

TOWN OF HAMPDEN DEPARTMENT OF PUBLIC WORKS

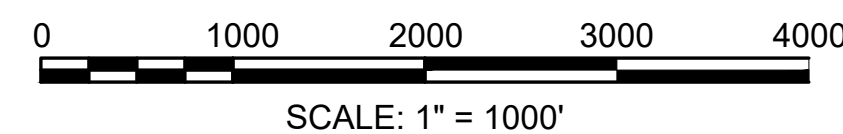
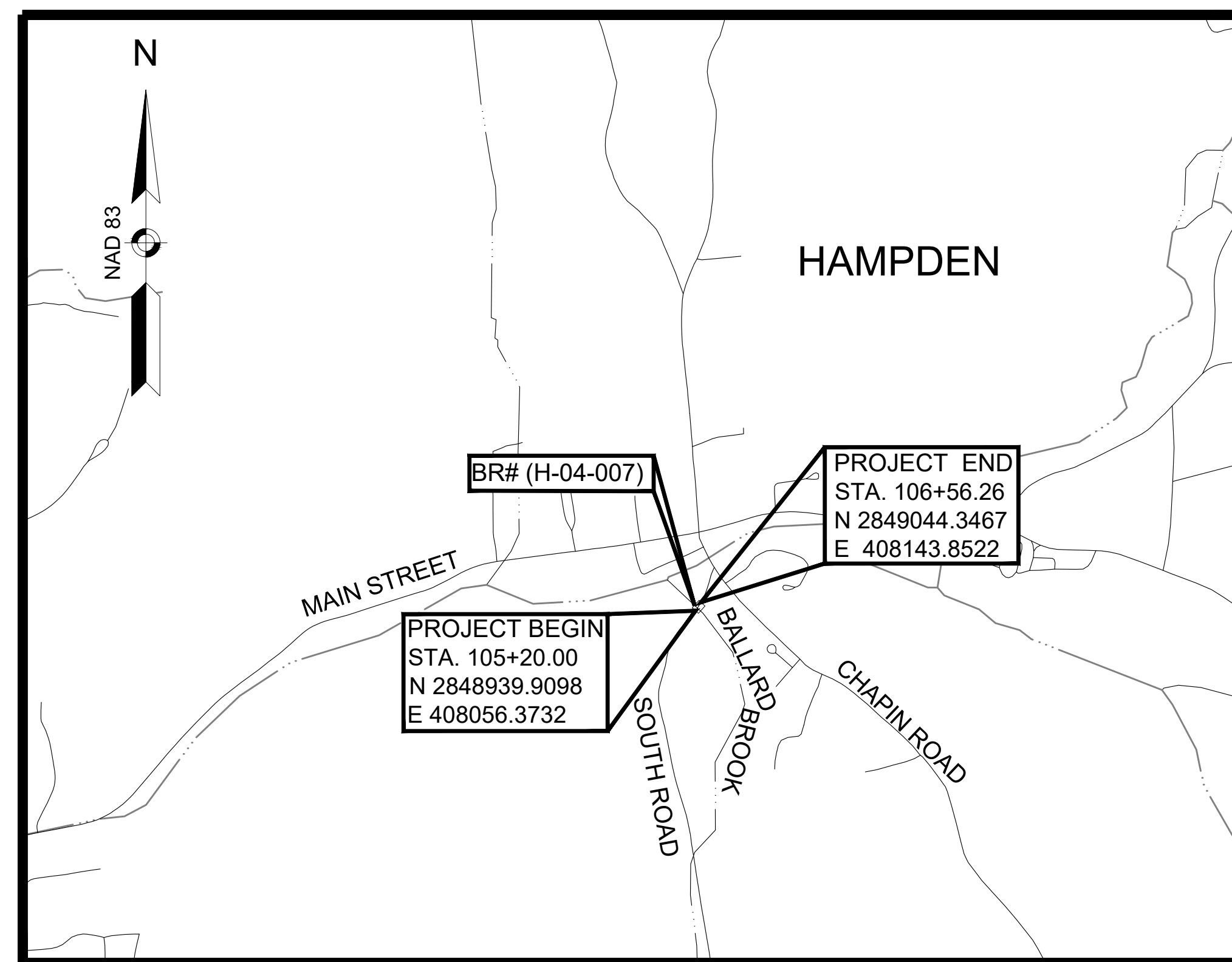
HAMPDEN
SOUTH ROAD
TITLE SHEET & INDEX
SHEET 1 OF 24

PLAN AND PROFILE OF
SOUTH ROAD
(BRIDGE NO. H-04-007)

IN THE TOWN OF
HAMPDEN
HAMPDEN COUNTY

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.

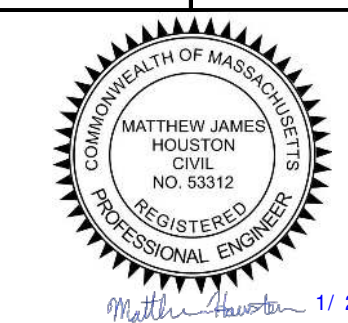
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LENGTH OF PROJECT = 132.66 FEET = 0.025 MILES

DESIGN DESIGNATION (SOUTH ROAD)	
FUNCTIONAL CLASSIFICATION	RURAL LOCAL

DATE	DESCRIPTION	REV #
1/9/2026	PS&E	0



ENGINEER _____ DATE _____

vhb Vanasse Hangen Brustlin, Inc.
120 Front Street, Suite 500
Worcester, MA 01608
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DESIGNED BY IK	APPROVED BY MJH	SHEET OF 1 24
DRAWN BY IK	DFTG CHECKED BY MJH	VHB CAD FILE NAME 15884.02_HD(COVER).dwg
CHECKED BY MJH	DATE OCTOBER 2025	JOB NO. 15884.02

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
FP	FP	CATCH BASIN CURB INLET
GP	GP	FLAG POLE
MB	MB	GAS PUMP
		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
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		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
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
		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		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)
		RAILROAD SIGNAL
		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
		MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
		MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
		LEGEND "ONLY" - WHITE
		STOP LINE
		CROSSWALK
		SOLID WHITE LINE
		SOLID YELLOW LINE
		BROKEN WHITE LINE
		BROKEN YELLOW LINE
		DOTTED WHITE LINE
		DOTTED YELLOW LINE
		DOTTED WHITE LINE EXTENSION
		DOTTED YELLOW LINE EXTENSION
		DOUBLE WHITE LINE
		DOUBLE YELLOW LINE

ABBREVIATIONS

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

ABBREVIATIONS (cont.)

GENERAL	
R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

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

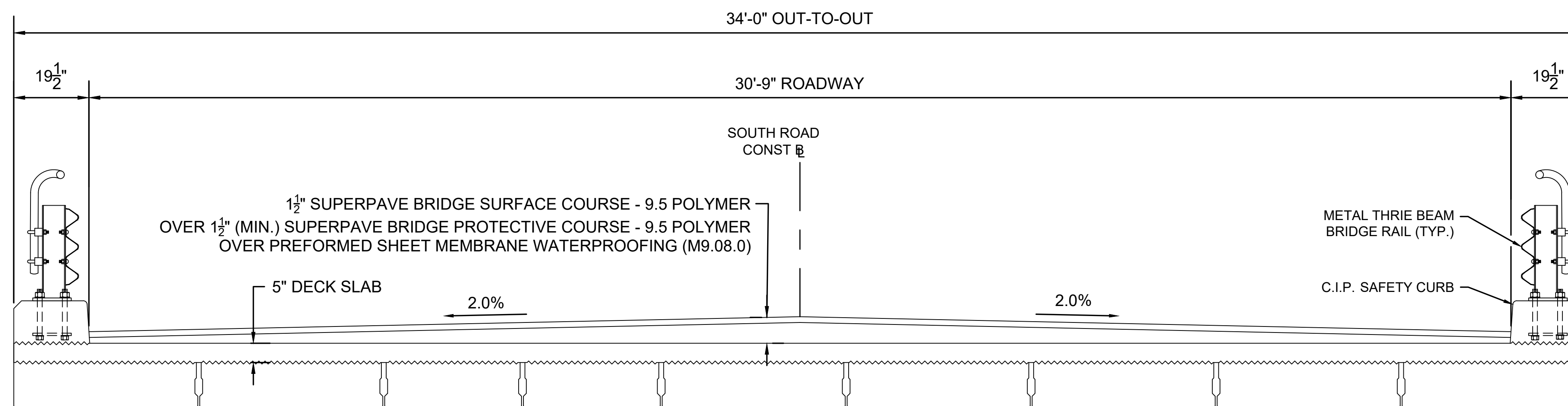
**HAMPDEN SOUTH ROAD
LEGEND & ABBREVIATIONS
SHEET 2 OF 24**

GENERAL NOTES:

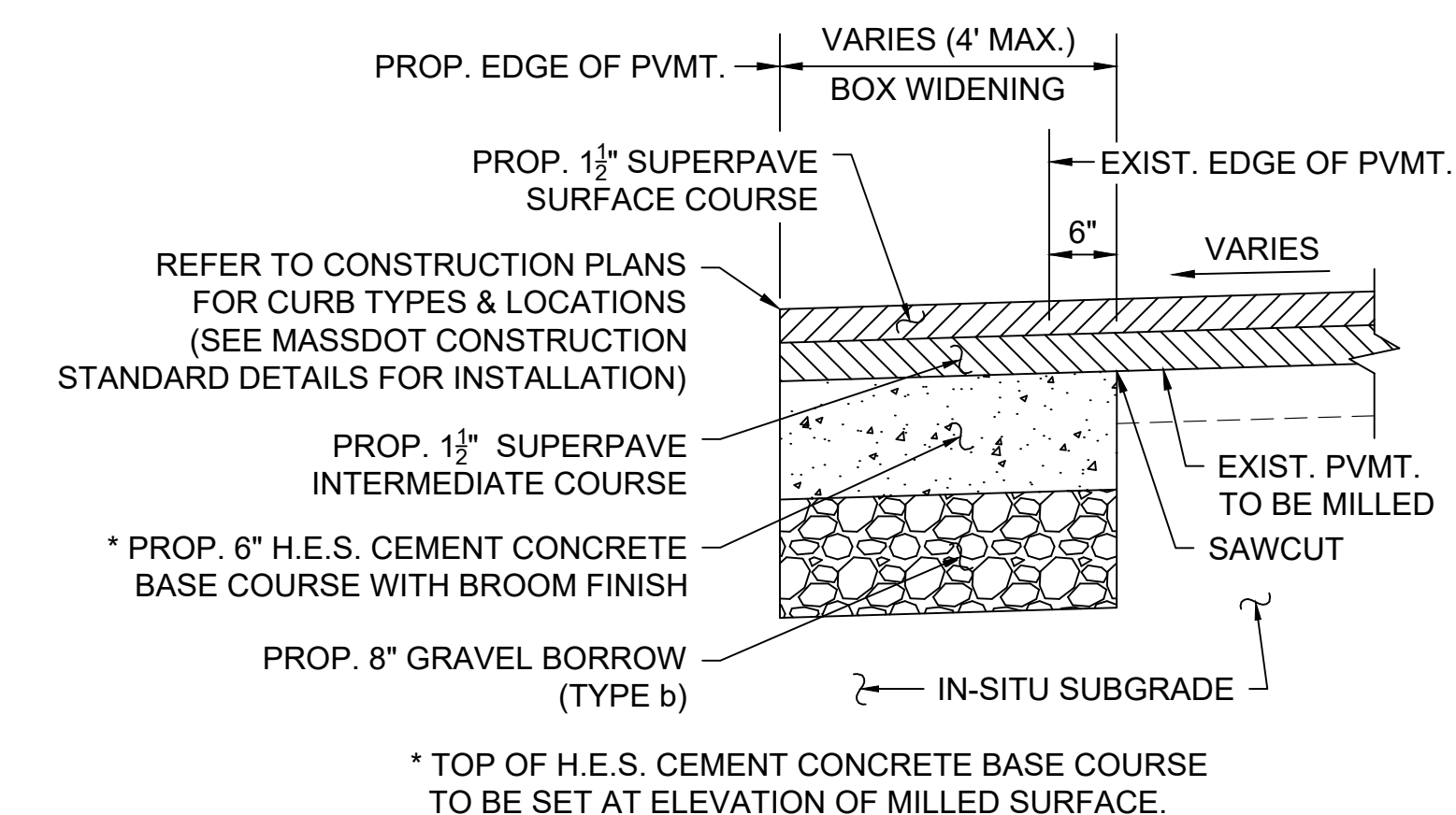
1. EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY VHB IN MAY, 2022.
2. THE HORIZONTAL CONTROL IS BASED ON THE MASSACHUSETTS MAINLAND STATE PLANE COORDINATE SYSTEM AND THE NATIONAL GEODETIC SURVEY (NAD83). ALL ELEVATION IS US FEET, REFERENCED TO THE NORTH AMERICA VERTICAL DATUM OF 1988 (NAVD88).
3. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
4. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
5. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
6. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
7. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
8. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
9. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
10. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO EXPENSE TO THE OWNER.
11. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
12. WHERE A NEW PAVEMENT MEETS EXISTING PAVEMENT, THE JOINT SHALL BE SAWCUT TO A NEAT VERTICAL LINE.
13. JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE SEALED WITH HMA JOINT SEALER IN ACCORDANCE WITH SUBSECTION 450 OF THE MASSDOT STANDARD SPECIFICATIONS.
14. AFTER MILLING OPERATIONS AND PRIOR TO PAVING THE SUPERPAVE INTERMEDIATE OR SURFACES COURSES THE ENGINEER SHALL EVALUATE THE MILLED SURFACE AND SHALL APPLY THE APPROPRIATE REPAIR METHOD IF REQUIRED.
15. EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
16. IF SUITABLE, EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
17. EXISTING STATE, COUNTY, CITY, AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
18. DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
19. ALL EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF WORK THAT ARE TO BE RETAINED SHALL BE CLEANED AND ANY SEDIMENT REMOVED AND DISPOSED.
20. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ADEQUATE AND SAFE ACCESS IS PROVIDED TO VEHICULAR AND PEDESTRIAN TRAFFIC AND TO RESIDENCES WITHIN THE PROJECT AREA THROUGHOUT ALL STAGES OF CONSTRUCTION.
21. THE CONTRACTOR SHALL OBSERVE OSHA STANDARDS FOR SAFETY.
22. THE CONTRACTOR SHALL CONSTRUCT ALL DRAINAGE IMPROVEMENTS AS REQUIRED BY THE ENGINEER.
23. DURING ALL STAGES OF CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT DRAINAGE RUNOFF FROM WITHIN THE PROJECT AREA IS CONVEYED TO APPROPRIATE DISCHARGE LOCATIONS OUTSIDE OF THE LIMITS OF WORK IN SUCH A WAY TO PREVENT PONDING UPSTREAM OF, WITHIN OR DOWNSTREAM OF THE PROJECT AREA.
24. THE CONTRACTOR SHALL ENSURE THAT ALL ROADWAY RUNOFF IS DIRECTED TO CATCH BASINS WHERE PRESENT.
25. THE CONTRACTOR MUST NOTIFY DIGSAFE AT 1-888-344-7233 NO LESS THAN 72 HOURS BEFORE COMMENCING ANY EXCAVATION ACTIVITIES.
26. PRIOR TO THE START OF WORK THE CONTRACTOR SHALL CONFORM TO ALL OF THE REQUIREMENTS SET FORTH IN THE SPECIFICATIONS WITH REGARD TO UTILITY NOTIFICATIONS AND ANY SUBMITTALS REQUIRED BY THE CONTRACTOR WITH REGARD TO THE MAINTENANCE AND PROTECTION OF TRAFFIC.
27. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.
28. THE CONTRACTOR SHALL BE REQUIRED TO PROCURE PROJECT RELATED ITEMS WITHOUT ADVERSELY IMPACTING THE PROJECT SCHEDULE. THEREFORE, IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE APPROPRIATE SHOP DRAWINGS AS SOON AS POSSIBLE TO THE ENGINEER.

BENCHMARKS:

- SPIKE IN UTILITY POLE 7
STA. 104+79.00, 17.67' RT
EL.=326.30' (NAVD 1988)
- SPIKE IN UTILITY POLE 4
STA. 107+38.05, 6.82' RT
EL.= 311.03' (NAVD 1988)



TYPICAL SECTION SOUTH ROAD
STA 105+88.59 TO STA 106+02.26
NOT TO SCALE



BOX WIDENING DETAIL
(FOR WIDENING < 4')
NOT TO SCALE

PAVEMENT NOTES

PROPOSED FULL DEPTH PAVEMENT

- SURFACE: 1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P) OVER
- INTERMEDIATE: 1.5" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER
- BASE: 3" SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC-19.0) OVER
- SUBBASE: 4" DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER 8" GRAVEL BORROW, TYPE b
- SUBGRADE: PLACE SPECIAL BORROW AS REQUIRED ON EXISTING SUBGRADE MATERIALS

PROPOSED FULL DEPTH BOX WIDENING (<4'):

- SURFACE: 1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P) OVER
- INTERMEDIATE: 1.5" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER
- BASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE OVER
- SUBBASE: 8" GRAVEL BORROW, TYPE b

PROPOSED PAVEMENT MICROMILLING & OVERLAY

- SURFACE: 1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P) OVER
- INTERMEDIATE: SHIM AS REQUIRED TO MEET PROPOSED GRADES AND CROSS SLOPES SUPERPAVE LEVELING COURSE - 9.5 (SCL-9.5) (1" TO 1.5" LIFTS) SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) (1.5" TO 2" LIFTS)
- MILLING: 1.5" PAVEMENT FINE MILLING

PROPOSED BRIDGE PAVEMENT

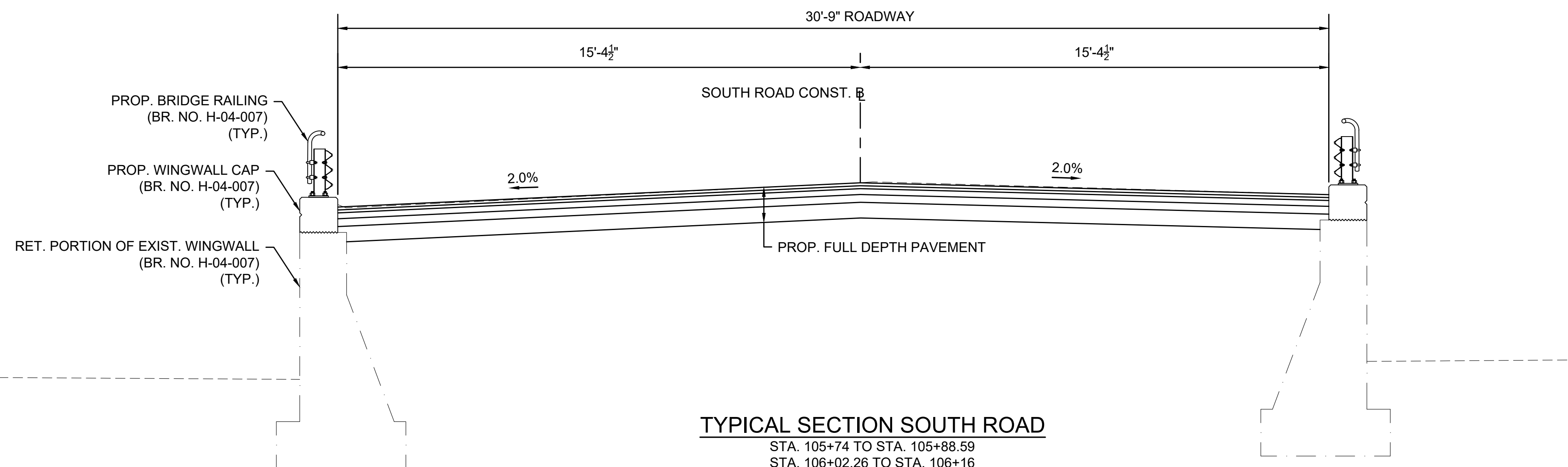
- SURFACE: 1.5" SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-B-9.5-P) OVER 1.5" (MIN.) SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 (SPC-B-9.5) OVER SHEET MEMBRANE WATERPROOFING OVER CONCRETE DECK

PROPOSED HMA DRIVEWAY

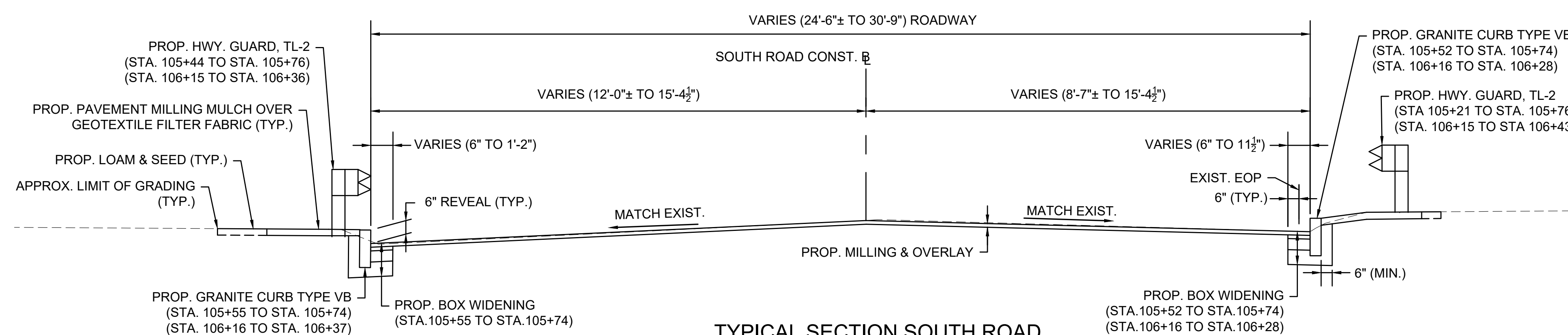
- SURFACE: 1.5" SUPERPAVE SURFACE COURSE - 12.5 (SSC-12.5) OVER 2.5" SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC-12.5) OVER
- SUBBASE: 8" GRAVEL BORROW, TYPE b

NOTES:

1. ALL HOT MIX ASPHALT PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 460 QUALITY ASSURANCE FOR HMA.
2. ASPHALT EMULSION FOR TACK COAT (ITEM 452.) SHALL BE SPRAY APPLIED FOR DOUBLE OVERLAP COVERAGE AT 0.08 GALLONS PER SQUARE YARD OVER SMOOTH SURFACES AND 0.09 GALLONS PER SQUARE YARD OVER MILLED SURFACES.



TYPICAL SECTION SOUTH ROAD
STA. 105+74 TO STA. 105+88.59
STA. 106+02.26 TO STA. 106+16
NOT TO SCALE



TYPICAL SECTION SOUTH ROAD
STA. 105+20 TO STA. 105+74
STA. 106+16 TO STA. 106+56.26
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5%

HIGHWAY GUARD DETAILS

PROPOSED:

STA. 105+21 RT. TO STA. 105+58 RT. - ITEM 627.82 GUARDRAIL TANGENT END TREATMENT, TL-2
 STA. 105+58 RT. TO STA. 105+70 RT. - ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)
 STA. 105+70 RT. TO STA. 105+76 RT. - ITEM 628.25 TRANSITION TO THRIE BEAM
 STA. 106+15 RT. TO STA. 106+21 RT. - ITEM 628.25 TRANSITION TO THRIE BEAM
 STA. 106+21 RT. TO STA. 106+34 RT. - ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)
 STA. 106+34 RT. TO STA. 106+43 RT. - ITEM 627.1 TRAILING ANCHORAGE

STA. 105+47 LT. TO STA. 105+56 LT. - ITEM 627.1 TRAILING ANCHORAGE
 STA. 105+56 LT. TO STA. 105+61 LT. - ITEM 620.32 GUARDRAIL - CURVED, TL-2 (SINGLE FACED)
 STA. 105+61 LT. TO STA. 105+70 LT. - ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)
 STA. 105+70 LT. TO STA. 105+76 LT. - ITEM 628.25 TRANSITION TO THRIE BEAM
 STA. 106+15 LT. TO STA. 106+21 LT. - ITEM 628.25 TRANSITION TO THRIE BEAM
 STA. 106+21 LT. TO STA. 106+28 LT. - ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)
 STA. 106+28 LT. TO STA. 106+33 LT. - ITEM 620.32 GUARDRAIL - CURVED, TL-2 (SINGLE FACED)
 STA. 106+33 LT. TO STA. 106+36 LT. - ITEM 627.1 TRAILING ANCHORAGE

EXISTING:

NONE

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

HAMPDEN SOUTH ROAD CONSTRUCTION PLANS SHEET 5 OF 24

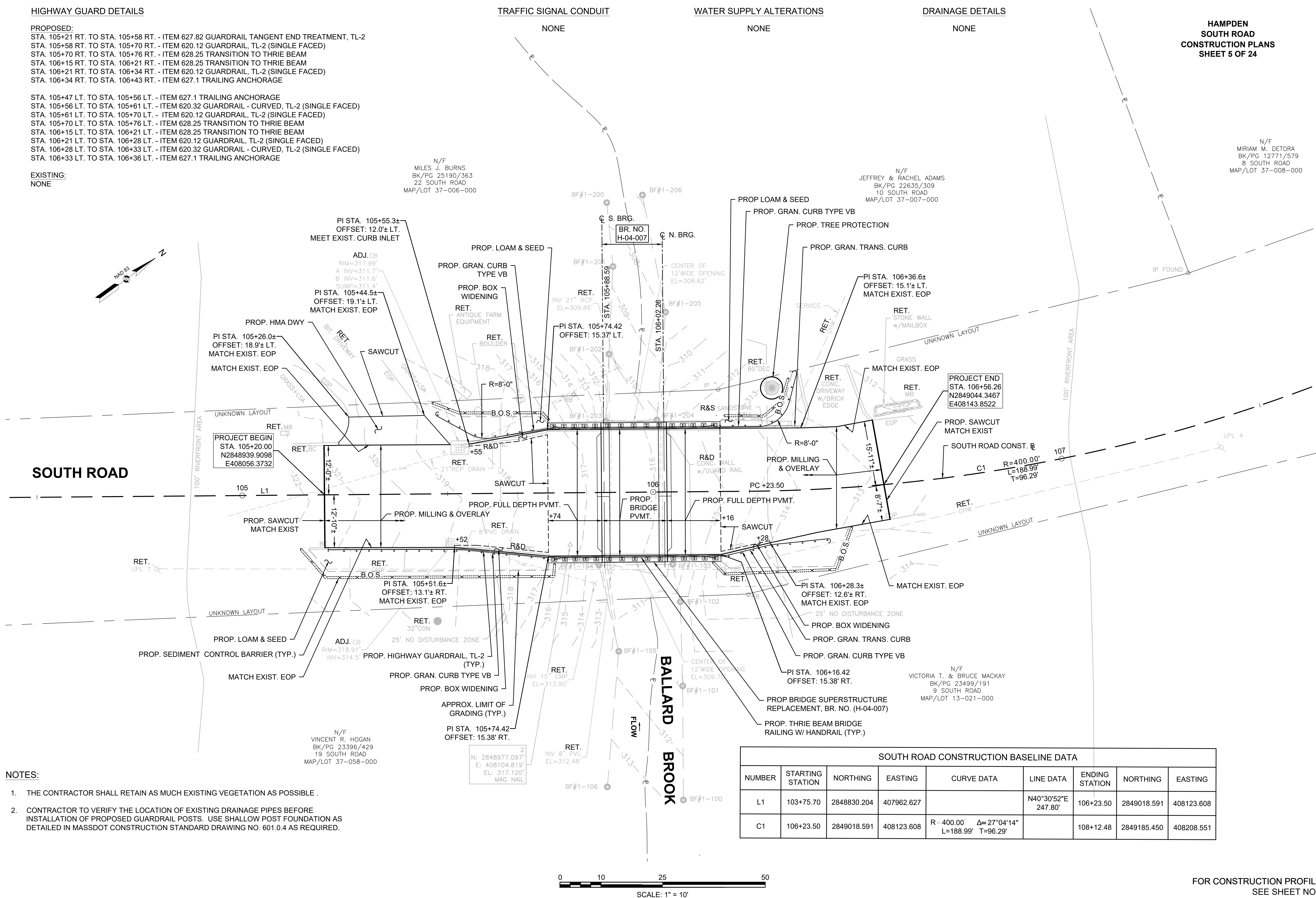
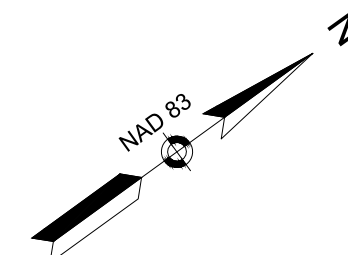
N/F
 MIRIAM M. DETORA
 BK/PG 12771/579
 8 SOUTH ROAD
 MAP/LOT 37-008-000

N/F
 JEFFREY & RACHEL ADAMS
 BK/PG 22635/309
 10 SOUTH ROAD
 MAP/LOT 37-007-000

N/F
 MILES J. BURNS
 BK/PG 25190/363
 22 SOUTH ROAD
 MAP/LOT 37-006-000

N/F
 VICTORIA T. & BRUCE MACKAY
 BK/PG 23499/191
 9 SOUTH ROAD
 MAP/LOT 13-021-000

N/F
 VINCENT R. HOGAN
 BK/PG 23396/429
 19 SOUTH ROAD
 MAP/LOT 37-058-000



PROJECT BEGIN
 STA. 105+20.00
 N2848939.9098
 E408056.3732

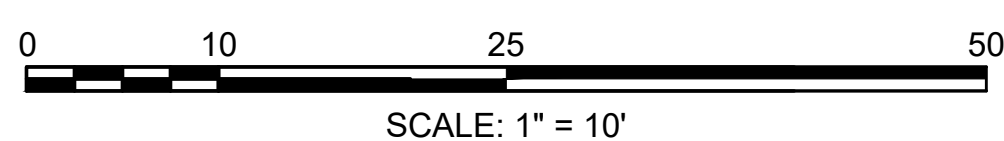
PROJECT END
 STA. 106+56.26
 N2849044.3467
 E408143.8522

2
 N: 2848977.097'
 E: 408104.819'
 EL: 317.120'
 MAG NAIL

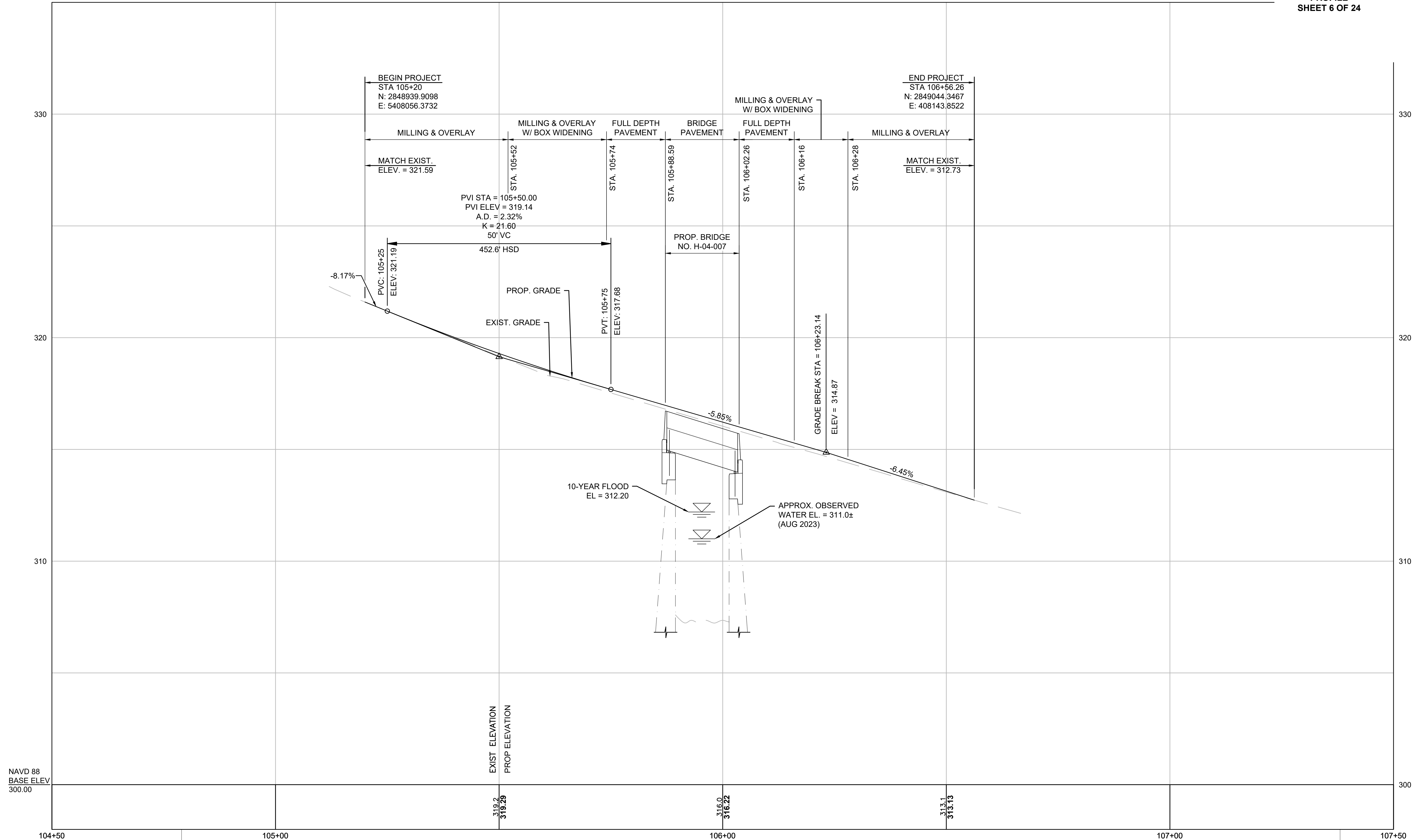
NOTES:

1. THE CONTRACTOR SHALL RETAIN AS MUCH EXISTING VEGETATION AS POSSIBLE.
2. CONTRACTOR TO VERIFY THE LOCATION OF EXISTING DRAINAGE PIPES BEFORE INSTALLATION OF PROPOSED GUARDRAIL POSTS. USE SHALLOW POST FOUNDATION AS DETAILED IN MASSDOT CONSTRUCTION STANDARD DRAWING NO. 601.0.4 AS REQUIRED.

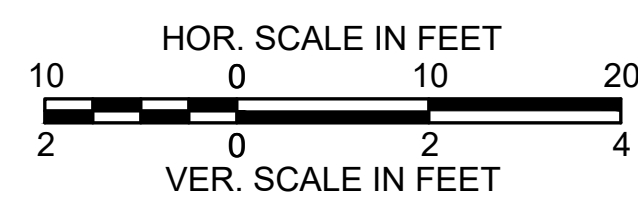
SOUTH ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	103+75.70	2848830.204	407962.627		N40°30'52"E 247.80'	106+23.50	2849018.591	408123.608
C1	106+23.50	2849018.591	408123.608	R= 400.00' Δ=27°04'14" L=188.99' T=96.29'		108+12.48	2849185.450	408208.551



FOR CONSTRUCTION PROFILE:
 SEE SHEET NO. 6



Benchmark
Spike in Utility Pole 7
Elevation = 326.30'
Sta. 104+79.00, 17.67' RT



Benchmark
Spike in Utility Pole 4
Elevation = 311.03'
Sta. 107+38.05, 6.82' RT

FOR CONSTRUCTION PLAN:
SEE SHEET NO. 5

GENERAL NOTES

- ALL CONSTRUCTION SIGNING, TEMPORARY TRAFFIC CONTROL DEVICES, AND ROADSIDE ELEMENTS SHALL CONFORM WITH THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS AMENDED, THE MASSDOT STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS, THE LATEST REVISIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, (AASHTO) ROADSIDE DESIGN GUIDE, AASHTO POLICY ON GEOMETRIC DESIGN OF HIGHWAYS AND STREETS, AND THE AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH).
- WORK HOURS SHALL BE IN ACCORDANCE WITH CONTRACT DOCUMENTS UNLESS APPROVED BY THE TOWN OF HAMPDEN.
- ALL DRUMS OUTSIDE TAPERS SHALL BE SET AT 20' ON CENTER MAX. UNLESS OTHERWISE NOTED OR ADJUSTED BY THE ENGINEER.
- ALL DRUMS SHALL BE APPROXIMATELY PLACED AND MOVED AS NECESSARY TO MAINTAIN SAFE AND REASONABLE ABUTTER ACCESS. WORK MAY REQUIRE ADDITIONAL SIGNS, DRUMS AND OTHER TRAFFIC CONTROL DEVICES, GRADING AND TEMPORARY PAVEMENT FOR PASSAGE OF PEDESTRIAN, VEHICULAR AND EMERGENCY TRAFFIC THROUGH THE WORK AREAS, BOTH DURING AND AFTER WORKING HOURS, TO MAINTAIN SUCH ACCESS.
- REFLECTORIZED CONES SHALL BE A MINIMUM OF 36 INCHES IN HEIGHT.
- CONES MAY BE USED IN LIEU OF DRUMS OUTSIDE OF TAPER AREAS.
- THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OR RESTRICTION OF ACCESS.
- FOR DROP-OFFS 3" OR LESS WITHIN THE CLEAR ZONE, CONDITION MAY BE MITIGATED WITH W8-9 (LOW SHOULDER) SIGN OR TEMPORARY CHANNELIZATION DEVICES. FOR DROP-OFFS GREATER THAN 3" BUT NO MORE THAN 36", DETERMINE WHETHER IT IS MORE COST EFFECTIVE TO INSTALL BOTH W8-9 SIGN AND TEMPORARY CHANNELIZATION DEVICES IN ACCORDANCE WITH MASSDOT WORK ZONE SAFETY GUIDE OR W8-9 SIGN WITH A 2H:1V (MIN) WEDGE OR TO REMOVE THE HAZARD. FOR DROP-OFFS 36" OR GREATER USE TEMPORARY BARRIER IN ACCORDANCE WITH MASSDOT WORK ZONE POSITIVE PROTECTION GUIDELINES.
- CONSTRUCTION CLEAR ZONE SHALL BE IN ACCORDANCE WITH MASSDOT BOSTON TRAFFIC GUIDELINES AS FOLLOWS:
4' IF POSTED SPEED IS LESS THAN 35 MPH
- ALL TEMP BARRIERS SHALL MEET OR EXCEED MASH TL-2 OR HIGHER REQUIREMENTS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- THE CONTRACTOR SHALL PROVIDE TEMPORARY IMPACT ATTENUATORS TO PROTECT ALL BLUNT-ENDS OF TEMPORARY BARRIER OR AS REQUIRED BY THE ENGINEER. ALL TEMPORARY IMPACT ATTENUATORS SHALL MEET OR EXCEED MASH TEST LEVEL 1 (TL-1) IN ACCORDANCE WITH MASSDOT STANDARD SPECIFICATIONS.
- 11' MINIMUM LANE WIDTHS SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
- TEMPORARY TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE COVERED OR REMOVED DURING NON-WORKING HOURS WHEN NOT IN USE.
- SIGNS INSTALLED ON PORTABLE STANDS REQUIRE 12 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- SIGNS INSTALLED ON PORTABLE STANDS PLACED AMONG CHANNELIZATION DEVICES REQUIRE A 36 INCH MINIMUM MOUNTING HEIGHT FROM THE ROADWAY SURFACE TO THE BOTTOM OF THE SIGN.
- SIGNS MOUNTED ON POSTS REQUIRE A MINIMUM 84 INCH MOUNTING HEIGHT FROM THE ROADWAY OR SIDEWALK SURFACE TO THE BOTTOM OF THE SIGN. CONTRACTOR SHALL MAINTAIN A MINIMUM SIDEWALK HORIZONTAL CLEAR WIDTH OF 36" AT ALL TIMES.
- ALL SIGNS SHALL BE MOUNTED ON MASH CRASH TESTED SIGN SUPPORTS AND INSTALLED IN ACCORDANCE WITH THE MUTCD. SIGNS SHALL NOT BE MOUNTED TO OR LEANED AGAINST DRUMS OR CONES.
- CONTRACTOR SHALL SECURE WORK AREAS BY APPROPRIATE MEANS, TO PREVENT UNAUTHORIZED ACCESS AT ALL TIMES.
- THERE IS NO DESIGNATED BICYCLE LANE ON THE ROADWAY WITHIN THE PROJECT LIMITS. BICYCLES ARE EXPECTED TO SHARE THE ROAD WITH GENERAL VEHICULAR TRAFFIC.
- ANY EQUIPMENT OR MATERIALS THAT WOULD RESTRICT ACCESS TO THE TEMPORARY TRAVEL LANE AND/OR EXISTING DRIVEWAYS SHALL NOT BE LEFT UNATTENDED AT ANY TIME. ANY SUCH EQUIPMENT OR MATERIALS SHALL BE MOVED TO ALLOW ACCESS FOR PRESENT VEHICULAR, PEDESTRIAN AND BICYCLE TRAFFIC.

TEMPORARY TRAFFIC CONTROL SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.	BACK-GROUND	LEGEND	BORDER
R1-2	36"x36"x36"			SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			WHITE	RED	RED
R1-2aP	36"	30"					WHITE	RED	RED
W3-2	36"	36"					FLUORESCENT ORANGE	WHITE/RED	BLACK
W8-9	36"	36"					FLUORESCENT ORANGE	BLACK	BLACK
W20-1c	36"	36"					FLUORESCENT ORANGE	BLACK	BLACK
W20-4c	36"	36"					FLUORESCENT ORANGE	BLACK	BLACK
MA-W20-7b	36"	36"		AS PER MASSDOT STANDARD			FLUORESCENT ORANGE	BLACK	BLACK
G20-2	36"	18"		SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION"; AS AMENDED			FLUORESCENT ORANGE	BLACK	BLACK

NOTES:

- HIGH INTENSITY REFLECTIVE SHEETING SHALL BE USED FOR ALL SIGNS. SEE FHWA "STANDARD HIGHWAY SIGNS, 2004 EDITION" FOR TEXT DIMENSIONS, AS AMENDED; THE 1977 MASSHIGHWAY DEPARTMENT CONSTRUCTION AND TRAFFIC STANDARD DETAILS, AS AMENDED, FOR SIGNS AND SUPPORTS; THE MASSHIGHWAY DEPARTMENT SIGN LISTINGS 1993 EDITION, AS AMENDED; THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR MOUNTING REQUIREMENTS; AND THE 2017 MASSDOT STANDARD SIGNS BOOK, AS AMENDED.
- ALL SIGNS SHOWN GRAPHICALLY FOR INFORMATION ONLY. SIGN VENDOR SHALL FABRICATE ALL SIGNS IN ACCORDANCE WITH THE APPLICABLE STANDARDS.

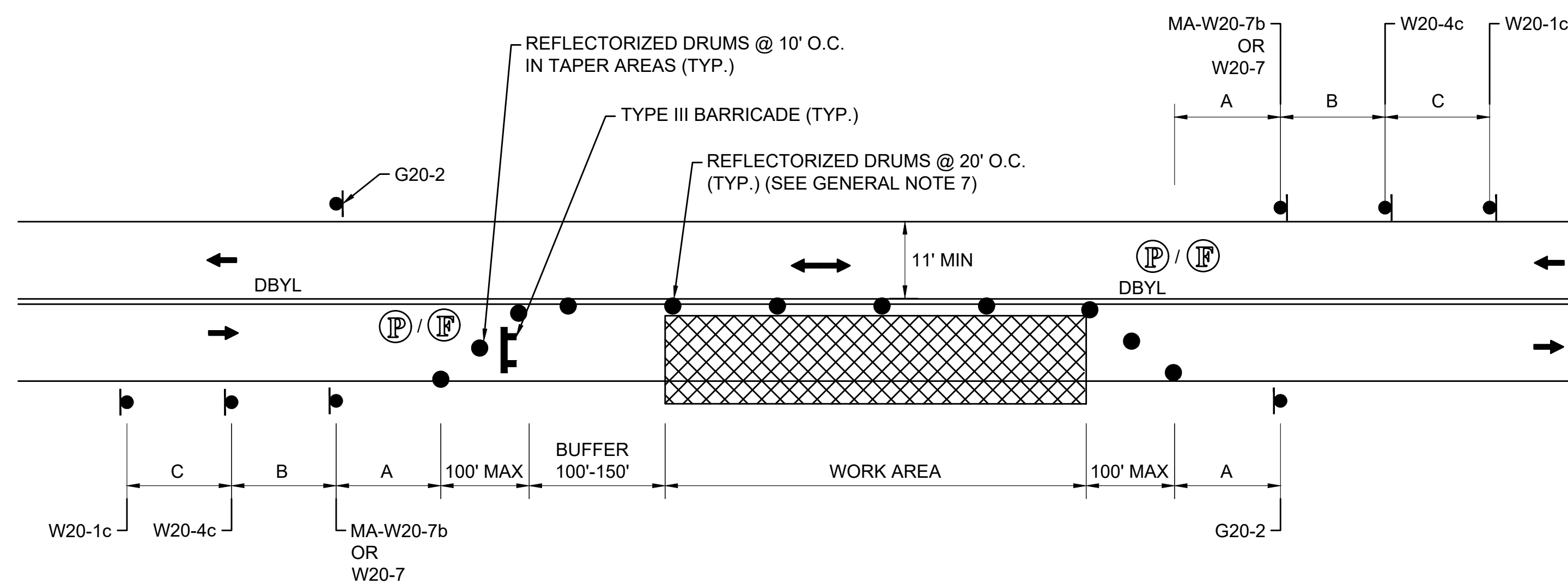
**HAMPDEN SOUTH ROAD
TEMPORARY TRAFFIC CONTROL PLANS
SHEET 7 OF 24**

LEGEND

	POLICE OFFICER
	FLAGGER
	REFLECTORIZED DRUM
	TEMPORARY CONSTRUCTION SIGN
	TRAFFIC CONE
	TYPE III BARRICADE
	PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)
	TEMPORARY LIMITED DEFLECTION BARRIER (TL-2) FOR WORK ZONE ENCLOSURE PURPOSES
	TEMPORARY CONSTRUCTION FENCE
	TEMPORARY CONSTRUCTION GATE
	TEMPORARY IMPACT ATTENUATOR (TYPE NOTED)
	WORK AREA (PUBLIC ACCESS RESTRICTED)
	TRANSITION/BUFFER AREAS
	TRAFFIC FLOW
NTS	NOT TO SCALE
TTCP	TEMPORARY TRAFFIC CONTROL PLANS

ADVANCE SIGN SPACING

ROADWAY	DISTANCE BETWEEN SIGNS (FEET)		
	A	B	C
ALL ROADWAYS	100	100	100

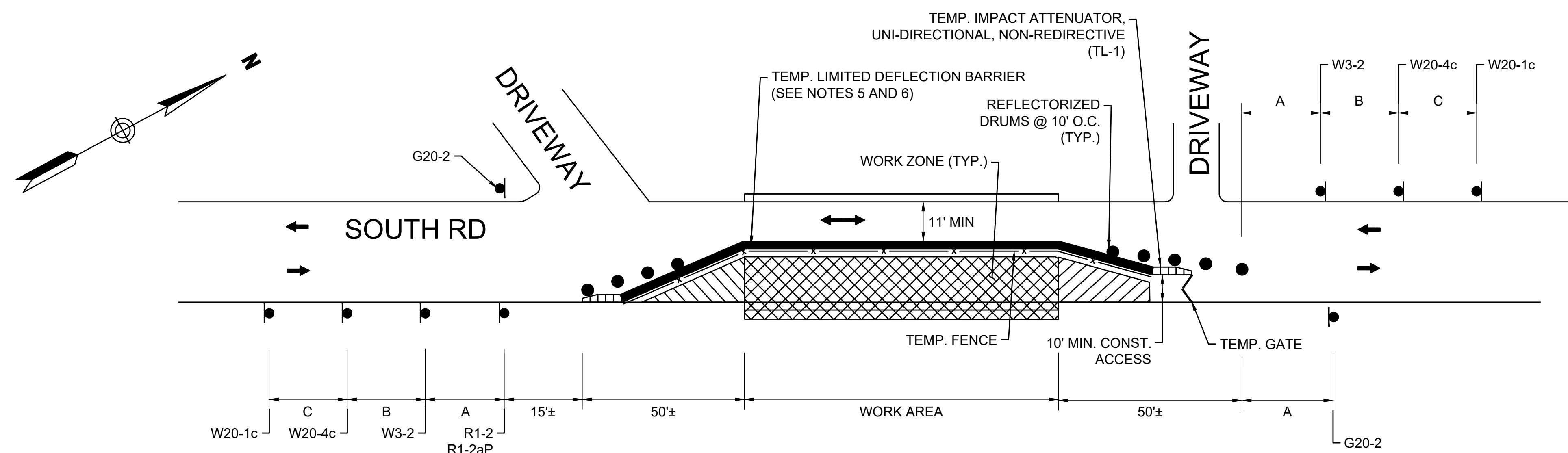


NOTES:

- REFER TO ADVANCE SIGN SPACING TABLE.
- AT THE END OF WORK SHIFT, CONTRACTOR TO RESTORE TRAFFIC BACK TO ORIGINAL CONDITION.

TYPICAL TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC

SCALE: NTS

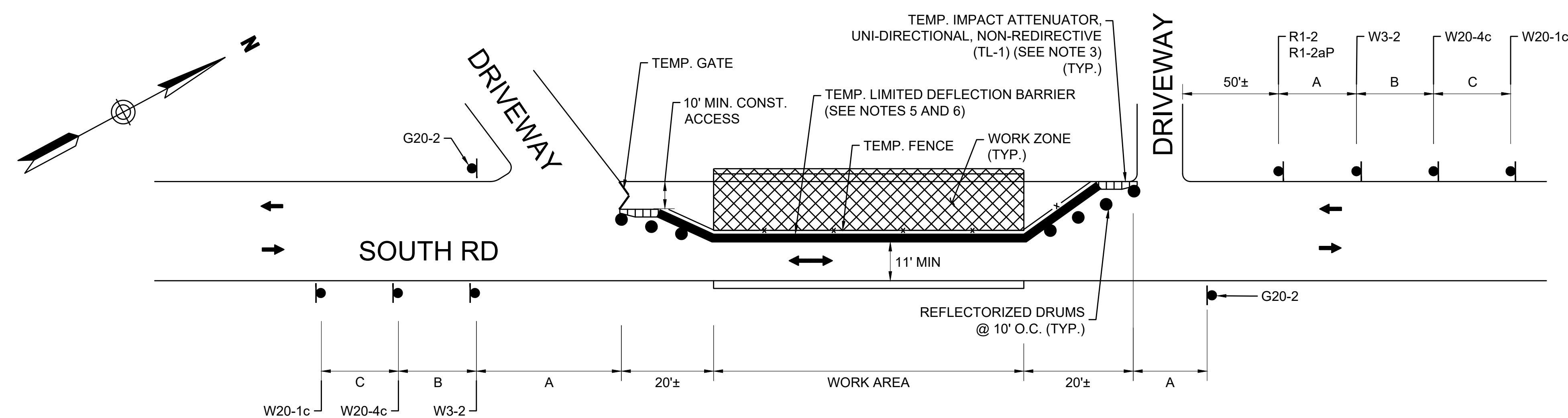


NOTES:

1. REFER TO SHEET 7 FOR GENERAL TRAFFIC CONTROL NOTES AND LEGEND INFORMATION.
2. REFER TO SHEET 7 FOR ADVANCE SIGN SPACING TABLE.
3. CONTRACTOR SHALL ENSURE ADEQUATE SIGHT LINES FOR EXISTING DRIVEWAYS.
4. CONTRACTOR SHALL NOTIFY THE TOWN IF THE YIELD CONTROL MEASURE SHOWN IS NOT FUNCTIONING PROPERLY IN THE FIELD.
5. TEMPORARY LIMITED DEFLECTION BARRIER AND FENCE SHALL NOT BLOCK SIGHT LINES AND ACCESS TO EXISTING DRIVEWAYS.
6. TEMPORARY LIMITED DEFLECTION BARRIER SHALL ENCLOSE AND PREVENT ACCESS TO THE WORK AREA. THE USE OF BARRIER DOES NOT GUARANTEE PROTECTION OF ANY KIND FROM HAZARDS THAT EXIST BEHIND SAID BARRIER. BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. ALL BLUNT ENDS SHALL BE PROTECTED BY AN APPROVED TEMPORARY IMPACT ATTENUATOR AT ALL TIMES.
7. MAINTAIN EXIST ROADWAY LIGHTING AT ALL TIMES.
8. MAINTAIN PROPER ROADWAY DRAINAGE AT ALL TIMES.

TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC ON SOUTH RD WITH BARRIER AND FENCE (STAGE 1)

SCALE: NTS

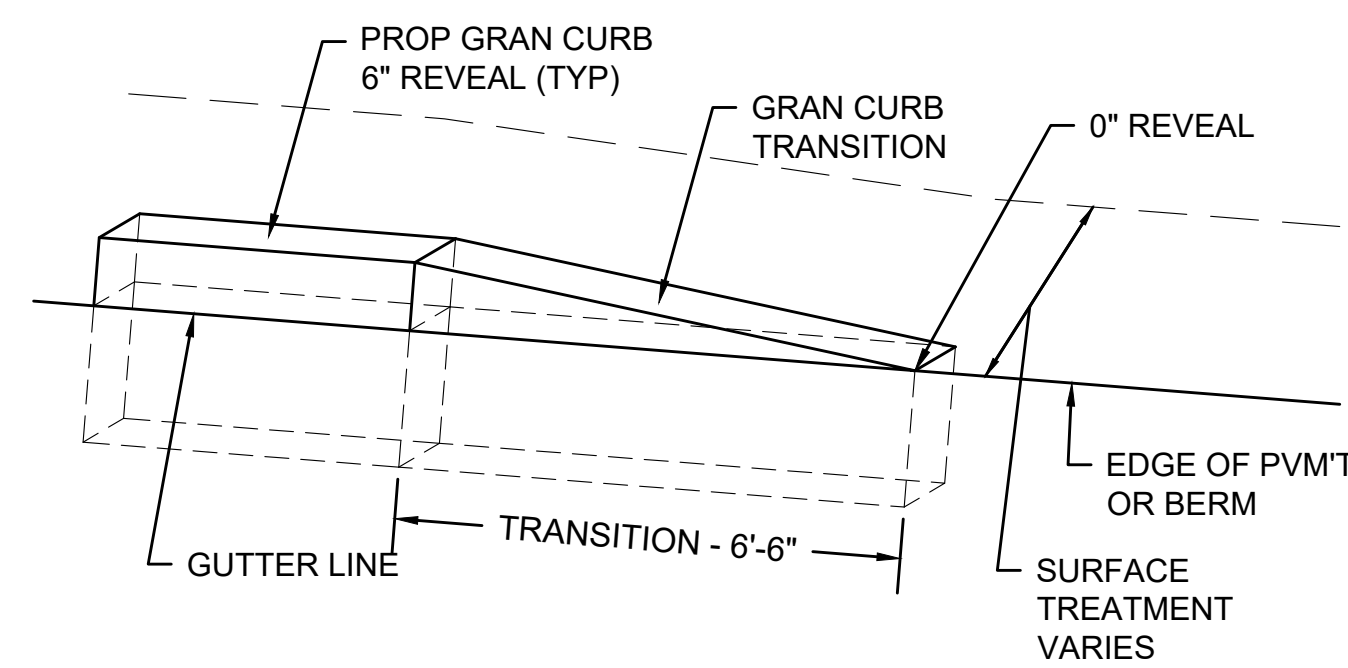


NOTES:

1. REFER TO SHEET 7 FOR GENERAL NOTES & LEGEND INFORMATION.
2. REFER TO SHEET 7 FOR ADVANCE SIGN SPACING TABLE.
3. TEMP IMPACT ATTENUATOR TO BE PLACED BETWEEN BRIDGE AND EXISTING DRIVEWAYS.
4. CONTRACTOR SHALL ENSURE ADEQUATE SIGHT LINES FOR EXISTING DRIVEWAY.
5. CONTRACTOR SHALL NOTIFY THE TOWN IF THE YIELD CONTROL MEASURE SHOWN IS NOT FUNCTIONING PROPERLY IN THE FIELD.
6. TEMPORARY LIMITED DEFLECTION BARRIER AND FENCE SHALL NOT BLOCK SIGHT LINES AND ACCESS TO EXISTING DRIVEWAYS.
7. TEMPORARY LIMITED DEFLECTION BARRIER SHALL ENCLOSE AND PREVENT ACCESS TO THE WORK AREA. THE USE OF BARRIER DOES NOT GUARANTEE PROTECTION OF ANY KIND FROM HAZARDS THAT EXIST BEHIND SAID BARRIER. BARRIER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION. ALL BLUNT ENDS SHALL BE PROTECTED BY AN APPROVED TEMPORARY IMPACT ATTENUATOR AT ALL TIMES.
8. MAINTAIN EXIST ROADWAY LIGHTING AT ALL TIMES.
9. MAINTAIN PROPER ROADWAY DRAINAGE AT ALL TIMES.

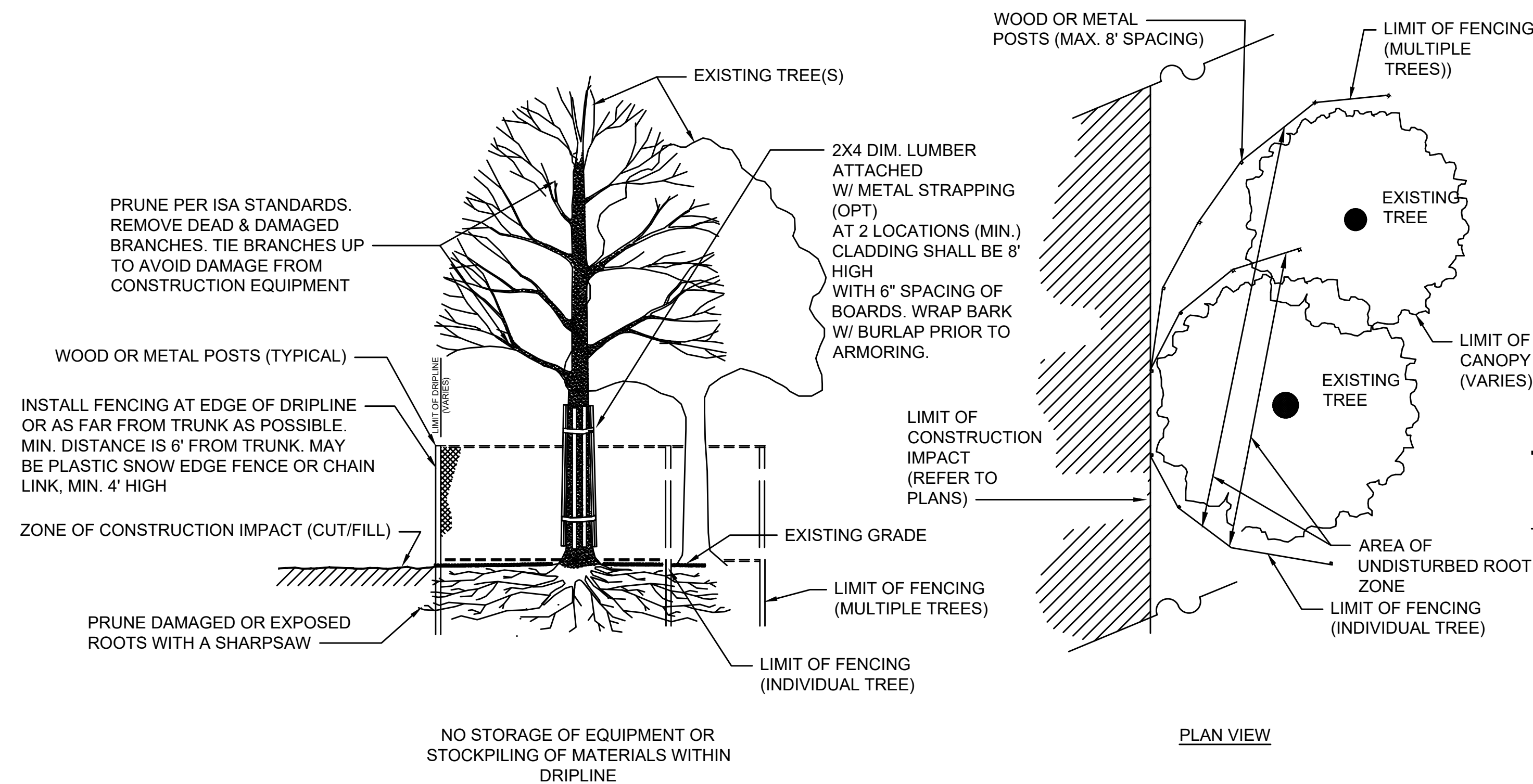
TWO-WAY STREET LANE CLOSURE ALTERNATING TRAFFIC ON SOUTH RD WITH BARRIER AND FENCE (STAGE 2)

SCALE: NTS



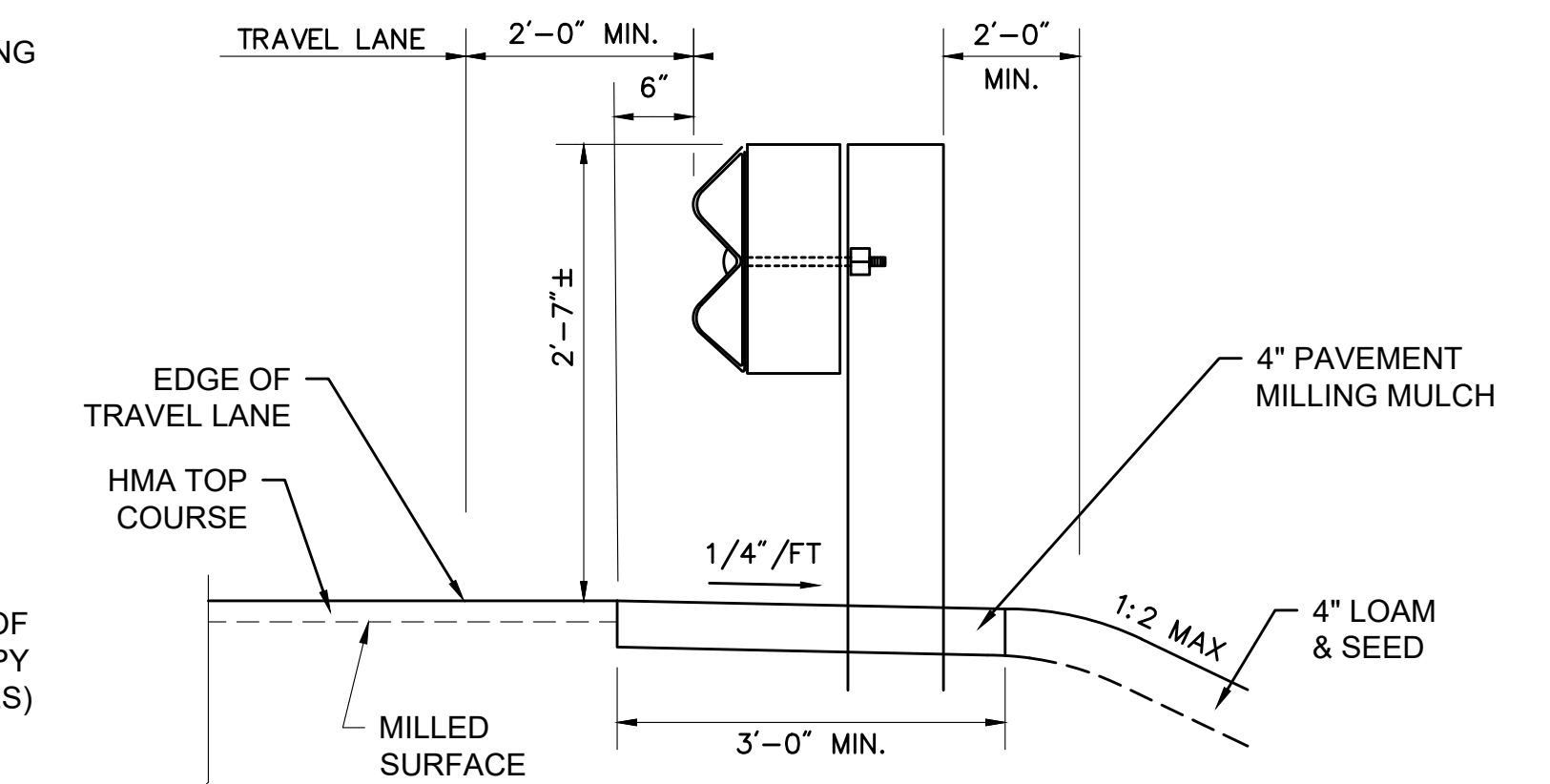
GRANITE CURB TRANSITION PIECE

SCALE: N.T.S.



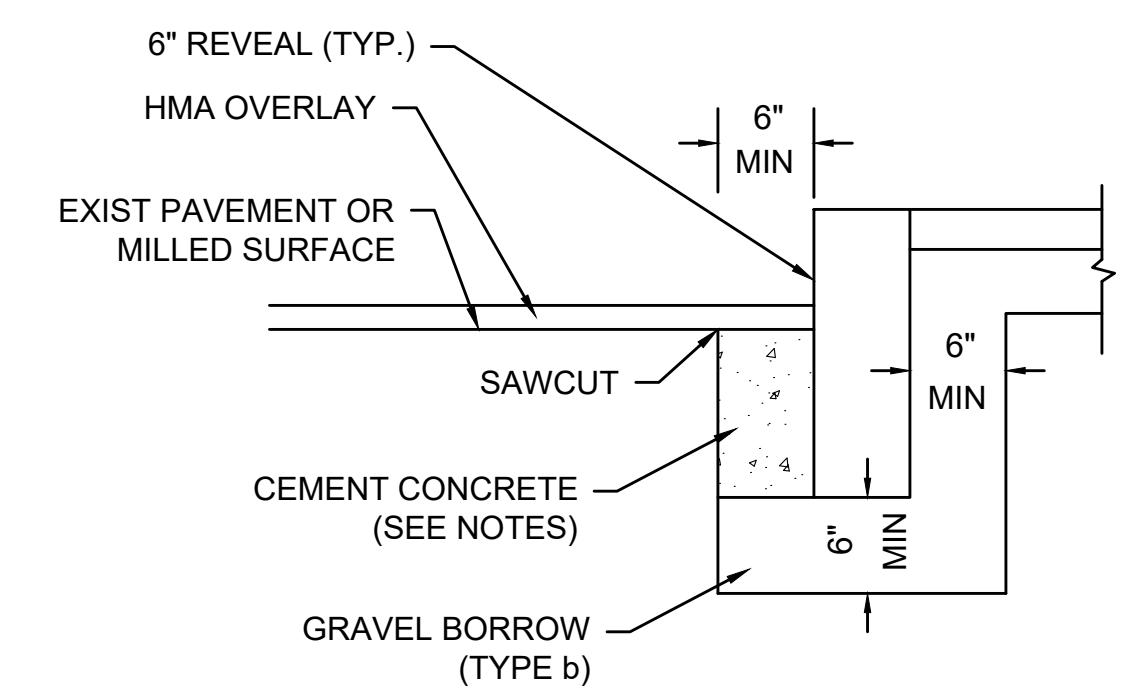
TREE PROTECTION OF EXISTING TREE(S)

SCALE: N.T.S.



**STEEL W BEAM HIGHWAY GUARD
FLUSH W/ ROADWAY**

SCALE: NTS

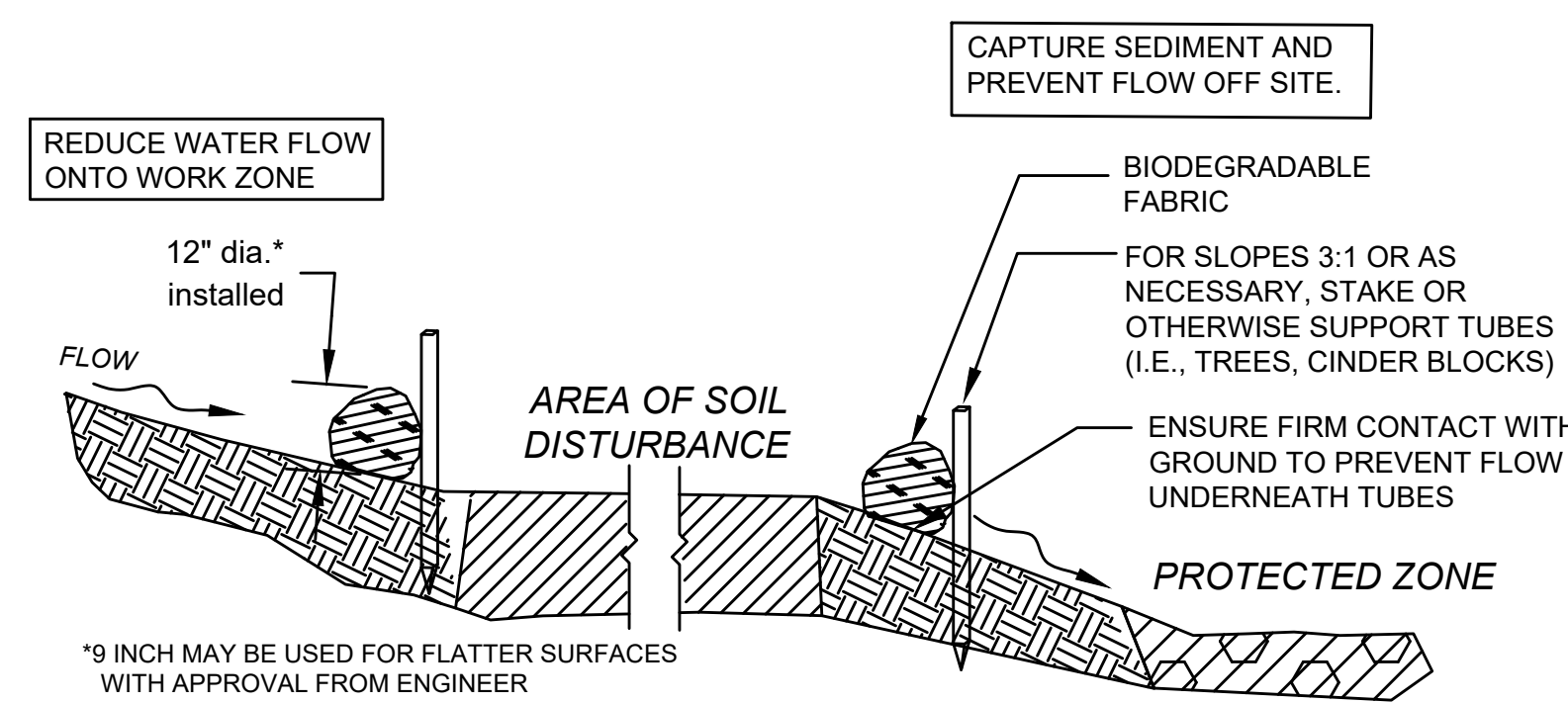


NOTES:

1. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
2. SAWCUT 6" FROM CURB LINE AND REMOVE EXISTING PAVEMENT AND GRAVEL. REPLACE WITH CEMENT CONCRETE.
3. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED. ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

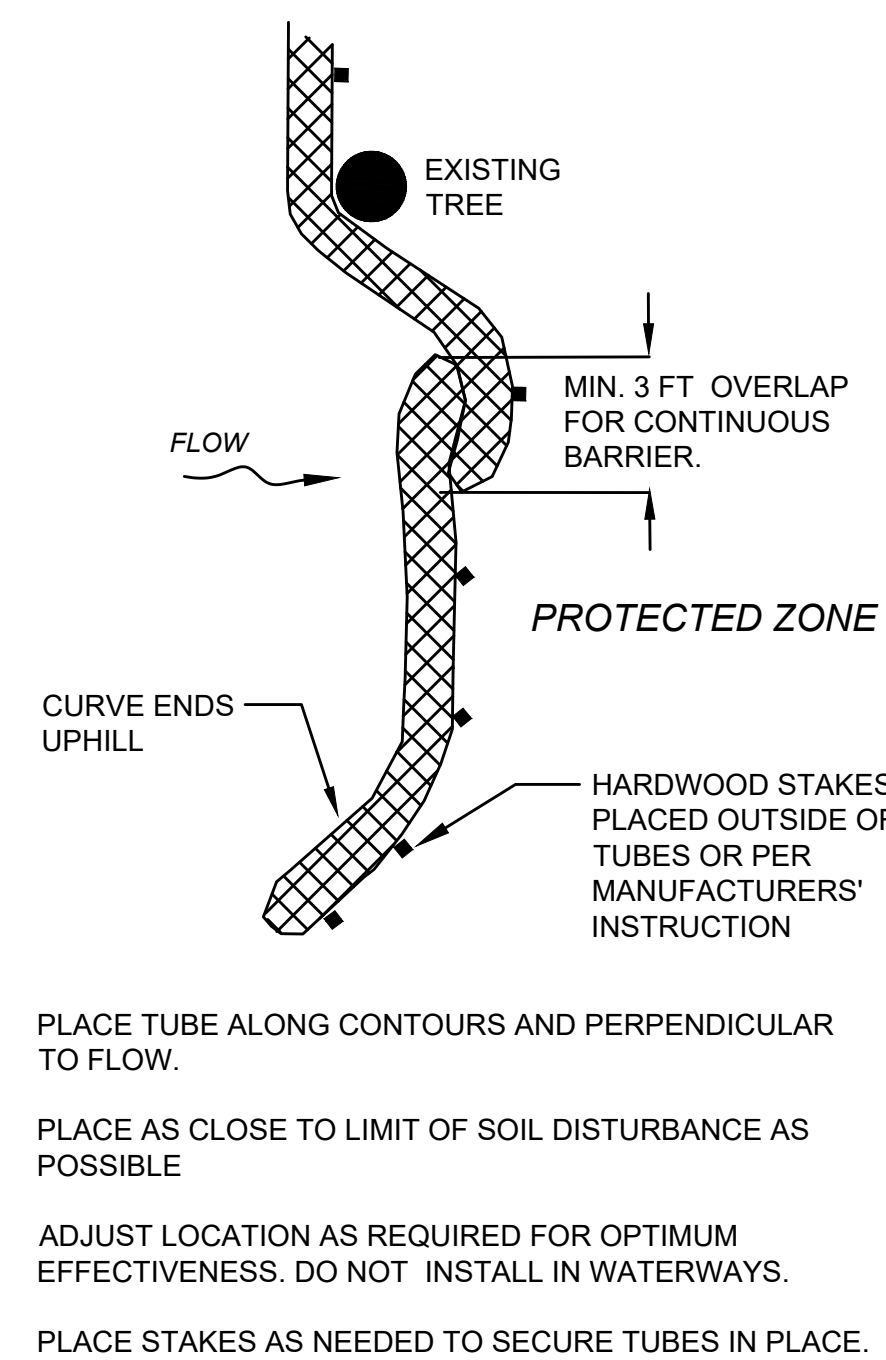
**GRANITE CURB IN EXISTING PAVEMENT -
WITH OVERLAY**

SCALE: N.T.S.



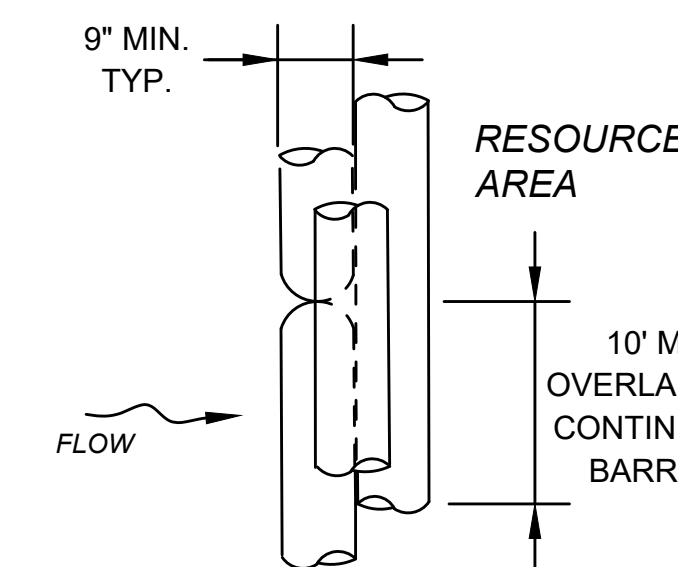
SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE

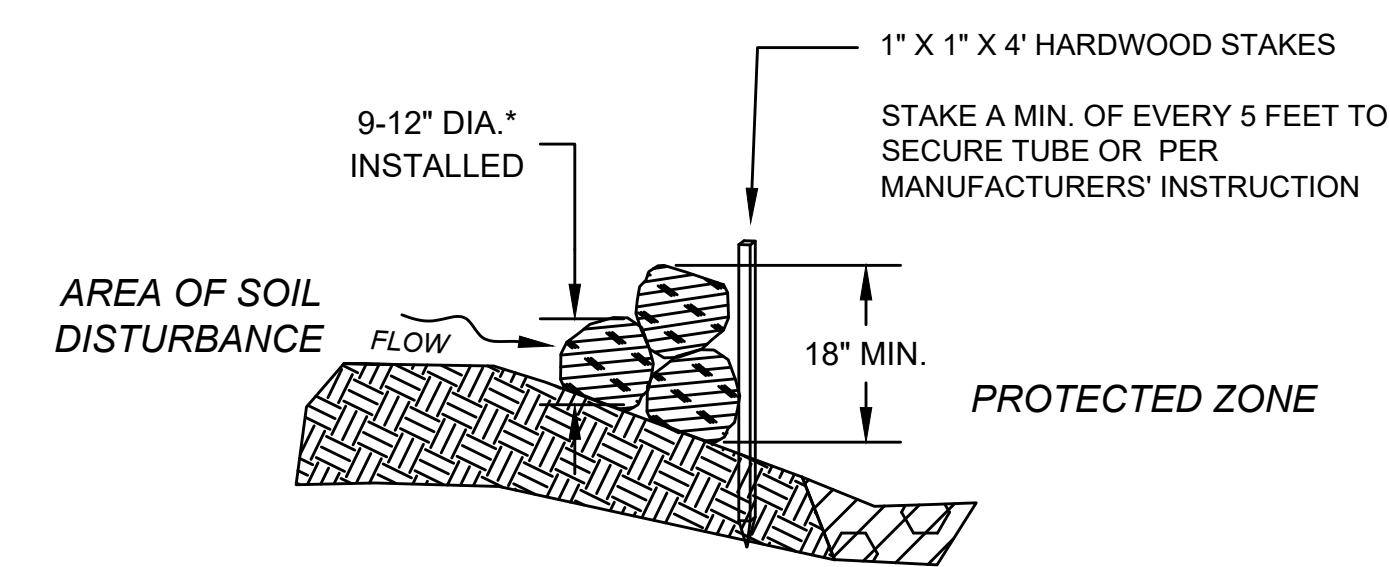


SEDIMENT BARRIERS

NOT TO SCALE

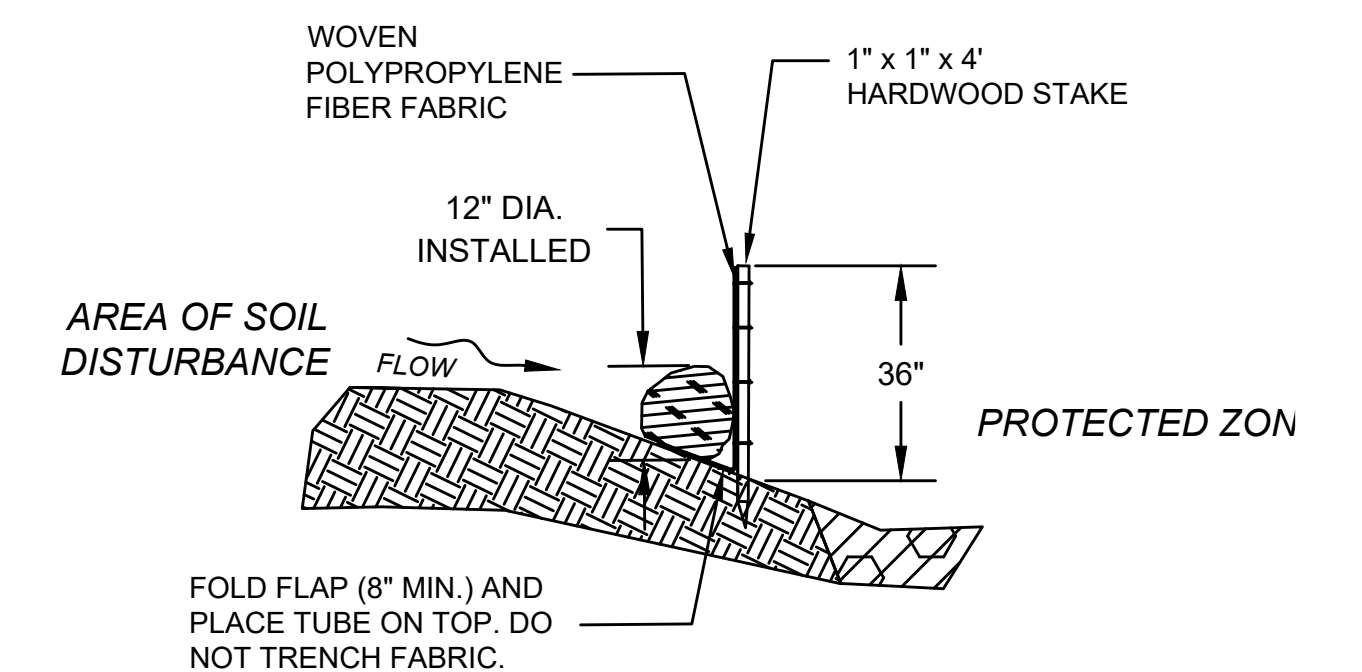


PLAN VIEW



COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE



COMPOST FILTER TUBE & SILT FENCE

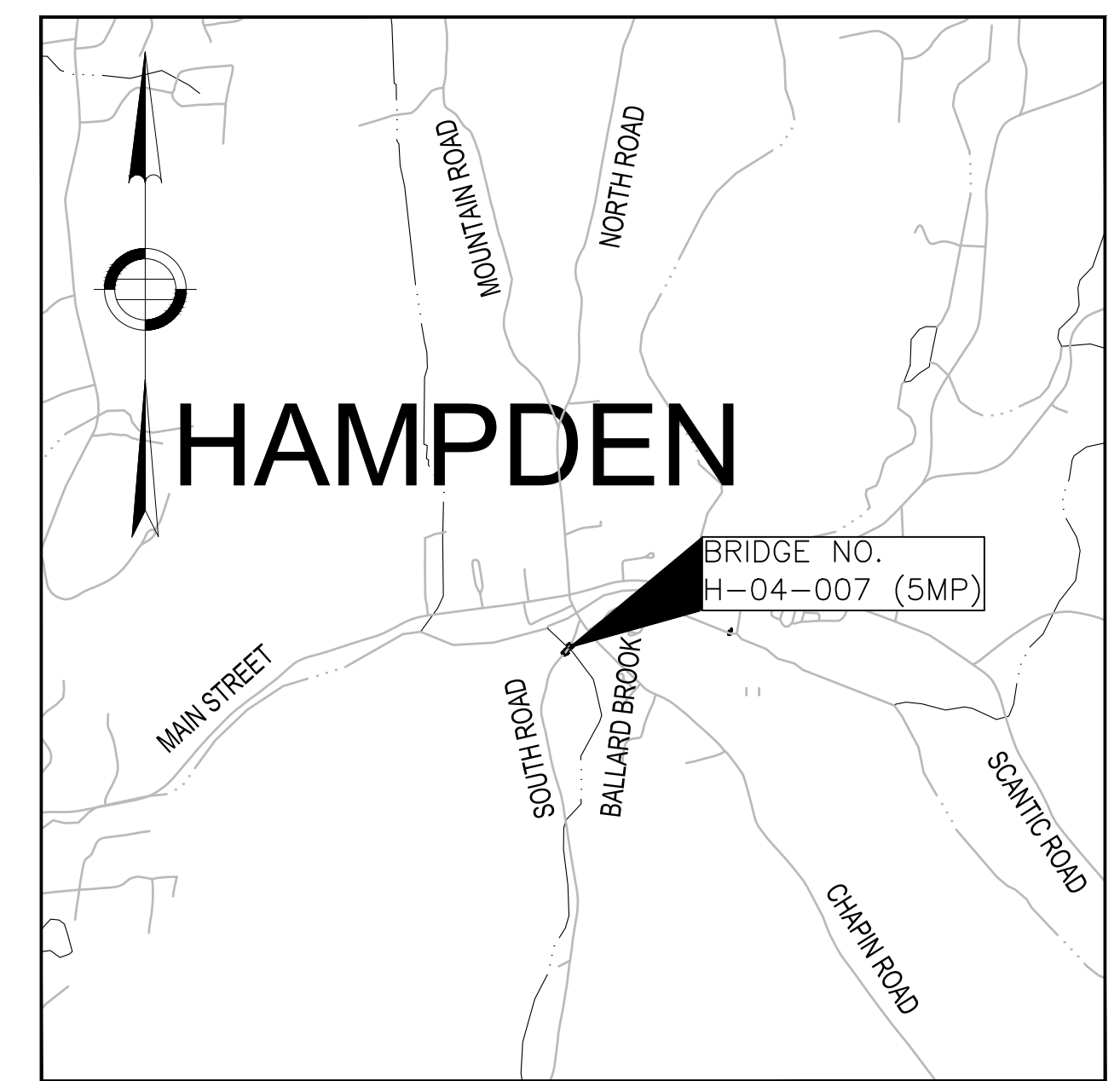
NOT TO SCALE

H:\04007_BRKEY_PLAN\DWG Plotted on 24-Oct-2025 3:56 PM

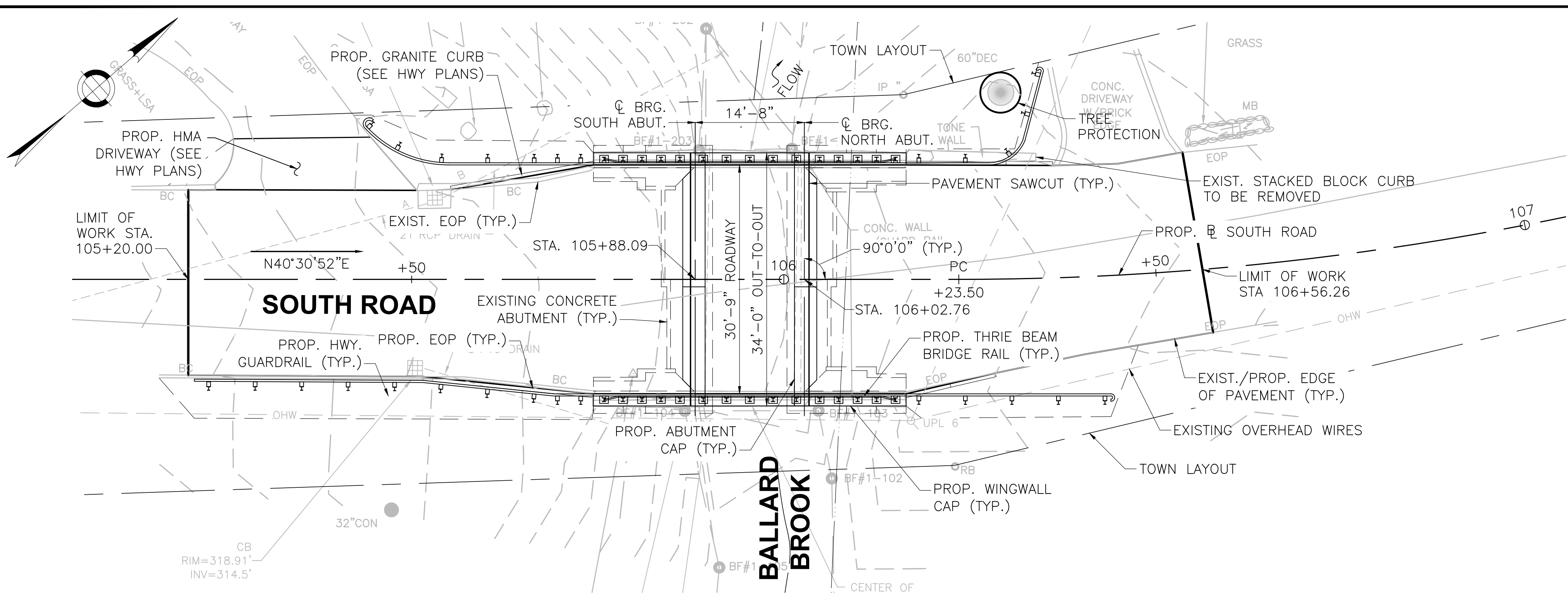
HAMPDEN SOUTH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	10	24
PROJECT FILE NO.		N/A	

KEY PLAN, PROFILE, & INDEX



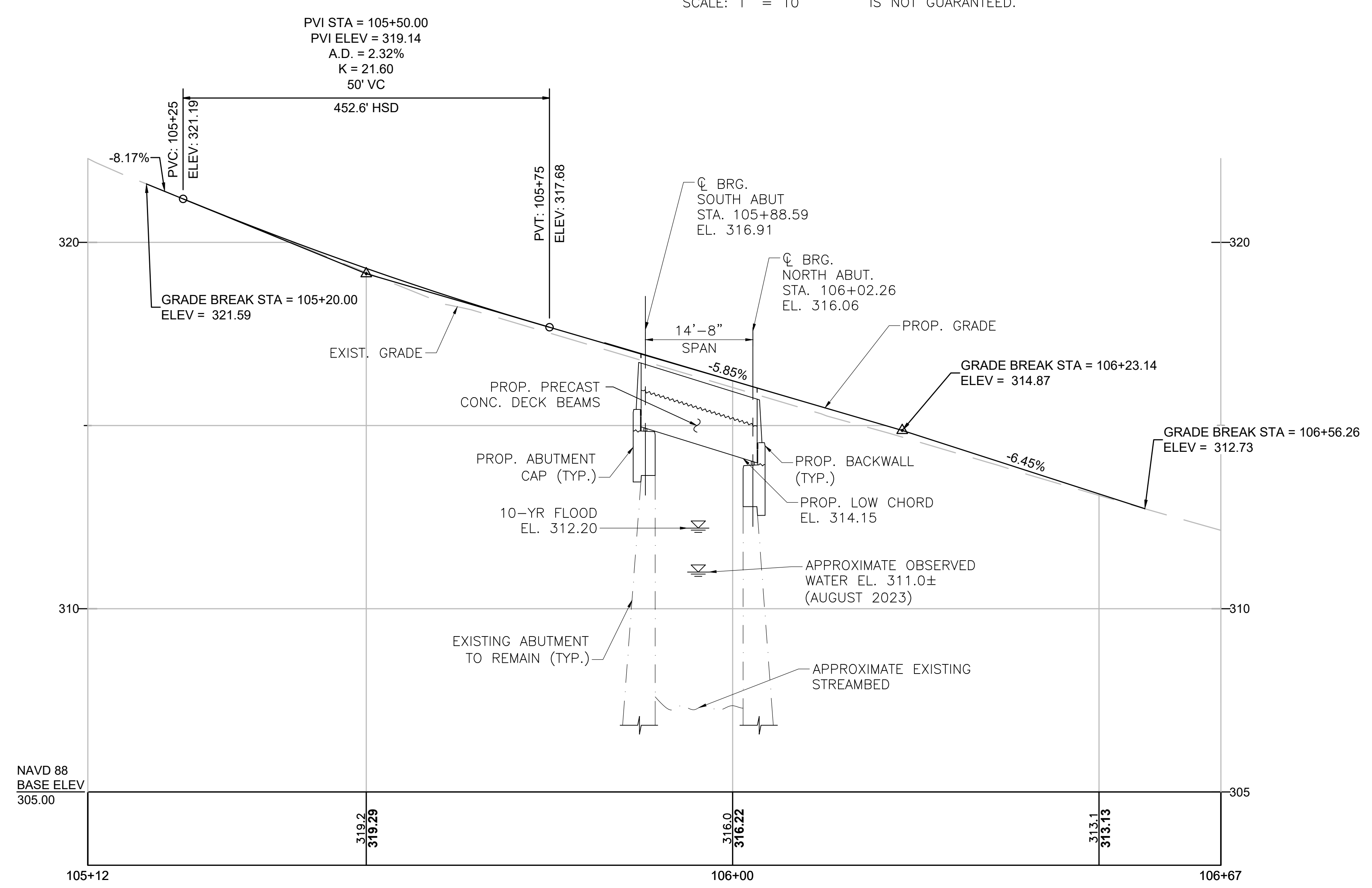
LOCUS
SCALE: 1" = 2000'



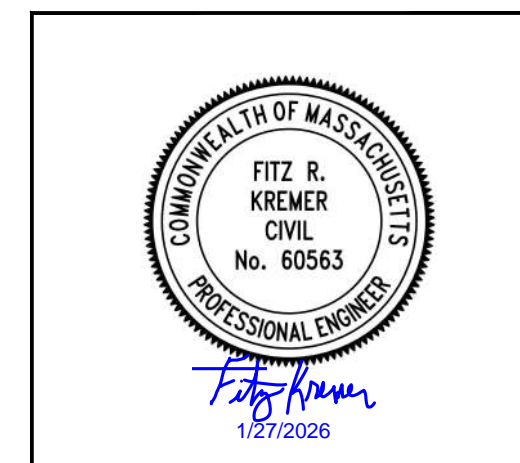
KEY PLAN
SCALE: 1" = 10'
*EXISTING SUBSTRUCTURE GEOMETRY BELOW GRADE IS BASED ON 1938 RECORD PLANS AND IS NOT GUARANTEED.

SHEET LIST

- 1 KEY PLAN, PROFILE, & INDEX
- 2 GENERAL NOTES
- 3 GENERAL PLAN & ELEVATION
- 4 STAGING SECTIONS
- 5 LONGITUDINAL & CROSS SECTIONS
- 6 SUBSTRUCTURE REPAIR DETAILS
- 7 TEMPORARY BEAM DETAILS
- 8 SOUTH ABUTMENT PLAN & ELEVATION
- 9 NORTH ABUTMENT PLAN & ELEVATION
- 10 WINGWALL ELEVATIONS
- 11 ABUTMENT DETAILS
- 12 BEAM DETAILS
- 13 DECK DETAILS
- 14 RAILING DETAILS (1 OF 2)
- 15 RAILING DETAILS (2 OF 2)



PROFILE ALONG SOUTH ROAD
HORIZ. SCALE: 1" = 10'-0"
VERT. SCALE: 1" = 2'-0"



vhb
260 Arsenal Pl Ste 2
Watertown, MA 02471
617.924.1770 FAX 617.924.2286

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35
10/30/2025
DATE

OCTOBER 24, 2025 ISSUED FOR CONSTRUCTION

PROPOSED SUPERSTRUCTURE REPLACEMENT
HAMPDEN
SOUTH ROAD
OVER BALLARD BROOK

GENERAL NOTES

DESIGN:

IN ACCORDANCE WITH:

THE 2020 AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS LRFD BRIDGE DESIGN SPECIFICATIONS FOR HL-93 LOADING.

BENCHMARKS:

SPIKE SET IN UTILITY POLE 4
N 2849112.2950, E 408190.8600, EL. 311.03'

SPIKE IN UTILITY POLE 7
N 2848897.2620, E 408043.1670, EL. 326.30'

MAG NAIL
N 2848977.097, E 408104.819, EL. 317.12'

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

SURVEY:

TOPOGRAPHICAL INFORMATION FROM A SURVEY BY VANASSE HANGEN BRUSTLIN, INC. PERFORMED IN AUGUST 2023.

SCALES:

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

EXISTING CONDITIONS:

THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENTS AND SURVEY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ADEQUACY AND ACCURACY THEREOF, AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE OR SHE HAS MADE THE REQUIRED MEASUREMENTS AND THE EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

CONSTRUCTION REQUIREMENTS AND PROCEDURES:

THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO ENSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS DURING DEMOLITION AND CONSTRUCTION.

THE CONTRACTOR SHALL SUBMIT DEMOLITION AND ERECTION PLANS AND CALCULATIONS STAMPED BY A MASSACHUSETTS P.E. TO THE ENGINEER FOR REVIEW AND APPROVAL.

THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE EXISTING ABUTMENTS DURING CONSTRUCTION ACTIVITIES.

IF THERE ARE REVISIONS TO APPROVED PLANS, THE CONTRACTOR SHALL SUBMIT THESE CHANGES TO THE ENGINEER OF RECORD AND MASSDOT FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

DEBRIS:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTAINING ALL DEBRIS GENERATED DURING THE WORK AND PREVENTING THE DEBRIS FROM DROPPING INTO OR BEING DISPERSED IN THE RIVER.

ALL DEBRIS SHALL BE CAPTURED AND DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL LAWS AND REGULATIONS.

CONSTRUCTION JOINTS:

CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE ENGINEER.

UTILITIES

THE CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE ALL EXISTING UTILITIES.

REINFORCEMENT:

ALL REINFORCING STEEL SHALL BE EPOXY COATED.

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31 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 CLEARING 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.

CONCRETE:

UNLESS OTHERWISE SPECIFIED, ALL CONCRETE SHALL BE 5000 HP CONCRETE.

ALL CONCRETE MIXES SHALL BE MASSDOT APPROVED MIXES.

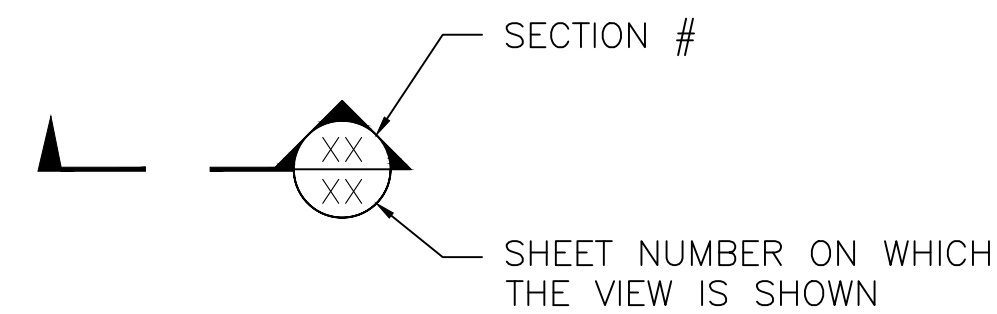
ANCHOR BOLTS

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

MEMBRANE WATERPROOFING:

MEMBRANE WATERPROOFING SHALL BE PREFORMED SHEET MEMBRANE WATERPROOFING FOR BRIDGE DECKS.

SECTION MARK:



HAMPDEN SOUTH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	11	24
PROJECT FILE NO.		N/A	

GENERAL NOTES

HYDRAULIC DESIGN DATA	
DRAINAGE AREA (SQ. MILES)	0.97
DESIGN FLOOD DISCHARGE (C.F.S.)	118
DESIGN FLOOD FREQUENCY (YEARS)	10
DESIGN FLOOD VELOCITY (F.P.S.)	6.9
DESIGN FLOOD ELEVATION (FEET, NAVD)	312.2
BASE (100-YEAR) FLOOD DATA	
BASE FLOOD DISCHARGE (C.F.S.)	240
BASE FLOOD ELEVATION (FEET, NAVD)	313.6
DESIGN AND CHECK SCOUR DATA	
DESIGN SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	25
DESIGN FLOOD ABUTMENT SCOUR DEPTH (FEET)	N/A
DESIGN FLOOD PIER SCOUR DEPTH (FEET)	N/A
CHECK SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	50
CHECK FLOOD ABUTMENT SCOUR DEPTH (FEET)	N/A
CHECK FLOOD PIER SCOUR DEPTH (FEET)	N/A
FLOOD OF RECORD	
DISCHARGE (C.F.S.)	N/A
FREQUENCY (IF KNOWN, YEARS)	N/A
MAXIMUM ELEVATION (FEET, NAVD)	N/A
DATE (MM/YYYY)	N/A
HISTORY OF ICE FLOES	N/A
EVIDENCE OF SCOUR AND EROSION	N/A

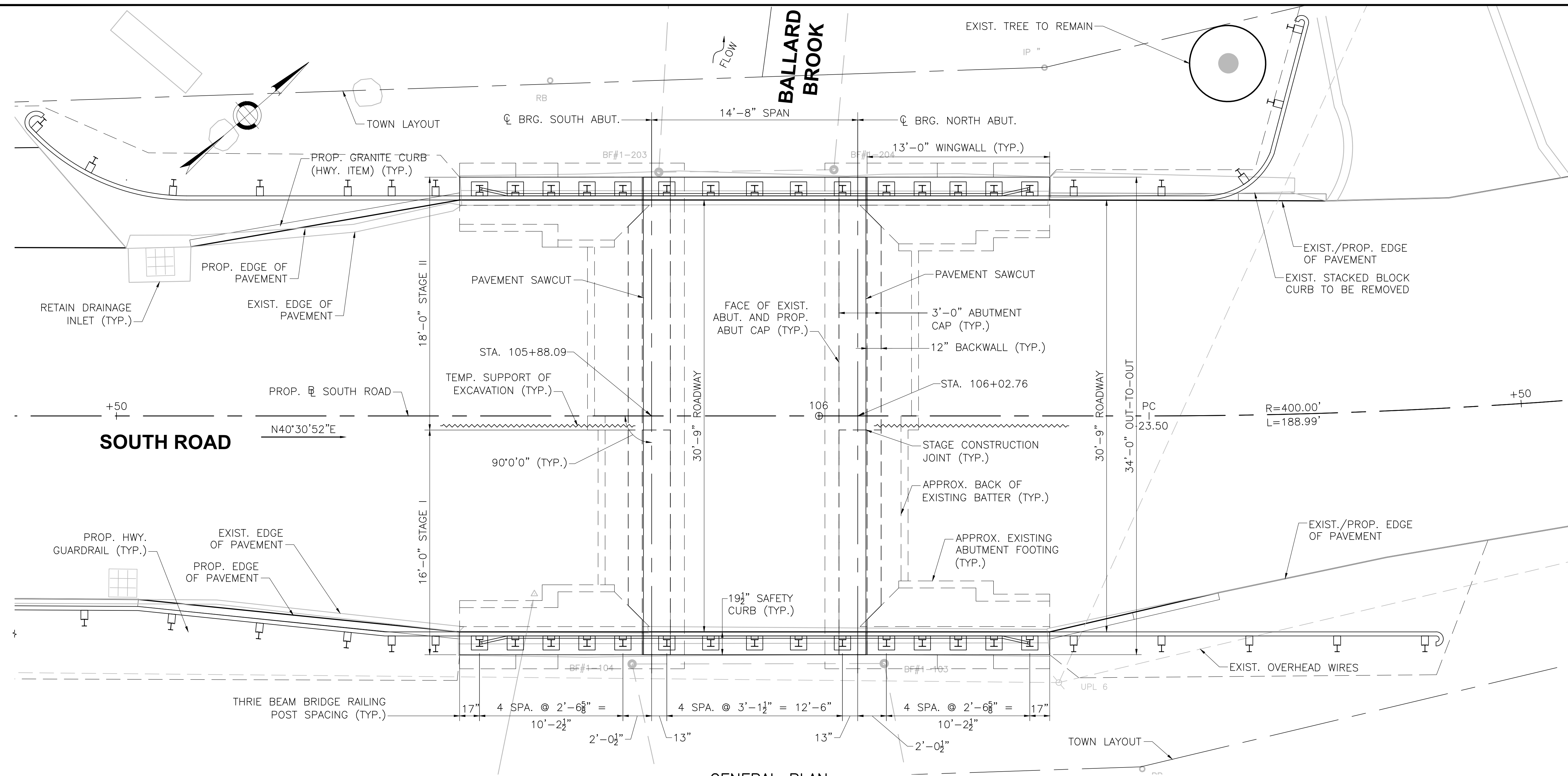
BRIDGE QUANTITIES

NO.	ITEM	UNIT	QUANTITY
114.1	DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. H-04-007 (5MP)	1	LS
127.11	REINFORCED CONCRETE EXCAVATION - SUBSTRUCTURE MODIFICATIONS	1	LS
127.12	REINFORCED CONCRETE EXCAVATION - ABUTMENT REPAIRS	5	CY
140.	BRIDGE EXCAVATION	25	CY
151.	GRAVEL BORROW	35	CY
156.	CRUSHED STONE	5	TON
450.601	SUPERPAVE BRIDGE SURFACE COURSE - 9.5 POLYMER (SSC-12.5-P)	5	TON
450.70	SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 (SPC-B-9.5)	5	TON
482.31	SAWING & SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES	62	FT
905.	4000 PSI 3/8" 660 CEMENT CONCRETE	5	CY
910.1	STEEL REINFORCEMENT FOR STRUCTURES - EPOXY COATED	375	LB
912.4	DRILLED AND GROUTED #4 DOWELS	70	EA
950.5	TEMPORARY SUPPORT OF EXCAVATION	1	LS
960.111	TEMPORARY SUPPORT BEAM	1	LS
994.01	TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. H-04-007 (5MP)	1	LS
995.01	BRIDGE STRUCTURE - BRIDGE NO. H-04-007 (5MP)	1	LS

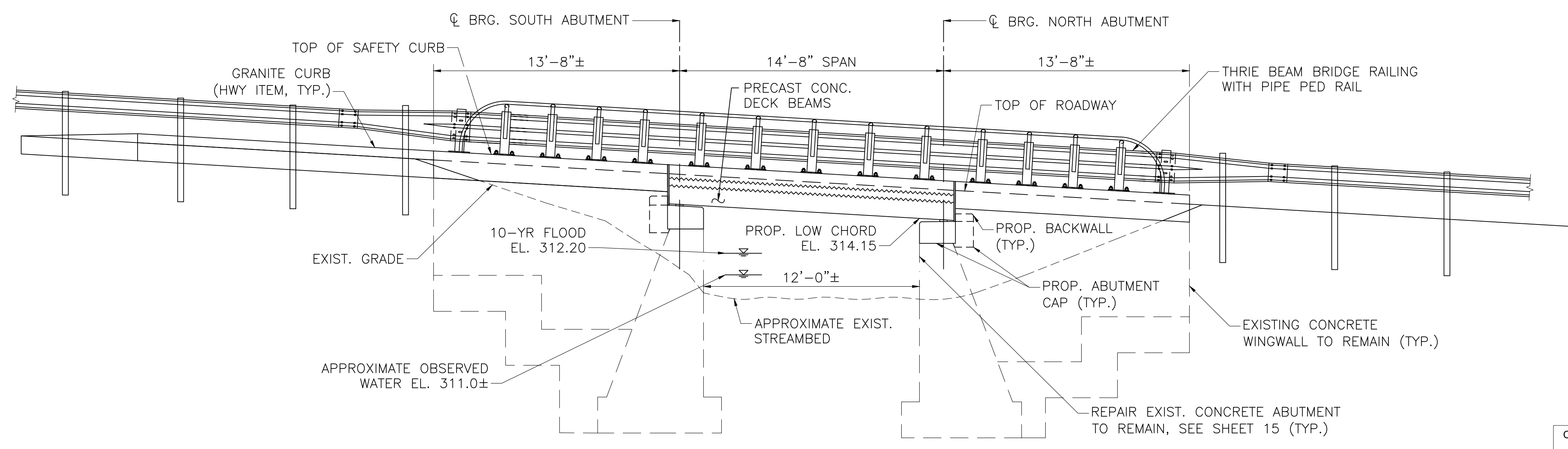
COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35
[Signature]
DISTRICT TWO BRIDGE ENGINEER 10/30/2025 DATE

OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

HAMPDEN SOUTH ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	12	24
PROJECT FILE NO.		N/A	
GENERAL PLAN & ELEVATION			



GENERAL PLAN
SCALE: 1/4" = 1'-0"



ELEVATION
SCALE: 1/4" = 1'-0"

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35
10/30/2025
DISTRICT TWO BRIDGE ENGINEER

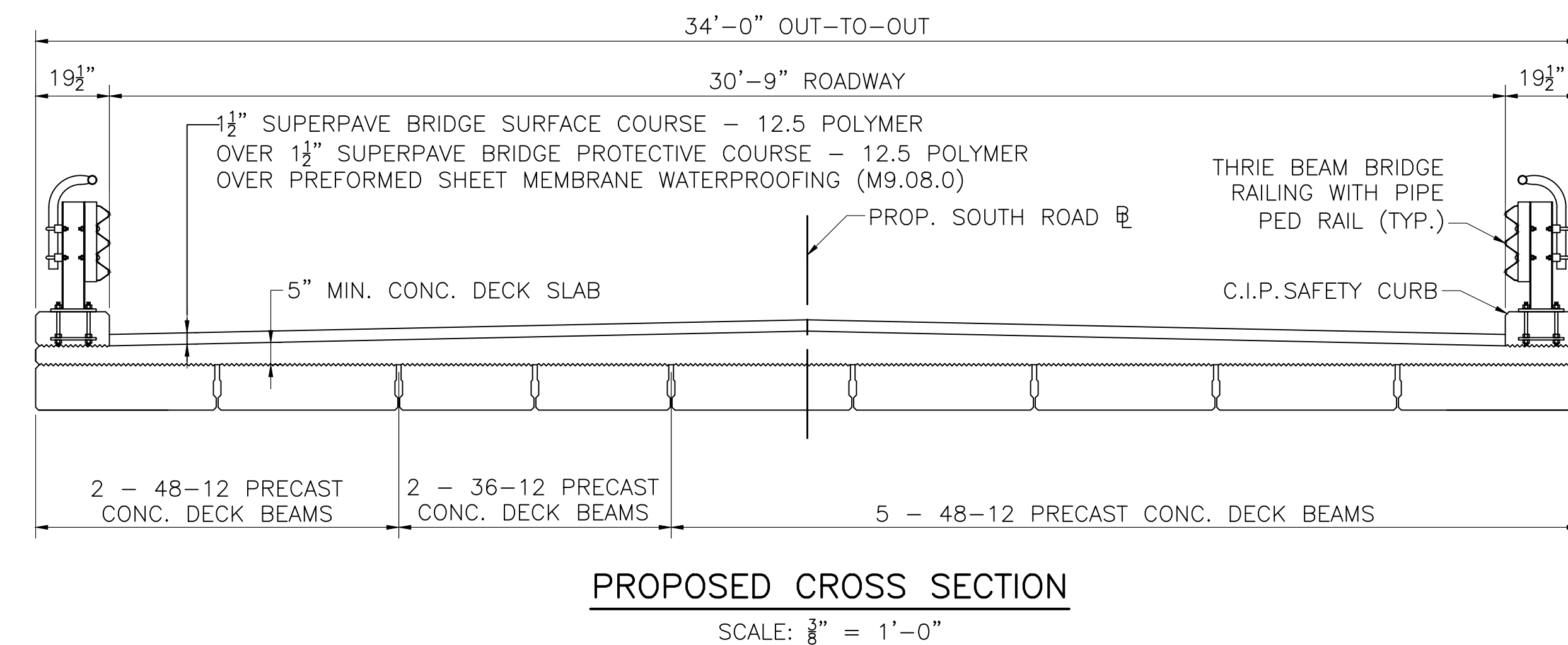
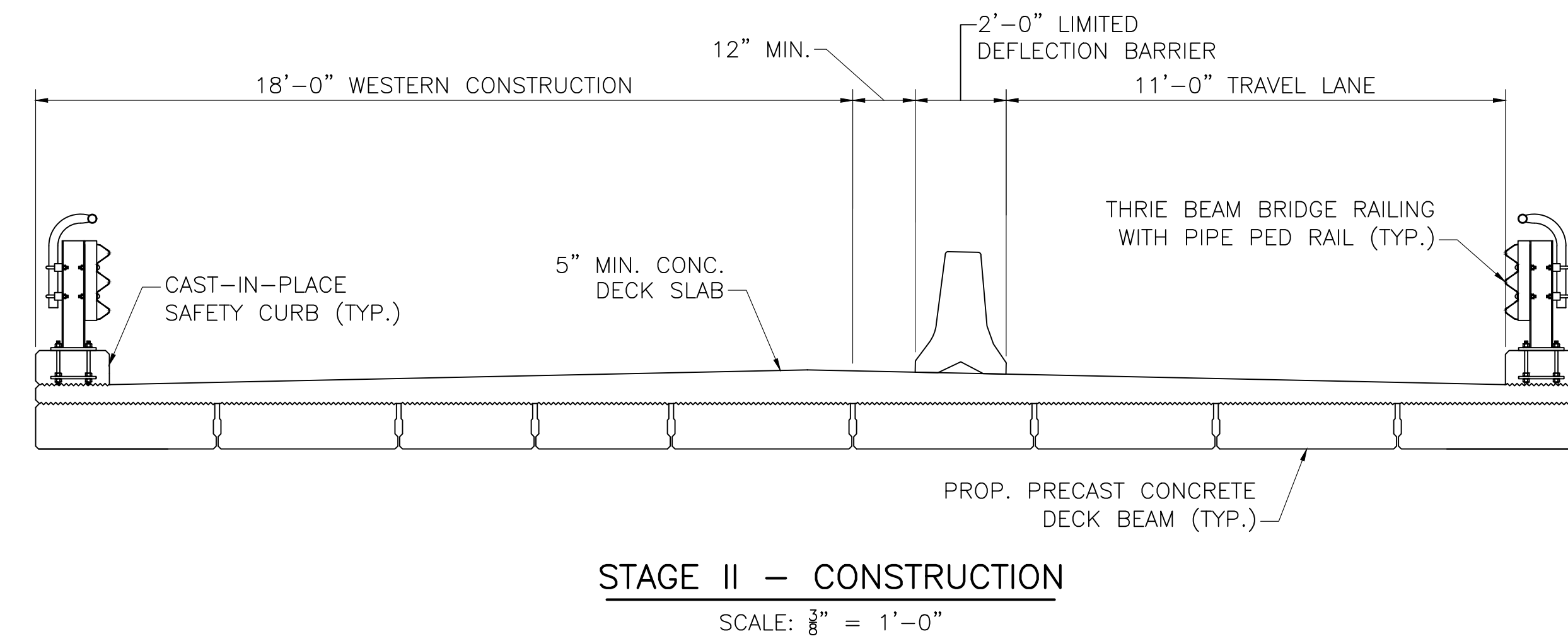
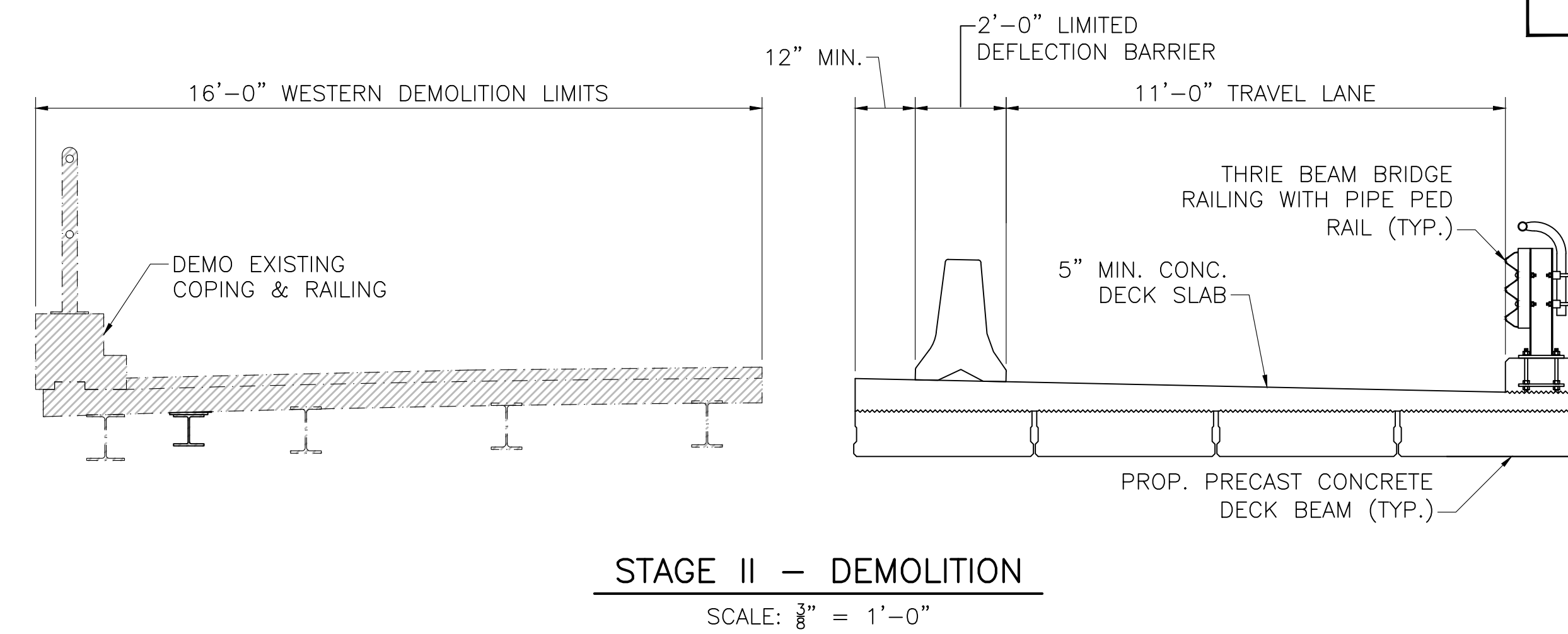
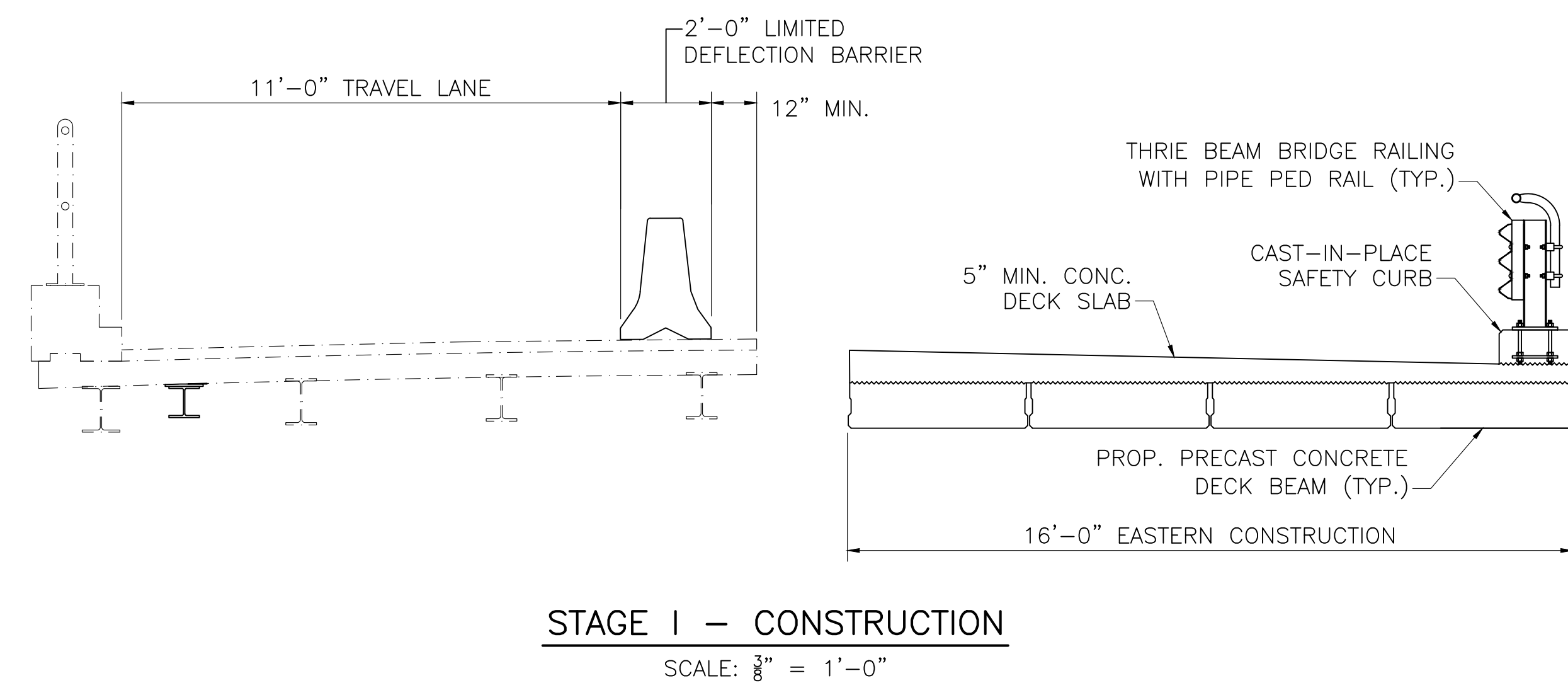
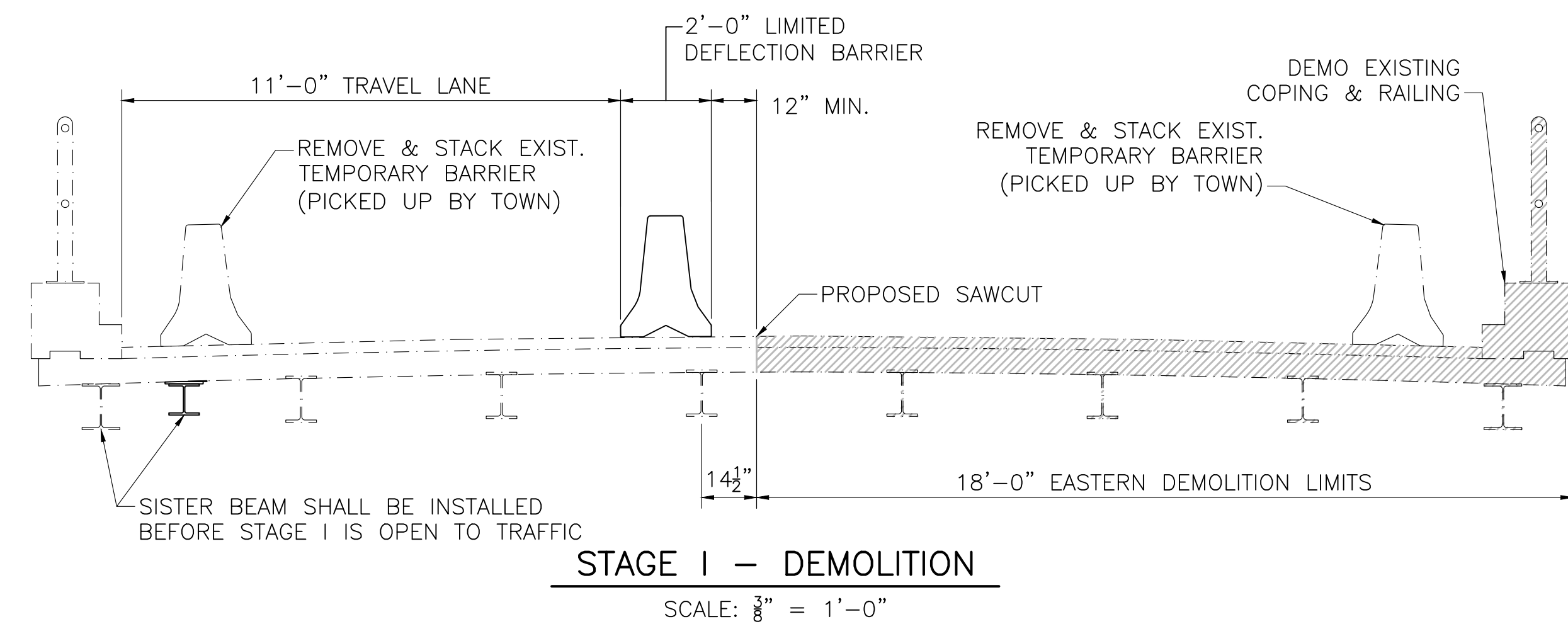
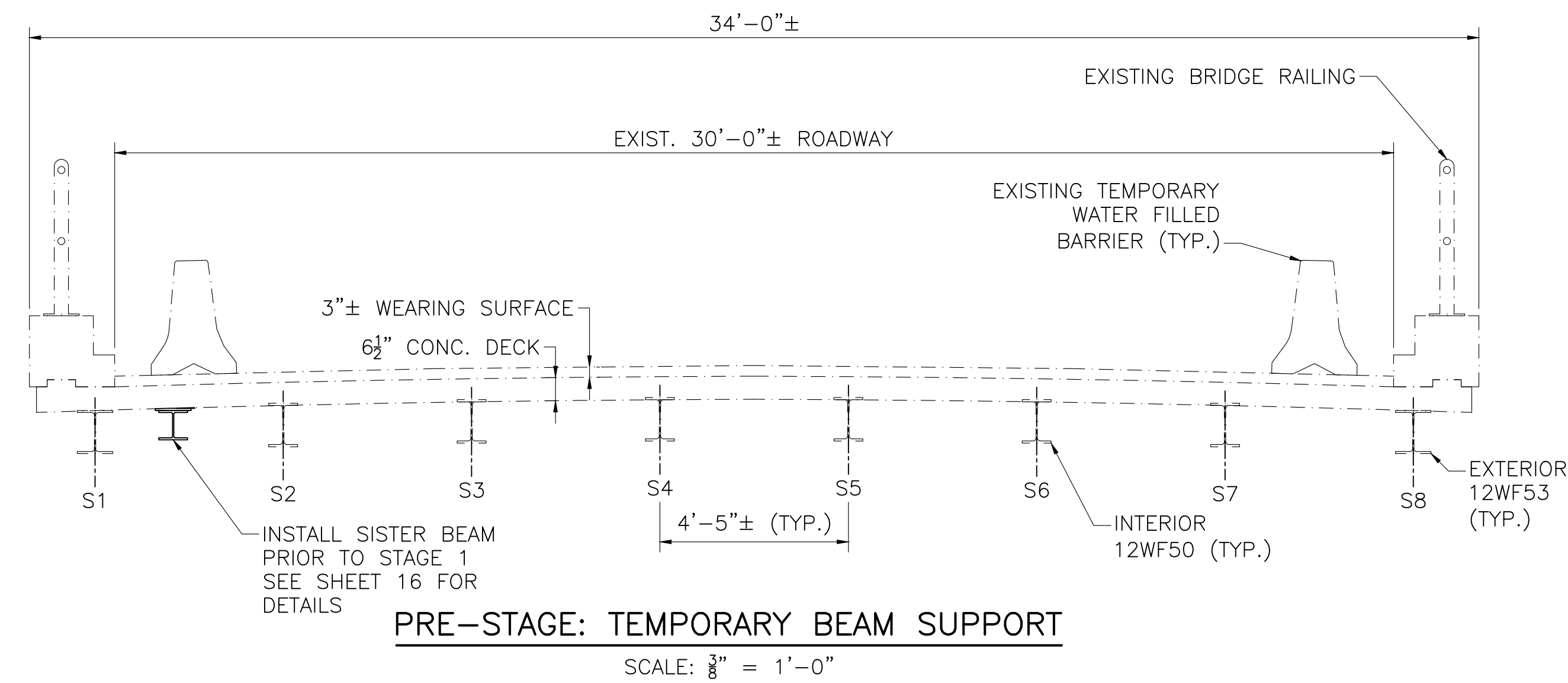
OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

H04007_BRIDGE PLAN ELEV.DWG Plotted on 24-Oct-2025 3:57 PM

HAMPDEN SOUTH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	13	24
PROJECT FILE NO.		N/A	

STAGING SECTIONS



NOTE:
SEE SHEET 22 FOR STAGED CONSTRUCTION NOTES AND DETAIL.

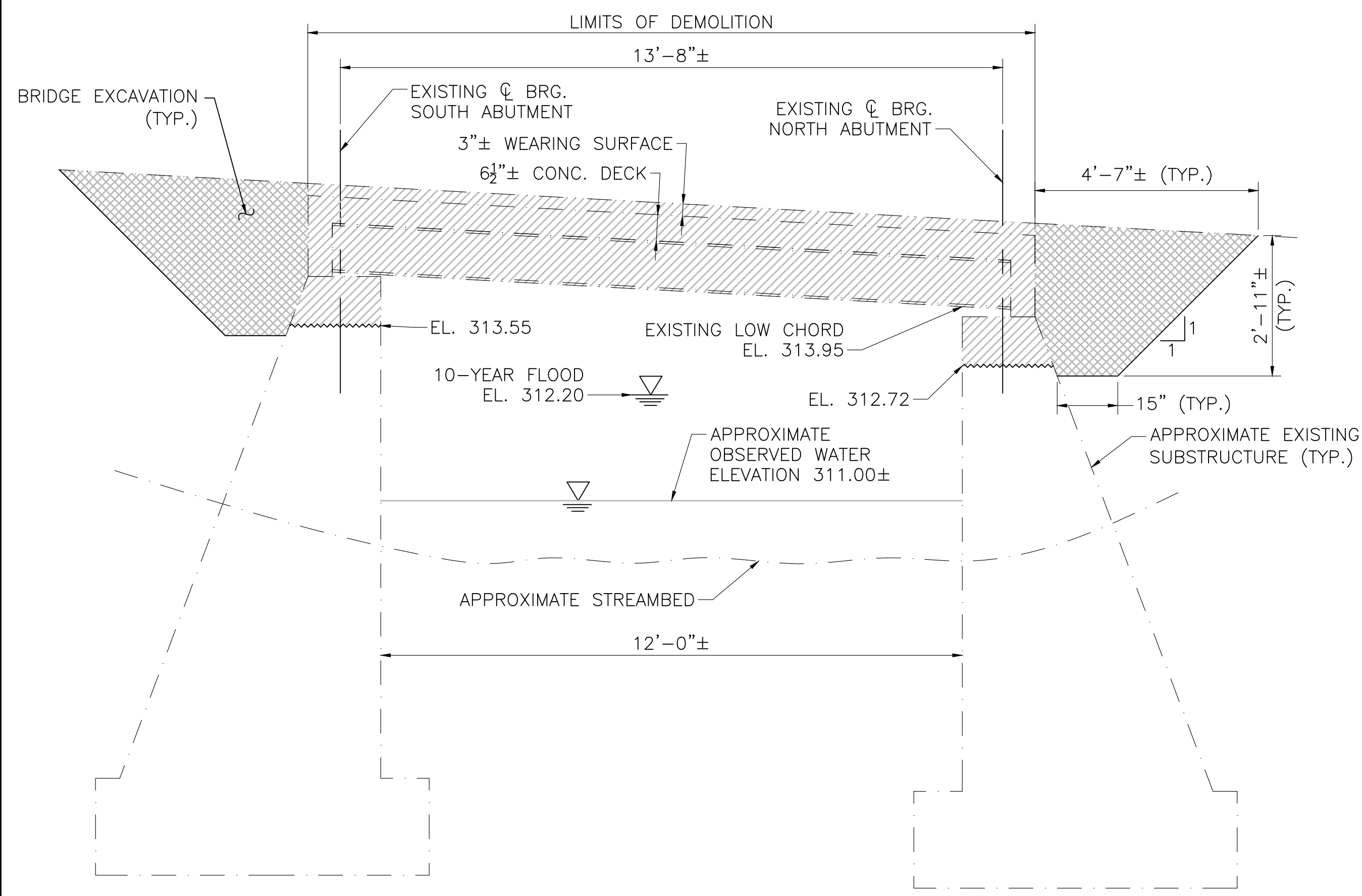
COMMONWEALTH OF MASSACHUSETTS
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MASS. GEN. LAWS CH 85 S 35
10/30/2025
DISTRICT TWO BRIDGE ENGINEER

OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

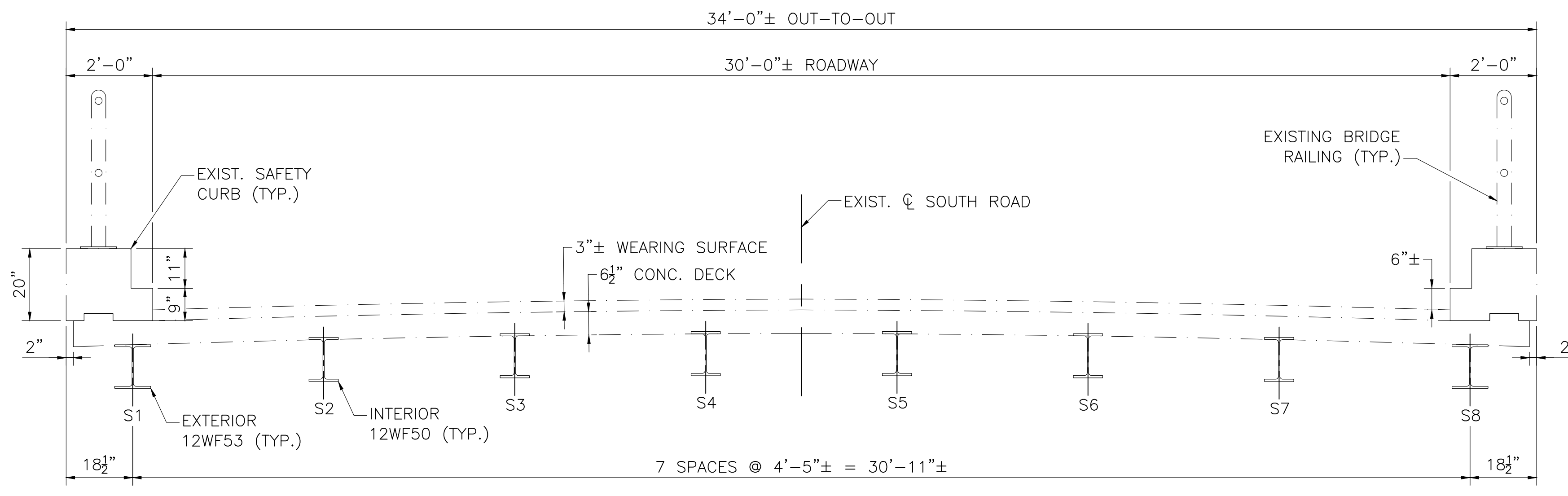
HAMPDEN SOUTH ROAD

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PROJECT FILE NO.		N/A	

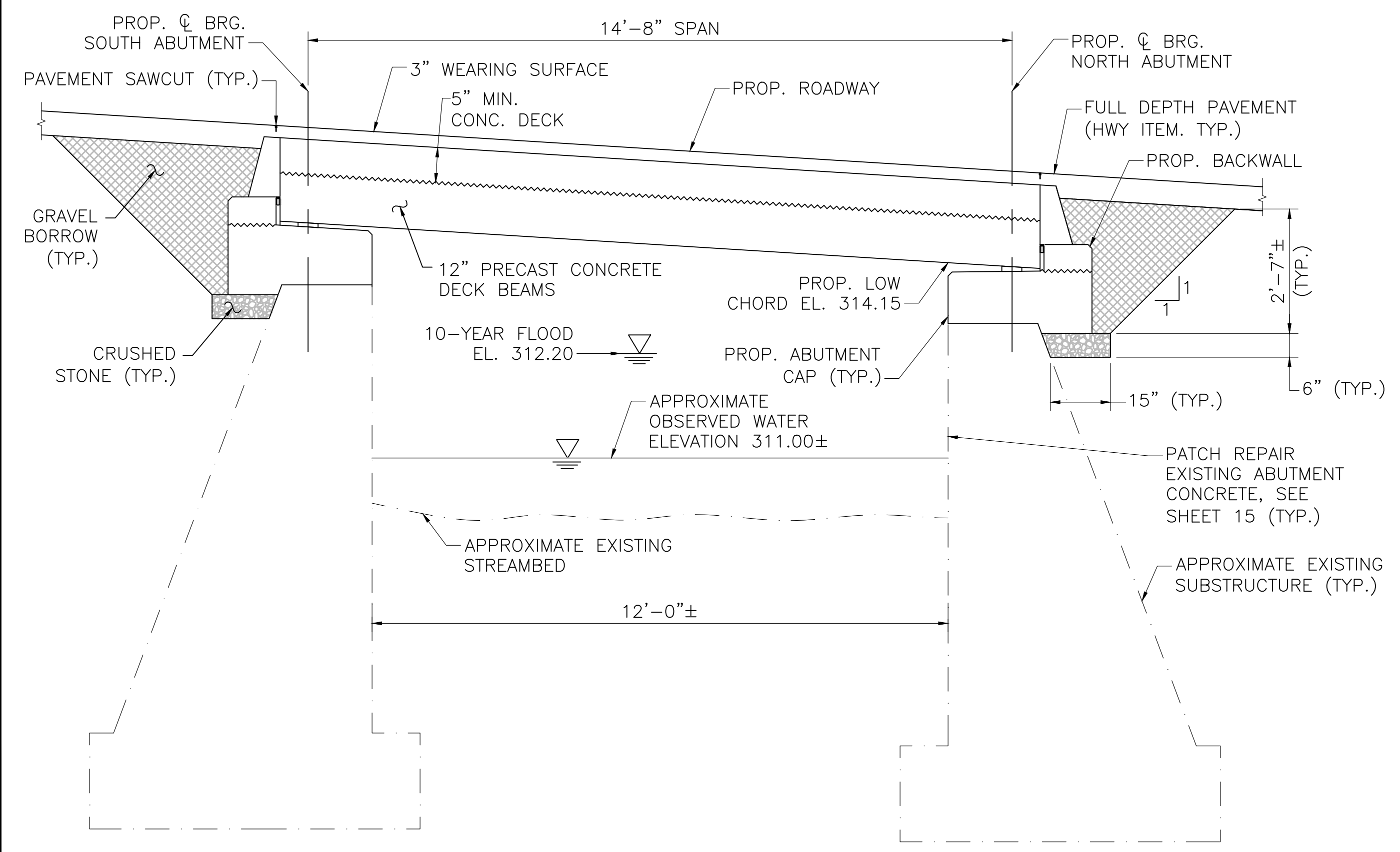
LONGITUDINAL & CROSS SECTIONS



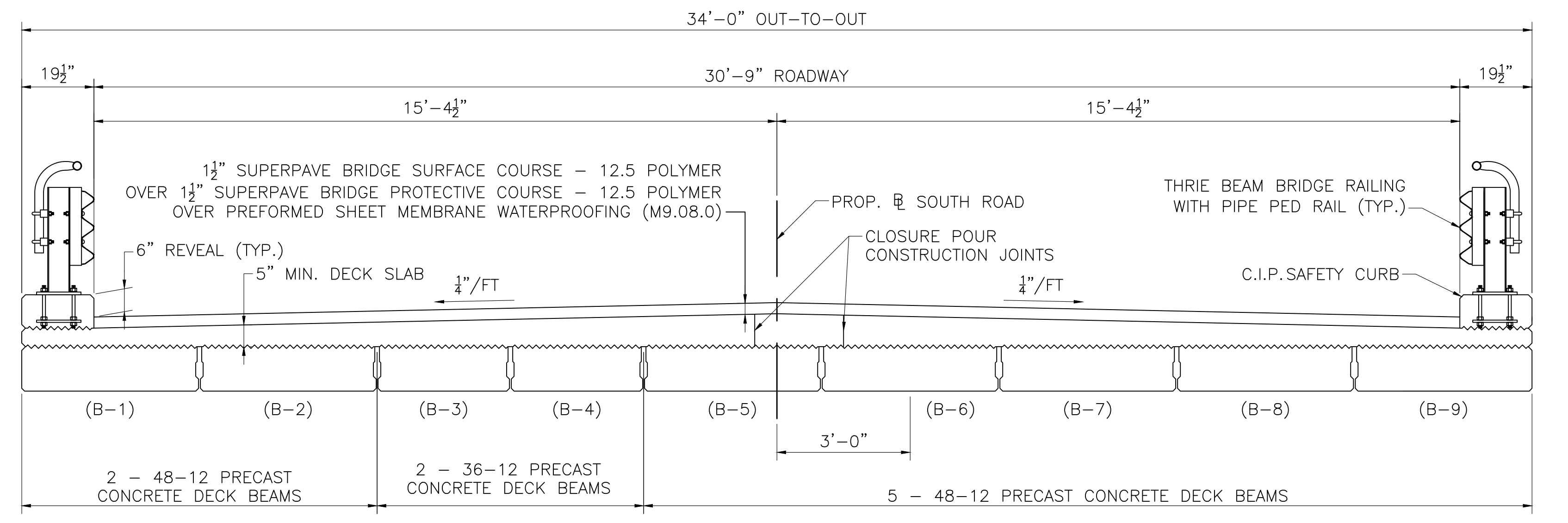
EXISTING LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"



EXISTING CROSS SECTION
SCALE: 1/2" = 1'-0"



PROPOSED LONGITUDINAL SECTION
SCALE: 1/2" = 1'-0"



PROPOSED CROSS SECTION
SCALE: 1/2" = 1'-0"

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MassDOT, Highway Division
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MASS. GEN. LAWS CH 85 S 35
10/30/2025

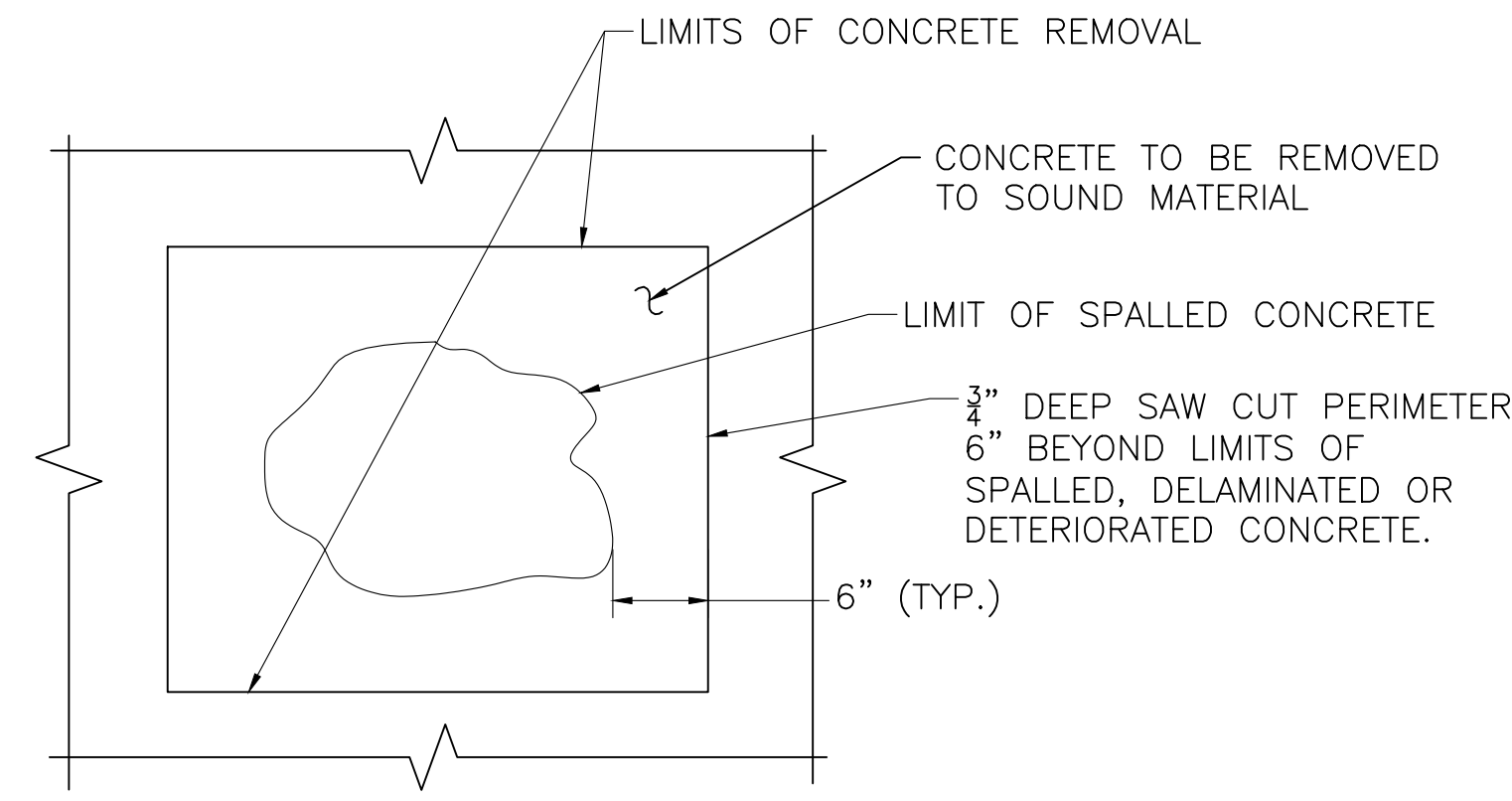
OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

H04007_BR(LONG & CROSS)DWG Plotted on 24-Oct-2025 3:57 PM

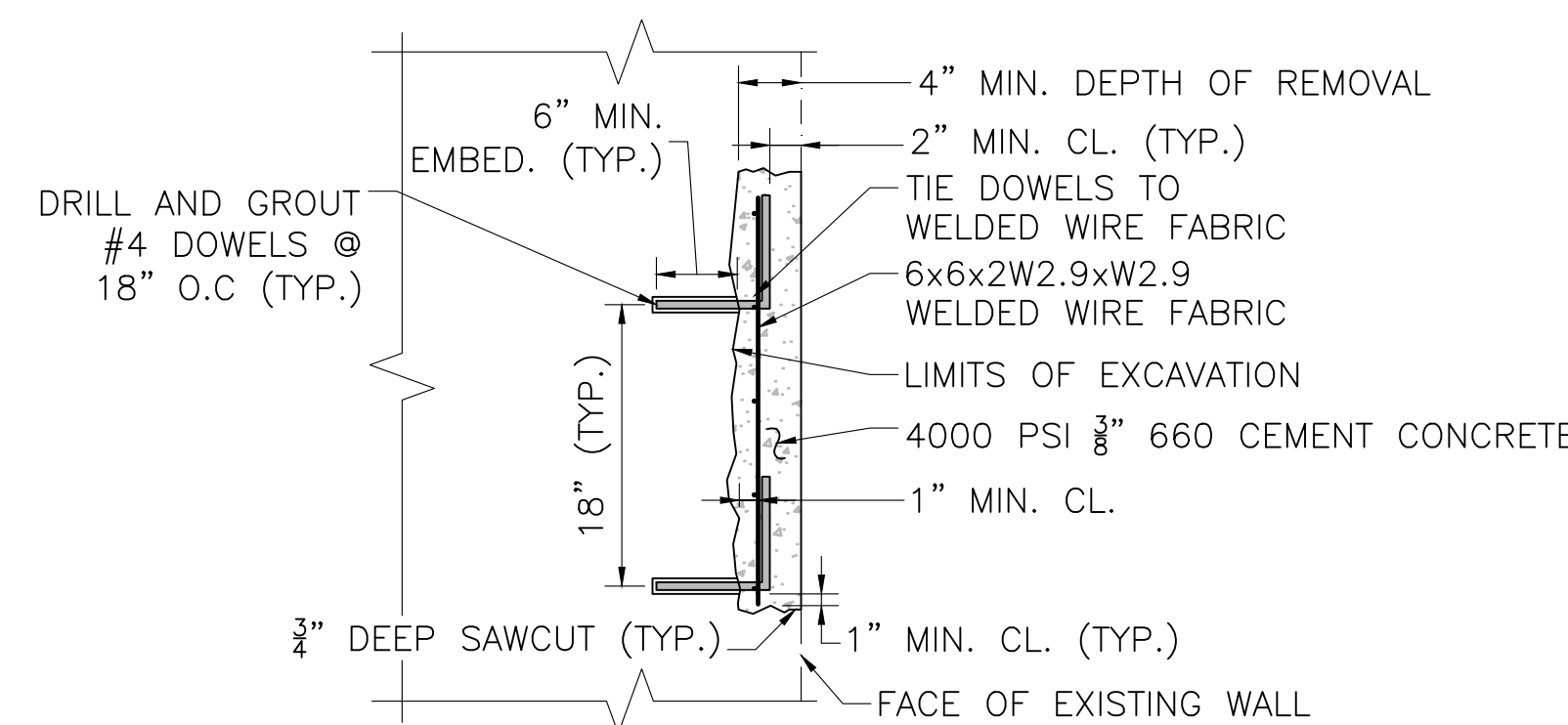
HAMPDEN SOUTH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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PROJECT FILE NO.		N/A	

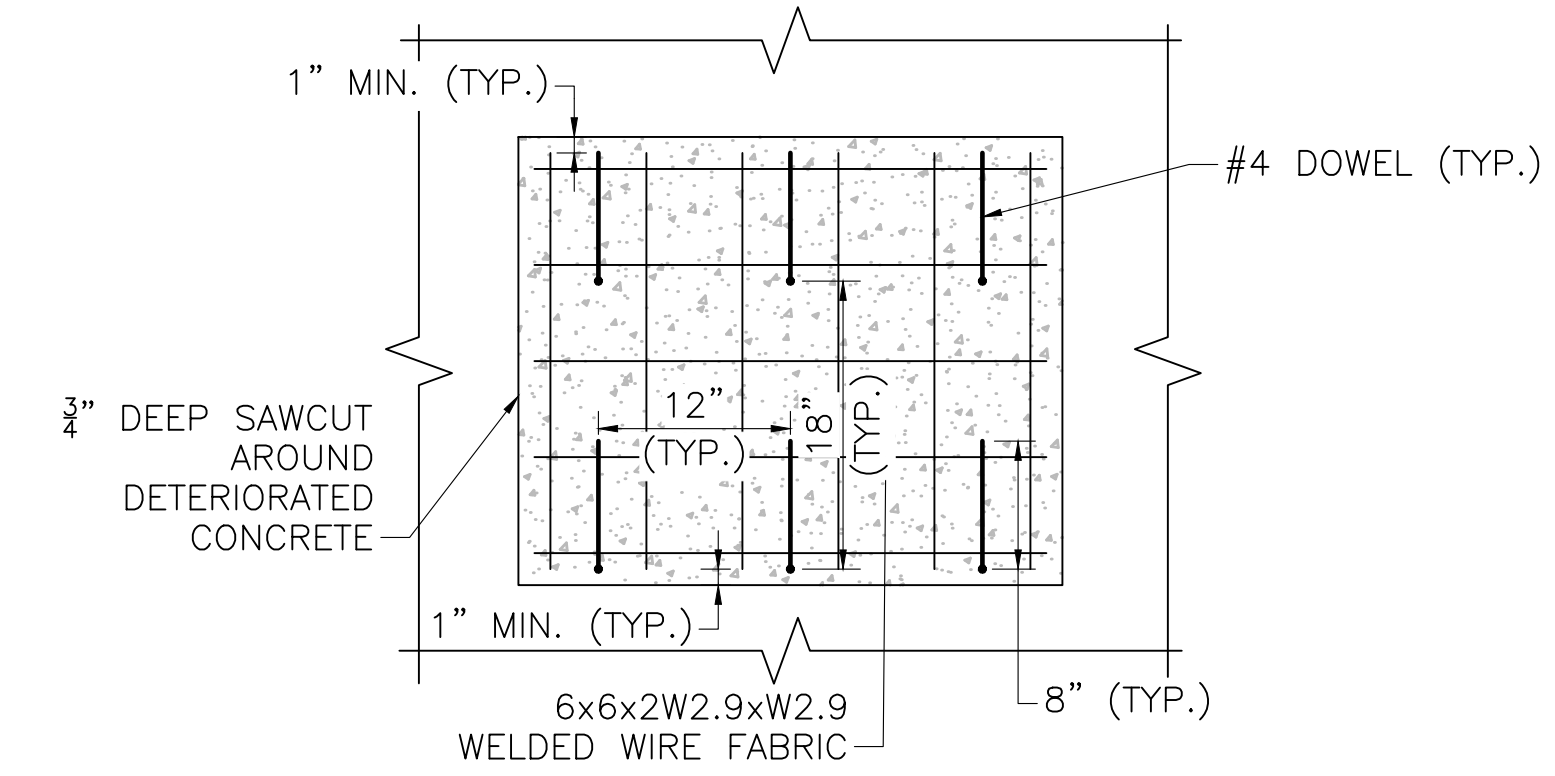
SUBSTRUCTURE REPAIR DETAILS



TYPICAL REPAIR DETAIL
SCALE: 1" = 1'-0"

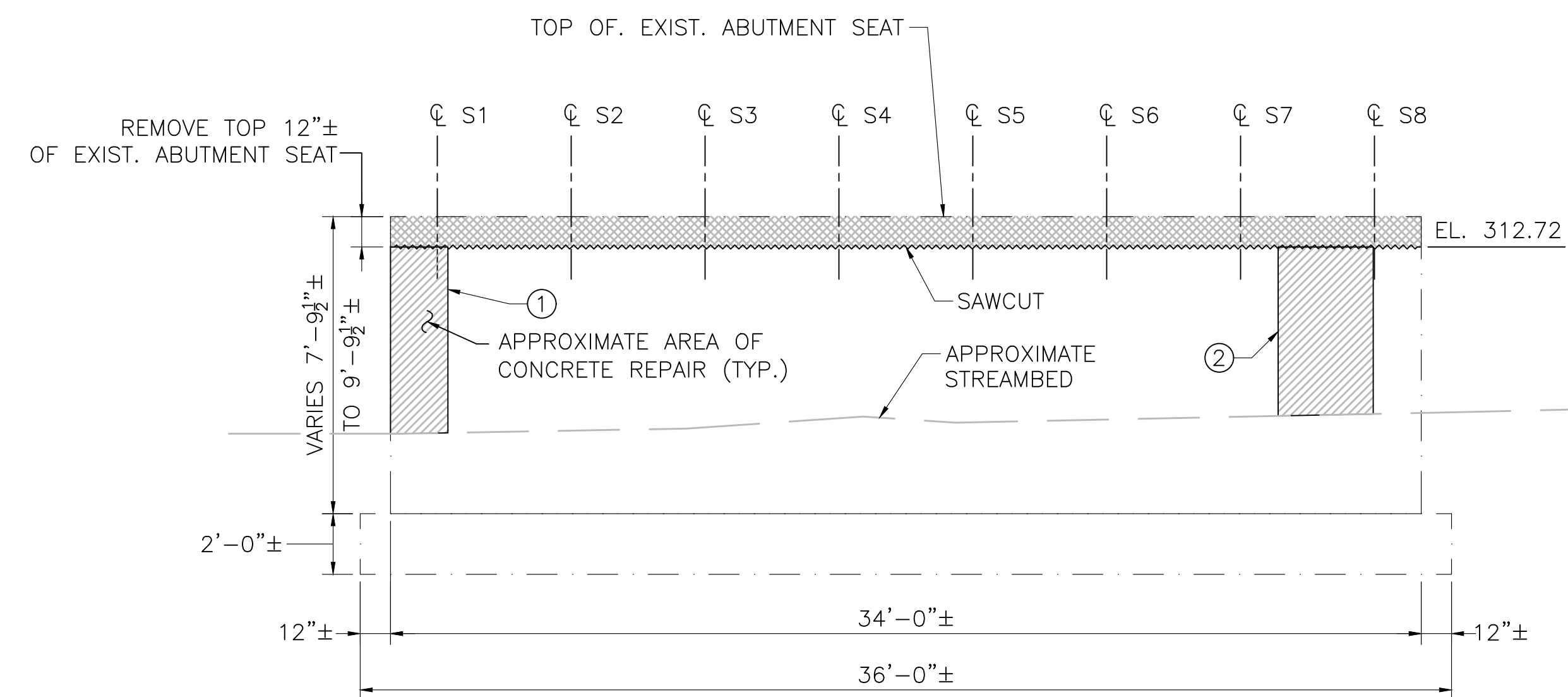


VERTICAL SECTION: TYPICAL REPAIR
SCALE: 1" = 1'-0"

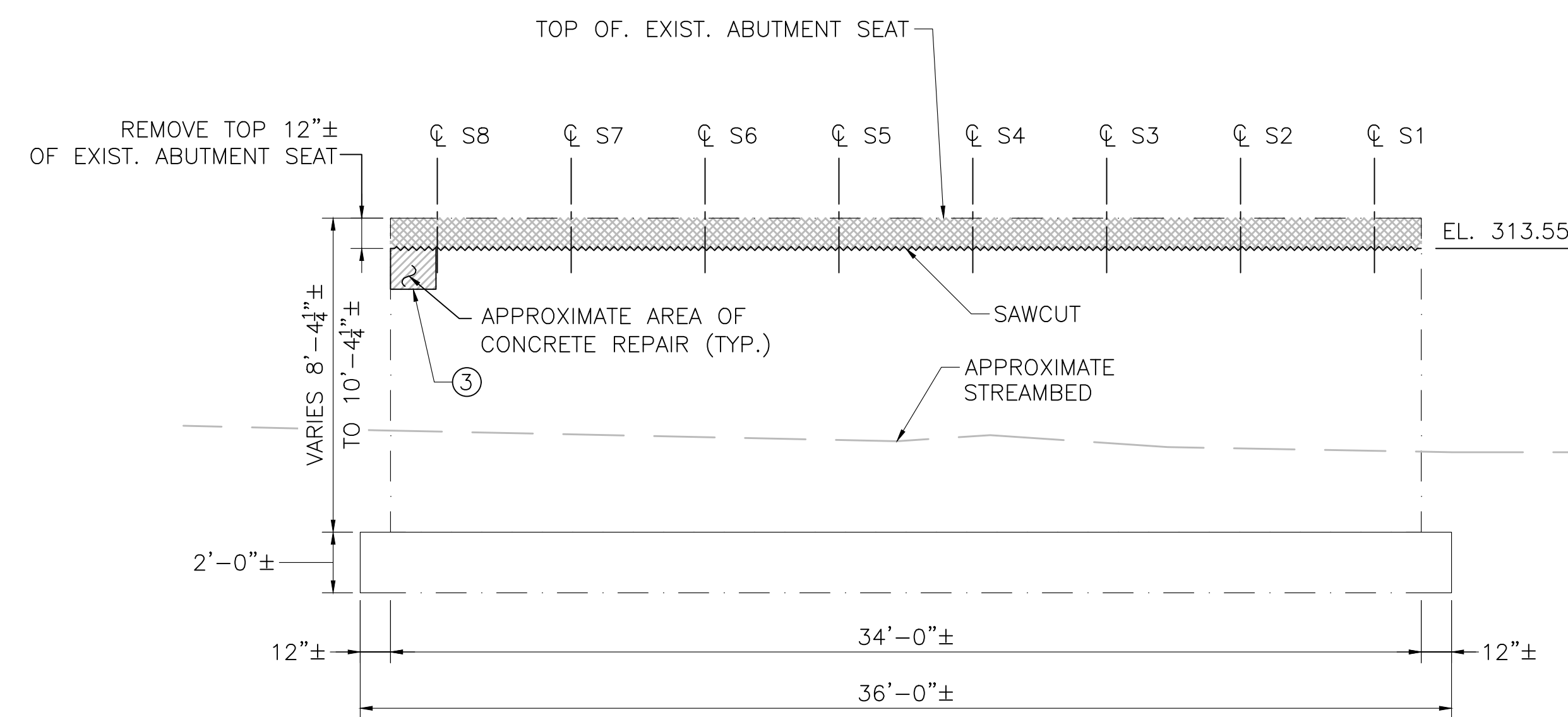


NOTE:
#4 DOWELS SHALL HAVE A MINIMUM EDGE DISTANCE OF 6 INCHES.

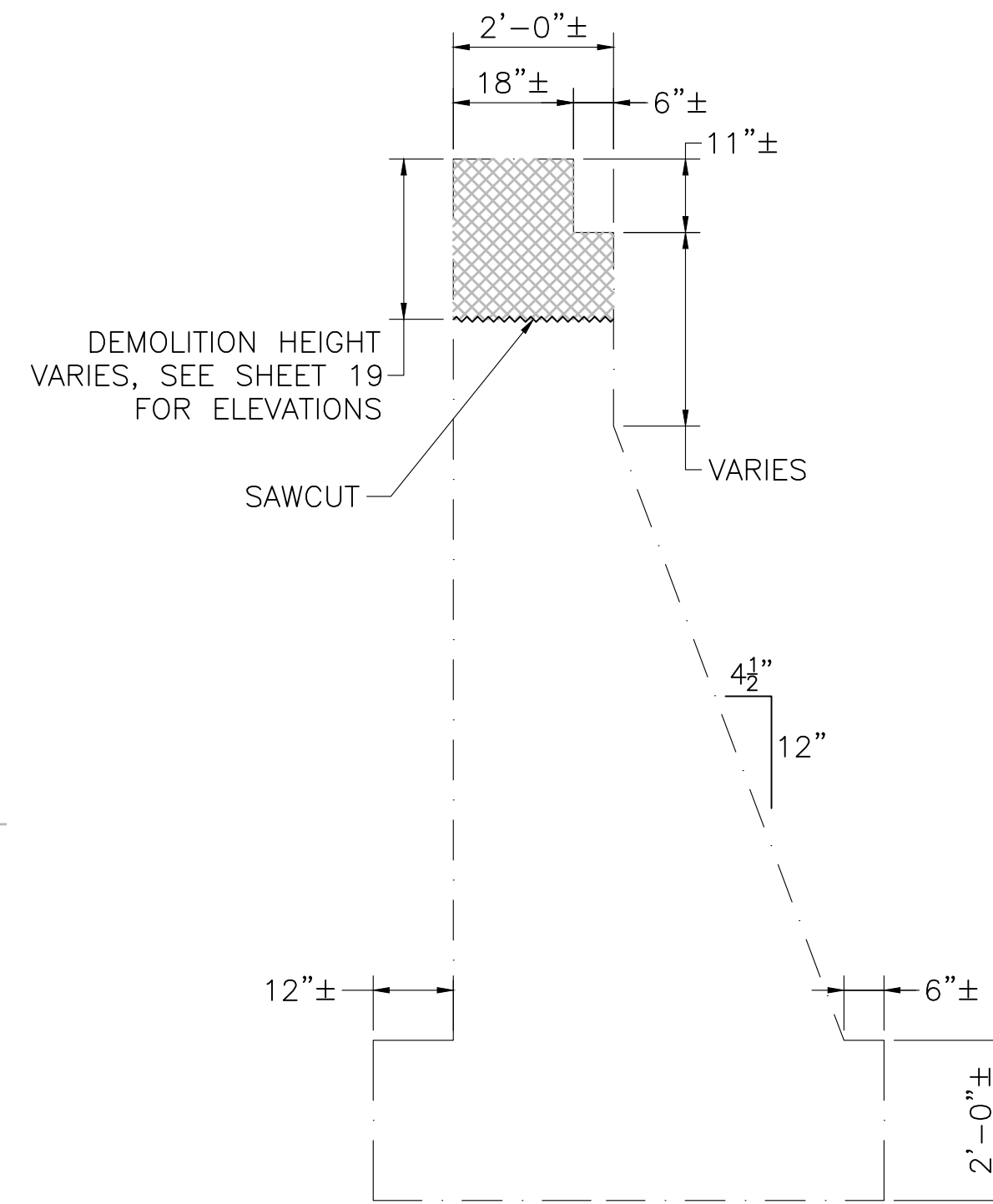
VERTICAL SECTION: TYPICAL REPAIR
SCALE: 1" = 1'-0"



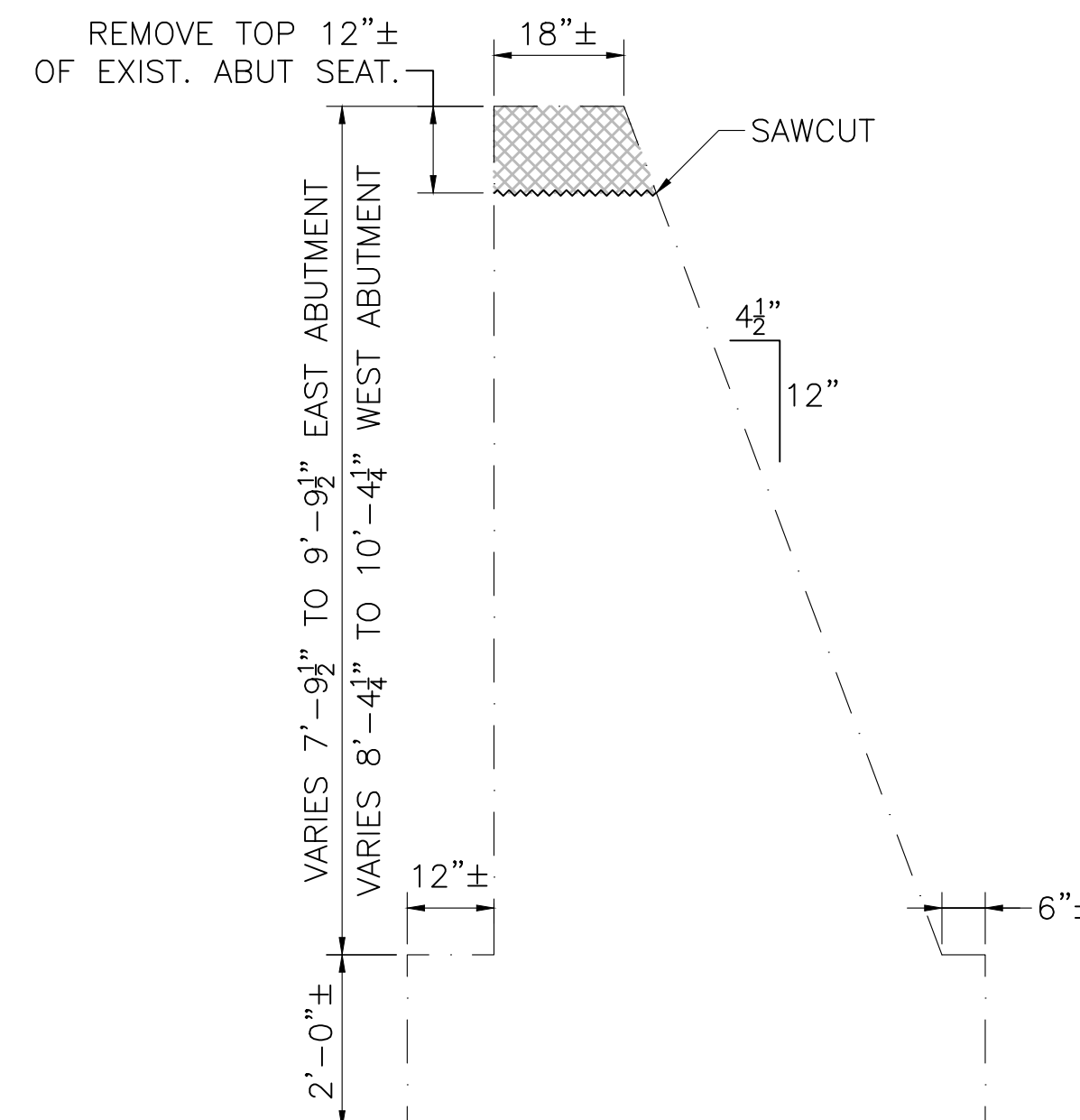
NORTH ABUTMENT ELEVATION
SCALE: 1/4" = 1'-0"



SOUTH ABUTMENT ELEVATION
SCALE: 1/4" = 1'-0"



EXISTING WINGWALL SECTION
SCALE: 1/2" = 1'-0"



EXISTING ABUTMENT SECTION
SCALE: 1/2" = 1'-0"

SUBSTRUCTURE REPAIR PROCEDURE:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE RELEVANT PROVISIONS OF THE CONTRACT SPECIAL PROVISIONS AND SUBSECTION 901 OF THE STANDARD SPECIFICATIONS.
- WORK SHALL BEGIN NEAR THE GROUND LINE AND CONTINUE UPWARD. SECTIONS OF WALL TO BE EXCAVATED AND REPAIRED SHALL BE PERFORMED IN 4-FOOT MAXIMUM HEIGHT SECTIONS.
- THE DEPTH OF EXCAVATION SHALL BE LIMITED TO 50% OF THE WALL THICKNESS EXCEPT AT THE TOP 2 FEET OF WINGWALLS. ALL DETERIORATED CONCRETE WITHIN THESE LIMITS SHALL BE EXCAVATED. CONTRACTOR SHALL OBTAIN ENGINEERS APPROVAL BEFORE EXCAVATING BEYOND 50% OF THE THICKNESS OF THE WALL.
- LIMITS OF REPAIR AREAS SHALL SAWCUT 3/4" DEEP ALONG NEAT EDGE AND SQUARE CORNERS.
- ROUGHEN EXISTING CONCRETE SURFACE TO A MINIMUM AMPLITUDE OF 1/4".
- IMMEDIATELY PRIOR TO PLACING CONCRETE AGAINST EXISTING CONCRETE, CLEAN EXISTING SURFACES BY ABRASIVE BLASTING.
- AN EPOXY BONDING AGENT SHALL BE APPLIED TO THE REINFORCING BARS AND CONCRETE BY BRUSH, ROLLER, OR SPRAY ACCORDING TO THE MANUFACTURER'S WRITTEN INSTRUCTIONS BEFORE THE CASTING OF THE REPAIR. THE EPOXY BONDING AGENT SHALL BE APPLIED IN AT LEAST TWO COATS, ALLOWING THE FIRST COAT TO DRY BEFORE APPLYING SECOND COAT. CONCRETE SHALL BE PLACED WHILE EPOXY IS STILL TACKY.
- FOR VERTICAL SURFACE REPAIRS, PUMP CONCRETE INTO FORM AND INSERT 1" Ø NOMINAL HEAD DIAMETER VIBRATORS INTO OPENING AT TOP OF FORM. VIBRATORS SHALL BE INSERTED AT A MAXIMUM SPACING OF 1.5 TIMES THE RADIUS OF ACTION OF THE VIBRATOR USED TO FACILITATE CONSOLIDATION.
- AFTER FORM REMOVAL, RUB TO PRODUCE A SMOOTH FINISH OF CONCRETE PATCH.
- THE CONTRACTOR SHALL ESTABLISH LIMITS OF VARIOUS REPAIRS AS SHOWN ON THE PLANS AND AT THE DIRECTION OF THE ENGINEER. THE LOCATIONS SHOWN ON THE PLANS ARE BASED UPON RECORDS OF BRIDGE INSPECTIONS AND OBSERVATION FROM THE GROUND AND ARE NOT GUARANTEED. THE LOCATION AND EXTENT 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.
- EXISTING SUBSTRUCTURE DIMENSIONS ARE BASED ON AVAILABLE 1938 RECORD PLANS AND ARE NOT GUARANTEED.

REPAIR CONDITIONS	
REPAIR #	SIZE
1	3'-0"H x 2'-0"L x 1 1/2"D
2	3'-0"H x 3'-0"L x 1 1/2"D
3	20"H x 18"L x 1 1/2"D

KEY

- DEMOLITION
- CONCRETE REPAIR

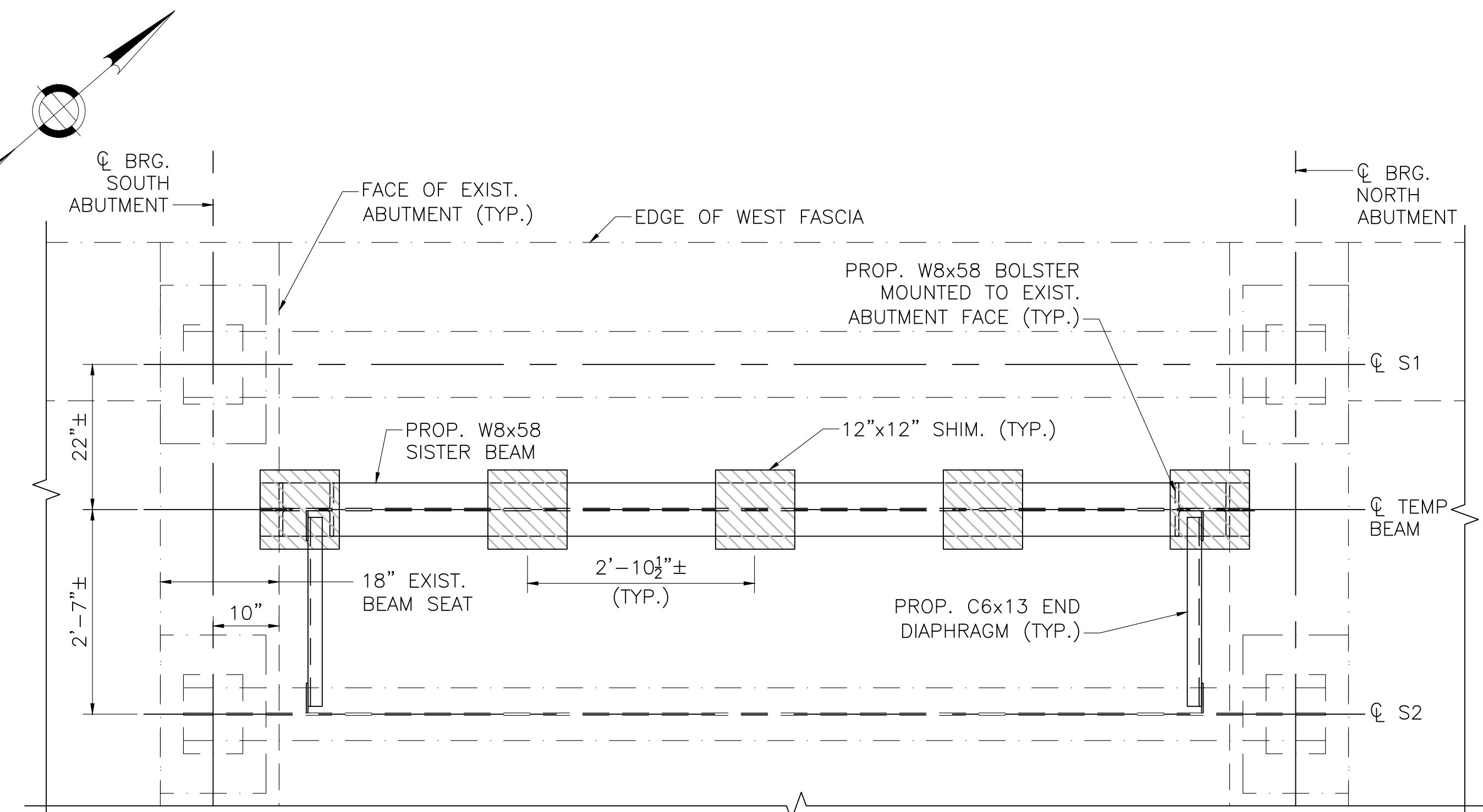
COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
APPROVED UNDER PROVISIONS OF
MASS. GEN. LAWS CH 85 S 35
10/30/2025
DISTRICT TWO BRIDGE ENGINEER DATE

OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
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USE ONLY PRINTS OF LATEST DATE	

HAMPDEN SOUTH ROAD

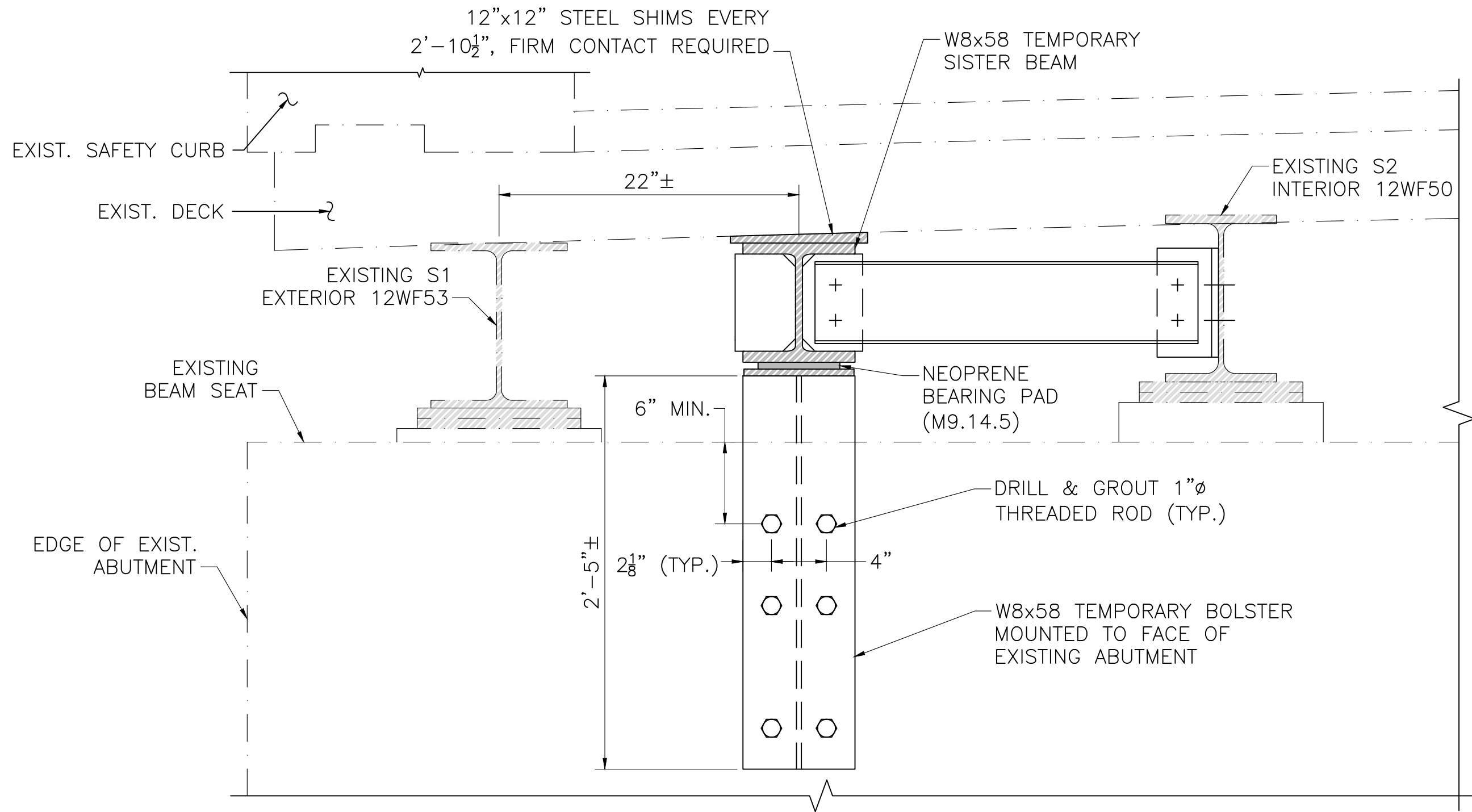
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	16	24
PROJECT FILE NO.		N/A	

TEMPORARY BEAM DETAILS



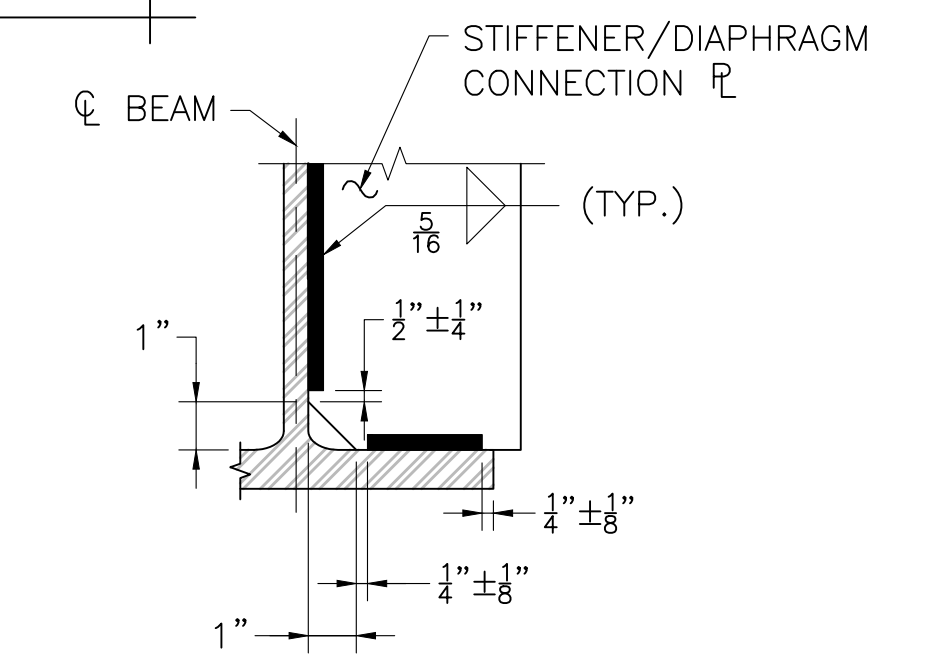
TEMPORARY BEAM SUPPORT PLAN

SCALE: 3/4" = 1'-0"



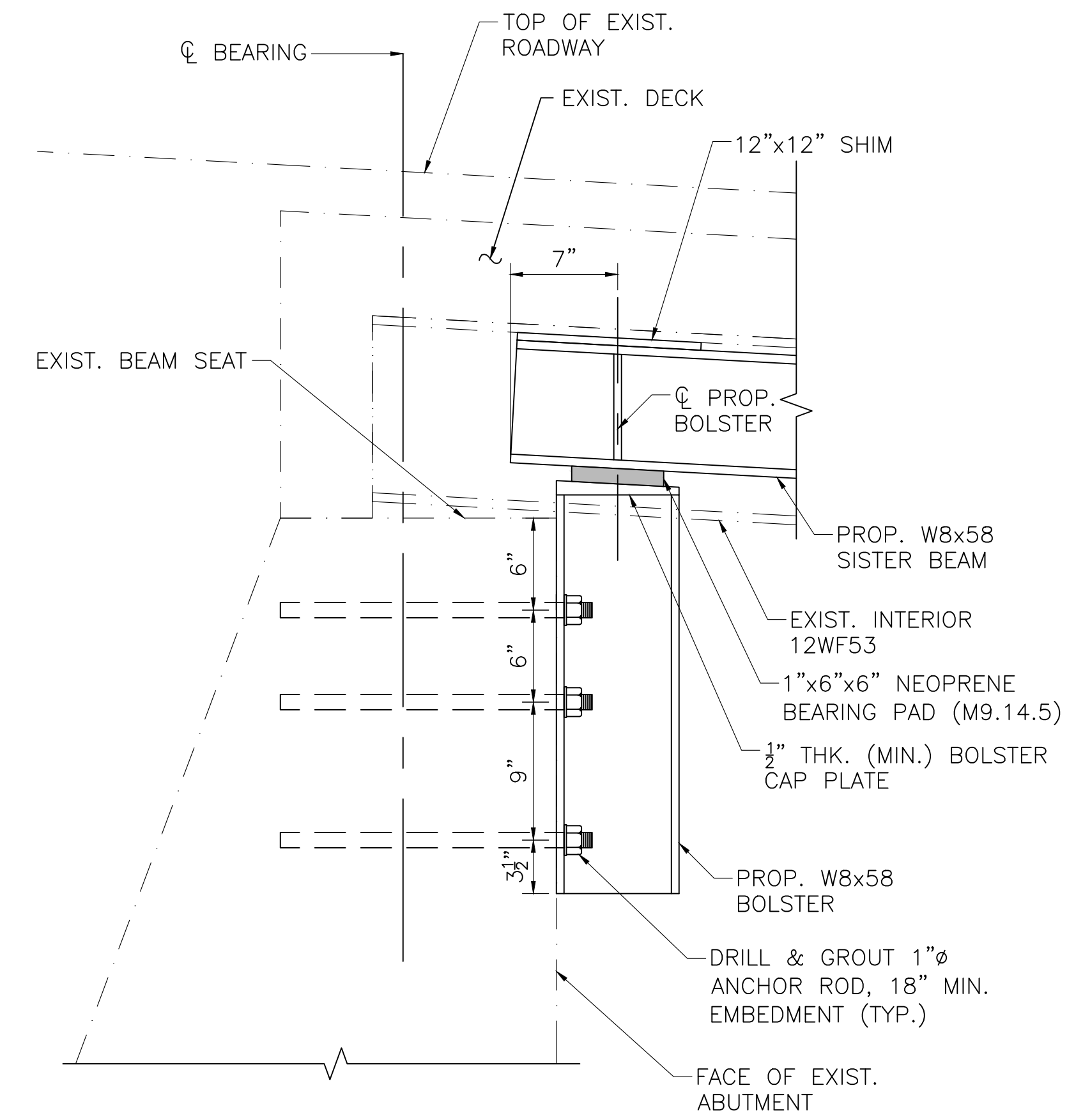
TEMPORARY BEAM SUPPORT - ELEVATION

SCALE: 1 1/2" = 1'-0"



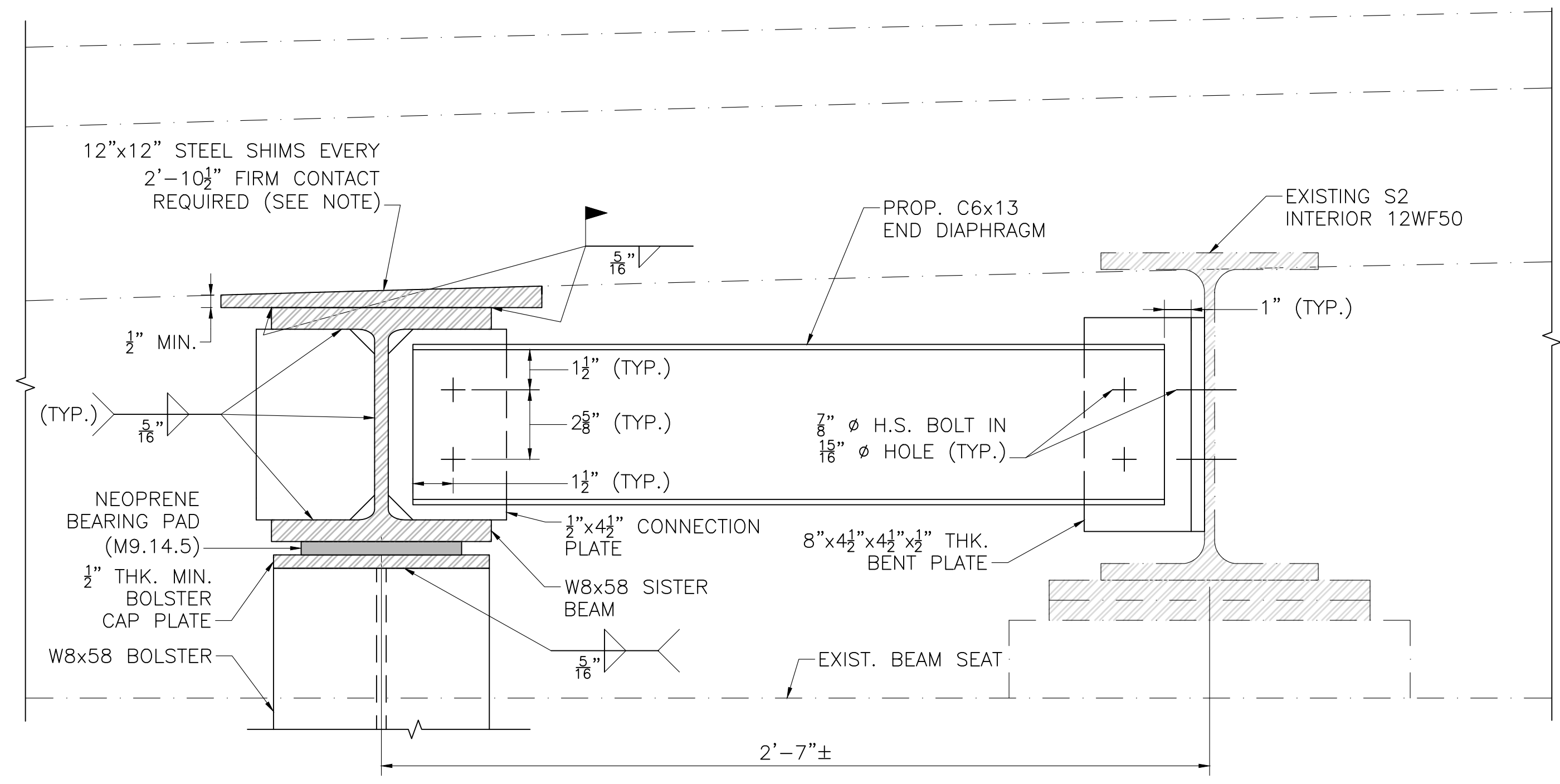
END OF WELD DETAILS

NOT TO SCALE



TEMPORARY BEAM SUPPORT - SECTION

SCALE: 1 1/2" = 1'-0"



TEMPORARY END DIAPHRAGM DETAIL

SCALE: 3" = 1'-0"

NOTE: FIELD GRIND SHIM PLATE AS NEEDED FOR TIGHT FIT UP FOR BEARING.

NOTES:

1. STRUCTURAL STEEL TEMPORARY BEAM SHALL CONFORM TO AASHTO M270 GRADE 50 OR BETTER.
2. NO COATING REQUIRED ON ANY TEMPORARY STRUCTURAL STEEL MEMBERS.
3. ALL HIGH STRENGTH BOLTS SHALL BE 5/8" Ø CONFORMING TO THE REQUIREMENTS OF ASTM F3125 GRADE A325. NUTS AND WASHERS SHALL BE LISTED AS SUITABLE IN THE ASTM F3125 SPECIFICATION FOR GRADE A325. BLACK BOLTS MAY BE USED FOR TEMPORARY CONNECTIONS OF TEMPORARY STEEL USING HIGH STRENGTH BOLTS.
4. ALL ANCHOR RODS SHALL BE 1" Ø CONFORMING TO THE REQUIREMENTS OF ASTM F1554 GRADE 55 AND SHALL BE GALVANIZED.
5. THE EXISTING STEEL BEAM S2 SHALL BE CLEANED TO SSPC-SP11 PRIOR TO THE ATTACHMENT OF THE CONNECTION PLATE.
6. STEEL SHIM PLATES SHALL CONFORM TO AASHTO M270 GRADE 36 OR BETTER.
7. CONTRACTOR SHALL COMPLETE ANY NECESSARY SUBSTRUCTURE REPAIRS TO THE FACE OF THE EXISTING ABUTMENTS PRIOR TO INSTALLATION OF THE PROPOSED BOLSTERS.
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. SEE SPECIFICATIONS FOR TESTING REQUIREMENTS FOR ANCHOR BOLTS.

COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
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10/30/2025
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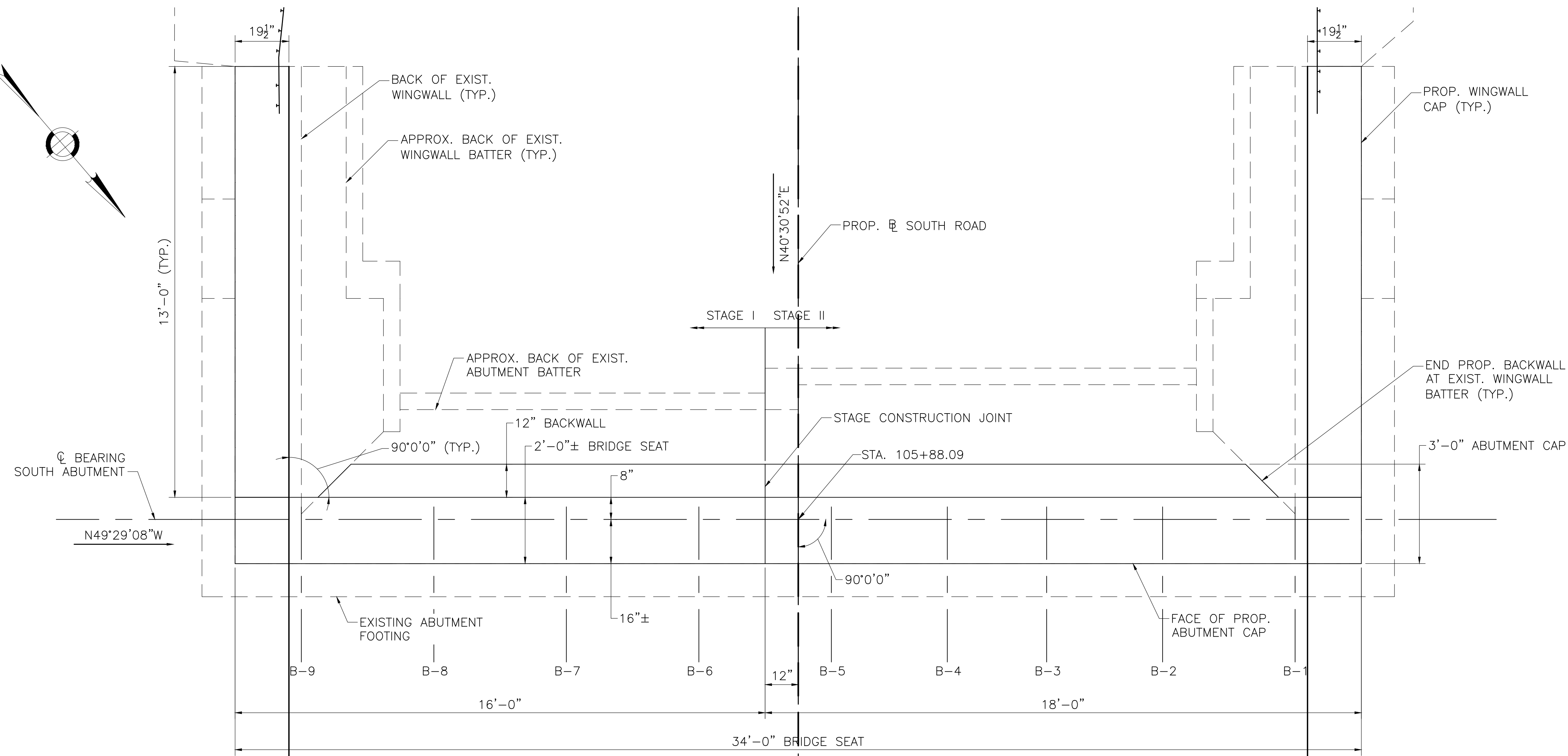
OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

**HAMPDEN
SOUTH ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	17	24
PROJECT FILE NO.		N/A	

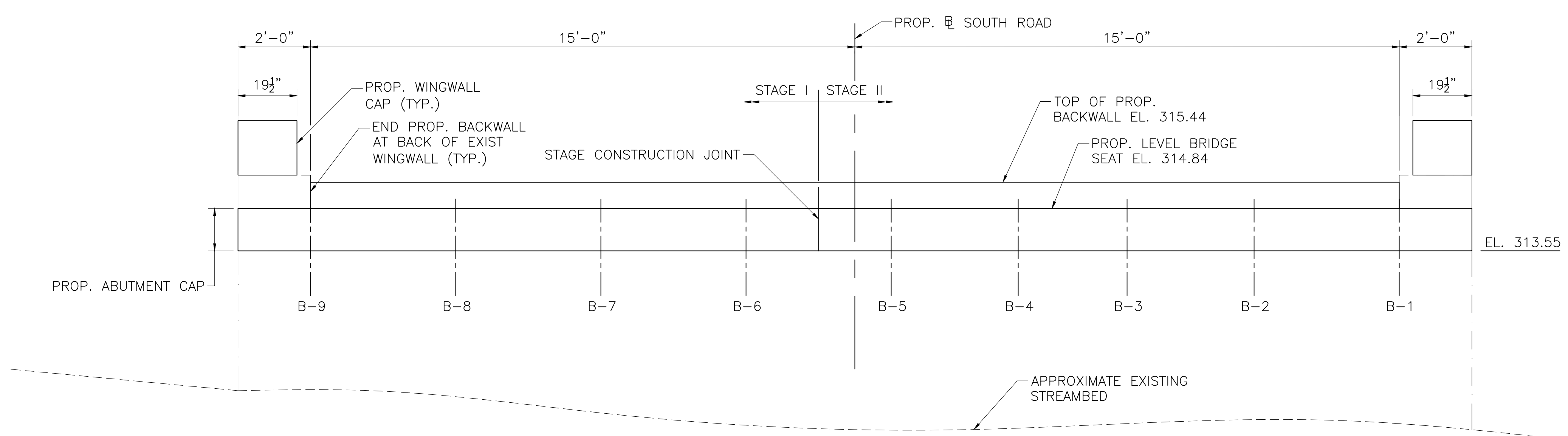
SOUTH ABUTMENT PLAN & ELEVATION

Plotted on 24-Oct-2025 3:58 PM
H04007_BR(ABUT)DWG



SOUTH ABUTMENT PLAN

SCALE: 1/2" = 1'-0"



SOUTH ABUTMENT ELEVATION

SCALE: 1/2" = 1'-0"

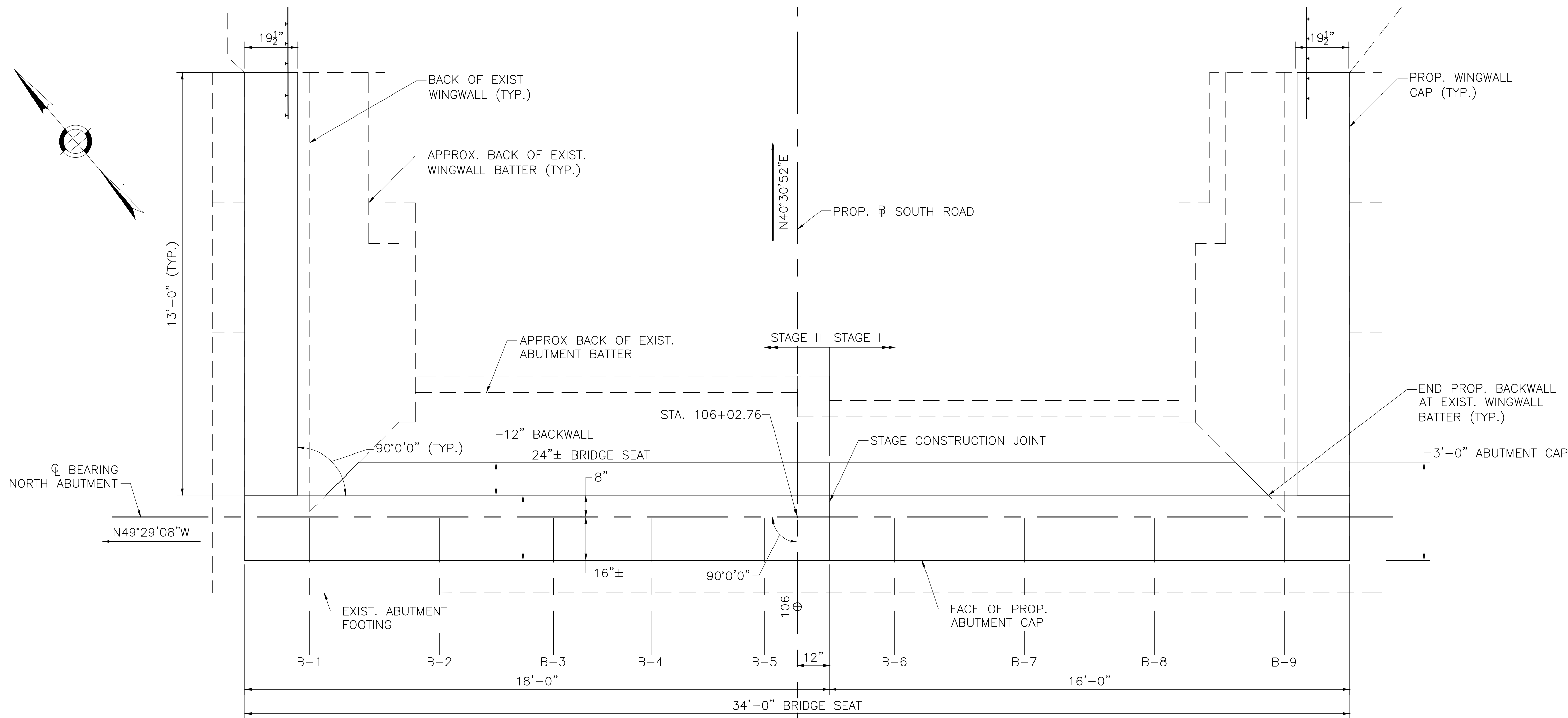
COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
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MASS. GEN. LAWS CH 85 S 35
[Signature]
DISTRICT TWO BRIDGE ENGINEER 10/30/2025 DATE

OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

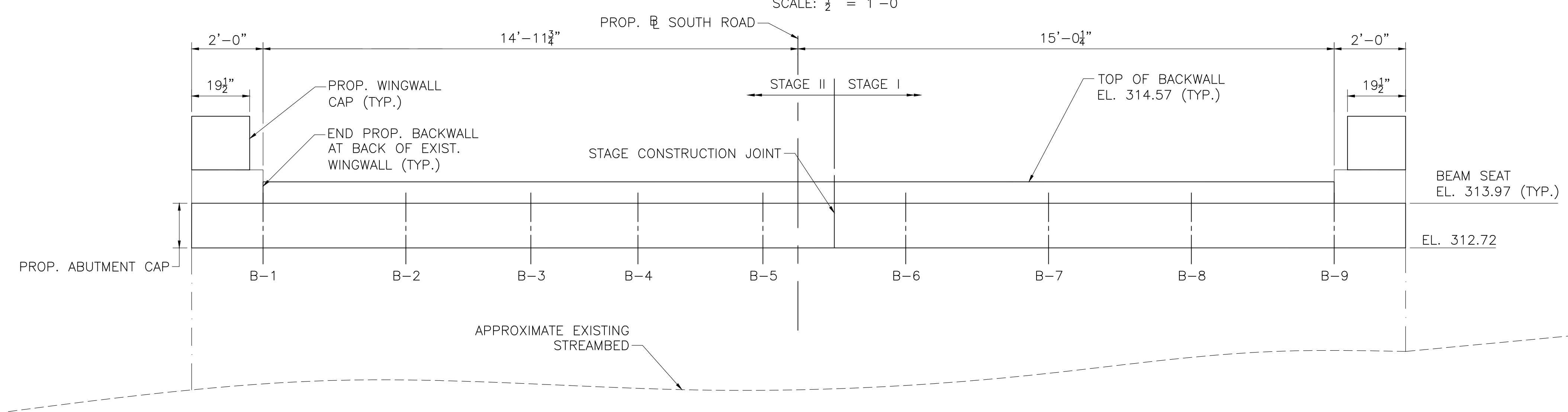
**HAMPDEN
SOUTH ROAD**

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MA	N/A	18	24
PROJECT FILE NO.		N/A	

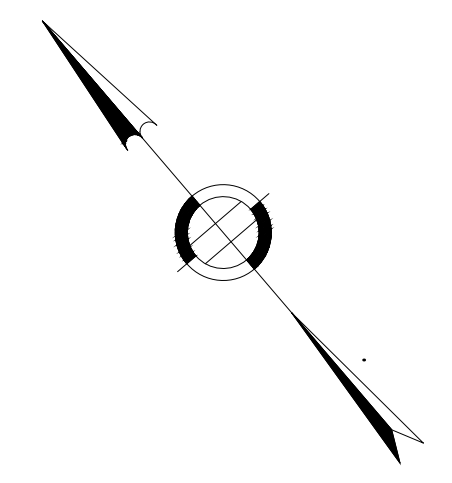
NORTH ABUTMENT PLAN & ELEVATION



NORTH ABUTMENT PLAN
SCALE: 1/2" = 1'-0"



NORTH ABUTMENT ELEVATION
SCALE: 1/2" = 1'-0"



COMMONWEALTH OF MASSACHUSETTS
MassDOT, Highway Division
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MASS. GEN. LAWS CH 85 S 35
[Signature] 10/30/2025
DISTRICT TWO BRIDGE ENGINEER DATE

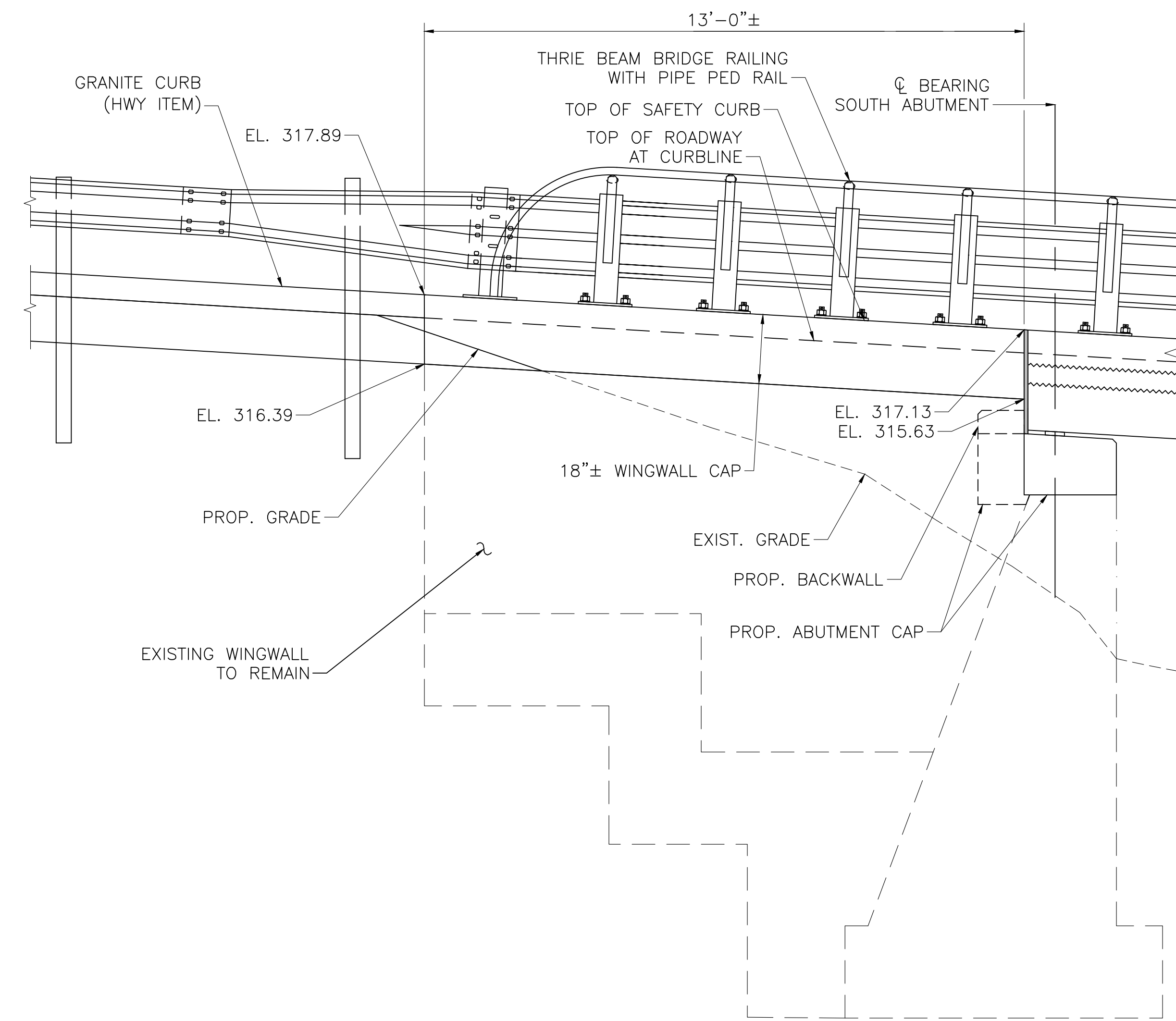
OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

H04007_BR(ABUT)DWG Plotted on 24-Oct-2025 3:58 PM

**HAMPDEN
SOUTH ROAD**

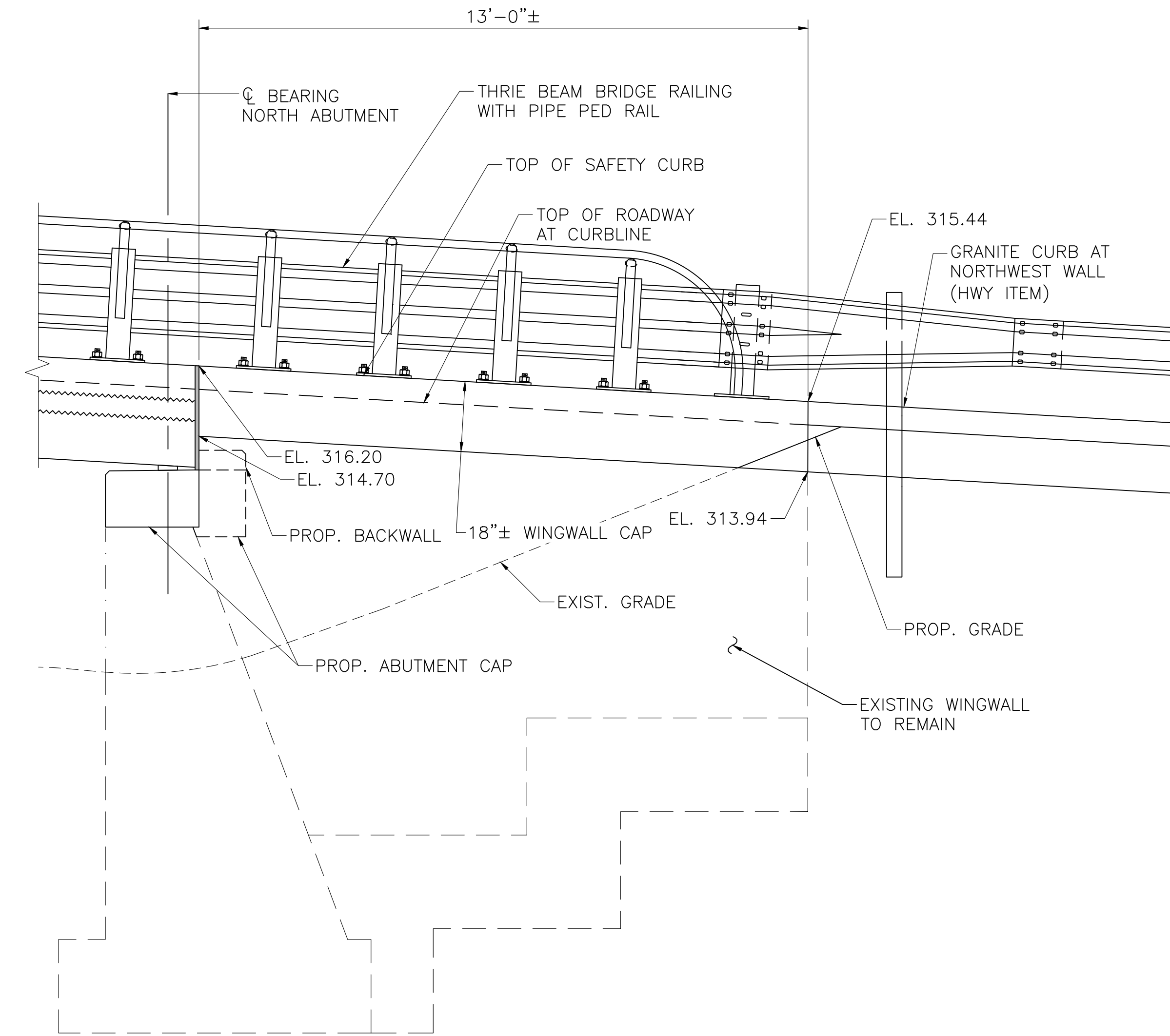
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	19	24
PROJECT FILE NO.		N/A	

WINGWALL ELEVATIONS



SOUTHWEST AND SOUTHEAST WINGWALL ELEVATION

SCALE: 1/2" = 1'-0"



NORTHWEST AND NORTHEAST WINGWALL ELEVATION

SCALE: 1/2" = 1'-0"

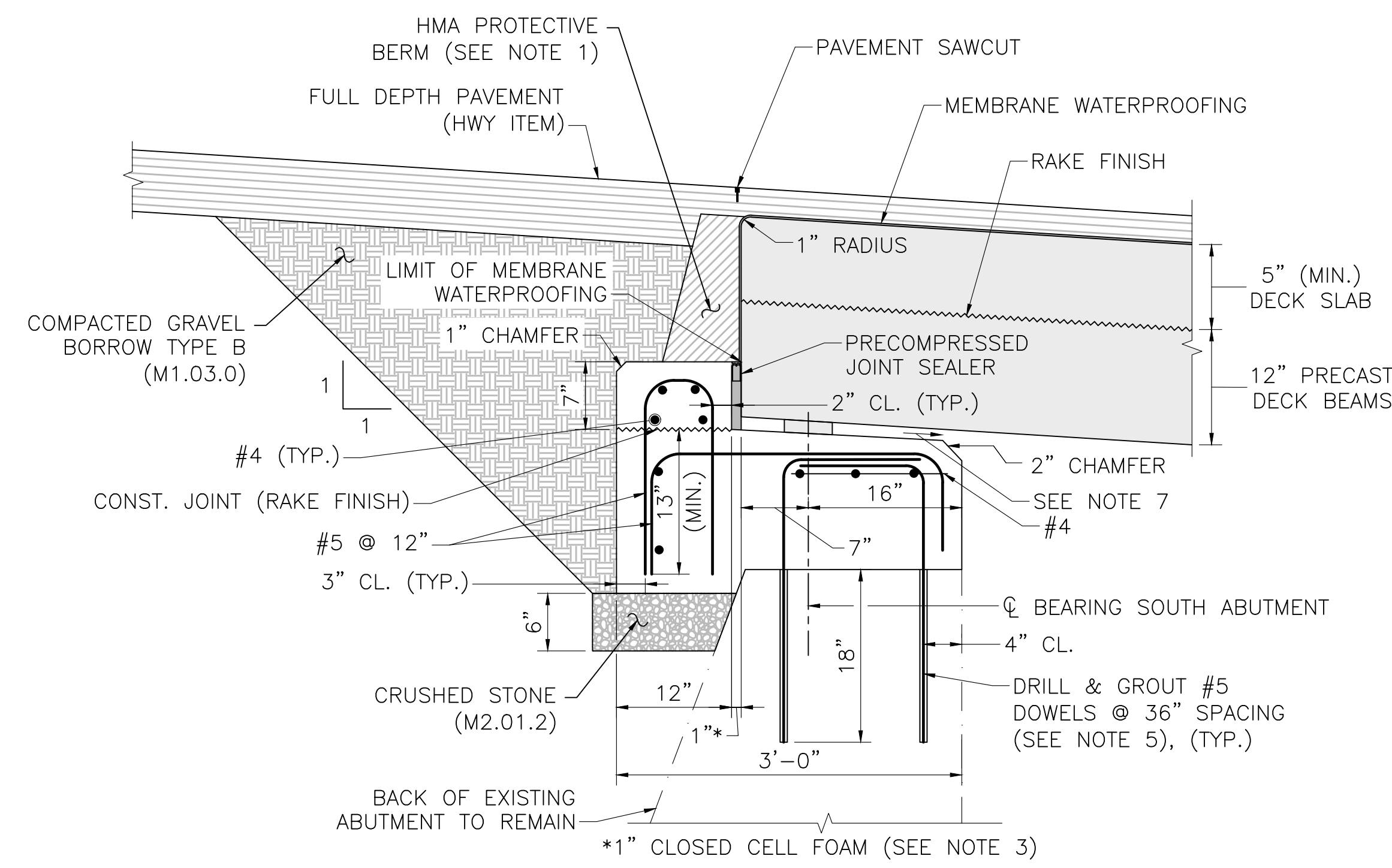
COMMONWEALTH OF MASSACHUSETTS
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[Signature]
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DATE	DESCRIPTION
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HAMPDEN SOUTH ROAD

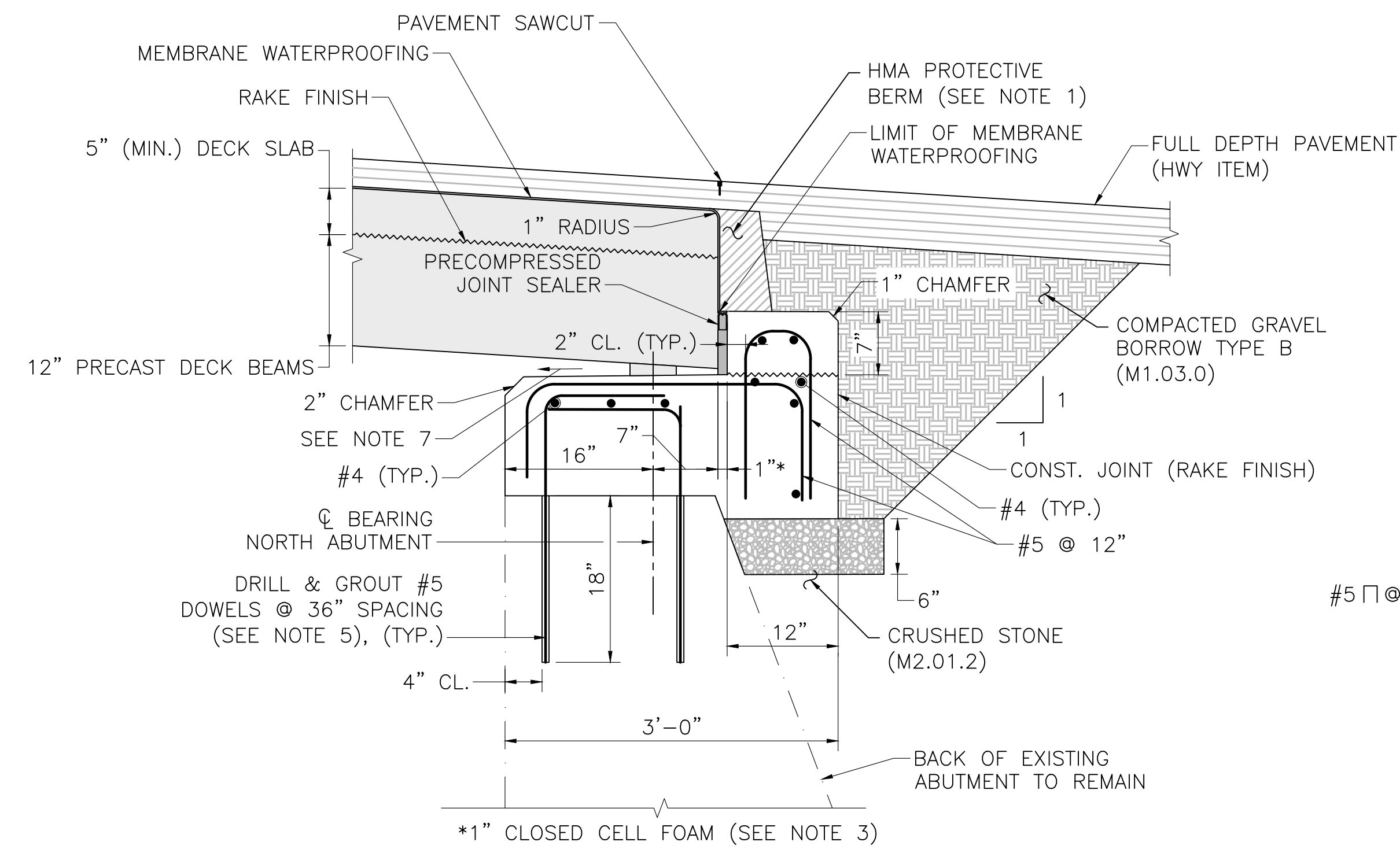
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	20	24
PROJECT FILE NO.		N/A	

ABUTMENT DETAILS



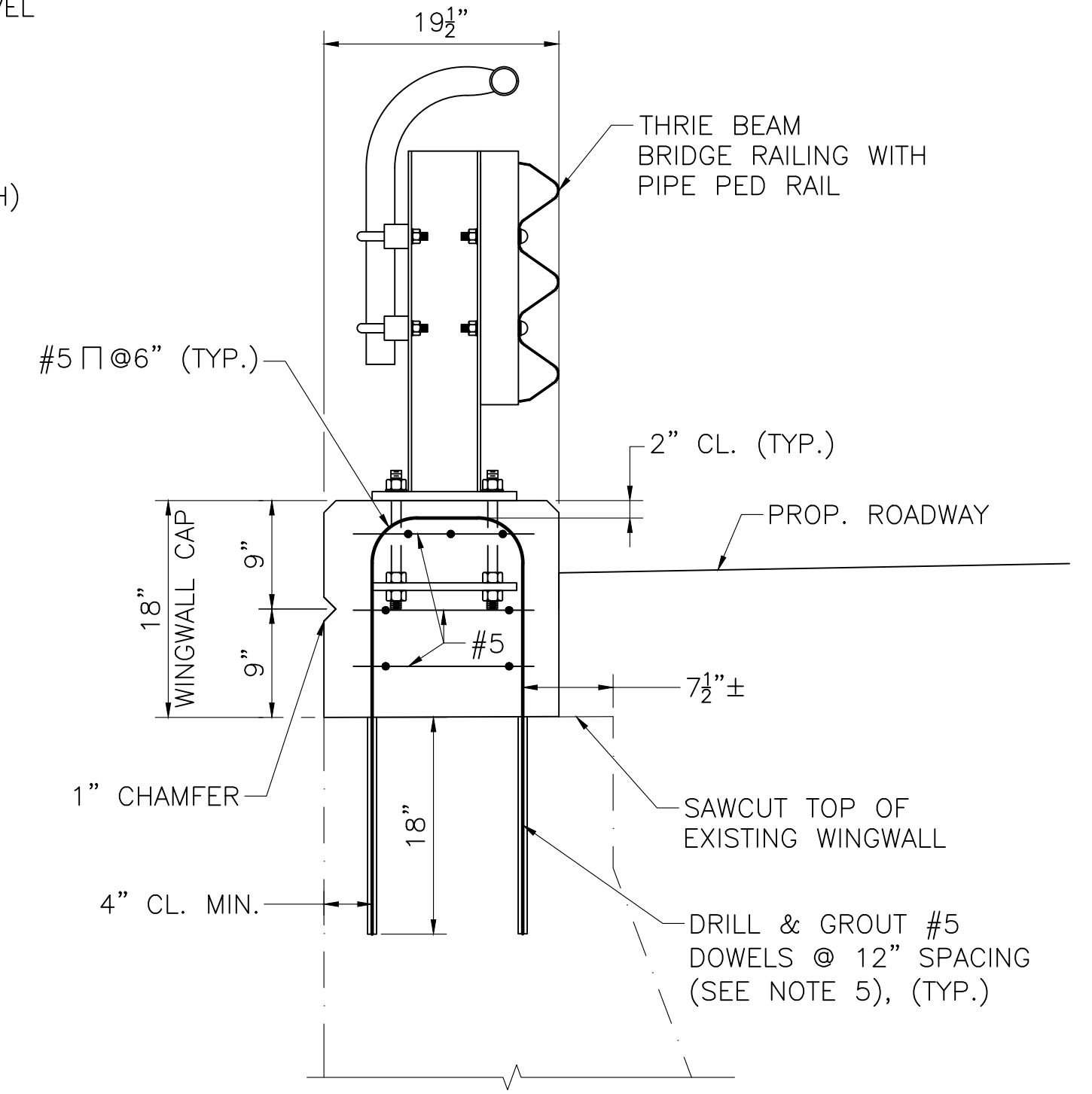
ABUTMENT CAP DETAIL - SOUTH ABUTMENT

SCALE: 1" = 1'-0"



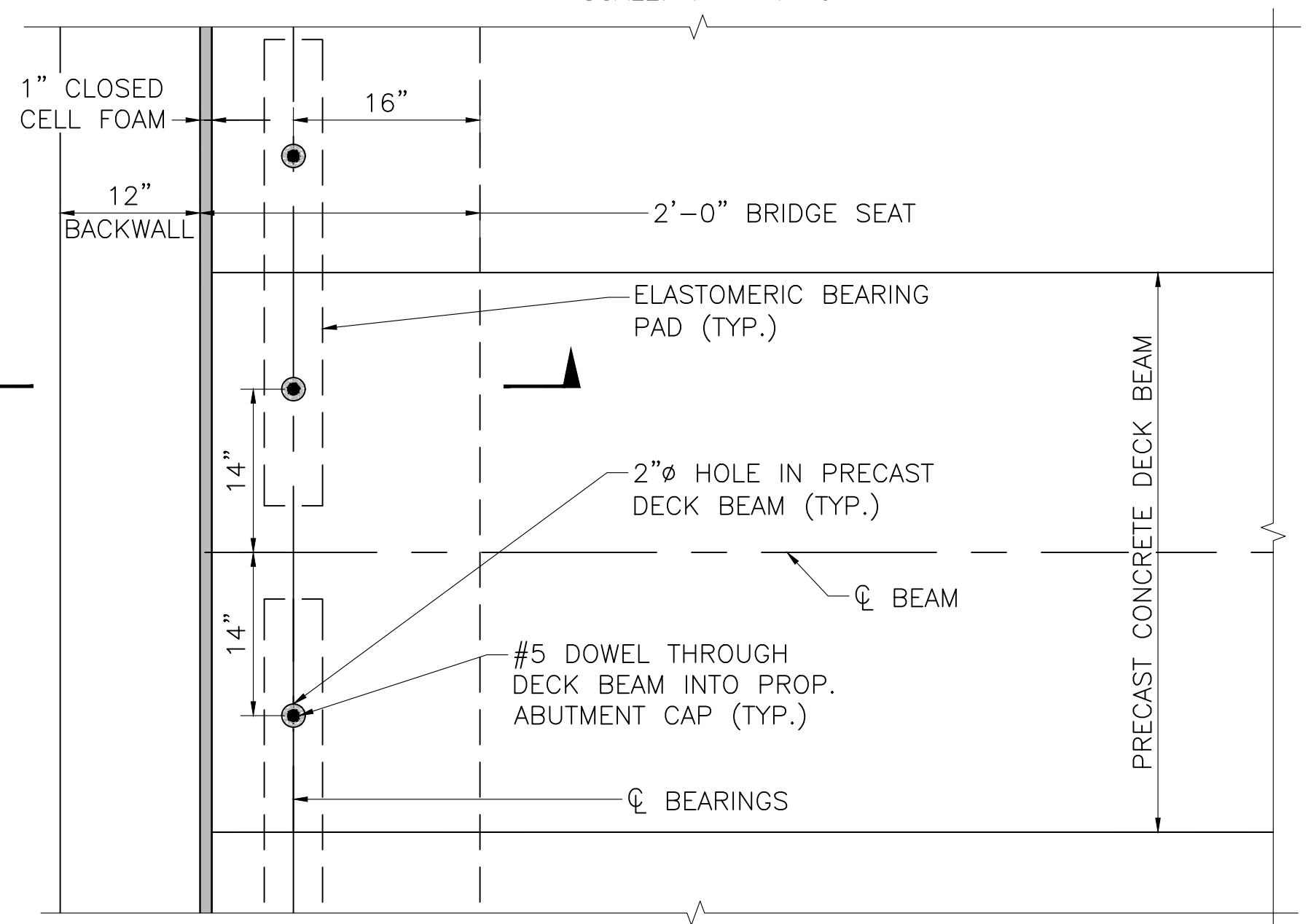
ABUTMENT CAP DETAIL - NORTH ABUTMENT

SCALE: 1" = 1'-0"



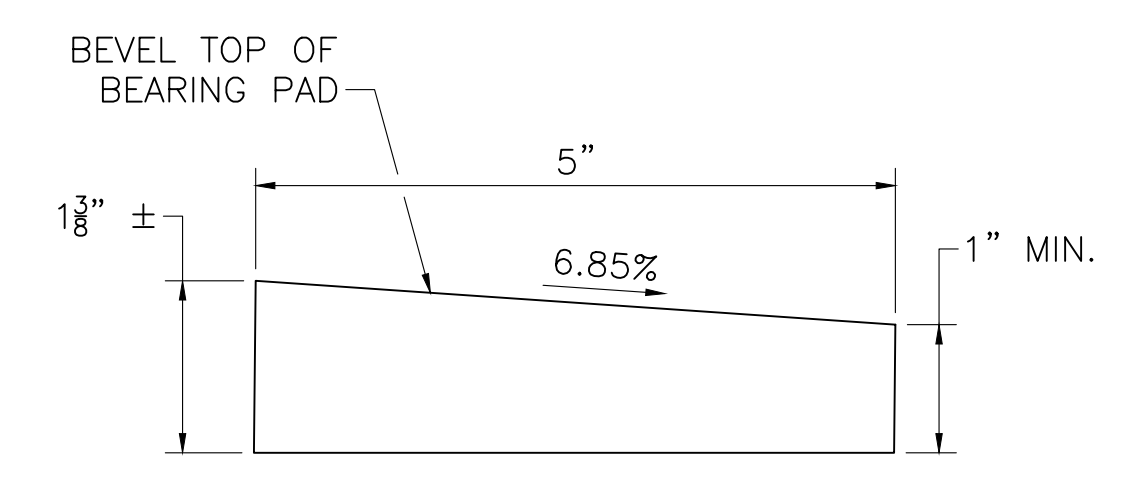
WINGWALL CAP DETAIL

SCALE: 1" = 1'-0"



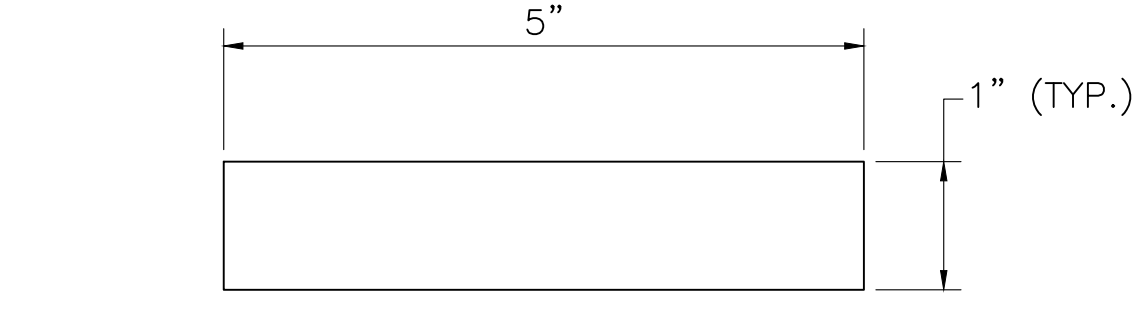
BEAM ANCHOR DETAIL - PLAN

SCALE: 1" = 1'-0"



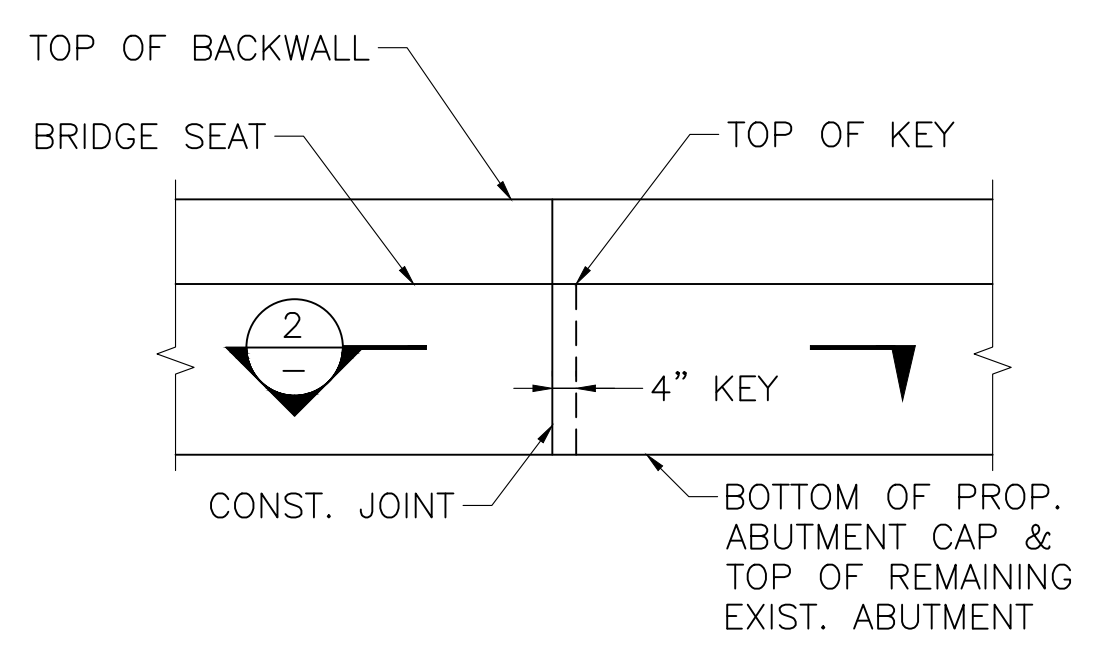
NORTH ABUTMENT BEARING PAD DETAIL

NOT TO SCALE



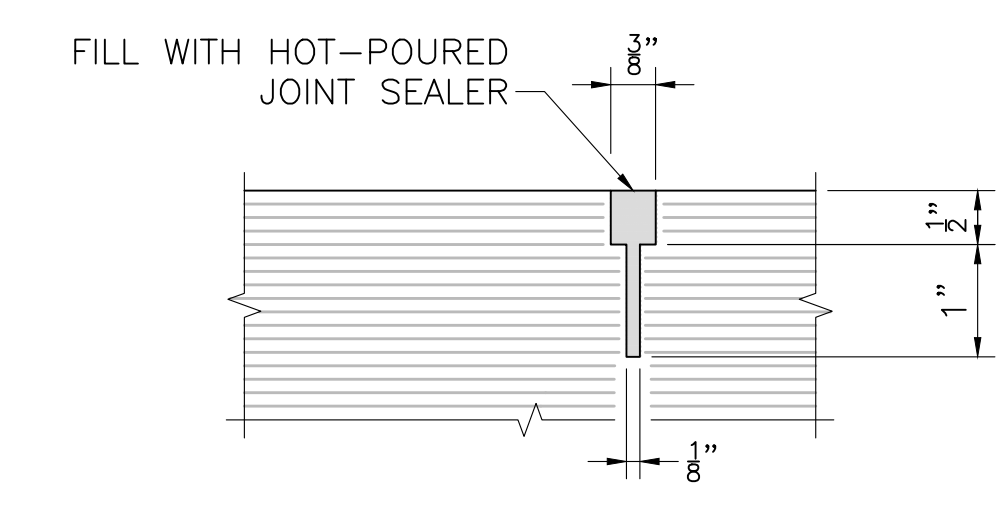
SOUTH ABUTMENT BEARING PAD DETAIL

NOT TO SCALE



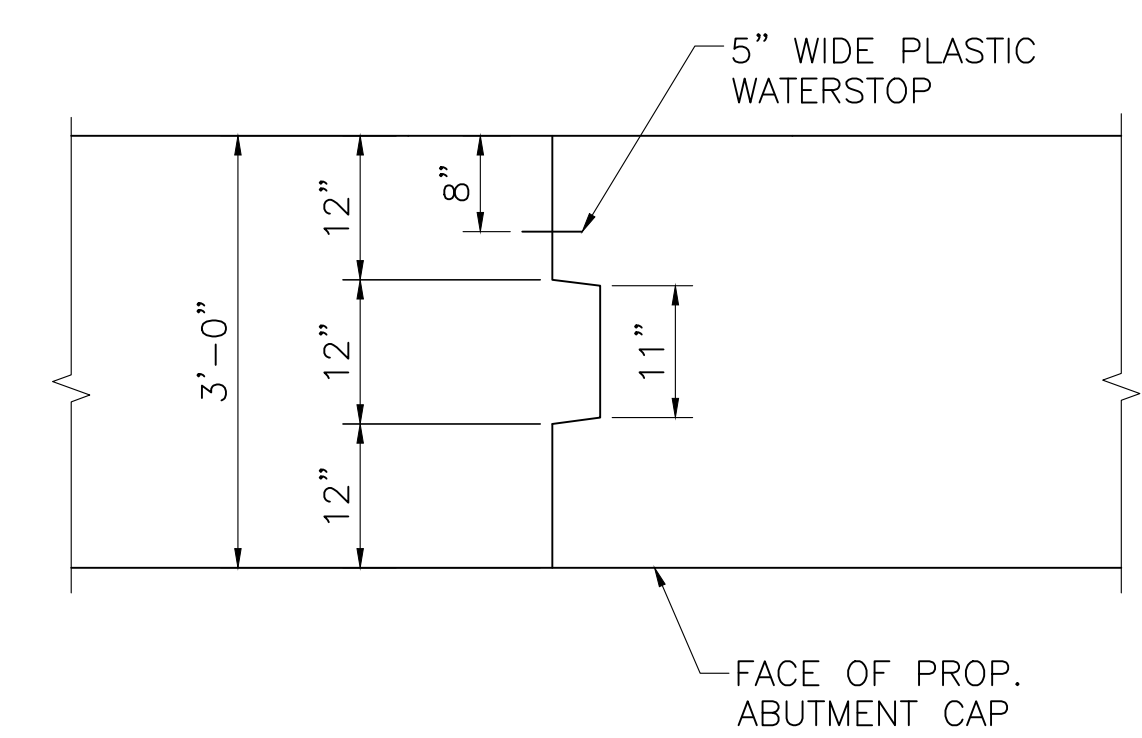
ELEVATION OF CONSTRUCTION JOINT

SCALE: 3/4" = 1'-0"



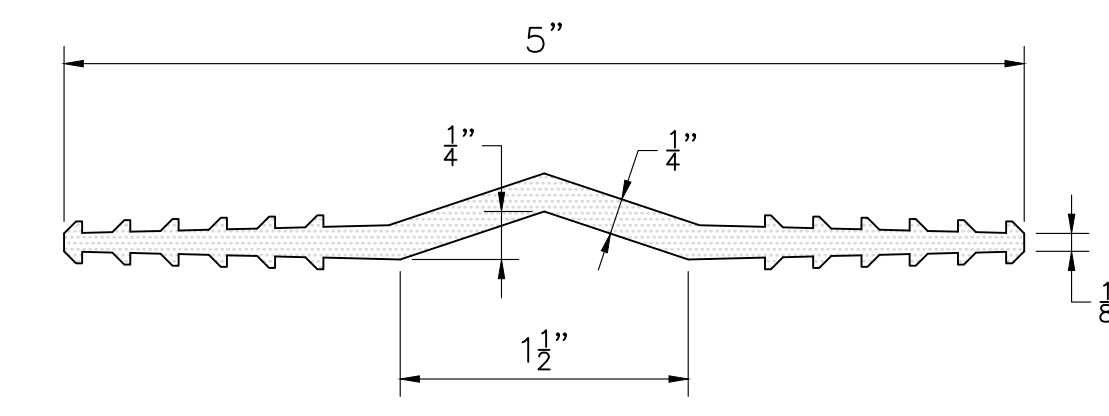
PAVEMENT SAWCUT DETAIL

NOT TO SCALE

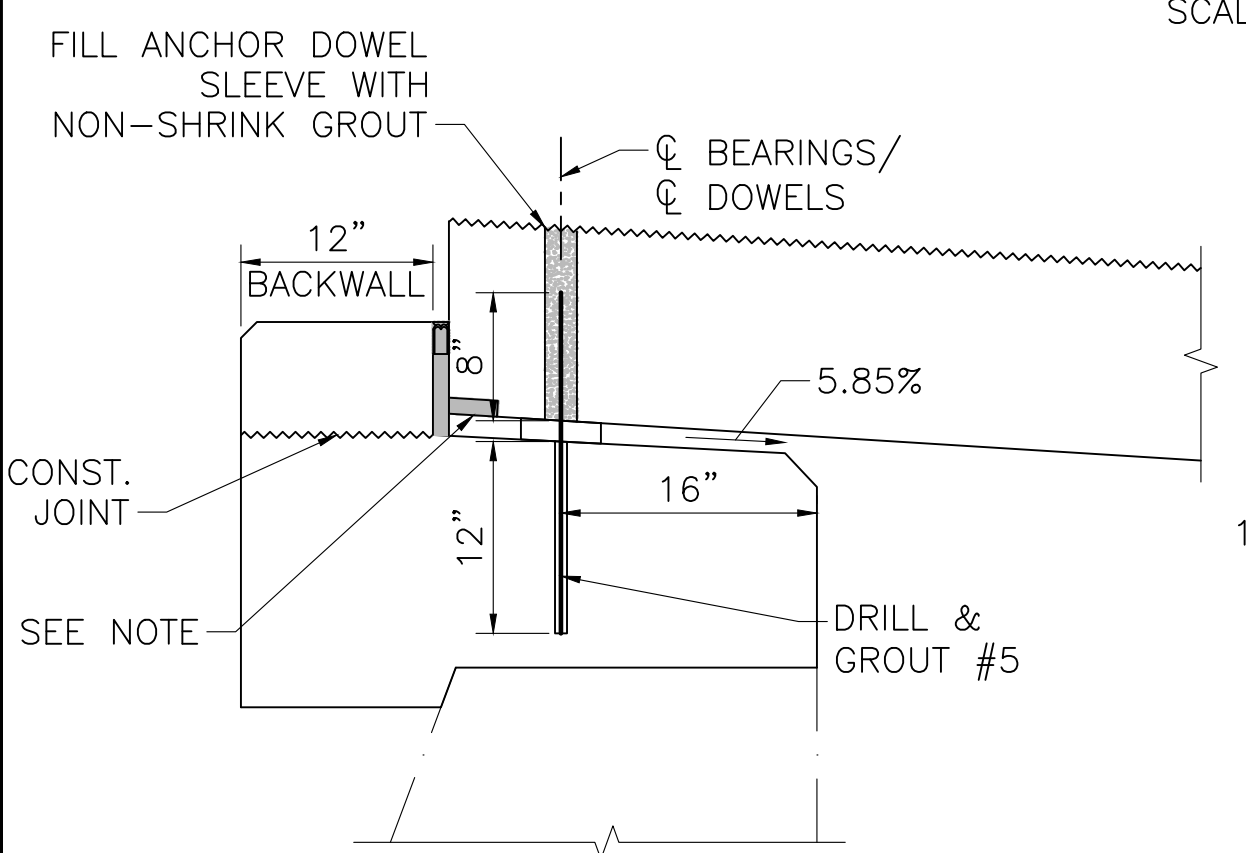


SECTION 2

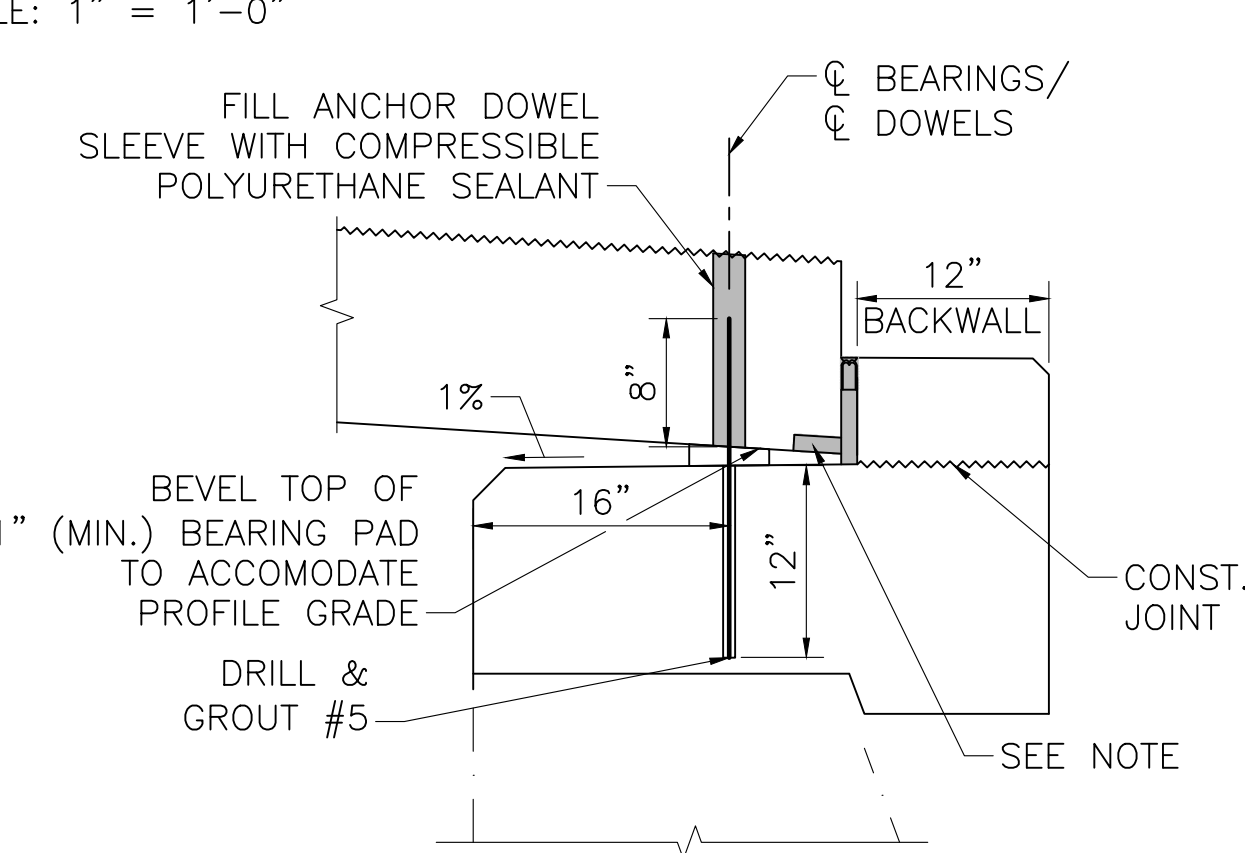
SCALE: 3/4" = 1'-0"



5" WATERSTOP FULL SIZE



SECTION AT SOUTH ABUTMENT



SECTION AT NORTH ABUTMENT

SECTION 1
SCALE: 1" = 1'-0"

NOTES:

- 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.
- ALL REINFORCEMENT SHALL BE COATED.
- ATTACH CLOSED CELL FOAM TO BACK OF PRECAST BEAM WITH ADHESIVE.
- ALL BACKWALL CONCRETE SHALL BE PLACED AFTER ALL BEAMS HAVE BEEN ERECTED.
- CENTER OF DOWELS SHALL NOT BE PLACED LESS THAN 4" FROM THE OUTSIDE FACES OF THE EXISTING ABUTMENTS. GROUT SHALL BE NON-SHRINK GROUT SELECTED FROM MASSDOT'S QUALIFIED CONSTRUCTION MATERIALS LIST AND APPROVED BY THE ENGINEER. DRILL HOLE DIAMETER SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- EXISTING SURFACE SHALL BE CLEANED BY ABRASIVE BLASTING AND ROUGHENED TO AN AMPLITUDE OF 1/4". EPOXY BONDING COMPOUND SHALL BE APPLIED TO CLEANED SURFACES OF EXISTING CONCRETE AT ALL SURFACES THAT ARE TO BE BONDED TO FRESH CONCRETE.
- SLOPE ENTIRE BEAM SEAT 1% AT NORTH ABUTMENT AND 5.85% AT SOUTH ABUTMENT.

COMMONWEALTH OF MASSACHUSETTS
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10/30/2025
DISTRICT TWO BRIDGE ENGINEER

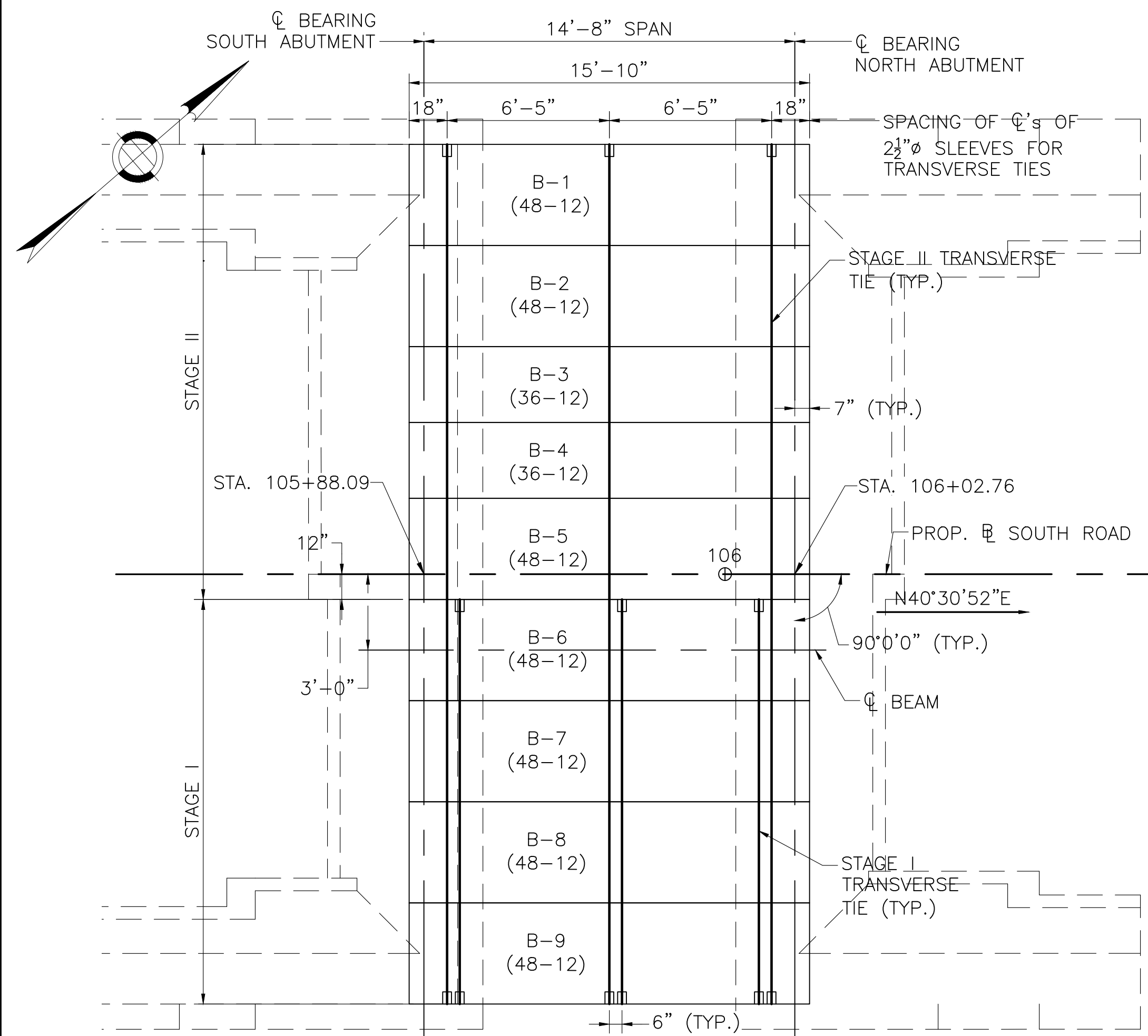
OCTOBER 24, 2025	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
USE ONLY PRINTS OF LATEST DATE	

H04007_BR(ABUT DETAILS)DWG Plotted on 24-Oct-2025 3:58 PM

HAMPDEN SOUTH ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	21	24
PROJECT FILE NO.		N/A	

BEAM DETAILS

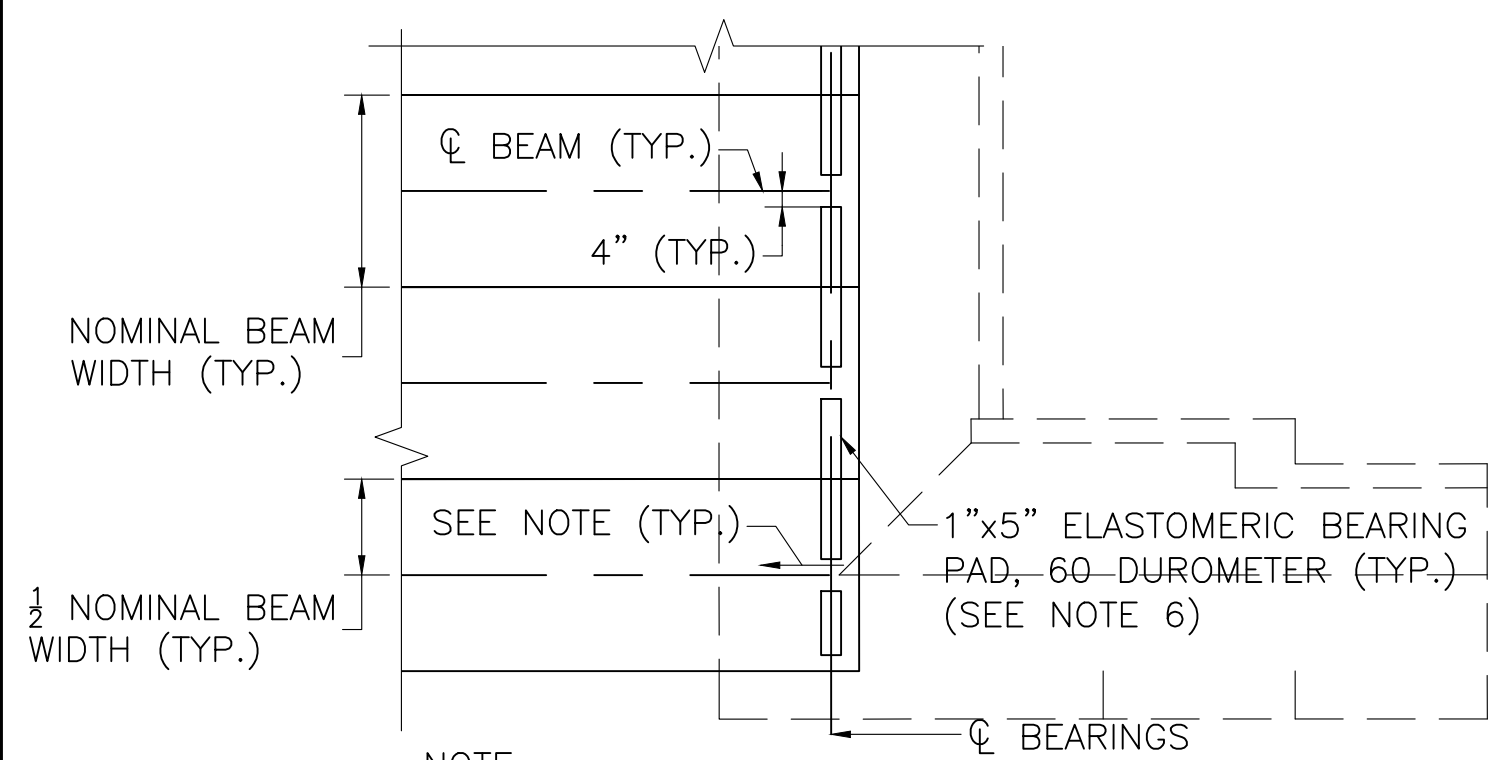


NOTES:

1. STAGE I: AFTER ERECTING STAGE I BEAMS, INSTALL AND TENSION TRANSVERSE TIES IN STAGE I SLEEVES.
2. STAGE II: AFTER ERECTING STAGE II BEAMS, INSTALL AND TENSION TRANSVERSE TIES IN STAGE II SLEEVES FULL WIDTH OF BRIDGE.

FRAMING PLAN

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



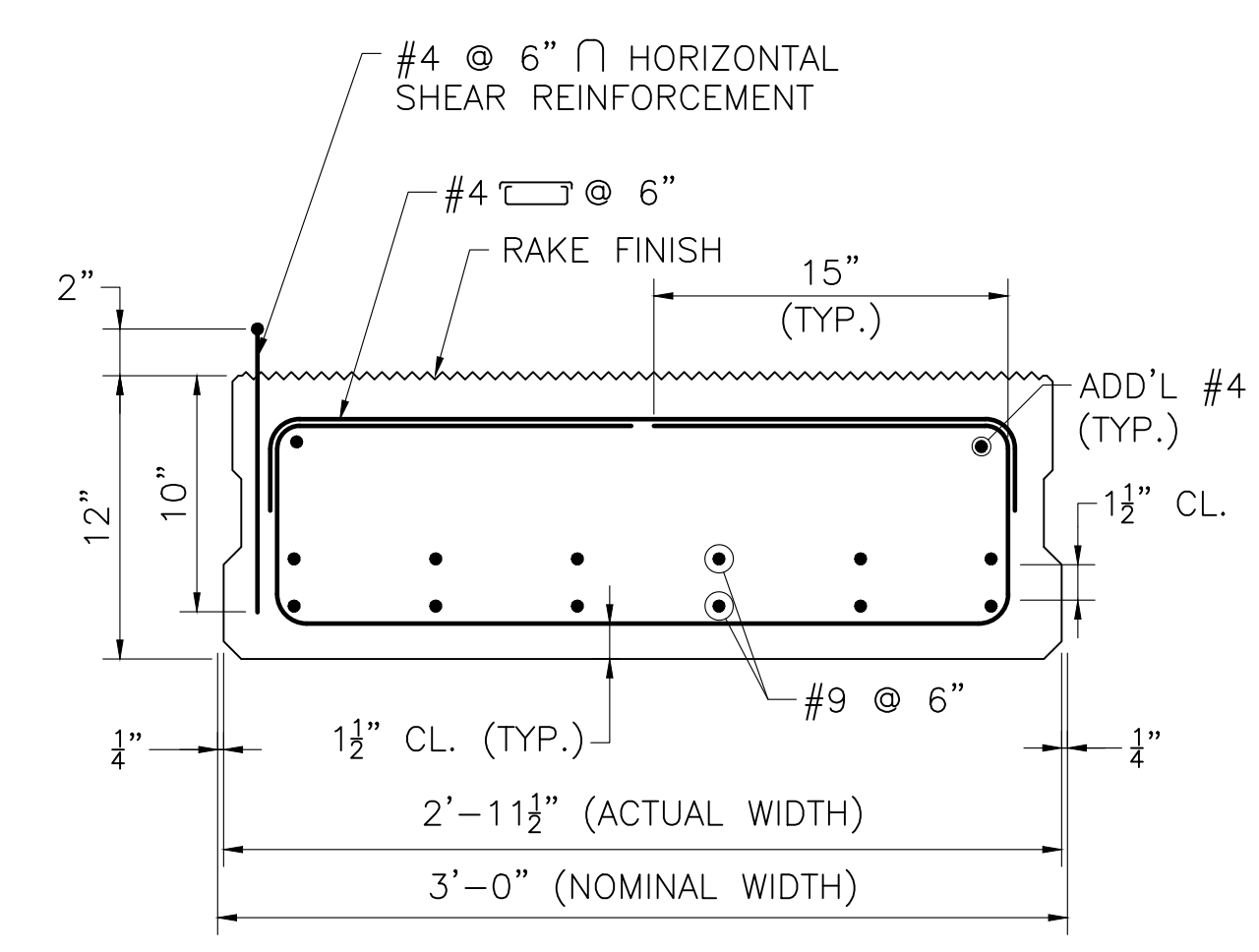
NOTE:
SLOPE BEAM SEAT 1% AT NORTH ABUTMENT AND 5.85% AT SOUTH ABUTMENT, ENTIRE BEAM SEAT.

LAYOUT OF BEARINGS

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

NOTES:

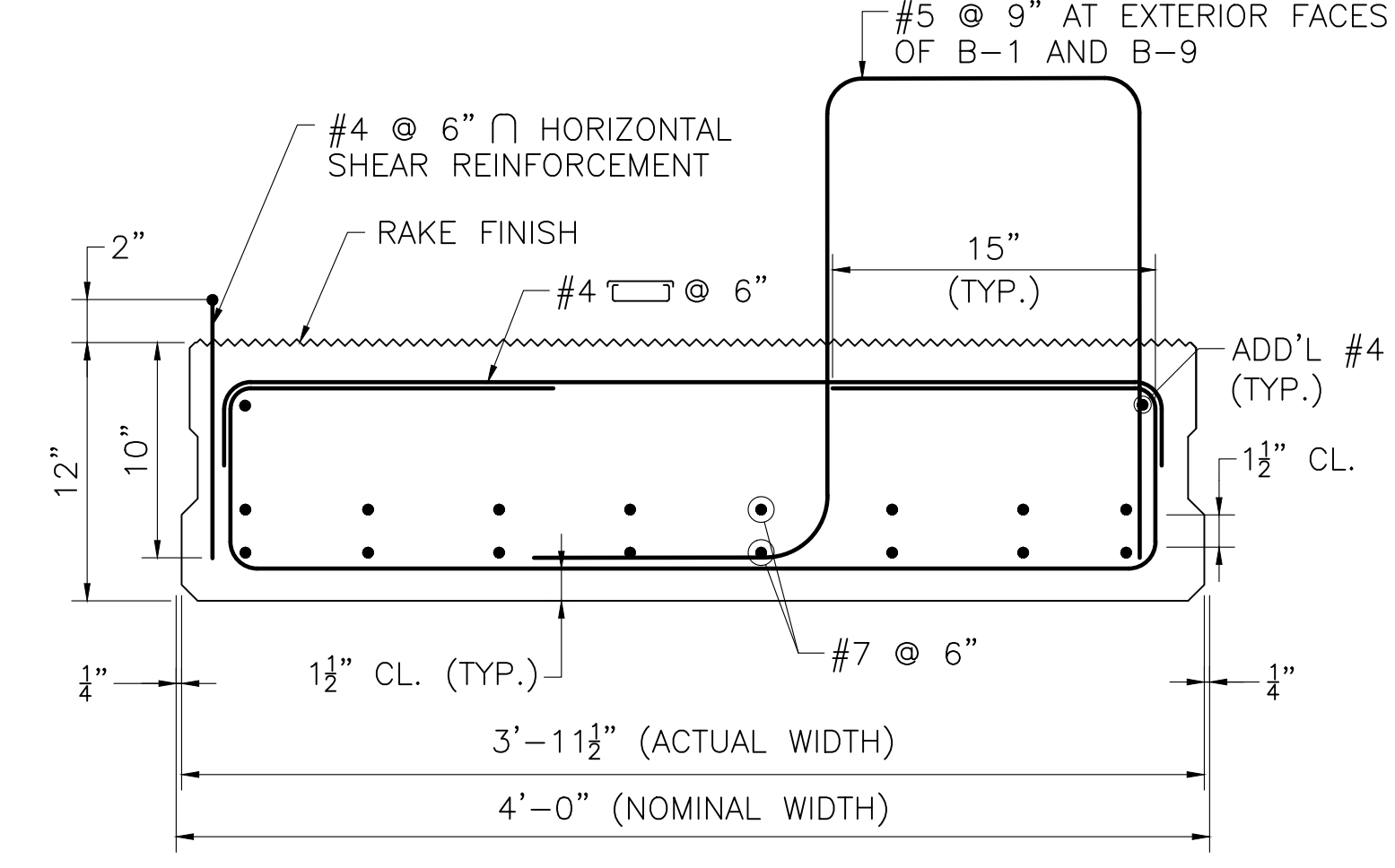
1. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 5000 PSI.
2. THE TOP OF ALL BEAMS SHALL BE GIVEN A RAKED FINISH (1/4" AMPLITUDE) ACROSS THE WIDTH PERPENDICULAR TO THE BEAM'S AXIS.
3. THE FABRICATOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES AND BEAM STRESSES DURING LIFTING AND HANDLING WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURE
4. FILL ALL KEYWAYS WITH MORTAR (M4.04.5). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE (5) DAYS AFTER THE BEAMS ARE ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM WEATHER AND DEBRIS UNTIL THEY ARE FILLED
5. ELIMINATE SHEAR KEY ON EXTERIOR FACES OF BEAMS 1 & 9.
6. BEVEL TOP OF 1" MINIMUM BEARING PAD AT NORTH ABUTMENT TO ACCOMMODATE PROFILE GRADE.



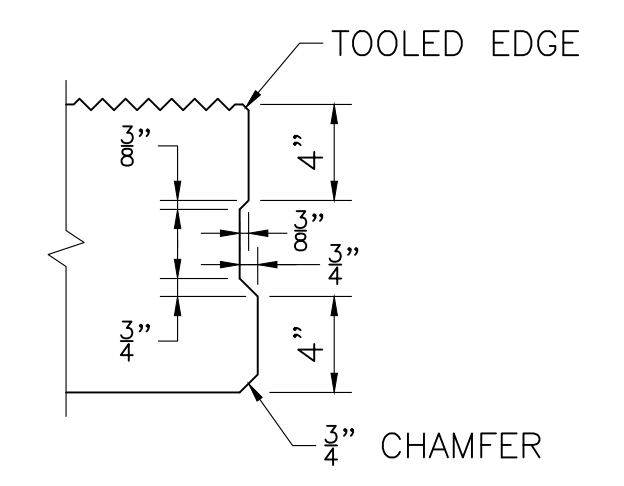
36-12 BEAM (B-3 & B-4)

TYPICAL MIDSPAN BEAM SECTION

SCALE: 1 1/2" = 1'-0"

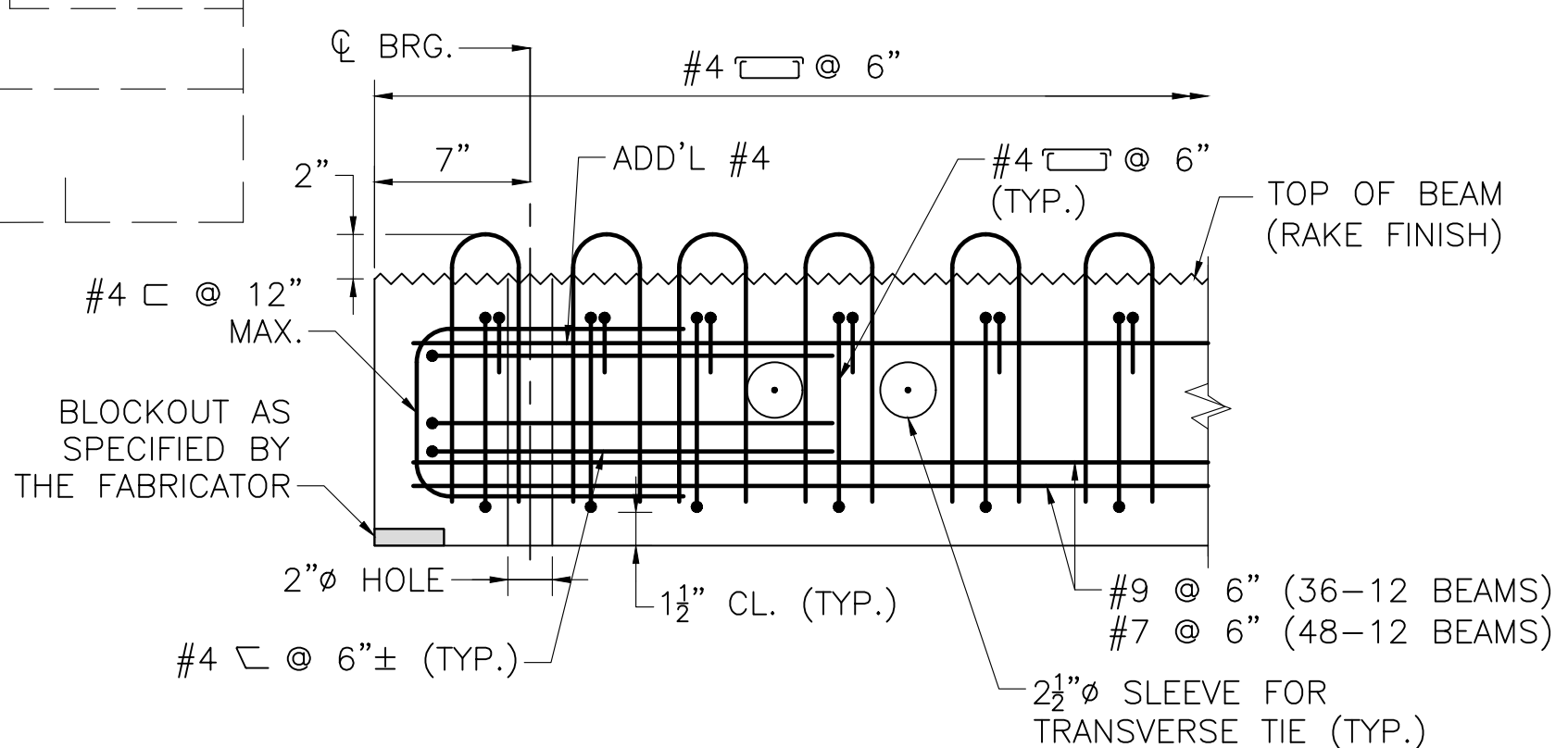


48-12 BEAM (B-1, B-2, B-5 THRU B-9)



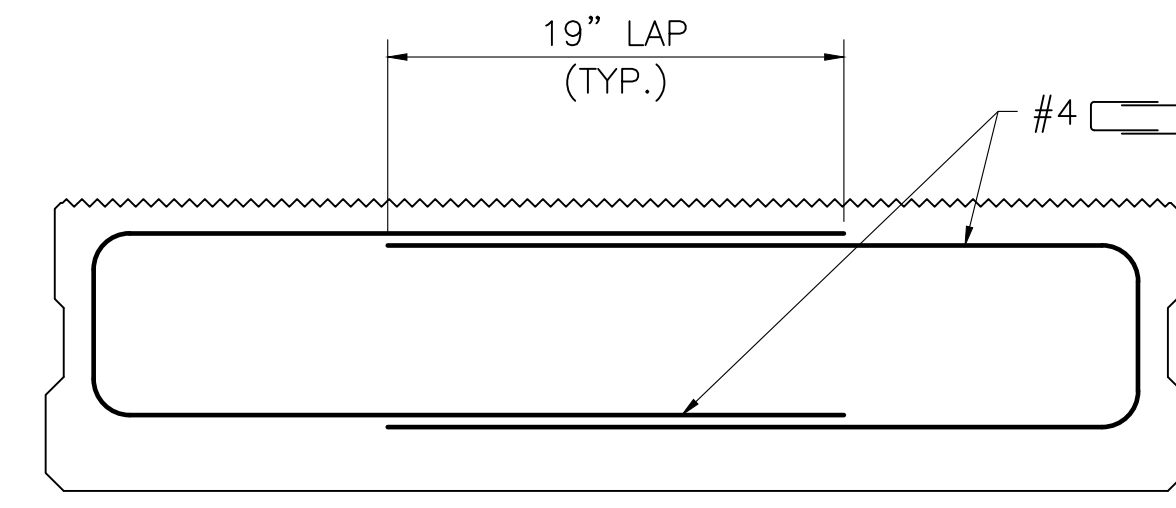
SHEAR KEY DETAIL

SCALE: 1 1/2" = 1'-0"



LONGITUDINAL SECTION

SCALE: 1 1/2" = 1'-0"

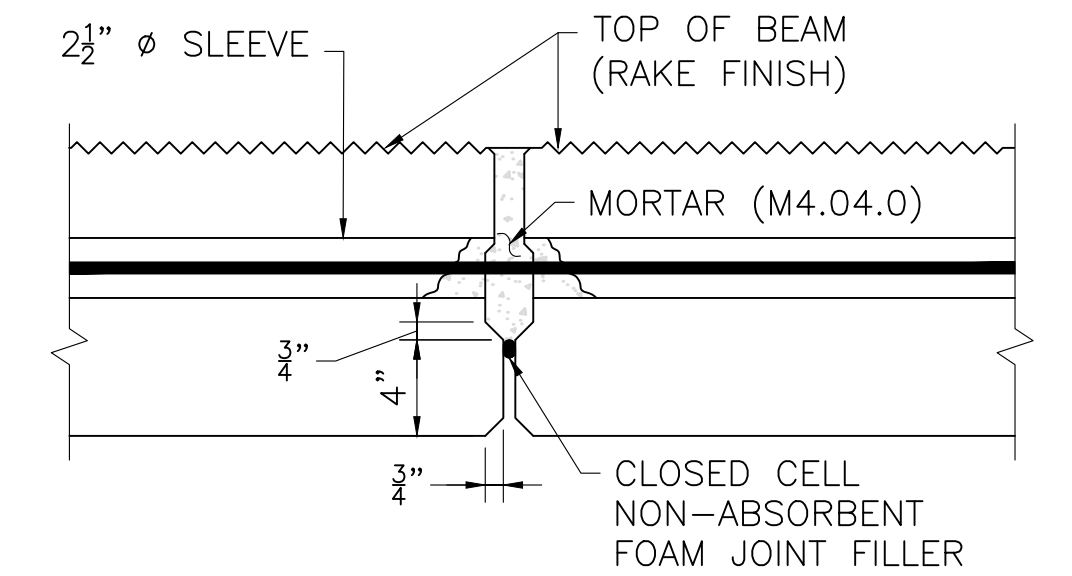


ALTERNATE STIRRUP PATTERN

SCALE: 1 1/2" = 1'-0"

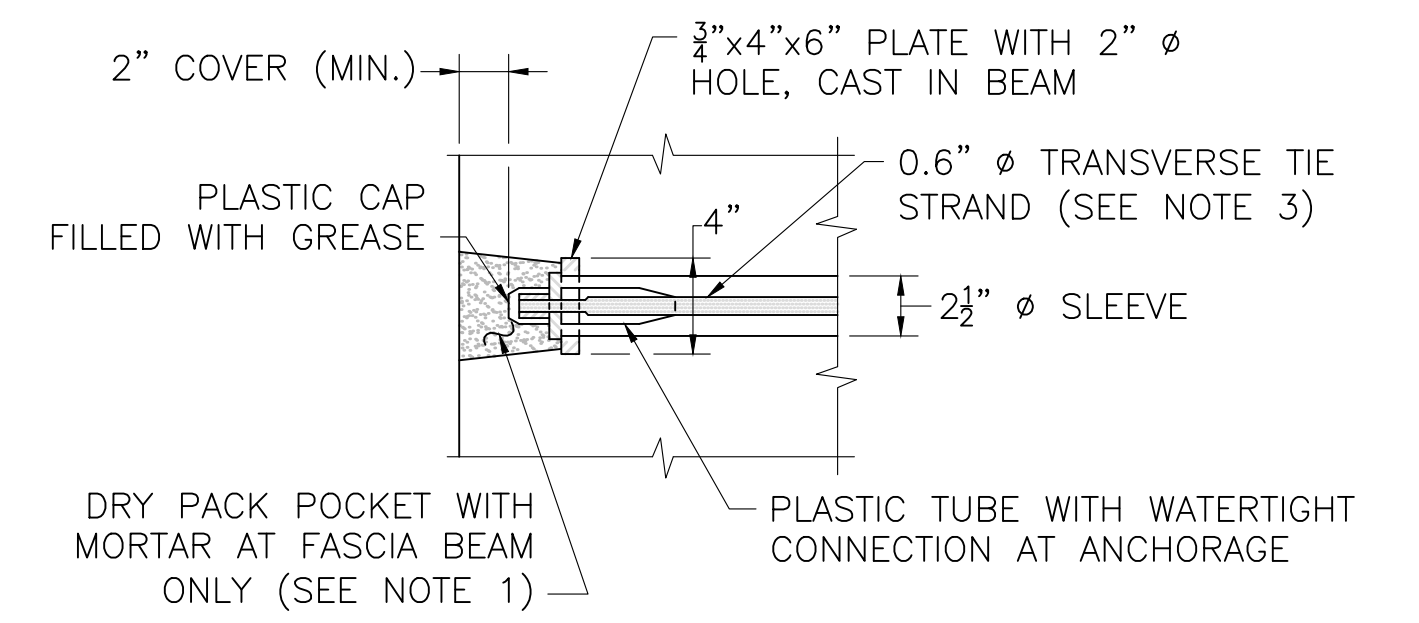
NOTES:

1. CONTRACTOR MAY SUBMIT ABOVE STIRRUP PATTERN TO THE ENGINEER FOR APPROVAL PROVIDED THAT THE ABOVE CRITERIA IS MET.
2. MAINTAIN ALL CLEARANCES AS SHOWN ON THE MIDSPAN SECTION.



LONGITUDINAL JOINT SECTION

SCALE: 1 1/2" = 1'-0"

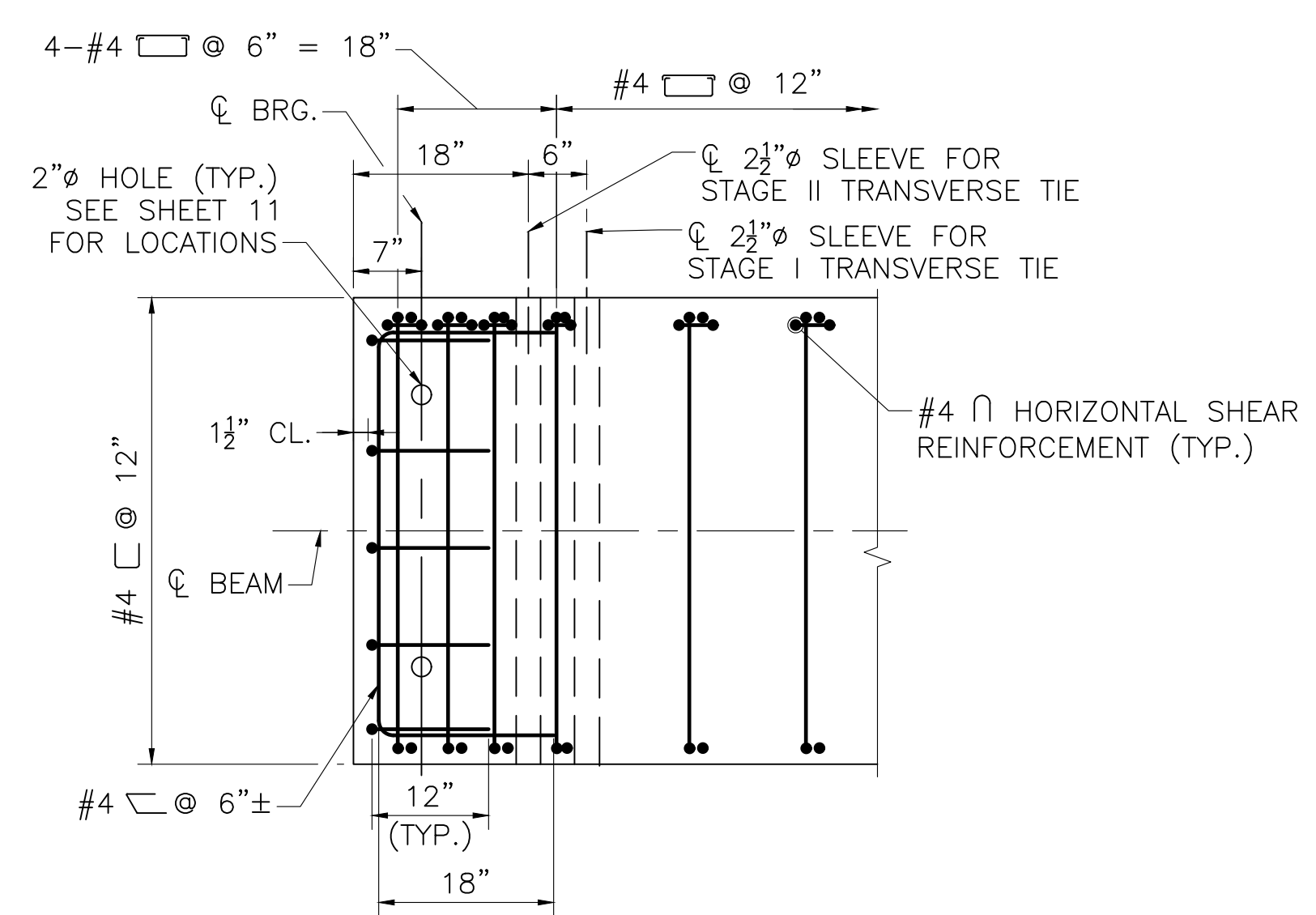


NOTES:

1. MORTAR FOR EXTERIOR POCKETS SHALL CONFORM TO M4.02.15 AND SHALL BE THE SAME COLOR AND TEXTURE AS THE BEAM CONCRETE.
2. OTHER ANCHORAGE SYSTEMS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER. ALTERNATE ANCHORAGE SYSTEMS SHALL BE WATERTIGHT AND CORROSION PROOF.
3. TRANSVERSE TIES SHALL BE COVERED BY A SEAMLESS POLYPROPYLENE SHEATH (WITH CORROSION INHIBITING GREASE BETWEEN THE STRAND AND SHEATH) FOR THE FULL LENGTH OF THE STRAND, EXCEPT AT THE ANCHORAGE LOCATION.

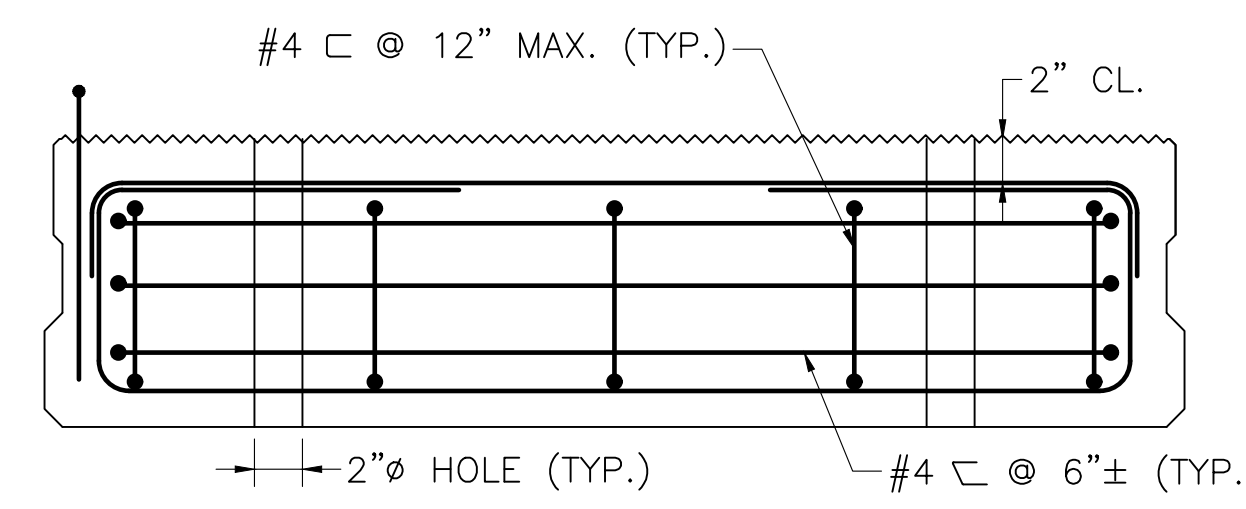
TRANSVERSE TIE ANCHORAGE

SCALE: 1 1/2" = 1'-0"



BEAM HORIZONTAL SECTION AT END OF BEAM

SCALE: 3/4" = 1'-0"



VERTICAL SECTION AT END OF BEAM

SCALE: 1 1/2" = 1'-0"

NOTE:

SEE MIDSPAN SECTION FOR DETAILS AND INFORMATION NOT SHOWN ABOVE.

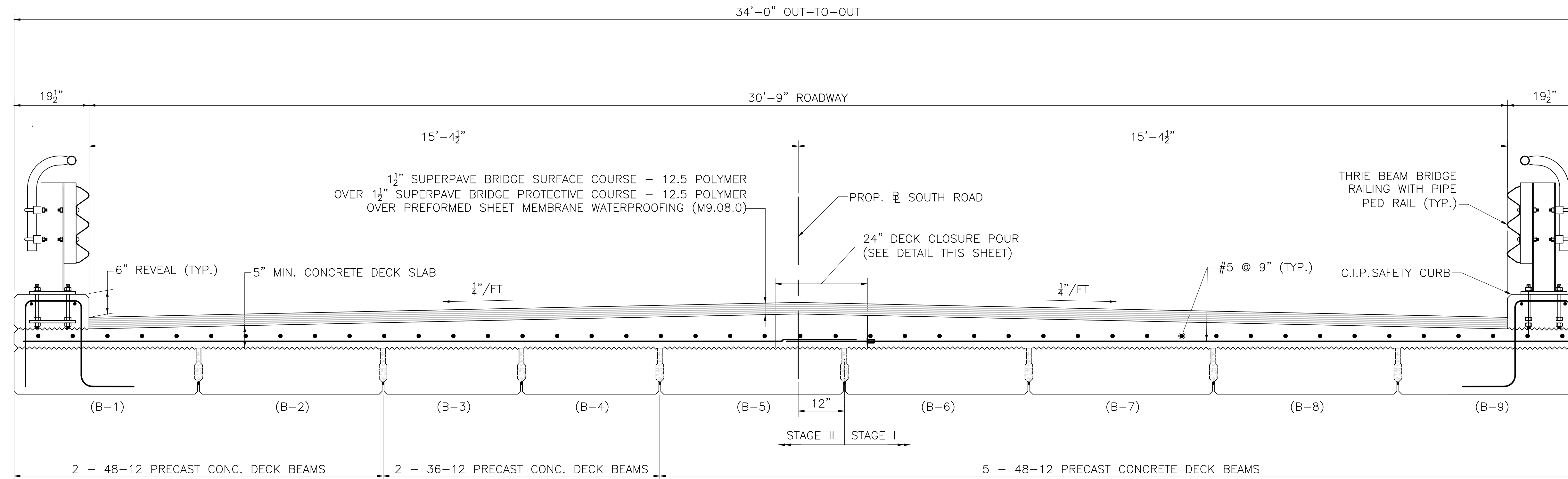
COMMONWEALTH OF MASSACHUSETTS
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**HAMPDEN
SOUTH ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	22	24
PROJECT FILE NO.		N/A	

DECK DETAILS



NOTE:

SEE SHEET 12 FOR STEEL REINFORCEMENT IN PRECAST CONCRETE BEAMS.

TYPICAL SECTION

SCALE: 3/4" = 1'-0"

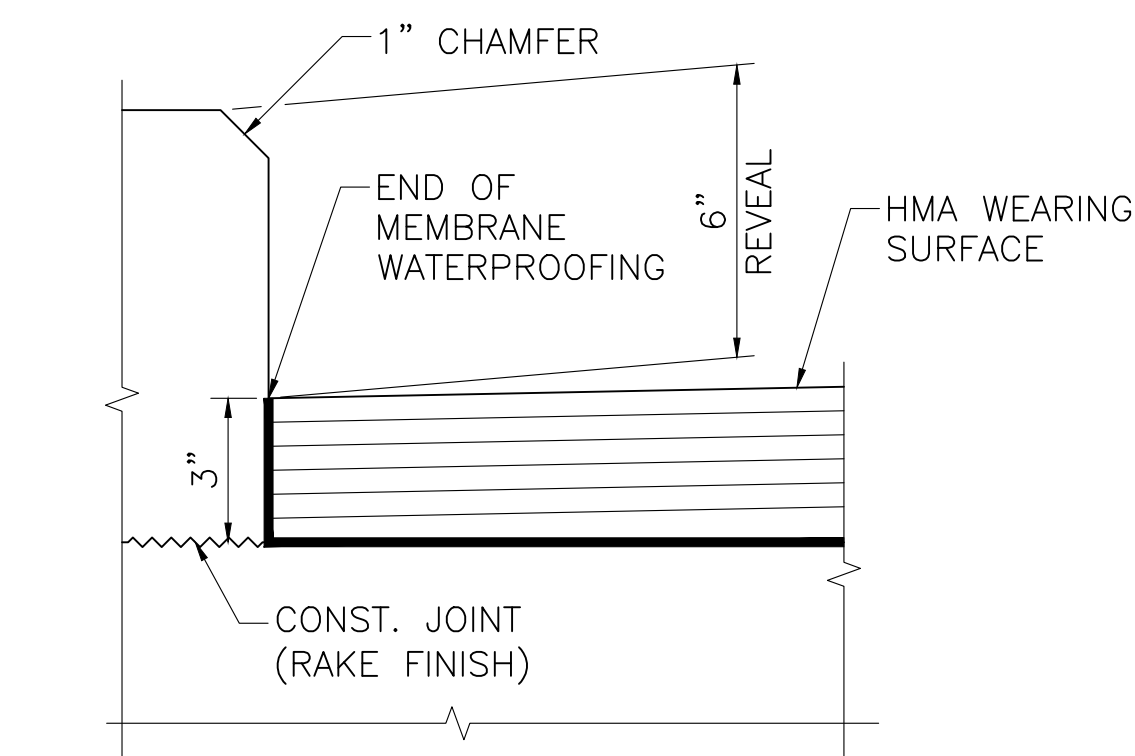
STAGE CONSTRUCTION NOTES:

STAGE I

1. AFTER ALL STAGE I BEAMS HAVE BEEN ERECTED, TENSION EACH STAGE I TRANSVERSE TIE TO 5 KIPS. SEE SHEET 21 FOR TRANSVERSE TIE LOCATIONS.
2. FILL ALL KEYWAYS BETWEEN STAGE I BEAMS WITH MORTAR (M4.04.5). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE (5) DAYS AFTER THE BEAMS HAVE BEEN ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
3. AFTER THE MORTAR HAS CURED (24 HOURS MINIMUM), TENSION EACH STAGE I TRANSVERSE TIE TO 44 KIPS.
4. CONCRETE FOR STAGE I DECK SLAB SHALL BE PLACED AFTER THE STAGE I TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.

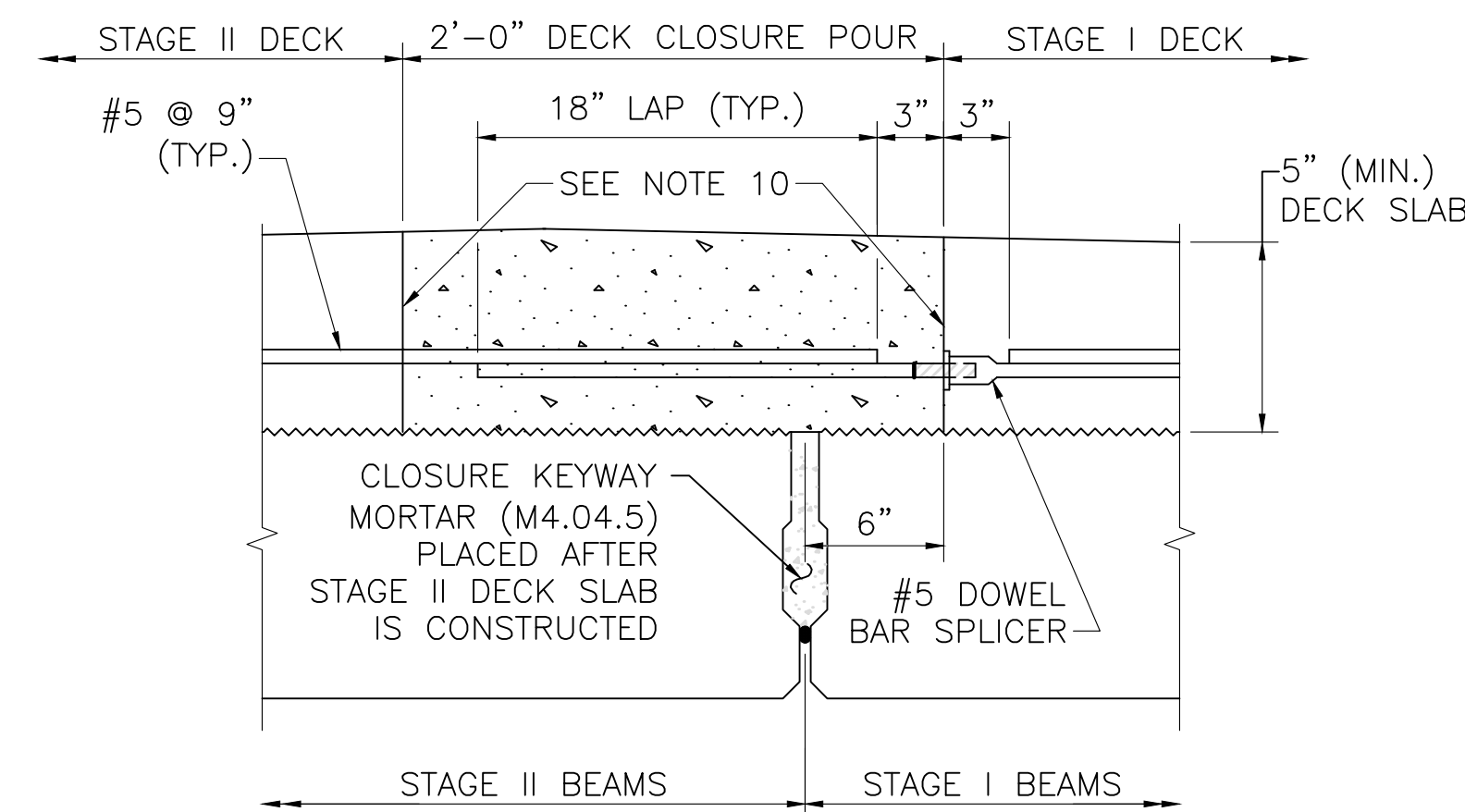
STAGE II

5. AFTER ALL STAGE II BEAMS HAVE BEEN ERECTED, TENSION EACH STAGE II TRANSVERSE TIE TO 5 KIPS. SEE SHEET 21 FOR TRANSVERSE TIE LOCATIONS.
6. FILL ALL KEYWAYS BETWEEN STAGE II BEAMS WITH MORTAR (M4.04.5). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE (5) DAYS AFTER THE BEAMS HAVE BEEN ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
7. AFTER THE MORTAR HAS CURED (24 HOURS MINIMUM), TENSION EACH STAGE II TRANSVERSE TIE TO 44 KIPS.
8. CONCRETE FOR STAGE II DECK SLAB SHALL BE PLACED AFTER THE STAGE II TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.
9. FILL CLOSURE KEYWAY BETWEEN STAGE I AND STAGE II BEAMS WITH MORTAR (M4.04.5).
10. VERTICAL SURFACES OF PREVIOUSLY CAST DECK SLAB CONCRETE SHALL BE PRE-WETTED FOR 24 HOURS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
11. IMMEDIATELY PLACE AND CURE CLOSURE POUR.



FACE OF SAFETY CURB DETAILS

SCALE: 3" = 1'-0"



STAGED CONSTRUCTION DETAIL

SCALE: 1 1/2" = 1'-0"

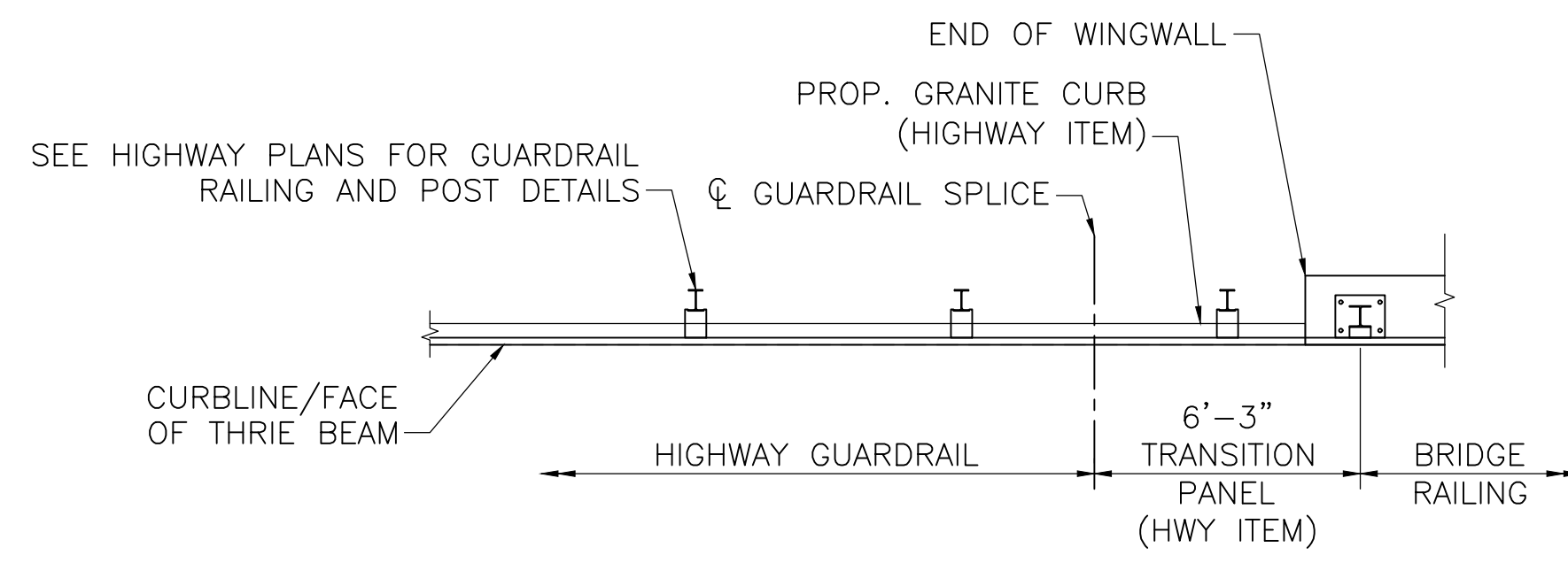
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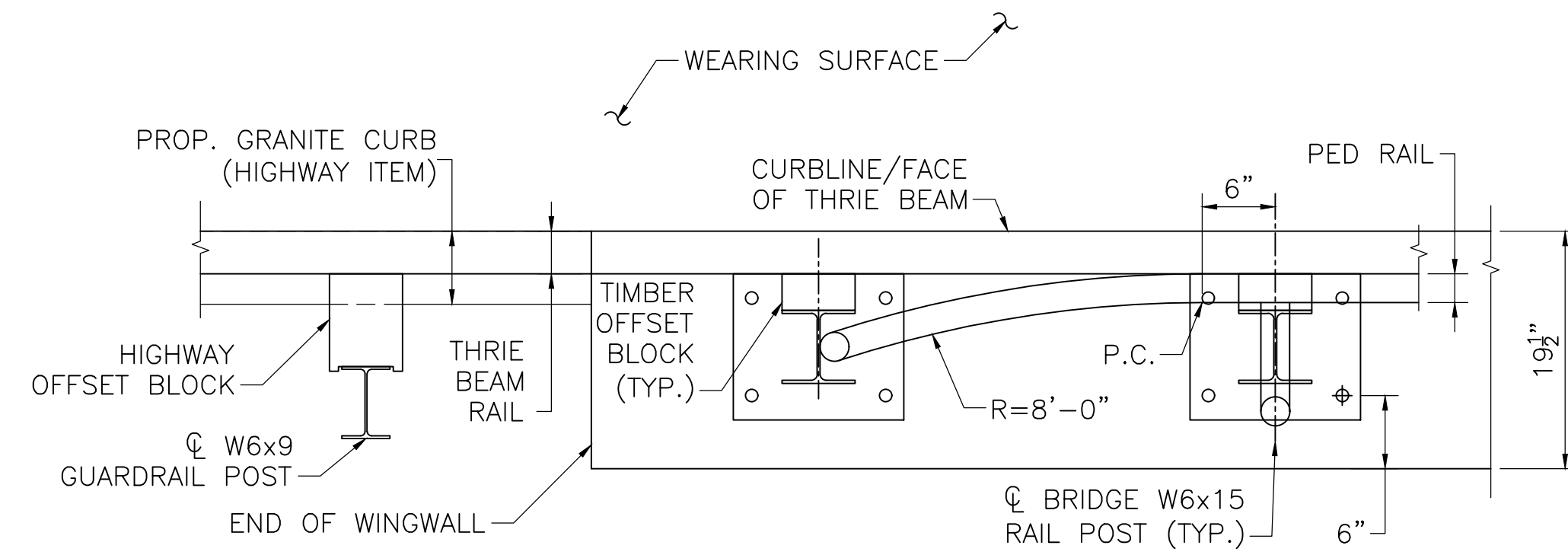
**HAMPDEN
SOUTH ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	23	24
PROJECT FILE NO.		N/A	

RAILING DETAILS (1 OF 2)

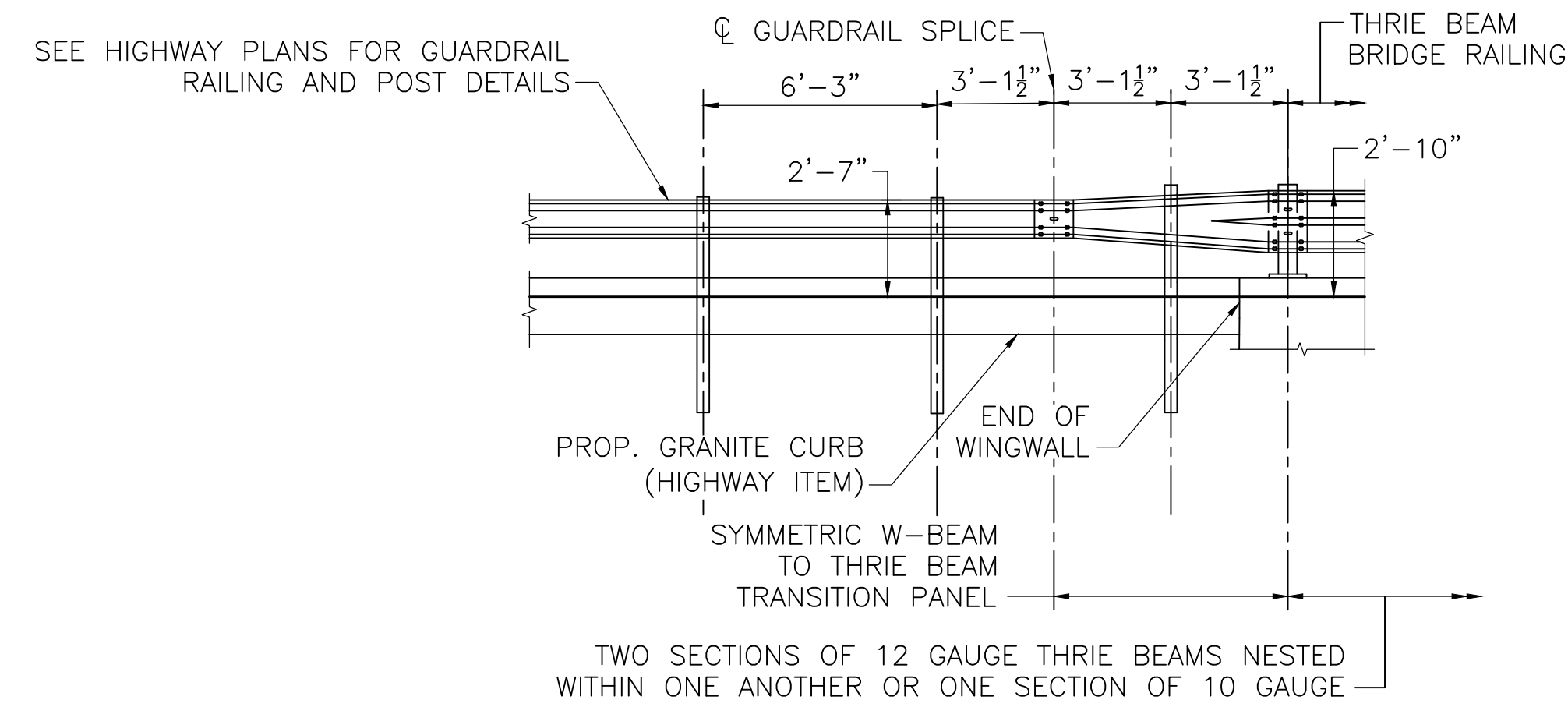


PLAN



TYPICAL DETAIL END OF SAFETY CURB

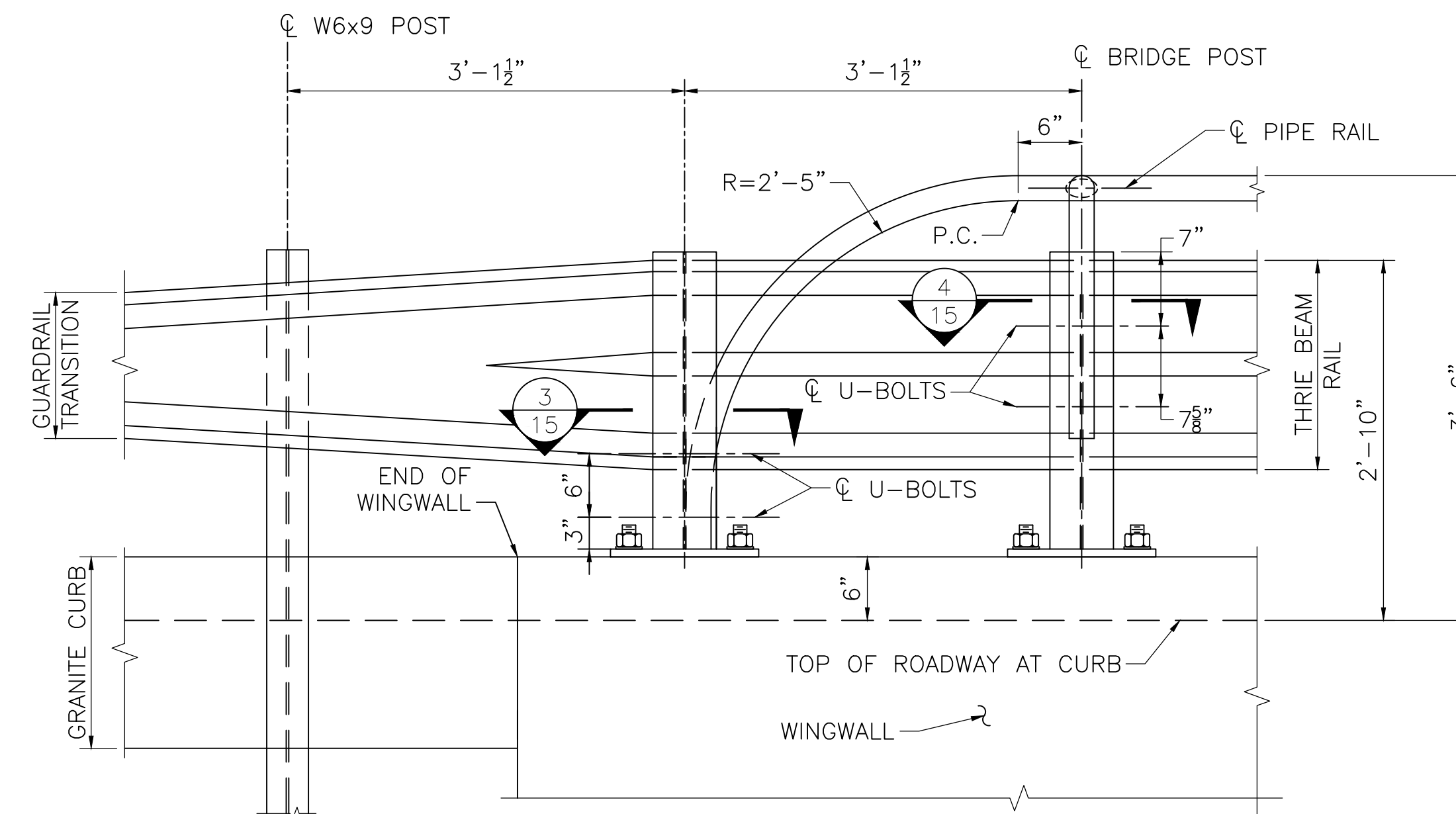
SCALE: 1" = 1'-0"



ELEVATION

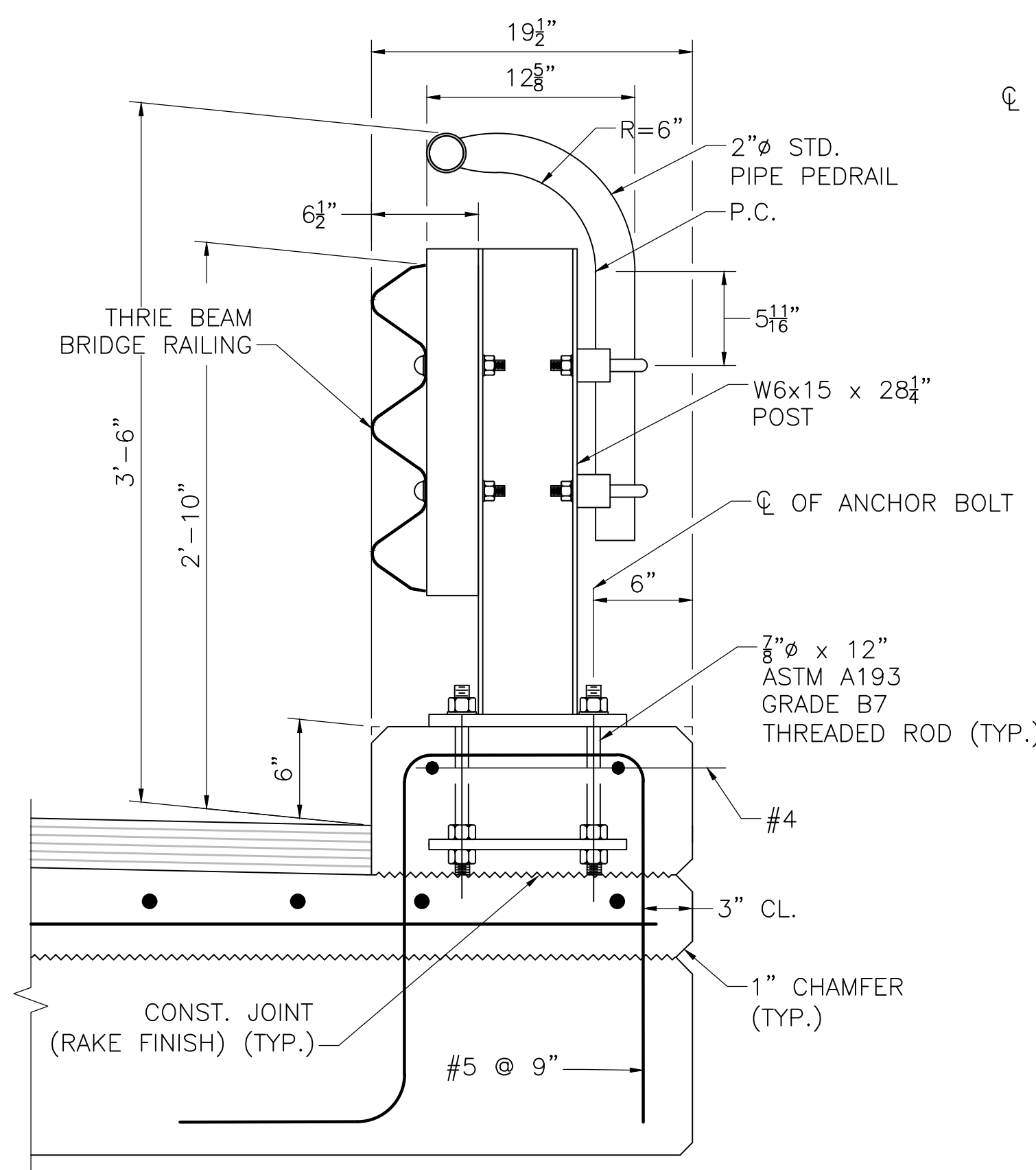
GUARDRAIL TRANSITION

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



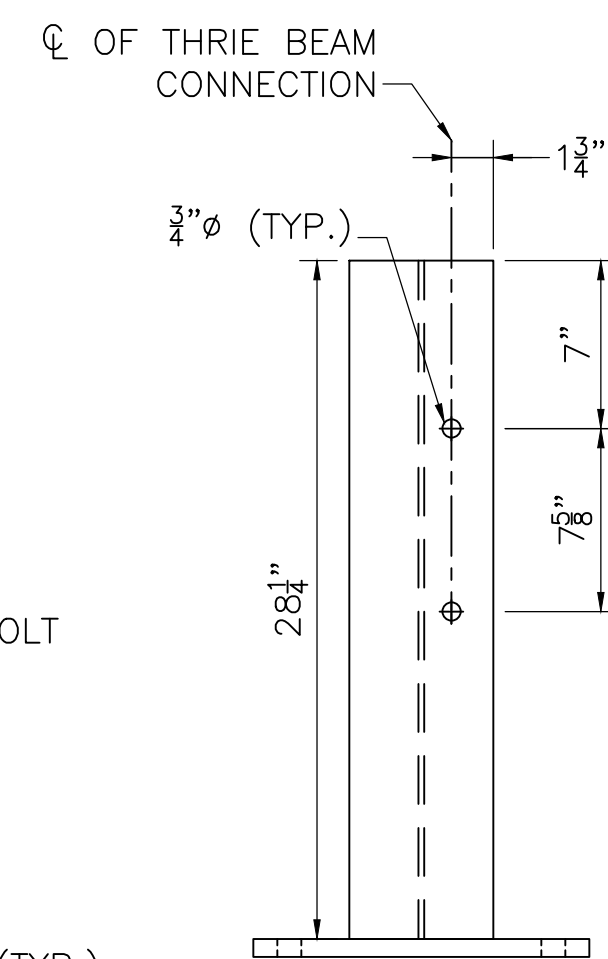
TYPICAL RAILING ELEVATION

SCALE: 1" = 1'-0"



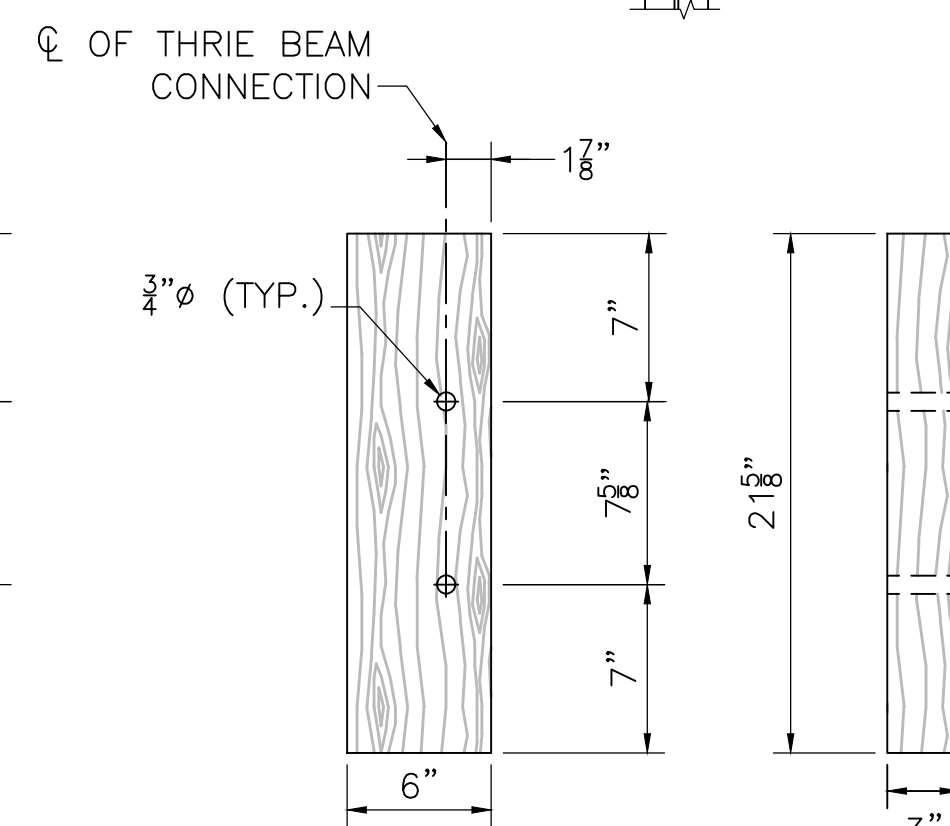
SAFETY CURB DETAIL

SCALE: 1 1/2" = 1'-0"



STEEL POST DETAIL

SCALE: 1 1/2" = 1'-0"



TIMBER OFFSET DETAILS

SCALE: 1 1/2" = 1'-0"

MATERIALS:

1. RAIL POST, BASE PLATES, AND ANCHOR PLATES SHALL BE AASHTO M270 GRADE 50 GALVANIZED.
2. THRIE BEAM BRIDGE RAIL SHALL BE AASHTO M180, CLASS B (10 GAUGE OR DOUBLE NESTED 12 GAUGE), AND GALVANIZED.
3. THRIE BEAM RAIL SPLICE SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD DETAILS, SECTION 400.
4. ALL BOLTS SHALL BE MECHANICALLY GALVANIZED WITH COMPATIBLE NUTS AND WASHERS UNLESS OTHERWISE NOTED.
5. STANDARD WEIGHT PIPES SHALL BE ASTM A500 GRADE B GALVANIZED.
6. PIPE RAIL SADDLE SHALL BE ASTM A36 OR GREATER, GALVANIZED.
7. TIMBER OFFSET BLOCKS SHALL MEET M8.07.0.B.

GENERAL NOTES:

1. SET POSTS PERPENDICULAR TO TOP OF SAFETY CURB.
2. ANCHOR BOLTS SHALL BE SET WITH TEMPLATES.
3. WELDING SHALL CONFORM TO THE REQUIREMENTS OF ANSI/AASHTO/AWS D.1.5.
4. PLACE A REFLECTORIZED WASHER IN THE UPPER VALLEY OF EVERY THRIE BEAM POST.

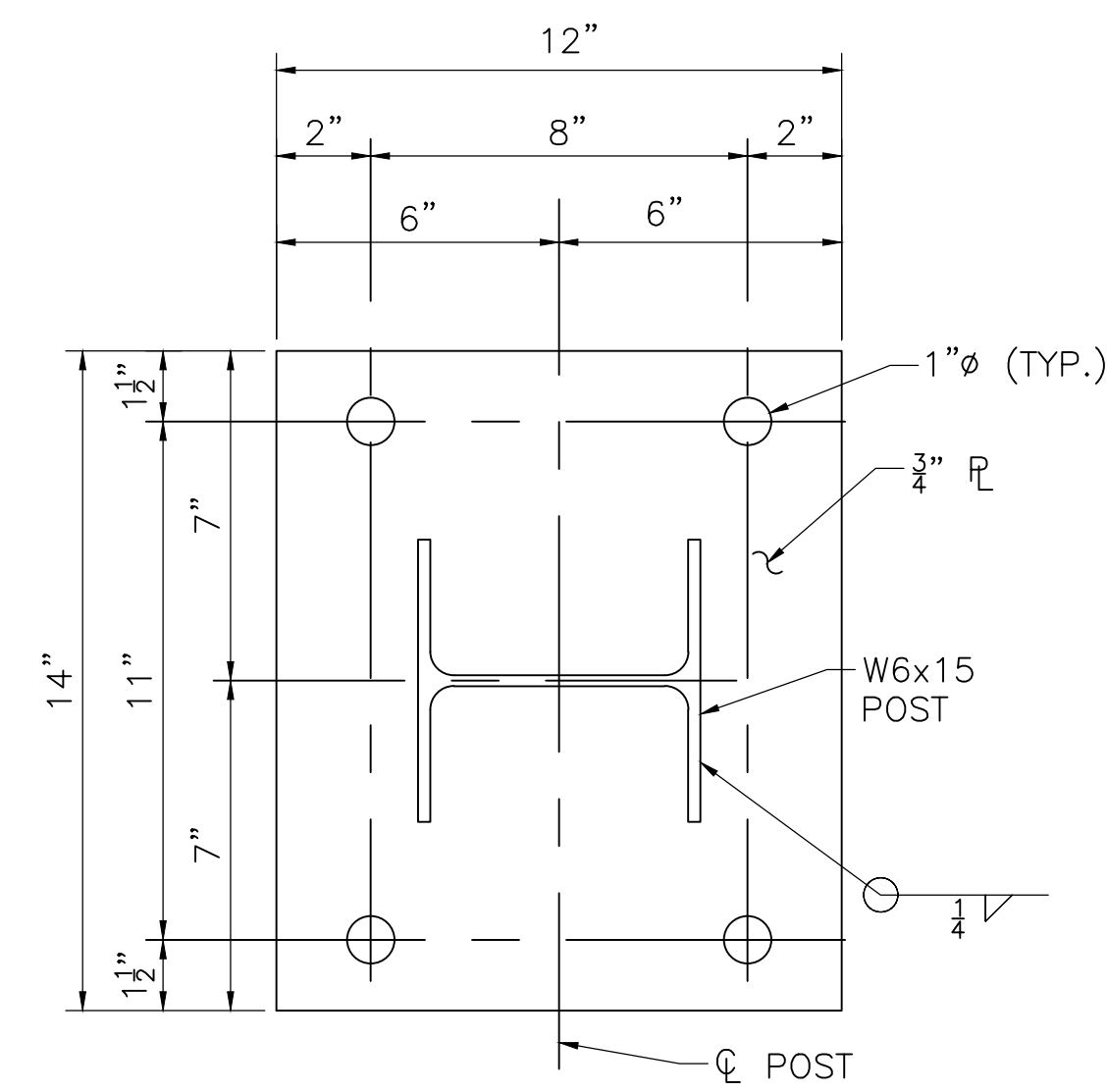
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HAMPDEN SOUTH ROAD

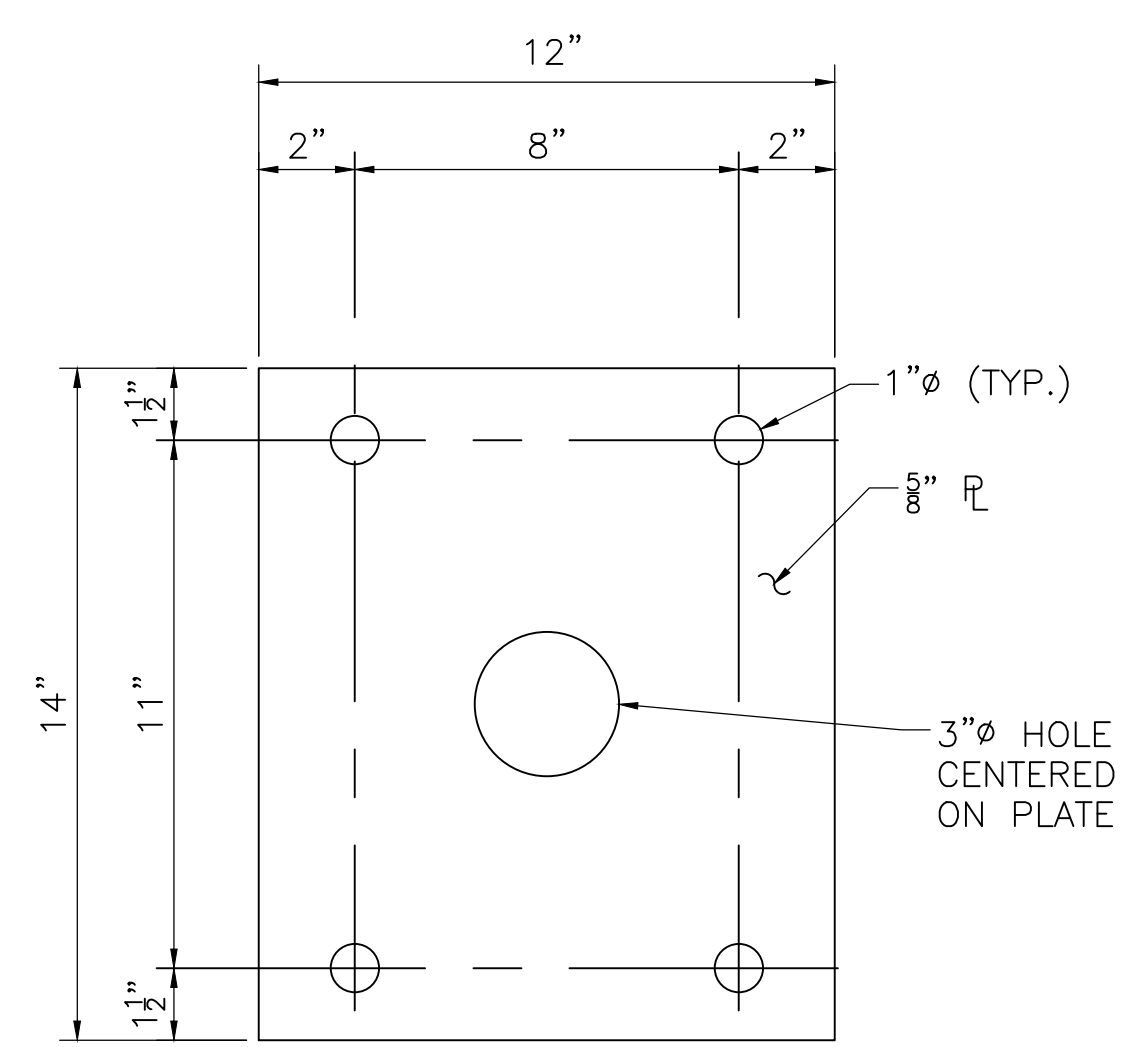
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	24	24
PROJECT FILE NO.		N/A	

RAILING DETAILS (2 OF 2)



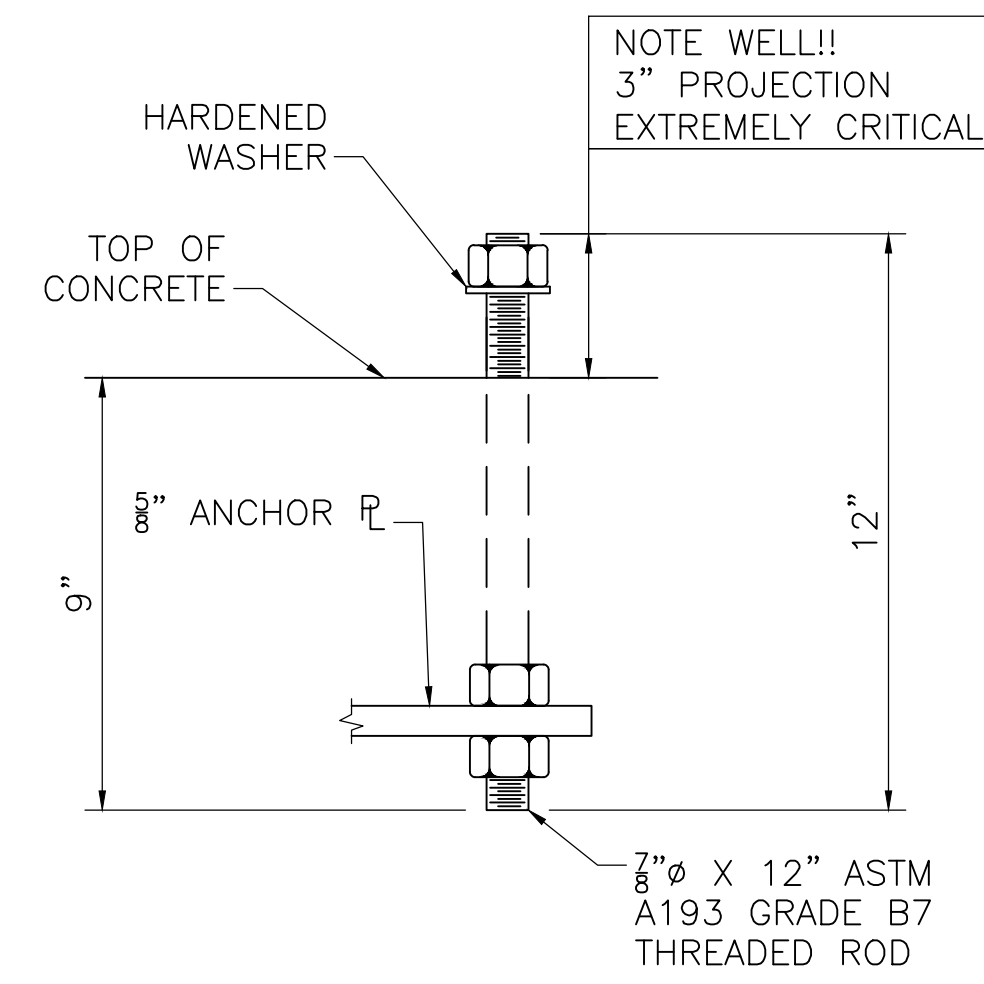
THRIE BEAM POST BASE PLATE DETAIL

SCALE: 3" = 1'-0"



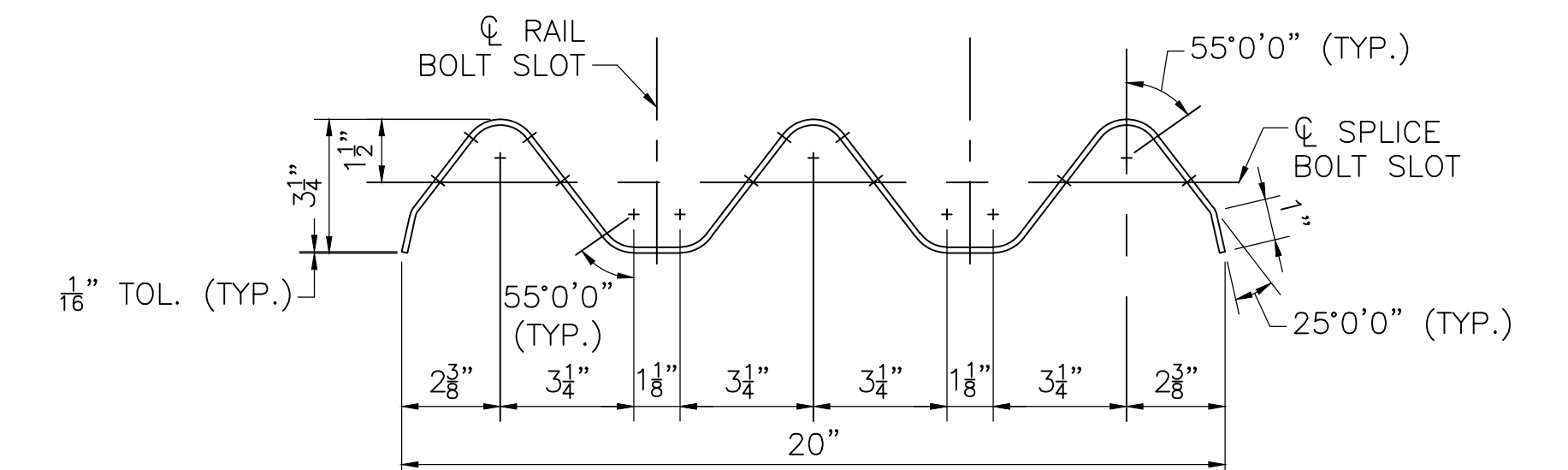
THRIE BEAM POST ANCHOR PLATE DETAIL

SCALE: 3" = 1'-0"



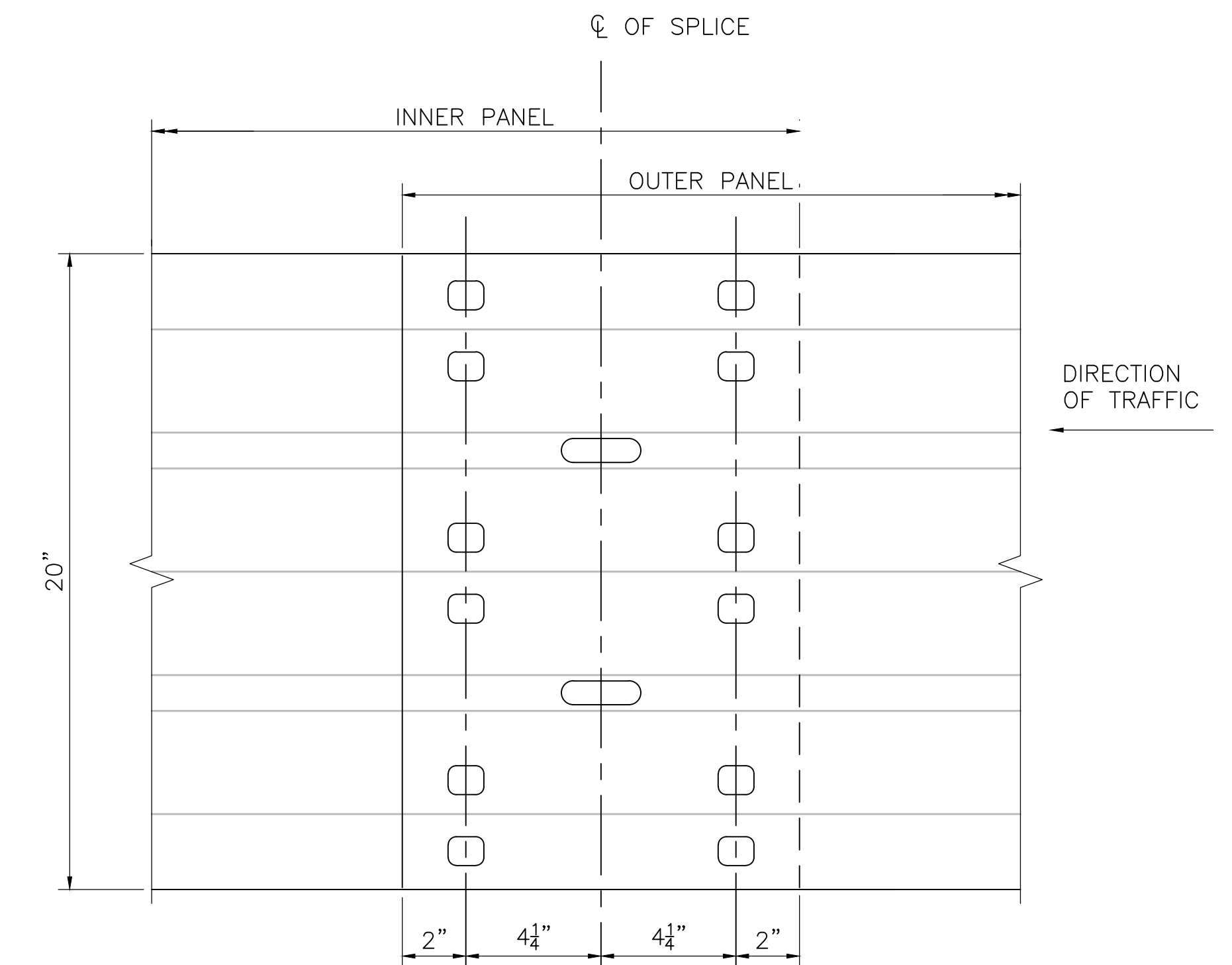
ANCHOR BOLT DETAIL

SCALE: 3" = 1'-0"



STEEL THRIE BEAM 10 GAUGE GUARDRAIL SECTION

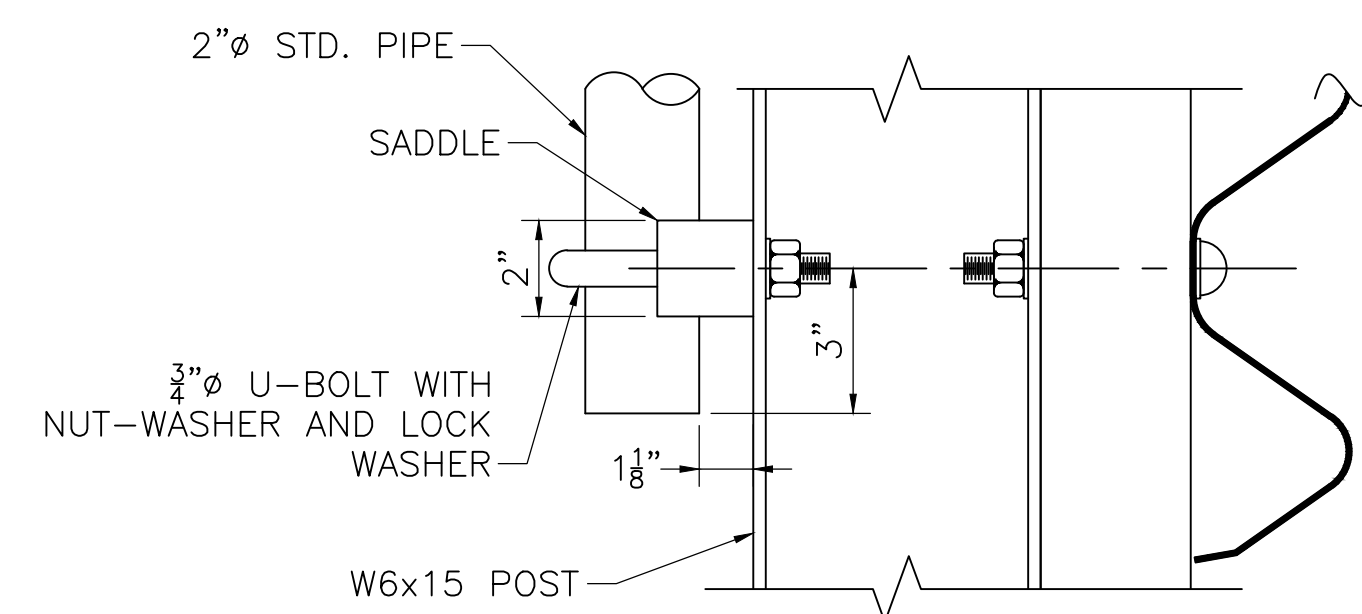
SCALE: 3" = 1'-0"



NOTE:
THRIE BEAM PANELS SHOWN SHALL BE 2 LAYERS (DOUBLE-NESTED) OF 12 GAUGE THRIE BEAM OR 1 LAYER OF 10 GAUGE.

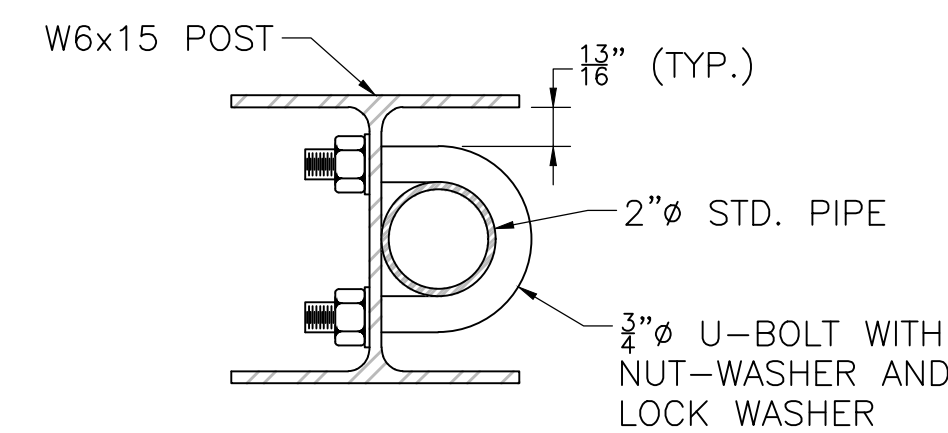
THRIE BEAM RAIL SPLICE ELEVATION

SCALE: 3" = 1'-0"



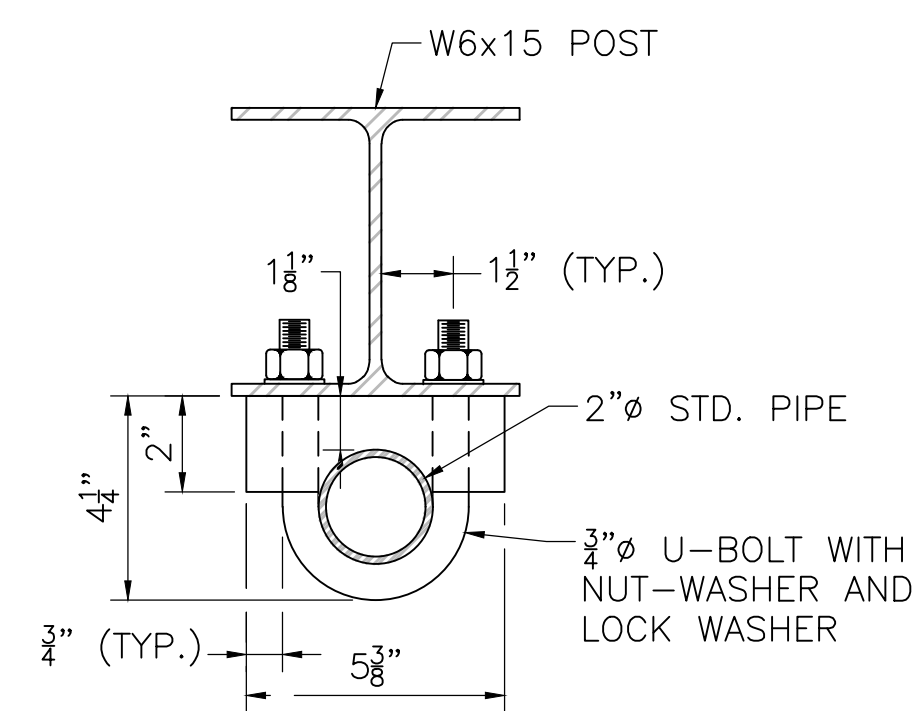
PIPE RAILING CONNECTION DETAILS

SCALE: 3" = 1'-0"



SECTION 3

SCALE: 3" = 1'-0"



SECTION 4

SCALE: 3" = 1'-0"

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