MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	1	49
PROJECT FILE NO.	613295		

TITLE SHEET & INDEX

PLAN AND PROFILE OF

LOG PLAIN ROAD WEST OVER G&W RAILROAD

(BRIDGE NO. G-12-022)

IN THE CITY OF

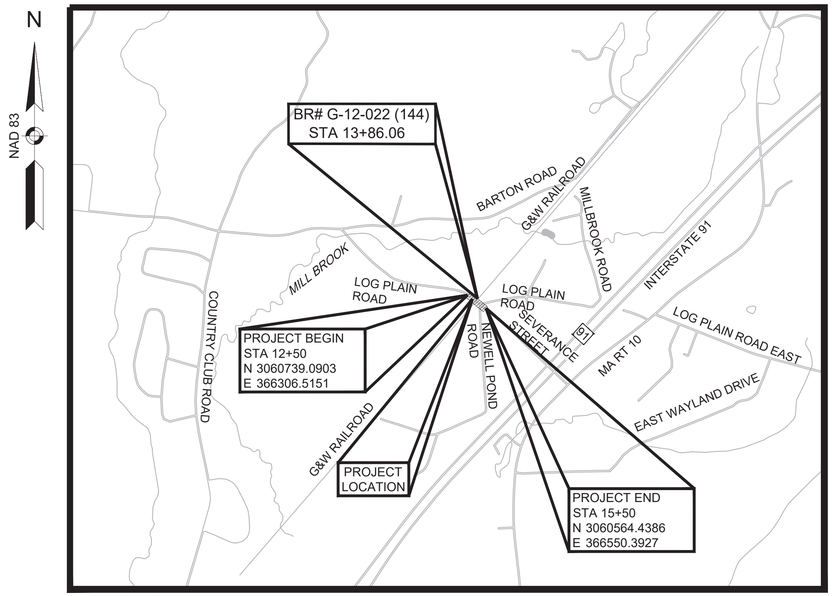
GREENFIELD

FRANKLIN COUNTY

FEDERAL AID PROJECT NO. STP(BR-OFF)-003S(930)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 HIGHWGAY 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



0 100 200 300 400

SCALE: 1" = 100'

LENGTH OF PROJECT = 300.00 FEET = 0.057 MILES

DESIGN DESIGNATION (LOG PLAIN ROAD)

DESIGN SPEED	25 MPH
ADT (2024)	879
ADT (2044)	971
K	10.5% (PM)
D	66% (WB)
T (PEAK HOUR)	2.8% (PM)
T (AVERAGE DAY)	4.8%
DHV	102
DDHV	67
FUNCTIONAL CLASSIFICATION	URBAN LOCAL

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER DEACETIS
CIVIL
No. 56508
REGISTERED PROFESSIONAL ENGINEER

Christopher Deacetis
Digitally signed by Christopher Deacetis
Date: 2026.02.05 11:25:12 -05'00'

DATE	DESCRIPTION	REV #

MassDOT
Massachusetts Department of Transportation
Highway Division

Jacobs
120 ST. JAMES AVENUE
5TH FLOOR
BOSTON, MA 02116

APPROVED

Carrie Lavallee, P.E.
Digitally signed by Carrie Lavallee, P.E.
Date: 2026.02.09 08:21:07 -05'00'

02/09/2026

CHIEF ENGINEER **DATE**

613295_HD (TITLE).DWG Plotted on 5-Feb-2026 8:56 AM

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
		SILT SACK
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
		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
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
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT BARRIER
		COIR LOG SEDIMENT BARRIER
		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
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	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	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
M&O	MILL & OVERLAY
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

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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
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
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

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

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GREENFIELD
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MA	STP(BR-OFF)-003S(930)X	3	49
PROJECT FILE NO.	613295		

GENERAL NOTES

GENERAL NOTES:

1. THIS BASEPLAN WAS COMPILED FROM A COMBINATION OF TERRESTRIAL LIDAR AND CONVENTIONAL TOTAL STATION SURVEY DATA COLLECTED BY GREENMAN-PEDERSEN, INC. (GPI) BETWEEN FEBRUARY & MARCH, 2024.

2. THE SURVEY CONROL NETWORK WAS SET BY AN INSTRUMENT FIELD SURVEY PERFORMED BY GPI IN FEBRUARY, 2024. THE MASSDOT ESTABLISHED PRIMARY SURVEY CONTROL WAS HELD AS THE BASIS FOR THE SURVEY TRAVERSE AND ELEVATION NETWORKS. GPI EXTENDED THESE NETWORKS VIA TOTAL STATION SET COLLECTION AND DIFFERENTIAL LEVELING.

   TRAVERSE 1:
   UNADJUSTED TRAVERSE CLOSURE: 1:730,498
   TRAVERSE ADJUSTMENT METHOD: LEAST SQUARES (VIA STARNET)
   CHI-SQUARED TEST: PASS, TOTAL ERROR FACTOR = 0.984 (VIA STARNET)
   PROJECT AVERAGE COMBINED SCALE FACTOR: 0.9999821081 (VIA STARNET)
   LEVEL LINE CLOSURE: 0.0059' OVER 6,917 LF (1:1,172,373)
   LEVEL LINE ADJUSTMENT METHOD: BY DISTANCE (VIA LEICA INFINITY ADJUSTMENT SOFTWARE)

   TRAVERSE 2:
   UNADJUSTED TRAVERSE CLOSURE: 1:643,489
   TRAVERSE ADJUSTMENT METHOD: LEAST SQUARES (VIA STARNET)
   CHI-SQUARED TEST: PASS, TOTAL ERROR FACTOR = 0.984 (VIA STARNET)
   PROJECT AVERAGE COMBINED SCALE FACTOR: 0.9999821081 (VIA STARNET)
   LEVEL LINE CLOSURE: 0.0059' OVER 6,917 LF (1:1,172,373)
   LEVEL LINE ADJUSTMENT METHOD: BY DISTANCE (VIA LEICA INFINITY ADJUSTMENT SOFTWARE)

3. THE COORDINATE SYSTEM SHOWN HEREON IS BASED UPON THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM - MAINLAND ZONE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83) (2011), EPOCH 2010.00, ESTABLISHED BY GPI IN FEBRUARY, 2024.

4. THE VERTICAL DATUM SHOWN HEREON REFERENCES THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS ESTABLISHED BY GPI IN FEBRUARY, 2024 VIA DIFFERENTIAL LEVELING FROM IRON ROD & CAP SET #3448 & #3449, AS DESCRIBED IN 2023 WITHIN MASSDOT FIELD BOOK NO. 18690.

5. THE UNITS SHOWN HEREIN ARE US SURVEY FEET.

6. CONTOUR INTERVAL: 1 FOOT

7. THE STATE AND CITY RIGHT-OF-WAYS SHOWN HEREON WERE ESTABLISHED BY A CADASTRAL SURVEY AND FOUND MONUMENTATION.

8. PROPERTY LINES SHOWN HERON ARE APPROXIMATE ONLY AND ARE BASED UPON RECORD DEEDS, PLANS AND ASSESSORS INFORMATION OBTAINED AT THE FRANKLIN COUNTY REGISTRY OF DEEDS AND THE TOWN OF GREENFIELD ASSESSOR'S DEPARTMENT.

9. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY MASSACHUSETTS HIGHWAY BOUND OR PRIVATE PROPERTY PIN THAT IS DISPLACED OR DESTROYED DURING CONSTRUCTION, TO ITS CORRECT LOCATION AT THE COMPLETION OF THE WORK.

10. IT IS THE INTENT OF THE DESIGN TO PROVIDE A MINIMUM CONSTRUCTED SIDEWALK WIDTH FOR A PATH OF TRAVEL PAST ALL OBSTRUCTIONS OF 48". THE CONTRACTOR SHALL VERIFY THAT ALL POTENTIAL OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO SIGNS, MAILBOXES, UTILITY POLES, HYDRANTS, AND TRAFFIC SIGNAL EQUIPMENT ARE LOCATED AS TO PROVIDE THIS MINIMUM PATH OF TRAVEL CLEARANCE.

11. THE CONTRACTOR IS HEREBY NOTIFIED THAT ADDITIONAL WORK WITHIN THE PROJECT LIMITS MAY BE PERFORMED BY OTHERS.

12. THE CONTRACTOR SHALL COORDINATE ALL ACTIVITIES WITH OTHER CONTRACTORS PERFORMING WORK WITHIN AND AT THE PROJECT LIMITS.

13. THE CONTRACTOR MAY BE REQUIRED TO PERFORM ITEMS OF WORK OUT OF NORMAL SEQUENCE AND SCHEDULE, AS DIRECTED BY THE ENGINEER, IN ORDER TO MEET THE OVERALL PROJECT SCHEDULE.

14. 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 WITH SUFFICIENT LEAD TIME FOR PROCESSING IN ACCORDANCE WITH CONTRACT SPECIFICATIONS.

15. 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 TO SUBMITTALS REQUIRED BY THE CONTRACTOR REGARDING THE MAINTENANCE AND PROTECTION OF TRAFFIC.

16. DAMAGE TO PRIVATE PROPERTIES BEYOND THE WORK LIMITS AS CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED "IN-KIND" BY THE CONTRACTOR AT THE CONTRACTOR'S SOLE EXPENSE.

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

18. ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM BORROW PLACED AND SEEDED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM, OR PAVEMENT SURFACE.

19. TREES AND SHRUBS WITHIN THE LIMITS OF WORK NOT SCHEDULED FOR REMOVAL AS INDICATED ON THE PLANS SHALL ONLY BE REMOVED UPON APPROVAL OF THE ENGINEER.

20. ALL EROSION CONTROLS MUST BE CHECKED, REPLACED OR REPAIRED AS NECESSARY, AND ANY SILTATION REMOVED, AFTER EACH RAIN EVENT.

21. ALL PEDESTRIAN CURB RAMPS SHALL CONFORM TO THE LATEST EDITION OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS AND WITH THE AMERICANS WITH DISABILITIES ACT (ADA) GUIDELINES, AS AMENDED, AND THE 2017 MASSDOT CONSTRUCTION STANDARD DETAILS, OR LATEST REVISION.

22. DETECTABLE WARNING PANELS SHALL BE INSTALLED ON ALL PEDESTRIAN CURB RAMPS AND SHALL COMPLY WITH CONSTRUCTION STANDARD 107.65R. PAYMENT FOR DETECTABLE WARNING PANELS SHALL BE CONSIDERED INCIDENTAL TO THE CONSTRUCTION OF THE PEDESTRIAN CURB RAMPS OR SIDEWALKS IN WHICH THEY ARE BEING INSTALLED.

23. ALL TRANSVERSE JOINTS, AND ALL LONGITUDINAL JOINTS BETWEEN NEW SURFACE PAVEMENT AND EXISTING SURFACE PAVEMENT TO REMAIN SHALL BE COATED WITH A HOT POURED RUBBERIZED ASPHALT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICATION NUMBER SS-S-1401.

24. CONTRACTOR SHALL COORDINATE LOCATION AND SIZE OF PROSPECTIVE CONSTRUCTION STOCKPILE AREAS IN ACCORDANCE WITH THE P-22-001 POLICY DIRECTIVE PRIOR TO THE COMMENCEMENT OF WORK AND OBTAIN APPROVAL FROM MASSDOT AND THE CITY OF GREENFIELD. ALL STOCKPILE AREAS SHALL BE STABILIZED AS NECESSARY DURING CONSTRUCTION.

UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT LOCATION OF ANY AND ALL EXISTING UTILITIES WITHIN THE PROJECT AREA PRIOR TO THE START OF CONSTRUCTION.

2. THE CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233), AT LEAST 72 BUSINESS HOURS BEFORE ANY CONSTRUCTION BEGINS.

3. SHOULD AN EXISTING UTILITY BE FOUND TO BE IN CONFLICT WITH THE PROPOSED WORK, THE LOCATION, SIZE AND TYPE SHALL BE ACCURATELY DETERMINED WITHOUT DELAY, BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

4. THE CONTRACTOR SHALL COORDINATE ALL ARRANGEMENTS FOR THE ALTERATION AND/OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITY THROUGH THE MASSDOT HIGHWAY DIVISION UTILITY SECTION.

5. THE CONTRACTOR SHALL ADJUST ALL SEWER MANHOLES, GAS GATES, WATER VALVE GATE BOXES, WATER SERVICE BOXES, CURB STOPS, AND OTHER WATER APPURTENANCES WITHIN LIMITS TO THE PROPOSED FINISH GRADE.

6. DAMAGE CAUSED BY THE CONTRACTOR'S ACTIONS TO EXISTING PRIVATE WATER OR SANITARY SEWER SERVICE LINES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.

TRAFFIC CONTROL NOTES:

1. SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS AND WORK ZONE PROTECTION SHALL BE IN ACCORDANCE WITH CURRENT MASSDOT AND MUTCD REQUIREMENTS AND SPECIFICATIONS.

2. ALL CONSTRUCTION SIGNS IN PLACE BUT NOT PERTINENT TO THE ONGOING CONSTRUCTION PHASING SHALL BE COVERED OR "BAGGED".

3. THE CONTRACTOR SHALL PROVIDE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICLE, BICYCLE AND PEDESTRIAN TRAFFIC IN AREAS UNDER CONSTRUCTION.

4. ANY AND ALL TRAFFIC RELATED ITEMS REQUIRED TO MAINTAIN TRAFFIC FLOW THROUGH OR AROUND THE PROJECT AREA SHALL BE MAINTAINED IN A CONDITION ACCEPTABLE TO THE ENGINEER. FURTHER, THE CONTRACTOR SHALL REPLACE THOSE ITEMS AS REQUIRED BY THE SPECIFICATIONS OR AS DEEMED NECESSARY BY THE ENGINEER.

5. ALL TEMPORARY FACILITIES INCLUDING BUT NOT LIMITED TO, TEMPORARY PEDESTRIAN PASSAGEWAYS AROUND A CONSTRUCTION SITE, SHALL COMPLY WITH 521 CMR.

MARKING AND SIGNING NOTES:

1. ALL PROPOSED PAVEMENT MARKINGS SHALL MATCH EXISTING MARKINGS AT THE LIMITS OF WORK.

2. ALL PROPOSED PAVEMENT MARKINGS SHALL BE WET REFLECTIVE THERMOPLASTIC OR RECESSED POLYUREA AS SPECIFIED.

3. THE FINAL LOCATION OF PROPOSED TRAFFIC SIGNS AND SUPPORTS AS SHOWN IN THE PLANS SHALL BE FIELD-CONFIRMED BY THE ENGINEER PRIOR TO INSTALLATION.

PLANTING NOTES:

1. PLANT LOCATIONS ARE APPROXIMATE. PRIOR TO PLANTING, LOCATION OF ALL PLANT MATERIAL WILL BE APPROVED BY THE RESIDENT ENGINEER AND THE LANDSCAPE ARCHITECT.

2. ALL PLANT MATERIAL WILL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.

3. IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.

4. ALL PLANTS WILL BE MULCHED PER PLANS AND SPECIFICATIONS.

5. ALL SHRUB AND PLANTING BEDS WILL BE WEEDED AND OTHERWISE NEATLY MAINTAINED FOR THE DURATION OF THE CONTRACT.

6. PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.

SOIL PREPARATION:

1. PLANTING AREA(S) SHALL HAVE EXISTING SOIL LOOSENED WITH A TOOTHED BUCKET ON AN EXCAVATOR (OR EQUIVALENT) TO A MINIMUM DEPTH OF 12 INCHES. LOAM SHALL BE ADDED AS REQUIRED TO MATCH EXISTING GRADE IN UNDISTURBED AREAS AFTER SETTLEMENT. SOIL SHALL BE RAKED SMOOTH PRIOR TO SEEDING.

2. IN SELECT AREAS WHERE TREES WILL BE PLANTED IN NEWLY TREATED LANDSCAPE ZONES THAT WERE FORMERLY ROADWAY, ALL EXISTING PAVING AND SUBBASE MATERIALS SHALL BE EXCAVATED SUFFICIENTLY TO ALLOW FOR PLACEMENT OF 18 INCHES OF LOAM. THESE AREAS ARE DESIGNATED ON CONSTRUCTION PLANS AND ON LANDSCAPE PLANS.

3. PLANTING SHALL OCCUR IMMEDIATELY FOLLOWING SITE PREPARATION AND PLACEMENT OF LOAM. PLACED LOAM THAT IS COMPACTED OR INFESTED WITH WEEDS AT TIME OF PLANTING SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.

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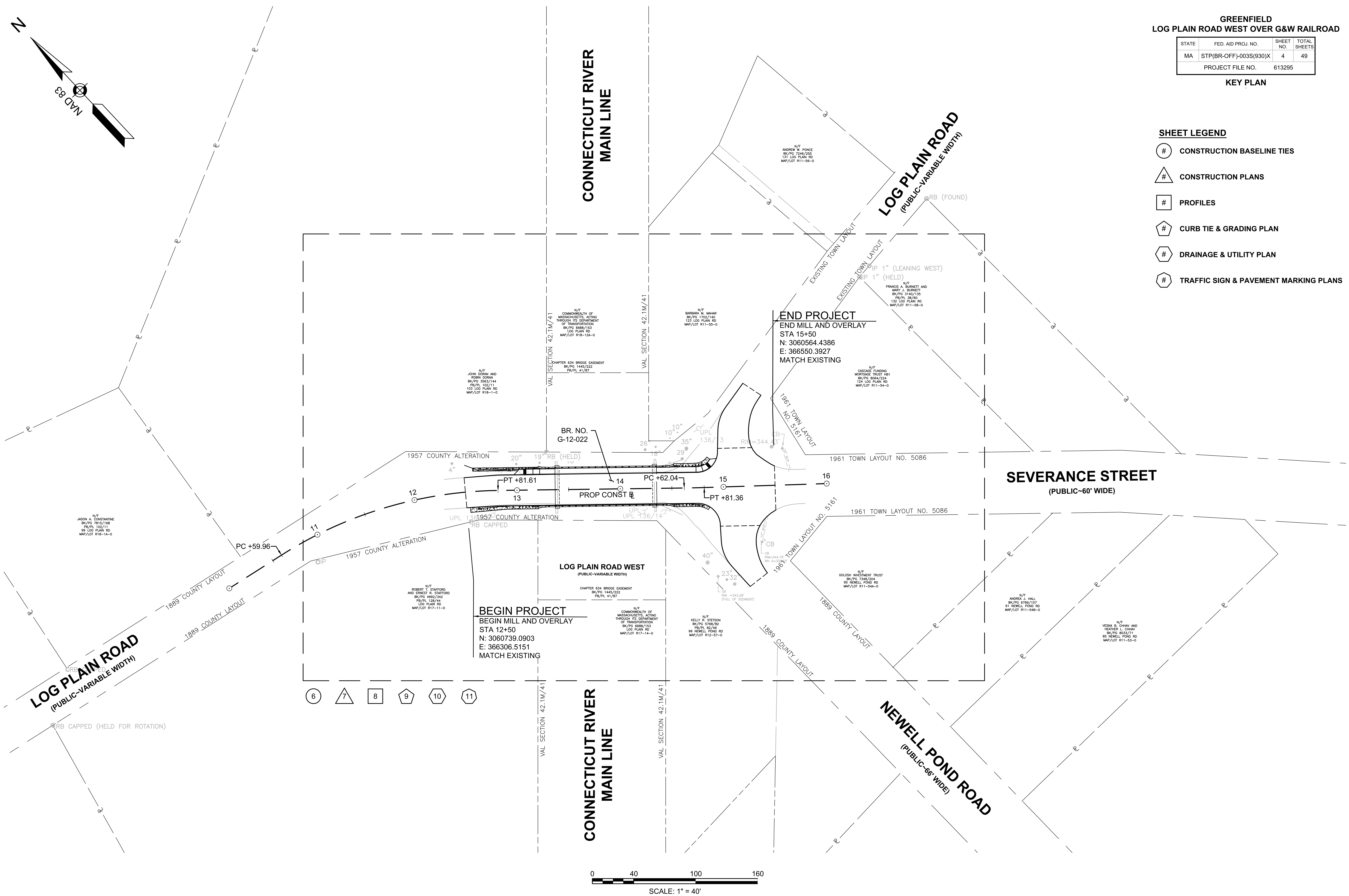
KEY PLAN

SHEET LEGEND

- # CONSTRUCTION BASELINE TIES
- # CONSTRUCTION PLANS
- # PROFILES
- # CURB TIE & GRADING PLAN
- # DRAINAGE & UTILITY PLAN
- # TRAFFIC SIGN & PAVEMENT MARKING PLANS



613295_HD (KEY PLAN).DWG Plotted on 5-Jan-2026 11:21 AM

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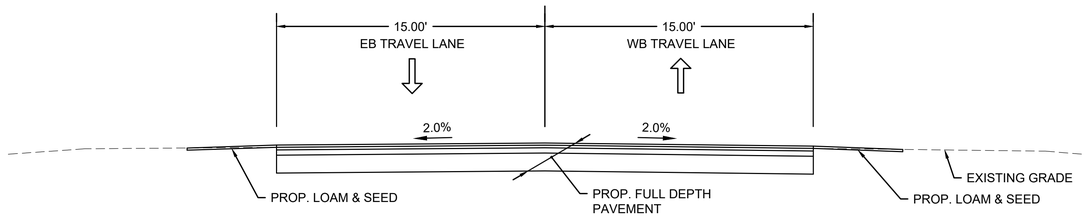
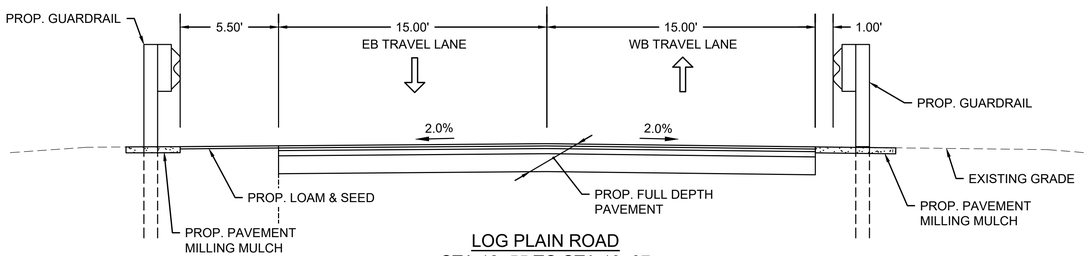
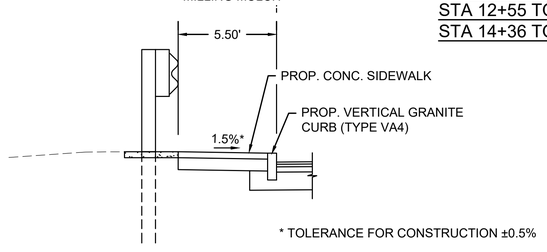
TYPICAL SECTIONS



LOG PLAIN ROAD
STA 12+50 TO STA 12+55
STA 14+90 TO STA 15+50

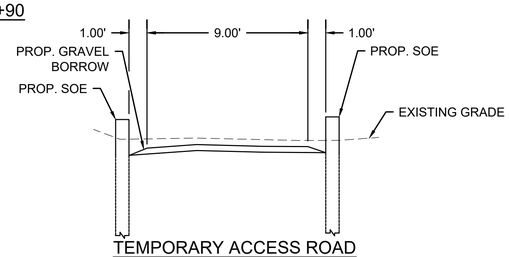


LOG PLAIN ROAD
STA 12+55 TO STA 13+37
STA 14+36 TO STA 14+90

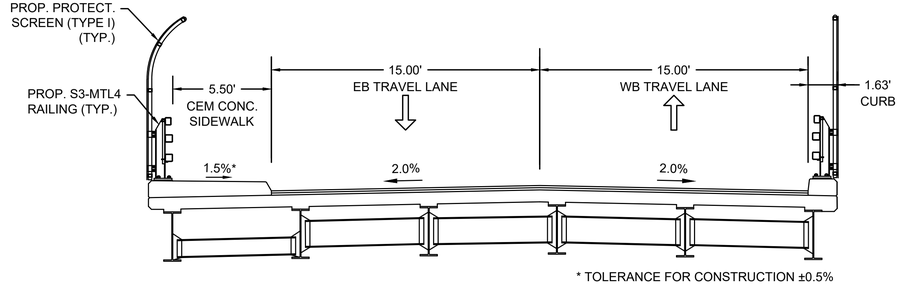


* TOLERANCE FOR CONSTRUCTION ±0.5%

LOG PLAIN ROAD
STA 13+05 TO STA 13+37
STA 14+36 TO STA 14+88



TEMPORARY ACCESS ROAD
STA 0+00 TO STA 1+44



* TOLERANCE FOR CONSTRUCTION ±0.5%

LOG PLAIN ROAD PROPOSED BRIDGE
STA 13+37 TO STA 14+36

PAVEMENT NOTES

FULL DEPTH PAVEMENT

SURFACE COURSE:	1.5" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER
INTERMEDIATE COURSE:	1.75" SUPERPAVE INTERMEDIATE COURSE 12.5 POLYMER (SIC-12.5-P) OVER
BASE COURSE:	3.50" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
SUBBASE:	12" GRAVEL BORROW - TYPE B

MILL AND OVERLAY

SURFACE COURSE:	1.5" SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P) OVER
SURFACE PREPARATION:	1.5" PAVEMENT MICRO MILL

CEMENT CONCRETE SIDEWALK

SURFACE COURSE:	4" CEMENT CONCRETE OVER
BASE COURSE:	8" GRAVEL BORROW - TYPE B

PEDESTRIAN CURB RAMPS

SURFACE COURSE:	4" CEMENT CONCRETE OVER
BASE COURSE:	8" GRAVEL BORROW - TYPE B

TEMPORARY ACCESS ROAD

BASE COURSE:	8" GRAVEL BORROW - TYPE B

PROPOSED BRIDGE

SURFACE COURSE:	1.5" SUPERPAVE BRIDGE SURFACE COURSE 12.5 POLYMER (SSC-B-12.5-P) OVER
INTERMEDIATE COURSE:	1.5" SUPERPAVE BRIDGE PROTECTIVE COURSE 12.5 POLYMER (SPC-B-12.5-P) OVER SPRAY APPLIED WATERPROOFING MEMBRANE OVER
PROPOSED DECK:	8" CEMENT CONCRETE BRIDGE DECK

TYPICAL SECTION NOTES

1. THE SURFACE COURSE SHALL BE PLACED IN ONE CONTINUOUS LAYER.
2. TOLERANCE FOR CONSTRUCTION 0.50%±. THIS APPLIES TO ALL CROSS-SLOPES SHOWN ON SIDEWALKS.
3. HMA, HMA FOR PATCHING, ASPHALT EMULSION FOR TACK COAT, HMA JOINT ADHESIVE, AND PAVEMENT MILLING SHALL BE IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE OF HMA SPECIFICATION.
4. ASPHALT EMULSION FOR TACK COAT (RS-1H) SHALL BE APPLIED AT A RATE OF 0.06 TO 0.08 GALLONS PER SQUARE YARD OVER NEW HMA SURFACES NOT OPENED TO TRAFFIC AS WELL AS OVER EXISTING TIGHT SMOOTH PAVEMENT. ON MILLED SURFACES, THE EMULSION APPLICATION RATE SHALL EQUAL 0.07 TO 0.09 GALLONS PER SQUARE YARD. ON NEW HMA PATCHES, THE EMULSION APPLICATION SHALL EQUAL 0.06 TO 0.09 GALLONS PER SQUARE YARD.

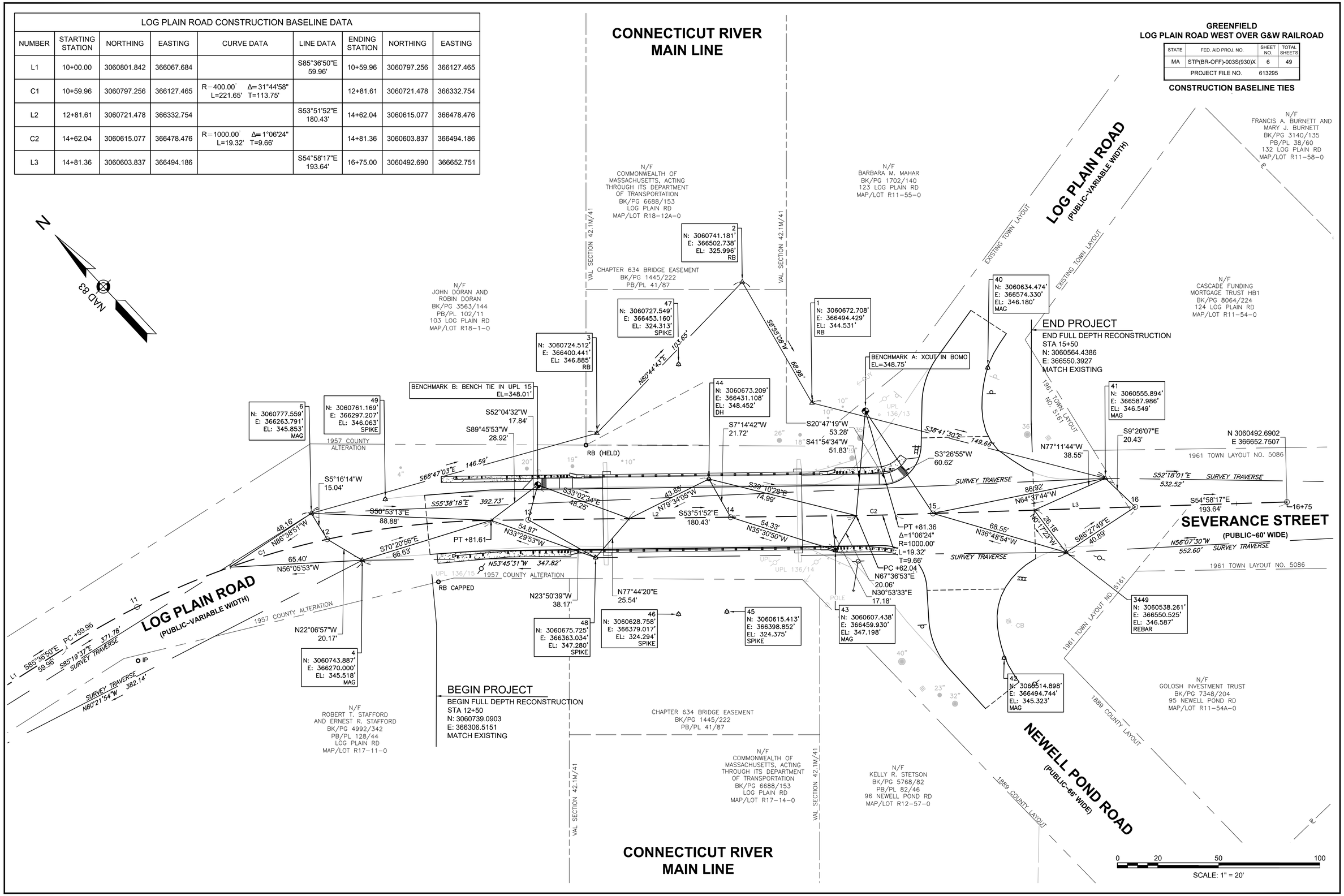
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	6	49
PROJECT FILE NO.	613295		

CONSTRUCTION BASELINE TIES

LOG PLAIN ROAD CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	3060801.842	366067.684		S85°36'50"E 59.96'	10+59.96	3060797.256	366127.465
C1	10+59.96	3060797.256	366127.465	R=400.00' Δ=31°44'58" L=221.65' T=113.75'		12+81.61	3060721.478	366332.754
L2	12+81.61	3060721.478	366332.754		S53°51'52"E 180.43'	14+62.04	3060615.077	366478.476
C2	14+62.04	3060615.077	366478.476	R=1000.00' Δ=1°06'24" L=19.32' T=9.66'		14+81.36	3060603.837	366494.186
L3	14+81.36	3060603.837	366494.186		S54°58'17"E 193.64'	16+75.00	3060492.690	366652.751



613295_HD (BASELINE TIES).DWG Plotted on 5-Jan-2026 11:21 AM

HIGHWAY GUARDRAIL DETAILS

STA. 12+61.50 17.00' RT. TO STA. 12+71.00 16.50' RT. (ITEM 627.82) (TANGENT END TREATMENT & IMPACT HEAD)
STA. 12+71.00 16.50' RT. TO STA. 12+93.00 15.25' RT. (ITEM 620.12) (TL-2 HWY. GUARD)
STA. 12+93.00 15.25' RT. TO STA. 13+26.75 15.25' RT. (ITEM 628.24) (TRANSITION TO BRIDGE RAIL)

STA. 14+45.65 15.25' RT. TO STA. 14+80.21 17.41' RT. (ITEM 628.242) (MODIFIED TRANSITION TO BRIDGE RAIL)

STA. 12+64.25 21.40' LT. TO STA. 12+73.75 20.50' LT. (ITEM 627.1) (TRAILING ANCHORAGE & ROUNDED END UNIT)
STA. 12+73.75 20.50' LT. TO STA. 12+93.00 20.50' LT. (ITEM 620.12) (TL-2 HWY. GUARD)
STA. 12+93.00 20.50' LT. TO STA. 13+26.75 20.50' LT. (ITEM 628.24) (TRANSITION TO BRIDGE RAIL)

STA. 14+45.65 20.50' LT. TO STA. 14+80.97 22.29' LT. (ITEM 628.242) (MODIFIED TRANSITION TO BRIDGE RAIL)

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

NONE

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	7	49
PROJECT FILE NO.	613295		

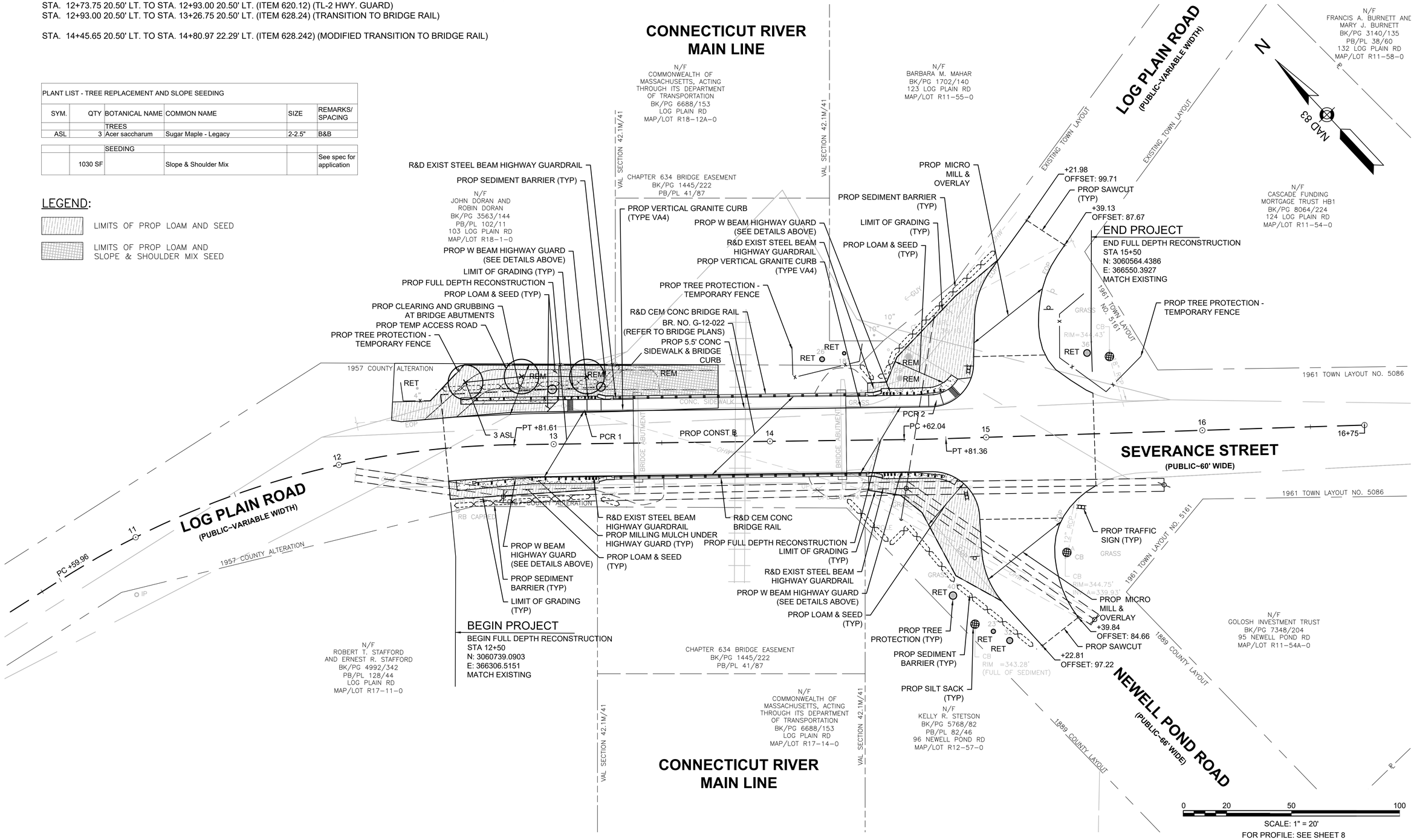
CONSTRUCTION PLAN

PLANT LIST - TREE REPLACEMENT AND SLOPE SEEDING					
SYM.	QTY	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS/ SPACING
		TREES			
ASL	3	Acer saccharum	Sugar Maple - Legacy	2-2.5"	B&B
		SEEDING			
	1030 SF		Slope & Shoulder Mix		See spec for application

LEGEND:

LIMITS OF PROP LOAM AND SEED

LIMITS OF PROP LOAM AND SLOPE & SHOULDER MIX SEED

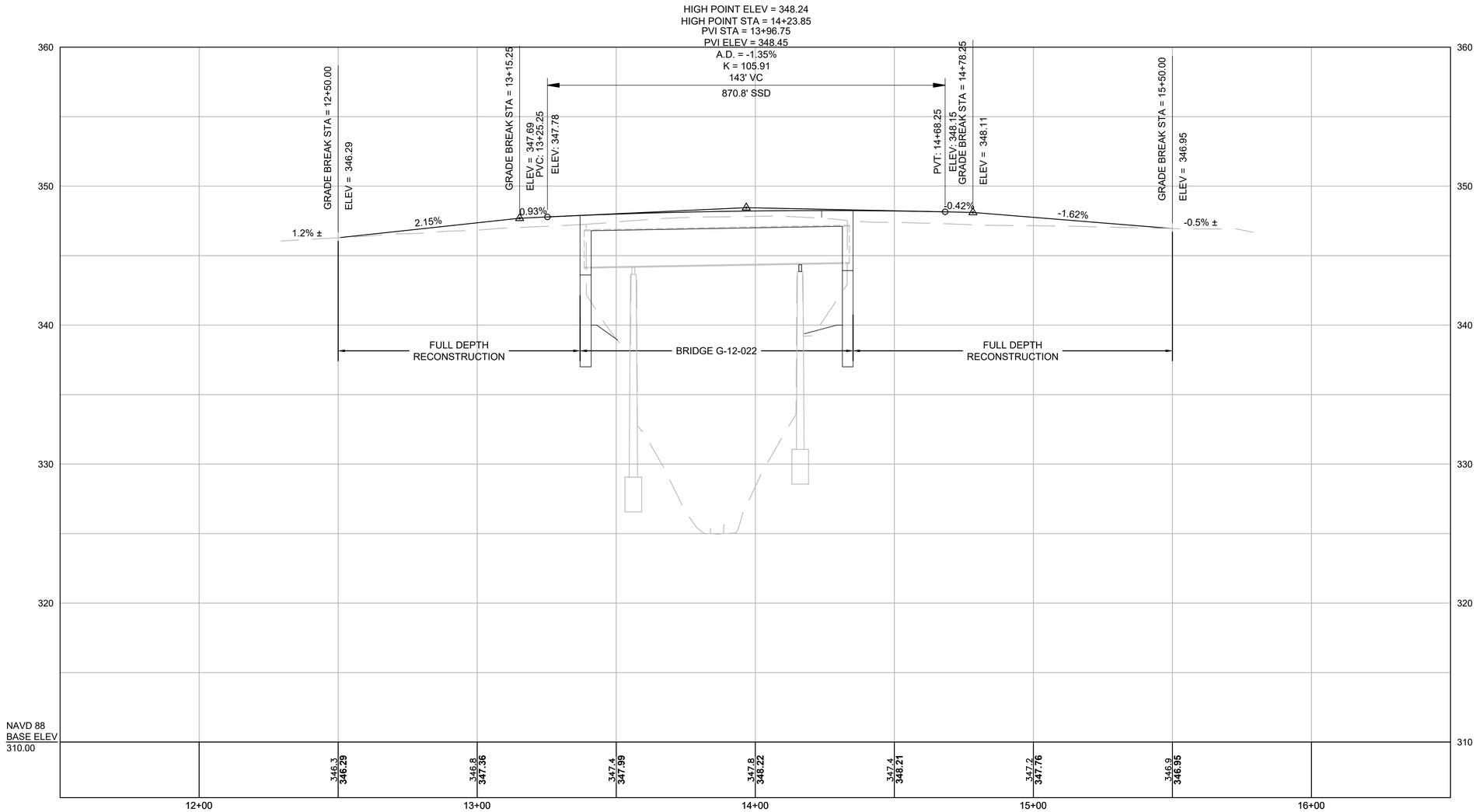


GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	8	49
PROJECT FILE NO.	613295		

PROFILE

LOG PLAIN ROAD



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	9	49
PROJECT FILE NO.	613295		

CURB TIE & GRADING PLAN

613295_HD (CURB TIE & GRADING PLAN).DWG Plotted on 5-Jan-2026 11:22 AM

N

NAD 83

CONNECTICUT RIVER MAIN LINE

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R18-12A-0

VAL SECTION 42.1M/41

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

N/F
JOHN DORAN AND ROBIN DORAN
BK/PG 3563/144
PB/PL 102/11
103 LOG PLAIN RD
MAP/LOT R18-1-0

N/F
BARBARA M. MAHAR
BK/PG 1702/140
123 LOG PLAIN RD
MAP/LOT R11-55-0

N/F
FRANCIS A. BURNETT AND MARY J. BURNETT
BK/PG 3140/135
PB/PL 38/60
132 LOG PLAIN RD
MAP/LOT R11-58-0

N/F
CASCADE FUNDING MORTGAGE TRUST HB1
BK/PG 8064/224
124 LOG PLAIN RD
MAP/LOT R11-54-0

N/F
ROBERT T. STAFFORD AND ERNEST R. STAFFORD
BK/PG 4992/342
PB/PL 128/44
LOG PLAIN RD
MAP/LOT R17-11-0

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R17-14-0

N/F
KELLY R. STETSON
BK/PG 5768/82
PB/PL 82/46
96 NEWELL POND RD
MAP/LOT R12-57-0

N/F
GOLOSH INVESTMENT TRUST
BK/PG 7348/204
95 NEWELL POND RD
MAP/LOT R11-54A-0

LOG PLAIN ROAD
(PUBLIC-VARIABLE WIDTH)

SEVERANCE STREET
(PUBLIC~60' WIDE)

NEWELL POND ROAD
(PUBLIC-66' WIDE)

EXISTING TOWN LAYOUT

1961 TOWN LAYOUT NO. 5086

1961 TOWN LAYOUT NO. 5161

1957 COUNTY ALTERATION

1889 COUNTY LAYOUT

BEGIN PROJECT
BEGIN FULL DEPTH RECONSTRUCTION
STA 12+50
N: 3060739.0903
E: 366306.5151
MATCH EXISTING

END PROJECT
END FULL DEPTH RECONSTRUCTION
STA 15+50
N: 3060564.4386
E: 366550.3927
MATCH EXISTING

END VERTICAL GRANITE CURB
BEGIN BRIDGE CURB
+36.98
15.00 LT
S53°51'52"E
18.33'
END TRANSITION CURB
BEGIN VERTICAL GRANITE CURB
+15.64
15.00 LT
BEGIN TRANSITION CURB
+06.64
15.00 LT
S53°51'52"E
25.04'

BEGIN FULL DEPTH
+50.00
14.08 LT

BEGIN FULL DEPTH
+50.00
15.22 RT

R=400.00'
L=221.65'
T=113.75'
PC +59.96

BEGIN BRIDGE CURB
+36.98
15.00 RT

BR. NO. G-12-022
(REFER TO BRIDGE PLANS)

PROP CONST ℄

END FULL DEPTH
BEGIN MILL & OVERLAY
+95.45
37.49 LT
BEGIN TRANSITION CURB
+88.66
20.06 LT
END TRANSITION CURB
+80.85
15.73 LT
END BRIDGE CURB
BEGIN VERTICAL GRANITE CURB
+35.31
15.00 LT

S53°51'52"E
180.43'

END BRIDGE CURB
+35.31
15.00 RT

S53°51'52"E
39.19'
R=1000.00'
L=19.32'
T=9.66'

END FULL DEPTH
BEGIN MILL & OVERLAY
+95.83
37.89 RT

S33°22'31"W
16.05'
R=40.00'
L=27.08'
T=14.08'
PT +05.79
OFFSET: 77.25
S5°25'12"E
26.24'

END MILL & OVERLAY
+22.81
97.22 RT

END MILL & OVERLAY
+21.98
99.71 LT

N72°35'28"E
28.53'
PT +04.59
OFFSET: 77.09
R=40.00'
L=24.14'
T=12.45'
PC +96.35
OFFSET: 54.79
N38°00'36"E
20.92'
PT +95.26
OFFSET: 33.90

PC +62.04

S53°51'52"E
39.30'
PC +74.81
OFFSET: 14.92
PT +81.36

PC +74.32
OFFSET: 15.08
R=22.00'
L=33.50'
T=20.96'
PC +96.24
OFFSET: 52.45

PT +95.78
OFFSET: 36.41

END MILL & OVERLAY
+39.13
87.67 LT

END FULL DEPTH
+50.00
18.83 LT

END FULL DEPTH
+50.00
23.95 RT

END MILL & OVERLAY
+39.84
84.66 RT

PT +81.61

0 20 50 100
SCALE: 1" = 20'

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	10	49
PROJECT FILE NO.	613295		

UTILITY PLAN

613295_HD (UTILITY PLAN).DWG Plotted on 5-Jan-2026 11:22 AM

N

NAD 83

CONNECTICUT RIVER MAIN LINE

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R18-12A-0

VAL SECTION 42.1M/41

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

N/F
JOHN DORAN AND ROBIN DORAN
BK/PG 3563/144
PB/PL 102/11
103 LOG PLAIN RD
MAP/LOT R18-1-0

N/F
BARBARA M. MAHAR
BK/PG 1702/140
123 LOG PLAIN RD
MAP/LOT R11-55-0

LOG PLAIN ROAD
(PUBLIC-VARIABLE WIDTH)

EXISTING TOWN LAYOUT

N/F
FRANCIS A. BURNETT AND MARY J. BURNETT
BK/PG 3140/135
PB/PL 38/60
132 LOG PLAIN RD
MAP/LOT R11-58-0

N/F
CASCADE FUNDING MORTGAGE TRUST HB1
BK/PG 8064/224
124 LOG PLAIN RD
MAP/LOT R11-54-0

END PROJECT
END FULL DEPTH RECONSTRUCTION
STA 15+50
N: 3060564.4386
E: 366550.3927
MATCH EXISTING

RET UPL
RET GUY WIRE
CONTRACTOR TO VERIFY LOCATION OF WATER LINE PRIOR TO INSTALLING GUARDRAIL POSTS
R&R OHW (BO)
REM UPL (BO)
R&R OHW (BO)
APPROX. EXIST OHW LOCATION
APPROX. EXIST UP LOCATION
1957 COUNTY ALTERATION
12" WATER
OHW
RB (HELD)
RB CAPPED
UPL 136/13
PROP CONST ℄
PC +62.04
PT +81.36
PT +81.61
PC +59.96
REM & REPLACE W/ 45' UPL
RET UPL
REM UPL AND GUY ANCHOR
CONTRACTOR TO VERIFY LOCATION OF WATER LINE PRIOR TO INSTALLING GUARDRAIL POSTS
PROP 50' UPL
PROP 15' DEAD END GUY ANCHOR
PROP OHW (TYP)
REM & REPLACE W/ 45' UPL
RET
CB
RIM=344.43'
RIM=344.75'
INV A=339.93'
RIM =343.28'
(FULL OF SEDIMENT)
1961 TOWN LAYOUT NO. 5086
1961 TOWN LAYOUT NO. 5161
1959 COUNTY LAYOUT

SEVERANCE STREET
(PUBLIC-60' WIDE)

BEGIN PROJECT
BEGIN FULL DEPTH RECONSTRUCTION
STA 12+50
N: 3060739.0903
E: 366306.5151
MATCH EXISTING

N/F
ROBERT T. STAFFORD AND ERNEST R. STAFFORD
BK/PG 4992/342
PB/PL 128/44
LOG PLAIN RD
MAP/LOT R17-11-0

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R17-14-0

N/F
KELLY R. STETSON
BK/PG 5768/82
PB/PL 82/46
96 NEWELL POND RD
MAP/LOT R12-57-0

N/F
GOLOSH INVESTMENT TRUST
BK/PG 7348/204
95 NEWELL POND RD
MAP/LOT R11-54A-0

NEWELL POND ROAD
(PUBLIC-66' WIDE)

CONNECTICUT RIVER MAIN LINE

0 20 50 100
SCALE: 1" = 20'

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	11	49
PROJECT FILE NO.	613295		

TRAFFIC SIGN & PAVEMENT MARKING PLAN

N

NAD 83

CONNECTICUT RIVER MAIN LINE

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R18-12A-0

VAL SECTION 42.1M/41

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

N/F
JOHN DORAN AND ROBIN DORAN
BK/PG 3563/144
PB/PL 102/11
103 LOG PLAIN RD
MAP/LOT R18-1-0

N/F
BARBARA M. MAHAR
BK/PG 1702/140
123 LOG PLAIN RD
MAP/LOT R11-55-0

N/F
FRANCIS A. BURNETT AND MARY J. BURNETT
BK/PG 3140/135
PB/PL 38/60
132 LOG PLAIN RD
MAP/LOT R11-58-0

N/F
CASCADE FUNDING MORTGAGE TRUST HB1
BK/PG 8064/224
124 LOG PLAIN RD
MAP/LOT R11-54-0

N/F
ROBERT T. STAFFORD AND ERNEST R. STAFFORD
BK/PG 4992/342
PB/PL 128/44
LOG PLAIN RD
MAP/LOT R17-11-0

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R17-14-0

N/F
KELLY R. STETSON
BK/PG 5768/82
PB/PL 82/46
96 NEWELL POND RD
MAP/LOT R12-57-0

N/F
GOLOSH INVESTMENT TRUST
BK/PG 7348/204
95 NEWELL POND RD
MAP/LOT R11-54A-0

LOG PLAIN ROAD
(PUBLIC-VARIABLE WIDTH)

SEVERANCE STREET
(PUBLIC-60' WIDE)

NEWELL POND ROAD
(PUBLIC-66' WIDE)

EXISTING TOWN LAYOUT

1957 COUNTY ALTERATION

1961 TOWN LAYOUT NO. 5086

1961 TOWN LAYOUT NO. 5161

1889 COUNTY LAYOUT

PC +59.96

PT +81.61

PC +62.04

PT +81.36

245 LF DBYL

67 LF DBYL

62 LF DBYL

12 LF DBYL

15 LF SL

20 LF SL

15.0'

14.0'

12.5'

+21.98
OFFSET: 99.71

+39.13
OFFSET: 87.67

+39.84
OFFSET: 84.66

+22.81
OFFSET: 97.22

16+75

LIMIT OF PROPOSED MILL & OVERLAY

R&S EXIST TRAFFIC SIGN (1 EA)

PROP TRAFFIC SIGN W14-2

R&S EXIST TRAFFIC SIGNS (2 EA)

PROP TRAFFIC SIGNS R1-1 AND MA-D3-1(1)

PROP TRAFFIC SIGNS R1-1 AND MA-D3-1(2)

PROP TRAFFIC SIGN MA-D3-1(3)

PROP TRAFFIC SIGN W14-2

R&S EXIST TRAFFIC SIGNS (4 EA)

MEET & MATCH EXISTING PAVEMENT MARKINGS

MEET & MATCH EXISTING PAVEMENT MARKINGS

"NOT A THROUGH STREET"

"STOP"

RB (HELD)

RB CAPPED

IP

CB
RIM=344.43'
INV A=339.93'

CB
RIM=344.75'
INV A=339.93'

CB
RIM =343.28'
(FULL OF SEDIMENT)

10" 19" 26" 18" 35" 29" 20" 19" *10" 40" 23" 32" 12" RCP

BEGIN PROJECT

BEGIN FULL DEPTH RECONSTRUCTION
STA. 12+50
N: 3060739.0903
E: 366306.5151
MATCH EXISTING

END PROJECT

END FULL DEPTH RECONSTRUCTION
STA 15+50
N: 3060564.4386
E: 366550.3927
MATCH EXISTING

0 20 50 100

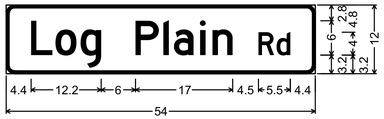
SCALE: 1" = 20'

TRAFFIC SIGN SUMMARY

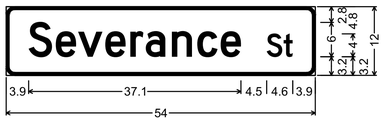
SIGN ID NUMBER	SIZE		MESSAGE	DIMENSIONS (IN)			NUMBER REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	TOTAL AREA (S.F.)
	WIDTH (IN)	HEIGHT (IN)		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30	STOP	(1)	(1)	(1)	2	RED	WHITE	WHITE	P5-1 0 REQ'D MOUNT W/ OTHERS	6.25	12.50
W14-2	30	30	NO OUTLET	(1)	(1)	(1)	2	YELLOW	BLACK	BLACK	P5-1 2 REQ'D	6.25	12.50
MA-D3-1(1)	54	12	Log Plain Rd	(2)			2	GREEN	WHITE	WHITE	P5-2 1 REQ'D MOUNT W/ R1-1	4.50	9.00
MA-D3-1(2)	54	12	Severance St	(2)			2	GREEN	WHITE	WHITE	P5-2 1 REQ'D MOUNT W/ R1-1	4.50	9.00
MA-D3-1(3)	66	12	Newell Pond Rd	(2)			2	GREEN	WHITE	WHITE	P5-2 1 REQ'D	5.50	11.00

SIGN SUMMARY NOTES:

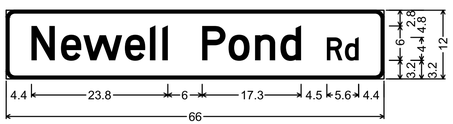
1. RETROFLECTIVE SHEETING ON ALL GUIDE AND TRAFFIC SIGNS SHALL CONFORM TO SUBSECTION M9.30.0 OF THE MASSDOT STANDARD SPECIFICATIONS.
2. (1) SEE MUTCD LATEST EDITION, 2004 STD. HWY. SIGNS AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS AND COLOR.
3. (2) SEE MASSDOT "STANDARD SIGNS" LATEST EDITION.



MA-D3-1(1)
1.5" Radius, 0.5" Border, White on Green;
"Log Plain", D 2K; "Rd", D 2K;



MA-D3-1(2)
1.5" Radius, 0.5" Border, White on Green;
"Severance", D 2K; "St", D 2K;



MA-D3-1(3)
1.5" Radius, 0.5" Border, White on Green;
"Newell Pond", D 2K; "Rd", D 2K;

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	12	49
PROJECT FILE NO.	613295		

TRAFFIC SIGN SUMMARY

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	13	49
PROJECT FILE NO.	613295		

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 1

MASSDOT STANDARD CONSTRUCTION DETAILS		
DETAIL NUMBER	DETAIL NAME	CURRENT VERSION
851.1.1	CONES & DRUMS	JAN 2025
851.3.1	PEDESTRIAN CHANNELIZING DEVICE	JAN 2025
852.4.3	ALTERNATING ONE-WAY (TEMPORARY SIGNAL)	JAN 2025
852.23.0	TEMPORARY CONCRETE BARRIER RETROFITTED TO MASH TL-3	JUN 2025

12" LIMITS OF DEMOLITION
12"
12" PEDESTRIAN CHANNELIZING DEVICE
12" PEDESTRIAN CHANNELIZING DEVICE
4'-0" PEDESTRIAN LANE
11'-6" TRAVEL LANE
11'-6" TRAVEL LANE

STAGE 1A DEMOLITION
NTS

4'-0" PEDESTRIAN LANE
12" TL-3 LIMITED DEFLECTION BARRIER
11'-0" TRAVEL LANE
20'-3" LIMITS OF DEMOLITION
TEMPORARY DECK OVERHANG SUPPORTS TO BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER

STAGE 1B DEMOLITION
NTS

4'-0" PEDESTRIAN LANE
12" TL-3 LIMITED DEFLECTION BARRIER
11'-0" TRAVEL LANE
19'-2½" LIMITS OF CONSTRUCTION
12" DOWEL BAR SPLICERS
VERIFY LOCATION OF TOP FLANGE PRIOR TO BOLTING
TEMPORARY DECK OVERHANG SUPPORTS TO BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER

STAGE 1 CONSTRUCTION
NTS

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R18-12A-0

VAL SECTION 42.1M/41

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

CONNECTICUT RIVER MAIN LINE

N/F
BARBARA M. MAHAR
BK/PG 1702/140
123 LOG PLAIN RD
MAP/LOT R11-55-0

MA-R2-10a
WORK ZONES
SPEEDING FINES DOUBLED
ROAD WORK AHEAD
W20-4c
ONE LANE ROAD AHEAD
350'
175'
W3-3
350'
EXISTING TOWN LAYOUT
LOG PLAIN ROAD
END ROAD WORK DOUBLE FINES END
MA-R2-10e
EXISTING TOWN LAYOUT

R10-6
STOP HERE ON RED
350'
40' MIN BUFFER
TEMP SL-12'
TEMP DBYL-35'
REM. SL

N/F
CASCADE FUNDING
MORTGAGE TRUST HB1
BK/PG 8064/224
124 LOG PLAIN RD
MAP/LOT R11-54-0

NO TURN ON RED
R10-11

END TEMPORARY FENCE
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE (PINNED ON BRIDGE); 170 FT

40' MIN BUFFER
119' 7:1 TAPER
BEGIN TEMPORARY FENCE
WORK ZONE
4'-0"
11'-0"
MATCHLINE
1957 COUNTY ALTERATION
LOG PLAIN ROAD
EOP
RB CAPPED
CONC. SIDEWALK
GRASS
UPL 136/15
UPL 136/14
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE TAPER BACK AT 7:1 RATIO
TEMPORARY MAST ARM TRAILER TRAFFIC SIGNAL (TYP.)
PROP. REFLECTORIZED DRUMS @ 25' (TYP.)
REM. DBYL BEYOND TEMP SL (313')
CONTINUED ON INSET "A"
4'-0" PEDESTRIAN LANE
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE
NO TURN ON RED
R10-11
REM. DBYL BEYOND TEMP SL (75')
PROP. TEMP. IMPACT ATTENUATOR (TYP.)
REM. SL

W20-4c
ONE LANE ROAD AHEAD
MA-R2-10a
WORK ZONES
SPEEDING FINES DOUBLED
W20-1
ROAD WORK AHEAD
350'
175'
350'
350'
1961 TOWN LAYOUT NO. 5086
R10-6
STOP HERE ON RED
W3-3
40' MIN BUFFER
TEMP SL-15'
SEVERANCE STREET
1961 TOWN LAYOUT NO. 5161
R4-7a*
KEEP RIGHT
R10-11
NO TURN ON RED
END ROAD WORK DOUBLE FINES END
MA-R2-10e
TEMP SL-17'
TEMP DBYL-32'
350'
1889 COUNTY LAYOUT
N/F
GOLOSH INVESTMENT TRUST
BK/PG 7348/204
95 NEWELL POND RD
MAP/LOT R11-54A-0
MA-R2-10a
WORK ZONES
SPEEDING FINES DOUBLED
W20-1
ROAD WORK AHEAD
175'
350'
1889 COUNTY LAYOUT
W20-4c
ONE LANE ROAD AHEAD
END ROAD WORK DOUBLE FINES END
MA-R2-10e
NEWELL POND ROAD

INSET "A"
END ROAD WORK DOUBLE FINES END
MA-R2-10e
LOG PLAIN ROAD
TEMP SL-13'
11
350'
350'
175'
350'
W3-3
R10-6
STOP HERE ON RED
W20-4c
ONE LANE ROAD AHEAD
MA-R2-10a
WORK ZONES
SPEEDING FINES DOUBLED
W20-1
ROAD WORK AHEAD
MATCHLINE
1957 COUNTY ALTERATIC

0 20 50 100
SCALE: 1" = 20'

N/F
COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION
BK/PG 6688/153
LOG PLAIN RD
MAP/LOT R17-14-0

CHAPTER 634 BRIDGE EASEMENT
BK/PG 1445/222
PB/PL 41/87

N/F
KELLY R. STETSON
BK/PG 5768/82
PB/PL 82/46
96 NEWELL POND RD
MAP/LOT R12-57-0

NOTES:
SEE SHEET 18 FOR ALL STAGE 1 TEMPORARY TRAFFIC SIGNAL DATA

* MOUNT ON TYPE III BARRICADE

0 20 50 100
SCALE: 1" = 20'

613295_TR(TTCP).DWG Plotted on 5-Jan-2026 11:32 AM

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	14	49
	PROJECT FILE NO.	613295	

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 2

MASSDOT STANDARD CONSTRUCTION DETAILS		
DETAIL NUMBER	DETAIL NAME	CURRENT VERSION
851.1.1	CONES & DRUMS	JAN 2025
851.3.1	PROP. PEDESTRIAN CHANNELIZING DEVICE	JAN 2025
852.4.3	ALTERNATING ONE-WAY (TEMPORARY SIGNAL)	JAN 2025
852.23.0	TEMPORARY CONCRETE BARRIER RETROFITTED TO MASH TL-3	JUN 2025

STAGE 2 DEMOLITION
NTS
4'-0" PEDESTRIAN LANE
12" TL-3 LIMITED DEFLECTION BARRIER
12" PEDESTRIAN CHANNELIZING DEVICE
18'-5½"
LIMITS OF DEMOLITION
11'-0"
TRAVEL LANE
DOWEL BAR SPLICERS
TEMPORARY DECK OVERHANG SUPPORTS TO BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER
STAGE 2 CONSTRUCTION
NTS
19'-9"
LIMITS OF CONSTRUCTION
2'-4" CLOSURE POUR
BLAST CLEAN AND PAINT EXISTING STEEL
N
N/F COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION BK/PG 6688/153 LOG PLAIN RD MAP/LOT R18-12A-0
CHAPTER 634 BRIDGE EASEMENT BK/PG 1445/222 PB/PL 41/87
N/F JOHN DORAN AND ROBIN DORAN BK/PG 3563/144 PB/PL 102/11 103 LOG PLAIN RD MAP/LOT R18-1-0
N/F BARBARA M. MAHAR BK/PG 1702/140 123 LOG PLAIN RD MAP/LOT R11-55-0
N/F FRANCIS A. BURNETT AND MARY J. BURNETT BK/PG 3140/135 PB/PL 38/60 132 LOG PLAIN RD MAP/LOT R11-58-0
N/F CASCADE FUNDING MORTGAGE TRUST HB1 BK/PG 8064/224 124 LOG PLAIN RD MAP/LOT R11-54-0
N/F GOLOSH INVESTMENT TRUST BK/PG 7348/204 95 NEWELL POND RD MAP/LOT R11-54A-0
N/F KELLY R. STETSON BK/PG 5768/82 PB/PL 82/46 96 NEWELL POND RD MAP/LOT R12-57-0
N/F COMMONWEALTH OF MASSACHUSETTS, ACTING THROUGH ITS DEPARTMENT OF TRANSPORTATION BK/PG 6688/153 LOG PLAIN RD MAP/LOT R17-14-0
CONNECTICUT RIVER MAIN LINE
VAL SECTION 42.1M/41
LOG PLAIN ROAD
SEVERANCE STREET
NEWELL POND RD
MA-R2-10a
W20-1
W20-4c
MA-R2-10e
W3-3
R10-6
R10-11a
R4-7a*
ROAD WORK AHEAD
ONE LANE ROAD AHEAD
WORK ZONES SPEEDING FINES DOUBLED
END ROAD WORK DOUBLE FINES END
STOP HERE ON RED
NO TURN ON RED
KEEP RIGHT
350'
175'
105'
95'
7:1 TAPER
40' MIN BUFFER
WORK ZONE
TEMP SL-11'
TEMP SL-13'
TEMP SL-15'
TEMP SL-16'
TEMP DBYL-35'
TEMP DBYL-32'
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE 5:1 FLARE RATE, 75 FT
PROP. REFLECTORIZED DRUMS @ 25' (TYP.)
REM. SL IN STAGE 1
4'-0" PEDESTRIAN LANE
PEDESTRIAN CHANNELIZING DEVICE
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE (PINNED ON BRIDGE); 141 FT
TEMPORARY MAST ARM TRAILER TRAFFIC SIGNAL (TYP.)
TEMPORARY BARRIER, TL-3 WITH TEMPORARY FENCE TAPER BACK AT 7:1 RATIO
EXISTING DBYL PAVEMENT MARKINGS REMOVED IN STAGE 1
PROP. TEMP. IMPACT ATTENUATOR (TYP.)
PROP. REFLECTORIZED DRUM (TYP.)
11'-0"
EXISTING TOWN LAYOUT
1961 TOWN LAYOUT NO. 5161
1961 TOWN LAYOUT NO. 5086
1957 COUNTY ALTERATION
1889 COUNTY LAYOUT
MATCHLINE
CONTINUED ON INSET "A"
INSET "A"
UPL 136/15
UPL 136/14
RB CAPPED
0 20 50 100
SCALE: 1" = 20'

NOTES:
SEE SHEET 19 FOR ALL STAGE 2 TEMPORARY TRAFFIC SIGNAL DATA

* MOUNT ON TYPE III BARRICADE

613295_TR(TTCP).DWG
Plotted on 5-Jan-2026 11:32 AM

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	15	49
PROJECT FILE NO.	613295		

TEMPORARY TRAFFIC CONTROL PLANS
CONSTRUCTION SIGN SUMMARY

CONSTRUCTION SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER		
MA-R2-10a	48"	36"	WORK ZONE / SPEEDING FINES DOUBLED	(2)	(2)	(2)	4	FLUOR. ORANGE/ WHITE	BLACK	BLACK	12.00	48.00
MA-R2-10e	36"	48"	END ROAD WORK / DOUBLE FINES END	↓	↓	↓	4	FLUOR. ORANGE/ WHITE	BLACK	BLACK	12.00	48.00
R4-7a	24"	30"	KEEP → RIGHT	(1)	(1)	(1)	2	WHITE	BLACK	BLACK	5.00	10.00
R10-6	24"	36"	STOP HERE ON RED ↙				4	WHITE	BLACK	BLACK	6.00	24.00
R10-11	24"	30"	NO TURN ON RED				3	WHITE	BLACK	BLACK	5.00	15.00
W3-3	36"	36"					4	FLUOR. ORANGE	BLACK/ GREEN/ YELLOW/ RED	BLACK	9.00	36.00
W20-1	36"	36"	ROAD WORK AHEAD				4	FLUOR. ORANGE	BLACK	BLACK	9.00	36.00
W20-4	36"	36"	ONE LANE ROAD AHEAD	↓	↓	↓	4	FLUOR. ORANGE	BLACK	BLACK	9.00	36.00

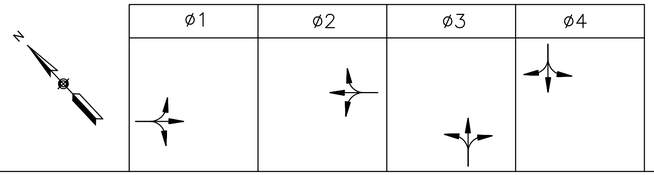
NOTES:

1. (1) SEE MUTCD 11TH EDITION, 2024 LATEST STD. HWY. SIGNS AND SECTION M9.30.0 TYPE III OF THE MASSDOT STANDARD SPECIFICATION FOR TEXT DIMENSIONS AND COLOR.
   (2) SEE MASSDOT SIGN STANDARDS.
2. SIGNS TO BE R&R FOR EACH STAGE OF CONSTRUCTION.
3. HIGH INTENSITY ENCAPSULATED LENS REFLECTIVE SHEETING CONFORMING TO SECTION M9.30.0 TYPE III OR IV, OF THE MASSDOT STANDARD SPECIFICATIONS, SHALL BE USED FOR ALL SIGNS
4. TRAFFIC MANAGEMENT SIGNS SHALL BE REUSED ACCORDING TO CONSTRUCTION SCHEDULE IN ORDER TO MINIMIZE THE TOTAL NUMBER OF SIGNS NEEDED.

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

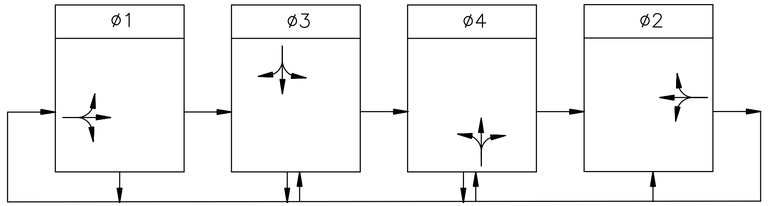
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	16	49
	PROJECT FILE NO. 613295		

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 1



SEQUENCE AND TIMING FOR MANUAL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	FLASH OPER.
LOG PLAIN ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R	R	R	R	FR
SEVERENCE STREET	WB	C,D	R	R	R	G	Y	R	R	R	R	R	R	R	FR
NEWELL POND ROAD	NB	E,F	R	R	R	R	R	R	G	Y	R	R	R	R	FR
LOG PLAIN ROAD	SB	G,H	R	R	R	R	R	R	R	R	R	G	Y	R	FR
TIMING IN SECONDS															
MINIMUM GREEN (INITIAL)			7			7			5			5			EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			3			3			3			3			
MAXIMUM 1			14			11			5			5			
MAXIMUM 2			–			–			–			–			
YELLOW CLEARANCE				3.0			3.0			2.0		2.0			
RED CLEARANCE					16.0			16.0			20.0		20.0		
WALK (W)															
PEDESTRIAN CLEARANCE															
RECALL			NONE			MIN			NONE			NONE			
MEMORY			NON–LOCKING			NON–LOCKING			NON–LOCKING			NON–LOCKING			



PREFERENTIAL PHASING DIAGRAM

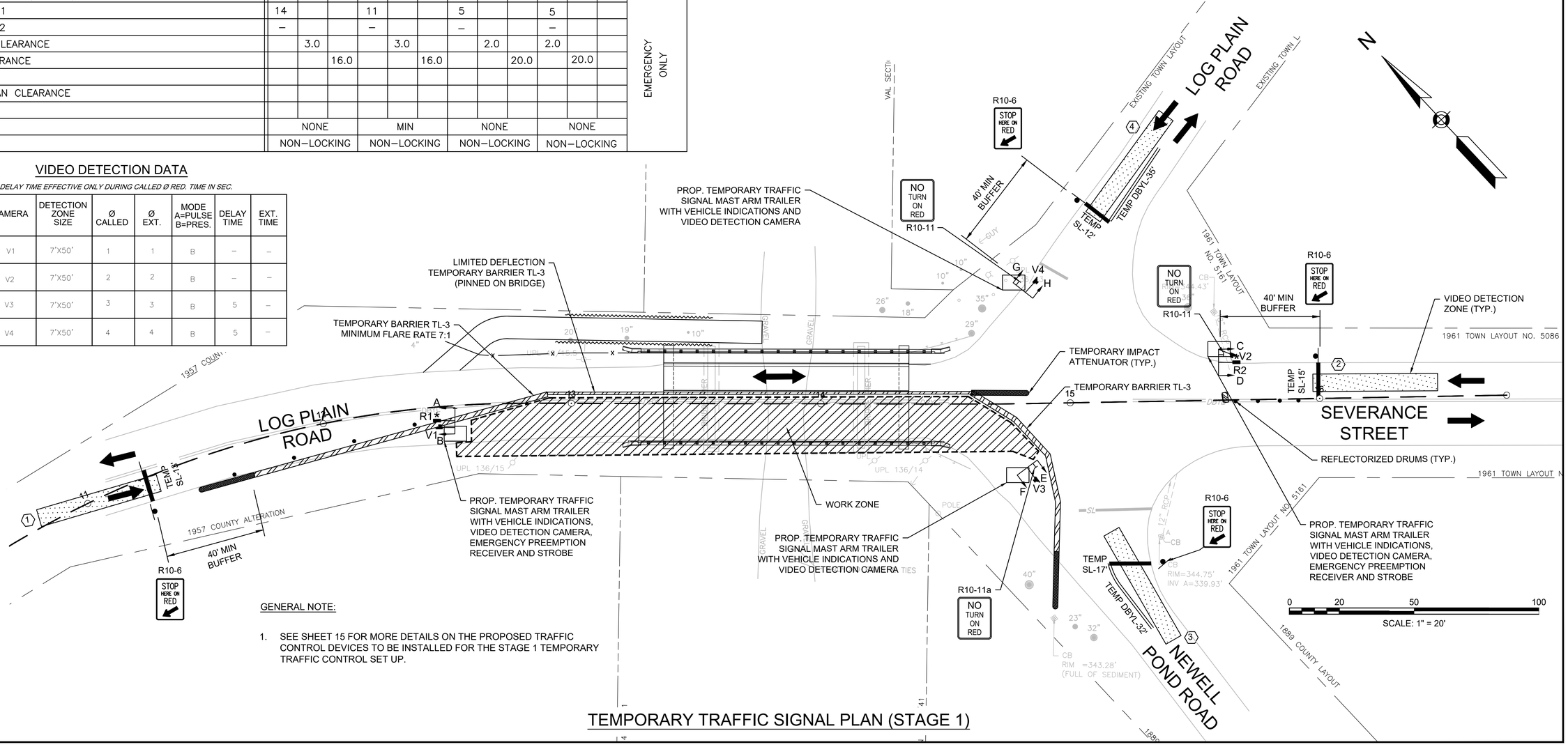
PROPOSED MAJOR ITEMS – TEMPORARY SIGNAL

QUANTITY	ITEM
4	PORTABLE MAST ARM TRAILER W/ EXTENSION ARM & SOLAR PANEL

VIDEO DETECTION DATA

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

DETECTOR NUMBER	CAMERA	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	V1	7'X50'	1	1	B	–	–
2	V2	7'X50'	2	2	B	–	–
3	V3	7'X50'	3	3	B	5	–
4	V4	7'X50'	4	4	B	5	–



TEMPORARY TRAFFIC SIGNAL PLAN (STAGE 1)

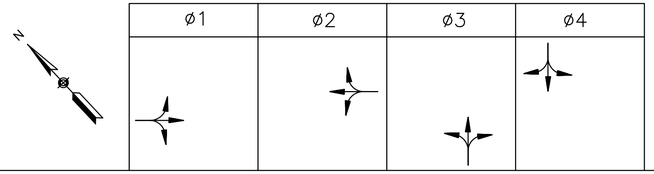
GENERAL NOTE:

1. SEE SHEET 15 FOR MORE DETAILS ON THE PROPOSED TRAFFIC CONTROL DEVICES TO BE INSTALLED FOR THE STAGE 1 TEMPORARY TRAFFIC CONTROL SET UP.

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

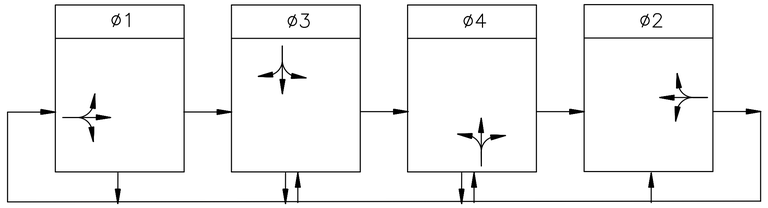
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	17	49
	PROJECT FILE NO. 613295		

TEMPORARY TRAFFIC CONTROL PLANS
STAGE 2



SEQUENCE AND TIMING FOR MANUAL ACTUATED CONTROL (ISOLATED)

STREET	DIRECTION	HOUSINGS	1	2	3	4	5	6	7	8	9	10	11	12	FLASH OPER.
LOG PLAIN ROAD	EB	A,B	G	Y	R	R	R	R	R	R	R	R	R	R	FR
SEVERENCE STREET	WB	C,D	R	R	R	G	Y	R	R	R	R	R	R	R	FR
NEWELL POND ROAD	NB	E,F	R	R	R	R	R	R	G	Y	R	R	R	R	FR
LOG PLAIN ROAD	SB	G,H	R	R	R	R	R	R	R	R	R	G	Y	R	FR
TIMING IN SECONDS															
MINIMUM GREEN (INITIAL)			7			7			5			5			EMERGENCY ONLY
PASSAGE TIME (VEHICLE)			3			3			3			3			
MAXIMUM 1			14			11			5			5			
MAXIMUM 2			–			–			–			–			
YELLOW CLEARANCE				3.0			3.0			2.0		2.0			
RED CLEARANCE					16.0			16.0			20.0		20.0		
WALK (W)															
PEDESTRIAN CLEARANCE															
RECALL			NONE			MIN			NONE			NONE			
MEMORY			NON–LOCKING			NON–LOCKING			NON–LOCKING			NON–LOCKING			



PREFERENTIAL PHASING DIAGRAM

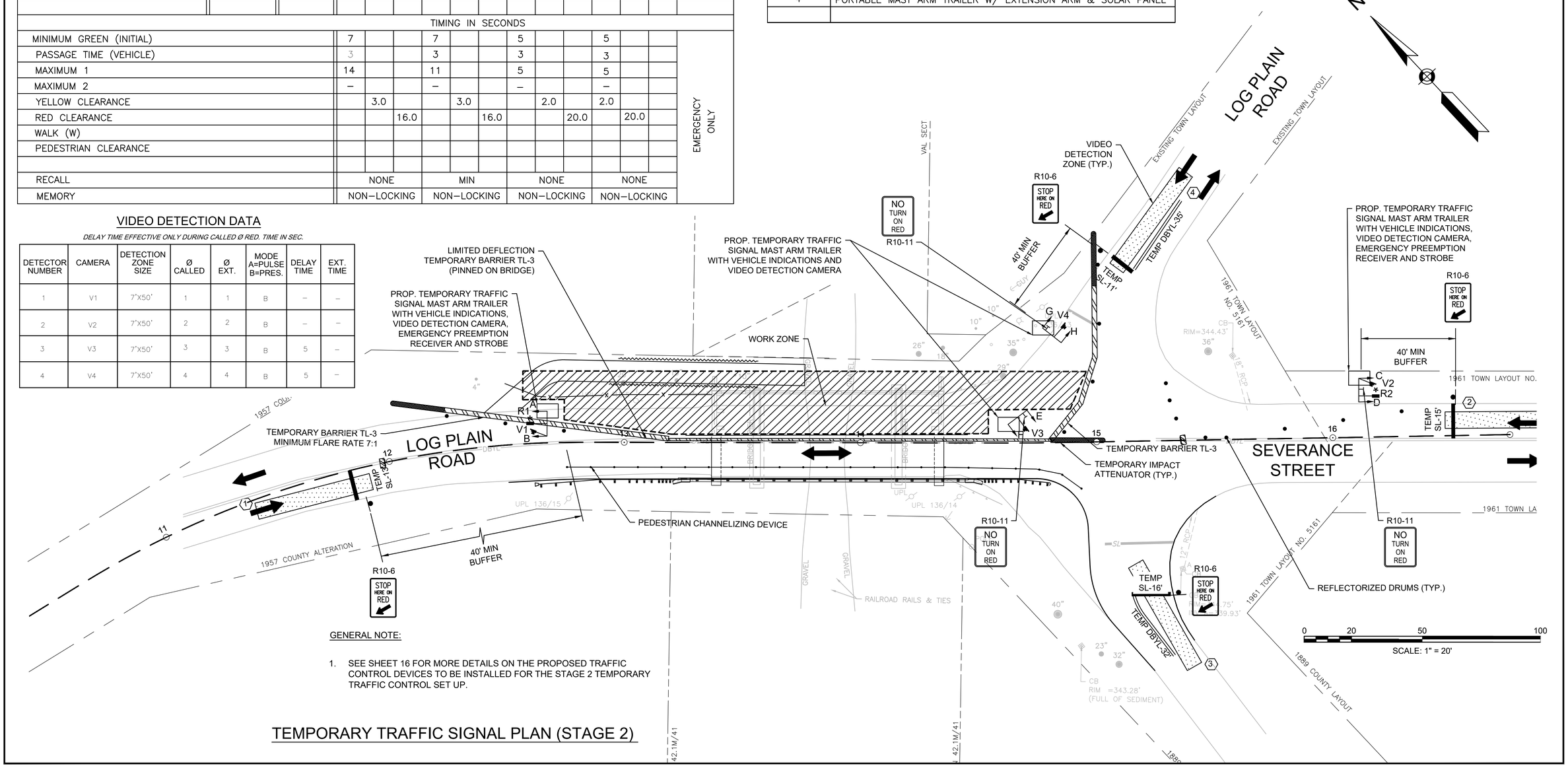
PROPOSED MAJOR ITEMS – TEMPORARY SIGNAL

QUANTITY	ITEM
4	PORTABLE MAST ARM TRAILER W/ EXTENSION ARM & SOLAR PANEL

VIDEO DETECTION DATA

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

DETECTOR NUMBER	CAMERA	DETECTION ZONE SIZE	Ø CALLED	Ø EXT.	MODE A=PULSE B=PRES.	DELAY TIME	EXT. TIME
1	V1	7'X50'	1	1	B	–	–
2	V2	7'X50'	2	2	B	–	–
3	V3	7'X50'	3	3	B	5	–
4	V4	7'X50'	4	4	B	5	–



GENERAL NOTE:

1. SEE SHEET 16 FOR MORE DETAILS ON THE PROPOSED TRAFFIC CONTROL DEVICES TO BE INSTALLED FOR THE STAGE 2 TEMPORARY TRAFFIC CONTROL SET UP.

TEMPORARY TRAFFIC SIGNAL PLAN (STAGE 2)

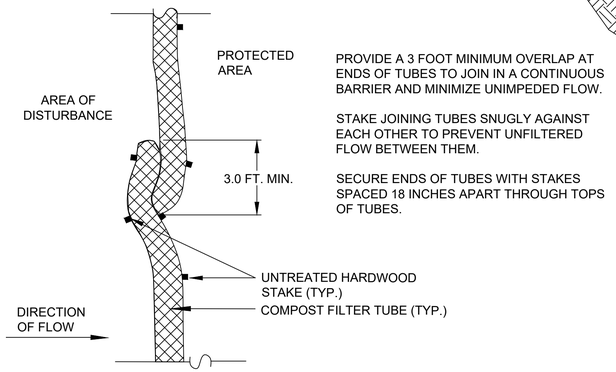
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	18	49
	PROJECT FILE NO. 613295		

CONSTRUCTION DETAILS (SHEET 1 OF 2)

NOTES:

1. PROVIDE A MINIMUM TUBE DIAMETER OF 12 INCHES FOR SLOPES UP TO 50 FEET IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORM WATER RUN-OFF.

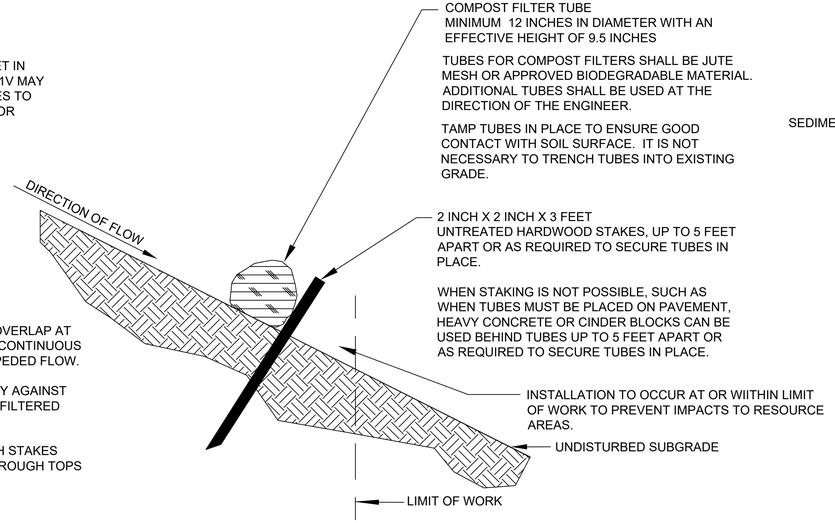


PROVIDE A 3 FOOT MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.

STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.

SECURE ENDS OF TUBES WITH STAKES SPACED 18 INCHES APART THROUGH TOPS OF TUBES.

PLAN VIEW - JOIN DETAIL



TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.

TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.

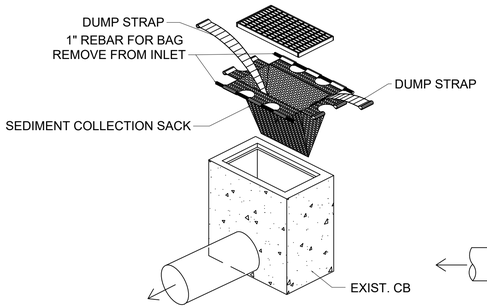
UNTREATED HARDWOOD STAKES, UP TO 5 FEET APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 5 FEET APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

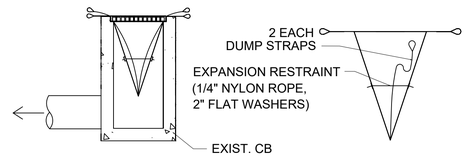
SECTION VIEW

COMPOST FILTER TUBES

NOT TO SCALE



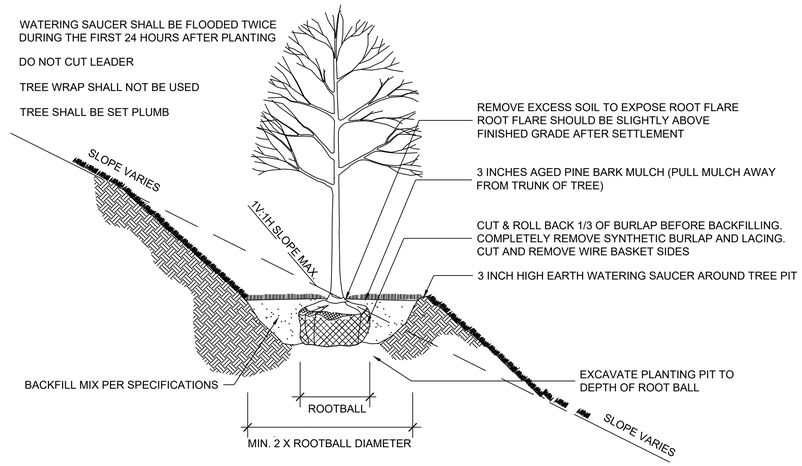
INSTALLATION DETAIL



BAG DETAIL

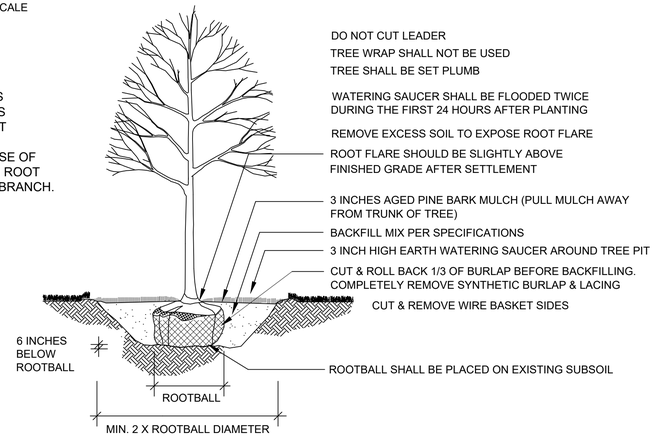
SEDIMENT COLLECTION SACK DETAIL (ITEM 697.1)

NOT TO SCALE



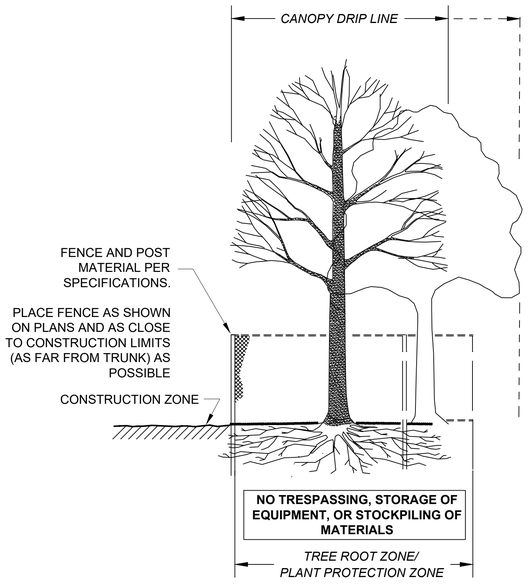
DECIDUOUS TREE PLANTING (SLOPE)

NOT TO SCALE

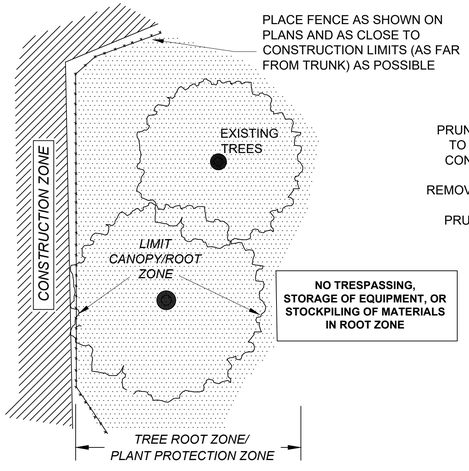


DECIDUOUS TREE PLANTING

NOT TO SCALE



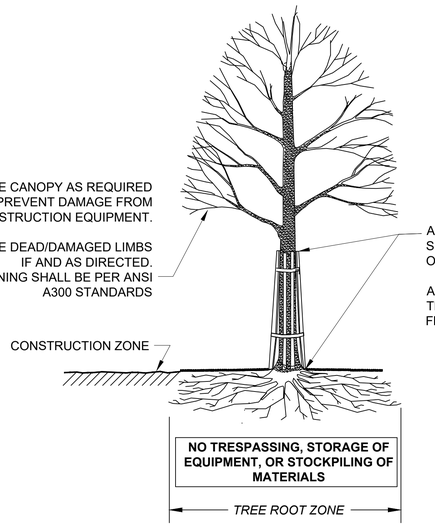
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE



SECTION - TRUNK ARMORING & PRUNING

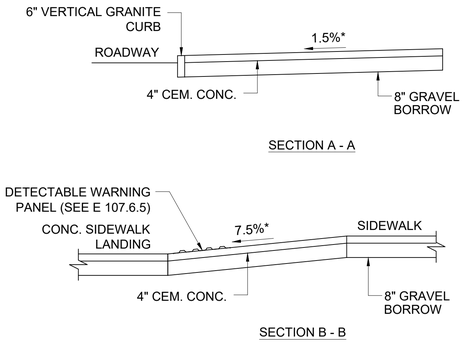
TREE PROTECTION - TRUNK

NOT TO SCALE

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

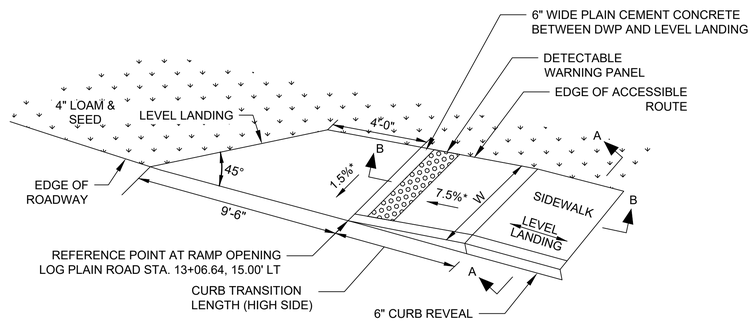
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	19	49
PROJECT FILE NO.	613295		

CONSTRUCTION DETAILS
(SHEET 2 OF 2)

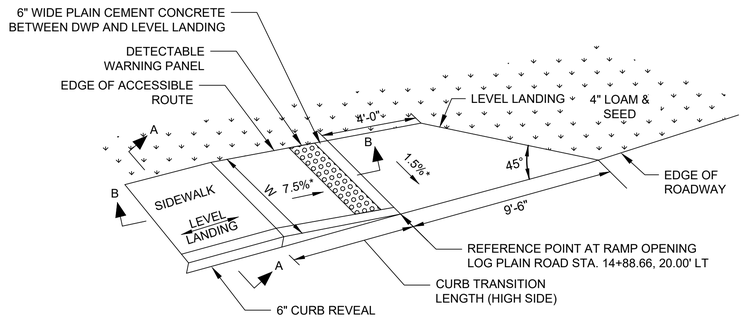


SECTION A - A

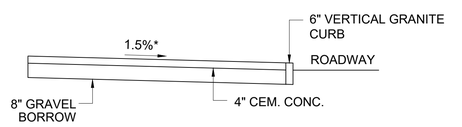
SECTION B - B



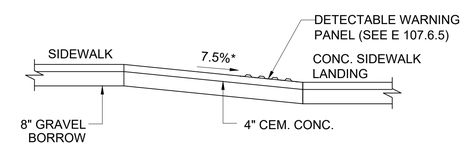
PEDESTRIAN CURB RAMP (PCR #1)
NOT TO SCALE



PEDESTRIAN CURB RAMP (PCR #2)
NOT TO SCALE



SECTION A - A



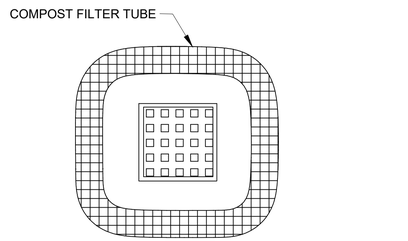
SECTION B - B

GUTTER SLOPE DIRECTION
AS VIEWED LOOKING AT THE RAMP
FROM THE CENTER OF THE ROADWAY

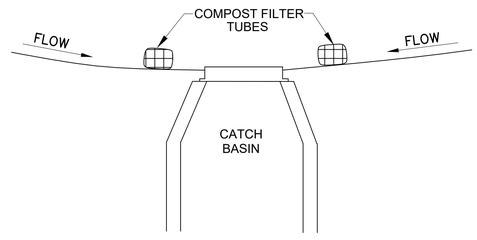
ROADWAY PROFILE GRADE	* HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
=0%	6'–6"
>0% TO 1%	7'–8"
>1% TO 2%	9'–0"
>2% TO 3%	11'–0"
>3% TO 4%	14'–0"
>4% TO 5%	15'–0" MAX

NOTE:
BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

* TOLERANCE FOR CONSTRUCTION ±0.5%
** SEE MASSDOT DETAIL E 107.9R FOR TRANSITION LENGTH



PLAN

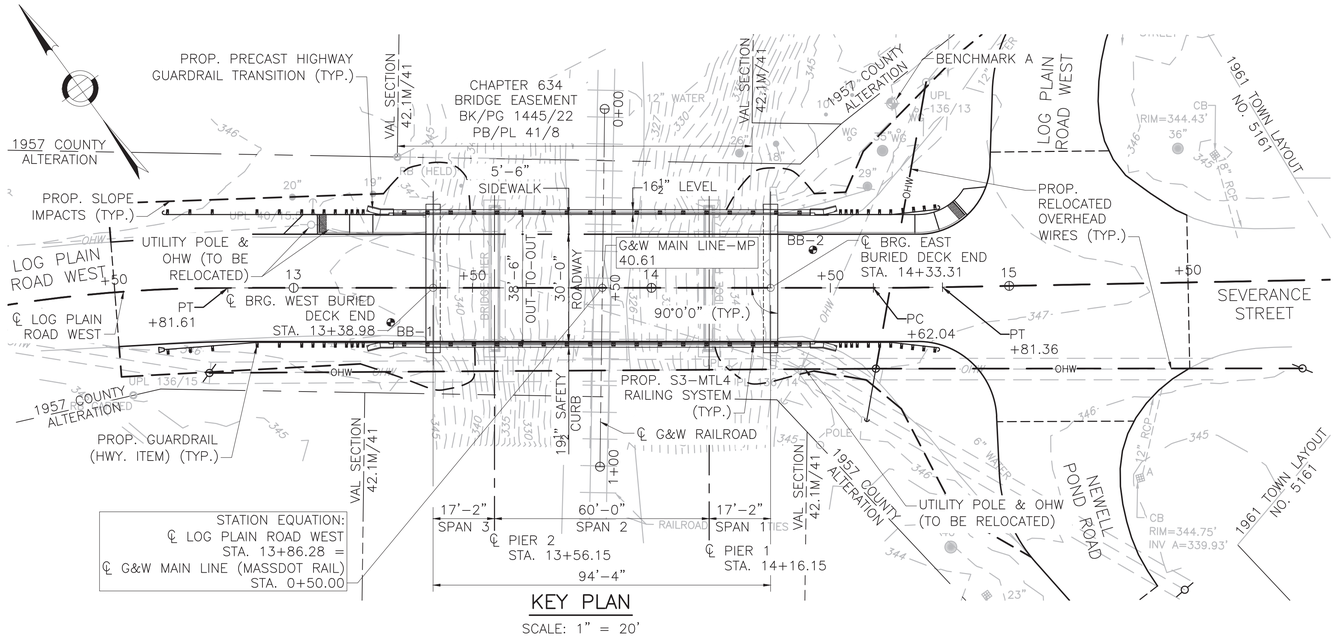


SECTION

DETAIL FOR SEDIMENT CONTROL AT CATCH BASIN & DROP INLET
NOT TO SCALE

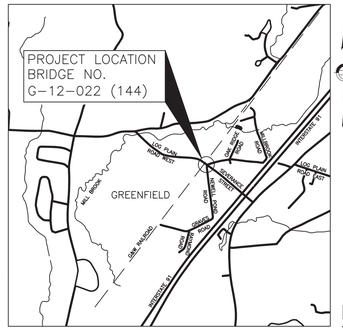
PEDESTRIAN CURB RAMP DATA TABLE

PCR#	REFERENCE POINT STATION	REFERENCE POINT OFFSET (FT)	CONSTRUCTION BASELINE	WIDTH OF SIDEWALK (W)	OPENING WIDTH AT GUTTER (MIN. 4'-0")	TRANSITION LENGTH		ROADWAY GUTTER
						LEFT SIDE	RIGHT SIDE	
1	13+06.64	15.00' (LT)	LOG PLAIN ROAD	5'-6"	9'-6"	-	9'-0"	1.68%
2	14+88.66	20.00' (LT)	LOG PLAIN ROAD	5'-6"	9'-6"	9'-0"	-	1.34%



KEY PLAN

SCALE: 1" = 20'



LOCUS

SCALE: 1" = 2000'

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	20	49
PROJECT FILE NO. 613295			

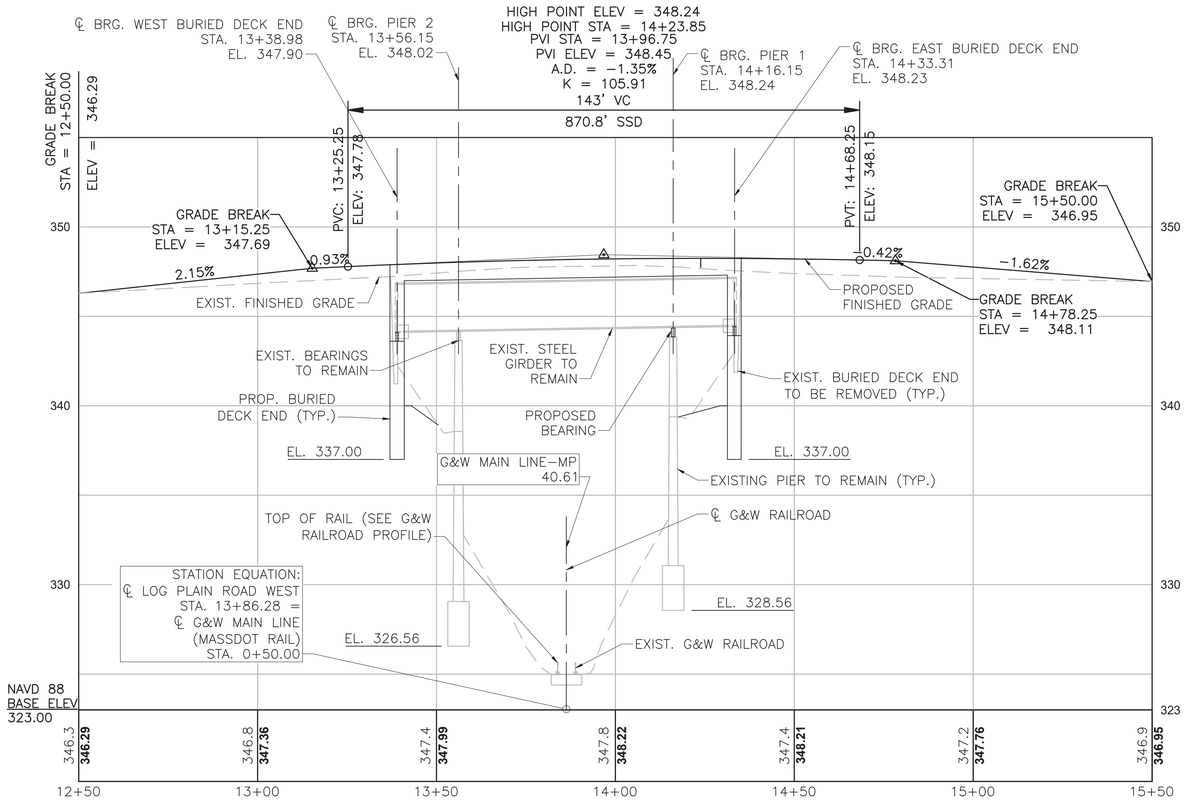
TITLE SHEET

ESTIMATED QUANTITIES

(NOT GUARANTEED)

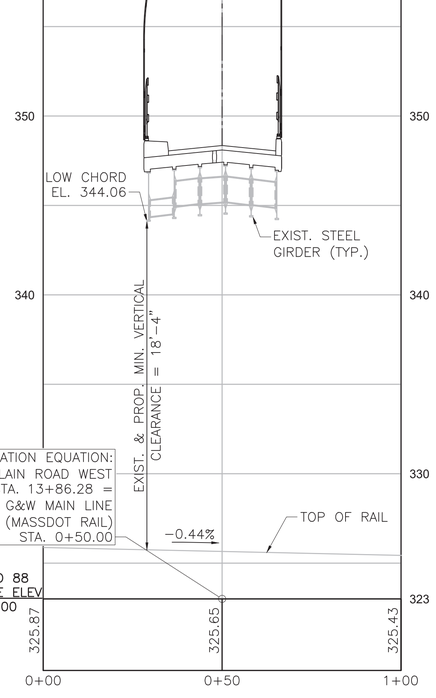
JACKING SUPERSTRUCTURE	1	LS
PRESSURE INJECTION OF CRACKS	20	FT
DEMOLITION OF DECK OF BRIDGE NO. G-12-022 (144)	1	LS
REINFORCED CONCRETE SUBSTRUCTURE EXCAVATION	2	CY
BRIDGE EXCAVATION	700	CY
CLASS B ROCK EXCAVATION	15	CY
GRAVEL BORROW	160	CY
GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	65	CY
CONTROLLED LOW STRENGTH MATERIAL (>300 PSI)	1	CY
SUPERPAVE BRIDGE SURFACE COURSE – 12.5 POLYMER (SSC-B-12.5-P)	35	TON
SUPERPAVE BRIDGE PROTECTIVE COURSE – 12.5 POLYMER (SPC-B-12.5-P)	35	TON
SAWING AND SEALING JOINTS IN ASPHALT PAVEMENT BRIDGES	60	FT
5000 PSI, $\frac{3}{4}$ INCH, 710 HP CEMENT CONCRETE	1	CY
STEEL REINFORCEMENT FOR STRUCTURES – EPOXY COATED	2700	LB
TEMPORARY SUPPORT OF EXCAVATION	1	LS
TEMPORARY SUPPORT OF DECK	1	LS
CLEAN (FULL REMOVAL) AND PAINT BRIDGE NO. G-12-022 (144)	1	LS
ALTERATION TO BRIDGE NO. G-12-022 (144)	1	LS
TEMPORARY PROTECTIVE SHIELDING BRIDGE NO. G-12-022 (144)	1	LS

INDEX OF BRIDGE SHEETS



LOG PLAIN ROAD WEST PROFILE

HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 4'



G&W RAILROAD PROFILE

(LOOKING EAST)
HORIZ. SCALE: 1" = 20'
VERT. SCALE: 1" = 4'

FEBRUARY 28, 2026 | ISSUED FOR CONSTRUCTION

COMMONWEALTH OF MASSACHUSETTS — MATTHEW SCHWARTZ — CIVIL — No. 57020 — PROFESSIONAL ENGINEER

Matthew Schwartz — Digitally signed by Matthew Schwartz Date: 2026.01.28 13:14:58 -05'00'

Jacobs
120 ST. JAMES AVENUE
5TH FLOOR
BOSTON, MA 02116

MassDOT Massachusetts Department of Transportation Highway Division

DECK REPLACEMENT
GREENFIELD
LOG PLAIN ROAD WEST
OVER G&W RAILROAD

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: 2026.01.29 11:03:47 -05'00'
STATE BRIDGE ENGINEER

Carrie Lavallee, P.E. — Digitally signed by Carrie Lavallee, P.E. Date: 2026.02.02 12:18:15 -05'00'
CHIEF ENGINEER

GENERAL NOTES:

DESIGN:
DECK ELEMENTS ARE IN ACCORDANCE WITH THE 2024 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 10TH EDITION FOR HL-93 LOADING.

IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION, 2002, ALLOWABLE STRESS DESIGN FOR H20, TYPE 3 AND TYPE 3S2 LOADING.

MASSDOT BENCH MARK:
A (XCUT IN BOMO):	ELEV.	348.75
	NORTH	3060653.6479
	EAST	366513.0960

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

DATE:
TO BE PLACED ON THE INSIDE FACE OF THE SOUTHWEST AND NORTHEAST 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. BOTH HIGHWAY GUARDRAIL TRANSITIONS SHALL FEATURE THE SAME DATE.

MASSDOT SURVEY NOTEBOOKS:
SURVEY BASED ON "EXISTING CONDITIONS PLAN – BRIDGE DECK REPLACEMENT LOG PLAIN ROAD WEST" IN THE TOWN OF GREENFIELD, MA AND DATED JUNE 2024. FIELD BOOK NO. 18690. SURVEY PREPARED BY GREENMAN-PEDERSEN, INC., 181 BALLARDVALE ST., SUITE 202, WILMINGTON, MA 01887. COPIES OF 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:
FOUNDATIONS MAY BE ALTERED, IF NECESSARY, TO SUIT CONDITIONS ENCOUNTERED DURING CONSTRUCTION, WITH THE APPROVAL OF THE ENGINEER.

UNSUITABLE MATERIAL:
ALL UNSUITABLE MATERIAL SHALL BE REMOVED WITHIN THE LIMITS OF THE FOUNDATIONS OF THE STRUCTURE, 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 5,000 HP CONCRETE:
ALL CIP AND PRECAST CONCRETE POURS SHOWN ON THESE CONSTRUCTION DRAWINGS 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 SECTION M4.06.9: MASS PLACEMENT CONCRETE.

CONCRETE MIXES:
	(1)	(2)	(3)
PIER REPAIR CONCRETE	5,000	$\frac{3}{8}$"	710
BURIED DECK END FOOTING, INTEGRAL WINGWALLS, PRECAST S3-MTL4 HIGHWAY GUARDRAIL TRANSITION, DECK, SIDEWALK, SAFETY CURB, HAUNCHES, BURIED DECK END STEM	5,000	$\frac{3}{4}$"	685

1. 28 DAY COMPRESSIVE STRENGTH (PSI)
2. MAXIMUM AGGREGATE SIZE (IN)
3. CEMENT CONTENT (PCF)

CONCRETE PROTECTIVE COATING:
CONCRETE PROTECTIVE COATING SHALL BE APPLIED TO ALL EXPOSED CONCRETE SURFACES OF THE ABUTMENTS AND WINGWALLS. IT SHALL ALSO BE APPLIED TO THE EXTERIOR FACES OF BRIDGE RAIL AND DECK FASCIA AS SHOWN ON SHEET 17.

REINFORCEMENT:
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 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.

EPOXY COATED BARS:
ALL REINFORCING BARS, GROUTED SPLICE COUPLERS, AND SUPPORTING DEVICES SHALL BE EPOXY COATED, EXCEPT AS OTHERWISE NOTED.

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

UTILITIES:
THE LOCATION OF ALL EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO STARTING CONSTRUCTION AND THE COMMENCEMENT OF EXCAVATION ACTIVITIES. ANY EXISTING UTILITIES PRESENT SHALL BE PROTECTED DURING CONSTRUCTION AND THE CONTRACTOR SHALL COORDINATE WITH ANY UTILITY COMPANIES PERFORMING WORK IN THE SAME AREA.

TRAFFIC MANAGEMENT:
REFER TO THE HIGHWAY PLANS FOR TEMPORARY TRAFFIC CONTROL AND CONSTRUCTION SEQUENCING ASSOCIATED WITH THE PROJECT.

ANTI-GRAFFITI COATING:
ANTI-GRAFFITI COATING SHALL BE APPLIED TO ALL EXPOSED SURFACES ON AN AS-NEEDED BASIS, WITH APPROVAL OF THE ENGINEER, IN ACCORDANCE WITH THE SPECIFICATIONS. CONTRACTOR TO ENSURE AND VERIFY WITH THE ENGINEER THAT THE ANTI-GRAFFITI COATING IS COMPATIBLE WITH THE CONCRETE PROTECTIVE COATING MATERIAL.

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

CONTRACTOR TO NOTIFY G&W PUBLIC PROJECTS DEPARTMENT 30 DAYS PRIOR TO CONSTRUCTION.

G&W FLAGGING SERVICES WILL BE REQUIRED FOR ALL WORK WITHIN G&W RIGHT-OF-WAY OR ANY WORK THAT HAS A "POTENTIAL TO FOUL".

THE CONTRACTOR MUST NOT USE THE RAILROAD RIGHT OF WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION. THE RAILROAD'S RIGHT OF WAY MUST REMAIN CLEAR AT ALL TIMES. THE CONTRACTOR MUST PLAN AND PERFORM THE WORK IN A MANNER SUCH THAT THE RAILROAD TRACKS AT THE PROJECT LOCATION REMAIN FULLY CAPABLE OF OPERATING RAIL TRAFFIC THROUGHOUT THE WORK PERIOD AND RAIL TRAFFIC IS NOT DELAYED OR OTHERWISE IMPACTED DUE TO THE WORK BEING PERFORMED.

ALL WORK PERFORMED ON, ABOVE, OR ADJACENT TO RAILROAD PROPERTY SHALL BE IN ACCORDANCE WITH THE PUBLIC PROJECT MANUAL, CURRENT EDITION. WORK PLANS SHALL BE SUBMITTED FOR REVIEW TO THE RAILROAD FOR TASKS RELATED TO SITE ACCESS, SOIL AND WATER MANAGEMENT, BALLAST PROTECTION, DEMOLITION, DEBRIS SHIELD, EXCAVATION, HOISTING, ERECTION, AND ALL OTHER WORK THAT POTENTIALLY AFFECTS RAILROAD PROPERTY OR OPERATIONS. ALL WORK PLANS SHALL BE PREPARED AND SUBMITTED TO THE RAILROAD IN ADHERENCE WITH THE PUBLIC PROJECT MANUAL, SECTION 1.11 CONSTRUCTION SUBMISSION CRITERIA.

STRUCTURAL STEEL:
SEE SHEET 21 FOR STRUCTURAL STEEL NOTES.

GEOTECHNICAL MEMORANDUM:
REFER TO GEOTECH MEMORANDUM, DATED APRIL, 2025, PREPARED BY JACOBS ENGINEERING GROUP, INC.

EXISTING CONDITIONS:
EXISTING ELEMENTS SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT ACCURATELY REPRESENT 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/SHE HAS MADE THE REQUIRED MEASUREMENTS AND THE EXTEND OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER.

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

CLEANING AND PAINTING REQUIREMENTS:
THIS WORK SHALL INCLUDE THE CLEANING AND PAINTING OF THE STEEL GIRDERS AND PIER 2 BRIDGE BEARINGS, IN ACCORDANCE WITH THE TECHNICAL AND ENVIRONMENTAL REQUIREMENTS OF SECTION 961, "MAINTENANCE PAINTING OF STEEL BRIDGES". EXISTING STEEL TO BE PAINTED SHALL BE SSPC-SP 10, NEAR-WHITE METAL BLAST CLEANING (NACE NO.2). THE FINISH COAT COLOR SHALL MATCH AMS STANDARD 595A COLOR NUMBER 14223 OF THE FEDERAL STANDARD 595B.

JACKING AND SHORING:
THE JACKING AND SHORING METHODS DEPICTED WITHIN THE CONTRACT DOCUMENTS ARE TO PROVIDE AN EQUAL BASIS FOR BIDDING. THE CONTRACTOR SHALL SUBMIT A PLAN OF THE PROPOSED WORK SHOWING THE DETAILS AND INDICATING THE MATERIALS THEY PROPOSE TO USE. THE SUBMITTAL SHALL INCLUDE DESIGN COMPUTATIONS, BASED ON THE BRIDGE LOADS AND THE WORKING STRESSES OF THE MATERIALS USED, SEQUENCE OF OPERATIONS, AND ALL DETAILS INCIDENTAL THERETO. APPROVAL OF THIS SUBMISSION SHALL BE OBTAINED PRIOR TO THE COMMENCEMENT OF ANY WORK UNDER THIS ITEM. THE ABOVE PLAN AND COMPUTATIONS SHALL BEAR THE WORK UNDER THIS ITEM. THE ABOVE PLAN AND COMPUTATIONS SHALL BEAR THE SEAL AND SIGNATURE OF A REGISTERED PROFESSIONAL STRUCTURAL ENGINEER IN MASSACHUSETTS.

ALL BEAMS ARE CONTINUOUS BEAMS, THE ACTUAL LOADING MAY VARY. THE CONTRACTOR'S SUBMITTED SHORING DESIGN, STAMPED BY A MASSACHUSETTS REGISTERED STRUCTURAL ENGINEER, SHALL HAVE A CAPACITY EQUAL TO OR GREATER THAN THE JACKING OR VERTICAL SHORING FACTOR OF SAFETY OF 2.0 PER THE AASHTO GUIDE SPECIFICATION FOR TEMPORARY WORKS SECTION 2.2.5.3.

TRAFFIC DATA
	ROADWAY OVER	ROADWAY UNDER
DESIGN YEAR	2044	
AVERAGE DAILY TRAFFIC – PRESENT	879	
AVERAGE DAILY TRAFFIC – DESIGN YEAR	971	
DESIGN HOURLY VOLUME	102	
DIRECTIONAL DISTRIBUTION	66% (WB)	
TRUCK PERCENTAGE – AVERAGE DAY	4.8%	
TRUCK PERCENTAGE – PEAK HOUR	2.8%	
DESIGN SPEED	25 MPH	
DIRECTIONAL DESIGN HOURLY VOLUME	67	

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	21	49
PROJECT FILE NO. 613295			

GENERAL NOTES

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	22	49
	PROJECT FILE NO. 613295		

BORING LOGS (SHEET 1 OF 2)

LOG OF TEST BORING

Jacobs

PROJECT	Greenfield- Log Plain Rd West
LOCATION	Greenfield, MA
OWNER	MassDOT
JOB NUMBER	E2X93633

BORING NO. BB-1 — SHEET 1 OF 2

INSPECTOR	L. Donovan	CONTRACTOR	Seaboard	DRILLER	M. Kern	ELEVATION	347.0
METHOD OF DRILLING		GROUNDWATER READINGS		DRILL RIG	B53 Mobile	DATUM	NAVD88
0.0	Vaccum Excavation	DATE/TIME	DEPTH(ft)	REMARKS	SPT HAMMER	Safety Driver	GRID N 3060687.3
5.0	Wash Boring w/Casing	02-04-2025 / 3:30 PM	19.2	During Drilling (In Casing)			COORD E 366363.4
40.0	Terminated	02-05-2025 / 09:45 AM	32.3	Upon Completion (In Casing)			DATE START 2/4/25
							DATE END 2/5/25

ELEV. (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
				SV-1	0 - 5			FILL	SV-1 (0-5'): Dry, brown & black, fine to coarse SAND and fine to medium Gravel, trace Silt.	1,2
345	5	37 34 26 31	60	S1	5 - 7	24/13			S1: Dry, very dense, brown & black with multi-colored mottles, fine to coarse SAND and fine to medium Gravel, trace Silt.	
340		31 50/5"	50/5"	S2	7 - 7.9	11/6			S2: Dry, very dense, gray brown, fine to coarse GRAVEL and fine to coarse Sand, trace Silt.	3
	10	29 33 34 33	67	S3	10 - 12	24/10		FILL	S3: Dry, very dense, gray brown, fine to coarse SAND, little fine to medium Gravel, little Silt. [Laboratory Testing Performed - Particle Size Analysis (Sieve Only): Gravel = 26.0%, Sand = 56.0%, Silt & Clay = 18.0%].	
335										
	15									
330		36 29 16 17	45	S4	17 - 19	24/8			S4: Dry, dense, gray, fine GRAVEL, some fine to coarse SAND.	4
	20	22 16 15 25	31	S5	20 - 22	24/9		SAND & GRAVEL	S5: Dry, dense, gray, fine to medium GRAVEL, some fine to coarse Sand, trace Silt. [Laboratory Testing Performed - Particle Size Analysis (Sieve Only): Gravel = 48.0%, Sand = 44.0%, Silt & Clay = 8.0%].	
325										
	25	23 21 22 23	43	S6	25 - 27	24/11			S6: Dry, dense, gray, fine to coarse SAND and fine to medium Gravel, trace Silt.	
320										
	30	25 24 21 23	45	S7	30 - 32	24/9			S7: Wet, dense, gray, fine GRAVEL, and fine to coarse Sand, cobble in tip of spoon.	
315										
	35									

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

1. BB-1 was vaccum excavated to 5' bgs to check for the presence of utilities.
2. A 6" asphalt layer was encountered at roadway surface.
3. Driller used roller bit to drill through probable boulder/cobble from ~8-10' bgs.
4. Depth of 15 to 17' was disurbed by drill process, advanced to 17' bgs for S4.

BOTTOM OF WEST BURIED DECK END EL. 337.00

GROUNDWATER LEVEL OBSERVED AT EL. 314.5 ON FEBRUARY, 2025

LOG OF TEST BORING

Jacobs

PROJECT	Greenfield- Log Plain Rd West
LOCATION	Greenfield, MA
OWNER	MassDOT
JOB NUMBER	E2X93633

BORING NO. BB-1 — SHEET 2 OF 2

ELEV. (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
		49 34 16 24	50	S8	35 - 37	24/6			S8: Wet, very dense, gray, fine to coarse GRAVEL, some fine to coarse Sand, some Silt.	
310	40	22 20 12 15	32	S9	38 - 40	24/7			S9: Wet, dense, gray, fine to coarse GRAVEL and fine to coarse SAND, little Silt. [Laboratory Testing Performed - Moisture Content = 8.2%].	5
									40 Bottom of Borehole at 40 feet.	
305	45									
300	50									
295	55									
290	60									
285	65									
280	70									
275										

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

5. Upon completion the boring was backfilled with soil cuttings with asphalt patched at the surface.

BORING NOTES:

1. LOCATION OF BORINGS SHOWN ON THE PLAN THUS: ⊕ BB–1
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. WATER LEVELS SHOWN ON THE BORING LOGS WERE OBSERVED AT THE TIME OF TAKING BORINGS AND DO NOT NECESSARILY SHOW THE TRUE GROUND WATER LEVEL.
4. FIGURES IN COLUMNS INDICATE NUMBER OF BLOWS REQUIRED TO DRIVE A 1 3/8" I.D. SPLIT SPOON SAMPLER 6" USING A 140 POUND WEIGHT FALLING 30".
5. BORING SAMPLES ARE STORED AT A STORAGE FACILITY LOCATED ON ROUTE 114 (219 WINTHROP AVE.) IN LAWRENCE, MA. THE CONTRACTOR MAY EXAMINE THE SOIL AND ROCK SAMPLES BY CONTACTING THE MASSDOT GEOTECHNICAL SECTION AT 10 PARK PLAZA, BOSTON, MA.
6. ALL BORINGS WERE MADE IN FEBRUARY, 2025.
7. BORINGS WERE MADE BY SEABOARD DRILLING, LLC. 37 LIBERTY DRIVE, BANGOR MAINE 04401.
8. THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

BORING BB–1

STATION: 13+27.13 (±)
OFFSET: 9.65' RT
GROUND ELEVATION: 347.0'

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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

LOG OF TEST BORING

Jacobs

PROJECT	Greenfield- Log Plain Rd West	BORING NO.	BB-2
LOCATION	Greenfield, MA		SHEET 1 OF 2
OWNER	MassDOT		
JOB NUMBER	E2X93633		

INSPECTOR	L. Donovan	CONTRACTOR	Seaboard Drilling	DRILLER	M. Kern	ELEVATION	347.4
METHOD OF DRILLING		GROUNDWATER READINGS		DRILL RIG	B53 Mobile	DATUM	NAVD88
0.0	Vaccum Excavation	DATE/TIME	DEPTH(ft)	REMARKS	SPT HAMMER	Safety Driver	GRID N 3060602.7
5.0	Wash Boring w/Casing	02-05-2025 / 03:30 PM	32.5	Upon Completion (In Casing)			COORD E 366476.1
40.0	Terminated						DATE START 2/5/25
							DATE END 2/5/25

ELEV (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
				SV-1	0 - 5				SV-1 (0-5'): Dry, brown, fine to coarse SAND and fine to medium Gravel, trace Silt.	1,2
345										
	5	3 5 11 9	16	S1	5 - 7	24/5		FILL	S1: Dry, medium dense, brown, fine to coarse SAND, some Gravel, trace Silt.	
340		12 12 13 15	25	S2	7 - 9	24/11			S2: Dry, medium dense, brown & gray with mottles (multi-colored), fine to coarse GRAVEL, some fine to coarse Sand, trace Silt. [Laboratory Testing Performed - Particle Size Analysis (Sieve Only): Gravel = 64.0%, Sand = 30.0%, Silt & Clay = 6.0%].	
	10	14 17 18 16	35	S3	9 - 11	24/9			S3: Dry, dense, brown & gray with yellowish red oxide staining, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt.	3
335								11.5 BLDR 14		
	15	14 15 17 14	32	S4	15 - 17	24/20			S4: Dry, dense, gray brown, fine SAND, trace Gravel, trace Silt.	
330										
	20	19 17 29 36	46	S5	20 - 22	24/9			S5: Dry, dense, gray brown, fine SAND, trace Silt, trace Gravel.	
325										
	25	39 39 42 53	81	S6	25 - 27	24/11		S&G	S6: Dry, very dense, gray brown, fine to coarse SAND, some fine to coarse Gravel, trace Silt.	
320										
	30	30 21 19 21	40	S7	30 - 32	24/8			S7: Wet, dense, gray, fine to medium GRAVEL and fine to coarse Sand, little Silt. [Laboratory Testing Performed - Particle Size Analysis (Sieve Only): Gravel = 45.0%, Sand = 44.5%, Silt & Clay = 10.5%].	
315										
	35									

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

1. BB-2 was vaccum excavated to 5' bgs to check for the presence of utilities.
2. A 6" asphalt layer was encountered at roadway surface.
3. Boulder encountered from 11.5' to 14' bgs, driller cored through obstruction.

BOTTOM OF EAST BURIED DECK END EL. 337.00

GROUNDWATER LEVEL OBSERVED AT EL. 314.5 ON FEBRUARY, 2025

LOG OF TEST BORING

Jacobs

PROJECT	Greenfield- Log Plain Rd West	BORING NO.	BB-2
LOCATION	Greenfield, MA		SHEET 2 OF 2
OWNER	MassDOT		
JOB NUMBER	E2X93633		

ELEV (ft)	DEPTH (ft)	SAMPLE DATA	N-VALUE	SAMPLE NO.	DEPTH INTERVAL (ft)	PEN/REC (in)/(in)	PID (ppm)	LAYER NAME	SOIL AND ROCK DESCRIPTION	NOTES
		24 18 17 32	35	S8	35 - 37	24/5			S8: Wet, dense, gray, fine to coarse SAND and fine to medium GRAVEL, little Silt. [Laboratory Testing Performed - Moisture Content = 10.5%].	
310										
	40	11 13 14 20	27	S9	38 - 40	24/12			S9: Wet, medium dense, gray, fine to coarse GRAVEL and fine to coarse Sand, trace Silt.	4
								40	Bottom of Borehole at 40 feet.	
305										
	45									
300										
	50									
295										
	55									
290										
	60									
285										
	65									
280										
	70									
275										

Page 1: 0-35 feet. Each subsequent page displays 40 feet.

NOTES

4. Upon completion the boring was backfilled with soil cuttings with asphalt patched at the surface.

BORING NOTES:

1. SEE SHEET 3 FOR BORING NOTES.

BORING BB-2

STATION: 14+45.15 (±)
OFFSET: 10.62' LEFT
GROUND ELEVATION: 347.4'

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

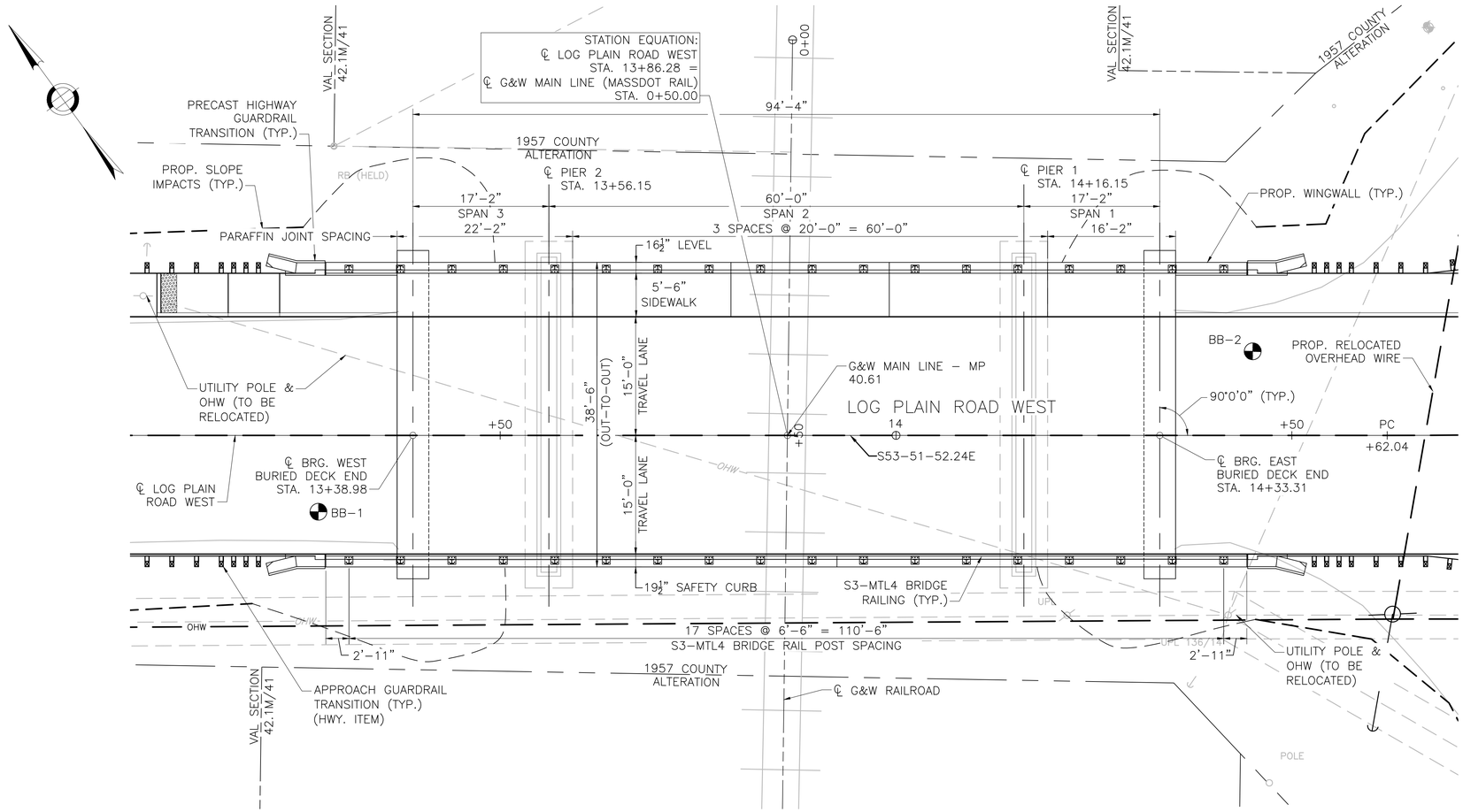
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

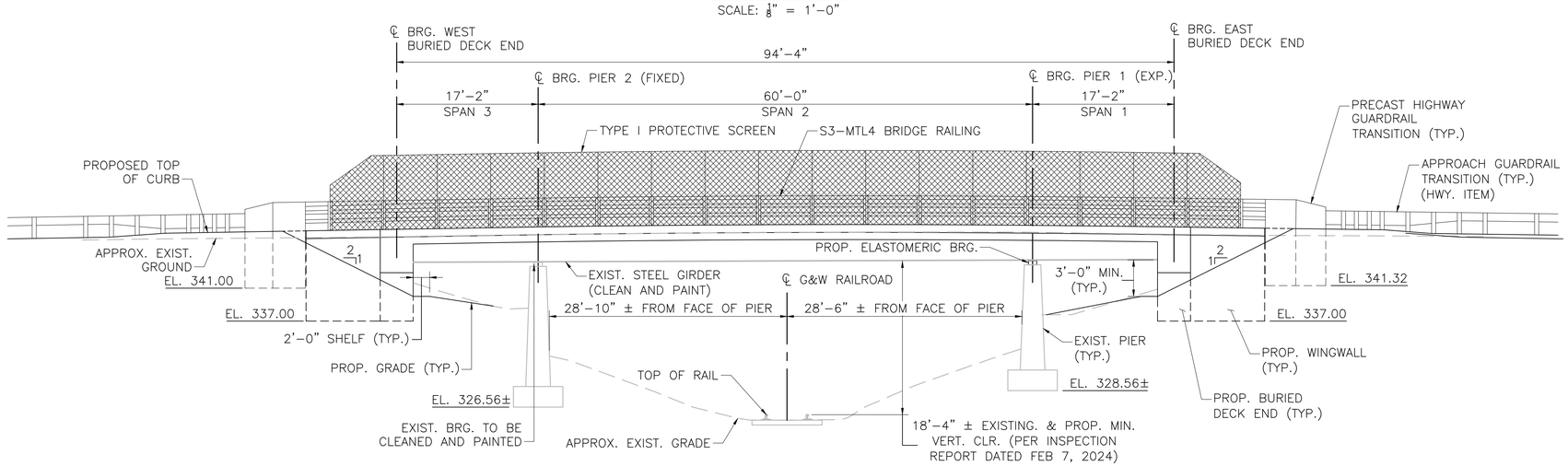
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	24	49
PROJECT FILE NO.	613295		

GENERAL PLAN AND ELEVATION



GENERAL PLAN
SCALE: ⅛" = 1'–0"



SOUTH ELEVATION
SCALE: ⅛" = 1'–0"

NOTE:

1. S3–MTL4 RAILING PICKETS NOT SHOWN FOR CLARITY.

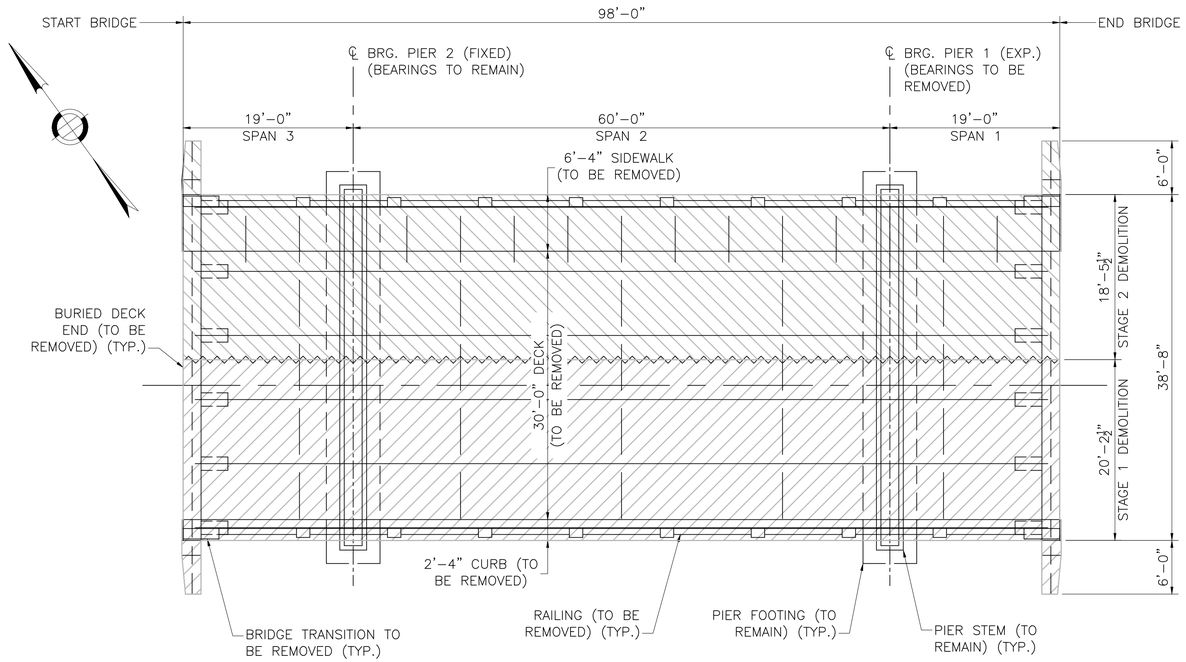
FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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

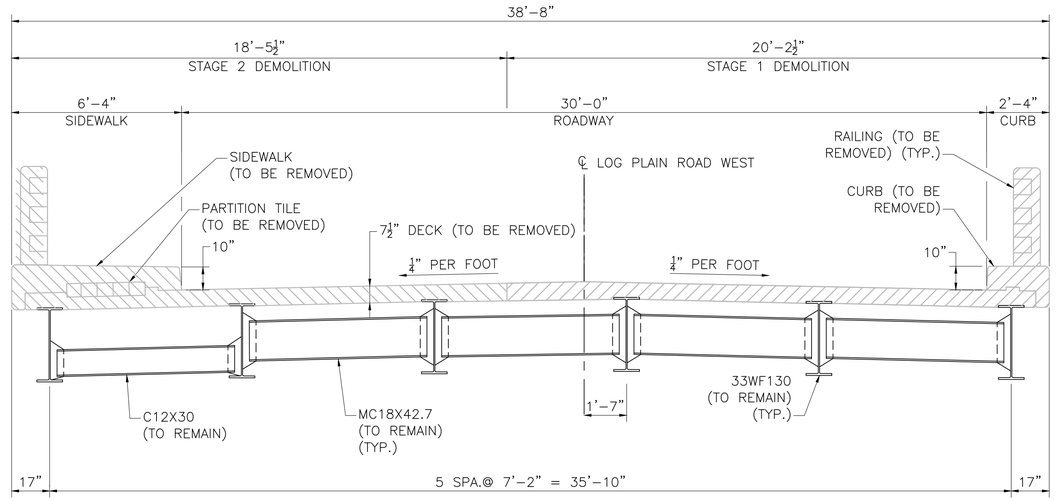
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	25	49
PROJECT FILE NO.	613295		

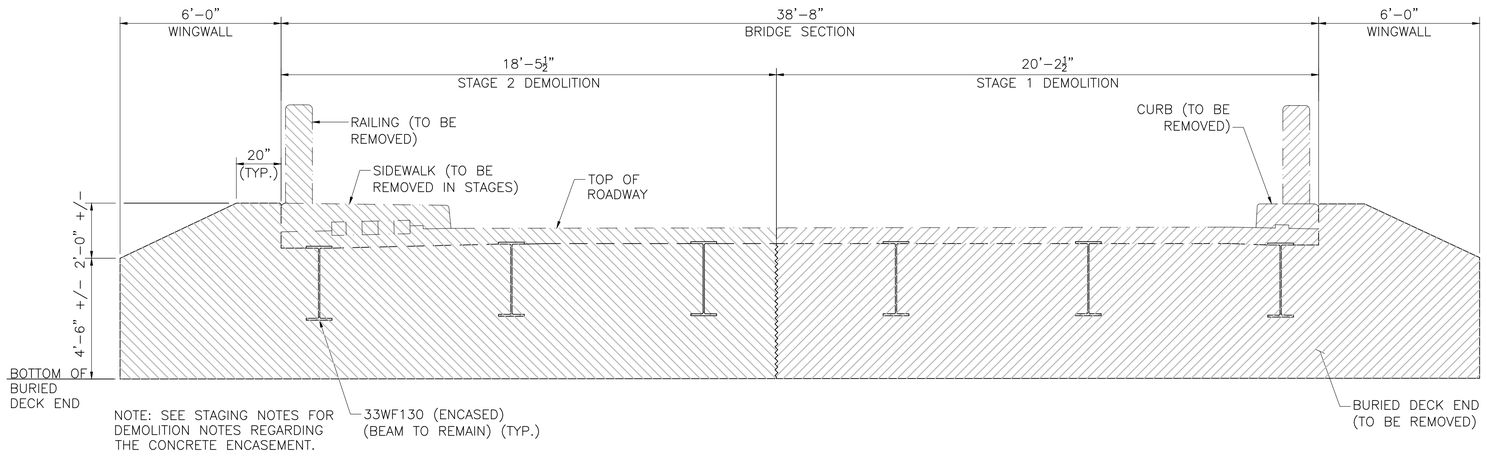
BRIDGE DEMOLITION



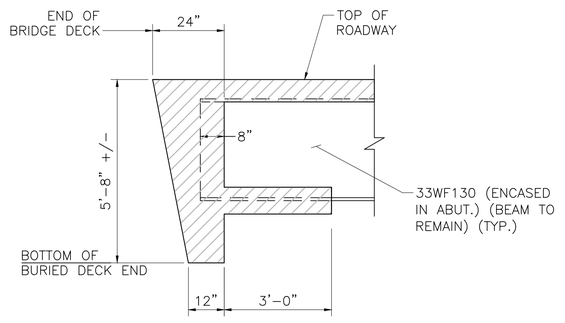
DEMOLITION LIMITS
EXISTING BRIDGE PLAN
SCALE: ⅛" = 1'–0"



DEMOLITION LIMITS
EXISTING BRIDGE SECTION
SCALE: ⅜" = 1'–0"



DEMOLITION LIMITS
EXISTING ABUTMENT ELEVATION
SCALE: ⅜" = 1'–0"



DEMOLITION LIMITS
EXISTING BURIED DECK END SECTION
SCALE: ½" = 1'–0"

LEGEND:

LIMITS OF STAGE 1 DEMOLITION

LIMITS OF STAGE 2 DEMOLITION

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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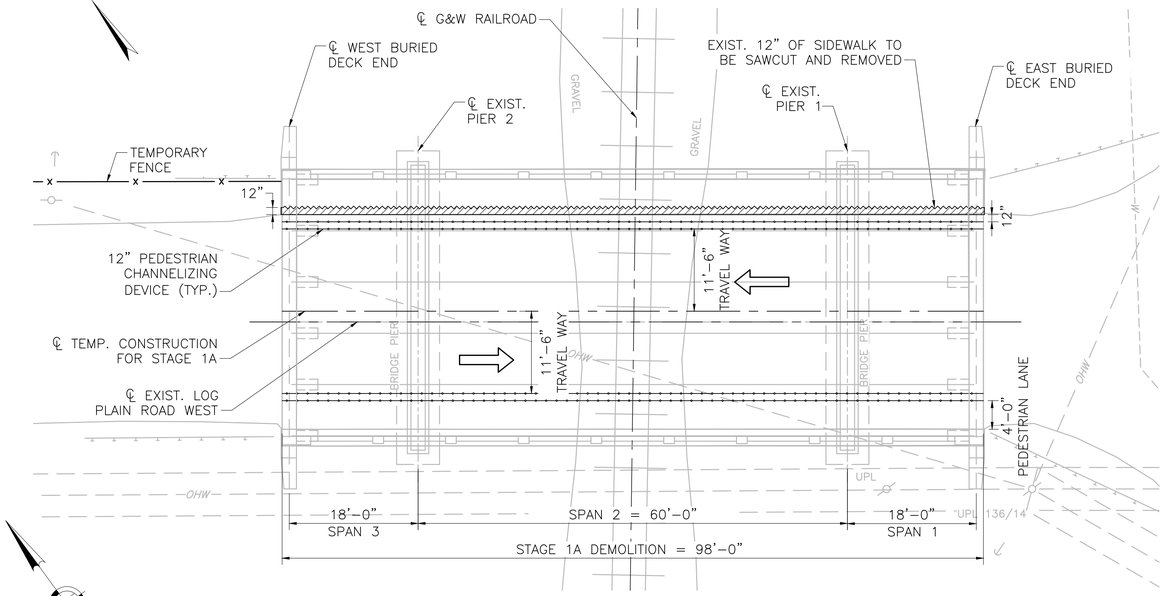
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

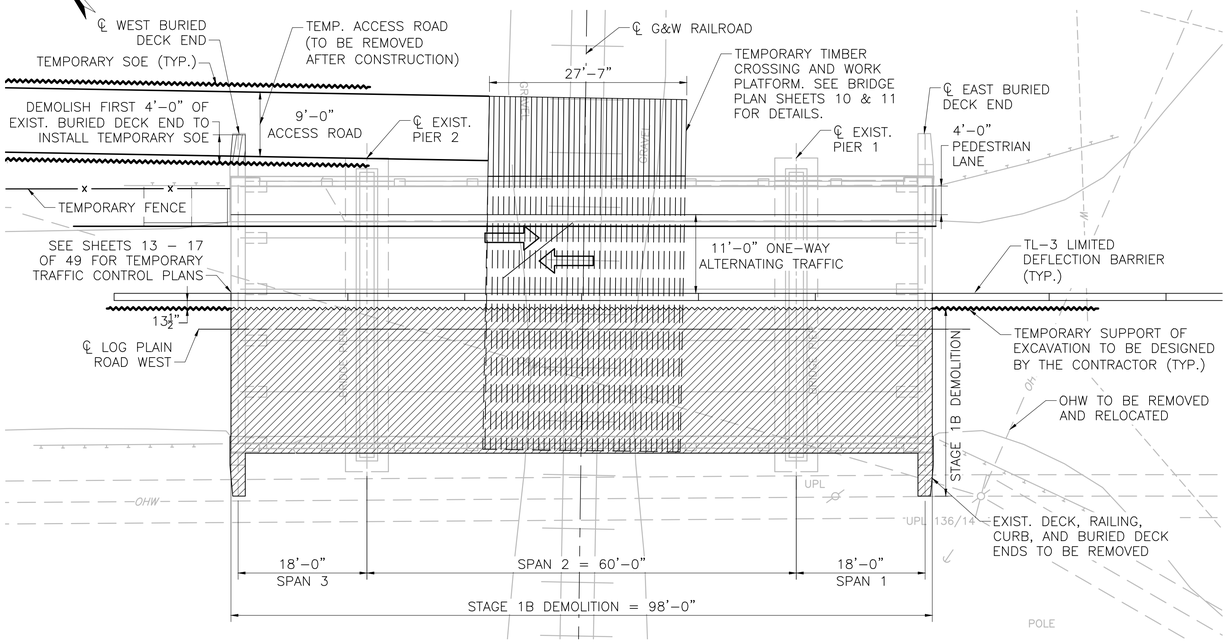
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	26	49
PROJECT FILE NO.	613295		

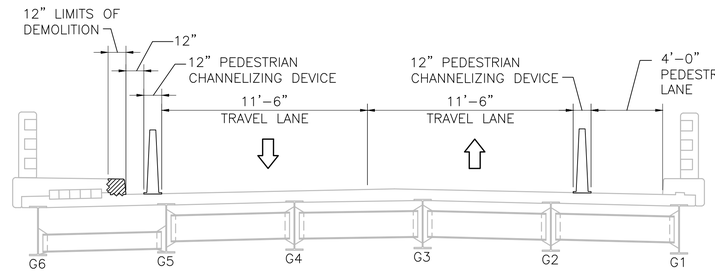
STAGE 1 DEMOLITION



PLAN
STAGE 1A DEMOLITION
SCALE: 1" = 10'



PLAN
STAGE 1B DEMOLITION
SCALE: 1" = 10'



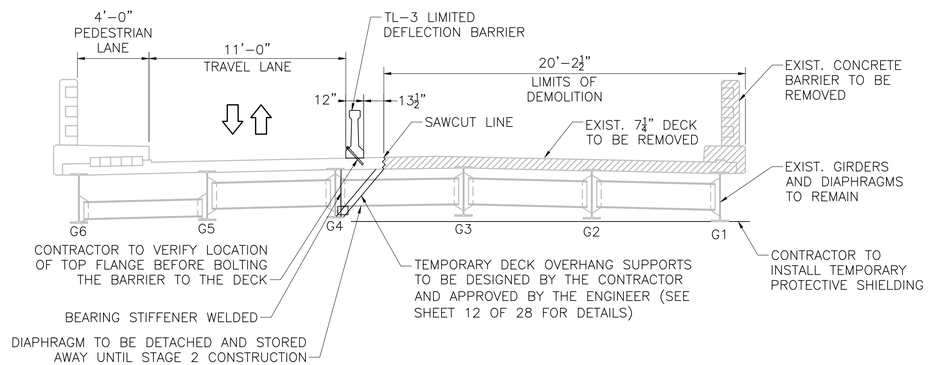
SECTION
STAGE 1A DEMOLITION
SCALE: ¼" = 1'-0"

NOTES:

1. TEMPORARY SUPPORT OF EXCAVATION LIMITS SHOWN ARE CONCEPTUAL AND CONTRACTOR SHALL DESIGN THE TEMPORARY EARTH SUPPORT SYSTEM AND SUBMIT DESIGN AND DETAILS TO THE ENGINEER FOR APPROVAL. SEE SPECIAL PROVISION ITEM 950.5.
2. TEMPORARY OVERHANG SUPPORTS SHOWN ARE CONCEPTUAL AND SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. SEE SPECIAL PROVISION ITEM 950.6.

SUGGESTED SEQUENCE OF CONSTRUCTION – STAGE 1 DEMOLITION:

1. COORDINATE WITH UTILITY COMPANIES TO RELOCATE OVERHEAD WIRE AND UTILITY POLE AT SOUTHEAST CORNER OF BRIDGE.
2. CONTRACTOR TO RELOCATE PEDESTRIANS TO THE SOUTH SIDE OF BRIDGE PER STAGE 1A DEMOLITION.
3. CONTRACTOR TO SET UP CONSTRUCTION AREA AT THE NORTHWEST CORNER OF THE BRIDGE FOR CONSTRUCTION OF THE TEMPORARY ACCESS ROADWAY. CONTRACTOR TO INSTALL TEMPORARY FENCING AND CLEAR THE TREES IN THIS AREA. SAWCUT AND REMOVE THE OUTER 12" PORTION OF THE SIDEWALK AND REDUCE THE PEDESTRIAN LANE TO 4'-0".
4. DEMOLISH AND REMOVE 4'-0" OF THE NORTHWEST BURIED DECK END. INSTALL TEMPORARY ACCESS ROADWAY AT THE NORTHWEST CORNER OF THE BRIDGE AND BOTH THE NORTH AND SOUTH LINES OF SUPPORT OF EXCAVATION. SEE SHEETS 10 & 11 OF THE BRIDGE PLANS FOR ADDITIONAL INFORMATION.
5. INSTALL TIMBER RAIL CROSSING AND WORK PLATFORM BELOW THE BRIDGE.
6. SET UP TEMPORARY TRAFFIC CONTROL MEASURES FOR STAGE 1B DEMOLITION ON THE BRIDGE PLANS. SEE SHEET 13 OF HIGHWAY PLANS FOR TTCP SET UP.
7. BLAST CLEAN AND PRIME STEEL GIRDERS.
8. INSTALL CONTRACTOR DESIGNED TEMPORARY SUPPORT OF EXCAVATION AND ALL REQUIRED TEMPORARY SHIELDING, DESIGNED BY THE CONTRACTOR, TO PREVENT DEBRIS FROM FALLING ONTO THE TRACKS. INSTALL TEMPORARY SUPPORT OF DECK OVERHANG BRACKETS.
9. DISCONNECT CENTER DIAPHRAGMS FROM GIRDER G4, SAWCUT EXISTING DECK.
10. DEMOLISH EXISTING DECK, RAILINGS, AND BURIED DECK ENDS TO THE LIMITS SHOWN. CONCRETE ENCASEMENT ON THE GIRDERS SHALL BE REMOVED PRIOR TO DEMOLITION OF THE BURIED DECK ENDS.



SECTION
STAGE 1B DEMOLITION
SCALE: ¼" = 1'-0"

LEGEND:

LIMITS DEMOLITION

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

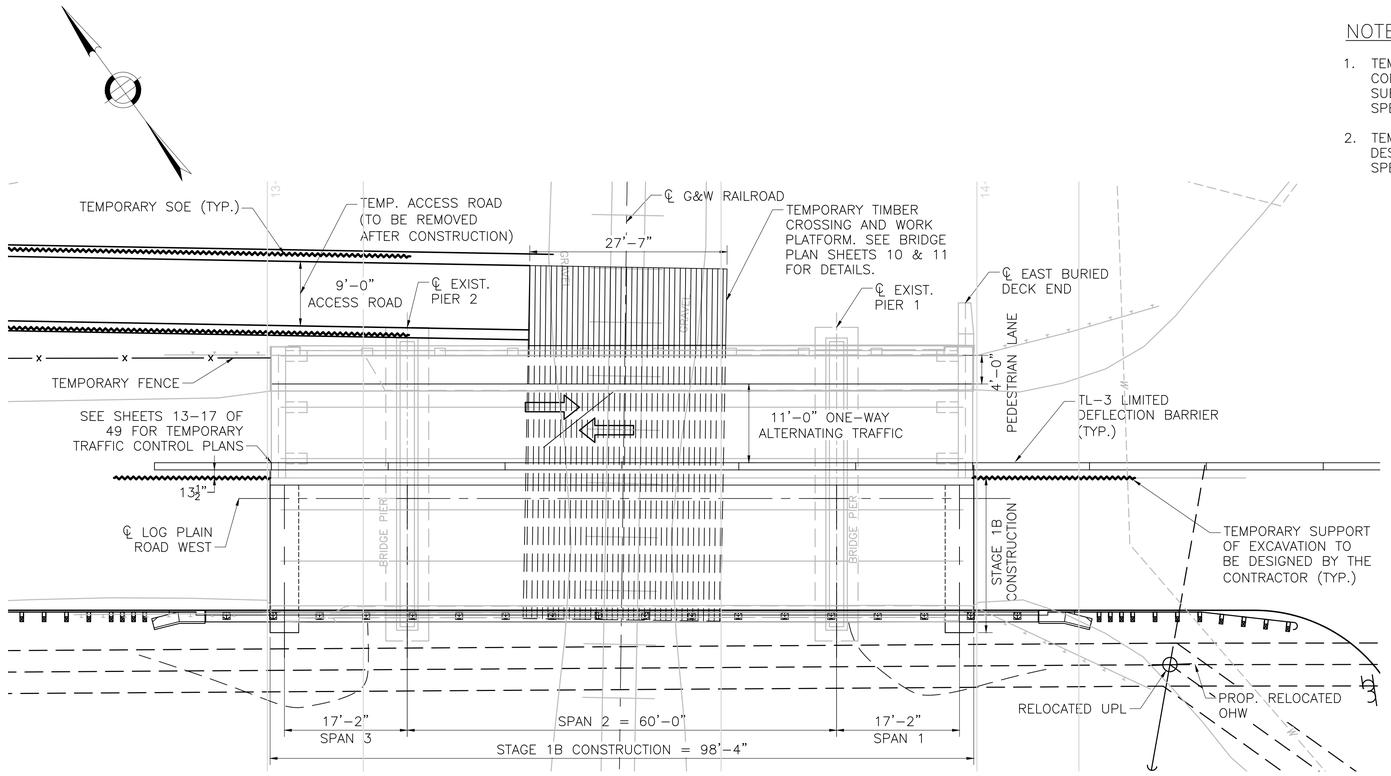
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	27	49
PROJECT FILE NO.	613295		

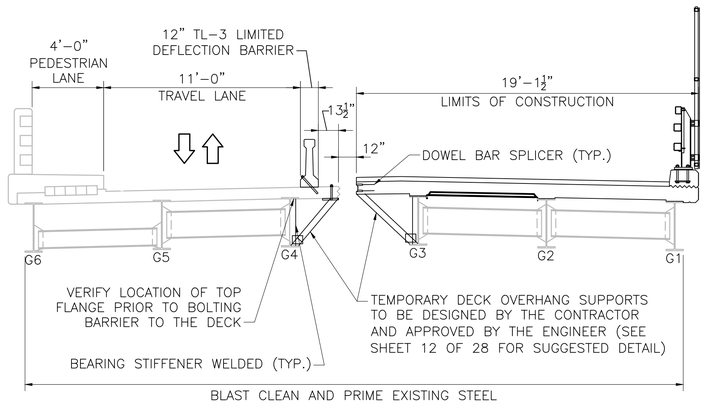
STAGE 1 CONSTRUCTION



PLAN
STAGE 1 CONSTRUCTION
SCALE: 1" = 10'

NOTES:

1. TEMPORARY SUPPORT OF EXCAVATION LIMITS SHOWN ARE CONCEPTUAL AND CONTRACTOR SHALL DESIGN THE TEMPORARY EARTH SUPPORT SYSTEM AND SUBMIT DESIGN AND DETAILS TO THE ENGINEER FOR APPROVAL. SEE SPECIAL PROVISION ITEM 950.5.
2. TEMPORARY OVERHANG SUPPORTS SHOWN ARE CONCEPTUAL AND SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. SEE SPECIAL PROVISION ITEM 950.6.



SECTION
STAGE 1 CONSTRUCTION
SCALE: ¼" = 1'–0"

SUGGESTED SEQUENCE OF CONSTRUCTION – STAGE 1 CONSTRUCTION:

1. REPAIR CRACKS, SPALLS, AND HOLLOW SECTIONS ON THE PIERS.
2. TEMPORARILY JACK GIRDERS G1 THRU G3 AND REPLACE THE BEARINGS AT PIER 1.
3. CONSTRUCT THE PROPOSED BURIED DECK ENDS, DECK, SAFETY CURB, S3–MTL4 RAILINGS, AND APPLY MEMBRANE WATERPROOFING TO THE DECK. POUR FIRST 1½" LAYER OF SUPERPAVE TO THE LIMITS SHOWN.
4. BACKFILL THE EXCAVATED AREA AND RECONSTRUCT APPROACH ROADWAY PER HIGHWAY PLANS.

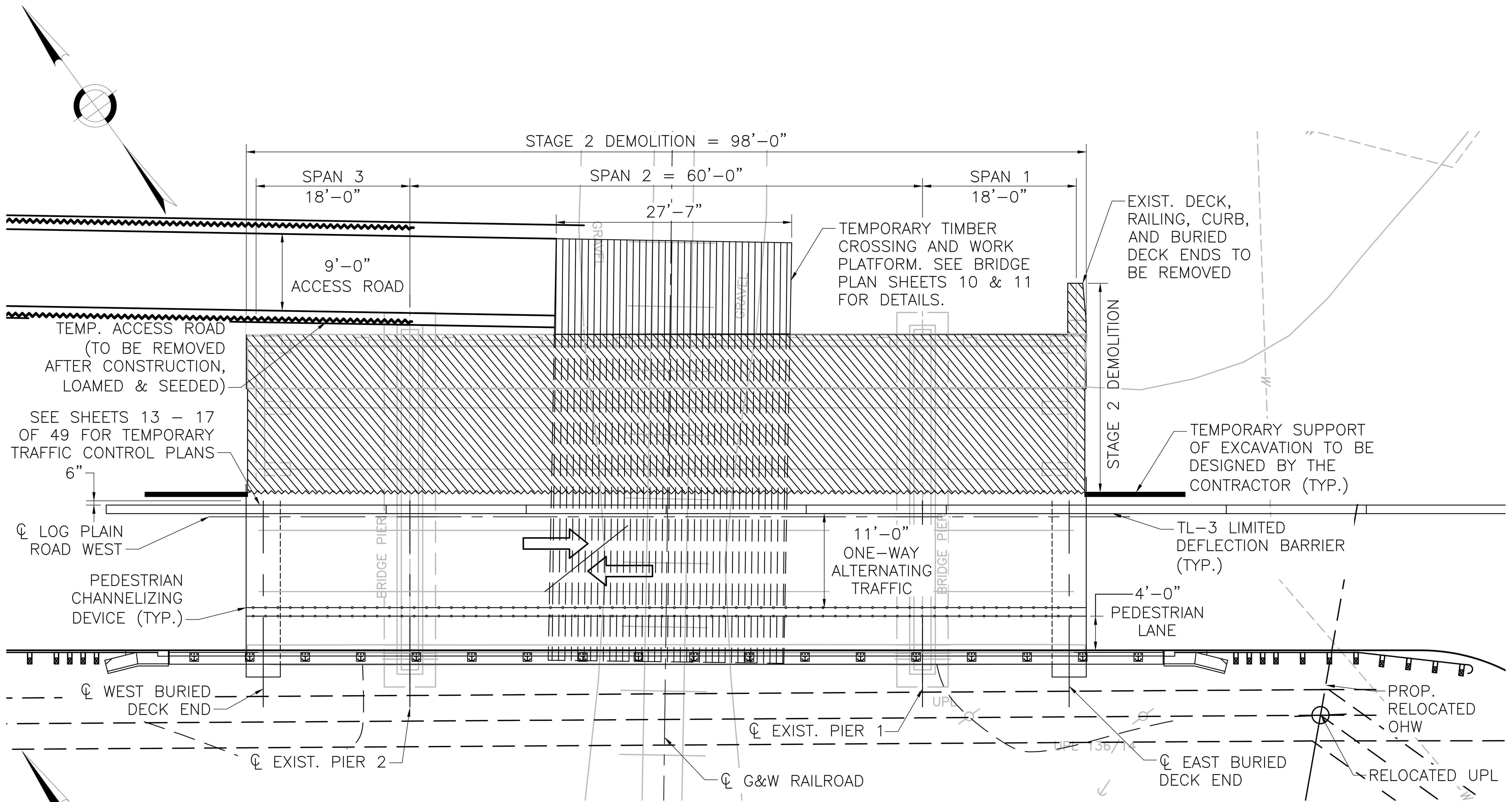
FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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

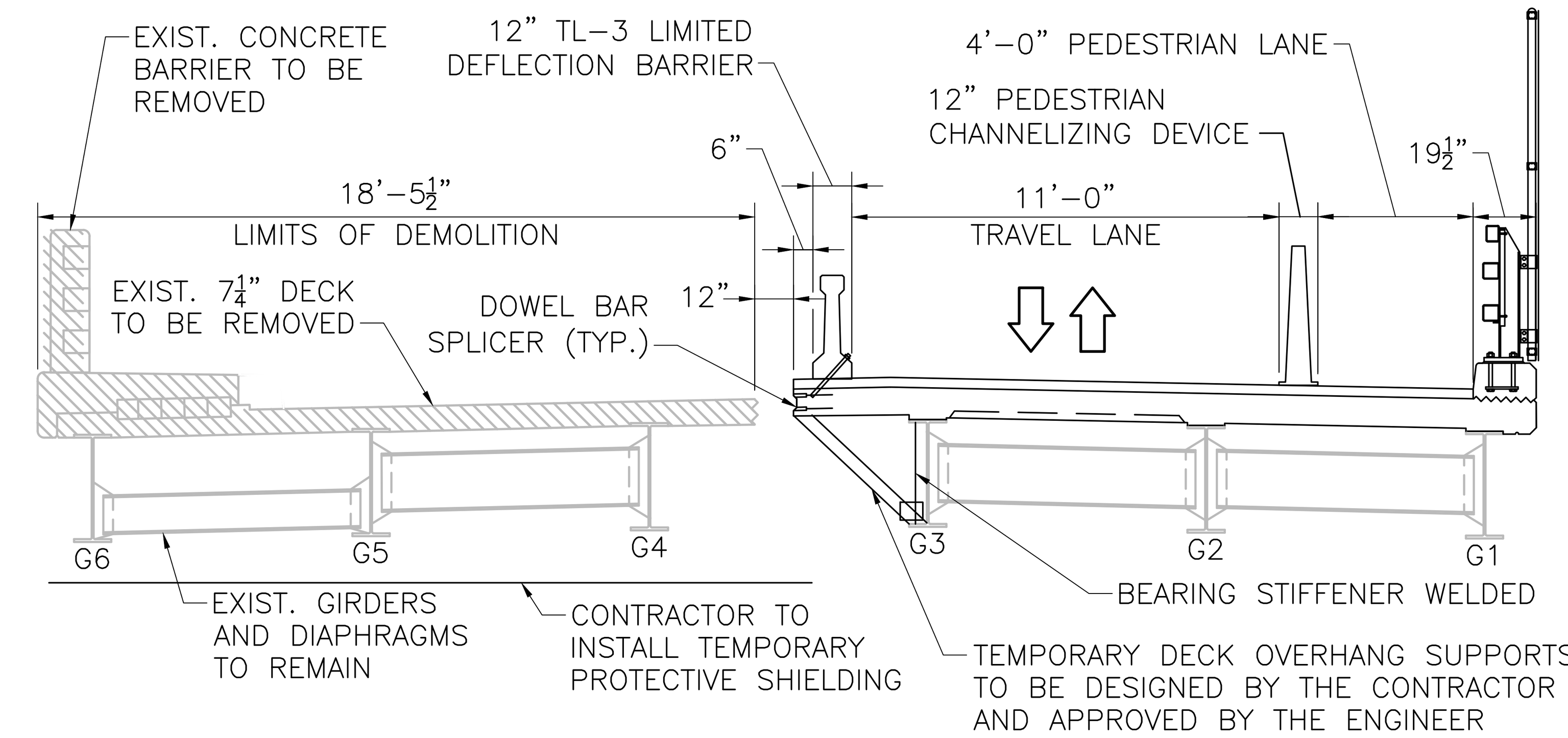
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	28	49
PROJECT FILE NO.	613295		

STAGE 2 DEMOLITION AND CONSTRUCTION



PLAN
STAGE 2 DEMOLITON
SCALE: 1" = 10'



SECTION
STAGE 2 DEMOLITON
SCALE: ¼" = 1'-0"

LEGEND:

LIMITS OF STAGE 2 DEMOLITION

NOTES:

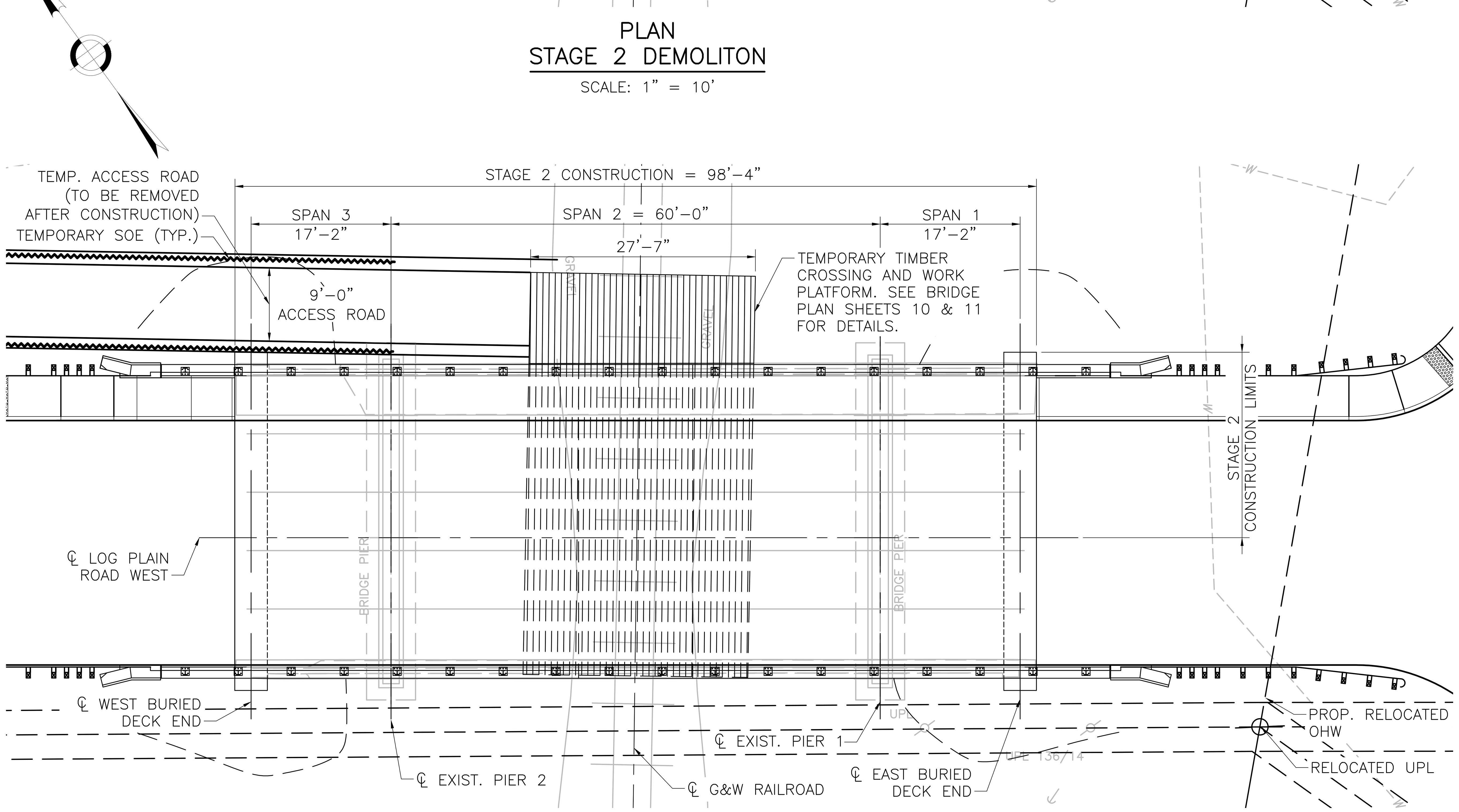
1. TEMPORARY SUPPORT OF EXCAVATION LIMITS SHOWN ARE CONCEPTUAL AND CONTRACTOR SHALL DESIGN THE TEMPORARY EARTH SUPPORT SYSTEM AND SUBMIT DESIGN AND DETAILS TO THE ENGINEER FOR APPROVAL. SEE SPECIAL PROVISION ITEM 950.5.
2. TEMPORARY OVERHANG SUPPORTS SHOWN ARE CONCEPTUAL AND SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. SEE SPECIAL PROVISION ITEM 950.6.

SUGGESTED SEQUENCE OF CONSTRUCTION – STAGE 2 DEMOLITION:

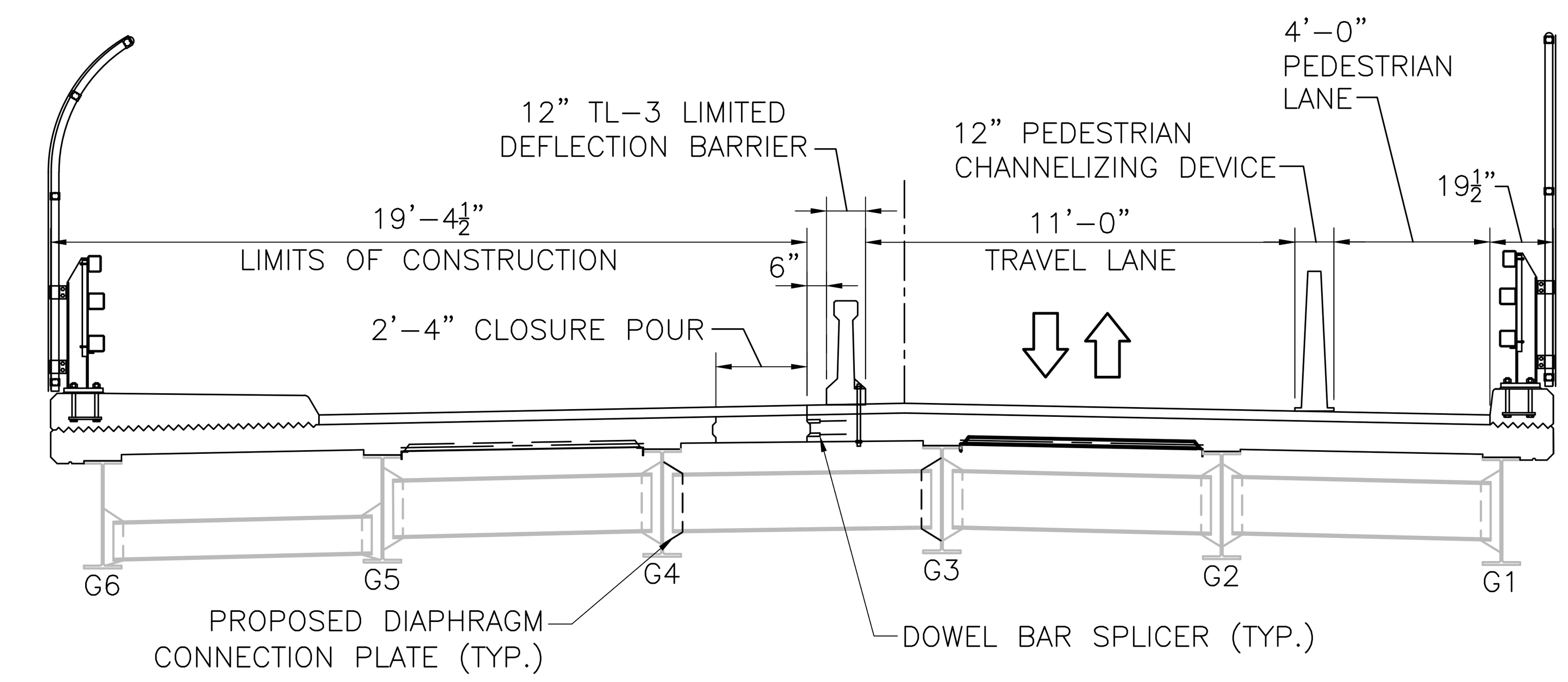
1. INSTALL TEMPORARY TRAFFIC CONTROL MEASURES (SIGNAGE, BARRIER CURB, SIGNALIZATION) PER HIGHWAY DRAWINGS.
2. INSTALL CONTRACTOR DESIGNED TEMPORARY SUPPORT OF EXCAVATION AND ALL REQUIRED TEMPORARY SHIELDING, DESIGNED BY THE CONTRACTOR, TO PREVENT DEBRIS FROM FALLING ONTO THE TRACKS.
3. DEMOLISH EXISTING DECK, RAILINGS AND BURIED DECK ENDS TO THE LIMITS SHOWN. CONCRETE ENCASEMENT ON THE GIRDERS SHALL BE REMOVED PRIOR TO DEMOLITION OF THE BURIED DECK ENDS.

SUGGESTED SEQUENCE OF CONSTRUCTION – STAGE 2 CONSTRUCTION:

1. TEMPORARILY JACK GIRDERS G4 THRU G6, AND REPLACE THE BEARINGS AT PIER 1.
2. CONSTRUCT THE PROPOSED BURIED DECK ENDS, DECK, SIDEWALK, S3-MTL4 RAILINGS, AND APPLY MEMBRANE WATERPROOFING TO THE DECK. PLACE FIRST 1½" LAYER OF SUPERPAVE TO THE LIMITS SHOWN.
3. RECONNECT CENTER DIAPHRAGMS BETWEEN GIRDERS G3 AND G4 ALONG THE LENGTH OF THE BRIDGE.
4. PLACE REINFORCEMENT AND FORM AND POUR CLOSURE POUR.
5. BACKFILL THE EXCAVATION, REMOVE TEMPORARY SUPPORT OF EXCAVATION, RECONSTRUCT ROADWAY AND PAVEMENT AT APPROACHES.
6. PLACE FINAL 1½" LAYER OF SUPERPAVE AND STRIPE ROADWAY PER HIGHWAY PLANS.
7. PAINT THE EXISTING STEEL SUPERSTRUCTURE AND FIXED BEARINGS AT PIER 2 WITH INTERMEDIATE AND FINAL COATS.
8. REMOVE THE TIMBER RAIL CROSSING AND WORK PLATFORM STRUCTURE. RESTORE THE BALLAST AND GRADE TO PROPER CONDITIONS IN ACCORDANCE WITH THE G&W RAILROAD.
9. RESTORE THE SLOPE NORTHWEST OF THE BRIDGE USED FOR THE TEMPORARY ACCESS ROAD. CUT THE SHEETPILE WALLS (IF USED BY THE CONTRACTOR) TO 2'-0" BELOW GROUND ELEVATION.



PLAN
STAGE 2 CONSTRUCTION
SCALE: 1" = 10'



SECTION
STAGE 2 CONSTRUCTION
SCALE: ¼" = 1'-0"

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

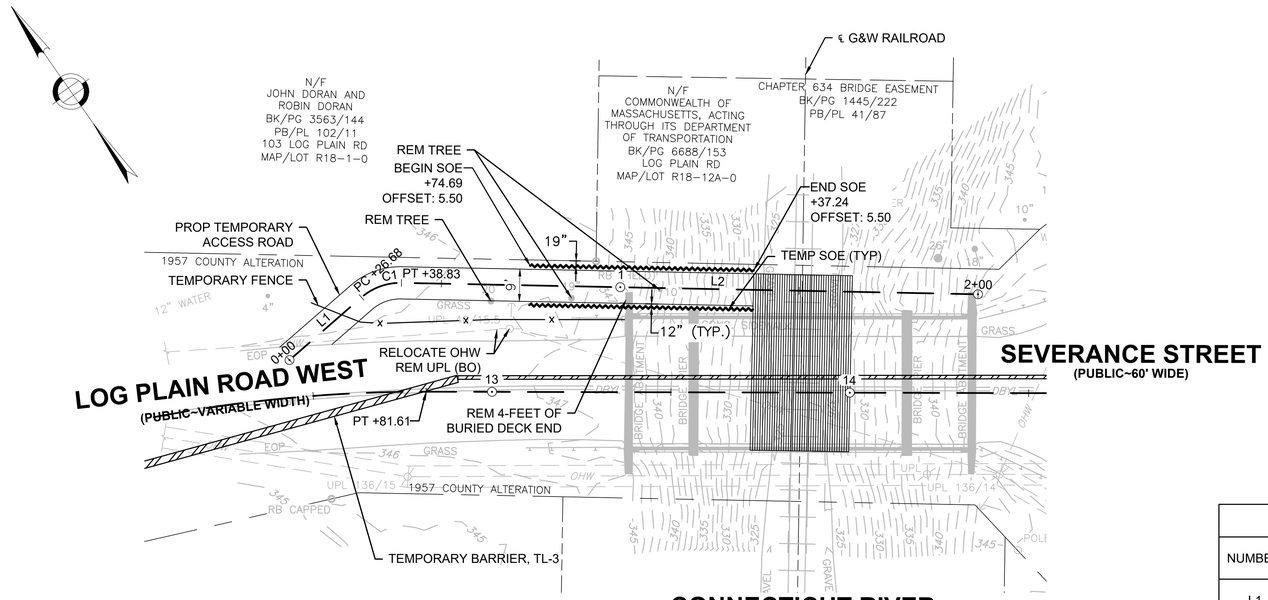
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

613295_BR09(G12022).DWG Plotted on 20-Jan-2026 12:35 PM
Final Structural Submittal (SF) 7-January-2026

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

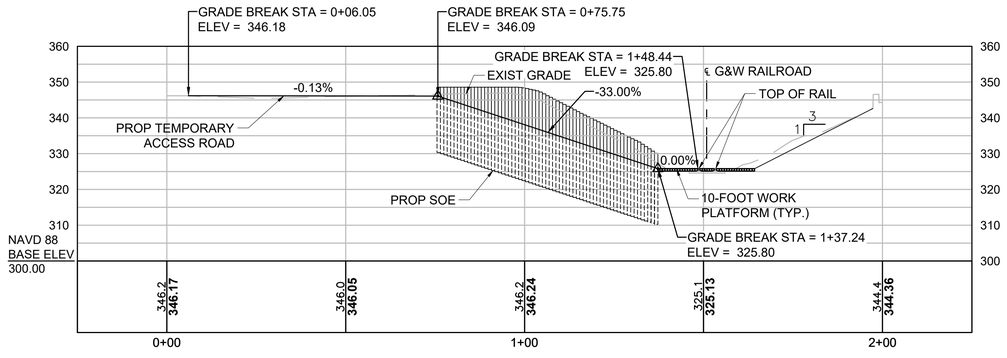
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	29	49
	PROJECT FILE NO. 613295		

TEMPORARY ACCESS ROAD PLAN AND PROFILE



PLAN

SCALE: 1" = 20'



TEMPORARY ACCESS ROAD PROFILE

SCALE: 1" = 20'

TEMPORARY SUPPORT OF EXCAVATION NOTES:

1. TEMPORARY SUPPORTS OF EXCAVATION SHOWN ARE CONCEPTUAL AND CONTRACTOR SHALL DESIGN, FURNISH, AND INSTALL A TEMPORARY SUPPORT OF EXCAVATION TO ALLOW FOR THE NECESSARY EXCAVATION REQUIRED TO DEMOLISH AND RECONSTRUCT THE STRUCTURE, CONTRACTOR SHALL SUBMIT THE DESIGN AND DETAILS TO ENGINEER FOR APPROVAL. SEE SPECIAL PROVISIONS ITEM 953.1 AND 472.1.
2. TEMPORARY SUPPORT OF EXCAVATION SHALL BE REMOVED OR CUT 2'-0" BELOW PROPOSED GRADE UPON COMPLETION OF WORK.
3. THE TEMPORARY SUPPORT OF EXCAVATION SHALL NOT CAUSE ANY DAMAGE TO THE EXISTING STRUCTURE FOUNDATIONS.
4. CONTRACTOR TO NOTE THAT THERE IS A UTILITY POLE AND OHW AT THE NORTH SIDE AND MAY INTERFERE WITH SHEETING. CONTRACTOR MAY CHOOSE SOLDIER PILE AND LAGGING SYSTEM TO AVOID ANY CONFLICT WITH THE EXISTING UNDERGROUND UTILITIES.
5. SEE TYPICAL SECTION ON SHEET 5 OF THE HIGHWAY PLANS FOR TEMPORARY ACCESS ROAD SECTION AND COMPOSITION.

TEMP ROAD NORTHERN EDGE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	0+00.00	3060751.083	366307.051		N84°57'18"E 26.68'	0+26.68	3060753.429	366333.629
C1	0+26.68	3060753.429	366333.629	R=16.50' Δ=42°10'52" L=12.15' T=6.36'		0+38.83	3060750.147	366345.041
L2	0+38.83	3060750.147	366345.041		S52°51'50"E 161.17'	2+00.00	3060652.846	366473.528

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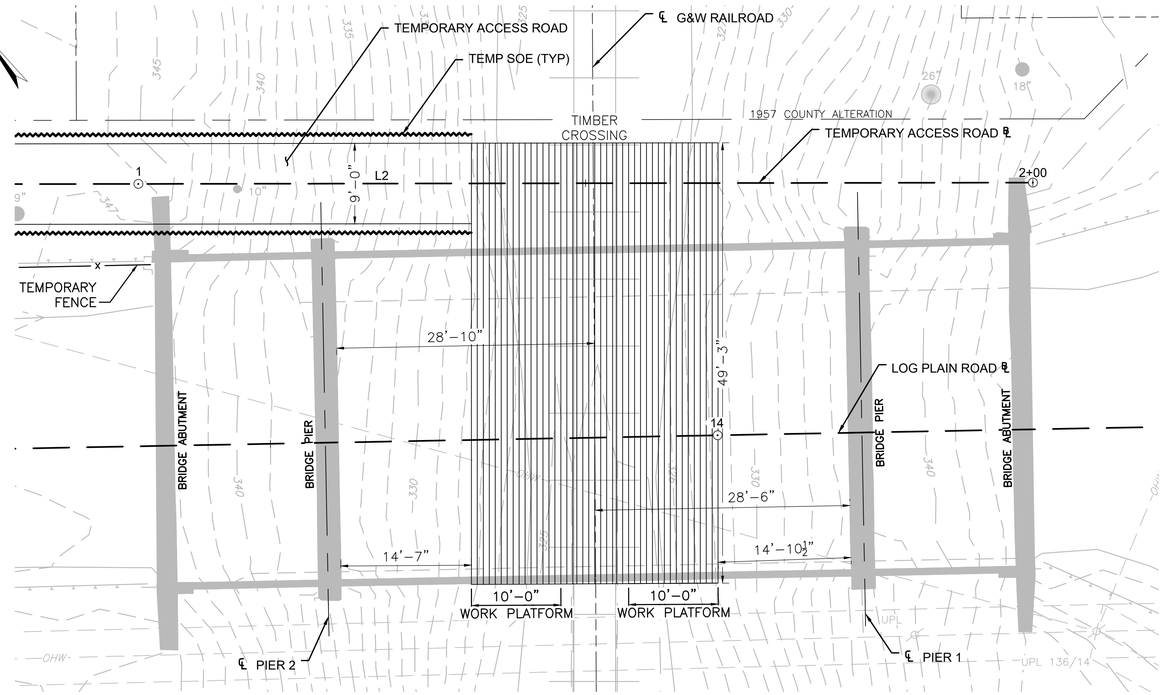
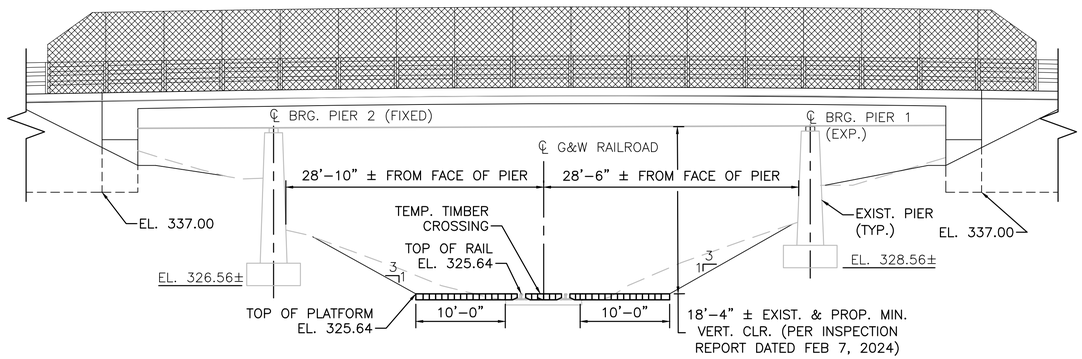


NOTE: SUPERSTRUCTURE NOT SHOWN FOR CLARITY.

TEMPORARY CROSSING & PLATFORM PLAN

SCALE: 1" = 8'



TEMPORARY CROSSING & PLATFORM ELEVATION

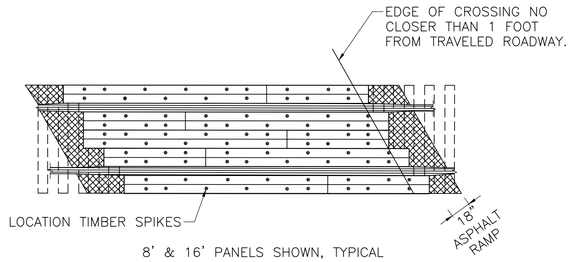
SCALE: 1" = 8'

MATERIAL & FABRICATION:

1. HARDWOOD PANELS TO BE TREATED (BNSF SPECIFICATIONS) MIXED HARDWOOD, FREE OF WANE.
2. BRANDING: EACH CROSSING PANEL SHALL BE IDENTIFIED ON THE END WITH MANUFACTURER ID, MO/YR MANUFACTURED, WEIGHT RAIL.

INSTALLATION:

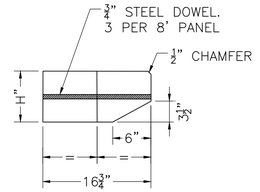
1. BALLAST THROUGH CROSSING AREA SHALL BE CLEAN CRUSHED ROCK BALLAST, 12" BELOW BOTTOM OF TIES. TOP OF BALLAST TO BE 2" BELOW TOP OF TIES. TIES THROUGH CROSSING SHALL BE NO. 5 TREATED HARDWOOD 19 3/16" ON CENTERS, IN GOOD CONDITION.
2. IF REQUIRED BY GDLM, PERFORATED DRAINAGE PIPE RECOMMENDED FOR PROPER DRAINAGE PER BNSF DWG. 2259.01.
3. ENDS OF CROSSING PANELS SHOULD BE CENTERED ON TIE.
4. THERMITE WELDS OR RAIL JOINTS SHOULD BE LOCATED OUTSIDE THE CROSSING. WHEREVER POSSIBLE, WELDED RAIL SHOULD BE RELAYED THROUGH CROSSING (MINIMUM RAIL WEIGHT, 112 LB.) BEFORE NEW TIES AND CROSSING PANELS ARE INSTALLED.
5. PANELS SHALL BE HANDLED CAREFULLY, SLATTED AND STACKED ON LEVEL GROUND TO PREVENT WORPAGE.
6. PUBLIC CROSSINGS SHALL BE OF SUCH WIDTH AS PRESCRIBED BY LAW, BUT IN NO CASE SHALL THE WIDTH BE LESS THAN THAT OF THE ADJACENT TRAVELED ROADWAY PLUS 2 FEET.
7. 5/8" X 12" TWIN LEAD TIMBER SPIKES FURNISHED SEPARATELY.
8. 3/8" DIA. HOLES SHOULD BE BORED IN FIELD, TO PATTERN SHOWN.
9. GAGE SIDE AND FIELD SIDE PANELS ARE INTERCHANGEABLE.
10. ALL CROSSING PANELS HAVE CLEARANCE FOR PANDROL PLATES AND CLIPS.
11. USE OF 10' TIES IS REQUIRED IN HEAVILY RAIL TRAFFIC CROSSINGS SEE DWG. 2253.03.
12. PANELS ARE FURNISHED FOR ANY LENGTH CROSSING IN INCREMENTS OF 8 AND 16 FEET. THE ITEM NUMBERS LISTED BELOW COVERS THE REQUIRED PANELS BY THE TRACK FOOT.



8' & 16' PANELS SHOWN, TYPICAL

NOTE: STANDARD DETAIL SHOWS SKEWED ROADWAY. SITE LOCATION CROSSING IS NOT SKEWED. CONSTRUCT ACCORDINGLY.

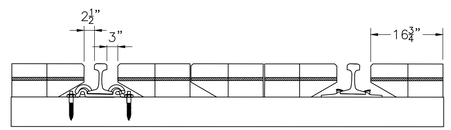
TYPICAL 24' CROSSING



H = 7" FOR 100 LB RAIL
H = 7 1/2" FOR 115 LB RAIL
H = 8" FOR 136 LB RAIL*

*TIMBER TO BE USED ON THIS PROJECT FOR 136 LB RAIL

TWO PIECE PANEL



8'-6" CROSS TIE

TIMBER CROSSING DETAIL

NOT TO SCALE

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	30	49
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TEMPORARY CROSSING AND WORK PLATFORM DETAILS

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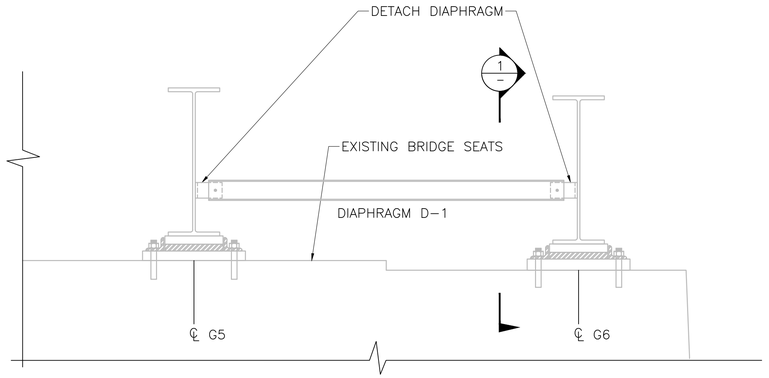
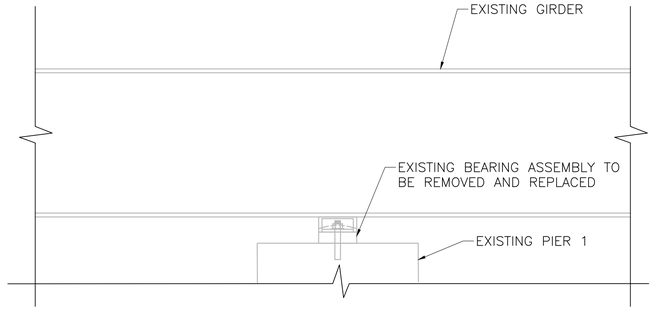
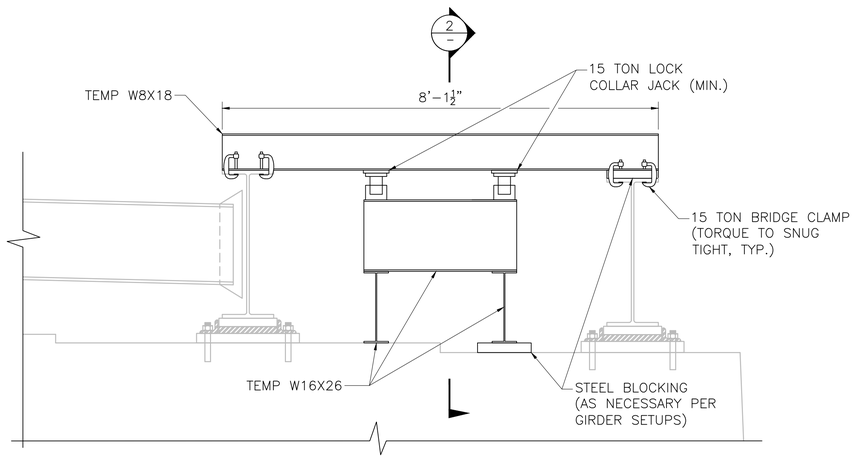


TEMPORARY JACKING ELEVATION – PHASE 1

SCALE: $\frac{3}{4}$" = 1'–0"

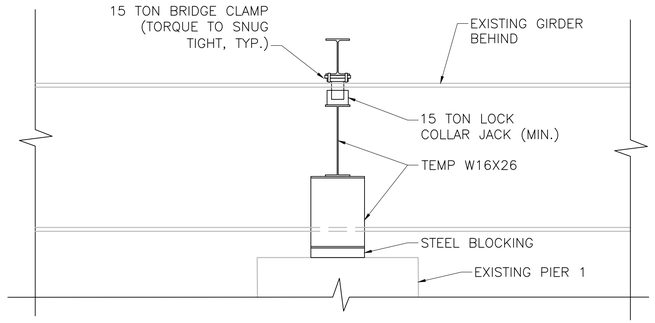


SECTION 1 – SCALE: $\frac{3}{4}$" = 1'–0"

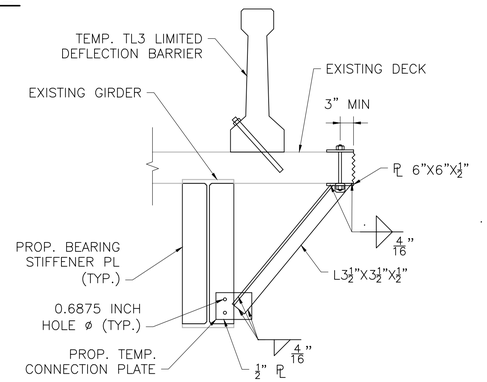


TEMPORARY JACKING ELEVATION – PHASE 2

SCALE: $\frac{3}{4}$" = 1'–0"



SECTION 2 – SCALE: $\frac{3}{4}$" = 1'–0"



TEMPORARY DECK SUPPORT (SUGGESTED DETAIL)

SCALE: $\frac{3}{4}$" = 1'–0"

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	31	49
PROJECT FILE NO.	613295		

TEMPORARY JACKING AND SHORING DETAILS

REMOVAL OF EXISTING EXPANSION BEARINGS:

1. LIVE LOAD AND DEAD LOAD FROM THE DECK, ROADWAY, SAFETY CURB,, AND SIDEWALK SHALL BE REMOVED FROM THE GIRDERS PRIOR TO ANY JACKING. THE CONTRACTOR SHALL SUBMIT A TEMPORARY JACKING AND SHORING PLAN AND PROCEDURE WITH STRUCTURAL DESIGN CALCULATIONS STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE COMMONWEALTH OF MASSACHUSETTS TO THE ENGINEER FOR APPROVAL.
2. JACK GIRDERS AND REMOVE EXISTING EXPANSION BEARING ASSEMBLY BY REMOVING SOLE PLATE TO BOTTOM FLANGE WELD. PULL THE SOLE PLATE AND BRONZE PLATE OUT TOWARDS THE FACE OF THE PIER AND REMOVE. CUP OFF AND/OR DRILL OUT EXISTING ANCHOR BOLT (OR PLUG WELD) AND REMOVE EXISTING MASONRY PLATE.
3. REMOVE EXISTING ANCHOR BOLTS BY CORING A 1¼"ø HOLE TO FULL EMBEDMENT DEPTH. JACKING POSTS MAY BE REMOVED IN ORDER TO ACCOMPLISH CORE DRILLING.

SUGGESTED SEQUENCE:

NOTE: GIRDERS 5 AND 6 ARE SHOWN, BUT REMAINING GIRDERS SHALL FOLLOW THE SAME PROCESS.

1. REMOVE DIAPHRAGM 5.
2. ATTACH TEMPORARY W8X18 (MIN.) LONGITUDINALLY TO TOP FLANGES OF GIRDERS 5 & 6. USE TEMPORARY STEEL BLOCKING AS NECESSARY TO ENSURE THE HEADER BEAM IS LEVEL.
3. INSTALL JACK SHORING AND 15 TON LOCK COLLAR JACK (MIN.).
4. DETACH GIRDER 5 AND 6 FROM THEIR BEARINGS.
5. JACK GIRDERS 5 & 6 TO FREE GIRDER ENDS FROM THE BEARINGS. GIRDERS ARE TO BE JACKED TO MAX LOAD*. JACKING SHALL BE DONE IN 500 LB INCREMENTS TO MAX LOAD*.

   THE GIRDERS 5 AND 6 SHALL BE MEASURED, FROM FIXED POINTS ON THE CONCRETE BRIDGE SEAT TO A FIXED POINT ATTACHED TO THE STEEL GIRDERS. WITH A DEVICE ACCURATE TO $\frac{1}{32}$" OR BETTER BEFORE JACKING STARTS. DURING JACKING, AT EACH 500 LB INCREMENT, MEASUREMENTS SHALL BE TAKEN AND DISPLACEMENT CALCULATED. THE TOTAL DISPLACEMENT FOR GIRDERS 5 AND 6 CAN RANGE FROM (0" TO $\pm\frac{1}{8}$") WITH $\pm\frac{1}{8}$" BEING THE MAXIMUM ALLOWABLE IN REFERENCE TO THE GIRDERS ORIGINAL LOCATION. DURING JACKING THE MAXIMUM DIFFERENTIAL DISPLACEMENT BETWEEN GIRDERS 5 AND 6 IS LIMITED TO $\frac{1}{16}$". JACKS SHALL BE MECHANICALLY LOCKED ONCE MAX LOAD* IS REACHED TO PREVENT LOSS OF SUPPORT AND UPWARD JACKING FORCE.

   *MAX LOAD IN EACH JACK = 24.5 KIPS
   *LOAD INCLUDES A 2.5 FACTOR OF SAFETY PER AASHTO TEMPORARY WORKS 2.2.5.3

6. INSTALL PL 9" X ½" TO TOP FLANGE OF GIRDERS 5 & 6.
7. INSTALL PROP. W4X13 DIAPHRAGM BETWEEN GIRDERS 5 & 6.
8. FOLLOW THE INSTALLATION PROCEDURE ON SHEET 20 OF THE PLANS.
9. RELEASE JACKS, RESET TO ORIGINAL POSITION, AND REMOVE ALL TEMP. SUPPORT COMPONENTS AND REPEAT FOR THE REMAINING BEARING ASSEMBLIES.
10. JACKING FORCES ARE LARGEST FOR GIRDERS 5 AND 6. OTHER GIRDERS SHALL USE SIMILAR LOADING AND PROCEDURES.

ESTIMATED JACKING FORCES		
LOCATION	GIRDER #	MAX. JACKING LOAD
PIER 1	G1	24.5 KIPS (12.25 TONS)
PIER 1	G2	24.5 KIPS (12.25 TONS)
PIER 1	G3	24.5 KIPS (12.25 TONS)
PIER 1	G4	24.5 KIPS (12.25 TONS)
PIER 1	G5	24.5 KIPS (12.25 TONS)
PIER 1	G6	24.5 KIPS (12.25 TONS)

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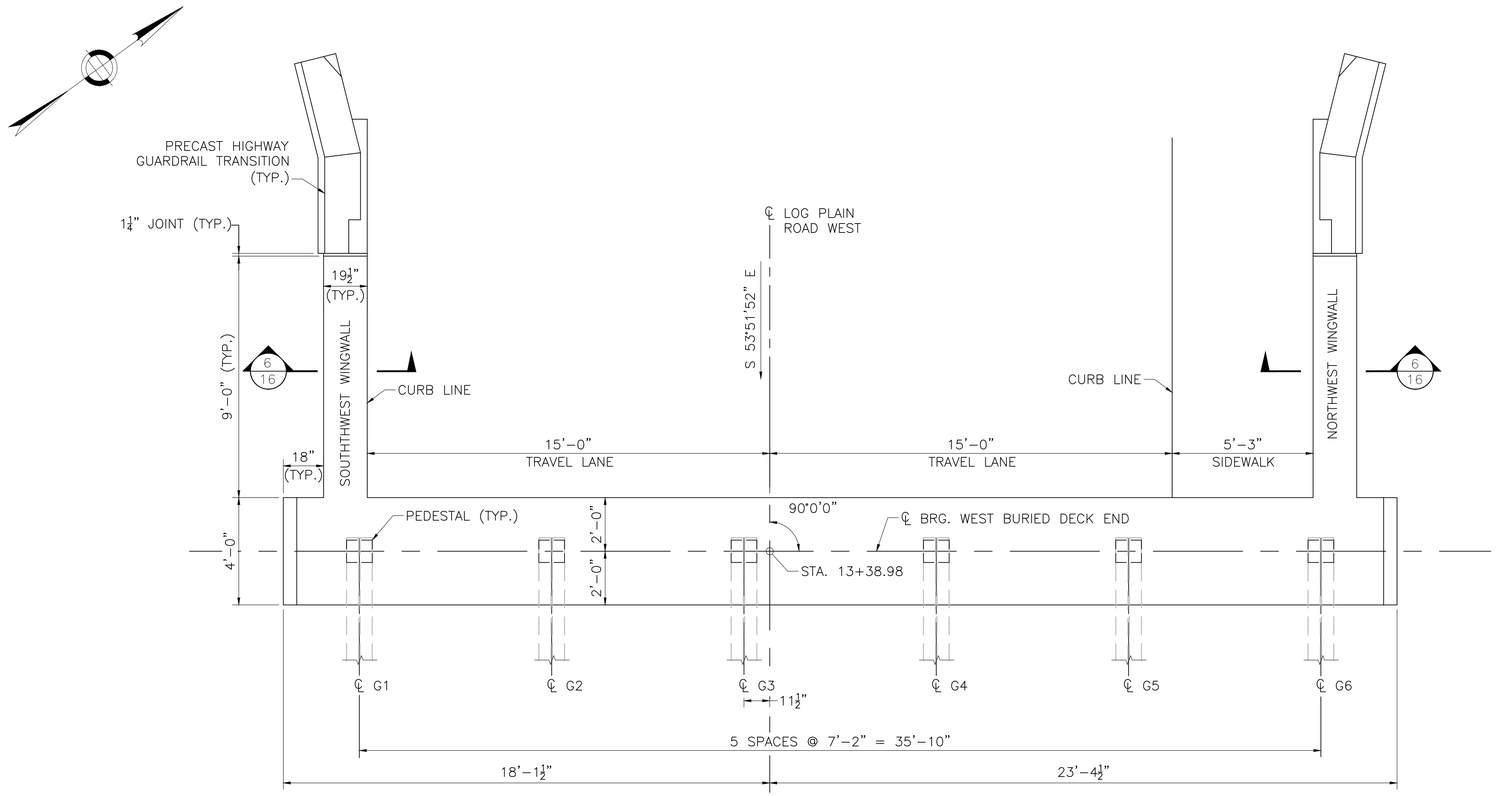
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

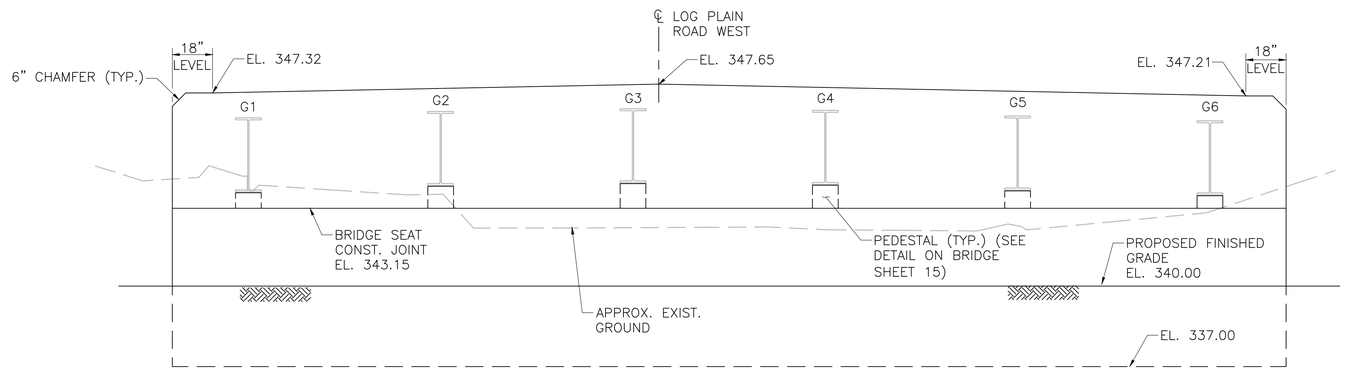
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	32	49
PROJECT FILE NO.	613295		

WEST BURIED DECK END PLAN AND ELEVATION



WEST BURIED DECK END PLAN

SCALE: ⅜" = 1'-0"



WEST BURIED DECK END ELEVATION

SCALE: ⅜" = 1'-0"

NOTES:

1. ALL ELEVATIONS ARE SHOWN AT ABUTMENT CENTERLINE.
2. DETAILS ABOVE DECK LEVEL AND INDEPENDENT WINGWALLS OMITTED FOR CLARITY.

TOP OF PEDESTAL ELEVATIONS			
BM. #1	343.76	BM. #4	343.94
BM. #2	343.91	BM. #5	343.80
BM. #3	344.05	BM. #6	343.66

NOTE:

ELEVATIONS DO NOT INCLUDE ERECTION PAD THICKNESS.

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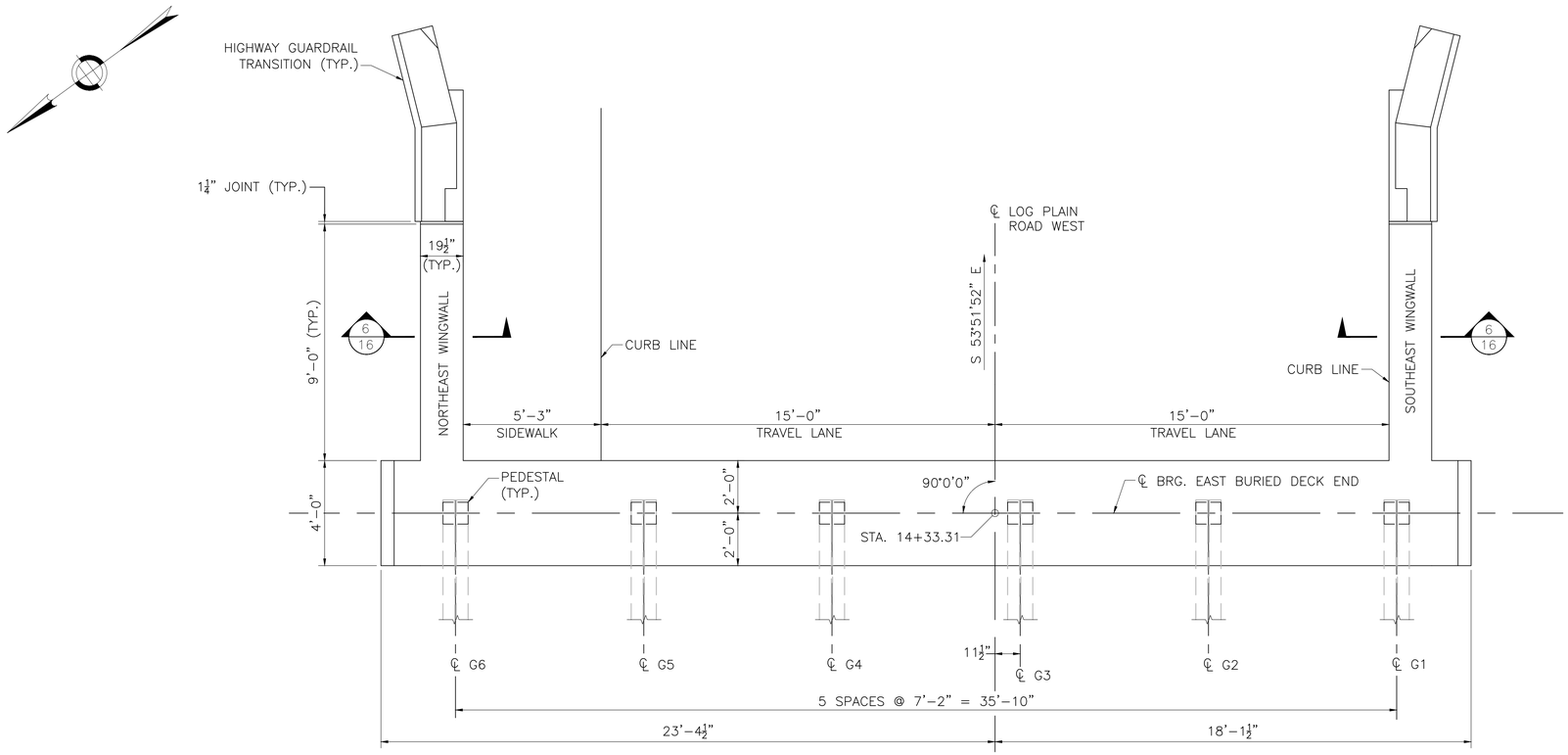
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

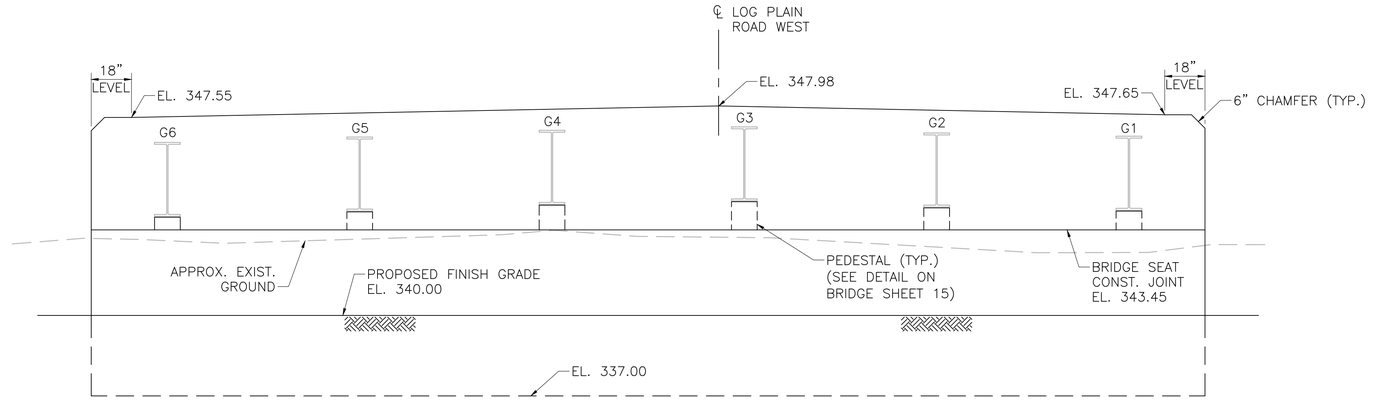
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	33	49
PROJECT FILE NO.	613295		

EAST BURIED DECK END PLAN AND ELEVATION



EAST BURIED DECK END PLAN

SCALE: ⅜" = 1'-0"



EAST BURIED DECK END ELEVATION

SCALE: ⅜" = 1'-0"

NOTES:

1. ALL ELEVATIONS ARE SHOWN AT ABUTMENT CENTERLINE.
2. DETAILS ABOVE DECK LEVEL AND INDEPENDENT WINGWALLS OMITTED FOR CLARITY.

TOP OF PEDESTAL ELEVATIONS			
BM. #1	344.10	BM. #4	344.28
BM. #2	344.24	BM. #5	344.14
BM. #3	344.38	BM. #6	343.99

NOTE:

ELEVATIONS DO NOT INCLUDE ERECTION PAD THICKNESS.

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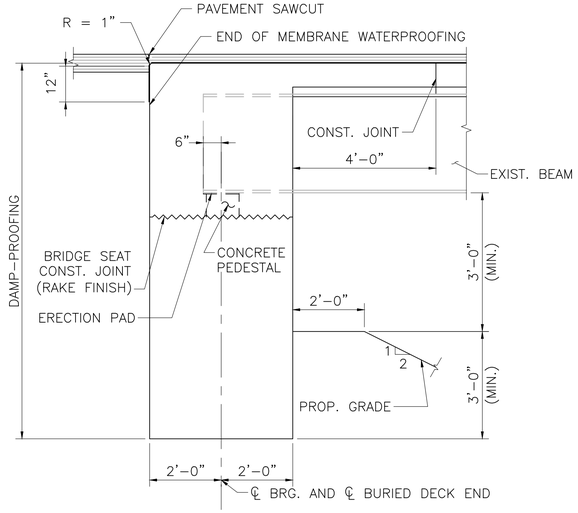
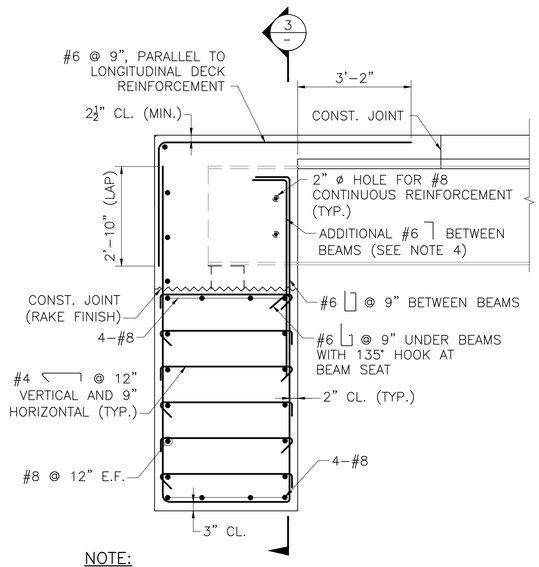


TYPICAL BURIED DECK END SECTION

SCALE: $\frac{1}{2}$" = 1'–0"



NOTE:

DECK REINFORCEMENT NOT SHOWN FOR CLARITY.

TYPICAL BURIED DECK END REINFORCEMENT SECTION

SCALE: $\frac{1}{2}$" = 1'–0"

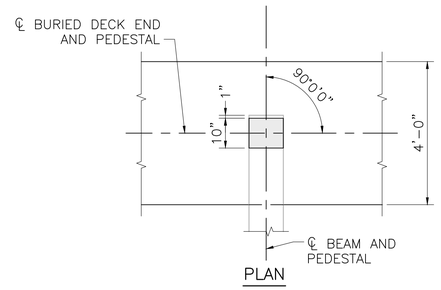
NOTES:

1. ALL REINFORCEMENT SHALL BE COATED.
2. DECK SLAB REINFORCEMENT NOT SHOWN FOR CLARITY. CONTINUE DECK SLAB REINFORCEMENT TO BACK OF BURIED DECK END.
3. ALL CONCRETE SHALL CONTAIN SUPERPLASTICIZER TO ENSURE ADEQUATE CONSOLIDATION.
4. THE NUMBER OF ADDITIONAL #6 BARS BETWEEN BEAMS SHALL BE EQUAL TO THE NUMBER OF #6 BARS WHICH ARE TERMINATED UNDERNEATH THE BEAM IN A 135° HOOK.
5. BOTH BURIED DECK ENDS SHALL BE BACKFILLED SIMULTANEOUSLY. NO MORE THAN TWO (2) FEET OF DIFFERENTIAL BACKFILL HEIGHT SHALL BE PERMITTED. BACKFILLING SHALL NOT BEGIN UNTIL THE BURIED DECK END AND DECK CONSTRUCTION IS COMPLETE.
6. MECHANICAL REINFORCING BAR SPLICERS SHALL BE INSTALLED AT STAGE CONSTRUCTION JOINTS FOR ALL TRANSVERSE REINFORCEMENT.

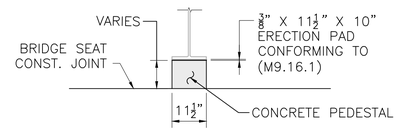
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	34	49
PROJECT FILE NO.	613295		

BURIED DECK END DETAILS



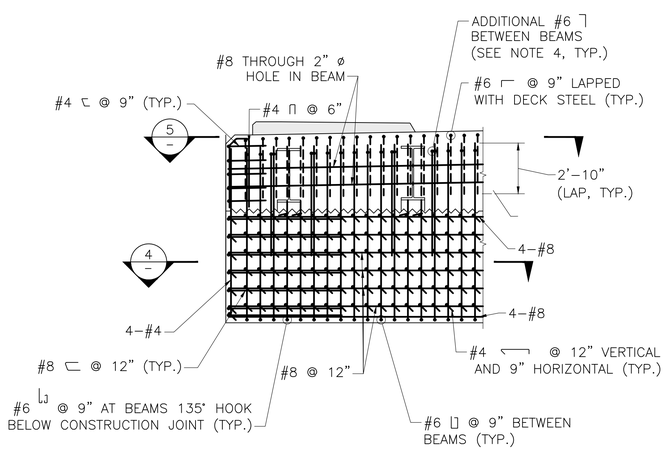
PLAN



ELEVATION

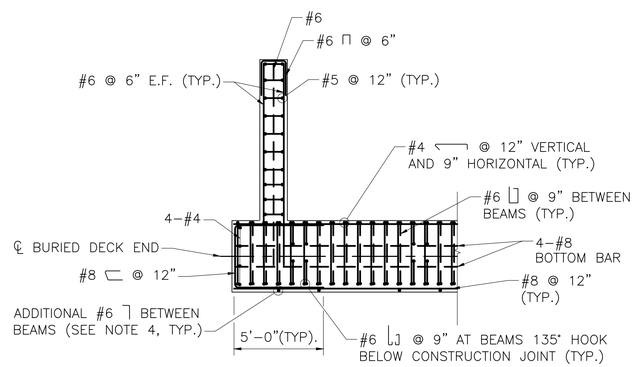
PEDESTAL DETAILS

SCALE: $\frac{1}{2}$" = 1'–0"



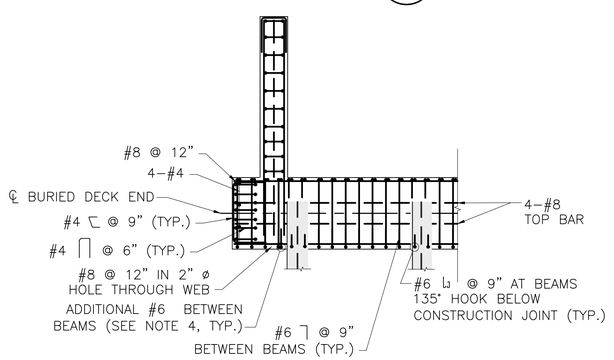
SECTION 3 / –

SCALE: $\frac{1}{4}$" = 1'–0"



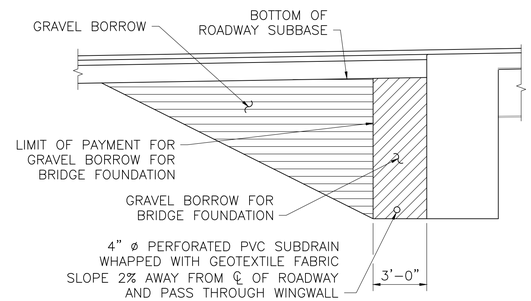
SECTION 4 / –

SCALE: $\frac{1}{4}$" = 1'–0"



SECTION 5 / –

SCALE: $\frac{1}{4}$" = 1'–0"



BURIED DECK END DETAIL

SCALE: $\frac{1}{4}$" = 1'–0"

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TOP OF WINGWALL ELEVATIONS		
	BEGIN WALL	END WALL
NORTHWEST WINGWALL	348.00	347.85
NORTHEAST WINGWALL	348.29	348.17
SOUTHWEST WINGWALL	348.11	347.96
SOUTHEAST WINGWALL	348.40	348.28

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

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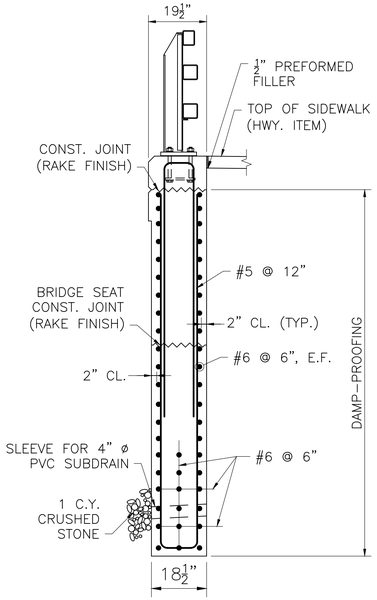
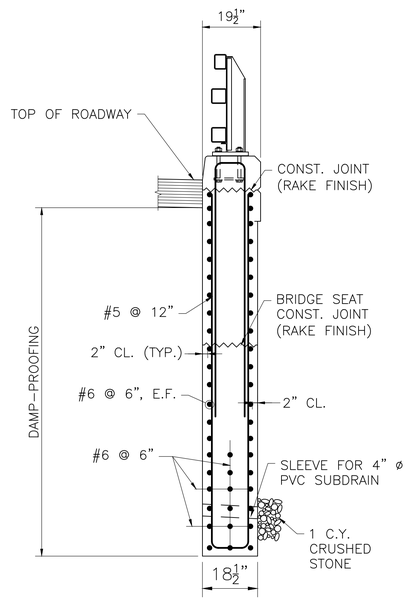
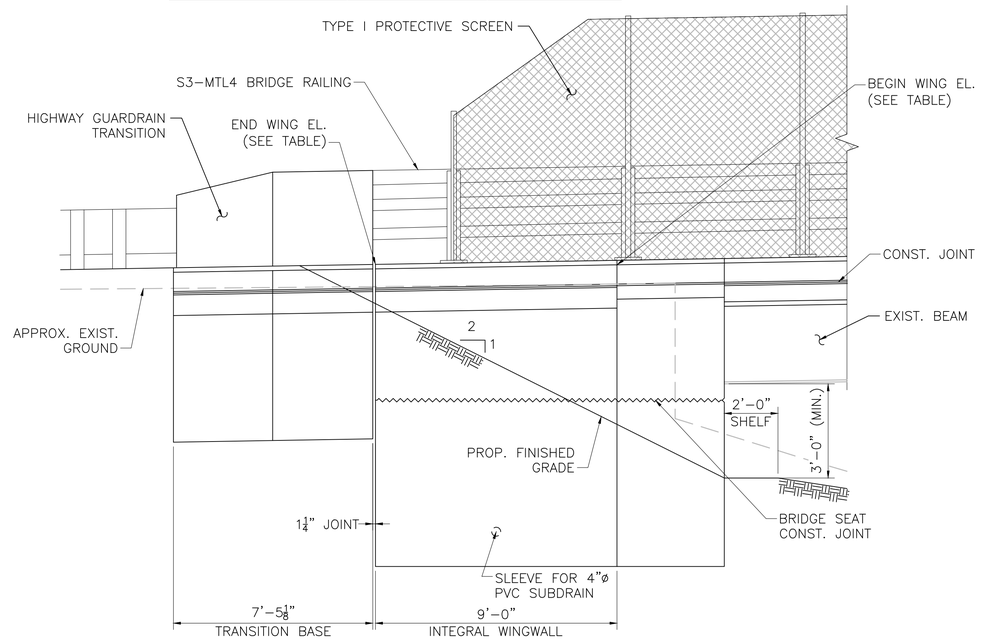
MA	STP(BR-OFF)-003S(930)X	35	49
PROJECT FILE NO. 613295			

WINGWALL DETAILS



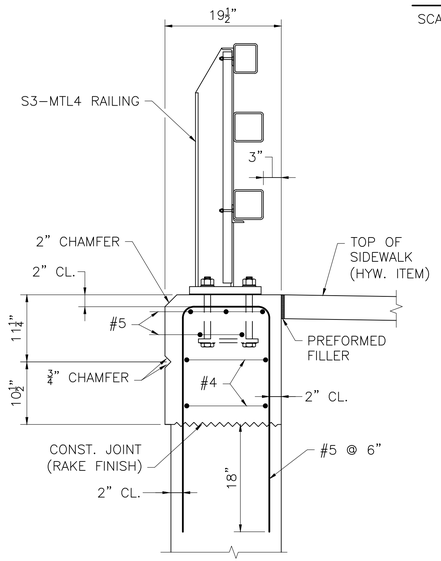




TYPICAL WINGWALL ELEVATION

SCALE: ⅜" = 1'-0"
(SOUTHWEST WINGWALL SHOWN – OTHERS SIMILAR)

WINGWALL WITH SIDEWALK

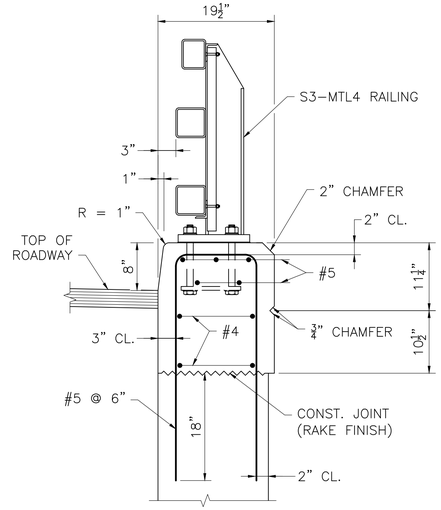


TOP OF WINGWALL DETAILS AT SIDEWALK

SCALE: 1" = 1'-0"

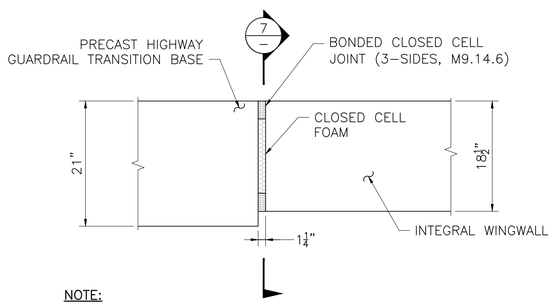
SECTION 6 (13,14)
SCALE: ½" = 1'-0"

WINGWALL WITH SAFETY CURB



TOP OF WINGWALL DETAILS AT SAFETY CURB

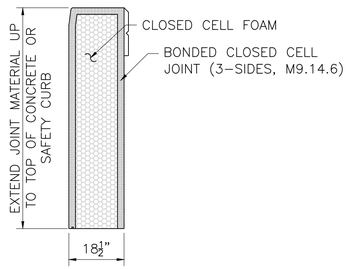
SCALE: 1" = 1'-0"



NOTE:
REINFORCEMENT NOT SHOWN FOR CLARITY.

INTEGRAL WINGWALL MOVEMENT JOINT

SCALE: 1" = 1'-0"



SECTION 7 (–)
SCALE: ½" = 1'-0"

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
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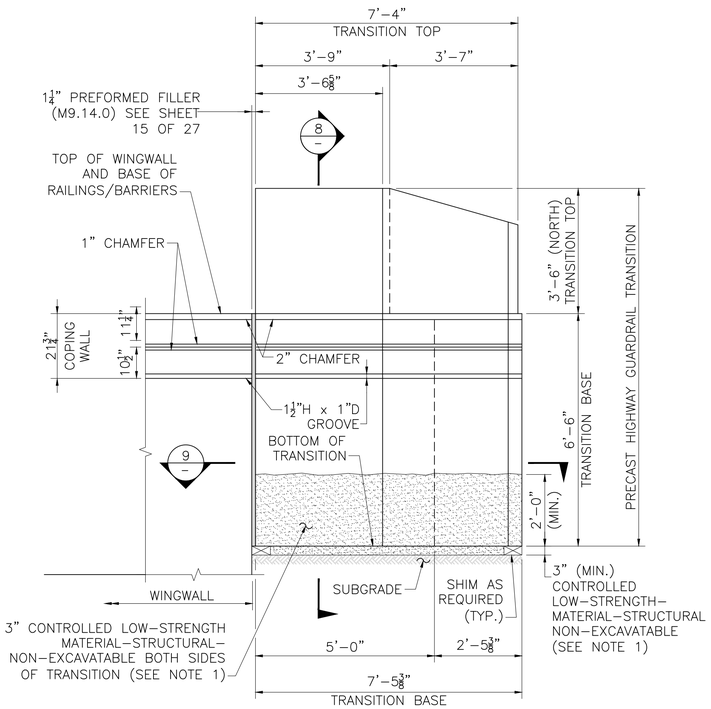
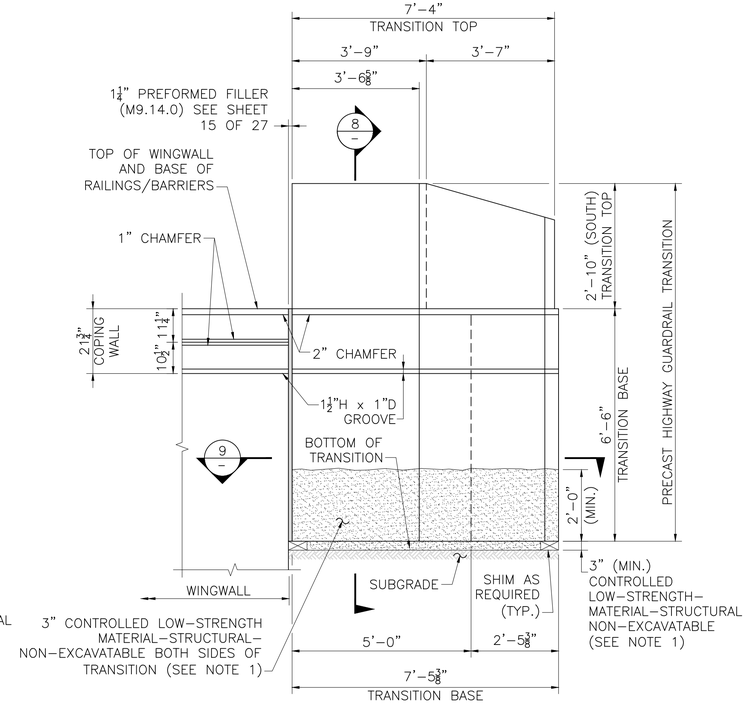


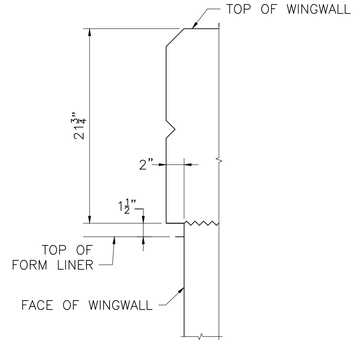
PRECAST GUARDRAIL TRANSITION
ELEVATION AT U-WINGWALL SIDEWALK

SCALE: ½" = 1'-0"



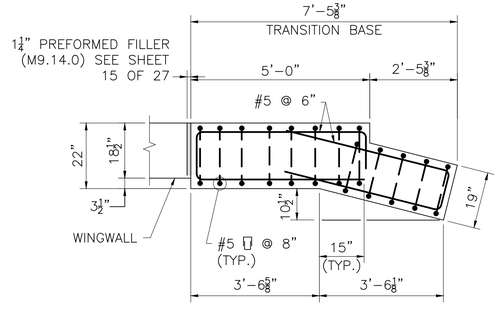
PRECAST GUARDRAIL TRANSITION
ELEVATION AT U-WINGWALL SAFETY CURB

SCALE: ½" = 1'-0"



DETAIL AT TOP OF WINGWALL

SCALE: 1½" = 1'-0"



NOTE:

WINGWALL REINFORCEMENT AND STRIATIONS NOT SHOWN FOR CLARITY.

SECTION 9 –

SCALE: ½" = 1'-0"

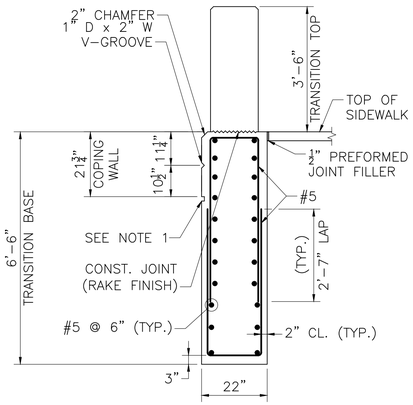
NOTES:

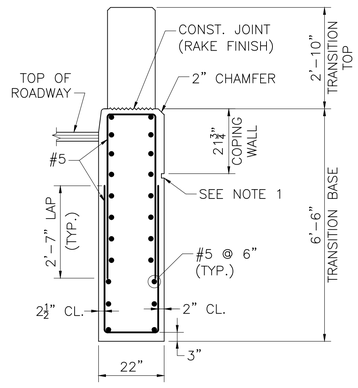
1. GRAVEL BORROW SHALL BE PLACED AND THOROUGHLY COMPACTED TO THE GRADE OF 3" (MIN.) BELOW THE INTENDED BOTTOM OF THE GUARDRAIL TRANSITION BASE AND TO A HEIGHT OF 2'-0" (MIN.) ON ALL SIDES OF THE TRANSITION BASE TO FORM A TRENCH IN WHICH TO SET THE TRANSITION.
2. CONTRACTOR SHALL SET THE PRECAST GUARDRAIL TRANSITION TO THE REQUIRED ELEVATION AND ALIGNMENT, AND BACKFILL GUARDRAIL TRANSITION WITH CONTROLLED LOW-STRENGTH MATERIAL-NON-EXCAVATABLE TO THE ELEVATION SHOWN.
3. BACKFILL THE REMAINDER OF EXCAVATION WITH GRAVEL BORROW, WHICH SHALL BE THOROUGHLY COMPACTED IN 12" LIFTS.

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	36	49
PROJECT FILE NO.	613295		

MISCELLANEOUS SUBSTRUCTURE DETAILS
(SHEET 1 OF 2)





NOTES:

1. 1½" H x 1" D GROOVE. ALIGN WITH GROOVE AT TOP OF STRIATIONS.
2. REINFORCEMENT OF THE TRANSITION TOP IS NOT SHOWN FOR CLARITY.

SIDEWALK AT NORTH SIDE

SAFETY CURB AT SOUTH SIDE

SECTION 8 –

SCALE: ½" = 1'-0"

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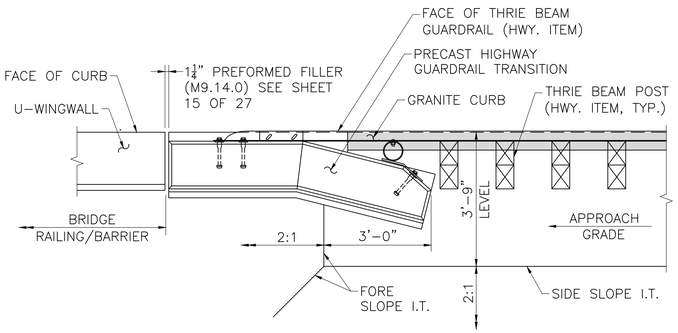
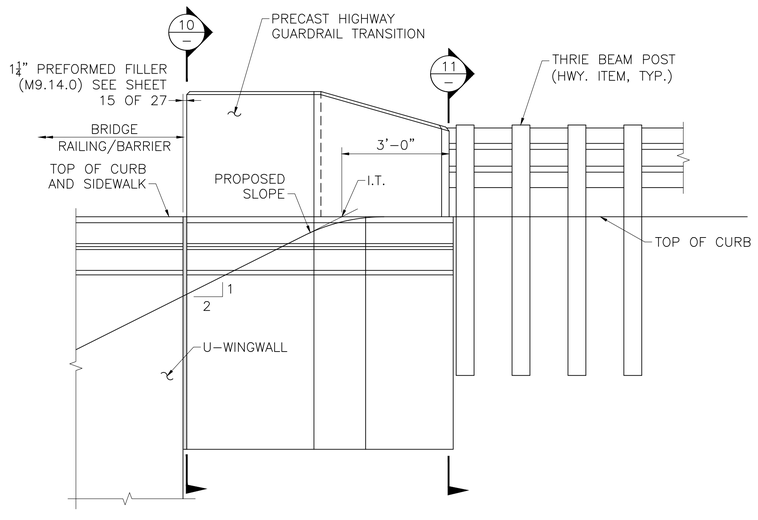
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	37	49
	PROJECT FILE NO. 613295		

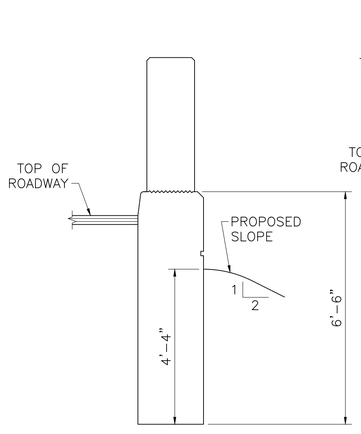
MISCELLANEOUS SUBSTRUCTURE DETAILS
(SHEET 2 OF 2)



GRADING REQUIREMENTS PLAN
SCALE: ½" = 1'–0"

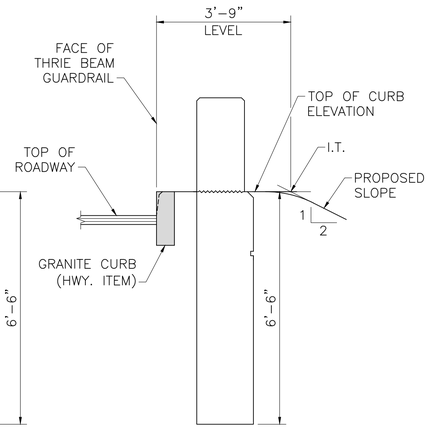


GRADING REQUIREMENTS ELEVATION
SCALE: ½" = 1'–0"

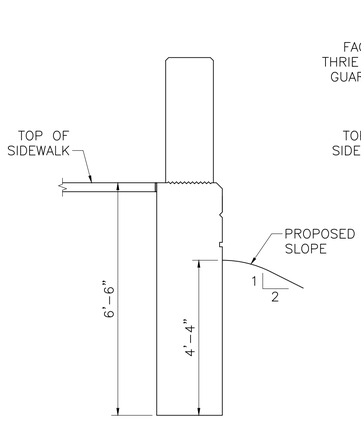


SOUTH SIDE

SECTION 10 –
SCALE: ½" = 1'–0"

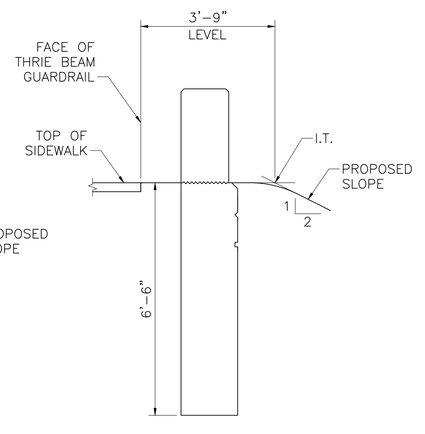


SECTION 11 –
SCALE: ½" = 1'–0"



NORTH SIDE

SECTION 10 –
SCALE: ½" = 1'–0"



SECTION 11 –
SCALE: ½" = 1'–0"

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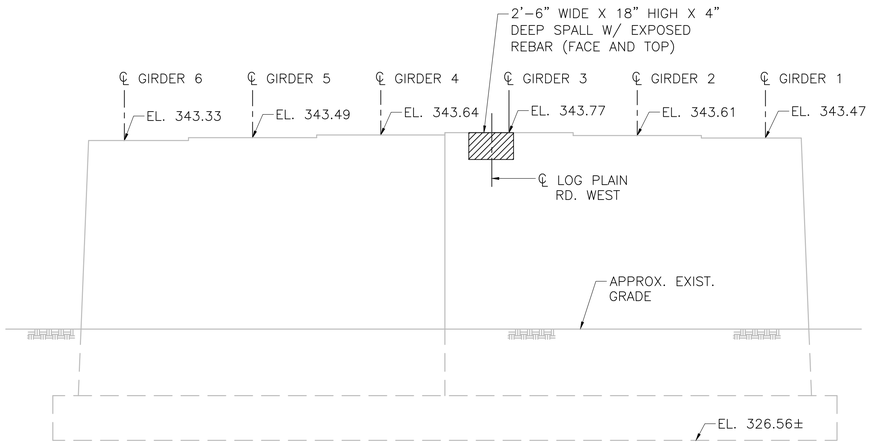
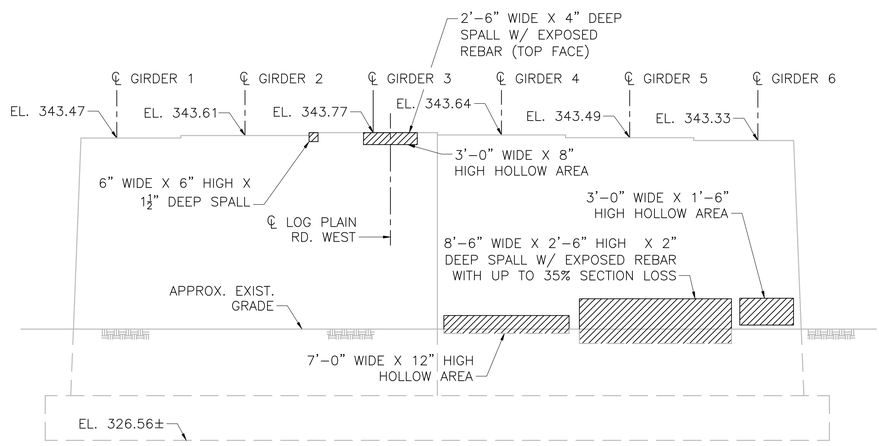
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	38	49
PROJECT FILE NO.	613295		

PIER ELEVATIONS



WEST FACE



EAST FACE

PIER 2 ELEVATION

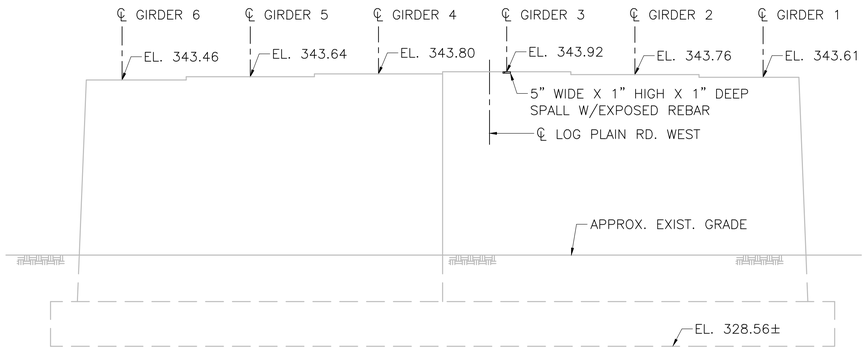
SCALE: ¼" = 1'-0"

LEGEND:

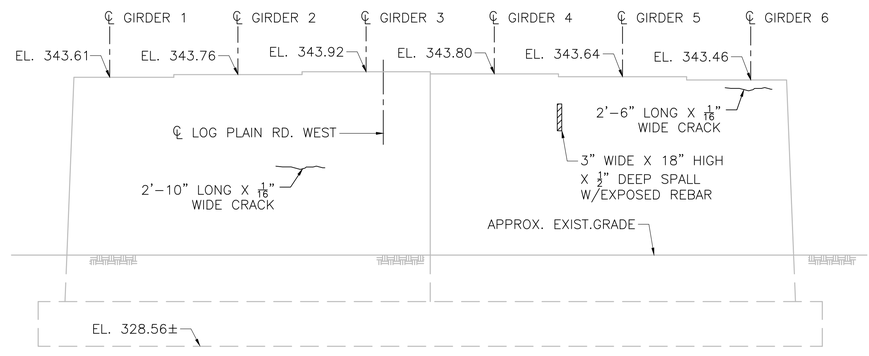
DETERIORATED CONCRETE

NOTES:

1. CONTRACTOR SHALL SOUND ALL EXISTING CONCRETE AND THEN REMOVE ALL LOOSE CONCRETE AT SPALLS AND HOLLOW AREAS AS SHOWN AND PATCH PER REPAIR ITEM SPECIFICATIONS.
2. INJECT IDENTIFIED CRACKS PER PLANS WITH EPOXY PER SPECIFICATIONS.
3. PIER 2 BEARINGS TO BE BLASTED CLEAN AND PAINTED. PIER 1 BEARINGS TO BE REMOVED AND REPLACED. SEE SUGGESTED STAGING SHEETS.
4. GRAFFITI SHALL BE REMOVED AND PAINTED OVER WITH ANTI-GRAFFITI COATING PER SHEET 2.
5. SEE SHEET 19 FOR CONCRETE REPAIR DETAILS.



WEST FACE



EAST FACE

PIER 1 ELEVATION

SCALE: ¼" = 1'-0"

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GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

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MA	STP(BR-OFF)-003S(930)X	39	49
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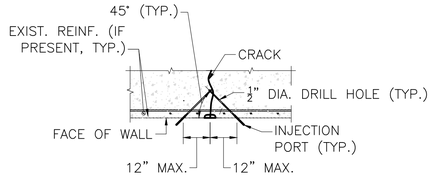
CONCRETE REPAIR DETAILS

SUGGESTED CRACK REPAIR SEQUENCE:

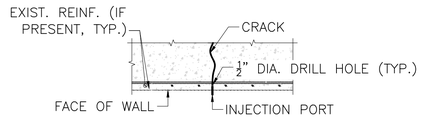
1. THE CONTRACTOR SHALL REPAIR THE CRACK IN ACCORDANCE WITH THE MANUFACTURERS REQUIREMENTS AND PROCEDURES.
2. LOCATE CRACKS TO BE REPAIRED AND ROUT CRACKS.
3. PLACE EPOXY CAP SEAL IN ROUTED AREA OF CRACK.
4. LOCATE, DRILL, AND PLACE INJECTION PORTS.
5. FLUSH CRACKS WITH WATER (SEE CRACK INJECTION REPAIR NOTE 8).
6. ALLOW CRACKS TO DRY.
7. INJECT EPOXY FOR CRACK REPAIR.
8. ALLOW INJECTION EPOXY TO SET.
9. REMOVE INJECTION PORTS.
10. STRIKE OFF CAP SEAL AND GRIND SMOOTH.

CRACK INJECTION REPAIR PROCEDURE:

1. PRIOR TO SEALING THE CRACKS BY PRESSURE INJECTION, WATER BLASTING OF THE CONCRETE SHALL BE DONE TO THOROUGHLY CLEAN THE CONCRETE SURFACE. ANY REMAINING MINERAL DEPOSITS NOT REMOVED BY WATER BLASTING SHALL BE REMOVED BY GRINDING.
2. BEFORE DRILLING THE INJECTION HOLES, LOCATE REINFORCING BARS (IF PRESENT) AND PLAN THE PATTERN TO MINIMIZE DAMAGING THE CONCRETE OR REINFORCING BARS DURING DRILLING.
3. THE DIAMETER OF THE INJECTION HOLES SHALL BE $\frac{1}{2}$" OR $\frac{3}{4}$" DEPENDING ON THE PACKER USED. HOLES SHALL BE STAGGERED FROM ONE SIDE OF THE CRACK TO THE OTHER. THE DISTANCE OF THE DRILLED HOLES TO EACH OTHER SHALL BE BETWEEN 6 INCHES AND 20 INCHES. DRILL BITS WITH HOLES AND A VACUUM SYSTEM SHALL BE USED TO PREVENT DEBRIS FROM ENTERING THE CRACK DURING DRILLING.
4. THE ANGLE OF DRILLING SHALL BE 45 DEGREES TO THE SURFACE AND TOWARDS THE CRACK. THE DEPTH OF THE DRILL HOLE INTERSECTING THE CRACK SHALL BE APPROXIMATELY AT MID–DEPTH OF THE CONCRETE COMPONENT, UNLESS OTHERWISE INDICATED. IF REINFORCING BARS ARE PRESENT AND PREVENT DIAGONAL DRILLING, DO NOT ATTEMPT DIAGONAL DRILLING. SET THE PACKERS STRAIGHT INTO THE FACE OF THE CRACK.
5. METAL–RUBBER TYPE MECHANICAL PACKERS SHALL BE USED AND BE CAPABLE OF PRESSURES UP TO 5,000 PSI.
6. PLACE THE PACKERS IN THE PREVIOUSLY DRILLED HOLE SO THAT THE TOP OF THE RUBBER SLEEVE IS BELOW THE CONCRETE SURFACE. IF THE PACKER CAN NOT BE PUSHED INTO THE HOLE, TAP IT IN. TIGHTEN THE PACKER WITH A WRENCH AS TIGHT AS NECESSARY.
7. ONCE THE PACKERS ARE IN PLACE, THE CRACK AND PORTS SHALL BE SEALED WITH AN EPOXY SEALING GEL.
8. PRIOR TO INJECTION OF SEALANT, THE CRACKS SHALL BE FLUSHED WITH WATER. START AT THE LOWEST PACKER ON A VERTICAL CRACK, OR AT THE NARROWEST PART OF A CRACK OF A HORIZONTAL OR INCLINED SURFACE AND PROCEED FORM PACKER TO PACKER IN SEQUENCE. AFTER COMPLETION OF FLUSHING, ALLOW CRACKS TO DRY BEFORE INJECTION OF SEALANT.
9. WHEN ALL OF THE PREPARATION WORK IS COMPLETED, MAKE SURE THE INJECTION PUMP IS IN GOOD WORKING ORDER. ALL EQUIPMENT THAT COMES IN CONTACT WITH THE CHEMICALS MUST BE ABSOLUTELY DRY.
10. FOLLOW THE MANUFACTURERS RECOMMENDATION FOR MIXING AND APPLICATION PROCEDURES FOR THE SPECIFIC INJECTION MATERIAL USED.
11. THE PACKER SHALL BE REMOVED WITHIN 24 HOURS AFTER INJECTION AND THE HOLES SHALL BE PATCHED. THE SURFACE SEAL SHALL ALSO BE REMOVED BY GRINDING AND THE ENTIRE WORKED SURFACE SHALL BE FINISHED TO MATCH THE EXISTING SURFACE.



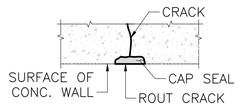
ORIENTATION OF INJECTION PORT



ALTERNATIVE ORIENTATION OF INJECTION PORT

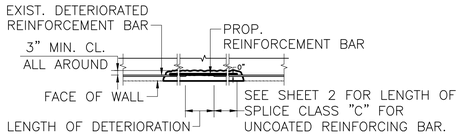
CRACK INJECTION REPAIR DETAIL

NOT TO SCALE



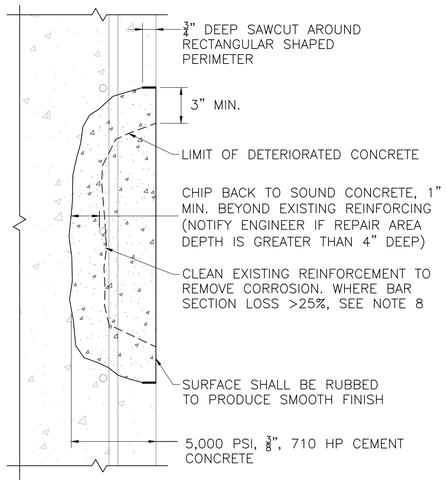
CAP SEAL DETAIL

NOT TO SCALE



DETERIORATED REINFORCING BAR REPAIR DETAIL

(SEE CONCRETE SPALL REPAIR PROCEDURE NOTE 8)
NOT TO SCALE



CONCRETE SPALL REPAIR DETAILS

SCALE: 3" = 1'–0"

CONCRETE SPALL REPAIR PROCEDURE:

1. REPAIR DEPTH SHALL NOT BE LESS THAN 1" BELOW EXISTING TRANSVERSE REINFORCEMENT.
2. SAWCUT $\frac{3}{4}$" DEEP AROUND DELAMINATED AREA.
3. REPAIR AREA SHALL BE RECTANGULAR WITH ALL EDGES MIN. 3" BEYOND LIMITS OF SPALL.
4. REMOVE LOOSE OR HOLLOW SOUNDING CONCRETE.
5. REMOVE ALL DIRT AND DUST BY AIR BLASTING AND PREPARE SURFACE.
6. WHERE REINFORCING BAR IS ENCOUNTERED, THE CONCRETE ALL AROUND THE BATS (BOTH OUTER SURFACE LAYERS OF STEEL) SHALL BE CHIPPED OUT TO A DEPTH WHERE THE BARS CAN BE COVERED WITH ATLEAST 1" OF REQUIRED REPAIR MATERIALS.
7. CLEAN REINFORCING STEEL AND CONCRETE BY SANDBLASTING, FOR INSPECTION BY OWNER.
8. REINFORCING BARS THAT HAVE BEEN REDUCED IN AREA MORE THAN 25% DUE TO CORROSION SHALL BE SPLICED WITH A NEW EQUAL SIZE REINFORCING BAR AT THE PROPER LENGTH (SEE DETERIORATED REINFORCING BAR REPAIR DETAIL THIS SHEET).
9. SANDBLAST REINFORCING BARS TO NEAR WHITE METAL BEFORE PUTTING NEW EPOXY COATED BARS IN PLACE.
10. COAT EXISTING AND NEW REINFORCING BARS AND CONCRETE WITH AN EPOXY BONDING COMPOUND.
11. INSTALL 5000 PSI, ⅜", 710 HP CEMENT CONCRETE.

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GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	40	49
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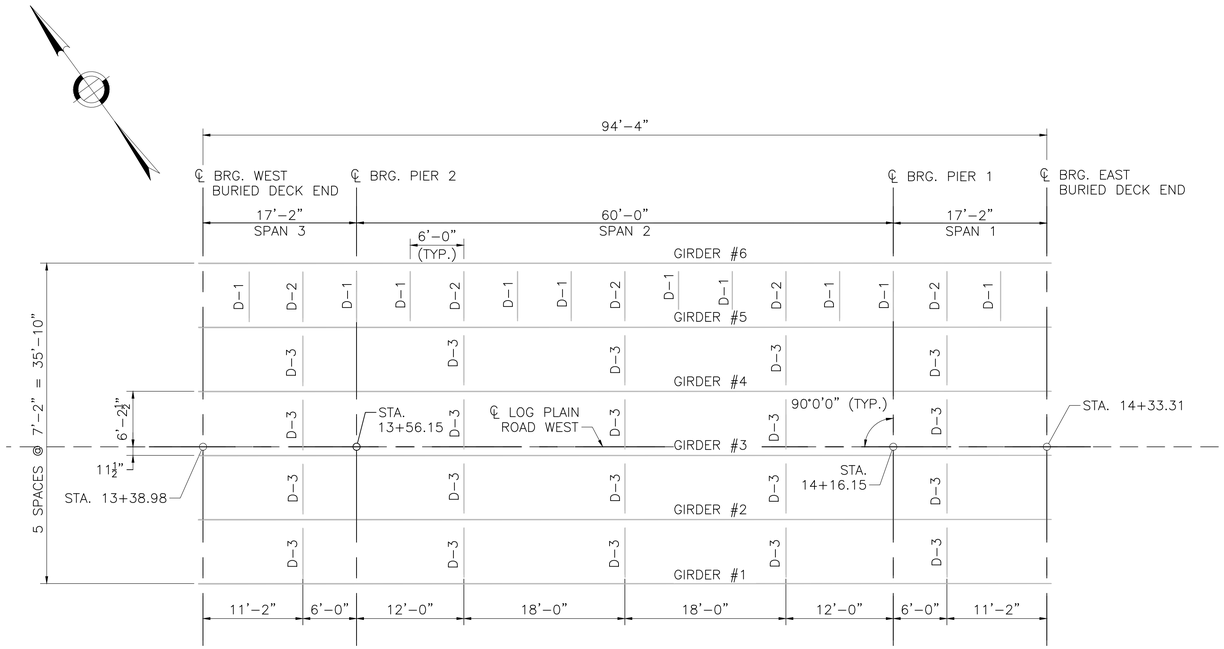
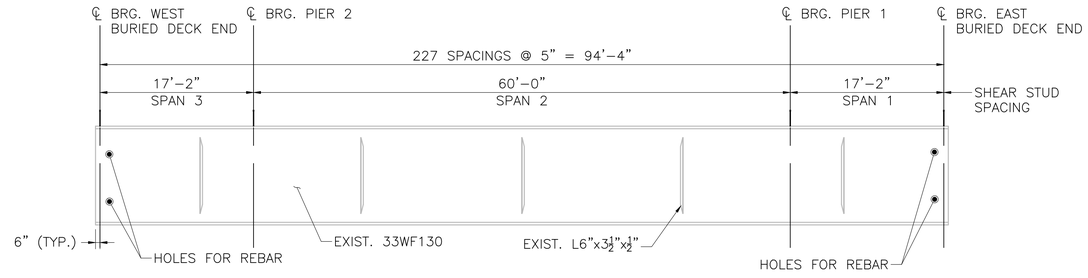
FRAMING PLAN



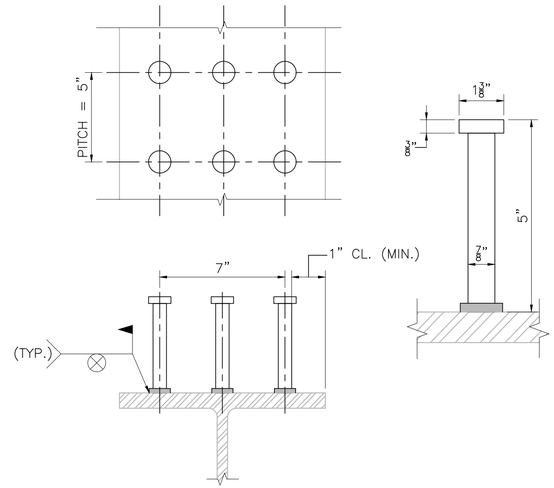
FRAMING PLAN

SCALE: $\frac{1}{8}$" = 1'–0"



GIRDER ELEVATION

SCALE: $\frac{1}{8}$" = 1'–0" (HORIZONTAL)
$\frac{1}{2}$" = 1'–0" (VERTICAL)



NOTES:

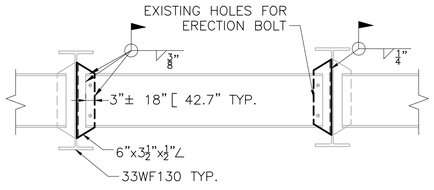
1. MINIMUM CONCRETE COVER ABOVE STUD SHEAR CONNECTOR SHALL NOT BE LOWER THAN 2".

STUD SHEAR CONNECTOR DETAILS

SCALE: 3" = 1'–0"

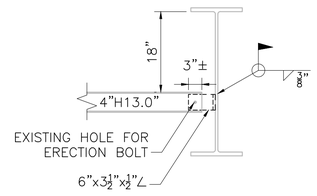
NOTES:

1. D–1 = 4H13.0
   D–2 = 12C30.0
   D–3 = 18C42.Y
   GIRDER # = 33WF130
2. ALL CROSS FRAMES, TRANSVERSE CONNECTION PLATES, INTERMEDIATE STIFFENERS AND BEARING STIFFENERS SOLE PLATES ARE CONSIDERED SECONDARY MEMBERS.



BAY 3 DIAPHRAGM CONNECTION DETAIL

SCALE: ½" = 1'–0"



D1 BETWEEN G5 AND G6 AT PIER

SCALE: ¾" = 1'–0"

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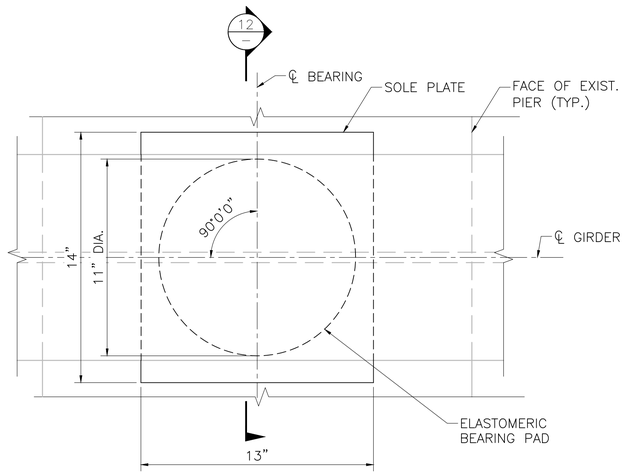
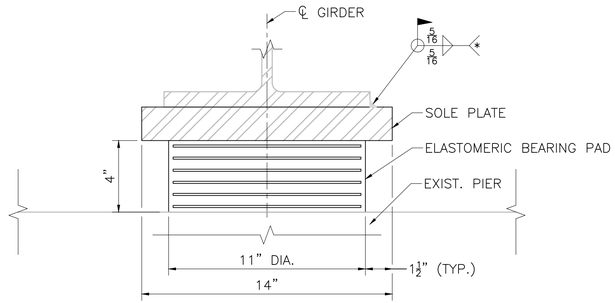


PROPOSED BEARING PLAN

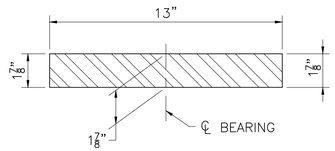
SCALE: 3" = 1'–0"



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

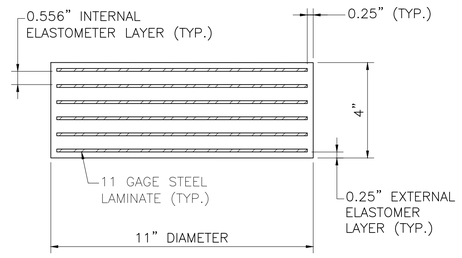
SECTION 12 –

SCALE: 3" = 1'–0"



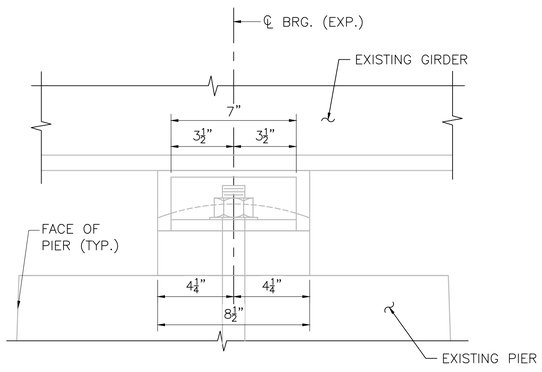
SOLE PLATE DETAIL

SCALE: 3" = 1'–0"



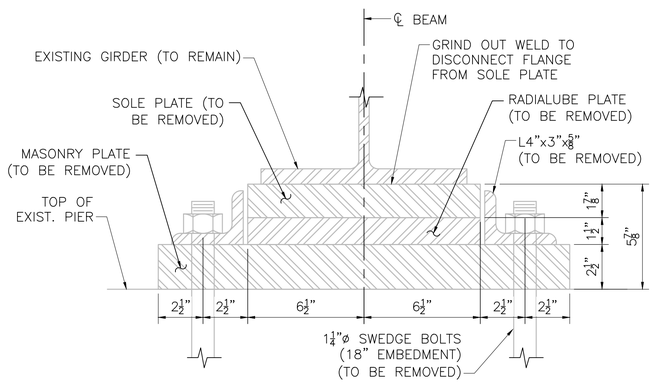
ELASTOMERIC BEARING PAD

SCALE: 4" = 1'–0"



EXISTING EXPANSION BEARING ELEVATION

SCALE: 3" = 1'–0"



EXISTING EXPANSION BEARING SECTION

SCALE: 3" = 1'–0"

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	41	49
	PROJECT FILE NO. 613295		

BEARING DETAILS

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. THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 130.43 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 1.372 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 36 OR 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.

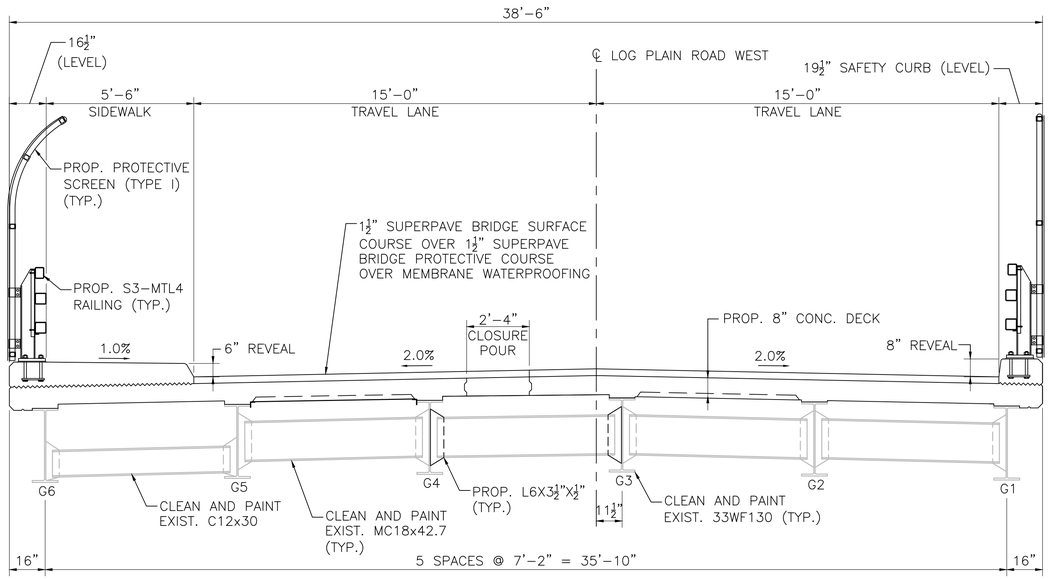
INSTALLATION OF PROPOSED EXPANSION BEARINGS:

1. LIVE LOAD SHALL BE REMOVED FROM THE ROADWAY ABOVE THE REPAIR LOCATION UNTIL JACKING IS COMPLETED AND HYDRAULIC JACKS ARE LOCKED.
2. UNINSTALL THE EXISTING BEARING ASSEMBLY AND REMOVE. CUT AND GRIND THE EXISTING ANCHOR BOLTS TO ¼" BELOW THE CONCRETE SURFACE AND PLACE MORTAR OVER IT. GRIND THE BEARING SEAT FOR THE PROPOSED BEARINGS TO ENSURE LEVEL BEARING.
3. EXPOSED FAYING SURFACE OF EXISTING SOLE PLATE AND BEAM BOTTOM FLANGE TO BE CLEANED AFTER REMOVAL OF EXISTING BEARING AND PRIOR TO INSTALLATION OF NEW BEVELED SOLE PLATE.
4. BEARING PADS SHALL BE SET WHEN THE AMBIENT TERMPERATURE IS BETWEEN 50° AND 77°F. IF THE BEARINGS ARE SET AT OTHER AMBIENT TEMPERATURES, THEY WILL HAVE TO BE RE–JACKED AND THE SOLE PLATE ASSEMBLY AND ELASTOMERIC BEARINGS RE–CENTERED WHEN THE TEMPERATURE RETURNS TO THAT RANGE.
5. PLACE THE SOLE PLATE ASSEMBLY SO THAT IT IS CENTERED AROUND THE CENTERLINE OF BEARING. CENTER THE ELASTOMERIC PAD UNDER THE SOLE PLATE.
6. AFTER THE SOLE PLATE ASSEMBLY IS IN ITS FINAL POSITION, WELD IT TO THE BEAM BOTTOM FLANGE.
7. TEMPERATURE OF THE STEEL ADJACENT TO THE ELASTOMER DURING FIELD WELDING SHALL BE KEPT BELOW 250°F.
8. SLOWLY RELEASE JACKS AND REMOVE TEMPORARY SHORING.
9. CONTRACTOR SHALL FIELD VERIFY EXISTING BEARING HEIGHTS PRIOR TO FABRICATION OF PROPOSED BEARINGS. FIELD VERIFIED BEARING HEIGHTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW, BEARING AND SOLE PLATE DIMENSIONS MAY BE ALTERED BASED ON FIELD CONDITIONS.

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

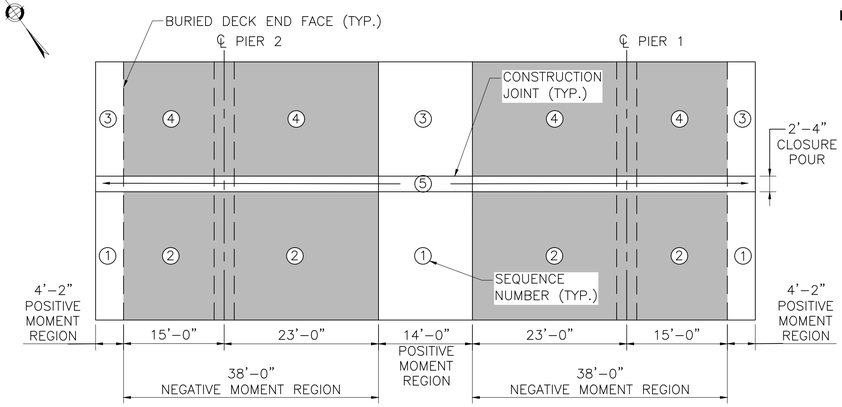
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER

USE ONLY PRINTS OF LATEST DATE



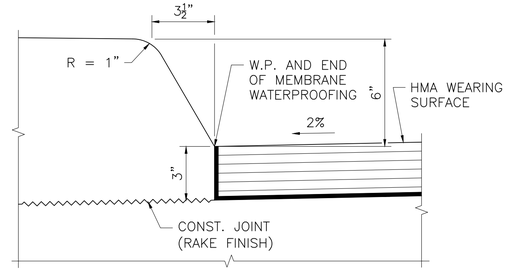
TRANSVERSE SECTION

SCALE: $\frac{3}{8}$" = 1'-0"



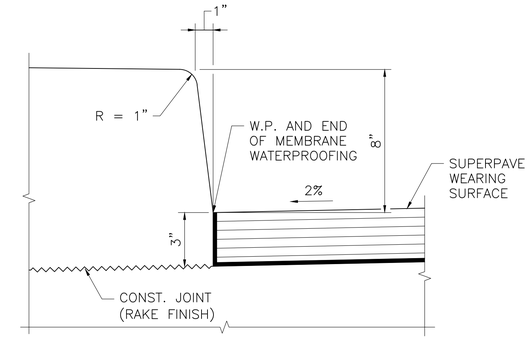
DECK POURING SEQUENCE

SCALE: $\frac{3}{32}$" = 1'-0"



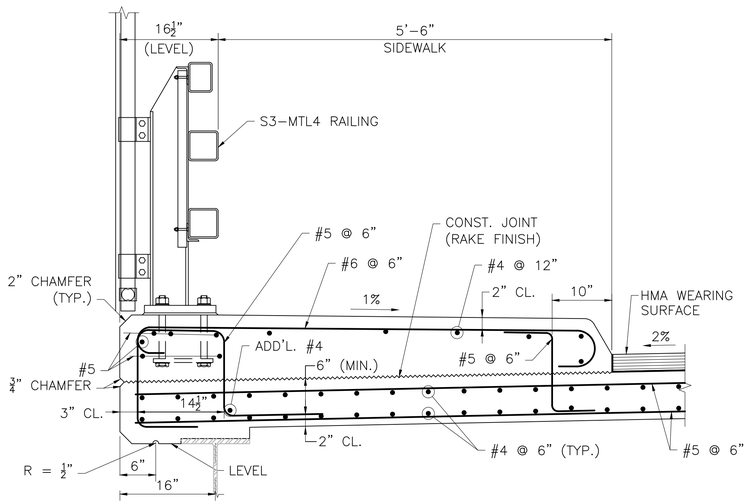
FACE OF SIDEWALK CURB DETAILS

SCALE: 3" = 1'-0"



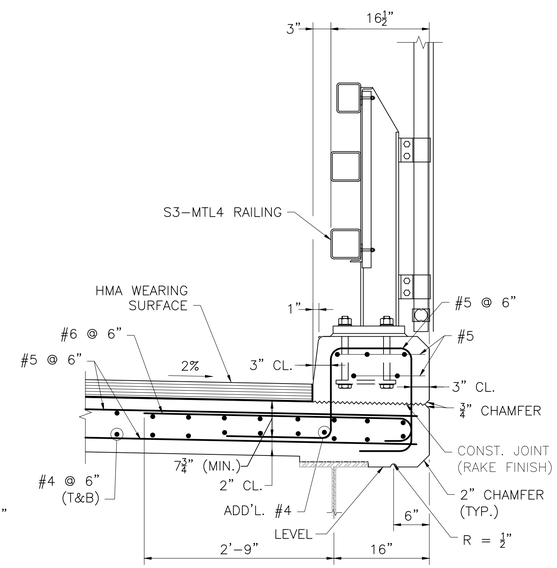
FACE OF SAFETY CURB DETAILS

SCALE: 3" = 1'-0"



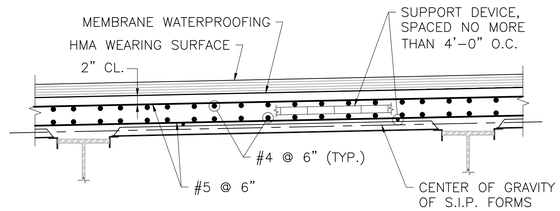
SECTION THRU SIDEWALK

SCALE: 1" = 1'-0"



SECTION THRU SAFETY CURB

SCALE: 1" = 1'-0"



NOTES:

1. LONGITUDINAL REINFORCEMENT SHALL BE PLACED PARALLEL TO THE ℄ OF CONSTRUCTION. TRANSVERSE (PRIMARY) REINFORCEMENT SHALL BE PLACED PERPENDICULAR TO THE ℄ OF CONSTRUCTION.
2. ALL REINFORCEMENT AND SUPPORT DEVICES SHALL BE COATED.
3. THE FINISHED SURFACE OF THE BRIDGE DECK SHALL BE SMOOTH AND WITHOUT ANY PROJECTIONS THAT COULD PUNCTURE THE MEMBRANE WATERPROOFING OR DEPRESSIONS THAT COULD RETAIN WATER.

TYPICAL DECK REINFORCEMENT

SCALE: ¾" = 1'-0"

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	42	49
PROJECT FILE NO.	613295		

DECK DETAILS (SHEET 1 OF 2)

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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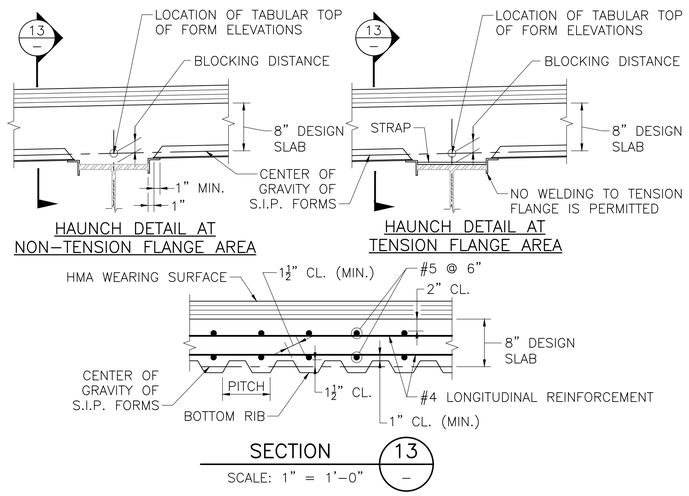
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE



STAY-IN-PLACE FORM DETAILS

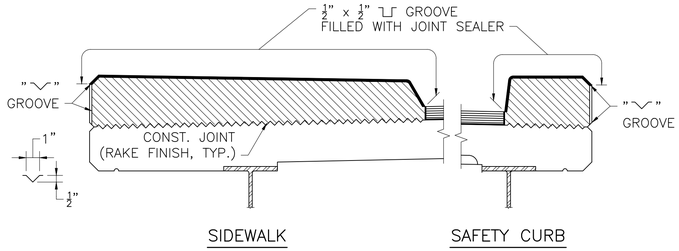
SCALE: 1" = 1'-0"

STAY-IN-PLACE FORM NOTES:

1. FOR 2" S.I.P. FORM, SET BOTTOM OF FORM 1" BELOW ELEVATION GIVEN IN TABLE. FOR 3" S.I.P. FORM, SET BOTTOM OF FORM 1½" BELOW TABLE ELEVATIONS.
2. FORM ENDS SHALL BE CRIMPED CLOSED IN A TAPERED MANNER. SEPARATE END CLOSURE PIECES WILL NOT BE ALLOWED.
3. SUPPORT ANGLES SHALL BE PLACED IN THE "LEG DOWN" POSITION WHERE POSSIBLE. WHERE "LEG UP" POSITION IS NECESSARY, THE UPPER MOST PORTION OF THE ANGLE SHALL NOT PROJECT MORE THAN 1" ABOVE THE TOP FLANGE OR COVER PLATE. THE CONTRACTOR SHALL HAVE AN ASSORTMENT OF ANGLES OF VARIOUS SIZES AVAILABLE ON THE SITE TO CONFORM TO THIS REQUIREMENT.
4. ALL MAIN STEEL REINFORCEMENT IN THE LOWER MAT SHALL BE CENTERED OVER THE VALLEY OF THE S.I.P. FORM.
5. CONTRACTOR SHALL DESIGN AND DETAIL ALL ELEMENTS OF THE FORMING SYSTEM AND SHALL SUBMIT IT TO THE ENGINEER FOR APPROVAL.
6. IN CASES WHERE STANDARD 2" OR 3" DEEP S.I.P. FORMS DO NOT SATISFY DESIGN REQUIREMENTS AN ALTERNATIVE FORMING SYSTEM CONSISTING OF DEEPER S.I.P. FORMS OR REMOVABLE FORMS SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL. THE DESIGN THICKNESS OF THE SLAB SHALL NOT BE REDUCED.

TOP OF FORM ELEVATIONS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE

BEAM NO.		INCREASING STATIONS →										
		℄ W. DECK END	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRGS. PIER 2
SPAN 1	B1	346.68	346.69	346.70	346.72	346.73	346.74	346.75	346.76	346.78	346.79	346.80
	B2	346.82	346.83	346.85	346.86	346.87	346.88	346.89	346.91	346.92	346.93	346.94
	B3	346.96	346.98	346.99	347.00	347.01	347.03	347.04	347.05	347.06	347.07	347.09
	B4	346.86	346.87	346.88	346.90	346.91	346.92	346.93	346.95	346.96	346.97	346.98
	B5	346.71	346.73	346.74	346.75	346.77	346.78	346.79	346.80	346.81	346.83	346.84
	B6	346.57	346.58	346.60	346.61	346.62	346.63	346.65	346.66	346.67	346.68	346.69
		℄ BRGS. PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ BRGS. PIER 1
SPAN 2	B1	346.80	346.84	346.88	346.92	346.95	346.98	347.00	347.01	347.01	347.01	347.01
	B2	346.94	346.99	347.03	347.07	347.10	347.13	347.15	347.16	347.16	347.16	347.16
	B3	347.09	347.13	347.17	347.21	347.25	347.27	347.29	347.30	347.30	347.30	347.30
	B4	346.98	347.03	347.07	347.11	347.14	347.17	347.18	347.19	347.20	347.20	347.20
	B5	346.84	346.88	346.93	346.97	347.00	347.03	347.04	347.05	347.06	347.05	347.05
	B6	346.69	346.74	346.78	346.82	346.85	346.88	346.90	346.91	346.91	346.91	346.91
		℄ BRGS. PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ E. DECK END
SPAN 3	B1	347.01	347.01	347.01	347.01	347.01	347.01	347.01	347.01	347.01	347.01	347.01
	B2	347.16	347.16	347.16	347.16	347.16	347.16	347.16	347.16	347.16	347.16	347.16
	B3	347.30	347.30	347.30	347.30	347.30	347.30	347.30	347.30	347.30	347.30	347.30
	B4	347.20	347.20	347.20	347.20	347.20	347.20	347.20	347.20	347.20	347.19	347.19
	B5	347.05	347.05	347.05	347.05	347.05	347.05	347.05	347.05	347.05	347.05	347.05
	B6	346.91	346.91	346.91	346.91	346.91	346.91	346.91	346.91	346.91	346.91	346.91

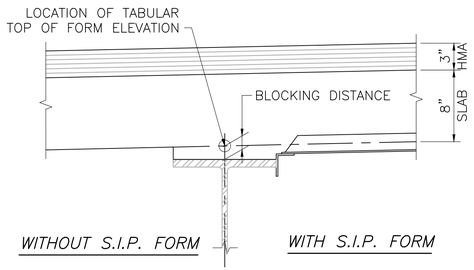


NOTES:

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.

PARAFFIN JOINT DETAILS

SCALE: ¾" = 1'-0"



HAUNCH DETAIL

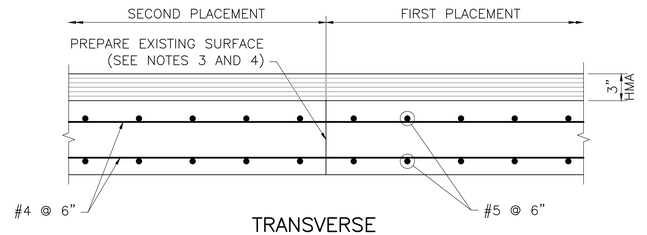
SCALE: 1½" = 1'-0"

CONSTRUCTION JOINT NOTES:

1. BRIDGE DECK SLAB SHALL BE PLACED IN ACCORDANCE WITH THE PLACEMENT SEQUENCE SHOWN ON THE CONSTRUCTION DRAWINGS.
2. THE CONTRACTOR MAY PLACE THE ENTIRE DECK IN ONE CONTINUOUS OPERATION WITHOUT CONSTRUCTION JOINTS WITH THE APPROVAL OF THE ENGINEER, PROVIDED THAT THE INITIAL SET (f'_c = 500 PSI) OF ALL CONCRETE DOES NOT OCCUR UNTIL AFTER THE COMPLETION OF THE PLACEMENT. AN APPROVED RETARDER SHALL BE USED, WHEN NECESSARY, TO RETAIN THE WORKABILITY OF THE CONCRETE. IF MULTIPLE PLACEMENTS ARE MADE, A MINIMUM OF 72 HOURS SHALL PASS BETWEEN PLACEMENTS.
3. THE SURFACE OF THE PREVIOUSLY CAST 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.
4. 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 SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
5. THE CONTRACTOR MAY SUBMIT A PROPOSAL DETAILING THE ELIMINATION OF THE CLOSURE POUR FOR THE APPROVAL OF THE ENGINEER. THE PROPOSAL SHALL DETAIL THE CONTRACTOR'S MEANS AND METHODS FOR ACCURATELY CONSTRUCTING THE DECK SLAB TO THE LINES, GRADES, AND THICKNESS SHOWN ON THE CONSTRUCTION DRAWINGS WITHOUT LEAKAGE OF CONCRETE.
6. DOWEL BAR SPLICERS SHALL BE USED WHERE USE OF LAP SPLICES IS NOT FEASIBLE.

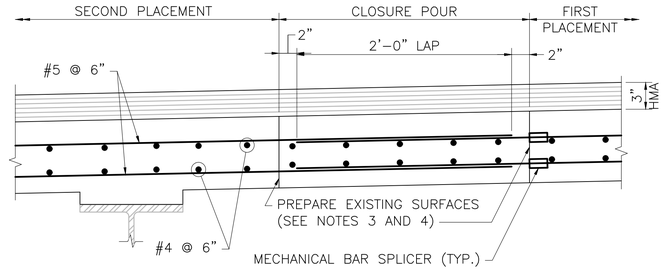
TOP OF FORM NOTE:

AFTER THE EXISTING DECK IS DEMOLISHED 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.



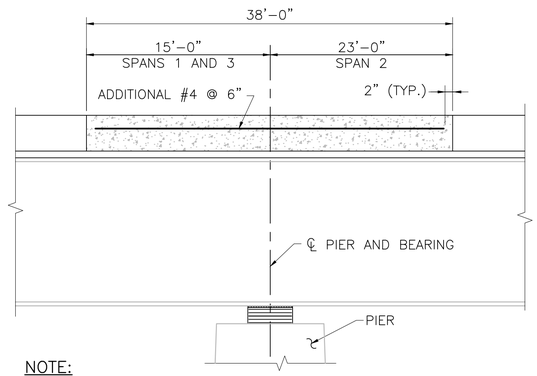
TRANSVERSE CONSTRUCTION JOINT DETAIL

SCALE: 1½" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT DETAIL

SCALE: 1½" = 1'-0"



NOTE:
DECK STEEL OMITTED FOR CLARITY.

TYPICAL SECTION AT PIER

SCALE: ¾" = 1'-0"

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
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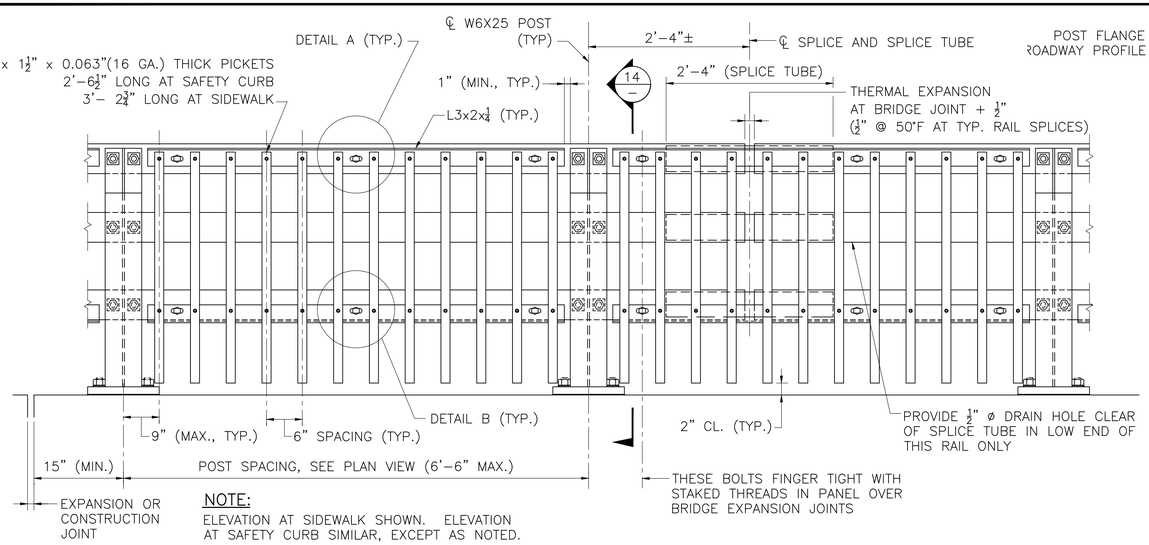
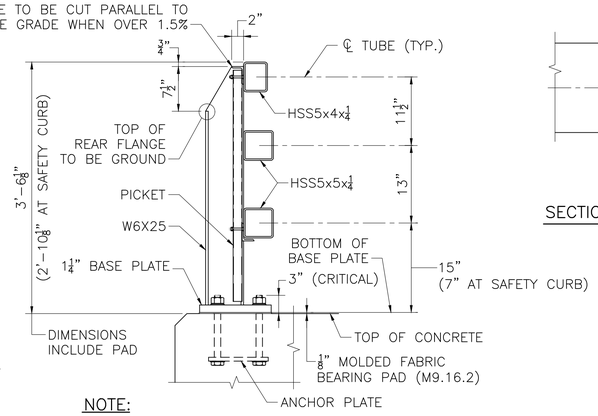


NOTE:
ELEVATION AT SIDEWALK SHOWN. ELEVATION AT SAFETY CURB SIMILAR, EXCEPT AS NOTED.

BRIDGE RAILING ELEVATION

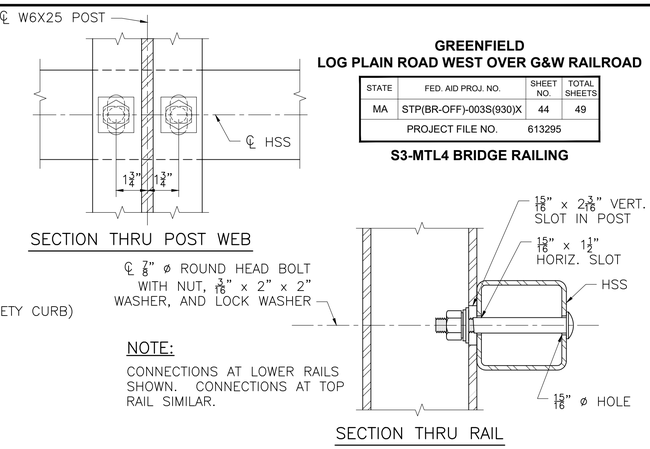
SCALE: 1" = 1'-0"



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

SECTION 14

SCALE: 1" = 1'-0"



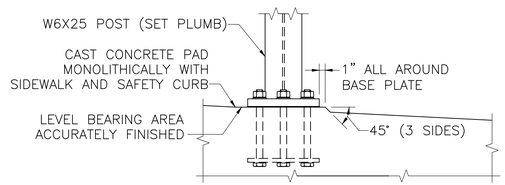
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	44	49
	PROJECT FILE NO. 613295		

S3-MTL4 BRIDGE RAILING

TYPICAL RAIL TO POST CONNECTIONS

SCALE: 3" = 1'-0"

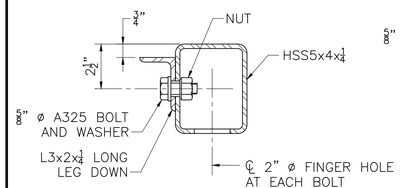


SETTING OF POSTS (PROFILE GRADE OVER 1.5%)

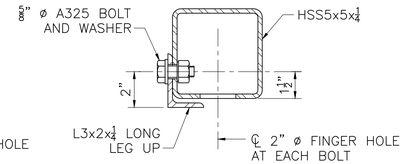
SCALE: 1" = 1'-0"

RAILING NOTES:

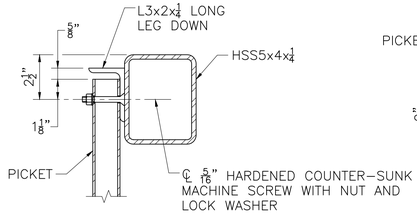
1. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 270 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500 WITH A CERTIFIED Fy = 50 KSI MINIMUM. THE MINIMUM HORIZONTAL BENDING RADII OF THE HSS TUBING SHALL BE 8 FEET. PICKET CARRIER 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 ⅝" 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.



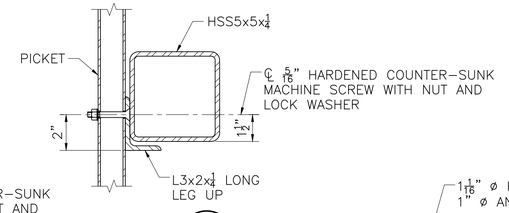
SECTION 15



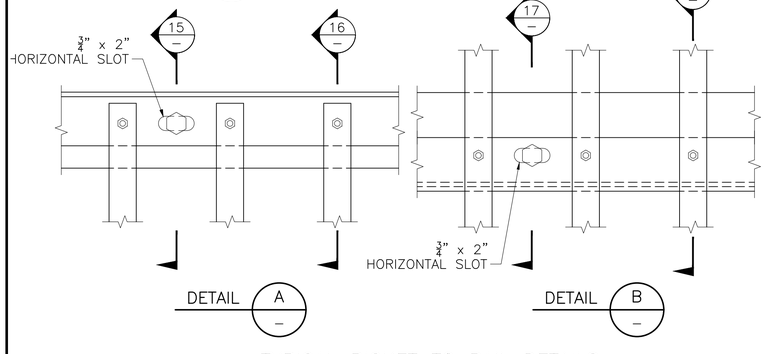
SECTION 17



SECTION 16

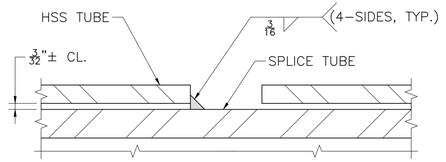


SECTION 18



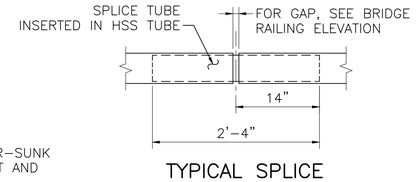
TYPICAL PICKET TO RAIL DETAILS

SCALE: 3" = 1'-0"



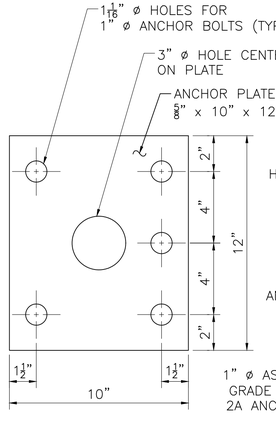
SPLICE DETAIL

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



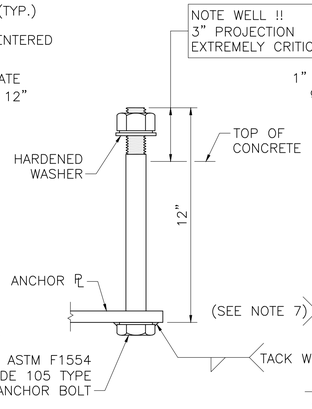
TYPICAL SPLICE

SCALE: 1" = 1'-0"



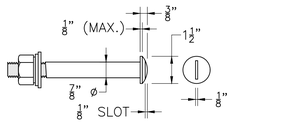
ANCHOR PLATE

SCALE: 3" = 1'-0"



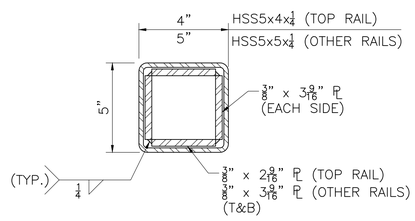
ANCHOR BOLT

SCALE: 3" = 1'-0"



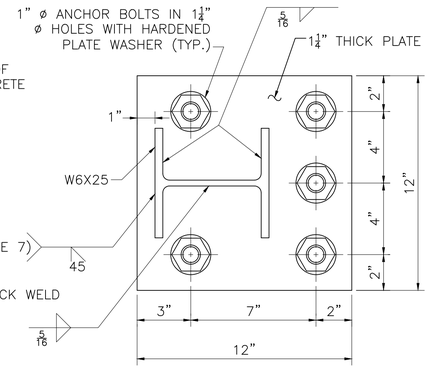
⅞" ø ROUND HEAD BOLT

SCALE: 3" = 1'-0"



SPLICE TUBE DETAILS

SCALE: 3" = 1'-0"



BASE PLATE

SCALE: 3" = 1'-0"

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

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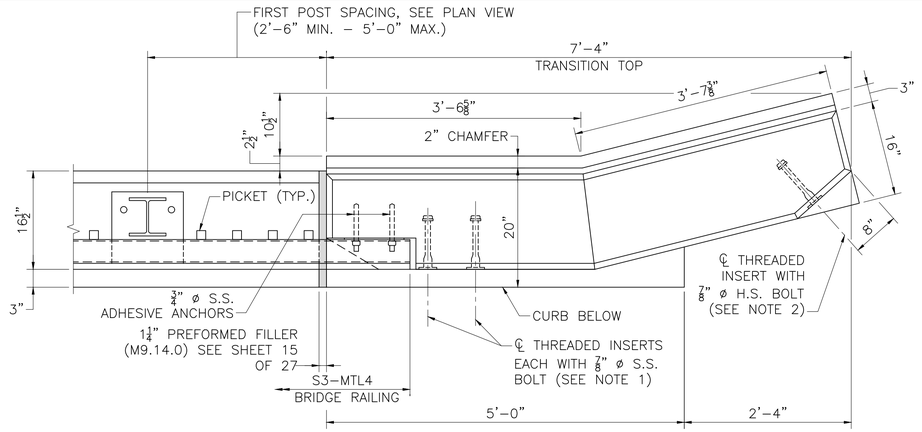
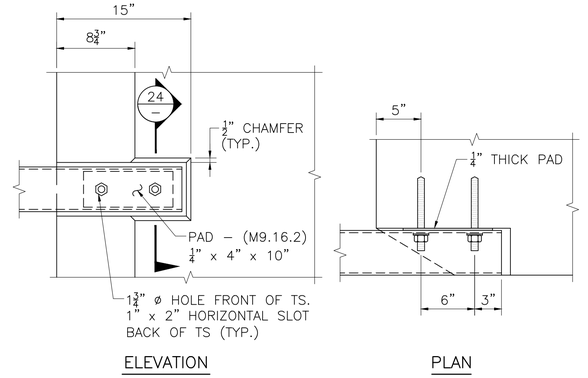


PLAN AT SAFETY CURB

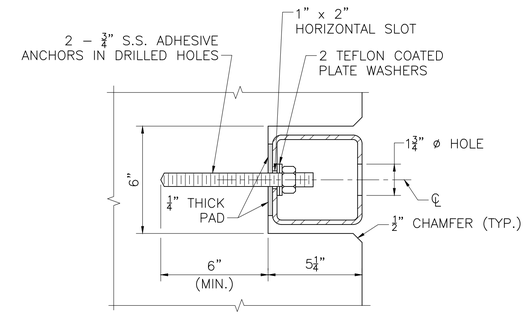
SCALE: 1" = 1'-0"



ELEVATION PLAN

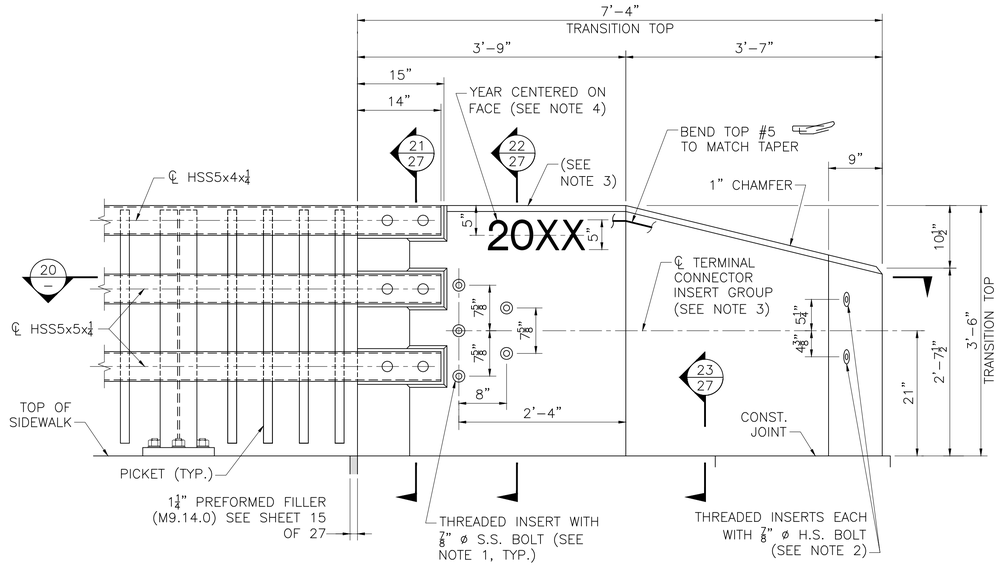
RAIL ATTACHMENT

SCALE: 1" = 8'



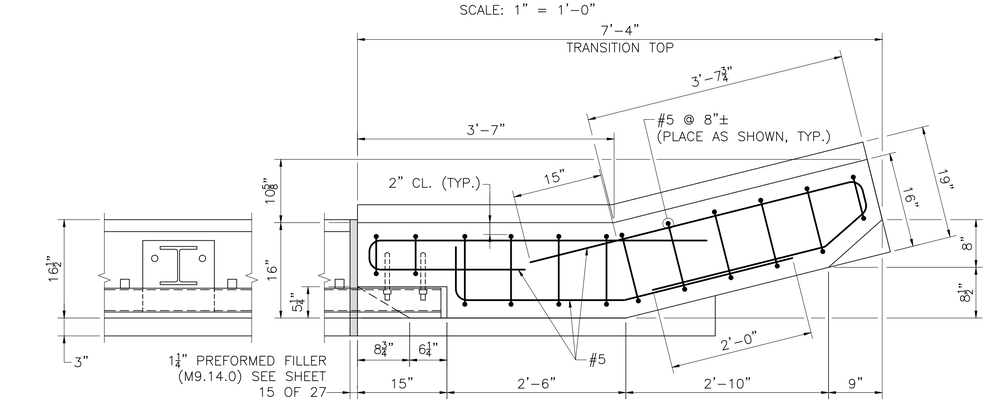
SECTION 24 / –

SCALE: 3" = 1'-0"



ELEVATION AT SIDEWALK

SCALE: 1" = 1'-0"



SECTION 20 / –

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 ⅞" ø S.S. (STAINLESS STEEL) BOLT. S.S. BOLTS SHALL BE ⅞" ø x 1½" LONG FULLY THREADED CONFORMING TO ASTM F593D WITH AISI TYPE 304N S.S. WASHERS. INSERTS FOR ⅞" S.S. BOLTS SHALL BE GALVANIZED AND CAST INTO THE TRANSITION.

2. ⅞" ø HIGH STRENGTH BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F3125 AND BE GALVANIZED. USE ADDITIONAL WASHERS AS REQUIRED TO PROPERLY ENGAGE THE BOLTS.

3. 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.

   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.

4. USE LATEST CONTRACT COMPLETION YEAR IN EFFECT WHEN THE FIRST GUARDRAIL TRANSITION IS CAST. USE THIS YEAR FOR ALL GUARDRAIL TRANSITIONS.

5. ALL CONCRETE FOR THE PRECAST HIGHWAY GUARDRAIL TRANSITION SHALL BE 5000 HP CEMENT CONCRETE.

6. 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.

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

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MA	STP(BR-OFF)-003S(930)X	45	49
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TOP OF PRECAST HIGHWAY GUARDRAIL TRANSITION FOR S3-MTL4 RAILING (SHEET 1 OF 2)

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
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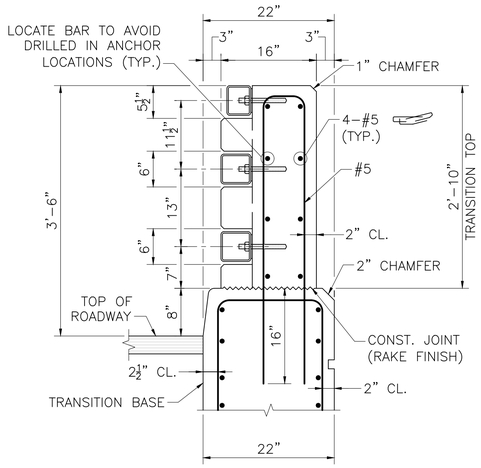
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

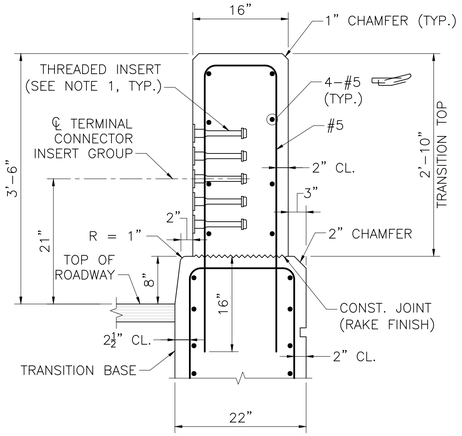
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	46	49
PROJECT FILE NO.	613295		

TOP OF PRECAST HIGHWAY GUARDRAIL TRANSITION FOR S3-MTL4 RAILING (SHEET 2 OF 2)



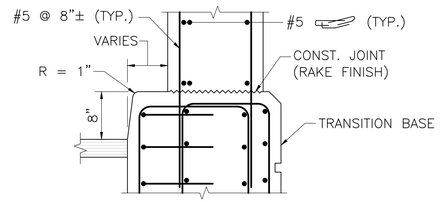
SECTION AT SAFETY CURB

SECTION 21 / SCALE: 1" = 1'-0" (26)



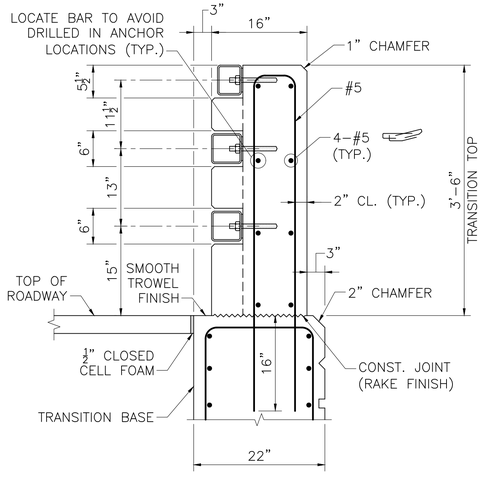
SECTION AT SAFETY CURB

SECTION 22 / SCALE: 1" = 1'-0" (26)



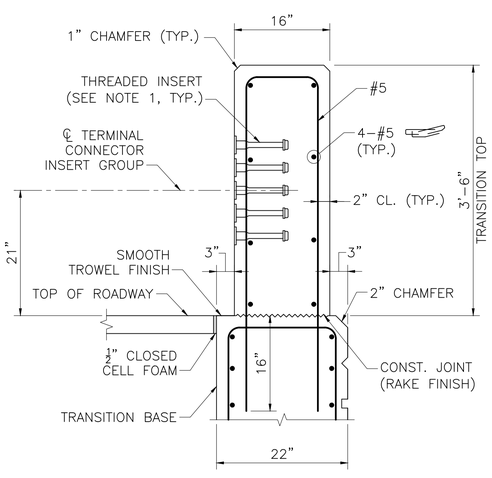
SECTION AT SAFETY CURB

SECTION 23 / SCALE: 1" = 1'-0" (26)



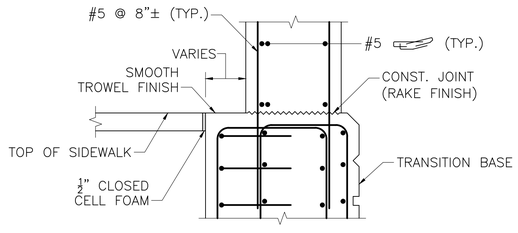
SECTION AT SIDEWALK

SECTION 21 / SCALE: 1" = 1'-0" (26)



SECTION AT SIDEWALK

SECTION 22 / SCALE: 1" = 1'-0" (26)



SECTION AT SIDEWALK

SECTION 23 / SCALE: 1" = 1'-0" (26)

FEBRUARY 28, 2026	ISSUED FOR CONSTRUCTION
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GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
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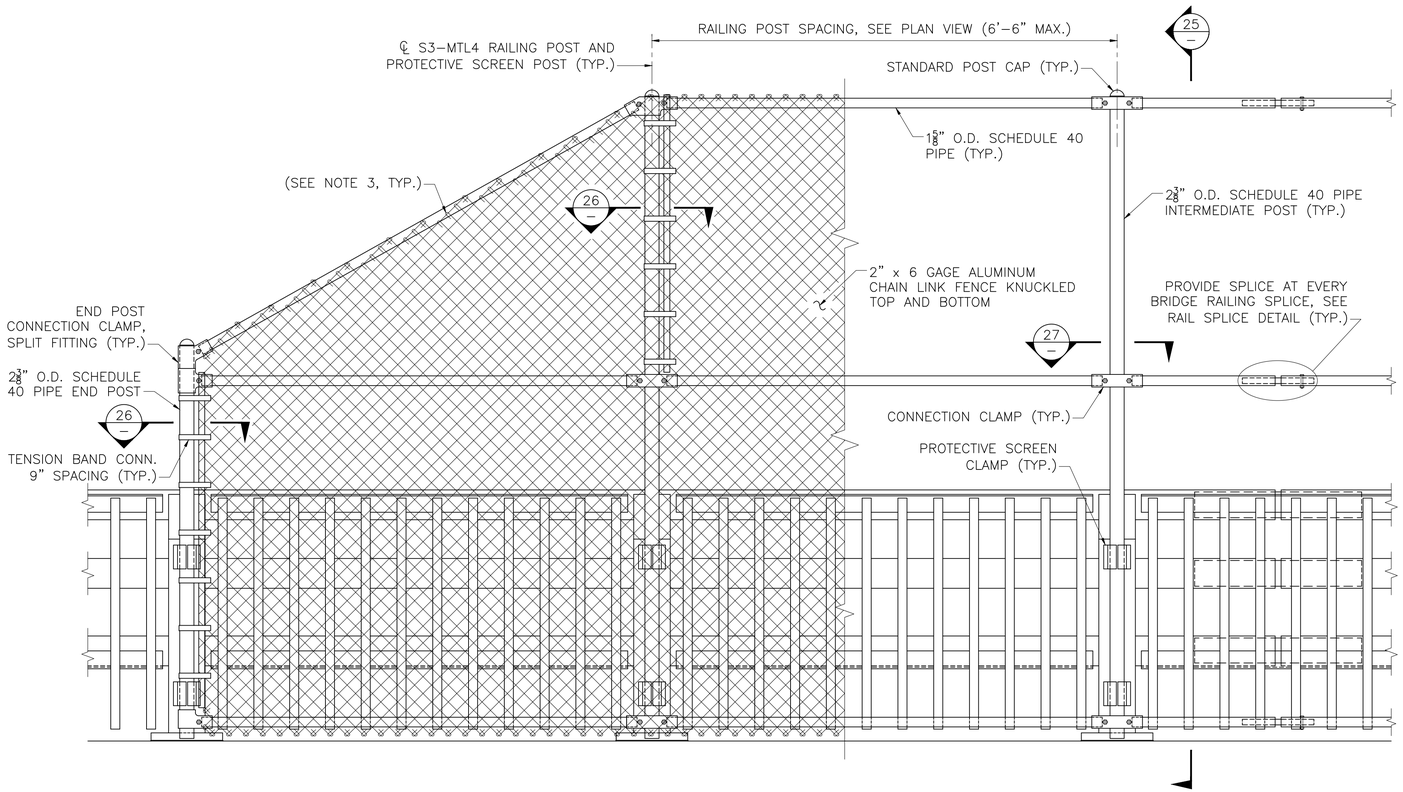
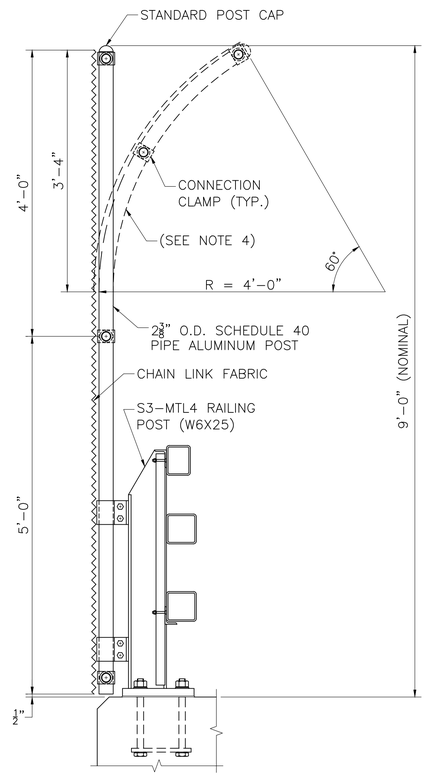
TYPE I PROTECTIVE SCREEN



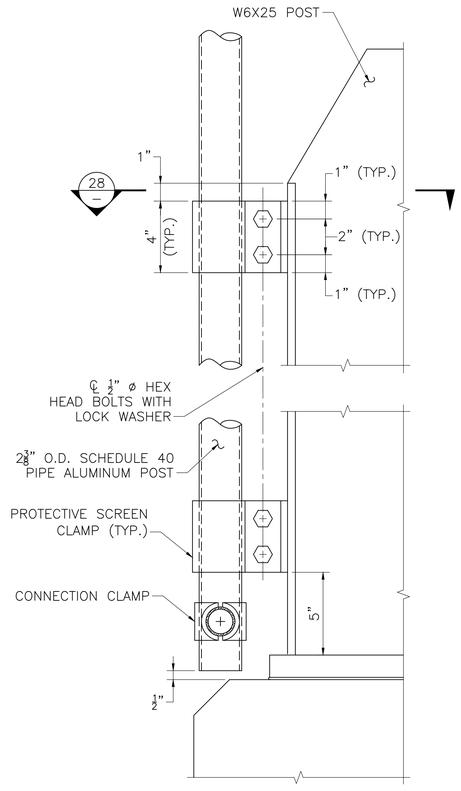
ELEVATION

SCALE: 1" = 1'–0"



SECTION 25

SCALE: 1" = 1'–0"



ELEVATION
PROTECTIVE SCREEN CLAMPS

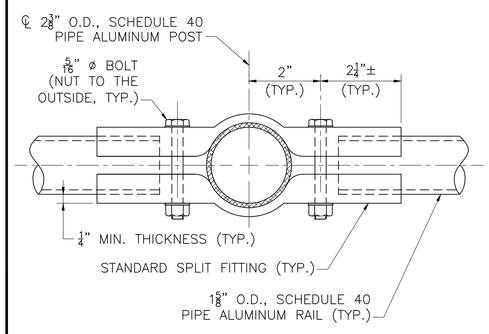
SCALE: 3" = 1'–0"

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.

MATERIALS:

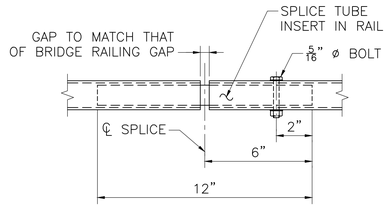
POST AND RAILS	ASTM B 221, ALLOY 6061–T6, SCHEDULE 40 PIPE
TENSION BARS, RAIL SPLICES, WASHERS, AND POST CONN. CLAMPS	ASTM B 221, ALLOY 6061–T6
FABRIC AND TIES	AASHTO M 181 TYPE III, ALLOY 6061–T89 OR T94; 6 GAGE
TENSION BANDS	ASTM B 221, ALLOY 6063–T5
BOLTS	ASTM B 316, ALLOY 2024–T4
NUTS	ASTM B 316,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



POST CONNECTION CLAMP

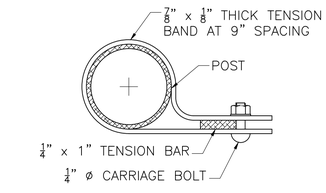
SECTION 27

SCALE: 6" = 1'–0"



RAIL SPLICE

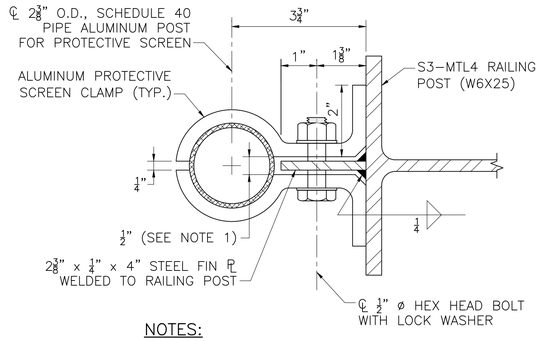
SCALE: 3" = 1'–0"



TENSION BAND CONNECTION

SECTION 26

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 28

SCALE: 6" = 1'–0"

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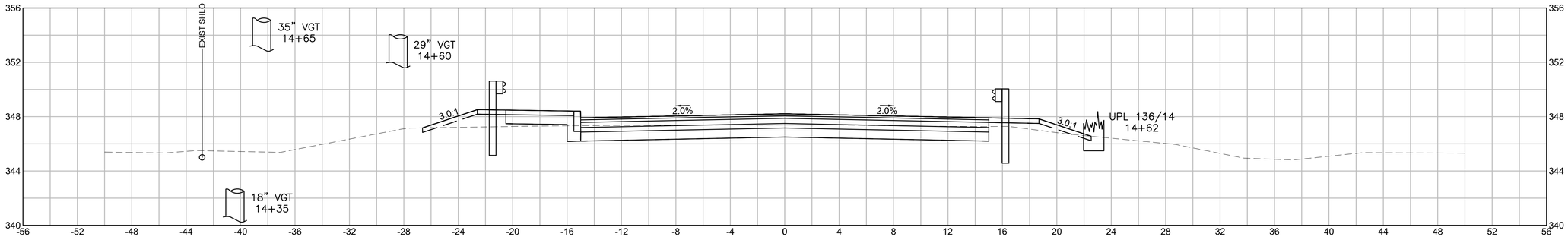
GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	48	49
PROJECT FILE NO.	613295		

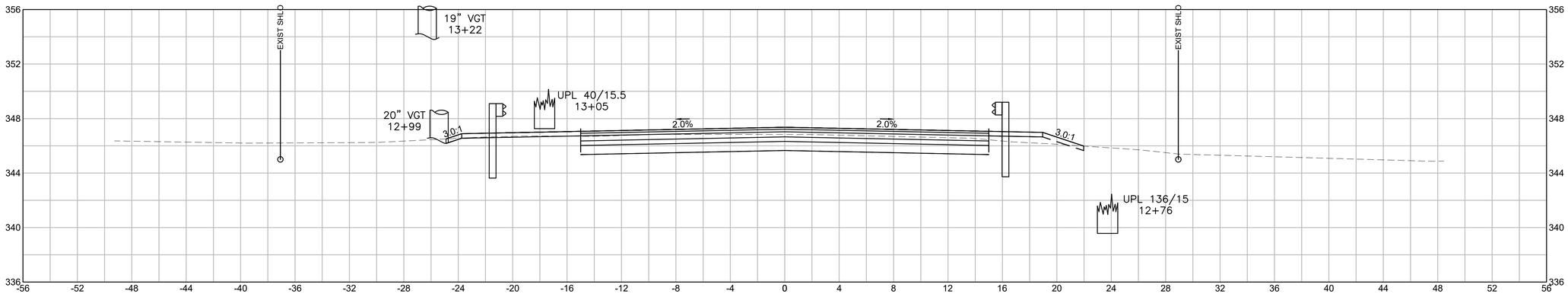
CROSS SECTIONS

14+50



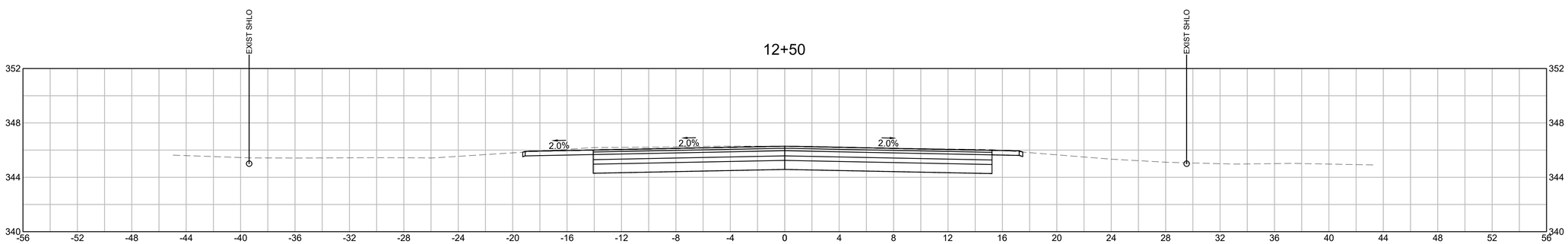
CUT 31.59 SF
FILL 8.12 SF

13+00



CUT 32.19 SF
FILL 5.90 SF

12+50



CUT 54.74 SF
FILL 0.02 SF

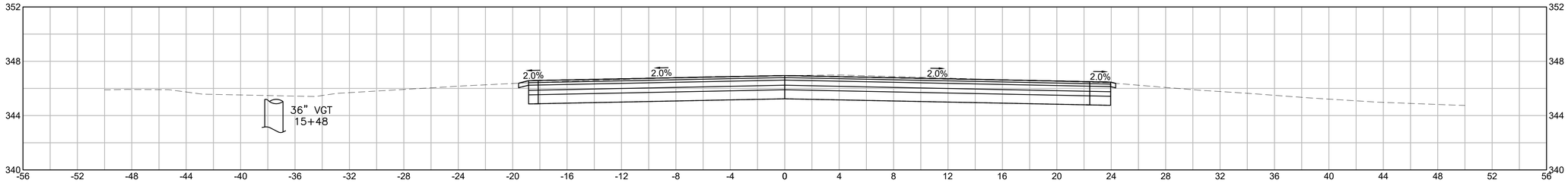
HOR. SCALE IN FEET
4 0 4 8
4 0 4 8
VER. SCALE IN FEET

GREENFIELD
LOG PLAIN ROAD WEST OVER G&W RAILROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(930)X	49	49
PROJECT FILE NO.	613295		

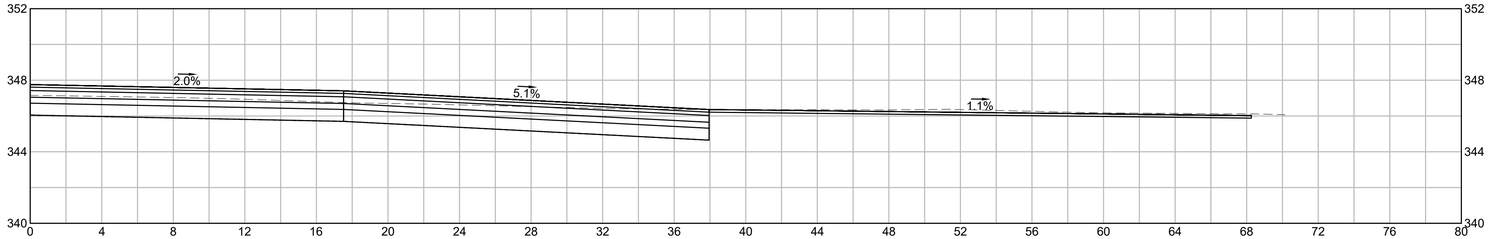
CROSS SECTIONS

15+50



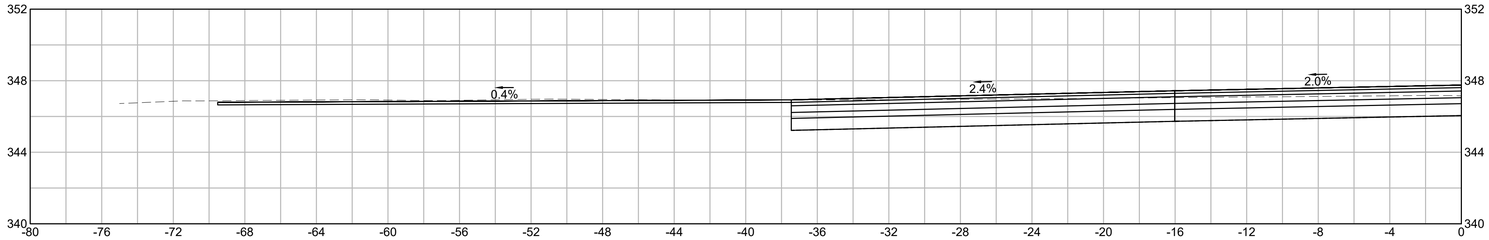
CUT 73.68 SF
FILL 0.07 SF

15+00



CUT 92.93 SF
FILL 0.00 SF

15+00



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