

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION HIGHWAY DIVISION

PLYMPTON WINNETUXET ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	1	34
PROJECT FILE NO. 609435			

TITLE SHEET & INDEX

PLAN AND PROFILE OF
WINNETUXET ROAD
(BRIDGE NO. P-14-001(CEN))

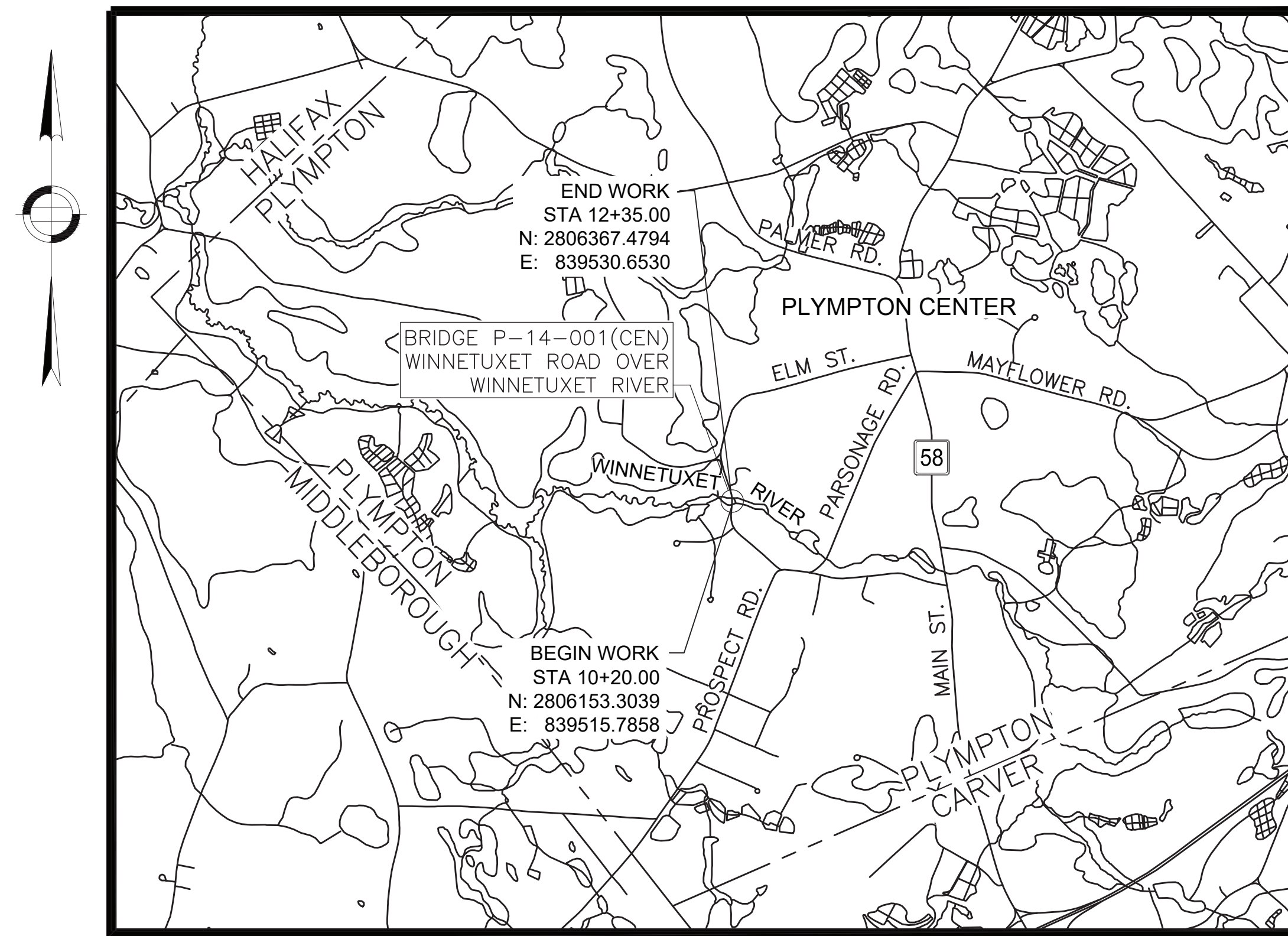
IN THE TOWN OF
PLYMPTON
PLYMOUTH COUNTY

FEDERAL AID PROJECT NO. STP(BR-OFF)-003S(740)X

THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

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10-32	BRIDGE PLANS, BRIDGE NO. P-14-001(CEN)
33-34	CROSS SECTIONS

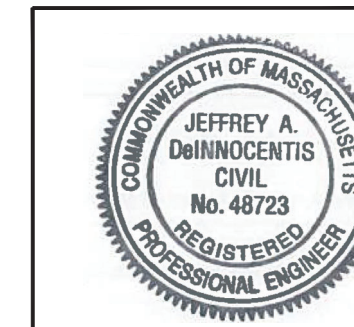


LOCUS
SCALE: 1" = 2000'

LENGTH OF PROJECT = 215.00 FEET = 0.041 MILES

DESIGN DESIGNATION - WINNETUXET ROAD

DESIGN SPEED	15 MPH
ADT (2022)	357
ADT (2029)	383
K	10.6%
D	51%
T (PEAK HOUR)	21%
T (AVERAGE DAY)	14%
DHV	38
DDHV	20
FUNCTIONAL CLASSIFICATION	RURAL LOCAL ROAD



DeInnocentis, Jeffrey
Digitally signed by Jeffrey A. DeInnocentis, P.E.
Date: 2024.05.28 16:19:37 -0400

DATE	DESCRIPTION	REV #

TRANSPORTATION
AECOM
AECOM TECHNICAL SERVICES, Inc.
250 Apollo Drive
Chelmsford, Massachusetts 01824
T 978.905.2100 F 978.905.2101 www.aecom.com

APPROVED
Carrie Lavallee, P.E.
Digitally signed by Carrie Lavallee, P.E.
Date: 2024.05.28 16:19:37 -0400
CHIEF ENGINEER
DATE 05/28/2024

**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	3	34
PROJECT FILE NO.		609435	

TYPICAL SECTIONS

PAVEMENT NOTES

FULL DEPTH PAVEMENT AT BRIDGE APPROACHES:

- SURFACE COURSE:** 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5) OVER
- INTERMEDIATE COURSE:** 2" SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5) OVER
- BASE COURSE:** 3" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) OVER
- SUBBASE:** 4" DENSE GRADED CRUSHED STONE
8" GRAVEL BORROW, TYPE b

MILL & OVERLAY:

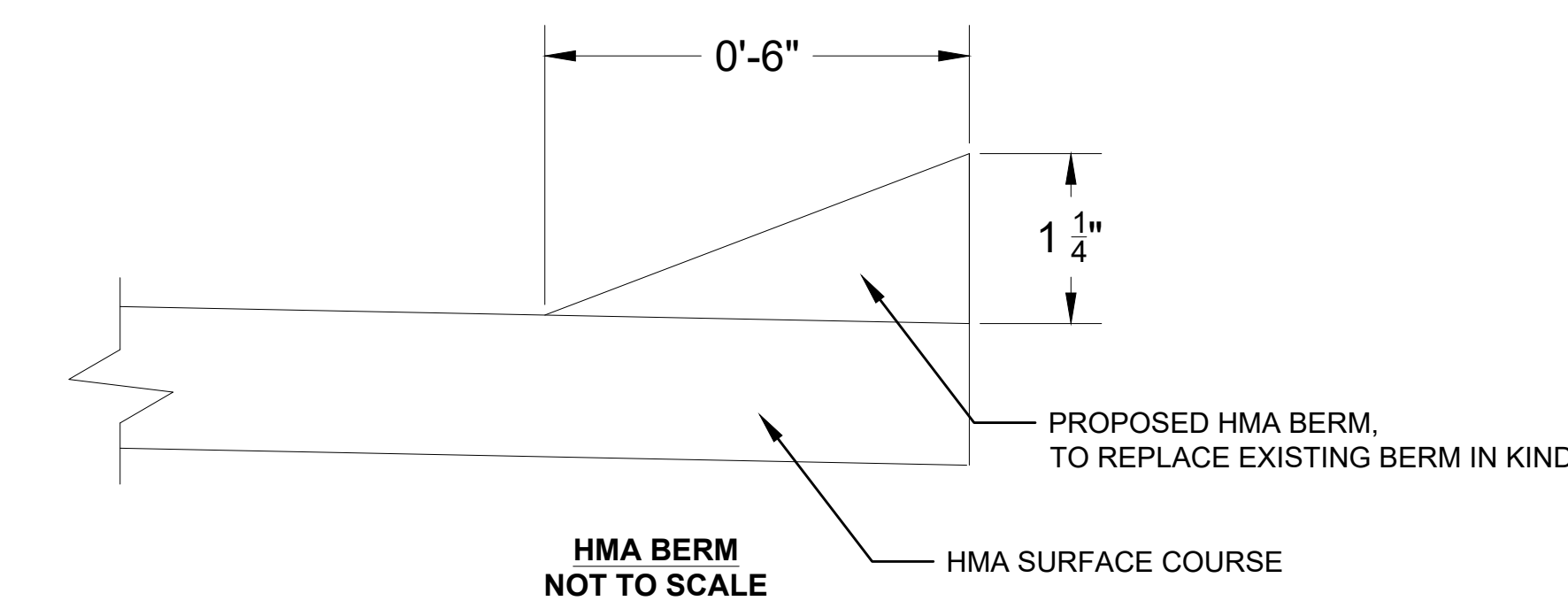
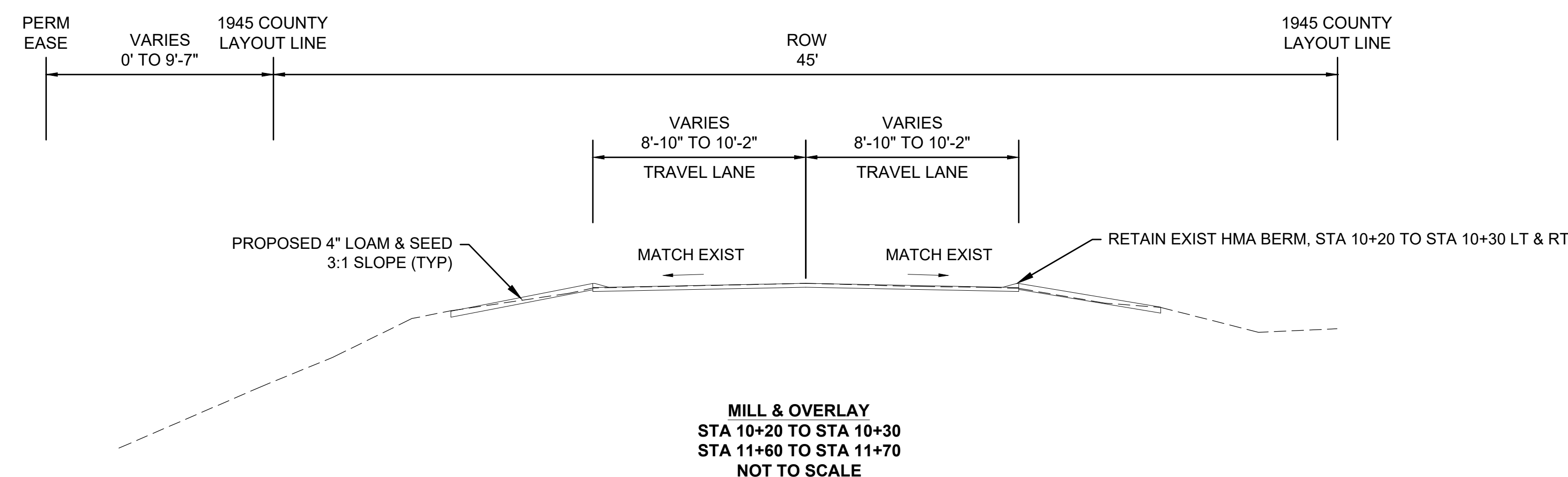
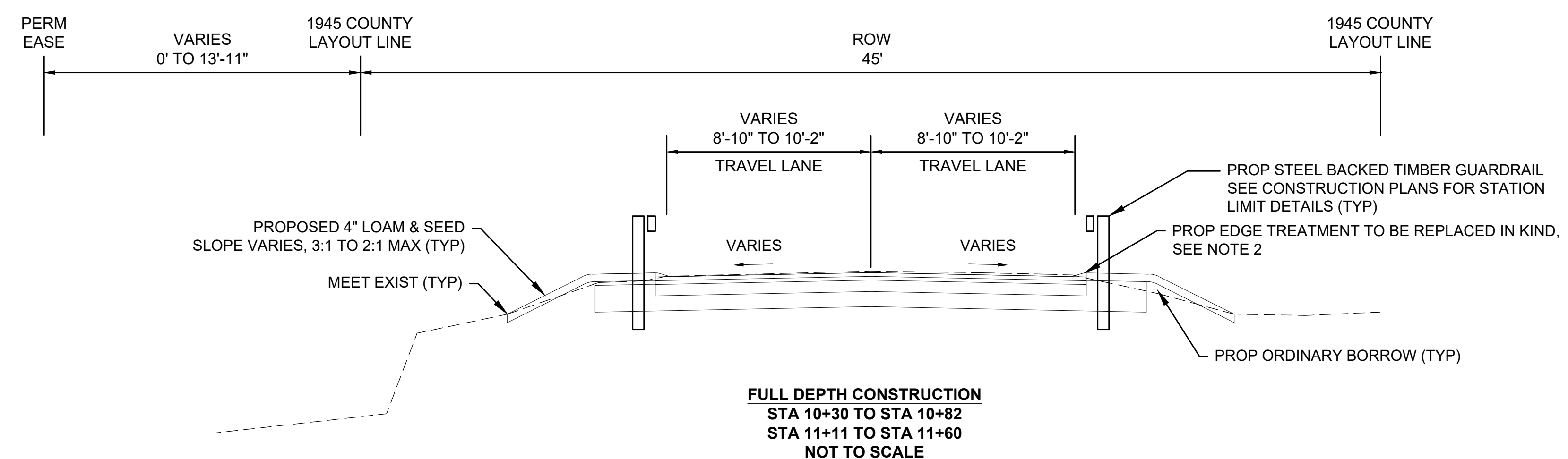
- SURFACE:** 2"± MILLING,
2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

DRIVEWAY TRANSITION:

- SURFACE:** 2"± MILLING,
2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

NOTES:

- TACK COAT SHALL BE APPLIED AT A RATE OF 0.07 GAL/SY ON MILLED SURFACES AND 0.05 GAL/SY ON SMOOTH (UNMILLED) SURFACES.
- PROPOSED HMA BERM TO REPLACE EXISTING BERM IN KIND SHALL BE PLACED FROM STA 10+30 LT TO STA 10+82 LT AND RT. NO BERM SHALL BE PLACED FROM STA 10+20 TO STA 10+30 OR FROM STA 11+11 TO 11+60.
- EXISTING CROSS SLOPE AT APPROACHES VARIES APPROXIMATELY 0% TO 2%. THE INTENT OF THE DESIGN IS TO MATCH EXISTING CONDITIONS.



TYPICAL SECTION NOTES:

- STEEL BACKED TIMBER GUARDRAIL SHALL BE SET TANGENT WITH TIMBER BRIDGE RAIL AT THE NORTHWEST AND SOUTHWEST APPROACHES.
- STEEL BACKED TIMBER GUARDRAIL SHALL BE SET TO FOLLOW ROADWAY CURVATURE AT THE NORTHEAST AND SOUTHEAST APPROACHES.
- AT LIMITS, STEEL BACKED TIMBER GUARDRAIL SHALL BE OFFSET 7'-0" FROM EDGE OF PAVEMENT TO FACE.
- SEE CONSTRUCTION PLANS FOR GUARDRAIL STATION LIMITS.
- SEE STRUCTURAL PLANS FOR BRIDGE RAIL TO STEEL BACKED TIMBER RAIL TRANSITION DETAIL.

HIGHWAY GUARD DETAILS

STA 10+32 LT TO STA 10+51 LT - STEEL-BACKED TIMBER GUARDRAIL, TL-2
 STA 10+51 LT TO STA 10+73 LT - TIMBER GUARDRAIL TRANSITION, BEGIN TANGENT TO BRIDGE RAIL
 STA 11+18 LT TO STA 11+30 LT - TIMBER GUARDRAIL TRANSITION, BEGIN TANGENT TO BRIDGE RAIL
 STA 11+30 LT TO STA 11+59 LT - STEEL-BACKED TIMBER GUARDRAIL, TL-2
 STA 10+58 RT TO STA 10+73 RT - TIMBER GUARDRAIL TRANSITION
 STA 11+18 RT TO STA 11+45 RT - TIMBER GUARDRAIL TRANSITION
 STA 11+45 RT TO STA 11+53 RT - STEEL-BACKED TIMBER GUARDRAIL, TL-2

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

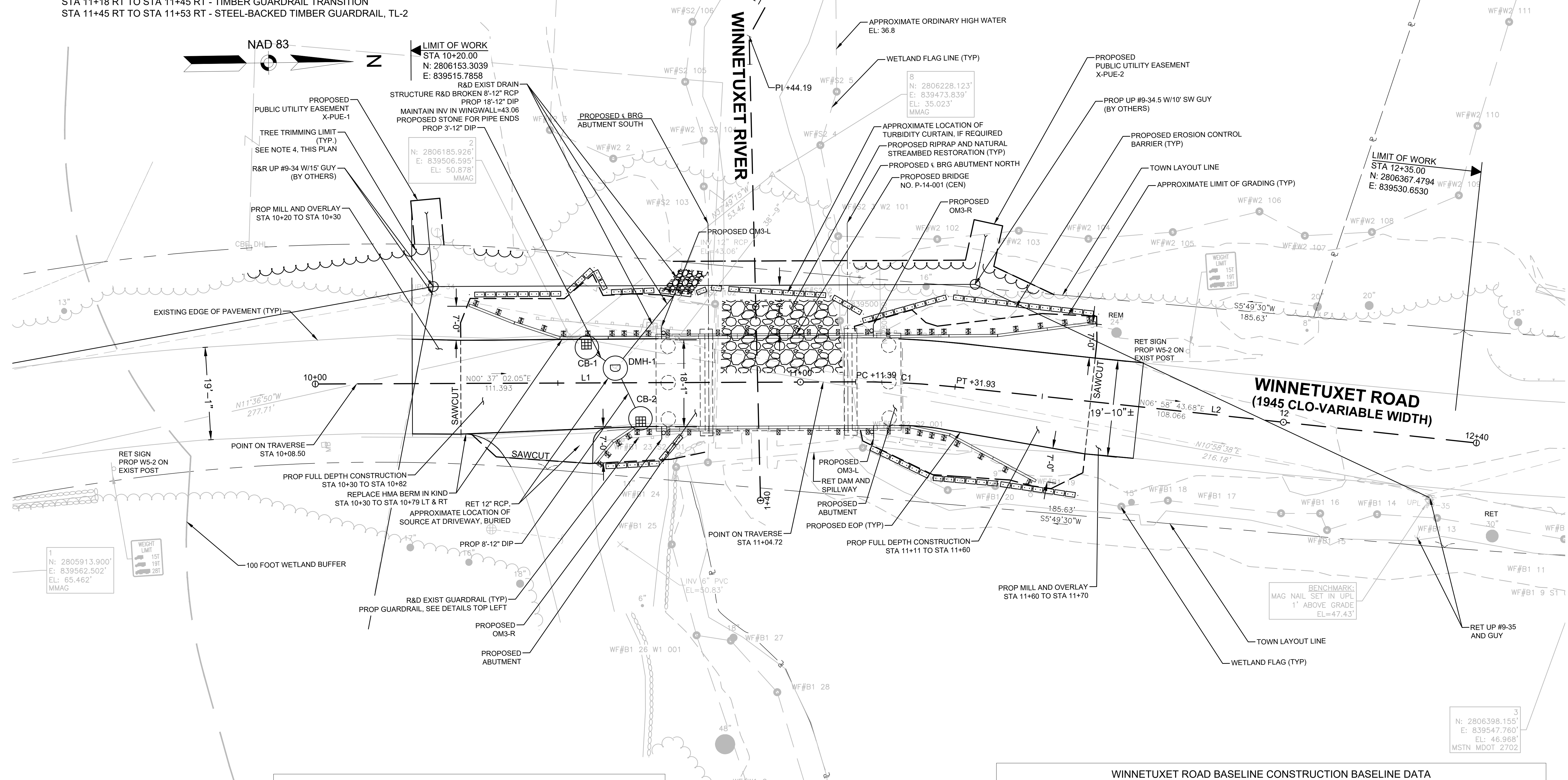
DRAINAGE DETAILS

SEE BELOW

**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	4	34
PROJECT FILE NO.		609435	

CONSTRUCTION PLAN

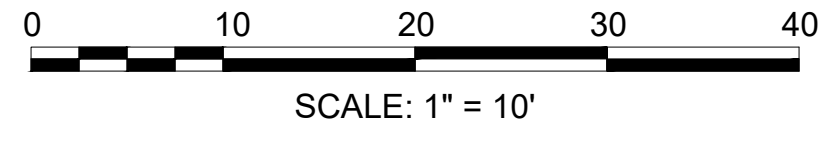


- NOTES:**
- CONTRACTOR SHALL MAINTAIN SAFE, 10' CLEARANCE FROM AERIAL WIRES PER OSHA GUIDANCE DURING CONSTRUCTION ACTIVITIES.
 - CRANE SWING SHALL BE LIMITED TO WITHIN ROW
 - SEE BRIDGE PLANS FOR TIMBER GUARDRAIL TRANSITION DETAIL.
 - CONTRACTOR TO TRIM TREES AROUND POLES AND AERIAL LINES AS SHOWN OR AS DIRECTED BY THE ENGINEER. MAINTAIN A 2' CLEARANCE FROM EXISTING AND PROPOSED ROW/EASEMENT LINES.

LEGEND:
 PROPOSED RIPRAP

NUMBER	STATION/OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
DMH-1	10+61.85 3.00 LT	50.80	CB-1: 46.60 CB-2: 46.15 EXIST: 45.2	43.92	F&C
CB-1	10+56.00 7.30 LT	50.99	-	46.80	DEEP SUMP
CB-2	10+67.00 7.36 RT	50.48	-	46.30	DEEP SUMP

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2806133.305	839515.570		N0°37'02"E 111.39'	11+11.39	2806244.692	839516.770
C1	11+11.39	2806244.692	839516.770	R=185.00' Δ=6°21'42" L=20.54' T=10.28'		11+31.93	2806265.177	839518.130
L2	11+31.93	2806265.177	839518.130		N6°58'44"E 108.07'	12+40.00	2806372.442	839531.261

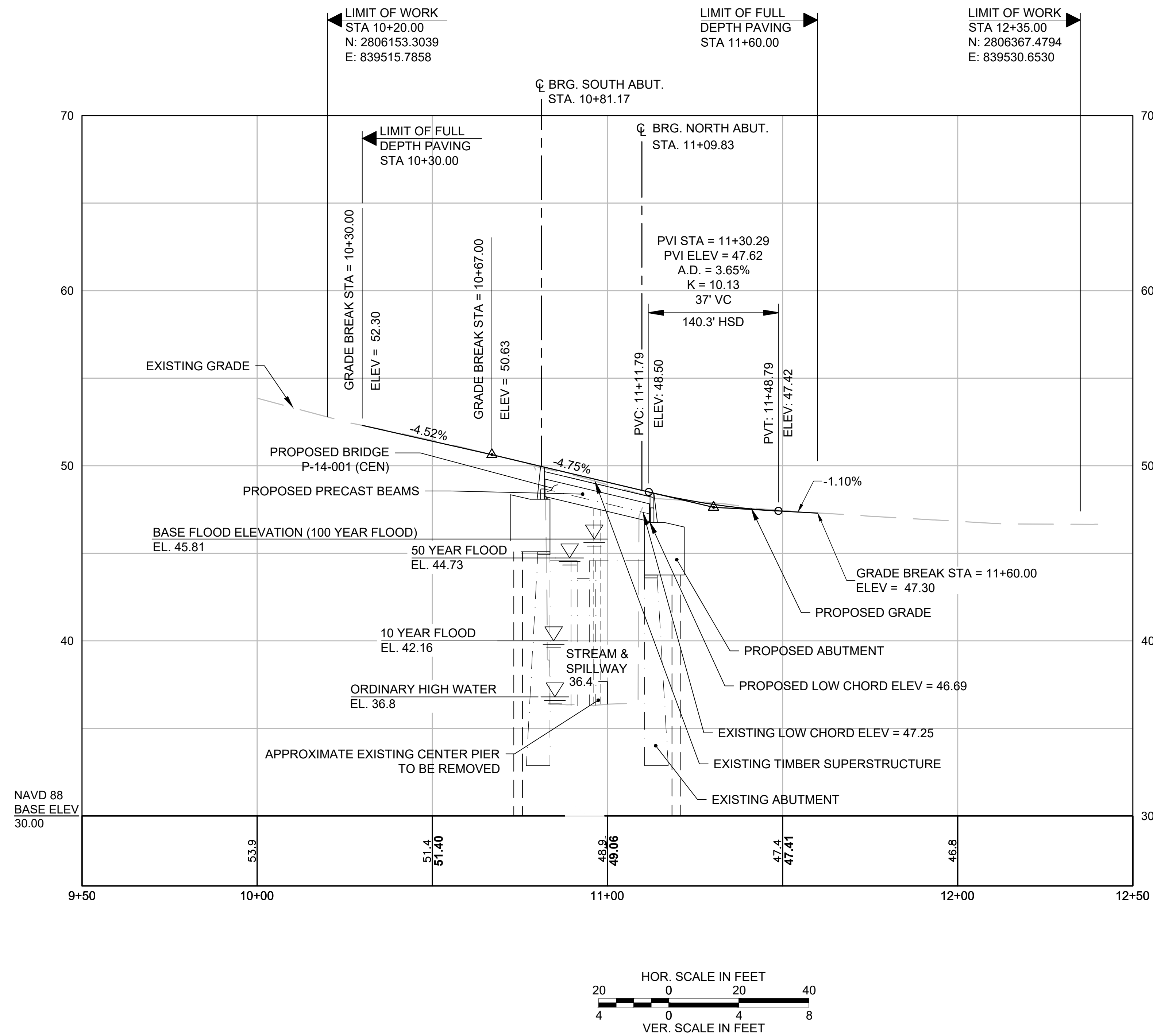


FOR PROFILE:
SEE SHEET NO. 5

PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	5	34
PROJECT FILE NO.		609435	

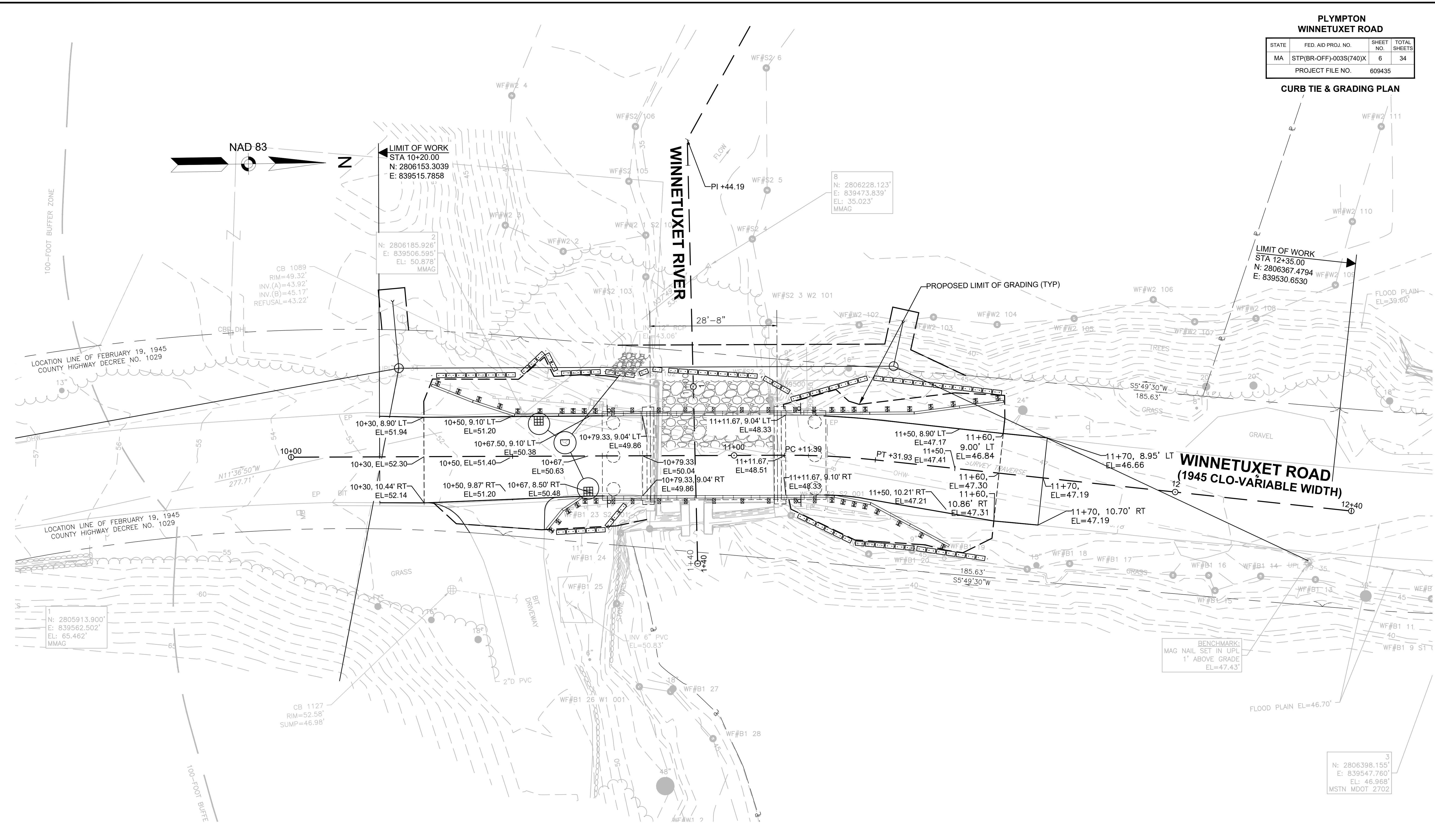
PROFILE
WINNETUXET ROAD



NOTES:

1. ORDINARY HIGH WATER ELEVATION IS NOT AVAILABLE

FOR CONSTRUCTION PLAN:
SEE SHEET NO. 4

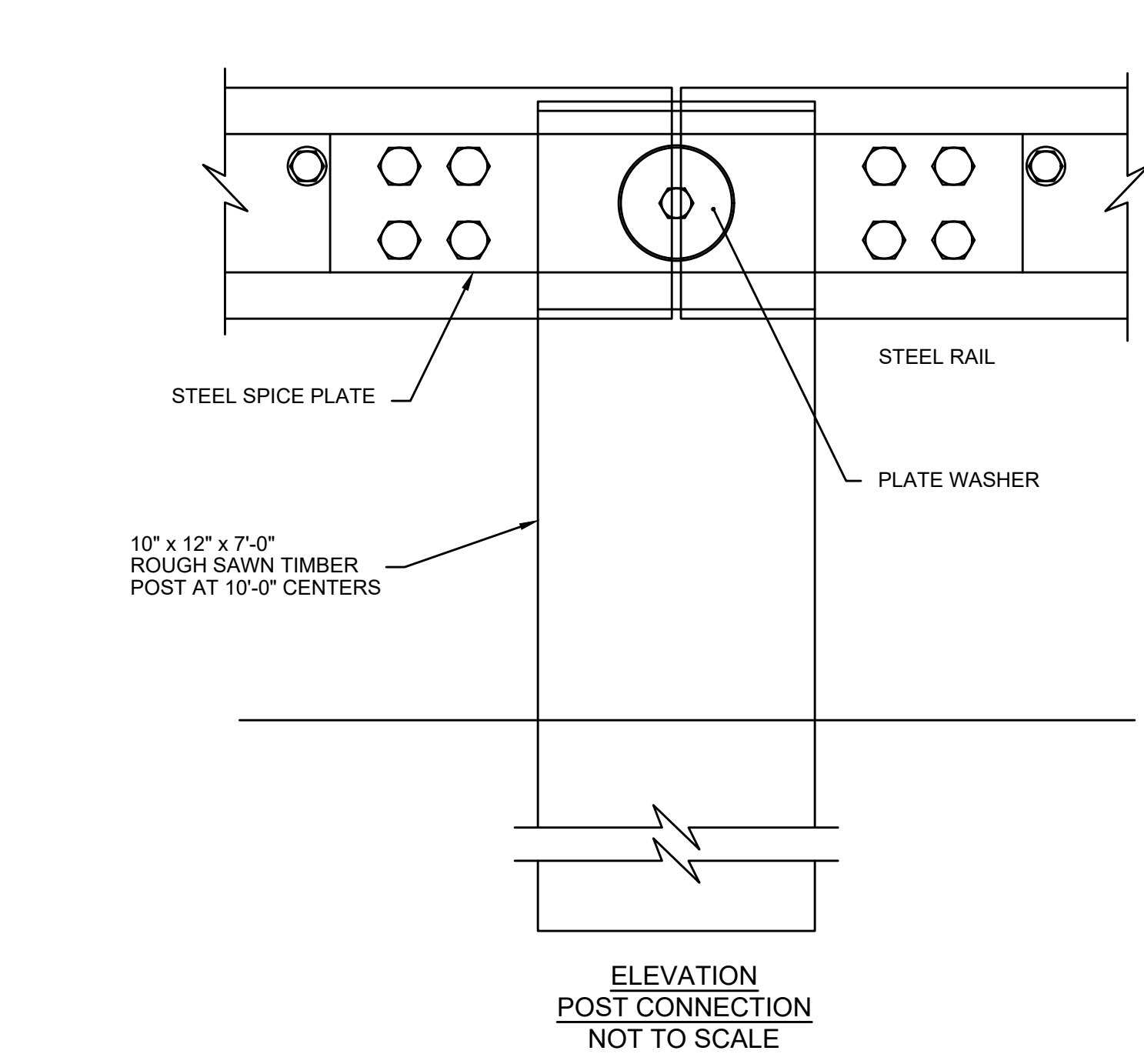
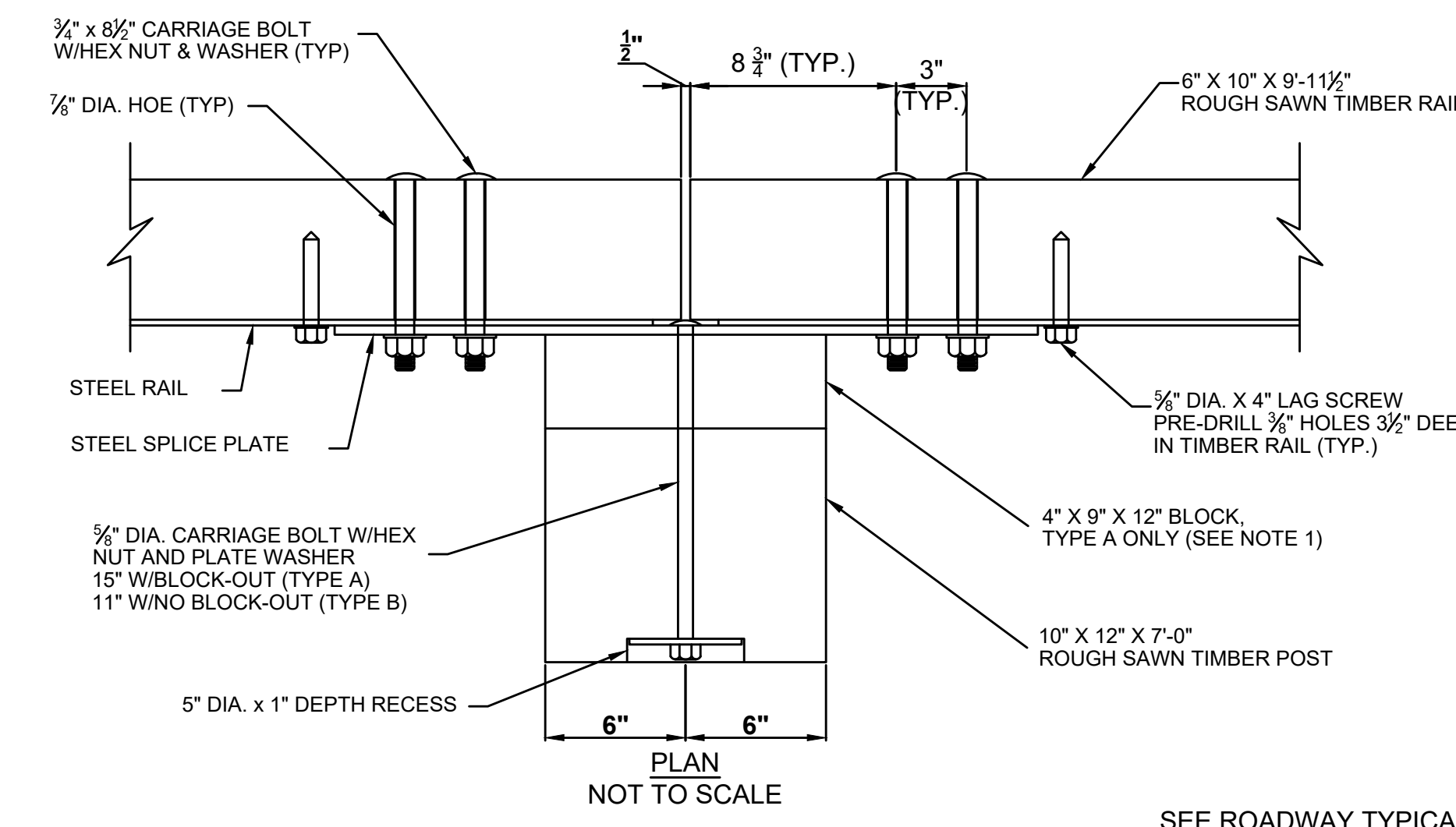
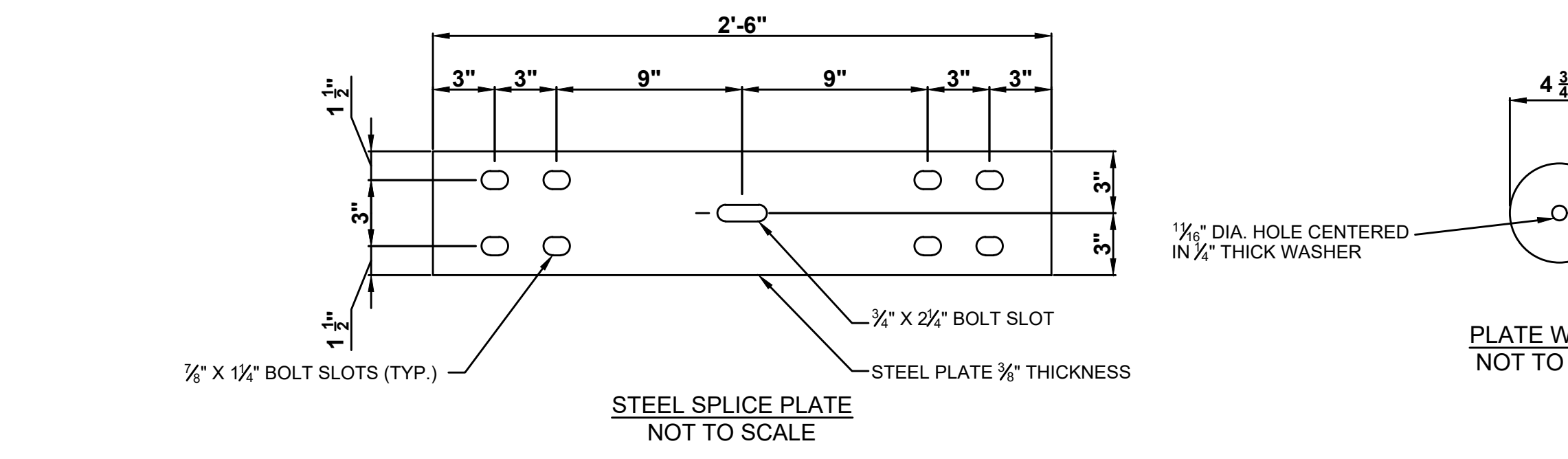
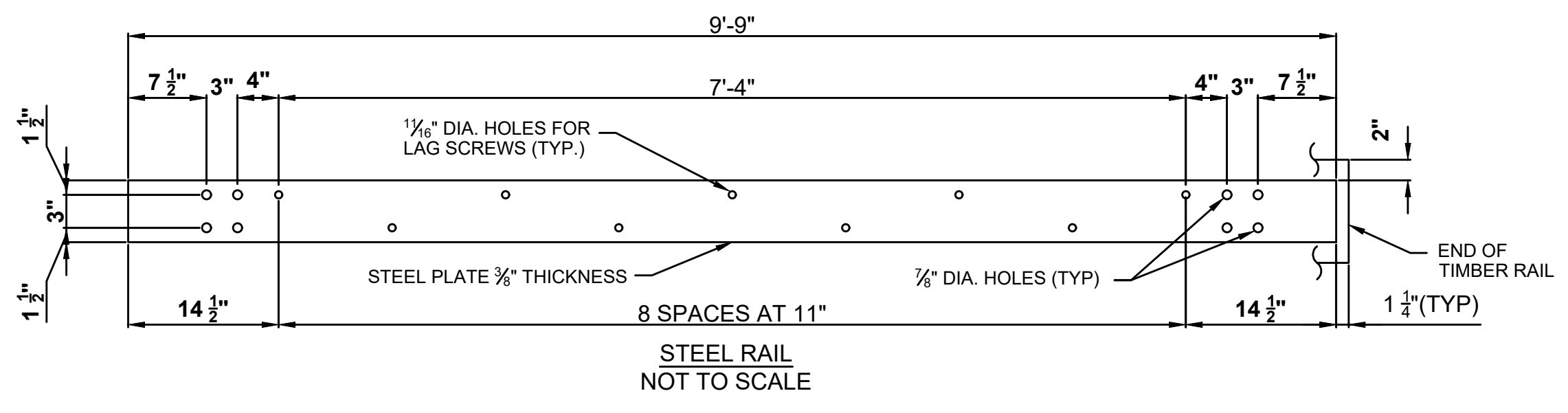


TRAVERSE POINTS TABLE

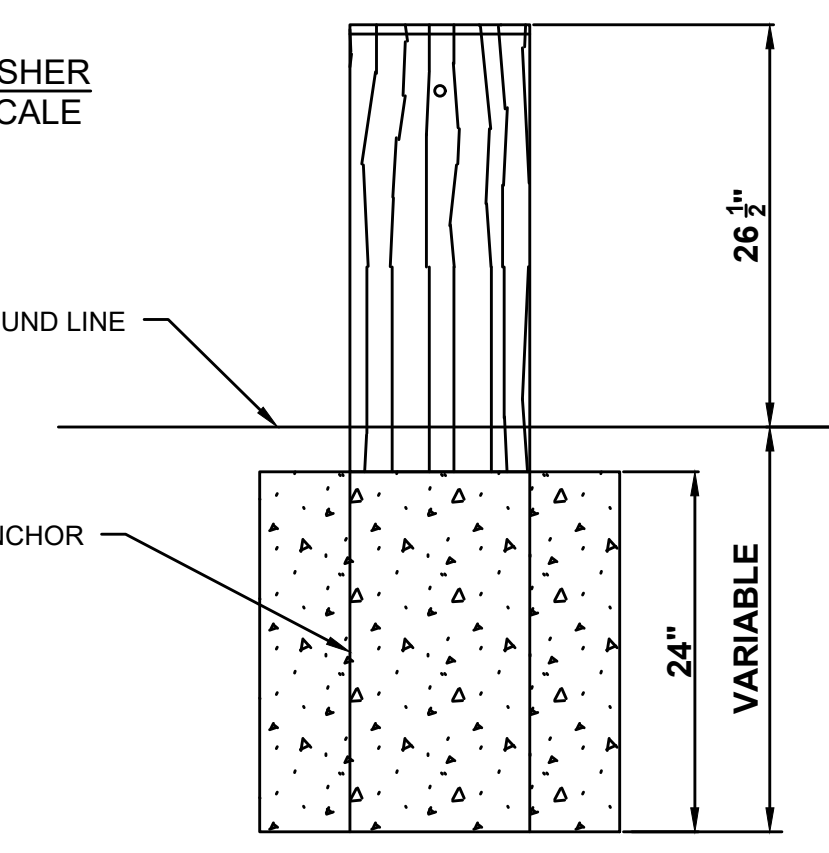
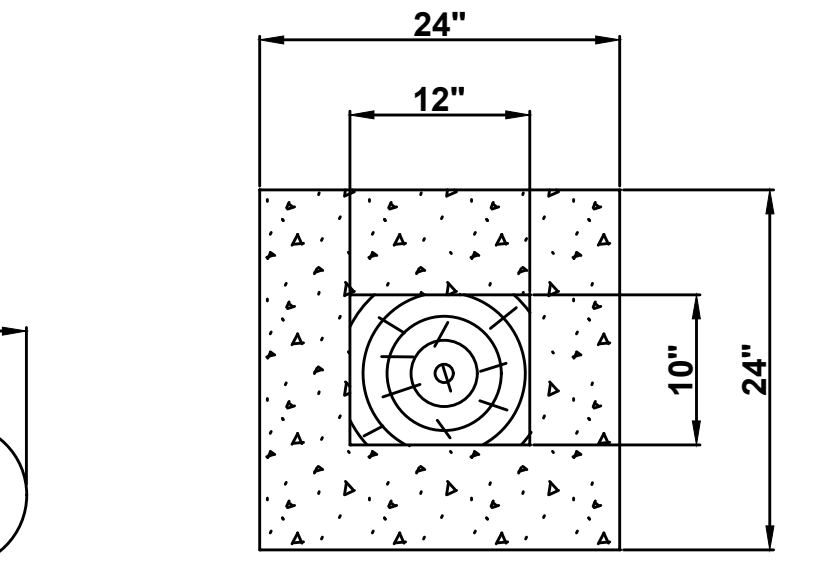
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	2805914.900	839562.502	65.462	MMAG
2	2806186.926	839506.595	50.878	MMAG
3	2806399.155	839547.760	46.968	MSTN MDOT 2702
4	2806748.130	839465.983	41.565	MSTN MDOT 2703
8	2806229.123	839473.839	35.023	MMAG



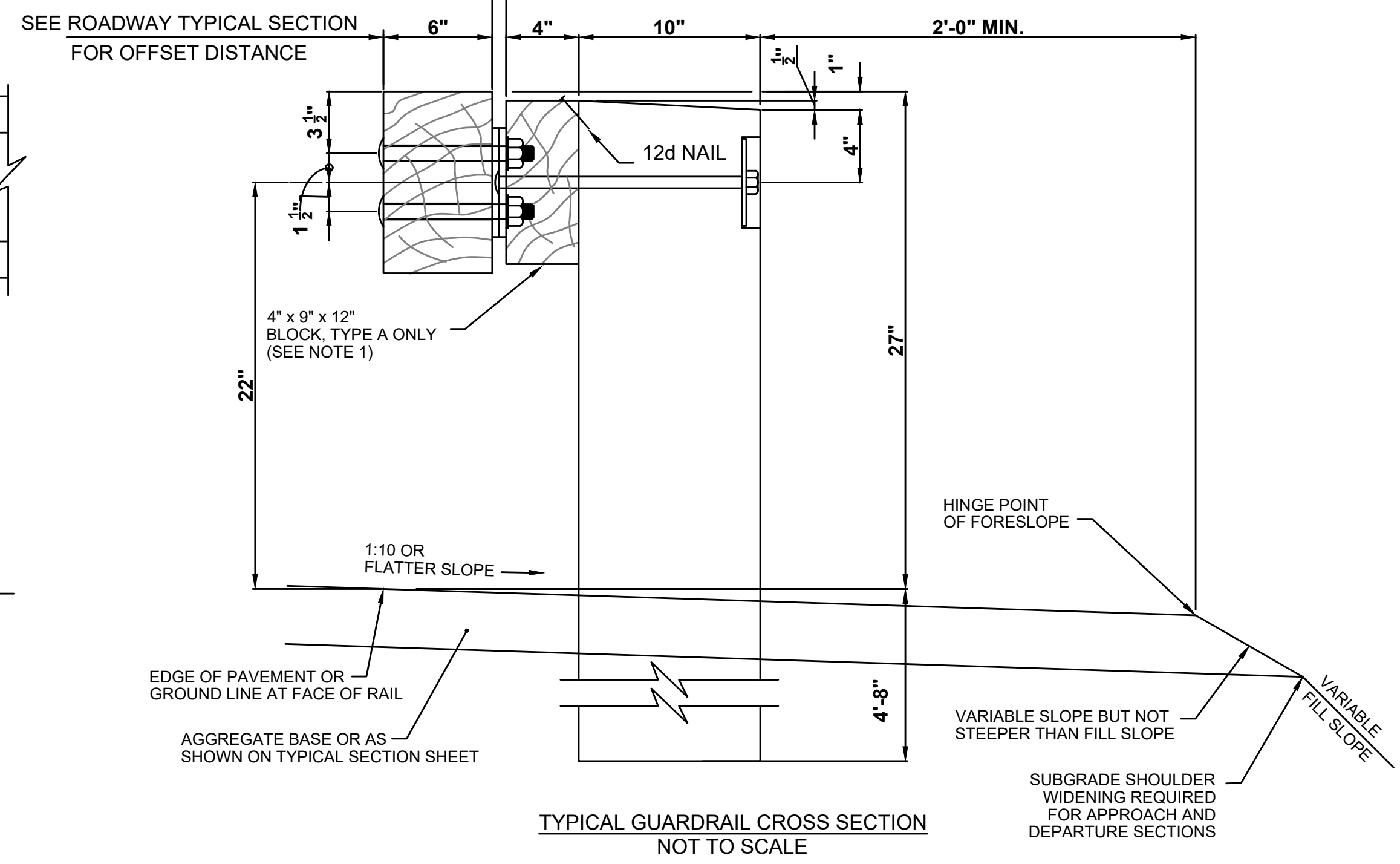
**CONSTRUCTION DETAILS
& TRAFFIC SIGN SUMMARY**



- GUARDRAIL NOTES:**
1. USE THE TYPE A, BLOCKED-OUT, SYSTEM OR THE TYPE B, NON-BLOCKED-OUT, SYSTEM AS SPECIFIED IN THE PLANS.
 2. USE WEATHERING STEEL FOR ALL STRUCTURAL STEEL AND FASTENER HARDWARE AS SPECIFIED.
 3. PLACE A TERMINAL SECTION (SEE STANDARDS 617-61 AND 617-62) ON BOTH APPROACH AND TRAILING ENDS OF BARRIER INSTALLATIONS.



**CONCRETE ANCHOR FOR SHORT GUARDRAIL POST
NOT TO SCALE**



**TYPICAL GUARDRAIL CROSS SECTION
NOT TO SCALE**

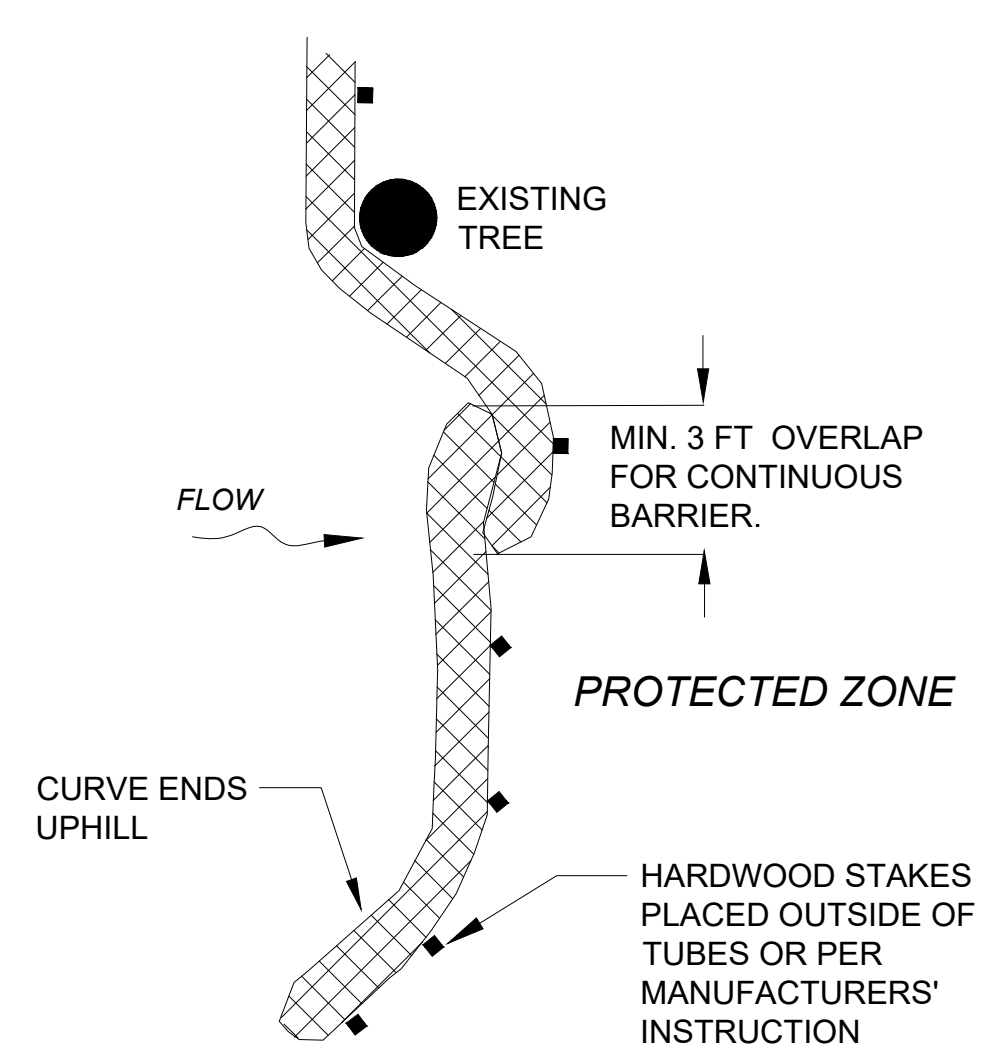
TRAFFIC SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
W5-2	36"	36"		SEE STANDARDS (1)			2	YELLOW	BLACK	BLACK	ON EXISTING POST	9	18
OM3-L	12"	36"		↓	↓	↓	2	YELLOW	BLACK	BLACK	P-5 2	3	6
OM3-R	12"	36"		↓	↓	↓	2	YELLOW	BLACK	BLACK	P-5 2	3	6

- TRAFFIC SIGN NOTES:**
1. PER THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE 2022 MASSDOT AMENDMENTS TO THE MUTCD, AND THE LATEST VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS FOR SIGNS AND SUPPORTS.

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CONSTRUCTION DETAILS



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

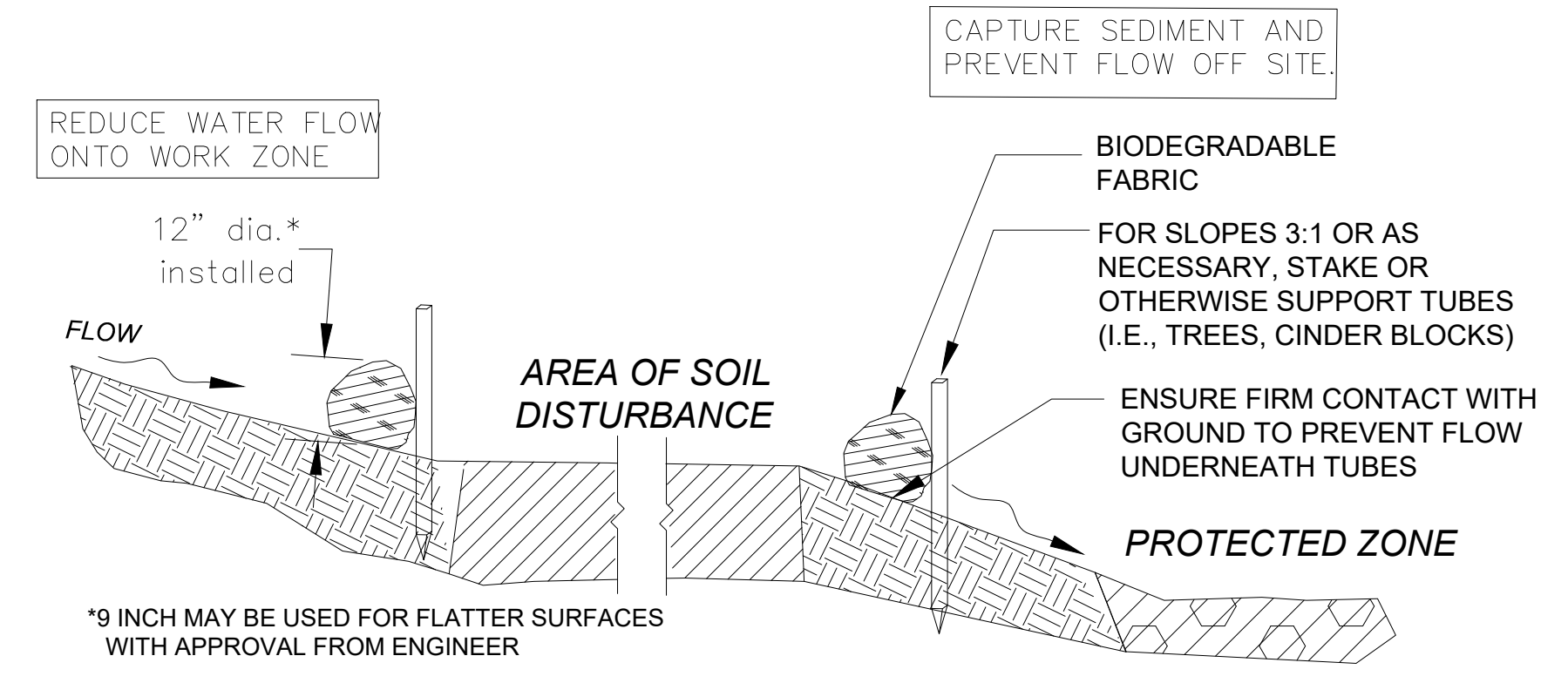
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

SEDIMENT BARRIERS

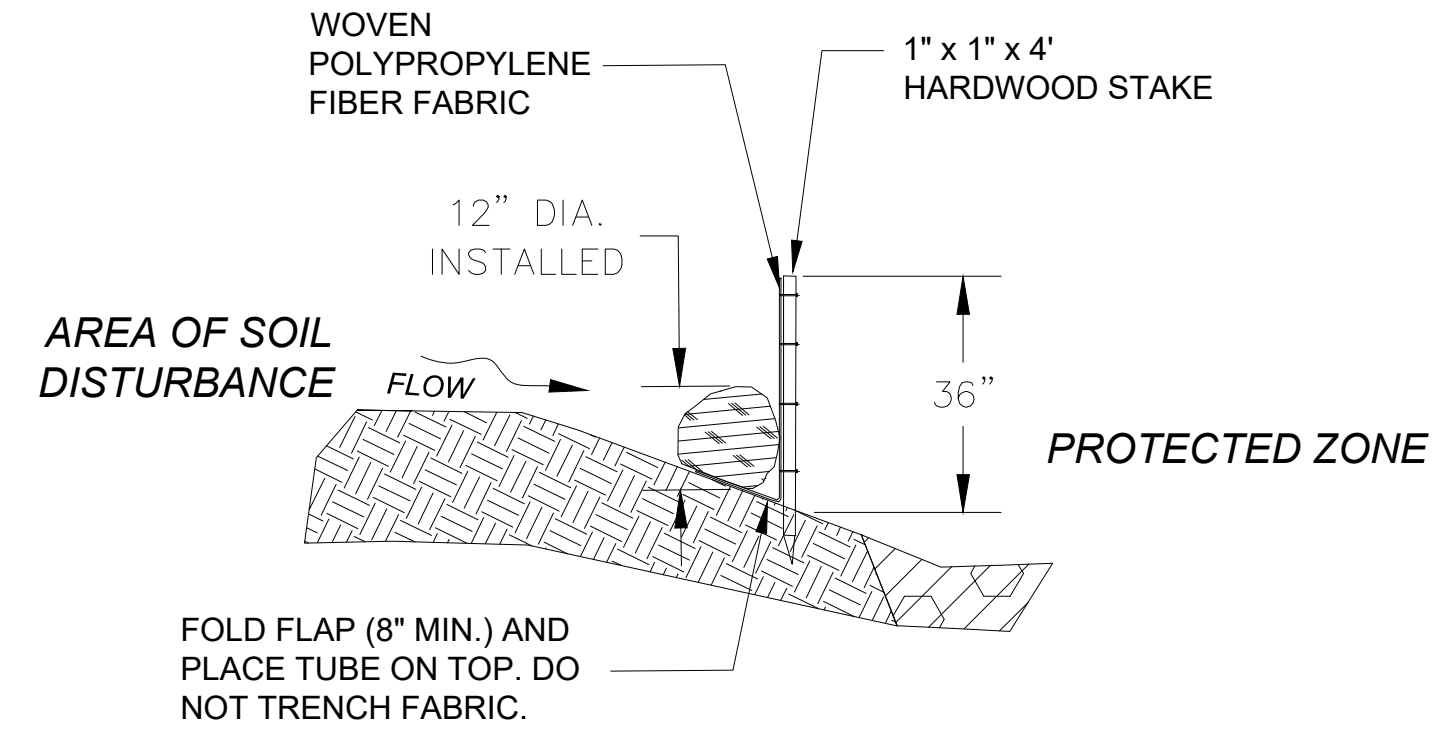
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

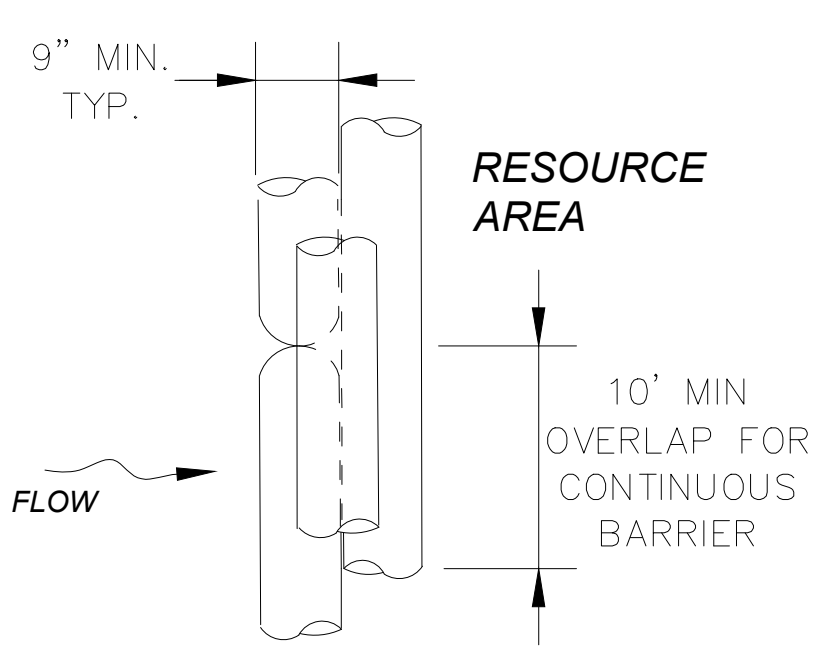
NOT TO SCALE



SECTION

COMPOST FILTER TUBE & SILT FENCE

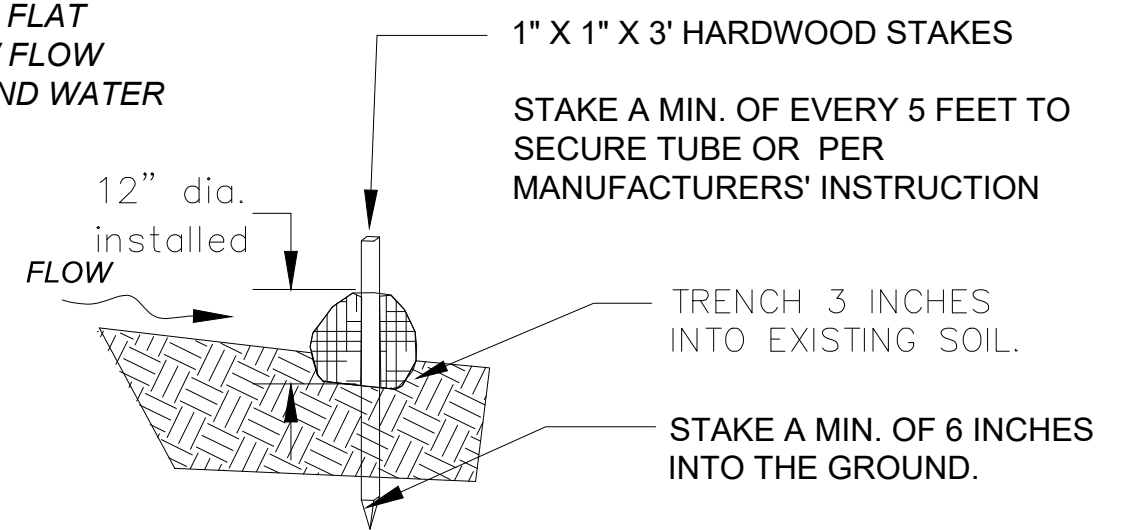
NOT TO SCALE



PLAN VIEW

12 INCH STRAW WATTLE

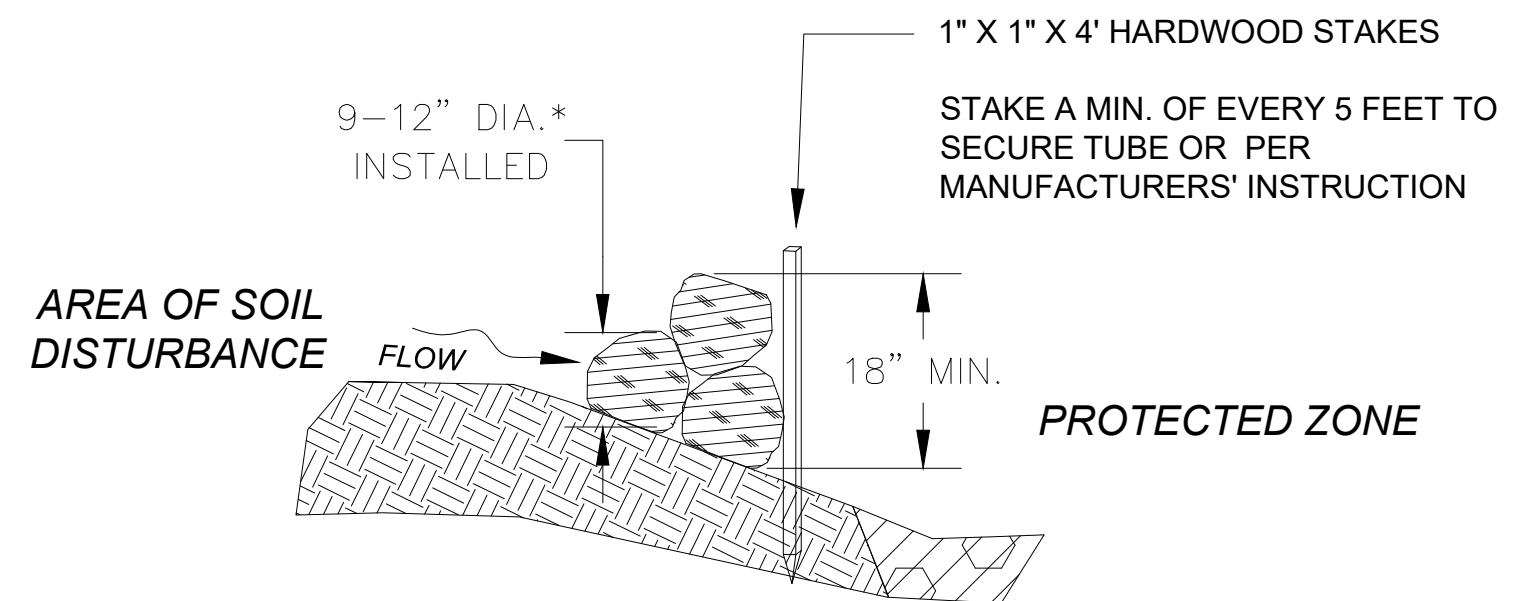
TO BE USED ONLY ON FLAT SURFACES WITH LOW FLOW TO DIVERT OR IMPOUND WATER FLOW



SECTION

SEDIMENT BARRIERS - STRAW WATTLE

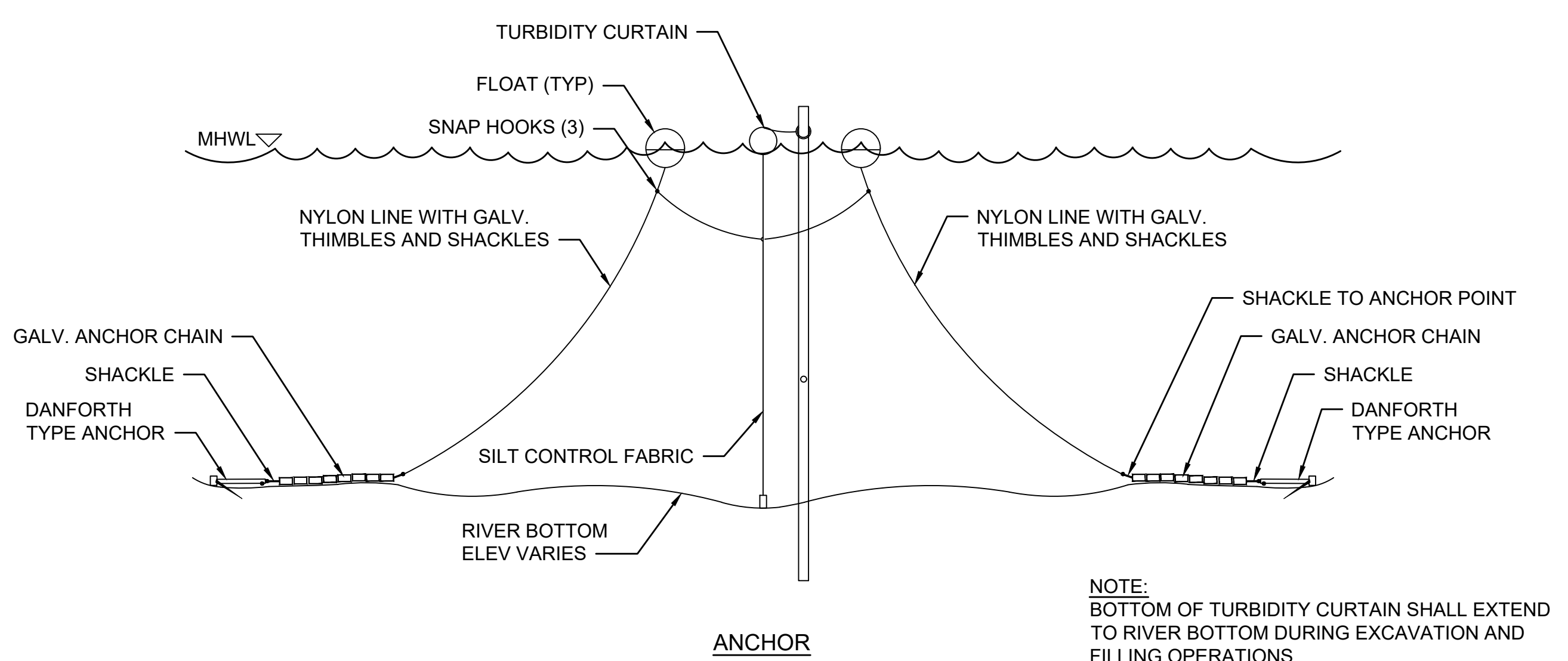
NOT TO SCALE



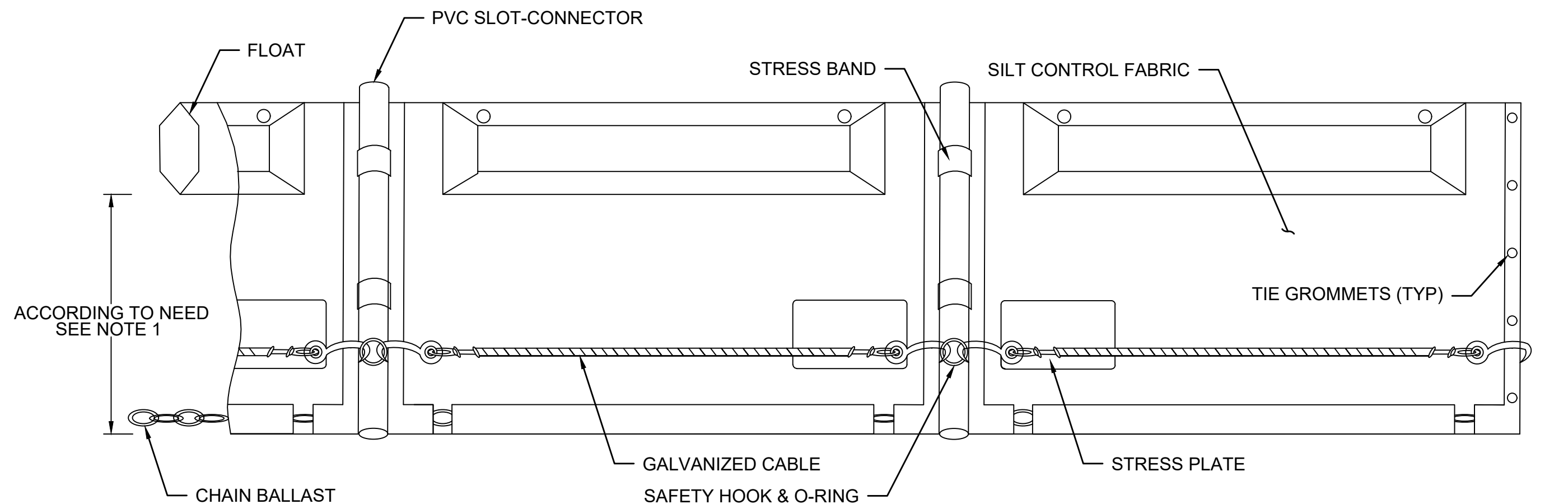
SECTION

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

NOT TO SCALE



NOTE: BOTTOM OF TURBIDITY CURTAIN SHALL EXTEND TO RIVER BOTTOM DURING EXCAVATION AND FILLING OPERATIONS



ACCORDING TO NEED SEE NOTE 1

TURBIDITY CURTAIN DETAIL

NTS

- NOTES:
1. TURBIDITY CURTAIN DEPTH VARIES. TURBIDITY CURTAIN SHALL EXTEND FROM RIVER BOTTOM TO WATER SURFACE DURING EXCAVATION AND FILLING OPERATIONS
 2. INSTALL PER MANUFACTURER'S RECOMMENDATION

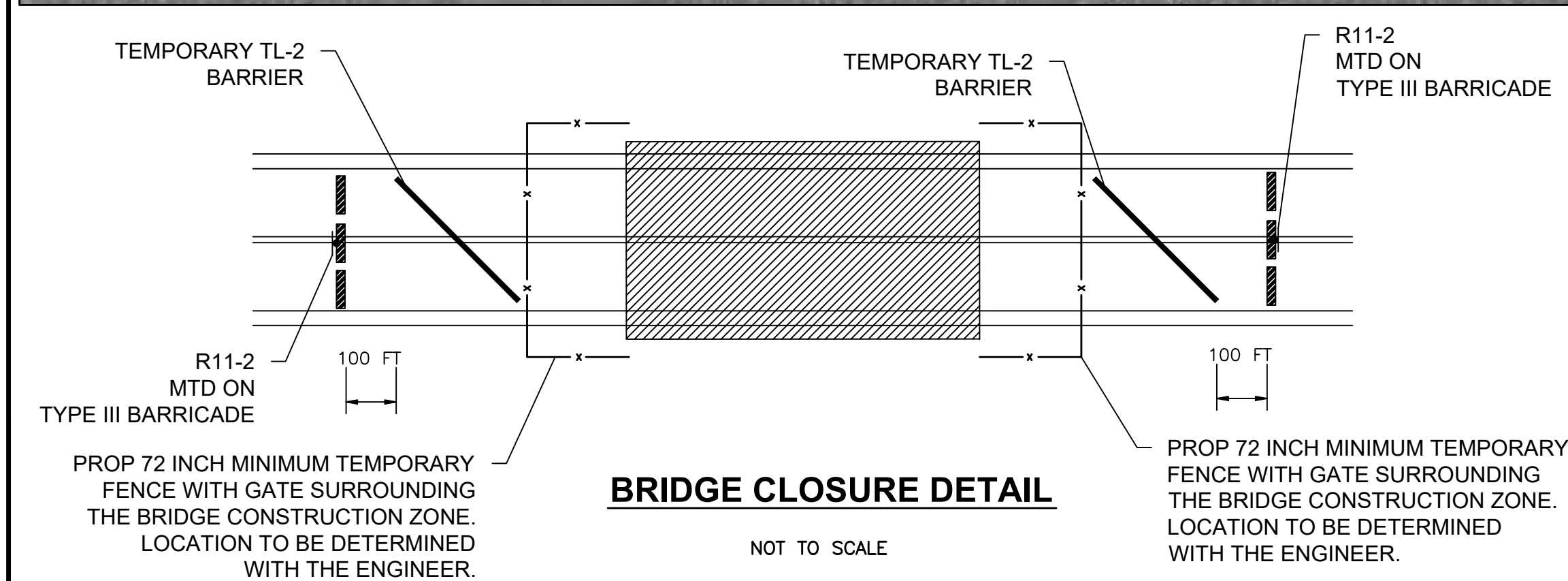
DETOUR SIGN SUMMARY

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
M4-8a	24"	18"	END DETOUR	SEE STANDARDS (2)			2	F.O.*	BLACK	BLACK	P-5 2	3	6
M4-9VL	30"	24"	DETOUR ←				1	F.O.	BLACK	BLACK	P-5 1	5	5
M4-9VR	30"	24"	DETOUR →				2	F.O.	BLACK	BLACK	P-5 2	5	10
M4-9L	30"	24"	DETOUR ←				5	F.O.	BLACK	BLACK	P-5 5	5	25
M4-9R	30"	24"	DETOUR →				6	F.O.	BLACK	BLACK	P-5 6	5	30
M4-9V	30"	24"	DETOUR ↑				5	F.O.	BLACK	BLACK	P-5 5	5	25
M4-10L	48"	18"	DETOUR ←				1	F.O.	BLACK	BLACK	MOUNT W/ R11-3ab SIGNS	6	6
M4-10R	48"	18"	DETOUR →				1	F.O.	BLACK	BLACK	MOUNT W/ R11-3ab SIGNS	6	6
R11-2	48"	30"	ROAD CLOSED				2	WHITE	BLACK	BLACK	MOUNT ON TYPE III BARRICADE	10	20
R11-3ab	60"	30"	ROAD CLOSED AHEAD LOCAL TRAFFIC ONLY				2	WHITE	BLACK	BLACK	MOUNT ON TYPE III BARRICADE	12.5	25
W16-8p	48"	12"	Winnetuxet Rd				19	F.O.	BLACK	BLACK	MOUNT W/ M4-9 SIGNS	4	76
W20-2	36"	36"	DETOUR AHEAD				3	F.O.	BLACK	BLACK	P-5 3	9	27

* F.O. = FLUORESCENT ORANGE (SEE NOTE 4)

DETOUR NOTES

- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN MASSDOT STANDARD TEMPORARY SIGN SUPPORTS. NO SIGNS SHALL BE MOUNTED ON DRUMS.
- PER THE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE 2022 MASSDOT AMENDMENTS TO THE MUTCD, AND THE LATEST VERSION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS FOR SIGNS AND SUPPORTS.
- THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE GROUND, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL TEMPORARY WARNING SIGNS SHALL HAVE FLUORESCENT ORANGE BACKGROUNDS WITH BLACK LEGENDS AND BORDERS UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- ALL TRAFFIC CONTROL DEVICES INCLUDING SIGNS, DRUMS, BARRICADES, BARRIER AND OTHER DEVICES SHALL BE INSTALLED PER MUTCD/MASSDOT STANDARD SPECIFICATIONS.
- ALL TRAFFIC CONTROL DEVICES INCLUDING SIGNS, DRUMS, BARRICADES, BARRIER AND OTHER DEVICES SHALL BE INSTALLED INSIDE PUBLIC RIGHT OF WAY.
- ACCESS TO PRIVATE DRIVEWAYS TO BE MAINTAINED AT ALL TIMES.
- WORK AREA SHALL BE PROTECTED ADEQUATELY DURING WORKING AND NON-WORKING HOURS.
- ALL ROADS SHOWN ARE PUBLIC ROADS. ALL PROPOSED SIGNS SHALL BE PLACED WITHIN PUBLIC RIGHT OF WAY.



NOTES

- ACCESS TO PRIVATE DRIVEWAYS ARE TO BE MAINTAINED AT ALL TIMES.

TWO WEEKS PRIOR TO CLOSURE

PHASE 1	PHASE 2
WINTUX BRDG OUT	STARTING MM-DD

PCMS 1, 2

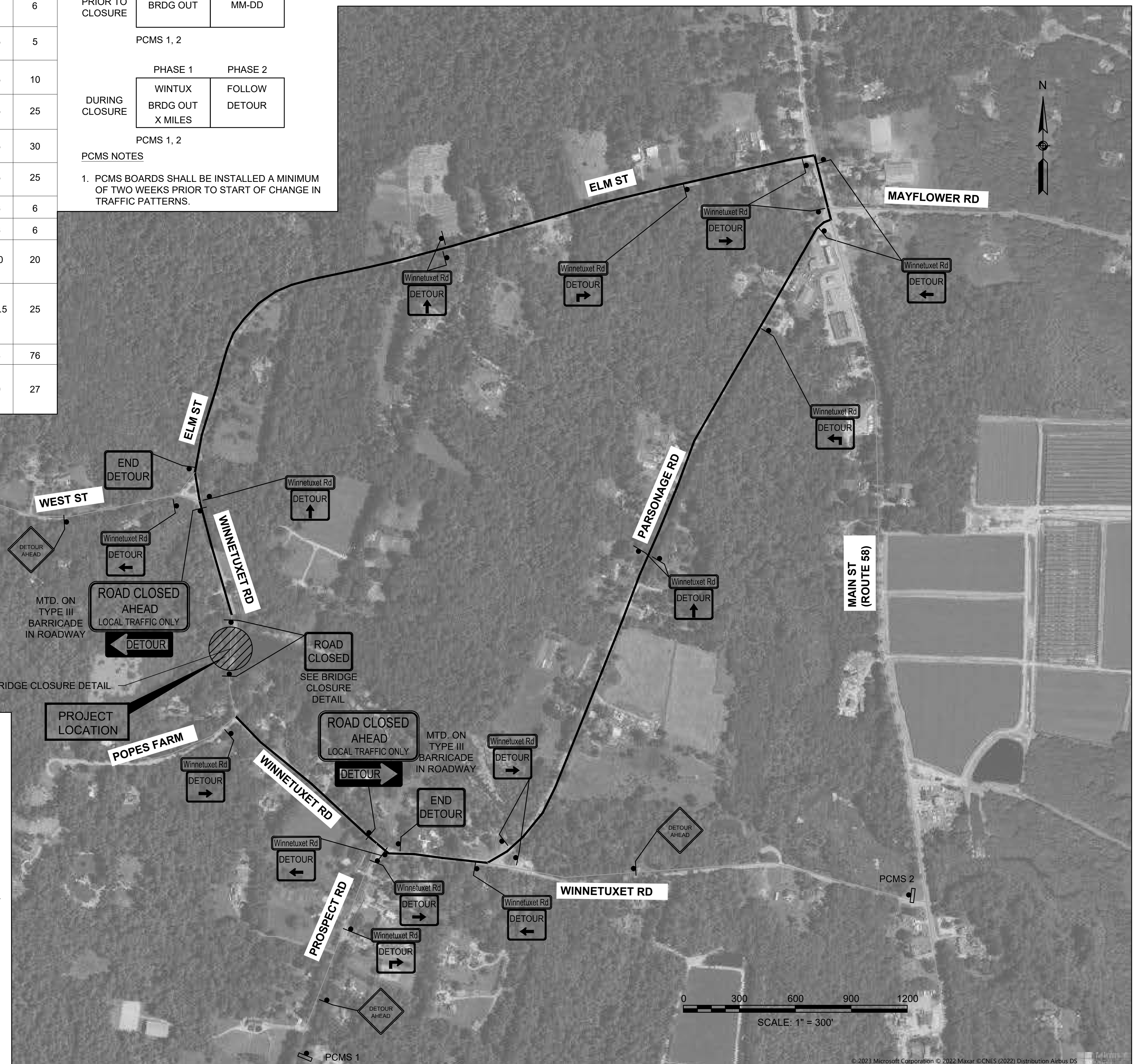
DURING CLOSURE

PHASE 1	PHASE 2
WINTUX BRDG OUT X MILES	FOLLOW DETOUR

PCMS 1, 2

PCMS NOTES

- PCMS BOARDS SHALL BE INSTALLED A MINIMUM OF TWO WEEKS PRIOR TO START OF CHANGE IN TRAFFIC PATTERNS.



PLYMPTON
WINNETUXET ROAD

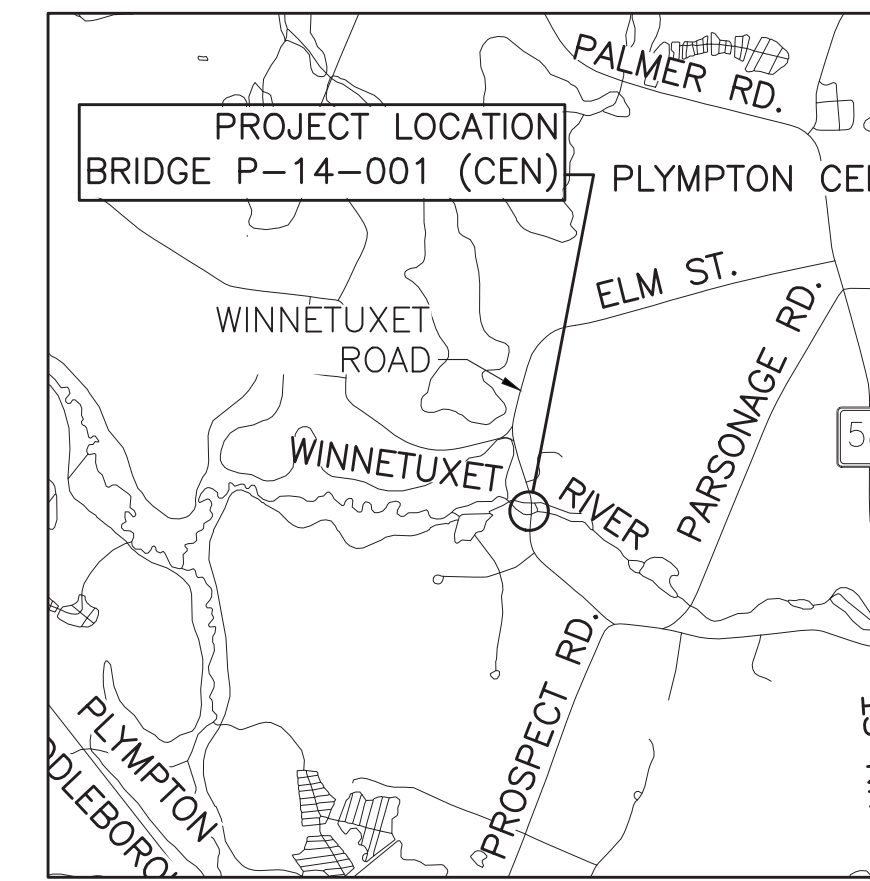
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TEMPORARY TRAFFIC CONTROL PLAN
DETOUR PLAN

**PLYMPTON
WINNETUXET ROAD**

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MA	STP(BR-OFF)-003S(740)X	10	34
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KEY PLAN, PROFILES, LOCUS AND INDEX

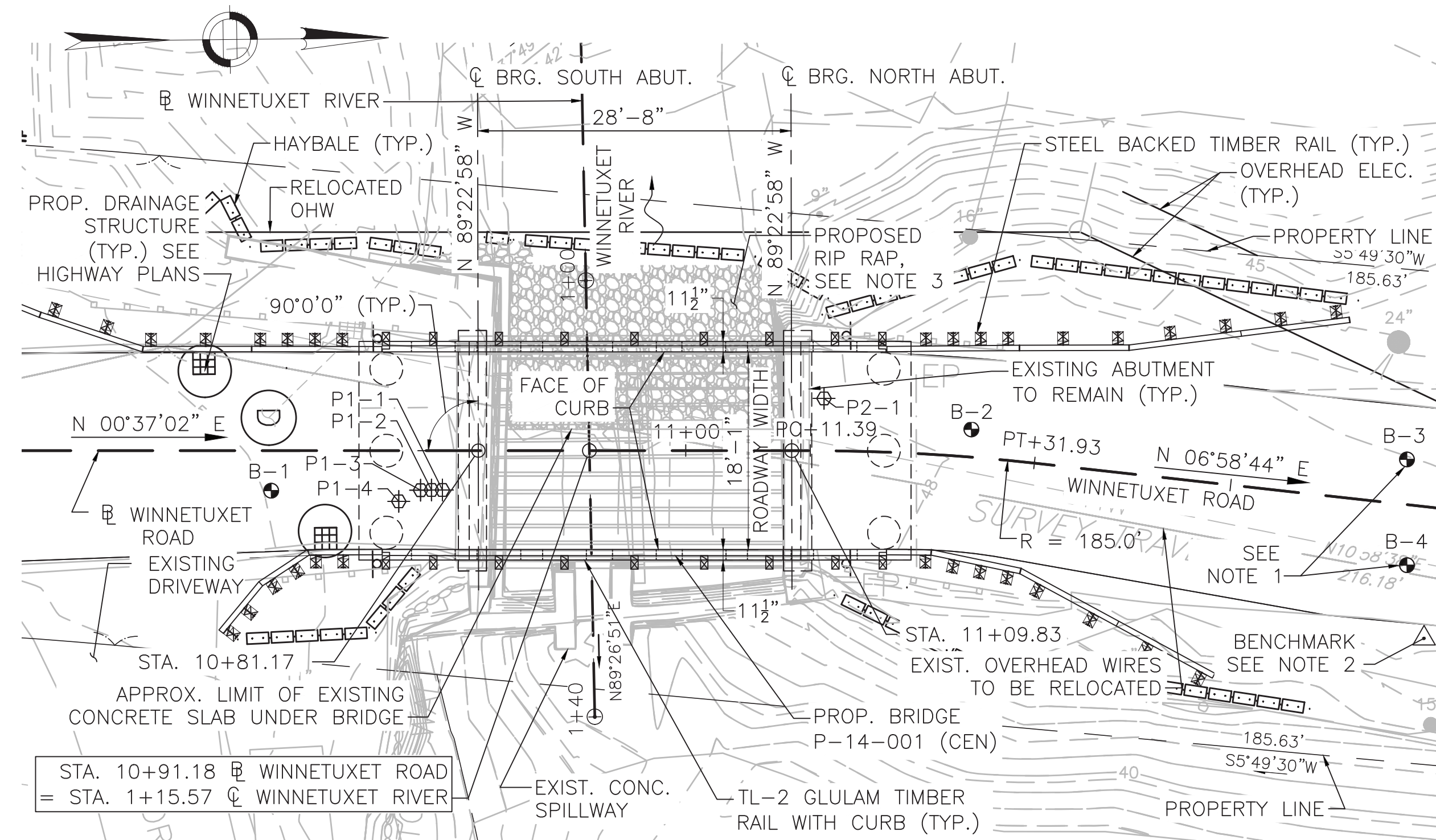


LOCUS

SCALE: 1" = 2000'

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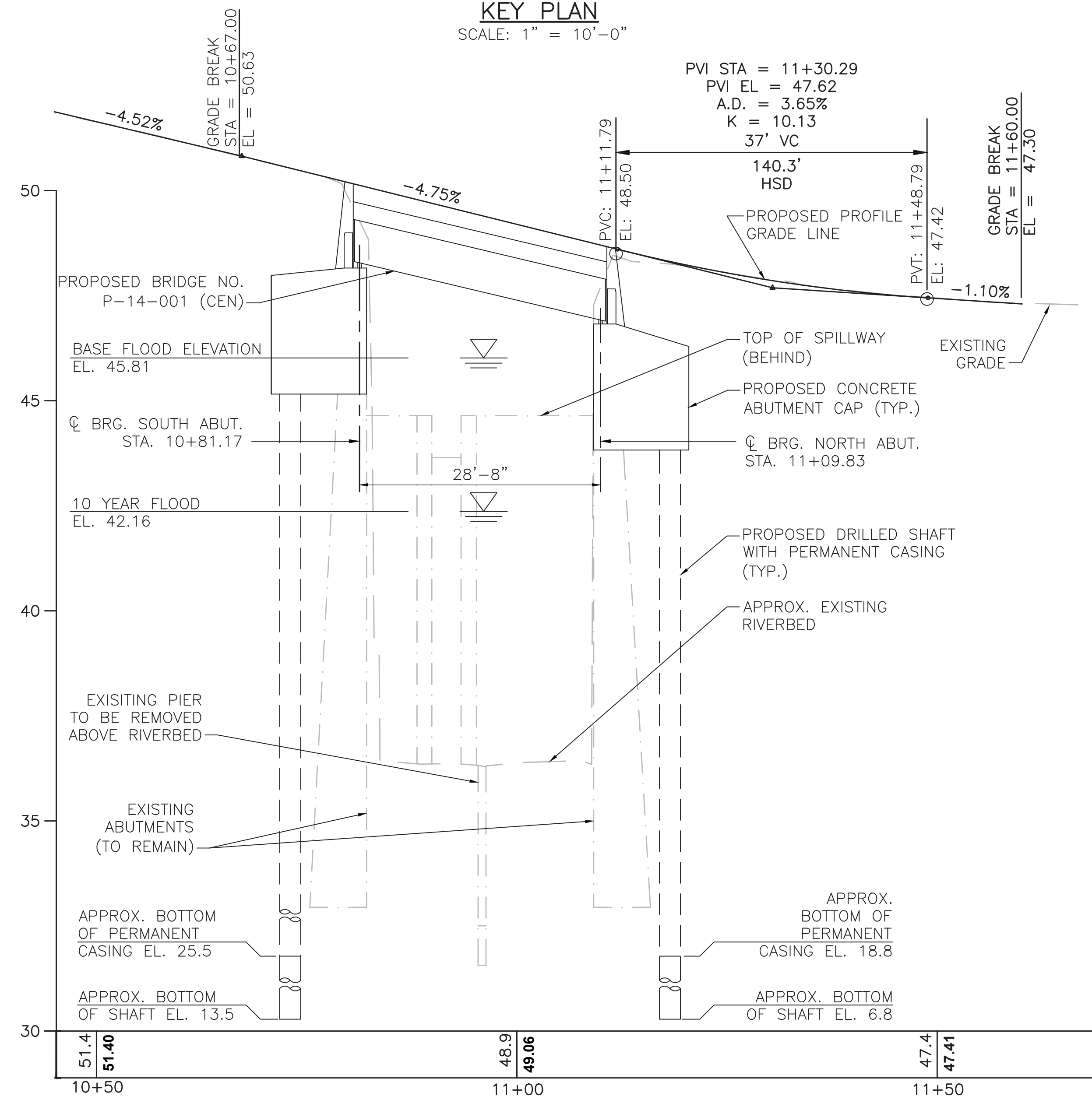


KEY PLAN

SCALE: 1" = 10'-0"

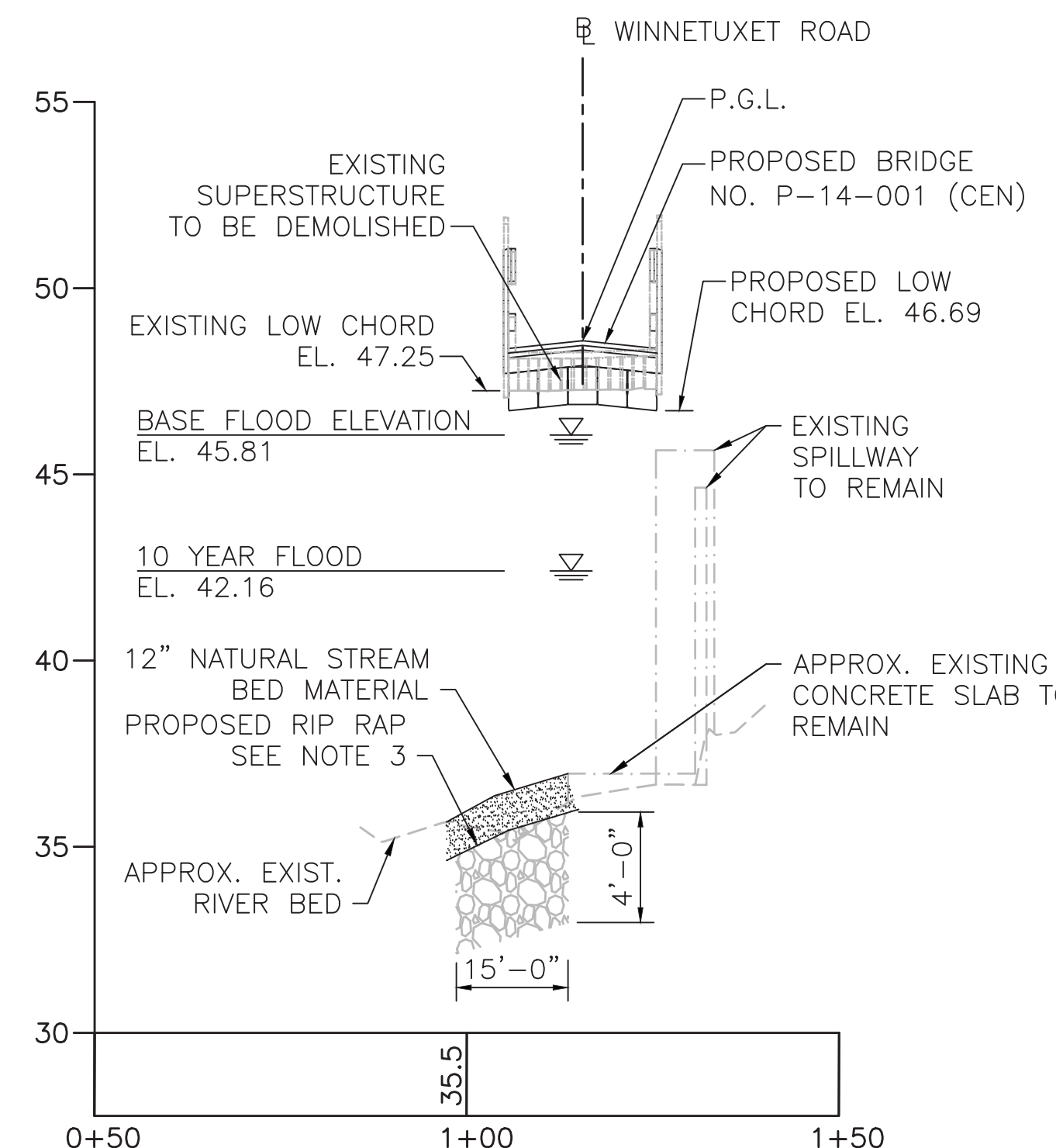
NOTES:

1. THE NORTH AND EAST COORDINATES OF BORINGS AND PROBES ARE SHOWN ON BORING LOGS SHEETS 1 THROUGH 7.
2. BENCHMARK IS LOCATED APPROXIMATELY AT STA. 12+32, 12.5 FEET RIGHT, ELEVATION 47.43 FEET.
3. RIP RAP SHALL BE INSTALLED ALONG THE EXISTING CONCRETE SLAB AT THE DOWNSTREAM EDGE, AND EXTEND TO WINNETUXET RIVER STATION 0+95. RIP RAP SHALL HAVE 4'-0" THICKNESS, D50=24", AND D100=48".



PROFILE - B OF CONSTRUCTION (WINNETUXET ROAD)

SCALE: HORZ. 1" = 10'-0"
VERT. 1" = 2'-0"



PROFILE - C OF WINNETUXET RIVER

SCALE: HORZ. 1" = 20'-0"
VERT. 1" = 4'-0"



Hanes, Kristina

AECOM

1 FEDERAL STREET,
8TH FLOOR
BOSTON, MA 02110

JUNE 29, 2024 ISSUED FOR CONSTRUCTION



**PROPOSED BRIDGE
PLYMPTON
WINNETUXET ROAD
OVER WINNETUXET RIVER**

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

Alexander K. Bardow, P.E. STATE BRIDGE ENGINEER
Carrie Lavallee, P.E. CHIEF ENGINEER

GENERAL NOTES:

DESIGN:

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

MASSDOT BENCH MARK:

MAG NAIL SET IN UPL 1 FOOT ABOVE GRADE, EL. 47.43 FEET.

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

MASSDOT SURVEY NOTEBOOKS:

SURVEY INFORMATION WAS PREPARED BY GREEN INTERNATIONAL AFFILIATES, INC. ACCURACY IS NOT GUARANTEED. THE SURVEY WAS PERFORMED BETWEEN APRIL 1, 2021 AND JUNE 4, 2021. FIELD NOTES CAN BE FOUND IN MASSDOT DISTRICT 5 FIELD BOOK 43867.

HORIZONTAL AND VERTICAL CONTROL WAS ESTABLISHED BY MASSDOT SURVEY ON FEBRUARY 25, 2021, IN FIELD BOOK 41673, PAGE 62.

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 AT THE BEARINGS AND THE BRIDGE RAIL SHALL BE SET BY TEMPLATE BEFORE THE CONCRETE IS PLACED.

CONCRETE:

THE FOLLOWING CONCRETE MIX SHALL BE USED WHERE NOTED:
5000PSI, HP CEMENT CONCRETE – DECK, BACKWALL, CURTAIN WALLS, ABUTMENT CAP, EXISTING ABUTMENT TOPPING SLAB

FOR DRILLED SHAFTS AND PRESTRESSED CONCRETE DECK BEAMS, SEE SHEETS 14 AND 16, RESPECTIVELY.

REINFORCEMENT:

REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 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"	19"	23"
2. 12" OF CONCRETE BELOW BAR	20"	25"	30"
3. EPOXY COATED BARS, COVER < 3d _b , OR CLEAR SPACING < 6d _b	23"	29"	34"
4. COATED BARS, ALL OTHER CASES	18"	23"	27"
5. CONDITION 2. AND 3.	26"	32"	39"
6. CONDITION 2. AND 4.	24"	30"	36"

ALL OTHER BARS SHALL BE LAPPED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ALL HOOKS AND BENDS SHALL BE STANDARD HOOKS UNLESS NOTED OTHERWISE.

COATED BARS:

ALL REINFORCING BARS AND SUPPORTING DEVICES SHALL BE COATED UNLESS OTHERWISE NOTED. COATING SHALL BE EITHER ALL EPOXY IN ACCORDANCE WITH AASHTO M284M OR ALL HOT DIPPED GALVANIZED IN ACCORDANCE WITH AASHTO M111M.

MEMBRANE WATERPROOFING:

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

GENERAL NOTES (CONT.):

TIMBER RAIL:

THIS BRIDGE RAIL WAS SUCCESSFULLY CRASH TESTED TO REQUIREMENTS FOR TEST LEVEL 2 (TL-2) AS OUTLINED IN NCHRP REPORT 350. SAWN LUMBER AND GLULAM SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO M166 AND SHALL BE PRESSURE TREATED WITH WOOD PRESERVATIVE IN ACCORDANCE WITH AASHTO M133.

BRIDGE RAIL SHALL BE HORIZONTALLY LAMINATED GLULAM, VISUALLY GRADED WESTERN SPECIES COMBINATION NO. 2 OR VISUALLY GRADED SOUTHERN PINE COMBINATION NO. 48. OTHER SPECIES AND GRADES OF GLULAM MAY BE USED, PROVIDED THE MINIMUM TABULATED VALUES ARE NOT LESS THAN THE FOLLOWING:
F_{by} = 1,800 LB/IN², E = 1,800,000 LB/IN².

POST, CURBS, SCUPPERS, AND SPACER BLOCKS MAY BE SAWN LUMBER OR GLULAM. WHEN SAWN LUMBER IS USED, MATERIAL SHALL BE VISUALLY GRADED NO. 1 SOUTHERN PINE OR VISUALLY GRADED NO. 1 DOUGLAS FIR LARCH. GLULAM AND OTHER SPECIES AND GRADES OF SAWN LUMBER MAY BE USED, PROVIDED THE MINIMUM TABULATED VALUES ARE NO LESS THAN THE FOLLOWING:
F_b = 1,350 LB/IN², E = 1,500,000 LB/IN².

STEEL PLATES AND SHAPES SHALL COMPLY WITH THE REQUIREMENTS OF ASTM A36 OR A572 GRADE 50.

BOLTS SHALL COMPLY WITH ASTM A449 REQUIREMENTS, AND SHOULD PREFERABLY BE DOME HEAD TIMBER BOLTS. BOLTS ON THE RAIL TRAFFIC FACE SHALL BE DOME HEAD.

SPLIT RINGS SHALL BE MANUFACTURED FROM SAE 1010 HOT-ROLLED CARBON STEEL (SAE 412). SHEAR PLATES SHALL BE MALLEABLE IRON MANUFACTURED ACCORDING TO ASTM A47, GRADE 52510.

ALL STEEL COMPONENTS AND FASTENERS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111 OR M232 OR SHALL OTHERWISE BE PROVIDED WITH ADEQUATE CORROSION PROTECTION.

PRECAST ELEMENTS:

THE FABRICATOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF LIFT HOOKS FOR ALL PRECAST ELEMENTS. UNDER NO CIRCUMSTANCES WILL THE REBAR ELEMENTS SHOWN ON THE PLANS BE USED TO LIFT THE PRECAST ELEMENTS.

STRUCTURAL STEEL:

UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M270 GRADE 50.

EXISTING BRIDGE PLANS:

PLANS FOR THE EXISTING BRIDGE ARE AVAILABLE AND MAY BE SEEN AT THE OFFICE OF THE STATE BRIDGE ENGINEER, MASSDOT – HIGHWAY DIVISION, 10 PARK PLAZA, BOSTON, MASSACHUSETTS 02116.

EXISTING CONDITIONS:

DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE TAKEN FROM THE ORIGINAL DESIGN DRAWINGS AND FIELD OBSERVATIONS AND ARE NOT GUARANTEED. THE CONTRACTOR IS REQUIRED TO EXAMINE THE DRAWINGS AND SPECIFICATIONS, AND TO VISIT THE SITE TO FULLY GET INFORMED ABOUT THE EXISTING CONDITIONS AND LIMITATIONS PRIOR TO AGREEING TO PERFORM THE WORK. FAILURE TO DO THIS WILL IN NO WAY RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY OF FURNISHING ANY MATERIALS OR PERFORMING ANY WORK IN ACCORDANCE WITH THESE DRAWINGS AND SPECIFICATIONS. ALL ELEVATIONS, DIMENSIONS, AND CONDITIONS OF THE STRUCTURE SHOWN SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION OR CONSTRUCTION.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE PLANS AND ACTUAL FIELD CONDITIONS. THE CONTRACTOR MAY BE REQUIRED TO DOCUMENT EXISTING CONDITIONS IN SKETCHES OR OTHER METHODS AS DIRECTED BY THE ENGINEER.

CONSTRUCTION JOINTS:

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

ESTIMATED QUANTITIES (NOT GUARANTEED)	
DEMOLITION OF SUPERSTRUCTURE OF BRIDGE NO. P-14-001 (445)	1 LS
REINFORCED CONCRETE EXCAVATION	22 CY
BRIDGE EXCAVATION	130 CY
CLASS B ROCK EXCAVATION	35 CY
ORDINARY BORROW	55 CY
GRAVEL BORROW FOR BRIDGE FOUNDATION	50 CY
GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES	5 CY
DRIVE SAMPLE BORING	77 FT
CORE BORING	20 FT
SUPERPAVE BRIDGE SURFACE COURSE – 9.5 POLYMER (SSC-B – 9.5 – P)	6 TON
SUPERPAVE BRIDGE PROTECTIVE COURSE – 9.5 POLYMER (SPC-B – 9.5 – P)	6 TON
DRILLED SHAFT EXCAVATION 3.0 FOOT DIAMETER	210 FT
OBSTRUCTION EXCAVATION 3.0 FOOT DIAMETER	20 FT
DRILLED SHAFT 3.0 FOOT DIAMETER	210 FT
PERMANENT CASING 3.0 FOOT DIAMETER	135 FT
CROSS HOLE SONIC TESTING ACCESS PIPES	825 FT
CROSS HOLE SONIC TEST	6 EA
OSTERBERG LOAD CELL AXIAL LOAD TEST	1 EA
STEEL SHEETING	800 LB
TEMPORARY PROTECTIVE SHIELDING, BRIDGE NO. P-14-001 (CEN)	1 LS
BRIDGE STRUCTURE, BRIDGE NO. P-14-001 (CEN)	1 LS

PLYMPTON WINNETUXET ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	11	34
PROJECT FILE NO.		609435	

GENERAL NOTES AND QUANTITIES

TRAFFIC DATA		
	ROADWAY OVER	ROADWAY UNDER
DESIGN YEAR	2029	
AVERAGE DAILY TRAFFIC – PRESENT	357	
AVERAGE DAILY TRAFFIC – DESIGN YEAR	383	
DESIGN HOURLY VOLUME	38	
DIRECTIONAL DISTRIBUTION	51%	
TRUCK PERCENTAGE – AVERAGE DAY	14%	
TRUCK PERCENTAGE – PEAK HOUR	21%	
DESIGN SPEED	15	
DIRECTIONAL DESIGN HOURLY VOLUME	20	

SEISMIC DESIGN CRITERIA	
DESIGN RETURN PERIOD:	1000 YR.
DESIGN SPECTRA	
As	0.096
SDs	0.208
SD1	0.084
SITE CLASS	D
SEISMIC DESIGN CATEGORY (SDC)	A

HYDRAULIC DESIGN DATA	
DRAINAGE AREA (SQ. MILES)	11.5
DESIGN FLOOD DISCHARGE (C.F.S.)	873
DESIGN FLOOD FREQUENCY (YEARS)	10
DESIGN FLOOD VELOCITY (F.P.S.)	10.36
DESIGN FLOOD ELEVATION (FEET, NAVD)	42.16
BASE (100-YEAR) FLOOD DATA	
BASE FLOOD DISCHARGE (C.F.S.)	1800
BASE FLOOD ELEVATION (FEET, NAVD)	45.81
DESIGN AND CHECK SCOUR DATA	
DESIGN SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	25
DESIGN FLOOD ABUTMENT SCOUR DEPTH (FEET)	5.48
DESIGN FLOOD PIER SCOUR DEPTH (FEET)	N/A
CHECK SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	50
CHECK FLOOD ABUTMENT SCOUR DEPTH (FEET)	7.56
CHECK FLOOD PIER SCOUR DEPTH (FEET)	N/A
FLOOD OF RECORD (FEET)	N/A
DISCHARGE (C.F.S.)	N/A
FREQUENCY (IF KNOWN, YEARS)	N/A
MAXIMUM ELEVATION (FEET, NAVD)	N/A
DATE (MM/YYYY)	N/A
HISTORY OF ICE FLOES	N/A
EVIDENCE OF SCOUR AND EROSION	*

* CONCRETE FOOTING EXPOSED ALONG SOUTH ABUTMENT

TEMPORARY WATER CONTROL DESIGN DATA	
DESIGN FLOOD DISCHARGE (C.F.S.)	873
DESIGN FLOOD FREQUENCY (YEARS)	10
DESIGN FLOOD VELOCITY (F.P.S.)	10.36
DESIGN FLOOD ELEVATION (FEET, NAVD)	42.16

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

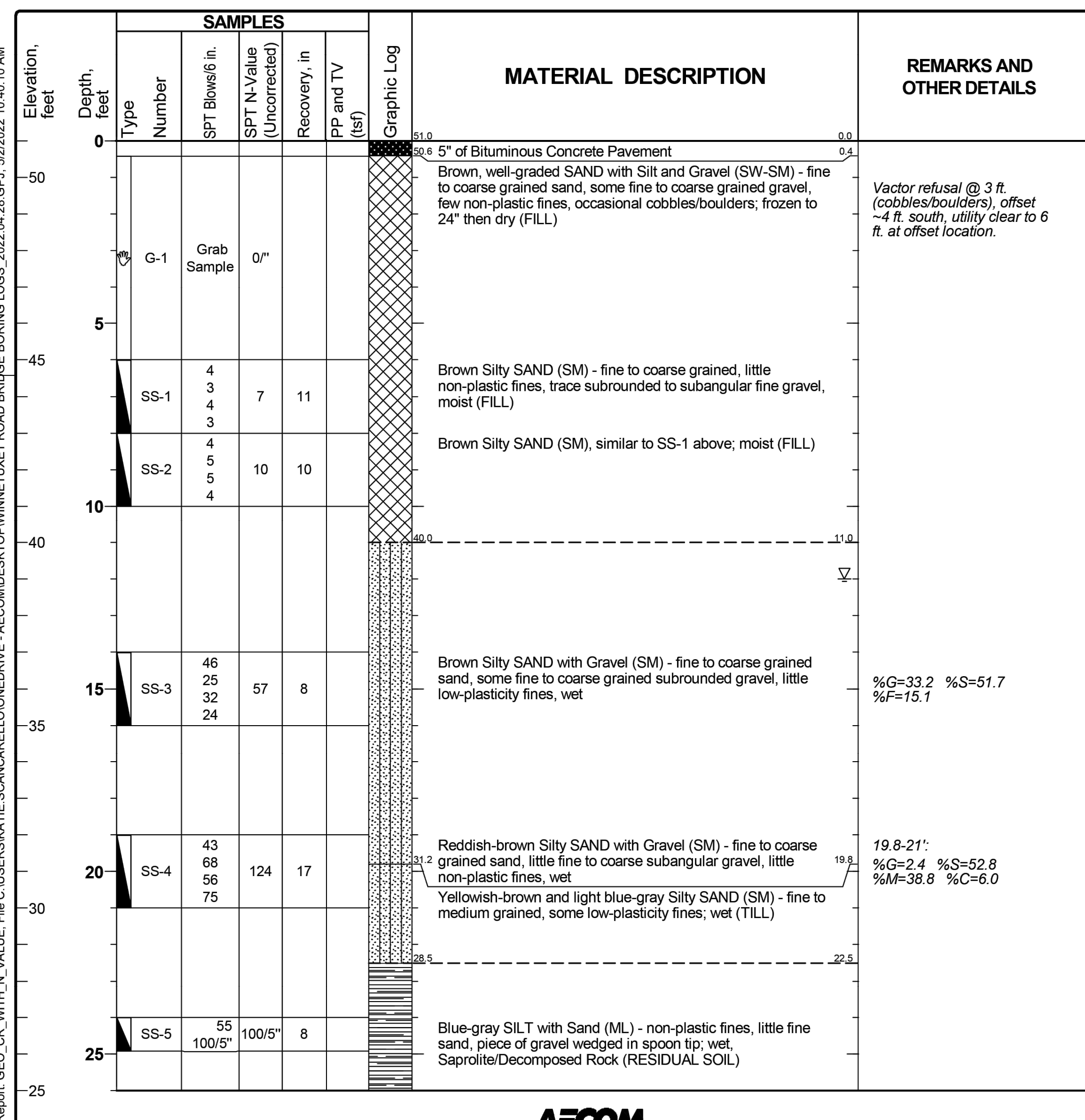
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	12	34
PROJECT FILE NO.		609435	

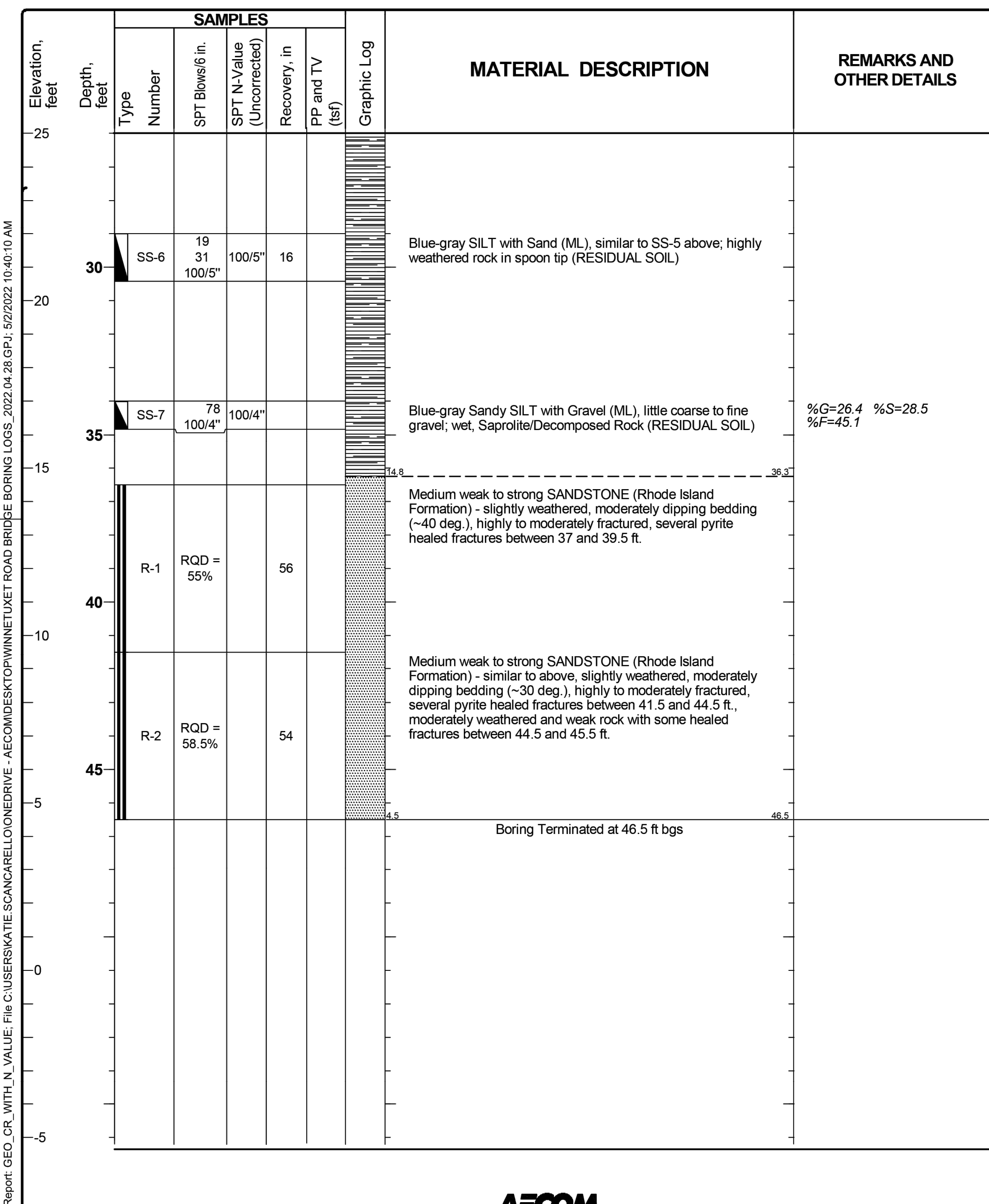
BORING LOGS SHEET 1 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-1
Project Location: Plympton, MA	Sheet 1 of 2
Project Number: 60652642	

Date(s) Drilled	February 10, 2022	Logged By	R. Munschauer	Checked By	B. Reyes
Drilling Method	Drive and Wash with NW & HW Steel Casing	Drill Bit Size/Type	Roller bits, N-sized core barrel	Total Depth of Borehole	46.5' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	51.0 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	2" split spoon, N-sized core barrel	Hammer Data	140 lb. auto-hammer
Boring Location	N 2806195 E 839520 (ft NAD83) Groundwater Level(s) Estimated @ 12 ft., FEBRUARY 10, 2022				



Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-1
Project Location: Plympton, MA	Sheet 2 of 2
Project Number: 60652642	



BORING NOTES:

- LOCATION OF BORINGS SHOWN ON THE PLAN THUS:
- 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.
- 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.
- 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".
- 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.
- ALL BORINGS WERE MADE IN FEBRUARY 2022.
- BORINGS WERE MADE BY:
NORTHERN DRILL SERVICE
130 EAST MAIN ST.
NORTHBOROUGH, MA
- THE NORTH AMERICAN VERTICAL DATUM (NAVD) OF 1988 IS USED THROUGHOUT.

GROUND WATER:

- THE WATER LEVELS RECORDED IN THE TABLE ARE THOSE MEASURED ON THE DATES GIVEN AND DO NOT NECESSARILY REPRESENT GROUND WATER LEVEL AT TIME OF CONSTRUCTION.

WELL NO.	GROUND SURFACE ELEVATION (FT)	DATE	ELAPSED TIME (DAYS)	DEPTH FROM ROADWAY SURFACE (FT)	GROUNDWATER ELEVATION (FT)
B-3	46.82	02/14/2022	INITIAL	10.5	36.32
		04/03/2022	48	9.8	37.02
		05/18/2022	93	10.8	36.02
		08/21/2022	188	12.0	34.82

BORING B-1

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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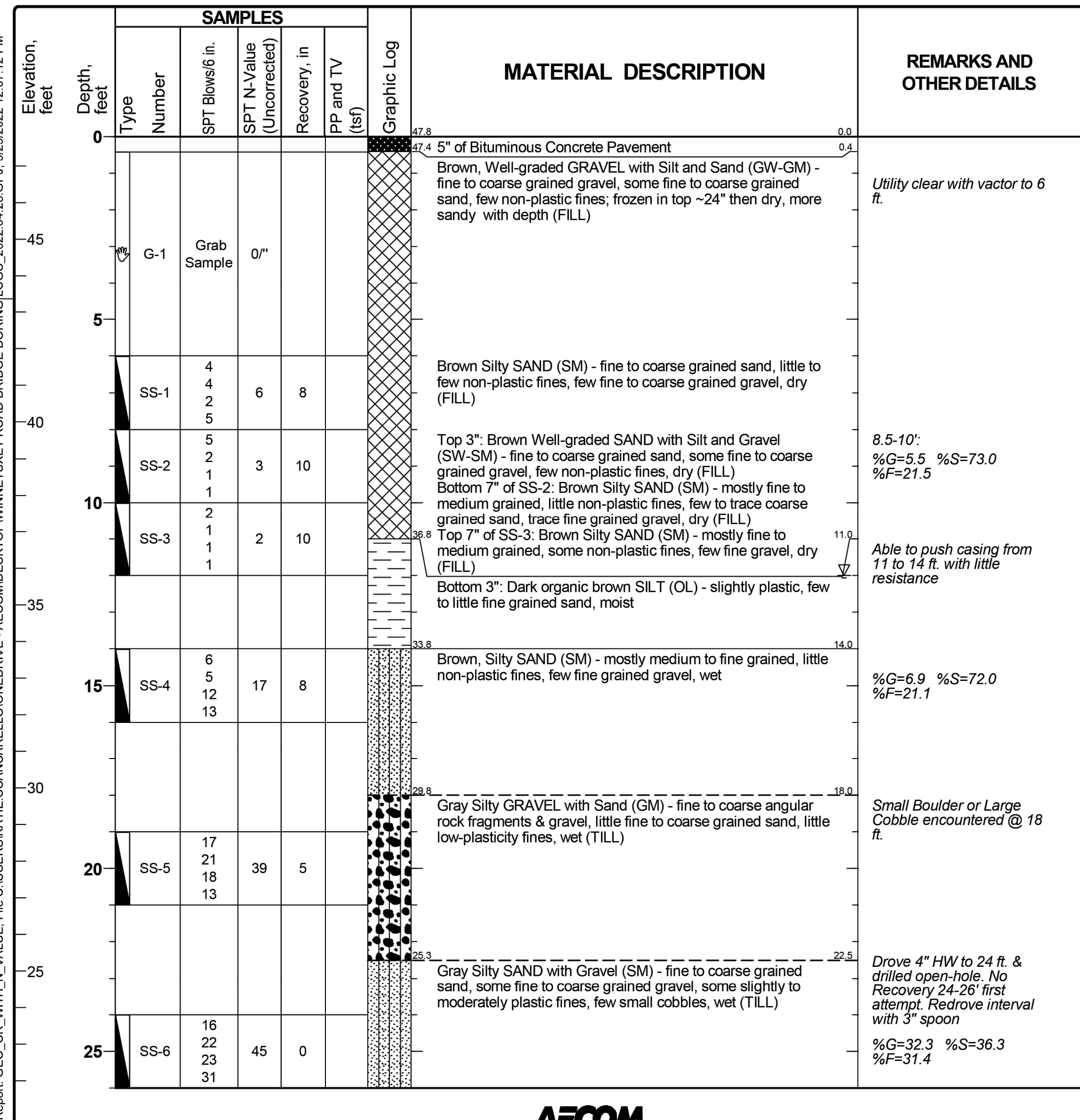
PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	13	34
PROJECT FILE NO.		609435	

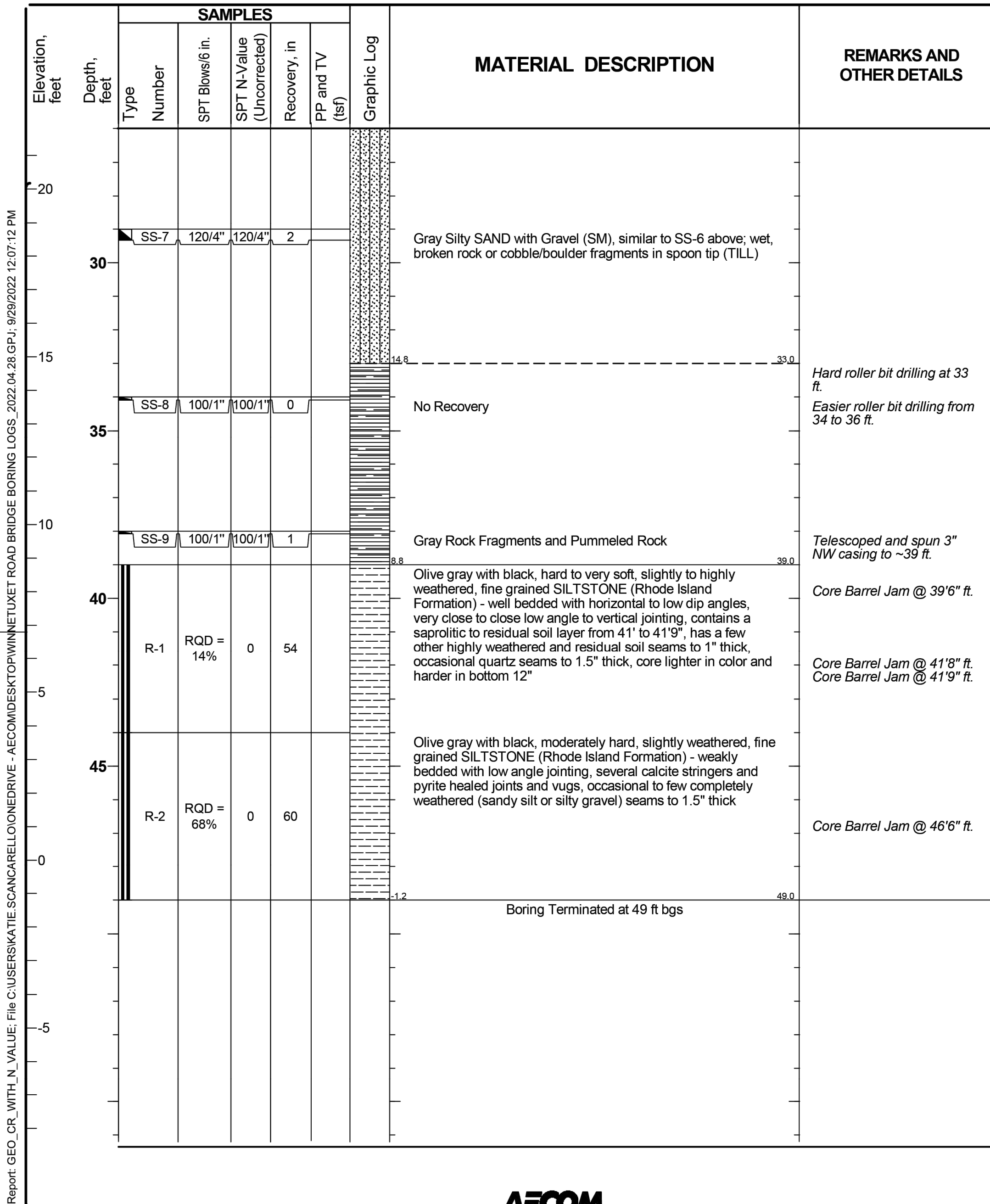
BORING LOGS SHEET 2 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-2
Project Location: Plympton, MA	Sheet 1 of 2
Project Number: 60652642	

Date(s) Drilled: February 14 to 15, 2022	Logged By: K. Harten	Checked By: B. Reyes
Drilling Method: Drive and Wash with NW & HW Steel Casing	Drill Bit Size/Type: Roller bits, N-sized core barrel	Total Depth of Borehole: 49.0' bgs
Drill Rig Type: Dietrich D-25	Drilling Contractor: Northern Drill Service	Surface Elevation: 47.8 ft NAVD88
Borehole Backfill: Cement Grout	Sampling Method(s): 2" split spoon, N-sized core barrel	Hammer Data: 140 lb. auto-hammer
Boring Location: N 2806259 E 839515 (ft NAD83)	Groundwater Level(s): Measured @ 12.0' on Feb. 15	



Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-2
Project Location: Plympton, MA	Sheet 2 of 2
Project Number: 60652642	



BORING B-2

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

SHEET 4 OF 23 SHEETS BRIDGE NO. P-14-001 (CEN)

609435_BR04(P14001) - BORING SHEET 2.DWG Plotted on 20-May-2024 2:12 PM Final Structural Submitter (SF)

PLYMPTON
WINNETUXET ROAD

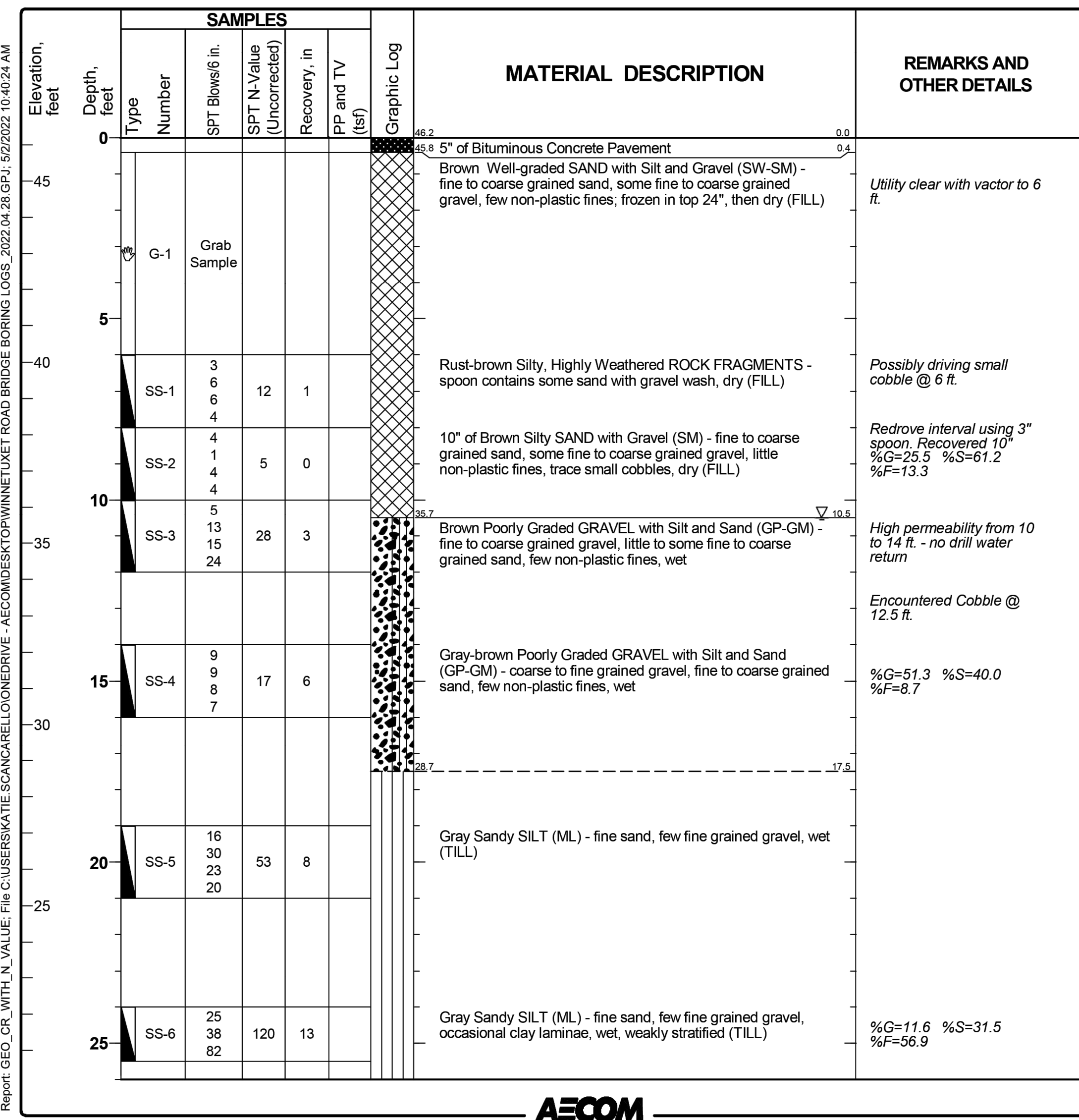
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	14	34
PROJECT FILE NO.		609435	

BORING LOGS SHEET 3 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-3
Project Location: Plympton, MA	Sheet 1 of 2
Project Number: 60652642	

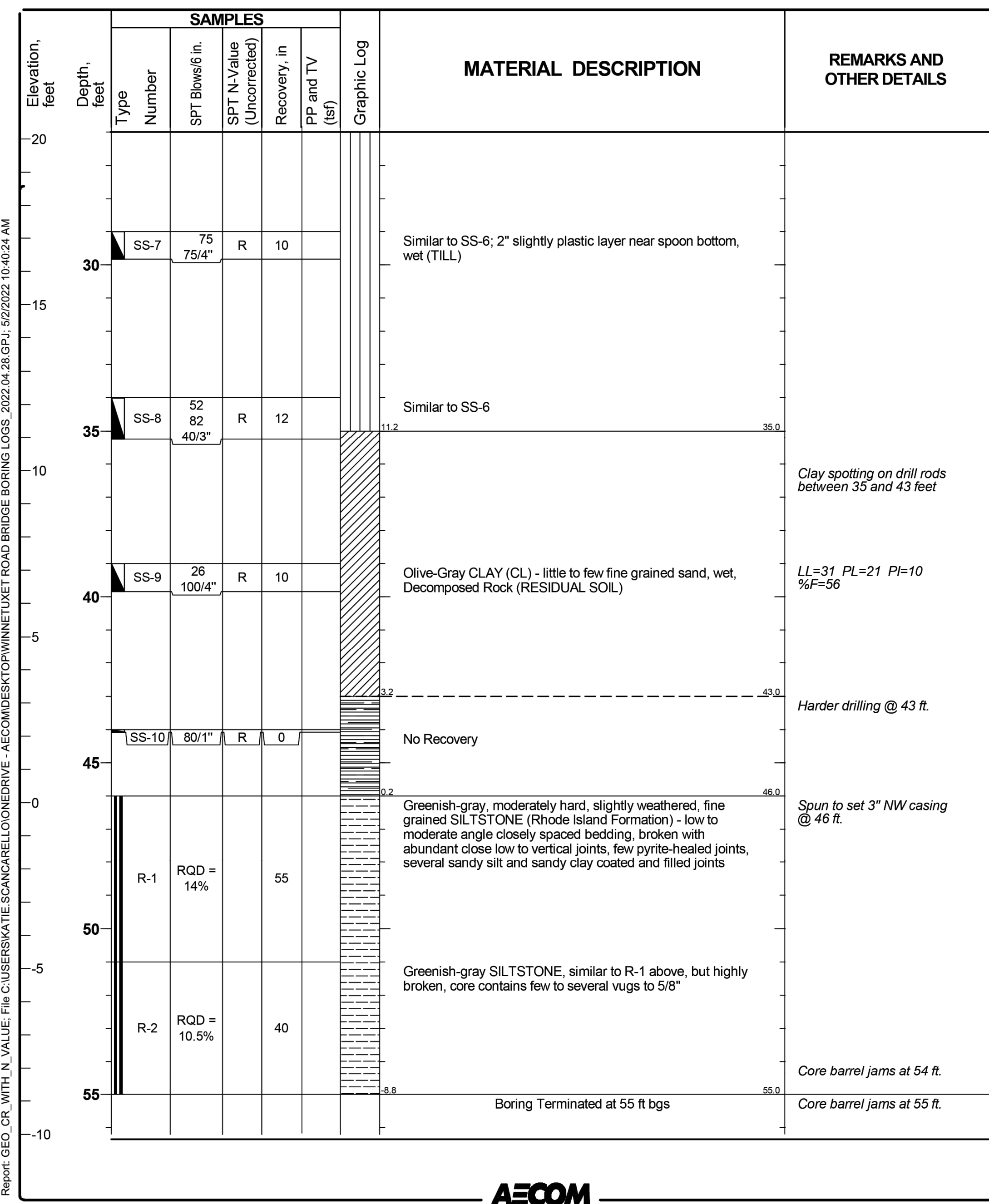
Date(s) Drilled	February 9, 2022	Logged By	K. Harten	Checked By	B. Reyes
Drilling Method	Drive and Wash with NW & HW Steel Casing	Drill Bit Size/Type	Roller bits, N-sized core barrel	Total Depth of Borehole	55.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	46.2 ft NAVD88
Borehole Backfill	Backfill w/ peastone to 20.3'; installed observation well w/ 10-ft. screen above 20.3'	Sampling Method(s)	2" split spoon, N-sized core barrel	Hammer Data	140 lb. auto-hammer
Boring Location	N 2806351 E 839523 (ft NAD83)	Groundwater Level(s)	Measured @ 10.5' on Feb. 14		

Report: GEO_CR_WITH_N_VALUE; File C:\USERS\KATIE SCANGARELLO\ONEDRIVE - AECOM\DESKTOP\WINNETUXET ROAD BRIDGE BORING LOGS_2022.04.28.GPJ; 5/2/2022 10:40:24 AM



BORING B-3

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-3
Project Location: Plympton, MA	Sheet 2 of 2
Project Number: 60652642	



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

SHEET 5 OF 23 SHEETS BRIDGE NO. P-14-001 (CEN)

609435_BR05(P14001) - BORING SHEET 3.DWG Plotted on 20-May-2024 2:13 PM Final Structural Submitter (SF)

PLYMPTON
WINNETUXET ROAD

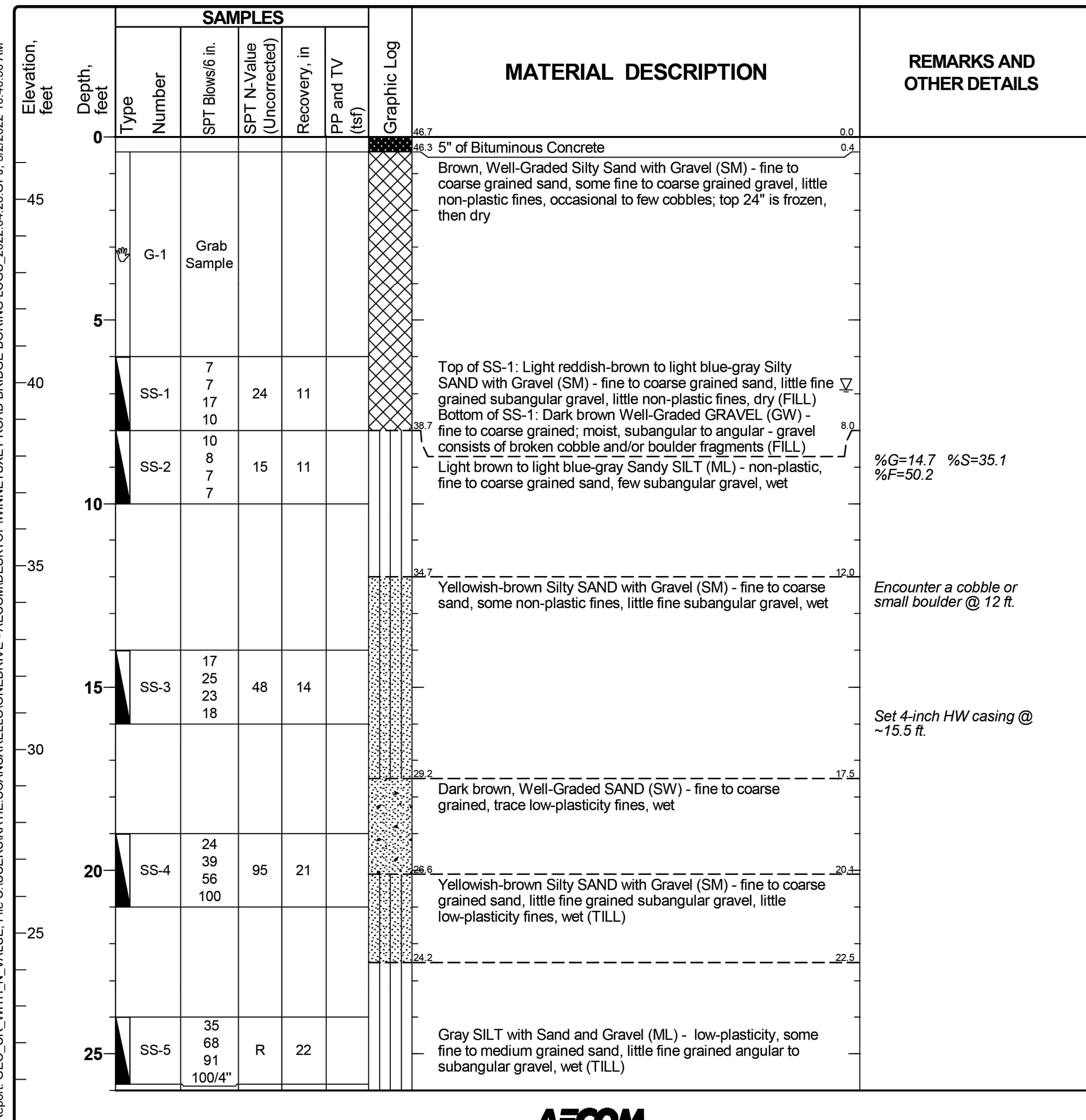
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	15	34
PROJECT FILE NO.		609435	

BORING LOGS SHEET 4 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-4
Project Location: Plympton, MA	Sheet 1 of 2
Project Number: 60652642	

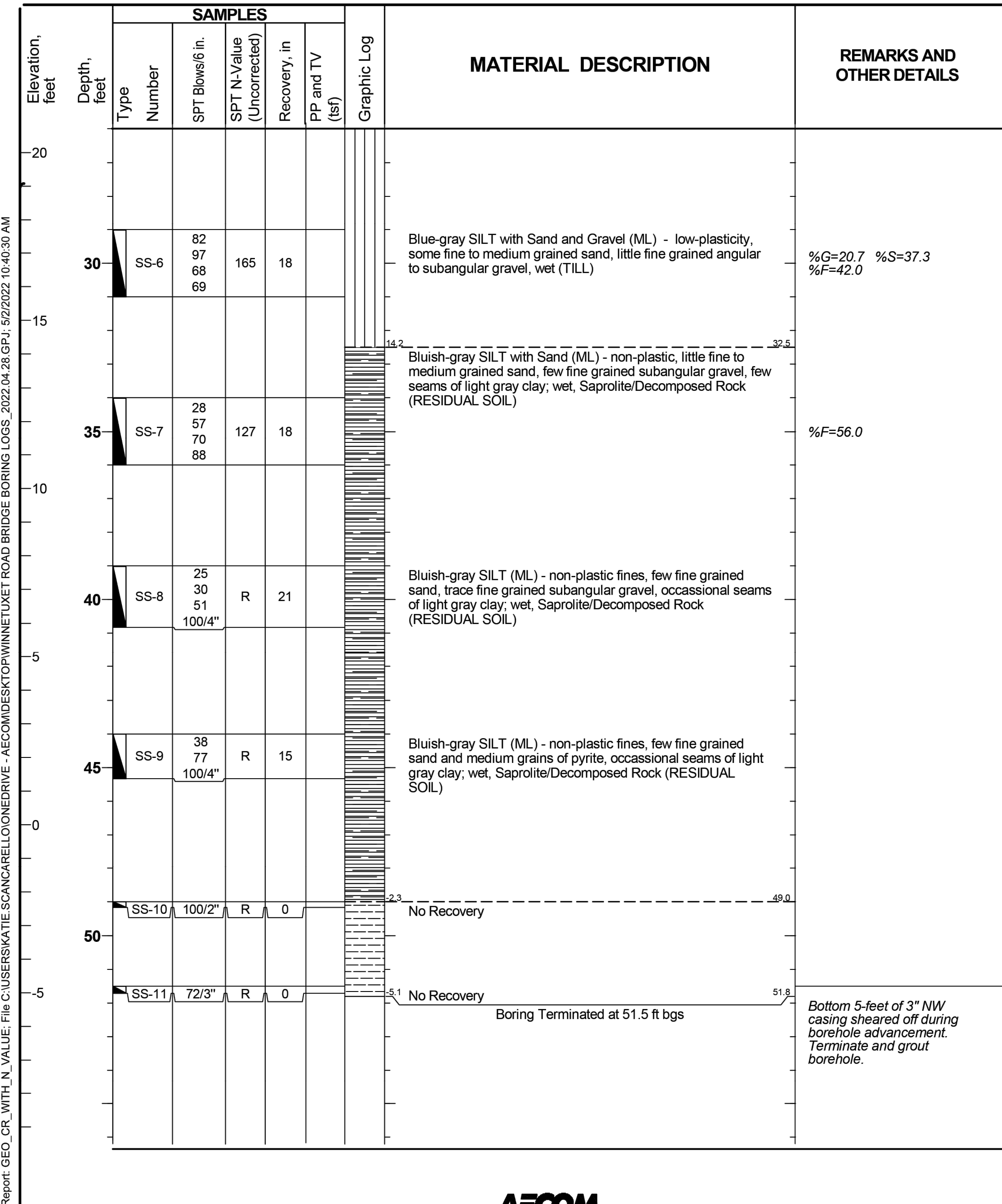
Date(s) Drilled	February 7 to 8, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Drive and Wash with NW & HW Steel Casing	Drill Bit Size/Type	Roller bits, N-sized core barrel	Total Depth of Borehole	51.5' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	46.7 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	2" split spoon, N-sized core barrel	Hammer Data	140 lb. auto-hammer
Boring Location	N 2806429 E 839541 (ft NAD83)	Groundwater Level(s)	Measured @ 6.9' on Feb. 8		

Report: GEO_CR_WITH_N_VALUE; File C:\USERS\KATIE SCANGARELLO\ONEDRIVE - AECOM\DESKTOP\WINNETUXET ROAD BRIDGE BORING LOGS_2022.04.28.GPJ; 5/2/2022 10:40:30 AM



BORING B-4

Project: Winnetuxet Road Bridge Replacement	Log of Test Boring B-4
Project Location: Plympton, MA	Sheet 2 of 2
Project Number: 60652642	



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USE ONLY PRINTS OF LATEST DATE	

SHEET 6 OF 23 SHEETS BRIDGE NO. P-14-001 (CEN)

609435_BR06(P14001) - BORING SHEET 4.DWG Plotted on 20-May-2024 2:13 PM Final Structural Submitter (SF) 28-June-2024

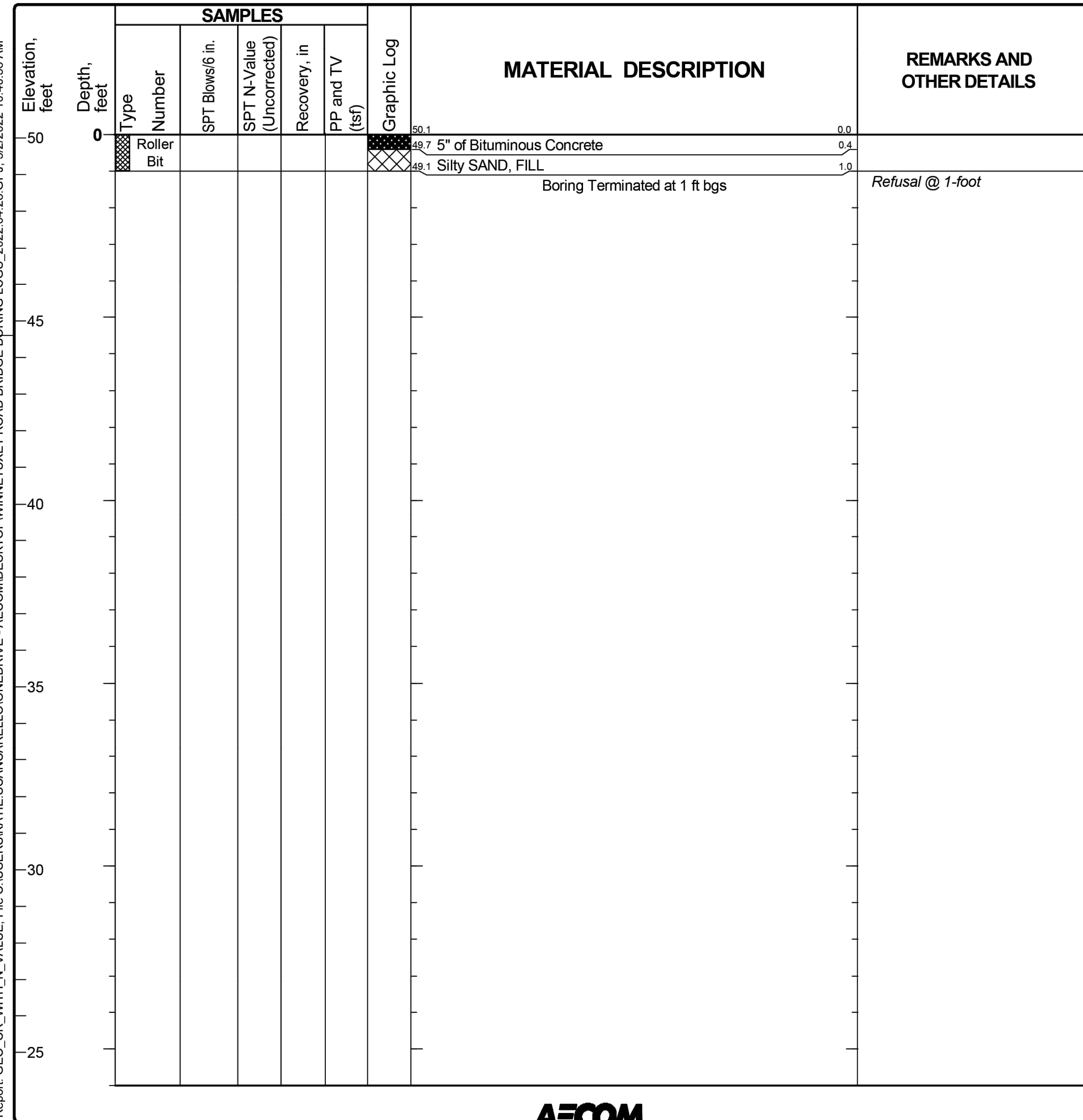
PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	16	34
PROJECT FILE NO.		609435	

BORING LOGS SHEET 5 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Probe P1-1
Project Location: Plympton, MA	Sheet 1 of 1
Project Number: 60652642	

Date(s) Drilled	February 11, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Rotary w/ 3" Roller Cone Bit	Drill Bit Size/Type	3" Roller Bit	Total Depth of Borehole	1.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	50.1 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	None	Hammer Data	N/A
Boring Location	N 2806211 E 839520 (ft NAD83)	Groundwater Level(s)	Undetermined		

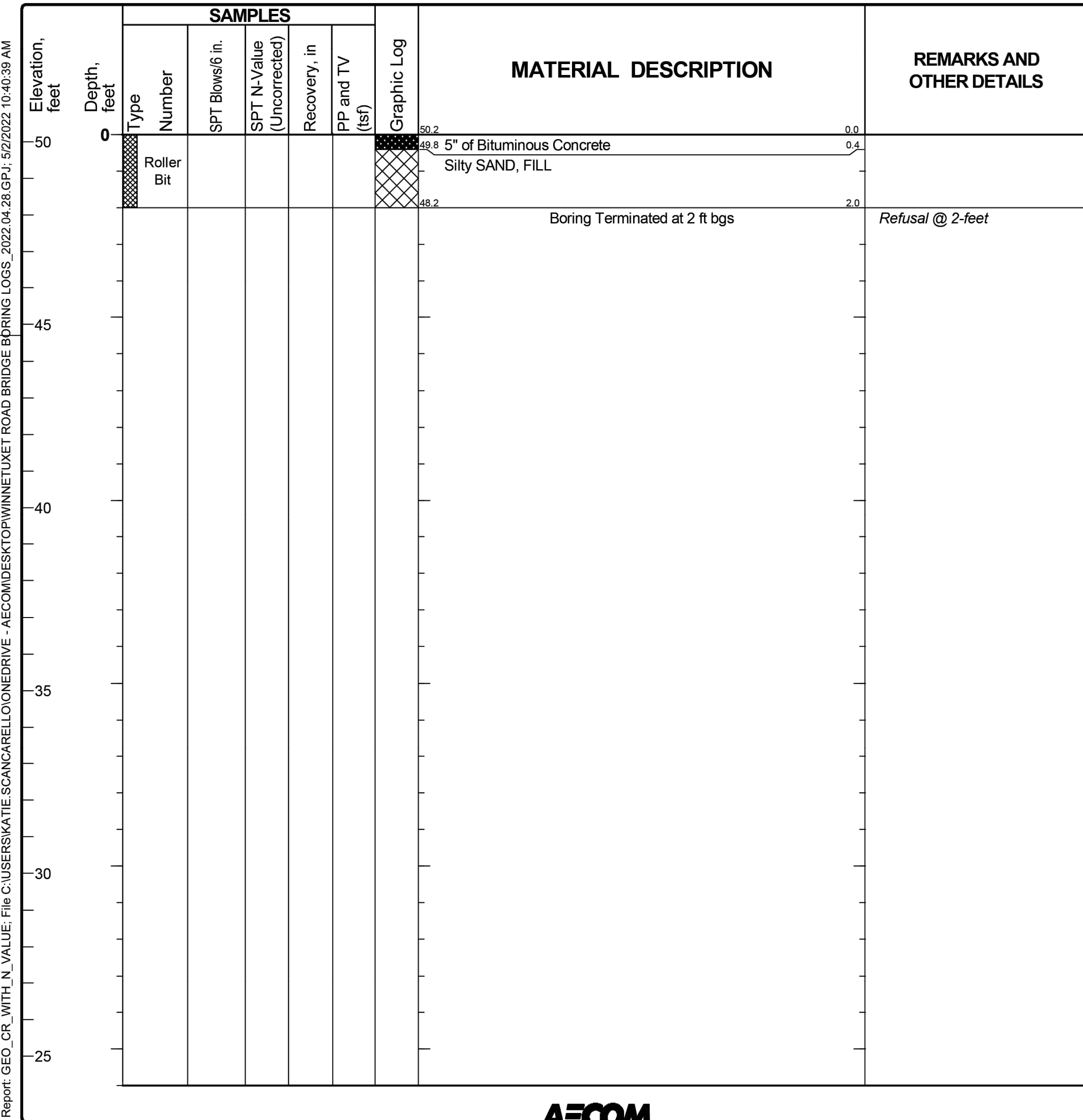


AECOM

PROBE P1-1

Project: Winnetuxet Road Bridge Replacement	Log of Probe P1-2
Project Location: Plympton, MA	Sheet 1 of 1
Project Number: 60652642	

Date(s) Drilled	February 11, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Rotary w/ 3" Roller Cone Bit	Drill Bit Size/Type	3" Roller Bit	Total Depth of Borehole	2.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	50.2 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	None	Hammer Data	N/A
Boring Location	N 2806210 E 839520 (ft NAD83)	Groundwater Level(s)	Undetermined		



AECOM

PROBE P1-2

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SHEET 7 OF 23 SHEETS BRIDGE NO. P-14-001 (CEN)

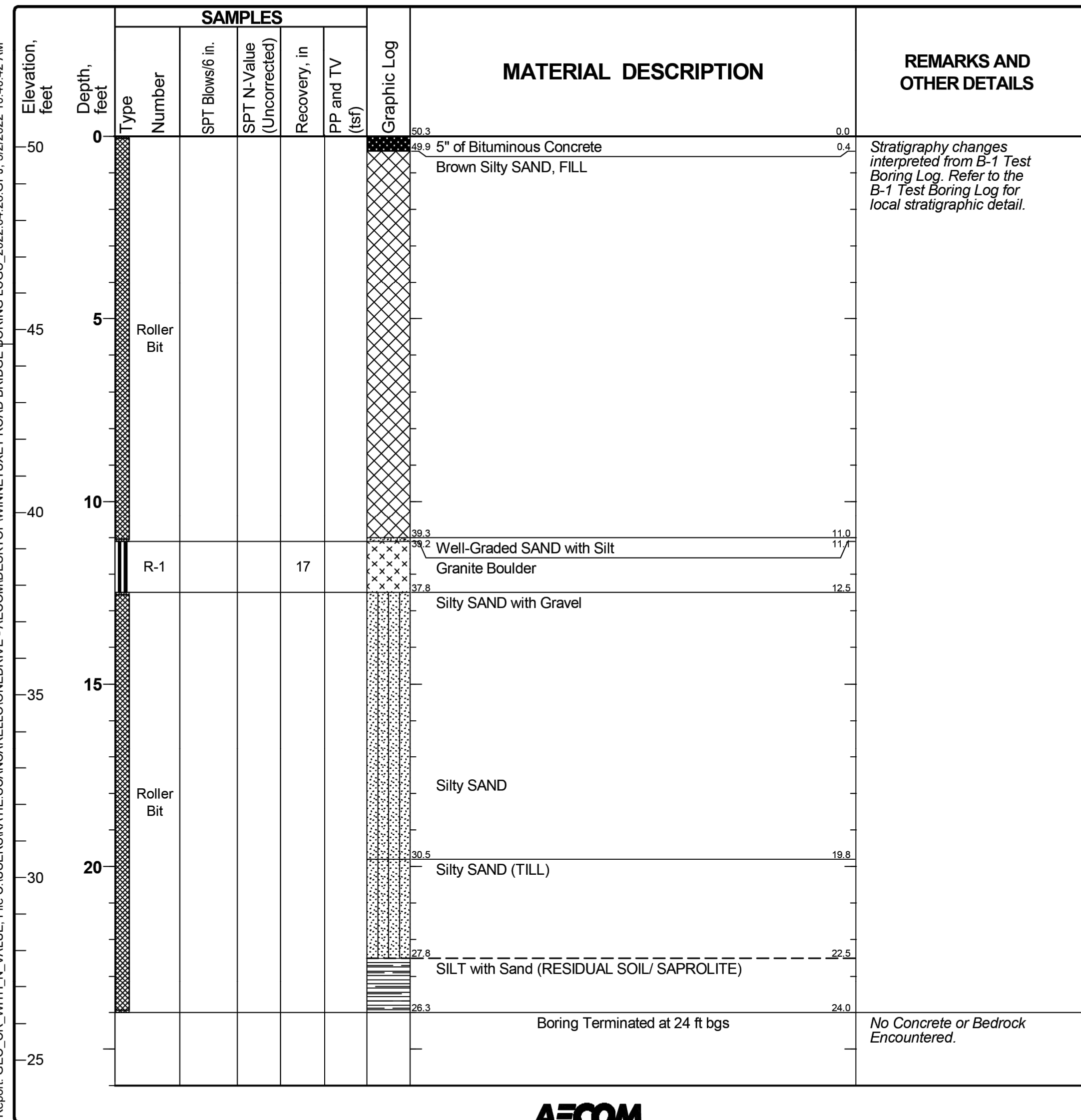
PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	17	34
PROJECT FILE NO.		609435	

BORING LOGS SHEET 6 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Probe P1-3
Project Location: Plympton, MA	Sheet 1 of 1
Project Number: 60652642	

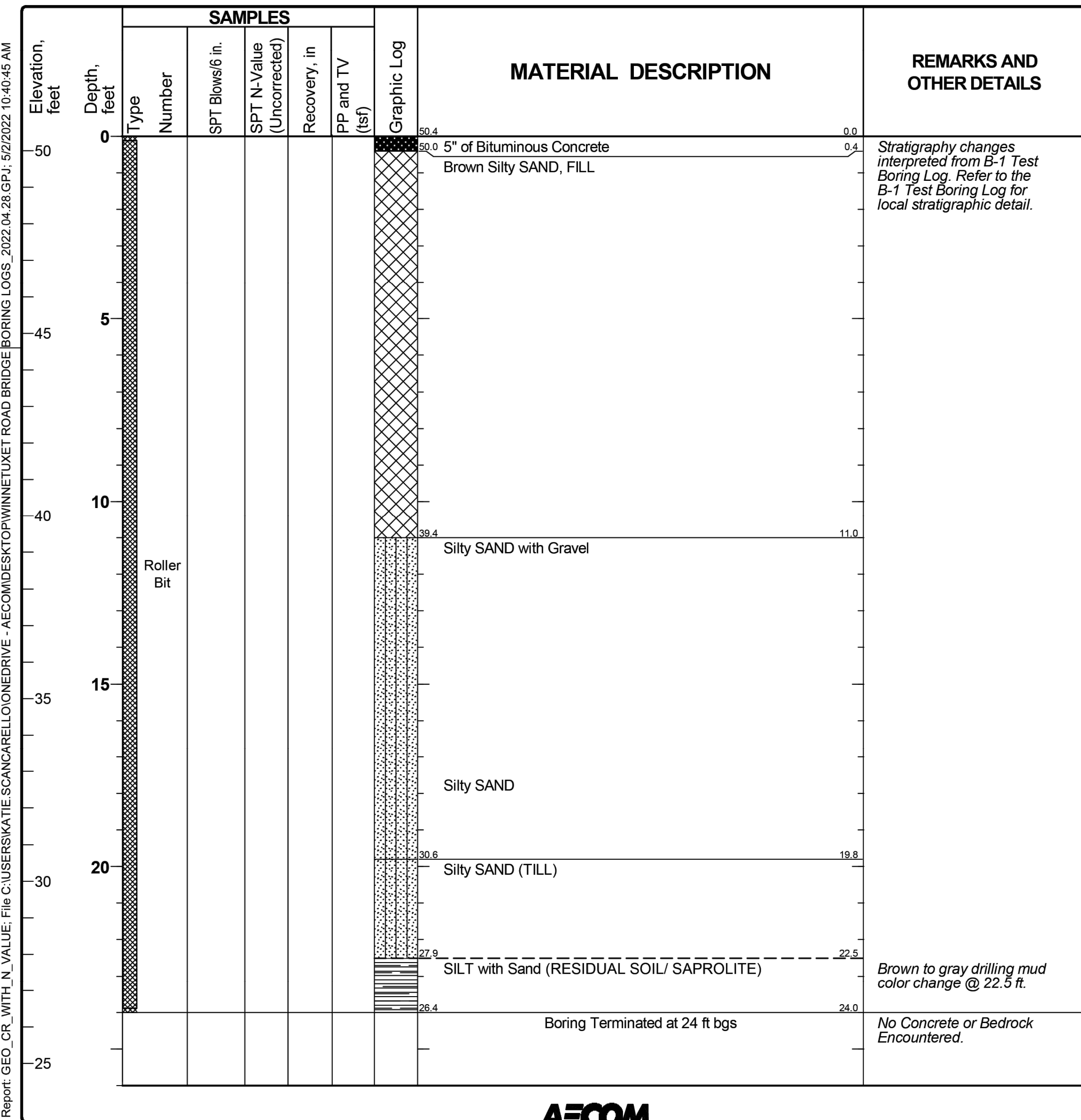
Date(s) Drilled	February 11, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Drive and Wash with NW Steel Casing	Drill Bit Size/Type	3-Inch Roller Bit & N-sized core barrel	Total Depth of Borehole	24.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	50.3 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	N-sized core barrel	Hammer Data	N/A
Boring Location	N 2806209 E 839520 (ft NAD83)	Groundwater Level(s)	Undetermined		



PROBE P1-3

Project: Winnetuxet Road Bridge Replacement	Log of Probe P1-4
Project Location: Plympton, MA	Sheet 1 of 1
Project Number: 60652642	

Date(s) Drilled	February 11, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Rotary w/ 3" Roller Cone Bit	Drill Bit Size/Type	3" Roller Bit	Total Depth of Borehole	24.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	50.4 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	None	Hammer Data	N/A
Boring Location	N 2806207 E 839521 (ft NAD83)	Groundwater Level(s)	Undetermined		



PROBE P1-4

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

PLYMPTON
WINNETUXET ROAD

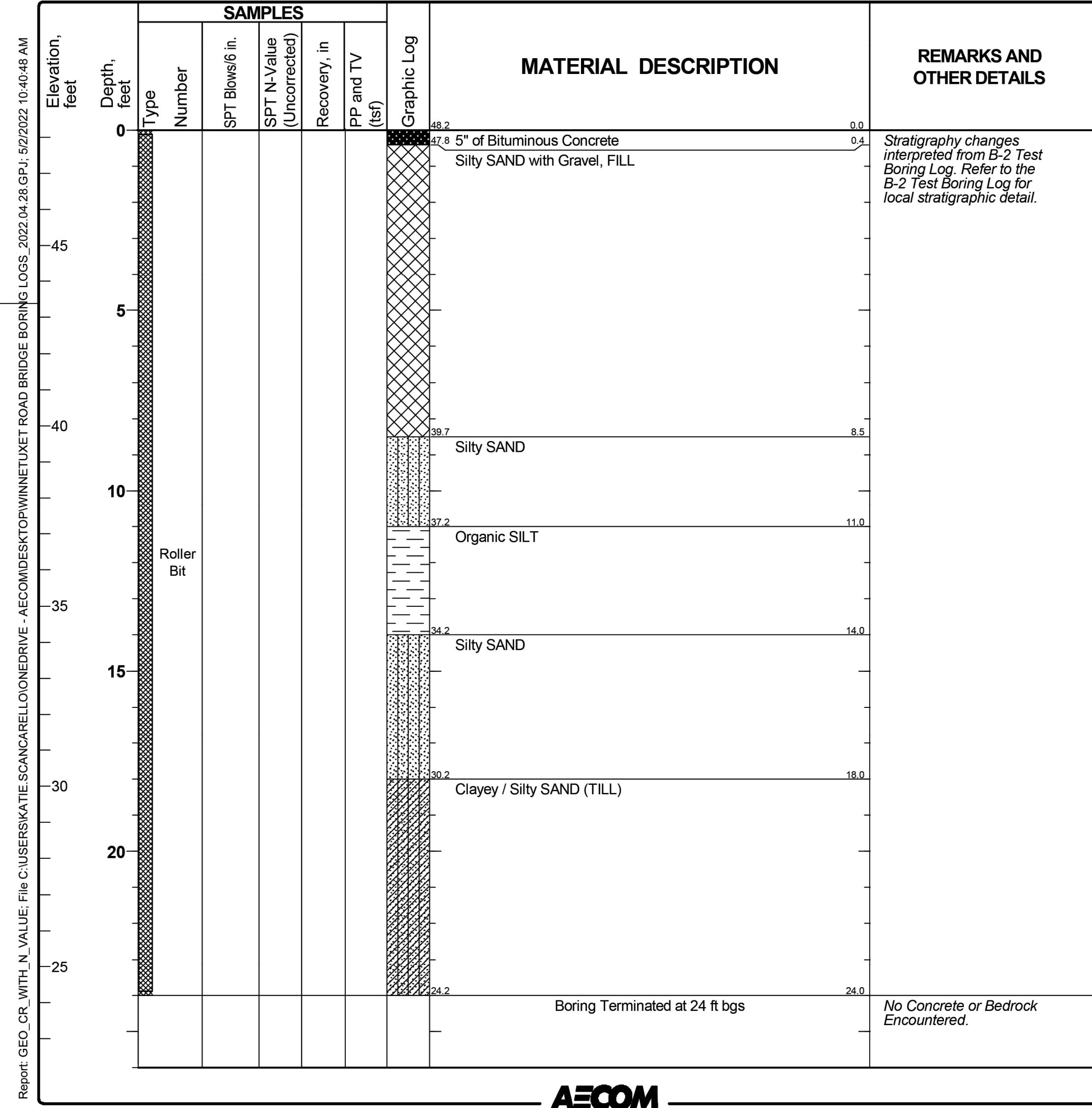
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	18	34
PROJECT FILE NO.		609435	

BORING LOGS SHEET 7 OF 7

Project: Winnetuxet Road Bridge Replacement	Log of Probe P2-1
Project Location: Plympton, MA	Sheet 1 of 1
Project Number: 60652642	

Date(s) Drilled	February 16, 2022	Logged By	R. Munchauer	Checked By	B. Reyes
Drilling Method	Rotary w/ 3" Roller Cone Bit	Drill Bit Size/Type	3" Roller Bit	Total Depth of Borehole	24.0' bgs
Drill Rig Type	Dietrich D-25	Drilling Contractor	Northern Drill Service	Surface Elevation	48.2 ft NAVD88
Borehole Backfill	Cement Grout	Sampling Method(s)	None	Hammer Data	N/A
Boring Location	N 2806246 E 839512 (ft NAD83)	Groundwater Level(s)	Undetermined		

APPROX. BOTTOM OF PROP. NORTH ABUTMENT CAP
EL. 43.30



PROBE P2-1

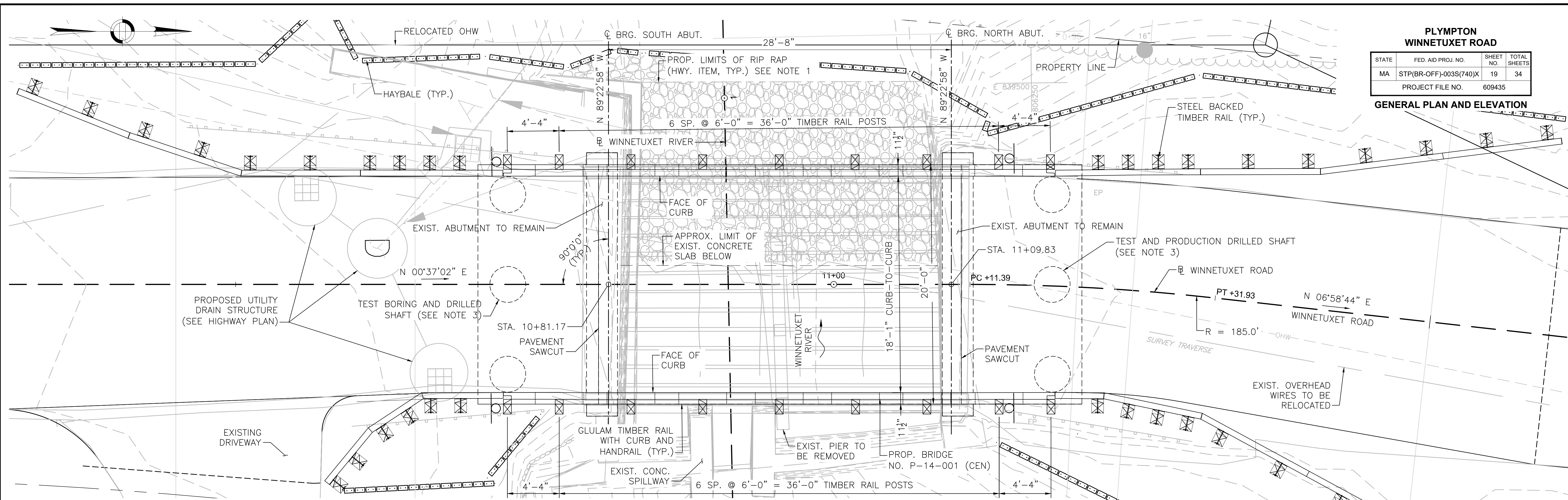
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

609435_BR03(P14001) - PROBE SHEET 3.DWG Plotted on 20-May-2024 2:13 PM
29-June-2024 Final Structural Submittal (SF)

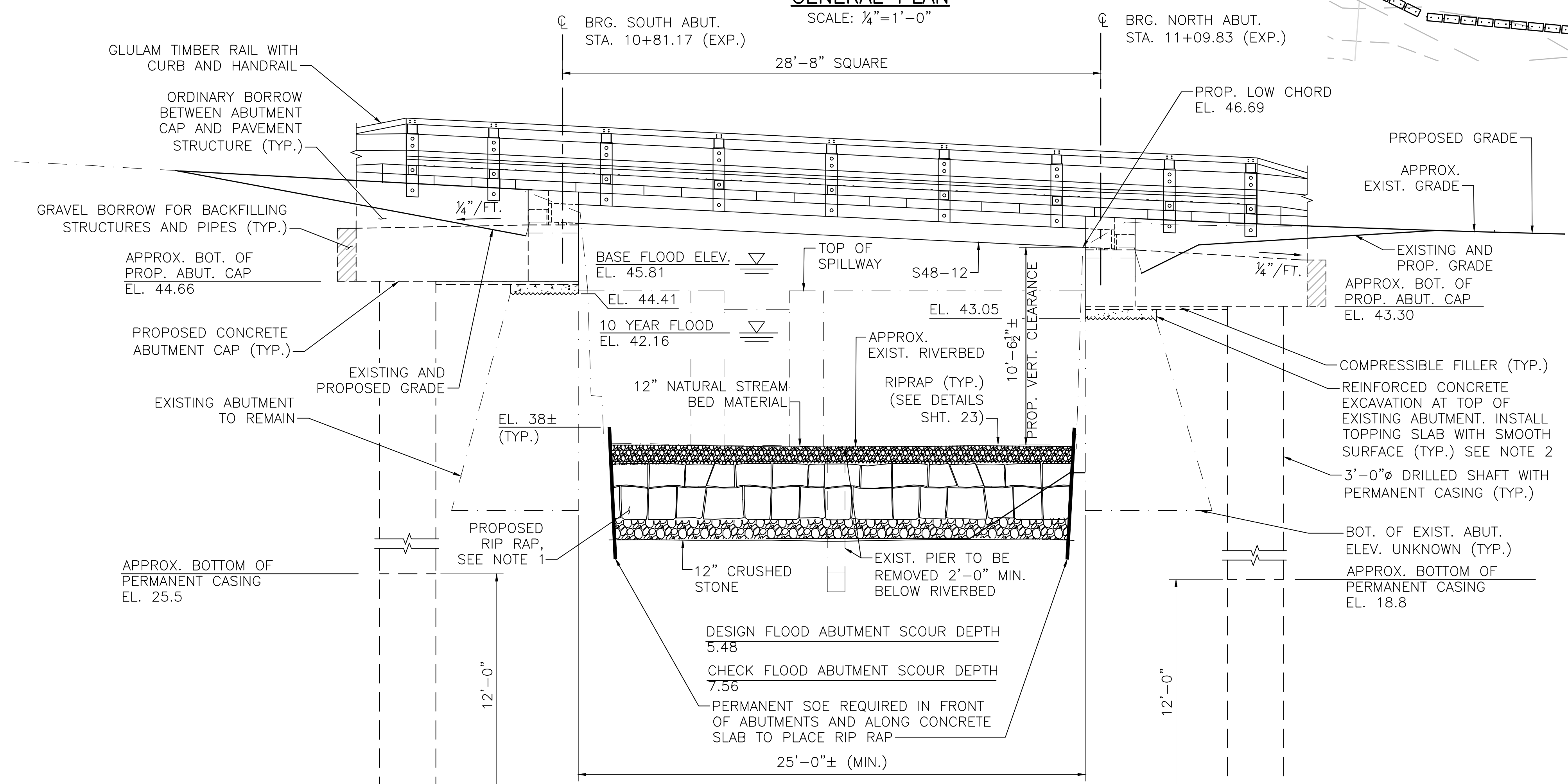
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	19	34
PROJECT FILE NO.			609435

GENERAL PLAN AND ELEVATION



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



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

- NOTES:**
1. RIP RAP SHALL BE INSTALLED BEGINNING AT THE EXISTING CONCRETE SLAB, AND SHALL EXTEND DOWNSTREAM TO WINNETUXET RIVER STATION 0+95. RIP RAP SHALL HAVE 4'-0" THICKNESS, D50=24", AND D100=48".
 2. CONCRETE TOPPING SLAB IS TO BE 5000 PSI HP CEMENT CONCRETE.
 3. A TEST BORING SHALL BE CONDUCTED AT THE EXACT LOCATIONS OF THE PROPOSED SHAFTS, ONE PER ABUTMENT AT THE CENTER DRILLED SHAFT, TO VERIFY THE SUBSURFACE CONDITIONS AT THE SHAFT LOCATIONS. THE TEST BORINGS SHALL EXTEND TO A MINIMUM DEPTH OF 10 FEET INTO SOUND ROCK. THE BORING LOGS SHALL BE REVIEWED BY THE CONTRACTOR AND BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO MOBILIZING DRILLED SHAFT EQUIPMENT.

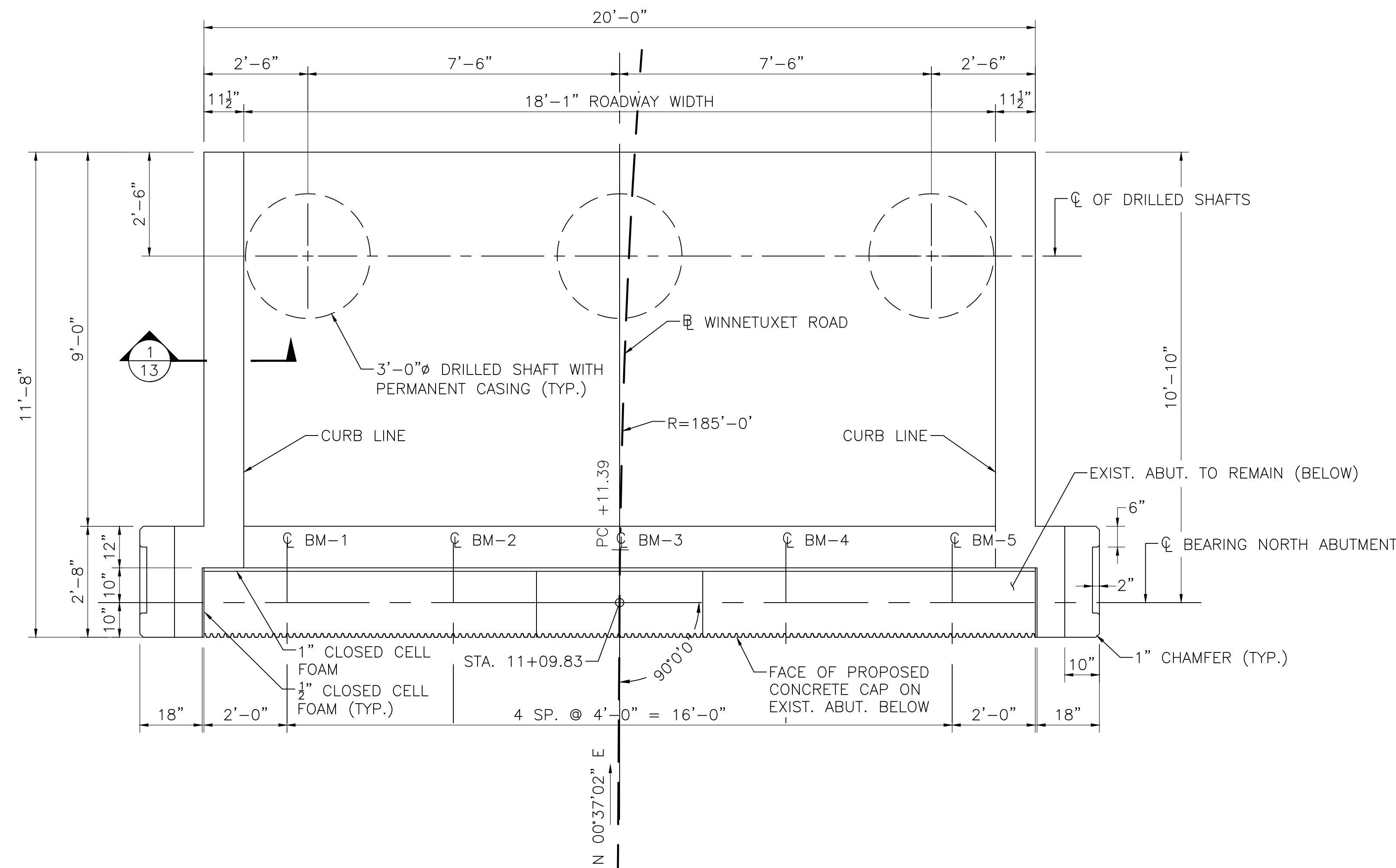
DATE	ISSUED FOR CONSTRUCTION DESCRIPTION
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

609435_BR10(P14001) - GENERAL PLAN AND ELEVATION.DWG Plotted on 20-May-2024 2:13 PM Final Structural Submitter (SF) 28-June-2024

PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	20	34
PROJECT FILE NO.		609435	

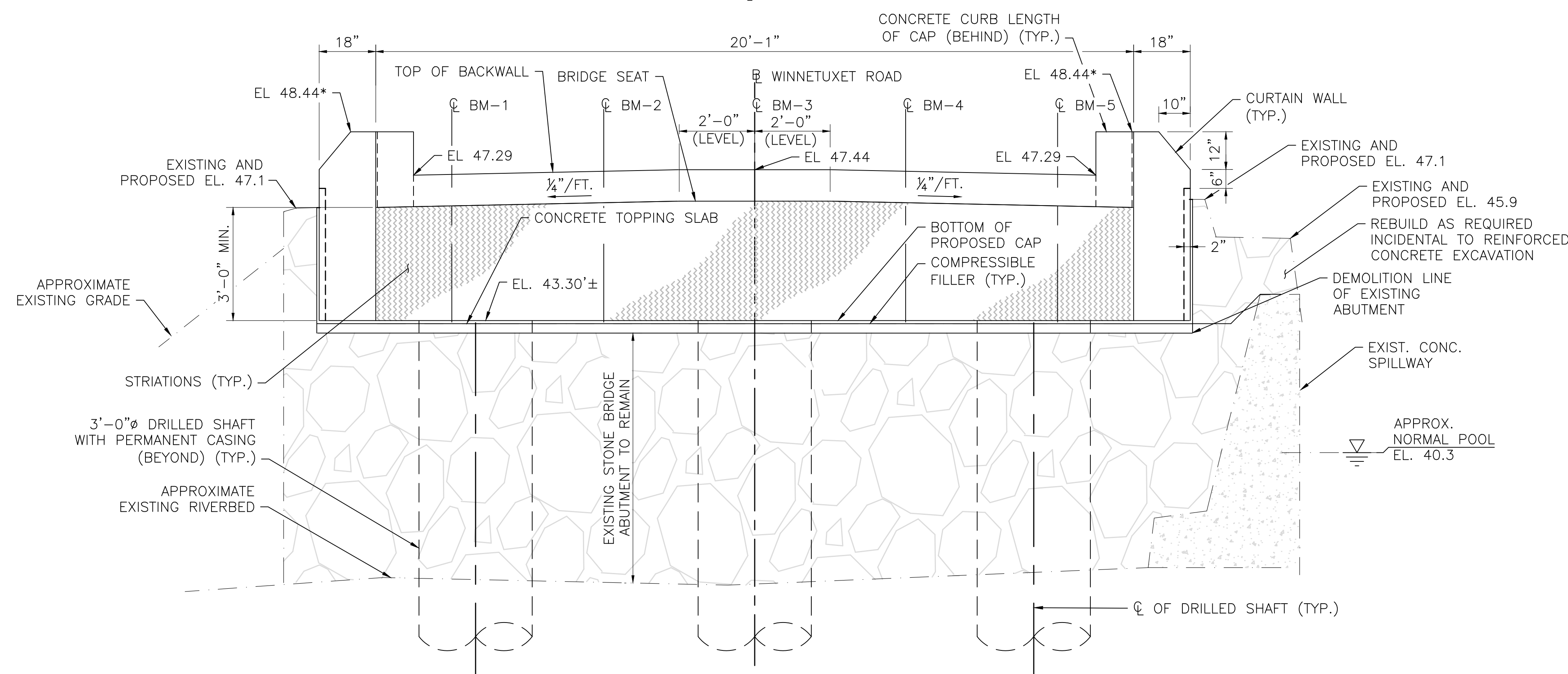
NORTH ABUTMENT PLAN AND ELEVATION



NORTH ABUTMENT PLAN VIEW

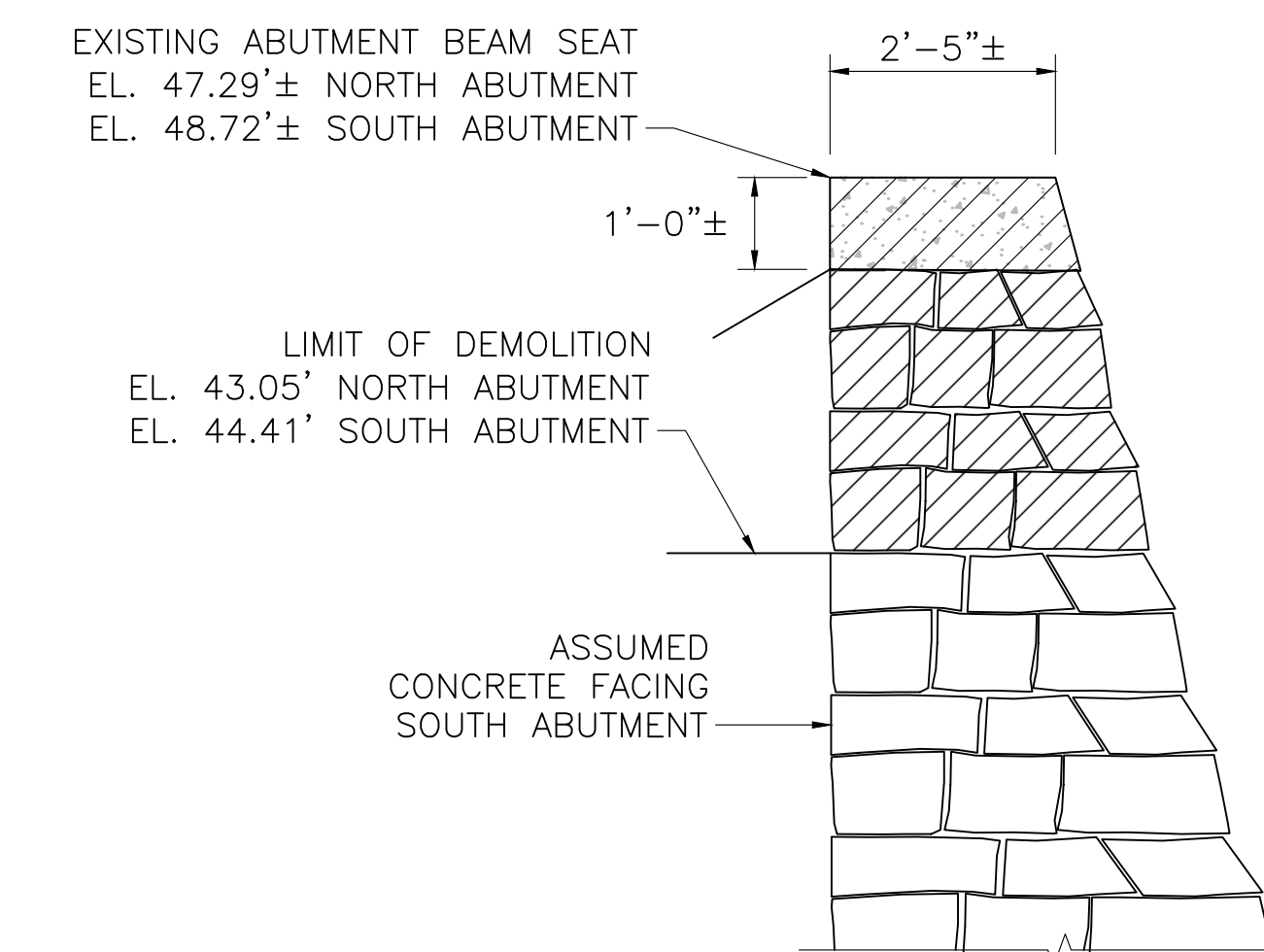
SCALE: 1/2" = 1'-0"

BEAM SEAT ELEVATIONS (FEET)				
GIRDER NO.	CL-BRG	0.0 SPAN	1.0 SPAN	CL-BRG
SPAN 1				
1	S. ABUT.	47.85	46.48	N. ABUT.
2		47.93	46.57	
3/CROWN		47.97	46.61	
4		47.93	46.57	
5		47.85	46.48	



NORTH ABUTMENT ELEVATION

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



EXISTING ABUTMENT DEMOLITION SECTION

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

NOTES:

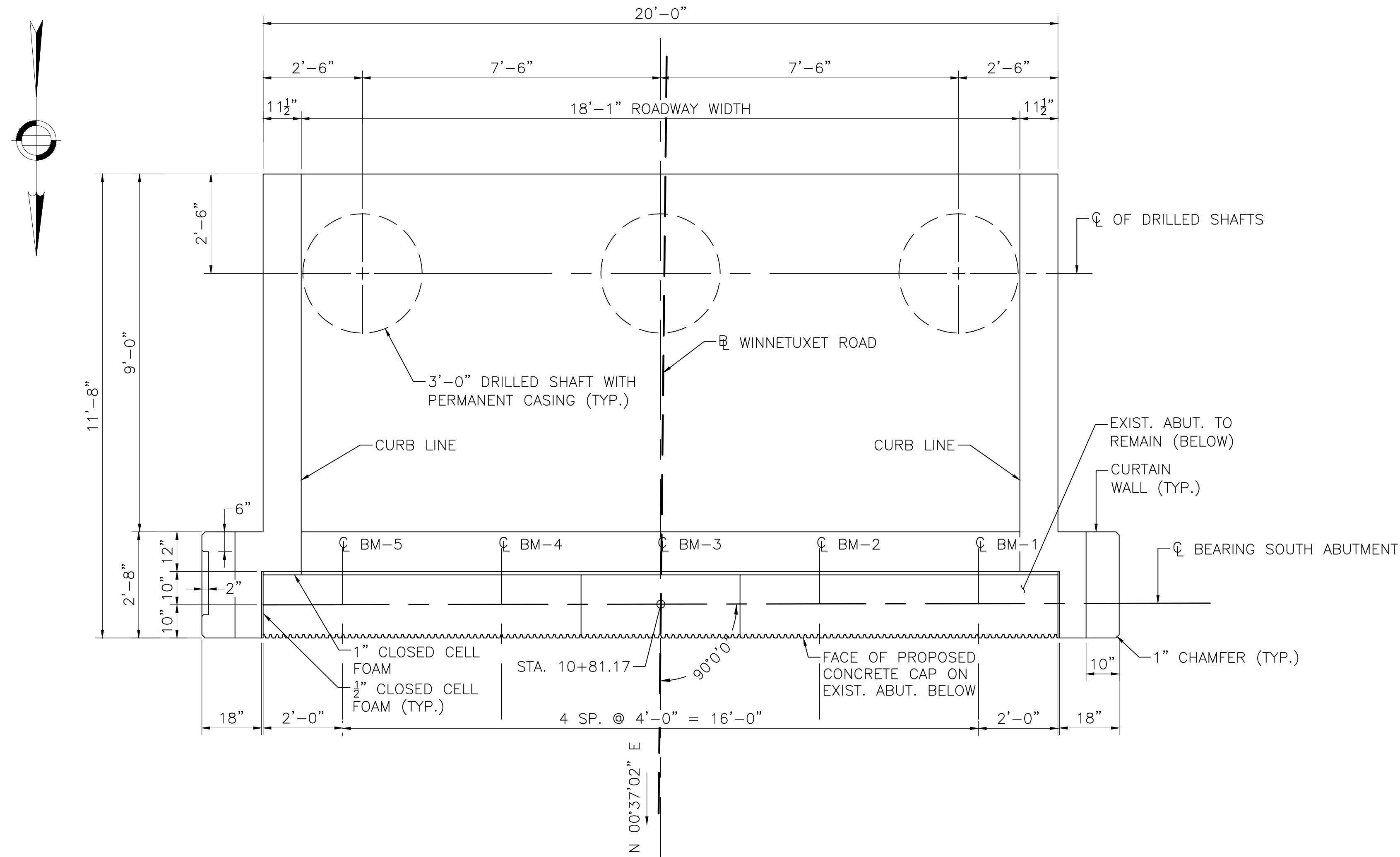
- SEE SHEET 12 FOR WINGWALL ELEVATIONS.
- *CURTAIN WALL ELEVATIONS ARE AT FRONT FACE OF ABUTMENT.

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

**PLYMPTON
WINNETUXET ROAD**

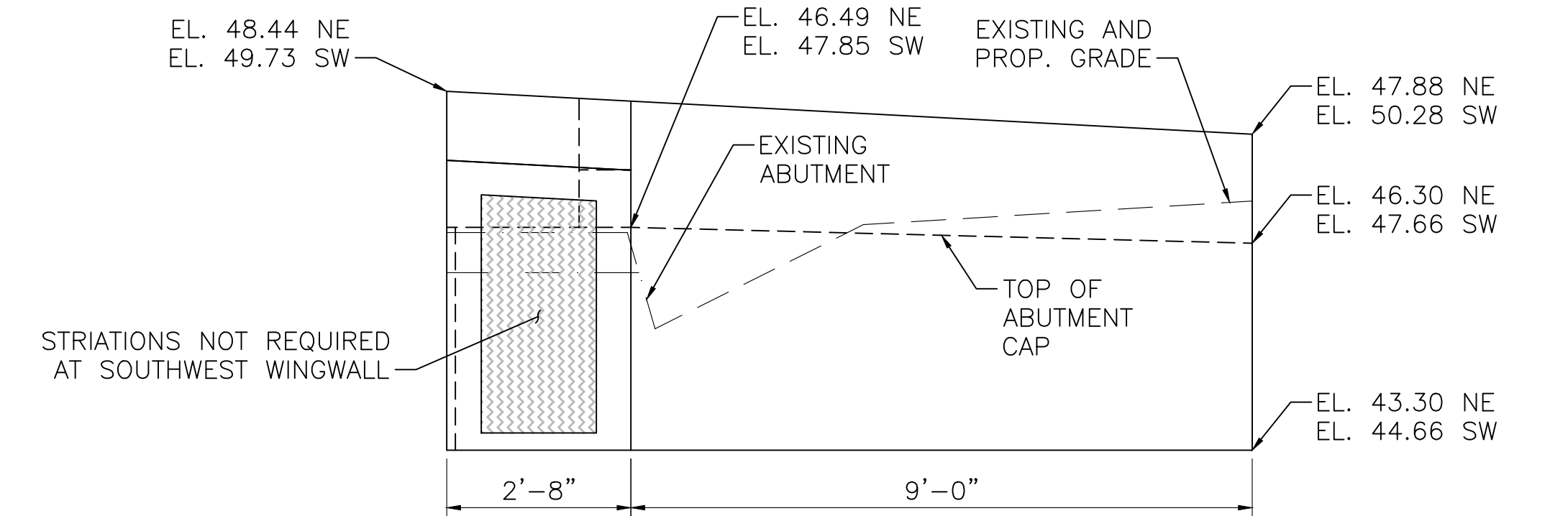
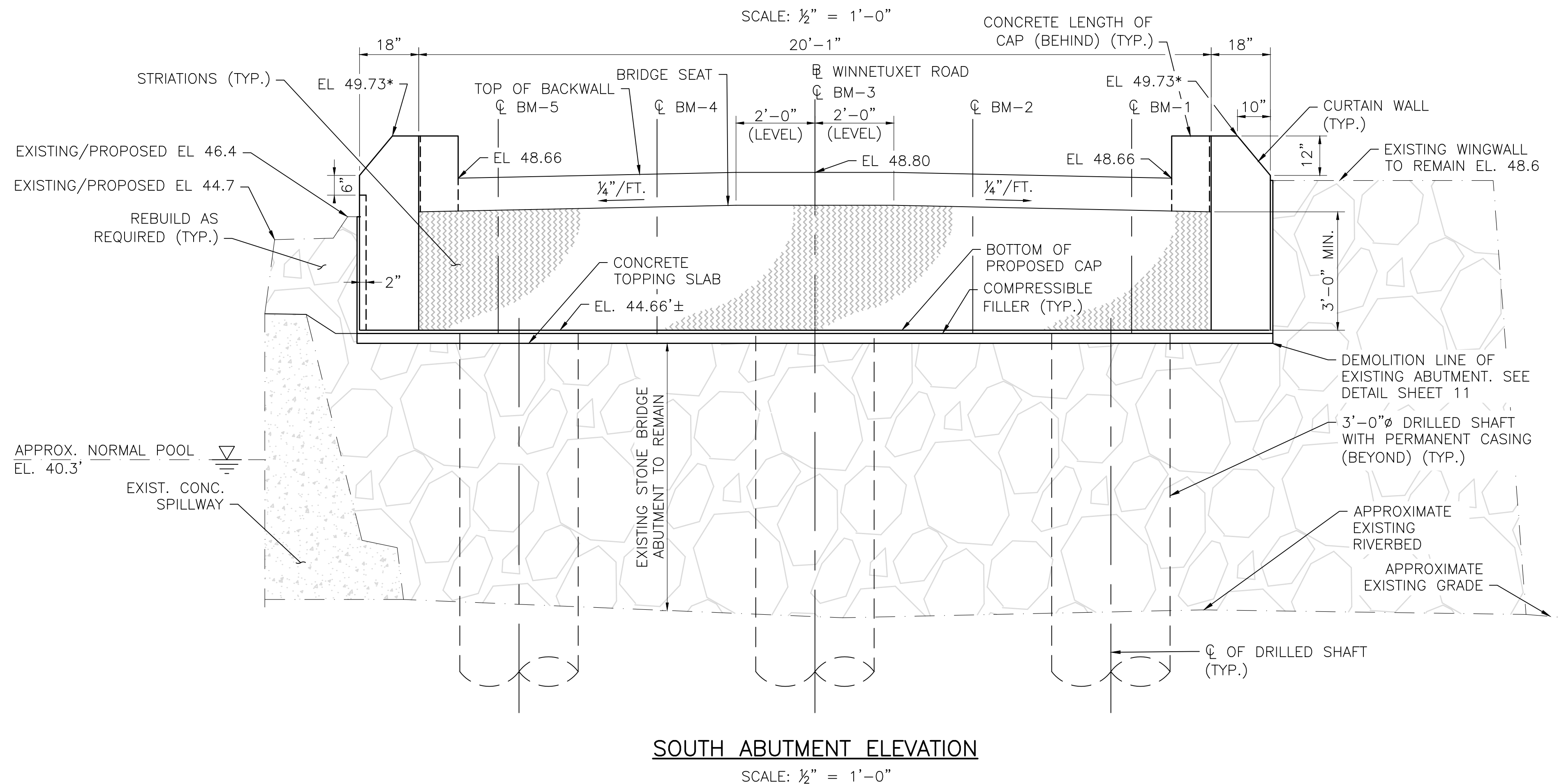
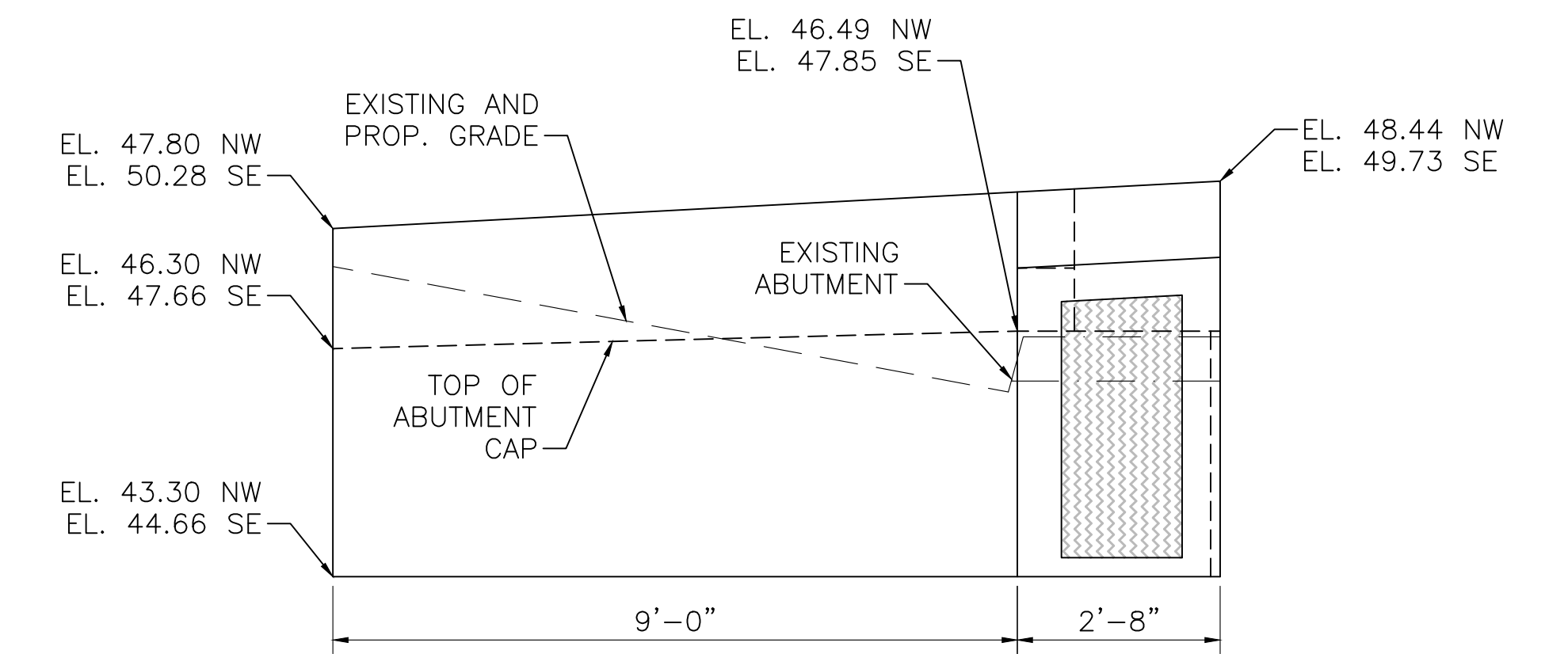
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	21	34
PROJECT FILE NO.		609435	

SOUTH ABUTMENT PLAN AND ELEVATION



BEAM SEAT ELEVATIONS (FEET)

GIRDER NO.	CL-BRG	0.0 SPAN	1.0 SPAN	CL-BRG
SPAN 1				
1	S. ABUT.	47.85	46.48	N. ABUT.
2		47.93	46.57	
3/CROWN		47.97	46.61	
4		47.93	46.57	
5		47.85	46.48	



NOTES:

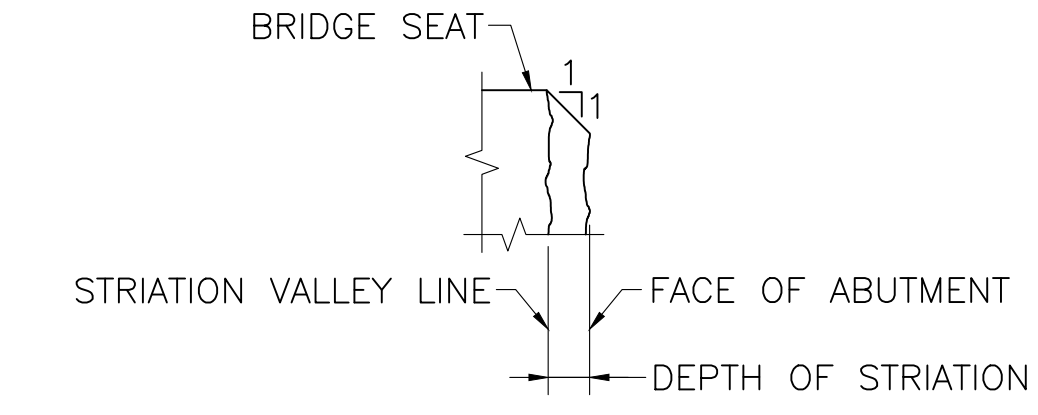
- SEE SHEET 11 FOR ABUTMENT DEMOLITION DETAIL.
- *CURTAIN WALL ELEVATIONS ARE AT FRONT FACE OF ABUTMENT.

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

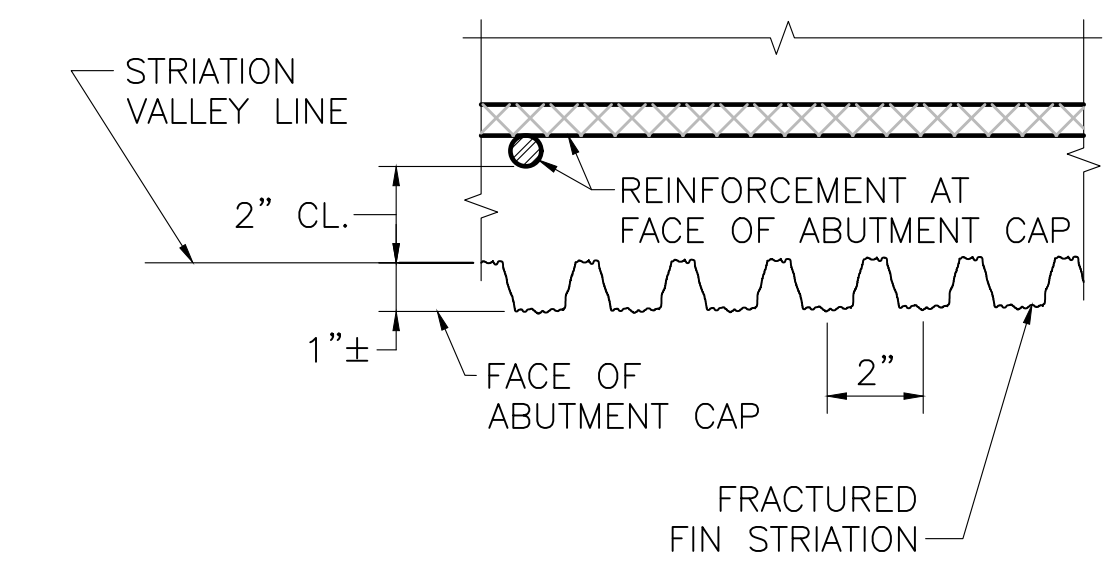
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	22	34
PROJECT FILE NO.		609435	

ABUTMENT DETAILS

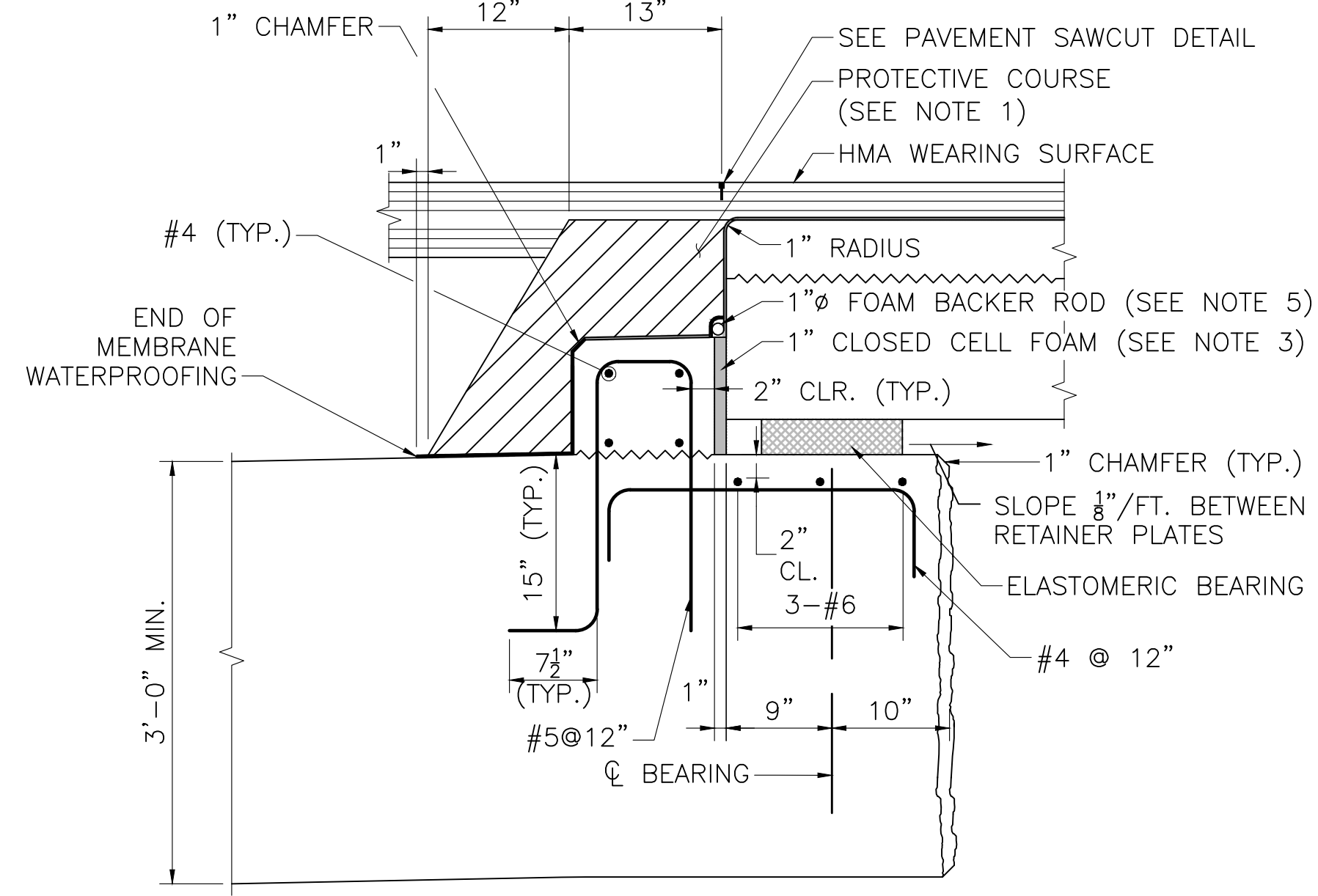


DETAIL AT BRIDGE SEAT
SCALE: 3" = 1'-0"



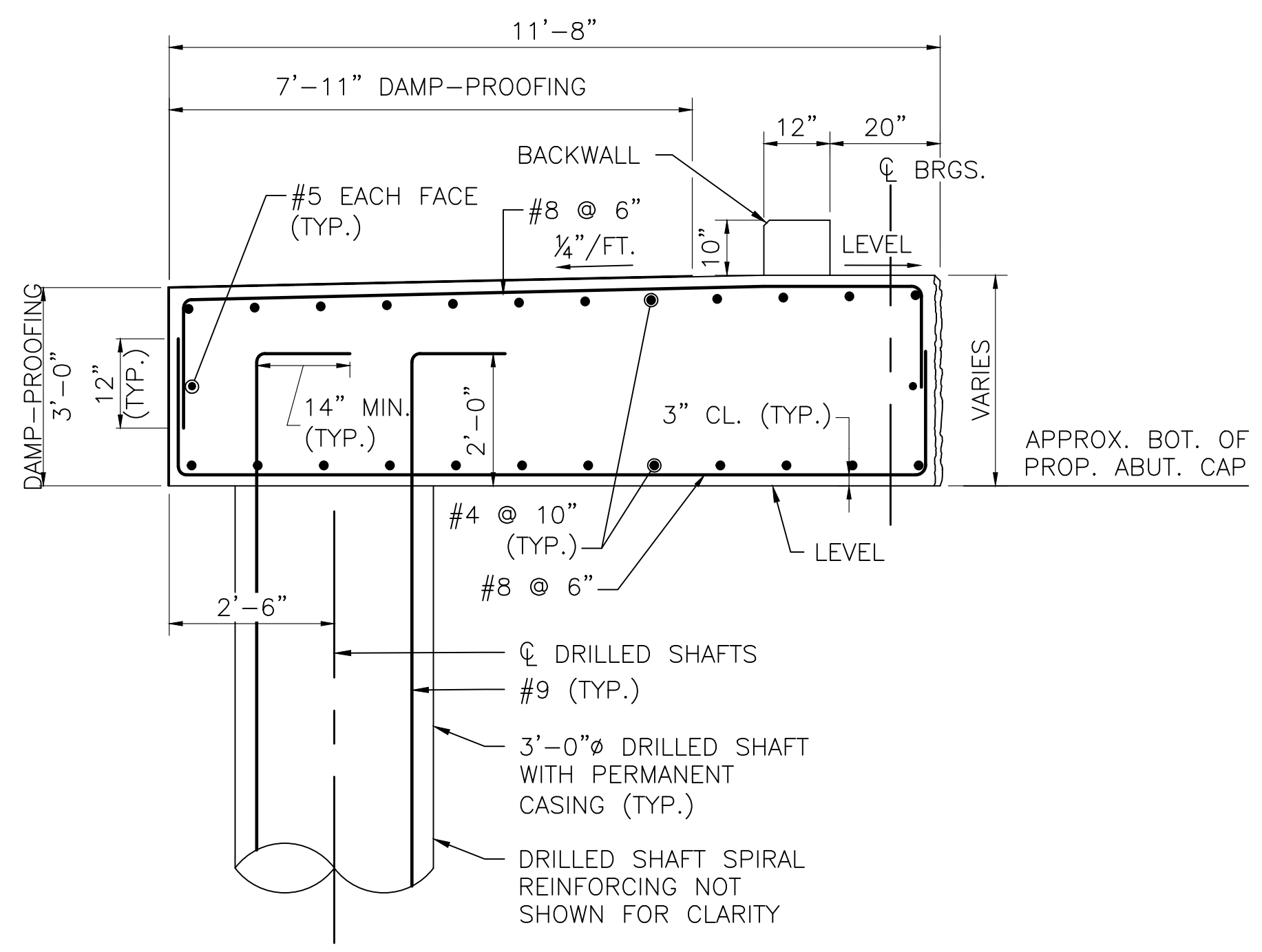
- NOTES:**
1. THE CONTRACTOR SHALL MAKE SURE THAT THE STRIATION FINS ARE PLUMB AND LINED UP VERTICALLY FROM PANEL TO PANEL FOR THE FULL HEIGHT OF THE ABUTMENT CAP.
 2. THE HORIZONTAL JOINT MAY BE OMITTED IF THE CONTRACTOR CAN DEMONSTRATE THAT THE FORM LINER PANELS CAN BE INSTALLED END TO END WITHOUT CREATING A VISIBLE SEAM IN THE FINAL CAST CONCRETE.

TYPICAL STRIATION DETAIL
SCALE: 3" = 1'-0"

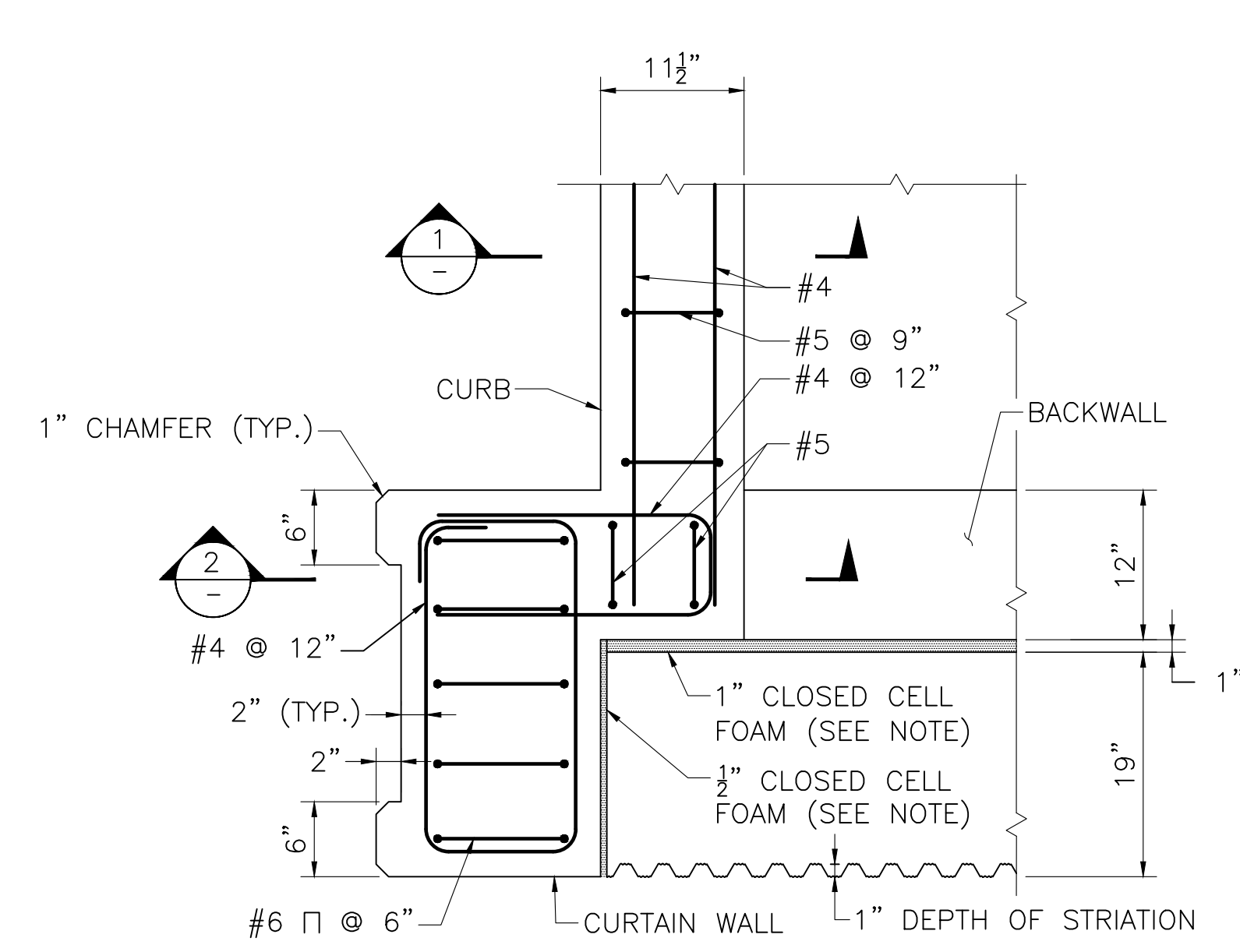


- NOTES:**
1. PROTECTIVE COURSE TO BE CLASS I DENSE BINDER COURSE FOR BRIDGES, PLACED IN 2" LAYERS AND COMPACTED WITH A MECHANICAL HAND-GUIDED TAMPER WITHIN 12 HOURS AFTER PLACING MEMBRANE WATERPROOFING.
 2. ALL REINFORCING SHOWN IN THIS DETAIL SHALL BE COATED BARS.
 3. ATTACH CLOSED CELL FOAM TO BACK OF PRECAST BEAM WITH ADHESIVE.
 4. ALL CURTAIN WALL AND BACKWALL CONCRETE SHALL BE 5000 PSI, 3/4" IN. CEMENT CONCRETE AND SHALL BE PLACED AFTER ALL BEAMS HAVE BEEN ERECTED.
 5. DRAPE MEMBRANE WATERPROOFING OVER CLOSED CELL FOAM BACKER ROD.

DETAILS AT ABUTMENT - ROADWAY SECTION
SCALE: 1" = 1'-0"

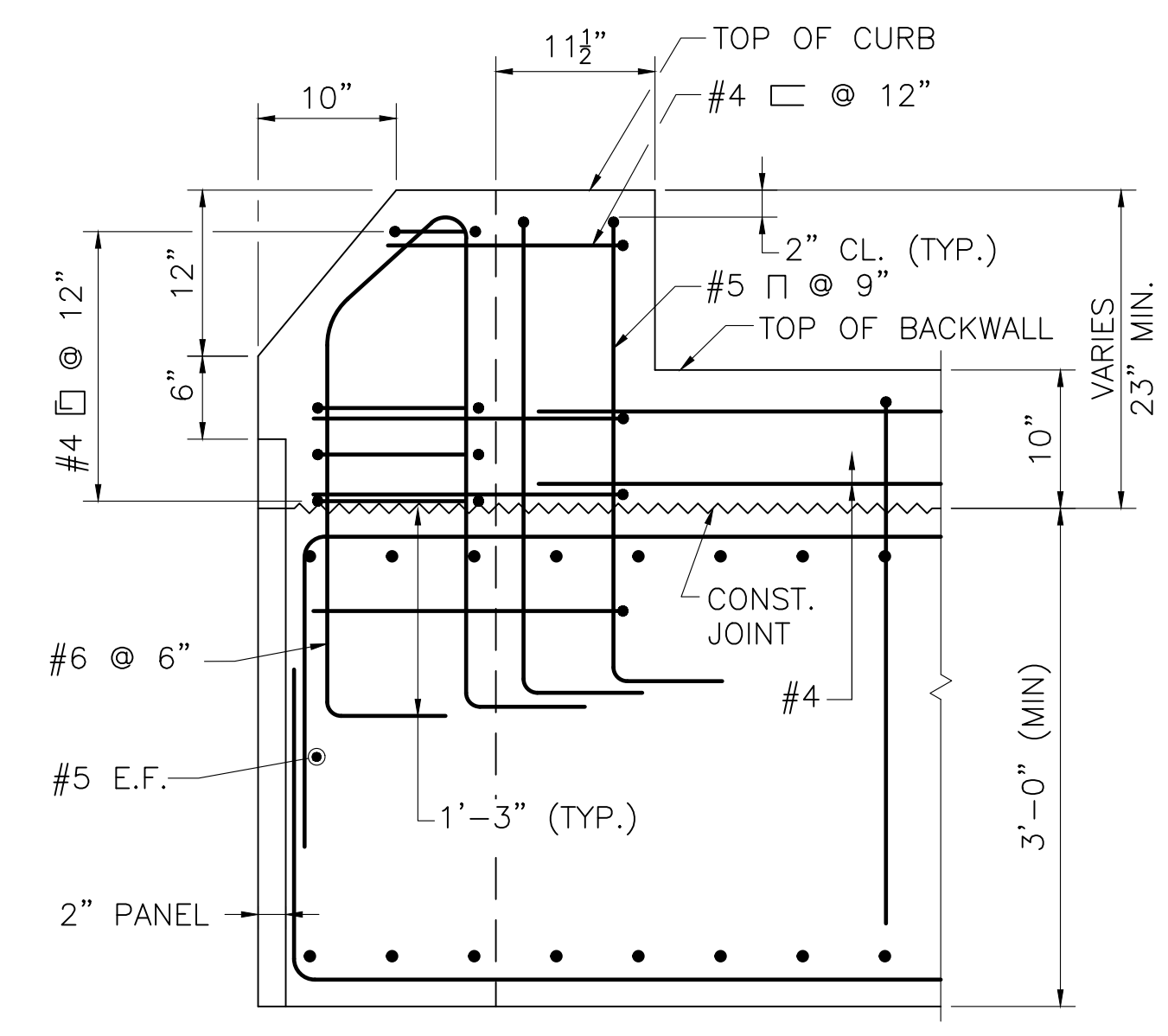


DETAILS AT ABUTMENT
SCALE: 1/2" = 1'-0"
NOTE: THE ABUTMENT CAP SHALL BE LEVEL IN THE TRANSVERSE DIRECTION.



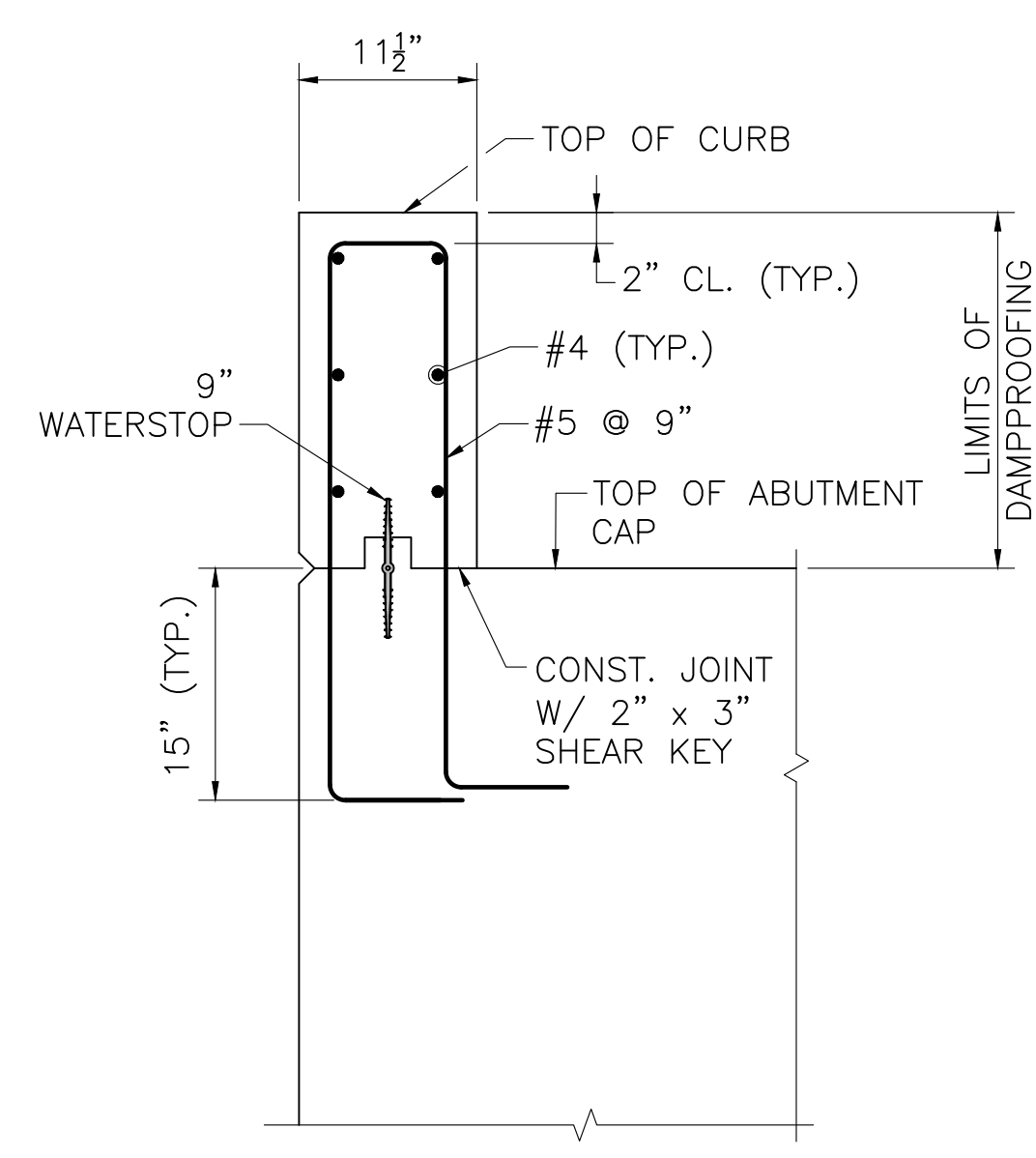
- NOTE:**
- ATTACH CLOSED CELL FOAM TO THE BACK AND SIDE OF THE EXTERIOR PRECAST BEAM PRIOR TO PLACING THE CONCRETE FOR THE BACKWALL AND CURTAIN WALL.

PLAN AT BEAM SEAT CORNER
SCALE: 1" = 1'-0"

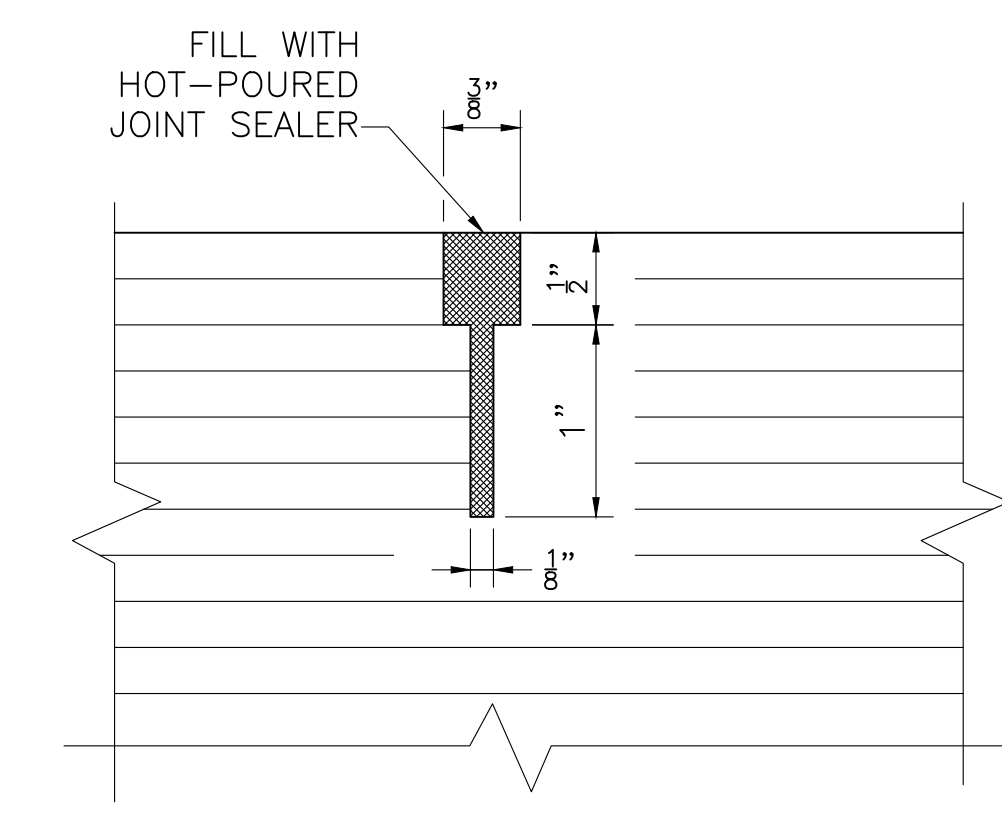


- NOTE:**
- REINFORCEMENT BELOW CONSTRUCTION JOINT HAS BEEN OMITTED FOR CLARITY.

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



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



PAVEMENT SAWCUT DETAIL
FULL SIZE

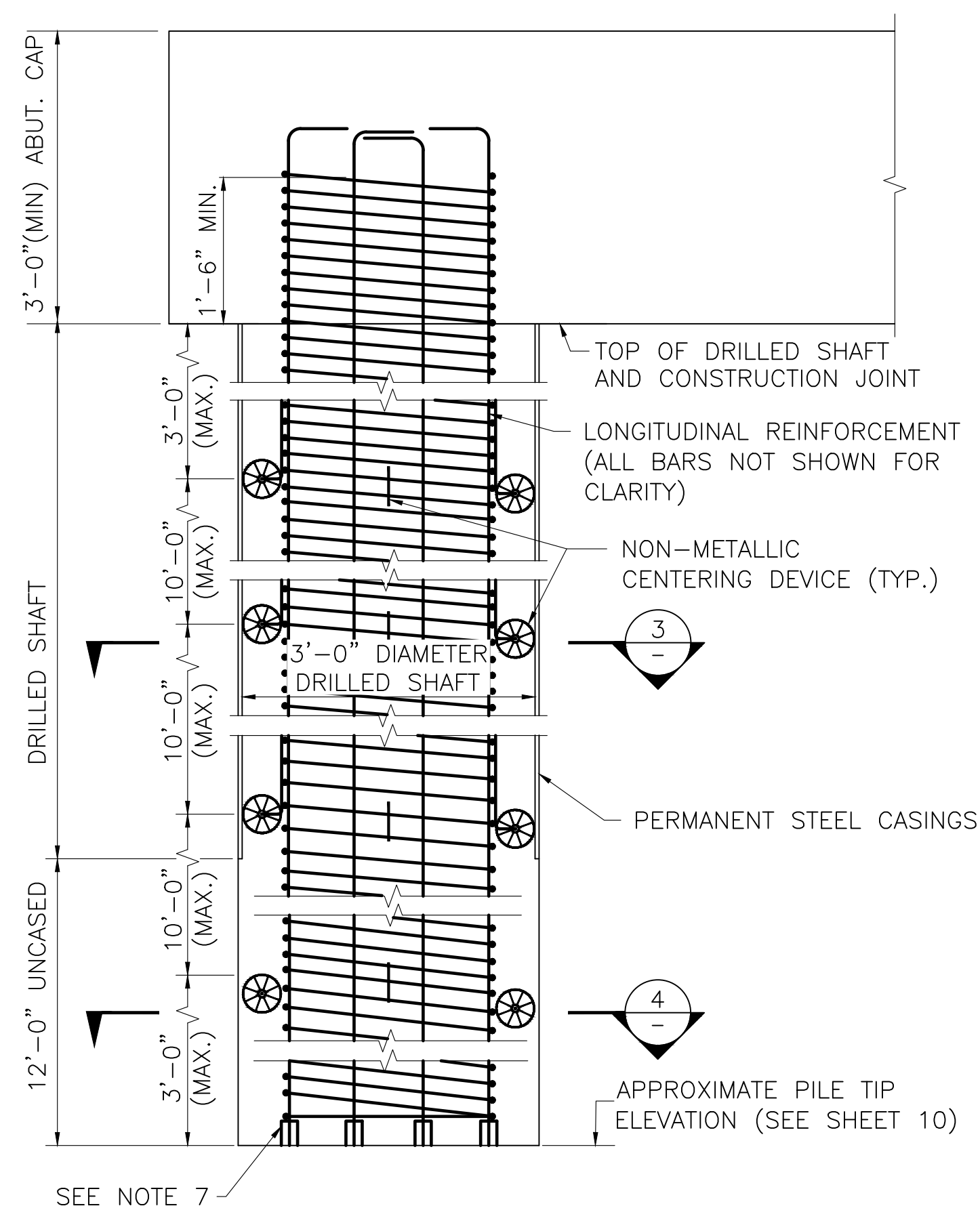
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

609435_BR13(P14001) - ABUTMENT DETAILS.DWG Plotted on 20-May-2024 2:13 PM Final Structural Submitter (SF)

PLYMPTON
WINNETUXET ROAD

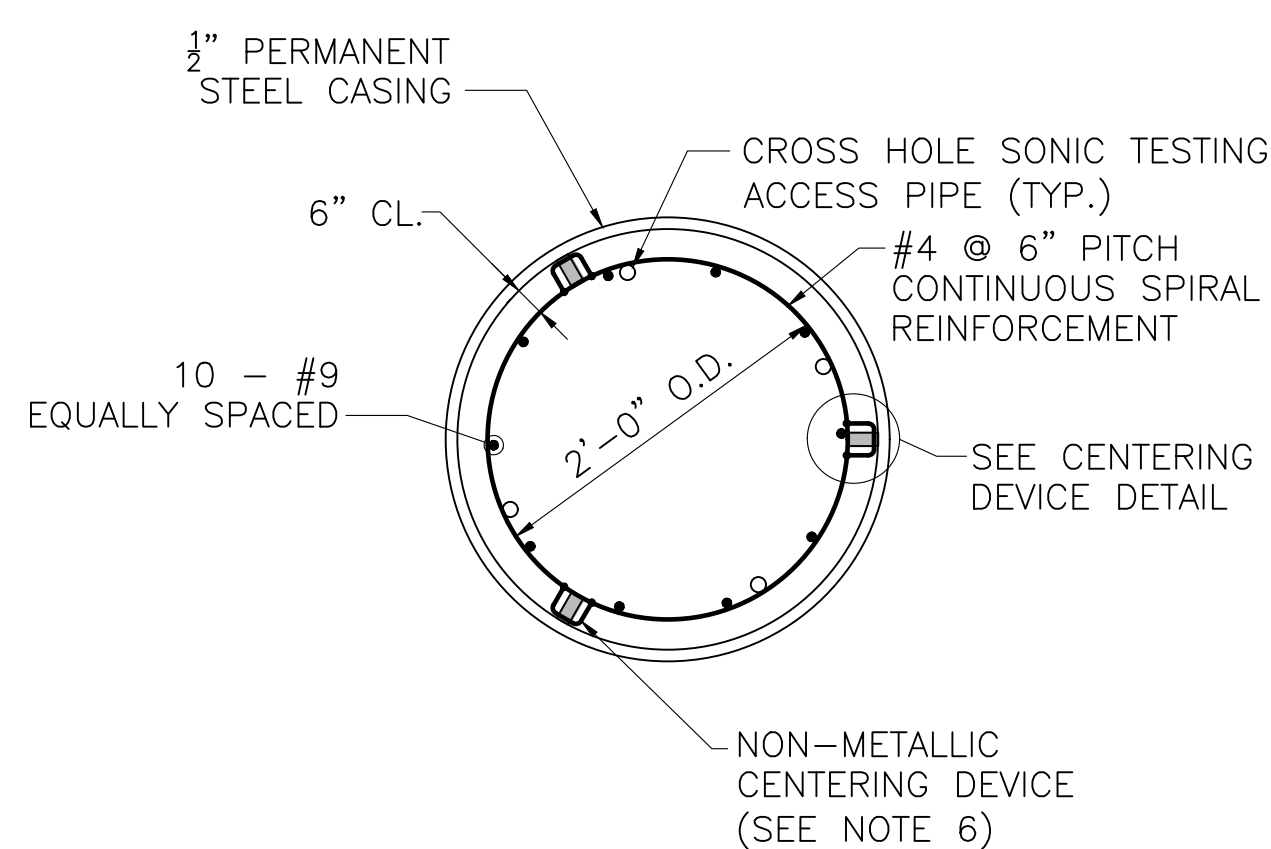
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	23	34
PROJECT FILE NO.		609435	

DRILLED SHAFT DETAILS



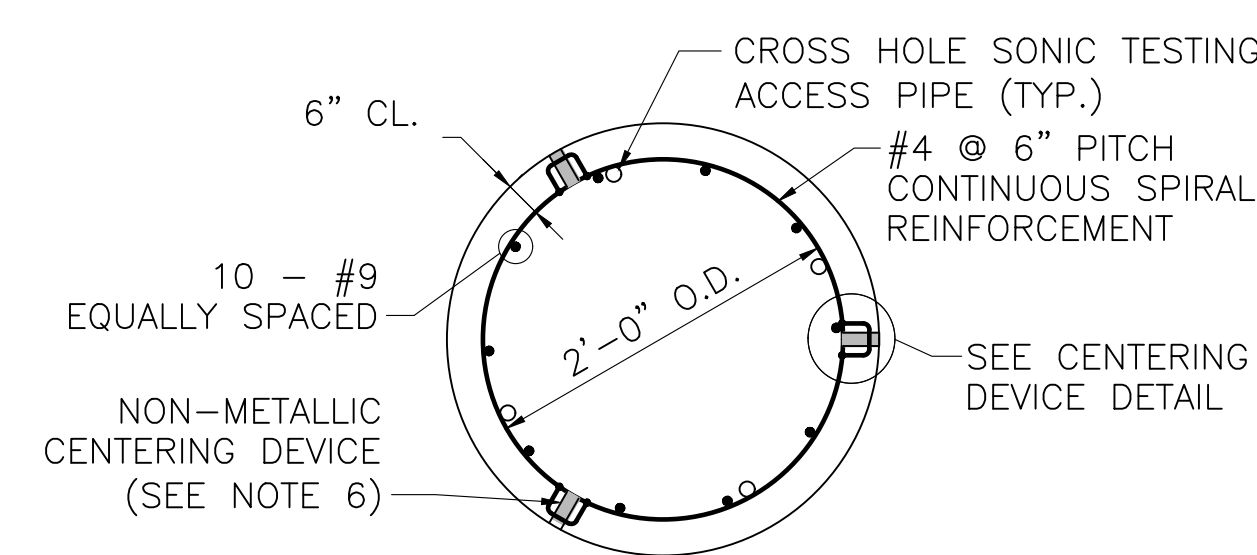
DRILLED SHAFT - VERTICAL SECTION

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



SECTION 3

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

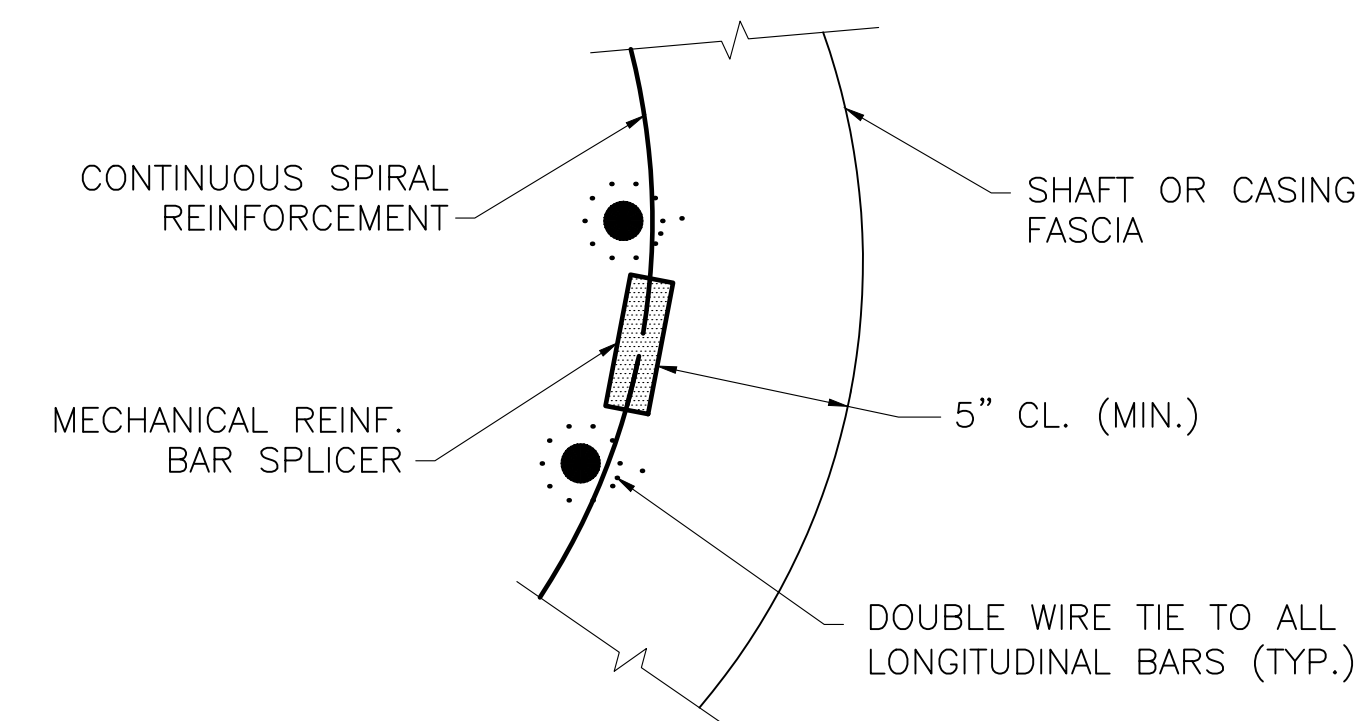


SECTION 4

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

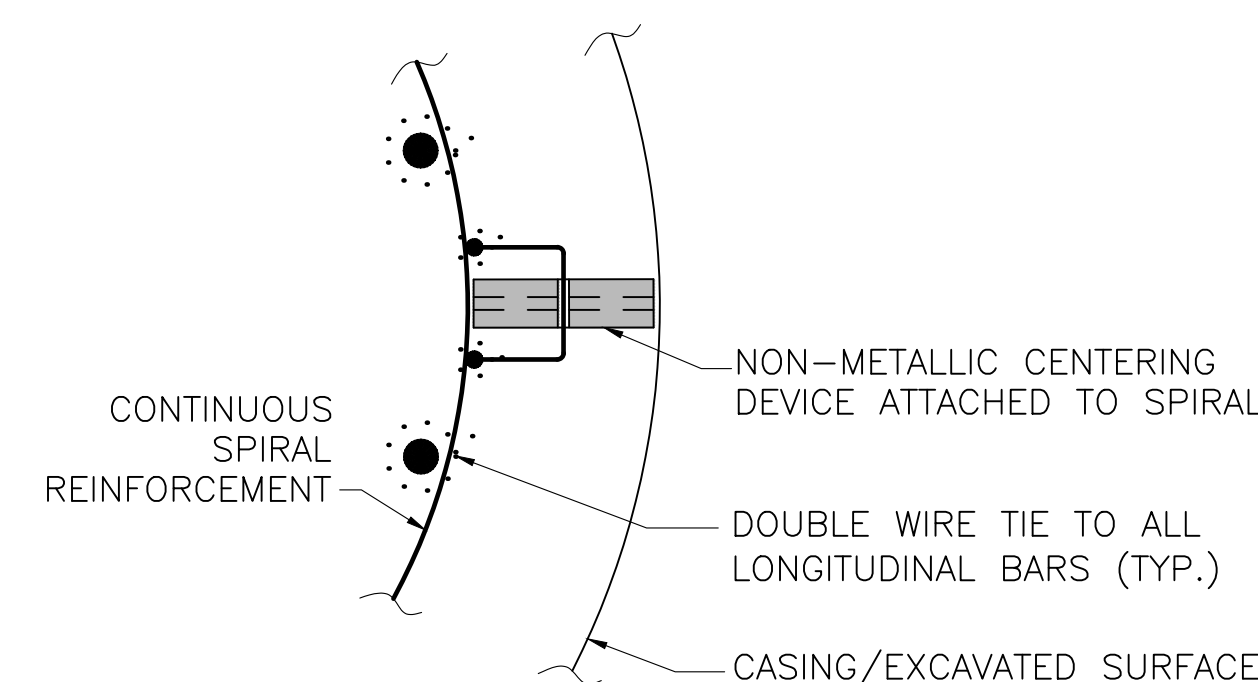
NOTES:

- DRILLED SHAFT CONCRETE SHALL BE 5000 PSI, 3/8 IN. CEMENT CONCRETE. THE CLEAR SPACING BETWEEN STEEL REINFORCEMENT BARS SHALL BE AT LEAST 1 1/8".
- THE FACTORED GEOTECHNICAL SHAFT RESISTANCE IS 245 KIPS AND IS THE PRODUCT OF THE NOMINAL GEOTECHNICAL RESISTANCE OF 445 KIPS AND A RESISTANCE FACTOR OF 0.55. THE FACTORED DESIGN AXIAL LOAD PER SHAFT IS 160 KIPS AS PER AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS STRENGTH I LOAD COMBINATION. THE FACTORED STRUCTURAL SHAFT RESISTANCE IS 1097 KIPS AND IS THE PRODUCT OF THE NOMINAL STRUCTURAL RESISTANCE OF 1462 KIPS AND A RESISTANCE FACTOR OF 0.75.
- CENTERING DEVICES SHALL BE CONSTRUCTED OF AN APPROVED NON-METALLIC DURABLE MATERIAL.
- THE NON-METALLIC CENTERING DEVICES SHALL BE OF ADEQUATE SIZE TO ENSURE A MINIMUM 5" ANNULAR SPACE BETWEEN THE OUTSIDE OF THE REINFORCEMENT CAGE AND THE SIDES OF THE EXCAVATED HOLE OR INSIDE OF CASING.
- THERE SHALL BE A MINIMUM OF 3 GROUPS OF NON-METALLIC CENTERING DEVICES FOR SHAFTS LESS THAN 26'-0" IN LENGTH.
- NON-METALLIC CENTERING DEVICES SHALL BE PLACED AT A MAXIMUM SPACING OF 2'-6" AROUND THE CIRCUMFERENCE OF THE SHAFT.
- EACH LONGITUDINAL BAR SHALL BE SUPPORTED BY A 3" HIGH BOLSTER OF APPROVED NON-METALLIC DURABLE MATERIAL.
- SPLICES IN THE LONGITUDINAL REINFORCEMENT SHALL BE MADE WITH MECHANICAL REINFORCING BAR SPLICERS AND SHALL BE STAGGERED A MINIMUM OF 2'-0".
- IF SPLICING OF SPIRAL REINFORCEMENT IS NECESSARY, A MINIMUM OF 5" CLEARANCE SHALL BE PROVIDED BETWEEN THE OUTSIDE SURFACE OF MECHANICAL REINFORCING BAR SPLICERS AND THE DRILLED SHAFT CASING OR EXCAVATED SURFACE.
- WELDING OF LONGITUDINAL REINFORCEMENT SHALL NOT BE PERMITTED. WELDING OF OTHER REINFORCING BARS MAY BE PERMITTED WITH THE WRITTEN APPROVAL OF THE ENGINEER.



SPIRAL REINFORCEMENT SPLICE DETAIL

NOT TO SCALE



CENTERING DEVICE DETAIL

NOT TO SCALE

CONSTRUCTION NOTES:

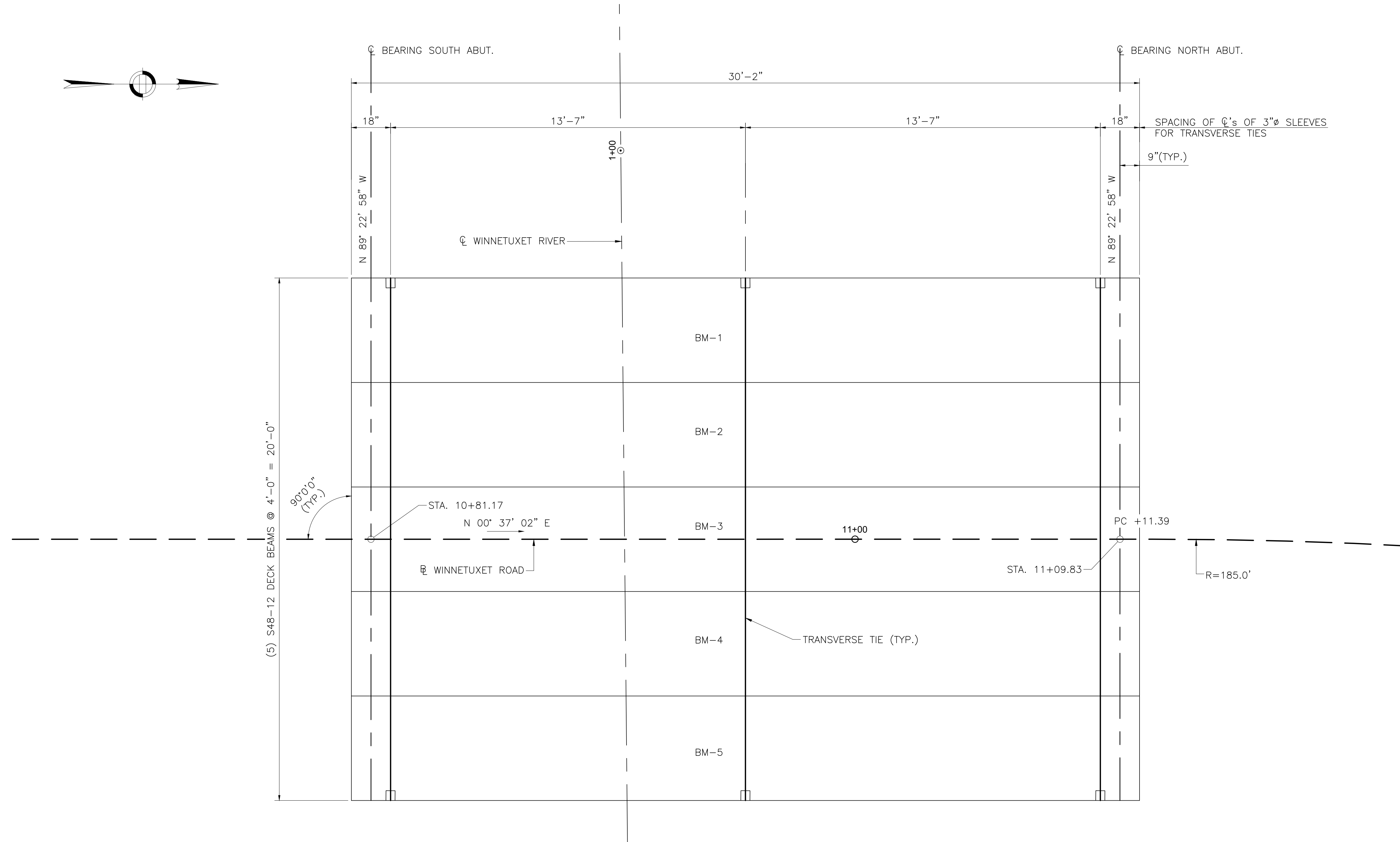
- DRILLING SLURRY, IF USED, SHALL ONLY BE PERMITTED THROUGH OVERBURDEN SOILS. ONLY WATER SHALL BE USED TO DRILL IN THE RESIDUAL SOIL AND BEDROCK.
- AN OSTERBERG LOAD CELL AXIAL LOAD TEST SHALL BE PERFORMED ON THE CENTER PRODUCTION PILE AT THE NORTH ABUTMENT AS SHOWN.
- THE PROTECTION OF STRUCTURES AS SPECIFIED IN THE SPECIFICATIONS INCLUDES PROTECTION OF THE ADJACENT DAM AND SPILLWAY. AN INSTRUMENTATION PLAN SHALL BE SUBMITTED FOR MONITORING THE DAM AND SPILLWAY DURING CONSTRUCTION.

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	24	34
PROJECT FILE NO.		609435	

FRAMING PLAN



FRAMING PLAN

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

NOTES:
SEE SPECIAL PROVISIONS FOR BEAMS
ERECTION AND LAYOUT.

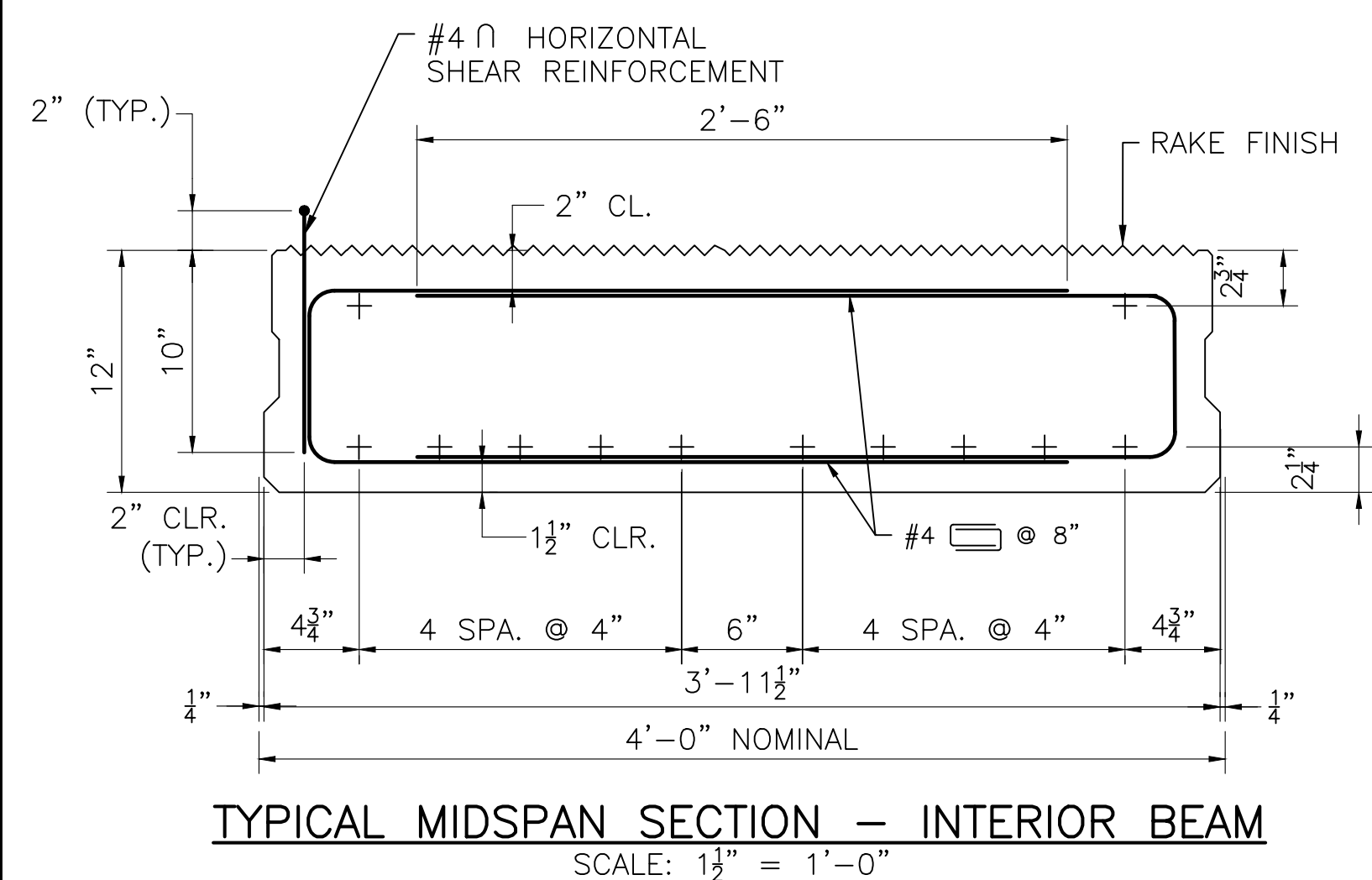
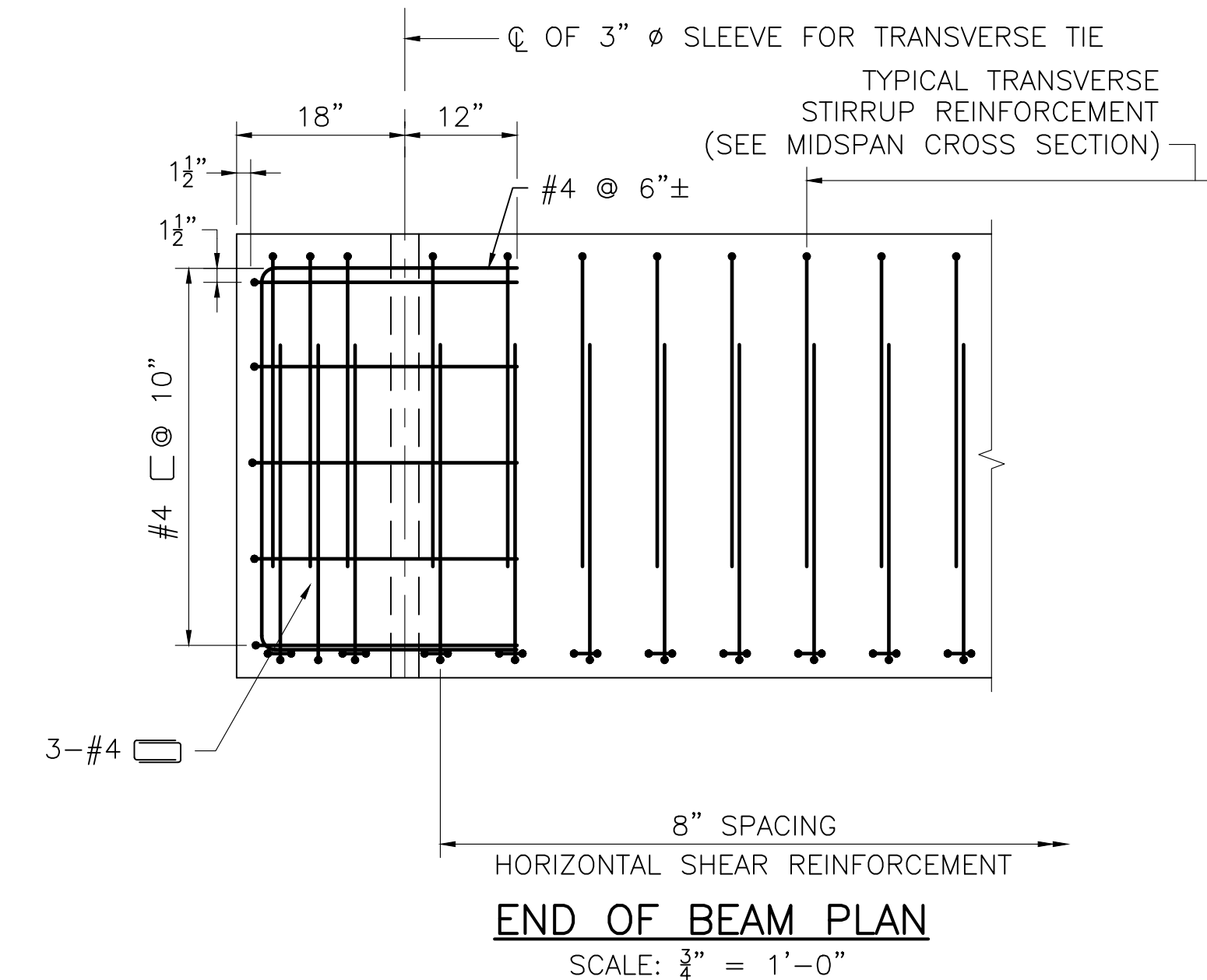
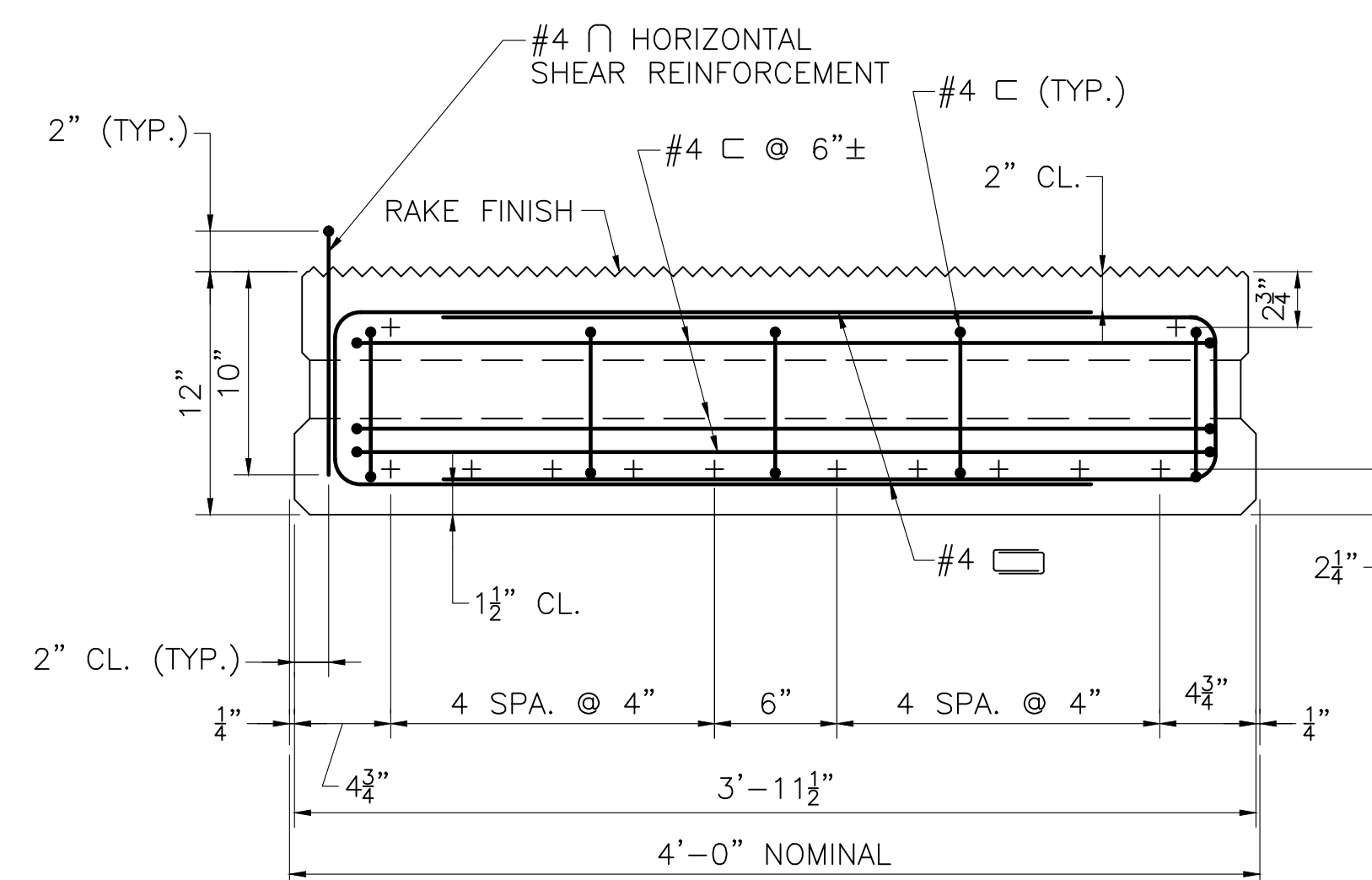
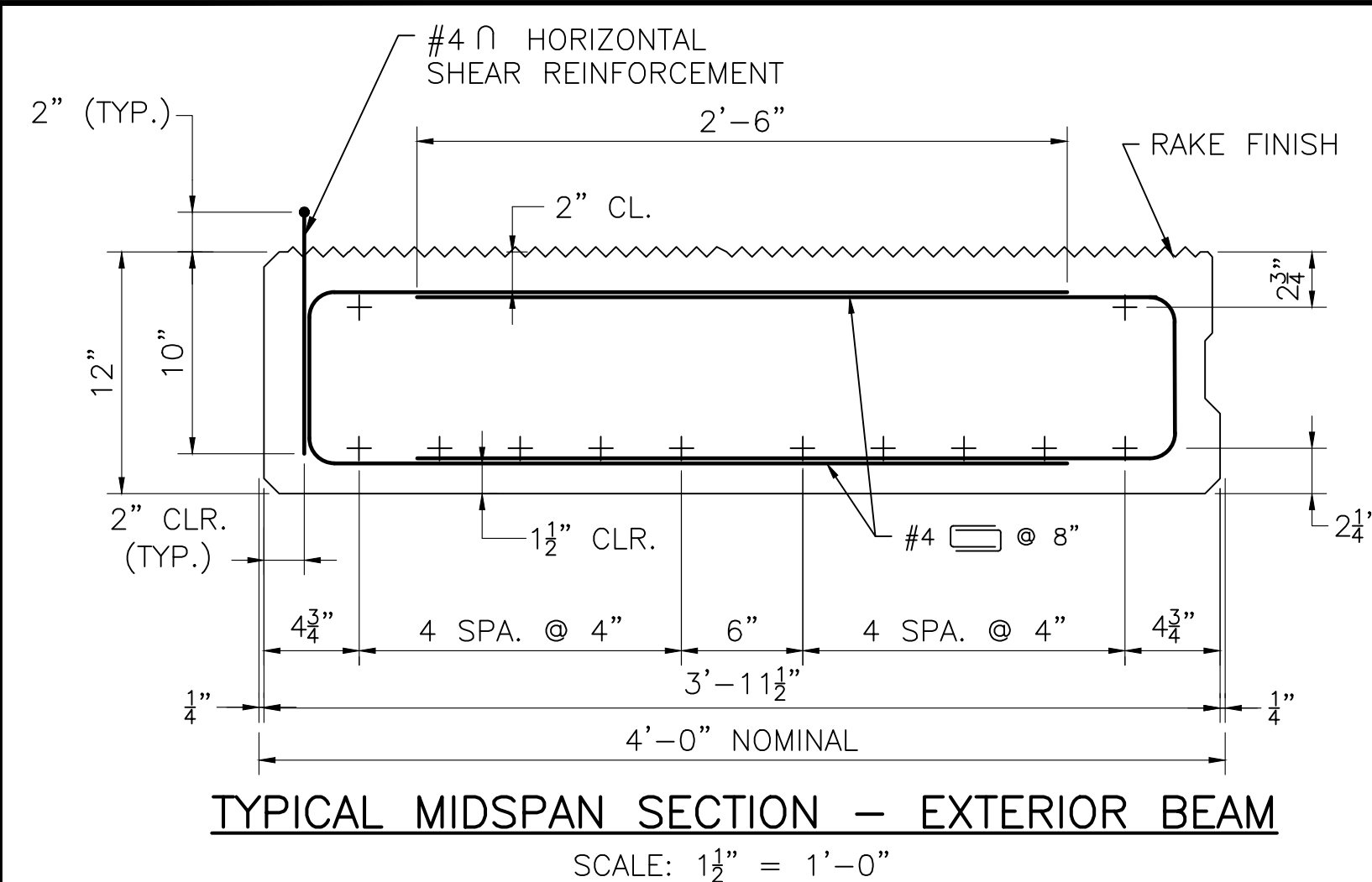
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

SHEET 15 OF 23 SHEETS BRIDGE NO. P-14-001 (CEN)

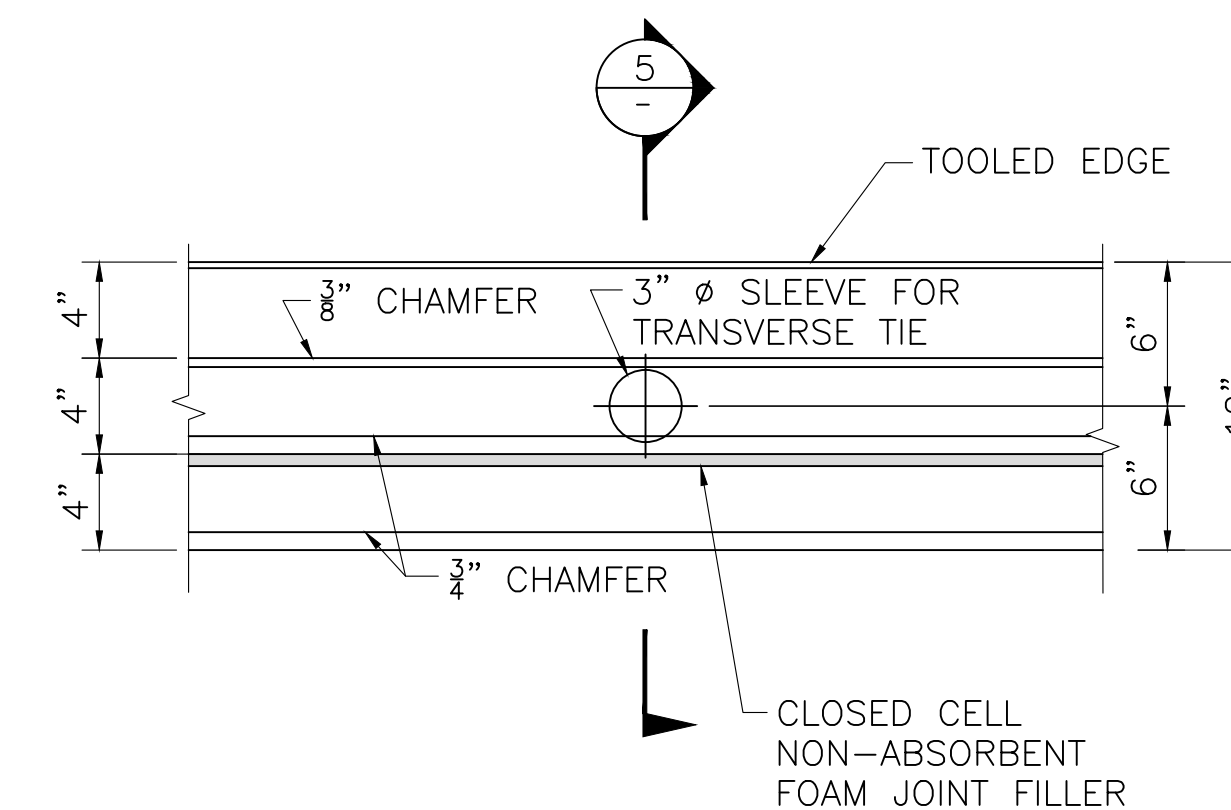
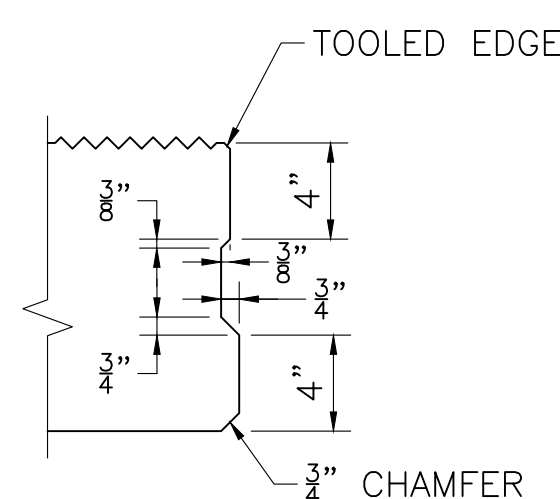
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	25	34
PROJECT FILE NO.		609435	

BEAM DETAILS

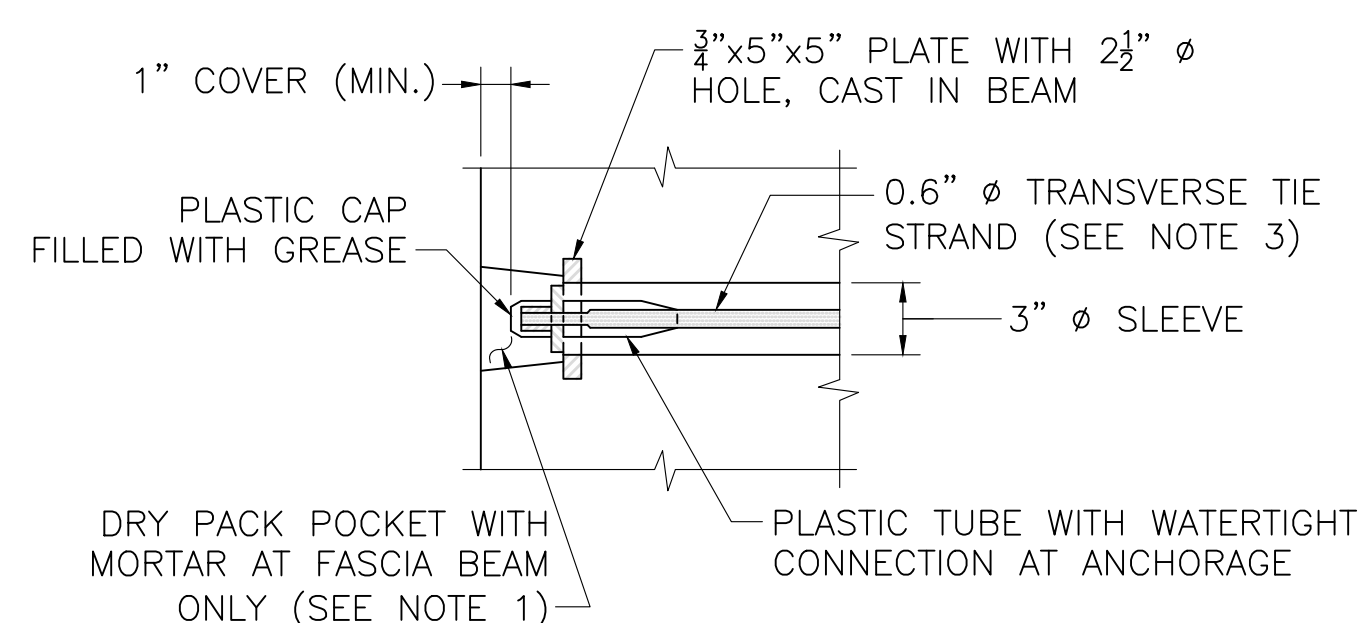


NOTE: INTERIOR BEAM SHOWN. EXTERIOR BEAM SIMILAR EXCEPT THE SHEAR KEY IS OMITTED AT THE FASCIA.



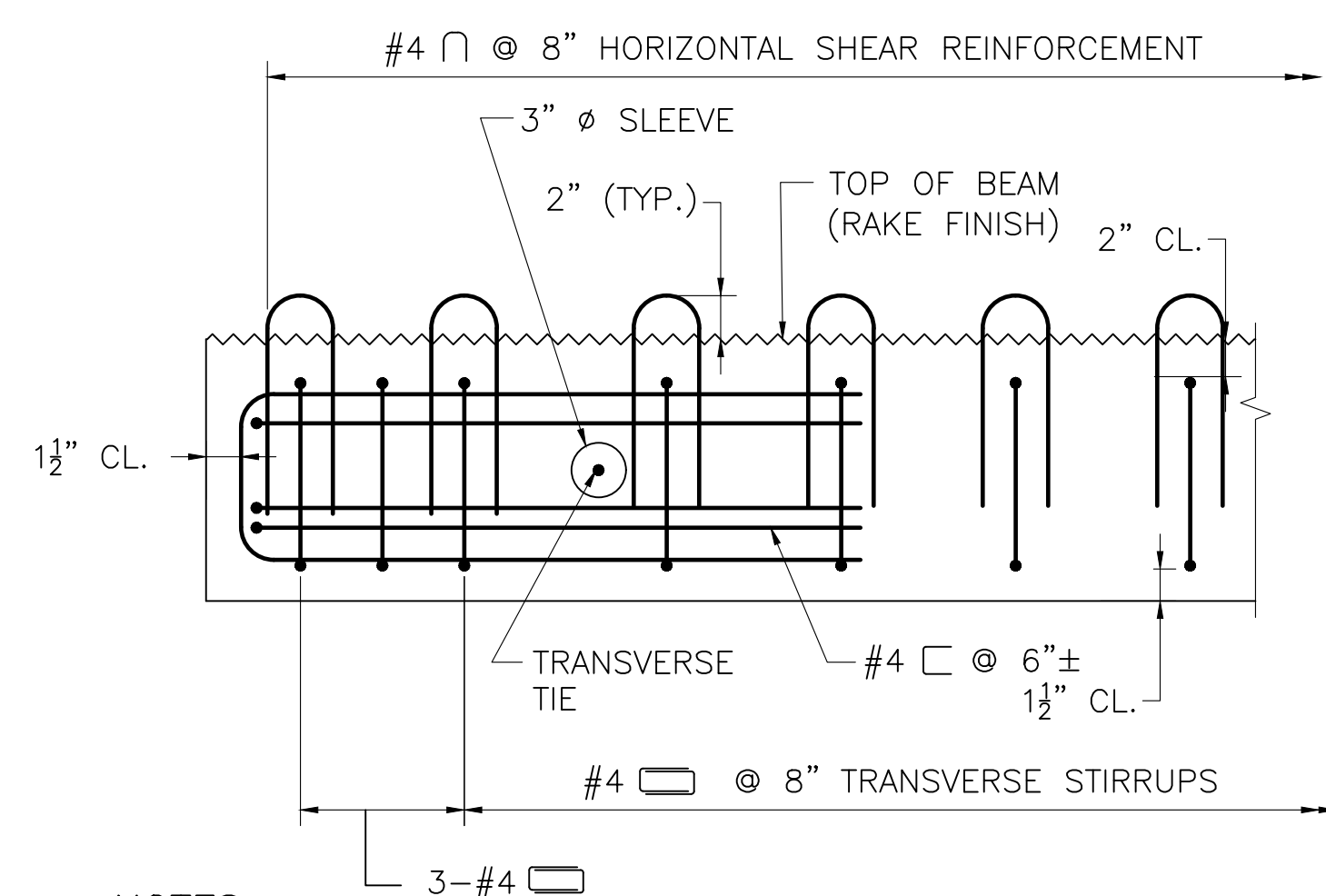
NOTES:

- + DENOTES STRAIGHT STRANDS.
- ⊕ DENOTES DEBONDED STRANDS.
- SEE SHEAR KEY DETAIL.
- SEE END OF BEAM PLAN FOR STIRRUP SPACING.



NOTES:

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

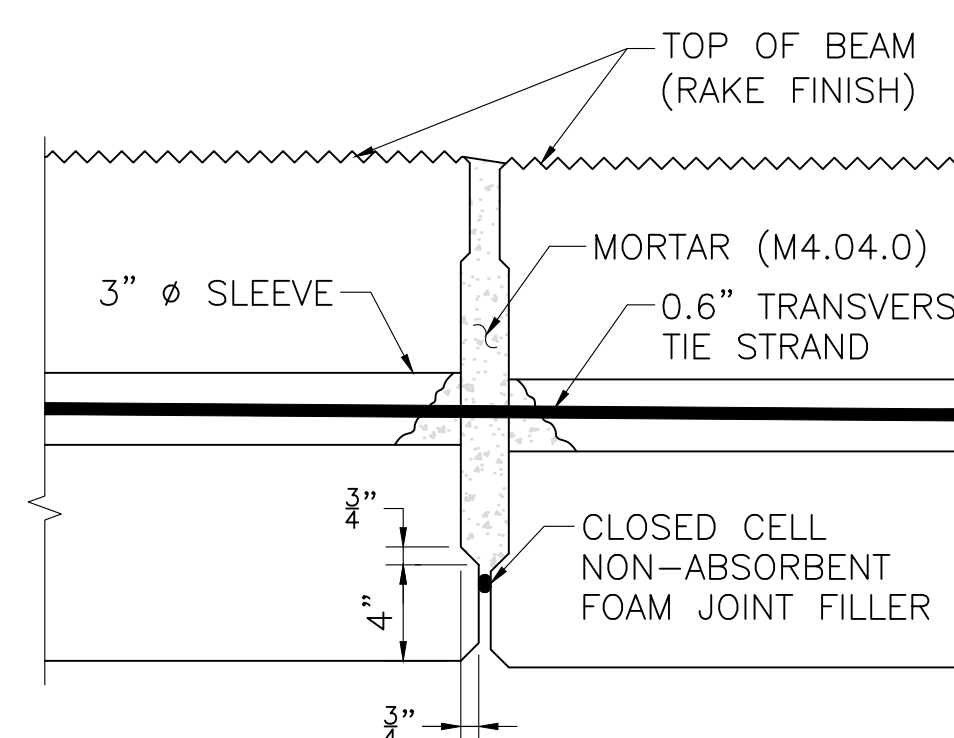


NOTES:

- THE REMAINDER OF THE STRANDS IS NOT SHOWN FOR CLARITY.

TYPICAL BEAM ELEVATION AT TRANSVERSE TIE LOCATIONS

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



CONSTRUCTION SEQUENCE NOTES:

- AFTER ALL BEAMS HAVE BEEN ERECTED, TENSION EACH TRANSVERSE TIE TO 5 KIPS.
- FILL ALL KEYWAYS WITH MORTAR (M4.04.0). IF THE KEYWAYS ARE NOT FILLED WITHIN FIVE (5) DAYS AFTER THE BEAMS ARE ERECTED, THE CONTRACTOR SHALL COVER AND PROTECT THE KEYWAYS FROM WEATHER AND DEBRIS UNTIL THEY ARE FILLED.
- AFTER THE MORTAR HAS CURED (24 HOURS MINIMUM), TENSION EACH TRANSVERSE TIE TO 44 KIPS.
- CONCRETE FOR DECK SLAB SHALL BE 5000 PSI, 3/4" IN, 685 HP CEMENT CONCRETE AND SHALL BE PLACED AFTER THE TRANSVERSE TIES HAVE BEEN FULLY TENSIONED.
- NO TRAFFIC OR HEAVY EQUIPMENT WILL BE PERMITTED ON THE BRIDGE UNTIL ALL TRANSVERSE TIES HAVE BEEN PROPERLY TENSIONED AND THE DECK HAS BEEN CAST AND CURED PER THE STANDARD SPECIFICATIONS.

PRESTRESS NOTES:

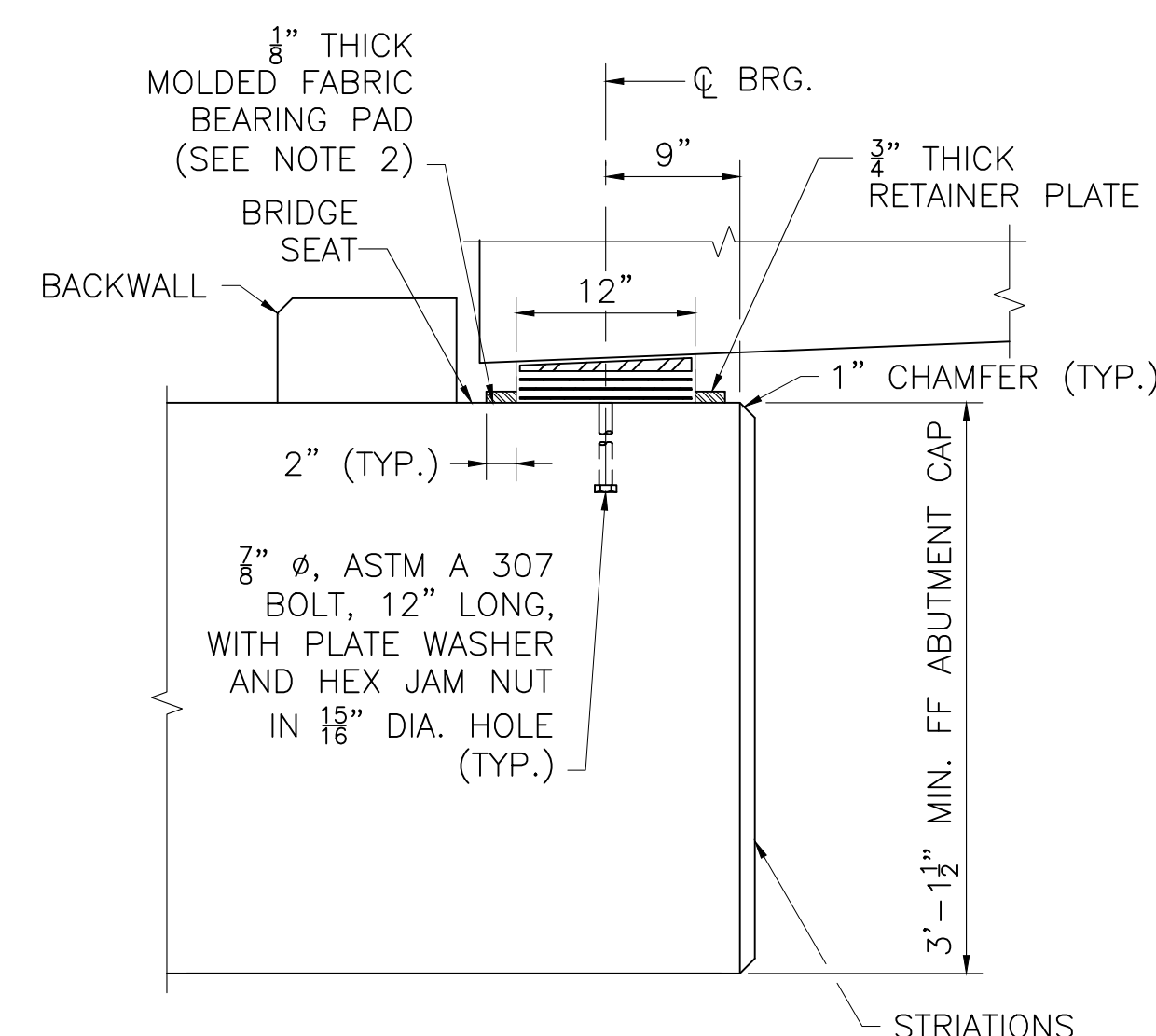
- ALL PRETENSIONING ELEMENTS SHALL BE 0.6" Ø, UNCOATED, SEVEN-WIRE, LOW RELAXATION STEEL STRANDS AND SHALL CONFORM TO AASHTO M 203.
- THE TENSILE STRENGTH OF THE PRETENSIONING STRANDS SHALL BE 270 KSI.
- THE INITIAL TENSION PER 0.6" Ø STRAND SHALL BE 44 KIPS.
- THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 6500 PSI.
- NO PRESTRESS SHALL BE TRANSFERRED TO THE CONCRETE UNTIL IT HAS ATTAINED A COMPRESSIVE STRENGTH, AS SHOWN BY CYLINDER TEST, OF AT LEAST 4500 PSI.
- THE TOP OF ALL BEAMS SHALL BE GIVEN A RAKE FINISH (1/4" AMPLITUDE) ACROSS THE WIDTH (PERPENDICULAR TO THE BEAM'S AXIS).
- THE FABRICATOR IS FULLY RESPONSIBLE FOR THE DESIGN OF THE LIFTING DEVICES WHICH SHALL BE ADEQUATE FOR THE SAFETY FACTORS REQUIRED BY THE ERECTION PROCEDURE.

DATE	ISSUED FOR CONSTRUCTION
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

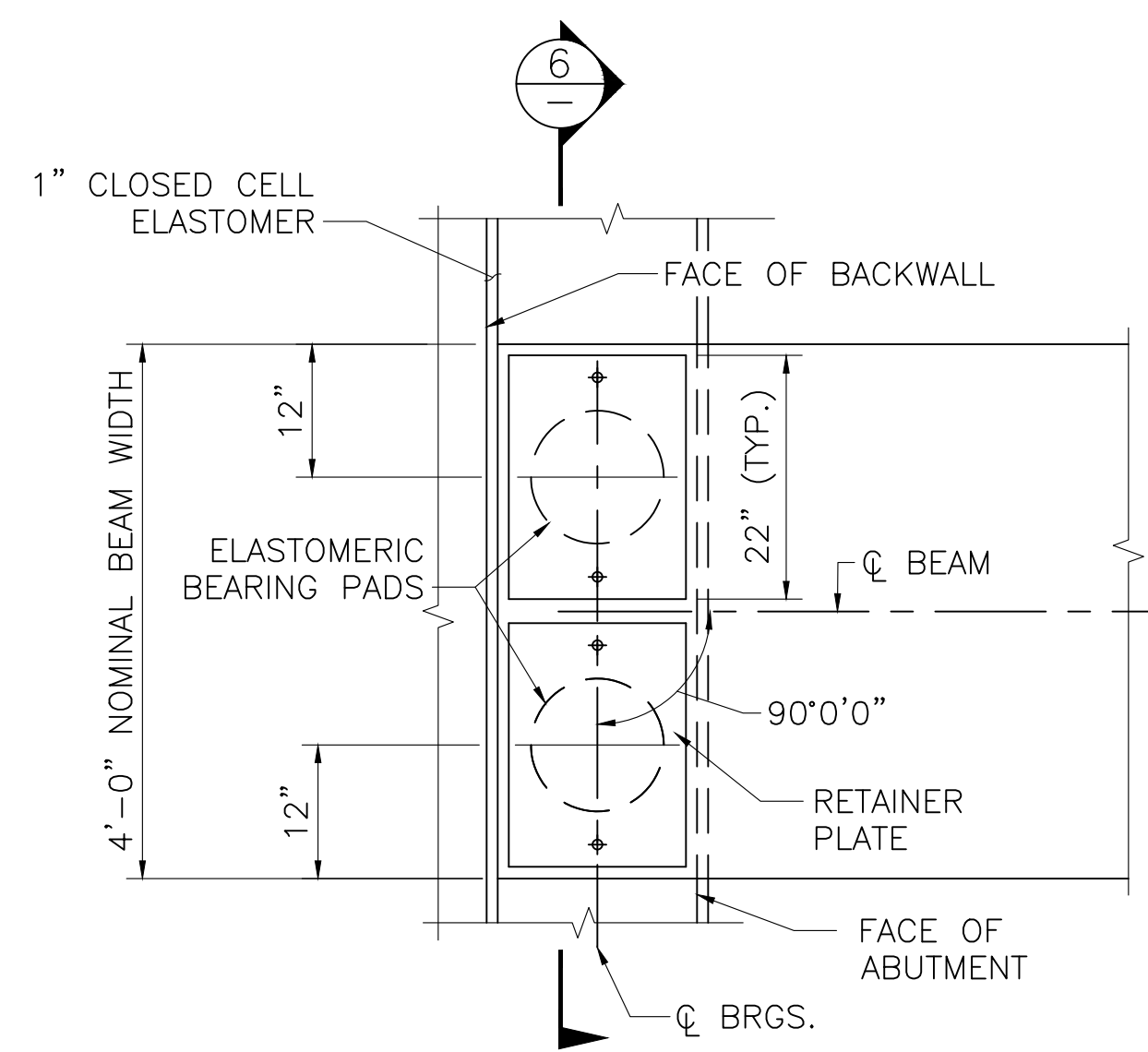
PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	26	34
PROJECT FILE NO.		609435	

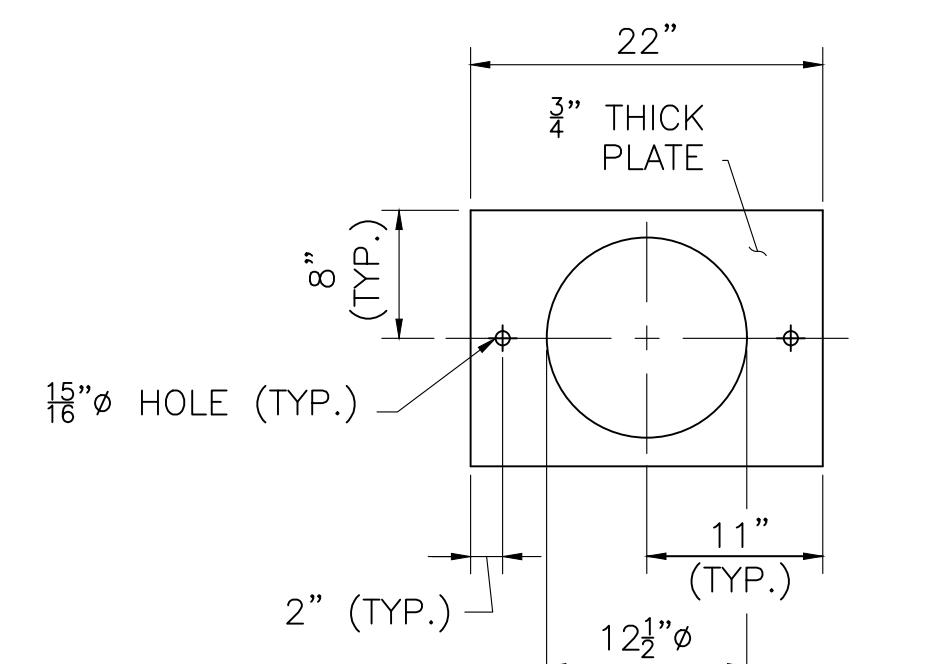
BEARING DETAILS



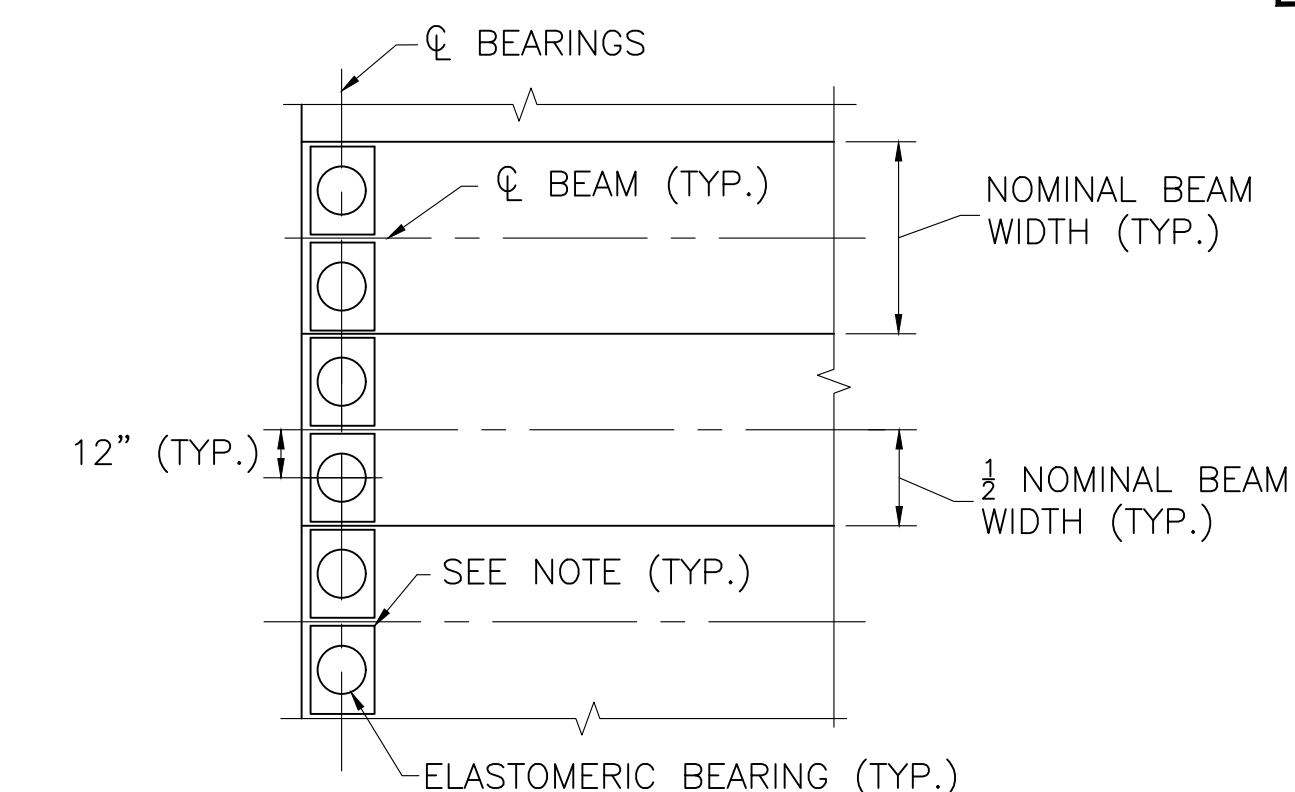
SECTION THROUGH BEARING
SCALE: 1" = 1'-0"



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

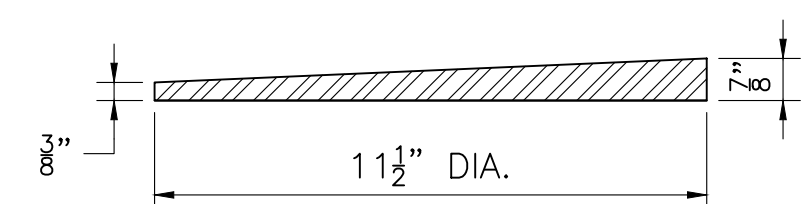


RETAINER PLATE DETAIL
SCALE: 1" = 1'-0"

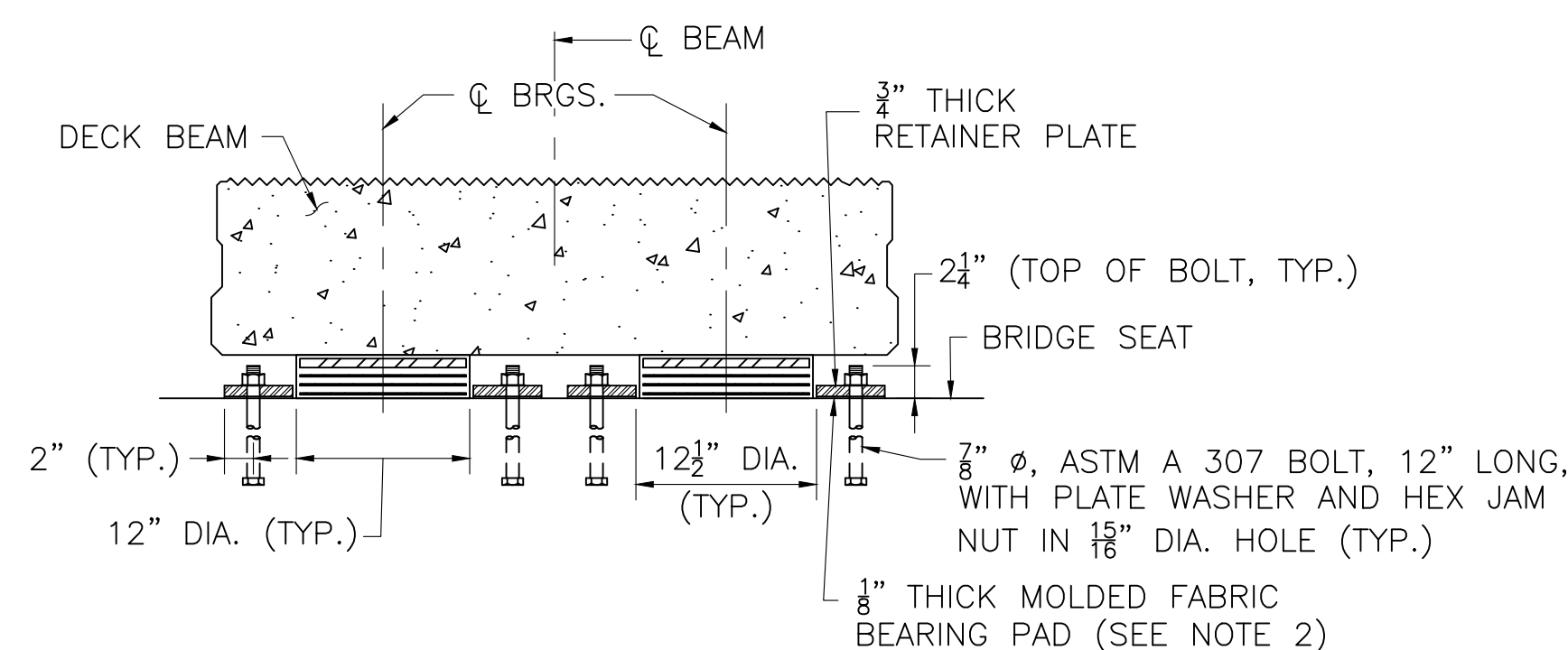


NOTE:
PROVIDE 1/8" / FT. SLOPE BETWEEN RETAINER PLATES.

LAYOUT OF BEARINGS
SCALE: 3/4" = 1'-0"



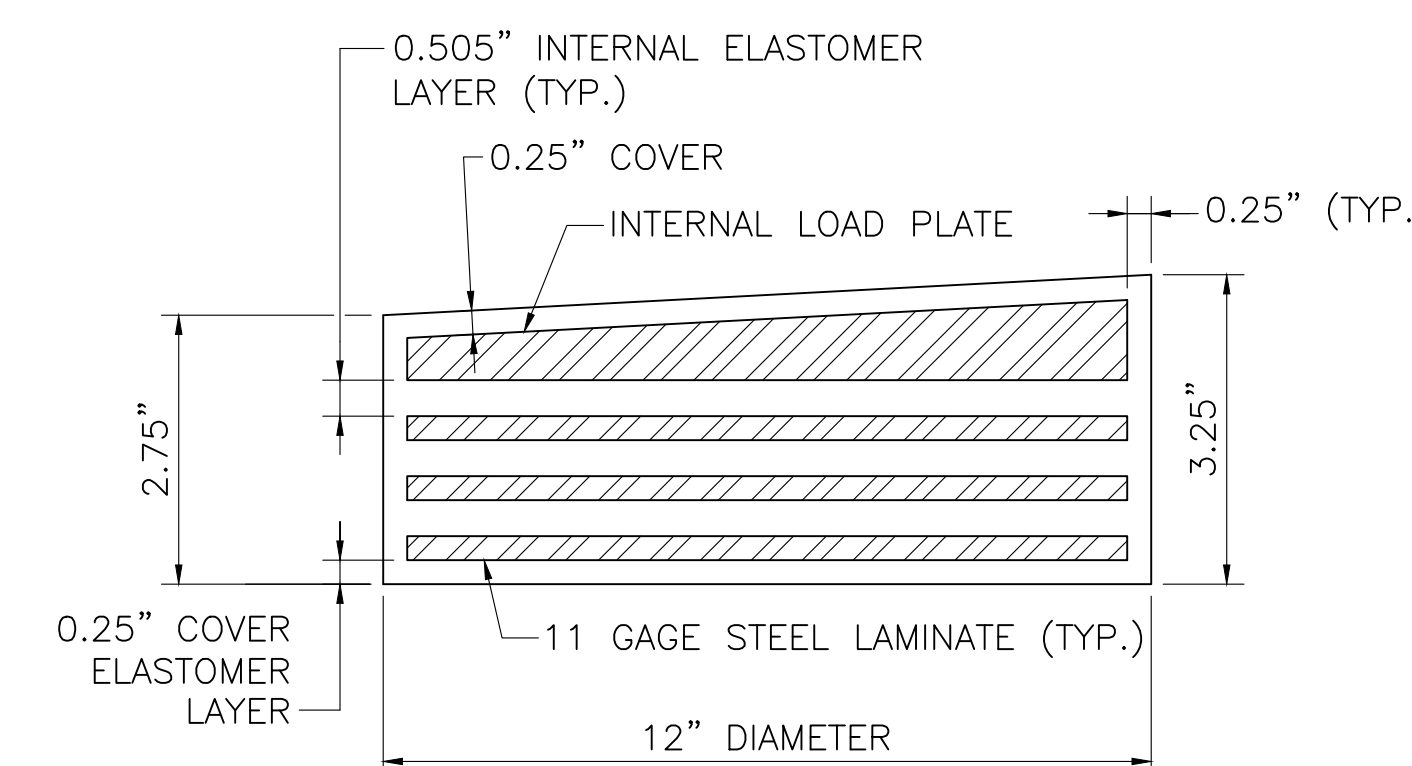
INTERNAL LOAD PLATE DETAIL
SCALE: 3" = 1'-0"



SECTION
SCALE: 1" = 1'-0"

NOTES:

1. STEEL RETAINER PLATES SHALL CONFORM TO AASHTO M270 GRADE 36.
2. MOLDED FABRIC BEARING PAD UNDERNEATH THE RETAINER PLATE SHALL CONFORM TO M9.16.2 AND SHALL BE CUT TO THE SHAPE OF THE PLATE. THE BEARING PAD MUST SIT ON CONCRETE AND NOT ON FABRIC PAD.
3. BOLTS, PLATE WASHERS, AND NUTS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M232. THE RETAINER PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.



ELASTOMERIC BEARING PAD
NOT TO SCALE

NOTES:

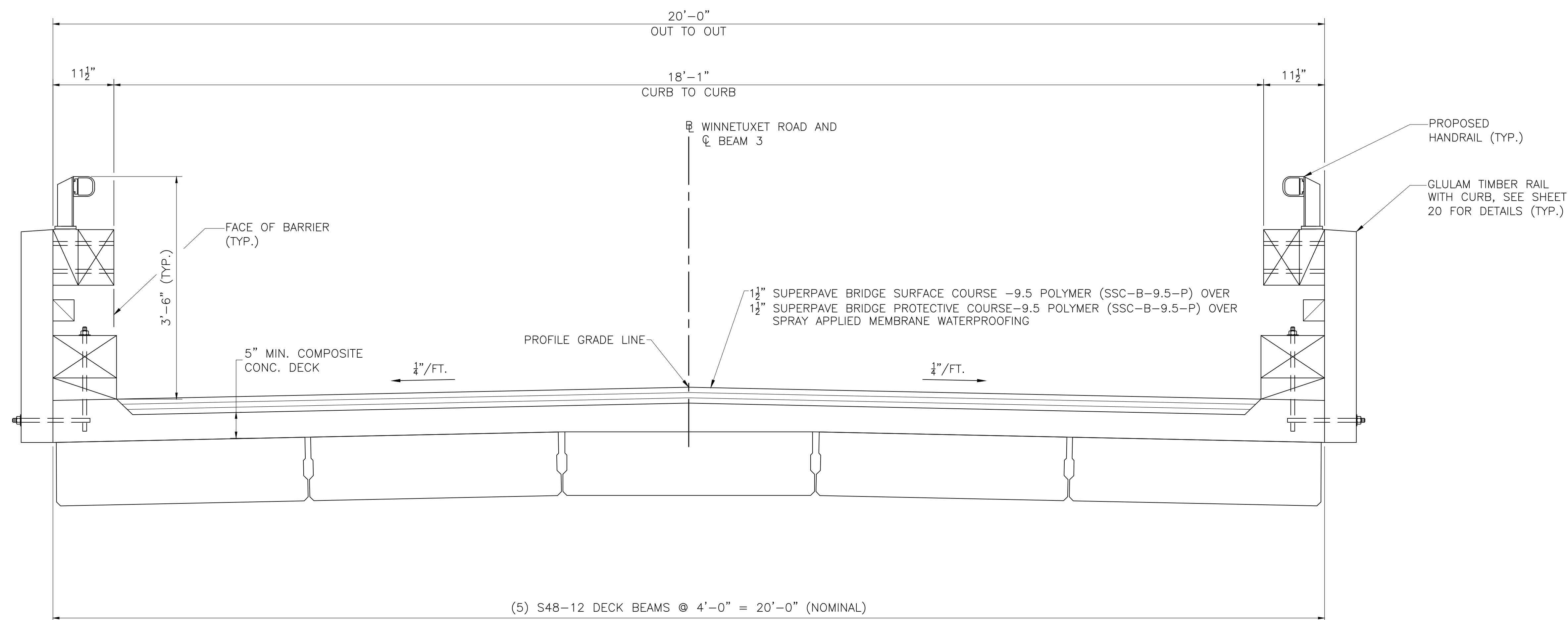
1. ELASTOMER SHALL HAVE A SHEAR MODULUS OF 0.160 KSI.
2. STEEL LAMINATES SHALL CONFORM TO ASTM A 1011 GRADE 36 OR HIGHER.
3. THE COMPRESSIVE DESIGN LOAD ON THE BEARING PAD IS 25 KIPS. THE COMPRESSIVE DESIGN STRESS IS THE RESULT OF DIVIDING THE COMPRESSIVE DESIGN LOAD BY THE AREA OF THE PAD AND IS EQUAL TO 0.22 KSI.
4. TAPERED INTERNAL LOAD PLATE SHALL CONFORM TO AASHTO M 270 GRADE 36.
5. ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A 1/32" DEEP DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER BEARING IS INSTALLED.

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	27	34
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TRANSVERSE SECTION



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

NOTES:

- SEE SHEET 19 FOR DECK SLAB DETAILS.

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
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PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	28	34
PROJECT FILE NO.		609435	

DECK DETAILS

TOP OF DECK ELEVATION (FEET) BEFORE DEAD LOAD DEFLECTION							
GIRDER NO.	CL-BRG	0.0 SPAN	0.25 SPAN	0.5 SPAN	0.75 SPAN	1.0 SPAN	CL-BRG
SPAN 1							
W. CURB	S. ABUT.	49.77	49.48	49.16	48.80	48.41	N. ABUT.
1		49.54	49.25	48.93	48.57	48.18	
2		49.62	49.34	49.02	48.66	48.26	
3/CROWN		49.71	49.42	49.10	48.74	48.35	
4		49.62	49.34	49.02	48.66	48.26	
5		49.54	49.25	48.93	48.57	48.18	
E. CURB		49.77	49.48	49.16	48.80	48.41	

NOTE:

DECK ELEVATIONS AT CURB LOCATIONS ARE ON TOP OF THE 3" CURB.

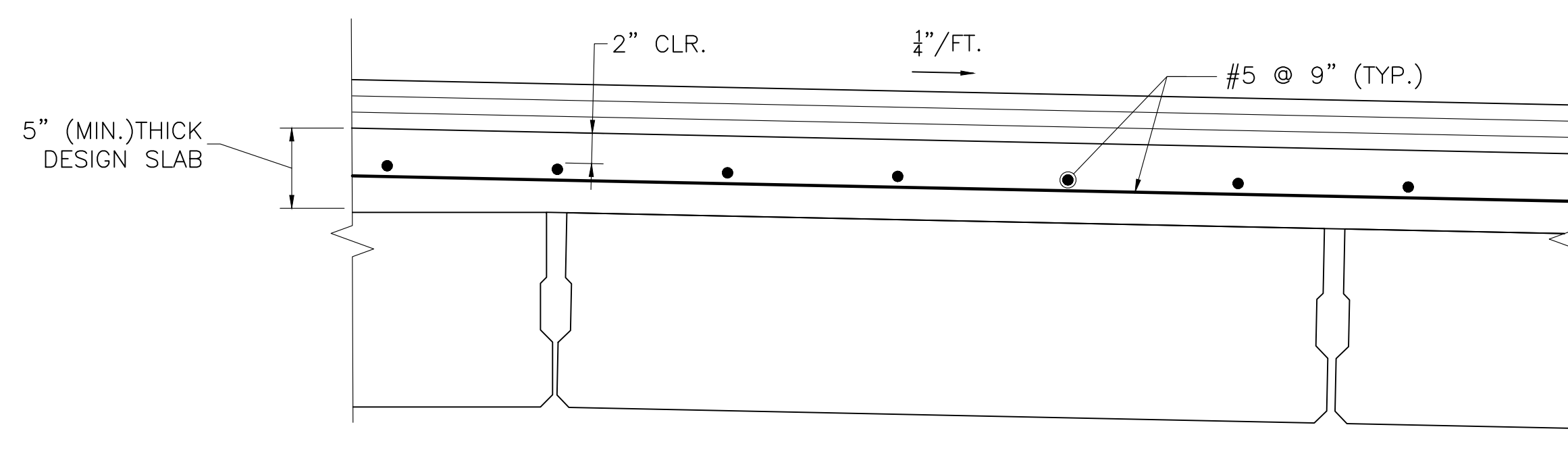
TOP OF DECK SLAB ELEVATION PRIOR TO
PLACEMENT OF WEARING SURFACE AND RAILINGS

THEORETICAL DECK THICKNESS TABLE (IN.)					
LOCATION	LEFT EDGE OF CURB	LEFT EDGE OF DECK SLAB	PROFILE GRADE LINE	RIGHT EDGE OF DECK SLAB	RIGHT EDGE OF CURB
CL BEARING SOUTH ABUTMENT	8.33	5.33	5.86	5.33	8.33
MIDSPAN	8	5	5.5	5	8
CL BEARING NORTH ABUTMENT	8.33	5.33	5.86	5.33	8.33

NOTES:

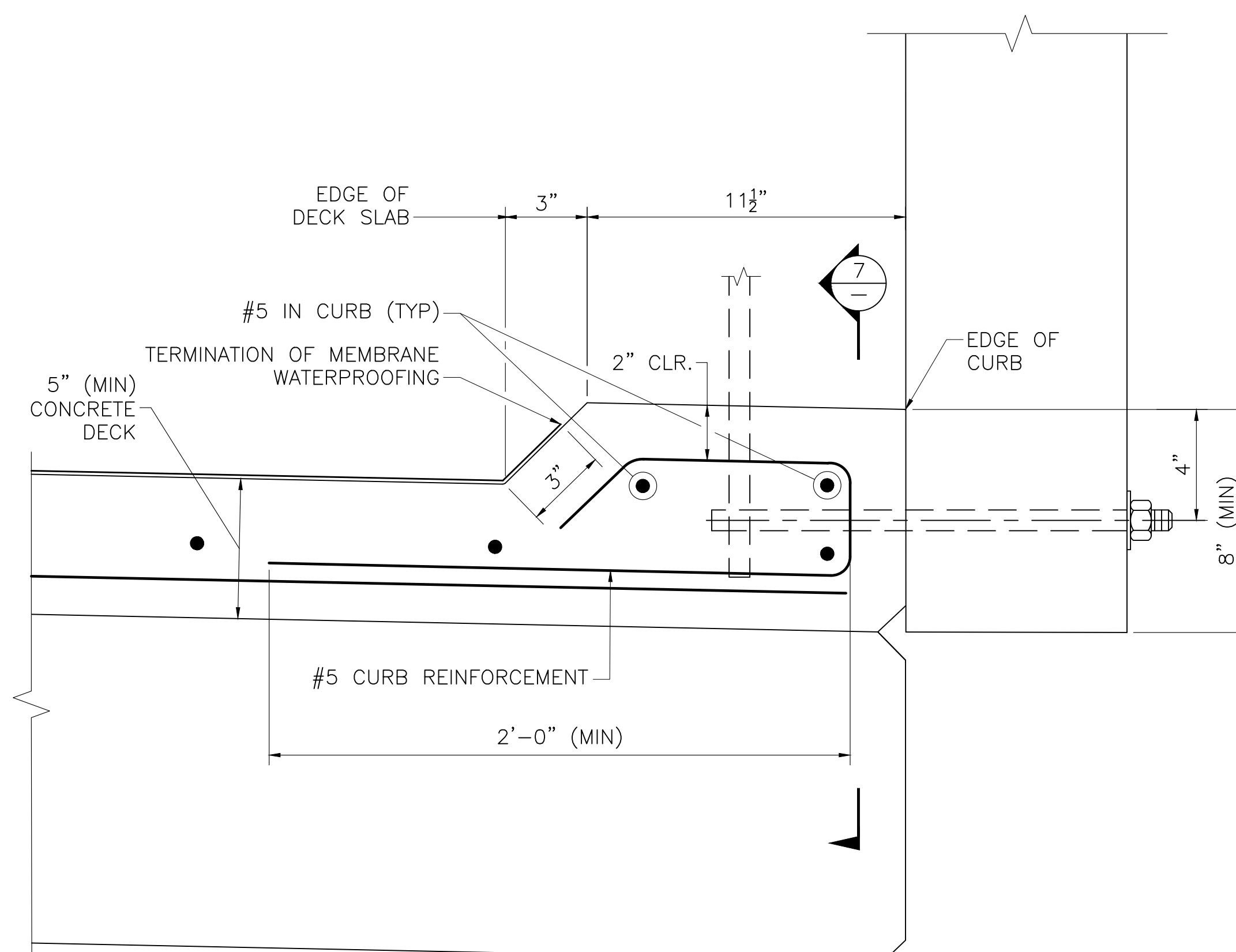
- THIS TABLE INDICATES THE THEORETICAL THICKNESS OF THE DECK SLAB IN INCHES BASED UPON ASSUMED BEAM CAMBERS AT ERECTION.
- TABLE IS PROVIDED TO ASSIST IN ESTIMATING THE REQUIRED CONCRETE VOLUME.
- THE ACTUAL DECK THICKNESSES WILL BE AS REQUIRED TO MEET THE PROFILE GRADES.

THEORETICAL DECK SLAB THICKNESS TABLE



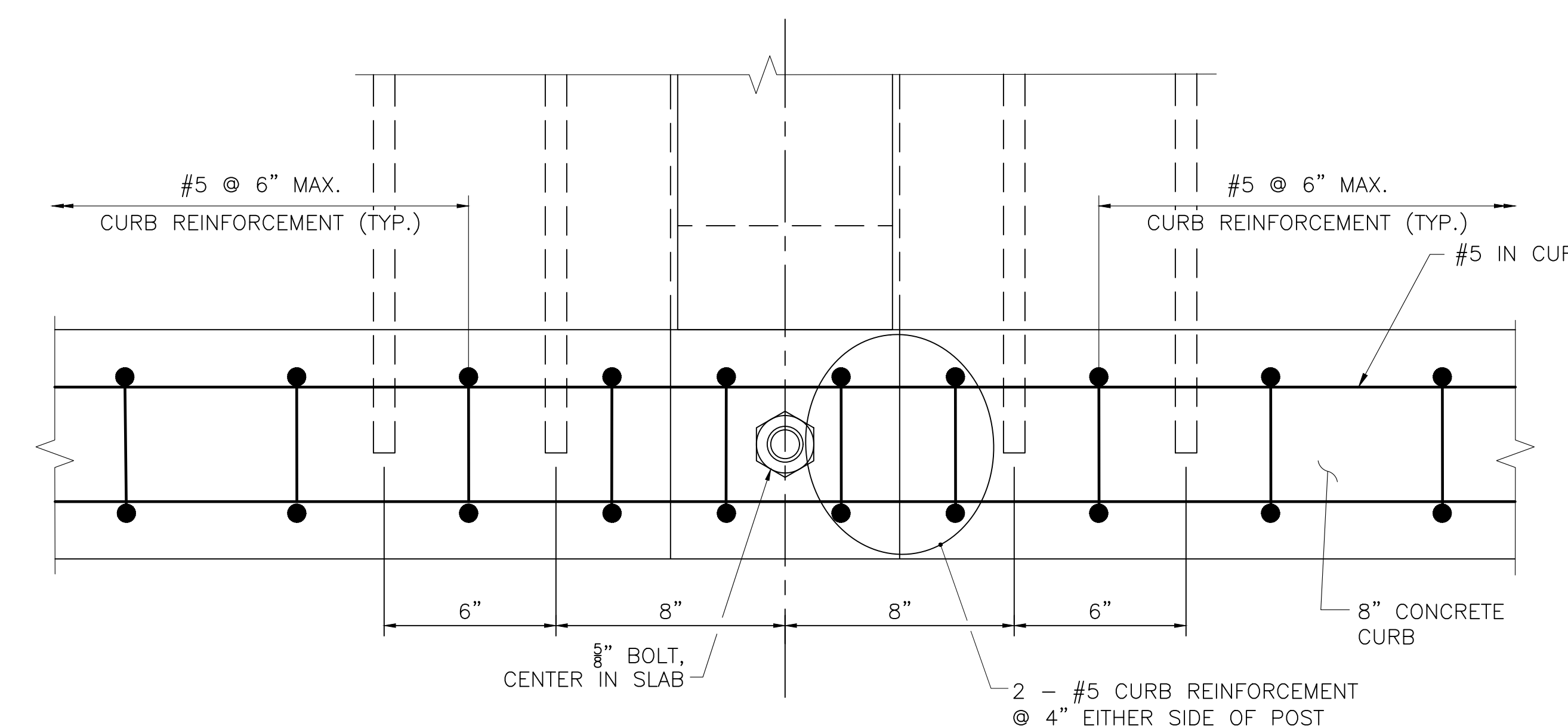
TYPICAL DECK SLAB REINFORCEMENT

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



CURB REINFORCEMENT

SCALE: 3" = 1'-0"



SECTION 7

SCALE: 3" = 1'-0"

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THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
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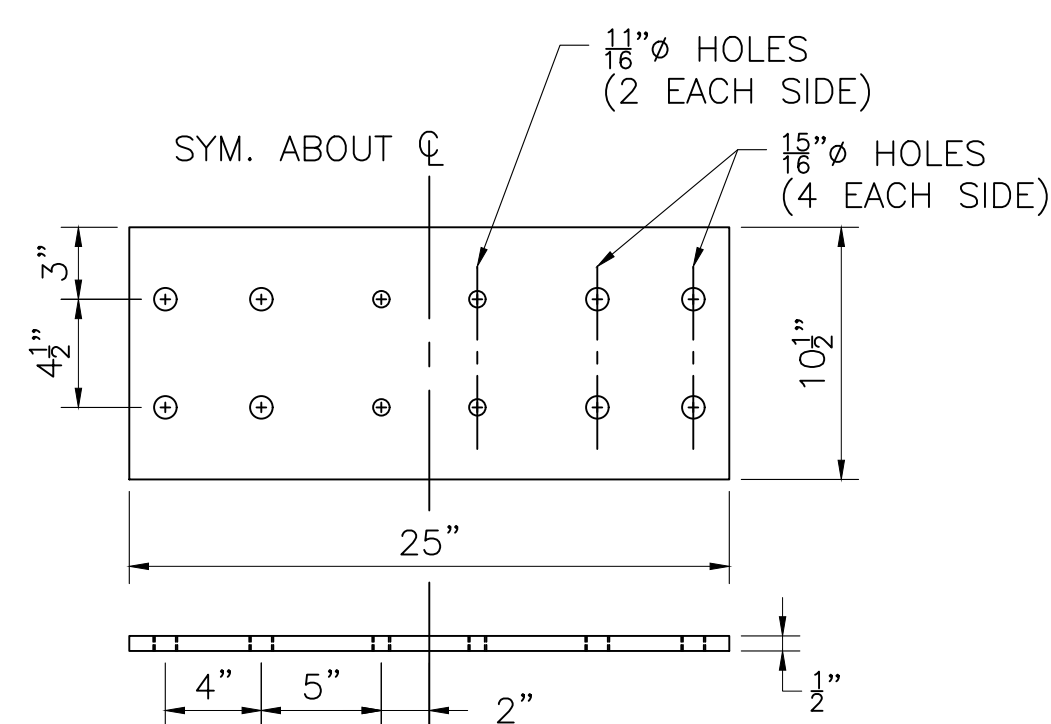
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	29	34
PROJECT FILE NO.		609435	

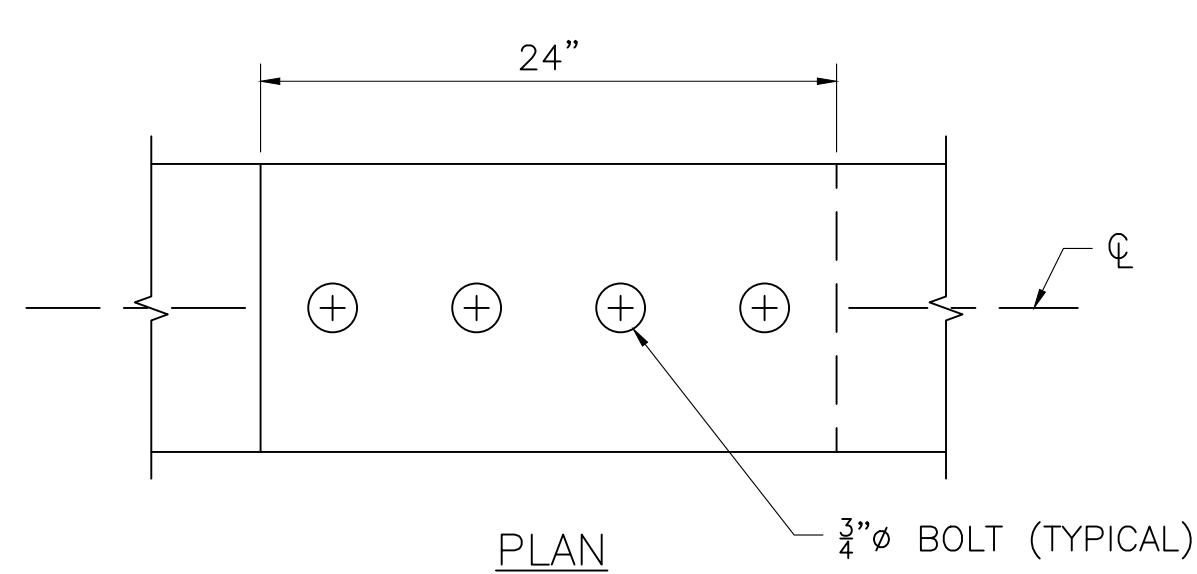
BRIDGE RAIL DETAILS

NOTES:

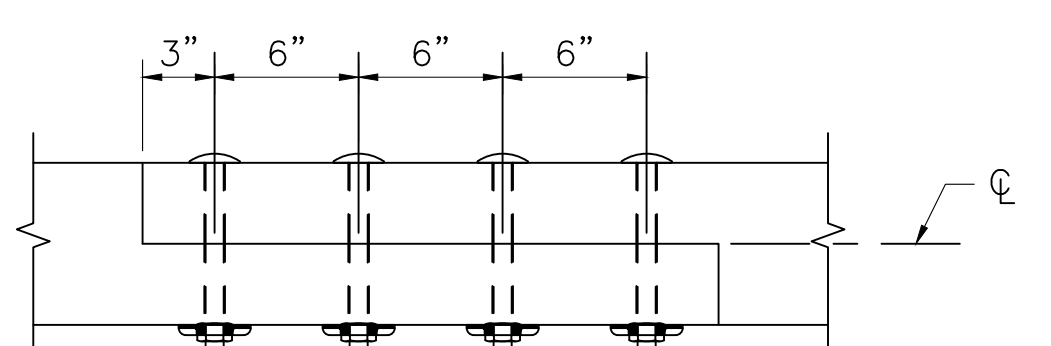
- DIMENSIONS FOR THE GLULAM TIMBER RAILS ARE ACTUAL DIMENSIONS.
- DIMENSIONS FOR WOOD POSTS, CURBS AND SCUPPERS ARE GIVEN AS NOMINAL DIMENSIONS. ACTUAL DIMENSIONS MAY BE A MAXIMUM OF 1/2" LESS THAN THE STATED NOMINAL DIMENSIONS. DIMENSIONS FOR THE SPACER BLOCK DEPTH ARE ACTUAL DIMENSIONS.
- CURB AND RAIL SPLICES SHALL BE LOCATED SO THAT CURB AND RAIL MEMBERS ARE CONTINUOUS OVER NOT LESS THAN TWO POSTS. CURB SPLICES SHALL BE LOCATED A MINIMUM OF 1.5 POST SPACINGS AWAY FROM RAIL SPLICES. IT IS RECOMMENDED THAT GLULAM RAILS BE CONTINUOUS OVER THE LENGTH OF THE BRIDGE



STEEL SPLICE PLATE DETAILS
SCALE: 1 1/2"=1'-0"

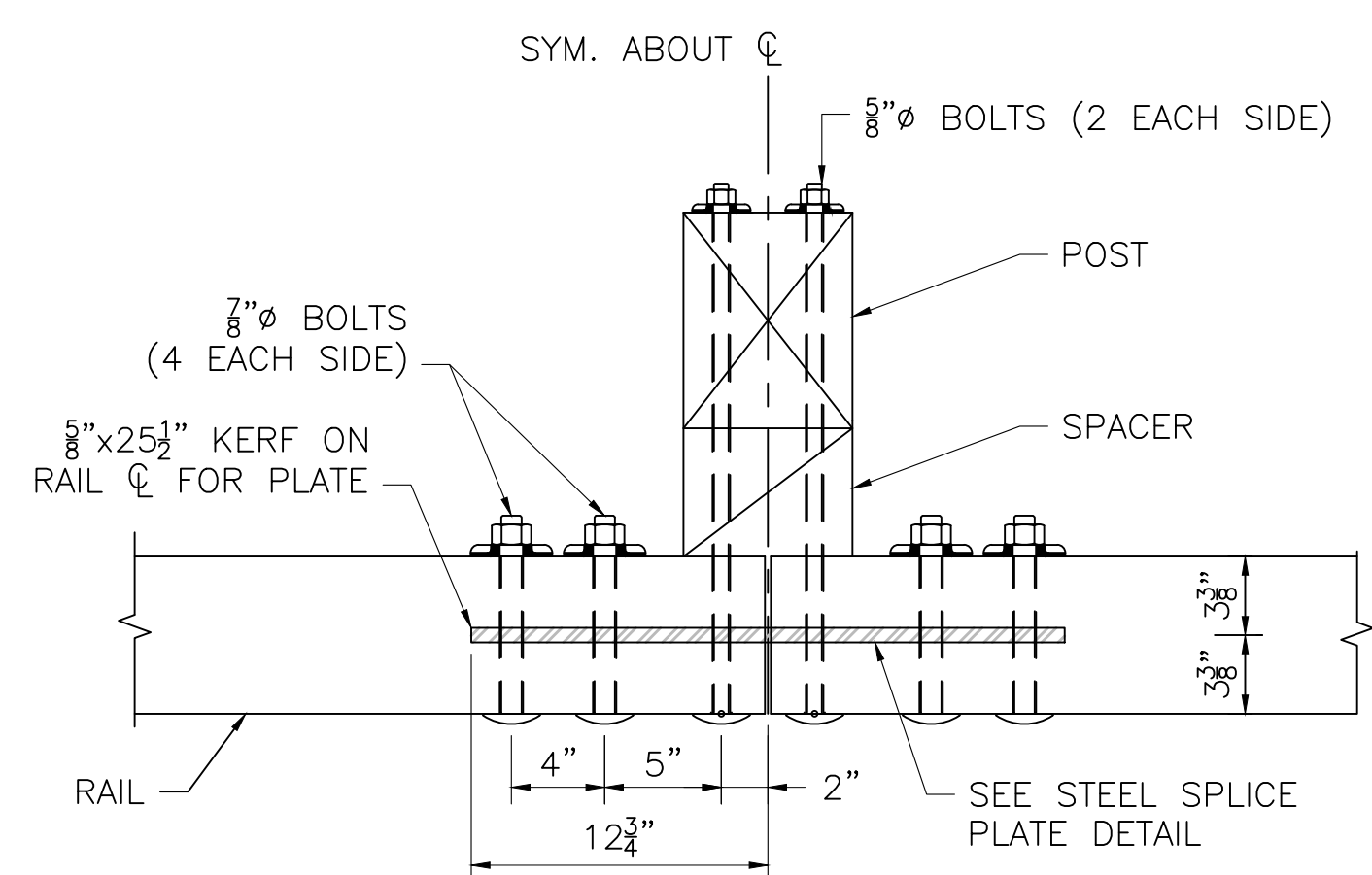


PLAN

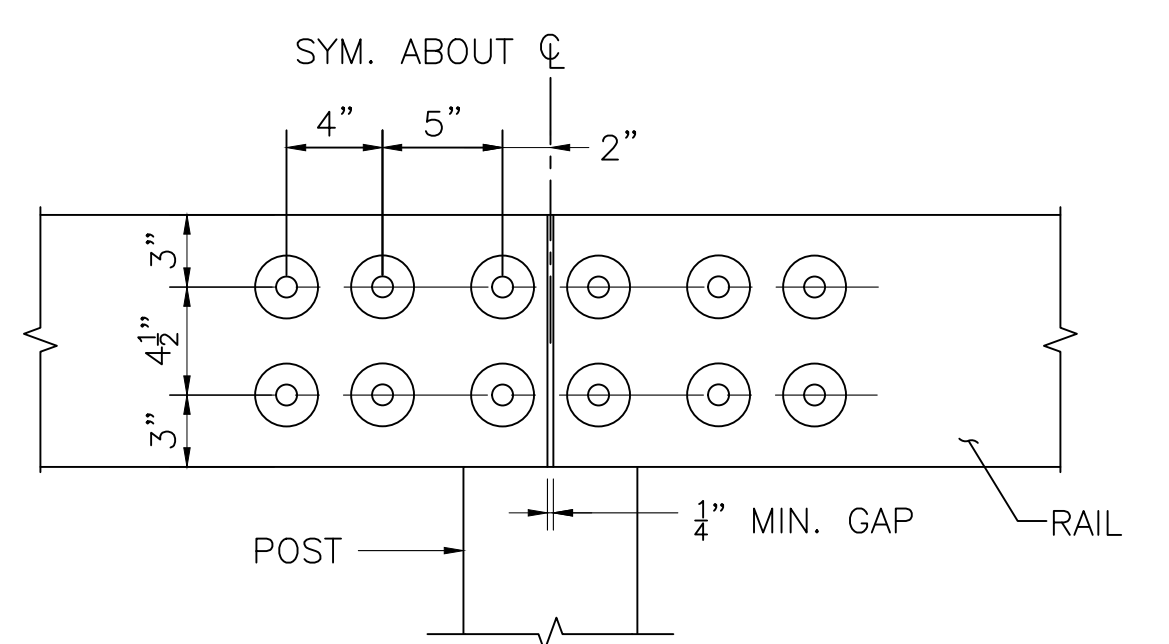


FRONT VIEW

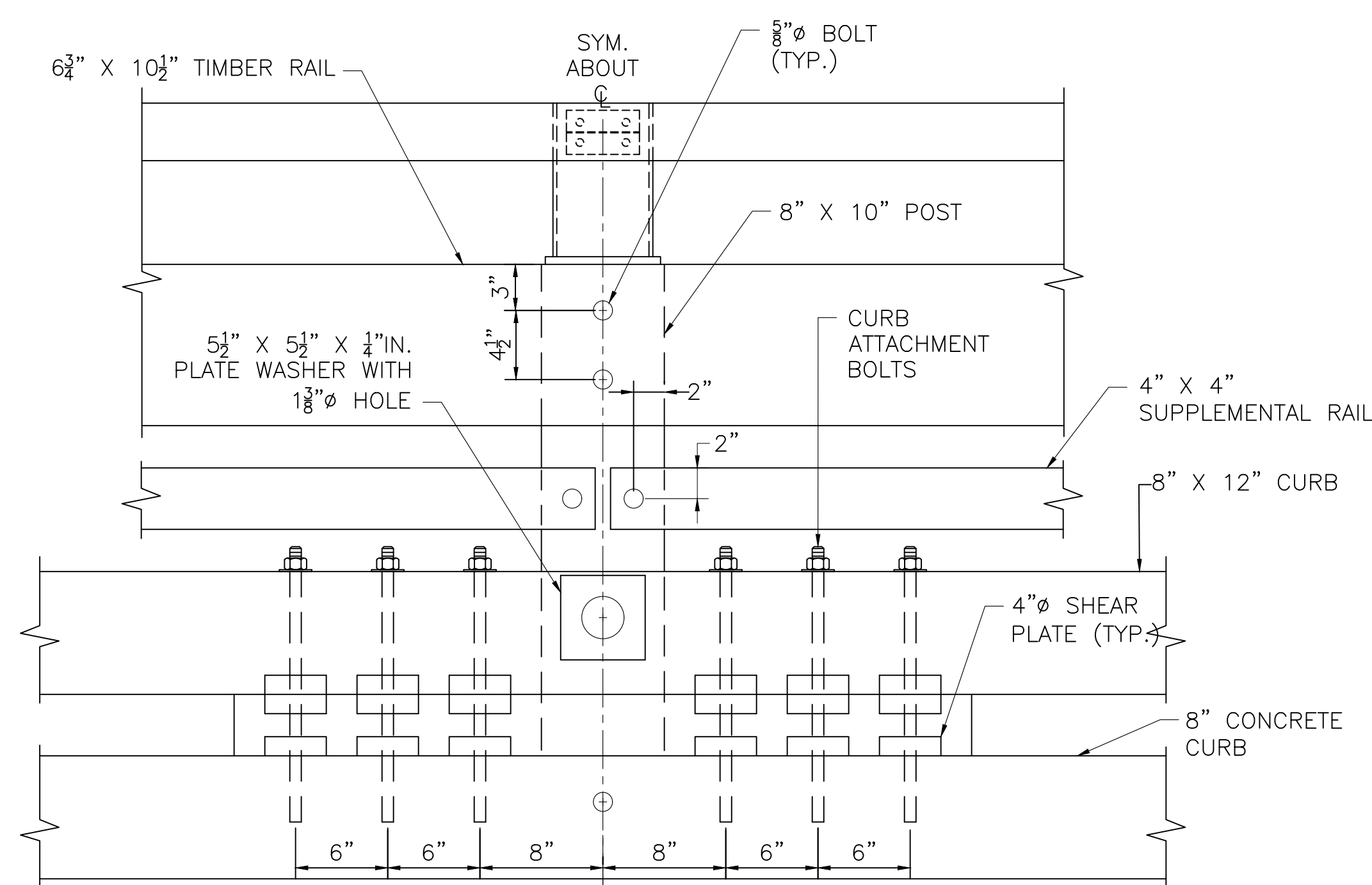
CURB SPLICE DETAILS
SCALE: 1 1/2"=1'-0"



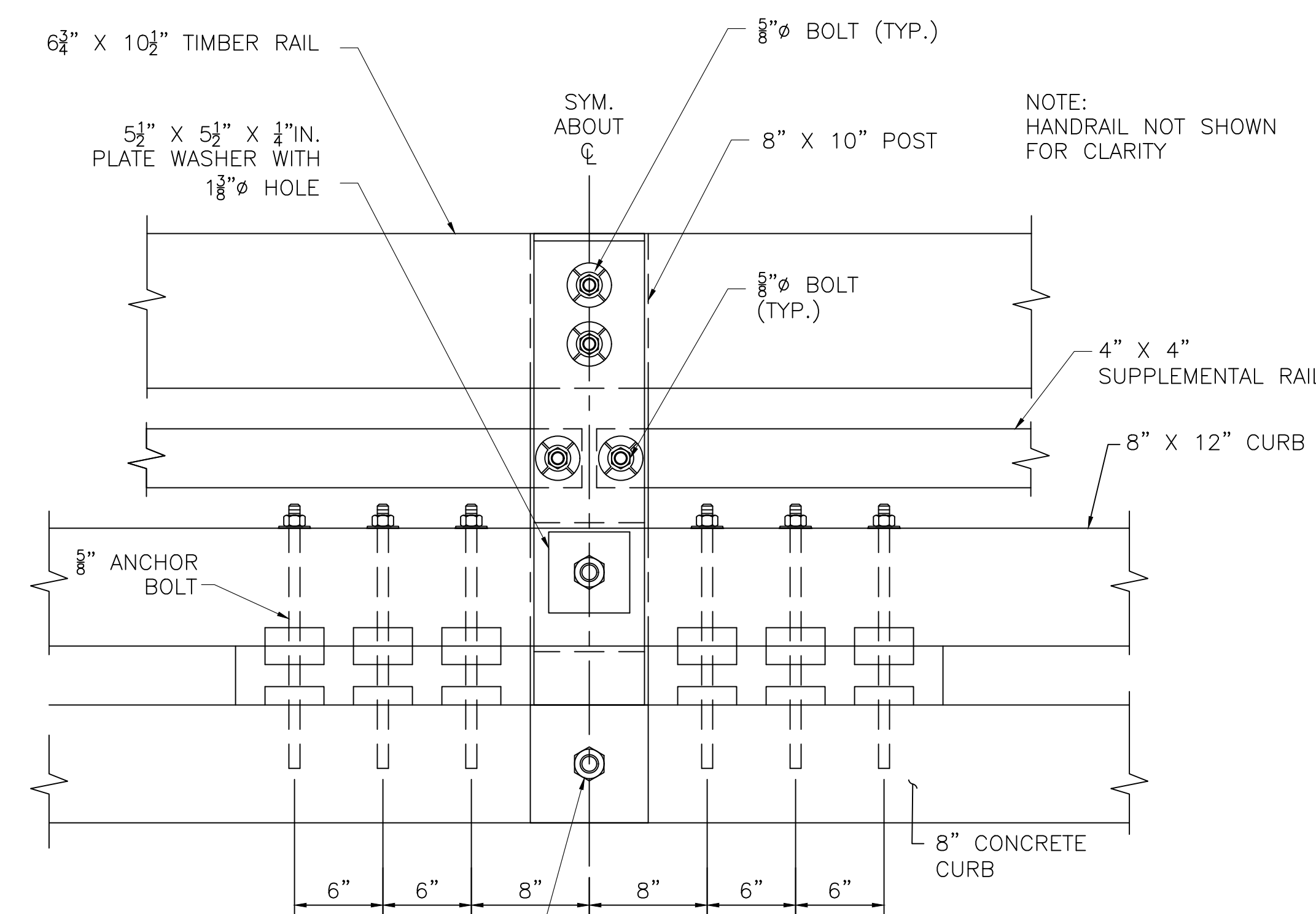
PLAN



**FRONT VIEW
RAIL SPLICE DETAILS**
SCALE: 1 1/2"=1'-0"

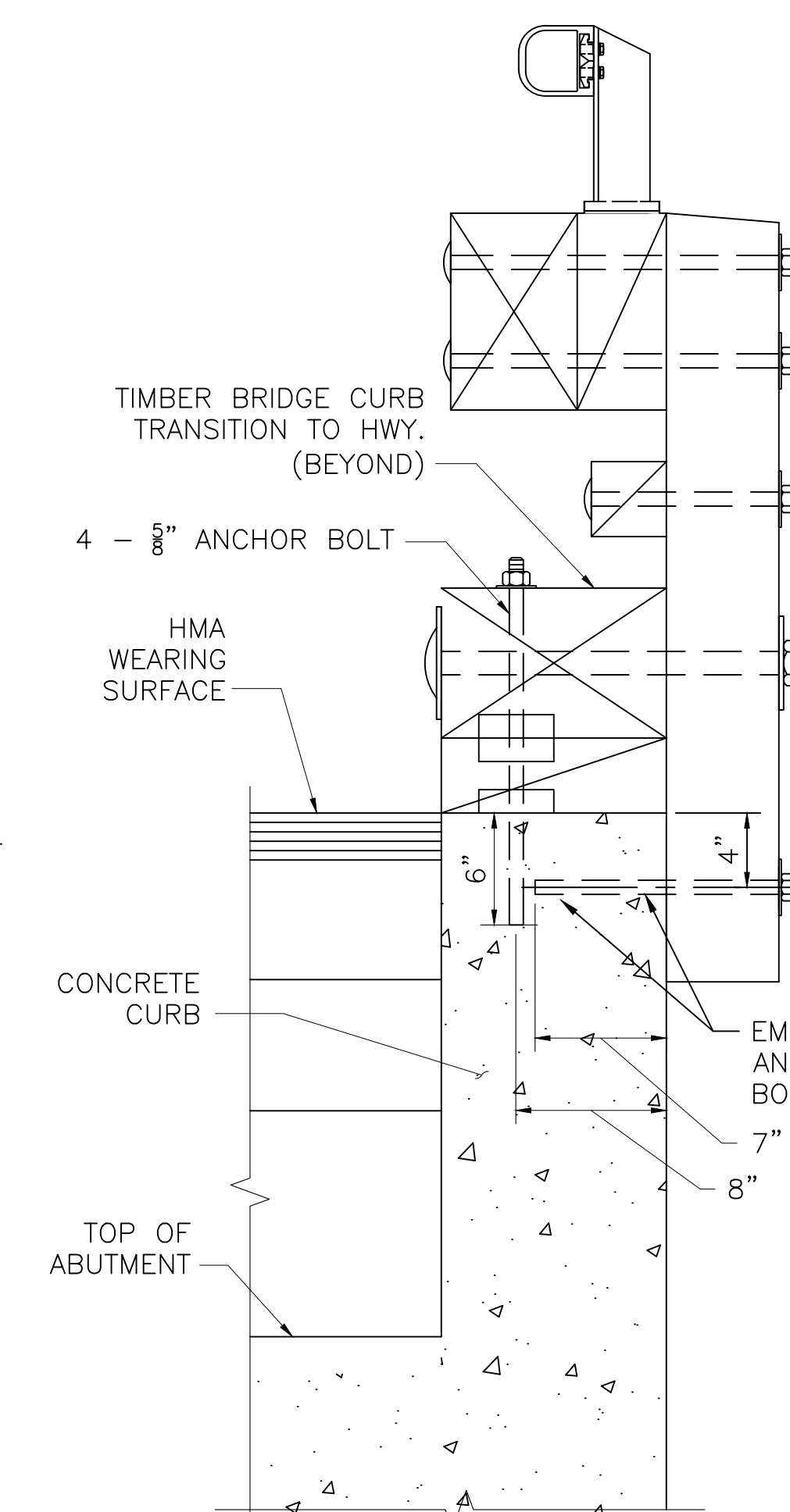


FRONT VIEW

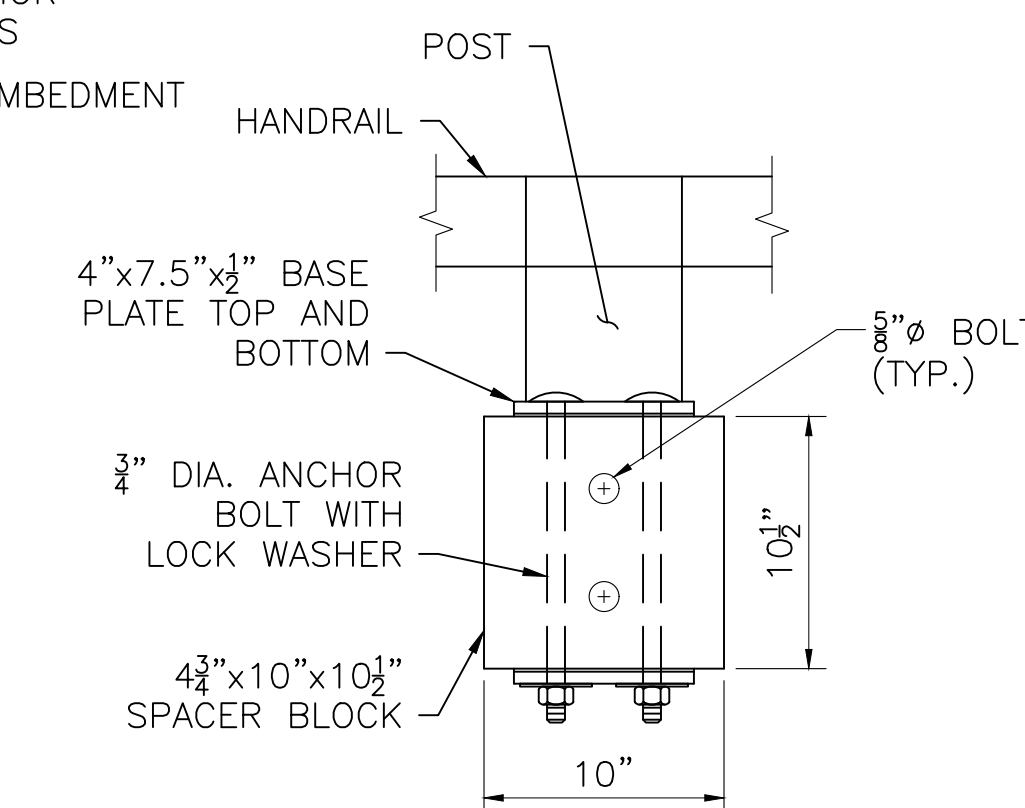


BACK VIEW

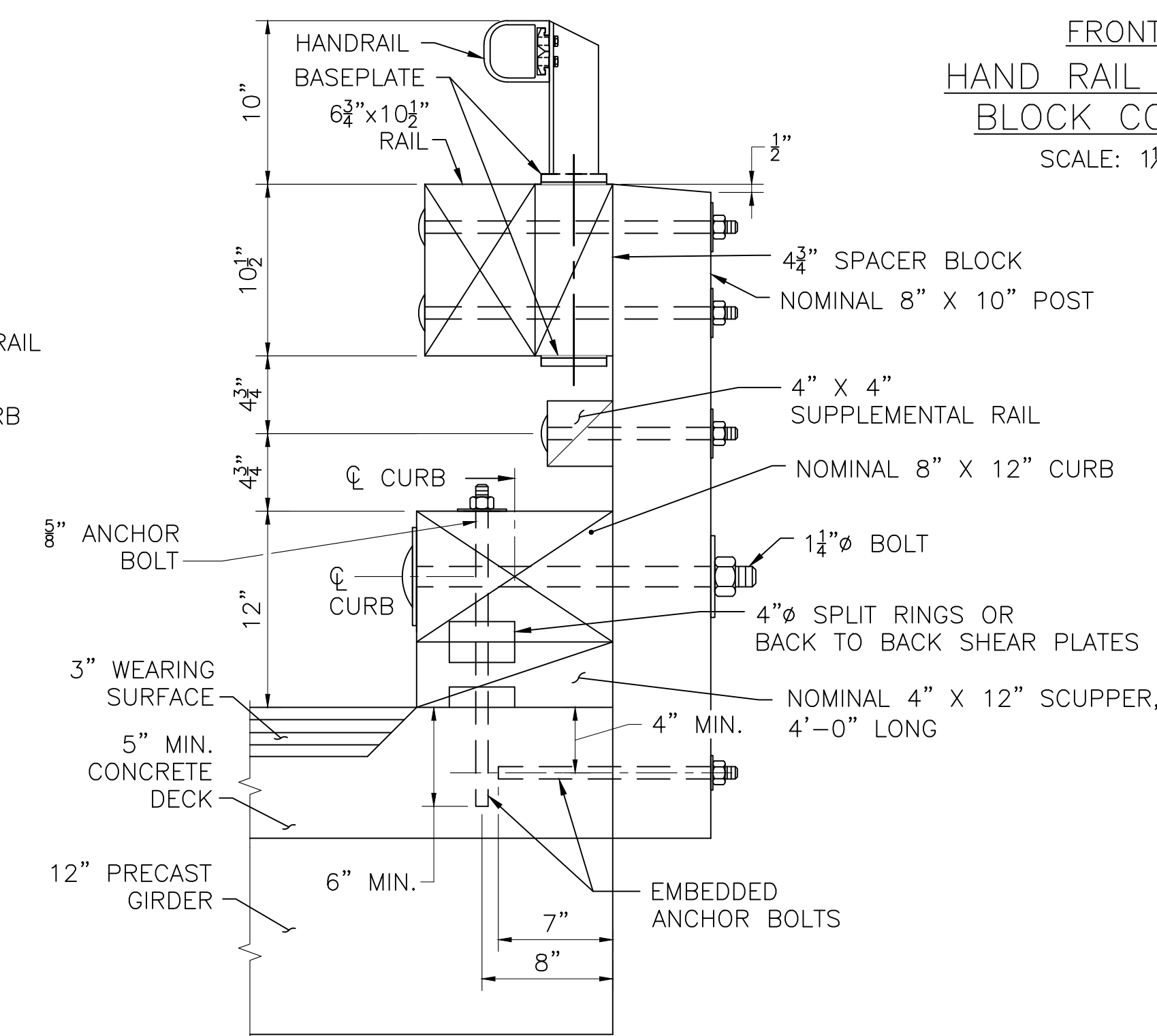
TIMBER BRIDGE RAIL DETAILS
SCALE: 1 1/2"=1'-0"



CURB AT ABUTMENT
SCALE: 1 1/2"=1'-0"



**FRONT VIEW
HAND RAIL TO SPACER
BLOCK CONNECTION**
SCALE: 1 1/2"=1'-0"



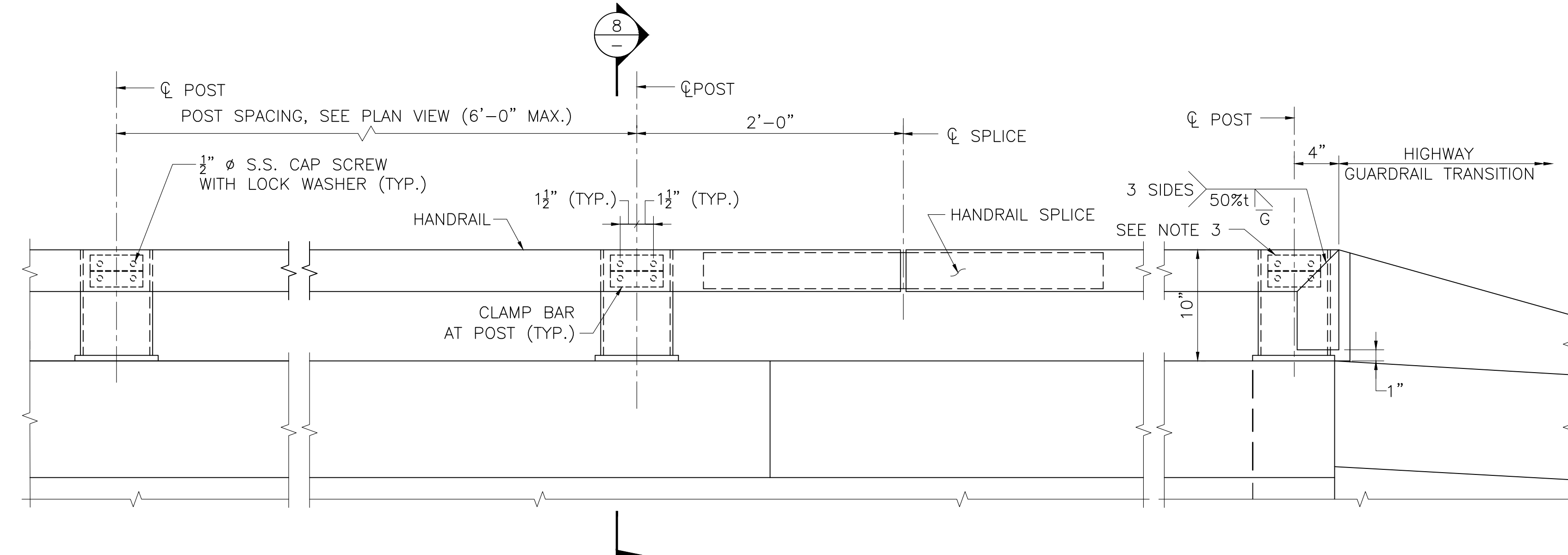
END VIEW

DATE	ISSUED FOR CONSTRUCTION
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
	DESCRIPTION
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AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

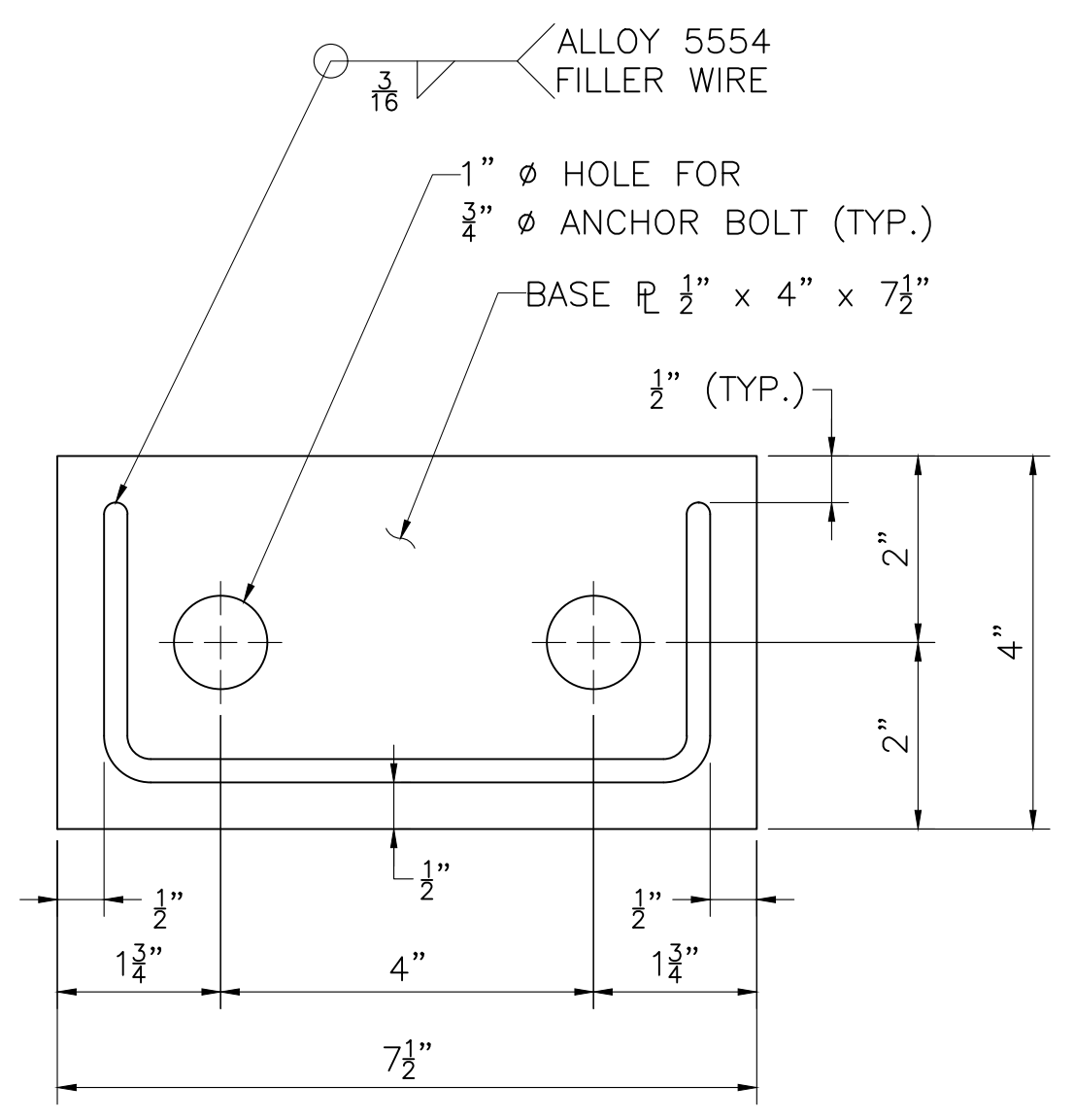
**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	30	34
PROJECT FILE NO.			609435

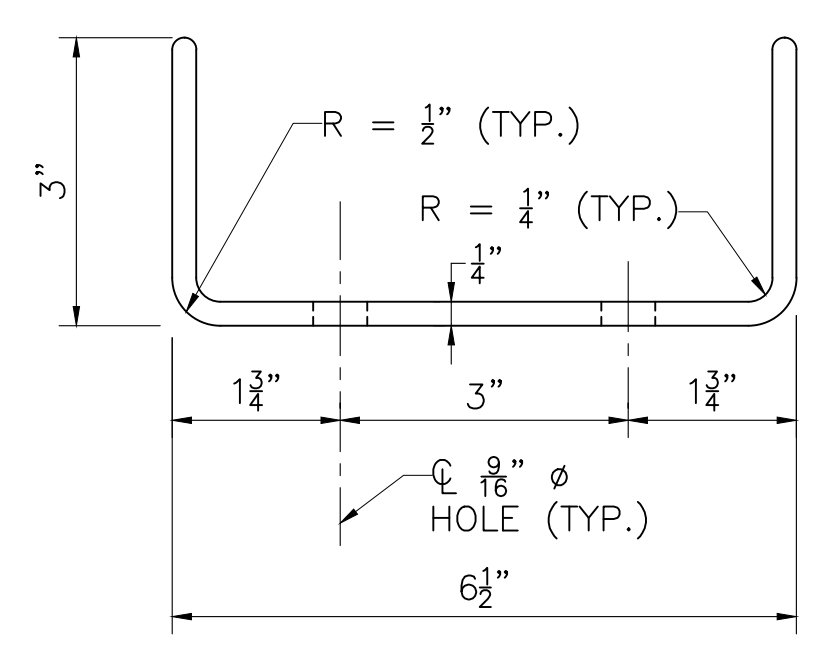
HANDRAIL DETAILS



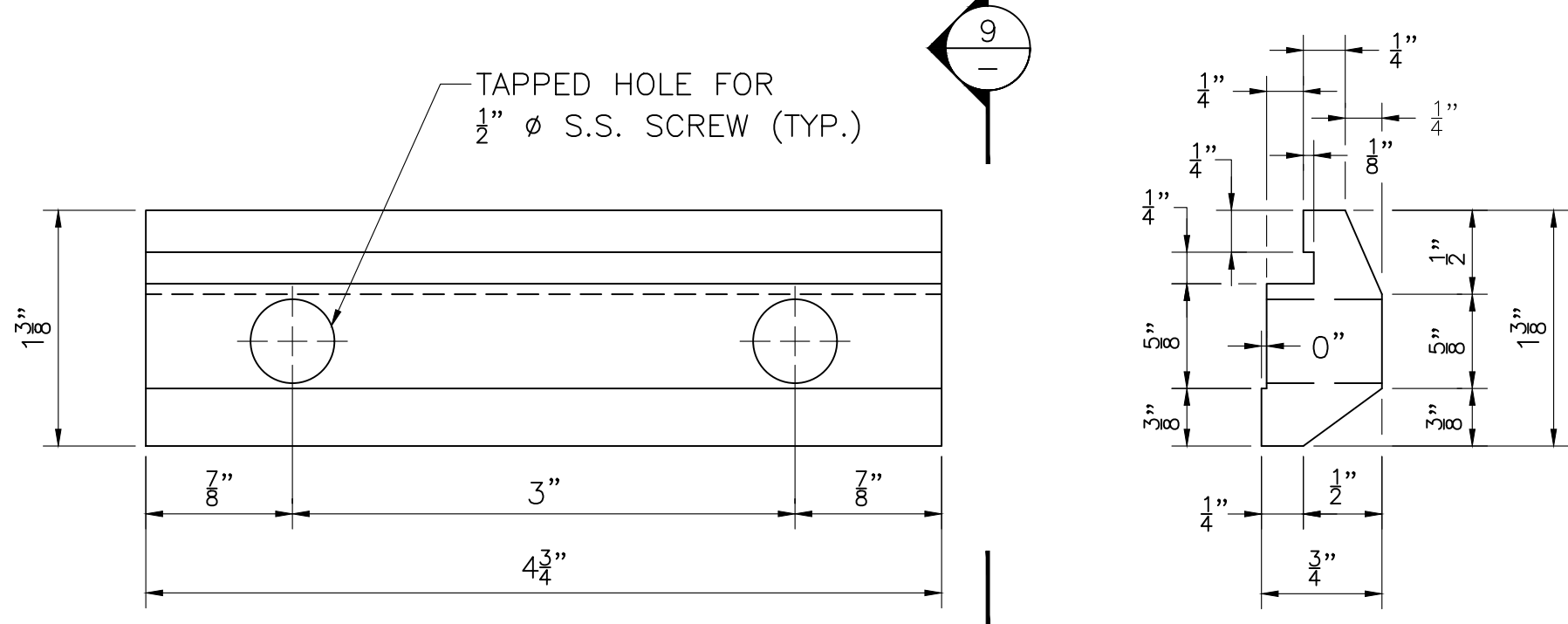
HANDRAIL ELEVATION
SCALE: 1 1/2" = 1'-0"



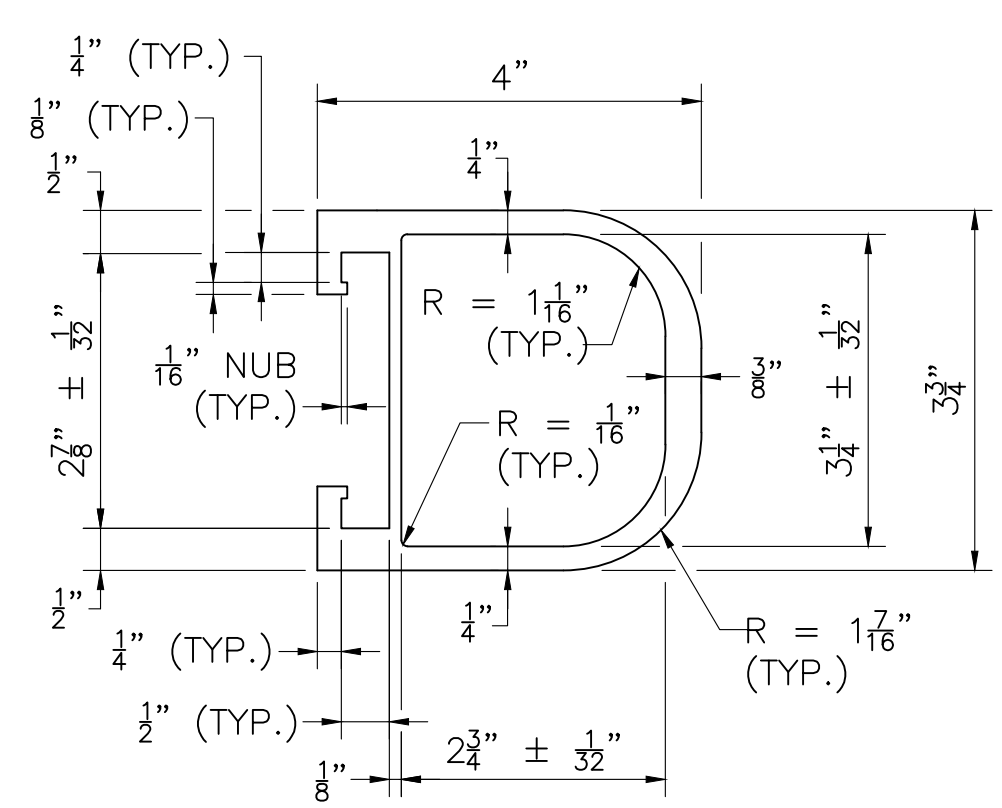
BASE PLATE DETAIL
SCALE: 6" = 1'-0"



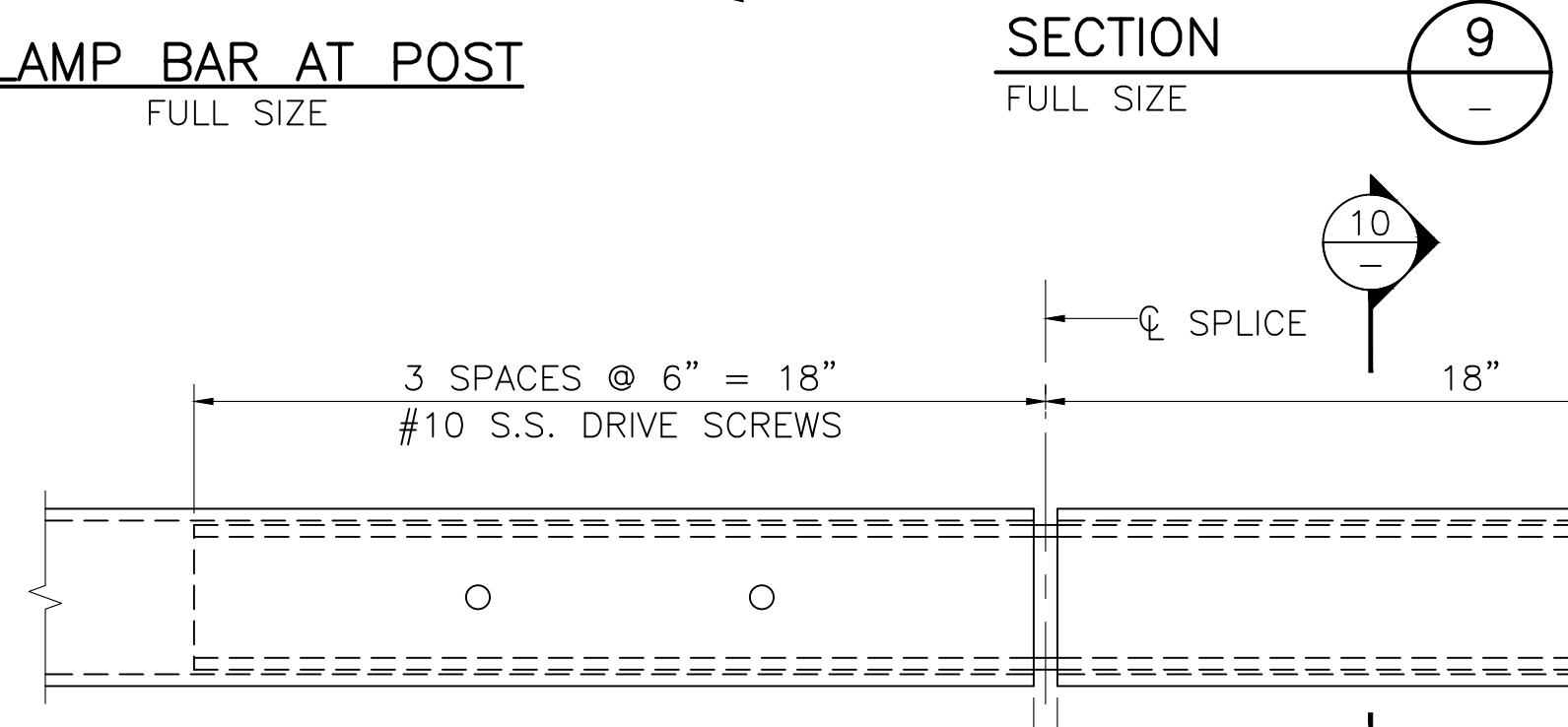
POST DETAIL
SCALE: 6" = 1'-0"



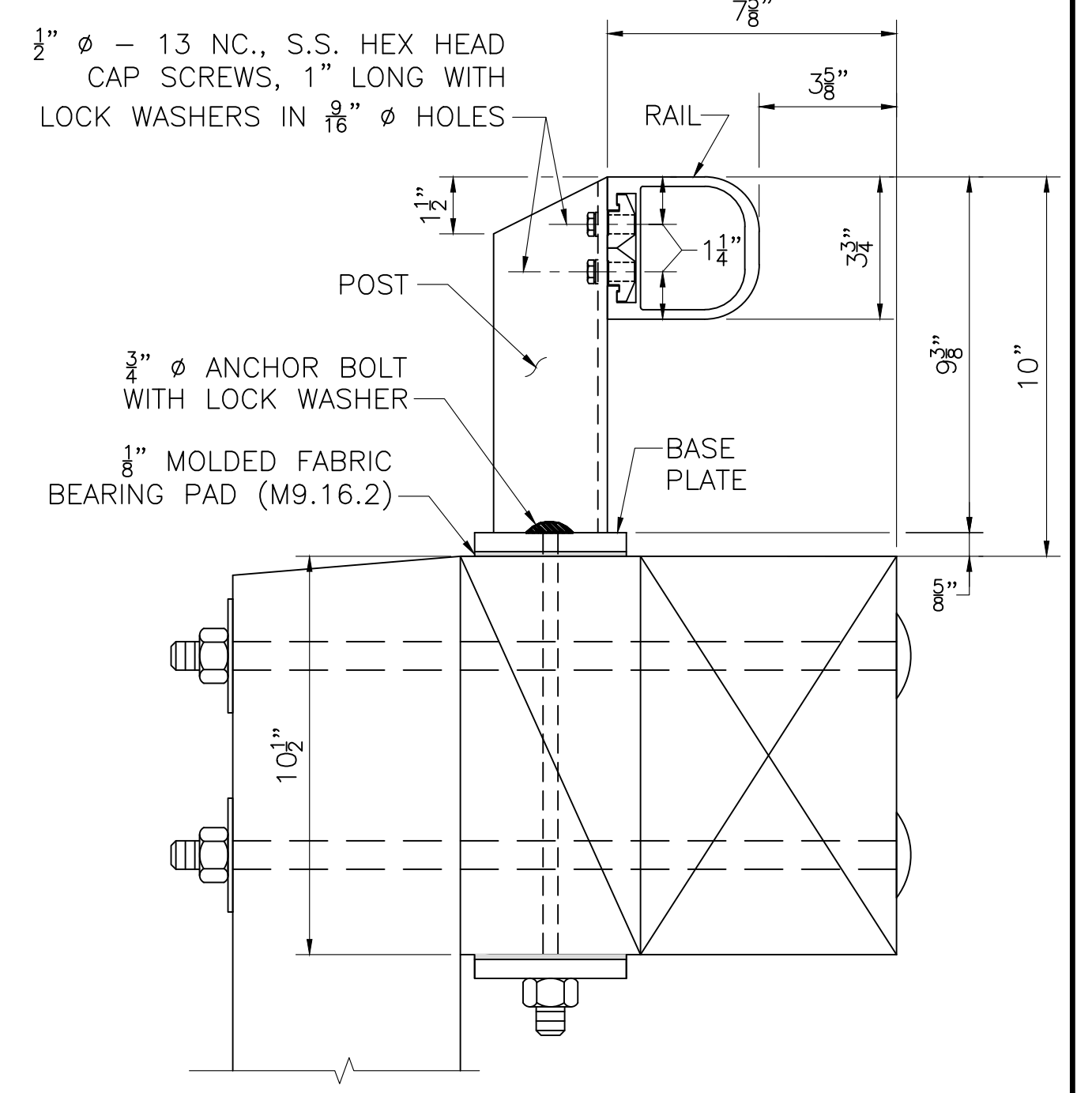
CLAMP BAR AT POST
FULL SIZE



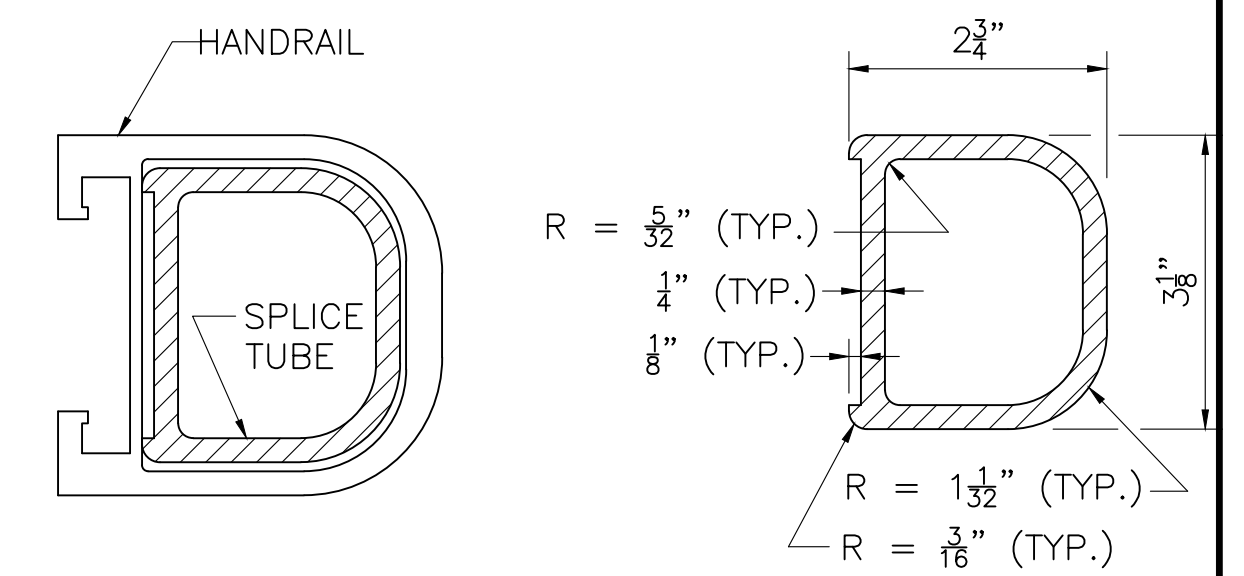
RAIL DETAIL
SCALE: 6" = 1'-0"



HANDRAIL SPLICE
SCALE: 3" = 1'-0"



SECTION 8
SCALE: 3" = 1'-0"



SECTION 10
SCALE: 6" = 1'-0"

FINISH:

POSTS, RAILS, BASE PLATES, AND SPLICE TUBE SHALL RECEIVE A DARK BRONZE ANODIZED FINISH.

MATERIALS:

- RAIL, POST AND BASE PLATE _____ ASTM B 221, ALLOY 6061-T6
- CLAMP BAR, RAIL SPLICE _____ ASTM B 221, ALLOY 6061-T6
- S.S. FASTENERS _____ ASTM A 193 GRADE B8 (TYPE 403)
- ANCHOR BOLTS _____ AASHTO M 164 GALVANIZED (ROTATION CAPACITY TEST NOT REQUIRED)
- ALUMINUM WASHERS _____ ASTM B 209 ALLOY ALCLAD 2024-T4

GENERAL NOTES:

- RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF FOUR POST, IF POSSIBLE.
- OTHER CONFIGURATIONS OF THE INTERNAL WALLS OF THE RAIL EXTRUSION MAY BE SUBMITTED FOR APPROVAL.
- AT 45° MITRES, TRIM OFF 1/16" NUB ON VERTICAL RAIL SECTION AS NEEDED TO ALLOW BOTTOM HORIZONTAL CLAMP BAR TO PROPERLY ENGAGE THE HORIZONTAL RAIL.

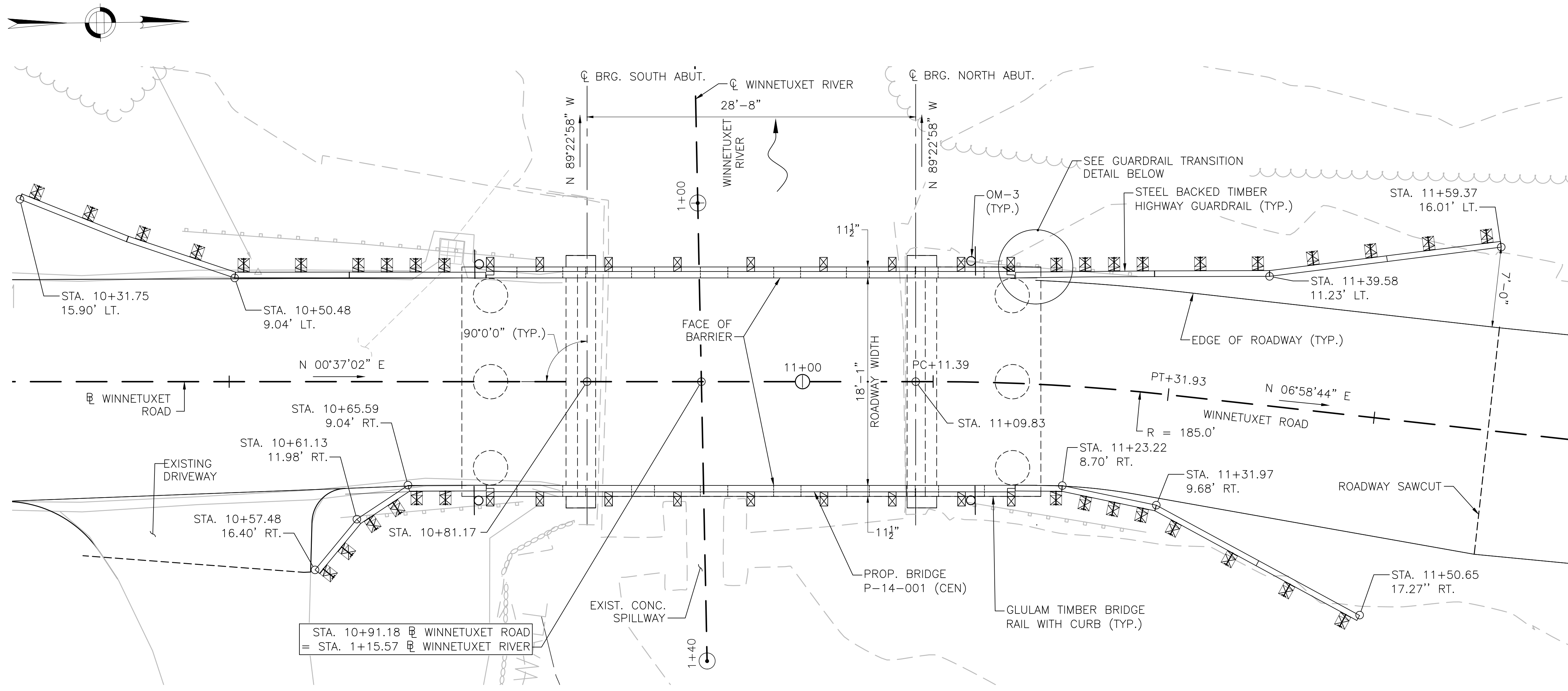
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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HANDRAIL

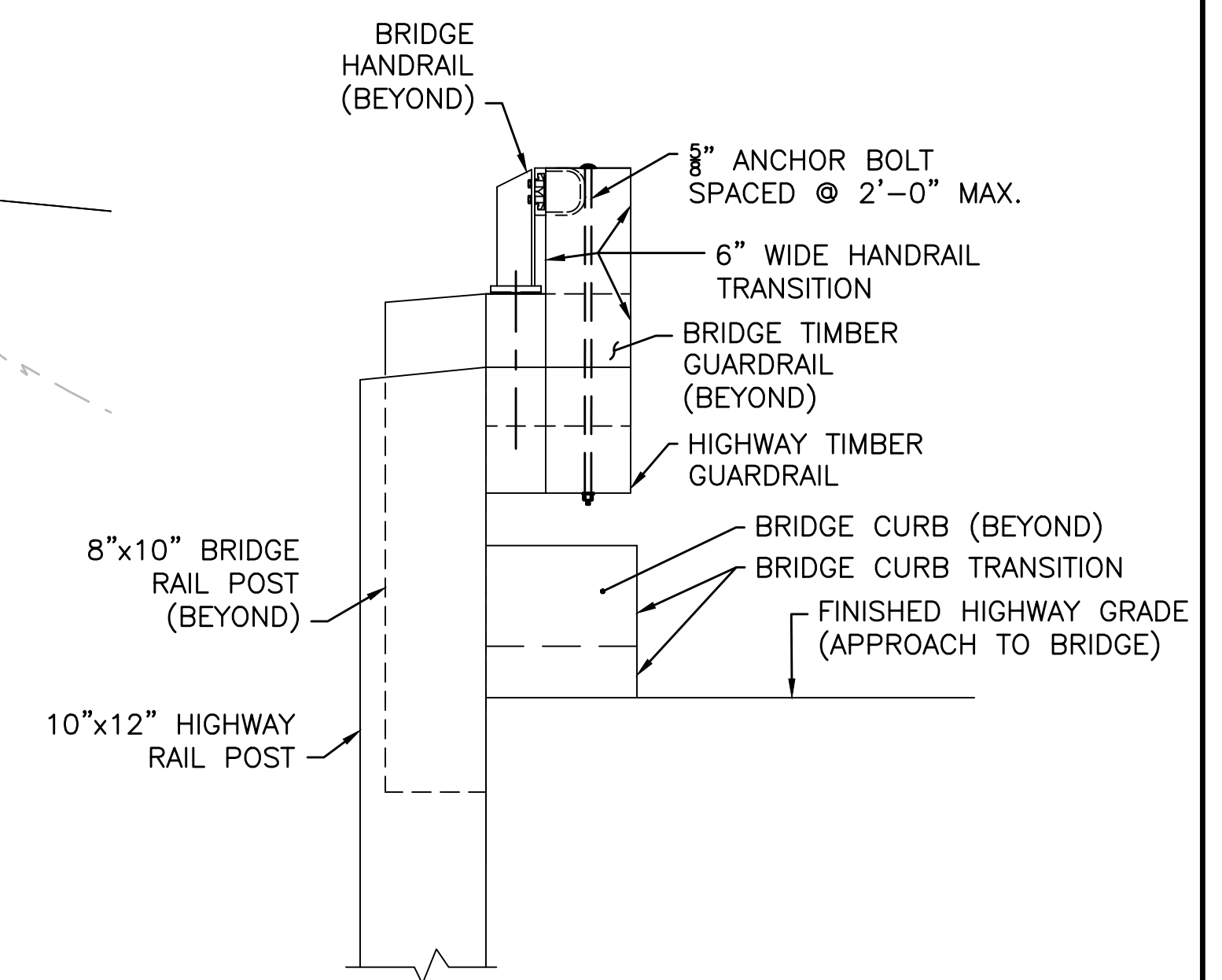
609435_BR21(P14001) - HANDRAIL DETAILS.DWG Plotted on 20-May-2024 2:14 PM Final Structural Submitter (SF) 28-June-2024

PLYMPTON WINNETUXET ROAD			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	31	34
PROJECT FILE NO.		609435	

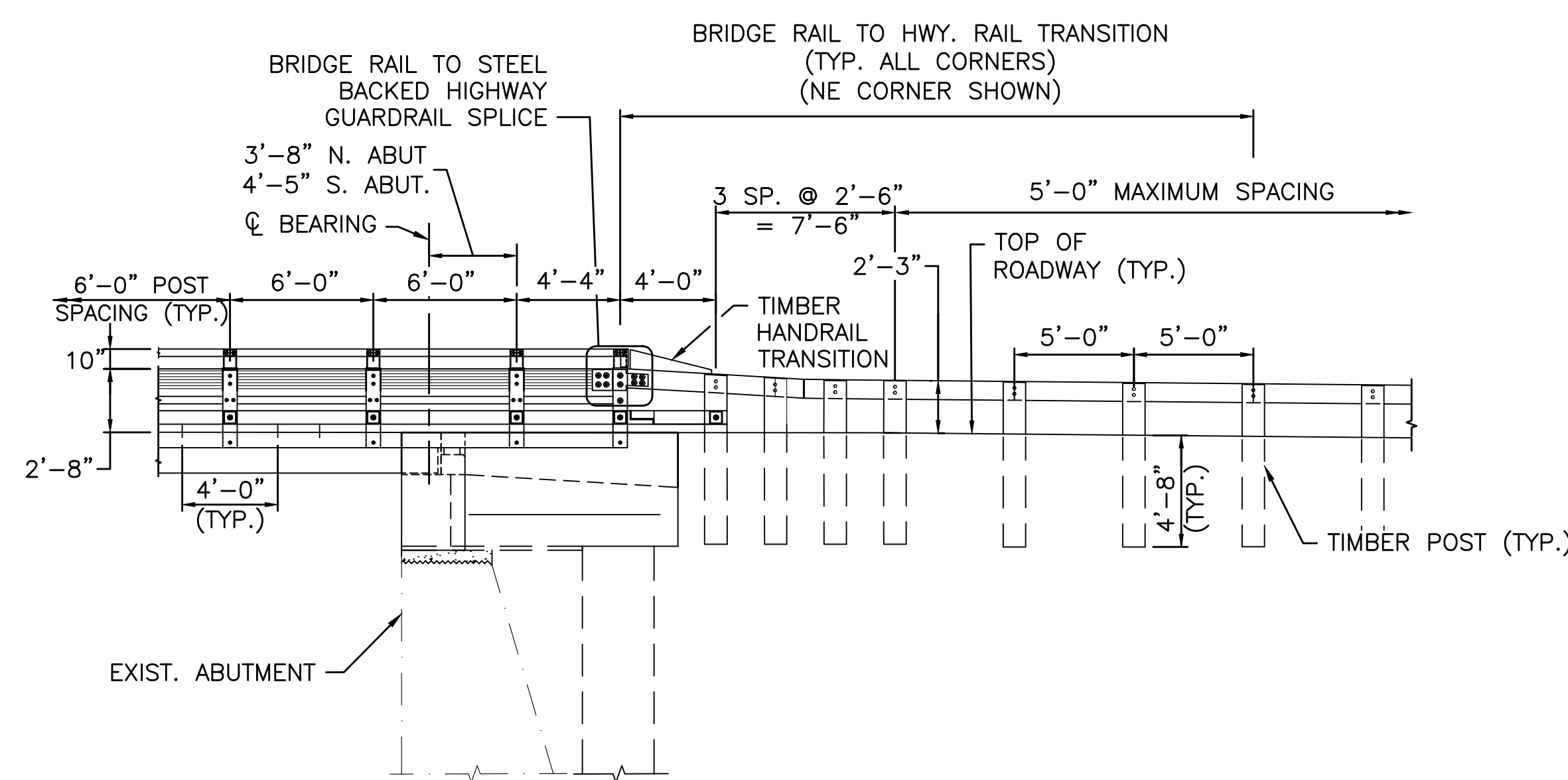
GUARDRAIL TRANSITION DETAILS



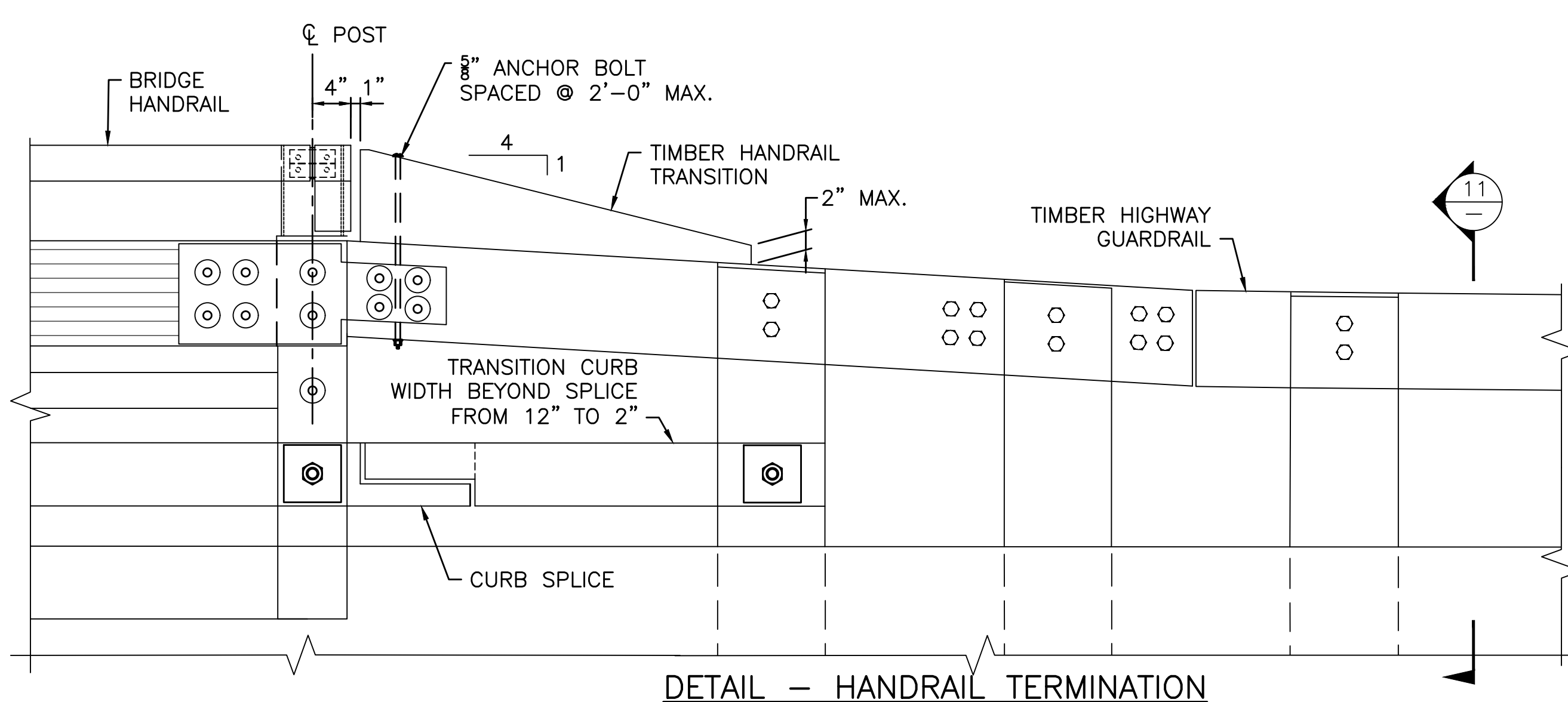
PLAN - TIMBER GUARDRAIL TRANSITION LAYOUT
SCALE: 3/16" = 1'-0"



SECTION 11
SCALE: 1" = 1'-0"



DETAIL - GUARDRAIL TRANSITION ELEVATION
SCALE: 3/16" = 1'-0"



DETAIL - HANDRAIL TERMINATION
SCALE: 1" = 1'-0"

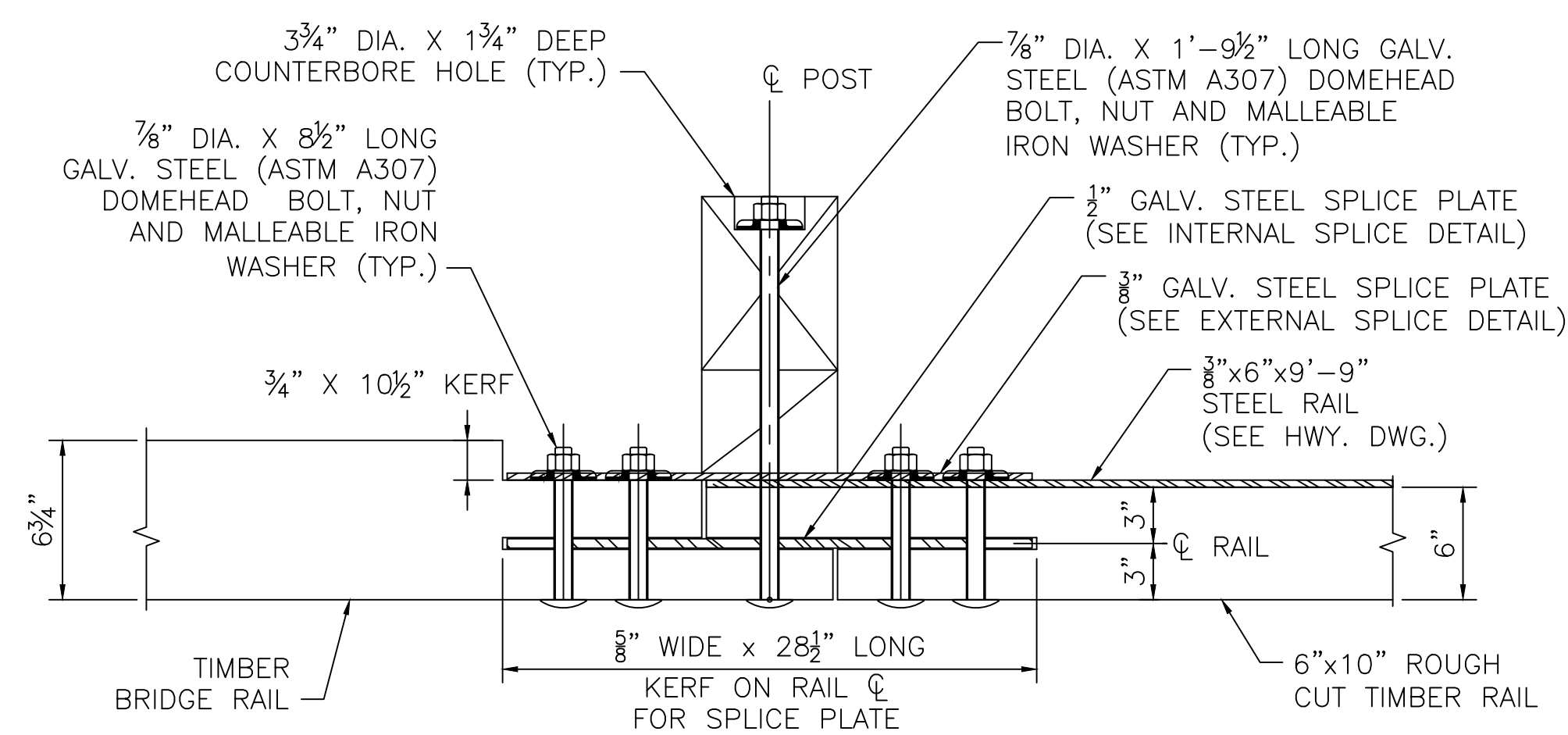
JUNE 29, 2024	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT	
AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
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609435_BR22(P14001)_GUARDRAIL_TRANSITION_DETAILS.DWG Plotted on 20-May-2024 2:14 PM Final Structural Submitter (SF)

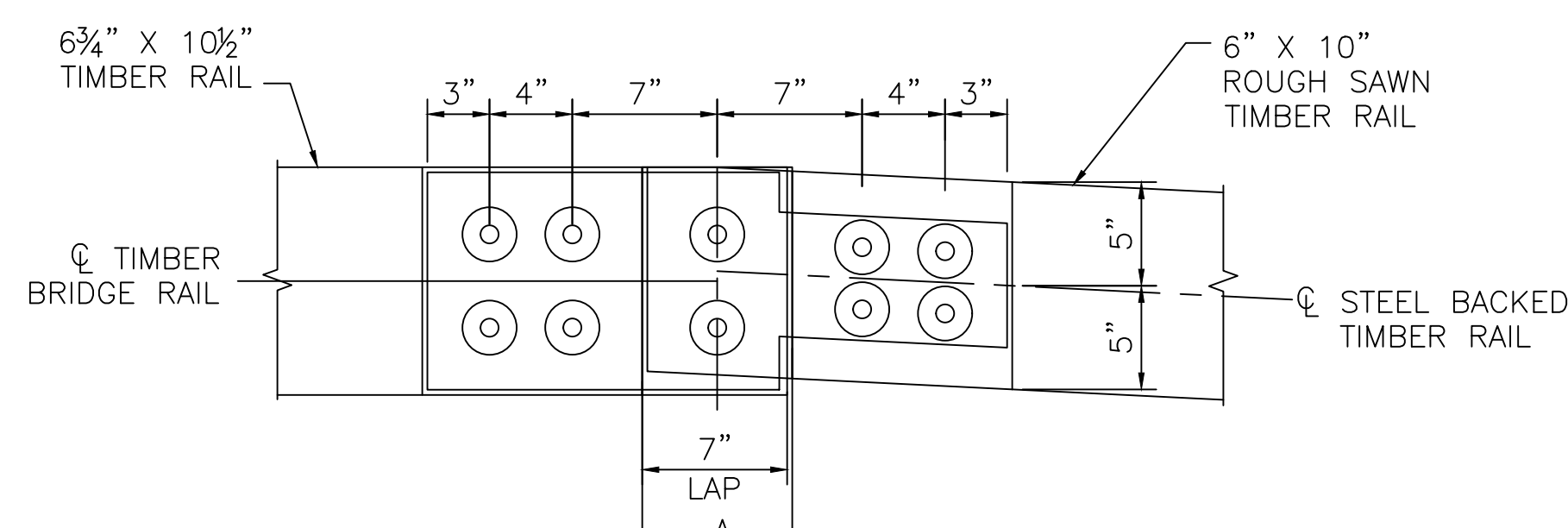
PLYMPTON
WINNETUXET ROAD

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	32	34
PROJECT FILE NO.		609435	

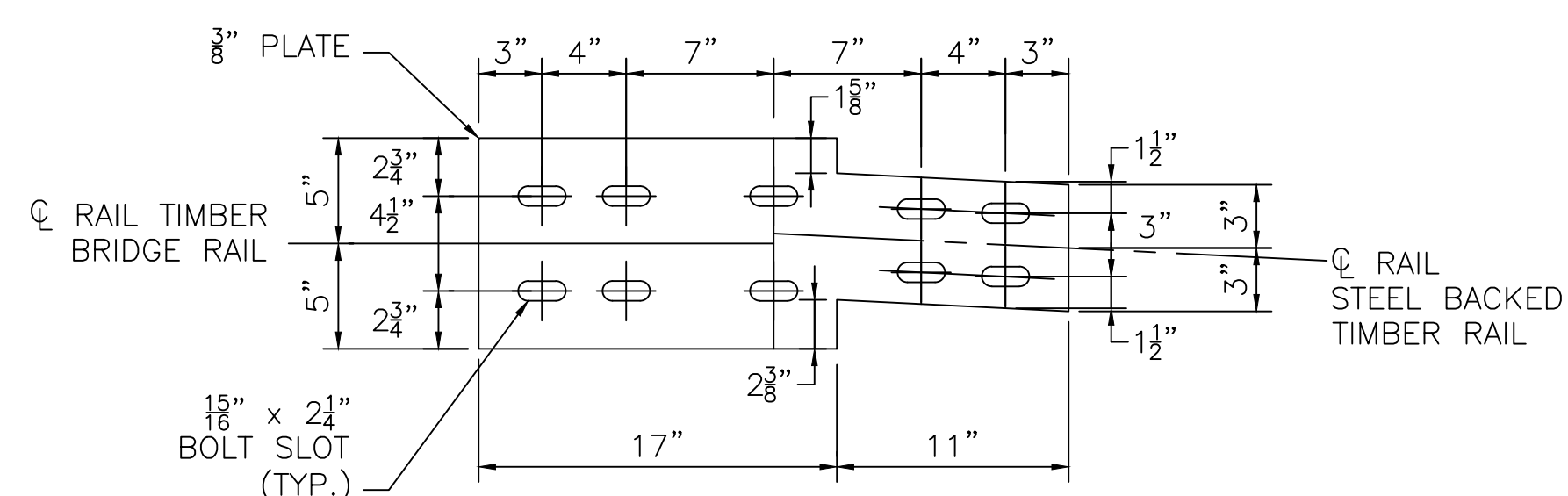
MISCELLANEOUS DETAILS



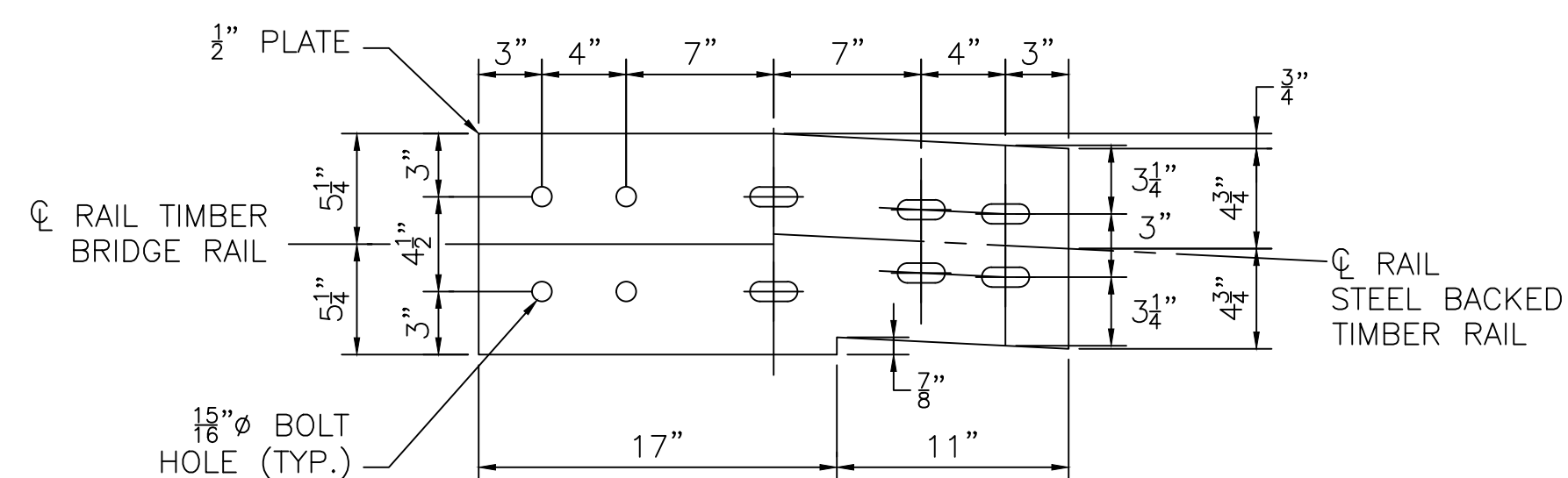
PLAN



FRONT VIEW



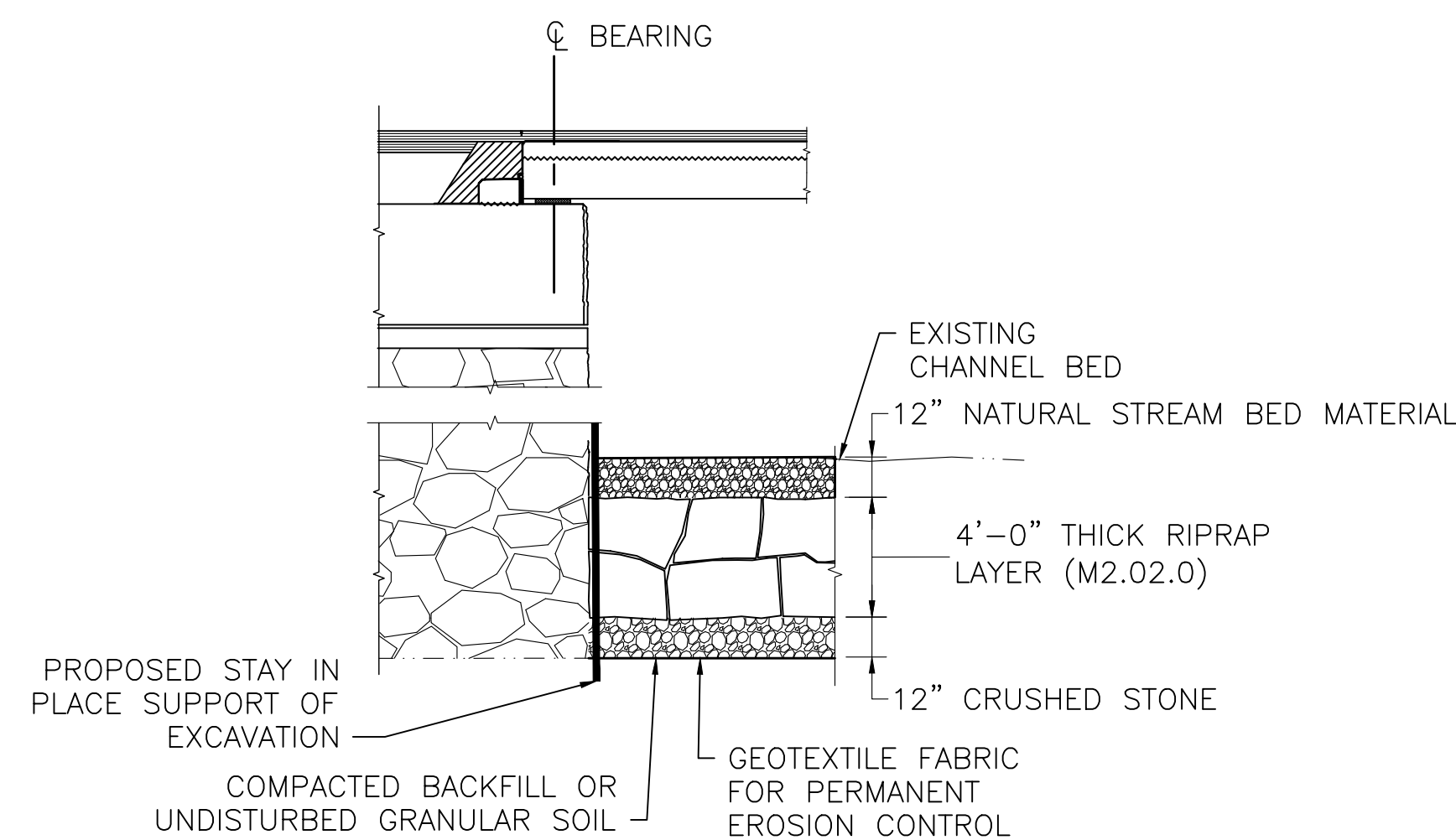
EXTERNAL SPLICE
PLATE DETAIL



INTERNAL SPLICE
PLATE DETAIL

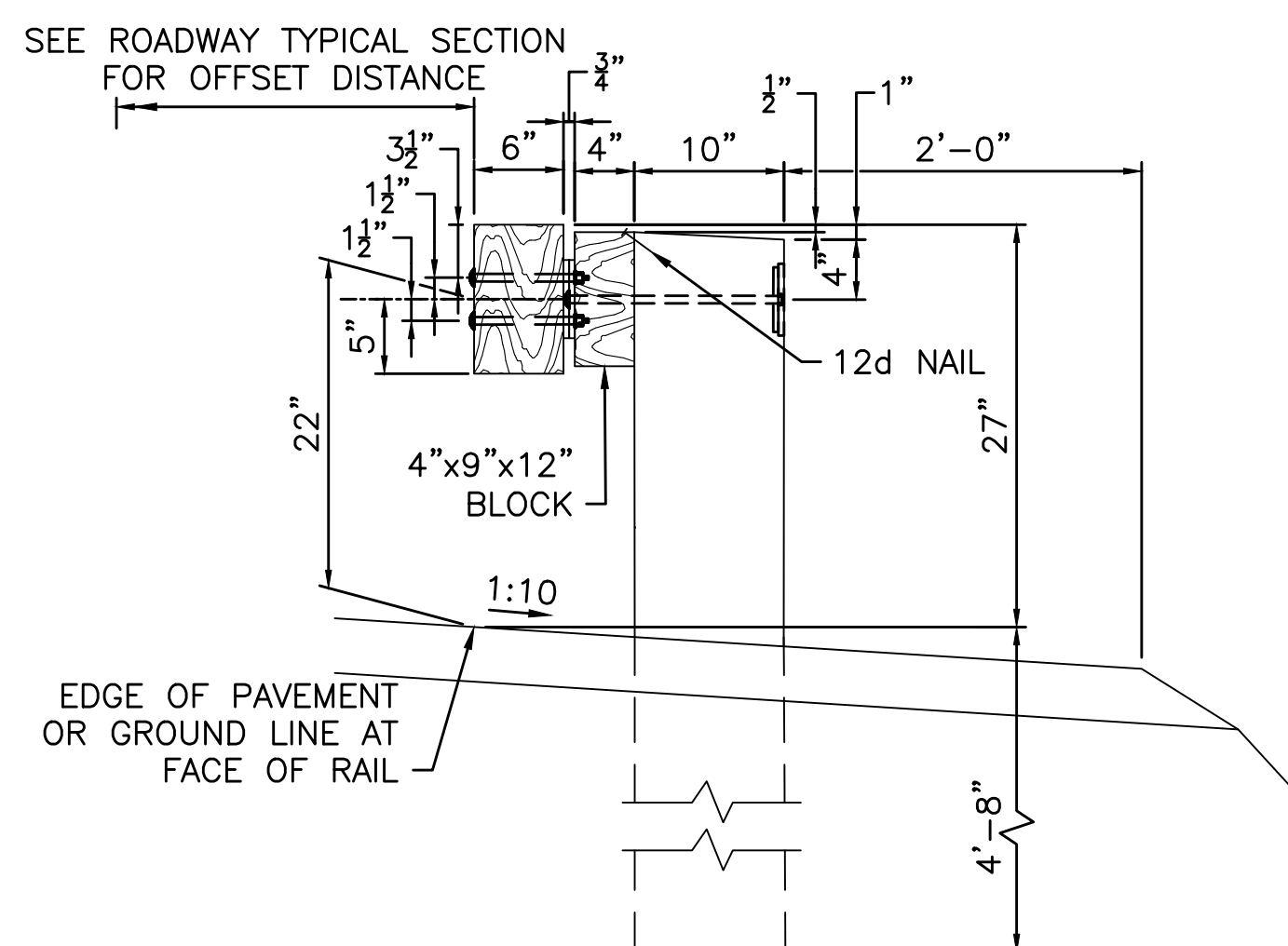
SPLICE DETAILS
TIMBER BRIDGE RAIL TO STEEL BACKED
HIGHWAY GUARDRAIL TRANSITION

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



RIPRAP DETAIL AT ABUTMENT

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



TYPICAL HIGHWAY GUARDRAIL
CROSS SECTION

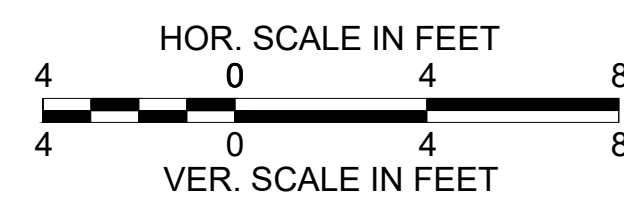
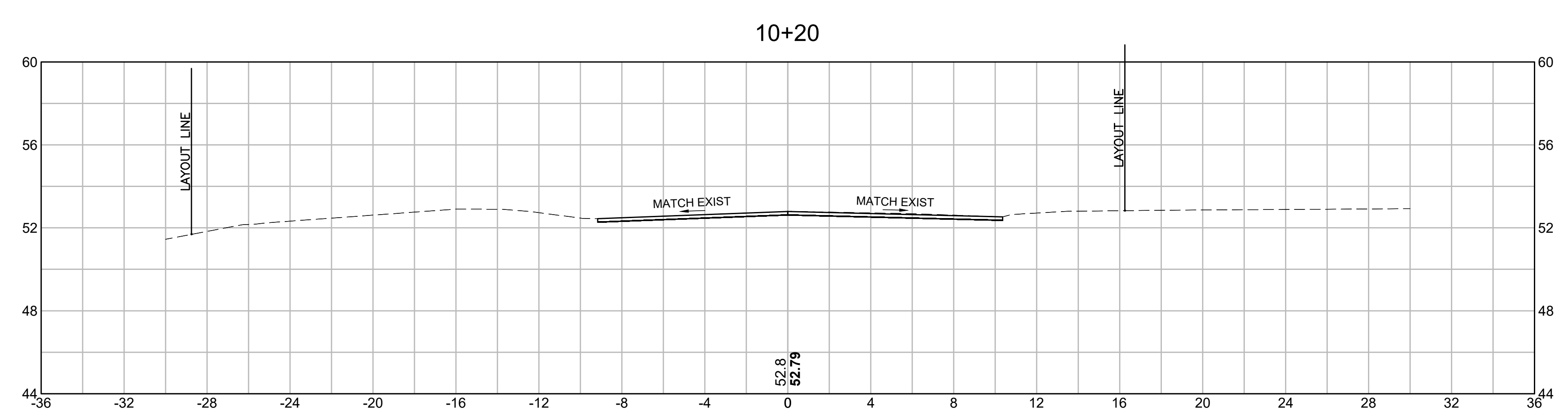
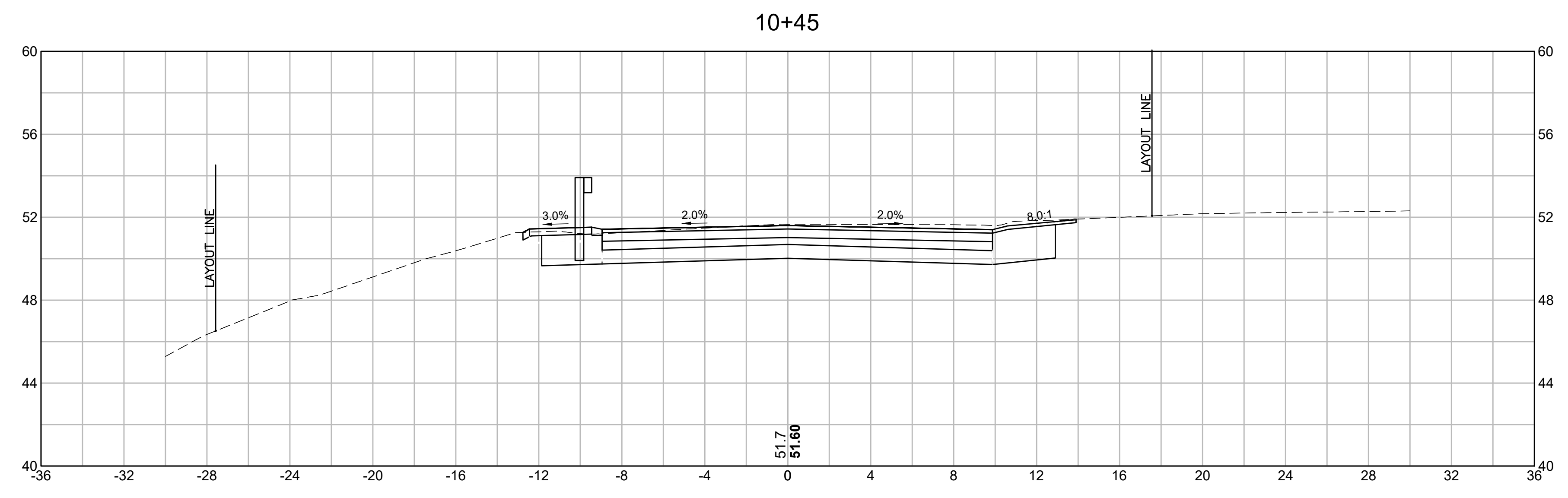
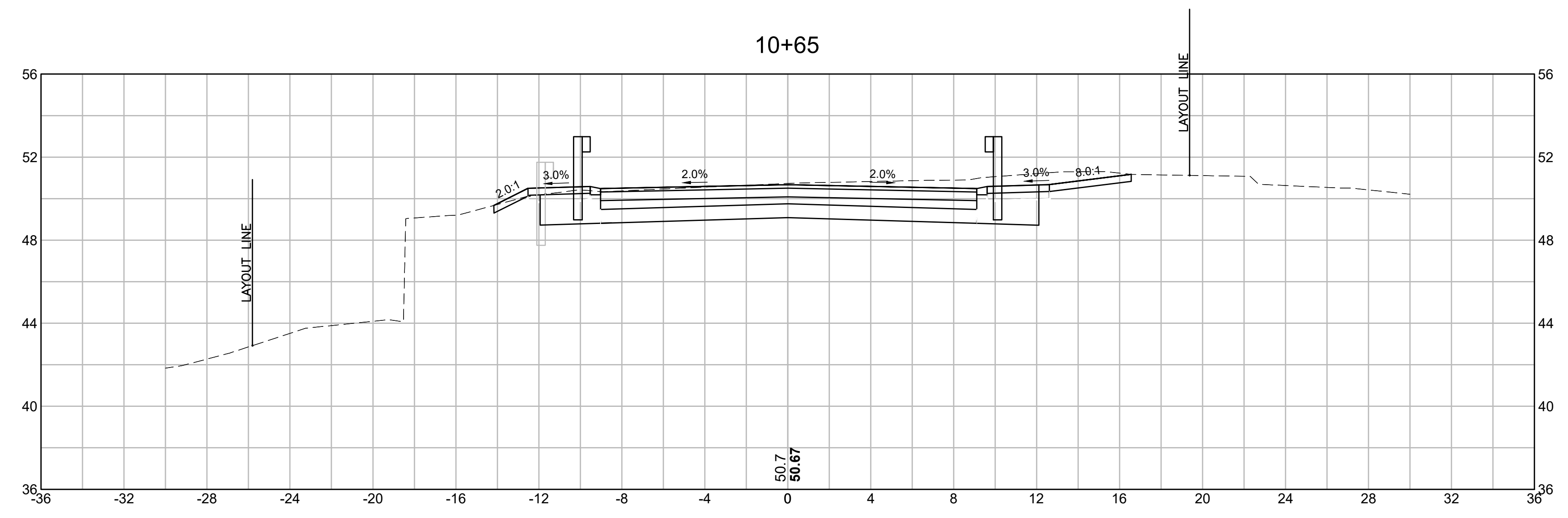
SCALE: 1" = 1'-0"

JUNE 29, 2024	ISSUED FOR CONSTRUCTION
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**PLYMPTON
WINNETUXET ROAD**

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	33	34
PROJECT FILE NO.		609435	

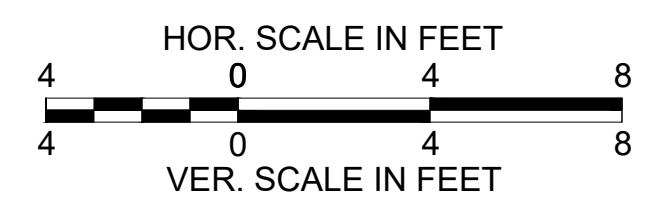
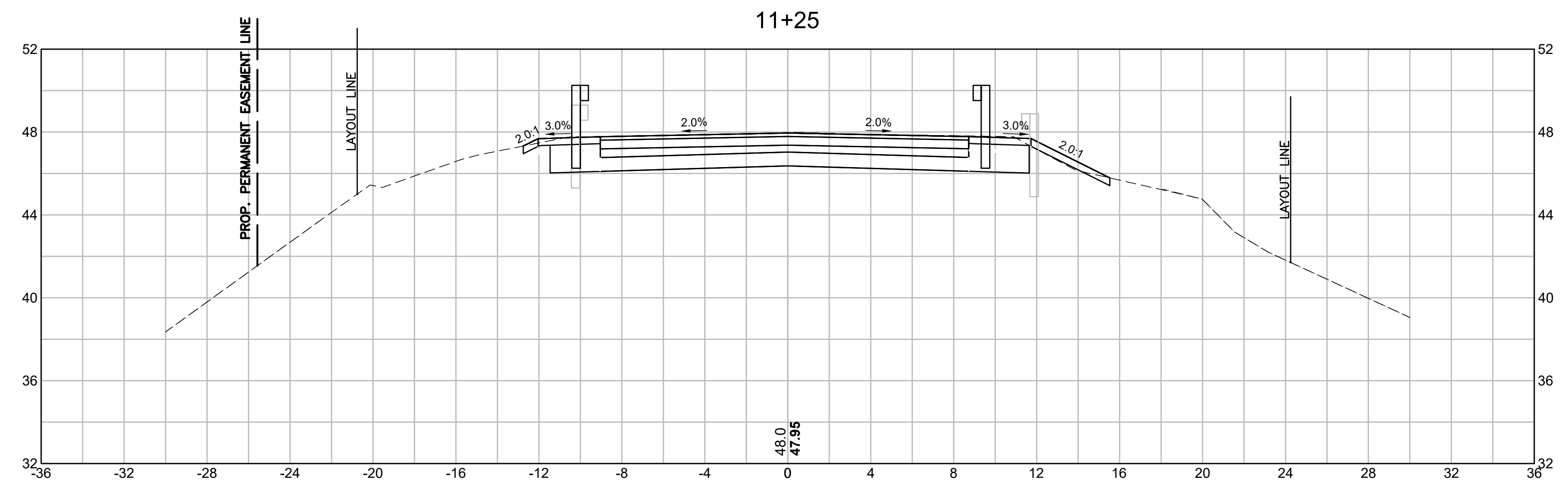
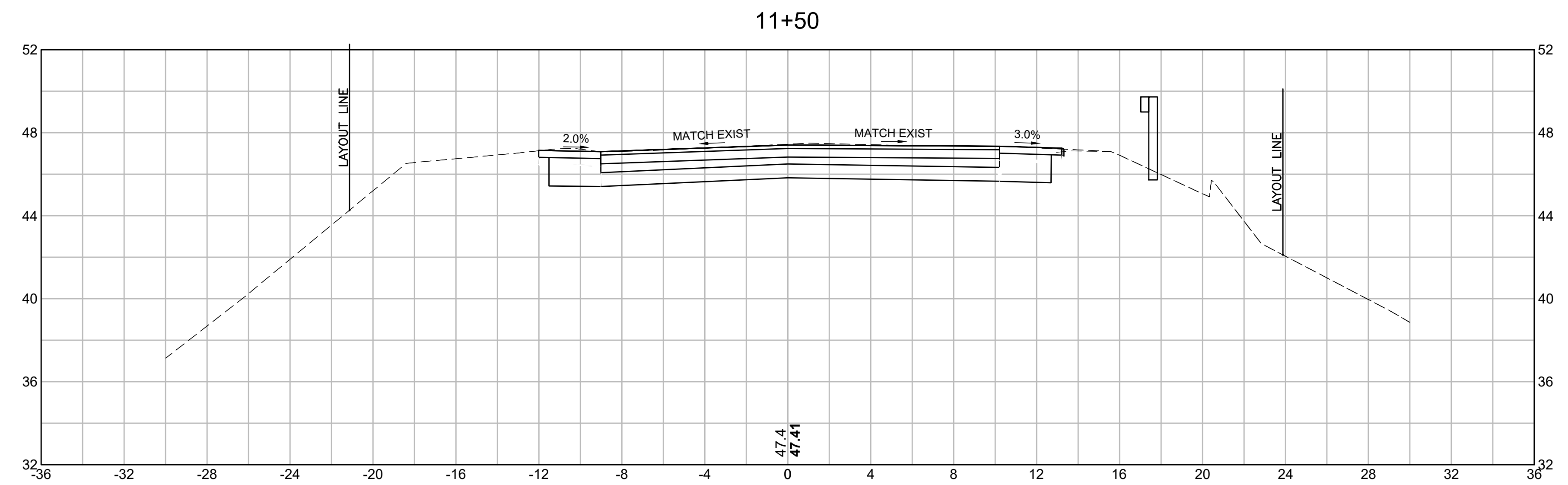
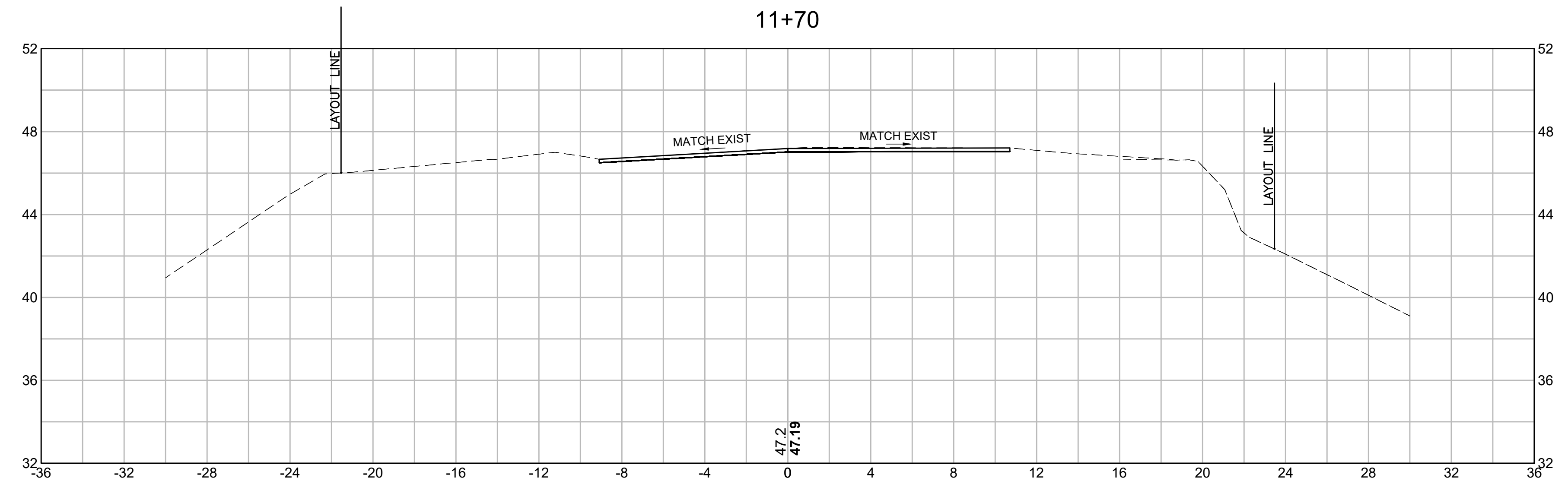
**CROSS SECTIONS
SHEET 1 OF 2**

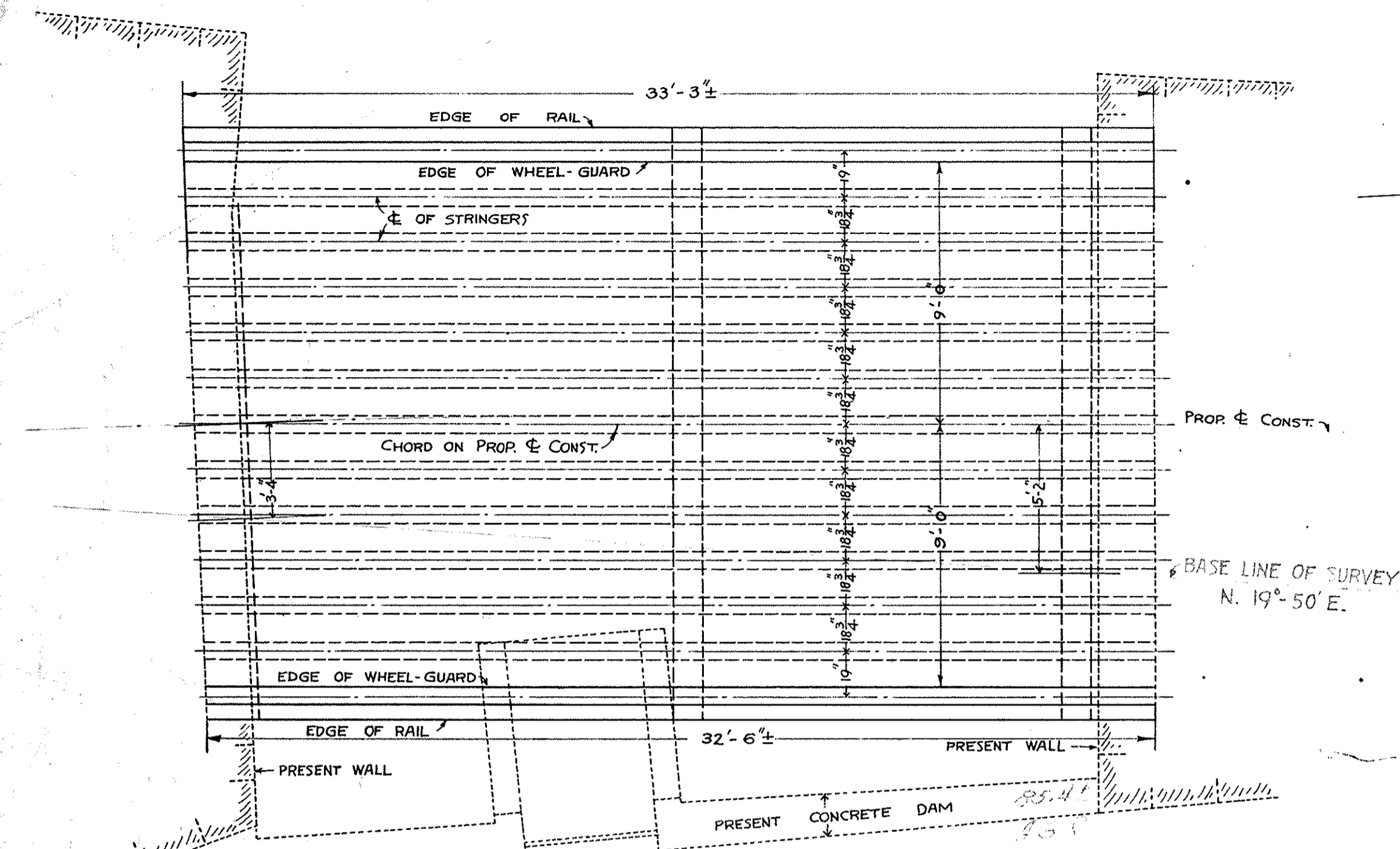


**PLYMPTON
WINNETUXET ROAD**

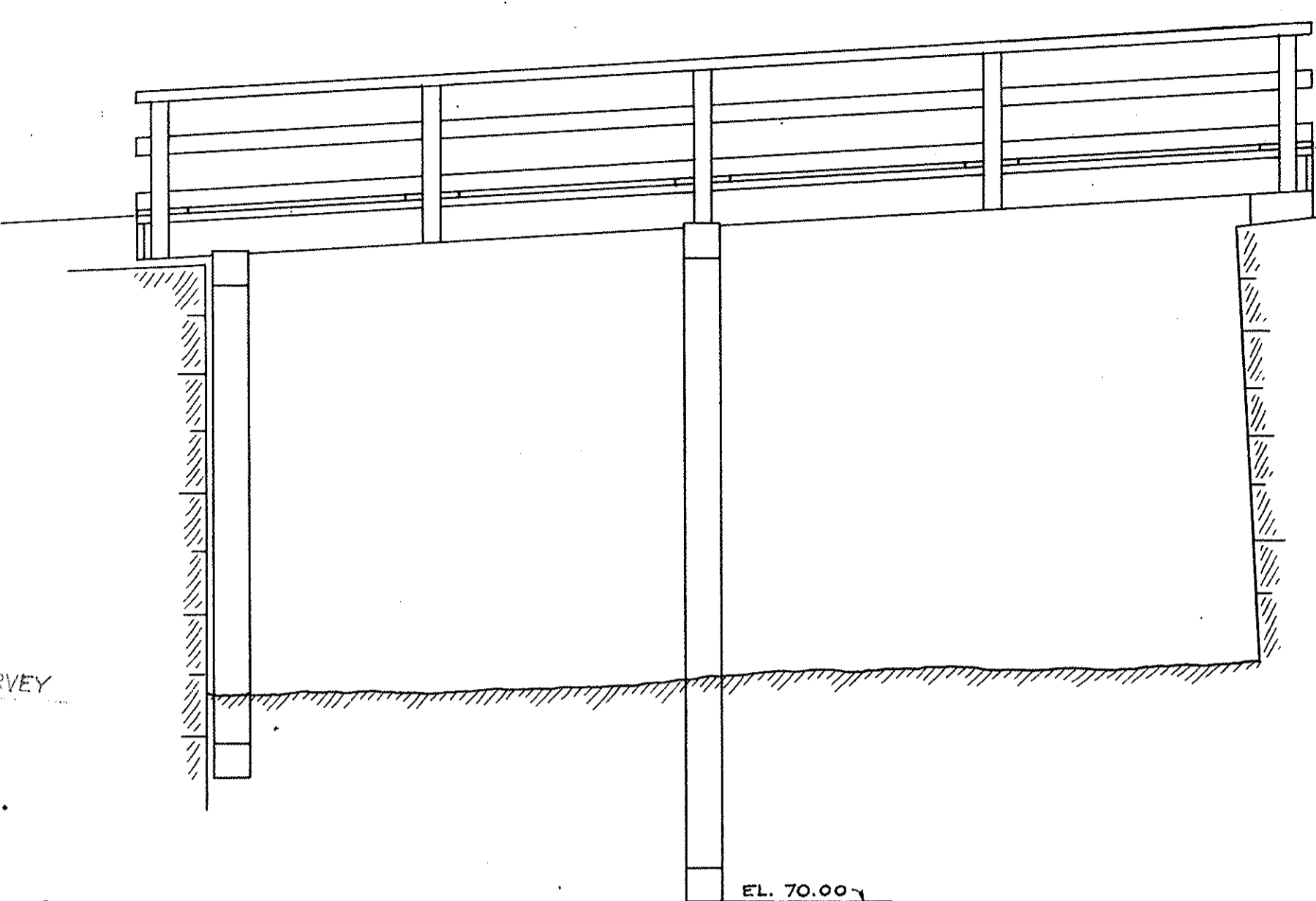
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	STP(BR-OFF)-003S(740)X	34	34
PROJECT FILE NO.		609435	

**CROSS SECTIONS
SHEET 2 OF 2**

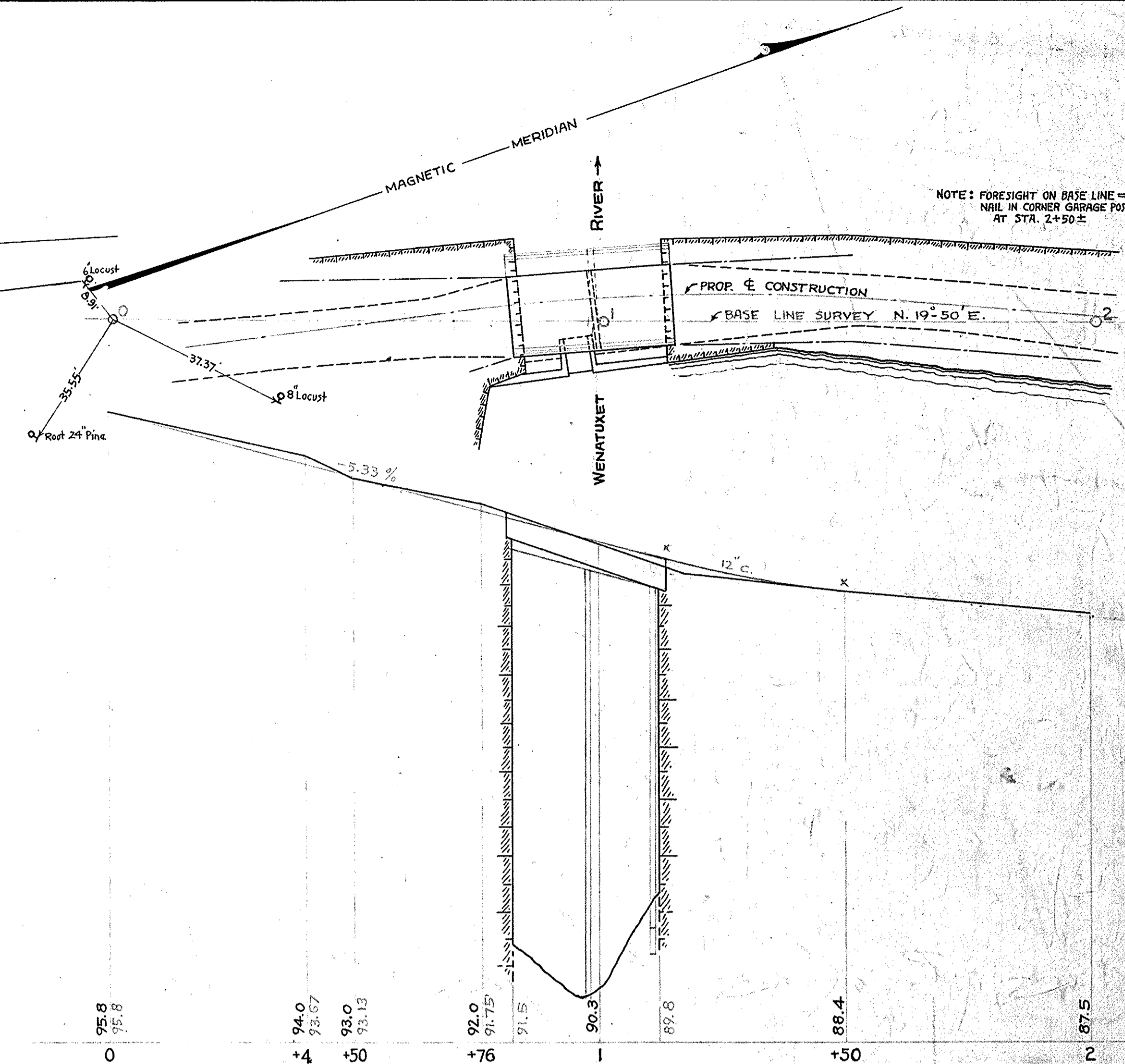




PLAN VIEW

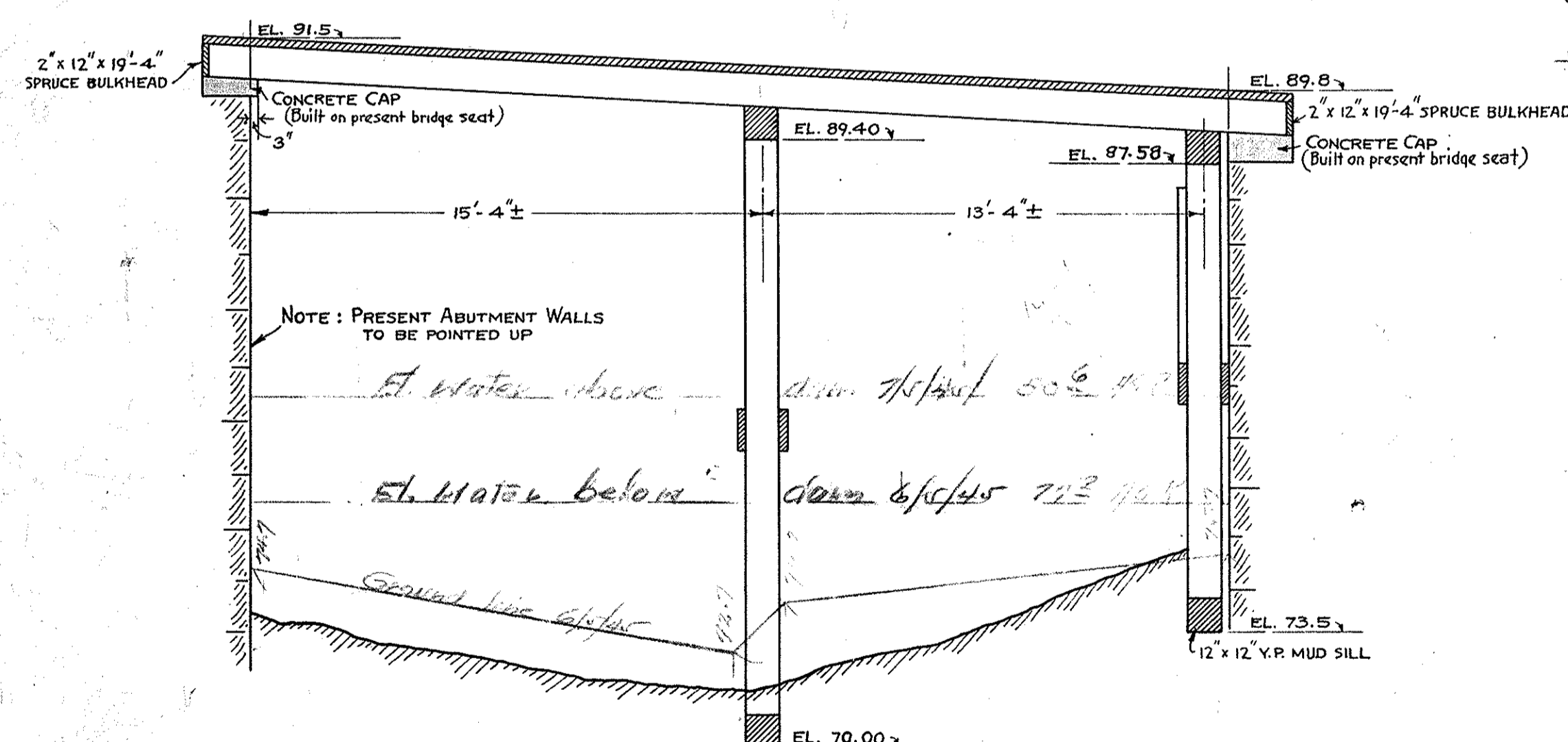


WESTERLY ELEVATION

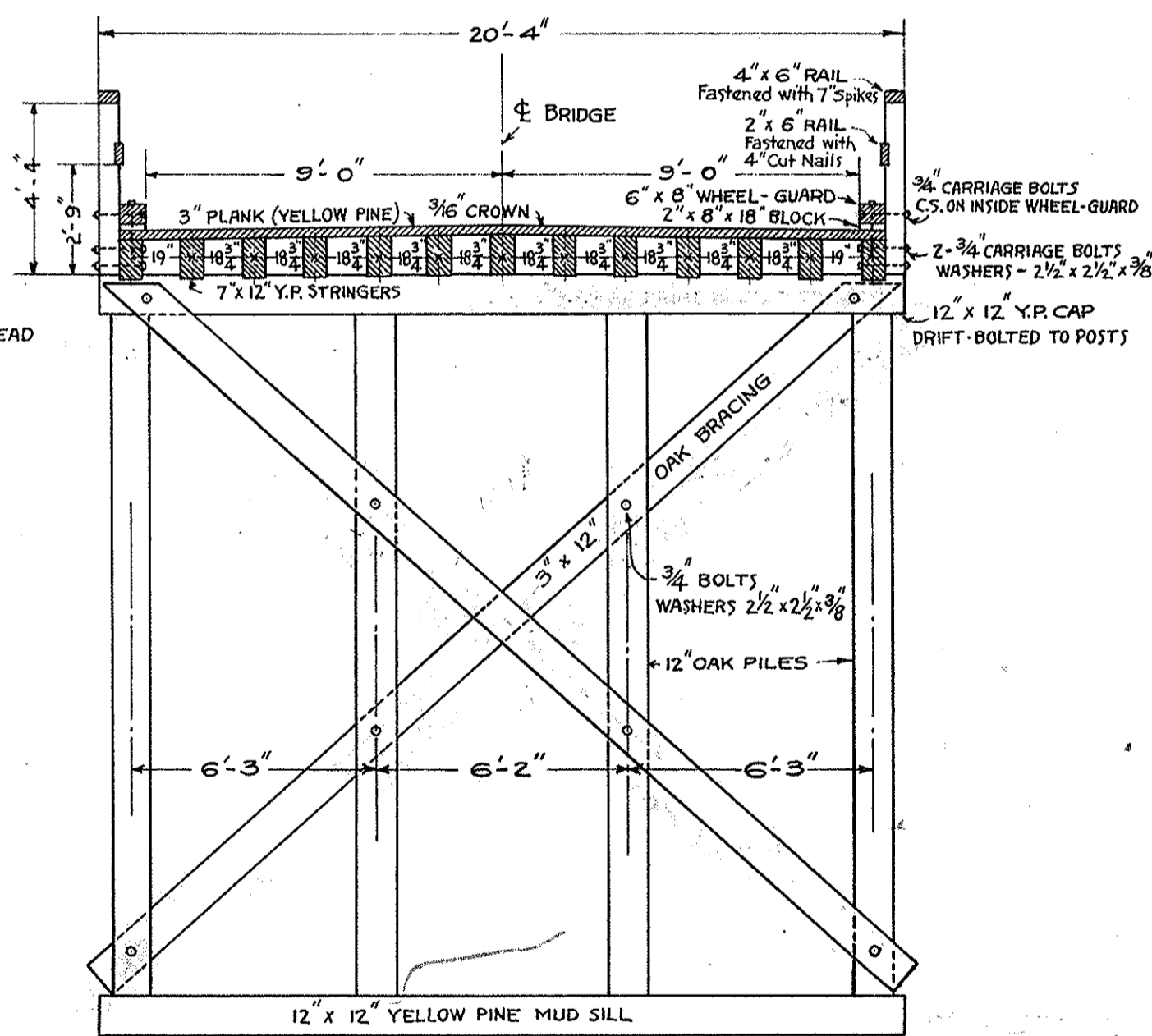


KEY PLAN AND PROFILE

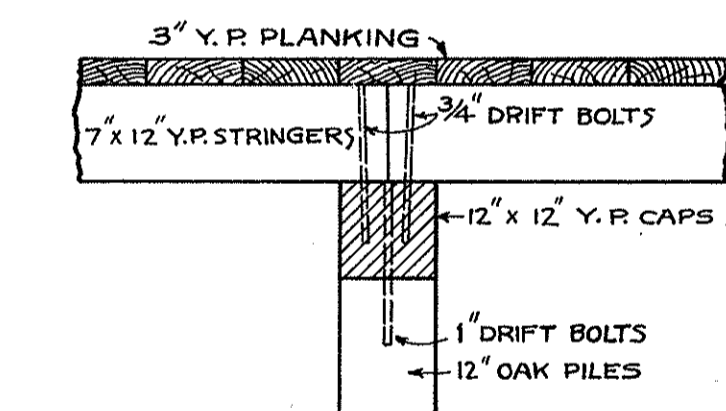
HOR. SCALE: 1" = 20'
VERT. SCALE: 1" = 4'



SECTION ON & OF BRIDGE



CROSS SECTION



DETAIL OF STRINGER CONNECTION
SCALE: 1/2" = 1'-0"

NOTES

- STRINGERS TO BE NOTCHED AT BEARINGS ON PILE CAPS SO AS TO GIVE A 3/16" CROWN TO ROADWAY.
- WHEEL-GUARD TO REST ON BLOCKS 8" x 2" x 18" LONG PLACED AT EACH POST AND FASTENED BY 3/4" LAG SCREWS 18" LONG EXTENDING THROUGH FLOOR INTO STRINGERS. TWO LAG SCREWS IN EACH BLOCK ABOUT 4 1/2" FROM ENDS.
- FLOOR TO BE SPIKED TO STRINGERS WITH 7" WIRE SPIKES.
- STRINGERS, FLOOR AND PILE CAPS TO BE OF FIRST QUALITY YELLOW PINE. NO TWISTED OR WARPED MATERIAL TO BE USED.
- WHEEL-GUARDS, BLOCKS, FENCE RAILS AND POSTS TO BE OF FIRST QUALITY SPRUCE, FREE FROM UNSOUND OR LOOSE KNOTS AND PLANED AND FITTED IN FIRST CLASS SHAPE.
- STRINGERS FASTENED TO PILE CAPS AS FOLLOWS: AT BEARING POINTS A 3/4" DRIFT BOLT 20" L. TO BE DRIVEN THROUGH STRINGERS INTO PILE CAPS. BORE HOLES 5/8" DIAMETER.
- BENCH MARK: SPIKE IN 24" PINE, RIGHT STA. 0+15 = EL. 100.00

PROPOSED WOODEN BEAM BRIDGE
OVER WENATUXET RIVER IN
TOWN OF PLYMPTON
ON WENATUXET ROAD

SCALE: FOUR FEET TO THE INCH UNLESS OTHERWISE NOTED

OFFICE OF
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
STATE HOUSE BOSTON, MASS.
MARCH 1923

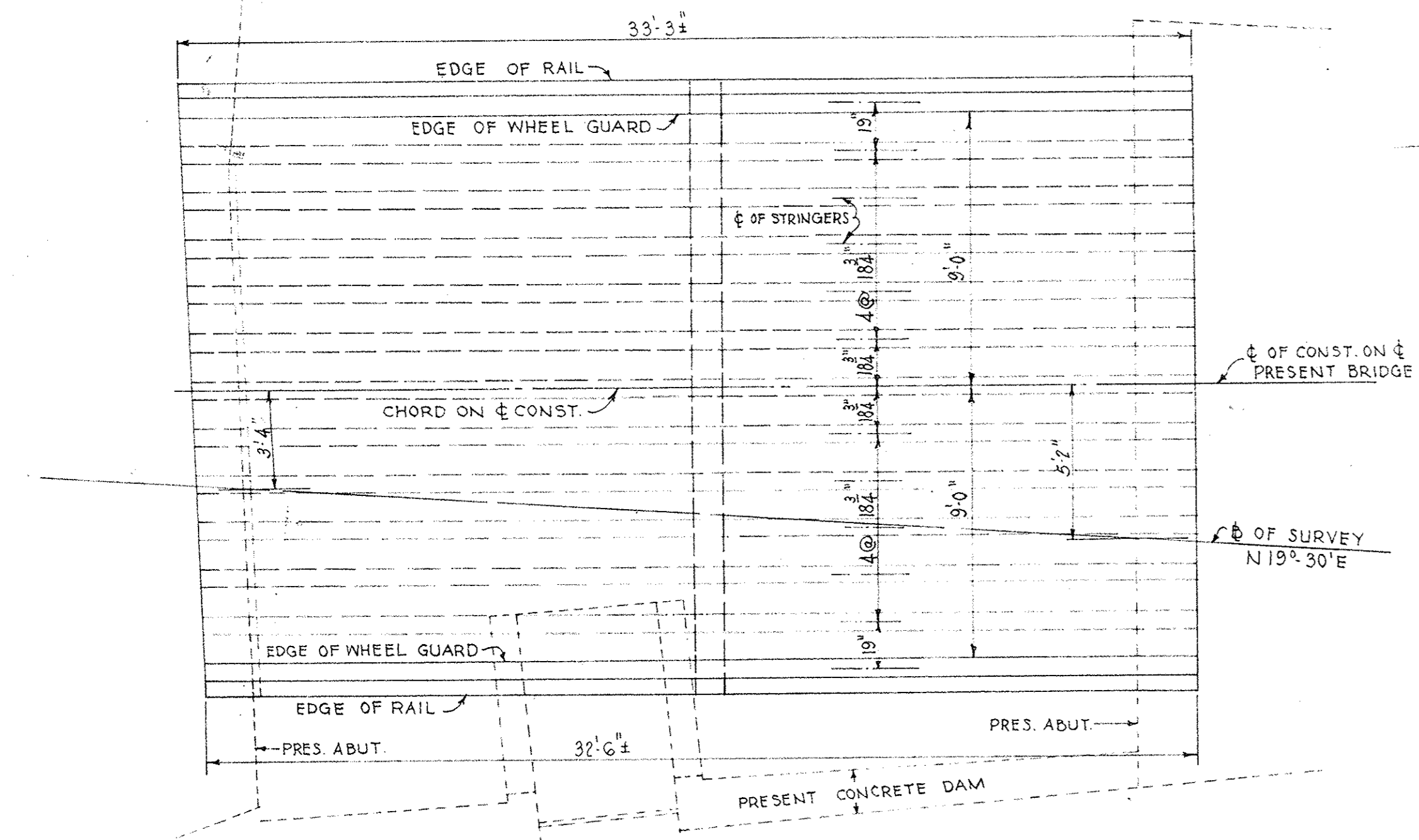
A.W. Rasmussen
CHIEF ENGINEER

GENERAL NOTES

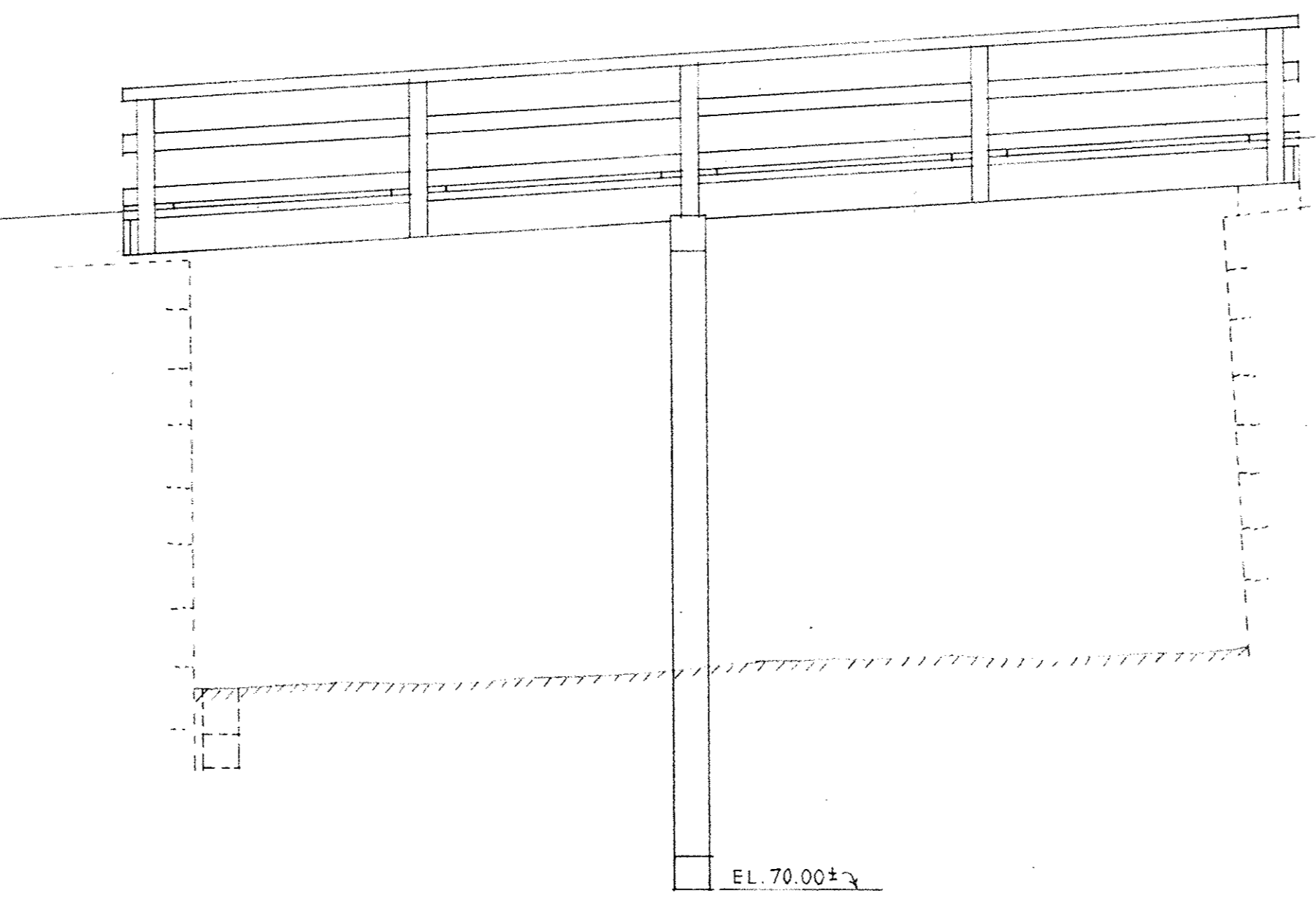
- STRINGERS: TO BE NOTCHED AT BEARINGS ON PILE CAP SO AS TO GIVE 3/16" CROWN TO ROADWAY.
- WHEEL GUARD: TO REST ON BLOCKS 2"x8"x18" LG PLACED AT EACH FENCE POST AND FASTENED BY 3/4" LAG SCREWS, 18" LG, EXTENDING THROUGH FLOOR INTO STRINGERS. TWO LAG SCREWS IN EACH BLOCK ABOUT 4 1/2" FROM ENDS.
- FLOOR: TO BE SPIKED TO STRINGERS WITH 7" WIRE SPIKES.
- BENCH MARK: SPIKE IN 24" PINE RT. STA. 0+15 - EL. = 100.00

ESTIMATED QUANTITIES
(NOT GUARANTEED)

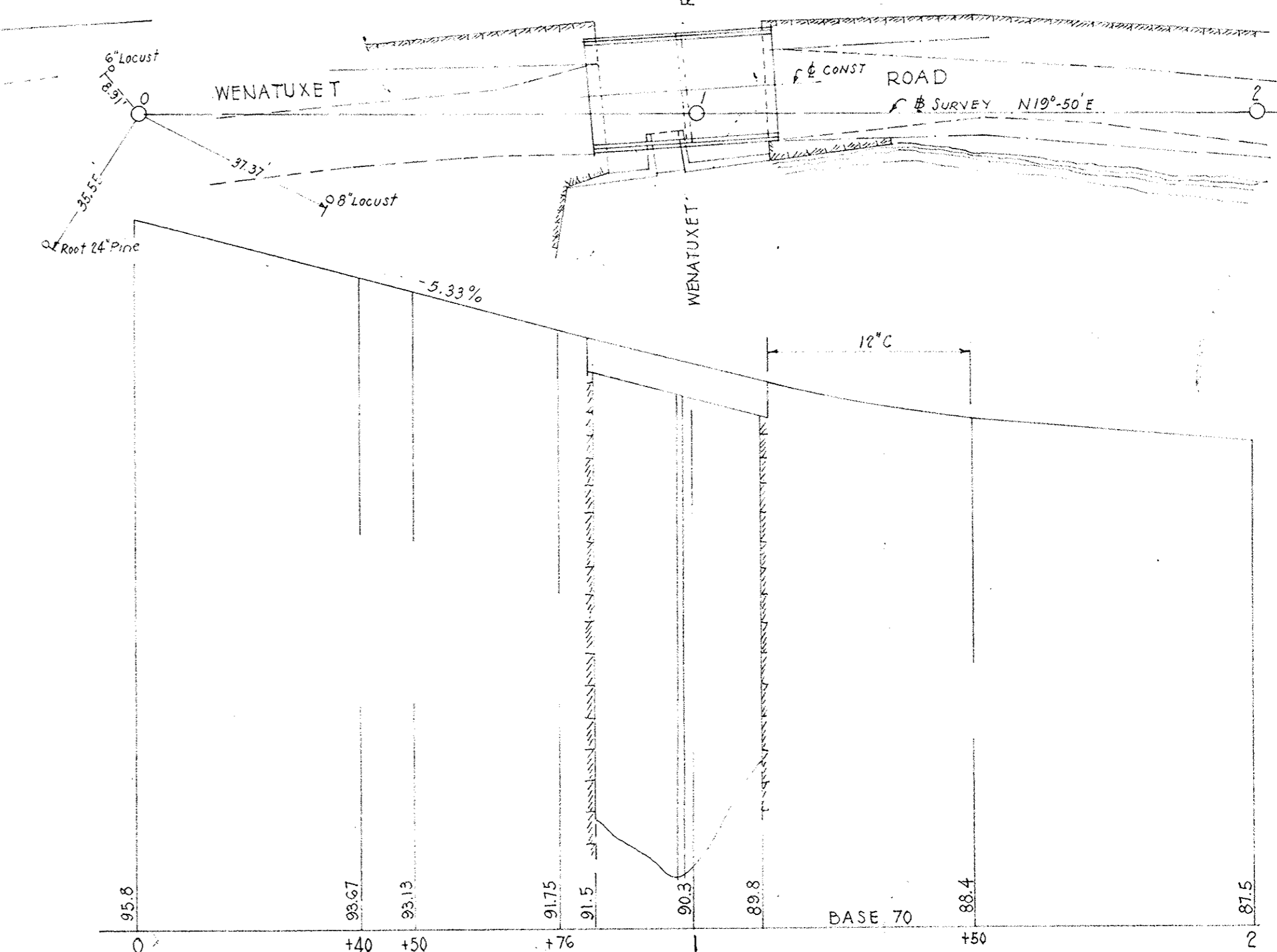
TREATED LUMBER	7.5 M. FT. B.M.
REMOVAL OF PRESENT BRIDGE	1 LUMP SUM
BRIDGE FENCE	66 LIN. FT.
MISCELLANEOUS WORK	1 LUMP SUM



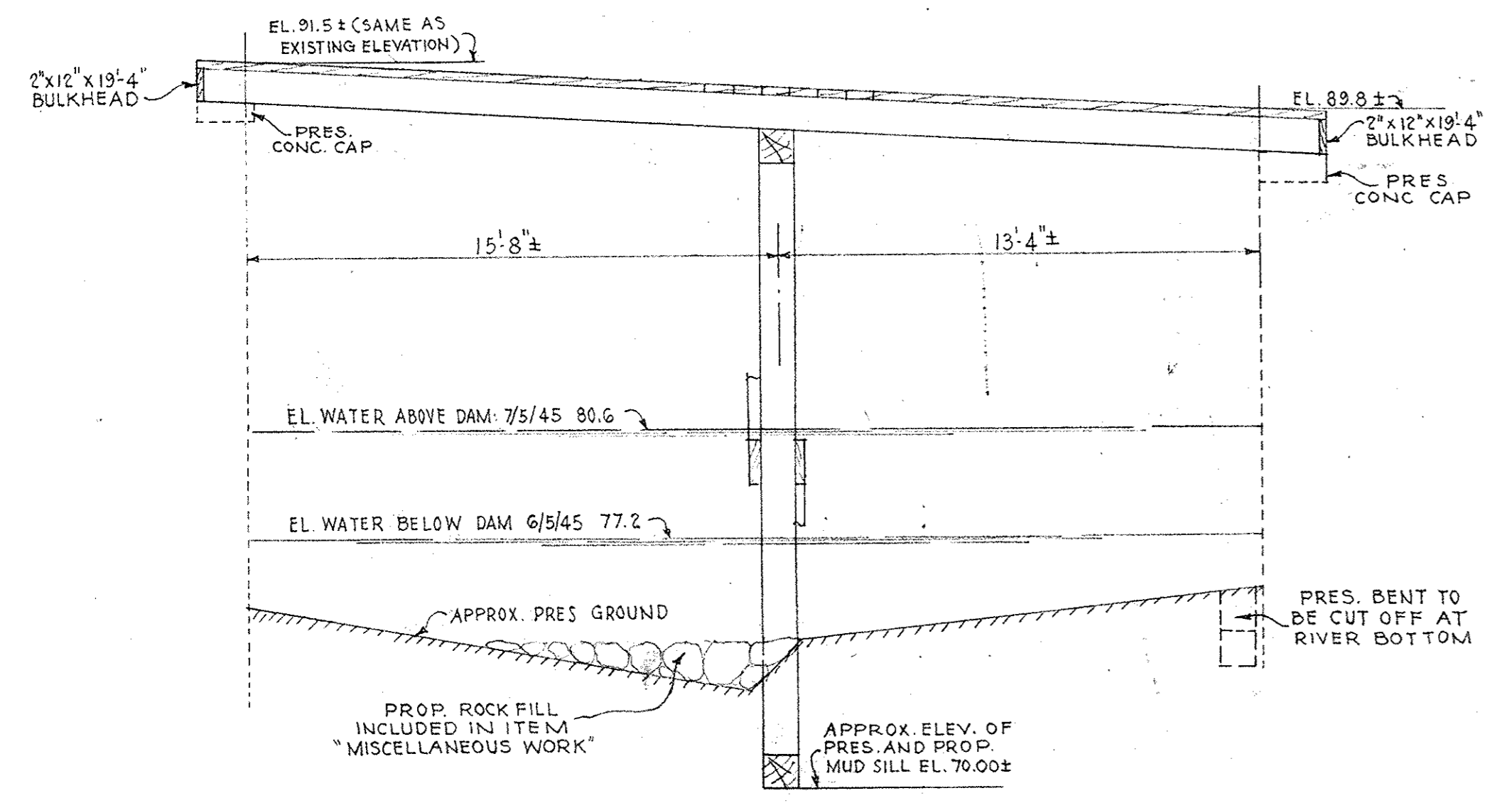
PLAN
SCALE 1/4"=1'-0"



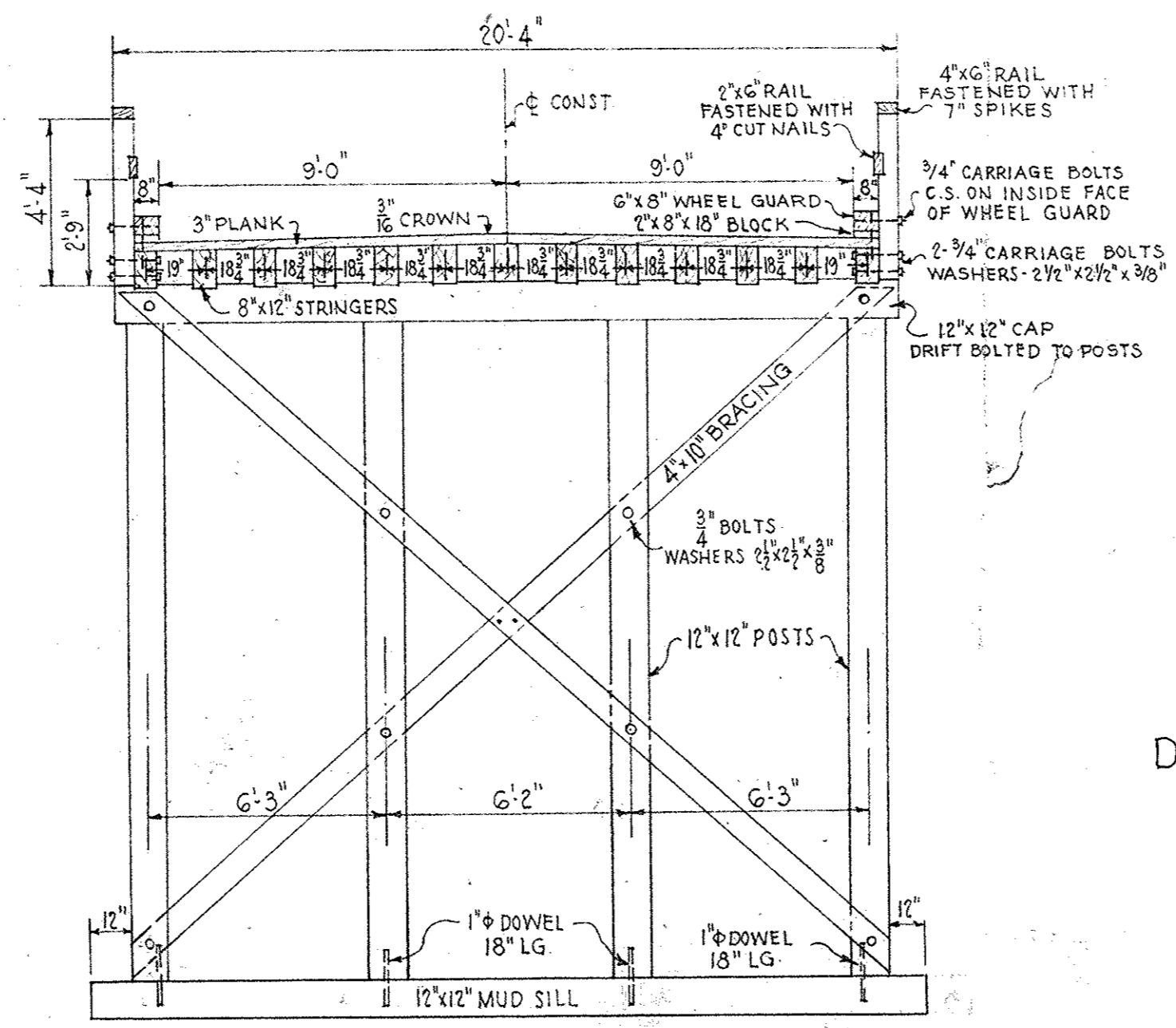
WESTERLY ELEVATION
SCALE 1/4"=1'-0"



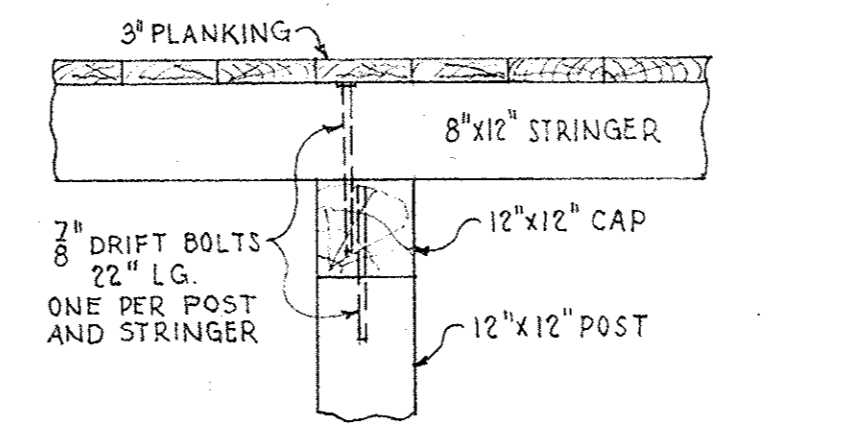
KEY PLAN AND PROFILE
HORIZ. SCALE 1"=20'
VERT. SCALE 1"=4'



SECTION ON à OF BRIDGE
SCALE 1/4"=1'-0"



CROSS - SECTION
SCALE 1/4"=1'-0"



DETAIL OF STRINGER CONNECTION
SCALE 1/2"=1'-0"

DATE	SHEET NOS.	DESCRIPTION
LIST OF REVISIONS - USE ONLY PRINTS OF LATEST DATE		
THE COMMONWEALTH OF MASSACHUSETTS PROPOSED BRIDGE PLYMPTON WENATUXET ROAD BRIDGE OVER WENATUXET RIVER - STA. 0+97± SCALES AS NOTED OFFICE OF DEPARTMENT OF PUBLIC WORKS 100 NASHUA ST. - BOSTON, MASS. JULY 1945		
R. O. Spofford BRIDGE ENGINEER		S. W. [Signature] CHIEF ENGINEER
DESIGNED BY J.J.M.		TRACED BY J.J.M. CHECKED BY
ADVERTISING CONSTRUCTION		DATE OF ISSUE
7-28-45	8-8-45	