

# PROPOSED IMPROVEMENT BRIDGE PROJECT

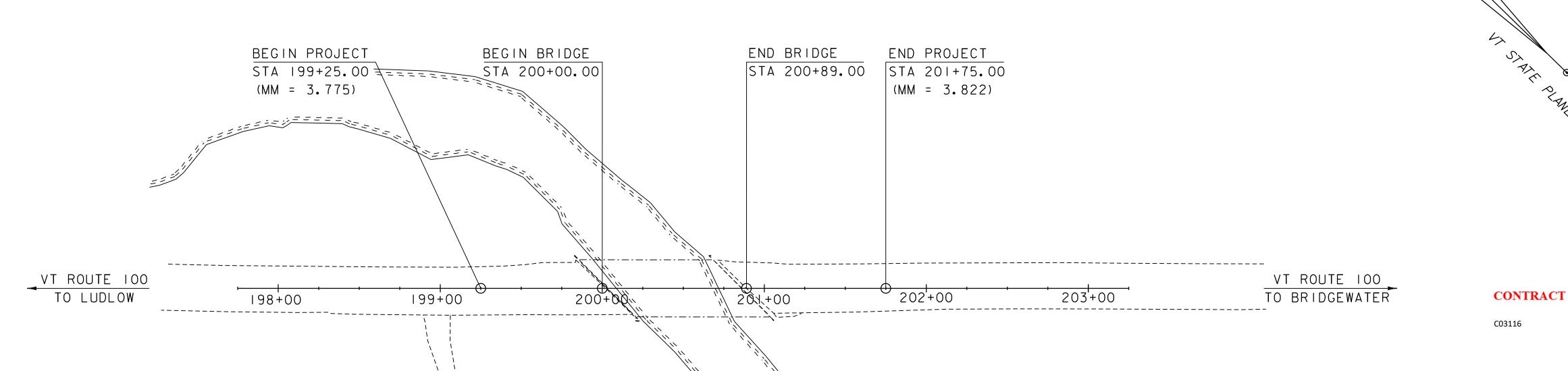
TOWN OF PLYMOUTH COUNTY OF WINDSOR

ROUTE NO : VT RTE 100: MINOR ARTERIAL BRIDGE NO : 107

PROJECT LOCATION: LOCATED ON VTIOO IN THE TOWN OF PLYMOUTH APPROXIMATELY 1.5 MILES SOUTH OF THE JUNCTION WITH VT ROUTE 100A

PROJECT DESCRIPTION: CONSTRUCTION OF A NEW BRIDGE DECK ON THE EXISTING STEEL BEAMS WITH RELATED ROADWAY APPROACH WORK.

LENGTH OF STRUCTURE: 89.00 FEET LENGTH OF ROADWAY: 161.00 FEET 250.00 FEET LENGTH OF PROJECT:



CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2018, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON APRIL 13, 2018 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE

QUALITY ASSURANCE PROGRAM : LEVEL 2

SURVEYED BY : R.GILMAN SURVEYED DATE : 01/10/2020

DATUM

VERTICAL NAVD88

HORIZONTAL NAD83 (2011)

HIGHWAY DIVISION, CHIEF ENGINEER

APPROVED <u>Crin Sisson</u>, P.C. DATE <u>Dec. 13, 2022</u>

CANADA

Commonwealth of

MASSACHUSETTS

State of NEW HAMPSHIRE

State of NEW YORK

PLYMOUTH

STP DECK (52)

PROJECT MANAGER : J.B. McCARTHY, P.E.

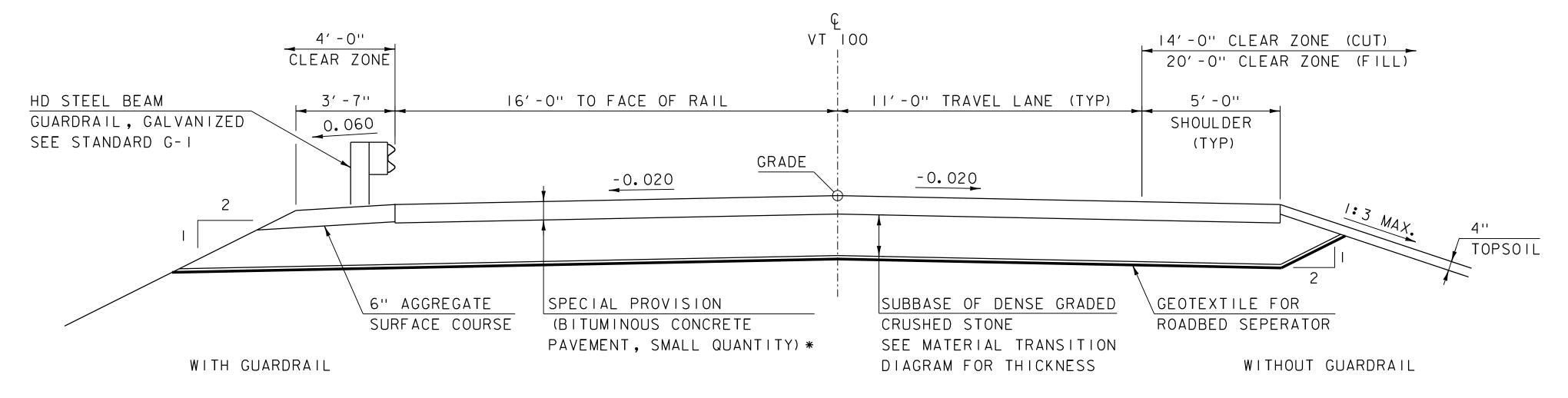
PROJECT NAME : PLYMOUTH PROJECT NUMBER : STP DECK (52)

SHEET I OF 29 SHEETS

## PRELIMINARY INFORMATION SHEET (BRIDGE)

LRFD

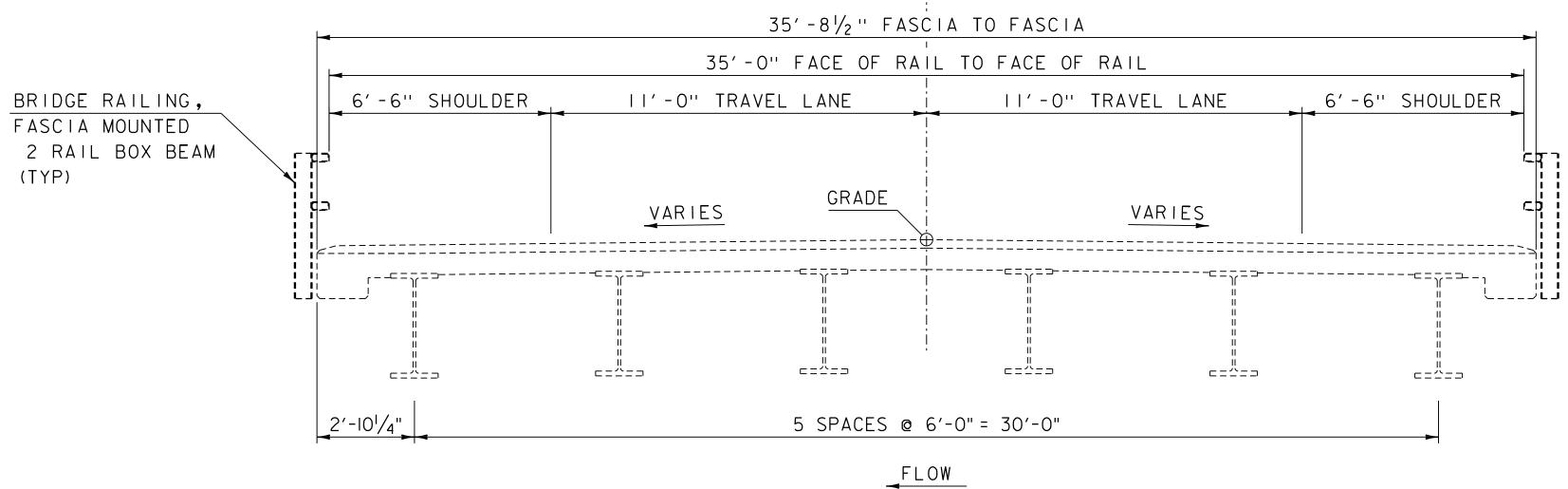
AGENCY OF TRANSPORTATION	PRELIMINARI	INFURIMATION	N SHEET (BRIDGE)	LRFD
	INDEX OF SHEETS		NO HYDRAU	JLIC REPORT
PLAN SHEETS  1 TITLE SHEET 2 PRELIMINARY INFORMATION SHEET 3 TYPICAL SECTIONS 4 PROJECT NOTES 5 - 6 QUANTITY SHEET 1 - 2 7 CONVENTIONAL SYMBOLOGY LEGEND 8 TIE SHEET 9 EXISTING CONDITIONS 10 DECK REPLACEMENT LAYOUT 11 RAIL LAYOUT 12 VT ROUTE 100 PROFILE 13 MATERIAL TRANSITION DIAGRAM 14 PHASING TYPICAL SECTIONS 15 - 16 PHASING LAYOUT 1 - 2 17 DECK REINFORCING 18 BRIDGE END DETAILS 19 BEARING DETAILS 20 ABUTMENT DETAILS 21 APPROACH SLAB DETAILS 22 - 23 APPROACH RAIL DETAIL SHEET 1 - 2 24 REINFORCING STEEL SCHEDULE 25 - 27 MAINLINE CROSS SECTIONS 1 - 3 28 EPSC DETAIL 29 R.O.W. LAYOUT SHEET		O4-07-2020 O4-07-2020 O4-07-2020 O8-08-1995 O8-18-1995 DELINEATOR, TYPICALS) O3-10-2017 ERMINAL, ANCHOR, MEDIAN) O3-10-2018 BEAM O2-17-2022 O4-07-2020 O8-06-2012 O8-06-2012 O2-17-2022 OP-OFFS FOR PAVING O8-06-2012 O1-02-2013 O4-09-2014	NO HYDRAU	
HSD-400.01 SAFETY EDGE DETAILS	1/5/2018			TRAFFIC MAINTENANCE NOTES  1. MAINTAIN ONE-WAY TRAFFIC ON THE EXISTING STRUCTURE. 2. INSTALL AND MAINTAIN TRAFFIC SIGNALS. 3. SIDEWALKS ARE NOT NECESSARY  DESIGN VALUES  1. DESIGN LIVE LOAD 2. FUTURE PAVEMENT 3. DESIGN SPAN 4. MIN. MID-SPAN POS. CAMBER @ RELEASE (PRESTRESSED UNITS) 5. PRESTRESSING STRAND 6. PRESTRESSED CONCRETE STRENGTH 7. PRESTRESSED CONCRETE RELEASE STRENGTH 8. (SPEC. PROV.) PERFORMANCE-BASED CONCRETE, CLASS PCD 7. 4. MIS.
TRAFFIC DA           YEAR         ADT         DHV         % D         % T         ADTT           2024         1500         240         56         9.1         100           2044         1600         260         56         13.9         170	20 year ESAL for flexible pavement from 2024 to 2044 : 542000	AS BUILT "REBAR" DETAIL	LRFR LOAD RATING FACTORS   TRUCK   H-20   HL-93   3S2   6 AXLE   3A. STR.   4A. STR.   5A. SEMI   TONNAGE   20   36   36   66   30   34.5   38   INVENTORY   2.83   1.33   POSTING   OPERATING   3.69   1.72   2.72   1.74   2.57   2.29   2.38   COMMENTS:	8. (SPEC. PROV.) PERFORMANCE-BASED CONCRETE, CLASS PCD   f'c: 4.0 KS  9. (SPEC. PROV.) PERFORMANCE-BASED CONCRETE, CLASS PCD   f'c: 3.5 KS  10. (SPEC. PROV.) CONCRETE HIGH PERFORMANCE, CLASS SCC   f'c: 11. CONCRETE, CLASS C   f'c: 12. REINFORCING STEEL   fy: 60 KS  13. STRUCTURAL STEEL AASHTO M270 (WEATHERING)   fy: 50 KS  14. NOMINAL BEARING RESISTANCE OF SOIL   qn: 15. SOIL BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)   ф: 16. NOMINAL BEARING RESISTANCE OF ROCK   qn: 17. ROCK BEARING RESISTANCE FACTOR (REFER TO AASHTO LRFD)   ф: 18. PILE RESISTANCE FACTOR (REFER TO AASHTO LRFD)   ф: 19. LATERAL PILE DEFLECTION   Δ: 20. BASIC WIND SPEED   V3s: 21. MINIMUM GROUND SNOW LOAD   pg: 22. SEISMIC DATA   PGA:   Ss: 23.   24.   24.   25.   25.   26.   PROJECT NAME:   PLYMOUTH   PROJECT NUMBER:   STP DECK(52)   FILE NAME:   \$18b007pi.dgn   PLOT DATE:   11/30/2022   PROJECT LEADER:   J. B. McCARTHY   DRAWN BY:   R. PELLETT   DESIGNED BY:   R. PELLETT   CHECKED BY:   F. BARROWS   PRELIMINARY INFORMATION SHEET   2 OF 29



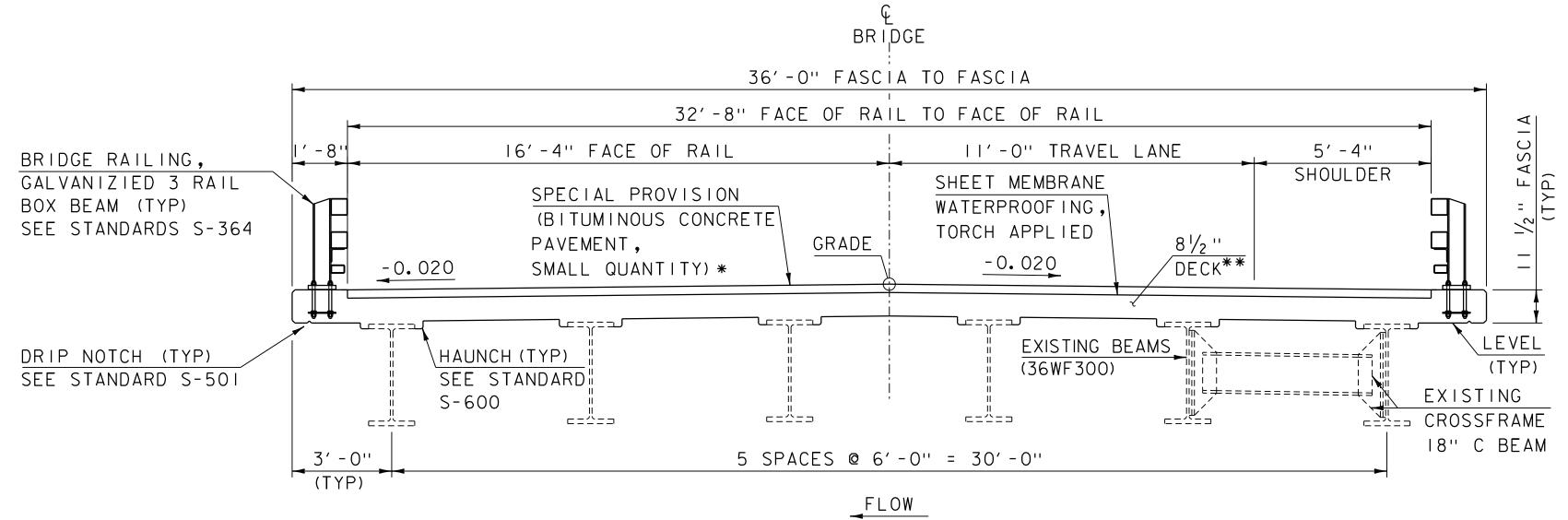
## PROPOSED VT ROUTE 100 TYPICAL SECTION

SCALE 3/8" = 1'-0"

BR I DGE



## EXISTING BRIDGE TYPICAL SECTION SCALE 3/8" = 1'-0"



## PROPOSED BRIDGE TYPICAL SECTION

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

#### PAVEMENT SPECIFICATIONS

DESIGN LANE/DESIGN LIFE	ESALS 303	<b>,</b> 520
PERFORMANCE GRADE ASPHA	LT BINDER 70	-28
DESIGN NUMBER OF GYRATI	ons 6	55

EMULSION SHALL BE APPLIED PER THE APPLICATION RATES IN TABLE 406. 12A OF THE STARDARD SPECIFICATIONS.

MATERIAL TOLERANG	CES
(IF USED ON PROJECT)	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/-  "
SAND BORROW	+/-  "

\* BITUMINOUS CONCRETE PAVEMENT (ROADWAY)

2 - I 1/2 " LIFTS TYPE IVB

I - 3½" LIFT TYPE IIS

BITUMINOUS CONCRETE PAVEMENT (DECK)
2 - 1/2" LIFTS TYPE IVB

\*\* SPECIAL PROVISION

(PERFORMANCE-BASED CONCRETE, CLASS PCD)

\_\_\_ ¾" SAW CUT\*

JOINT SEALER, HOT OR COLD POURED.

SHALL BE SLIGHTLY OVER FILLED

THEN WIPED FLUSH WITH A "V" OR

"U" SHAPED SQUEEGEE TO PROVIDE A

I 1/4" WIPE ZONE EACH SIDE OF

JOINT. ASPHALTIC PLUG JOINT

BINDER MAY BE USED AS A

SUBSTITUTE JOINT SEALER

#### TOP COURSE OF PAVEMENT

% "Ø HEAT RESISTANT FOAM BACKER ROD. COMPRESSION FIT REQUIRED TO ENSURE THAT THE ROD POSITION IS MAINTAINED DURING FILLING OPERATION. COST TO BE INCLUDED WITH UNIT PRICE BID FOR JOINT SEALER.

PAVEMENT SURFACES

TO BE SANDBLASTED

ON BOTH SIDES

OF JOINT

KER ROD.

ENSURE

I/4" WIDE × I/2" DEEP SAW CUT INTO

BOTTOM COURSE OF PAVEMENT TO

BE MADE DURING THE SAME WORKDAY

AS PLACEMENT.

I/4'' MIN. WIPE

ROADWAY SURFACE

SHEET 3 OF 29

ZONE (TYP)

## SAWED PAVEMENT JOINT DETAIL (NOT TO SCALE)

\*JOINT IS TO BE LOCATED ACCURATELY BY STRING LINING, OR OTHER MEANS, PRIOR TO PAVING, SO THAT THE SAW CUTS WILL BE MADE DIRECTLY OVER THE END OF CONCRETE DECK. JOINT SHALL BE CUT DRY IN A SINGLE PASS AND BE SEALED WITHIN 24 HOURS AND PRIOR TO EXPOSURE TO TRAFFIC. JOINT SHALL BE CLEANED PRIOR TO APPLYING THE JOINT SEALER.

TYPICAL SECTIONS

PROJECT NAME:	PLYMOUTH		
PROJECT NUMBER:	STP DECK(52)		
FILE NAME: SI8b007	'typical.dgn	PLOT DATE:	12/12/2022
FILE NAME: s18b007 PROJECT LEADER: ,		PLOT DATE: Drawn by:	

#### **GENERAL**

- ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2018, AND ITS LATEST REVISIONS, AND THE AASHTO LRFD BRIDGE DESIGN SPECIFICATION, DATED 2017, AND ITS LATEST REVISIONS.
- 2. ALL DIMENSIONS SHOWN IN THE PLANS ARE HORIZONTAL OR VERTICAL AND ARE GIVEN AT 68 DEGREES FAHRENHEIT, UNLESS NOTED OTHERWISE
- 3. ITEM 529.20, "PARTIAL REMOVAL OF STRUCTURE" WILL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS NEEDED TO COMPLETELY REMOVE THE EXISTING DECK DOWN TO THE TOP FLANGE OF THE EXISTING BEAMS TO INCLUDE BUT NOT LIMITED TO THE CURBS, BRIDGE RAILING, SHEAR STUDS (IF ANY), WOOD FORMS, APPROACH SLABS, CURTAIN WALLS, INTERMEDIATE DIAPHRAGMS, THE PAVEMENT AND WING WALLS TO THE LIMITS SHOWN ON THE PLANS.
- 4. THE CONTRACTOR SHALL MAINTAIN ALL SECTIONS OF THE HIGHWAY UNDER CONSTRUCTION SATISFACTORY TO THE ENGINEER TO ENSURE THE SAFETY OF THE TRAVELING PUBLIC. PAYMENT WILL BE UNDER CONTRACT ITEM 527.10 "MAINTENANCE OF STRUCTURES AND APPROACHES" WHICH WILL INCLUDE BUT NOT BE LIMITED TO PERFORMING THE WORK AND FOR FURNISHING ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY TO MAINTAIN ALL SUBSTRUCTURES, SUPERSTRUCTURES AND APPROACHES.

#### TRAFFIC CONTROL

- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN, SUBMITTAL, AND IMPLEMENTATION OF THE SITE-SPECIFIC TRAFFIC CONTROL PLAN FOR ALL STAGES OF CONSTRUCTION. THE SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL BE DESIGNED IN ACCORDANCE WITH SECTION 641.
- 6. THE CONTRACTOR'S SITE-SPECIFIC TRAFFIC CONTROL PLAN SHALL MEET THE SPECIFIED DIMENSIONS HEREIN. REFERENCE PHASE 1 LAYOUT, PHASE 2 LAYOUT, AND PHASING TYPICAL SECTIONS FOR ADDITIONAL DETAILS AND REQUIREMENTS.
- 7. ANY REMOVAL, COVERING AND/OR RESETTING OF EXISTING TRAFFIC SIGNS, AS DEEMED NECESSARY BY THE ENGINEER, WILL BE CONSIDERED INCIDENTAL TO ITEM 641.11 TRAFFIC CONTROL, ALL-INCLUSIVE.
- ANY TEMPORARY MEANS OF SUPPORTING EXCAVATION NECESSARY TO MAINTAIN TRAFFIC WILL BE INCLUDED IN THE PAYMENT OF ITEM 641.11 "TRAFFIC CONTROL, ALL-INCLUSIVE". CONSTRUCTION DRAWINGS SHALL BE REQUIRED AS PER SUBSECTION 105.03.
- ALL TEMPORARY TRAFFIC CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). FOR ADDITIONAL SIGNING INSTRUCTIONS SEE THE T SERIES OF THE STANDARDS. WHERE CONFLICTS EXIST, THE MUTCD SHALL GOVERN.
- 10. TEMPORARY TRAFFIC BARRIER SHALL MEET THE REQUIREMENTS OF SUBSECTION 621.07. PAYMENT FOR FURNISHING, MAINTAINING, INSTALLATION, REMOVAL, AND RESETTING WILL BE CONSIDERED INCIDENTAL TO ITEM 641.11 "TRAFFIC CONTROL, ALL-INCLUSIVE."

#### TEMPORARY TRAFFIC SIGNALS

- 11. TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM" AND IN COMPLIANCE WITH THE LATEST EDITION OF THE MUTCD.
- 12. SIGNAL FACES SHALL CONSIST OF 12 INCH LENSES (RED, YELLOW, AND GREEN) AND BE ILLUMINATED USING LIGHT EMITTING DIODES (LEDS).
- 13. LUMINAIRES SHALL BE INSTALLED AT EACH OF THE APPROACHES TO ADEQUATELY LIGHT THE STOP BAR AREAS. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM"
- 14. ALL TEMPORARY SIGNAL EQUIPMENT AND SIGNS SHALL BELONG TO THE CONTRACTOR AT THE END OF THE PROJECT AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR REMOVAL INCLUDING UTILITY POLES, WIRES, ETC. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".

- 15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING SIGNAL PHASING AND TIMING. THE CONTRACTOR SHALL SUBMIT A PHASING DIAGRAM AND TIMING SCHEDULE TO THE ENGINEER FOR APPROVAL. THE CONTRACTOR SHALL MAKE THE SIGNALS OPERATIONAL ONLY AFTER RECEIVING APPROVAL OF BOTH THE PHASING DIAGRAM AND TIMING SCHEDULE BY THE ENGINEER. DEVELOPMENT OF THE PHASING DIAGRAM AND TIMING SCHEDULE WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM". ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING REQUESTED BY THE ENGINEER SHALL BE COMPLETED WITHIN 48 HOURS OF THE REQUEST. PAYMENT FOR ADDITIONAL ADJUSTMENTS TO SIGNAL TIMING OR PHASING WILL BE CONSIDERED INCIDENTAL TO ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM".
- 16. THE SUBMITTAL FOR ITEM 678.40 "TEMPORARY TRAFFIC SIGNAL SYSTEM" SHALL BE IN CONJUNCTION WITH THE SUBMITTAL FOR ITEM 641.11 "TRAFFIC CONTROL, ALL-INCLUSIVE" AND SHALL INCLUDE AS A MINIMUM, THE SIGNAL LOCATION, TIMING, AND PHASING PLAN, VEHICLE DETECTION SYSTEM, AND EMERGENCY VEHICLE PREEMPTION SYSTEM.

#### **EPSC**

- 17. THIS PROJECT WILL UTILIZE THE VT DEC LOW RISK SITE HANDBOOK FOR EPSC DATED 2020. NO SITE-SPECIFIC EPSC PLAN IS INCLUDED. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A SITE-SPECIFIC EPSC PLAN, IN ACCORDANCE WITH SECTION 653 OF THE STANDARD SPECIFICATIONS, FOR CONSTRUCTION. ESTIMATED QUANTITIES FOR EPSC WORK HAVE BEEN INCLUDED IN THE CONTRACT FOR BIDDING PURPOSES. IF THE CONTRACTOR'S EPSC PLAN REQUIRES ITEMS OF WORK THAT ARE NOT INCLUDED IN THE PLANS, IT SHALL BE PAID FOR AS PART OF ITEM 653.03 "MAINTENANCE OF EPSC PLAN".
- 18. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT SILTATION AND POLLUTION AS PER SECTION 105, WITH SPECIAL CONSIDERATION GIVEN TO THE PROTECTION OF THE BLACK RIVER FROM THE DISCHARGE OF RAW CONCRETE. THE CONTRACTOR WILL PERFORM THIS WORK TO THE SATISFACTION OF THE ENGINEER. PAYMENT WILL BE CONSIDERED INCIDENTAL TO ITEM 653.01 "EPSC PLAN."
- 19. THE EPSC EXISTING SITE PLAN SHEET HAS BEEN INCLUDED FOR THE CONTRACTOR TO USE FOR SUBMITTALS. THE TOTAL AREA OF DISTURBANCE IS 0.19 ACRES.

#### STRUCTURAL STEEL

- 20. THE EXISTING STRUCTURAL STEEL IS PAINTED WITH A MATERIAL THAT MAY CONTAIN LEAD. THE CONTRACTOR SHALL FOLLOW ALL APPLICABLE REGULATIONS WHEN HANDLING AND WORKING WITH THIS STEEL, AND WHEN HANDLING ANY PAINT REMOVED INTENTIONALLY OR NOT. ANY REMOVED STRUCTURAL STEEL OR PAINT IS THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR SHALL INDEMNIFY AND HOLD THE STATE, IT'S OFFICERS AND EMPLOYEES HARMLESS CONCERNING THE CONTRACTOR'S USE OR DISPOSITION OF THE REMOVED STRUCTURAL STEEL OR PAINT.
- 21. IMMEDIATELY AFTER THE EXISTING CONCRETE DECK AND SHEAR STUDS (IF ANY) HAVE BEEN REMOVED, THE CONTRACTOR SHALL TAKE ELEVATIONS ALONG THE TOP OF THE BEAMS, AT 5'-0" INTERVALS. THE ELEVATIONS SHALL THEN BE SENT TO THE PROJECT MANAGER FOR USE IN DETERMINING THE HAUNCH DEPTHS. THE CONTRACTOR SHOULD EXPECT 4 WORKING DAYS FOR VTRANS TO PREPARE THE HAUNCH DEPTH CALCULATIONS.
- 22. FLEMING BRACKETS OR SIMILAR FALSEWORK SHALL BE SPACED AS REQUIRED BY DESIGN BUT SHALL BE LIMITED TO A MAXIMUM SPACING OF 4 FEET. THE DESIGN OF FALSEWORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND FLEMING / OVERHANG BRACKET SHALL EXTEND AT LEAST 75% OF THE WEB DEPTH.
- 23. THE LOCATION OF THE SHEAR CONNECTORS AND DIAPHRAGMS SHALL BE MARKED OUT BEFORE SURFACE PREPARATION BEGINS. THE CONTACT AREAS SHALL BE CLEANED TO AN EXTENT 1 INCH BEYOND THE BORDER OF EACH OF THE CONNECTED PARTS IN ACCORDANCE WITH ITEM 900.645 "SPECIAL PROVISION (REMOVAL, CONTAINMENT, AND DISPOSAL OF LEAD PAINT) (TYPE II)". THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY LEAD ABATEMENT PERMITS. PAYMENT FOR THIS WORK SHALL BE MADE UNDER ITEM 900.645 "SPECIAL PROVISION (REMOVAL, CONTAINMENT, AND DISPOSAL OF LEAD PAINT) (TYPE II)".
- 24. THE NEW SHEAR CONNECTORS SHALL BE SPACED AS PER PLANS. PAYMENT FOR THE NEW CONNECTORS WILL BE MADE UNDER ITEM 508.15, "SHEAR CONNECTORS (1044-7/8" X 7")".

#### CONCRETE

- 25. THE DECK, CURTAIN WALLS AND CURB CONCRETE SHALL BE SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD) AND SHALL BE PAID FOR UNDER ITEM 900.608, "PERFORMANCE-BASED CONCRETE, CLASS PCD".
- 26. THE APPROACH SLAB SHALL BE SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS) AND SHALL BE PAID FOR UNDER ITEM 900.608, "PERFORMANCE-BASED CONCRETE. CLASS PCS".
- 27. EACH PHASE OF THE DECK IS TO BE POURED IN ONE CONTINUOUS POUR WITH A MAXIMUM DURATION OF EIGHT HOURS. IF CIRCUMSTANCES BEYOND THE CONTRACTOR'S CONTROL PREVENT THIS FROM BEING ACCOMPLISHED, A TRANSVERSE CONSTRUCTION JOINT SHALL BE USED BETWEEN ADJACENT POURS. A MINIMUM 96 HOUR DELAY BETWEEN ADJACENT POURS SHALL BE OBSERVED.
- 28. SILANE WATER REPELLENT SHALL BE APPLIED IN ACCORDANCE WITH SECTION 514, TO ALL EXPOSED CONCRETE ON THE BRIDGE SUPERSTRUCTURE INCLUDING THE DECK, FASCIAS, AND EXISTING SUBSTRUCTURE, WITH THE EXCEPTION OF THE BOTTOM OF THE DECK BETWEEN DRIP NOTCHES AND SHALL BE PAID FOR UNDER ITEM 514.10 "WATER REPELLENT. SILANE".
- 29. WATERPROOFING MEMBRANE SHALL BE TORCH APPLIED IN ACCORDANCE TO SECTION 519, TO THE BRIDGE DECK AFTER THE ENTIRE DECK IS COMPLETE AND PAID FOR UNDER ITEM 519.20 "SHEET MEMBRANE WATERPROOFING, TORCH APPLIED". EXTEND MEMBRANE 3 INCHES UP THE CONCRETE RAIL BASE AND ONTO THE APPROACH SLAB 2 FEET BEYOND BEGIN BRIDGE AND END BRIDGE.
- 30. "REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I AND CLASS II" ARE INCLUDED TO BE USED AT THE DISCRETION OF THE ENGINEER.
- 31. CORK BETWEEN THE ABUTMENT CHEEK WALL AND DECK FASCIA SHALL BE INCLUDED IN THE ADJACENT CONCRETE ITEM.
- 32. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1 INCH X 1 INCH.
- 33. ALL REINFORCING SHALL BE LEVEL II, IN ACCORDANCE WITH SECTION 507, AND PAID FOR UNDER ITEM 507.12, "REINFORCING STEEL, LEVEL II".
- 34. REINFORCING STEEL PLACEMENT TOLERANCES SHALL BE:

SPACING: +/- 1 INCH CLEARANCE: +/- 1/4 INCH

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

# **QUANTITY SHEET 1**

		1051 -	4044 55:55	4000 5::::					$\top$
	1011 - ROADWAY	EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - FULL C.E. ITEMS	GRAND TOTAL FINAL	UNIT	ITEMS	ITEM NUMBER	
	1				1	LS	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	201.10	
	590				590	CY	COMMON EXCAVATION	203.15	_
	1				1	CY	TRENCH EXCAVATION OF EARTH, EXPLORATORY (N.A.B.I.)	204.22	
	330				330	SY	COARSE-MILLING, BITUMINOUS PAVEMENT	210.10	
	520				520	CY	SUBBASE OF DENSE GRADED CRUSHED STONE	301.35	
	45				45	CY	AGGREGATE SURFACE COURSE	401.10	
	12				12	CWT	EMULSIFIED ASPHALT	404.65	
	10				10	SY	HAND-PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES	406.38	
	1				1	LU	PRICE ADJUSTMENT, ASPHALT CEMENT (N.A.B.I.)	406.50	
			25652		25652	LB	REINFORCING STEEL, LEVEL II	507.12	
			36		36	LF	DRILLING AND GROUTING DOWELS	507.16	
			1		1	LS	SHEAR CONNECTORS (1044 - 7/8" X 7")	508.15	
			10		10	GAL	WATER REPELLENT, SILANE	514.10	
			80		80	LF	BRIDGE EXPANSION JOINT, ASPHALTIC PLUG	516.10	
			357		357	SY	SHEET MEMBRANE WATERPROOFING, TORCH APPLIED	519.20	
			33		33	LF	JOINT SEALER, HOT POURED	524.11	
			178		178	LF	BRIDGE RAILING, GALVANIZED 3 RAIL BOX BEAM	525.335	
	1				1	LS	MAINTENANCE OF STRUCTURES AND APPROACHES	527.10	_
			1		1	EACH	PARTIAL REMOVAL OF STRUCTURE	529.20	
			5		5	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS I	580.13	
			5		5	SY	REPAIR OF CONCRETE SUBSTRUCTURE SURFACE, CLASS II	580.14	
	10				10	HR	ALL PURPOSE EXCAVATOR RENTAL, TYPE I	608.25	_
	255				255	LF	HD STEEL BEAM GUARDRAIL, GALVANIZED	621.21	_
	255				255				_
					1	EACH	MANUFACTURED TERMINAL SECTION, TANGENT	621.51	
	3				3	EACH	ANCHOR FOR STEEL BEAM RAIL	621.60	
	218				218	LF	REMOVAL AND DISPOSAL OF GUARDRAIL	621.80	
	100				100	HR	UNIFORMED TRAFFIC OFFICERS	630.10	
	800				800		FLAGGERS	630.15	
				1	1	LS	FIELD OFFICE, ENGINEERS	631.10	
				1	1	LS	TESTING EQUIPMENT, CONCRETE	631.16	
				1	1	LS	TESTING EQUIPMENT, BITUMINOUS	631.17	
				1	1	LS	TESTING EQUIPMENT, GROUT	631.19	
				3000	3000	DL	FIELD OFFICE COMMUNICATIONS (N.A.B.I.)	631.26	
	5				5	EACH	CPM SCHEDULE	633.10	
	1				1	LS	MOBILIZATION/DEMOBILIZATION	635.11	_
	1				1	LS	TRAFFIC CONTROL, ALL-INCLUSIVE	641.11	+
	2				2	EACH	PORTABLE CHANGEABLE MESSAGE SIGN	641.15	_
	700				700	LF	4 INCH WHITE LINE, WATERBORNE PAINT	646.201	_
	700				700	LF	4 INCH YELLOW LINE, WATERBORNE PAINT	646.2111	_
	790				790	SY	GEOTEXTILE FOR ROADBED SEPARATOR	649.11	+

OLIA NITIT = -		
QUANTITIES	UNIT	ITEMS
		EARTHWORKS SUMMARY
		FILL AVAILABLE
590	CY	EARTH EXCAVATION (590x1.0)
	CY	CHANNEL EXCAVATION (5x0.3)
	CY	STRUCTURE/ COFFERDAM EXCAVATION (0x0.3)
0	CY	ROUND
590	CY	FILL AVAILABLE
		ELL DEOLIDED
0	CY	FILL REQUIRED FACTORED FILL (0x1.15)
	CY	ROUND
0	CY	FILL REQUIRED
590	CV	TOTAL WASTE MATERIAL
590	CT	TOTAL WASTE MATERIAL
		SUPERPAVE BITUMINOUS CONCRETE PAVEMENT
00	TONO	TVDE IIS DASE COURSE
		TYPE IIS - BASE COURSE TYPE IVB - WEARING COURSE
	TONS	TYPE IVB - WEARING COURSE
100	IOINO	THE IVE - WEAKING COUNCE
300	TONS	TOTAL
	_	
		N.A.B.I. = NOT A BID ITEM

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: s18b007QS.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: K. LIHIC
QUANTITY SHEET I

PLOT DATE: 12/12/2022
DRAWN BY: K. LIHIC
CHECKED BY: F. BARROWS
SHEET 5 OF 29

# **QUANTITY SHEET 2**

s	UMMARY OF ESTIMATED QUANTITIES			TOTALS	DESCRIPTIONS				DETAILED SUMMARY OF QUANTITIES
	1011 - ROADWAY	1051 - EROSION CONTROL	1211 - BRIDGE NO. 1	1999 - FULL GRAND TOTAL FINAL	UNIT	ITEM NUMBER	ROUND	QUANTITIES UNIT	ITEMS
		10		10	LB SEED	651.15			N.A.B.I. = NOT A BID ITEM
		25		25	LB FERTILIZER	651.18			
		0.25		0.25	TON AGRICULTURAL LIMESTONE	651.20			
		10		10	CY TOPSOIL	651.35			
		1		1	LS EPSC PLAN	653.01			
		40		40	HR MONITORING EPSC PLAN	653.02			
		1		1	LU MAINTENANCE OF EPSC PLAN (N.A.B.I.)	653.03			
		0.25		0.25	TON HAY MULCH	653.10			
		30		30	CY STABILIZED CONSTRUCTION ENTRANCE	653.35			
		550		550	LF SILT FENCE, TYPE I	653.475			
		525		525	LF BARRIER FENCE	653.50			
	1.26			1.26	SF TRAFFIC SIGN, TYPE A	675.20			
	20			20	LF SQUARE TUBE SIGN POST AND ANCHOR	675.341			
	3			3	EACH REMOVING SIGNS	675.50			
	4			4	EACH DELINEATOR WITH STEEL POST	676.10			
	1			1	EACH TEMPORARY TRAFFIC SIGNAL SYSTEM	678.40			
			110	110	CY SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCD)	900.608			
			44	44	CY SPECIAL PROVISION (PERFORMANCE-BASED CONCRETE, CLASS PCS)	900.608			
	4			4	EACH SPECIAL PROVISION (GUARDRAIL THRIE BEAM APPROACH SECTION, GALVANIZED 3 RAIL BOX BEAM)	900.620			
			1	1	LS SPECIAL PROVISION (REMOVAL, CONTAINMENT, AND DISPOSAL OF LEAD PAINT)	900.645			
					(TYPE II)				
				1	LU SPECIAL PROVISION (MAT DENSITY PAY ADJUSTMENT, SMALL QUANTITY)(N.A.B.I.)	900.650			
	1			1	LU SPECIAL PROVISION (MIXTURE PAY ADJUSTMENT)(N.A.B.I.)	900.650			
	300			300	TON SPECIAL PROVISION (BITUMINOUS CONCRETE PAVEMENT, SMALL QUANTITY)	900.680			
								NIFOT NIANE	PLYMOLITH

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sI8b007QS.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: K. LIHIC
QUANTITY SHEET 2

PLOT DATE: 12/12/2022
DRAWN BY: K.LIHIC
CHECKED BY: F.BARROWS
SHEET 6 OF 29

#### GENERAL INFORMATION

#### SYMBOLOGY LEGEND NOTE

THE SYMBOLOGY ON THIS SHEET IS INTENDED TO COVER STANDARD CONVENTIONAL SYMBOLOGY. THE SYMBOLOGY IS USED FOR EXISTING & PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROJECT ANNOTATION, AS NOTED ON PROJECT PLAN SHEETS. THIS LEGEND SHEET COVERS THE BASICS. SYMBOLOGY ON PLANS MAY VARY, PLAN ANNOTATIONS AND NOTES SHOULD BE USED TO CLARIFY AS NEEDED.

#### D O W ADDDEVIATIONS (CODES) & SYMPOIS

R. O. W.	ABBREV	'IATIONS (CODES) & SYMBOLS
POINT	CODE	DESCRIPTION
	BF CH CONST CUL D&C DIT DR DRIVE EC HWY I&M LAND PDF R&RES R&REP	BARRIER FENCE CHANNEL EASEMENT CONSTRUCTION EASEMENT CULVERT EASEMENT DISCONNECT & CONNECT DITCH EASEMENT DRAINAGE EASEMENT DRAINAGE EASEMENT EROSION CONTROL HIGHWAY EASEMENT INSTALL & MAINTAIN EASEMENT LANDSCAPE EASEMENT PROJECT DEMARCATION FENCE REMOVE & RESET REMOVE & REPLACE RIGHT, TITLE, AND INTEREST SLOPE RIGHT UTILITY EASEMENT
■ ◎ • ⊠ O [LENG	BNDNS BNDNS IPNF IPNS CALC PROW	BOUND SET BOUND TO BE SET IRON PIN FOUND IRON PIN TO BE SET EXISTING ROW POINT PROPOSED ROW POINT LENGTH CARRIED ON NEXT SHEET

#### COMMON TOPOGRAPHIC POINT SYMBOLS

TNIC	CODE	DESCRIPTION
<b>(:)</b>	APL	BOUND APPARENT LOCATION
0	BM	BENCHMARK
•	BND	BOUND
	СВ	CATCH BASIN
ф	COMB	COMBINATION POLE
	DITHR	DROP INLET THROATED DNC
<del>,</del>	EL	ELECTRIC POWER POLE
0	FPOLE	FLAGPOLE
$\odot$	GASFIL	GAS FILLER
$\odot$	GP	GUIDE POST
×	GSO	GAS SHUT OFF
0	GUY	GUY POLE
0	GUYW	GUY WIRE
M	GV	GATE VALVE
<b>(B)</b>	Н	TREE HARDWOOD
Δ	HCTRL	CONTROL HORIZONTAL
	HVCTRL	CONTROL HORIZ. & VERTICAL
$\Diamond$	HYD	HYDRANT
0	IP	IRON PIN
<b>©</b>	IPIPE	IRON PIPE
ф	LI	LIGHT - STREET OR YARD
5	MB	MAILBOX
0	MH	MANHOLE (MH)
•	MM	MILE MARKER
Θ	PM	PARKING METER
•	PMK	PROJECT MARKER
<b>⊙</b>	POST	POST STONE/WOOD
Ö	RRSIG	RAILROAD SIGNAL
<del>•</del>	RRSL	RAILROAD SWITCH LEVER
	S	TREE SOFTWOOD
⊙	SAT	SATELLITE DISH
	SHRUB	SHRUB
$\overline{\circ}$	SIGN	SIGN
A	STUMP	STUMP
-⊙-	TEL	TELEPHONE POLE
0	TIE	TIE
0 · 0	TSIGN	SIGN W/DOUBLE POST
$\downarrow$	VCTRL	CONTROL VERTICAL
0	WELL	WELL
M	WSO	WATER SHUT OFF

THESE ARE COMMON VAOT SURVEY POINT SYMBOLS FOR EXISTING FEATURES, ALSO USED FOR PROPOSED FEATURES WITH HEAVIER LINEWEIGHT, IN COMBINATION WITH PROPOSED ANNOTATION.

#### PROPOSED GEOMETRY CODES

1 1/01 03	CD GLOWLINI CODES
CODE	DESCRIPTION
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PCC	POINT OF COMPOUND CURVE
PRC	POINT OF REVERSE CURVE
POB	POINT OF BEGINNING
POE	POINT OF ENDING
STA	STATION PREFIX
ΑН	AHEAD STATION SUFFIX
ВК	BACK STATION SUFFIX
D	CURVE DEGREE OF (IOOFT)
R	CURVE RADIUS OF
T	CURVE TANGENT LENGTH
L	CURVE LENGTH OF
E	CURVE EXTERNAL DISTANCE
СВ	CHORD BEARING

UNDERGROUND L	JTILITIES
	UTILITY (GENERIC-UNKNOWN)
— <i>UT</i> — · · · —	TELEPHONE
— UE — · · —	ELECTRIC
— <i>UTV</i> — —	CABLE (TV)
	——— ELECTRIC+CABLE
	ELECTRIC+TELEPHONE
	CABLE+TELEPHONE
	ELECTRIC+CABLE+TELEPHONE
— G — · · –	GAS LINE
— W — · · -	WATER LINE
	SANITARY SEWER (SEPTIC)
ABOVE GROUND	UTILITIES (AERIAL)
— т — · · -	- · · - TELEPHONE
— E — · · -	ELECTRIC
	CABLE (TV)
	ELECTRIC+CABLE
	ELECTRIC+TELEPHONE
— AER E&T — -	
-	CABLE+TELEPHONE
	ELECTRIC+CABLE+TELEPHONE
	UTILITY POLE GUY WIRE
PROJECT CONSI	TRUCTION SYMBOLOGY
	GN & LAYOUT SYMBOLOGY
	— CLEAR ZONE
	CLEAR ZONE PLAN LAYOUT MATCHLINE
	TEAN EATOOT WATCHEINE
PROJECT CONST	TRUCTION FEATURES
PROJECT CONST	TRUCTION FEATURES
PROJECT CONST	▲ TOP OF CUT SLOPE
<u> </u>	→ TOP OF CUT SLOPE → TOE OF FILL SLOPE
<u>A</u> <u>A</u> <u>A</u>	→ TOP OF CUT SLOPE → TOE OF FILL SLOPE
<u>A</u> <u>A</u> <u>A</u> <u>O</u> O	TOP OF CUT SLOPE  TOE OF FILL SLOPE  STONE FILL  BOTTOM OF DITCH &  CULVERT PROPOSED
Δ Δ Δ Θ Θ Θ	TOP OF CUT SLOPE  TOE OF FILL SLOPE  STONE FILL  BOTTOM OF DITCH &  CULVERT PROPOSED  STRUCTURE SUBSURFACE

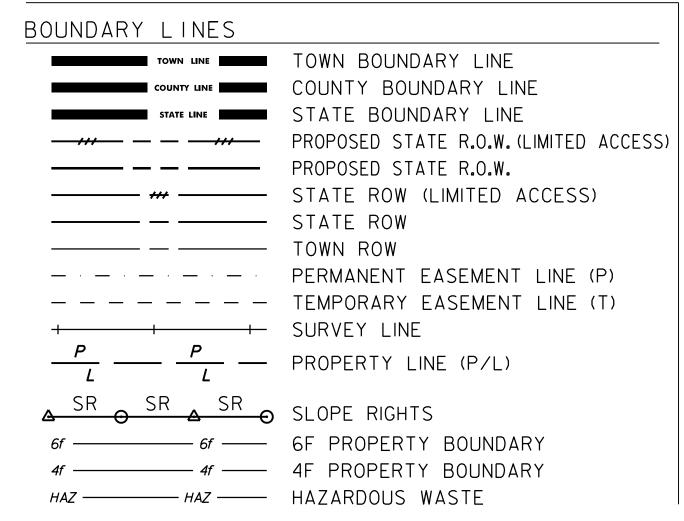
#### CONVENTIONAL BOUNDARY SYMBOLOGY

SHEET PILES

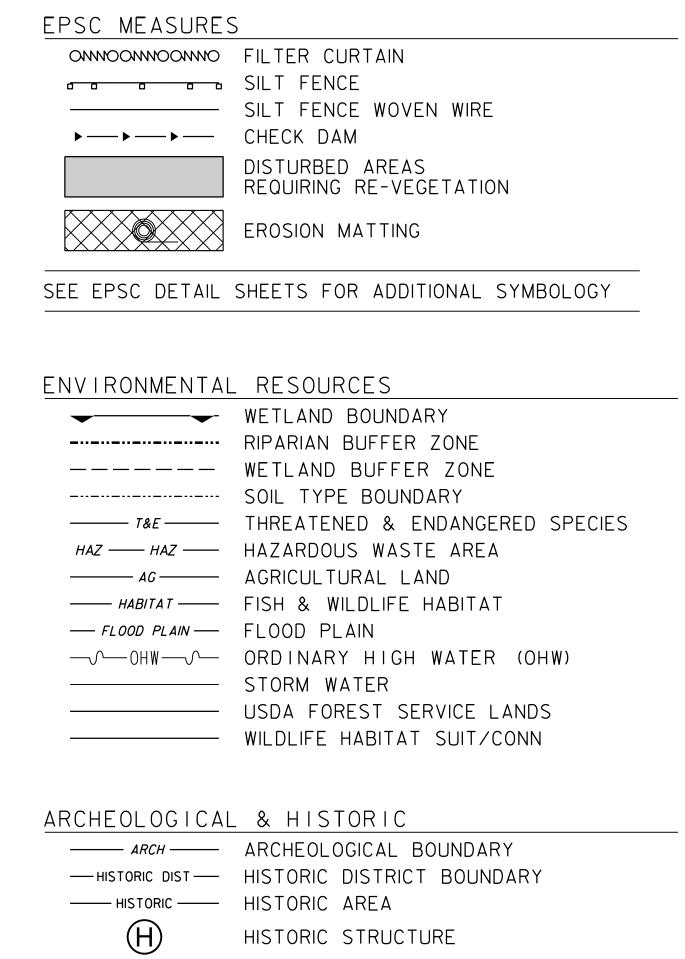
BARRIER FENCE

////////////// STRIPING LINE REMOVAL

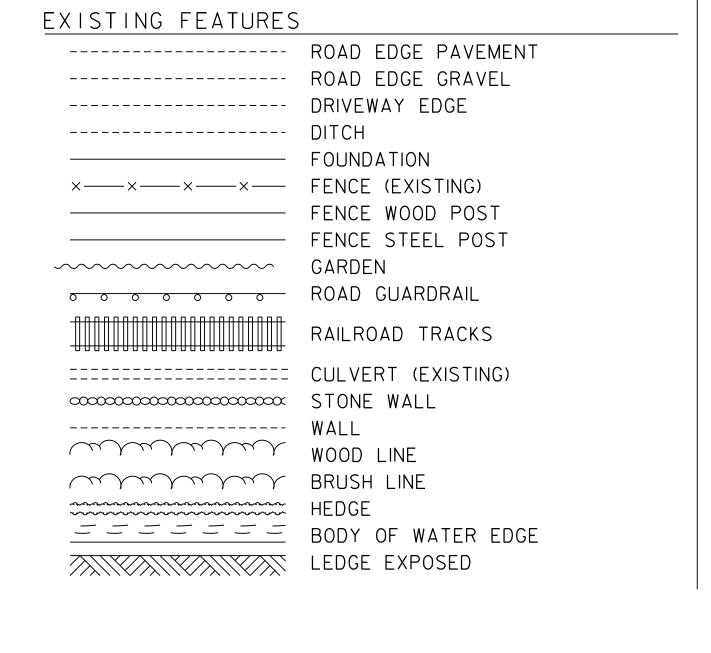
TREE PROTECTION ZONE (TPZ)



#### EPSC LAYOUT PLAN SYMBOLOGY



#### CONVENTIONAL TOPOGRAPHIC SYMBOLOGY



PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: si8b007legend.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: F. BARROWS
CONVENTIONAL SYMBOLOGY LEGEND

PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 7 OF 29

 $\bigcirc$  $\bigcirc$  $\triangleleft$ 

HVCTRL #1

NORTH = 370104.4570 EAST = 1578936.5990

ELEV. = 1183.7900

TO REACH FROM THE INTERSECTION OF ROUTES 100 AND 100A IN PLYMOUTH, GO SOUTH ALONG ROUTE 100 FOR 1.1 MI (1.8 KM) TO THE SITE OF THE MARK ON THE RIGHT AT A DRIVE LEADING TO A CAMP.

THE MARK IS A 3/4 INCH (19 MM) REBAR WITH RED PLASTIC CAP SET 2 INCHES (5 CM) BELOW GROUND SURFACE.

IT IS 29.0 FT (8.8 M) WEST OF AND ABOUT I FT (0.3 M) LOWER THAN THE CENTERLINE OF ROUTE 100, 62.0 FT (18.9 M) WEST-NORTHWEST OF AND ACROSS THE ROAD FROM POLE NUMBER 14/40ÓIF, 47.0 FT (14.3 M) EAST OF A 12 INCH (30 CM) HEMLOCK AND ABOUT 135 FT (41.1 M) SOUTH-SOUTHWEST OF THE SOUTHWEST CORNER OF THE WING WALL FOR BRIDGE 108.

HVCTRL #2

NORTH = 368203.7550 EAST = 1580138.8870 ELEV. = 1155.2900

TO REACH FROM THE INTERSECTION OF ROUTES 100 AND 100A IN PLYMOUTH, GO SOUTH ALONG ROUTE 100 FOR 1.6 MI (2.6 KM) TO THE SITE OF THE MARK ON THE RIGHT JUST PAST BRIDGE 107 AND ACROSS FROM A WOODS ROAD.

THE MARK IS A 3/4 INCH (19 MM) REBAR WITH RED PLASTIC CAP SET 2 INCHES (5 CM) BELOW GROUND SURFACE.

IT IS 23.0 FT (7.0 M) WEST-SOUTHWEST OF AND ABOUT I FT (0.3 M) LOWER THAN THE CENTERLINE OF ROUTE 100, 25.5 FT (7.8 M) SOUTH-SOUTHEAST OF POLE NUMBER 242/34, 28.8 FT (8.8 M) EAST-NORTHEAST OF 3 SMALL DEAD ELM TREES AND 7.0 FT (2. I M) SOUTH OF THE END OF A STEEL GUARD RAIL.

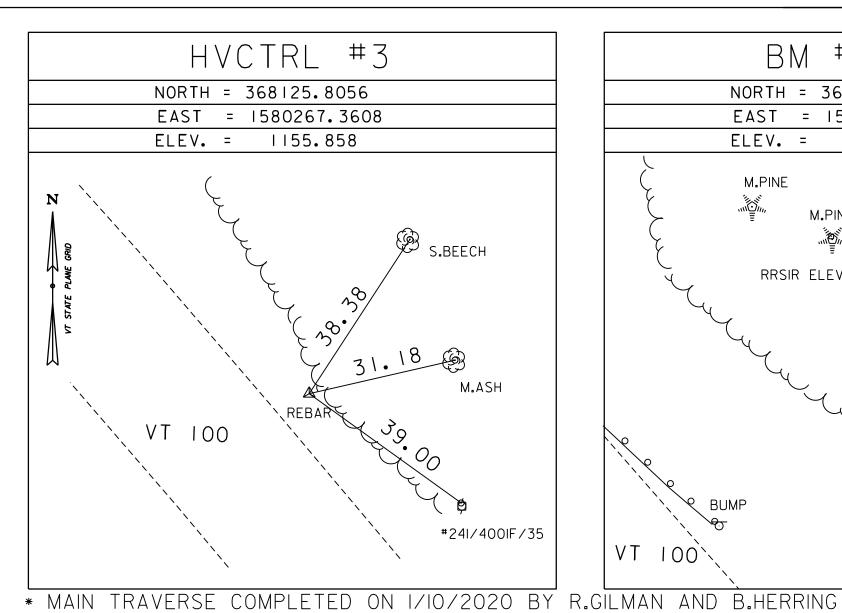
 $\bigcirc$  $\triangleleft$  $\bigcirc$  $\bigcirc$ Ш

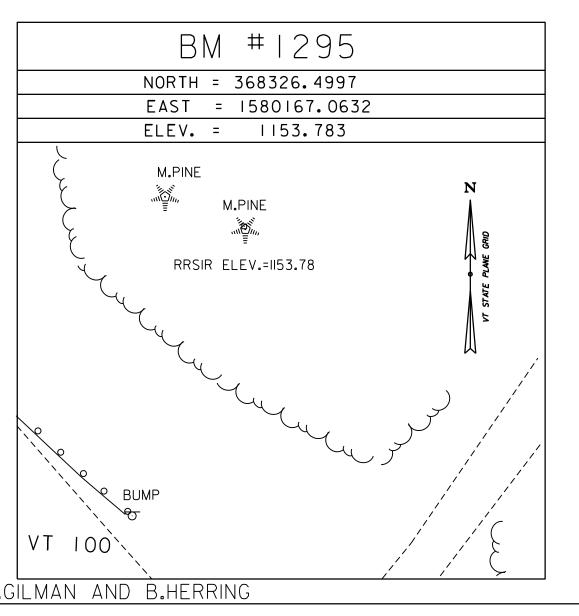
 $\bigcirc$ 

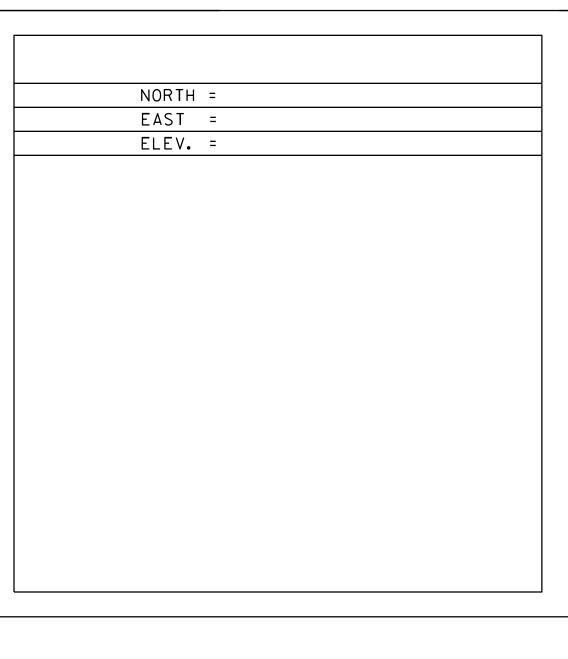
Z

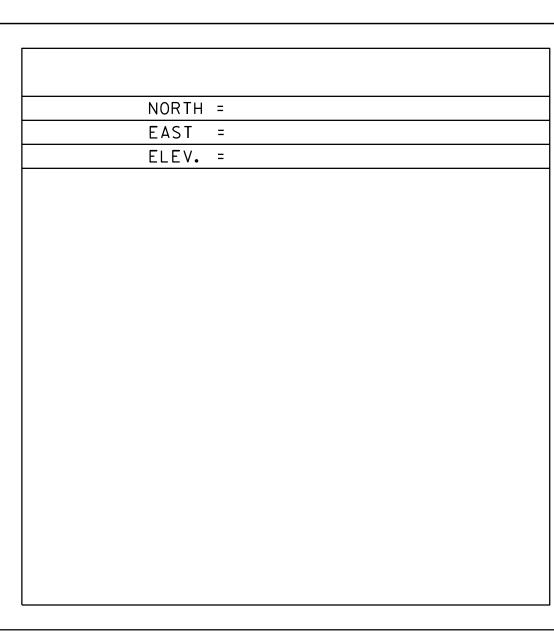
GNME

 $\triangleleft$ 









NORTH	=	
EAST	=	
ELEV.	=	

VT ROUTE 100

STATION NORTHING EASTING POB 19765.802 368110.646 1580251.344 POE 20315.802 368523.395 1579887.836

DATUM

HORIZONTAL

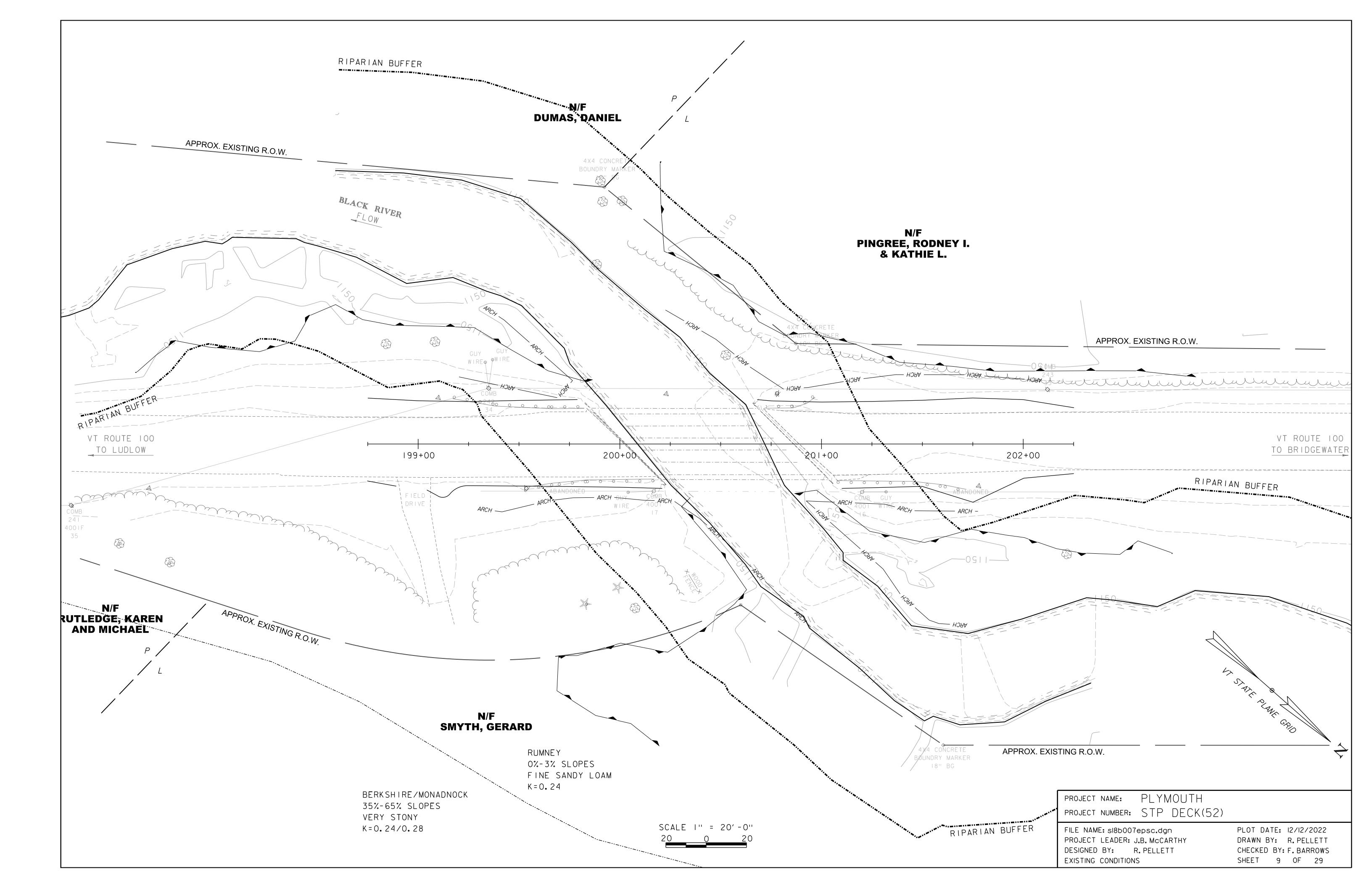
VERTICAL NAVD 88 NAD83 (2011)

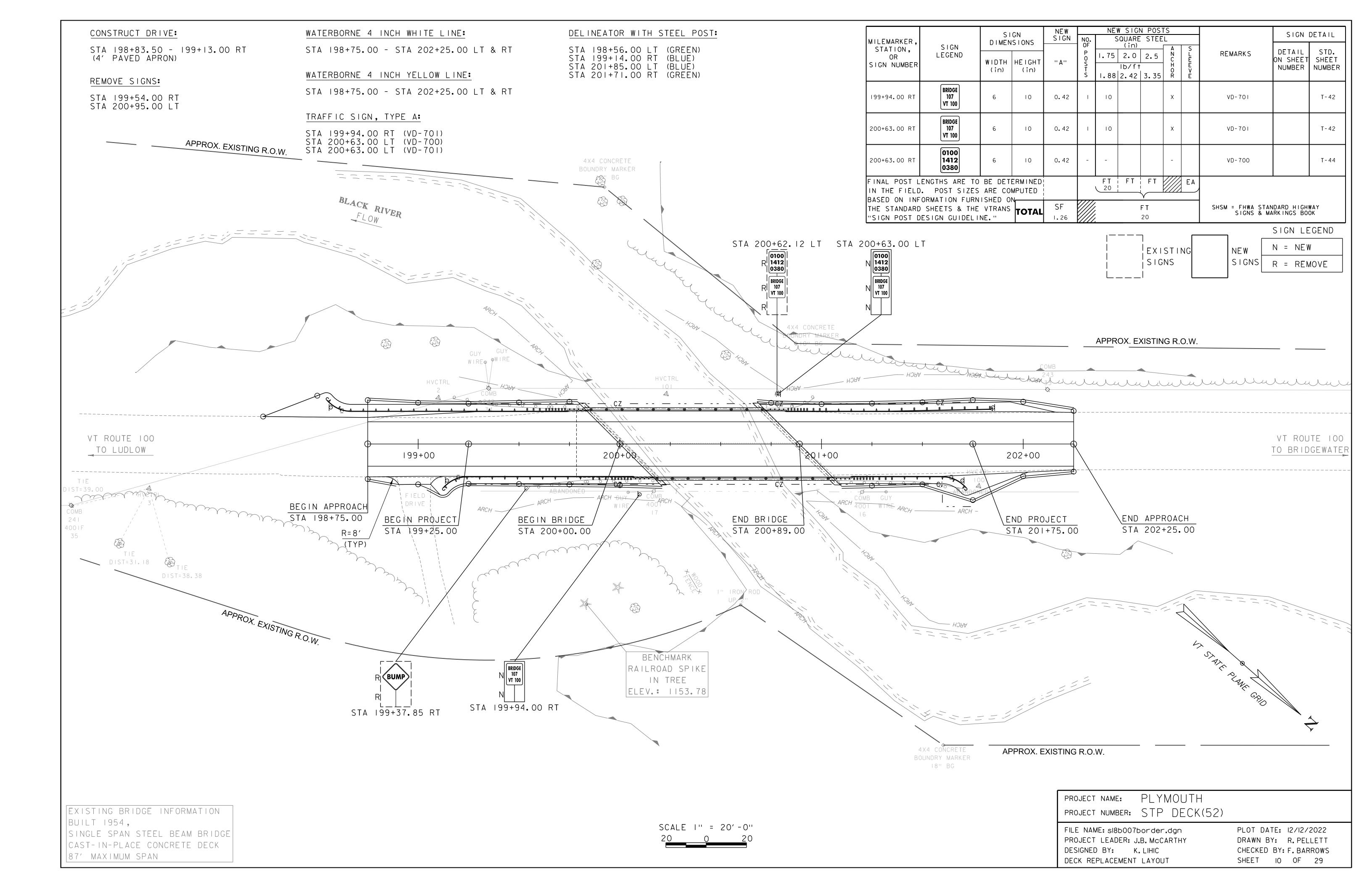
ADJUSTMENT \_\_\_\_COMPASS

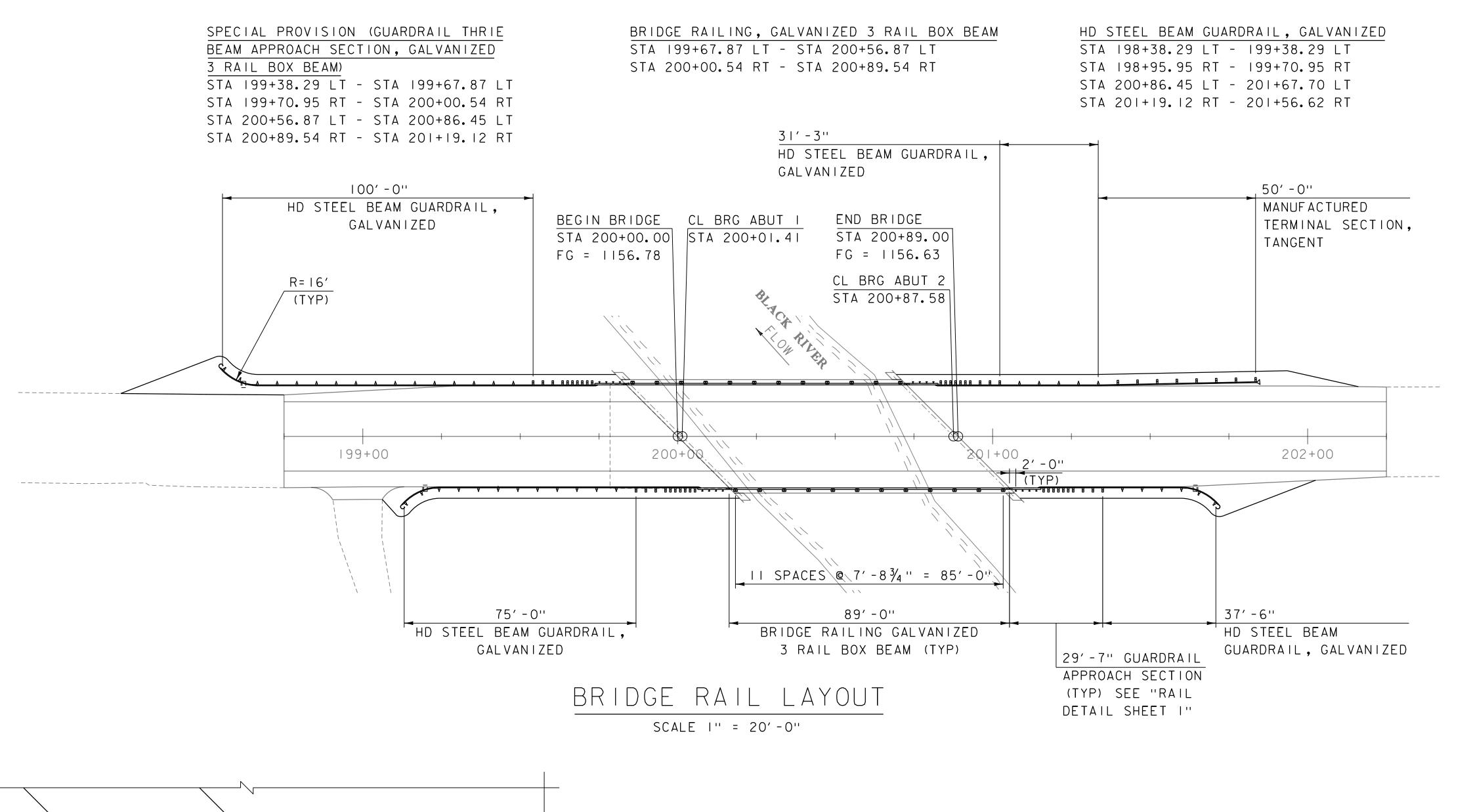
PROJECT NAME: PLYMOUTH PROJECT NUMBER: STP DECK(52)

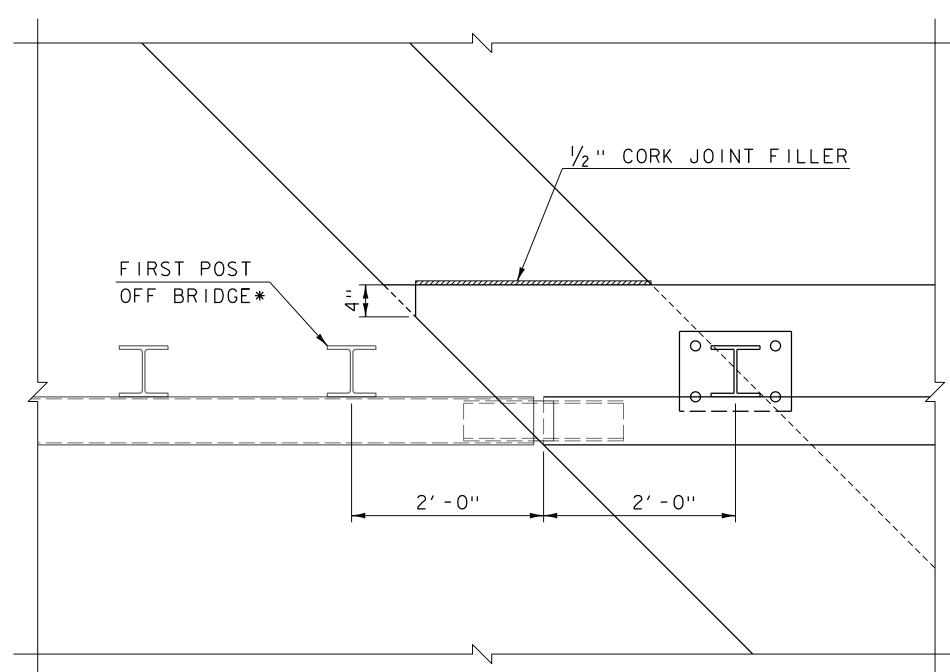
FILE NAME: sl8b007tie.dgn PROJECT LEADER: J.B. McCARTHY DESIGNED BY: VTRANS TIE SHEET

PLOT DATE: 13-DEC-2022 DRAWN BY: B. HERRING CHECKED BY: H. McGOWAN SHEET 8 OF 29









ACUTE CORNER BRIDGE END

SCALE I" = 2'-0"

\*TAKE CAUTION TO AVOID POST CONTACTING BACK OF BATTERED ABUTMENT

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sl8b007rail.dgn
PROJECT LEADER: J.B. MCCARTHY
DESIGNED BY: F. BARROWS
RAIL LAYOUT

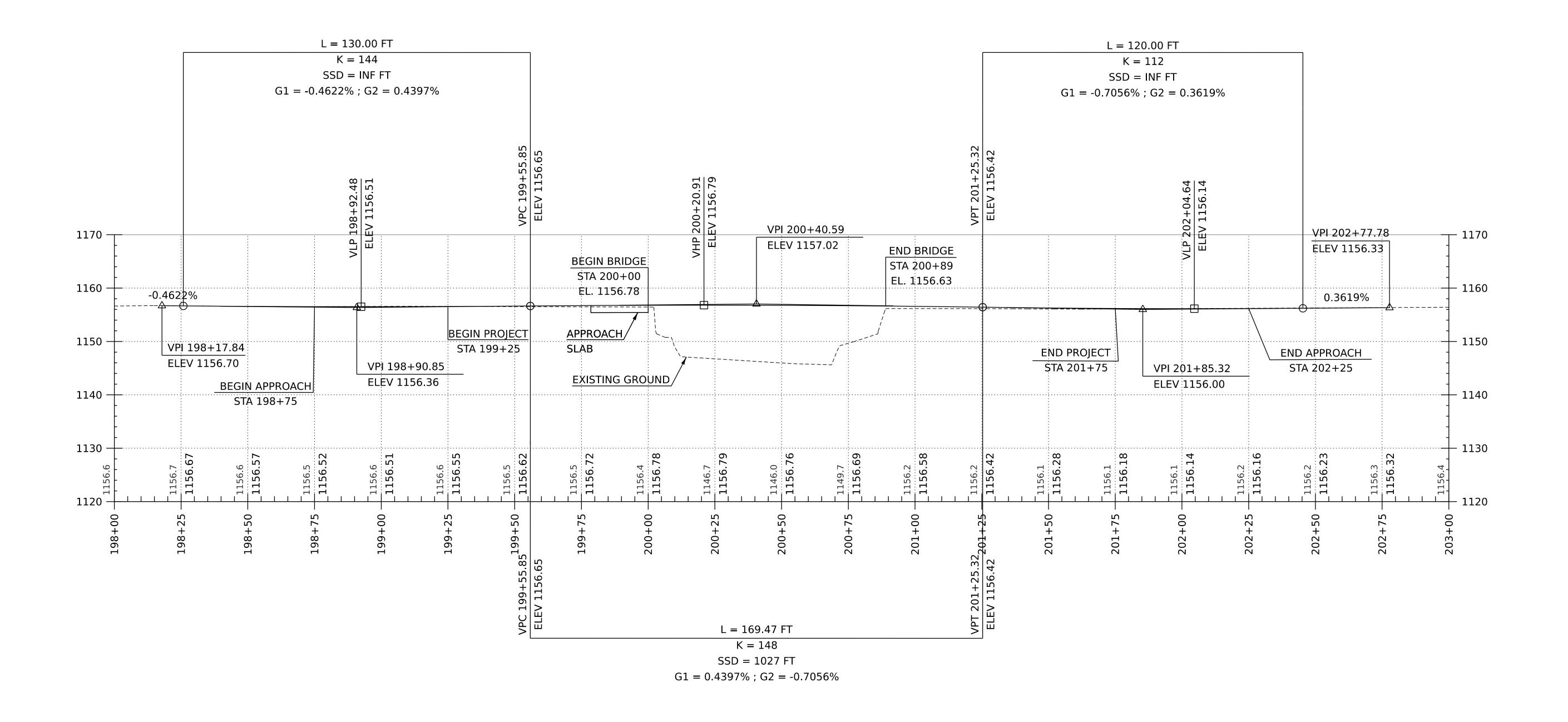
PLOT DATE: 12/12/2022

DRAWN BY: R. PELLETT

CHECKED BY: F. BARROWS

SHEET II OF 29

4 STATE PLANE CAID



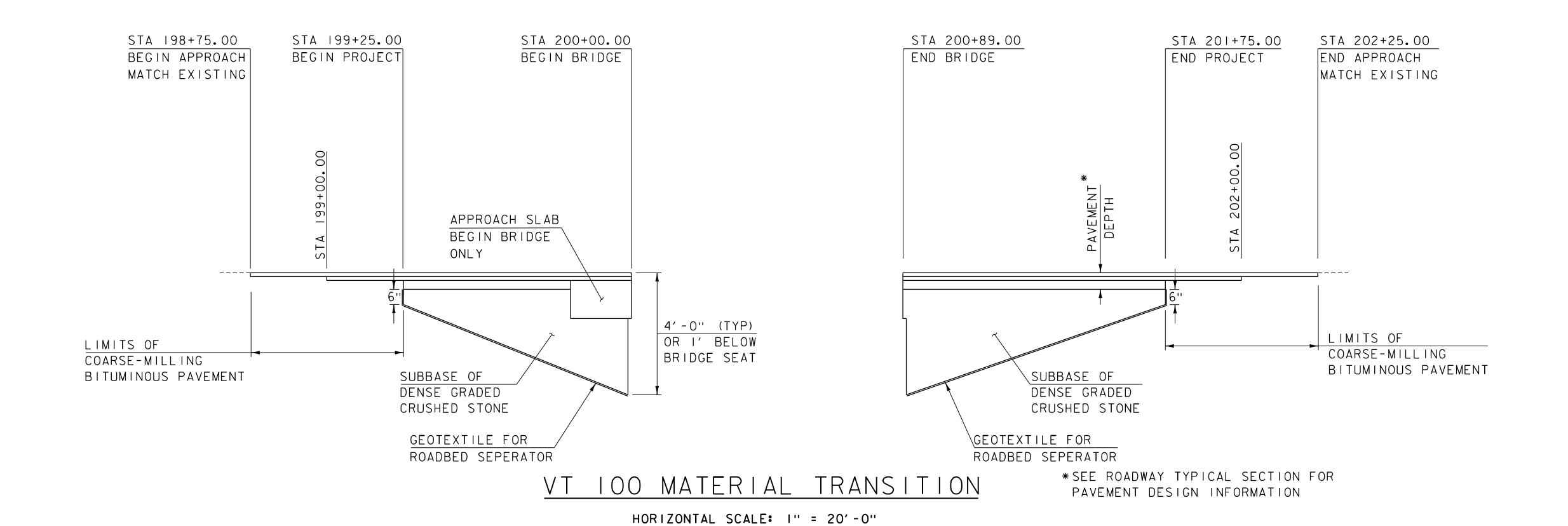
## VT 100 PROFILE

HORIZONTAL SCALE 1" = 20'.0" VERTICAL SCALE 1" = 10'.0"

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: s18b007Pro.dgn
PROJECT LEADER: J.B.MCCARTHY
DESIGNED BY: K.LIHIC
VT ROUTE 100 PROFILE

PLOT DATE: 13-DEC-2022 DRAWN BY: K.LIHIC CHECKED BY: F.BARROWS SHEET 12 OF 29

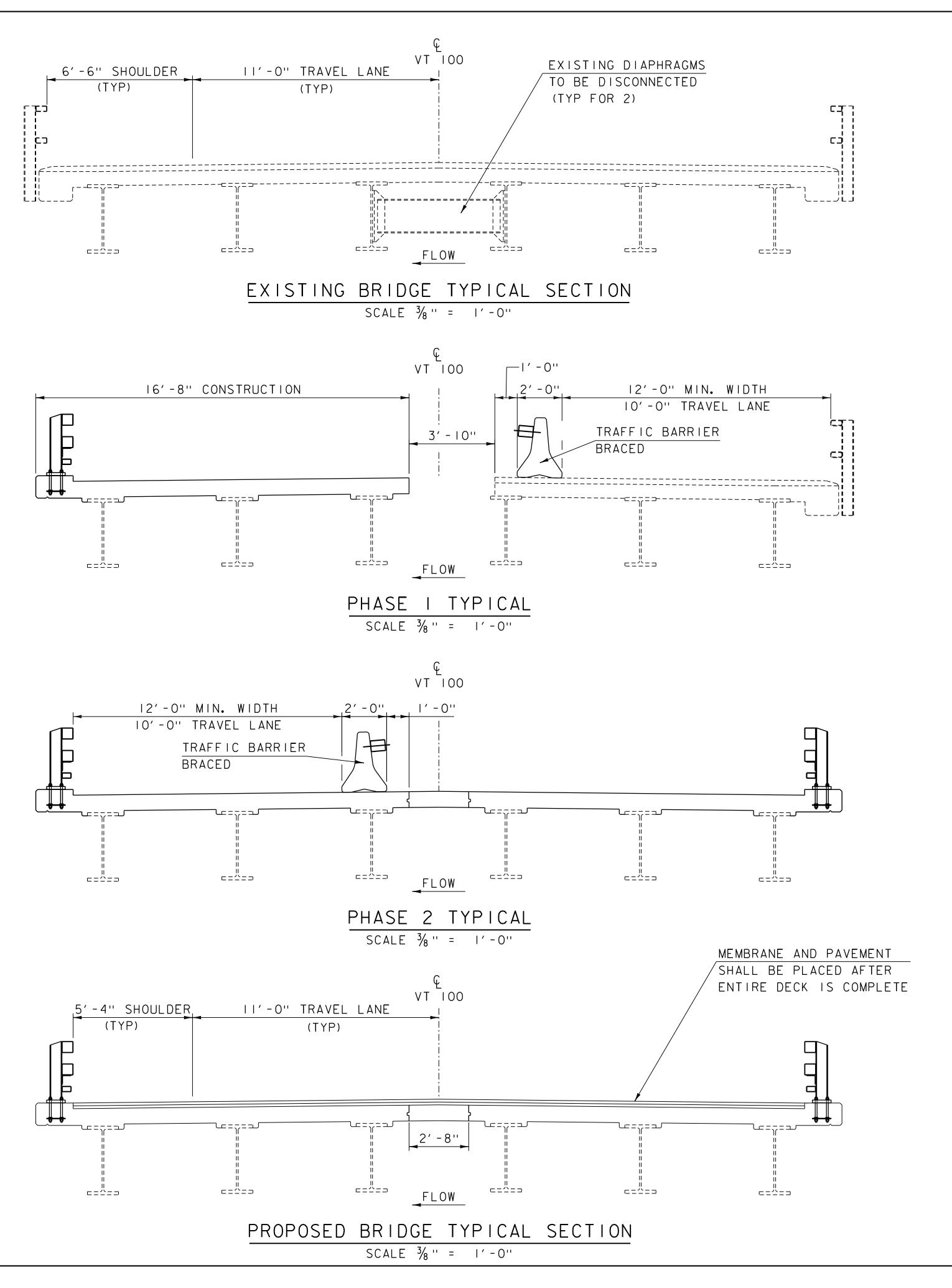


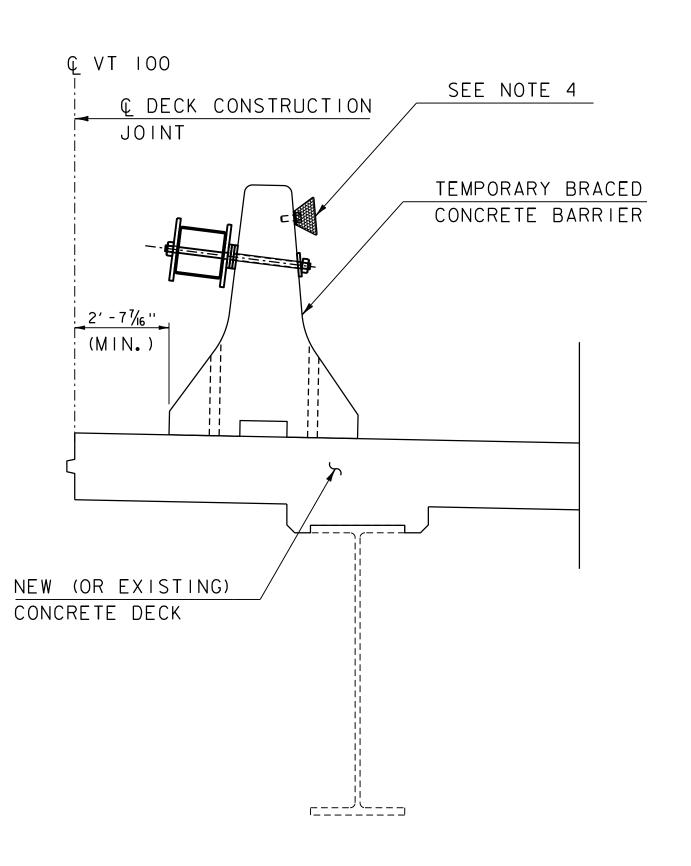
VERTICAL SCALE: I" = 2'-0"

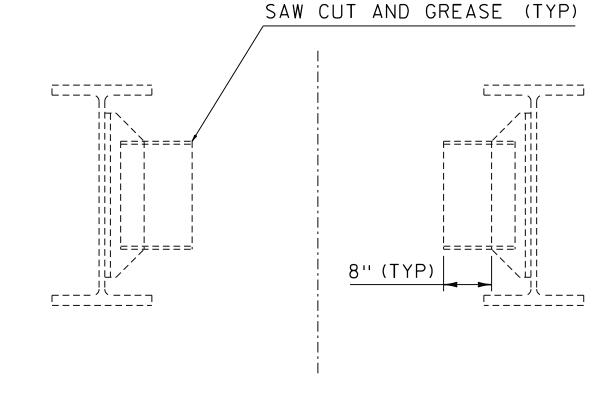
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: si8b007Pro.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: K. LIHIC
MATERIAL TRANSITION DIAGRAM

PLOT DATE: 12/12/2022 DRAWN BY: K. LIHIC CHECKED BY: F. BARROWS SHEET 13 OF 29

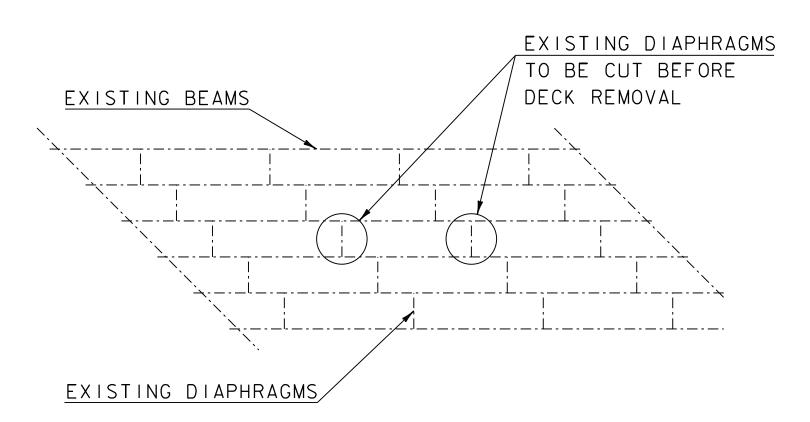






## EXISTING MIDDLE DIAPHRAGM SCALE 3/4" = 1'-0"

THE CONTRACTOR SHALL REMOVE THE SECOND AND THIRD DIAPHRAGMS IN THE CENTER BAY OF THE BRIDGE AS SHOWN



## BRACED CONCRETE BARRIER DETAIL

SCALE: I" = I'-0"

# PLAN OF EXISTING DIAPHRAGMS TO BE CUT

N. T. S.

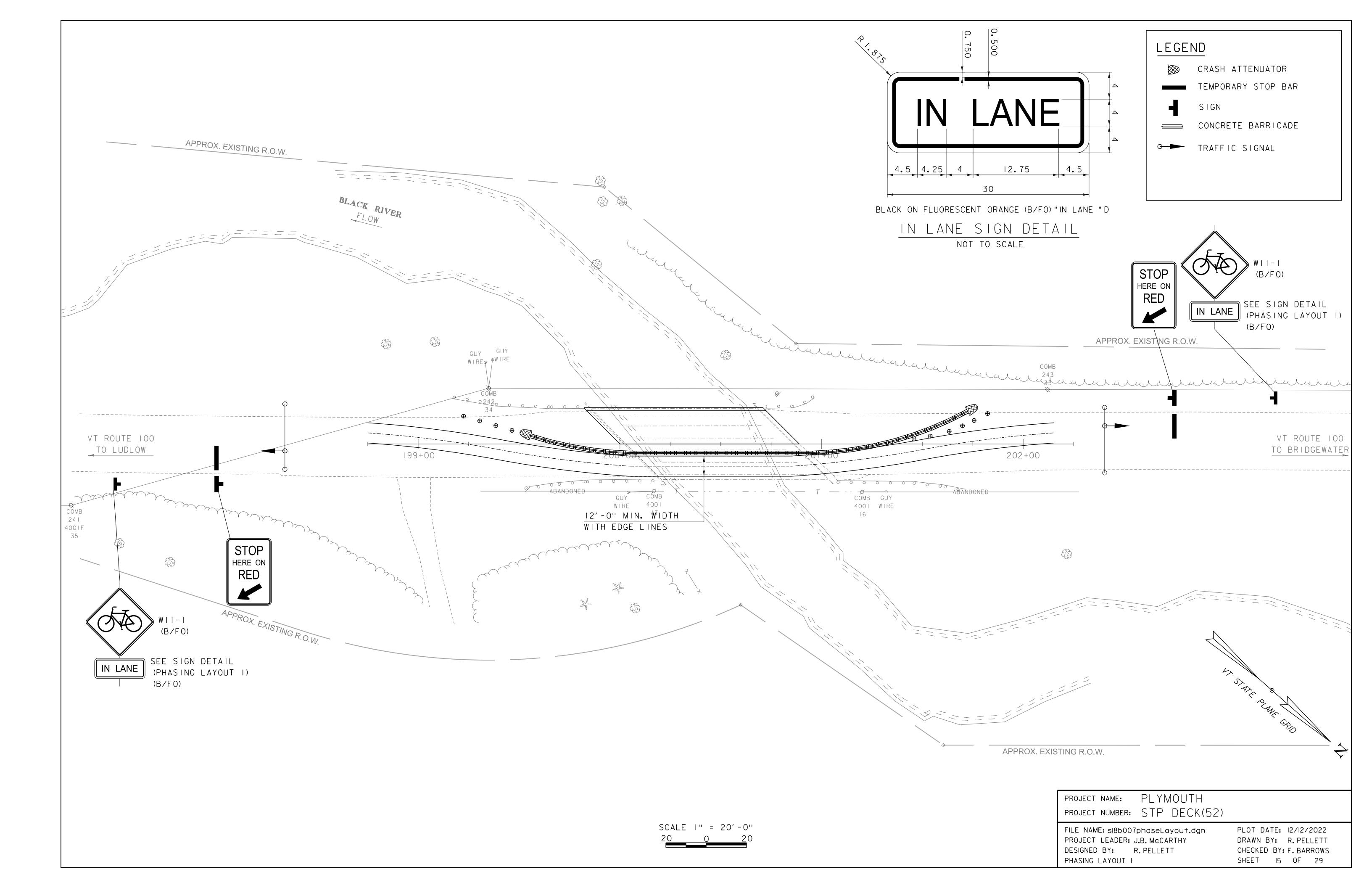
## TRAFFIC CONTROL NOTES

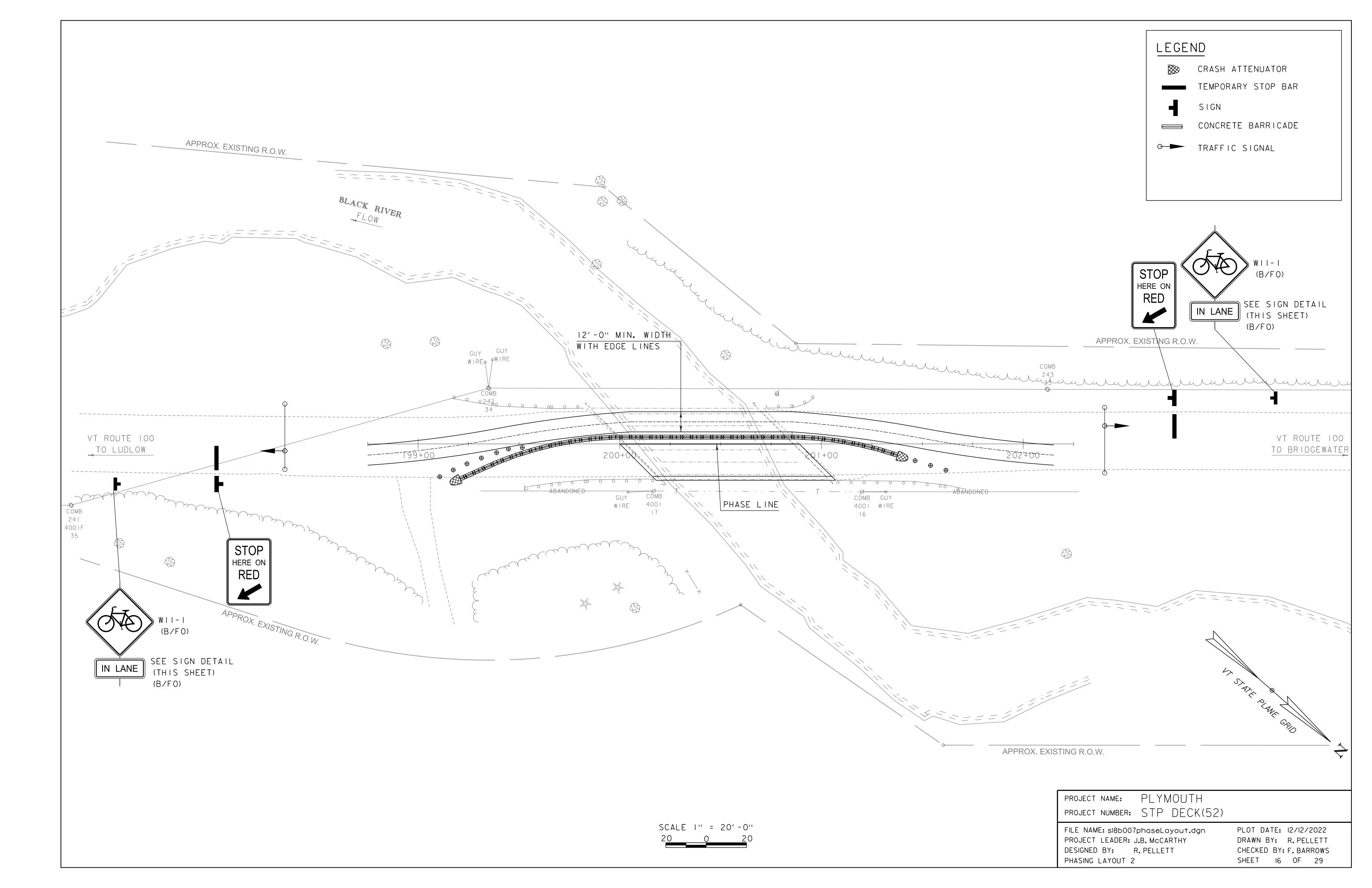
- I. PHASE I AND 2 REFLECT ONE-WAY ALTERNATING TRAFFIC CONTROLLED BY TEMPORARY TRAFFIC SIGNALS.
- 2. PHASING LAYOUTS ARE CONCEPTUAL ONLY. PHASING LAYOUT IS INTENDED TO COMMUNICATE BASIC SITE CONDITIONS THAT INCLUDE LANE, BARRIER, SUPPORT OF EXCAVATION, AND TRAFFIC LIGHT LOCATIONS. REFERENCE MUTCD SECTION 6H.OI FIGURE 6H-I2 FOR CONCEPT APPROACH SIGNAGE AND SPACING.
- 3. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL PROPERTIES AND TOWN HIGHWAYS THAT ACCESS VT-100 WITHIN THE PROJECT LIMITS AT ALL TIMES, FOR ALL PHASES OF CONSTRUCTION. IF ACCESS CANNOT BE MAINTAINED, THE CONTRACTOR SHALL COORDINATE ACCESS WITH THE PROPERTY OWNER AND OBTAIN APPROVAL OF THE ENGINEER.
- 4. BARRIER SHALL BE DELINEATED ON SIDES EXPOSED TO TRAFFIC, DELINEATORS SHALL MATCH CORRESPONDING TEMPORARY PAVEMENT MARKINGS. REFLECTORS SHALL BE MOUNTED EVERY 20 FEET ALONG THE SIDE OF THE BARRIER EXPOSED TO TRAFFIC. REFLECTORS SHALL BE INCIDENTAL TO ITEM 641.11, TRAFFIC CONTROL, ALL-INCLUSIVE.
- 5. TEMPORARY BARRIER SHALL BE IN ACCORDANCE WITH SECTION 621. IT IS REQUIRED DURING BRIDGE DECK CONSTRUCTION OPERATIONS AND SHALL BE PAID FOR AS ITEM 641. II, TRAFFIC CONTROL, ALL-INCLUSIVE. CHANNELIZING DEVICES SUCH AS RETROREFLECTIVE PLASTIC DRUMS MAY BE UTILIZED DURING PAVING AND MEMBRANE OPERATIONS. SEE TRAFFIC CONTROL NOTES ON PROJECT NOTES SHEET.
- 6. THE CONTRACTOR MAY FASTEN THE TEMPORARY TRAFFIC BARRIER TO THE EXISTING BRIDGE DECK DURING PHASE I.

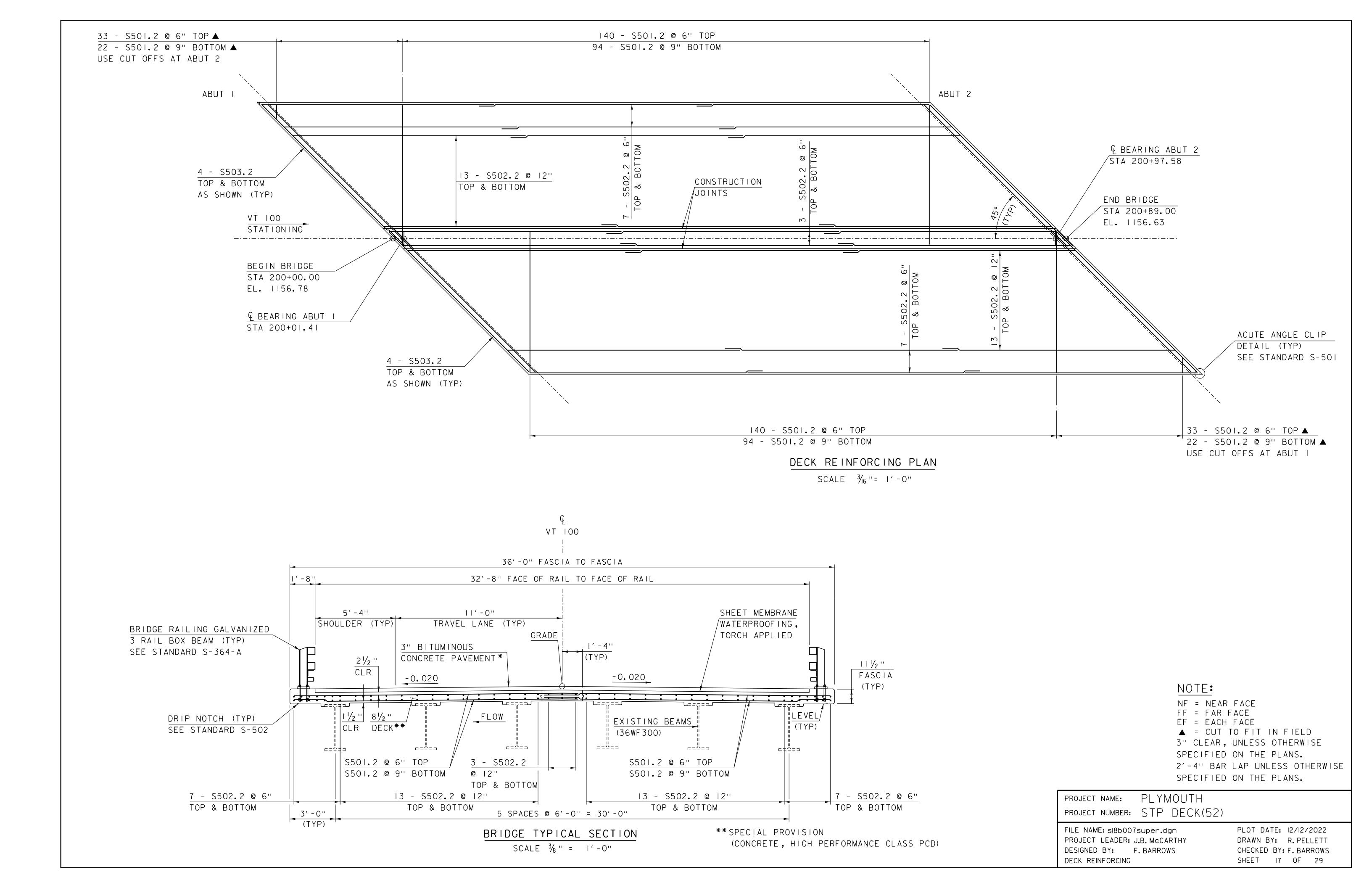
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

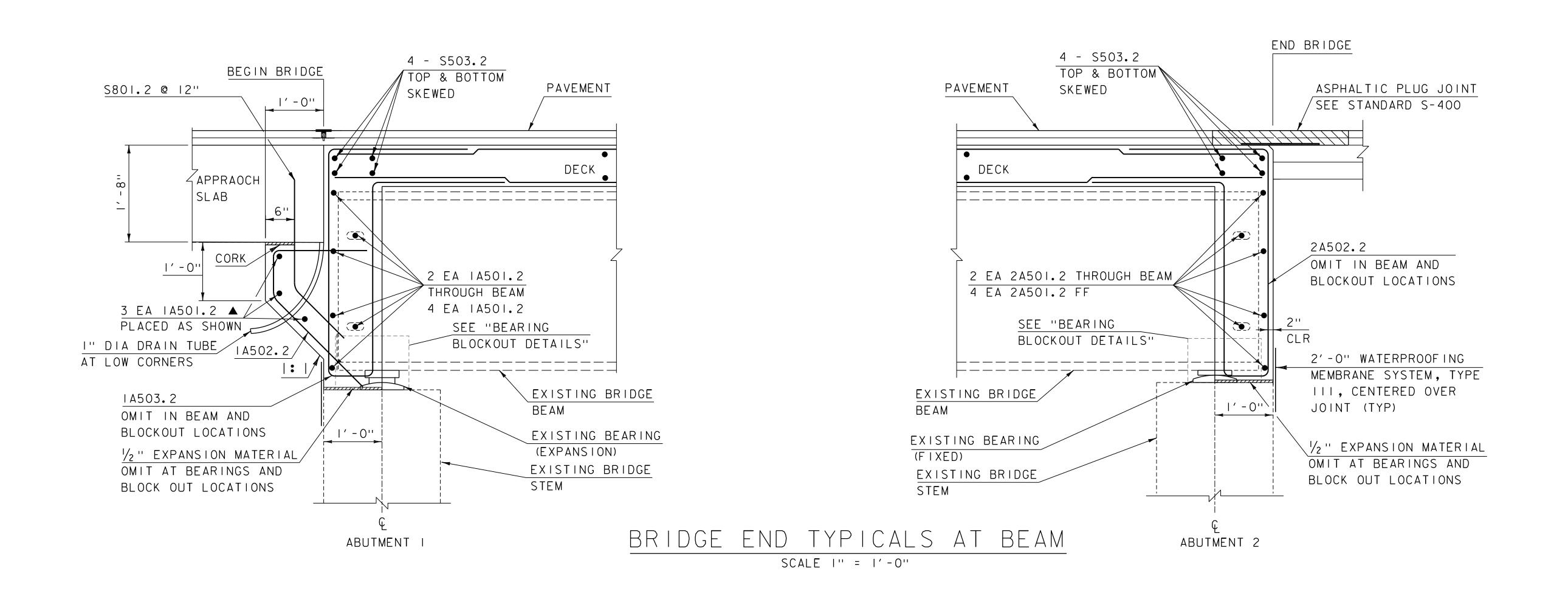
FILE NAME: sl8b007phaseTyp.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: F. BARROWS
PHASING TYPICAL SECTIONS

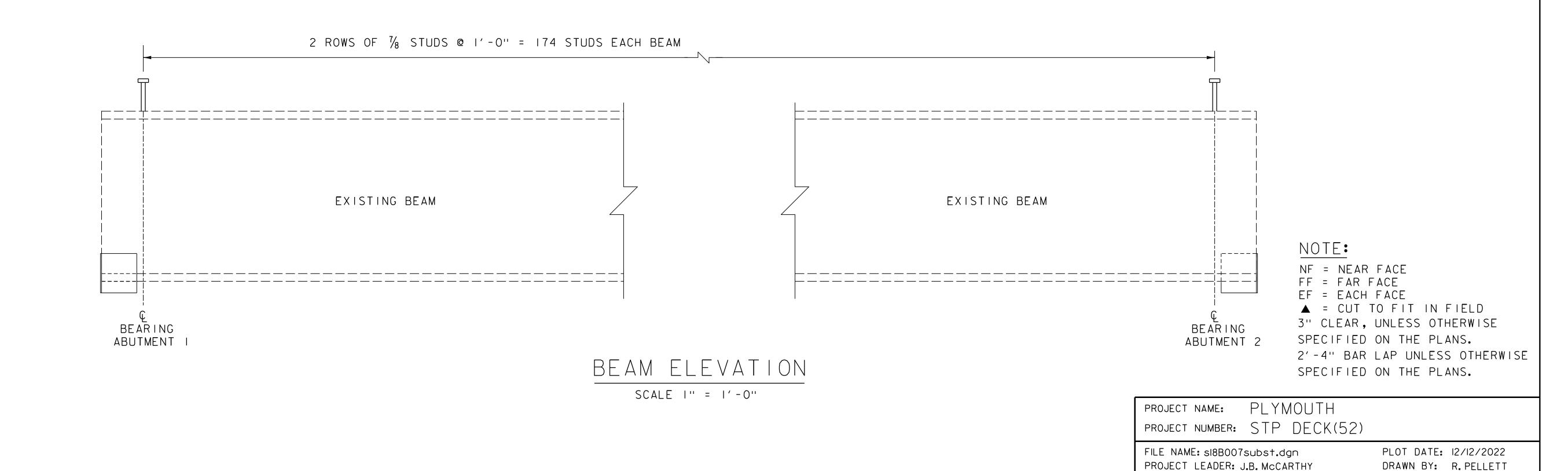
PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 14 OF 29









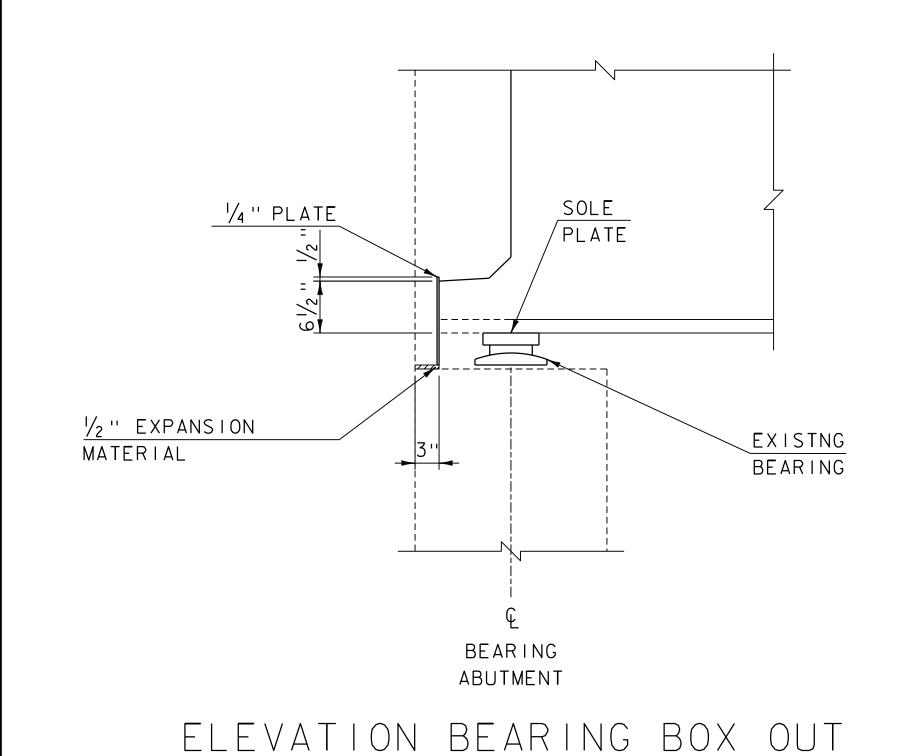


DESIGNED BY: F. BARROWS

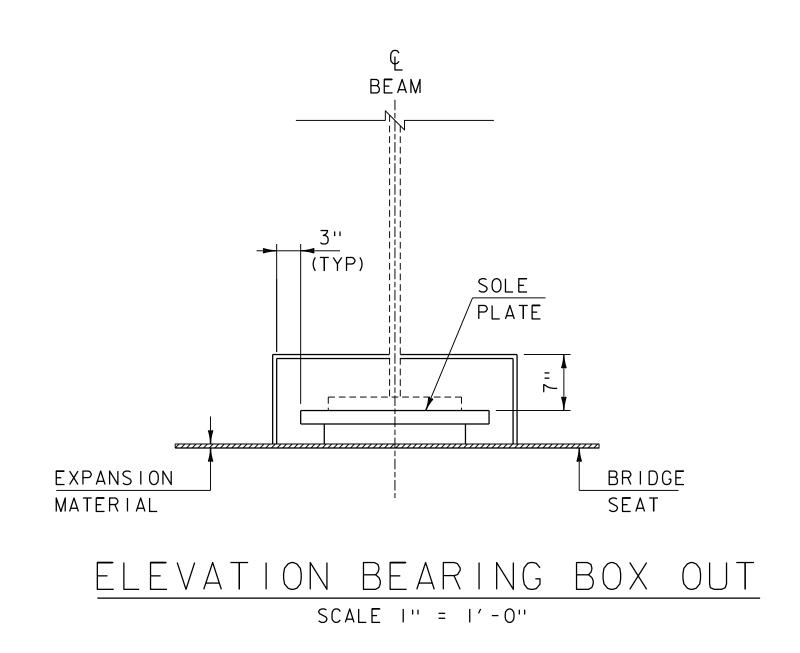
BRIDGE END DETAILS

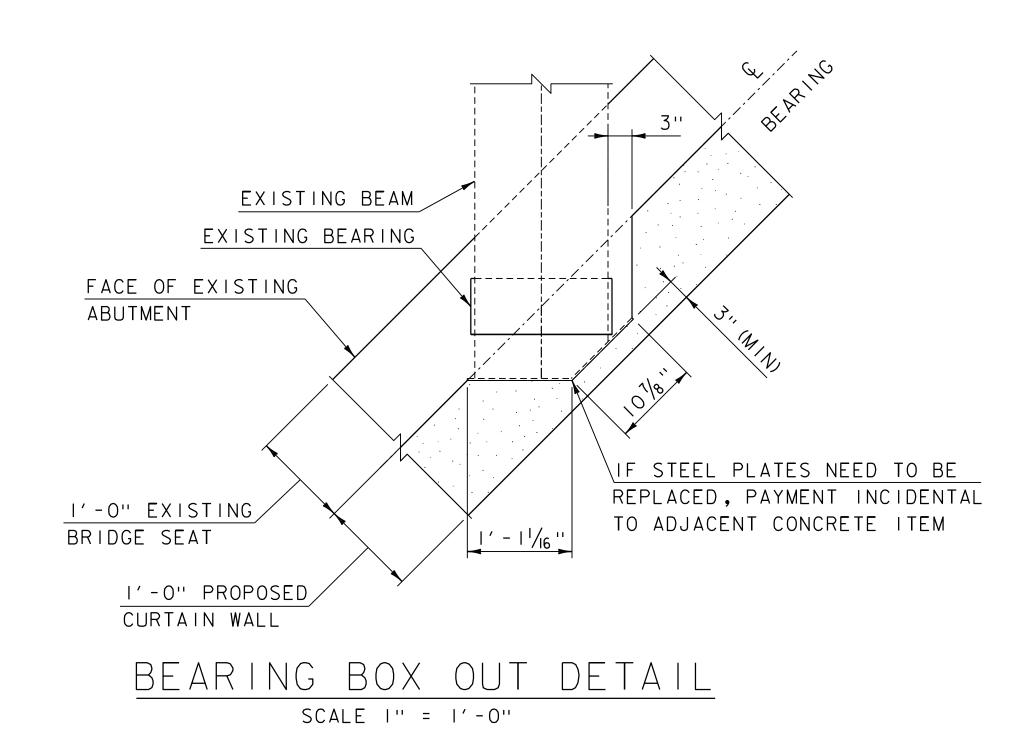
CHECKED BY: F. BARROWS

SHEET I8 OF 29



SCALE I'' = I'-0"

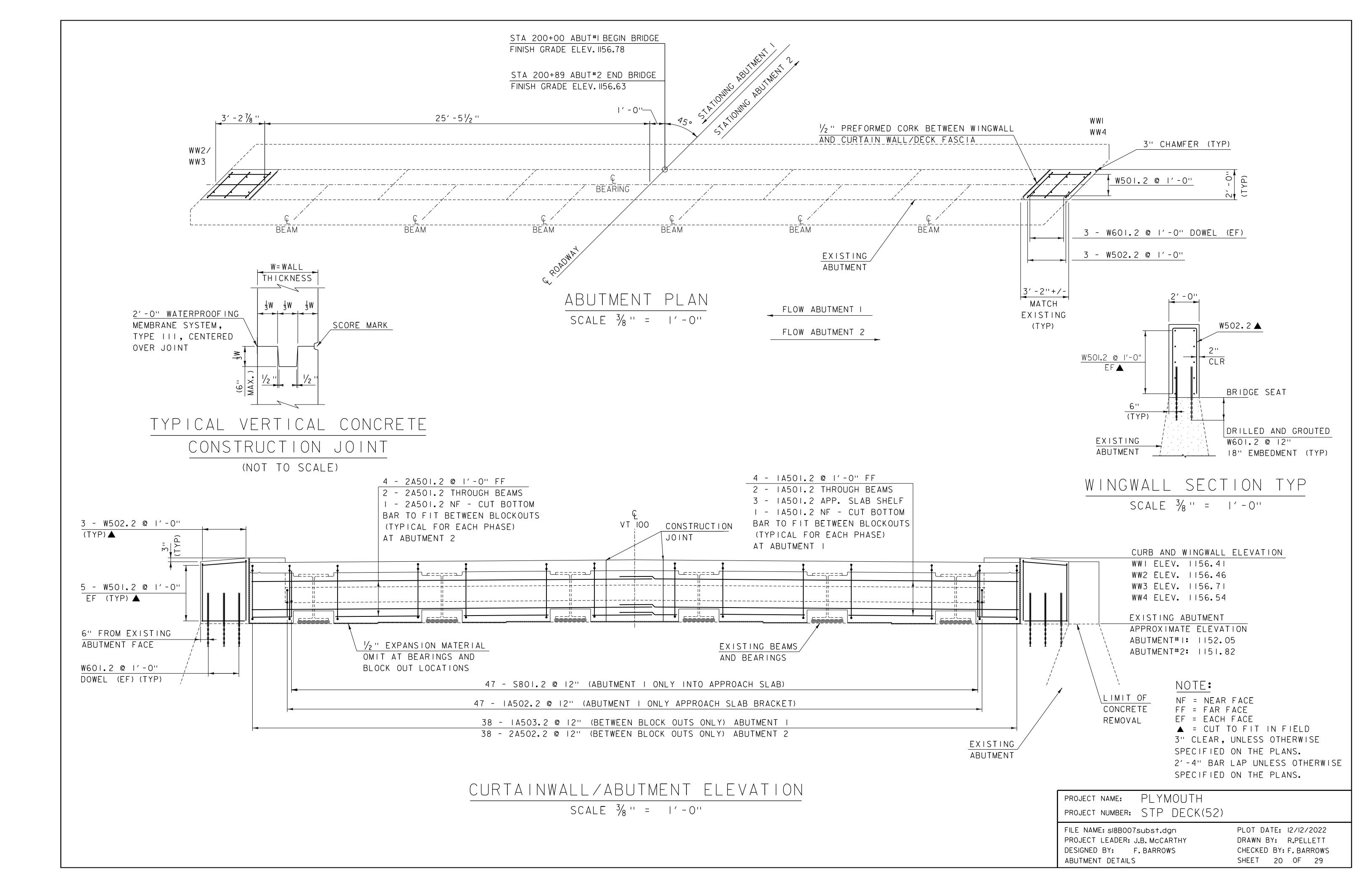


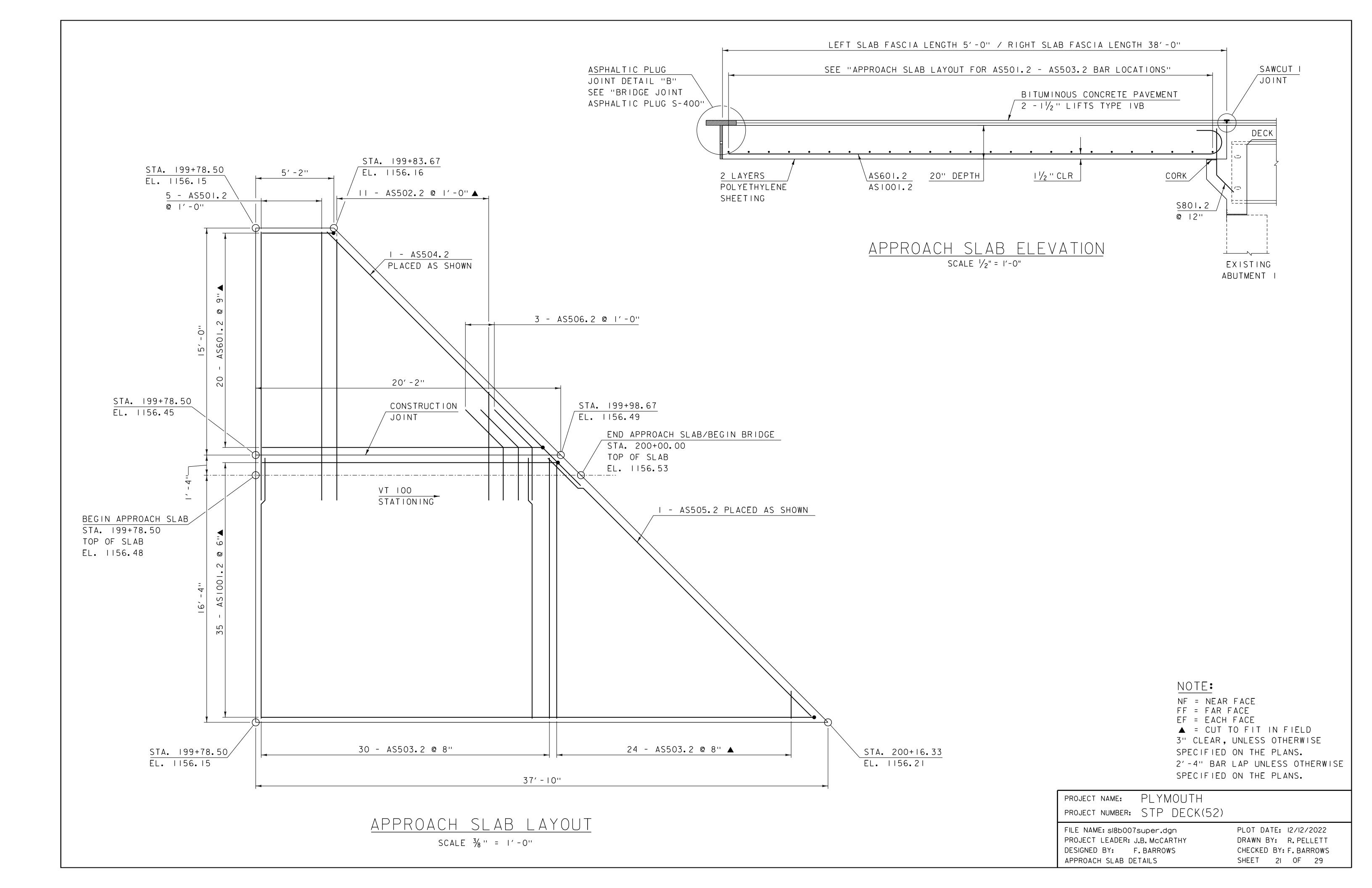


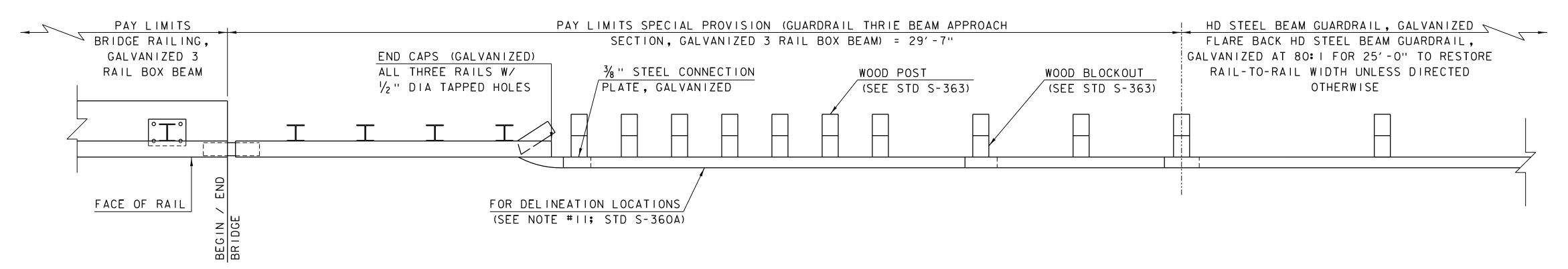
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sI8B007subst.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: F. BARROWS
BEARING DETAILS

PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 19 OF 29

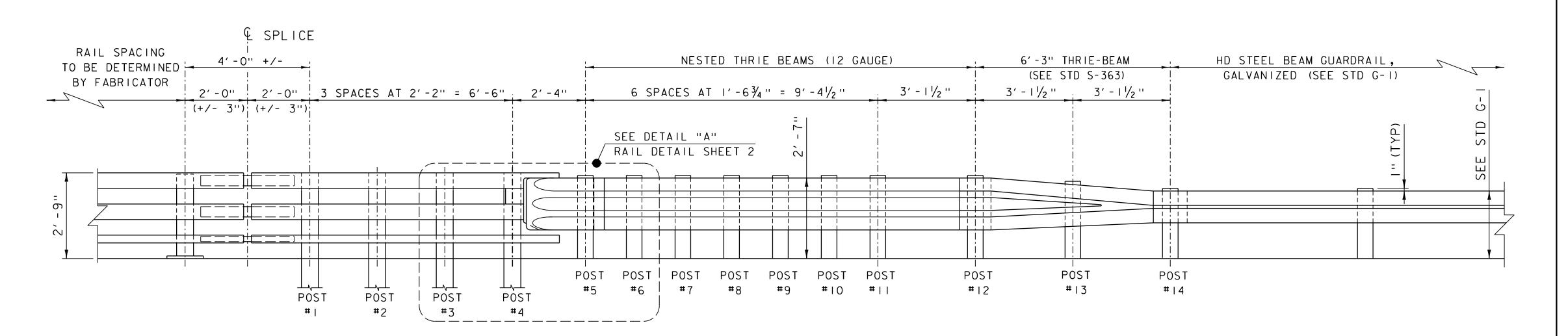






### RAILING TRANSITION PLAN

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



### RAILING TRANSITION ELEVATION

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

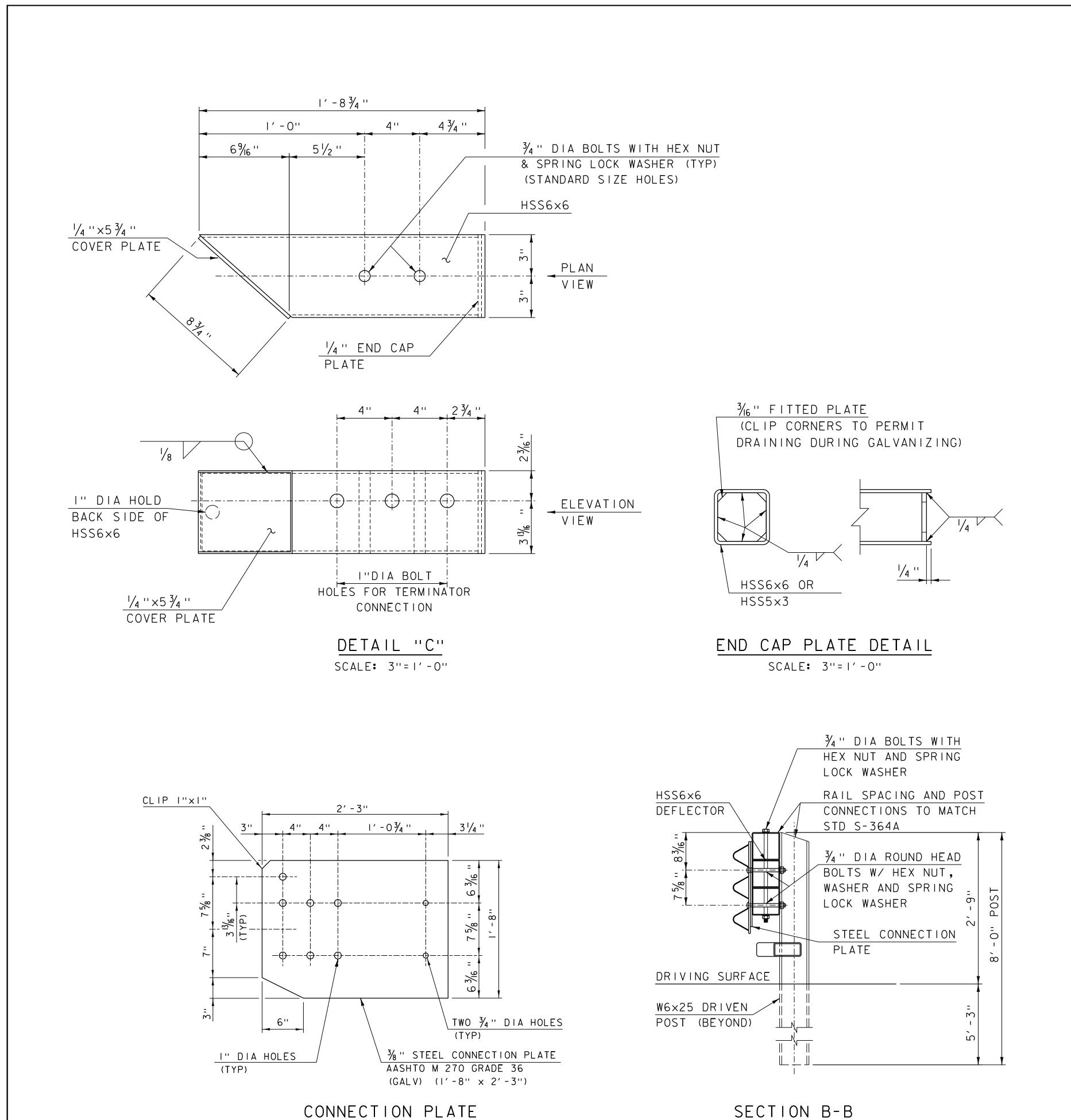
#### NOTES:

- I. ALL APPROACH RAIL SPLICES SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC FLOW.
- 2. TUBE AND STEEL POST MATERIALS, DIMENSION SIZES AND NOTES SHALL BE THE SAME AS THOSE OF THE BRIDGE RAIL, UNLESS OTHERWISE NOTED.
- 3. APPROACH RAIL BOLTS SHALL BE ASTM A307 GRADE A AND NUTS SHALL BE AASHTO M291 (ASTM A563 GRADE A OR BETTER) (GALVANIZED). WASHERS SHALL BE ASTM F844.
- 4. PRIOR TO GALVANIZING, GRIND ALL EDGES TO A MINIMUM RADIUS OF 1/16".

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

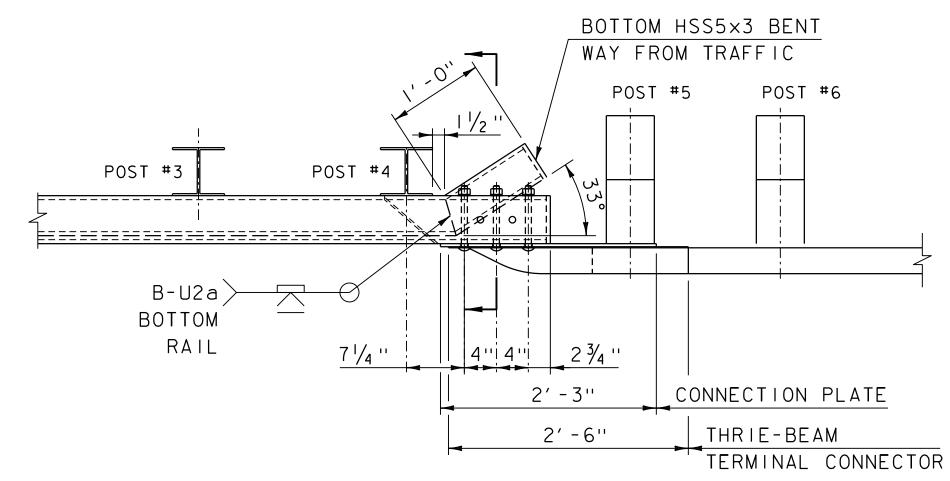
FILE NAME: sI8b007rail.dgn
PROJECT LEADER: J.B. MCCARTHY
DESIGNED BY: F. BARROWS
APPROACH RAIL DETAIL SHEET I

PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 22 OF 29

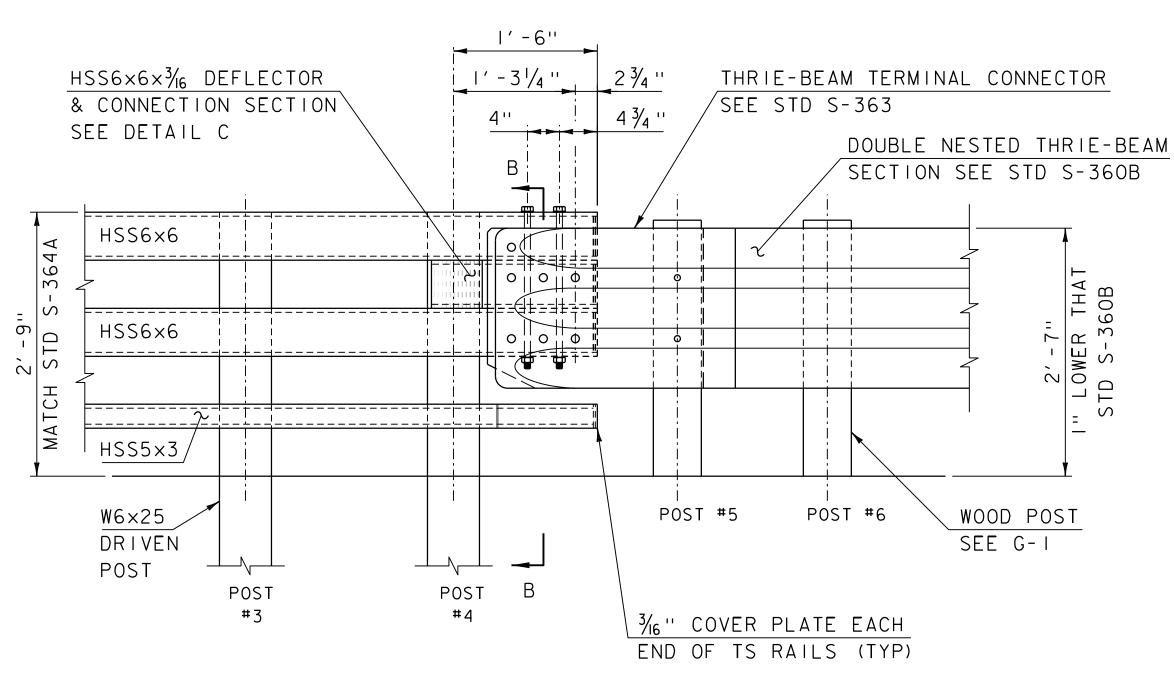


SCALE: | "= | '-0"

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



# THRIE-BEAM TERMINAL CONNECTION PLAN VIEW SCALE: | ''=|'-0''



DETAIL A - TERMINAL CONNECTION ELEVATION VIEW

SCALE: | ''= | '-0''

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sI8b007rail.dgn
PROJECT LEADER: J.B. MCCARTHY
DESIGNED BY: F. BARROWS
APPROACH RAIL DETAIL SHEET 2

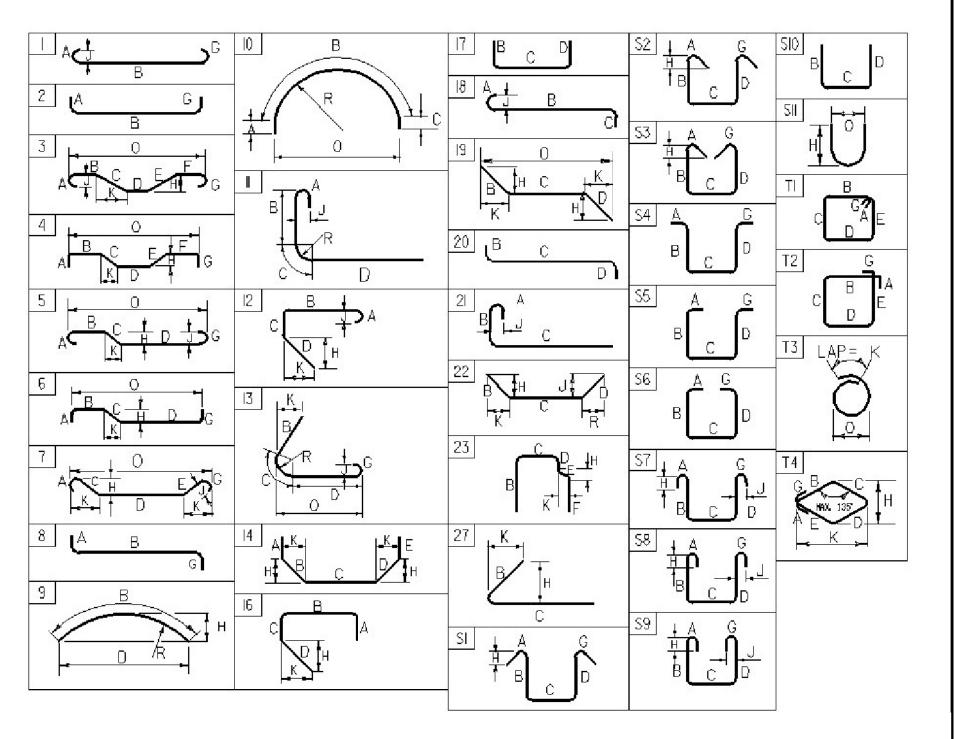
PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 23 OF 29

# REINFORCING STEEL SCHEDULE

	AGE			TRAN				ION	V									ŀ	<b>KI</b>		11	U	) H		N	j		<b>5</b>	l	ᄩ		. SC	<b>i</b>	1 <b>L</b>	<b>:</b> L	U
ITEM	EACH	SIZE	LENGTH	MARK	TYP	E	A	В	С		D	E	F	G	н		J	K	R		TEM EAC		Ι	T	TYPE A		В	С	D		F	G H	J		R	
	DECI	-																																		
	258	5	18'- 10" 31'- 0"	S502.2	STF	R 31'	- 0"																													
Δ	16 47		26'- 8" 4'- 4"					1'- 9"	2'- 7	7''	-				1'-	3"		1'- 3"																		
	ΔΡΡΕ	ROA	CH SL	ΔR 1																																
•	5	5		AS501.2																																
	54 1	5	17'- 2" 23'- 7"		STF	R 17'	- 2"																													
	1 3	5	25'- 0" 7'- 0"	AS505.2 AS506.2	22		3			6"					2'-			2'- 6"																		
	21 36		21'- 1" 38'- 10"	AS601.2 AS1001.2													0'- 6" 1'- 1"																			
	CHB	TAIN	I WALI	1																																
	20 47	5	26'- 5" 4'- 2"	r				1'- 6"	0'- 9	9" 1'-	- 11"				1'-	<b>4</b> "		1'- 4"																		
	38		12'- 3"											2'-		•																				
	CUR	TAIN	I WALI																																	
			26'- 5" 13'- 7"	2A501.2 2A502.2				4'- 2"	0'- ′	11" 3'-	- 10"			2'-	4"																					
<b>A</b>		5	2'- 8"					01 400	01. (	011 01	400																									
				1W502.2 1W601.2				3'- 10"	2- 2	2" 3'-	10"																									
	WINC	ΔW£	11.2																																	
<b>A</b>		5	2'- 8"	2W501.2 2W502.2				3'- 10"	2'- 2	2" 3'-	- 10"																									
	6			2W601.2																																
	WINC																																			
<b>A</b>	3	5	9'- 10"	3W501.2 3W502.2	S10	0	3	3'- 10"	2'- 2	2" 3'-	- 10"																									
	6	6	3'- 6"	3W601.2	SIF	₹ 3'	- 6"																													
	<b>WIN C</b>			4W501.2	STE	R 2'	- 8"																													
<u> </u>	3 6	5	9'- 10"	4W502.2 4W601.2	S10	0	3	3'- 10"	2'- 2	2" 3'-	- 10"																									
					1				1	I				1								1				<u> </u>							1	1	1	

## ~ NOTES ~

- 1. UNLESS OTHERWISE DESIGNATED, ALL BAR REINFORCEMENT FOR CONCRETE IN SIZES UP TO AND INCLUDING NO. 18 SHALL CONFORM TO THE REQUIREMENTS OF THE "SPECIFICATIONS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT", AASHTO M 31 (ASTM A 615-SI). ALL BARS SHALL BE GRADE 60, UNLESS OTHERWISE DESIGNATED.
- 2. FOR TYPICAL BENDING DETAILS, RECOMMENDED PIN DIAMETER "D" OF BENDS AND HOOKS, AND OTHER STANDARD PRACTICE, SEE CURRENT CONCRETE REINFORCING STEEL INSTITUTE "MANUAL OF STANDARD PRACTICE".
- 3. BARS WHICH REQUIRE MORE ACCURATE BENDING THAN STANDARD PRACTICES SHOULD HAVE LIMITS INDICATED.
- 4. ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" AND "G" ON STANDARD 180 DEGREE AND 135 DEGREE HOOKS.
- 5. "J" DIMENSION ON 180 DEGREE HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE. OTHERWISE, STANDARD HOOKS ARE TO BE USED.
- 6. "H" DIMENSION ON STIRRUPS TO BE SHOWN ONLY WHEN NECESSARY TO MAINTAIN CLEARANCES.
- 7. WHERE SLOPE DIFFERS FROM 45 DEGREES, DIMENSIONS "H" AND "K" MUST BE SHOWN.
- 8. A DENOTES BARS TO BE CUT IN FIELD.
- 9. \* DENOTES ONE EXTRA BAR ADDED FOR TESTING PURPOSES.
- 10.  $\triangle$  DENOTES TWO EXTRA BARS ADDED FOR TESTING PURPOSES.
- 11. E IN BAR MARK PREFIX DENOTES EPOXY COATED REINFORCING STEEL.



#### ASTM STANDARD

## 

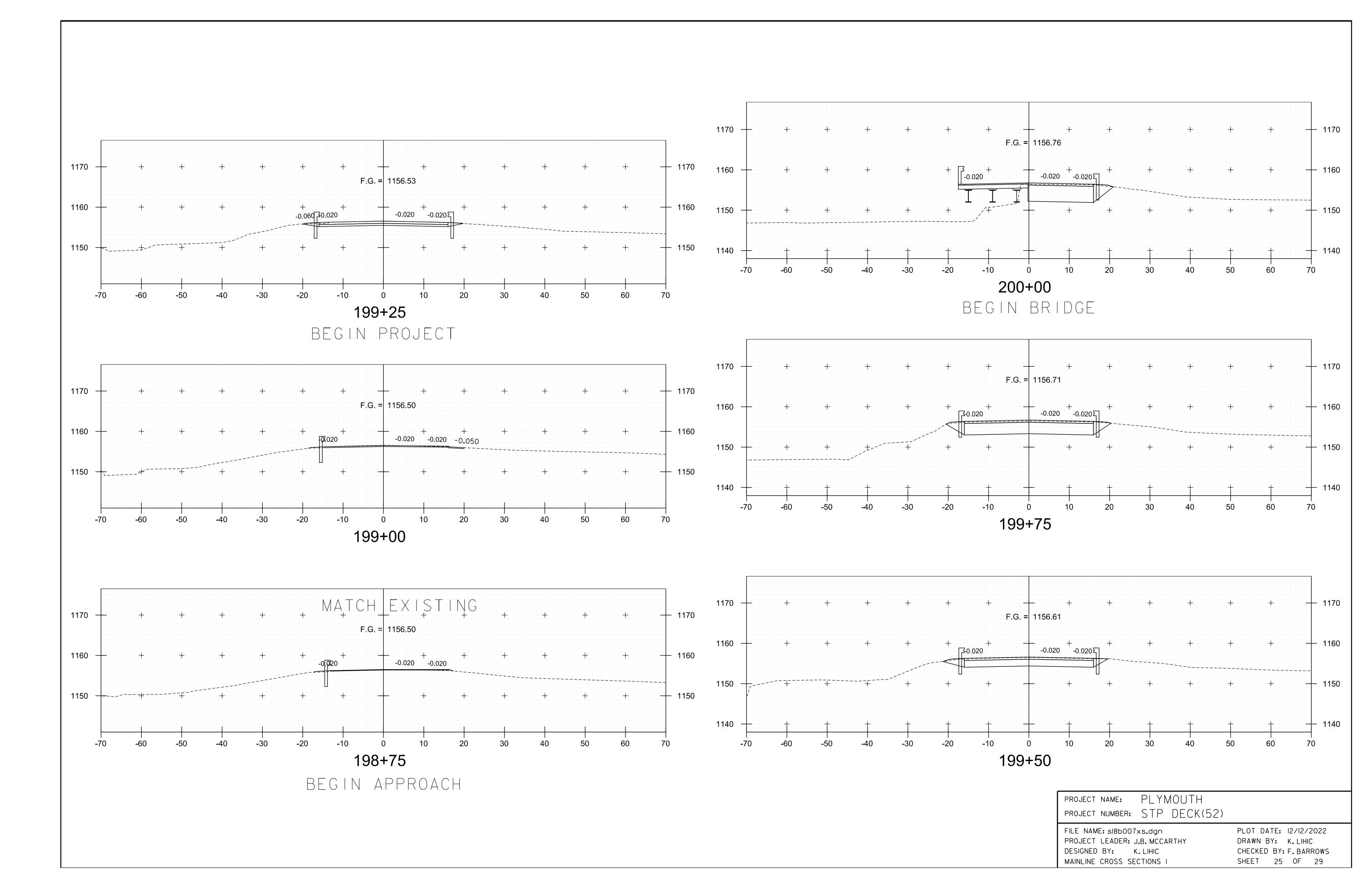
### ~ REINFORCING STEEL CORROSION RESISTANCE LEVEL ~

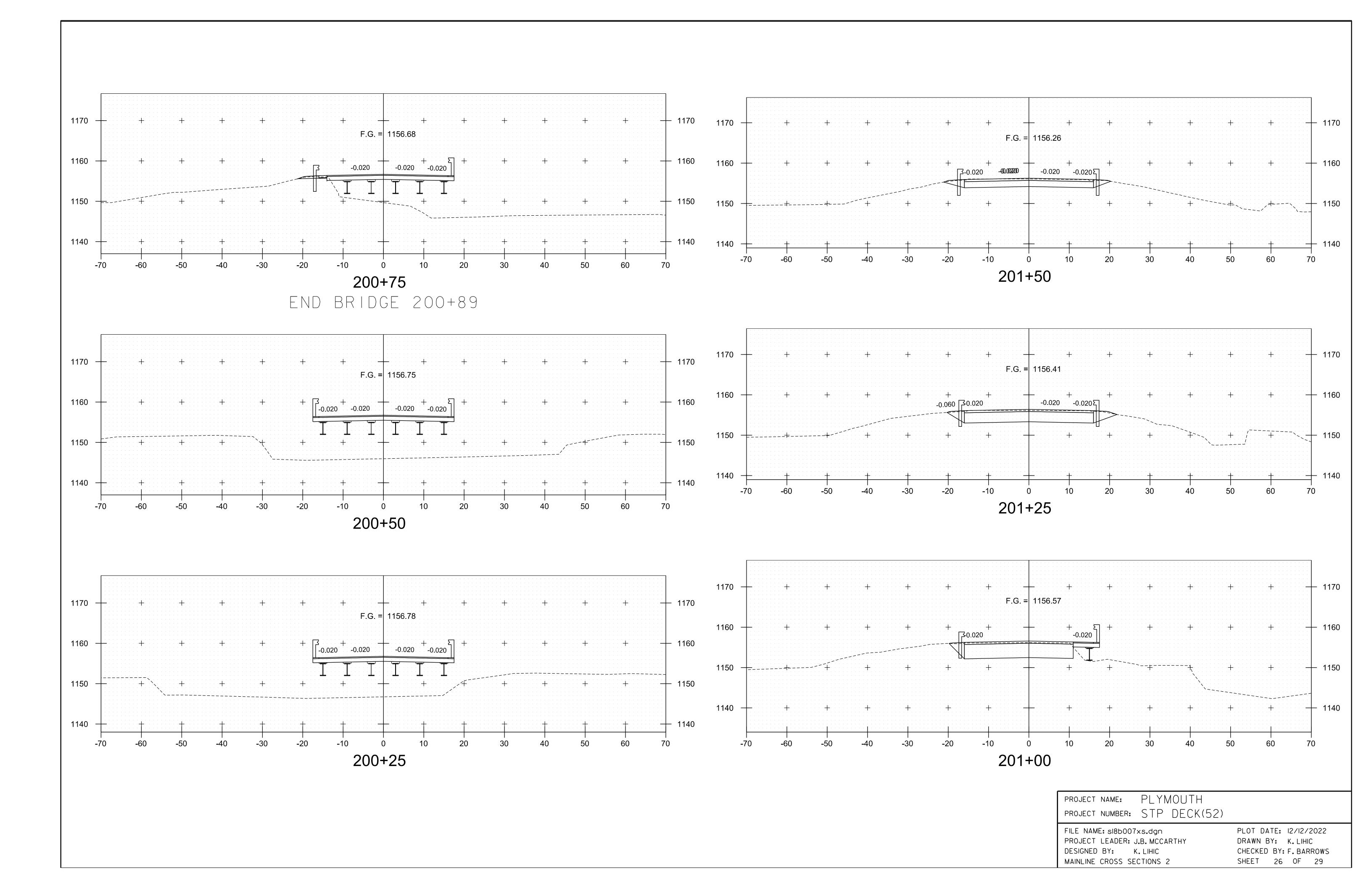
THE REINFORCING STEEL MARKS IN THIS SCHEDULE INDICATE THE REQUIRED BAR CORROSION RESISTANCE LEVEL. CORROSION RESISTANCE LEVEL IS DENOTED WITH A .2 FOR LEVEL TWO SUFFIX OR .3 FOR LEVEL THREE SUFFIX, .1 FOR LEVEL ONE IS TO BE OMITTED. THE BAR MATERIAL TYPE AND BAR STEEL GRADE PROVIDED FOR EACH CORROSION LEVEL WILL BE RECORDED ON THE PLAN SET PI SHEET FOR AS-BUILT RECORD PLAN ARCHIVES.

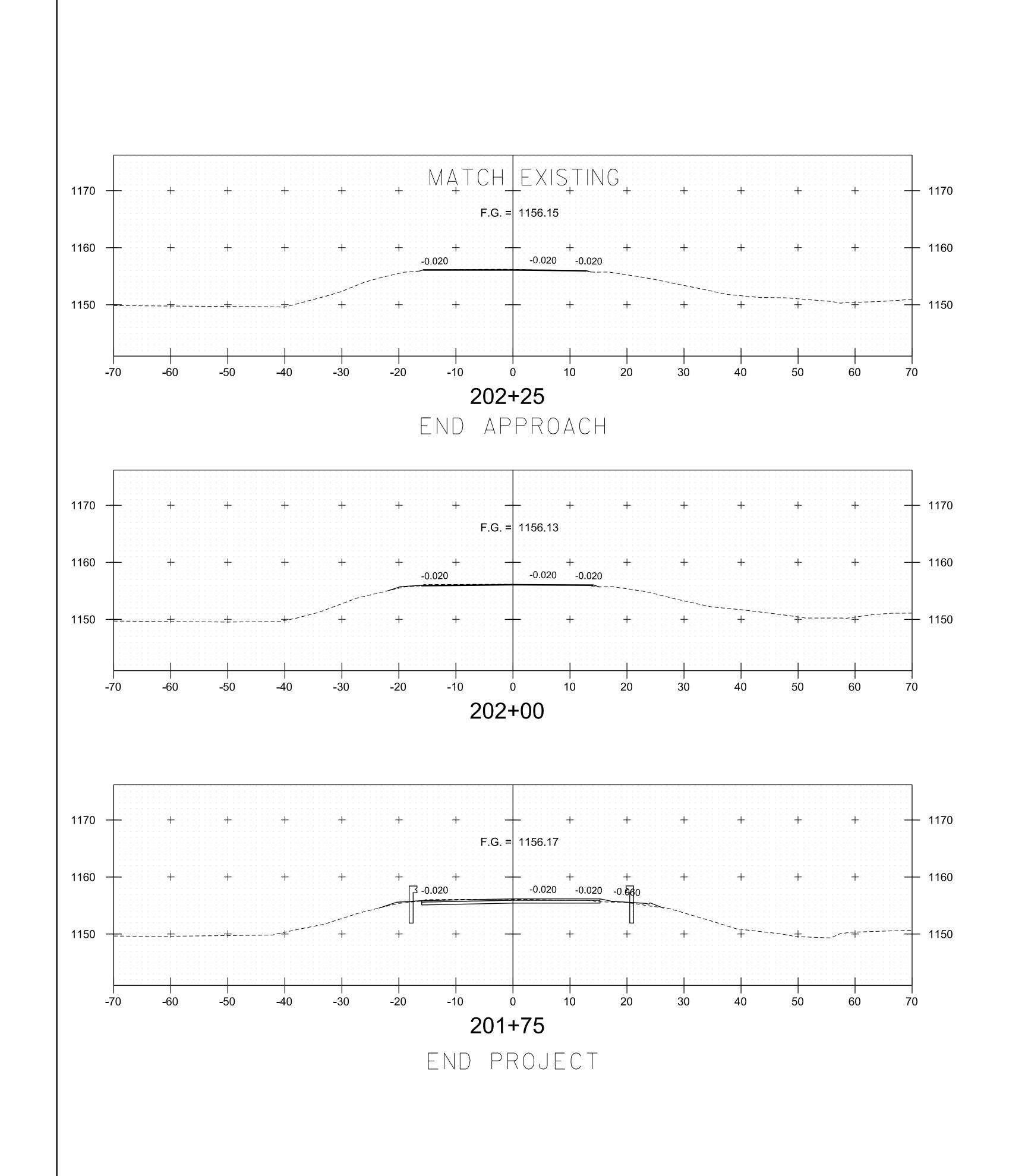
PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: s18b007rss.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: K. LIHIC
REINFORCING STEEL SCHEDULE

PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 24 OF 29







PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sI8b007xs.dgn
PROJECT LEADER: J.B. MCCARTHY
DESIGNED BY: K. LIHIC
MAINLINE CROSS SECTIONS 3

PLOT DATE: 12/12/2022
DRAWN BY: K.LIHIC
CHECKED BY: F.BARROWS
SHEET 27 OF 29

			VAOT LOW GROW/F	TINE FESCUE MIX		
	LBS	/AC				
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
38%	57	95	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	90%	98%
29%	43.5	72.5	HARD FESCUE	FESTUCA LONGIFOLIA	85%	95%
15%	22.5	37.5	CHEWINGS FESCUE	FESTUCA RUBRA VAR. COMMUTATA	87%	95%
15%	22.5	37.5	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	90%	95%
3%	4.5	7.5	INERTS			
100%	150	250				

#### VAOT RURAL AREA MIX

	LBS	/AC				
WEIGHT	BROADCAST	HYDROSEED	NAME	LATIN NAME	GERM	PURITY
37.5%	22.5	45	CREEPING RED FESCUE	FESTUCA RUBRA VAR. RUBRA	85%	98%
37.5%	22.5	45	TALL FESCUE	FESTUCA ARUNDINACEA	90%	95%
5.0%	3	6	RED TOP	AGROSTIS GIGANTEA	90%	95%
15.0%	9	18	WHITE FIELD CLOVER	TRIFOLIUM REPENS	85%	98%
5.0%	3	6	ANNUAL RYE GRASS	LOLIUM MULTIFLORUM	85%	95%
100%	60	120				

GENERAL	GENERAL AMENDMENT GUIDANCE								
FERTILIZER	L	IME							
10/20/10	AG LIME	PELLITIZED							
500 LBS/AC	2 TONS/AC	1 TONS/AC							

#### CONSTRUCTION GUIDANCE

- I.SEED MIX: THE CONTRACTOR SHALL COORDINATE WITH THE RESIDENT ENGINEER ON WHICH SEED MIX TO USE.
- 2.SEED MIX: USE AS INDICATED IN THE PLANS AND/OR FOR ALL ESTABLISHED UPLAND (NON WETLAND) AREAS DISTURBED BY THE CONTRACTOR.
- 3.ALL SEED MIXTURES: SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
- 4.FERTILIZER AND LIMESTONE: SHALL FOLLOW RATES SHOWN ON PLAN OR AS DIRECTED BY THE ENGINEER.
- 5. HAY MULCH: TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS/ACRE, ACHIEVE 90% GROUND COVER OR AS DIRECTED BY THE ENGINEER.
- 6. HYDROSEEDING: ALTHOUGH GUIDANCE IS GIVEN ABOVE THE SITE CONDITIONS AND THE TYPE OF HYDROSEED PROPOSED FOR USE WILL ULTIMATELY DICTATE THE AMOUNTS AND TYPES OF SOIL AMENDMENTS TO BE APPLIED.
- 7.TURF ESTABLISHMENT: PLACING SEED, FERTILIZER, LIME AND MULCH PRIOR TO SEPTEMBER 15 AND AFTER APRIL 15 CAN BETTER ENSURE A VIGOROUS GROWTH OF GRASS.

ADAPTED FROM VTRANS TECHNICAL LANDSCAPE MANUAL FOR ROADWAYS AND TRANSPORTATION FACILITIES TURF ESTABLISHMENT

THIS WORK SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 651 FOR SEED (PAY ITEM 651.15)

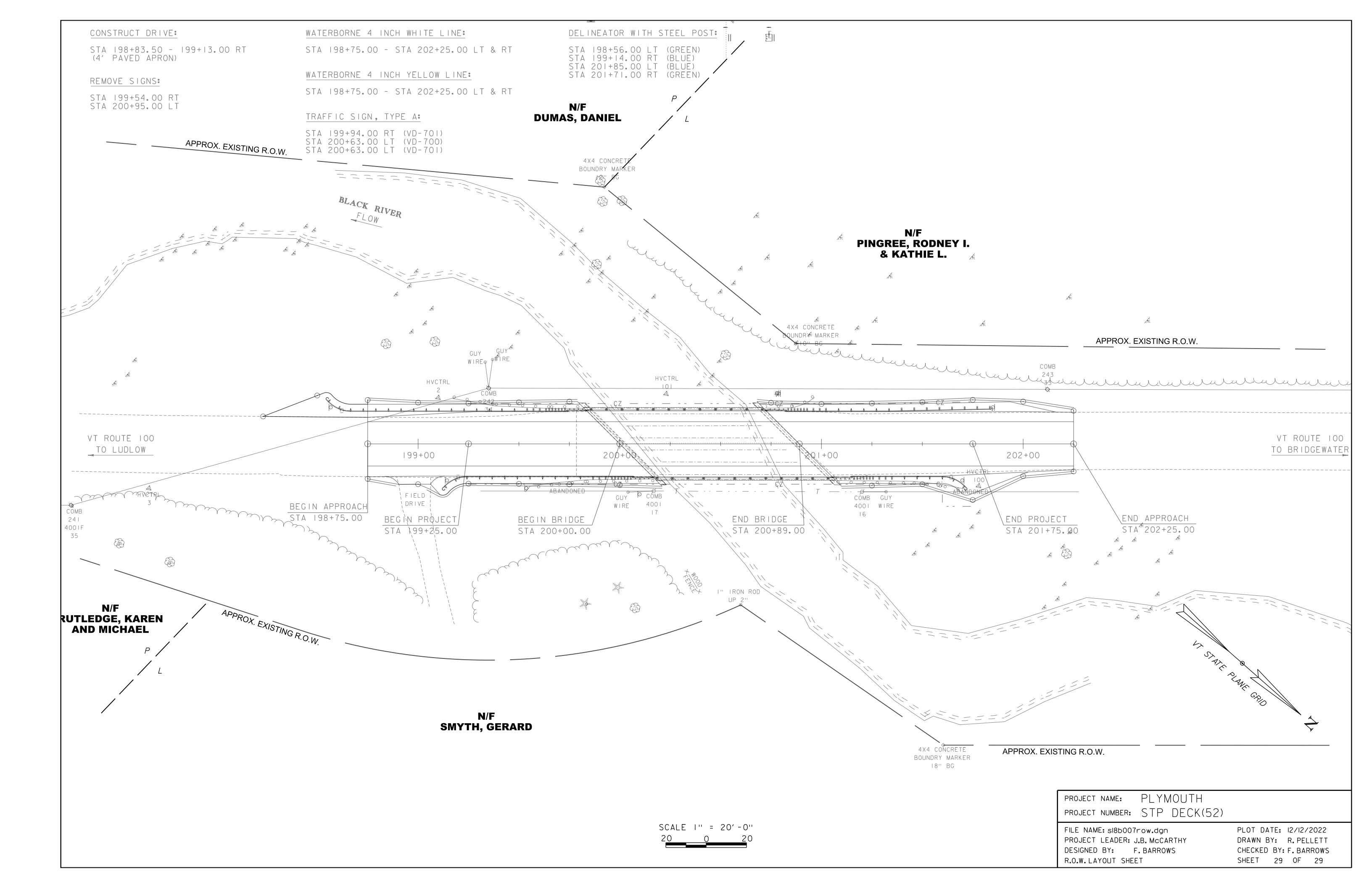
REVISIONS

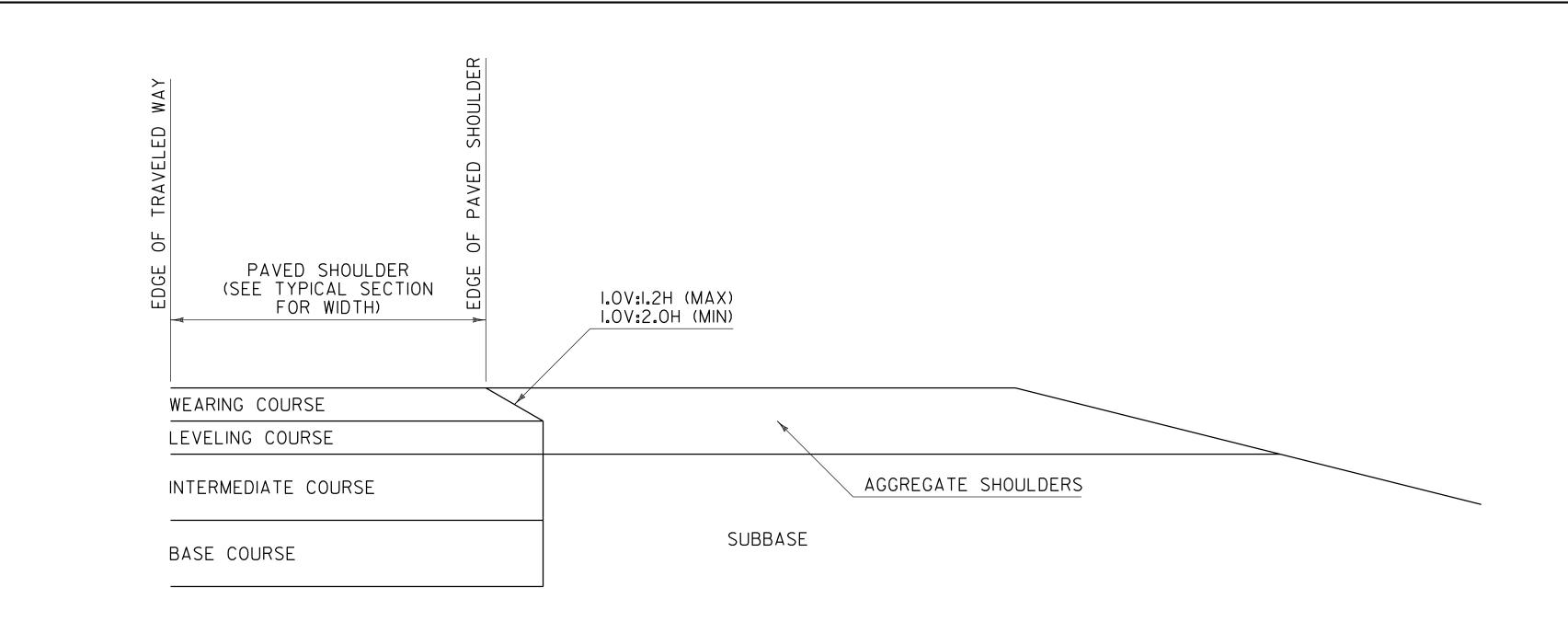
JANUARY 12, 2015 WHF

PROJECT NAME: PLYMOUTH
PROJECT NUMBER: STP DECK(52)

FILE NAME: sl8b007epsc.dgn
PROJECT LEADER: J.B. McCARTHY
DESIGNED BY: R. PELLETT
EPSC DETAIL

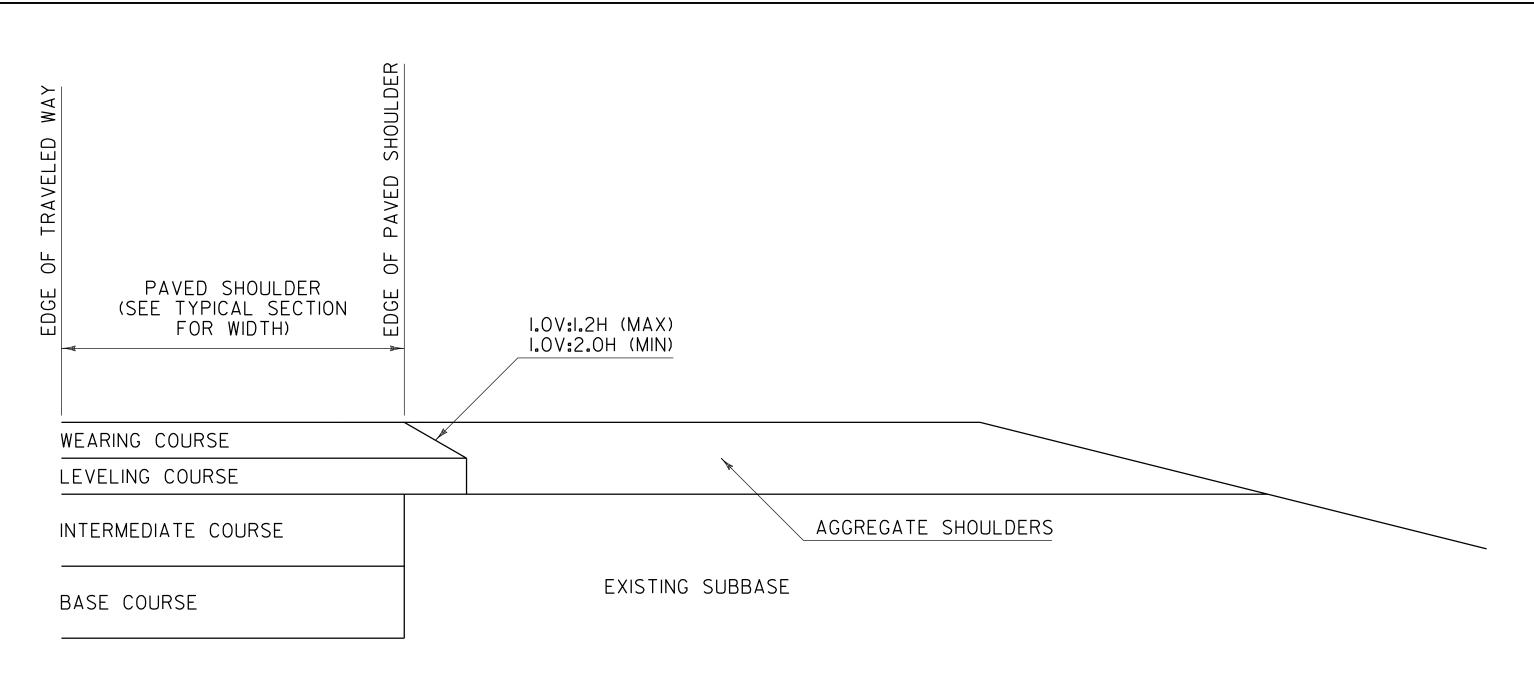
PLOT DATE: 12/12/2022
DRAWN BY: R. PELLETT
CHECKED BY: F. BARROWS
SHEET 28 OF 29





## NOTES:

- I. THIS DETAIL IS INTENDED FOR WHEN PAVING EXTENDS BELOW THE WEARING COURSE.
- 2. PRIOR TO PLACEMENT OF THE LEVELING AND/OR WEARING COURSE, THE SUBBASE LOCATED BENEATH THE AGGREGATE SHOULDERS SHALL BE PREPARED FLUSH WITH THE BOTTOM OF THE LEVELING COURSE.
- 3. BASE COURSE LIMITS MAY VARY, SEE TYPICAL SECTIONS FOR WIDTH.



SAFETY EDGE DETAIL
FOR PAVING WEARING COURSE ONLY

SAFETY EDGE DETAIL

### NOTES:

- I. THIS DETAIL IS INTENDED FOR WHEN ONLY THE LEVELING AND/OR WEARING COURSE IS TO BE PLACED.
- 2. PAVEMENT COURSES MAY VARY, SEE TYPICAL SECTIONS FOR ACTUAL PAVEMENT COURSES REQUIRED.

REV.	DATE	DESCRIPTION
0	MAR. 29, 2016	ORIGINAL APPROVAL
	JAN. 5, 2018	ANNOTATION CORRECTIONS
OTHER	DETAILS REQUIRED:	: NONE
	DETAILS APPROVED	FOR USE BY HIGHWAY SAFETY & DESIGN

## SAFETY EDGE DETAILS

SAFETY EDGE WIDTH COURSE THICKNESS	BASED ON WEARING AND A IV:1.6H SLOPE					
WEARING COURSE THICKNESS (INCHES)	NOMINAL SAFETY EDGE WIDTH (INCHES)					
1.25	2.000					
1.50	2.375					
1.75	2.750					
2.00	3.125					
2.25	3.500					
2.50	4.000					

### GENERAL NOTES:

- I. PLACEMENT OF THE WEARING COURSE SHALL INCLUDE THE SAFETY EDGE, UNLESS THE FOLLOWING APPLIES:
  - A. THE ADJACENT SLOPE IS STEEPER THAN THE SAFETY
  - B. THE EDGE OF PAVEMENT BEING PLACED ABUTS BOUND MATERIAL.
  - C. VEHICLES ARE RESTRICTED FROM LEAVING THE PAVED SURFACE (EXAMPLE: GUARDRAIL).
- 2. THE SAFETY EDGE SHALL BE FORMED IN SUCH A WAY THAT THE BITUMINOUS CONCRETE PAVEMENT IS EXTRUDED OR COMPRESSED TO FORM THE SLOPE. DEVICES THAT SIMPLY STRIKE-OFF THE MIX WITHOUT PROVIDING ANY COMPACTIVE EFFORT WILL NOT BE ALLOWED.
- 3. THE SAFETY EDGE SHALL NOT BE CONSIDERED PART OF THE PAVED SHOULDER.
- 4. THIS WORK SHALL BE INCIDENTAL TO THE RESPECTIVE BITUMINOUS CONCRETE PAVEMENT ITEM.



HIGHWAY SAFETY

& DESIGN DETAIL

HSD-400.01