

GENERAL LOCATION OF CONTRACT

THE STATE OF DELAWARE DEPARTMENT OF TRANSPORTATION

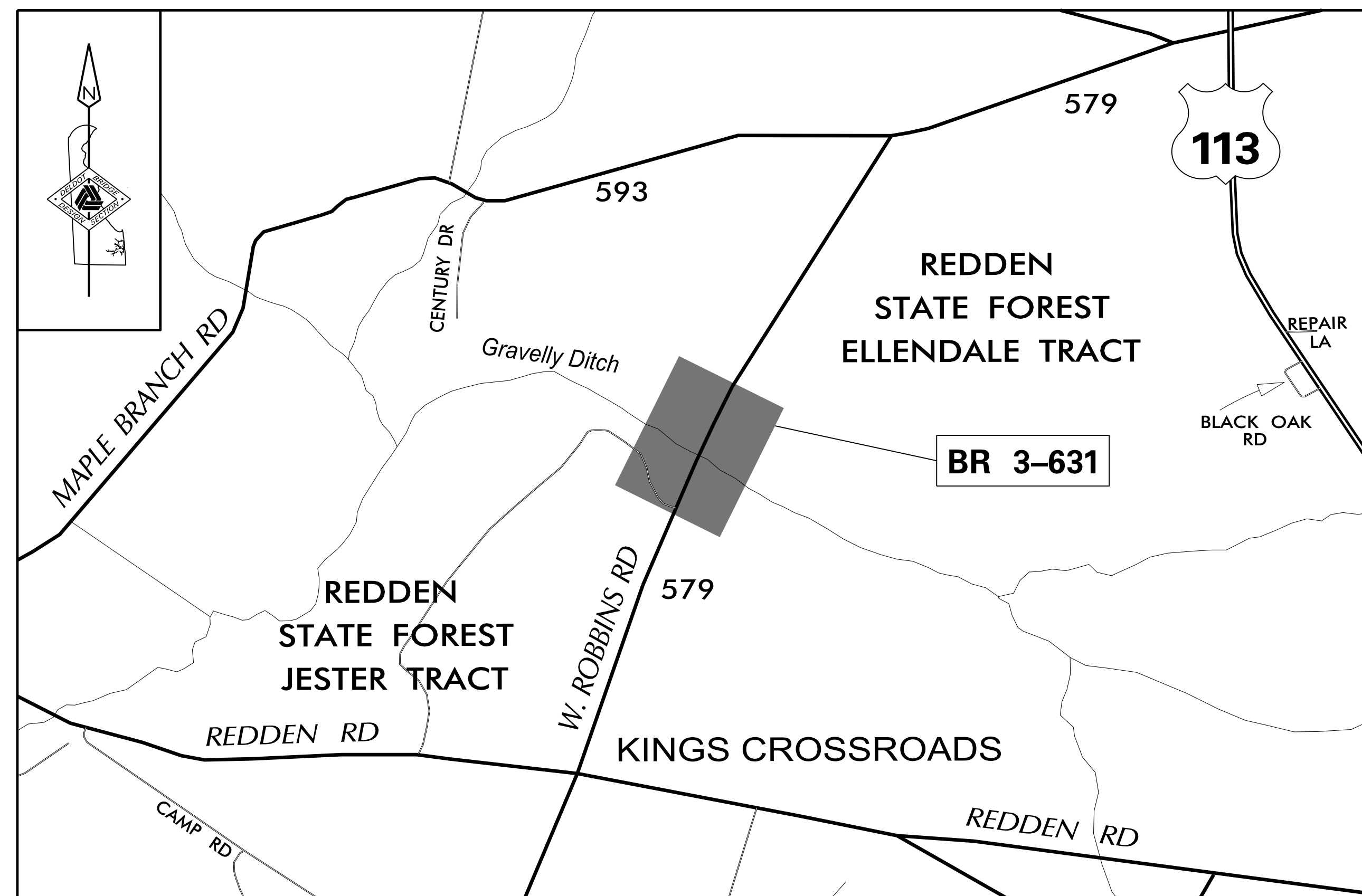
U.S. CUSTOMARY
UNITS



CONSTRUCTION AND RIGHT-OF-WAY PLANS FOR: BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT NUMBER: T201907302
FEDERAL AID PROJECT NUMBER: EBROS-S579(1)

COUNTY: SUSSEX M.R. #: 579



LOCATION MAP
NOT TO SCALE

DESIGN DESIGNATION			
MRD #: 5579	ROAD NAME: WEST ROBBINS ROAD		
FUNCTIONAL CLASS: RURAL LOCAL ROAD	D.H.V. PROJECTED: 50	YEAR: 2040	
TYPE OF CONSTRUCTION: BRIDGE REPLACEMENT	DESIGN SPEED: 55 M.P.H.		
A.A.D.T. CURRENT: 300	YEAR: 2019	TRUCKS: 13%	
A.A.D.T. PROJECTED: 340	YEAR: 2040	DIRECTION OF DISTRIBUTION: 61%	
APPROVED DESIGN EXCEPTIONS			
DESIGN PARAMETER	REQUIRED	PROVIDED	DATE
ADDENDA/ REVISIONS			
ASSOCIATED CONTRACTS			
CONTRACT NO.	CONTRACT NAME		
414	COKESBURY - ROBBINS		

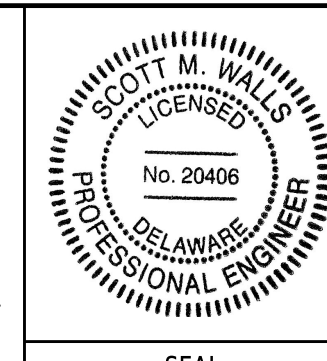
APPROVED FOR ADVERTISEMENT

 DIRECTOR OF TRANSPORTATION SOLUTIONS DATE: 04/03/2022

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
BRIDGE DESIGN

Scott M. Walls 04/01/2022 DATE

THIS SEAL APPLIES TO ALL SHEETS BEARING THE "BR" SECTION DESIGNATION.



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ADDENDA / REVISIONS	NOT TO SCALE	BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH	CONTRACT	BRIDGE NO.	3-631	INDEX OF SHEETS & ADDENDA & REVISIONS	SECTION
			T201907302	DESIGNED BY:			E. YODER
			COUNTY	CHECKED BY:	S. WALLS		2
			SUSSEX				

MANMADE ROADSIDE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BOLLARD - STEEL POLE	⊙		
BOLLARD - WOOD POST	⊠		
CURB, TYPE 1 AND TYPE 3		=====	
CURB, TYPE 2	CURB, TYPE "X"	=====	
CURB & GUTTER, TYPE 1		=====	(C/XXX)
CURB & GUTTER, TYPE 2		=====	
CURB & GUTTER, TYPE 3	C&G, TYPE "X"	=====	
CURB OPENING - SUMP / ON GRADE			(C/O)
CURB OPENING WITH SIDEWALK			(C/SW)
FENCE - CHAINLINK OR STRANDED	—x—	—o—o—o—	(F)
FENCE - STOCKADE OR SPLIT RAIL	—o—o—o—	—•—•—•—	(F/XXX)
FLAG POLE	F.P.		
GUARDRAIL - STEEL BEAM, TYPE 1			
GUARDRAIL - STEEL BEAM, TYPE 2			
GUARDRAIL - STEEL BEAM, TYPE 3			
GUARDRAIL - WIRE ROPE			
GUARDRAIL - END ANCHORAGE			(OR/XXX)
GUARDRAIL - END TREATMENT, TYPE 1			
GUARDRAIL - END TREATMENT, TYPE 2			
GUARDRAIL - END TREATMENT, TYPE 3			
GUARDRAIL - IMPACT ATTENUATOR			
LAMP AND POST - RESIDENTIAL	LAMP ⊙		
MAILBOX	MB ⊠	MB ■	
PARKING METER AND POST	P.M. ⊙		
PAVEMENT - FLEXIBLE	-----		
PAVEMENT - RIGID	=====		
PILE - BRIDGE	□		
PILLAR OR MISCELLANEOUS POST	○		
TRAFFIC SIGN AND POST	⊥	●→	
WALL - BRICK OR BLOCK	□□□□		
WALL - STONE	□□□□		

DRAINAGE FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	ID
BIOFILTRATION SWALE		← BFS → x	
DITCH OR STREAM CENTERLINE	—∞—	x → → x	
DIRECTIONAL STREAM FLOW ARROW		→	
DRAINAGE INLET	C.B. □ / D.I. □	■	(DI/XXX)
DRAINAGE JUNCTION BOX	J.B. □	■	(JB/XXX)
DRAINAGE MANHOLE	⊙	●	(MH/XXX)
DRAINAGE PIPE AND FLOW ARROW	— SIZE/TYPE LABEL —	→	(P/XXX)
FLARED END SECTION			(FE/XXX)
RIPRAP - AREA FEATURE			(RR/XXX)
RIPRAP - LINEAR FEATURE			
SAFETY END SECTION			(SES/XXX)
UNDERDRAIN		→	(UD/XXX)
UNDERDRAIN OUTLET		→	(UDO/XXX)

UTILITY FEATURES			
FEATURE DESCRIPTION	EXISTING	PROPOSED	
CABLE TV DISTRIBUTION BOX	TV		
COMMUNICATIONS - UNDERGROUND	— COMM(A) —	— COMM —	
ELECTRIC - UNDERGROUND	— E(A) —	— E —	
ELECTRIC MANHOLE	⊙		
ELECTRIC METER	EM		
ELECTRIC TRANSFORMER	E		
GAS - UNDERGROUND	— G(A) —	— G —	
GAS MANHOLE	⊙		
GAS METER	G.M.		
GAS VALVE	G.V.		
GAS PUMP - SERVICE STATION	G.P.		
IRRIGATION - UNDERGROUND	— IR(A) —	— IR —	
ITMS - UNDERGROUND	--- ITMS(A) ---	--- ITMS ---	
LIGHTING - UNDERGROUND	--- LI(A) ---	--- LI ---	
LUMINAIRE - POLE MOUNTED			
MANHOLE - UNDETERMINED OWNER	⊙		
RAILROAD TRACKS			
SANITARY - UNDERGROUND	— S(A) —	— S —	
SANITARY SEWER MANHOLE	⊙		
SANITARY SEWER VALVE	S.V.		
SANITARY SEWER CLEANOUT OR VENT	S.C.O.		
SEPTIC DRAIN FIELD	S.D.F.		
SIGNALIZATION - UNDERGROUND	--- SIG(A) ---	--- SIG ---	
SOIL BORING LOCATION	⊙		
TELEPHONE BOOTH	B		
TELEPHONE MANHOLE	⊙		
TELEPHONE TEST POINT	T		
TRAFFIC - CONDUIT JUNCTION WELL	J.W.		
TRAFFIC - LIGHT POLE AND BASE	⊙		
TRAFFIC - PEDESTRIAN POLE & BASE	⊙	■	
TRAFFIC - SIGNAL CABINET & BASE	⊙	■	
TRAFFIC - SIGNAL POLE AND BASE	⊙	⊙	
UTILITY BOX	U		
UTILITY MARKER	⊙		
UTILITY POLE GUY WIRE ANCHOR	↔	↔	
UTILITY POLE	⊙	■	
UTILITY TEST HOLE LOCATION	⊙		
WATER - UNDERGROUND	— W(A) —	— W —	
WATER - FIRE HYDRANT	F.H.	F.H.	
WATER METER	W.M.		
WATER VALVE	W.V.	W.V.	
WELL HEAD	WELL		

PAVEMENT SECTION(S)	
2" SUPERPAVE, TYPE C HOT-MIX	
2.25" SUPERPAVE, TYPE B HOT-MIX	
6" GABC, TYPE B	

NATURAL ROADSIDE FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
HEDGEROW OR THICKET		
MARSH BOUNDARY LINE		
TREE - CONIFEROUS		
TREE - DECIDUOUS		
TREE STUMP	⊙	
SHRUBBERY		
WETLAND BOUNDARY - DELINEATED	— WL —	
WOODS LINE BOUNDARY		

RIGHT-OF-WAY FEATURES		
FEATURE DESCRIPTION	EXISTING	PROPOSED
DENIAL OF ACCESS	— DA —	— DA —
EASEMENT - OTHERS	— EASEMENT TYPE —	
PERMANENT EASEMENT	--- PE ---	--- PE ---
PROPERTY LINE		
PROPERTY MARKER - CONCRETE	C.M.	⊠
PROPERTY MARKER - IRON PIPE	I.P.	⊠
RIGHT-OF-WAY BASELINE	100+00	100+00
RIGHT-OF-WAY LINE	---	R/W
RIGHT-OF-WAY & DENIAL OF ACCESS	— R/W-DA —	— R/W-DA —
RIGHT-TO-ENTER		— RTE —
TEMPORARY CONSTRUCTION EASEMENT		--- TCE ---

SURVEY CONTROL & MONUMENTATION	
FEATURE DESCRIPTION	EXISTING
POINT OF CURVATURE OR TANGENCY	⊙
POINT OF INTERSECTING TANGENTS	⊙
SURVEY BENCHMARK LOCATION	B.M.
SURVEY NGS POINT LOCATION	⊙
SURVEY TIE POINT LOCATION	T.P.
SURVEY TRAVERSE POINT	△

MISCELLANEOUS FEATURES	
FEATURE DESCRIPTION	PROPOSED
BARRIER, DOUBLE-FACED, PERMANENT	
BARRIER, SINGLE-FACED, PERMANENT, TEST LEVEL 4 / TEST LEVEL 5	
BRICK PATTERNED SURFACE	
BUTT JOINT	
CLEAR ZONE	— CZ —
CONSTRUCTION BASELINE	100+00
LATERAL OFFSET	— LO —
LIMIT OF CONSTRUCTION	--- LOC ---
PAVEMENT PATCH	
PAVEMENT REMOVAL - TOPSOIL, SEED AND MULCH	
P.C.C. SIDEWALK - 4"	
P.C.C. SIDEWALK - 6" (USE 8" DEPTH FOR CHANNELIZATION ISLANDS.)	

IDENTIFIERS	
FEATURE DESCRIPTION	ID
ABANDON BY CONTRACTOR	(AB/C)
ABANDON BY OTHERS	(AB/O)
ADJUST BY CONTRACTOR	(A/C)
ADJUST BY OTHERS	(A/O)
BEST MANAGEMENT PRACTICE	(BMP/XXX)
BUS STOP PAD / TYPE	(BSP/X)
BUS STOP WITH SHELTER PAD / TYPE	(BSSP/X)
CONCRETE SAFETY BARRIER	(B/XXX)
CONVERT TO JUNCTION BOX	(CJB/XXX)
CONVERT TO DRAINAGE MANHOLE	(CMB/XXX)
DO NOT DISTURB	(DND)
ENERGY DISSIPATOR	(ED/XXX)
FILL WITH FLOWABLE FILL	(FF/C)
LANDSCAPE PLANTINGS	(LS/XXX)
PEDESTRIAN CONNECTION / TYPE	(PC/XX)
PEDESTRIAN CONNECTION / TYPE WITHOUT DETECTABLE WARNING SYSTEM	(PC-W/XXX)
RELOCATE BY CONTRACTOR	(RL/C)
RELOCATE BY OTHERS	(RL/O)
RELOCATE BY PROPERTY OWNER	(RL/PO)
REMOVE BY CONTRACTOR	(RM/C)
REMOVE BY OTHERS	(RM/O)
REMOVE BY TRAFFIC CONTRACTOR	(RM/TC)
RIGHT-OF-WAY MONUMENT	(R/XXX)

LAST REVISED: 09/02/2020
 16 MAY 2022
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ADDENDA / REVISIONS	NOT TO SCALE	BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH	CONTRACT T201907302	BRIDGE NO. 3-631	SECTION BR
			COUNTY SUSSEX	DESIGNED BY: E. YODER	LEGEND
				CHECKED BY: S. WALLS	SHEET NO. 3

GENERAL NOTES

1. THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED JUNE 2021 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED DECEMBER 2021.

2. ELECTRONIC DESIGN DATA FILES THAT WILL BE MADE AVAILABLE TO THE BIDDERS INCLUDE:

()	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D TRIANGLES REPRESENTING THE EXISTING SURFACE.
(X)	DESIGN FILE, IN .DGN FILE FORMAT, THAT CONTAINS 3D FEATURE LINES FOR THE PROPOSED DESIGN. 3D FEATURE LINES ARE FOR THE PROPOSED TOP SURFACE ELEVATION ONLY.

NOTE: THE DOCUMENT ENTITLED "ELECTRONIC FILE SHARING RELEASE" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

NOTE: THERE MAY BE SOME AREAS OF THE PROJECT NOT INCLUDED IN THE ELECTRONIC DESIGN DATA FILE(S). IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE DESIGN DATA FILE AND DETERMINE THE LIMITS OF THE PROJECT INCLUDED.

3. PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR, INCLUDE:

(X)	CROSS SECTIONS
(X)	RIGHT-OF-WAY PLANS (WILL BE MADE AVAILABLE TO THE AWARDED CONTRACTOR)

PROJECT NOTES

SECTION 100

1. ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

2. THE CONTRACTOR WILL CONTACT THE DELAWARE TMC AT 302-659-4600 PRIOR TO ANY UNMANNED AERIAL VEHICLE (UAV) FLIGHTS. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE FOLLOWING INFORMATION: THE REGISTRATION NUMBER OF THE UAV, THE FLIGHT TIME, LOCATION OF THE FLIGHT, THE PILOT'S NAME AND THE PILOT'S CONTACT NUMBER DURING THE FLIGHT.

SECTION 200

3. REMOVAL OF UNSUITABLE MATERIAL:
SOIL BORINGS HAVE IDENTIFIED MATERIAL, DESCRIBED AS SATURATED LOOSE BROWN FINE TO COARSE SAND WITH SOME FINE GRAVEL AND SILT, THAT MAY BE UNSUITABLE FOR BEARING OF THE STRUCTURE AT ELEVATION 22.5' TO 18.5'. IF NECESSARY, EXCAVATE THIS LAYER TO A MAXIMUM DEPTH OF 4' BELOW THE BOTTOM OF FOOTING ELEVATION UNTIL SUITABLE BEARING MATERIAL IS REACHED, AS DIRECTED BY THE ENGINEER. EXCAVATION TO ELEVATION 18.5' IS INCLUDED IN THE QUANTITY FOR STRUCTURAL EXCAVATION. BACKFILL EXCAVATION BELOW THE FOOTING ELEVATION WITH DELAWARE #57 STONE ON GEOTEXTILE. PAYMENT UNDER ITEM #302005 AND ITEM #708001, RESPECTIVELY.

4. ITEMS TO BE REMOVED UNDER ITEM 211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

- REMOVAL OF THREE (3) EXISTING 142" X 91" CORRUGATED METAL PIPE ARCHES WITH PAVED INSERTS AND CONCRETE HEADWALLS.
- REMOVAL OF FOUR (4) EXISTING 24" DIAMETER REINFORCED CONCRETE DRAINAGE PIPES AND SACK CONCRETE RIPRAP.
- REMOVAL OF FOUR (4) EXISTING WOODEN POSTS ON SOUTHERN MAINTENANCE ACCESS, BOTH UPSTREAM AND DOWNSTREAM.
- REMOVAL OF EXISTING RIPRAP. EXISTING STONE MAY BE RE-USED IF IT MEETS THE REQUIREMENTS FOR R-4 RIPRAP.
- REMOVAL OF TWO (2) 24" TREES AT SOUTHWEST CORNER OF EXISTING STRUCTURE
- REMOVAL OF COUCHES AND ANY DEBRIS IN STREAM.

5. HAZARDOUS MATERIAL:
BE ADVISED THAT THE PREVIOUS STRUCTURE OVER GRAVELLY DITCH MAY CONTAIN CREOSOTED TIMBER. HANDLE ALL HAZARDOUS MATERIALS IN ACCORDANCE WITH SPECIAL PROVISION #202560. COST INCLUDED UNDER ITEM #211000 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS.

SECTION 600

6. PORTLAND CEMENT CONCRETE:
USE PORTLAND CEMENT CONCRETE FOR PRECAST ELEMENTS AS FOLLOWS:
(f'c = 5.0 ksi, 28-DAY COMPRESSIVE STRENGTH)

- RIGID FRAME
- WINGWALLS
- FOOTERS
- HEADWALL

7. BAR REINFORCEMENT:
- PROVIDE REINFORCING STEEL CONFORMING TO AASHTO M31 (ASTM A615), GRADE 60.
- PROVIDE A 3" CLEAR COVER FOR ALL REINFORCING STEEL PLACED IN CONCRETE CAST AGAINST EARTH OR A 2" CLEAR COVER ELSEWHERE, UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- WHERE A SUFFIX IS INCLUDED IN BAR MARKS, PROTECT ALL REINFORCING STEEL WITH THE MATERIAL DENOTED.
SUFFIX 'E' DENOTES EPOXY COATED BAR REINFORCEMENT
SUFFIX 'G' DENOTES GALVANIZED BAR REINFORCEMENT
SUFFIX 'S' DENOTES STAINLESS STEEL BAR REINFORCEMENT
- WITH APPROVAL OF THE BRIDGE DESIGN ENGINEER, GALVANIZED REINFORCING STEEL MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL AT NO ADDITIONAL COST TO THE DEPARTMENT.

8. THE FACTORED BEARING RESISTANCE OF SOIL BENEATH PRECAST ELEMENTS IS 3.26 TSF.

SECTION 700

9. SAWCUTTING:
ALL PAVED AREAS TO BE RECONSTRUCTED OR WIDENED SHALL BE SAWCUT AT THE POINT WHERE THE NEW PAVEMENT IS TO TIE INTO THE EXISTING PAVEMENT.

10. THE CONTRACTOR SHALL DELIVER ALL EXCESS MILLED MATERIAL TO THE DELAWARE DEPARTMENT OF TRANSPORTATION'S ELLENDALE MAINTENANCE YARD. THE MATERIAL SHALL BE NEATLY STOCKPILED AT THE YARD. COSTS FOR THIS WORK SHALL BE INCIDENTAL TO THE MILLING ITEM UTILIZED FOR PAYMENT ON THE CONTRACT.

SECTION 800

11. MAINTENANCE OF TRAFFIC:
MAINTAIN TRAFFIC AS PER DETOUR PLAN. ALL MOT ITEMS, WITH THE EXCEPTION OF PORTABLE CHANGEABLE MESSAGE SIGNS (ITEM #803001) AND FLAGGERS (ITEM #811003 AND #811015), WILL BE INCLUDED IN ITEM #801500 - MAINTENANCE OF TRAFFIC, ALL INCLUSIVE.

SECTION 900

12. THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S STORMWATER SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

13. USE OF WELL POINTS:
SOIL BORINGS HAVE IDENTIFIED POTENTIAL ISSUES WITH A HIGH WATER TABLE AND/OR RUNNING SANDS, DESCRIBED AS SATURATED VERY LOOSE BROWN FINE GRAVELLY COARSE SAND WITH SOME FINE SAND, TRACE OF SILT AT ELEVATION 22.50. IF NEEDED AND WITH APPROVAL OF THE ENGINEER, INSTALL A WELL POINT SYSTEM TO LOWER THE GROUNDWATER ELEVATION. PAYMENT UNDER ITEM #906006 - WELL POINT SYSTEM.

MISCELLANEOUS

14. DESIGN SPECIFICATIONS:
(A) DELDOT BRIDGE DESIGN MANUAL, 2021 EDITION
(B) AASHTO LRFD BRIDGE SPECIFICATIONS, 2017, 8TH EDITION, CUSTOMARY U.S. UNITS.

15. LOADING:
-DESIGN LIVE LOADS INCLUDE HL-93 LOADING.

16. HYDRAULIC DATA:

DRAINAGE AREA:	8.70 sq. miles	DESIGN FREQ.:	25 YEARS
DESIGN DISCHARGE:	636 cfs	100-YEAR DISCHARGE:	946 cfs
EXISTING (DESIGN STORM) WSE:	36.60 ft	PROPOSED (DESIGN STORM) WSE:	36.54 ft
EXISTING (DESIGN STORM) VELOCITY:	3.21 fps	PROPOSED (DESIGN STORM) VELOCITY:	3.12 fps
EXISTING 100-YEAR WSE:	38.14 ft	PROPOSED 100-YEAR WSE:	38.19 ft
EXISTING 100-YEAR VELOCITY:	2.90 fps	PROPOSED 100-YEAR VELOCITY:	3.68 fps
EXISTING WATERWAY OPENING:	199 sq. ft	PROPOSED WATERWAY OPENING:	204 sq. ft

17. SCOUR ANALYSIS:
SCOUR DESIGN FREQUENCY: OVERTOPPING
SCOUR DESIGN FLOOD DISCHARGE: 750 cfs
SCOUR DESIGN FLOOD VELOCITY: 3.67 fps (AT BRIDGE OUTLET)
WATER SURFACE ELEVATION: 37.38 ft (IMMEDIATELY UPSTREAM OF BRIDGE)

SCOUR COUNTERMEASURES HAVE BEEN DESIGNED FOR THE SCOUR DESIGN FLOOD IN ACCORDANCE WITH HEC 14 - HYDRAULIC DESIGN OF ENERGY DISSIPATORS FOR CULVERTS AND CHANNELS.

18. MILLINGS ARE NOT AN ACCEPTABLE SUBSTITUTION FOR GABC.

19. DELIVER EXCAVATED FILL MATERIAL TO THE REDDEN STATE FOREST. DELIVERY LOCATION IS ON CAMP ROAD, OFF REDDEN ROAD, LOCATED APPROXIMATELY 1.25 MILES SOUTH OF THE PROJECT SITE. CONTACT DNREC'S REDDEN STATE FOREST OFFICE AT 302-856-2893 TO COORDINATE FURTHER DETAILS. PAYMENT FOR DELIVERY WILL BE INCLUDED UNDER THE RESPECTIVE EXCAVATION ITEMS IN THE CONTRACT.

LOAD RATING SUMMARY

DESIGN VEHICLE	RATING FACTOR	RATING WEIGHT (TON)	CONTROLLING MEMBER	CONTROLLING POINT	LOAD EFFECT
HL-93 TRUCK+LANE (INVENTORY)	2.21	N/A	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
HL-93 TANDEM+LANE (INVENTORY)	1.80	N/A	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
HS-20 (INVENTORY)	2.21	79.56	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
HL-93 TRUCK+LANE (OPERATING)	2.86	N/A	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
HL-93 TANDEM+LANE (INVENTORY)	2.33	N/A	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
HS-20 (OPERATING)	2.86	102.96	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE S220 & LEGAL-LANE (LEGAL)	4.25	85.00	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE S535 & LEGAL-LANE (LEGAL)	2.24	78.40	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE S437 & LEGAL-LANE (LEGAL)	2.24	82.07	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE T330 & LEGAL-LANE (LEGAL)	4.06	121.80	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE T435 & LEGAL-LANE (LEGAL)	3.02	105.70	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
DE T540 & LEGAL-LANE (LEGAL)	2.98	119.20	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
EV2 (EMERGENCY VEHICLE)	2.84	81.65	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
EV3 (EMERGENCY VEHICLE)	1.95	83.85	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
SU4 (LEGAL)	3.06	82.62	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
SU5 (LEGAL)	2.89	89.59	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
SU6 (LEGAL)	2.74	95.22	SPAN 1: INTERIOR BEAM	105	STRENGTH 1
SU7 (LEGAL)	2.61	101.14	SPAN 1: INTERIOR BEAM	105	STRENGTH 1

ADDENDA / REVISIONS

NOT TO SCALE

BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH

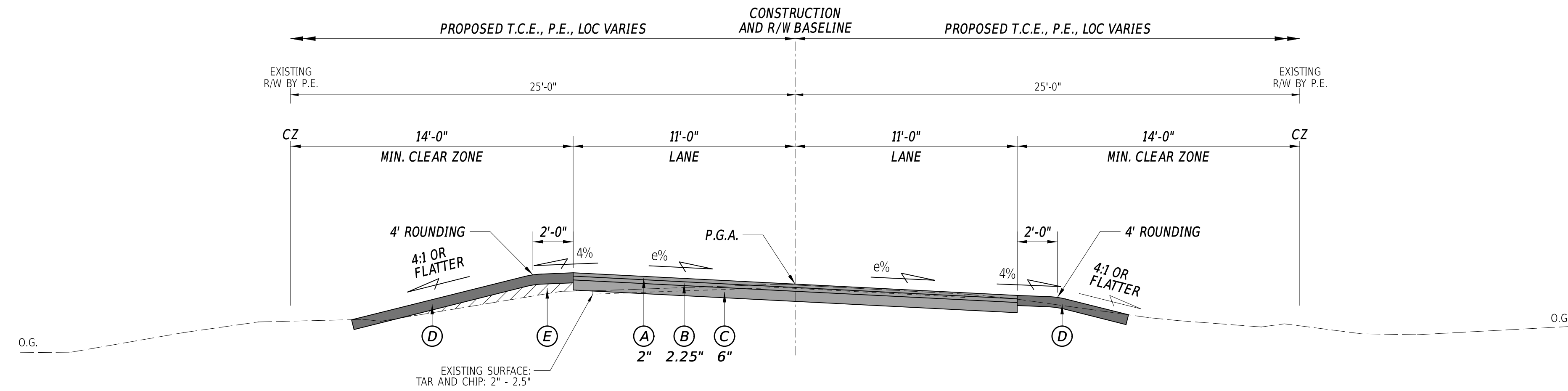
CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

NOTES

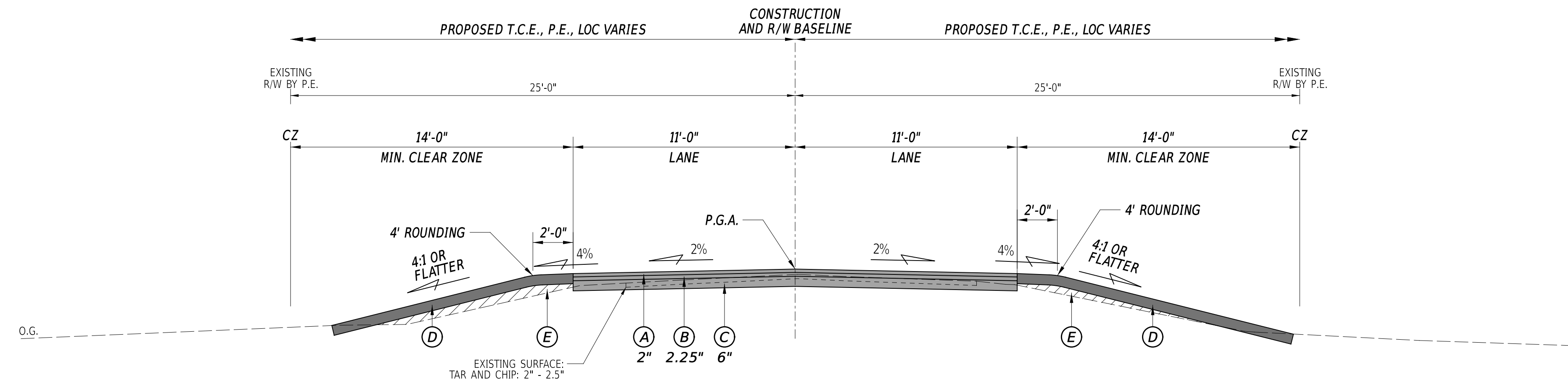
SECTION
BR
SHEET NO.
4

LEGEND

- (A) ITEM #401005 - SUPERPAVE TYPE C, PG 64-22 (CARBONATE STONE)
- (B) ITEM #401014 - SUPERPAVE TYPE B, PG 64-22
- (C) ITEM #301001 - GABC
- (D) ITEM #908004 - TOPSOIL, 6" DEPTH AND
ITEM #908019 - PERMANENT GRASS SEEDING, STREAMBANK AND
ITEM #908020 - BLANKET MULCH
- (E) ITEM #209006 - BORROW, TYPE F



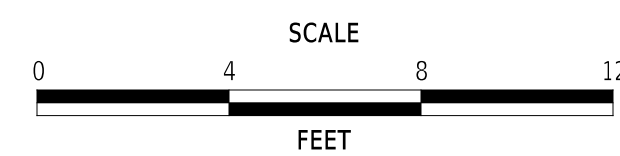
SUPERELEVATED ROADWAY SECTION
STATION 2+44.27 TO STATION 8+32.52



TYPICAL PROPOSED ROADWAY SECTION
STATION 0+27.09 TO STATION 2+44.27
STATION 8+32.52 TO STATION 8+40.84

MATERIAL TYPE	BINDER GRADE	LIFT THICKNESS (IN)	
		MINIMUM	MAXIMUM
TYPE C (4.75 MM MIX)	ALL	0.5	1.0
TYPE C (9.5 MM MIX)	ALL	1.25	2.0
TYPE C (12.5 MM MIX)	ALL	1.5	2.0
TYPE B (19 MM MIX)	76-22, 70-22	2.25	4.0
TYPE B (19 MM MIX)	64-22	2.25	6.0
TYPE BCBC (25 MM MIX)	64-22	3.0	6.0
GABC	-	4.0	8.0

ADDENDA / REVISIONS



**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

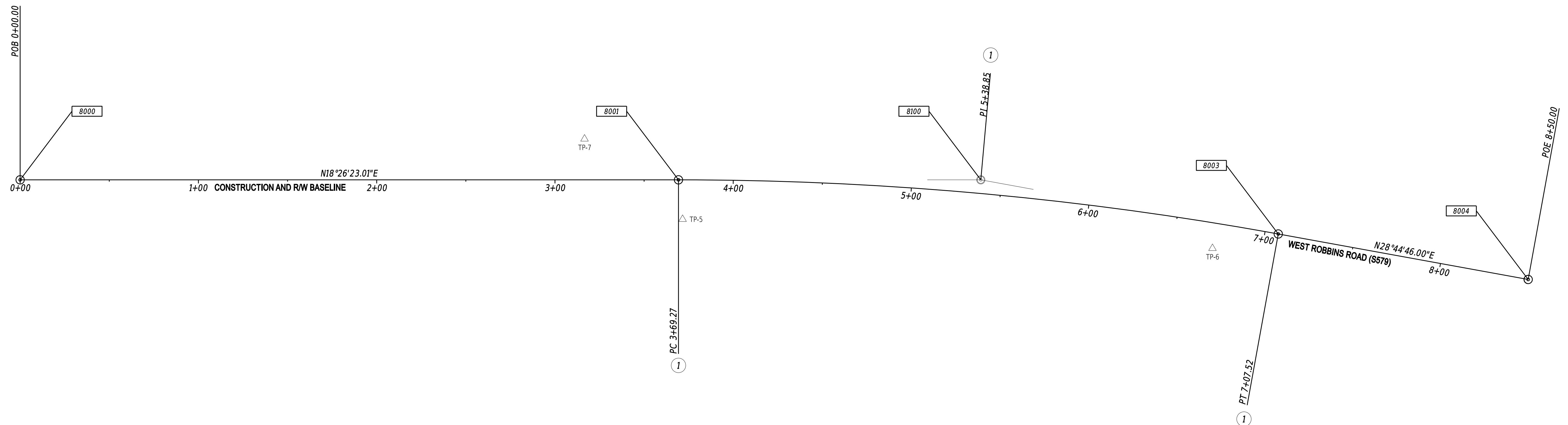
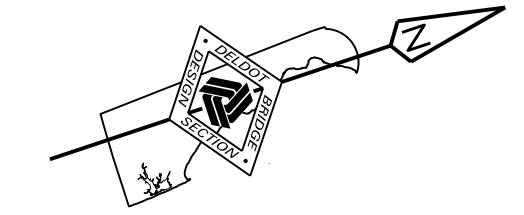
TYPICAL SECTIONS

SECTION
BR
SHEET NO.
5

CONSTRUCTION CIRCULAR CURVE NO. 1			
	STATION	NORTHING	EASTING
Curve Set Type: Circular			
PC (8001)	3+69.27	274197.5860	646387.2831
PI (8100)	5+38.85	274358.4602	646440.9227
CC (8002)		273602.8026	648171.1375
PT (8003)	7+07.52	274507.1420	646522.4792
Radius:	1880.40		
Delta:	10°18'22.99" Right		
Degree of Curvature (Arc):	03°02'49.20"		
Length:	338.25		
Tangent:	169.58		
Chord:	337.79		
Middle Ordinate:	7.60		
External:	7.63		
Tangent Direction:	N 18°26'23.01" E		
Radial Direction:	S 71°33'36.99" E		
Chord Direction:	N 23°35'34.51" E		
Radial Direction:	S 61°15'14.00" E		
Tangent Direction:	N 28°44'46.00" E		

HORIZONTAL / VERTICAL CONTROL DATA					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
TP-5	3+71.60	22.11	274199.7969	646388.0218	37.95
TP-6	6+72.39	14.21	274476.1854	646505.8729	36.95
TP-7	3+16.57	-22.92	274147.5924	646370.6139	38.05

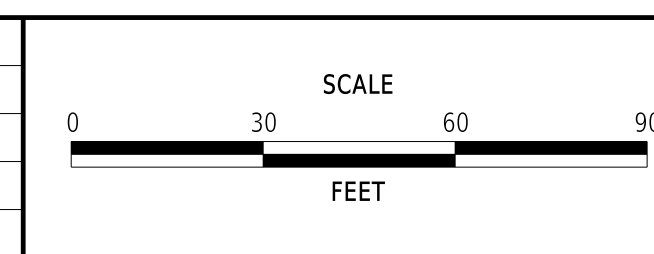
CONSTRUCTION ALIGNMENT CONTROL				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
8000	0+00.00	0.00	273847.2734	646270.4798
8004	8+50.00	0.00	274632.0617	646591.0015



DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983 (NAD 83).
VERTICAL - THIS PROJECT IS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

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ADDENDA / REVISIONS



BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

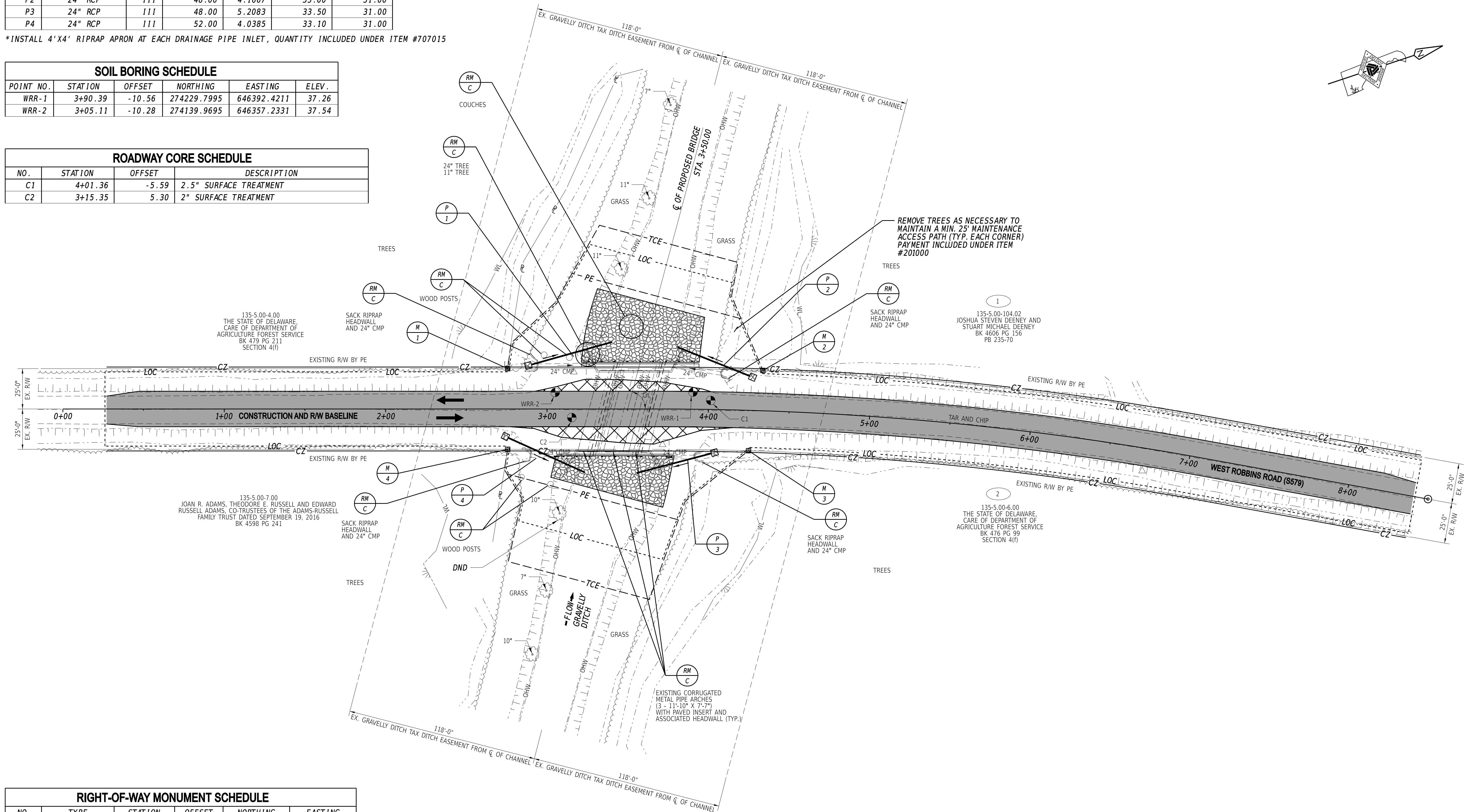
HORIZONTAL AND VERTICAL CONTROL	SECTION
	BR
	SHEET NO.
	6

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INVERT EL.	DIS. EL.
P1	24" RCP	111	52.00	2.4038	32.25	31.00
P2	24" RCP	111	48.00	4.1667	33.00	31.00
P3	24" RCP	111	48.00	5.2083	33.50	31.00
P4	24" RCP	111	52.00	4.0385	33.10	31.00

*INSTALL 4'X4' RIPRAP APRON AT EACH DRAINAGE PIPE INLET, QUANTITY INCLUDED UNDER ITEM #707015

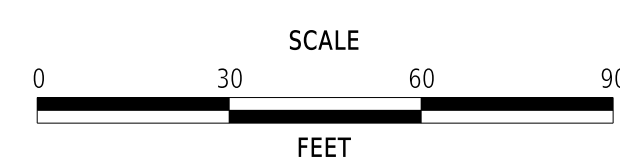
SOIL BORING SCHEDULE					
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.
WRR-1	3+90.39	-10.56	274229.7995	646392.4211	37.26
WRR-2	3+05.11	-10.28	274139.9695	646357.2331	37.54

ROADWAY CORE SCHEDULE				
NO.	STATION	OFFSET	DESCRIPTION	
C1	4+01.36	-5.59	2.5" SURFACE TREATMENT	
C2	3+15.35	5.30	2" SURFACE TREATMENT	



RIGHT-OF-WAY MONUMENT SCHEDULE					
NO.	TYPE	STATION	OFFSET	NORTHING	EASTING
M1	CAPPED REBAR	2+75.63	-25.00	274116.6589	646333.9468
M2	CAPPED REBAR	4+32.93	-25.00	274266.3249	646385.0000
M3	CAPPED REBAR	4+25.63	25.00	274242.1602	646429.3767
M4	CAPPED REBAR	2+75.63	25.00	274100.8435	646381.3797

ADDENDA / REVISIONS



**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

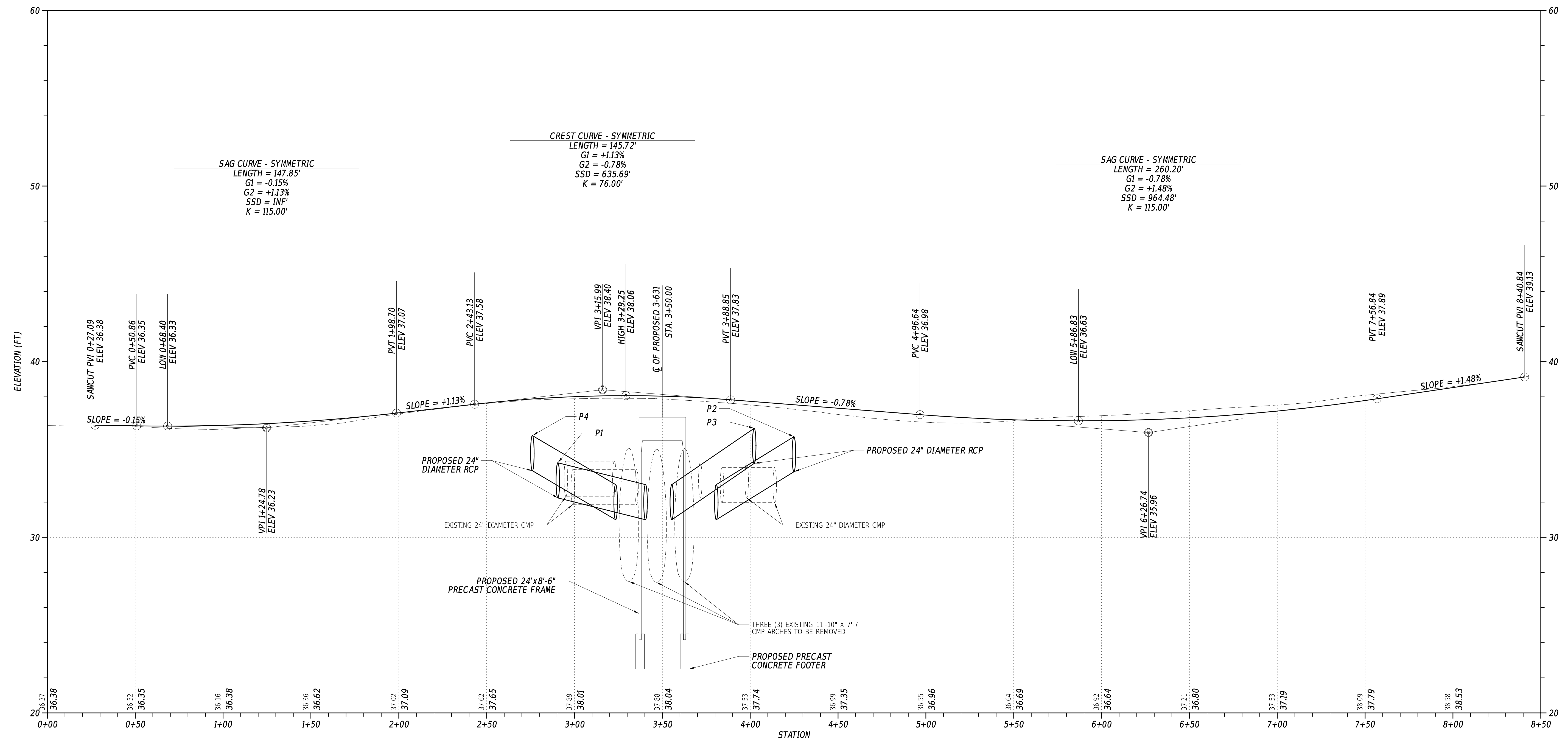
CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

CONSTRUCTION PLAN

SECTION	BR
SHEET NO.	7

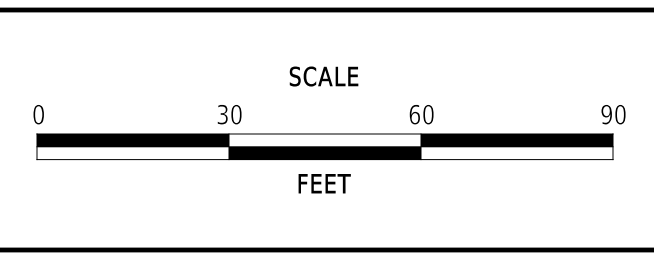
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S579 - WEST ROBBINS ROAD

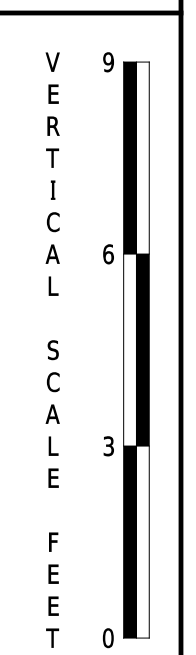
ADDENDA / REVISIONS	

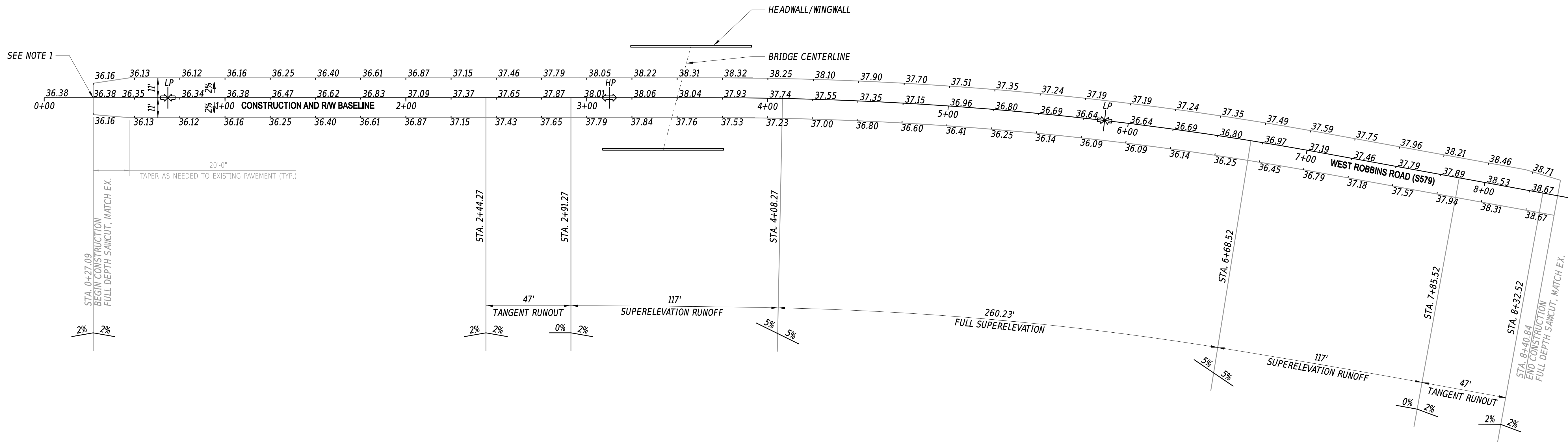
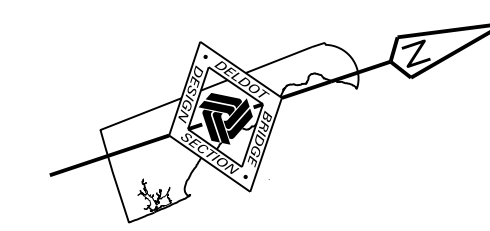


**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

CONTRACT	T201907302	BRIDGE NO.	3-631
COUNTY	SUSSEX	DESIGNED BY:	E. YODER
		CHECKED BY:	S. WALLS

PROFILE	SECTION	BR
	SHEET NO.	8

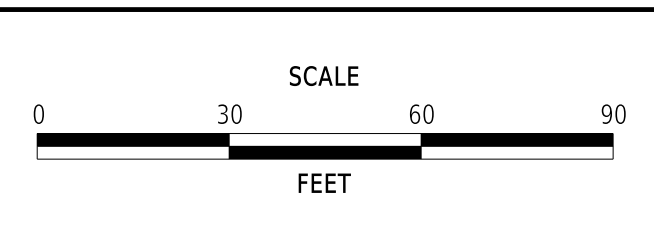




- NOTES:
1. PROPOSED PAVEMENT THAT TIES INTO EXISTING PAVEMENT SHALL MATCH GRADES AND CROSS SLOPE OF EXISTING PAVEMENT.
 2. ALL WORK REQUIRED FOR CALCULATING AND STAKING OF GRADES SHALL BE PAID FOR UNDER ITEM #763501 - CONSTRUCTION ENGINEERING.

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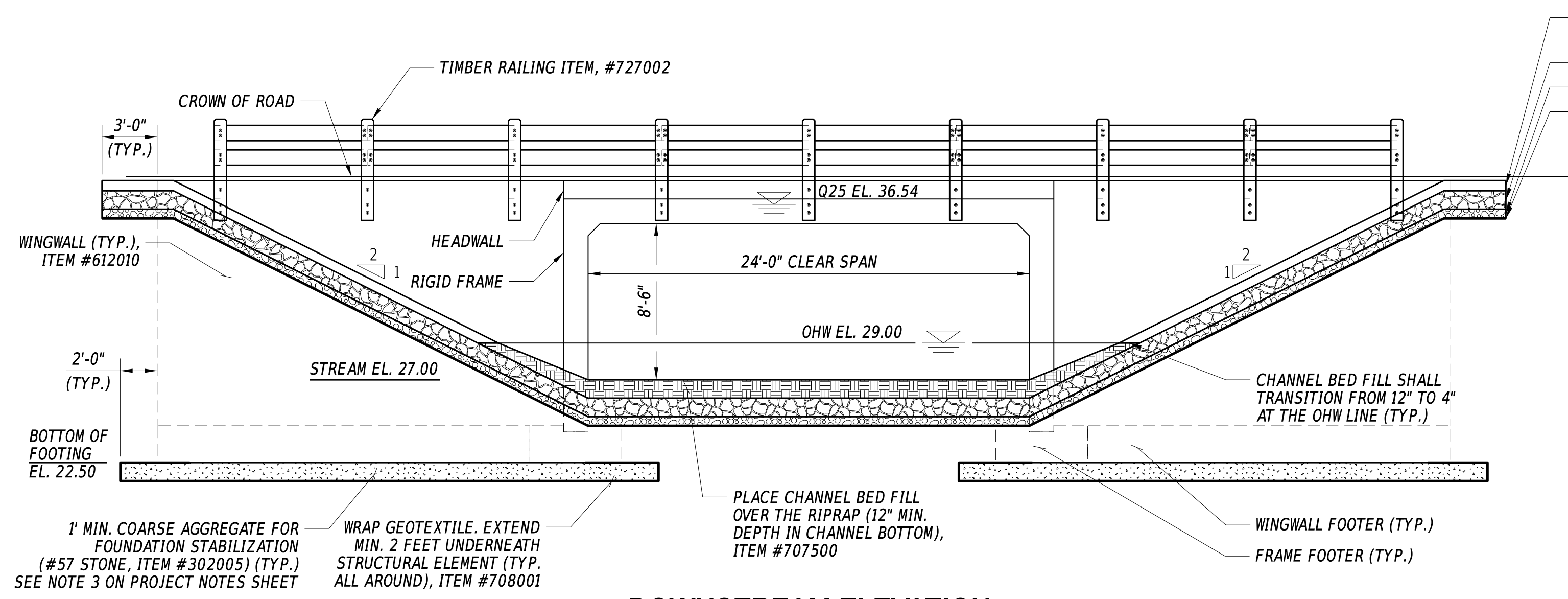
ADDENDA / REVISIONS	



**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

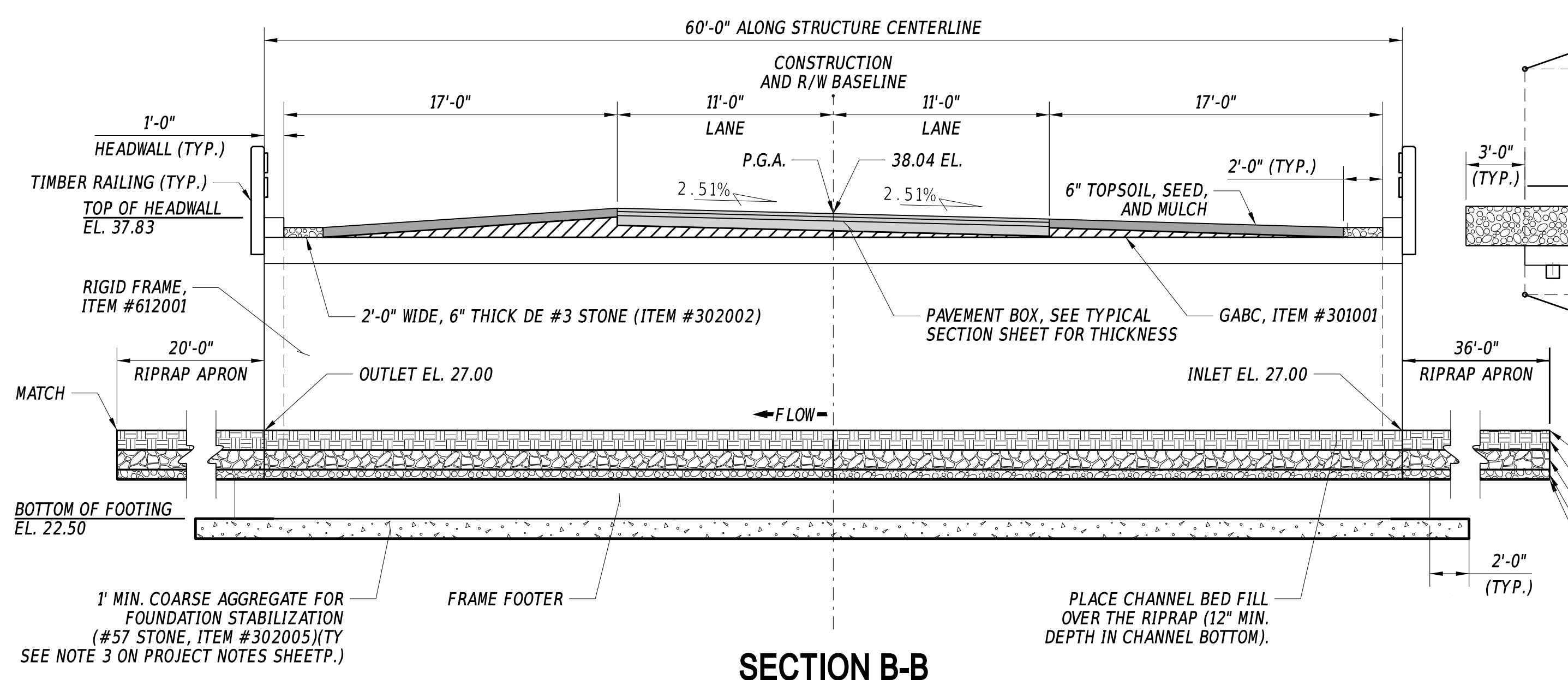
CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

GRADES AND GEOMETRICS	SECTION
	BR
	SHEET NO.
	9

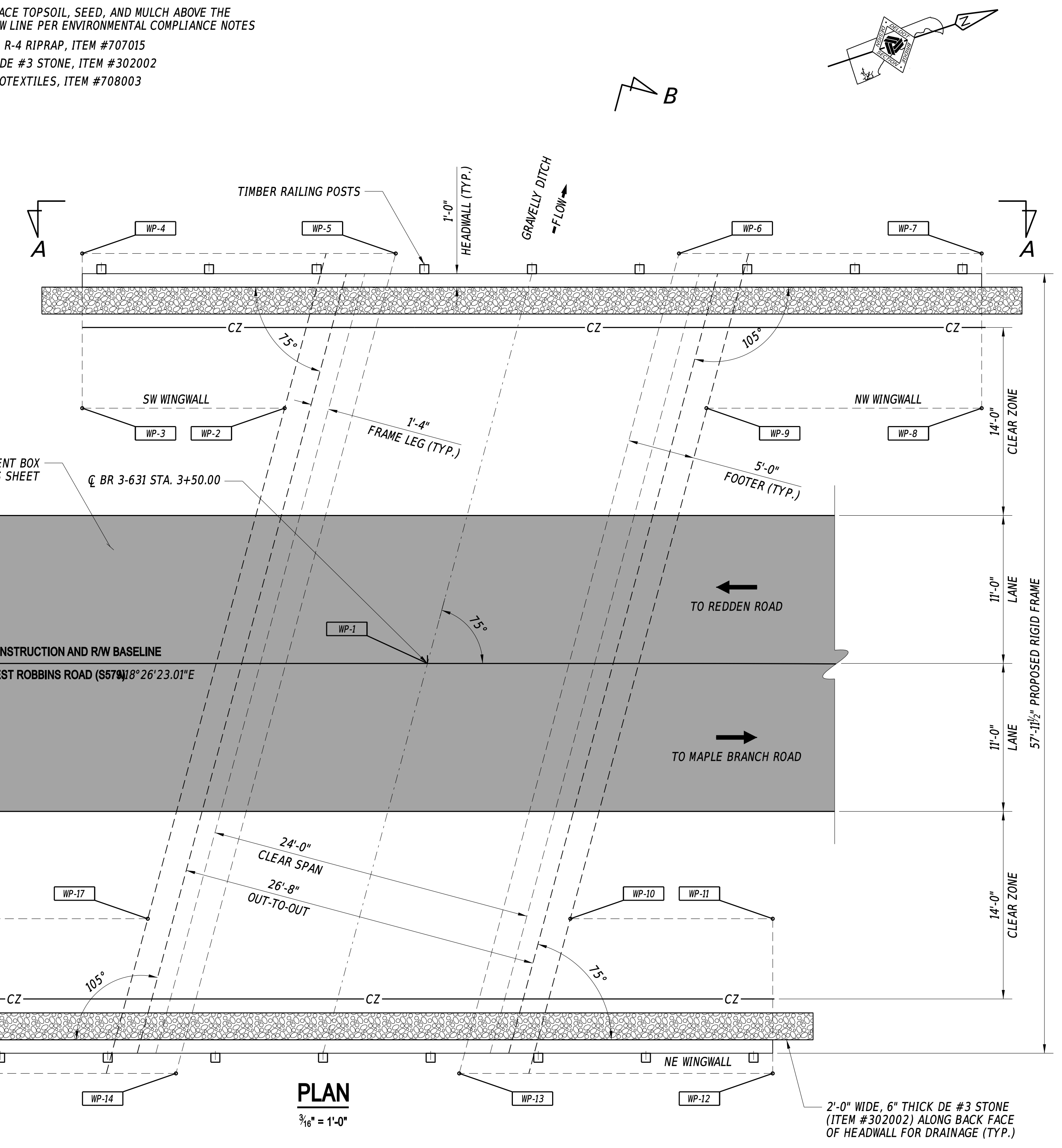


**DOWNSTREAM ELEVATION
(SECTION A-A)**
3/16" = 1'-0"

WORKING POINTS				
POINT NO.	STATION	OFFSET	NORTHING	EASTING
WP-1	3+50.00	0.00	274179.3034	646381.1872
WP-2	3+39.38	-18.98	274175.2346	646359.8257
WP-3	3+24.34	-18.98	274160.9648	646355.0677
WP-4	3+24.34	-30.48	274164.6023	646344.1582
WP-5	3+47.64	-30.48	274186.7059	646351.5281
WP-6	3+68.69	-30.48	274206.6758	646358.1865
WP-7	3+90.84	-30.60	274228.0168	646365.3022
WP-8	3+90.97	-19.10	274224.3793	646376.2118
WP-9	3+70.77	-18.98	274205.0257	646369.7588
WP-10	3+60.62	18.98	274183.3721	646402.5487
WP-11	3+75.72	18.97	274197.6419	646407.3067
WP-12	3+75.76	30.47	274194.0044	646418.2163
WP-13	3+52.36	30.48	274171.9008	646410.8463
WP-14	3+31.31	30.48	274151.9309	646404.1878
WP-15	3+08.81	30.48	274130.5899	646397.0721
WP-16	3+08.81	18.98	274134.2275	646386.1626
WP-17	3+29.21	18.98	274153.5811	646392.6156



SECTION B-B
3/16" = 1'-0"



PLAN
3/16" = 1'-0"

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ADDENDA / REVISIONS

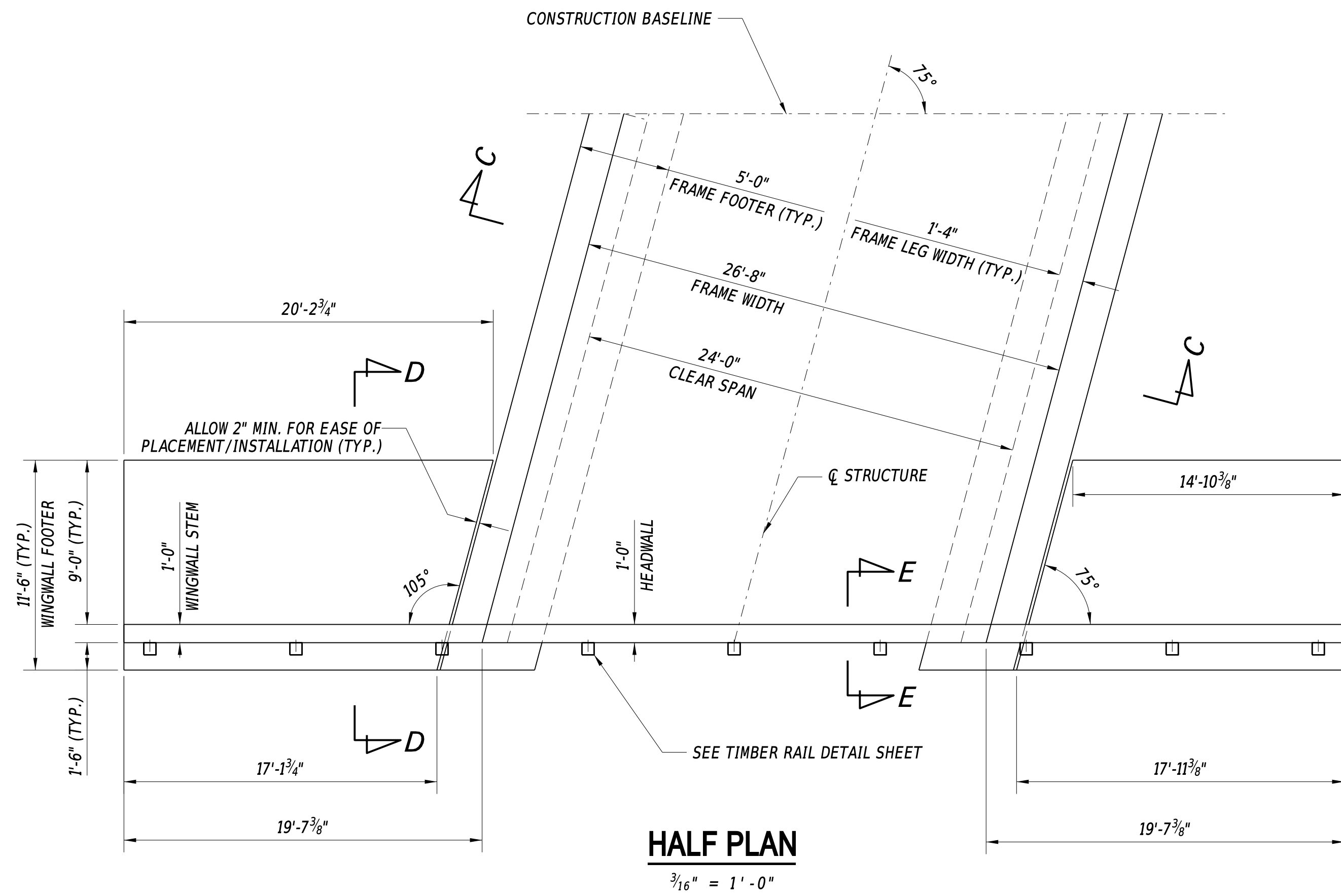
SCALE AS NOTED

**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

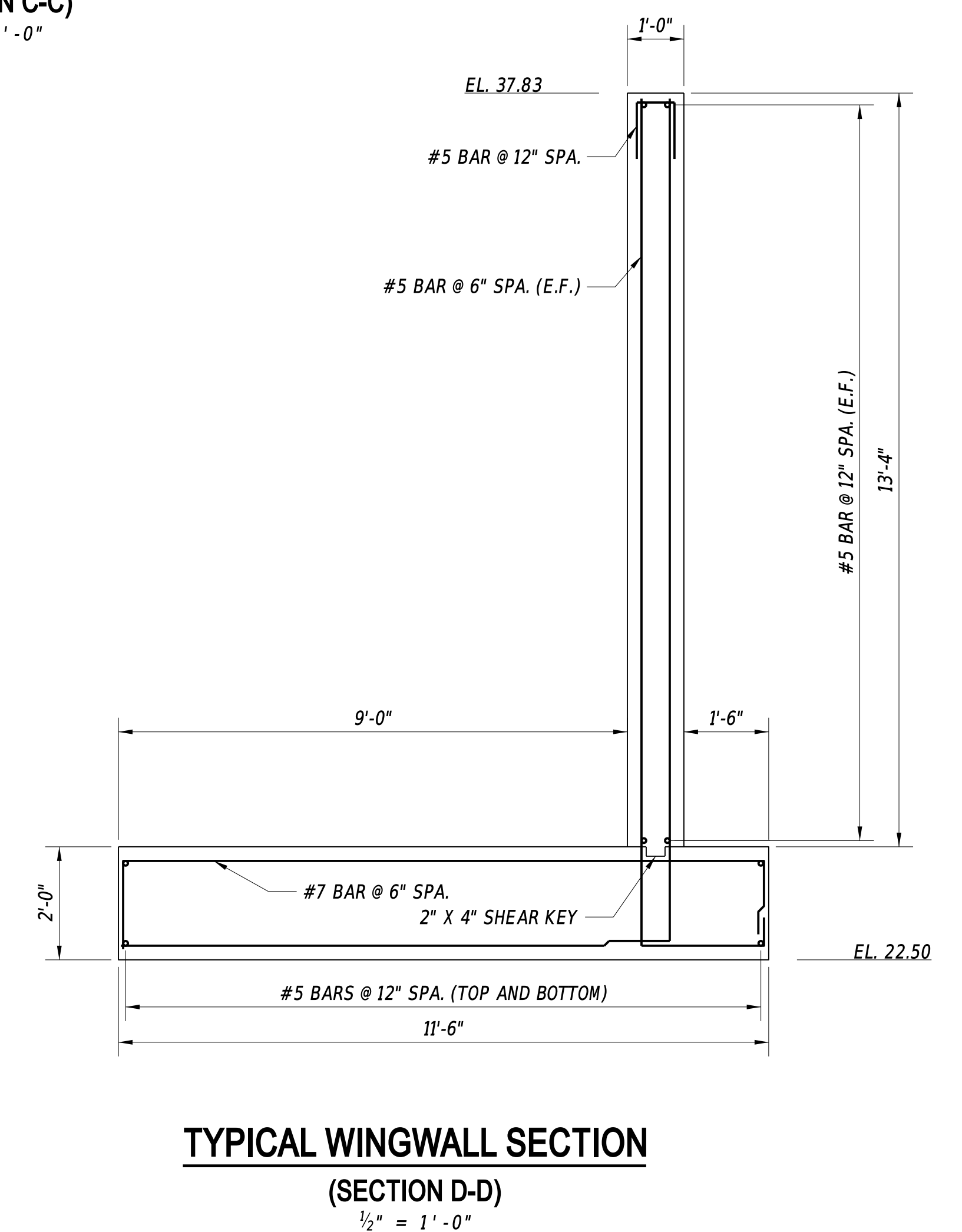
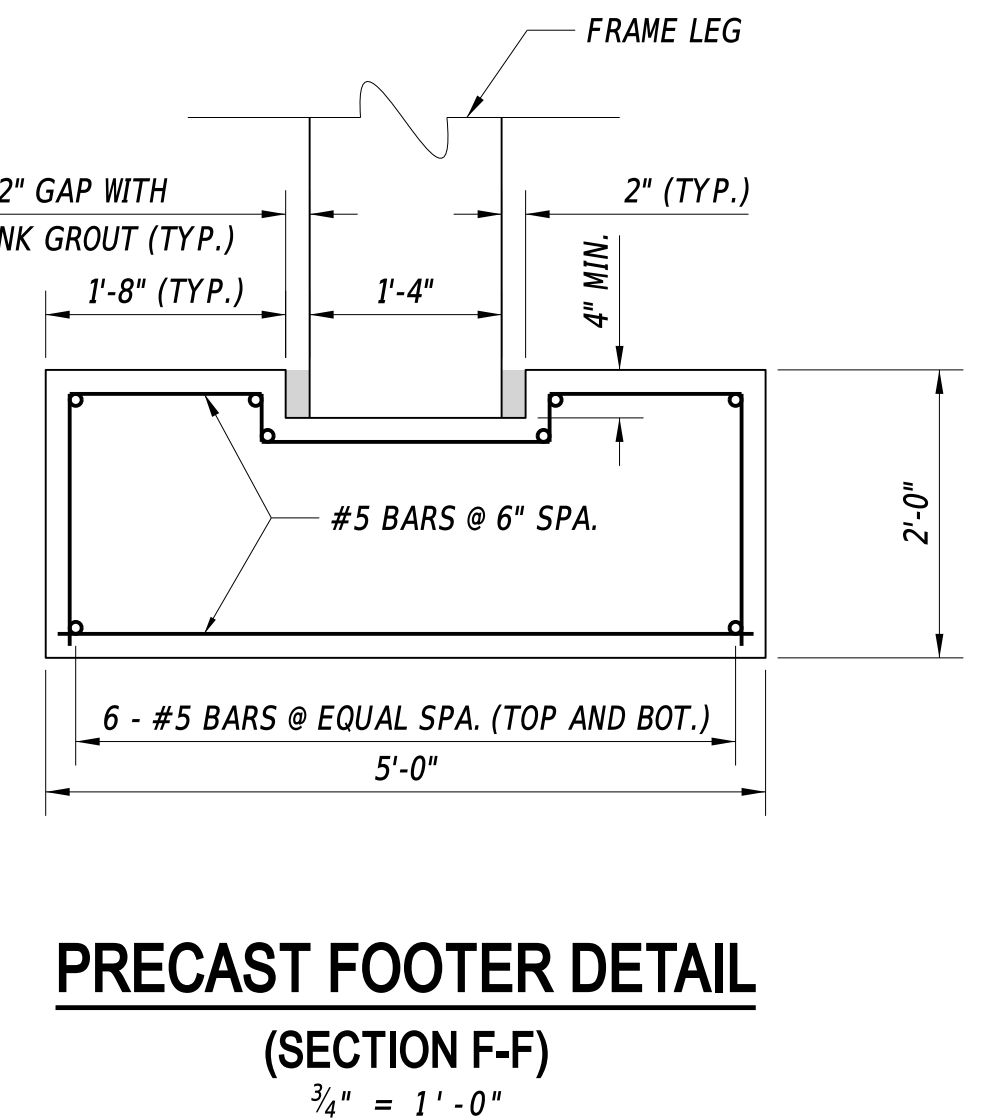
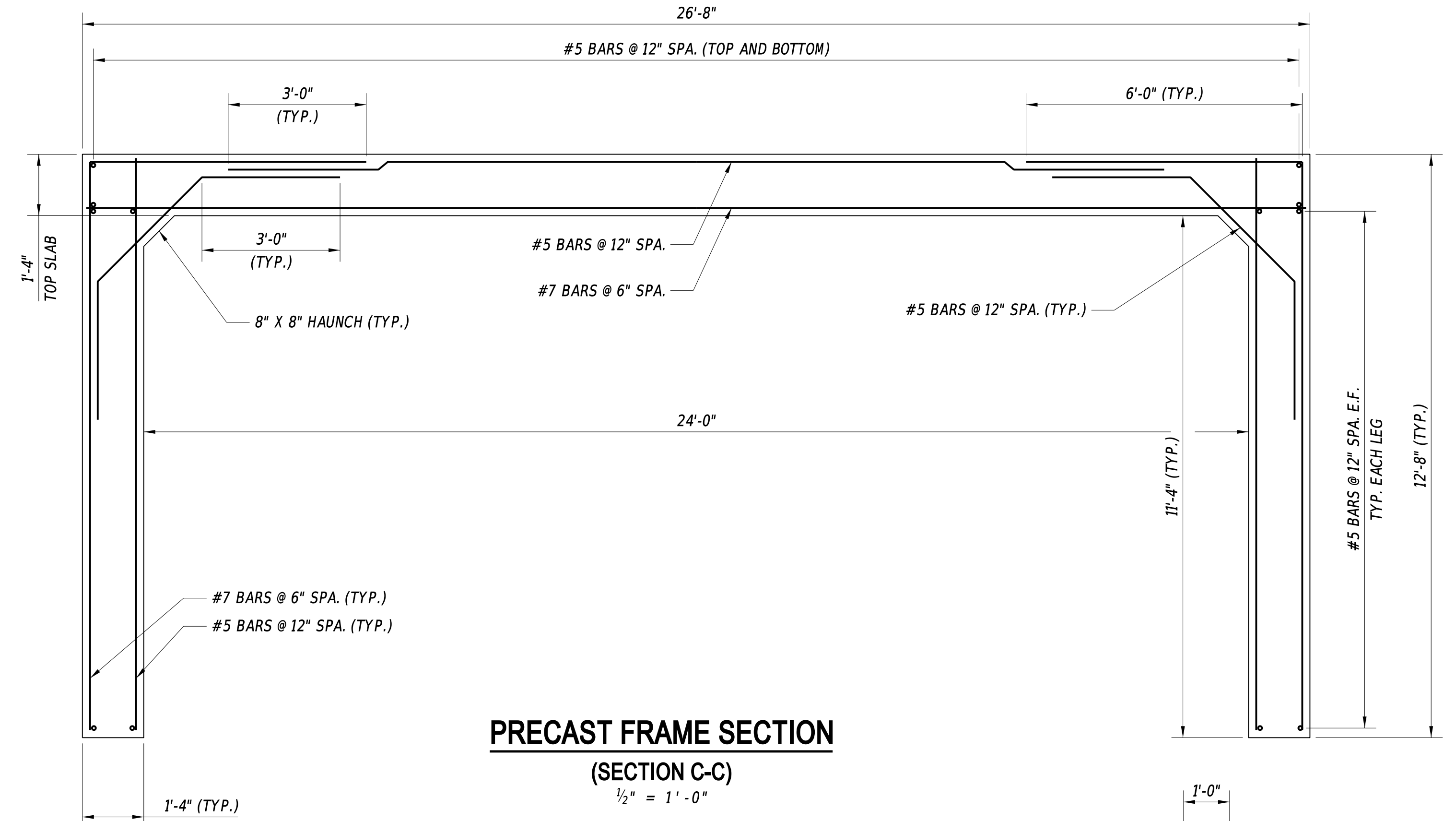
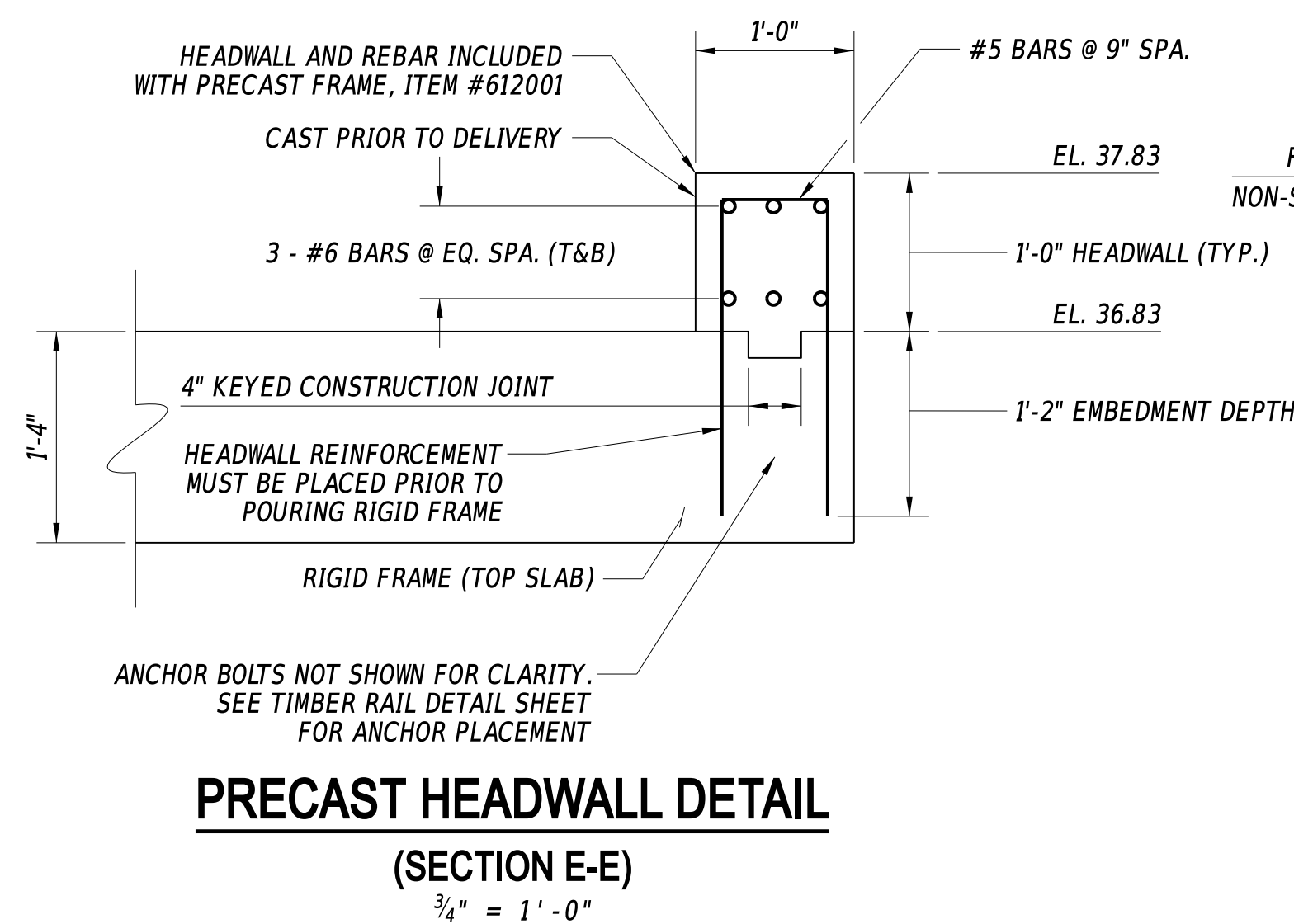
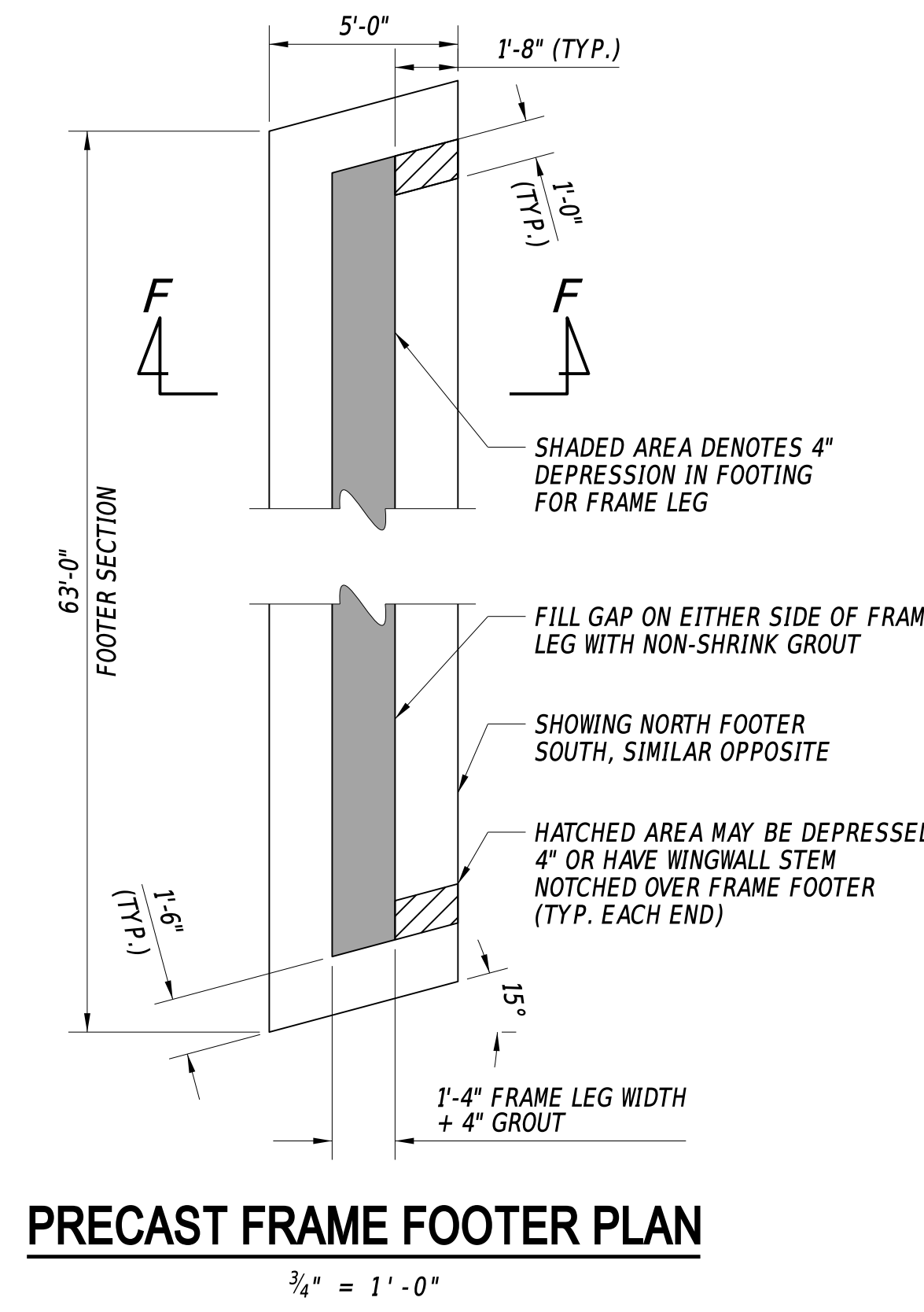
CONTRACT	T201907302	BRIDGE NO.	3-631
COUNTY	SUSSEX	DESIGNED BY:	E. YODER
		CHECKED BY:	S. WALLS

**BRIDGE PLAN, SECTION
AND ELEVATION**

SECTION
BR
SHEET NO.
10

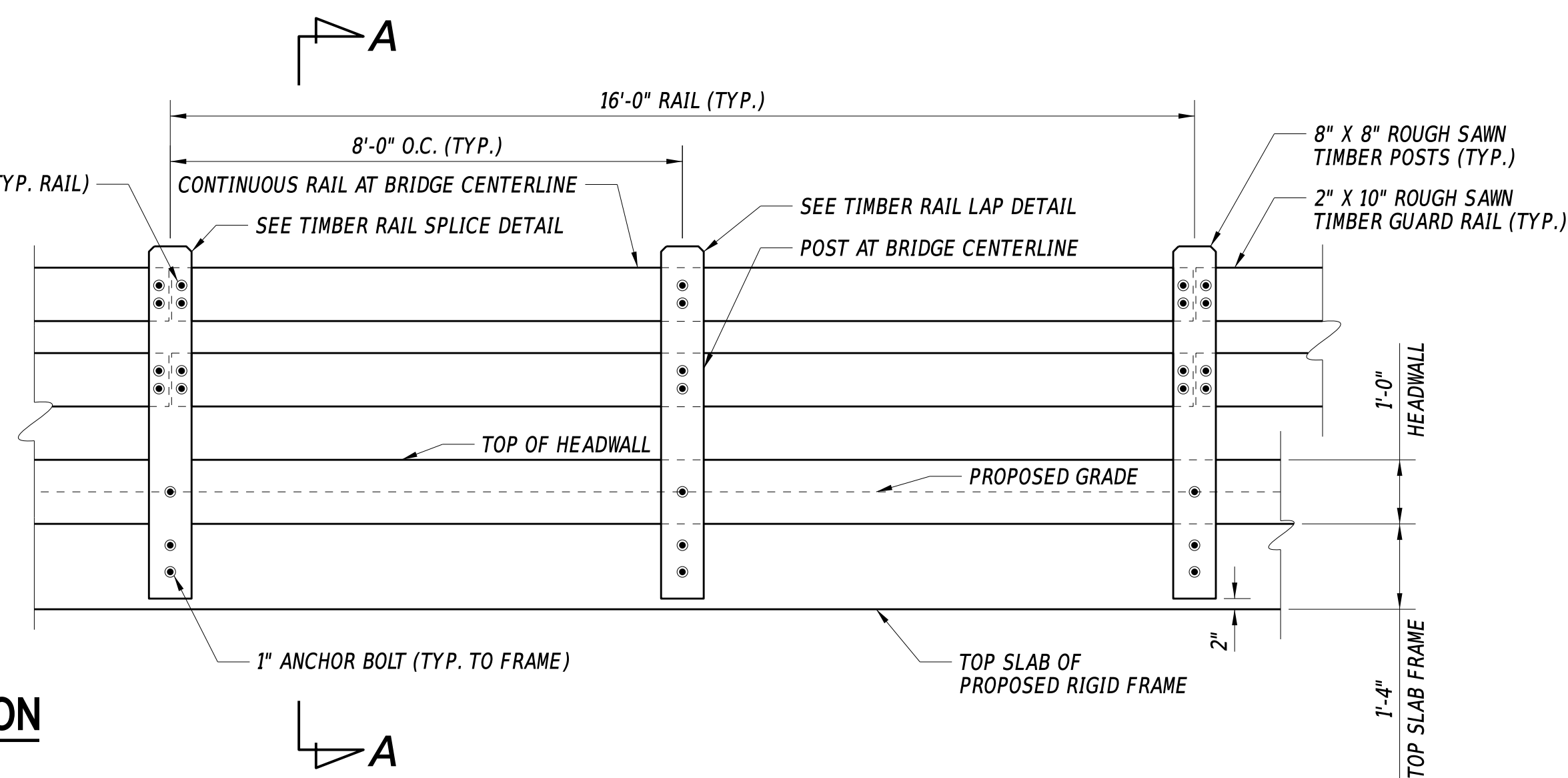
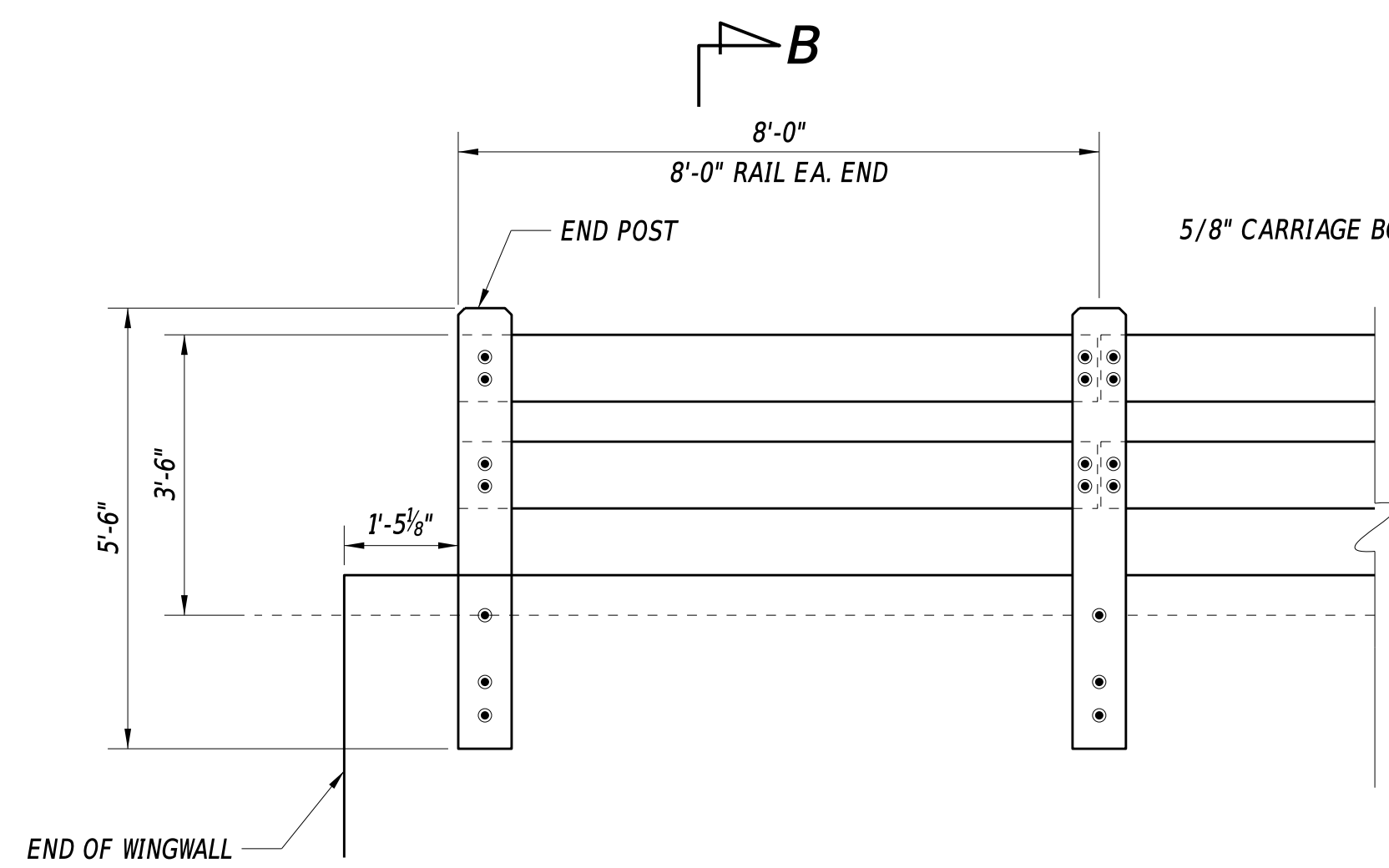


OTHER HALF SYMMETRICAL AND NOT SHOWN FOR CLARITY

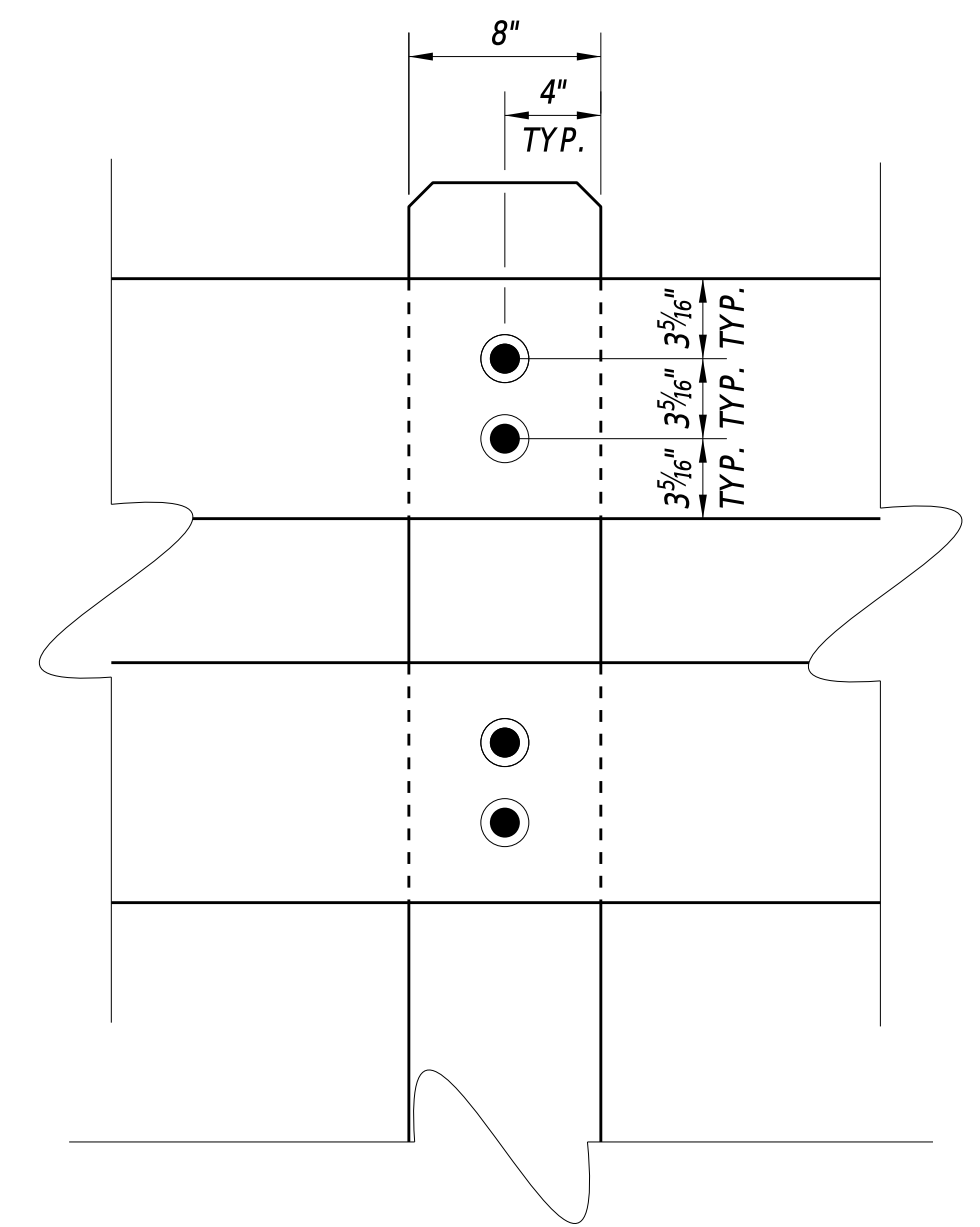


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ADDENDA / REVISIONS		SCALE AS NOTED	BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH	CONTRACT	BRIDGE NO.	3-631	RIGID FRAME DETAILS	SECTION
				T201907302	DESIGNED BY:	E. YODER		BR
				COUNTY	CHECKED BY:	S. WALLS		SHEET NO.
				SUSSEX				11



TIMBER RAIL - ELEVATION
1" = 2'



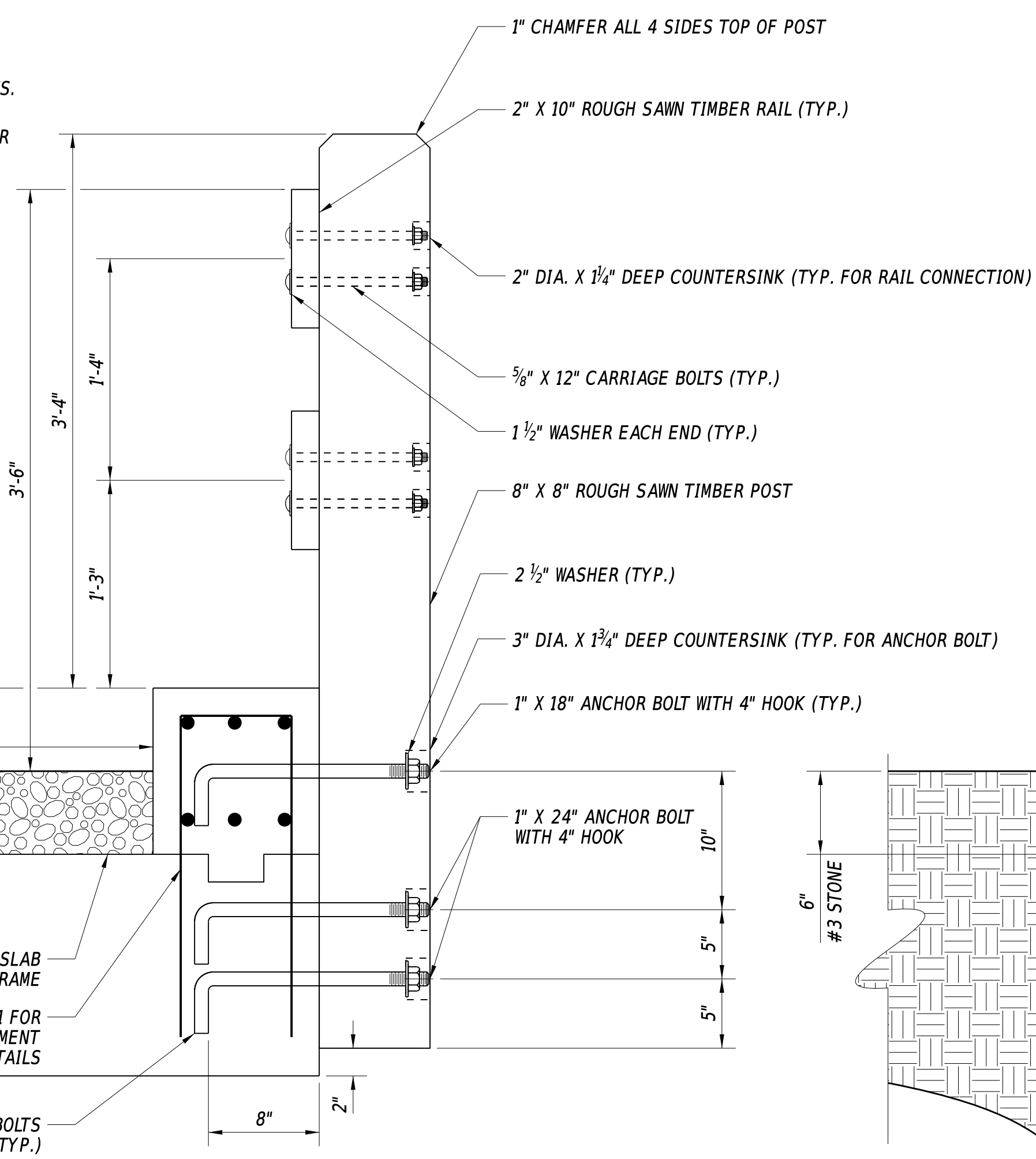
TIMBER RAIL LAP DETAIL
1 1/2" = 1'

GENERAL NOTES:

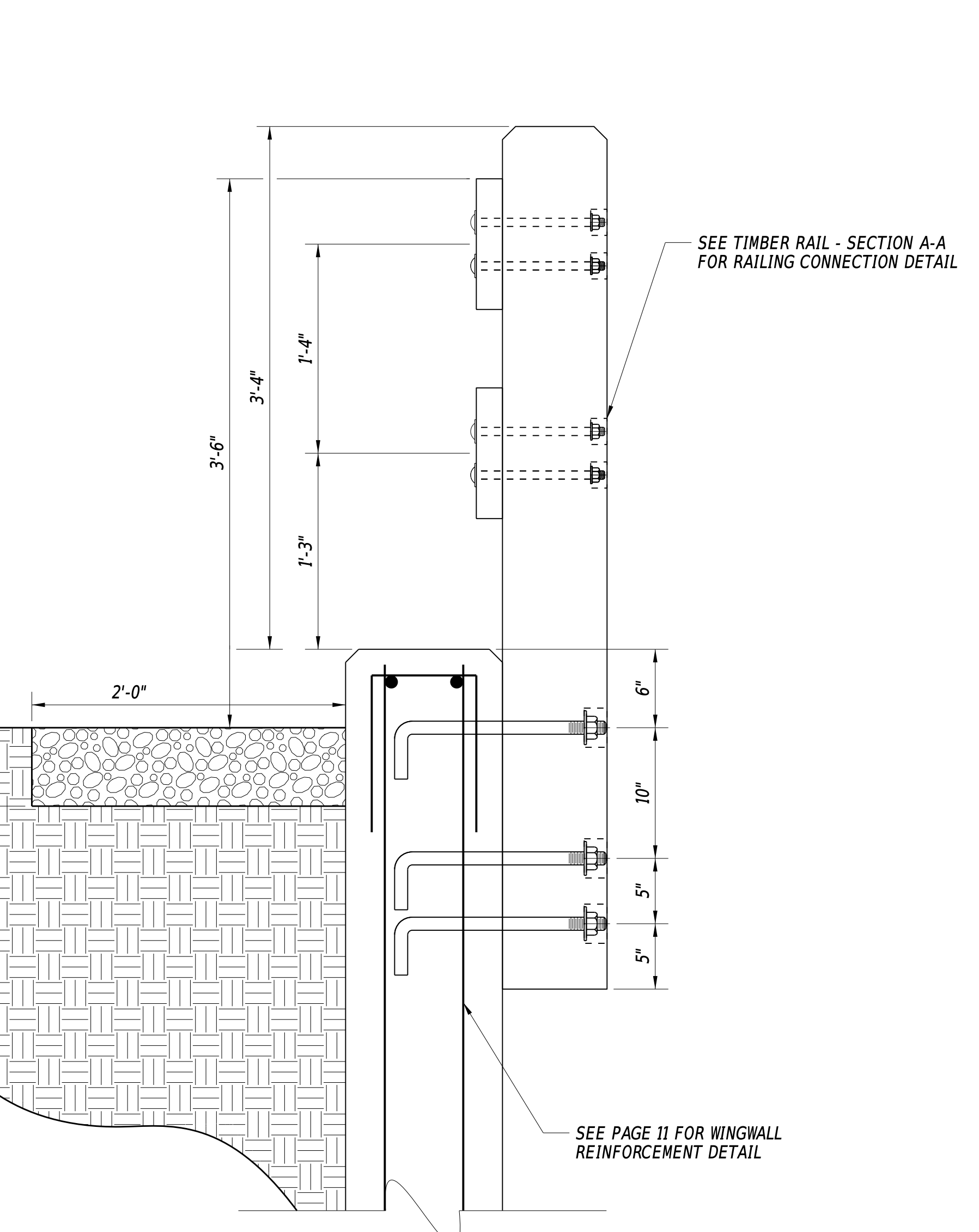
1. COUNTERSINK ALL NUTS AS SHOWN IN DETAILS. BOLTS ARE TO BE TRIMMED FLUSH WITH THE EXTERIOR SURFACE OF THE POST. BURR THE ENDS OF ALL BOLTS.
2. PAYMENT FOR MATERIALS, GALVANIZED HARDWARE, AND INSTALLATION OF TIMBER RAILING IS INCIDENTAL TO ITEM #727002.

MATERIAL SPECIFICATIONS:

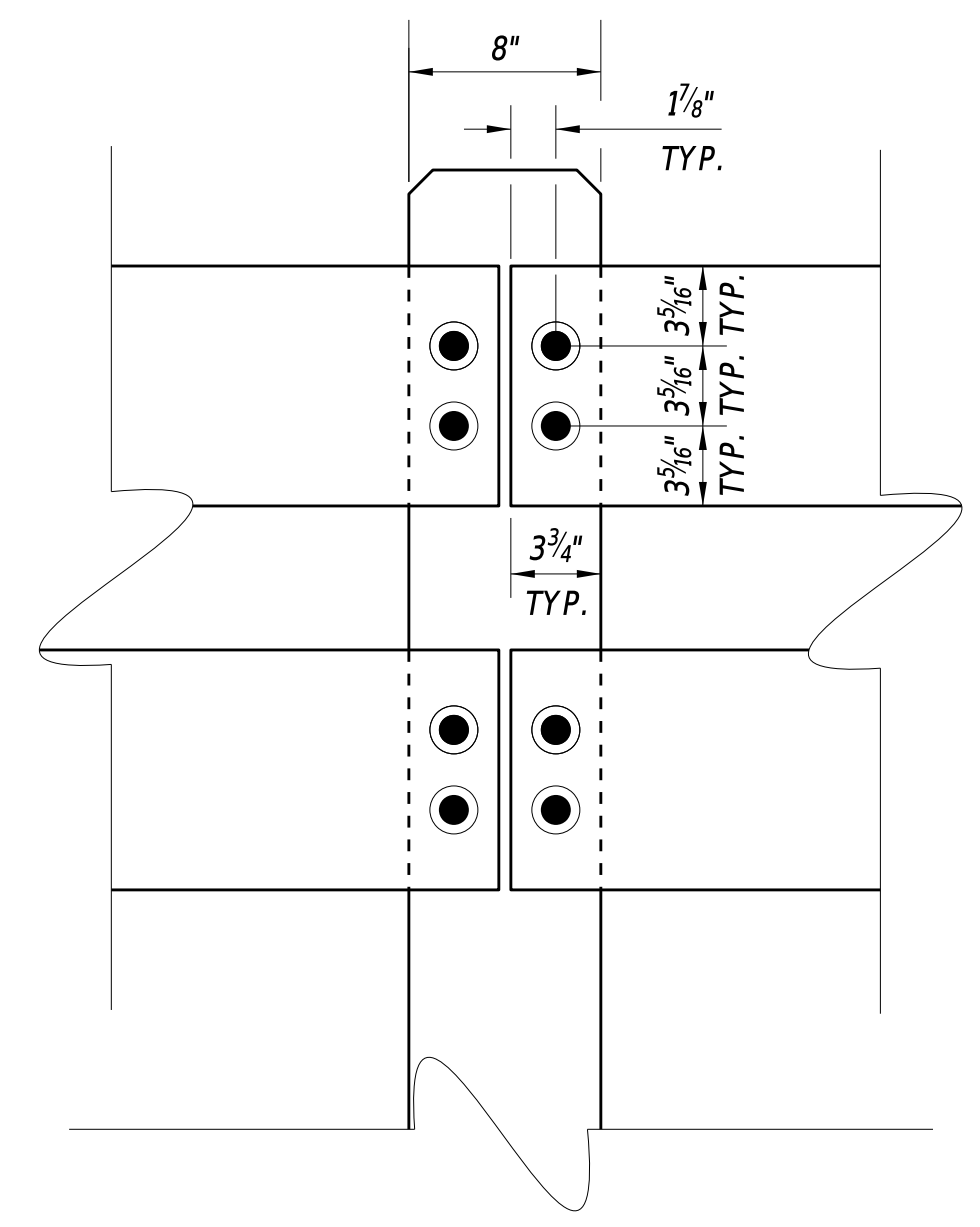
1. USE ROUGH SAWN, TREATED WOOD FOR ALL POSTS AND RAILS PER MATERIAL SPECIFICATION 1041.2 AND 1041.4.
2. ALL HARDWARE TO BE GALVANIZED PER MATERIAL SPECIFICATION 1041.5.



TIMBER RAIL (SECTION A-A)
1 1/2" = 1'-0"



TIMBER RAIL (SECTION B-B)
1 1/2" = 1'-0"



TIMBER RAIL SPLICE DETAIL
1 1/2" = 1'

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ADDENDA / REVISIONS		SCALE AS NOTED	BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH	CONTRACT	BRIDGE NO.	3-631	SECTION
				T201907302	DESIGNED BY:	E. YODER	
			COUNTY	SUSSEX	CHECKED BY:	S. WALLS	SHEET NO.
							12

BORING: WRR-1		DATE DRILLED: 2/17/16	
STATION: 3+90.39		OFFSET: -10.56	ELEVATION: 37.26
COMMENTS: N/A		NORTHING: 274229.7995	EASTING: 646392.4211
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS / 6"	REMARKS
1	0.0		MOIST GRAY COARSE TO FINE SAND W/ SOME SILT.
	2.0		
2	2.0	6	MOIST LOOSE GRAY SILTY FINE TO COARSE SAND.
		5	
		5	
	4.0	7	
3	4.0	2	SATURATED FIRM GRAY FINE SANDY SILT W/SOME COARSE SAND.
		3	
		2	
	6.0	2	
4	6.0	3	SATURATED LOOSE BROWN SILTY FINE SAND W/SOME COARSE SAND.
		3	
		4	
	8.0	5	
5	8.0	2	SATURATED LOOSE BROWN COARSE TO FINE SAND W/TRACE FINE GRAVEL AND SILT.
		3	
		5	
	10.0	7	
6	10.0	3	SATURATED LOOSE BROWN SILTY FINE SAND W/TRACE COARSE SAND.
		5	
		5	
	12.0	8	
7	12.0	5	SATURATED MEDIUM DENSE BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.
		6	
		7	
	14.0	5	
8	14.0	3	SATURATED LOOSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		3	
		3	
	16.0	5	
9	16.0	3	SATURATED LOOSE BROWN COARSE TO FINE SAND W/SOME SILT AND FINE GRAVEL.
		4	
		4	
	18.0	5	
10	18.0	5	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		8	
		6	
	20.0	7	
11	24.0	5	SATURATED MEDIUM DENSE BROWN FINE TO COARSE SAND AND FINE GRAVEL W/SOME SILT.
		7	
		8	
	26.0	12	
12	29.0	7	SATURATED MEDIUM DENSE BROWN SILTY FINE SAND W/TRACE COARSE SAND AND FINE GRAVEL.
		5	
		7	
	31.0	9	
13	34.0	4	SATURATED MEDIUM DENSE BROWN SILTY FINE SAND W/SOME COARSE SAND, TRACE OF FINE GRAVEL.
		5	
		7	
	36.0	9	
14	39.0	11	SATURATED MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.
		11	
		12	
	41.0	11	
15	44.0	8	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
		7	
		8	
	46.0	15	
16	49.0	9	SATURATED MEDIUM DENSE BROWN COARSE SAND W/SOME FINE GRAVEL, TRACE OF FINE SAND AND SILT.
		11	
		13	
	51.0	15	
17	54.0	8	SATURATED MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		8	
		14	
	56.0	13	
18	59.0	12	SATURATED MEDIUM DENSE BROWN FINE GRAVELLY COARSE TO FINE SAND W/TRACE SILT.
		13	
		15	
	61.0	21	
19	64.0	8	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE FINE GRAVEL AND SILT.
		9	
		8	
	66.0	13	
20	68.0	10	SATURATED DENSE BROWN FINE TO COARSE SAND W/SOME SILT.
		14	
		17	
	70.0	19	
			END BORING

BORING: WRR-2		DATE DRILLED: 2/17/16	
STATION: 3+05.11		OFFSET: -10.28	ELEVATION: 37.54
COMMENTS: N/A		NORTHING: 274139.9695	EASTING: 646357.2331
SAMPLE INFORMATION			
NO.	DEPTH	BLOWS / 6"	REMARKS
1	0.0		MOIST BROWN COARSE TO FINE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
	2.0		
2	2.0	6	MOIST MEDIUM DENSE BROWN SILTY COARSE TO FINE SAND W/TRACE FINE GRAVEL.
		9	
		7	
	4.0	4	
3	4.0	6	SATURATED SOFT BROWN FINE SANDY SILT W/ SOME COARSE SAND AND ORGANIC MATTER.
		1	
		2	
	6.0	2	
4	6.0	6	NO SIEVE ANALYSIS - INDICATION OF SATURATED SOFT GRAY ORGANIC FINE SANDY SILT W/SOME COARSE SAND AND FINE GRAVEL.
		1	
		1	
	8.0	1	
5	8.0	6	SATURATED LOOSE BROWN FINE TO COARSE SAND W/ SOME SILT, TRACE OF FINE GRAVEL
		4	
		6	
	10.0	6	
6	10.0	7	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE FINE GRAVEL AND SILT.
		6	
		6	
	12.0	7	
7	12.0	7	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
		10	
		9	
	14.0	11	
8	14.0	1	SATURATED VERY LOOSE BROWN FINE GRAVELLY COARSE SAND W/SOME FINE SAND, TRACE OF SILT.
		1	
		2	
	16.0	1	
9	16.0	1	SATURATED LOOSE BROWN FINE TO COARSE SAND W/SOME FINE GRAVEL AND SILT.
		3	
		3	
	18.0	3	
10	18.0	5	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL, TRACE OF SILT.
		10	
		12	
	20.0	17	
11	24.0	8	SATURATED MEDIUM DENSE BROWN FINE GRAVELLY FINE TO COARSE SAND W/SOME SILT.
		17	
		12	
	26.0	5	
12	29.0	7	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/SOME FINE GRAVEL AND SILT.
		8	
		8	
	31.0	6	
13	34.0	8	SATURATED MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		6	
		5	
	36.0	6	
14	39.0	7	SATURATED MEDIUM DENSE BROWN FINE GRAVELLY FINE TO COARSE SAND W/SOME SILT.
		11	
		11	
	41.0	7	
15	44.0	12	SATURATED MEDIUM DENSE BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.
		13	
		14	
	46.0	9	
16	49.0	5	SATURATED MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		8	
		6	
	51.0	8	
17	54.0	6	SATURATED MEDIUM DENSE BROWN FINE TO COARSE SAND W/SOME SILT, TRACE OF FINE GRAVEL.
		8	
		8	
	56.0	8	
18	59.0	7	SATURATED MEDIUM DENSE BROWN COARSE SAND W/SOME FINE SAND AND FINE GRAVEL, TRACE OF SILT.
		7	
		9	
	61.0	10	
19	64.0	8	SATURATED MEDIUM DENSE BROWN FINE GRAVELLY COARSE SAND W/TRACE FINE SAND AND SILT.
		9	
		11	
	66.0	12	
20	68.0	9	SATURATED MEDIUM DENSE BROWN COARSE TO FINE SAND W/TRACE FINE GRAVEL AND SILT.
		13	
		16	
	70.0	14	
			END BORING

- NOTES:
- BORING LOGS ARE CREATED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION. SUBSURFACE EXPLORATION COMPLETED BY WALTON CORPORATION.
 - REFER TO CONSTRUCTION PLAN SHEET FOR BORING LOCATIONS. BORING LOGS ARE LABELED AS WRR-1 AND WRR-2.
 - SOIL SAMPLING: 2 IN. OUTSIDE DIA. SPLIT BARREL SAMPLER, DRIVEN WITH A 140 LB. HAMMER FALLING 30 IN.
 - ALL DEPTHS GIVEN ARE IN FEET.

ADDENDA / REVISIONS

NOT TO SCALE

BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

BORING LOGS

SECTION	BR
SHEET NO.	13

ENVIRONMENTAL COMPLIANCE NOTES

1. GENERAL NOTES:

- A. THE PURPOSE OF THIS SHEET IS TO IDENTIFY THOSE ITEMS ASSOCIATED WITH ENVIRONMENTAL COMPLIANCE. IMPACT CALCULATIONS ARE FOR THE AGENCY PERMIT REPORTING PURPOSES ONLY AND ARE NOT TO BE USED FOR BIDDING PURPOSES.
- B. IF A DEPARTURE FROM THE APPROVED PLANS (WHICH WOULD AFFECT ANY NATURAL AND/OR CULTURAL RESOURCES) IS NECESSARY, CONTACT THE ENVIRONMENTAL STUDIES SECTION AT (302-760-2264 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) TO ALLOW FOR COORDINATION WITH THE APPROPRIATE RESOURCE AGENCIES AND APPROVAL.
- C. USE OF THIS SHEET DOES NOT ALLEVIATE THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH ALL CONDITIONS SET FORTH IN THE ENVIRONMENTAL STATEMENT AND PERMITS.

2. NATURAL RESOURCE ISSUES:

- A. PERMIT REQUIREMENTS/APPROVALS *:
U.S. ARMY CORPS OF ENGINEERS (COE): NWP #3 NO PCN
DNREC - WETLANDS & SUBAQUEOUS LANDS (WLSL): PROJECT CONSISTENT WITH DEL. CODE CH 72. SECTION 7217 EXEMPTION B
DNREC - WATER QUALITY (WQC) & COASTAL ZONE CONSISTENCY (CZM): ISSUED, PROJECT IS NOT IN A CRW
- * THE PERMITS/APPROVALS LISTED ARE THOSE REQUIRED FOR THIS PROJECT. THE ENVIRONMENTAL STUDIES SECTION IS RESPONSIBLE FOR COORDINATING AND/OR OBTAINING THESE APPROVALS.
- ** THE CONTRACTOR MUST ENSURE THAT THESE PERMITS/APPROVALS ARE IN THEIR POSSESSION PRIOR TO BEGINNING CONSTRUCTION IN THE PERMITTED AREA(S) AND ENSURE THEY ARE DISPLAYED ON-SITE DURING THE ENTIRE CONSTRUCTION PERIOD.
- B. CONSTRUCTION RESTRICTIONS:
FISHERIES - NONE
ENDANGERED SPECIES - NONE
MIGRATORY BIRDS - NONE

3. CULTURAL RESOURCE ISSUES:

- A. THERE ARE NO CULTURAL RESOURCE CONCERNS WITH THE PROJECT AS CURRENTLY DESIGNED. SHOULD IT BE NECESSARY TO ADD ADDITIONAL ACCESS LOCATIONS OR STAGING/STOCKPILING AREAS OUTSIDE OF THE LIMITS OF CONSTRUCTION (LOC), OR OTHERWISE MODIFY THE LOC OR PROJECT SCOPE FROM WHAT IS DETAILED IN THE APPROVED PLANS, DELDOT ENVIRONMENTAL STUDIES STAFF (DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV, (302) 760-4887) MUST BE CONTACTED TO REVIEW THESE CHANGES FOR POTENTIAL CULTURAL RESOURCES CONCERNS AND COORDINATE WITH THE FEDERAL HIGHWAY ADMINISTRATION AND DE STATE HISTORIC PRESERVATION OFFICE AS NECESSARY.

4. STREAM RESTORATION AND RIPRAP TREATMENT:

- A. FOLLOW THE SPECIAL PROVISION FOR ITEM #707500 - CHANNEL BED FILL IN REGARDS TO THE SALVAGING OF ON-SITE NATURAL STREAM BOTTOM MATERIAL OR THE FURNISHING OF OFFSITE MATERIAL. IF SUFFICIENT SOURCES FOR CHANNEL BED FILL DO NOT EXIST ON-SITE, ANY NEW MATERIAL MUST CONFORM TO THE REQUIREMENTS OF ITEM #707500 - CHANNEL BED FILL. RECESS ALL RIPRAP IN THE CHANNEL BOTTOM (I.E. BELOW THE WATER LINE) ONE FOOT BELOW STREAM BED ELEVATION AND CHOKE WITH BORROW TYPE 'B' SO THAT ALL OF THE VOIDS IN THE RIPRAP ARE FILLED WITH SPECIFIED MATERIAL. PAYMENT UNDER ITEM #209002 - BORROW, TYPE B. COVER THE RIPRAP WITH A MINIMUM OF 12" CHANNEL BED FILL. MATCH THE FINAL CHANNEL ELEVATIONS WITH EXISTING ELEVATIONS AT THE UPSTREAM AND DOWNSTREAM PROJECT LIMITS. THROUGH THE STRUCTURE, ELEVATIONS WILL BE AS NOTED ON THE PLANS. PAYMENT UNDER ITEM #707500 - CHANNEL BED FILL.
- B. RESTORE OTHER AREAS OF THE CHANNEL BOTTOM AFFECTED BY CONSTRUCTION (INCLUDING, BUT NOT LIMITED TO, THE LOCATION OF SUMP PITS, STABILIZED OUTFALLS, TEMPORARY PIPES AND/OR SANDBAG DIKES AND DIVERSIONS) TO EXISTING CONDITIONS. FILL ANY CAVITIES OR SCOUR HOLES RESULTING FROM CONSTRUCTION ACTIVITIES WITH CHANNEL BED FILL. PAYMENT UNDER ITEM #707500 - CHANNEL BED FILL.
- C. WHEN ALL EROSION AND SEDIMENT CONTROL MEASURES ARE REMOVED AND THE STREAM RETURNS TO ITS NATURAL FLOW CONDITIONS, THE FLOW MUST REMAIN ABOVE GROUND AND ABOVE THE RIPRAP (I.E. THE FLOW CANNOT BE "LOST" IN THE RIPRAP OR BENEATH THE STRUCTURE). IF THIS IS NOT ACHIEVED, THE CONTRACTOR WILL BE REQUIRED TO TAKE CORRECTIVE ACTION AT THE CONTRACTOR'S EXPENSE.
- D. CHOKe ALL RIPRAP ON THE STREAM BANK, OUTSIDE THE CHANNEL BED, WITH DELAWARE #57 STONE. PLACE JUST ENOUGH CHOKe MATERIAL TO PREVENT THE LOSS OF TOPSOIL THROUGH THE RIPRAP, AND THEN FINISH FILLING THE VOIDS WITH TOPSOIL SO THAT THE RIPRAP PEAKS ARE BARELY VISIBLE. PLACE AN ADDITIONAL 6-INCH TOPSOIL LAYER ON TOP OF THE RIPRAP. SLOPE SEEDING WILL BE DONE WITH ITEM #908019 - STREAMBANK SEED MIX, SEEDING. FOLLOWING THE SEEDING OPERATION, INSTALL ITEM #908020 - EROSION CONTROL BLANKET (ECB) MULCH, OR OTHER BLANKET AS SHOWN ON THE PLANS. ECB AT TOE OF SLOPE CAN BE EITHER TRENCHED IN OR STAPLED AT 6" ON CENTER. COMPLETE ALL WORK, STARTING WITH THE INITIAL CHOKING WITH TOPSOIL THROUGH THE SEEDING AND MULCHING PRIOR TO ANY RAIN EVENT. DELAWARE #57 STONE IS INCIDENTAL TO THE RIPRAP ITEM. ALL OTHER ITEMS WILL BE PAID FOR UNDER THEIR RESPECTIVE ITEMS.
- E. THE TOPSOIL/SEED/MULCH CAN BE PLACED BEFORE OR AFTER THE REMOVAL OF THE STREAM DIVERSION. IF THE PLACEMENT OCCURS AFTER STREAM DIVERSION REMOVAL, USE A TURBIDITY CURTAIN TO MINIMIZE IN-STREAM SEDIMENTATION. PAYMENT WILL BE INCIDENTAL TO ITEM #909005 - STREAM DIVERSION.

5. PROTECTION OF RESOURCES:

- A. USE SILT FENCE OR CONSTRUCTION SAFETY FENCE ALONG THE LIMITS OF CONSTRUCTION IN ALL AREAS WHERE WATER/ WETLANDS ARE BEING IMPACTED (AS SHOWN ON ENVIRONMENTAL COMPLIANCE SHEETS), AND ALSO IN ANY AREA WHERE WATER/WETLANDS EXIST WITHIN 20 FEET OF THE LIMIT OF CONSTRUCTION (AS SHOWN ON CONSTRUCTION PLAN SHEETS). ANY CONTRACTOR ACCESS BEYOND THE LIMIT OF CONSTRUCTION IS STRICTLY PROHIBITED.
- B. USE SANDBAGS OR COMPOST FILTER LOG (CFL) TO SECURE SILT FENCE AT AREAS ADJACENT TO WOODED UPLANDS/ ALL WETLANDS IN LIEU OF TRENCHING UNLESS PROPER EROSION AND SEDIMENT CONTROL CANNOT BE MAINTAINED. REMOVE SANDBAGS AND CFLS (AND CONTENTS) IN THEIR ENTIRETY WHEN NO LONGER NEEDED. SANDBAGS/CFLS USED TO SECURE THE SILT FENCE IS INCIDENTAL TO ITEM #905001 - SILT FENCE. THE ENVIRONMENTAL STUDIES SECTION (302-760-2259 OR DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) CAN PROVIDE FURTHER GUIDANCE REGARDING THIS METHOD OF INSTALLATION.
- C. CLEARLY MARK ALL TREES TO BE REMOVED WITH PAINT PRIOR TO THE EROSION AND SEDIMENT CONTROL MEETING.

6. SECTION 4(f):

- A. THE PARCELS TO THE NE AND SW SIDE OF THE BRIDGE (135-5.00-4.00 AND 135-5.00-6.00) ARE PART OF THE REDDEN STATE FOREST, WHICH IS A PROPERTY PROTECTED UNDER SECTION 4(F) OF THE US DOT ACT. CONTRACTOR ACCESS BEYOND THE LOC (AS IDENTIFIED ON THE CONSTRUCTION PLANS) WITHOUT PRIOR APPROVAL FROM FHWA AND DELDOT ENVIRONMENTAL STUDIES STAFF IS PROHIBITED. SHOULD IT BE NECESSARY TO ADD ADDITIONAL ACCESS LOCATIONS OR STAGING/STOCKPILING AREAS, OR OTHERWISE MODIFY THE PROJECT SCOPE, METHODS, OR LOC, DELDOT ENVIRONMENTAL STUDIES STAFF (DOT_ENVIRONMENTALSTUDIES@DELAWARE.GOV) MUST BE CONTACTED.

ADDENDA / REVISIONS

NOT TO SCALE

**BR 3-631 ON WEST ROBBINS ROAD
OVER GRAVELLY DITCH**

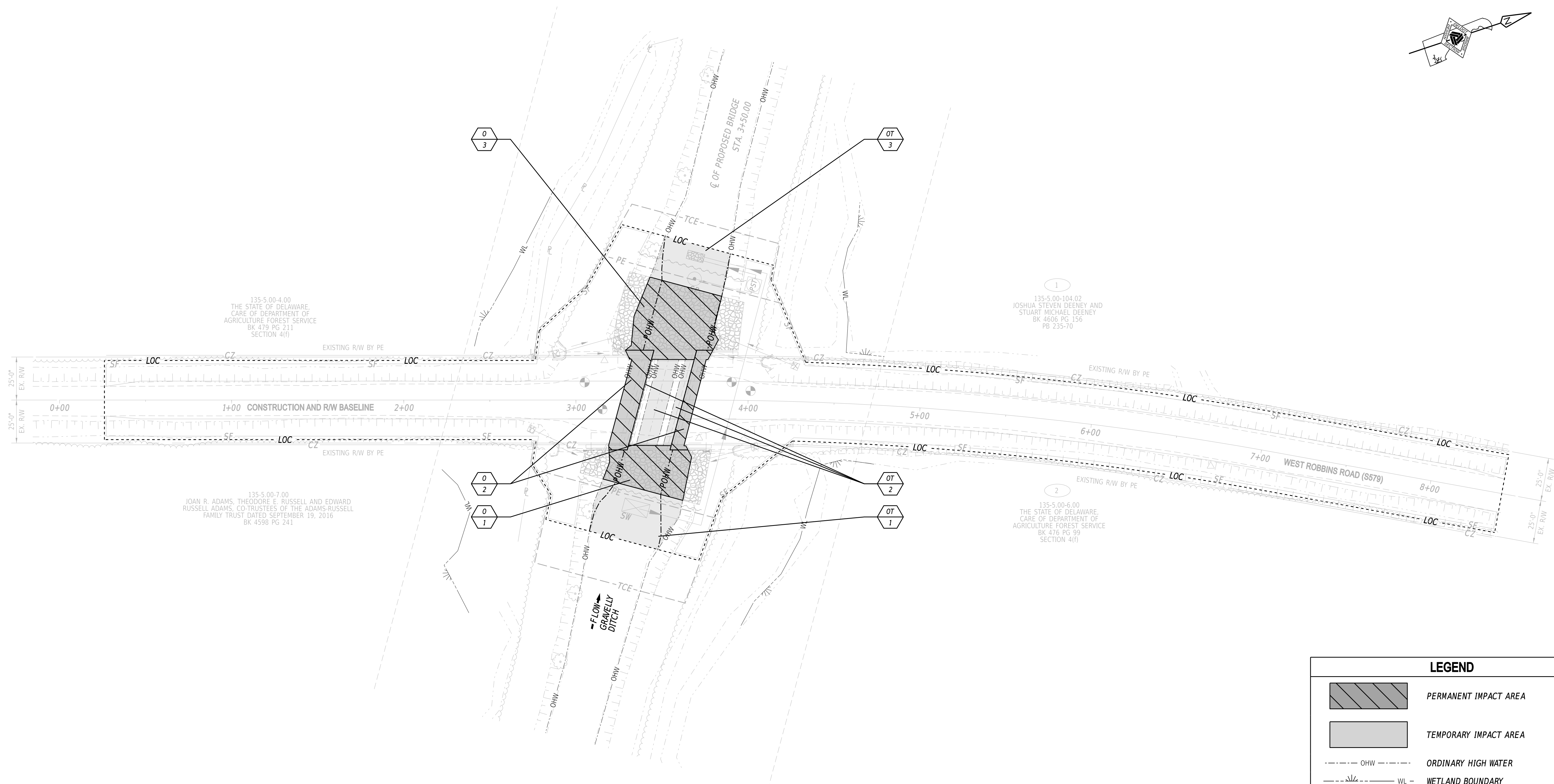
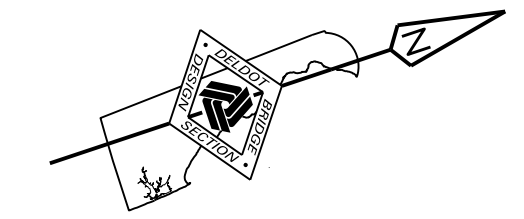
CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

**ENVIRONMENTAL
COMPLIANCE NOTES**

SECTION	BR
SHEET NO.	14

TEMPORARY OPEN WATER IMPACT AREA SCHEDULE					
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION
OT-1	UPSTREAM E&S CONTROLS AND CONTRACTOR ACCESS	1462.25	0.0336	54.16	COE/DNREC
OT-2	PIPES TO OPEN WATER	640.72	0.0147	23.73	COE/DNREC
OT-3	DOWNSTREAM E&S CONTROLS AND CONTRACTOR ACCESS	1044.84	0.0240	38.70	COE/DNREC
TOTAL TEMPORARY OPEN WATER IMPACTS		3147.81	0.0723	116.59	COE/DNREC

PERMANENT OPEN WATER IMPACT AREA SCHEDULE						
ID	IMPACT DESCRIPTION	AREA (SF)	AREA (AC)	VOLUME (CY)	JURISDICTION	LOSS
O-1	UPSTREAM RIPRAP	1172.13	0.0269	43.41	COE/DNREC	NO
O-2	STREAM TO FILL	1112.01	0.0255	41.19	COE/DNREC	YES
O-3	DOWNSTREAM RIPRAP	1896.69	0.0435	70.25	COE/DNREC	NO
TOTAL PERMANENT OPEN WATER IMPACTS		4180.83	0.0959	154.85	COE/DNREC	



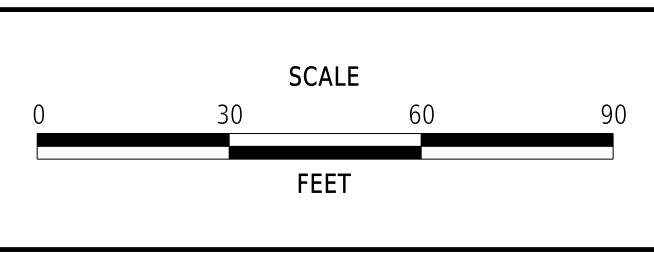
LEGEND	
	PERMANENT IMPACT AREA
	TEMPORARY IMPACT AREA
	OHW - ORDINARY HIGH WATER
	WL - WETLAND BOUNDARY
	POHW - PROPOSED ORDINARY HIGH WATER
	IMPACT AREA TYPE ID. (SEE BELOW)
	IMPACT AREA ID. AND/OR NUMBER
T =	TEMPORARY IMPACT
O =	OPEN WATER IMPACT

ORIGINAL SHEET PREPARED BY ERIC YODER ON 01-25-2021. SHEET LAST UPDATED ON 03-29-2022.

WETLANDS DELINEATED BY VAN ADAMS AND TREVOR MCCOLLEY ON 05-12-2020 IN ACCORDANCE WITH THE US ARMY CORPS OF ENGINEERS "CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987)".

18-MAY-2022 2:19 \\del\dot\p\111cs\01\CS_pof_work_sht\408\32260_42\EC02_BRSE_T201907302_DOT.dgn

ADDENDA / REVISIONS



BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

ENVIRONMENTAL COMPLIANCE PLAN	SECTION
	BR
	SHEET NO.
	15

EROSION NOTES:

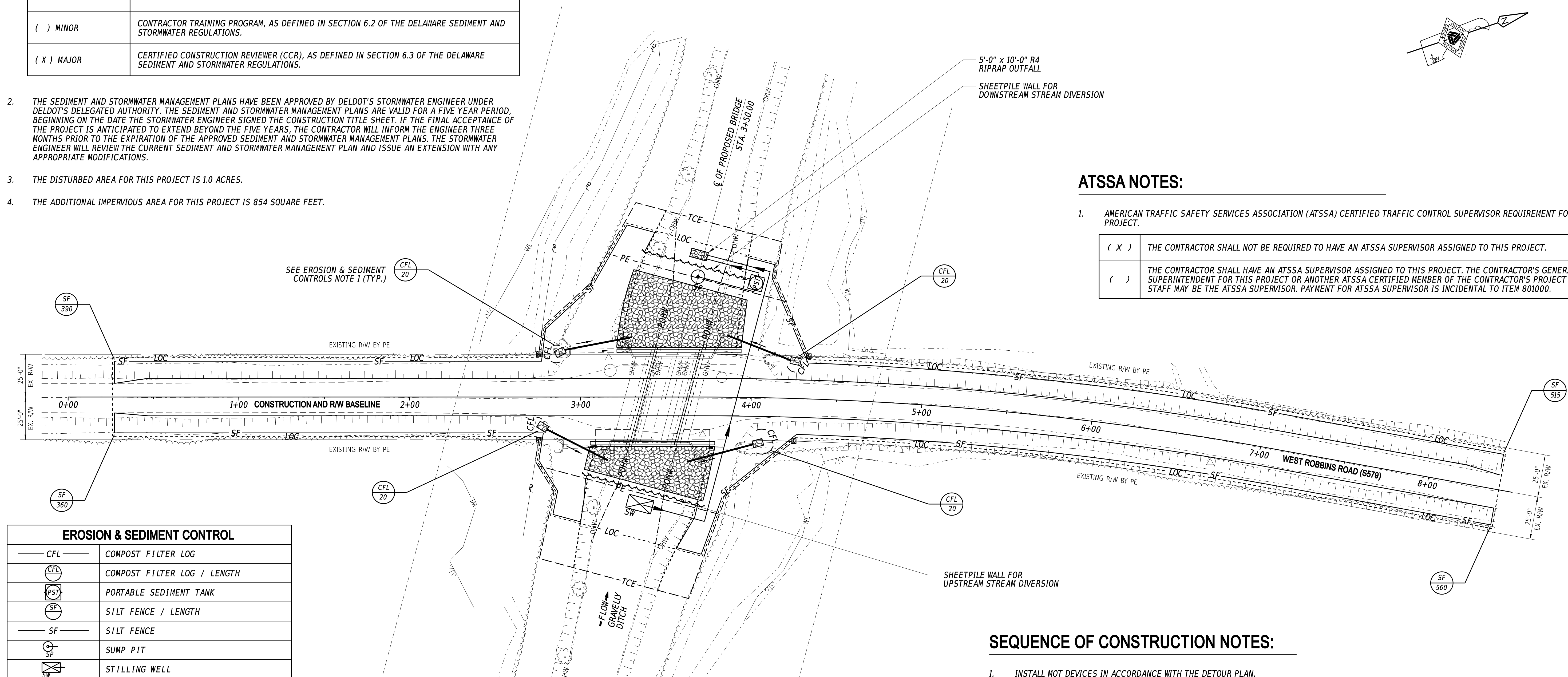
1. EROSION POTENTIAL FOR THIS PROJECT	CONTRACTOR EROSION AND SEDIMENT CONTROL SUPERVISOR REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR TRAINING PROGRAM, AS DEFINED IN SECTION 6.2 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MAJOR	CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 6.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.

- THE SEDIMENT AND STORMWATER MANAGEMENT PLANS HAVE BEEN APPROVED BY DELDOT'S STORMWATER ENGINEER UNDER DELDOT'S DELEGATED AUTHORITY. THE SEDIMENT AND STORMWATER MANAGEMENT PLANS ARE VALID FOR A FIVE YEAR PERIOD, BEGINNING ON THE DATE THE STORMWATER ENGINEER SIGNED THE CONSTRUCTION TITLE SHEET. IF THE FINAL ACCEPTANCE OF THE PROJECT IS ANTICIPATED TO EXTEND BEYOND THE FIVE YEARS, THE CONTRACTOR WILL INFORM THE ENGINEER THREE MONTHS PRIOR TO THE EXPIRATION OF THE APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS. THE STORMWATER ENGINEER WILL REVIEW THE CURRENT SEDIMENT AND STORMWATER MANAGEMENT PLAN AND ISSUE AN EXTENSION WITH ANY APPROPRIATE MODIFICATIONS.
- THE DISTURBED AREA FOR THIS PROJECT IS 1.0 ACRES.
- THE ADDITIONAL IMPERVIOUS AREA FOR THIS PROJECT IS 854 SQUARE FEET.

ATSSA NOTES:

- AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR. PAYMENT FOR ATSSA SUPERVISOR IS INCIDENTAL TO ITEM 801000.



EROSION & SEDIMENT CONTROL	
— CFL —	COMPOST FILTER LOG
⊖ CFL	COMPOST FILTER LOG / LENGTH
⊖ PST	PORTABLE SEDIMENT TANK
⊖ SF	SILT FENCE / LENGTH
— SF —	SILT FENCE
⊖ SP	SUMP PIT
⊖ SW	STILLING WELL

SEQUENCE OF CONSTRUCTION NOTES:

- PLACE COMPOSTE FILTER LOG PER INLET SEDIMENT CONTROL. CULVERT INLET STANDARD DETAIL. REPLACE CFL AFTER PROPOSED DRAINAGE PIPES HAVE BEEN INSTALLED. PAYMENT UNDER ITEM #907017, PAYMENT WILL BE MADE FOR EACH INSTALLATION.

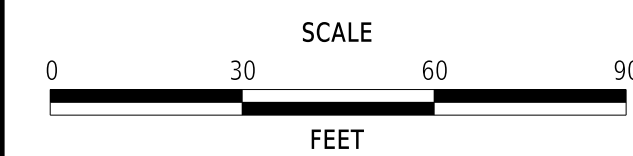
John Wright
 DELDOT STORMWATER ENGINEER
 DATE 5/18/22

"I, CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THESE PLANS MEET THE REQUIREMENTS OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS AND THAT ALL CLEARING, GRADING, AND CONSTRUCTION WILL BE ACCOMPLISHED PURSUANT TO THE PLAN." per Standard Plan

SEQUENCE OF CONSTRUCTION NOTES:

- INSTALL MOT DEVICES IN ACCORDANCE WITH THE DETOUR PLAN.
- INSTALL SILT FENCE (ITEM #905001) EXCEPT CONNECTION TO SHEETPILES (ITEM #909005). INSTALL CULVERT INLET PROTECTION ON UPSTREAM END OF EXISTING PIPES (ITEM #907017).
- INSTALL STILLING WELL (ITEM #909005) JUST UPSTREAM OF THE PROPOSED UPSTREAM SHEETPILE WALL. PLACE R-4 RIPRAP (ITEM #909005) 5 FEET IN DIRECTION OF FLOW BY 10 FEET WIDE AT THE PROPOSED DISCHARGE AREA.
- CONSTRUCT THE SHEETPILE WALLS AT THE LOCATIONS SHOWN, WITH TOP EL. OF 33.00 OR 6 INCHES BELOW TOP OF STREAM BANK (WHICHEVER IS LOWER) WITH A 1' X 5' WEIR OPENING UPSTREAM. ELEVATION OF THE DOWNSTREAM SHEETPILES SHALL NOT BE HIGHER THAN THE LOWEST ELEVATION OF THE UPSTREAM SHEETPILES. CONNECT SILT FENCE TO SHEETPILES TO COMPLETELY ENCLOSE THE WORK AREA. USE PUMP (ITEM #909005) TO DIVERT THE STREAM BASE FLOW AROUND THE ENCLOSED WORK AREA. WHEN THE FLOW IS HIGHER THAN PUMP CAPACITY DURING RAINFALL EVENTS, THE STREAM FLOW IS ALLOWED TO FLOW OVER THE SHEETPILE. THEREFORE, THE ENCLOSED AREA SHALL BE KEPT CLEAR OF DEBRIS AND OBSTRUCTIONS AT THE END OF EACH WORKDAY. THE BASE FLOW THROUGH THE PUMPS SHALL BE 35.0 C.F.S.
- INSTALL SUMP PIT (ITEM #906003) AND PORTABLE SEDIMENT TANK (ITEM #906001) AS A SEDIMENT TRAPPING DEVICE. DEWATER THE WORK AREA IN ACCORDANCE WITH SECTION 902 OF THE STANDARD SPECIFICATIONS. DISCHARGE CLEAN EFFLUENT FROM THE APPROVED SEDIMENT TRAPPING DEVICE AT THE STABILIZED OUTLET OF THE PUMPING OPERATION OR ON OTHER STABLE OUTLET AS APPROVED BY THE ENGINEER.
- REMOVE EXISTING BRIDGE, DRAINAGE PIPES, ASSOCIATED HEADWALLS, TREES DESIGNATED FOR REMOVAL, AS WELL AS COUCHES AND OTHER MAJOR DEBRIS.
- INSTALL PROPOSED PRECAST FRAME, FOOTERS, WINGWALLS, AND TIMBER RAILING.
- INSTALL RIPRAP CHANNEL BED FILL, STREAM SLOPE STABILIZATION, DRAINAGE PIPES, AND CULVERT INLET PROTECTION ON THE UPSTREAM END OF NEW PIPES AS SHOWN ON PLANS.
- INSTALL PROPOSED PAVEMENT, ROAD SIDE SLOPES, SLOPE PROTECTION, TOPSOIL AND SEED, AND COMPLETE ANY OTHER REMAINING WORK.
- REMOVE STILLING WELL, STABILIZED OUTFALL, SUMP PIT, SHEETPILES, AND TEMPORARY SETTLING TANK AFTER ALL DEWATERING WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THESE PLANS AND AS DIRECTED BY THE ENGINEER.
- REMOVE ALL MOT DEVICES AND REOPEN THE ROADWAY.
- REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES AFTER VEGETATIVE STABILIZATION IS ACHIEVED AND APPROVED BY THE ENGINEER.

ADDENDA / REVISIONS



BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

CONSTRUCTION SEQUENCE AND EROSION AND SEDIMENT CONTROL PLAN

SECTION	BR
SHEET NO.	16

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PORTABLE CHANGEABLE MESSAGE SIGNS

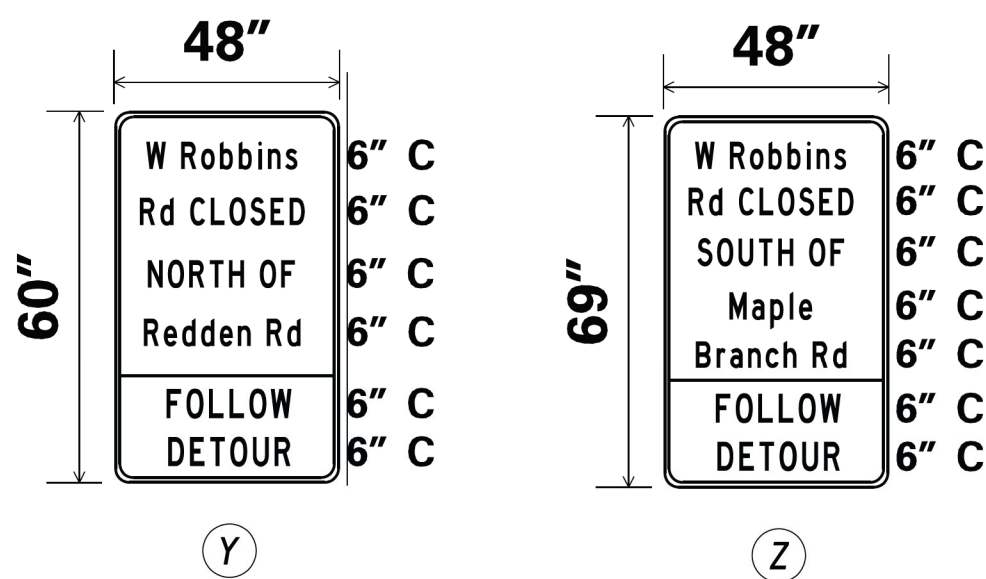
PRIOR TO DETOUR
(10 DAYS PRIOR TO BEGINNING OF DETOUR)

PCMS-1

W ROBBINS ROAD TO CLOSE

STARTING XX/XX/XX

SPECIAL SIGNS



*D/G RETROREFLECTIVE ORANGE BACKGROUND; BLACK LEGEND

PREPARED BY
DELDOT - TRANSPORTATION SOLUTIONS
TRAFFIC SAFETY

[Signature]
THIS SEAL ONLY APPLIES TO THIS DETOUR SHEET

05/11/2020
DATE

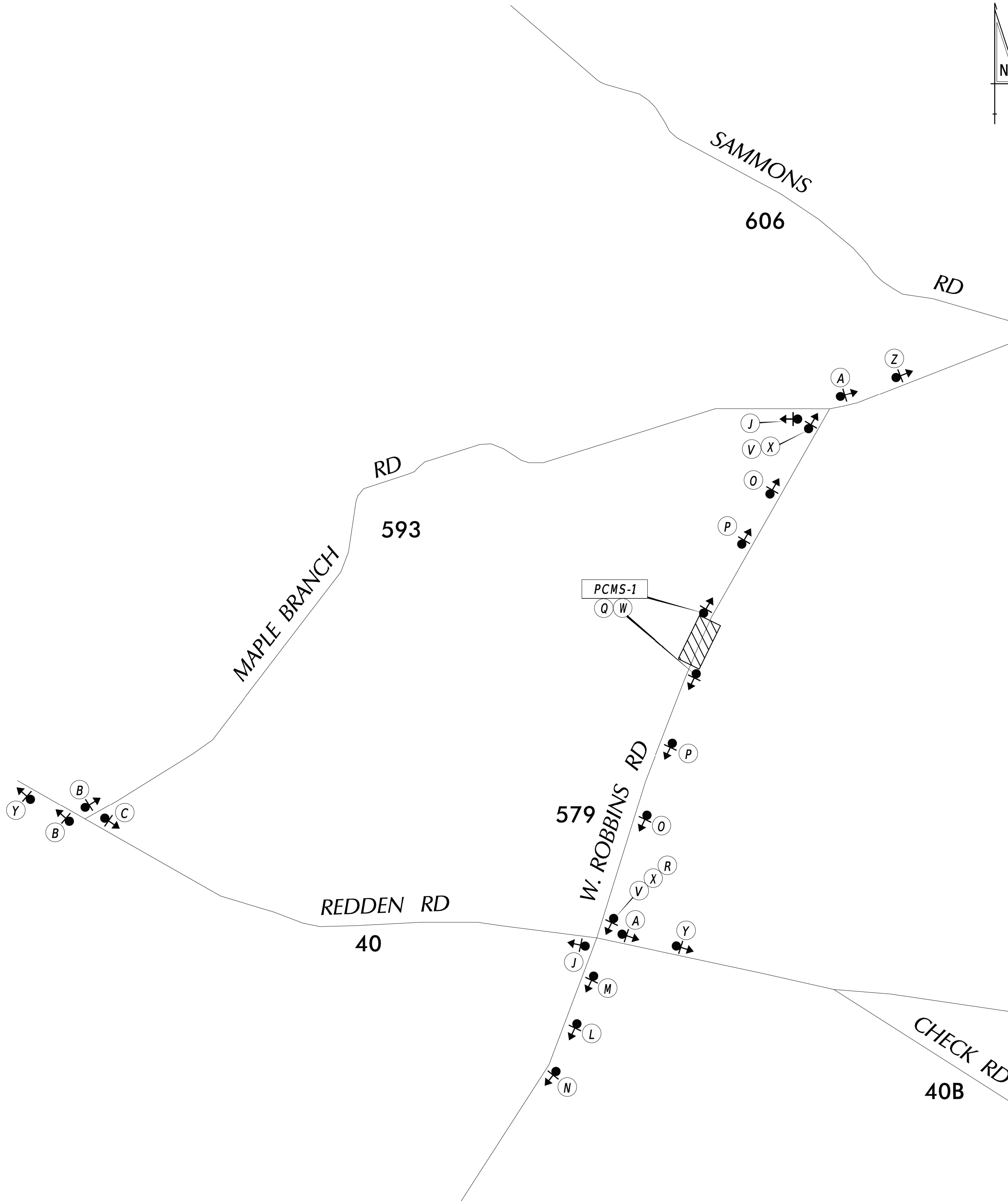


SEAL

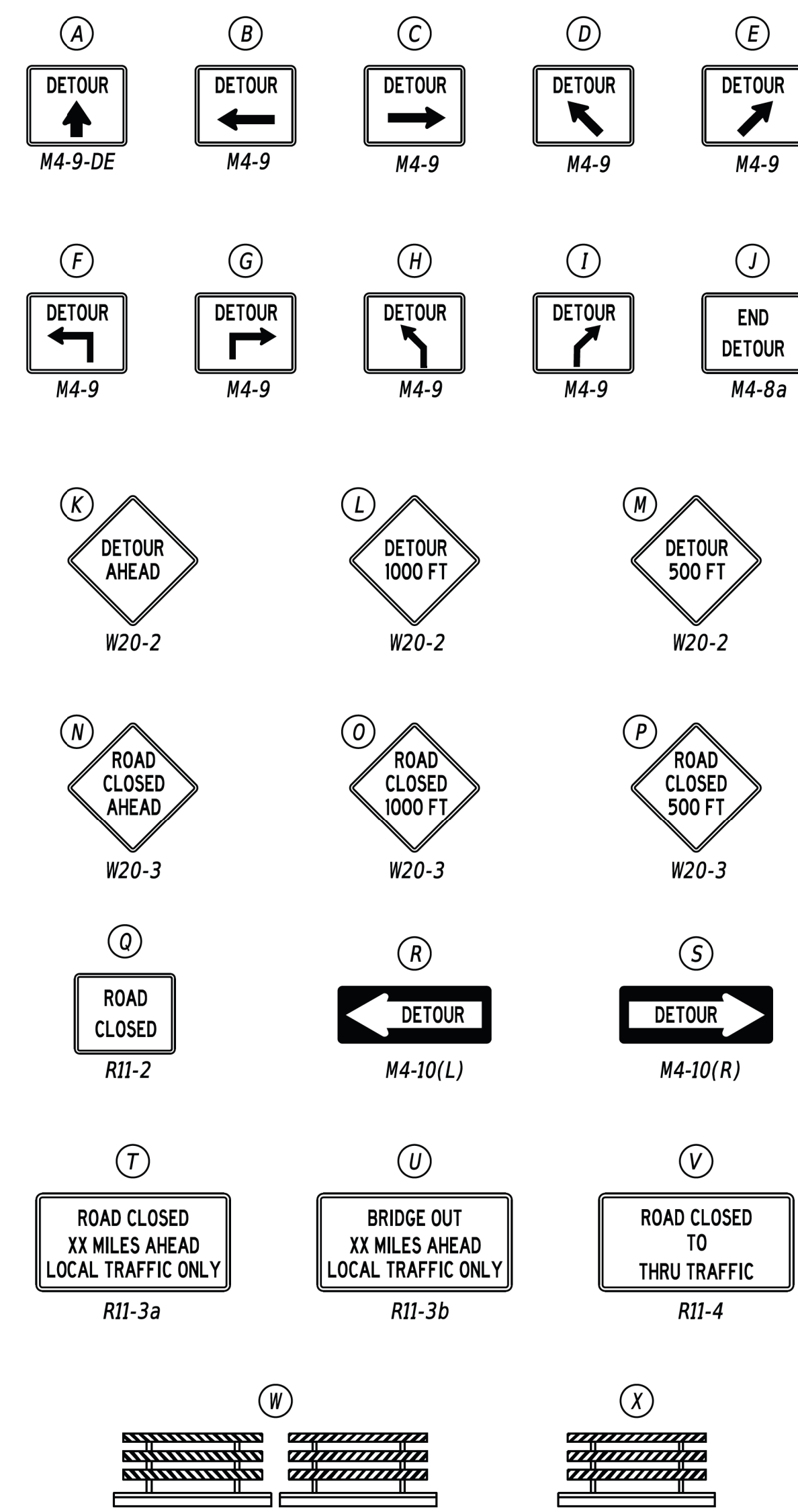
[Signature] **5/10/20**
QA/QC REVIEWER DATE

"I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THIS DETOUR PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES."

ADDENDA / REVISIONS



LEGEND



GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL DEVICES ARE TO BE SUPPLIED AND MAINTAINED BY THE GENERAL CONTRACTOR AND SHALL BE IN COMPLIANCE WITH THIS PLAN AND THE DELAWARE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (DE MUTCD) LATEST EDITION.
2. SIGNS "N" THROUGH "O" AND "T" AND "V", THE WORD "ROAD" SHALL BE CHANGED TO "RAMP", "RR XING" OR "BRIDGE" WHERE APPLICABLE.
3. "W" TYPE 3 BARRICADES AT A ROAD CLOSURE SHALL BE PLACED COMPLETELY ACROSS THE ROADWAY, FROM CURB TO CURB, OR FROM EDGE OF ROAD TO EDGE OF ROAD, WITH THE STRIPES POSITIONED DOWNWARD TOWARD THE CENTER OF THE ROADWAY.
4. BARRICADES SHALL BE A MINIMUM OF 6 FEET WIDE UNLESS DIRECTED BY THE ENGINEER.

CONCURRENCE FOR IMPLEMENTATION

[Signature] **5/7/2020**
TRAFFIC SAFETY DATE

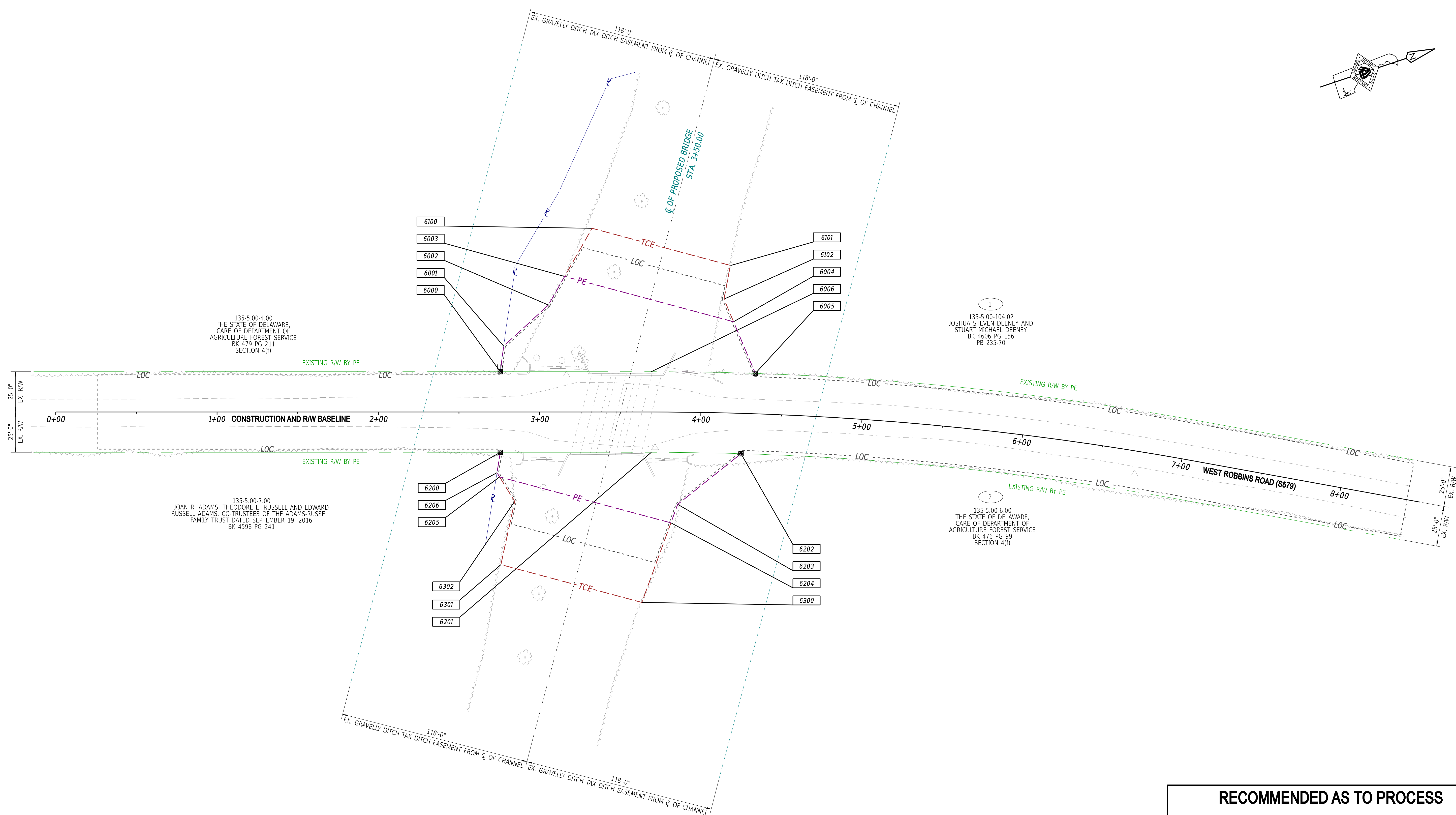
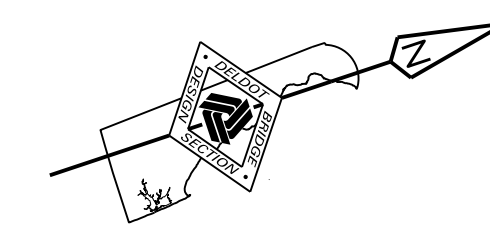
NOT TO SCALE

BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	PERMIT NO.	3-631
T201907302	DESIGNED BY:	DBW
COUNTY	CHECKED BY:	GAN
SUSSEX		

DETOUR PLAN

SECTION
TS
SHEET NO.
17

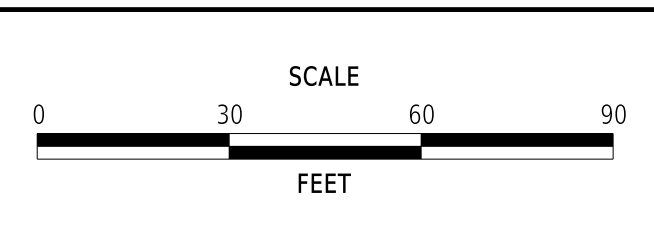


RECOMMENDED AS TO PROCESS

Shehnaz Chaudhri 12/21/2021
GROUP ENGINEER, ROW ENGINEERING DATE

30-MAR-2022 2:02:02 \\del\dot\pw\111cs\01\CS_pof_work_dir\4570\32260_21\RW01_BRSF_T201907302_DOT.dgn

NO.	REVISIONS



BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

RIGHT-OF-WAY PLAN	
SECTION	BR
SHEET NO.	18

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
135-5.00-104.02	(1) JOSHUA STEVEN DEENEY AND STUART MICHAEL DEENEY					P/E	BK 4606 PG 156	4.483			
ALIGNMENT NUMBER & DESCRIPTION: P_BL1 - PROPOSED CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6000	P_BL1	2+75.63	-25.00	274116.6589	646333.9468	N 63°58'58.97" W	15.98				
6001	P_BL1	2+77.74	-40.84	274123.6671	646319.5885	N 24°06'58.51" W	37.63				
6002	P_BL1	3+05.46	-66.29	274158.0162	646304.2117	N 41°55'40.78" W	20.37				
6003	P_BL1	3+15.53	-84.00	274173.1735	646290.5984	N 33°26'23.00" E	108.42				
6004	P_BL1	4+18.78	-56.61	274263.6487	646350.3458	N 85°35'02.39" E	34.76				
6005	P_BL1	4+32.93	-25.00	274266.3249	646385.0000			S 19°24'34.01" W	64.50	64.50	-1905.40
6006	P_BL1	3+69.27	-25.00	274205.4911	646363.5658	S 18°26'23.00" W	93.64				
6000	P_BL1	2+75.63	-25.00	274116.6589	646333.9468						

FIGURE 6000 AREA = 6247.9618 SQ. FT. (0.1434 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
135-5.00-104.02	(1) JOSHUA STEVEN DEENEY AND STUART MICHAEL DEENEY					TCE	BK 4606 PG 156	4.483			
ALIGNMENT NUMBER & DESCRIPTION: P_BL1 - PROPOSED CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6100	P_BL1	3+32.52	-113.86	274198.7302	646267.6452	N 33°27'44.90" E	88.78				
6101	P_BL1	4+16.00	-91.45	274272.7977	646316.5996	S 60°54'27.28" E	21.23				
6102	P_BL1	4+12.72	-70.50	274262.4752	646335.1512	N 85°35'02.39" E	15.24				
6004	P_BL1	4+18.78	-56.61	274263.6487	646350.3458	S 33°26'23.00" W	108.42				
6003	P_BL1	3+15.53	-84.00	274173.1735	646290.5984	N 41°55'40.78" W	34.35				
6100	P_BL1	3+32.52	-113.86	274198.7302	646267.6452						

FIGURE 6100 AREA = 3186.2032 SQ. FT. (0.0731 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
135-5.00-6.00	(2) THE STATE OF DELAWARE					P/E	BK 476 PG 99	143.980			
ALIGNMENT NUMBER & DESCRIPTION: P_BL1 - PROPOSED CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6200	P_BL1	2+75.63	25.00	274100.8435	646381.3797	N 18°26'22.97" E	93.64				
6201	P_BL1	3+69.27	25.00	274189.6763	646410.9988			N 19°17'53.94" E	55.61	55.61	1855.40
6202	P_BL1	4+25.63	25.00	274242.1602	646429.3767	S 20°13'03.31" E	50.27				
6203	P_BL1	3+86.13	57.16	274194.9914	646446.7479	S 51°28'49.71" E	12.20				
6204	P_BL1	3+81.89	68.65	274187.3933	646456.2932	S 33°26'23.00" W	109.98				
6205	P_BL1	2+75.20	40.23	274095.6227	646395.6903	S 76°47'03.37" W	3.07				
6206	P_BL1	2+73.59	37.61	274094.9200	646392.6981	N 62°22'28.45" W	12.77				
6200	P_BL1	2+75.63	25.00	274100.8435	646381.3797						

FIGURE 6200 AREA = 3931.4997 SQ. FT. (0.0903 ACRES)

ASSESSMENT NUMBER	OWNERSHIP OF RECORD					TYPE OF ACQUISITION	TITLE SOURCE	PARCEL AREA (ACRES)			
135-5.00-6.00	(2) THE STATE OF DELAWARE					TCE	BK 476 PG 99	143.980			
ALIGNMENT NUMBER & DESCRIPTION: P_BL1 - PROPOSED CONSTRUCTION BASELINE											
PT. NO.	ALIGN. NO.	STATION	OFFSET *	NORTH	EAST	BEARING	DISTANCE	CHORD BEARING	CHORD LENGTH	ARC LENGTH	RADIUS **
6300	P_BL1	3+63.40	118.00	274154.6941	646497.3731	S 33°26'23.00" W	90.48				
6301	P_BL1	2+76.01	94.59	274079.1895	646447.5119	N 59°16'37.57" W	40.13				
6302	P_BL1	2+84.54	55.38	274099.6911	646413.0147	S 76°47'03.37" W	17.80				
6205	P_BL1	2+75.20	40.23	274095.6227	646395.6903	N 33°26'23.00" E	109.98				
6204	P_BL1	3+81.89	68.65	274187.3933	646456.2932	S 51°28'49.71" E	52.51				
6300	P_BL1	3+63.40	118.00	274154.6941	646497.3731						

FIGURE 6300 AREA = 4994.1058 SQ. FT. (0.1146 ACRES)

COUNTY ASSESSMENT PARCEL NUMBER	PLAN SHEET NUMBER	OWNERSHIP OF RECORD	TITLE SOURCE	PROPERTY AREA BEFORE ACQUISITION (ACRE) D=DEED C=CALCULATED A=ASSESSMENT	ACQUISITION CODE FEE, R/W, P/E, TCE	AREA TO BE ACQUIRED		PROPERTY AREA REMAINING (SQ. FEET/ACRES)	DEED RECORD OF ACQUISITION	REMARKS
						ACQUISITION (SQ. FEET/ACRES)	AREA OCCUPIED BY EXISTING RIGHT OF WAY (SQ. FEET/ACRES)			
135-5.00-104.02	18	(1) JOSHUA STEVEN DEENEY AND STUART MICHAEL DEENEY	BK 4606 PG 156	D - 4.48	P/E		6247.9618 / 0.14			TOTAL AREA WITHIN TAX DITCH EASEMENT
								3186.2032 / 0.07	195279.48 / 4.48	TOTAL AREA WITHIN TAX DITCH EASEMENT
135-5.00-6.00	18	(2) THE STATE OF DELAWARE	BK 476 PG 99	A - 143.98	P/E		3931.4997 / 0.09			TOTAL AREA WITHIN TAX DITCH EASEMENT, SECTION 4(F) PROPERTY
								4994.1058 / 0.11	6271768.80 / 143.98	TOTAL AREA WITHIN TAX DITCH EASEMENT, SECTION 4(F) PROPERTY

LEGEND	
FEE	AREA OF ACQUISITION
R/W	AREA OCCUPIED BY EXISTING RW
P/E	PERMANENT EASEMENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
*	OFFSET IS LEFT OF BASELINE
**	CURVE TURNS TO THE LEFT

REVISIONS

NOT TO SCALE

BR 3-631 ON WEST ROBBINS ROAD OVER GRAVELLY DITCH

CONTRACT	BRIDGE NO.	3-631
T201907302	DESIGNED BY:	E. YODER
COUNTY	CHECKED BY:	S. WALLS
SUSSEX		

RIGHT-OF-WAY DATA AND TABULATION SHEET

SECTION	BR
SHEET NO.	19

18-MAY-2022 20:20 \\del00p111cs01\CS_pdf_work_dir\408\32260_47\RT01_BRSF_T201907302_DOT.dgn