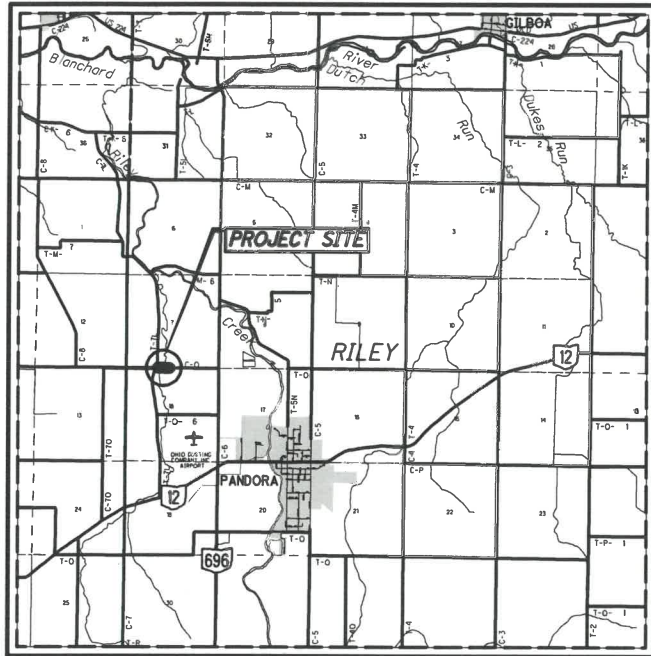


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LOCATION MAP

LATITUDE: 41°02'27" N LONGITUDE: 84°13'37" W



PORTION TO BE IMPROVED	
INTERSTATE HIGHWAY	
FEDERAL ROUTES	
STATE ROUTES	
COUNTY & TOWNSHIP ROADS	
OTHER ROADS	

**DESIGN DESIGNATION**

CURRENT ADT (2018)	270
DESIGN YEAR ADT (2038)	330
DIRECTIONAL DISTRIBUTION	55%
TRUCKS (24 HOUR B&C)	5%
DESIGN SPEED	55
LEGAL SPEED	55
DESIGN FUNCTIONAL CLASSIFICATION:	RURAL LOCAL

**DESIGN EXCEPTIONS**

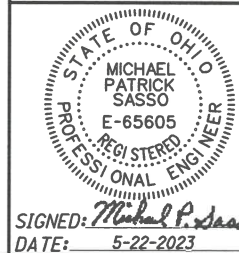
NONE REQUIRED

PLAN PREPARED BY:



1168 North Main Street | Bowling Green, Ohio 43402  
419.352.7537 | WWW.KLEINFELDER.COM

ENGINEERS SEAL:



# PUT-CR 0-14.741

(COUNTY ROAD 0)

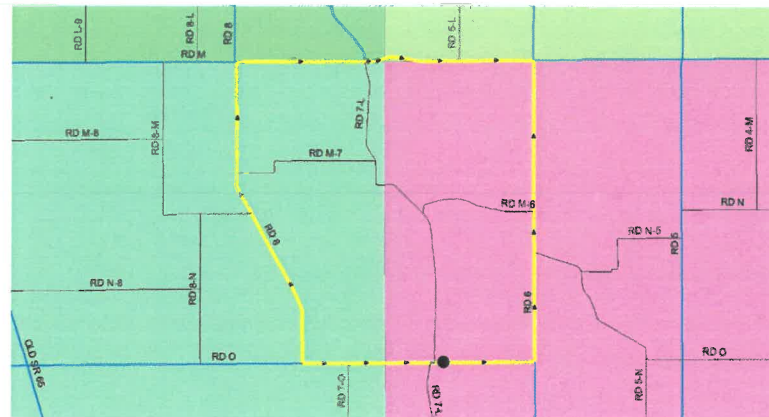
## BRIDGE REPLACEMENT OVER CRANBERRY RUN

RILEY TOWNSHIP

PUTNAM COUNTY

**INDEX OF SHEETS:**

TITLE SHEET	1
TYPICAL SECTIONS	2
GENERAL NOTES	3
GENERAL NOTES & GENERAL SUMMARY	4
PLAN AND PROFILE	5
CROSS SECTIONS	6-8
STRUCTURES OVER 20 FEET	9-18
RIGHT OF WAY PLANS	19-22



DETOUR MAP (NOT TO SCALE)

**PROJECT DESCRIPTION**

REPLACEMENT OF AN EXISTING SINGLE SPAN BRIDGE WITH A PROPOSED SINGLE SPAN BRIDGE WITH 252' OF APPROACH WORK.

PROJECT EARTH DISTURBED AREA:	0.45 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.22 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	NOT REQUIRED

**2023 SPECIFICATIONS**

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

APPROVED   
DATE 3-6-24 PUTNAM COUNTY ENGINEER,  
MICHAEL L. LEMHART, PE, PS

APPROVED   
DATE 3-7-24 PUTNAM COUNTY COMMISSIONER

APPROVED   
DATE 3-7-24 PUTNAM COUNTY COMMISSIONER

APPROVED   
DATE 3/9/24 PUTNAM COUNTY COMMISSIONER

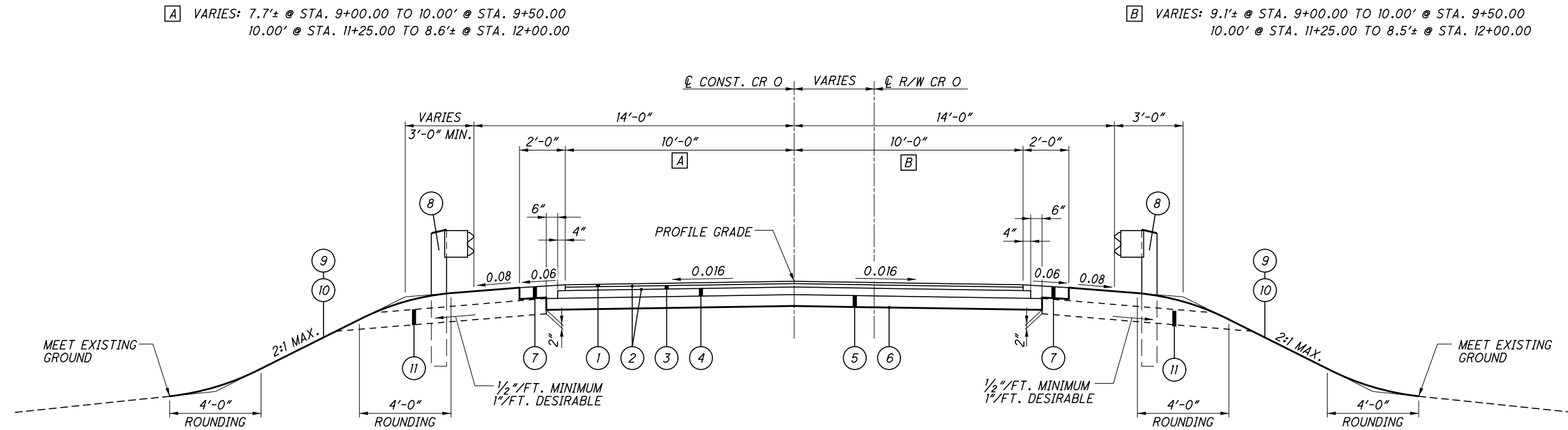
STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/19/24	DS-1-92	7/15/22	800	1/20/23
		PSBD-2-07	7/20/18	832	7/15/22
		SICD-1-96	7/18/14		
		TST-1-99	1/15/21		
		MT-101.60	4/21/23		
DM-1.1	7/17/20				
DM-4.4	1/15/16				
MGS-1.1	7/16/21				
MGS-2.1	1/19/18				
MGS-3.1	1/19/18				

**UNDERGROUND UTILITIES**  
Contact Two Working Days Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764  
(Non-members must be called directly)

FEDERAL PROJECT NO. E230251  
PID NO. 117598  
CONSTRUCTION PROJECT NO.  
RAILROAD INVOLVEMENT NONE  
PUT-CR 0-14.741  
1/22

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**A** VARIES: 7.7'± @ STA. 9+00.00 TO 10.00' @ STA. 9+50.00  
10.00' @ STA. 11+25.00 TO 8.6'± @ STA. 12+00.00

**B** VARIES: 9.1'± @ STA. 9+00.00 TO 10.00' @ STA. 9+50.00  
10.00' @ STA. 11+25.00 TO 8.5'± @ STA. 12+00.00

**NORMAL SECTION COUNTY ROAD O**

APPLIES: STA. 9+00.00 TO STA. 9+77.00 = 77+00.00 LIN. FT  
STA. 10+25.00 TO STA. 12+00.00 = 175+00.00 LIN. FT  
TOTAL = 252.00 LIN. FT

AGGREGATE DRAIN LOCATIONS		
STATION	SIDE	LENGTH
9+25	RIGHT	10'
9+50	LEFT	9'
10+50	LEFT	18'
TOTAL =		37'

**LEGEND**

- ① ITEM 441 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
- ② ITEM 407 TACK COAT
- ③ ITEM 441 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
- ④ ITEM 301 4" ASPHALT CONCRETE BASE, PG64-22
- ⑤ ITEM 304 6" AGGREGATE BASE
- ⑥ ITEM 204 SUBGRADE COMPACTION
- ⑦ ITEM 411 6" STABILIZED CRUSHED AGGREGATE
- ⑧ ITEM 606 GUARDRAIL, TYPE MGS
- ⑨ ITEM 659 SEEDING AND MULCHING (SEE GENERAL NOTE)
- ⑩ ITEM 659 COMMERCIAL FERTILIZER
- ⑪ ITEM 605 AGGREGATE DRAIN

TYPICAL SECTION

PUT-CR 0-14.741

**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

DAVID SPURGEON III  
BRIGHTSPEED  
122 S. ELIZABETH  
LIMA, OH 45801  
567-242-2882  
David.L.Spurgeon@Brightspeed.com  
(FIELD CONTACT IS ERIC FLORY: 419-576-7089)

CHRIS HARDY  
DIRECTOR OF TECHNOLOGY, TELEPHONE SERVICE COMPANY  
A HANSON COMMUNICATIONS COMPANY  
WAPAKONETA, OH 45895  
419-739-2560  
chris.hardy@telsco.com

DOUG JOHANNES  
PAULDING PUTNAM ELECTRIC COOPERATIVE  
401 MCDONALD PIKE  
PAULDING, OH 45879  
419-439-3304  
djohannes@pppec.coop

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**CLEARING AND GRUBBING**

ALL TREES, STUMPS, AND BRUSH WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED AS REQUIRED UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING.

**SEEDING AND MULCHING**

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. TOP SOIL AND COMMERCIAL FERTILIZER SHALL BE APPLIED PER 659 AS NEEDED AND AS DIRECTED BY THE ENGINEER.

**EROSION CONTROL**

THE FOLLOWING ITEMS HAVE BEEN INCLUDED:  
832, STORM WATER POLLUTION PREVENTION PLAN LUMP SUM  
832, STORM WATER POLLUTION PREVENTION INSPECTIONS LUMP  
832, STORM WATER POLLUTION PREVENTION SOFTWARE LUMP  
832, EROSION CONTROL \$5,000  
THE EROSION CONTROL (\$5,000) HAS BEEN CARRIED TO THE BID PROPOSAL.

**FARM DRAINS**

ALL FARM DRAINS, WHICH ARE ENCOUNTERED DURING CONSTRUCTION, SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS, AND WHICH CROSS THE ROADWAY, SHALL BE REPLACED WITHIN THE RIGHT OF WAY BY ITEM 611 CONDUIT, TYPE B, OF THE SAME SIZE CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS, WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF ROADWAY DITCHES, SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 611 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE ONE FOOT ABOVE THE FLOWLINE ELEVATION OF THE DITCH. LATERAL FIELD TILES WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 611, TYPE E CONDUIT, AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

EROSION CONTROL PADS AND ANIMAL GUARDS SHALL BE PROVIDED AT THE OUTLET END OF ALL FARM DRAINS AS PER STANDARD CONSTRUCTION DRAWING DM-1.1, EXCEPT WHEN THEY OUTLET INTO A DRAINAGE STRUCTURE.

**ITEM 614 - MAINTAINING TRAFFIC**

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48"x30" "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES, GATES, AND LIGHTS, AS DETAILED ON SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROAD IS CLOSED TO TRAFFIC:

AT EACH END OF THE PROJECT AS DIRECTED BY THE ENGINEER

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTION OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

**DETOUR NOTIFICATION**

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER, PUTNAM COUNTY ENGINEER'S OFFICE A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE BEGINNING OF WORK AND/OR INTENDED ROAD CLOSURE.

**ACCESS**

THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION PHASES AND OPERATIONS IN A MANNER THAT PROVIDES ACCESS TO PROPERTY OWNERS/TENANTS AFFECTED BY THE WORK AT ALL TIMES, UNLESS OTHERWISE AGREED TO BY THE OWNER/TENANT.

**MAINTAINING TRAFFIC RESTRICTIONS**

COMPLETE CLOSURE OF CR-0 FOR THE COMPLETE REMOVAL AND REPLACEMENT OF THE STRUCTURE WITH ALL SAFETY ITEMS INSTALLED AND FUNCTIONAL SHALL BE FOR A MAXIMUM OF 90 DAYS.

**EXISTING SIGNS**

EXISTING SIGNS REMOVED SHALL BE SALVAGED AND LEFT ON SITE FOR THE PUTNAM COUNTY ENGINEERS OFFICE TO PICK-UP PER ITEM 630. IF THE COUNTY ENGINEER DOES NOT WANT THE SIGNS THEN THEY SHALL BE DISPOSED OF BY THE CONTRACTOR. EXISTING POSTS SHALL BE DISPOSED OF BY THE CONTRACTOR.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE COUNTY, REPRESENTATIVES OF THE COUNTY AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE COUNTY.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE COUNTY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

**PAVEMENT MARKINGS**

4" WHITE EDGE LINES, ITEM 646, SHALL BE PLACED AT BOTH EDGES OF THE PROPOSED PAVEMENT AT THE FOLLOWING LOCATIONS:

- STA. 9+00 TO STA. 12+00

A 4" YELLOW CENTERLINE, ITEM 646, SHALL BE PLACED AT THE CENTERLINE OF THE ROAD AT THE FOLLOWING LOCATIONS

- STA. 9+00 TO STA. 12+00 (DOUBLE SOLID LINE)

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CALCULATED  
MPS  
CHECKED  
HAC

GENERAL NOTES

PUT-CR 0-14.741

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ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION
<b>ROADWAY</b>				
201	11000	LS		CLEARING AND GRUBBING
203	98500	LS		ROADWAY, MISC.-EXCAVATION & EMBANKMENT
204	10000	637	SY	SUBGRADE COMPACTION
204	45000	1	HOUR	PROOF ROLLING
606	15050	175	FT	GUARDRAIL, TYPE MGS
606	25000	2	EACH	ANCHOR ASSEMBLY, TYPE A
606	32161	2	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE TST, AS PER PLAN
606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE I
<b>EROSION CONTROL</b>				
601	32200	63	CY	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER
659	98700	LS		SEEDING, MISC.-SEEDING AND MULCHING, AS PER PLAN
832	30000	5,000	EACH	EROSION CONTROL
<b>DRAINAGE</b>				
605	31100	37	FT	AGGREGATE DRAINS
<b>PAVEMENT</b>				
301	56000	63	CY	ASPHALT CONCRETE BASE, PG64-22, (449)
304	20000	108	CY	AGGREGATE BASE
407	10000	66	GAL	TACK COAT
411	10000	16	CY	STABILIZED CRUSHED AGGREGATE
441	70000	19	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (449), PG64-22
441	70300	27	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (449)
<b>TRAFFIC CONTROL</b>				
644	00100	0.12	MILE	EDGE LINE, 4"
644	00300	0.06	MILE	CENTER LINE
<b>STRUCTURE OVER 20 FOOT SPAN SEE ESTIMATED QUANTITIES</b>				
<b>INCIDENTALS</b>				
614	11000	LS		MAINTAINING TRAFFIC
623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING
623	50000	LS		PRECONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT
623	51000	LS		POST CONSTRUCTION SURVEY MONUMENT VERIFICATION AND REPORT
624	10000	LS		MOBILIZATION

**Environmental Notes:**

1. An asbestos survey of the PUT-CR O-14.741 bridge, scheduled for demolition, was conducted by a certified asbestos hazard evaluation specialist. The survey determined regulated asbestos-containing materials are not present on the structure. The asbestos survey report is found in the Special Provisions attached to the plans.

A copy of the Ohio Environmental Protection Agency (OEPA) Notification of Demolition and Renovation Forms, partially completed by the bridge owner, has been included at the end of the asbestos survey report in the Special Provisions. The Contractor shall complete and sign the forms and submit them to:

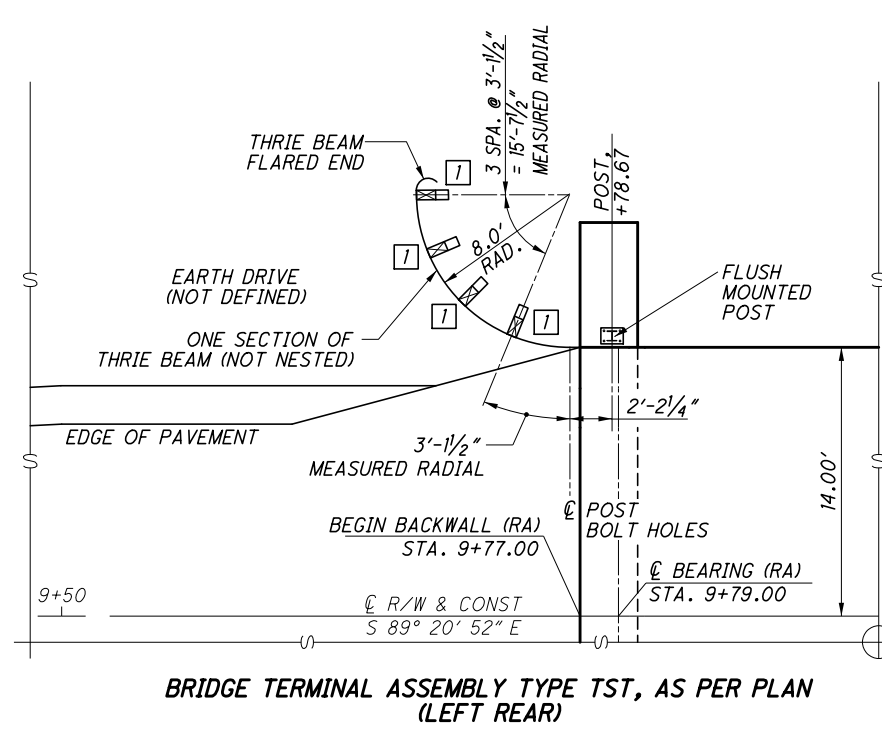
Ohio EPA, SAPC - Asbestos  
 50 W. Town Street, 7th Floor or P.O. Box 1049  
 Columbus, OH 43216-1049

Or submit these forms electronically (electronic submission instructions provided on the forms), at least 10 working days prior to the start of any demolition work.

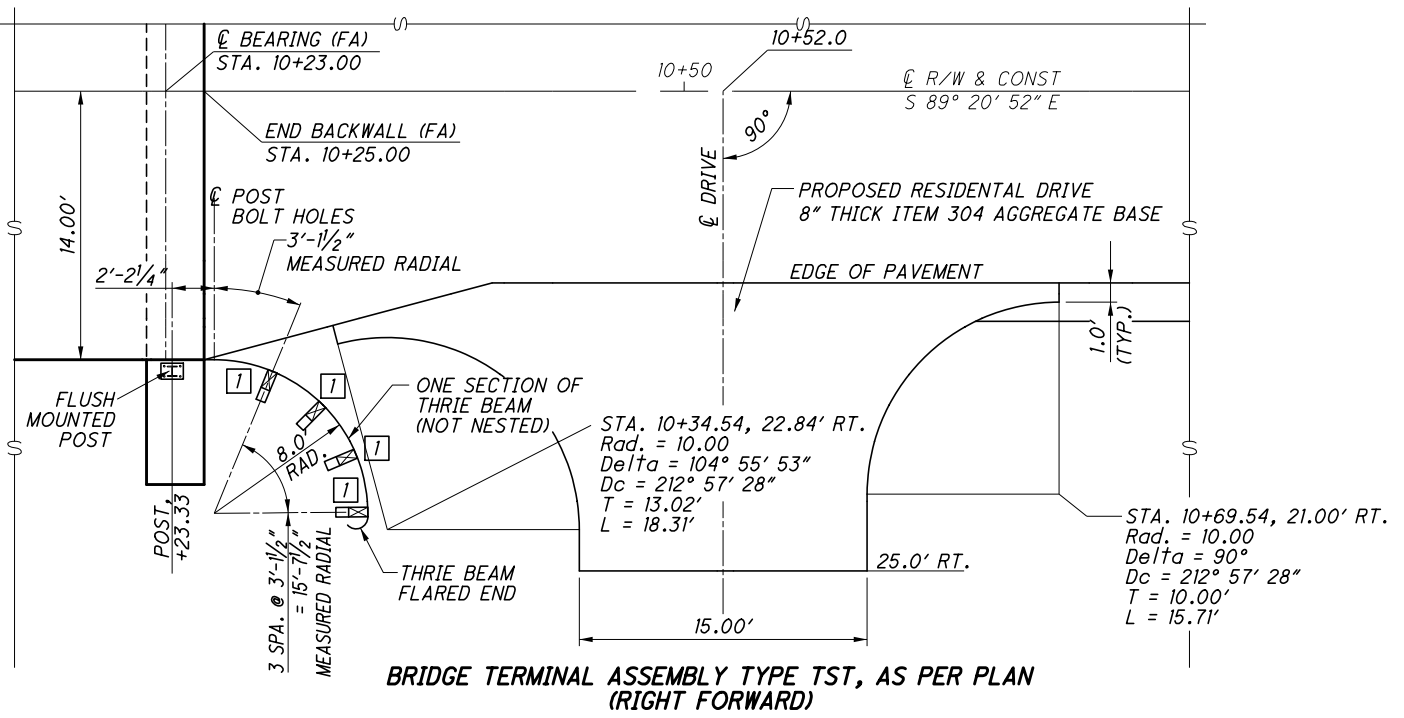
The Contractor shall provide a copy of the completed and signed forms to the Engineer. Information required on the forms shall include at a minimum: 1) the ODOT Project Number, 2) The Contractor's name, address, and telephone number, 3) the scheduled dates for the start and completion of bridge demolition.

Basis for payment: the Contractor shall furnish all fees, labor, and material necessary to complete and submit the OEPA Notification of Demolition and Renovation Forms. Payments for this work shall be incidental to the Item 202 Structure Removal Item(s) in the plan.

2. The Putnam County Engineer has obtained all necessary waterway permits for construction impacts to Cranberry Run, Ditch 1, and portions of Wetland A. The Putnam County Engineer will provide the waterway permits to the Contractor at the pre-construction meeting. The Contractor is responsible for following all the terms and conditions of the waterway permit throughout construction.



1 6"x8"x6'-6" WOOD POSTS WITH 6"x8"x22" WOOD BLOCKOUTS



CALCULATED  
MPS  
CHECKED  
HAC

**GENERAL NOTES AND GENERAL SUMMARY**

**PUT - CR 0 - 14.741**

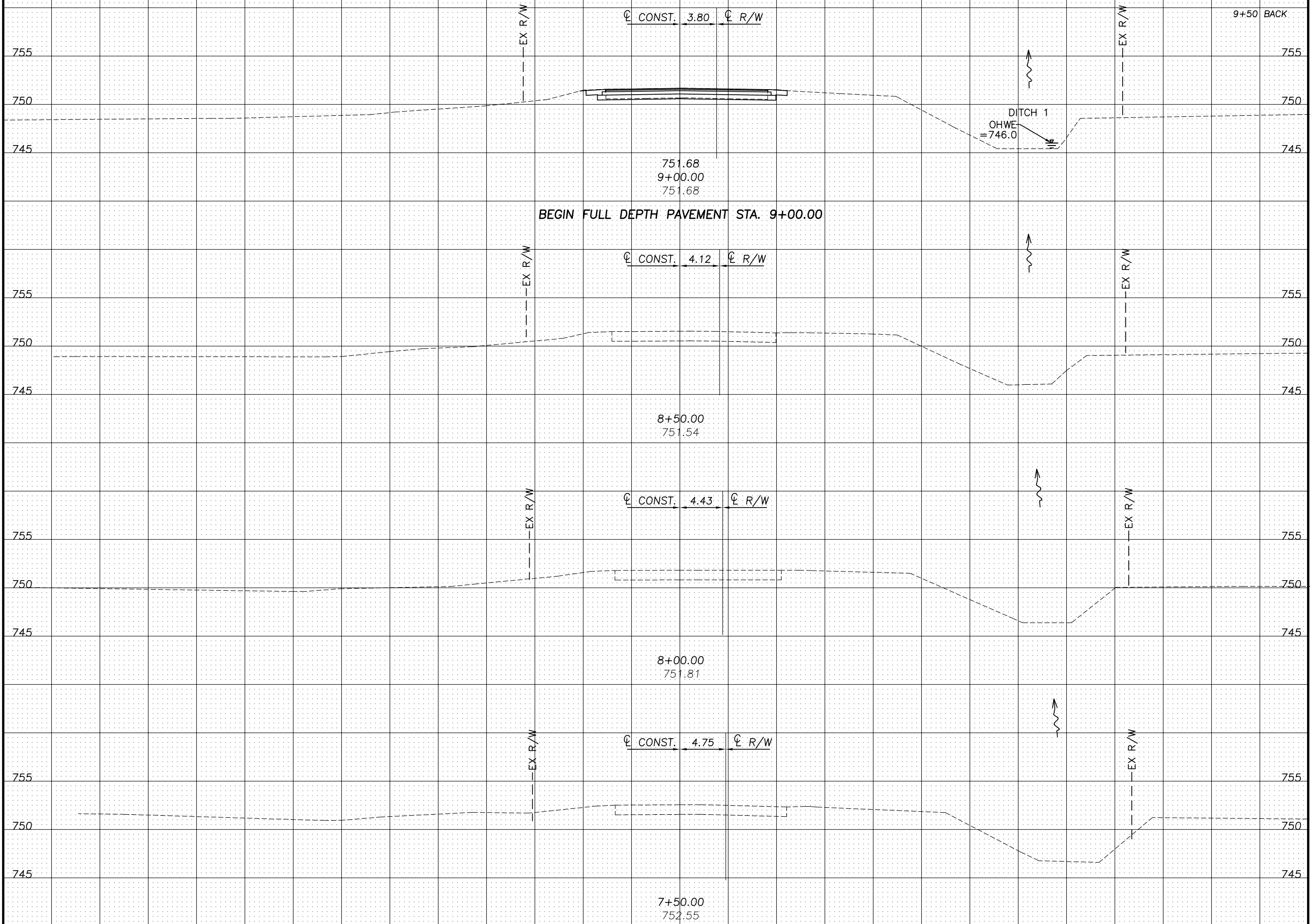




SEEDING  
END WIDTH SQ. YDS.

60 50 40 30 20 10 0 10 20 30 40 50 60

END AREA VOLUME  
CUT FILL CUT FILL  
CALCULATED  
CHECKED  
MPS  
HAC



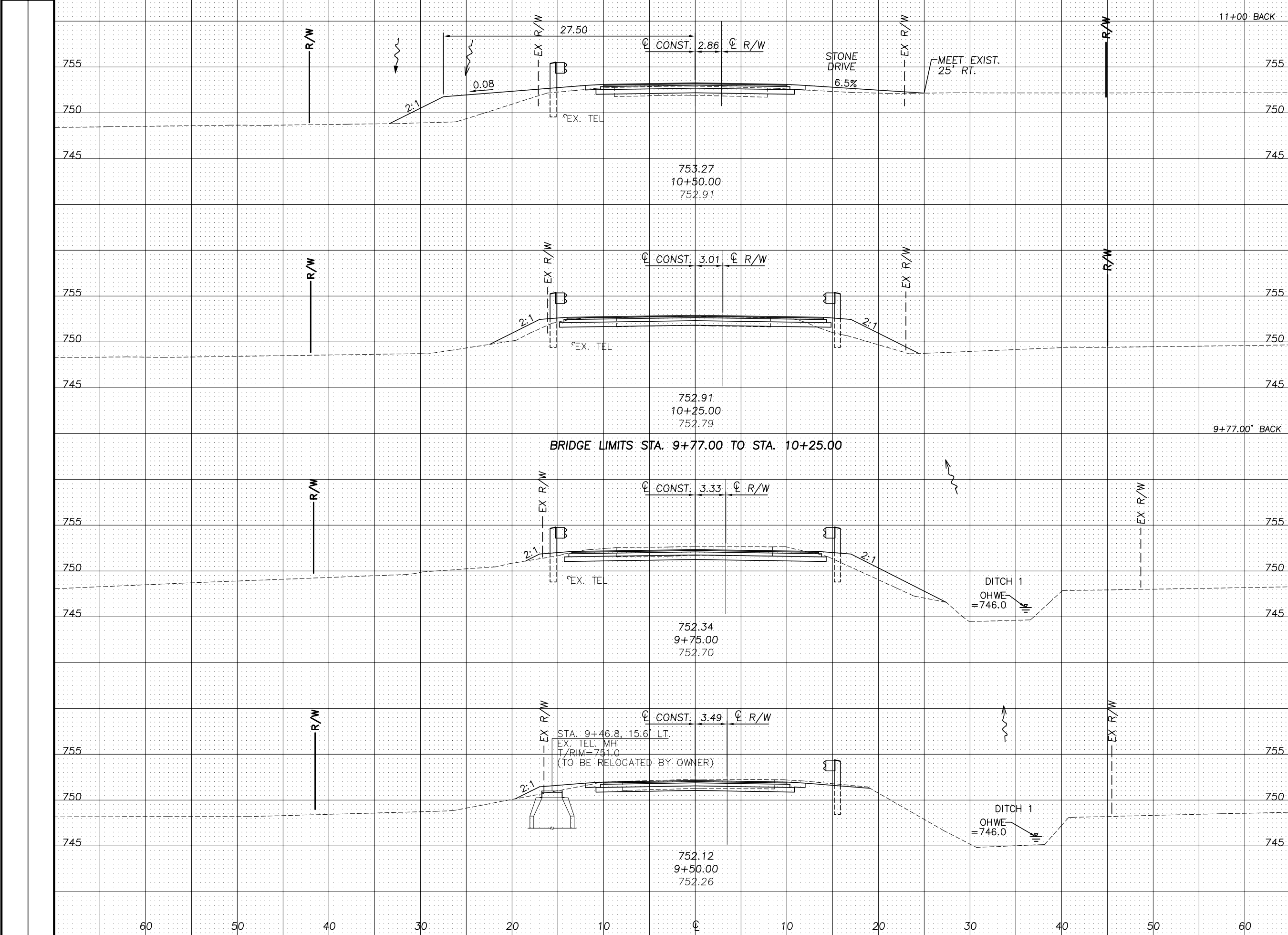
Station	End Area Cut	End Area Fill	Volume Cut	Volume Fill
9+50.00	28	4	45	4
7+50.00	21	0	0	0

CROSS SECTIONS COUNTY ROAD 0  
STA. 7+50.00 TO STA. 9+00.00

PUT-CR 0-14.741

SEEDING  
END WIDTH SQ. YDS.

END AREA VOLUME  
CUT FILL CUT FILL  
CALCULATED  
MPS  
CHECKED  
HAC



CROSS SECTIONS COUNTY ROAD O  
STA. 9+50.00 TO STA. 10+50.00

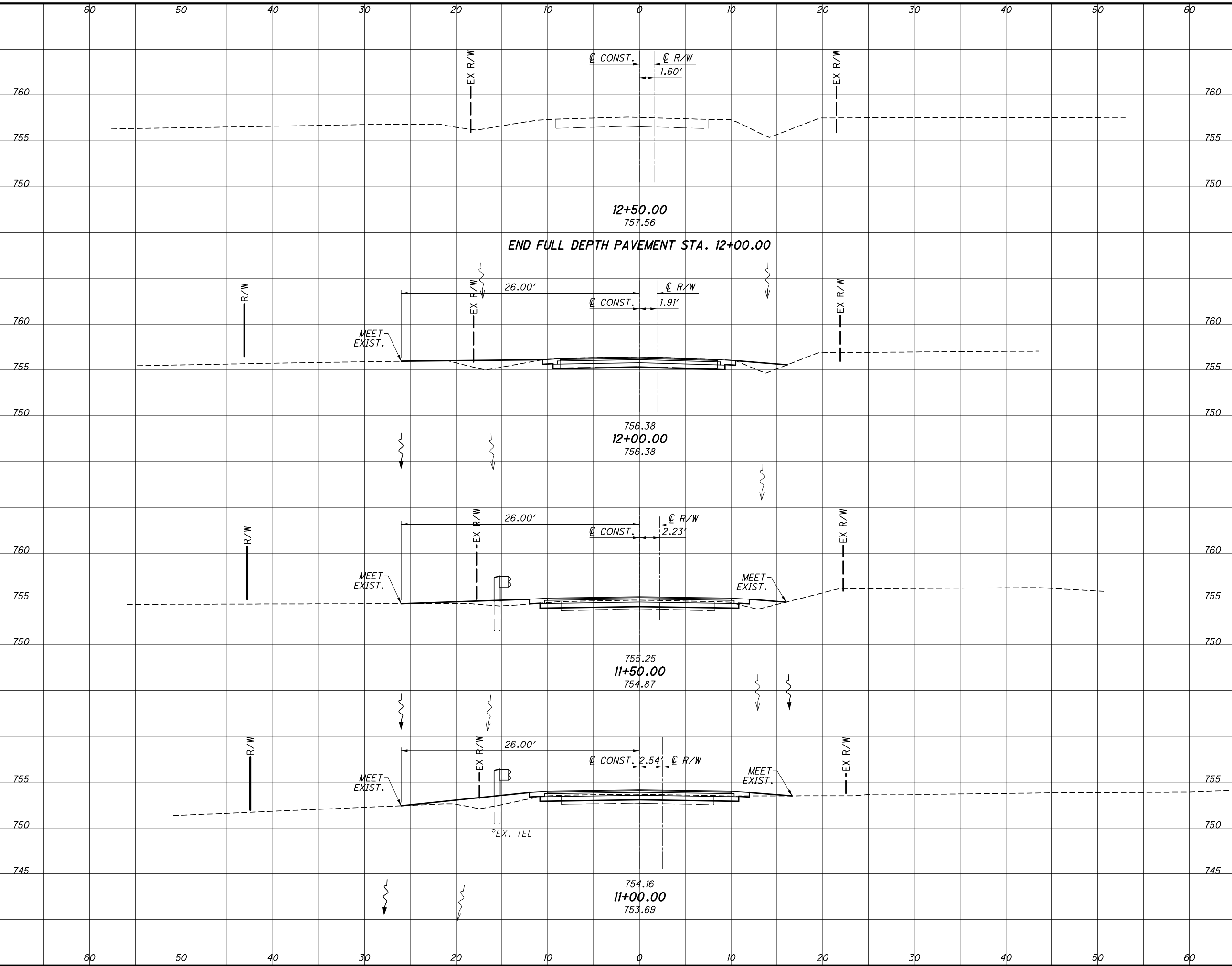
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7  
22

79 72

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SEEDING		END AREA		VOLUME		CALCULATED	
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	MPS	HAC
		21	8	16	5		
		14	3	13	6		
		13	10				
		29	11				



**CROSS SECTIONS COUNTY ROAD 0  
STA. 11+00.00 TO STA. 12+50.00**

**PUT-CR 0-14-741**



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**BENCHMARK DATA**

BM No. 1 STA. 4+88.5, ELEV.=757.6860, OFFSET 22.2' RT.  
 BM No. 2 STA. 11+28.2, ELEV.=754.6450, OFFSET 18.0' RT.

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET  $\frac{5}{18}$

**NOTES**

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:  
 2018 ADT = 270      2022 ADTT = 14  
 2038 ADT = 330      2038 ADTT = 17  
 DIRECTIONAL DISTRIBUTION = 55%

**LEGEND**

$\oplus$  BORING LOCATION

**BORING LOCATIONS**

BORING	STATION	OFFSET	TOP OF ROCK EL.
B-001-0-22	9+77±	4'± LT.	740.4±
B-002-0-22	10+29±	4'± RT.	742.8±

**HYDRAULIC DATA**

DRAINAGE AREA = 11.3 SQ. MILES  
 Q (10) = 791 CFS      V (10) = 4.3 FT/S  
 Q (100) = 1350 CFS      V (100) = 6.0 FT/S  
 STRUCTURE CLEARS THE 10 YEAR  
 DESIGN HW BY 0.06 FEET.

**EXISTING STRUCTURE**

TYPE: SINGLE SPAN STEEL BEAM SUPERSTRUCTURE WITH CORRUGATED METAL DECK.

SPANS: 35'-0" C/C BEARINGS  
 ROADWAY: 24'-0" F/F DBR  
 LOADING: UNKNOWN  
 SKEW: NONE  
 WEARING SURFACE: ASPHALT CONCETE  
 APPROACH SLABS: NONE  
 ALIGNMENT: TANGENT  
 STRUCTURAL FILE NUMBER: 6932533  
 DATE BUILT: 1965  
 DISPOSITION: TO BE REMOVED

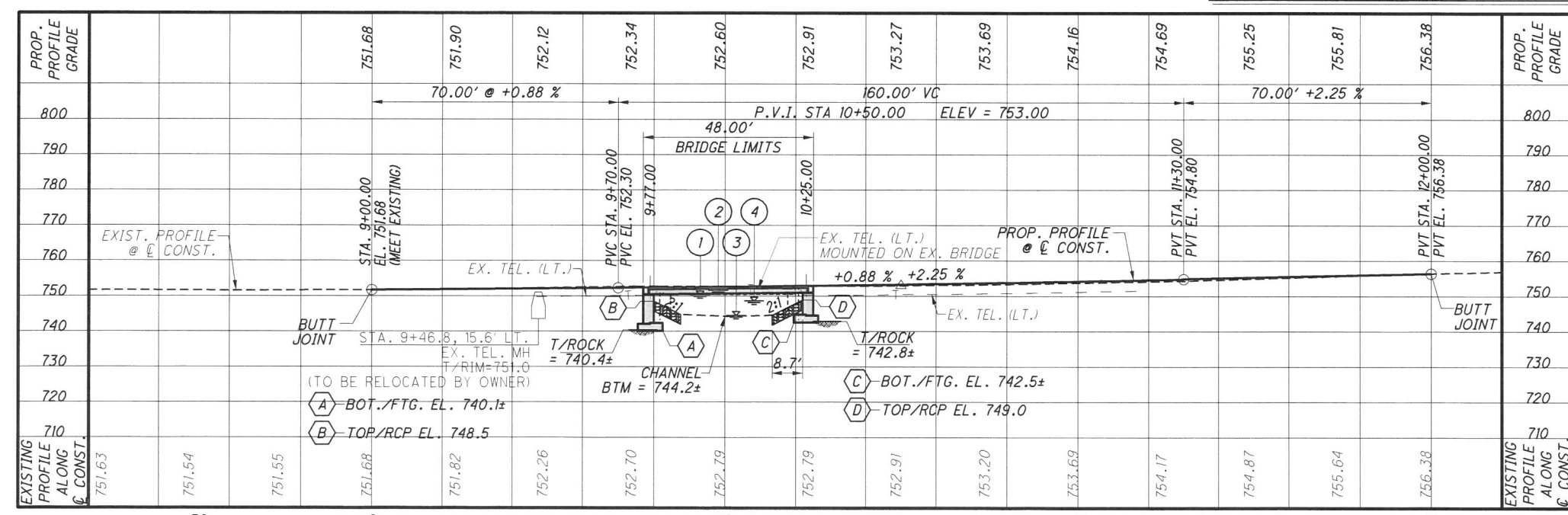
**PROPOSED STRUCTURE**

TYPE: SINGLE SPAN PRESTRESSED COMPOSITE BOX BEAMS WITH SEMI-INTEGRAL SPREAD FOOTING ABUTMENTS.

SPAN: 44'-0"  
 ROADWAY: 28'-0" F/F RAIL  
 LOADING: HL93, FWS=60 PSF  
 SKEW: NONE  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: NONE  
 ALIGNMENT: TANGENT  
 CROWN: 0.016 FT/FT

COORDINATES: LATITUDE 40°57'48.39" N  
 LONGITUDE 83°59'17.01" W

- ① 10 YEAR (DESIGN) HIGH WATER = 750.08
- ② 100 YEAR HIGH WATER = 751.64
- ③ NORMAL WATER ELEVATION = 744.5±
- ④ ORDINARY HIGH WATER ELEVATION = 746.5



PROFILE ALONG CENTERLINE CONSTRUCTION

DESIGN AGENCY: **KLEINFELDER**  
 DATE: 01/13/23  
 REVIEWED: JDB  
 DRAWN: JEF  
 DESIGNED: MPS  
 COUNTY: PUTNAM COUNTY  
 STA.: 9+77.00  
 STA.: 10+25.00  
 STRUCTURE FILE NUMBER: 6932534  
 CHECKED: JDB  
 SITE PLAN: BRIDGE No. PUT-CR0-1474 OVER CRANBERRY RUN  
 PUT-CR 0-14.741  
 PID No. 117598  
 1/10  
 9/22

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**STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

PSBD-2-07	REVISED	07-20-18
SICD-1-96	REVISED	07-18-14
DS-1-92	REVISED	07-15-22
TST-1-99	REVISED	01-15-21

**OPERATIONAL IMPORTANCE:**

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL 2020.

**DESIGN SPECIFICATIONS**

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 9th EDITION OF "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, INCLUDING THE 2015 INTERM REVISIONS AND THE ODOT BRIDGE DESIGN MANUAL.

**DESIGN LOADING**

DESIGN LOADING: HL-93  
FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

**DESIGN DATA**

CONCRETE, CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI  
COMPRESSIVE STRENGTH 4.5 K.S.I. (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI  
(SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

CONCRETE FOR PRESTRESSED BOX BEAMS:

COMPRESSIVE STRENGTH (FINAL) - 7.0 KSI

COMPRESSIVE STRENGTH (RELEASE) - 5.0 KSI

PRESTRESSING STRANDS:

AREA = 0.167 SQ. IN.

ULTIMATE STRENGTH = 270 KSI

INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

**DECK PROTECTION METHOD**

EPOXY COATED REINFORCING STEEL  
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

**UTILITY LINES:** ALL EXPENSE INVOLVED IN RELOCATION OF THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITIES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

**FOUNDATION BEARING RESISTANCE:** ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM SERVICE LOAD PRESSURE OF 4.9 KIPS PER SQUARE FOOT AND A MAXIMUM STRENGTH LOAD PRESSURE OF 7.0 KIPS PER SQUARE FOOT. THE ASSUMED FACTORED BEARING RESISTANCE IS 20 KIPS PER SQUARE FOOT.

**FOOTINGS:** FOOTINGS SHALL EXTEND A MINIMUM OF 3 INCHES INTO BEDROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

**ITEM 511 - CLASS QC1 CONCRETE, AS PER PLAN:** POLYSTYRENE - FURNISH MATERIAL MEETING THE REQUIREMENTS OF ASTM C578 TYPE IV. NEATLY CUT MATERIAL AS NECESSARY TO ALLOW FOR PROPER INSTALLATION. JOINTS AT ABUTTING PIECES SHALL BE SEALED WITH DUCT TAPE. ALLOWABLE TOLERANCE FOR THE TOTAL THICKNESS OF THE MATERIAL SHALL BE -0", +1/2". DO NOT PLACE MORE THAN TWO LAYERS OF POLYSTYRENE TO ACHIEVE TOTAL THICKNESS.

ITEM	EXT	TOTAL	UNIT	DESCRIPTION	ABUTMENTS		SUPER	CALC. CHCK.	GENERAL	MPS JTY	SEE SHT.
					REAR	FWD.					
202	11002	LUMP		STRUCTURE REMOVED, OVER 20 FOOT SPAN					LUMP		
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING					LUMP		
503	21300	LUMP		UNCLASSIFIED EXCAVATION					LUMP		
503	31100	6	CU. YD.	ROCK EXCAVATION	3	3					
509	10000	13347	POUNDS	EPOXY COATED REINFORCING STEEL	4250	4249	4,848				
511	31610	27	CU. YD.	CLASS QC2 CONCRETE, SUPERSTRUCTURE			27				
511	44111	108	CU. YD.	CLASS QC1 CONCRETE, ABUTMENT INCLUDING FOOTING, AS PER PLAN	57	51					2 OF 11
512	10100	44	SQ. YD.	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	15	15	14				
515	12030	7	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB17-48 (45'-00 LONG)			7				
SPECIAL	51631200	56	FT	SAWING AND SEALING BITUMINOUS CONCRETE JOINTS	28	28					
516	13600	26	SQ. FT.	1" PREFORMED EXPANSION JOINT FILLER	13	13					
516	14020	66	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	33	33					
516	43100	28	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE) (11.5" x 5.5" x 11.5")	14	14					
517	70000	44.66	FT	RAILING (TWIN STEEL TUBE)			44.66				
SPECIAL	51822300	114	FT	STEEL DRIP STRIP			114				
518	21230	LUMP		POROUS BACKFILL WITH FILTER FABRIC					LUMP		
518	40000	86	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	43	43					
518	40010	40	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	21	19					

**GENERAL NOTES AND ESTIMATED QUANTITIES**

BRIDGE No. PUT-CR0-1474  
OVER CRANBERRY RUN

DESIGN AGENCY  
**KLEINFELDER**  
Highway Engineering & Construction

DESIGNED: MPS  
CHECKED: JDB

DRAWN: JEF  
REVISED:

REVIEWED: JDB  
JOB: STRUCTURE FILE NUMBER  
6932534

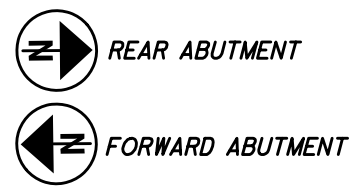
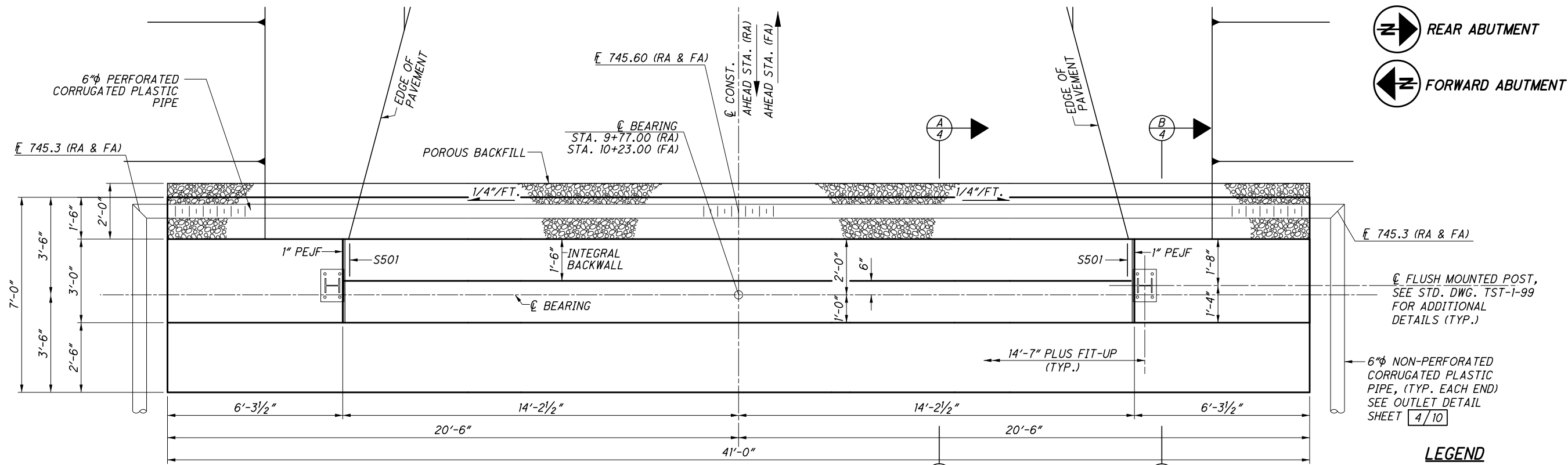
DATE: 01/13/23

PUT - CR 0 - 14.741  
PID No. 117598

2 / 10

10  
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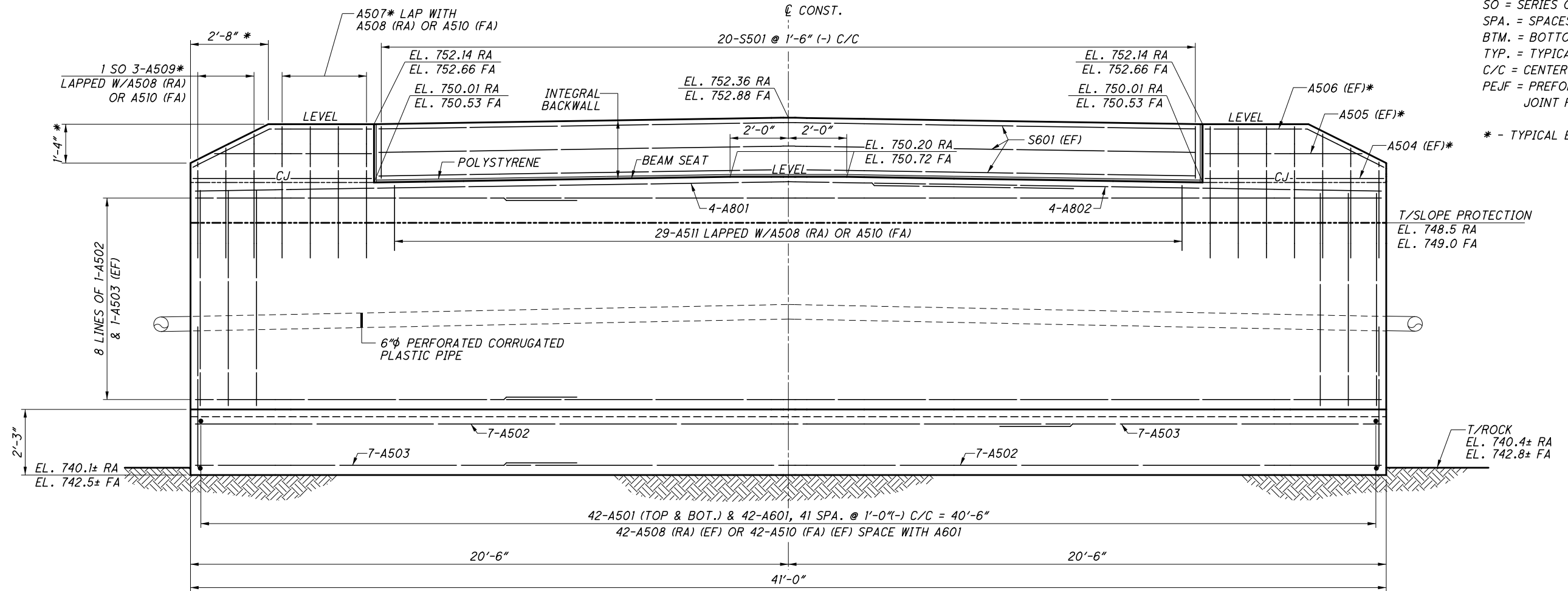
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**NOTES**  
 REINFORCING SPLICE LENGTHS SHALL BE AS FOLLOWS  
 UNLESS OTHERWISE NOTED:  
 #5 BARS 2'-5"  
 #8 BARS 4'-11"

**ABUTMENT PLAN**  
 REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR

**LEGEND**  
 RA = REAR ABUTMENT  
 FA = FORWARD ABUTMENT  
 NF = NEAR FACE  
 FF = FAR FACE  
 EF = EACH FACE  
 CJ = CONSTRUCTION JOINT  
 SO = SERIES OF  
 SPA. = SPACES  
 BTM. = BOTTOM  
 TYP. = TYPICAL  
 C/C = CENTER TO CENTER  
 PEJF = PREFORMED EXPANSION  
 JOINT FILLER  
 \* - TYPICAL EACH END



**ABUTMENT ELEVATION**  
 REAR ABUTMENT SHOWN, FORWARD ABUTMENT SIMILAR

DESIGN AGENCY: **KLEINFELDER**  
 DATE: 01/13/23  
 REVIEWED: JDB  
 DRAWN: JEF  
 DESIGNED: MPS  
 CHECKED: JDB  
 STRUCTURE FILE NUMBER: 6932534  
**ABUTMENT PLAN AND ELEVATION**  
 BRIDGE No. PUT-CR0-1474  
 OVER CRANBERRY RUN  
**PUT-CR 0-14.741**  
 PID No. 117598  
 3 / 10  
 11 / 22

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DESIGN AGENCY  
**KLEINFELDER**  
Design • Program • Manage • Construct

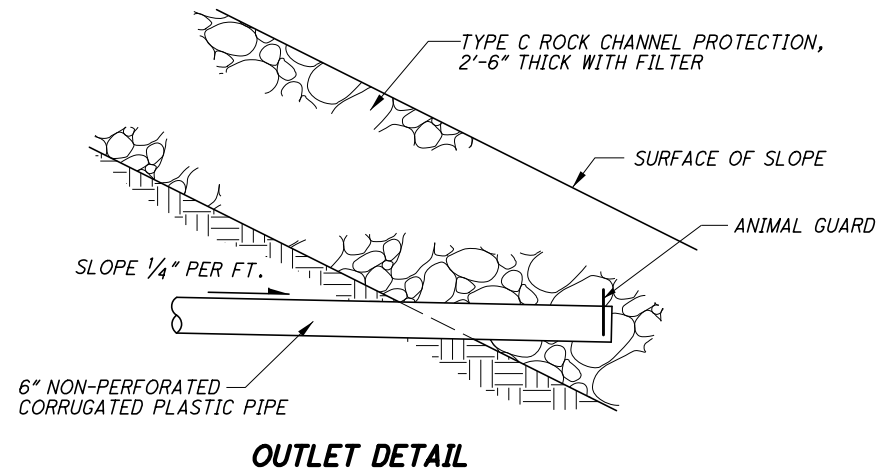
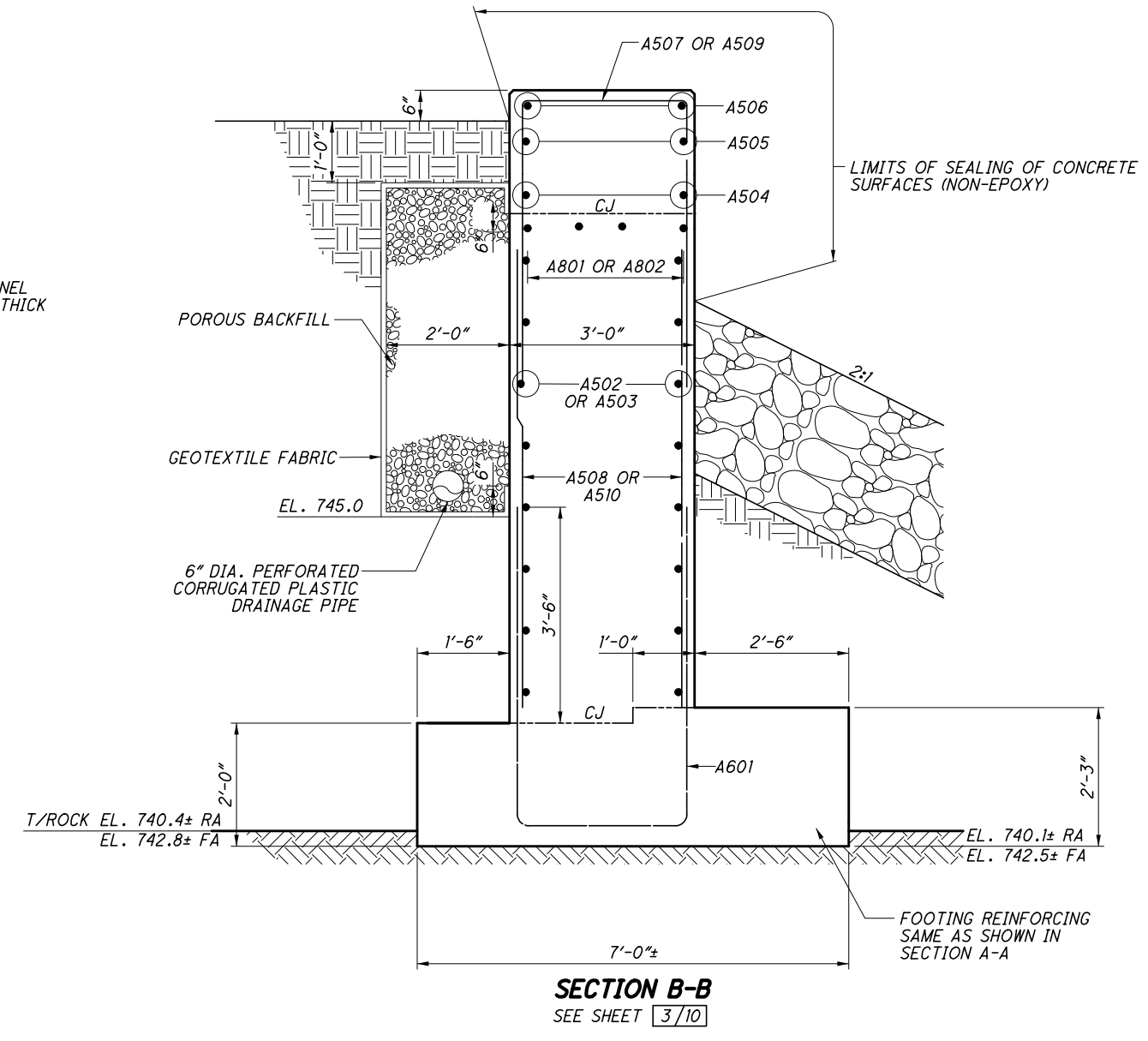
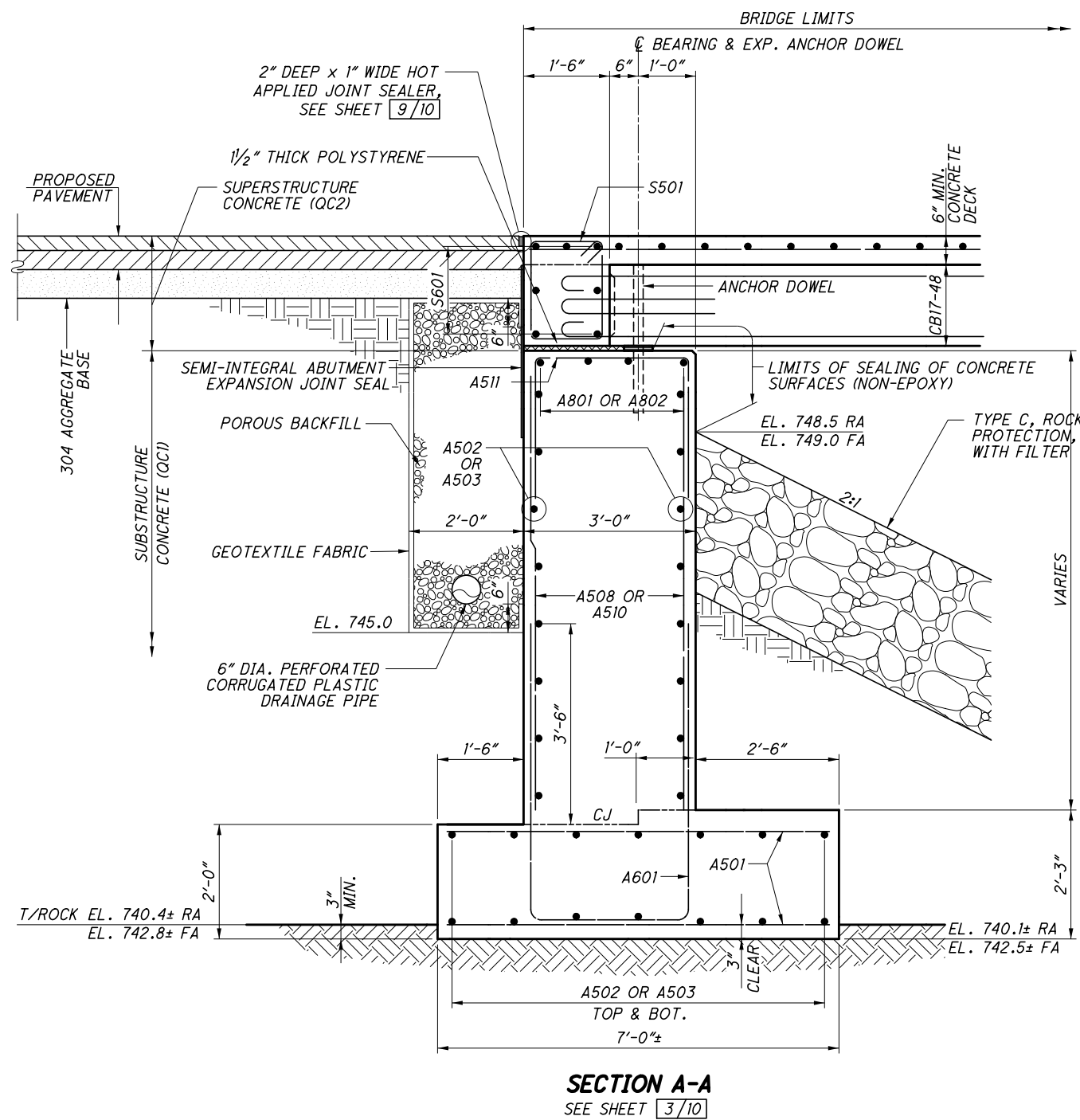
DESIGNED	MPS	CHECKED	JDB
DRAWN	JEF	REVISED	
REVIEWED	JDB	STRUCTURE FILE NUMBER	6932534
DATE	01/13/23		

**ABUTMENT SECTIONS**  
 BRIDGE No. PUT-CR0-1474  
 OVER CRANBERRY RUN

**PUT - CR 0 - 14.741**  
 PID No. 117598

4 / 10

12  
22

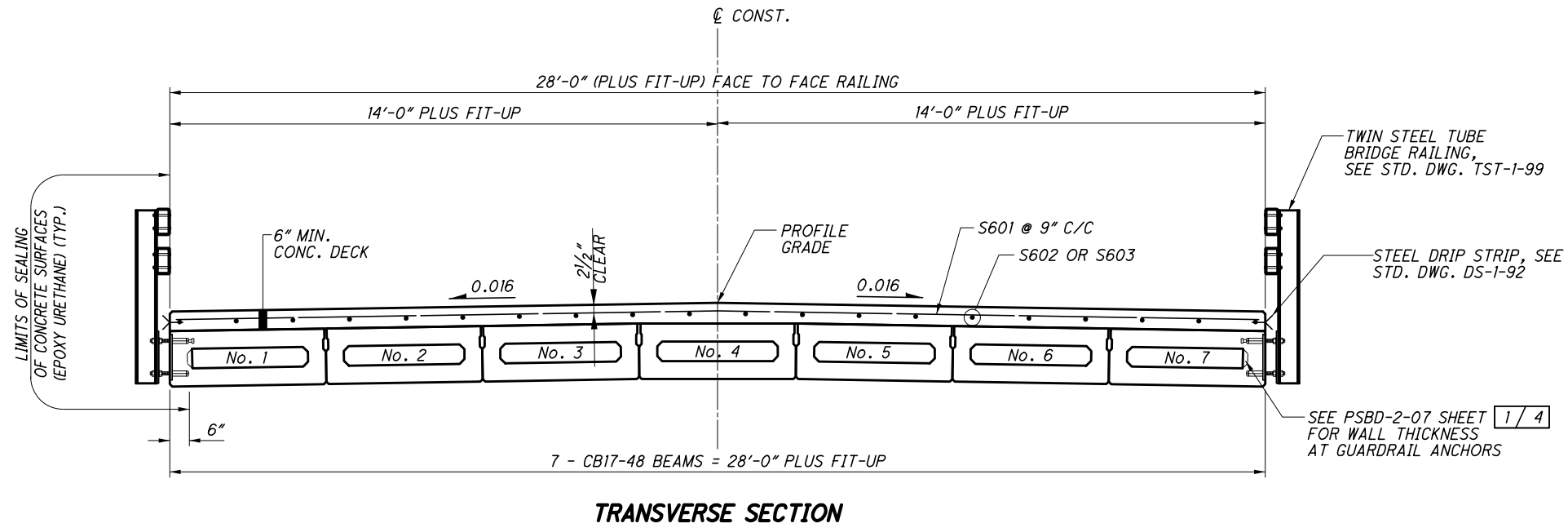


- LEGEND**
- RA = REAR ABUTMENT
  - FA = FORWARD ABUTMENT
  - FF = FAR FACE
  - EF = EACH FACE
  - CJ = CONSTRUCTION JOINT
  - RCP = ROCK CHANNEL PROTECTION
  - TYP. = TYPICAL
  - PEJF = PREFORMED EXPANSION JOINT FILLER
- ALL BARS TO BE EPOXY COATED

**NOTES**

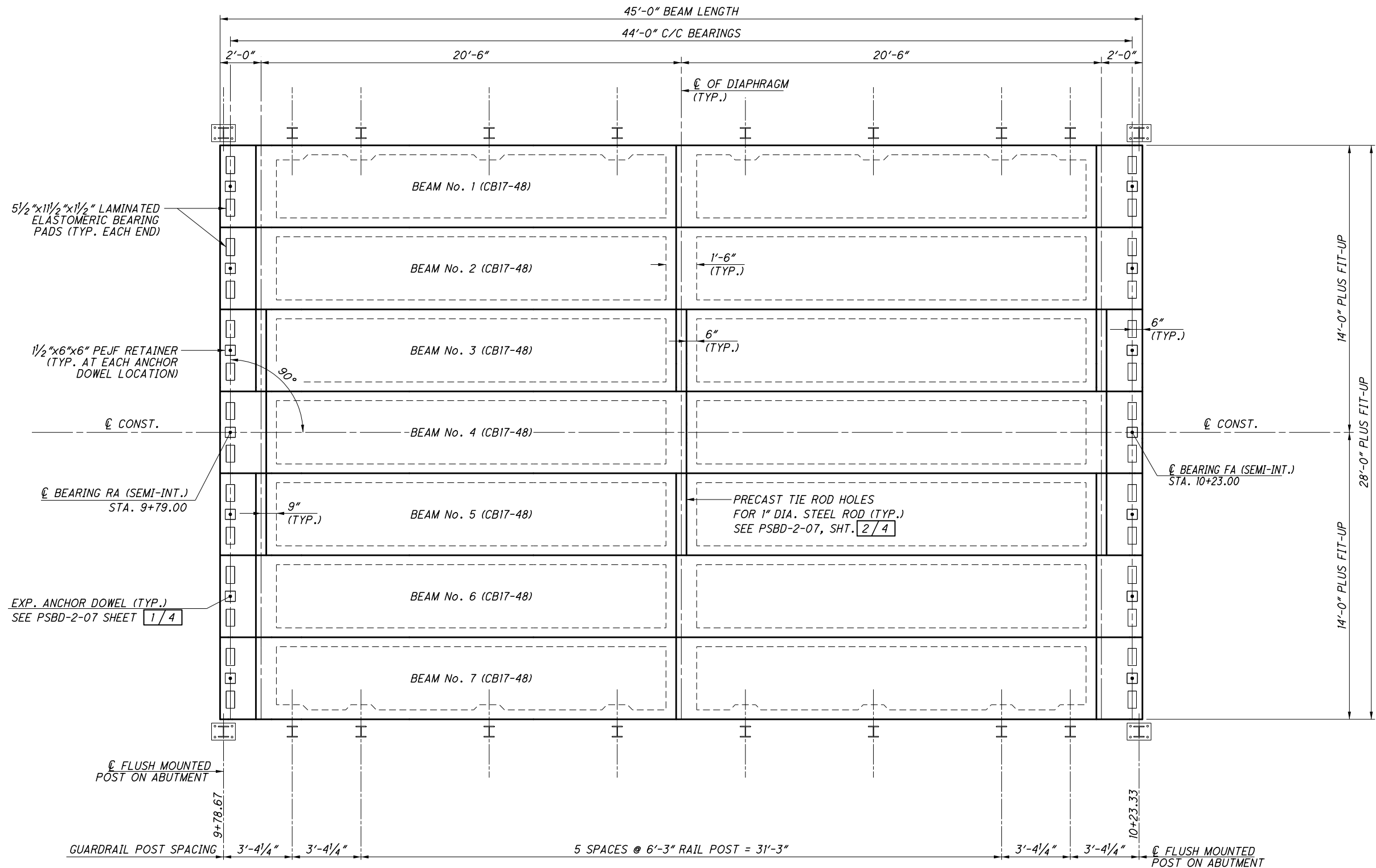
**BRIDGE SEAT REINFORCING:** REINFORCING STEEL IN THE VICINITY OF THE BRIDGE SEAT SHALL BE ACCURATELY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF BEAM ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

**ABUTMENT CONCRETE ABOVE THE BRIDGE SEAT CONSTRUCTION JOINT SHALL NOT BE PLACED UNTIL THE PRESTRESSED CONCRETE BOX BEAMS HAVE BEEN ERECTED.**



DESIGNED	MPS	CHECKED	JDB
DRAWN	JEF	REVISED	
REVIEWED	JDB	STRUCTURE FILE NUMBER	6932534
DATE	01/13/23		

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**FRAMING PLAN**

**LEGEND**

- RA = REAR ABUTMENT
- FA = FORWARD ABUTMENT
- EXP. = EXPANSION
- INT. = SEMI-INTEGRAL
- TYP. = TYPICAL

DESIGN AGENCY  
**KLEINFELDER**  
Design | Program | Project | Construction

REVIEWED DATE  
JDB 01/13/23  
STRUCTURE FILE NUMBER  
6932534

DRAWN JEF  
MPS JDB  
CHECKED JDB

**FRAMING PLAN**  
BRIDGE No. PUT-CR0-1474  
OVER CRANBERRY RUN

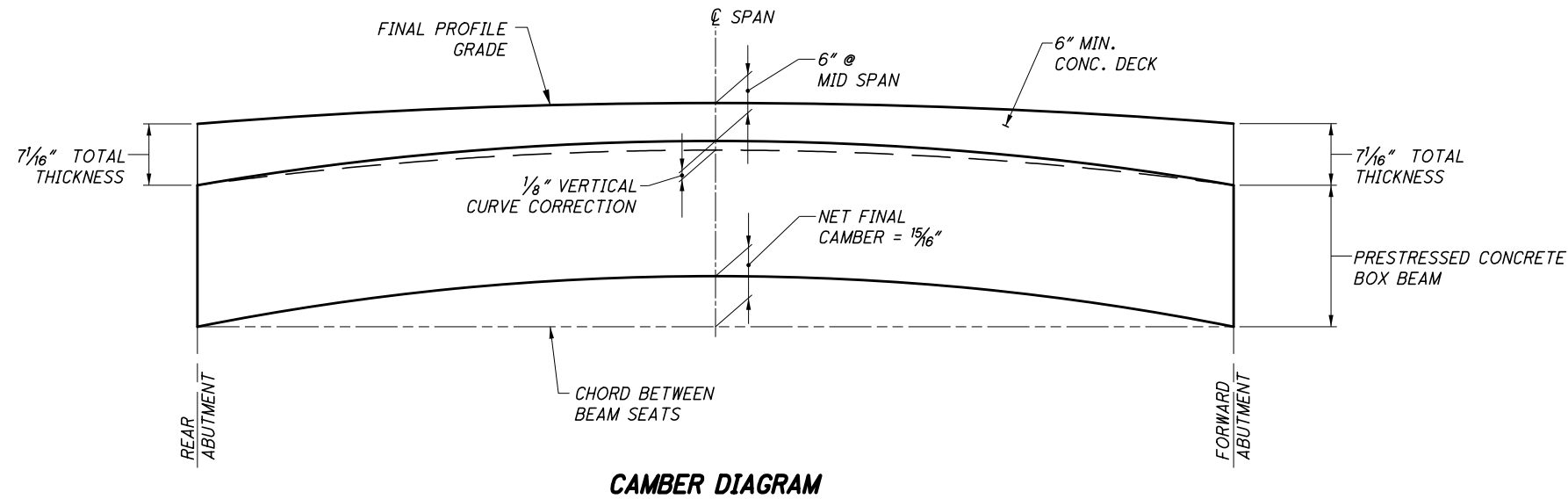
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PID No. 117598

6 / 10

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**CAMBER DIAGRAM**

**NOTES**

**ELASTOMERIC BEARINGS:** THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.6 (METHOD A) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. THE LONGTERM COMPRESSION PROOF LOAD TEST (AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6) IS NOT REQUIRED.

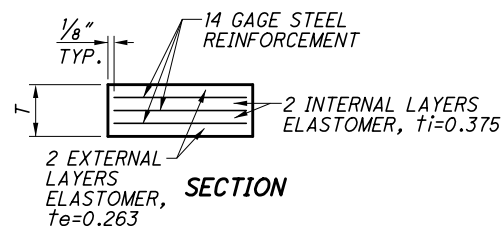
**CAMBER**

ESTIMATED CAMBER AT DAY 0 (D<sub>0</sub>) IS 3/4 INCH

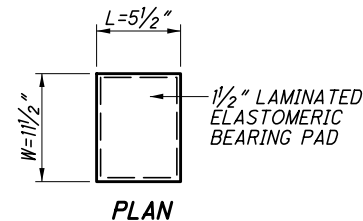
ESTIMATED CAMBER AT DAY 30 (D<sub>30</sub>) IS 1/4 INCHES

DEFLECTION DUE TO REMAINING DEAD LOAD (CONCRETE DECK, DIAPHRAGM, RAILINGS, ETC.) IS 5/16 INCH.

THE BEAM SEAT ELEVATIONS ASSUME ESTIMATED CAMBER D<sub>30</sub>.



**SECTION**

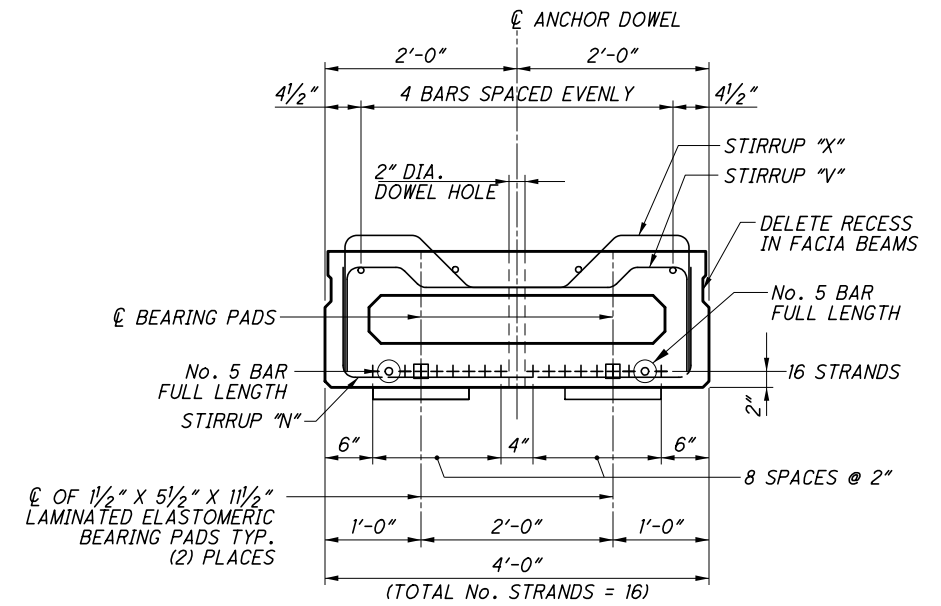


**PLAN**

**LAMINATED ELASTOMERIC BEARINGS**

ELASTOMER						STEEL		COMMENTS
DUROMETER	L	W	T	t <sub>i</sub>	t <sub>e</sub>	n <sub>s</sub>	GAGE	
50	5 1/2"	1 1/2"	1 1/2"	0.375	0.263	3	14	

ALL SPANS - MAXIMUM DESIGN LOAD PER PAD = 18.7 KIPS DL + 16.3 KIPS LL = 35.0 KIPS

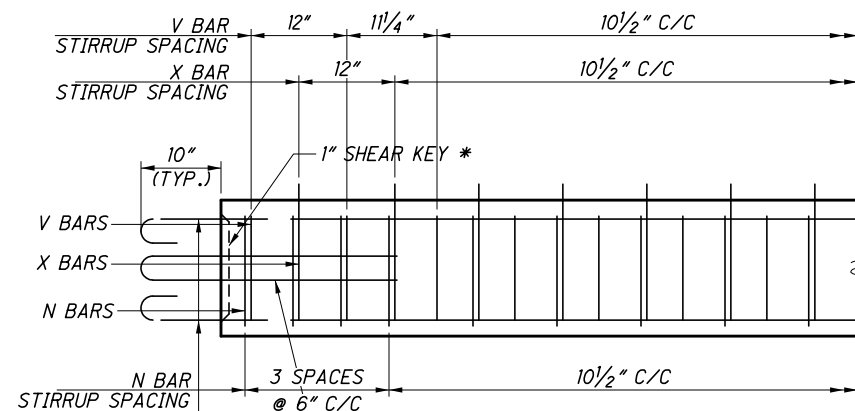


**CB17-48 BEAM 44'-0" SPAN**

NOTE: FABRICATORS SHOP DRAWINGS SHALL SHOW COMPLETE DETAILS OF BEAM REINFORCING. SEE STD. PSBD-2-07 FOR ADDITIONAL DETAILS

1/2" DIA. SEVEN WIRE PRESTRESSING    o No. 5 BAR FULL LENGTH  
 + STRAND, UNCOATED, LOW RELAXATION  
 (A<sub>s</sub> = 0.167 IN<sup>2</sup>)

⊞ DEBOND 2'-6"



**PARTIAL ELEVATION AT BEAM END**

EXTEND TOP AND BOTTOM No. 5 BARS WITH 180° BEND (6 TOTAL) (EPOXY COATED)

SEE STD. DWG. PSBD-2-07, SHEET 4/4 FOR STIRRUP BAR SHAPES

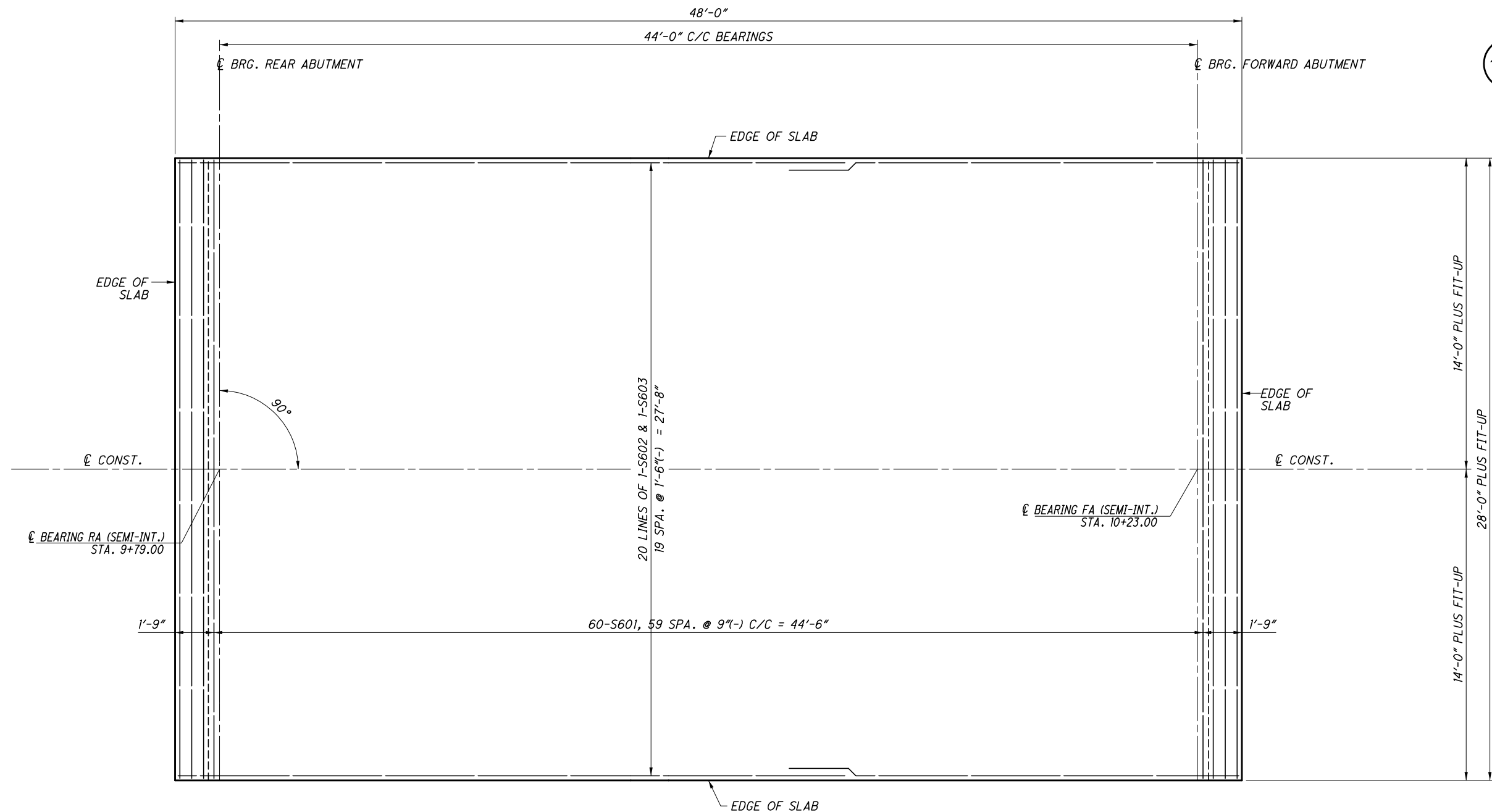
\* - 1" DEEP SHEAR KEY CENTERED ON THE BEAM END. SHEAR KEY HEIGHT = 8 1/2" & WIDTH = 38"

PLACE No. 5 BAR @ MID-HEIGHT OF EACH WEB (EPOXY COATED)

**PARTIAL ELEVATION AT BEAM END**

SEE STD. DWG. PSBD-2-07 SHT. 4/4 FOR STIRRUP BAR SHAPES

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**DECK REINFORCING PLAN**

DECK SCREED ELEVATIONS		SPAN (44.00' C/C BRG.)				
		R. ABUT. CL BRG.	1/4 SPAN	MID SPAN	3/4 SPAN	F. ABUT. CL BRG.
<b>LEFT DECK EDGE 14' LT</b>	STATION	9+79.00	9+90.00	10+01.00	10+12.00	10+23.00
	FINAL DECK SURFACE ELEV.	752.16	752.27	752.39	752.52	752.66
	DL DEFLECTION (FT)	0.0000	0.0140	0.0207	0.0140	0.0000
	SCREED ELEVATION	752.16	752.28	752.41	752.53	752.66
<b>CENTERLINE CONSTRUCTION</b>	STATION	9+79.00	9+90.00	10+01.00	10+12.00	10+23.00
	FINAL DECK SURFACE ELEV.	752.38	752.49	752.61	752.74	752.88
	DL DEFLECTION (FT)	0.0000	0.0140	0.0207	0.0140	0.0000
	SCREED ELEVATION	752.38	752.50	752.63	752.75	752.88
<b>RIGHT DECK EDGE 14.00' RT</b>	STATION	9+79.00	9+90.00	10+01.00	10+12.00	10+23.00
	FINAL DECK SURFACE ELEV.	752.16	752.27	752.39	752.52	752.66
	DL DEFLECTION (FT)	0.0000	0.0140	0.0207	0.0140	0.0000
	SCREED ELEVATION	752.16	752.28	752.41	752.53	752.66

SCREED ELEVATIONS SHOWN REPRESENT THE THEORETICAL DECK SURFACE LOCATION PRIOR TO DEFLECTIONS CAUSED BY DECK PLACEMENT AND OTHER ANTICIPATED DEAD LOADS.

FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

**NOTES**

REINFORCING SPLICE LENGTHS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

No. 6 BARS - 2'-11"

ALL BARS TO BE EPOXY COATED

**LEGEND**

RA = REAR ABUTMENT  
 FA = FORWARD ABUTMENT  
 TYP. = TYPICAL  
 ALT. = ALTERNATE  
 EXP. = EXPANSION

DESIGN AGENCY  
  
 KLEINFELDER  
 Design • Program • Project Management

DESIGNED	MPS	CHECKED	JDB
DRAWN	JEF	REVISED	
REVIEWED	JDB	STRUCTURE FILE NUMBER	6932534
DATE	01/13/23		

**DECK REINFORCING PLAN AND DECK SCREED TABLE**

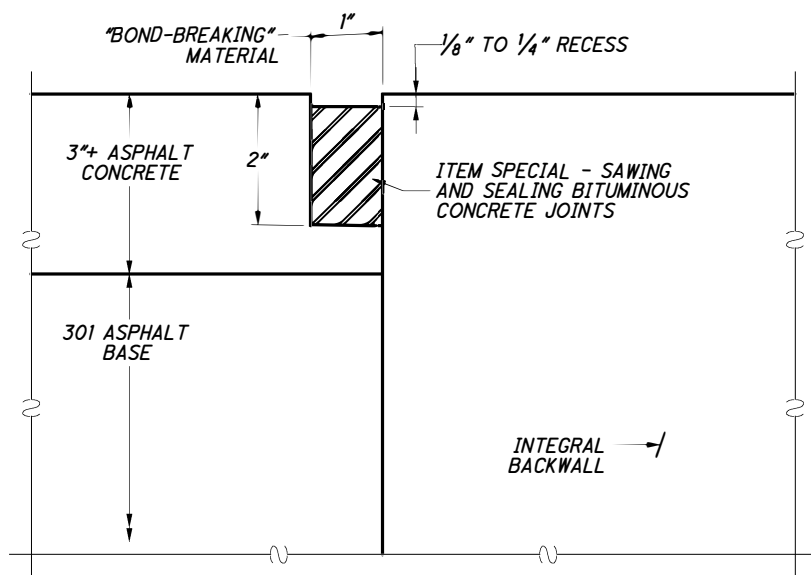
BRIDGE No. PUT-CR0-1474  
 OVER CRANBERRY RUN

**PUT-CR 0-14.741**  
 PID No. 117598

8 / 10

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SEALING OF JOINTS AT ABUTMENTS

ITEM SPECIAL-SAWING AND SEALING BITUMINOUS CONCRETE JOINTS

1) DESCRIPTION:

THIS WORK SHALL CONSIST OF CUTTING AND SEALING TRANSVERSE JOINTS IN THE NEW BITUMINOUS CONCRETE. BITUMINOUS CONCRETE JOINTS SHALL BE CONSTRUCTED DIRECTLY OVER, AND IN LINE WITH, THE EXISTING UNDERLYING TRANSVERSE ABUTMENT JOINT OF THE BOX BEAMS.

2) MATERIALS:

THE JOINT SEALANT SHALL MEET THE REQUIREMENTS OF ITEM 705.04, JOINT SEALANTS, HOT-POURED, FOR CONCRETE AND ASPHALT PAVEMENTS. ACCEPTABLE ALTERNATE MATERIALS ARE:

A SILICONE SEALANT MEETING FEDERAL SPECIFICATIONS TT-S-001543A CLASS A (ONE-PART SILICONE SEALANTS) AND TT-S-00230C CLASS A (ONE-COMPONENT SEALANTS), SUCH AS THOSE MANUFACTURED BY GENERAL ELECTRIC, SILICONE PRODUCTS DIVISION, 4015 EXECUTIVE PARK DRIVE, CINCINNATI, OHIO 45242 (513-243-1953)OR DOW CORNING, 400 TECHNE CENTER, SUITE 103, MILFORD, OHIO 45150 (513-831-3586); OR SOF-SEAL, A COLD-APPLIED, LOW-MODULUS, TWO-COMPONENT POLY-MERIC COMPOUND HORIZONTAL SEALANT AS MANUFACTURED BY W.R.MEADOWS, INC., P.O.BOX 543,ELGIN,ILLINOIS 60121 (800-342-5976).

3) CONSTRUCTION DETAILS:

A) GENERAL: THE CONTRACTOR SHALL CONDUCT HIS OPERATION SO THAT THE CUTTING, CLEANING AND SEALING OF TRANSVERSE JOINTS IS A CONTINUOUS OPERATION THAT WILL BE PERFORMED AS SOON AS PRACTICAL AFTER THE PAVING, BUT NO LATER THAN FOUR (4) DAYS AFTER PLACEMENT OF THE ASPHALT CONCRETE SURFACE COURSE. TRAFFIC SHALL NOT BE ALLOWED TO KNEAD TOGETHER OR DAMAGE JOINT CUT PRIOR TO SEALING.

B) CUTTING OF TRANSVERSE JOINTS: THE CONTRACTOR SHALL SAW OR ROUT TRANSVERSE JOINTS TO THE DIMENSIONS SHOWN IN THE DETAILS ON THIS SHEET. THE CUT JOINTS SHALL LIE DIRECTLY ABOVE EACH BOX BEAM ABUTMENT JOINT.

THE BLADE OR BLADES SHALL BE OF SUCH SIZE THAT THE FULL WIDTH AND DEPTH OF THE CUT CAN BE MADE WITH ONE PASS. DRY OR WET CUTTING WILL BE ALLOWED. JOINTS SHALL EXTEND THE FULL WIDTH OF THE BRIDGE.

C) CLEANING JOINTS: DRY SAWED JOINTS SHALL BE THOROUGHLY CLEANED WITH A SUFFICIENT AMOUNT OF COMPRESSED AIR TO REMOVE ANY DIRT, DUST, OR DELETERIOUS MATTER. WET SAWED JOINTS SHALL BE WASHED CLEAN OF ALL CUTTINGS BY FLUSHING WITH A JET OF WATER AND WITH OTHER TOOLS AS NECESSARY. AFTER FLUSHING, THE JOINT SHALL BE BLOWN OUT WITH COMPRESSED AIR. WHEN THE SURFACES ARE THOROUGHLY CLEAN AND DRY, AND JUST PRIOR TO PLACING THE JOINT SEALER, COMPRESSED AIR HAVING A PRESSURE OF AT LEAST 90 P.S.I. SHALL BE USED TO BLOW OUT THE JOINT AND REMOVE ALL TRACES OF DUST.

IN THE EVENT FRESHLY CUT JOINTS BECOME CONTAMINATED BEFORE THEY ARE SEALED, THEY SHALL BE RECLEANED OF ALL FOREIGN MATERIAL BY HIGH PRESSURE WATER JET.

D) SEALING JOINTS: THE JOINT SHALL BE THOROUGHLY DRY WHEN THE SEALANT IS PLACED. AFTER CLEANING AND DRYING, A BOND-BREAKER MATERIAL SHALL BE APPLIED TO THE BOTTOM OF THE GROOVE.

HOT-POURED JOINT SEALANT MATERIAL SHALL BE HEATED IN A KETTLE OR MELTER CONSTRUCTED AS A DOUBLE BOILER, WITH THE SPACE BETWEEN THE INNER AND OUTER SHELLS FILLED WITH OIL OR OTHER HEAT TRANSFER MEDIUM. POSITIVE TEMPERATURE CONTROL AND MECHANICAL AGITATION SHALL BE PROVIDED. HEATING MUST BE IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. JOINT SEALER MATERIAL SHALL NEVER BE KEPT HEATED AT THE POURING TEMPERATURE FOR MORE THAN FOUR (4) HOURS AND SHALL NEVER BE REHEATED. SEALER LEFT IN THE APPLICATOR AT THE END OF A DAY'S WORK SHALL NOT BE USED.

HOT-POURED SEALANT SHALL BE APPLIED IMMEDIATELY THROUGH A NOZZLE, WHICH MUST PROJECT INTO THE SAWED JOINT, FILLING FROM THE BOTTOM UP. THE SEALANT SHALL COMPLETELY FILL THE JOINT IN SUCH A MANNER THAT, AFTER COOLING, THE LEVEL OF THE SEALANT WILL NOT BE HIGHER THAN 1/8" BELOW THE PAVEMENT SURFACE. ANY DEPRESSION IN THE COOLED SEAL GREATER THAN 3/16" SHALL BE BROUGHT UP TO THE SPECIFIED LIMIT BY FURTHER ADDITION OF HOT-POURED SEALANT. CARE SHALL BE TAKEN IN THE SEALING OF THE JOINTS SO THAT THE FINAL APPEARANCE WILL PRESENT A NEAT FINE LINE.

THE COLD APPLIED SEALANT MATERIALS (POLYURETHANE, SILICONE, AND POLYMERIC COMPOUNDS) SHALL BE INSTALLED AS PER MANUFACTURERS' RECOMMENDATIONS, EXCEPT AS MODIFIED BY THIS DRAWING. THE SEALANT SHALL BE INSTALLED WHEN THE AMBIENT TEMPERATURE IS 40 DEGREES F OR HIGHER. TRAFFIC SHALL NOT BE ALLOWED ON THE JOINT FOR ONE HOUR AFTER APPLICATION OF THE SEALANT.

4) METHOD OF MEASUREMENT:

THE QUANTITY TO BE PAID FOR UNDER THIS ITEM WILL BE THE NUMBER OF LINEAR FEET OF JOINTS SAWED AND SEALED AS PER THE ABOVE REQUIREMENTS.

5) BASIS OF PAYMENT:

THE UNIT PRICE PER LINEAR FOOT FOR ITEM SPECIAL-"SAWING AND SEALING BITUMINOUS CONCRETE JOINTS" SHALL INCLUDE THE COST OF ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE WORK, INCLUDING THE FURNISHING AND PLACING OF THE JOINT SEALER MATERIAL.

OFFICE OF STRUCTURAL ENGINEERING

CHECKED REVIEWED

DESIGNED

PLAN INSERT SHEET Abutment Joints in Bituminous Concrete Box Beam Bridges

PUT-CR O-14.741 PID No. 117598

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LENGTHS SHOWN IN FEET AND INCHES

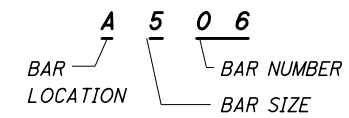
REINFORCING STEEL LIST										
MARK	TOTAL	ABUTMENTS		LENGTH (FOOT)	WEIGHT (POUNDS)	TYPE	A	B	C	INCR
		REAR	FWD.							
<b>ABUTMENTS</b>										
A501	168	84	84	6-8	1168	S	6-8			
A502	60	30	30	30-0	1877	S	30-0			
A503	60	30	30	13-1	819	S	13-1			
A504	8	4	4	6-0	50	S	6-0			
A505	8	4	4	5-1	42	S	5-1			
A506	8	4	4	5-10	49	19	1-3	2-6	3-5	
A507	16	8	8	11-7	193	2	4-7	2-8	4-7	
A508	84	84	0	7-6	657	S	7-6			
A509	4	2	2	11-5			4-6		4-6	
	50	50	50	70	82	2	70	2-8	70	0-6
	3	3	3	12-5			5-6		5-6	
A510	84	0	84	5-7	489	S	5-7			
A511	58	29	29	7-9	469	2	2-8	2-8	2-8	
A601	84	42	42	12-11	1630	2	5-3	2-8	5-3	
A801	8	4	4	30-0	641	S	30-0			
A802	8	4	4	15-7	333	S	15-7			
					8.499	<b>ABUTMENT TOTAL</b>				

NOTE:

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED. "STD." WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

ALL REINFORCING STEEL TO BE EPOXY COATED.

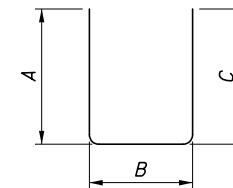
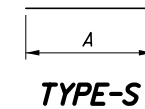
**BAR LEGEND**



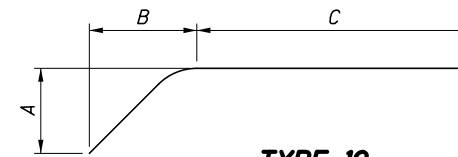
- A - ABUTMENT
- S - SUPERSTRUCTURE
- R - RAILING

LENGTHS SHOWN IN FEET AND INCHES

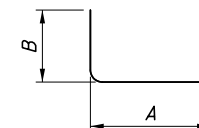
REINFORCING STEEL LIST										
MARK	TOTAL	LENGTH (FOOT)	WEIGHT (POUNDS)	TYPE	A	B	C	D	E	INCR
S501	40	6-1	254	3	1-2	1-7				
S601	74	27-8	3075	S	27-8					
S602	20	30-0	901	S	30-0					
S603	20	20-7	618	S	20-7					
			4.848	<b>SUPERSTRUCTURE TOTAL</b>						



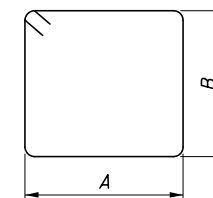
TYPE-2



TYPE-19



TYPE-4



TYPE-3



DESIGN AGENCY  
DATE 01/13/23  
REVIEWED JDB  
STRUCTURE FILE NUMBER 6932534

DRAWN JEF  
CHECKED JDB  
DESIGNED MPS

REINFORCING STEEL LIST  
BRIDGE No. PUT-CR0-1474  
OVER CRANBERRY RUN

PUT-CR 0-14.741  
PID No. 117598

10/10



# RIGHT OF WAY LEGEND SHEET

## PUT-CR 0-14.741

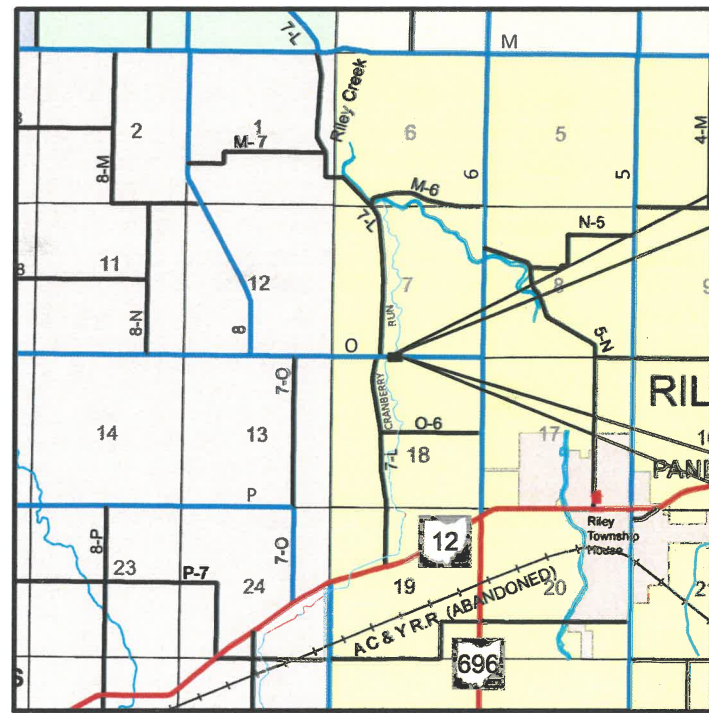
RILEY TOWNSHIP – SECTIONS 7 and 18  
T-1-S, R-8-E  
PUTNAM COUNTY

### PROJECT DESCRIPTION

Replacement of the County Road O Bridge Over Cranberry Run using Reinforced Concrete Abutments on Spread Footings and Composite Prestressed Concrete Box Beams and Reconstruct Asphalt Approaches.

The existing and proposed right of way shall be referenced from the centerline of right of way.

Instrument Number: 202300003265  
Recorded 09/11/2023 08:51:37 AM  
BK: 95 PG: 73 Number of Pages:4  
Rec Fees: \$0.00  
SHERRILYN J BRITSCH, Recorder  
Putnam County, Ohio



**LOCATION MAP**  
LAT: 40.9634, LONG: -83.9880



(Not to Scale)

### NOTE:

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

### Utilities:

#### POWER:

Paulding Putnam Electric  
401 McDonald Pike  
Paulding, OH 45879  
Doug Johanns  
(419)-439-3304

#### TELEPHONE:

BrightSpeed Telephone Service Company  
122 S. Elizabeth St. Wapakoneta, OH 45895  
Lima, OH 45801 Chris Hardy  
Dave Spurgeon 419-739-2560  
(567)-242-2882

### INDEX OF SHEETS

LEGEND SHEET	1
CENTERLINE SURVEY PLAT.	2
PROPERTY MAP AND	3
SUMMARY OF ADDITIONAL RIGHT OF WAY	
RIGHT OF WAY PLAN	4

**UNDERGROUND UTILITIES**

Contact Two Working Days  
Before You Dig

OHIO811, 8-1-1, 1-800-362-2764  
(Non-members must be called directly)

### STRUCTURE KEY

- Residential Building
- Non-Residential Building

### LEGEND

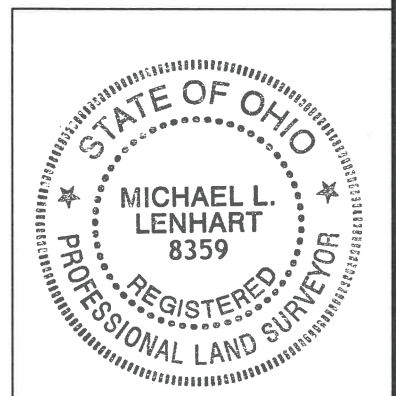
SH = Standard Highway Easement

### CONVENTIONAL SYMBOLS

County Line	———
Township Line	- - - - -
Section Line	· · · · ·
Corporation Line	———
Fence Line (existing)	—x—x— (proposed) —x—x—
Center Line	——— 352 ——— 353 ———
Trees	(circle with cross), Stumps (circle with dot), (to be removed) (circle with X)
Utility Poles:	Light (circle with dot), Telephone (circle with dot), Power (circle with dot)
Standard Highway Ease.(Ex)	——— Ex SH
Standard Highway Ease.(Pr)	——— SH
Temporary Right of Way (Pr)	——— TMP
Channel Ease. (Pr)	——— CH
Property Line	——— (in existing fence) —x—x—
Railroad	———
Guardrail(existing)	——— (proposed) ——
Construction Limits	———
Edge of Pavement (Ex)	———
Edge of Pavement (Pr)	———
Edge of Shoulder (Ex)	———
Edge of Shoulder (Pr)	———

I, Michael L. Lenhart, P.S., have conducted a survey of the existing conditions for the Putnam County Engineer's Office on February 2, 2023. The results of that survey are contained herein. Underground utility locations are shown for informational purposes only. Their location as marked on the ground by the utility company or their representatives per Ohio811 were surveyed and mapped as a part of this project by the Bridge Design Consultant, Kleinfelder. I assume they followed Ohio811 Utility Damage Prevention laws and have no direct knowledge or control of how these marks were placed, nor knowledge of the accuracy as to their intended depiction of subsurface utility facilities. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinate System of 1983, Ohio North Zone (3401), NAD83 (2011) datum and 2010.0 EPOCH. The survey utilized the Ohio Department of Transportation's (ODOT's) Virtual Reference System (VRS) Network and Geoid Model G18US. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates US Survey Feet by a Project Adjustment Factor of 1.000898882 applied at Point #2 at (1558096.2310, 475942.2570). As part of this project I have reestablished the locations of the existing boundary lines and centerline of existing Right of Way for the property takes contained herein. As part of this project I have established the proposed boundary lines, calculated the Gross Take, Present Roadway Occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As part of this work, I have set or found right of way monuments at property corners, property line intersections, points along the right of way and/or angle points on the right of way, Section Corners and other points shown herein. All of my work contained herein was conducted in accordance with the Ohio Administrative Code Chapter 4733-37 Standards for Boundary Surveys unless so noted. The words "I" and "my", as used herein, are to mean that either myself or someone working under my direct supervision.

*Michael L. Lenhart*  
Michael L. Lenhart, P.S., Ohio Surveyor No. 8359



FEDERAL PROJECT NO. E230251

PID NO. 117598

DESIGNED MILL CHECKED KLG

RIGHT OF WAY LEGEND SHEET

PUT-CR 0-14.741

1 | 4

19 | 22



NOTE: Stationing is on the Centerline of Construction and on the Centerline of Right of Way.

**BASIS FOR BEARINGS**

Bearings shown hereon are based on True North of the Ohio State Plane Coordinate System and observed by the Putnam County Engineer using a Trimble RBs GPS receiver. Horizontal Datum NAD83 (2011).

**BASIS OF EXISTING CENTERLINE OF R/W AND R/W WIDTH:**

The existing right of way width of 40' was determined based on the Putnam County Road Book Volume 1, pages 274-275 dated 10/6/1874. The existing centerline of right of way was determined from recorded surveys (PB 71, PG 93 and PB 72, PG 2 and PB 72, PG 63 and PB 72, PG 118 and PB 75, PG 199 and PB 79, PG 76 and PB 79, PG 236 and PB 87, PG 35) filed at the Putnam County Recorder's Office and existing monuments and property pins were also used to determine the centerline of right of way.

# CENTERLINE SURVEY PLAT

## PUT - CR 0 - 14.741

### RILEY TOWNSHIP SEC. 7 & 18 - T1S-R8E

#### PUTNAM COUNTY, OHIO

**MONUMENT LEGEND**

- 5/8" Iron Pin Set Labeled "Putnam County Engineer Survey Marker"
- Iron Pin Found
- ⊠ MAG Mag Nail Found

Setting of all monuments shall be performed by a Surveyor registered in the State of Ohio. The monument assemblies and referenced monuments will be installed by the contractor at the time of construction. The iron pin and cap (when required) are to be installed by the Putnam County Engineer.

Changes or alterations to the location of any monuments shown in this table require prior approval from the Putnam County Engineer. In the event that changes or alterations are approved, a revised Centerline Plat with the new locations shall be recorded in the Putnam County Recorder's Office. Specifications for monument assemblies, referenced monuments and right of way monuments are shown on Standard Construction Drawing RM-1.1.

SW 1/4, SECTION 7  
RILEY TOWNSHIP  
T-1-S, R-8-E  
PUTNAM COUNTY, OHIO

☉ Construction  
(S 89°20'52" E)

☉ Right of Way  
(S 89°42'33" E)

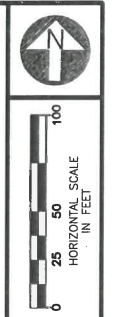
NW 1/4, SECTION 18  
RILEY TOWNSHIP  
T-1-S, R-8-E  
PUTNAM COUNTY, OHIO

**SECTION CORNER MONUMENTATION AND CENTERLINES OF EXISTING RIGHT OF WAY AND CONSTRUCTION**

C/L R/W	C/L R/W	C/L Const.	NORTH (Y)	EAST (X)	DESCRIPTION
0+00.00	16.50' LT.		475972.0860	1555469.9220	MAG NAIL FOUND, SE CORNER, SEC. 12, PLEASANT TWP.
0+00.00	C/L		475955.5866	1555469.7848	5/8" IRON PIN SET, SW CORNER, SEC. 7, RILEY TWP
15+13.34	6.96' LT.	4+00.00	475954.8621	1556983.1798	POINT ESTABLISHED ON CENTERLINE OF CONSTRUCTION
15+13.34	C/L		475947.9063	1556983.1006	POINT ESTABLISHED ON CENTERLINE OF R/W
15+91.62	C/L		475947.5088	1557061.4245	POINT ESTABLISHED ON CENTERLINE OF R/W AT CL OF ROAD 7-L
17+19.67	C/L		475946.8589	1557189.4727	POINT ESTABLISHED ON CENTERLINE OF R/W AT CL OF ROAD 7-L
24+13.31	C/L		475943.3386	1557883.1069	POINT ESTABLISHED ON CENTERLINE OF R/W
24+13.31	1.28' LT.	13+00.00	475944.6188	1557883.1215	POINT ESTABLISHED ON CENTERLINE OF CONSTRUCTION
			475942.2570	1558096.2310	IRON PIN FOUND, S 1/4 POST, SEC. 7, RILEY TWP
			475925.8160	1560750.4400	IRON PIN FOUND, SE CORNER, SEC. 7, RILEY TWP

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*Michael L. Lenhart*  
Michael L. Lenhart, P.S., Ohio Surveyor No. 8359



DESIGNER: MLL  
REVIEWER: KLG  
PID NO.: 117598

CENTERLINE SURVEY PLAT

PUT-CR 0-14.741

2 | 4  
20  
22

East Line, Section 12, Pleasant Twp.  
West Line, Section 7, Riley Twp.

East Line, Section 13, Pleasant Twp.  
West Line, Section 18, Riley Twp.

East Line, Southwest Quarter,  
Section 7, Riley Twp.

East Line, Northwest Quarter,  
Section 18, Riley Twp.

East Line, Section 7, Riley Twp.

East Line, Section 18, Riley Twp.

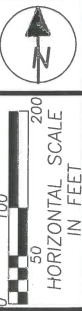


# PROPERTY MAP

PUT - CR 0 - 14.741  
 RILEY TOWNSHIP SEC. 7 & 18 - T1S-R8E  
 PUTNAM COUNTY, OHIO

LIMIT FLAG NOTE:  
 For all Begin and End Project, Acquisition, and  
 Work Flags, See Detail Sheets

Structure Key:  
 [Symbol] Residential Building  
 [Symbol] Non-Residential Building



P.I.D. NO.  
**117598**

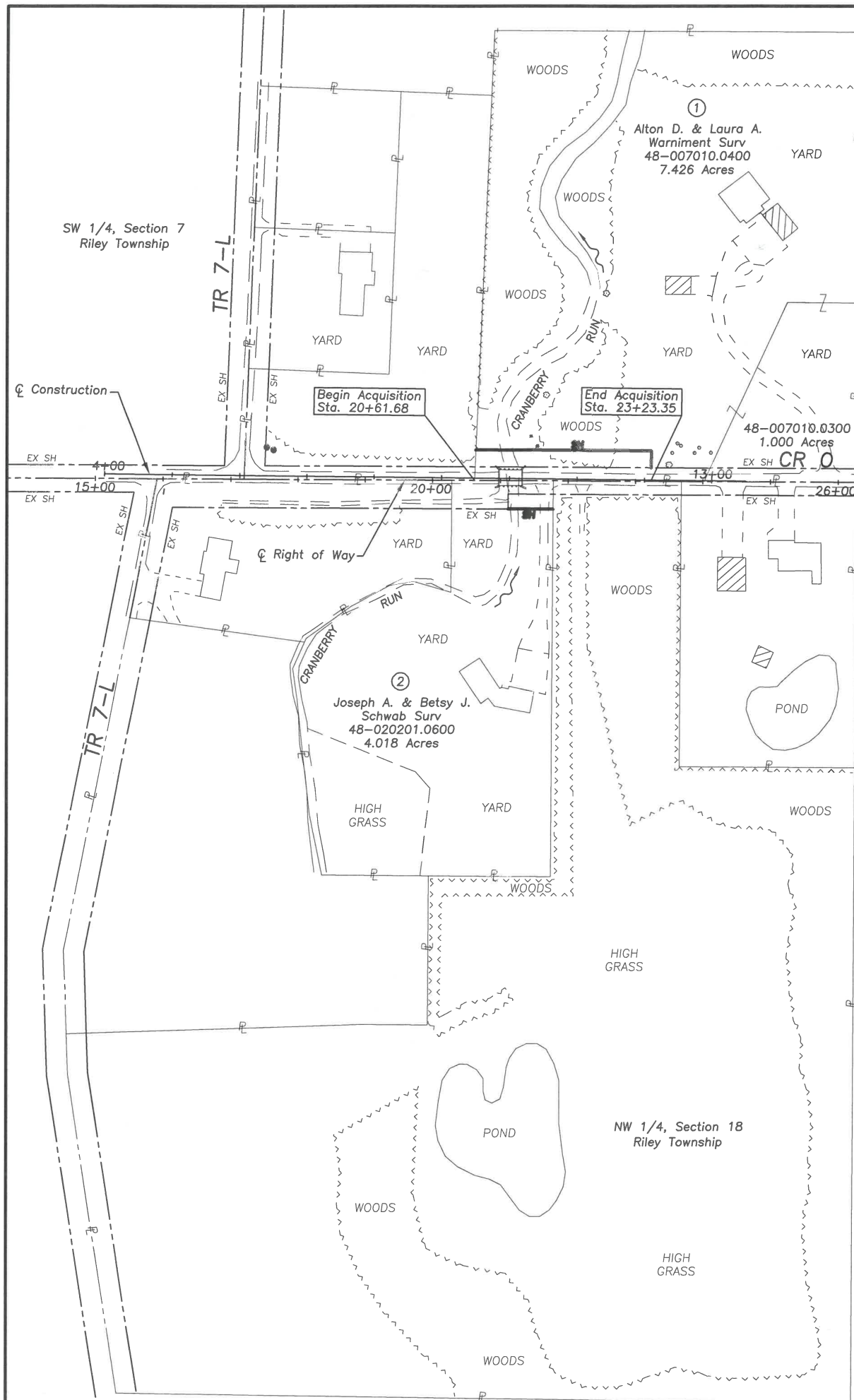
R/W DESIGNER  
 MLL  
 R/W REVIEWER  
 KLG

PROPERTY MAP AND  
 SUMMARY OF ADDITIONAL RIGHT OF WAY

PUT-CR 0-14.741

3/4

21  
 22



S 1/4 Post, Section 7  
 N 1/4 Post, Section 18

REMARKS AND PERSONALTY:

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF THE  
BOARD OF COMMISSIONERS OF PUTNAM COUNTY, OHIO  
 UNLESS OTHERWISE SHOWN.

TOTAL NUMBER OF

2 OWNERSHIPS 0 OWNERSHIPS WITH STRUCTURES INVOLVED  
2 PARCELS 0 OWNERSHIPS WITH "P" ITEMS  
0 TOTAL TAKES

NET RESIDUE = RECORD AREA - TOTAL P.R.O. - NET TAKE  
 (ALL AREAS IN ACRES)

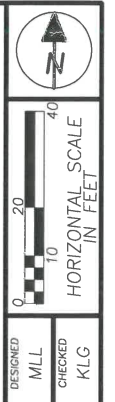
NOTES:

ALL TEMPORARY EASEMENTS TO BE OF 12 MONTH DURATION.

UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO  
 BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE  
 CONTRACTOR UNLESS NOTED OTHERWISE.

REV.	DATE	DESCRIPTION
	08/07/23	Date of Completion

PARCEL NO.	OWNER	SHEET NO.	OWNERS BOOK	RECORD PAGE	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUC-TURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED BOOK	AS ACQUIRED PAGE
1-SH	ALTON D. WARNIMENT and LAURA A. WARNIMENT	4	OR 634	1928	48-007010.0400	7.426	0.158	0.269	0.120	0.149	NO	7.119		LOCAL			
1-SH	ALTON D. WARNIMENT and LAURA A. WARNIMENT	4	OR 639	277	48-007010.0300	1.000	0.101	0.000	0.000	0.000	NO	0.899		NO WORK			
2-SH	JOSEPH A. SCHWAB and BETSY J. SCHWAB	4	OR 644	2218	48-020201.0600	4.018	0.111	0.064	0.030	0.034	NO		3.873	LOCAL			

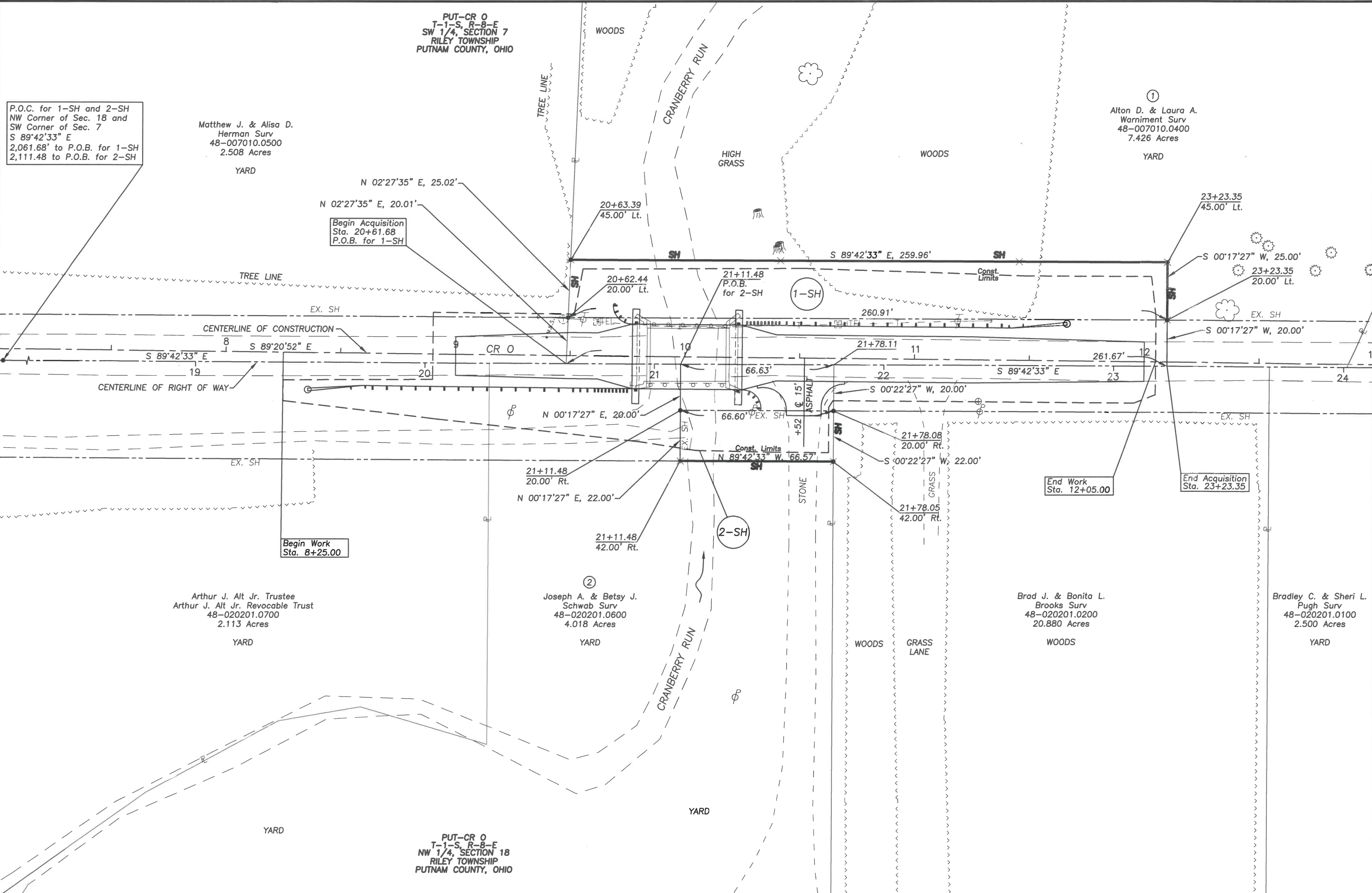


DESIGNED MLL  
CHECKED KLG  
PD NO. 117598

Right of Way Plan  
Sta. 7+00 to Sta. 13+00

PUT-CR 0-14.741

4/4  
22/22



P.O.C. for 1-SH and 2-SH  
NW Corner of Sec. 18 and  
SW Corner of Sec. 7  
S 89°42'33" E  
2,061.68' to P.O.B. for 1-SH  
2,111.48 to P.O.B. for 2-SH

Matthew J. & Alisa D.  
Herman Surv  
48-007010.0500  
2.508 Acres  
YARD

①  
Alton D. & Laura A.  
Warniment Surv  
48-007010.0400  
7.426 Acres  
YARD

Arthur J. Alt Jr. Trustee  
Arthur J. Alt Jr. Revocable Trust  
48-020201.0700  
2.113 Acres  
YARD

②  
Joseph A. & Betsy J.  
Schwab Surv  
48-020201.0600  
4.018 Acres  
YARD

Brad J. & Bonita L.  
Brooks Surv  
48-020201.0200  
20.880 Acres  
WOODS

Bradley C. & Sheri L.  
Pugh Surv  
48-020201.0100  
2.500 Acres  
YARD

PUT-CR 0  
T-1-S, R-8-E  
NW 1/4, SECTION 18  
RILEY TOWNSHIP  
PUTNAM COUNTY, OHIO

REV.	DATE	DESCRIPTION
	08/07/23	Date of Completion

NOTE: ROCK CHANNEL PROTECTION IS TURNED OFF FOR CLARITY.  
NOTE: P.O.C. STANDS FOR POINT OF COMMENCEMENT.  
NOTE: P.O.B. STANDS FOR POINT OF BEGINNING.  
● 5/8" IRON PIN SET LABELED "PUTNAM COUNTY ENGINEER SURVEY MARKER"