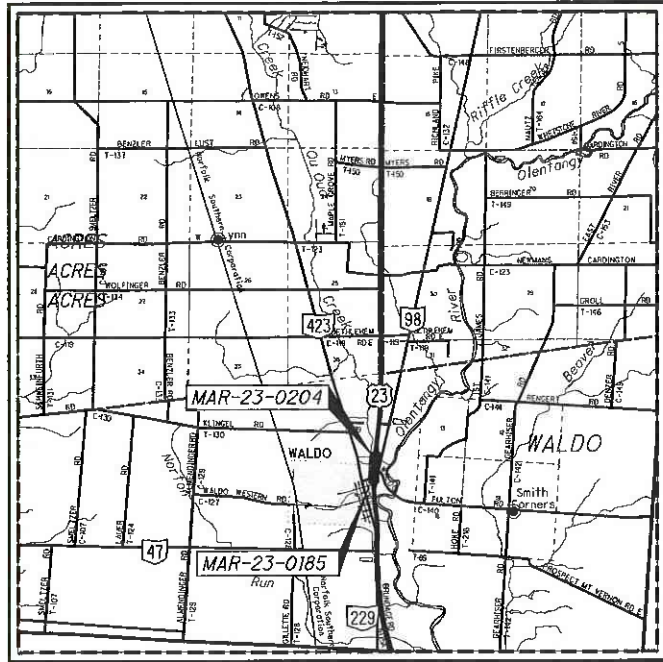


MAR - US 23-01.85/02.04  
 200476 PID - 102332  
 Dist 6 10/1/2020

Contract Proposal available @  
 www.contracts.dot.state.oh.us

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LOCATION MAP

LATITUDE: 40°27'50" LONGITUDE: 83°04'32"



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

**DESIGN DESIGNATION**

MAR-23 (1.56-2.39)	
CURRENT ADT (2018)	28,000
DESIGN YEAR ADT (2038)	37,000
DESIGN HOURLY VOLUME (2038)	3,700
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	10%
DESIGN SPEED	65
LEGAL SPEED	65
DESIGN FUNCTIONAL CLASSIFICATION:	
02 PRINCIPAL ARTERIAL (RURAL)	
NHS PROJECT	YES

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

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

PLAN PREPARED BY:  
 IN HOUSE DESIGN

STATE OF OHIO  
 DEPARTMENT OF TRANSPORTATION

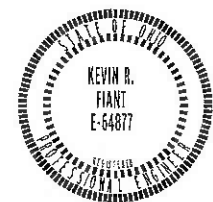
**MAR-23-1.85 / 2.04**

**WALDO TOWNSHIP  
 MARION COUNTY**

**INDEX OF SHEETS:**

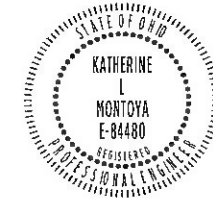
TITLE	1
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MAR-23-0185	58 - 87
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**STRUCTURES:**



SIGNED: *Kevin R. Fiant*  
 DATE: 7/2/2020

**ENGINEERS SEAL:**



SIGNED: *Katherine L. Montoya*  
 DATE: 7/2/2020

**DESIGN EXCEPTIONS**

DESIGN FEATURE	APPROVAL DATE	SHEET NUMBERS
SHOULDER WIDTH	02/15/18	3 AND 103

**STANDARD CONSTRUCTION DRAWINGS**

STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	
AS-1-15	07/17/15	MGS-1.1	01/19/18	MT-98.20	04/19/19	SICD-1-96	07/18/14	800	07/17/20
AS-2-15	01/19/18	MGS-2.1	01/19/18	MT-98.29	01/17/20	SICD-2-14	07/18/14	807	04/17/20
		MGS-3.1	01/19/18	MT-99.20	04/19/19			808	01/18/19
BP-3.1	01/17/20	MGS-3.2	01/18/13	MT-99.30	01/17/20	TC-41.20	10/18/13	821	04/20/12
BP-5.1	01/18/19	MGS-4.2	07/19/13	MT-100.00	01/15/16	TC-42.20	10/18/13	832	10/19/18
BP-9.1	01/18/19	MGS-5.3	07/15/16	MT-101.60	01/17/20	TC-52.10	10/18/13	869	10/17/14
		MGS-6.1	01/19/18	MT-101.70	01/17/20	TC-52.20	01/19/18	875	01/18/19
DM-4.1	07/20/18			MT-101.75	01/17/20	TC-61.10	01/17/20	878	01/17/20
DM-4.3	01/15/16	MT-95.30	07/19/19	MT-101.80	01/17/20	TC-61.30	07/19/19	896	07/21/17
DM-4.4	01/15/16	MT-95.40	01/17/20	MT-101.90	07/21/17	TC-65.10	01/17/14		
		MT-95.50	07/21/17	MT-104.10	10/16/15	TC-65.11	07/21/17		
PCB-91	01/18/13	MT-95.70	01/17/20	MT-105.10	01/17/20	TC-72.20	07/15/16		
		MT-95.82	07/19/13						
RM-4.2	04/17/20	MT-97.10	04/19/19	SBR-1-13	01/17/14	VPF-1-90	07/20/18		

**SPECIAL PROVISIONS**

**PROJECT DESCRIPTION**

REPLACE BRIDGE DECKS OF TWO TWIN STRUCTURES ON US-23 OVER SR-98 AND QU QUA CREEK IN MARION COUNTY NEAR THE TOWN OF WALDO. INCIDENTAL RESURFACING AND GUARDRAIL REPLACEMENTS.

**EARTH DISTURBED AREAS**

PROJECT EARTH DISTURBED AREA:	3.47 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.13 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	4.90 ACRES

**LIMITED ACCESS**

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

**2019 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.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

**PLANS CERTIFIED BY:**

NAME: *Bonnie Fing* DATE: 7-2-2020  
 DISTRICT 6  
 OHIO DEPT. OF TRANSPORTATION

APPROVED: *Armed R. Blayf*  
 DATE: 7/2/2020  
 DISTRICT DEPUTY DIRECTOR

APPROVED: *David Mark...*  
 DATE: 7/10/2020  
 DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO.  
**E170(477)**

PID NO.  
**102332**

CONSTRUCTION PROJECT NO.  
**1**

RAILROAD INVOLVEMENT  
**NONE**

**MAR-23-1.85 / 2.04**

1  
 112

**MAINTENANCE OF TRAFFIC - SEQUENCE OF OPERATIONS:**

PRE-PHASE 1 - WORK IN THE PRE-PHASE SHALL INCLUDE THE CONSTRUCTION OF THE MEDIAN CROSSOVERS AND TEMPORARY PAVEMENT.

PHASE 1 - WORK IN THIS PHASE SHALL INCLUDE REHABILITATION OF NORTHBOUND STRUCTURES MAR-23-0185R AND MAR-23-0204R AND THE NORTHBOUND LANES OF US-23.

PHASE 2 - WORK IN THIS PHASE SHALL INCLUDE REHABILITATION OF SOUTHBOUND STRUCTURES MAR-23-0185L AND MAR-23-0204L AND THE SOUTHBOUND LANES OF US-23.

POST-PHASE 2 - WORK IN THE POST-PHASE A SHALL INCLUDE THE REMOVAL OF THE CROSSOVERS, INSTALLATION OF FINAL STRIPING, AND BRIDGE PAINTING. IT MAY ALSO INCLUDE THE INSTALLATION OF GUARDRAIL NOT CONNECTED TO THE STRUCTURES, CONCRETE SEALING, AND/OR PAVEMENT REPAIRS NOT COMPLETED DURING PRE-PHASE 1, PHASE 1, OR PHASE 2.

**MAINTENANCE OF TRAFFIC:**

BELOW IS A SUMMARY OF MOT REQUIREMENTS FOR THIS PROJECT. THE CONTRACTOR SHALL NOT ENTER PHASE 1 UNTIL APRIL 1, 2021 UNLESS APPROVED BY THE ENGINEER.

**PRE-PHASE 1:**

- \* UTILIZE SHOULDER AND LANE CLOSURES.

**PHASE 1:**

- \* REDUCE BOTH SOUTHBOUND AND NORTHBOUND TRAFFIC FROM 2 LANES TO 1 LANE. CROSSOVER THE SINGLE NORTHBOUND LANE TO THE SOUTHBOUND SIDE OF US-23, CREATING TWO-LANE, TWO-WAY TRAFFIC. CROSSOVER THE SINGLE NORTHBOUND LANE BACK TO THE NORTHBOUND SIDE AFTER TRAFFIC HAS PASSED THE NORTHERNMOST WORK ZONE. ALL RAMPS SHALL REMAIN OPEN.

**PHASE 2:**

- \* REDUCE BOTH SOUTHBOUND AND NORTHBOUND TRAFFIC FROM 2 LANES TO 1 LANE. CROSSOVER THE SINGLE SOUTHBOUND LANE TO THE NORTHBOUND SIDE OF US-23, CREATING TWO-LANE, TWO-WAY TRAFFIC. CROSSOVER THE SINGLE SOUTHBOUND LANE BACK TO THE SOUTHBOUND SIDE AFTER TRAFFIC HAS PASSED THE SOUTHERNMOST WORK ZONE. RAMP A, THE EXIT RAMP FROM US-23 SOUTHBOUND TO SR-98, SHALL BE CLOSED. ALL OTHER RAMPS SHALL REMAIN OPEN.

**POST-PHASE 2**

- \* UTILIZE SHOULDER AND LANE CLOSURES.

SINGLE LANE CLOSURES AS PER MT-95.30 MAY BE UTILIZED WHEN THE CROSSOVERS ARE NOT IN PLACE. CLOSURES SHALL FOLLOW THE LANE VALUE CONTRACT TABLE ON SHEET 13.

SINGLE LANE CLOSURES USING FLAGGERS AS PER MT-97.10 SHALL BE UTILIZED ON SR-98.

**TRUCK MOUNTED ATTENUATOR (TMA):**

WHEN WORKING IN A CLOSED LANE OR SHOULDER ON A MULTILANE HIGHWAY WITHOUT TEMPORARY OR PERMANENT TRAFFIC BARRIERS SEPARATING THE WORK AREA FROM THEM TRAVELED LANES, A TRUCK MOUNTED ATTENUATOR (TMA) SHALL BE PROVIDED TO PROTECT EACH WORK AREA IN ACCORDANCE WITH STANDARD DRAWINGS MT-95.30, MT-95.31, MT-95.32 OR OMUTCD TYPICAL APPLICATION (TA) 4 AND TA-6. THE TMA SHALL BE PLACED IN SUCH A WAY TO ADEQUATELY PROTECT THE WORKERS INSIDE THE WORK ZONE. THE TMA IS NOT INTENDED TO BE USED AS OR SUBSTITUTED FOR THE FLASHING ARROW PANEL AT THE BEGINNING OF THE MERGE TAPER. THE TMA SHALL MEET NCHRP 350 TEST LEVEL 3 CRITERIA FOR STANDARD AND OPTIONAL TESTS AT 100 KM/H (62 MPH) FOR DESIGN IMPACTS. THE COST FOR PROVIDING THEM TMA SHALL INCLUDE ALL MATERIAL, LABOR, EQUIPMENT, AND HARDWARE REPLACEMENT AND IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

**RIGHT OF WAY PERMITS:**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE RIGHT OF WAY USE PERMITS TO INSTALL MAINTENANCE OF TRAFFIC SIGNING.

**ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS:**

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- \* DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

- \* FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEO'S DUTIES AND PLACEMENT, AND WILL RESOLVE AND ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WITH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COSTS

(ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM, 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE = 100 HOUR

**APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTION:**

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE MOT EXCEPTION COMMITTEE (MOTEC) OR THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTIONS INCLUDE:  
REDUCE US 23 IN BOTH DIRECTIONS FROM 2 TO 1 LANE VIA CROSSOVER, APPROVED 8/11/17.

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AND MARION COUNTY ENGINEER AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR, AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION REFERENCED ABOVE SO THAT THE PROJECT ENGINEER CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM, AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED 8/11/17 FOR PID 102332" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO THE DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

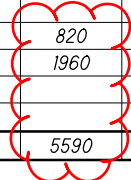
**USE OF STANDARD DRAWINGS:**

FOR THE PURPOSE OF THIS PROJECT, "MOVING OPERATION" SHALL BE LIMITED TO PAVEMENT MARKING STRIPING. IT MAY BE NECESSARY TO EXTEND THE ADVANCE WARNING AND BUFFER ZONES BEYOND THE MINIMUM DISTANCES SHOWN ON THE STANDARD DRAWINGS. THIS MAY BE DUE TO HORIZONTAL ALIGNMENT, VERTICAL ALIGNMENT, RAMP LOCATIONS, OR OTHER SIGHT OBSTRUCTIONS. LOCATIONS OF THE TAPER ZONES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER, BUT TAPER LENGTHS MUST MEET THE MINIMUM STANDARDS. TAPERS SHOULD BE PLACED IN TANGENT SECTIONS WHENEVER POSSIBLE. ADDITIONAL YIELD SIGNS MAY BE REQUIRED FOR RAMPS WITHIN 1,000 FEET OF A WORK ZONE. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

FOR ANY MULTILANE HIGHWAY, DEVICE SPACING SHALL BE A MAXIMUM OF 40' (FEET) CENTER ON CENTER IN THE TAPERS AND 80' (FEET) CENTER ON CENTER IN THE TANGENT SECTIONS.

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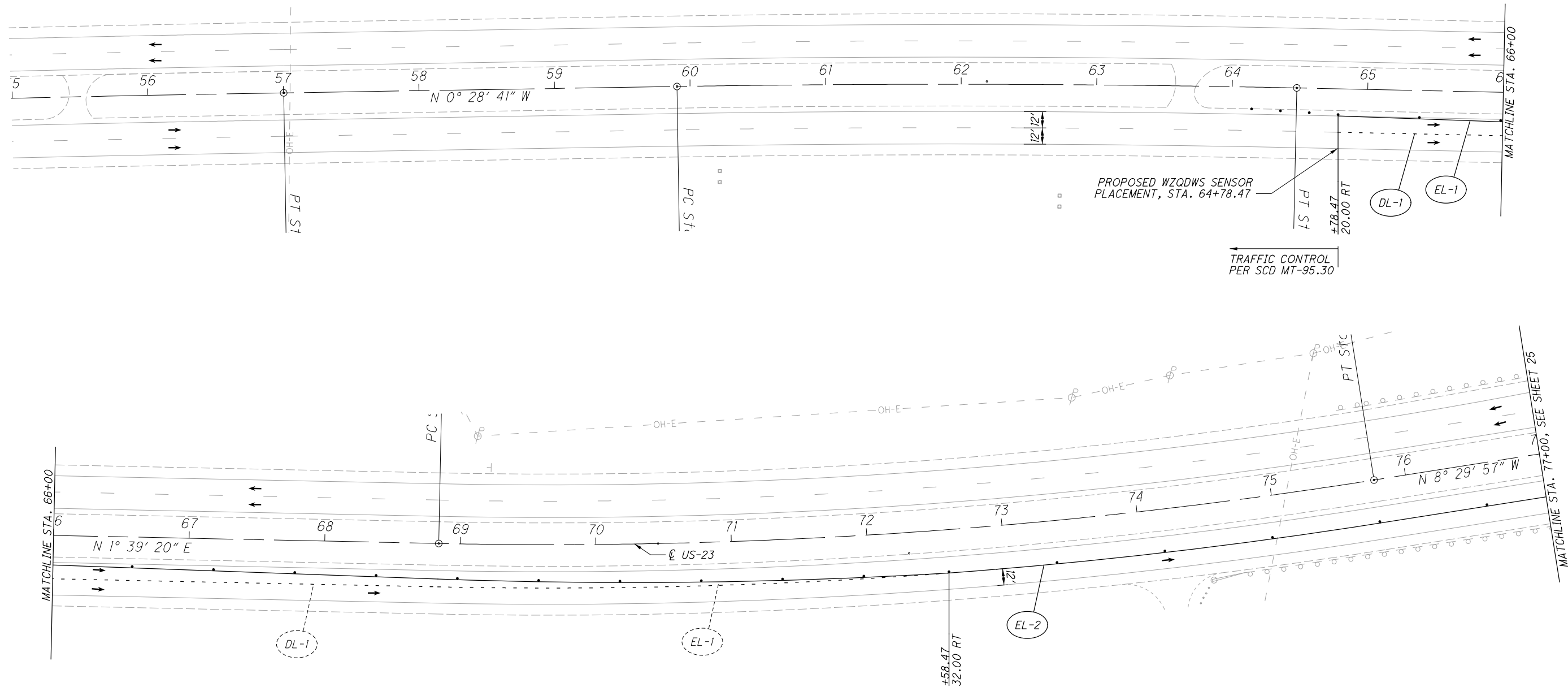
SHEET	STATION		PHASE	202	411	614	614	614	614	614	614	614	614	615	622	622		
	FROM	TO		PAVEMENT REMOVED, ASPHALT SY	STABILIZED CRUSHED AGGREGATE CY	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH	WORK ZONE RAISED PAVEMENT MARKER EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY EACH	OBJECT MARKER, ONE WAY EACH	OBJECT MARKER, TWO WAY EACH	WORK ZONE EDGE LINE, CLASS 1, 6", 807 MILE	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 MILE	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807 FT	WORK ZONE DOTTED LINE, CLASS 1, 6", 642 PAINT FT	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A SY	PORTABLE BARRIER, UNANCHORED FT	GLARE SCREEN FT	
18	55+00.00	154+00.00		3741	51									5234				
19	55+00.00	154+00.00		2941	54									4363				
24	66+00.00	88+00.00	1							0.30	0.15		783					
25	88+00.00	110+00.00	1			2		52	5	45	1.28	0.55			2500	2500		
26	110+00.00	132+00.00	1			1	26	7	6		0.46	0.12	470	563	310	310		
27	132+00.00	154+00.00	1								0.07	0.21		779				
28	55+00.00	77+00.00	2										784					
29	77+00.00	99+00.00	2			1	21	19		17	1.97	0.18	392	416		820	820	
30	99+00.00	121+00.00	2			2		42	12	28	0.37	0.25				1960	1960	
31	121+00.00	143+00.00	2									0.15		778				
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				6682	105	6	47	120	23	90	4.45	1.76	862	4103	9597	5590	5590	



**MAINTENANCE OF TRAFFIC SUBSUMMARY**



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CALCULATED  
KLM  
CHECKED  
MAK

0 40 80  
HORIZONTAL  
SCALE IN FEET

**CROSSOVER PHASE 1**  
**STA. 55+00 TO STA. 77+00**

REF NO.	STATION		DIRECTION	ITEMS											
	FROM	TO		614	614	614	614	614	614	614	614	614	614	622	622
				WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS 1, 6", 807	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS 1, 12", 807	WORK ZONE DOTTED LINE, CLASS 1, 6", 642 PAINT	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN	
				EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT	
EL-1	64+78.47	72+58.47	NB							0.15					
DL-1	64+78.47	72+58.47	NB									783			
EL-2	72+58.47	88+18.47	NB						0.30						
<b>TOTALS CARRIED TO SHEET 15</b>									0.30	0.15		783			

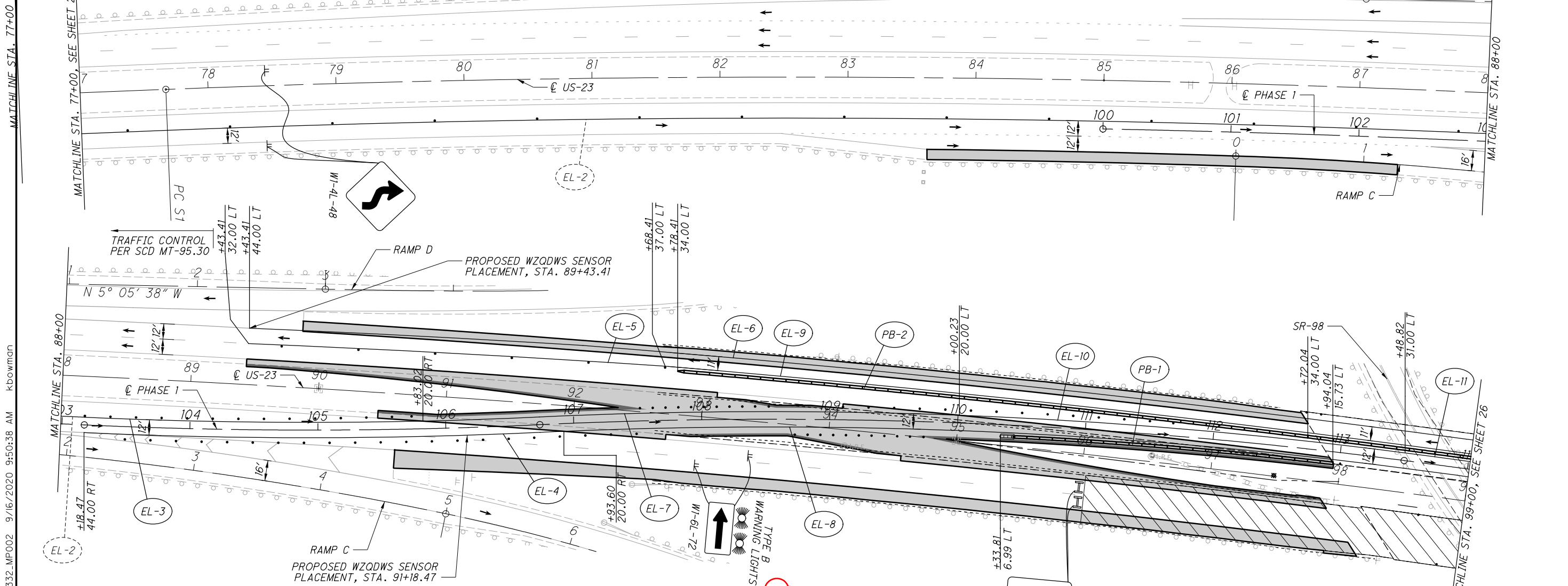
**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

MATCHLINE STA. 77+00

MATCHLINE STA. 88+00

MATCHLINE STA. 99+00



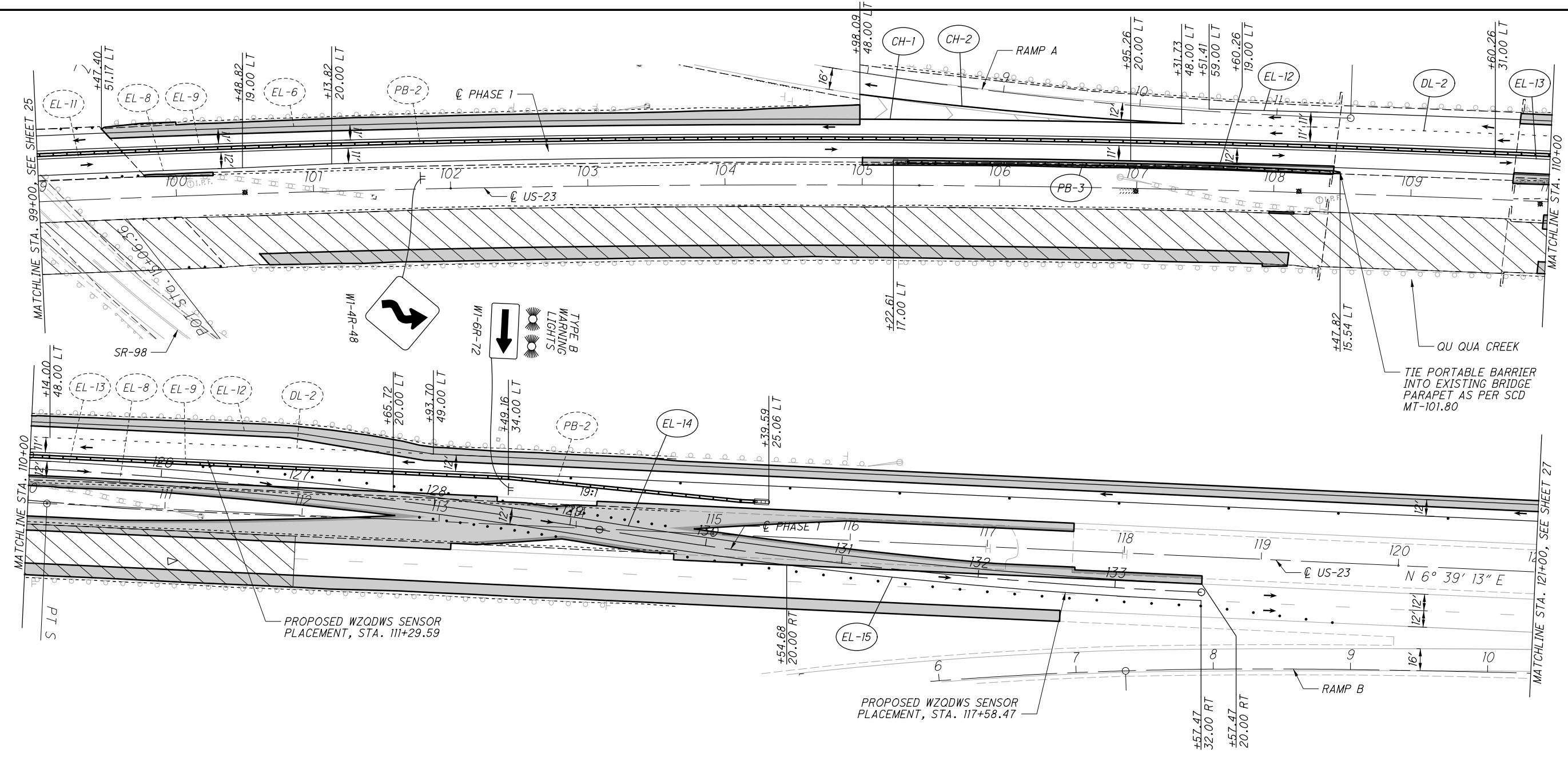
**CROSSOVER PHASE 1**  
**STA. 77+00 TO STA. 99+00**

REF NO.	STATION		DIRECTION	ITEM					MILE		FT		FT	
	FROM	TO		614	614	614	614	614	614	614	622	622	622	622
EL-3	88+18.47	90+83.02	NB						0.05					
EL-4	88+18.47	91+93.60	NB						0.07					
EL-7	90+83.02	95+00.23	NB						0.08					
EL-8	91+93.60	115+54.68	NB						0.42					
EL-10	95+00.23	98+48.82	NB						0.07					
PB-1	95+33.81	97+94.04	NB	1		6	5				250		250	
EL-11	98+48.82	109+60.26	NB						0.21					
EL-5	89+43.41	92+68.41	SB						0.06					
EL-6	89+43.41	104+98.09	SB						0.30					
EL-9	92+68.41	122+74.59	SB						0.57					
PB-2	92+78.41	115+39.59	SB	1		46	45				2250		2250	
<b>TOTALS CARRIED TO SHEET 15</b>				2		52	5	45	1.28	0.55			2500	2500

**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

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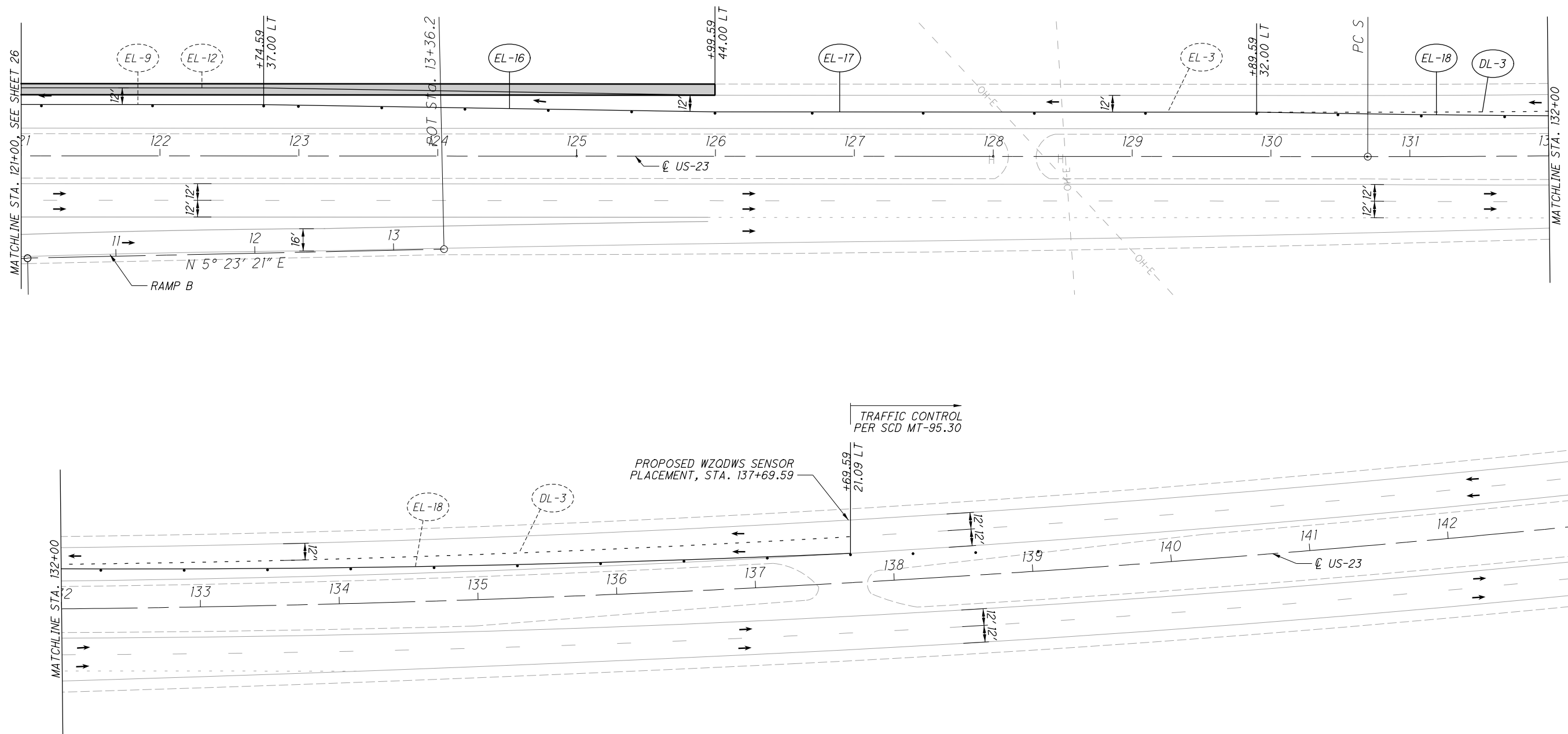
CALCULATED  
KLM  
CHECKED  
MAK

**CROSSOVER PHASE 1**  
**STA. 99+00 TO STA. 121+00**

REF NO.	STATION		DIRECTION	ITEMS											
	FROM	TO		WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN	
			EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT		
PB-3	105+22.61	108+47.82	NB	1		7	6					310	310		
EL-13	109+60.26	112+65.72	NB							0.11	0.06				
EL-14	112+65.72	118+57.47	NB							0.11	0.06				
EL-15	115+54.68	118+57.47	NB												
CH-1	104+98.09	107+31.73	SB								235				
CH-2	104+98.09	107+31.73	SB								235				
DL-2	107+31.73	112+93.70	SB									563			
EL-12	107+51.41	125+99.59	SB							0.35					
<b>TOTALS CARRIED TO SHEET 15</b>				1	26	7	6			0.46	0.12	470	563	310	310

- LEGEND**
- PAVEMENT FOR MAINTAINING TRAFFIC
  - WORK AREA
  - CHANNELIZING LINE
  - DOTTED LINE
  - EDGE LINE
  - PORTABLE BARRIER

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**CROSSOVER PHASE 1**  
**STA. 121+00 TO STA. 143+00**

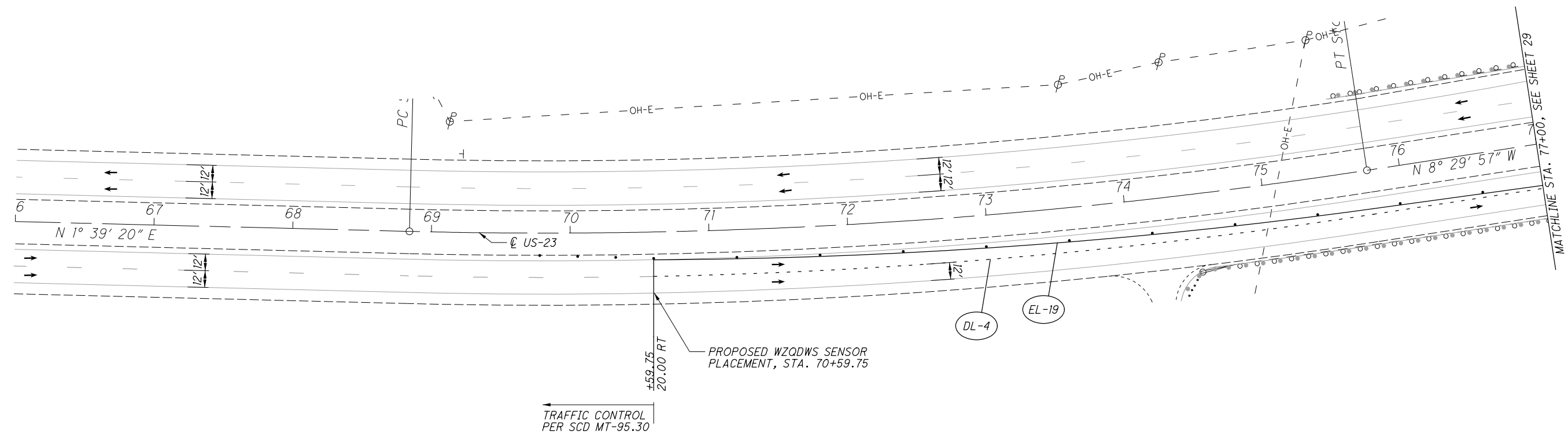
REF NO.	STATION		DIRECTION	ITEMS											
	FROM	TO		614	614	614	614	614	614	614	614	614	622	622	
			WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN		
			EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT		
EL-16	122+74.59	125+99.59	SB						0.06						
EL-17	125+99.59	130+69.69	SB					0.07							
DL-3	129+89.59	137+69.59	SB								779				
EL-18	130+69.69	137+69.59	SB						0.15						
<b>TOTALS CARRIED TO SHEET 15</b>								0.07	0.21		779				

- LEGEND**
- PAVEMENT FOR MAINTAINING TRAFFIC
  - WORK AREA
  - CHANNELIZING LINE
  - DOTTED LINE
  - EDGE LINE
  - PORTABLE BARRIER

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HORIZONTAL SCALE IN FEET



**CROSSOVER PHASE 2**  
**STA. 55+00 TO STA. 77+00**

REF NO.	STATION		DIRECTION	ITEMS											
	FROM	TO		614	614	614	614	614	614	614	614	614	622	622	
EL-19	70+59.75	78+39.75	NB										0.15		
DL-4	70+59.75	78+39.75	NB											784	
<b>TOTALS CARRIED TO SHEET 15</b>													0.15	784	

**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

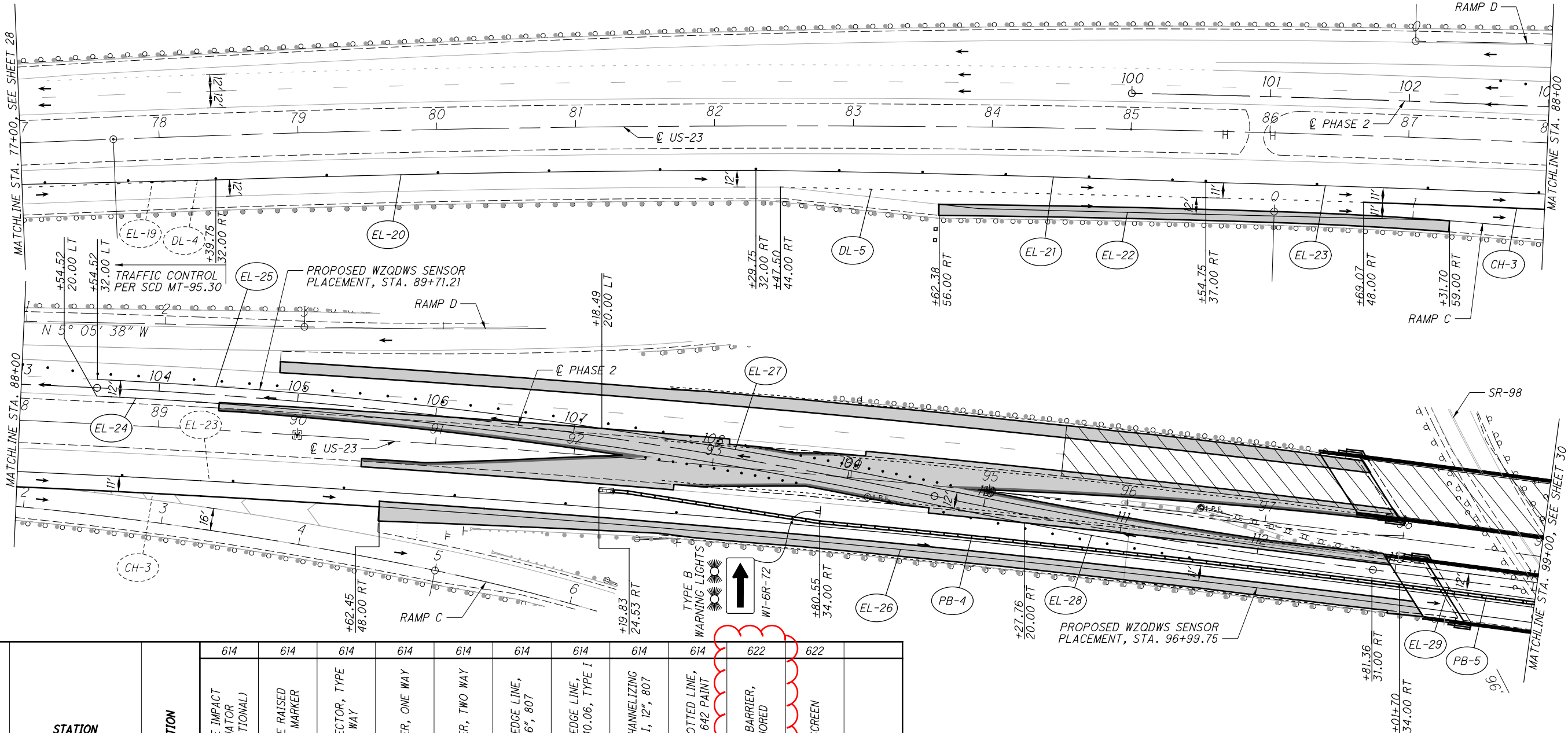




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**CROSSOVER PHASE 2**  
**STA. 77+00 TO STA. 99+00**

**MAR-23-1.85 / 2.04**



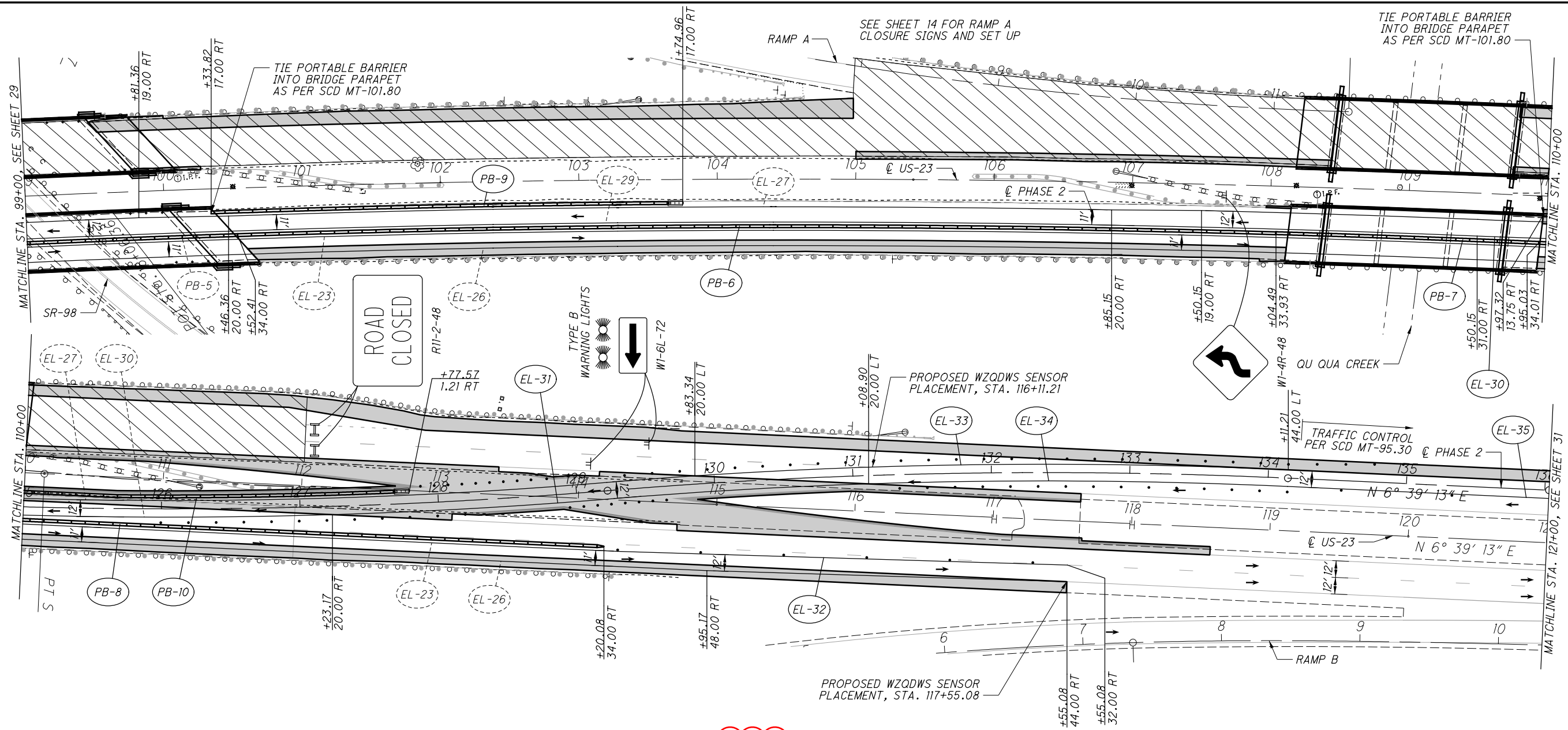
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REF NO.	STATION		DIRECTION	ITEMS													
	FROM	TO		WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN			
			EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT				
EL-20	78+39.75	82+29.75	NB						0.07								
EL-21	82+29.75	85+54.75	NB						0.06								
DL-5	82+47.50	86+69.07	NB								416						
EL-22	83+62.38	87+31.70	NB						0.07								
EL-23	85+54.75	114+30.08	NB						0.54								
CH-3	86+69.07	90+62.45	NB		21						392						
EL-26	90+62.45	117+55.08	NB						0.51								
PB-4	92+19.83	98+01.71	NB	1		12						570	570				
PB-5	98+01.71	100+52.41	NB			6						250	250				
EL-24	88+54.52	95+27.76	SB						0.13								
EL-25	88+54.52	92+18.49	SB						0.07								
EL-27	92+18.49	114+83.34	SB						0.43								
EL-28	95+27.76	97+81.36	SB						0.05								
EL-29	97+81.36	109+50.15	SB						0.22								
<b>TOTALS CARRIED TO SHEET 15</b>				1	21	19			17	1.97	0.18	392	416	820	820		

**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

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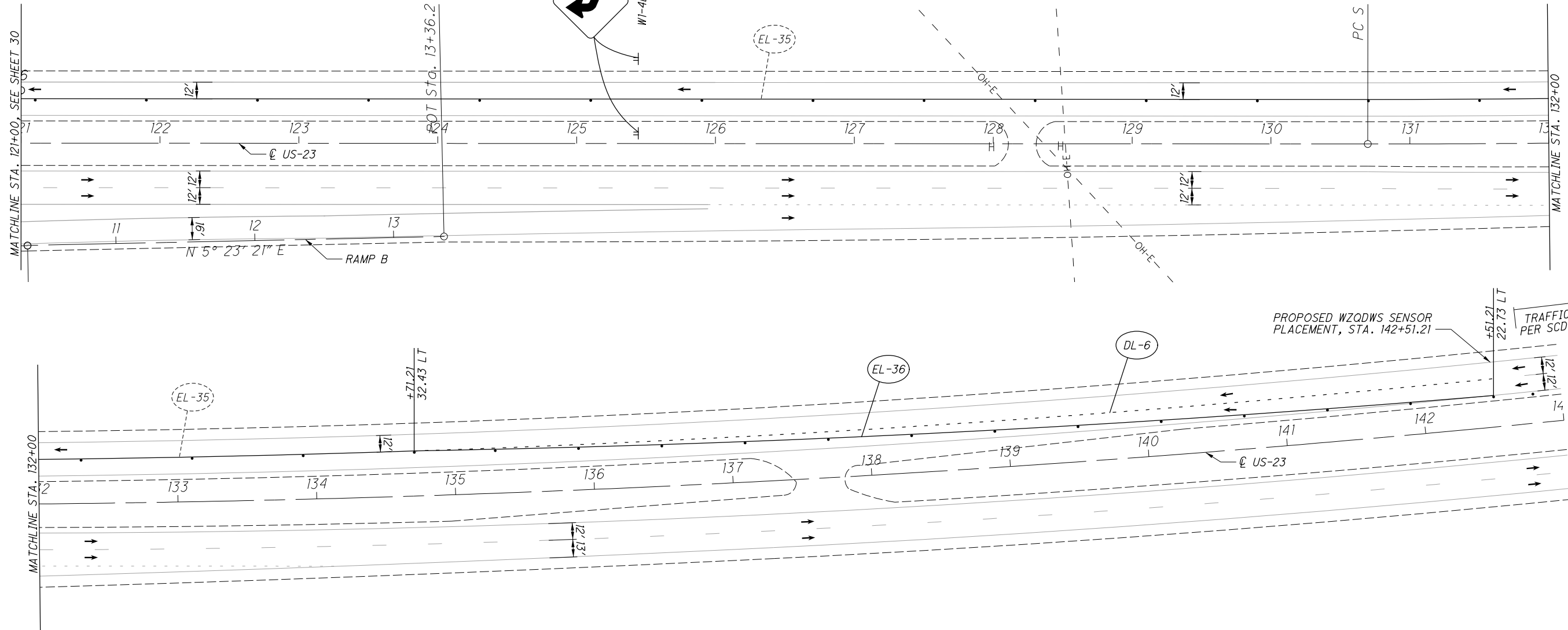
**CROSSOVER PHASE 2**  
**STA. 99+00 TO STA. 121+00**

**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

REF NO.	STATION		DIRECTION	614		614		614		614		622		622			
	FROM	TO		EACH	EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT		
PB-6	100+52.41	108+04.49	NB			15		15				750		750			
PB-7	108+04.49	109+95.03	NB			4		4				190		190			
PB-8	109+95.03	114+20.08	NB			8		8				420		420			
EL-32	114+30.08	117+55.08	NB							0.06							
PB-9	100+33.82	103+74.96	SB	1		8		7				330		330			
EL-30	109+50.15	112+23.17	SB							0.05							
PB-10	109+97.32	112+77.55	SB	1		6		5				270		270			
EL-31	112+23.17	116+08.90	SB							0.07							
EL-33	114+83.34	119+11.21	SB							0.08							
EL-34	116+08.90	119+11.21	SB							0.06							
EL-35	119+11.21	134+71.21	SB							0.30							
<b>TOTALS CARRIED TO SHEET 15</b>				2		42		12		28		0.37		0.25		1960	1960

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HORIZONTAL  
SCALE IN FEET

**CROSSOVER PHASE 2**  
**STA. 121+00 TO STA. 143+00**

REF NO.	STATION		DIRECTION												
	FROM	TO		614	614	614	614	614	614	614	614	614	614	622	622
				WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	OBJECT MARKER, TWO WAY	WORK ZONE EDGE LINE, CLASS I, 6", 807	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT	PORTABLE BARRIER, UNANCHORED	GLARE SCREEN	
				EACH	EACH	EACH	EACH	EACH	MILE	MILE	FT	FT	FT	FT	
EL-36	134+71.21	142+51.21	SB							0.15					
DL-6	134+71.21	142+51.21	SB									778			
<b>TOTALS CARRIED TO SHEET 15</b>										0.15		778			

**LEGEND**

- PAVEMENT FOR MAINTAINING TRAFFIC
- WORK AREA
- CHANNELIZING LINE
- DOTTED LINE
- EDGE LINE
- PORTABLE BARRIER

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SHEET NUMBER							PARTICIPATION			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6-7	8-13	15	34	35	36	01/NHS/BR	02/SAF/OT								
													<b>TRAFFIC CONTROL (CONT.)</b>		
					1.81	1.81			644	00104	1.81	MILE	EDGE LINE, 6"		
					1.74	1.74			644	00204	1.74	MILE	LANE LINE, 6"		
					896	896			644	00404	896	FT	CHANNELIZING LINE, 12"		
					135	135			644	00720	135	FT	CHEVRON MARKING		
					881	881			644	01510	881	FT	DOTTED LINE, 6"		
					0.32	0.32			646	10010	0.32	MILE	EDGE LINE, 6"		
					0.16	0.16			646	10110	0.16	MILE	LANE LINE, 6"		
					181	181			646	20504	181	FT	DOTTED LINE, 6"		
													<b>STRUCTURE OVER 20 FOOT SPAN (SFN 5100305 &amp; 5100364)</b>		
													SEE SHEET 62		
													<b>STRUCTURE OVER 20 FOOT SPAN (SFN 5100399 &amp; 5100429)</b>		
													SEE SHEET 91		
													<b>MAINTENANCE OF TRAFFIC</b>		
	100					100			614	11110	100	HOURL	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE		
		6				6			614	12336	6	EACH	WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)		
	LS					LS			614	12421	LS		DETOUR SIGNING, AS PER PLAN	11	
	4					4			614	12484	4	EACH	WORK ZONE INCREASED PENALTIES SIGN		
	2					2			614	12756	2	EACH	WORK ZONE CROSSOVER LIGHTING SYSTEM		
		47				47			614	12800	47	EACH	WORK ZONE RAISED PAVEMENT MARKER		
		120				120			614	13310	120	EACH	BARRIER REFLECTOR, TYPE 1, ONE-WAY		
		23				23			614	13350	23	EACH	OBJECT MARKER, ONE WAY		
		90				90			614	13360	90	EACH	OBJECT MARKER, TWO WAY		
	15					15			614	18601	15	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	11	
	2.03					2.03			614	20560	2.03	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT		
		4.45					4.45		614	22056	4.45	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 807		
		1.76				1.76			614	22210	1.76	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I		
	1.60					1.60			614	22360	1.60	MILE	WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT		
		862					862		614	23110	862	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 12", 807		
	279					279			614	23690	279	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT		
		4103				4103			614	24202	4103	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 642 PAINT		
	554					554			614	24612	554	FT	WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT		
		9597				9597			615	10000	LS		ROADS FOR MAINTAINING TRAFFIC		
		5590				5590			615	20000	9597	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A		
		5590				5590			622	41100	5590	FT	PORTABLE BARRIER, UNANCHORED		
		5590				5590			622	80000	5590	FT	GLARE SCREEN		
	12					12			808	18700	12	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY		
	36					36			896	00010	36	SNMT	PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS I		
	12					12			896	00021	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	13	
													<b>INCIDENTALS</b>		
						LS			108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS		
						LS			614	11000	LS		MAINTAINING TRAFFIC		
						7			619	16010	7	MNTH	FIELD OFFICE, TYPE B		
						LS			623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	7	
						LS			624	10000	LS		MOBILIZATION		

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		33 112



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

AS-1-15	DATED/REVISED	07-17-15
AS-2-15	DATED/REVISED	01-18-19
GSD-1-19	DATED/REVISED	01-18-19
PCB-91	DATED/REVISED	01-18-13
SBR-1-13	DATED/REVISED	07-20-18
SICD-1-96	DATED/REVISED	07-18-14
SICD-2-14	DATED/REVISED	07-18-14

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

SS869	DATED/REVISED	10-17-14
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DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN LOADING

HS-20-44 CASE II AND THE ALTERNATE MILITARY LOADING (SUPERSTRUCTURE ONLY)

FUTURE WEARING SURFACE (FWS) OF 0.60 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS, QSC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS, QSC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE WAS CONDUCTED BY A CERTIFIED ASBESTOS EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT AT THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

OHIO EPA, COD  
50 WEST TOWN ST, SUITE 700  
COLUMBUS, OHIO 43215  
KELLY TOTH, APC MANAGER  
(614) 728-3898

AT LEAST TEN (10) DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE:  
1) THE CONTRACTOR'S NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL, AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

DECK PLACEMENT DESIGN ASSUMPTIONS

THE FOLLOWING ASSUMPTIONS OF MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR THE SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.55 KIPS  
A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103"

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48"

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65"

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK, BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE SUBSTRUCTURE AND CONCRETE DECK INCLUDING PARAPETS FROM THE STEEL SUPPORTING SYSTEMS (GIRDERS, CROSSFRAMES, ETC.), SCUPPERS, EXPANSION JOINT, EXPANSION JOINT ARMOR, END CROSS FRAMES, AND INCIDENTALS. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING DECK REMOVALS TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE RAM TYPE EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 2019 01.05.B.2.

PROTECTION OF STEEL SUPPORT SYSTEMS: BEFORE DECK SLAB CUTTING IS PERMITTED, DRAW THE OUTLINE OF PRIMARY STEEL MEMBERS IN CONTACT WITH THE BOTTOM OF THE DECK ON THE SURFACE OF THE DECK. DRILL SMALL DIAMETER PILOT HOLES 2 INCHES OUTSIDE THESE LINES TO CONFIRM THE LOCATION OF FLANGE EDGES. DECK CUTS OVER OR WITHIN 2 INCHES OF FLANGE EDGES MAY EXTEND THE FULL DEPTH OF THE DECK. PERFORM WORK CAREFULLY DURING CUTTING OF THE DECK SLAB TO AVOID DAMAGING STEEL MEMBERS THAT ARE TO BE INCORPORATED INTO THE PROPOSED STRUCTURE. REPLACE OR REPAIR STEEL MEMBERS DAMAGED BY THE DECK SLAB CUTTING OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING THE REPAIR.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNDED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (STEEL GIRDERS), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUT NOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING TH EPRIMARY STRUCTURAL MEMBERS.

DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPER AND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING THE REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE DIRECTOR. OBTAIN THE DIRECTOR'S APPROVAL BEFORE PERFORMING THE REPAIR.

INSPECTION OF EXISTING STEEL

THE ENGINEER WILL VISUALLY INSPECT ALL EXISTING BUTT-WELDED SPLICES AND/OR TOP FLANGE COVER PLATE FILLET WELDS TO ENSURE THE WELDS, PLATES, AND GIRDERS ARE FREE OF DEFECTS AND CRACKS. IF NECESSARY, REMOVE ALL DECK SLAB HAUNCH FORMS IMMEDIATELY ADJACENT TO SUCH WELDS THAT MAY INTERFERE WITH THE ENGINEER'S INSPECTION. THE INSPECTION WILL NOT TAKE PLACE UNTIL THE TOP FLANGES ARE CLEANED ACCORDING TO 511.10, BUT IT WILL BE DONE BEFORE THE DECK SLAB REINFORCEMENT IS INSTALLED. THE ENGINEER WILL REPORT ALL CRACKS FOUND TO THE OFFICE OF CONSTRUCTION ADMINISTRATION, BRIDGE CONSTRUCTION SPECIALIST, ALONG WITH SPECIFIC INFORMATION ON LOCATION OF THE CRACKS, LENGTH, AND DEPTH SO AN EVALUATION AND REPAIR OR REPLACEMENT RECOMMENDATION CAN BE MADE.

EXISTING WELDED ATTACHMENTS

REMOVE EXISTING WELDED ATTACHMENTS (E.G., FINISHING MACHINE AND FORM SUPPORTS, AND SUPPORTS FOR SCUPPERS AND BULB ANGLES WHICH ARE TO BE REMOVED) LOCATED IN THE DESIGNATED TENSION PORTIONS OF THE TOP FLANGES OF EXISTING STEEL MEMBERS AND GRIND THE FLANGE SURFACES SMOOTH. CAREFULLY GRIND PARALLEL TO THE FLANGES.

MEASUREMENT AND PAYMENT

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT BID PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

SUBSTRUCTURE CONCRETE REMOVAL

ALL CONCRETE REMOVED IN THE PLANS SHALL BE REMOVED BY MEANS OF CUTTING AND OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRUALIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

UPON COMPLETION OF THE PROPOSED APPROACH SLAB THE CONTRACTOR SHALL SAW CUT ALONG THE APPROACH SLAB AND BRIDGE LIMIT, AS DETAILED IN THE PLANS, AN AREA 1" WIE BY 2" DEEP AND FILL THIS AREA WITH HOT APPLIED JOINT SEALER 705.04.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL.

EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON THE BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

DECK SLAB CONCRETE QUANTITY

THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 3". DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE. THE ALLOWABLE TOLERANCE FOR THE HAUNCH WIDTH OUTSIDE THE EDGE OF EACH BEAM FLANGE IS 3 INCHES. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS, THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HUANCH QUANTITY IN ACCORDANCE WITH 511.24.

ITEM 513 - STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES

THIS ITEM SHALL CONSIST OF FIELD LOCATING AND FIELD DRILLING OF 2" DIAMETER HOLES FOR #8 REINFORCING STEEL AS PER STD. DWG. SICD-1-96 INTO THE EXISTING BEAM ENDS. THE CONTRACTOR SHALL CLEARLY MARK THE LOCATIONS AND HAVE THE ENGINEER'S APPROVAL PRIOR TO DRILLING. FLAME CUTTING OF THE HOLES WILL NOT BE PERMITTED.

MEASUREMENT: THE DEPARTMENT WILL PAY FOR EACH 2" DIA. HOLE DRILLED.

ALL MATERIALS, LABOR, AND INCIDENTALS TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 513 - STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN

ALL PROVISIONS OF 514 SHALL APPLY FOR THE APPLICATION OF PRIME COAT WITH HE FOLLOWING PROVISIONS. THE CONTRACTOR SHALL USE INTERNATIONAL PAINT INTERZINC 52, ORGANIC ZINC, PRIMER AS REFERENCED IN ODOT'S QUALIFIED PRODUCTS LIST (QPL) FOR 708.02.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN

ALL PROVISIONS OF 514 SHALL APPLY FOR THE APPLICATION OF INTERMEDIATE COAT WITH THE FOLLOWING PROVISIONS. THE CONTRACTOR SHALL USE INTERNATIONAL PAINT INTERGUARD 475 HS, EPOXY, INTERMEDIATE COAT AS REFERENCED IN ODOT'S QUALIFIED PRODUCTS LIST (QPL) FOR 708.02.

ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN, URETHANE

ALL PROVISIONS OF 514 SHALL APPLY FOR THE APPLICATION OF FINISH COAT WITH THE FOLLOWING PROVISIONS. THE CONTRACTOR SHALL USE INTERNATIONAL PAINT INTERTHANE 990 HS, URETHANE, FINISH COAT AS REFERENCED IN ODOT'S QUALIFIED PRODUCTS LIST (QPL) FOR 708.02.

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DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6	
	DATE	3/5/2018
REVIEWED	KRF	STRUCTURE FILE NUMBER 5100305/5100364
DRAWN	JPH	REVISED -
DESIGNED	JPH	CHECKED BLF
BRIDGE NOTES		
BRIDGE NO. MAR-23-0185 L&R OVER SR 98		
MAR-23-1.85 / 2.04		
PID No. 102332		
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**ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN, POLYSILOXANE**

ALL PROVISIONS OF 514 SHALL APPLY FOR THE APPLICATION OF FINISH COAT WITH THE FOLLOWING PROVISIONS. THE CONTRACTOR SHALL USE INTERNATIONAL PAINT INTERFINE 979, POLYSILOXANE AS DEFINED IN 514.17.E. PRIOR TO APPLICATION, THE CONTRACTOR SHALL CHECK FOR CURE, DRY FILM THICKNESS MEASUREMENTS, AND CLEANLINESS OF THE PRIME COAT. STRIPE COAT INTERNATIONAL PAINT INTERFINE 979, POLYSILOXANE AS DEFINED IN 514.17.E. APPLY THE COATING TO A DRY FILM THICKNESS MEASUREMENT OF 4 TO 6 MILS. AFTER CURE, CAULK GAPS OR CREVICES UP TO 1/2 INCH (13MM) WIDE. FOLLOW THE MANUFACTURER'S RECOMMENDATIONS FOR CURING BEFORE APPLYING ADDITIONAL MILS OF POLYSILOXANE TO COVER EXPOSED CAULK.

**PAINTING OF STRUCTURAL STEEL**

ALL STRUCTURAL STEEL SHALL BE PAINTED IN ACCORDANCE WITH SECTION 514 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE FINISH COAT COLOR SHALL BE FS-595C, 14277 (GREEN).

**ITEM 519 - PATCHING CONCRETE STRUCTURE**

THE FOLLOWING ITEMS HAVE BEEN PROVIDED AS CONTINGENCY QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER AT THE NOTED LOCATIONS. THESE ITEMS HAVE BEEN CARRIED TO THE STRUCTURES SUMMARY.

MAR-23-0185L

ITEM 519 - PATCHING CONCRETE STRUCTURE = 50 SF

MAR-23-0185R

ITEM 519 - PATCHING CONCRETE STRUCTURE = 50 SF

**ABUTMENT DIAPHRAGM CONCRETE**

PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS AFTER THE DECK PLACEMENT IN THE ADJACENT SPAN IS COMPLETE. PROCEDURES THAT PLACE THE ABUTMENT DIAPHRAGM WITH THE DECK CONCRETE MAY BE APPROVED BY THE ENGINEER IF THE PLACEMENT SUBMITTAL CAN ASSURE THAT THE DECK CONCRETE IN THE ADJACENT SPAN WILL BE PLACED BEFORE CONCRETE IN THE DIAPHRAGM HAS REACHED ITS INITIAL SET.

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<b>MAR - 23 - 1.85 / 2.04</b> PID No. 102332	<b>BRIDGE NOTES</b> BRIDGE NO. MAR-23-0185 L&R OVER SR 98	DESIGNED JPH	DRAWN JPH	REVIEWED KRF	DATE 3/5/2018	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6
		CHECKED BLF	REVISED -	STRUCTURE FILE NUMBER 5100305/5100364	4 / 30	61 112

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ESTIMATED QUANTITIES (MAR-23-0185L SFN: 5100305)

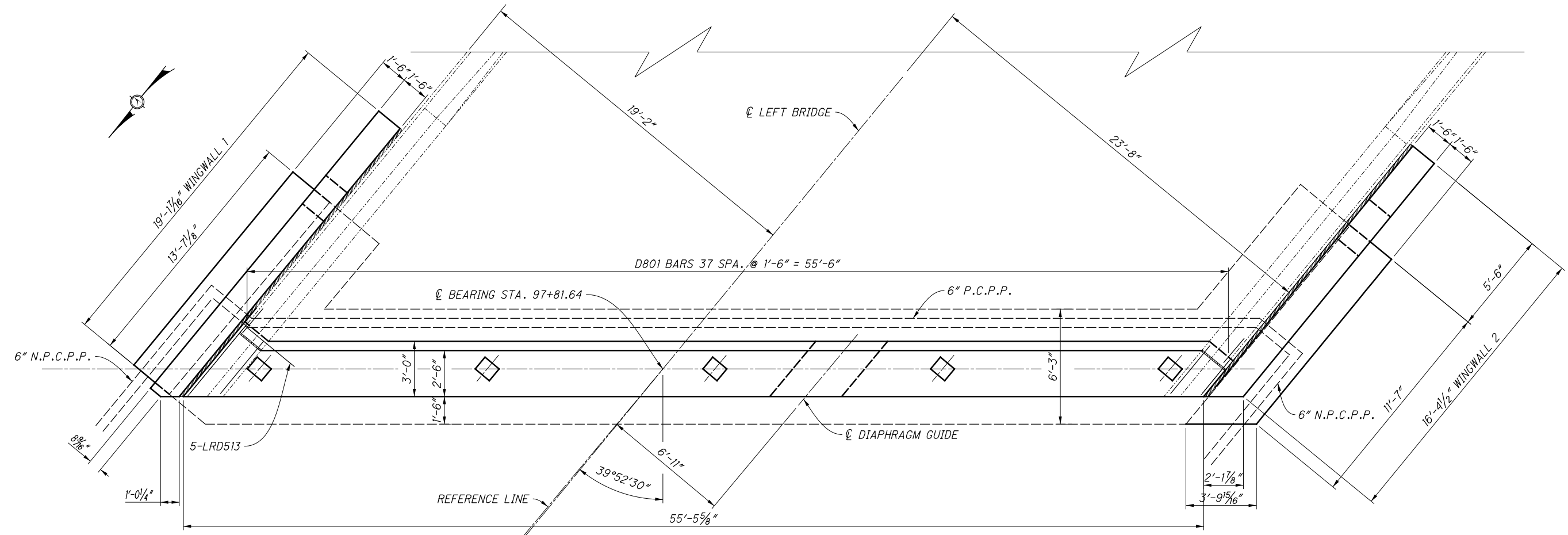
ESTIMATED QUANTITIES (MAR-23-0185R SFN: 5100364)

ITEM	EXTENSION	TOTAL 1/NHS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #	ITEM	EXTENSION	TOTAL 1/NHS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11201		LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					3/30	202	11201		LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					3/30
202	22900	134	SY	APPROACH SLAB REMOVED				134		202	22900	134	SY	APPROACH SLAB REMOVED				134	
202	23500	809	SY	WEARING COURSE REMOVED				809		202	23500	812	SY	WEARING COURSE REMOVED				812	
503	11100		LS	COFFERDAMS AND EXCAVATION BRACING						503	11100		LS	COFFERDAMS AND EXCAVATION BRACING					
503	21300		LS	UNCLASSIFIED EXCAVATION						503	21300		LS	UNCLASSIFIED EXCAVATION					
509	10000	91,630	LB	EPOXY COATED REINFORCING STEEL	5,851		85,780			509	10000	90,421	LB	EPOXY COATED REINFORCING STEEL	5,679		84,742		
510	10000	221	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	244					510	10000	208	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	208				
511	21522	282	CY	CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE			282			511	21522	283	CY	CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE			283		
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN			2		16/30	511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN			2		16/30
511	34448	73	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			73			511	34448	73	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			73		
511	45710	83	CY	CLASS QC1 CONCRETE, ABUTMENT	83					511	45710	83	CY	CLASS QC1 CONCRETE, ABUTMENT	83				
512	10050	619	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)				619		512	10050	619	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)				619	
513	20000	2,980	EACH	WELDED STUD SHEAR CONNECTORS			2,980			513	20000	2,980	EACH	WELDED STUD SHEAR CONNECTORS			2,980		
513	95030	30	EACH	STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES			30		3/30	513	95030	30	EACH	STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES			30		3/30
514	00050	10,003	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			10,003			514	00050	10,101	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			10,101		
514	00057	10,003	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN			10,003		4/30	514	00057	10,101	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT, AS PER PLAN			10,101		4/30
514	00061	9,869	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT, AS PER PLAN			9,869		4/30	514	00067	9,966	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN, POLYSILOXANE			9,966		4/30
514	00067	9,869	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN, URETHANE			9,869		4/30	514	00504	33	MINHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			33		
514	00504	33	MINHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			33			514	10000	15	EACH	FINAL INSPECTION REPAIR			15		
514	10000	15	EACH	FINAL INSPECTION REPAIR			15			516	10010	110	FT	ARMORLESS PREFORMED JOINT SEAL				110	
516	10010	110	FT	ARMORLESS PREFORMED JOINT SEAL				110		516	13600	2	SF	1" PREFORMED EXPANSION JOINT FILLER				2	
516	13600	2	SF	1" PREFORMED EXPANSION JOINT FILLER				2		516	13900	17	SF	2" PREFORMED EXPANSION JOINT FILLER				17	
516	13900	17	SF	2" PREFORMED EXPANSION JOINT FILLER				17		516	14020	144	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				144	
516	14020	144	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				144		516	31011	103	FT	2" DEEP JOINT SEALER, AS PER PLAN			103		3/30
516	31011	103	FT	2" DEEP JOINT SEALER, AS PER PLAN			103		3/30	516	41100	20	EACH	1/8" PREFORMED BEARING PAD				20	
516	41100	20	EACH	1/8" PREFORMED BEARING PAD				20		516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12"x10"x3.247")				10	
516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12"x10"x3.247")				10		516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14"x13"x3.5717")				10	
516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14"x13"x3.5717")				10		516	47001		AS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					3/30
516	47001		AS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					3/30	518	21200	59	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				59	
518	21200	59	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				59		518	40000	113	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				112	
518	40000	112	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				112		518	40010	62	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				62	
518	40010	62	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				62		519	11100	50	SF	PATCHING CONCRETE STRUCTURE				50	4/30
519	11100	9	SF	PATCHING CONCRETE STRUCTURE		9			1/30	526	30000	286	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")				286	
519	11100	50	SF	PATCHING CONCRETE STRUCTURE				50	4/30	526	90030	111	FT	TYPE C INSTALLATION				111	
526	30000	286	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")				286		607	39900	340	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			340		
526	90030	112	FT	TYPE C INSTALLATION				112		611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET				4	
607	39900	340	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			340												
611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET				4											

DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6  
 DATE: 3/5/2018  
 REVIEWED: KRF  
 DRAWN: JPH  
 CHECKED: BLF  
 ESTIMATED QUANTITIES  
 BRIDGE NO. MAR-23-0185 L&R  
 OVER SR 98  
 MAR-23-1.85 / 2.04  
 PID No. 102332  
 5 / 30  
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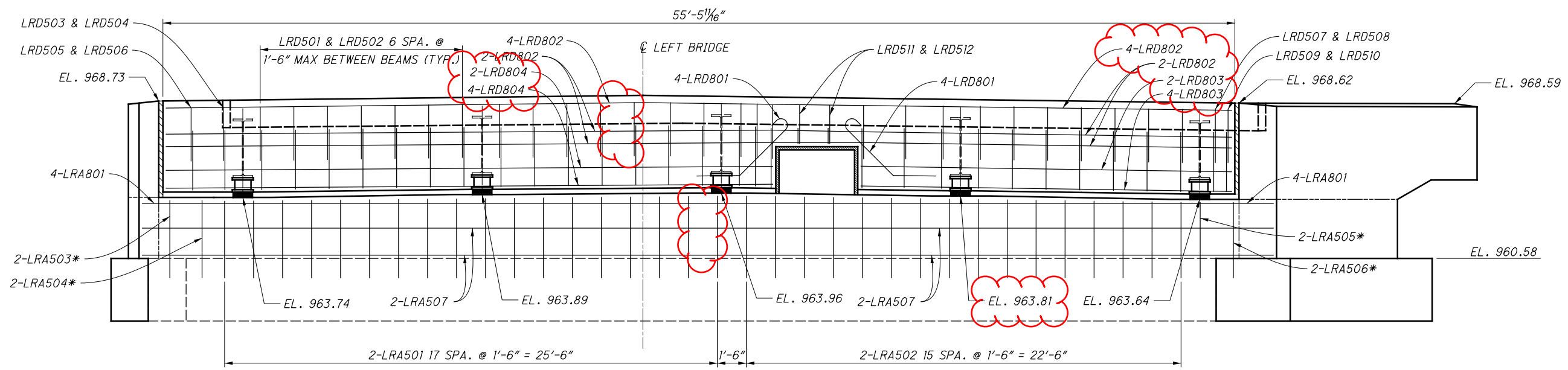


**PLAN**  
LEFT BRIDGE REAR ABUTMENT

**NOTES:**

- 1: THE CONTRACTOR SHALL VERIFY THE EXISTING BOTTOM OF BEAM ELEVATIONS AND ADJUST THE BEAM SEAT ELEVATIONS ACCORDINGLY TO THE THICKNESS OF THE ELASTOMERIC BEARING PAD BUILD-UP.
- 2: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.

P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE

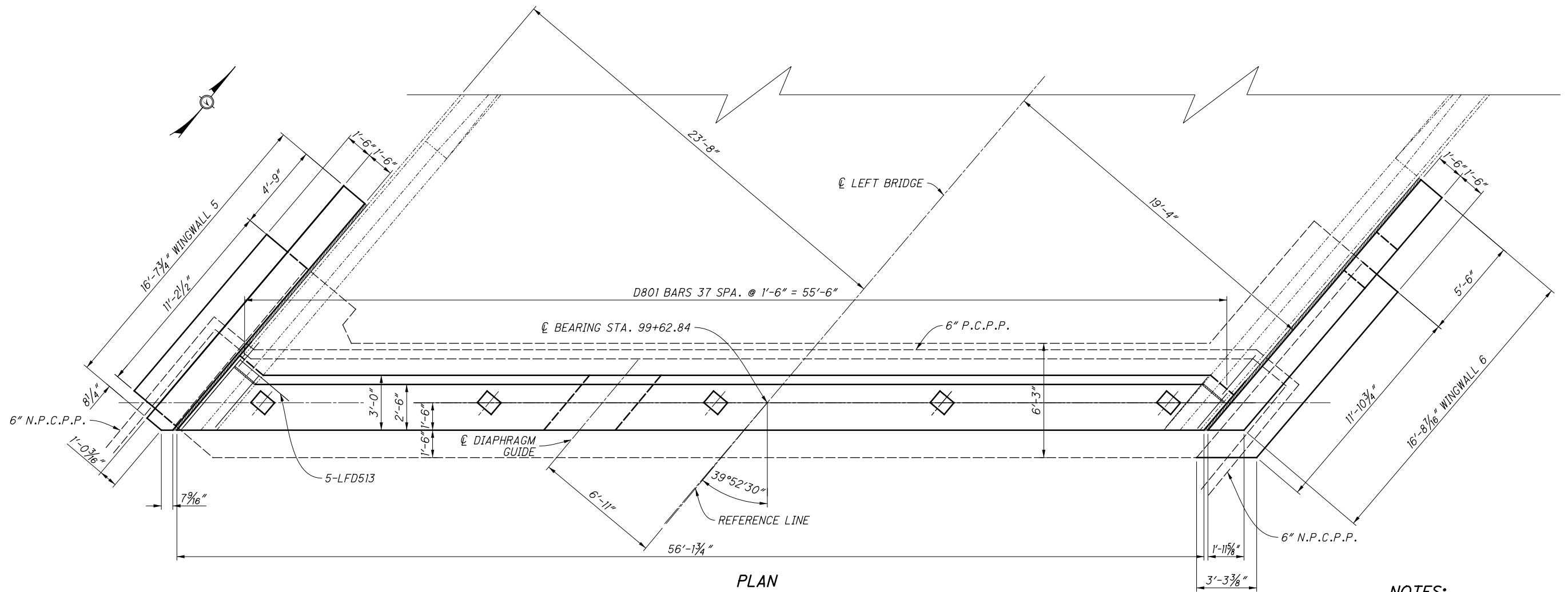


**ELEVATION**  
LEFT BRIDGE REAR ABUTMENT

\* - INDICATES ABUTMENT BARS TO BE PLACED ALONG SKEW



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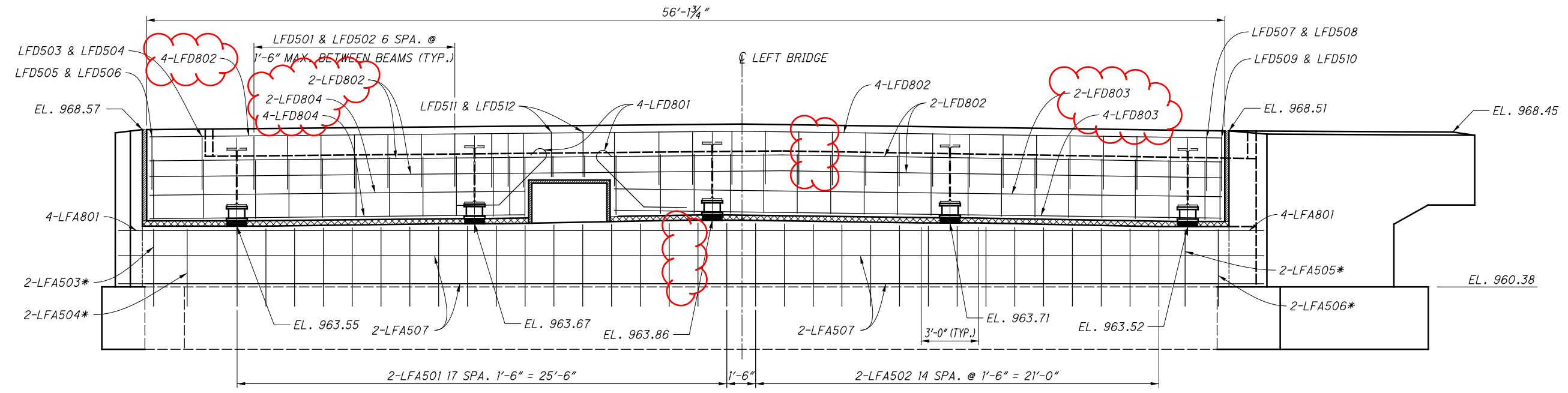
**PLAN**

LEFT BRIDGE FORWARD ABUTMENT

P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
 N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE

**NOTES:**

- 1: THE CONTRACTOR SHALL VERIFY THE EXISTING BOTTOM OF BEAM ELEVATIONS AND ADJUST THE BEAM SEAT ELEVATIONS ACCORDINGLY TO THE THICKNESS OF THE ELASTOMERIC BEARING PAD BUILD-UP.
- 2: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.



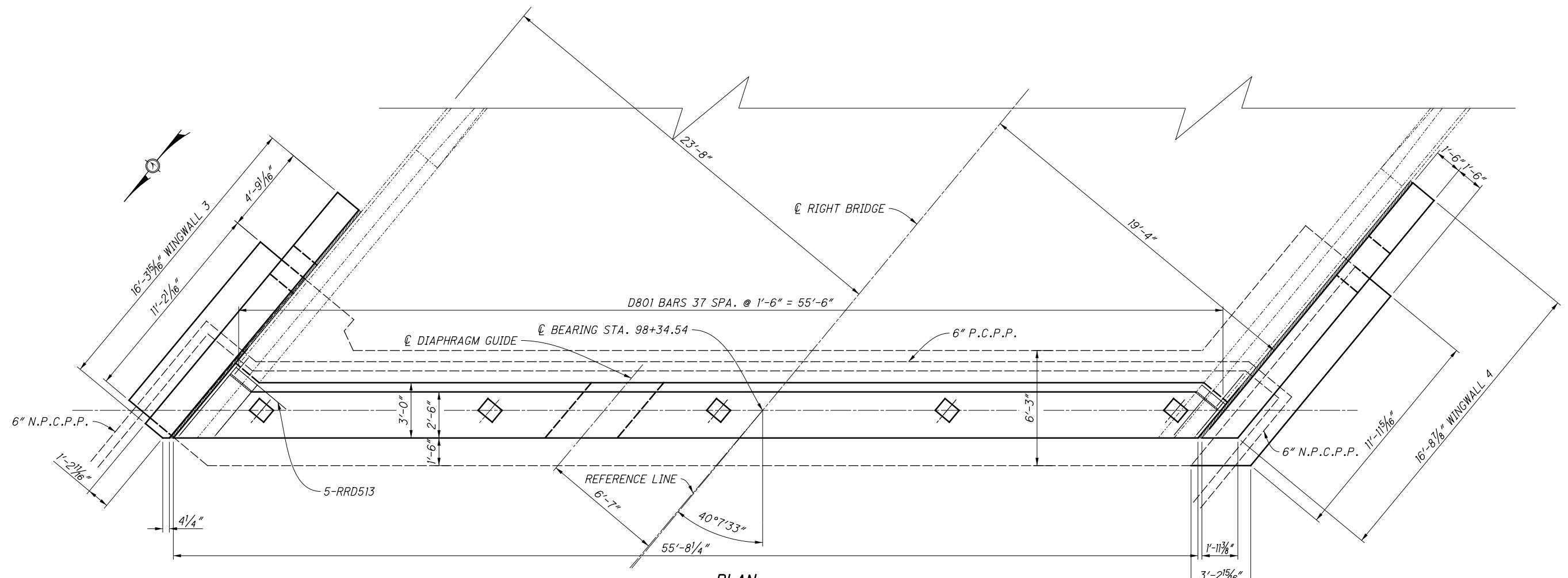
**ELEVATION**

LEFT BRIDGE FORWARD ABUTMENT

\* - INDICATES ABUTMENT BARS TO BE PLACED ALONG SKEW

<b>FORWARD ABUTMENT DETAILS LEFT BRIDGE</b> BRIDGE NO. MAR-23-0185 L&R OVER SR 98	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6	DATE 3/5/2018 REVIEWED KRF STRUCTURE FILE NUMBER 5100305/5100364
MAR-23-1.85 / 2.04 PID No. 102332	9 / 30	66 112

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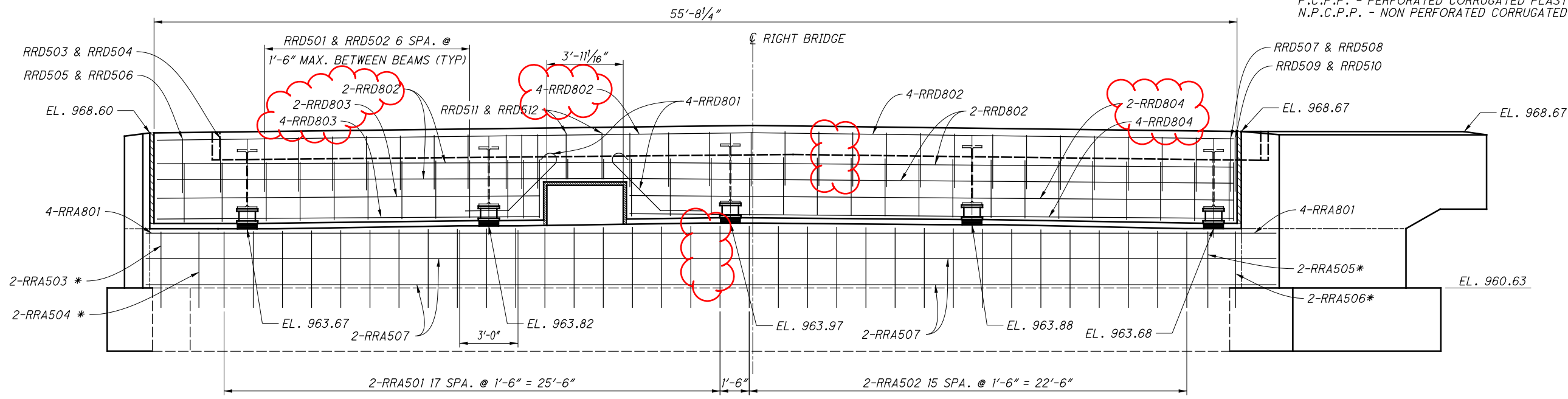


**PLAN**

RIGHT BRIDGE REAR ABUTMENT

**NOTES:**

- 1: THE CONTRACTOR SHALL VERIFY THE EXISTING BOTTOM OF BEAM ELEVATIONS AND ADJUST THE BEAM SEAT ELEVATIONS ACCORDINGLY TO THE THICKNESS OF THE ELASTOMERIC BEARING PAD BUILD-UP.
  - 2: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.
- P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
 N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE

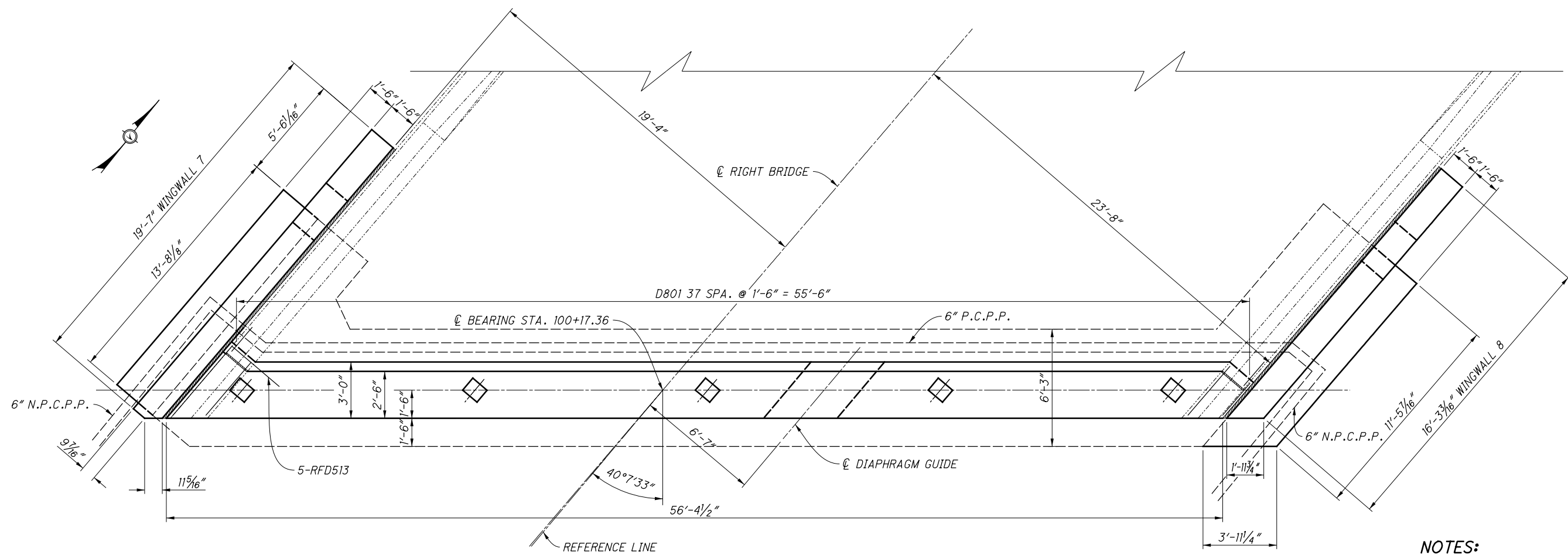


**ELEVATION**

RIGHT BRIDGE REAR ABUTMENT

DESIGN AGENCY		OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6	
REVIEWED	DATE	STRUCTURE FILE NUMBER	5100305/5100364
KRF	3/5/2018		
DRAWN	JPH	REVISIONS	
JPH			
DESIGNED	JPH	CHECKED	BLF
<b>REAR ABUTMENT DETAILS RIGHT BRIDGE</b>			
BRIDGE NO. MAR-23-0185 L&R OVER SR 98			
<b>MAR-23-1.85 / 2.04</b>		<b>PID No. 102332</b>	
12 / 30		69 112	

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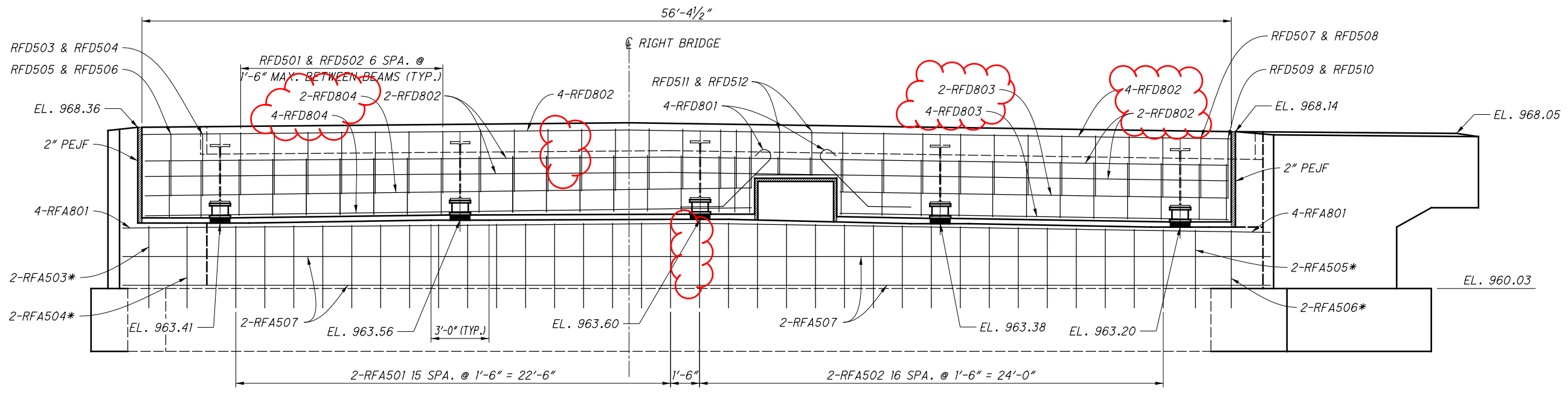
**PLAN**

RIGHT BRIDGE FORWARD ABUTMENT

P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
 N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE

**NOTES:**

- 1: THE CONTRACTOR SHALL VERIFY THE EXISTING BOTTOM OF BEAM ELEVATIONS AND ADJUST THE BEAM SEAT ELEVATIONS ACCORDINGLY TO THE THICKNESS OF THE ELASTOMERIC BEARING PAD BUILD-UP.
- 2: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.

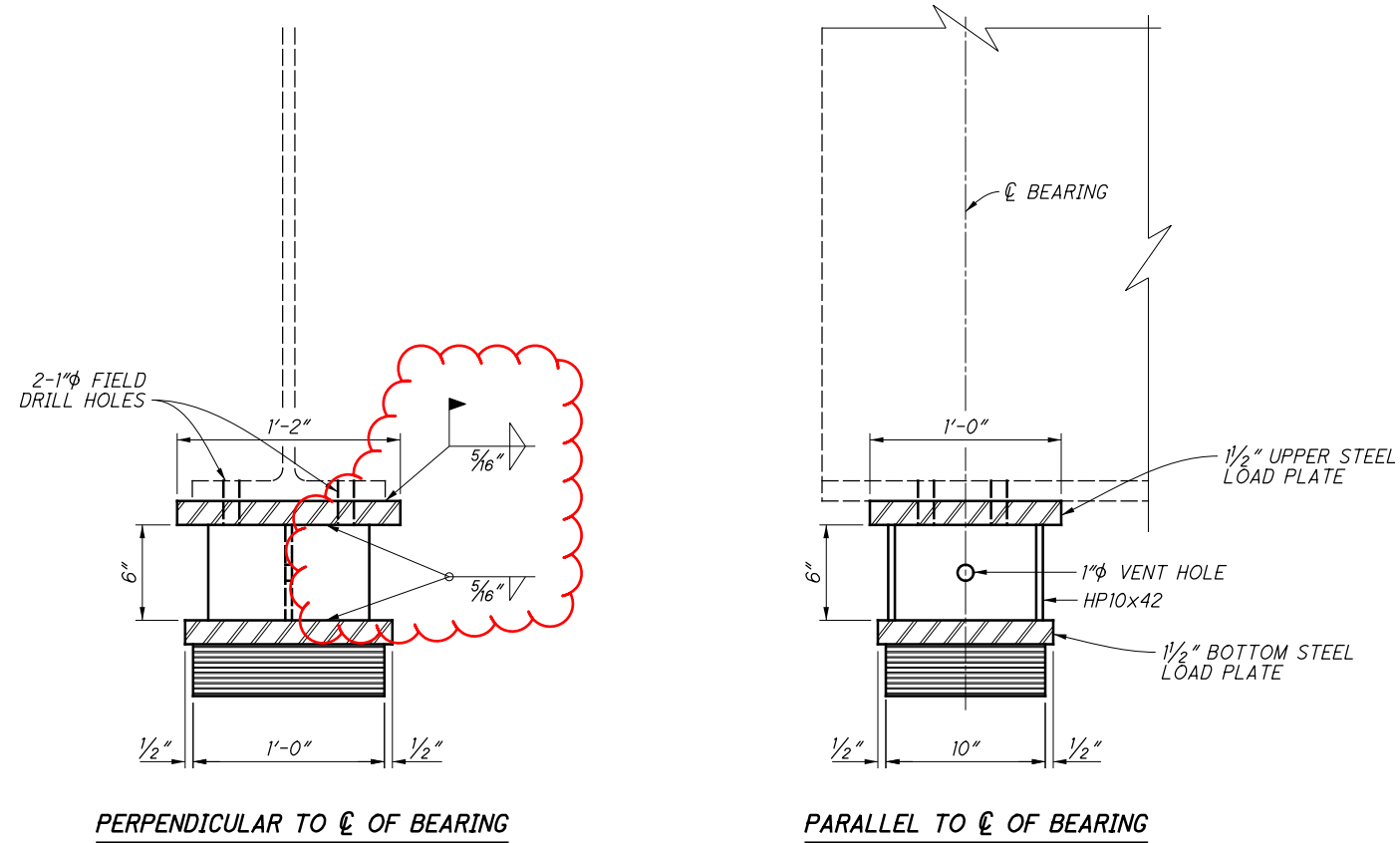


**ELEVATION**

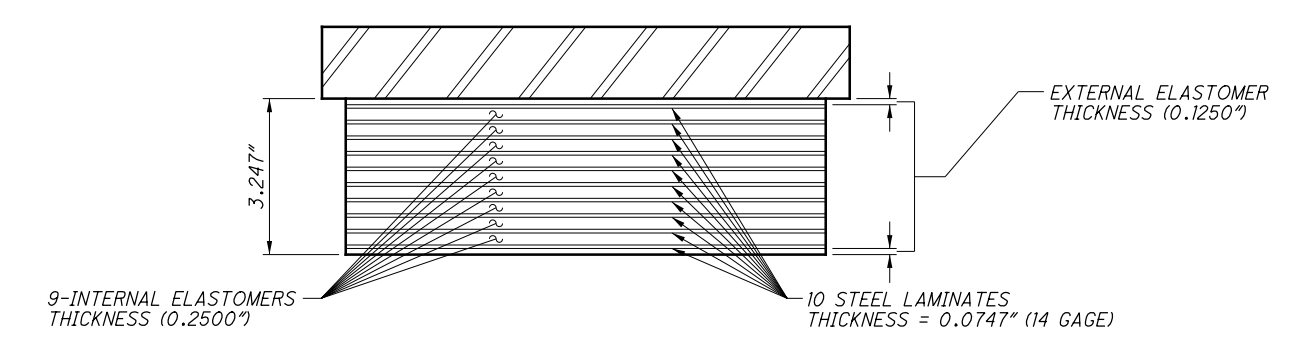
RIGHT BRIDGE FORWARD ABUTMENT

DESIGNED		DATE		DESIGN AGENCY	
JPH	JPH	3/5/2018	KRF	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6	
CHECKED		FILE NUMBER			
BLF	BLF	5100305/5100364			
<b>FORWARD ABUTMENT DETAILS RIGHT BRIDGE</b>					
BRIDGE NO. MAR-23-0185 L&R OVER SR 98					
MAR-23-1.85 / 2.04		PID No. 102332			
13 / 30					
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112					

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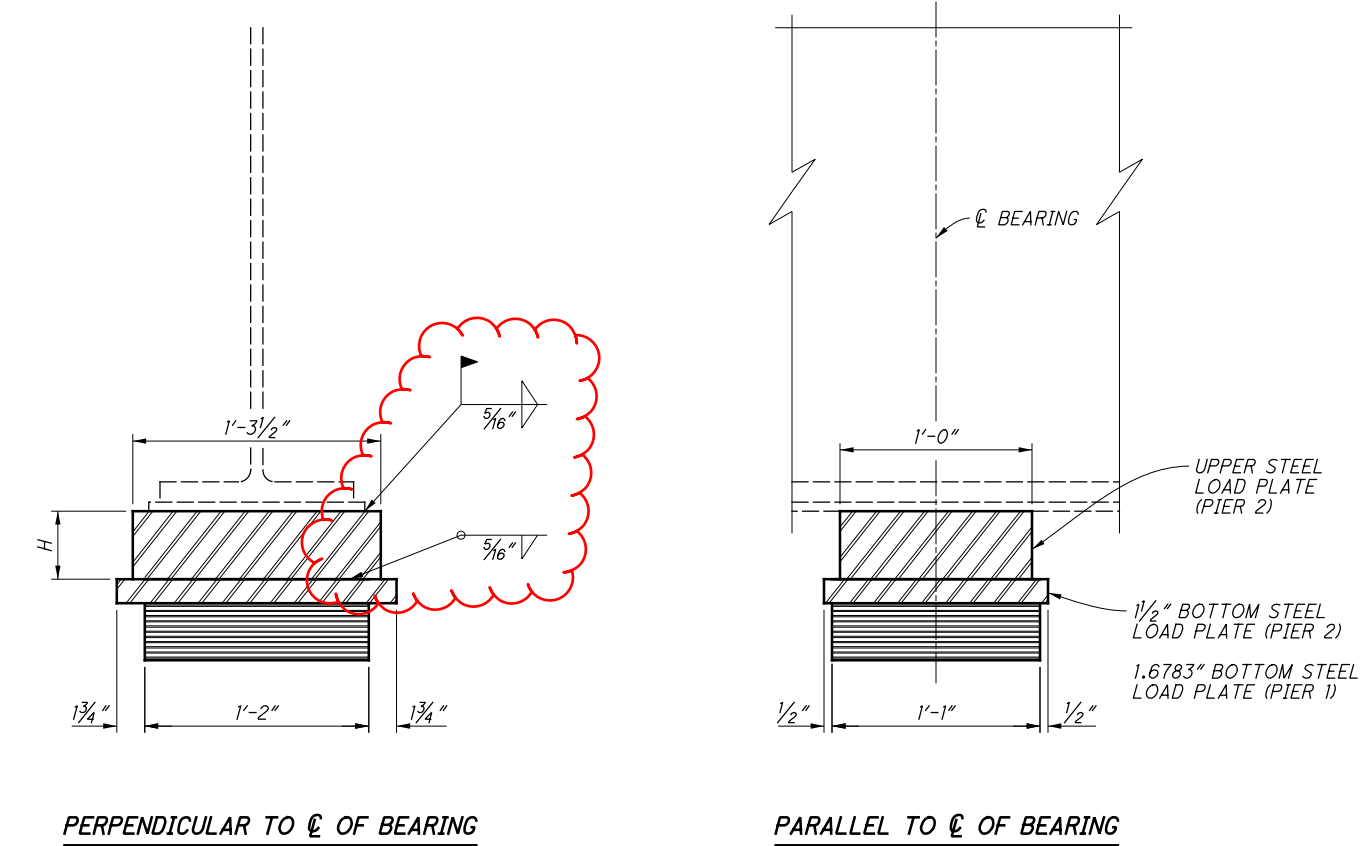


**ABUTMENT BEARING DETAILS**

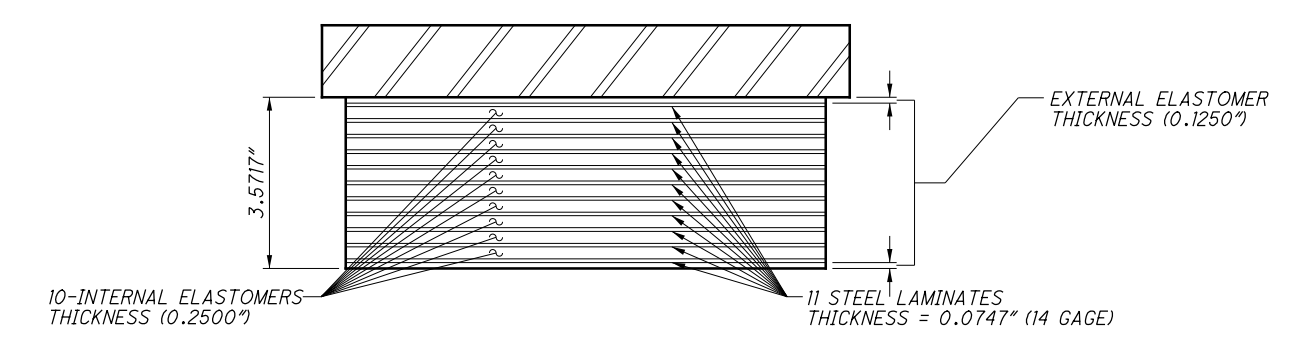


**ABUTMENT ELASTOMERIC BEARING DETAILS**

	D.L. (KIPS)	L.L. (KIPS)	TOTAL (KIPS)
ABUTMENT R&F	69	53	122



**PIER BEARING DETAILS**



**PIER ELASTOMERIC BEARING DETAILS**

	D.L. (KIPS)	L.L. (KIPS)	TOTAL (KIPS)
PIER 1&2	115	64	179

	DIM. "H"
PIER 1	NO UPPER LOAD PLATE
PIER 2	3.9283"

**NOTES:**

- ELASTOMERIC BEARINGS**  
THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES
- LOAD PLATE**  
THE STEEL LOAD PLATES AND HP 10x42 SHALL BE MADE OF A709 STEEL. SURFACE PREPARATION AND PRIMING SHALL BE DONE IN THE SHOP AND REQUIRED FIELD DRILLED HOLES SHALL BE INCLUDED IN THE PRICE BID ITEM 516 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATES (NEOPRENE)  
THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLD PROCESS.



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MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL					A	B	C	D	E	R	INC
<b>LEFT BRIDGE REAR ABUTMENT</b>												
LRA501	2	SERIES OF 18	6'-7" TO 6'-10"	252	1	2'-8"	4'-0" TO 4'-3"					0'-0.2"
LRA502	2	SERIES OF 16	6'-4" TO 6'-10"	110	1	2'-8"	3'-10" TO 4'-3"					0'-0.4"
LRA503	2		8'-8"	18	1	4'-9"	4'-0"					
LRA504	2		7'-7"	16	1	3'-8"	4'-0"					
LRA505	2		7'-1"	15	1	3'-4"	3'-10"					
LRA506	2		6'-0"	13	1	2'-3"	3'-10"					
LRA507	8		31'-3"	261	STR							
LRA801	8		32'-8"	698	STR							
SUBTOTAL				1,382								

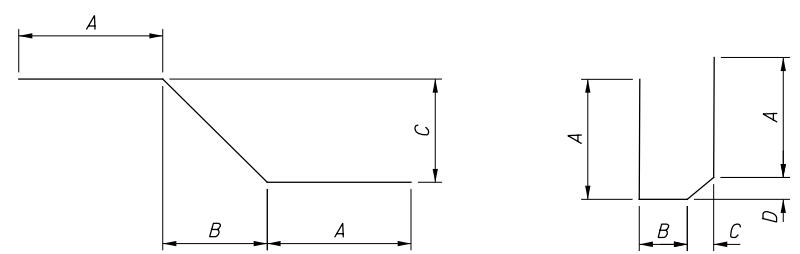
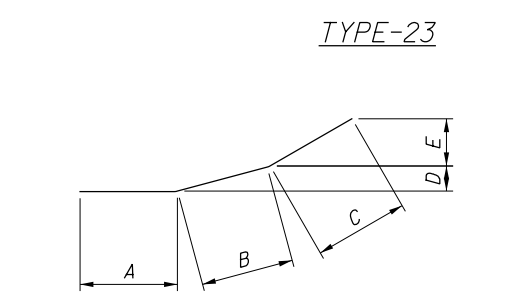
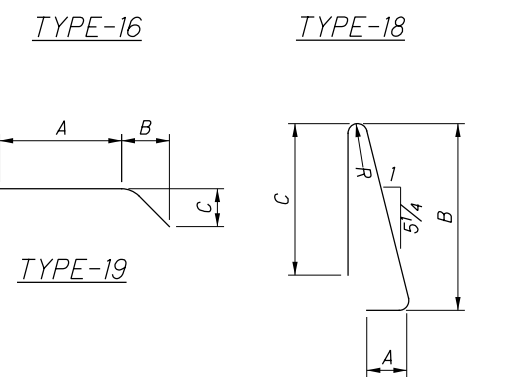
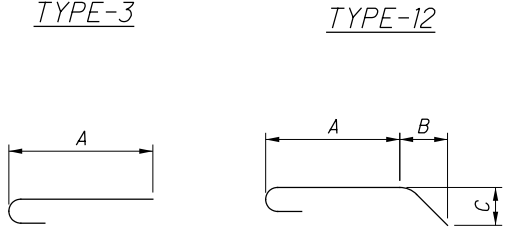
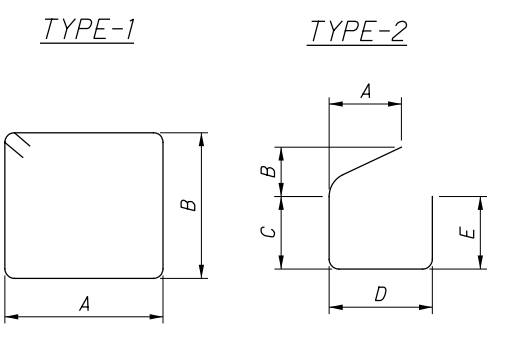
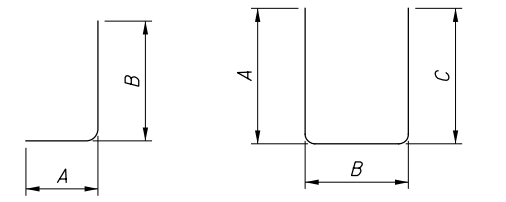
<b>LEFT BRIDGE REAR WINGWALLS (1 &amp; 2)</b>												
LRW501	20		5'-11"	123	1	2'-9"	3'-3"					
LRW502	7		13'-1"	96	STR							
LRW503	9		7'-3"	68	STR							
LRW504	27		8'-9"	246	STR							
LRW505	18		9'-2"	172	2	4'-6"	1'-2"	4'-6"				
LRW506	8		8'-1"	67	3	1'-2"	2'-7"					
LRW507	2		10'-5"	22	3	1'-2"	3'-9"					
LRW508	2		9'-0"	19	37	3'-0"	2'-2"	2'-2"				
LRW509	6		19'-2"	120	STR							
LRW510	2		13'-9"	29	STR							
LRW511	8		12'-8"	106	STR							
LRW512	8		5'-11"	49	38	2'-6"	0'-6"	0'-8"	0'-7"			
LRW513	20		6'-4"	132	1	2'-9"	3'-8"					
LRW514	2		4'-6"	9	19	3'-6"	0'-9"	0'-8"				
LRW515	3		13'-6"	42	STR							
LRW516	2		12'-3"	26	STR							
LRW517	3		11'-1"	35	STR							
LRW518	3		17'-3"	54	STR							
LRW519	3		15'-10"	50	STR							
LRW520	1		12'-3"	13	STR							
LRW521	1		11'-9.6"	12	STR							
LRW522	4		10'-9"	45	STR							
LRW523	4		9'-6"	40	STR							
LRW524	1		7'-9"	8	STR							
LRW525	2		9'-7"	20	37	3'-0"	2'-11"	2'-1"				
SUBTOTAL				1,602								

<b>LEFT BRIDGE FORWARD ABUTMENT</b>												
LFA501	2	SERIES OF 18	6'-7" TO 6'-11"	253	1	2'-8"	4'-0" TO 4'-4"					0'-0.2"
LFA502	2	SERIES OF 15	6'-7" TO 6'-11"	106	1	2'-8"	4'-0" TO 4'-4"					0'-0.3"
LFA503	2		8'-9"	18	1	4'-10"	4'-0"					
LFA504	2		7'-7"	16	1	3'-8"	4'-0"					
LFA505	2		7'-5"	15	1	3'-6"	4'-0"					
LFA506	2		2'-4"	5	1	2'-5"	4'-0"					
LFA507	8		31'-1"	259	STR							
LFA801	8		32'-5"	692	STR							
SUBTOTAL				1,365								

<b>LEFT BRIDGE FORWARD WINGWALLS (5 &amp; 6)</b>												
LFW501	18		6'-4"	119	1	2'-9"	3'-8"					
LFW502	7		10'-10"	79	STR							
LFW503	9		7'-3"	68	STR							
LFW504	25		8'-9"	228	STR							
LFW505	17		9'-11"	176	2	4'-6"	1'-2"	4'-6"				
LFW506	7		8'-1"	59	3	1'-2"	2'-7"					
LFW507	2		10'-5"	22	3	1'-2"	3'-9"					
LFW508	2		8'-11"	19	37	3'-0"	2'-1"	2'-0"				
LFW509	6		16'-3"	102	STR							
LFW510	2		11'-6"	24	STR							
LFW511	8		10'-6"	88	STR							
LFW512	8		5'-11"	49	38	2'-6"	9'-6"	4'-6"	3'-6"			
LFW513	20		5'-11"	123	1	2'-9"	3'-3"					
LFW514	2		4'-0"	8	19	2'-11"	0'-9"	0'-8"				
LFW515	2		13'-8"	29	STR							
LFW516	2		12'-7"	26	STR							
LFW517	3		11'-6"	36	19							
LFW518	3		17'-7"	55	STR							
LFW519	3		16'-4"	51	STR							
LFW520	1		12'-9"	13	STR							
LFW521	1		11'-6"	12	STR							
LFW522	4		11'-1"	46	STR							
LFW523	4		9'-10"	41	STR							
LFW524	1		7'-9"	8	STR							
LFW525	2		9'-7"	20	37	3'-0"	2'-11"	2'-1"				
SUBTOTAL				1,501								

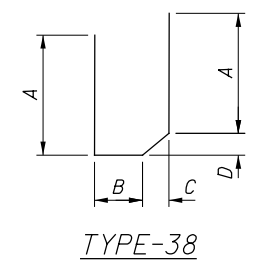
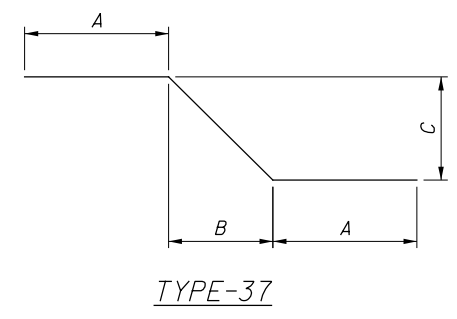
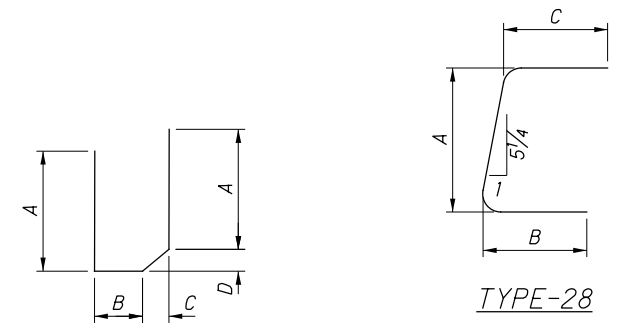
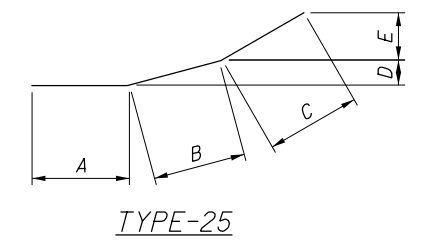
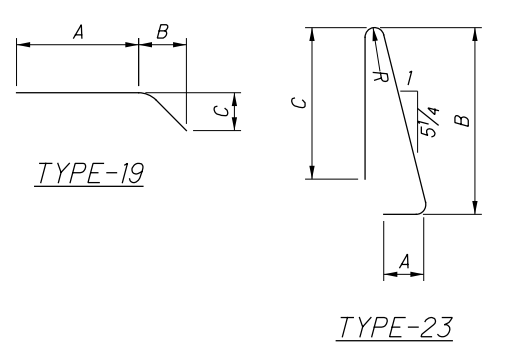
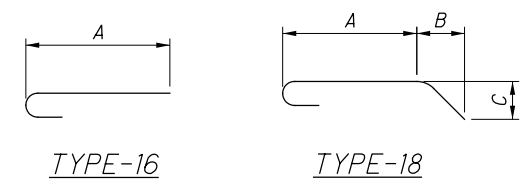
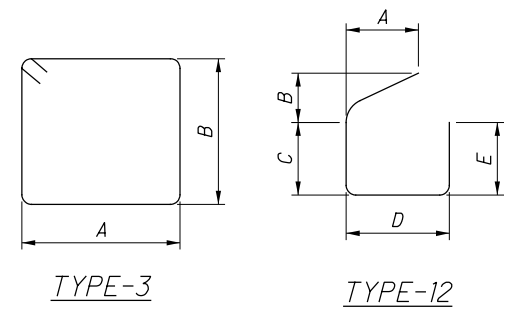
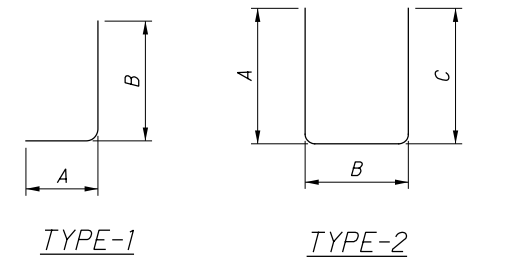
<b>LEFT BRIDGE REAR DIAPHRAGM</b>												
D801	38		5'-10"	592	18	3'-8"	1'-0"	1'-0"				
LRD501	27		13'-7"	383	3	2'-11"	3'-7"					
LRD502	27		11'-11"	336	2	2'-9"	2'-11"	2'-9"				
LRD503	1		13'-9"	14	3	2'-11"	3'-8"					
LRD504	1		12'-1"	13	2	2'-9"	3'-0"	2'-9"				
LRD505	1		15'-11"	17	3	2'-11"	4'-9"					
LRD506	1		14'-3"	15	2	2'-9"	4'-1"	2'-9"				
LRD507	1		13'-1"	14	3	2'-11"	3'-4"					
LRD508	1		11'-5"	12	2	2'-9"	2'-8"	2'-9"				
LRD509	1		10'-11"	11	3	2'-11"	2'-3"					
LRD510	1		9'-3"	10	2	2'-9"	1'-7"	2'-9"				
LRD511	2		9'-3"	19	3	0'-9"	3'-7"					
LRD512	2		10'-5"	22	2	2'-0"	2'-11"	2'-0"				
LRD513	5		3'-6"	18	STR							
SUBTOTAL				3,725								

<b>LEFT BRIDGE FORWARD DIAPHRAGM</b>												
D801	38		5'-10"	592	18	3'-8"	1'-0"	1'-0"				
LFD501	27		13'-7"	383	3	2'-11"	3'-7"					
LFD502	27		11'-11"	336	2	2'-9"	2'-11"	2'-9"				
LFD503	1		13'-9"	14	3	2'-11"	3'-8"					
LFD504	1		12'-1"	13	2	2'-9"	3'-0"	2'-9"				
LFD505	1		15'-11"	17	3	2'-11"	4'-9"					
LFD506	1		14'-3"	15	2	2'-9"	4'-1"	2'-9"				
LFD507	1		13'-1"	14	3	2'-11"	3'-4"					
LFD508	1		11'-5"	12	2	2'-9"	2'-8"	2'-9"				
LFD509	1		10'-11"	11	3	2'-11"	2'-3"					
LFD510	1		9'-3"	10	2	2'-9"	1'-7"	2'-9"				
LFD511	2		9'-3"	19	3	0'-9"	3'-7"					
LFD512	2		10'-5"	22	2	2'-0"	2'-11"	2'-0"				
LFD513	5		3'-6"	18	STR							
SUBTOTAL				3,749								



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LEFT BRIDGE DECK									
S401	240	40'-0"	6,413	STR					
S402	60	33'-7"	1,346	STR					
S403	192	2'-0"	257	1	0'-8"	1'-6"			
S404	192	2'-3"	289	19	1'-6"	0'-8"	0'-4"		
S405	192	1'-10"	235	1	0'-8"	1'-3"			
S406	192	2'-0"	257	19	1'-3"	0'-8"	0'-4"		
S501	1 SERIES OF 67	2'-4" TO 40'-4"	1,491	16	1'-6" TO 39'-6"				0'-6.9"
S502	1 SERIES OF 67	1'-6" TO 39'-6"	1,450	STR					0'-6.9"
S503	319	20'-10"	6,932	16	20'-0"				
S504	319	20'-0"	6,654	STR					
S505	2	24'-4"	51	16	23'-6"				
S506	2	23'-6"	49	STR					
S507	2	24'-10"	52	16	24'-0"				
S508	2	24'-0"	50	STR					
S509	315	26'-9"	8,789	16	25'-11"				
S510	315	25'-11"	8,515	STR					
S511	472	40'-0"	19,692	STR					
S512	1 SERIES OF 68	2'-3" TO 40'-5"	1,513	16	1'-5" TO 39'-7"				0'-6.8"
S513	1 SERIES OF 68	1'-5" TO 39'-7"	1,454	STR					0'-6.8"
SUBTOTAL			65,486						
LEFT BRIDGE PARAPETS									
LP501	510	7'-4"	3,901	23	0'-11"	3'-3"	3'-0"		0'-2.8"
LP502	144	4'-6"	676	STR					
LP503	2	3'-5"	7	STR					
LP504	2	3'-10"	8	STR					
LP505	2	15'-2"	32	STR					
LP506	2	15'-3"	32	STR					
LP507	2	15'-7"	33	STR					
LP508	2	15'-8"	33	STR					
LP509	16	10'-0"	167	STR					
LP510	16	5'-8"	95	25	1'-10"	2'-5"	1'-5"	0'-1.5"	0'-5"
LP511	16	5'-8"	95	STR					
LP512	8	26'-0"	217	STR					
LP513	8	26'-6"	221	STR					
LP514	32	40'-0"	1,335	STR					
LP515	8	33'-7"	280	STR					
LP601	72	4'-6"	487	STR					
LP602	510	2'-5"	1,851	1	1'-0"	1'-6"			
LP603	510	3'-2"	2,426	28	1'-6"	1'-0"	0'-11"		
LP604	1	3'-5"	5	STR					
LP605	1	3'-10"	6	STR					
LP606	8 SERIES OF 12	3'-11" TO 4'-10"	631	1	1'-0"	3'-0" TO 3'-11"			0'-1"
LP607	1	15'-2"	23	STR					
LP608	1	15'-3"	23	STR					
LP609	1	15'-7"	23	STR					
LP610	1	15'-8"	24	STR					
LP611	32	4'-0"	192	1	1'-0"	3'-1"			
SUBTOTAL			12,820						
SUBSTRUCTURE			5,851						
SUPERSTRUCTURE			85,780						
GRAND TOTAL			91,630						



DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6

REINFORCING STEEL LIST

BRIDGE NO. MAR-23-0185 L&R OVER SR 98

DESIGNED: JPH  
CHECKED: BLF

DRAWN: JPH  
REVISED: -

REVIEWED: KRF  
DATE: 3/5/2018  
STRUCTURE FILE NUMBER: 5100305/5100364

MAR-23-1.85 / 2.04  
PID No. 102332

28/30

85  
112

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MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
<b>RIGHT BRIDGE REAR ABUTMENT</b>											
RAA501	2 SERIES OF 18	6'-5" TO 6'-9"	124	1	2'-8"	3'-10" TO 4'-2"					0'-0.2"
RAA502	2 SERIES OF 16	6'-5" TO 6'-9"	110	1	2'-8"	3'-10" TO 4'-2"					0'-0.3"
RAA503	2	8'-6"	18	1	4'-9"	3'-10"					
RAA504	2	7'-3"	15	1	3'-6"	3'-10"					
RAA505	2	6'-9"	14	1	3'-0"	3'-10"					
RAA506	2	6'-0"	13	1	2'-3"	3'-10"					
RAA507	8	31'-0"	259	STR							
RAA801	8	32'-4"	691	STR							
SUBTOTAL			1242								

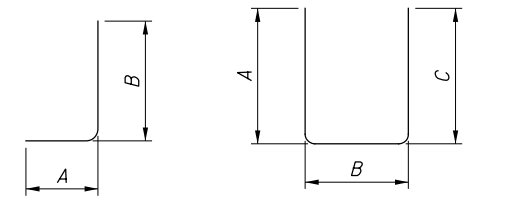
<b>RIGHT BRIDGE REAR WINGWALLS (3 &amp; 4)</b>											
RRW501	18	6'-5"	120	1	2'-9"	3'-9"					
RRW502	7	10'-8"	78	STR							
RRW503	9	7'-2"	67	STR							
RRW504	24	8'-9"	219	STR							
RRW505	17	9'-5"	167	2	4'-9"	1'-8"	4'-9"				
RRW506	7	9'-1"	66	3	1'-8"	2'-7"					
RRW507	2	5'-4"	11	3	1'-2"	3'-7"					
RRW508	2	8'-10"	18	37	3'-0"	2'-2"	2'-0"				
RRW509	6	16'-0"	100	STR							
RRW510	2	11'-3"	23	STR							
RRW511	8	10'-2"	85	STR							
RRW512	8	5'-11"	49	38	2'-6"	1'-0"	0'-2"	0'-2"			
RRW513	20	5'-11"	123	1	2'-9"	3'-3"					
RRW514	2	3'-10"	8	19	2'-11"	0'-9"	0'-7"				
RRW515	2	13'-6"	28	STR							
RRW516	2	12'-6"	26	STR							
RRW517	3	11'-5"	36	STR							
RRW518	3	17'-8"	55	STR							
RRW519	3	16'-4"	51	STR							
RRW520	1	12'-8"	13	STR							
RRW521	1	11'-6"	12	STR							
RRW522	4	11'-0"	46	STR							
RRW523	4	9'-10"	41	STR							
RRW524	1	7'-7"	8	STR							
RRW525	2	9'-7"	20	37	3'-0"	2'-11"	2'-1"				
SUBTOTAL			1473								

<b>RIGHT BRIDGE FORWARD ABUTMENT</b>											
RFA501	2 SERIES OF 16	10'-11" TO 11'-6"	187	1	2'-8"	4'-3" TO 4'-5"					0'-0.5"
RFA502	2 SERIES OF 17	10'-5" TO 11'-3"	192	1	2'-8"	4'-0" TO 4'-5"					0'-0.6"
RFA503	2	8'-11"	19	1	4'-10"	4'-3"					
RFA504	2	7'-9"	16	1	3'-8"	4'-3"					
RFA505	2	7'-3"	15	1	3'-5"	4'-0"					
RFA506	2	6'-2"	13	1	2'-3"	4'-0"					
RFA507	8	31'-0"	259	STR							
RFA801	8	32'-4"	691	STR							
SUBTOTAL			1391								

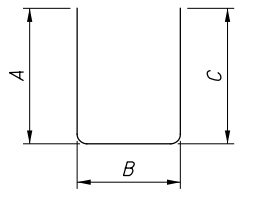
<b>RIGHT BRIDGE FORWARD WINGWALLS (7 &amp; 8)</b>											
RFW501	20	5'-11"	123	1	2'-9"	3'-3"					
RFW502	7	13'-2"	96	STR							
RFW503	9	7'-5"	70	STR							
RFW504	25	9'-0"	235	STR							
RFW505	17	9'-11"	176	2	4'-6"	1'-2"	4'-6"				
RFW506	8	8'-1"	67	3	1'-2"	2'-7"					
RFW507	2	10'-5"	22	3	1'-2"	3'-9"					
RFW508	2	9'-8"	20	37	3'-0"	3'-0"	2'-0"				
RFW509	6	19'-3"	120	STR							
RFW510	2	14'-1"	29	STR							
RFW511	8	12'-9"	106	STR							
RFW512	8	5'-11"	49	38	2'-6"	0'-7"	0'-7"	0'-6"			
RFW513	18	6'-4"	119	1	2'-9"	3'-9"					
RFW514	2	4'-7"	10	19	3'-7"	0'-9"	0'-7"				
RFW515	2	13'-8"	29	STR							
RFW516	2	12'-3"	26	STR							
RFW517	3	11'-2"	35	STR							
RFW518	3	17'-3"	54	STR							
RFW519	3	16'-0"	50	STR							
RFW520	1	12'-4"	13	STR							
RFW521	1	11'-1"	12	STR							
RFW522	4	10'-8"	45	STR							
RFW523	4	9'-5"	39	STR							
RFW524	1	7'-11"	8	STR							
RFW525	2	9'-7"	20	37	3'-0"	3'-0"	2'-0"				
SUBTOTAL			1573								

<b>RIGHT BRIDGE REAR DIAPHRAGM</b>											
D801	38	5'-10"	592	18	3'-8"	1'-0"	1'-0"				
RRD501	27	13'-5"	378	3	2'-11"	3'-7"					
RRD502	27	8'-10"	249	2	3'-2"	2'-9"	3'-2"				
RRD503	1	13'-5"	14	3	2'-11"	3'-6"					
RRD504	1	8'-1"	8	2	2'-9"	2'-10"	2'-9"				
RRD505	1	15'-11"	17	3	2'-11"	4'-9"					
RRD506	1	9'-4"	10	2	2'-9"	4'-1"	2'-9"				
RRD507	1	12'-5"	13	3	2'-11"	3'-0"					
RRD508	1	7'-7"	8	2	2'-9"	2'-4"	2'-9"				
RRD509	1	10'-1"	11	3	2'-11"	2'-3"					
RRD510	1	6'-9"	7	2	2'-9"	1'-6"	2'-9"				
RRD511	2	9'-9"	20	3	1'-0"	3'-7"					
RRD512	2	7'-2"	15	2	2'-3"	2'-11"	2'-3"				
SUBTOTAL			3618								

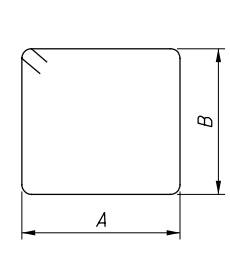
<b>RIGHT BRIDGE FORWARD DIAPHRAGM</b>											
D801	38	5'-10"	592	18	3'-8"	1'-0"	1'-0"				
RFD501	27	13'-5"	378	3	2'-10"	3'-7"					
RFD502	27	9'-0"	253	2	3'-2"	2'-11"	3'-2"				
RFD503	1	13'-7"	14	3	2'-10"	3'-8"					
RFD504	1	9'-1"	9	2	3'-2"	3'-0"	3'-2"				
RFD505	1	15'-10"	17	3	2'-10"	4'-10"					
RFD506	1	10'-2"	11	2	3'-2"	4'-1"	3'-2"				
RFD507	1	12'-11"	13	3	2'-10"	3'-4"					
RFD508	1	8'-10"	9	2	3'-2"	2'-9"	3'-2"				
RFD509	1	10'-9"	11	3	2'-10"	2'-3"					
RFD510	1	7'-7"	8	2	3'-2"	1'-6"	3'-2"				
RFD511	2	9'-7"	20	3	0'-11"	3'-7"					
RFD512	2	7'-0"	15	2	2'-2"	2'-11"	2'-2"				
RFD513	5	3'-6"	18	STR							
SUBTOTAL			3654								



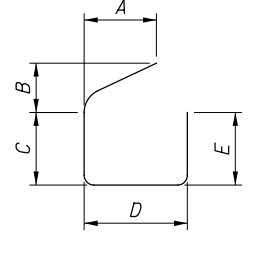
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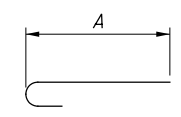
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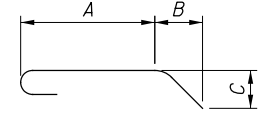
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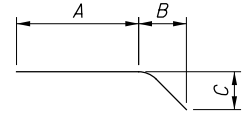
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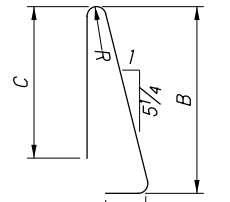
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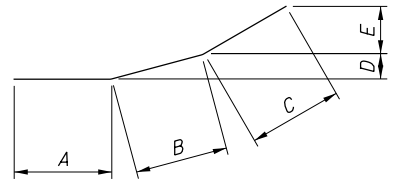
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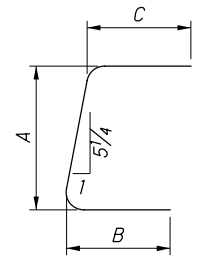
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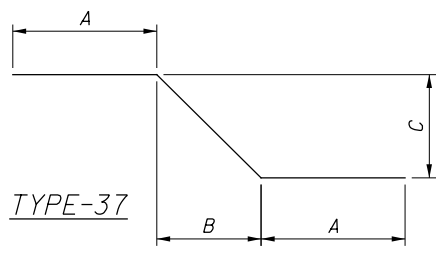
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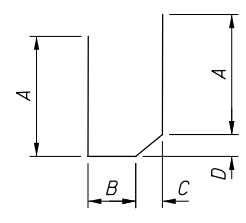
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TYPE-28



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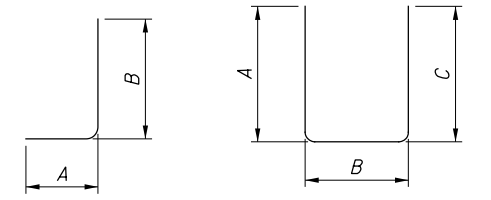


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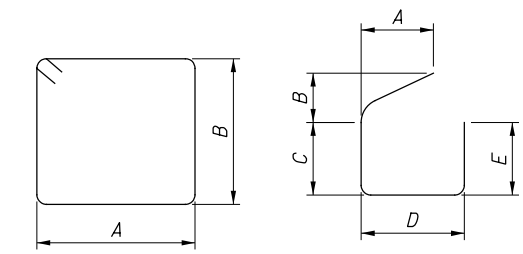
DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6  
 DATE: 3/5/2018  
 REVIEWED: KRF  
 DRAWN: JPH  
 CHECKED: BLF  
 STRUCTURE FILE NUMBER: 5100305/5100364  
**REINFORCING STEEL LIST**  
 BRIDGE NO. MAR-23-0185 L&R OVER SR 98  
**MAR-23-1.85 / 2.04**  
 PID No. 102332  
 29/30  
 86  
 112

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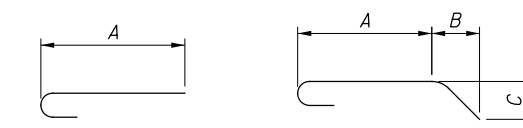
RIGHT BRIDGE DECK									
S401	240	40'-0"	6413	STR					
S402	60	33'-7"	1346	STR					
S403	192	2'-0"	257	1	0'-8"	1'-6"			
S404	192	2'-3"	289	19	1'-6"	0'-8"	0'-4"		
S405	192	1'-10"	235	1	0'-8"	1'-3"			
S406	192	2'-0"	257	19	1'-3"	0'-8"	0'-4"		
S501	1	2'-4"			1'-6"				0'-6.9"
	SERIES OF	TO	1491	16	TO				
	67	40'-4"			39'-6"				
S502	1	1'-6"							0'-6.9"
	SERIES OF	TO	1450	STR					
	67	39'-6"							
S503	319	20'-10"	6932	16	20'-0"				
S504	319	20'-0"	6654	STR					
S505	2	24'-4"	51	16	23'-6"				
S506	2	23'-6"	49	STR					
S507	2	24'-10"	52	16	24'-0"				
S508	2	24'-0"	50	STR					
S509	315	26'-9"	8789	16	25'-11"				
S510	315	25'-11"	8515	STR					
S511	472	40'-0"	19692	STR					
S512	1	2'-3"			1'-5"				0'-6.8"
	SERIES OF	TO	1513	16	TO				
	68	40'-5"			39'-7"				
S513	1	1'-5"							0'-6.8"
	SERIES OF	TO	1454	STR					
	68	39'-7"							
SUBTOTAL			65486						
RIGHT BRIDGE PARPETS									
RP501	512	7'-4"	3916	23	0'-11"	3'-3"	3'-0"		
RP502	72	4'-6"	338	STR					
RP503	2	4'-2"	9	STR					
RP504	2	4'-7"	10	STR					
RP505	2	15'-2"	32	STR					
RP506	2	15'-3"	32	STR					
RP507	2	15'-8"	33	STR					
RP508	2	15'-9"	33	STR					
RP509	16	10'-0"	167	STR					
RP510	16	5'-8"	95	25	1'-10"	2'-5"	1'-5"	0'-1.5"	0'-5"
RP511	16	5'-8"	95	STR					
RP512	8	25'-10"	216	STR					
RP513	8	26'-3"	219	STR					
RP514	32	40'-0"	1335	STR					
RP515	8	34'-1"	284	STR					
RP601	74	4'-6"	500	STR					
RP602	512	2'-5"	1859	1	1'-0"	1'-6"			
RP603	512	3'-2"	2435	28	1'-6"	1'-0"	0'-11"		
RP604	1	4'-2"	6						
RP605	1	4'-7"	7						
RP606	8	3'-11"			1'-0"	3'-0"			0'-1"
	SERIES OF	TO	79	1	TO				
	12	4'-10"			3'-11"				
RP607	1	15'-2"	23	STR					
RP608	1	15'-9"	24	STR					
RP609	1	15'-8"	24	STR					
RP610	1	15'-9"	24	STR					
RP611	32	4'-0"	192	1	1'-0"	3'-1"			
SUBTOTAL			11983						
SUBSTRUCTURE			5679						
SUPERSTRUCTURE			84742						
GRAND TOTAL			90421						



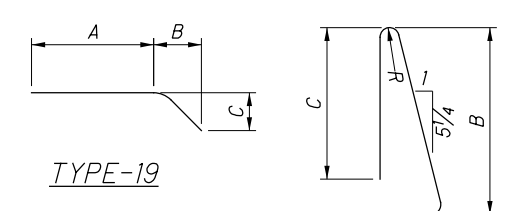
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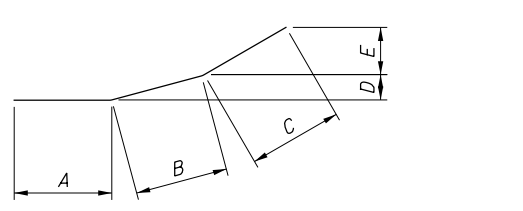
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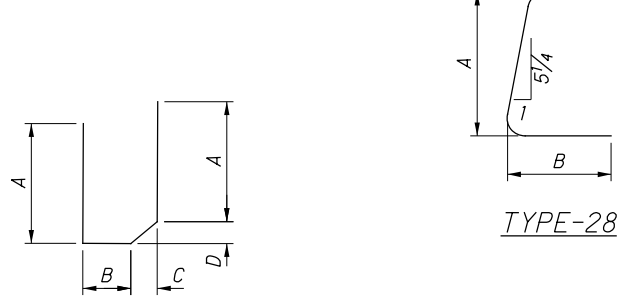
TYPE-16 TYPE-18



TYPE-19 TYPE-23



TYPE-25



TYPE-37 TYPE-38

DESIGNED	JPH	CHECKED	BLF
DRAWN	JPH	REVISED	-
REVIEWED	KRF	DATE	3/5/2018
STRUCTURE FILE NUMBER	5100305/5100364	DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6
<b>REINFORCING STEEL LIST</b>			
BRIDGE NO. MAR-23-0185 L&R OVER SR 98			
MAR-23-1.85 / 2.04			
PID No. 102332			
30/30			
87			
112			



STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

Table with 3 columns: Drawing ID, DATED/REVISED, and Date. Includes AS-1-15, AS-2-15, GSD-1-19, PCB-91, SBR-1-13, SICD-1-96, and SICD-2-14.

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

Table with 3 columns: Spec ID, DATED/REVISED, and Date. Includes SS869.

DESIGN SPECIFICATIONS

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE 8TH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2017 AND THE ODOT BRIDGE DESIGN MANUAL, 2019.

DESIGN LOADING

DESIGN LOADING: HL-93 (SUPERSTRUCTURE ONLY)

FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)

REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

STRUCTURAL STEEL - ASTM A709 GRADE 50W - YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD

EPOXY COATED REINFORCING STEEL

2.5" CONCRETE COVER

MONOLITHIC WEARING SURFACE

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

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE BRIDGE WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT AT THE BRIDGES.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

OHIO EPA, CDO
50 WEST TOWN ST., SUITE 700
COLUMBUS, OHIO 43215
KELLY TOH, APC MANAGER
(614) 728-3778
FAX: (614) 728-3898

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR REHABILITATION. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER.

INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTOR'S NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL, AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED.

THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM.

WATERWAY/WETLAND PROTECTION

THE CONTRACTOR SHALL NOT PLACE TEMPORARY OR PERMANENT FILL IN WETLANDS OR BELOW THE ORDINARY HIGH WATER MARK OF ANY WATERWAY DURING CONSTRUCTION OF THIS PROJECT, INCLUDING SCAFFOLDING OR BRACING. THE CONTRACTOR SHALL NOT PLACE/STAGE EQUIPMENT BELOW THE ORDINARY HIGH WATER MARK. IF DEBRIS ENTERS THE WATERWAY DURING CONSTRUCTION, THE CONTRACTOR SHALL REMOVE THE DEBRIS IMMEDIATELY UTILIZING HAND REMOVALS OR EQUIPMENT STAGED ABOVE THE ORDINARY HIGH WATER MARK.

DECK PLACEMENT DESIGN ASSUMPTIONS

DECK PLACEMENT DESIGN ASSUMPTIONS: THE FOLLOWING ASSUMPTIONS OF THE CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE FALSEWORK SUPPORT SYSTEM WITH THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.40 KIPS FOR THE LEFT BRIDGE AND 2.28 KIPS FOR THE RIGHT BRIDGE, A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE FACE OF THE SAFETY HANDRAIL OF 65".

EXISTING STRUCTURE VERIFICATION

EXISTING STRUCTURE VERIFICATION: DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02, AND 513.04. BASE CONTRACT BID PRICES UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED IN THE FIELD.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF THE ENTIRE EXISTING SUPERSTRUCTURE. THIS WORK SHALL INCLUDE THE REMOVAL OF ALL EXISTING CONCRETE DECK, RAILING, BEAMS, INTERMEDIATE CROSSFRAMES, END CROSSFRAMES, EXPANSION JOINTS, ABUTMENT AND PIER BEARING ASSEMBLIES, AND ALL OTHER INDIVIDUAL COMPONENTS OF THE ENTIRE EXISTING SUPERSTRUCTURE. THIS WORK ALSO CONSISTS OF THE PARTIAL REMOVAL OF THE SUBSTRUCTURE AS DETAILED IN THE PLAN.

DURING THE BEARING REMOVAL PROCESS, DRILL OUT ALL EXISTING ANCHOR BARS, FILL THE HOLES WITH NONSHRINK NONMETALLIC GROUT AS PER C&MS 510, AND ENSURE THAT BEARING SEAT AREAS HAVE A PURE AND LEVEL SURFACE TO REST ON. THE CONTRACTOR SHALL FOLLOW C&MS 516.07 TO ACCOMPLISH THIS SEAT PREPARATION WORK FOR NEW BEARINGS.

PROTECTION OF TRAFFIC: PRIOR TO DEMOLITION OF ANY PORTIONS OF THE EXISTING SUPERSTRUCTURE, THE CONTRACTOR SHALL SUBMIT PLANS FOR THE PROTECTION OF TRAFFIC (VEHICULAR, PEDESTRIAN, BOAT, ETC.) AS PER CMS 501.05.B.2

REMOVAL METHODS: REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS WHILE STILL IN USE DURING THE REMOVAL PROCEDURES.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

CUT LINE CONSTRUCTION JOINT PREPARATION

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL

ALL CONCRETE REMOVED AS DETAILED IN THE PLANS SHALL BE REMOVED BY MEANS OF CUTTING AND OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMERS SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

ALL PROVISIONS OF C&MS 509 SHALL APPLY FOR REINFORCING STEEL DETAILED IN THIS PLAN WITH THE FOLLOWING PROVISIONS.

PROVIDE ELUSION BONDED EPOXY COATED REINFORCING STEEL CONFORMING TO ASTM A934 "STANDARD SPECIFICATION FOR EPOXY COATED PREFABRICATED STEEL REINFORCING BARS."

ENSURE THAT STEEL REINFORCING BARS TO BE COATED CONFORM TO 709.01, 709.03, 709.05, AND ARE FREE OF OIL, GREASE, OR PAINT.

ENSURE THAT THE COATING MATERIAL MEETS THE REQUIREMENTS LISTED IN ANNEX A1 AND IS A COLOR THAT FACILITATES INSPECTION OF THE INSTALLED BAR.

REPORT OF TEST RESULTS IS REQUIRED.

SAMPLES OF FUSION BONDED EPOXY COATED REINFORCING STEEL ARE REQUIRED. PERFORM TEST, INSPECTION, AND SAMPLING AT A SITE SPECIFIED BY THE ENGINEER. SAMPLING FOR TESTING REQUIRES THREE 30 INCH (IM) SAMPLES FOR EACH BAR SIZE, FOR EACH COATING LOT, AND FOR EACH HEAT OF STEEL REINFORCING BARS.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN
ITEM 526 - TYPE C INSTALLATION, AS PER PLAN

THE CONTRACTOR SHALL USE FUSION BONDED EPOXY COATED REINFORCING STEEL FOLLOWING THE GUIDELINES AND SPECIFICATIONS FOR ITEM 509 - REINFORCING STEEL, AS PER PLAN.

THE PAYMENT FOR FUSION BONDED EPOXY COATED REINFORCING STEEL SHALL BE INCLUDED WITH ITEM 526 - TYPE C INSTALLATION, AS PER PLAN.

ITEM 516 - 2" DEEP JOINT SEALER, AS PER PLAN

UPON COMPLETION OF THE PROPOSED APPROACH SLAB THE CONTRACTOR SHALL SAW CUT ALONG THE APPROACH SLAB AND BRIDGE LIMIT, AS DETAILED IN THE PLANS, AN AREA 1" WIDE BY 2" DEEP AND FILL THIS AREA WITH HOT APPLIED JOINT SEALER 705.04.

DECK SLAB CONCRETE QUANTITY

THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH BEAM HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH HEIGHT OF 2" AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.

THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE BEAM, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.

ITEM 513 - STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES

THIS ITEM SHALL CONSIST OF FIELD LOCATIONS AND FIELD DRILLING OF 2" DIAMETER HOLES FOR #8 REINFORCING STEEL AS PER STD. DWG. SICD-1-96 INTO THE BEAM ENDS. THE CONTRACTOR SHALL CLEARLY MARK THE LOCATIONS AND HAVE THE ENGINEER'S APPROVAL PRIOR TO DRILLING. FLAME CUTTING OF THE HOLES WILL NOT BE PERMITTED.

MEASUREMENT: THE DEPARTMENT WILL PAY FOR EACH 2" DIA. HOLE DRILLED.

ALL MATERIALS, LABOR, INCIDENTALS TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE BID PRICE FOR ITEM 513 - STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES.

WELDED ATTACHMENTS

WELD ATTACHMENT OF SUPPORTS FOR CONCRETE DECK FINISHING MACHINE TO AREAS OF THE FASCIA STRINGER FLANGES DESIGNATED "COMPRESSION". DO NOT WELD ATTACHMENTS TO AREAS DESIGNATED "TENSION". FILLET WELDS TO COMPRESSION FLANGES SHALL BE AT LEAST 1" FROM EDGE OF FLANGE, BE NO MORE THAN 2" LONG, AND BE AT LEAST 1/4" FOR THICKNESSES UP TO 3/4" OR 5/16" FOR GREATER THAN 3/4" THICK.

ITEM 519 - PATCHING OF CONCRETE STRUCTURE

THE FOLLOWING ITEMS HAVE BEEN PROVIDED AS CONTINGENCY QUANTITIES TO BE USED AS DIRECTED BY THE ENGINEER AT THE NOTED LOCATIONS. THESE ITEMS HAVE BEEN CARRIED TO THE STRUCTURES SUMMARY.

MAR-23-0204L

ITEM 519 - PATCHING CONCRETE STRUCTURE = 50 SF

MAR-23-0204R

ITEM 519 - PATCHING CONCRETE STRUCTURE = 50 SF

ITEM 519 - PATCHING OF CONCRETE STRUCTURE, AS PER PLAN

ALL PROVISIONS OF 514 SHALL APPLY FOR PATCHING OF CONCRETE PIER CAP WITH THE FOLLOWING PROVISION. ANY TEMPORARY SUPPORT OF THE BEAM IS INCIDENTAL TO THE PATCHING ITEM. SEE SHEET 1/25 FOR PATCHING LOCATION.

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Vertical sidebar containing: DESIGN AGENCY (OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6), DATE (7/3/2020), FILE NUMBER (5100399/5100429), DRAWN (JPH), CHECKED (BLF), STRUCTURE NOTES (BRIDGE NO. MAR-23-0204 L&R OVER QU QUA CREEK), PID No. 102332, and a circular stamp with 90 and 112.

ABUTMENT DIAPHRAGM CONCRETE

PLACE THE DIAPHRAGM CONCRETE ENCASING THE STRUCTURAL MEMBER ENDS WITH THE DECK CONCRETE OR AT LEAST 48 HOURS BEFORE PLACEMENT OF THE DECK CONCRETE. IF PLACED SEPARATELY, LOCATE A HORIZONTAL CONSTRUCTION JOINT IN THE DIAPHRAGM AS SHOWN ON SICD-1-96 FOR STEEL SUPERSTRUCTURES AND PLACE THE REMAINING DIAPHRAGM CONCRETE WITH THE DECK.

STRUCTURAL STEEL QUANTITIES

THE STRUCTURAL STEEL QUANTITIES LISTED IN THE STRUCTURES SUMMARY INCLUDE BEAMS, INTERMEDIATE DIAPHRAGMS, AND SPLICE ASSEMBLIES TO CONSTRUCT THE BRIDGE AS DETAILED. THE TOTAL QUANTITIES ARE BASED UPON THE ASSUMPTION OF TWO (2) FIELD SPLICES PER BEAM. EACH SPLICE ASSEMBLY HAS AN ESTIMATED WEIGHT OF 512.43 LBS. EACH BEAM HAS A TOTAL OF FOUR (4) FIELD SPLICE LOCATIONS DETAILED IN THE PLANS. ALL SPLICE LOCATIONS ARE OPTIONAL. THE DEPARTMENT WILL PAY FOR THE ACTUAL QUANTITY OF STEEL PLACED.

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90A  
112

3A / 25

**MAR-23-1.85 / 2.04**  
PID No. 102332

**STRUCTURE NOTES**  
BRIDGE NO. MAR-23-0204 L&R  
OVER QU QUA CREEK

DESIGNED  
BLF  
CHECKED  
JPH

DRAWN  
BLF  
REVISED  
-

REVIEWED  
KRF  
STRUCTURE FILE NUMBER  
5100399/5100429

DATE  
7/3/2020

DESIGN AGENCY  
OHIO DEPARTMENT OF  
TRANSPORTATION DISTRICT 6

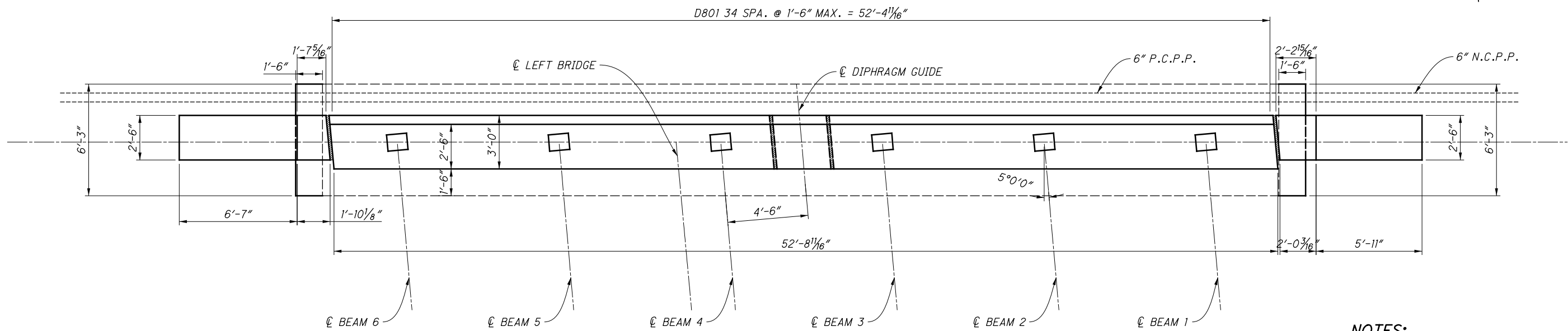
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ESTIMATED QUANTITIES (MAR-23-0204L SFN: 5100399)									
ITEM	EXTENSION	TOTAL L/MS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11201		LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					3/25
202	22900	200	SY	APPROACH SLAB REMOVED				200	
202	23500	733	SY	WEARING COURSE REMOVED				733	
503	11100		LS	COFFERDAMS AND EXCAVATION BRACING					
503	21300		LS	UNCLASSIFIED EXCAVATION					
509	10001	79,127	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	4,475		74,652		3/25
510	10000	186	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	186				
511	21522	242	CY	CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE			242		
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN			2		10/25
511	34448	54	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			54		
511	45710	72	CY	CLASS QC1 CONCRETE, ABUTMENT	72				
512	10050	464	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)				464	
513	10260	124,066	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			124,066		
513	20000	3,765	EACH	WELDER STUD SHEAR CONNECTORS			3,758		
513	95030	36	EACH	STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES			36		3/25
516	10010	106	FT	ARMORLESS PREFORMED JOINT SEAL				106	
516	13600	2	SF	1" PREFORMED EXPANSION JOINT FILLER				2	
516	13900	5	SF	2" PREFORMED EXPANSION JOINT FILLER				5	
516	14020	136	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				136	
516	31011	99	FT	2" DEEP JOINT SEALER, AS PER PLAN			99		3/25
516	41100	24	EACH	1/8" PREFORMED BEARING PAD				24	
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11"x9 1/2"x2.7226")				12	
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x12"x2.7226")				12	
518	21200	74	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				74	
518	40000	139	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				139	
518	40010	48	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				48	
519	11100	50	SF	PATCHING OF CONCRETE STRUCTURE				50	3/25
526	25001	292	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				292	3/25
526	90031	106	FT	TYPE C INSTALLATION, AS PER PLAN				106	3/25
611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET				4	

ESTIMATED QUANTITIES (MAR-23-0204R SFN: 5100429)									
ITEM	EXTENSION	TOTAL L/MS/BR	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11201		LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					3/25
202	22900	134	SY	APPROACH SLAB REMOVED				134	
202	23500	588	SY	WEARING COURSE REMOVED				588	
503	11100		LS	COFFERDAMS AND EXCAVATION BRACING					LS
503	21300		LS	UNCLASSIFIED EXCAVATION					LS
509	10001	76,935	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	3,961		72,974		3/25
510	10000	160	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	160				
511	21522	199	CY	CLASS QC2 CONCRETE WITH QC/OA, SUPERSTRUCTURE			199		
511	33501	2	EACH	SEMI-INTEGRAL DIAPHRAGM GUIDE, AS PER PLAN			2		10/25
511	34448	54	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			54		
511	45710	65	CY	CLASS QC1 CONCRETE, ABUTMENT	65				
512	10050	455	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)				455	
513	10260	102,526	LB	STRUCTURAL STEEL MEMBERS, LEVEL 3			102,526		
513	20000	3,130	EACH	WELDER STUD SHEAR CONNECTORS			3,130		
513	95030	30	EACH	STRUCTURAL STEEL, MISC.: 2" DIA. FIELD DRILLED HOLES			30		3/25
516	10010	106	FT	ARMORLESS PREFORMED JOINT SEAL				106	
516	13600	2	SF	1" PREFORMED EXPANSION JOINT FILLER				2	
516	13900	5	SF	2" PREFORMED EXPANSION JOINT FILLER				5	
516	14020	116	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL				116	
516	31011	80	FT	2" DEEP JOINT SEALER, AS PER PLAN			80		3/25
516	41100	20	EACH	1/8" PREFORMED BEARING PAD				20	
516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11"x9 1/2"x2.7226")				10	
516	44100	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13"x12"x2.7226")				10	
518	21200	65	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC				65	
518	40000	119	FT	6" PERFORATED CORRUGATED PLASTIC PIPE				119	
518	40010	48	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS				48	
519	11100	50	SF	PATCHING CONCRETE STRUCTURE				50	3/25
519	11101	9	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN			9		3/25
526	25001	238	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				238	3/25
526	90031	86	FT	TYPE C INSTALLATION, AS PER PLAN				86	3/25
611	99710	4	EACH	PRECAST REINFORCED CONCRETE OUTLET				4	

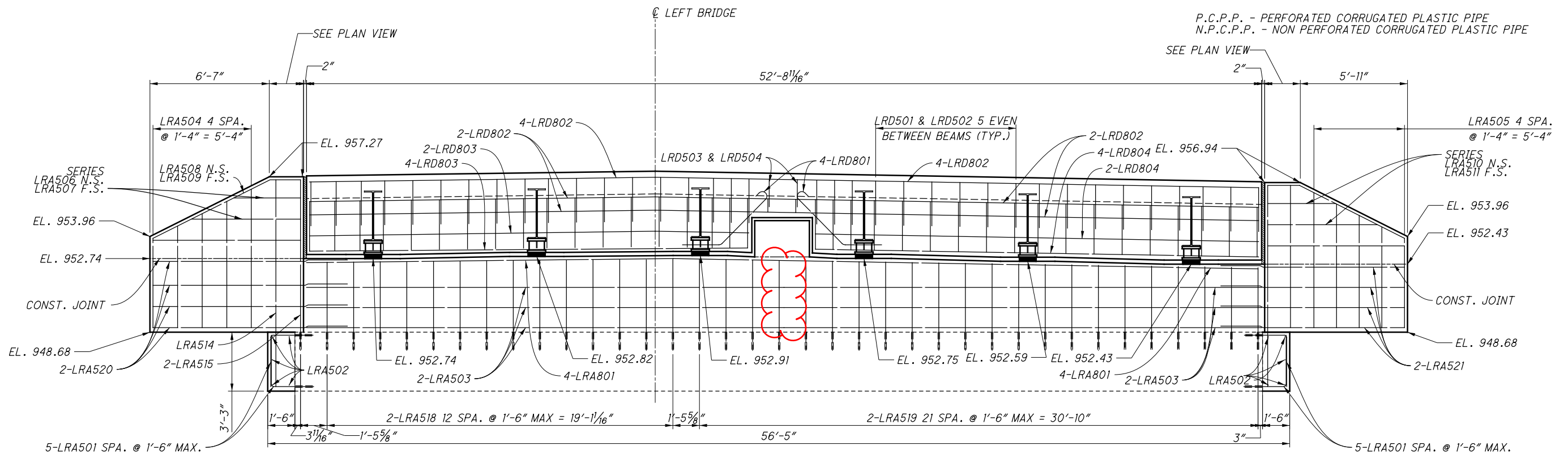
DESIGN AGENCY	OHIO DEPARTMENT OF
	TRANSPORTATION DISTRICT 6
DESIGNED	BLF
	JPH
DRAWN	BLF
	REVISED
REVIEWED	KRF
	FILE NUMBER
DATE	7/23/2020
STRUCTURE FILE NUMBER	5100399/5100429
ESTIMATED QUANTITIES	
BRIDGE NO. - MAR-23-0204 L&R	
OVER QU QUA CREEK	
MAR-23-1.85 / 2.04	
PID No. 102332	
4 / 25	
91	
112	

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**PLAN**  
LEFT BRIDGE REAR ABUTMENT

**NOTES:**  
1: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.



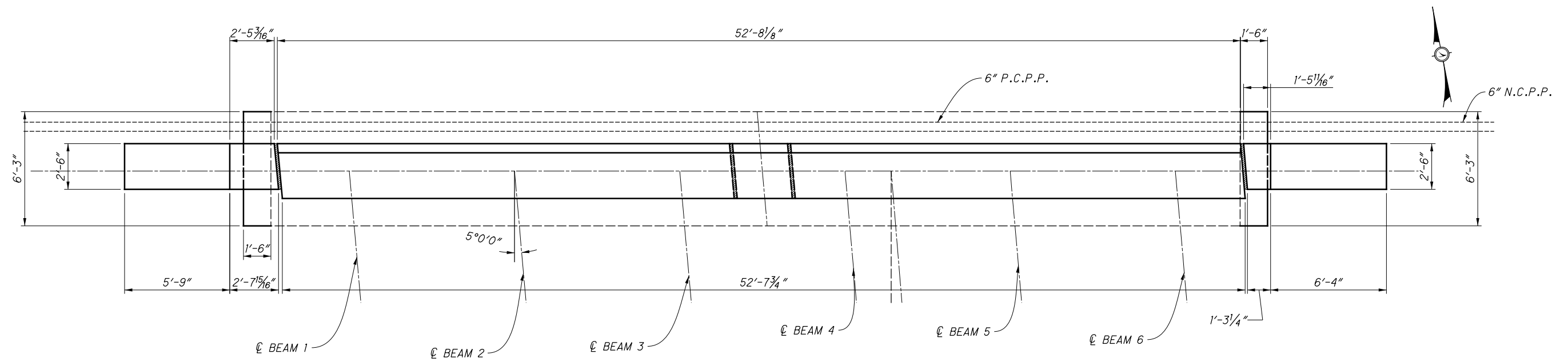
**ELEVATION**  
LEFT BRIDGE REAR ABUTMENT



DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6	
REVIEWED KRF	DATE 7/3/2020
DRAWN BLF	STRUCTURE FILE NUMBER 5100399/5100429
DESIGNED BLF	CHECKED JPH
<b>REAR ABUTMENT DETAILS LEFT BRIDGE</b> BRIDGE NO. MAR-23-0204 L&R OVER QU QU CREEK	
<b>MAR-23-1.85 / 2.04</b> PID No. 102332	
6 / 25	
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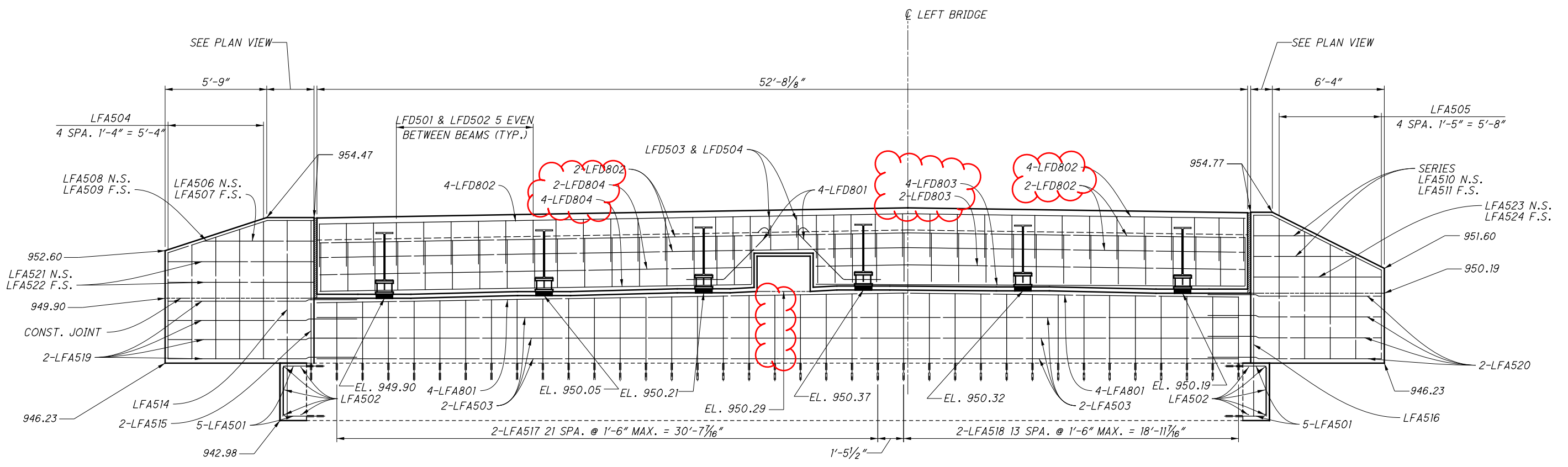
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**PLAN**  
LEFT BRIDGE FORWARD ABUTMENT

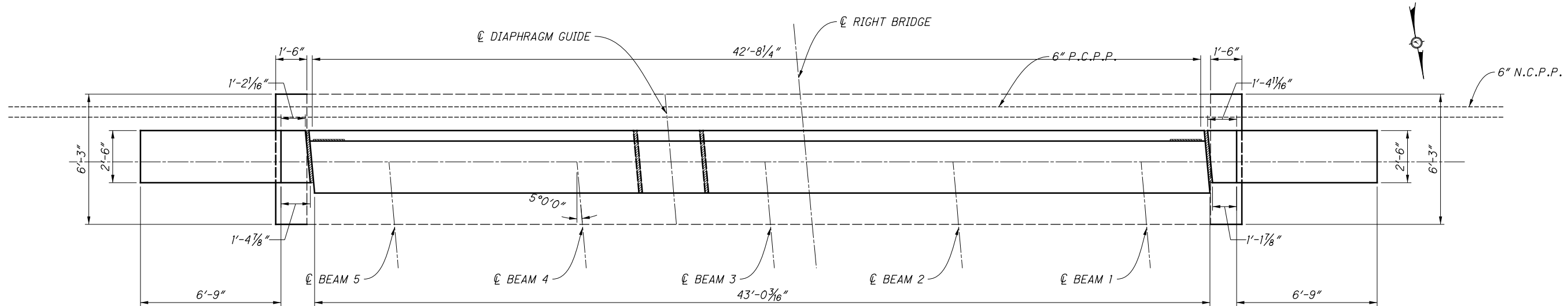
**NOTES:**  
1: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.

P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE



**ELEVATION**  
LEFT BRIDGE FORWARD ABUTMENT

DESIGNED BLF	CHECKED JPH	DRAWN BLF	REVIEWED KRF	DATE 7/3/2020	DESIGN AGENCY OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6
				STRUCTURE FILE NUMBER 5100399/5100429	
<b>FORWARD ABUTMENT DETAILS LEFT BRIDGE</b> BRIDGE NO. MAR-23-0204 L&R OVER QU QUA CREEK					
<b>MAR-23-1.85 / 2.04</b> PID No. 102332					
7 / 25					
94 112					



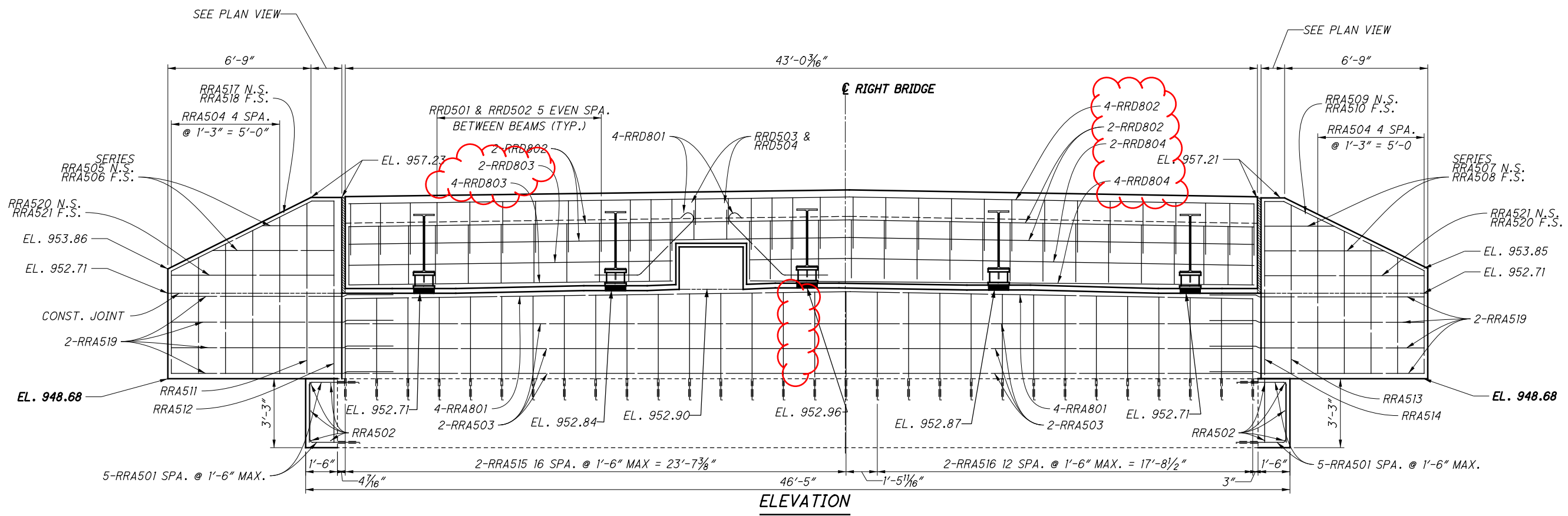
**PLAN**

RIGHT BRIDGE REAR ABUTMENT

**NOTES:**

1: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.

P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
 N.P.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE



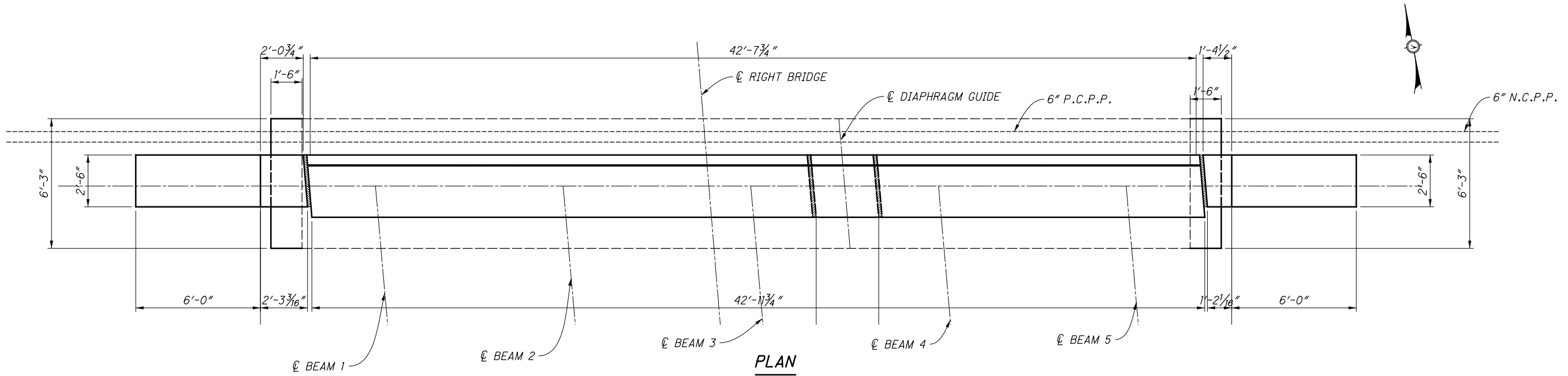
**ELEVATION**

RIGHT BRIDGE REAR ABUTMENT

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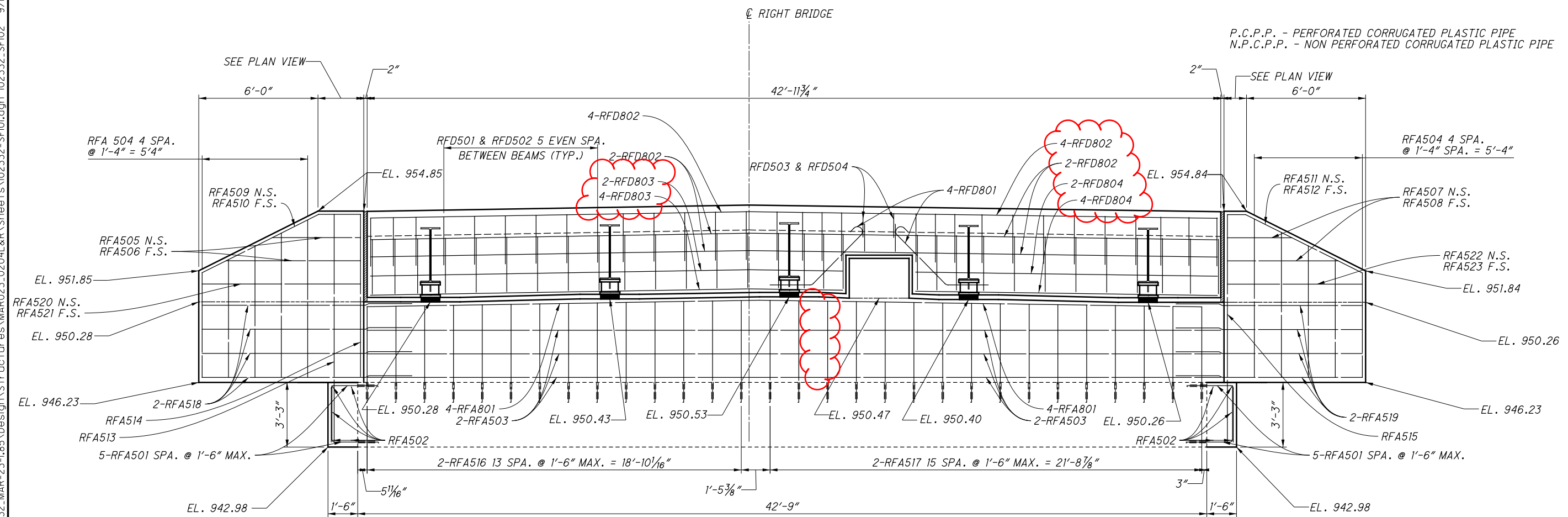
DESIGNED	BLF	CHECKED	JPH
DRAWN	BLF	REVISED	-
REVIEWED	KRF	DATE	7/3/2020
STRUCTURE FILE NUMBER	5100399/5100429		
DESIGN AGENCY	OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6		
REAR ABUTMENT DETAILS RIGHT BRIDGE			
BRIDGE NO. MAR-23-0204 L&R OVER QU QUA CREEK			
MAR-23-1.85 / 2.04		PID No. 102332	
8 / 25		95 / 112	

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**PLAN**  
RIGHT BRIDGE FORWARD ABUTMENT

1: ALL DIAPHRAGM STIRRUPS SHALL BE PLACED PARALLEL TO THE BRIDGE SKEW.

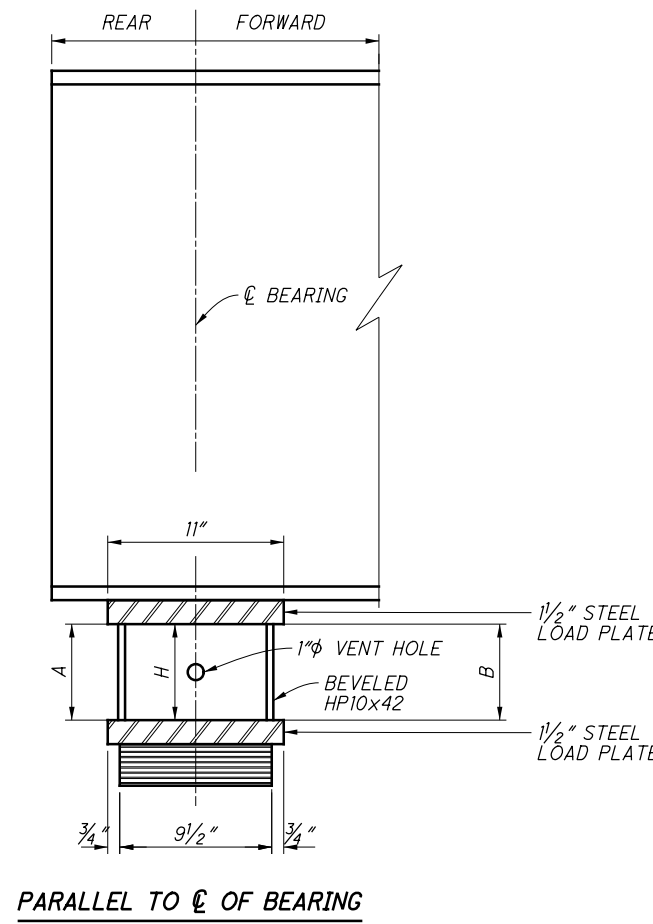
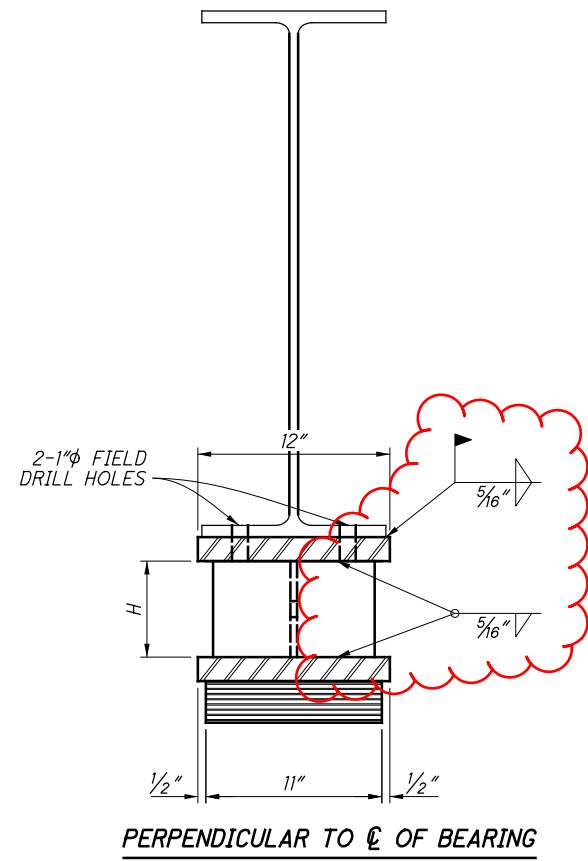


**ELEVATION**  
RIGHT BRIDGE FORWARD ABUTMENT

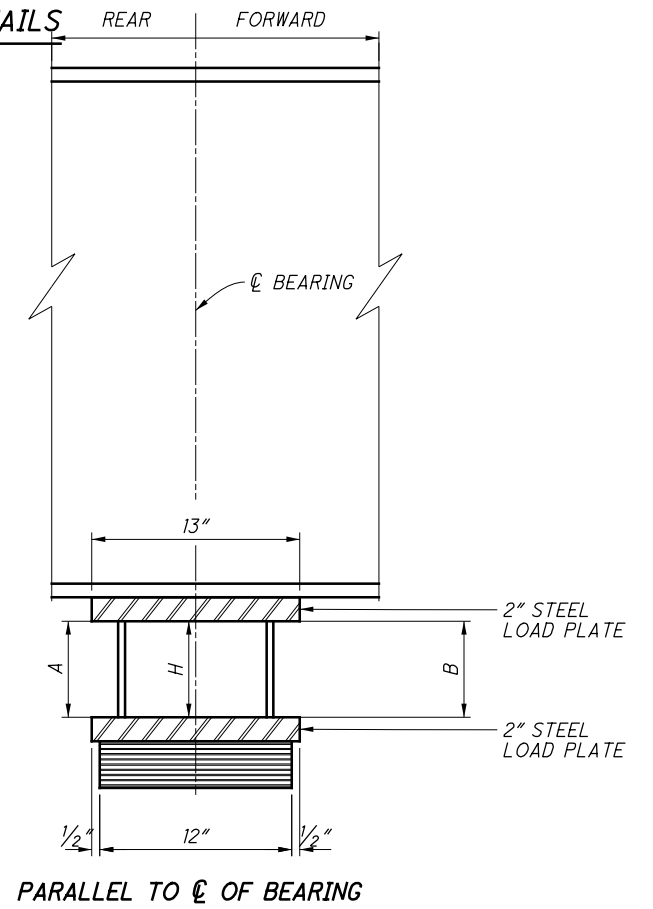
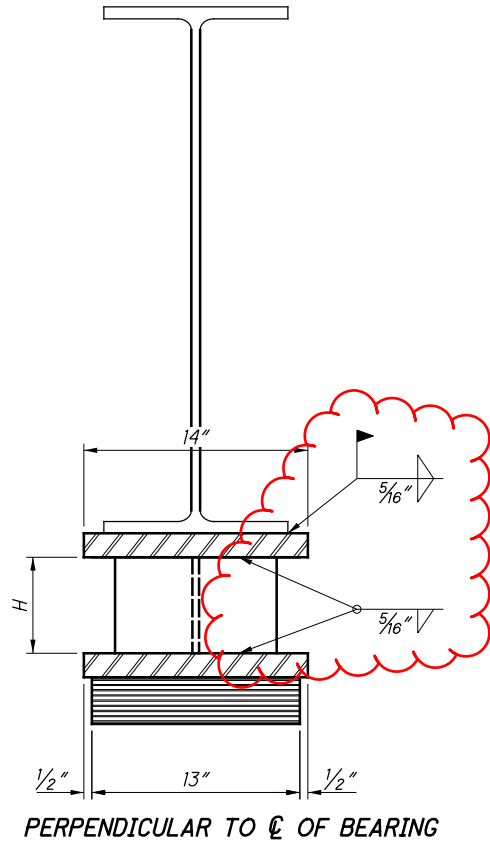
P.C.P.P. - PERFORATED CORRUGATED PLASTIC PIPE  
N.C.P.P. - NON PERFORATED CORRUGATED PLASTIC PIPE

DESIGNED		DATE	DESIGN AGENCY
BLF	KRF	7/3/2020	OHIO DEPARTMENT OF
CHECKED	STRUCTURE FILE NUMBER		TRANSPORTATION DISTRICT 6
JPH	5100399/5100429		
DRAWN		REVIEWED	
BLF	KRF		
REVISED			
<b>FORWARD ABUTMENT DETAILS RIGHT BRIDGE</b>			
BRIDGE NO. MAR-23-0204 L&R OVER QU QUA CREEK			
MAR-23-1.85 / 2.04		PID No. 102332	
9 / 25		96 112	

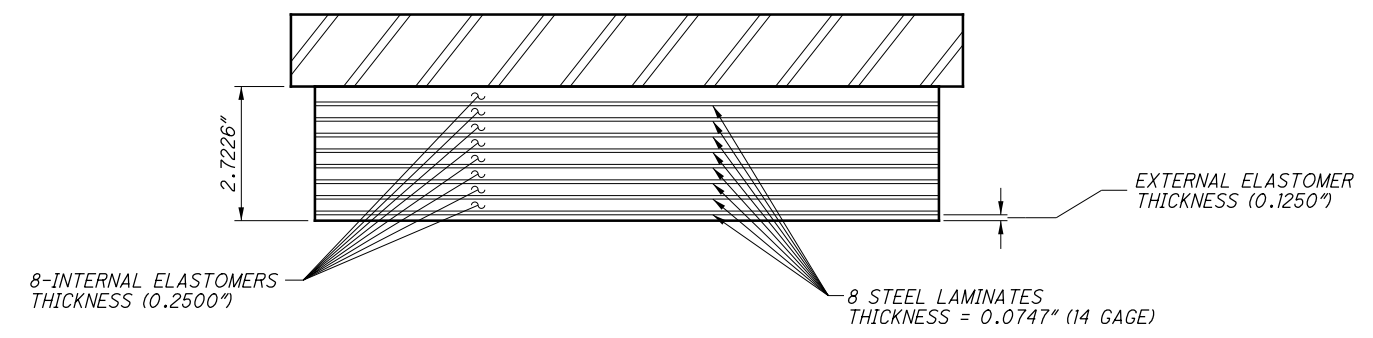
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**ABUTMENT BEARING DETAILS**



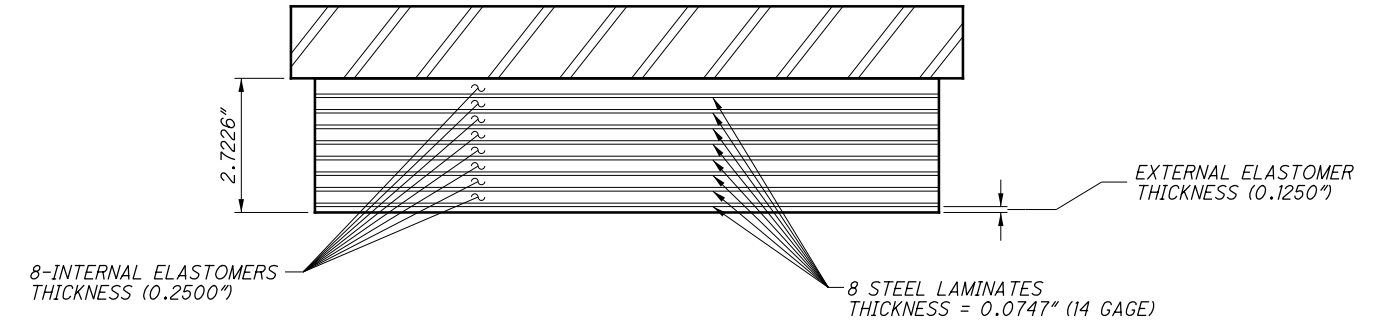
**PIER BEARING DETAILS**



**ABUTMENT ELASTOMERIC BEARING DETAILS**

	D.L. (KIPS)	L.L. (KIPS)	TOTAL (KIPS)
ABUTMENT R&F	59	60	119

ABUTMENT	DIM. A	DIM B	DIM. H
REAR & FORWARD	6.2085"	6.0339"	6.12"



**PIER ELASTOMERIC BEARING DETAILS**

	D.L. (KIPS)	L.L. (KIPS)	TOTAL (KIPS)
PIER 1&2	94	96	190

LEFT BRIDGE	DIM. A	DIM B	DIM. H
1	8.9177"	8.7431"	8.8304"
2	8.2669"	8.0923"	8.1796"

RIGHT BRIDGE	DIM. A	DIM B	DIM. H
1	9.3258"	9.1512"	9.2385"
2	9.1497"	8.9751"	9.0624"

**NOTES:**

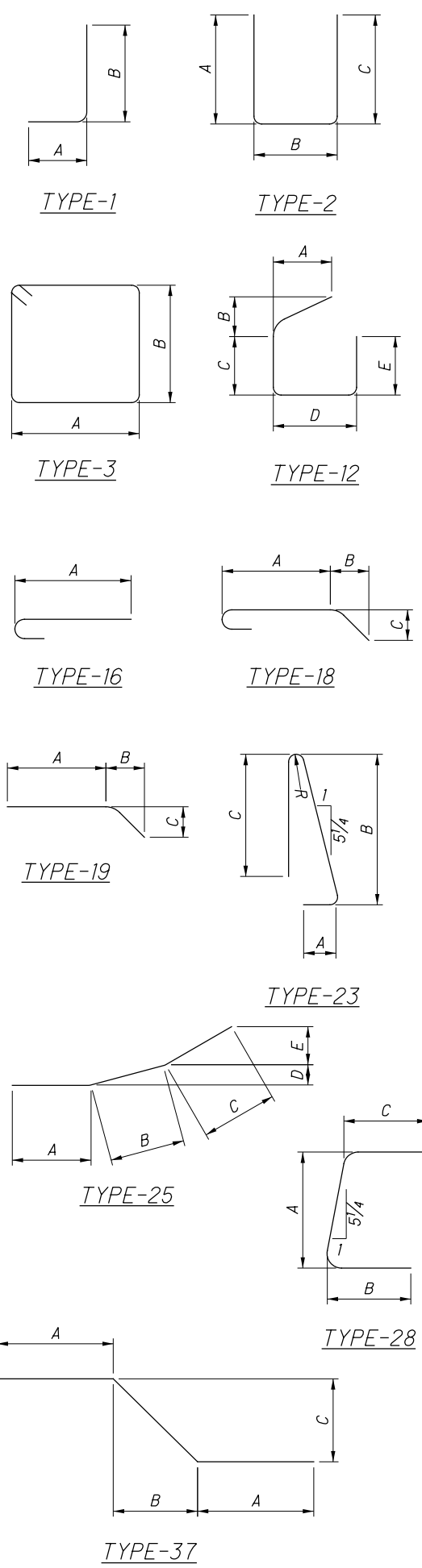
- ELASTOMERIC BEARINGS**  
THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES
- LOAD PLATE**  
THE STEEL LOAD PLATES AND HP 10x42 SHALL BE MADE OF A709 STEEL 50W.  
REQUIRED FIELD DRILLED HOLES SHALL BE INCLUDED IN THE PRICE BID ITEM 516 ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATES (NEOPRENE)  
THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLD PROCESS.



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MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
<b>LEFT REAR ABUTMENT</b>											
LRA501	20	4'-11"	103	1	2'-3"	2'-10"					
LRA502	10	5'-3"	60	STR							
LRA503	12	27'-9"	347	STR							
LRA504	SERIES OF 5 1	TO 20'-4" 14'-10"	92	3	2'-2"	TO 7'-8" 4'-11"					1'-4.3"
LRA505	SERIES OF 5 1	TO 19'-10" 3'-6"	90	3	2'-2"	TO 7'-5"					1'-3"
LRA506	SERIES OF 2 1	TO 5'-10" 3'-4"	10	STR							2'-4"
LRA507	SERIES OF 2	TO 5'-8"	9	STR							2'-4"
LRA508	1	9'-0"	9	19	1'-8"	6'-6"	3'-4"				
LRA509	1	8'-4"	9	19	1'-6"	6'-6"	3'-4"				
LRA510	SERIES OF 2 1	TO 6'-3" 4'-1"	11	STR							2'-4"
LRA511	SERIES OF 2	TO 6'-5"	11	STR							2'-4"
LRA512	1	8'-3"	9	19	1'-10"	5'-9"	2'-11"				
LRA513	1	8'-6"	9	19	2'-1"	5'-9"	2'-11"				
LRA514	1	27'-10"	29	3	2'-2"	11'-5"					
LRA515	2	11'-5"	24	1	2'-2"	9'-5"					
LRA516	1	27'-2"	28	3	2'-2"	11'-1"					
LRA517	1	20'-8"	22	3	2'-2"	7'-10"					
LRA518	SERIES OF 13 2	TO 7'-6" 7'-1"	198	1	2'-8"	TO 5'-0" 4'-7"					0'-0.4"
LRA519	SERIES OF 22	TO 7'-6"	335	1	2'-8"	TO 5'-2"					0'-0.2"
LRA520	8	10'-8"	89	STR							
LRA521	8	10'-5"	87	STR							
LRA522	1	8'-1"	8	STR							
LRA523	1	7'-10"	8	STR							
LRA524	1	7'-7"	8	STR							
LRA525	1	7'-10"	8	STR							
LRA801	8	29'-2"	623	STR							
		SUBTOTAL	2,236								
<b>LEFT FORWARD ABUTMENT</b>											
LFA501	20	4'-11"	103	1	2'-3"	2'-10"					
LFA502	10	5'-3"	60	STR							
LFA503	12	27'-7"	345	STR							
LFA504	SERIES OF 5 1	TO 20'-5" 14'-11"	92	3	2'-2"	TO 7'-9" 5'-0"					1'-4.5"
LFA505	SERIES OF 5	TO 20'-9" 7'-11"	93	3	2'-2"	TO 7'-11"					1'-5.5"
LFA506	1	6'-0"	6	STR							
LFA507	1	5'-10"	6	STR							
LFA508	1	8'-7"	9	19	2'-6"	5'-10"	1'-10"				
LFA509	1	8'-4"	9	19	2'-3"	5'-10"	1'-10"				
LFA510	SERIES OF 2 1	TO 7'-2" 4'-4"	12	STR							3'-1"
LFA511	SERIES OF 2	TO 7'-6"	12	STR							3'-2"
LFA512	1	8'-0"	8	19	1'-1"	6'-2"	3'-1"				
LFA513	1	8'-2"	9	19	1'-3"	6'-2"	3'-1"				
LFA514	1	27'-2"	28	3	2'-2"	11'-1"					
LFA515	2	11'-1"	23	1	2'-2"	9'-1"					
LFA516	1	27'-8"	29	3	2'-2"	11'-4"					
LFA517	SERIES OF 22 2	TO 7'-7" 7'-4"	337	1	2'-8"	TO 5'-0" 4'-9"					0'-0.3"
LFA518	SERIES OF 14	TO 7'-6"	217	1	2'-8"	TO 4'-11"					0'-0.2"
LFA519	8	10'-8"	89	STR							
LFA520	8	10'-1"	84	STR							
LFA521	2	8'-0"	17	STR							
LFA522	2	7'-10"	16	STR							
LFA523	1	7'-3"	8	STR							
LFA524	1	7'-5"	8	STR							
LFA801	8	29'-0"	619	STR							
		SUBTOTAL	2,239								

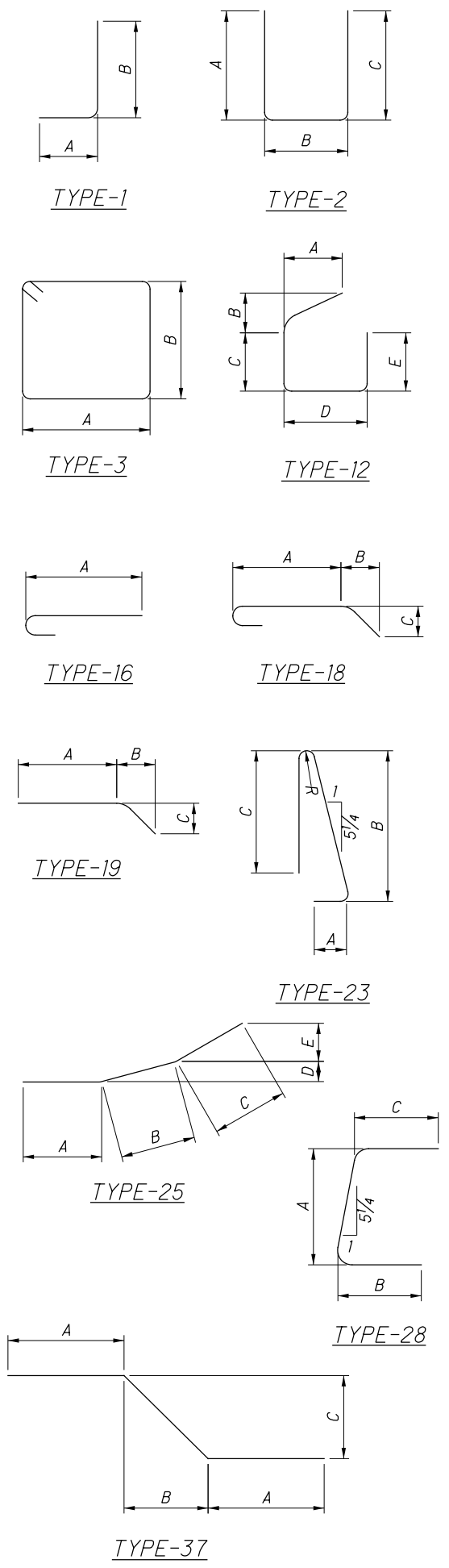
<b>LEFT REAR DIAPHRAGM</b>											
D801	35	4'-9"	444	18	2'-7"	1'-0"	1'-0"				
LRD501	36	11'-5"	429	3	2'-8"	2'-9"					
LRD502	36	6'-9"	253	2	2'-2"	2'-5"					
LRD503	2	7'-5"	15	3	2'-8"	0'-9"					
LRD504	2	5'-7"	12	2	2'-2"	1'-10"					
LRD801	8	6'-8"	142	18	3'-8"	1'-7"	1'-6"				
LRD802	16	29'-1"	1,242	STR							
LRD803	6	24'-4"	386	STR							
LRD804	6	24'-4"	390	STR							
		SUBTOTAL	3,313								
<b>LEFT FORWARD DIAPHRAGM</b>											
D801	35	4'-9"	444	18	2'-7"	1'-0"	1'-0"				
LFD501	34	11'-5"	405	3	2'-8"	2'-9"					
LFD502	34	6'-9"	239	2	2'-2"	2'-5"					
LFD503	2	7'-5"	15	3	2'-8"	0'-9"					
LFD504	2	5'-7"	12	2	2'-2"	1'-10"					
LFD801	8	6'-8"	142	18	3'-8"	1'-7"	1'-6"				
LFD802	16	29'-1"	1,242	STR							
LFD803	6	24'-3"	388	STR							
LFD804	6	24'-5"	391	STR							
		SUBTOTAL	3,278								
<b>LEFT BRIDGE DECK</b>											
LS401	542	9'-0"	3,259	16	8'-6"						
LS402	139	3'-9"	348	1	0'-7"	3'-3"					
LS403	139	3'-11"	364	19	3'-3"	0'-6"	0'-6"				
LS404	139	3'-6"	325	1	0'-7"	3'-0"					
LS405	139	3'-8"	340	19	3'-0"	0'-6"	0'-6"				
LS406	402	40'-0"	10,741	STR							
LS407	58	18'-5"	714	STR							
LS501	552	27'-11"	16,073	16	27'-6"						
LS502	552	28'-0"	16,121	STR							
LS503	213	40'-0"	8,886	STR							
LS504	71	18'-0"	1,333	STR							
		SUBTOTAL	58,504								
<b>LEFT BRIDGE PARAPETS</b>											
LP501	364	7'-4"	2,784	23	0'-11"	3'-3"	3'-0"				
LP502	100	4'-6"	469	STR							
LP503	24	40'-0"	1,001	STR							
LP504	4	6'-5"	27	STR							
LP505	8	21'-9"	181	STR							
LP506	8	10'-8"	89	STR							
LP507	16	21'-2"	353	STR							
LP508	16	10'-0"	167	STR							
LP509	16	5'-8"	95	25	1'-10"	2'-5"	1'-5"	0'-1.5"	0'-5"		
LP510	16	5'-8"	95	STR							
LP601	50	4'-6"	338								
LP602	364	2'-5"	1,321	1	1'-0"	1'-6"					
LP603	364	3'-2"	1,731	28	1'-6"	1'-0"	0'-11"				
LP604	2	6'-6"	20	STR							
LP605	2	10'-6"	32	STR							
LP606	2	10'-5"	31	STR							
LP607	32	4'-0"	192	1	1'-0"	3'-1"					
LP608	SERIES OF 8 12	TO 3'-11" 4'-10"	631	1	1'-0"	TO 3'-11"					0'-1"
		SUBTOTAL	9,557								
		SUBSTRUCTURE	4,475								
		SUPERSTRUCTURE	74,652								
		GRAND TOTAL	79,127								



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MARK	NUMBER		LENGTH	WEIGHT	TYPE	DIMENSIONS						
	TOTAL					A	B	C	D	E	R	INC
<b>RIGHT REAR ABUTMENT</b>												
RRA501	20		4'-11"	103	1	2'-3"	2'-10"					
RRA502	10		5'-4"	60	STR							
RRA503	12		22'-10"	286	STR							
RRA504	2	SERIES OF 5	14'-8" TO 19'-10"	180	3	2'-2"	4'-10" TO 7'-5"					1'-3.5"
RRA505	1	SERIES OF 2	3'-6" TO 5'-10"	10	STR							2'-4"
RRA506	1	SERIES OF 2	3'-4" TO 5'-8"	9	STR							2'-4"
RRA507	1	SERIES OF 2	3'-4" TO 5'-8"	9	STR							2'-4"
RRA508	1	SERIES OF 2	3'-6" TO 5'-11"	10	STR							2'-5"
RRA509	1		8'-5"	9	19	1'-0"	6'-8"	3'-4"				
RRA510	1		8'-8"	9	19	1'-2.5"	6'-8"	3'-4"				
RRA511	1		21'-0"	22	3	2'-2"	8'-0"					
RRA512	1		27'-8"	29	3	2'-2"	11'-4"					
RRA513	1		20'-10"	22	3	2'-2"	7'-11"					
RRA514	1		27'-8"	29	3	2'-2"	11'-4"					
RRA515	2	SERIES OF 17	7'-3" TO 7'-7"	263	1	2'-8"	4'-9" TO 5'-1"					0'-0.2"
RRA516	2	SERIES OF 13	7'-3" TO 7'-7"	201	1	2'-8"	4'-9" TO 5'-1"					0'-0.3"
RRA517	1		8'-8"	9	19	1'-2.7"	6'-8"	3'-4"				
RRA518	1		8'-6"	9	19	1'-0.2"	6'-8"	3'-4"				
RRA519	16		10'-4"	172	STR							
RRA520	2		7'-9"	16	STR							
RRA521	2		7'-7"	16	STR							
RRA801	8		24'-3"	518	STR							
SUBTOTAL				1,991								
<b>RIGHT FORWARD ABUTMENT</b>												
RFA501	20		4'-11"	103	1	2'-3"	2'-10"					
RFA502	10		5'-4"	60	STR							
RFA503	12		23'-0"	288	STR							
RFA504	2	SERIES OF 5	15'-6" TO 20'-10"	189	3	2'-2"	5'-3.1" TO 7'-11.1"					1'-4"
RFA505	1	SERIES OF 2	4'-4.5" TO 6'-8"	12	STR							2'-3.5"
RFA506	1	SERIES OF 2	4'-2.5" TO 6'-6.5"	11	STR							2'-4"
RFA507	1	SERIES OF 2	3'-3.8" TO 5'-7.7"	9	STR							2'-4"
RFA508	1	SERIES OF 2	3'-5.9" TO 5'-9.9"	10	STR							2'-4"
RFA509	1		8'-8"	9	19	2'-1"	5'-10.5"	2'-11.3"				
RFA510	1		8'-6"	9	19	1'-10.9"	5'-10.5"	2'-11.3"				
RFA511	1		7'-7"	8	19	1'-0.2"	5'-10.5"	2'-11.3"				
RFA512	1		7'-9"	8	19	1'-2.3"	5'-10.5"	2'-11.3"				
RFA513	1		27'-11"	29	3	2'-2"	11'-5.4"					
RFA514	1		21'-4"	22	3	2'-2"	8'-2"					
RFA515	1		27'-10"	29	3	2'-2"	11'-5"					
RFA516	2	SERIES OF 14	7'-4" TO 7'-8"	219	1	2'-8"	4'-9.7" TO 5'-1.4"					0'-0.3"
RFA517	2	SERIES OF 15	7'-4" TO 7'-8"	235	1	2'-8"	4'-9.6" TO 5'-1.5"					0'-0.3"
RFA518	8		10'-6"	88	STR							
RFA519	8		9'-9.4"	82	STR							
RFA520	1		7'-11"	8	STR							
RFA521	1		7'-9"	8	STR							
RFA522	1		6'-10.3"	7	STR							
RFA523	1		7'-0.3"	7	STR							
RFA801	8		24'-4"	520	STR							
SUBTOTAL				1,970								

<b>RIGHT REAR DIAPHRAGM</b>												
D801	30		4'-9"	380	18	2'-7"	1'-0"	1'-0"				
RRD501	30		11'-5"	357	3	2'-8"	2'-9"					
RRD502	30		6'-9"	211	2	2'-2"	2'-5"					
RRD503	2		7'-5"	15	3	2'-8"	0'-9"					
RRD504	2		5'-7"	12	2	2'-2"	1'-10"					
RRD801	8		6'-8"	144	18	3'-8"	1'-7"	1'-6"				
RRD802	16		24'-3"	1,036	STR							
RRD803	6		15'-3"	244	STR							
RRD804	6		23'-9"	380	STR							
SUBTOTAL				2,777								
<b>RIGHT FORWARD DIAPHRAGM</b>												
D801	35		4'-9"	444	18	2'-7"	1'-0"	1'-0"				
RFD501	28		11'-5"	333	3	2'-8"	2'-9"					
RFD502	28		6'-9"	197	2	2'-2"	2'-5"					
RFD503	2		7'-9"	16	3	2'-8"	0'-11"					
RFD504	2		6'-1"	13	2	2'-2"	2'-0"					
RFD801	8		6'-8"	144	18	3'-8"	1'-7"	1'-6"				
RFD802	16		24'-3"	1,036	STR							
RFD803	6		23'-9"	380	STR							
RFD804	6		15'-1"	242	STR							
SUBTOTAL				2,803								
<b>RIGHT BRIDGE DECK</b>												
RS401	552		9'-0"	3,319	16	8'-6"						
RS402	139		2'-10"	263	1	0'-7"	2'-4"					
RS403	139		3'-0"	279	19	2'-4"	0'-6"	0'-6"				
RS404	139		3'-2"	294	1	0'-7"	2'-8"					
RS405	139		3'-4"	310	19	2'-8"	0'-6"	0'-6"				
RS406	325		40'-0"	8,684	STR							
RS501	552		23'-7"	13,578	16	23'-0"						
RS502	552		23'-0"	13,242	STR							
RS503	275		40'-0"	11,473	STR							
RS504	275		20'-0"	5,737	STR							
SUBTOTAL				57,870								
<b>RIGHT BRIDGE PARAPETS</b>												
RP501	364		7'-4"	2,784	23	0'-11"	3'-3"	3'-0"				
RP502	100		4'-6"	469	STR							
RP503	24		40'-0"	1,001	STR							
RP504	4		6'-5"	27	STR							
RP505	8		21'-9"	181	STR							
RP506	8		21'-0"	175	STR							
RP507	8		21'-2"	177	STR							
RP508	16		10'-0"	167	STR							
RP509	16		5'-8"	95	25	1'-10"	2'-5"	1'-5"	0'-1.5"	0'-5"		
RP510	16		5'-8"	95	STR							
RP511	2		10'-5"	22	STR							
RP512	2		10'-4"	22	STR							
RP513	2		10'-7"	22	STR							
RP514	2		10'-6"	22	STR							
RP601	50		4'-6"	338								
RP602	364		2'-5"	1,321	1	1'-0"	1'-6"					
RP603	364		3'-2"	1,731	28	1'-6"	1'-0"	0'-11"				
RP604	2		6'-6"	20	STR							
RP605	1		10'-6"	16	STR							
RP606	1		10'-5"	16	STR							
RP607	32		4'-0"	192	1	1'-0"	3'-1"					
RP608	8	SERIES OF 12	3'-11" TO 4'-10"	631	1	1'-0"	3'-0" TO 3'-11"					0'-1"
SUBTOTAL				9,524								
SUBSTRUCTURE				3,961								
SUPERSTRUCTURE				72,974								
GRAND TOTAL				76,935								



**REINFORCING STEEL LIST**  
 BRIDGE NO. MAR-23-0204 L&R OVER QU QUA CREEK  
 DESIGN AGENCY: OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 6  
 REVIEWED DATE: 7/23/2020  
 DRAWN: KRF  
 CHECKED: JPH  
 STRUCTURE FILE NUMBER: 5100399/5100429  
**MAR-23-1.85 / 2.04**  
 PID No. 102332  
 25 / 25  
 112 / 112