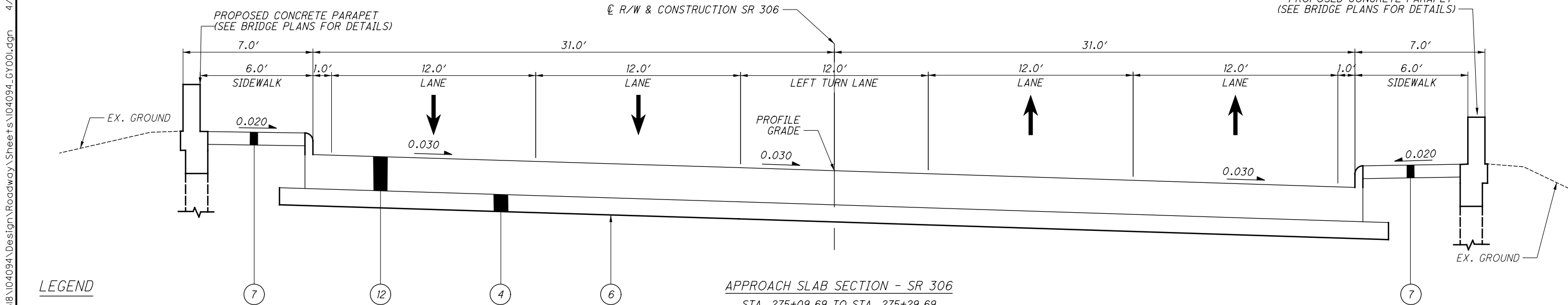


\*\* LONGITUDINAL JOINT PER BP-2.1. SEE SHEETS 39 AND 40 FOR OFFSETS.  
\* TRANSITION EXISTING CROSS SLOPE TO MATCH PROPOSED CROSS SLOPE OF 0.030.  
LIMITS OF SLOPE TRANSITION:  
STA. 274+00 TO 275+00  
STA. 279+75 TO 280+75

**SUPERELEVATED SECTION - SR 306**  
STA. 274+00.00 TO STA. 275+09.69  
STA. 279+47.19 TO STA. 280+75.00

☒ = VARIES 6.0' TO 7.5'  
STA. 280+00.00 TO STA. 280+60.00  
☒ = 7.5', STA. 280+60.00 TO STA. 280+75.00



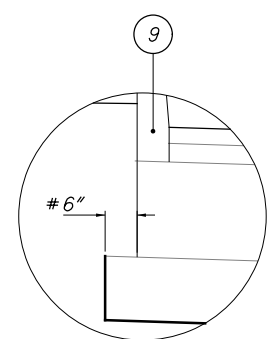
**APPROACH SLAB SECTION - SR 306**  
STA. 275+09.69 TO STA. 275+29.69  
STA. 279+27.19 TO STA. 279+47.19

**LEGEND**

- ① ITEM 441 - 1 1/4" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22, AS PER PLAN
- ② ITEM 441 - 1 3/4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- ③ ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC1
- ④ ITEM 304 - 6" AGGREGATE BASE
- ⑤ ITEM 407 - TACK COAT
- ⑤A ITEM 407 - TACK COAT, 702.13
- ⑥ ITEM 204 - SUBGRADE COMPACTION
- ⑦ ITEM 608 - 4 1/2" CONCRETE WALK
- ⑧ ITEM 659 - SEEDING AND MULCHING
- ⑨ ITEM 609 - CURB, TYPE 2-B
- ⑨A ITEM 609 - CURB, TYPE 6
- ⑩ ITEM 606 - GUARDRAIL, TYPE MGS
- ⑩A ITEM 606 - GUARDRAIL, TYPE MGS HALF POST SPACING
- ⑩B ITEM 606 - GUARDRAIL, TYPE MGS QUARTER POST SPACING
- ⑪ ITEM 609 - CONCRETE MEDIAN
- ⑫ ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=13")
- ⑬ ITEM 605 - 6" BASE PIPE UNDERDRAINS
- ⑬A ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS
- ⑭ ITEM 441 - 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG 64-22, AS PER PLAN
- ⑮ ITEM 254 - PAVEMENT PLANING ( 1 1/2" DEEP)

TYPE	STA.	OFFSET		STA.	OFFSET
GUARDRAIL, MGS HALF POST SPACING	273+56.31	67.83' RT	TO	273+64.12	44.96' RT
	273+87.52	38.00' RT	TO	274+12.72	38.00' RT
	274+59.34	38.00' LT	TO	275+21.31	38.00' LT
	280+14.33	38.00' LT	TO	280+39.12	38.00' LT
	280+51.52	38.00' LT	TO	280+74.12	45.55' LT
GUARDRAIL, MGS QUARTER POST SPACING	280+64.84	40.13' RT	TO	280+89.79	42.17' RT
	273+64.12	44.96' RT	TO	273+87.52	38.00' RT
	280+39.12	38.00' LT	TO	280+51.52	38.00' LT

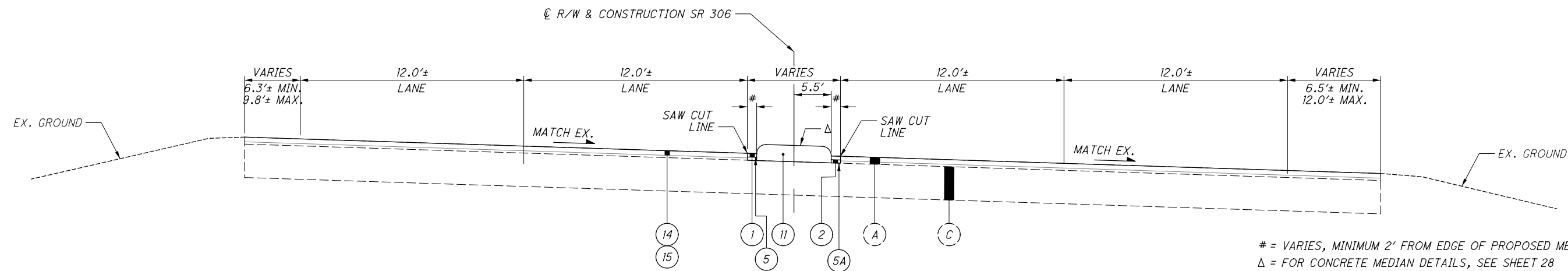
- Ⓐ EXISTING 2 1/4" ASPHALT
- Ⓑ EXISTING 3" ASPHALT
- Ⓒ EXISTING 9" CONCRETE BASE



BASE AND SUBBASE STEP DETAIL

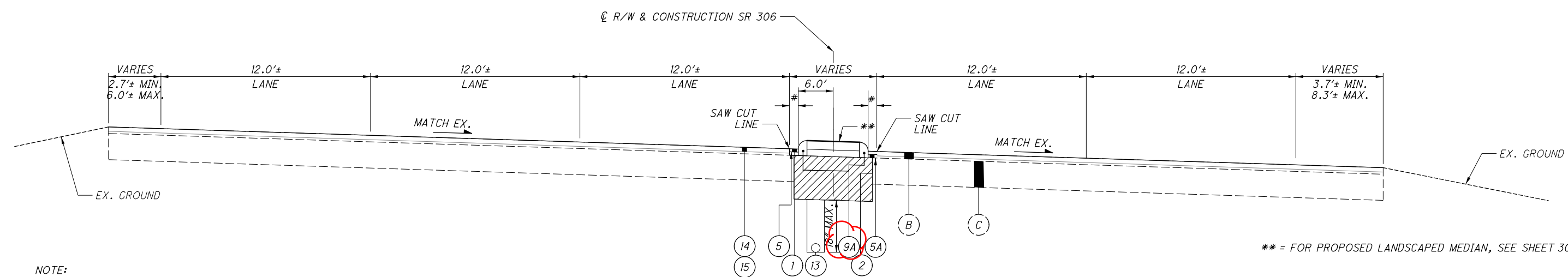
# = 14" WHEN 6" UNDERDRAIN IS USED

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# = VARIES, MINIMUM 2' FROM EDGE OF PROPOSED MEDIAN  
 Δ = FOR CONCRETE MEDIAN DETAILS, SEE SHEET 28

EXISTING SECTION - SR 306 (SOUTH OF PROJECT)  
 STA. 267+00.00 TO STA. 274+00.00 (RESURFACING LIMITS)  
 STA. 268+99.50 TO STA. 273+35.00 (MEDIAN LIMITS)



\*\* = FOR PROPOSED LANDSCAPED MEDIAN, SEE SHEET 30

NOTE:  
 PAVEMENT PLANING SHALL BE A MINIMUM DEPTH OF 1/2" WITH A UNIFORM CROSS SLOPE OF 0.016.

EXISTING SECTION - SR 306 (NORTH OF PROJECT)  
 STA. 280+75.00 TO STA. 286+50.00 (RESURFACING LIMITS)  
 STA. 281+33.10 TO STA. 284+78.00 (MEDIAN LIMITS)

EXISTING PAVEMENT BUILDUP UNDER THE LANDSCAPED MEDIAN IS UNKNOWN. TEMPORARY PAVEMENT PLACED DURING MAINTENANCE OF TRAFFIC SHALL REMAIN IN THE AREAS ADJACENT TO THE CURB, AS NEEDED. PROPOSED UNDERDRAIN SHALL BE PLACED BEFORE PLACING THE TEMPORARY PAVEMENT FOR MAINTAINING TRAFFIC.

TYPICAL SECTIONS

LAK - 306 - 5.18

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**ROUNDING**

THE ROUNDING AT SLOPE BREAKPOINTS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

**UTILITIES**

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

AT&T OHIO  
13630 LORAIN AVENUE, 2ND FLOOR  
CLEVELAND, OHIO 44111  
MR. JAMES JANIS  
(216) 476-6142  
FAX: (216) 476-6013  
PJ8191@ATT.COM

AQUA OHIO, INC.  
8644 STATION STREET 6  
MENTOR, OHIO 44060-431  
BILL BOWERS  
(216) 905-8362  
WMBOWERS@AQUAAMERICA.COM

CEI FIRST ENERGY  
6896 MILLER ROAD  
BRECKSVILLE, OH 44141  
JOHN ZASSICK  
(440) 546-8706  
JMZASSICK@FIRSTENERGYCORP.COM

CHARTER COMMUNICATIONS  
7820 DIVISION DRIVE  
MENTOR, OH 44060  
CHARLES SULLIVAN  
(440) 974-3401 EXT. 125  
MATT HANNAH  
(216) 575-8106 EXT. (216) 555-1105  
CELL: (440) 655-5590  
MATHEW.HANNAH@CHARTER.COM

DOMINION EAST OHIO  
RELOCATION DEPARTMENT  
320 SPRINGSIDE DR  
AKRON, OH 44333  
(330) 664-2409  
RELOCATION@DOMINIONENERGY.COM

LAKE COUNTY DEPARTMENT OF UTILITIES  
ADMINISTRATION BUILDING  
105 MAIN STREET  
PAINESVILLE, OHIO 44077  
SARAH A. CEROVSKI  
DEPUTY SANITARY ENGINEER  
(440) 350-2652  
FAX: (440) 350-5784  
SARAH.CEROVSKI@LAKECOUNTYOHIO.GOV

LAKE COUNTY WATER  
ADMINISTRATION BUILDING  
105 MAIN STREET  
PAINESVILLE, OHIO 44077  
SARAH A. CEROVSKI  
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(440) 350-2652  
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SARAK.CEROVSKI@LAKECOUNTYOHIO.GOV

ORWELL NATURAL GAS  
8470 STATION STREET  
SUITE 100  
MENTOR, OHIO 44060  
TIM REILLY  
(440) 701-5115  
CELL: (440) 669-2929  
FAX: (440) 974-0844  
JHEIDNIK@EGAS.NET

**CLEARING AND GRUBBING**

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

**SURVEYING PARAMETERS**

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 2 FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

**PROJECT CONTROL**

POSITIONING METHOD: ODOT VRS

**VERTICAL POSITIONING**

ORTHOMETRIC HEIGHT DATUM: NAVD 88  
GEOID: GEOID12B

**HORIZONTAL POSITIONING**

REFERENCE FRAME: NAD83 (2011)  
ELLIPSOID: GRS 80  
MAP PROJECTION: LAMBERT CONFORMAL CONIC  
COORDINATE SYSTEM: OHIO STATE PLANE NORTH  
COMBINED SCALE FACTOR: 1.00004301  
ORIGIN OF COORDINATE SYSTEM: 0, 0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

**WORK LIMITS**

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

**SEEDING AND MULCHING**

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

- 659, TOPSOIL 84 CU. YD.
- 659, SEEDING AND MULCHING 759 SQ. YD.
- 659, REPAIR SEEDING AND MULCHING 38 SQ. YD.
- 659, COMMERCIAL FERTILIZER 0.11 TON
- 659, LIME 0.16 ACRES
- 659, WATER 5 M. GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

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

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

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

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

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

**REVIEW OF DRAINAGE FACILITIES**

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

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

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

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

**ITEM SPECIAL - PIPE CLEANOUT**

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEANOUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEANOUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEANOUT.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE NOTED WORK:



THE PROPOSED LANDSCAPED MEDIAN FROM STA. 281+33 TO STA. 284+75 SHALL BE REPLACED IN KIND AFTER COMPLETION OF THE PROPOSED WORK. THE CONTRACTOR SHALL PLACE THE LIGHT POLES BACK AS SHOWN IN THE LIGHTING PLANS. CONTRACTOR TO COORDINATE WITH THE CITY OF MENTOR REGARDING PLACEMENT OF LANDSCAPING IN THE MEDIAN AREA. TREES AND SHRUBS SHALL BE PLACED AND MULCH SHALL BE ADDED IN THE MEDIAN TO CLOSELY MATCH THE EXISTING CONDITIONS. THE FOLLOWING ITEMS HAVE BEEN INCLUDED HERE AND CARRIED TO THE GENERAL SUMMARY FOR PERFORMING THIS WORK. PAYMENT SHALL INCLUDE ALL THE LABOR, EQUIPMENT AND MATERIALS REQUIRED FOR PERFORMING EACH ITEM OF WORK.

- ITEM 661 - MULCH 85 CU. YD.
- ITEM 661 - DECIDUOUS SHRUB, 3' HEIGHT 20 EACH
- ITEM 661 - EVERGREEN SHRUB, 18" HEIGHT 10 EACH
- ITEM 661 - DECIDUOUS TREE, 6" CALIPER (IVORY SILK LILAC) 10 EACH
- ITEM 661 - PLANTING, MISC: PLANTING TREES SHRUBS AND WATERING 336 SQ. YD.

**SPECIAL - TREE REMOVED, 4"-12"**

THE TREES IN THE EXISTING MEDIAN SHALL BE REMOVED AND REPLACED POST CONSTRUCTION OF THE PROPOSED WORK. THE FOLLOWING QUANTITIES HAVE BEEN ADDED TO THE PLANS AND CARRIED TO THE GENERAL SUMMARY AND SHALL INCLUDE ALL THE LABOR, EQUIPMENT AND MATERIAL REQUIRED TO PERFORM THE WORK.

- ITEM 201 - SPECIAL, TREE REMOVED, 4"-12" 10 EACH

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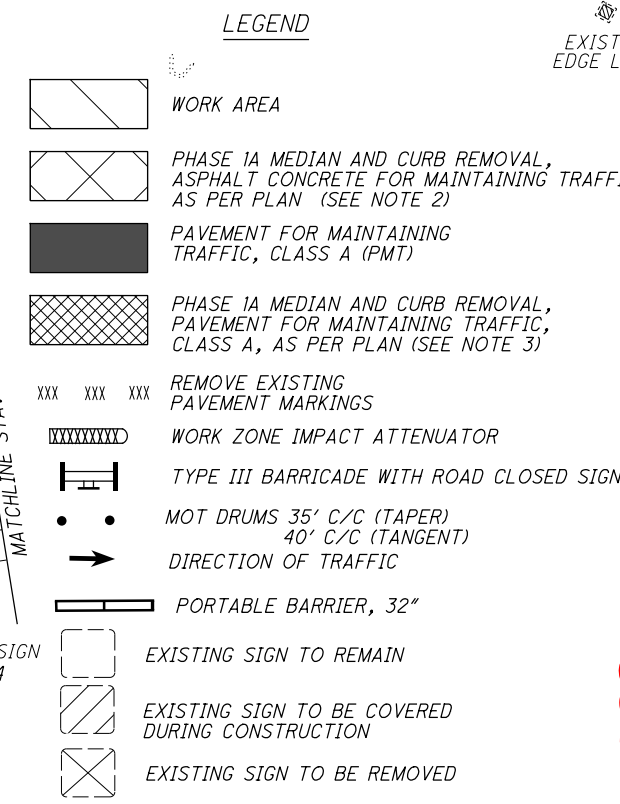
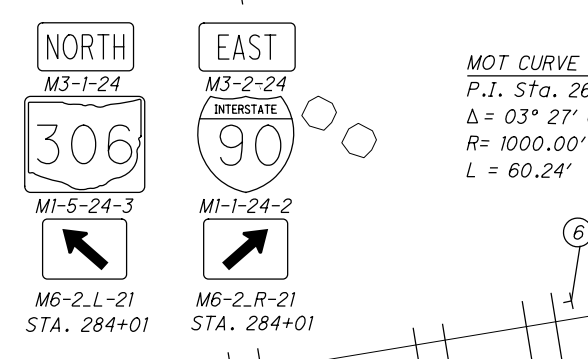
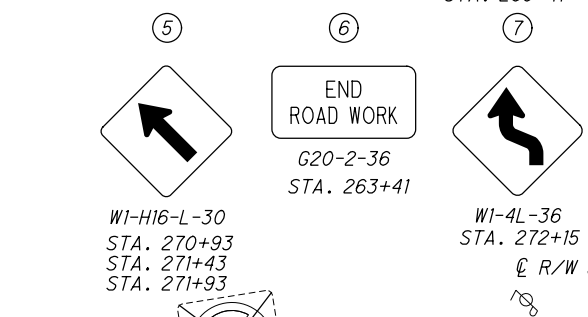
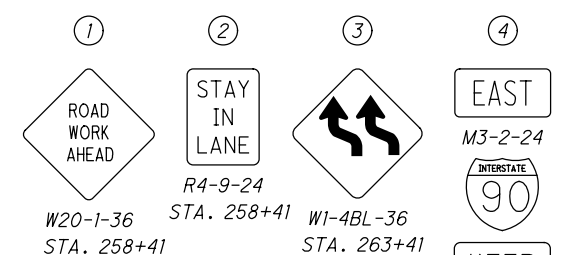
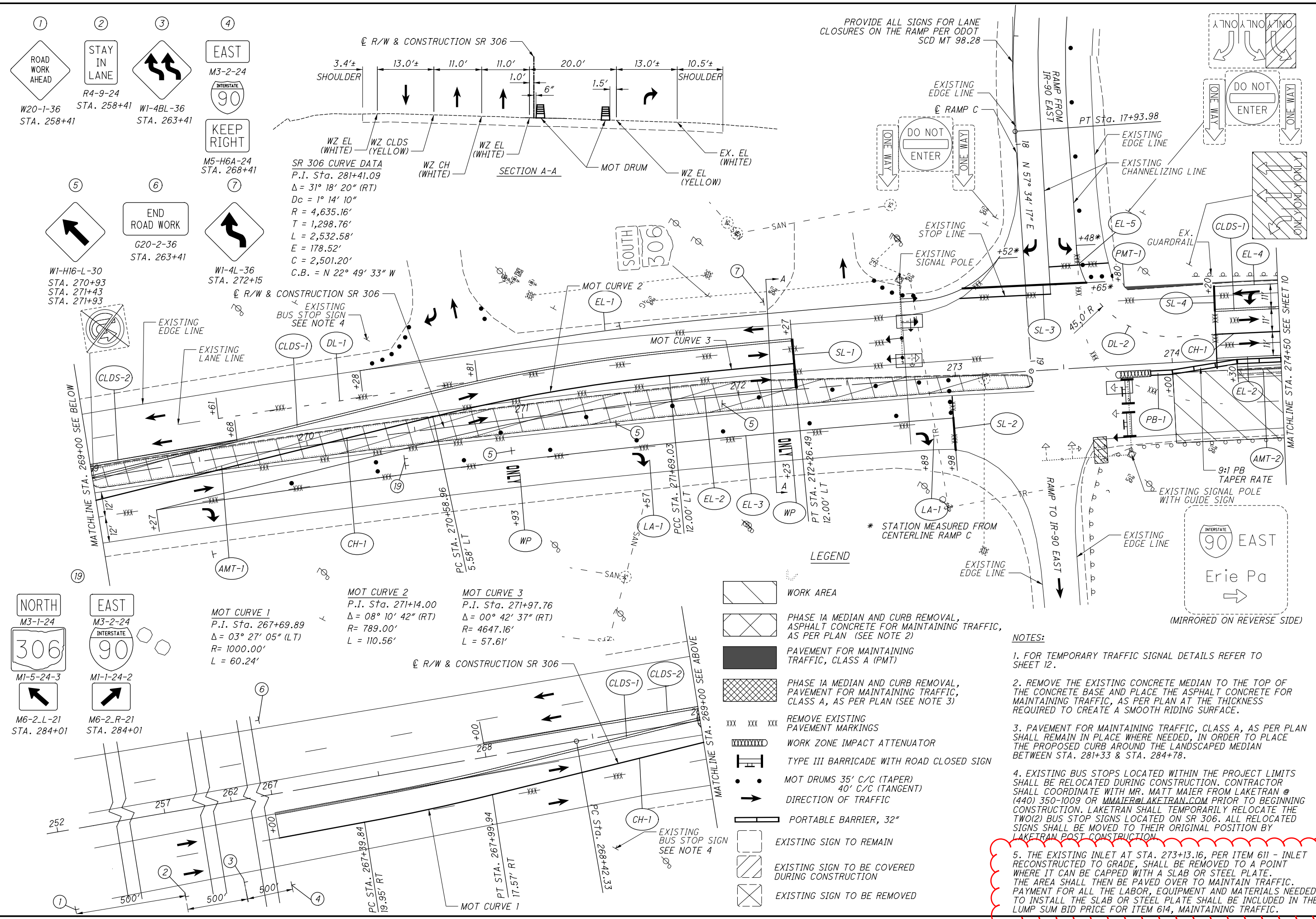
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**GENERAL NOTES**

**LAK - 306 - 5.18**



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- NOTES:**
- FOR TEMPORARY TRAFFIC SIGNAL DETAILS REFER TO SHEET 12.
  - REMOVE THE EXISTING CONCRETE MEDIAN TO THE TOP OF THE CONCRETE BASE AND PLACE THE ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN AT THE THICKNESS REQUIRED TO CREATE A SMOOTH RIDING SURFACE.
  - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A, AS PER PLAN SHALL REMAIN IN PLACE WHERE NEEDED, IN ORDER TO PLACE THE PROPOSED CURB AROUND THE LANDSCAPED MEDIAN BETWEEN STA. 281+33 & STA. 284+78.
  - EXISTING BUS STOPS LOCATED WITHIN THE PROJECT LIMITS SHALL BE RELOCATED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH MR. MATT MAIER FROM LAKETRAN @ (440) 350-1009 OR [MMAIER@LAKETRAN.COM](mailto:MMAIER@LAKETRAN.COM) PRIOR TO BEGINNING CONSTRUCTION. LAKETRAN SHALL TEMPORARILY RELOCATE THE TWO(2) BUS STOP SIGNS LOCATED ON SR 306. ALL RELOCATED SIGNS SHALL BE MOVED TO THEIR ORIGINAL POSITION BY LAKETRAN POST CONSTRUCTION.
  - THE EXISTING INLET AT STA. 273+13.16, PER ITEM 611 - INLET RECONSTRUCTED TO GRADE, SHALL BE REMOVED TO A POINT WHERE IT CAN BE CAPPED WITH A SLAB OR STEEL PLATE. THE AREA SHALL THEN BE PAVED OVER TO MAINTAIN TRAFFIC. PAYMENT FOR ALL THE LABOR, EQUIPMENT AND MATERIALS NEEDED TO INSTALL THE SLAB OR STEEL PLATE SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614, MAINTAINING TRAFFIC.

**MAINTENANCE OF TRAFFIC**

**PHASE 1 - STA. 252+00 TO STA. 274+50**

**LAK - 306 - 5.18**

CALCULATED AA CHECKED EAK

HORIZONTAL SCALE IN FEET

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SHEET NUM.										OFFICE CALCS	PART. 01/IMS/BR	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALCULATED	AA	CHECKED	EAK	
6		25	26						56							ROADWAY						
LS										LS	201	11000	LS			CLEARING AND GRUBBING						
10										10	SPECIAL	20120010	10	EACH		TREE REMOVED, 4"-12"	6					
		1								1	202	20010	1	EACH		HEADWALL REMOVED						
									2,003	2,003	202	23000	2,003	SY		PAVEMENT REMOVED						
									240	240	202	23500	240	SY		WEARING COURSE REMOVED						
		571								571	202	30600	571	SY		CONCRETE MEDIAN REMOVED						
		697								697	202	32000	697	FT		CURB REMOVED						
		92								92	202	35100	92	FT		PIPE REMOVED, 24" AND UNDER						
		667								667	202	38000	667	FT		GUARDRAIL REMOVED						
		2								2	202	58200	2	EACH		INLET REMOVED						
90										90	SPECIAL	20270110	90	FT		PIPE CLEANOUT, 24" AND UNDER	6					
									427	427	203	10000	427	CY		EXCAVATION						
									223	223	203	20000	223	CY		EMBANKMENT						
										2,113	2,113	204	10000	2,113	SY		SUBGRADE COMPACTION					
		300								300	606	15050	300	FT		GUARDRAIL, TYPE MGS						
		187.5								187.5	606	15150	187.5	FT		GUARDRAIL, TYPE MGS HALF POST SPACING						
		37.5								37.5	606	15250	37.5	FT		GUARDRAIL, TYPE MGS QUARTER POST SPACING						
		5								5	606	26550	5	EACH		ANCHOR ASSEMBLY, MGS TYPE T						
		2								2	606	35002	2	EACH		MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1						
		2								2	606	35102	2	EACH		MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2						
		3,009								3,009	608	11000	3,009	SF		4-1/2" CONCRETE WALK						
		670								670	608	52000	670	SF		CURB RAMP						
		1								1	625	31510	1	EACH		PULL BOX REMOVED						
																EROSION CONTROL						
									1,070	1,070	601	20000	1,070	SY		CRUSHED AGGREGATE SLOPE PROTECTION						
84										84	659	00300	84	CY		TOPSOIL						
759										759	659	10000	759	SY		SEEDING AND MULCHING						
38										38	659	14000	38	SY		REPAIR SEEDING AND MULCHING						
0.11										0.11	659	20000	0.11	TON		COMMERCIAL FERTILIZER						
0.16										0.16	659	31000	0.16	ACRE		LIME						
5										5	659	35000	5	MGAL		WATER						
																DRAINAGE						
		468								468	605	11100	468	FT		6" SHALLOW PIPE UNDERDRAINS						
		569								569	605	14000	569	FT		6" BASE PIPE UNDERDRAINS						
									42	42	605	31100	42	FT		AGGREGATE DRAINS						
		205								205	611	00510	205	FT		6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS						
		49								49	611	05900	49	FT		15" CONDUIT, TYPE B						
		10								10	611	10400	10	FT		24" CONDUIT, TYPE B						
		53								53	611	96600	53	FT		CONDUIT, BORED OR JACKED 6" , TYPE F						
		1								1	611	98150	1	EACH		CATCH BASIN, NO. 3						
		1								1	611	99154	1	EACH		INLET RECONSTRUCTED TO GRADE						
		1								1	611	99574	1	EACH		MANHOLE, NO. 3						
		2								2	611	99710	2	EACH		PRECAST REINFORCED CONCRETE OUTLET						
																PAVEMENT						
									10,162	10,162	254	01000	10,162	SY		PAVEMENT PLANING, ASPHALT CONCRETE (1.5" THICK)						
									346	346	304	20000	346	CY		AGGREGATE BASE						
										133	133	407	10000	133	GAL		TACK COAT					
										155	155	407	13900	155	GAL		TACK COAT, 702.13					
										495	495	441	50000	495	CY		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22					
										99	99	441	50300	99	CY		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)					
										254	254	SPECIAL	45131000	254	FT		PRESSURE RELIEF JOINT, TYPE B					29
									1,702	1,702	452	13010	1,702	SY		9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC IP						
		616								616	609	16000	616	FT		CURB, TYPE 2-B						
		38								38	609	24510	38	FT		CURB, TYPE 4-C						
		698								698	609	26000	698	FT		CURB, TYPE 6						
		482								482	609	72000	482	SY		CONCRETE MEDIAN						

GENERAL SUMMARY

LAK -306 -5.18



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REF NO.	SHEET NO.	STATION TO STATION		202	202	202	202	202	202	609	606	606	606	606	606	606	608	608	609	609	609	625
				HEADWALL REMOVED	CONCRETE MEDIAN REMOVED	CURB REMOVED	PIPE REMOVED, 24" AND UNDER	GUARDRAIL REMOVED	INLET REMOVED	CURB, TYPE 6	GUARDRAIL, TYPE MGS	GUARDRAIL, TYPE MGS HALF POST SPACING	GUARDRAIL, TYPE MGS QUARTER POST SPACING	ANCHOR ASSEMBLY, MGS TYPE T	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	4-1/2" CONCRETE WALK	CURB RAMP	CURB, TYPE 2-B	CURB, TYPE 4-C	CONCRETE MEDIAN	PULL BOX REMOVED
				EACH	SY	FT	FT	FT	EACH	FT	FT	FT	FT	EACH	EACH	EACH	SF	SF	FT	FT	SY	EACH
			TO																			
R-1	28		273+13.16				10															
R-2	29		274+92.46	1			72		1													
R-3	30		280+50.00				10		1													
R-4	28	268+98.91					520.2															
R-5	29 - 30	274+25.18					20.6															
R-6	28 - 29	274+10.79						119.0														
R-7	28 - 29	273+56.29						216														
R-8	29 - 30	279+29.87						148														
R-9	29 - 30	279+29.48						184														
R-10	29 - 30	279+28.31					29.6															
R-11	30	281+32.38				697																
R-12	29		279+40.64																			1
GR-1	28 - 29	274+08.46					275+21.31				37.5	62.5		1		1						
GR-2	28 - 29	273+56.49					275+15.42				100	50	25	1	1						18.75	
GR-3	29 - 30	279+38.07					280+74.12				37.5	50	12.5	1	1						18.75	
GR-4	29 - 30	279+38.91					280+98.10				125	25		2		1						
CR-1	28	273+79.23					274+03.69															
CR-2	28	273+61.40					273+83.56															134.3
SW-1	28 - 29	274+03.69					275+32.30															129.4
SW-2	28 - 29	273+83.56					275+27.03										714					782
C-1	28	273+75.89					273+79.23															24
C-2	28	273+55.55					273+61.40															14
C-3	28 - 29	274+03.69					275+12.53															130
C-4	28 - 29	273+83.56					275+07.01															143
CR-3	30	280+59.83					280+80.53															113.2
CR-4	30	280+58.41					280+97.40															292.6
SW-3	29 - 30	279+47.22					280+59.83															736
SW-4	29 - 30	279+47.19					280+58.41															777
C-5	30	281+33.00					284+78.00			698												134
C-6	29 - 30	279+47.19					280+59.83															131
C-7	29 - 30	279+47.19					280+58.41															24
C-8	30	280+80.53					280+77.72															24
C-9	30	280+96.84					280+99.00															16
M-1	28	268+99.50					273+35.00															482
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>				1	571	697	92	667	2	698	300	187.5	37.5	5	2	2	3009	670	616	38	482	1

<b>ROADWAY SUBSUMMARY</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">CALCULATED</td> <td style="width: 50%; text-align: center;">AA</td> </tr> <tr> <td style="width: 50%; text-align: center;">CHECKED</td> <td style="width: 50%; text-align: center;">EAK</td> </tr> </table>	CALCULATED	AA	CHECKED	EAK
CALCULATED	AA				
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<b>LAK - 306 - 5.18</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">25</td> <td style="width: 50%; text-align: center;">87</td> </tr> </table>	25	87		
25	87				



**GENERAL NOTES (CONT.):**

**ITEM SPECIAL – FORM LINER:**

THIS ITEM SHALL INCLUDE THE FURNISHING OF ALL MATERIALS AND THE NECESSARY LABOR TO PROVIDE ARCHITECTURAL TREATMENT ON BOTH FACES OF BRIDGE AND APPROACH SLAB PARAPET RAILINGS.

ALL WORK SHALL CONFORM TO APPLICABLE PROVISIONS OF ITEM 511 EXCEPT AS MODIFIED AND ADDED HEREIN.

CONCRETE SHALL BE CLASS QC2 AND CONFORM TO ITEM 511 AND THE MIX OPTION SPECIFIED IN ITEM 511 – CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN.

ARCHITECTURAL TREATMENT OF CONCRETE PARAPETS SHALL BE AS FOLLOWS:

GENERAL: THE WORK SHALL INCLUDE:

1. CONSTRUCTION OF TEXTURED CONCRETE SURFACES USING FORM LINERS DESIGNED TO DUPLICATED CLOSELY THE APPEARANCE OF NATURAL STONE.
2. DESIGN AND PATTERN OF THE CONCRETE SURFACES SHALL FOLLOW THE MANUFACTURER'S STANDARD DRAWING SELECTED.
3. PATTERN SHALL BE: CUSTOM ROCK #1203, NEW ENGLAND DRystack; GREEN STREAK #330, ASHLAR STONE; ARCHITECTURAL POLYMERS #911, LARGE STONE DRY STACK; OR APPROVED EQUAL.
4. SHOP DRAWINGS: PLAN, ELEVATIONS, AND DETAILS TO SHOW OVERALL PATTERN, JOINT LOCATIONS, FROM TIE LOCATIONS, AND END, EDGE AND OTHER SPECIAL CONSIDERATIONS.
5. SAMPLES: FORM TIES, SAMPLE AND DESCRIPTION, SHOWING METHOD SEPARATION WHEN FORMS ARE REMOVED.
6. MANUFACTURER OF FORM LINERS MUST HAVE A MINIMUM OF FIVE YEARS EXPERIENCE MAKING CUSTOM FORM LINERS AND COLOR STAINS TO CREATED FORMED CONCRETE SURFACES TO MATCH NATURAL STONE SHAPES AND SURFACE TEXTURES.
7. PRE- INSTALLATION MEETING: SCHEDULE CONFERENCE WITH MANUFACTURER'S REPRESENTATIVE TO ASSURE UNDERSTANDING OF FORM LINER USE, REQUIREMENTS FOR CONSTRUCTION MOCK -UP, AND TO COORDINATE THE WORK.

PRODUCTS:

1. FORM LINERS SHALL BE #898 RUSTIC ASHLAR (OR SIMILAR) AND MANUFACTURED BY:

CUSTOM ROCK FORMLINER  
2020 WEST 7TH STREET  
ST. PAUL, MN 55116  
(615) 699-1345  
WWW.CUSTOMROCK.COM

GREENSTREAK  
3400 TREE COURT INDUSTRIAL BLVD.  
ST. LOUIS, MO 63122-6614  
(636) 225-9400

ARCHITECTURAL POLYMERS  
1220 LITTLE GAP ROAD  
PALMERTON, PA 18071  
(610) 824-3322  
WWW.APFORMLINER.COM

2. RELEASE AGENT COMPATIBLE WITH FORM LINER. CONSULT MANUFACTURER.
3. FORM TIES: DESIGNED TO SEPARATE AT LEAST 1 INCH BACK FROM FINISHED SURFACE, LEAVING ONLY A NEAT HOLE THAT CAN BE PLUGGED WITH PATCHING.

EXECUTION:

1. FORMED LINED CONCRETE CONSTRUCTION: INSTALL SHALL HAVE A MINIMUM OF FIVE YEARS OF EXPERIENCE WITH VERTICALLY FORMED ARCHITECTURAL CONCRETE. INSTALLER SHALL BE TRAINED IN MANUFACTURER'S SPECIAL TECHNIQUES TO ACHIEVE REALISTIC SURFACES.
2. FORM LINER PREPARATION: CLEAN AND MAKE FREE OF BUILDUP PRIOR TO EACH POUR. INSPECT FOR BLEMISHES OR TEARS. REPAIR IF NEEDED FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
3. FORM LINER ATTACHMENT: PLACE ADJACENT LINERS WITH LESS THAN 1/4 INCH SEPARATION BETWEEN LINERS. ATTACH LINERS TO FORM SECURELY, FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
4. FORM RELEASE AGENT: APPLY FOLLOWING MANUFACTURER'S RECOMMENDATIONS.
5. FORM STRIPPING AND RELATED CONSTRUCTION SHALL AVOID CREATING DEFECTS IN THE FINISHED SURFACES.
6. WHERE FORM LINERS ABUT, CAREFULLY BLEND TO MATCH THE BALANCE OF THE STONE PATTERN, AVOIDING VISIBLE SEAMS OR FORM MARKS.

**ITEM SPECIAL – FORM LINER (CONT.):**

7. PLACE FORM TIES AT THE THINNEST POINTS OF LINER (HIGHER POINTS OF FINISHED WALL). NEATLY PATCH THE HOLE REMAINING AFTER DISENGAGING THE PROTRUDING PORTION OF THE TIE SO THAT IT WILL NOT BE VISIBLE AFTER SEALING THE CONCRETE SURFACE.
8. WHERE AN EXPANSTION JOINT MUST OCCUR AT A POINT OTHER THAN AT MORTAR JOINT OR RUSTICATION JOINTS, SUCH AS AT THE FACE OF CONCRETE TEXTURE WHICH IS TO HAVE THE APPEARANCE OF STONE, CONSULT MANUFACTURER FOR PROPER TREATMENT OF EXPANSION MATERIAL.

BASIS OF PAYMENT: PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN- PLACE, WILL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL – FORM LINER. THIS PRICE SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SPECIFIED.

**ITEM SPECIAL – COMPOSITE FIBER WRAP SYSTEM:**

**I. DESCRIPTION:**  
THIS WORK CONSISTS OF PREPARING EXISTING SOUND CONCRETE SURFACES AND DESIGNING THE SYSTEM TO MEET THE REQUIREMENTS IN THE PLANS, FURNISHING AND INSTALLING FIBER REINFORCED POLYMER (FRP) COMPOSITE WRAP SYSTEMS TO REPAIR OR RETROFIT EXISTING CONCRETE MEMBERS AT THE LOCATIONS SHOWN IN THE PLANS. FIBER MAY BE EITHER CARBON (CFRP) OR E-GLASS (EGFRP).

**II. MATERIALS:**  
FURNISH FRP COMPOSITE WRAP SYSTEMS THAT HAVE BEEN EVALUATED BY THE INTERNATIONAL CODE COUNCIL EVALUATION SERVICE (ICC-ES) IN ACCORDANCE WITH AC125 – ACCEPTANCE CRITERIA FOR CONCRETE AND REINFORCED AND UNREINFORCED MASONRY STRENGTHENING USING FIBER-REINFORCED, COMPOSITE SYSTEMS. SELECT FROM PRODUCTS LISTED UNDER EVALUATION REPORTS CSI – DIVISION 03 01 00 MAINTENANCE OF CONCRETE, EVALUATED ON THE ICC-ES WEBSITE: WWW.ICC-ES.ORG. ALL SYSTEM COMPONENTS DELIVERED TO THE PROJECT SHALL BE LABELED IN ACCORDANCE WITH THE FRP SYSTEM'S ICC-ES EVALUATION REPORT SECTION 7.0.

**III. SUBMITTALS:** PROVIDE THE FOLLOWING INFORMATION TO THE ENGINEER:

- A. ENGINEERED DRAWINGS** IN ACCORDANCE WITH C&MS 501.05.B. AS A MINIMUM, ACCEPTABLE DRAWINGS SHALL INCLUDE:
  1. IDENTIFICATION OF THE FRP SYSTEM USING THE PRODUCT NAMES OF EACH OF THE CONSTITUENT MATERIALS.
  2. DESIGN DATA FOR THE FRP SYSTEM INCLUDING: MINIMUM ULTIMATE TENSILE STRENGTH; MINIMUM TENSILE MODULUS AND CORRESPONDING ELONGATION; AND LAYER THICKNESS.
  3. GOVERNING SPECIFICATION FOR FRP SYSTEM DESIGN.
  4. PLAN, ELEVATION AND CROSS-SECTIONAL VIEWS OF THE CONCRETE MEMBERS AS NECESSARY TO COMPLETELY DESCRIBE THE WORK.
  5. IDENTIFY ALL OBSTRUCTIONS INCLUDING PIPES, CONDUITS, WIRING, JUNCTION BOXES AND OTHER ITEMS THAT AFFECT THE INSTALLATION OF THE FRP SYSTEM TO ENABLE REMOVAL, RELOCATION AND SUBSEQUENT REINSTALLATION. FOR REINSTALLATION, PROVIDE LOCATIONS OF PENETRATIONS THROUGH THE FINISHED FRP SYSTEM.
  6. NUMBER OF LAYERS AND ORIENTATION OF WRAP AT EACH CROSS-SECTION.
  7. MINIMUM FABRIC LAP SPLICE DIMENSIONS AND ACCEPTABLE LOCATIONS FOR LAP SPLICES.
  8. PROVIDE INSPECTION ACCESS DOCUMENTATION IN ACCORDANCE WITH C&MS 514.10 WHERE APPLICABLE.

**B. DOCUMENTATION WITH DELIVERED CONSTITUENT MATERIAL INCLUDING:**

1. MATERIAL TECHNICAL DATA SHEETS. INCLUDE PRODUCT STANDARDS, PHYSICAL AND CHEMICAL CHARACTERISTICS, TECHNICAL SPECIFICATIONS, LIMITATIONS, MAINTENANCE INSTRUCTIONS, CLEANING AND SAFETY INFORMATION, AND GENERAL RECOMMENDATIONS REGARDING EACH CONSTITUENT MATERIAL.
2. MATERIAL SAFETY DATA SHEETS. SUBMIT SHEETS FOR ALL COMPONENTS OF THE FRP STRENGTHENING SYSTEM INCLUDING FIBER SHEETS, RESINS AND PROTECTIVE TOP-COATING MATERIALS.
3. CERTIFIED TEST DATA CONFIRMING THE MATERIAL PROPERTIES FOR ALL CONSTITUENT MATERIALS MEET THE SPECIFIED REQUIREMENTS.
4. QUALITY CONTROL PLAN (QCP) ADDRESSING ALL ACTIVITIES AND PROCESSES REQUIRED TO CONTROL THE QUALITY OF THE MATERIALS INCLUDING PROCEDURES FOR TRACKING AND VERIFYING THE QUALITY OF ALL FRP CONSTITUENT MATERIALS.
5. STORAGE AND HANDLING REQUIREMENTS.

**C. SURFACE PREPARATION, INSTALLATION AND REPAIR SPECIFICATIONS** IN ACCORDANCE WITH THE FRP SYSTEM'S ICC-ES EVALUATION REPORT SECTION 4.2 AND SECTION IV OF THIS SPECIFICATION.

**D. DOCUMENTATION FROM THE MANUFACTURER OF THE FRP SYSTEM** THAT THE APPLICATORS ARE TRAINED AND CERTIFIED BY THE MANUFACTURER.

**IV. INSTALLATION:**  
VERIFY DIMENSIONS OF CONCRETE MEMBERS TO BE STRENGTHENED WITH EXTERNALLY BONDED FRP REINFORCEMENT. VISUALLY ASSESS THE MEMBER TO BE STRENGTHENED AND ALL SURFACES TO RECEIVE THE FRP SYSTEM FOR CONDITIONS THAT MAY AFFECT THE INSTALLATION. REPORT ALL AREAS EXHIBITING EVIDENCE OF DETERIORATION OR DISTRESS, NOT OTHERWISE IDENTIFIED IN THE PLANS TO BE REPAIRED, TO THE ENGINEER. MAKE ALL SUBSTRATE CONCRETE REPAIRS IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS PRIOR TO INSTALLATION OF THE FRP SYSTEM. PROPERLY CURE ALL CONCRETE REPAIRS PRIOR TO THE INITIATION OF SURFACE PREPARATION OR FRP INSTALLATION.

**ITEM SPECIAL – COMPOSITE FIBER WRAP SYSTEM (CONT.):**

REMOVE ALL OBSTRUCTIONS INCLUDING PIPES, CONDUITS, WIRING, JUNCTION BOXES AND OTHER ITEMS THAT AFFECT THE INSTALLATION OF THE FRP SYSTEM.

REMOVE PROTRUDING SURFACE IMPERFECTIONS THAT EXCEED 1/32-IN. ROUND ALL OUTSIDE CORNERS AND SHARP EDGES TO BE WRAPPED TO A MINIMUM RADIUS OF 0.5-IN. PREPARE CONCRETE SURFACE TO A SURFACE PROFILE NOT LESS THAN CSP 3, AS DEFINED BY ICRI 310.2R, OR TO THE TOLERANCES RECOMMENDED BY THE FRP SYSTEM MANUFACTURER. CLEAN CONCRETE SURFACES USING METHODS RECOMMENDED BY THE FRP SYSTEM MANUFACTURER TO REMOVE ANY DUST, LAITANCE, GREASE, OIL, CURING COMPOUNDS, WAX, IMPREGNATIONS, STAINS, PAINT COATINGS, SURFACE LUBRICANTS, FOREIGN PARTICLES, WEATHERED LAYERS AND ANY OTHER BOND-INHIBITING MATERIAL.

DO NOT APPLY THE FRP SYSTEM OR ANY OF ITS CONSTITUENT MATERIALS TO FROZEN OR WET SURFACES. DO NOT APPLY FRP MATERIALS IF RAIN, SNOW, OR DEW POINT CONDENSATION IS EXPECTED. ENSURE AMBIENT AND CONCRETE SURFACE TEMPERATURES ARE WITHIN THE RANGE SPECIFIED BY THE MANUFACTURER FOR FRP INSTALLATION.

MIX ALL RESIN CONSTITUENT MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. FOLLOW MANUFACTURER'S INSTRUCTIONS REGARDING MIX RATIO, TEMPERATURE RANGE, PADDLE TYPE, MIX DURATION, ETC. DO NOT DILUTE ANY RESIN CONSTITUENT MATERIALS WITH ANY ORGANIC SOLVENTS OR THINNERS. DISCARD ANY MIXED RESIN THAT EXCEEDS ITS POT LIFE OR SHOWS SIGNS OF INCREASED VISCOSITY.

APPLY PRIMER RESIN ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS SUCH THAT IT PENETRATES THE PORES OF THE SUBSTRATE BUT DOES NOT DRIP OR RUN. FILL ALL BUG HOLES AND SMALL VOIDS AND LEVEL ANY UNEVEN SURFACES WITH THE RESIN PUTTY USING A TROWEL OR PUTTY KNIFE OR OTHER TOOLS RECOMMENDED BY THE MANUFACTURER TO APPLY THE PUTTY. DO NOT APPLY PUTTY TO A PREVIOUSLY APPLIED PRIMER OR PUTTY COAT IF THAT COAT HAS FULLY CURED, UNLESS FIRST PREPARED PER THE MANUFACTURER'S INSTRUCTIONS.

FOLLOW MANUFACTURER'S RECOMMENDED PROCEDURES FOR IMPREGNATING FIBER SHEETS WITH SATURATING RESIN. DO NOT APPLY SATURATING RESIN OR IMPREGNATED FIBER SHEET TO A PREVIOUSLY APPLIED RESIN COAT IF THAT COAT HAS FULLY CURED, UNLESS PREPARED PER THE MANUFACTURER'S INSTRUCTIONS. PLACE FIBER SHEET ONTO SUBSTRATE. ROLL FIBER SHEETS IN THE DIRECTION OF THE FIBERS USING A FIN ROLLER TO REMOVE ANY AIR ENTRAPPED BETWEEN THE FIBER SHEETS AND CONCRETE SURFACE AND TO FULLY IMPREGNATE THE FIBER SHEETS WITH SATURATING RESIN. ACHIEVE FULL CONTACT WITH THE CONCRETE SUBSTRATE DURING ROLLING. DO NOT ROLL UNIDIRECTIONAL FIBER SHEETS IN THE DIRECTION TRANSVERSE TO THE FIBERS TO AVOID DAMAGING THE FIBERS. INSTALL FRP SHEETS WITH THE FIBERS ALIGNED IN THE DIRECTION INDICATED ON THE DRAWINGS ± 5°.

WHEN INSTALLING MULTIPLE FIBER SHEET PLIES, FOLLOW THE MANUFACTURER'S RECOMMENDED PROCEDURES FOR THE ORIENTATION OF THE FIBERS, PLY STACKING SEQUENCE, AND LENGTH. LIMIT THE NUMBER OF PLIES APPLIED IN A SINGLE DAY TO THAT WHICH CAN BE SUPPORTED BY THE PREVIOUSLY APPLIED SYSTEM WITHOUT SLOUGHING OR SLIDING. DO NOT APPLY ADDITIONAL FIBER SHEET PLIES TO PREVIOUSLY CURED PLIES UNLESS FIRST PREPARED PER THE MANUFACTURER'S INSTRUCTIONS.

PROVIDE LAP SPLICES EQUAL TO OR EXCEEDING THE LENGTH RECOMMENDED BY THE MANUFACTURER SUCH THAT THE FULL TENSILE STRENGTH OF THE FIBER SHEET IS ACHIEVED. STAGGER LAP SPLICES FOR MULTIPLE PLIES OR SIDE-BY-SIDE INSTALLATIONS.

DO NOT ALLOW BARE METAL TO COME INTO DIRECT CONTACT WITH THE CARBON FRP SYSTEM. PROTECT METAL HARDWARE FROM GALVANIC CORROSION BY PROVIDING AN INSULATING BARRIER OF ADDITIONAL RESIN OR E-GLASS FRP BETWEEN THE CARBON FRP AND THE METAL.

**V. QUALITY CONTROL:**  
DESIGNATE EXPERIENCED INDIVIDUALS TO ACT AS QUALITY CONTROL SPECIALISTS TO CONTROL THE QUALITY OF WORK IN EACH PHASE. THE DUTIES OF QUALITY CONTROL SPECIALISTS INCLUDE: MATERIAL CONTROL AND DOCUMENTATION, ASSESSMENT OF CONCRETE SUBSTRATE, DAILY CONSTRUCTION DOCUMENTATION, FIELD TESTING, INSPECTING AND REPORTING ALL INFORMATION TO THE ENGINEER.

MATERIAL CONTROL SHALL INCLUDE INSPECTING ALL MANUFACTURER'S CERTIFICATIONS FOR THE DELIVERED AND STORED FRP CONSTITUENT MATERIALS; ENSURING CONSTITUENT MATERIALS ARE DELIVERED IN THE MANUFACTURER'S ORIGINAL, FACTORY-SEALED, UNOPENED CONTAINERS WITH LABEL INTACT IDENTIFYING THE MANUFACTURER, BRAND NAME, SYSTEM COMPONENT NAME AND IDENTIFICATION NUMBER WITH PRODUCTION DATE; ENSURING ALL MATERIALS ARE PROPERLY STORED PRIOR TO USE; ENSURING ALL SAFETY MEASURES ARE FOLLOWED; ENSURING ALL EQUIPMENT FOR FRP WORK IS FUNCTIONING PROPERLY; AND REPORTING ALL DISCREPANCIES TO THE ENGINEER AS SOON AS POSSIBLE.

DAILY CONSTRUCTION DOCUMENTATION SHALL INCLUDE: PHOTO DOCUMENTATION OF PREPARED SURFACES USING ICRI-SURFACE-PROFILE-CHIPS FOR COMPARISON LOCATION FOR FABRIC AND EPOXY USED EACH DAY; DATE AND TIME OF INSTALLATION; AMBIENT AND CONCRETE SURFACE TEMPERATURES; RELATIVE HUMIDITY; GENERAL WEATHER CONDITIONS; ADHESION TEST LOCATIONS AND RESULTS; AND LOCATION AND SIZE OF DEFECTS.

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**GENERAL NOTES (CONT.):**

**ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM (CONT.):**

PRIOR TO TOP COATING, VISUALLY INSPECT THE INSTALLED FRP SYSTEM FOR FIBER KINKS, WAVINESS AND FIBER ORIENTATION. REPORT UNUSUAL WAVINESS AND ALL KINKS TO THE ENGINEER FOR ACCEPTANCE/REJECTION. REPORT ANY DEVIATION IN THE ALIGNMENT OF THE FIBERS OF MORE THAN 5° (APPROXIMATELY 1 IN/FT.) TO ENGINEER.

AFTER WAITING A MINIMUM OF 24 HOURS FOR THE FRP SYSTEM TO INITIALLY CURE AND BEFORE THE APPLICATION OF ANY TOP COATINGS, VISUALLY INSPECT THE INSTALLED FRP SYSTEM FOR DELAMINATION DEFECTS INCLUDING BUBBLES, AIR POCKETS, VOIDS, AND AREAS OF DEBONDING. LIGHTLY TAP THE CURED FRP SYSTEM WITH A HAMMER OR OTHER OBJECT TO VERIFY THE LOCATION AND SIZE OF DEFECTS BY NOTING A 'DEAD' SOUND. DELAMINATIONS LESS THAN 2 IN<sup>2</sup> EACH ARE PERMISSIBLE AS LONG AS THE DELAMINATED AREA IS LESS THAN 5% OF THE TOTAL LAMINATE AREA AND THERE ARE NOT MORE THAN 10 SUCH DELAMINATIONS PER 10 FT<sup>2</sup>. NOTE THE SIZE AND LOCATION OF ALL DELAMINATION DEFECTS AND REPORT TO THE ENGINEER FOR ACCEPTANCE/REJECTION.

THE QUALITY CONTROL SPECIALIST SHALL NOTIFY THE ENGINEER OR INSPECTOR PRIOR TO BEGINNING ALL FIELD TESTING. INSPECT THE BOND BETWEEN THE CURED FRP SYSTEM AND THE CONCRETE SUBSTRATE BY CONDUCTING DIRECT TENSION PULL-OFF TESTS IN ACCORDANCE WITH ASTM D7522. CONDUCT ADHESION TESTING AT A FREQUENCY OF THREE TESTS PER DAY OF INSTALLATION OR ONE TEST PER 1000 FT<sup>2</sup> OF SUBSTRATE CONTACT AREA WHICHEVER RESULTS IN MORE TESTS BEING PERFORMED. THE PULL-OFF STRENGTH SHALL EXCEED 200 PSI AND FAILURE SHALL OCCUR IN THE CONCRETE SUBSTRATE. THE DEPARTMENT WILL CONSIDER THE FRP SYSTEM DEFECTIVE WHERE THE PULL-OFF STRENGTH IS 200 PSI OR LESS OR WHERE FAILURES OCCUR BETWEEN PLYS OR BETWEEN THE CONCRETE SUBSTRATE AND THE FRP SYSTEM, REGARDLESS OF THE STRENGTH. IF ONE OR MORE OF THE PULL-OFF TESTS INDICATES A DEFECT, PERFORM TWO ADDITIONAL TESTS ADJACENT TO THE AREA WHERE PULL-OFF TESTS INDICATED A DEFECT. IF ONE OF THE ADDITIONAL PULL-OFF TESTS INDICATES A DEFECT THE DEPARTMENT WILL CONSIDER THE ENTIRE WRAPPED AREA OF THE MEMBER TO BE DEFECTIVE.

**VI. REPAIR OF DEFECTS AND QC TEST SITES:**  
REPAIR ALL DEFECTS IN A MANNER THAT WILL RESTORE THE FRP COMPOSITE WRAP SYSTEM TO THE ENGINEER'S SATISFACTION IN ACCORDANCE WITH SECTION III.C. OF THIS SPECIFICATION. REPAIR LARGE DELAMINATIONS GREATER THAN 25 IN<sup>2</sup> BY CUTTING AWAY THE AFFECTED FRP SHEET AND APPLYING AN OVERLAPPING FRP SHEET PATCH OF EQUIVALENT PLYS. DELAMINATIONS OF 25 IN<sup>2</sup> OR LESS MAY BE REPAIRED BY INJECTING WITH SATURATING RESIN. IF ANY DELAMINATION GROWTH IS SUSPECTED BETWEEN THE FRP PLYS DUE TO INJECTION, THE PROCEDURE SHALL BE HALTED AND REPORTED TO THE ENGINEER. REPAIR LOCATIONS IN THE FRP SYSTEM WHERE THE BOND TESTS WERE PERFORMED BY LAPPING ADDITIONAL PLYS IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN RECOMMENDATIONS. DO NOT APPLY ADDITIONAL FIBER SHEET PLYS TO PREVIOUSLY CURED PLYS UNLESS FIRST PREPARED PER THE MANUFACTURER'S INSTRUCTIONS. ALL REPAIRS SHALL BE SUBJECT TO THE SAME APPLICATION, CURING, AND QUALITY CONTROL SPECIFICATIONS AS THE ORIGINAL WORK.

**VII. METHOD OF MEASUREMENT:**  
THE DEPARTMENT WILL MEASURE THE FRP COMPOSITE WRAP SYSTEM BY THE NUMBER OF SQUARE FEET OF CONCRETE SURFACE WRAPPED.

**VIII. BASIS OF PAYMENT:**  
THE DEPARTMENT WILL PAY FOR REPAIR OF UNSOUND, CRACKED OR SPALLED CONCRETE SUBSTRATE SEPARATELY. THE DEPARTMENT WILL CONSIDER THE COST FOR FILLING SURFACE IRREGULARITIES IN SOUND CONCRETE SUBSTRATE IN ORDER TO PROVIDE A SMOOTH AND CONTINUOUS SURFACE AS INCIDENTAL TO THIS WORK. THE DEPARTMENT WILL CONSIDER THE REMOVAL OF OBSTRUCTIONS AS INCIDENTAL TO THIS WORK, BUT THE DEPARTMENT WILL PAY FOR REINSTALLATION OR RELOCATION OF OBSTRUCTIONS SEPARATELY. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF THE COMPLETED FRP COMPOSITE WRAP SYSTEM INCLUDING PREPARATION OF THE CONCRETE SUBSTRATE SURFACES AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
519E00100	SQUARE FEET	COMPOSITE FIBER WRAP SYSTEM

**ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN:**

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING A 6' STRAIGHT STEEL FENCE ON A CONCRETE PARAPET ACROSS THE STRUCTURE PER PLAN DETAILS. THE FENCE SHALL CONFORM TO CMS ITEM 607 AND STANDARD DRAWING VPF-1-90, EXCEPT AS SPECIFIED IN THESE PLANS.

TO MITIGATE THINNING OF GALVANIZING MATERIAL AT SHARP EDGES DURING THE CURING PROCESS, PRIOR TO GALVANIZING, ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/16 INCH RADIUS.

ANCHOR BOLTS FOR VANDAL PROTECTION FENCE SHALL BE CAST INTO THE BR-2-15 BARRIER.

THE 11 GAGE (0.120") CORE WIRES OF THE STEEL FABRIC SHALL BE UNIFORMLY GALVANIZED WITH ZINC METAL OF 0.30 OZ/SQ. FT. MINIMUM WEIGHT IN ACCORDANCE WITH ASTM A641. THE GALVANIZED WIRE SHALL THEN BE PVC COATED TO MATCH FEDERAL STANDARD FS-5958 COLOR NO. 27040 (BLACK) IN ACCORDANCE WITH ASTM F668, CLASS 2A OR 2B. ALL OTHER STEEL PARTS OF THE FENCE SHALL BE PAINTED PER ITEM 508 USING THIS SAME COLOR.

ALL LABOR, EQUIPMENT, AND MATERIALS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LINEAR FOOT BID FOR ITEM 607 - VANDAL PROTECTION FENCE, 6 FEET STRAIGHT, COATED FABRIC, AS PER PLAN.

**ASBESTOS NOTIFICATION:**

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
P.O. BOX 1049  
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM  
OHIO EPA, DAPC  
50 W. TOWN ST., SUITE 700  
COLUMBUS, OH 43215

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

- 1) THE CONTRACTORS 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.

COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT - THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

**STRUCTURE GROUNDING:**

THE CONTRACTOR SHALL GROUND ALL STRUCTURES. THE GROUNDING SYSTEM SHALL GROUND ALL METAL ITEMS AND APPURTENANCES ON ALL STRUCTURES, INCLUDING ANY AND ALL DECORATIVE ITEMS. THE GROUNDING SYSTEM SHALL INCLUDE PARALLELS FOR REDUNDANCY. THE GROUNDING SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH SCD HL-50.2I, WITH ADDITIONAL ITEMS AS NEEDED TO PROVIDE A COMPLETE AND ACCEPTABLE GROUNDING SYSTEM.

**ITEM 513 - STRUCTURAL STEEL, MISC., MOMENT PLATE RETROFITS:**

EXISTING CROSS-FRAMES MAY INTERFERE WITH MOMENT PLATE RETROFITS AT CERTAIN LOCATIONS. AT THESE LOCATIONS, EXISTING CROSS-FRAMES WILL NEED TO BE REMOVED AND REPLACED PER STANDARD DRAWING GSD-1-96 AFTER RETROFITS HAVE BEEN INSTALLED. PAYMENT FOR ALL LABOR AND MATERIALS NECESSARY TO PERFORM THIS WORK ARE TO BE INCLUDED WITH PRICE BID FOR ITEM 513 -STRUCTURAL STEEL, MISC., MOMENT PLATE RETROFITS.

**STANDARD ABBREVIATIONS:**

BRGS.	-	BEARINGS
B	-	BOTTOM
C/C	-	CENTER TO CENTER
C.J.	-	CONSTRUCTION JOINT
CONST.	-	CONSTRUCTION
CPP.	-	CORRUGATED PLASTIC PIPE
CLR.	-	CLEAR
DIA.	-	DIAMETER
E.F.	-	EACH FACE
EQ.	-	EQUAL
EXIST.	-	EXISTING
EXP.	-	EXPANSION
F.A.	-	FORWARD ABUTMENT
F.F.	-	FAR FACE
F.S.	-	FIELD SPLICE
MIN.	-	MINIMUM
N.F.	-	NEAR FACE
PEJF	-	PERFORMED EXPANSION JOINT FILLER
R.A.	-	REAR ABUTMENT
R/W	-	RIGHT OF WAY
SER.	-	SERIES
SPA.	-	SPACING/SPACES
T	-	TOP
T.O.A.S.	-	TOP OF APPROACH SLAB
T.O.S.S.	-	TOP OF SLEEPER SLAB
TYP.	-	TYPICAL

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DESIGN AGENCY  
**PRIMEV**  
845 Plaza, Columbus, Ohio 43240

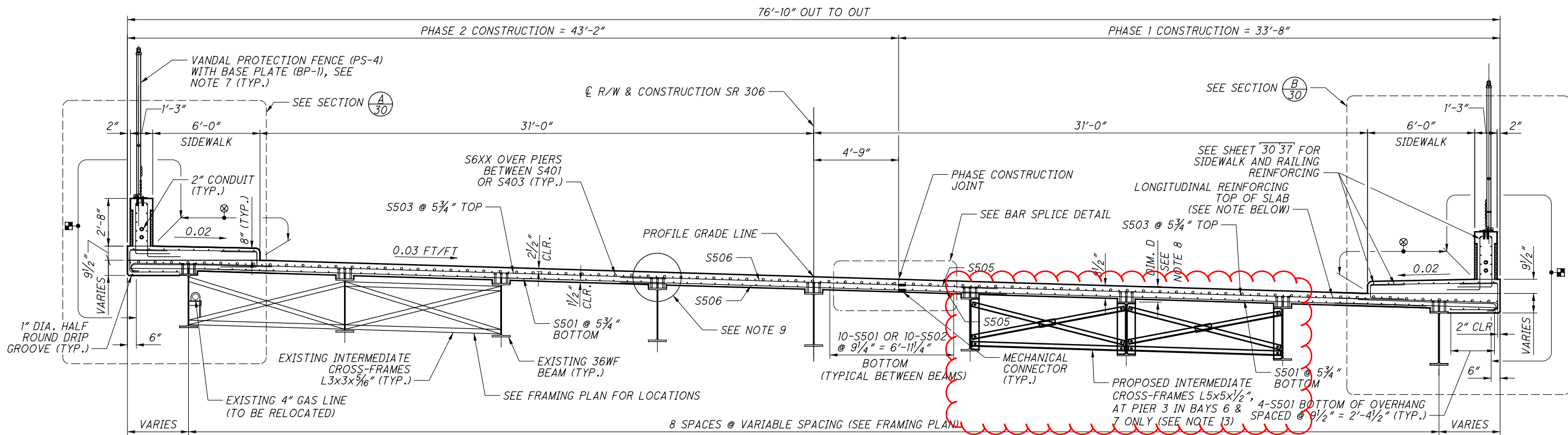
DESIGNED	DATE	REVIEWED	DATE
AMT	10/15/2020	CCJ	10/15/2020
CHECKED		STRUCTURE FILE NUMBER	4303997
KDC		REVISED	

**GENERAL NOTES - 3**  
BRIDGE NO. LAK-306-0518  
SR 306 OVER IR-90

**LAK-306-5.18**  
PID No. 104094

5/37  
55  
87

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**TRANSVERSE SECTION**

**LONGITUDINAL REINFORCING STEEL NOTE**

SEE SLAB PLAN (SHEET 21/37) AND 22/37 FOR TOTAL NUMBER AND LOCATION)  
 TOP OF SLAB REINFORCING  
 PHASE 2:  
 48-S401 OR 48-S403 AT 11" (MAX) SPACING WITH  
 47-S601, S602, OR S603 BETWEEN S401 BARS OVER PIERS  
 PHASE 1:  
 37-S401 OR 37-S403 AT 11" (MAX) SPACING WITH  
 36-S601, S602, OR S603 BETWEEN S401 BARS OVER PIERS

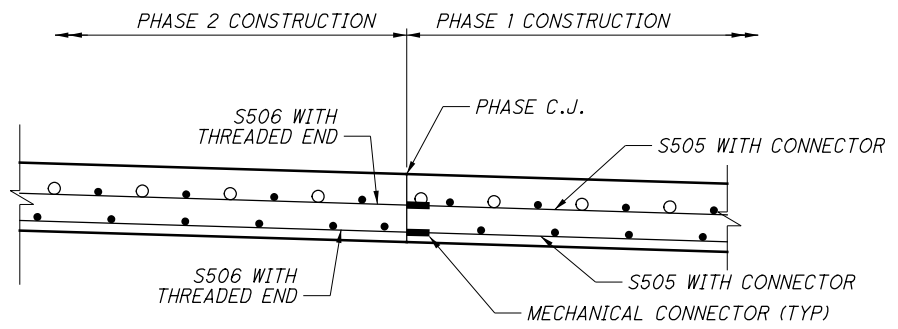
REQUIRED LAP LENGTH	
BAR #	MIN. LAP LENGTH
4	2'-0"
5	2'-6"
6	2'-11"

**NOTES:**

- 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 GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 2 INCHES AND A CONSTANT HAUNCH WIDTH OF EACH GIRDER FLANGE. 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 GIRDER, FROM THE SURFACE OF THE DECK TO THE TOP 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 511.24.
- UTILITIES SHALL BE PROTECTED DURING CONSTRUCTION. SEE NOTE FOR ITEM 202 PORTIONS OF STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN ON SHEET 3/37.
- SIDEWALKS AND CURB ONLY SHALL BE SEALED WITH NON-EPOXY SEALER.
- THE BRIDGE-MOUNTED SIDEWALK CONCRETE IS INCLUDED WITH ITEM 511 CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, FOR PAYMENT. THE SIDEWALKS BEHIND THE ABUTMENTS AND ADJACENT TO THE APPROACH SLABS SHALL BE INCLUDED WITH THE ROADWAY SUB-SUMMARY FOR PAYMENT.
- FOR ADDITIONAL STRUCTURE CONDUIT DETAILS, SEE STD. DWG. HL 30.32.
- FOR ADDITIONAL FENCE DETAILS, SEE STANDARD DRAWING VPF-1-90 AND NOTE ON SHEET 5/37.
- FOR HAUNCH DIMENSION D TABLE, SEE SHEET 29/37.
- FOR SUPPLEMENTAL HAUNCH REINFORCING DETAILS AND LOCATIONS, SEE SHEET 26/37.
- FOR LIGHTING PILASTER DETAILS, SEE SHEET 31/37.
- SEE CMS 511.09 AND 511.10 TO DETERMINE PROPER CONSTRUCTION JOINT TREATMENTS.
- SEALING OF CONCRETE SURFACES EPOXY-URETHANE. FOR TOP CAP OF PARAPET, THE SECOND SEAL COAT ONLY SHALL BE TINTED TO FEDERAL STANDARD COLOR 25630 (LIGHT GRAY). FOR THE VERTICAL SIDES OF THE PARAPET WHERE STONE-LOOK FORMWORK WILL BE USED, THE SECOND SEALING COAT ONLY SHALL BE TINTED TO FEDERAL COLOR NUMBER 25978 (TAN).
- CONNECTION DETAILS FOR PROPOSED INTERMEDIATE CROSS-FRAMES AT PIER 3, BEAM 7 SHALL FOLLOW DETAILS ON SHEET 20/37 AND NOTES ON STANDARD DRAWING GSD-1-19.

**LEGEND:**

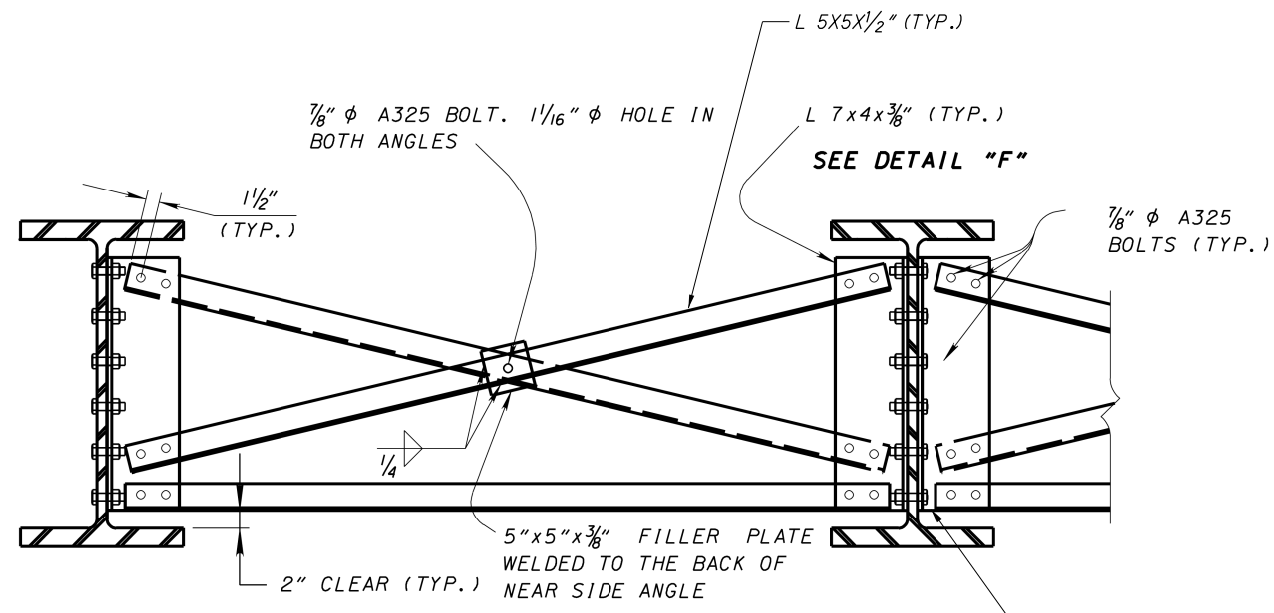
- ⊗ - LIMITS OF SEALING, NON-EPOXY
- ⊠ - LIMITS OF SEALING, EPOXY-URETHANE, SEE NOTE 12.



**BAR SPLICE DETAIL**

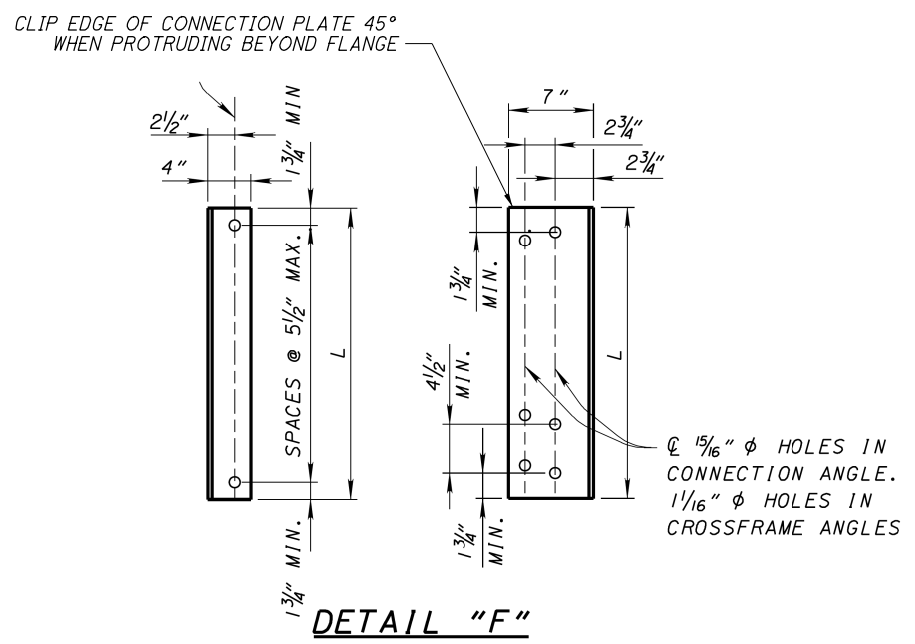
MECHANICAL CONNECTORS SHALL BE ABLE TO DEVELOP 125% OF FULL REBAR YIELD STRENGTH

DESIGN AGENCY: **PRIMEV**  
 8415 Pulaski Place, Suite 300  
 Columbus, Ohio 43240  
 DATE: 10/15/2020  
 REVIEWED: EDW  
 DRAWN: AMT  
 CHECKED: JAT  
 STRUCTURE FILE NUMBER: 4303997  
**TRANSVERSE SECTION**  
 BRIDGE NO. LAK-306-0518  
 SR 306 OVER IR-90  
**LAK-306-5.18**  
 PID No. 104094  
 20/37  
 70/87



**INTERMEDIATE CROSS FRAME**  
(PIER 3, BAY 6 AND 7 ONLY)

FOR BOLT LAYOUT,  
SEE MOMENT PLATE  
RETROFIT DETAILS  
ON SHEET 254/37



**DETAIL "F"**

$L = [D - (2 \times T_f) - 4]$   
WHERE:  
L = LENGTH (INCH)  
D = DEPTH OF ROLLED BEAM (INCH)  
 $T_f$  = THICKNESS OF FLANGE (INCH)

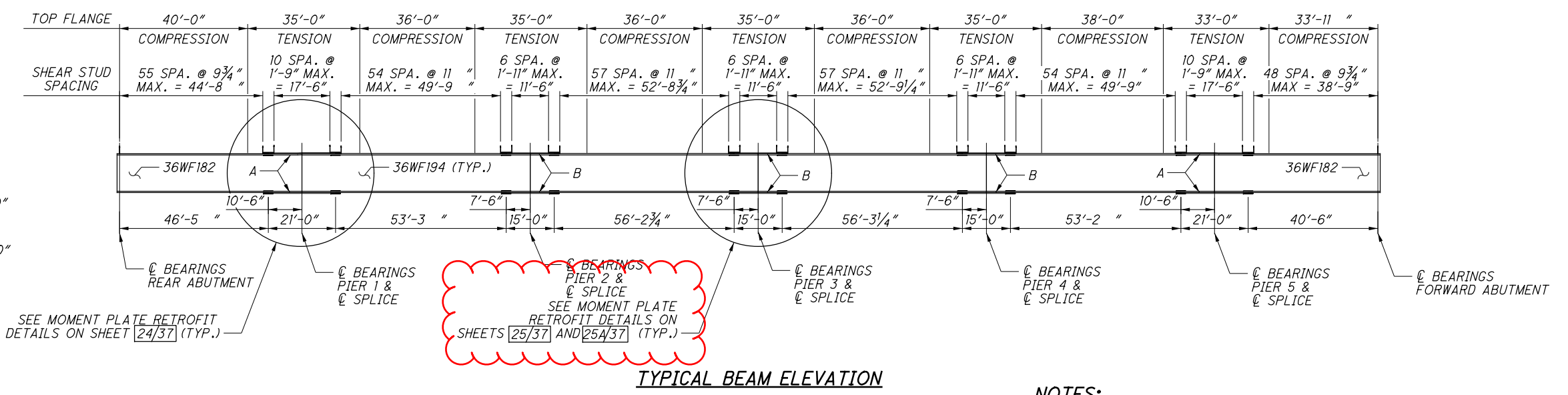
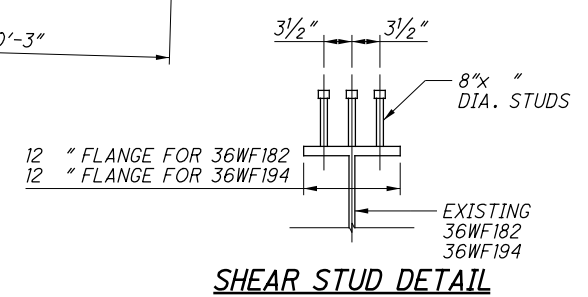
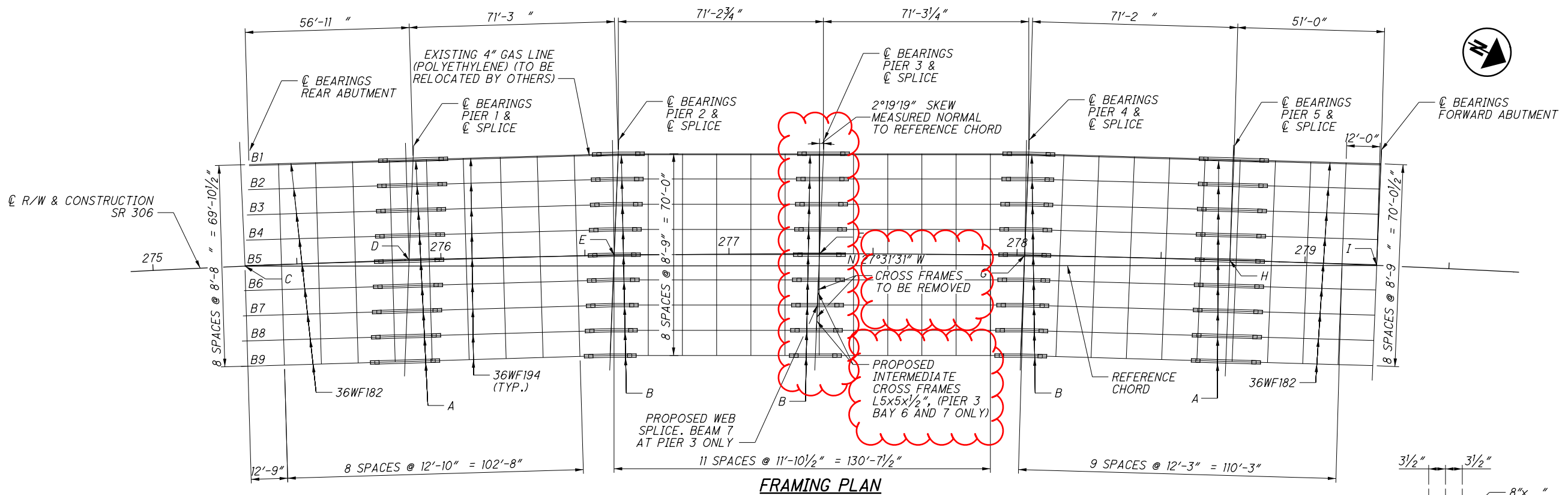
**NOTES:**

1. FOR ADDITIONAL CROSS FRAME DETAILS AND NOTES,  
SEE STANDARD DRAWING GSD-1-19.

DESIGN AGENCY <b>PRIMEVU</b> 8415 Polaris Place, Suite 300 Columbus Ohio 43240	DATE 10/15/2020
	STRUCTURE FILE NUMBER 4303997
REVIEWED EDW	DRAWN AMT
CHECKED JAT	REVISED
<b>INTERMEDIATE CROSS FRAME DETAILS</b> BRIDGE NO. LAK-306-0518 SR 306 OVER IR-90	
LAK-306-5.18 PID No. 104094	20A/37 70A 87



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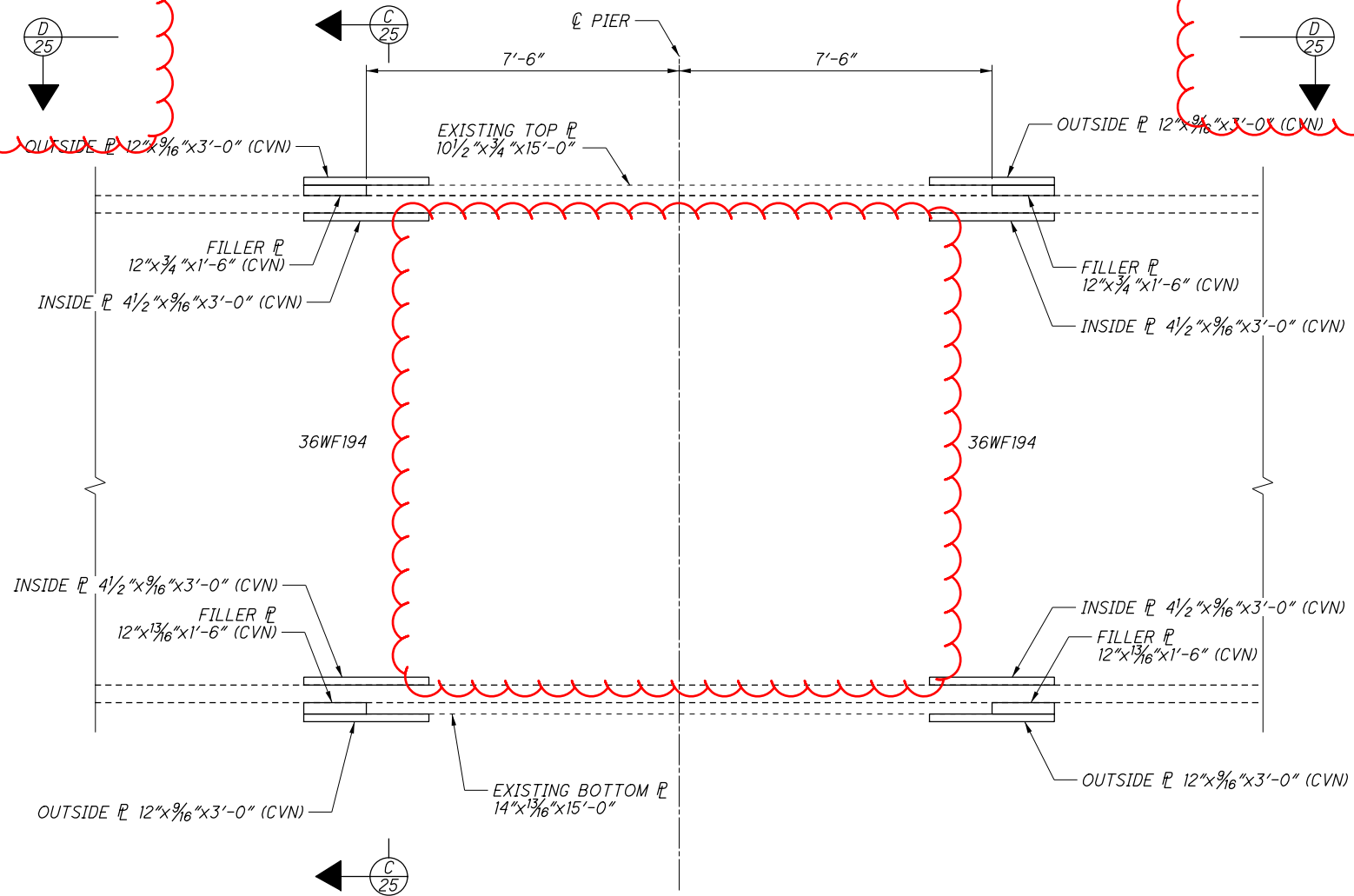


- LEGEND:**
- A: EXISTING TOP 10 1/2"x 15'-0" EXISTING BOTTOM 14"x 21'-0"
  - B: EXISTING TOP 10 1/2"x 15'-0" EXISTING BOTTOM 14"x 15'-0"
  - C: STA. 275 31.94
  - D: STA. 275 88.94
  - E: STA. 276 60.19
  - F: STA. 277 31.44
  - G: STA. 278 02.69
  - H: STA. 278 73.94
  - I: STA. 279 24.94

- NOTES:**
1. 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.
  2. THE CONTRACTOR MAY PLACE THE SHEAR STUDS PARALLEL WITH THE BRIDGE SKEW TO FACILITATE THE PLACEMENT OF THE BRIDGE DECK REINFORCING BARS.
  3. EXISTING BEAM PAINT COLOR SHALL BE FEDERAL STANDARD COLOR 595B-15180 (MEDIUM BLUE, GLOSS).

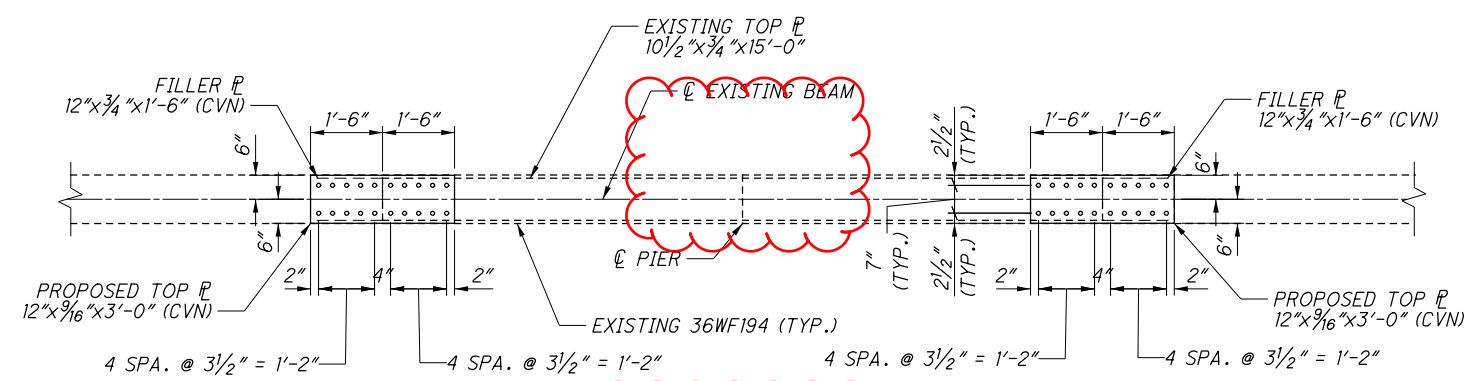
	<b>PRIMEV</b> <small>8415 Pulaski Place, Suite 300 Columbus, Ohio 43240</small>	DESIGN AGENCY DATE 10/15/2020	REVIEWED CCJ	STRUCTURE FILE NUMBER 4303997
<b>FRAMING PLAN AND EAM ELEVATION</b>	BRIDGE NO. LAK-306-0518 SR 306 OVER I-90	DESIGNED AMT CHECKED KDC	DRAWN AMT REVISED	STRUCTURE FILE NUMBER 4303997
<b>LAK-306-5.18</b> PID No. 104094	23/37 73 87			

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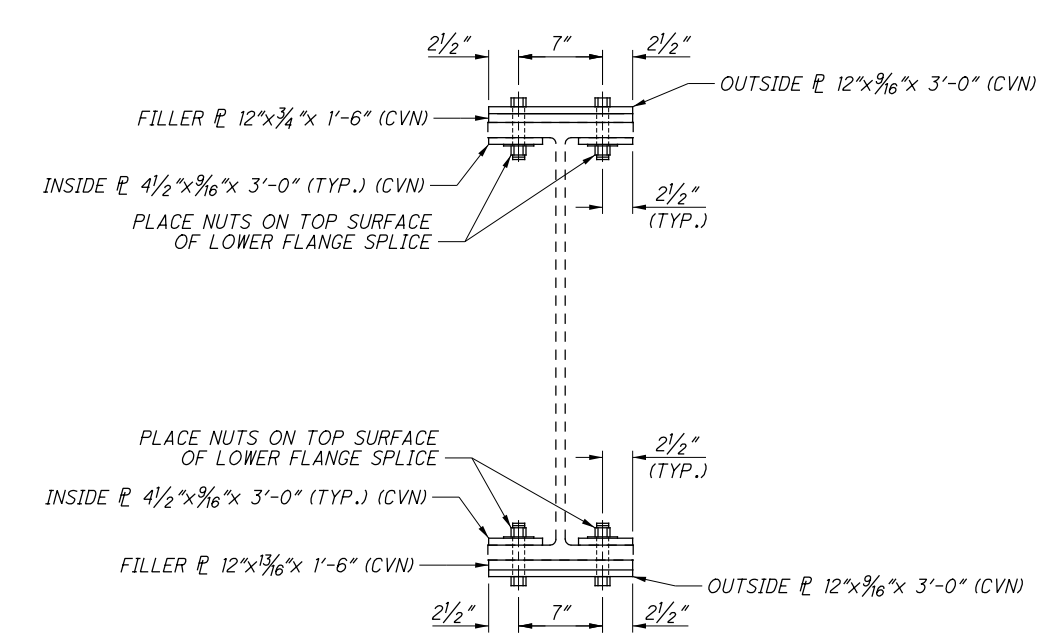


**MOMENT PLATE RETROFIT DETAIL**

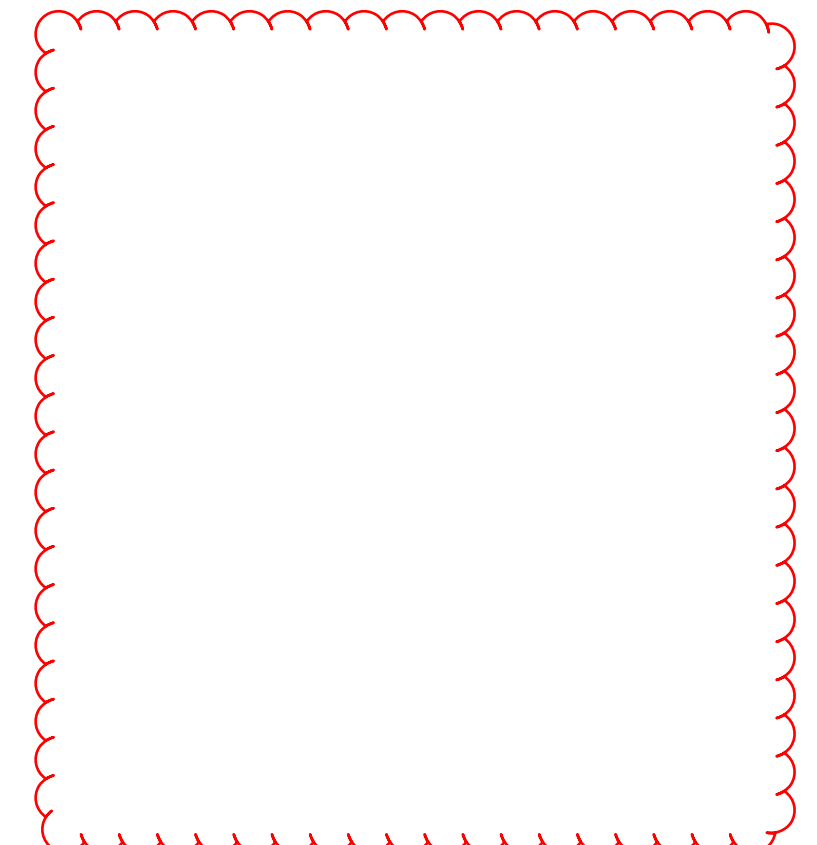
(DETAIL AT PIER 3 SHOWN; DETAIL AT PIERS 2 AND 4 SIMILAR)



**D-25 VIEW**



**C-25 SECTION**

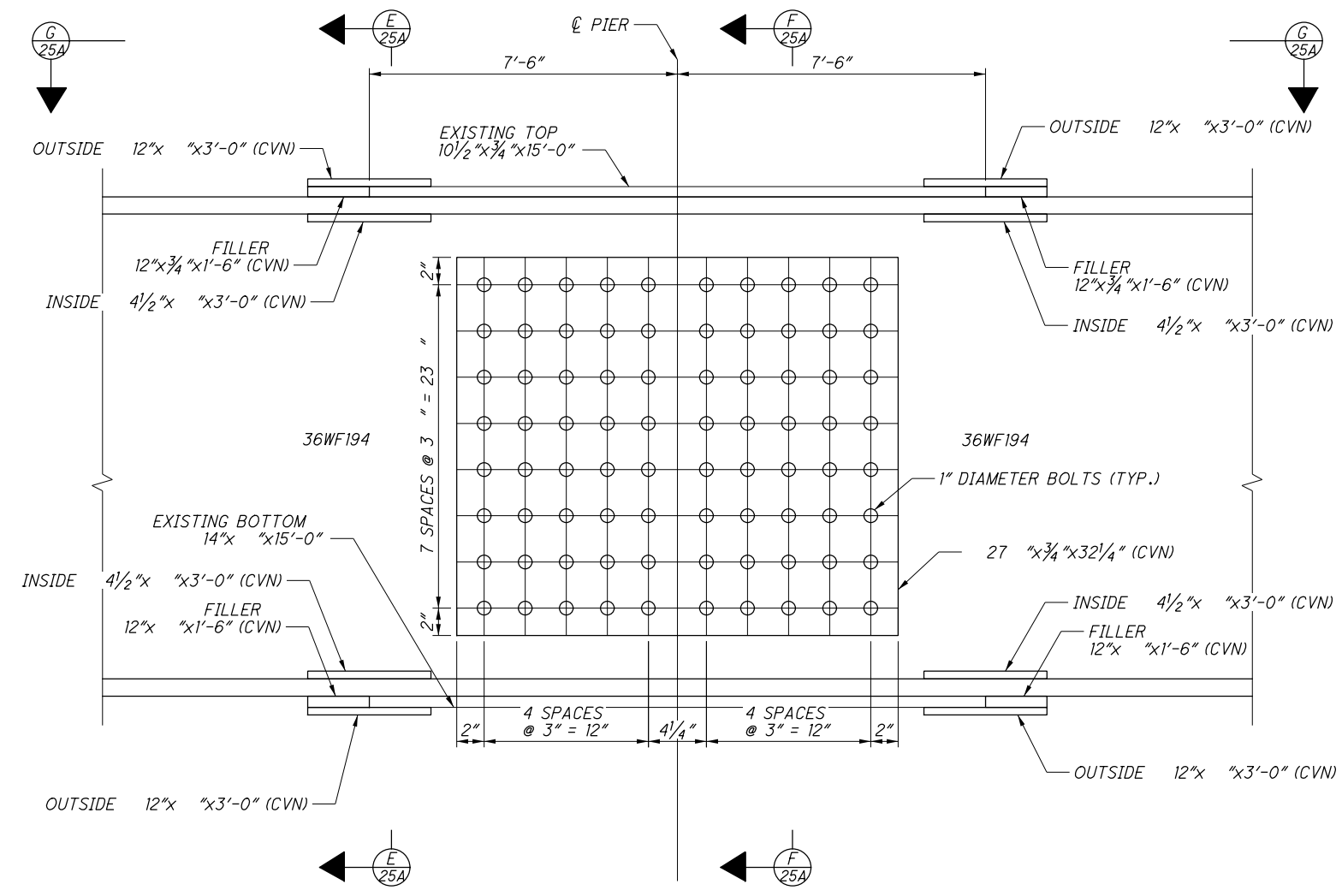


**NOTES:**

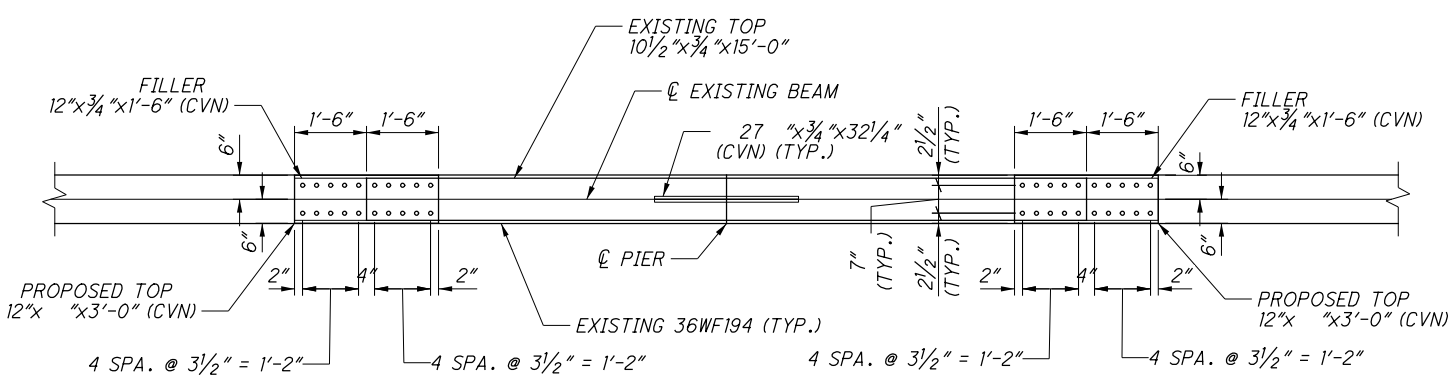
1. ALL NEW STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
2. WHERE A SHAPE OF PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER HIGH STRENGTH, ASTM A325 UNLESS OTHERWISE NOTED.

DESIGN AGENCY <b>PRIMEV</b> 8415 Pulaski Place Columbus, Ohio 43240	DATE 10/15/2020	REVIEWED CCJ	DRAWN AMT	DESIGNED AMT	CHECKED JAT
	STRUCTURE FILE NUMBER 4303997				
<b>MOMENT PLATE DETAILS (PIERS 2, 3, AND 4)</b>					
BRIDGE NO. LAK-306-0518 SR 306 OVER IR-90					
<b>LAK-306-5.18</b> PID No. 104094					
25 / 37					
75 87					

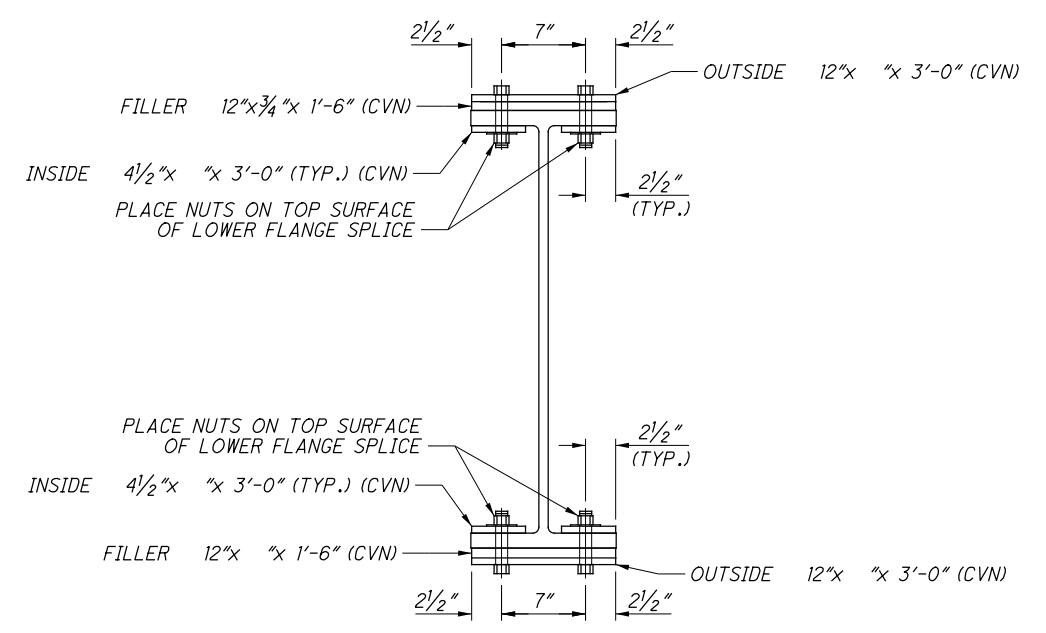
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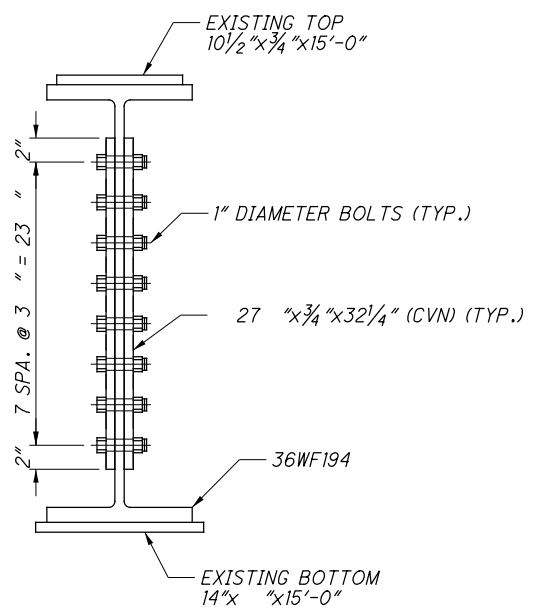
**MOMENT PLATE RETROFIT AND WEB SPLICE DETAIL**  
(DETAIL AT PIER 3, BEAM 7 ONLY)



**G VIEW**  
25A



**E SECTION**  
25A



**F SECTION**  
25A

**NOTES:**

1. ALL NEW STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 50.
2. WHERE A SHAPE OF PLATE IS DESIGNATED (CVN), FURNISH MATERIAL THAT MEETS THE MINIMUM NOTCH TOUGHNESS REQUIREMENTS AS SPECIFIED IN 711.01.
3. HIGH STRENGTH BOLTS SHALL BE 1" DIAMETER HIGH STRENGTH, ASTM A325 UNLESS OTHERWISE NOTED.

DESIGN AGENCY  
**PRIMEV**  
8415 Pulaski Place, Suite 300  
Columbus, Ohio 43240

DATE 10/15/2020  
REVIEWED CCJ  
DRAWN AMT  
CHECKED JAT  
DESIGNED AMT  
STRUCTURE FILE NUMBER 4303997

**MOMENT PLATE DETAILS PIER 3 EAM ONL**  
BRIDGE NO. LAK-306-0518  
SR 306 OVER IR-90

LAK-306-5.18  
PID No. 104094

25A/37

75A  
87