



**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET**
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Matthew G. Bevin
Governor

Greg Thomas
Secretary

March 17, 2017

CALL NO. 200
CONTRACT ID NO. 171206
ADDENDUM # 1

Subject: Garrard-Mercer County, 121GR17D004-STP
Letting March 24, 2017

- (1) Revised - Plans - S21, S62 and S63
- (2) Revised - Material Summary - Pages 200-204 of 269
- (3) Revised - Wage Rates - Pages 245-259 of 269
- (4) Revised - Bid Items - Pages 265-269 of 269
- (5) Added - Special Notes - Pages 1-42 of 42

Proposal revisions are available at <http://transportation.ky.gov/Construction-Procurement/>.

Plan revisions are available at <http://www.lynnimaging.com/kytransportation/>.

If you have any questions, please contact us at 502-564-3500.

Sincerely,

A handwritten signature in cursive script that reads "Rachel Mills".

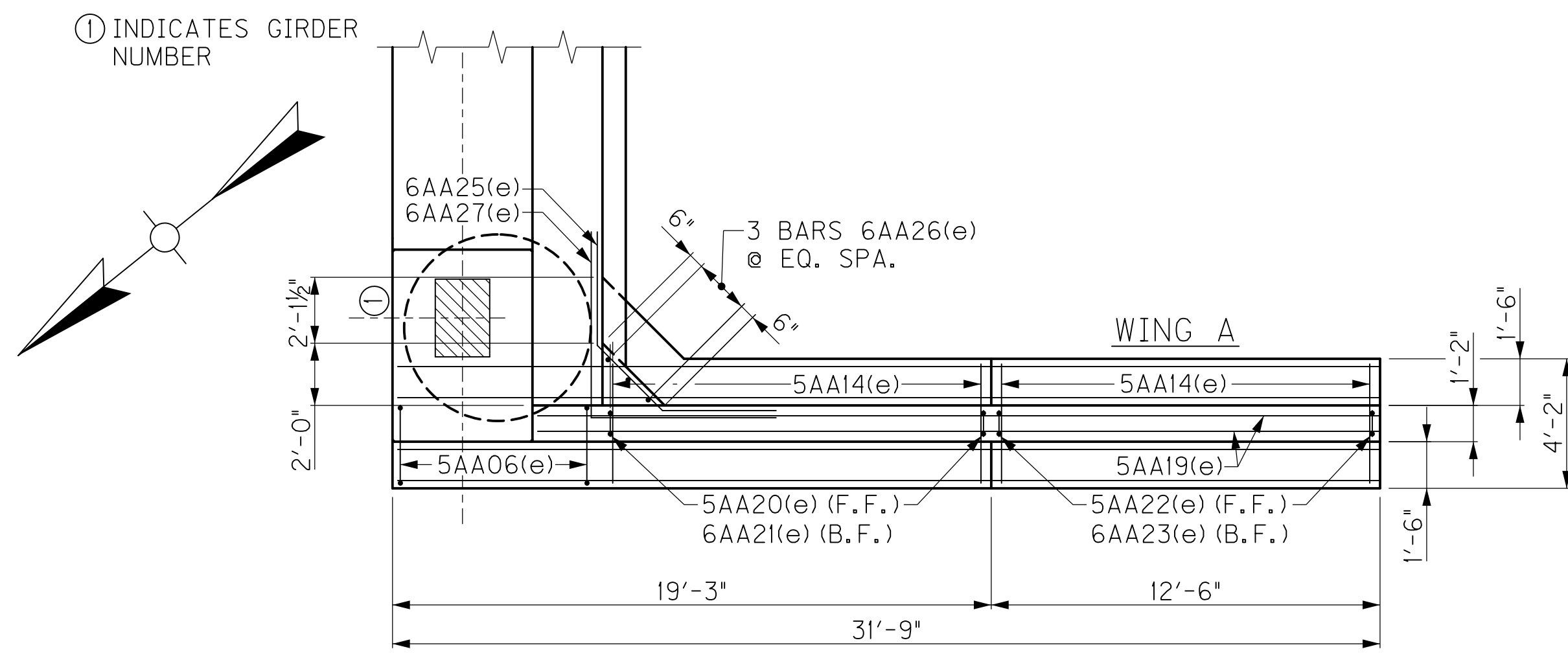
Rachel Mills, P.E.
Director
Division of Construction Procurement

RM:ks
Enclosures

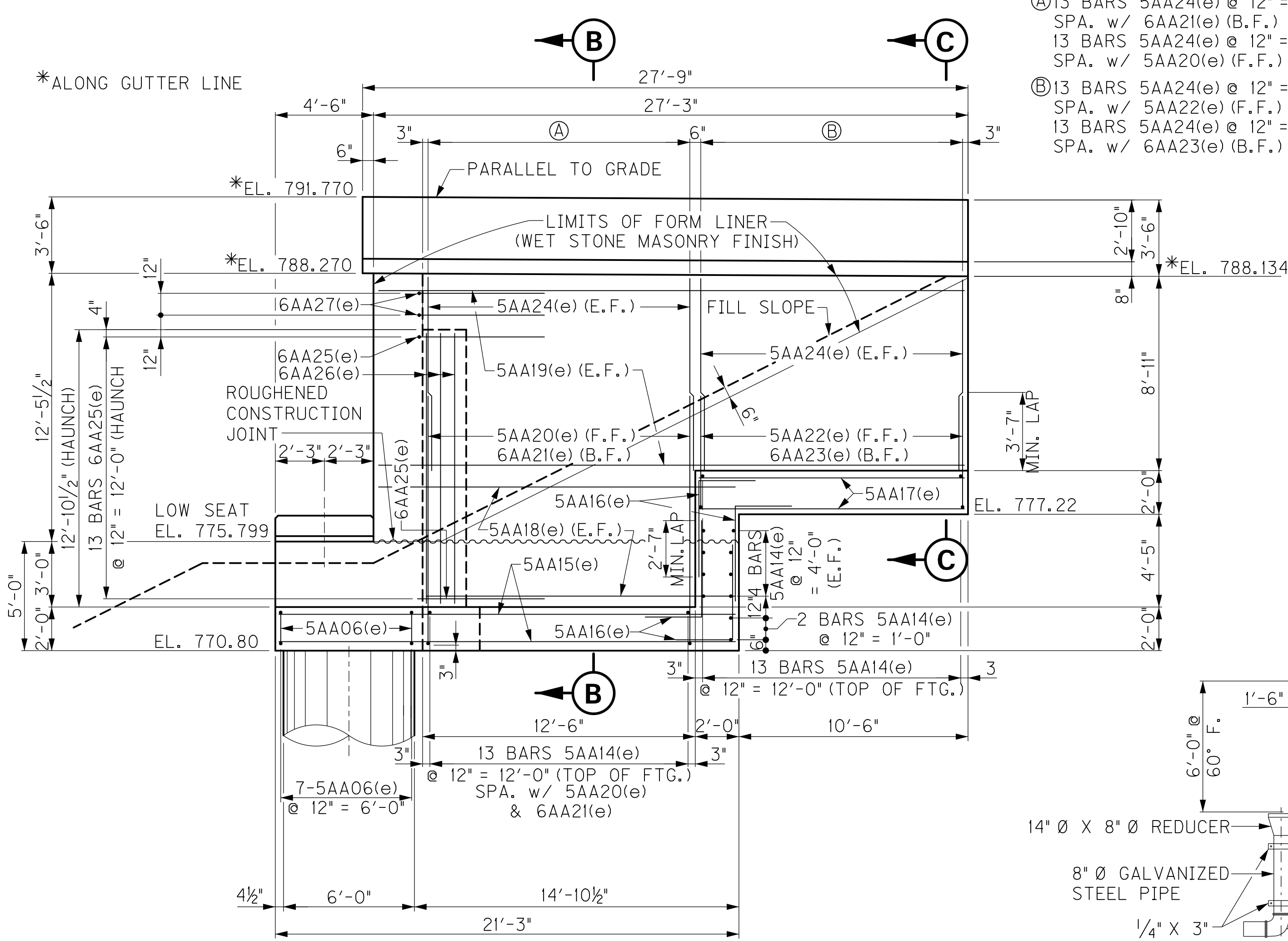


An Equal Opportunity Employer M/F/D

FILE NAME: P:\STRUCT\MERCER-GARRARD, KY 152\FINAL DESIGN\DON FILES\REVISED 03_15_17\21-ABUTMENT 1 - WINGWALL DETAILS.DGN
 USER: eodell
 DATE PLOTTED: March 16, 2017
 E-SHEET NAME:
 MicroStation v8.11.9.655

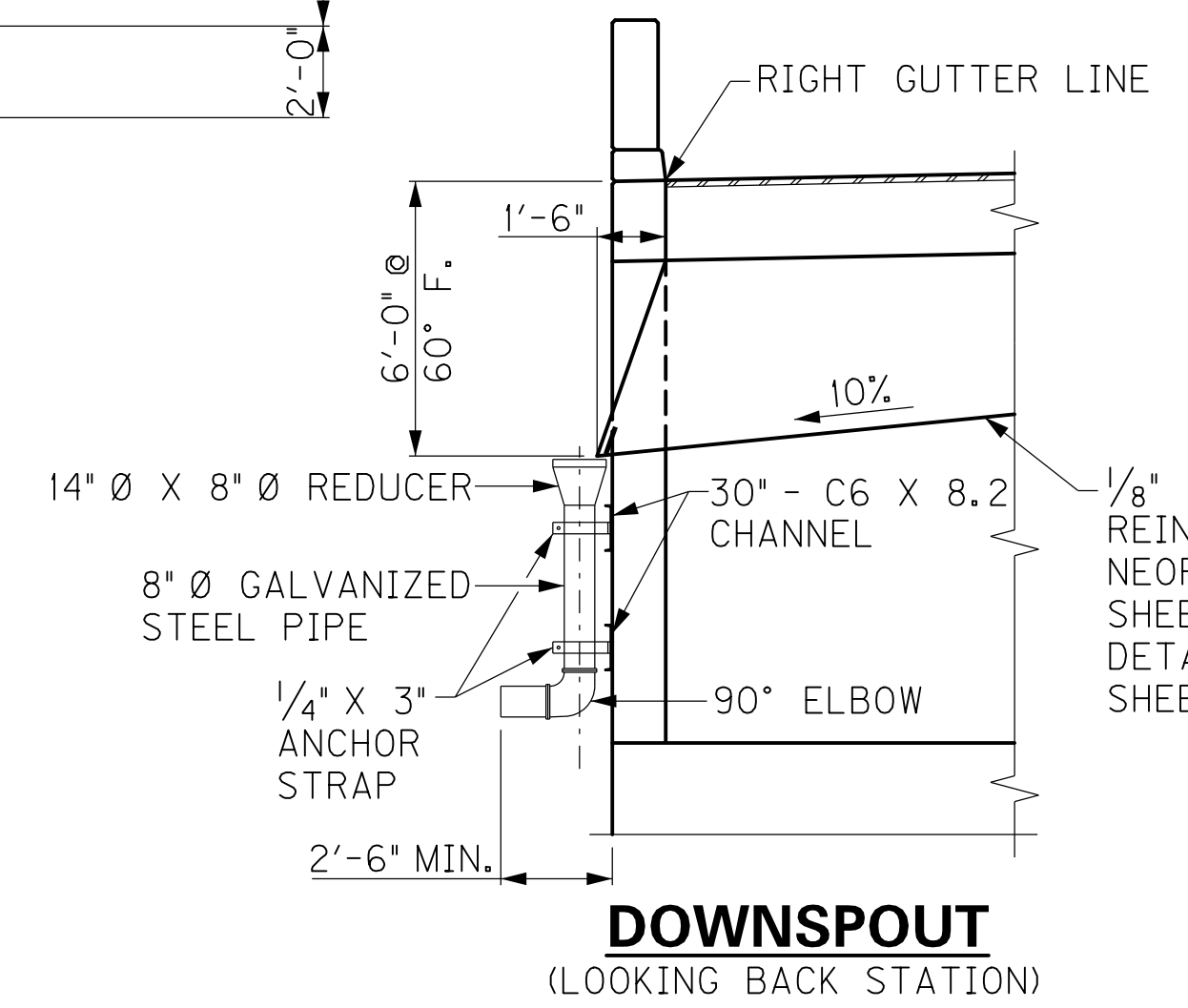


TYPICAL WING PLAN
(WINGWALL A SHOWN, WINGWALL B SIMILAR)

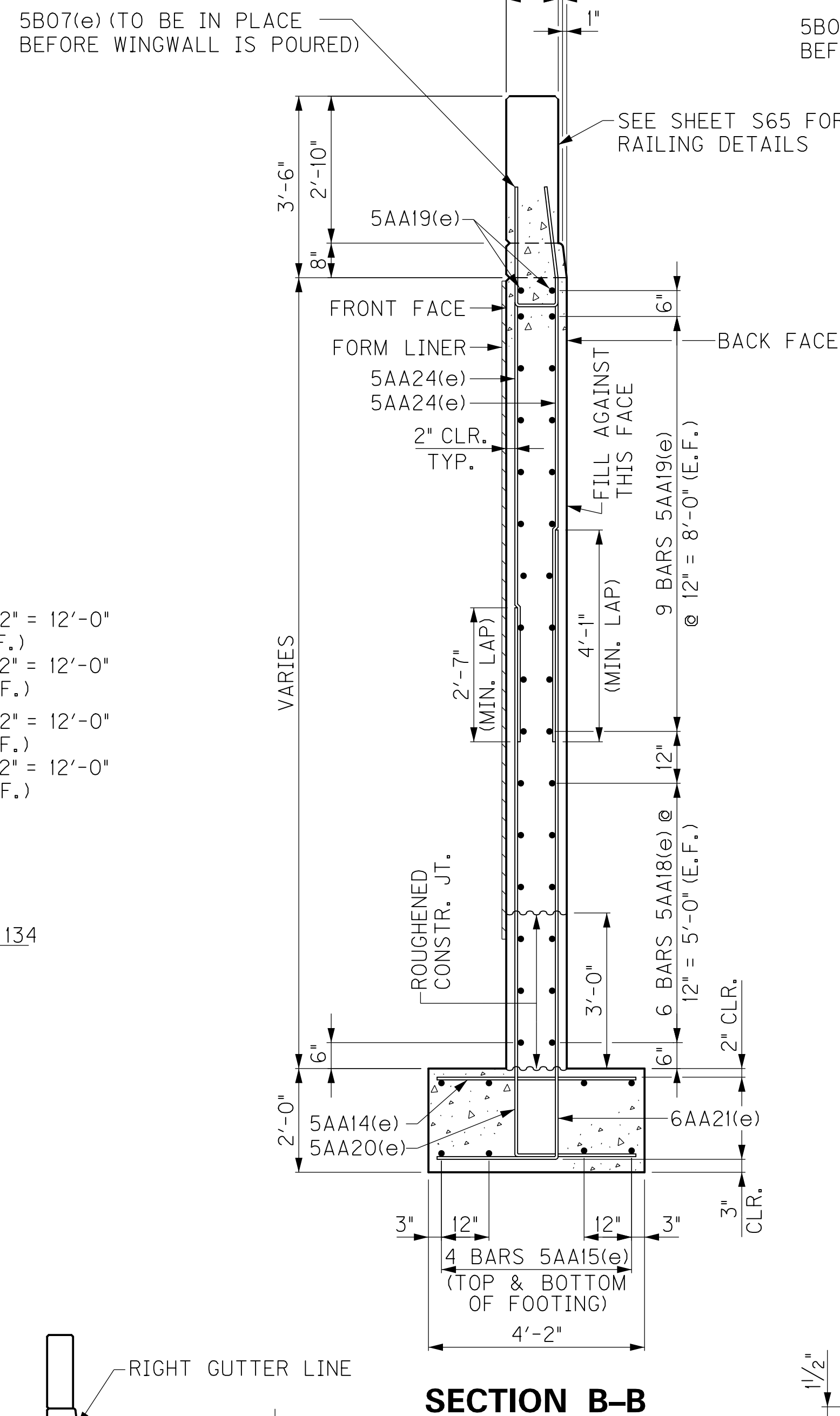


TYPICAL WING ELEVATION
(WINGWALL A SHOWN, WINGWALL B SIMILAR)

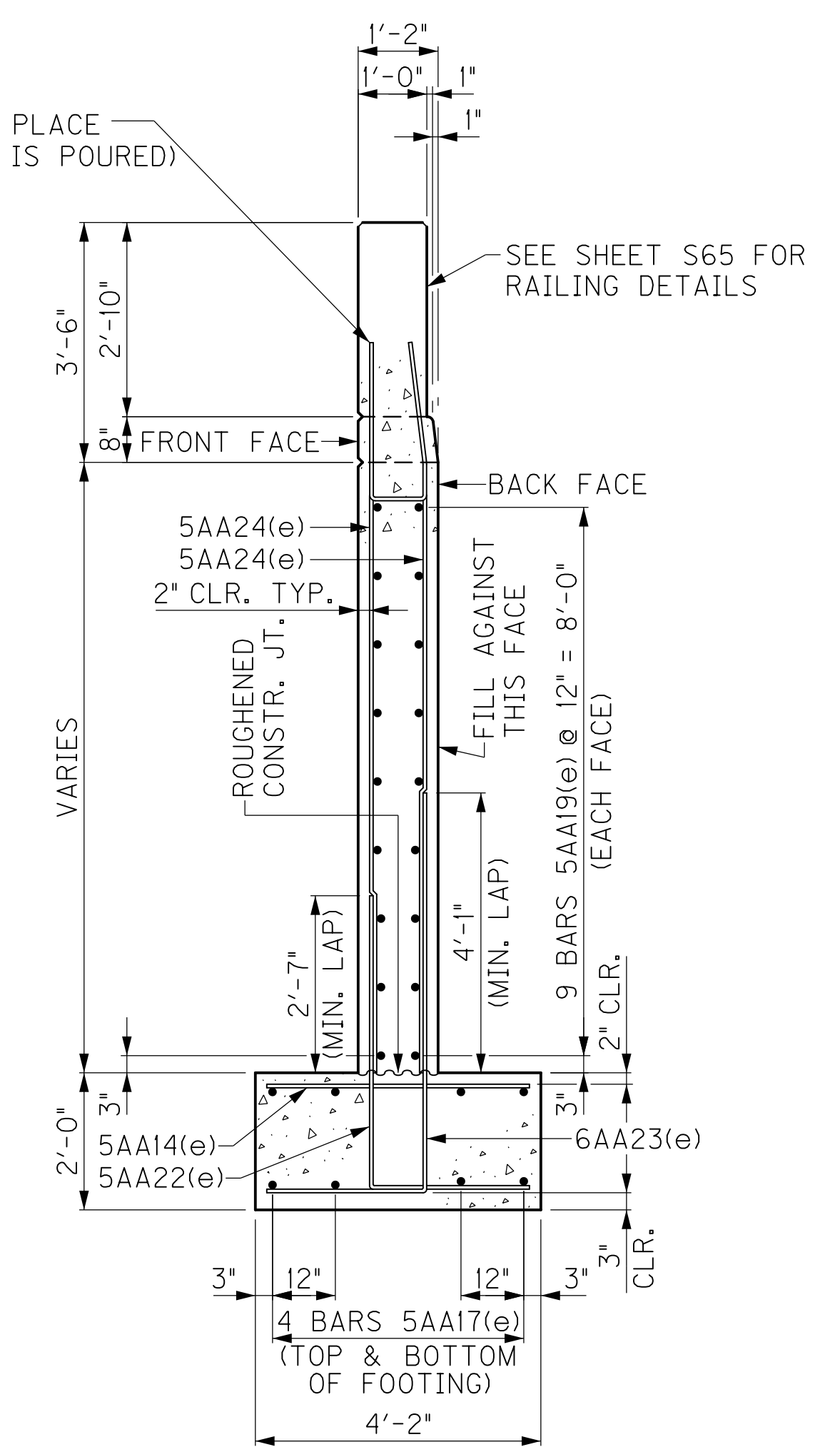
- Ⓐ 13 BARS 5AA24(e) @ 12" = 12'-0" SPA. w/ 6AA21(e) (B.F.)
- 13 BARS 5AA24(e) @ 12" = 12'-0" SPA. w/ 5AA20(e) (F.F.)
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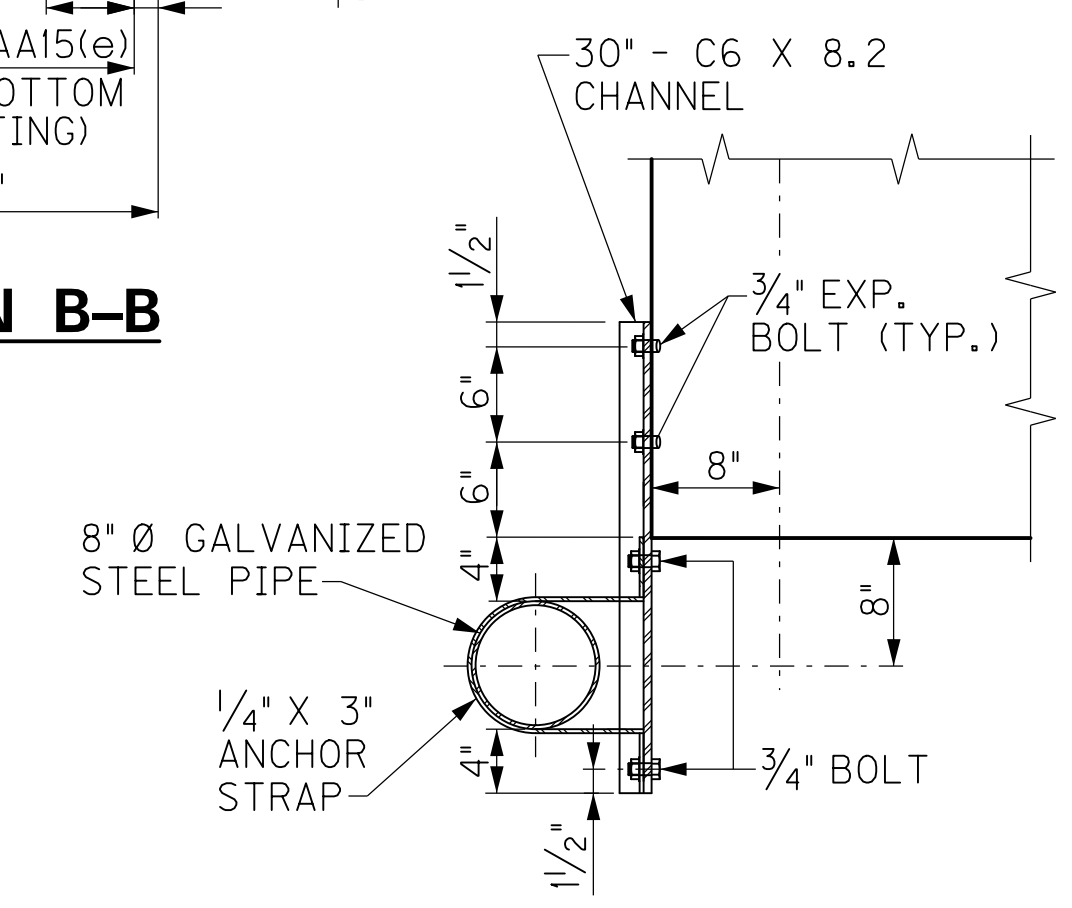
DOWNSPOUT
(LOOKING BACK STATION)



SECTION B-B



SECTION C-C

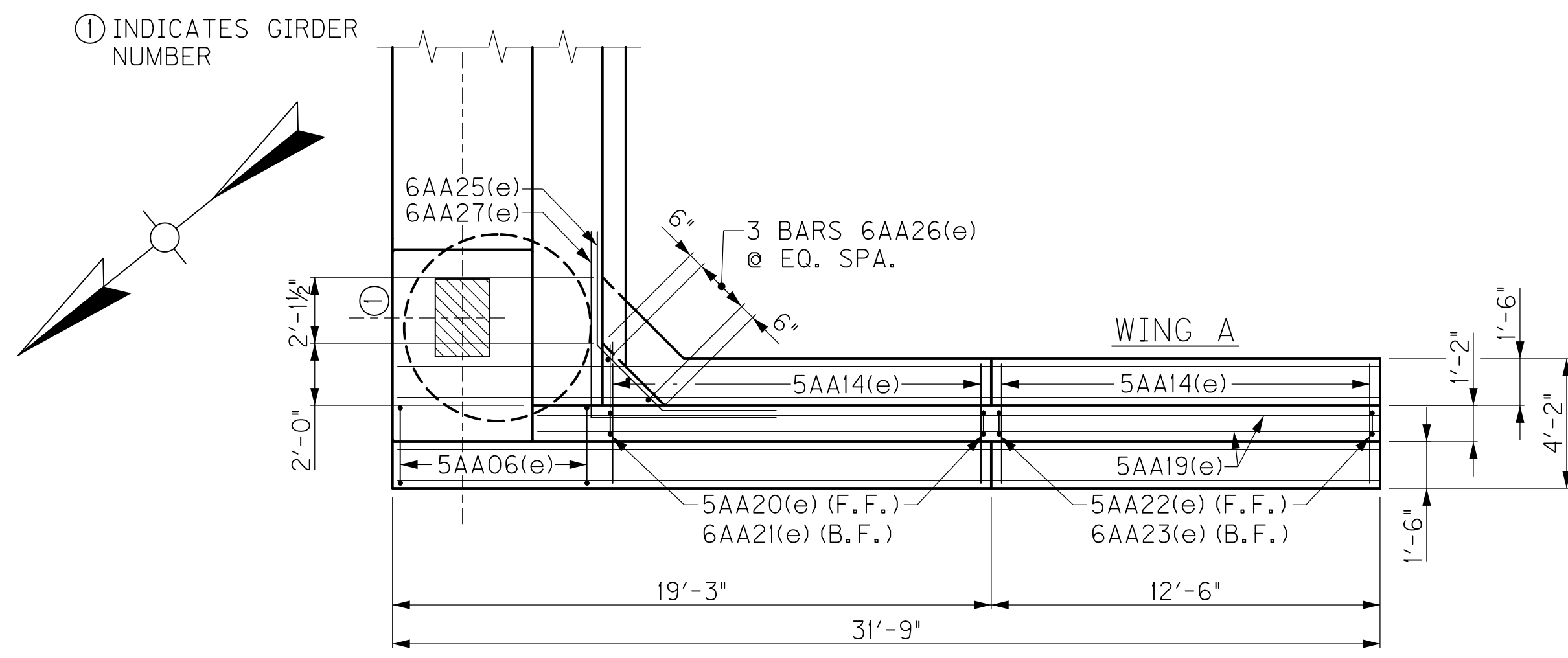


ANCHOR STRAP DETAIL

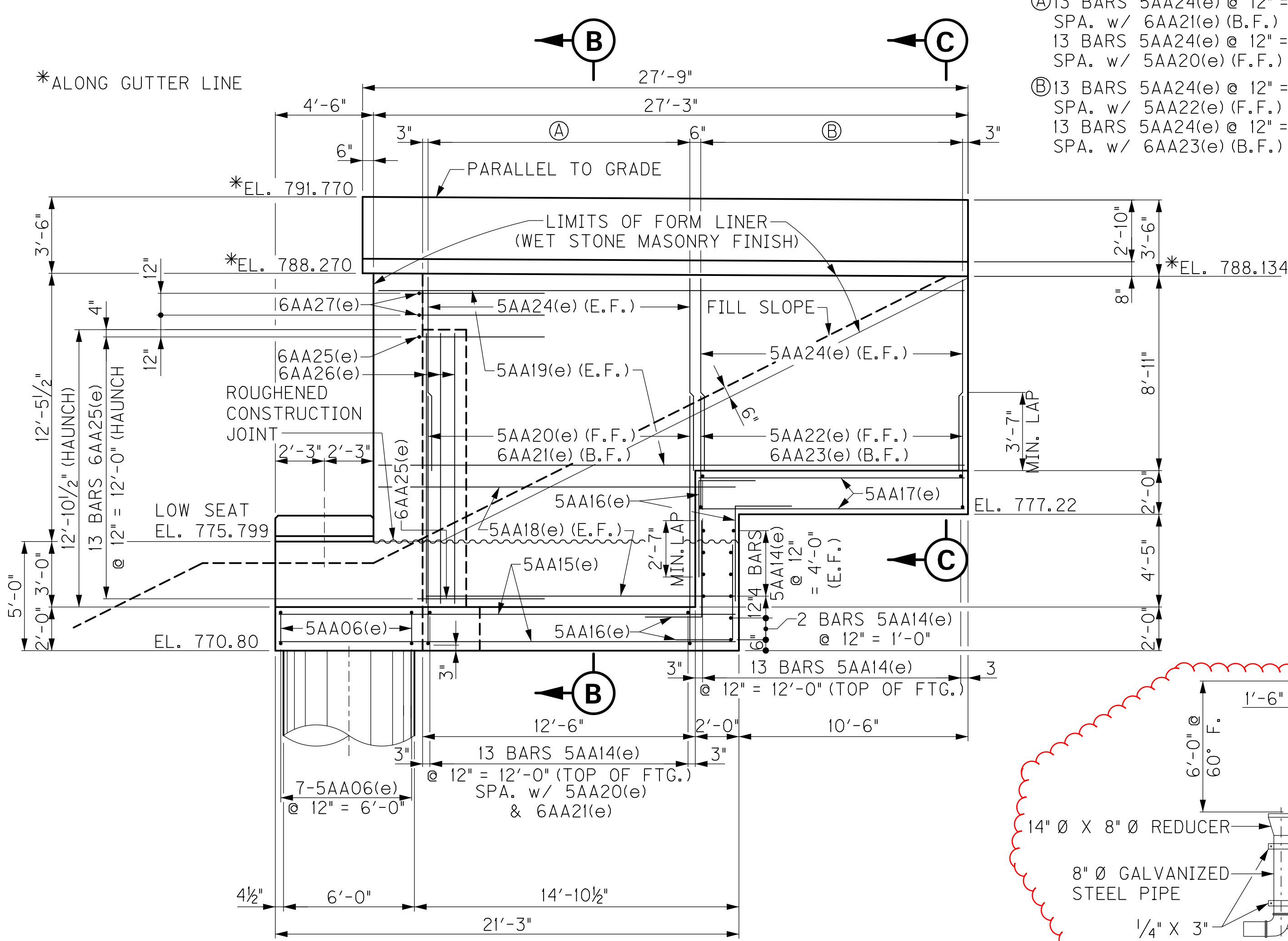
ITEM NUMBER	07-1116.00
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REVISION		DATE
DATE: 07-2016	DESIGNED BY: CGM	CHECKED BY: CDB
DESIGNED BY: CGM	DATE: 07-2016	CHECKED BY: CDB
Commonwealth of Kentucky DEPARTMENT OF HIGHWAYS COUNTY: MERCER - GARRARD		
ROUTE: KY 152	CROSSING: HERRINGTON LAKE	
ABUTMENT 1 WINGWALLS DETAILS		
PREPARED BY: WM3	SINCE 1957	SHEET NO. S21
ENGINEERING IN EXCELLENCE		DRAWING NO. 27207

FILE NAME: P:\STRUCT\MERCER-GARRARD, KY 152\FINAL DESIGN\DON FILES\REVISED 03_15_17\21-ABUTMENT 1 - WINGWALL DETAILS.DGN
 USER: eodell DATE PLOTTED: March 16, 2017
 E-SHEET NAME: MicroStation v8.11.9.655



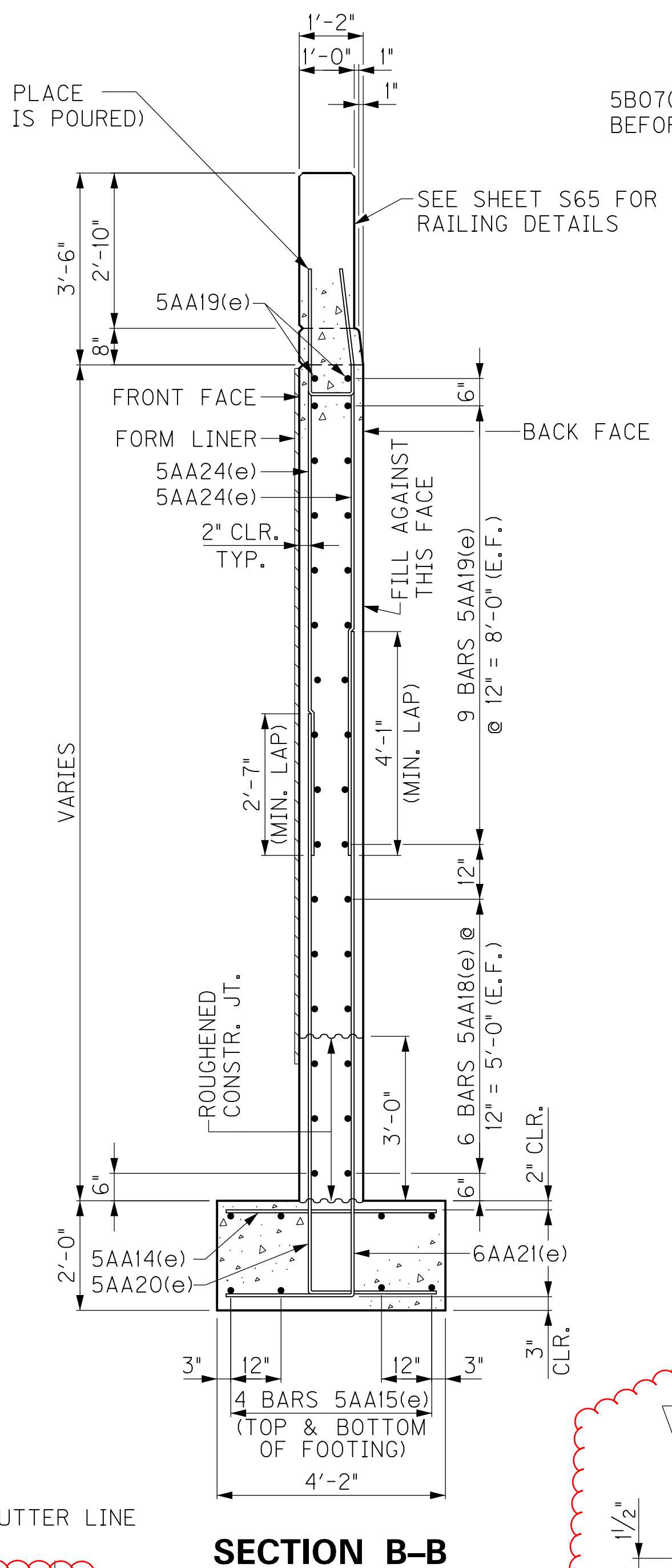
TYPICAL WING PLAN
(WINGWALL A SHOWN, WINGWALL B SIMILAR)



TYPICAL WING ELEVATION
(WINGWALL A SHOWN, WINGWALL B SIMILAR)

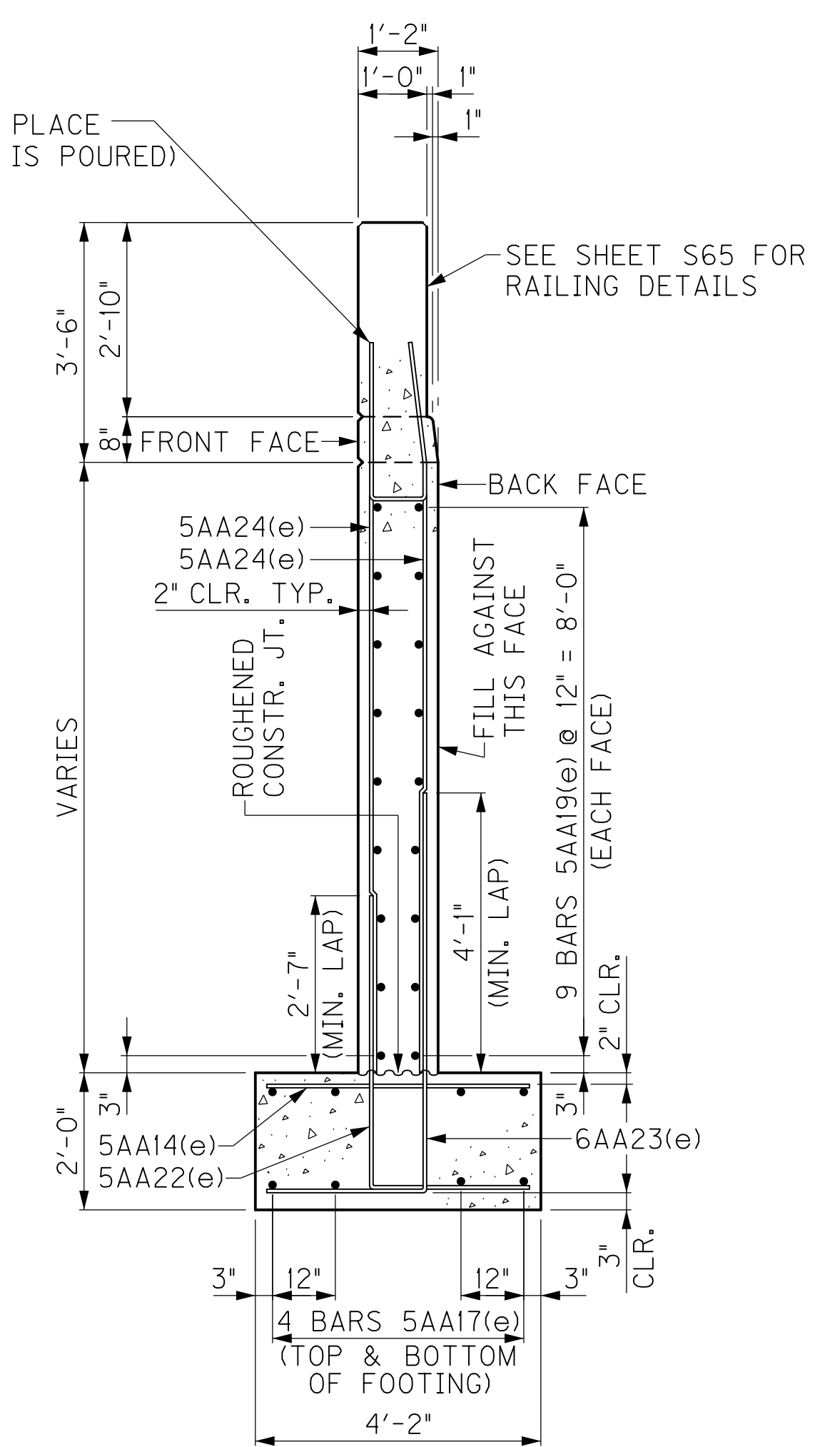
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- 13 BARS 5AA24(e) @ 12" = 12'-0" SPA. w/ 6AA23(e) (B.F.)

5B07(e) (TO BE IN PLACE BEFORE WINGWALL IS POURED)

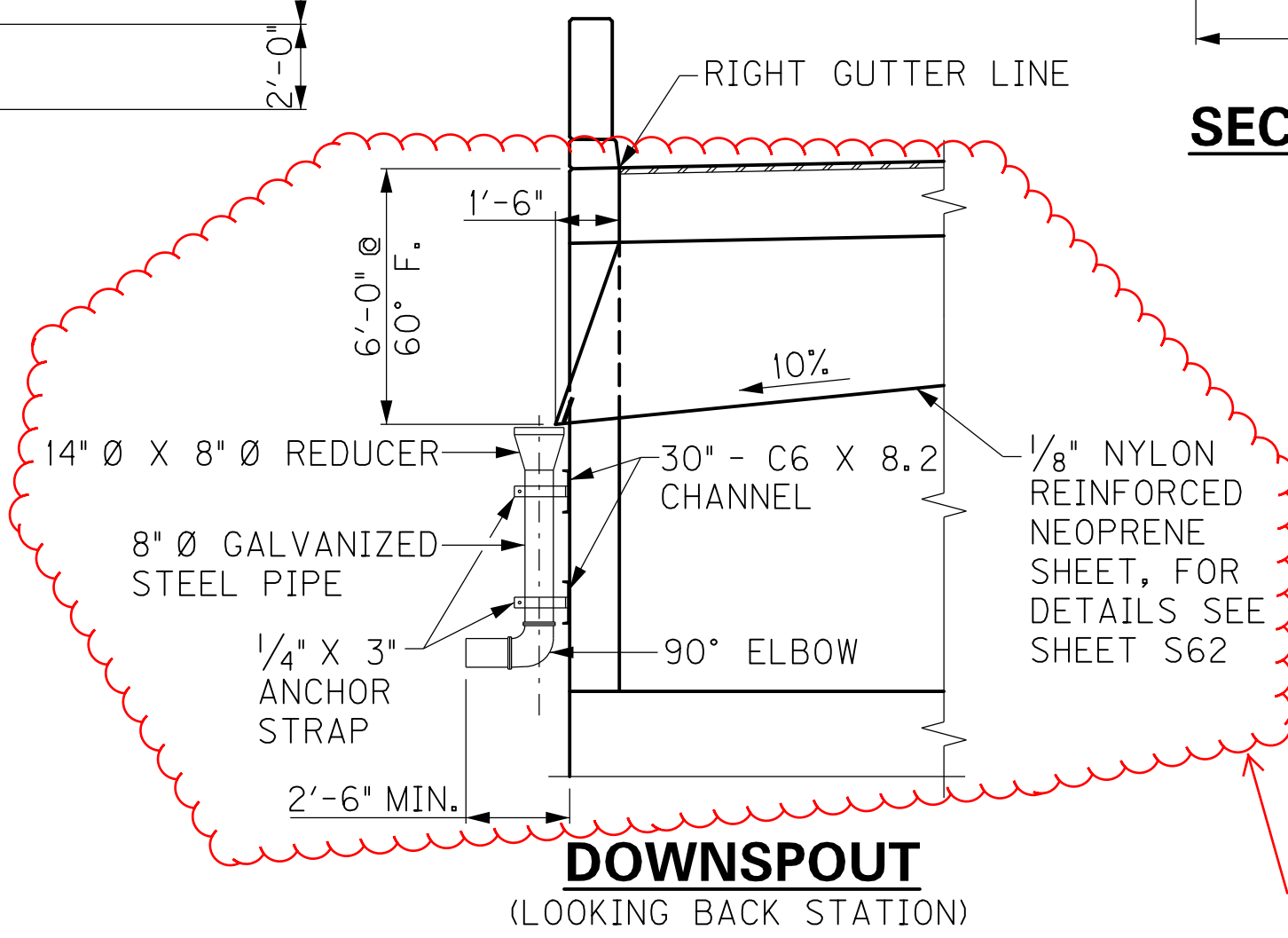


SECTION B-B

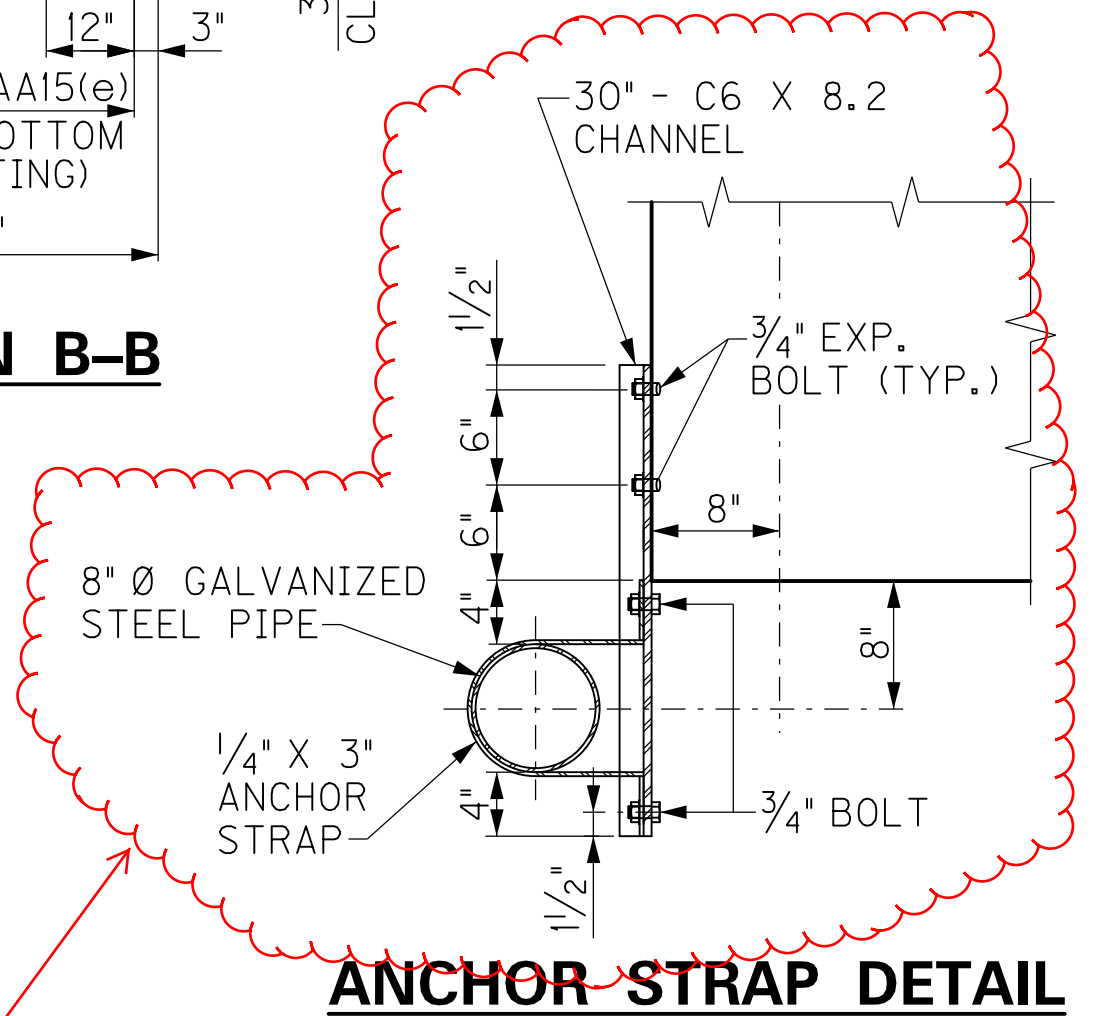
5B07(e) (TO BE IN PLACE BEFORE WINGWALL IS POURED)



SECTION C-C



DOWNSPOUT
(LOOKING BACK STATION)



ANCHOR STRAP DETAIL

REVISION	DATE

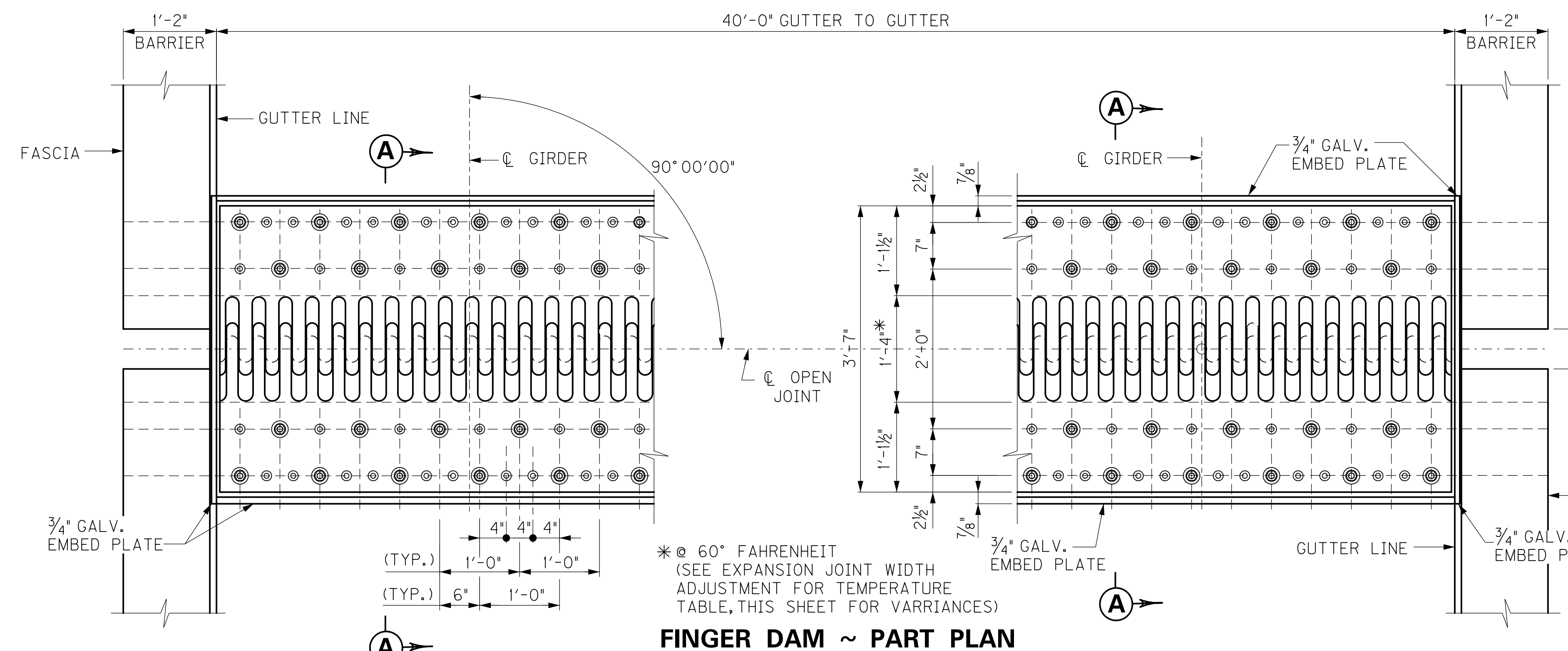
DATE: 07-2016
 DESIGNED BY: CGM
 CHECKED BY: CDB
 DETAILED BY: DWW

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
 COUNTY
MERCER - GARRARD

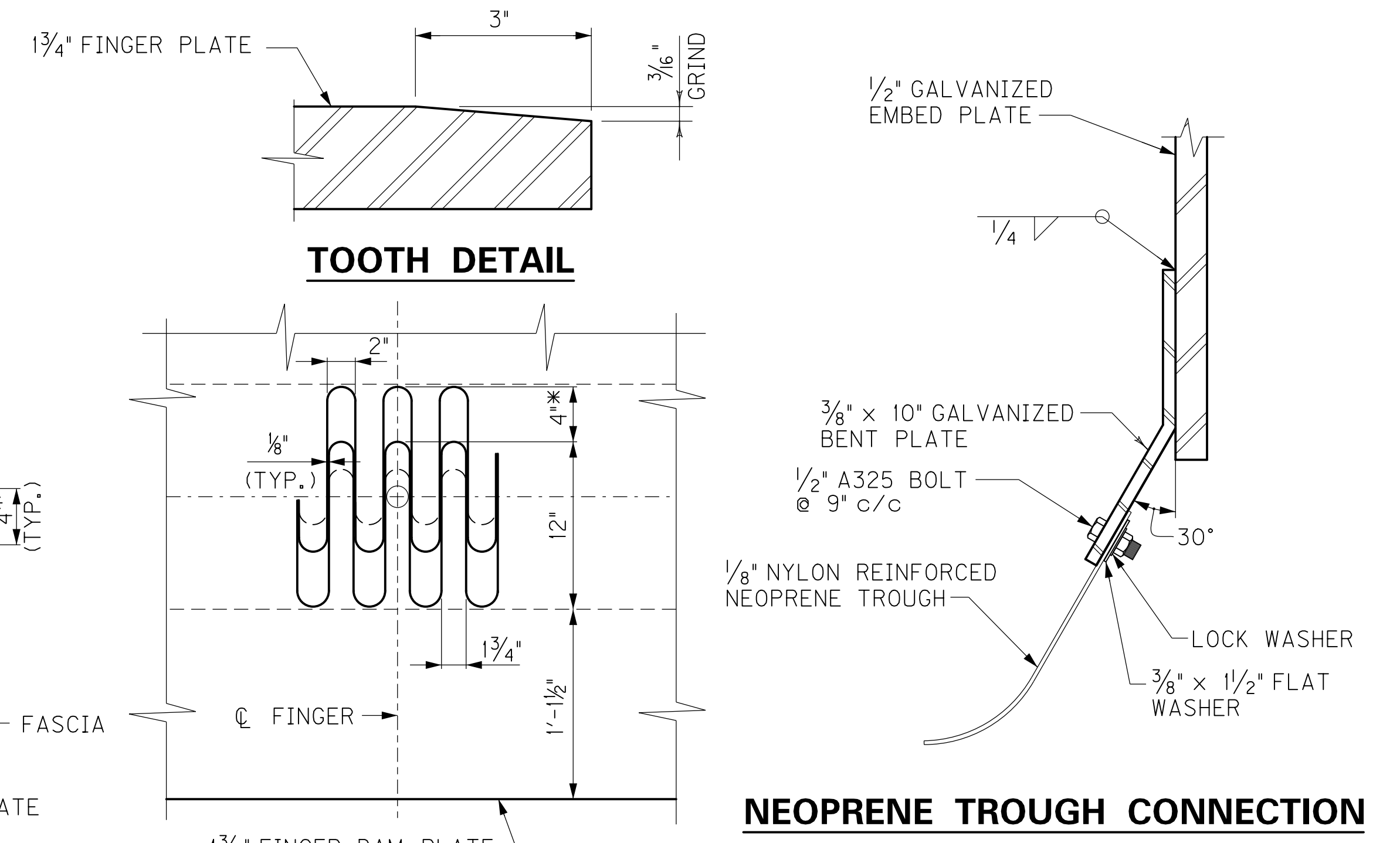
ROUTE: KY 152
 CROSSING: HERRINGTON LAKE
ABUTMENT 1 WINGWALLS DETAILS

ITEM NUMBER: 07-1116.00
 PREPARED BY: WMB SINCE 1957
 ENGINEERING IN EXCELLENCE
 SHEET NO. S21
 DRAWING NO. 27207

FILE NAME: P:\STRUCT\MERCER-GARRARD, KY 152\FINAL DESIGN\CON FILES\REVISED 03_15_17\162-JOINT DETAIL - ABUTMENT 1.DGN
 USER: eodell
 DATE PLOTTED: March 16, 2017
 E-SHEET NAME: MicroStation v8.11.9.655

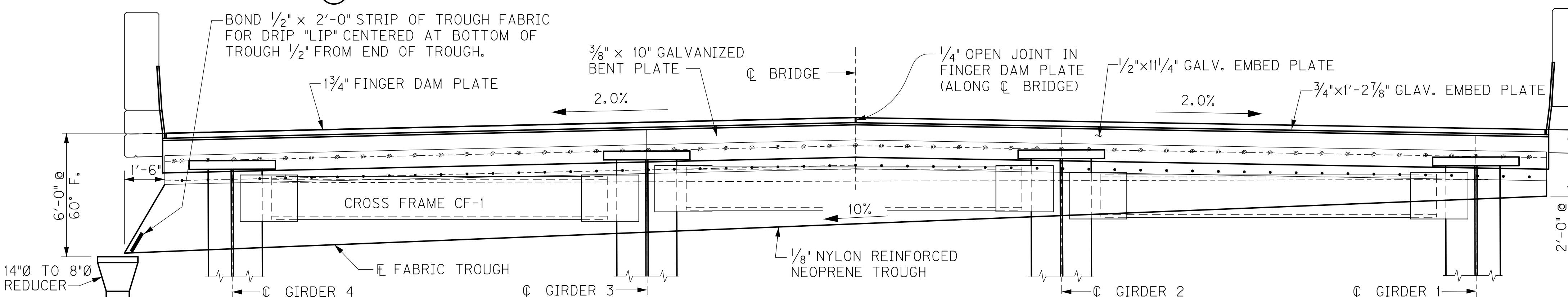


FINGER DAM ~ PART PLAN



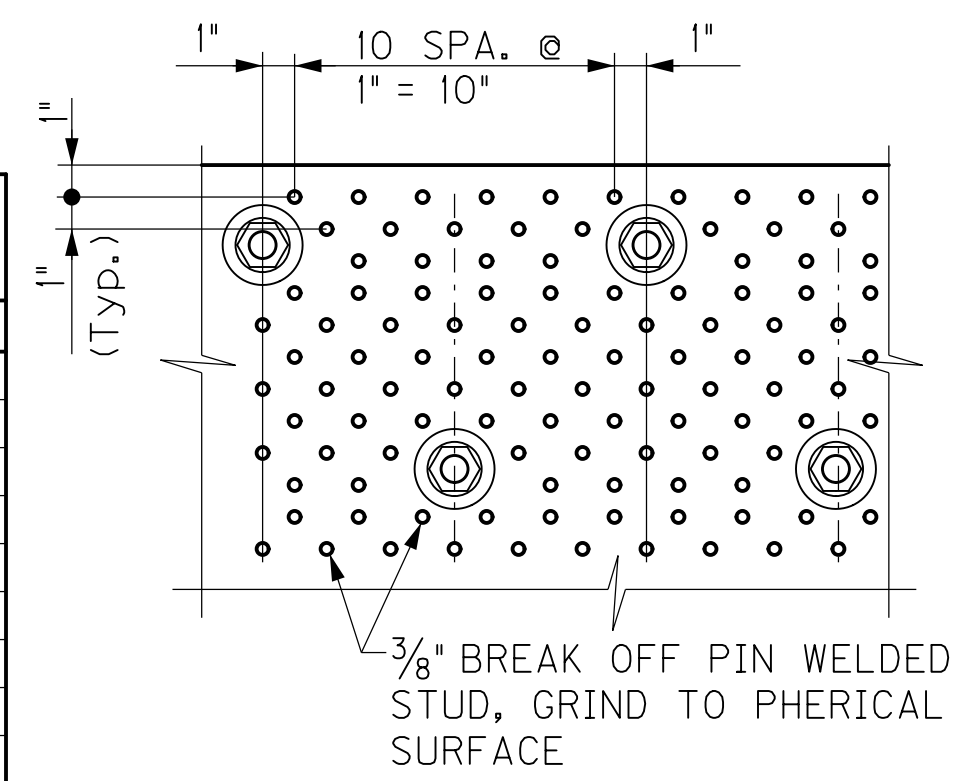
TOOTH DETAIL

NEOPRENE TROUGH CONNECTION

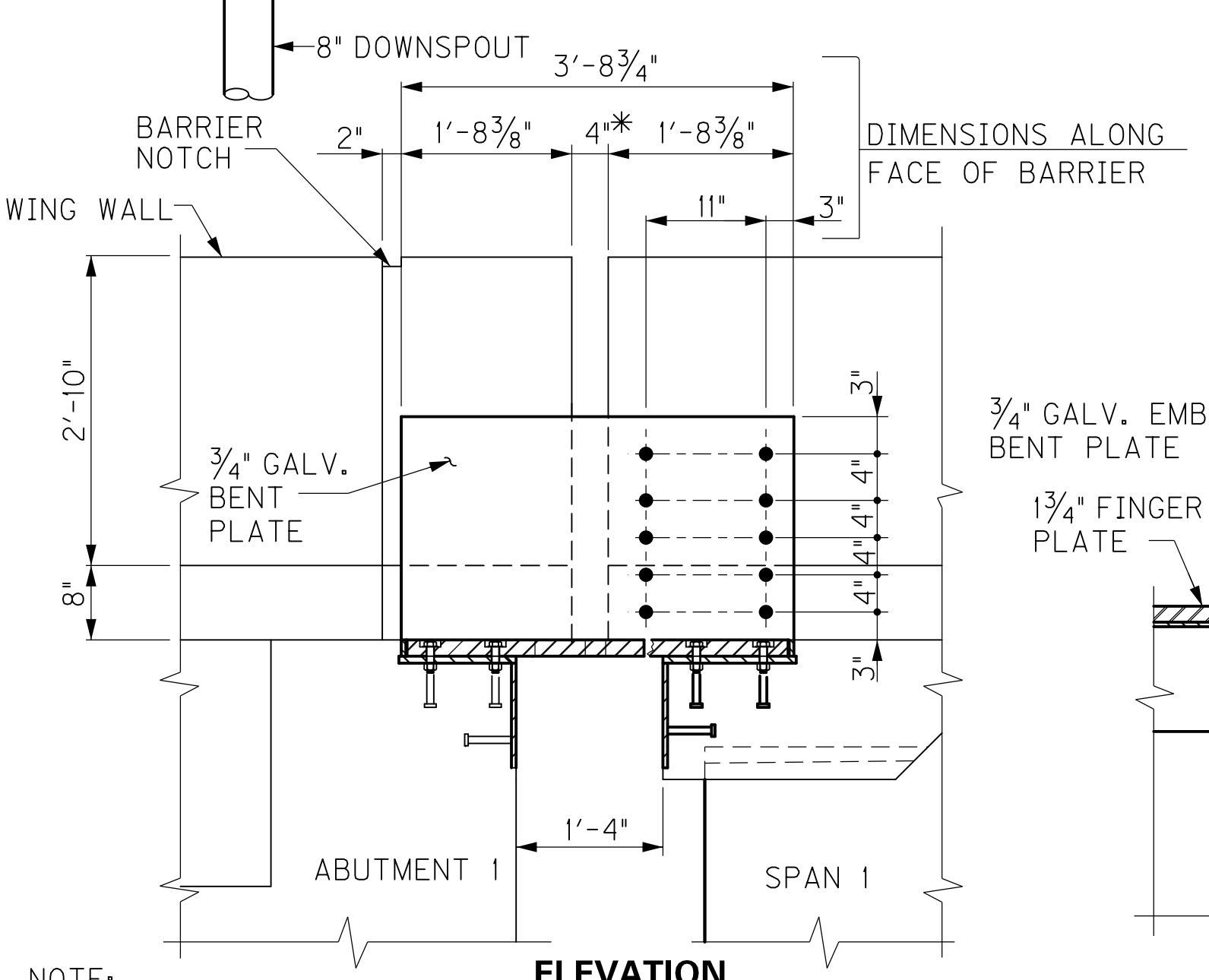


ELEVATION OF DRAIN TROUGH

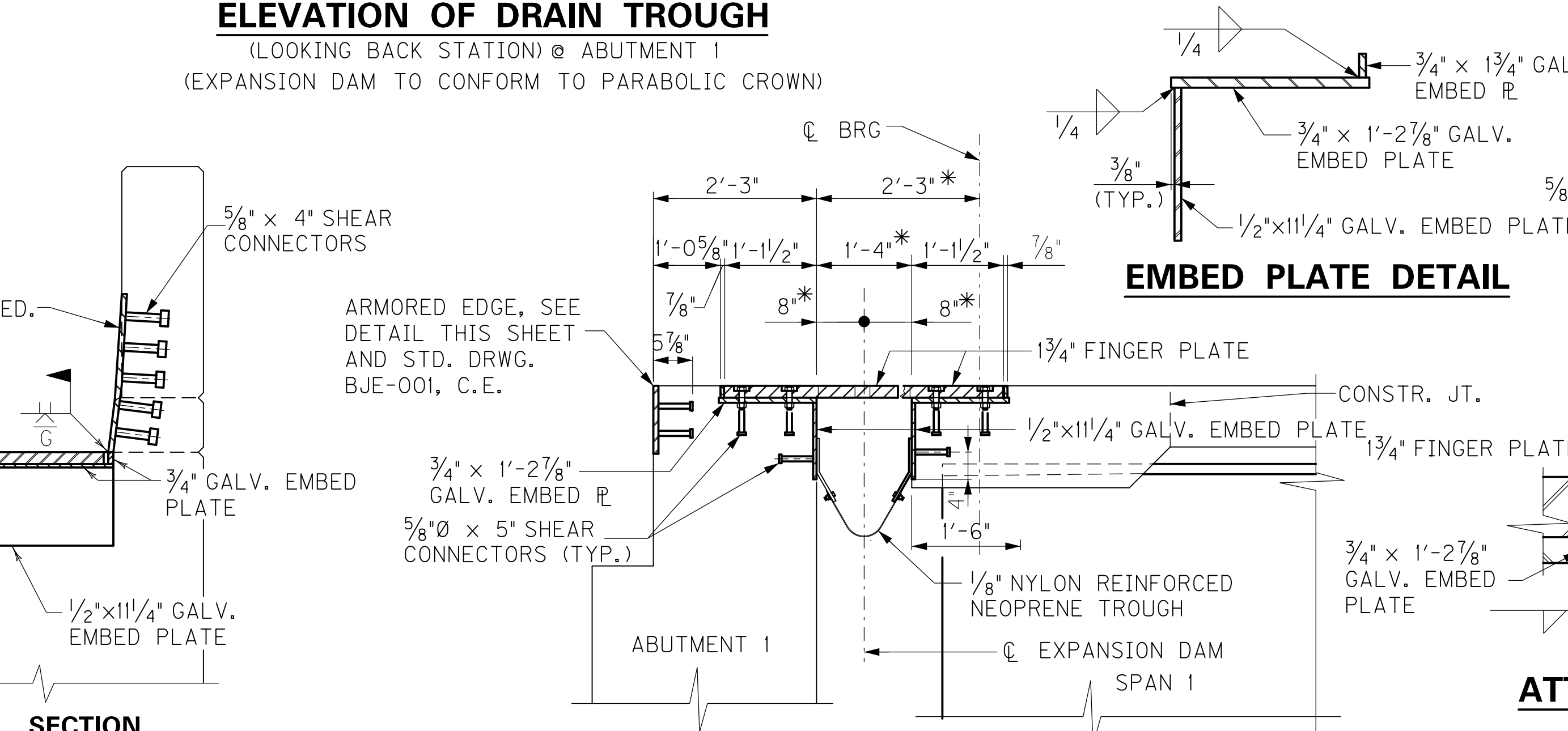
EXPANSION JOINT WIDTH ADJUSTMENT FOR TEMPERATURE	
TEMPERATURE °F	ADJUSTMENT (IN.)
-30	2.457
-20	2.184
-10	1.911
0	1.638
10	1.365
20	1.092
30	0.819
40	0.546
50	0.273
60	0
70	-0.273
80	-0.546
90	-0.819
100	-1.092
110	-1.365
120	-1.638



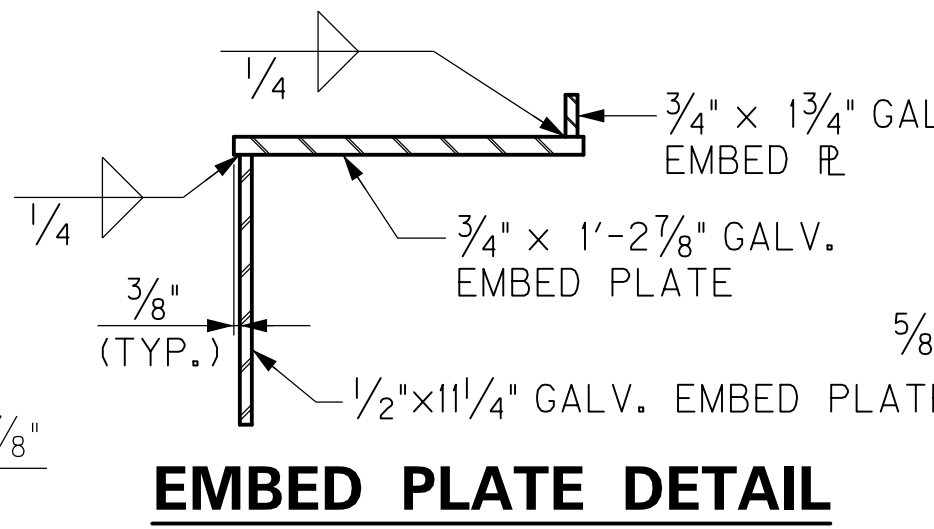
ANTI-SKID PATTERN



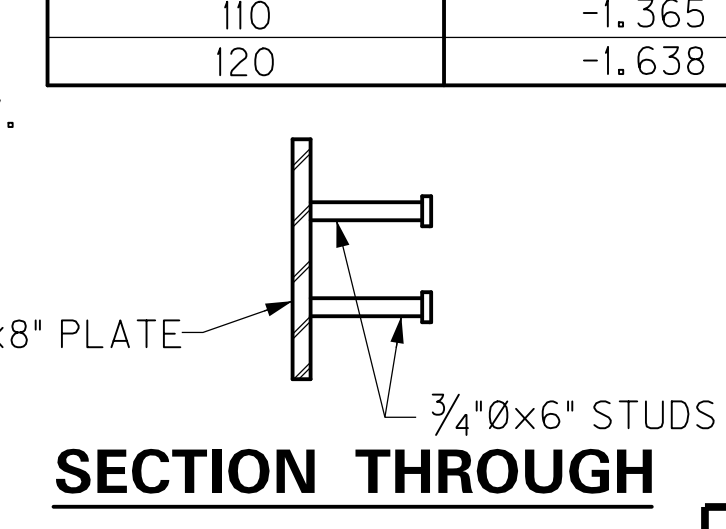
BARRIER SLIDE PLATE



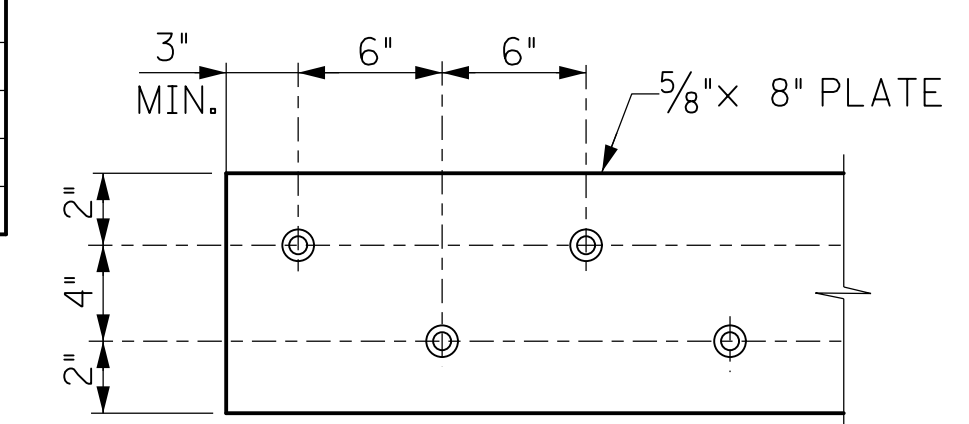
EXPANSION DAM ASSEMBLY ~ SECTION A-A



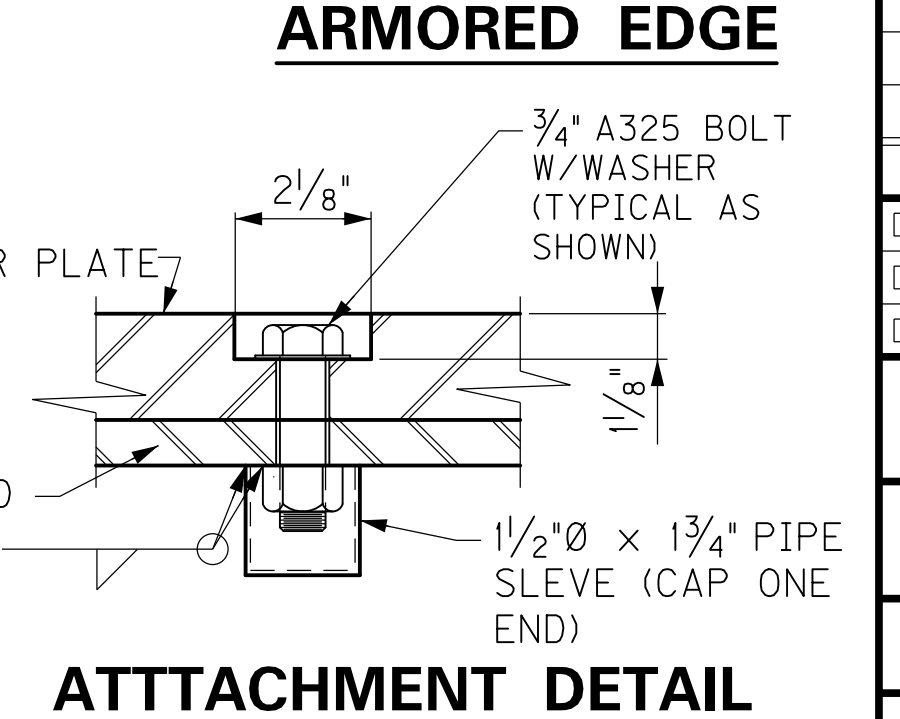
EMBED PLATE DETAIL



SECTION THROUGH ARMORED EDGE



STUD PATTERN ARMORED EDGE



ATTACHMENT DETAIL

NOTE: SLIDE PLATE SHALL BE ATTACHED TO BARRIER IN DIRECTION OF ON COMING TRAFFIC.

ITEM NUMBER	07-1116.00
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REVISION		DATE

DATE: 07-2016
 DESIGNED BY: CDB
 CHECKED BY: CGM
 DETAILED BY: CH
 CDB

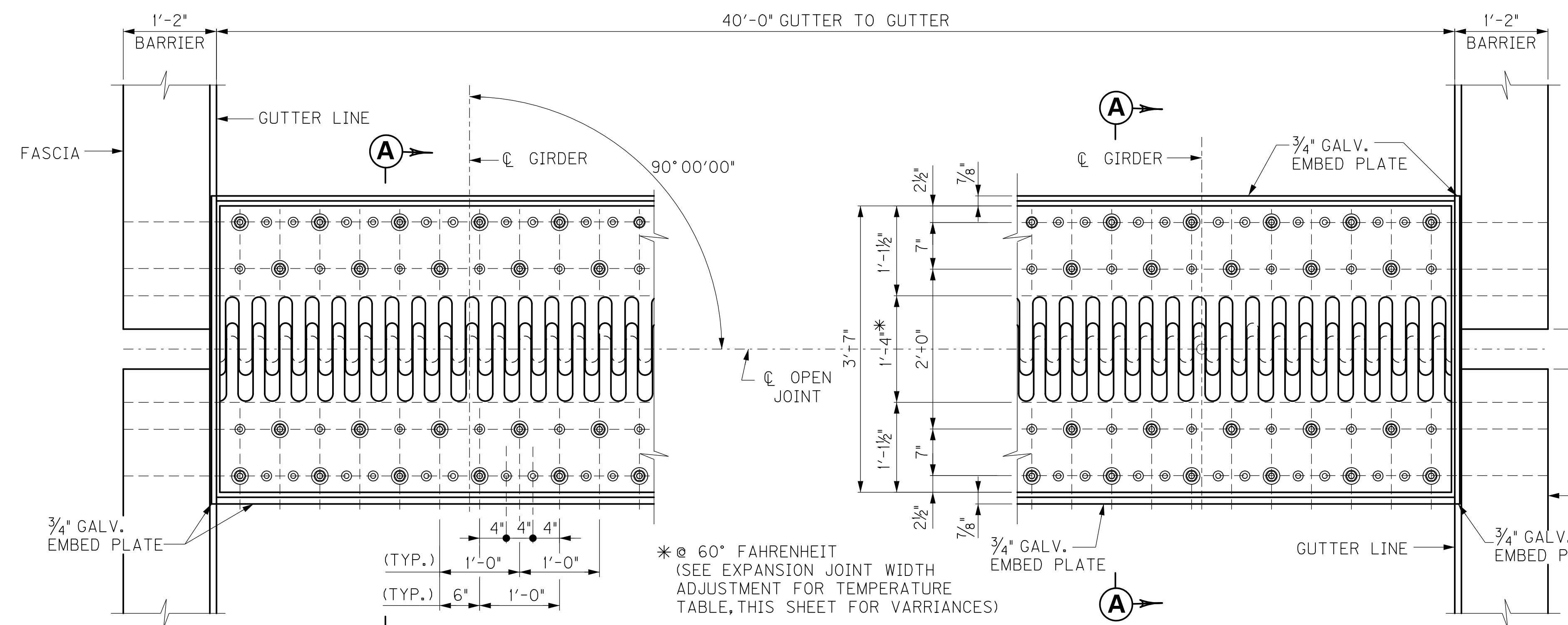
Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
 COUNTY
MERCER - GARRARD

ROUTE: KY 152
 CROSSING: HERRINGTON LAKE
JOINT DETAIL - ABUTMENT 1

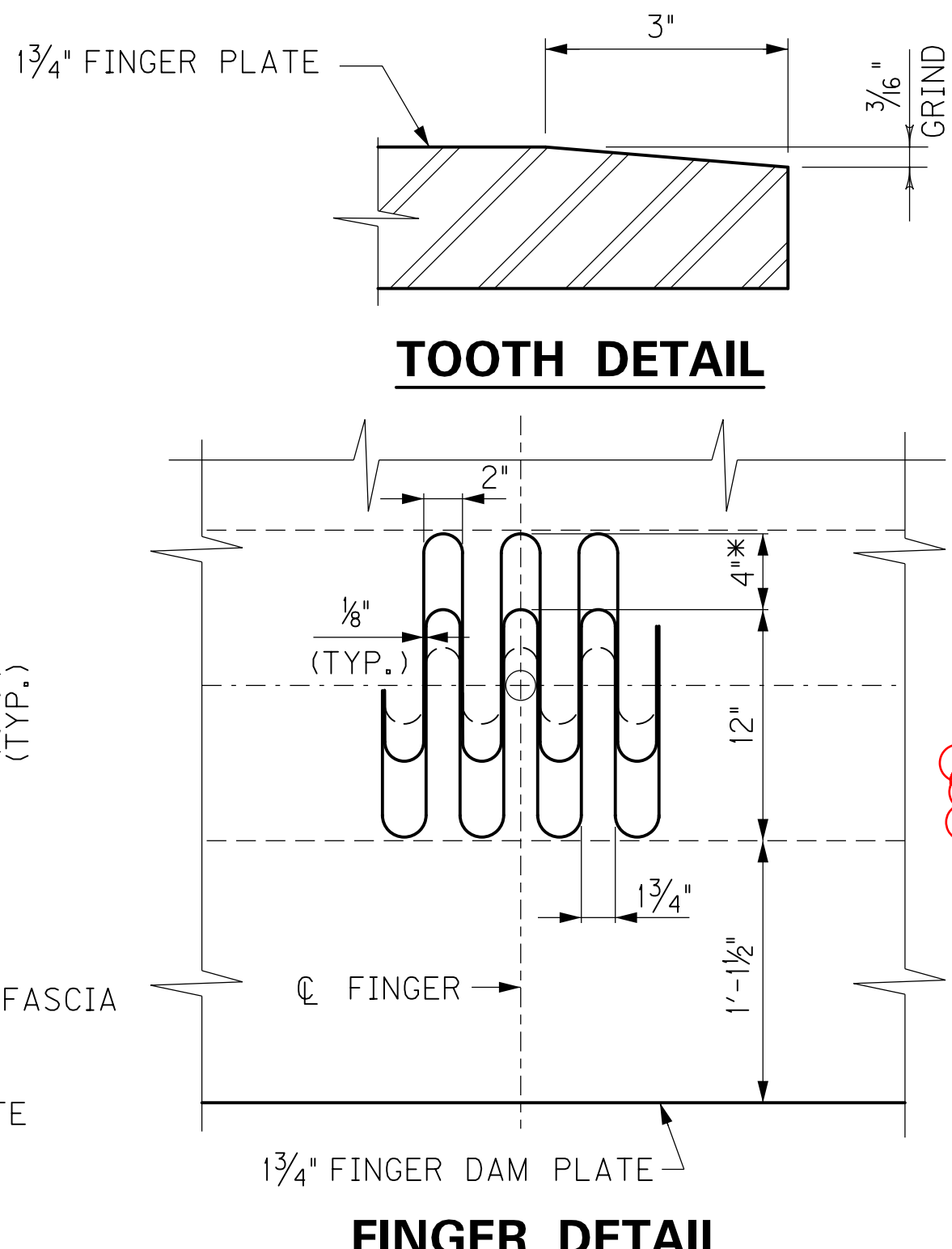
PREPARED BY: **WM3** SINCE 1957
 ENGINEERING IN EXCELLENCE

SHEET NO. **S62**
 DRAWING NO. **27207**

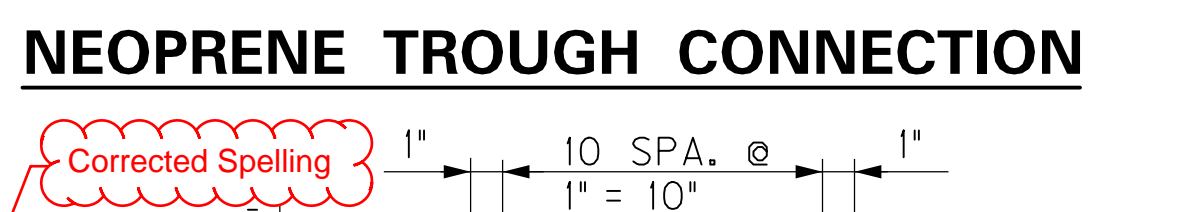
FILE NAME: P:\STRUCT\MERCER-GARRARD, KY 152\FINAL DESIGN\DON FILES\REVISED 03_15_17\162-JOINT DETAIL - ABUTMENT 1.DGN
USER: eodell
DATE PLOTTED: March 16, 2017
E-SHEET NAME:
MicroStation v8.11.9.655



FINGER DAM ~ PART PLAN

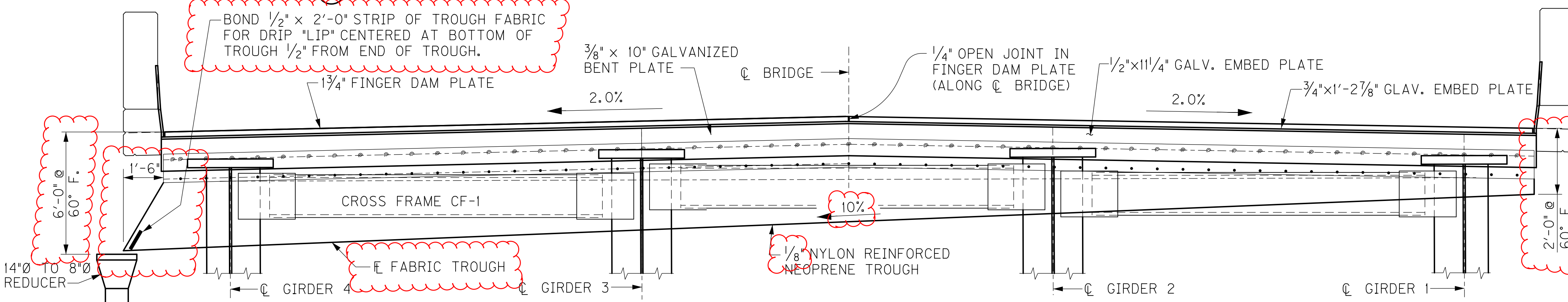


TOOTH DETAIL
FINGER DETAIL



NEOPRENE TROUGH CONNECTION

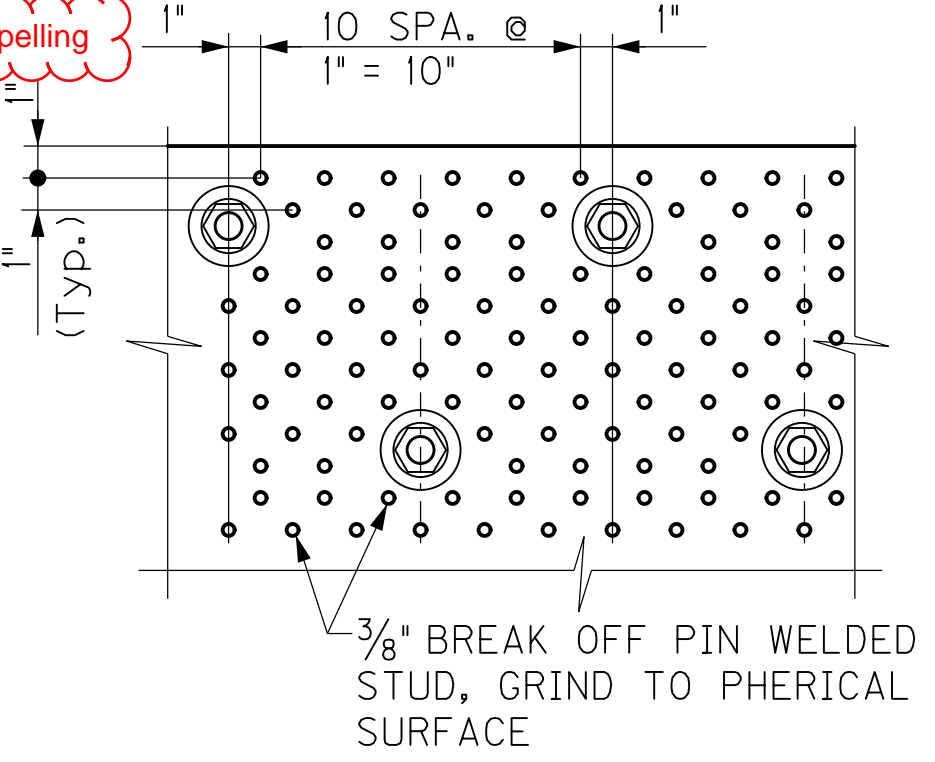
BOND 1/2" x 2'-0" STRIP OF TROUGH FABRIC FOR DRIP "LIP" CENTERED AT BOTTOM OF TROUGH 1/2" FROM END OF TROUGH.



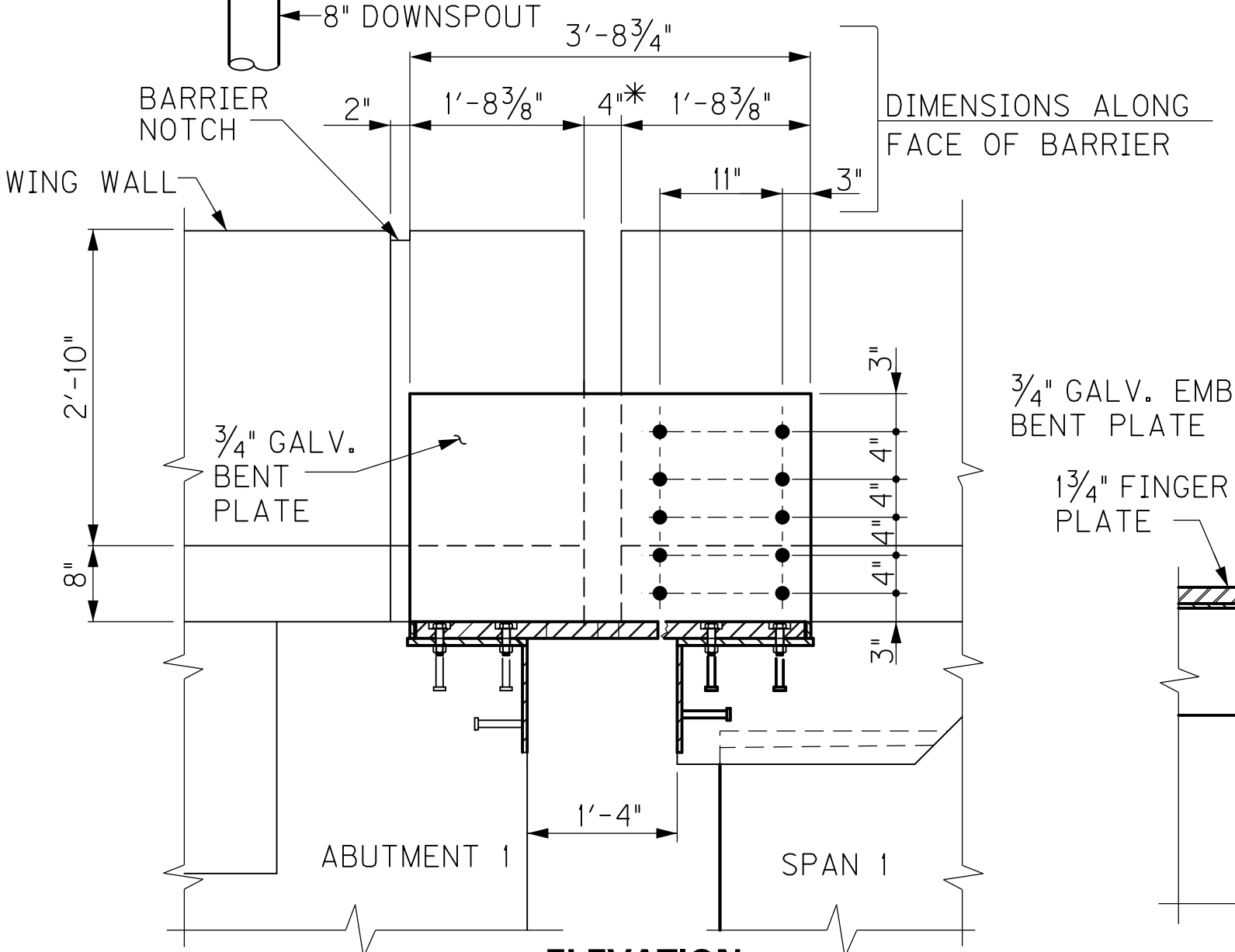
ELEVATION OF DRAIN TROUGH

EXPANSION JOINT WIDTH ADJUSTMENT FOR TEMPERATURE

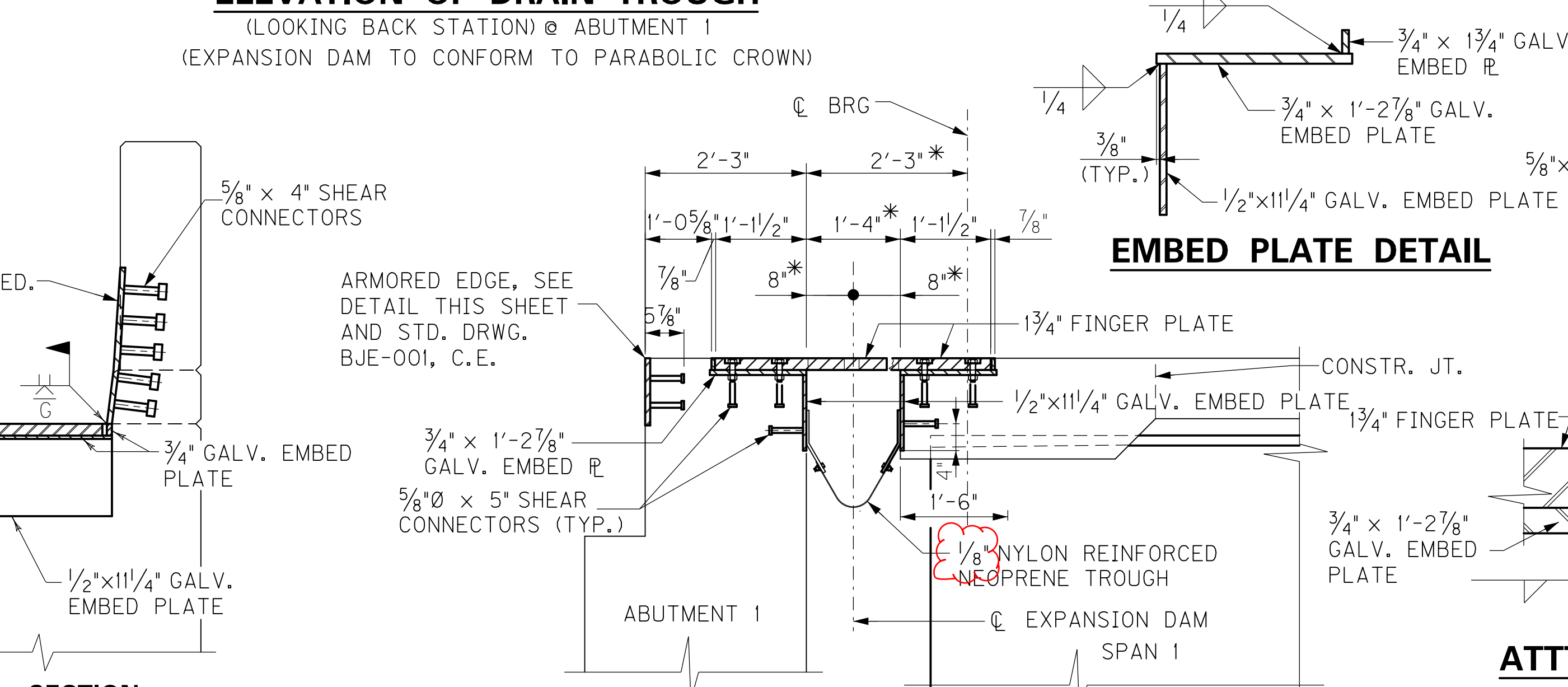
TEMPERATURE °F	ADJUSTMENT (IN.)
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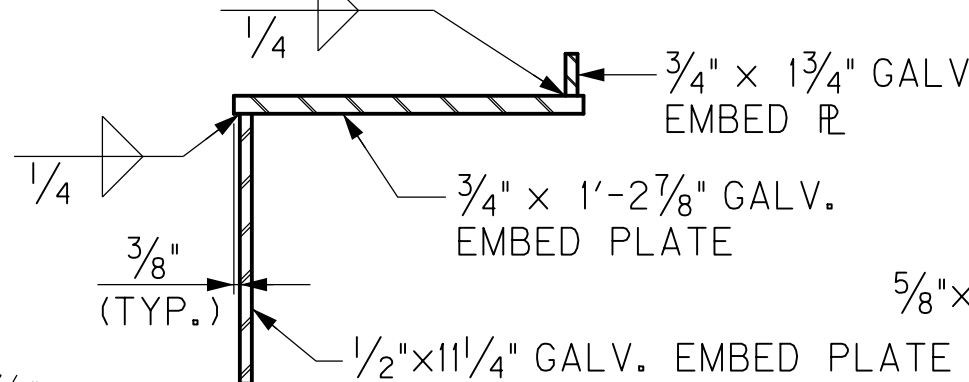
ANTI-SKID PATTERN



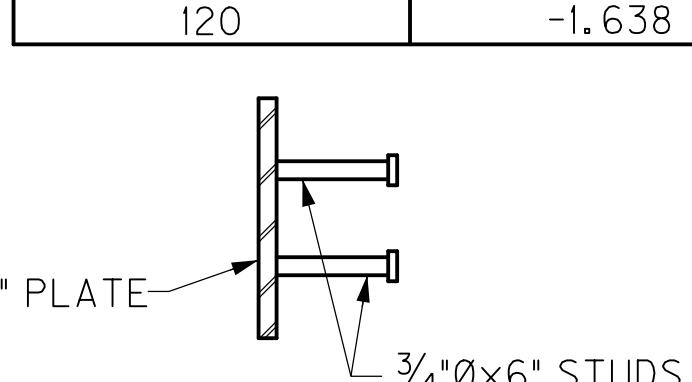
BARRIER SLIDE PLATE



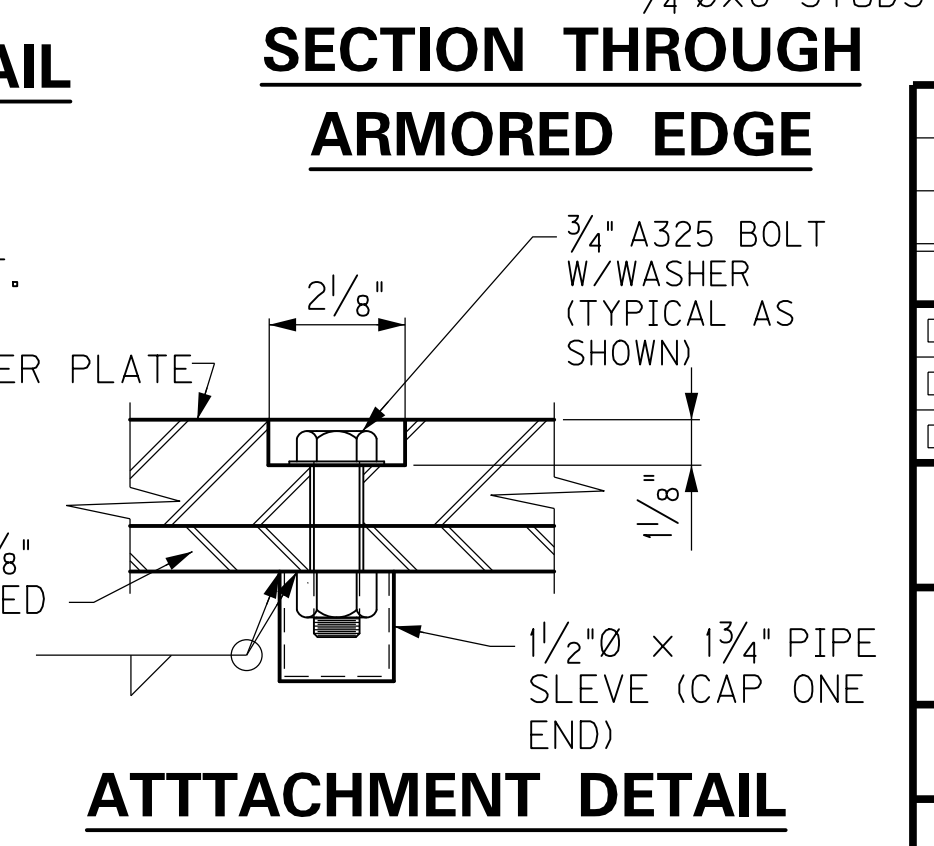
EXPANSION DAM ASSEMBLY ~ SECTION A-A



EMBED PLATE DETAIL



SECTION THROUGH ARMORED EDGE



ATTACHMENT DETAIL

NOTE: SLIDE PLATE SHALL BE ATTACHED TO BARRIER IN DIRECTION OF ON COMING TRAFFIC.

REVISION	DATE

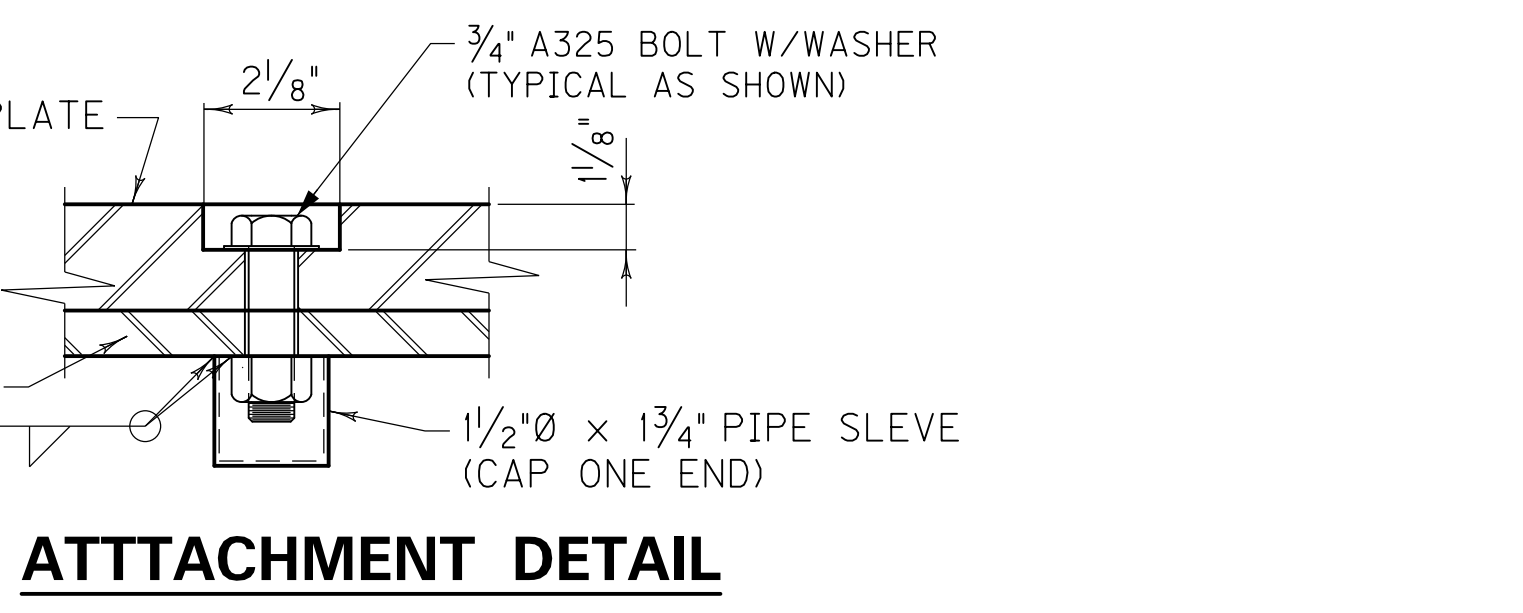
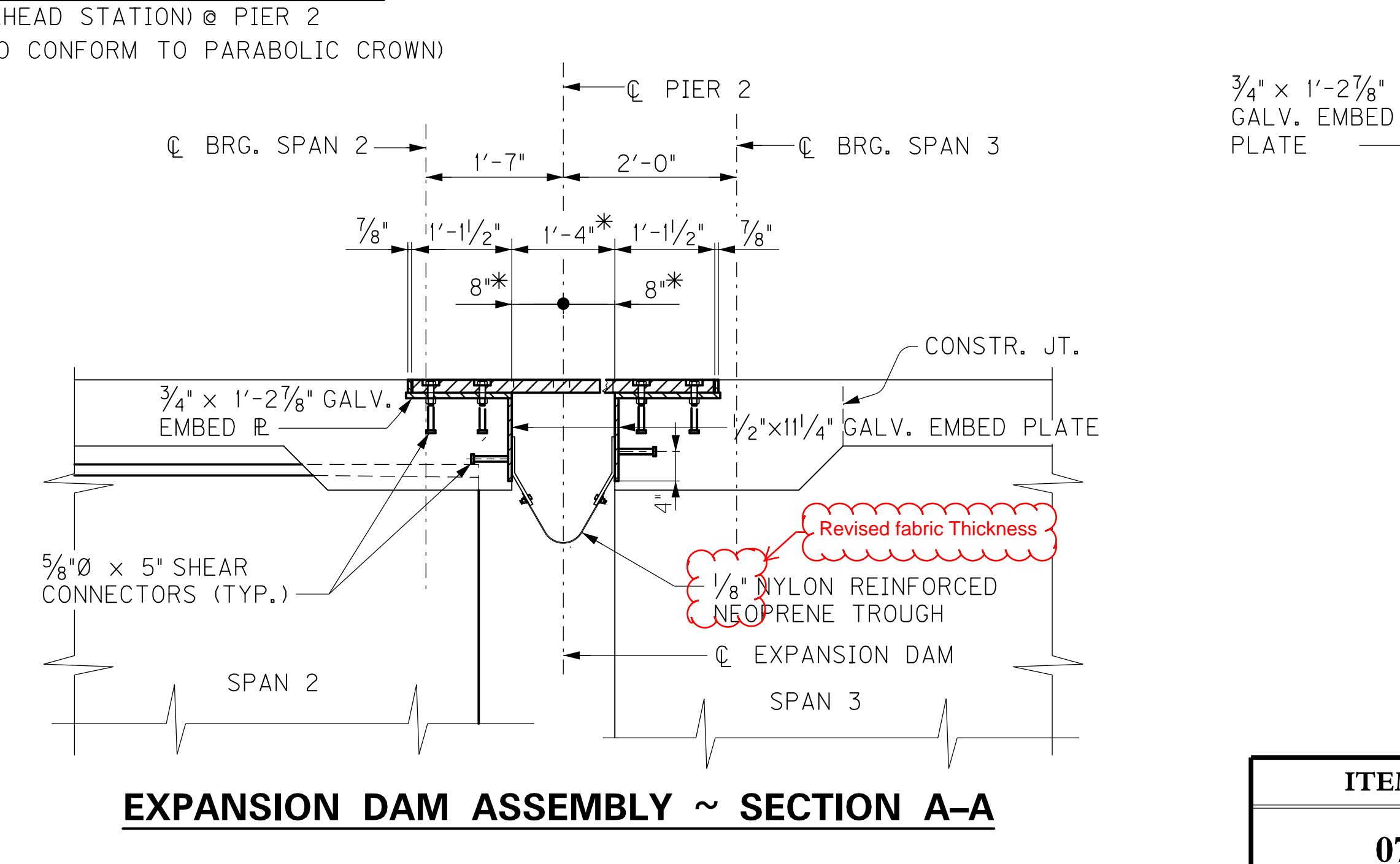
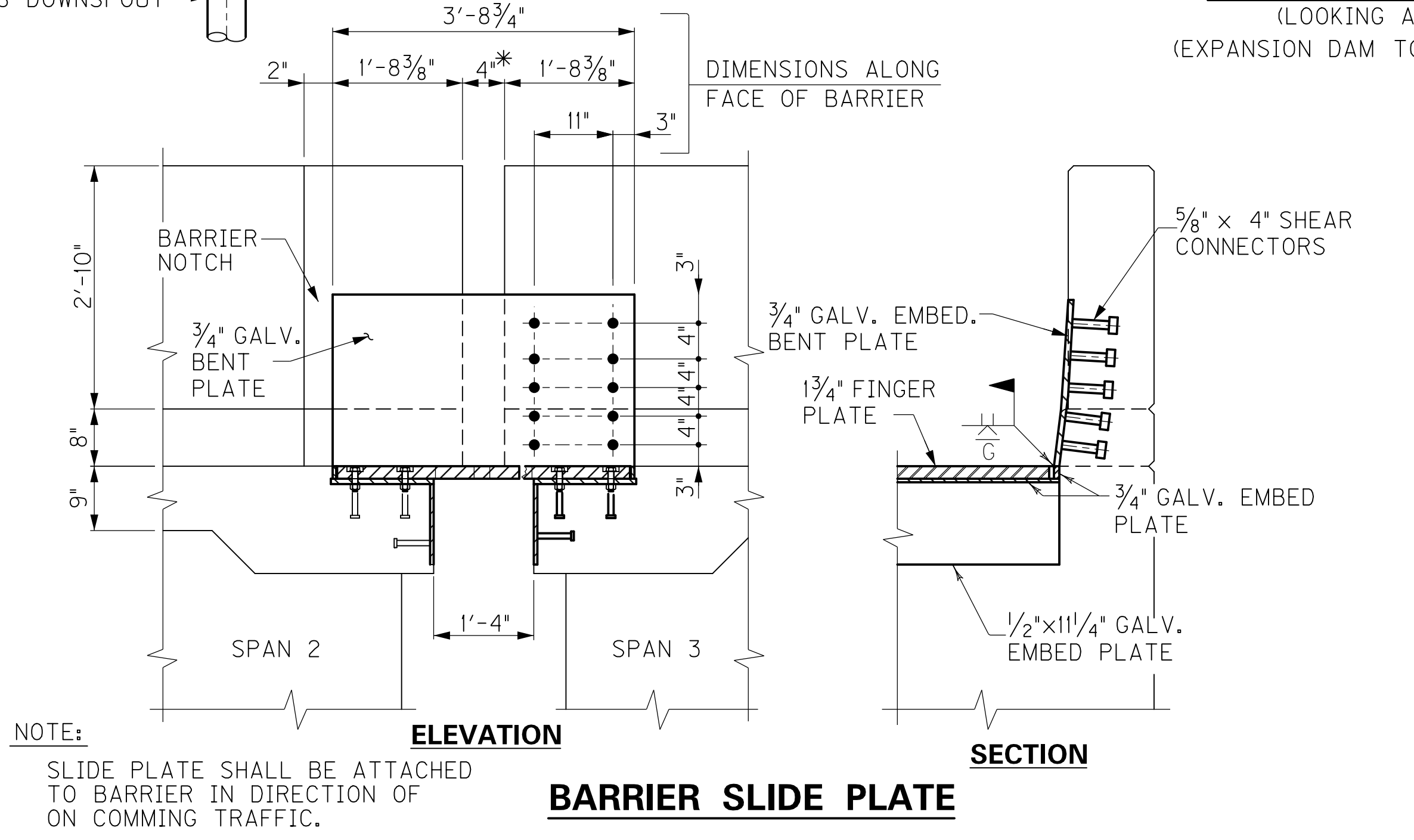
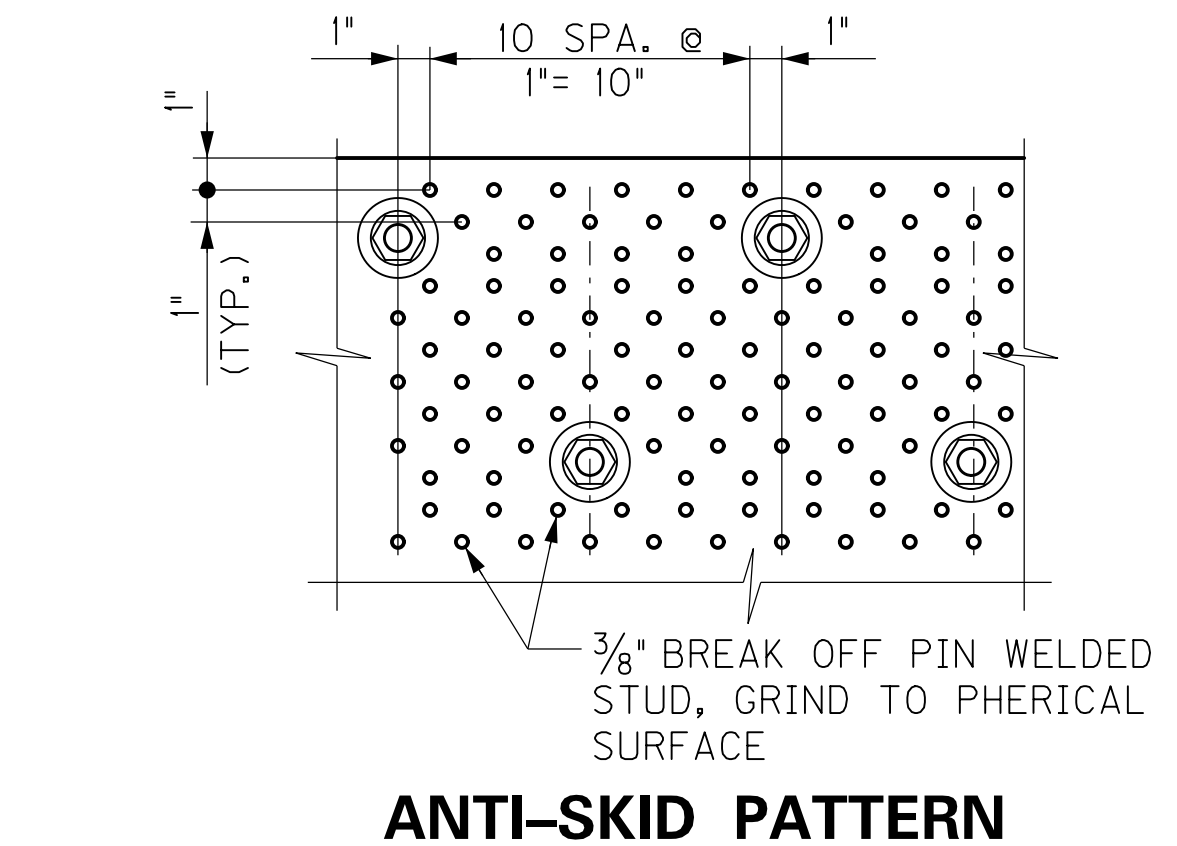
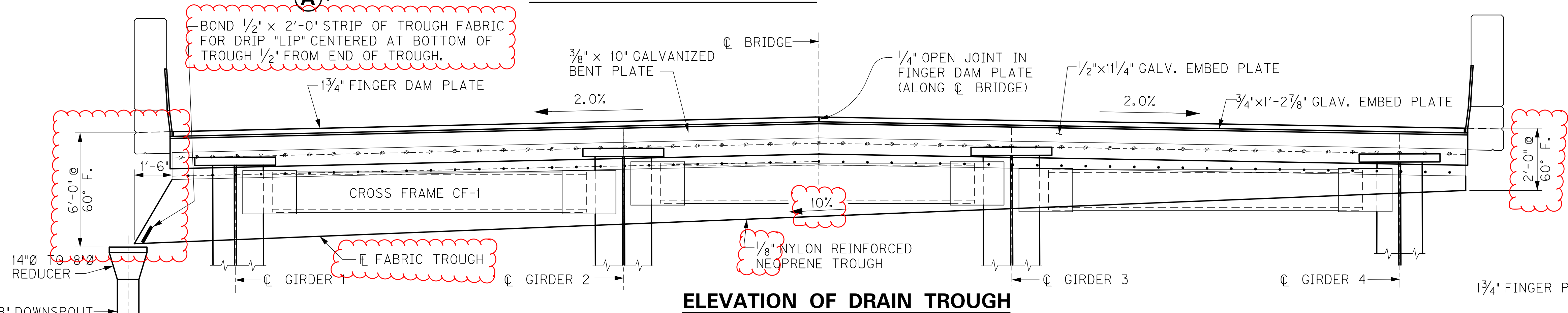
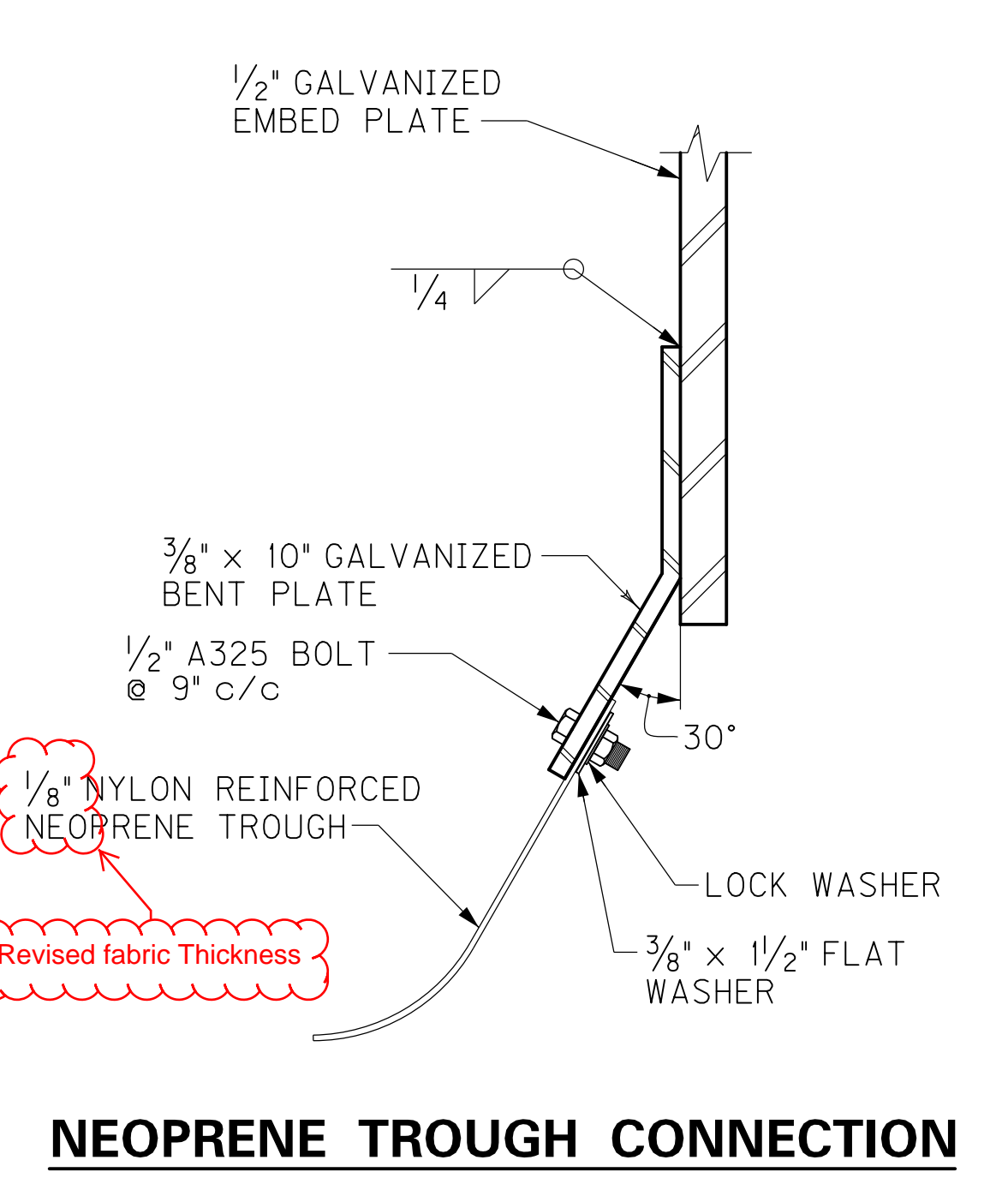
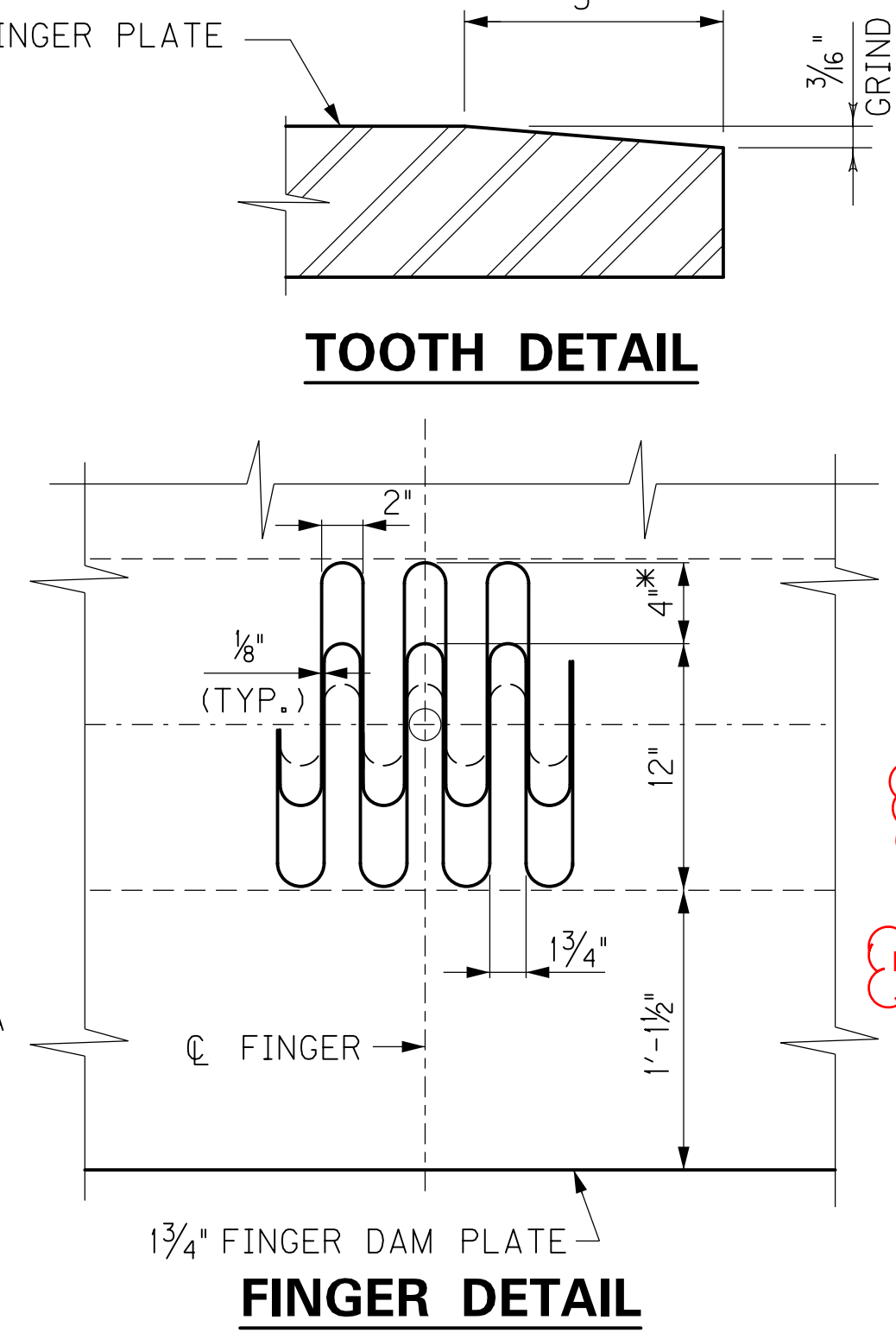
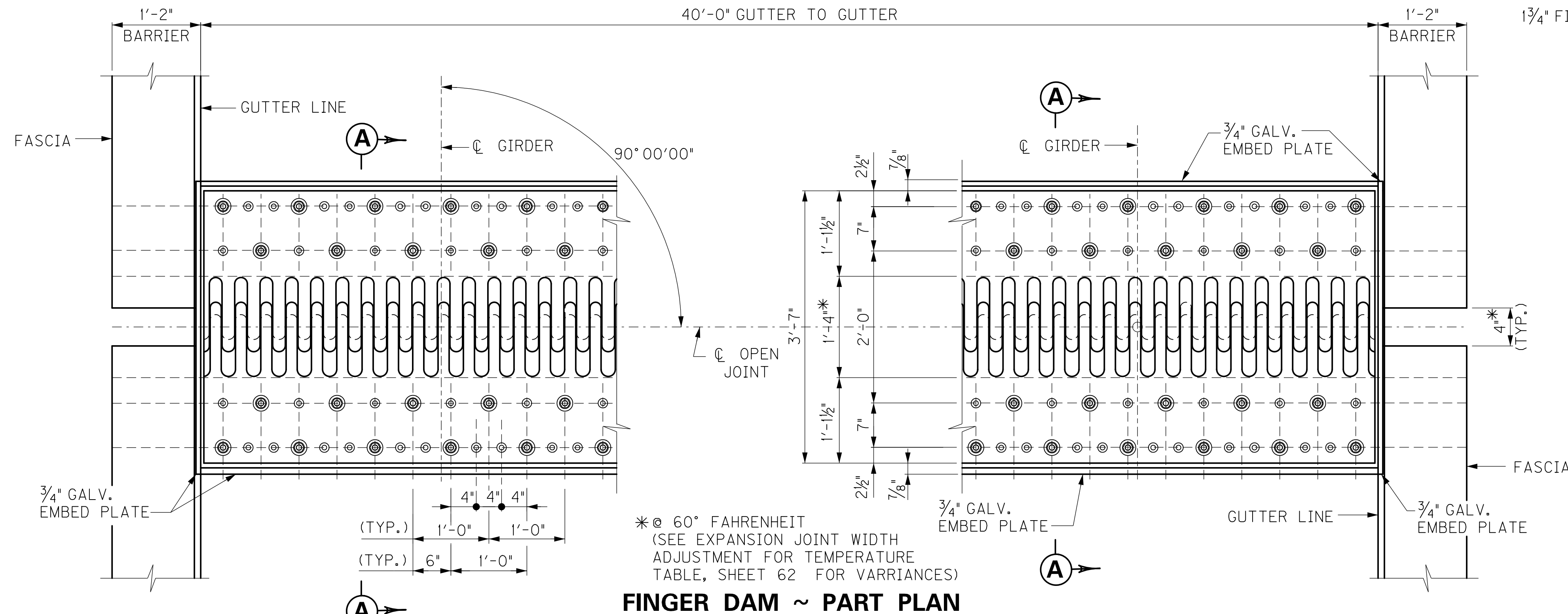
DATE: 07-2016
DESIGNED BY: CDB
CHECKED BY: CGM
DETAILED BY: CH
CDB

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
MERCER - GARRARD
ROUTE KY 152
CROSSING HERRINGTON LAKE
JOINT DETAIL - ABUTMENT 1

ITEM NUMBER
07-1116.00

PREPARED BY
WM3 SINCE 1957
ENGINEERING IN EXCELLENCE
SHEET NO. S62
DRAWING NO. 27207

FILE NAME: P:\STRUCT\MERCER-GARRARD, KY 152\FINAL DESIGN\DON FILES-REVISED 03.15.17\63-JOINT DETAIL - PIER 2.DGN
USER: dwt101
DATE PLOTTED: March 16, 2017
E-SHEET NAME: MicroStation v8.11.7.443



NOTE:
SLIDE PLATE SHALL BE ATTACHED TO BARRIER IN DIRECTION OF ON COMING TRAFFIC.

REVISION	DATE

DATE: 07-2016
DESIGNED BY: CDB
CHECKED BY: CGM
DETAILED BY: CH

Commonwealth of Kentucky
DEPARTMENT OF HIGHWAYS
COUNTY
MERCER - GARRARD
ROUTE KY 152 CROSSING HERRINGTON LAKE
JOINT DETAIL - PIER 2

PREPARED BY: WMB SINCE 1957 ENGINEERING IN EXCELLENCE

SHEET NO. S63
DRAWING NO. 27207

ITEM NUMBER	07-1116.00
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MATERIAL SUMMARY

CONTRACT ID: 171206

121GR17D004-STP

DE040015217W1

KENNEDY BRIDGE ROAD (KY 152) GARRARD COUNTY REPLACE BRIDGE AND APPROACHES ON KY 152 OVER HERRINGTON LAKE AT THE MERCER/GARRARD COUNTY LINE BRIDGE WITH GRADE, DRAIN & SURFACE, A DISTANCE OF .12 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0580	00003	CRUSHED STONE BASE	356.00	TON
0585	00078	CRUSHED AGGREGATE SIZE NO 2	680.00	TON
0590	00100	ASPHALT SEAL AGGREGATE	2.00	TON
0595	00103	ASPHALT SEAL COAT	.30	TON
0600	00221	CL2 ASPH BASE 0.75D PG64-22	314.00	TON
0605	00301	CL2 ASPH SURF 0.38D PG64-22	64.00	TON
0610	02599	FABRIC-GEOTEXTILE TYPE IV	2,670.00	SQYD
0615	20071EC	JOINT ADHESIVE	200.00	LF
0620	01000	PERFORATED PIPE-4 IN	43.00	LF
0625	01010	NON-PERFORATED PIPE-4 IN	8.00	LF
0630	01825	ISLAND CURB AND GUTTER	133.00	LF
0635	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	9.00	EACH
0640	02014	BARRICADE-TYPE III	5.00	EACH
0645	02091	REMOVE PAVEMENT	113.00	SQYD
0650	02159	TEMP DITCH	158.00	LF
0655	02160	CLEAN TEMP DITCH	79.00	LF
0660	02200	ROADWAY EXCAVATION	2,804.00	CUYD
0665	02203	STRUCTURE EXCAV-UNCLASSIFIED	128.00	CUYD
0670	02242	WATER - (FOR DUST CONTROL)	50.00	MGAL
0675	02351	GUARDRAIL-STEEL W BEAM-S FACE	400.00	LF
0680	02360	GUARDRAIL TERMINAL SECTION NO 1	3.00	EACH
0685	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	2.00	EACH
0690	02367	GUARDRAIL END TREATMENT TYPE 1	1.00	EACH
0695	02381	REMOVE GUARDRAIL	23.00	LF
0700	02404	SEPTIC TANK TREATMENT	2.00	EACH
0705	02429	RIGHT-OF-WAY MONUMENT TYPE 1	11.00	EACH
0710	02432	WITNESS POST	2.00	EACH
0715	02484	CHANNEL LINING CLASS III	115.00	TON
0720	02545	CLEARING AND GRUBBING - (APPROXIMATELY 0.80 ACRES; GARRARD COUNTY)	1.00	LS
0725	02555	CONCRETE-CLASS B	52.00	CUYD
0730	02562	TEMPORARY SIGNS	100.00	SQFT
0735	02650	MAINTAIN & CONTROL TRAFFIC - (GARRARD COUNTY)	1.00	LS
0740	02653	LANE CLOSURE	1.00	EACH
0745	02585	EDGE KEY	24.00	LF
0750	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0755	02701	TEMP SILT FENCE	158.00	LF
0760	02703	SILT TRAP TYPE A	1.00	EACH
0765	02704	SILT TRAP TYPE B	1.00	EACH
0770	02705	SILT TRAP TYPE C	1.00	EACH
0775	02706	CLEAN SILT TRAP TYPE A	1.00	EACH
0780	02707	CLEAN SILT TRAP TYPE B	1.00	EACH
0785	02708	CLEAN SILT TRAP TYPE C	1.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0790	02726	STAKING - (GARRARD COUNTY)	1.00	LS
0795	02731	REMOVE STRUCTURE - (GARRARD COUNTY)	1.00	LS
0800	02775	ARROW PANEL	1.00	EACH
0805	05952	TEMP MULCH	7,938.00	SQYD
0810	05953	TEMP SEEDING AND PROTECTION	1,984.00	SQYD
0815	05985	SEEDING AND PROTECTION	2,193.00	SQYD
0820	05989	SPECIAL SEEDING CROWN VETCH	1,200.00	SQYD
0825	06510	PAVE STRIPING-TEMP PAINT-4 IN	2,200.00	LF
0830	06514	PAVE STRIPING-PERM PAINT-4 IN	808.00	LF
0835	06554	PAVE STRIPING-DUR TY 1-4 IN W	683.00	LF
0840	06555	PAVE STRIPING-DUR TY 1-4 IN Y	684.00	LF
0845	24755EC	MAINTAIN EXISTING BRIDGE	250,000.00	DOLL
0850	00462	CULVERT PIPE-18 IN	6.00	LF
0855	01480	CURB BOX INLET TYPE B	1.00	EACH
0860	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	10.00	SQYD
0865	24814EC	PIPELINE INSPECTION	6.00	LF
0870	01001	PERFORATED PIPE-6 IN	66.00	LF
0875	01021	PERF PIPE HEADWALL TY 1-6 IN	1.00	EACH
0880	02231	STRUCTURE GRANULAR BACKFILL	291.00	CUYD
0885	02998	MASONRY COATING	1,123.00	SQYD
0890	03299	ARMORED EDGE FOR CONCRETE	44.00	LF
0895	08002	STRUCTURE EXCAV-SOLID ROCK - (ABUTMENT 1 & 2)	283.00	CUYD
0900	08002	STRUCTURE EXCAV-SOLID ROCK - (PIER 2)	84.00	CUYD
0905	08100	CONCRETE-CLASS A	848.50	CUYD
0910	08104	CONCRETE-CLASS AA	706.20	CUYD
0915	08150	STEEL REINFORCEMENT	98,784.00	LB
0920	08151	STEEL REINFORCEMENT-EPOXY COATED	183,839.00	LB
0925	08160	STRUCTURAL STEEL - (APPROXIMATELY 945,925 LBS; GARRARD COUNTY)	1.00	LS
0930	08170	SHEAR CONNECTORS - (APPROXIMATELY 2,555 LBS; GARRARD COUNTY)	1.00	LS
0935	08500	APPROACH SLAB	120.00	SQYD
0940	21119ED	CONCRETE FORM LINER	188.00	SQYD
0945	21322NC	CSL TESTING (6 TUBES) - (PIER 2; GARRARD)	4.00	EACH
0950	22885EN	DRILLED SHAFT-72 IN-ROCK - (PIER 2)	85.40	LF
0955	23859EC	FINGER EXPANSION JOINT	40.00	LF
0960	23860EC	ELECTRIC POWER CONDUITS - (GARRARD COUNTY)	1.00	LS
0965	24001EC	DRILLED SHAFT-78 IN COMMON	42.60	LF
0970	24582EN	PRECAST PC I BEAM-HN 72-49	491.00	LF
0975	24737EC	CAVITY STABILIZATION - (PIER 2)	34.90	CUYD
0980	24738EC	REDRILLING CAVITY STABILIZATION - (PIER 2; GARRARD)	22.20	LF
0985	24741EC	SONAR CALIPER TESTING - (PIER 2)	4.00	EACH
0990	24872ED	NEOPRENE O-RING SEAL	4.00	EACH
0995	24874EC	TIP TESTING - (PIER 2)	4.00	EACH
1000	24876EC	DRILLED SHAFT VIDEO INSPECTION - (PIER 2; GARRARD)	4.00	EACH
1005	06406	SBM ALUM SHEET SIGNS .080 IN	34.50	SQFT
1010	06407	SBM ALUM SHEET SIGNS .125 IN	8.75	SQFT
1015	06410	STEEL POST TYPE 1	50.00	LF
1020	06490	CLASS A CONCRETE FOR SIGNS	.46	CUYD

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
1025	06491	STEEL REINFORCEMENT FOR SIGNS	27.83	LB
1030	20912ND	BARRIER WALL POST	1.00	EACH
1035	21596ND	GMSS TYPE D	2.00	EACH
1040	02568	MOBILIZATION	1.00	LS
1045	02569	DEMOBILIZATION	1.00	LS

CONTRACT ID: 171206

121GR17D004-STP

DE084015217W1

KENNEDY BRIDGE ROAD (KY 152) IN MERCER COUNTY REPLACE BRIDGE AND APPROACHES ON KY 152 OVER HERRINGTON LAKE AT THE MERCER/GARRARD COUNTY LINE BRIDGE WITH GRADE, DRAIN & SURFACE, A DISTANCE OF .32 MILES.

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0005	00003	CRUSHED STONE BASE	1,109.00	TON
0010	00078	CRUSHED AGGREGATE SIZE NO 2	2,079.00	TON
0015	00100	ASPHALT SEAL AGGREGATE	6.00	TON
0020	00103	ASPHALT SEAL COAT	.70	TON
0025	00221	CL2 ASPH BASE 0.75D PG64-22	1,045.00	TON
0030	00301	CL2 ASPH SURF 0.38D PG64-22	212.00	TON
0035	02599	FABRIC-GEOTEXTILE TYPE IV	8,960.00	SQYD
0040	20071EC	JOINT ADHESIVE	720.00	LF
0045	01000	PERFORATED PIPE-4 IN	42.00	LF
0050	01010	NON-PERFORATED PIPE-4 IN	29.00	LF
0055	01825	ISLAND CURB AND GUTTER	6.00	LF
0060	01987	DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	12.00	EACH
0065	02014	BARRICADE-TYPE III	5.00	EACH
0070	02091	REMOVE PAVEMENT	342.00	SQYD
0075	02159	TEMP DITCH	325.00	LF
0080	02160	CLEAN TEMP DITCH	163.00	LF
0085	02200	ROADWAY EXCAVATION	4,192.00	CUYD
0090	02203	STRUCTURE EXCAV-UNCLASSIFIED	230.00	CUYD
0095	02242	WATER - (FOR DUST CONTROL)	100.00	MGAL
0100	02351	GUARDRAIL-STEEL W BEAM-S FACE	537.50	LF
0105	02360	GUARDRAIL TERMINAL SECTION NO 1	2.00	EACH
0110	02363	GUARDRAIL CONNECTOR TO BRIDGE END TY A	2.00	EACH
0115	02367	GUARDRAIL END TREATMENT TYPE 1	2.00	EACH
0120	02381	REMOVE GUARDRAIL	200.00	LF
0125	02404	SEPTIC TANK TREATMENT	1.00	EACH
0130	02429	RIGHT-OF-WAY MONUMENT TYPE 1	14.00	EACH
0135	02432	WITNESS POST	2.00	EACH
0140	02545	CLEARING AND GRUBBING - (APPROXIMATELY 2.00 ACRES; MERCER COUNTY)	1.00	LS
0145	02555	CONCRETE-CLASS B	162.00	CUYD
0150	02562	TEMPORARY SIGNS	100.00	SQFT
0155	02585	EDGE KEY	41.00	LF
0160	02611	HANDRAIL-TYPE A-1	118.00	LF
0165	02650	MAINTAIN & CONTROL TRAFFIC - (MERCER COUNTY)	1.00	LS
0170	02653	LANE CLOSURE	1.00	EACH

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0175	02671	PORTABLE CHANGEABLE MESSAGE SIGN	2.00	EACH
0180	02701	TEMP SILT FENCE	325.00	LF
0185	02703	SILT TRAP TYPE A	2.00	EACH
0190	02704	SILT TRAP TYPE B	2.00	EACH
0195	02705	SILT TRAP TYPE C	2.00	EACH
0200	02706	CLEAN SILT TRAP TYPE A	2.00	EACH
0205	02707	CLEAN SILT TRAP TYPE B	2.00	EACH
0210	02708	CLEAN SILT TRAP TYPE C	2.00	EACH
0215	02726	STAKING - (MERCER COUNTY)	1.00	LS
0220	02731	REMOVE STRUCTURE - (MERCER COUNTY)	1.00	LS
0225	02775	ARROW PANEL	1.00	EACH
0230	05950	EROSION CONTROL BLANKET	445.00	SQYD
0235	05952	TEMP MULCH	19,360.00	SQYD
0240	05953	TEMP SEEDING AND PROTECTION	4,840.00	SQYD
0245	05985	SEEDING AND PROTECTION	3,585.00	SQYD
0250	05989	SPECIAL SEEDING CROWN VETCH	800.00	SQYD
0255	06510	PAVE STRIPING-TEMP PAINT-4 IN	4,200.00	LF
0260	06514	PAVE STRIPING-PERM PAINT-4 IN	2,188.00	LF
0265	06554	PAVE STRIPING-DUR TY 1-4 IN W	967.00	LF
0270	06555	PAVE STRIPING-DUR TY 1-4 IN Y	966.00	LF
0275	10020NS	FUEL ADJUSTMENT	3,756.00	DOLL
0280	21432NC	CONCRETE FORMLINER	1,180.00	SQFT
0285	23274EN11F	TURF REINFORCEMENT MAT 1	310.00	SQYD
0290	23912EC	WEB CAMERA CONST MONITORING SYSTEM - (MERCER COUNTY)	1.00	LS
0295	24601EC	INSTALL - (INTERPRETIVE SIGNS)	2.00	EACH
0300	24755EC	MAINTAIN EXISTING BRIDGE	250,000.00	DOLL
0305	00440	ENTRANCE PIPE-15 IN	121.00	LF
0310	00521	STORM SEWER PIPE-15 IN	206.00	LF
0315	00522	STORM SEWER PIPE-18 IN	112.00	LF
0320	01202	PIPE CULVERT HEADWALL-15 IN	1.00	EACH
0325	01204	PIPE CULVERT HEADWALL-18 IN	1.00	EACH
0330	01480	CURB BOX INLET TYPE B	2.00	EACH
0335	01490	DROP BOX INLET TYPE 1	2.00	EACH
0340	01544	DROP BOX INLET TYPE 11	5.00	EACH
0345	02600	FABRIC GEOTEXTILE TY IV FOR PIPE	530.00	SQYD
0350	24814EC	PIPELINE INSPECTION	185.00	LF
0355	01001	PERFORATED PIPE-6 IN	66.00	LF
0360	01021	PERF PIPE HEADWALL TY 1-6 IN	1.00	EACH
0365	02231	STRUCTURE GRANULAR BACKFILL	367.00	CUYD
0370	02998	MASONRY COATING	1,087.00	SQYD
0375	03299	ARMORED EDGE FOR CONCRETE	40.00	LF
0380	08001	STRUCTURE EXCAVATION-COMMON	29.00	CUYD
0385	08002	STRUCTURE EXCAV-SOLID ROCK - (ABUTMENTS 1 & 2)	57.00	CUYD
0390	08019	CYCLOPEAN STONE RIP RAP	150.00	TON
0395	08100	CONCRETE-CLASS A	883.90	CUYD
0400	08104	CONCRETE-CLASS AA	1,181.30	CUYD
0405	08150	STEEL REINFORCEMENT	200,017.00	LB
0410	08151	STEEL REINFORCEMENT-EPOXY COATED	217,943.00	LB

MATERIAL SUMMARY

Project Line No	Bid Code	DESCRIPTION	Quantity	Unit
0415	08160	STRUCTURAL STEEL - (APPROXIMATELY 2,093,425 LBS; MERCER COUNTY)	1.00	LS
0420	08170	SHEAR CONNECTORS - (APPROXIMATELY 5,655 LBS; MERCER COUNTY)	1.00	LS
0425	08500	APPROACH SLAB	112.00	SQYD
0430	21119ED	CONCRETE FORM LINER	215.00	SQYD
0435	21322NC	CSL TESTING (6 TUBES) - (ABUTMENT 1; MERCER)	3.00	EACH
0440	22885EN	DRILLED SHAFT-72 IN-ROCK	64.50	LF
0445	23859EC	FINGER EXPANSION JOINT	40.00	LF
0450	23860EC	ELECTRIC POWER CONDUITS - (MERCER COUNTY)	1.00	LS
0455	24550EC	VIBRATION MONITORING - (MERCER COUNTY)	1.00	LS
0460	24737EC	CAVITY STABILIZATION - (ABUTMENT 1)	33.80	CUYD
0465	24737EC	CAVITY STABILIZATION - (PIER 1)	427.90	CUYD
0470	24738EC	REDRILLING CAVITY STABILIZATION - (ABUTMENT 1)	21.50	LF
0475	24738EC	REDRILLING CAVITY STABILIZATION - (PIER 1)	153.30	LF
0480	24741EC	SONAR CALIPER TESTING - (PIER 1)	4.00	EACH
0485	24870EC	DRILLED SHAFT - 102 IN (COMMON)	723.30	LF
0490	24871EC	DRILLED SHAFT - 96 IN (SOLID ROCK)	150.00	LF
0495	24872ED	NEOPRENE O-RING SEAL	12.00	EACH
0500	24874EC	TIP TESTING - (ABUTMENT 1)	3.00	EACH
0505	24874EC	TIP TESTING - (PIER 1)	4.00	EACH
0510	24875EC	CSL TESTING (8 TUBES) - (PIER 1; MERCER)	4.00	EACH
0515	24876EC	DRILLED SHAFT VIDEO INSPECTION - (ABUTMENT 1)	3.00	EACH
0520	24876EC	DRILLED SHAFT VIDEO INSPECTION - (PIER 1)	4.00	EACH
0525	06406	SBM ALUM SHEET SIGNS .080 IN	67.50	SQFT
0530	06407	SBM ALUM SHEET SIGNS .125 IN	26.25	SQFT
0535	06410	STEEL POST TYPE 1	116.00	LF
0540	06491	STEEL REINFORCEMENT FOR SIGNS	55.66	LB
0545	06490	CLASS A CONCRETE FOR SIGNS	.92	CUYD
0550	20912ND	BARRIER WALL POST	1.00	EACH
0555	21596ND	GMSS TYPE D	4.00	EACH
0560	02568	MOBILIZATION	1.00	LS
0565	02569	DEMOBILIZATION	1.00	LS
0570	24626EC	PROJECT INSPECTION BOAT - ADDED: 3-17-17	1.00	LS
0575	24895EC	MARINE MOBILIZATION - (ADDED: 3-17-17)	1.00	L S

General Decision Number: KY170100 03/10/2017 KY100

Superseded General Decision Number: KY20160100

State: Kentucky

Construction Type: Highway

Counties: Anderson, Bath, Bourbon, Boyd, Boyle, Bracken, Breckinridge, Bullitt, Carroll, Carter, Clark, Elliott, Fayette, Fleming, Franklin, Gallatin, Grant, Grayson, Greenup, Hardin, Harrison, Henry, Jefferson, Jessamine, Larue, Lewis, Madison, Marion, Mason, Meade, Mercer, Montgomery, Nelson, Nicholas, Oldham, Owen, Robertson, Rowan, Scott, Shelby, Spencer, Trimble, Washington and Woodford Counties in Kentucky.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.20 for calendar year 2017 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.20 (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2017. The EO minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2017
1	01/13/2017
2	02/03/2017
3	03/10/2017

BRIN0004-003 06/01/2016

BRECKENRIDGE COUNTY

	Rates	Fringes
BRICKLAYER.....	\$ 25.96	11.38

* BRKY0001-005 06/01/2016

BULLITT, CARROLL, GRAYSON, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, & TRIMBLE COUNTIES:

Rates	Fringes
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BRICKLAYER.....\$ 25.96 11.38

* BRKY0002-006 06/01/2016

BRACKEN, GALLATIN, GRANT, MASON & ROBERTSON COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 27.01	11.38

BRKY0007-004 06/01/2016

BOYD, CARTER, ELLIOT, FLEMING, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 32.20	18.78

* BRKY0017-004 06/01/2016

ANDERSON, BATH, BOURBON, BOYLE, CLARK, FAYETTE, FRANKLIN,
HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS,
OWEN, SCOTT, WASHINGTON & WOODFORD COUNTIES:

	Rates	Fringes
BRICKLAYER.....	\$ 25.64	11.38

CARP0064-001 05/01/2015

	Rates	Fringes
CARPENTER.....	\$ 27.50	16.06
Diver.....	\$ 41.63	16.06
PILEDRIVERMAN.....	\$ 27.75	16.06

ELEC0212-008 06/06/2016

BRACKEN, GALLATIN and GRANT COUNTIES

	Rates	Fringes
ELECTRICIAN.....	\$ 27.47	17.13

ELEC0212-014 12/01/2014

BRACKEN, GALLATIN & GRANT COUNTIES:

	Rates	Fringes
Sound & Communication Technician.....	\$ 22.75	10.08

ELEC0317-012 06/01/2016

BOYD, CARTER, ELLIOT & ROWAN COUNTIES:

	Rates	Fringes
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ELECTRICIAN (Wiremen)		
Cable Splicer.....	\$ 32.68	18.13
Electrician.....	\$ 33.31	22.98

ELEC0369-007 06/01/2016

ANDERSON, BATH, BOURBON, BOYLE, BRECKINRIDGE, BULLITT, CARROLL,
CLARK, FAYETTE, FRAONKLIN, GRAYSON, HARDIN, HARRISON, HENRY,
JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER,
MONTGOMERY, NELSON, NICHOLAS, OLDHAM, OWEN, ROBERTSON, SCOTT,
SHELBY, SPENCER, TRIMBLE, WASHINGTON, & WOODFORD COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 30.56	16.10

ELEC0575-002 06/02/2014

FLEMING, GREENUP, LEWIS & MASON COUNTIES:

	Rates	Fringes
ELECTRICIAN.....	\$ 31.70	14.21

ENGI0181-018 07/01/2016

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
GROUP 1.....	\$ 31.05	14.65
GROUP 2.....	\$ 28.28	14.65
GROUP 3.....	\$ 28.71	14.65
GROUP 4.....	\$ 27.97	14.65

OPERATING ENGINEER CLASSIFICATIONS

GROUP 1 - A-Frame Winch Truck; Auto Patrol; Backfiller;
Batcher Plant; Bituminous Paver; Bituminous Transfer
Machine; Boom Cat; Bulldozer; Mechanic; Cableway; Carry-All
Scoop; Carry Deck Crane; Central Compressor Plant; Cherry
Picker; Clamshell; Concrete Mixer (21 cu. ft. or Over);
Concrete Paver; Truck-Mounted Concrete Pump; Core Drill;
Crane; Crusher Plant; Derrick; Derrick Boat; Ditching &
Trenching Machine; Dragline; Dredge Operator; Dredge
Engineer; Elevating Grader & Loaders; Grade-All; Gurries;
Heavy Equipment Robotics Operator/Mechanic; High Lift;
Hoe-Type Machine; Hoist (Two or More Drums); Hoisting
Engine (Two or More Drums); Horizontal Directional Drill
Operator; Hydrocrane; Hyster; KeCal Loader; LeTourneau;
Locomotive; Mechanic; Mechanically Operated Laser Screed;
Mechanic Welder; Mucking Machine; Motor Scraper; Orangepeel
Bucket; Overhead Crane; Piledriver; Power Blade; Pumpcrete;
Push Dozer; Rock Spreader, attached to equipment; Rotary
Drill; Roller (Bituminous); Rough Terrain Crane; Scarifier;
Scoopmobile; Shovel; Side Boom; Subgrader; Tailboom;
Telescoping Type Forklift; Tow or Push Boat; Tower Crane
(French, German & other types); Tractor Shovel; Truck
Crane; Tunnel Mining Machines, including Moles, Shields or

similar types of Tunnel Mining Equipment

GROUP 2 - Air Compressor (Over 900 cu. ft. per min.); Bituminous Mixer; Boom Type Tamping Machine; Bull Float; Concrete Mixer (Under 21 cu. ft.); Dredge Engineer; Electric Vibrator; Compactor/Self-Propelled Compactor; Elevator (One Drum or Buck Hoist); Elevator (When used to Hoist Building Material); Finish Machine; Firemen & Hoist (One Drum); Flexplane; Forklift (Regardless of Lift Height); Form Grader; Joint Sealing Machine; Outboard Motor Boat; Power Sweeper (Riding Type); Roller (Rock); Ross Carrier; Skid Mounted or Trailer Mounted Concrete Pump; Skid Steer Machine with all Attachments; Switchman or Brakeman; Throttle Valve Person; Tractair & Road Widening Trencher; Tractor (50 H.P. or Over); Truck Crane Oiler; Tugger; Welding Machine; Well Points; & Whirley Oiler

GROUP 3 - All Off Road Material Handling Equipment, including Articulating Dump Trucks; Greaser on Grease Facilities servicing Heavy Equipment

GROUP 4 - Bituminous Distributor; Burlap & Curing Machine; Cement Gun; Concrete Saw; Conveyor; Deckhand Oiler; Grout Pump; Hydraulic Post Driver; Hydro Seeder; Mud Jack; Oiler; Paving Joint Machine; Power Form Handling Equipment; Pump; Roller (Earth); Steerman; Tamping Machine; Tractor (Under 50 H.P.); & Vibrator

CRANES - with booms 150 ft. & Over (Including JIB), and where the length of the boom in combination with the length of the piling leads equals or exceeds 150 ft. - \$1.00 over Group 1 rate

EMPLOYEES ASSIGNED TO WORK BELOW GROUND LEVEL ARE TO BE PAID 10% ABOVE BASIC WAGE RATE. THIS DOES NOT APPLY TO OPEN CUT WORK.

IRON0044-009 06/01/2016

BRACKEN, GALLATIN, GRANT, HARRISON, ROBERTSON,
BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);
CARROLL (Eastern third, including the Township of Ghent);
FLEMING (Western part, excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);
MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);
NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);
OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall)

	Rates	Fringes
IRONWORKER		
Fence Erector.....	\$ 23.76	19.15
Structural.....	\$ 26.47	20.20

IRON0070-006 06/01/2016

ANDERSON, BOYLE, BRECKINRIDGE, BULLITT, FAYETTE, FRANKLIN, GRAYSON, HARDIN, HENRY, JEFFERSON, JESSAMINE, LARUE, MADISON, MARION, MEADE, MERCER, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE, WASHINGTON & WOODFORD

BOURBON (Southern two-thirds, including Townships of Austerlity, Centerville, Clintonville, Elizabeth, Hutchison, Littlerock, North Middletown & Paris);

CARROLL (Western two-thirds, including Townships of Carrollton, Easterday, English, Locust, Louis, Prestonville & Worthville);

CLARK (Western two-thirds, including Townships of Becknerville, Flanagan, Ford, Pine Grove, Winchester & Wyandotte);

OWEN (Eastern eighth, including Townships of Glenmary, Gratz, Monterey, Perry Park & Tacketts Mill);

SCOTT (Southern third, including Townships of Georgetown, Great Crossing, Newtown, Stampling Ground & Woodlake);

	Rates	Fringes
IRONWORKER.....	\$ 27.91	21.11

IRON0372-006 07/15/2016

BRACKEN, GALLATIN, GRANT, HARRISON and ROBERTSON

BOURBON (Northern third, including Townships of Jackson, Millersburg, Ruddel Mills & Shawhan);

CARROLL (Eastern third, including the Township of Ghent);

FLEMING (Western part, Excluding Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford);

MASON (Western two-thirds, including Townships of Dover, Lewisburg, Mays Lick, Maysville, Minerva, Moranburg, Murphysville, Ripley, Sardis, Shannon, South Ripley & Washington);

NICHOLAS (Townships of Barefoot, Barterville, Carlisle, Ellisville, Headquarters, Henryville, Morningglory, Myers & Oakland Mills);

OWEN (Townships of Beechwood, Bromley, Fairbanks, Holbrook, Jonesville, Long Ridge, Lusby's Mill, New, New Columbus, New Liberty, Owenton, Poplar Grove, Rockdale, Sanders, Teresita & Wheatley);

SCOTT (Northern two-thirds, including Townships of Biddle, Davis, Delaplain, Elmville, Longlick, Muddy Ford, Oxford, Rogers Gap, Sadieville, Skinnersburg & Stonewall) COUNTIES

	Rates	Fringes
IRONWORKER, REINFORCING.....	\$ 27.15	20.33

IRON0769-007 06/01/2016

BATH, BOYD, CARTER, ELLIOTT, GREENUP, LEWIS, MONTGOMERY & ROWAN CLARK (Eastern third, including townships of Bloomingdale, Hunt, Indian Fields, Kiddville, Loglick, Rightangele & Thomson); FLEMING (Townships of Beechburg, Colfax, Elizaville, Flemingsburg, Flemingsburg Junction, Foxport, Grange City, Hillsboro, Hilltop, Mount Carmel, Muses Mills, Nepton, Pecksridge, Plummers Landing, Plummers Mill, Poplar Plains, Ringos Mills, Tilton & Wallingford); MASON (Eastern third, including Townships of Helena, Marshall, Orangeburg, Plumville & Springdale); NICHOLAS (Eastern eighth, including the Township of Moorefield Sprout)

	Rates	Fringes
IRONWORKER		
ZONE 1.....	\$ 31.33	23.47
ZONE 2.....	\$ 31.73	23.47
ZONE 3.....	\$ 33.33	23.47

ZONE 1 - Up to 10 mile radius of Union Hall, Ashland, Ky.,
1643 Greenup Ave.

ZONE 2 - 10 to 50 mile radius of Union Hall, Ashland, Ky.,
1643 Greenup Ave.

ZONE 3 - 50 mile radius & over of Union Hall, Ashland, Ky.,
1643 Greenup Ave.

LABO0189-003 07/01/2016

BATH, BOURBON, BOYD, BOYLE, BRACKEN, CARTER, CLARK, ELLIOTT, FAYETTE, FLEMING, FRANKLIN, GALLATIN, GRANT, GREENUP, HARRISON, JESSAMINE, LEWIS, MADISON, MASON, MERCER, MONTGOMERY, NICHOLAS, OWEN, ROBERTSON, ROWAN, SCOTT, & WOOLFORD COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.75	12.84
GROUP 2.....	\$ 23.00	12.84
GROUP 3.....	\$ 23.05	12.84
GROUP 4.....	\$ 23.65	12.84

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines;

Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

LABO0189-008 07/01/2014

ANDERSON, BULLITT, CARROLL, HARDIN, HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE & WASHINGTON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.71	11.05
GROUP 2.....	\$ 22.96	11.05
GROUP 3.....	\$ 23.01	11.05
GROUP 4.....	\$ 23.61	11.05

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler;

Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder; Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

LAB00189-009 07/01/2014

BRECKINRIDGE & GRAYSON COUNTIES

	Rates	Fringes
Laborers:		
GROUP 1.....	\$ 22.66	11.10
GROUP 2.....	\$ 22.91	11.10
GROUP 3.....	\$ 22.96	11.10
GROUP 4.....	\$ 23.56	11.10

LABORERS CLASSIFICATIONS

GROUP 1 - Aging & Curing of Concrete; Asbestos Abatement Worker; Asphalt Plant; Asphalt; Batch Truck Dump; Carpenter Tender; Cement Mason Tender; Cleaning of Machines; Concrete; Demolition; Dredging; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level D; Flagperson; Grade Checker; Hand Digging & Hand Back Filling; Highway Marker Placer; Landscaping, Mesh Handler & Placer; Puddler; Railroad; Rip-rap & Grouter; Right-of-Way; Sign, Guard Rail & Fence Installer; Signal Person; Sound Barrier Installer; Storm & Sanitary Sewer; Swamper; Truck Spotter & Dumper; Wrecking of Concrete Forms; General Cleanup

GROUP 2 - Batter Board Man (Sanitary & Storm Sewer); Brickmason Tender; Mortar Mixer Operator; Scaffold Builder;

Burner & Welder; Bushhammer; Chain Saw Operator; Concrete Saw Operator; Deckhand Scow Man; Dry Cement Handler; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Level C; Forklift Operator for Masonary; Form Setter; Green Concrete Cutting; Hand Operated Grouter & Grinder Machine Operator; Jackhammer; Pavement Breaker; Paving Joint Machine; Pipelayer; Plastic Pipe Fusion; Power Driven Georgia Buggy & Wheel Barrow; Power Post Hole Digger; Precast Manhole Setter; Walk-Behind Tamper; Walk-Behind Trencher; Sand Blaster; Concrete Chipper; Surface Grinder; Vibrator Operator; Wagon Driller

GROUP 3 - Asphalt Luteman & Raker; Gunnite Nozzleman; Gunnite Operator & Mixer; Grout Pump Operator; Side Rail Setter; Rail Paved Ditches; Screw Operator; Tunnel (Free Air); Water Blaster

GROUP 4 - Caisson Worker (Free Air); Cement Finisher; Environmental - Nuclear, Radiation, Toxic & Hazardous Waste - Levels A & B; Miner & Driller (Free Air); Tunnel Blaster; & Tunnel Mucker (Free Air); Directional & Horizontal Boring; Air Track Drillers (All Types); Powdermen & Blasters; Troxler & Concrete Tester if Laborer is Utilized

 PAIN0012-005 06/11/2005

BATH, BOURBON, BOYLE, CLARK, FAYETTE, FLEMING, FRANKLIN, HARRISON, JESSAMINE, MADISON, MERCER, MONTGOMERY, NICHOLAS, ROBERTSON, SCOTT & WOODFORD COUNTIES:

	Rates	Fringes
PAINTER		
Bridge/Equipment Tender and/or Containment Builder..\$	18.90	5.90
Brush & Roller.....\$	21.30	5.90
Elevated Tanks; Steeplejack Work; Bridge &		
Lead Abatement.....\$	22.30	5.90
Sandblasting &		
Waterblasting.....\$	22.05	5.90
Spray.....\$	21.80	5.90

 PAIN0012-017 05/01/2015

BRACKEN, GALLATIN, GRANT, MASON & OWEN COUNTIES:

	Rates	Fringes
PAINTER (Heavy & Highway Bridges - Guardrails - Lightpoles - Striping)		
Bridge Equipment Tender and Containment Builder.....\$	20.73	9.06
Brush & Roller.....\$	23.39	9.06
Elevated Tanks; Steeplejack Work; Bridge &		
Lead Abatement.....\$	24.39	9.06

Sandblasting & Water		
Blasting.....	\$ 24.14	9.06
Spray.....	\$ 23.89	9.06

 PAIN0118-004 06/01/2014

ANDERSON, BRECKINRIDGE, BULLITT, CARROLL, GRAYSON, HARDIN,
 HENRY, JEFFERSON, LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY,
 SPENCER, TRIMBLE & WASHINGTON COUNTIES:

	Rates	Fringes
PAINTER		
Brush & Roller.....	\$ 18.50	11.97
Spray, Sandblast, Power Tools, Waterblast & Steam		
Cleaning.....	\$ 19.50	11.97

 PAIN1072-003 12/01/2016

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS and ROWAN COUNTIES

	Rates	Fringes
Painters:		
Bridges; Locks; Dams; Tension Towers & Energized Substations.....	\$ 32.98	16.15
Power Generating Facilities.	\$ 29.74	16.15

 PLUM0248-003 06/01/2016

BOYD, CARTER, ELLIOTT, GREENUP, LEWIS & ROWAN COUNTIES:

	Rates	Fringes
Plumber and Steamfitter.....	\$ 30.00	24.05

 PLUM0392-007 06/01/2014

BRACKEN, CARROLL (Eastern Half), GALLATIN, GRANT, MASON, OWEN &
 ROBERTSON COUNTIES:

	Rates	Fringes
Plumbers and Pipefitters.....	\$ 29.80	17.79

 PLUM0502-003 08/01/2016

BRECKINRIDGE, BULLITT, CARROLL (Western Half), FRANKLIN
 (Western three-fourths), GRAYSON, HARDIN, HENRY, JEFFERSON,
 LARUE, MARION, MEADE, NELSON, OLDHAM, SHELBY, SPENCER, TRIMBLE &
 WASHINGTON COUNTIES

	Rates	Fringes
PLUMBER.....	\$ 32.00	20.13

SUKY2010-160 10/08/2001

	Rates	Fringes
Truck drivers:		
GROUP 1.....	\$ 16.57	7.34
GROUP 2.....	\$ 16.68	7.34
GROUP 3.....	\$ 16.86	7.34
GROUP 4.....	\$ 16.96	7.34

TRUCK DRIVER CLASSIFICATIONS

GROUP 1 - Mobile Batch Truck Tender

GROUP 2 - Greaser; Tire Changer; & Mechanic Tender

GROUP 3 - Single Axle Dump; Flatbed; Semi-trailer or Pole
Trailer when used to pull building materials and equipment;
Tandem Axle Dump; Distributor; Mixer; & Truck Mechanic

GROUP 4 - Euclid & Other Heavy Earthmoving Equipment &
Lowboy; Articulator Cat; 5-Axle Vehicle; Winch & A-Frame
when used in transporting materials; Ross Carrier; Forklift
when used to transport building materials; & Pavement
Breaker

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave
for Federal Contractors applies to all contracts subject to the
Davis-Bacon Act for which the contract is awarded (and any
solicitation was issued) on or after January 1, 2017. If this
contract is covered by the EO, the contractor must provide
employees with 1 hour of paid sick leave for every 30 hours
they work, up to 56 hours of paid sick leave each year.
Employees must be permitted to use paid sick leave for their
own illness, injury or other health-related needs, including
preventive care; to assist a family member (or person who is
like family to the employee) who is ill, injured, or has other
health-related needs, including preventive care; or for reasons
resulting from, or to assist a family member (or person who is
like family to the employee) who is a victim of, domestic
violence, sexual assault, or stalking. Additional information
on contractor requirements and worker protections under the EO
is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within
the scope of the classifications listed may be added after
award only as provided in the labor standards contract clauses
(29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date

for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

Fringe benefit amounts are applicable for all hours worked except when otherwise noted.

No laborer, workman or mechanic shall be paid at a rate less than that of a Journeyman except those classified as bona fide apprentices.

Apprentices or trainees shall be permitted to work as such subject to Administrative Regulations adopted by the Commissioner of Workplace Standards. Copies of these regulations will be furnished upon request from any interested person.

Before using apprentices on the job the contractor shall present to the Contracting Officer written evidence of registration of such employees in a program of a State apprenticeship and training agency approved and recognized by the U. S. Bureau of Apprenticeship and Training. In the absence of such a State agency, the contractor shall submit evidence of approval and registration by the U. S. Bureau of Apprenticeship and Training.

The contractor shall submit to the Contracting Officer, written evidence of the established apprenticeship-journeyman ratios and wage rates in the project area, which will be the basis for establishing such ratios and rates for the project under the applicable contract provisions.

TO: EMPLOYERS/EMPLOYEES

PREVAILING WAGE SCHEDULE:

The wages indicated on this wage schedule are the least permitted to be paid for the occupations indicated. When an employee works in more than one classification, the employer must record the number of hours worked in each classification at the prescribed hourly base rate.

OVERTIME:

Overtime is to be paid after an employee works eight (8) hours a day or forty (40) hours a week, whichever gives the employee the greater wages. At least time and one-half the base rate is required for all overtime. A laborer, workman or mechanic and an employer may enter into a written agreement or a collective bargaining agreement to work more than eight (8) hours a calendar day but not more than ten (10) hours a calendar day for the straight time hourly rate. Wage violations or questions should be directed to the designated Engineer or the undersigned.

Director
Division of Construction Procurement
Frankfort, Kentucky 40622
502-564-3500

PROPOSAL BID ITEMS

171206

Page 1 of 5

Report Date 3/17/17

Section: 0001 - PAVING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0010	00003		CRUSHED STONE BASE	1,465.00	TON		\$	
0020	00078		CRUSHED AGGREGATE SIZE NO 2	2,759.00	TON		\$	
0030	00100		ASPHALT SEAL AGGREGATE	8.00	TON		\$	
0040	00103		ASPHALT SEAL COAT	1.00	TON		\$	
0050	00221		CL2 ASPH BASE 0.75D PG64-22	1,359.00	TON		\$	
0060	00301		CL2 ASPH SURF 0.38D PG64-22	276.00	TON		\$	
0070	02599		FABRIC-GEOTEXTILE TYPE IV	11,630.00	SQYD		\$	
0080	20071EC		JOINT ADHESIVE	920.00	LF		\$	

Section: 0002 - ROADWAY

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0090	01000		PERFORATED PIPE-4 IN	85.00	LF		\$	
0100	01010		NON-PERFORATED PIPE-4 IN	37.00	LF		\$	
0110	01825		ISLAND CURB AND GUTTER	139.00	LF		\$	
0120	01987		DELINEATOR FOR GUARDRAIL BI DIRECTIONAL WHITE	21.00	EACH		\$	
0130	02014		BARRICADE-TYPE III	10.00	EACH		\$	
0140	02091		REMOVE PAVEMENT	455.00	SQYD		\$	
0150	02159		TEMP DITCH	483.00	LF		\$	
0160	02160		CLEAN TEMP DITCH	242.00	LF		\$	
0170	02200		ROADWAY EXCAVATION	6,996.00	CUYD		\$	
0180	02203		STRUCTURE EXCAV-UNCLASSIFIED	358.00	CUYD		\$	
0190	02242		WATER (FOR DUST CONTROL)	150.00	MGAL		\$	
0200	02351		GUARDRAIL-STEEL W BEAM-S FACE	937.50	LF		\$	
0210	02360		GUARDRAIL TERMINAL SECTION NO 1	5.00	EACH		\$	
0220	02363		GUARDRAIL CONNECTOR TO BRIDGE END TY A	4.00	EACH		\$	
0230	02367		GUARDRAIL END TREATMENT TYPE 1	3.00	EACH		\$	
0240	02381		REMOVE GUARDRAIL	223.00	LF		\$	
0250	02404		SEPTIC TANK TREATMENT	3.00	EACH		\$	
0260	02429		RIGHT-OF-WAY MONUMENT TYPE 1	25.00	EACH		\$	
0270	02432		WITNESS POST	4.00	EACH		\$	
0280	02484		CHANNEL LINING CLASS III	115.00	TON		\$	
0290	02545		CLEARING AND GRUBBING (APPROXIMATELY 0.80 ACRES; GARRARD COUNTY)	1.00	LS		\$	
0300	02545		CLEARING AND GRUBBING (APPROXIMATELY 2.00 ACRES; MERCER COUNTY)	1.00	LS		\$	
0310	02555		CONCRETE-CLASS B	214.00	CUYD		\$	
0320	02562		TEMPORARY SIGNS	200.00	SQFT		\$	
0330	02585		EDGE KEY	65.00	LF		\$	
0340	02611		HANDRAIL-TYPE A-1	118.00	LF		\$	
0350	02650		MAINTAIN & CONTROL TRAFFIC (GARRARD COUNTY)	1.00	LS		\$	
0360	02650		MAINTAIN & CONTROL TRAFFIC (MERCER COUNTY)	1.00	LS		\$	

PROPOSAL BID ITEMS

171206

Report Date 3/17/17

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0370	02653		LANE CLOSURE	2.00	EACH		\$	
0380	02671		PORTABLE CHANGEABLE MESSAGE SIGN	4.00	EACH		\$	
0390	02701		TEMP SILT FENCE	483.00	LF		\$	
0400	02703		SILT TRAP TYPE A	3.00	EACH		\$	
0410	02704		SILT TRAP TYPE B	3.00	EACH		\$	
0420	02705		SILT TRAP TYPE C	3.00	EACH		\$	
0430	02706		CLEAN SILT TRAP TYPE A	3.00	EACH		\$	
0440	02707		CLEAN SILT TRAP TYPE B	3.00	EACH		\$	
0450	02708		CLEAN SILT TRAP TYPE C	3.00	EACH		\$	
0460	02726		STAKING (GARRARD COUNTY)	1.00	LS		\$	
0470	02726		STAKING (MERCER COUNTY)	1.00	LS		\$	
0480	02731		REMOVE STRUCTURE (GARRARD COUNTY)	1.00	LS		\$	
0490	02731		REMOVE STRUCTURE (MERCER COUNTY)	1.00	LS		\$	
0500	02775		ARROW PANEL	2.00	EACH		\$	
0510	05950		EROSION CONTROL BLANKET	445.00	SQYD		\$	
0520	05952		TEMP MULCH	27,298.00	SQYD		\$	
0530	05953		TEMP SEEDING AND PROTECTION	6,824.00	SQYD		\$	
0540	05985		SEEDING AND PROTECTION	5,778.00	SQYD		\$	
0550	05989		SPECIAL SEEDING CROWN VETCH	2,000.00	SQYD		\$	
0560	06510		PAVE STRIPING-TEMP PAINT-4 IN	6,400.00	LF		\$	
0570	06514		PAVE STRIPING-PERM PAINT-4 IN	2,996.00	LF		\$	
0580	06554		PAVE STRIPING-DUR TY 1-4 IN W	1,650.00	LF		\$	
0590	06555		PAVE STRIPING-DUR TY 1-4 IN Y	1,650.00	LF		\$	
0600	10020NS		FUEL ADJUSTMENT	3,756.00	DOLL	\$1.00	\$	\$3,756.00
0610	21432NC		CONCRETE FORMLINER	1,180.00	SQFT		\$	
0620	23274EN11F		TURF REINFORCEMENT MAT 1	310.00	SQYD		\$	
0630	23912EC		WEB CAMERA CONST MONITORING SYSTEM (MERCER COUNTY)	1.00	LS		\$	
0640	24601EC		INSTALL (INTERPRETIVE SIGNS)	2.00	EACH		\$	
0645	24626EC		PROJECT INSPECTION BOAT ADDED: 3-17-17	1.00	LS		\$	
0650	24755EC		MAINTAIN EXISTING BRIDGE	500,000.00	DOLL	\$1.00	\$	\$500,000.00
0655	24895EC		MARINE MOBILIZATION (ADDED: 3-17-17)	1.00	L S		\$	

Section: 0003 - DRAINAGE

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0660	00440		ENTRANCE PIPE-15 IN	121.00	LF		\$	
0670	00462		CULVERT PIPE-18 IN	6.00	LF		\$	
0680	00521		STORM SEWER PIPE-15 IN	206.00	LF		\$	
0690	00522		STORM SEWER PIPE-18 IN	112.00	LF		\$	
0700	01202		PIPE CULVERT HEADWALL-15 IN	1.00	EACH		\$	
0710	01204		PIPE CULVERT HEADWALL-18 IN	1.00	EACH		\$	
0720	01480		CURB BOX INLET TYPE B	3.00	EACH		\$	

PROPOSAL BID ITEMS

171206

Report Date 3/17/17

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0730	01490		DROP BOX INLET TYPE 1	2.00	EACH		\$	
0740	01544		DROP BOX INLET TYPE 11	5.00	EACH		\$	
0750	02600		FABRIC GEOTEXTILE TY IV FOR PIPE	540.00	SQYD	\$2.00	\$	\$1,080.00
0760	24814EC		PIPELINE INSPECTION	191.00	LF		\$	

Section: 0004 - BRIDGE - HERRINGTON LAKE - GARRARD - DWG. 27207

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
0770	01001		PERFORATED PIPE-6 IN	66.00	LF		\$	
0780	01021		PERF PIPE HEADWALL TY 1-6 IN	1.00	EACH		\$	
0790	02231		STRUCTURE GRANULAR BACKFILL	291.00	CUYD		\$	
0800	02998		MASONRY COATING	1,123.00	SQYD		\$	
0810	03299		ARMORED EDGE FOR CONCRETE	44.00	LF		\$	
0820	08002		STRUCTURE EXCAV-SOLID ROCK (ABUTMENT 1 & 2)	283.00	CUYD		\$	
0830	08002		STRUCTURE EXCAV-SOLID ROCK (PIER 2)	84.00	CUYD		\$	
0840	08100		CONCRETE-CLASS A	848.50	CUYD		\$	
0850	08104		CONCRETE-CLASS AA	706.20	CUYD		\$	
0860	08150		STEEL REINFORCEMENT	98,784.00	LB		\$	
0870	08151		STEEL REINFORCEMENT-EPOXY COATED	183,839.00	LB		\$	
0880	08160		STRUCTURAL STEEL (APPROXIMATELY 945,925 LBS; GARRARD COUNTY)	1.00	LS		\$	
0890	08170		SHEAR CONNECTORS (APPROXIMATELY 2,555 LBS: GARRARD COUNTY)	1.00	LS		\$	
0900	08500		APPROACH SLAB	120.00	SQYD		\$	
0910	21119ED		CONCRETE FORM LINER	188.00	SQYD		\$	
0920	21322NC		CSL TESTING (6 TUBES) (PIER 2; GARRARD)	4.00	EACH		\$	
0930	22885EN		DRILLED SHAFT-72 IN-ROCK (PIER 2)	85.40	LF		\$	
0940	23859EC		FINGER EXPANSION JOINT	40.00	LF		\$	
0950	23860EC		ELECTRIC POWER CONDUITS (GARRARD COUNTY)	1.00	LS		\$	
0960	24001EC		DRILLED SHAFT-78 IN COMMON	42.60	LF		\$	
0970	24582EN		PRECAST PC I BEAM-HN 72-49	491.00	LF		\$	
0980	24737EC		CAVITY STABILIZATION (PIER 2)	34.90	CUYD		\$	
0990	24738EC		REDRILLING CAVITY STABILIZATION (PIER 2; GARRARD)	22.20	LF		\$	
1000	24741EC		SONAR CALIPER TESTING (PIER 2)	4.00	EACH		\$	
1010	24872ED		NEOPRENE O-RING SEAL	4.00	EACH		\$	
1020	24874EC		TIP TESTING (PIER 2)	4.00	EACH		\$	
1030	24876EC		DRILLED SHAFT VIDEO INSPECTION (PIER 2; GARRARD)	4.00	EACH		\$	

Section: 0005 - BRIDGE - HERRINGTON LAKE - MERCER - DWG. 27207

PROPOSAL BID ITEMS

REVISED ADDENDUM #1: 3-17-17

171206

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Report Date 3/17/17

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1040	01001		PERFORATED PIPE-6 IN	66.00	LF		\$	
1050	01021		PERF PIPE HEADWALL TY 1-6 IN	1.00	EACH		\$	
1060	02231		STRUCTURE GRANULAR BACKFILL	367.00	CUYD		\$	
1070	02998		MASONRY COATING	1,087.00	SQYD		\$	
1080	03299		ARMORED EDGE FOR CONCRETE	40.00	LF		\$	
1090	08001		STRUCTURE EXCAVATION-COMMON	29.00	CUYD		\$	
1100	08002		STRUCTURE EXCAV-SOLID ROCK (ABUTMENTS 1 & 2)	57.00	CUYD		\$	
1110	08019		CYCLOPEAN STONE RIP RAP	150.00	TON		\$	
1120	08100		CONCRETE-CLASS A	883.90	CUYD		\$	
1130	08104		CONCRETE-CLASS AA	1,181.30	CUYD		\$	
1140	08150		STEEL REINFORCEMENT	200,017.00	LB		\$	
1150	08151		STEEL REINFORCEMENT-EPOXY COATED	217,943.00	LB		\$	
1160	08160		STRUCTURAL STEEL (APPROXIMATELY 2,093,425 LBS; MERCER COUNTY)	1.00	LS		\$	
1170	08170		SHEAR CONNECTORS (APPROXIMATELY 5,655 LBS; MERCER COUNTY)	1.00	LS		\$	
1180	08500		APPROACH SLAB	112.00	SQYD		\$	
1190	21119ED		CONCRETE FORM LINER	215.00	SQYD		\$	
1200	21322NC		CSL TESTING (6 TUBES) (ABUTMENT 1; MERCER)	3.00	EACH		\$	
1210	22885EN		DRILLED SHAFT-72 IN-ROCK	64.50	LF		\$	
1220	23859EC		FINGER EXPANSION JOINT	40.00	LF		\$	
1230	23860EC		ELECTRIC POWER CONDUITS (MERCER COUNTY)	1.00	LS		\$	
1240	24550EC		VIBRATION MONITORING (MERCER COUNTY)	1.00	LS		\$	
1250	24737EC		CAVITY STABILIZATION (ABUTMENT 1)	33.80	CUYD		\$	
1260	24737EC		CAVITY STABILIZATION (PIER 1)	427.90	CUYD		\$	
1270	24738EC		REDRILLING CAVITY STABILIZATION (ABUTMENT 1)	21.50	LF		\$	
1280	24738EC		REDRILLING CAVITY STABILIZATION (PIER 1)	153.30	LF		\$	
1290	24741EC		SONAR CALIPER TESTING (PIER 1)	4.00	EACH		\$	
1300	24870EC		DRILLED SHAFT - 102 IN (COMMON)	723.30	LF		\$	
1310	24871EC		DRILLED SHAFT - 96 IN (SOLID ROCK)	150.00	LF		\$	
1320	24872ED		NEOPRENE O-RING SEAL	12.00	EACH		\$	
1330	24874EC		TIP TESTING (ABUTMENT 1)	3.00	EACH		\$	
1340	24874EC		TIP TESTING (PIER 1)	4.00	EACH		\$	
1350	24875EC		CSL TESTING (8 TUBES) (PIER 1; MERCER)	4.00	EACH		\$	
1360	24876EC		DRILLED SHAFT VIDEO INSPECTION (ABUTMENT 1)	3.00	EACH		\$	
1370	24876EC		DRILLED SHAFT VIDEO INSPECTION (PIER 1)	4.00	EACH		\$	

PROPOSAL BID ITEMS

171206

Report Date 3/17/17

Section: 0006 - SIGNING

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1380	06406		SBM ALUM SHEET SIGNS .080 IN	102.00	SQFT		\$	
1390	06407		SBM ALUM SHEET SIGNS .125 IN	35.00	SQFT		\$	
1400	06410		STEEL POST TYPE 1	166.00	LF		\$	
1410	06490		CLASS A CONCRETE FOR SIGNS	1.38	CUYD		\$	
1420	06491		STEEL REINFORCEMENT FOR SIGNS	83.49	LB		\$	
1430	20912ND		BARRIER WALL POST	2.00	EACH		\$	
1440	21596ND		GMSS TYPE D	6.00	EACH		\$	

Section: 0007 - DEMOBILIZATION &/OR MOBILIZATION

LINE	BID CODE	ALT	DESCRIPTION	QUANTITY	UNIT	UNIT PRIC	FP	AMOUNT
1450	02568		MOBILIZATION	1.00	LS		\$	
1460	02569		DEMOBILIZATION	1.00	LS		\$	

KYTC Trough Material Specification

Material 1/8" thick fabric reinforced neoprene sheet

Neoprene Trough. Fabric reinforced drainage trough shall be polychloroprene (Neoprene) of the thickness specified in the plans. Trough shall be reinforced with one or two plies of tightly woven polyester or nylon fabric and shall be supplied and installed in one continuous length, except that a vulcanized field splice is permitted between construction phases at or near the centerline of bridge deck. The inside surfaces of the trough shall be smooth to promote self-removal of foreign material during normal joint operation. The shape of the trough shall be designed to minimize stress concentrations at compression strips.

Neoprene/fabric composite material shall comply with the following:

<u>PHYSICAL PROPERTY</u>	<u>ASTM TEST</u>	<u>VALUE</u>
Density		75 pcf minimum
Hardness (Type A Durometer)	D2240	50 to 75
Tensile Strength, both directions	D378	800 lbs/in. minimum
Elongation at ultimate tensile strength	D412	35% maximum
Tear (Die C)	D624	120 lbs/in. minimum
Low Temperature Brittleness (22 hrs. at -20°F, then wrapped around a 3 inch mandrel)	D2137	No Cracks
Ozone Resistance (20% strain) 100 pphm in air (100 hrs. at 100°F)	D1149	No Cracks

MARINE MOBILIZATION

A bid item for Marine Mobilization has been added to this project because of the uniqueness of the project requiring large equipment such as barges and cranes being trucked to the project and assemble onsite. The bid amount for this item shall not exceed \$500,000. The unit bid price shall be Lump Sum and the Department will pay for the quantities at the Contract unit price as mentioned for “Mobilization” as listed in the Standard Specifications for Road Bridge Construction Section 110.

SPECIAL NOTE FOR PROJECT INSPECTION BOAT

DESCRIPTION. Project Inspection Boat shall consist of providing a boat and safety equipment at the site, along with adequate training and docking facilities as specified below. The boat shall be for the exclusive use of, and operated by, the Engineer or his personnel.

PROJECT INSPECTION BOAT. The boat shall not be less than 18 ft (5.5 m) in length with at least a 72-inch (1.8 m) beam, equipped with an outboard motor of at least 70 horsepower (52 kw), and shall be capable of accommodating at least 6 adult passengers, including the operator. In addition, the Engineer shall at all times retain the right to travel on, or be present on, any of the Contractor's floating plants or equipment. The boat shall remain on site at all times.

The boat shall be in good condition and meet the approval of the Engineer. The boat and safety equipment shall at all times meet all applicable boating regulations of the United States Coast Guard.

The boat shall be equipped with 2 fuel tanks, complete remote control, a spotlight and an adequate whistle or horn. The motor shall be equipped with electric and hand starters, an alternator or generator, and slip clutch propeller protection. These requirements are in addition to all Coast Guard or State requirements.

The boat shall be equipped with a depth finder and trolling motor.

The Contractor shall service, gas, oil and maintain the boat during the life of the contract unless otherwise directed by the Engineer.

TRAINING FOR DEPARTMENT PERSONNEL. The Contractor shall provide field training by someone proficient in the operation of the boat to ensure that approximately 3 to 5 employees of the Department, or their representative, are competent in the proper operation, safety features and handling on open water and while docking. The required training time is anticipated to be no more than one-half day.

INSURANCE FOR PROJECT INSPECTION BOAT. The Contractor shall furnish the Engineer with evidence that liability insurance has been obtained, with a minimum coverage of \$500,000, and shall hold the Department and its representatives harmless from any and all damage to, or caused by, the boat while being operated by the Engineer.

The insurance shall be kept in effect until the project is completed, and the evidence of renewal of the policy as necessary shall be forwarded to the Engineer.

MEASUREMENT. The Department will measure all work performed as part Project Inspection Boat as a lump sum.

PAYMENT. The Department will consider payment as full compensation for all work required under this section.

Payment will be made under:

BID ITEM CODE

24626EC

PROJECT INSPECTION BOAT

LS

SPECIAL NOTE FOR CURRENT STRUCTURAL REPAIRS ON EXISTING BRIDGE

The existing bridge shall be closed for repairs. The Contractor shall give a two-week notice before repairs can begin, and have a pre-determined time period for when the work will be completed.

SECONDARY BRACING FORCES TRANSFERED FROM SHAFTS
UPPER BRACING PLATFORM, ELEVATION 663.7

STAAD JOINT NUMBER	CONSTRUCTION PLANS SHAFT NUMBER
109	4
110	5
111	6
112	7

STAAD LOAD NUMBER	LRFD LOADING
1	DEAD LOAD (DC1) NOTE: INCLUDES WEIGHT OF PLATFORM (0.150 KIPS/FT3)
2	DEAD LOAD (DC2)
3	WEARING SURFACE (DW)
4	LIVE LOAD 1 (LL1+IMP)
5	LIVE LOAD 2 (LL2+IMP)
6	LIVE LOAD 3 (LL3+IMP)
7	HORIZ. EARTH PRESSURE (EH)
8	WIND LOAD ON STRUCTURE (WS)
9	OVER TURNING WIND LOAD (OTW)
10	WIND LOAD ON LIVE LOEAD (WL)
11	BRAKING LOAD (BR)
12	WATER LOADING (WA) NOTE: INCLUDES BOUYANT WEIGHT OF PLATFORM

VARIABLE DEFINITIONS:

SQX SHEAR STRESS ON THE LOCAL X FACE IN THE Z DIRECTION
SQY SHEAR STRESS ON THE LOCAL Y FACE IN THE Z DIRECTION
MX MOMENT PER UNIT WIDTH ABOUT THE LOCAL X FACE
MY MOMENT PER UNIT WIDTH ABOUT THE LOCAL Y FACE
MXY TORSIONAL MOMENT PER UNIT WIDTH IN THE LOCAL X-Y PLANE
SX AXIAL STRESS IN THE LOCAL X DIRECTION
SY AXIAL STRESS IN THE LOCAL Y DIRECTION
SXY SHEAR STRESS IN THE LOCAL XY PLANE
VONT VON MISES STRESS ON THE TOP SURFACE OF THE ELEMENT
VONB VON MISES STRESS ON THE BOTTOM SURFACE OF THE ELEMENT
TRESCAT TRESCA STRESS ON THE TOP SURFACE OF THE ELEMENT
TRES CAB TRESCA STRESS ON THE BOTTOM SURFACE OF THE ELEMENT
SMAX MAXIMUM IN-PLANE PRINCIPAL STRESS
SMIN MINIMUM IN-PLANE PRINCIPAL STRESS
TMAX MAXIMUM IN-PLANE SHEAR STRESS
ANGLE ANGLE WHICH DETERMINES DIRECTION OF MAXIMUM PRINCIPAL STRESS WITH RESPECT TO
LOCAL X AXIS

NOTE: THIS DOCUMENT CONTAINS MODIFIED EXCERPTS FROM STAAD-PRO ANALYSIS OUTPUT

JOINT DISPLACEMENT (INCH RADIANS) STRUCTURE TYPE = SPACE

JOINT	LOAD	X-TRANS	Y-TRANS	Z-TRANS	X-ROTAN	Y-ROTAN	Z-ROTAN
109	1	-0.13933	-0.22922	-0.02030	-0.00002	-0.00000	0.00012
	2	-0.00330	-0.00518	-0.00045	-0.00000	-0.00000	0.00000
	3	-0.00300	-0.00471	-0.00041	-0.00000	-0.00000	0.00000
	4	-0.01358	-0.02114	-0.00185	-0.00000	-0.00000	0.00001
	5	0.00141	0.00223	0.00019	0.00000	0.00000	-0.00000
	6	-0.00725	-0.00386	0.06636	0.00008	-0.00000	0.00001
	7	-0.06859	-0.00053	-0.00001	0.00000	0.00000	0.00002
	8	-2.28352	0.03742	3.89317	0.00371	0.00002	0.00219
	9	-0.03054	-0.12835	-5.16002	-0.00490	-0.00003	0.00001
	10	-0.18130	0.00524	0.37991	0.00036	0.00000	0.00017
	11	-0.30492	-0.00767	-0.00012	0.00000	0.00000	0.00029
	12	0.00007	0.00047	0.03332	0.00002	0.00000	0.00000
110	1	-0.13912	-0.22815	-0.02030	-0.00002	-0.00000	0.00012
	2	-0.00330	-0.00517	-0.00045	-0.00000	-0.00000	0.00000
	3	-0.00300	-0.00470	-0.00041	-0.00000	-0.00000	0.00000
	4	-0.01358	-0.02108	-0.00185	-0.00000	-0.00000	0.00001
	5	0.00141	0.00222	0.00019	0.00000	0.00000	-0.00000
	6	-0.01405	-0.02923	0.06636	0.00008	-0.00000	0.00001
	7	-0.06860	-0.00053	-0.00001	-0.00000	0.00000	0.00002
	8	-2.32380	-0.14850	3.89319	0.00370	0.00002	0.00219
	9	0.00975	0.09666	-5.15995	-0.00490	-0.00002	0.00001
	10	-0.18529	-0.01432	0.37991	0.00036	0.00000	0.00017
	11	-0.30517	-0.00767	-0.00013	-0.00000	0.00000	0.00029
	12	-0.00007	-0.00046	0.03332	0.00002	0.00000	-0.00000
111	1	-0.13933	-0.22479	-0.02051	-0.00002	-0.00000	0.00012
	2	-0.00330	-0.00507	-0.00045	-0.00000	-0.00000	0.00000
	3	-0.00300	-0.00461	-0.00041	-0.00000	-0.00000	0.00000
	4	-0.01358	-0.02067	-0.00185	-0.00000	-0.00000	0.00001
	5	0.00141	0.00218	0.00019	0.00000	0.00000	-0.00000
	6	-0.00725	-0.00350	0.07316	0.00009	0.00000	0.00001
	7	-0.06859	0.00039	0.00001	-0.00000	0.00000	0.00002
	8	-2.28348	0.14481	3.93339	0.00373	0.00002	0.00216
	9	-0.03057	-0.12800	-5.20031	-0.00493	-0.00002	0.00004
	10	-0.18130	0.01405	0.38390	0.00037	0.00000	0.00017
	11	-0.30492	0.00699	0.00012	-0.00000	0.00000	0.00029
	12	0.00007	0.00047	0.03346	0.00002	0.00000	-0.00000
112	1	-0.13912	-0.22372	-0.02051	-0.00002	-0.00000	0.00012
	2	-0.00330	-0.00505	-0.00045	-0.00000	-0.00000	0.00000
	3	-0.00300	-0.00459	-0.00041	-0.00000	-0.00000	0.00000
	4	-0.01357	-0.02061	-0.00185	-0.00000	-0.00000	0.00001
	5	0.00141	0.00217	0.00019	0.00000	0.00000	-0.00000
	6	-0.01405	-0.02886	0.07316	0.00009	0.00000	0.00001
	7	-0.06860	0.00039	0.00001	0.00000	0.00000	0.00002
	8	-2.32380	-0.04113	3.93343	0.00374	0.00002	0.00221
	9	0.00978	0.09701	-5.20024	-0.00493	-0.00003	-0.00002
	10	-0.18529	-0.00551	0.38390	0.00037	0.00000	0.00018
	11	-0.30517	0.00699	0.00012	0.00000	0.00000	0.00029
	12	-0.00007	-0.00046	0.03346	0.00002	0.00000	0.00000

***** END OF LATEST ANALYSIS RESULT *****

1383. PRINT ELEMENT FORCES AT 108.071 181.366 LIST 1131 1132 1140 1141
 ELEMENT FORCES AT 108.071

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1131	1	-52.36 33802.58	-104.23 33802.79	-16176.95 -0.62	-56816.76 -0.05	-246.53 0.00
	2	3.24 707.31	0.05 707.38	1071.55 -0.03	21.58 0.00	8.07 -0.01
	3	2.95 642.85	0.05 642.91	973.89 -0.03	19.61 0.00	7.33 -0.01
	4	13.36 2916.44	0.22 2916.69	4418.02 -0.12	88.45 0.01	33.26 -0.06
	5	-1.39 302.51	-0.02 302.53	-458.30 0.01	-9.26 -0.00	-3.45 0.01
	6	2.07 6622.61	18.63 6622.32	643.85 0.04	10238.22 0.17	107.15 0.06
	7	14.23 3347.20	-0.98 3347.30	4708.39 -0.05	-574.97 0.01	28.96 0.01
	8	2557.17 1231174.62	-2294.99 1231194.25	850506.81 -5.43	-1268246.00 5.94	-6409.61 0.25
	9	-566.84 1135159.62	2902.73 1135180.00	-193704.27 -0.27	1597432.00 -10.29	14543.85 -4.20
	10	209.16 110885.94	-217.65 110887.84	69629.94 -0.48	-120195.09 0.62	-688.38 0.07
	11	281.12 66171.89	-19.66 66173.72	92996.72 -0.88	-11511.32 0.06	570.57 -0.04
	12	2.77 5387.42	-13.75 5387.50	944.30 -0.00	-7566.68 0.04	-68.69 0.00

ELEMENT STRESSES FORCE, LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1132	1	56.40 44652.71	137.03 44653.09	17909.03 0.14	74111.34 -0.15	-300.99 -0.01
	2	-3.05 837.68	0.72 837.73	-1011.91 0.02	394.54 -0.00	-5.01 0.01
	3	-2.78 761.33	0.65 761.38	-919.68 0.02	358.58 -0.00	-4.55 0.00
	4	-12.59 3453.75	2.95 3453.95	-4172.15 0.09	1626.60 -0.02	-20.65 0.02
	5	1.31 358.28	-0.31 358.30	432.79 -0.01	-168.76 0.00	2.14 -0.00
	6	3.61 9917.19	28.72 9917.50	1199.81 -0.07	15438.83 -0.18	-87.14 0.04
	7	-13.77 3338.63	1.40 3338.71	-4562.15 0.02	796.17 -0.03	-16.74 0.00
	8	-3120.05 931080.69	-2971.38 931068.00	-1034266.25 0.06	-1588634.12 -8.09	6568.55 4.02
	9	1422.43 1409275.38	4302.79 1409244.12	471836.47 -1.43	2309828.75 15.46	-12281.74 -3.05
	10	-264.34 89429.98	-288.61 89428.52	-87630.54 0.07	-154422.19 -0.89	672.65 0.38
	11	-271.97 65896.91	27.46 65897.86	-90123.08 0.28	15589.88 -0.30	-329.89 0.07
	12	-6.81 6663.15	-20.36 6663.05	-2259.92 0.00	-10930.60 -0.05	58.05 0.02

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1140	1	370.66	114.53	118663.31	63158.30	57.26
		68558.34	68557.27	0.63	-0.17	-0.17
	2	4.90	0.30	1562.97	170.23	-3.30
		990.17	990.10	0.03	-0.00	0.00
	3	4.46	0.27	1420.52	154.72	-3.00
		899.92	899.87	0.03	-0.00	0.00
	4	20.22	1.22	6444.67	702.42	-13.59
		4082.66	4082.40	0.12	-0.01	0.00
	5	-2.10	-0.13	-668.46	-72.77	1.41
		423.49	423.46	-0.01	0.00	-0.00
	6	14.16	-17.30	4564.46	-9524.10	-78.66
		8300.94	8300.73	0.12	-0.01	-0.11
7	21.00	2.46	6688.75	1386.36	-9.51	
	4076.47	4076.36	0.05	-0.01	-0.02	
8	2516.91	2440.74	795277.50	1350833.88	7071.48	
	784030.12	784029.19	8.60	-0.45	-2.91	
9	863.87	-2800.01	283991.22	-1544197.75	-11489.62	
	1136088.88	1136112.88	-7.07	7.63	3.08	
10	188.08	227.89	59291.52	126056.99	702.50	
	72826.00	72826.35	0.83	-0.16	-0.26	
11	414.84	48.79	132150.69	27535.84	-186.87	
	80508.25	80506.58	0.86	0.03	-0.29	
12	-3.97	13.27	-1304.95	7319.17	54.34	
	5367.90	5367.97	0.03	-0.02	-0.00	

ELEMENT STRESSES FORCE, LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1141	1	-365.42 69245.10	-143.55 69244.00	-117647.95 -0.68	-78900.07 -0.19	1223.31 0.14
	2	-4.86 909.11	-1.00 909.06	-1553.66 -0.03	-556.66 0.00	14.41 -0.01
	3	-4.41 826.26	-0.91 826.21	-1412.06 -0.02	-505.92 0.00	13.10 -0.01
	4	-20.02 3748.57	-4.13 3748.38	-6406.22 -0.10	-2295.07 0.01	59.42 -0.04
	5	2.08 388.81	0.43 388.79	664.48 0.01	238.10 -0.00	-6.16 0.00
	6	-19.04 8893.81	-28.23 8894.10	-6195.54 -0.21	-15308.46 0.13	174.28 -0.04
	7	-20.47 3954.09	-2.70 3954.05	-6544.03 -0.02	-1525.24 0.01	53.41 0.02
	8	-1863.77 1197659.88	2661.88 1197650.50	-583767.75 -3.60	1431922.75 2.16	-9190.92 -2.07
	9	-1640.21 1353933.12	-4148.15 1353917.62	-540520.19 2.66	-2246053.50 -7.07	23280.81 1.62
	10	-126.76 109672.67	262.22 109671.60	-39369.89 -0.39	141241.61 0.28	-1017.42 -0.19
	11	-404.40 78133.72	-53.12 78133.01	-129268.59 -0.37	-29996.94 -0.03	1053.82 0.23
	12	7.64 6411.40	19.62 6411.35	2520.41 -0.02	10624.35 0.02	-109.91 -0.02

*****END OF ELEMENT FORCES*****

1384. PRINT ELEMENT FORCES AT 108.071 181.366 LIST 1136 1137 1145 1146
 ELEMENT FORCES AT 108.071

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1136	1	-49.99 35217.99	-107.97 35218.34	-15446.70 -0.67	-58826.37 0.00	-288.41 -0.01
	2	3.35 731.57	0.06 731.64	1108.26 -0.03	22.23 0.01	8.28 -0.01
	3	3.05 664.89	0.05 664.96	1007.25 -0.03	20.20 0.01	7.53 -0.00
	4	13.83 3016.19	0.23 3016.49	4569.45 -0.13	92.06 0.05	34.16 -0.02
	5	-1.43 312.90	-0.02 312.93	-474.00 0.01	-9.49 -0.00	-3.54 0.00
	6	25.10 8404.71	26.58 8404.35	8170.90 -0.06	14514.69 0.23	172.83 0.03
	7	13.91 3369.39	-1.41 3369.47	4601.43 -0.05	-807.71 -0.01	27.46 -0.02
	8	952.36 1363565.50	-3386.14 1363586.88	330352.16 -6.92	-1859971.25 6.44	-12171.31 4.00
	9	1556.47 1433387.62	4298.20 1433389.00	494393.34 -4.48	2353869.50 -2.13	22104.05 -1.88
	10	56.18 124859.41	-321.38 124860.46	20050.87 -0.26	-176445.45 0.37	-1237.57 0.29
	11	274.93 66519.45	-27.41 66521.20	90970.53 -0.90	-15739.96 -0.04	544.67 -0.20
	12	-7.35 6787.33	-20.35 6787.35	-2335.69 0.02	-11144.25 0.02	-104.61 0.03

ELEMENT STRESSES FORCE, LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1137	1	45.16 40862.97	123.96 40863.30	14183.34 0.17	67140.55 -0.11	-315.61 -0.06
	2	-3.32 833.61	0.47 833.70	-1099.57 0.03	260.68 -0.02	-4.78 -0.00
	3	-3.02 757.64	0.42 757.71	-999.36 0.03	236.91 -0.02	-4.34 -0.00
	4	-13.69 3437.33	1.93 3437.66	-4533.57 0.12	1075.48 -0.07	-19.70 -0.00
	5	1.42 356.53	-0.20 356.56	470.29 -0.01	-111.46 0.01	2.04 0.00
	6	-19.46 9995.66	19.95 9996.25	-6383.51 0.07	10744.96 -0.26	-90.11 0.03
	7	-14.10 3321.06	0.98 3321.04	-4673.79 0.00	566.90 0.02	-16.62 0.01
	8	-1656.60 614620.12	-1997.08 614601.88	-556439.75 0.28	-1064106.00 -10.63	5605.48 1.05
	9	-643.59 1112612.12	2905.89 1112620.50	-203085.09 10.28	1557979.62 1.81	-10999.54 -2.75
	10	-123.26 60184.32	-194.14 60183.38	-41564.27 -0.44	-103565.09 -0.57	580.08 0.17
	11	-278.78 65720.29	19.67 65720.64	-92376.76 0.18	11411.35 0.00	-329.85 0.09
	12	3.03 5265.57	-13.76 5265.56	956.80 -0.04	-7375.85 -0.03	52.06 0.01

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1145	1	361.73 66950.91	116.37 66949.93	115726.83 0.60	64249.34 -0.17	40.87 -0.11
	2	4.63 936.28	0.26 936.20	1474.32 0.04	152.38 -0.01	-3.11 -0.00
	3	4.21 850.95	0.24 850.87	1339.96 0.03	138.49 -0.01	-2.82 -0.00
	4	19.09 3860.64	1.08 3860.30	6079.03 0.15	627.90 -0.06	-12.81 -0.01
	5	-1.98 400.43	-0.11 400.40	-630.55 -0.02	-65.18 0.01	1.33 0.00
	6	11.05 10247.61	-24.20 10247.13	3531.26 0.25	-13297.22 -0.07	-95.73 -0.11
	7	20.80 4001.23	2.73 4001.19	6622.18 0.03	1541.44 0.03	-8.46 -0.00
	8	4416.64 1149665.75	3483.27 1149667.50	1404448.75 10.57	1924653.38 -4.96	8379.93 -3.99
	9	-1721.70 1381983.62	-4158.12 1381977.75	-545993.75 1.90	-2291192.50 -2.45	-13087.17 0.44
	10	371.13 105995.07	327.35 105995.01	117995.67 0.49	180794.22 -0.06	825.63 -0.28
	11	411.10 79115.92	53.64 79114.72	130870.05 0.70	30250.29 0.26	-168.71 -0.15
	12	8.17 6542.19	19.69 6542.20	2590.58 -0.01	10848.08 -0.01	61.96 -0.01

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1146	1	-357.12 67198.11	-132.65 67197.03	-114997.91 -0.65	-72920.09 -0.20	1111.52 0.09
	2	-4.68 888.05	-0.79 888.00	-1496.77 -0.02	-442.45 0.01	12.70 -0.00
	3	-4.25 807.11	-0.72 807.07	-1360.36 -0.02	-402.12 0.01	11.54 -0.00
	4	-19.30 3661.61	-3.27 3661.40	-6171.64 -0.10	-1824.98 0.04	52.36 -0.02
	5	2.00 379.81	0.34 379.79	640.15 0.01	189.21 -0.00	-5.43 0.00
	6	-16.45 6503.77	-20.77 6504.13	-5304.00 -0.25	-11255.32 0.19	143.29 -0.09
	7	-20.69 4032.26	-2.43 4032.24	-6617.04 -0.02	-1375.57 -0.02	50.14 -0.00
	8	-3780.57 1220746.00	1697.96 1220729.38	-1203894.25 -8.68	903346.38 0.56	-2715.60 2.27
	9	881.87 1107198.12	-2797.58 1107201.50	275293.28 3.67	-1505774.25 4.11	13946.88 2.46
	10	-310.35 109127.68	169.11 109127.06	-98761.17 -0.53	90186.56 -0.19	-387.74 0.10
	11	-409.08 79665.82	-48.32 79665.30	-130802.38 -0.33	-27388.65 -0.21	992.78 0.06
	12	-4.19 5243.49	13.24 5243.49	-1308.91 -0.01	7127.83 -0.01	-65.98 0.01

*****END OF ELEMENT FORCES*****

1385. PRINT ELEMENT FORCES AT 128.071 181.366 LIST 1176 1177 1185 1186
 ELEMENT FORCES AT 128.071

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1176	1	-2.85 31010.20	-85.42 31009.65	-292.40 0.00	-46660.01 -0.28	-109.99 0.13
	2	4.65 1065.88	1.07 1065.84	1805.75 0.02	571.30 -0.01	14.42 0.00
	3	4.23 968.72	0.97 968.69	1641.16 0.02	519.24 -0.01	13.10 0.00
	4	19.18 4396.18	4.40 4396.03	7447.61 0.07	2355.55 -0.06	59.46 0.01
	5	-1.99 455.80	-0.46 455.79	-772.21 -0.01	-244.35 0.01	-6.17 -0.00
	6	4.89 5775.56	17.20 5775.15	1858.67 0.08	9440.02 0.23	91.93 0.09
	7	21.00 4967.14	3.26 4967.19	8160.86 -0.03	1723.78 -0.01	57.86 -0.03
	8	3737.79 1495555.38	-2023.28 1495551.62	1458846.00 3.27	-1124315.38 1.23	-1972.16 -1.05
	9	-783.93 1361442.62	3391.87 1361457.62	-313367.94 -4.92	1867225.25 -10.56	14400.37 -6.72
	10	305.24 133705.59	-202.53 133706.27	119225.98 0.08	-112324.25 0.47	-336.86 0.06
	11	414.95 98097.45	64.69 98098.54	161232.42 -0.58	34233.16 -0.08	1144.45 -0.27
	12	3.83 6437.74	-15.98 6437.76	1531.31 0.03	-8798.75 0.03	-67.58 0.02

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1177	1	6.73 41681.12	117.36 41680.09	2140.14 -0.50	63561.68 0.27	-276.30 -0.04
	2	-4.45 1103.96	-0.34 1103.89	-1736.33 -0.03	-174.80 0.02	-4.26 0.00
	3	-4.04 1003.33	-0.31 1003.27	-1578.07 -0.02	-158.86 0.02	-3.87 0.00
	4	-18.35 4553.07	-1.40 4552.78	-7161.37 -0.11	-721.38 0.09	-17.57 0.00
	5	1.90 472.10	0.15 472.07	742.51 0.01	74.72 -0.01	1.82 -0.00
	6	-1.09 8068.16	22.13 8068.42	-401.91 -0.09	11896.06 -0.18	-58.31 -0.00
	7	-20.45 4811.89	-3.62 4811.87	-7980.08 0.00	-1907.96 0.02	-14.18 0.01
	8	-4231.09 1371403.50	-4299.77 1371400.25	-1654969.25 -10.07	-2303071.50 1.30	6419.17 5.00
	9	1562.31 1647617.38	5067.81 1647596.00	614696.81 5.61	2720661.50 12.70	-11536.57 -2.72
	10	-354.01 126466.75	-403.51 126465.92	-138514.06 -0.53	-216209.47 -0.42	652.38 0.40
	11	-403.91 95082.43	-71.19 95082.65	-157634.53 0.13	-37527.66 0.08	-281.04 0.14
	12	-7.50 7770.69	-23.93 7770.67	-2951.55 -0.04	-12847.68 -0.03	54.32 0.02

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1185	1	301.61 66210.55	96.80 66210.84	114588.12 -0.16	53318.91 0.24	-128.99 -0.10
	2	3.23 949.10	-0.64 949.18	1219.93 -0.02	-344.33 0.02	-5.77 0.00
	3	2.94 862.59	-0.58 862.67	1108.73 -0.02	-312.95 0.02	-5.25 0.00
	4	13.33 3914.36	-2.65 3914.69	5031.81 -0.10	-1419.43 0.10	-23.80 0.00
	5	-1.38 405.88	0.27 405.91	-521.67 0.01	147.29 -0.01	2.47 -0.00
	6	8.70 7439.14	-16.56 7438.99	3333.13 0.06	-9111.67 -0.03	-61.86 -0.08
	7	14.23 3832.97	-1.35 3832.99	5366.53 0.02	-701.32 0.04	-20.80 0.00
	8	1670.73 749713.50	2342.47 749696.44	621917.81 -3.87	1298103.25 9.64	5453.46 -0.12
	9	630.36 1353469.12	-3435.36 1353479.25	248671.12 0.01	-1894321.75 5.15	-11578.06 1.65
	10	124.10 73873.80	228.31 73873.16	46018.88 0.06	126400.00 0.35	576.56 -0.07
	11	281.07 75777.10	-26.98 75776.77	105993.56 0.42	-14035.61 0.44	-411.93 -0.06
	12	-2.88 6368.74	16.20 6368.71	-1137.71 -0.02	8932.82 0.01	54.48 -0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1186	1	-298.17 66219.38	-125.97 66219.38	-113795.05 0.06	-69200.52 -0.37	985.81 0.23
	2	-3.21 798.48	-0.05 798.54	-1214.92 0.02	-35.27 -0.01	8.71 0.00
	3	-2.92 725.70	-0.04 725.75	-1104.18 0.02	-32.06 -0.01	7.91 0.00
	4	-13.25 3293.56	-0.20 3293.80	-5011.06 0.10	-145.04 -0.05	35.90 0.02
	5	1.37 341.44	0.02 341.47	519.53 -0.01	15.12 0.01	-3.72 -0.00
	6	-12.61 7104.12	-22.55 7104.32	-4858.04 -0.14	-12217.42 0.09	121.56 -0.06
	7	-13.78 3831.12	1.86 3831.15	-5201.29 0.01	967.55 -0.01	29.19 -0.01
	8	-961.20 1564348.62	3991.61 1564361.00	-346833.09 7.56	2153705.25 -1.76	-12893.86 -4.26
	9	-1496.21 1646492.62	-5008.50 1646485.00	-586361.31 -3.25	-2709807.75 -4.92	23316.54 -0.01
	10	-57.14 143333.67	378.41 143333.81	-20035.00 0.39	204269.83 0.15	-1312.08 -0.29
	11	-272.20 75614.01	36.46 75614.35	-102749.06 0.20	18948.69 0.06	577.86 -0.02
	12	6.97 7778.71	23.64 7778.71	2732.16 0.02	12790.14 0.01	-109.82 -0.01

*****END OF ELEMENT FORCES*****

1386. PRINT ELEMENT FORCES AT 128.071 181.366 LIST 1181 1182 1190 1191
 ELEMENT FORCES AT 128.071

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1181	1	1.86 30695.90	-82.93 30695.70	1506.08 0.02	-45271.81 -0.09	-107.02 0.28
	2	4.83 1096.74	1.25 1096.71	1874.04 0.02	669.55 -0.00	15.88 0.01
	3	4.39 996.78	1.13 996.75	1703.23 0.01	608.52 -0.00	14.43 0.01
	4	19.91 4523.36	5.15 4523.23	7729.26 0.07	2761.68 -0.00	65.50 0.05
	5	-2.06 469.01	-0.53 469.00	-801.42 -0.01	-286.32 0.00	-6.79 -0.01
	6	29.56 8986.69	27.27 8986.24	11399.98 0.17	14872.77 0.24	175.77 0.15
	7	20.81 4880.48	3.61 4880.55	8086.74 -0.03	1913.61 0.01	61.36 0.01
	8	1874.70 1492480.62	-3218.97 1492504.62	742750.56 -7.05	-1772911.88 7.04	-8702.35 1.34
	9	1712.75 1678996.88	5071.18 1679004.25	646516.75 1.68	2778375.25 -3.21	24221.67 1.31
	10	127.14 136771.78	-318.07 136773.64	50770.22 -0.52	-174999.75 0.60	-990.79 0.11
	11	411.22 96499.22	70.79 96500.38	159813.66 -0.57	37565.62 0.08	1210.70 -0.08
	12	-8.08 7920.97	-23.92 7921.05	-3048.90 -0.02	-13107.18 0.03	-114.26 0.01

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1182	1	-4.79 40059.98	108.61 40059.55	-2327.65 -0.39	58889.69 0.00	-304.46 -0.11
	2	-4.72 1155.85	-0.46 1155.81	-1841.45 -0.02	-240.57 -0.00	-4.21 -0.00
	3	-4.29 1050.49	-0.42 1050.46	-1673.61 -0.02	-218.65 -0.00	-3.82 -0.00
	4	-19.48 4767.26	-1.90 4767.11	-7594.79 -0.07	-991.66 -0.00	-17.36 -0.02
	5	2.02 494.28	0.20 494.26	787.48 0.01	102.90 0.00	1.80 0.00
	6	-25.57 9599.48	12.24 9599.43	-9920.26 -0.18	6594.76 -0.18	-64.47 -0.01
	7	-20.67 4902.01	-3.27 4902.07	-8062.07 0.02	-1724.71 -0.03	-14.95 0.00
	8	-2482.03 936584.56	-3010.74 936567.31	-976184.44 1.72	-1610076.38 -11.00	5556.72 2.37
	9	-866.71 1334081.62	3388.38 1334079.75	-327116.22 4.75	1817325.25 3.93	-10530.39 -4.09
	10	-185.77 86694.84	-280.63 86693.25	-73234.75 0.02	-150139.20 -0.91	571.18 0.23
	11	-408.59 96849.98	-65.15 96850.66	-159364.06 0.26	-34327.57 -0.28	-294.37 0.10
	12	4.09 6294.12	-15.99 6294.03	1542.29 -0.00	-8574.62 -0.05	49.69 0.01

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1190	1	292.87	92.58	111219.98	51066.13	-154.75
		64284.50	64284.58	-0.04	-0.02	-0.19
	2	2.97	-0.85	1118.57	-457.39	-5.68
		936.20	936.23	-0.01	0.00	-0.01
	3	2.70	-0.77	1016.62	-415.70	-5.16
		850.87	850.90	-0.01	0.00	-0.01
	4	12.23	-3.50	4613.72	-1886.67	-23.43
		3861.55	3861.68	-0.06	0.01	-0.03
	5	-1.27	0.36	-478.33	195.59	2.43
		400.34	400.36	0.01	-0.00	0.00
	6	6.97	-25.18	2635.83	-13816.60	-77.71
		10204.19	10204.19	-0.03	-0.01	-0.11
7	13.90	-1.84	5243.16	-973.36	-20.81	
	3861.13	3861.04	0.04	-0.01	-0.01	
8	3275.05	3451.82	1234093.38	1906208.38	5887.87	
	1116397.38	1116401.12	10.92	-4.69	-2.10	
9	-1581.80	-5025.97	-595284.38	-2766405.00	-12168.54	
	1681401.88	1681402.75	-4.15	-0.90	-0.56	
10	279.05	335.95	105142.00	185407.88	617.82	
	107368.13	107368.53	0.87	-0.32	-0.18	
11	274.89	-35.97	103656.92	-18978.69	-409.99	
	76224.50	76223.52	0.59	0.14	-0.17	
12	7.46	23.71	2808.42	13050.52	57.41	
	7931.95	7932.02	0.04	-0.03	-0.00	

ELEMENT STRESSES FORCE, LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

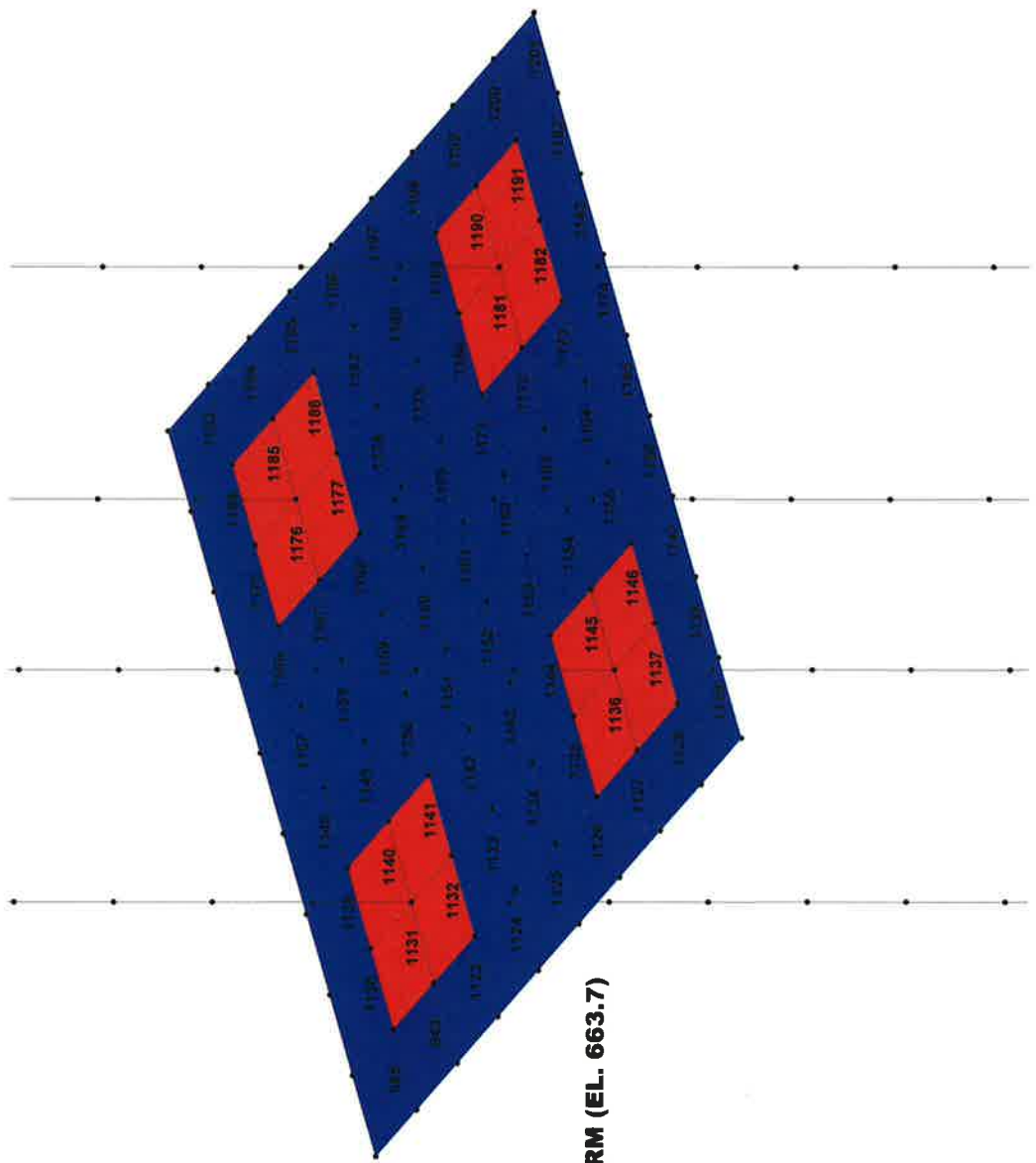
ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1191	1	-292.07 64701.57	-119.56 64701.59	-111463.59 0.06	-65660.86 -0.20	908.93 0.41
	2	-3.09 781.53	0.03 781.57	-1168.12 0.02	8.19 0.00	8.13 0.02
	3	-2.81 710.29	0.03 710.33	-1061.65 0.02	7.45 0.00	7.39 0.02
	4	-12.76 3223.36	0.12 3223.53	-4818.13 0.09	33.20 0.01	33.55 0.07
	5	1.32 334.21	-0.01 334.23	499.52 -0.01	-3.53 -0.00	-3.48 -0.01
	6	-11.51 4497.22	-14.36 4497.39	-4375.23 -0.01	-7766.19 0.10	100.68 -0.00
	7	-14.12 3808.53	1.37 3808.52	-5330.29 0.01	699.98 0.02	30.90 0.02
	8	-2624.80 1430192.75	2751.12 1430179.38	-985797.69 -6.18	1475159.25 1.79	-6414.41 -0.47
	9	662.05 1318056.38	-3426.62 1318053.88	242941.53 8.51	-1844215.62 3.94	14928.87 6.00
	10	-216.11 129021.43	260.55 129020.39	-81091.58 -0.55	139790.20 0.09	-693.91 -0.10
	11	-279.03 75367.44	27.49 75367.50	-105349.55 0.16	14075.28 0.22	608.81 0.18
	12	-3.12 6218.58	16.17 6218.53	-1145.98 -0.05	8701.09 -0.00	-70.43 -0.02

Job No	Sheet No	Rev
	1	
Part		
Ref Deep Water Pier 1		
By	Date	Chd
EAO	29-Sep-15	
File KY 152 Pier No 1, 8' Shal Date/Time 08-Mar-2017 09:36		

Software licensed to

Job Title KY 152 Over Herrington Lake

Client KYTC



BRACING PLATFORM (EL. 663.7)



Load 1

SECONDARY BRACING FORCES TRANSFERED FROM SHAFTS
LOWER BRACING PLATFORM, ELEVATION 604.7

STAAD JOINT NUMBER	CONSTRUCTION PLANS SHAFT NUMBER
53	4
54	5
55	6
56	7

STAAD LOAD NUMBER	LRFD LOADING
1	DEAD LOAD (DC1) NOTE: INCLUDES WEIGHT OF PLATFORM (0.150 KIPS/FT3)
2	DEAD LOAD (DC2)
3	WEARING SURFACE (DW)
4	LIVE LOAD 1 (LL1+IMP)
5	LIVE LOAD 2 (LL2+IMP)
6	LIVE LOAD 3 (LL3+IMP)
7	HORIZ. EARTH PRESSURE (EH)
8	WIND LOAD ON STRUCTURE (WS)
9	OVER TURNING WIND LOAD (OTW)
10	WIND LOAD ON LIVE LOEAD (WL)
11	BRAKING LOAD (BR)
12	WATER LOADING (WA) NOTE: INCLUDES BOUYANT FORCE ON PLATFORM

VARIABLE DEFINITIONS:

SQX SHEAR STRESS ON THE LOCAL X FACE IN THE Z DIRECTION
SQY SHEAR STRESS ON THE LOCAL Y FACE IN THE Z DIRECTION
MX MOMENT PER UNIT WIDTH ABOUT THE LOCAL X FACE
MY MOMENT PER UNIT WIDTH ABOUT THE LOCAL Y FACE
MXY TORSIONAL MOMENT PER UNIT WIDTH IN THE LOCAL X-Y PLANE
SX AXIAL STRESS IN THE LOCAL X DIRECTION
SY AXIAL STRESS IN THE LOCAL Y DIRECTION
SXY SHEAR STRESS IN THE LOCAL XY PLANE
VONT VON MISES STRESS ON THE TOP SURFACE OF THE ELEMENT
VONB VON MISES STRESS ON THE BOTTOM SURFACE OF THE ELEMENT
TRESCAT TRESCA STRESS ON THE TOP SURFACE OF THE ELEMENT
TRES CAB TRESCA STRESS ON THE BOTTOM SURFACE OF THE ELEMENT
SMAX MAXIMUM IN-PLANE PRINCIPAL STRESS
SMIN MINIMUM IN-PLANE PRINCIPAL STRESS
TMAX MAXIMUM IN-PLANE SHEAR STRESS
ANGLE ANGLE WHICH DETERMINES DIRECTION OF MAXIMUM PRINCIPAL STRESS WITH RESPECT TO
LOCAL X AXIS

NOTE: THIS DOCUMENT CONTAINS MODIFIED EXCERPTS FROM STAAD-PRO ANALYSIS OUTPUT.

JOINT DISPLACEMENT (INCH RADIANS) STRUCTURE TYPE = SPACE

JOINT	LOAD	X-TRANS	Y-TRANS	Z-TRANS	X-ROTAN	Y-ROTAN	Z-ROTAN
53	1	-0.04339	-0.12311	-0.00626	-0.00001	-0.00000	0.00008
	2	-0.00095	-0.00250	-0.00013	-0.00000	-0.00000	0.00000
	3	-0.00087	-0.00228	-0.00012	-0.00000	-0.00000	0.00000
	4	-0.00392	-0.01021	-0.00053	-0.00000	-0.00000	0.00001
	5	0.00041	0.00108	0.00006	0.00000	0.00000	-0.00000
	6	-0.00207	-0.00191	0.01603	0.00004	-0.00000	0.00000
	7	-0.04734	-0.00041	-0.00000	0.00000	0.00000	0.00004
	8	-0.65604	0.02151	1.11889	0.00227	0.00001	0.00133
	9	-0.01052	-0.07196	-1.48346	-0.00300	-0.00002	0.00001
	10	-0.05202	0.00293	0.10899	0.00022	0.00000	0.00011
	11	-0.08770	-0.00423	-0.00005	0.00000	0.00000	0.00018
	12	0.00003	0.00030	0.01215	0.00002	0.00000	0.00000
54	1	-0.04333	-0.12252	-0.00626	-0.00001	-0.00000	0.00008
	2	-0.00095	-0.00249	-0.00013	-0.00000	-0.00000	0.00000
	3	-0.00087	-0.00227	-0.00012	-0.00000	-0.00000	0.00000
	4	-0.00392	-0.01017	-0.00053	-0.00000	-0.00000	0.00001
	5	0.00041	0.00107	0.00006	0.00000	0.00000	-0.00000
	6	-0.00407	-0.01407	0.01603	0.00004	-0.00000	0.00001
	7	-0.04735	-0.00041	-0.00000	-0.00000	0.00000	0.00004
	8	-0.67022	-0.08328	1.11888	0.00227	0.00001	0.00135
	9	0.00447	0.05689	-1.48350	-0.00300	-0.00002	-0.00000
	10	-0.05343	-0.00796	0.10899	0.00022	0.00000	0.00011
	11	-0.08779	-0.00423	-0.00005	-0.00000	0.00000	0.00018
	12	-0.00003	-0.00030	0.01215	0.00002	0.00000	-0.00000
55	1	-0.04339	-0.12039	-0.00632	-0.00001	-0.00000	0.00008
	2	-0.00095	-0.00243	-0.00013	-0.00000	-0.00000	0.00000
	3	-0.00087	-0.00221	-0.00012	-0.00000	-0.00000	0.00000
	4	-0.00392	-0.00993	-0.00054	-0.00000	-0.00000	0.00001
	5	0.00041	0.00105	0.00006	0.00000	0.00000	-0.00000
	6	-0.00207	-0.00169	0.01803	0.00005	0.00000	0.00000
	7	-0.04734	0.00031	0.00000	-0.00000	0.00000	0.00004
	8	-0.65606	0.08224	1.13310	0.00229	0.00001	0.00133
	9	-0.01049	-0.07174	-1.49841	-0.00303	-0.00002	0.00002
	10	-0.05202	0.00788	0.11040	0.00022	0.00000	0.00011
	11	-0.08770	0.00402	0.00005	-0.00000	0.00000	0.00018
	12	0.00003	0.00030	0.01222	0.00002	0.00000	-0.00000
56	1	-0.04333	-0.11979	-0.00632	-0.00001	-0.00000	0.00008
	2	-0.00095	-0.00242	-0.00013	-0.00000	-0.00000	0.00000
	3	-0.00087	-0.00220	-0.00012	-0.00000	-0.00000	0.00000
	4	-0.00392	-0.00989	-0.00054	-0.00000	-0.00000	0.00001
	5	0.00041	0.00104	0.00006	0.00000	0.00000	-0.00000
	6	-0.00407	-0.01385	0.01803	0.00005	0.00000	0.00001
	7	-0.04735	0.00031	0.00000	0.00000	0.00000	0.00004
	8	-0.67020	-0.02256	1.13306	0.00230	0.00001	0.00136
	9	0.00444	0.05711	-1.49845	-0.00302	-0.00002	-0.00001
	10	-0.05343	-0.00300	0.11040	0.00022	0.00000	0.00011
	11	-0.08779	0.00402	0.00004	0.00000	0.00000	0.00018
	12	-0.00003	-0.00030	0.01222	0.00002	0.00000	0.00000

***** END OF LATEST ANALYSIS RESULT *****

1379. PRINT ELEMENT FORCES AT 108.142 112.732 LIST 1477 1478 1486 1487
 ELEMENT FORCES AT 108.142

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1477	1	-55.98 20494.32	-104.83 20494.27	-17755.78 0.07	-35494.22 -0.03	-228.44 0.04
	2	1.22 267.97	0.02 267.96	403.72 0.01	3.69 0.00	4.23 0.01
	3	1.11 243.57	0.02 243.56	366.95 0.01	3.35 0.00	3.85 0.01
	4	5.02 1102.04	0.08 1101.99	1660.31 0.03	15.23 0.00	17.40 0.03
	5	-0.52 114.75	-0.01 114.74	-172.87 -0.00	-1.58 -0.00	-1.81 -0.00
	6	1.56 1182.39	5.73 1182.37	503.41 0.00	1970.26 0.01	26.16 0.00
	7	25.37 5975.08	-2.85 5975.10	8394.69 -0.01	-1042.74 0.00	75.97 -0.01
	8	984.25 479329.62	-1432.99 479328.34	328803.16 0.68	-495793.66 -0.10	-1857.49 0.71
	9	-203.97 440218.47	1803.39 440212.09	-71688.59 -2.13	621475.31 1.97	5857.70 -0.12
	10	80.46 43281.42	-136.30 43281.17	26924.02 0.11	-47127.06 -0.04	-221.44 0.06
	11	109.55 25778.75	-12.15 25778.68	36249.39 -0.01	-4444.81 -0.08	328.60 -0.09
	12	1.64 3365.98	-13.75 3365.98	573.55 0.01	-4737.11 0.00	-44.37 0.01

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1478	1	197.27	111.01	63120.67	38038.37	-85.17
		36697.78	36697.96	-0.12	0.07	-0.02
	2	1.87	0.19	594.82	68.32	-2.74
		375.85	375.87	-0.01	0.00	-0.00
	3	1.70	0.17	540.65	62.10	-2.49
		341.62	341.64	-0.01	0.00	-0.00
	4	7.68	0.79	2446.18	280.92	-11.27
		1545.69	1545.77	-0.04	0.01	-0.01
	5	-0.80	-0.08	-254.71	-29.26	1.17
		160.94	160.95	0.00	-0.00	0.00
	6	4.43	-5.10	1426.31	-1759.16	-18.62
		1842.62	1842.58	0.02	-0.01	-0.02
7	37.52	7.05	11943.48	2475.33	-48.17	
	7279.11	7279.08	0.01	-0.00	0.00	
8	982.42	1521.67	308800.44	526910.44	1652.49	
	305716.31	305715.94	-1.06	0.33	-0.30	
9	334.39	-1737.17	111774.50	-600052.06	-4352.68	
	442063.56	442051.41	4.00	-3.62	-0.25	
10	73.47	142.48	23009.51	49316.99	186.09	
	28495.29	28495.10	-0.17	0.10	-0.03	
11	162.00	30.29	51572.10	10633.07	-208.37	
	31443.04	31443.15	-0.02	0.11	0.02	
12	-2.43	13.25	-813.93	4578.07	33.00	
	3356.64	3356.62	-0.01	0.00	-0.00	

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX	SQY	MX	MY	MXY
		VONT	VONB	SX	SY	SXY
		TRESCAT	TRESCAB			
1486	1	56.03	129.27	18164.76	43358.33	-118.36
		25142.79	25142.65	-0.12	0.07	-0.01
	2	-1.15	0.44	-380.82	148.13	-3.06
		315.11	315.10	-0.01	0.00	-0.00
	3	-1.04	0.40	-346.14	134.64	-2.78
		286.42	286.40	-0.01	0.00	-0.00
	4	-4.73	1.79	-1566.13	609.21	-12.57
		1295.92	1295.85	-0.03	0.00	-0.01
	5	0.49	-0.19	163.07	-63.43	1.31
		134.93	134.93	0.00	-0.00	0.00
	6	-0.44	9.22	-138.78	3070.38	-18.19
		2094.79	2094.85	0.01	-0.03	0.00
7	-24.49	4.00	-8120.31	1402.79	-55.25	
	5936.97	5937.00	0.01	-0.01	0.00	
8	-1197.61	-1853.73	-399026.06	-613097.38	1153.31	
	359303.34	359303.12	-1.03	0.08	0.02	
9	530.11	2671.84	178302.22	887190.44	-3993.60	
	541908.38	541918.81	3.73	-4.04	0.06	
10	-101.49	-180.63	-33835.89	-59785.24	142.02	
	34617.30	34617.45	-0.17	0.10	-0.01	
11	-105.71	17.47	-35057.69	6120.85	-238.90	
	25658.19	25658.00	-0.03	0.12	0.03	
12	-4.12	-20.34	-1384.50	-6754.77	30.25	
	4120.11	4120.12	-0.01	0.00	-0.00	

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1487	1	-191.91 37085.79	-133.22 37085.88	-62059.21 0.08	-45312.28 -0.04	827.42 0.03
	2	-1.83 344.09	-0.61 344.10	-587.93 0.01	-210.32 0.00	7.21 0.01
	3	-1.67 312.75	-0.56 312.76	-534.39 0.01	-191.16 0.00	6.55 0.01
	4	-7.54 1415.05	-2.52 1415.10	-2417.85 0.03	-864.93 0.00	29.64 0.02
	5	0.78 147.34	0.26 147.35	251.76 -0.00	90.06 -0.00	-3.09 -0.00
	6	-5.31 1795.16	-9.25 1795.20	-1729.62 -0.01	-3101.21 0.02	44.06 0.00
	7	-36.29 7024.08	-7.77 7024.06	-11625.87 -0.01	-2716.36 0.00	129.25 -0.01
	8	-725.52 462671.78	1664.95 462672.69	-226092.38 0.66	552747.56 0.04	-3058.70 0.66
	9	-625.88 520586.47	-2584.35 520592.41	-209108.33 -2.53	-863959.06 2.34	9825.18 -0.12
	10	-49.44 42475.41	164.58 42475.64	-15228.95 0.11	54715.60 -0.04	-366.91 0.05
	11	-156.71 30323.96	-33.75 30324.00	-50209.80 -0.01	-11790.66 -0.08	558.77 -0.08
	12	4.65 3967.42	19.66 3967.42	1556.65 0.01	6573.32 0.00	-74.44 0.01

*****END OF ELEMENT FORCES*****

1380. PRINT ELEMENT FORCES AT 108.142 112.732 LIST 1522 1523 1532 1533
 ELEMENT FORCES AT 108.142

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1522	1	-55.08 21157.71	-108.21 21157.68	-17484.88 0.08	-36629.77 -0.01	-267.32 0.07
	2	1.27 274.97	0.05 274.95	418.41 0.01	12.36 -0.00	4.41 0.00
	3	1.15 249.93	0.04 249.91	380.31 0.01	11.24 -0.00	4.01 0.00
	4	5.21 1130.83	0.19 1130.74	1720.72 0.03	50.80 -0.02	18.15 0.01
	5	-0.54 117.74	-0.02 117.73	-179.17 -0.00	-5.30 0.00	-1.89 -0.00
	6	7.58 1734.96	7.97 1734.94	2474.27 0.06	2711.73 -0.03	47.21 0.02
	7	24.79 6005.01	-3.99 6005.03	8205.68 -0.01	-1430.67 0.00	72.82 -0.01
	8	367.24 533079.56	-2118.03 533076.38	129175.16 0.19	-727125.25 -1.48	-4602.39 -1.25
	9	607.08 556819.88	2670.00 556826.94	190692.09 2.46	913929.62 -2.78	9418.99 -0.39
	10	21.46 48923.58	-201.52 48923.91	7836.54 -0.15	-69148.07 0.08	-483.47 -0.06
	11	107.16 25962.18	-17.29 25962.38	35468.64 -0.05	-6198.39 0.09	314.62 0.05
	12	-4.65 4241.00	-20.34 4241.02	-1459.79 -0.01	-6963.28 0.00	-71.82 -0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1523	1	193.47	112.86	61859.79	38727.66	-109.37
		36091.25	36091.44	-0.13	0.03	-0.01
	2	1.76	0.15	559.80	53.28	-2.70
		356.76	356.80	-0.01	0.01	-0.00
	3	1.60	0.13	508.82	48.43	-2.45
		324.27	324.30	-0.01	0.01	-0.00
	4	7.23	0.61	2302.15	219.17	-11.08
		1467.17	1467.30	-0.05	0.03	-0.00
	5	-0.75	-0.06	-239.71	-22.81	1.15
		152.77	152.78	0.01	-0.00	0.00
	6	6.11	-6.80	1953.55	-2331.13	-24.89
		2477.00	2477.25	-0.08	0.06	-0.02
7	37.17	7.77	11823.31	2725.97	-47.50	
	7149.16	7149.14	0.01	-0.01	0.00	
8	1738.75	2176.75	550788.38	751521.06	1477.94	
	449311.22	449309.09	-0.28	1.63	0.58	
9	-687.72	-2581.34	-215666.52	-889213.69	-4094.88	
	535610.06	535621.50	-4.46	4.50	0.35	
10	146.49	205.06	46377.47	70770.80	168.69	
	41511.84	41512.01	0.25	-0.16	0.02	
11	160.64	33.61	51098.20	11796.32	-205.14	
	30894.46	30894.20	0.09	-0.15	-0.01	
12	5.21	19.66	1634.22	6773.70	31.26	
	4081.76	4081.78	0.01	-0.01	0.00	

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1532	1	50.76	119.04	16407.03	39988.93	-147.05
		23211.83	23211.73	-0.11	0.04	-0.02
	2	-1.25	0.31	-413.58	104.89	-3.11
		316.57	316.54	-0.01	0.01	-0.00
	3	-1.13	0.28	-375.92	95.34	-2.83
		287.74	287.71	-0.01	0.01	-0.00
	4	-5.14	1.26	-1700.86	431.31	-12.80
		1301.87	1301.73	-0.05	0.03	-0.00
	5	0.53	-0.13	177.10	-44.92	1.33
		135.56	135.55	0.01	-0.00	0.00
	6	-6.49	6.65	-2134.30	2219.28	-26.63
		2514.01	2513.77	-0.08	0.05	0.00
7	-25.08	2.86	-8317.75	1023.82	-55.91	
	5916.38	5916.41	0.01	-0.00	0.00	
8	-643.17	-1247.78	-217573.03	-410355.34	1241.09	
	237065.61	237068.67	-0.31	1.80	0.21	
9	-249.10	1803.69	-76857.08	596861.06	-4149.40	
	425878.69	425864.34	-4.25	4.68	0.02	
10	-47.84	-121.62	-16277.85	-40042.57	150.62	
	23253.72	23253.37	0.24	-0.16	0.01	
11	-108.42	12.30	-35954.51	4402.41	-241.50	
	25565.15	25565.51	0.10	-0.14	-0.02	
12	1.92	-13.75	592.80	-4548.57	31.67	
	3248.28	3248.25	0.01	-0.01	0.00	

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1533	1	-187.91 36003.88	-124.70 36004.00	-60774.66 0.09	-42419.57 -0.03	751.49 0.07
	2	-1.77 334.92	-0.51 334.94	-566.20 0.01	-174.29 -0.00	6.50 0.00
	3	-1.60 304.42	-0.46 304.44	-514.64 0.01	-158.41 -0.00	5.91 0.00
	4	-7.26 1377.37	-2.08 1377.44	-2328.47 0.03	-716.68 -0.02	26.73 0.01
	5	0.76 143.42	0.22 143.42	242.45 -0.00	74.64 0.00	-2.78 -0.00
	6	-7.13 1593.68	-7.35 1593.70	-2299.42 0.05	-2469.98 -0.02	44.91 0.02
	7	-36.69 7158.97	-7.06 7158.96	-11758.84 -0.01	-2478.47 0.00	122.75 -0.01
	8	-1477.27 473692.97	1060.82 473695.97	-470050.38 0.29	347348.44 -1.48	97.16 -1.20
	9	357.33 425955.38	-1738.79 425946.69	110000.16 2.48	-576717.75 -2.85	5315.08 -0.23
	10	-121.61 42421.55	105.98 42421.18	-38647.36 -0.14	34794.84 0.08	-59.23 -0.07
	11	-158.57 30942.40	-30.45 30942.27	-50816.48 -0.04	-10689.77 0.08	530.29 0.05
	12	-2.69 3242.74	13.25 3242.72	-828.84 -0.01	4395.91 0.00	-40.58 -0.00

*****END OF ELEMENT FORCES*****

1381. PRINT ELEMENT FORCES AT 128.142 112.732 LIST 1482 1483 1491 1492
 ELEMENT FORCES AT 128.142

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT TRES CAT	SQY VONB TRES CAB	MX SX	MY SY	MX Y SXY
1482	1	-34.23 19240.67	-97.42 19240.87	-12733.59 -0.10	-33036.42 0.09	-172.93 -0.01
	2	1.82 419.34	0.65 419.36	708.23 -0.01	215.16 0.01	7.47 -0.00
	3	1.66 381.15	0.59 381.17	643.73 -0.01	195.57 0.01	6.79 -0.00
	4	7.50 1724.40	2.65 1724.48	2912.41 -0.04	884.87 0.03	30.73 -0.01
	5	-0.78 179.57	-0.28 179.58	-303.28 0.00	-92.13 -0.00	-3.20 0.00
	6	2.92 840.61	3.99 840.57	1126.84 -0.02	1360.97 0.04	21.76 0.01
	7	37.52 8868.48	9.38 8868.46	14571.90 0.01	3085.12 -0.00	141.25 0.01
	8	1449.16 584852.88	-1272.22 584864.94	567016.19 -3.01	-443474.84 3.97	288.67 0.41
	9	-292.63 530969.75	2117.67 530964.88	-119204.96 0.28	730065.25 2.55	5825.48 2.80
	10	118.40 52441.04	-127.77 52441.37	46387.95 -0.10	-44435.84 0.10	-51.73 -0.02
	11	161.99 38306.02	40.31 38306.11	62918.63 -0.01	13255.78 0.10	609.36 0.09
	12	2.32 4030.56	-16.01 4030.56	942.29 -0.00	-5518.89 -0.00	-43.73 -0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1483	1	166.26 36559.95	103.95 36559.69	63155.98 0.17	35550.56 -0.16	-188.50 0.00
	2	1.28 370.67	-0.38 370.63	481.68 0.01	-126.65 -0.01	-3.59 0.00
	3	1.16 336.91	-0.34 336.87	437.82 0.01	-115.12 -0.01	-3.26 0.00
	4	5.25 1524.29	-1.56 1524.11	1980.77 0.06	-520.88 -0.05	-14.77 0.00
	5	-0.55 158.73	0.16 158.71	-206.27 -0.01	54.23 0.01	1.54 -0.00
	6	2.62 1269.16	-3.49 1269.06	996.92 0.02	-1198.04 -0.04	-11.95 0.00
	7	25.37 6842.71	-3.93 6842.74	9566.98 -0.01	-1274.01 0.00	-65.05 -0.00
	8	655.25 294764.12	1469.97 294775.19	242244.23 5.05	510333.22 -6.11	1097.86 0.15
	9	237.41 528297.12	-2142.77 528291.75	96054.29 -0.39	-740000.62 -2.92	-4331.57 -0.56
	10	48.81 29157.88	143.74 29158.25	17938.36 0.17	49853.57 -0.17	142.33 0.02
	11	109.54 29519.80	-16.76 29519.56	41308.63 0.03	-5434.72 -0.15	-280.51 -0.01
	12	-1.73 3987.43	16.21 3987.44	-702.34 0.01	5598.71 -0.00	32.62 0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1491	1	34.23 23964.40	121.16 23964.79	13138.71 0.15	40667.21 -0.17	-124.02 0.02
	2	-1.74 429.98	-0.23 430.01	-678.83 0.01	-74.16 -0.01	-3.59 0.00
	3	-1.58 390.82	-0.21 390.85	-617.01 0.01	-67.40 -0.01	-3.27 0.00
	4	-7.15 1768.16	-0.94 1768.32	-2791.51 0.06	-304.90 -0.05	-14.77 0.01
	5	0.74 184.12	0.10 184.14	290.69 -0.01	31.76 0.01	1.54 -0.00
	6	-2.40 1260.22	3.74 1260.32	-928.92 0.02	1246.13 -0.04	-10.44 -0.02
	7	-36.28 8553.94	-10.29 8553.92	-14180.40 -0.01	-3374.61 0.00	-66.63 -0.00
	8	-1630.21 531585.50	-2694.19 531579.19	-640513.62 5.17	-893066.44 -6.10	401.87 -0.17
	9	589.39 635438.50	3158.83 635444.12	234910.19 -0.43	1048634.38 -3.06	-3467.39 -0.95
	10	-136.53 49162.86	-253.60 49162.66	-53684.94 0.19	-84084.30 -0.17	76.22 -0.00
	11	-156.70 36926.70	-44.64 36926.86	-61238.45 0.04	-14643.88 -0.15	-287.37 -0.04
	12	-4.56 4809.88	-23.95 4809.87	-1817.12 0.01	-7949.51 -0.00	26.06 0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MXY SXY
1492	1	-162.48 36798.52	-126.02 36798.40	-62267.88 -0.11	-42849.15 0.10	724.00 -0.00
	2	-1.26 315.61	-0.02 315.59	-477.57 -0.01	-8.59 0.01	4.90 -0.00
	3	-1.15 286.87	-0.01 286.85	-434.07 -0.01	-7.81 0.01	4.45 -0.00
	4	-5.18 1297.85	-0.07 1297.75	-1963.83 -0.04	-35.37 0.03	20.15 -0.01
	5	0.54 135.15	0.01 135.14	204.50 0.00	3.68 -0.00	-2.10 0.00
	6	-3.06 860.01	-4.12 860.04	-1172.29 -0.01	-1381.11 0.03	22.47 0.02
	7	-24.49 6805.28	5.25 6805.29	-9254.64 0.01	1692.94 -0.00	81.48 0.01
	8	-381.25 607550.19	2507.55 607539.56	-135689.27 -2.79	835827.88 3.65	-4714.53 0.59
	9	-565.92 635707.62	-3129.88 635712.25	-225173.16 0.21	-1045841.56 2.56	9903.80 2.77
	10	-22.93 55819.49	238.47 55819.25	-7855.16 -0.08	79520.17 0.08	-499.77 -0.01
	11	-105.70 29409.04	22.91 29408.92	-39951.58 0.00	7383.53 0.09	351.19 0.09
	12	4.22 4821.54	23.71 4821.54	1681.12 -0.00	7923.64 -0.00	-74.79 -0.00

*****END OF ELEMENT FORCES*****

1382. PRINT ELEMENT FORCES AT 128.142 112.732 LIST 1527 1529 1537 1538
 ELEMENT FORCES AT 128.142

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1527	1	-32.23 19042.72	-96.20 19042.62	-11977.90 -0.07	-32600.87 -0.06	-188.01 -0.10
	2	1.90 430.17	0.79 430.18	735.56 -0.01	265.88 -0.00	8.29 -0.01
	3	1.72 391.00	0.72 391.01	668.57 -0.01	241.66 -0.00	7.53 -0.01
	4	7.80 1768.96	3.27 1769.01	3024.76 -0.03	1093.34 -0.02	34.08 -0.03
	5	-0.81 184.21	-0.34 184.21	-314.98 0.00	-113.86 0.00	-3.55 0.00
	6	9.47 2147.52	7.04 2147.60	3663.66 -0.05	2382.17 -0.01	49.56 -0.05
	7	37.17 8719.05	10.28 8719.03	14438.04 0.01	3392.80 -0.00	148.42 0.01
	8	724.28 584175.31	-2018.08 584167.12	288800.19 2.38	-695388.88 -2.51	-2972.87 0.03
	9	674.31 654351.50	3161.35 654355.12	251942.61 -0.77	1082768.38 -2.02	10558.55 -2.30
	10	48.87 53692.52	-200.07 53692.02	19702.82 0.16	-68856.12 -0.15	-369.53 0.03
	11	160.63 37676.69	44.47 37676.49	62395.76 0.07	14681.99 -0.13	641.61 -0.05
	12	-5.12 4955.76 5468.52	-23.95 4955.75 5468.51	-1912.69 0.01	-8201.75 -0.00	-80.01 0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX	SQY	MX	MY	MXY
1529	1	162.54	101.29	61713.29	34689.99	-216.72
		35722.66	35722.53	0.07	0.04	0.04
	2	1.17	-0.54	441.47	-183.10	-3.50
		370.76	370.75	0.01	0.00	0.00
	3	1.06	-0.49	401.27	-166.43	-3.18
		337.00	336.99	0.01	0.00	0.00
	4	4.81	-2.23	1815.38	-752.95	-14.40
		1524.64	1524.60	0.03	0.01	0.01
	5	-0.50	0.23	-189.05	78.41	1.50
		158.77	158.77	-0.00	-0.00	-0.00
	6	4.72	-5.82	1784.06	-1984.80	-19.96
		2177.13	2177.07	0.04	0.00	0.03
7	24.79	-5.24	9348.98	-1727.00	-63.97	
	6881.32	6881.36	-0.01	0.01	-0.01	
8	1287.30	2161.53	482950.41	746202.62	634.45	
	437003.22	436998.31	-3.35	3.93	-0.35	
9	-628.58	-3130.82	-233676.39	-1077139.38	-3683.10	
	654273.81	654277.38	0.66	2.08	0.58	
	718101.50	718105.62				
10	110.03	211.06	41251.79	72813.67	96.98	
	42163.21	42162.86	-0.23	0.24	-0.02	
11	107.15	-22.72	40407.27	-7482.95	-276.58	
	29749.39	29749.80	-0.10	0.17	-0.01	
12	4.75	23.71	1767.55	8158.45	27.91	
	4956.10	4956.08	-0.01	0.01	-0.00	

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1537	1	28.77 22799.84	114.15 22799.79	11013.10 0.08	38348.27 0.04	-159.41 0.04
	2	-1.84 452.87	-0.27 452.88	-718.72 0.01	-87.31 0.00	-3.67 0.00
	3	-1.67 411.63	-0.24 411.64	-653.27 0.01	-79.36 0.00	-3.33 0.00
	4	-7.57 1862.29	-1.10 1862.34	-2955.52 0.03	-359.07 0.01	-15.09 0.01
	5	0.79 193.93	0.11 193.94	307.77 -0.00	37.39 -0.00	1.57 -0.00
	6	-8.89 2432.59	1.04 2432.69	-3461.15 0.06	350.02 0.01	-21.30 0.00
	7	-36.69 8709.58	-9.39 8709.55	-14329.45 -0.01	-3082.54 0.01	-66.73 -0.00
	8	-957.97 362732.16	-1886.28 362736.97	-378900.47 -3.54	-623467.25 3.55	797.07 -0.06
	9	-339.88 513795.28	2114.04 513792.34	-126306.31 0.64	699703.81 1.87	-4023.84 0.84
	10	-71.64 33661.21	-176.34 33661.59	-28439.11 -0.25	-58297.06 0.22	114.18 -0.01
	11	-158.56 37642.75	-40.51 37642.42	-61922.84 -0.12	-13295.30 0.15	-288.51 0.02
	12	2.59 3892.40	-16.01 3892.43	961.35 -0.01	-5298.04 0.01	30.50 0.00

ELEMENT STRESSES FORCE,LENGTH UNITS= KIP FEET

STRESS = FORCE/UNIT WIDTH/THICK, MOMENT = FORCE-LENGTH/UNIT WIDTH

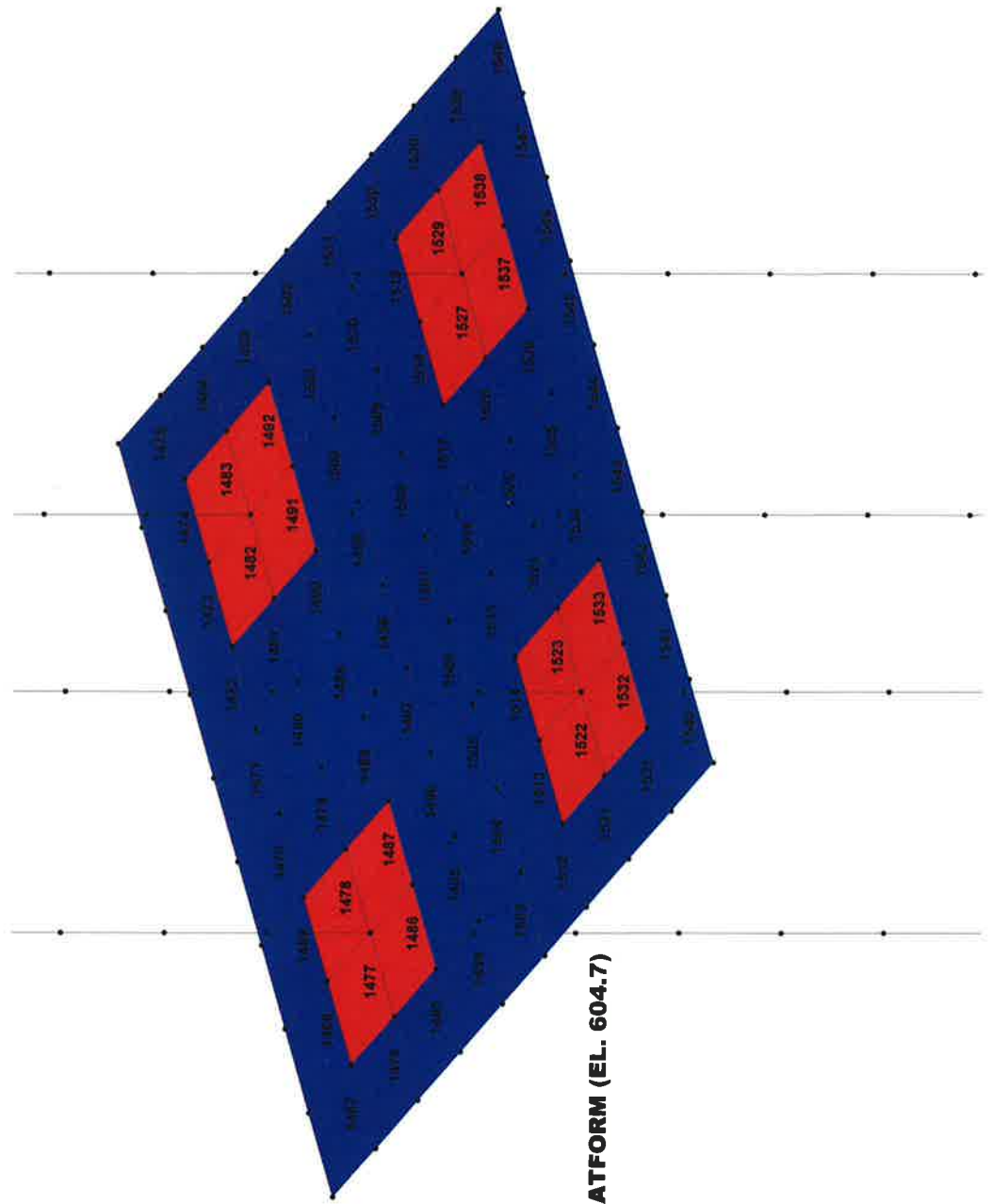
ELEMENT	LOAD	SQX VONT	SQY VONB	MX SX	MY SY	MX SXY
1538	1	-159.51 35993.48	-120.87 35993.37	-61133.16 -0.06	-41086.30 -0.06	664.13 -0.10
	2	-1.22 305.76	-0.00 305.75	-460.61 -0.01	-4.14 -0.00	4.75 -0.01
	3	-1.11 277.91	-0.00 277.90	-418.66 -0.00	-3.76 -0.00	4.31 -0.01
	4	-5.00 1257.32	-0.02 1257.29	-1894.09 -0.02	-16.98 -0.02	19.51 -0.03
	5	0.52 130.93	0.00 130.93	197.24 0.00	1.77 0.00	-2.03 0.00
	6	-5.36 1184.86	-2.28 1184.81	-2031.80 -0.03	-770.74 -0.02	28.11 -0.05
	7	-25.08 6777.46	3.94 6777.47	-9482.26 0.01	1250.10 -0.00	85.15 0.01
	8	-1027.27 555104.19	1726.21 555110.69	-384658.16 1.86	570787.25 -1.91	-1499.66 -0.02
	9	266.96 508499.47	-2140.85 508497.06	95947.70 -0.72	-710167.88 -1.69	5782.41 -2.32
	10	-84.83 50199.09	163.99 50199.51	-31713.90 0.12	54253.63 -0.12	-192.18 0.02
	11	-108.41 29283.63	16.93 29283.84	-40985.38 0.05	5376.23 -0.10	368.25 -0.05
	12	-2.02 3849.54	16.21 3849.55	-724.10 0.00	5377.62 -0.00	-43.81 0.00

Job No	Sheet No	Rev
	1	
Part		
Ref Deep Water Pier 1		
By	Date	Chd
EAO	29-Sep-15	
File KY 152 Pier No 1, 8' Shaft		
Date/Time 08-Mar-2017 09:36		

Software licensed to

Job Title KY 152 Over Herrington Lake

Client KYTC



BRACING PLATFORM (EL. 604.7)