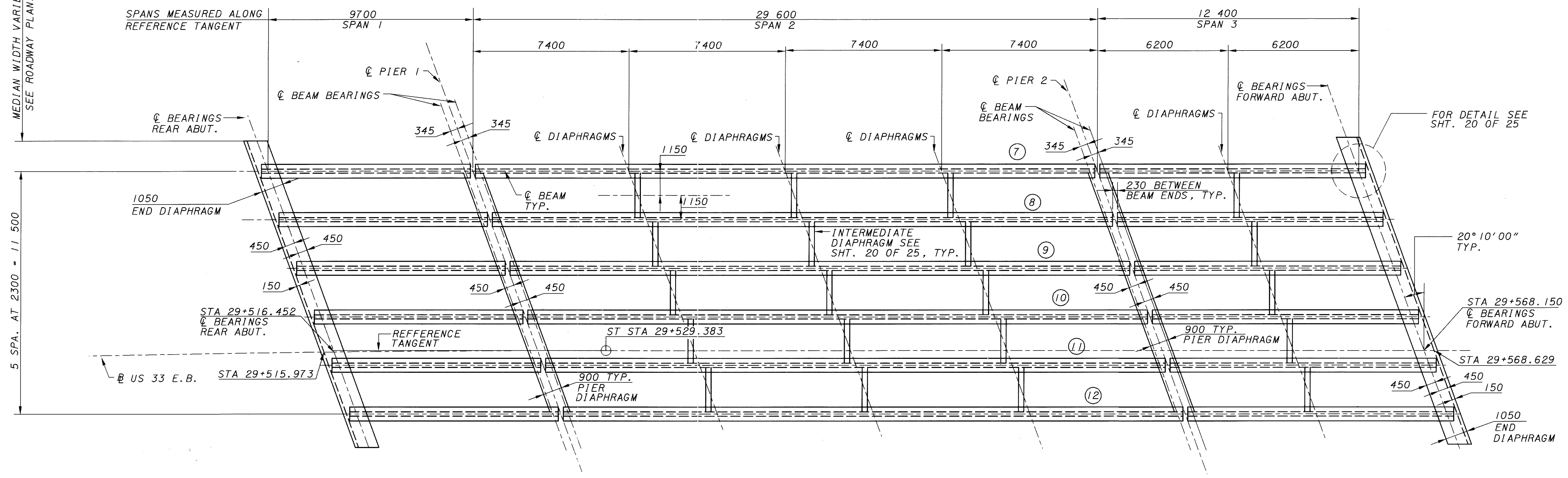


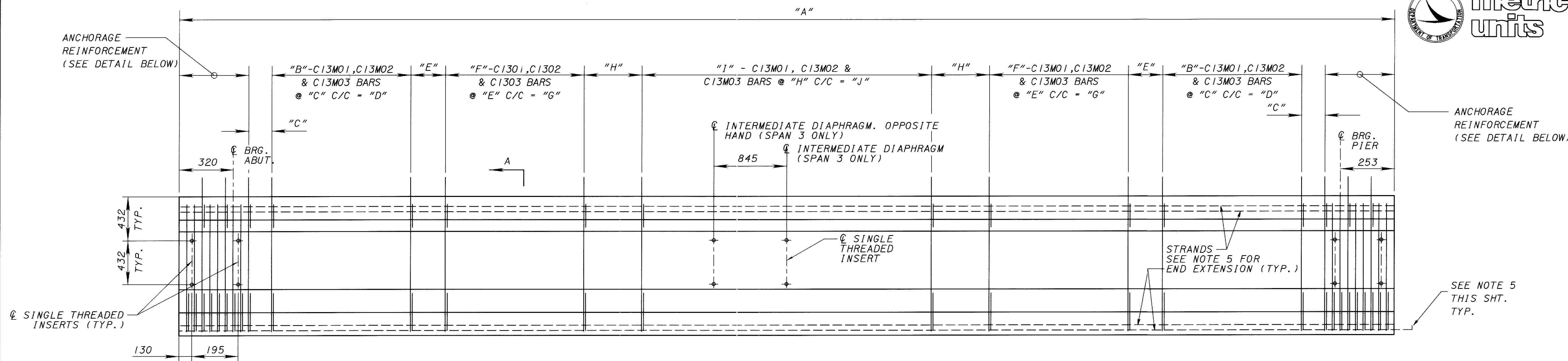
FRAMING PLAN- LEFT BRIDGE



FRAMING PLAN- RIGHT BRIDGE

NOTES:
1. (X) INDICATES BEAM ROW NUMBERS.

ALL DIMENSIONS ARE IN MILLIMETERS.
ALL ELEVATIONS AND STATIONS ARE IN METERS.



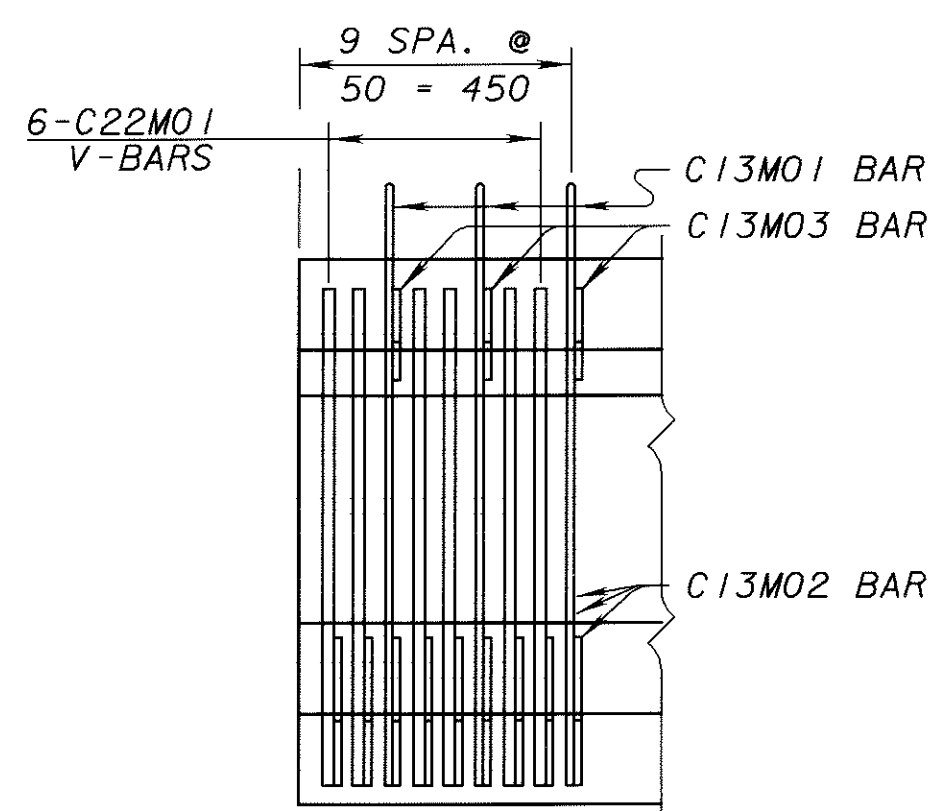
PRESTRESSED CONCRETE I-BEAM ELEVATION
AASHTO TYPE 4 (SPANS 1 & 3)

BEAM ROWS	LOCATION	NO. REQ'D	DIMENSIONS										APPROXIMATE WEIGHT (KG) PER BEAM
			A	B	C	D	E	F	G	H	I	J	
			①-⑥	SPAN 1	6	9905	6	250	1250	380	4	1140	
①-⑥	SPAN 3	6	12 605	6	250	1250	380	5	1520	545	8	3815	15 346

BEAM ROWS	LOCATION	LEFT BRIDGE BEAM SECTIONS	NUMBER OF STRANDS PER ROW AT EACH BEAM				TOTAL STRANDS	CONCRETE STRENGTHS		NUMBER OF BARS PER BEAM			
			①	②	③	④		f'ci	f'c	C13M01 BARS REQ'D	C13M02 BARS REQ'D	C13M03 BARS REQ'D	C22M01 BARS REQ'D
			①-⑥	SPAN 1	AASHTO TYPE 4 (1370 mm)	8		3	3	3	17	34.5 MPa	48.0 MPa
①-⑥	SPAN 3	AASHTO TYPE 4 (1370 mm)	8	4	3	3	18	34.5 MPa	48.0 MPa	36	48	36	24

BEAM ROWS	LOCATION	NO. REQ'D	DIMENSIONS										APPROXIMATE WEIGHT (KG) PER BEAM
			A	B	C	D	E	F	G	H	I	J	
			⑦-⑫	SPAN 1	6	9905	6	250	1250	380	4	1140	
⑦-⑫	SPAN 3	6	12 605	6	250	1250	380	5	1520	545	8	3815	15 346

BEAM ROWS	LOCATION	RIGHT BRIDGE BEAM SECTIONS	NUMBER OF STRANDS PER ROW AT EACH BEAM				TOTAL STRANDS	CONCRETE STRENGTHS		NUMBER OF BARS PER BEAM			
			①	②	③	④		f'ci	f'c	C13M01 BARS REQ'D	C13M02 BARS REQ'D	C13M03 BARS REQ'D	C22M01 BARS REQ'D
			⑦-⑫	SPAN 1	AASHTO TYPE 4 (1370 mm)	8		3	3	3	17	34.5 MPa	48.0 MPa
⑦-⑫	SPAN 3	AASHTO TYPE 4 (1370 mm)	8	4	3	3	18	34.5 MPa	48.0 MPa	36	48	36	24

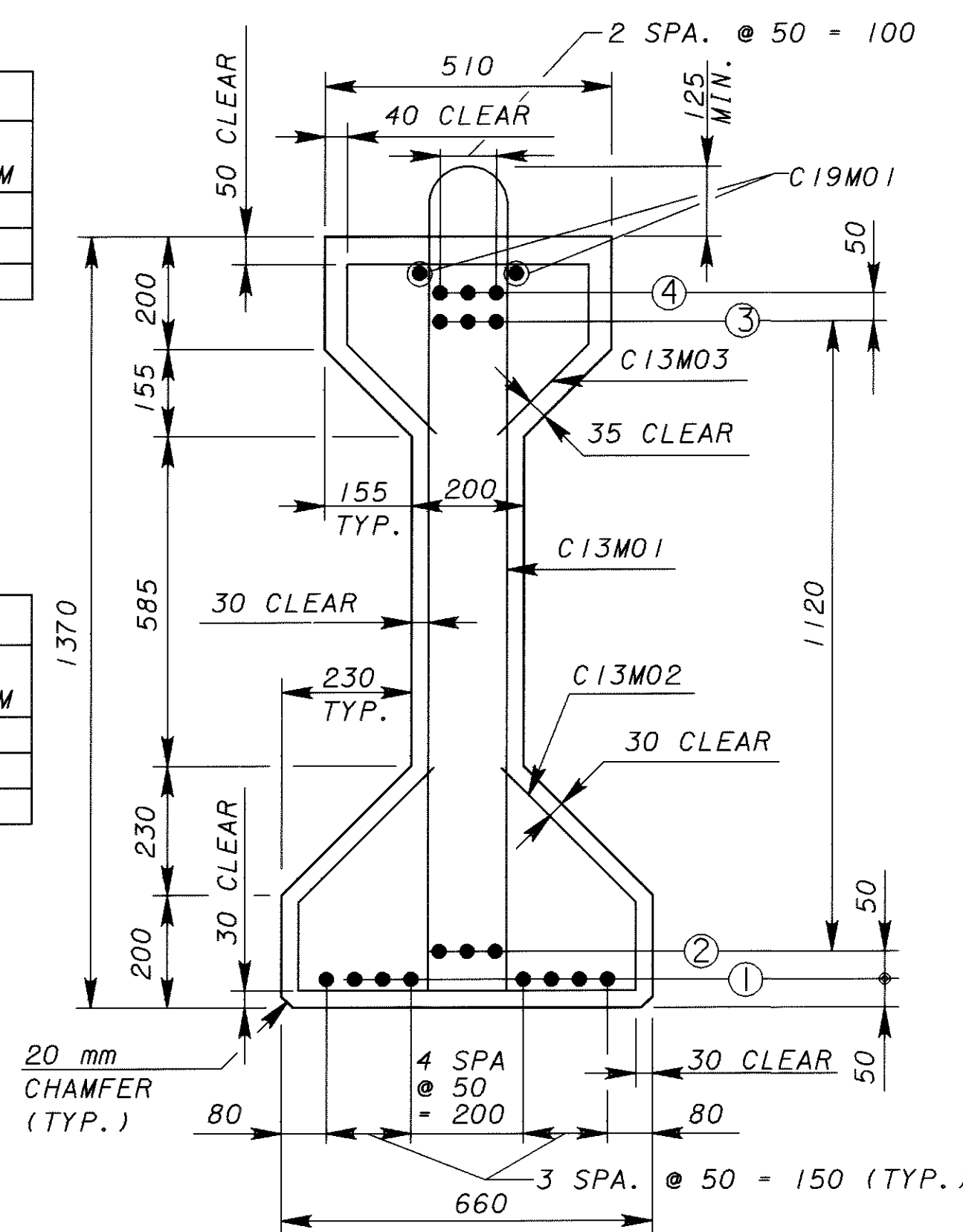


ANCHORAGE REINFORCEMENT
AASHTO TYPE 4

LEGEND
N.F. : NEAR FACE
F.F. : FAR FACE
CLR. : CLEAR
TYP. : TYPICAL
U.N.O. : UNLESS NOTED OTHERWISE
● : FULLY BONDED PRESTRESSING STRANDS

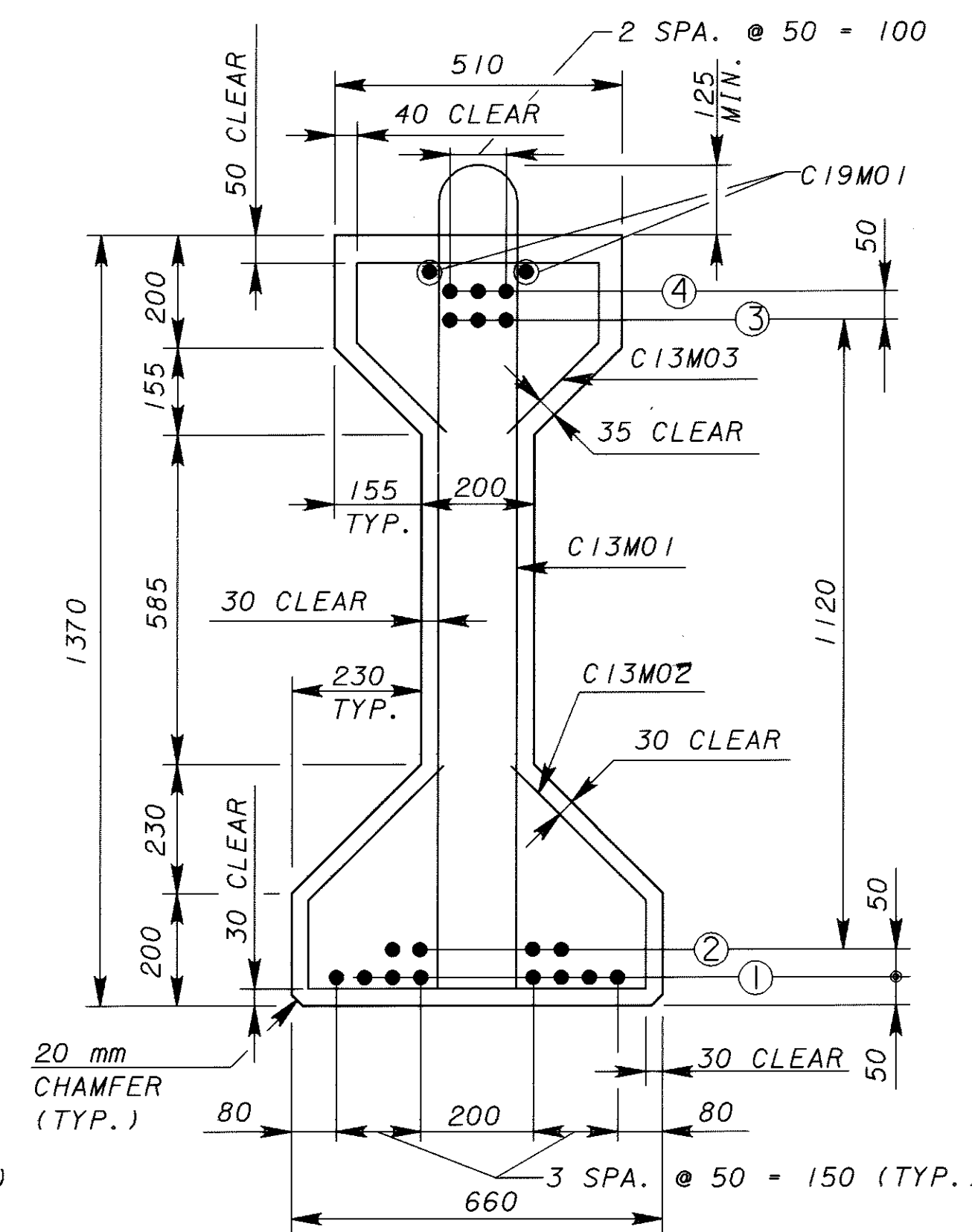
NOTES:

- PRESTRESSING STRAND - NOMINAL STRAND AREA = 99 SQ. mm (LOW RELAXATION STRANDS).
- FOR INTERMEDIATE DIAPHRAGM DETAILS, SEE SHT. 20 OF 25.
- FOR MORE INFORMATION ON ANCHORAGE ZONE REINFORCEMENT (INCLUDING V-BARS), SEE STD. DWG. PSID-1-99, SHEET 2/8.
- FOR EMBEDDED SOLE PLATE DETAILS, SEE STD. DWG. PSID-1-99, SHEET 4/8.
- FOR EXTENDED STRAND DETAIL INTO THE END DIAPHRAGM & PIER DIAPHRAGM, SEE STD. DWG. PSID-1-99, SHEET 7/8.
- FOR ADDITIONAL DETAILS AND NOTES, SEE STD. DWG. PSID-1-99.
- FOR REINFORCING OF END DIAPHRAGMS AT ABUTMENTS SEE SHEET 8 THRU 11 OF 25.



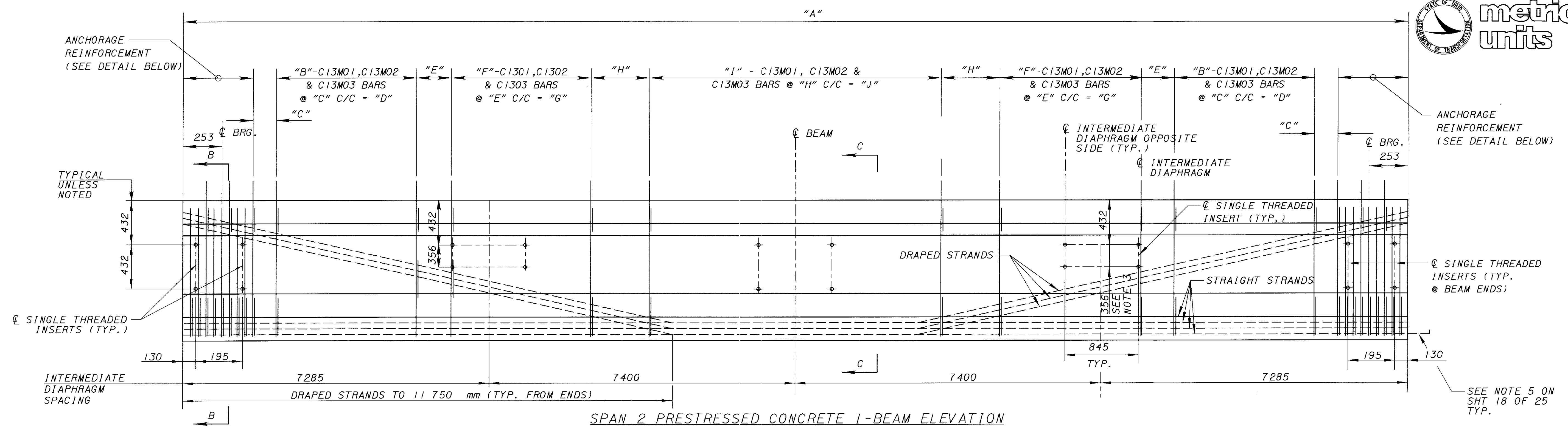
SECTION A-A

AASHTO TYPE 4
(SPAN 1 : TOTAL 17 STRAIGHT STRANDS)



SECTION A-A

AASHTO TYPE 4
(SPAN 3 : TOTAL 18 STRAIGHT STRANDS)



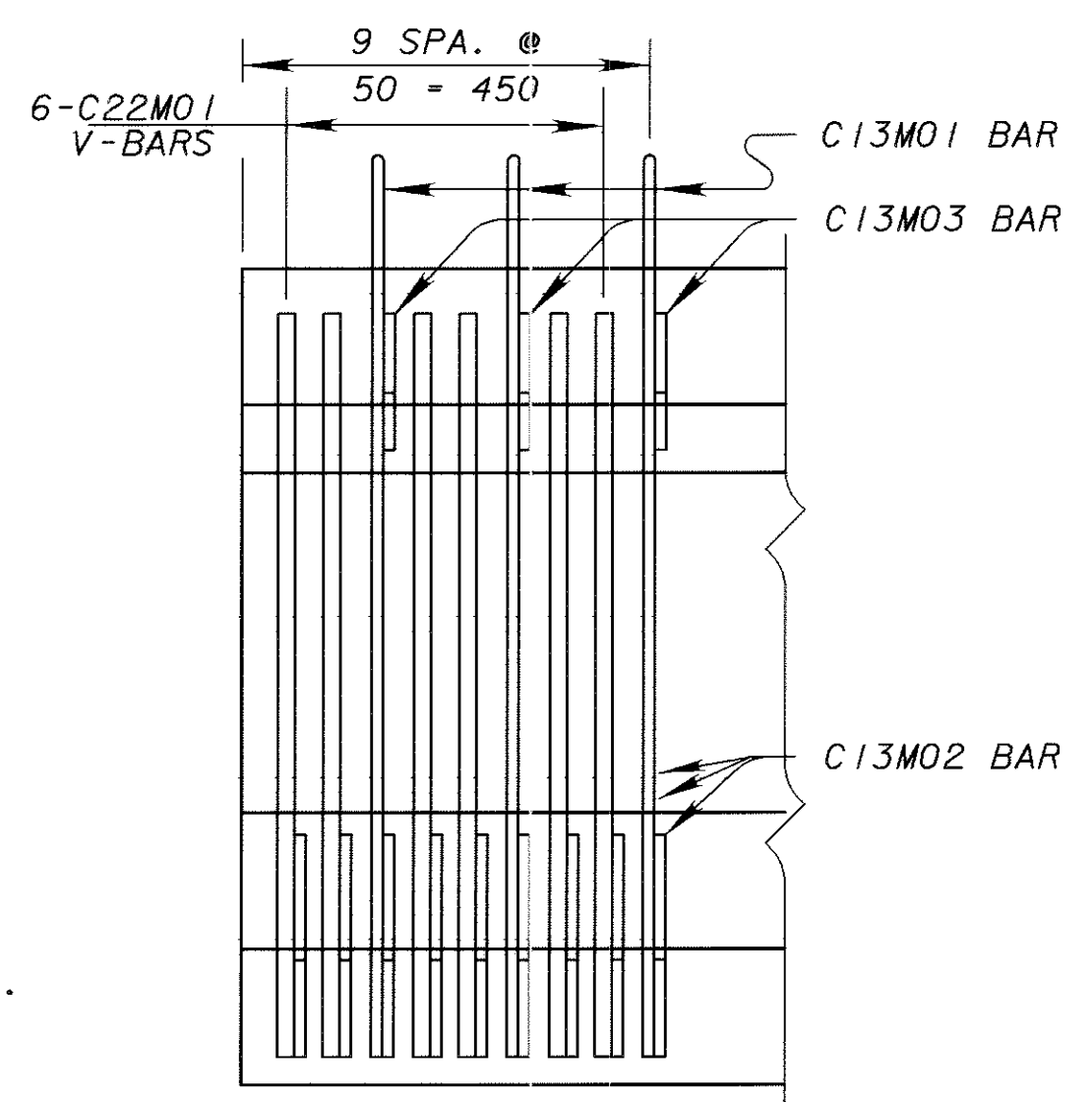
SPAN 2 PRESTRESSED CONCRETE I-BEAM ELEVATION

BEAM ROWS	LEFT BRIDGE BEAM DIMENSIONS											APPROXIMATE WEIGHT (KG) PER BEAM	
	LOCATION	NO. REQ'D	DIMENSIONS										
(1)-(6)	SPAN 2	6	A	B	C	D	E	F	G	H	I	J	35 943
			29 370	13	200	2400	380	13	4560	515	25	12 360	

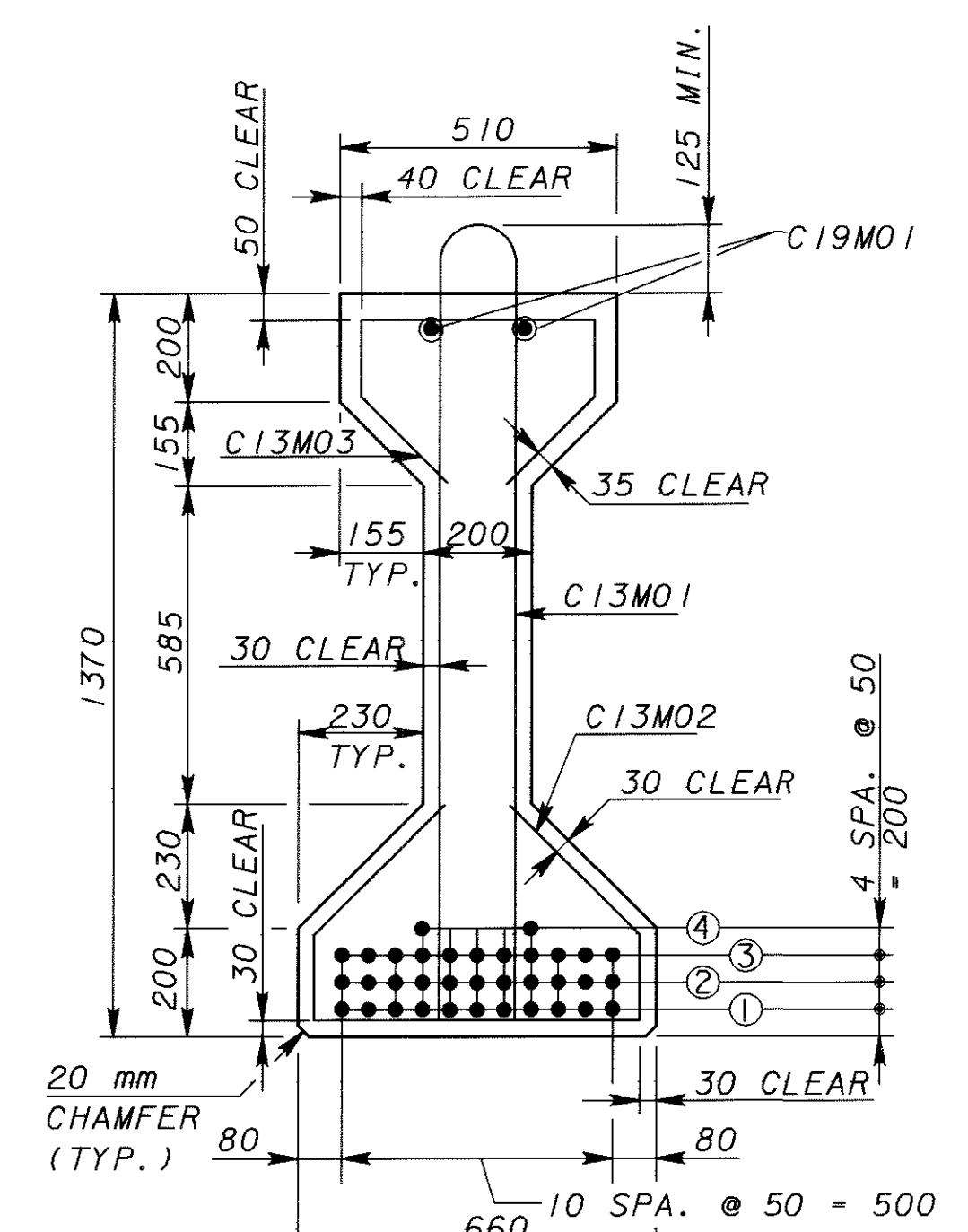
BEAM ROWS	LOCATION	NUMBER OF STRANDS PER ROW AT EACH BEAM							TOTAL STRANDS	CONCRETE STRENGTHS		NUMBER OF BARS PER BEAM					
		LEFT BRIDGE BEAM SECTIONS	PATTERN	ROW NUMBER							f'ci	f'c	C13M01 BARS REQ'D	C13M02 BARS REQ'D	C13M03 BARS REQ'D	C22M01 BARS REQ'D	
(1)-(6)	SPAN 2	AASHTO TYPE 4 (1370 mm)	END SPAN	8	8	8	2	3	3	3	35	34.5 MPa	48.0 MPa	83	95	83	24
			MID SPAN	11	11	11	2	--	--	--	35						

BEAM ROWS	RIGHT BRIDGE BEAM DIMENSIONS											APPROXIMATE WEIGHT (KG) PER BEAM	
	LOCATION	NO. REQ'D	DIMENSIONS										
(7)-(12)	SPAN 2	6	A	B	C	D	E	F	G	H	I	J	35 943
			29 370	13	200	2400	380	13	4560	515	25	12 360	

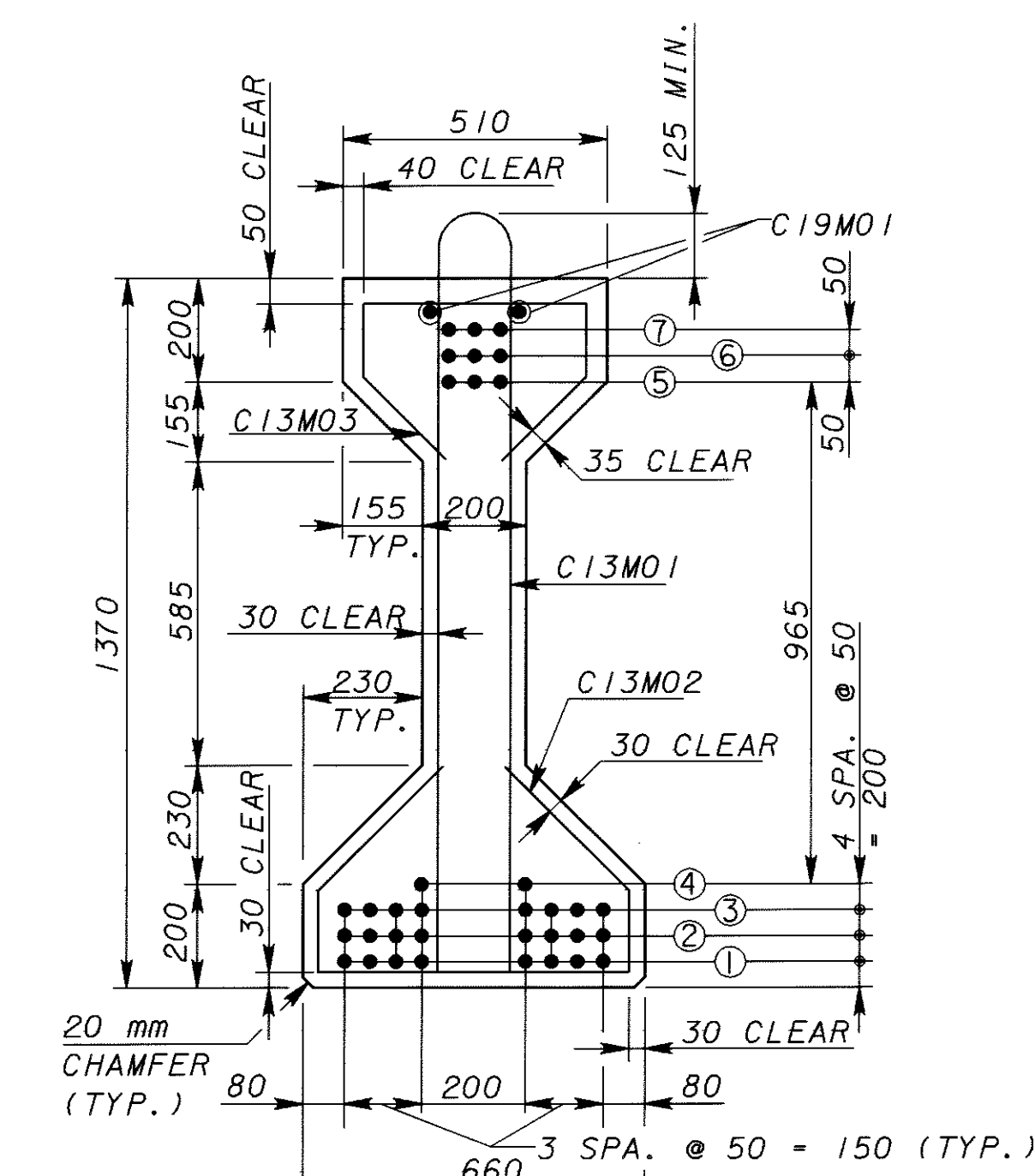
BEAM ROWS	LOCATION	NUMBER OF STRANDS PER ROW AT EACH BEAM							TOTAL STRANDS	CONCRETE STRENGTHS		NUMBER OF BARS PER BEAM					
		RIGHT BRIDGE BEAM SECTIONS	PATTERN	ROW NUMBER							f'ci	f'c	C13M01 BARS REQ'D	C13M02 BARS REQ'D	C13M03 BARS REQ'D	C22M01 BARS REQ'D	
(7)-(12)	SPAN 2	AASHTO TYPE 4 (1370 mm)	END SPAN	8	8	8	2	3	3	3	35	34.5 MPa	48.0 MPa	83	95	83	24
			MID SPAN	11	11	11	2	--	--	--	35						



ANCHORAGE REINFORCEMENT (AASHTO TYPE 4)

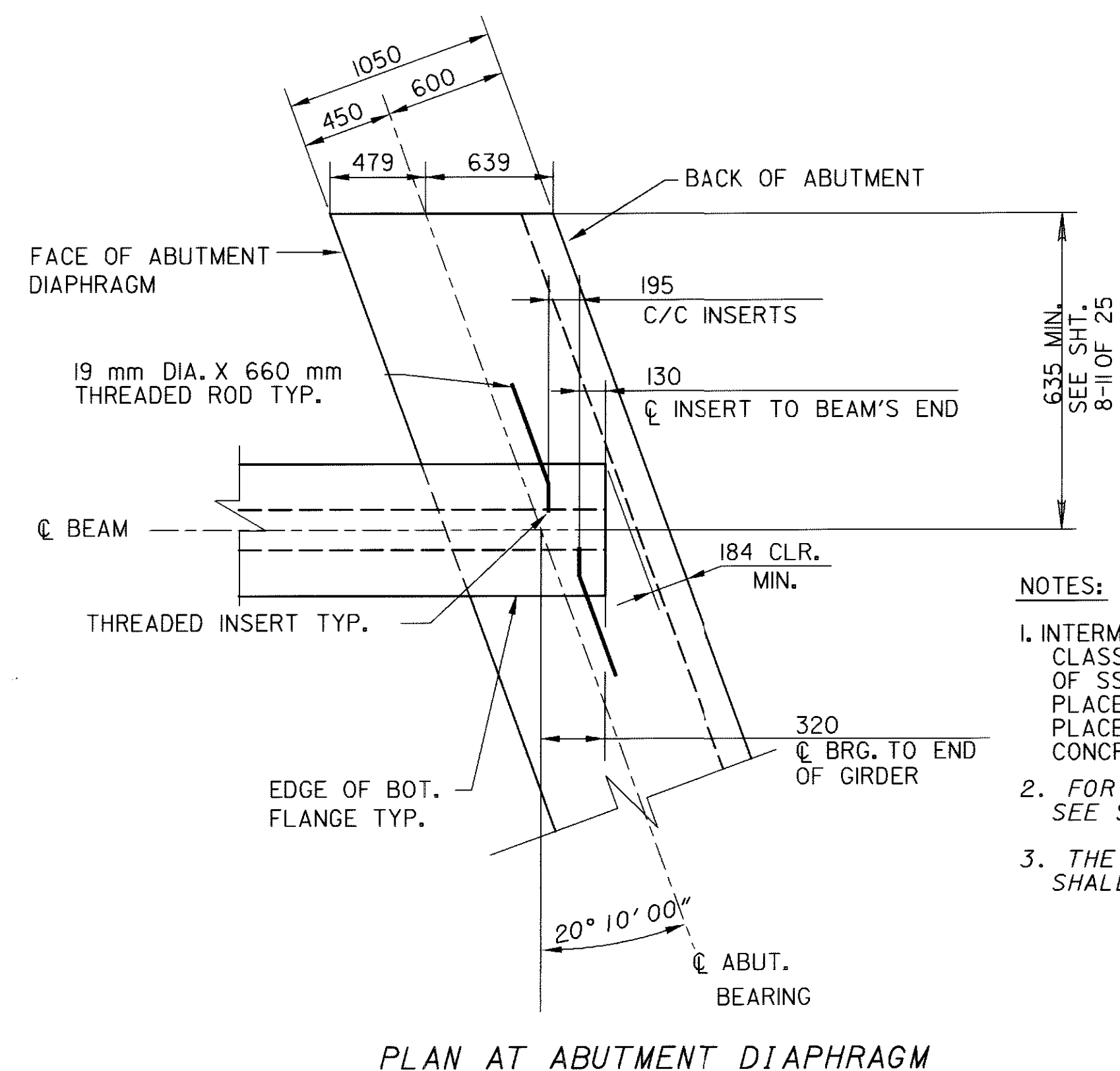
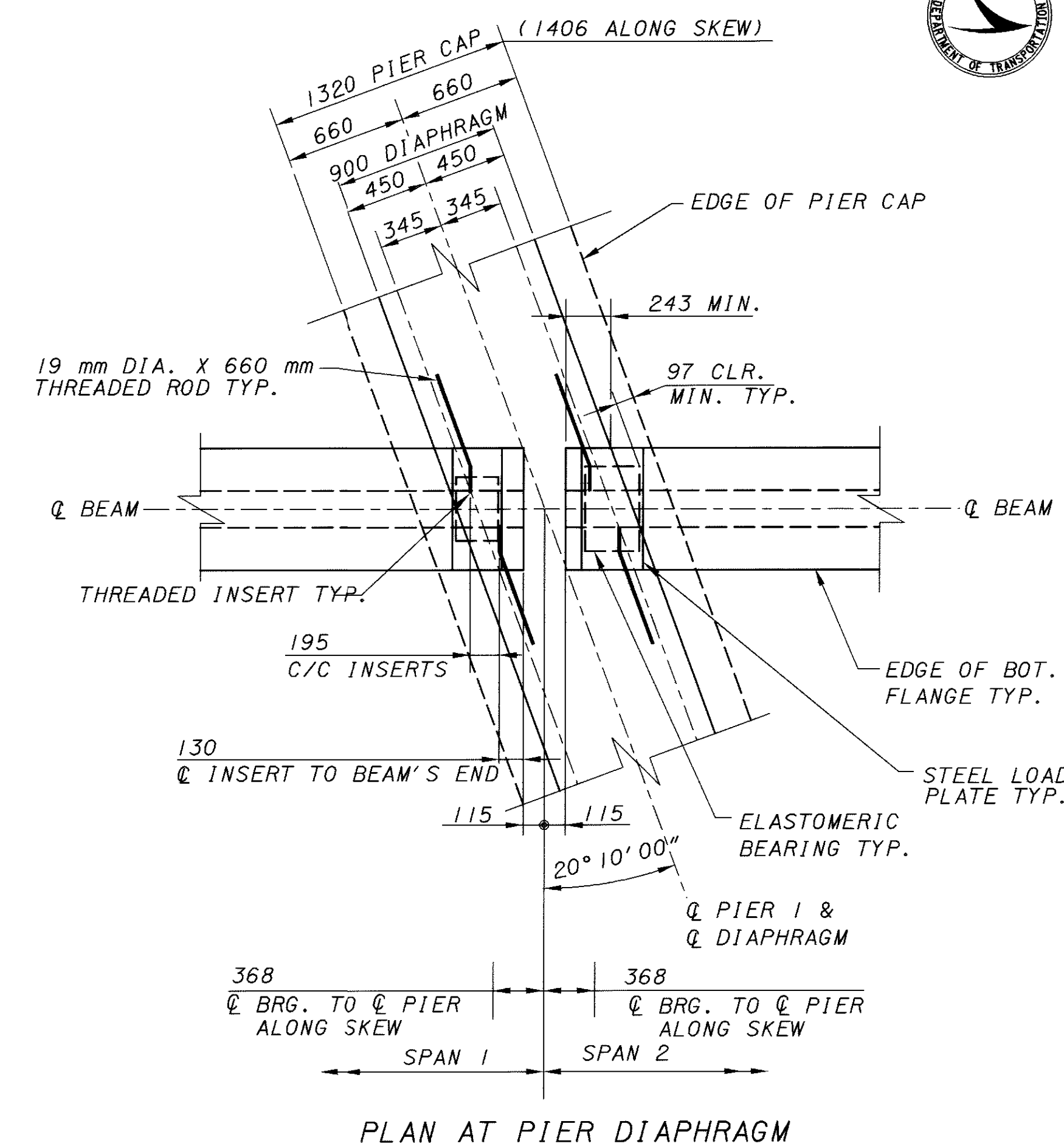
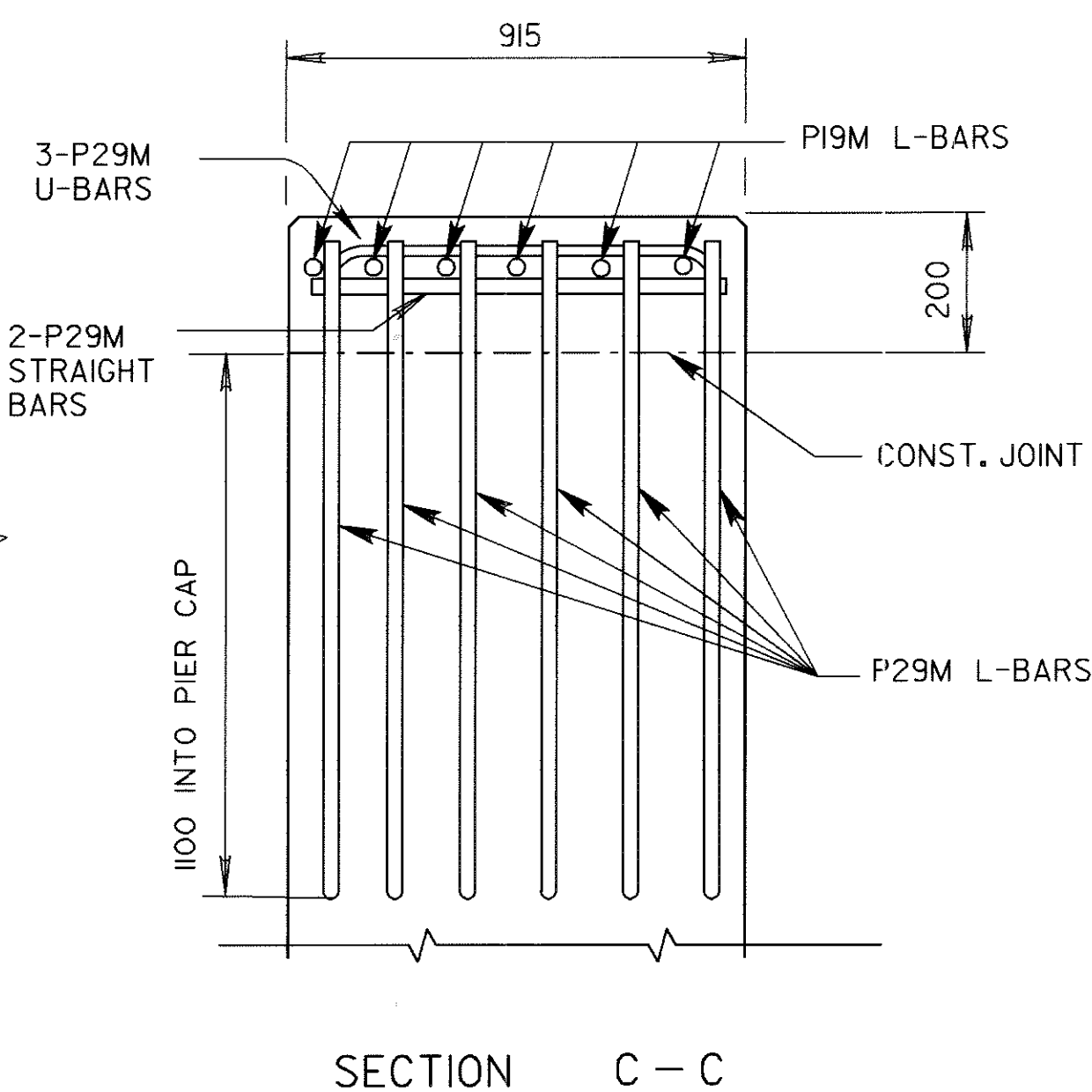
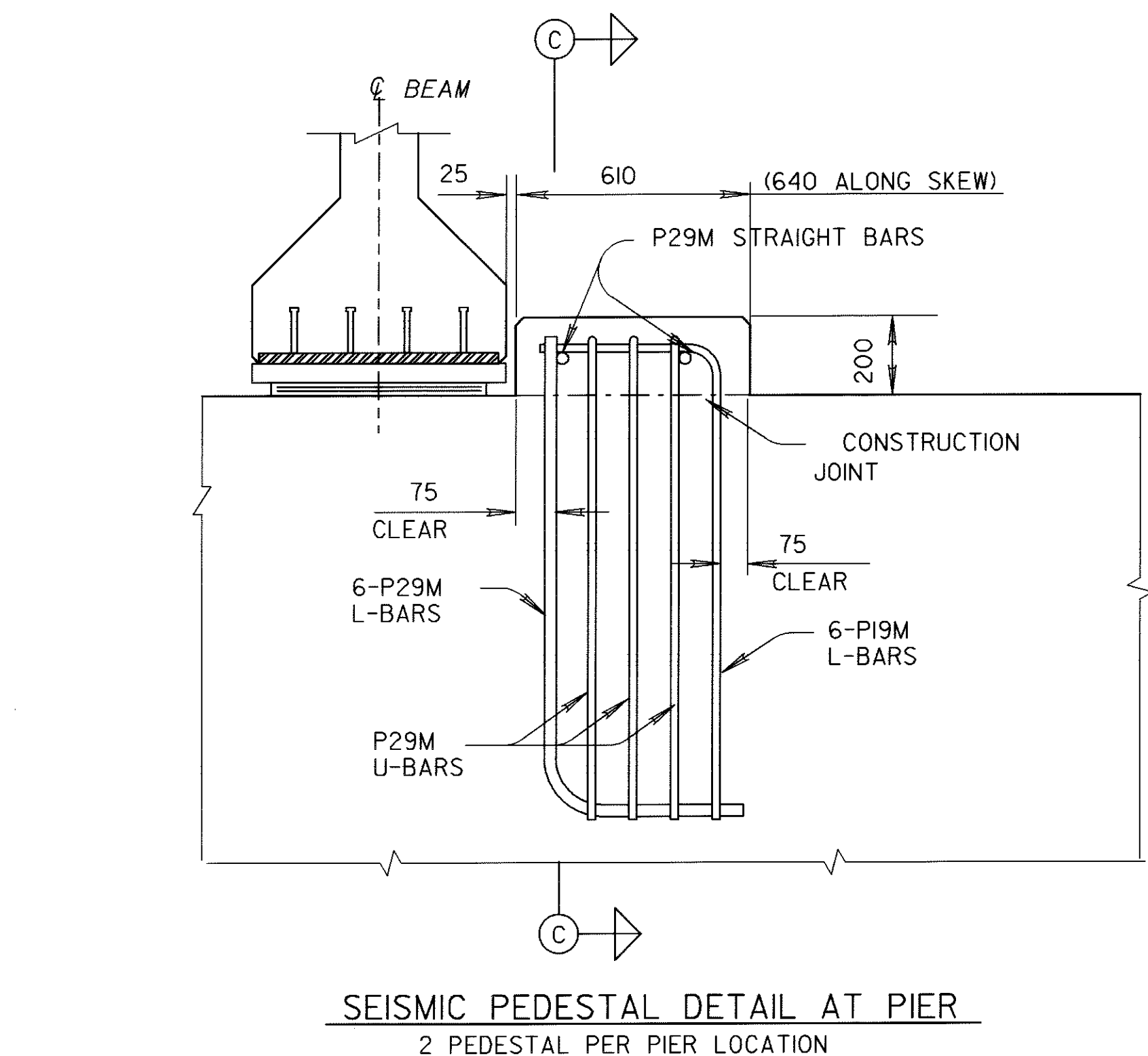
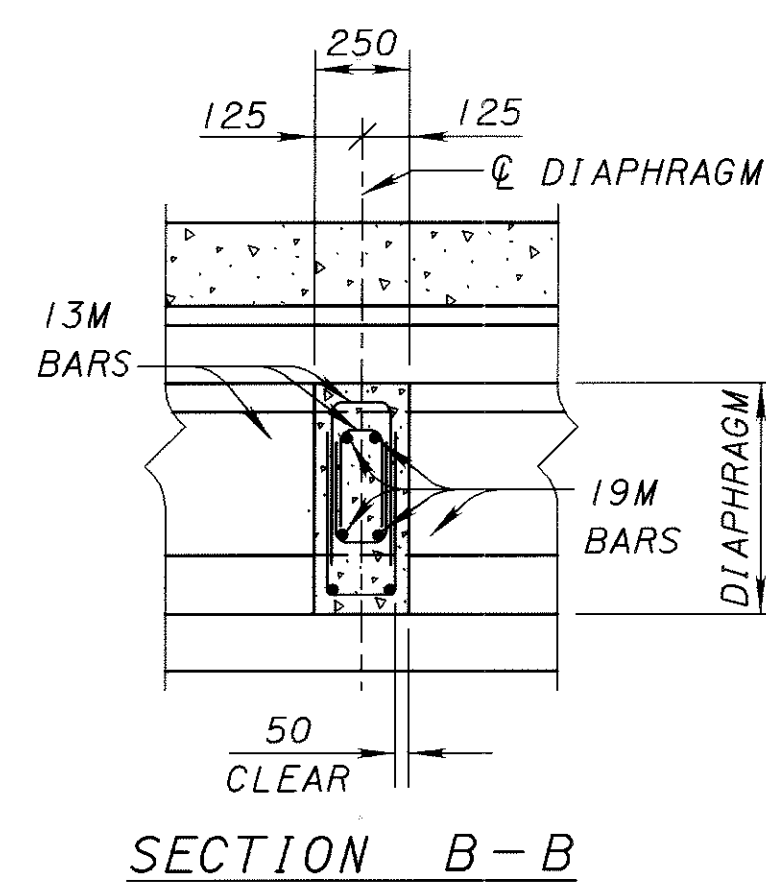
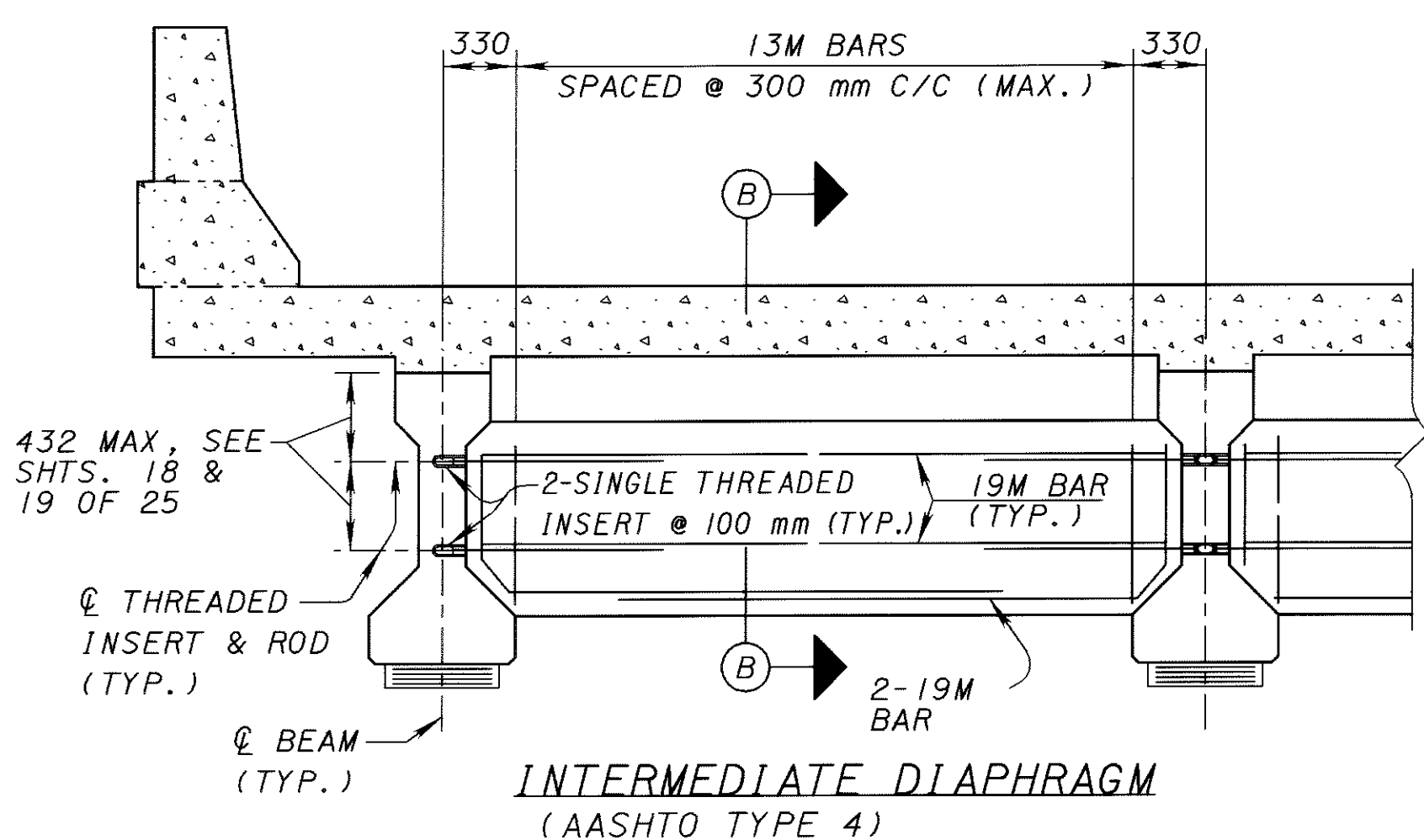
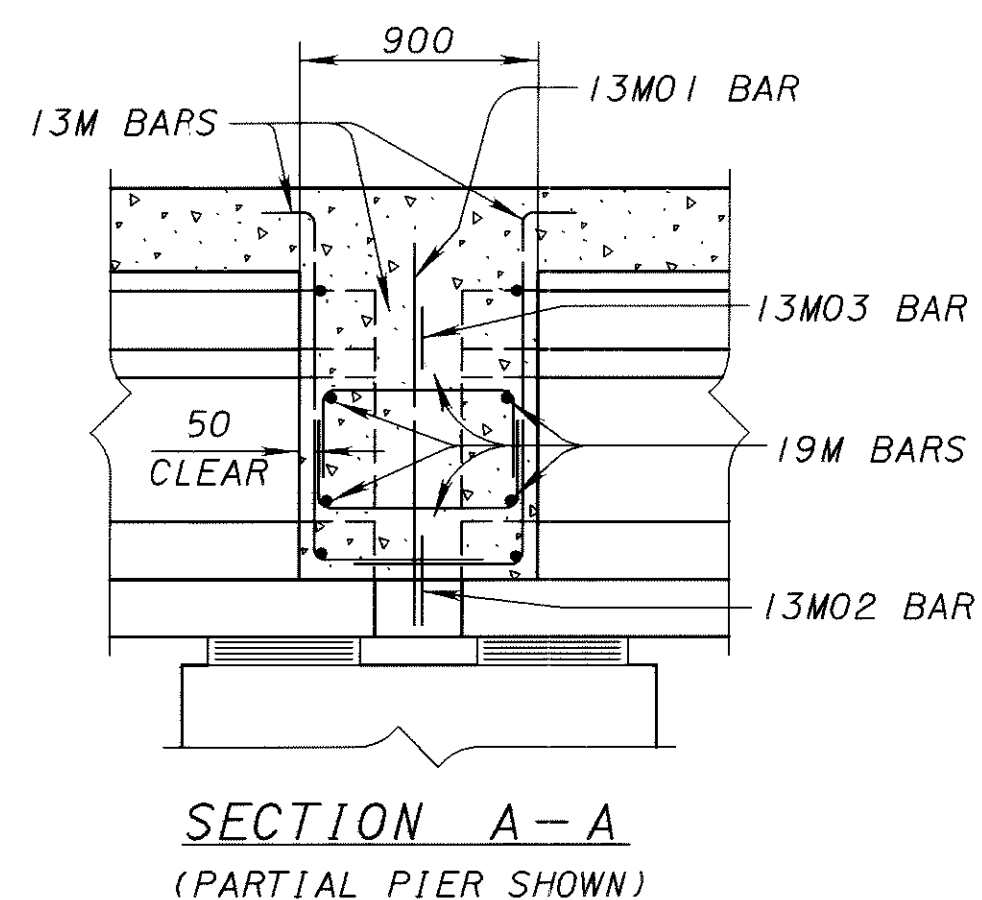
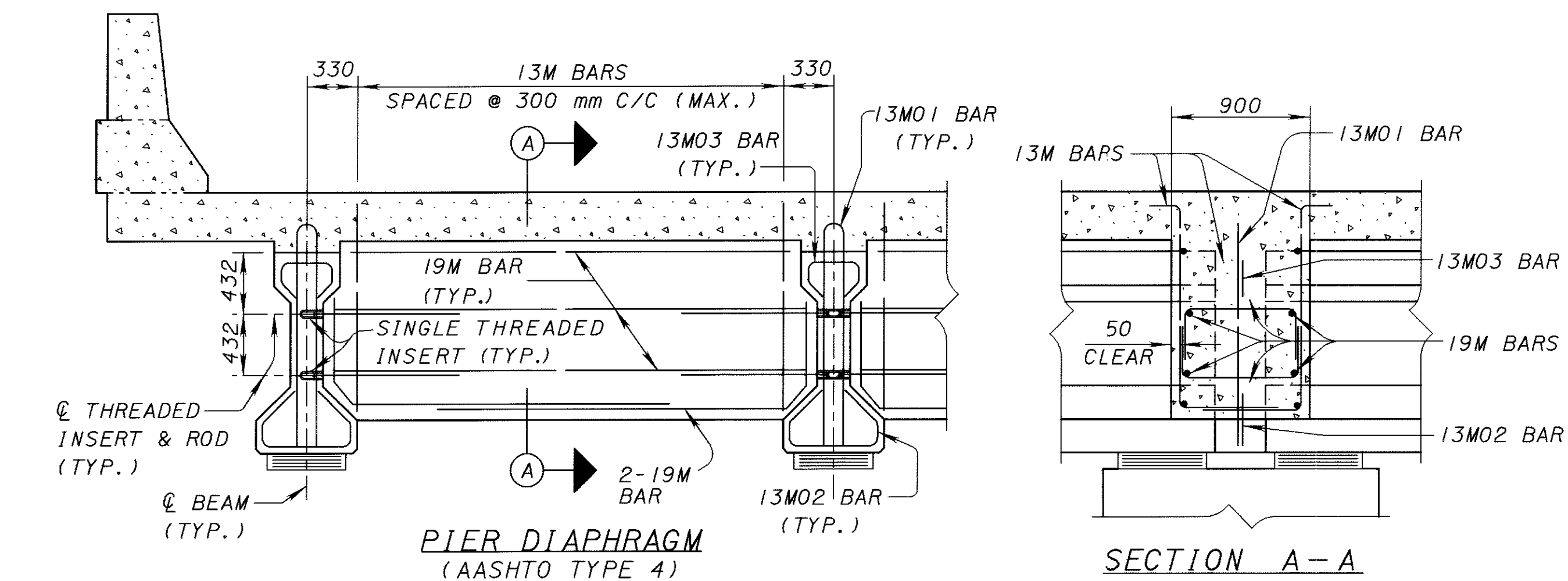


SECTION C-C AASHTO TYPE 4 (SPAN 2 AT MIDSPAN)

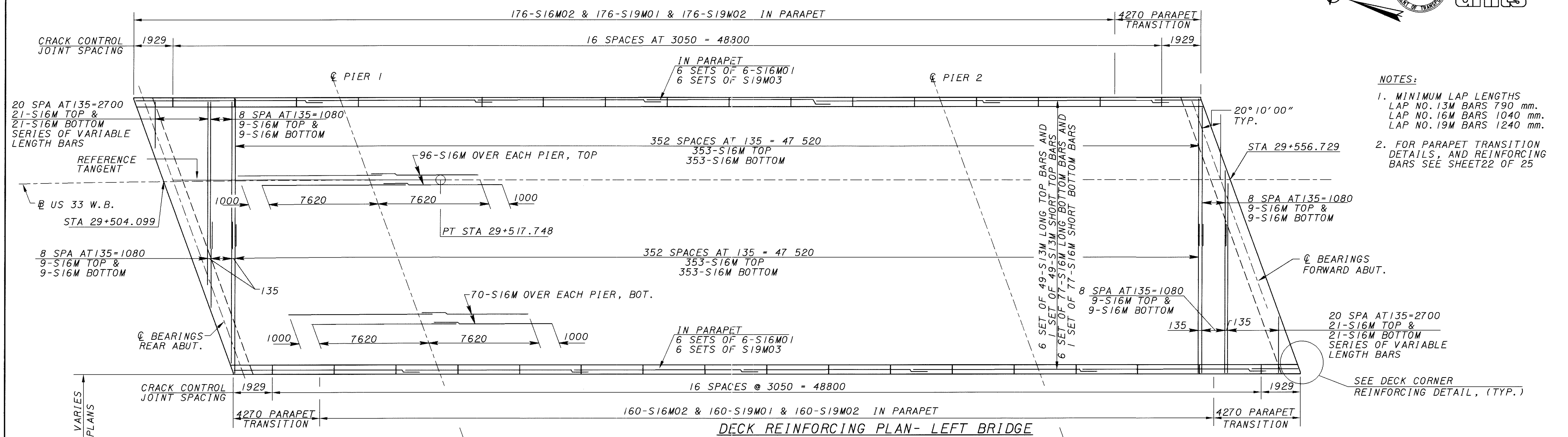


SECTION B-B AASHTO TYPE 4 (SPAN 2 AT ENDS)

- NOTES:**
- PRESTRESSING STRAND - NOMINAL STRAND AREA = 99 SQ. mm (LOW RELAXATION STRANDS).
 - FOR ADDITIONAL NOTES SEE SHEET 18 OF 25.
 - PRECAST BEAM FABRICATOR TO ADJUST THE VERTICAL LOCATION OF INSERTS, TO CLEAR PRESTRESSING STRANDS BY 50 mm.

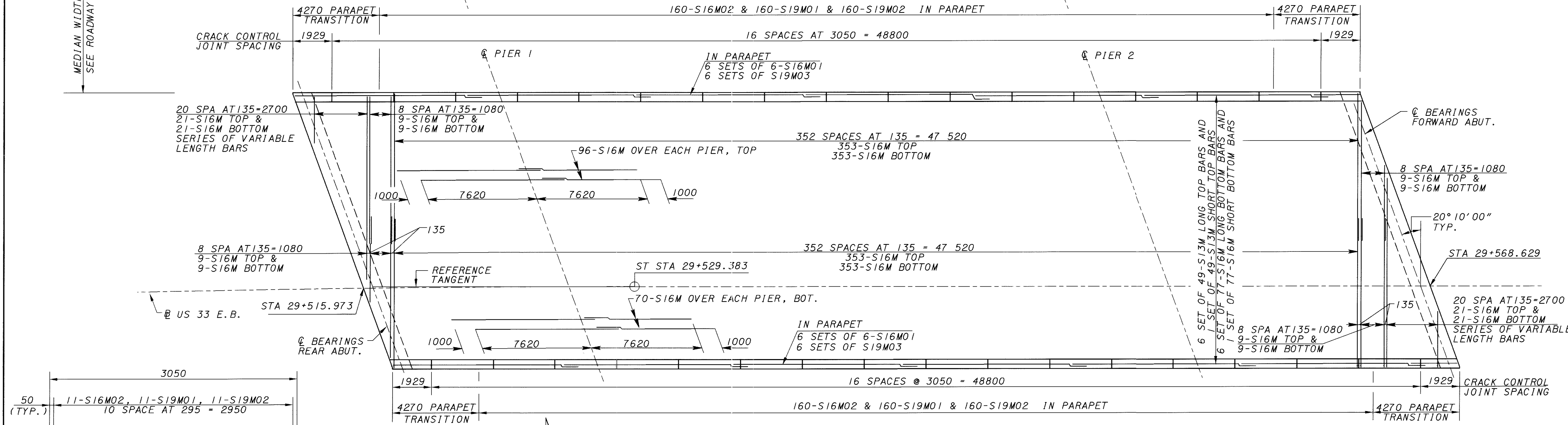


- NOTES:**
- INTERMEDIATE DIAPHRAGM CONCRETE SHALL BE CLASS S CONCRETE & CONFORM TO REQUIREMENTS OF SS842. DECK SLAB CONCRETE SHALL NOT BE PLACED UNTIL AT LEAST 48 HOURS AFTER PLACEMENT OF INTERMEDIATE DIAPHRAGM CONCRETE.
 - FOR ABUTMENT DIAPHRAGM DETAILS AND NOTES SEE SHT. 13 OF 25.
 - THE PIER & ABUTMENT DIAPHRAGM CONCRETE SHALL BE HIGH PERFORMANCE CONCRETE.

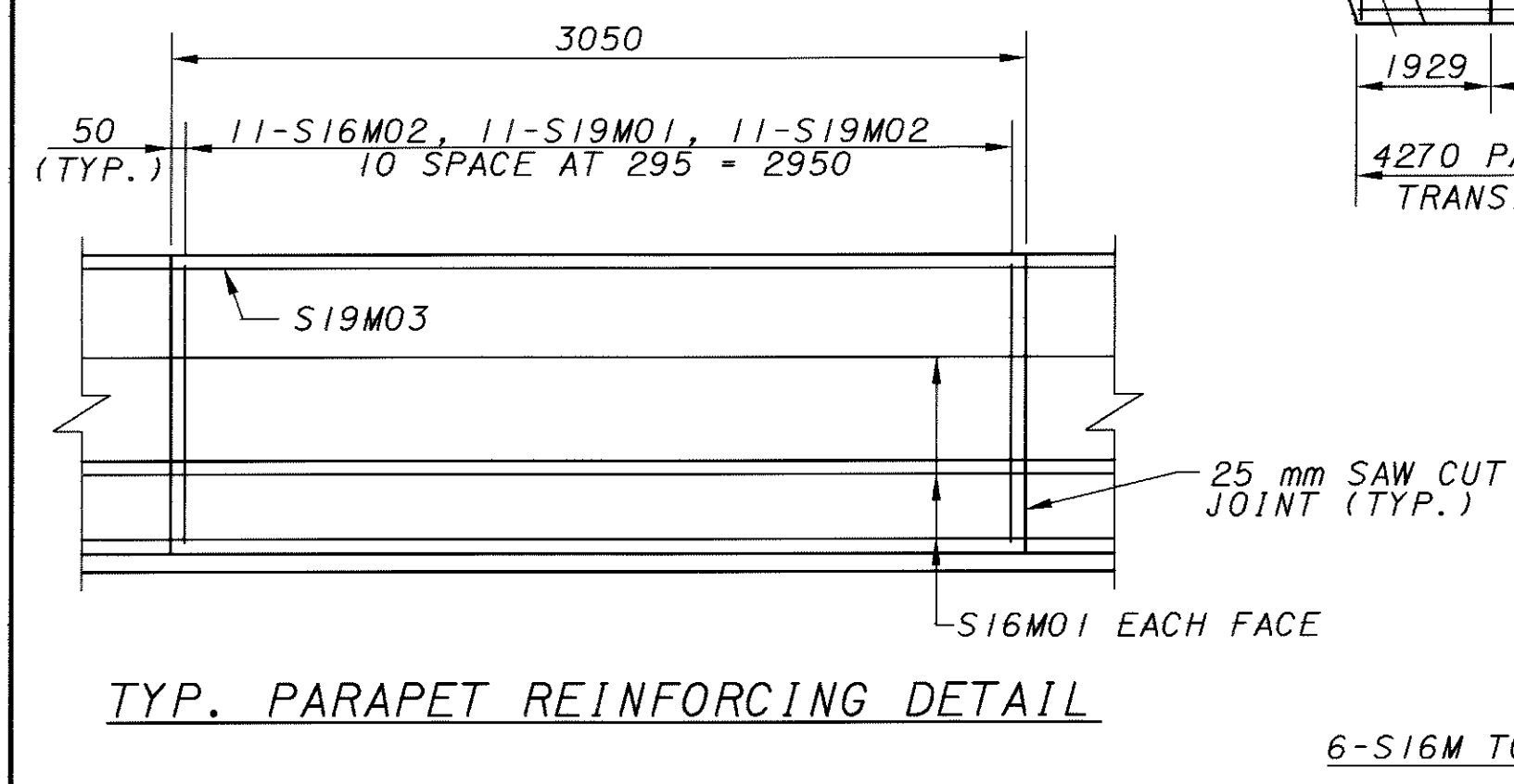


- NOTES:**
1. MINIMUM LAP LENGTHS
LAP NO. 13M BARS 790 mm.
LAP NO. 16M BARS 1040 mm.
LAP NO. 19M BARS 1240 mm.
 2. FOR PARAPET TRANSITION DETAILS, AND REINFORCING BARS SEE SHEET 22 OF 25

DECK REINFORCING PLAN- LEFT BRIDGE



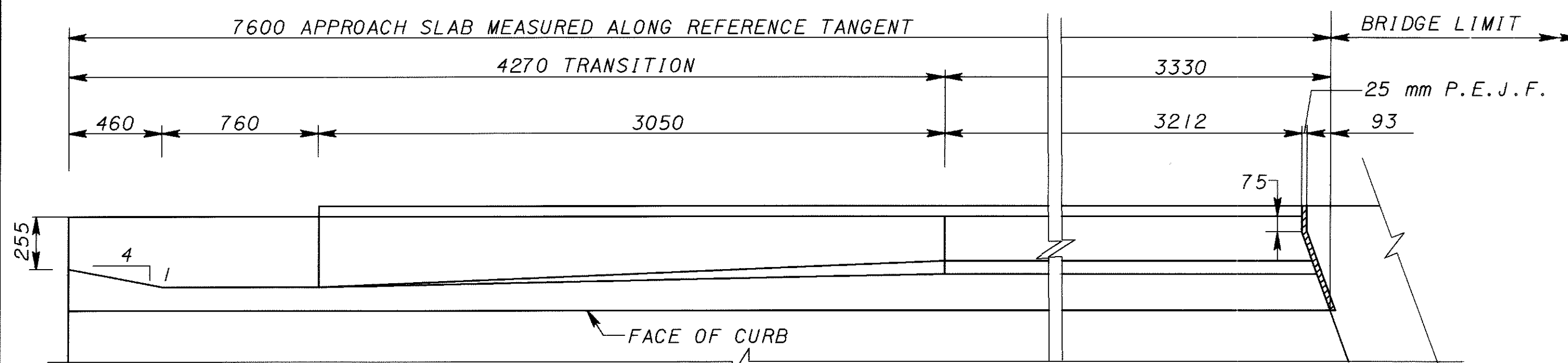
DECK REINFORCING PLAN- RIGHT BRIDGE



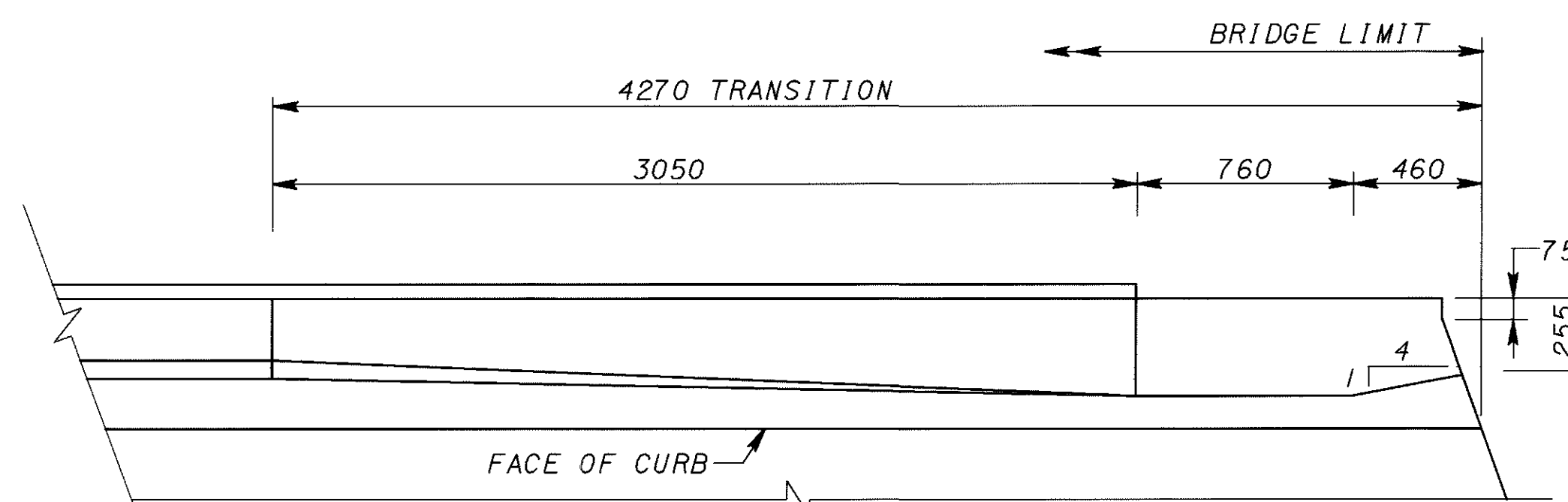
DECK CORNER REINFORCING
(TYPICAL AT 4 LOCATIONS)

ALL DIMENSIONS ARE IN MILLIMETERS.
ALL ELEVATIONS AND STATIONS ARE IN METERS.

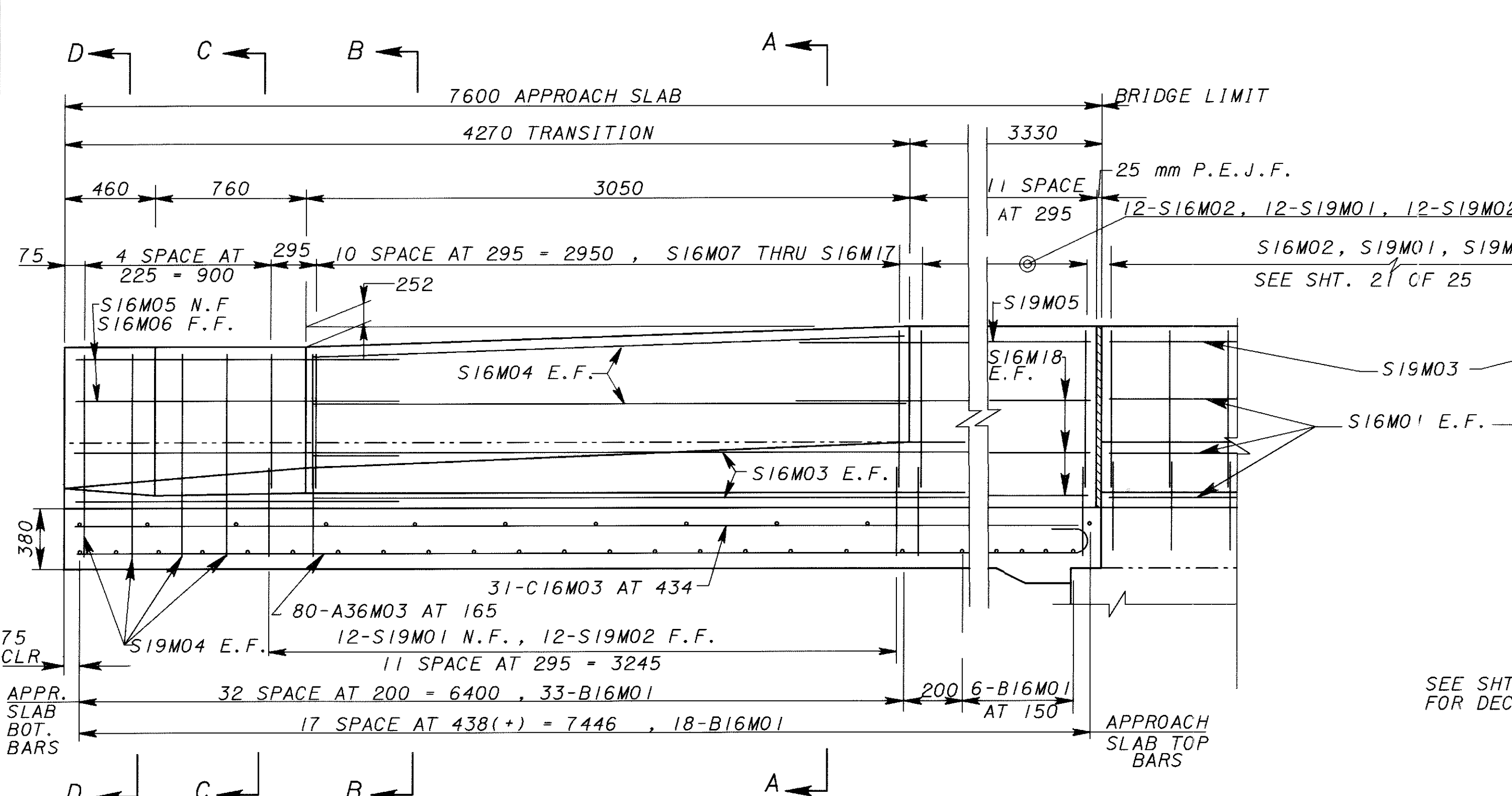
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DATE: FEB 6 2001 10:24



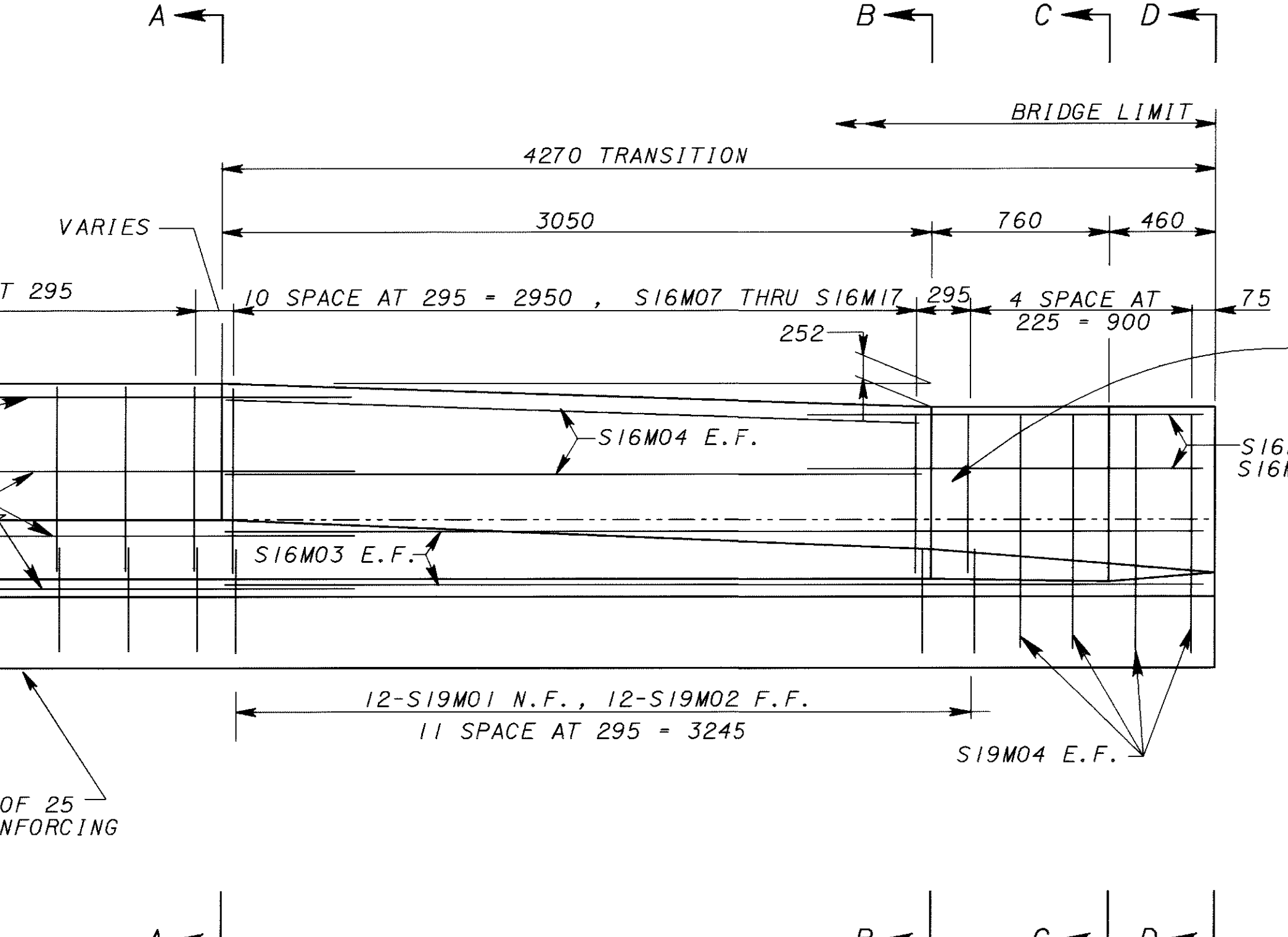
PARAPET PLAN AT REAR ABUTMENT -LEFT BRIDGE



PARAPET PLAN AT FORWARD ABUTMENT -LEFT BRIDGE
PARAPET PLAN AT FORWARD ABUTMENT -RIGHT BRIDGE
PARAPET PLAN AT REAR ABUTMENT -RIGHT BRIDGE (OPPOSITE HAND)



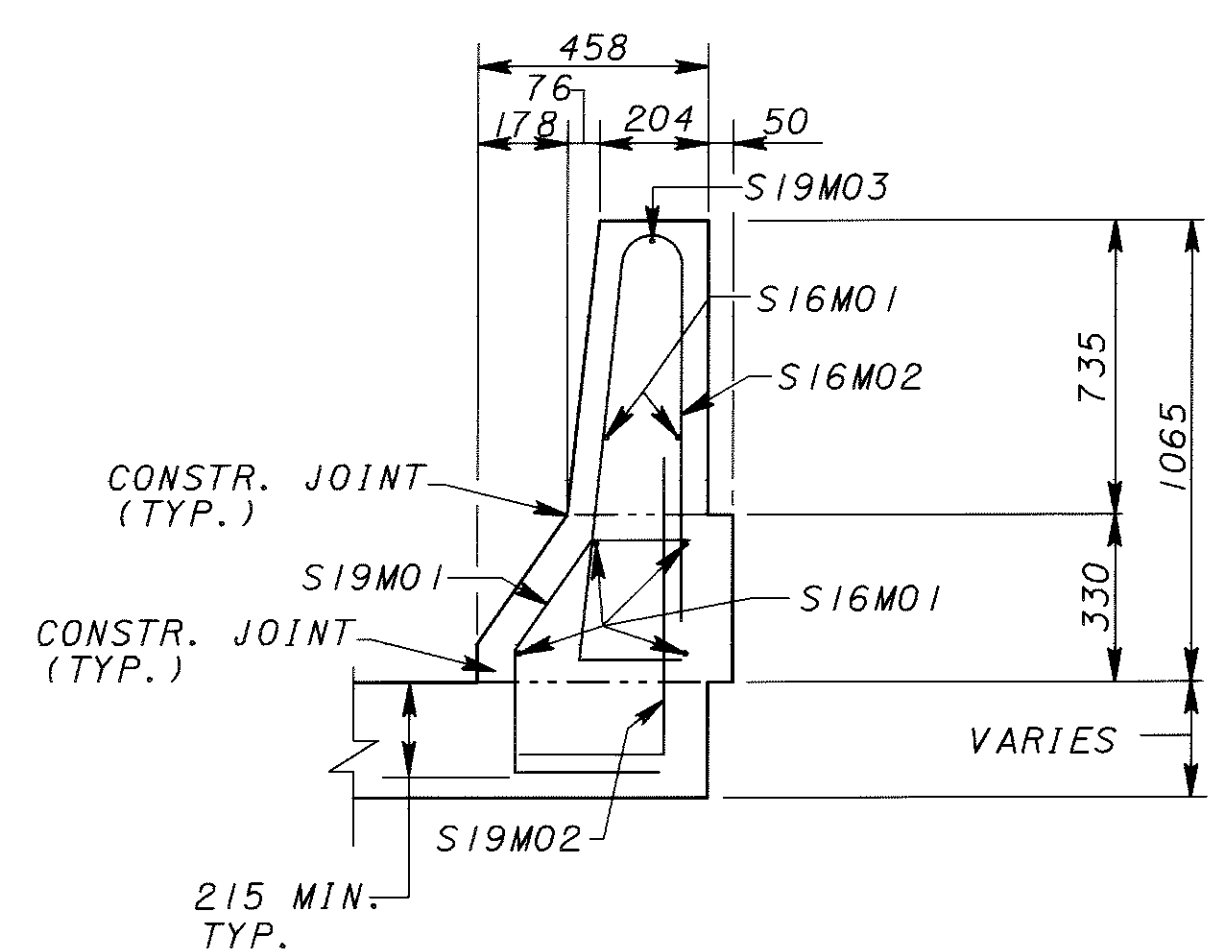
PARAPET ELEVATION AT REAR ABUTMENT -LEFT BRIDGE



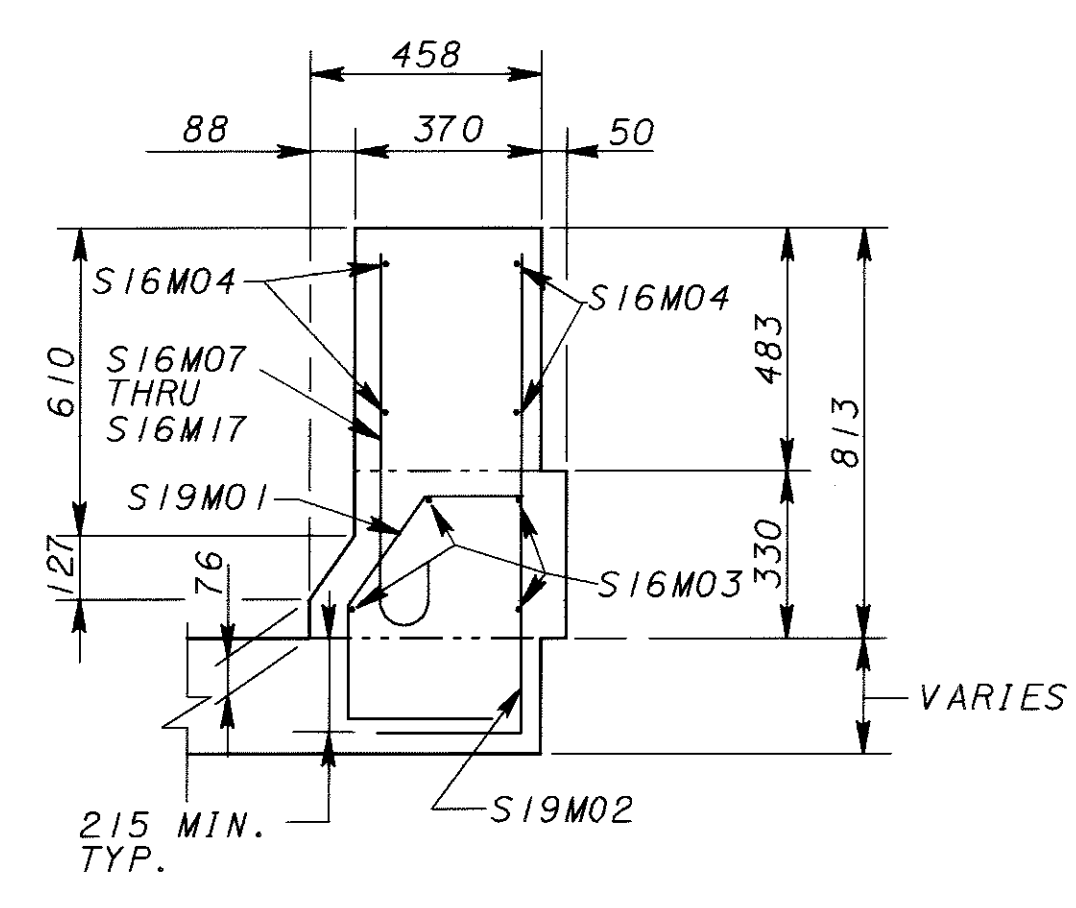
PARAPET ELEVATION AT FORWARD ABUTMENT -LEFT BRIDGE
PARAPET ELEVATION AT FORWARD ABUTMENT -RIGHT BRIDGE
PARAPET ELEVATION AT REAR ABUTMENT -RIGHT BRIDGE (OPPOSITE HAND)

NOTES:

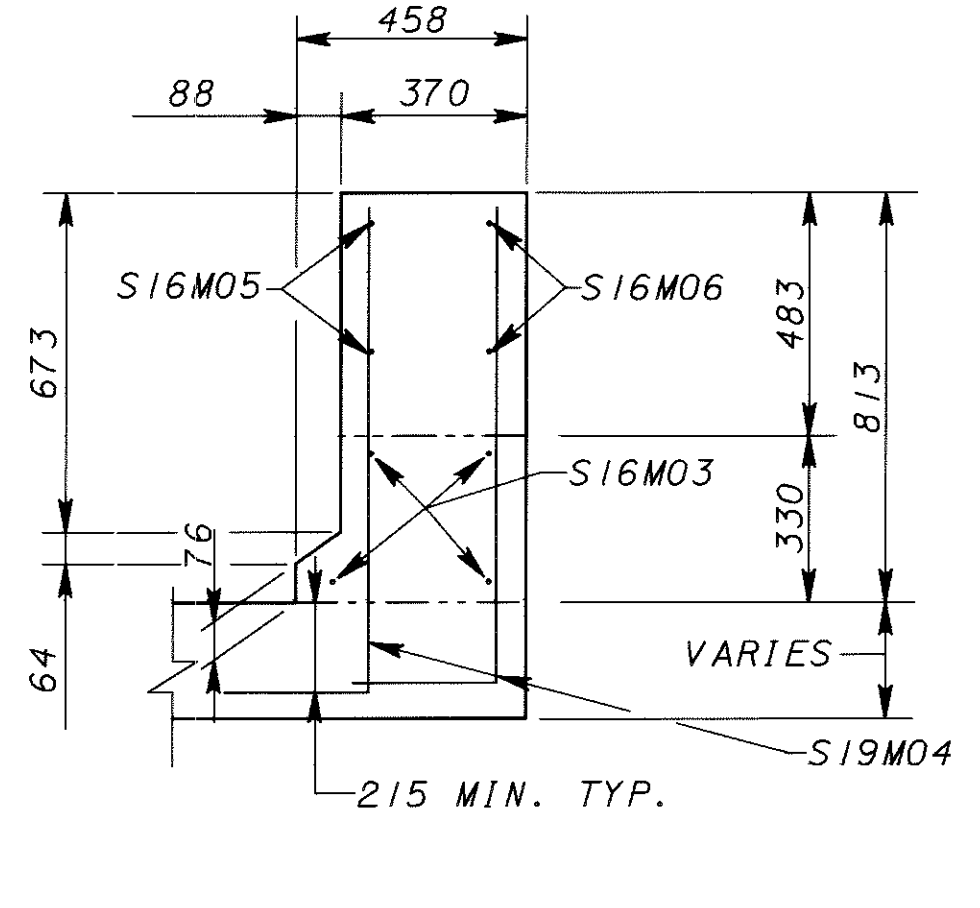
- SEE SHEET 4 OF 25 FOR GENERAL NOTES.
- SEE STD. DWG. AS-1-B1M FOR ADDITIONAL APPROACH SLAB NOTES AND DETAILS
- SEE STD. DWG. BR-1M FOR ADDITIONAL PARAPET NOTES AND DETAILS AND REINFORCING BAR BENDS.
- MINIMUM LAP LENGTHS:
LAP NO. 16M BARS 1040 mm
LAP NO. 19M BARS 1240 mm



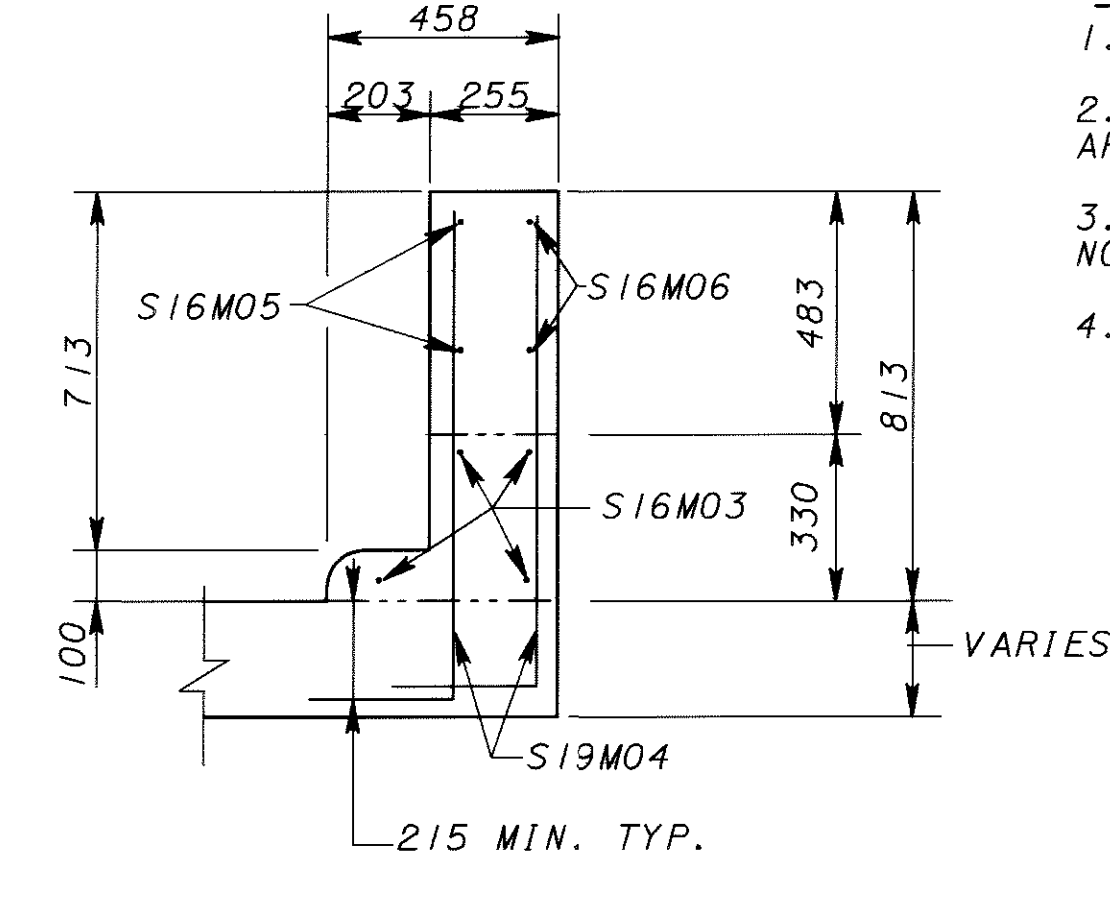
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

LEGEND

- N.F. = NEAR FACE
- F.F. = FAR FACE
- E.F. = EACH FACE
- P.E.J.F. = PREFORMED EXPANSION JOINT FILLER

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DATE: FEB-6-2001 10:00

		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 1A	SPAN 1	0.00L	29+503.272	215.689	3688 (L)	265	0	215.689
		0.50L	29+508.107	215.838	3639 (L)	262	0	215.838
	SPAN 2	0.00L	29+512.942	215.994	3609 (L)	289	0	215.994
		0.25L	29+520.328	216.241	3600 (L)	265	38	216.279
		0.50L	29+527.728	216.488	3600 (L)	265	77	216.565
	SPAN 3	0.00L	29+542.528	216.984	3600 (L)	314	0	216.984
		0.50L	29+548.728	217.192	3600 (L)	288	2	217.194
		1.00L	29+554.928	217.399	3600 (L)	268	0	217.399
	SCREED NO. 1	SPAN 1	0.00L	29+503.485	215.670	3085 (L)	265	0
0.50L			29+508.322	215.821	3037 (L)	262	0	215.821
SPAN 2		0.00L	29+513.160	215.980	3009 (L)	289	0	215.980
		0.25L	29+520.548	216.229	3000 (L)	265	38	216.267
		0.50L	29+527.948	216.479	3000 (L)	265	77	216.556
SPAN 3		0.00L	29+542.748	216.979	3000 (L)	314	0	216.979
		0.50L	29+548.948	217.189	3000 (L)	288	2	217.191
		1.00L	29+555.148	217.399	3000 (L)	268	0	217.399
SCREED NO. 2		SPAN 1	0.00L	29+504.301	215.600	775 (L)	265	0
	0.50L		29+509.148	215.759	731 (L)	262	0	215.759
	SPAN 2	0.00L	29+513.995	215.925	706 (L)	291	0	215.925
		0.25L	29+521.393	216.184	700 (L)	265	38	216.222
		0.50L	29+528.793	216.444	700 (L)	265	77	216.521
	SPAN 3	0.00L	29+543.593	216.963	700 (L)	272	0	216.963
		0.50L	29+549.793	217.181	700 (L)	267	2	217.183
		1.00L	29+555.993	217.399	700 (L)	268	0	217.399

		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 3	SPAN 1	0.00L	29+505.121	215.532	1534 (R)	265	0	215.532
		0.50L	29+509.977	215.698	1575 (R)	262	0	215.698
	SPAN 2	0.00L	29+514.834	215.872	1597 (R)	291	0	215.872
		0.25L	29+522.238	215.142	1600 (R)	265	38	215.180
		0.50L	29+529.638	216.411	1600 (R)	265	77	216.488
	SPAN 3	0.00L	29+537.038	216.680	1600 (R)	265	38	216.718
		0.00L	29+544.438	216.950	1600 (R)	316	0	216.950
		0.50L	29+550.638	217.175	1600 (R)	289	2	217.177
	SCREED NO. 4	SPAN 1	0.00L	29+505.944	215.466	3842 (R)	265	0
0.50L			29+510.810	215.641	3880 (R)	262	0	215.641
SPAN 2		0.00L	29+515.676	215.822	3898 (R)	293	0	215.822
		0.25L	29+523.082	216.101	3900 (R)	268	38	216.139
		0.50L	29+530.482	216.380	3900 (R)	267	77	216.457
SPAN 3		0.00L	29+537.882	216.659	3900 (R)	266	38	216.697
		0.00L	29+545.282	216.938	3900 (R)	317	0	216.938
		0.50L	29+551.482	217.171	3900 (R)	289	2	217.173
SCREED NO. 5		SPAN 1	0.00L	29+506.771	215.403	6150 (R)	265	0
	0.50L		29+511.646	215.585	6185 (R)	262	0	215.585
	SPAN 2	0.00L	29+516.521	215.774	6199 (R)	294	0	215.774
		0.25L	29+523.927	216.063	6200 (R)	269	38	216.101
		0.50L	29+531.327	216.352	6200 (R)	267	77	216.429
	SPAN 3	0.00L	29+538.727	216.640	6200 (R)	266	38	216.678
		0.00L	29+546.127	216.929	6200 (R)	318	0	216.929
		0.50L	29+552.327	217.166	6200 (R)	290	2	217.168
	SPAN 3	0.00L	29+558.527	217.399	6200 (R)	268	0	217.399

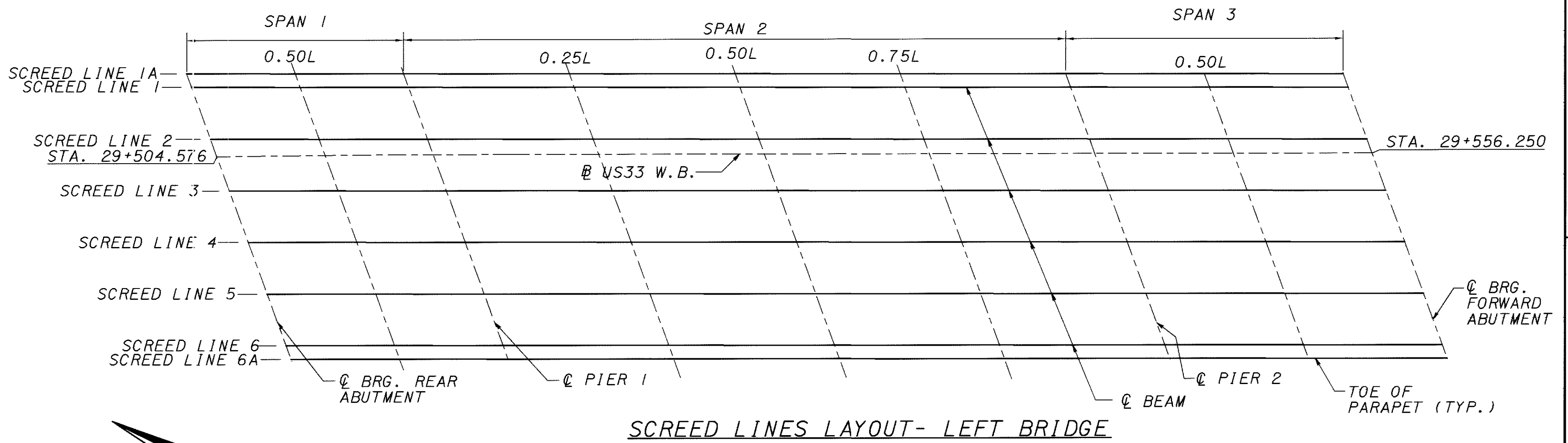
NOTES

1. SCREED ELEVATIONS

SCREED ELEVATIONS ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR THE ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

L = SPAN LENGTH

		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 6	SPAN 1	0.00L	29+507.600	215.342	8457 (R)	265	0	215.342
		0.50L	29+512.485	215.533	8488 (R)	262	0	215.533
	SPAN 2	0.00L	29+517.369	215.729	8499 (R)	295	0	215.729
		0.25L	29+524.772	216.027	8500 (R)	269	38	216.065
		0.50L	29+532.172	216.325	8500 (R)	268	77	216.402
	SPAN 3	0.00L	29+539.572	216.623	8500 (R)	266	38	216.661
		0.00L	29+546.972	216.921	8500 (R)	319	0	216.921
		0.50L	29+553.372	217.161	8500 (R)	290	2	217.163
	SCREED NO. 6A	SPAN 1	0.00L	29+507.817	215.327	9059 (R)	265	0
0.50L			29+512.704	215.519	9089 (R)	262	0	215.519
SPAN 2		0.00L	29+517.591	215.717	9100 (R)	295	0	215.717
		0.25L	29+524.992	216.018	9100 (R)	269	38	216.056
		0.50L	29+532.392	216.319	9100 (R)	268	77	216.396
SPAN 3		0.00L	29+539.792	216.619	9100 (R)	266	38	216.657
		0.00L	29+547.192	216.920	9100 (R)	319	0	216.920
		0.50L	29+553.592	217.160	9100 (R)	290	2	217.162
SPAN 3		0.00L	29+559.592	217.393	9100 (R)	268	0	217.393

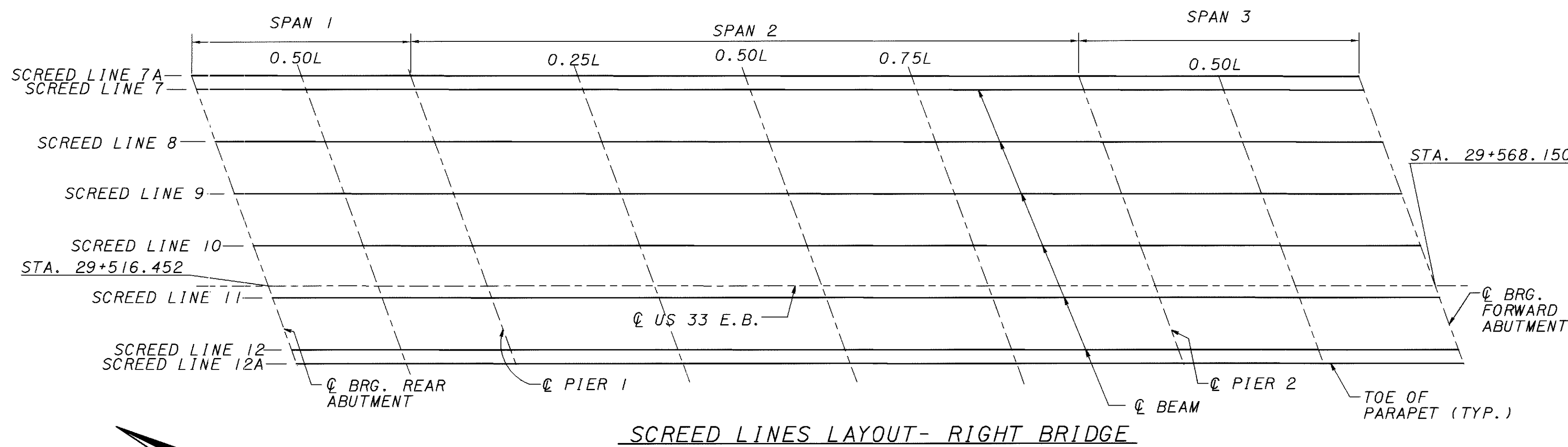


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DATE: FEB-06-2001 10:40

		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 7A	SPAN 1	0.00L	29+513.127	216.059	9111 (L)	268	0	216.059
		0.50L	29+517.967	216.207	9104 (L)	265	0	216.207
	SPAN 2	0.00L	29+522.811	216.356	9101 (L)	292	0	216.356
		0.25L	29+530.208	216.596	9100 (L)	267	38	216.634
		0.50L	29+537.608	216.836	9100 (L)	267	77	216.913
	SPAN 3	0.75L	29+545.008	217.076	9100 (L)	266	38	217.114
		0.00L	29+552.408	217.315	9100 (L)	313	0	217.315
		0.50L	29+558.608	217.516	9100 (L)	288	2	217.518
	SCREED NO. 7	SPAN 1	1.00L	29+564.808	217.717	9100 (L)	268	0
0.00L			29+513.346	216.053	8511 (L)	268	0	216.053
SPAN 2		0.50L	29+518.187	216.203	8504 (L)	265	0	216.203
		0.00L	29+523.031	216.354	8501 (L)	292	0	216.203
		0.25L	29+530.428	216.596	8500 (L)	267	38	216.634
SPAN 3		0.50L	29+537.828	216.838	8500 (L)	267	77	216.915
		0.75L	29+545.228	217.081	8500 (L)	266	38	217.119
		0.00L	29+552.628	217.323	8500 (L)	313	0	217.323
SCREED NO. 8		SPAN 1	0.50L	29+558.828	217.526	8500 (L)	288	2
	1.00L		29+565.028	217.729	8500 (L)	268	0	217.729
	SPAN 2	0.00L	29+514.184	216.032	6209 (L)	268	0	216.032
		0.50L	29+519.028	216.188	6203 (L)	265	0	216.188
		0.00L	29+523.874	216.347	6200 (L)	293	0	216.347
	SPAN 3	0.25L	29+531.273	216.598	6200 (L)	268	38	216.636
		0.50L	29+538.673	216.850	6200 (L)	267	77	216.927
		0.75L	29+546.073	217.102	6200 (L)	266	38	217.140
	SPAN 3	0.00L	29+553.473	217.354	6200 (L)	314	0	217.354
0.50L		29+559.673	217.565	6200 (L)	288	2	217.567	
1.00L		29+565.873	217.776	6200 (L)	268	0	217.776	

		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 9	SPAN 1	0.00L	29+515.024	216.013	3908 (L)	268	0	216.013
		0.50L	29+519.870	216.175	3902 (L)	265	0	216.175
	SPAN 2	0.00L	29+524.718	216.341	3900 (L)	294	0	216.341
		0.25L	29+532.117	216.603	3900 (L)	269	38	216.641
		0.50L	29+539.517	216.864	3900 (L)	267	77	216.941
	SPAN 3	0.75L	29+546.917	217.125	3900 (L)	266	38	217.163
		0.00L	29+554.317	217.387	3900 (L)	315	0	217.387
		0.50L	29+560.517	217.606	3900 (L)	288	2	217.608
	SCREED NO. 10	SPAN 1	1.00L	29+566.717	217.825	3900 (L)	268	0
0.00L			29+515.864	215.996	1607 (L)	268	0	215.996
SPAN 2		0.50L	29+520.713	216.164	1602 (L)	265	0	216.164
		0.00L	29+525.562	216.335	1600 (L)	295	0	216.335
		0.25L	29+532.962	216.597	1600 (L)	269	38	216.635
SPAN 3		0.50L	29+540.362	216.860	1600 (L)	268	77	216.937
		0.75L	29+547.762	217.123	1600 (L)	266	38	217.161
		0.00L	29+555.162	217.386	1600 (L)	315	0	217.386
SCREED NO. 11		SPAN 1	0.50L	29+561.362	217.606	1600 (L)	289	2
	1.00L		29+567.562	217.826	1600 (L)	268	0	217.826
	SPAN 2	0.00L	29+516.706	215.981	695 (R)	268	0	215.981
		0.50L	29+521.556	216.155	699 (R)	265	0	216.155
		0.00L	29+526.407	216.328	700 (R)	294	0	216.328
	SPAN 3	0.25L	29+533.807	216.591	700 (R)	269	38	216.629
		0.50L	29+541.207	216.853	700 (R)	268	77	216.930
		0.75L	29+548.607	217.116	700 (R)	266	38	217.154
	SPAN 3	0.00L	29+556.007	217.379	700 (R)	315	0	217.379
0.50L		29+562.207	217.599	700 (R)	289	2	217.601	
1.00L		29+568.407	217.819	700 (R)	268	0	217.819	

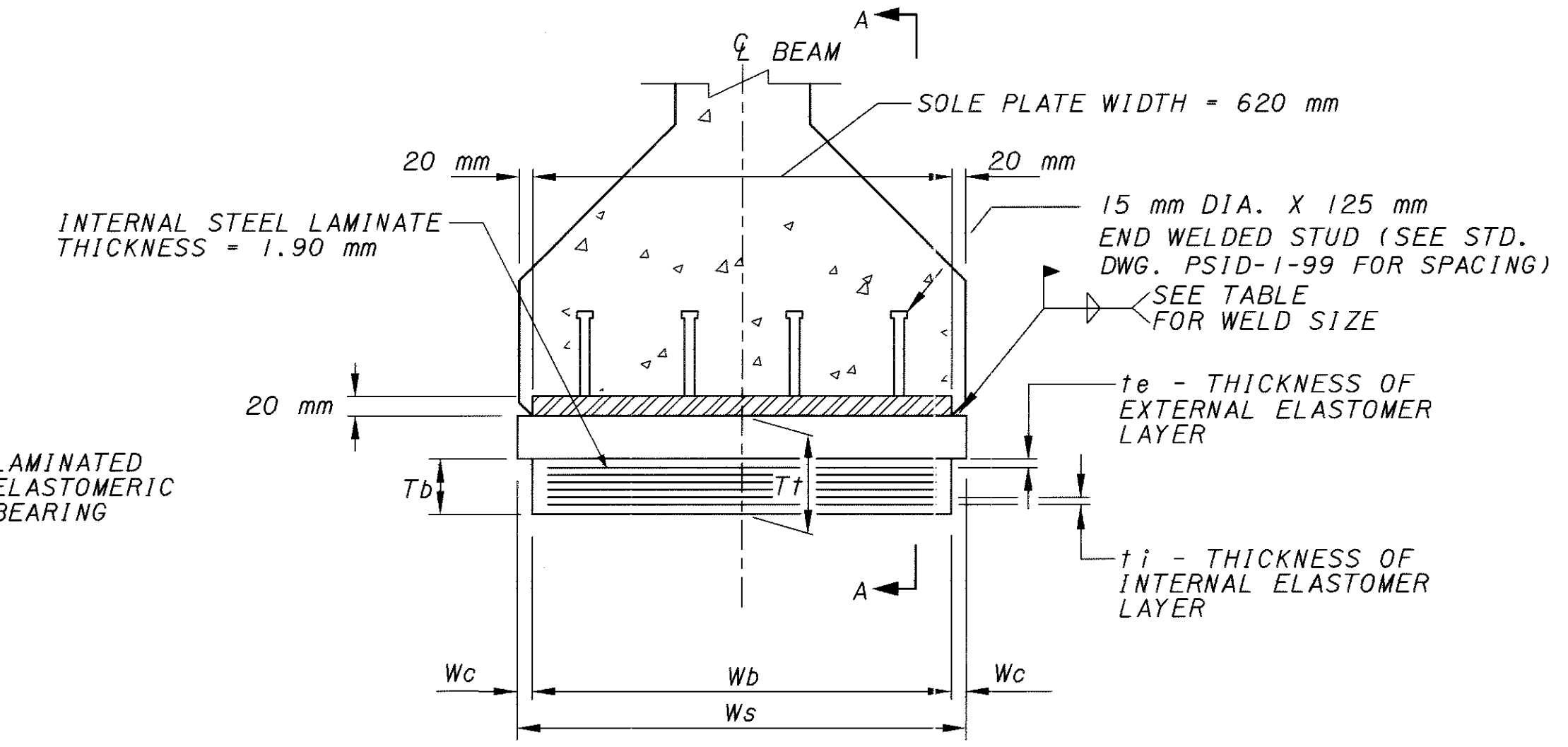
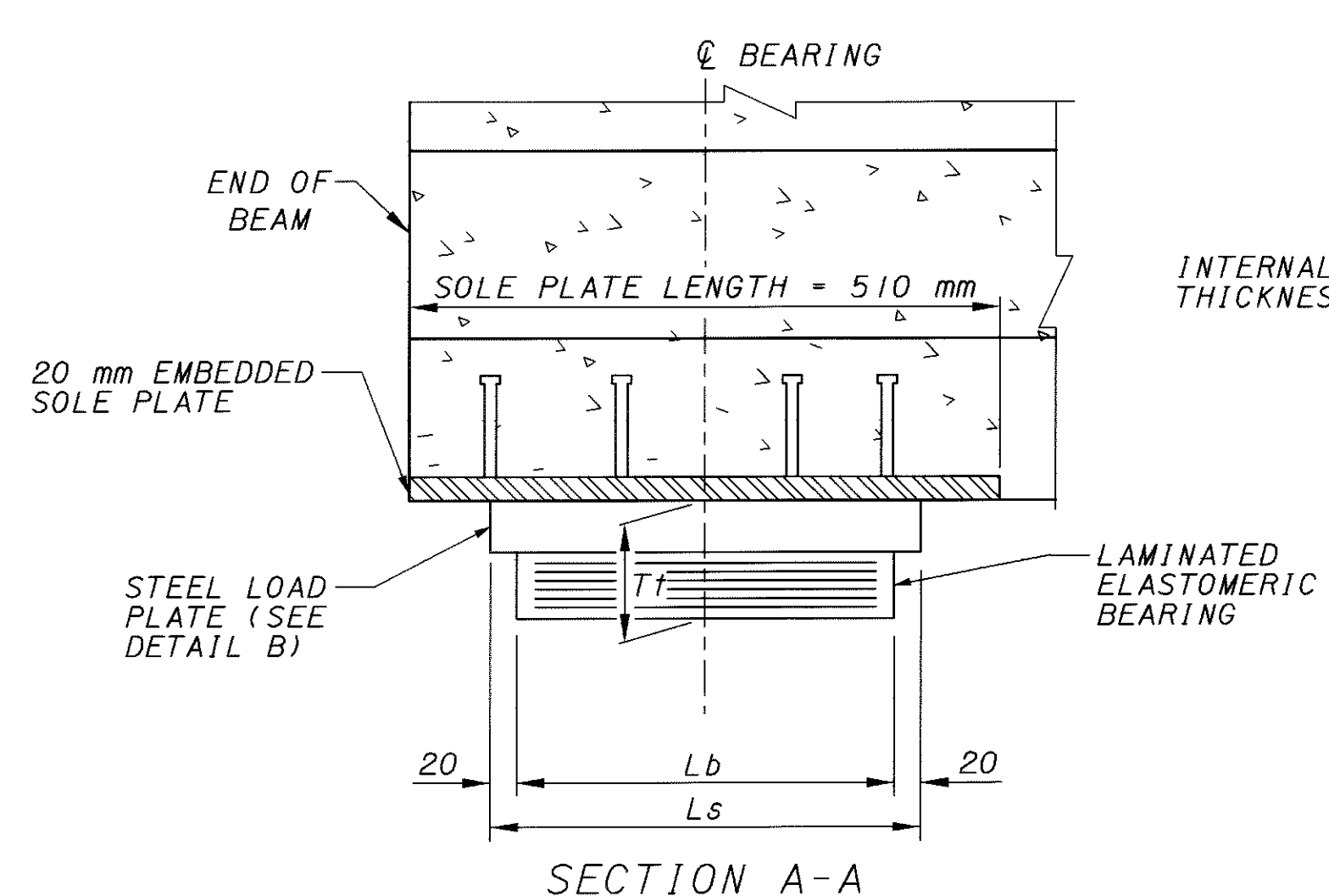
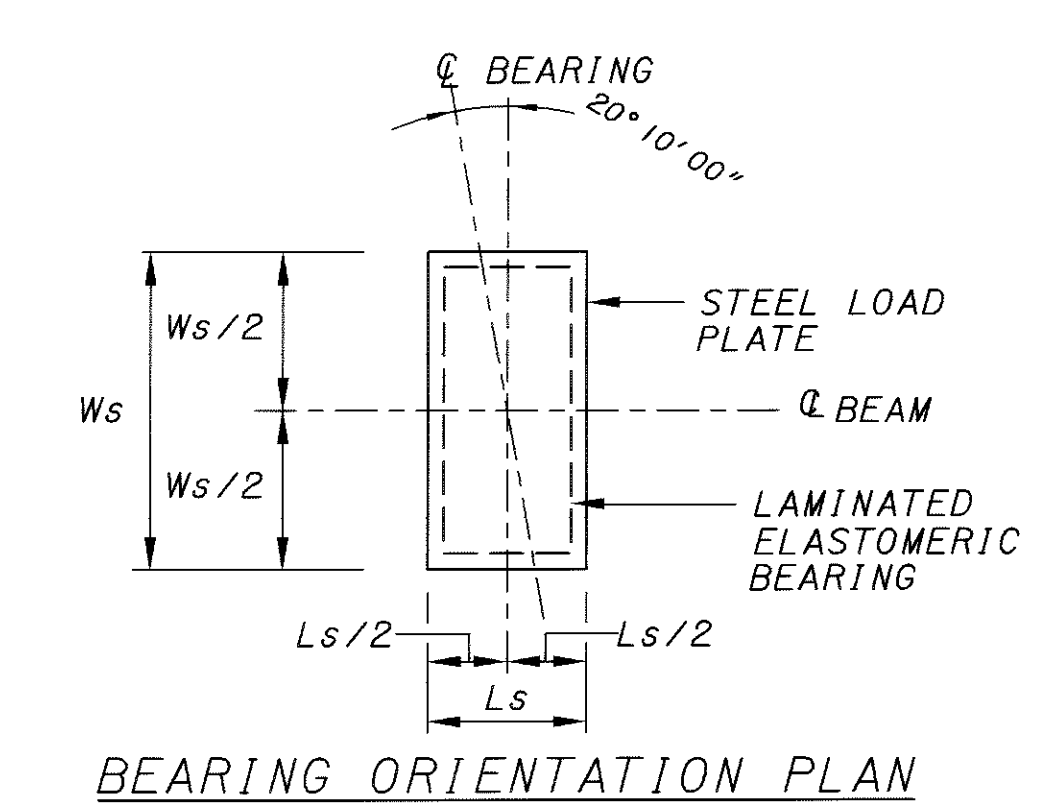
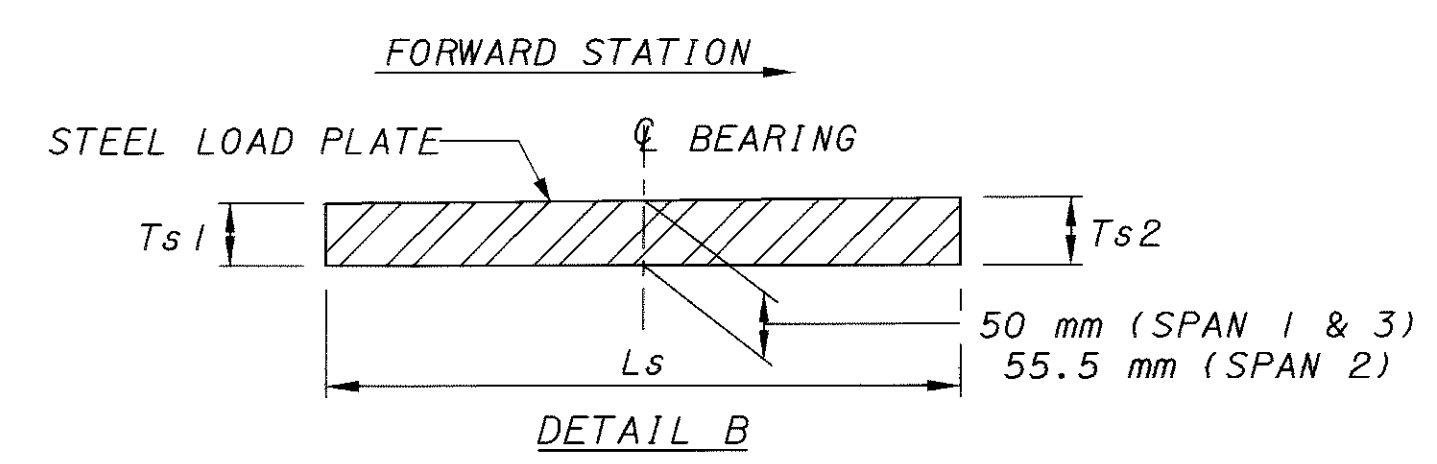
		LOCATION	STATION	FINAL DECK EL m	OFFSET mm	FINAL DECK THICKNESS mm	DEAD LOAD DEFLECTION mm	SCREED EL m
SCREED NO. 12	SPAN 1	0.00L	29+517.548	215.969	2996 (R)	268	0	215.969
		0.50L	29+522.400	216.149	2999 (R)	265	0	216.149
	SPAN 2	0.00L	29+527.252	216.321	3000 (R)	294	0	216.321
		0.25L	29+534.652	216.584	3000 (R)	269	38	216.622
		0.50L	29+542.052	216.847	3000 (R)	268	77	216.924
	SPAN 3	0.75L	29+549.452	217.109	3000 (R)	266	38	217.147
		0.00L	29+556.852	217.372	3000 (R)	315	0	217.372
		0.50L	29+563.052	217.592	3000 (R)	289	2	217.594
	SCREED NO. 12A	SPAN 1	1.00L	29+569.252	217.812	3000 (R)	268	0
0.00L			29+517.768	215.966	3596 (R)	268	0	215.966
SPAN 2		0.50L	29+522.621	216.147	3599 (R)	265	0	216.147
		0.00L	29+527.472	216.319	3600 (R)	294	0	216.319
		0.25L	29+534.872	216.582	3600 (R)	269	38	216.620
SPAN 3		0.50L	29+542.272	216.845	3600 (R)	268	77	216.922
		0.75L	29+549.672	217.107	3600 (R)	266	38	217.145
		0.00L	29+557.072	217.370	3600 (R)	315	0	217.370
SPAN 3		0.50L	29+563.272	217.590	3600 (R)	289	2	217.592
	1.00L	29+569.472	217.810	3600 (R)	268	0	217.810	



NOTES
 1. SCREED ELEVATIONS
 SCREED ELEVATIONS ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR THE ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

L = SPAN LENGTH

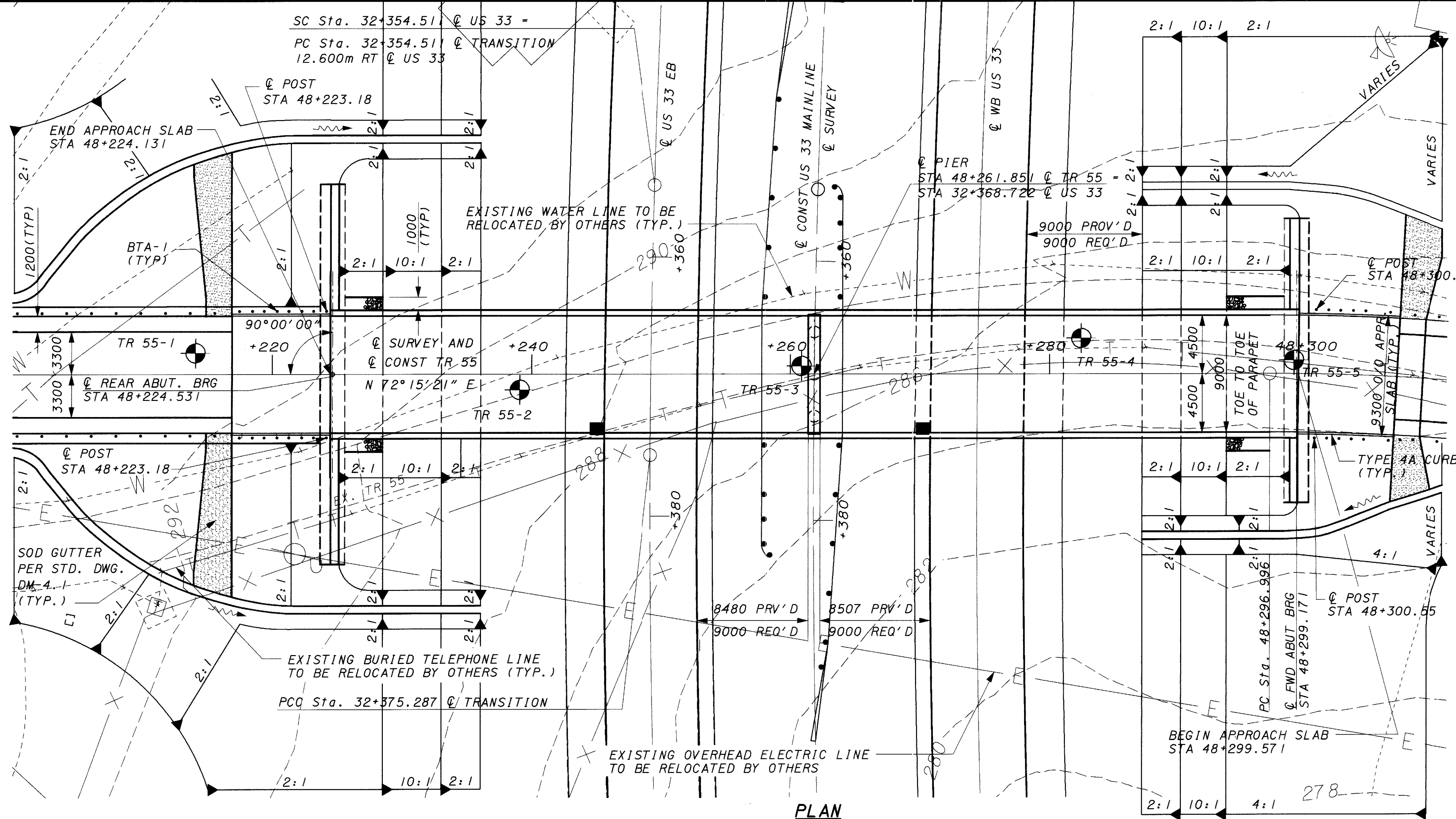
ALL DIMENSIONS ARE IN MILLIMETERS.
 ALL ELEVATIONS AND STATIONS ARE IN METERS.



NOTES

- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION 11, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 (METHOD A) OF SECTION 14, BEARINGS, DIVISION 1, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, AS PER PLAN, EACH.
- THE STEEL LOAD PLATE SHALL BE ASTM A709, GRADE 50 STEEL, AND SHALL BE GALVANIZED AS PER 711.02. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE SHALL BE CONTROLLED SO THAT THE LOAD PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 150°C AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 26°C OR LOWER THAN 4°C, AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 15°C (+/- 5°C), THE PRECAST CONCRETE BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UN DEFORMED SHAPE AT 15°C (+/- 5°C).
- THE TOTAL DESIGN LOAD FOR A BEARING EQUALS THE SUM OF THE DEAD LOAD AND LIVE LOAD TABULATED IN THE BEARING TABLE.
- FOR SPAN LOCATIONS, SEE SHEET 17 OF 25.
- SEISMIC PEDESTALS ADJACENT TO THE FACIA BEAMS ARE NOT SHOWN. SEE SHEET 14 & 15 FOR LOCATION AND SHEET 20 OF 25 FOR DETAILS.

RIGHT BRIDGE BEAM ROWS ⑦ - ⑫	LEFT BRIDGE BEAM ROWS ① - ⑥	BEARING LOCATION	BEARING TYPE	NO. REQ'D.	DEAD LOAD (kN)	LIVE LOAD (kN)	TOTAL LOAD (DL+LL) (kN)	BEARING		ti	NO. OF ti's	te (2 EA.)	NUMBER OF INTERNAL LAMINATES (1.9 mm)	Tb	STEEL LOAD PLATE				Tt	FILLET WELD SIZE	Wc
								Lb	Wb						Ls	Ws	Ts1	Ts2			
		PIER 1 (SPAN 1)	EXP.	6	223.0	201.0	424.0	230	345	6.5	6	4.5	7	61	270	660	46	54	111	8	157.5
		PIER 1 (SPAN 2)	EXP.	6	512.0	254.0	766.0	295	460	8.5	4	6	5	55.5	335	660	50	61	111	8	100
		PIER 2 (SPAN 2)	EXP.	6	512.0	254.0	766.0	295	460	8.5	4	6	5	55.5	335	660	50	61	111	8	100
		PIER 2 (SPAN 3)	EXP.	6	258.0	214.0	472.0	230	345	6.5	6	4.5	7	61	270	660	46	54	111	8	157.5



CURVE DATA T.R. 55
PI STA. 48+320.097
 $\Delta = 14^{\circ}37'36''$ RT
R = 180.000m
T = 23.101m
L = 45.951m
E = 1.476m

HORIZONTAL CURVE

NOTES:

- EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
- STATIONS & ELEVATIONS ARE IN METERS; ALL OTHER DIMENSIONS ARE IN MILLIMETERS, UNLESS NOTED OTHERWISE.

LEGEND

BENCHMARK

BENCHMARK #33C
BRASS TAB ON CONCRETE
STA 48+019.858, 6.138m LT
ELEV = 285.254

TRAFFIC DATA (TR 55)

CURRENT ADT (2001) = 220
DESIGN YEAR ADT (2021) = 300
DESIGN YEAR ADTT (2021) = 18
SOURCE = ODOT

PROPOSED STRUCTURE

TYPE: PRESTRESSED CONCRETE "I" BEAMS WITH COMPOSITE CONCRETE DECK MADE CONTINUOUS FOR LIVE LOAD, SUPPORTED BY REINFORCED CONCRETE CAP AND COLUMN PIERS AND SEMI-INTEGRAL REINFORCED CONCRETE ABUTMENTS.

SPANS: 36950mm - 36950mm C/C BEARINGS
ROADWAY: 9000 TOE TO TOE PARAPET
LOADING: MS-22.5 & ALTERNATE MILITARY LOADING

SKEW: NONE
ALIGNMENT: TANGENT
SUPERELEVATION: VARIES FROM NORMAL CROWN AT .0156 TO SUPERELEVATION AT .058
WEARING SURFACE: MONOLITHIC CONCRETE
APPROACH SLAB: AS-1-81 (7600 LONG), AS PER PLAN
LATITUDE: 39° 16' 43" N
LONGITUDE: 82° 05' 54" W

WB = WESTBOUND
EB = EASTBOUND

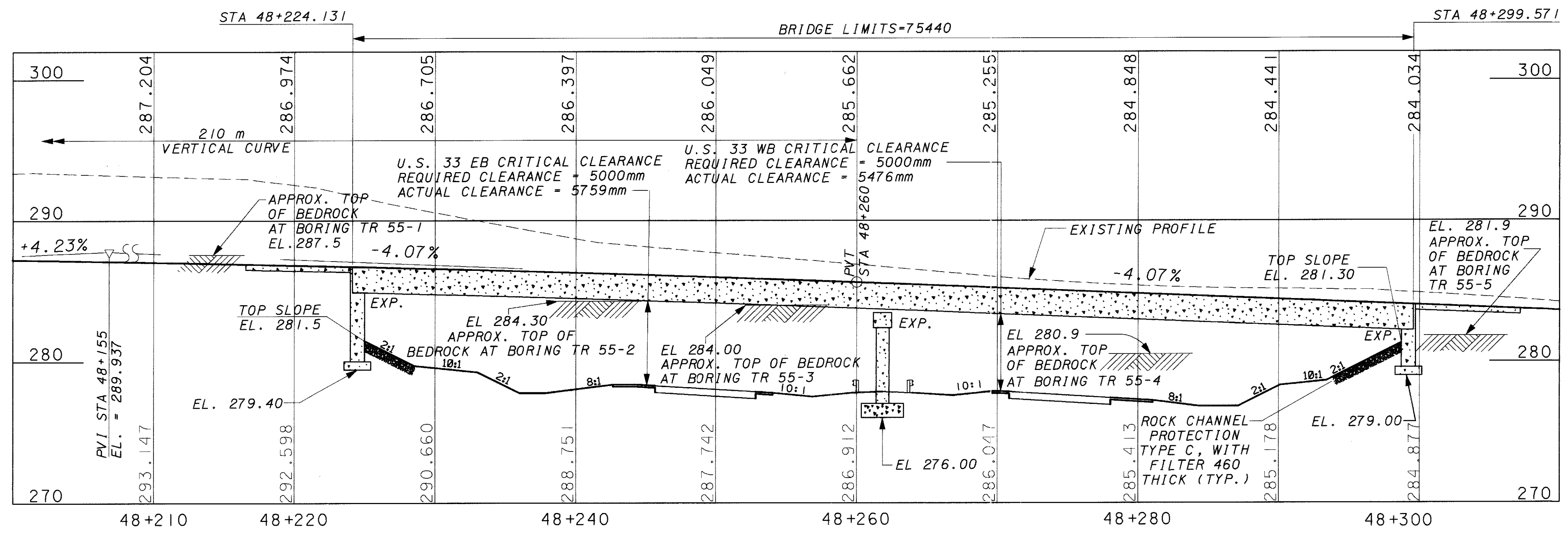
SOIL BORING LOCATION

MIN VERTICAL CLEARANCE LOCATION

APPROX. TOP OF BEDROCK

REINFORCED SODDING

ROCK CHANNEL PROTECTION, WITH FILTER



PROFILE ALONG @ SURVEY AND @ CONSTRUCTION TR 55


09:32:09 AM
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10:57 AM
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QUANTITIES CALCULATED BY: ENB - SEPTEMBER 13, 2000					ESTIMATED QUANTITIES					QUANTITIES CHECKED BY: JBK - SEPTEMBER 13, 2000				
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER- STRUCTURE	REAR ABUTMENT	FORWARD ABUTMENT	PIER	GENERAL	AS PER PLAN SHEET NO.				
										3				
503	21101	7	CU METER	UNCLASSIFIED EXCAVATION, AS PER PLAN			7			3				
503	31101	482	CU METER	ROCK EXCAVATION, AS PER PLAN	18	332	132			3				
SPECIAL	51267510	1144	SQ METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	865	141	57	81						
516	13900	10	SQ METER	51 MM PREFORMED EXPANSION JOINT FILLER		5	5							
516	14000	20	SQ METER	PREFORMED EXPANSION JOINT FILLER, MISC.:75 MM		10	10							
516	14021	26	METER	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN		13	13			3				
516	44101	20	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND STEEL LOAD PLATE (NEOPRENE) (72.0 X 300 X 500 AND 57 (AVG) X 330 X 530 LOAD PLATE) (EXPANSION), AS PER PLAN		5	5	10		14				
518	21200	148	CU METER	POROUS BACKFILL WITH FILTER FABRIC		100	48							
518	40000	56	METER	150 MM PERFORATED CORRUGATED PLASTIC PIPE		34	22							
518	40010	18	METER	150 MM NON-PERFORATED CORRUGATED PLASTIC PIPE INCLUDING SPECIALS		8	10							
601	32200	55	CU METER	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER		22	33							
841	10000	738	SQ METER	TREATING OF CONCRETE SURFACES WITH SR5	738									
842	31509	44	CU METER	CLASS S CONCRETE, SUPERSTRUCTURE (PARAPET), AS PER PLAN	44					3				
842	42001	28	CU METER	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN				28		3				
842	44101	201	CU METER	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN		141	60			3				
842	46501	125	CU METER	CLASS C CONCRETE, FOOTING, AS PER PLAN		81	33	11		3				
865	15040	10	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4 MOD. (1675 mm)	10									
865	16000	24	EACH	PRESTRESSED CONCRETE I-BEAM MEMBERS, MISC.: CONCRETE INTERMEDIATE DIAPHRAGMS, AS PER PLAN	24					10				
894	10001	214	CU METER	HIGH PERFORMANCE CONCRETE FOR BRIDGE DECK, WITH WARRANTY, AS PER PLAN **	214									

* SEE PROPOSAL NOTE

** INCLUDES CONCRETE FOR PIERS AND ABUTMENT DIAPHRAGMS

 DESIGN AGENCY 635 Brookside Boulevard Westerville, OH 43081	DATE 09/18/00
	REVIEWED T.L.W.
DRAWN K.M.H.	STRUCTURE FILE NUMBER 0501069
DESIGNED ENB	CHECKED JBK
ESTIMATED QUANTITIES BRIDGE NO. ATH-33-32369 U.S. 33 UNDER T.R. 55	
ATH-33-30.981	
2 / 14	
910 956	

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81M DATED 10-25-94
 BR-1M DATED 1-06-99
 PSD-1-99 DATED 10-20-00
 SICD-1-96M DATED 2-12-97

AND TO SUPPLEMENTAL SPECIFICATION:

841 DATED 10-12-99 894 DATED 10-12-99
 842 DATED 1-06-99 899 DATED 10-21-98
 844 DATED 1-06-99 954 DATED 9-09-97
 846 DATED 9-09-97 911 DATED 7-10-97
 865 DATED 2-22-00

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997, 1998 AND 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING: MS-22.5 AND THE ALTERNATE MILITARY LOADING. FUTURE WEARING SURFACE 2.87 KN/m²

DESIGN STRESSES:

HIGH PERFORMANCE CONCRETE HPC SS 844- COMPRESSIVE STRENGTH 31.0 MPa (28-DAY)

CLASS S CONCRETE - COMPRESSIVE STRENGTH 31.0 MPa (28-DAY)

CLASS C CONCRETE - COMPRESSIVE STRENGTH 27.5 MPa (28-DAY)

REINFORCING STEEL - ASTM A615M, A616M OR A617M. GRADE 420 - MINIMUM YIELD STRENGTH 420 MPa. SPIRAL REINFORCEMENT MAY BE PLAIN BARS, ASTM, A82M OR A615M.

MILD REINFORCING FOR THE CONCRETE PRESTRESSED BEAMS GRADE 420, MINIMUM YIELD STRENGTH 420 MPa

CONCRETE FOR PRESTRESSED BEAMS
 COMPRESSIVE STRENGTH 48.0 MPa (FINAL),
 COMPRESSIVE STRENGTH 34.5 MPa (RELEASE),
 UNIT STRESS 22 MPa COMPRESSION AND
 3.7 MPa TENSION

PRESTRESSING STRAND ASTM A416M, 2
 13 mm DIAMETER AREA = 108mm²
 f's = 1860 MPa
 INITIAL STRESS 0.75 f's (LOW RELAXATION STRANDS)

DECK PROTECTION METHOD: EPOXY COATED REINFORCING STEEL, HIGH PERFORMANCE CONCRETE AND 65 mm CONCRETE COVER.

MONOLITHIC WEARING SURFACE: IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

REINFORCING STEEL CLEARANCE:

UNLESS OTHERWISE NOTED, MINIMUM REINFORCING STEEL CLEARANCE TO FACE OF CONCRETE IS 50 mm.

REINFORCING BAR SPLICES: REINFORCING BAR SPLICE LENGTHS SHALL CONFORM TO THE MINIMUM LENGTHS SPECIFIED BY 509.08 OF THE C.M.S. UNLESS OTHERWISE NOTED ON THE PLANS.

CONSTRUCTION CONSTRAINTS: ALL EMBANKMENT MATERIAL FOR FILLING THE VOID CREATED BY EXCAVATING FOR THE ABUTMENT FOOTINGS SHALL BE 203 EMBANKMENT MATERIAL. AFTER THE FOOTING AND THE BREASTWALL HAVE BEEN CONSTRUCTED, THE VOID BEHIND EACH ABUTMENT SHALL BE FILLED UP TO THE BEAM SEAT ELEVATION AND FROM THE BEAM SEAT UP ON A 1:1 SLOPE TO THE SUBGRADE ELEVATION PRIOR TO CONSTRUCTING THE BACKWALL AND SETTING THE BEAMS ON THE ABUTMENT.

ITEM 503, UNCLASSIFIED EXCAVATION, AS PER PLAN & ROCK EXCAVATION, AS PER PLAN:

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENT SHALL BE 203 MATERIAL PLACED IN 150 mm LIFTS.

FOOTINGS: SHALL BE PLACED IN BEDROCK AT ELEVATION SHOWN.

FOUNDATION BEARING PRESSURE: PIER, REAR ABUTMENT AND FORWARD ABUTMENT FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 1062 kPa, 379 kPa AND 386 kPa, RESPECTIVELY. THE ALLOWABLE PRESSURE IS 3100 kPa FOR THE PIER AND 390 kPa FOR THE ABUTMENTS

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

ITEM 611 REINFORCED CONCRETE APPROACH SLAB (T=380 mm), AS PER PLAN

CONCRETE FOR THIS ITEM SHALL BE SS 844, HIGH PERFORMANCE CONCRETE MIX 3 OR 4. THE HIGH PERFORMANCE CONCRETE TRIAL MIX AND TESTING, AS DESCRIBED IN SS844, SHALL BE WAIVED.

THIS ITEM IS INCLUDED WITH ROADWAY QUANTITIES FOR PAYMENT.

ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN:

INSTALL A 900 mm WIDE STRIP, 2.5 mm THICK, GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 1000 mm WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 32 x 3 mm (LENGTH x SHANK DIAMETER) GALVANIZED BUTTON HEAD SPIKES THROUGH A 25 mm OUTSIDE DIAMETER, 3 mm GALVANIZED WASHER. MAXIMUM FASTENER SPACING IS 225 mm. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE OR THE CONCRETE MAY BE USED SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS, STARTING AT 150 mm (+/-) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS SECURE THE NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS, STARTING AT 150 mm (+/-) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150 mm CENTER TO CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS IS LOCATED.

THE VERTICAL NEOPRENE STRIPS SHOULD COMPLETELY OVERLAP THE HORIZONTAL STRIPS. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS DUE TO MATERIAL MANUFACTURING SHALL BE AT LEAST 300 mm IN LENGTH, IF NOT VULCANIZED OR ADHESIVE BONDED, OR 150 mm IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVE BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 2.5 mm THICK GENERAL PURPOSE, HEAVY DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, mm	D751	2.5 +/- .25
BREAK STRENGTH, GRAB WXF, N MIN	D751	3130 X 3130
ADHESIVE 25 mm STRIP, 50 mm MIN, N MIN	D751	27
BURST STRENGTH(MULLEN) MPa, MIN	D751	9.65
HEAT AGING 70 HOURS T 100°C 180° BEND WITHOUT CRACKING	D2136	NO CRACKING OF COATING
LOW TEMP BRITTLENESS 1 HOUR AT -40°C, BEND AROUND 6 mm MANDREL	D2136	NO CRACKING OF COATING

IN LIEU OF THE NEOPRENE SHEETING THE CONTRACTOR MAY CHOOSE TO SUPPLY TYPE 3 MEMBRANE, 711.29

PAYMENT FOR LABOR, MATERIALS AND INSTALLATION OF THESE ITEMS SHALL BE INCLUDED IN ITEM 516 SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL, AS PER PLAN.

CONCRETE AS PER PLAN:

A REINFORCING STEEL LIST HAS NOT BEEN PROVIDED WITH THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING THE REINFORCING STEEL LIST AND ALL REINFORCING STEEL DETAILS. IN ACCORDANCE WITH SECTIONS 301.4 THROUGH 301.4.8 (INCLUSIVE) OF THE ODOT BRIDGE DESIGN MANUAL, APRIL 2000 EDITION. THE COMPLETED REINFORCING STEEL LIST SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH CMS 501.05. FABRICATION OF THE REINFORCING STEEL SHALL NOT BEGIN UNTIL WRITTEN ACCEPTANCE OF THE SUBMITTED DRAWINGS HAS BEEN RECEIVED FROM THE DIRECTOR. ALL COSTS FOR PREPARING THE REINFORCING STEEL LIST SHALL BE INCLUDED FOR PAYMENT WITH THE APPROVED CONCRETE ITEMS.

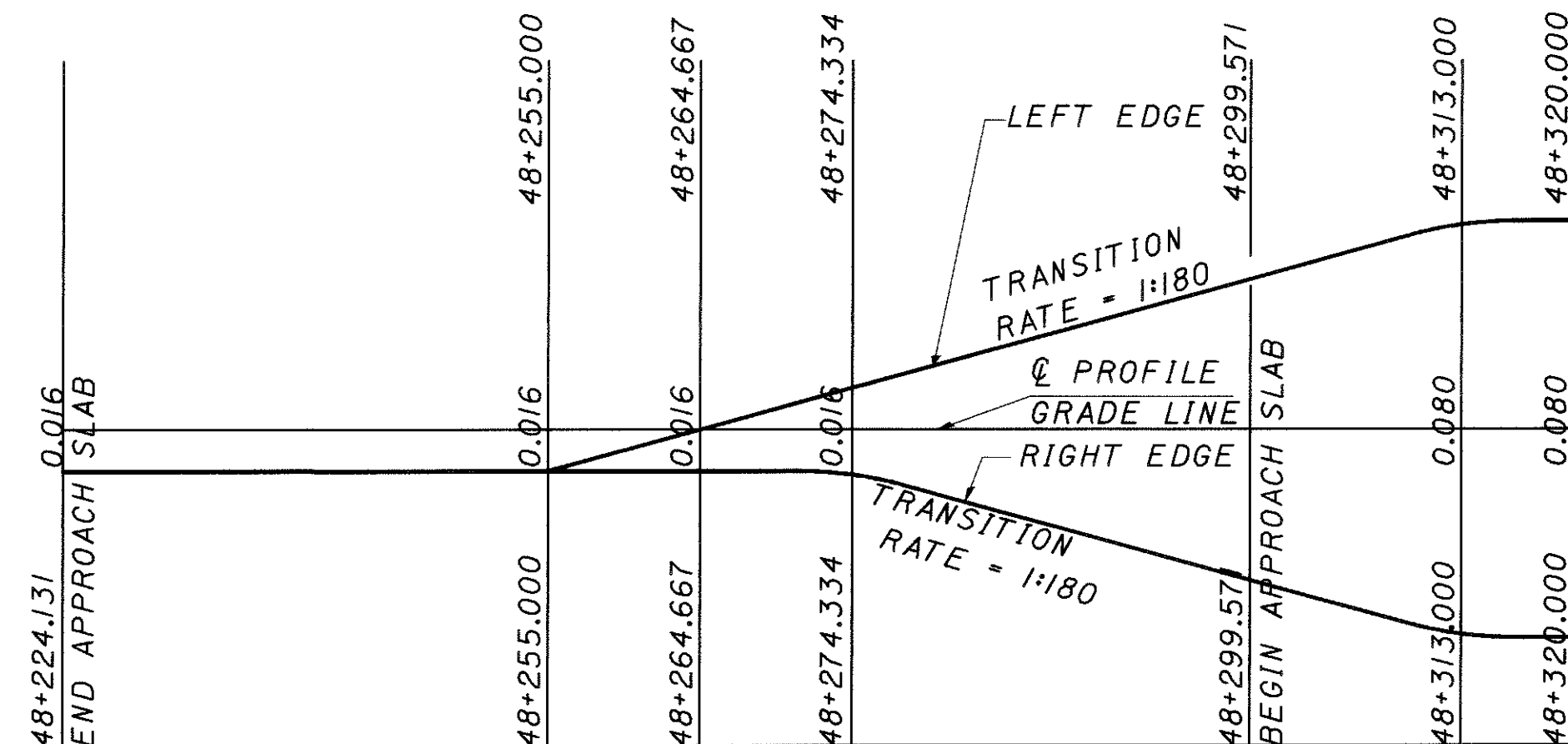
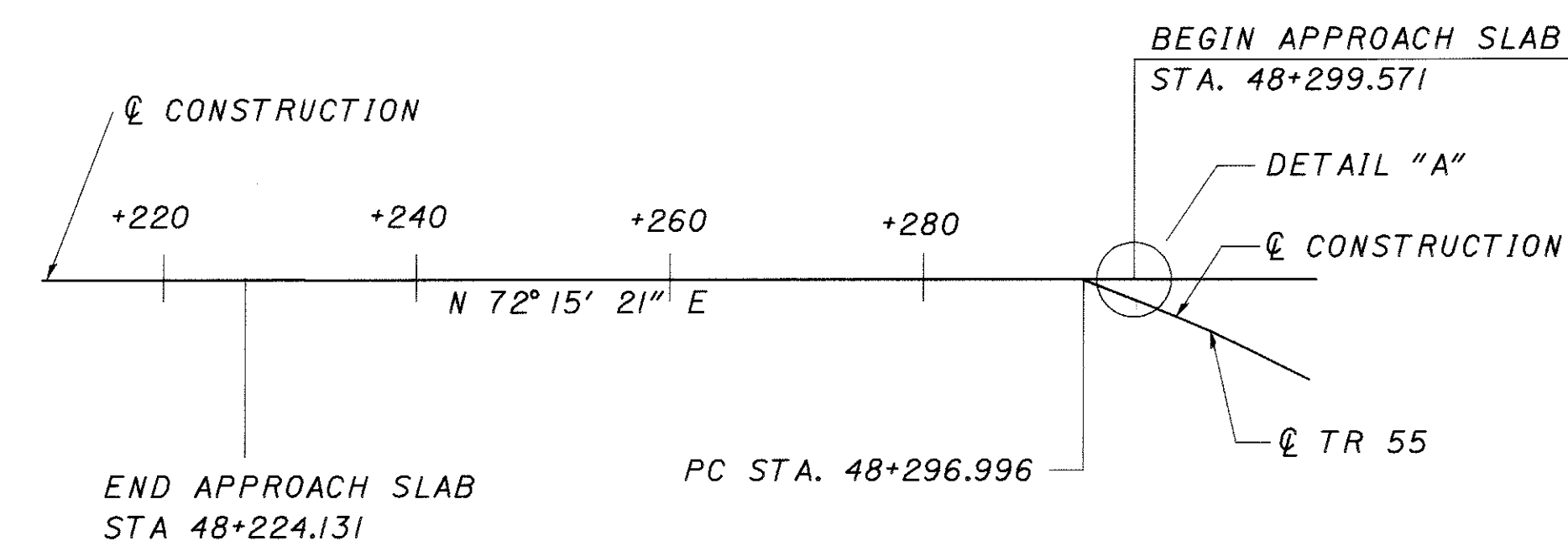
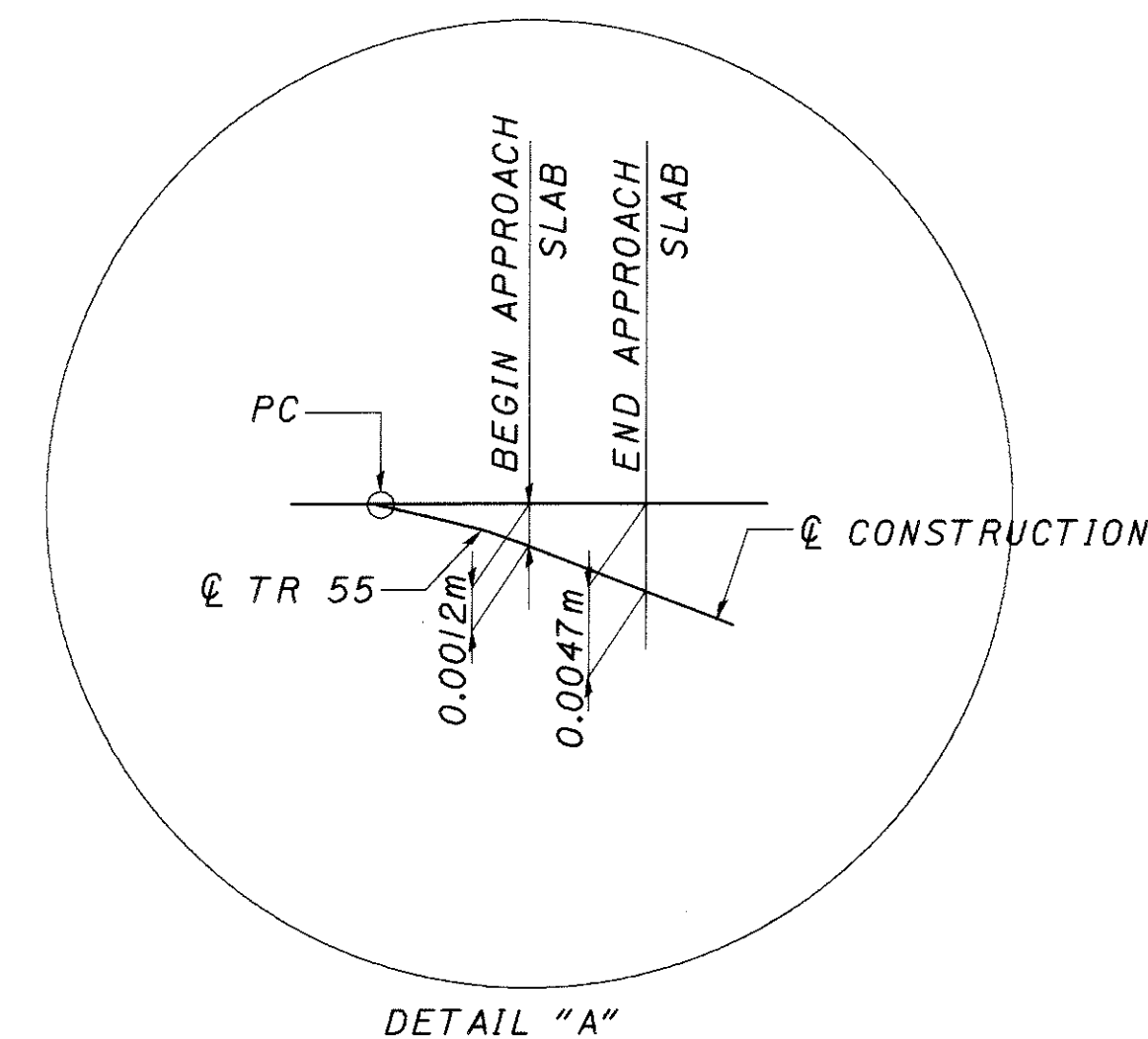
WHEN THE SHAPE OF A BAR IS NOT APPARENT IN THE PLAN DETAILS, A BEND DIAGRAM HAS BEEN SHOWN WITH THE BAR MARK. "(STR.)" IN THE BAR MARK INDICATES A STRAIGHT BAR.

ITEM SPECIAL SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

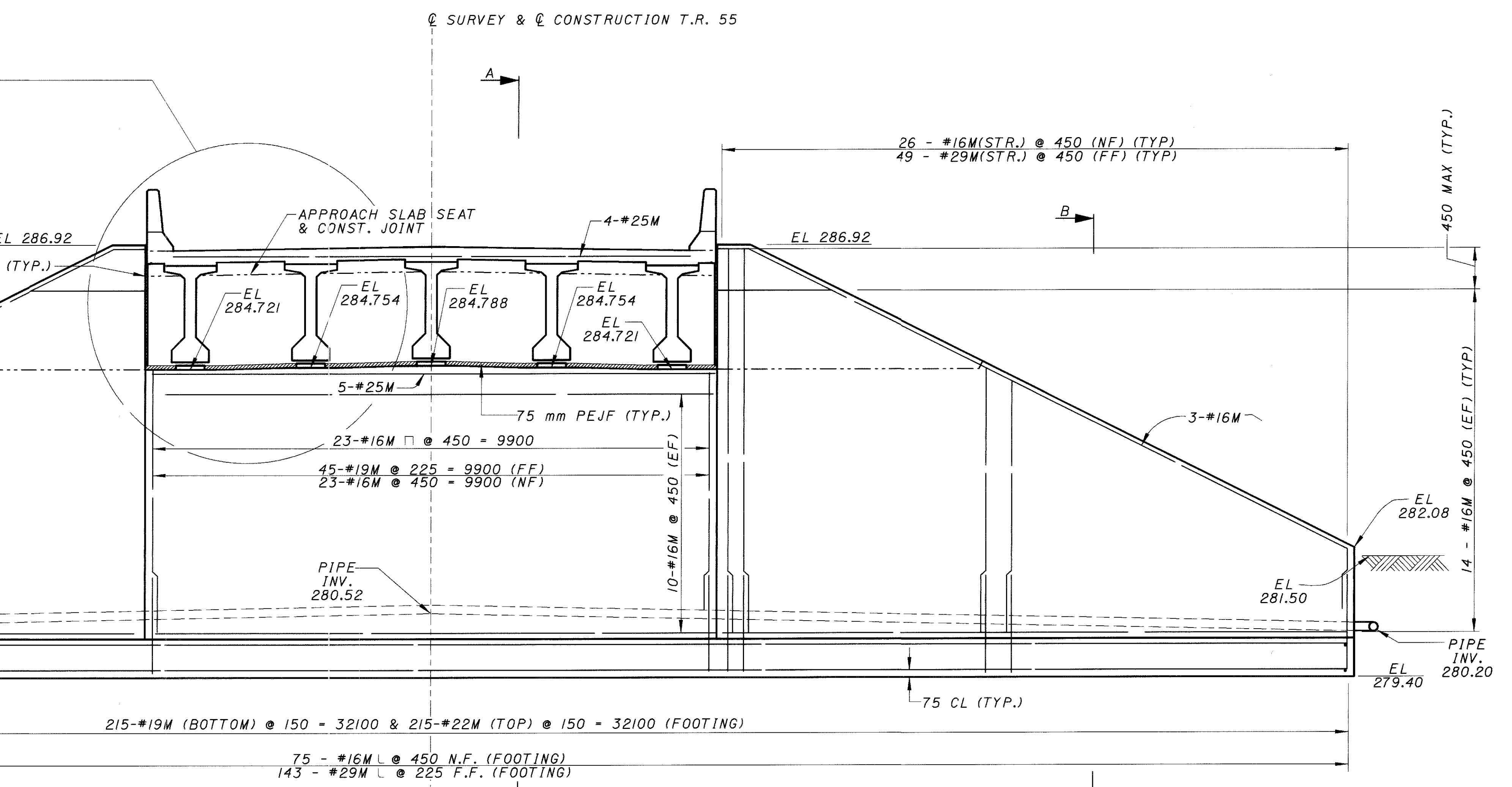
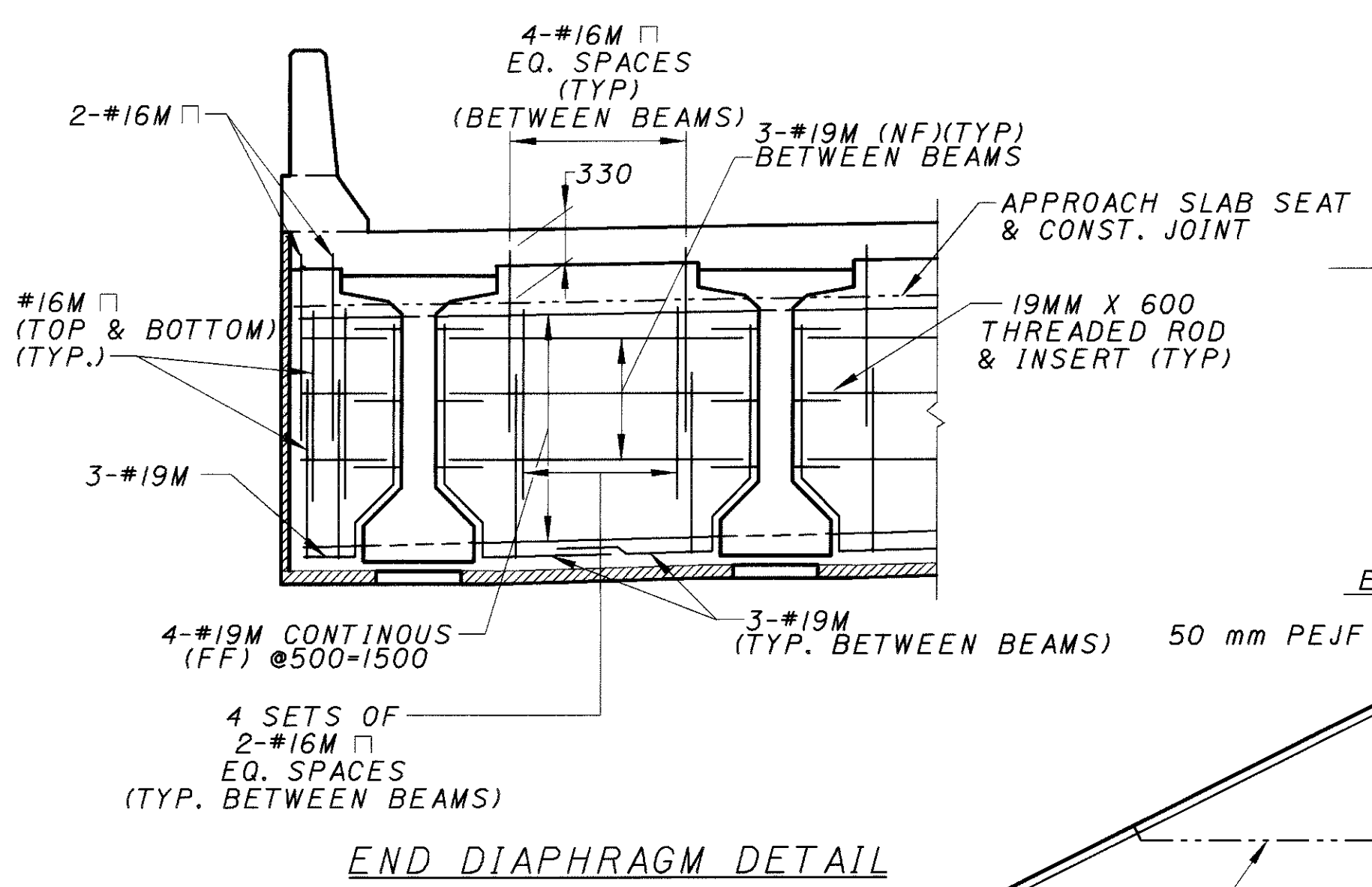
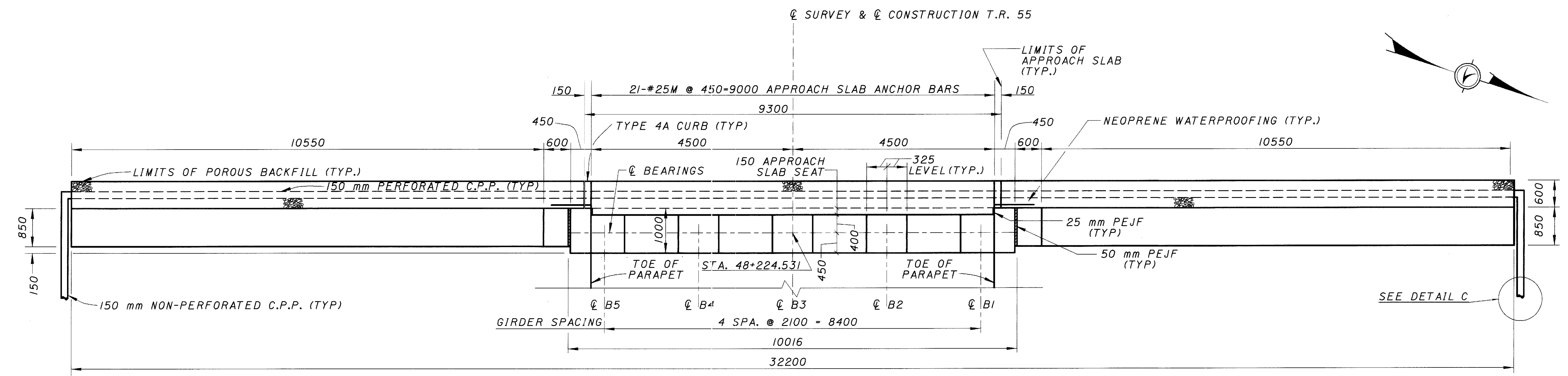
THE COLOR OF THE URETHANE TOP COAT SHALL CONFORM TO FEDERAL STANDARD NO. 595B-I7778(OFF-WHITE).

ITEM 865 PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC: CONCRETE INTERMEDIATE DIAPHRAGMS, AS PER PLAN:

INTERMEDIATE DIAPHRAGMS SHALL BE CONCRETE. STEEL DIAPHRAGMS SHALL NOT BE PERMITTED.



SUPERELEVATION TRANSITION DIAGRAM



NOTES

1. THE REINFORCING STEEL USED IN THE FAR FACE OF THE ABUTMENT IS DETAILED IN THE LEFT WINGWALL. STEEL USED IN THE NEAR FACE IS DETAILED IN THE RIGHT WINGWALL.
2. MINIMUM BAR LAPS SHALL BE IN ACCORDANCE WITH CMS ITEM 509.08 OR AS SHOWN OTHERWISE.
3. ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.
4. FOR SECTION & DETAILS SEE SHEET 5/14

ABBREVIATIONS

CL	= CENTERLINE	EQ	= EQUAL
CL	= CLEAR	FF	= FAR FACE
CONST.	= CONSTRUCTION	INV.	= INVERT
CCP	= CORRUGATED POLYETHYLENE PIPE	NF	= NEAR FACE
EF	= EACH FACE	STR.	= STRAIGHT
EL	= ELEVATION	TYP.	= TYPICAL

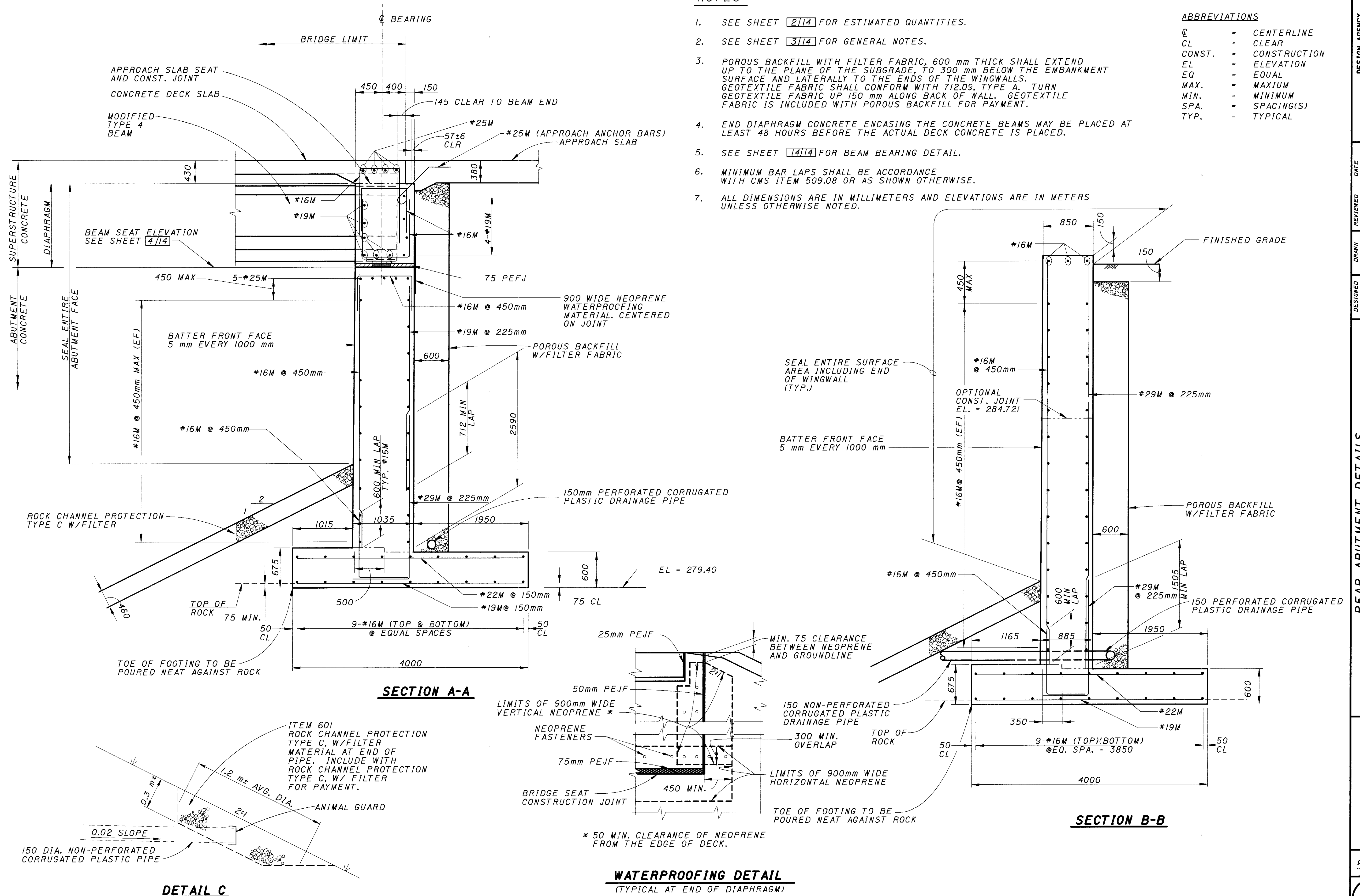
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NOTES

- SEE SHEET **2/14** FOR ESTIMATED QUANTITIES.
- SEE SHEET **3/14** FOR GENERAL NOTES.
- POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE AND Laterally TO THE ENDS OF THE WINGWALLS. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A. TURN GEOTEXTILE FABRIC UP 150 mm ALONG BACK OF WALL. GEOTEXTILE FABRIC IS INCLUDED WITH POROUS BACKFILL FOR PAYMENT.
- END DIAPHRAGM CONCRETE ENCASEING THE CONCRETE BEAMS MAY BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.
- SEE SHEET **14/14** FOR BEAM BEARING DETAIL.
- MINIMUM BAR LAPS SHALL BE ACCORDANCE WITH CMS ITEM 509.08 OR AS SHOWN OTHERWISE.
- ALL DIMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.

ABBREVIATIONS

CL	=	CENTERLINE
CL	=	CLEAR
CONST.	=	CONSTRUCTION
EL	=	ELEVATION
EQ	=	EQUAL
MAX.	=	MAXIMUM
MIN.	=	MINIMUM
SPA.	=	SPACING(S)
TYP.	=	TYPICAL



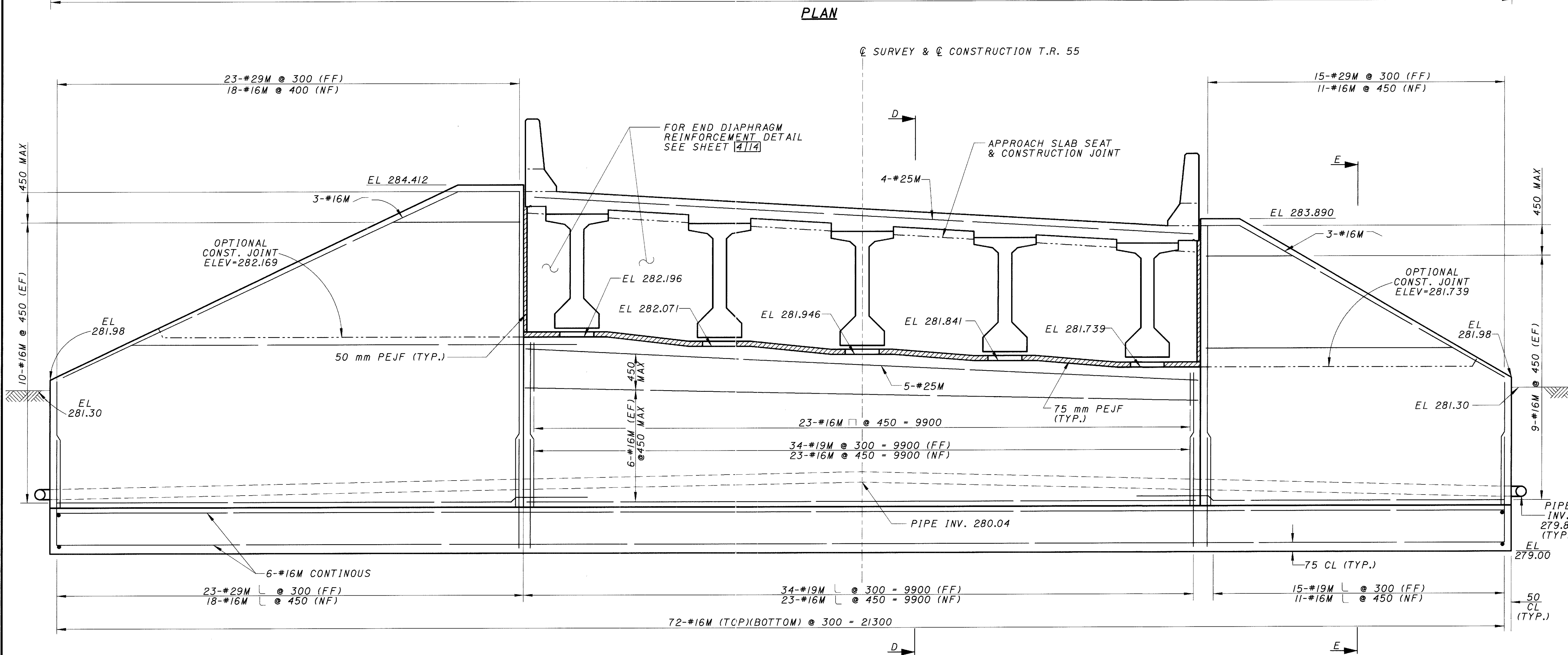
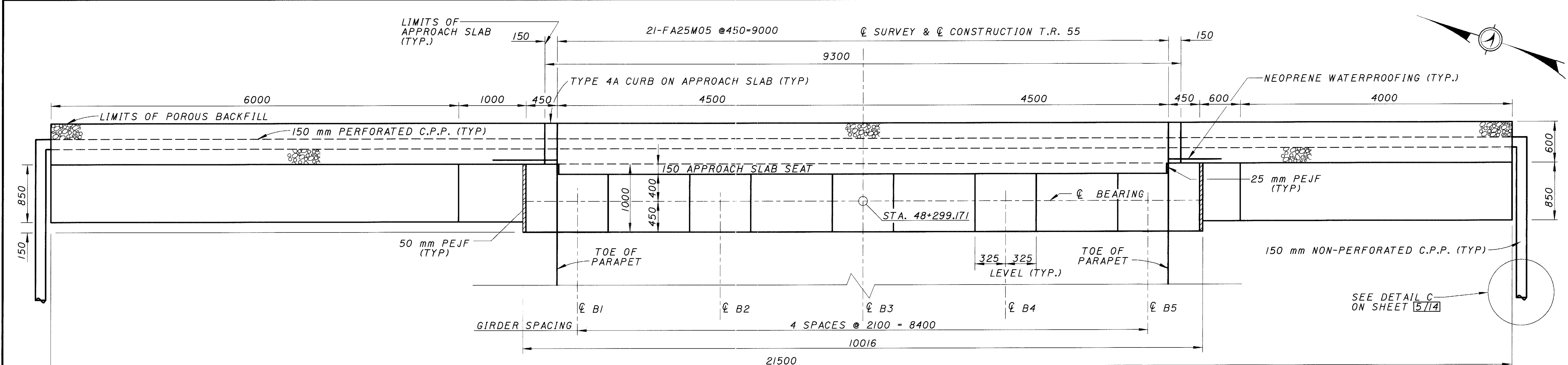
SECTION A-A

SECTION B-B

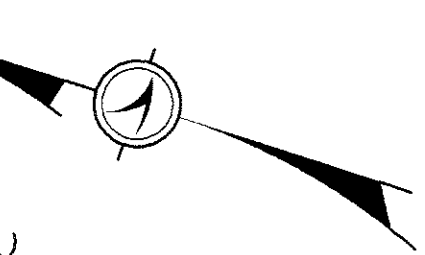
DETAIL C

WATERPROOFING DETAIL
(TYPICAL AT END OF DIAPHRAGM)

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NOTES
FOR SECTION, DETAIL, AND NOTES SEE SHEET 7/14



DESIGN AGENCY
ME
635 Brookside Boulevard
Westerville, OH 43081

DESIGNED	ENB	CHECKED	JBK
DRAWN	ENB	REVISED	---
REVIEWED	TLW	DATE	09/18/00
STRUCTURE FILE NUMBER	0501069		

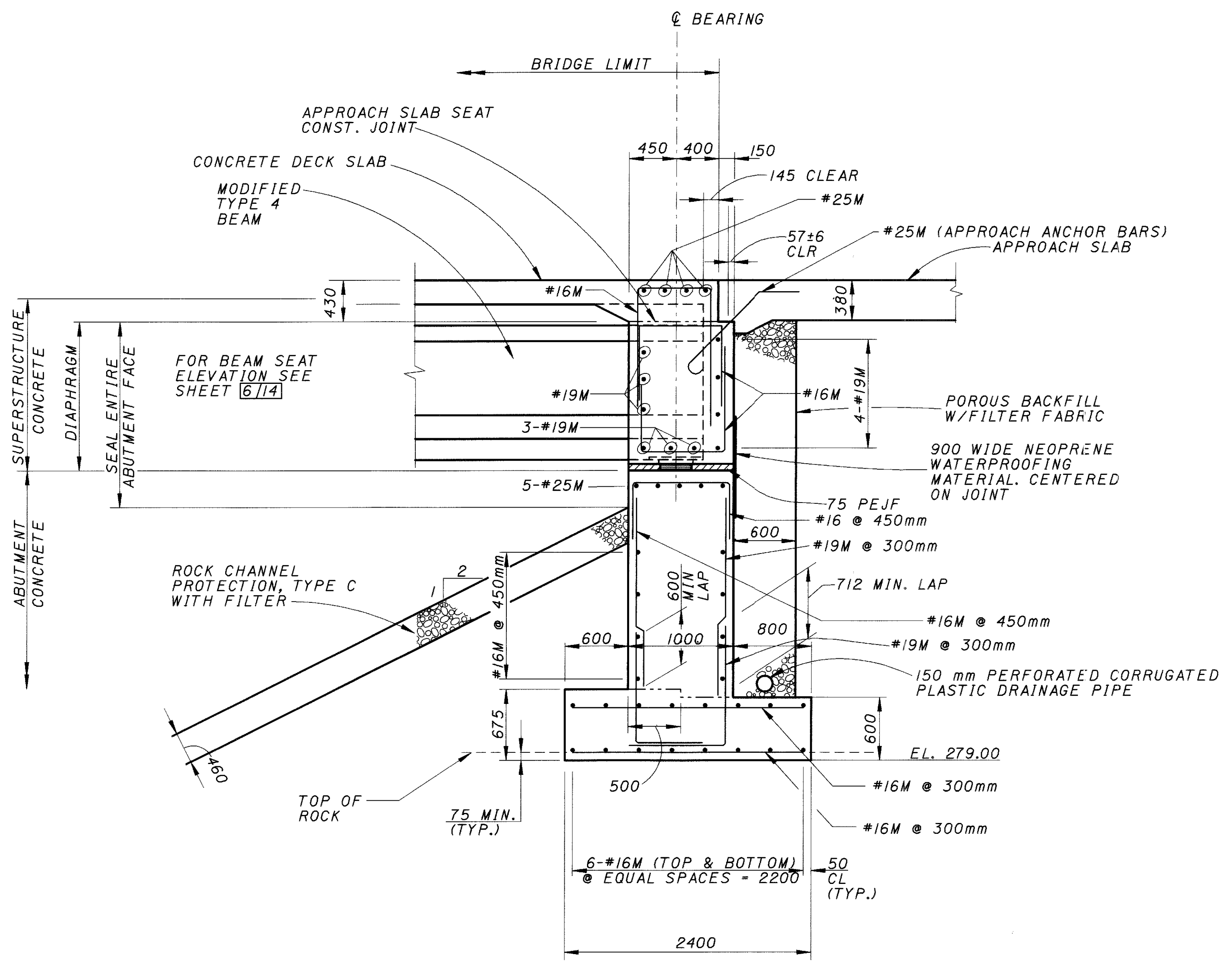
FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. ATH-33-32369
U.S. 33 UNDER T.R. 55

ATH-33-30.981

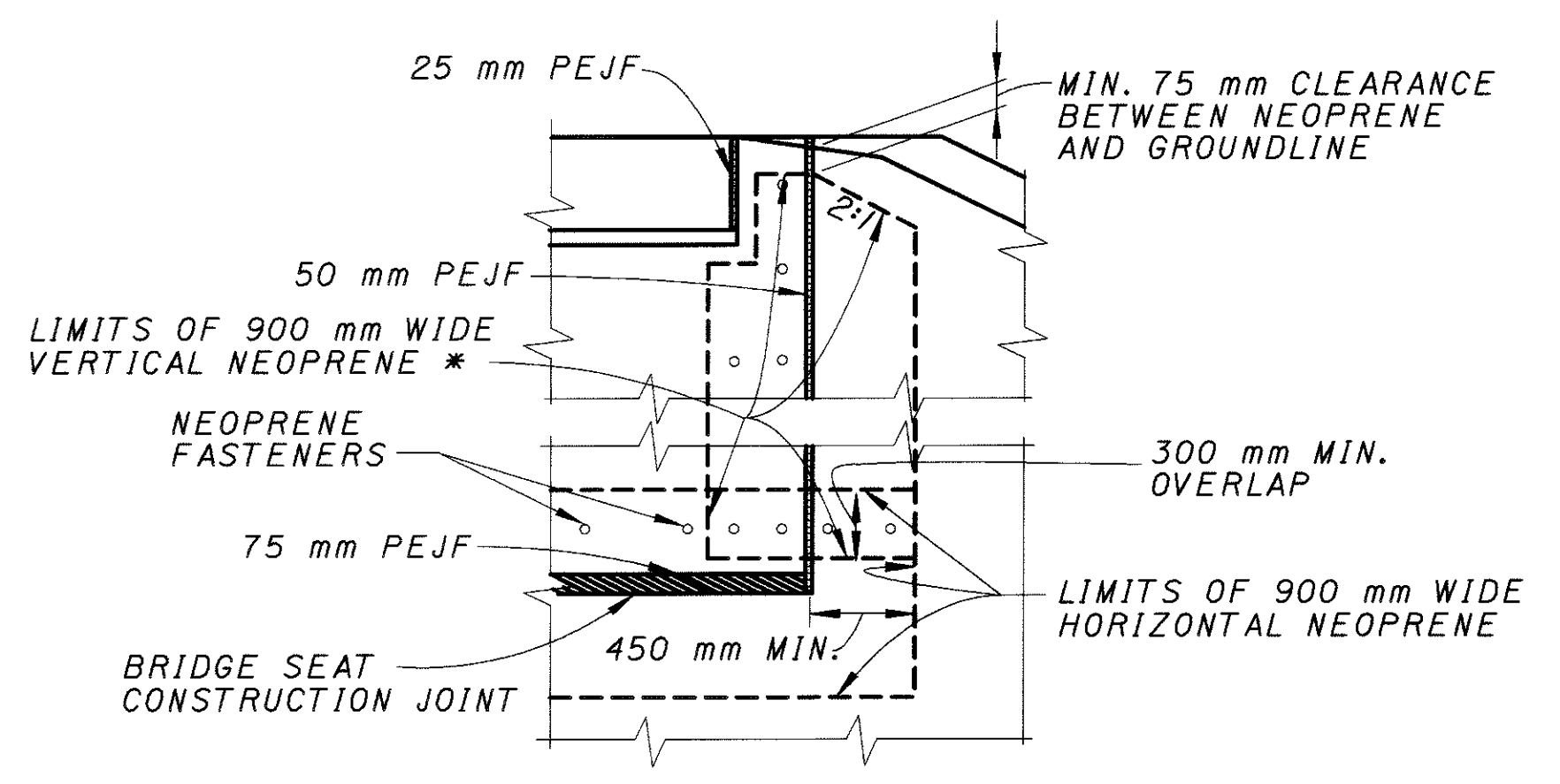
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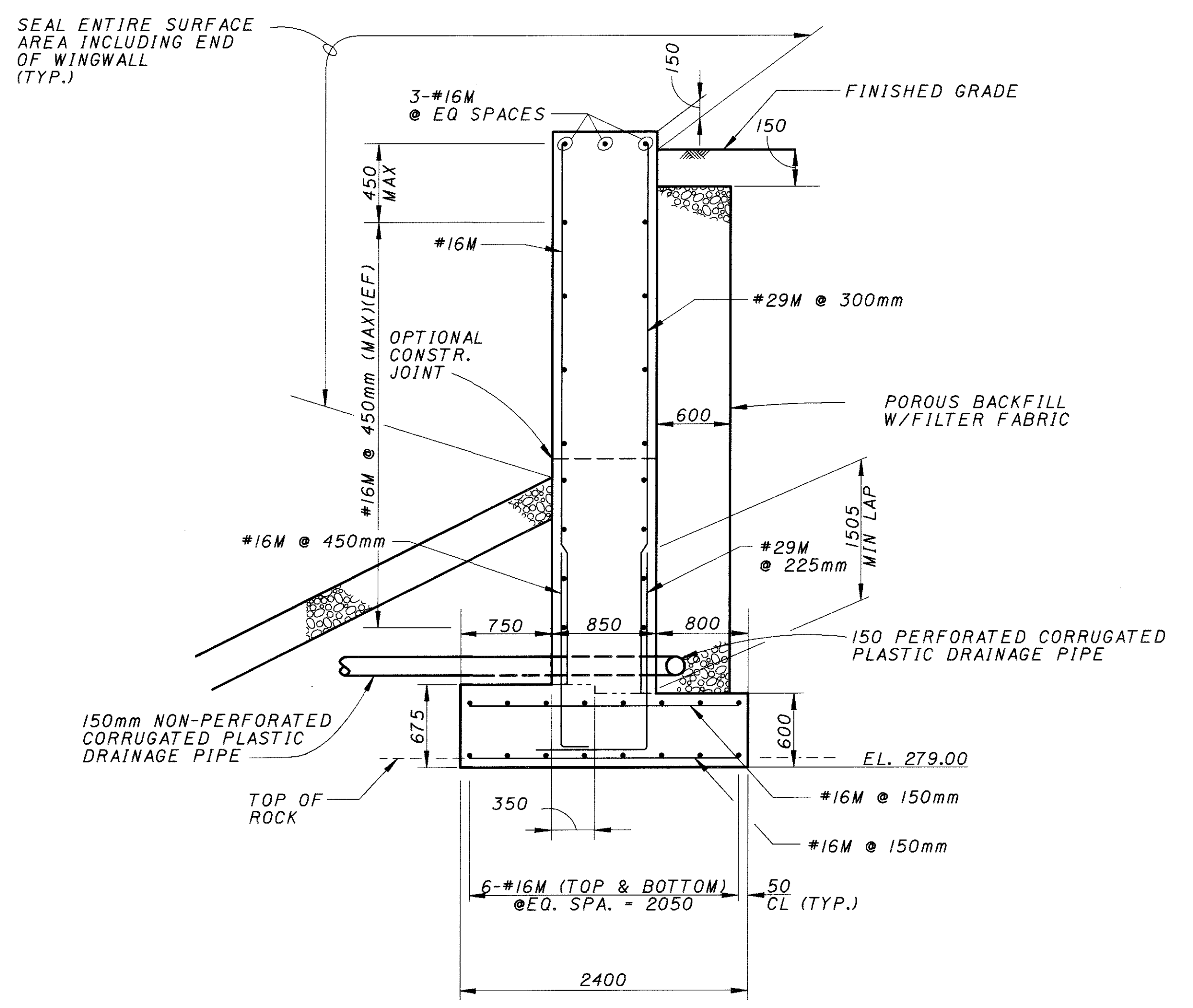
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SECTION D-D



WATERPROOFING DETAIL
(TYPICAL AT END OF DIAPHRAGM)



SECTION E-E

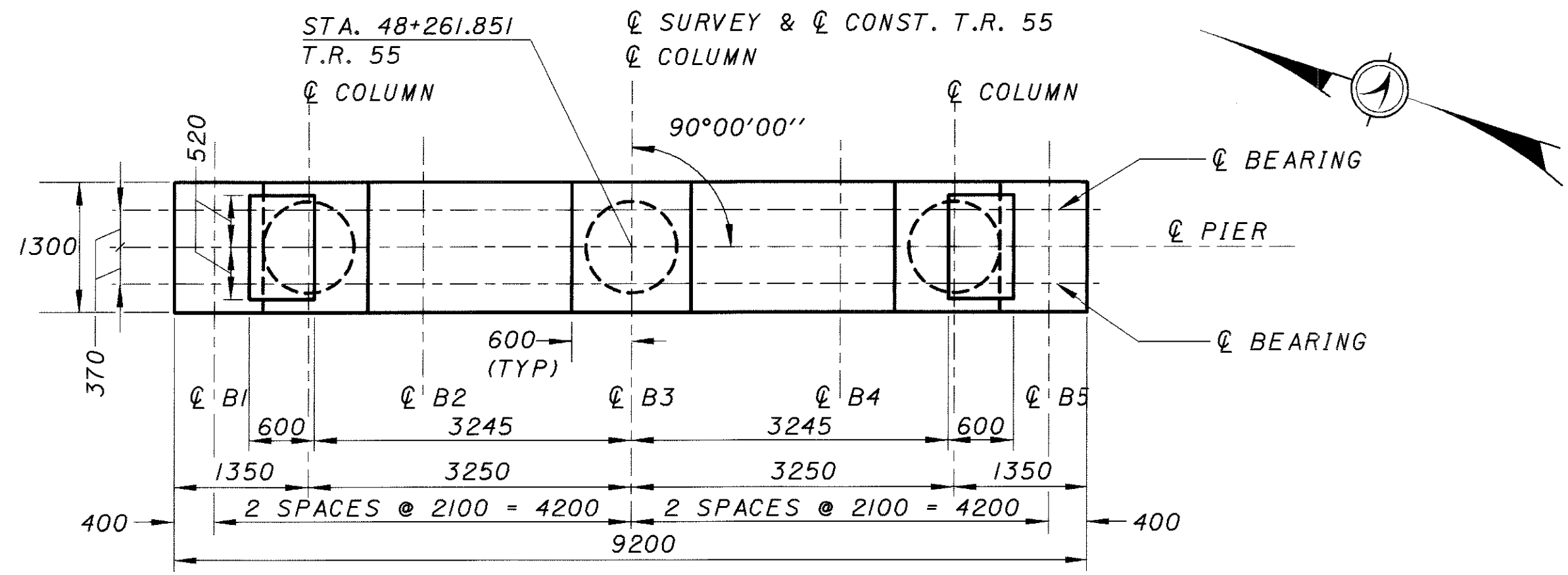
NOTES

- SEE SHEET [2/14] FOR ESTIMATED QUANTITIES.
- SEE SHEET [3/14] FOR GENERAL NOTES.
- POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE AND LATERALLY TO THE ENDS OF THE WINGWALLS. GEOTEXTILE FABRIC SHALL CONFORM WITH 712.09, TYPE A. TURN GEOTEXTILE FABRIC UP 150 mm ALONG BACK OF WALL. GEOTEXTILE FABRIC IS INCLUDED WITH POROUS BACKFILL FOR PAYMENT.
- END DIAPHRAGM CONCRETE ENCASEING THE CONCRETE BEAMS MAY BE PLACED AT LEAST 48 HOURS BEFORE THE ACTUAL DECK CONCRETE IS PLACED.
- SEE SHEET [4/14] FOR BEAM BEARING DETAIL.
- MINIMUM BAR LAPS SHALL BE ACCORDANCE WITH CMS ITEM 509.02 OR AS SHOWN OTHERWISE
- ALL DEMENSIONS ARE IN MILLIMETERS AND ELEVATIONS ARE IN METERS UNLESS OTHERWISE NOTED.

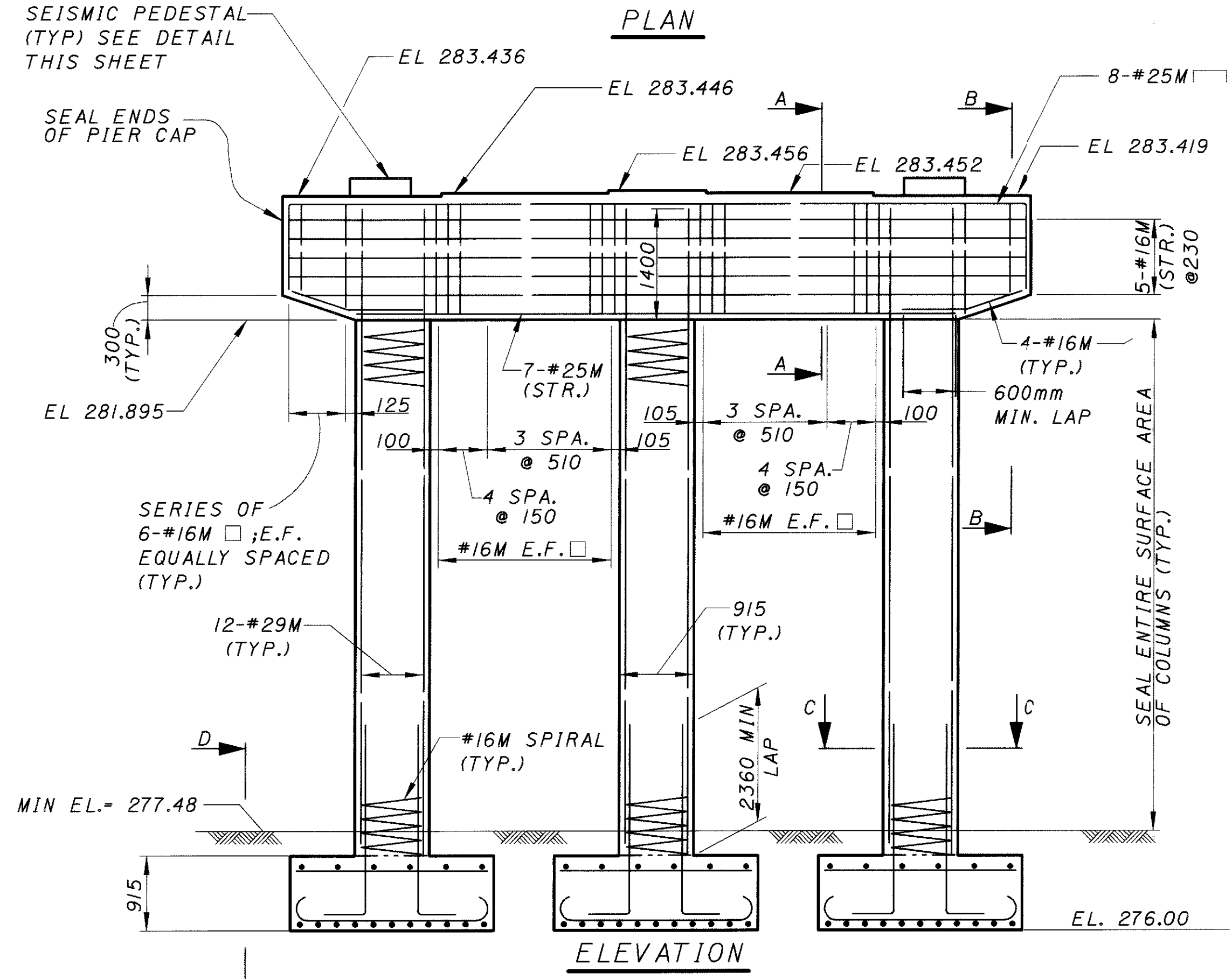
ABBREVIATIONS

- CL = CENTERLINE
- CL = CLEAR
- CONST. = CONSTRUCTION
- EL = ELEVATION
- EQ = EQUAL
- MAX. = MAXIMUM
- MIN. = MINIMUM
- SPA. = SPACING(S)
- TYP. = TYPICAL

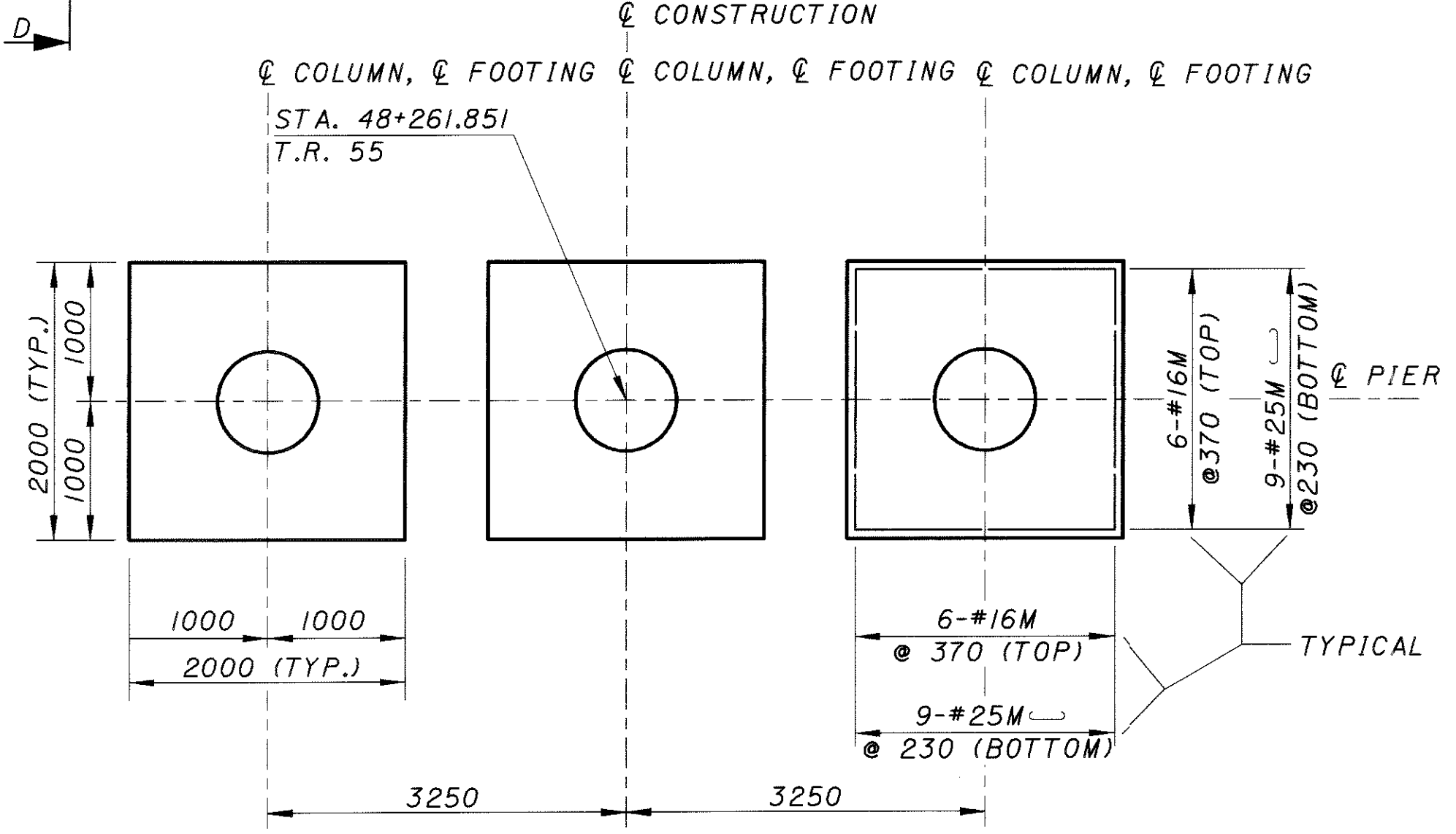
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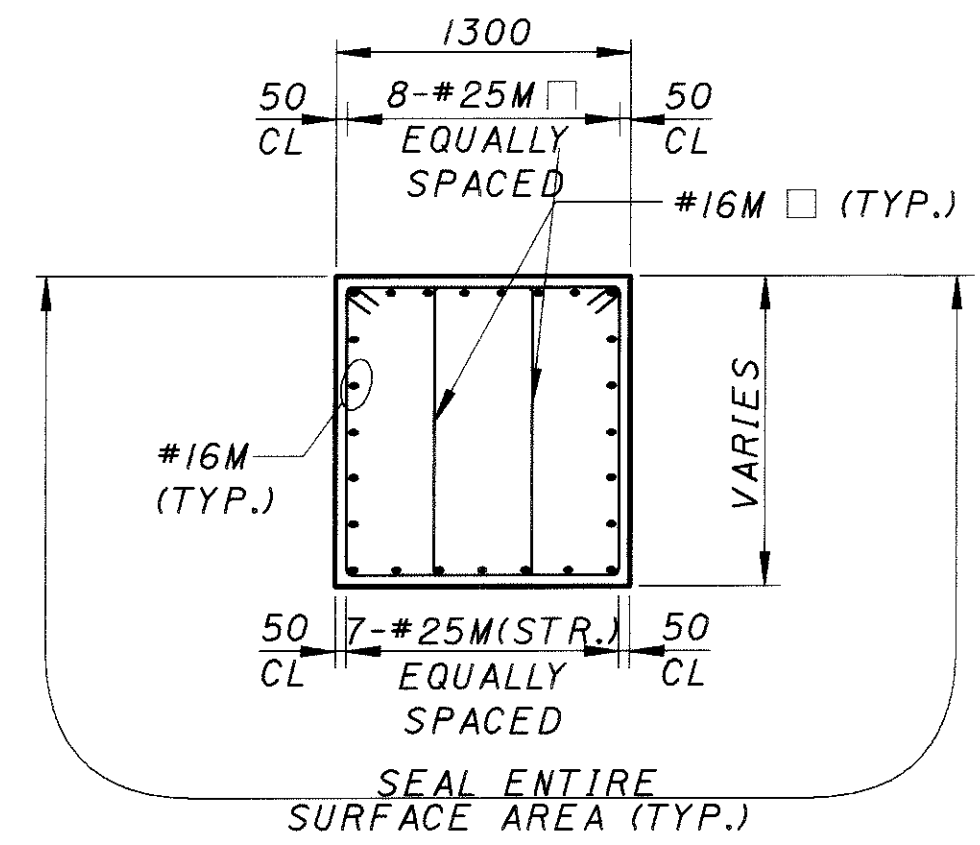
PLAN



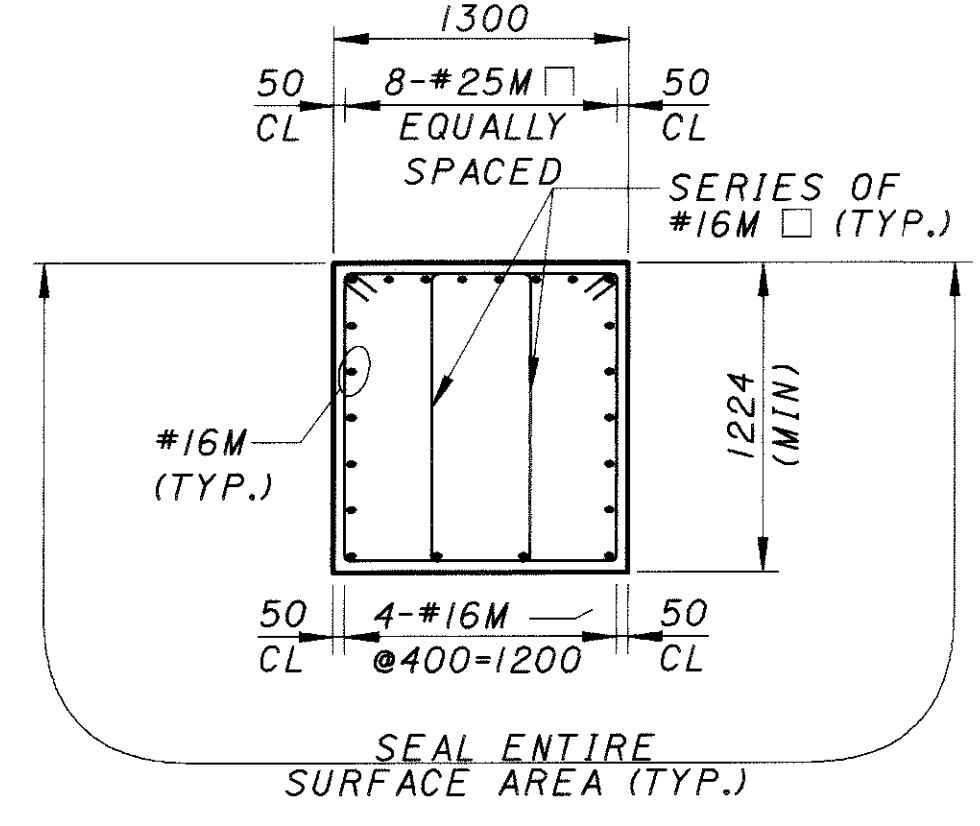
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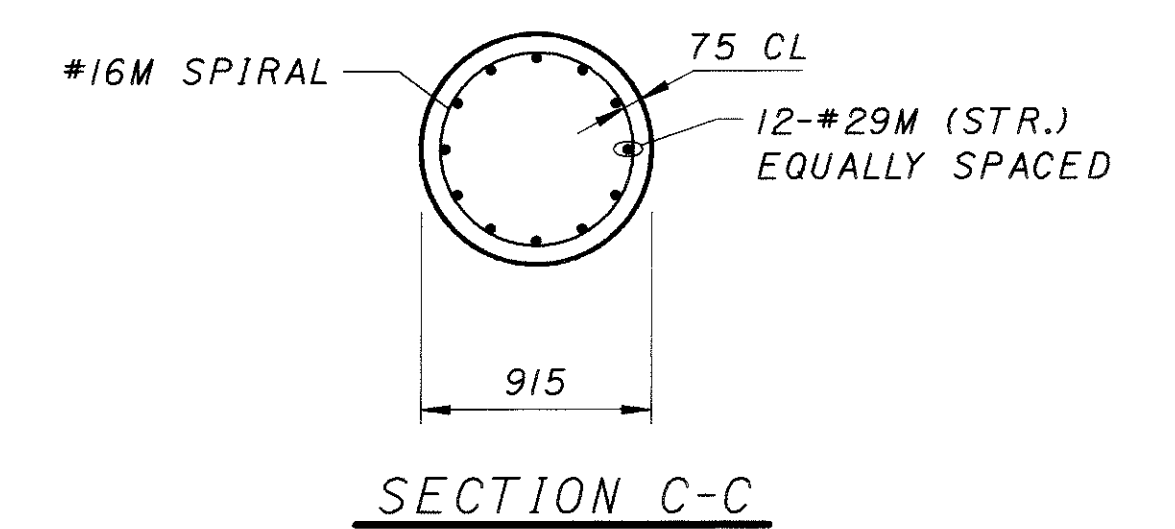
FOUNDATION PLAN



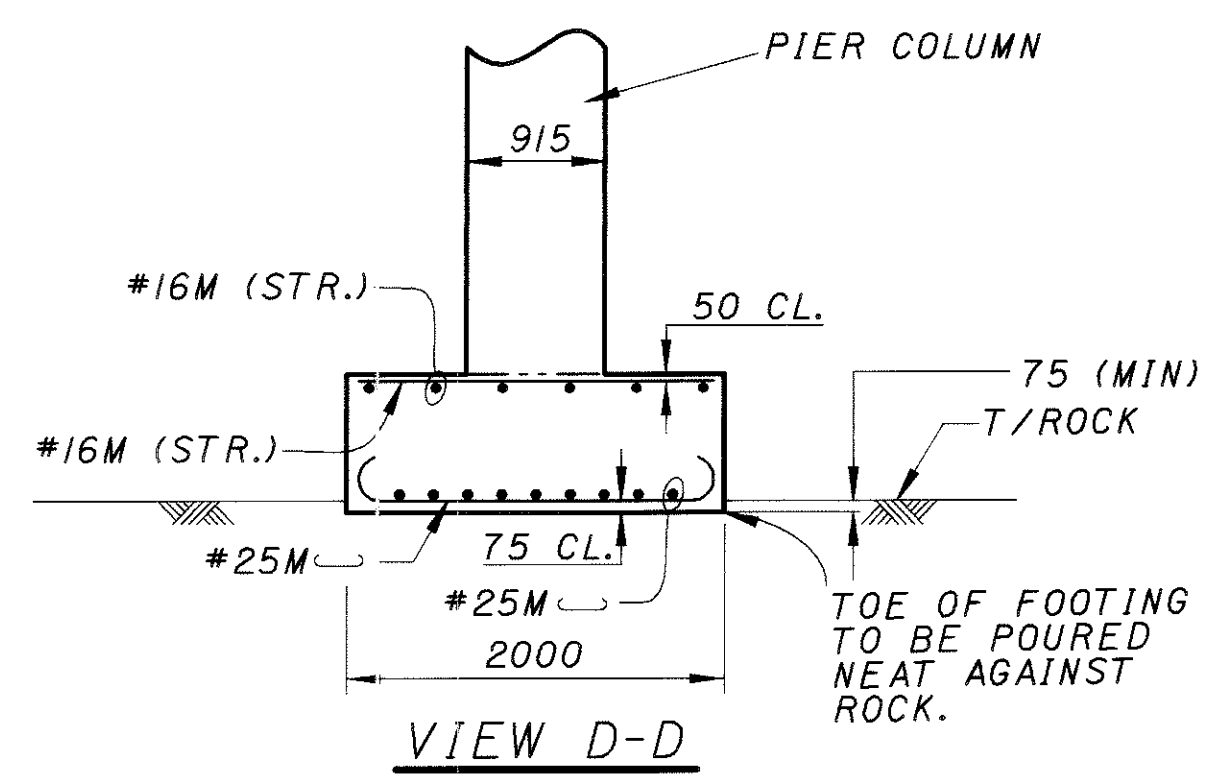
SECTION A-A



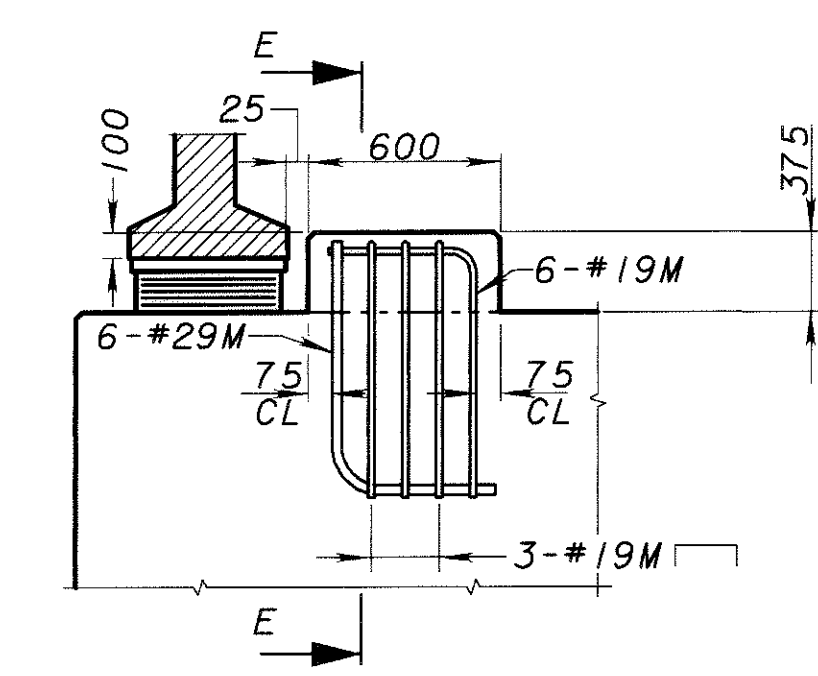
SECTION B-B



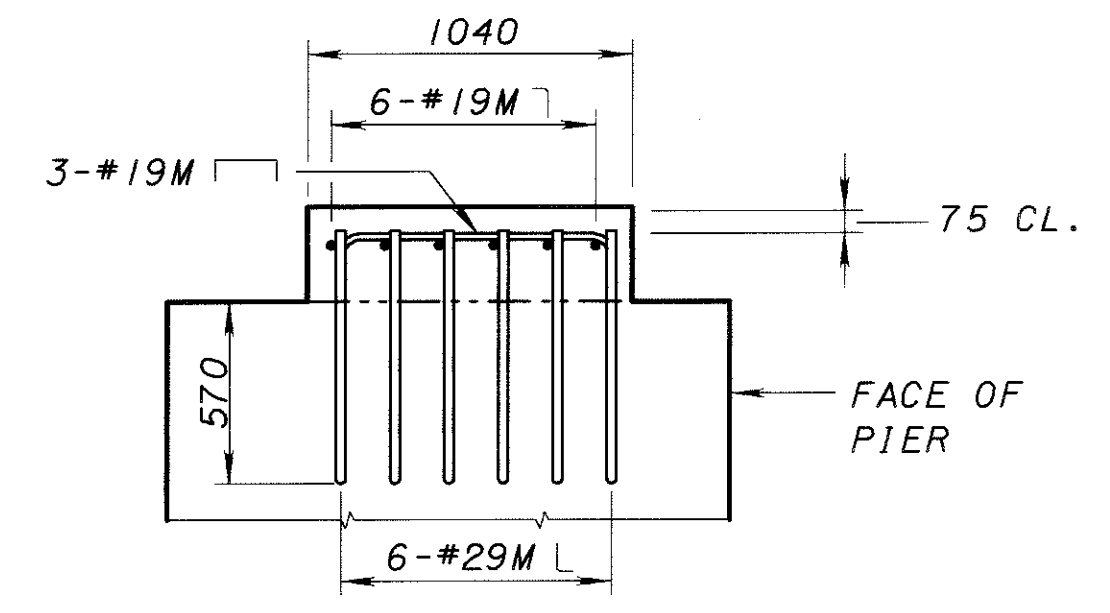
SECTION C-C



VIEW D-D



SEISMIC PEDESTAL DETAIL



SECTION E-E

NOTE: PEDESTAL SHALL NOT BE CAST UNTIL THE BEARING LOAD PLATE HAS BEEN WELDED TO THE BEAM SOLE PLATE

NOTES:

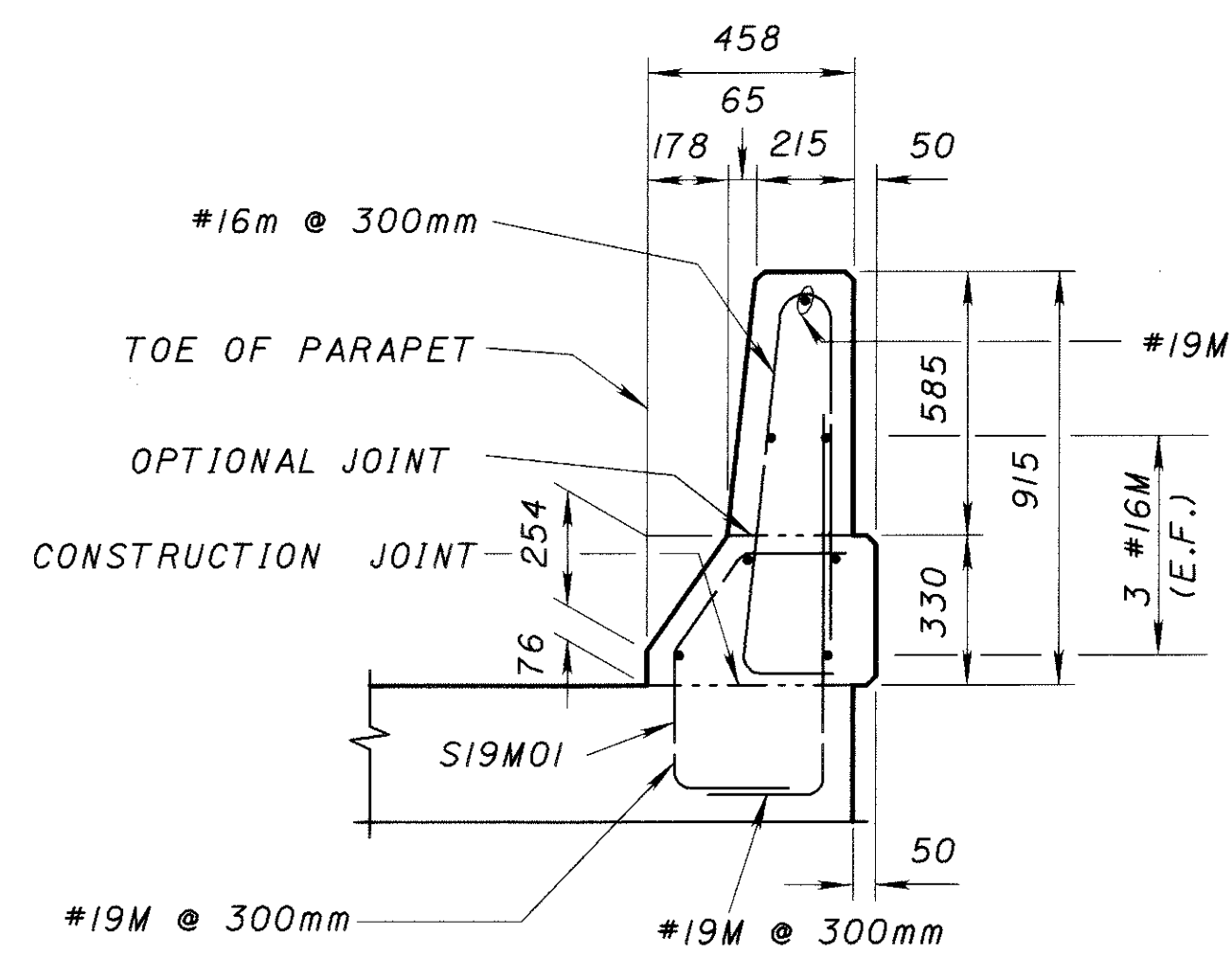
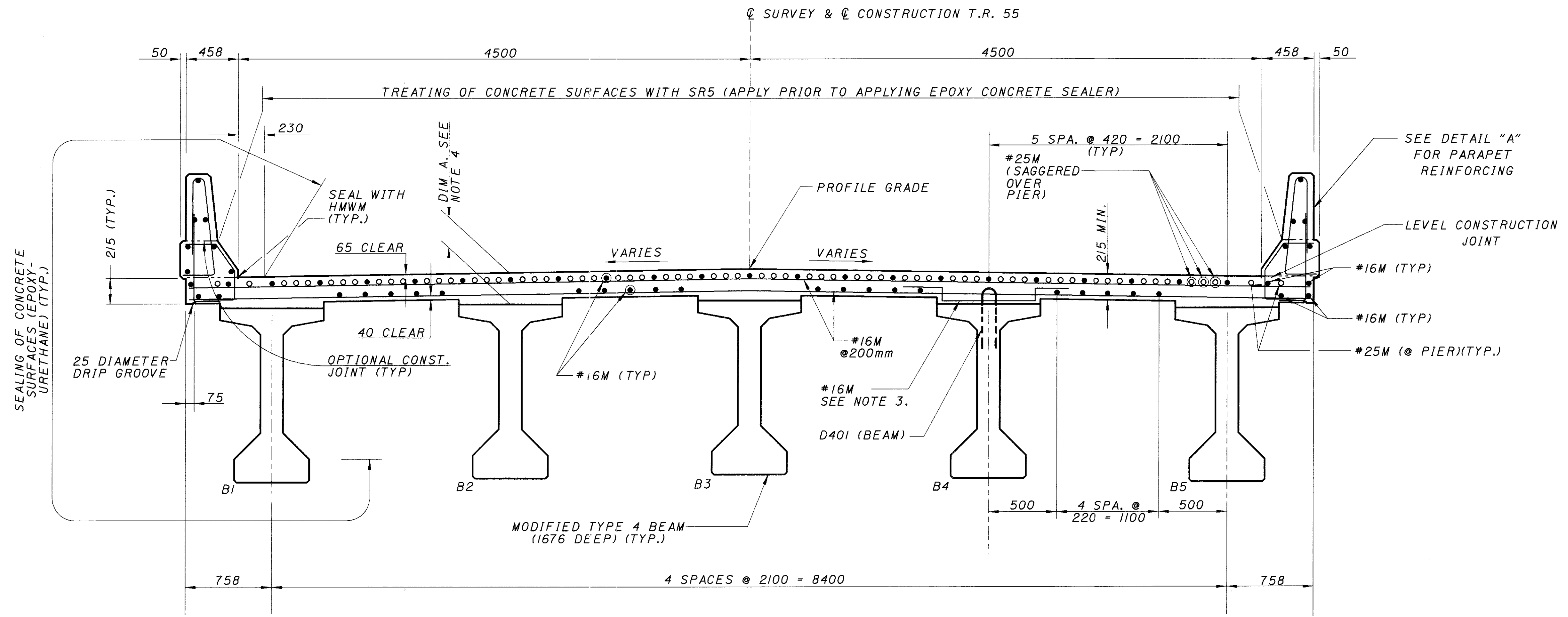
1. SEE SHEET 2/14 FOR ESTIMATED QUANTITIES.
2. SEE SHEET 3/14 FOR GENERAL NOTES.
3. SEE SHEET 14/14 FOR BEARING DETAILS.
4. PIERS SHALL BE SEALED WITH AN EPOXY-URETHANE SEALER AS INDICATED.
5. MINIMUM BAR LAPS SHALL BE IN ACCORDANCE WITH CMS ITEM 509.08 OR AS SHOWN OTHERWISE.
6. THE SPIRAL REINFORCING PITCH SHALL BE 115mm.
7. SPIRAL REINFORCEMENT: THE TOP OF THE COLUMN SPIRAL REINFORCEMENT SHALL BE EMBEDDED A MINIMUM 50mm INTO THE PIER CAP CONCRETE.
8. ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.

ABBREVIATIONS

- CL = CENTERLINE
- CL = CLEAR
- CONST. = CONSTRUCTION
- E.F. = EACH FACE
- EL = ELEVATION
- MIN. = MINIMUM
- SPA. = SPACING(S)
- STA. = STATION
- STR. = STRAIGHT
- TYP. = TYPICAL

DESIGN AGENCY: 635 Brookside Boulevard Westerville, OH 43081
 DATE: 09/08/00
 REVIEWED: TLW
 DRAWN: AGW
 DESIGNED: CMD
 CHECKED: TAB
 STRUCTURE FILE NUMBER: 0501069
 PIER PLAN AND ELEVATION
 BRIDGE NO. ATH-33-32369
 U.S. 33 UNDER T.R. 55
 ATH-33-30.981
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DETAIL A

NOTES:

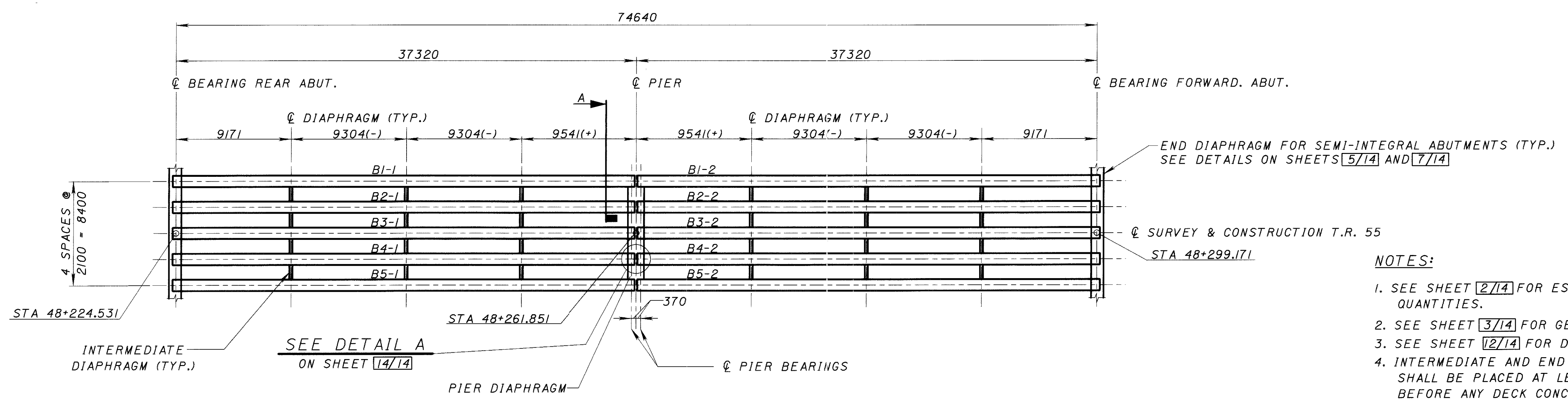
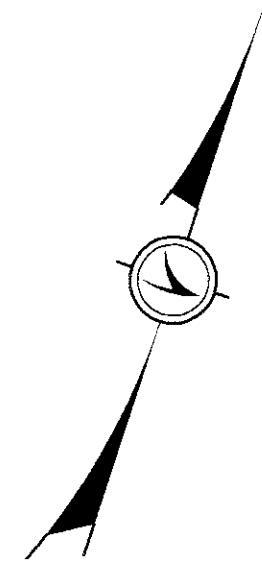
- SEE SHEET 2/14 FOR ESTIMATED QUANTITIES.
- SEE SHEET 3/14 FOR GENERAL NOTES.
- SEE SHEET 13/14 FOR LIMITING STATION OF THE #16M REBAR. #16 SHALL BE PROVIDED BETWEEN LIMITING STATIONS AT THE SAME SPACING AS THE D401 BAR

- FOR DIMENSION "A" SEE TABLE ON SHEET 13/14. THE TOPPING THICKNESSES SHOWN ARE NOMINAL DIMENSIONS. THE PAY QUANTITY FOR DECK CONCRETE SHALL BE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE NOMINAL HAUNCH DEPTHS AT MID-SPAN AND AT THE BEAM BEARINGS. THE HAUNCH DEPTH IS THE TOPPING THICKNESS MINUS THE DESIGN SLAB THICKNESS. DEVIATION FROM THIS AVERAGE MAY OCCUR BECAUSE THE TOP OF THE BEAM MAY NOT HAVE THE CAMBER ANTICIPATED BY DESIGN DUE TO CONTRACTOR'S TIME OF ERECTION, MIX DESIGN, AND OTHER FABRICATION FACTORS. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE CONTRACTOR SHALL RECORD THE TOP OF BEAM ELEVATIONS AT EACH BEARING AND AT MID-SPAN. THE ACTUAL CAMBER FOR EACH MEMBER SHALL BE THE MEASURED ELEVATION AT MID-SPAN MINUS THE AVERAGE ELEVATION AT EACH BEARING. THE ACTUAL HAUNCH DEPTH AT MID-SPAN SHALL BE THE NOMINAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.

ABBREVIATIONS

- CL - CENTERLINE
- CONST. - CONSTRUCTION
- DIM. - DIMENSION
- SPA. - SPACING(S)
- TYP. - TYPICAL
- HMWM - HIGH MOLECULAR WEIGHT METHACRYLATE

- SEE SHEET 12/14 FOR PARAPET TRANSITION DETAIL.
- ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.



FRAMING PLAN

ALL BEAMS ARE MODIFIED AASHTO TYPE 4 (1676 DEEP)
 (SEE SHEET 11/14 FOR DETAILS)

NOTES:

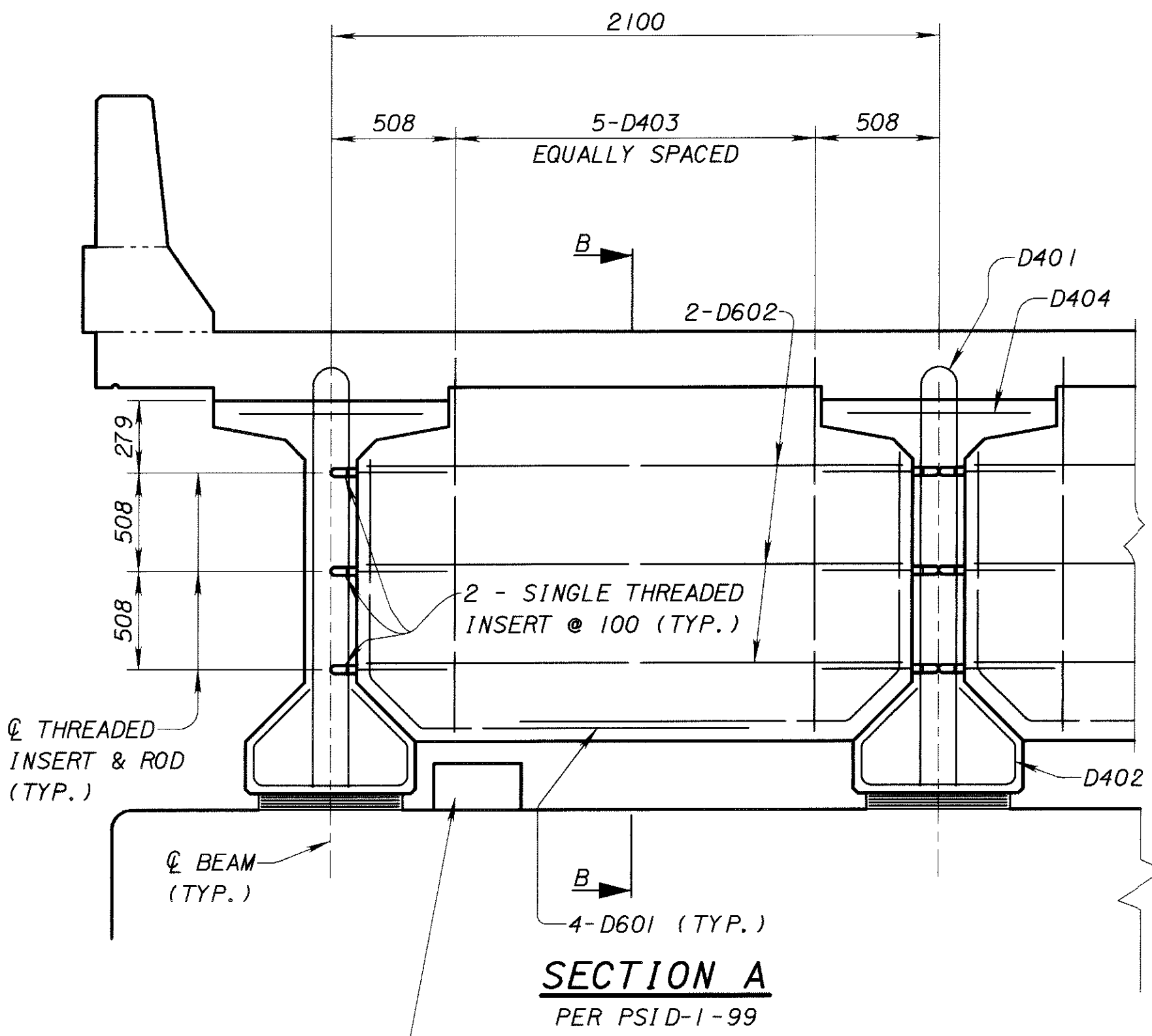
- SEE SHEET 2/14 FOR ESTIMATED QUANTITIES.
- SEE SHEET 3/14 FOR GENERAL NOTES.
- SEE SHEET 12/14 FOR DECK PLAN.
- INTERMEDIATE AND END DIAPHRAGMS SHALL BE PLACED AT LEAST 48 HOURS BEFORE ANY DECK CONCRETE IS PLACED.
- FOR ADDITIONAL DETAILS REFER TO STANDARD DRAWING PSID-1-99. REBAR FOR BEAMS ARE DETAILED IN ENGLISH, CONSISTENT WITH THE STANDARD DRAWING. CONVERSION FROM ENGLISH TO METRIC (SI) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONVERSION FACTORS SHALL BE IN ACCORDANCE WITH THE CMS SECTION 109.011
- FOR SCREED ELEVATIONS AND HAUNCH THICKNESSES AND SHEET 13/14
- ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.
- PIER AND END DIAPHRAGM CONCRETE SHALL BE HIGH PERFORMANCE CONCRETE.
- REINFORCING BAR CALL-OUTS IN PIER DIAPHRAGM AND BEAMS ARE AS PER STANDARD DRAWING PSID-1-99.

ABBREVIATIONS

- ABUT. = ABUTMENT
- ∅ = CENTERLINE
- STA. = STATION
- TYP. = TYPICAL

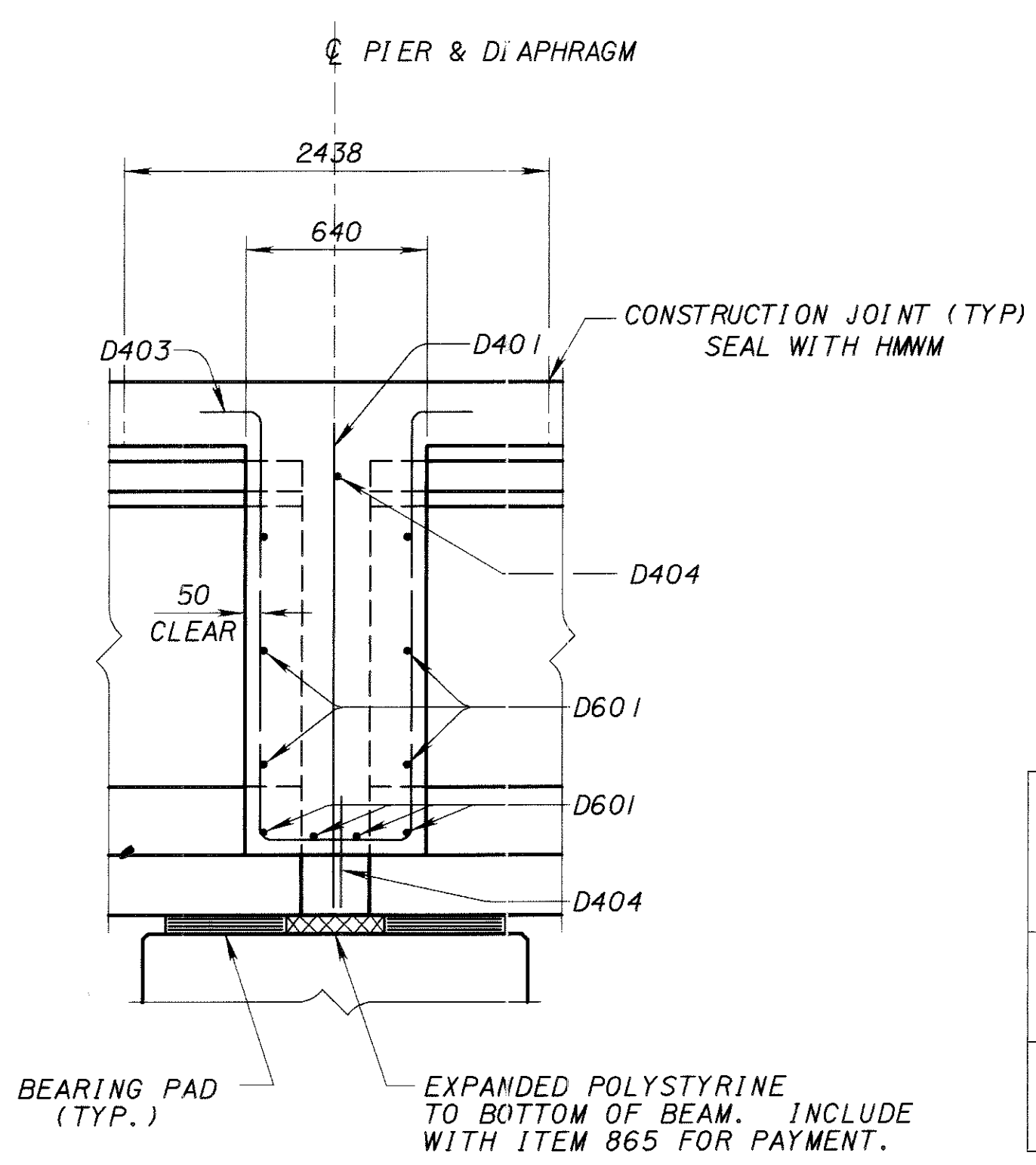
BEAM CAMBER & DEFLECTION

SPAN	LOCATION	ANTICIPATED CAMBER PRIOR TO DECK PLACEMENT	ANTICIPATED DEFLECTION DUE TO ADDITIONAL DEAD LOAD	ANTICIPATED FINAL CAMBER	ADJUSTMENT REQUIRED FOR VERTICAL CURVE	ANTICIPATED EXCESS FINAL CAMBER
SPAN 1	1/4 PT	+76	-38	+38	0	+38
	1/2 PT	+102	-51	+51	0	+51
	3/4 PT	+76	-38	+38	0	+38
SPAN 2	1/4 PT	+76	-38	+38	0	+38
	1/2 PT	+102	-51	+51	0	+51
	3/4 PT	+76	-38	+38	0	+38



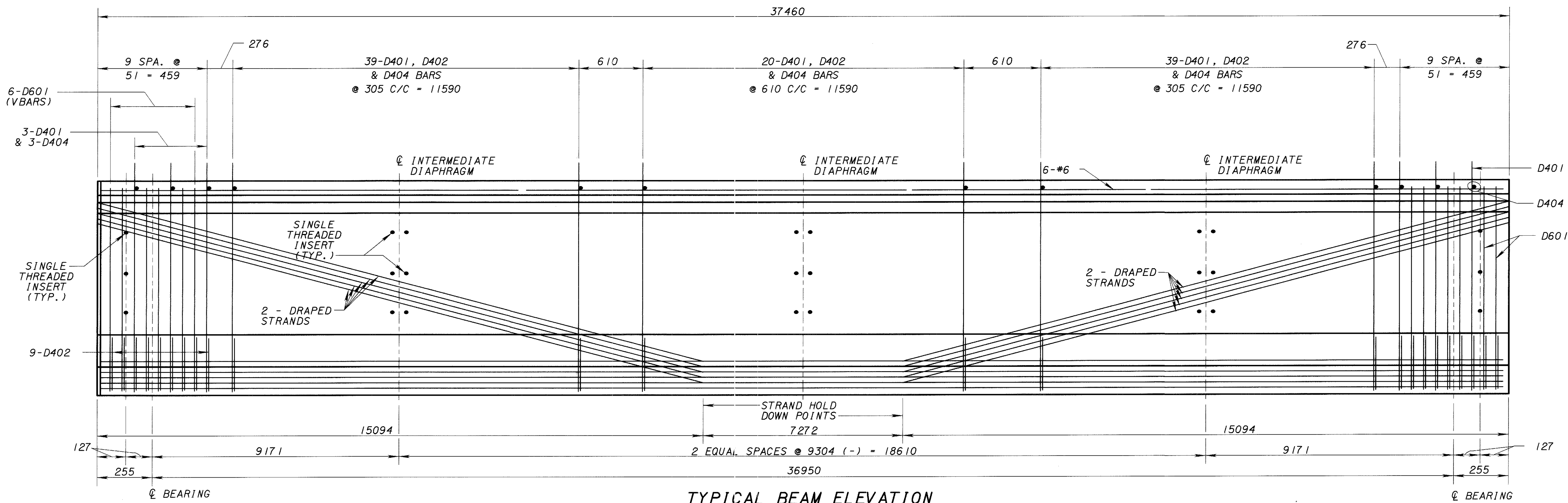
SECTION A
 PER PSID-1-99

SEISMIC PEDESTAL
 SEE DETAIL ON SHEET 8/14

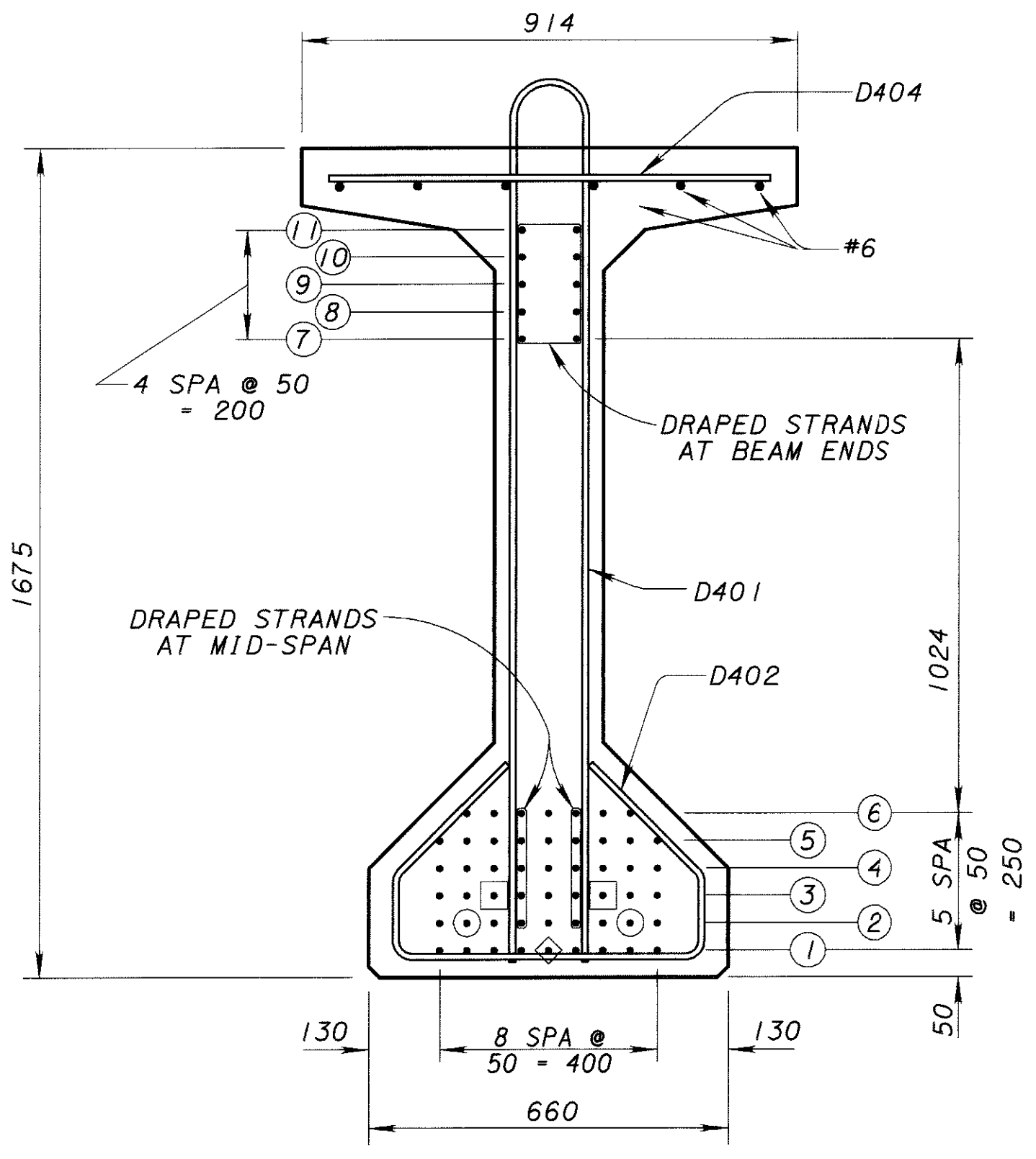


SECTION B-B
 (PARTIAL PIER SHOWN)

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TYPICAL BEAM ELEVATION



BEAM SECTION
MODIFIED AASHTO TYPE 4

- ◇ DEBOND 4575mm @ ENDS
- DEBOND 3050mm @ ENDS
- DEBOND 1525mm @ ENDS

BEAM MARK	BEAM SECTION	PATTERN	NUMBER OF STRANDS PER ROW										TOTAL STRANDS	CONCRETE STRENGTHS		401 BARS REQ'D	402 BARS REQ'D	403 BARS REQ'D	404 BARS REQ'D			
			ROW NUMBER					ROW NUMBER						f'ci	f'c							
			①	②	③	④	⑤	⑥	⑦	⑧	⑨	⑩		⑪								
B1-1 THRU B5-2	MODIFIED AASHTO TYPE 4 (1676)	END SPAN	9	7	7	7	7	5				2	2	2	2	2	34.5 MPa	48 MPa	104	116	-	104
		MID SPAN	9	9	9	9	9	7				0	0	0	0	0						

- NOTES
- FOR ADDITIONAL DETAILS REFER TO STANDARD DRAWING PSID-1-99. REBAR FOR BEAMS ARE DETAILED IN ENGLISH, CONSISTENT WITH THE STANDARD DRAWING. CONVERSION FROM ENGLISH TO METRIC (SI) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONVERSION FACTORS SHALL BE IN ACCORDANCE WITH THE CMS SECTION 109.011
 - ALL DIMENSIONS ARE IN MILLIMETERS.

- ABBREVIATIONS
- ℄ = CENTERLINE
 - SPA. = SPACING(S)
 - TYP. = TYPICAL

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DESIGN AGENCY
 635 Brookside Boulevard
 Westerville, OH 43081
ME
 COMPANIES

REVIEWED DATE 09/18/00
 T.L.W.
 STRUCTURE FILE NUMBER 0501069

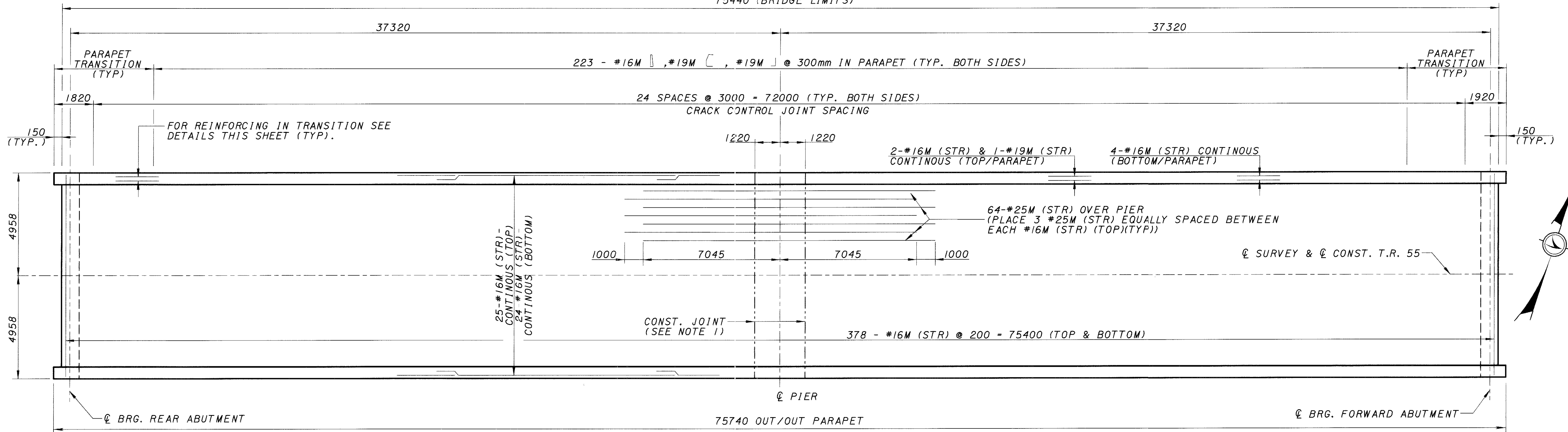
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 C.M.D. T.A.B.

BEAM DETAILS
 BRIDGE NO. ATH-33-32369
 U.S. 33 UNDER T.R. 55

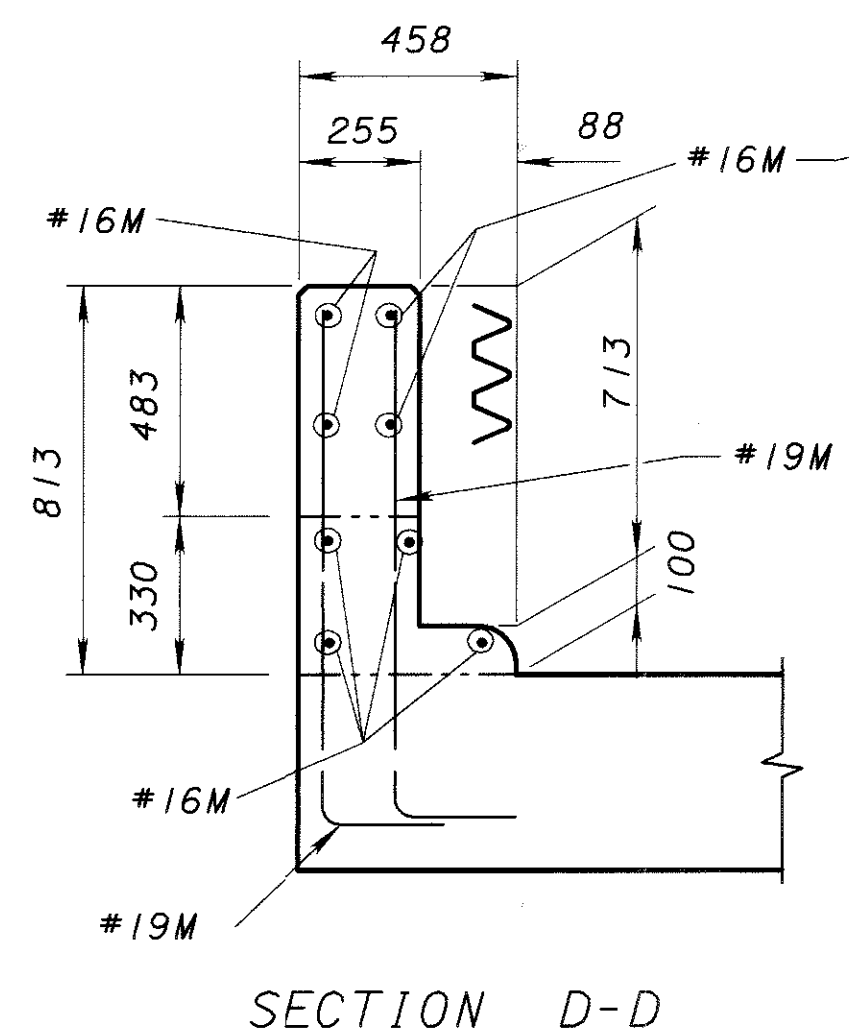
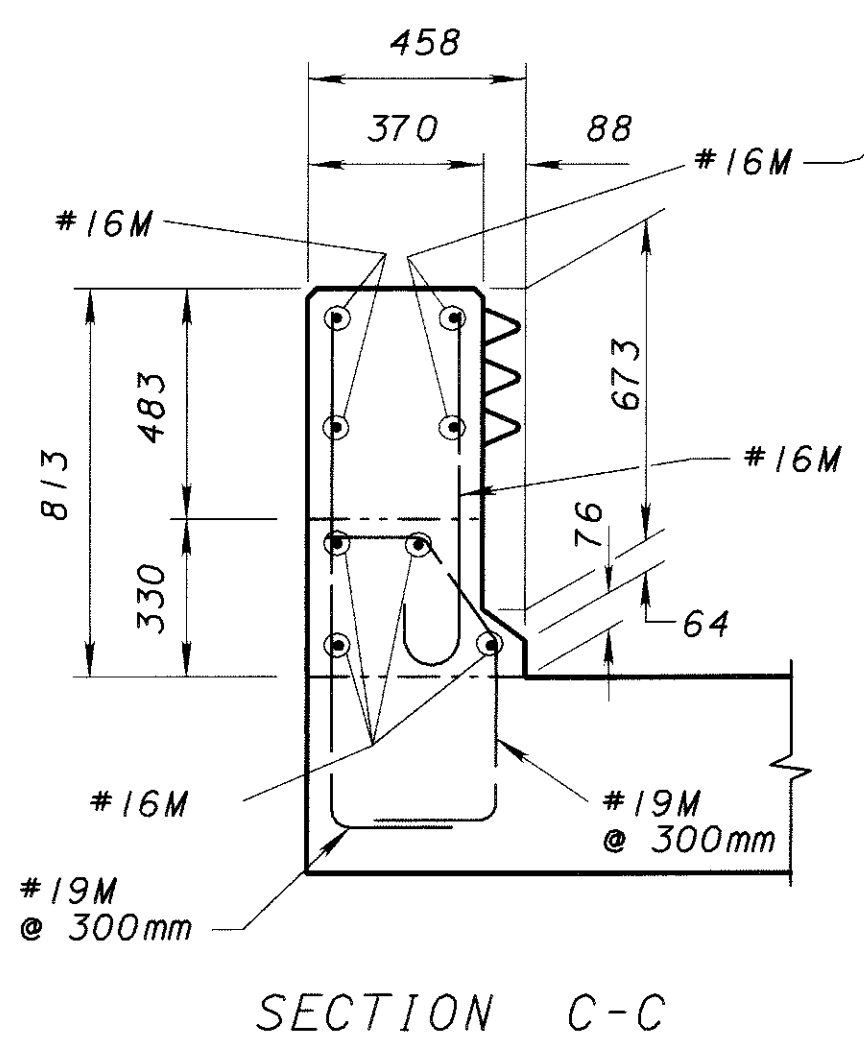
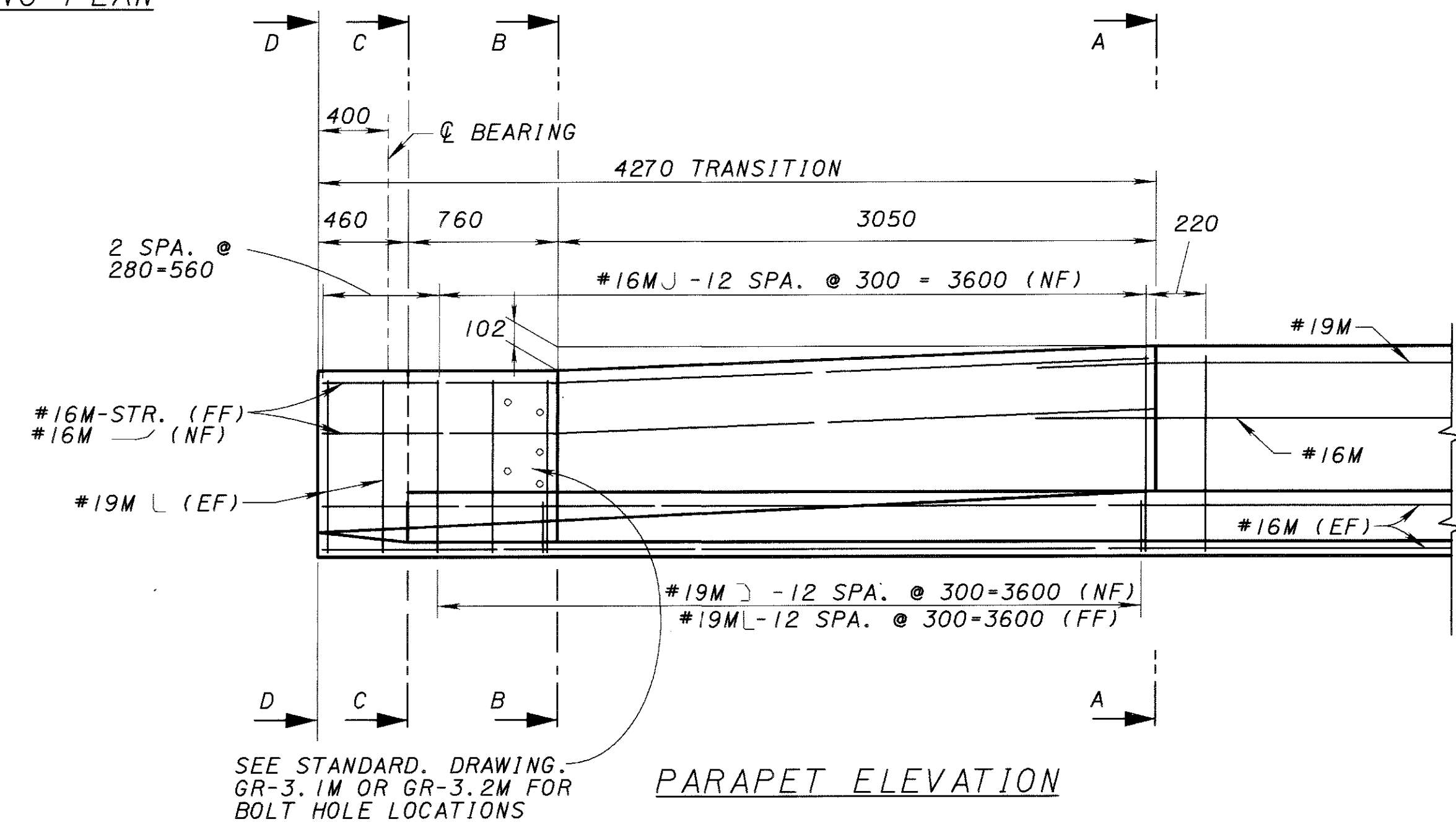
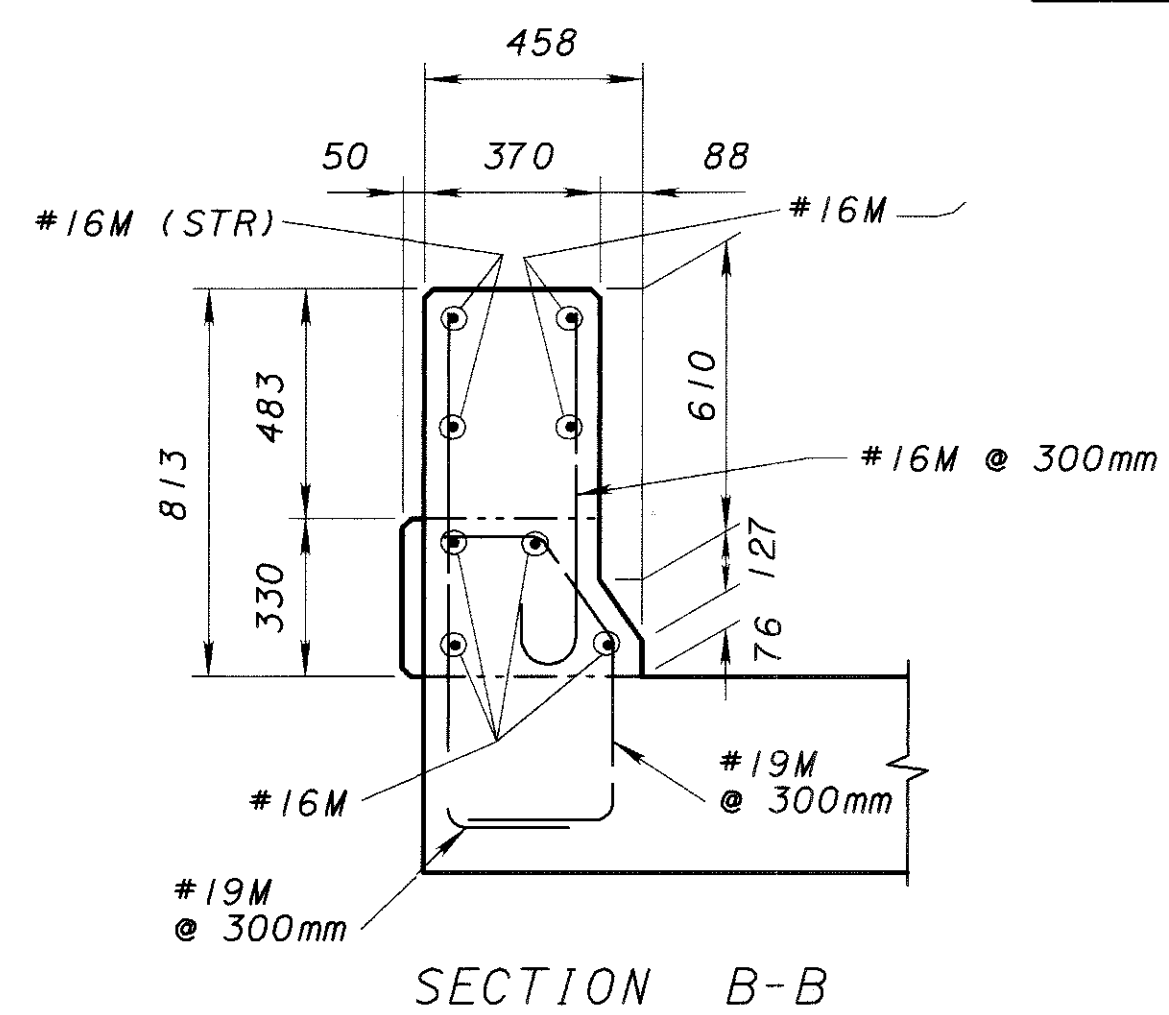
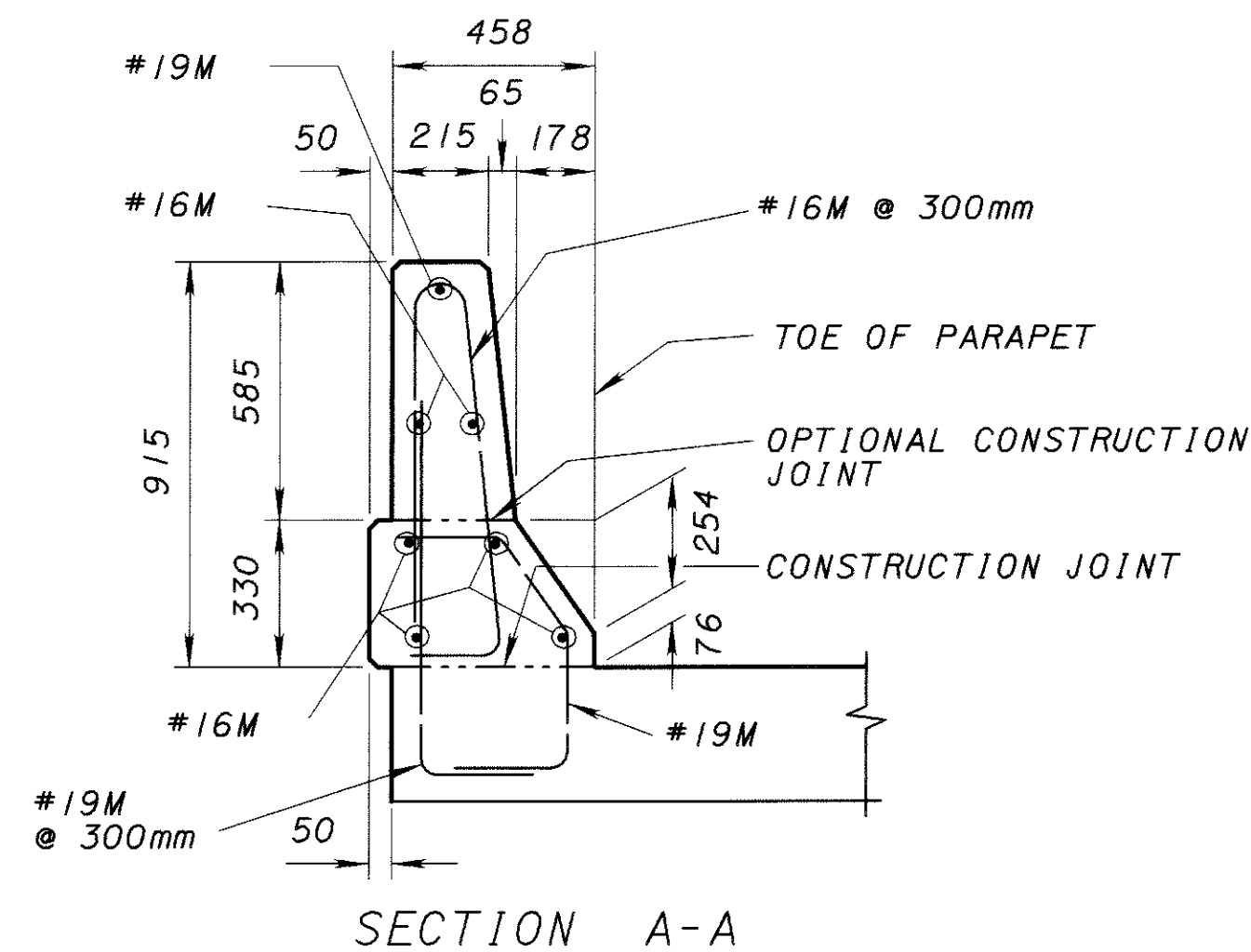
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11 | 14
 919
 956

75440 (BRIDGE LIMITS)



DECK REINFORCING PLAN



ABBREVIATIONS

- BRG. = BEARING
- CL = CENTERLINE
- CONST. = CONSTRUCTION
- EF = EACH FACE
- FF = FAR FACE
- NF = NEAR FACE
- SER. = SERIES
- STR. = STRAIGHT
- TYP. = TYPICAL

NOTES:

1. NO CONCRETE SHALL BE PLACED BETWEEN THE CONSTRUCTION JOINTS ON EITHER SIDE OF THE PIER DIAPHRAGM CONCRETE, UNTIL THE DECK CONCRETE HAS BEEN PLACED IN THE SPANS ADJACENT TO THE PIER. SEAL JOINTS WITH HIGH MOLECULAR WEIGHT METHACRYLATE.
2. SEE SHEET 2/14 FOR ESTIMATED QUANTITIES.
3. SEE SHEET 3/14 FOR GENERAL NOTES.
4. SEE SHEET 10/14 FOR CAMBER TABLE SHOWING ANTICIPATED DECK THICKNESS OVER BEAMS.
5. LAP LENGTHS
#16 BAR = 740mm (DECK), 835mm (PARAPET)
#19 BAR = 995mm (PARAPET)
#25 BAR = 1930mm (DECK)
6. MAXIMUM BAR LENGTH SHALL BE 18400mm
7. ALL DIMENSIONS ARE IN MILLIMETERS.


CONSTRUCTION ELEVATION (SCREEDS) FOR BRIDGE DECK PLACEMENT

LOCATION	SPAN 1					SPAN 2				
	Q BRG. REAR ABUT.	1/4pt.	1/2pt.	3/4pt.	Q BRG. PIER	Q BRG. PIER	1/4pt.	1/2pt.	3/4pt.	Q BRG. FWD. ABUT.
STATION	48+224.531	48+233.769	48+243.006	48+252.244	48+261.481	48+262.221	48+271.459	48+280.696	48+289.934	48+299.171
PROFILE GRADE ELEVATION	286.857	286.594	286.297	285.966	285.602	285.572	285.195	284.819	284.443	284.067
BEAM 1										
FINAL DECK THICKNESS - "A"	0.265	0.285 *	0.296	0.300	0.341	0.311	0.273 *	0.261	0.271	0.311
FINAL DECK ELEVATION	286.790	286.527	286.230	285.899	285.581	285.551	285.241	284.932	284.619	284.311
DEAD LOAD DEFLECTION	0.000	0.038	0.051	0.038	0.000	0.000	0.038	0.051	0.038	0.000
SCREED ELEVATION	286.790	286.565	286.281	285.937	285.581	285.551	285.279	284.983	284.657	284.311
BEAM 2										
FINAL DECK THICKNESS - "A"	0.265	0.291 *	0.308	0.317	0.341	0.312	0.274 *	0.262	0.274	0.314
FINAL DECK ELEVATION	286.823	286.560	286.263	285.932	285.592	285.562	285.218	284.876	284.531	284.189
DEAD LOAD DEFLECTION	0.000	0.038	0.051	0.038	0.000	0.000	0.038	0.051	0.038	0.000
SCREED ELEVATION	286.823	286.598	286.314	285.970	285.592	285.562	285.256	284.927	284.569	284.189
CENTER LINE & BEAM 3										
FINAL DECK THICKNESS - "A"	0.265	0.297 *	0.320	0.335	0.342	0.312	0.275 *	0.263	0.278	0.317
FINAL DECK ELEVATION	286.857	286.594	286.297	285.966	285.602	285.572	285.195	284.819	284.443	284.067
DEAD LOAD DEFLECTION	0.000	0.038	0.051	0.038	0.000	0.000	0.038	0.051	0.038	0.000
SCREED ELEVATION	286.857	286.632	286.348	286.004	285.602	285.572	285.233	284.870	284.481	284.067
BEAM 4										
FINAL DECK THICKNESS - "A"	0.265	0.290 *	0.305	0.313	0.312	0.282	0.270 *	0.263	0.269	0.300
FINAL DECK ELEVATION	286.823	286.560	286.263	285.932	285.568	285.538	285.161	284.764	284.355	283.945
DEAD LOAD DEFLECTION	0.000	0.038	0.051	0.038	0.000	0.000	0.038	0.051	0.038	0.000
SCREED ELEVATION	286.823	286.598	286.314	285.970	285.568	285.538	285.199	284.815	284.393	283.945
BEAM 5										
FINAL DECK THICKNESS - "A"	0.265	0.289 *	0.305	0.312	0.312	0.282	0.287 *	0.276	0.265	0.280
FINAL DECK ELEVATION	286.790	286.527	286.230	285.899	285.535	285.505	285.128	284.710	284.267	283.823
DEAD LOAD DEFLECTION	0.000	0.038	0.051	0.038	0.000	0.000	0.038	0.051	0.038	0.000
SCREED ELEVATION	286.790	286.565	286.281	285.937	285.535	285.505	285.166	284.761	284.305	283.823

SCREED ELEVATIONS:

SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT.
ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

* DENOTES LIMITING STATIONS OF #16M  BAR IN DECK HAUNCH. BAR SPACING SHALL BE SAME AS D401 BAR DETAILED ON SHEET 11/14

DESIGN AGENCY
635 Brookside Boulevard
Westerville, OH 43081
 COMPANIES

REVIEWED DATE 9/18/00
TLW
STRUCTURE FILE NUMBER 0501069

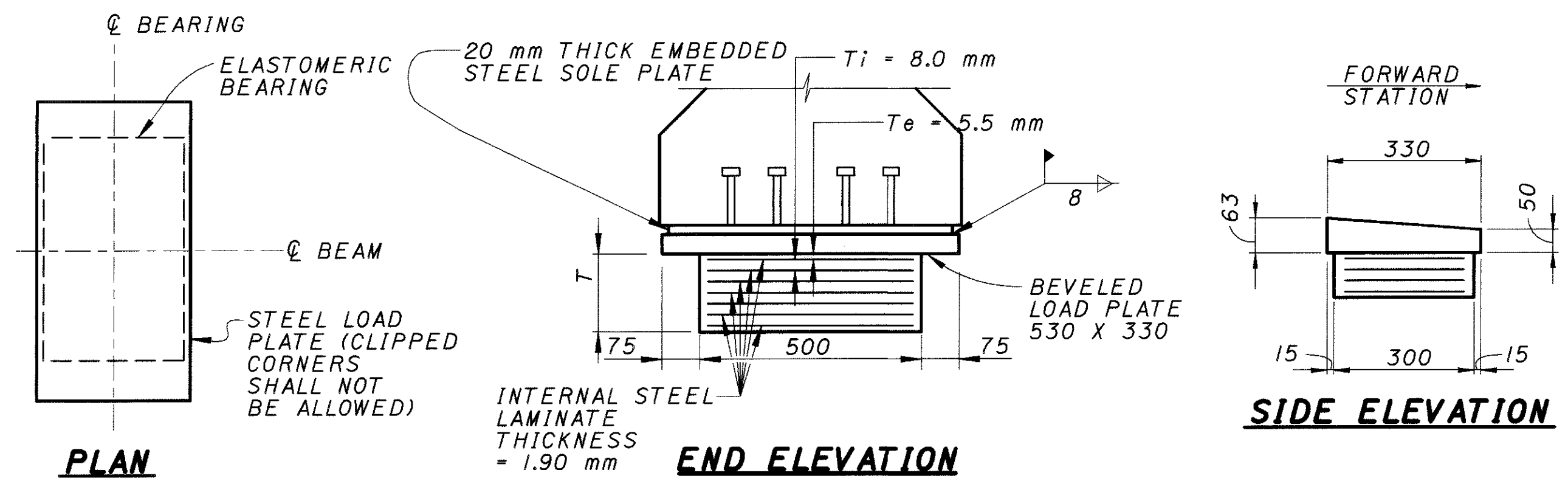
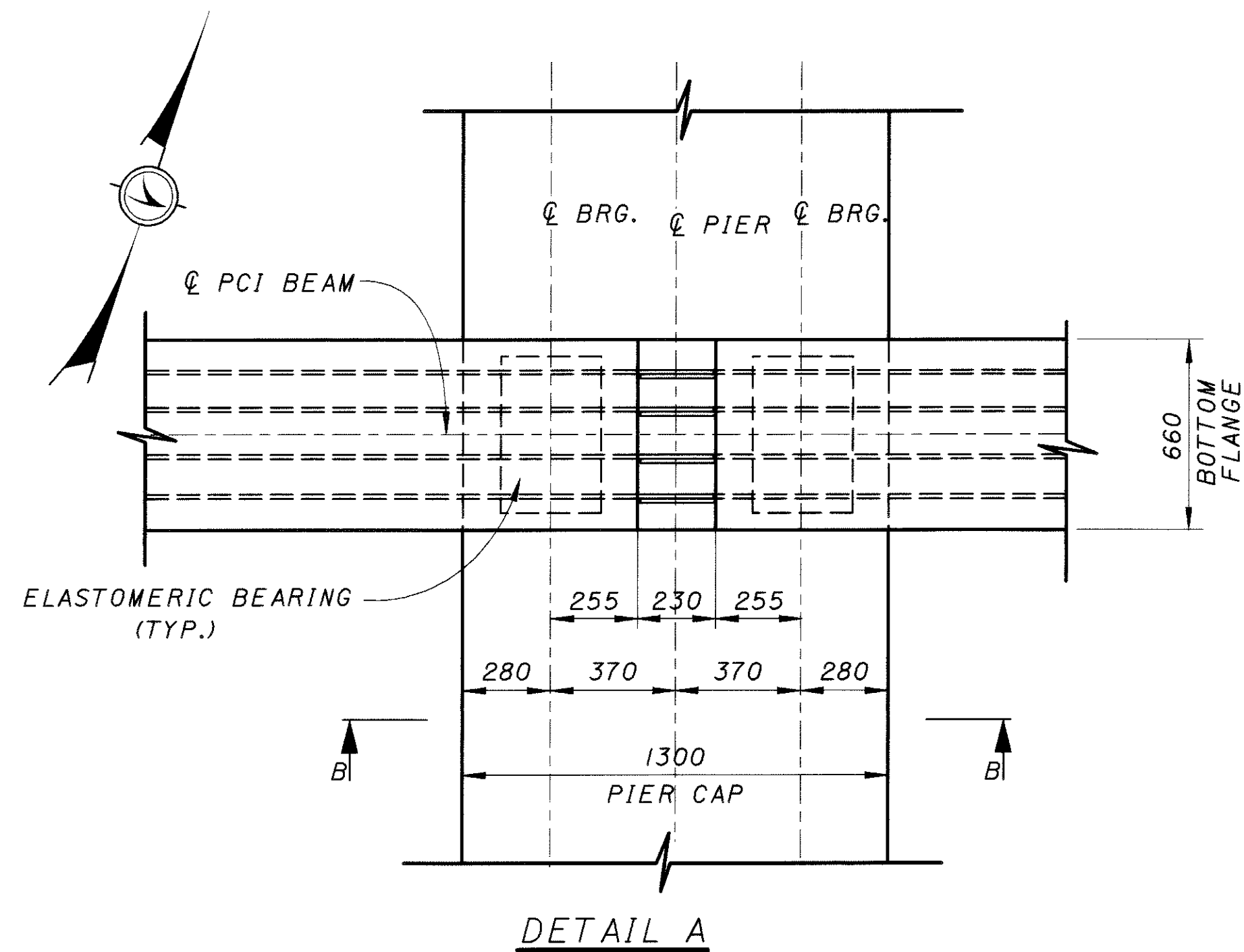
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ENB
CHECKED JBK
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SCREED DIAGRAM AND TABLE
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U.S. 33 UNDER T.R. 55

ATH-33-30.981

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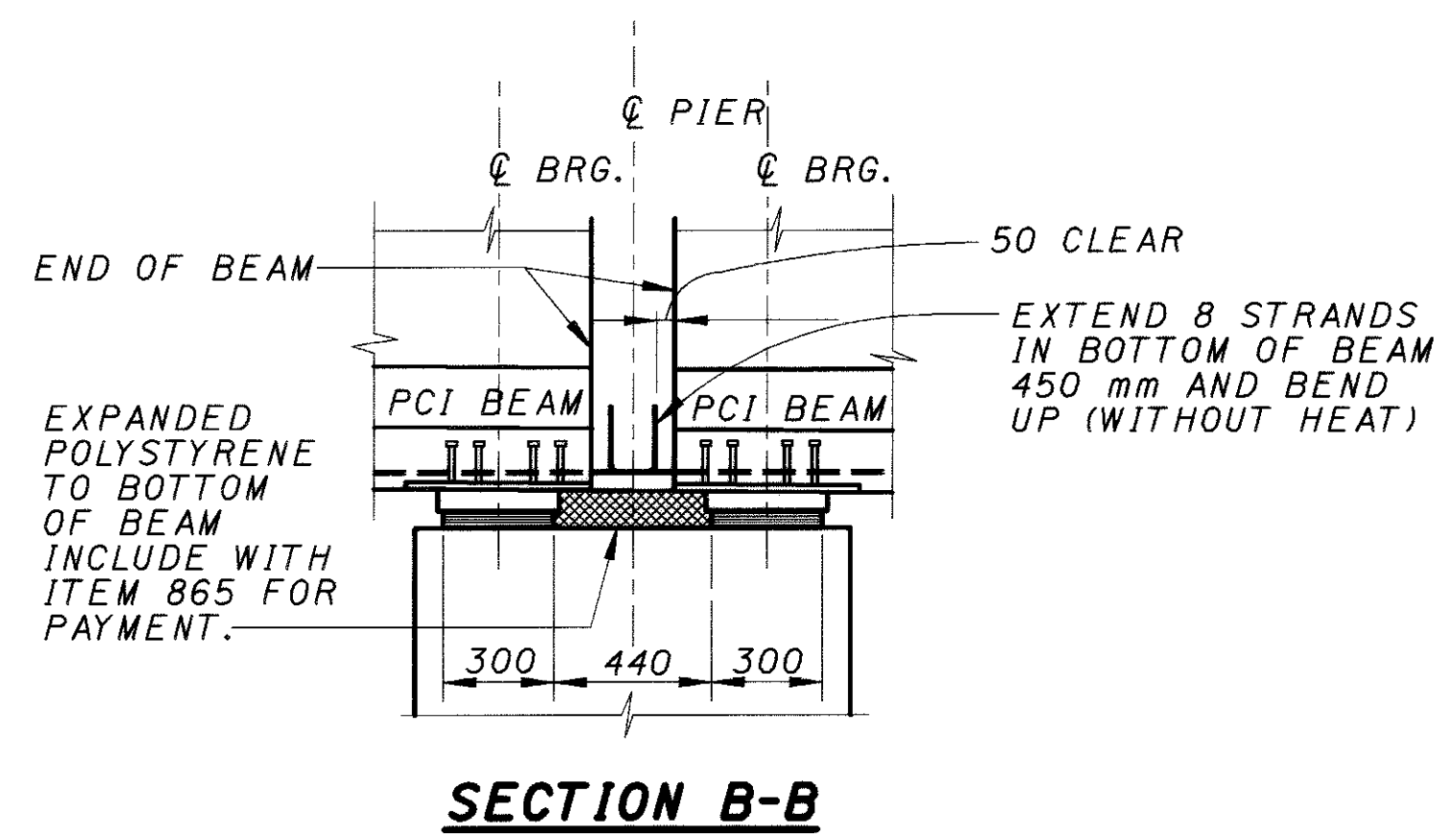
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EXTERIOR ELASTOMERIC LAYERS	2 x 5.5 =	11.00
INTERIOR ELASTOMERIC LAYERS	6 x 8.0 =	48.00
STEEL PLATES	7 x 1.90 =	13.30
TOTAL (mm)	T =	72.30

PIER	ABUTMENTS
DEAD LOAD REACTION = 690 KN	DEAD LOAD REACTION = 614 KN
LIVE LOAD REACTION = 298 KN	LIVE LOAD REACTION = 344 KN
MAXIMUM DESIGN LOAD = 988 KN	MAXIMUM DESIGN LOAD = 958 KN

**LAMINATED ELASTOMERIC EXPANSION
(50 DUROMETER ELASTOMETER)**



NOTES :

- SEE STANDARD DRAWING, PSID-1-99 (SHEET 4) FOR ADDITIONAL BEARING LOAD PLATE DETAILS.
- WELDING OF THE LOAD PLATE TO THE PCI BEAM SOLE PLATE SHALL BE CONTROLLED SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 149°C (300°F) AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MEASURING DEVICES.
- STEEL FOR THE BEARING LOAD PLATES SHALL BE A572 AND SHALL BE INCLUDED WITH ITEM 516 FOR PAYMENT.
- ALL EXPOSED SURFACES OF THE BEARING LOAD PLATES SHALL RECEIVE A SHOP PRIME COAT PRIOR TO INSTALLATION. FURTHERMORE, THE BEARING LOAD PLATES AT THE PIER SHALL RECEIVE A TOP COAT. THE COLOR OF THE TOP COAT SHALL BE SIMILAR TO THAT OF CONCRETE. SEALING BE PER CMS SPECIFICATIONS, ITEM 816 - PAINTING : SYSTEM I2EU.
- THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS.

- IF THE DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 27°C (80°F) OR LOWER THAN 5°C (40°F), AND THE BEARING SHEAR DEFLECTION EXCEEDS ONE SIXTH OF THE BEARING HEIGHT AT 16°C ± 12°C (60°F ± 10°F), THE PCI BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 16°C (60°F).
- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION 11, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECT TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.5 OF SECTION 14, BEARINGS, DIVISION 1, DESIGN. TESTING SHALL BE INCLUDED IN THE PRICE BID FOR THE BEARINGS, EACH.
- THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL LAMINATED ELASTOMERIC BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516.

9. ALL DIMENSIONS ARE IN MILLIMETERS.

ABBREVIATIONS

- BRG. = BEARINGS
- C/C = CENTER TO CENTER
- ∅ = CENTERLINE
- DIA. = DIAMETER
- PCI = PRESTRESSED CONCRETE I

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BEARING DETAILS
BRIDGE NO. ATH-33-32369
U.S. 33 UNDER T.R. 55

ATH-33-30.981

14 / 14

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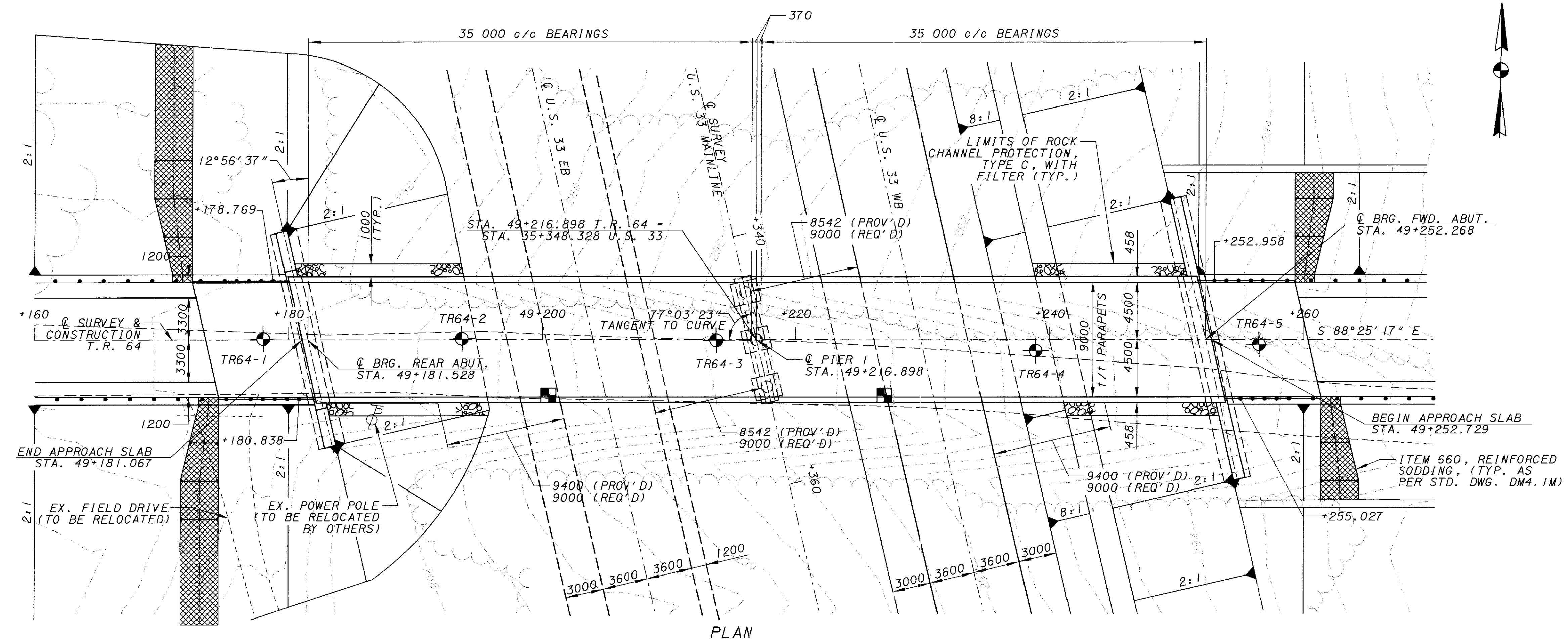
DESIGN AGENCY
ME
635 Brookside Boulevard
Westerville, OH 43081

COMPANIES

REVIEWED DATE
TLW 09/18/00
STRUCTURE FILE NUMBER
0501069

DRAWN ENB
ENB REVISED

DESIGNED JBK
JBK CHECKED
TAB



HORIZONTAL CURVE DATA
TR 64

P.I. STA 49+313.067
Δ = 14° 18' 08" RT.
R = 305.000m
T = 38.266m
L = 76.134m
E = 2.391
e_{max} = 0.08

HORIZONTAL CURVE DATA
U.S. 33

P.I. STA 35+565.165
Δ = 8° 47' 53" LT.
R = 3500.000m
T = 269.249m
L = 537.440m
E = 10.341
e_{max} = 0.018

BENCHMARK DATA

BENCHMARK #33A
BRASS TAB ON CONCRETE
NORTHING = 139630.4006
EASTING = 635882.4270
ELEV. = 290.100

TRAFFIC DATA (T.R. 64)

CURRENT ADT (2001) = 80
CURRENT ADTT (2001) = 4
DESIGN YEAR ADT (2021) = 120
DESIGN YEAR ADTT (2021) = 6

LEGEND

- ⊕ - SOIL BORING LOCATION
- - POINT OF MINIMUM VERTICAL CLEARANCE
- ▨ - APPROXIMATE TOP OF BEDROCK
- ◻ - ROCK CHANNEL PROTECTION TYPE C, WITH FILTER (450 mm THICK)

- NOTES**
- EARTHWORK LIMITS SHOWN ARE APPROXIMATE; ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.
 - STATIONS AND ELEVATIONS SHOWN ARE IN METERS; ALL OTHER DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

PROPOSED STRUCTURE

TYPE: 2-SPAN PRESTRESSED CONCRETE I-BEAMS, CONTINUOUS FOR LIVE LOAD, WITH COMPOSITE REINFORCED CONCRETE DECK, SUPPORTED ON CAP AND COLUMN PIER AND SEMI-INTEGRAL ABUTMENTS

SPANS: 35 000 - 35 000 mm c/c BEARINGS

ROADWAY: 9000 mm 1/1 PARAPETS

LOADING: MS-22.5 AND ALTERNATE MILITARY LOADING ALIGNMENT: TANGENT

SKEW: 12°56'37" RIGHT FORWARD

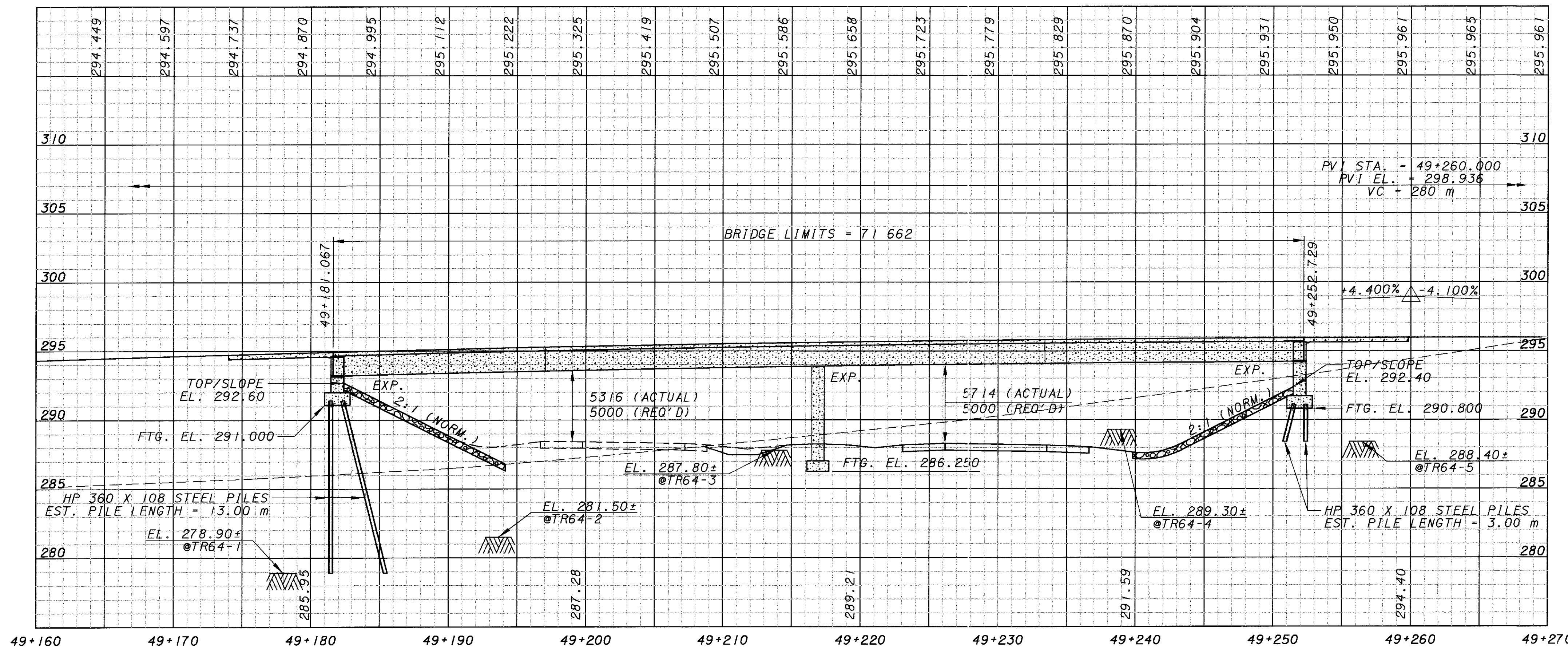
WEARING SURFACE: 25 mm MONOLITHIC CONCRETE

APPROACH SLABS: AS-1-81M (7600 mm LONG)

SUPERELEVATION: VARIES

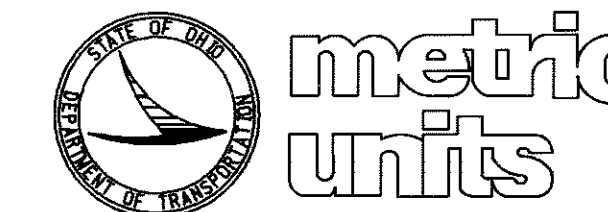
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LONGITUDE: W 39°15'24"



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DATE: 09-Feb-01 09:28

BRIDGE GENERAL NOTES



REFERENCE SHALL BE MADE TO THE FOLLOWING STANDARD DRAWINGS:

AS-1-81M DATED 10-25-94
 BR-1M REVISED 01-06-99
 PSID-1-99 REVISED 10-20-00
 SICD-1-96M DATED 02-12-97

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

841 DATED 10-12-99
 842 DATED 01-06-99
 844 DATED 01-06-99
 846 DATED 09-09-97
 863 DATED 10-12-99
 865 DATED 02-22-00
 894 DATED 10-12-99
 899 DATED 10-21-98
 911 DATED 07-10-97
 954 DATED 09-09-97

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE INTERIM SPECIFICATIONS THRU 1999, AND THE O.D.O.T. BRIDGE DESIGN MANUAL, 2000 EDITION.

DESIGN LOADING:

MS-22.5 AND THE ALTERNATE MILITARY LOADING
 2.87 kPa FUTURE WEARING SURFACE

DESIGN STRESSES:

CLASS C CONCRETE - COMPRESSIVE STRENGTH 27.5 MPa (SUBSTRUCTURE)
 CLASS S CONCRETE - COMPRESSIVE STRENGTH 31.0 MPa (SUPERSTRUCTURE - PARAPETS)
 HIGH PERFORMANCE CONCRETE (SS844) - COMPRESSIVE STRENGTH 31.0 MPa (SUPERSTRUCTURE - DECK & DIAPHRAGMS)

REINFORCING STEEL - ASTM A615M, A616M OR A617M, GRADE 420
 MINIMUM YIELD STRENGTH 420 MPa

MILD REINFORCING STEEL FOR PRESTRESSED BEAMS -
 ASTM A615M, A616M OR A617M, GRADE 420,
 MINIMUM YIELD STRENGTH 420 MPa

SPIRAL REINFORCEMENT MAY BE UNDEFORMED BARS, ASTM A82M OR A615M

STRUCTURAL STEEL - ASTM A572/A709 GRADE 50 - YIELD STRENGTH 350 MPa

CONCRETE FOR PRESTRESSED BEAMS:
 COMPRESSIVE STRENGTH (RELEASE) - 34.5 MPa
 COMPRESSIVE STRENGTH (FINAL @ 28 DAYS) - 48.0 MPa

UNIT STRESS - 19.2 MPa (COMPRESSION)
 3.46 MPa (TENSION)

PRESTRESSING STRANDS - ASTM A416M, GRADE 1860,
 SEVEN-WIRE, UNCOATED, LOW-RELAXATION STRANDS
 12.70 mm DIAMETER, NOMINAL STRAND AREA = 98.7 mm²
 MINIMUM ULTIMATE STRENGTH (f_s) = 1860 MPa
 INITIAL STRESS = 0.75f_s

DECK PROTECTION METHODS:

EPOXY COATED REINFORCING STEEL
 65 mm CONCRETE COVER
 SEALING OF CONCRETE SURFACES
 HIGH PERFORMANCE CONCRETE

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 25 mm THICK.

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING) THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND THE UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING PILES, THE SPILL-THROUGH SLOPES, AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENTS, SHALL BE CONSTRUCTED UP TO THE LEVEL OF THE SUBGRADE ELEVATION FOR A MINIMUM DISTANCE OF 60 METERS BEHIND EACH ABUTMENT. THE EXCAVATION FOR THE ABUTMENT FOOTINGS AND THE INSTALLATION OF THE ABUTMENT PILES SHALL NOT BEGIN UNTIL AFTER THE ABOVE REQUIRED EMBANKMENT HAS BEEN CONSTRUCTED.

PIER FOOTINGS:

PIER FOOTINGS SHALL BE PLACED IN BEDROCK AT THE ELEVATION SHOWN. PIER FOOTINGS, AS DESIGNED, PRODUCE A MAXIMUM BEARING PRESSURE OF 1.85 MPa. THE ALLOWABLE BEARING PRESSURE IS 3.1 MPa.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN:

UNCLASSIFIED EXCAVATION SHALL BE IN ACCORDANCE WITH 503 EXCEPT THAT THE BACKFILL MATERIAL BEHIND THE ABUTMENTS SHALL BE 203 MATERIAL PLACED IN 150 mm LIFTS.

PILES DRIVEN TO BEDROCK:

PILES SHALL DRIVEN TO REFUSAL ON BEDROCK. REFUSAL SHALL BE CONSIDERED AS OBTAINED BY PENETRATING SOFT BEDROCK FOR SEVERAL MILLIMETERS WITH A MINIMUM RESISTANCE OF 20 BLOWS PER 25 mm, OR REFUSAL SHALL BE CONSIDERED AS OBTAINED AFTER THE PILE HAS CONTACTED HARD BEDROCK AND THE PILE HAS THEN RECEIVED AT LEAST 20 BLOWS.

PILE DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE IS 1660 kN PER PILE FOR THE ABUTMENT PILES.

REAR ABUTMENT PILES:

18 PILES @ 13.0 METERS, ESTIMATED LENGTH
 18 PILES OF ORDER LENGTH 13.0 METERS
 9 SPLICES

FORWARD ABUTMENT PILES:

24 PILES @ 3.0 METERS, ESTIMATED LENGTH
 24 PILES OF ORDER LENGTH 3.0 METERS
 12 SPLICES

ITEM 507 - STEEL POINTS, AS PER PLAN:

STEEL PILE POINTS SHALL BE USED TO PROTECT THE TIPS OF THE PROPOSED STEEL "H" PILING. THE STEEL POINTS SHALL BE FURNISHED BY ASSOCIATED PILE AND FITTING CORPORATION, 262 RUTHERFORD BLVD, CLIFTON, NEW JERSEY 07014; INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., 301 WAREHOUSE DRIVE, MATTHEWS, NORTH CAROLINA 28015; DOUGHERTY FOUNDATION PRODUCTS, INC., P.O. BOX 688, FRANKLIN LAKES, NEW JERSEY 07417; VERSA STEEL INC, 3601 N.W. YEON AVE., P.O. BOX 10559, PORTLAND, OREGON 97210; PILING ACCESSORIES, INC. 3467 GRIBBLE ROAD, MATTHEWS, NORTH CAROLINA 28015; OR BY A MANUFACTURER THAT CAN FURNISH A STEEL POINT THAT IS ACCEPTABLE TO THE DIRECTOR. THE MATERIAL USED FOR THE MANUFACTURING OF PILE POINTS SHALL CONFORM TO ASTM A27M 450/240-CLASS 2-HEAT TREATED OR AASHTO M103M 450/240-HEAT TREATED. A NOTARIZED COPY OF THE MILL TEST REPORT SHALL BE SUBMITTED TO THE ENGINEER.

ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL:

INSTALL A 900 mm WIDE STRIP, 2.5 mm THICK, GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT AT LOCATIONS SHOWN IN THE PLANS. SECURE THE 900 mm WIDE NEOPRENE SHEETING TO THE CONCRETE WITH 32 mm X 3 mm (LENGTH X SHANK DIAMETER) GALVANIZED BUTTON-HEAD SPIKES THROUGH 3 mm X 25 mm OUTSIDE DIAMETER GALVANIZED WASHERS. MAXIMUM FASTENER SPACING SHALL BE 225 mm. OTHER SIMILAR GALVANIZED DEVICES WHICH WILL NOT DAMAGE EITHER THE NEOPRENE SHEETING OR THE CONCRETE MAY BE USED, SUBJECT TO THE APPROVAL OF THE ENGINEER.

CENTER THE NEOPRENE STRIPS ON ALL JOINTS. FOR HORIZONTAL JOINTS, SECURE THE HORIZONTAL NEOPRENE STRIP BY USING A SINGLE LINE OF FASTENERS PLACED 150 mm (±) FROM THE TOP OF THE NEOPRENE STRIP. FOR THE VERTICAL JOINTS, SECURE THE VERTICAL NEOPRENE STRIP BY USING A SINGLE VERTICAL LINE OF FASTENERS PLACED 150 mm (±) FROM THE VERTICAL EDGE OF THE NEOPRENE STRIP NEAREST TO THE CENTERLINE OF ROADWAY. FOR VERTICAL JOINTS, INSTALL 2 ADDITIONAL FASTENERS AT 150 mm CENTER-TO-CENTER, ACROSS THE TOP OF THE NEOPRENE STRIP ON THE SAME SIDE OF THE VERTICAL JOINT AS THE SINGLE VERTICAL ROW OF FASTENERS.

THE VERTICAL NEOPRENE STRIPS SHALL COMPLETELY OVERLAP THE HORIZONTAL STRIPS. DO NOT FASTEN THE VERTICAL STRIPS TO THE CONCRETE BELOW THE BRIDGE SEAT CONSTRUCTION JOINT. LAPS IN THE LENGTH OF THE HORIZONTAL STRIPS, DUE TO MATERIAL MANUFACTURING, SHALL BE AT LEAST 300 mm IN LENGTH IF NOT VULCANIZED OR ADHESIVELY BONDED, OR 150 mm IN LENGTH IF THE LAP IS VULCANIZED OR ADHESIVELY BONDED. NO LAPS ARE ACCEPTABLE IN VERTICALLY INSTALLED NEOPRENE STRIPS.

THE NEOPRENE SHEETING SHALL BE 2.5 mm THICK, GENERAL PURPOSE, HEAVY-DUTY NEOPRENE SHEET WITH NYLON FABRIC REINFORCEMENT. THE SHEETING SHALL BE "FAIRPRENE NUMBER NN-0003", BY E.I. DUPONT DE NEMOURS AND COMPANY, INC., "WINGPRENE" BY THE GOODYEAR TIRE AND RUBBER COMPANY, OR AN APPROVED ALTERNATE. THE NEOPRENE SHEETING SHALL CONFORM TO THE FOLLOWING:

DESCRIPTION OF TEST	ASTM METHOD	REQUIREMENT
THICKNESS, mm	D 751	2.5 (± 0.25)
BREAKING STRENGTH, GRAB W×F, N (MIN.)	D 751	3130 X 3130
ADHESIVE 25 mm STRIP, 50 mm MINIMUM, N (MIN.)	D 751	27
BURST STRENGTH (MULLÉN), MPa (MIN.)	D 751	9.65
HEAT AGING 72 HOURS T 100° C, 180 BEND, WITHOUT CRACKING	D 2136	NO CRACKING
LOW TEMPERATURE BRITTLINESS 1 HOUR AT -40° C, BEND AROUND 6 mm MANDREL	D 2136	NO CRACKING OF COATING

THE FINAL PAY QUANTITY SHALL BE THE ACTUAL OVERALL LENGTH OF STRIP INSTALLED FOR THE VERTICAL JOINTS, AND THE ACTUAL OVERALL LENGTH (NOT INCLUDING LAPS) OF STRIP INSTALLED FOR THE HORIZONTAL JOINTS.

ALL NECESSARY LABOR, MATERIALS, INCIDENTALS AND EQUIPMENT FOR INSTALLING THE NEOPRENE SHEETING AS SPECIFIED SHALL BE INCLUDED FOR PAYMENT WITH ITEM 516 - SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

THE COLOR OF THE URETHANE TOP COAT SHALL CONFORM TO FEDERAL STANDARD NO. 595B-I7778 (OFF-WHITE).

ITEM 611 - REINFORCED CONCRETE APPROACH SLAB (T = 380 mm), AS PER PLAN:

CONCRETE FOR THIS ITEM SHALL BE SUPP. SPEC. 844, HIGH PERFORMANCE CONCRETE, MIX 3 OR 4. THE REQUIREMENTS FOR PERFORMING A TRIAL MIX AND TESTING, AS DESCRIBED IN SUPP. SPEC. 844, SHALL BE WAIVED.

CONCRETE - AS PER PLAN:

A REINFORCING STEEL LIST HAS NOT BEEN PROVIDED WITH THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING THE REINFORCING STEEL LIST AND ALL REINFORCING STEEL DETAILS, IN ACCORDANCE WITH SECTIONS 301.4 THROUGH 301.4.8 (INCLUSIVE) OF THE ODOT BRIDGE DESIGN MANUAL, APRIL 2000 EDITION. THE COMPLETED REINFORCING STEEL LIST SHALL BE SUBMITTED TO THE DIRECTOR FOR REVIEW AND ACCEPTANCE IN ACCORDANCE WITH CMS 501.05. FABRICATION OF THE REINFORCING STEEL SHALL NOT BEGIN UNTIL WRITTEN ACCEPTANCE OF THE SUBMITTED DRAWINGS HAS BEEN RECEIVED FROM THE DIRECTOR. ALL COSTS FOR PREPARING THE REINFORCING STEEL LIST SHALL BE INCLUDED FOR PAYMENT WITH THE APPROPRIATE CONCRETE ITEMS.

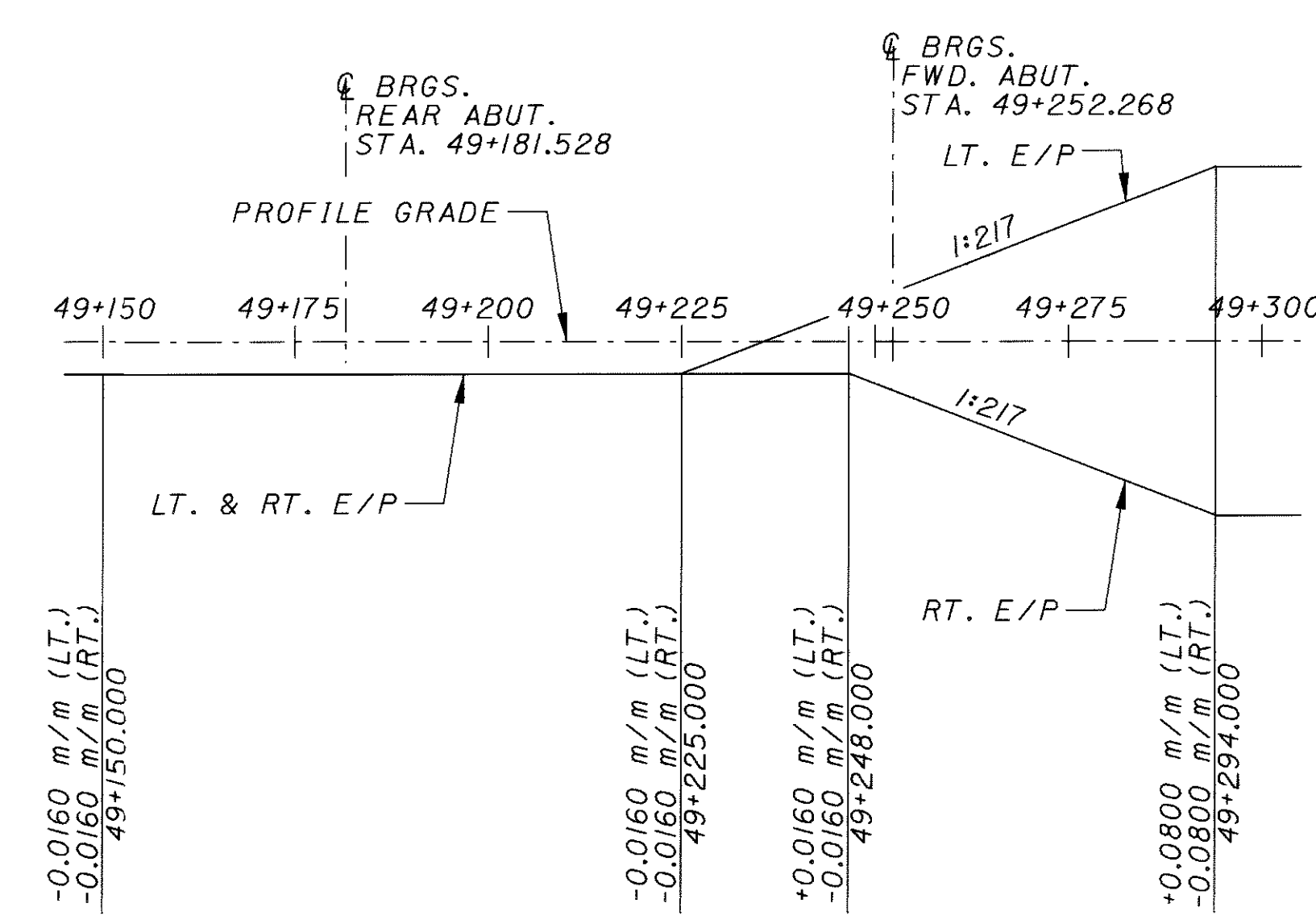
WHEN THE SHAPE OF A BAR IS NOT APPARENT IN THE PLAN DETAILS, A BEND DIAGRAM HAS BEEN SHOWN WITH THE BAR MARK. "(ST.)" IN THE BAR MARK INDICATES A STRAIGHT BAR.

ITEM 865 - PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC: CONCRETE INTERMEDIATE DIAPHRAGMS, AS PER PLAN:

INTERMEDIATE DIAPHRAGMS SHALL BE CAST-IN-PLACE REINFORCED CONCRETE AS SHOWN IN THE PLANS AND IN ACCORDANCE WITH STD. DWG. PSID-1-99. STEEL INTERMEDIATE DIAPHRAGMS WILL NOT BE APPROVED FOR USE.

CONVERSION OF STANDARD BRIDGE DRAWINGS:

THE STANDARD BRIDGE DRAWINGS REFERENCED IN THIS PLAN ARE METRIC. ANY CONVERSION OF DIMENSIONS REQUIRED TO CONSTRUCT THE ITEMS SHOWN ON THE STANDARDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONVERSIONS SHALL BE MADE USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.



SUPERELEVATION TRANSITION DIAGRAM

FILE: c:\n6287\BRIDGE\TR64\ATH033_0646n.dgn
 DATE: 07-Feb-01 15:58

DESIGN AGENCY: GANNETT FLEMING ENGINEERS & ARCHITECTS, P.C.
 401 WESTERN BLVD. SUITE 300
 DATE: 12/00
 REVIEWED: PLC
 STRUCTURE FILE NUMBER: 0501107
 DRAWN: MTO
 REVISION:
 DESIGNED: MTO
 CHECKED: ABH
 BRIDGE GENERAL NOTES
 BRIDGE NO. ATH-33-35348
 UNDER T.R. 64
 ATH-33-30.981
 2/14
 926
 956



DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
4151 EASTERN BLVD., SUITE 350
ANN ARBOR, MI 48106

CALCULATED BY: ABH DATE: 12/11/00
CHECKED BY: MTO DATE: 12/12/00

ESTIMATED BRIDGE QUANTITIES

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	ABUTS.	PIER	SUPER.	GENERAL	AS PER PLAN SHEET NO.
503	21101	222	CU. METER	UNCLASSIFIED EXCAVATION, AS PER PLAN	212	10			2
503	31100	18	CU. METER	ROCK EXCAVATION		18			
505	11100	LUMP	LUMP SUM	PILE DRIVING EQUIPMENT MOBILIZATION				LUMP	
507	00300	306	METER	STEEL PILES HP 360 X 108, FURNISHED	306				
507	00350	306	METER	STEEL PILES HP 360 X 108, DRIVEN	306				
507	50500	21	EACH	STEEL PILE SPLICES	21				
507	93301	42	EACH	STEEL POINT (OR SHOE) AS PER PLAN	42				2
SPECIAL	51267510	973	SQ. METER	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) *	110	76	787		2
516	13900	7	SQ. METER	51 mm PREFORMED EXPANSION JOINT FILLER	7				
516	14020	27	METER	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	27				
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (270 X 500 X 55 mm BEARING WITH 300 X 690 X 38 mm LOAD PLATE)		12			14
516	44101	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN (250 X 460 X 65 mm BEARING WITH 290 X 690 X 38 mm LOAD PLATE)	12				14
518	21200	68	CU. METER	POROUS BACKFILL WITH FILTER FABRIC	68				
518	40000	40	METER	150 mm PERFORATED CORRUGATED PLASTIC PIPE,	40				
518	40010	11	METER	150 mm NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS,	11				
601	32200	139	CU. METER	ROCK CHANNEL PROTECTION, TYPE C, WITH FILTER	139				
660	20000	145	SQ. METER	SODDING REINFORCING	145				
841	10000	700	SQ. METER	TREATING OF CONCRETE SURFACES WITH SRS			700		
842	31609	42	CU. METER	CLASS S CONCRETE, SUPERSTRUCTURE, AS PER PLAN (PARAPETS)			42		2
842	41001	28	CU. METER	CLASS C CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN		28			2
842	44101	94	CU. METER	CLASS C CONCRETE, ABUTMENT NOT INCLUDING FOOTING, AS PER PLAN	94				2
842	46501	85	CU. METER	CLASS C CONCRETE, FOOTING, AS PER PLAN	76	9			2
865	15020	12	EACH	DRAPED STRAND PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, LEVEL 3, TYPE 4			12		
865	16000	30	EACH	PRESTRESSED CONCRETE BRIDGE I-BEAM MEMBERS, MISC.: CONCRETE INTERMEDIATE DIAPHRAGMS, AS PER PLAN			30		2, 9
894	10001	206	CU. METER	HIGH PERFORMANCE CONCRETE, FOR BRIDGE DECK WITH WARRANTY, AS PER PLAN **	30	7	169		2

* SEE PROPOSAL NOTE

** INCLUDES ABUTMENT AND PIER DIAPHRAGM CONCRETE

DATE 12/00
REVIEWED PLC
STRUCTURE FILE NUMBER 050107

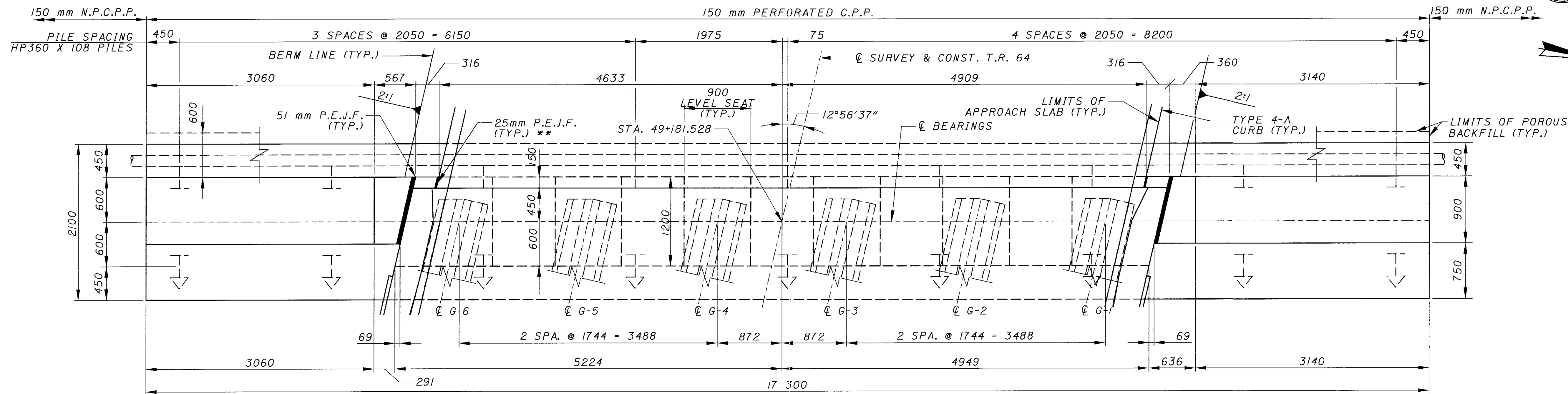
DRAWN ABH
REVISOR ABH
DESIGNED ABH
CHECKED MTO

ESTIMATED BRIDGE QUANTITIES
BRIDGE NO. ATH-33-35348
UNDER T.R. 64

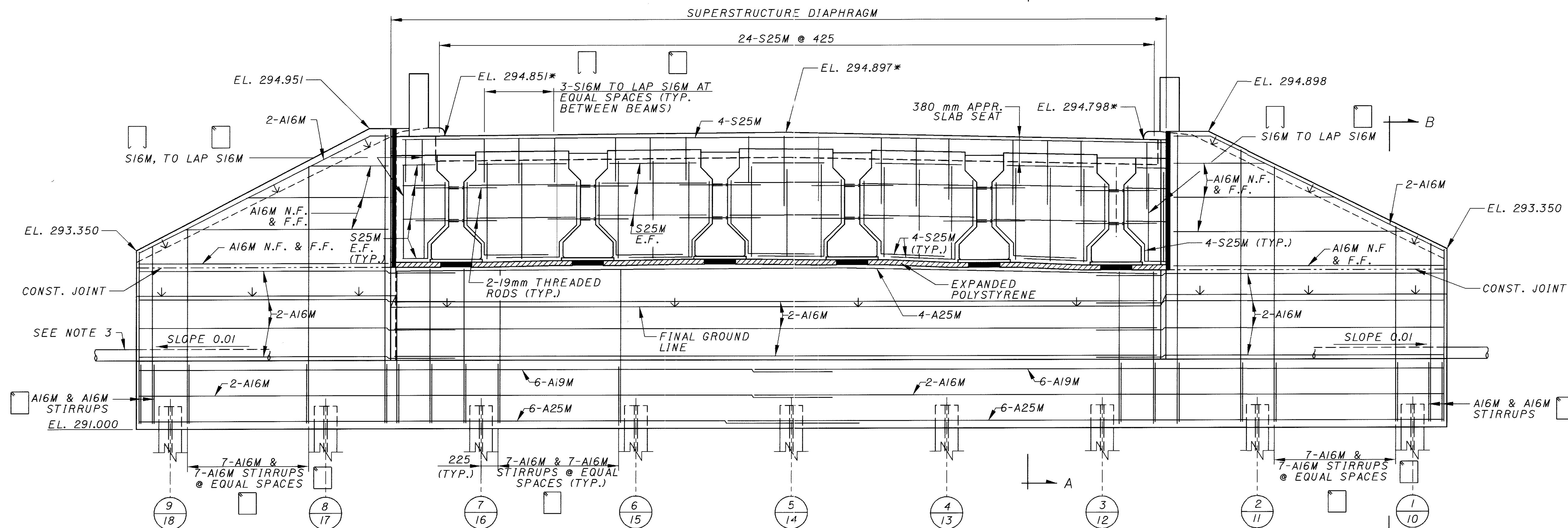
ATH-33-30.981

3 / 14

927
956



PLAN - REAR ABUTMENT



ELEVATION

NOTES:

- FOR ABUTMENT NOTES, SECTIONS A-A & B-B, AND BEAM SEAT ELEVATIONS, SEE SHEET 6 OF 14.
- MINIMUM BAR LAPS
LAP NO. 16M BARS 780 mm.
LAP NO. 19M BARS 1170 mm.
LAP NO. 25M BARS 1750 mm.
- CONNECT 150 mm DIA. N.P.C.P.P. TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 6 OF 14.
- ALL DIMENSIONS ARE IN MILLIMETERS; ALL ELEVATIONS AND STATIONS ARE IN METERS.

ABBREVIATIONS

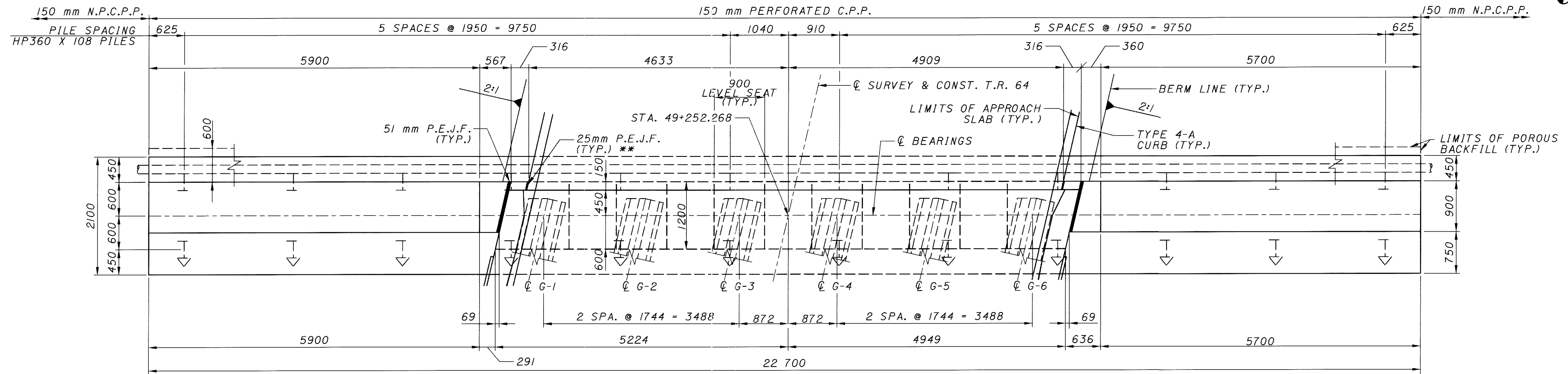
- N.F. = NEAR FACE
F.F. = FAR FACE
E.F. = EACH FACE
C.P.P. = CORRUGATED POLYETHYLENE PIPE
N.P.C.P.P. = NON-PERFORATED CORRUGATED POLYETHYLENE PIPE
P.E.J.F. = PREFORMED EXPANSION JOINT FILLER

PILE SYMBOL

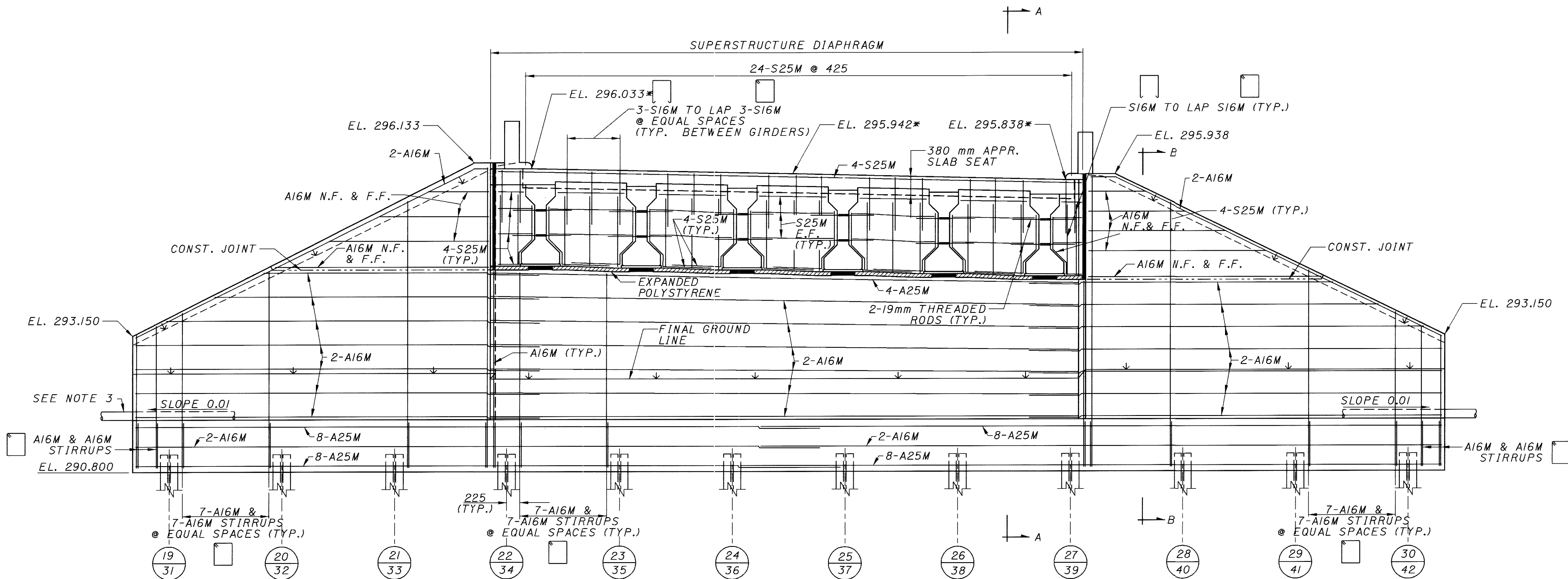
- └ PILES BATTERED AT 1:4
└ HP360X108 PILES
└ VERTICAL PILES
└ HP360X108 PILES

AA - PILE NUMBER (N.F./F.F.)
BB

- * ELEVATIONS ARE GIVEN AT APPROACH SLAB SEAT; SEE SECTION A-A ON SHEET 6 OF 14.
** INCLUDED WITH ITEM 611 FOR PAYMENT



PLAN - FORWARD ABUTMENT



ELEVATION

NOTES:

- FOR ABUTMENT NOTES, SECTIONS A-A & B-B, AND BEAM SEAT ELEVATIONS, SEE SHEET 6 OF 14.
- MINIMUM BAR LAPS
LAP NO. 16M BARS 780 mm.
LAP NO. 19M BARS 1170 mm.
LAP NO. 25M BARS 1750 mm.
- CONNECT 150 mm DIA. N.P.C.P.P. TO PERFORATED PIPE AND OUTLET AS SHOWN IN PIPE TERMINATION DETAIL ON SHEET 6 OF 14.
- ALL DIMENSIONS ARE IN MILLIMETERS; ALL ELEVATIONS AND STATIONS ARE IN METERS.

ABBREVIATIONS

- N.F. = NEAR FACE
- F.F. = FAR FACE
- E.F. = EACH FACE
- C.P.P. = CORRUGATED POLYETHYLENE PIPE
- N.P.C.P.P. = NON-PERFORATED CORRUGATED POLYETHYLENE PIPE
- P.E.J.F. = PREFORMED EXPANSION JOINT FILLER

PILE SYMBOL

- ┌ PILES BATTERED AT 1:4
- └ HP360X108 PILES
- ┆ VERTICAL PILES
- ┆ HP360X108 PILES



* ELEVATIONS ARE GIVEN AT APPROACH SLAB SEAT; SEE SECTION A-A ON SHEET 6 OF 14.
** INCLUDED WITH ITEM 611 FOR PAYMENT

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DESIGN AGENCY
GANNETT FLEMING
ENGINEERS & ARCHITECTS, P.C.
401 WESTWILDE WAY, SUITE 300
WESTVILLE, MO 64088

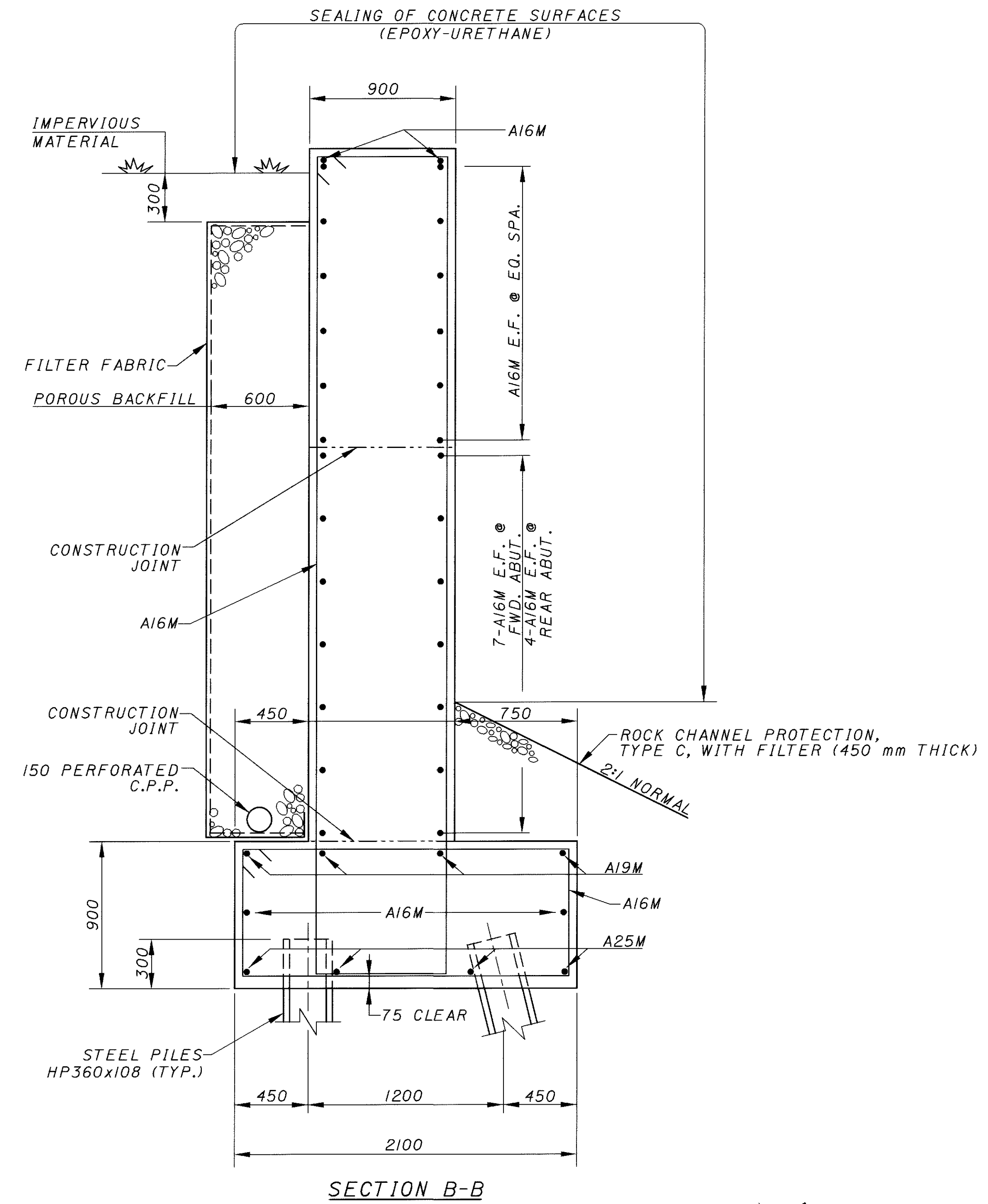
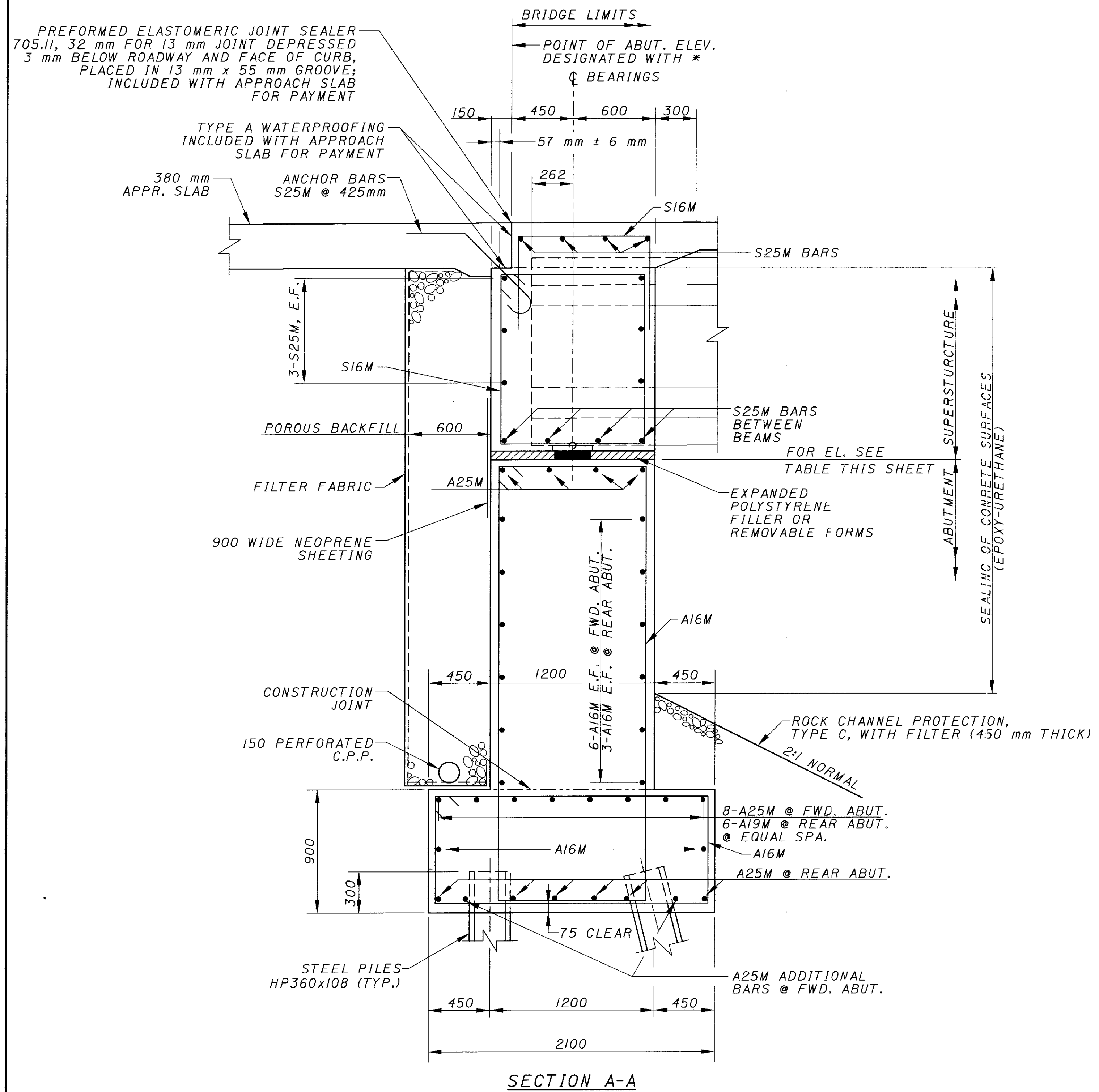
DATE 12/00
REVIEWED PLC
DRAWN DEK
DESIGNED ABH
CHECKED MTO/ZR
STRUCTURE FILE NUMBER 050107

FORWARD ABUTMENT PLAN AND ELEVATION
BRIDGE NO. ATH-33-35348
UNDER T.R. 64

ATH-33-30.981

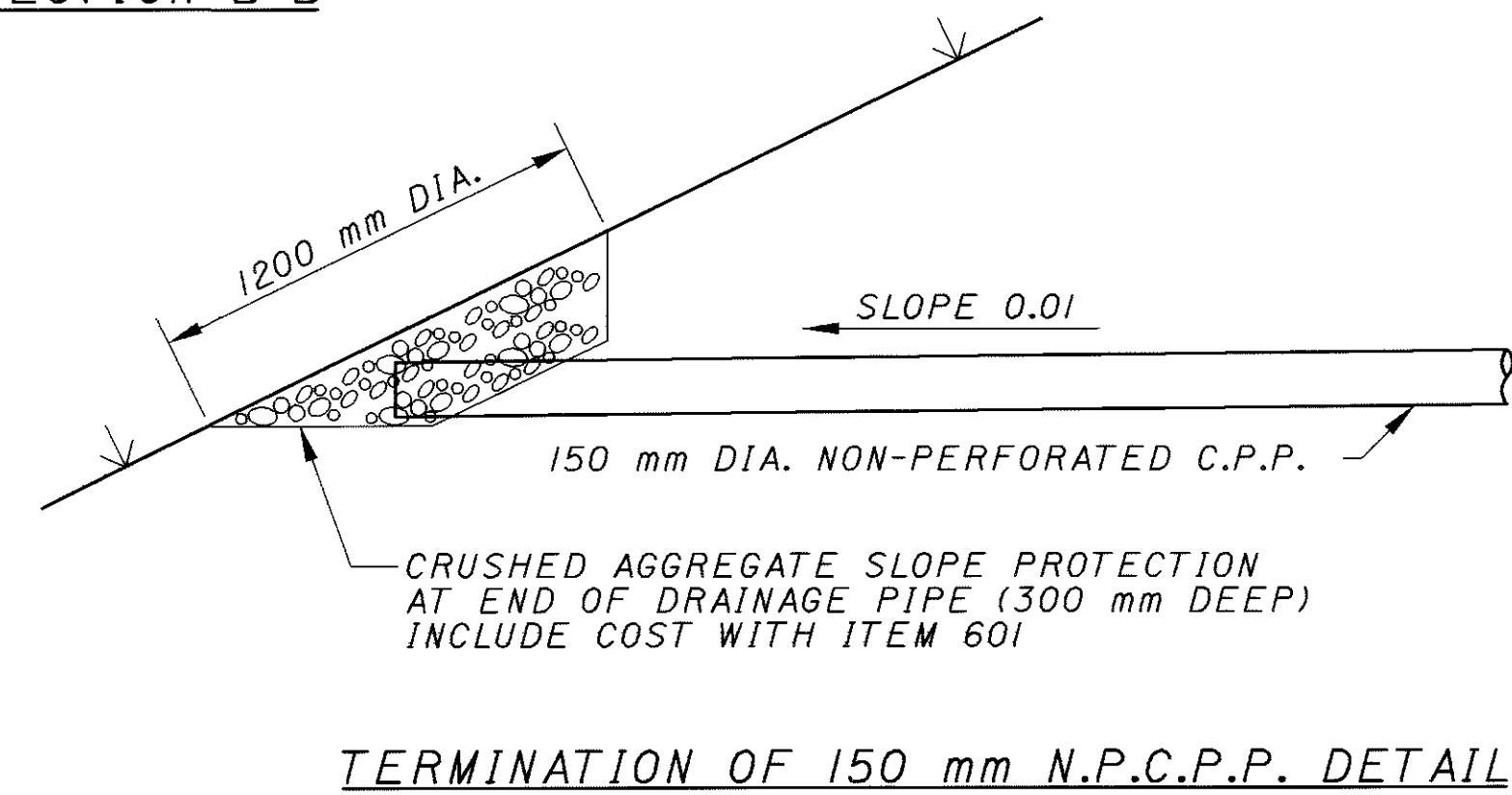
5 / 14

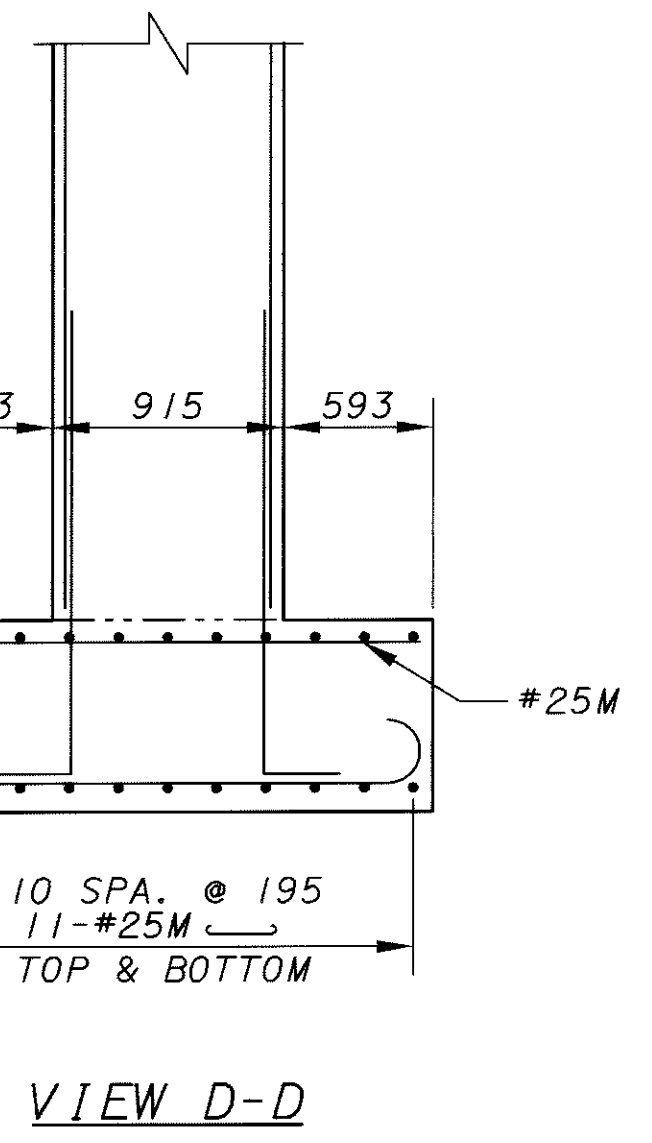
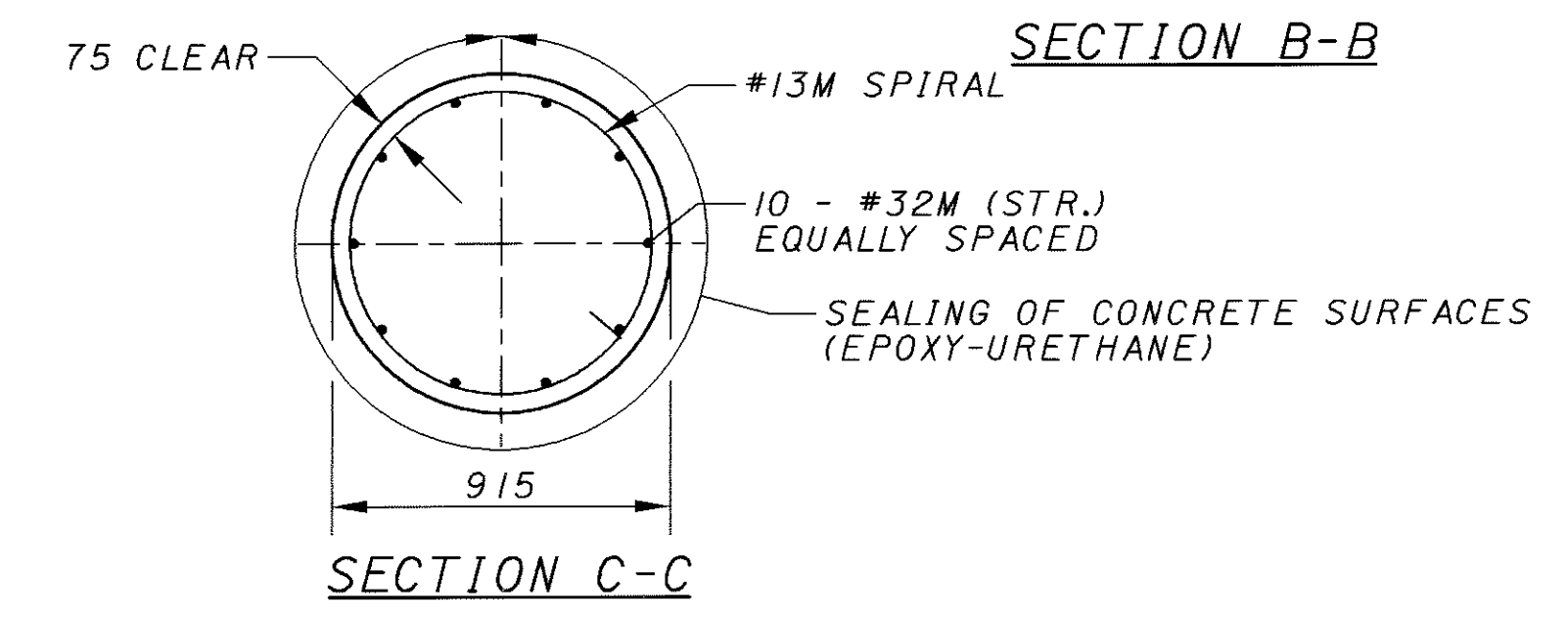
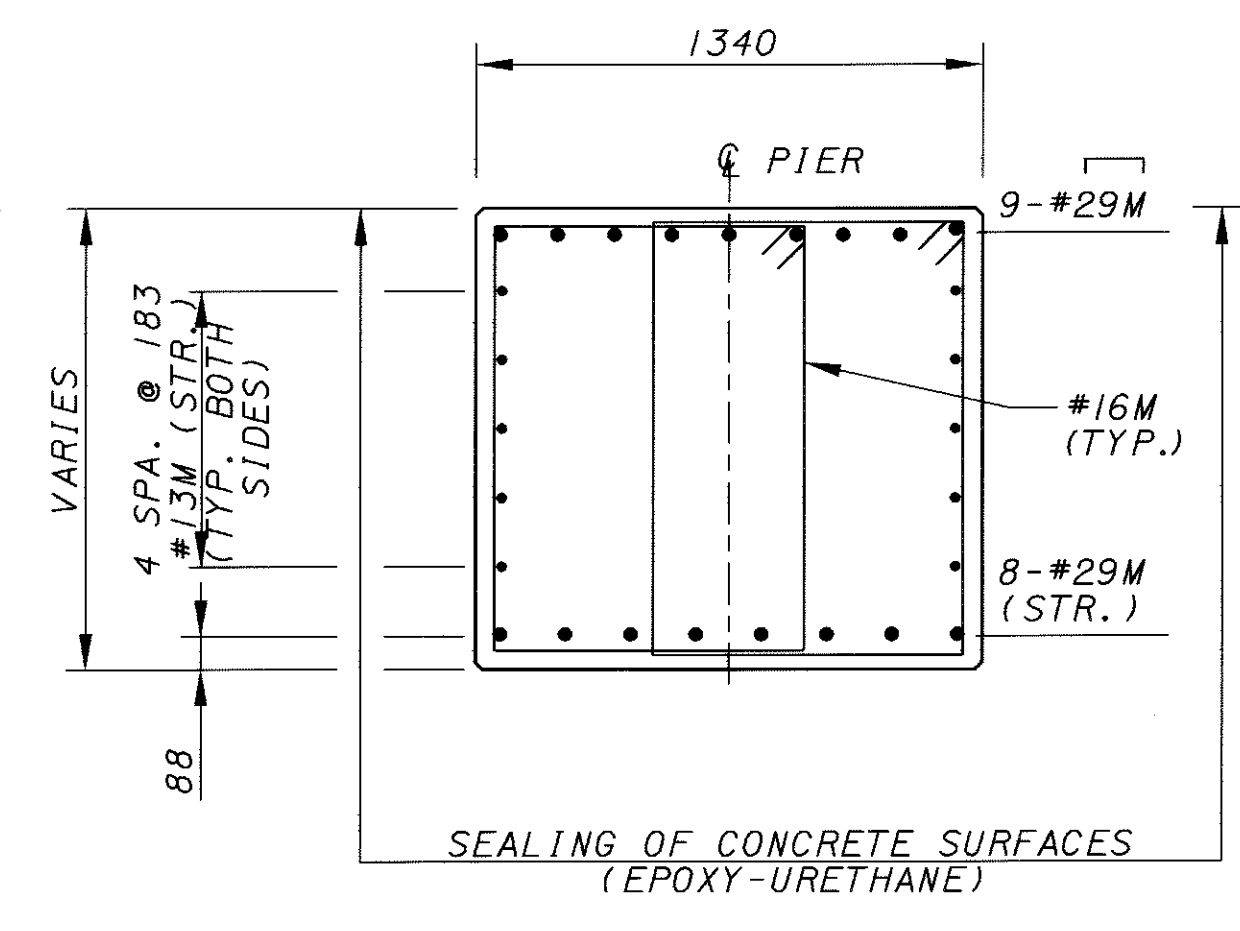
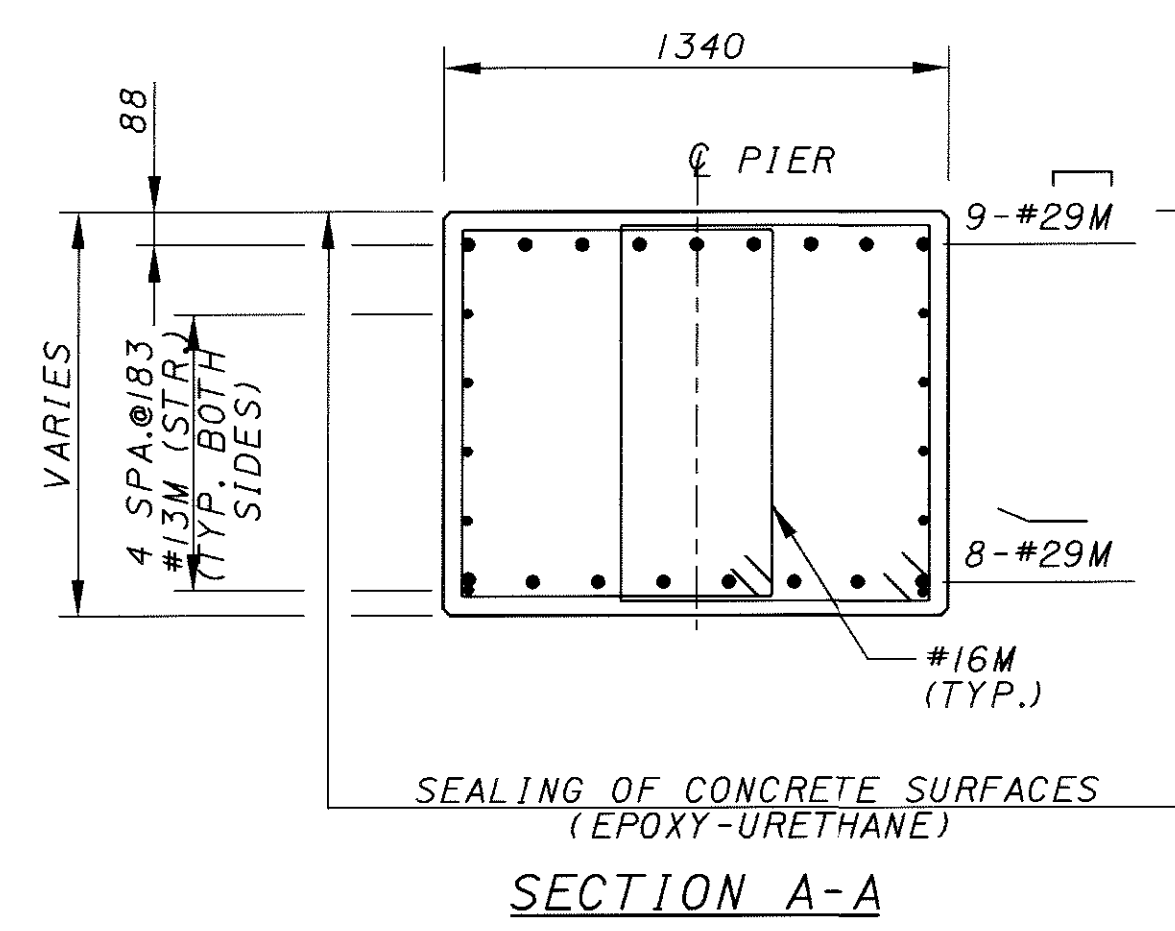
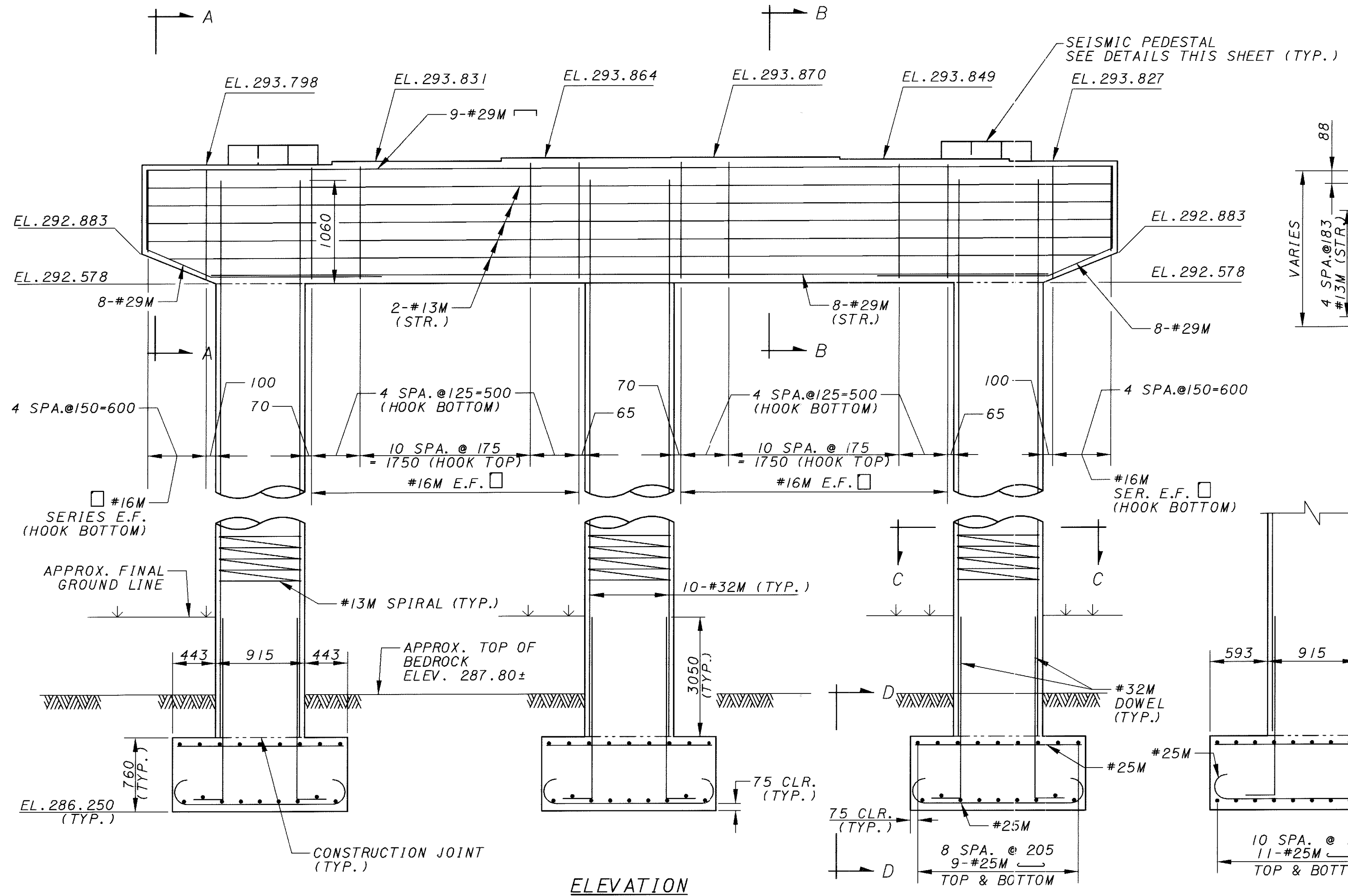
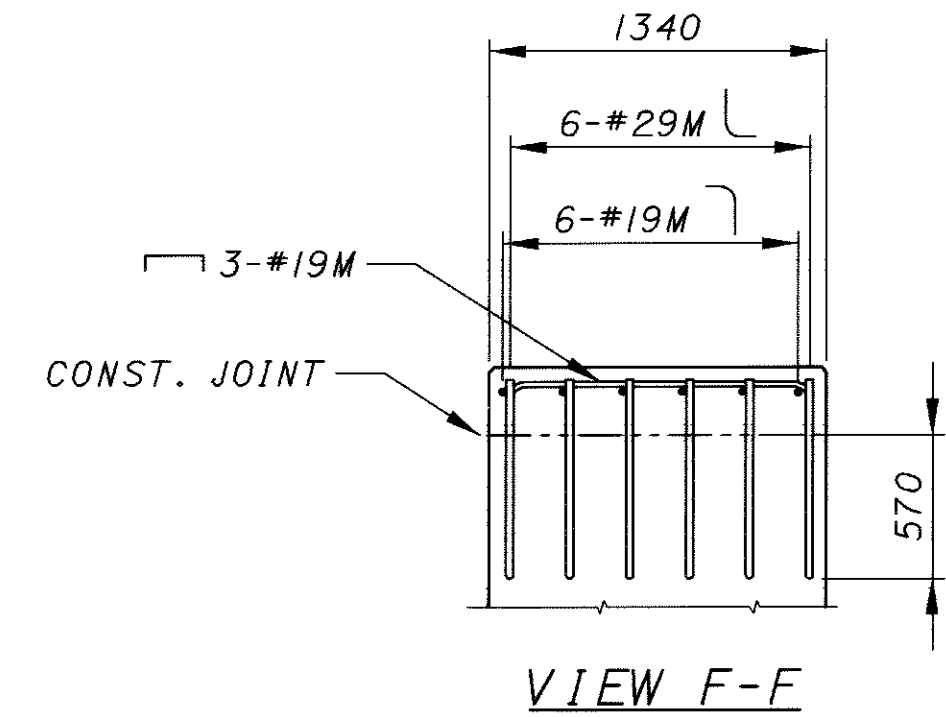
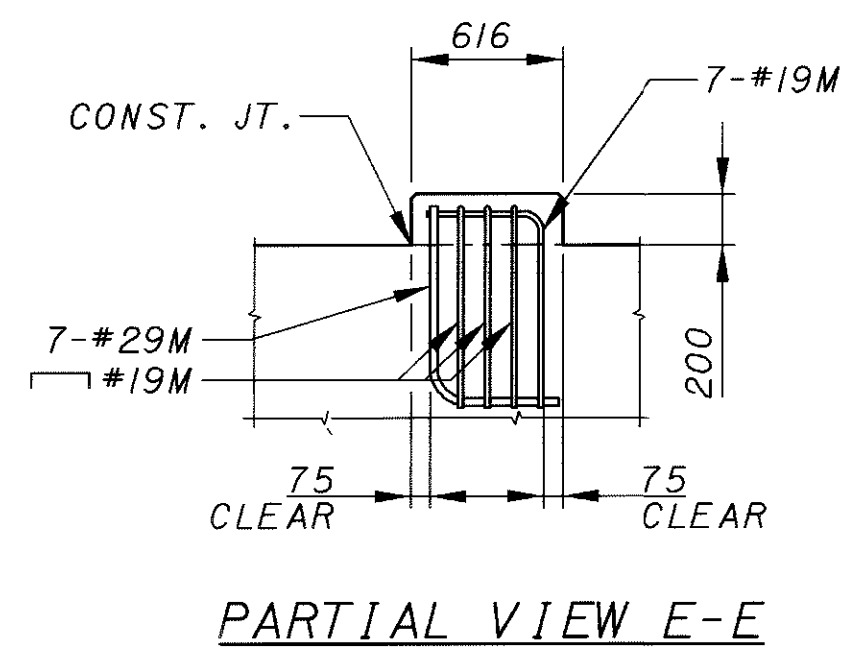
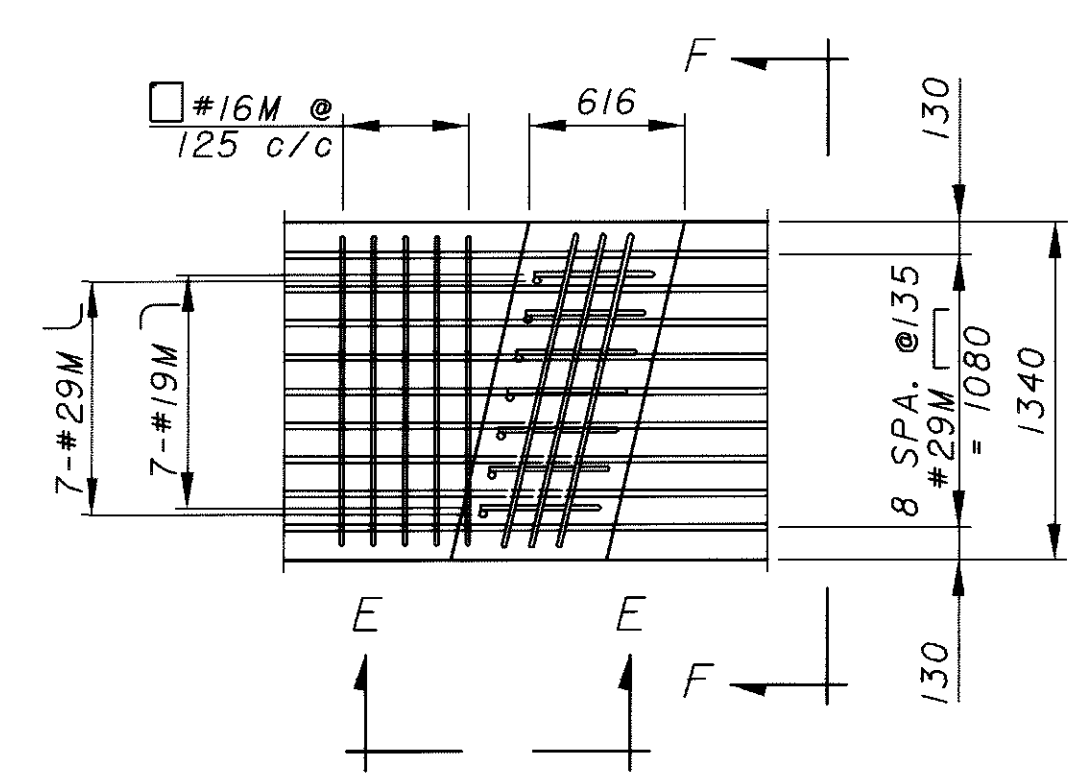
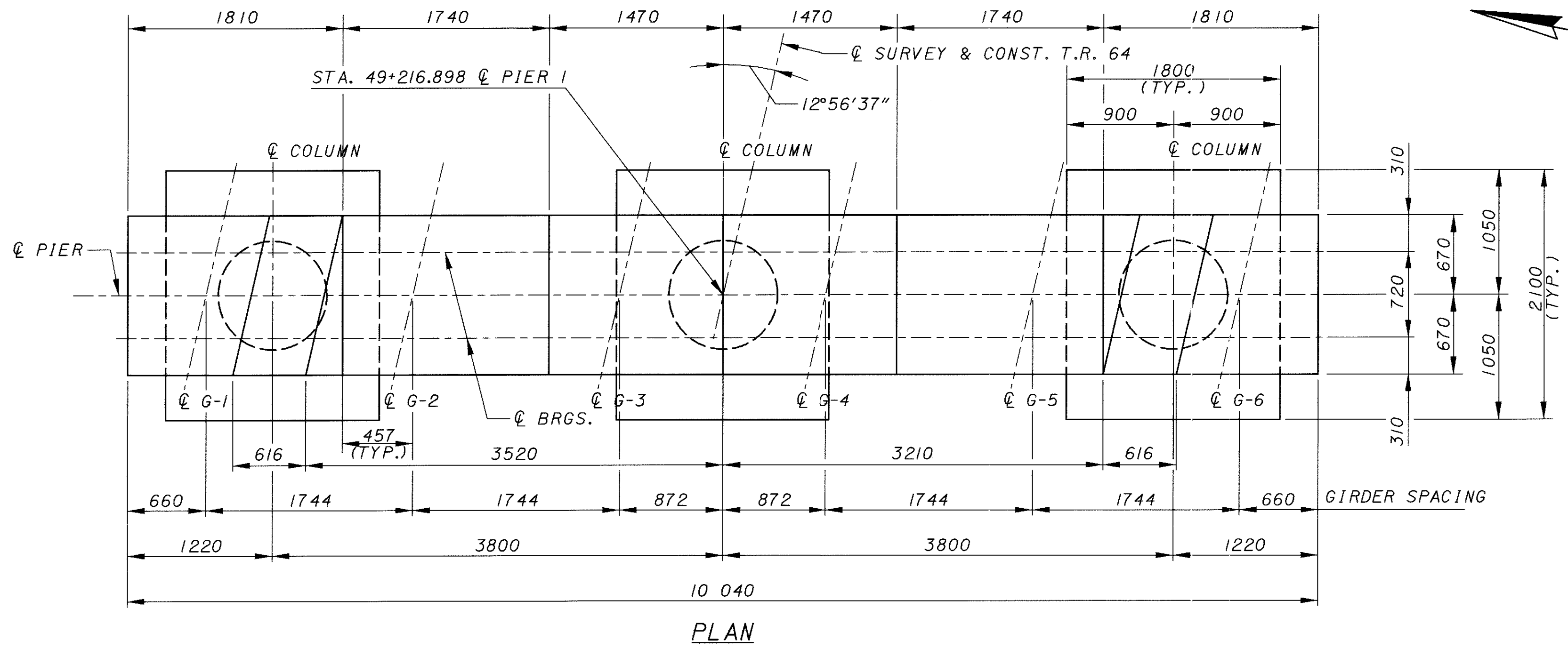
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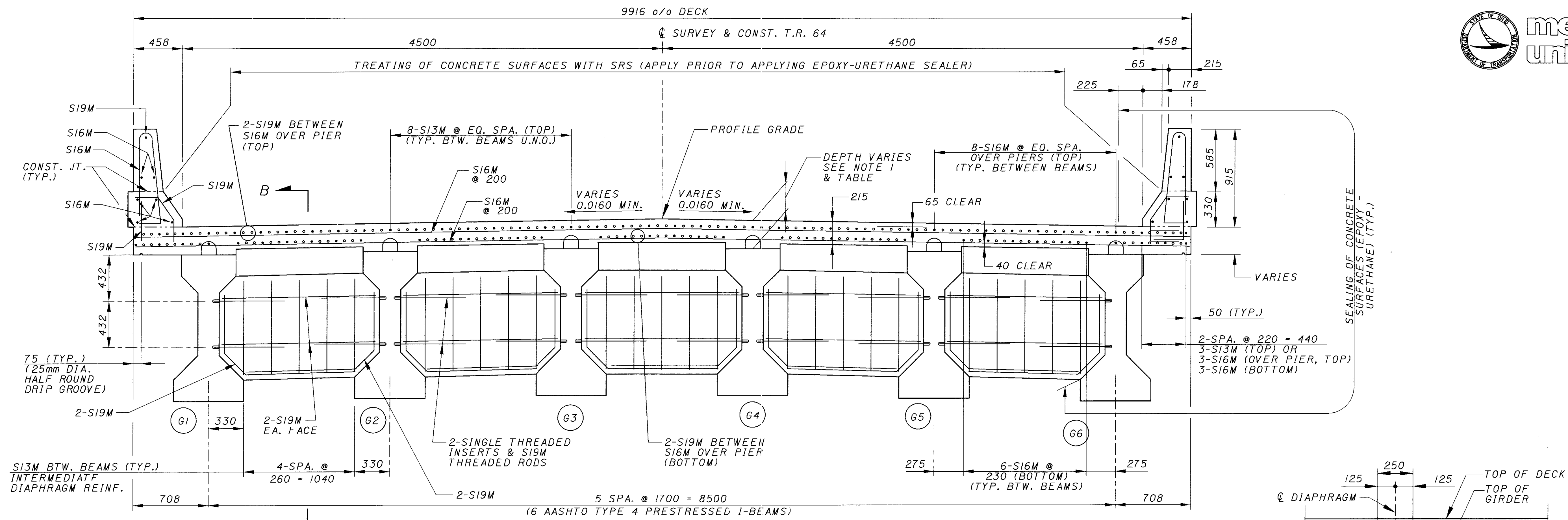
	GIRDER SEAT ELEVATIONS					
	GIRDER NO. 1	GIRDER NO. 2	GIRDER NO. 3	GIRDER NO. 4	GIRDER NO. 5	GIRDER NO. 6
REAR ABUTMENT	293.078	293.115	293.152	293.162	293.145	293.127
FORWARD ABUTMENT	294.286	294.254	294.220	294.184	294.147	294.107

- NOTES:**
- ALL DIMENSIONS GIVEN IN MILLIMETERS; ALL ELEVATIONS AND STATIONS IN METERS.
 - POROUS BACKFILL WITH FILTER FABRIC, 600 mm THICK, SHALL EXTEND UP TO THE PLANE OF THE SUBGRADE, TO 300 mm BELOW THE EMBANKMENT SURFACE, AND Laterally TO THE ENDS OF THE WINGWALLS.
 - ABUTMENT DIAPHRAGM CONCRETE FOR PRESTRESSED I-BEAM SUPERSTRUCTURES:
CONCRETE ENCASEING PRESTRESSED I-BEAM STRUCTURAL MEMBERS, SUPPORTED ON SEMI-INTEGRAL TYPE ABUTMENTS, SHALL BE PLACED AT LEAST 48 HOURS BEFORE THE DECK CONCRETE IS PLACED IF THE BRIDGE SKEW IS 10° OR LESS. FOR BRIDGES WITH A SKEW GREATER THAN 10°, THE ABUTMENT DIAPHRAGM CONCRETE SHALL BE PLACED AS PART OF THE DECK POUR.

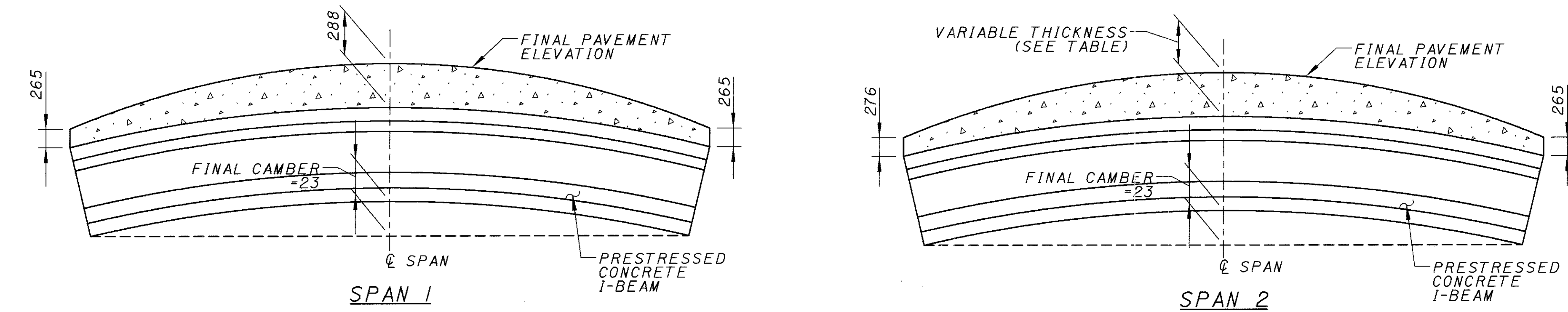




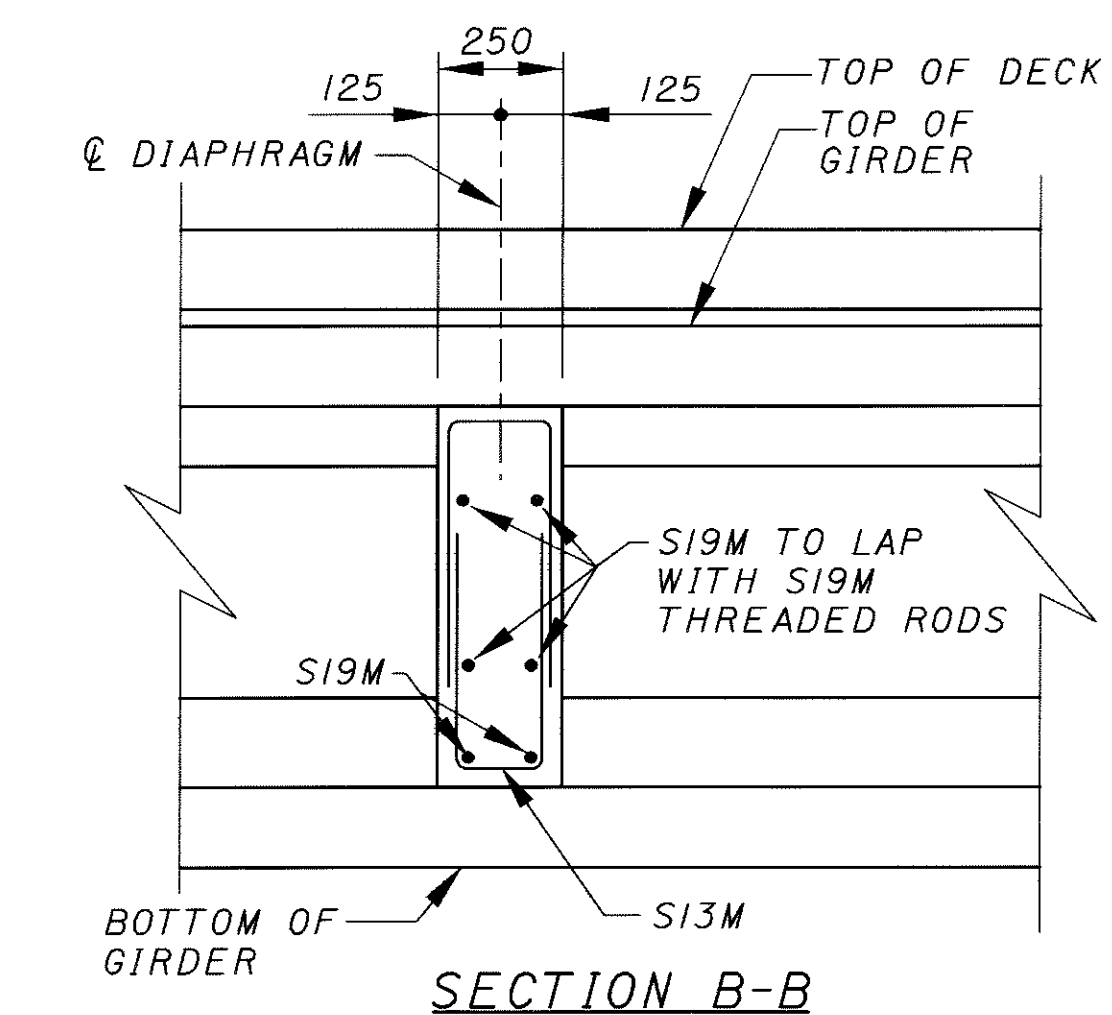
- NOTES:
1. SPIRAL REINFORCEMENT TOP OF THE COLUMN SPIRAL REINFORCEMENT SHALL BE EMBEDDED A MINIMUM OF 50 mm INTO THE PIER CAP CONCRETE.
 2. MINIMUM BAR LAPS
LAP NO. 25M BARS 1750 mm.
LAP NO. 29M BARS 2800 mm
LAP NO. 32M BARS 3050 mm
 3. MINIMUM CONCRETE COVER FOR ALL REINFORCING STEEL IS 50mm, UNLESS NOTED OTHERWISE.
 4. ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.
 5. SUGGESTED CONSTRUCTION PROCEDURE: PLACE SEISMIC PEDESTAL CONCRETE AFTER THE BEARING LOAD PLATE HAS BEEN WELDED TO THE GIRDER SOLE PLATE.



TRANSVERSE SECTION



DECK THICKNESS DIAGRAM

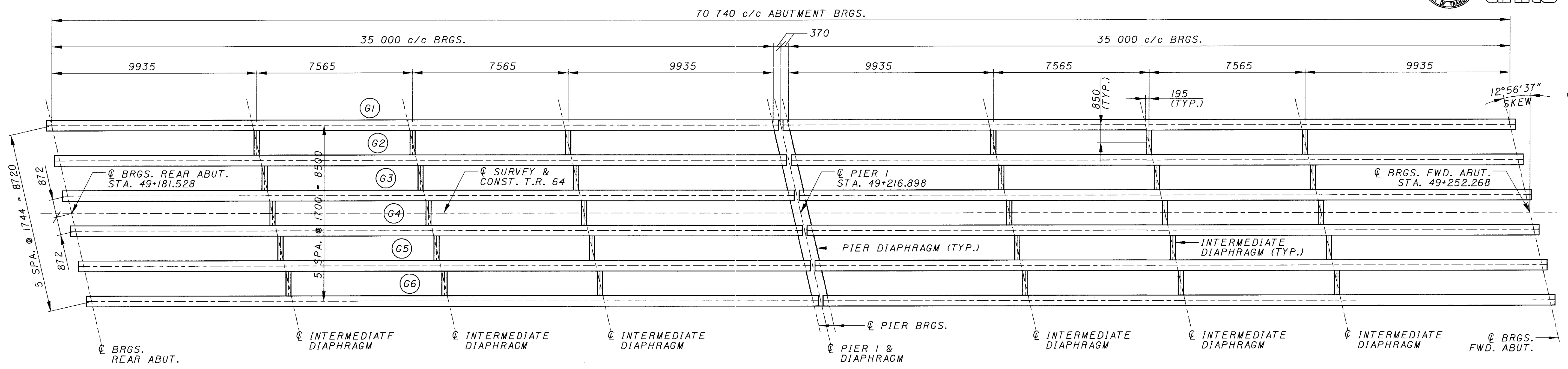


NOTES:

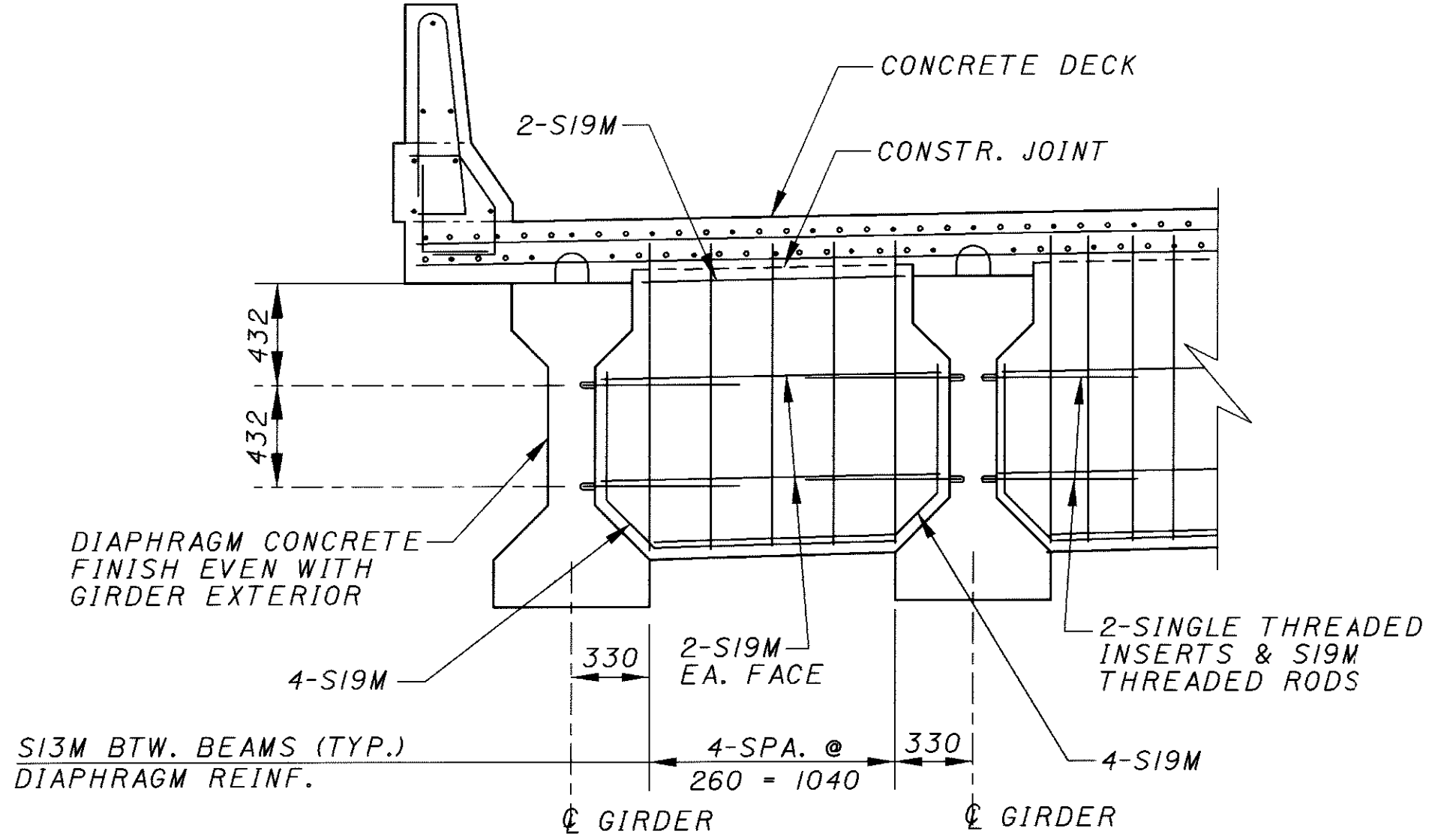
- INTERMEDIATE DIAPHRAGMS:
THE PLACEMENT OF DECK CONCRETE SHALL NOT PROCEED UNTIL ALL INTERMEDIATE DIAPHRAGMS HAVE BEEN PROPERLY INSTALLED. CONCRETE INTERMEDIATE DIAPHRAGMS SHALL BE COMPLETED AT LEAST 48 HOURS BEFORE DECK CONCRETE PLACEMENT BEGINS.
- CONCRETE DECK SLAB DEPTH
THE SLAB THICKNESSES OVER THE GIRDERS AS TABULATED ON THIS SHEET ARE NOMINAL DIMENSIONS. THE PAY QUANTITY FOR DECK CONCRETE SHALL BE BASED ON THE DESIGN SLAB THICKNESS AND THE AVERAGE OF THE NOMINAL HAUNCH DEPTHS AT MID-SPAN AND AT THE BEAM BEARINGS. THE HAUNCH DEPTH IS THE SLAB THICKNESS OVER THE GIRDER MINUS THE DESIGN SLAB THICKNESS. DEVIATION FROM THIS AVERAGE MAY OCCUR BECAUSE THE TOP OF THE BEAM MAY NOT HAVE THE CAMBER ANTICIPATED BY DESIGN DUE TO CONTRACTOR'S TIME OF ERECTION, MIX DESIGN, AND OTHER FABRICATION FACTORS. ONCE ALL BEAMS ARE SET IN THEIR FINAL POSITION, THE CONTRACTOR SHALL RECORD THE TOP OF BEAM ELEVATIONS AT EACH BEARING AND AT MID-SPAN. THE ACTUAL CAMBER FOR EACH MEMBER SHALL BE THE MEASURED ELEVATION AT MID-SPAN MINUS THE AVERAGE ELEVATION AT EACH BEARING. THE ACTUAL HAUNCH DEPTH AT MID-SPAN SHALL BE THE NOMINAL DIMENSION PLUS OR MINUS THE DIFFERENCE BETWEEN THE ACTUAL AND ANTICIPATED CAMBER.
- MINIMUM LAP LENGTHS:
LAP NO. 13M BARS 780 mm.
LAP NO. 16M BARS 980 mm.
LAP NO. 19M BARS 1170 mm.
- FOR PARAPET REINFORCING DETAILS, SEE SHEET 11 OF 14.
- ALL DIMENSIONS ARE IN MILLIMETERS. ALL ELEVATIONS AND STATIONS ARE IN METERS.

DECK SLAB DEPTH OVER GIRDERS (mm)

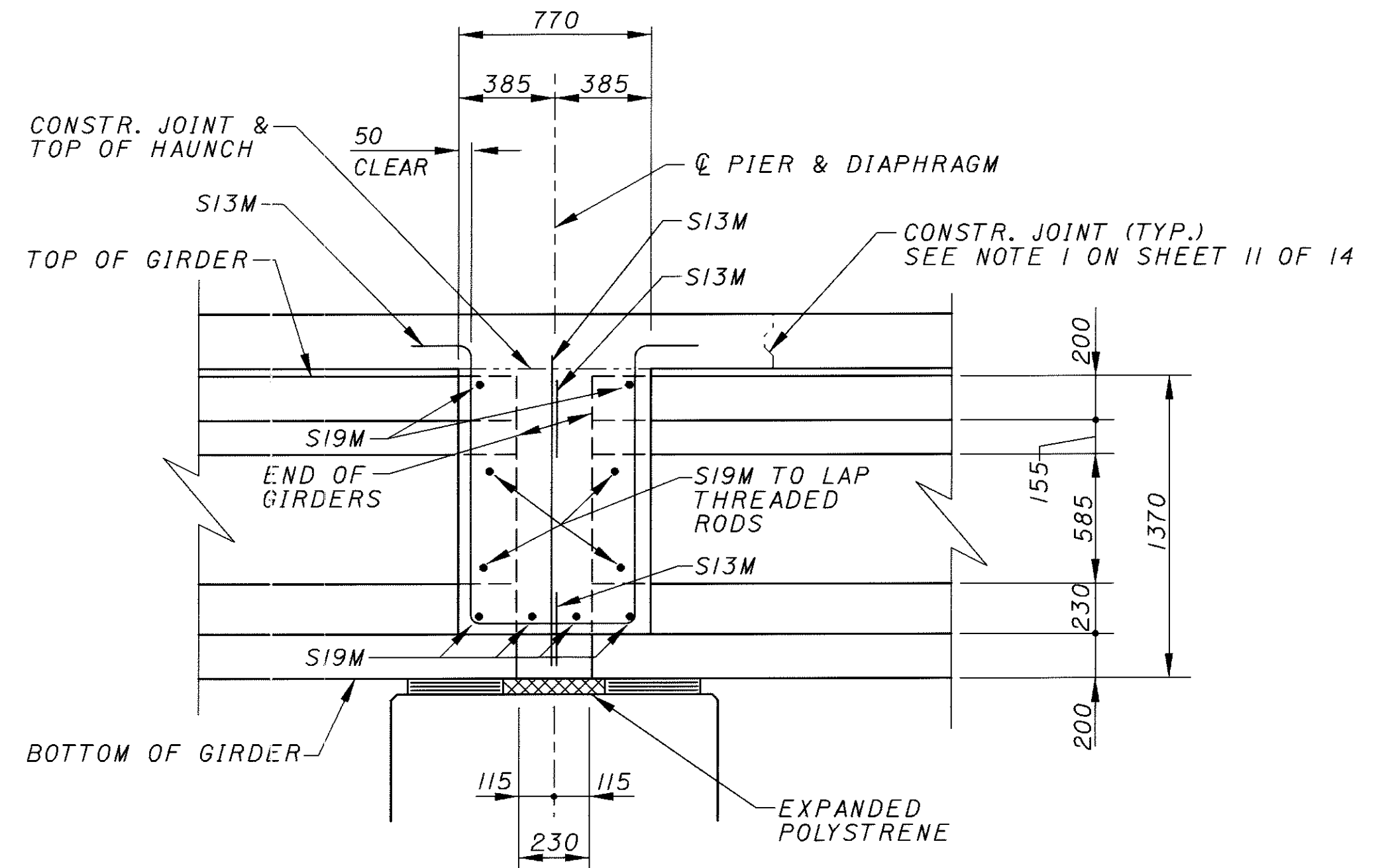
GIRDER NO.	SPAN 1					SPAN 2				
	CL BRGS. REAR ABUT.	0.25L	0.50L	0.75L	CL REAR BRGS. PIER 1	CL FWD. BRGS. PIER 1	0.25L	0.50L	0.75L	CL BRGS. FWD. ABUT.
1	265	283	288	283	265	276	253	268	273	265
2	265	283	288	283	265	276	269	279	279	265
3	265	283	288	283	265	276	284	289	284	265
4	265	283	288	283	265	276	293	296	290	265
5	265	283	288	283	265	276	296	302	299	265
6	265	283	288	283	265	276	299	309	309	265



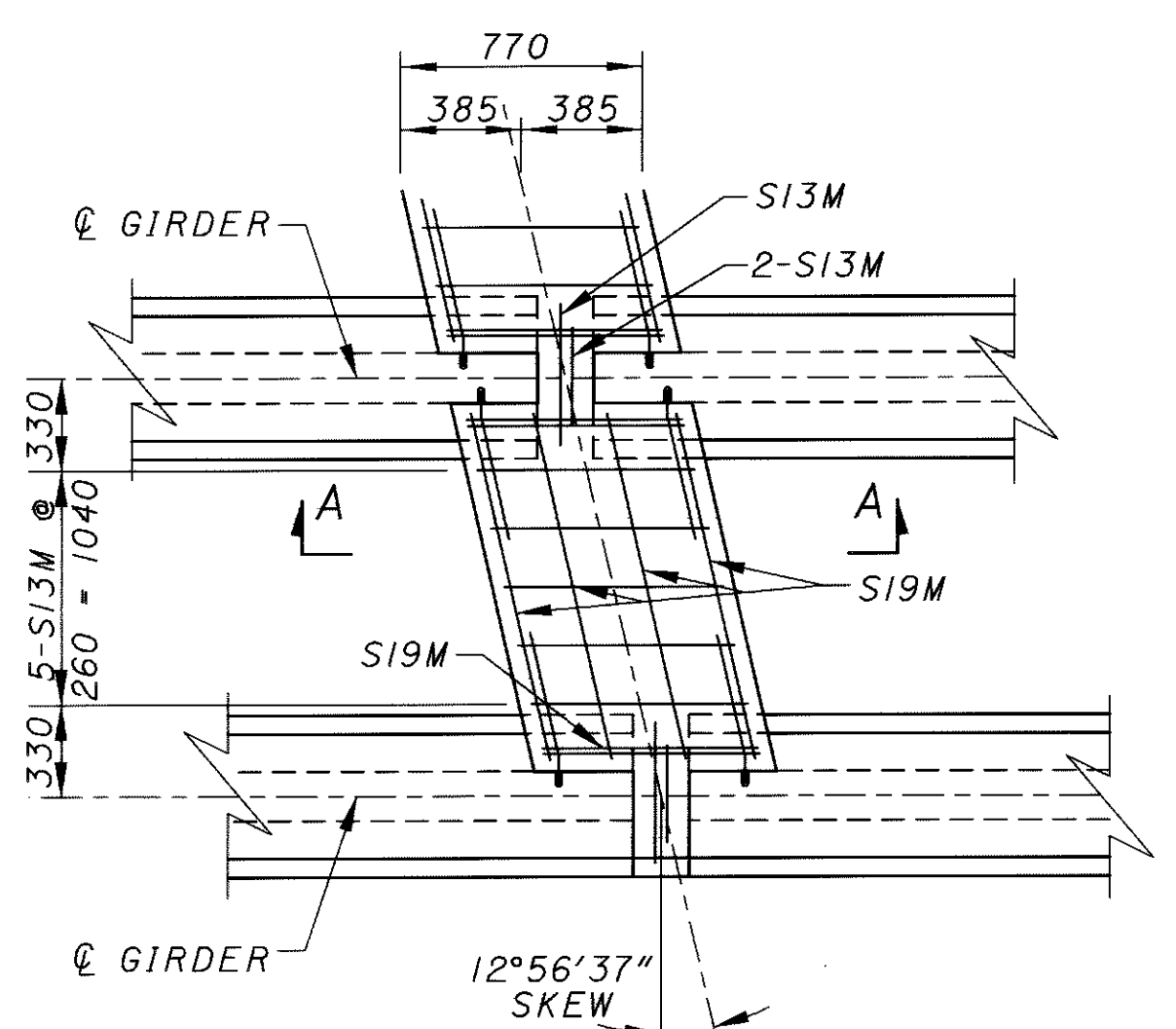
FRAMING PLAN



PIER DIAPHRAGM PARTIAL ELEVATION



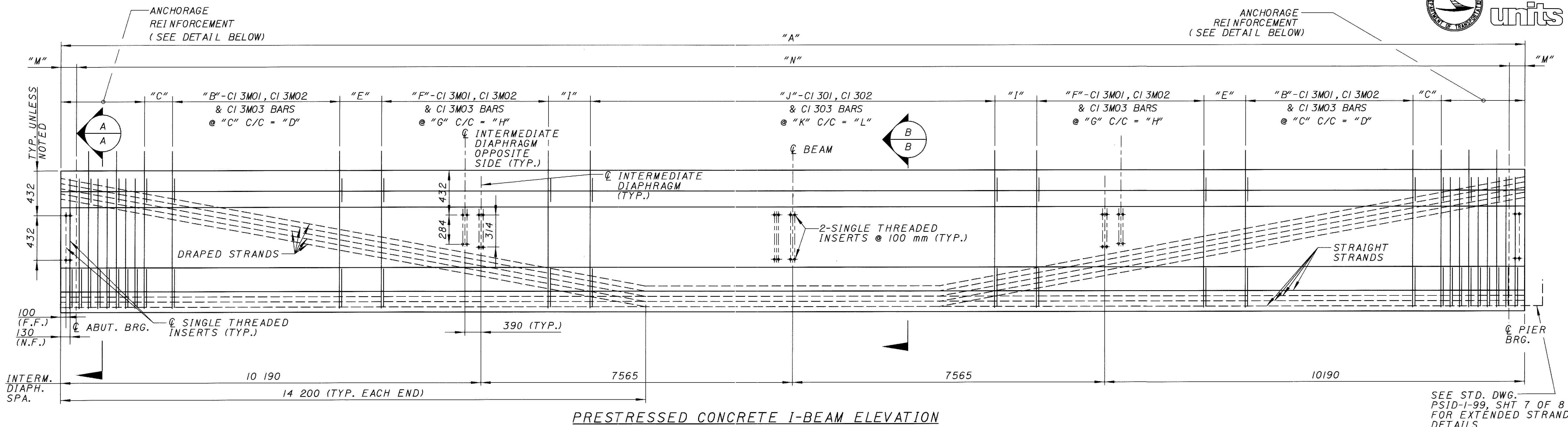
SECTION A-A
 (SHOWN PARALLEL TO ϕ SURVEY & CONST.)



PIER DIAPHRAGM PARTIAL PLAN

ALL DIMENSIONS ARE IN MILLIMETERS.
 ALL ELEVATIONS AND STATIONS ARE IN METERS.

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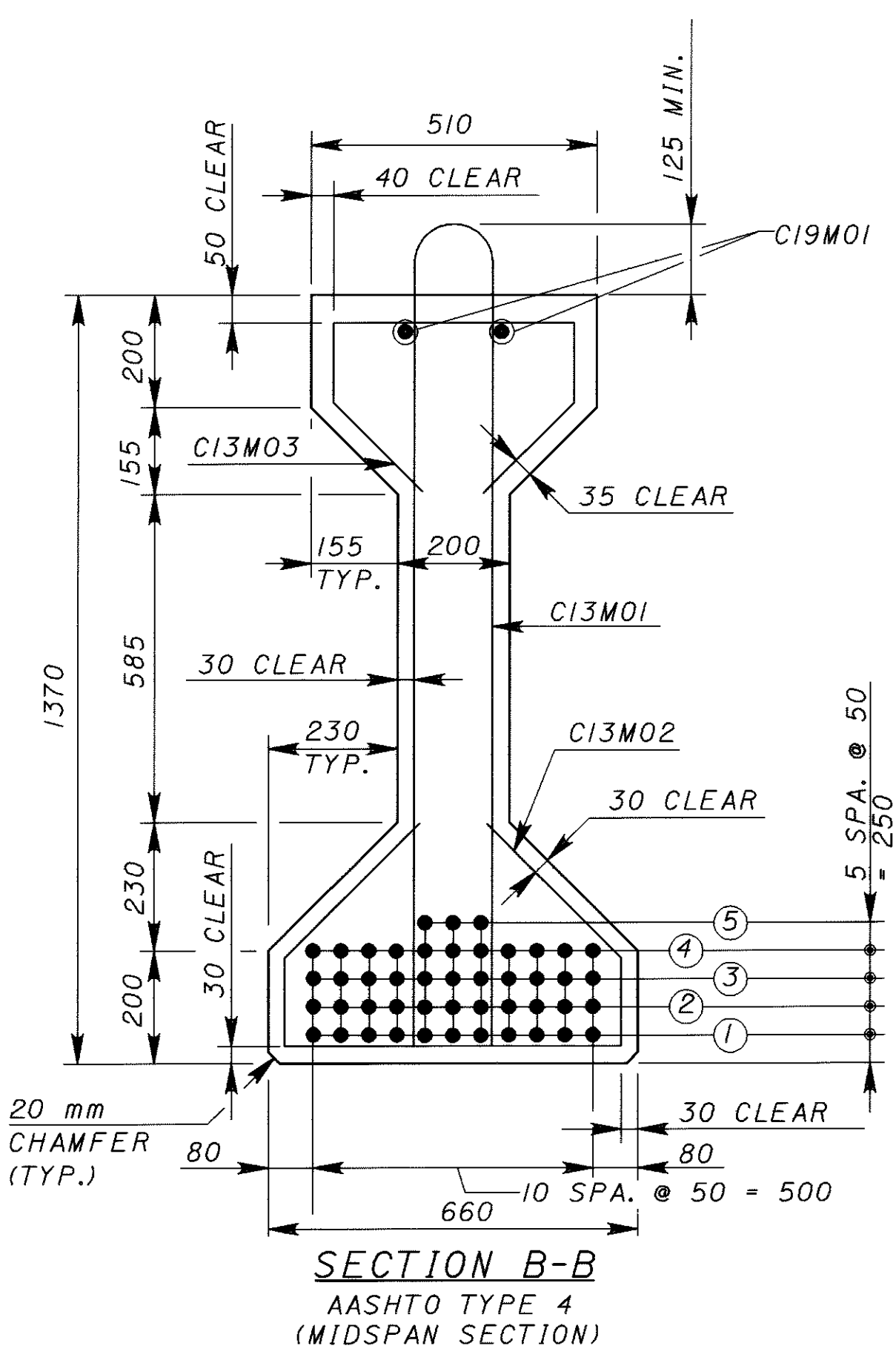
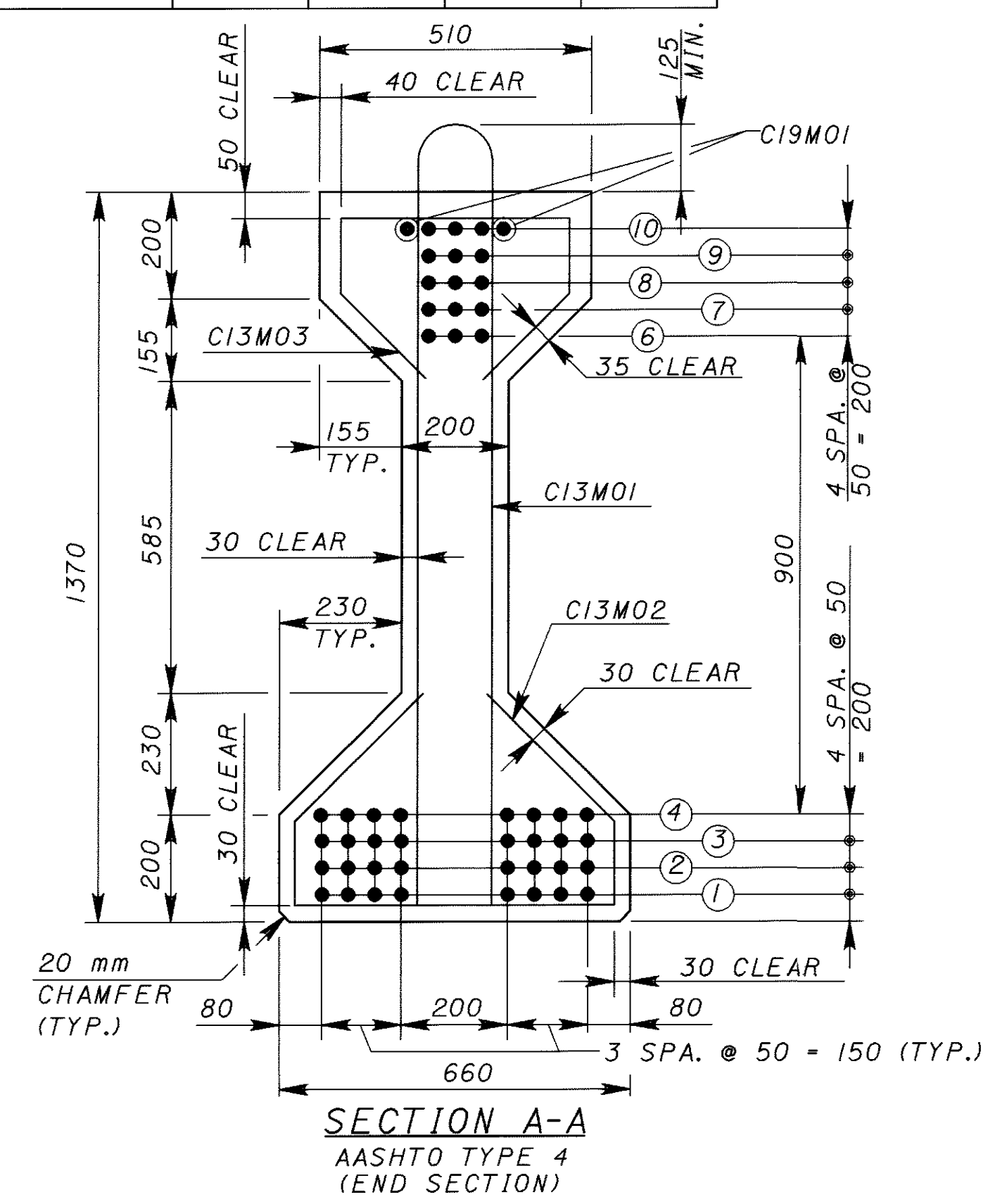
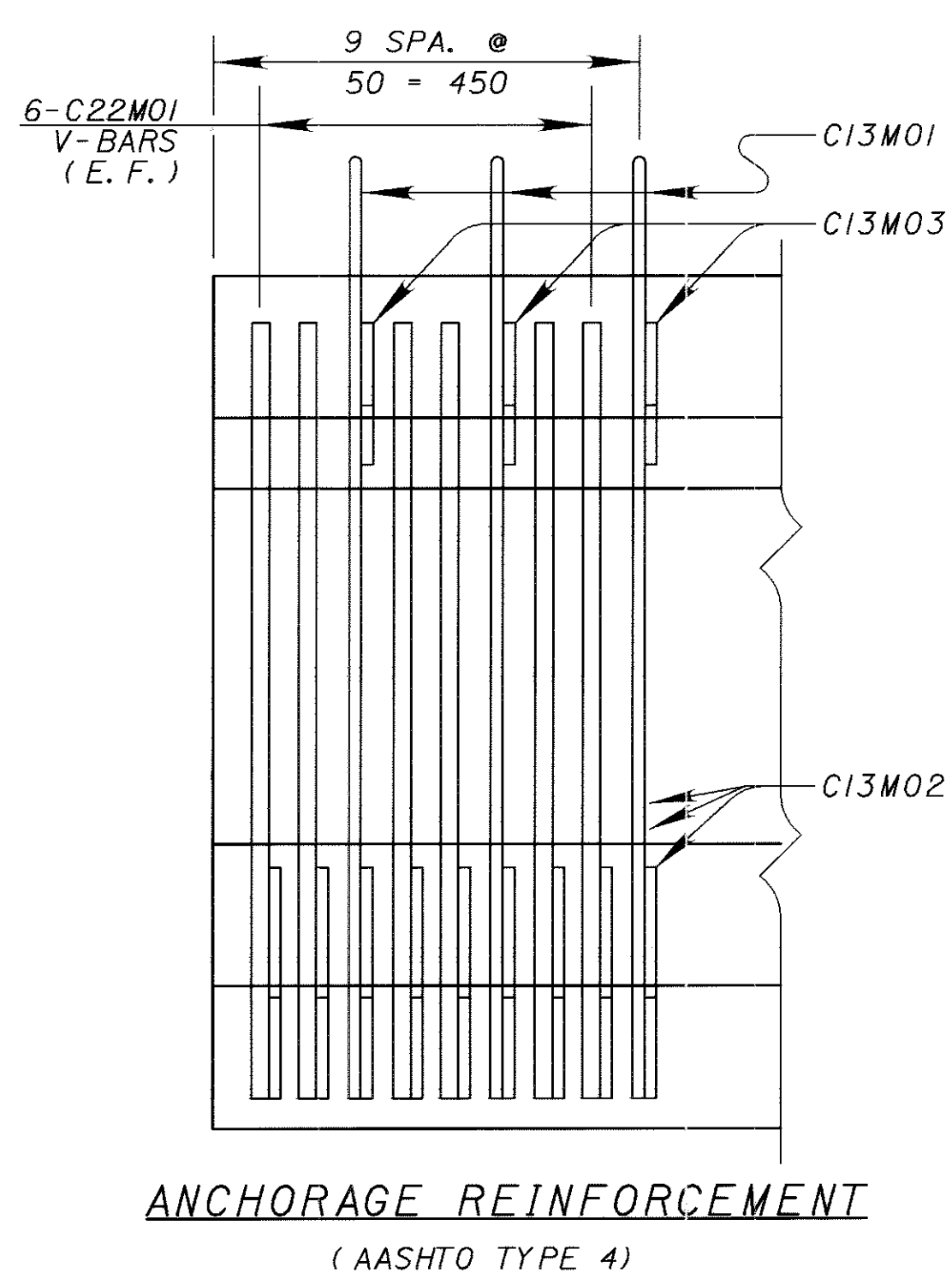
PRESTRESSED CONCRETE I-BEAM ELEVATION

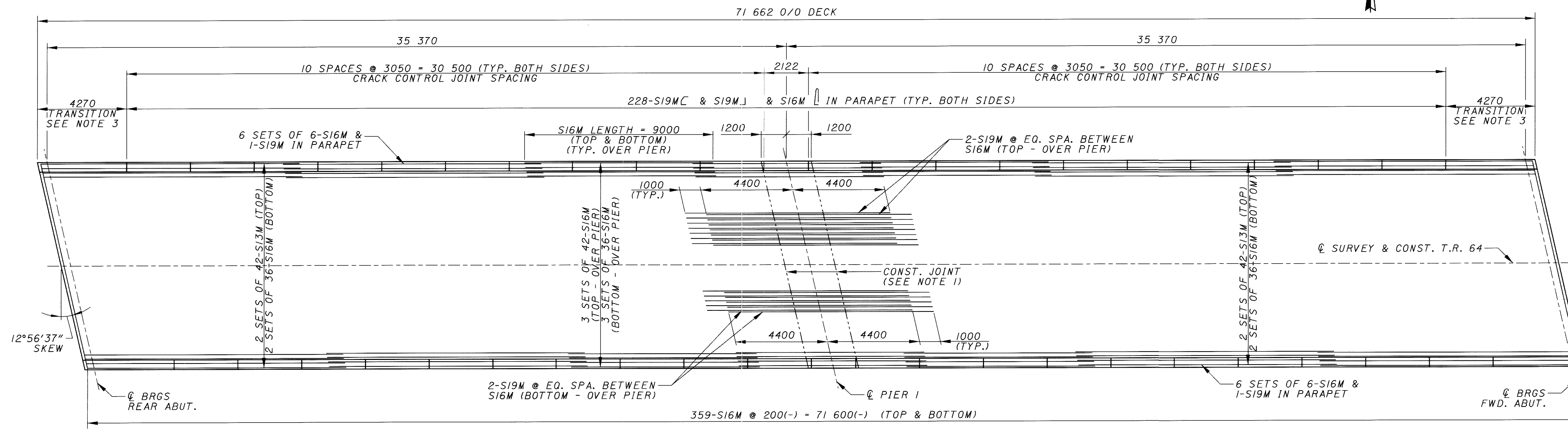
LOCATION		DIMENSIONS														APPROXIMATE WEIGHT (KG) PER BEAM
NO. REQ'D		A	B	C	D	E	F	G	H	I	J	K	L	M	N	
12	SPANS 1 & 2	35 510	13	240	2880	485	16	440	6600	450	29	475	13 300	255	35 000	47 350

LOCATION	BEAM SECTION	NUMBER OF STRANDS PER ROW AT EACH BEAM										TOTAL STRANDS	CONCRETE STRENGTHS		NUMBER OF BARS PER BEAM				
		PATTERN											f'ci	f'c	CI 3M01 BARS REQ'D	CI 3M02 BARS REQ'D	CI 3M03 BARS REQ'D	C22M01 BARS REQ'D	
		ROW NUMBER	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)								(10)
SPANS 1 & 2	AASHTO TYPE 4 (1370 mm)	END SPAN	8	8	8	8	--	3	3	3	3	3	47	34.5 MPa	48.0 MPa	93	105	93	24
		MID SPAN	11	11	11	11	3	--	--	--	--	47							

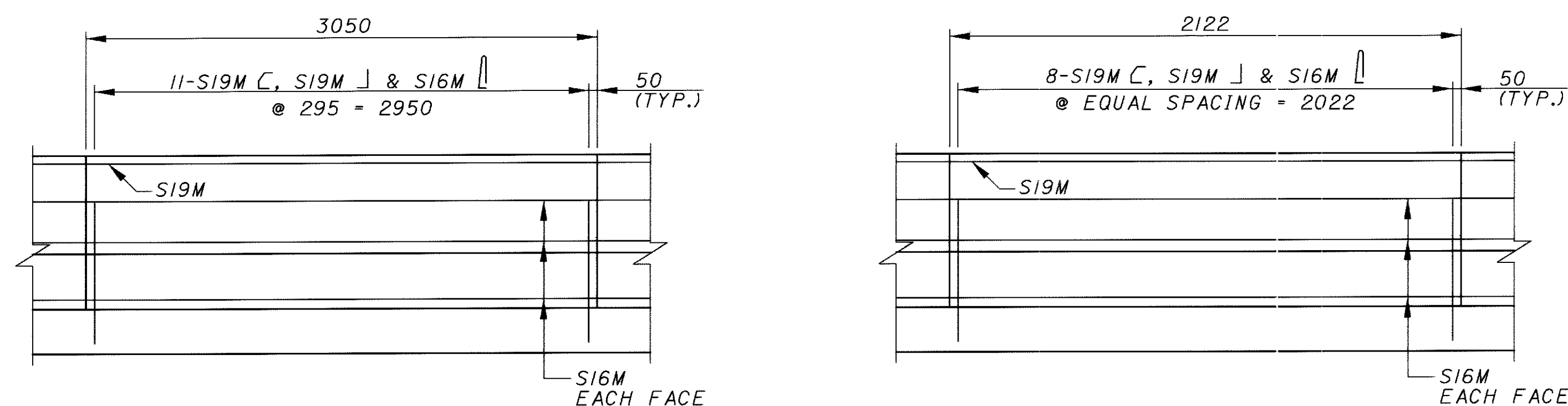
- NOTES:**
- ALL DIMENSIONS GIVEN IN MILLIMETERS.
 - FOR INTERMEDIATE AND PIER DIAPHRAGM DETAILS, SEE SHEET 9 OF 14.
 - FOR ABUTMENT DIAPHRAGM DETAILS, SEE SHEETS 4 - 6 OF 14.
 - FOR ADDITIONAL BEAM DETAILS AND NOTES, SEE STD. DWG. PSID-1-99.
 - OMIT THREADED INSERTS ON EXTERIOR FACE OF FASCIA BEAMS, EXCEPT AT ABUTMENT ENDS OF BEAMS.
 - PRECAST BEAM FABRICATOR TO ADJUST THE VERTICAL LOCATION OF INSERTS TO CLEAR PRESTRESSING STRANDS BY 50 mm.

- LEGEND**
- E.F. - EACH FACE
 - N.F. - NEAR FACE
 - F.F. - FAR FACE
 - CLR. - CLEAR
 - TYP. - TYPICAL
 - U.N.O. - UNLESS NOTED OTHERWISE
 - - FULLY BONDED PRESTRESSING STRANDS





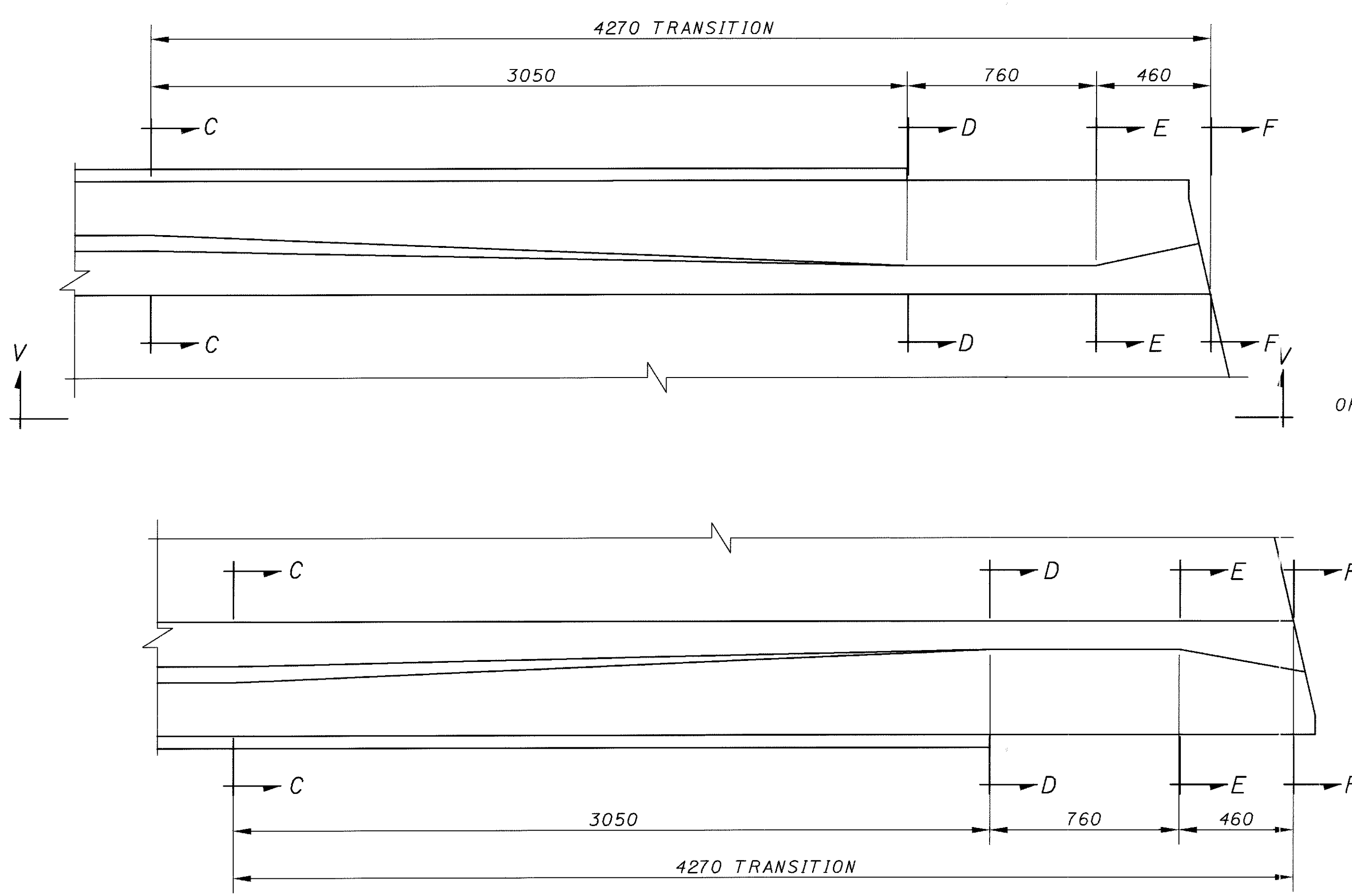
DECK REINFORCING PLAN



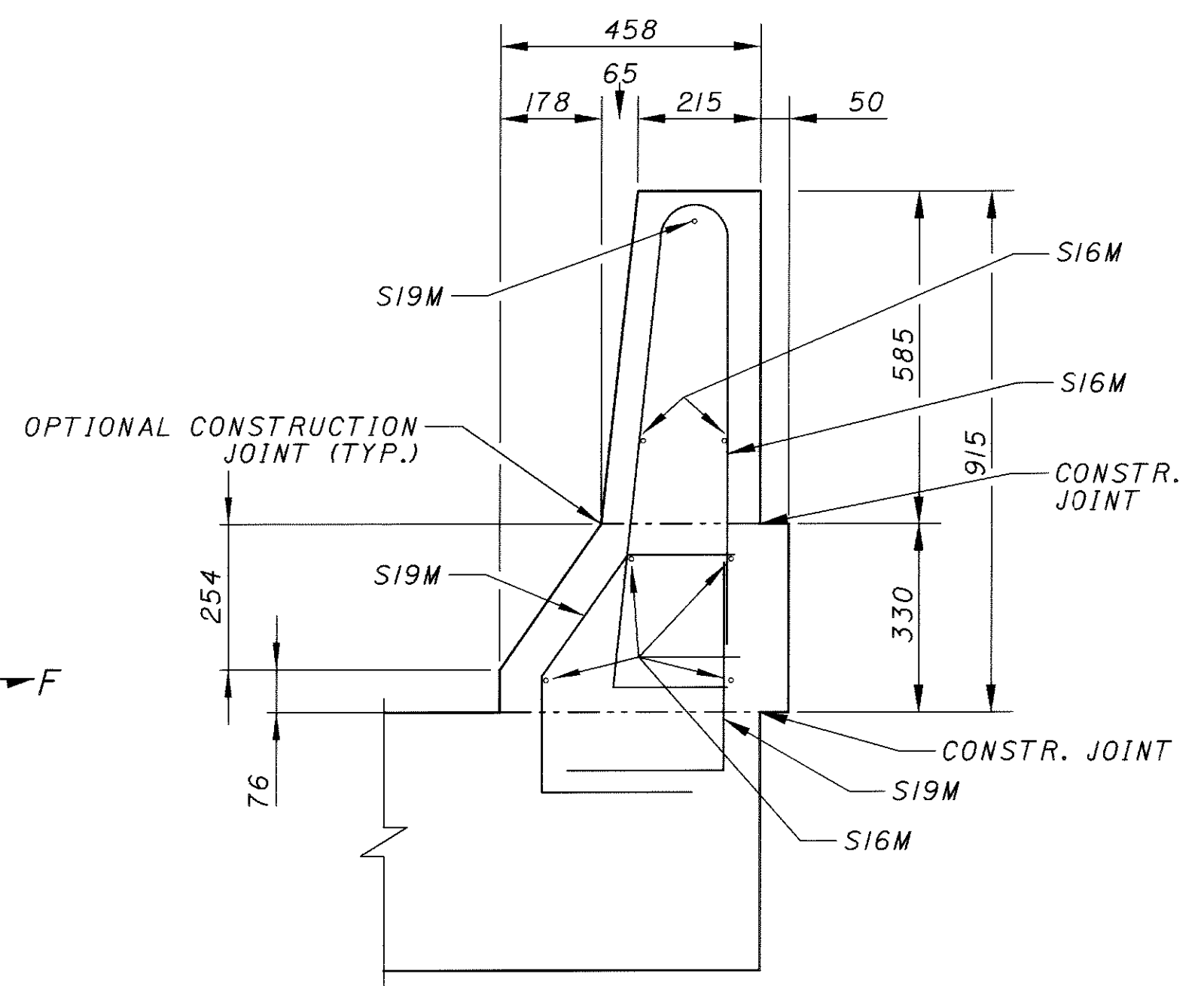
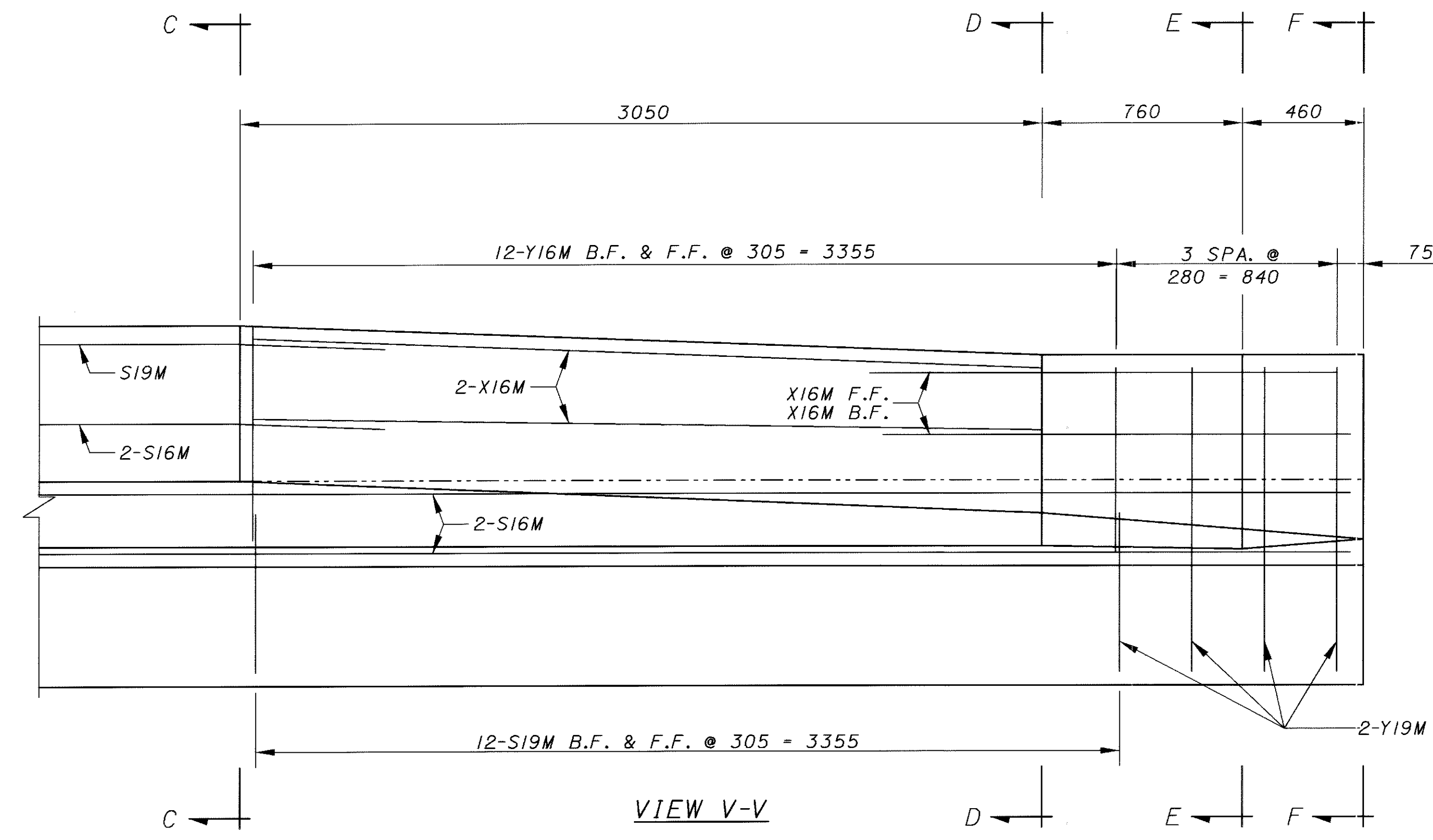
PARAPET REINFORCING DETAILS

NOTES:

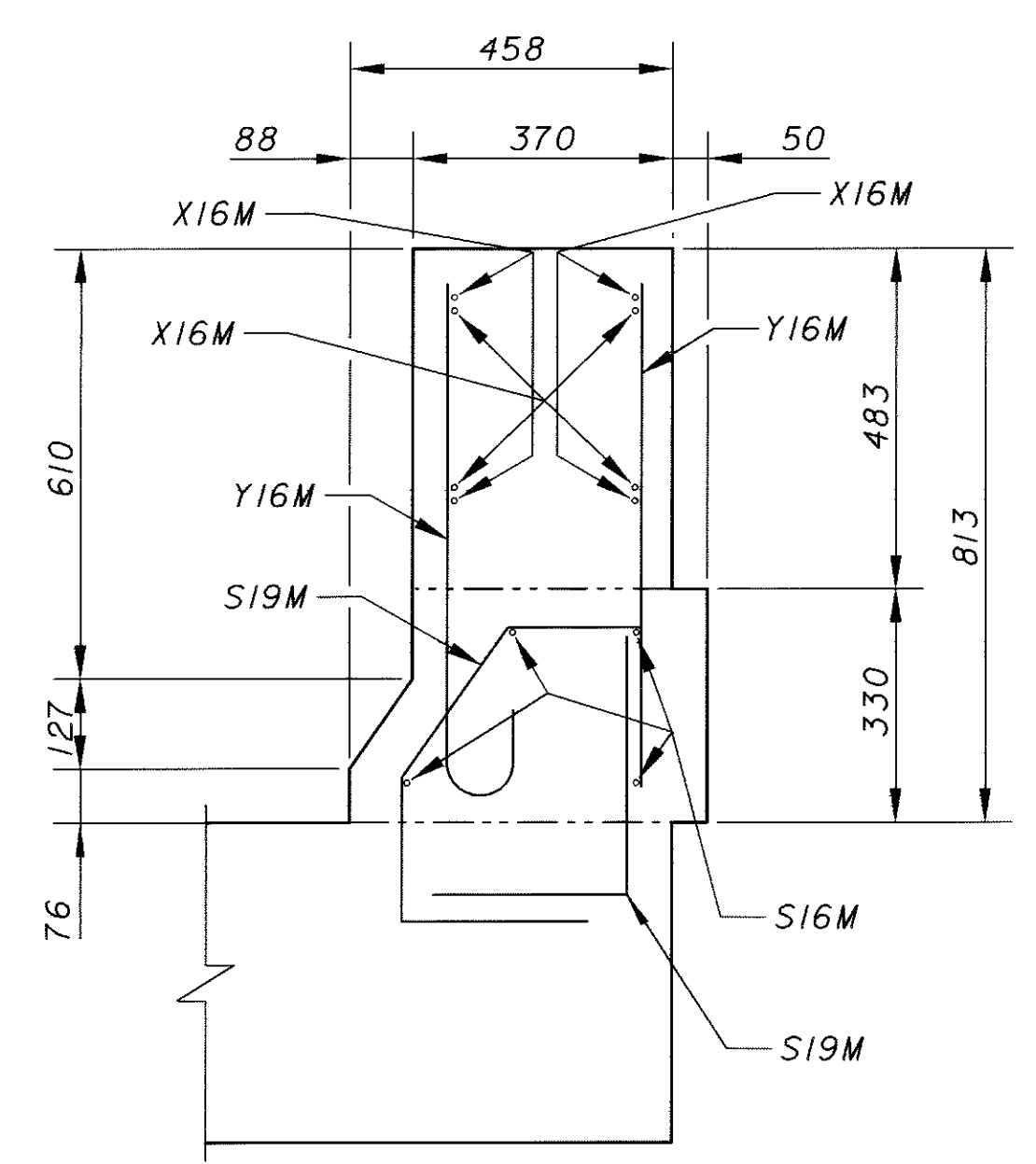
1. NO CONCRETE SHALL BE PLACED BETWEEN THE CONSTRUCTION JOINTS ON EITHER SIDE OF THE PIER, INCLUDING THE PIER DIAPHRAGM CONCRETE, UNTIL THE DECK CONCRETE HAS BEEN PLACED IN THE SPANS ADJACENT TO THE PIER.
2. FOR DECK REINFORCING OVER ABUTMENT DIAPHRAGMS, SEE SECTION A-A, SHEET 6 OF 14.
3. FOR PARAPET TRANSITION DETAILS, SEE SHEET 12 OF 14.
4. MINIMUM LAP LENGTHS
LAP NO. 13M BARS 780 mm.
LAP NO. 16M BARS 980 mm.
LAP NO. 19M BARS 1170 mm.
5. ALL DIMENSIONS ARE IN MILLIMETERS; ALL ELEVATIONS AND STATIONS ARE IN METERS.



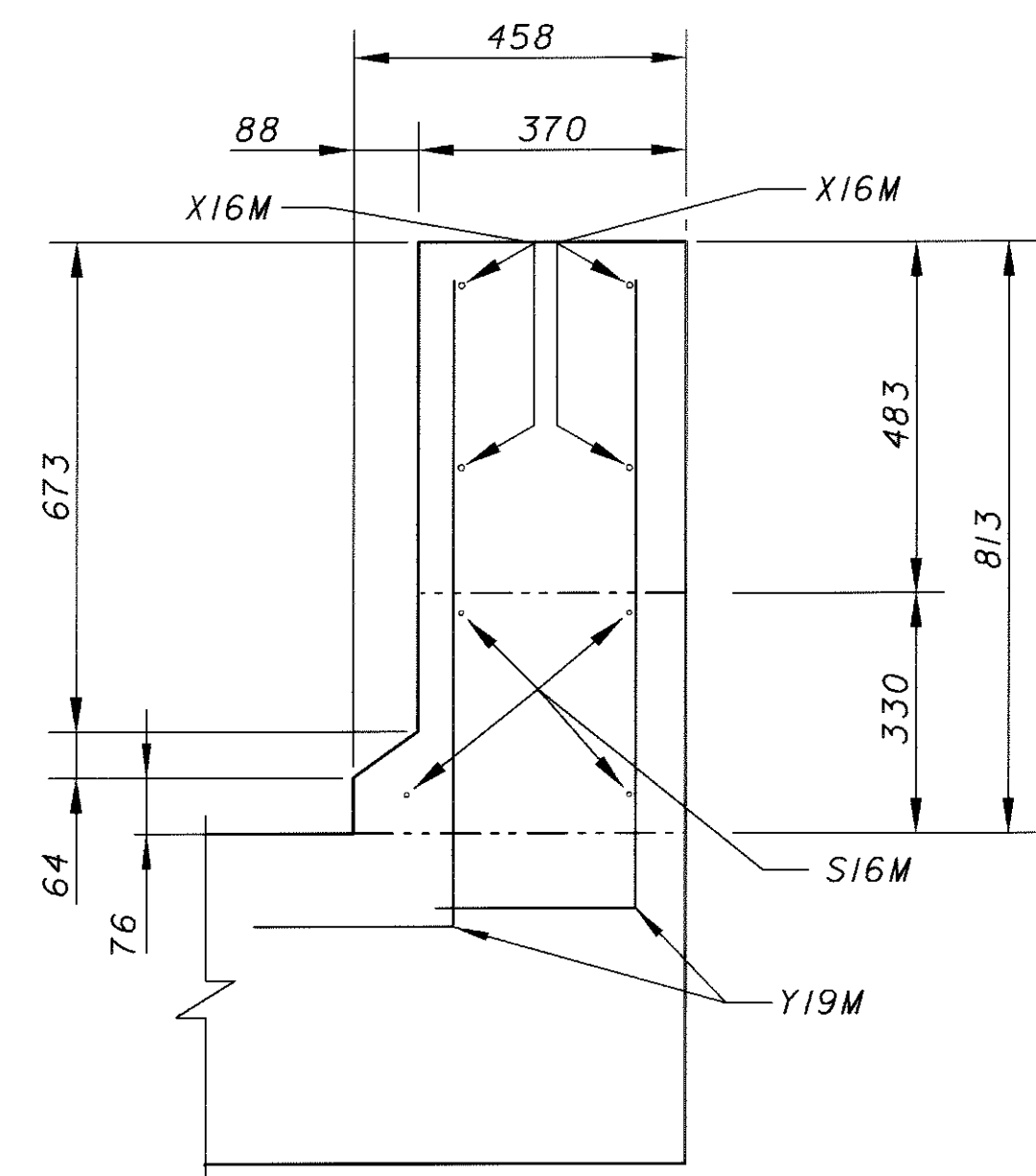
PARAPET TRANSITION DETAIL
 TYPICAL @ BOTH ABUTMENTS
 (SEE STD. DWG. BR-1M FOR ADDITIONAL DETAILS.)



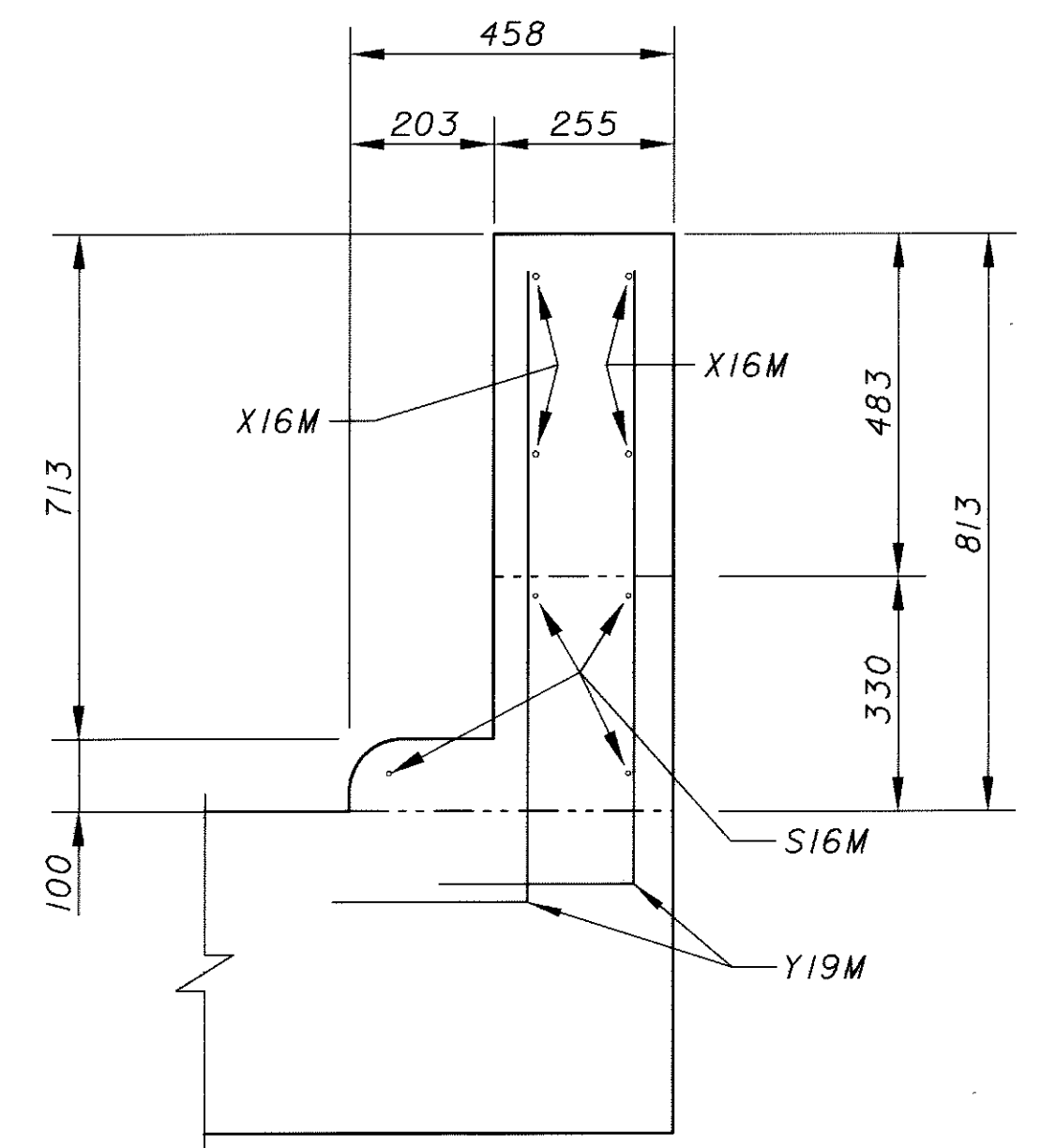
SECTION C-C



SECTION D-D



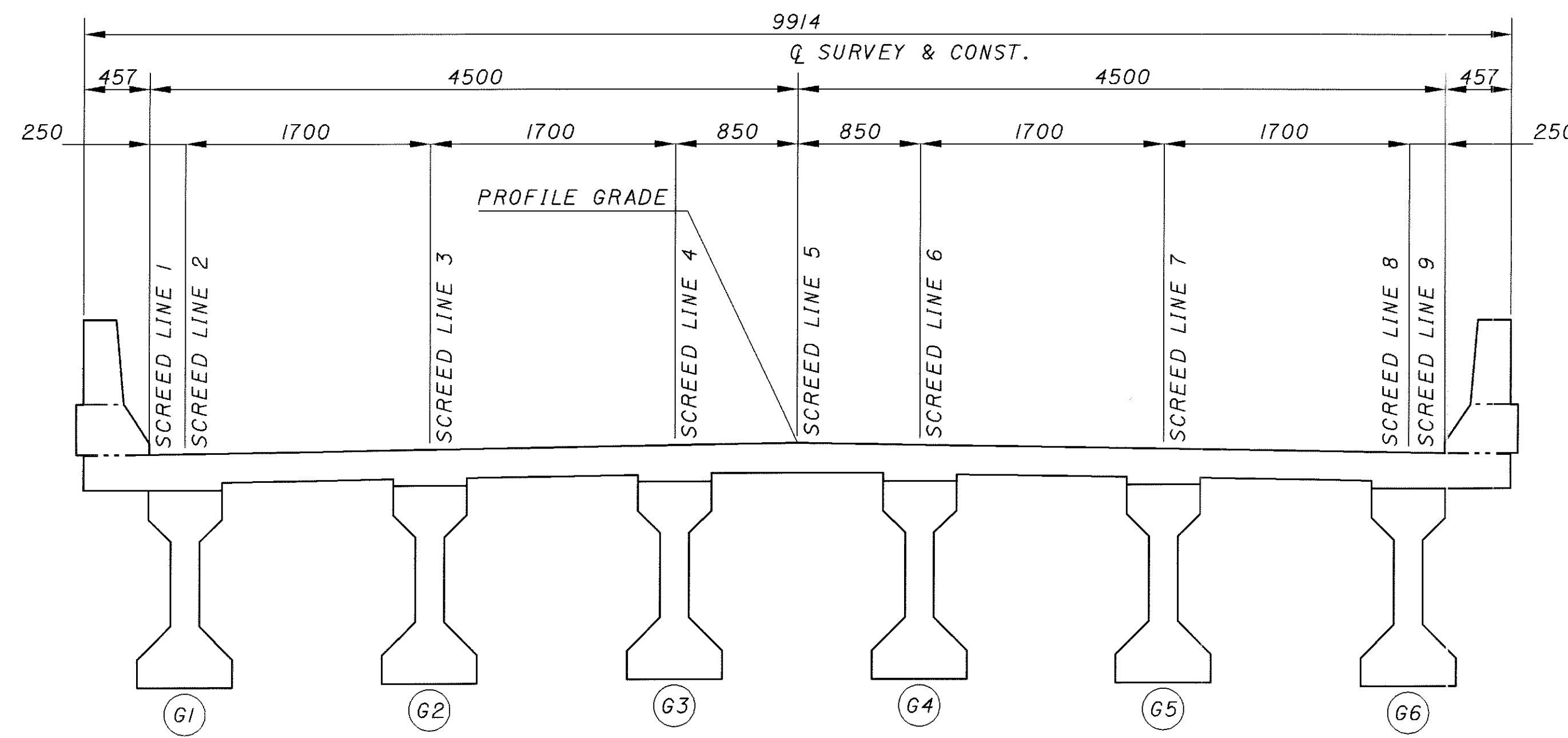
SECTION E-E



SECTION F-F

NOTES
 LEGEND
 F.F. = FRONT FACE
 B.F. = BACK FACE
 E.F. = EACH FACE

ALL DIMENSIONS ARE IN MILLIMETERS.
 ALL ELEVATIONS AND STATIONS ARE IN METERS.

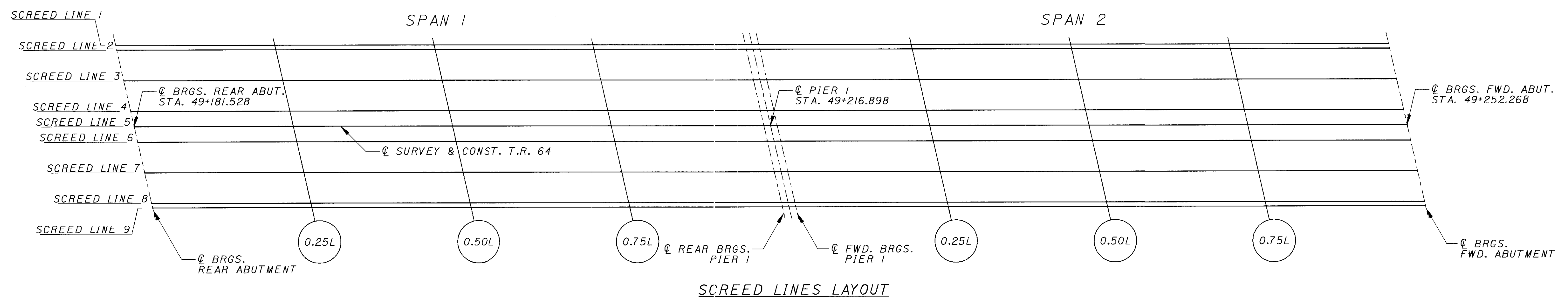


NOTES

1. SCREED ELEVATIONS

SCREED ELEVATIONS ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR THE ANTICIPATED CALCULATED DEAD LOAD DEFLECTION OF 44 mm AT MID-SPAN AND 31 mm AT THE QUARTER-SPANS.

L = SPAN LENGTH



SCREED ELEVATIONS TABLE

SPAN NO.	LOCATION	SCREED LINE 1		SCREED LINE 2		SCREED LINE 3		SCREED LINE 4		SCREED LINE 5		SCREED LINE 6		SCREED LINE 7		SCREED LINE 8		SCREED LINE 9	
		STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION	STATION	SCREED ELEVATION
SPAN NO. 1	0.00 L	49+180.494	294.810	49+180.551	294.816	49+180.942	294.853	49+181.333	294.890	49+181.528	294.909	49+181.723	294.900	49+182.114	294.883	49+182.505	294.865	49+182.562	294.863
	0.25 L	49+189.244	295.055	49+189.301	295.060	49+189.692	295.096	49+190.083	295.132	49+190.278	295.150	49+190.473	295.141	49+190.864	295.123	49+191.255	295.104	49+191.312	295.101
	0.50 L	49+197.994	295.257	49+198.051	295.262	49+198.442	295.297	49+198.833	295.332	49+199.028	295.350	49+199.223	295.340	49+199.614	295.321	49+200.005	295.301	49+200.062	295.298
	0.75 L	49+206.744	295.410	49+206.801	295.415	49+207.192	295.449	49+207.583	295.483	49+207.778	295.500	49+207.973	295.490	49+208.364	295.470	49+208.755	295.449	49+208.812	295.446
	1.00 L	49+215.494	295.522	49+215.551	295.526	49+215.942	295.559	49+216.333	295.592	49+216.528	295.609	49+216.723	295.598	49+217.114	295.577	49+217.505	295.555	49+217.562	295.552
SPAN NO. 2	0.00 L	49+216.234	295.533	49+216.291	295.537	49+216.682	295.570	49+217.073	295.603	49+217.268	295.620	49+217.463	295.609	49+217.854	295.587	49+218.245	295.566	49+218.302	295.563
	0.25 L	49+224.984	295.682	49+225.041	295.687	49+225.432	295.720	49+225.823	295.751	49+226.018	295.766	49+226.213	295.755	49+226.604	295.732	49+226.995	295.710	49+227.052	295.706
	0.50 L	49+233.734	295.844	49+233.791	295.846	49+234.182	295.857	49+234.573	295.867	49+234.768	295.871	49+234.963	295.859	49+235.354	295.835	49+235.745	295.812	49+235.802	295.808
	0.75 L	49+242.484	295.957	49+242.541	295.956	49+242.932	295.946	49+243.323	295.933	49+243.518	295.927	49+243.713	295.914	49+244.104	295.890	49+244.495	295.865	49+244.552	295.861
	1.00 L	49+251.234	296.029	49+251.291	296.024	49+251.682	295.992	49+252.073	295.958	49+252.268	295.940	49+252.463	295.922	49+252.854	295.885	49+253.245	295.845	49+253.302	295.839

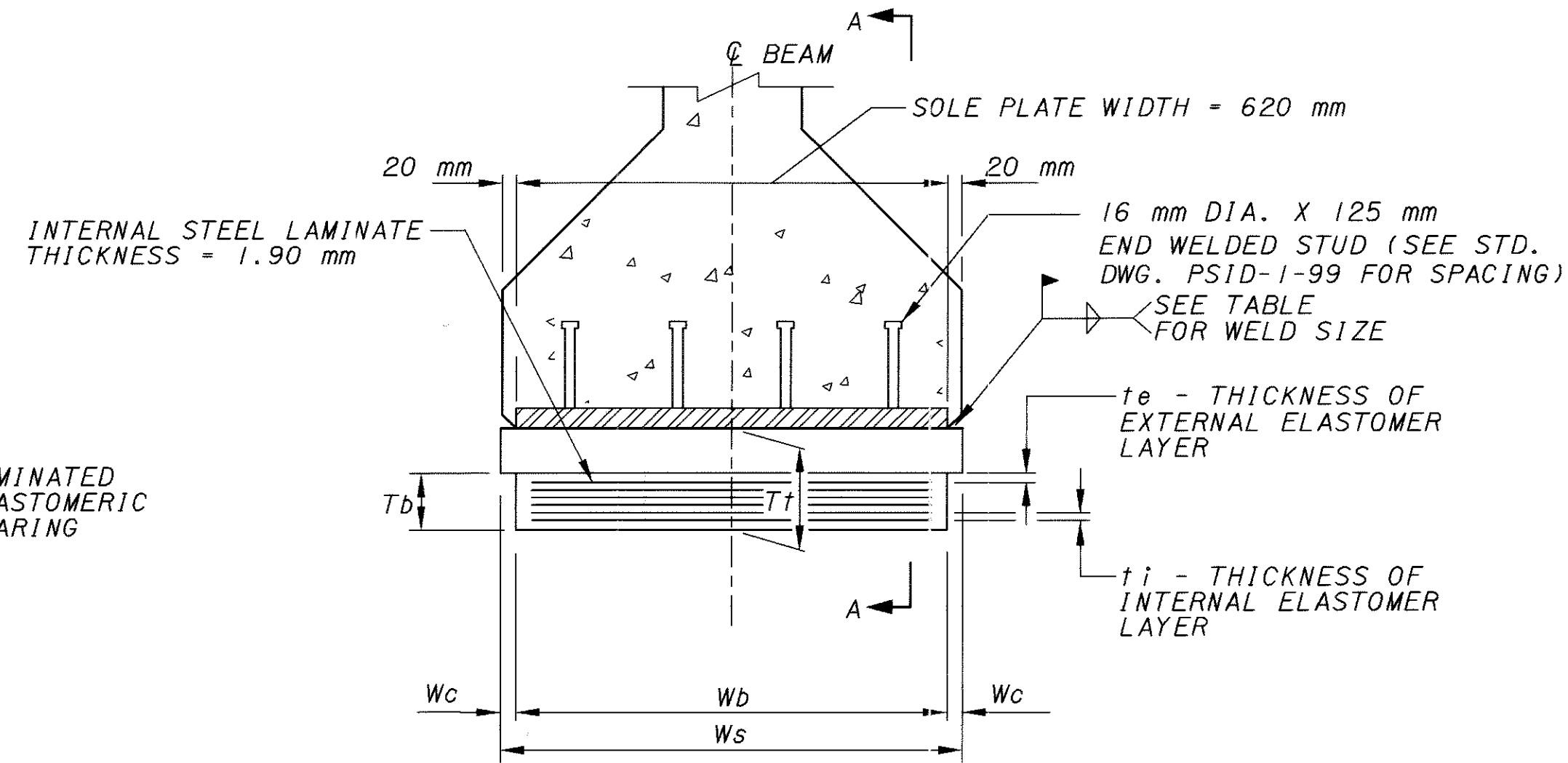
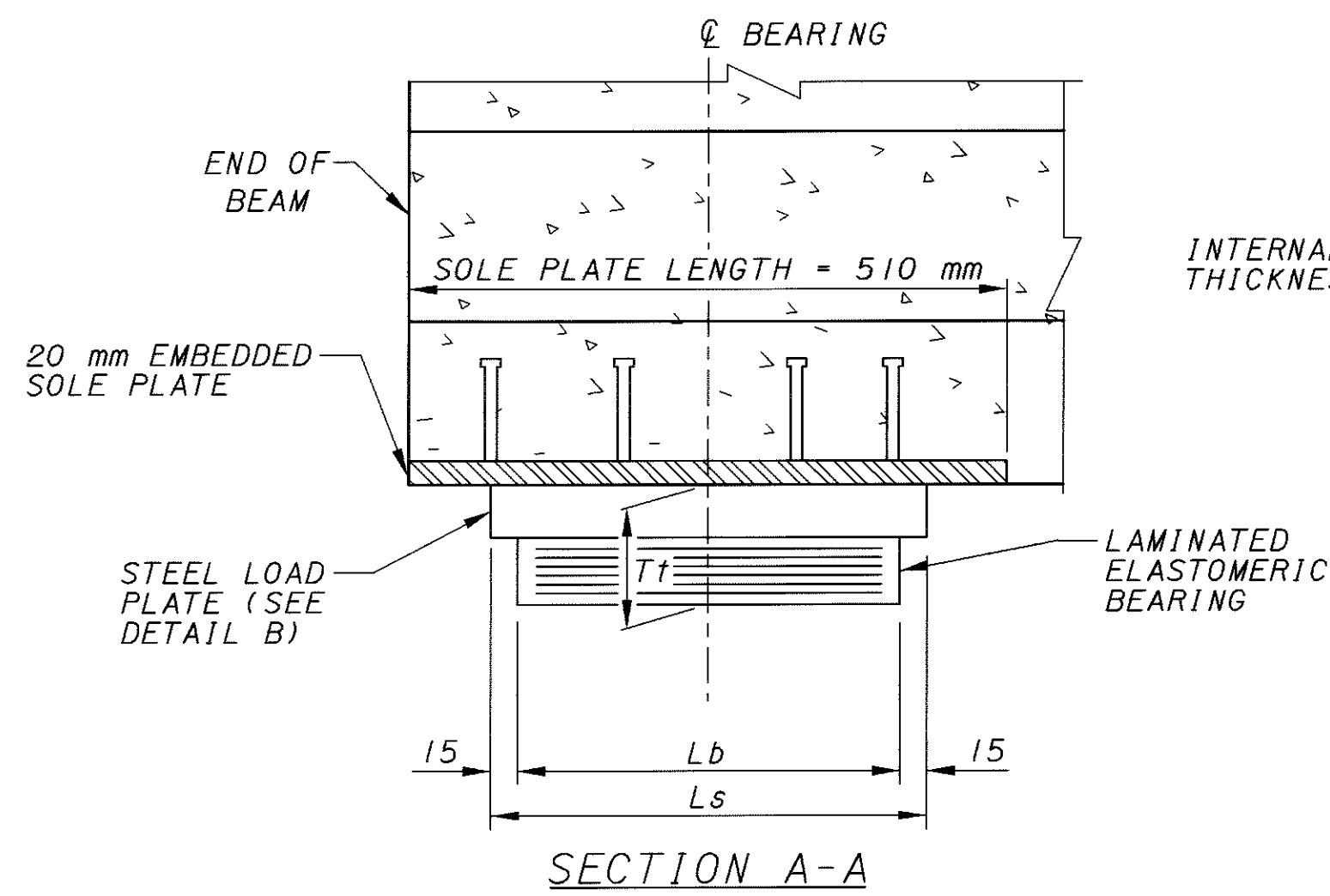
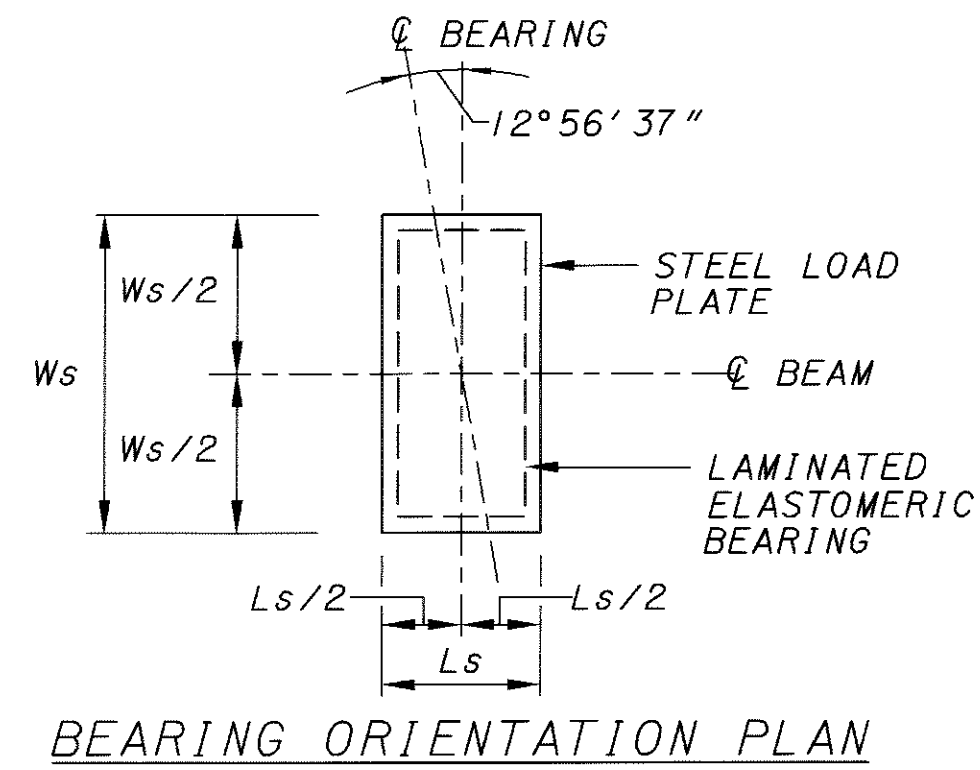
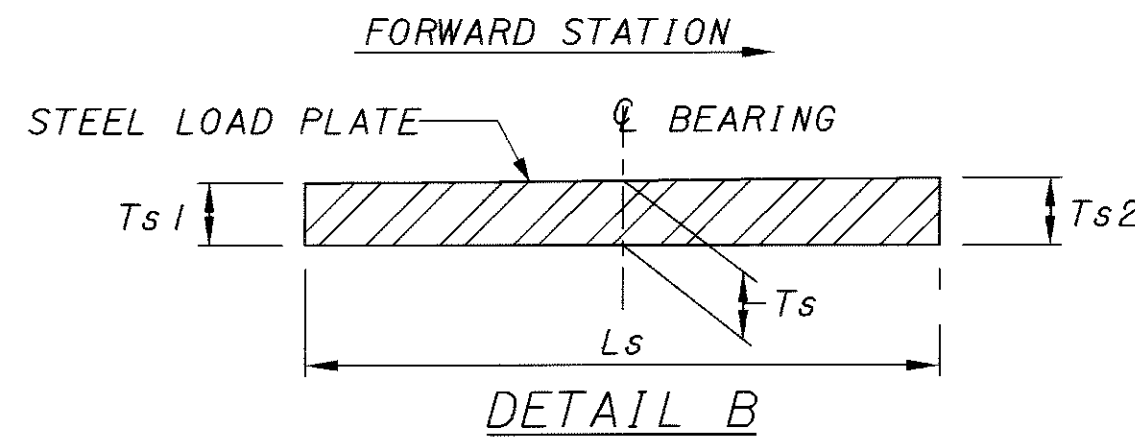
ALL DIMENSIONS ARE IN MILLIMETERS.
 ALL ELEVATIONS AND STATIONS ARE IN METERS.

SCREED ELEVATIONS
 BRIDGE NO. ATH-33-35348
 UNDER T.R. 64

ATH-33-30.981

13 / 14

937
 956

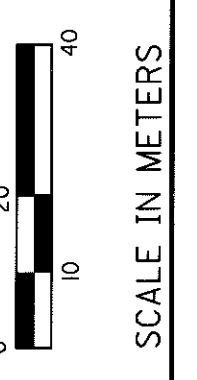
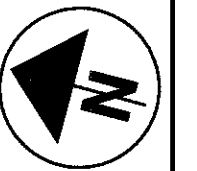


LAMINATED ELASTOMERIC EXPANSION BEARINGS
(ABUTMENT & PIER)

BEARING LOCATION	BEARING TYPE	NO. REQ'D.	DEAD LOAD (kN)	LIVE LOAD (kN)	TOTAL LOAD (DL+LL) (kN)	BEARING		t _i	NO. OF t _i 's	t _e (2 EA.)	NUMBER OF INTERNAL LAMINATES (1.9 mm)	T _b	STEEL LOAD PLATE					T _t	FILLET WELD SIZE	W _c
						L _b	W _b						L _s	W _s	T _s	T _{s1}	T _{s2}			
REAR ABUT	EXP.	6	531.1	181.0	712.1	260	460	8.43	5	5.75	6	65	290	690	42	38	46	107	8	115
PIER 1 (SPAN 1)	EXP.	6	545.8	332.3	878.1	270	500	8.50	4	5.77	5	55	300	690	40	38	43	95	8	95
PIER 1 (SPAN 2)	EXP.	6	545.8	332.3	878.1	270	500	8.50	4	5.77	5	55	300	690	40	38	43	95	8	95
FORWARD ABUT	EXP.	6	531.1	181.0	712.1	260	460	8.43	5	5.75	6	65	290	690	39	38	40	104	8	115

NOTES

- ELASTOMERIC BEARINGS SHALL COMPLY WITH ITEM 516 AND AASHTO STANDARD SPECIFICATION FOR HIGHWAY BRIDGES, SECTION 18, BEARING DEVICES, DIVISION II, CONSTRUCTION, ARTICLES 18.4.5.1 AND 18.5.6.2. BEARINGS SHALL BE GRADE 3, 50 DUROMETER ELASTOMER, AND SHALL BE SUBJECTED TO THE LOAD TESTING REQUIREMENTS DEFINED IN ARTICLE 18.7.4.5 OF THE AASHTO DOCUMENT LISTED ABOVE. BEARINGS WERE DESIGNED UNDER SECTION 14.6.6 (METHOD A) OF SECTION 14, BEARINGS, DIVISION I, DESIGN. TESTING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE BEARINGS, EACH.
- THE STEEL LOAD PLATE SHALL BE ASTM A709, GRADE 50 STEEL, AND SHALL BE GALVANIZED AS PER 711.02. THE STEEL LOAD PLATE SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. WELDING OF THE LOAD PLATE SHALL BE CONTROLLED SO THAT THE LOAD PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 150°C AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- BEARING REPOSITIONING: IF DECK CONCRETE IS PLACED AT AN AMBIENT TEMPERATURE HIGHER THAN 26°C OR LOWER THAN 4°C, AND THE BEARING SHEAR DEFLECTION EXCEEDS 1/6 OF THE BEARING HEIGHT AT 15°C (+/- 5°C), THE PRECAST CONCRETE BEAMS SHALL BE RAISED TO ALLOW THE BEARINGS TO RETURN TO THEIR UNDEFORMED SHAPE AT 15°C (+/- 5°C).
- THE TOTAL DESIGN LOAD FOR A BEARING EQUALS THE SUM OF THE DEAD LOAD AND LIVE LOAD TABULATED IN THE BEARING TABLE.
- FOR SPAN LOCATIONS, SEE SHEET 9 OF 14.
- SEISMIC PEDESTALS ADJACENT TO THE FASCIA BEAMS AT THE PIER ARE NOT SHOWN. SEE SHEET 7 OF 14 FOR LOCATIONS AND DETAILS.



PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 29+100 TO STA 29+700

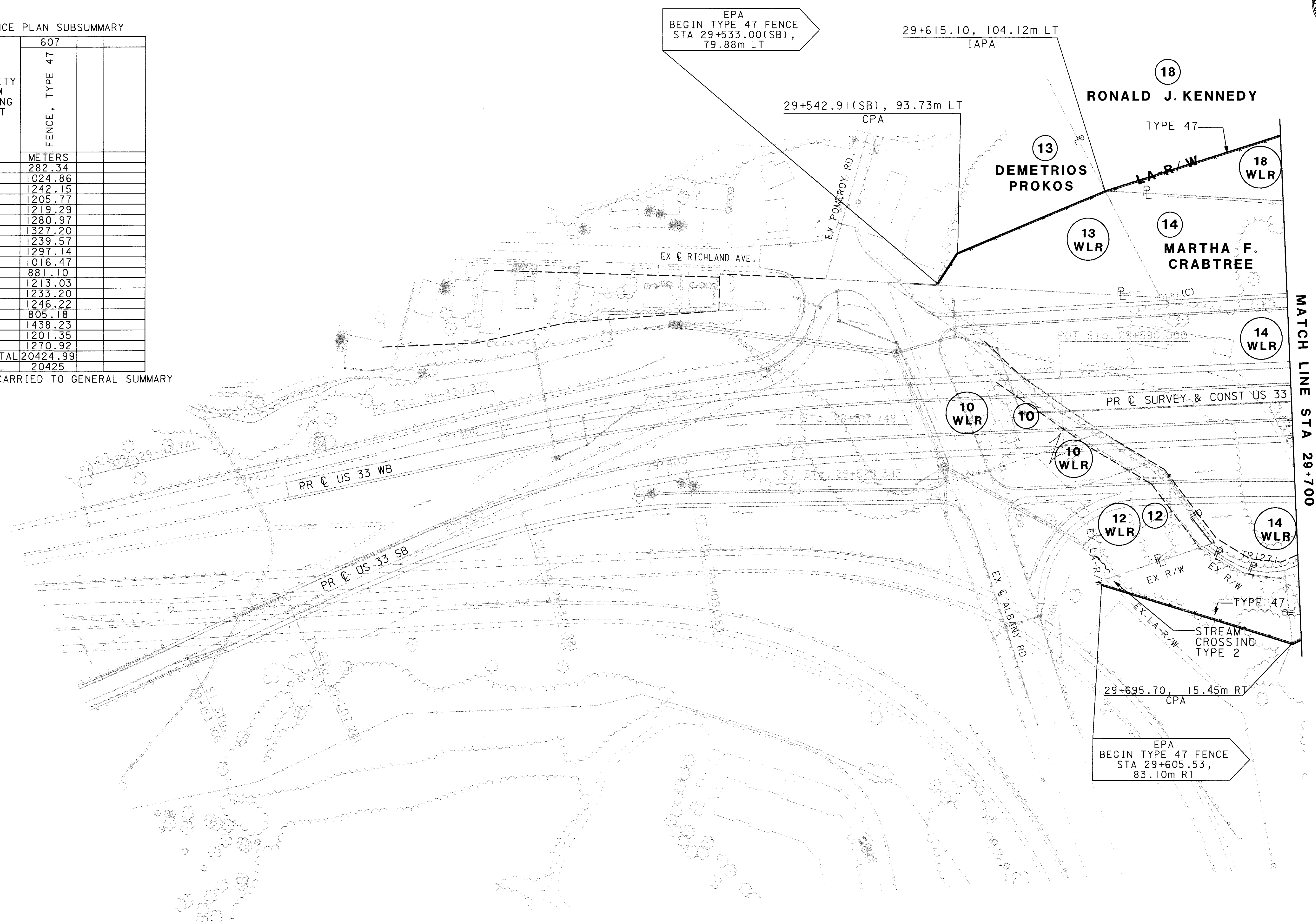
ATH-33-30.981

939
956

FENCE PLAN SUBSUMMARY

QUANTITY FROM FENCING SHEET NO.	607	
	FENCE, TYPE 47	
	METERS	
939	282.34	
940	1024.86	
941	1242.15	
942	1205.77	
943	1219.29	
944	1280.97	
945	1327.20	
946	1239.57	
947	1297.14	
948	1016.47	
949	881.10	
950	1213.03	
951	1233.20	
952	1246.22	
953	805.18	
954	1438.23	
955	1201.35	
956	1270.92	
SUB-TOTAL	20424.99	
TOTAL	20425	

QUANTITIES CARRIED TO GENERAL SUMMARY



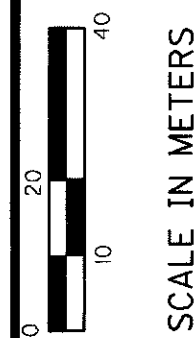
NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 282.34m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

PROPERTY OWNERS

- 10 ERNEST LAMBERT & BETTY I. LAMBERT
- 12 KATHLEEN A. NICHOLAS

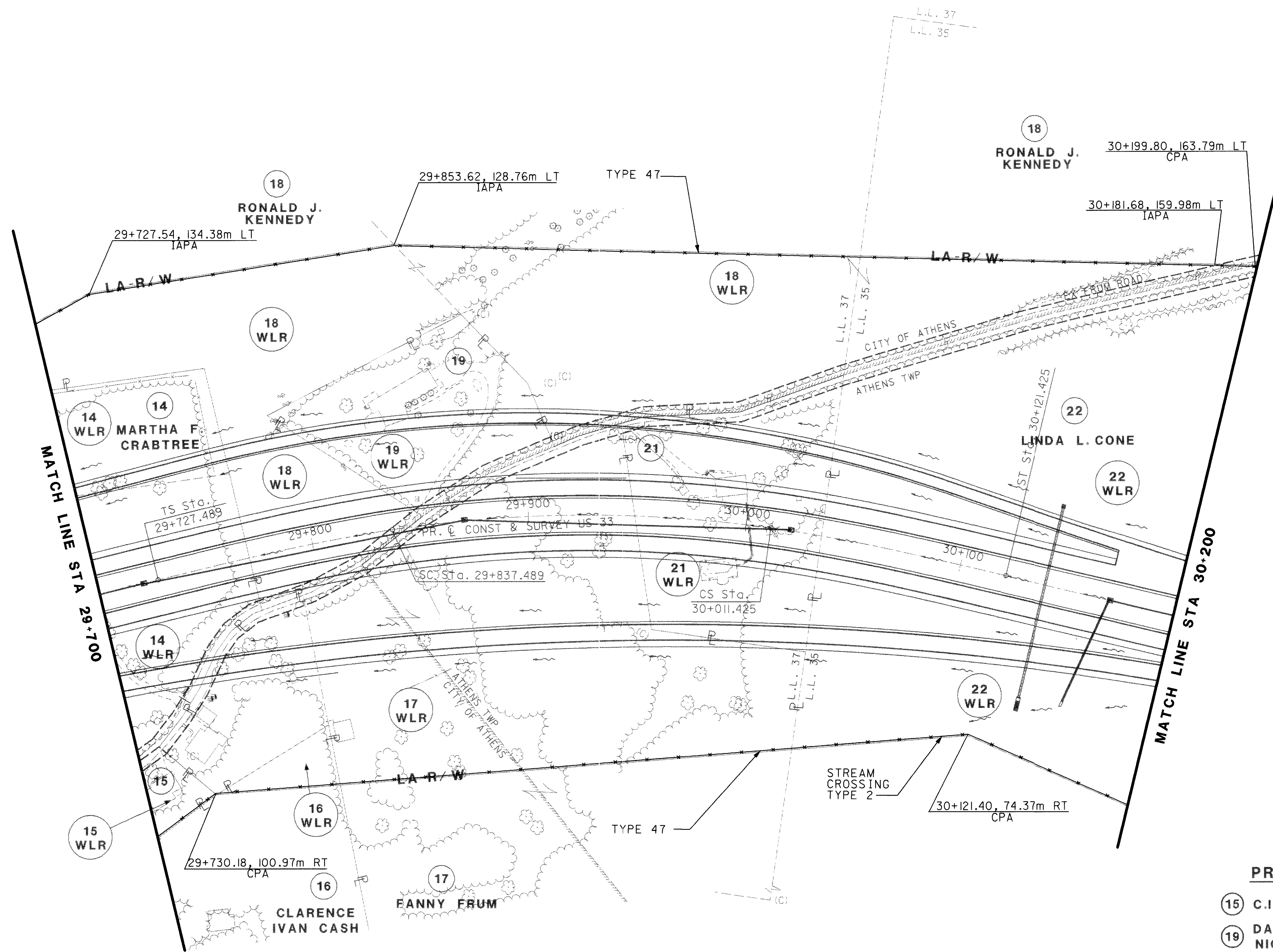


PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 29+700 TO STA 30+200

ATH-33-30.981



PROPERTY OWNERS

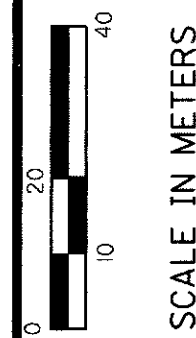
- 15 C.I. CASH & NELLIE M. CASH
- 19 DAVID A. STOBART & NICOLETTE DIOGAURD
- 21 GARY L. CRABTREE
LINDA S. CRABTREE

NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

— FENCE —
 EPA = END POST ASSEMBLY
 IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA = CORNER POST ASSEMBLY
 ITEM 607, FENCE, TYPE 47 = 1024.86m
 ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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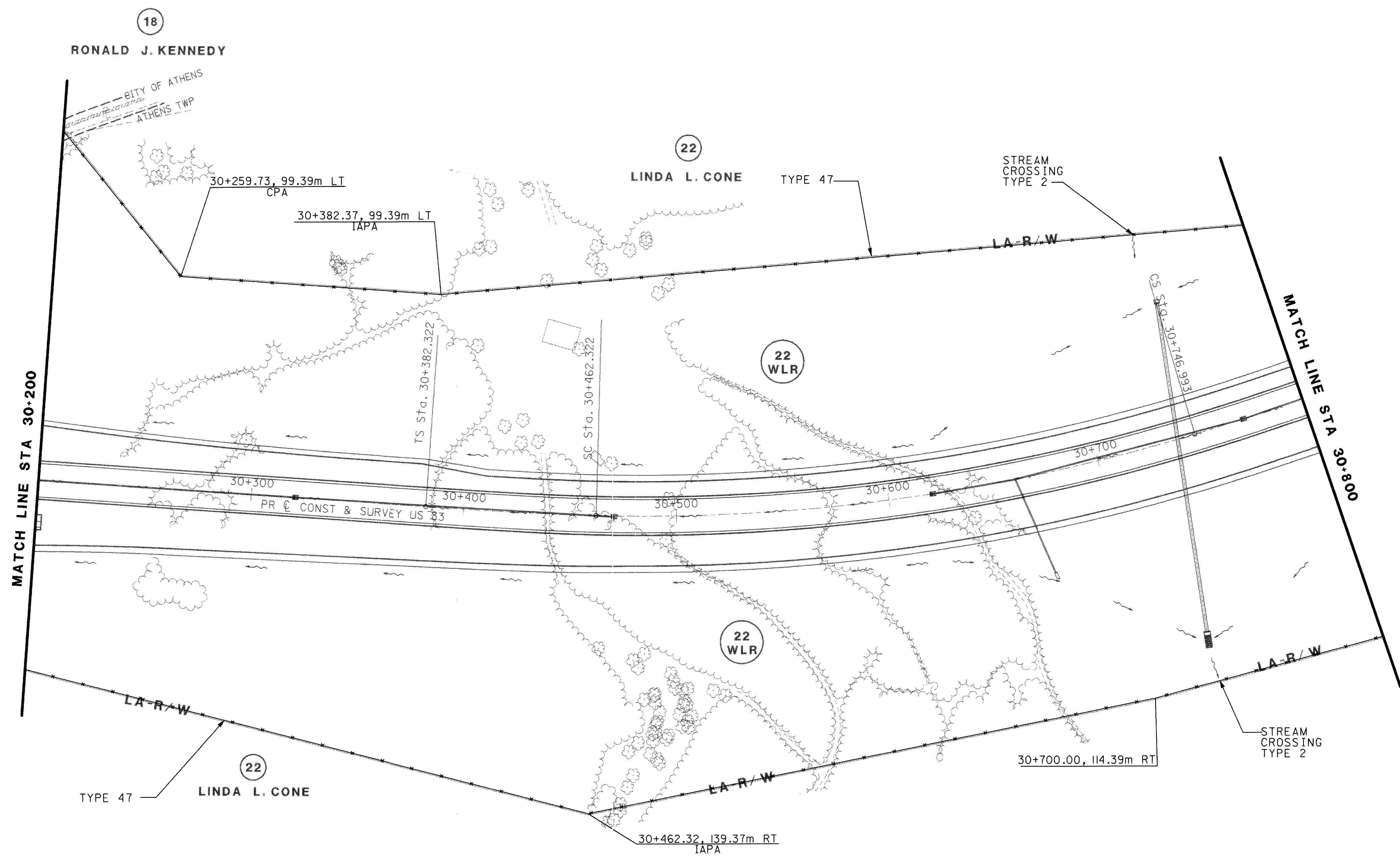
PID NO. 18287

DESIGNER
AJP
REVIEWER
TWM

FENCING PLAN
STA 30+200 TO STA 30+800

ATH-33-30.981

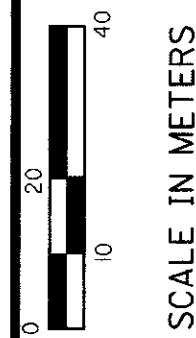
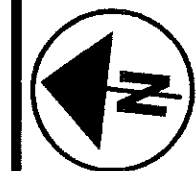
941
956



NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1242.15m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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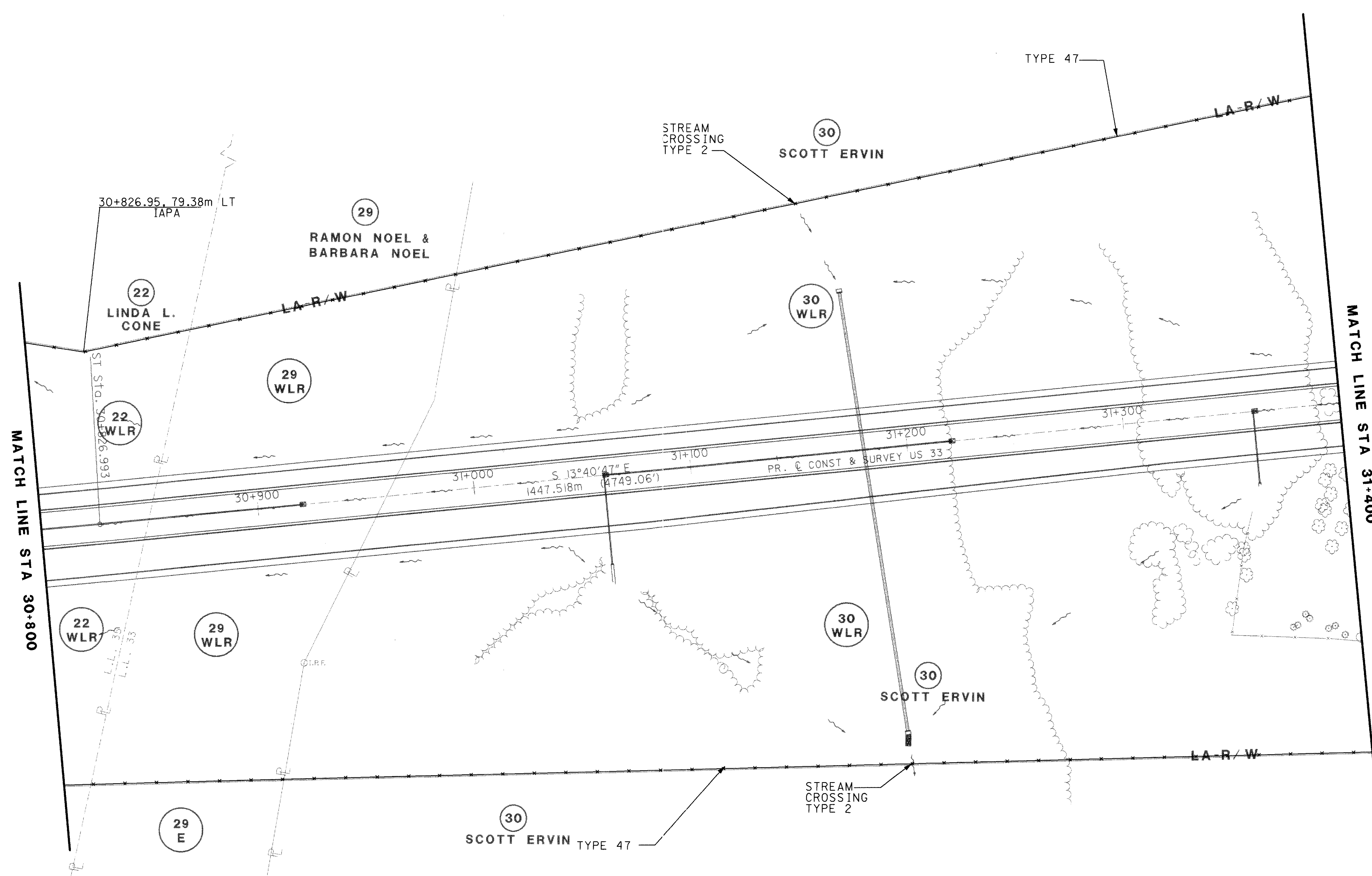
PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 30+800 TO STA 31+400

ATH-33-30.981

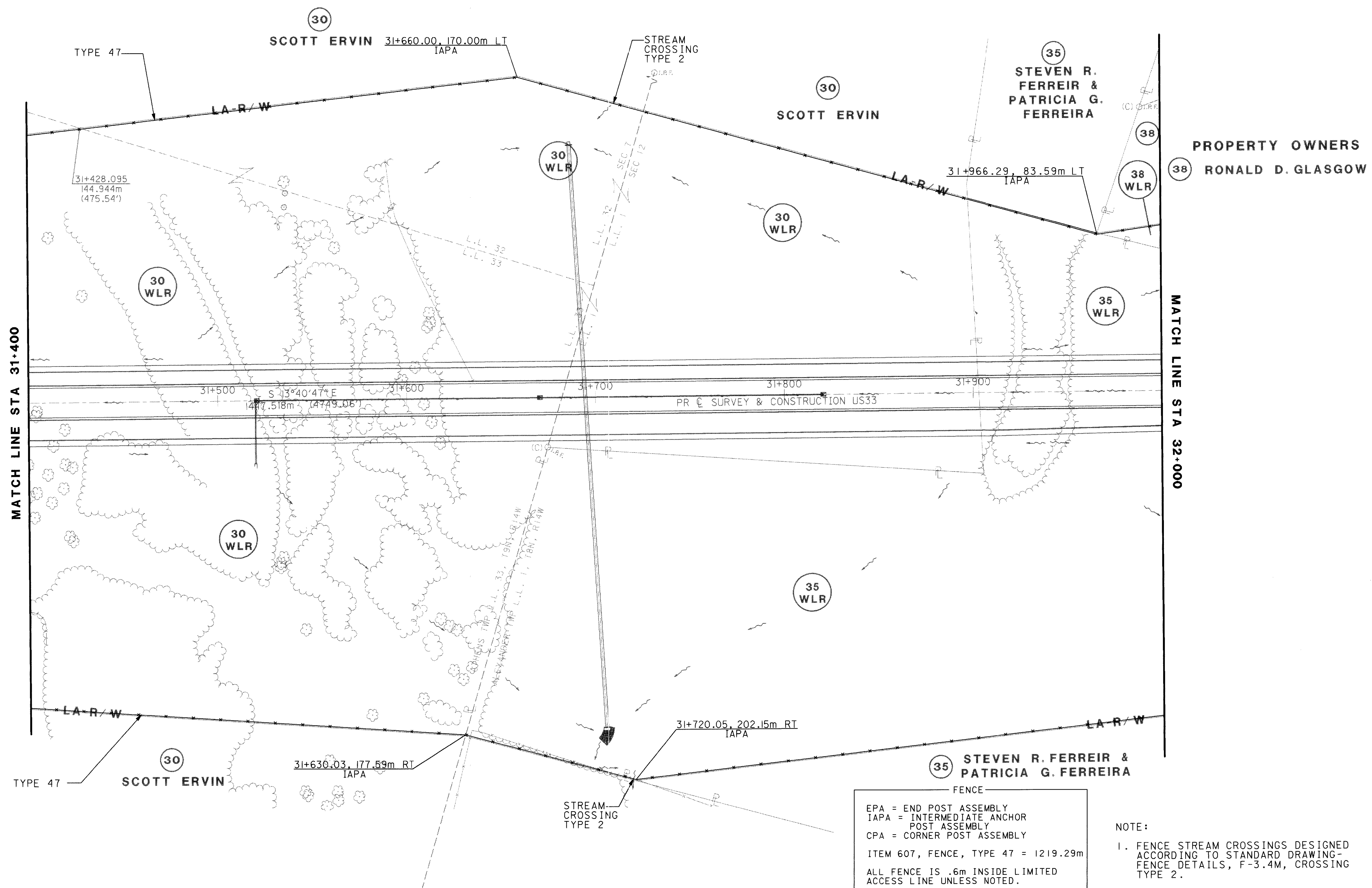
942
956



NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1205.77m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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PID NO. **18287**

DESIGNER: AJP
REVIEWER: JDH

FENCING PLAN
STA 31+400 TO STA 32+000

ATH-33-30.981

943
956

FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR
POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

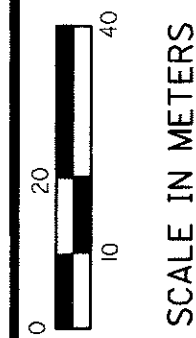
ITEM 607, FENCE, TYPE 47 = 1219.29m

ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

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PID NO. 18287

DESIGNER: AJP
REVIEWER: JDH

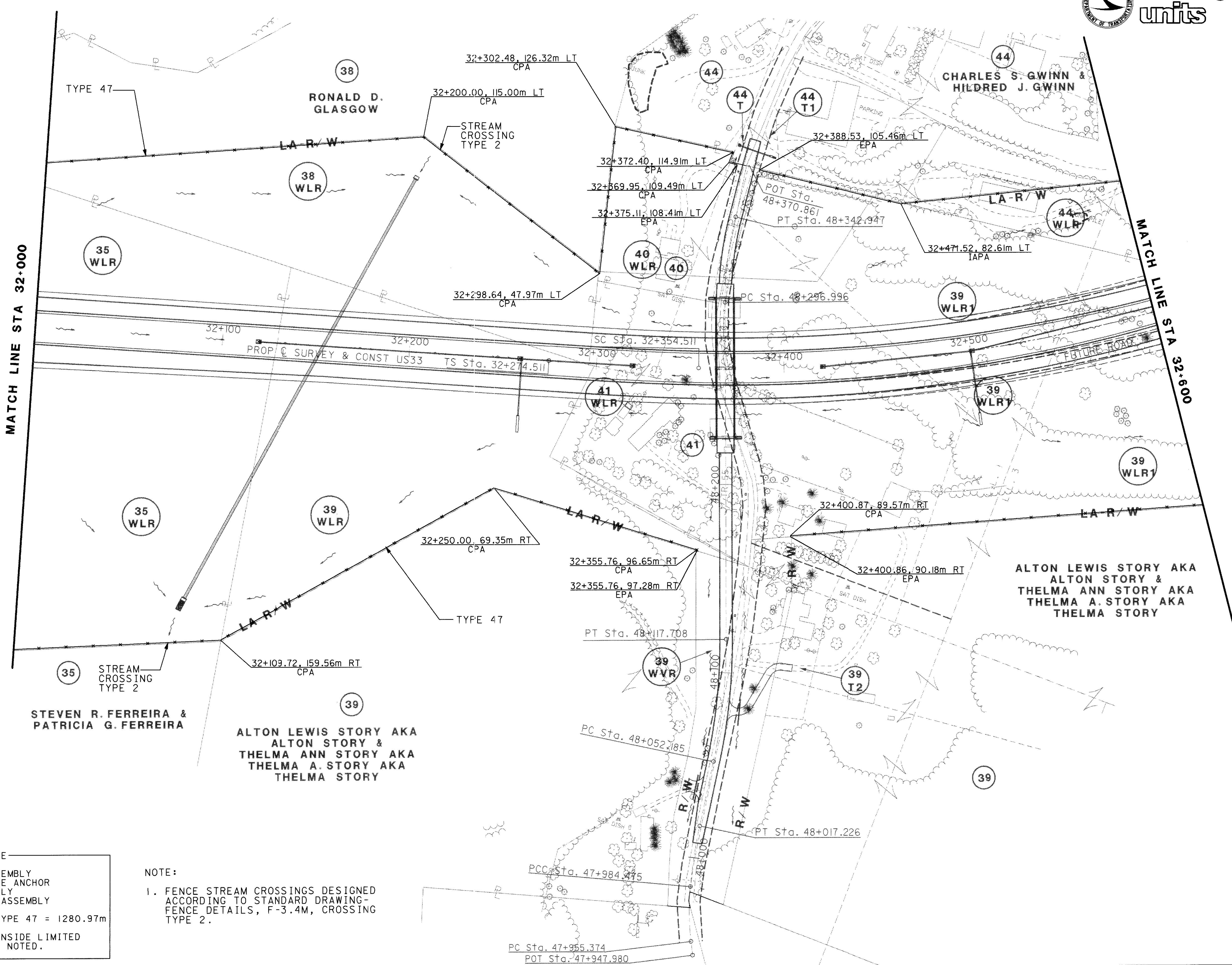
FENCING PLAN
STA 32+000 TO STA 32+600

ATH-33-30.981

944
956

PROPERTY OWNERS

- 40 CHARLES E. GOULD & LINDA R. GOULD
- 41 ELIAS BAILS
- 44 KENNETH & MILDRED SICKELS



FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

ITEM 607, FENCE, TYPE 47 = 1280.97m

ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

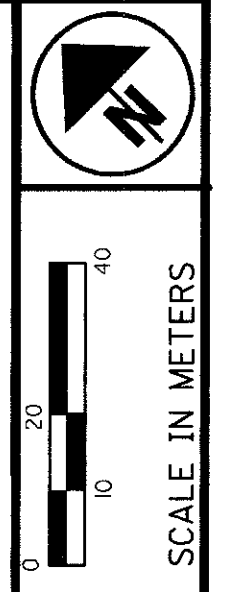
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FENCE

EPA = END POST ASSEMBLY
 IAPA = INTERMEDIATE ANCHOR
 POST ASSEMBLY
 CPA = CORNER POST ASSEMBLY

ITEM 607, FENCE, TYPE 47 = 1327.20m

ALL FENCE IS .6m INSIDE LIMITED
 ACCESS LINE UNLESS NOTED.



PID NO. 18287

DESIGNER AJP
 REVIEWER JDH

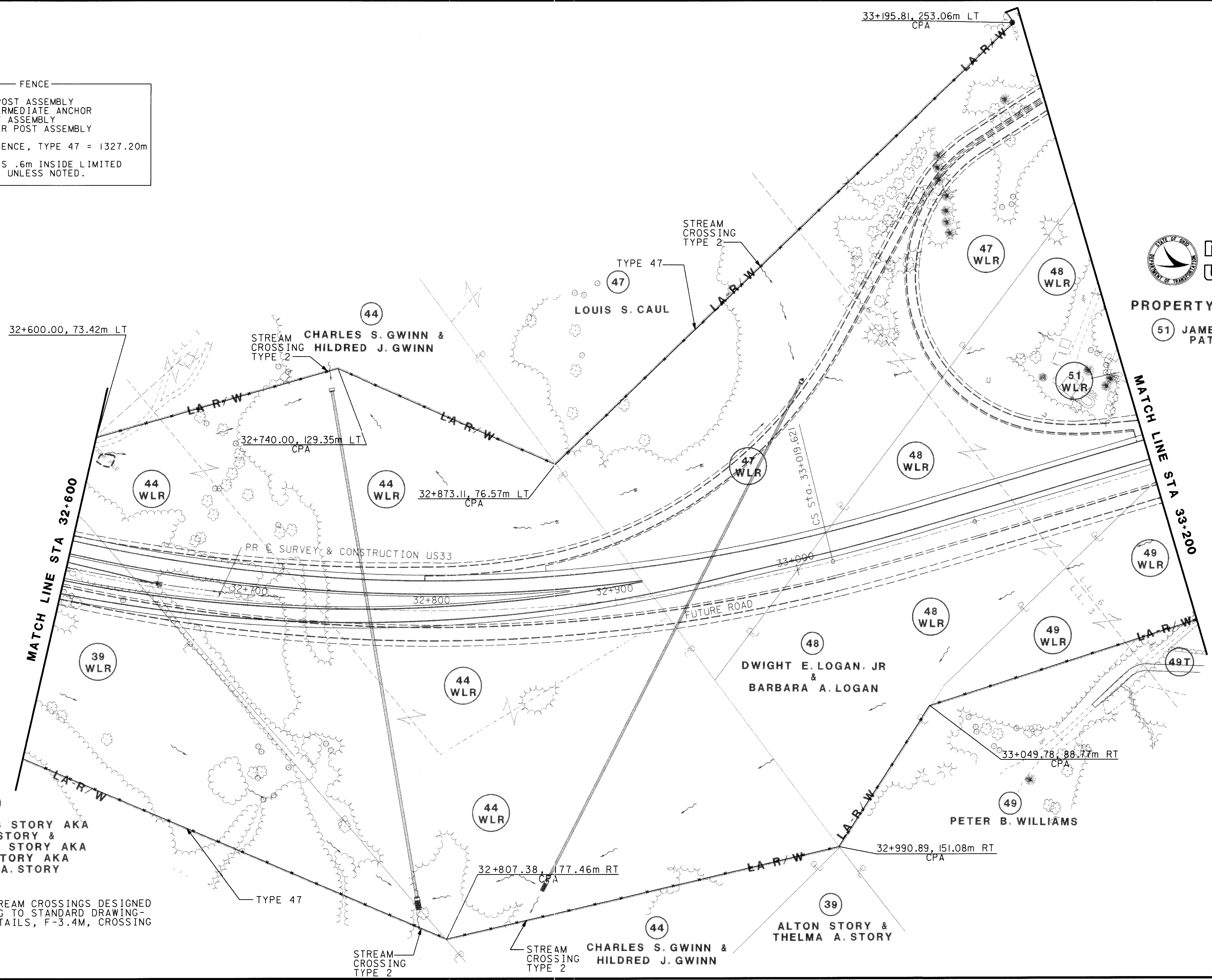
FENCING PLAN
 STA 32+600 TO STA 33+200

ATH-33-30.981

945
956



PROPERTY OWNERS
 51 JAMES D. FRYE &
 PATTY J. FRYE



ALTON LEWIS STORY AKA
 ALTON STORY &
 THELMA ANN STORY AKA
 THELMA STORY AKA
 THELMA A. STORY

NOTE:
 1. FENCE STREAM CROSSINGS DESIGNED
 ACCORDING TO STANDARD DRAWING-
 FENCE DETAILS, F-3.4M, CROSSING
 TYPE 2.

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PROPERTY OWNERS

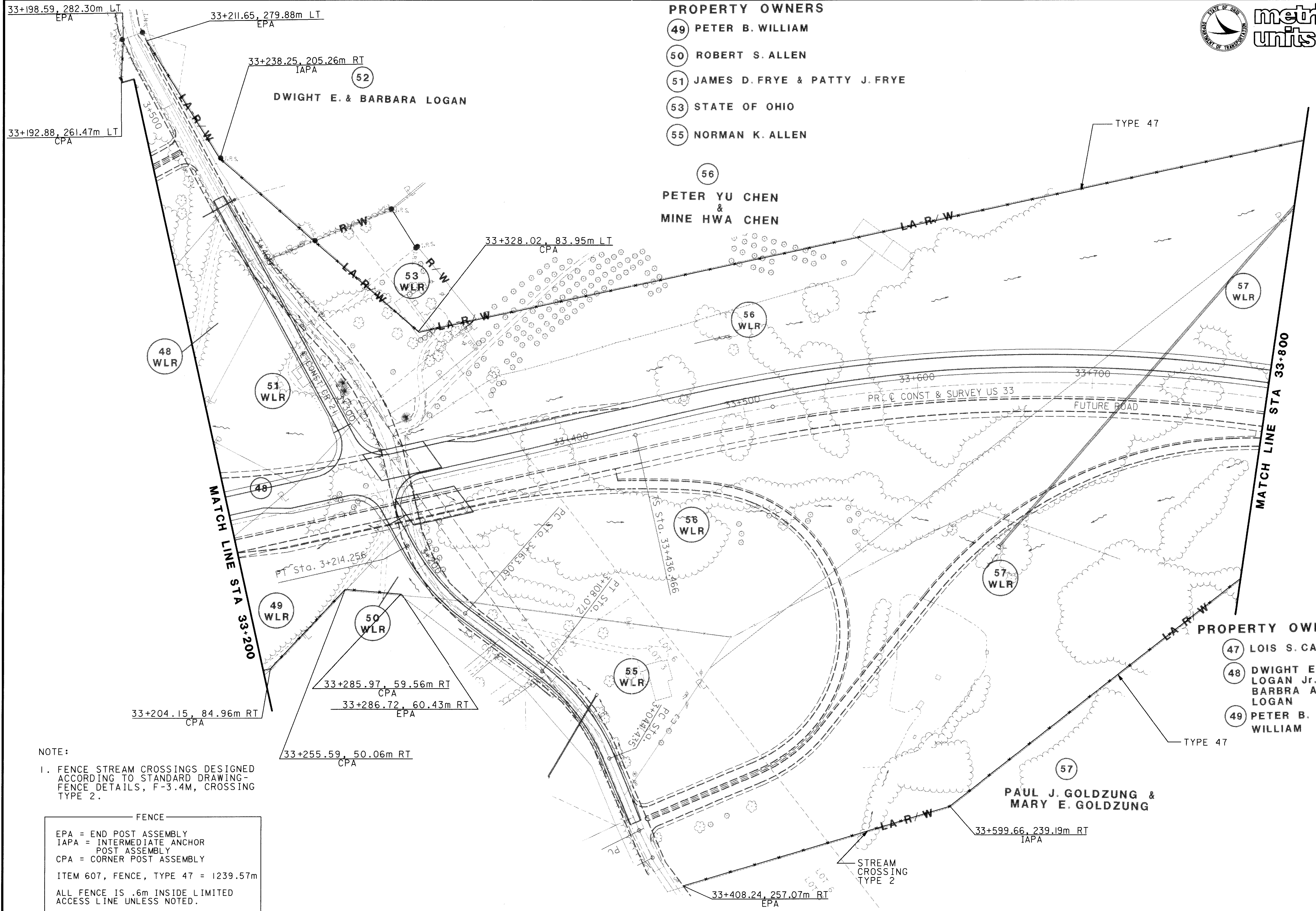
- 49 PETER B. WILLIAM
- 50 ROBERT S. ALLEN
- 51 JAMES D. FRYE & PATTY J. FRYE
- 53 STATE OF OHIO
- 55 NORMAN K. ALLEN

56
PETER YU CHEN
&
MINE HWA CHEN

PROPERTY OWNERS

- 47 LOIS S. CAUL
- 48 DWIGHT E. LOGAN Jr. & BARBRA A. LOGAN
- 49 PETER B. WILLIAM

57
PAUL J. GOLDZUNG &
MARY E. GOLDZUNG



NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING - FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1239.57m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

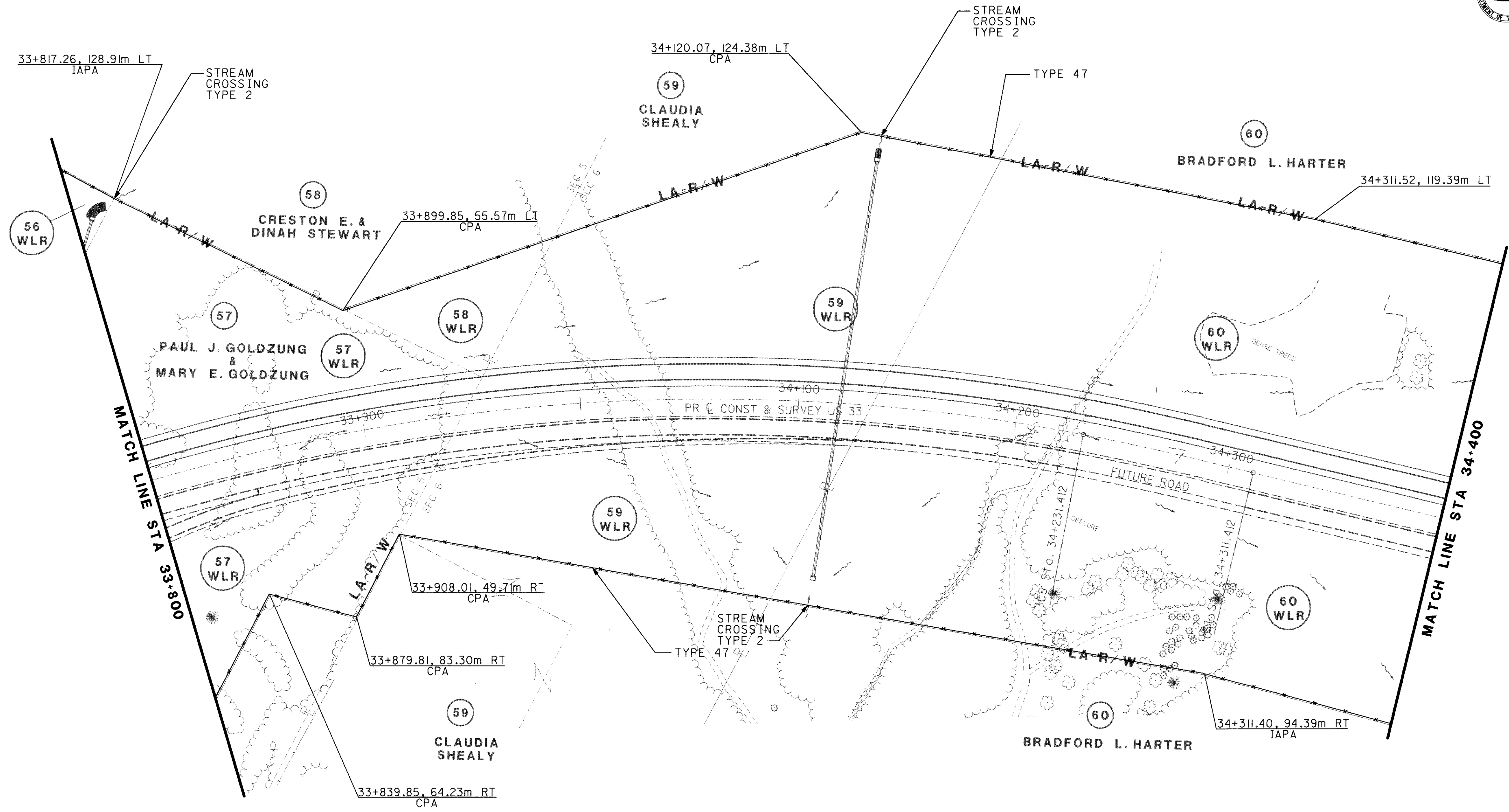
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DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 33+200 TO STA 33+800

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PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 33+800 TO STA 34+400

ATH-33-30.981

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NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

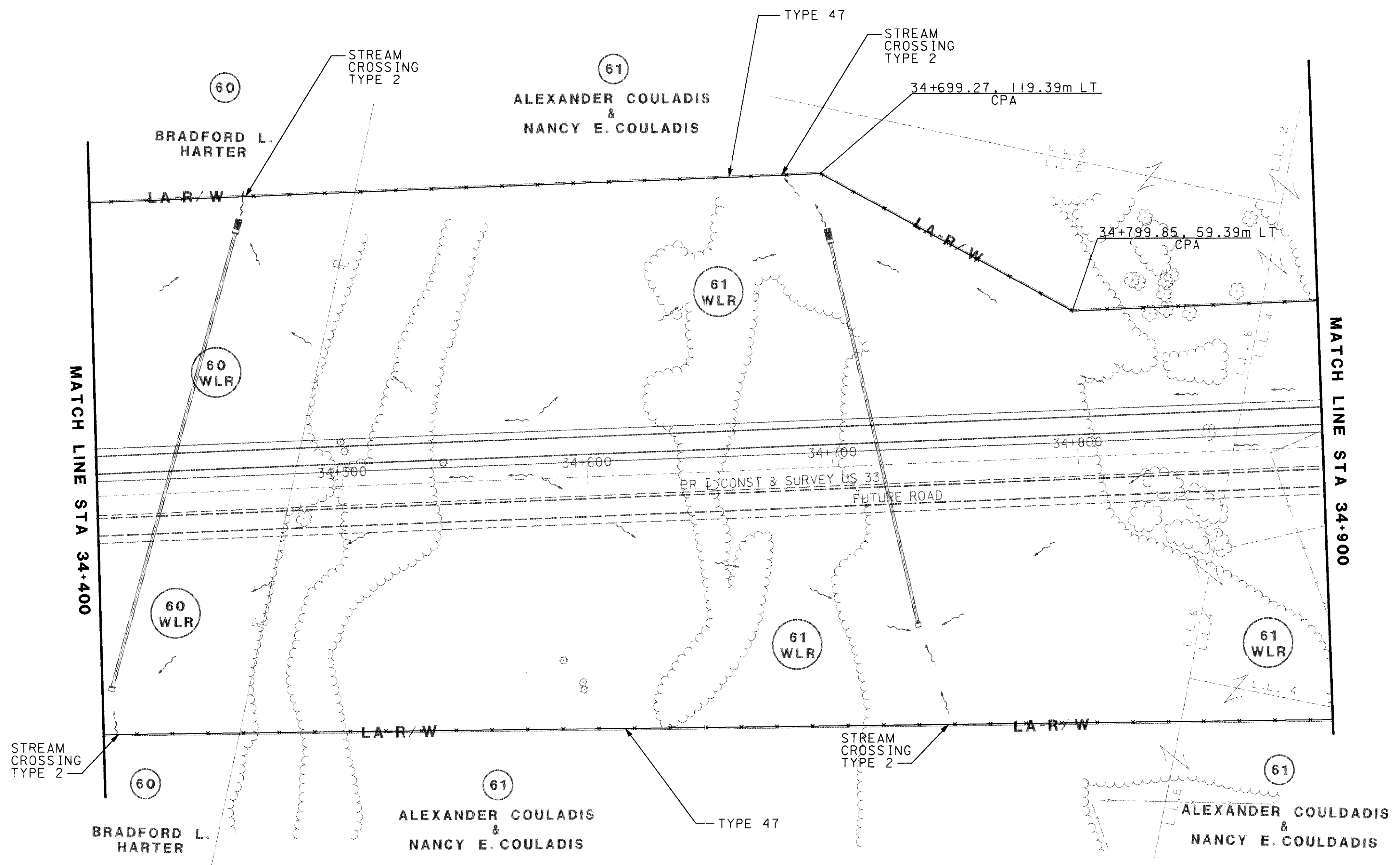
FENCE

EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY

ITEM 607, FENCE, TYPE 47 = 1297.14m

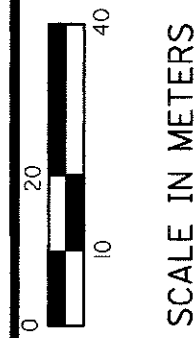
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NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1016.47m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.



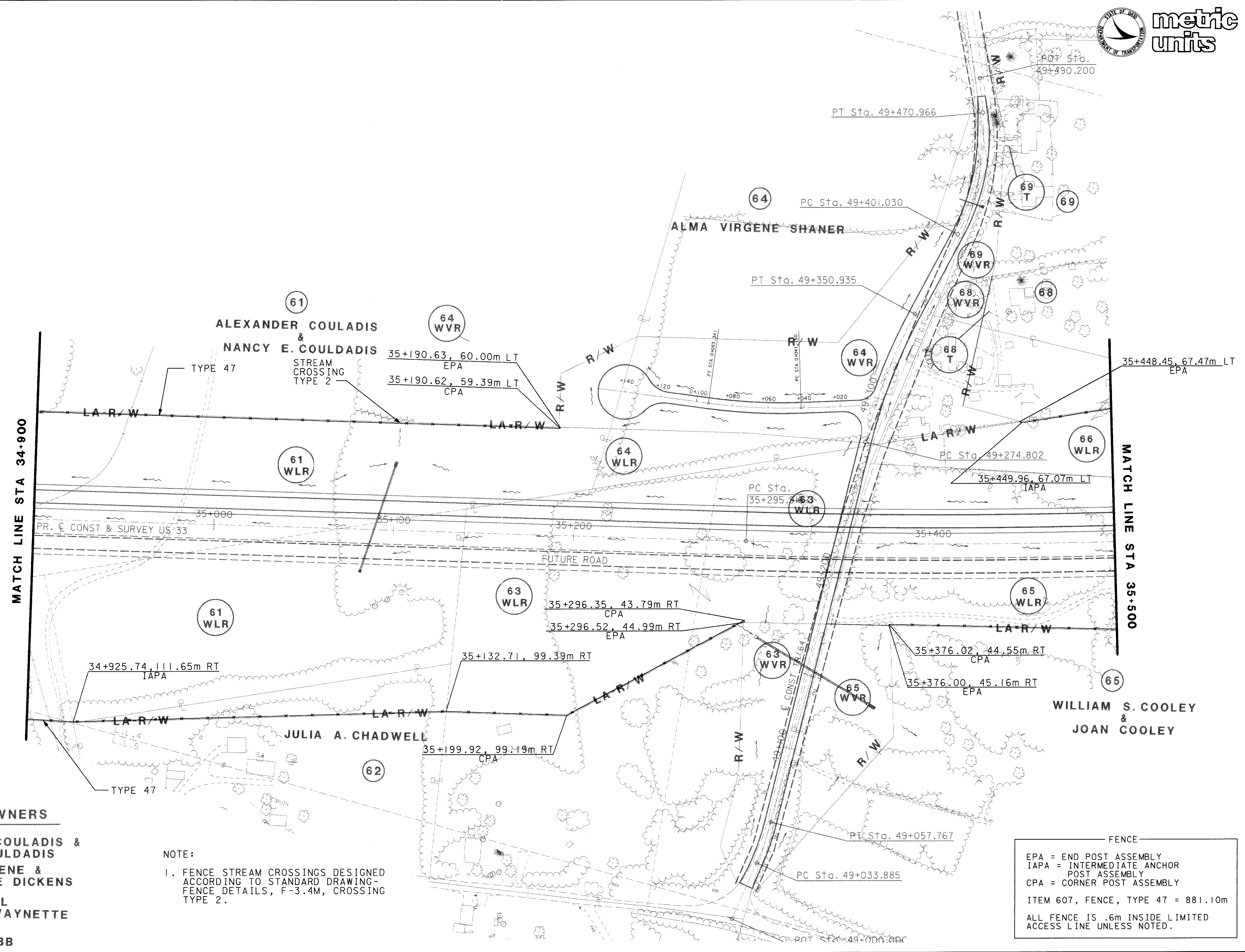
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DESIGNER: AJP
REVIEWER: JDH

FENCING PLAN
STA 34+900 TO STA 35+500

ATH-33-30.981

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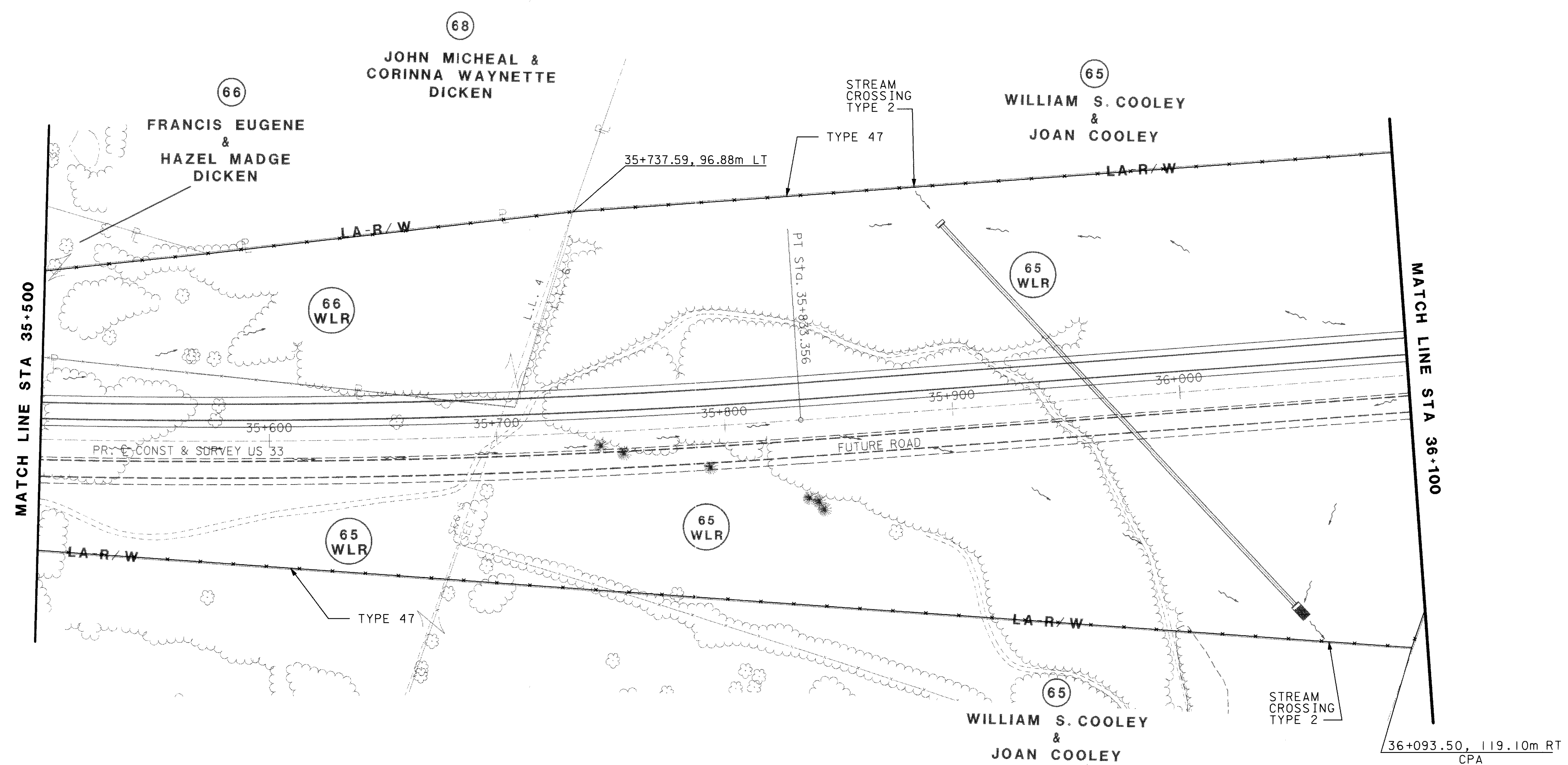
PROPERTY OWNERS

- (61) ALEXANDER COULADIS & NANCY E. COULDADIS
- (66) FRANCIS EUGENE & HAZEL MADGE DICKENS
- (68) JOHN MICHAEL & CORINNA WAYNETTE DICKEN
- (69) NANCY C. WEBB

NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

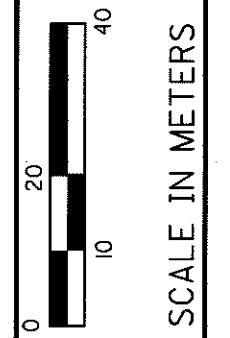
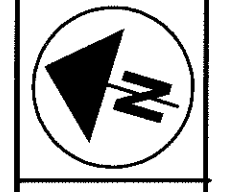
FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 881.10m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1213.03m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.



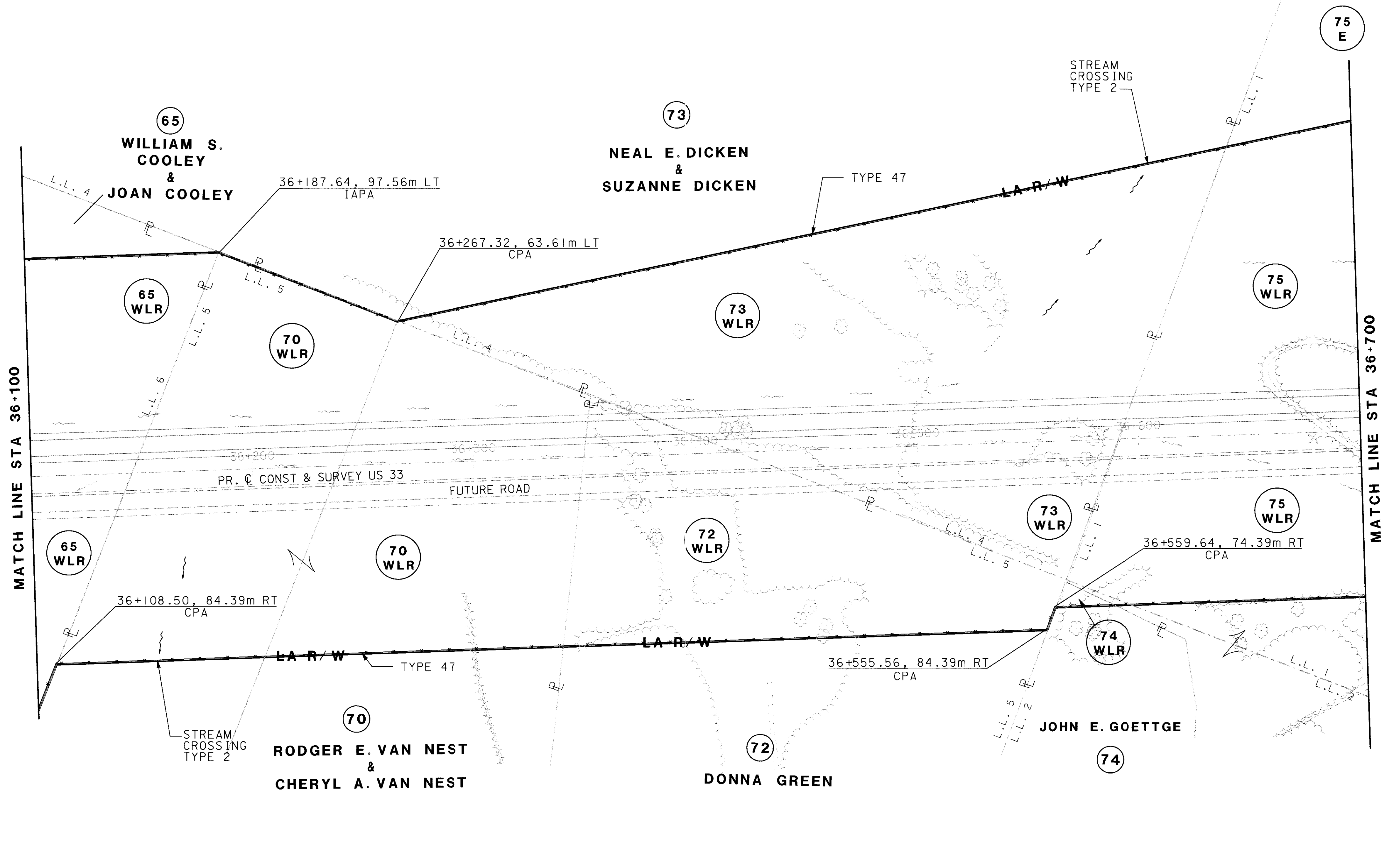
PID NO.
18287

DESIGNER
AJP
REVIEWER
JDH

FENCING PLAN
STA 36+100 TO STA 36+700

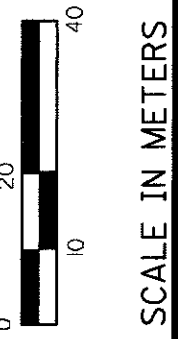
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NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1228.04m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.



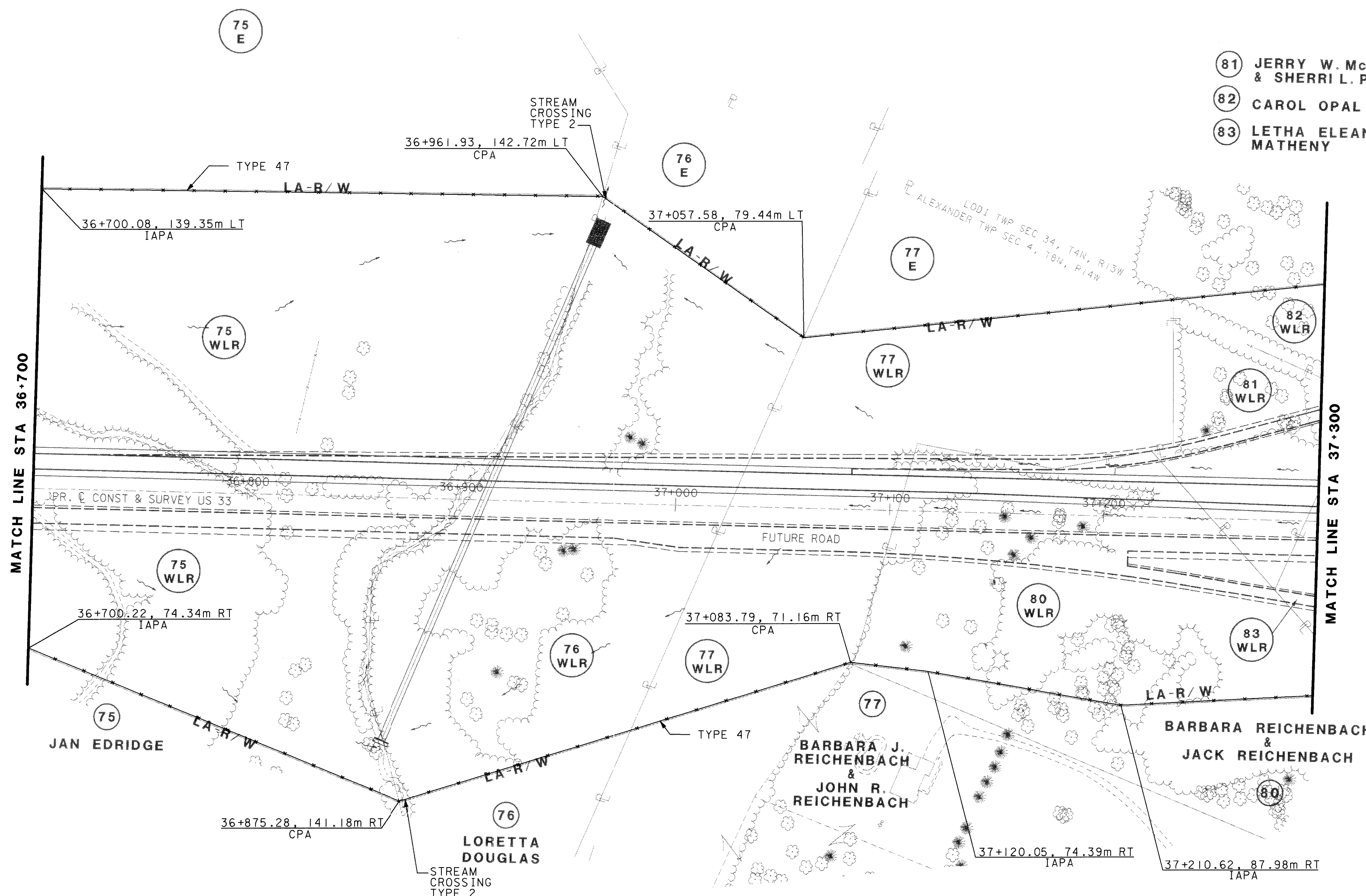
PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 36+700 TO STA 37+300

ATH-33-30.981

952
956



- 81 JERRY W. McDONALD & SHERRI L. PERRY
- 82 CAROL OPAL GURA
- 83 LETHA ELEANOR MATHENY

NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1246.22m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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FENCE

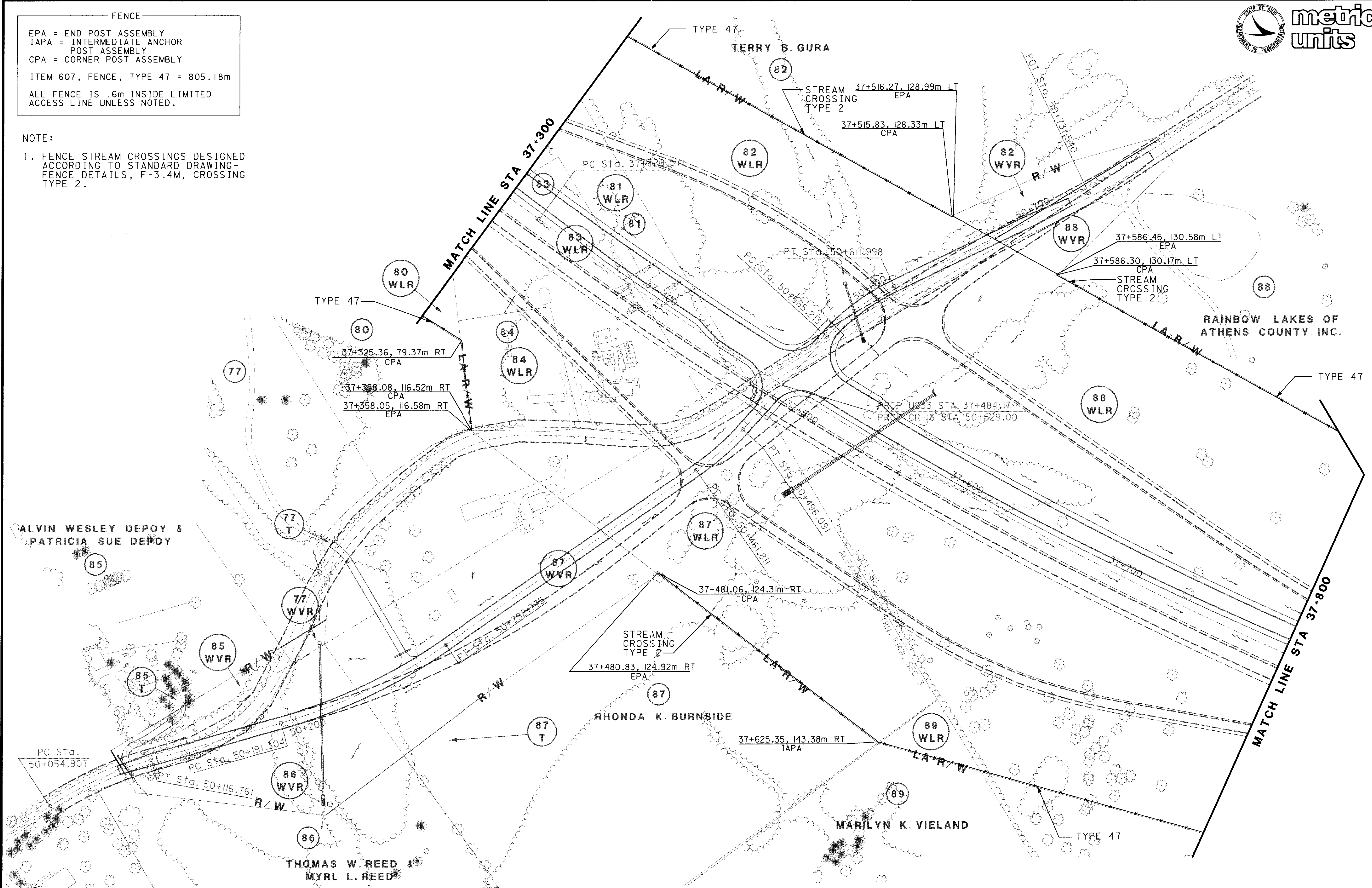
EPA = END POST ASSEMBLY
 IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA = CORNER POST ASSEMBLY

ITEM 607, FENCE, TYPE 47 = 805.18m

ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

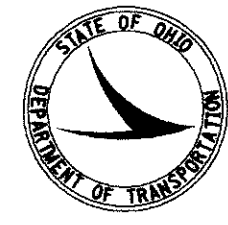
NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.



77	BARBARA J. REICHENBACH & JOHN R. REICHENBACH	83	LETHA ELEANOR MATHENY
80	JACK REICHENBACH & BARBARA REICHENBACH	84	BETTY J. CALVERT
81	JERRY W. MCDONALD & SHERRI L. PERRY		

02:35:07 PM
 C:\3023\18287\FinalDesign\cdm\Fence\Fd16u33.dgn



metric units



0 20 40
SCALE IN METERS

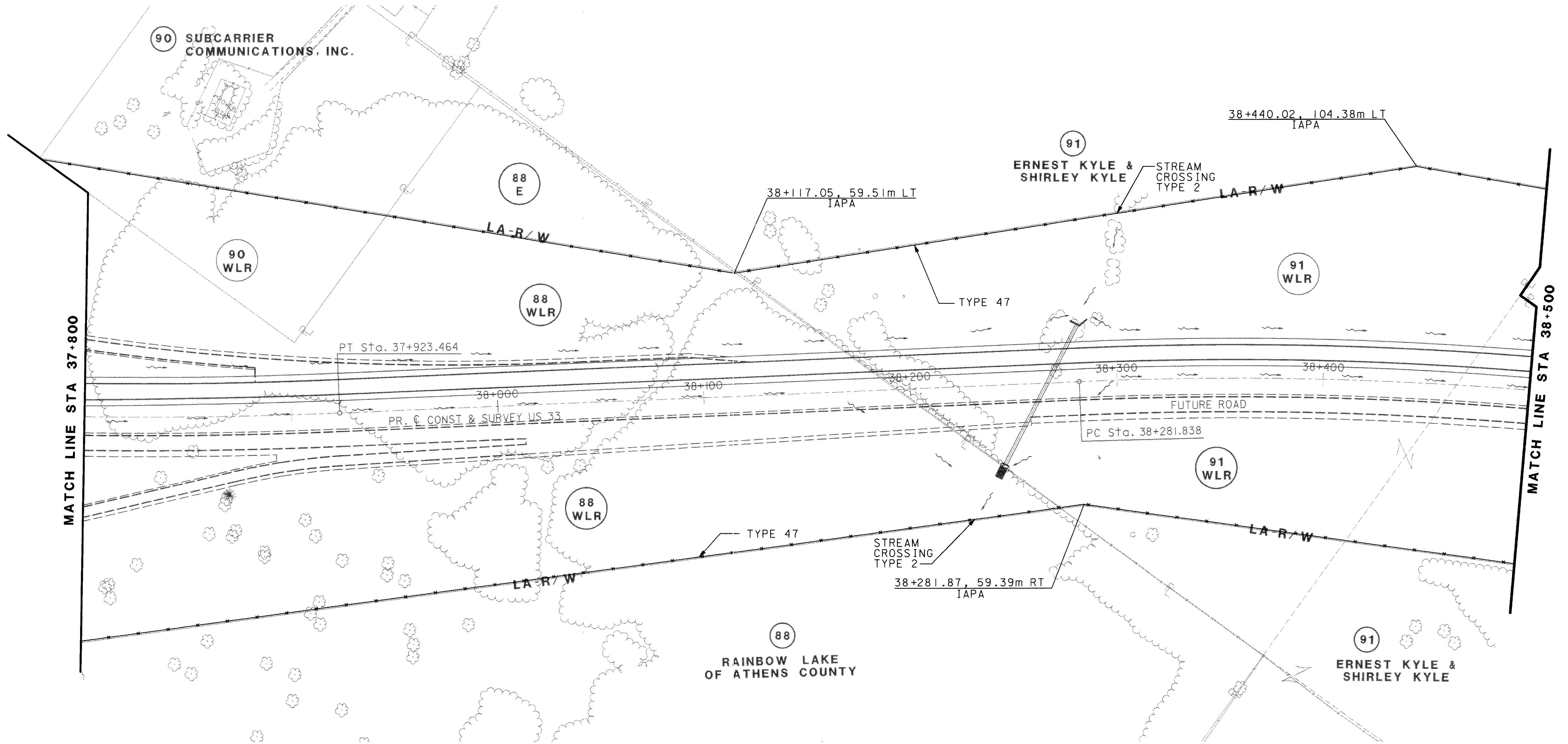
PID NO. 18287

DESIGNER AJP
REVIEWER JDH

FENCING PLAN
STA 37+800 TO STA 38+500

ATH-33-30.981

954
956



NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

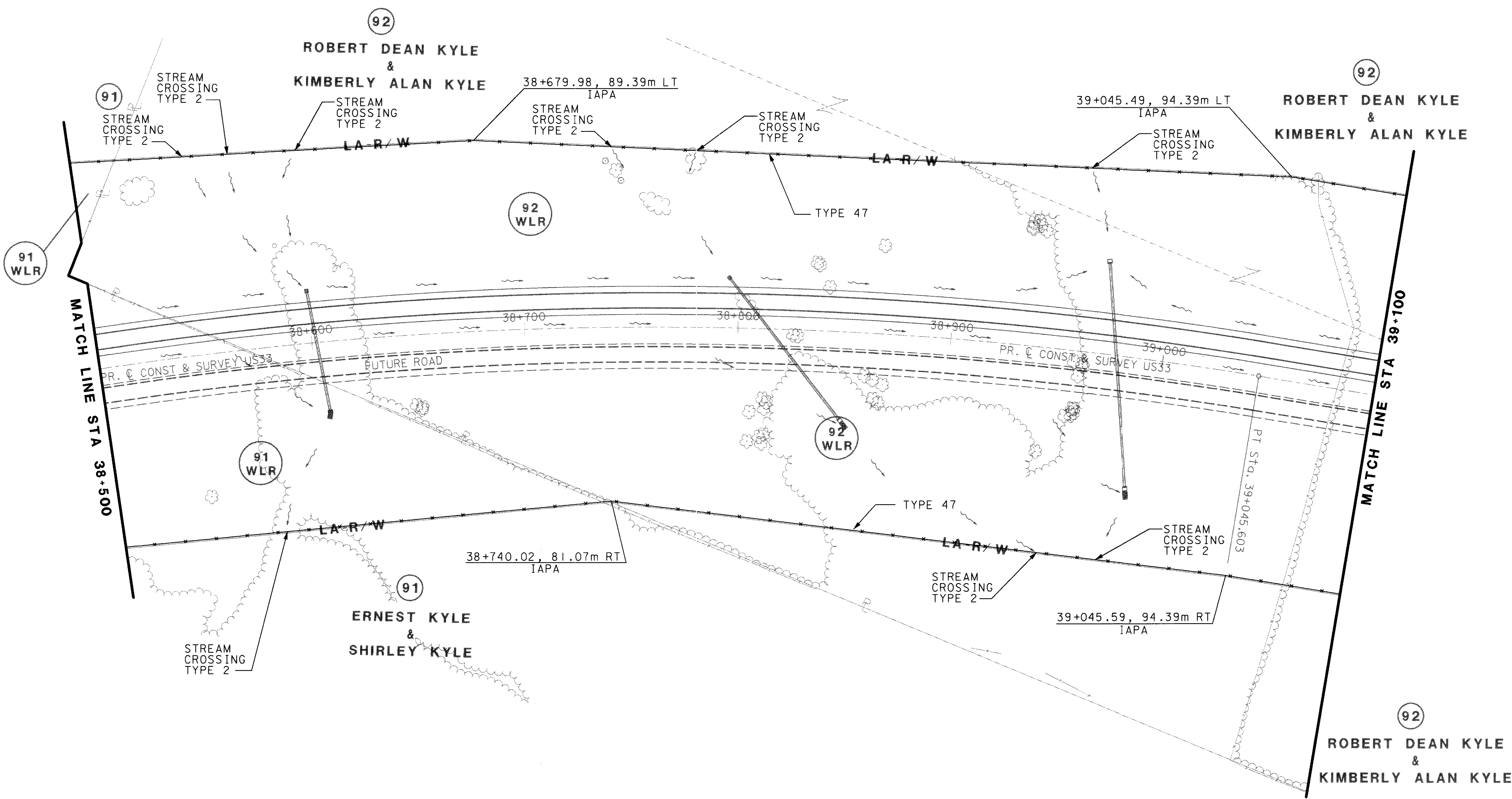
FENCE

EPA = END POST ASSEMBLY
 IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
 CPA = CORNER POST ASSEMBLY

ITEM 607, FENCE, TYPE 47 = 1438.23m

ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

02:35:56 PM
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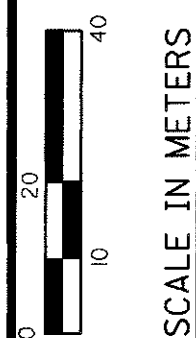


NOTE:

1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1201.35m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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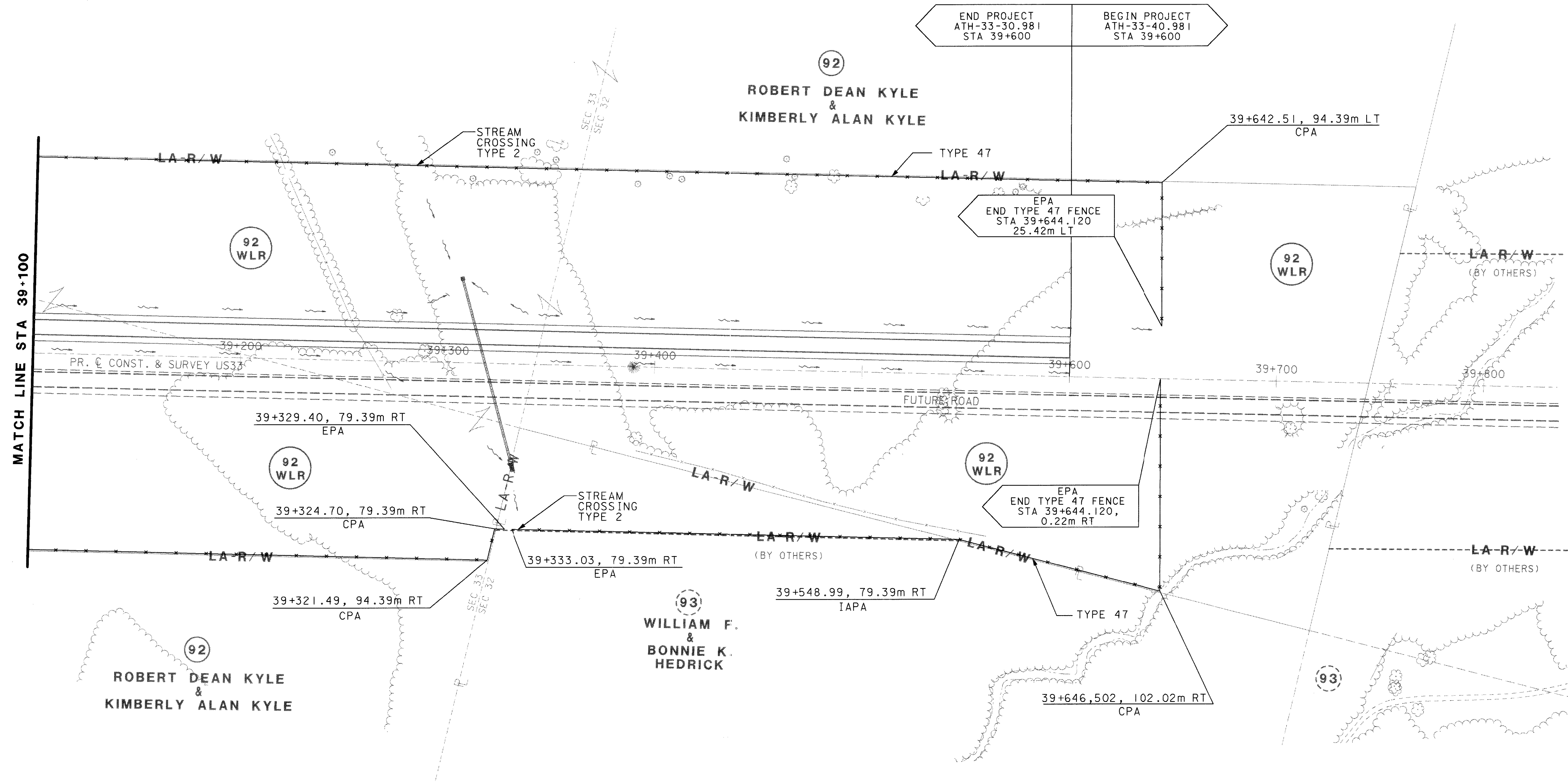
PID NO. 18287

DESIGNER AJP REVIEWER JDH

FENCING PLAN STA 39+100 TO STA 39+757.96

ATH-33-30.981

956
956



NOTE:
1. FENCE STREAM CROSSINGS DESIGNED ACCORDING TO STANDARD DRAWING-FENCE DETAILS, F-3.4M, CROSSING TYPE 2.

FENCE
EPA = END POST ASSEMBLY
IAPA = INTERMEDIATE ANCHOR POST ASSEMBLY
CPA = CORNER POST ASSEMBLY
ITEM 607, FENCE, TYPE 47 = 1270.92m
ALL FENCE IS .6m INSIDE LIMITED ACCESS LINE UNLESS NOTED.

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