

DESIGN DATA

LIVELOAD:
 DESIGN RATING: MS18
 INVENTORY RATING: MS21
 OPERATIONAL RATING: MS37
 MAX. STANDARD PERMIT VEHICLE LOAD: 1110 kN
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 1.0 kN/m²

ALLOWABLE DESIGN STRESSES:
 CONCRETE MASONRY - SLAB $f'_c = 28$ MPa
 - ALL OTHER $f'_c = 24$ MPa
 HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 420 $f_y = 420$ MPa
 1370 mm PRESTRESSED GIRDERS, CONCRETE MASONRY $f'_c = 42$ MPa
 STRANDS - 13mm DIA. WITH AN ULTIMATE TENSILE STRENGTH OF $f_{ult} = 1860$ MPa

FOUNDATION DATA:
 ABUTMENTS & PIER TO BE SUPPORTED ON HP250x62 STEEL PILING DRIVEN TO A MINIMUM BEARING VALUE OF 490 kN PER PILE. ESTIMATED LENGTH OF 15.5 m AT S. ABUT., 6.5 m AT PIER AND 12.5 m AT N. ABUT.

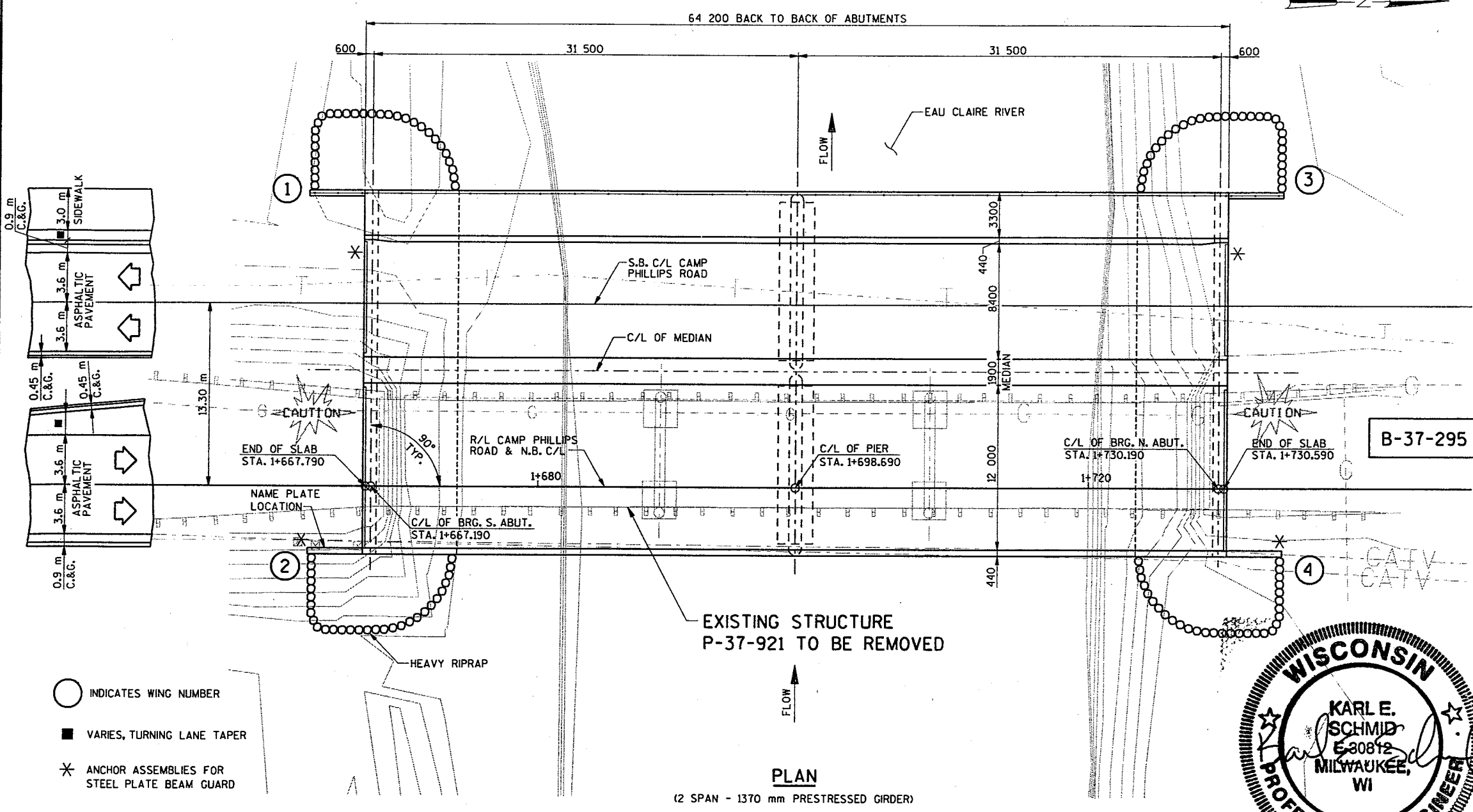
HYDRAULIC DATA:
100 YEAR FREQUENCY
 DRAINAGE AREA 1160 km²
 Q_{100} 297 m³/s
 VELOCITY 1.42 m/s
 WATERWAY AREA 209.6 m²
 HIGH WATER 100 ELEVATION 359.36
 ROAD OVERTOPPING NOT APPLICABLE.
 SCOUR CRITICAL CODE = 8

TRAFFIC VOLUME

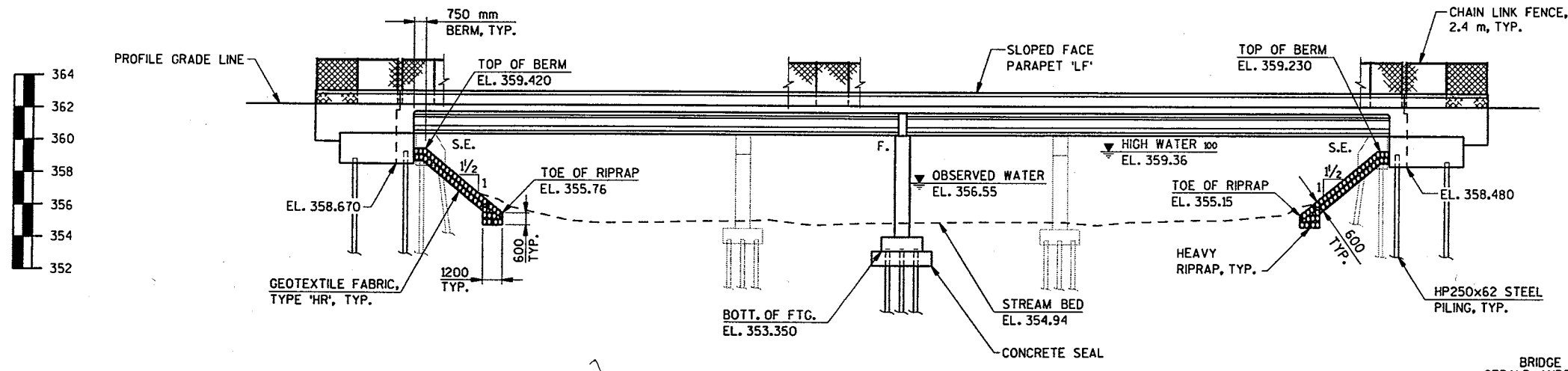
CAMP PHILLIPS ROAD
 A.D.T. (2002) = 10,250
 A.D.T. (2022) = 20,900

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. NORTH ABUTMENT
9. NORTH ABUTMENT DETAILS
10. NORTHBOUND PIER
11. SOUTHBOUND PIER
12. PIER REINFORCEMENT
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE
15. SUPERSTRUCTURE DETAILS
16. SUPERSTRUCTURE DETAILS
17. SUPERSTRUCTURE DETAILS
18. 1370 mm PRESTRESSED GIRDER DETAILS
19. STEEL DIAPHRAGM
20. FENCING DETAILS
21. SLOPED FACE PARAPET 'LF' EAST SIDE
22. SLOPED FACE PARAPET 'LF' WEST SIDE

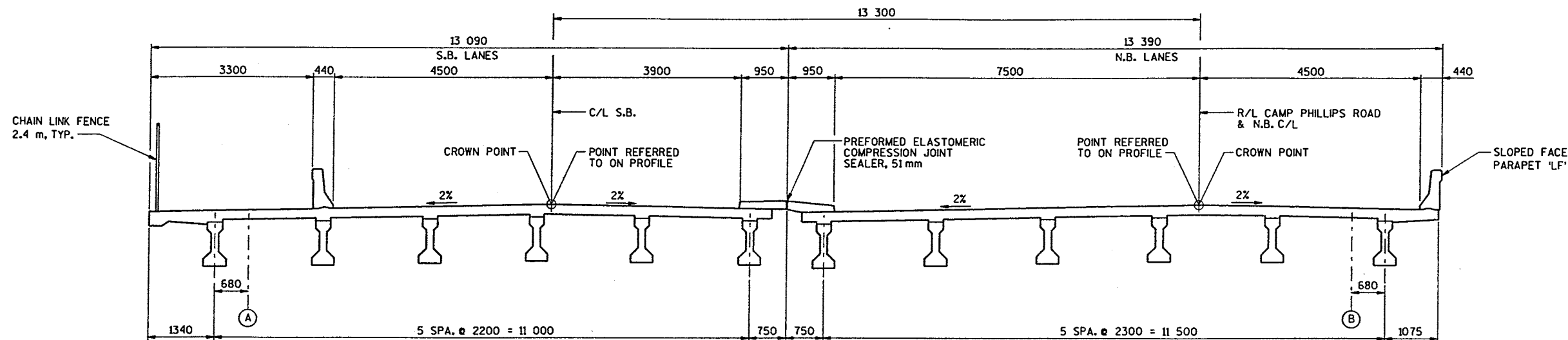


- INDICATES WING NUMBER
- VARIES, TURNING LANE TAPER
- * ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD



BRIDGE OFFICE CONTACT:
 GERALD ANDERSON (608) 266-8488
 ORIGINAL PLANS PREPARED BY
CH2MHILL
 411 E. WISCONSIN AVE. SUITE 1600
 MILWAUKEE, WISCONSIN 53202
 (414) 272-2426

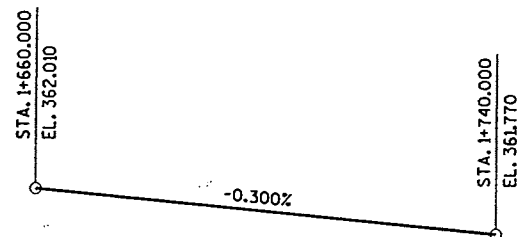
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CAMP PHILLIPS ROAD OVER EAU CLAIRE RIVER			
COUNTY	MARATHON	TOWN	WESTON
DESIGN SPEC.	AASHTO 1996	LOAD	MS18
DESIGNED BY	JAM	DRAWN BY	TEK
DESIGN CK'D.	MAM	PLANS CK'D.	KES
APPROVED		CHIEF BRIDGE DESIGN ENGINEER	DATE
GENERAL PLAN			SHEET 1 OF 22



CROSS SECTION THRU ROADWAY

(LOOKING NORTH)

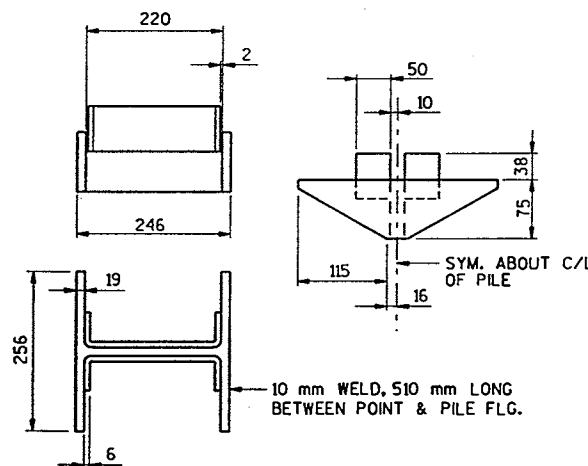
- (A) C/L 150 mm DIA. WISCONSIN FUEL & LIGHT COMPANY CONDUIT
- (B) C/L 100 mm DIA. CHARTER COMMUNICATION CONDUIT



PROFILE GRADE LINE - CAMP PHILLIPS ROAD

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SOUTH ABUTMENT	PIER	NORTH ABUTMENT	SUPER	TOTAL
REMOVING OLD BRIDGE, STA. 1+699	L.S.					1
EXCAVATION FOR STRUCTURES, BRIDGES B-37-295	L.S.					1
COFFERDAMS, STRUCTURE B-37-295	L.S.					1
STRUCTURE BACKFILL	m ³	195		195		390
CONCRETE MASONRY, BRIDGES	m ³	53.8	154.9	53.8	497.5	760
CONCRETE MASONRY, SEAL	m ³		89			89
PREFORMED ELASTOMERIC COMPRESSION JOINT SEALER, 51mm	m				65	65
PROTECTIVE SURFACE TREATMENT	m ²				1882	1882
PRESTRESSED GIRDER, I TYPE, 1370 mm	m				758.6	758.6
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	2285	8090	2285		12660
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	kg	160		160	57805	58125
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	12	12	12		36
STEEL DIAPHRAGM, STRUCTURE B-37-295	EACH				40	40
STEEL PILING, DELIVERED AND DRIVEN, HP250x62	m	372	312	300		984
PILE POINTS	EACH	24	48	24		96
RUBBERIZED MEMBRANE WATERPROOFING	m ²	15		15		30
HEAVY RIPRAP	m ³	225		265		490
PIPE UNDERDRAIN, 150 mm	m	30		30		60
PIPE UNDERDRAIN, UNPERFORATED, 150 mm	m	7		7		14
ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD	EACH					4
CHAIN LINK FENCE, 2.4 m	m				72	72
GEOTEXTILE FABRIC, TYPE DF	m ²	66		66		132
GEOTEXTILE FABRIC, TYPE HR	m ²	425		465		890
INSTALLING HANGER ROD INSERTS, WISCONSIN FUEL AND LIGHT COMPANY, ITEM 90004A	L.S.					1
INSTALLING CHARTER COMMUNICATION CONDUIT SYSTEM, ITEM 90004B	L.S.					1
OMP, READY MIXED CONCRETE MASONRY FOR BRIDGES	m ³					760
OMP, MASONRY STRENGTH INCENTIVE, READY MIXED CONCRETE	DOL					9120



PILE POINT DETAIL

(DIMENSIONS AS SHOWN ABOVE MAY VARY BY MODEL & MANUFACTURER)

NOTES:

1. POINTS SHALL BE MADE FROM CAST STEEL (ASTM A27 GRADE 65-35) AND SHALL BE ONE OF THE FOLLOWING OR AN APPROVED EQUAL. NO. H.P.A. 1057 AS SUPPLIED BY INTERNATIONAL CONSTRUCTION EQUIPMENT, INC., NO. 10 MAC-4 AS SUPPLIED BY J.C. McELROY CO. INC., OR PRUYN POINT NO. H.P. 75750, HP-77750-B, HP-77600-B, OR HP-7780-B AS MANUFACTURED BY ASSOCIATED PILE & FITTING CORP.
2. ALL FILLETS = 10 mm
3. ALL WELDS BETWEEN PILE AND POINT TO BE IN ACCORDANCE WITH AWS SPEC'S. WELD FLANGES TO FITTING ON OUTSIDE FACES.
4. CONTRACTOR MAY USE AN ALTERNATE DESIGN UPON APPROVAL OF THE ENGINEER.

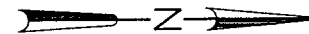
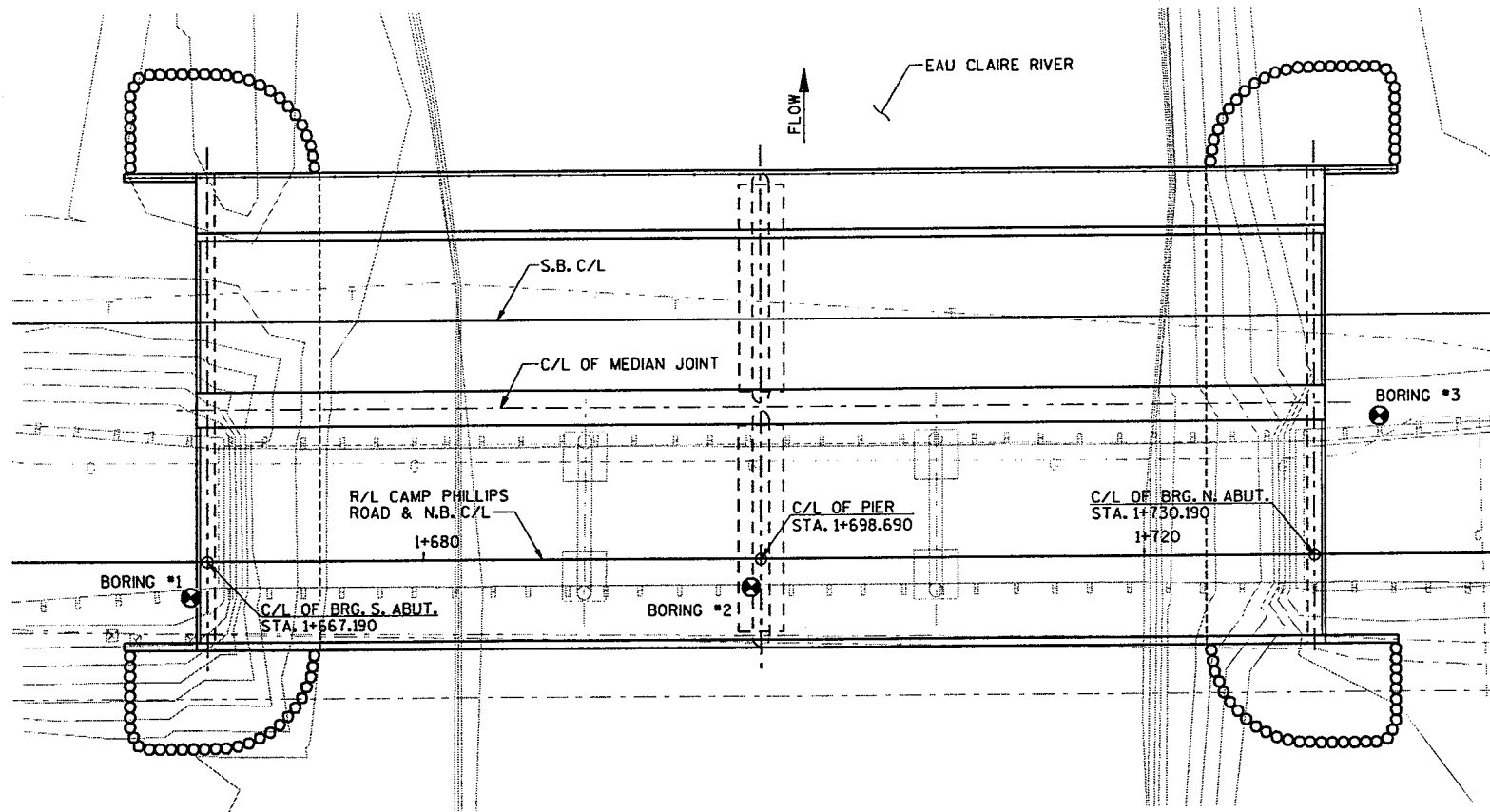
GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- ALL DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS SHOWN OR OTHERWISE NOTED.
- ALL STATIONS AND ELEVATIONS ARE IN METERS (m).
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 50 mm CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
- ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP TO THE LIMITS SHOWN ON SHEET 1, ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.
- THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- AT THE BACKFACE OF ABUTMENTS, ALL EXCAVATED VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL. PAYMENT WILL BE MADE ONLY FOR MATERIAL PLACED WITHIN THE LIMITS SHOWN ON THE ABUTMENT SHEETS.
- THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES AT THE ABUTMENTS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CRD.	KES
CROSS SECTION & QUANTITIES			SHEET 2 OF 22

SOIL BORINGS PERFORMED BY:
SOILS & ENGINEERING SERVICES, INC
MADISON, WI

SOIL BORINGS PERFORMED ON:
DECEMBER 16, 1997 - BORING #1
DECEMBER 16, 1997 - BORING #2
DECEMBER 17, 1997 - BORING #3



STATE PROJECT NUMBER SHEET NO.

6676-03-

ABBREVIATIONS
F — Fine M — Medium C — Coarse
Ws — Weathered So — Sand

MATERIAL SYMBOLS

Bituminous Pavement	Silt	Sandstone
Sand	Peat	Limestone
Gravel	Clay	Metamorphic Rock

LEGEND OF PROBING

Probing No. Sta. Elevation
30/0.15m = 30 Blows for 0.15m Penetration
Probing taken with a 63.5kg mass Falling 0.76 on a 0.051m O.D. Point.
7 Average Blows Per 0.3 Meter
Refusal 30/0.15m

LEGEND OF BORING

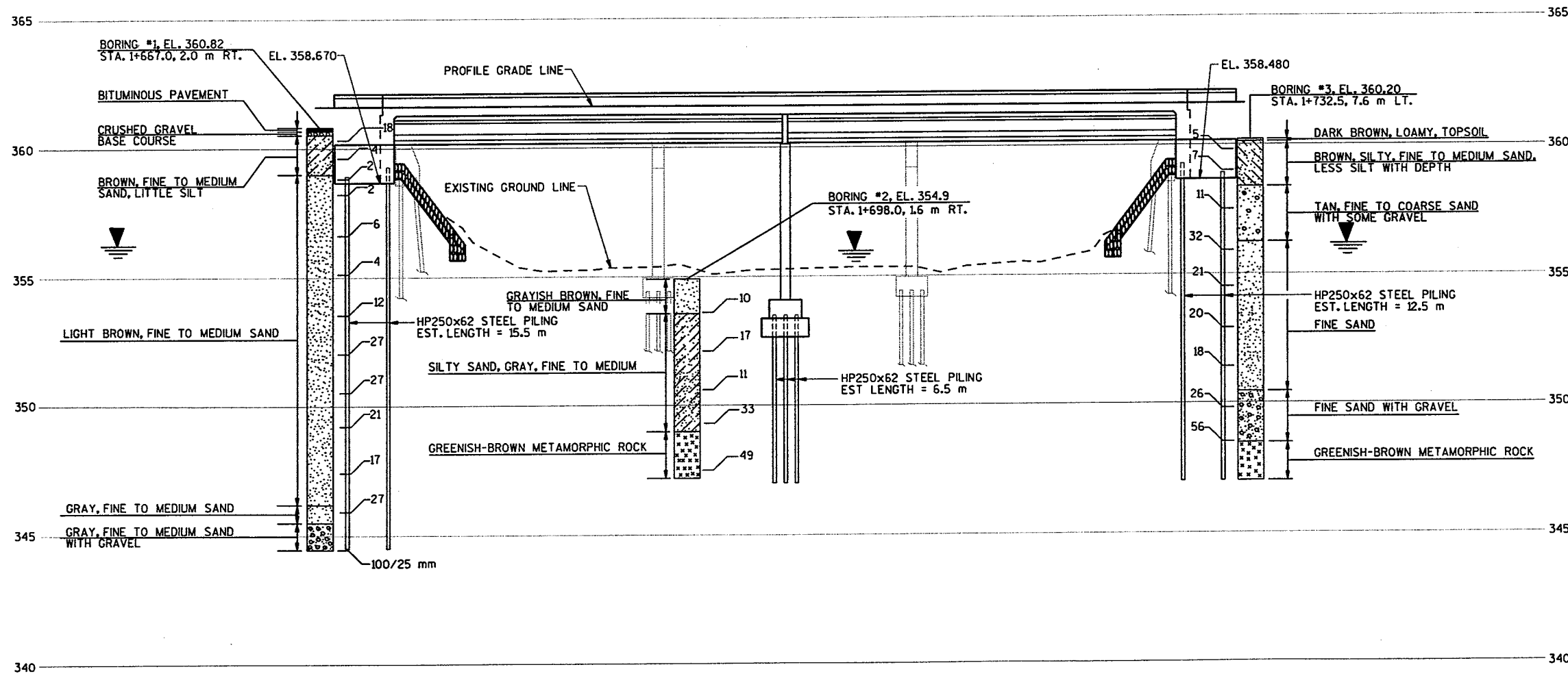
Elev. Boring No. Sta.
Unconfined Strength — 720
Blows Per 0.3m Using 64kg mass Falling 0.75m
Wash Sample
Shelby Tube — S.T.
Ground Water Elevation
No Ground Water Observed Above This Elevation

	Sandy Gravel
	Boulders or Cobbles
	Sand
	Silty Clay
	Limestone

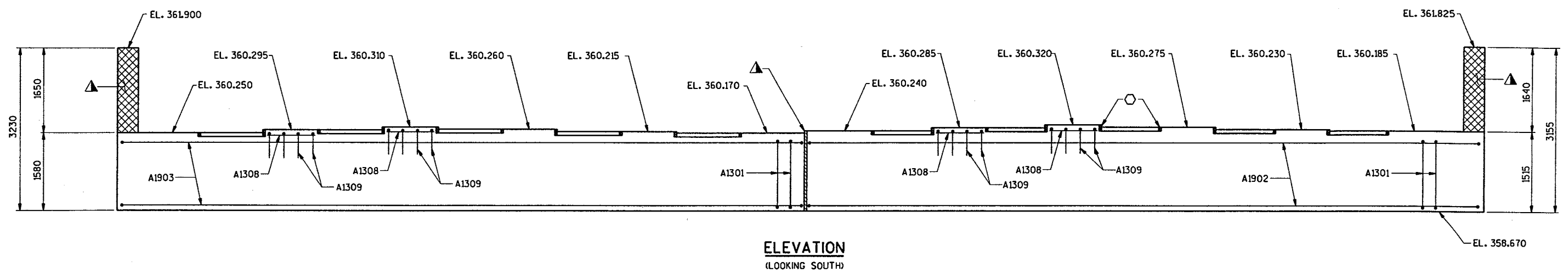
Unless otherwise specified, the blows per 0.3 m at the locations indicated are based on driving a 0.0x0.014m I.D. split spoon sampler with a 64kg mass hammer having a free fall of 0.75m. The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

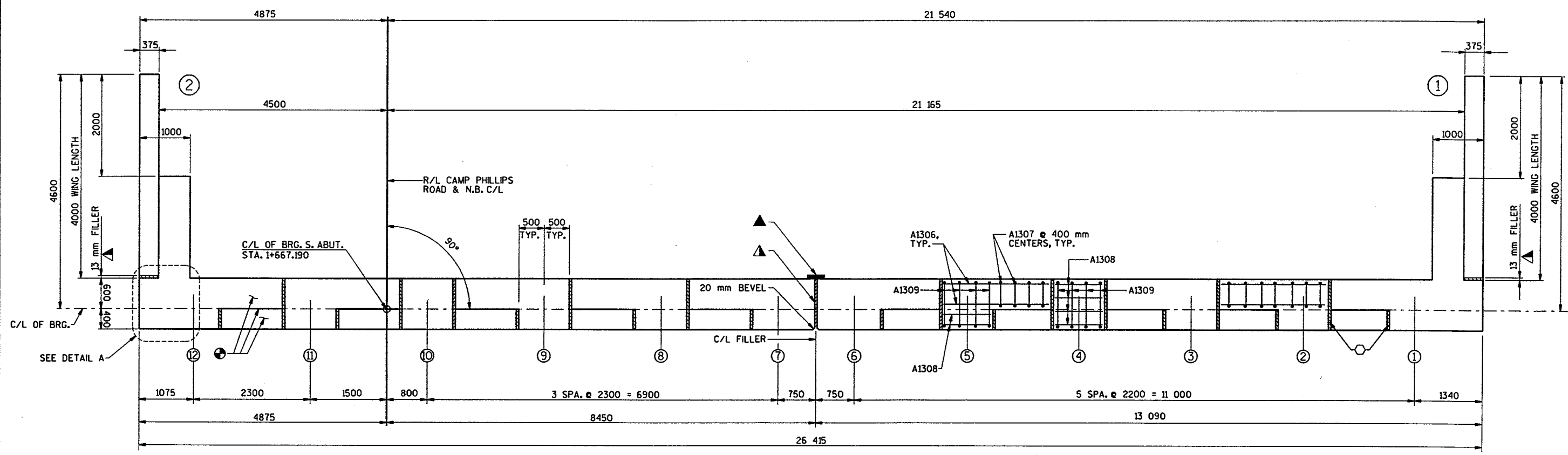
To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents the findings of the subsurface explorations made. However, because the depths investigated are limited and the area of the borings and/or soundings is very small in relation to the entire area, the Division of Highways does not warrant conditions below the depths investigated or that the classification of material encountered in these investigations is necessarily typical of the entire site.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. MAM
SUBSURFACE EXPLORATION			SHEET 3 OF 22



ELEVATION
(LOOKING SOUTH)

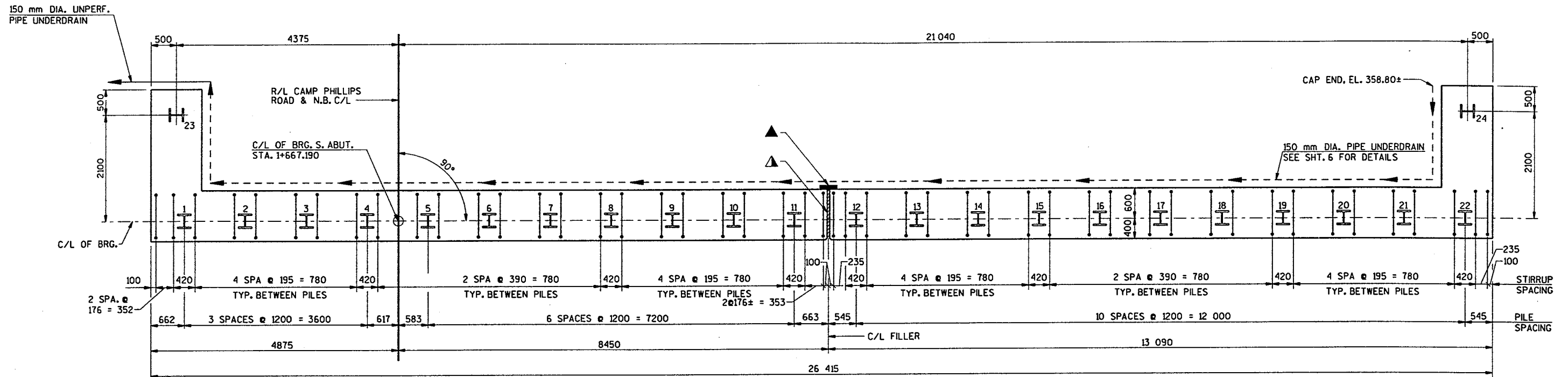


PLAN

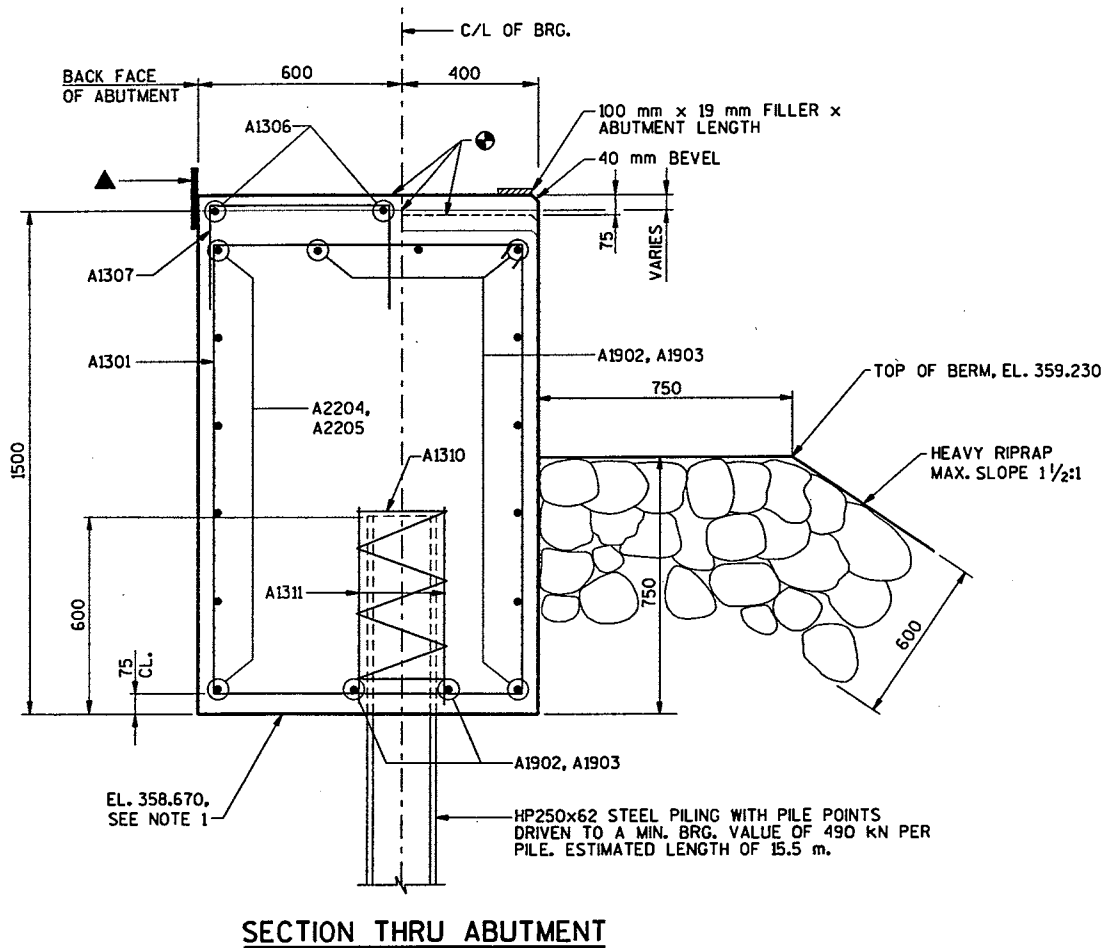
NOTES:

- ▲ 13 mm FILLER TO EXTEND AS SHOWN - SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (25 mm DEEP AND HOLD 3 mm BELOW SURFACE OF CONCRETE).
- ▲ 457 mm RUBBERIZED MEMBRANE WATERPROOFING.
- 19 mm CORK FILLER ON VERTICAL FACE ONLY.
- STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PAD. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.750 mm.

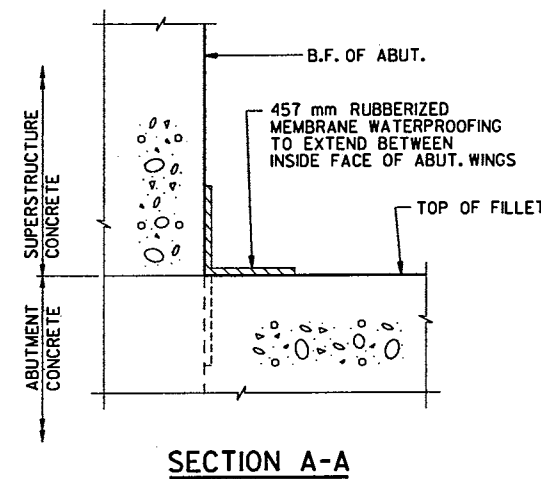
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	PLANS CKD.
		TEK	KES
SOUTH ABUTMENT			SHEET 4 OF 22



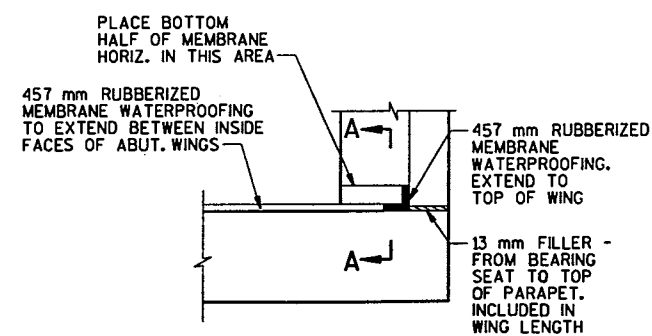
PILE PLAN



SECTION THRU ABUTMENT



SECTION A-A

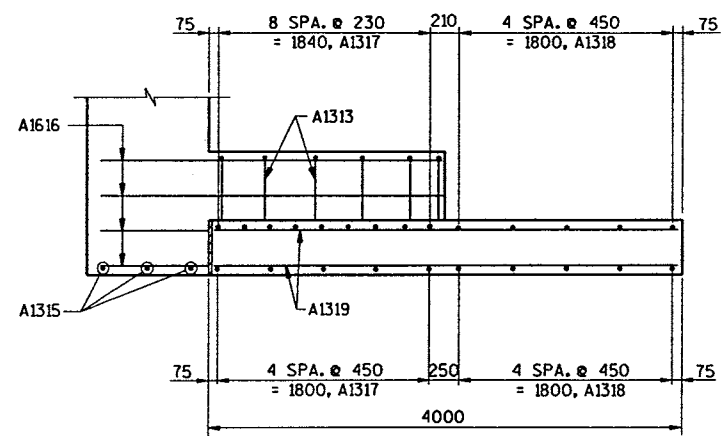


DETAIL A

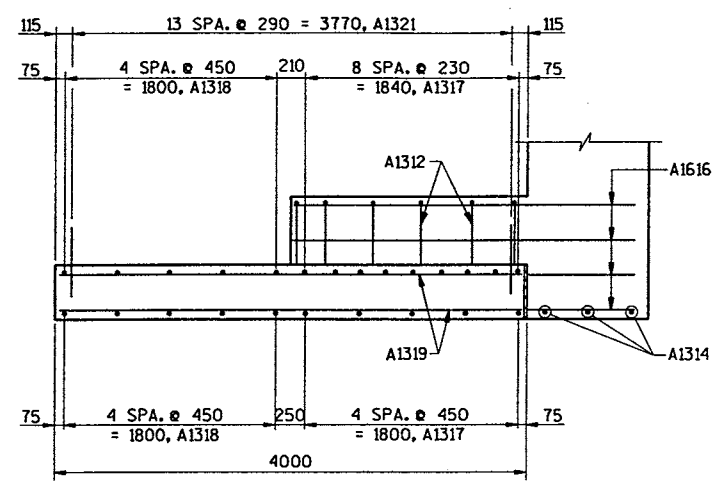
NOTES:

1. EXCAVATE TO THIS ELEVATION BEFORE DRIVING PILES.
2. STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PAD. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.750 mm.
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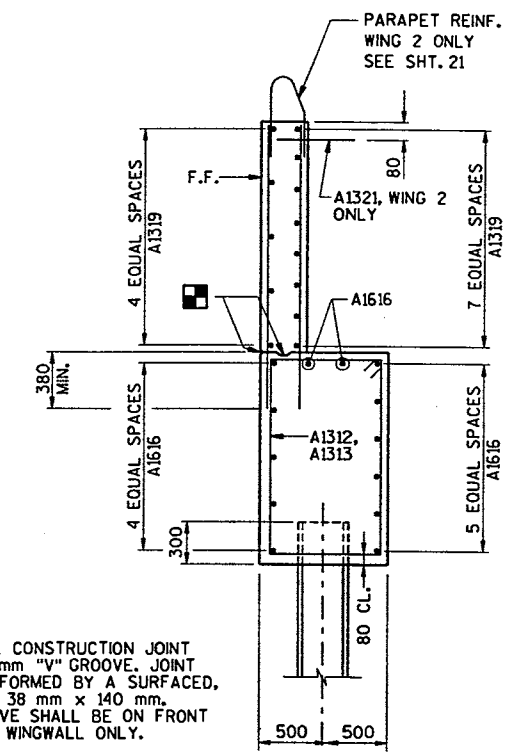
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. KES
SOUTH ABUTMENT			SHEET 5 OF 22



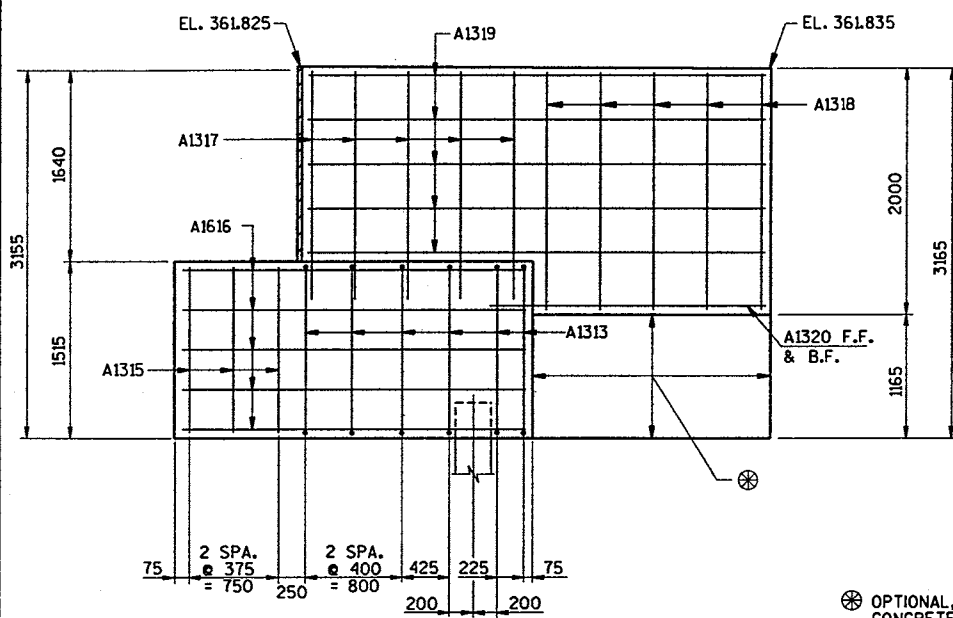
PLAN - WING 1



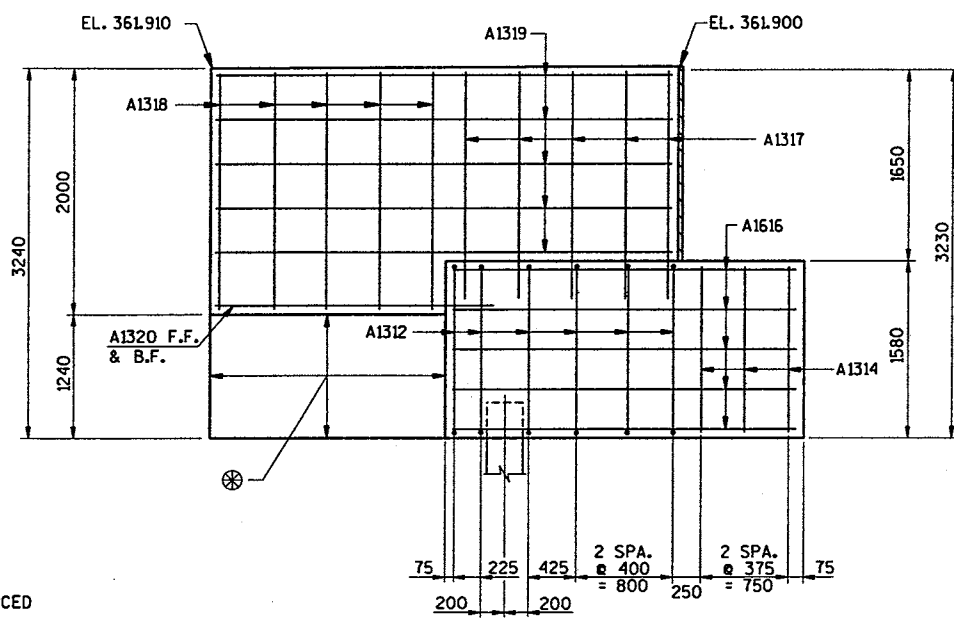
PLAN - WING 2



SECTION THRU WINGS



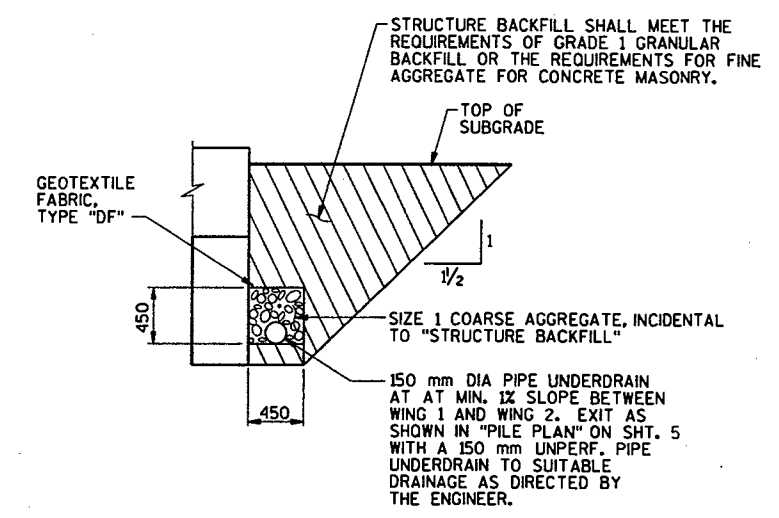
ELEVATION - WING 1



ELEVATION - WING 2

OPTIONAL CONSTRUCTION JOINT AND 20 mm "V" GROOVE. JOINT KEYWAY FORMED BY A SURFACED, BEVELED 38 mm x 140 mm. "V" GROOVE SHALL BE ON FRONT FACE OF WINGWALL ONLY.

OPTIONAL, MAY BE UNREINFORCED CONCRETE. QUANTITY SHALL NOT BE INCLUDED IN PAY ITEM "CONCRETE MASONRY, BRIDGES".



PIPE UNDERDRAIN AND BACKFILL DETAILS

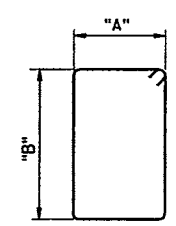
NOTE: SEE "PILE PLAN" ON SHEET 5 FOR ADDITIONAL PIPE UNDERDRAIN DETAILS

PAY LIMITS OF STRUCTURE BACKFILL

BILL OF BARS

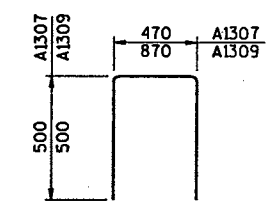
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	BUN-DLE	LOCATION
A1301		94	4540	x			BODY - STIRRUPS - VERT.
A1902		10	13380	x			BODY - TOP, BOTTOM & B.F. - HORIZ.
A1903		10	13620	x			BODY - TOP, BOTTOM & B.F. - HORIZ.
A2204		6	12980				BODY - B.F. - HORIZ.
A2205		6	13220				BODY - B.F. - HORIZ.
A1306		20	2400				BODY - TOP - HORIZ.
A1307		64	1400	x			BODY - TOP - VERT.
A1308		12	900				BODY - TOP - HORIZ.
A1309		16	1800	x			BODY - TOP - VERT.
A1310		22	8600	x			BODY - AT PILES - 1 PER PILE - 5 WRAP SPIRAL
A1311		44	700				BODY - AT PILES - 2 PER PILE - VERT.
A1312		6	4660	x			WING 2 - STIRRUPS - VERT.
A1313		6	4780	x			WING 1 - STIRRUPS - VERT.
A1314		3	1420				WING 2 - F.F. - VERT.
A1315		3	1480				WING 1 - F.F. - VERT.
A1616		26	2860				WING 1 & 2 - F.F., TOP & B.F. - HORIZ.
A1317		28	1940				WING 1 & 2 - F.F. & B.F. - VERT.
A1318		20	1900				WING 1 & 2 - F.F. & B.F. - VERT.
A1319		26	3900				WING 1 & 2 - F.F. & B.F. - HORIZ.
A1320		4	2400				WING 1 & 2 - F.F. & B.F. - HORIZ.
A1321	x	14	600				WING 2 - PAVEMENT TIES - HORIZ.

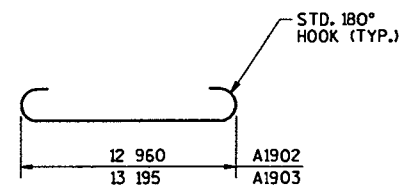


MARK	"A"	"B"
A1301	870	1320
A1312	870	1375
A1313	870	1435

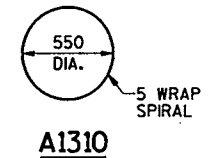
A1301, A1312, A1313



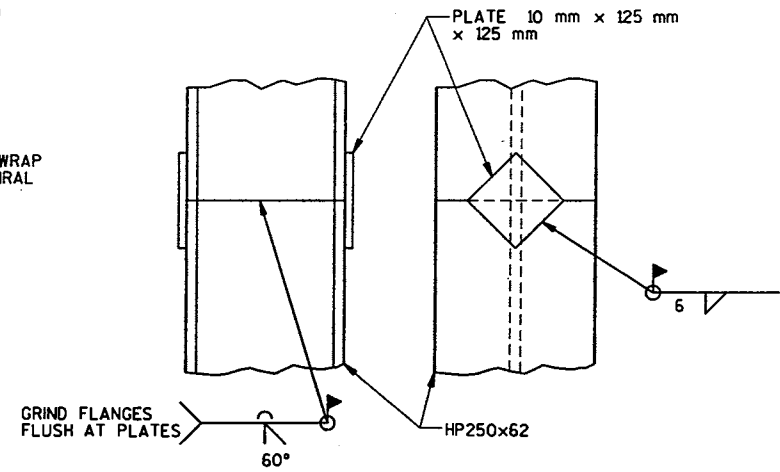
A1307, A1309



A1902, A1903

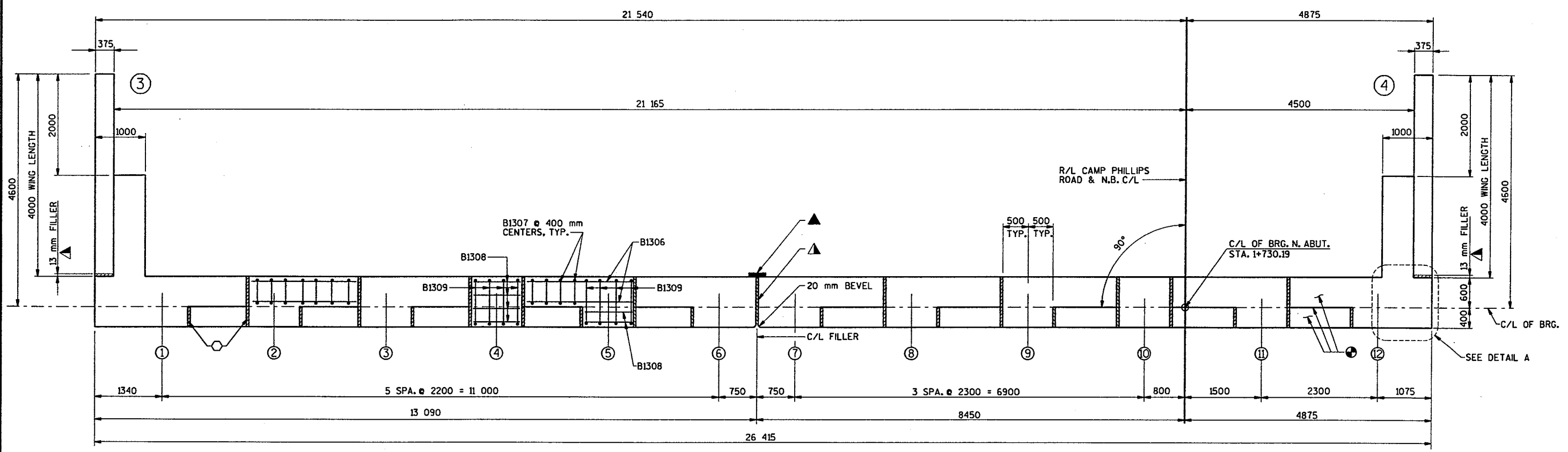
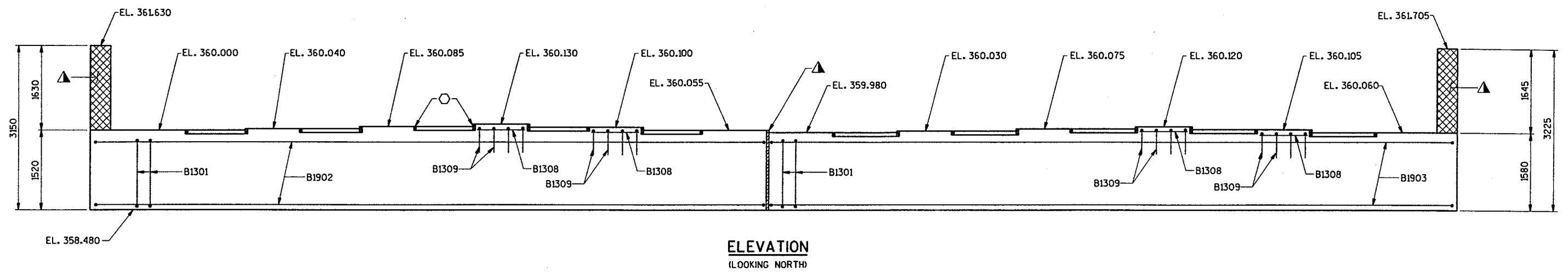


A1310



PILE SPlice DETAIL

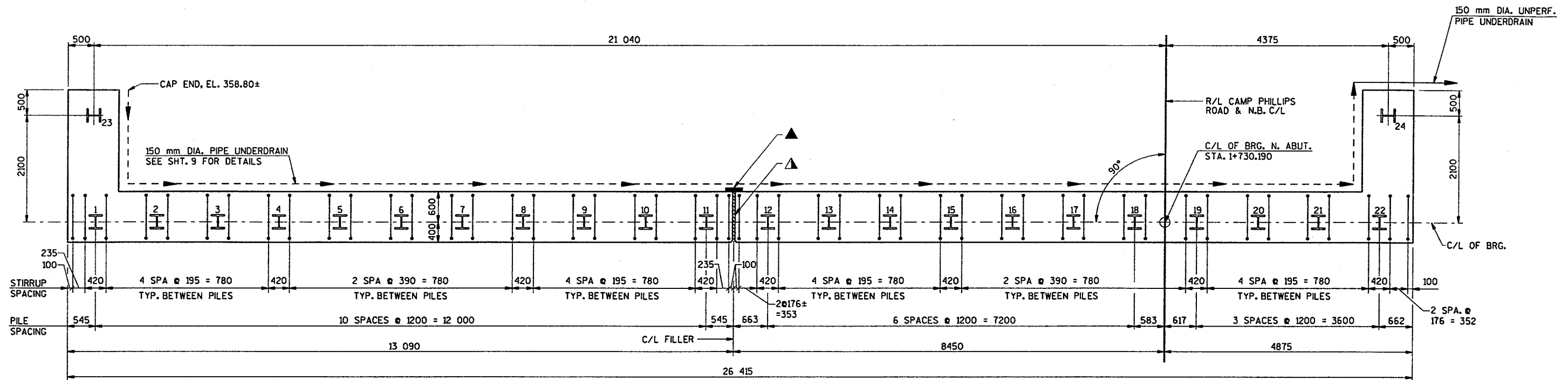
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CKD.	KES
SOUTH ABUTMENT DETAILS			SHEET 6 OF 22



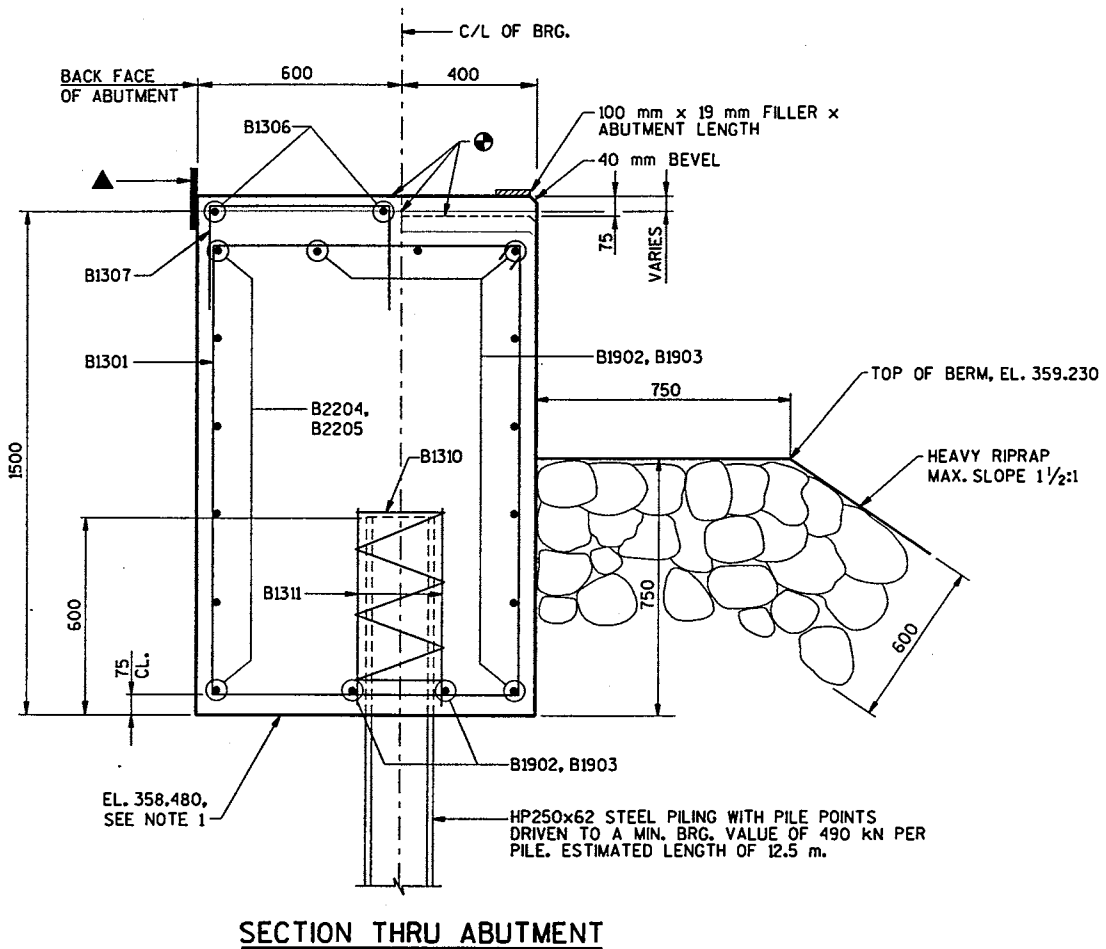
NOTES:

- ▲ 13 mm FILLER TO EXTEND AS SHOWN - SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (25 mm DEEP AND HOLD 3 mm BELOW SURFACE OF CONCRETE).
- ▲ 457 mm RUBBERIZED MEMBRANE WATERPROOFING.
- 19 mm CORK FILLER ON VERTICAL FACE ONLY.
- STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PAD. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.750 mm.

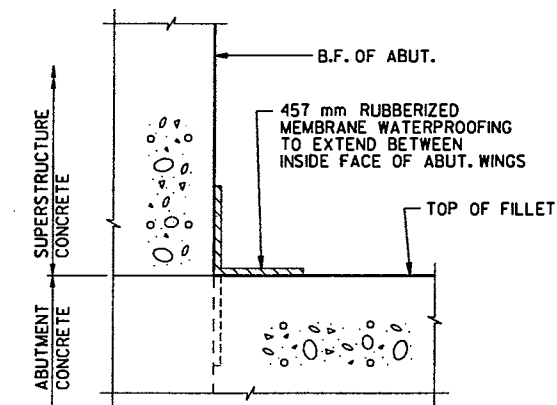
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CK'D.	KES
NORTH ABUTMENT			SHEET 7 OF 22



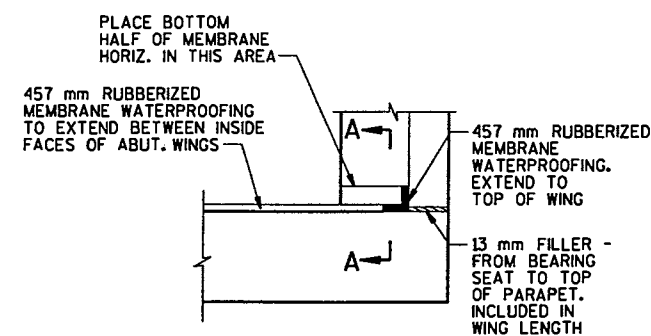
PILE PLAN



SECTION THRU ABUTMENT



SECTION A-A

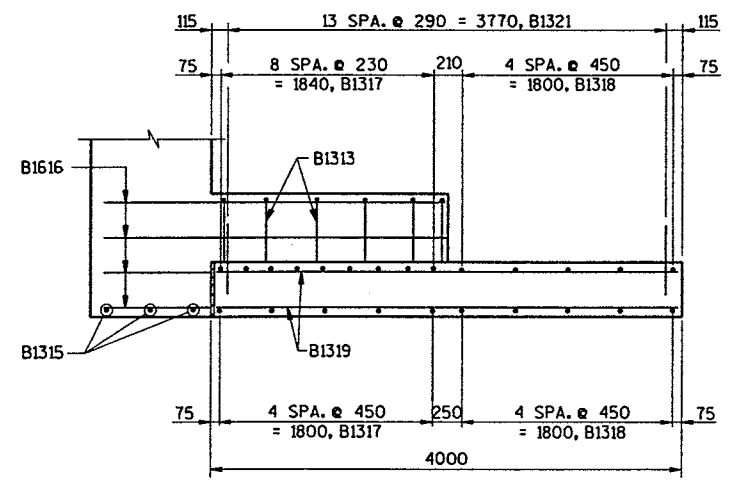


DETAIL A

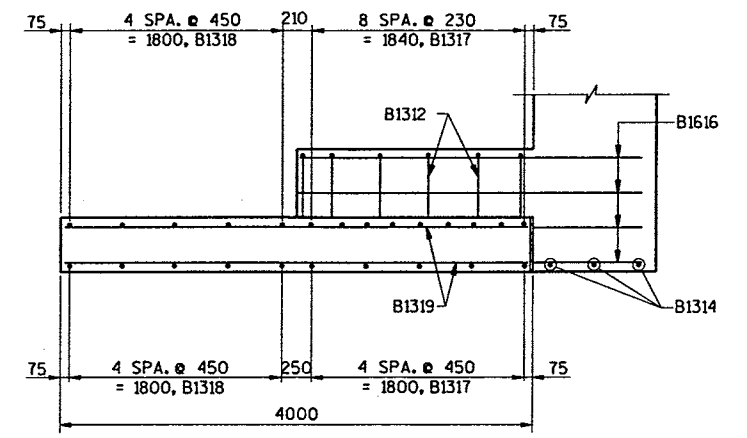
NOTES:

1. EXCAVATE TO THIS ELEVATION BEFORE DRIVING PILES.
2. STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PAD. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.750 mm.
3. 457 mm RUBBERIZED MEMBRANE WATERPROOFING.
4. 13 mm FILLER TO EXTEND AS SHOWN - SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (25 mm DEEP AND HOLD 3 mm BELOW SURFACE OF CONCRETE).

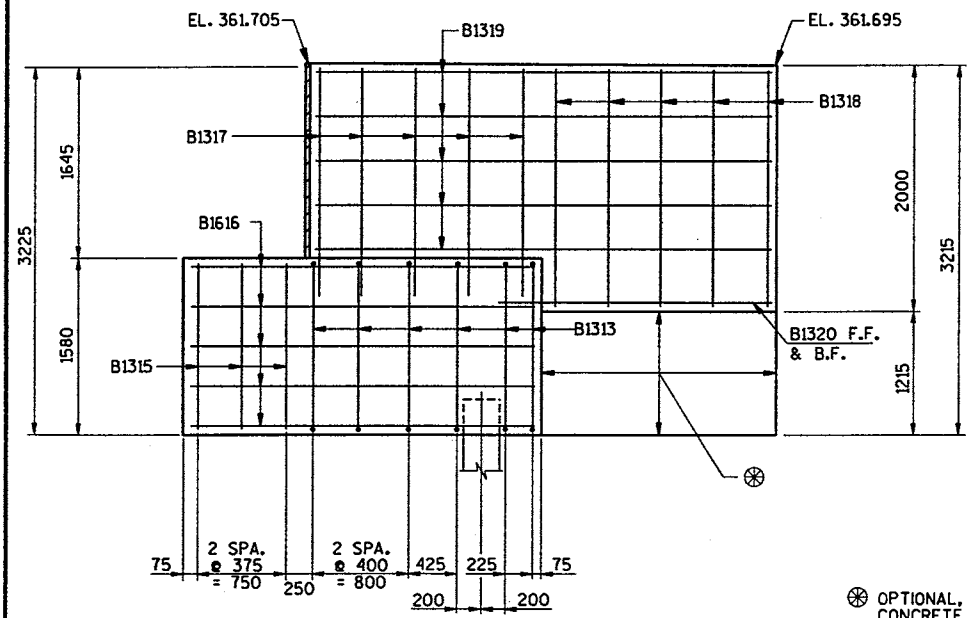
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CKD. KES
NORTH ABUTMENT			SHEET 8 OF 22



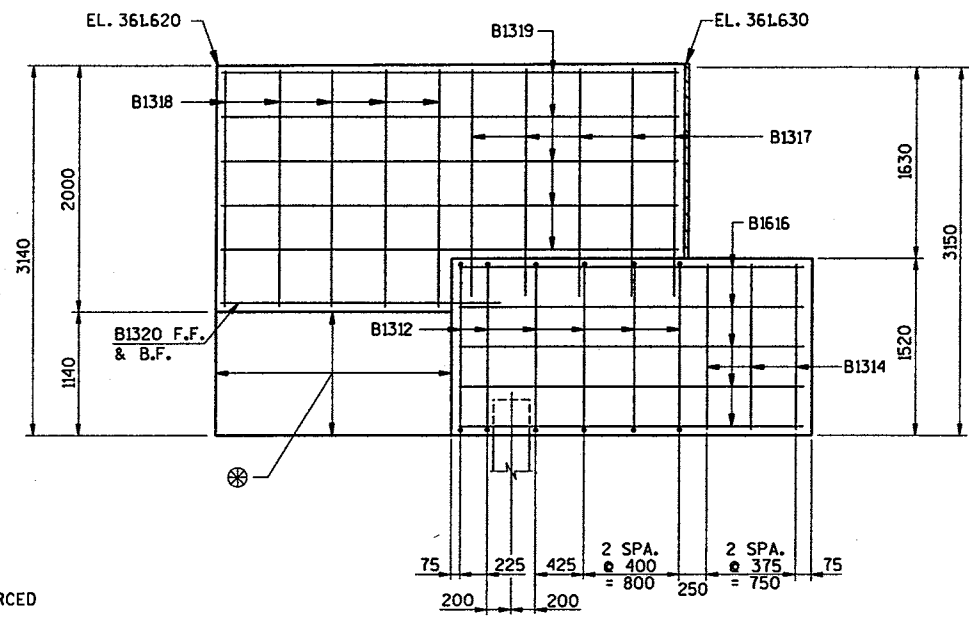
PLAN - WING 4



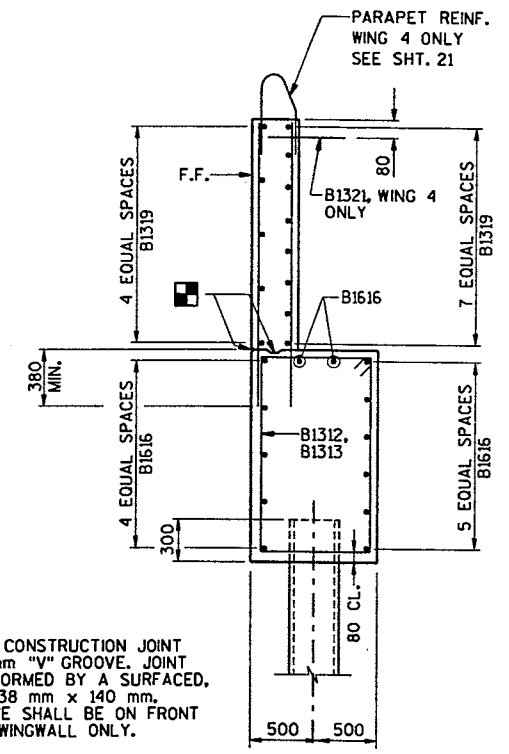
PLAN - WING 3



ELEVATION - WING 4



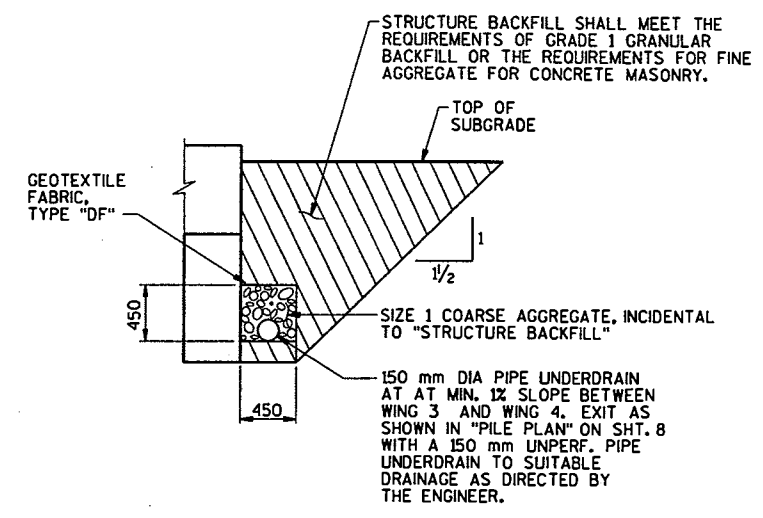
ELEVATION - WING 3



SECTION THRU WINGS

OPTIONAL CONSTRUCTION JOINT AND 20 mm "V" GROOVE. JOINT KEYWAY FORMED BY A SURFACED, BEVELED 38 mm x 140 mm. "V" GROOVE SHALL BE ON FRONT FACE OF WINGWALL ONLY.

STRUCTURE BACKFILL SHALL MEET THE REQUIREMENTS OF GRADE 1 GRANULAR BACKFILL OR THE REQUIREMENTS FOR FINE AGGREGATE FOR CONCRETE MASONRY.



PIPE UNDERDRAIN AND BACKFILL DETAILS

NOTE: SEE "PILE PLAN" ON SHEET 8 FOR ADDITIONAL PIPE UNDERDRAIN DETAILS

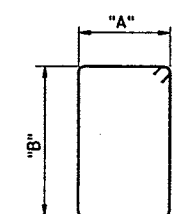
PAY LIMITS OF STRUCTURE BACKFILL

BILL OF BARS

NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

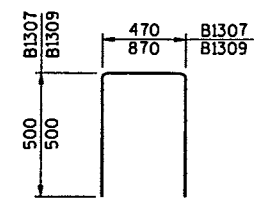
BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	BAR SERIES	BUNDLE	LOCATION
B1301		94	4540	x			BODY - STIRRUPS - VERT.
B1902		10	13380	x			BODY - TOP, BOTTOM & B.F. - HORIZ.
B1903		10	13620	x			BODY - TOP, BOTTOM & B.F. - HORIZ.
B2204		6	12980				BODY - B.F. - HORIZ.
B2205		6	13220				BODY - B.F. - HORIZ.
B1306		20	2400				BODY - TOP - HORIZ.
B1307		64	1400	x			BODY - TOP - VERT.
B1308		12	900				BODY - TOP - HORIZ.
B1309		16	1800	x			BODY - TOP - VERT.
B1310		22	8600	x			BODY - AT PILES - 1 PER PILE - 5 WRAP SPIRAL
B1311		44	700				BODY - AT PILES - 2 PER PILE - VERT.
B1312		6	4660	x			WING 3 - STIRRUPS - VERT.
B1313		6	4780	x			WING 4 - STIRRUPS - VERT.
B1314		3	1420				WING 3 - F.F. - VERT.
B1315		3	1480				WING 4 - F.F. - VERT.
B1616		26	2860				WING 3 & 4 - F.F., TOP & B.F. - HORIZ.
B1317		28	1940				WING 3 & 4 - F.F. & B.F. - VERT.
B1318		20	1900				WING 3 & 4 - F.F. & B.F. - VERT.
B1319		26	3900				WING 3 & 4 - F.F. & B.F. - HORIZ.
B1320		4	2400				WING 3 & 4 - F.F. & B.F. - HORIZ.
B1321	x	14	600				WING 4 - PAVEMENT TIES - HORIZ.

OPTIONAL, MAY BE UNREINFORCED CONCRETE. QUANTITY SHALL NOT BE INCLUDED IN PAY ITEM "CONCRETE MASONRY, BRIDGES".

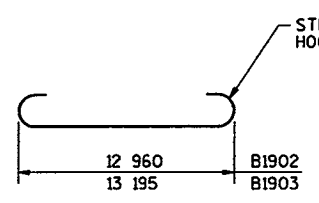


MARK	"A"	"B"
B1301	870	1320
B1312	870	1375
B1313	870	1435

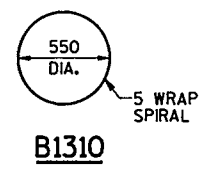
B1301, B1312, B1313



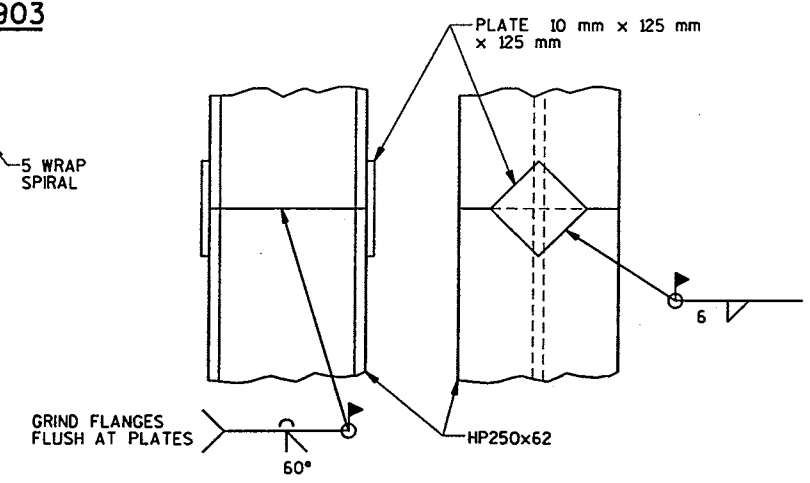
B1307, B1309



B1902, B1903

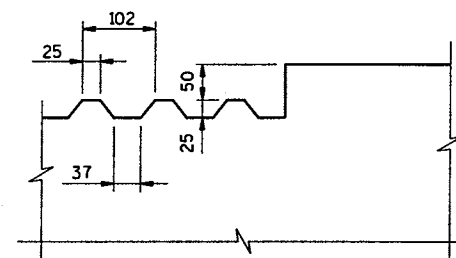
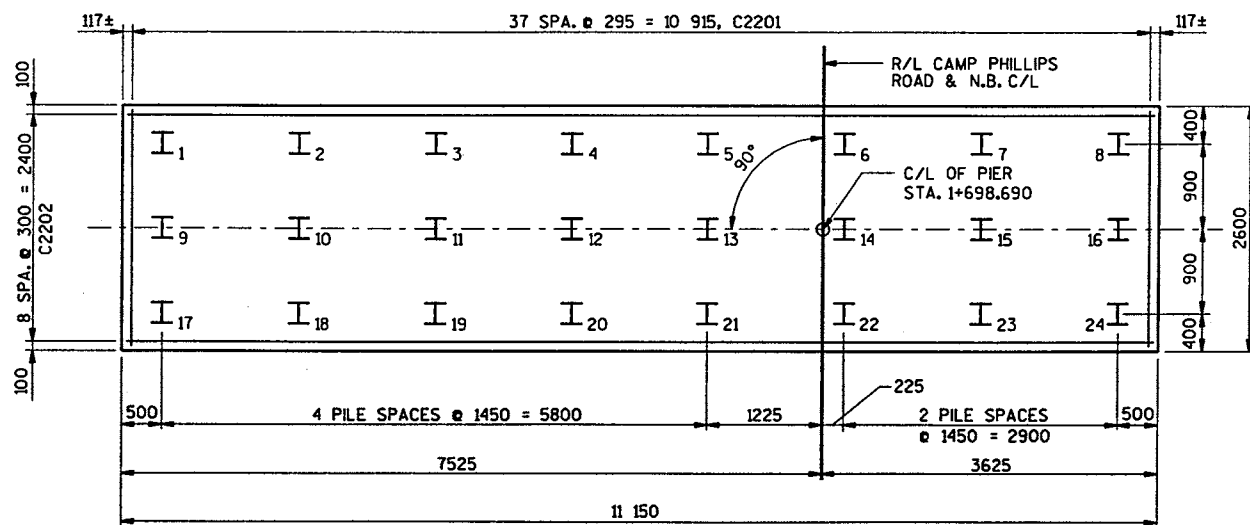
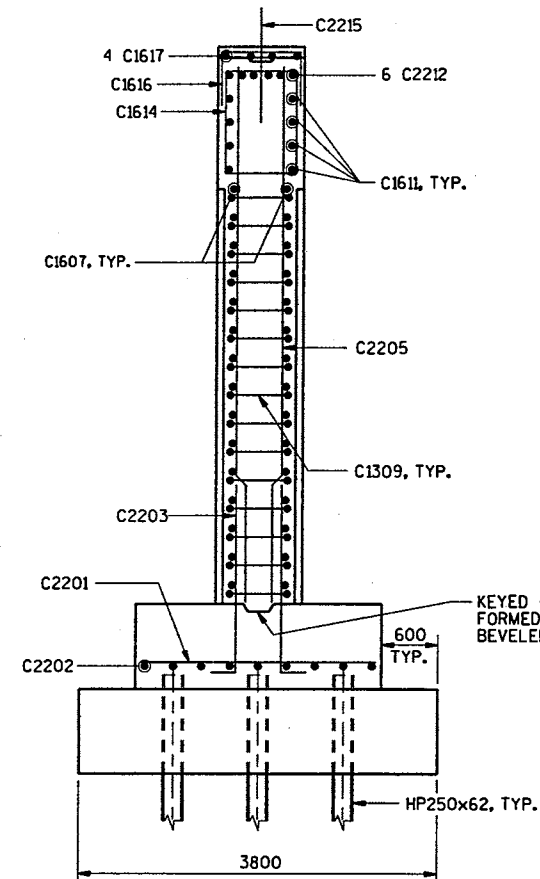
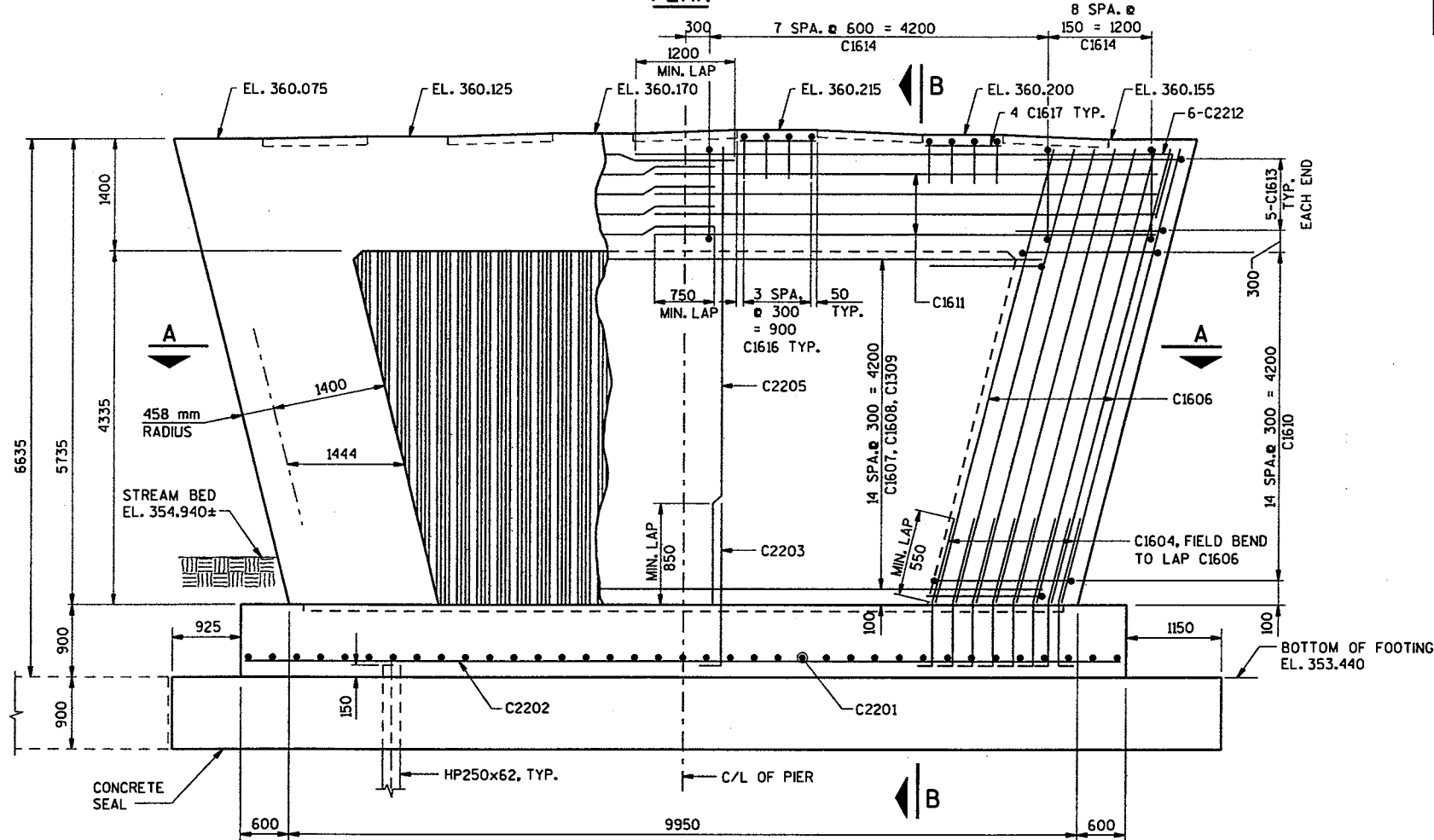
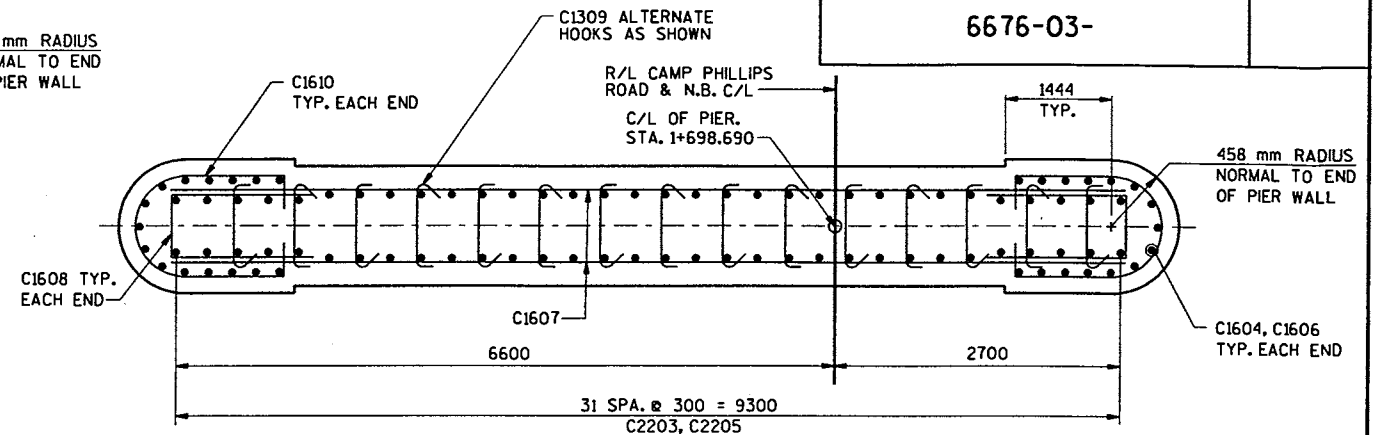
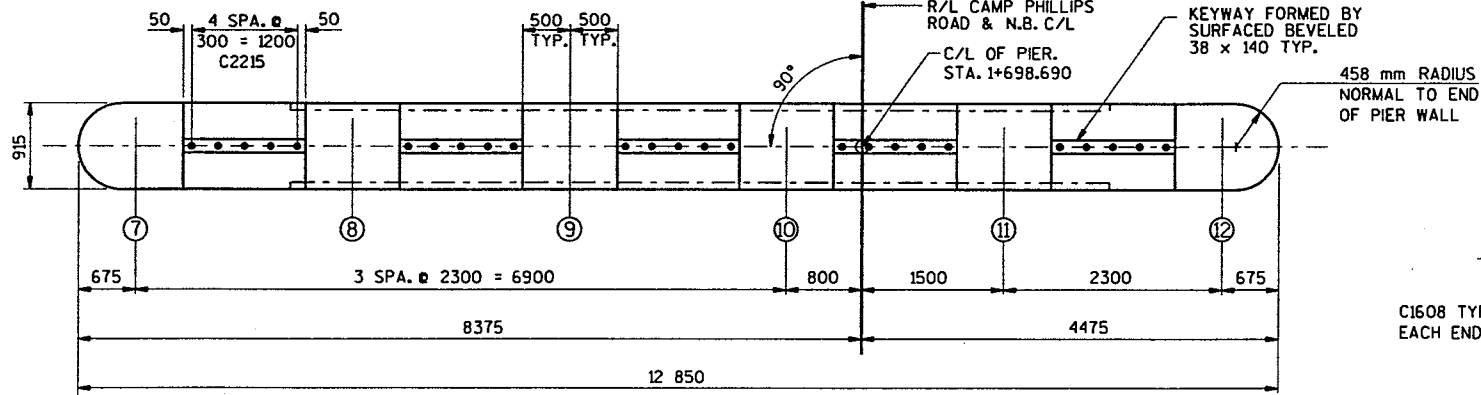


B1310



PILE SPLICE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CK'D.	KES
NORTH ABUTMENT DETAILS			SHEET 9 OF 22



NOTES

1. PILING SHALL BE HP250x62 STEEL PILING WITH PILE POINTS DRIVEN TO A MINIMUM BEARING VALUE OF 490 KN PER PILE. ESTIMATED LENGTH = 6.5 METERS
2. C2215 BARS MAY BE PLACED AFTER CONCRETE IS PLACED, BUT BEFORE CONCRETE REACHES INITIAL SET. (EMBED 325 mm)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CKD. KES
NORTHBOUND PIER			SHEET 10 OF 22

NORTHBOUND PIER

SOUTHBOUND PIER

BILL OF BARS

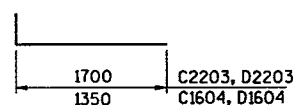
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
C2201		38	2500				FOOTING - TRANSVERSE
C2202		9	11 050				FOOTING - LONGITUDINAL
C2203		64	2020	x			FOOTING - DOWELS
C1604		30	1580	x			FOOTING - DOWELS
C2205		64	5660				WALL - VERTICAL
C1606		30	5840				WALL ENDS - VERTICAL
C1607		30	9320				WALL - HORIZONTAL
C1608		30	2060	x			WALL ENDS - HORIZONTAL
C1309		225	880	x			WALL TIES - HORIZONTAL
C1610		30	4500	x			WALL ENDS - HORIZONTAL
C1611		16	6340				CAP SIDES - HORIZONTAL
C2212		12	7520	x			CAP TOP - HORIZONTAL
C1613		10	2760	x			CAP ENDS - HORIZONTAL
C1614		32	4160	x			CAP - STIRRUPS
C2215		25	650				CAP - VERTICAL DOWEL
C1616		8	1620	x			CAP - BEAM SEATS
C1617		8	900				CAP - BEAM SEATS

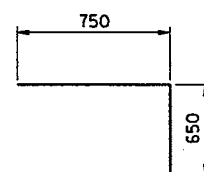
BILL OF BARS

NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

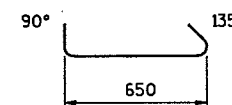
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
D2201		36	2500				FOOTING - TRANSVERSE
D2202		9	10 550				FOOTING - LONGITUDINAL
D2203		60	2020	x			FOOTING - DOWELS
D1604		30	1580	x			FOOTING - DOWELS
D2205		60	5680				WALL - VERTICAL
D1606		30	5860				WALL ENDS - VERTICAL
D1607		30	8740				WALL - HORIZONTAL
D1608		30	2060	x			WALL ENDS - HORIZONTAL
D1309		210	880	x			WALL TIES - HORIZONTAL
D1610		30	4500	x			WALL ENDS - HORIZONTAL
D1611		16	6100				CAP SIDES - HORIZONTAL
D2212		12	7280	x			CAP TOP - HORIZONTAL
D1613		10	2760	x			CAP ENDS - HORIZONTAL
D1614		32	4160	x			CAP - STIRRUPS
D2215		25	650				CAP - VERTICAL DOWEL
D1616		8	1620	x			CAP - BEAM SEATS
D1617		8	900				CAP - BEAM SEATS



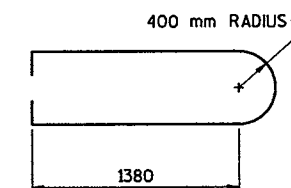
C2203, C1604, D2203, D1604



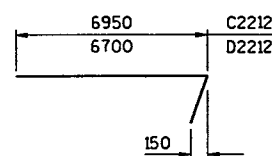
C1608, D1608



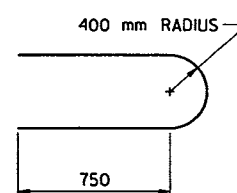
C1309, D1309



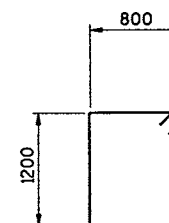
C1610, D1610



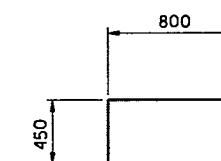
C2212, D2212



C1613, D1613

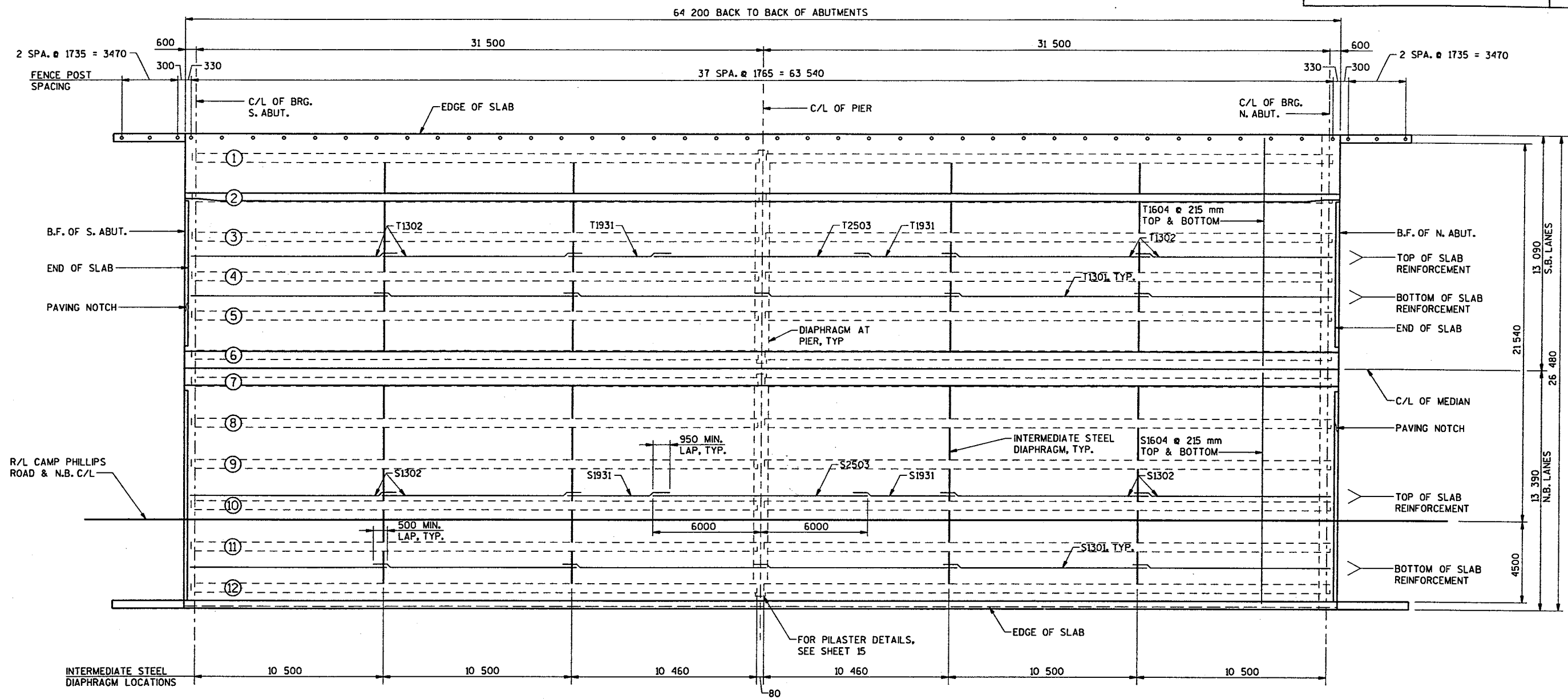


C1614, D1614



C1616, D1616

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CKD. KES
PIER REINFORCEMENT			SHEET 12 OF 22

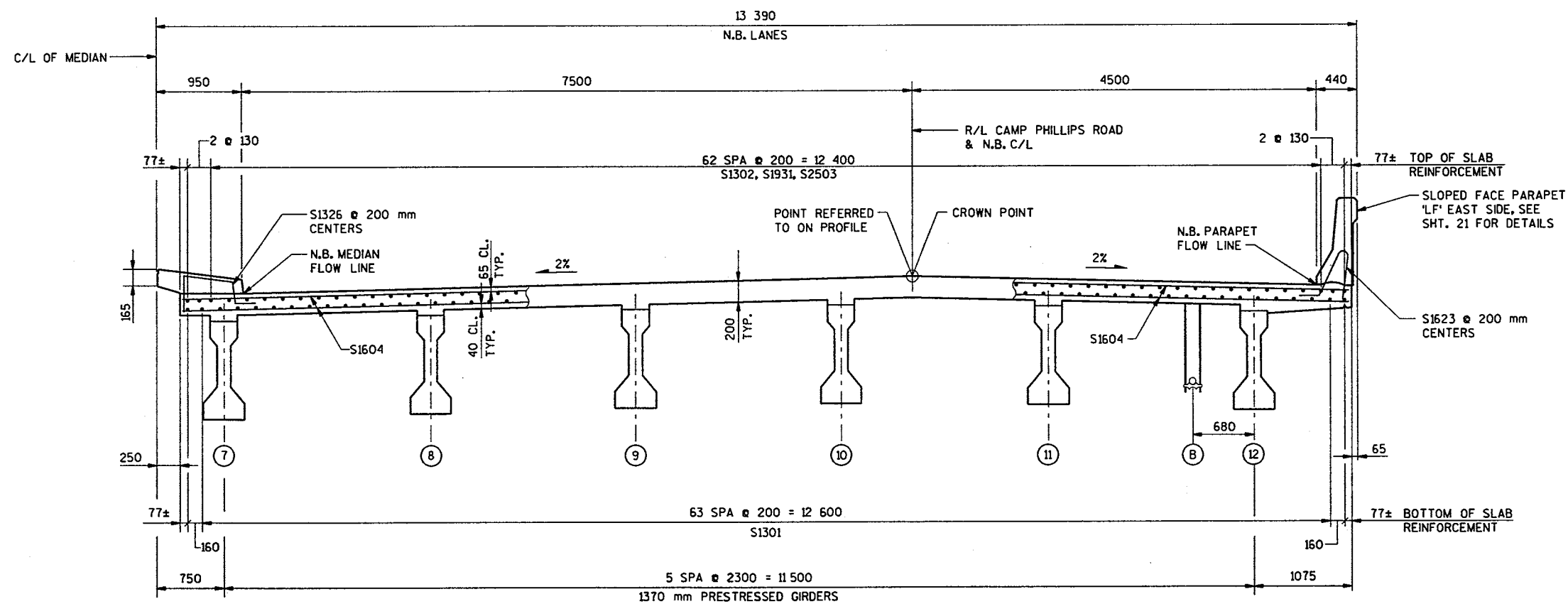
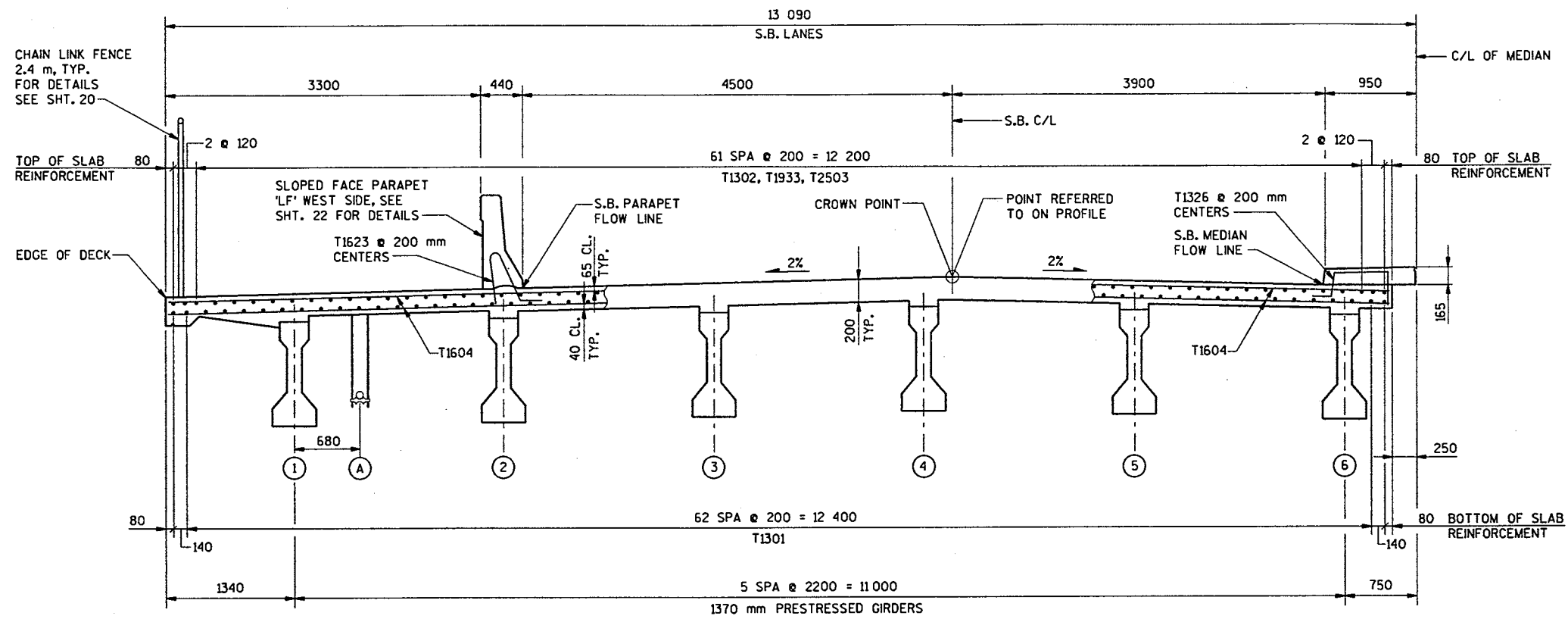


PLAN
(S BARS FOR N.B. LANES
T BARS FOR S.B. LANES)

TOP OF DECK ELEVATIONS

	C/L BRG. S. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	C/L OF PIER	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	C/L BRG. N. ABUT.
EDGE OF DECK	361.824	361.814	361.805	361.795	361.786	361.776	361.767	361.757	361.748	361.739	361.729	361.720	361.710	361.701	361.691	361.682	361.672	361.663	361.654	361.644	361.635
GIRDER 1	361.850	361.841	361.832	361.822	361.813	361.803	361.794	361.784	361.775	361.765	361.756	361.746	361.737	361.728	361.718	361.709	361.699	361.690	361.680	361.671	361.661
GIRDER 2	361.894	361.885	361.876	361.866	361.857	361.847	361.838	361.828	361.819	361.809	361.800	361.790	361.781	361.772	361.762	361.753	361.743	361.734	361.724	361.715	361.705
S.B. PARAPET FLOW LINE	361.898	361.889	361.880	361.870	361.861	361.851	361.842	361.832	361.823	361.813	361.804	361.794	361.785	361.776	361.766	361.757	361.747	361.738	361.728	361.719	361.709
GIRDER 3	361.938	361.929	361.920	361.910	361.901	361.891	361.882	361.872	361.863	361.853	361.844	361.834	361.825	361.816	361.806	361.797	361.787	361.778	361.768	361.759	361.749
GIRDER 4	361.982	361.973	361.964	361.954	361.945	361.935	361.926	361.916	361.907	361.897	361.888	361.878	361.869	361.860	361.850	361.841	361.831	361.822	361.812	361.803	361.793
GIRDER 5	361.950	361.941	361.932	361.922	361.913	361.903	361.894	361.884	361.875	361.865	361.856	361.846	361.837	361.828	361.818	361.809	361.799	361.790	361.780	361.771	361.761
GIRDER 6	361.906	361.897	361.888	361.878	361.869	361.859	361.850	361.840	361.831	361.821	361.812	361.802	361.793	361.784	361.774	361.765	361.755	361.746	361.736	361.727	361.717
S.B. MEDIAN FLOW LINE	361.910	361.901	361.892	361.882	361.873	361.863	361.854	361.844	361.835	361.825	361.816	361.806	361.797	361.788	361.778	361.769	361.759	361.750	361.740	361.731	361.721
C/L OF MEDIAN	362.079	362.070	362.061	362.051	362.042	362.032	362.023	362.013	362.004	361.994	361.985	361.975	361.966	361.957	361.947	361.938	361.928	361.919	361.909	361.900	361.890
N.B. MEDIAN FLOW LINE	361.838	361.829	361.820	361.810	361.801	361.791	361.782	361.772	361.763	361.753	361.744	361.734	361.725	361.716	361.706	361.697	361.687	361.678	361.668	361.659	361.649
GIRDER 7	361.834	361.825	361.816	361.806	361.797	361.787	361.778	361.768	361.759	361.749	361.740	361.730	361.721	361.712	361.702	361.693	361.683	361.674	361.664	361.655	361.645
GIRDER 8	361.880	361.871	361.862	361.852	361.843	361.833	361.824	361.814	361.805	361.795	361.786	361.776	361.767	361.758	361.748	361.739	361.729	361.720	361.710	361.701	361.691
GIRDER 9	361.926	361.917	361.908	361.898	361.889	361.879	361.870	361.860	361.851	361.841	361.832	361.822	361.813	361.804	361.794	361.785	361.775	361.766	361.756	361.747	361.737
GIRDER 10	361.972	361.963	361.954	361.944	361.935	361.925	361.916	361.906	361.897	361.887	361.878	361.868	361.859	361.850	361.840	361.831	361.821	361.812	361.802	361.793	361.783
GIRDER 11	361.958	361.949	361.940	361.930	361.921	361.911	361.902	361.892	361.883	361.873	361.864	361.854	361.845	361.836	361.826	361.817	361.807	361.798	361.788	361.779	361.769
GIRDER 12	361.912	361.903	361.894	361.884	361.875	361.865	361.856	361.846	361.837	361.827	361.818	361.808	361.799	361.790	361.780	361.771	361.761	361.752	361.742	361.733	361.723
N.B. PARAPET FLOW LINE	361.898	361.889	361.880	361.870	361.861	361.851	361.842	361.832	361.823	361.813	361.804	361.794	361.785	361.776	361.766	361.757	361.747	361.738	361.728	361.719	361.709

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	PLANS CKD.
		TEK	KES
SUPERSTRUCTURE			SHEET 13 OF 22

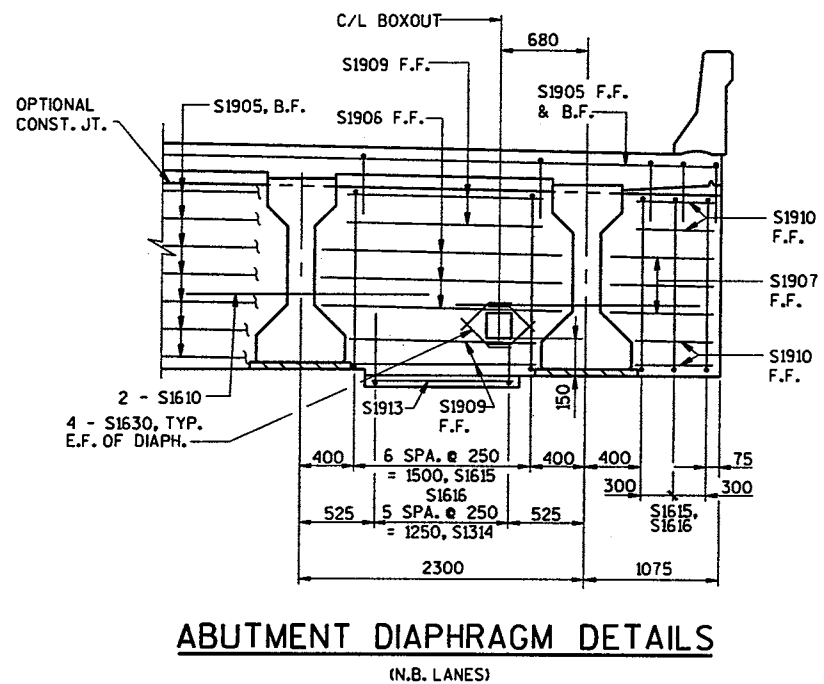
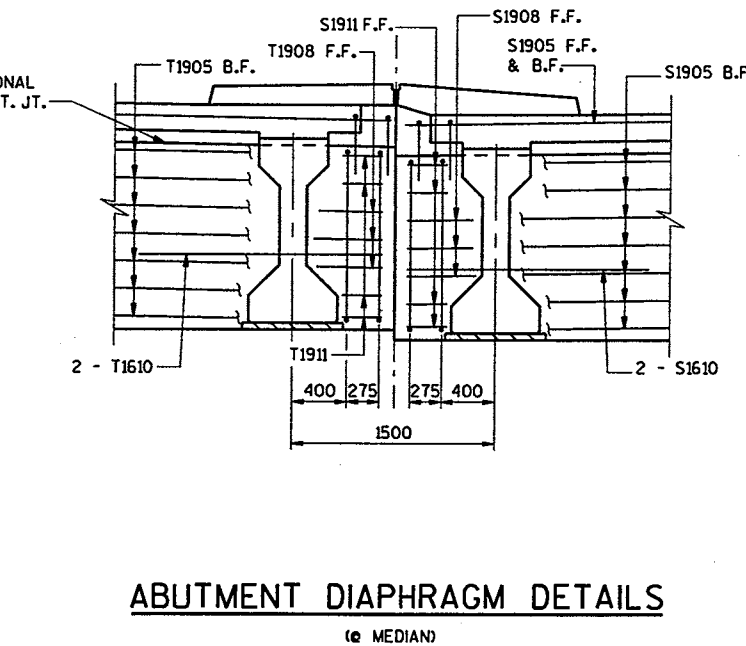
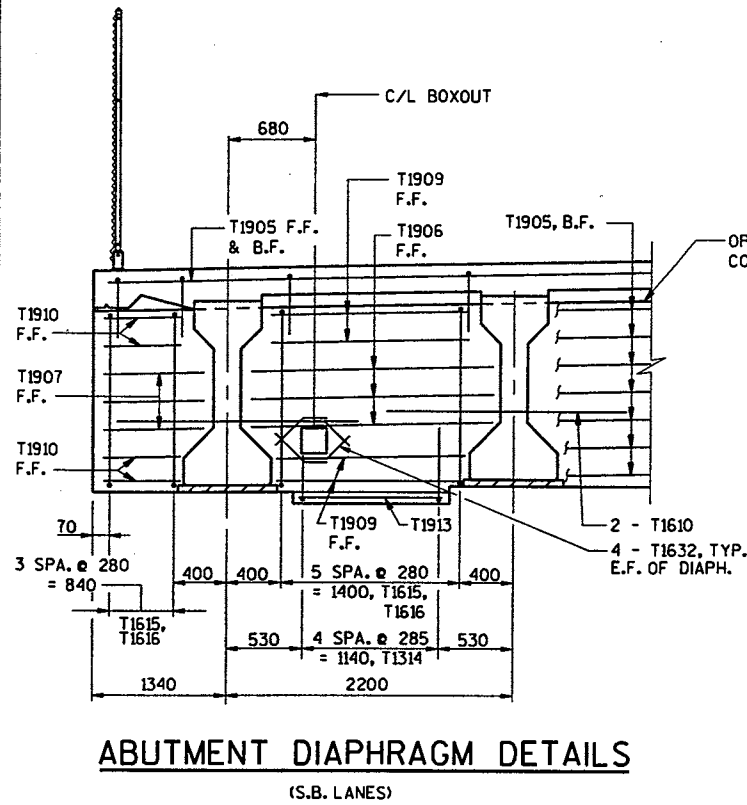
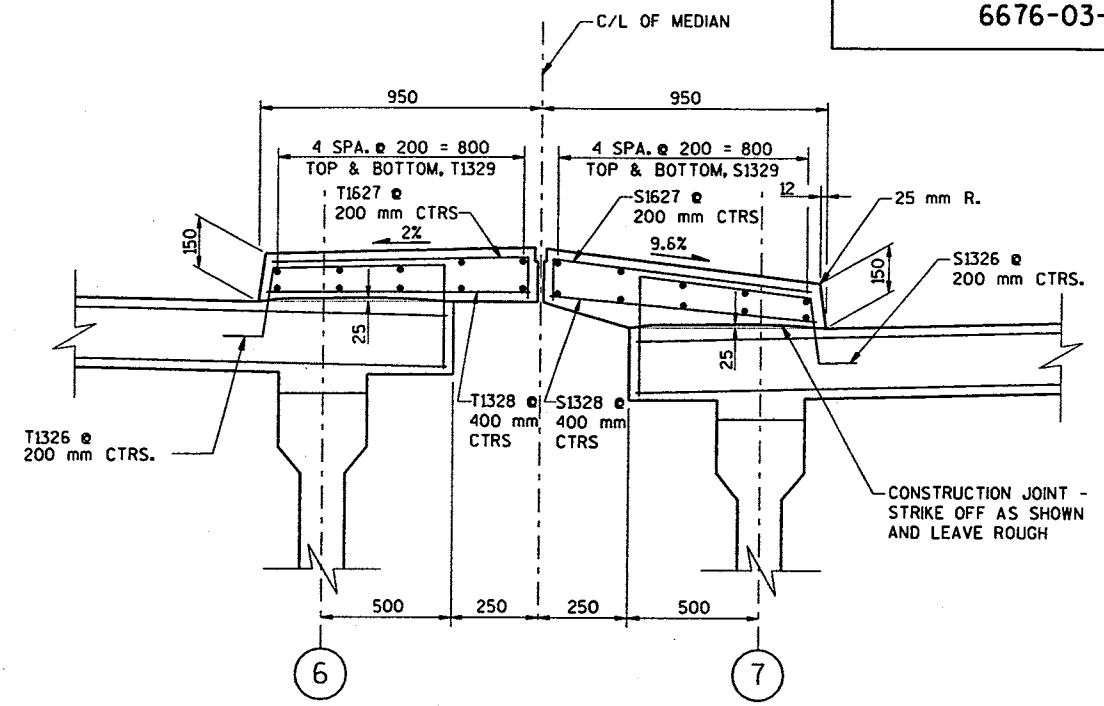
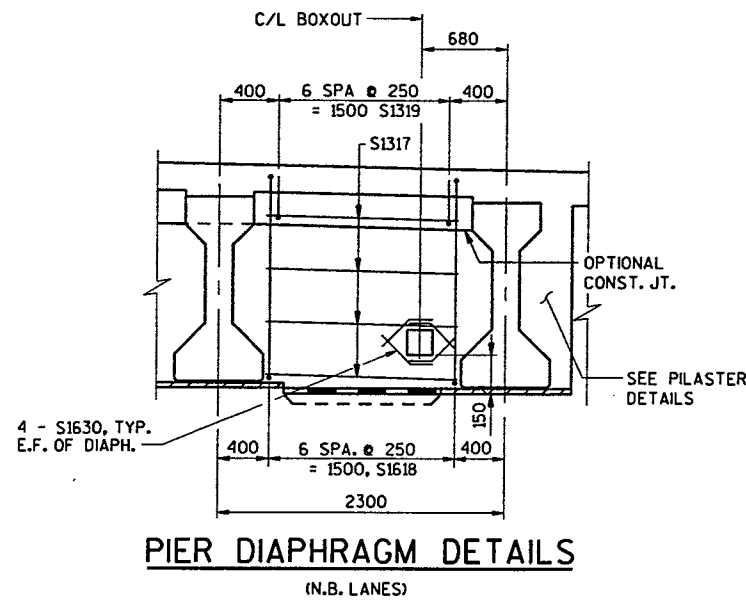
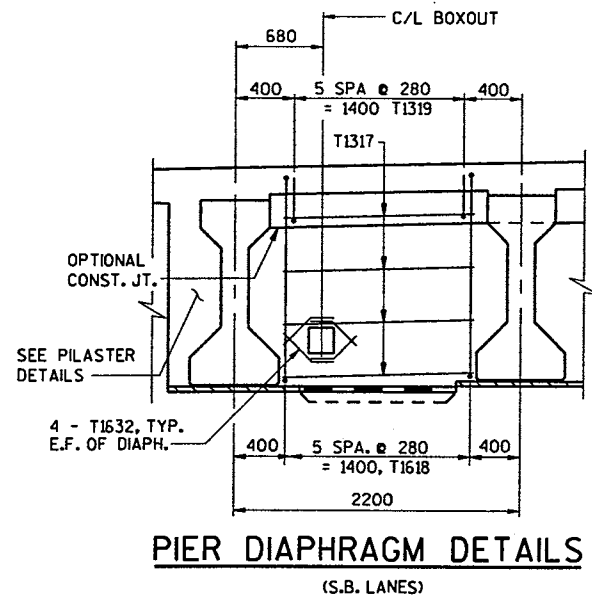


CROSS SECTION THRU ROADWAY
(LOOKING NORTH)

UTILITY NOTES

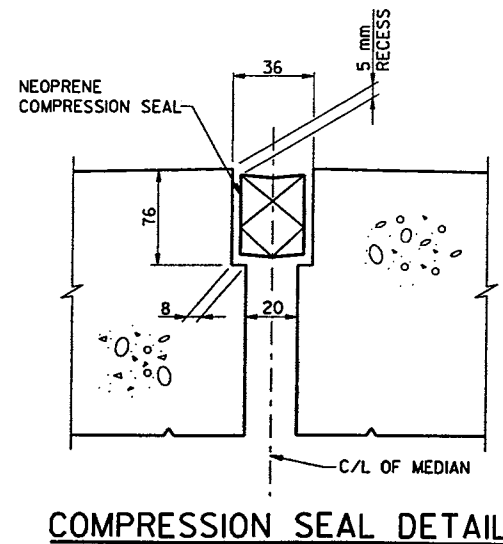
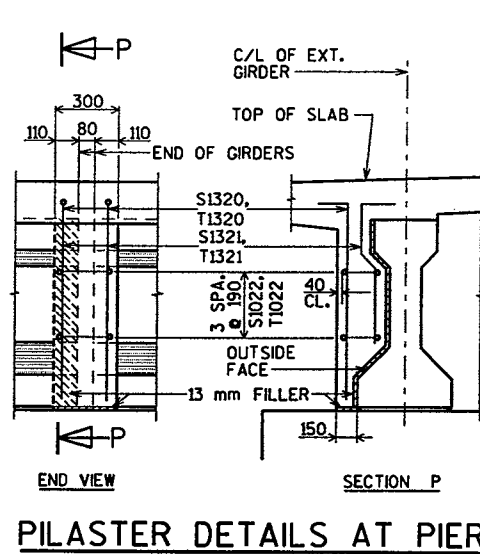
- (A) C/L 150 mm DIA. WISCONSIN FUEL & LIGHT COMPANY CONDUIT. HANGER ROD CONCRETE INSERTS TO BE SUPPLIED BY THE UTILITY AND INSTALLED BY THE CONTRACTOR.
- (B) C/L 100 mm DIA. CHARTER COMMUNICATION CONDUIT. HANGER ROD CONCRETE INSERTS TO BE SUPPLIED BY THE UTILITY AND INSTALLED BY THE CONTRACTOR.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. KES
SUPERSTRUCTURE			SHEET 14 OF 22



BOXOUT NOTES:

1. BOXOUT SIZE TO BE 200 mm WIDE x 200 mm HIGH.
2. CUT DIAPHRAGM REINFORCING AS NECESSARY TO CLEAR BOXOUTS.



COMPRESSION SEAL NOTES

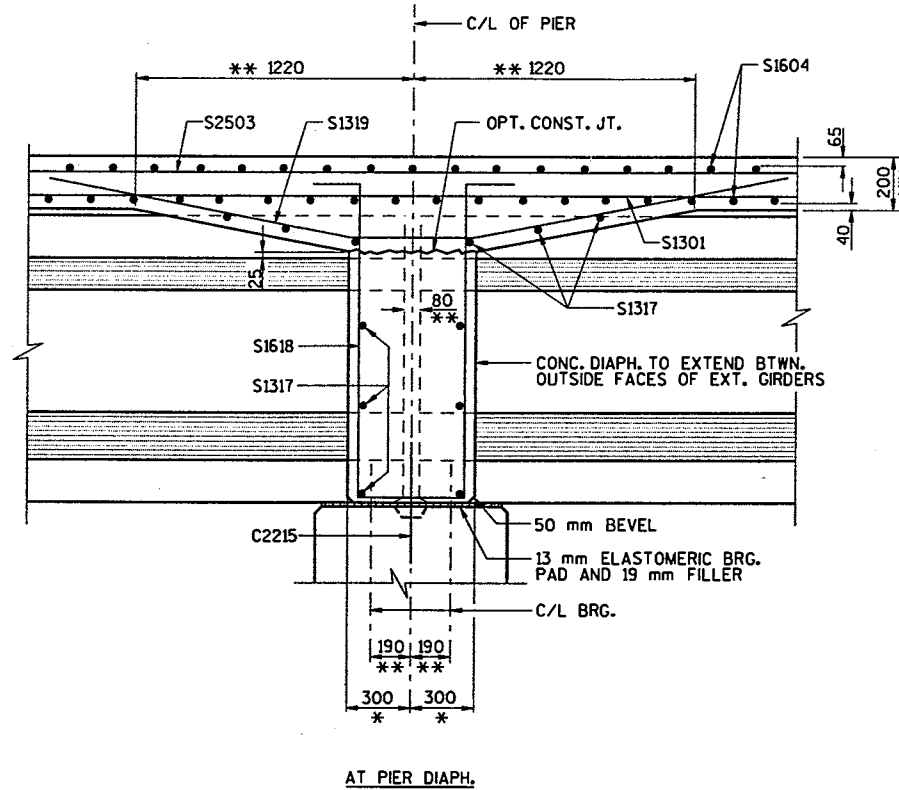
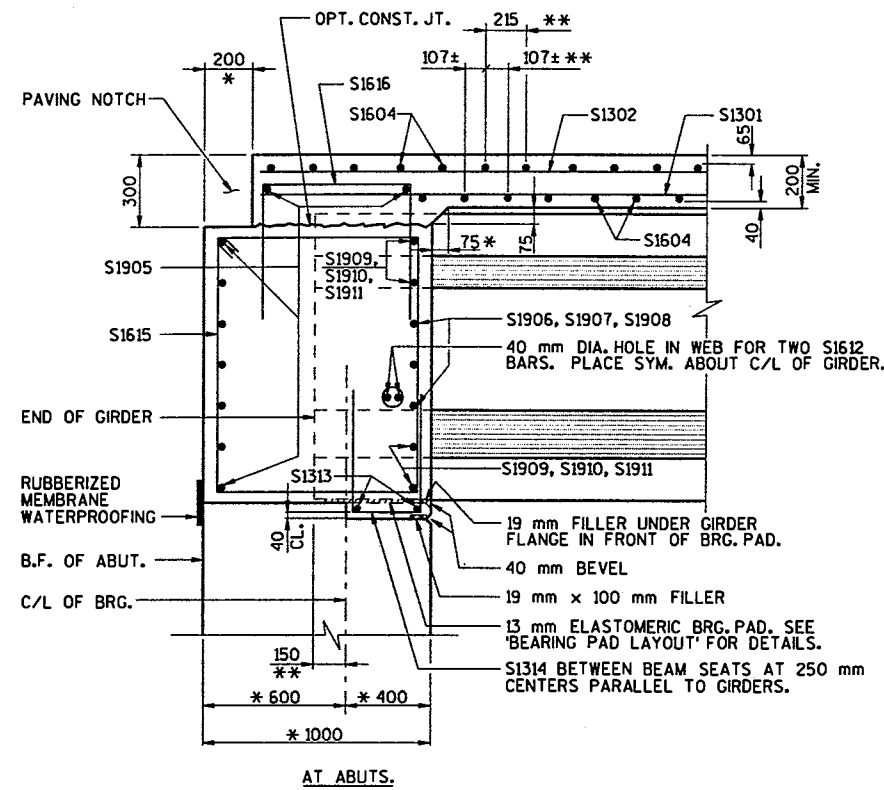
1. MANUF. - D.S. BROWN CO., CV-2000 OR WATSON-BOWMAN-ACME WA-200.
2. SEAL TO BE CONTINUOUS, NO SPLICING PERMITTED.
3. ENDS TO BE SEALED. MANUF. TO FURNISH SEAL WITH TOP SIDE LABELED.
4. EXTEND FROM BACK FACE OF S. ABUT. TO BACK FACE OF N. ABUT.
5. JOINT OPENING SHALL BE TRUE & VERT. TO 1mm IN 2 m

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. KES
SUPERSTRUCTURE DETAILS			SHEET 15 OF 22

BILL OF BARS

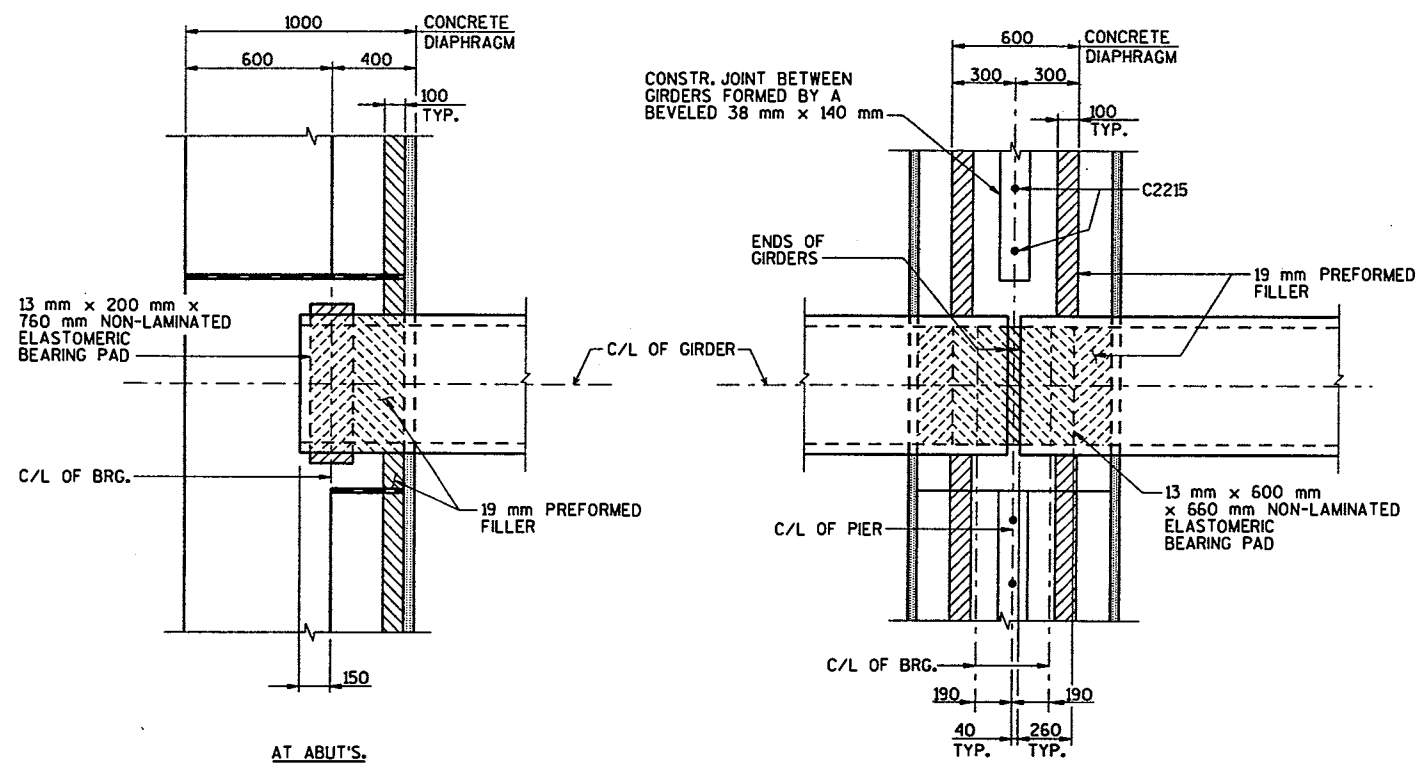
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
S1301	x	396	11 100				SLAB - BOTTOM - LONGIT.
S1302	x	268	11 500				SLAB - TOP AT ABUTS. - LONGIT.
S2503	x	67	12 000				SLAB - TOP AT PIER - LONGIT.
S1604	x	589	12 960				SLAB - TOP & BOTTOM - TRANSVERSE
S1905	x	18	13 200				DIAPH. AT ABUTS. - TOP & B.F. - HORIZ.
S1906	x	30	2000				DIAPH. AT ABUTS. - F.F. - HORIZ.
S1907	x	6	860				DIAPH. AT ABUTS. - F.F. - HORIZ. AT PARAPET
S1908	x	6	540				DIAPH. AT ABUTS. - F.F. - HORIZ. AT MEDIAN
S1909	x	40	1540				DIAPH. AT ABUTS. - F.F. - HORIZ.
S1910	x	8	640				DIAPH. AT ABUTS. - F.F. - HORIZ. AT PARAPET
S1911	x	8	300				DIAPH. AT ABUTS. - F.F. - HORIZ. AT MEDIAN
S1612	x	24	2000				DIAPH. AT ABUTS. - GIRDER - HORIZ.
S1313	x	20	1220				DIAPH. AT ABUTS. - BOTTOM - HORIZ.
S1314	x	60	1220	x			DIAPH. AT ABUTS. - BOTTOM - VERT.
S1615	x	82	4340	x			DIAPH. AT ABUTS. - VERT.
S1616	x	82	1580	x			DIAPH. AT ABUTS. - TOP - VERT.
S1317	x	60	1540				DIAPH. AT PIER - HORIZ.
S1618	x	35	3700	x			DIAPH. AT PIER - VERT.
S1319	x	35	3060	x			DIAPH. AT PIER - TOP - HORIZ.
S1320	x	4	1680	x			PILASTER AT PIER - VERT.
S1321	x	4	1200	x			PILASTER AT PIER - HORIZ.
S1022	x	8	1140	x			PILASTER AT PIER - HORIZ.
S1623	x	322	1350	x			PARAPET - VERT.
S1624	x	322	1470	x			PARAPET - VERT.
S1625	x	30	11 200				PARAPET - HORIZ.
S1326	x	322	1200	x			MEDIAN CURB - VERT.
S1627	x	322	880	x			MEDIAN CURB - HORIZ.
S1328	x	161	840				MEDIAN CURB - HORIZ.
S1329	x	42	11 200				MEDIAN CURB - BOTTOM - LONGIT.
S1630	x	48	600	x			DIAPH. BOXOUT AT ABUTS. & PIER-EACH FACE
S1931	x	67	5000				SLAB - TOP AT PIER - LONGIT.

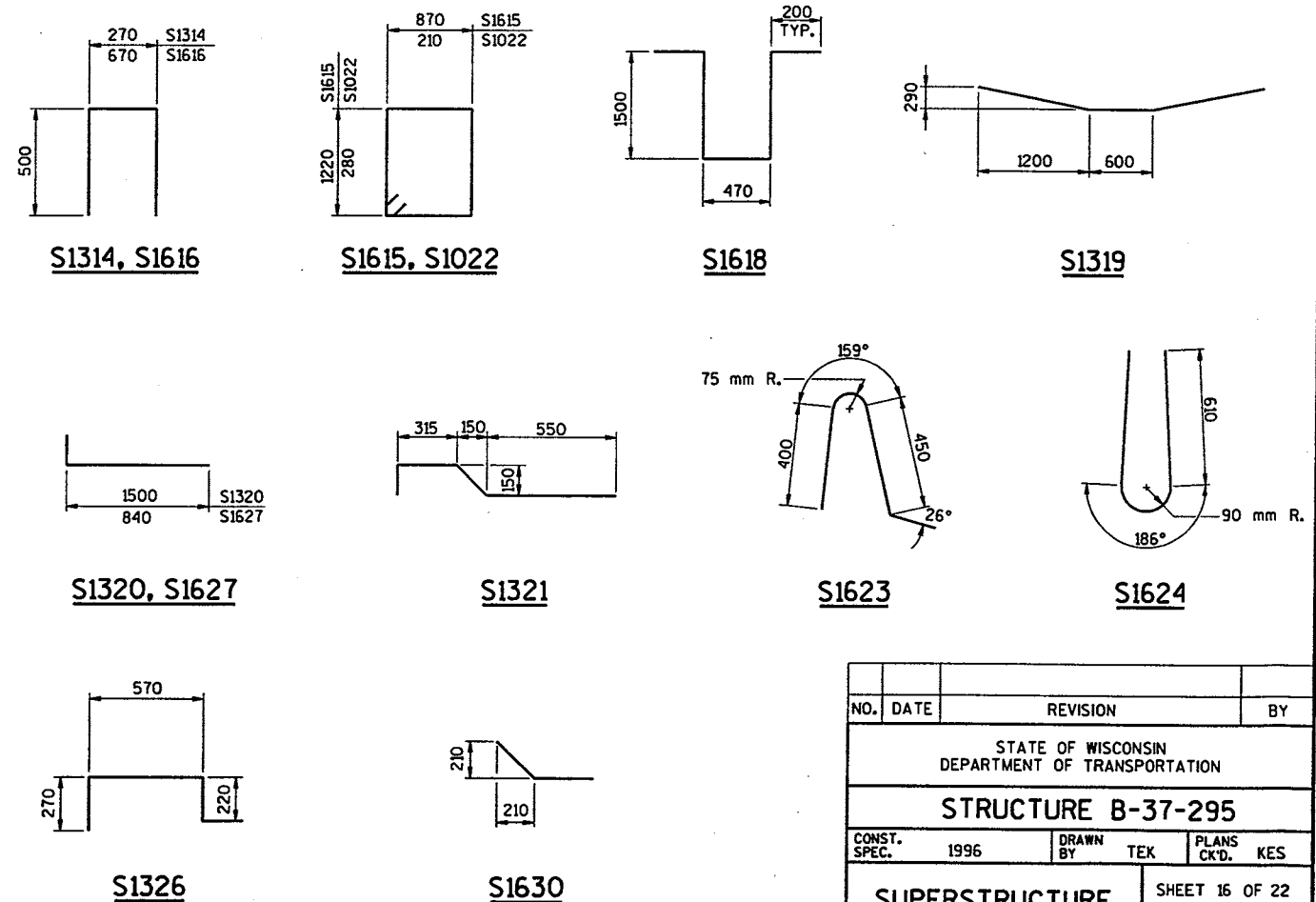


PART LONGITUDINAL SECTION

* DIMENSIONS ARE GIVEN NORMAL TO C/L OF SUBSTRUCTURE UNITS
** DIMENSIONS ARE GIVEN PARALLEL TO THE GIRDER



BEARING PAD LAYOUT

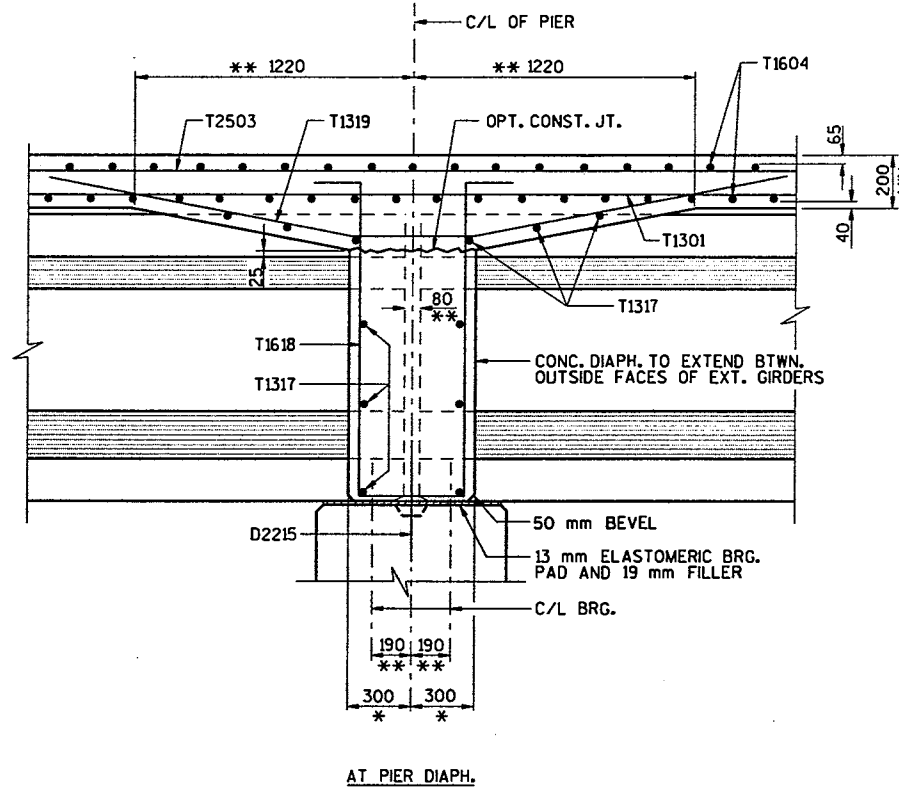
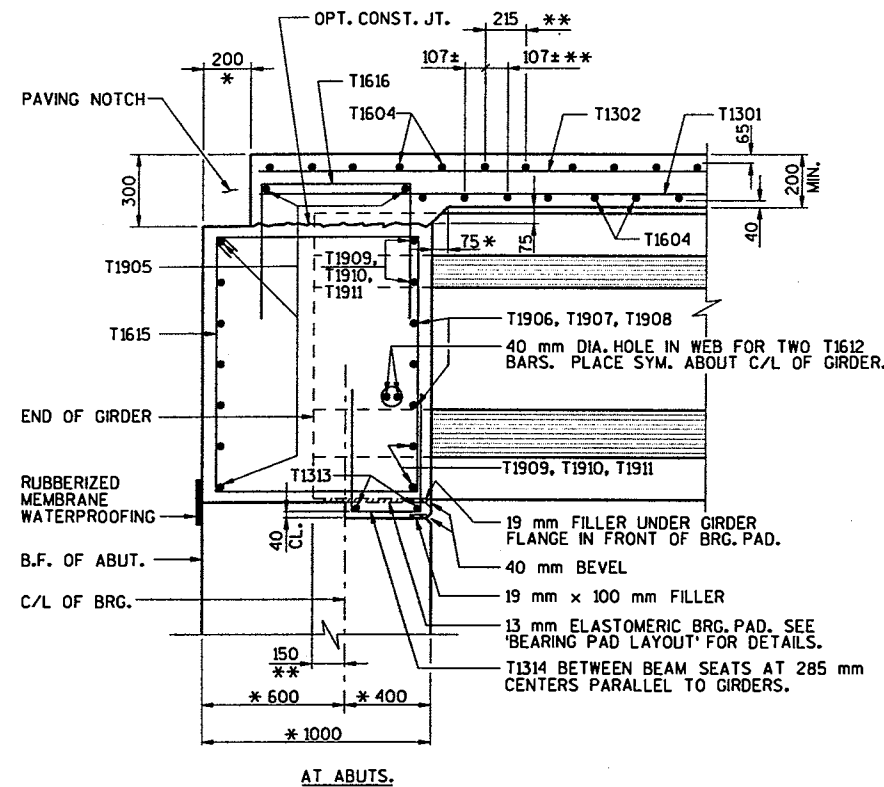


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	PLANS CKD.
		TEK	KES
SUPERSTRUCTURE DETAILS			SHEET 16 OF 22

BILL OF BARS

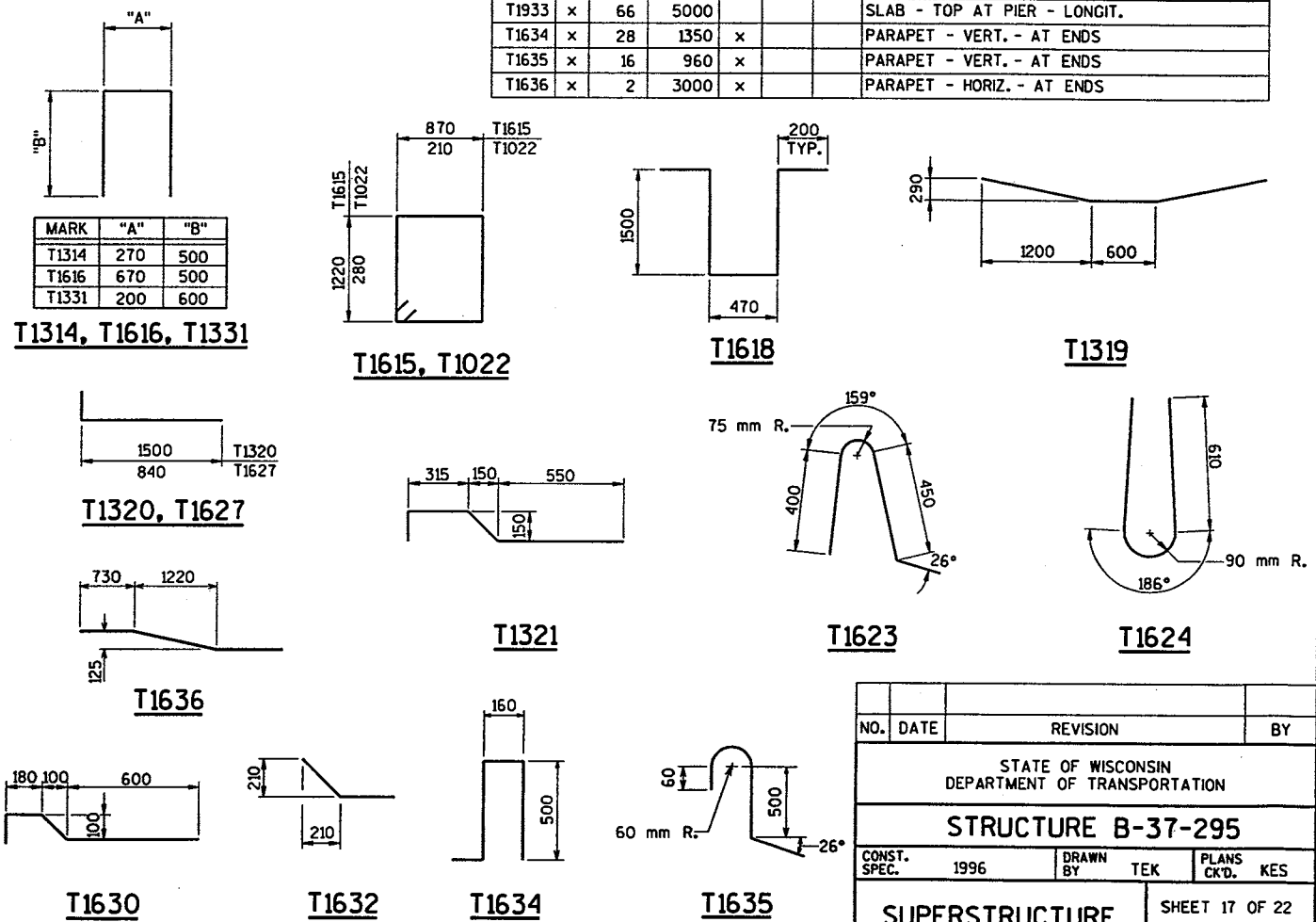
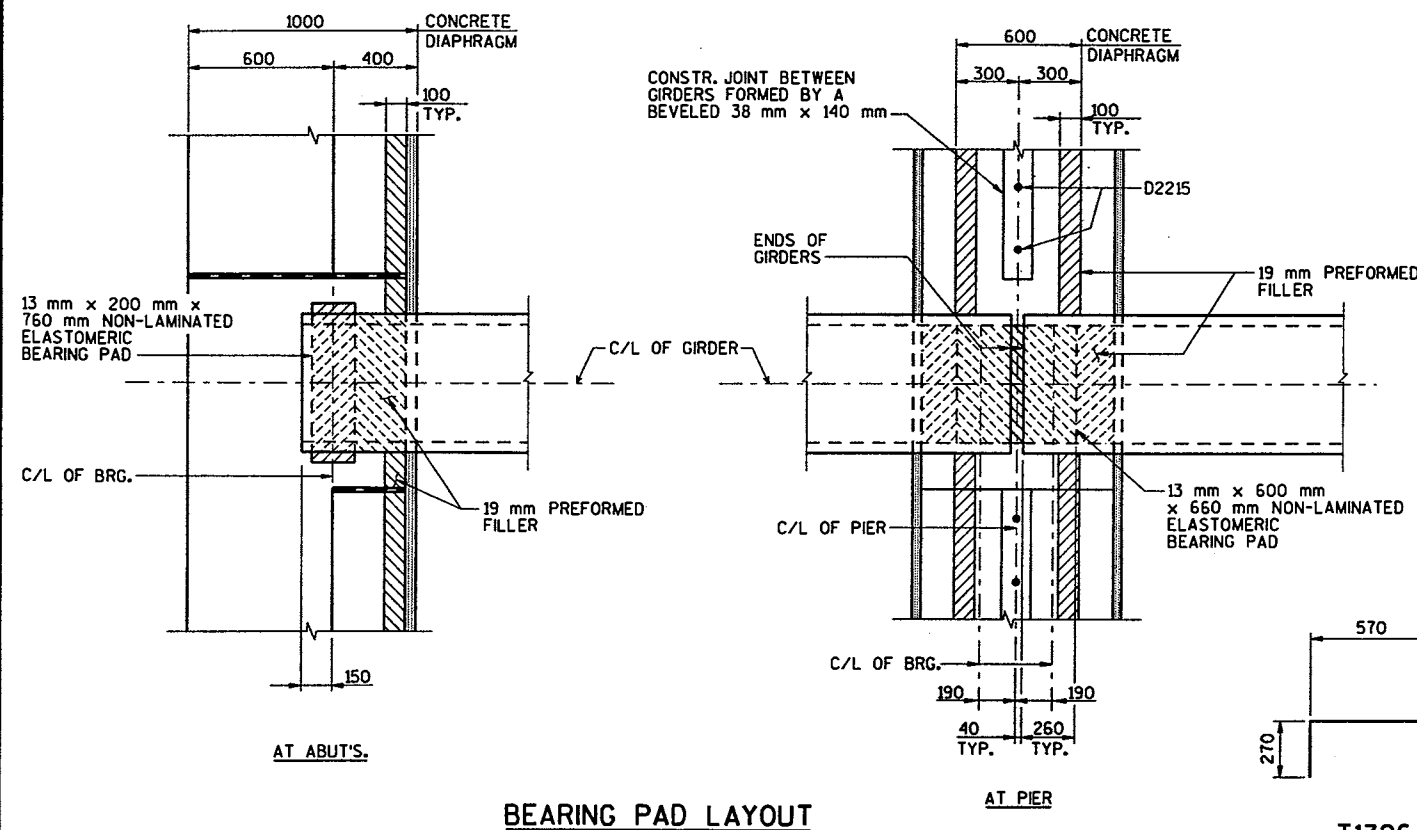
NOTE: THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN- DLE	LOCATION
T1301	x	402	11 100				SLAB - BOTTOM - LONGIT.
T1302	x	260	11 500				SLAB - TOP AT ABUTS. - LONGIT.
T2503	x	66	12 000				SLAB - TOP AT PIER - LONGIT.
T1604	x	589	12 740				SLAB - TOP & BOTTOM - TRANSVERSE
T1905	x	18	12 980				DIAPH. AT ABUTS. - TOP & B.F. - HORIZ.
T1906	x	30	1900				DIAPH. AT ABUTS. - F.F. - HORIZ.
T1907	x	6	1140				DIAPH. AT ABUTS. - F.F. - HORIZ. AT FENCE LINE
T1908	x	6	540				DIAPH. AT ABUTS. - F.F. - HORIZ. AT MEDIAN
T1909	x	40	1440				DIAPH. AT ABUTS. - F.F. - HORIZ.
T1910	x	8	900				DIAPH. AT ABUTS. - F.F. - HORIZ. AT FENCE LINE
T1911	x	8	300				DIAPH. AT ABUTS. - F.F. - HORIZ. AT MEDIAN
T1612	x	24	2000				DIAPH. AT ABUTS. - GIRDER - HORIZ.
T1313	x	20	1120				DIAPH. AT ABUTS. - BOTTOM - HORIZ.
T1314	x	50	1220	x			DIAPH. AT ABUTS. - BOTTOM - VERT.
T1615	x	72	4340	x			DIAPH. AT ABUTS. - VERT.
T1616	x	72	1580	x			DIAPH. AT ABUTS. - TOP - VERT.
T1317	x	60	1440				DIAPH. AT PIER - HORIZ.
T1618	x	30	3700	x			DIAPH. AT PIER - VERT.
T1319	x	30	3060	x			DIAPH. AT PIER - TOP - HORIZ.
T1320	x	4	1680	x			PILASTER AT PIER - VERT.
T1321	x	4	1200	x			PILASTER AT PIER - VERT.
T1022	x	8	1140	x			PILASTER AT PIER - HORIZ.
T1623	x	322	1350	x			PARAPET - VERT.
T1624	x	322	1470	x			PARAPET - VERT.
T1625	x	30	11 200				PARAPET - HORIZ.
T1326	x	322	1180	x			MEDIAN CURB - VERT.
T1627	x	322	880	x			MEDIAN CURB - HORIZ.
T1328	x	161	840				MEDIAN CURB - HORIZ.
T1329	x	42	11 200				MEDIAN CURB - BOTTOM - LONGIT.
T1630	x	322	1060	x			EDGE OF SLAB - AT FENCE
T1331	x	38	1340	x			SLAB - TOP - AT FENCE POST
T1332	x	48	600	x			DIAPH. BOXOUT AT ABUTS. & PIER - EACH FACE
T1933	x	66	5000				SLAB - TOP AT PIER - LONGIT.
T1634	x	28	1350	x			PARAPET - VERT. - AT ENDS
T1635	x	16	960	x			PARAPET - VERT. - AT ENDS
T1636	x	2	3000	x			PARAPET - HORIZ. - AT ENDS

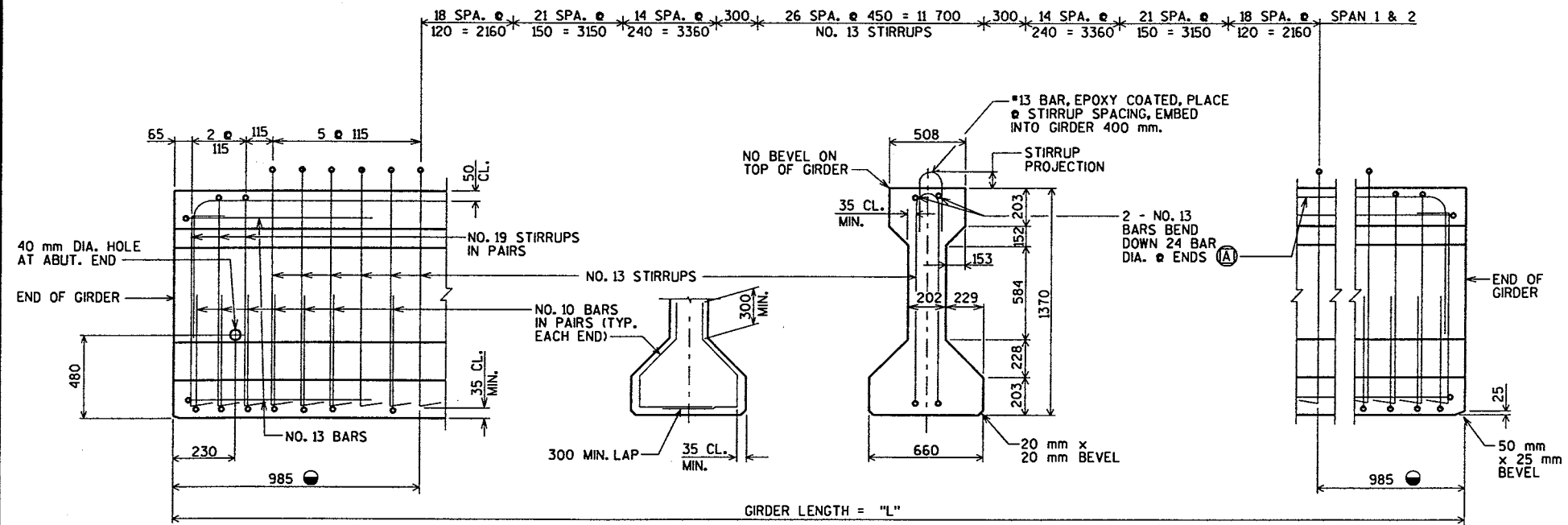


PART LONGITUDINAL SECTION

* DIMENSIONS ARE GIVEN NORMAL TO C/L OF SUBSTRUCTURE UNITS
** DIMENSIONS ARE GIVEN PARALLEL TO THE GIRDER



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STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CK'D.	KES
SUPERSTRUCTURE DETAILS			SHEET 17 OF 22

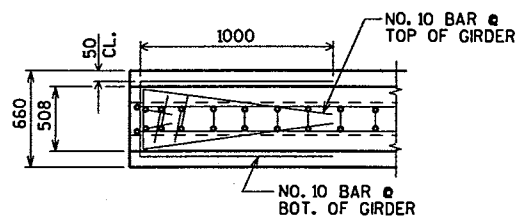


SIDE VIEW & TYP. SECTION IN SPAN

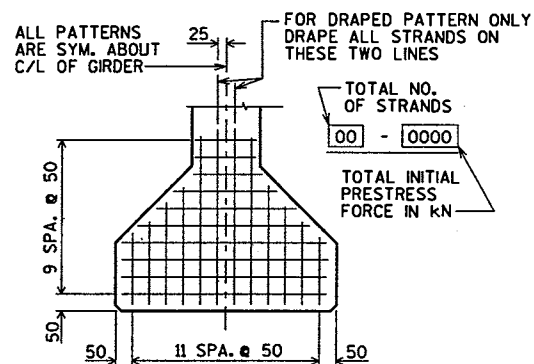
● DETAIL TYP. AT EACH END

GIRDER NOTES

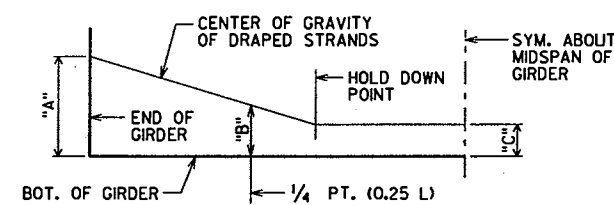
- ALL DIMENSIONS ARE IN MILLIMETERS (mm).
- TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 50 mm OF GIRDER, WHICH SHALL BE TROWEL FINISHED.
- THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.
- PRESTRESSING STRANDS SHALL BE 13 mm DIA. - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 1860 MPa AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.
- BEND EACH END OF NO. 13 STIRRUPS 120 mm AND NO. 19 STIRRUPS 180 mm.
- FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.
- SPACING SHOWN FOR #13 STIRRUPS IS FOR GRADE 420 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #13 STIRRUPS, 2 OPTIONS ARE AVAILABLE:
1. USE ASTM A706M, GRADE 420 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.
 2. USE ASTM A615M, GRADE 300 REINFORCEMENT AND A MODIFIED STIRRUP SPACING SUBMITTED TO AND APPROVED BY THE STRUCTURES DEVELOPMENT SECTION.
- AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.
- WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A497.



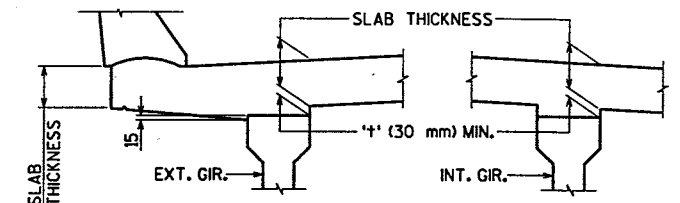
TOP VIEW OF GIRDER



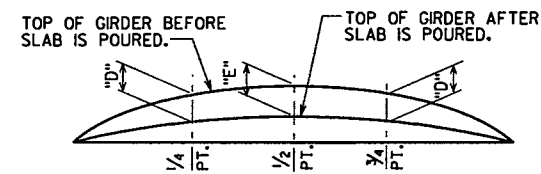
TYP. STRAND PATTERN



DRAPED STRAND PROFILE



SLAB HAUNCH DETAIL

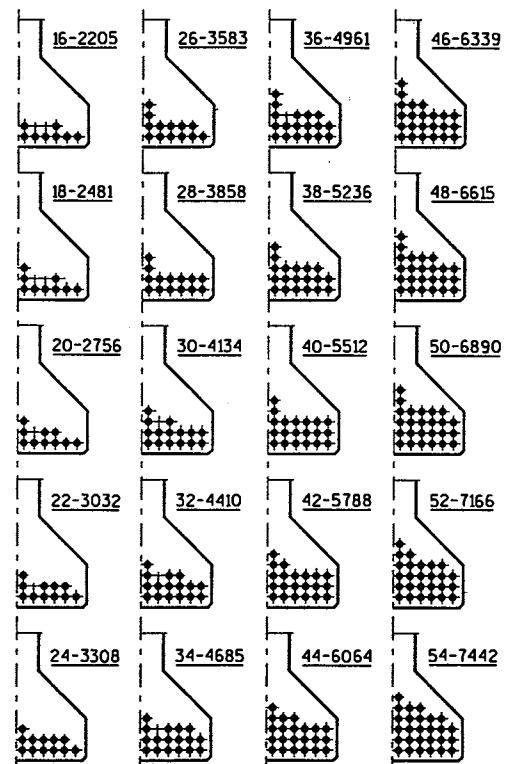


DEAD LOAD DEFLECTION DIAGRAM

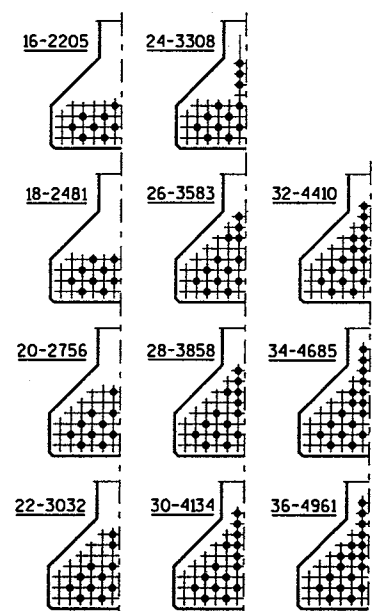
IF 30 mm MINIMUM HAUNCH HEIGHT "t" CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. MAX. HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 75 mm.

TO DETERMINE "t", ELEV. OF TOP OF GIR' AT C/L OF SUBSTRUCTURE UNITS AND AT 0.250 L POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
 - TOP OF GIRDER ELEVATION
 + DEADLOAD DEFLECTION
 - SLAB THICKNESS
 = HAUNCH HEIGHT "t"



DRAPED PATTERN

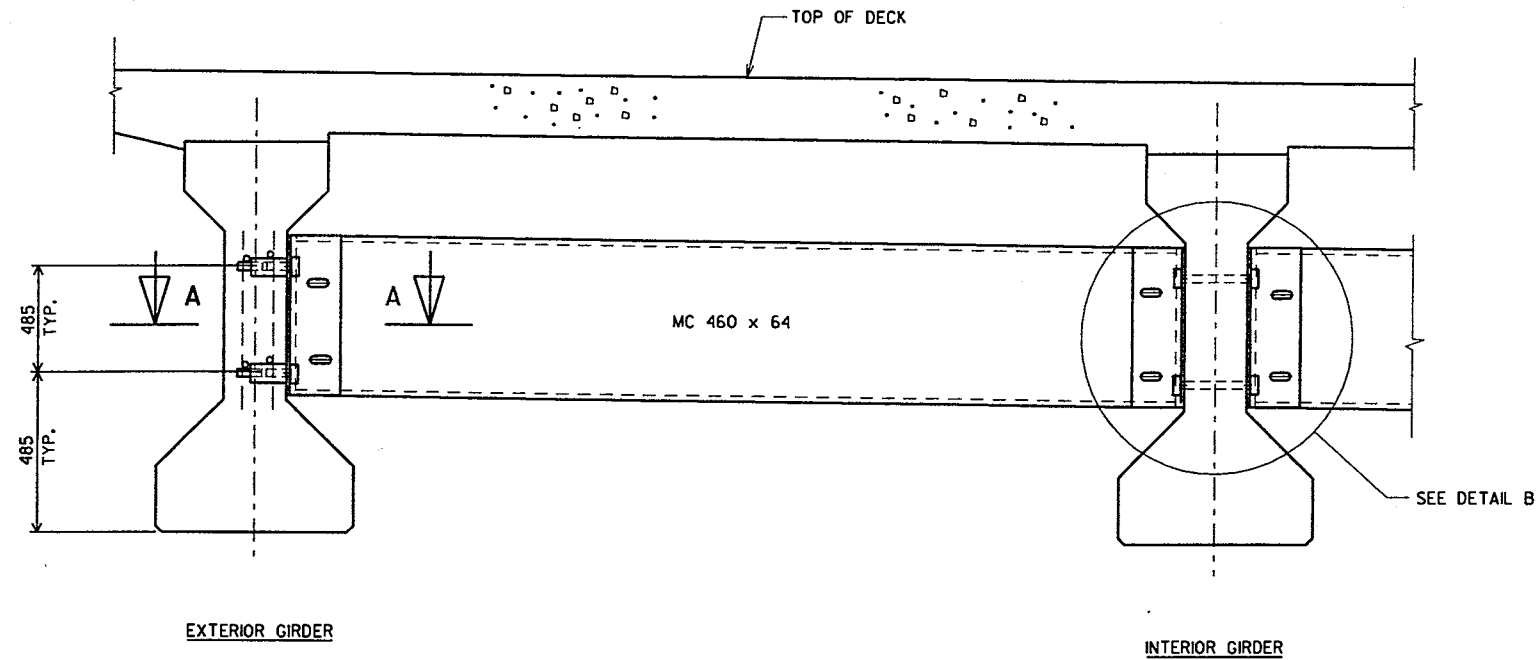


UNDRAPED PATTERN

GIRDER DATA										DRAPED PATTERN					UNDRAPED PATTERN		
GIRDER	SPAN	GIRDER LENGTH "L"	DEAD LOAD DEFL. (mm)					CONC. STRGTH. f'c (MPa)	STIRRUP PROJECTION (mm)	TOTAL NO. OF STRANDS	f'd (MPa) *	1200 (mm)				TOTAL NO. OF STRANDS	f'd (MPa) *
			0.10	0.20	0.30	0.40	0.50					"A"	"B" MIN.	"B" MAX.	"C"		
1 THRU 6	1 & 2	31 610	11	20	28	32	34	42	150	38	34	1200	425	500	150	—	—
7 THRU 12	1 & 2	31 610	11	21	29	34	36	42	150	38	34	1200	425	500	150	—	—

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY	TEK
		PLANS CK'D.	KES
1370 mm PRESTRESSED GIRDER DETAILS			SHEET 18 OF 22



PART TRANSVERSE SECTION AT DIAPHRAGM

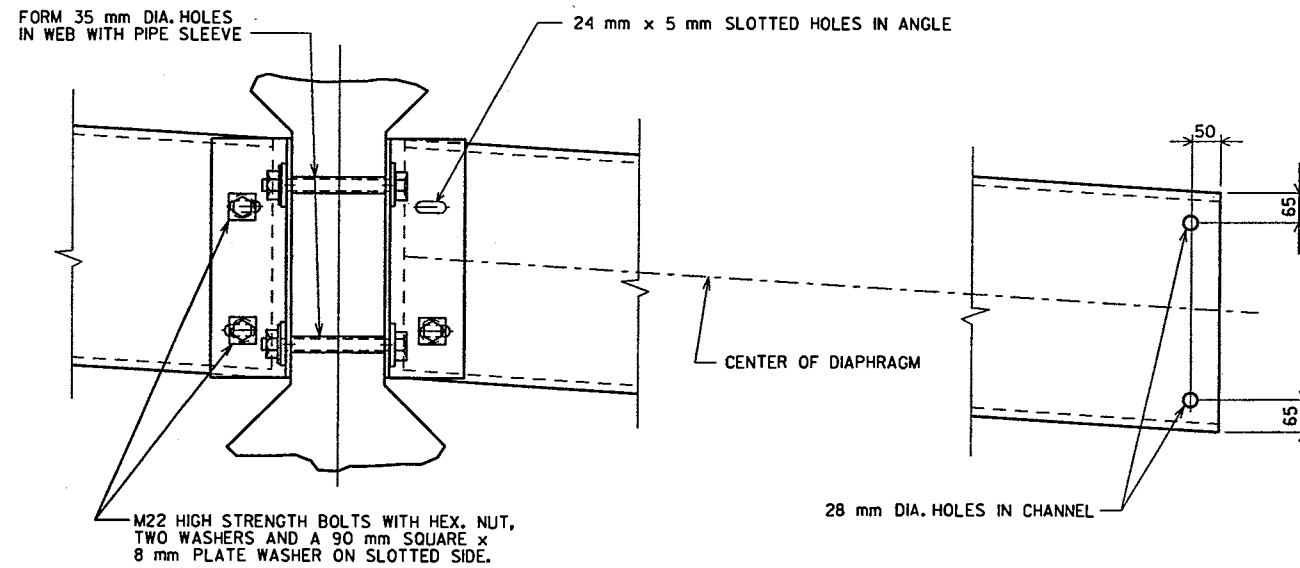
GENERAL NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM". EACH DIAPHRAGM BETWEEN THE GIRDERS SHALL CONSTITUTE ONE UNIT.

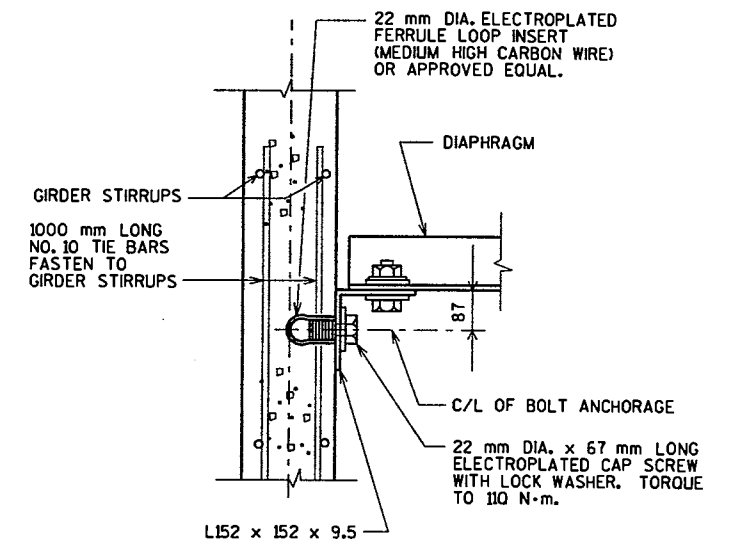
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709M GRADE 250 ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325M TYPE L

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153M CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563M AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563M, LUBRICANT AND TEST FOR COATED NUTS.

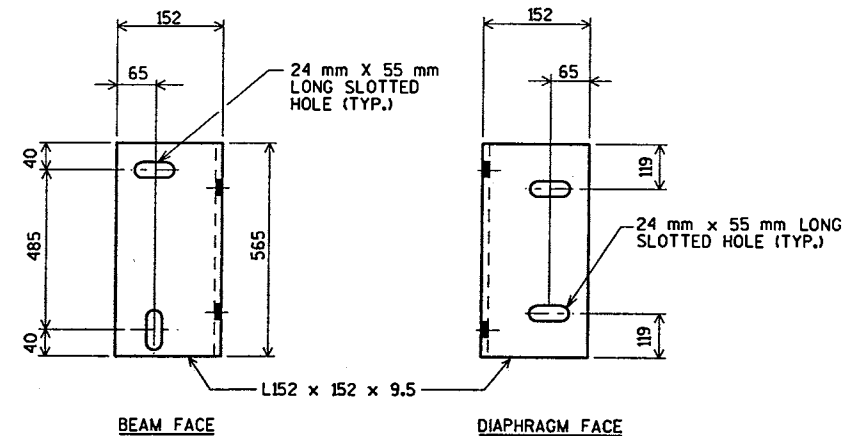
ALL DIMENSIONS ARE IN MILLIMETERS.



DETAIL B



SECT. A-A
(FOR EXTERIOR GIRDER ATTACHMENT)

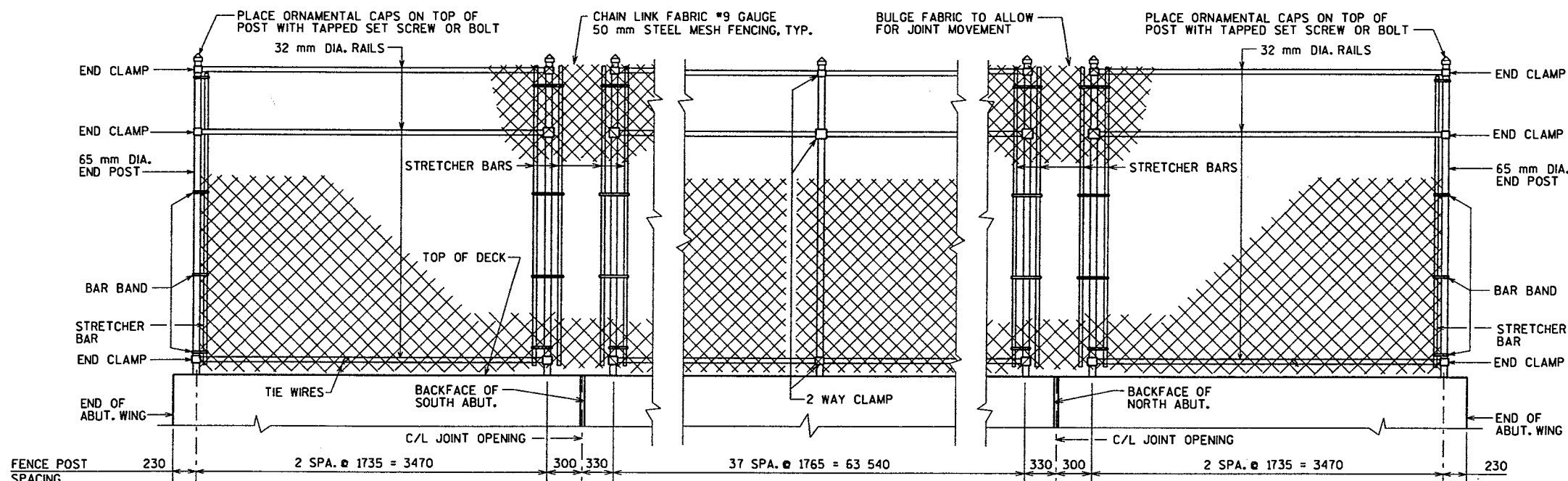


DIAPHRAGM SUPPORT

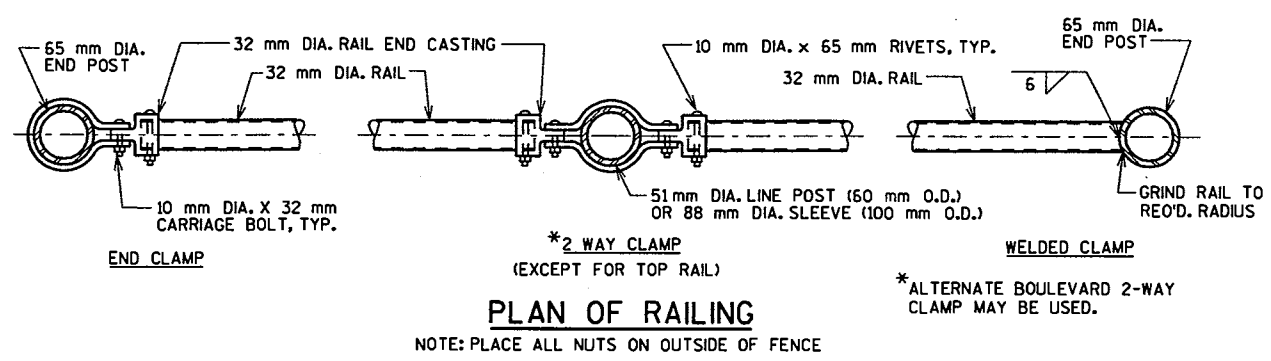
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. KES
STEEL DIAPHRAGM			SHEET 19 OF 22

GENERAL NOTES

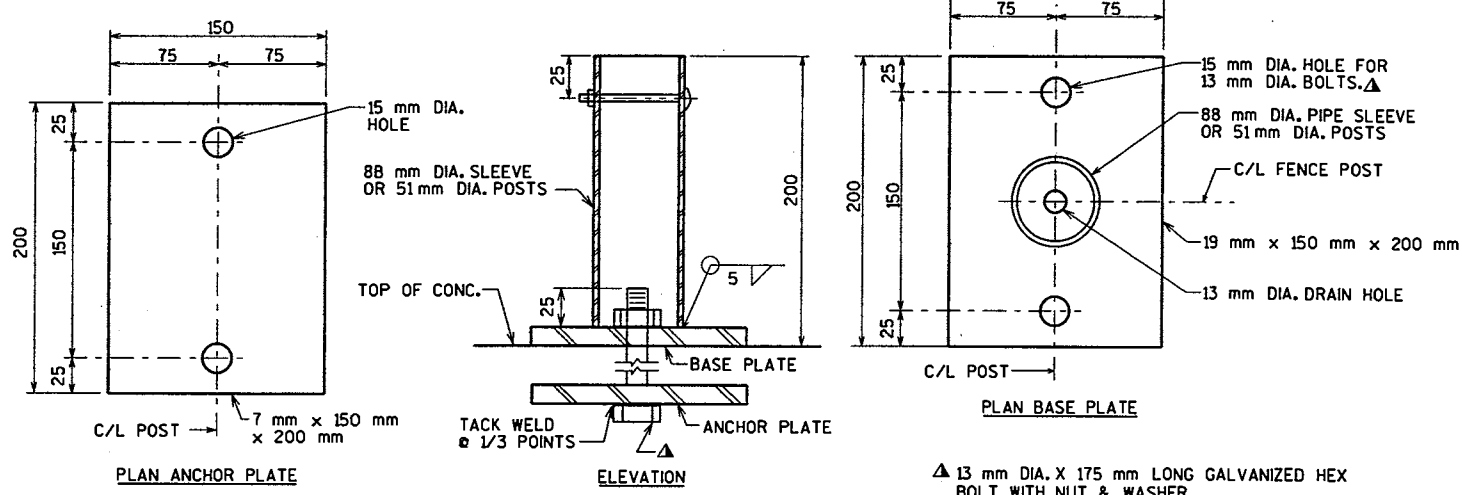
- POSTS ARE TO BE SET VERTICAL.
- KNUCKLE TOP AND BOTTOM OF 50 mm MESH CHAIN LINK FENCING.
- ALL FENCING COMPONENTS SHALL BE GALVANIZED STEEL OR APPROVED ALTERNATE LISTED BELOW.
- ALL RAILS, POSTS AND SLEEVES ARE STANDARD WEIGHT PIPE, SCHEDULE 40.
- PLACE ALL NUTS ON OUTSIDE OF FENCE.
- TOP RAIL SHALL BE CONTINUOUS OVER INTERIOR POSTS. MINIMUM LENGTH OF TOP RAIL BETWEEN SPLICES SHALL BE 6096 mm. PLACE TOP RAIL SPLICES NEAR 1/4 POINTS OF POST SPACING. NO 9 GAGE TIES AT 230 mm SPACING REQ'D. ON RAILS & POSTS WITHOUT STRETCHER BARS.
- ALTERNATE FENCING MATERIALS ARE ALUMINUM, ALUMINUM COATED STEEL, AND APPROVED COLOR COATING SYSTEMS. IF ALTERNATE MATERIALS ARE USED FOR POSTS & RAILS, THESE ELEMENTS SHOULD BE DESIGNED.



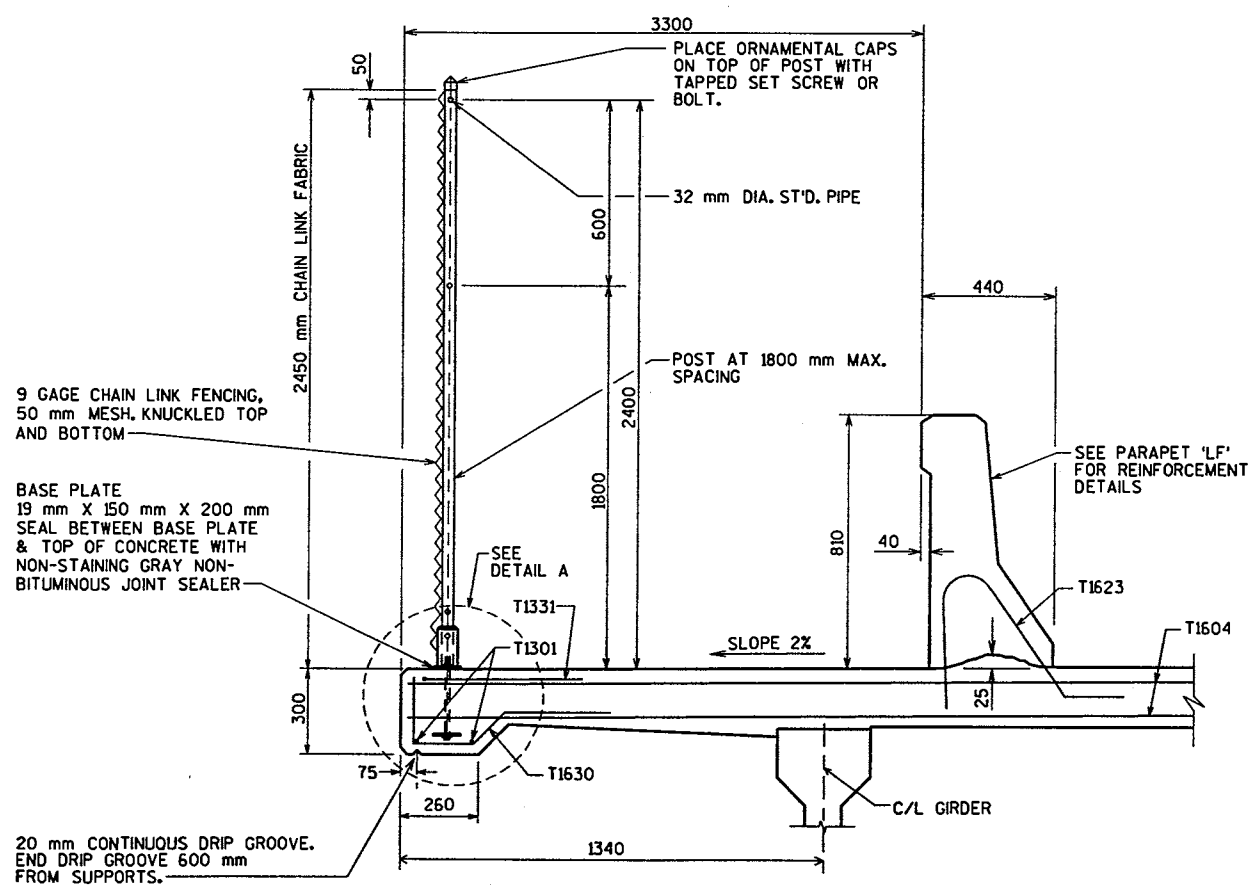
FENCE PART ELEVATION



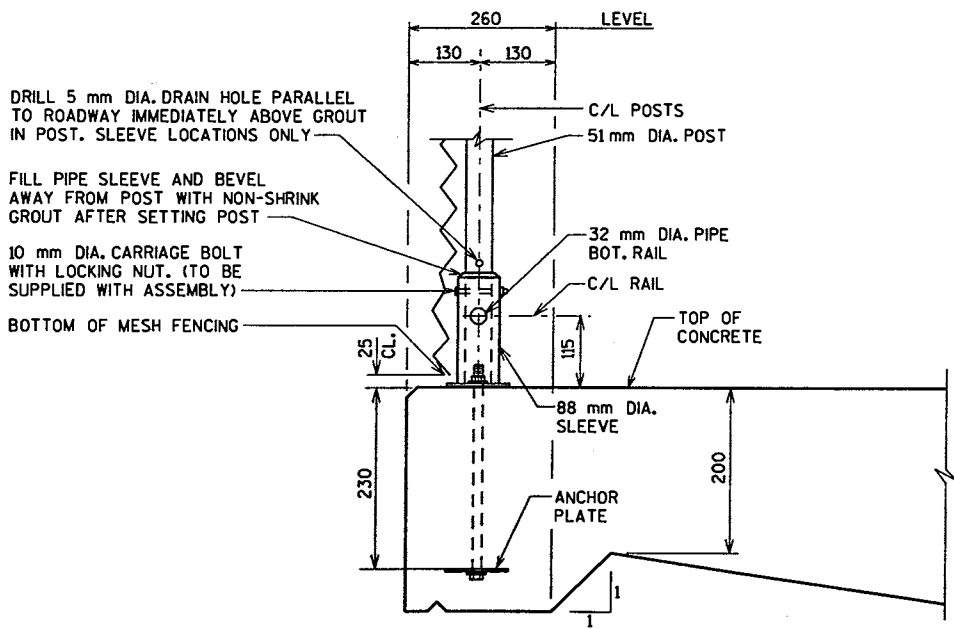
PLAN OF RAILING



POST ATTACHMENT



SECTION THRU PARAPET ON BRIDGE



DETAIL A

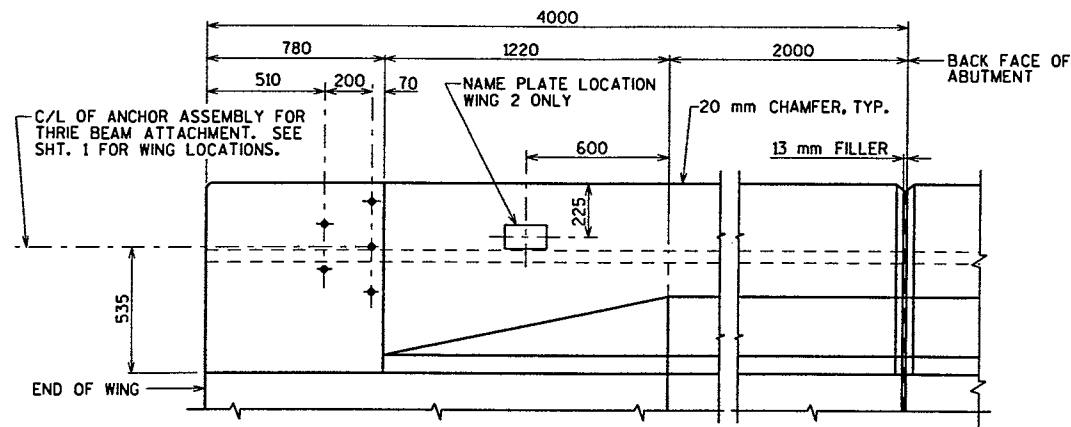
ALL DIMENSIONS ARE IN MILLIMETERS.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-67-0057			
CONST. SPEC.	1996	DRAWN BY MAR	PLANS CK'D. KES
FENCING DETAILS			SHEET 20 OF 22

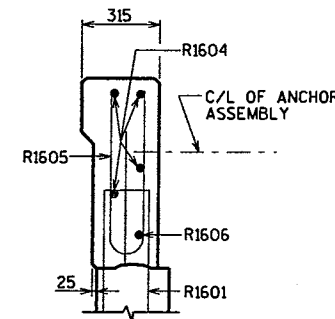
BILL OF BARS

FOR ABUTMENT PARAPETS, WING 2 & WING 4 ONLY
 THE FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE. EPOXY COAT ALL PARAPET REINFORCEMENT.

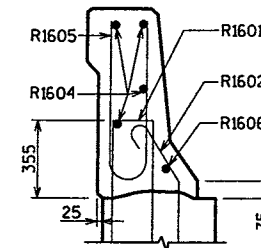
BAR MARK	COAT	NO. REQ'D		LENGTH	BENT	LOCATION
		SOUTH ABUT.	NORTH ABUT.			
R1601	X	14	14	1400	X	PARAPET - VERT.
R1602	X	8	8	960	X	PARAPET - VERT.
R1603	X	10	10	1430	X	PARAPET - VERT.
R1604	X	4	4	3900		PARAPET - HORIZ.
R1605	X	24	24	1470	X	PARAPET - VERT.
R1606	X	1	1	3900	X	PARAPET - HORIZ.



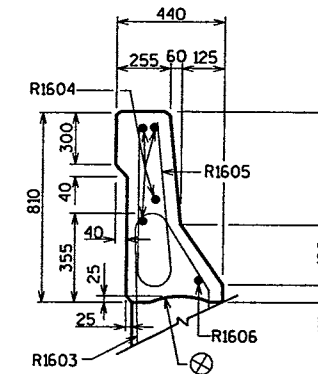
INSIDE ELEVATION



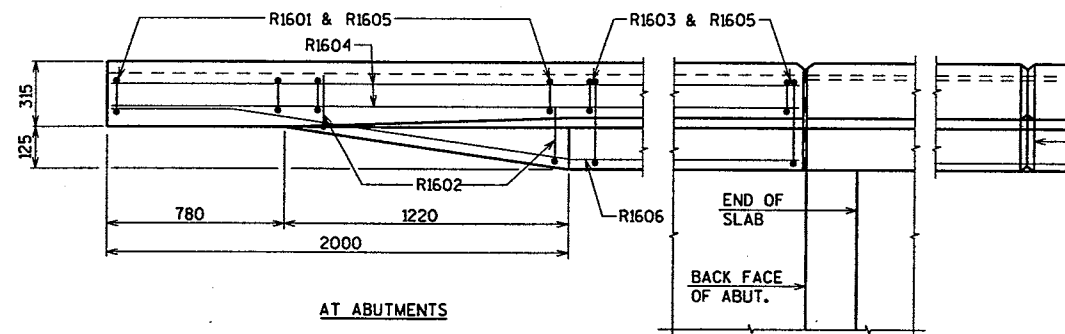
SECTION A



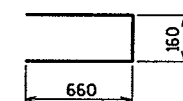
SECTION B



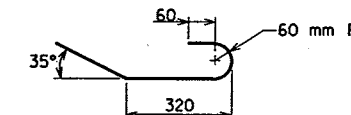
SECTION C



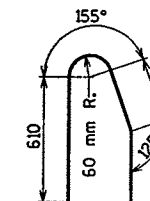
PLAN



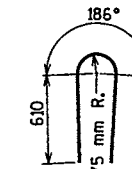
R1601



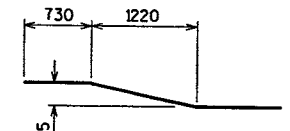
R1602



R1603

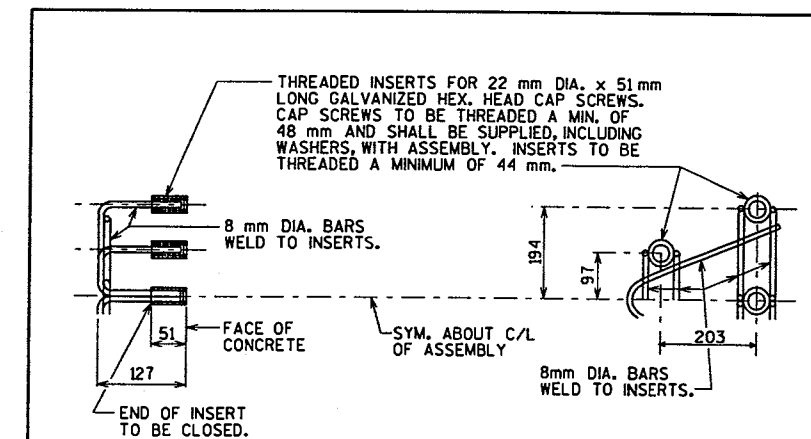


R1605



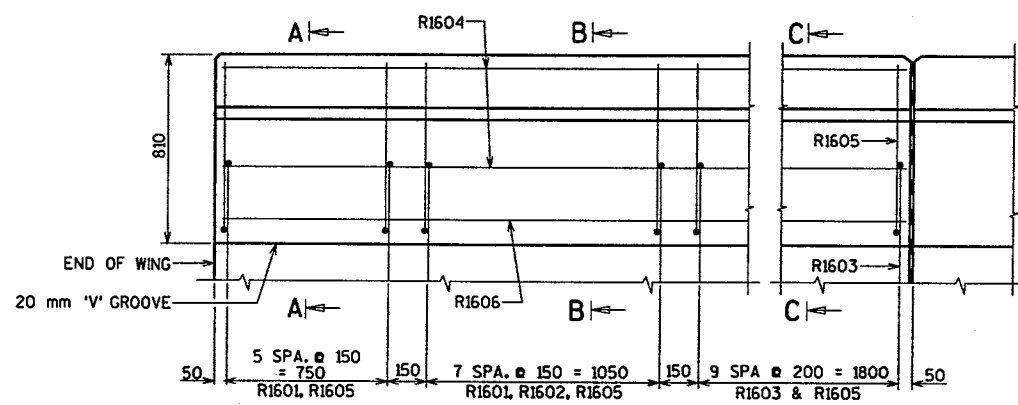
R1606

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGITUDINAL BARS A MIN. OF 550 mm. MIN. JOINT SPACING OF 25000 mm. DEFINE CONSTRUCTION JOINT WITH A 20 mm 'V' GROOVE.

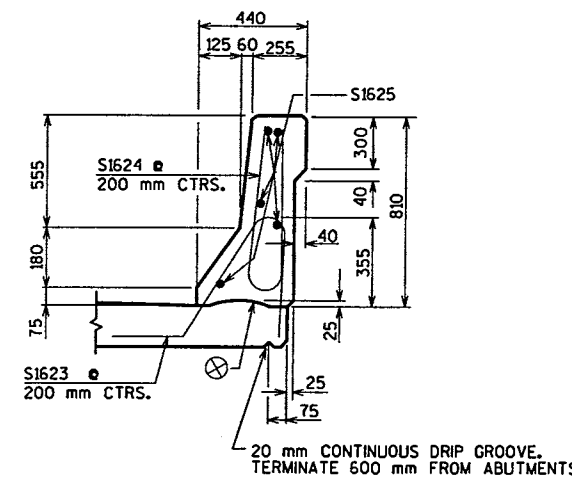


DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.



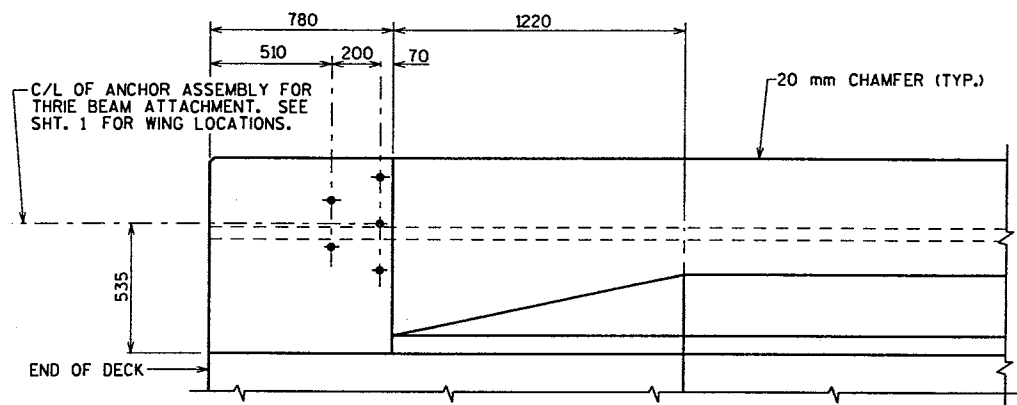
OUTSIDE ELEVATION



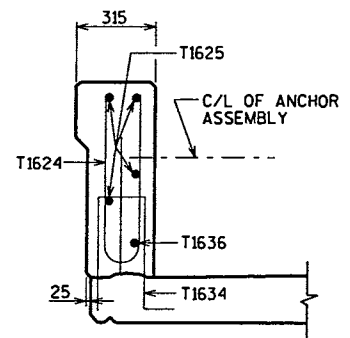
SECTION THRU PARAPET ON BRIDGE

⊗ CONST. JOINT - STRIKE OFF AS SHOWN

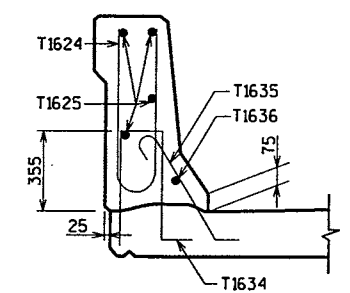
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CK'D. KES
SLOPED FACE PARAPET 'LF' EAST SIDE			SHEET 21 OF 22



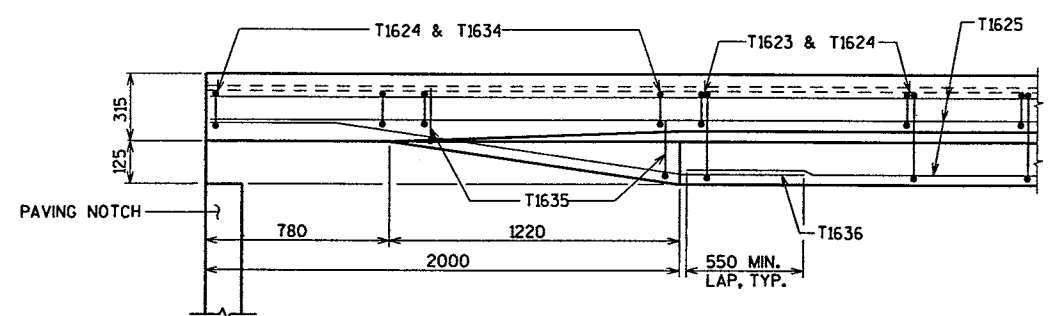
INSIDE ELEVATION



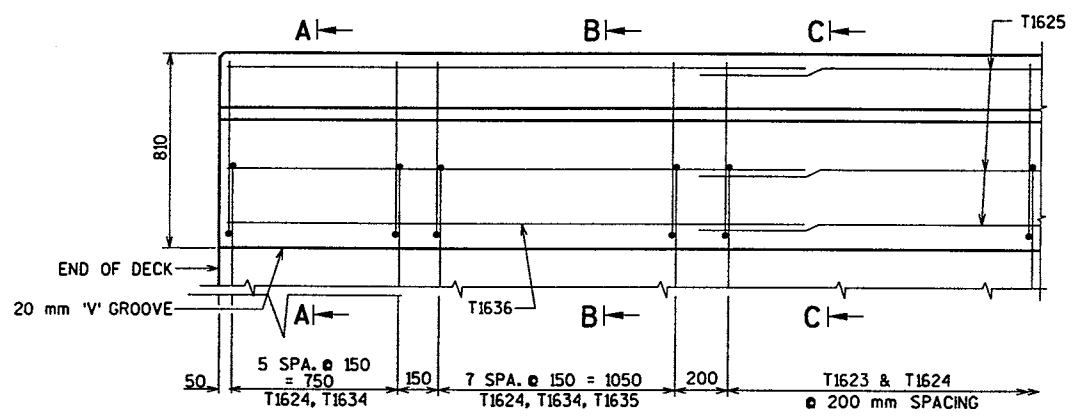
SECTION A



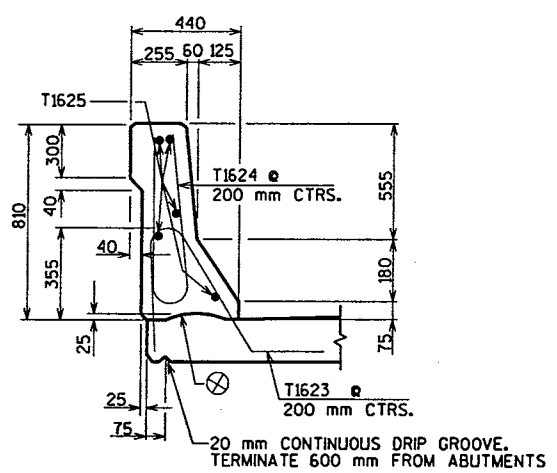
SECTION B



PLAN

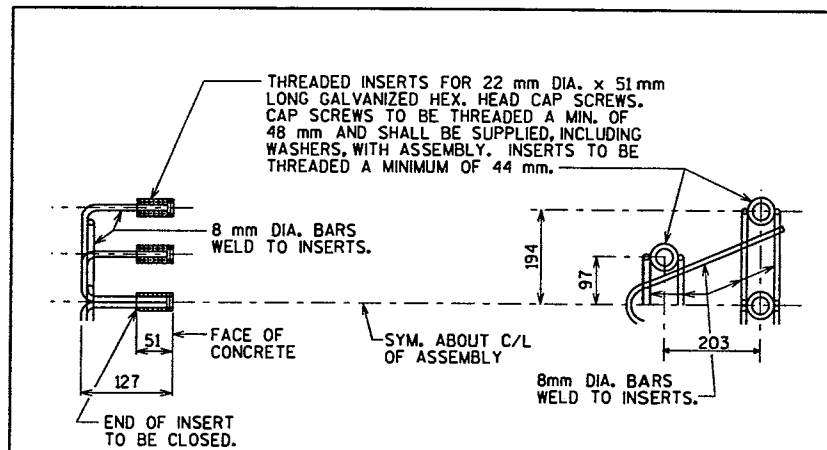


OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

⊗ CONST. JOINT - STRIKE OFF AS SHOWN



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-295			
CONST. SPEC.	1996	DRAWN BY TEK	PLANS CKD. KES
SLOPED FACE PARAPET 'LF' WEST SIDE			SHEET 22 OF 22