

INDEX OF SHEETS

Sheet No.	Title
Sheet No. 1	Typical Sections and Details
Sheet No. 2-2.8	Estimate of Quantities
Sheet No. 3 & 3.1	Miscellaneous Quantities
Sheet No. *	Right of Way Plat
Sheet No. 4-4.6	Plan and Profile
Sheet No. 5-5.8	Standard Detail Drawings
Sheet No. 6 & 6.3	Sign Plates
Sheet No. 8-8.96	Structure Plans
Sheet No. 8-8.96	Computer Earthwork Data
Sheet No. 8-8.96	Cross Sections
* 2.2, 8.1, 8.14, 8.27, 8.38, 8.50, 8.61, 8.72 & 8.85	TOTAL SHEETS = 128



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

VERONA BYPASS (CTH "PB" INTERCHANGE - EAST INTERCHANGE) U.S.H. 18 DANE COUNTY

STATE PROJECT NUMBER
1201-04-76

STATE PROJECT	FEDERAL PROJECT
1201-04-76	PROJECT CONTRACT

STRUCTURE CONTRACT ONLY
B-13-411/412 CTH "PB" INTERCHANGE
B-13-413/414 WHALEN ROAD
B-13-415/416 GRANDVIEW ROAD
B-13-417/418 EAST INTERCHANGE
AS BUILT CONSTRUCTION PLAN

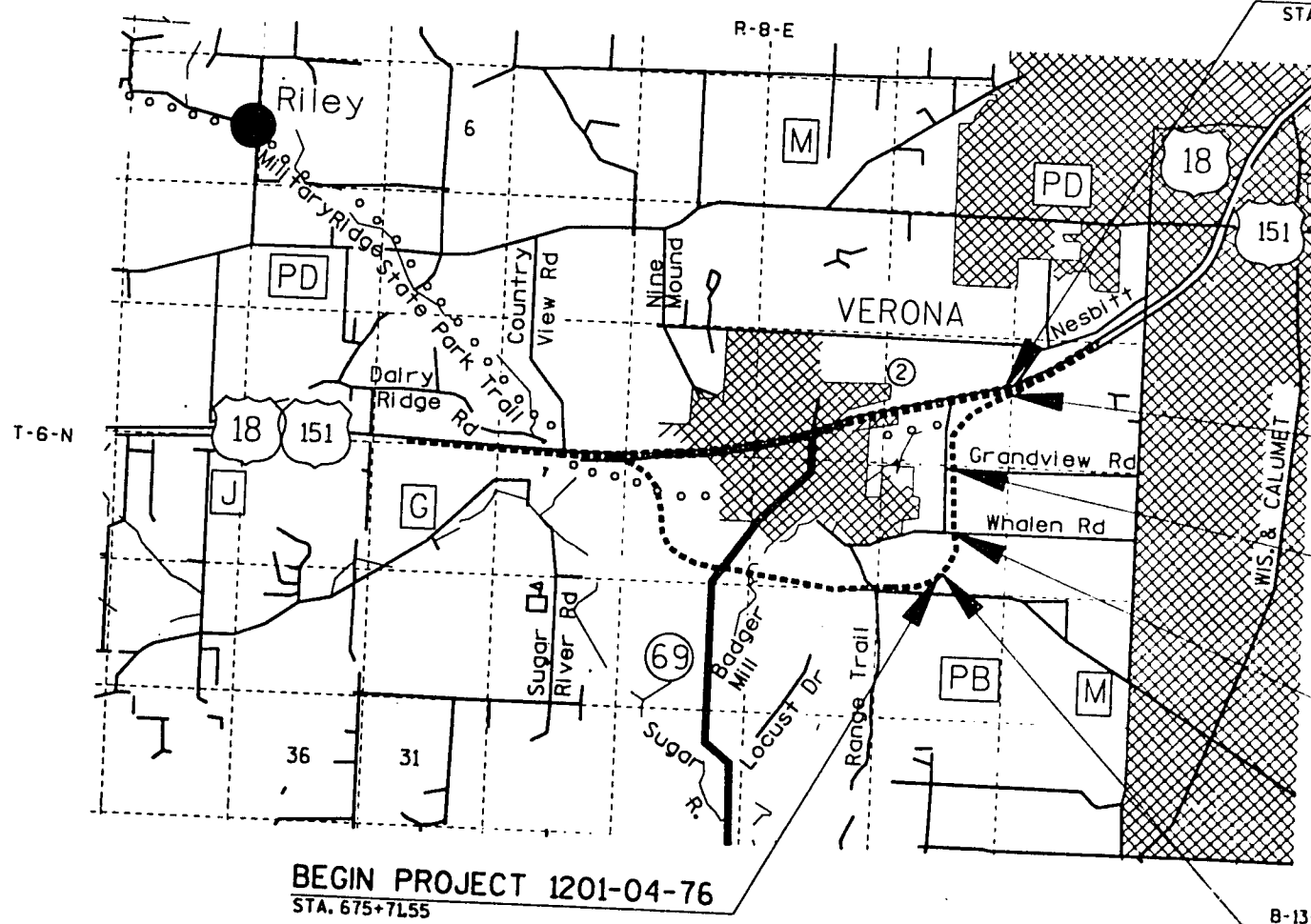
WORK TYPE Bridges
CONTRACTOR EDWARD KRAEMER & SONS
PROJECT MANAGER Mark J. Spornem
WORK START-COMPLETED 8/22/94 - 6-30-95

DESIGN DESIGNATION

	(EXISTING)	(BYPASS)
A.D.T. 1995	=	7,000
A.D.T. 2012	=	700
D.H.V. 2012	=	60-40
D.	=	4.9%
T. (DHV)	=	65 MPH
DESIGN SPEED	=	N.A.
ESALS	=	

CONVENTIONAL SIGNS

COUNTY LINE	COMBUSTIBLE FLUIDS (UNDER PRESSURE)
CORPORATE LIMITS	UNDERGROUND UTILITIES
PROPERTY LINE	GAS
LOT LINE	ELECTRIC
LIMITED EASEMENT	TELEPHONE
EXISTING RIGHT OF WAY	SERVICE PEDESTAL
NEW RIGHT OF WAY	CABLE MARKER
REFERENCE LINE	POWER POLE
SLOPE INTERCEPT	TELEPHONE POLE
ORIGINAL GROUND	RAILROADS
MARSH OR ROCK PROFILE	MARSH
CULVERT IN PLACE	WOODED AREA
CULVERT REQUIRED	
CULVERT REQUIRED (Profile)	
CULVERT IN PLACE (Profile)	



BEGIN PROJECT 1201-04-76
STA. 675+71.55

END PROJECT 1201-04-76
STA. 745+90.63

LAYOUT
SCALE 0 0.8 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.108 MI. RURAL

ALL COORDINATES ON THIS PLAN
ARE REFERENCED TO THE
WISCONSIN COORDINATE GRID SYSTEM
SOUTH ZONE.
GRID CONVERSION FACTOR = 0.99991

ORIGINAL ROADWAY PLANS PREPARED BY
CHM HILL
MILWAUKEE, WISCONSIN

WISCONSIN
JEFFREY A. ROEMER
6-23321
MILWAUKEE, WI
PROFESSIONAL ENGINEER

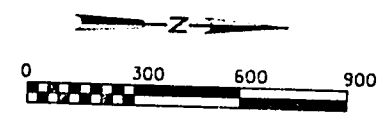
11-30-93
Jeffrey A. Roemer

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: T.L.G.
Designer: JAR/JAB
District Examiner: RCL
District Supervisor: D.J.P.
Proj. Dev. Engineer: Richard R. Felling
C.O. Examiner: N.R. AFFELDT

APPROVED FOR DISTRICT OFFICE
DATE: 12-6-93 Kevin Chinnell
Signature

AUTHORIZED FOR CENTRAL OFFICE DESIGN
DATE: 2/11/94 Harold E. Grandt
Signature



KEY MAP

STATE PROJECT NUMBER
1201-04-76

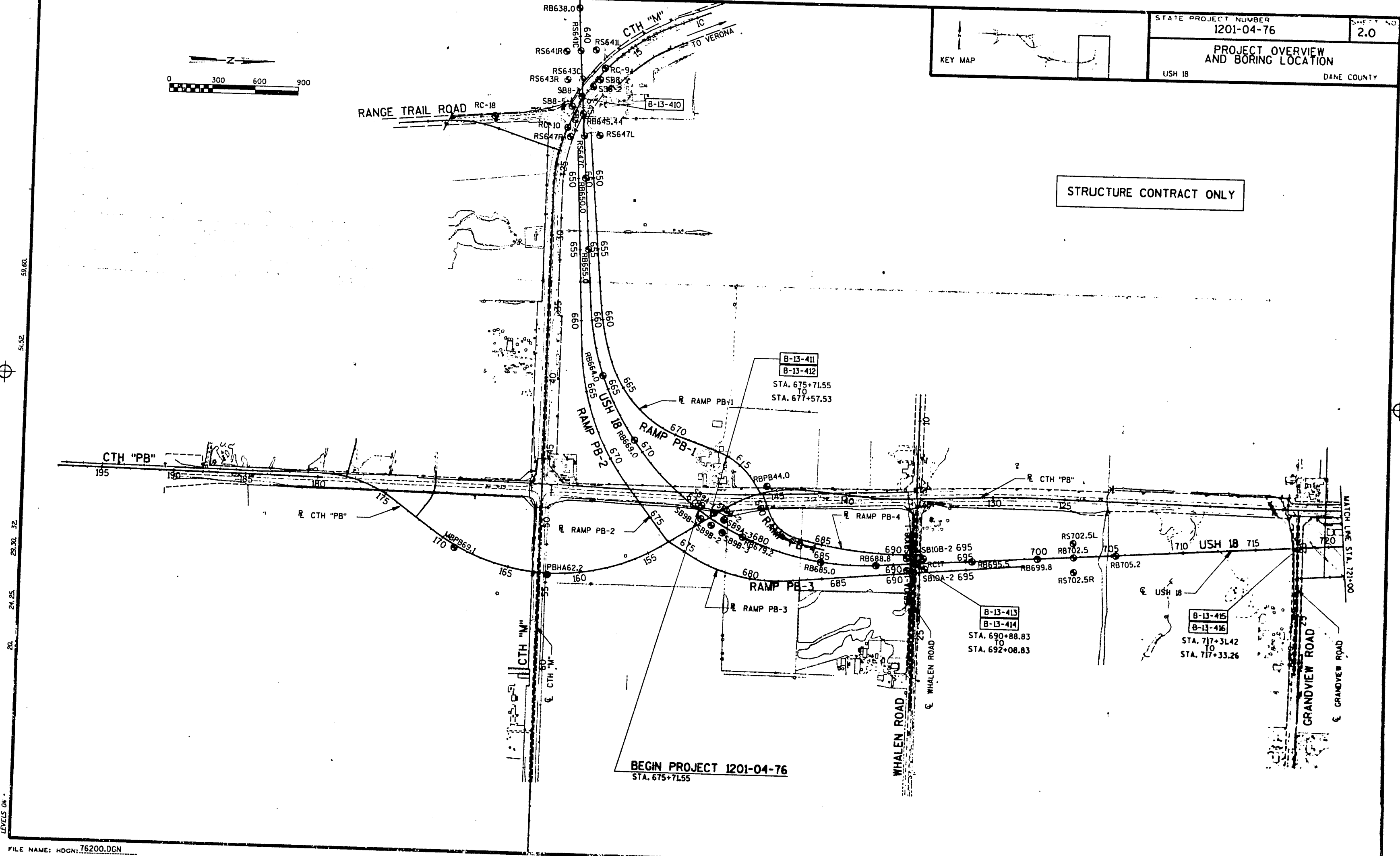
SHEET NO
2.0

PROJECT OVERVIEW
AND BORING LOCATION

US 18

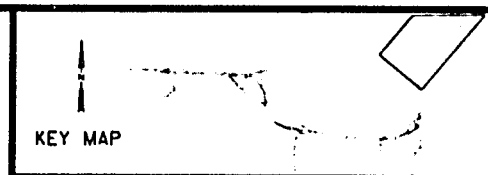
DANE COUNTY

STRUCTURE CONTRACT ONLY

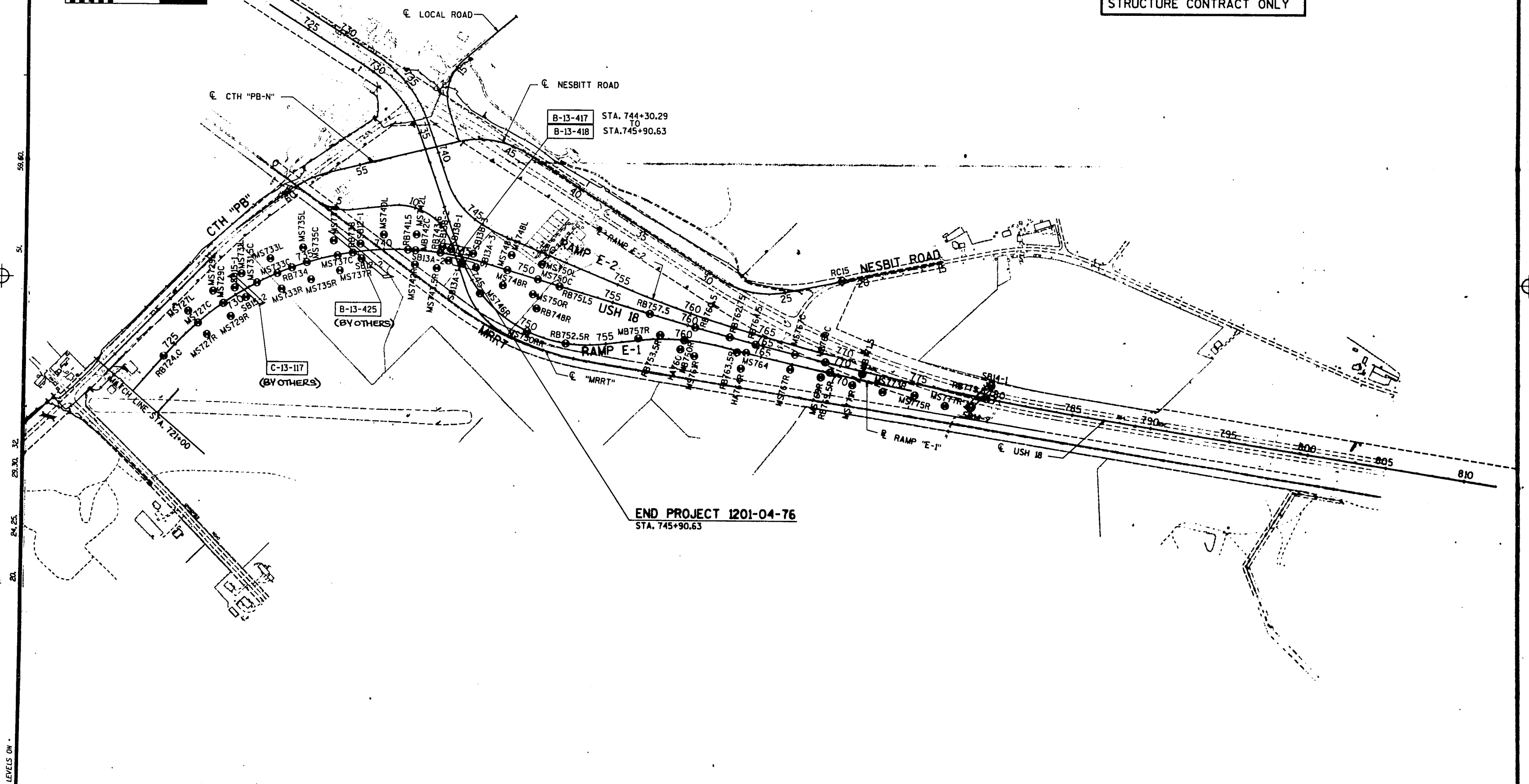


59.60
51.52
29.30 32
24.25
20

LEVELS ON



STRUCTURE CONTRACT ONLY



LEVELS ON
59.60
59
58.30
58
57.25
57
56.25
56

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- ALL COORDINATES SHOWN ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COORDINATE SYSTEM (SOUTH ZONE). THE CONTROL SURVEY FOR THIS PROJECT WAS CONDUCTED AND MET SPECIFICATIONS FOR THIRD ORDER SURVEYS.

STANDARD DETAIL DRAWINGS

8E8-1	EROSION BALES
8E9-3	SILT FENCE
12A2-3	SLOPED PAVING-STRUCTURES (CRUSHED AGGREGATE)
12A3-4	NAME PLATE-STRUCTURES

STANDARD ABBREVIATIONS

B/L	BASE LINE
C/L	CENTER LINE
T/L	TRANSIT LINE
R/L	REFERENCE LINE
MIN.	MINIMUM
MAX.	MAXIMUM
NOR.	NORMAL
TYP.	TYPICAL
VAR.	VARIABLE
F.E.	FIELD ENTRANCE
P.E.	PRIVATE ENTRANCE
DGBC	DENSE GRADED BASE COURSE
OGBC	OPEN GRADED BASE COURSE
SHLDR.	SHOULDER
SDD	STANDARD DETAIL DRAWINGS
S.E.	SUPERELEVATION
N.C.	NORMAL CROWN
R.C.	REVERSE CROWN
EBRL	EASTBOUND REFERENCE LINE
WBRL	WESTBOUND REFERENCE LINE
PUJ	PIPE UNDERDRAIN UNPERFORATED
RCCP	REINFORCED CONCRETE CULVERT PIPE
CSCP	CORRUGATED STEEL CULVERT PIPE
CP	CULVERT PIPE
UNDIST.	UNDISTRIBUTED

UTILITIES

- TELEPHONE
- MOUNT VERNON TELEPHONE COMPANY
MR. JACK NORTHRUP
113 NORTH MAIN STREET
VERONA, WI 53593
PHONE: 608/845-6445
- ELECTRIC
- WISCONSIN POWER AND LIGHT COMPANY
MR. JIM PALZKILL
222 WEST WASHINGTON AVENUE
P.O. BOX 192
MADISON, WI 53703
PHONE: 608/252-3456
- WISCONSIN POWER AND LIGHT COMPANY
LOCAL CONTACT
MR. MIKE BURNS
P.O. BOX 4
OREGON, WI 53575
PHONE: 608/258-5143
- WISCONSIN DEPARTMENT OF TRANSPORTATION
DISTRICT 1
MR. BRUCE BELSCAMPER
2101 WRIGHT STREET
MADISON, WI 53704-2583
PHONE: 608/246-3817
- GAS
- MADISON GAS AND ELECTRIC COMPANY
MR. JOHN YOGERT
133 SOUTH BLAIR STREET
P.O. BOX 1231
MADISON, WI 53703
PHONE: 608/252-7195
- CABLE T.V.
- MARCUS CABLE
MR. RANDY STEURER
612 EAST MAIN STREET
P.O. BOX 145
WAUNAKEE, WI 53597-0145
PHONE: 608/849-8033

MISCELLANEOUS QUANTITIES

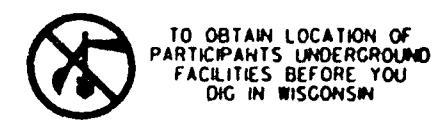
GROUP CODE	LOCATION	EROSION BALES		SILT FENCE (SANDY TYPE REQ'D.)		
		DELIVERED EACH	INSTALLED EACH	DELIVERED L.F.	INSTALLED L.F.	MAINTENANCE L.F.
010	B-13-411, UNDIST.	20	20	100	100	100
020	B-13-412, UNDIST.	20	20	100	100	100
030	B-13-413, UNDIST.	20	20	100	100	100
040	B-13-414, UNDIST.	20	20	100	100	100
050	B-13-415, UNDIST.	20	20	100	100	100
060	B-13-416, UNDIST.	20	20	100	100	100
070	B-13-417, UNDIST.	20	20	100	100	100
080	B-13-418, UNDIST.	20	20	100	100	100
TOTALS		160	160	800	800	800

RECREATION TRAIL

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
SOUTHERN DISTRICT
MR. GREG MARKUS
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
PHONE: 608/275-3337

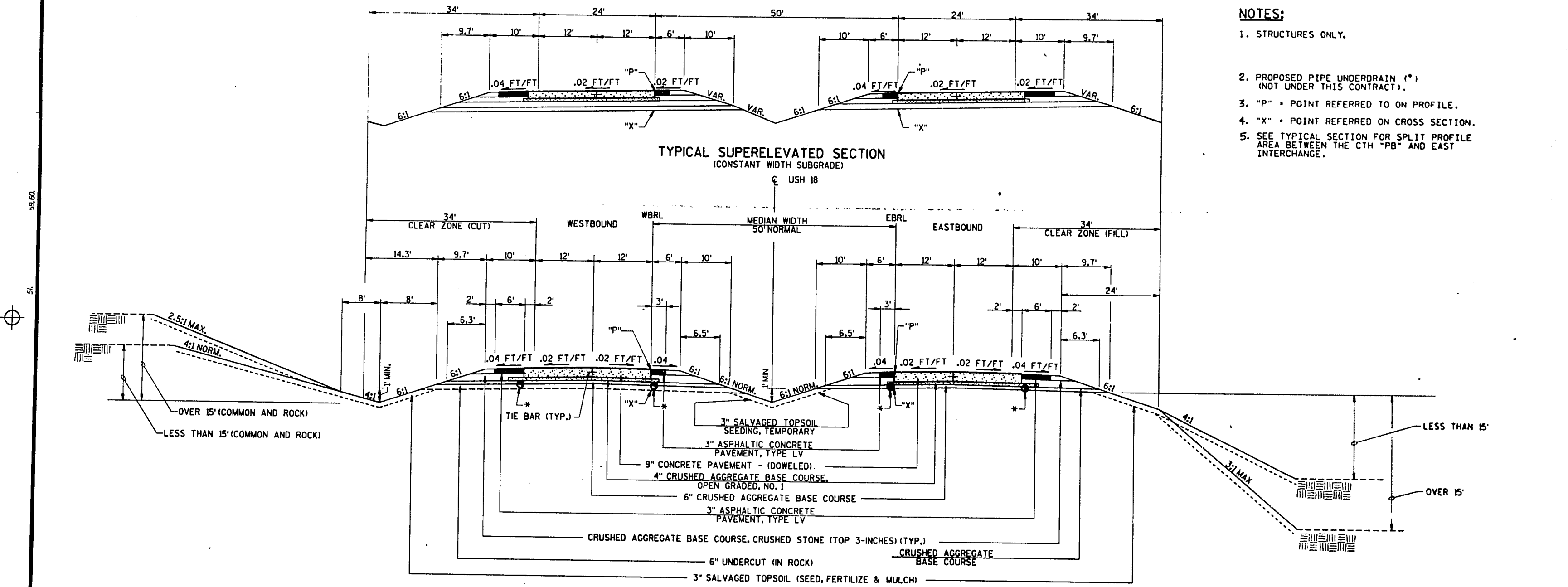
DIGGERS HOTLINE

DANE COUNTY
PHONE: 800/242-8511

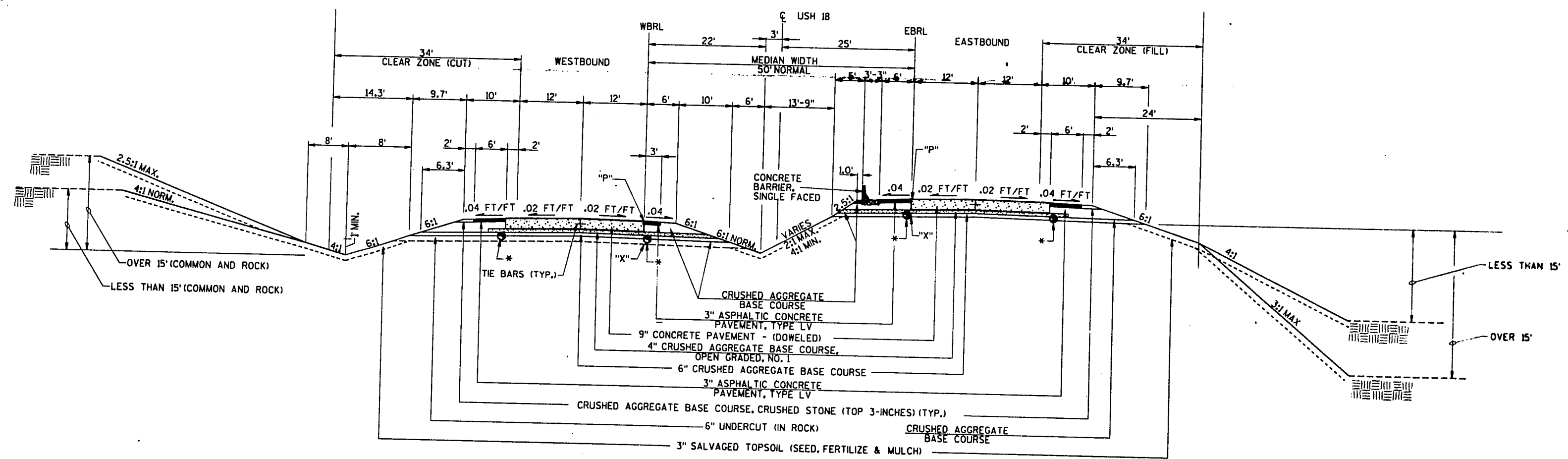


WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORKING DAYS
NOTICE BEFORE YOU EXCAVATE

- NOTES:
- STRUCTURES ONLY.
 - PROPOSED PIPE UNDERDRAIN (*) (NOT UNDER THIS CONTRACT).
 - "P" = POINT REFERRED TO ON PROFILE.
 - "X" = POINT REFERRED ON CROSS SECTION.
 - SEE TYPICAL SECTION FOR SPLIT PROFILE AREA BETWEEN THE CTH "PB" AND EAST INTERCHANGE.

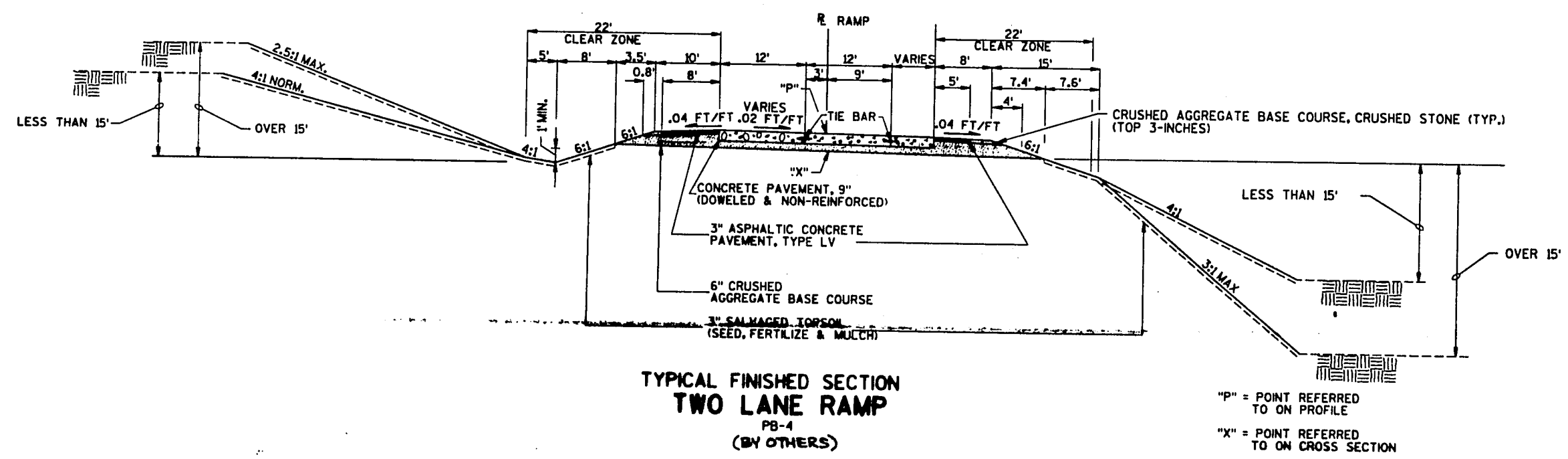
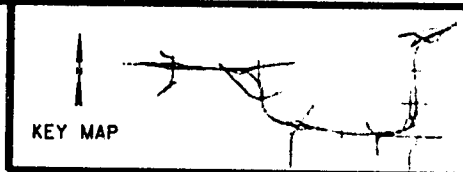


FOR INFORMATION ONLY
STRUCTURE CONTRACT

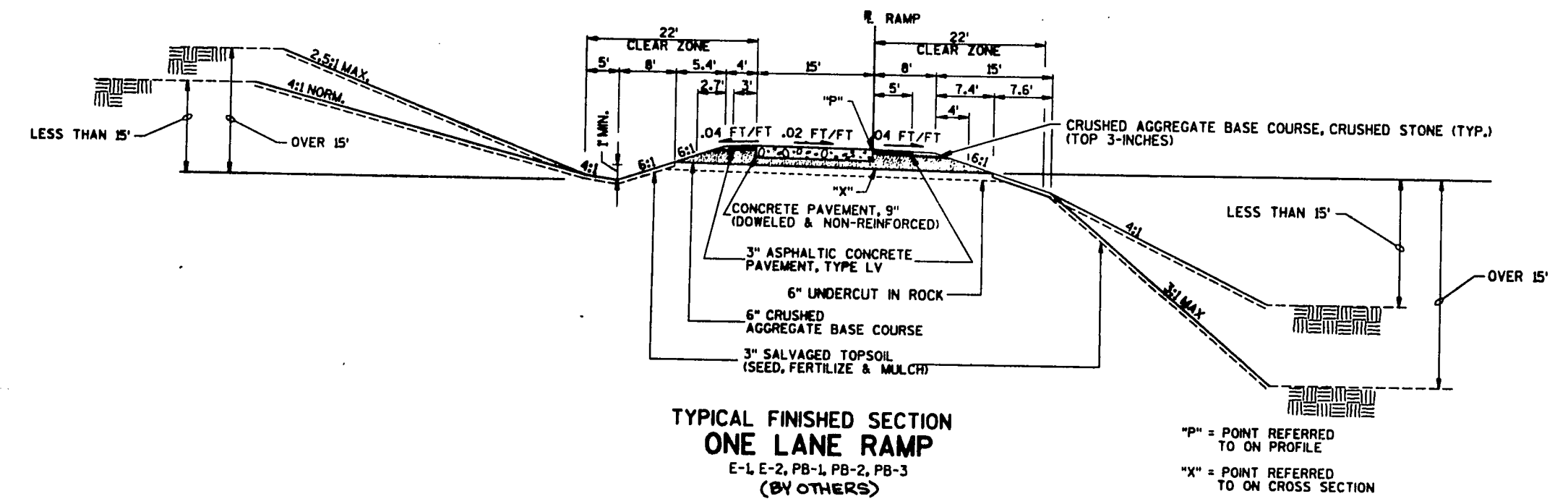


- NOTES:**
- STRUCTURES ONLY.
 - PROPOSED PIPE UNDERDRAIN (*) (NOT UNDER THIS CONTRACT).
 - "P" - POINT REFERRED TO ON PROFILE.
 - "X" - POINT REFERRED ON CROSS SECTION.

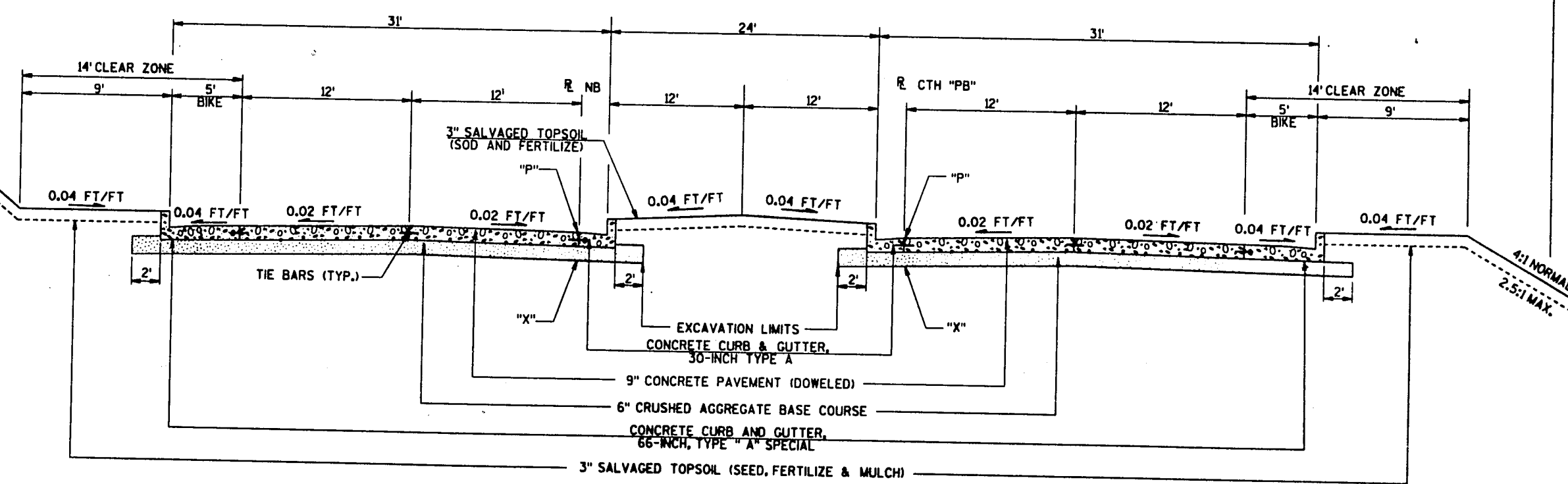
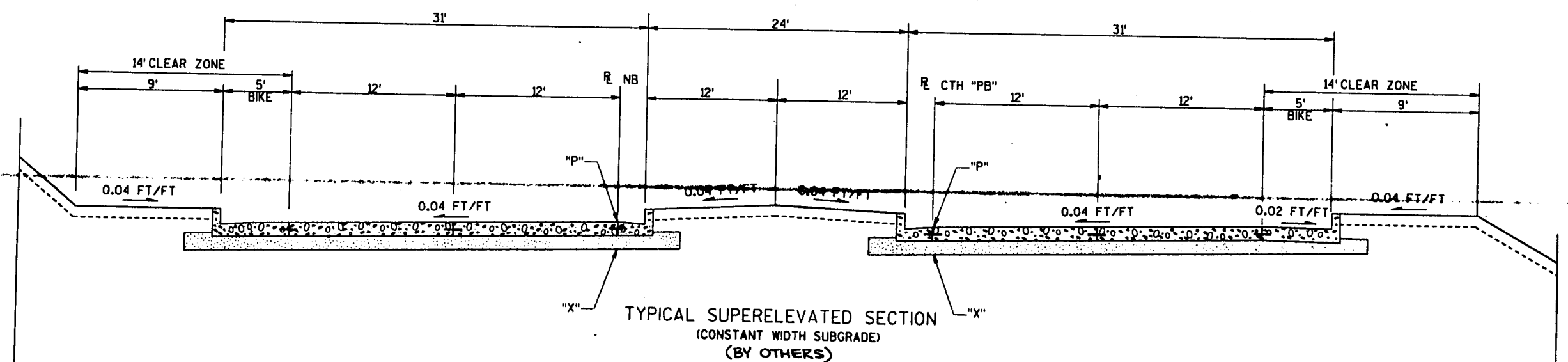
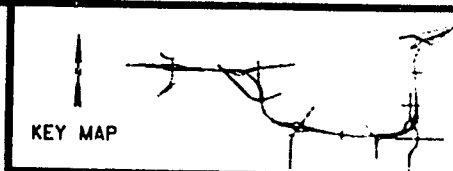
FOR INFORMATION ONLY
STRUCTURE CONTRACT



NOTES:
1. STRUCTURES ONLY.



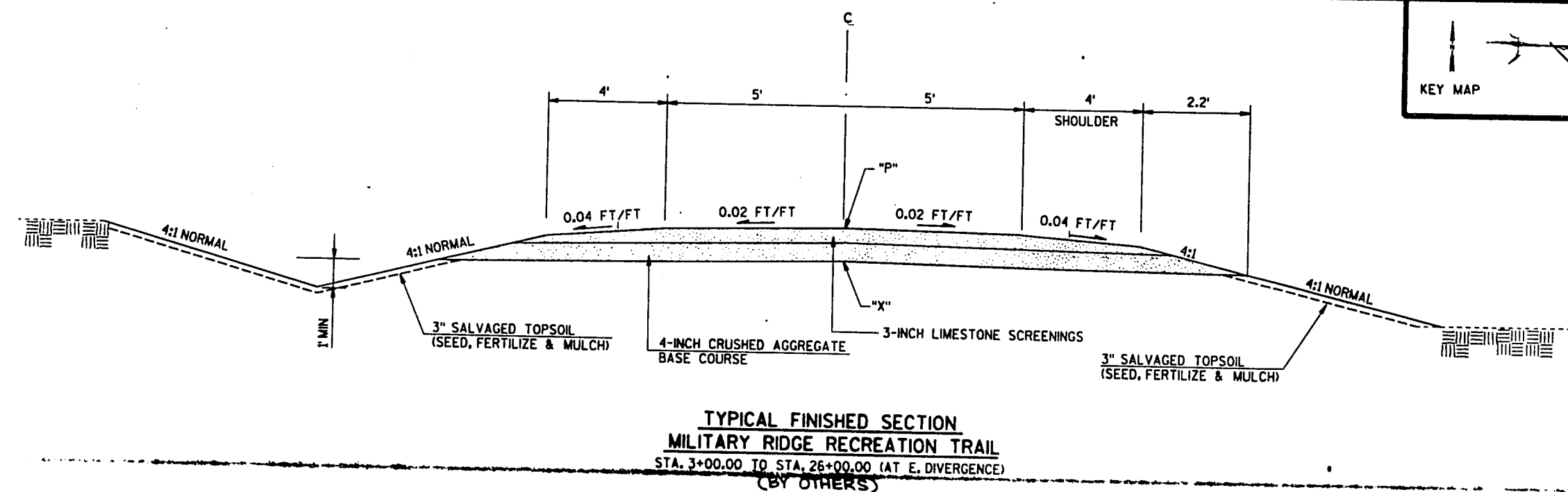
FOR INFORMATION ONLY
STRUCTURE CONTRACT



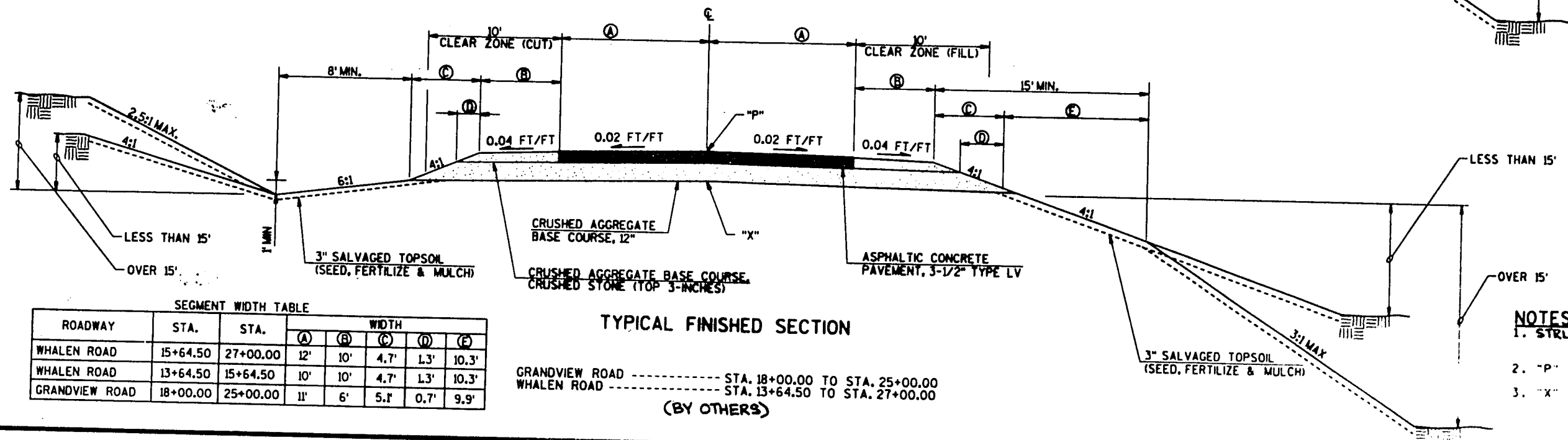
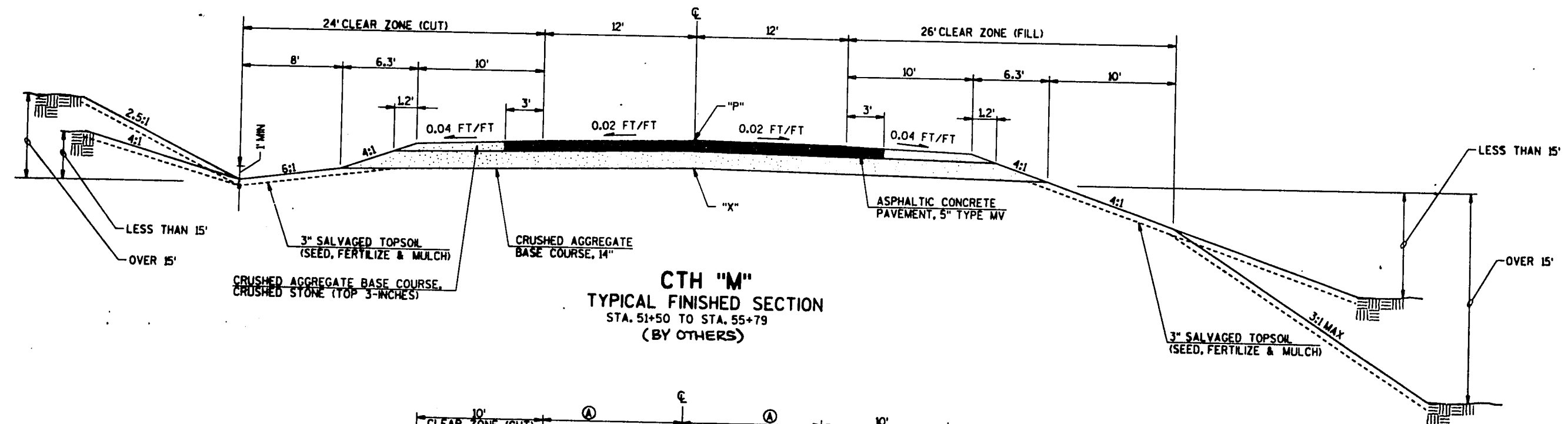
TYPICAL FINISHED SECTION
CTH PB ----- STA. 145+11.89 TO STA. 155+23.32
(BY OTHERS)

FOR INFORMATION ONLY
STRUCTURE CONTRACT

"P" - POINT REFERRED
TO ON PROFILE
"X" - POINT REFERRED
ON CROSS SECTION

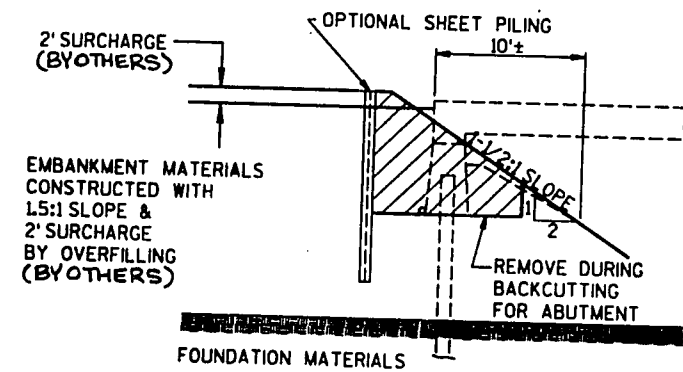


FOR INFORMATION ONLY
STRUCTURE CONTRACTS

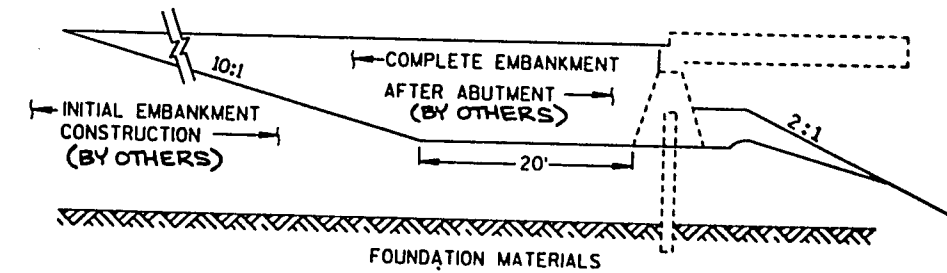


- NOTES:**
- STRUCTURES ONLY.
 - "P" - POINT REFERRED TO ON PROFILE.
 - "X" - POINT REFERRED ON CROSS SECTION.

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BRIDGE APPROACH CONSTRUCTION DETAIL
B-13-417/418 EAST INTERCHANGE



BRIDGE APPROACH CONSTRUCTION DETAIL

B-13-411/412 CTH 'B' IN DISCHARGE
B-13-413/414 WHALEN ROAD
B-13-415/416 GRANDVIEW ROAD

DATE 02/18/94

ESTIMATE OF QUANTITIES

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-76 QUANTITY
20610	EXCAVATION FOR STRUCTURES, BRIDGES B-13-411	L.S.	1.00	1.00
20611	EXCAVATION FOR STRUCTURES, BRIDGES B-13-412	L.S.	1.00	1.00
20612	EXCAVATION FOR STRUCTURES, BRIDGES B-13-413	L.S.	1.00	1.00
20613	EXCAVATION FOR STRUCTURES, BRIDGES B-13-414	L.S.	1.00	1.00
20614	EXCAVATION FOR STRUCTURES, BRIDGES B-13-415	L.S.	1.00	1.00
20615	EXCAVATION FOR STRUCTURES, BRIDGES B-13-416	L.S.	1.00	1.00
20616	EXCAVATION FOR STRUCTURES, BRIDGES B-13-417	L.S.	1.00	1.00
20617	EXCAVATION FOR STRUCTURES, BRIDGES B-13-418	L.S.	1.00	1.00
50201	CONCRETE MASONRY, BRIDGES	C.Y.	2,981.00	2,981.00
50230	PROTECTIVE SURFACE TREATMENT	GAL.	366.00	366.00
50305	PRESTRESSED GIRDER, I TYPE, 45-INCH	L.F.	1,820.00	1,820.00
50307	PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	3,042.00	3,042.00
50309	PRESTRESSED GIRDER, I TYPE, 70-INCH	L.F.	1,632.00	1,632.00
50504	HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	57,610.00	57,610.00
50511	COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	372,020.00	372,020.00
50626	NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	118.00	118.00
50640	STEEL DIAPHRAGMS, STRUCTURE B-13-411	EACH	16.00	16.00
50641	STEEL DIAPHRAGMS, STRUCTURE B-13-412	EACH	16.00	16.00
50642	STEEL DIAPHRAGMS, STRUCTURE B-13-413	EACH	12.00	12.00
50643	STEEL DIAPHRAGMS, STRUCTURE B-13-414	EACH	12.00	12.00
50644	STEEL DIAPHRAGMS, STRUCTURE B-13-415	EACH	10.00	10.00
50645	STEEL DIAPHRAGMS, STRUCTURE B-13-416	EACH	10.00	10.00

Sheet

3

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1201-04-76 QUANTITY
50646	STEEL DIAPHRAGMS, STRUCTURE B-13-417	EACH	18.00	18.00
50647	STEEL DIAPHRAGMS, STRUCTURE B-13-418	EACH	12.00	12.00
51121	STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	5,810.00	5,810.00
51122	STEEL PILING, DELIVERED AND DRIVEN, HP 12-INCH 53 POUND	L.F.	2,300.00	2,300.00
60405	SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	3,222.00	3,222.00
61433	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	32.00	32.00
61801	MAINTENANCE AND REPAIR OF HAUL ROADS	L.S.	1.00	1.00
61910	MOBILIZATION	L.S.	1.00	1.00
62811	EROSION BALES, DELIVERED	EACH	160.00	160.00
62812	EROSION BALES, INSTALLED	EACH	160.00	160.00
62815	SILT FENCE, DELIVERED	L.F.	800.00	800.00
62816	SILT FENCE, INSTALLED	L.F.	800.00	800.00
62817	SILT FENCE MAINTENANCE	L.F.	800.00	800.00
64220	FIELD OFFICE, TYPE C	L.S.	1.00	1.00
64301	TRAFFIC CONTROL	L.S.	1.00	1.00

Sheet
31

CONVENTIONAL SIGNS AND ABBREVIATIONS

STATE LINE	---	SECTION CORNER		HYDRANT	
COUNTY LINE	---	NOTATION FOR COMBUSTIBLE FLUIDS		FOUNDATION OR RUIN BUILDING	
TOWNSHIP AND RANGE LINES	---	BRIDGE		CEMETERY	
SECTION LINE	---	STREAM OR RIVER		R/W MONUMENT	
QUARTER LINE	---	LAKE		NON-MONUMENTED R/W POINT	
SIXTEENTH LINE	---	CULVERT (BOX, PIPE OR CATTLE PASS)		IRON PIN	
NEW REFERENCE LINE	---	RAIL LINE		VALVE	
NEW R/W LINE	---	SIGN		WINDMILL	
EXISTING R/W LINE	---	POWER POLE		SILLO, MANHOLE, VENT, SEPTIC VENT, WELL, ETC.	
PROPERTY LINE	---	TELEPHONE POLE		GAS PUMPS	
CORPORATE LIMITS	---	NO ACCESS (BY ACQUISITION)		BUSHES	
LOT, TIE AND OTHER MINOR LINES	---	NO ACCESS (BY STATUTORY AUTHORITY)		TREES (DECIDUOUS)	
SLOPE INTERCEPTS	---	NO ACCESS (BY PREVIOUS PROJECT)		TREES (CONIFEROUS)	
UNDERGROUND FACILITY (GAS, TELEPHONE, ELECTRIC, ETC.)	---			WOODS	
FENCE	---			ENCROACHING SIGN	
TEMPORARY LIMITED EASEMENT	---				
PERMANENT LIMITED EASEMENT	---				
BEAM GUARD	---				
TRANSMISSION TOWER AND LINE	---				
GAS MARKER OR TELEPHONE PEDESTAL	---				

ACCESS RIGHTS
UNDER GROUND
HOUSE TRAILER
WATER VALVE
VOL
RECORDED
POINT OF BEGINNING
ACCESS POINT
ACRES
ALUMINUM
AND OTHERS
ASPHALTIC
BACK
BARN
BUSINESS
CABLE MARKER
CABLE TELEVISION
CATCH BASIN
CERTIFIED SURVEY MAP
CONCRETE
CORNER
CULVERT
DOING BUSINESS AS
ELECTRIC
FORWARD
FOUNDATION
GARAGE
GAS MARKER
GAS PUMPS
HANGAR
HOUSE
IRON PIN
LEFT
LENGTH

A.R.
U.C.
H.T.
W.V.
VOL
REC'D
P.O.B.
A.P.
AC.
ALUM.
ET AL
ASP.
BK.
B.
BUS.
C.M.
CATV
C.B.
C.S.M.
CONC.
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CULV.
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FWD.
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G.
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G.P.
HA.
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I.P.
LT.
L.

FIBER OPTIC CABLE
GAS VALVE
MOBILE HOME
HANGAR
LIQUID PROPANE
STATION
WATERS EDGE
PERMANENT LIMITED EASEMENT
LONG CHORD
LONG CHORD BEARING
MANHOLE
MONUMENT
OUTLOT
PAGE
PARKER-KALON FASTENER
PROPERTY LINE
RADIUS
RAILROAD
REFERENCE LINE
RESTRICTED DEVELOPMENT EASEMENT
RIGHT
RIGHT OF WAY
SANITARY SEWER
SECTION
SHED
TANGENT
TAVERN
TELEPHONE
TELEPHONE MANHOLE
TELEPHONE PEDESTAL
TELEVISION PEDESTAL
TEMPORARY LIMITED EASEMENT
WALL
GAS AS 'PAINTED' ON GROUND BY UTILITY
STORM SEWER
CENTER OF SECTION

FO.
GV.
M.H.
HA.
LP.
STA.
W.E.
P.L.E.
L.C.
L.C.B.
M.H.
MON.
O.L.
P.
P.K.
P.L.
R.
R.R.
R.L.
R.D.E.
RT.
R/W
SAN.
SEC.
S.
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TAV.
T.
T.M.H.
T.P.
TV P.
T.L.E.
W.
GPA
SS.
C.O.S.

NOTES

DIMENSIONING FOR THE NEW R/W IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

GOVERNMENTAL LAND LINE AND REFERENCE LINE ARE NOT COINCIDENTAL.

DISTANCES FROM REFERENCE LINE ARE $\frac{XX'}{R}$ OR $\frac{XX'}{G}$
DISTANCES FROM GOVERNMENTAL LAND LINE ARE $\frac{XX'}{G}$ OR $\frac{XX'}{G}$

EXISTING HIGHWAY RIGHT OF WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE AS SPECIFIED ON EACH PLAT DETAIL SHEET: GOVERNMENT LAND LINES; PREVIOUS PROJECTS 1200-03-21, F 017-2(15), COUNTY PROJECT NO. 403, 502540, 502574(1) & (2), 51118(14), REFERENCE LINES; OR THE CENTERLINE OF EXISTING PAVEMENT AS NOTED.

COORDINATES AND BEARINGS ON THIS PLAT ARE ORIENTED TO THE WISCONSIN COORDINATE SYSTEM SOUTH ZONE, NAD 27. ALL PLAT DISTANCES ARE GROUND LENGTH AND MAY BE CONVERTED TO GRID LENGTH BY MULTIPLYING THE DISTANCE BY THE GRID FACTOR PROVIDED ON THE DETAIL SHEETS.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND ARE PLACED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION (AS PER THE CONTRACT NEGOTIATED WITH CH2M HILL CENTRAL, INC., DATED AUGUST 28, 1990) PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

G N

OFFICIAL PLAT ON FILE WITH
THE REGISTER OF DEEDS OFFICE

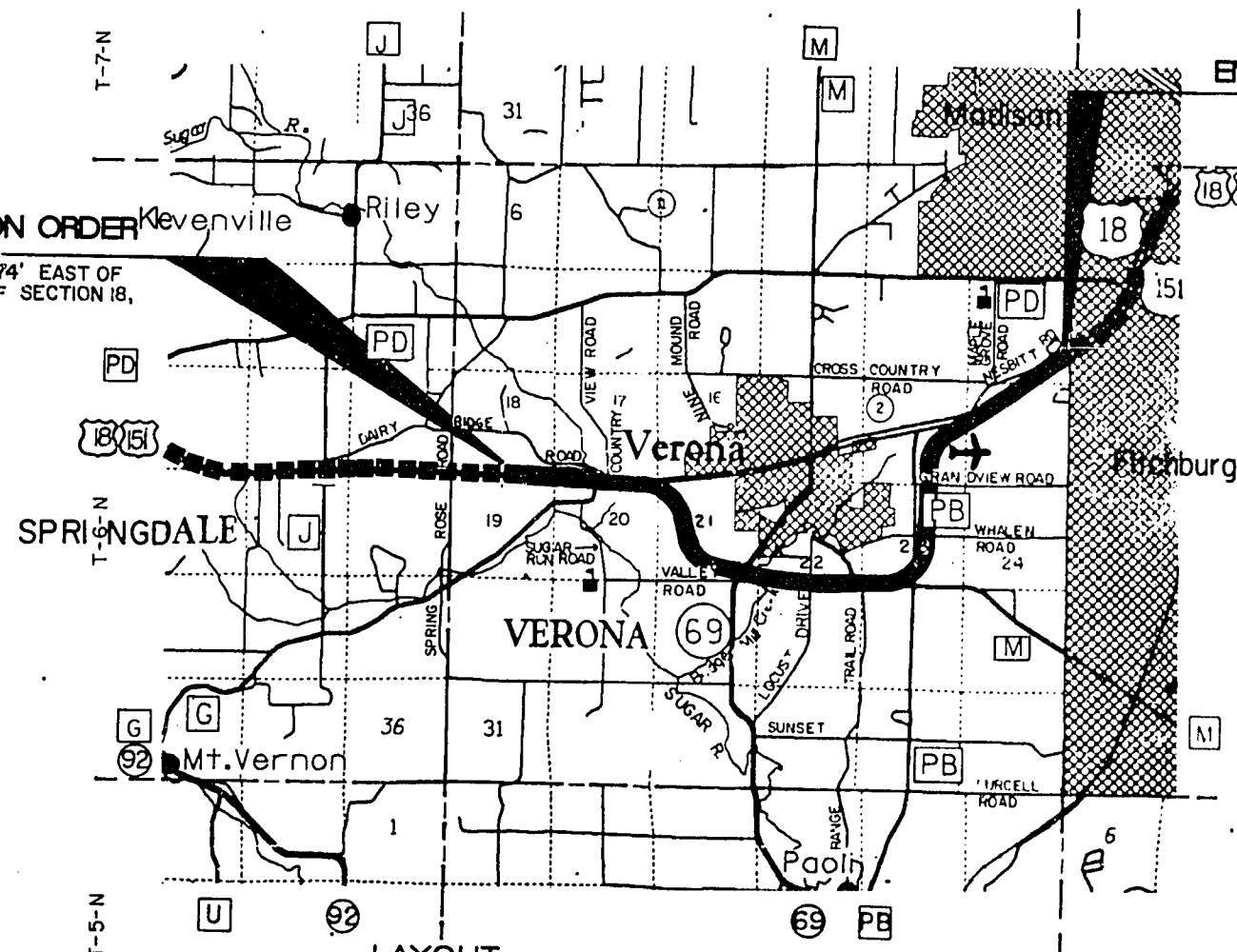
R/W PROJECT NUMBER 1201--04-21	SHEET NUMBER 4.0	TOTAL SHEETS 26
FEDERAL PROJECT NUMBER		
PLAT OF RIGHT OF WAY REQUIRED FOR VERONA BYPASS (C.T.H. G - NESBITT ROAD)		
U.S.H. 18	DANE COUNTY	
	1201-4-72 / 4.0	
	1201-4-76 / 4.0	

BEGIN RELOCATION ORDER

29.91' SOUTH OF AND 122.74' EAST OF
THE SOUTH 1/4 CORNER OF SECTION 18,
T.6N., R.8E.

END RELOCATION ORDER

1289.02' NORTH OF AND 258.12' WEST
OF THE SOUTHEAST CORNER OF
SEC 12, T.6N., R.8E



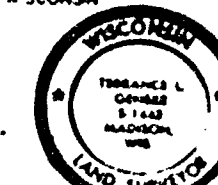
LAYOUT
SCALE



TOTAL NET LENGTH OF CENTERLINE= 7.302 MILES

RURAL

PLAT PREPARED BY
BARRIENTOS & ASSOC., INC
ENGINEERS, ARCHITECTS & SURVEYORS
MADISON, WISCONSIN



REVISED DATE
11-4-92
11-2-93
1-26-93 NC
10-27-93

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
[Signature]

SCHEDULE OF LAND & INTERESTS REQUIRED

AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED

REVISION DATE	ROUTE	COUNTY	DATE	R/W PROJECT NUMBER	SHEET
7-14-92 11-12-92 1-26-93 10-27-93	U.S.H. 18	DANE	3-2-92	1201-4-72	4.1
				FEDERAL PROJECT NUMBER	

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED	OR S.F. EXISTING	TOTAL	TOTAL ACRES REM.	T.L.E. ACRES	H.E. ACRES	PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	TOTAL ACRES OR S.F.	R/W ACRES REQUIRED	OR S.F. EXISTING	TOTAL	TOTAL ACRES REM.	T.L.E. ACRES	H.E. ACRES
1	4.3,4.5	CLIFFORD F. & JOYCE E. GUST	FEE, T.L.E., A.R.	385.19	10.05	2.18	12.23	372.96	0.48	—	51	4.20,4.21	DANE COUNTY	FEE	INDET.	47.51	—	47.51	INDET.	—	—
2	4.3,4.4	SISK FARMS, INC.	FEE, T.L.E., A.R.	63.77	6.59	—	6.59	57.18	2.39	—	52	4.21-4.23	SHARON L. NESBITT, ETAL.	FEE, T.L.E.	128.50	68.99	0.07	69.06	59.44	1.03	—
3	4.4	JULIAN O. & ANNA MAY RHINER	FEE, T.L.E.	178.6	4.53	2.91	7.44	171.16	0.54	—	53	4.23-4.25	K.A. RAYNER TRUST	FEE	82.21	81.62	0.59	82.21	0	—	—
4	4.4,4.5	THOMAS J. & MICHELE J. PELLITTERI	FEE, A.R.	82.34	5.52	0.53	6.05	76.29	—	—	54										
5											55										
6	4.4	ARNOLD A. JENNERMAN & MARGARET M. STEUCK	FEE, T.L.E.	36.7	0.63	0.98	1.61	35.09	0.21	—	56										
7											57										
8	4.5	ROYCE M. ESSIG	FEE	7.78	0.18	—	0.18	7.60	—	—	58										
9	4.6-4.8,4.10	SYLVESTER F. & MARGIE M. ZIEGLER	FEE, T.L.E.	432.19	432.19	—	432.19	—	—	—	59										
10											60										
11	4.7	RICHARD B. & RUTH L. STAMPFL	FEE	242.4	3.62	—	3.62	238.78	—	—	61	4.4,4.6,4.8,4.10 4.12,4.13,4.15,4.16, 4.18-4.21	MT. VERNON TELEPHONE COMPANY								
12	4.8	LESTER B. & SHIRLEY A. THOMPSON, 1/2 ALEXANDER R. & CAROL M. MILLER, 1/2	FEE	INDET.	0.20	—	0.20	INDET.	—	—	62	4.3,4.4,4.5,4.12-4.18,4.21	WISCONSIN POWER AND LIGHT COMPANY								
13	4.6, 4.10 4.18-4.20	STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES	FEE, T.L.E., H.E.	INDET.	1.69	—	1.69	INDET.	2.21	0.88	63	4.23-4.25									
14	4.8,4.10	MARVIN & DELORES THOMPSON	FEE, T.L.E.	72.00	9.20	—	9.20	62.80	3.63	—											
15																					
16	4.10	ESTATES OF PALMER PETERS & THELMA C. PETERS	FEE, T.L.E.	79.7	0.40	—	0.40	79.30	0.05	—											
17																					
18	4.11,4.12	ALEX BARTH, ETAL.	FEE, T.L.E., A.R.	174.00	26.23	2.86	29.09	144.91	1.14	—											
19	4.13	DWAINE W. & DONNA J. DICKINSON	FEE, T.L.E., A.R.	37.70	2.74	1.20	3.94	33.76	0.59	—											
20																					
21	4.13	KIRK A. & JAN D. FELLER	FEE, A.R.	120.00	1.74	2.32	4.06	115.94	—	—											
22	4.12	ELMER PALMER, VENDOR	FEE, T.L.E., A.R.	119.50	21.93	1.30	23.23	96.27	1.33	—											
23	4.12	DUWAYNE J. & JUDITH A. HOFFMAN, VENDEE	FEE, T.L.E.	2.15	0.22	—	0.22	1.93	0.16	—											
24		K. & M. ENTERPRISES																			
25																					
26	4.12	MONROE PROPERTIES, INC.	FEE, T.L.E.	1.99	0.05	—	0.05	1.94	0.09	—											
27	4.12	JEROME D. KAVON	FEE, T.L.E.	2.25	0.01	—	0.01	2.24	0.11	—											
28	4.12	TERRY A. & VICKIE L. HEILIGER	T.L.E.	0.34	—	—	—	0.34	0.02	—											
29																					
30																					
31	4.14	RANDALL J. ACKER	FEE, T.L.E.	120.00	9.88	0.48	10.36	109.64	0.05	—											
32	4.14,4.15	DONALD G. GUST	FEE, T.L.E., A.R.	113.50	17.01	0.51	17.52	95.98	0.70	—											
33	4.14,4.15	CLARENCE H. & VIRGINIA A. WITT	FEE, T.L.E.	136.00	2.10	0.22	2.32	133.68	0.07	—											
34	4.15,4.18	IRVING WILD, VENDOR	FEE, A.R.	109.00	13.46	4.20	17.66	91.34	—	—											
35	4.18	RICHARD M. & MARLY M. TOLLEFSON, VENDEE	A.R.	INDET.	—	—	—	—	—	—											
36	4.15	ERVIN & BONNIE C. ROWE																			
37	4.16,4.18	RAYMOND W. & LOIS J. GUST	FEE, T.L.E.	72.40	1.16	0.30	1.46	70.94	1.17	—											
38	4.16,4.18	IRVING WILD, VENDOR	FEE, A.R.	40.00	23.24	—	23.24	16.76	—	—											
39	4.16,4.17	RUSSELL J. AND ROSE M. JOHNSON, VENDEE	FEE, T.L.E., A.R.	INDET.	26.82	0.98	27.80	INDET.	0.17	—											
40		JAMES J. VAN DE GRIFT MARITAL TRUST, 1/2																			
41	4.17	ANN R. VAN DE GRIFT, 1/2	FEE, T.L.E.	160.00	5.89	—	5.89	154.11	0.14	—											
42		JOHN D. ADAMS																			
43	4.17	MARK J. KOCH & CAROL A. DRESEN	FEE	5.13	0.05	0.10	0.15	4.98	—	—											
44	4.17	BLACKHAWK BOW HUNTERS	FEE	12.91	0.08	0.06	0.14	12.77	0.32	—											
45	4.17	ELWOOD C. & PHYLLIS ANDERSON	FEE	27.00	1.89	0.97	2.86	24.14	—	—											
46																					
47	4.17	JAMES & JUDY PAUTZKE	T.L.E.	2.00	—	—	—	2.00	0.16	—											
48	4.18	JAMES J. VAN DE GRIFT TRUST	FEE, T.L.E., A.R.	INDET.	14.82	0.25	15.07	INDET.	1.18	—											
49	4.19	RODNEY SLOTTEN	FEE, T.L.E., A.R.	57.59	23.28	0.33	23.61	33.98	0.12	—											
50	4.19	AIR PARK ASSOCIATES, INC.	P.L.E., FEE, T.L.E., A.R.	17.33	0.62	0.15	0.77	16.56	0.15	—											

(0.54 ACRE P.L.E.)

1201-4-76

4.1

RELEASE
OF RIGHTS
RELEASE
OF RIGHTS
RELEASE
OF RIGHTS

NW - SW

NE - SW

TOWN

OF

SE - SW

VERONA

SW - SW

SW - SE

G N

REVISION DATE 7-14-92 11-12-92 1-26-93 N.C. 10-27-93	ROUTE U.S.H. 18	COUNTY DANE	DATE 3-2-92	R/W PROJECT NUMBER 1201 - 04 - 21	SHEET NUMBER 4.16
	SCALE, FT. 0 100 200		GRID FACTOR 0.99991	FEDERAL PROJECT NUMBER 1201-4-72	4.4
NOTE: CENTERLINE HIGHWAY R/W ESTABLISHED FROM CENTERLINE OF EXISTING PAVEMENT.					1201-4-76/4.3

PI STA 660+91.84 "PB-1"
DELTA= 13°00'00" Lt.
D= 3'00'00"
T=217.60'
L=433.33'
R=1909.86'
PC STA 658+74.24 "PB-1"
PT STA 663+07.57 "PB-1"

PI STA 63+61.14 "PB"
DELTA= 69°00'00" Rt.
D= 4'00'00"
T=984.46'
L=1725.00'
R=1432.39'
PC STA 53+76.68
PT STA 71+01.68

PI STA 667+09.499 "PB-1"
DELTA= 52°18'22" Lt.
D= 7'00'00"
T=401.826'
L=747.232'
R=818.51'
PC STA 663+07.573 "PB-1"
PT STA 670+54.805 "PB-1"

PI STA 674+88.56 "PB-1"
DELTA= 38°27'07" Rt.
D= 14'00'00"
T=181.65'
L=349.56'
R=520.87'
PC STA 673+06.91 "PB-1"
PT STA 676+56.47 "PB-1"

PI STA 678+00.24
Y 355,228.80
X 2,130,728.57
DELTA=90°00'00" Lt.
D=3'00'00"
T=1909.86'
L=3000.00'
R=1909.86'
PC STA 658+90.38
PT STA 688+90.38

COURSE TABLE			GARY FELT	
COURSE	BEARING	DISTANCE	LOT 1	LOT 2
A	N00°-07'-50"W	44.99'		
B	N89°-34'-35"W	149.77'		
C	N48°-20'-22"E	157.00'		
D	N01°-07'-03"E	82.78'		
E	S89°-34'-56"E	98.98'		
F	S00°-17'-12"E	101.17'		
G	S44°-42'-12"E	123.10'		
H	N89°-34'-35"W	155.22'		
I	N00°-25'-43"E	42.33'		
J	S00°-25'-43"W	39.84'		
K	S00°-25'-43"W	50.16'		
L	N00°-25'-43"E	47.67'		
M	N00°-07'-50"W	64.36'		
N	S54°-50'-53"E	101.31'		
O	S27°-41'-28"E	518.54'		
P	S00°-36'-31"W	30.00'		

THEODORE PETERSON

LOT 1
C.S.M. 2499
VOL. 10 / P. 31-33

LOT 2
C.S.M. 2499
VOL. 10 / P. 31-33

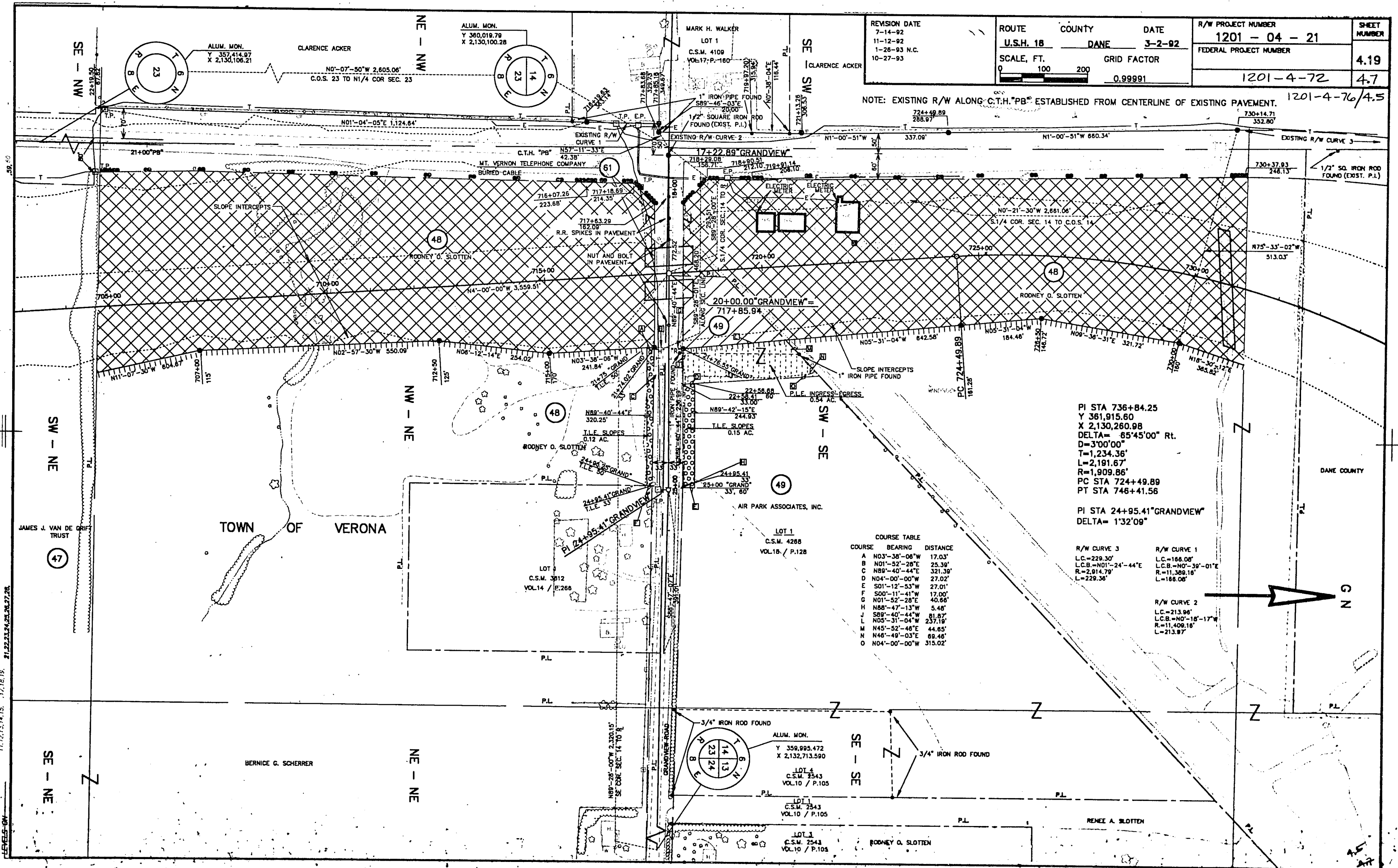
JOHN D. ADAMS
5.21 AC.
REMAINING

TO BE VACATED
BY COUNTY BOARD ACTION
2.73 AC.

NW - NE

REVISION DATE 7-14-92 11-12-92 1-26-93 N.C. 10-27-93	ROUTE U.S.H. 18	COUNTY DANE	DATE 3-2-92	R/W PROJECT NUMBER 1201 - 04 - 21	SHEET NUMBER 4.19
SCALE, FT. 0 100 200				FEDERAL PROJECT NUMBER 1201-4-72	4.7
GRID FACTOR 0.99991				1201-4-76/4.5	

NOTE: EXISTING R/W ALONG C.T.H. "PB" ESTABLISHED FROM CENTERLINE OF EXISTING PAVEMENT.



COURSE TABLE

COURSE	BEARING	DISTANCE
A	N03°-38'-06"W	17.03'
B	N01°-52'-28"E	25.39'
C	N89°-40'-44"E	321.39'
D	N04°-00'-00"W	27.02'
E	S01°-12'-53"W	27.01'
F	S00°-11'-41"W	17.00'
G	N01°-52'-28"E	40.86'
H	N88°-47'-13"W	5.48'
J	S89°-40'-44"W	81.87'
L	N05°-31'-04"W	237.19'
M	N45°-52'-46"E	44.85'
N	N48°-49'-03"E	89.46'
O	N04°-00'-00"W	315.02'

PI STA 736+84.25
 Y 381,915.60
 X 2,130,260.98
 DELTA= 85°45'00" Rt.
 D=3'00'00"
 T=1,234.36'
 L=2,191.67'
 R=1,909.86'
 PC STA 724+49.89
 PT STA 746+41.56

PI STA 24+95.41 "GRANDVIEW"
 DELTA= 1°32'08"

R/W CURVE 3
 L.C.=229.30'
 L.C.B.=N01°-24'-44"E
 R.=2,914.79'
 L.=229.36'

R/W CURVE 1
 L.C.=166.08'
 L.C.B.=N0°-39'-01"E
 R.=11,369.16'
 L.=166.08'

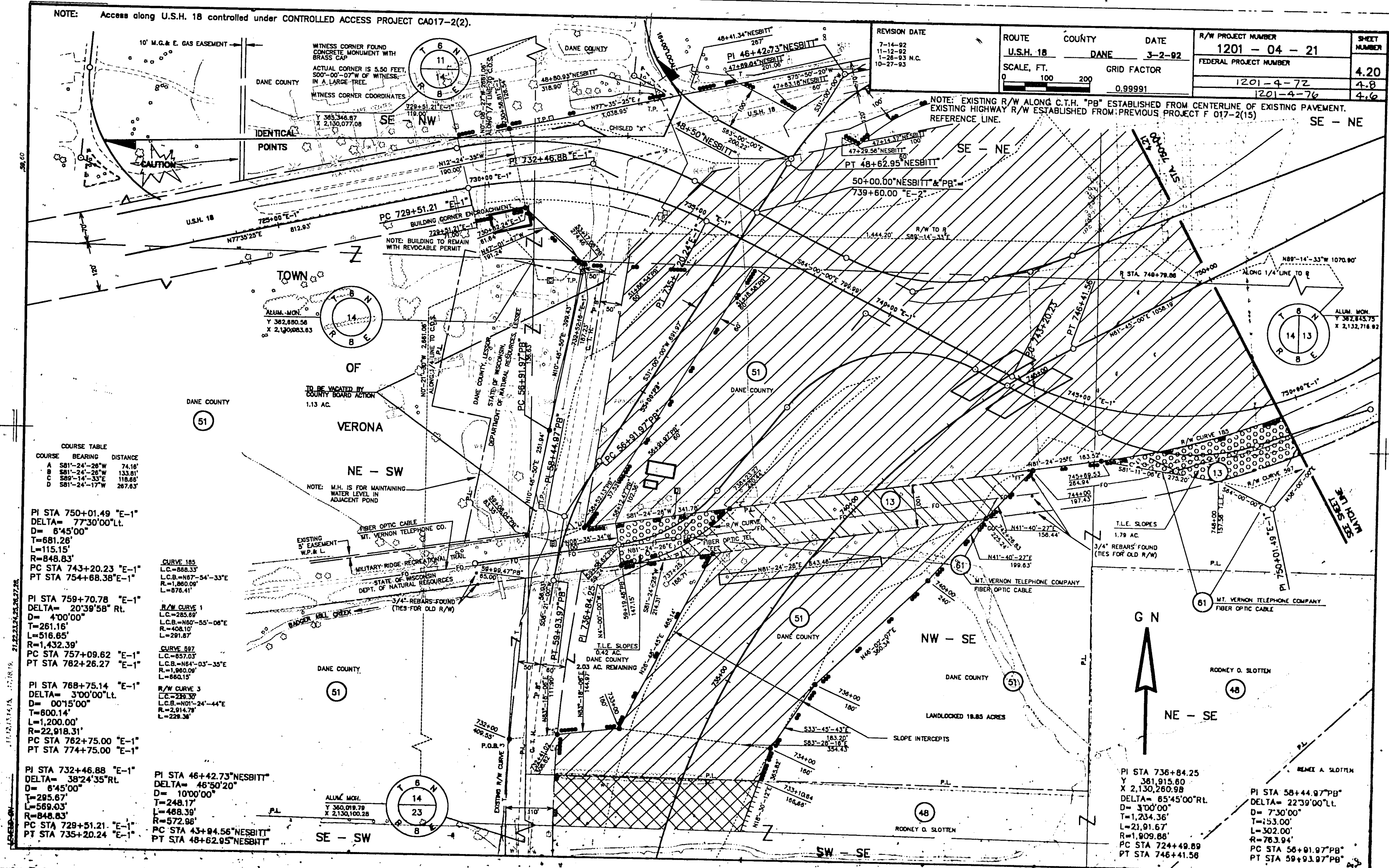
R/W CURVE 2
 L.C.=213.96'
 L.C.B.=N0°-18'-17"W
 R.=11,409.16'
 L.=213.97'

NOTE: Access along U.S.H. 18 controlled under CONTROLLED ACCESS PROJECT CA017-2(2).

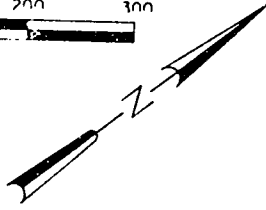
REVISION DATE
7-14-92
11-12-92
1-26-93 N.C.
10-27-93

ROUTE _____ COUNTY _____ DATE _____
U.S.H. 18 DANE 3-2-92
 SCALE, FT. _____ GRID FACTOR _____
 0 100 200 0.99991

R/W PROJECT NUMBER	SHEET NUMBER
1201 - 04 - 21	
FEDERAL PROJECT NUMBER	
1201-4-72	
1201-4-76	4.20
	4.8
	4.6



CADD5 SHEET 70



USH 18
C3

P.I. STA. 678+00.24
X 2,130,728.57
Y 355,228.80
Δ 90°00'00.0"
D 03°00'00.0"
T 1909.86'
L 3000.00'
R 1909.86'
S.E. = 0.059 FT/FT
R.O. = 190'

RUSSELL J. AND ROSE M. JOHNSON

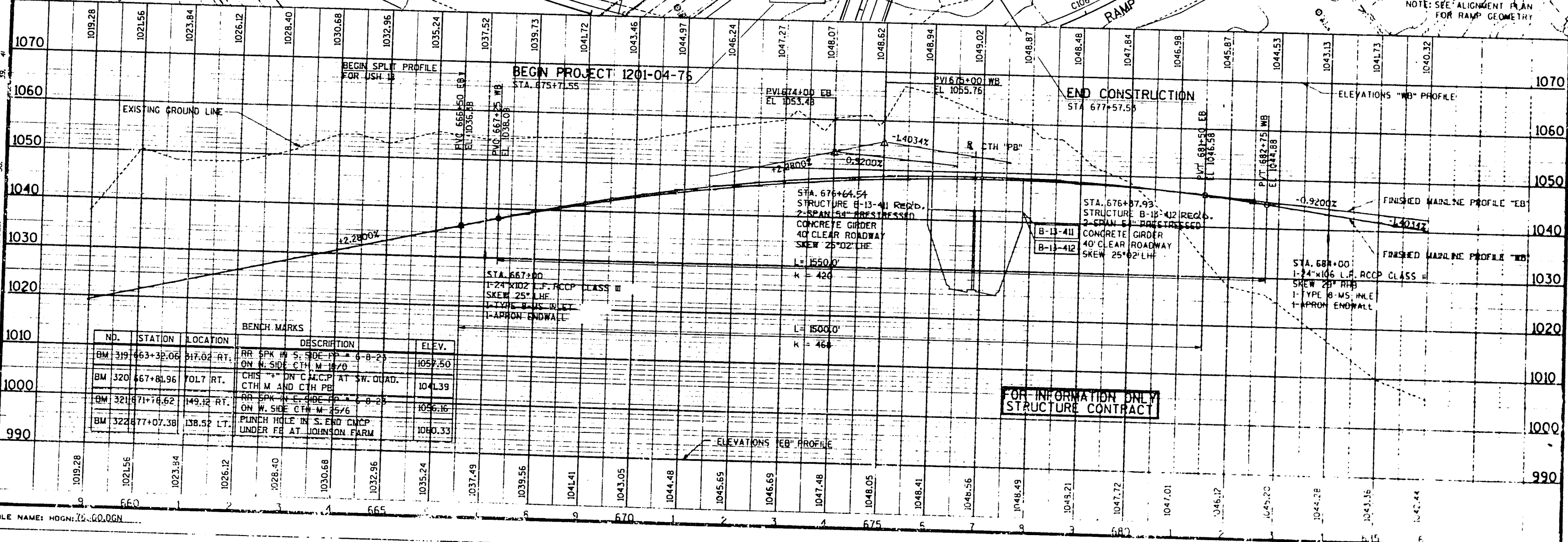
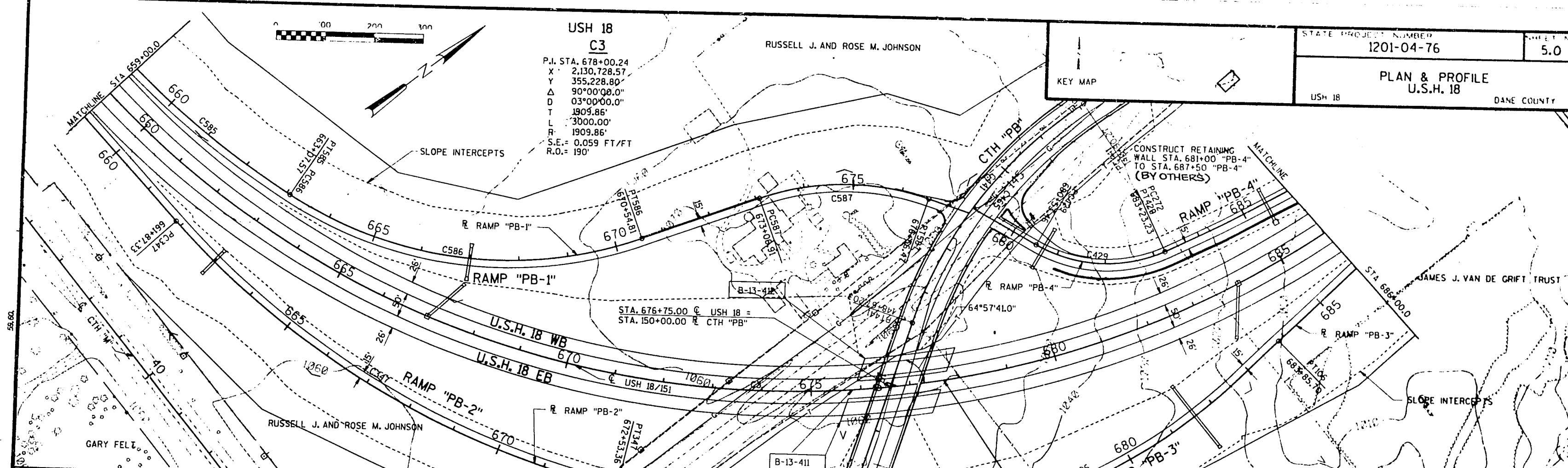
KEY MAP

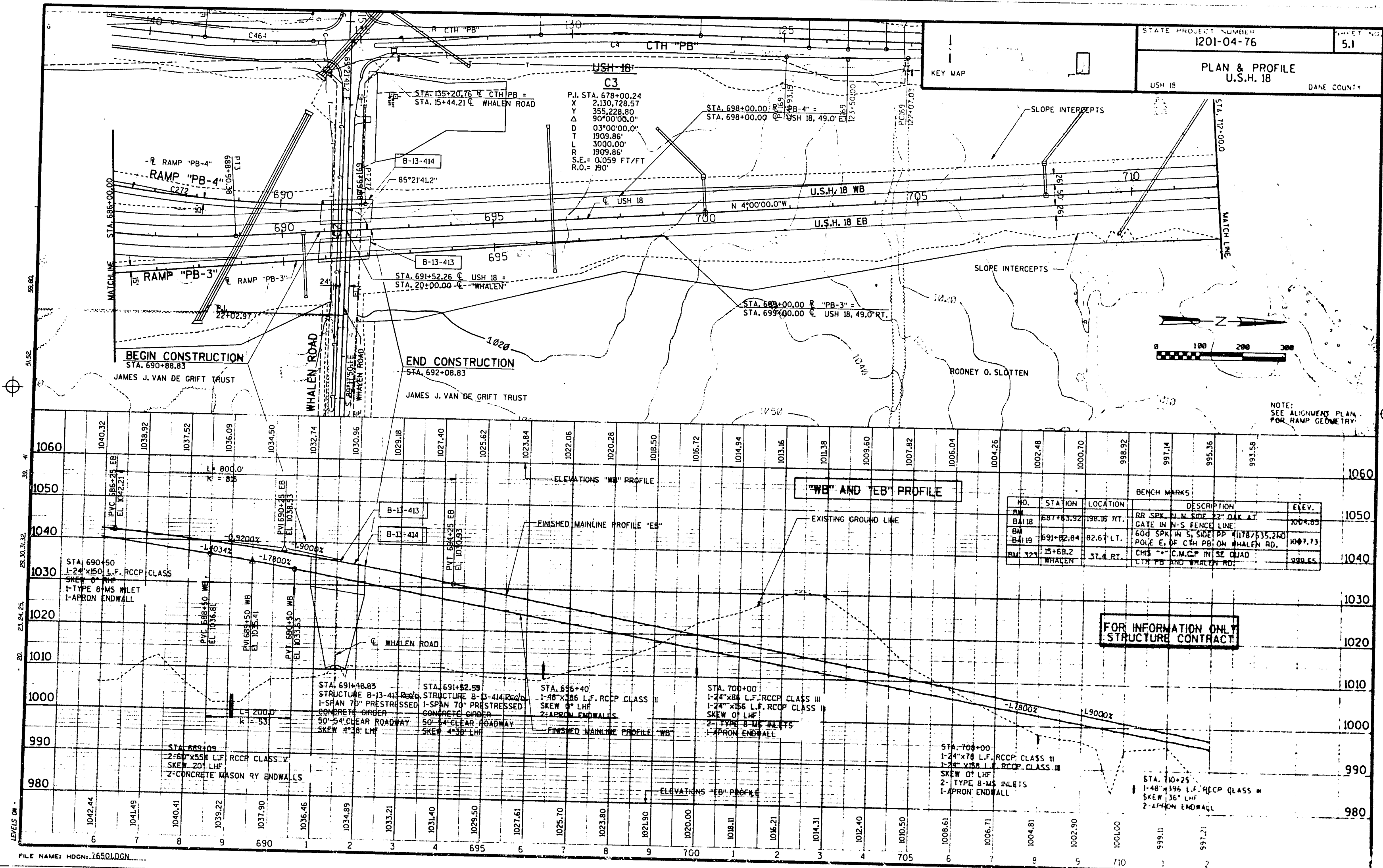
STATE PROJECT NUMBER
1201-04-76

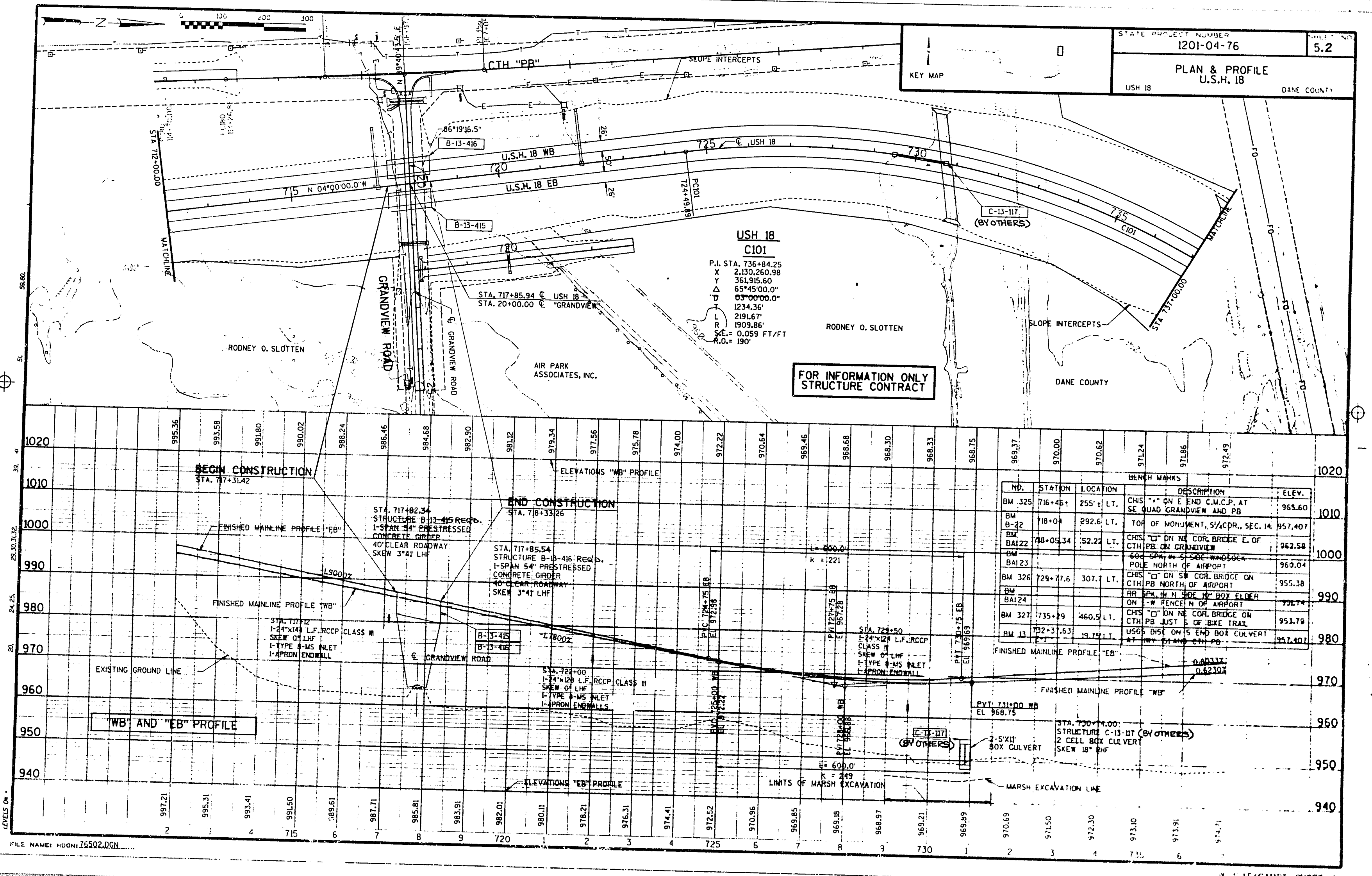
SHEET
5.0

PLAN & PROFILE
U.S.H. 18

USH 18
DANE COUNTY







USH 18
C101
P.I. STA. 736+84.25
X 2,130,260.98
Y 361,915.60
Δ 65°45'00.0"
R 03°00'00.0"
T 1234.36'
L 2191.67'
R 1909.86'
S.E. = 0.059 FT/FT
R.O. = 190'

FOR INFORMATION ONLY
STRUCTURE CONTRACT

BENCH MARKS				
NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM 325	716+45.1	255' LT.	CHS "ON E END C.M.C.P. AT SE QUAD GRANDVIEW AND PB	965.60
BM B-42	718+04	292.6 LT.	TOP OF MONUMENT, S/4 COR., SEC. 14	957.407
BM BAI 22	718+05.34	52.22 LT.	CHS "ON NE COR. BRIDGE E. OF CTH PB ON GRANDVIEW	962.58
BM BAI 23			60' S.W. S/4 SEC. WINDLOCK POLE NORTH OF AIRPORT	960.04
BM 326	729+77.6	307.7 LT.	CHS "ON SW COR. BRIDGE ON CTH PB NORTH OF AIRPORT	955.38
BM BAI 24			RR S.P. IN N. SIDE 10" BOX ELDER ON E-W FENCE N OF AIRPORT	957.74
BM 327	735+79	460.5 LT.	CHS "ON NE COR. BRIDGE ON CTH PB JUST S OF BIKE TRAIL	951.79
BM 13	732+37.63	19.75 LT.	USGS DISC ON S END BOX CULVERT AT HWY 51 AND CTH PB	952.407

ELEVATIONS "WB" PROFILE				
1020	995.36	993.58	991.80	990.02
1010	988.24	986.46	984.68	982.90
1000	981.12	979.34	977.56	975.78
990	974.00	972.22	970.64	969.46
980	968.68	968.30	968.33	968.75
970	969.37	970.00	970.62	971.24
960	971.86	972.49		
950				
940				

ELEVATIONS "EB" PROFILE				
997.21	995.31	993.41	991.50	989.61
987.71	985.81	983.91	982.01	980.11
978.21	976.31	974.41	972.52	970.96
969.18	968.97	969.21	969.49	970.69
971.50	972.30	973.10	973.91	974.71

PLAN & PROFILE
U.S.H. 18

USH 18 DANE COUNTY

KEY MAP

USH 18
C105

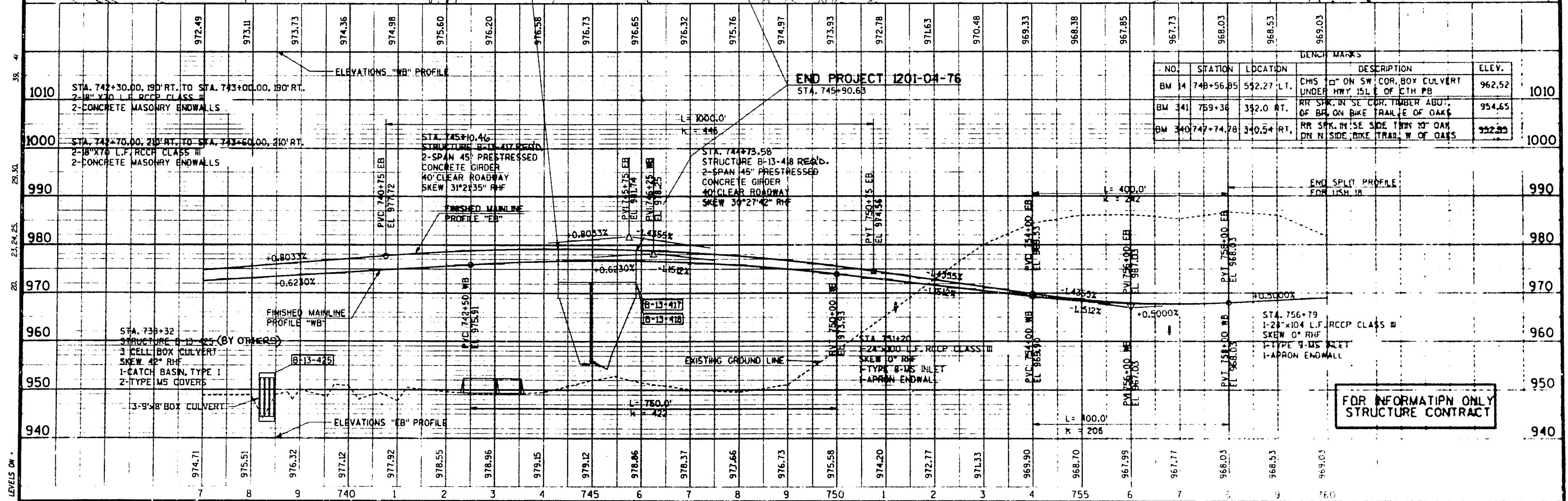
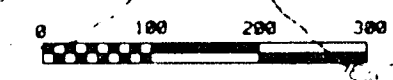
P.I. STA. 771+71.22
X 2,133,576.18
Y 363,697.02
Δ 07°20'00.0"
D 00°15'00.0"
T 1471.47'
L 2938.91'
R 22.918.31'
S.E.=0.020 FT/FT
R.O.= N.A.

USH 18
C101

P.I. STA. 736+84.25
X 2,130,260.98
Y 361,915.60
Δ 65°45'00.0"
D 03°00'00.0"
T 1234.36'
L 2191.67'
R 1909.86'
S.E.= 0.059 FT/FT
R.O.= 190'

NOTE:
SEE ALIGNMENT PLAN
FOR RAMP GEOMETRY

BEGIN CONSTRUCTION
STA. 744+30.29



BENCH MARKS				
NO.	STATION	LOCATION	DESCRIPTION	ELEV.
BM 14	748+56.85	552.27' LT.	CHS 10" ON SW COR. BOX CULVERT UNDER HWY 151 E OF KTH PB	962.52
BM 341	759+36	352.0 RT.	RR SKEW IN SE COR. THUNDER ABUT. OF BR. ON BIKE TRAIL E OF OAKS	954.65
BM 340	747+74.78	340.54 RT.	RR SKEW IN SE SIDE TYPY 10' OAK ON N SIDE BIKE TRAIL W OF OAKS	952.23

FOR INFORMATION ONLY
STRUCTURE CONTRACT

JAMES J. VAN DE GRIFT

STATE PROJECT NUMBER
1201-04-76

SHEET NO.
5.4

PLAN & PROFILE
CTH "PB"

USH 18

DANE COUNTY

KEY MAP

JOHN D. ADAMS



CTH "PB"

C731

P.I. STA. 163+51.52
X 2,131,207.73
Y 354,860.29
Δ 69°00'00"
D 04°02'22.1"
T 974.83'
L 1708.14'
S.E. = 0.037 FT/FT
R.O. = 150'

STA. 175+00 CTH "PB"
2-95'x36" CMP
TO BE REMOVED

STA. 153+30.00 R CTH "PB" SB =
STA. 673+77.66 R RAMP "PB-3"

END CONSTRUCTION
STA. 675+71.55

END MEDIAN TRANSITION
PT 439 (NB MEDIAN)
148+63.44, 26.0' LT.

STA. 153+41.22 R CTH "PB" SB =
STA. 677+10.94 R RAMP "PB-2"

STA. 160+17.59, 41' RT.
STA. 158+87.95, 29' RT.

STA. 162+79.83 R "CTH PB" SB =
STA. 53+70.25 C CTH "M"

JAMES J. VAN DE GRIFT

STEEL PLATE
BEAM GUARD,
CLASS B

JOHN D. ADAMS

OBLITERATE
OLD ROADWAY

EXTEND
DRIVEWAY

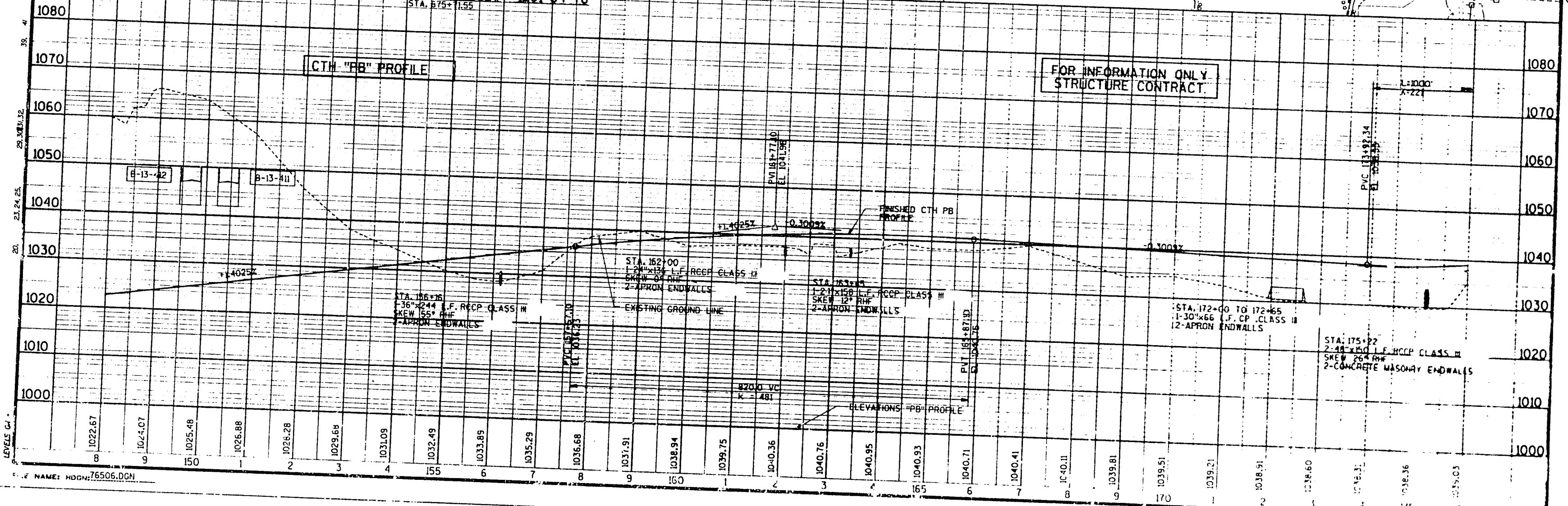
RUSSELL J. AND ROSE M. JOHNSON

STA. 148+48 CTH "PB"
1-26'x18" CMP
TO BE REMOVED

BEGIN PROJECT 1201-04-76
STA. 675+71.55

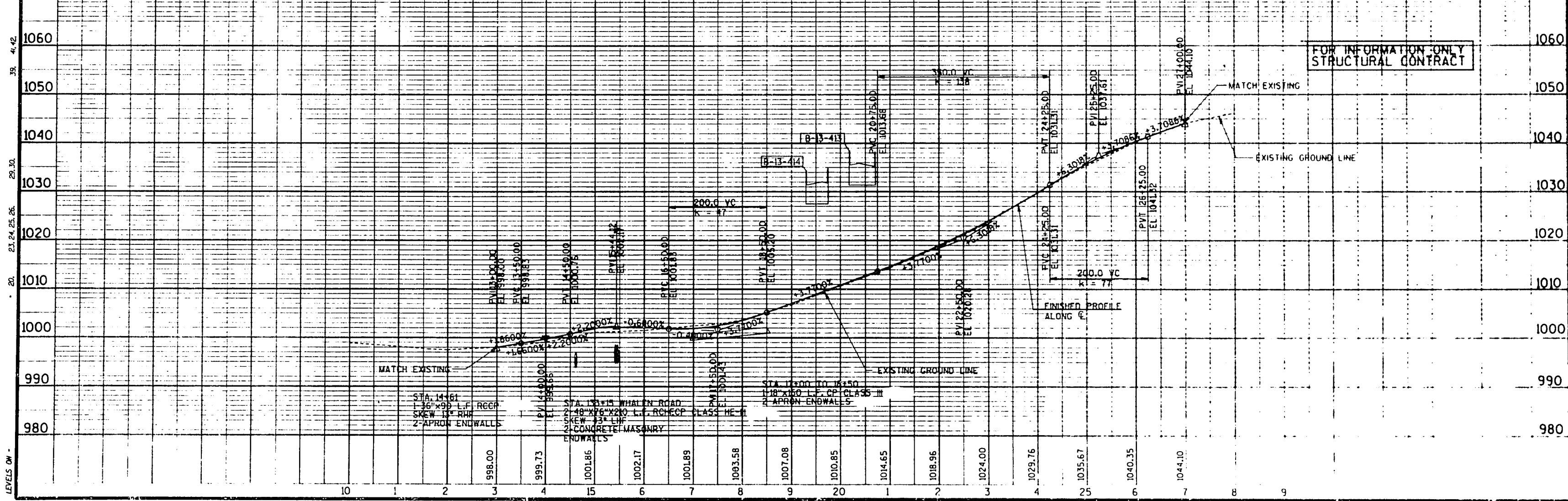
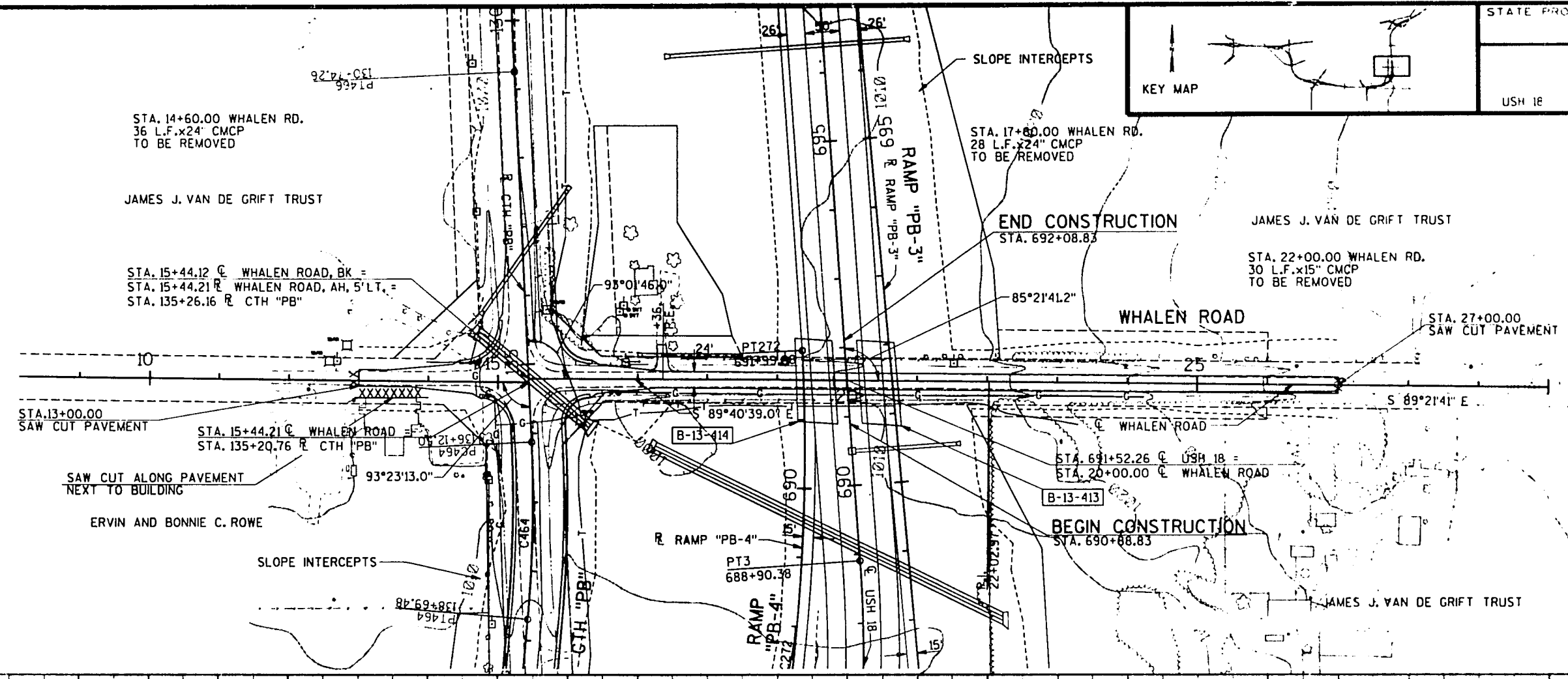
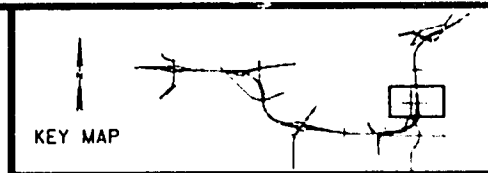
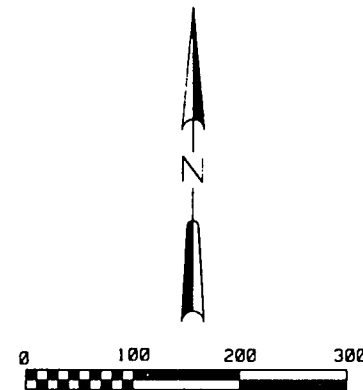
CTH "PB" PROFILE

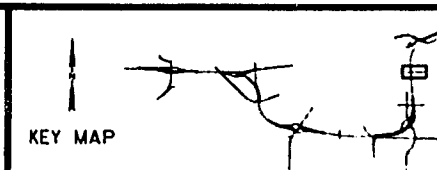
FOR INFORMATION ONLY
STRUCTURE CONTRACT



NAME: HDGN: 76506.DGN

USDOT 7000 SHEET 17





STA. 17+33.30 GRANDVIEW ROAD =
STA. 108+97.04 CTH "PB"

STA. 19+40.00 GRANDVIEW RD.
30'x14'x2.5' BOX CULVERT
TO BE REMOVED

END CONSTRUCTION
STA. 718+33.26

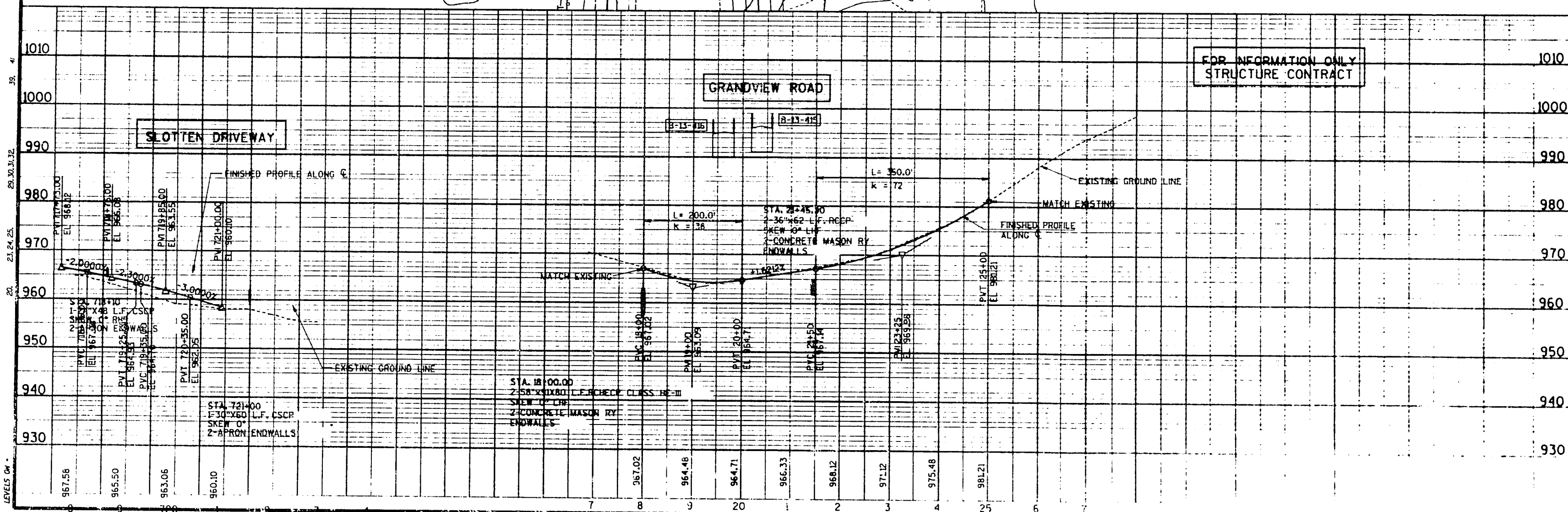
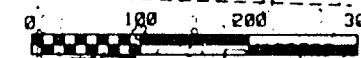
STA. 20+00 @ GRANDVIEW =
STA. 717+85.94 @ USH 18

STA. 22+10.00 GRANDVIEW ROAD =
STA. 717+72.50 SLOTTEN DRIVEWAY

AIR PARK
ASSOCIATES, INC.

STA. 25+80.00
SAW CUT PAVEMENT

BEGIN CONSTRUCTION
STA. 717+31.42



KEY MAP

NOTE:
RELOCATED USH 18, CTH PB, NESBITT ROAD
AND REMAINDER OF RAMP E-1 WILL BE
CONSTRUCTED UNDER PROJECT 1201-04-78

TO BE CONSTRUCTED
BY OTHERS UNDER
I.D. 1201-04-78

BEGIN CONSTRUCTION
STA. 744+30.29

END PROJECT 1201-04-76
STA. 745+90.63

MILITARY RIDGE
RECREATION TRAIL

RAMP "E-1"

FOR INFORMATION ONLY
STRUCTURE CONTRACT

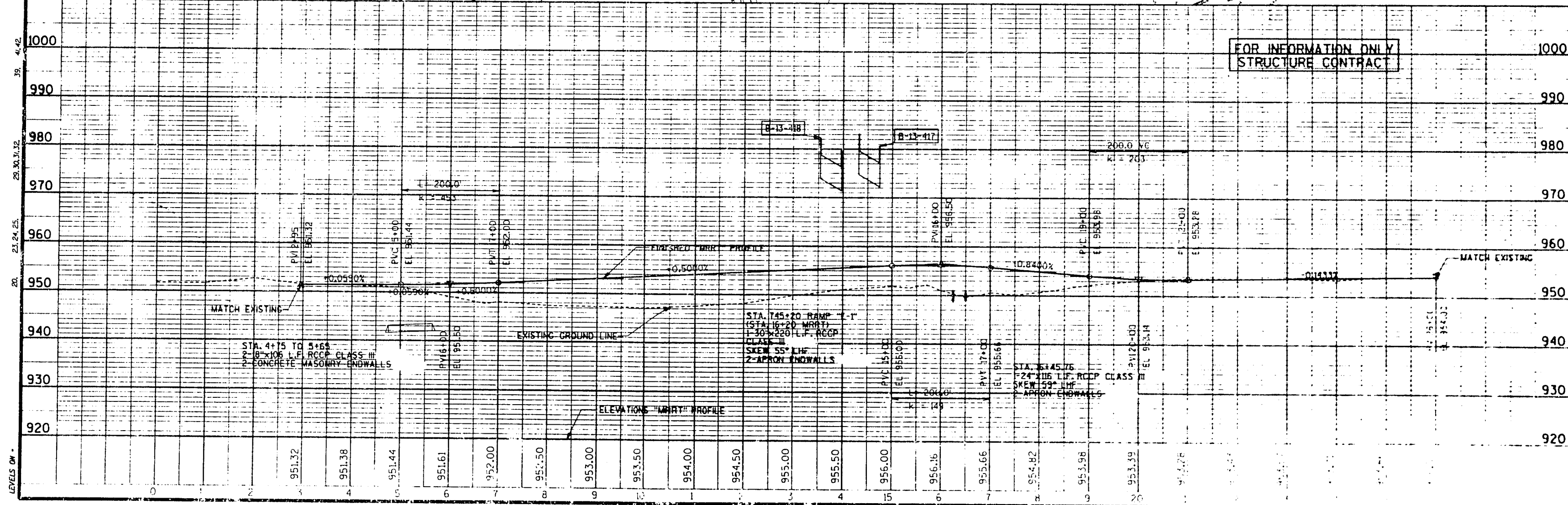
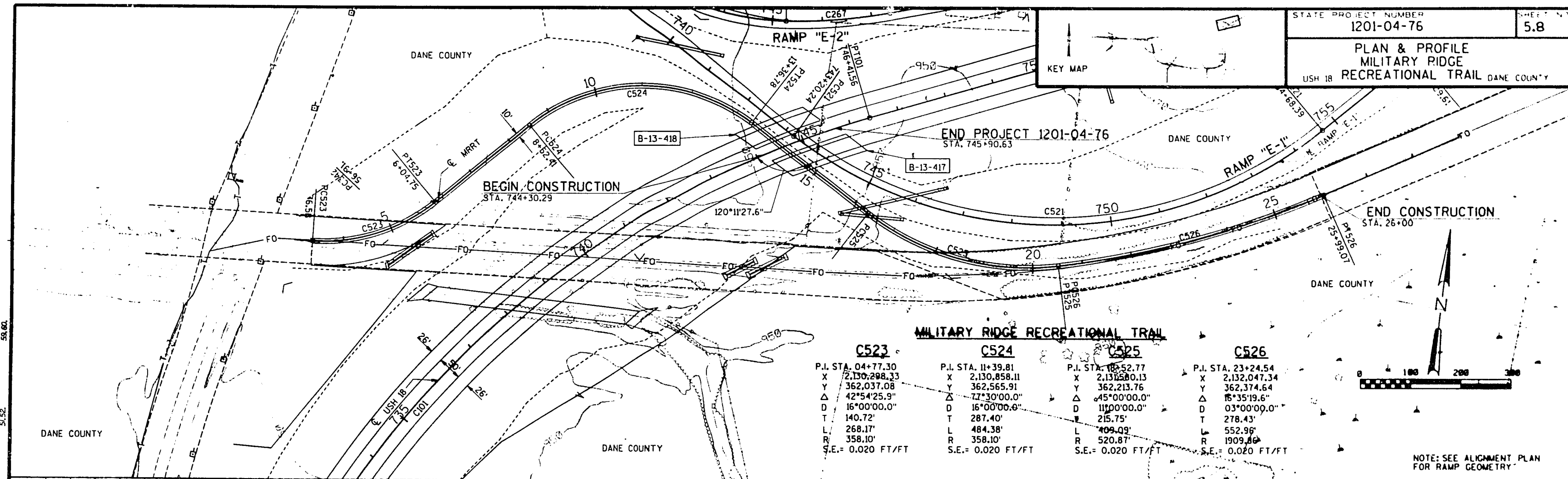
STA. 735+35
1-30" x 166" L.F. RCCP CLASS III
SKEW 0° RHF
1 TYPE 8 INLET
1 APRON ENDWALL
FOR INFORMATION ONLY

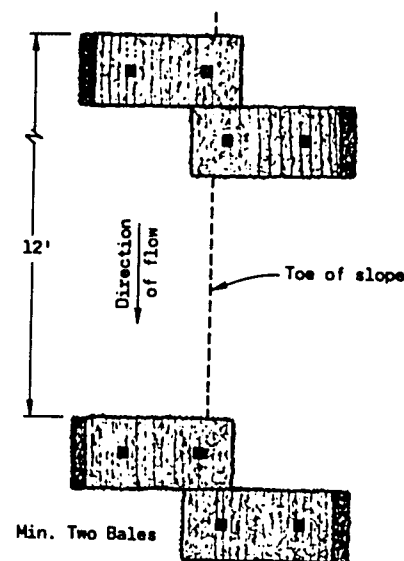
STA. 737+20
1-54" x 180" L.F. RCCP CLASS III
SKEW 0° RHF
2 APRON ENDWALLS
FOR INFORMATION ONLY

STA. 740+20
1-24" x 174" L.F. RCCP CLASS III
SKEW 60° LHF
APRON ENDWALLS

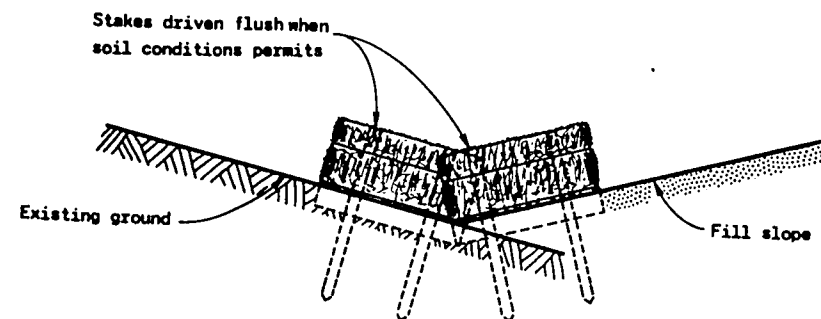
STA. 745+90.60
1-30" x 208" L.F. RCCP CLASS III
SKEW 53° LHF
2 APRON ENDWALLS

ELEVATIONS RAMP "E-1" PROFILE

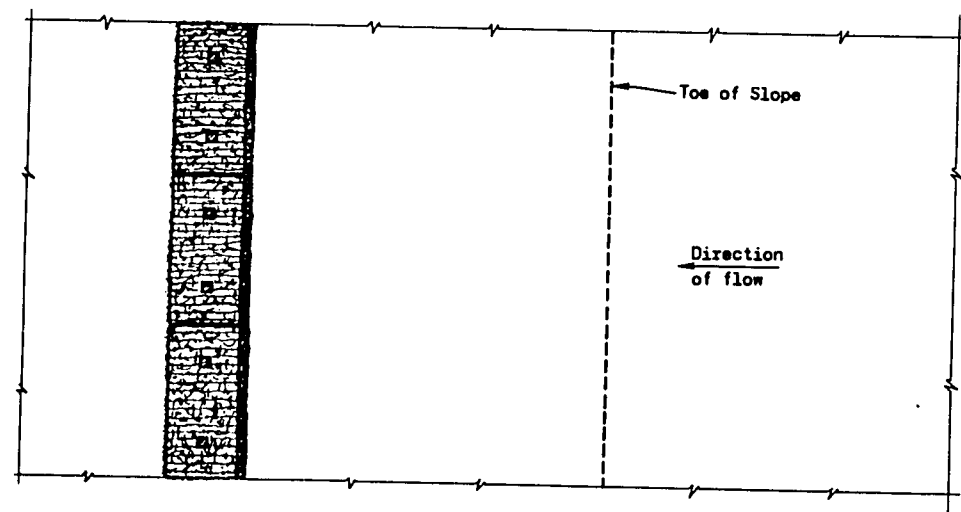




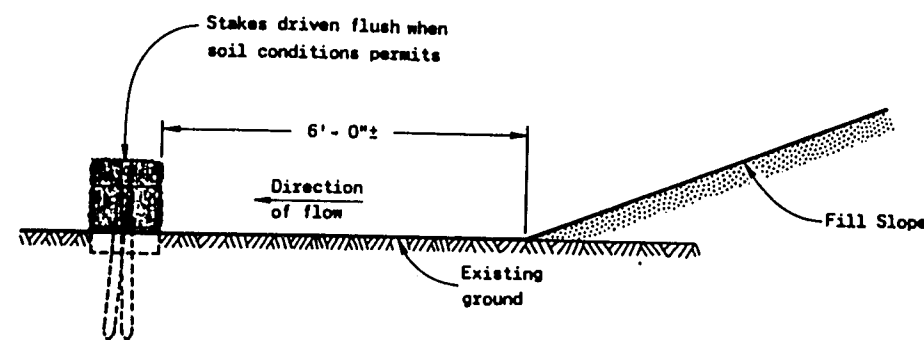
PLAN VIEW



FRONT ELEVATION
WHEN EXISTING GROUND
SLOPES TOWARD FILL SLOPE

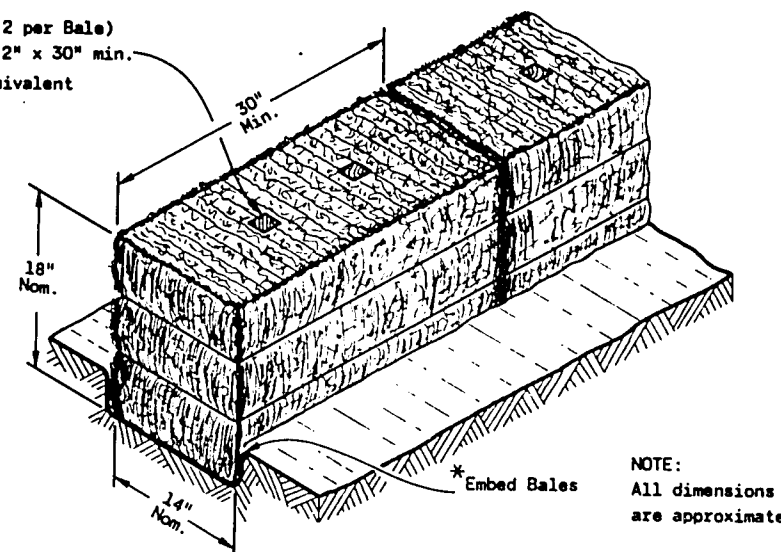


PLAN VIEW

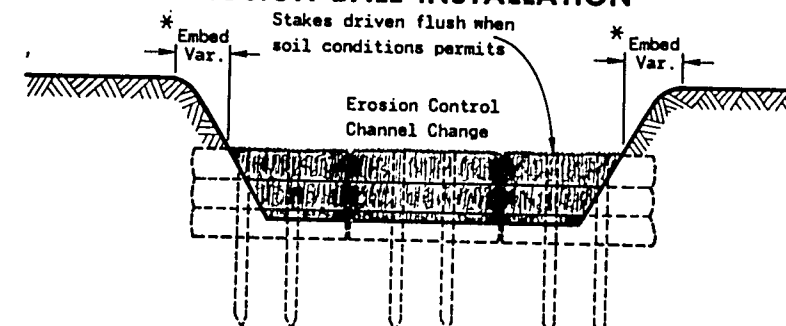


FRONT ELEVATION
EROSION BALES AT TOE OF SLOPE
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

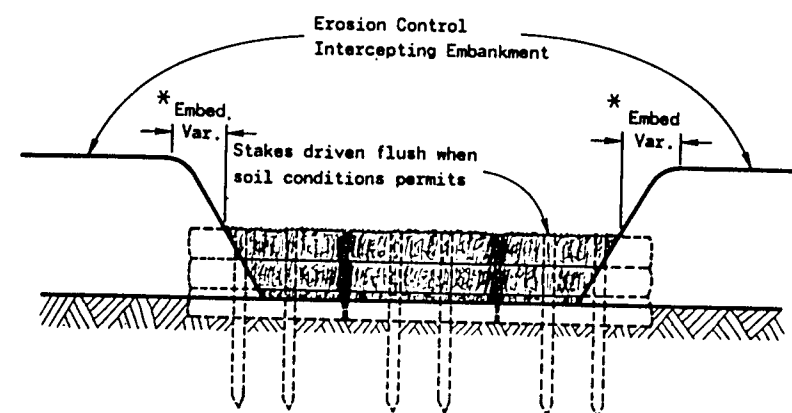
Wood Stakes (2 per Bale)
Nominal 2" x 2" x 30" min.
length or equivalent



DETAIL OF EROSION BALE INSTALLATION



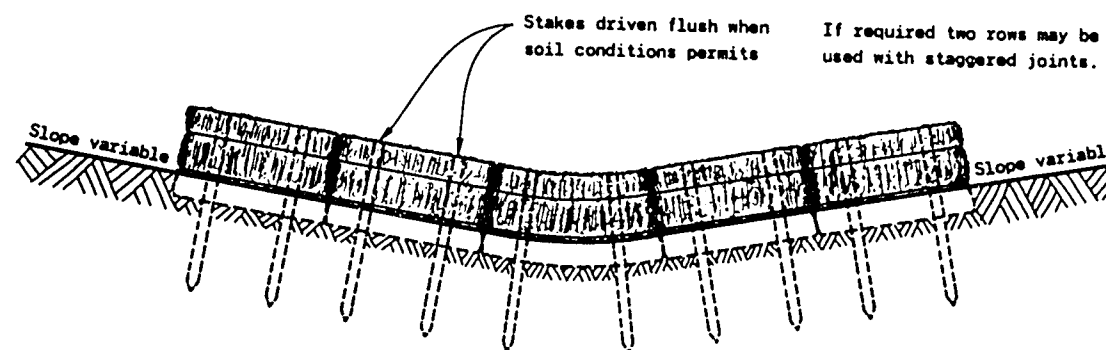
EROSION CONTROL CHANNEL CHANGE



EROSION CONTROL INTERCEPTING EMBANKMENT



PLAN VIEW



FRONT ELEVATION
EROSION BALES ACROSS DITCH BOTTOM

GENERAL NOTES

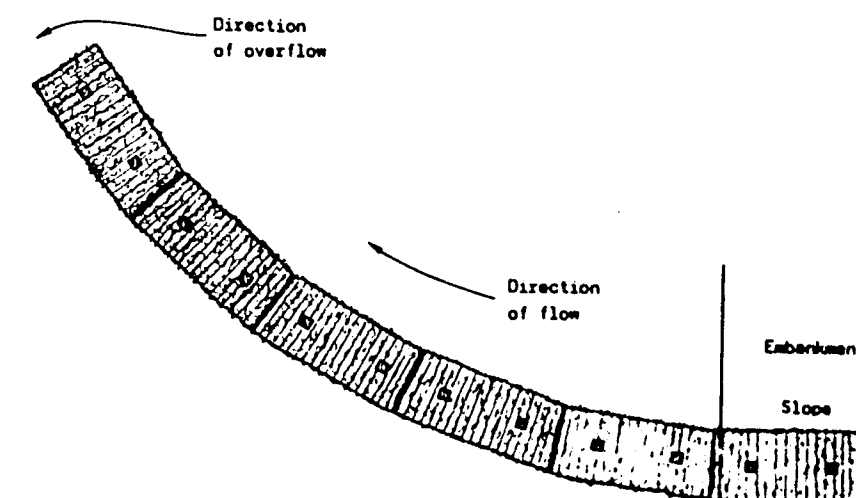
Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Bales shall be placed end to end or overlapping at right angles to the direction of flow and far enough up the sides of the ditch to prevent eroding around ends.

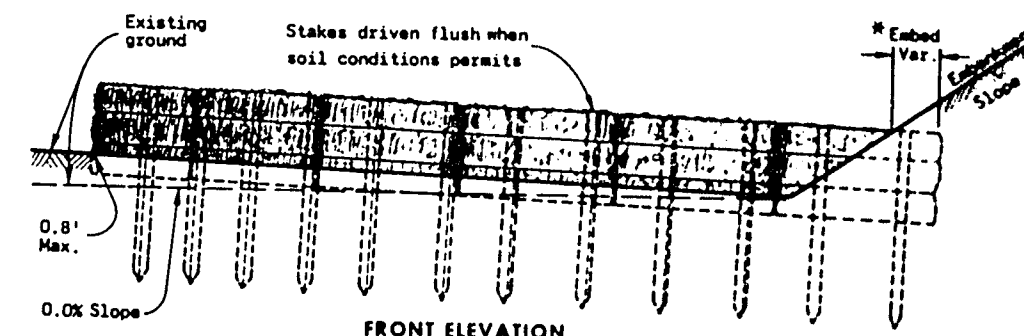
Bales shall be placed with twine or tie wires parallel to the ground.

Stakes to be battered in opposite directions.

* As determined by the Engineer.



PLAN VIEW



FRONT ELEVATION

EROSION BALES AT TOE OF SLOPE

TYPICAL INSTALLATIONS OF EROSION BALES

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL

10/14/75

DATE

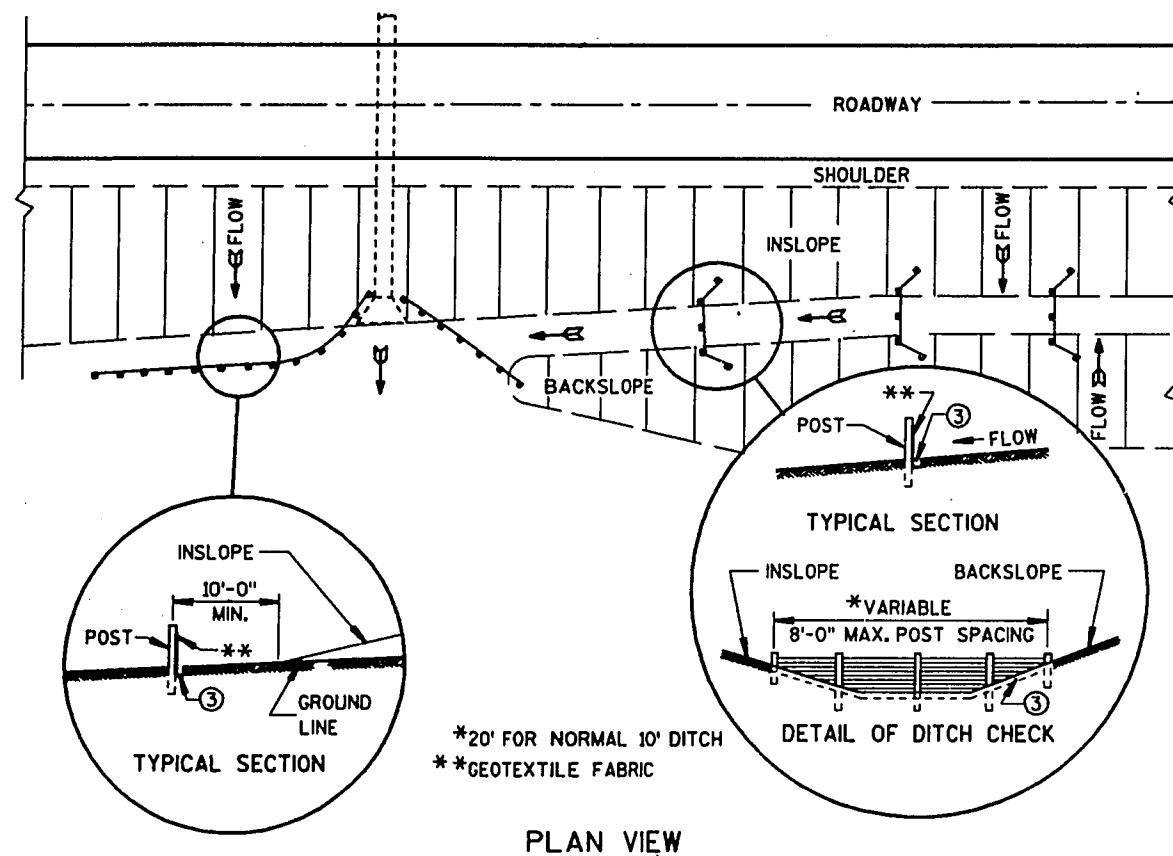
[Signature]
CHIEF OF FACILITIES DEVELOPMENT

APPROVED

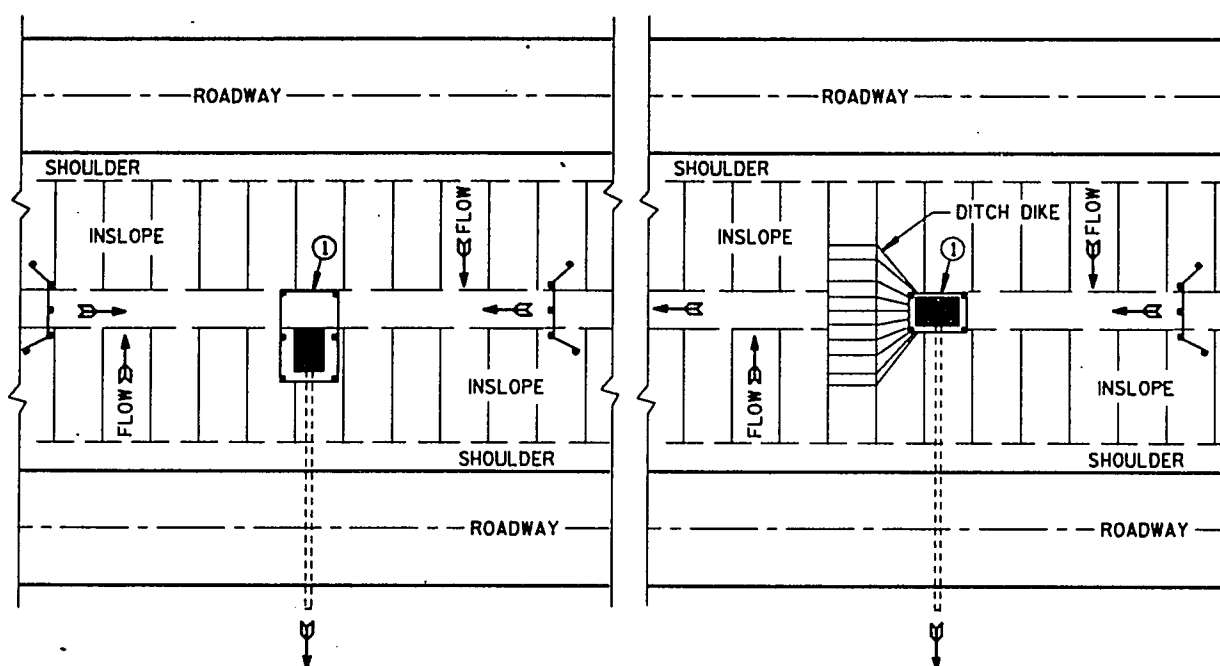
10/16/75

DATE

[Signature]
CHIEF OF FACILITIES DEVELOPMENT



PLAN VIEW
TYPICAL APPLICATIONS OF SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

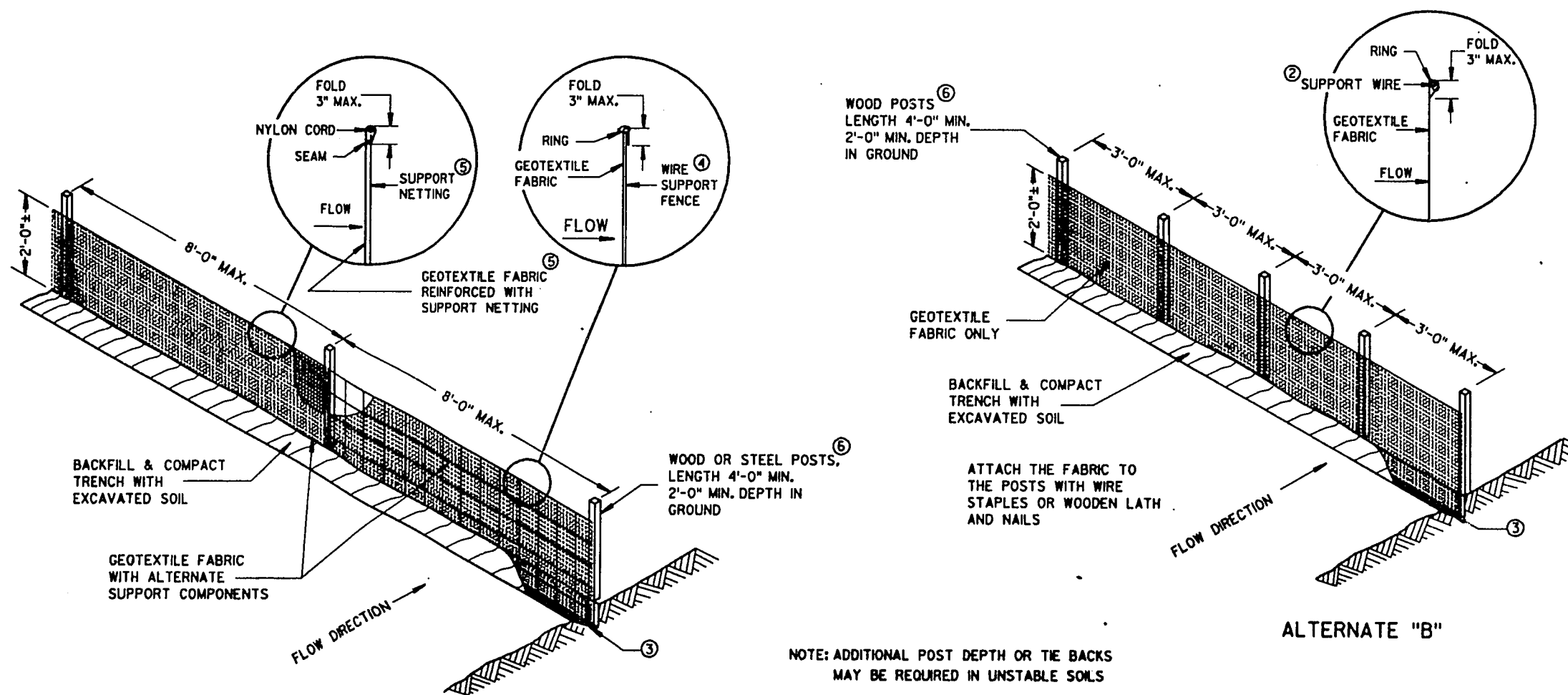
GENERAL NOTES

DETAIL OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

WHEN POSSIBLE THE SILT FENCE SHOULD BE CONSTRUCTED IN AN ARC OR HORSESHOE SHAPE, WITH THE ENDS POINTING UPSLOPE TO MAXIMIZE BOTH STRENGTH AND EFFECTIVENESS.

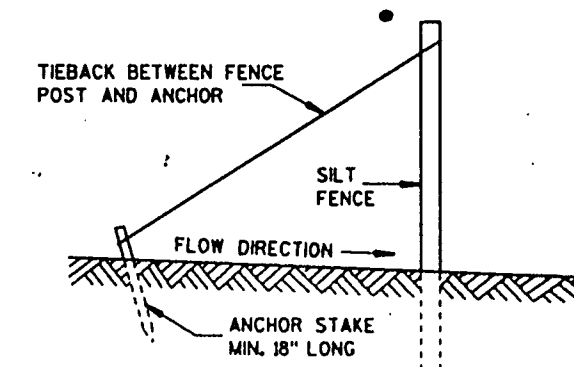
- ① CROSS BRACE WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS AS DIRECTED BY THE ENGINEER.
- ② MINIMUM 14 GAGE WIRE REQUIRED, FOLD FABRIC 3" OVER THE WIRE AND STAPLE OR PLACE WIRE RINGS ON 12" C-C.
- ③ EXCAVATE A TRENCH A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ④ WIRE SUPPORT FENCE SHALL BE 14 GAGE MINIMUM WOVEN WIRE WITH A MAXIMUM MESH SPACING OF 6". SECURE TOP OF GEOTEXTILE FABRIC TO TOP OF FENCE WITH STAPLES OR WIRE RINGS AT 12" C-C.
- ⑤ GEOTEXTILE FABRIC SHALL BE REINFORCED WITH AN INDUSTRIAL POLYPROPYLENE NETTING WITH A MAXIMUM MESH SPACING OF 3/4" OR EQUAL. A HEAVY DUTY NYLON TOP SUPPORT CORD OR EQUIVALENT IS REQUIRED.
- ⑥ STEEL POSTS SHALL BE STUDDED "TEE" OR "U" TYPE WITH A MINIMUM WEIGHT OF 128 LBS/LINEAL FOOT (WITHOUT ANCHOR). FIN ANCHORS SUFFICIENT TO RESIST POST MOVEMENT ARE REQUIRED. WOOD POSTS SHALL BE A MINIMUM SIZE OF 4" DIA. OR 1 1/2" X 3 1/2" EXCEPT WOOD POSTS FOR GEOTEXTILE FABRIC REINFORCED WITH NETTING SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OAK OR HICKORY.

ALTERNATES A & B ARE EQUAL AND EITHER MAY BE USED.

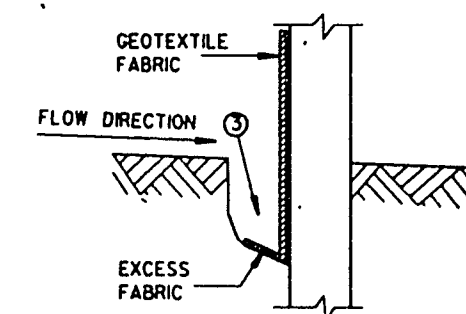


NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

SILT FENCE



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)



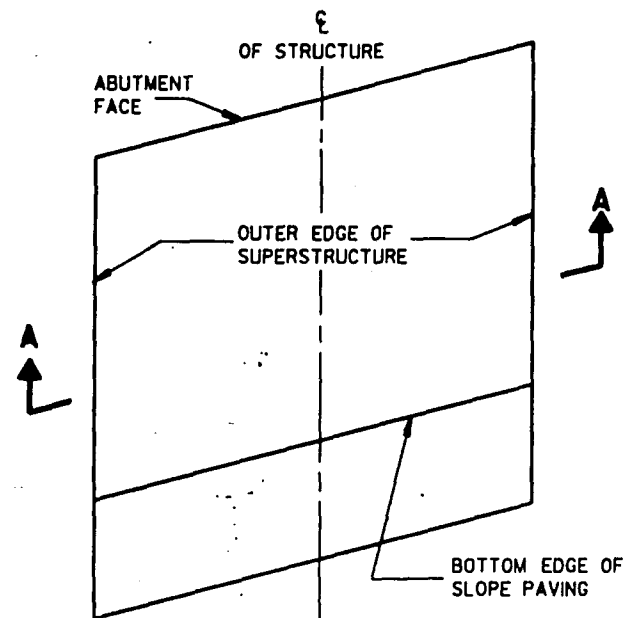
TRENCH DETAIL

SILT FENCE

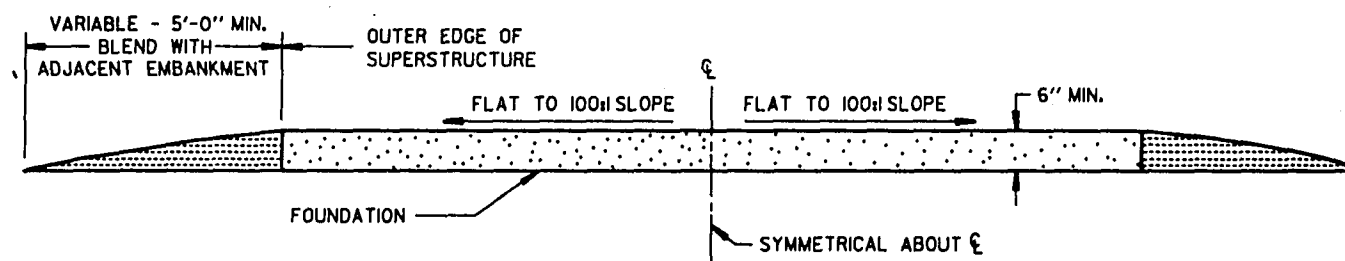
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-88
DATE

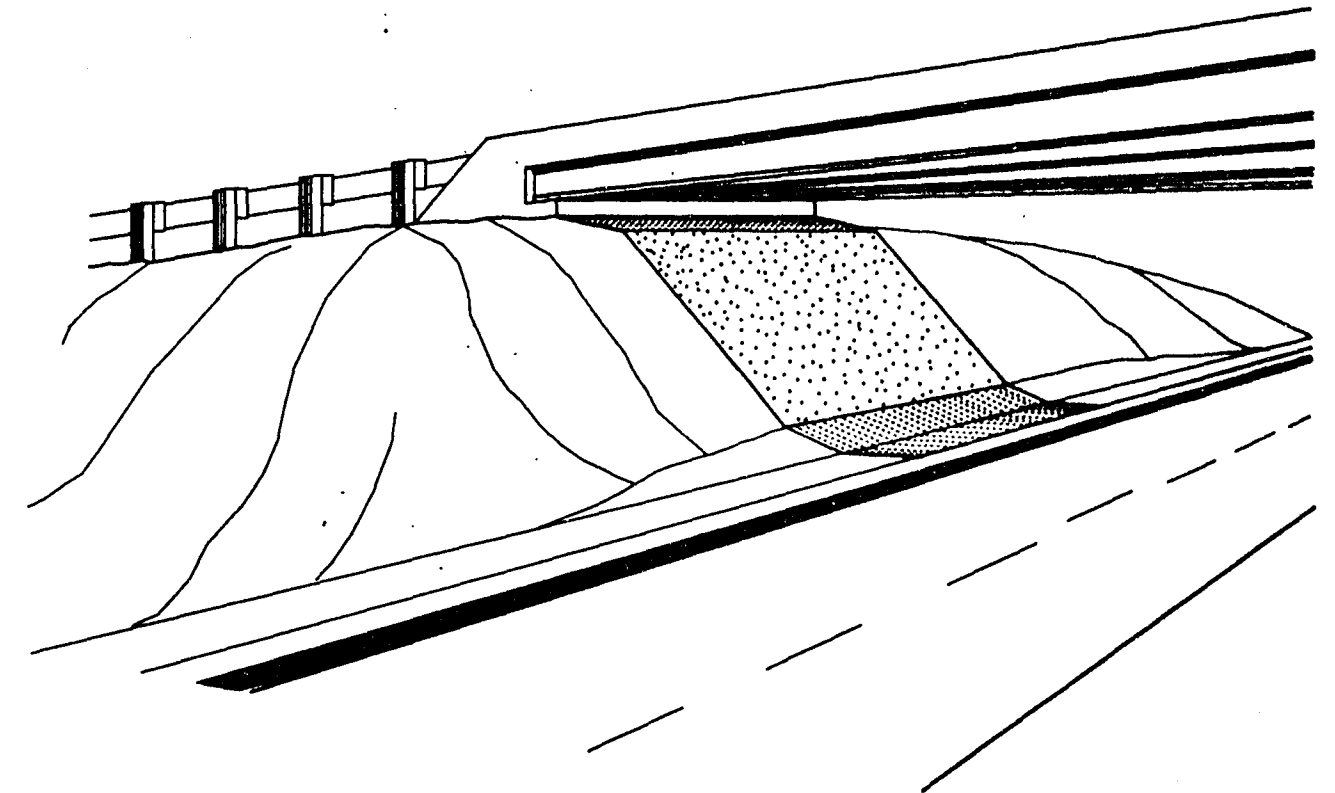
STATE DESIGN ENGINEER FOR HWYS
FWHA



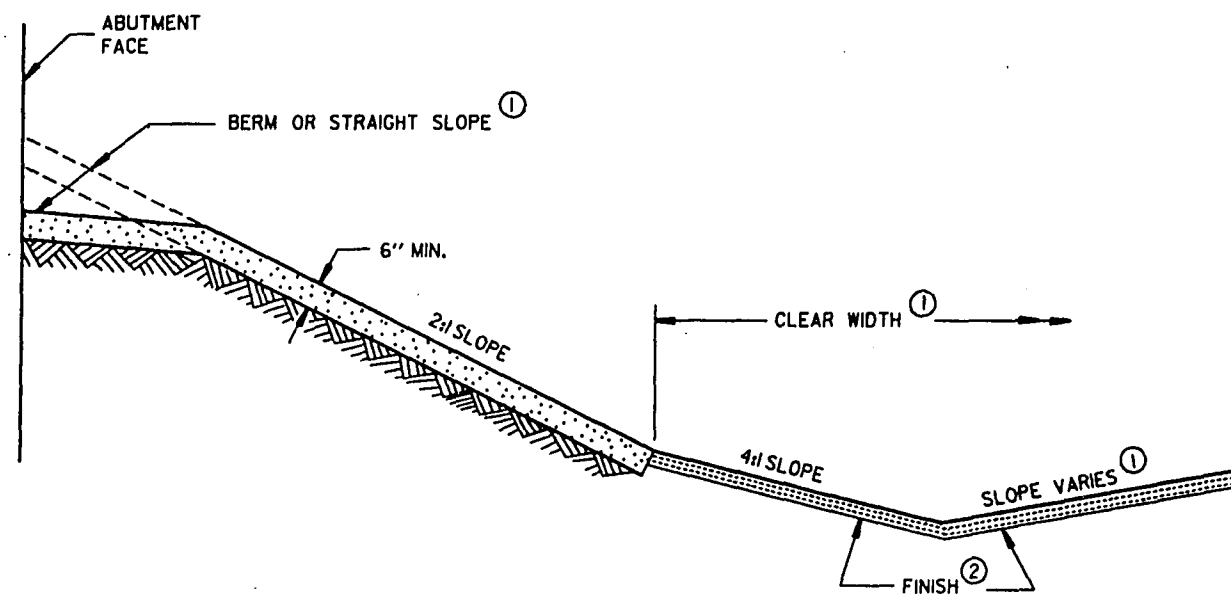
PLAN VIEW



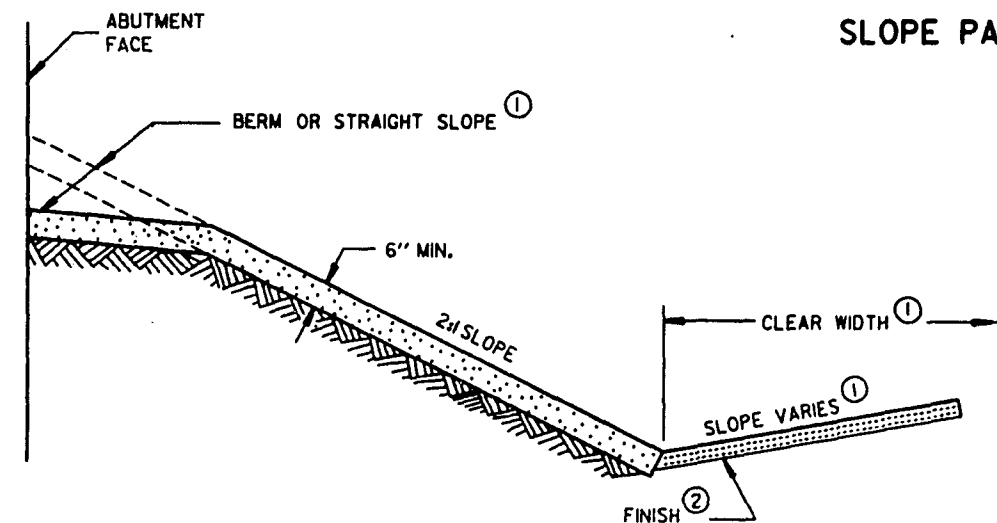
SECTION A-A



SLOPE PAVING UNDER STRUCTURES



STANDARD CROSS SECTION



ALTERNATE CROSS SECTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WOOD FORMS MAY BE LEFT IN PLACE WHEN OF A QUALITY ACCEPTABLE TO THE ENGINEER.

- ① DIMENSIONS, SLOPES AND SLOPE LIMITS ARE DETAILED ON THE STRUCTURE PLANS.
- ② MATCH EXISTING FINISH OR FINISH AS SHOWN ELSEWHERE IN THE CONTRACT.

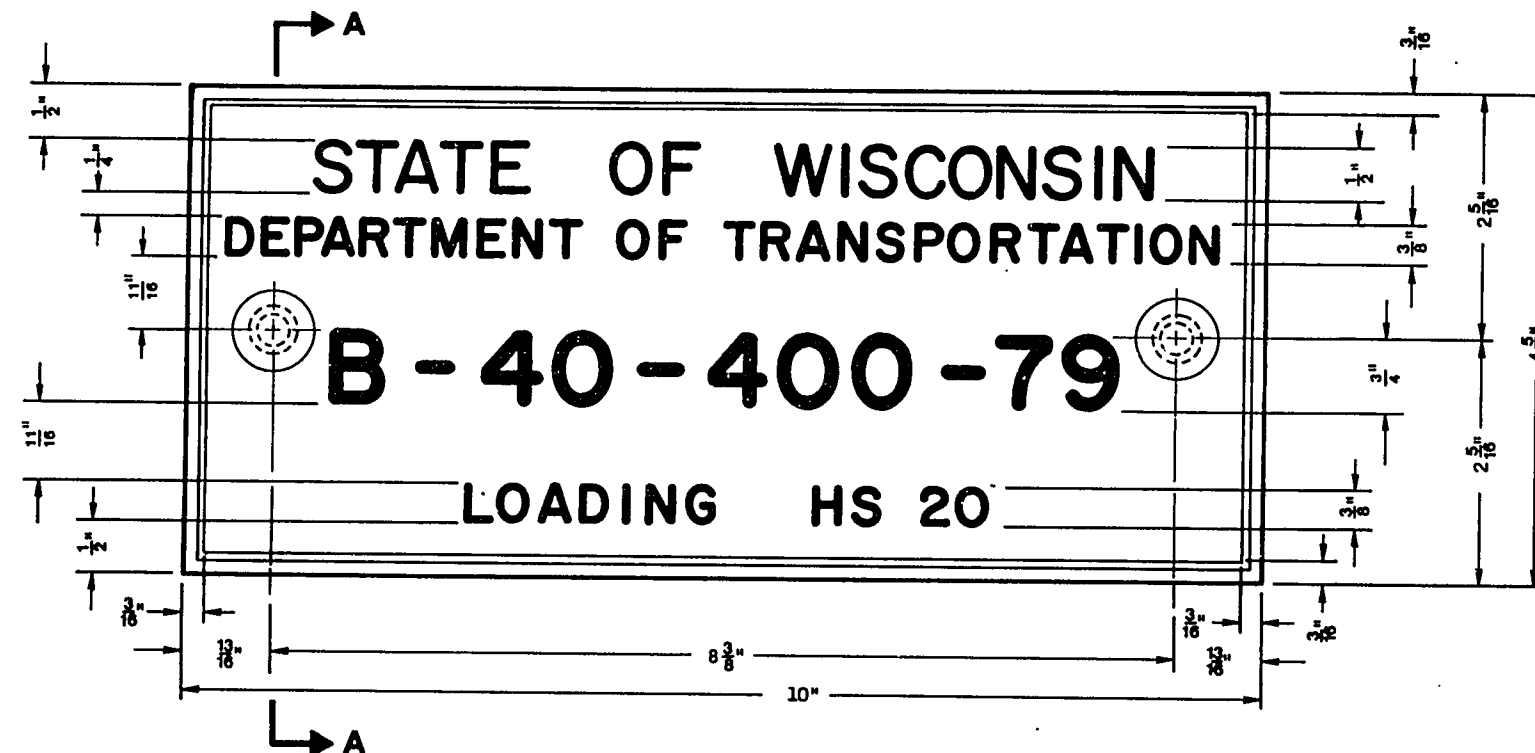
SLOPE PAVING - STRUCTURES
(CRUSHED AGGREGATE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

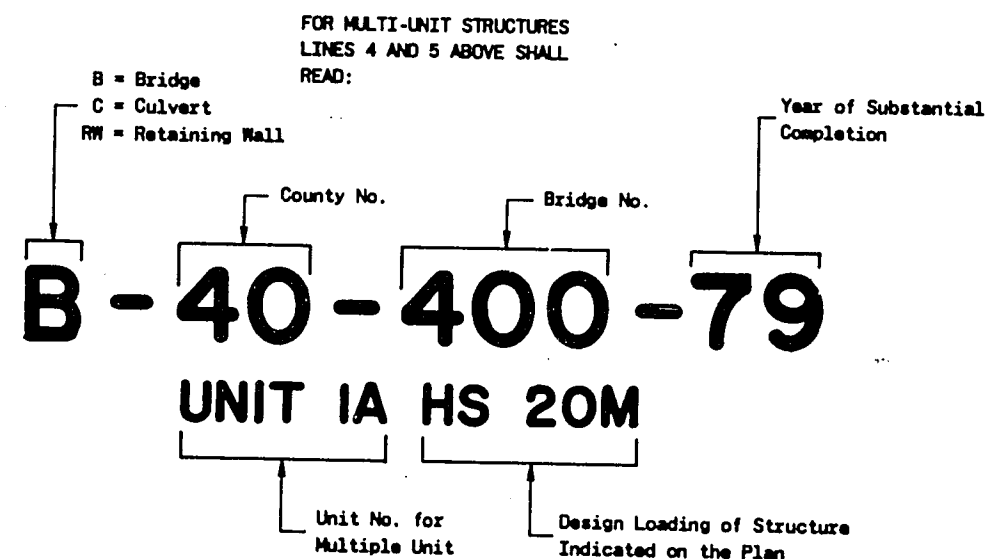
APPROVED
9-21-84
DATE

[Signature]
CHIEF DESIGN ENGINEER

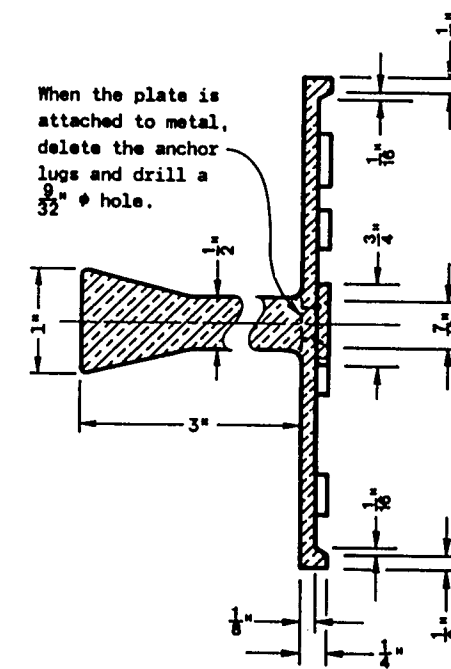
FHWA



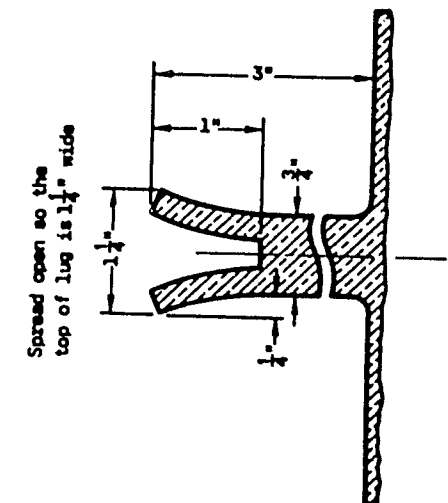
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING AND LOADING DESIGNATION
MULTI-UNIT STRUCTURES



SECTION A-A



ALTERNATE LUG

GENERAL NOTES

Name Plates to be installed on Bridges, Culverts, and Retaining Walls shall conform to the requirements of Section 506.2.4 of the Standard Specifications.

The Bridge Number and Design Loading shown on this drawing are examples only. See Construction Plans for individual numbering and design loading.

NAME PLATE
(STRUCTURES)

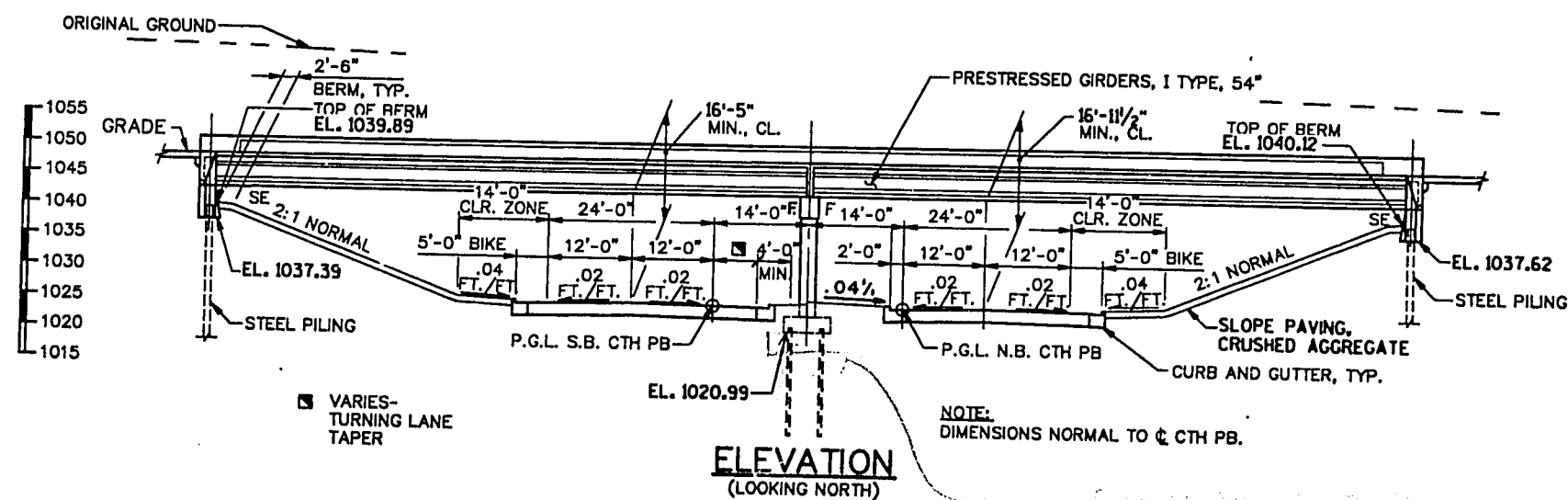
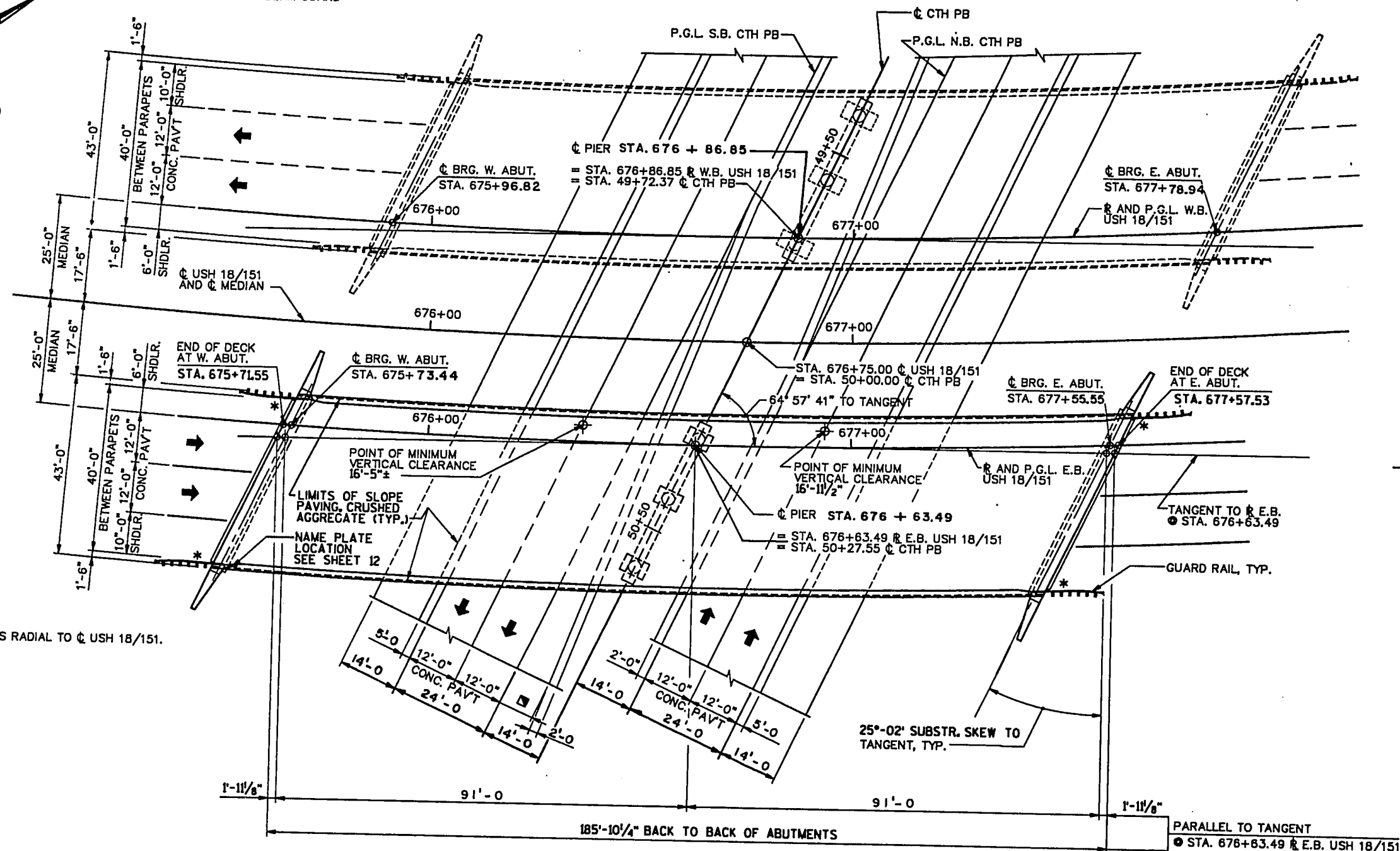
State of Wisconsin
Department of Transportation
Division of Transportation Facilities

APPROVED

9-27-79

DATE

[Signature]
CHIEF DESIGN ENGINEER

* ANCHOR ASSEMBLY
FOR BEAM GUARDWESTBOUND
B-13-412EASTBOUND
B-13-411NOTE:
DIMENSIONS RADIAL TO $\odot$ USH 18/151.

STATE PROJECT NUMBER

1201-04-76

SHEET NO

E.C

DESIGN DATA

LIVE LOAD:

DESIGN RATING: HS-20
INVENTORY RATING: HS-24
OPERATIONAL RATING: HS-48
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB $-f'_c = 4,000$ P.S.I. ALL OTHER $-f'_c = 3,500$ P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
54" PRESTRESSED GIRDERS, CONCRETE MASONRY $f'_c = 6,000$ P.S.I.
STRANDS- $\frac{1}{2}$ " ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

TRAFFIC VOLUME

U.S.H. 18/151

A.D.T.=7,500 (2012)
R.D.S.=65 M.P.H.

C.T.H. PB

A.D.T.=5,500 (2012)
R.D.S.=50 M.P.H.

FOUNDATION DATA

ABUTMENTS AND PIER TO BE SUPPORTED ON STEEL PILING.

CURVE DATA

 $\odot$ USH 18/151

P.I. STA. 678+00.24
X 2,130,728.57
Y 355,228.80
 Δ 90° 00' 00"
D 3° 00' 00"
T 1909.86'
L 3000.00'
R 1909.86'
S.E. 0.060 FT./FT.

 $\odot$ E.B. USH 18/151

P.I. STA. 678+02.03
X 2,130,755.25
Y 355,205.81
 Δ 90° 00' 00"
D 2° 57' 40.5"
T 1934.86'
L 3039.27'
R 1934.86'
S.E. 0.060 FT./FT.

 $\odot$ W.B. USH 18/151

P.I. STA. 677+98.78
X 2,130,701.89
Y 355,251.99
 Δ 90° 00' 00"
D 3° 02' 23.2"
T 1884.86'
L 2960.73'
R 1884.86'
S.E. 0.060 FT./FT.

C.T.H. PB

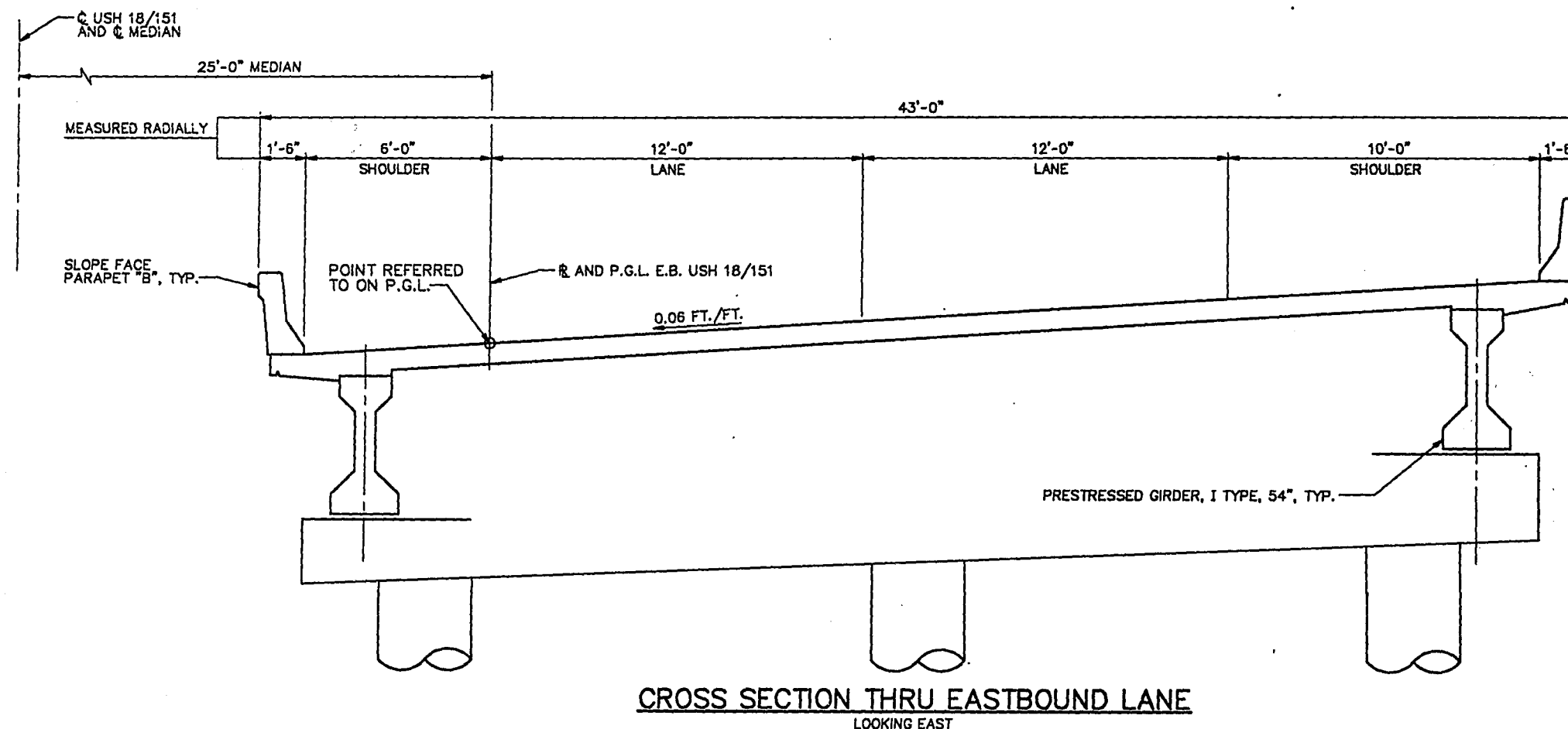
P.I. STA. 45+73.04
X 2,130,059.72
Y 356,355.35
 Δ 37° 30' 00"
D 06° 00' 00"
T 324.15'
L 625.00'
R 954.93'
S.E. 0.059 FT/FT

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL PLAN
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. EAST ABUTMENT
6. ABUTMENT DETAILS
7. PIER
8. 54" PRESTRESSED GIRDER DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. SLOPED FACE PARAPET 'B'
13. STEEL DIAPHRAGM

BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488
D.R. GENSON (608)266-8491

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-411			
USH 18/151 OVER CTH PB			
County	DANE	Town	VERONA
Design Spec.	AASHTO '89 & '90 INTERIM	Load	HS-20
Designed By	SDR	Design Ch'd	OLA
Drawn By	HES	Checked	J.C.H.
Approved	State Bridge Engineer		
GENERAL PLAN			SHEET 1 of 13 X

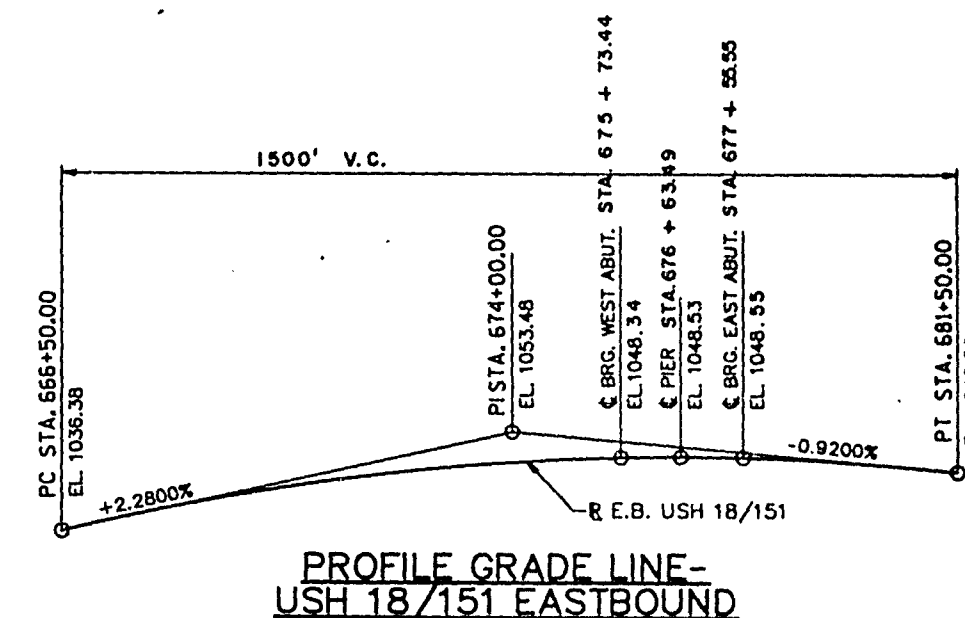
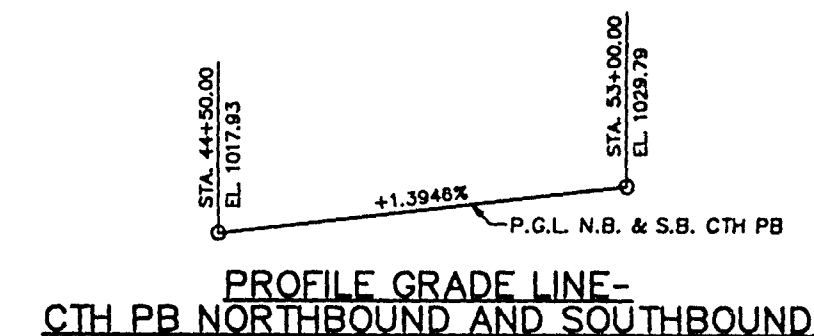


TOTAL ESTIMATED QUANTITIES

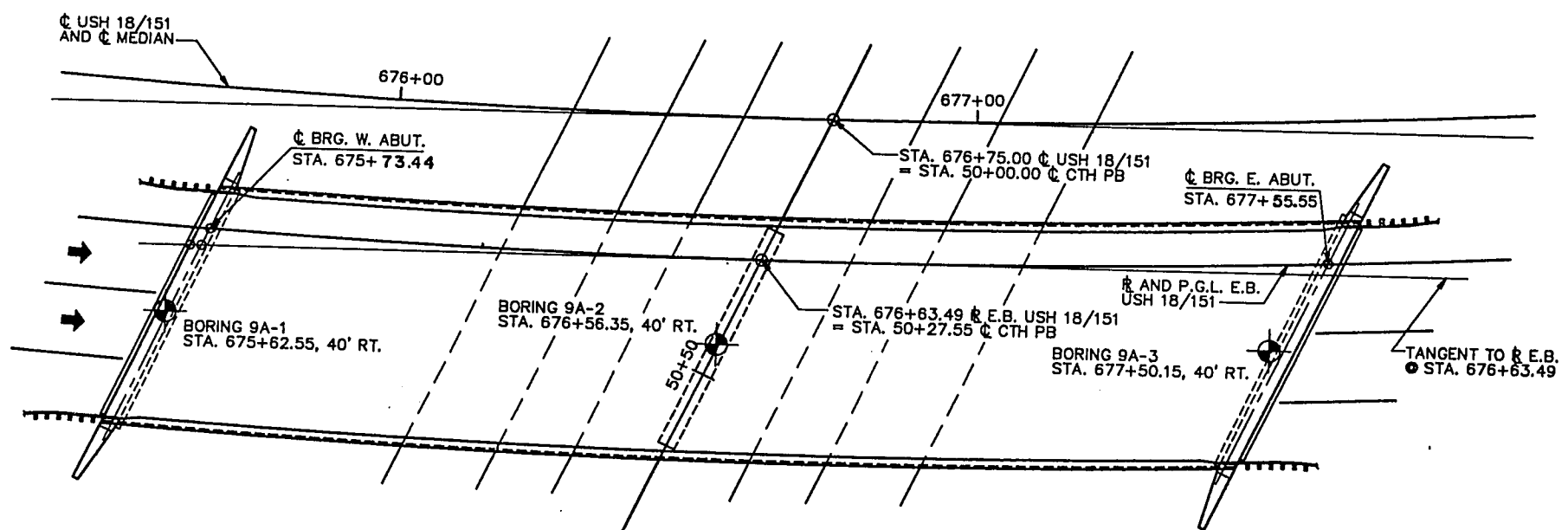
BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	PIER	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-411	L.S.	—	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	314	56	57	52	479
PROTECTIVE SURFACE TREATMENT	GAL.	56	—	—	—	56
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	3,320	3,380	880	7,580
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	57,750	—	—	5,140	62,890
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	914	—	—	—	914
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	210	216	—	426
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	15	—	—	—	15
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	—	270	315	210	795
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	—	—	—	4
STEEL DIAPHRAGM	EACH	16	—	—	—	16
NON-BID ITEMS						
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	58	60	—	118
FILLER	SIZE	—	—	—	—	1/2" & 3/4"

GENERAL NOTES

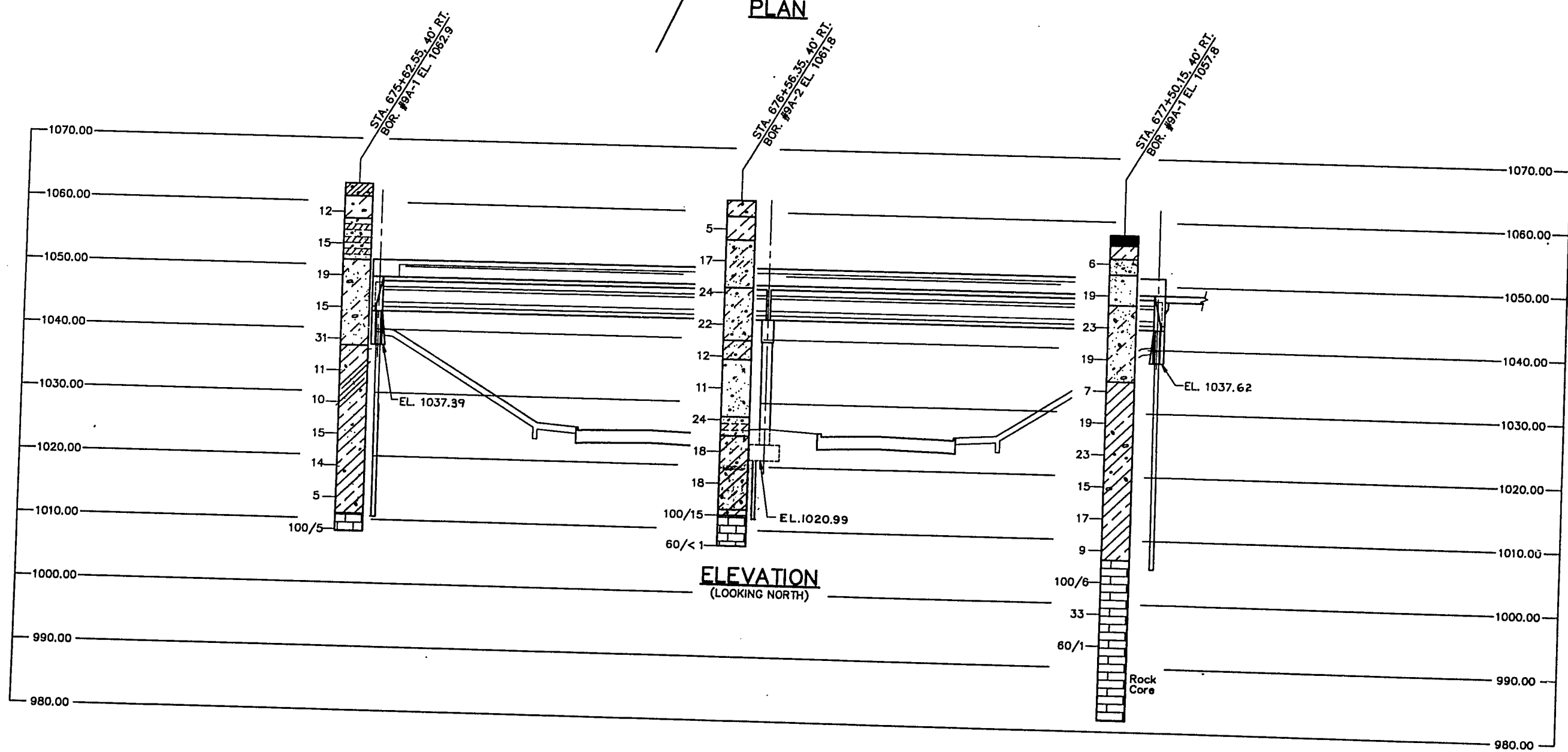
DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED
2" CLEAR UNLESS OTHERWISE SHOWN OR NOTEDTHE FINISHED GRADED SECTION SHALL BE THE UPPER
LIMITS OF EXCAVATION FOR STRUCTURES AT THE PIER.THE SLOPE OF THE FILL IN FRONT OF THE
ABUTMENTS SHALL BE COVERED WITH SLOPE
PAVING, CRUSHED AGGREGATE TO THE EXTENT
SHOWN ON THE GENERAL PLAN, ABUTMENT
DETAILS AND STANDARD DETAILS.

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-411			
Const. Spec.	MS. '89	Drawn by	RIES Checked J.C.L.
GENERAL PLAN			SHEET 2 X



PLAN

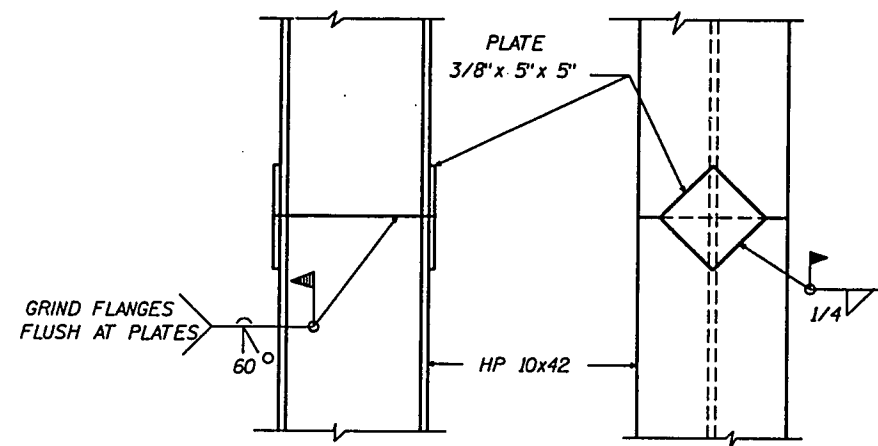


ELEVATION
(LOOKING NORTH)

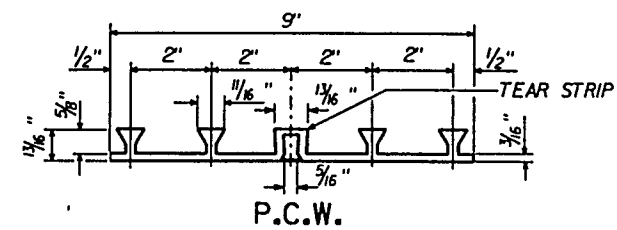
STATE PROJECT NUMBER		SHEET NO.	
1201-04-76		8.2	
ABBREVIATIONS			
F FINE	M MEDIUM	C COARSE	
WS WEATHERED	SO SOUND		
MATERIAL SYMBOLS			
TOPSOIL	SILT	SHALE	
SAND	CLAY	LIMESTONE/DOLOMITE	
GRAVEL	BOULDERS/COBBLES	SANDSTONE	
LEGEND OF BORING			
Elev.	Boring No.	Sta.	
Unconfined Strength 7.7			Sandy Gravel
Blows per Ft. Using 140# Wt. Falling 30"			F. Boulders or Cobbles
Wash Sample *			Sand
Shelby Tube S.T.			Silty Clay
Ground Water Elevation			So
No Ground Water Observed Above This Elevation			Limestone
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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-13-411			
Const. Spec.	WS '89	Drawn By	C. M. F.
SHEET 3		Checked J. V. E.	
SUBSURFACE EXPLORATION		X	

STATE PROJECT NUMBER	SHEET NO.
1201-04-76	8.4

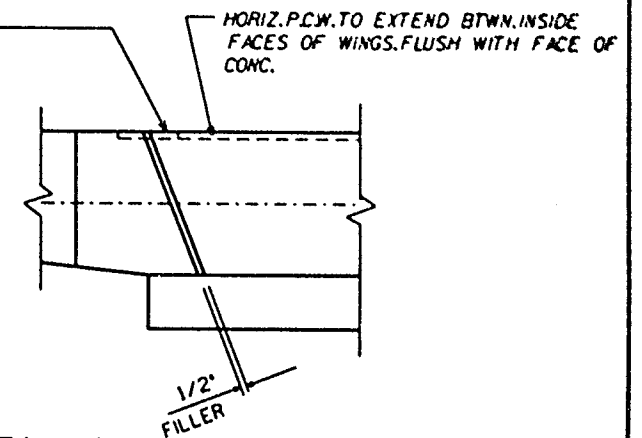
- (A) OPT. CONST. JOINT - FORMED BY SURFACED BEVELED
2" X 6" KEYWAY. $\frac{3}{4}$ " "V" GROOVE AT FRONT FACE.
IF JOINT IS NOT USED "V" GROOVE IS NOT REQ'D.
- (B) VERT. CONST. JOINT - FORMED BY SURFACED BEVELED
2" X 8" KEYWAY. $\frac{3}{4}$ " "V" GROOVE AT FRONT FACE &
P.V.C. WATERSTOP UP BACKFACE.
- (C) $\frac{1}{2}$ " FILLER FROM BEAM SEAT TO TOP OF WING.
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF
FILLER WITH NON-STAINING NON-BITUMINOUS JOINT
SEALER. (1" DEEP & HOLD $\frac{1}{8}$ " BELOW SURFACE OF CONC.)



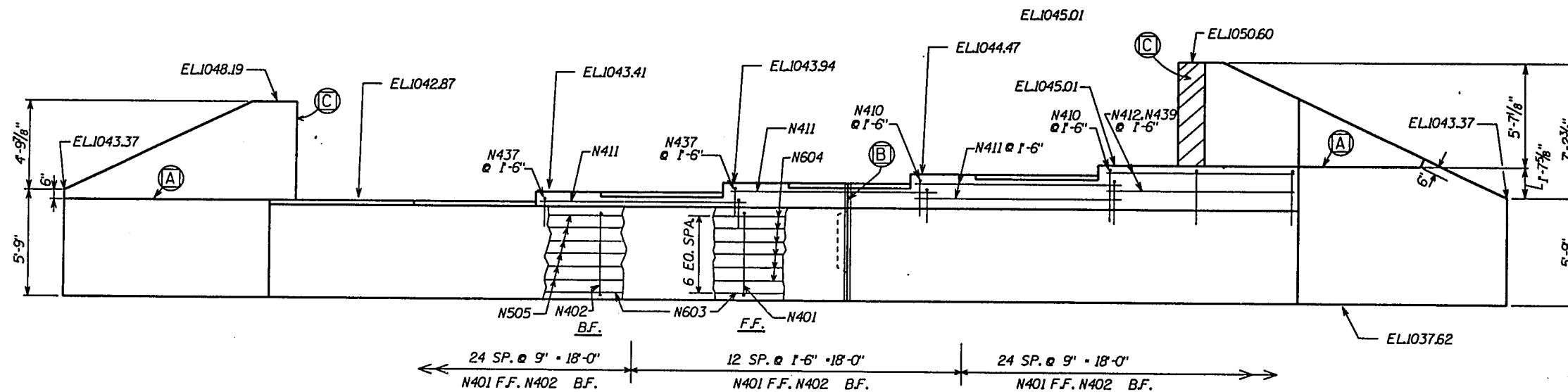
PILE SPLICE DETAIL



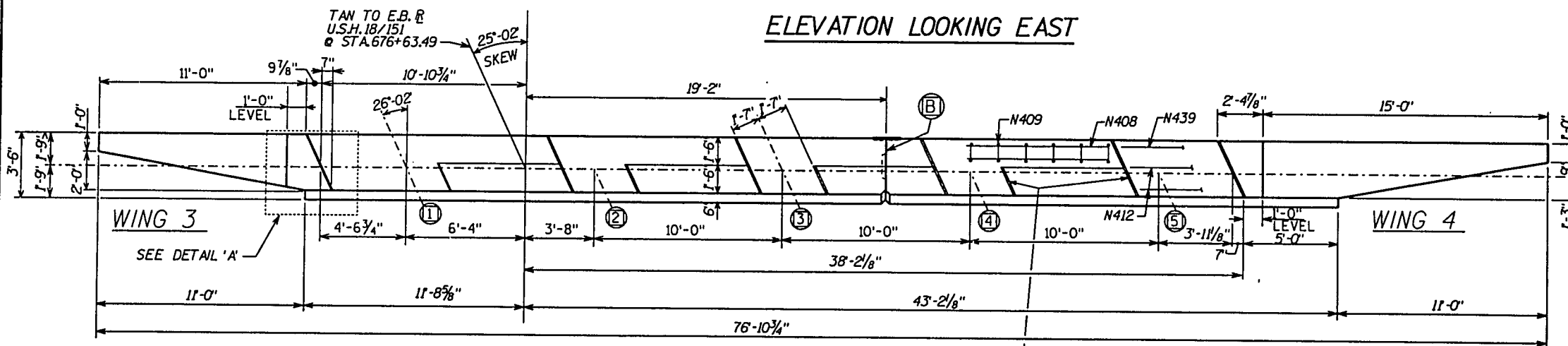
(POLYVINYL CHLORIDE WATERSTOP)
P.C.W. SHALL BE BUTT SPULCED AT ALL INTERSECTIONS BY USING A
HEATED SPULCING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS
OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.



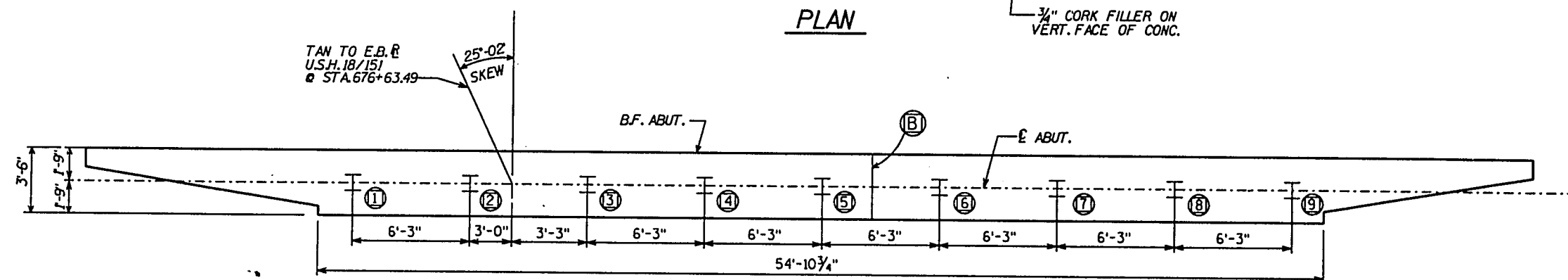
DETAIL "A"



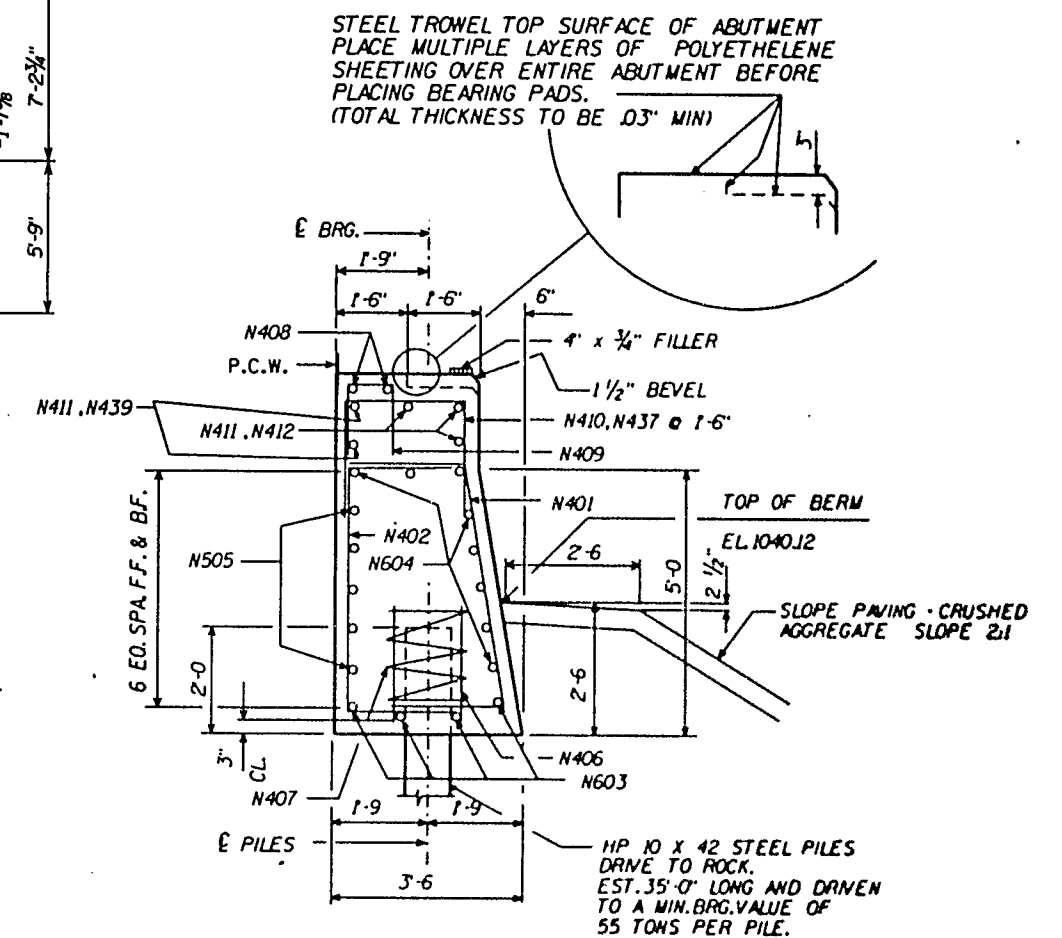
ELEVATION LOOKING EAST



PLAN

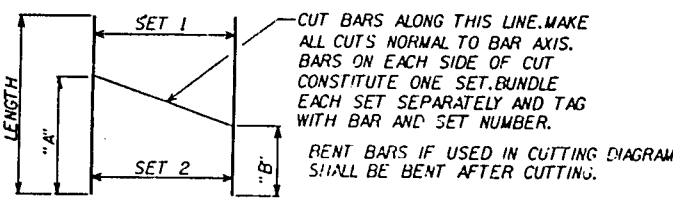


PILE PLAN

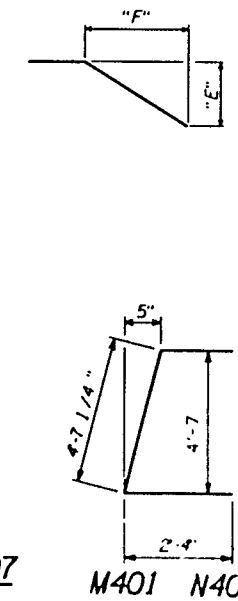
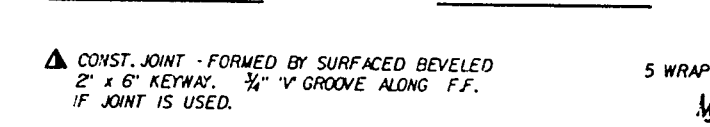


SECTION THRU BODY

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-411			
CONST. SPEC.	1989	DRAWN BY C.M.F.	PLANS SAC. J.C.W.
EAST ABUTMENT		SHEETS	



MARK	"A"	"B"	NO.OF BARS/SET	NO.OF EACH SET
M414	11'-10"	5'-5"	10	1
N414	11'-10"	5'-5"	10	1
M428	9'-9"	5'-5"	7	1
N428	9'-9"	5'-5"	7	1



BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN- DLE	LOCATION
N401		61	8-8	X			BODY F.F. VERT.
N402		61	9-1	X			BODY B.F. VERT.
N603		8	28-10				BODY BOT. HORIZ.
N604		16	29-6	X			BODY F.F. & TOP HORIZ.
N505		10	28-7				BODY B.F. HORIZ.
N406		18	2-3				BODY @ PILES VERT.
N407		9	28-0	X			BODY @ PILES HORIZ.
N408		8	7-6				BODY TOP HORIZ.
N409		24	3-11	X			BODY TOP VERT.
N410		15	9-6	X			BODY TOP VERT.
N411		11	11-0				BODY TOP HORIZ.
N412		3	10-5				BODY TOP HORIZ.
N413		3	12-6				WING 4 F.F. & B.F. VERT.
N414		10	17-3		X		WING 4 F.F. & B.F. VERT.
N515		10	12-7	X			WING 4 & 3 F.F. HORIZ.
N616		1	11-3	X			WING 4 F.F. HORIZ.
N617		2	11-0				WING 4 & 3 B.F. HORIZ.
N618		10	12-7				WING 4 & 3 B.F. HORIZ.
N419		1	9-4	X			WING 4 F.F. HORIZ.
N420		1	6-2	X			WING 4 F.F. HORIZ.
N421		1	3-1				WING 4 F.F. HORIZ.
N422		1	10-4				WING 4 B.F. HORIZ.
N423		1	7-2				WING 4 B.F. HORIZ.
N424		1	4-1				WING 4 B.F. HORIZ.
N425		1	14-8	X			WING 4 F.F. HORIZ.
N426		1	18-2	X			WING 4 B.F. HORIZ.
N427		3	10-2				WING 3 VERT.
N428		7	15-2		X		WING 3 F.F. & B.F. VERT.
N429		1	10-8	X			WING 3 F.F. VERT.
N430		1	7-8	X			WING 3 F.F. VERT.
N431		1	4-6	X			WING 3 F.F. VERT.
N432		1	3-6				WING 3 B.F. HORIZ.
N433		1	6-8				WING 3 B.F. HORIZ.
N434		1	9-8				WING 3 B.F. HORIZ.
N435		1	12-6	X			WING 3 F.F. VERT.
N436		1	11-6	X			WING 3 B.F. VERT.
N437		16	7-0	X			BODY - TOP
N438		1	2-8	X			WING 4 - TOP - F.F.
N439		2	11-8				BODY - TOP
N640		1	14-2				WING 3

MARK	"E"	"F"
M515	1-11/2"	10-9"
M616	1-5"	7-9"
M419	10"	4-7"
M420	3"	1-6"
M425	1-9/2"	11-11/2"
M426	7-1"	14-9"
M435	4-8"	9-9"
M436	4-8"	9-9"
M515	1-11/2"	10-9"
M616	1-5"	7-9"
M419	10"	4-7"
M420	3"	1-6"
M425	1-9/2"	11-11/2"
M426	7-1"	14-9"
M435	4-8"	9-9"
M436	4-8"	9-9"
M438	7/2"	1-13/4"
M438	9/2"	1-13/4"
M639	1-11"	10-10"
M640	1-11"	10-10"

MARK		"C"	"U"
M402	N402	2-4"	4-7"
M409	N409	1-6"	1-2"
M410	N410	3-6"	2-8"
M437	N437	2-5"	2-8"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-411			
CONST. SPEC.	1989	DRAWN BY C.M.F.	PLANNED C.D. J.C.W.
ABUTMENT DETAILS		SHEET 6	
		X	

LEVELS - NUMBERED 1 TO 63

STATE PROJECT NUMBER

1201-04-76

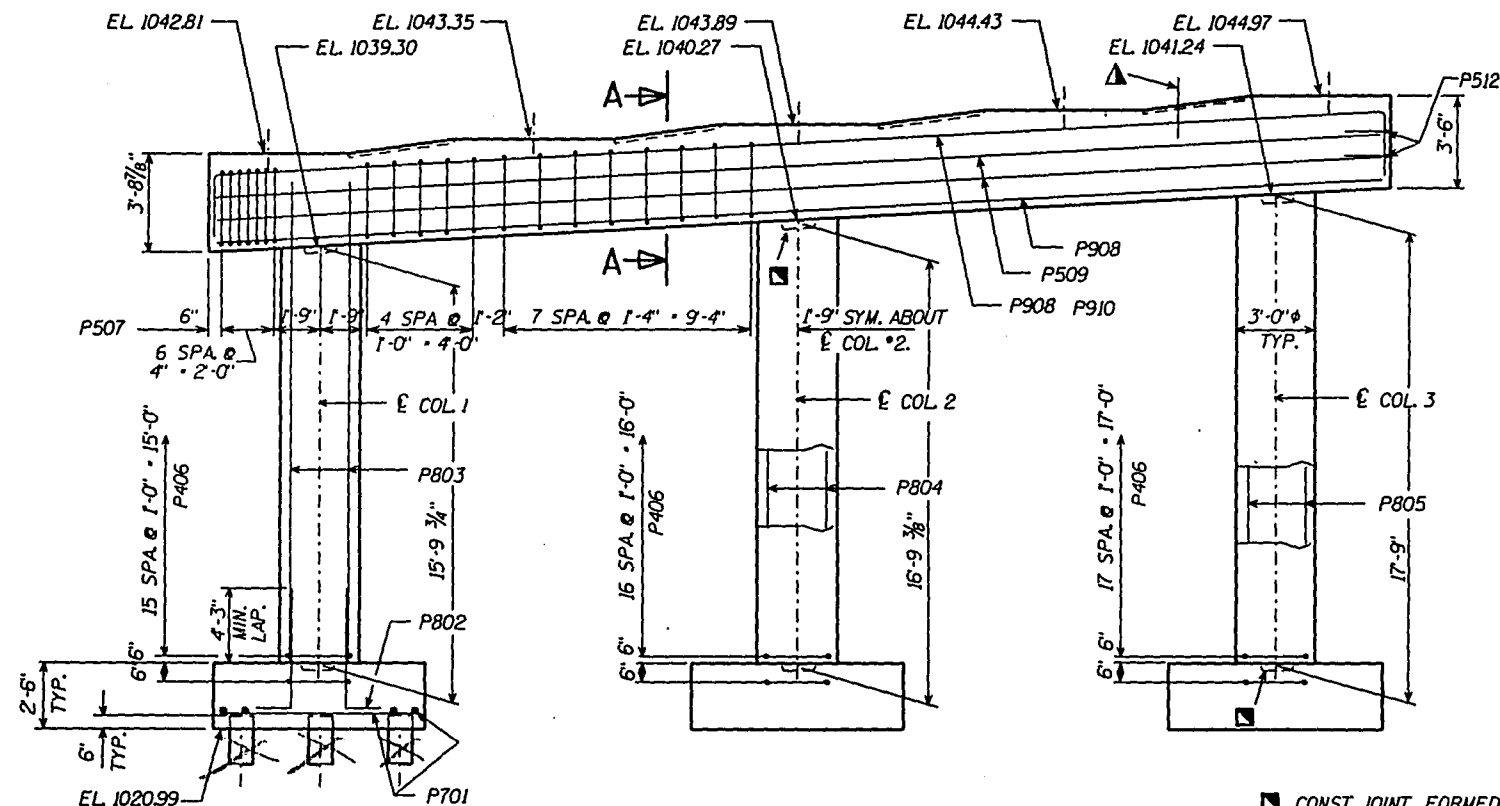
SHEET NO.

8.6

BILL OF BARS

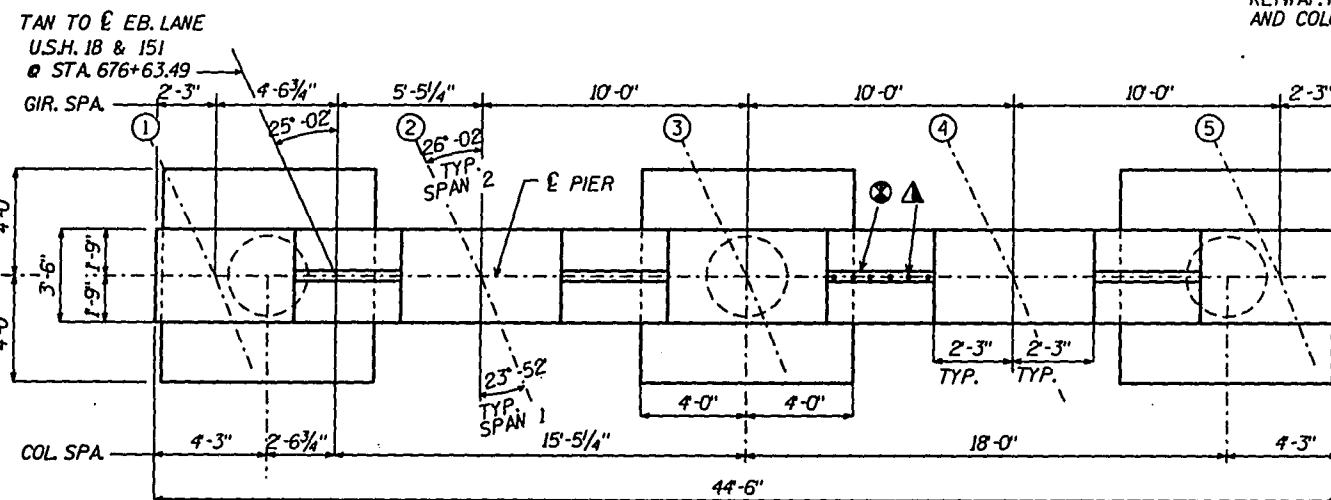
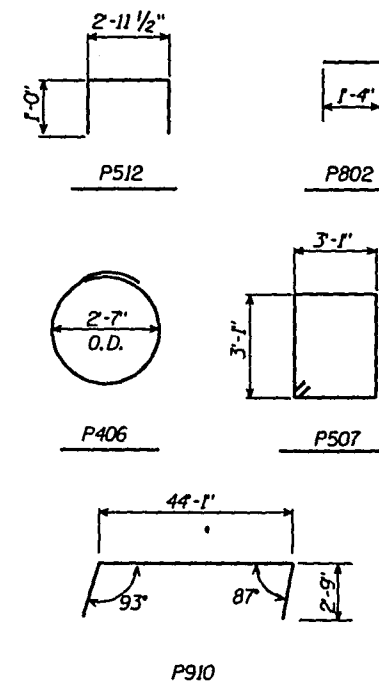
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	CONT.	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
P701		57	7-6				FOOTING HORIZ.
P802	X	39	7-3	X			FOOTING DOWELS VERT.
P803	X	13	18-9				COLUMN 1 VERT.
P804	X	13	19-9				COLUMN 2 VERT.
P805	X	13	20-9				COLUMN 3 VERT.
P406	X	54	9-2	X			COLUMNS HOOPS HORIZ.
P507	X	40	13-0	X			CAP STIRRUPS SINGLE VERT.
P908	X	8	44-1				CAP TOP & BOT HORIZ.
P509	X	4	44-1				CAP SIDES HORIZ.
P910	X	5	49-1	X			CAP TOP HORIZ.
P511	X	24	2-0				CAP TOP VERT.
P512	X	4	4-9	X			CAP ENDS HORIZ.



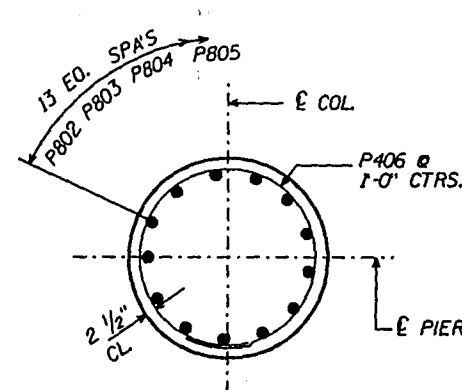
ELEVATION LOOKING EAST

CONST. JOINT FORMED WITH A SURFACED, BEVELED 15' X 15' X 2' KEYWAY, TYP. ALL FTGS. AND COLUMNS.

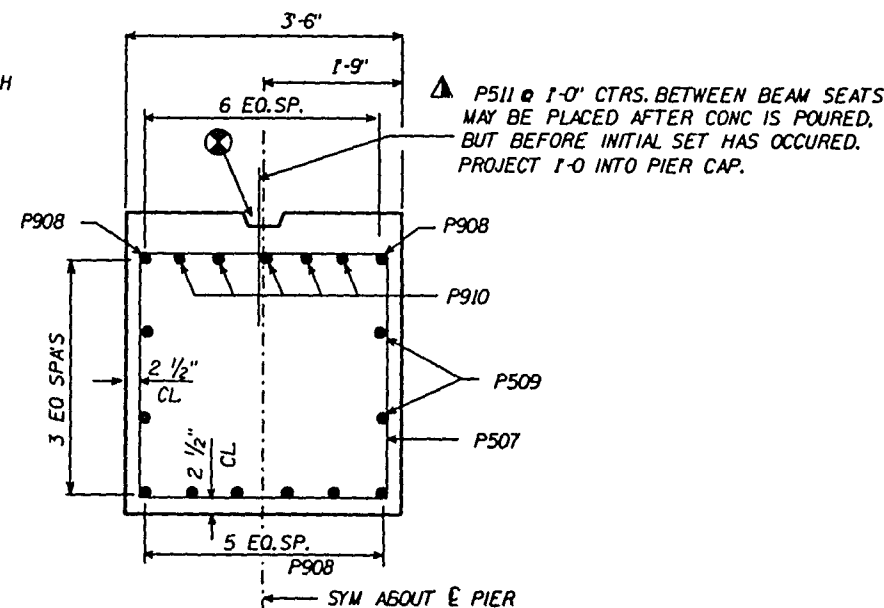


PLAN

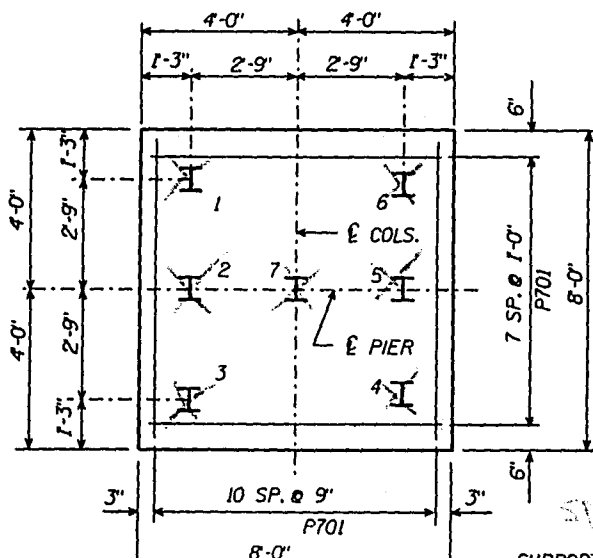
KEYWAY BETW GIR'S FORMED WITH SURFACED, BEVELED 2' X 6'.



SECT. THRU COL.



SECTION A



FOOTING PLAN

SUPPORT PIER ON HP 10 X 42 STEEL PILES, EST. 10'-0" LG. & DRIVEN TO A MIN. BEARING VALUE OF 55 TONS PER PILE. (TO ROCK)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-411			
CONST. SPEC.	1989	DRAWN BY BUDD	PLANS C.E.D. JCK
PIER			SHEET 7

SR_411PIER.DGN

GIRDER NOTES

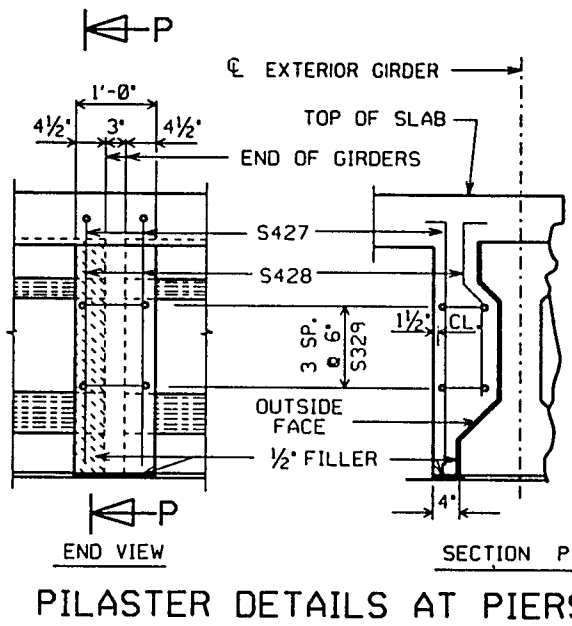
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

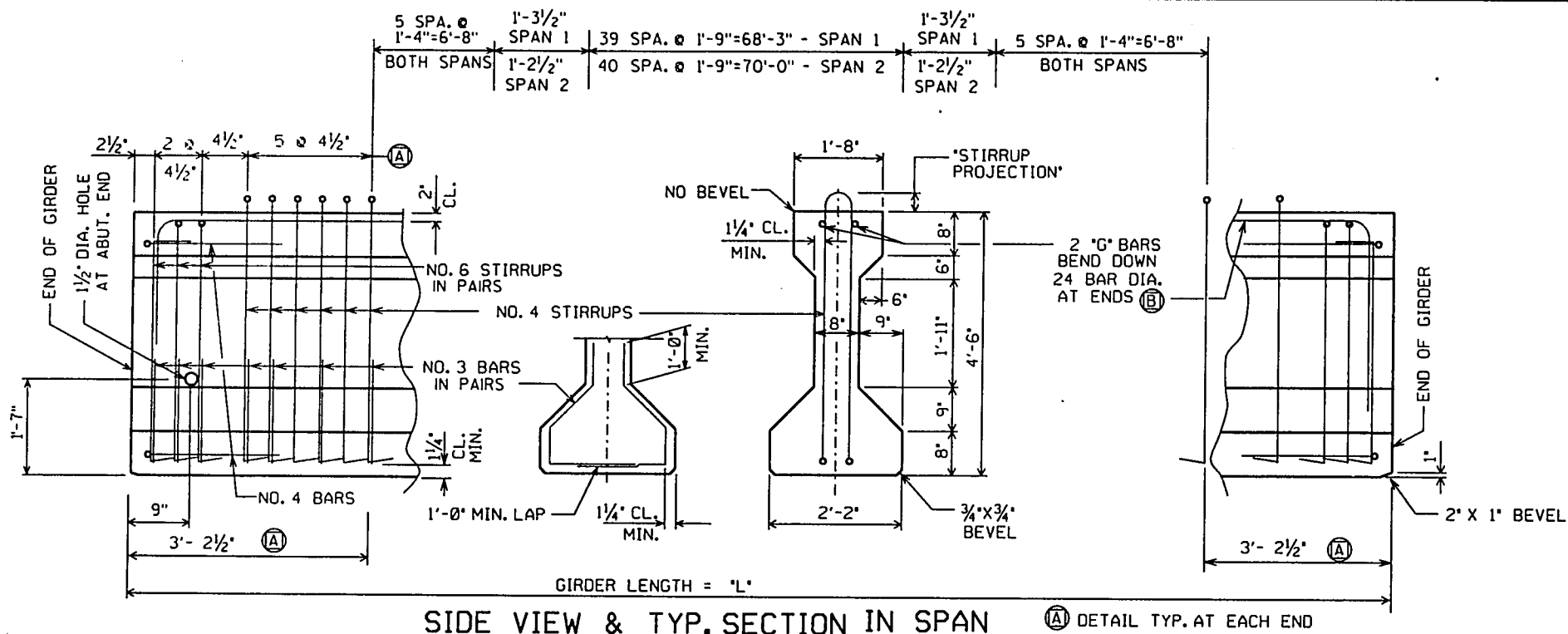
PRESTRESSING STRANDS SHALL BE $\frac{1}{2}$ " - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF No. 4 STIRRUPS $4\frac{1}{2}$ " AND No. 6 STIRRUPS $6\frac{1}{2}$ ".

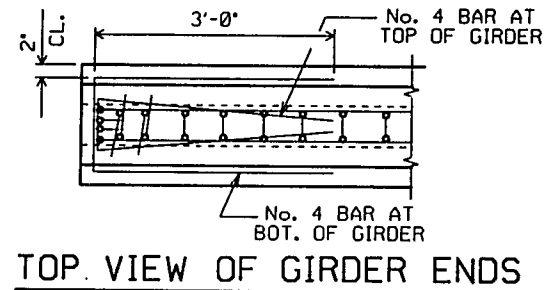
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



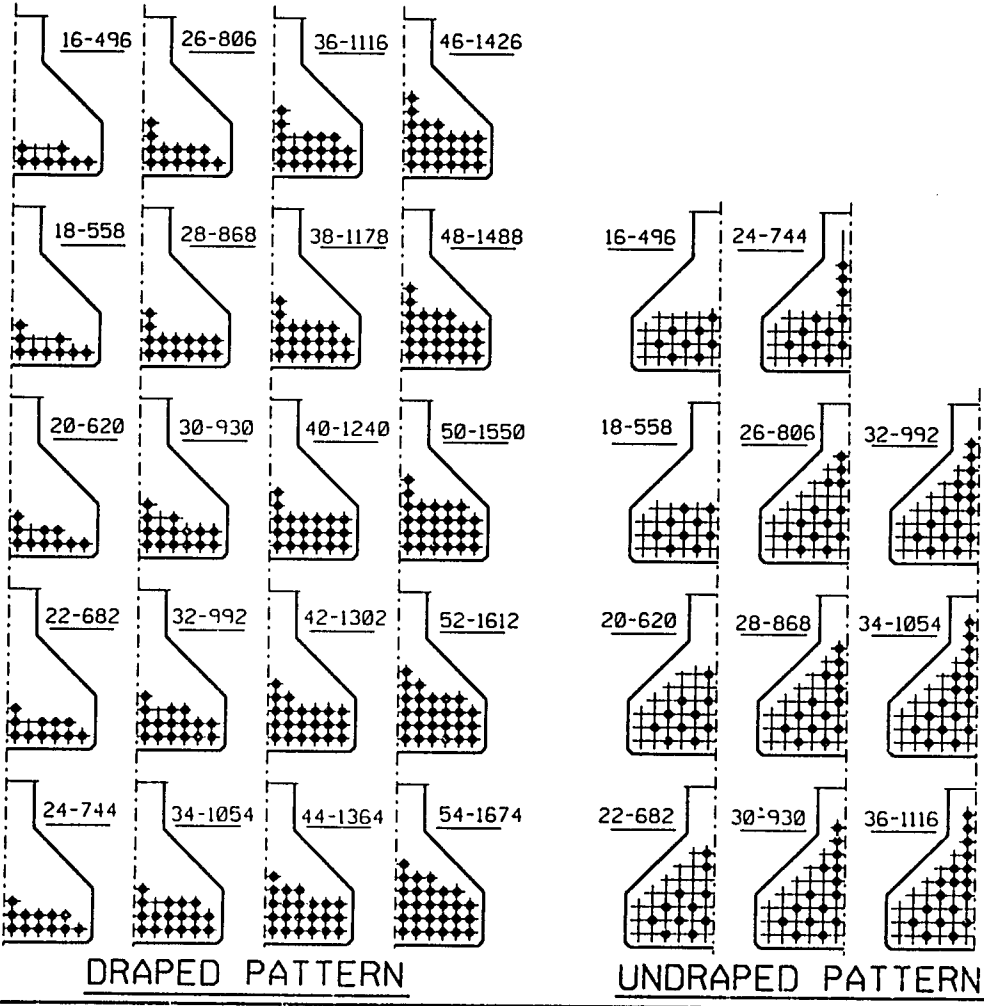
PILASTER DETAILS AT PIERS



SIDE VIEW & TYP. SECTION IN SPAN (A) DETAIL TYP. AT EACH END

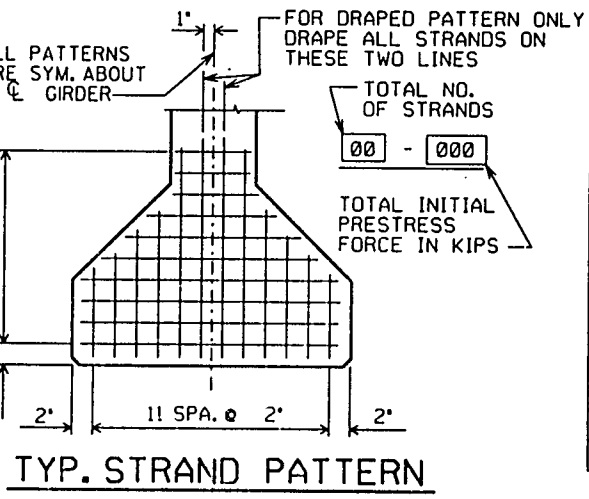


TOP VIEW OF GIRDER ENDS

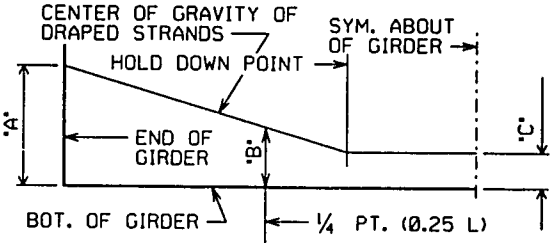


DRAPED PATTERN

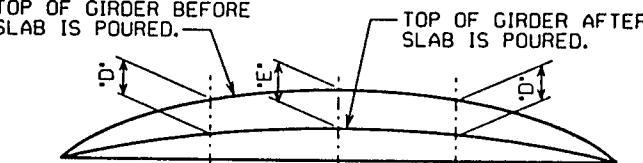
UNDRAPED PATTERN



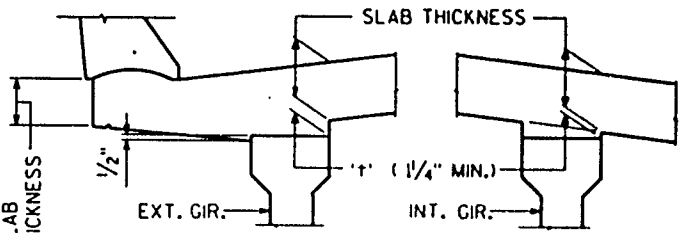
TYP. STRAND PATTERN



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF $1\frac{1}{4}$ " 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. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 't', ELEV. OF TOP OF GIR'S. AT $\frac{1}{4}$ OF SUBSTRUCTURE UNITS & AT $\frac{1}{4}$ POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

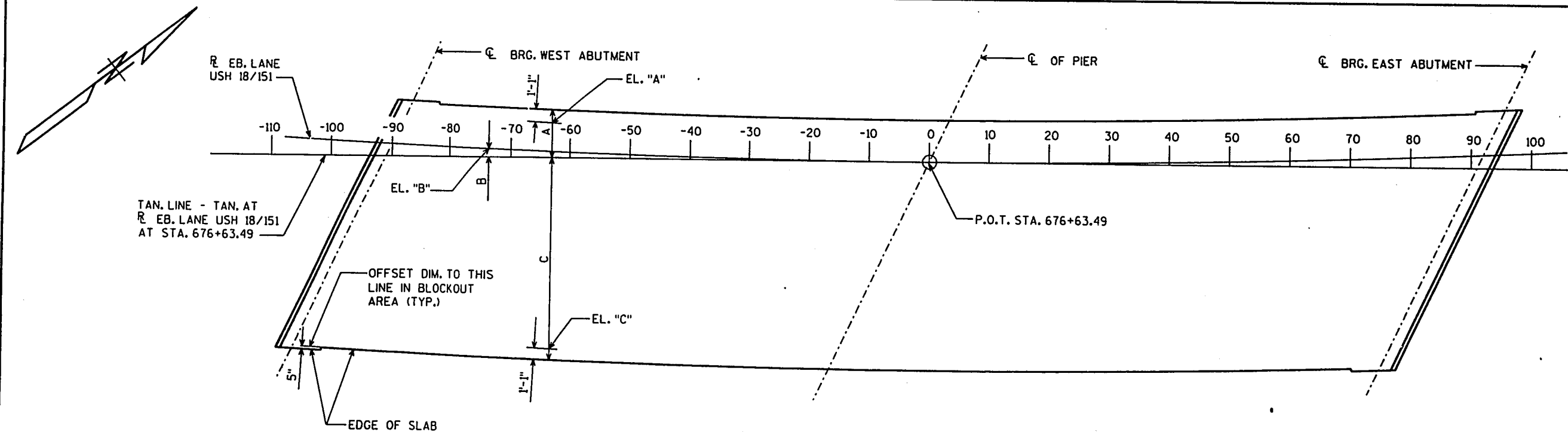
- TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
- + DEADLOAD DEFLECTION
- SLAB THICKNESS
- = HAUNCH HEIGHT 't'

GIRDER DATA									
SPAN	GIRDER LENGTH 'L'	DEAD LOAD DEF. (IN.)		CONC. STRENGTH (P.S.I.)	STIRRUP PROJECTION*	DRAPED PATTERN			
		'D'	'E'			TOTAL NO. OF STRANDS	f'ci (P.S.I.)	(INCHES)	UNDRAPED PATTERN
								'A' 'B' MIN. 'B' MAX. 'C'	TOTAL NO. OF STRANDS
1	90'-7"	1/8"	1/8"	6,000	6"	36	4,800	48 16.5 19.5 6	36
2	92'-2"	1/8"	1/8"	6,000	6"	36	4,800	48 16.5 19.5 6	36

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

NO.	DATE	REVISION	BY
1	1989	RES	JCL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
STRUCTURE B-13-411
54" PRESTRESSED GIRDER DETAILS



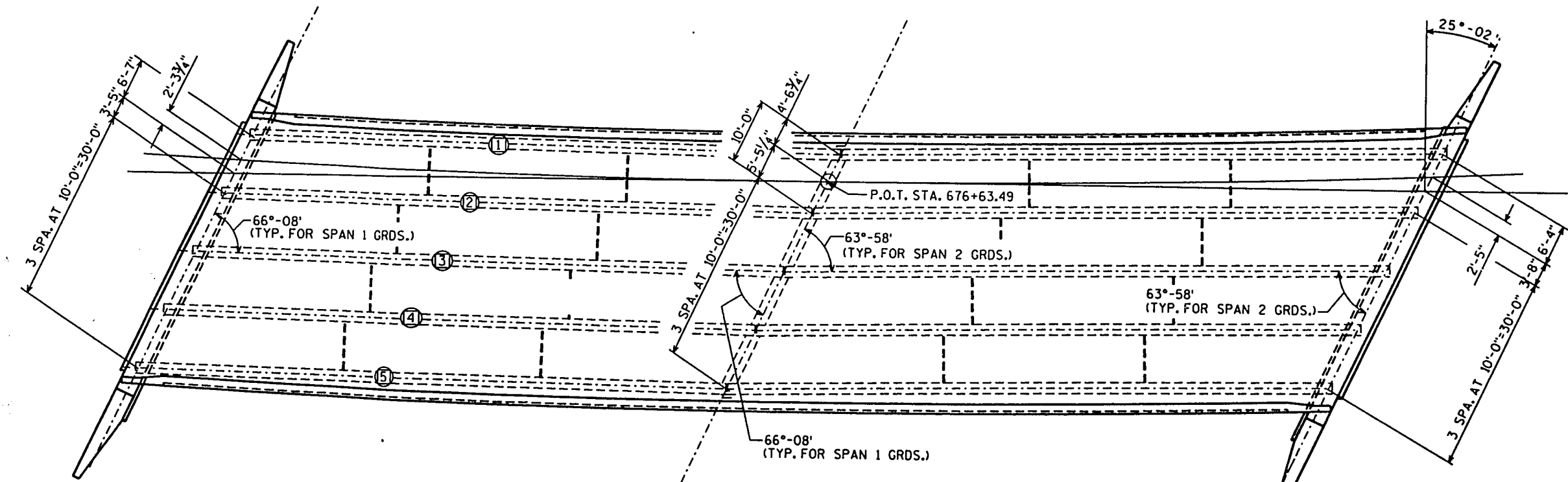
PLAN FOR TANGENT OFFSETS

TABLE OF TAN. OFFSETS
(OFFSETS ARE NORMAL TO TAN. LINE.)

DIST.	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100
DIM. "A"	10'-2 5/8"	9'-8 7/8"	9'-2 1/8"	8'-8 7/8"	8'-4 1/4"	8'-0 7/8"	7'-8 3/4"	7'-6"	7'-3 3/4"	7'-2 1/4"	7'-1 1/4"	7'-1"	7'-1 1/4"	7'-2 1/4"	7'-3 3/4"	7'-6"	7'-8 3/4"	8'-0 7/8"	8'-4 1/4"	8'-8 7/8"	9'-2 1/8"	9'-8 7/8"
EL. "A"	1047.91	1047.95	1047.98	1048.01	1048.04	1048.06	1048.08	1048.11	1048.13	1048.14	1048.16	1048.17	1048.18	1048.19	1048.20	1048.20	1048.20	1048.20	1048.20	1048.20	1048.19	1048.18
DIM. "B"	3'-1 1/2"	2'-7"	2'-1 1/8"	1'-7 7/8"	1'-3 1/4"	11 1/8"	7 3/4"	5"	2 3/4"	1 1/4"	5/16"	0	5/16"	1 1/4"	2 3/4"	5"	7 3/4"	11 1/8"	1'-3 1/4"	1'-7 7/8"	2'-1 1/8"	2'-7"
EL. "B"	1046.27	1048.31	1048.34	1048.37	1048.40	1048.42	1048.45	1048.47	1048.49	1048.50	1048.52	1048.53	1048.54	1048.55	1048.56	1048.56	1048.56	1048.56	1048.56	1048.56	1048.55	1048.54
DIM. "C"	32'-0 7/8"	32'-6 1/2"	33'-0 1/4"	33'-5 1/2"	33'-10"	34'-2"	34'-5 3/8"	34'-8 1/8"	34'-10 1/4"	34'-11 3/4"	35'-0 5/8"	35'-1"	35'-0 5/8"	34'-11 3/4"	34'-10 1/4"	34'-8 1/8"	34'-5 3/8"	34'-2"	33'-10"	33'-5 1/2"	33'-0 1/4"	32'-6 1/2"
EL. "C"	1050.32	1050.36	1050.39	1050.42	1050.44	1050.47	1050.49	1050.51	1050.53	1050.55	1050.56	1050.58	1050.58	1050.59	1050.60	1050.60	1050.60	1050.60	1050.60	1050.59	1050.58	1050.58

TOP OF DECK ELEVATIONS

	CL BRG. W. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	CL PIER	1/4 PT.	1/2 PT.	3/4 PT.	CL BRG. E. ABUT.
GIRDER 1	1048.11	1048.14	1048.19	1048.23	1048.28	1048.29	1048.30	1048.32	1048.34
GIRDER 2	1048.65	1048.69	1048.73	1048.77	1048.82	1048.83	1048.84	1048.86	1048.88
GIRDER 3	1049.19	1049.23	1049.27	1049.31	1049.36	1049.37	1049.38	1049.39	1049.41
GIRDER 4	1049.74	1049.77	1049.81	1049.85	1049.90	1049.91	1049.91	1049.93	1049.94
GIRDER 5	1050.28	1050.31	1050.35	1050.40	1050.44	1050.44	1050.45	1050.46	1050.48



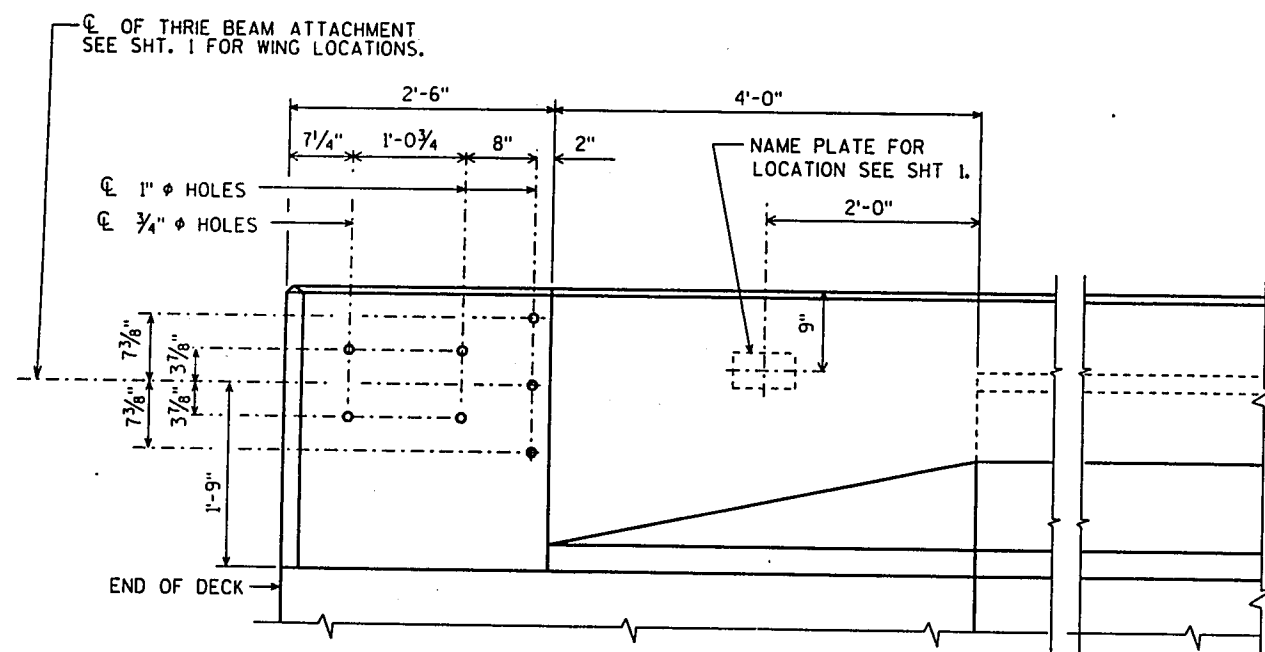
PLAN OF GIRDER LAYOUT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-411			
CONST. SPEC.	1989	DRAWN BY RES	PLANS C&D J.C.K.
SUPERSTRUCTURE			SHEET 9
			X

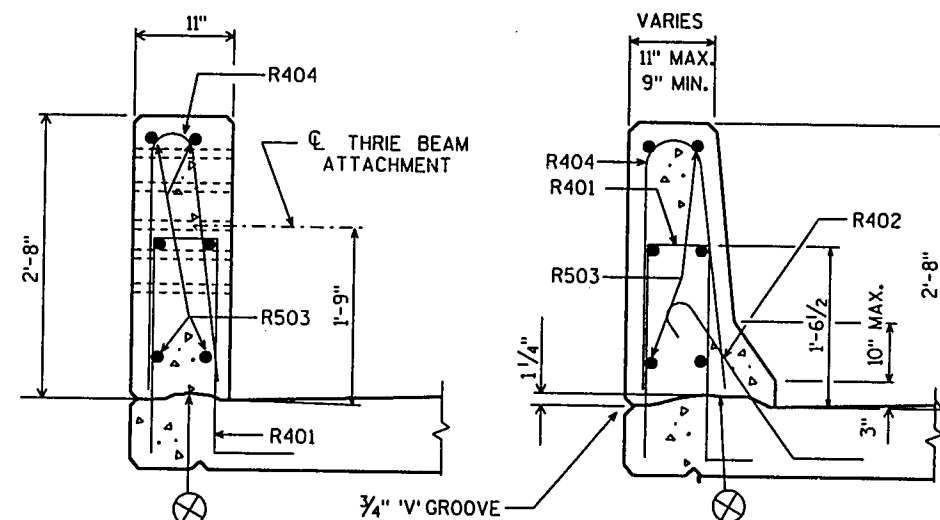
BR B13411:411SUPER.DGN

BILL OF BARS

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

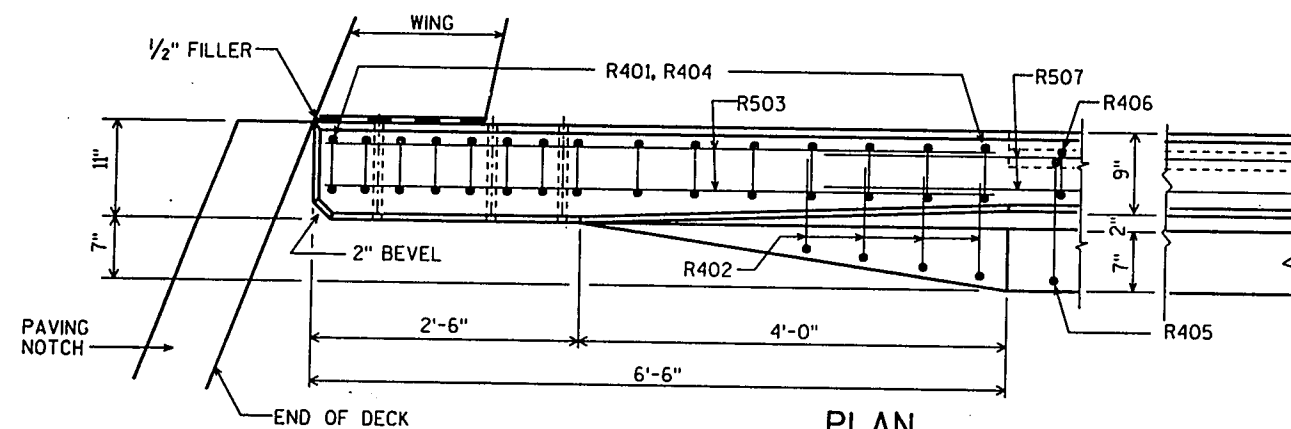
[illegible]

INSIDE ELEVATION

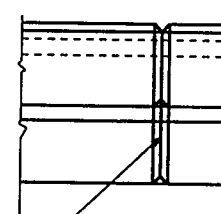


SECTION A

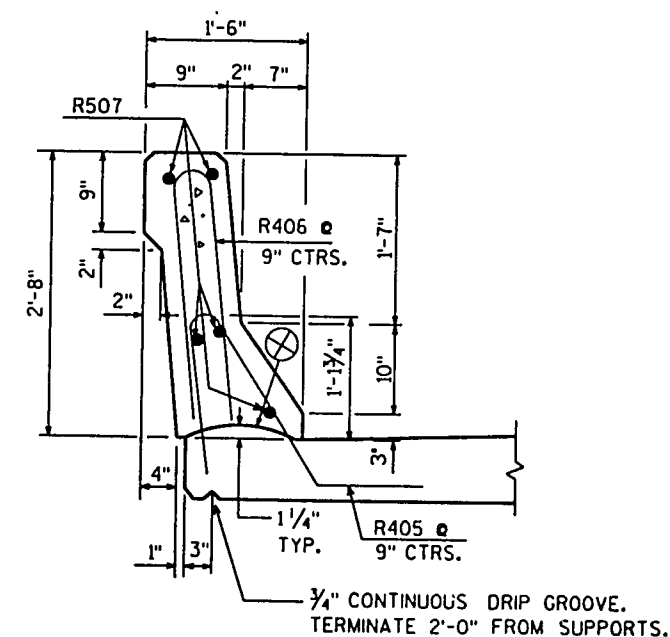
SECTION B



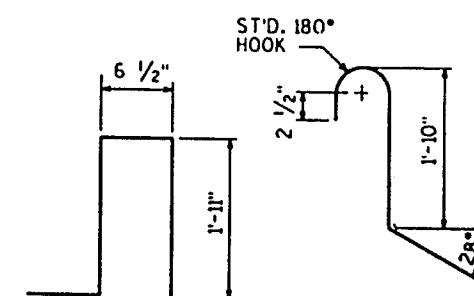
PLAN



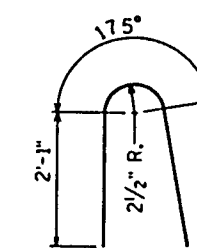
- OPTIONAL CONSTRUCTION JOINTS
IN THE PARAPETS MAY BE USED.
RUN BAR REINF THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 1'-9".
MIN. JOINT SPACING OF 80'-0".
DEFINE CONST. JOINT
WITH A 1" 'V' GROOVE.



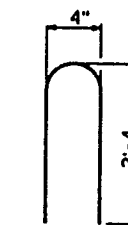
SECTION THRU PARAPET ON BRIDGE



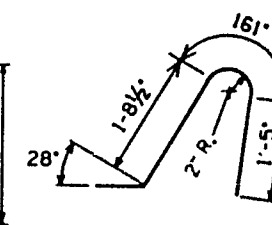
R401



R404



R406



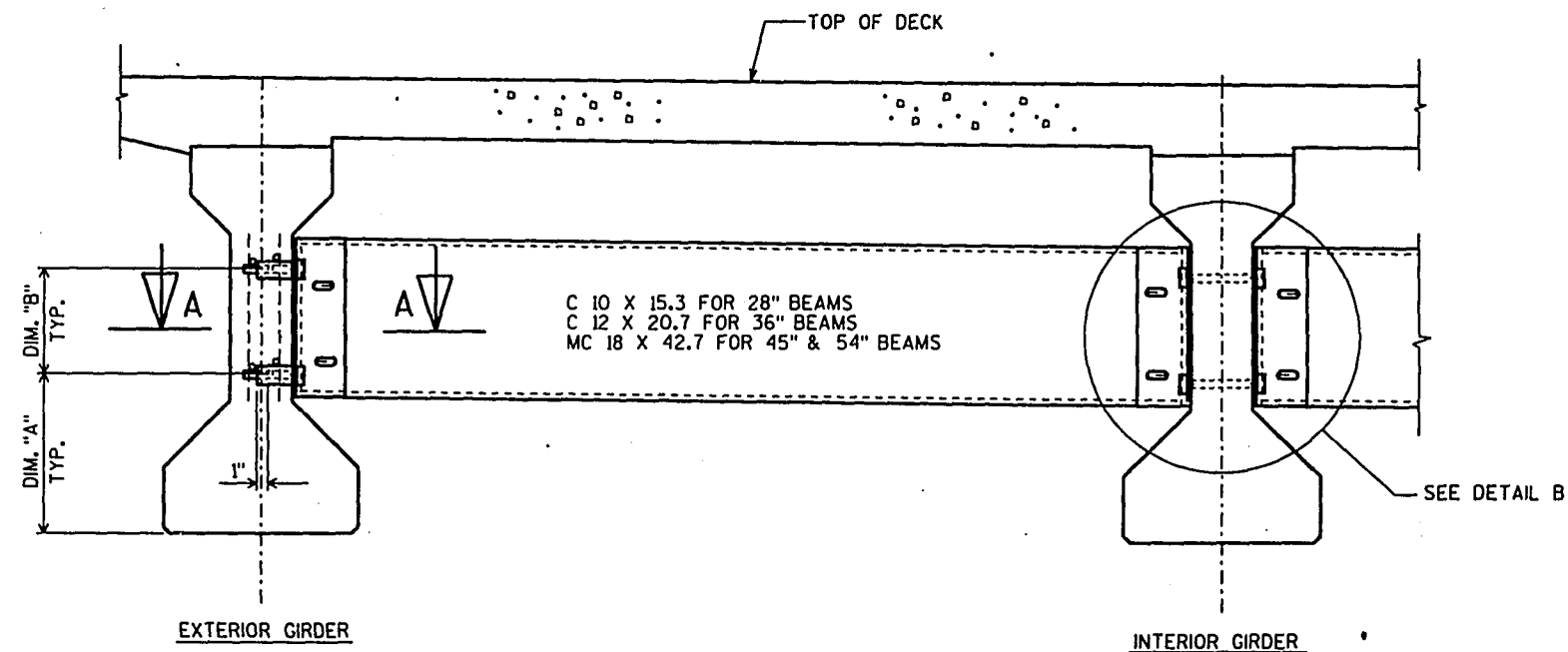
R405

⊗ CONST. JOINT - STRIKE OFF
AS SHOWN & FINISH WITH
A WOODEN TROWEL.

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-13-411				
CONST. SPEC.	1989	DRAWN BT	RJS	PLANS C&D. J&K.
SLOPED FACE PARAPET "B"			SHEET 12	
			X	

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



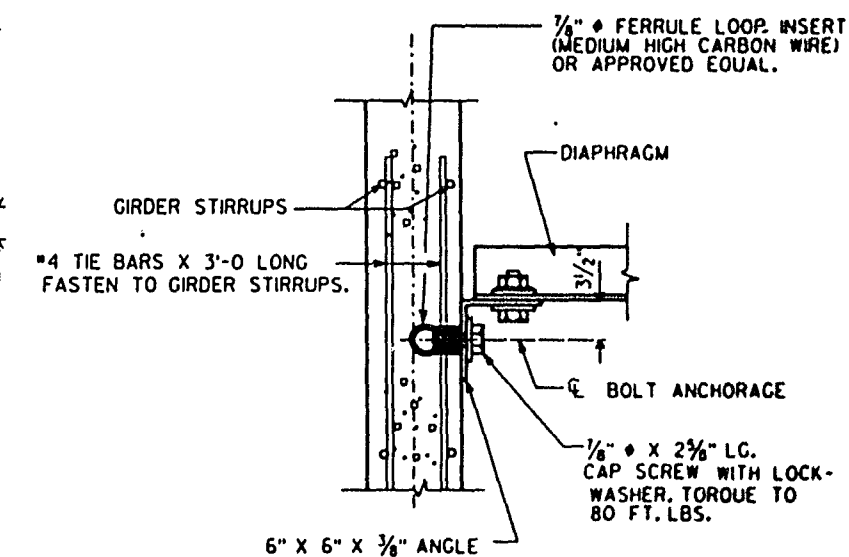
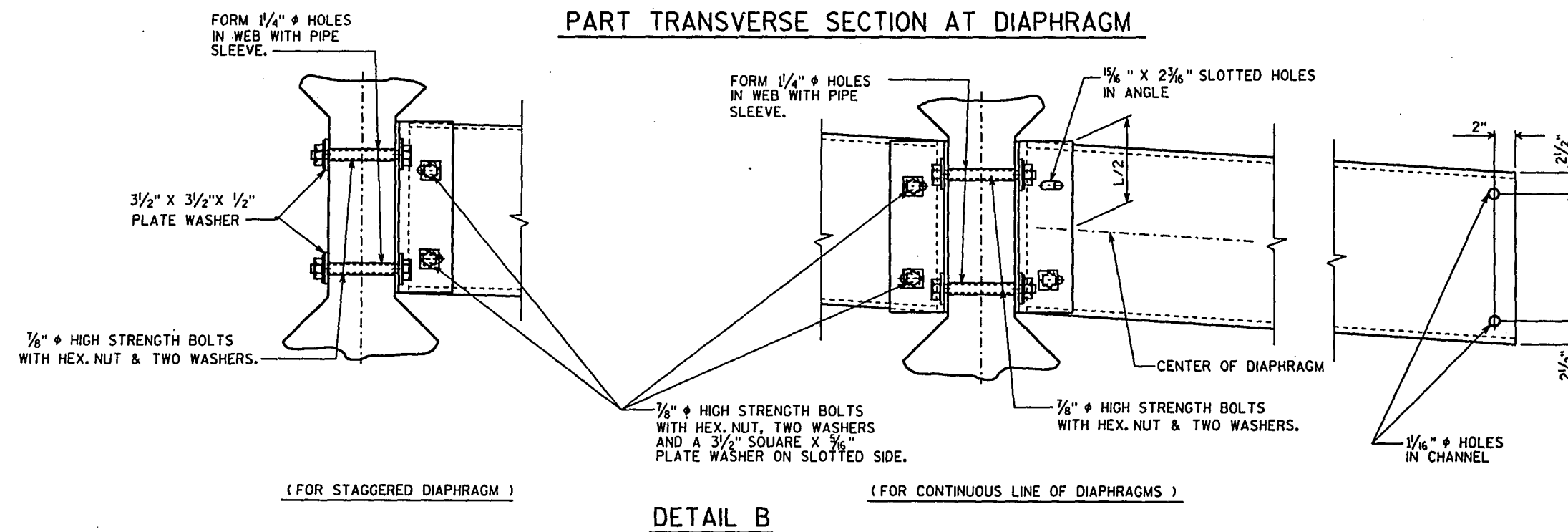
NOTES

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

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

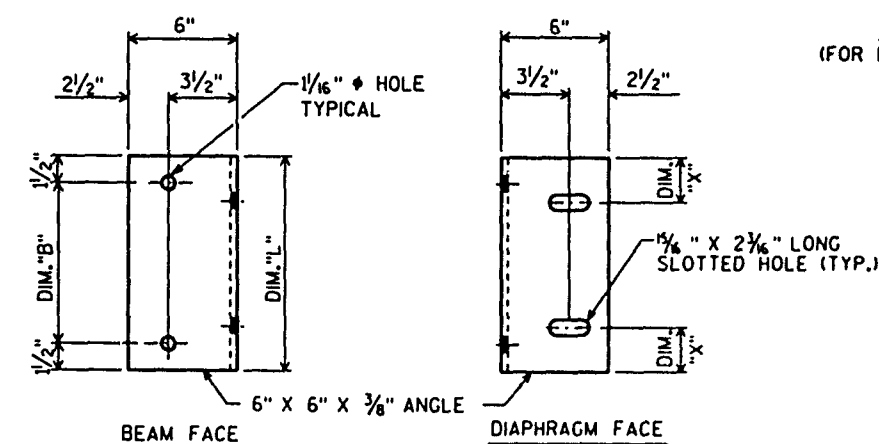
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



SECT. A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-411			
CONST. SPEC.	1989	DRAWN BY RIES	PLANS C&D JCK
STEEL DIAPHRAGM			SHEET 13
			X

* ANCHOR ASSEMBLY
FOR BEAM GUARD

STATE PROJECT NUMBER

SHEET NO

1201-04-76

8.13

WESTBOUND
B-13-412EASTBOUND
B-13-411NOTE:
DIMENSIONS RADIAL TO C USH 18/151.

185'-10" BACK TO BACK OF ABUTMENTS.

PARALLEL TO TANGENT
C STA. 676+86.85 & W.B. USH 18/151

CURVE DATA

C USH 18/151
P.I. STA. 678+00.24
X Y 2,130,728.57
A D 355,228.80
T L 90° 00' 00"
R 3° 00' 00"
L 1909.86'
S.E. 3000.00'
0.060 FT./FT.

E.B. USH 18/151
P.I. STA. 678+02.03
X Y 2,130,753.25
A D 355,205.81
T L 90° 00' 00"
R 2° 57' 40.5"
L 1934.86'
S.E. 3039.27'
0.060 FT./FT.

W.B. USH 18/151
P.I. STA. 677+98.78
X Y 2,130,701.89
A D 355,251.99
T L 90° 00' 00"
R 3° 02' 23.2"
L 1884.86'
S.E. 2960.73'
0.060 FT./FT.

CTH PB
P.I. STA. 45+73.04
X Y 2,130,059.72
A D 356,355.35
T L 37° 30' 00.0"
R 08° 00' 00.0"
L 324.15'
S.E. 625.00'
0.059 FT./FT.

DESIGN DATA

LIVE LOAD:

DESIGN RATING: HS-20
INVENTORY RATING: HS-24
OPERATIONAL RATING: HS-48
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

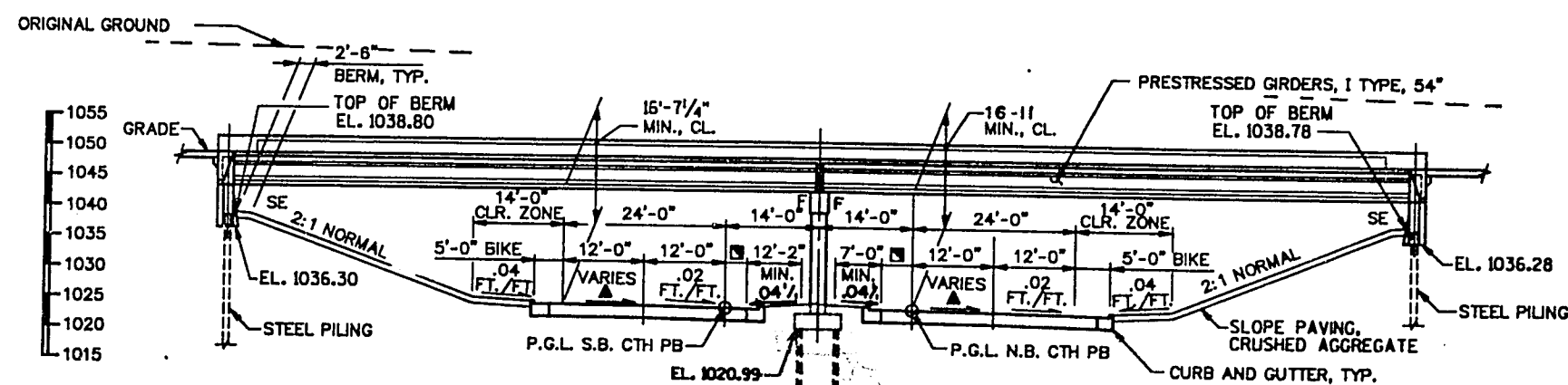
CONCRETE MASONRY SLAB — f'_c = 4,000 P.S.I. ALL OTHER — f'_c = 3,500 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 f_y = 60,000 P.S.I.
54" PRESTRESSED GIRDERS, CONCRETE MASONRY f'_c = 6,000 P.S.I.
STRANDS-1/2" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

TRAFFIC VOLUME

U.S.H. 18/151
A.D.T.=7,500 (2012)
R.D.S.=65 M.P.H.

C.T.H. PB
A.D.T.=5,500 (2012)
R.D.S.=50 M.P.H.

PLAN B-13-412

2 SPANS
PRESTRESSED GIRDERS, I TYPE, 54"

VARIES - TURNING LANE TAPER

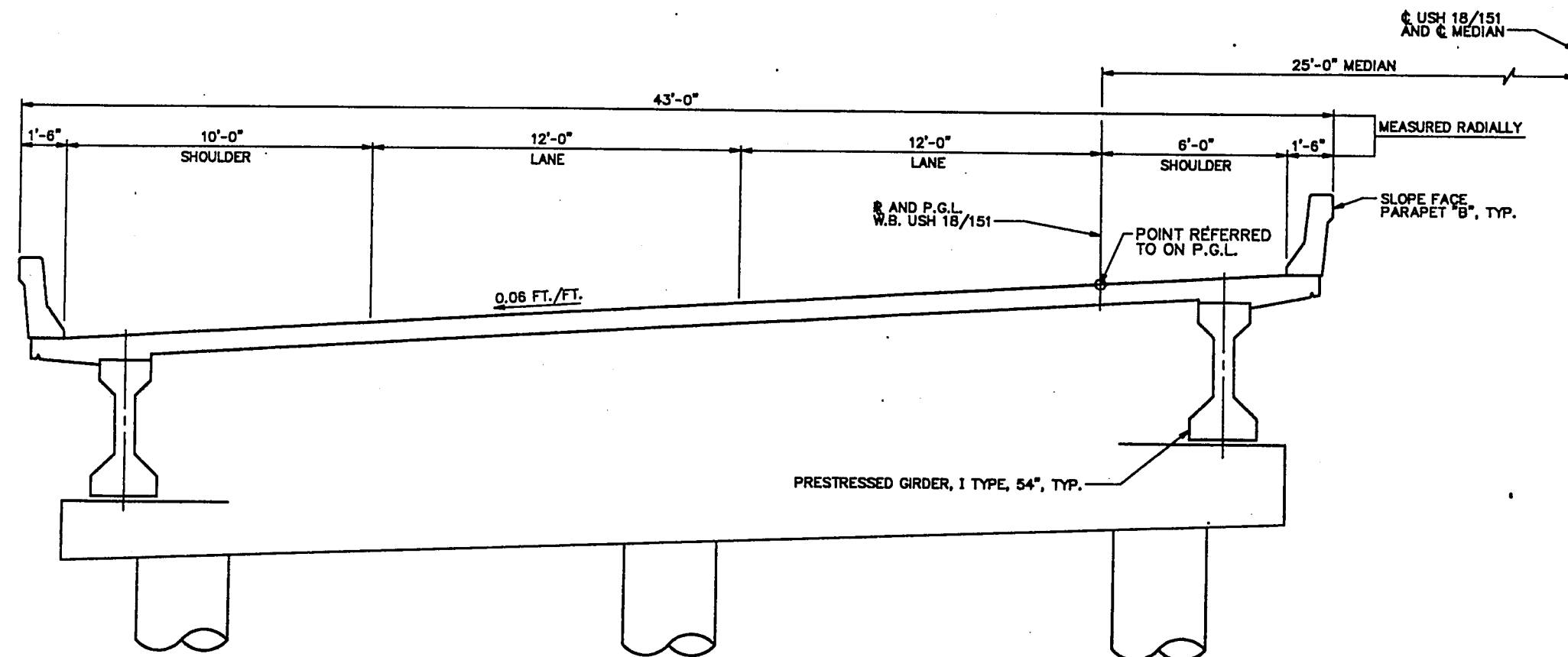
▲ SUPERELEVATION TRANSITION ZONE.
VARIES FROM -.01 FT/FT S SOUTH
SIDE TO .025 FT/FT N NORTH SIDE
OF B-13-412.

ELEVATION
(LOOKING NORTH)NOTE:
DIMENSIONS NORMAL TO C CTH PB.BRIDGE OFFICE CONTACT - R.L. REESE (608)266-8488
D.R. GENSEN (608)266-8491

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL PLAN
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. EAST ABUTMENT
6. ABUTMENT DETAILS
7. PIER
8. 54" PRESTRESSED GIRDER DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE
11. SUPERSTRUCTURE DETAILS
12. SLOPED FACE PARAPET 'B'
13. STEEL DIAPHRAGM

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-412			
USH 18/151 OVER CTH PB			
County	DANE	Town	VERONA
Design Spec.	AASHTO 1989	Load	HS-20
Designed By	SDR	Design Ch'd	CLA
Drawn By	RES	Checked	JCK
Approved	State Bridge Engineer		Date
GENERAL PLAN			SHEET 1 of 13
			X



CROSS SECTION THRU EASTBOUND LANE
LOOKING EAST

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	PIER	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-412	L.S.	—	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	314	56	57	51	478
PROTECTIVE SURFACE TREATMENT	GAL.	56	—	—	—	56
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	3,340	3,410	880	7,630
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	57,890	—	—	5,830	63,720
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	916	—	—	—	916
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	15	—	—	—	15
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	—	180	675	210	1,065
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	210	218	—	428
STEEL DIAPHRAGM	EACH	16	—	—	—	16
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	—	4
NON-BID ITEMS						
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	58	60	—	118
FILLER	SIZE	—	—	—	—	1/2" & 3/4"

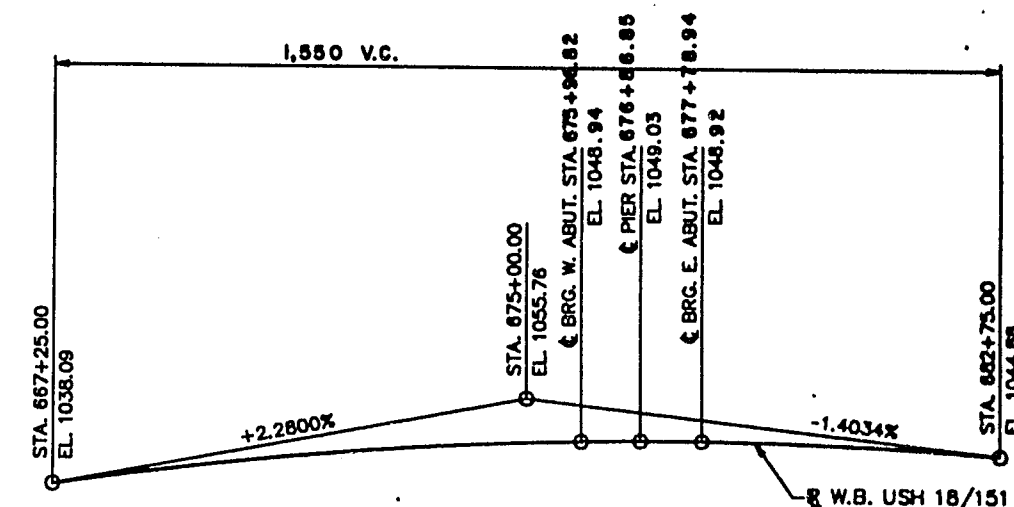
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

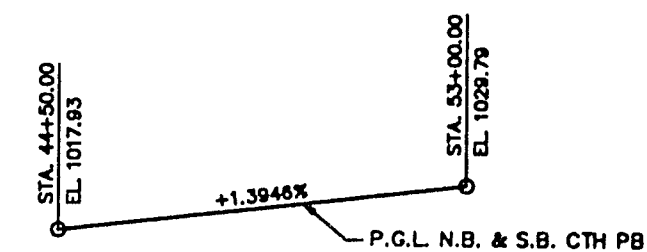
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED

THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES AT THE PIER.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING, CRUSHED AGGREGATE TO THE EXTENT SHOWN ON THE GENERAL PLAN, ABUTMENT DETAILS AND STANDARD DETAILS.

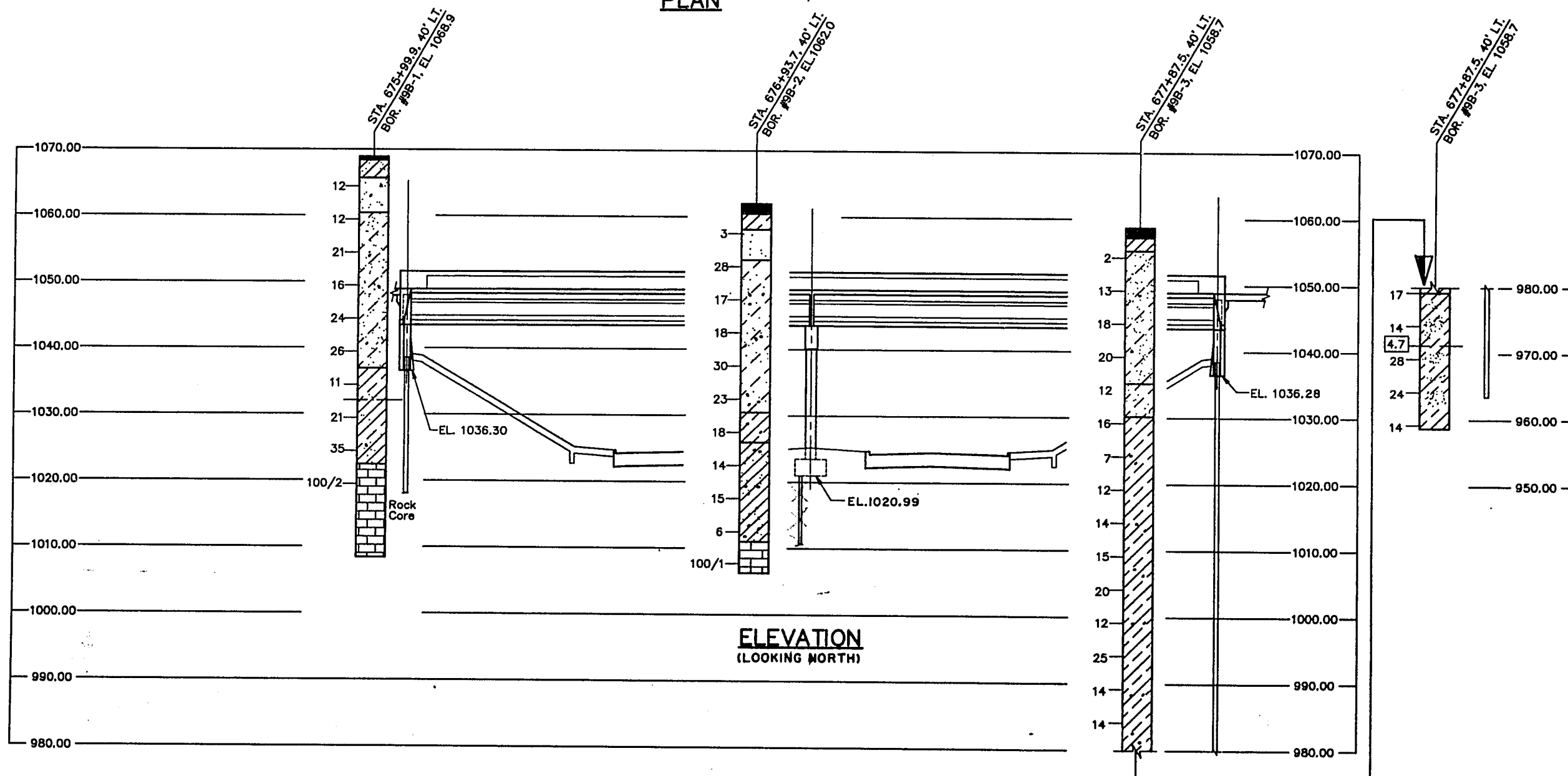
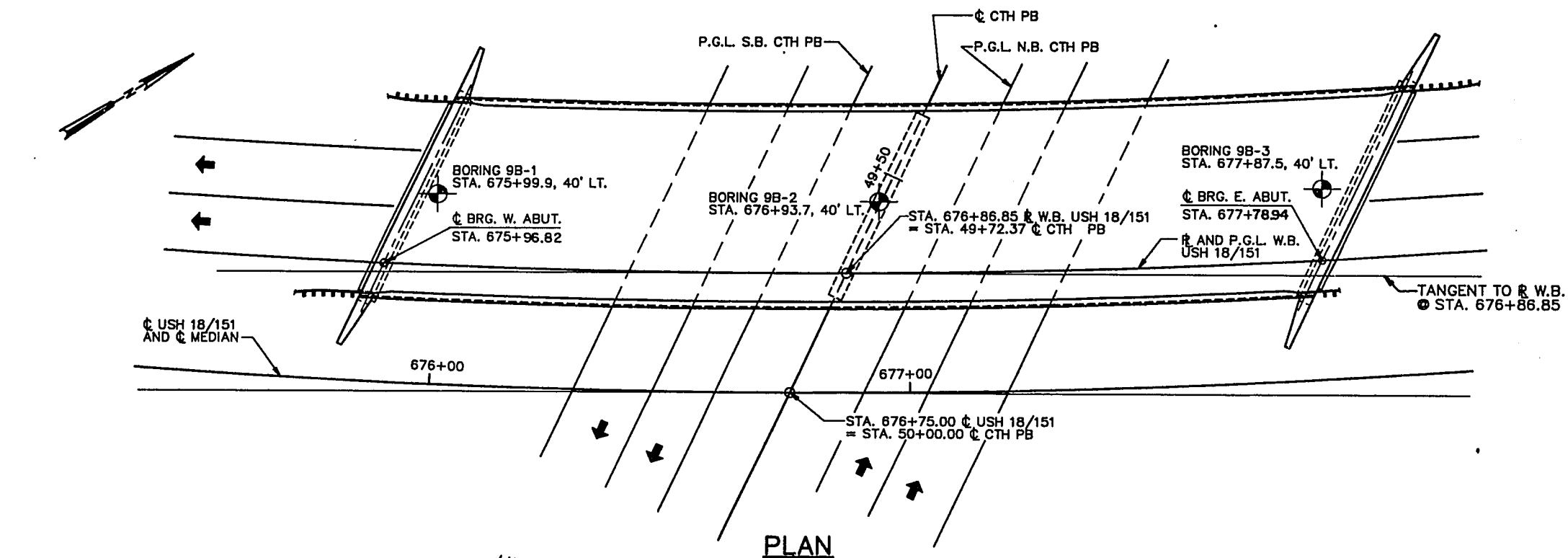


PROFILE GRADE LINE-
USH 18/151 WESTBOUND



PROFILE GRADE LINE-
CTH PB NORTHBOUND AND SOUTHBOUND

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-412			
Const. Spec.	1989	Drawn By	RES
		Checked	JCL
GENERAL PLAN			SHEET 2 of X



STATE PROJECT NUMBER SHEET NO

1201-04-76

8.15

ABBREVIATIONS

F FINE M MEDIUM C COARSE
WS WEATHERED SO SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SHALE
SAND CLAY LIMESTONE/DOLOMITE
GRAVEL BOULDERS/COBBLES SANDSTONE

LEGEND OF BORING

Elev. Boring No. Sta.

Unconfined Strength 7.7

Blows per Ft. Using 140# Wt. Falling 30"

Wash Sample *

Shelby Tube S.T.

Ground Water Elevation

No Ground Water Observed Above This Elevation

Sandy Gravel

F. Boulders or Cobbles

Sand

Silty Clay

So Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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

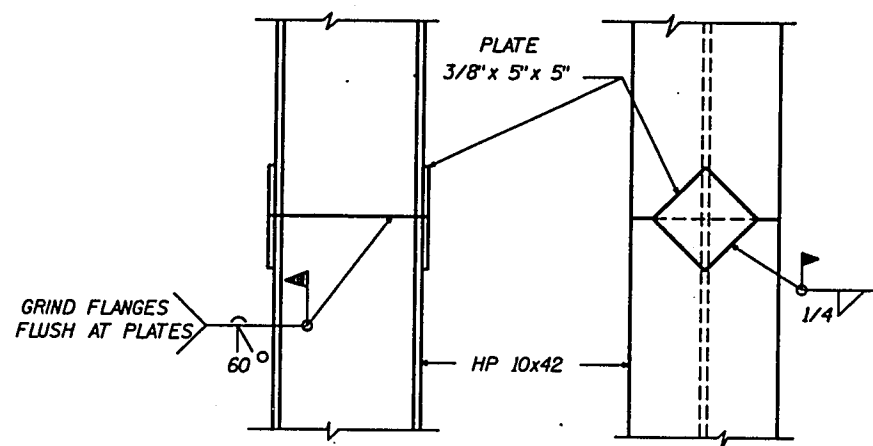
DESIGN AND BIDDERS INFORMATION

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.

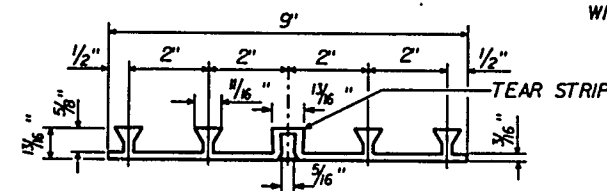
No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-412			
Const. Spec.	WS. '89	Drawn By	C.M.F. Phone Checked J.C.K.
SUBSURFACE EXPLORATION			SHEET 3 X

SPACE M401 & M402 BARS TO MISS PILING.

- (A) OPT. CONST. JOINT - FORMED BY SURFACED BEVELED 2' X 8" KEYWAY. 3/4" V GROOVE AT FRONT FACE. IF JOINT IS NOT USE V GROOVE NOT REQ'D.
- (B) VERT. CONST. JOINT - FORMED BY SURFACED BEVELED 2' X 8" KEYWAY. 3/4" V GROOVE AT FRONT FACE & P.V.C. WATERSTOP UP BACKFACE.
- (C) 1/2" FILLER FROM BEAM SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONC.)



PILE SPLICE DETAIL



P.C.W.
(POLYVINYL CHLORIDE WATERSTOP)
P.C.W. SHALL BE BUTT SPICED AT ALL INTERSECTIONS BY USING A HEATED SPICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING BITUMINOUS JOINT SEALER.

VERT. P.C.W. TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. P.C.W.

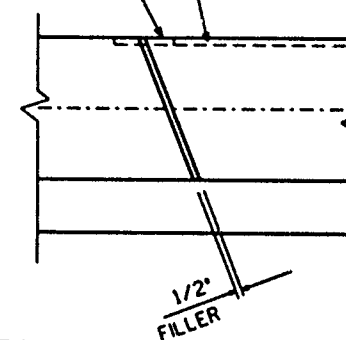
STATE PROJECT NUMBER

1201-04-76

SHEET NO.

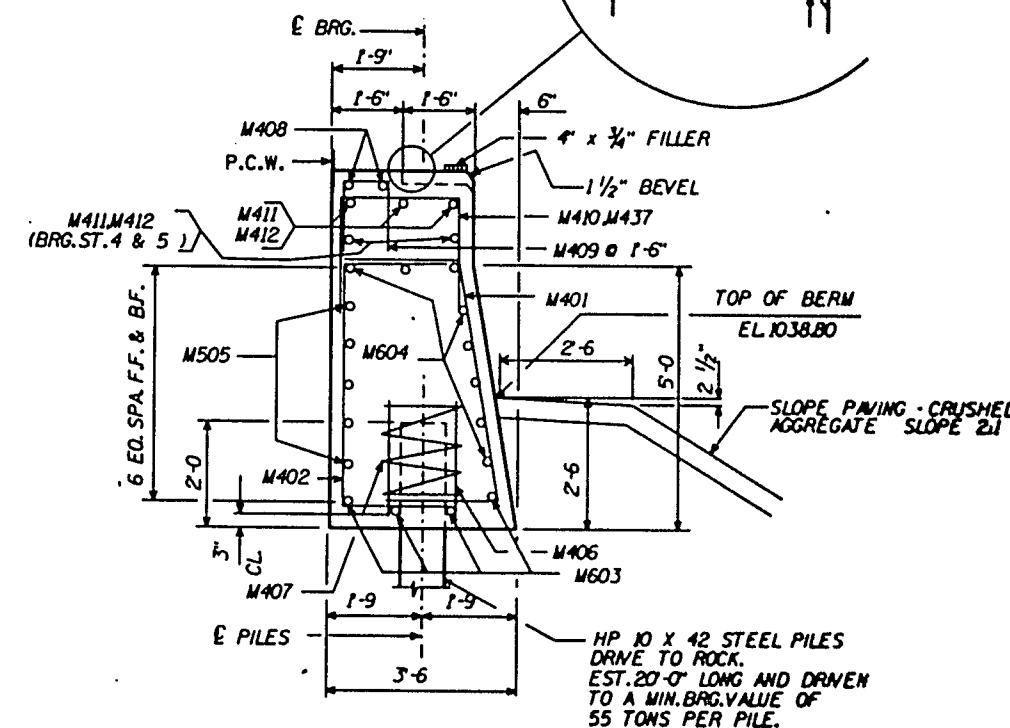
8.16

HORIZ. P.C.W. TO EXTEND BTWN. INSIDE FACES OF WINGS. FLUSH WITH FACE OF CONC.

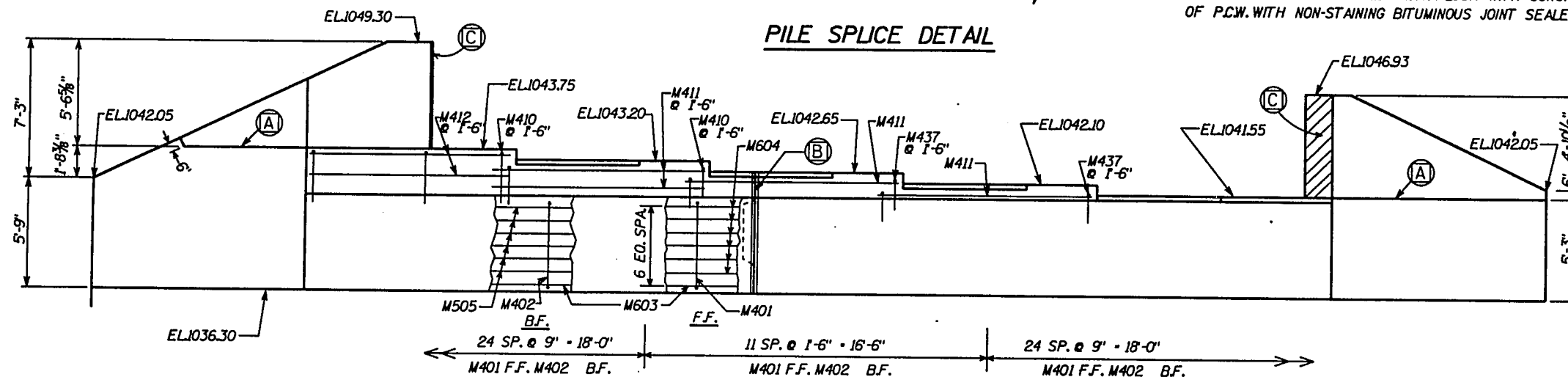


DETAIL "A"

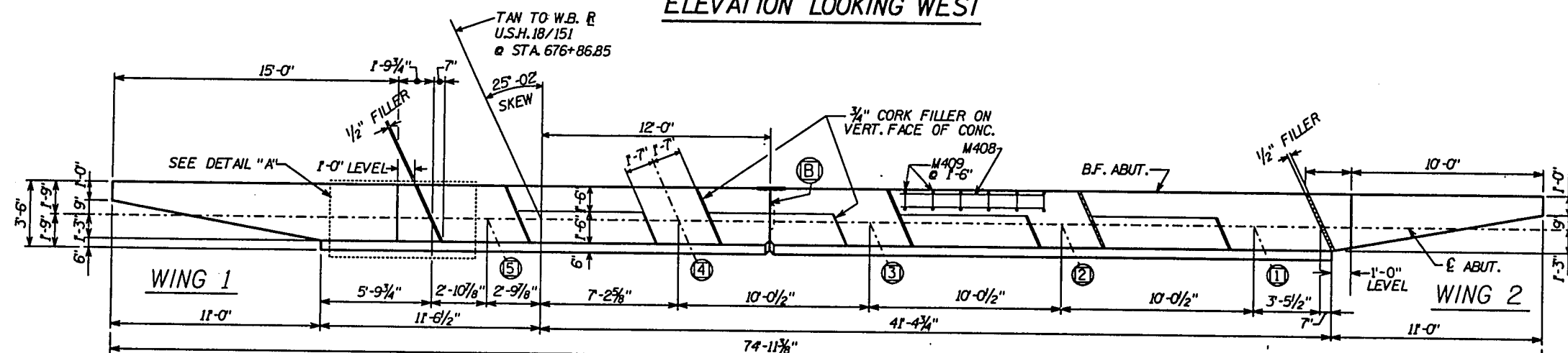
STEEL TROWEL TOP SURFACE OF ABUTMENT PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE 0.3" MIN)



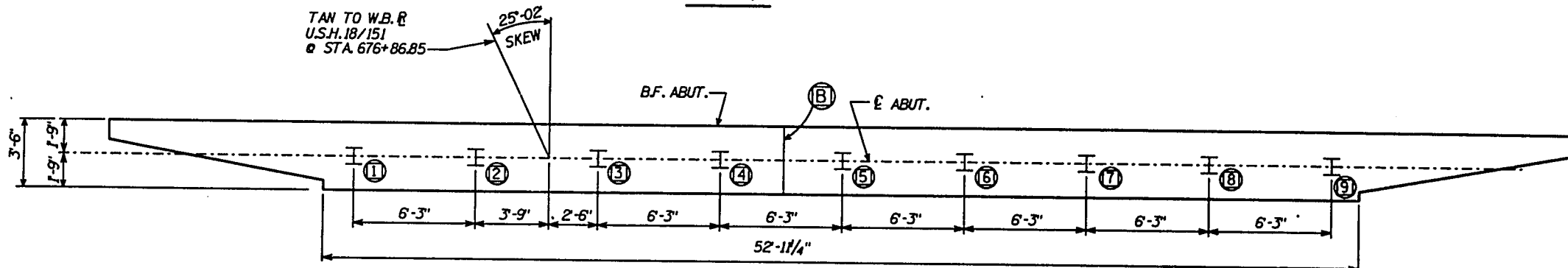
SECTION THRU BODY



ELEVATION LOOKING WEST



PLAN



PILE PLAN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1989	DRAWN BY C.M.F.	PLANS C.R.D. J.C.K.
WEST ABUTMENT			SHEET 4

SCALE 4

412ABUTS.DGN

STATE PROJECT NUMBER	SHEET NO.
1201-04-76	8.17

-
- PLATE
3/8" x 5" x 5"
- HP 10x42
- GRIND FLANGES
FLUSH AT PLATES
- 60°
- 1/4"

Technical drawing of a P.C.W. (Pneumatically Controlled Valve) showing dimensions and a tear strip. The drawing includes the following dimensions and labels:

- Overall width: 9"
- Top flange thickness: $\frac{1}{2}"$
- Internal spacing (left to right): $2"$, $2"$, $2"$, $2"$
- Internal hole diameter (left to right): $\frac{5}{16}"$, $\frac{9}{16}"$, $\frac{13}{16}"$, $\frac{5}{16}"$
- Bottom flange thickness: $\frac{1}{4}"$
- Right side flange thickness: $\frac{1}{2}"$
- Right side hole diameter: $\frac{5}{16}"$
- Label: **TEAR STRIP** (pointing to the right side flange)
- Label: **P.C.W.** (Pneumatically Controlled Valve)

HORIZ. PCW. TO EXTEND BTWN. INSIDE
FACES OF WINGS. FLUSH WITH FACE OF
CONC.

1/2"
FILLER

[illegible]

ELEVATION LOOKING EAST

TAN TO W.B.R.
U.S.H. 18/151
@ STA. 676+86.85

SKEW 25°-02'

SEE DETAIL "A"

LEVEL

N409 @ 1'-6"
N408
N439
N412

PLAN

[illegible]

HORIZ. PLW. TO EXTEND BTWN. INSIDE
FACES OF WINGS. FLUSH WITH FACE OF
CONC.

[illegible]

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1989	DRAWN BY C.M.F.	PLANS CND. J.C.K.
EAST ABUTMENT			SHEETS

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
M401		60	8-8	X			BODY F.F. VERT.
M402		60	9-1	X			BODY B.F. VERT.
M603		8	27-10				BODY BOT. HORIZ.
M604		16	28-6	X			BODY F.F. & TOP HORIZ.
M505		10	27-7				BODY B.F. HORIZ.
M406		18	2-3				BODY PILES VERT.
M407		9	28-0	X			BODY PILES HORIZ.
M408		8	7-6				BODY TOP HORIZ.
M409		24	3-11	X			BODY TOP VERT.
M410		15	9-6	X			BODY TOP VERT.
M411		11	11-0				BODY TOP HORIZ.
M412		5	10-2				BODY TOP HORIZ.
M413		3	12-7				WING 1 F.F. & B.F. VERT.
M414		10	17-4		X		WING 1 F.F. & B.F. VERT.
M515		10	12-6	X			WING 1 & 2 F.F. HORIZ.
M616		2	11-3	X			WING 1 & 2 F.F. HORIZ.
M617		2	14-1				WING 1 & 2 B.F. HORIZ.
M618		10	12-7				WING 1 & 2 B.F. HORIZ.
M419		1	10-4	X			WING 1 F.F. HORIZ.
M420		1	7-2	X			WING 1 F.F. HORIZ.
M421		1	4-0				WING 1 F.F. HORIZ.
M422		1	9-2				WING 1 B.F. HORIZ.
M423		1	6-1				WING 1 B.F. HORIZ.
M424		1	2-11				WING 1 B.F. HORIZ.
M425		1	14-8	X			WING 1 F.F. HORIZ.
M426		1	17-1	X			WING 1 B.F. HORIZ.
M427		3	10-2				WING 2 VERT.
M428		7	15-3		X		WING 2 F.F. & B.F. VERT.
M429		1	8-3				WING 2 F.F. VERT.
M430		1	5-1				WING 2 F.F. VERT.
M431		1	2-0				WING 2 F.F. VERT.
M432		1	3-0				WING 2 B.F. HORIZ.
M433		1	6-1				WING 2 B.F. HORIZ.
M434		1	9-3				WING 2 B.F. HORIZ.
M435		1	11-5	X			WING 2 F.F. VERT.
M436		1	12-5	X			WING 2 B.F. VERT.
M437		16	7-0	X			BODY - TOP
M438		1	3-8	X			WING 1 - TOP F.F.
M639		1	14-2	X			WING 2 - F.F.

STATE PROJECT NUMBER

1201-04-76

SHEET NO.

8.18

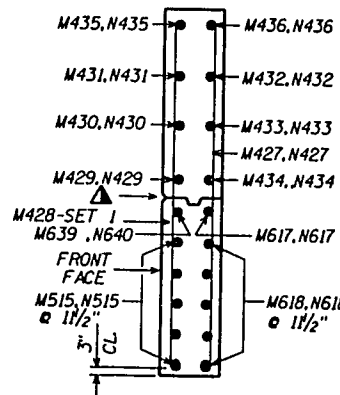
BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
N401		61	8-8	X			BODY F.F. VERT.
N402		61	9-1	X			BODY B.F. VERT.
N603		8	28-10				BODY BOT. HORIZ.
N604		16	29-6	X			BODY F.F. & TOP HORIZ.
N505		10	28-7				BODY B.F. HORIZ.
N406		18	2-3				BODY PILES VERT.
N407		9	28-0	X			BODY PILES HORIZ.
N408		8	7-6				BODY TOP HORIZ.
N409		24	3-11	X			BODY TOP VERT.
N410		15	9-6	X			BODY TOP VERT.
N411		11	11-0				BODY TOP HORIZ.
N412		3	10-5				BODY TOP HORIZ.
N413		3	12-7				WING 4 F.F. & B.F. VERT.
N414		10	17-4		X		WING 4 F.F. & B.F. VERT.
N515		10	12-7	X			WING 4 & 3 F.F. HORIZ.
N616		2	11-3	X			WING 4 & 3 F.F. HORIZ.
N617		2	14-1				WING 4 & 3 B.F. HORIZ.
N618		10	12-7				WING 4 & 3 B.F. HORIZ.
N419		1	9-4	X			WING 4 F.F. HORIZ.
N420		1	6-2	X			WING 4 F.F. HORIZ.
N421		1	3-1				WING 4 F.F. HORIZ.
N422		1	10-4				WING 4 B.F. HORIZ.
N423		1	7-2				WING 4 B.F. HORIZ.
N424		1	4-1				WING 4 B.F. HORIZ.
N425		1	14-8	X			WING 4 F.F. HORIZ.
N426		1	18-2	X			WING 4 B.F. HORIZ.
N427		3	10-2				WING 3 VERT.
N428		7	15-3		X		WING 3 F.F. & B.F. VERT.
N429		1	10-8	X			WING 3 F.F. VERT.
N430		1	7-8	X			WING 3 F.F. VERT.
N431		1	4-6	X			WING 3 F.F. VERT.
N432		1	3-6				WING 3 B.F. HORIZ.
N433		1	6-8				WING 3 B.F. HORIZ.
N434		1	9-8				WING 3 B.F. HORIZ.
N435		1	12-6	X			WING 3 F.F. VERT.
N436		1	11-6	X			WING 3 B.F. VERT.
N437		16	7-0	X			BODY - TOP
N438		1	2-8	X			WING 4 - TOP F.F.
N439		2	11-8				BODY - TOP
N640		1	14-2	X			WING 3

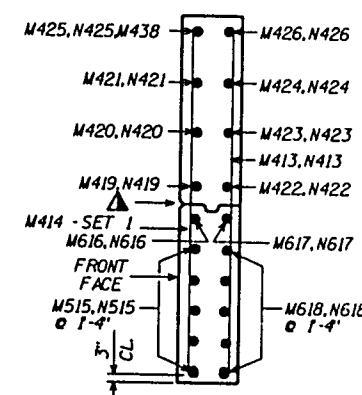
M604 N604
STD. 180°
HOOK. TYP.

"F"



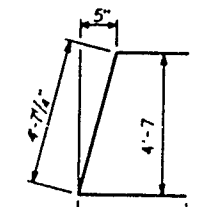
SECTION THRU
WINGS 2 & 3

Δ CONST. JOINT - FORMED BY SURFACED BEVELED
2" x 6" KEYS. 1/4" V GROOVE ALONG F.F.
IF JOINT IS USED.

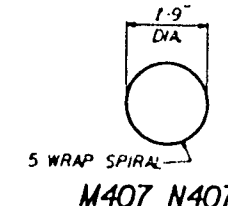


SECTION THRU
WINGS 1 & 4

MARK	"E"	"F"
M515	1'-11 1/2"	10'-9"
M616	1'-5"	7'-9"
M419	10"	4'-7"
M420	3"	1'-6"
M425	1'-9 1/2"	11'-11 1/2"
M426	7'-1"	14'-9"
M435	4'-8"	9'-9"
M436	4'-8"	9'-9"
N515	1'-11 1/2"	10'-9"
N616	1'-5"	7'-9"
N419	10"	4'-7"
N420	3"	1'-6"
N425	1'-9 1/2"	11'-11 1/2"
N426	7'-1"	14'-9"
N435	4'-8"	9'-9"
N436	4'-8"	9'-9"
N438	9 1/2"	1'-7 1/4"
N439	1'-11"	10'-10"
N640	1'-11"	10'-10"



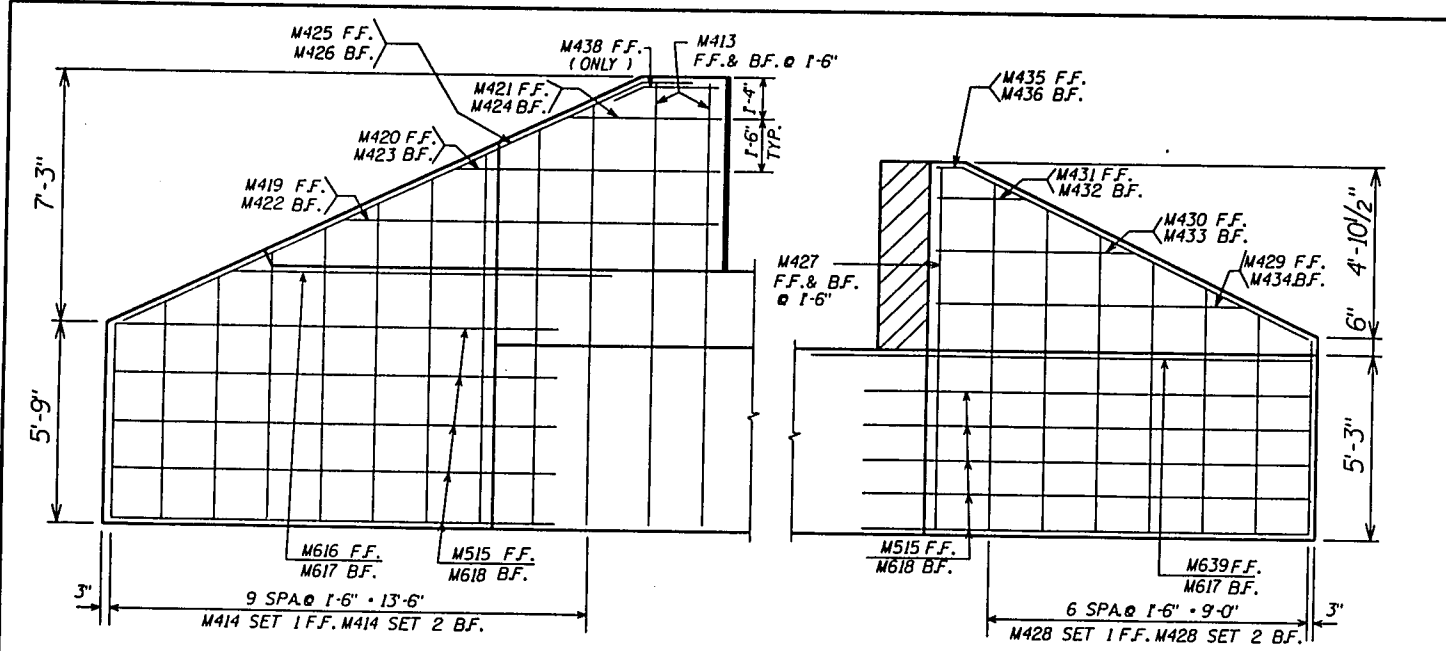
M401 N401



M407 N407

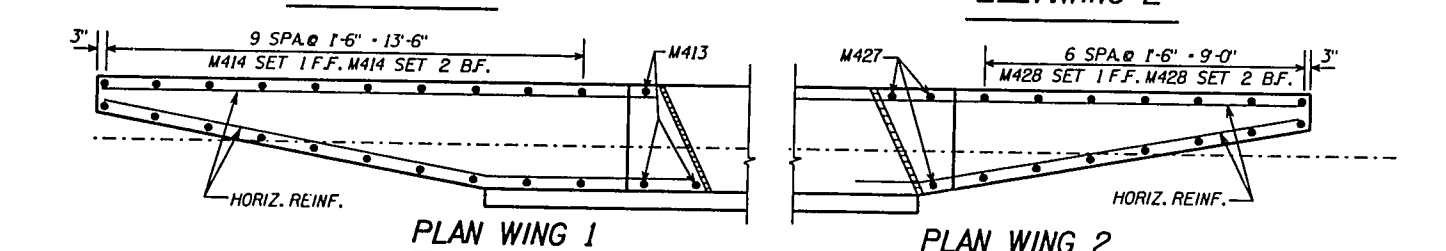
MARK	"C"	"D"
M402	2'-4"	4'-4"
M409	1'-6"	1'-2"
M410	3'-6"	2'-8"
M431	2'-5"	2'-8"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1989	DRAWN BY C.M.F.	PLANS CAD J.C.K.
ABUTMENT DETAILS			SHEET 6
			X



ELEV. WING 1

ELEV. WING 2



GIRDER NOTES

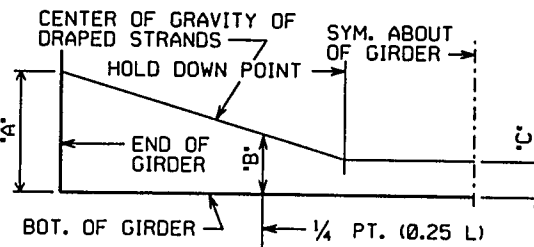
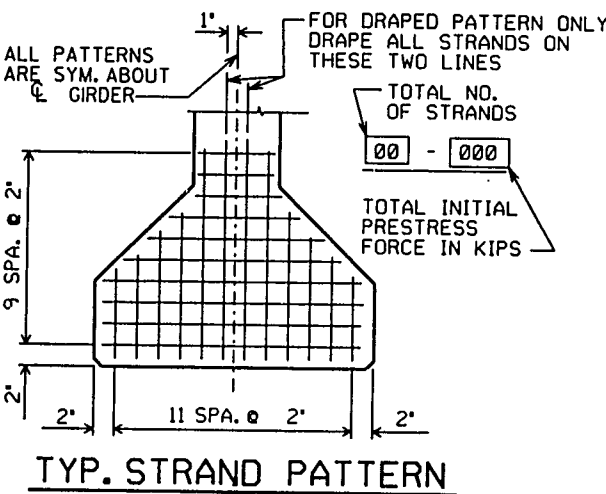
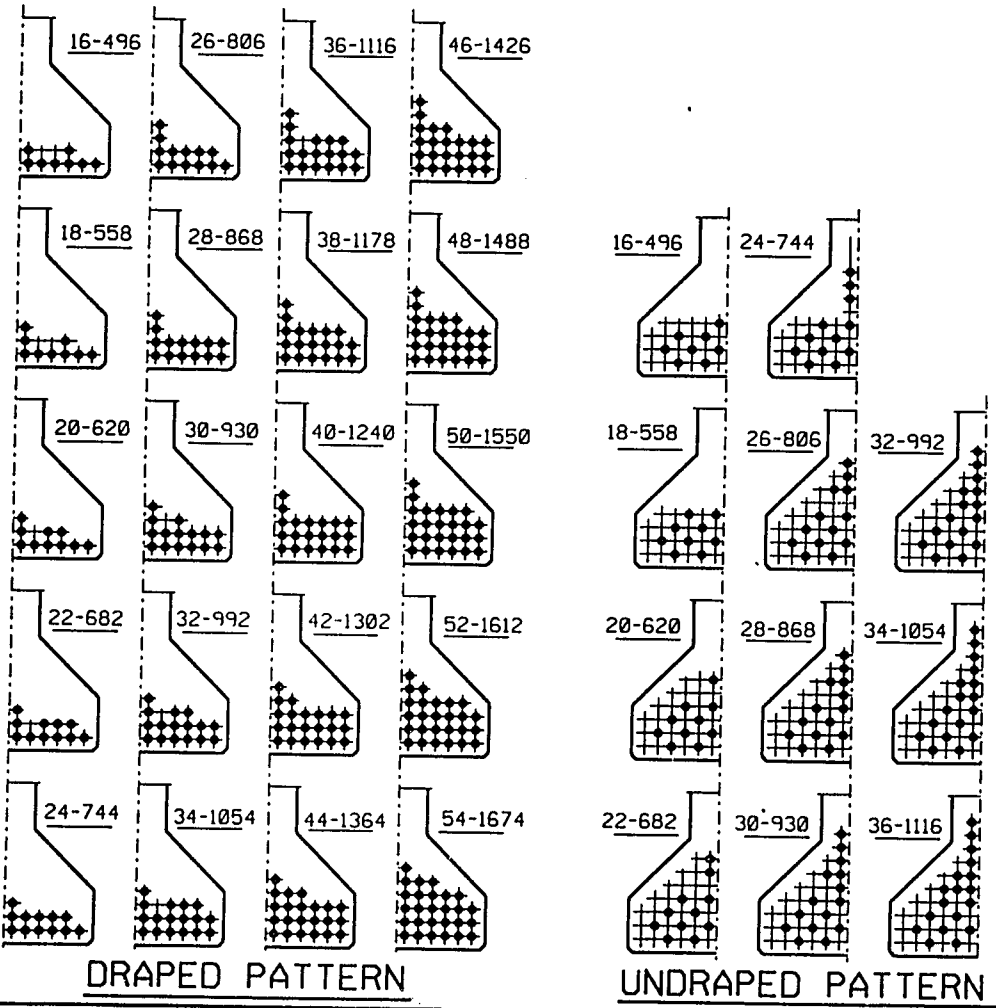
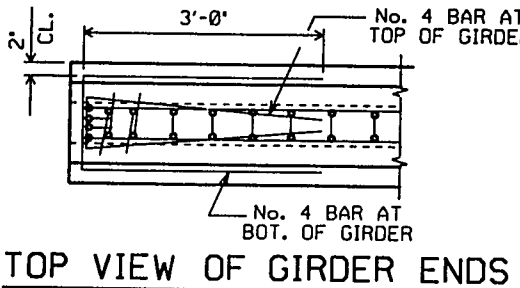
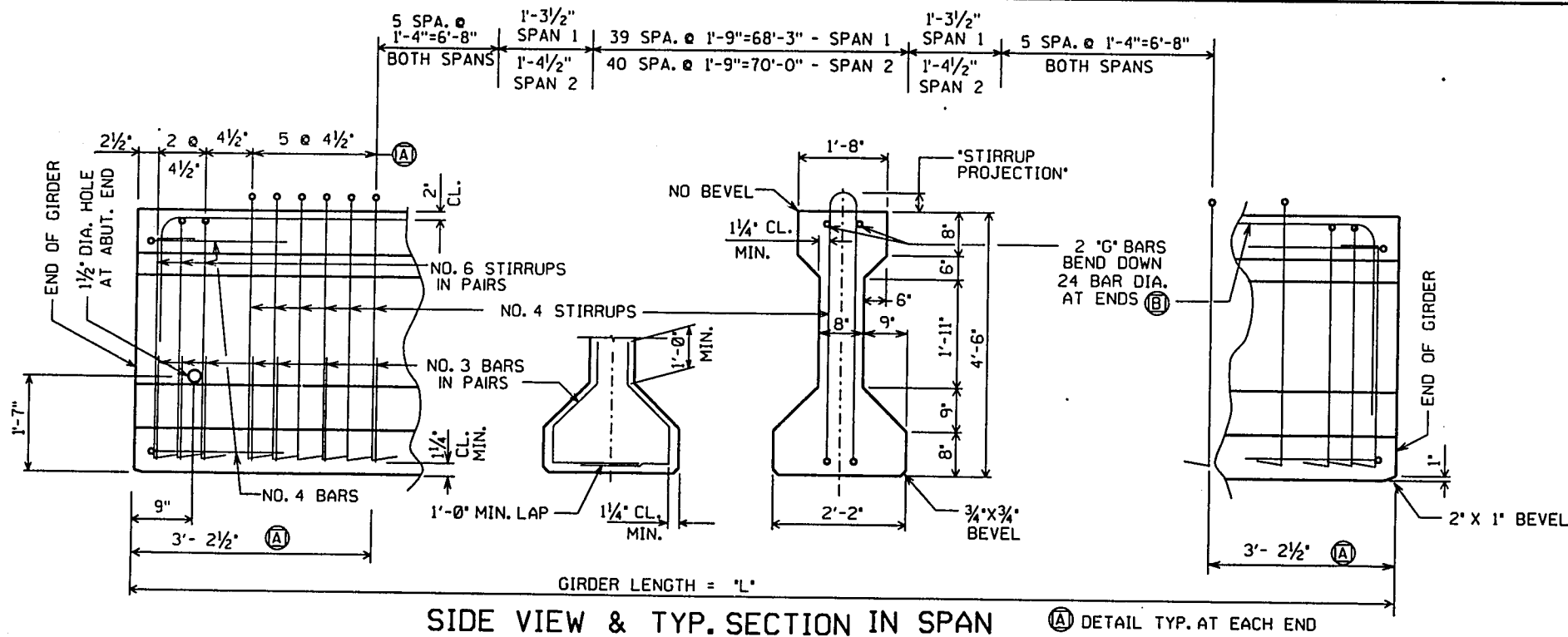
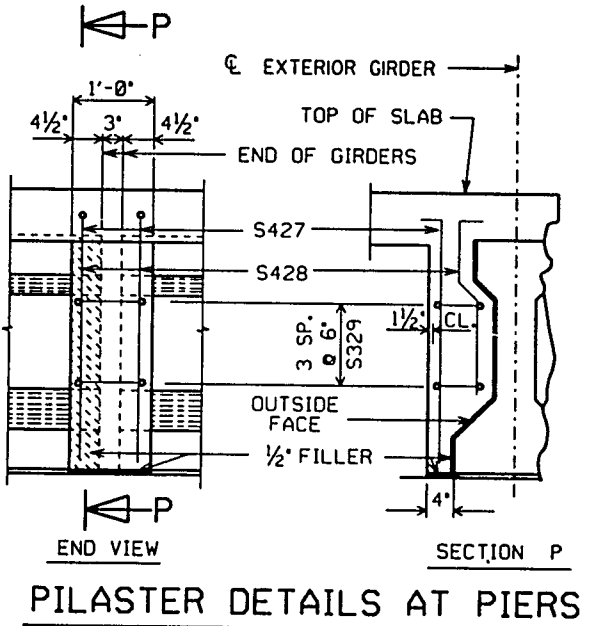
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

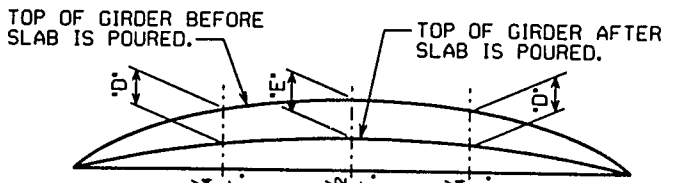
PRESTRESSING STRANDS SHALL BE 1/2" - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF NO. 4 STIRRUPS 4 1/2" AND NO. 6 STIRRUPS 6 1/2".

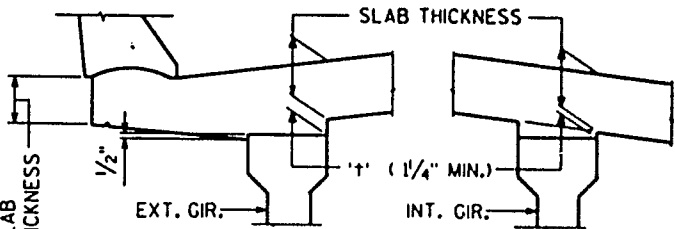
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF 1 1/4" 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. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT CL. OF SUBSTRUCTURE UNITS & AT 1/4 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'

GIRDER DATA						No. 4 "C" BARS, MAY BE SPLICED AT THE 1/3 POINTS. USE 1'-11" MIN. LAP.					
SPAN	GIRDER LENGTH 'L'	DEAD LOAD DEF. (IN.)		CONC. STRGTH. f'c (p.s.i.)	STIRRUP PROJECTION	DRAPED PATTERN (INCHES)				UNDRAPED PATTERN	
		'D'	'E'			TOTAL NO. OF STRANDS	f'ci (p.s.i.)	'A'	'B' MIN.	'B' MAX.	'C'
1	90'-7"	7/8"	1 1/8"	6,000	6"	36	4,800	48	16.5	19.5	6
2	92'-6"	7/8"	1 1/8"	6,000	6"	36	4,800	48	16.5	19.5	6

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-412

CONST. SPEC. 1989

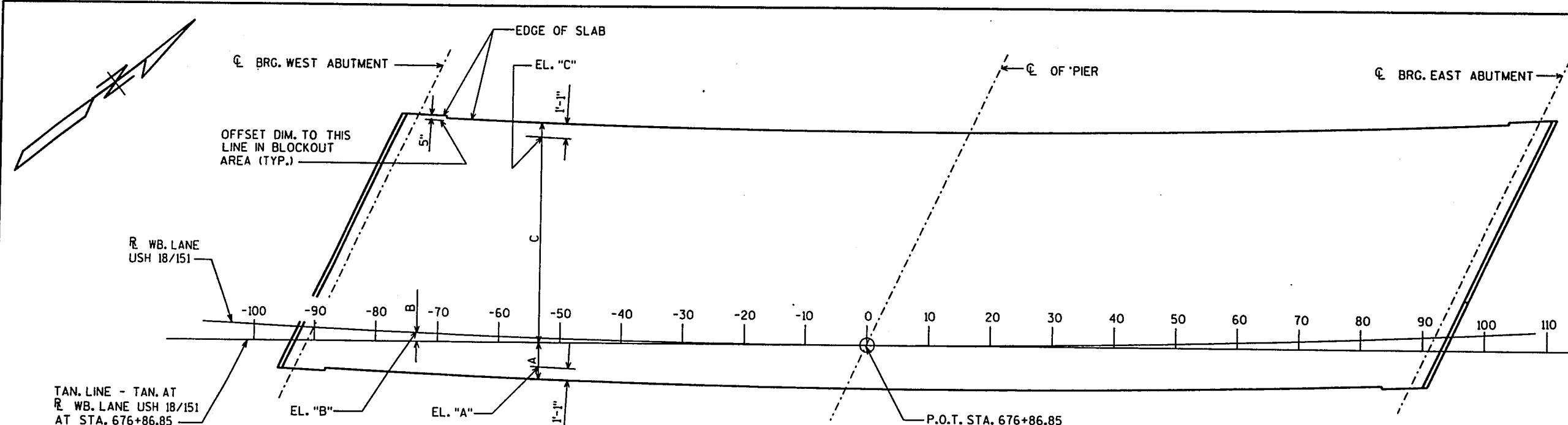
DRAWN BY RIES

PLANS C.O.D. J.C.K.

54" PRESTRESSED GIRDER DETAILS

SHEET 8

X



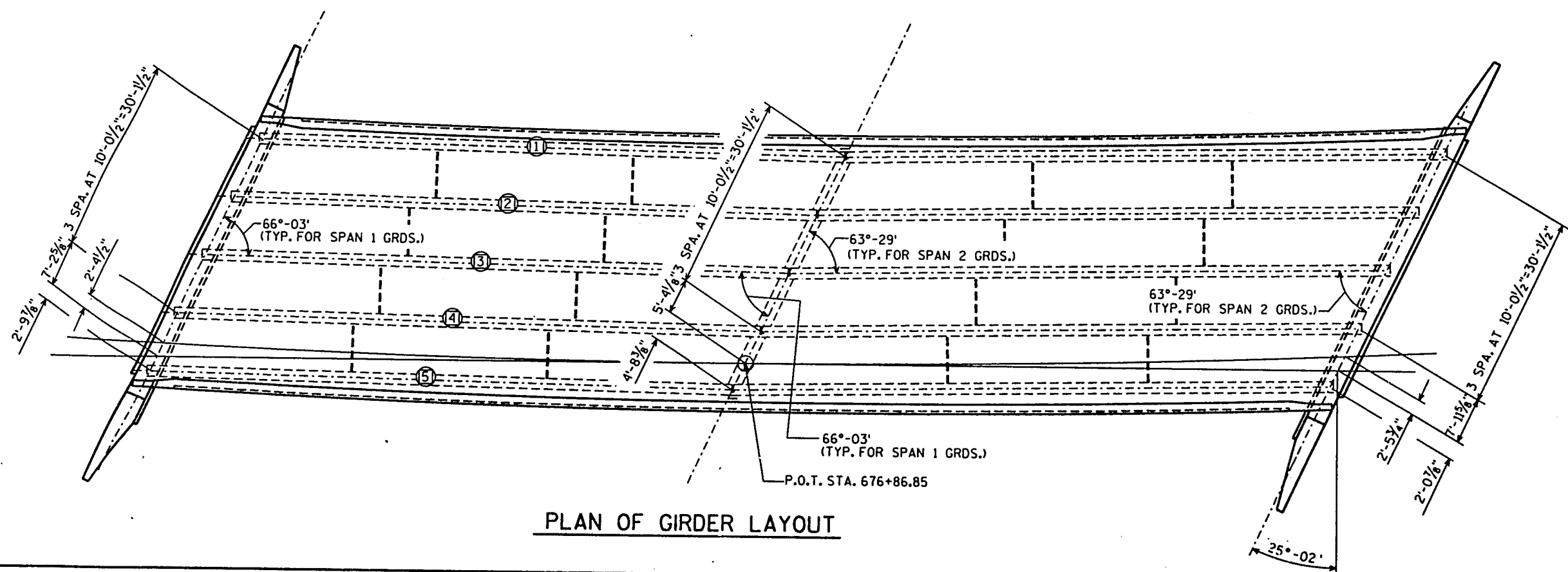
PLAN FOR TANGENT OFFSETS

TABLE OF TAN. OFFSETS
(OFFSETS ARE NORMAL TO TAN. LINE.)

DIST.	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110
DIM. "A"	4'-5 1/4"	4'-11 1/4"	5'-4 5/8"	5'-9 3/8"	6'-1 1/2"	6'-5"	6'-7 7/8"	6'-10 1/8"	6'-11 3/4"	7'-0 5/8"	7'-1"	7'-0 5/8"	6'-11 3/4"	6'-10 1/8"	6'-7 7/8"	6'-5"	6'-1 1/2"	5'-9 3/8"	5'-4 5/8"	4'-11 1/4"	4'-5 1/4"	3'-10 1/2"
EL. "A"	1049.28	1049.30	1049.32	1049.34	1049.35	1049.37	1049.38	1049.38	1049.39	1049.39	1049.39	1049.39	1049.39	1049.38	1049.38	1049.35	1049.35	1049.34	1049.32	1049.29	1049.26	1049.24
DIM. "B"	2'-7 7/8"	2'-1 3/4"	1'-8 1/4"	1'-3 3/8"	1 1/2"	8"	5 1/8"	2 7/8"	1 1/4"	3/8"	0	3/8"	1 1/4"	2 7/8"	5 1/8"	8"	1 1/2"	1'-3 3/8"	1'-8 1/4"	2'-1 3/4"	2'-7 7/8"	3'-2 5/8"
EL. "B"	1048.91	1048.94	1048.96	1048.97	1048.99	1049.00	1049.01	1049.02	1049.02	1049.03	1049.03	1049.03	1049.02	1049.02	1049.01	1049.00	1048.99	1048.97	1048.96	1048.94	1048.91	1048.89
DIM. "C"	37'-9 3/8"	37'-3 1/4"	36'-9 3/4"	36'-4 7/8"	36'-0 5/8"	35'-9 1/8"	35'-6 1/8"	35'-3 3/8"	35'-2 1/4"	35'-1 1/4"	35'-1"	35'-1 1/4"	35'-2 1/4"	35'-3 3/8"	35'-6 1/8"	35'-9 1/8"	36'-0 5/8"	36'-4 7/8"	36'-9 3/4"	37'-3 1/4"	37'-9 3/8"	38'-4 1/4"
EL. "C"	1046.87	1046.89	1046.91	1046.93	1046.95	1046.96	1046.97	1046.98	1046.98	1046.99	1046.99	1046.99	1046.98	1046.97	1046.97	1046.95	1046.94	1046.92	1046.90	1046.88	1046.86	1046.83

TOP OF DECK ELEVATIONS

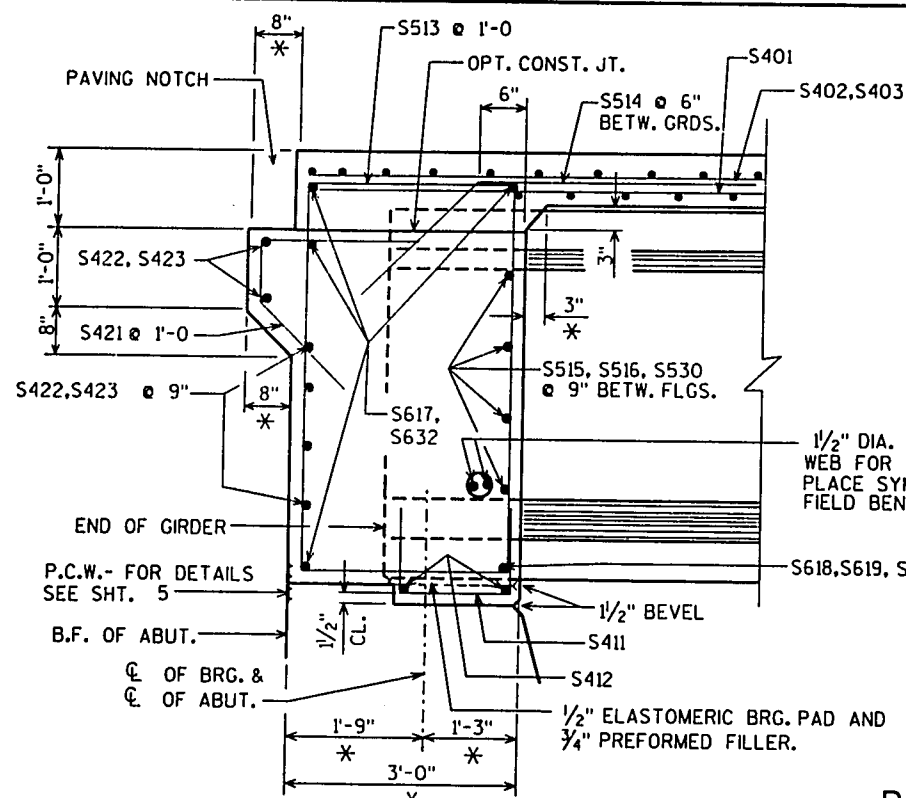
	CL BRG. W. ABUT	1/4 PT.	1/2 PT.	3/4 PT.	CL PIER	1/4 PT.	1/2 PT.	3/4 PT.	CL BRG. E. ABUT
GIRDER 1	1047.02	1047.04	1047.05	1047.08	1047.10	1047.07	1047.04	1047.02	1047.00
GIRDER 2	1047.57	1047.58	1047.60	1047.62	1047.64	1047.61	1047.58	1047.56	1047.54
GIRDER 3	1048.12	1048.13	1048.15	1048.17	1048.19	1048.16	1048.13	1048.10	1048.08
GIRDER 4	1048.67	1048.68	1048.70	1048.72	1048.74	1048.70	1048.67	1048.65	1048.62
GIRDER 5	1049.22	1049.23	1049.24	1049.26	1049.28	1049.25	1049.22	1049.19	1049.17



PLAN OF GIRDER LAYOUT

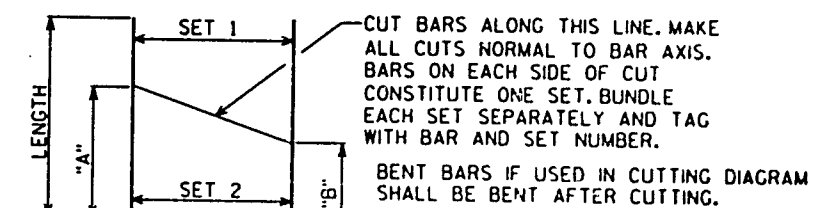
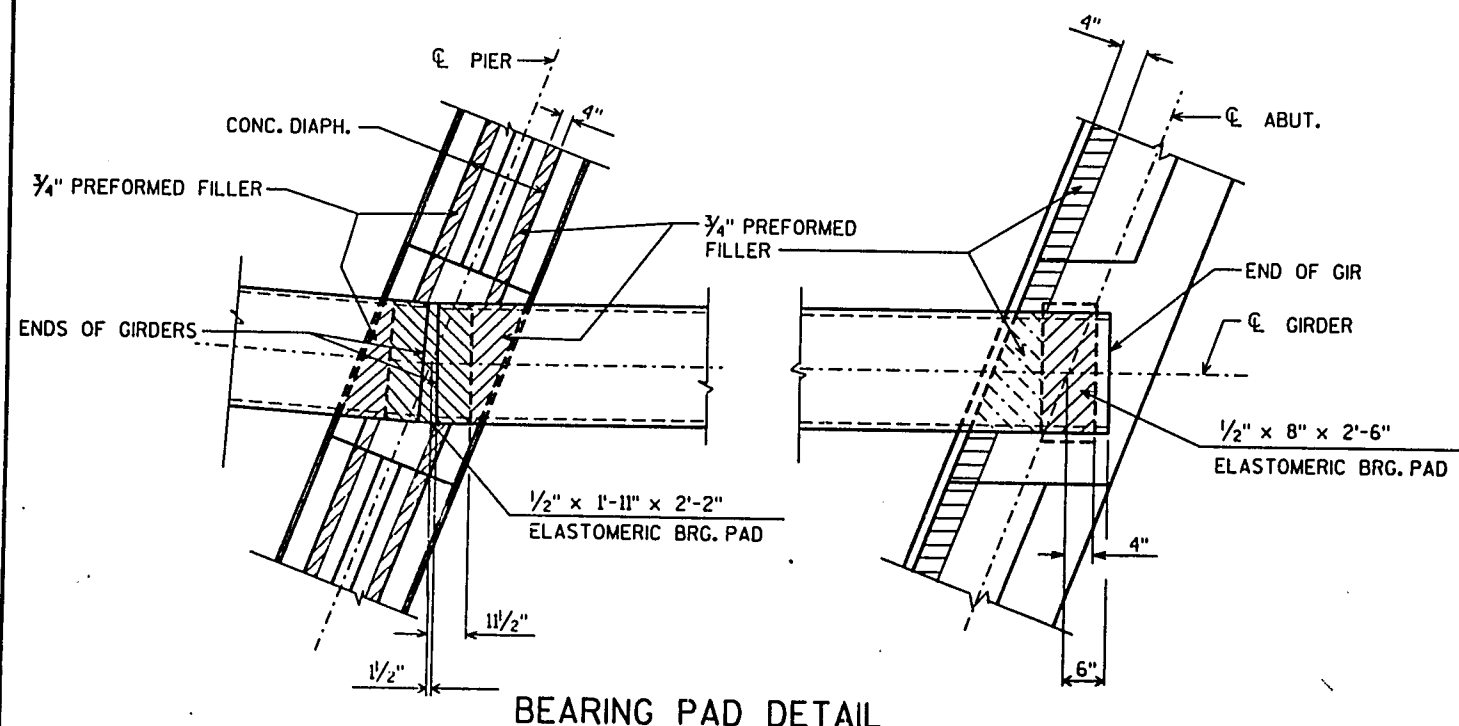
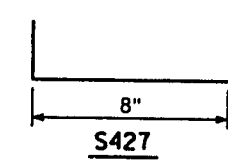
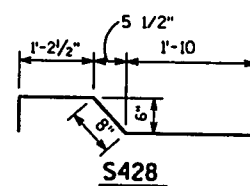
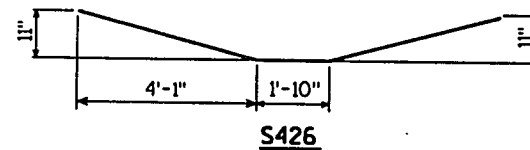
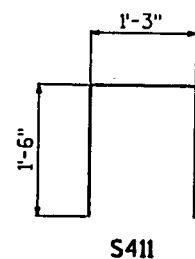
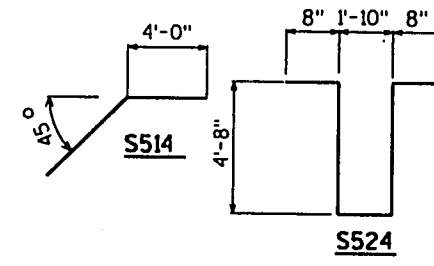
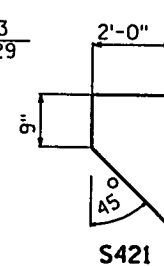
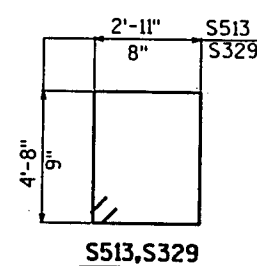
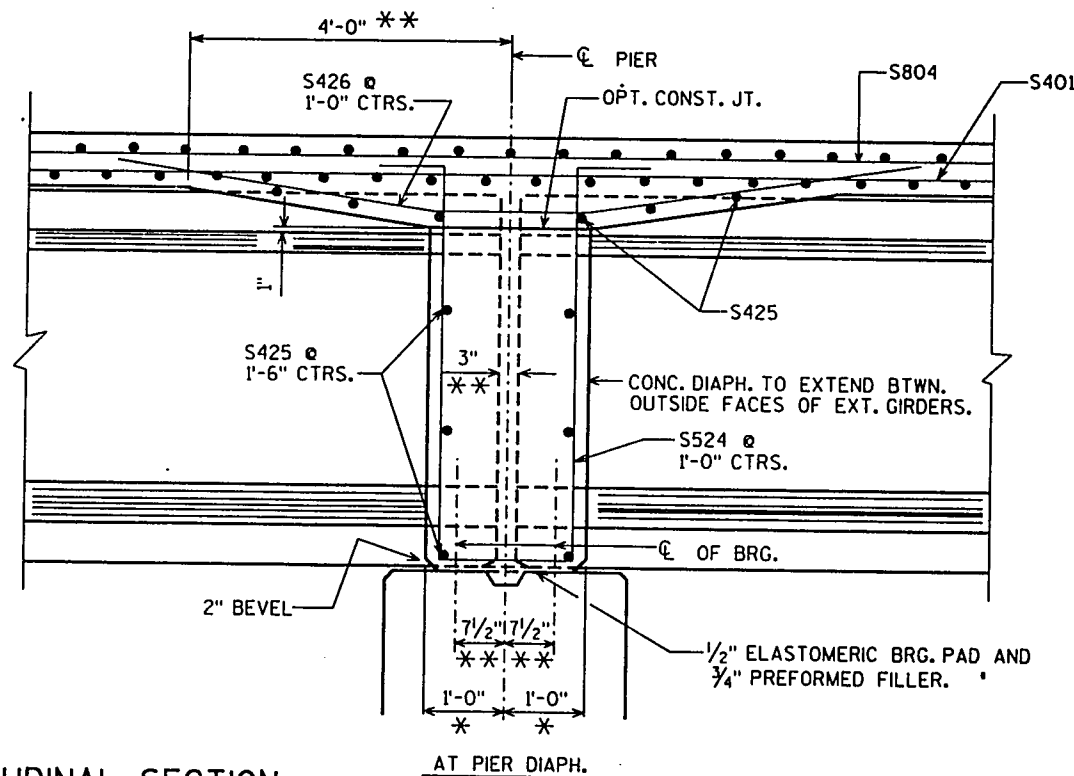
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1989	DRAWN BY RES	PLANS C&D JCK
SUPERSTRUCTURE			SHEET 9
			X

BR_813412-412SUPER.DGN



PART LONGITUDINAL SECTION

* DIMENSIONS TAKEN AT RIGHT ANGLES TO SUBSTRUCTURE UNITS.
 ** DIMENSIONS GIVEN PARALLEL TO $\bar{C}$ OF GIRDER.



STATE PROJECT NUMBER	SHEET NO.
1201-04-76	8.23

BILL OF BARS

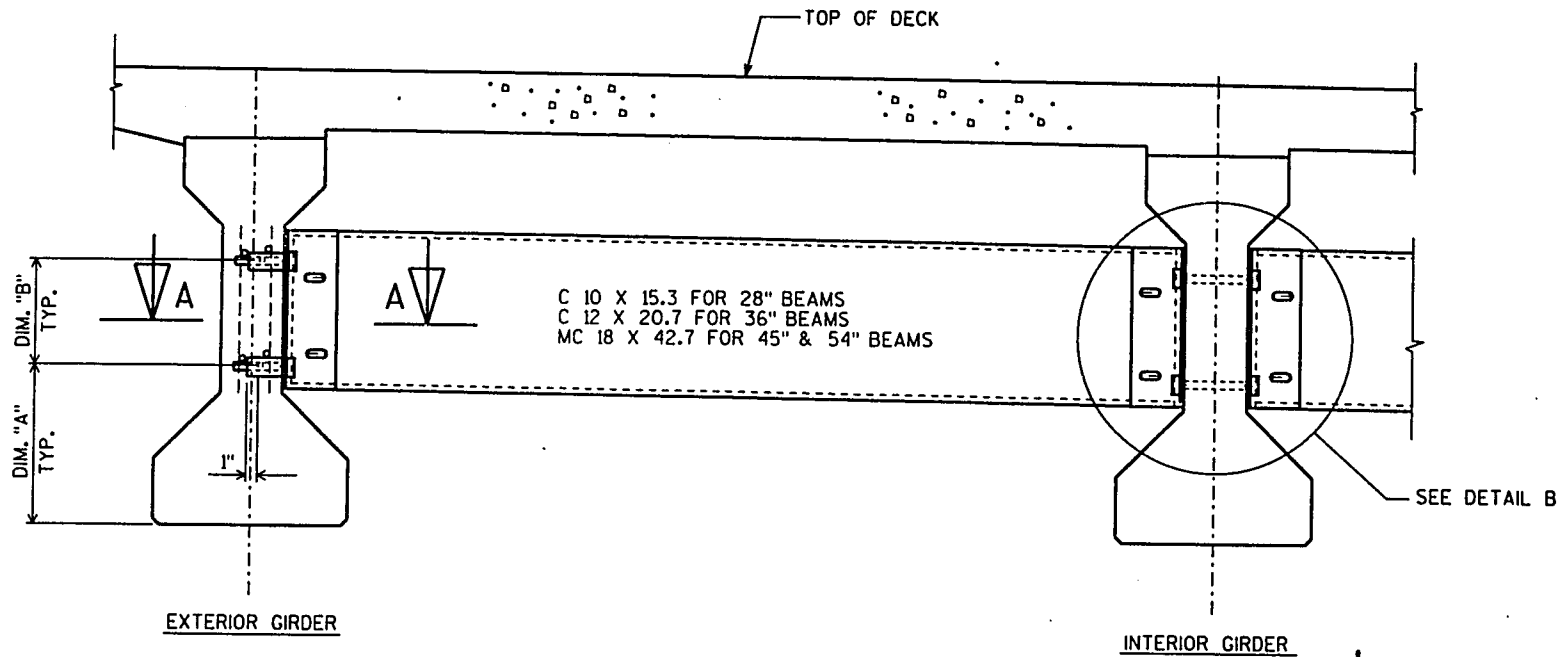
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
S401	X	330	39-0				SLAB BOT. LONGIT.
S402	X	201	26-6				SLAB TOP LONGIT.
S403	X	201	29-0				SLAB TOP LONGIT.
S804	X	67	32-9				SLAB TOP OVER PIER LONGIT.
S505	X	492	41-10				SLAB TOP & BOT. TRANS.
S506	X	40	42-3				SLAB TOP & BOT. TRANS.
S507	X	20	55-8	X			SLAB TOP & BOT. TRANS.
S508	X	10	14-11	X			SLAB TOP & BOT. TRANS.
S509	X	22	55-8	X			SLAB TOP & BOT. TRANS.
S510	X	10	14-1	X			SLAB TOP & BOT. TRANS.
S411	X	48	4-1	X			DIAPH. @ ABUT. VERT.
S412	X	16	6-2				DIAPH. @ ABUT. HORIZ.
S513	X	68	15-9	X			DIAPH. @ ABUT. VERT.
S514	X	120	6-0	X			DIAPH. @ ABUT. VERT.
S515	X	32	8-0				DIAPH. @ ABUT. F.F. HORIZ.
S516	X	8	3-3				DIAPH. @ E. ABUT. F.F. HORIZ.
S617	X	8	25-9				DIAPH. @ E. ABUT. B.F. HORIZ.
S618	X	8	7-3				DIAPH. @ ABUT. F.F. HORIZ.
S619	X	2	2-7				DIAPH. @ E. ABUT. F.F. HORIZ.
S520	X	20	6-0				DIAPH. @ ABUT. SYM. ABOUT $\bar{C}$ GRD.
S421	X	96	4-9	X			CORBEL VERT.
S422	X	12	23-11				CORBEL&DIAPH. AT W. ABUT. HORIZ.
S423	X	12	24-11				CORBEL&DIAPH. AT E. ABUT. HORIZ.
S524	X	28	12-0	X			DIAPH. @ PIER VERT.
S425	X	48	7-3				DIAPH. @ PIER HORIZ.
S426	X	28	10-1	X			DIAPH. @ PIER HORIZ.
S427	X	4	5-5	X			PILASTER VERT.
S428	X	4	4-3	X			PILASTER VERT.
S329	X	8	3-4	X			PILASTER HORIZ.
S530	X	8	2-3				DIAPH. AT W. ABUT.
S631	X	2	1-7				DIAPH. AT W. ABUT.
S632	X	8	24-9				DIAPH. AT W. ABUT.

MARK	"A"	"B"	NO. OF BARS/SET	NO. OF EACH SET
S507	41-2	15-2	20	1
S508	13-11	1-8	10	1
S509	41-3	13-10	22	1
S510	12-7	10	10	1

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1981	DRAWN BY	RCS
		PLANS	10.10
SUPERSTRUCTURE DETAILS			SHEET 11
			X

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



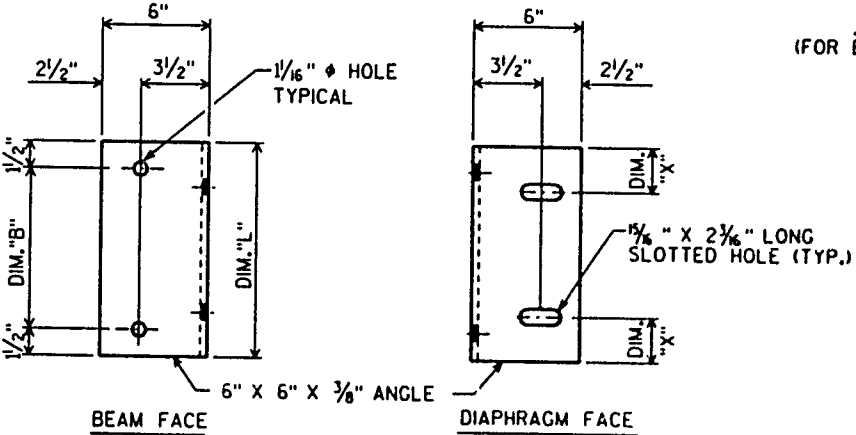
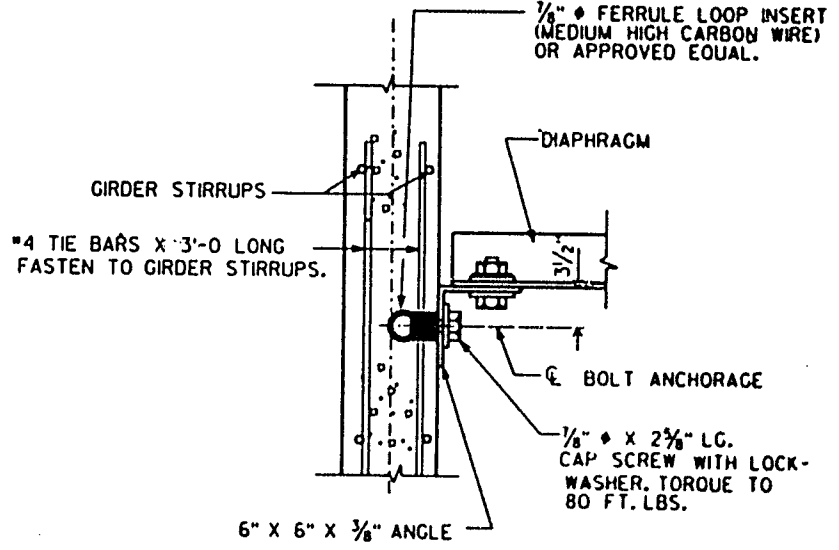
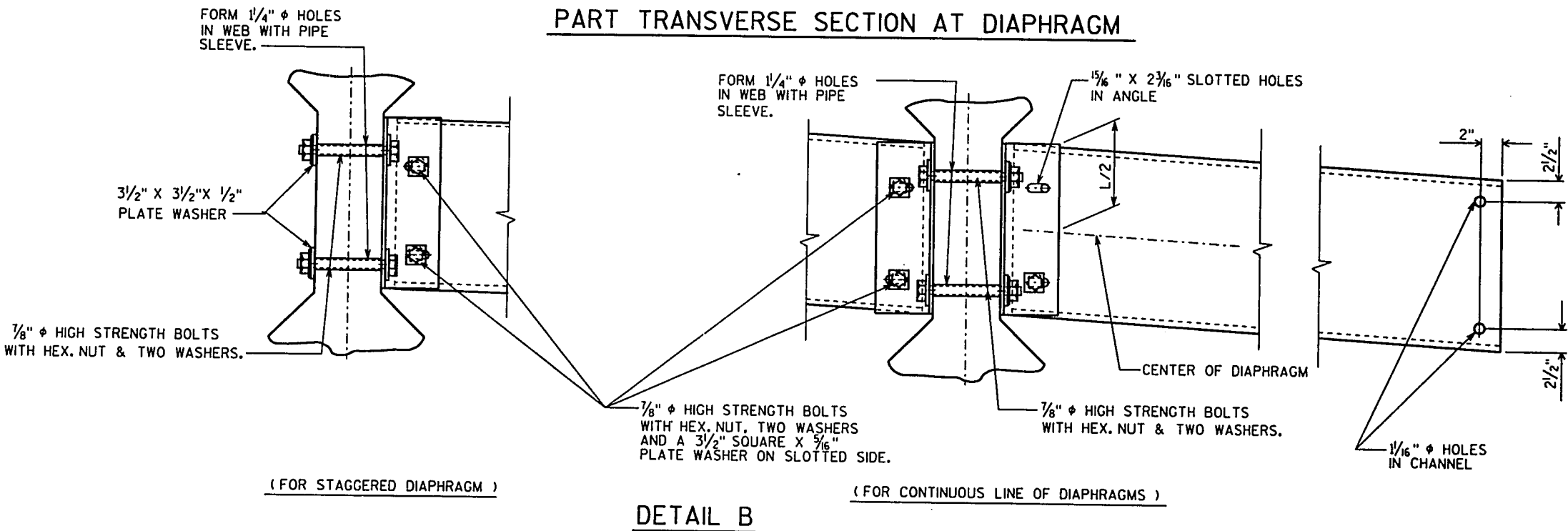
NOTES

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

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 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 A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-412			
CONST. SPEC.	1989	DRAWN BY RIES	PLANS C.E.D. J.C.C.
STEEL DIAPHRAGM			SHEET 13
			X

FILE: BR. 8134-13-412-04.DGN

LIST OF DRAWINGS

1. GENERAL PLAN
2. TOTAL ESTIMATED QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. NORTH ABUTMENT
6. ABUTMENT DETAILS
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. 70" PRESTRESSED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SLOPED FACE PARAPET "B"

WESTBOUND

EASTBOUND

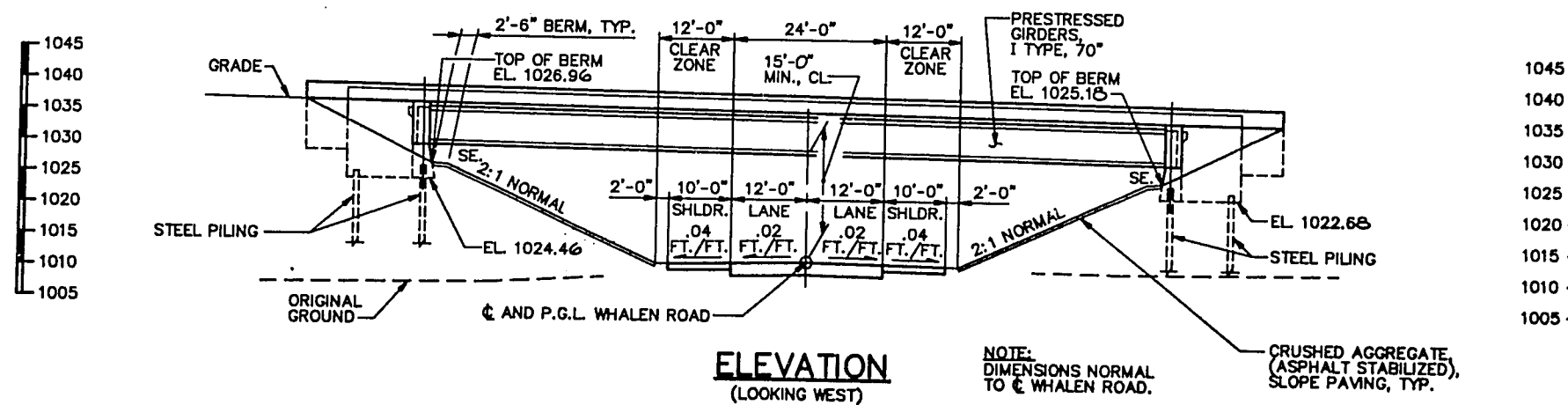
STA. 689 + 00
44' RIGHT
BEGIN TAPER
(50:1)

NOTES:

1. DIMENSIONS TAKEN AT RIGHT ANGLES TO ∇ USH 18/151 ALONG ∇ BEARING AT ABUTMENTS, UNLESS NOTED OTHERWISE.
2. Δ DIMENSIONS TAKEN AT RIGHT ANGLES TO RAMP ∇ .

PLAN B-13-413

1 SPAN,
PRESTRESSED GIRDERS, I TYPE, 70"

ELEVATION
(LOOKING WEST)

NOTE:
DIMENSIONS NORMAL
TO ∇ WHALEN ROAD.

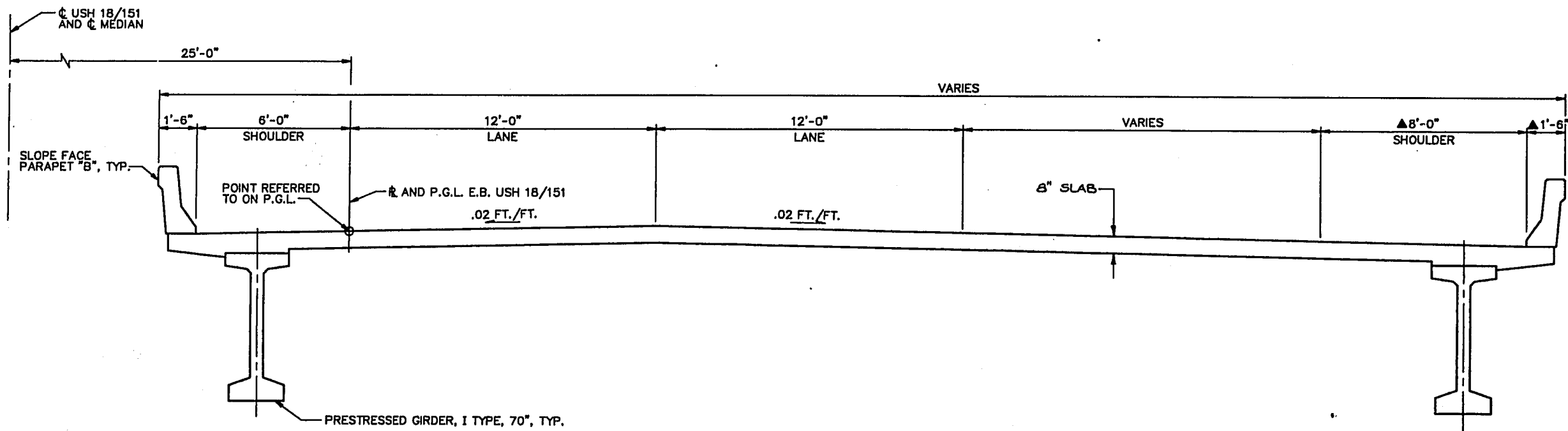
CRUSHED AGGREGATE,
(ASPHALT STABILIZED),
SLOPE PAVING, TYP.

CURVE DATA

RAMP PB-4
P.I. STA. 687+65.01
X = 2,130,534.91
Y = 358,997.23
 Δ = 17°-31'-59"
D = 2°-00'-00"
T = 441.78'
L = 878.65'
R = 2,864.79'
S.E. = 0.045 FT./FT.

BRIDGE OFFICE CONTACT: (808)268-8488, R. REESE

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-413			
USH 18/151 OVER WHALEN ROAD			
County	DANE	Town	VERONA
Design Spec.	AASHTO '91	Load	HS-20
Design By	KAK	Design	MGW
Drawn By	G	Phone	Checked P&G
Approved	Robert J. Blum	Date	1/15/91
GENERAL PLAN			SHEET 1 of 11
			X 84101

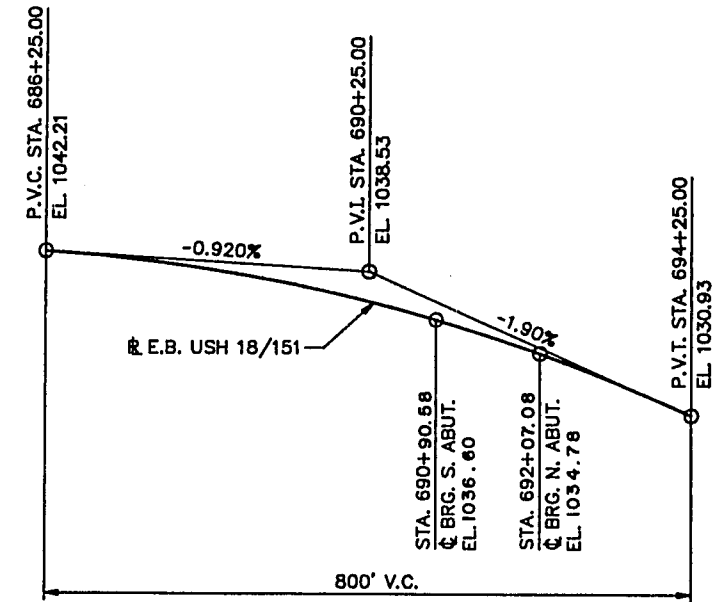


CROSS SECTION THRU EASTBOUND LANE
LOOKING NORTH

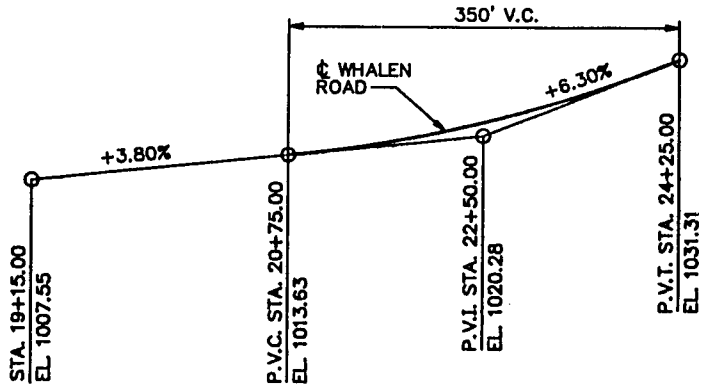
▲ DIMENSIONS TAKEN AT RIGHT ANGLES
TO RAMP E

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-413	L.S.	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	263	57	56	376
PROTECTIVE SURFACE TREATMENT	GAL.	49	—	—	49
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	4750	4630	9380
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	47910	600	600	49110
PRESTRESSED GIRDER, I TYPE, 70-INCH	L.F.	823	—	—	823
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	242	158	400
STEEL PILING, DELIVERED AND DRIVEN, HP 12-INCH 53 POUND	L.F.	—	600	600	1200
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	4
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	14	—	—	14
STEEL DIAPHRAGM	EACH	12	—	—	12
NON-BID ITEMS					
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	73	71	144
FILLER	SIZE	—	—	—	1/2" & 3/4"



PROFILE GRADE LINE-
USH 18/151 EASTBOUND



PROFILE GRADE LINE- WHALEN ROAD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED
2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS
SHALL BE COVERED WITH CRUSHED AGGREGATE SLOPE
PAVING TO THE EXTENT SHOWN ON THE GENERAL PLAN,
ABUTMENT DETAILS, AND STANDARD DETAILS.

ELASTOMERIC BEARING PADS NEED NOT
BE INDIVIDUALLY MOLDED PROVIDED THE
CUT EDGES ARE SMOOTH & TRUE

DESIGN DATA

STRUCTURE IS DESIGNED FOR A FUTURE
WEARING SURFACE OF 20 P.S.F.

RATINGS:

DESIGN RATING ————— HS 20
INVENTORY RATING ————— HS 23
OPERATING RATING ————— HS 48
MAXIMUM STANDARD PERMIT VEHICLE LOAD- 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY - SLAB, PARAPETS ————— $f_c = 4,000$ P.S.I.
OTHER ————— $f_c = 3,500$ P.S.I.

HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 ————— $f_y = 60,000$ P.S.I.

70" PRESTRESSED CONCRETE GIRDER ————— $f_c = 6,000$ P.S.I.

PRESTRESSED STRANDS,
LOW RELAXATION, 1/2" DIA. ————— $f_s = 270,000$ P.S.I.

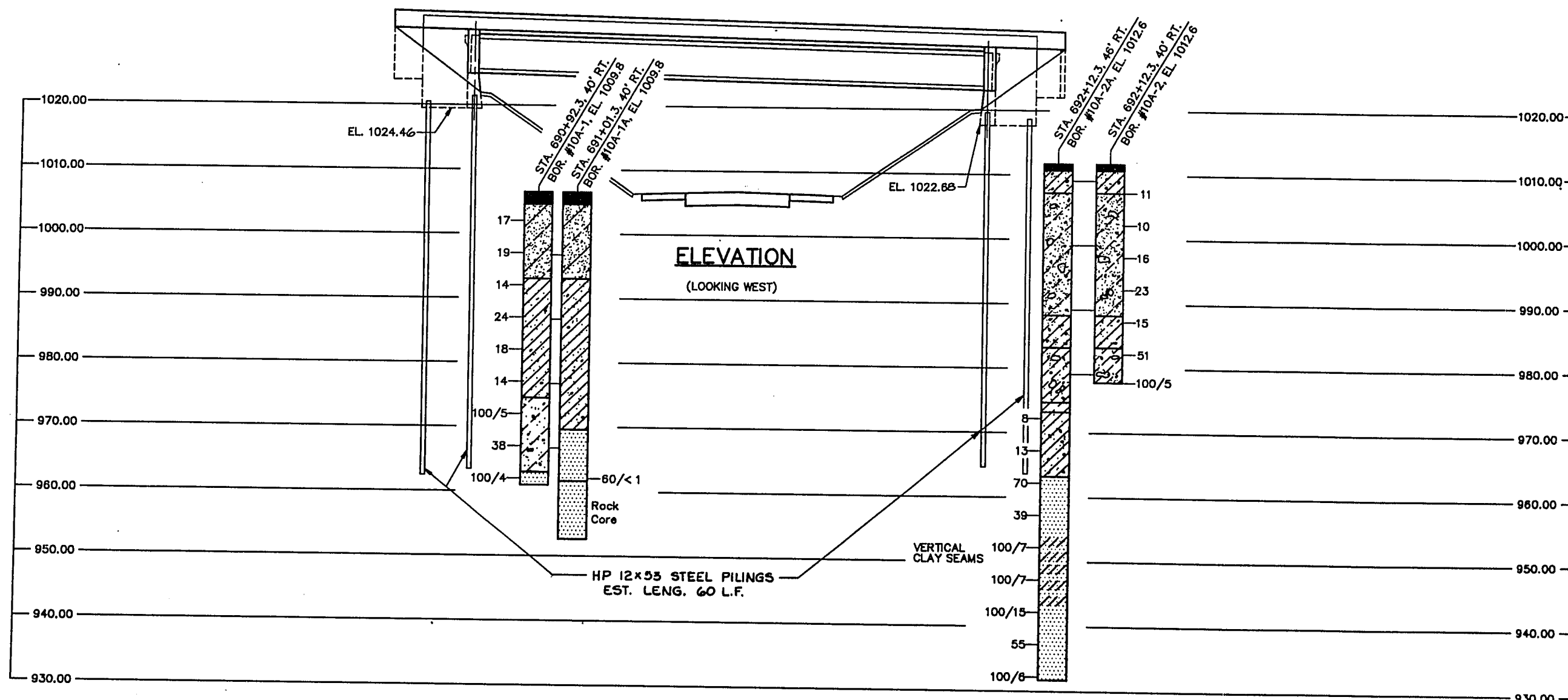
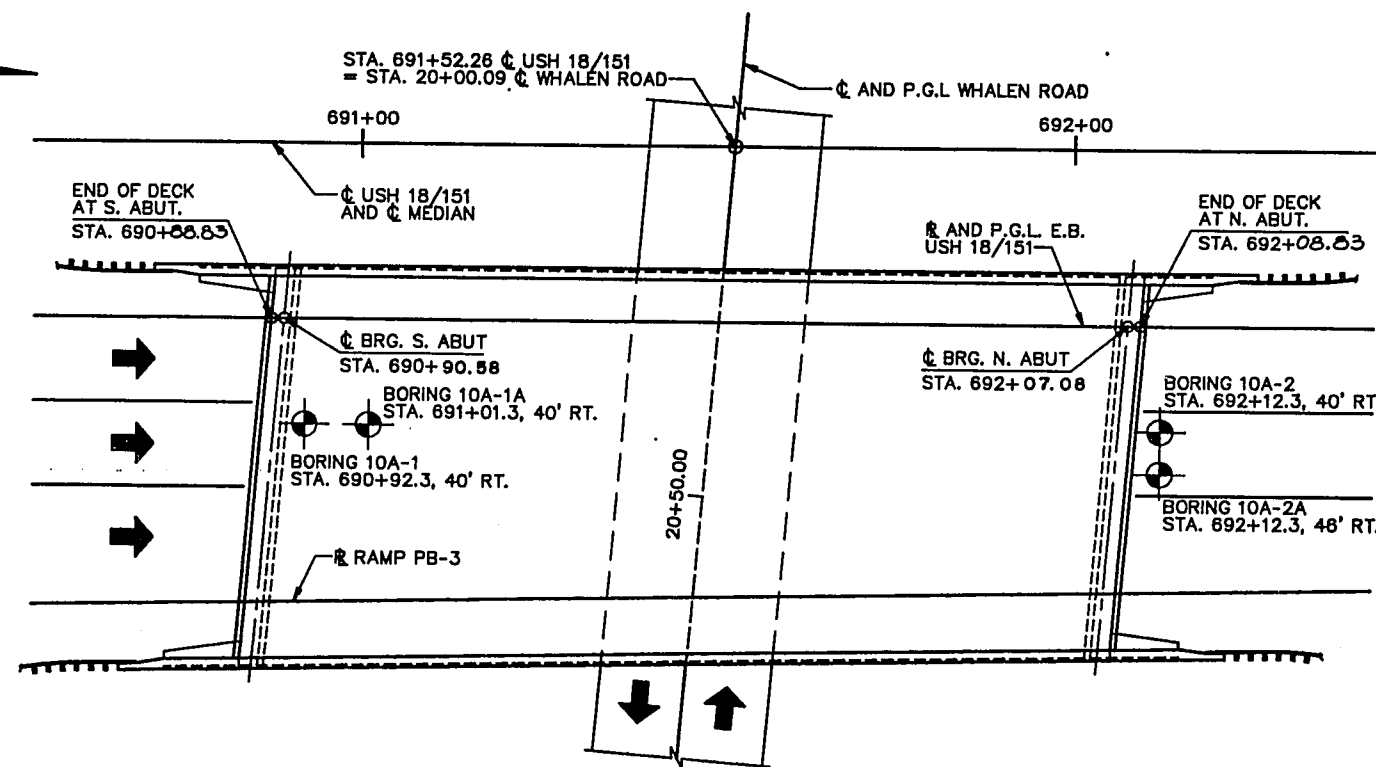
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON STEEL PILING

TRAFFIC DATA:

A.D.T. (2012) ————— USH 18/151 WHALEN ROAD
R.D.S. ————— 9,000 1,050
 65 M.P.H. 50 M.P.H.

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-413			
Const. Spec.	W.S. '89	Drawn By	Plane Checked
TOTAL ESTIMATED QUANTITIES		SHEET 2 X84101	



STATE PROJECT NUMBER SHEET NO

1201-04-76 8.2B

ABBREVIATIONS
F FINE M MEDIUM C COARSE
WS WEATHERED SO SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SHALE
SAND CLAY LIMESTONE/DOLOMITE
GRAVEL BOULDERS/COBBLES SANDSTONE

LEGEND OF BORING

Elev. Boring No. Sta.
Unconfined Strength 7.7
Blows per Ft. Using 140# Wt. Falling 30"
Wash Sample *
Shelby Tube S.T.
Ground Water Elevation
No Ground Water Observed Above This Elevation
Sandy Gravel
F. Boulders or Cobbles
Sand
Silty Clay
So
Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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

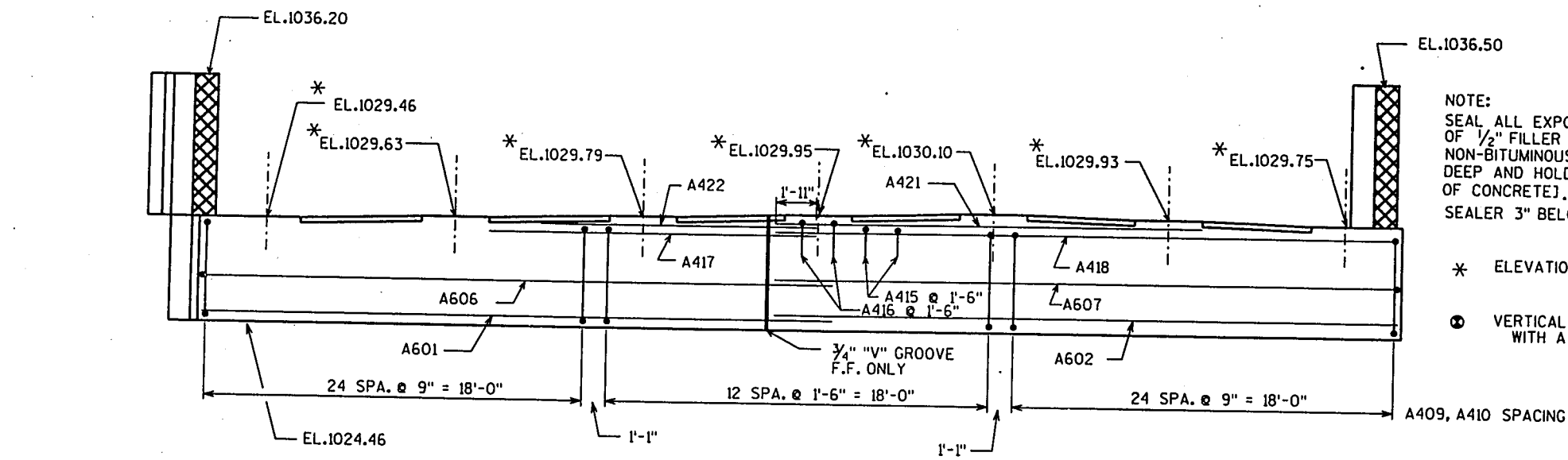
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-413

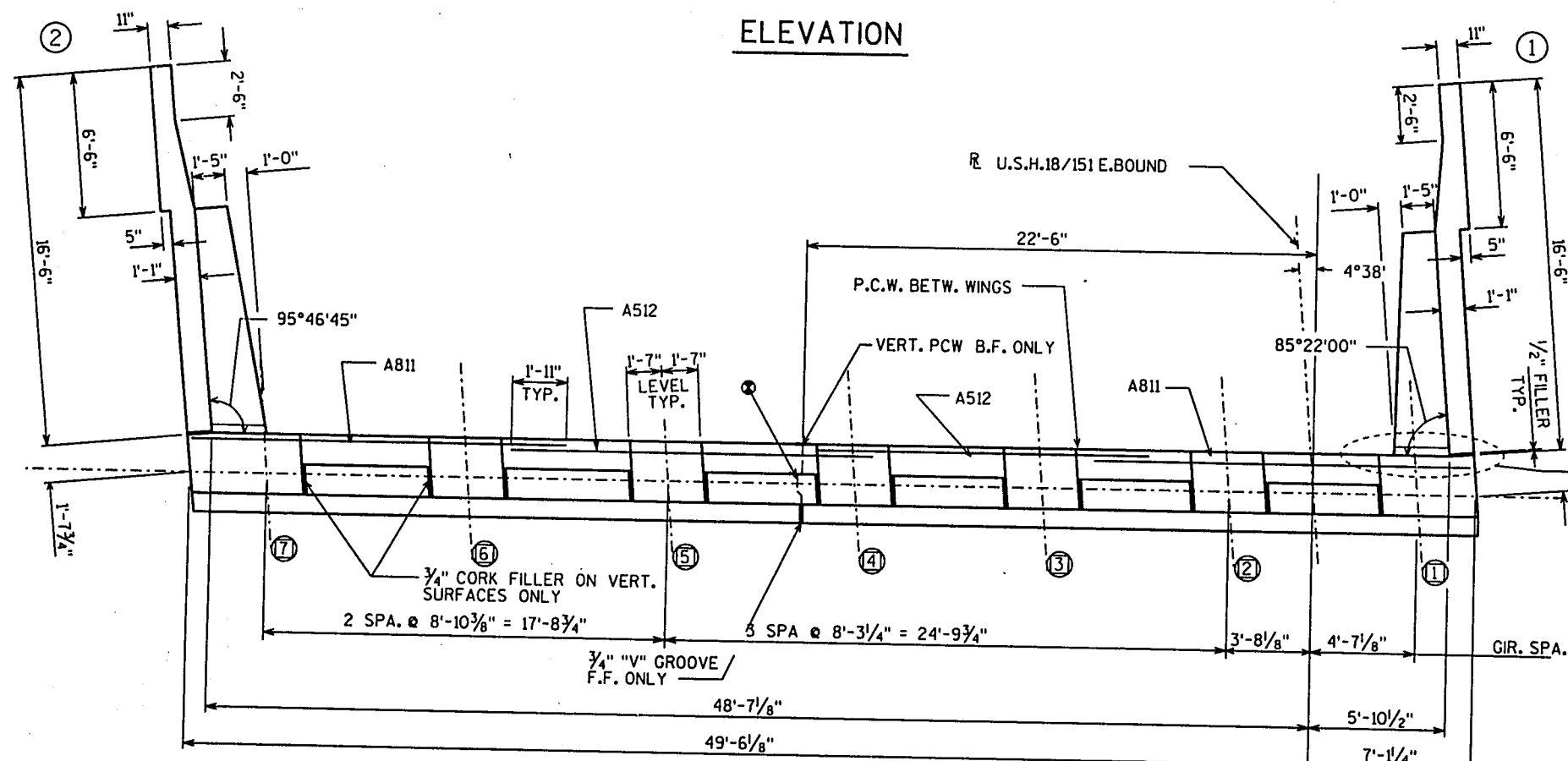
Const. Spec.	WS '89	Drawn By	G	Plan Checked	PWG

SUBSURFACE EXPLORATION

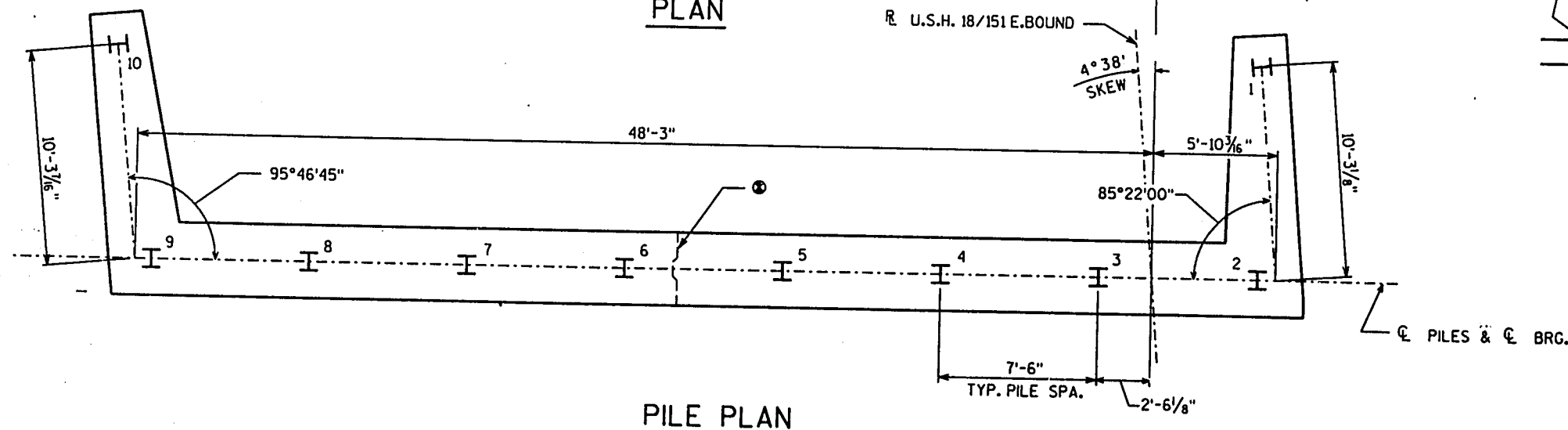
SHEET 3
X84101



ELEVATION

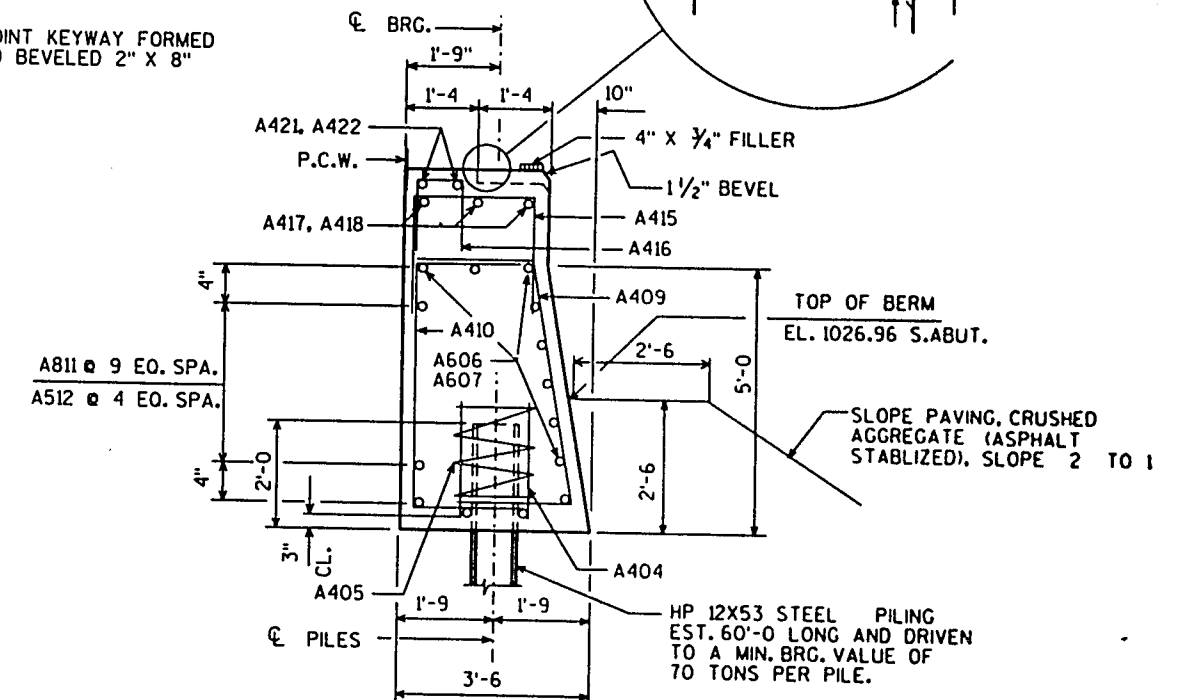


PLAN



PILE PLAN

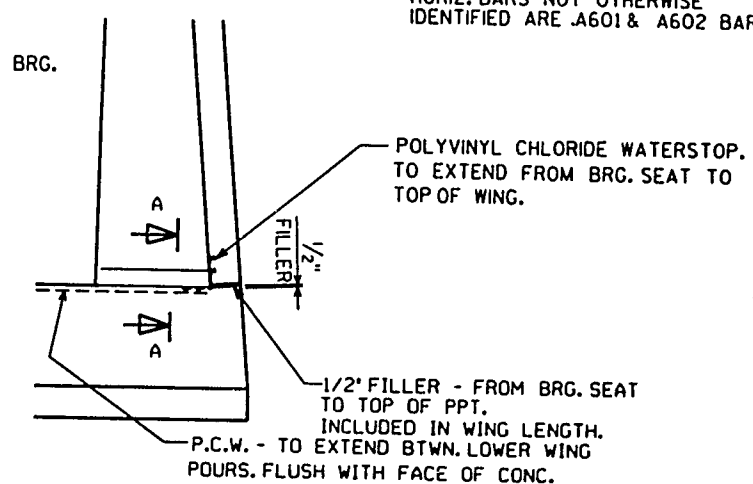
STEEL TROWEL TOP SURFACE OF ABUTMENT
PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS.
(TOTAL THICKNESS TO BE .03" MIN)



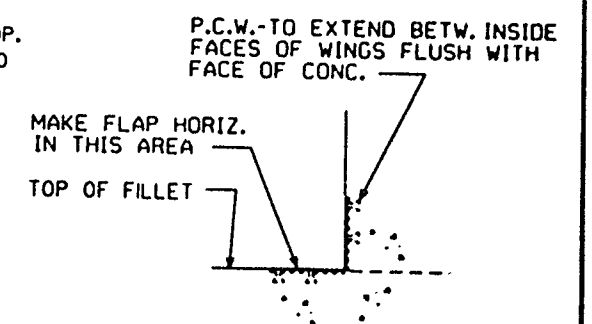
SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A601 & A602 BARS.

NOTE: FILL TO BOTT. OF ABUT. BEFORE DRIVING PILING.



DETAIL "B"



SECTION A-A

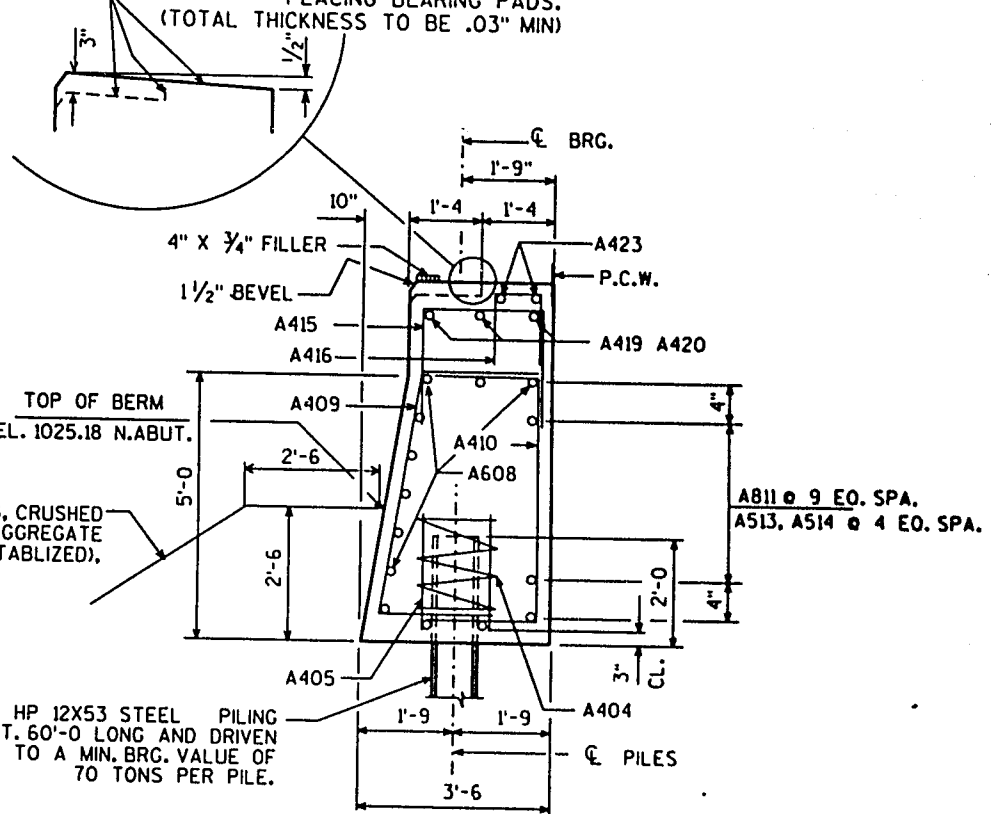
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY G	PLANS C.D. FWG
SOUTH ABUTMENT		SHEET 4	
		X84:01	

NOTE:
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (HOLD 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

* ELEVATIONS GIVEN @ C. BRG.

① VERTICAL CONST. JOINT KEYWAY FORMED WITH A SURFACED BEVELED 2" X 8"

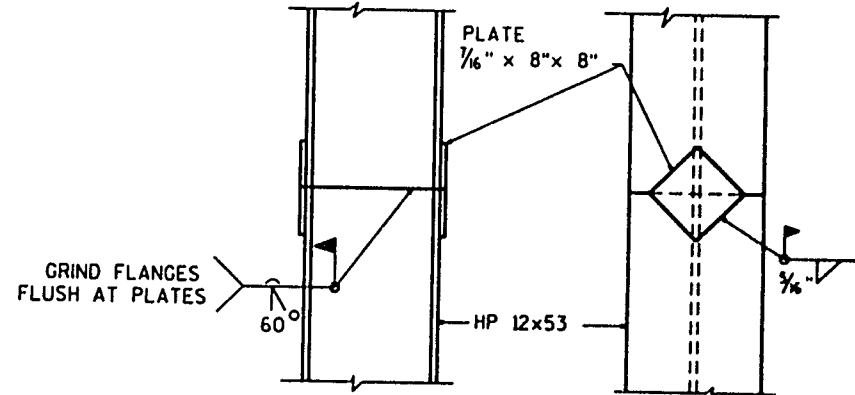
STEEL TROWEL TOP SURFACE OF ABUTMENT
PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS.
(TOTAL THICKNESS TO BE .03" MIN)



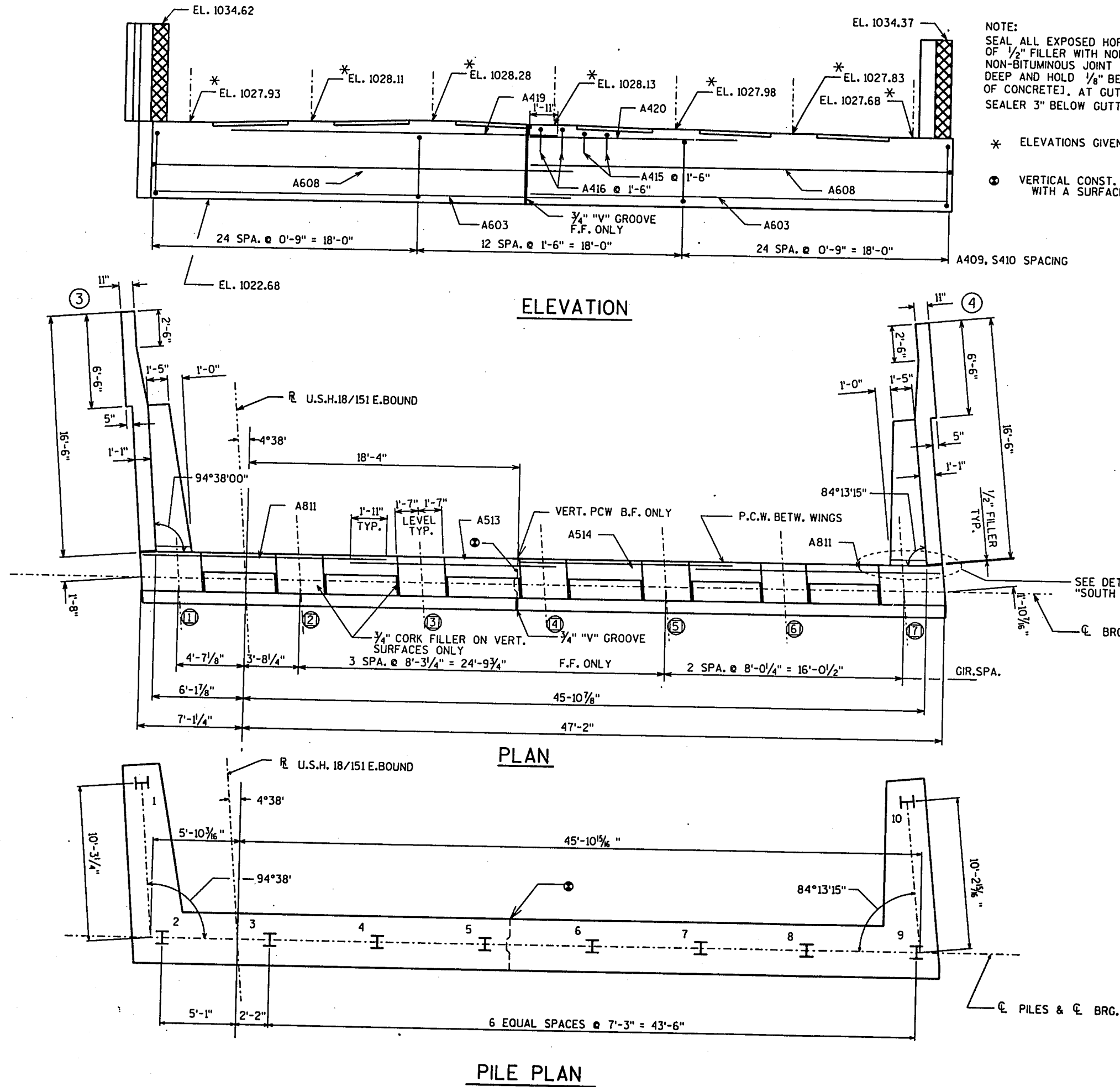
NOTE: FILL TO BOTT. OF ABUT. BEFORE DRIVING PILING.

SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A603 BARS.



PILE SPLICE DETAIL



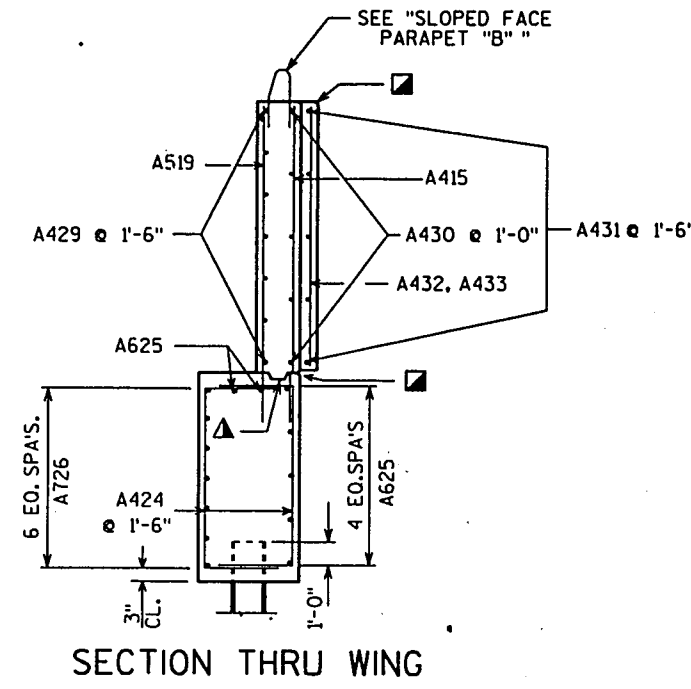
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY	PLANS C.R.D. FWG
NORTH ABUTMENT			SHEET 5
			X84101

413NABUT.DGN SCALE 4:1

BILL OF BARS

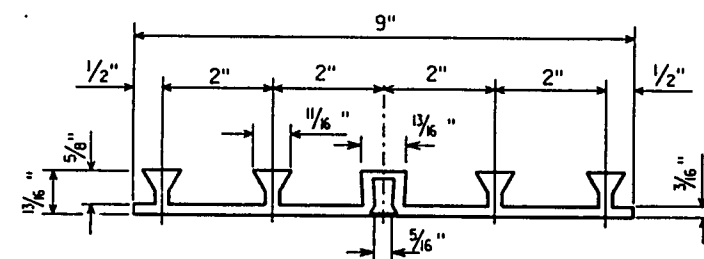
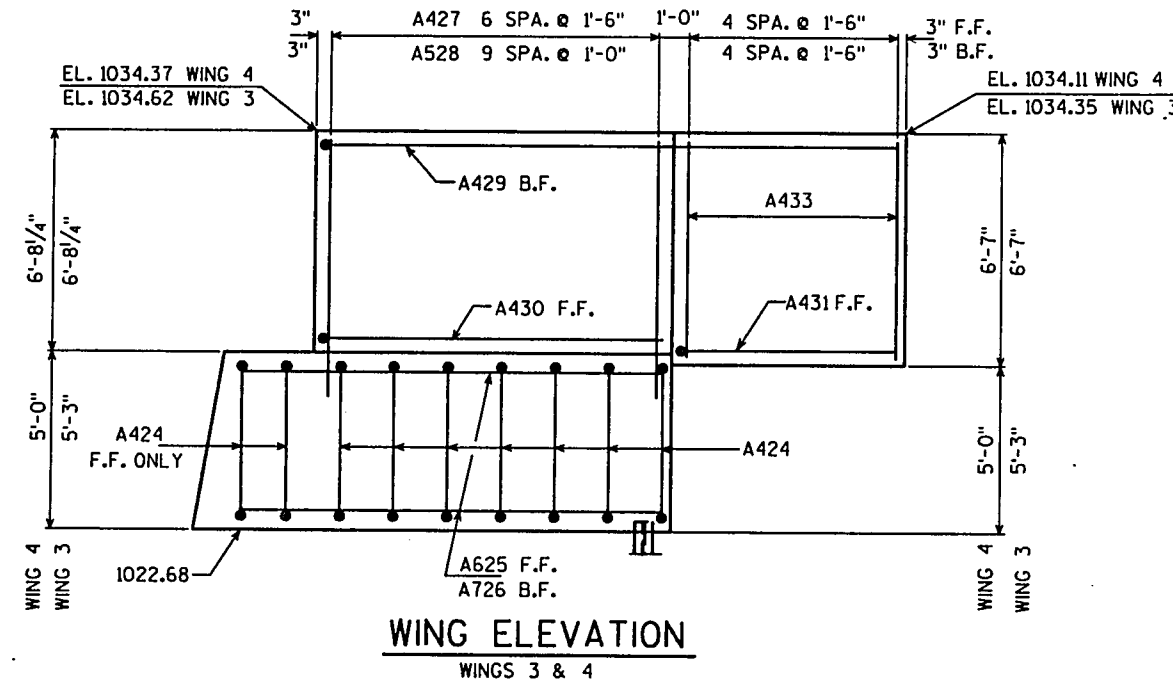
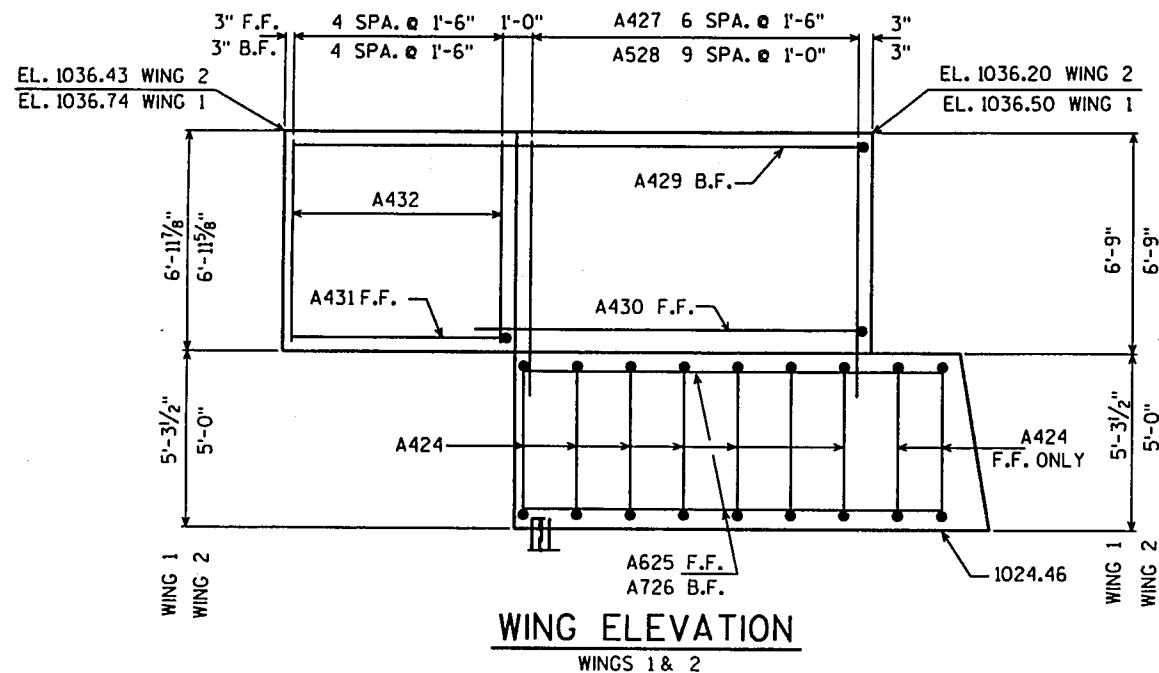
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D. S. ABUT.	NO. REQ'D. N. ABUT.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A601		4	-	32-6				ABUT BODY HORIZ.
A602		4	-	26-8				ABUT BODY HORIZ.
A603		-	8	28-6				ABUT BODY HORIZ.
A404		16	16	2-3				ABUT BODY 2 PER PILE
A405		8	8	28-0	X			ABUT BODY 12 PER PILE
A606		8	-	33-4	X			ABUT BODY
A607		8	-	27-6	X			ABUT BODY
A608		-	16	29-4	X			ABUT BODY
A409		63	61	7-11	X			ABUT BODY STIRRUP
A410		63	61	8-7	X			ABUT BODY STIRRUP
A811		20	20	16-6				ABUT BODY HORIZ. B.F. @ WINGS
A512		10	-	15-3				ABUT BODY HORIZ. BETW. WINGS
A513		-	5	13-11				ABUT BODY HORIZ. BETW. WINGS
A514		-	5	12-10				ABUT BODY HORIZ. BETW. WINGS
A415		27	22	5-2	X			BEARING SEAT STIRRUP
A416		39	37	3-3	X			BEARING SEAT STIRRUP
A417		3	-	15-6				BEARING SEAT HORIZ.
A418		3	-	26-8				BEARING SEAT HORIZ.
A419		-	3	21-0				BEARING SEAT HORIZ.
A420		-	3	14-1				BEARING SEAT HORIZ.
A421		2	-	26-8				BEARING SEAT HORIZ.
A422		2	-	31-6				BEARING SEAT HORIZ.
A423		-	4	28-0				BEARING SEAT HORIZ.
A424		32	32	8-10	X			WING STIRRUPS
A625		14	14	12-2				WING HORIZ.F.F.
A726		14	14	12-5	X			WING HORIZ.B.F.
A427		14	14	8-3				WING VERT. B.F.
A528		20	20	8-3				WING VERT.F.F.
A429		14	14	16-9	X			WING HORIZ.B.F.
A430		10	10	11-11	X			WING HORIZ.F.F.
A431		10	10	7-3	X			WING HORIZ.F.F.
A432		20	-	6-5				WING VERT.
A433		-	20	6-1				WING VERT.



▲ OPT. CONST. JT KEYWAY FORMED BY SURFACED BEVELED 2"X6.

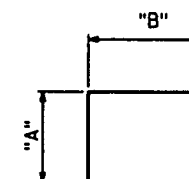
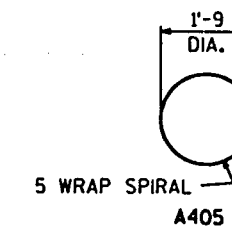
■ 3/4" V-GROOVE ON F.F. OF WINGWALL



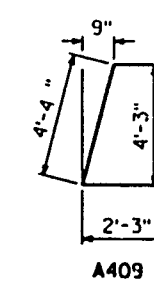
P.C.W.

(POLYVINYL CHLORIDE WATERSTOP)

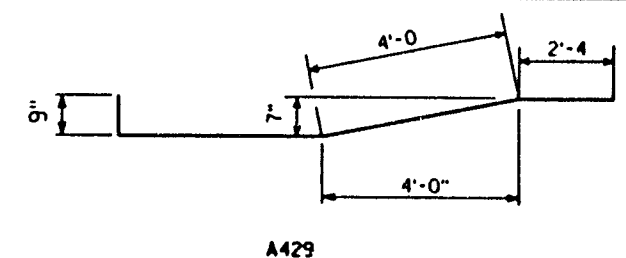
P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.



MARK	"A"	"B"
A410	2'-3"	4'-3"
A415	1'-6"	2'-4"
A416	1'-3"	1'-0"
A424	2'-2"	4'-7"

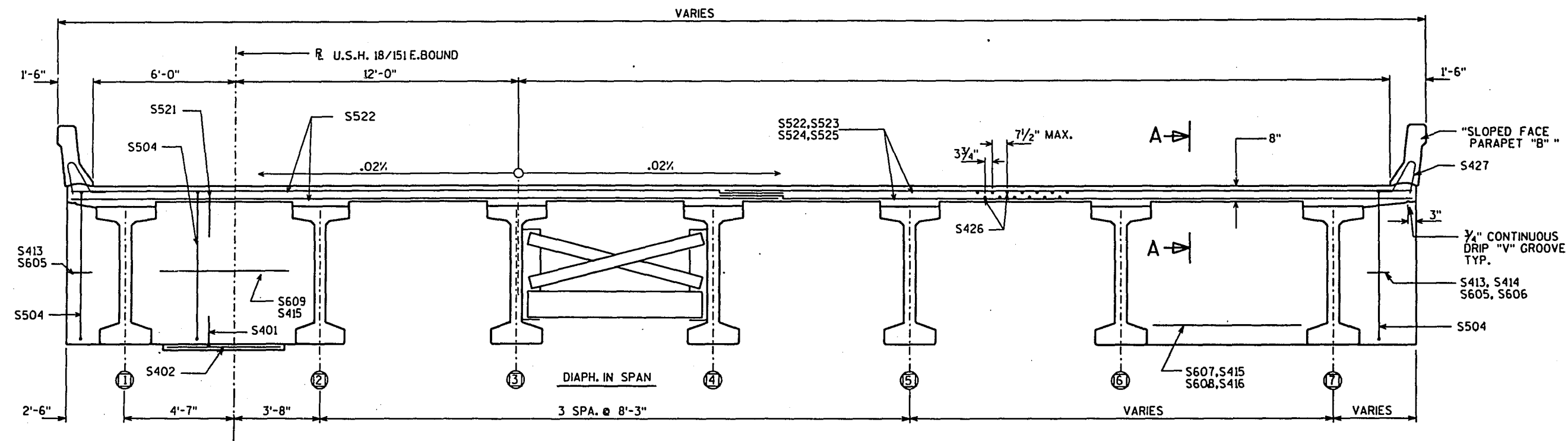


MARK	"C"
A430	9"
A431	1'-2"
A606	1'-0"
A607	1'-0"
A608	1'-0"
A726	1'-2"

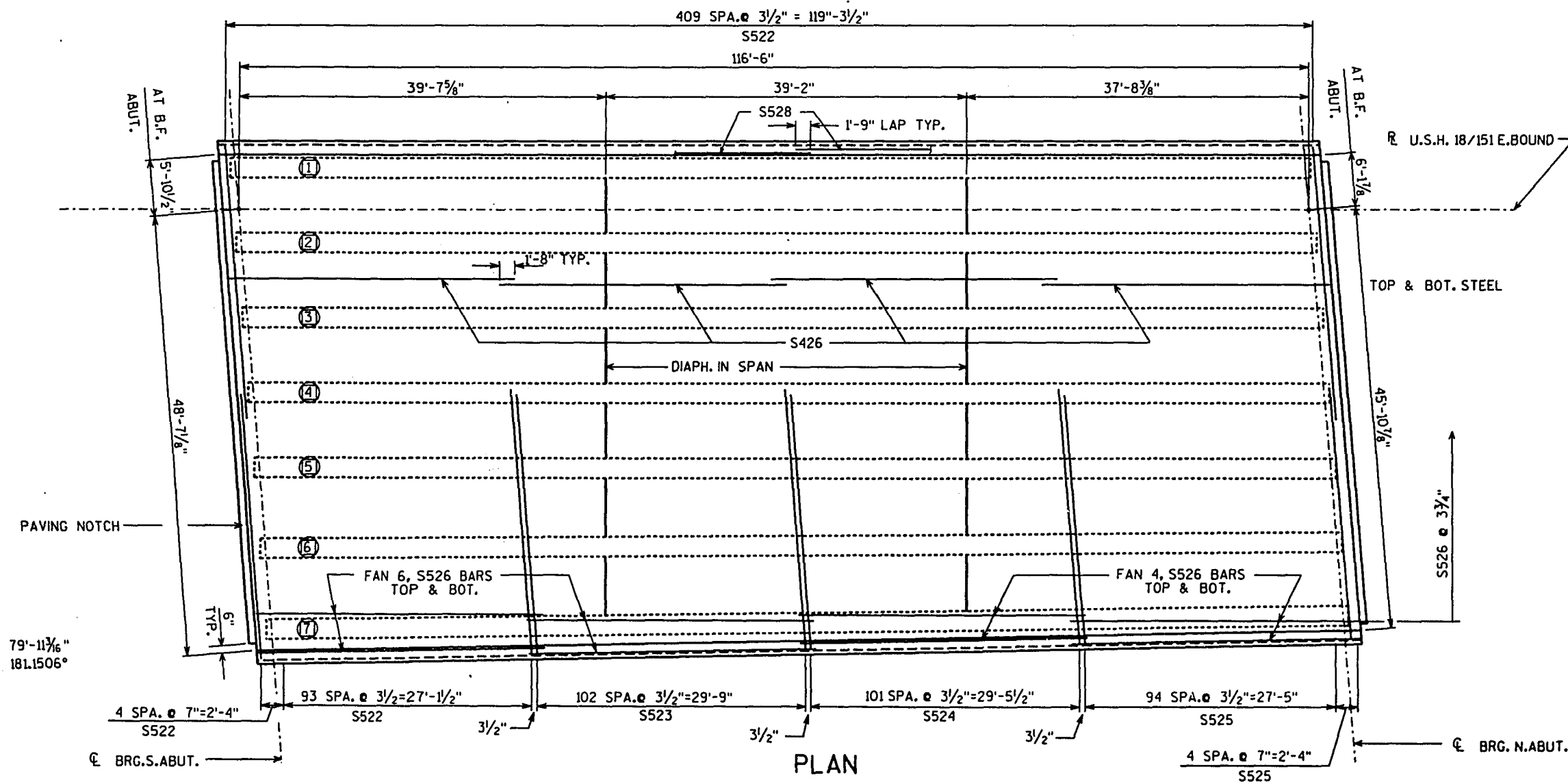


NO.	DATE	REVISION	BY

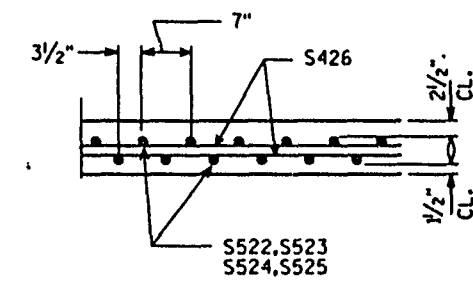
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
STRUCTURE B-13-413	
CONST. SPEC. 1939	DRAWN BY G. PLANS C.O.D. FWG
ABUTMENT DETAILS	SHEET 6 X84101



CROSS SECTION
LOOKING NORTH



PLAN



SECTION A-A

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY G	PLANS C.D. FWG
SUPERSTRUCTURE			SHEET 7
			X84101

BR 813413:413SUP

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

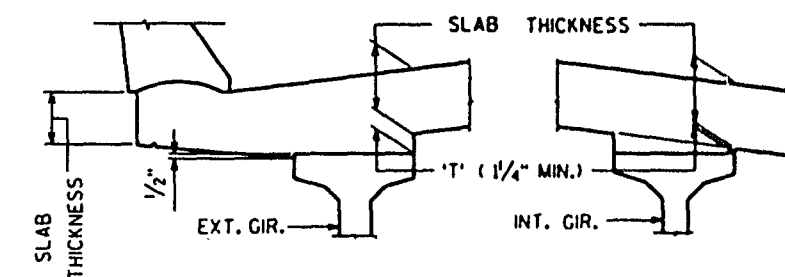
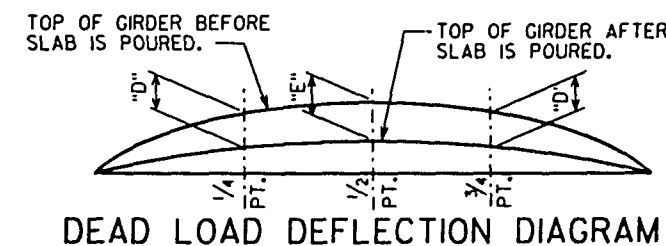
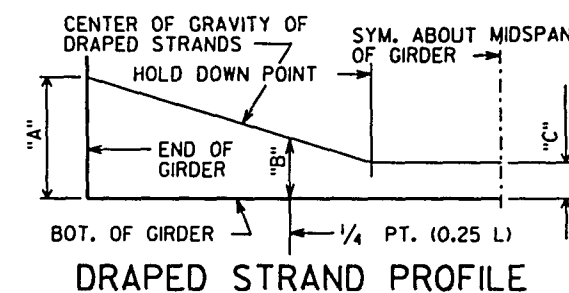
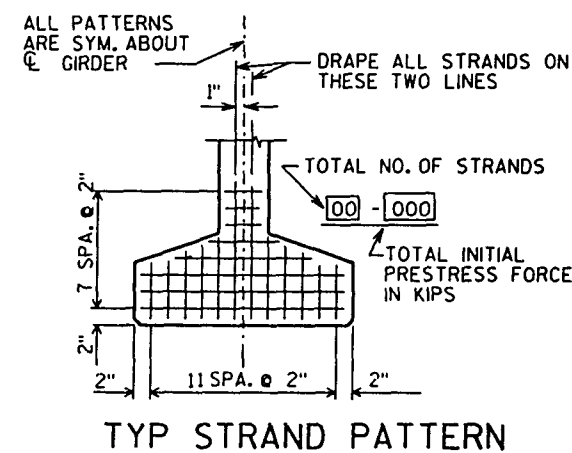
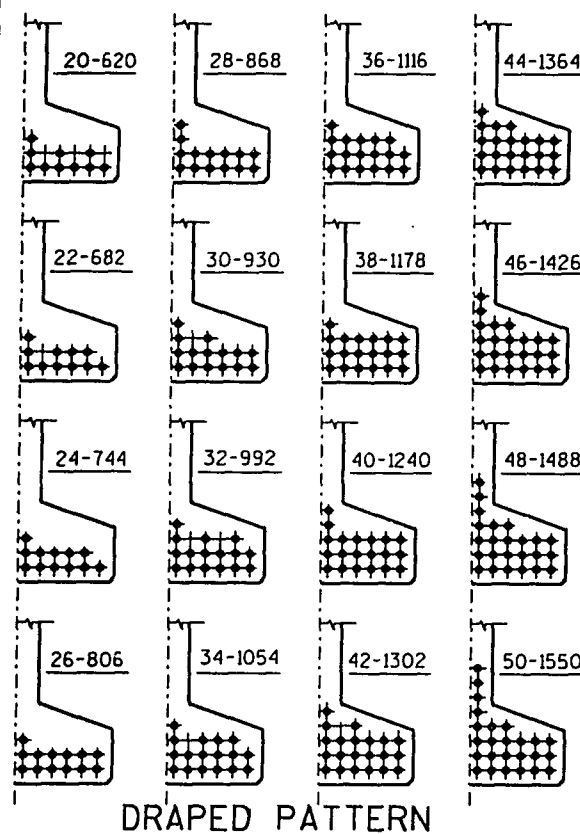
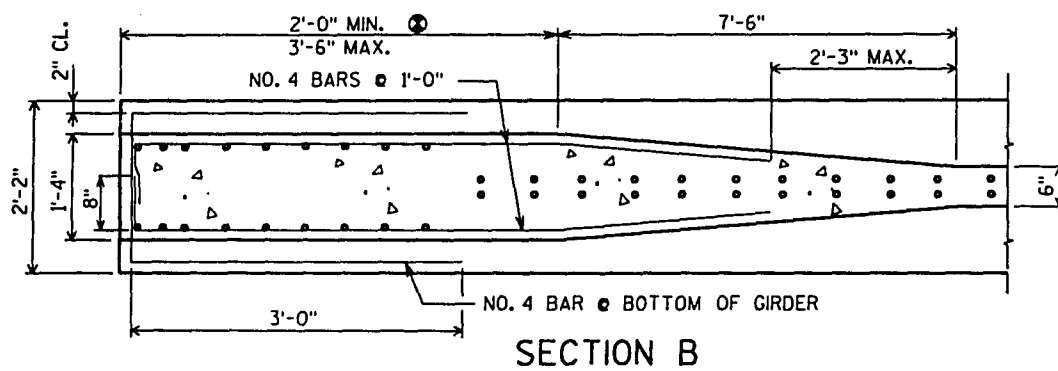
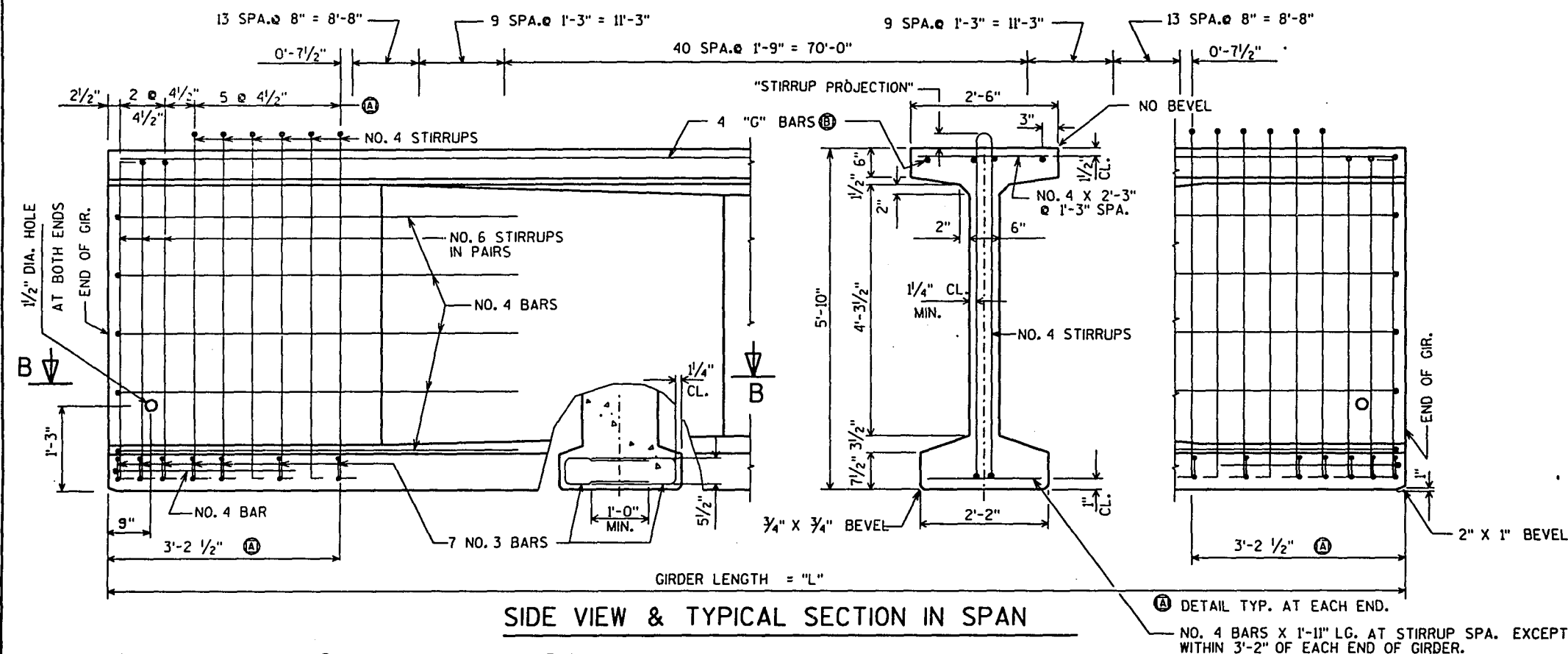
PRESTRESSING STRANDS SHALL BE $\frac{1}{2}$ " - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF NO. 4 STIRRUPS $4\frac{1}{2}$ " AND NO. 6 STIRRUPS $6\frac{1}{2}$ ".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ON MULTIPLE SPAN STRUCTURES, SET THE END BLOCK LENGTHS OF GIRDERS RESTING ON THE SAME PIER TO ± 2 ". ON SIMPLE SPANS, SET THE END BLOCK LENGTH ON BOTH GIRDER ENDS TO ± 2 ".

IF THE CONTRACTOR USES BOTTOM FLANGE TO SUPPORT CONSTRUCTION FORMS, THE CONTRACTOR SHALL SUBMIT FALSEWORK PLANS FOR APPROVAL OF THE ENGINEER.



SLAB HAUNCH DETAIL

IF $1\frac{1}{4}$ " 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. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT CL OF SUBSTRUCTURE UNITS & AT $\frac{1}{8}$ 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'

GIRDER DATA					"STIRRUP PROJECTION"	NO. 4 "G" BARS, MAY BE SPLICED AT THE 1/3 POINTS. USE 1'-11" MIN. LAP.						
SPAN	GIRDER LENGTH "L"	DEAD LOAD		CONC. STRGTH. F' _C (P.S.I.)		DRAPED PATTERN						
		DEF. (IN.) "D"	"E"			TOTAL NO. OF STRANDS	F' _C I (P.S.I.) *	(INCHES)				
								"A"	"B" MIN.	"B" MAX.	"C"	
1	117'-6"	1 1/8	1 1/2	6,000	6"	42	4,900	61	19.75	22.75	6	

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY	PLANS CRO. FWC
70" PRESTRESSED GIRDER DETAILS			SHEET 9
			X84101

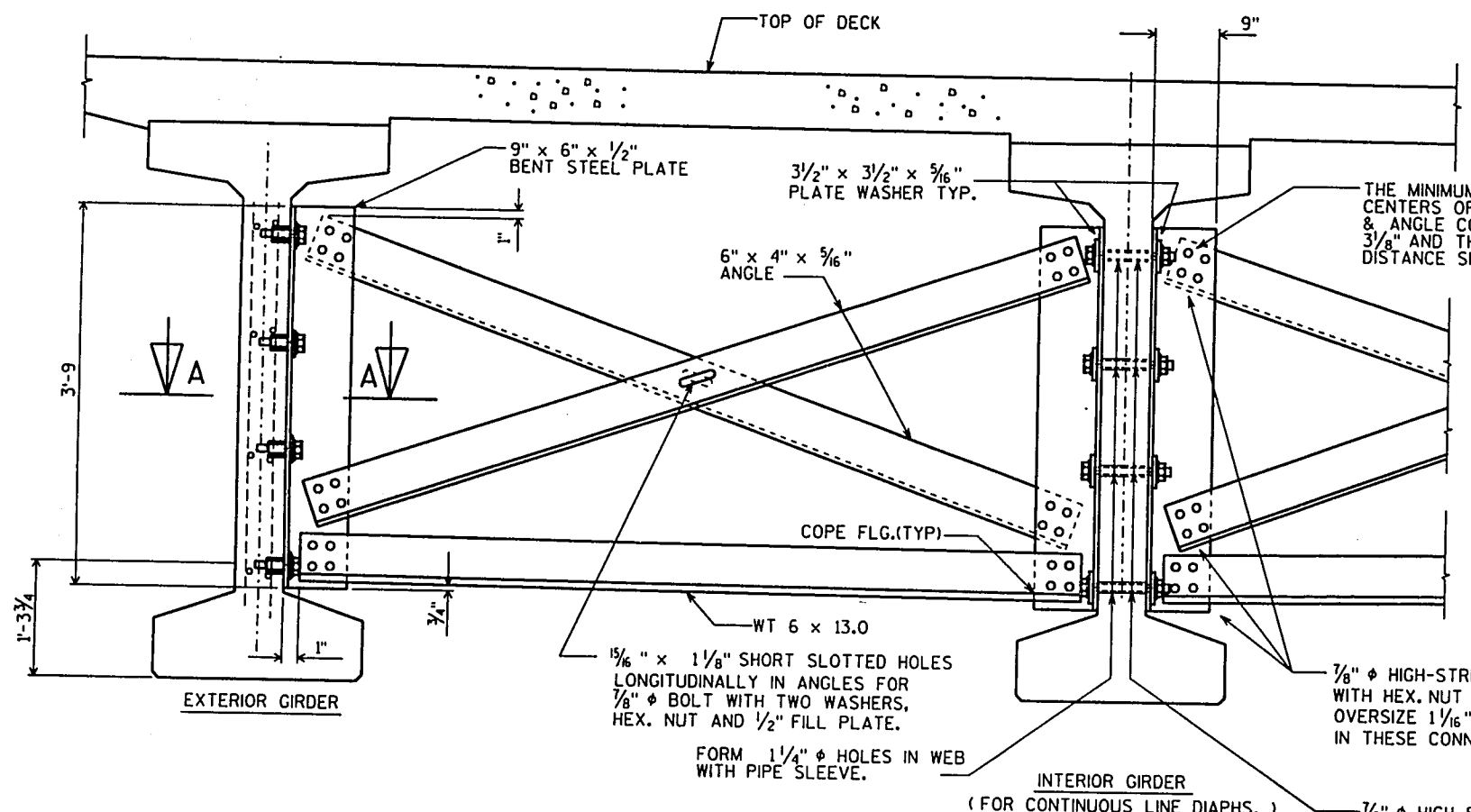
NOTES

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

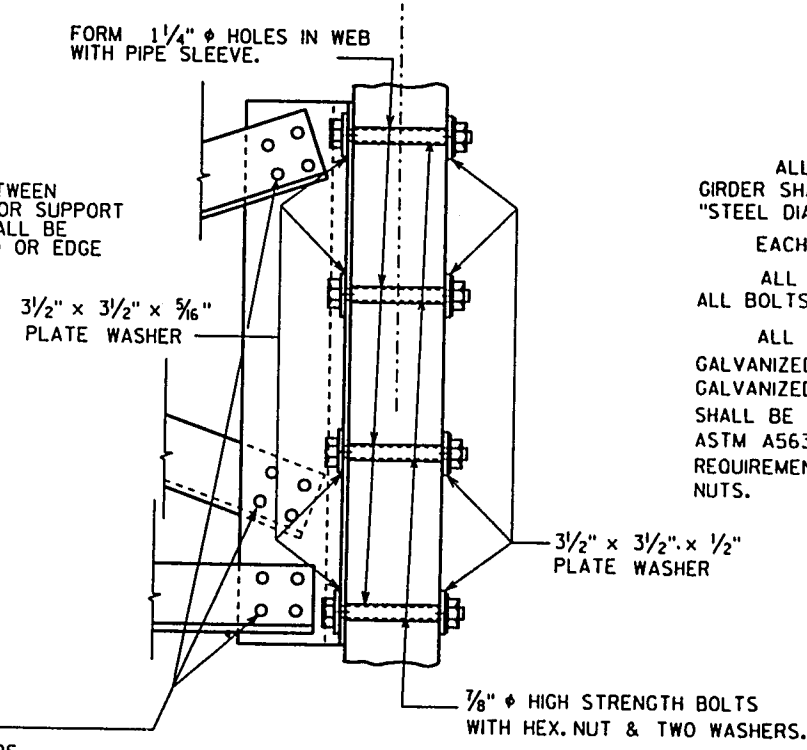
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE L.

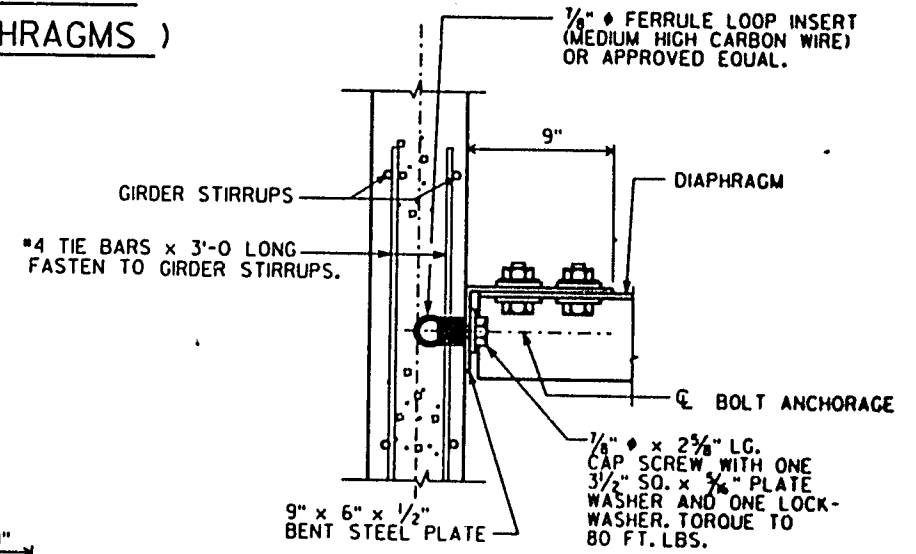
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



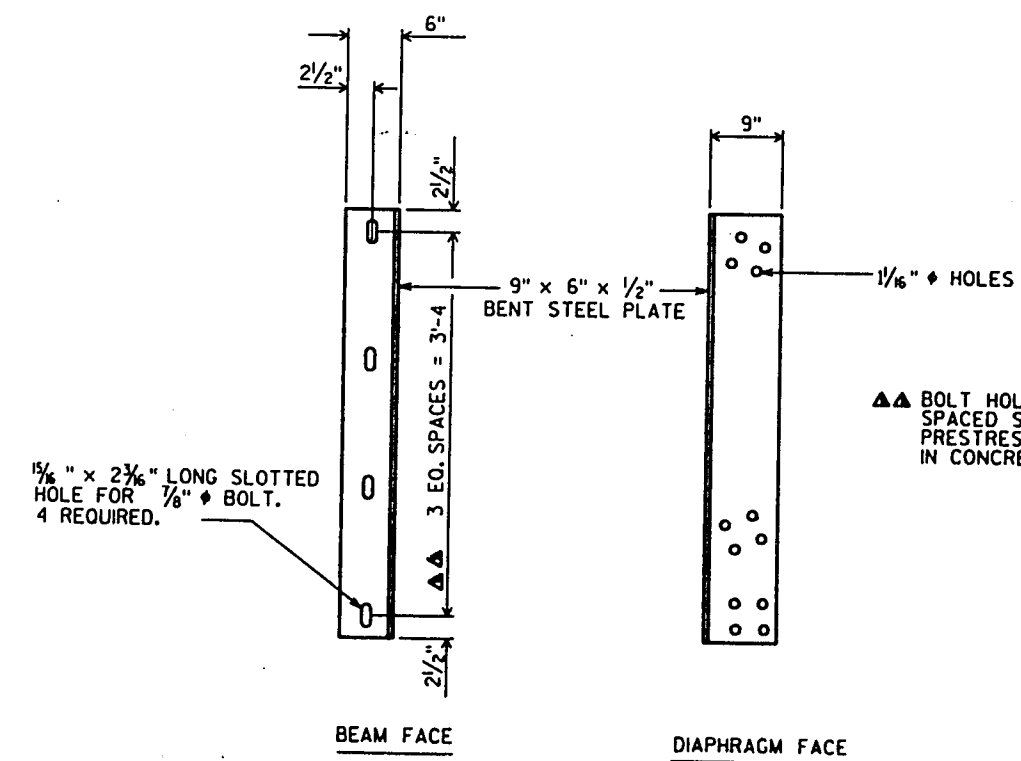
PART TRANSVERSE SECTION AT DIAPHRAGM



**SECTION AT INTERIOR GIRDERS
(FOR STAGGERED DIAPHRAGMS)**



**SECT. A-A
(FOR EXTERIOR ATTACHMENT)**



DIAPHRAGM SUPPORT

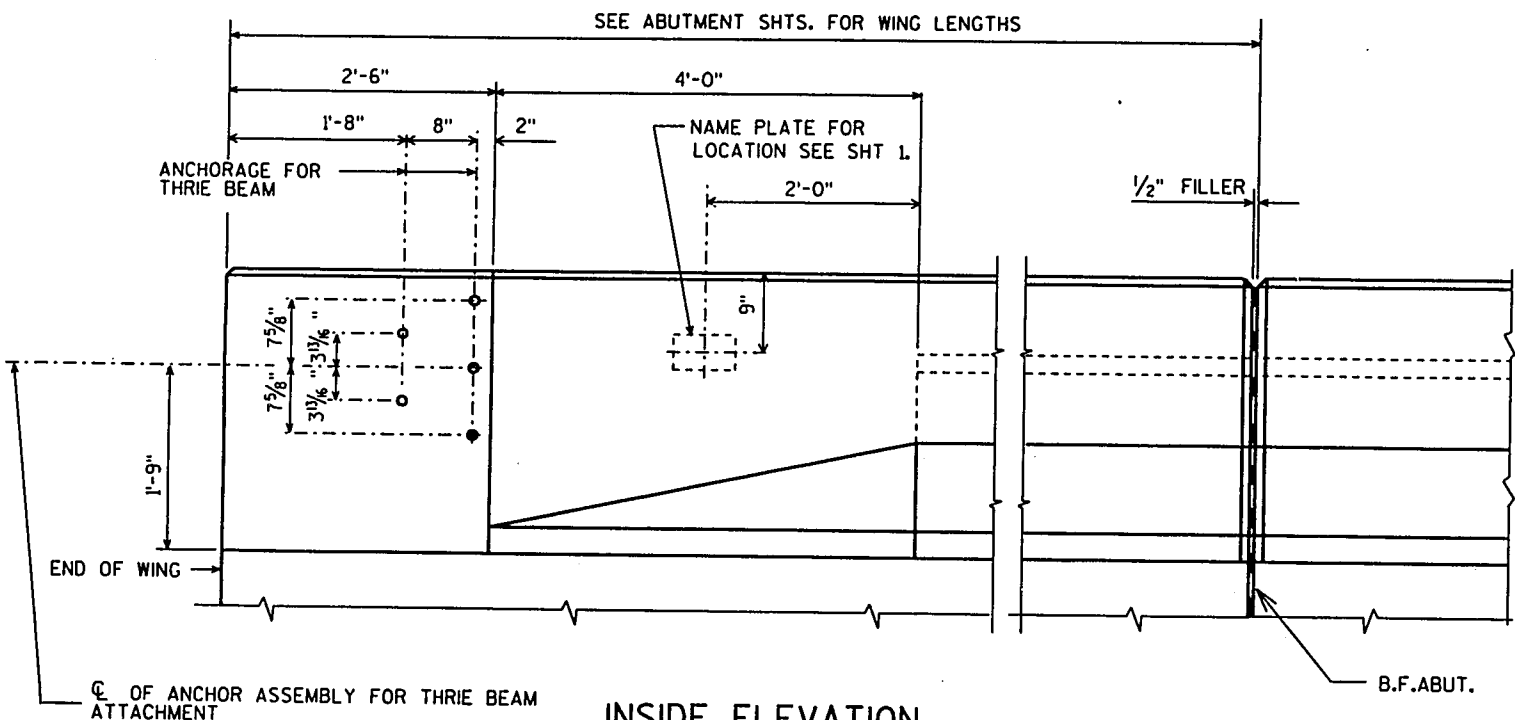
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY G	PLANS CHD. FWG
STEEL DIAPHRAGM			SHEET 10
			X84101

BILL OF BARS

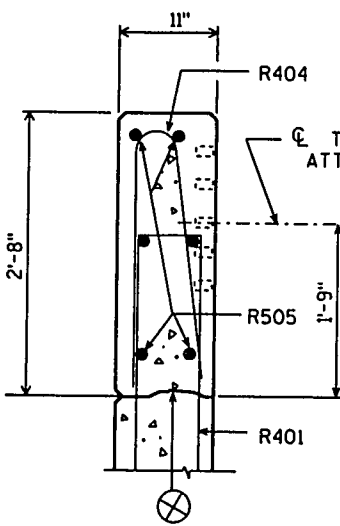
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

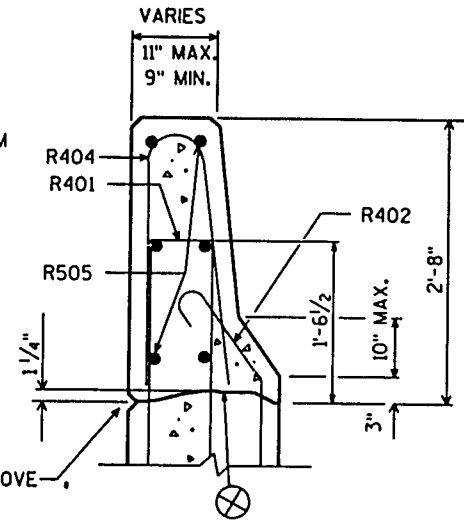
BAR MARK	NO. NORTH ABUT.	REO'D. SOUTH ABUT.	LENGTH	BENT	LOCATION
R401	30	30	5-10	X	WINGS STIRRUPS
R402	8	8	3-1	X	WINGS
R403	28	28	4-7	X	WINGS STIRRUPS
R404	30	30	4-9	X	WINGS
R505	12	12	6-2		WINGS
R406	28	28	4-10	X	WINGS
R507	10	10	11-9		WINGS



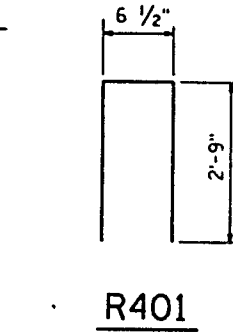
INSIDE ELEVATION



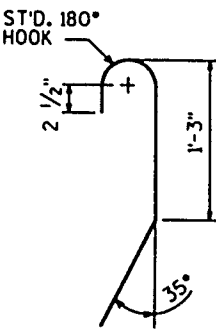
SECTION A



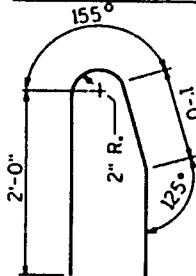
SECTION B



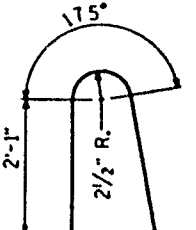
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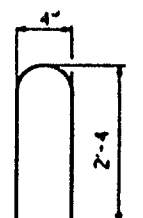
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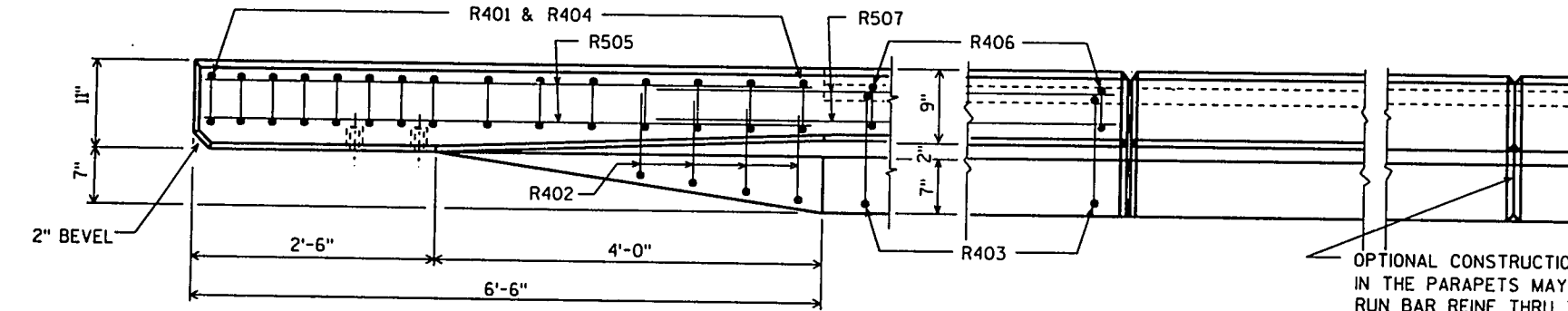
R403



R404

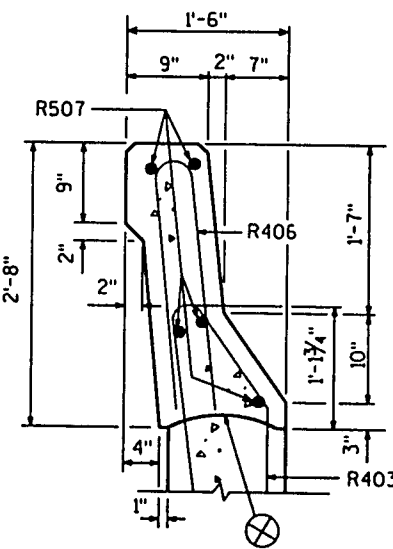


R406

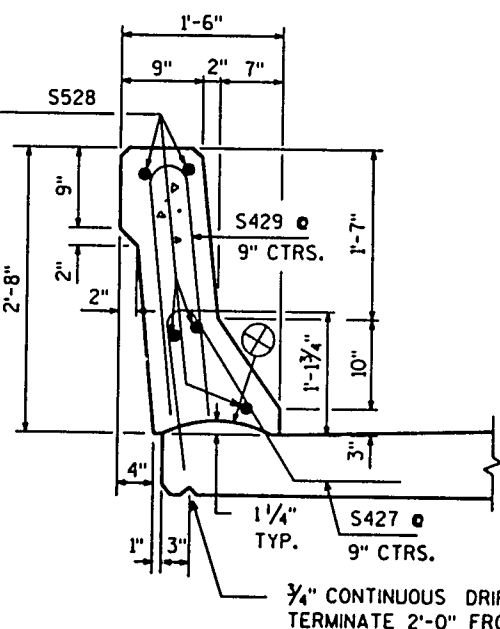


PLAN

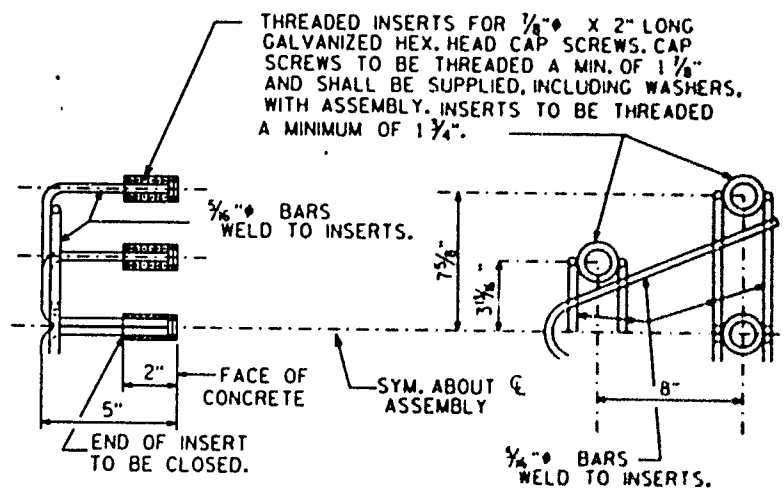
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 1" 'V' GROOVE.



SECTION C

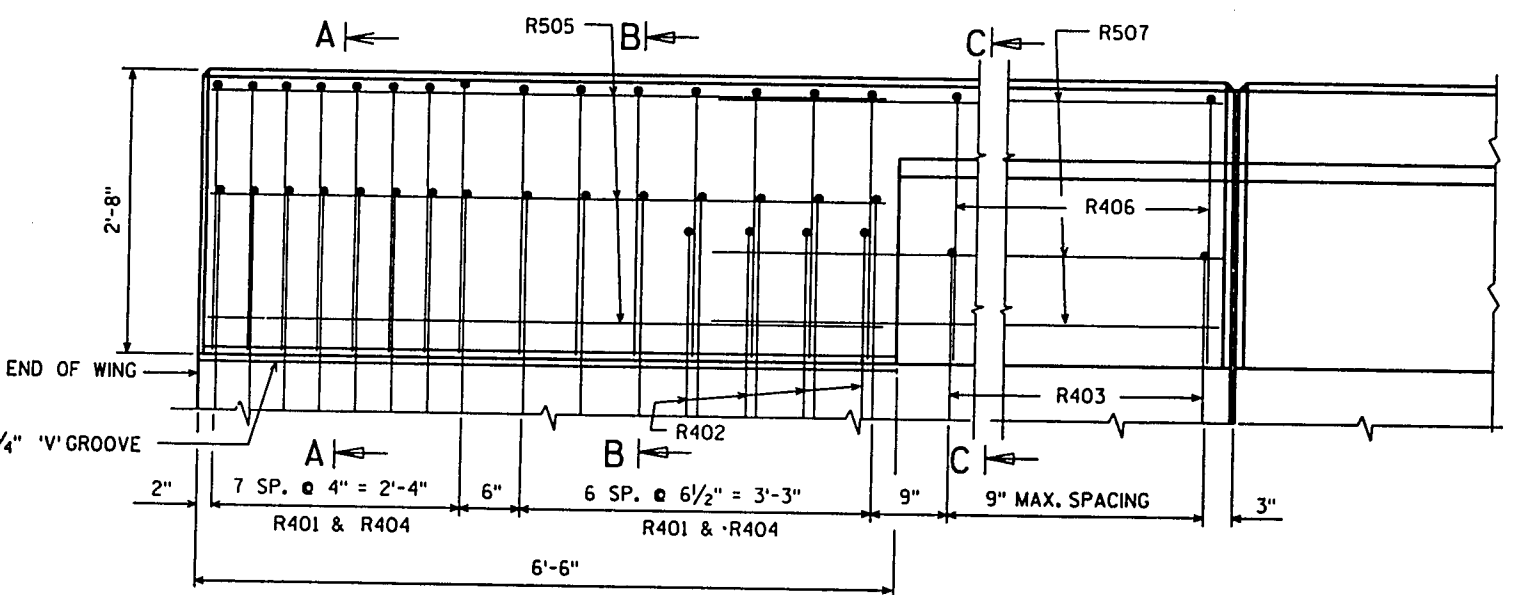


SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. SEE SHEET 1 FOR LOCATION.



OUTSIDE ELEVATION

CONST. JOINT - STRIKE OFF AS SHOWN & FINISH WITH A WOODEN TROWEL.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-413			
CONST. SPEC.	1989	DRAWN BY	PLANS C&D. FWG
SLOPED FACE PARAPET "B"			SHEET 11
			X84101

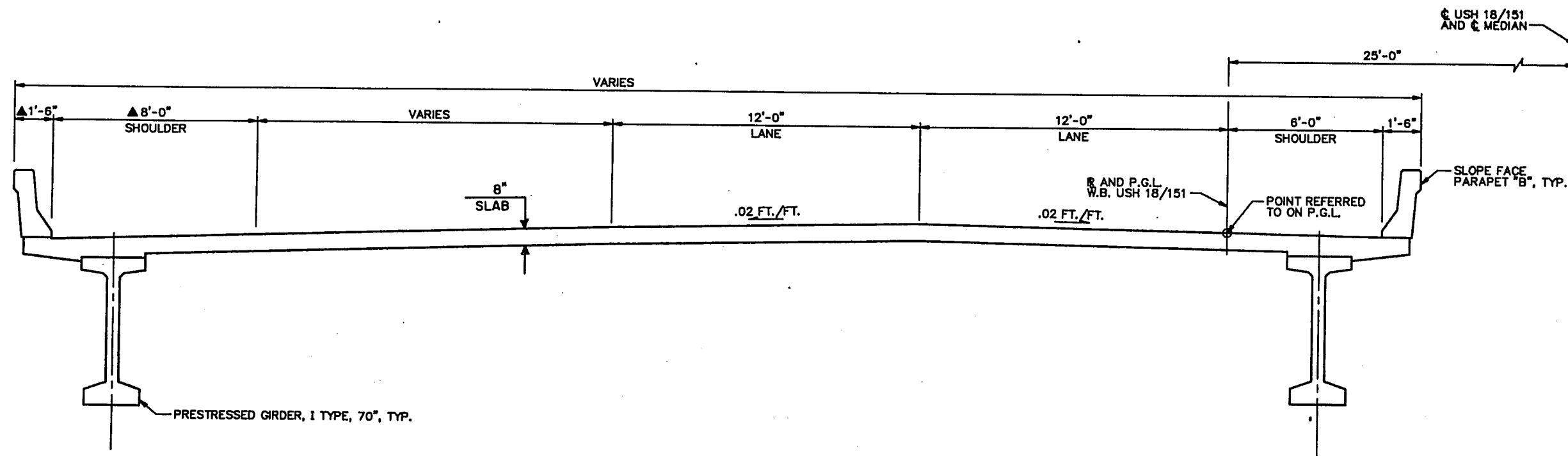
8.37



RAMP PB-4
P.I. STA. 687+65.01
X = 2,130,534.91
Y = 356,997.23
Δ = 17°-31'-59"
D = 2°-00'-00"
T = 441.78'
L = 876.65'
R = 2,864.79'
S.E. = 0.045 FT./FT.

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-414 USH 18/151 OVER WHALEN ROAD			
County DANE		Town VERONA	
Design Spec. AASHTO 1991		Load HS-20	
Designed By MGW		Checkd By MDW	
Design Ch'd KAK		Plans Checked F.W.G.	
Approved <i>Robert F. Kasse</i> State Bridge Engineer		<i>1/25/99</i> Date	
GENERAL PLAN		SHEET 1 of 12	
		X84062	

X84062

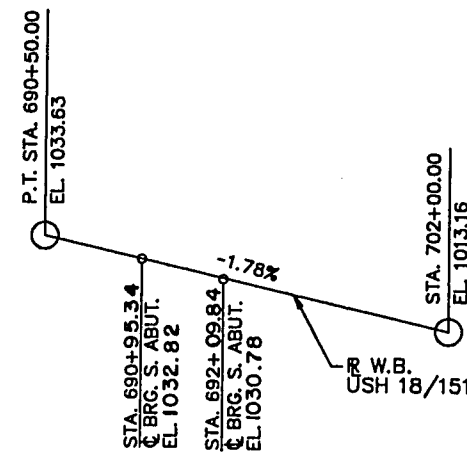


CROSS SECTION THRU WESTBOUND LANE
LOOKING NORTH

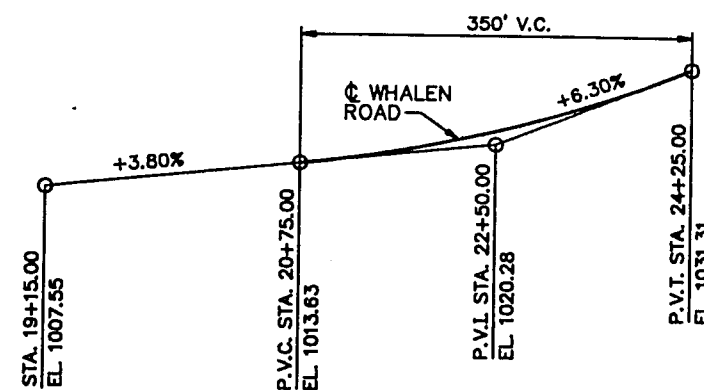
▲ DIMENSIONS TAKEN AT RIGHT ANGLES
TO RAMP

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER	NORTH ABUT.	SOUTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-414	L.S.	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	257	55	58	370
PROTECTIVE SURFACE TREATMENT	GAL.	46	—	—	46
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	4,520	4,430	8,950
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	43,550	610	610	44,770
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	4
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	14	—	—	14
PRESTRESSED GIRDER, I TYPE 70 INCH	L.F.	809	—	—	809
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	210	240	450
STEEL PILING, DELIVERED AND DRIVEN, HP 12-INCH 53 POUND	L.F.	—	600	500	1100
STEEL DIAPHRAGM	EACH	12	—	—	12
NON-BID ITEMS					
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	70	74	144
FILLER	SIZE	—	—	—	1/2" & 3/4"



PROFILE GRADE LINE-
USH 18/151 WESTBOUND



PROFILE GRADE LINE- WHALEN ROAD

STATE PROJECT NUMBER

1201-04-76

SHEET NO

E.38

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED
2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS
SHALL BE COVERED WITH CRUSHED AGGREGATE SLOPE
PAVING TO THE EXTENT SHOWN ON THE GENERAL PLAN,
ABUTMENT DETAILS, AND STANDARD DETAILS.

DESIGN DATA

STRUCTURE IS DESIGNED FOR A FUTURE
WEARING SURFACE OF 20 P.S.F.

RATINGS:

DESIGN RATING _____ HS 20
INVENTORY RATING _____ HS 26
OPERATING RATING _____ HS 49
MAX. STANDARD PERMIT VEHICLE LOAD = 250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY - SLAB, PARAPETS _____ $f_c = 4,000$ P.S.I.
OTHER _____ $f_c = 3,500$ P.S.I.

HIGH STRENGTH BAR STEEL
REINFORCEMENT, GRADE 60 _____ $f_y = 60,000$ P.S.I.

70" PRESTRESSED CONCRETE GIRDER _____ $f_c = 6,000$ P.S.I.

PRESTRESSED STRANDS,
LOW RELAXATION, 1/2" DIA. _____ $f_s = 270,000$ P.S.I.

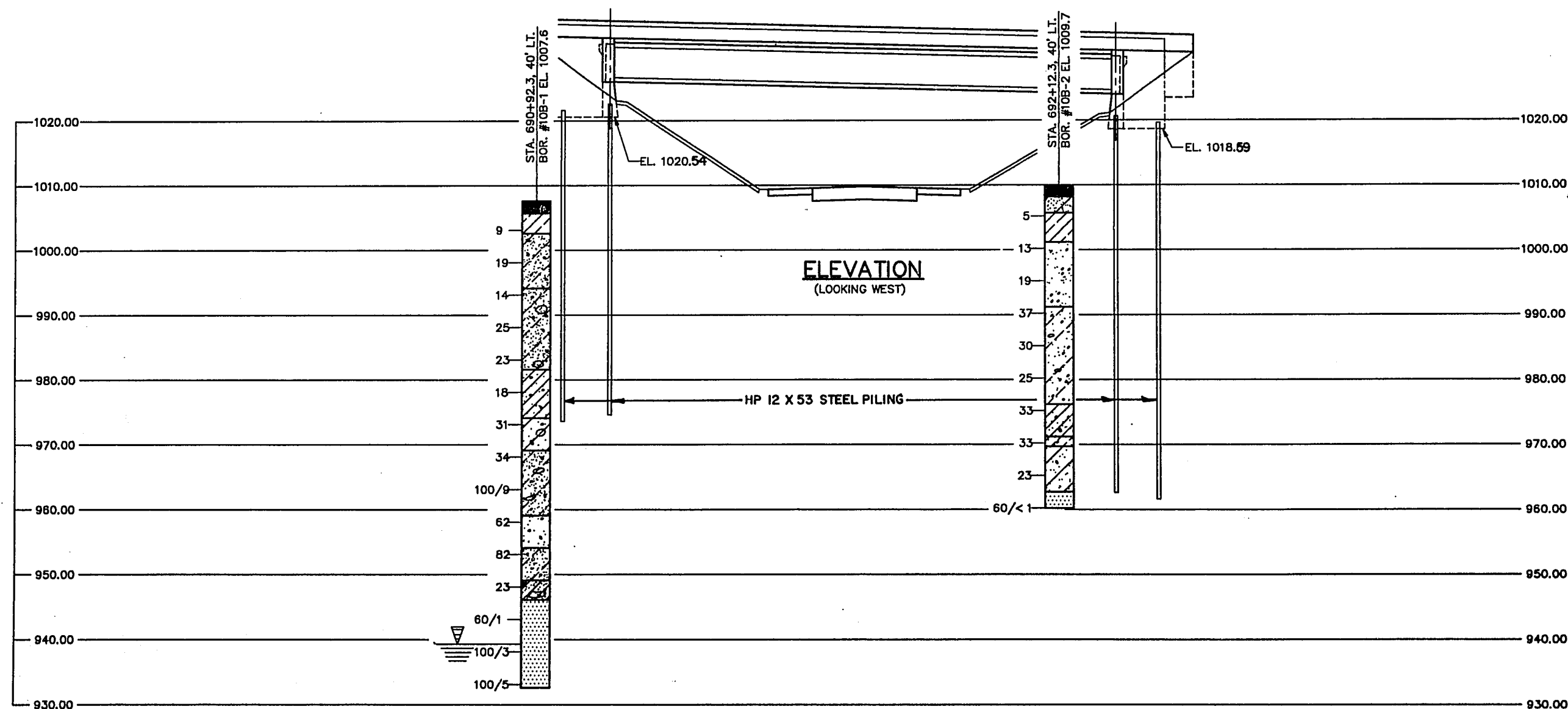
FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON STEEL PILING

TRAFFIC DATA:

A.D.T. (2012) _____ USH 18/151 WHALEN ROAD
R.D.S. _____ 9,000 1,050
85 M.P.H. 50 M.P.H.

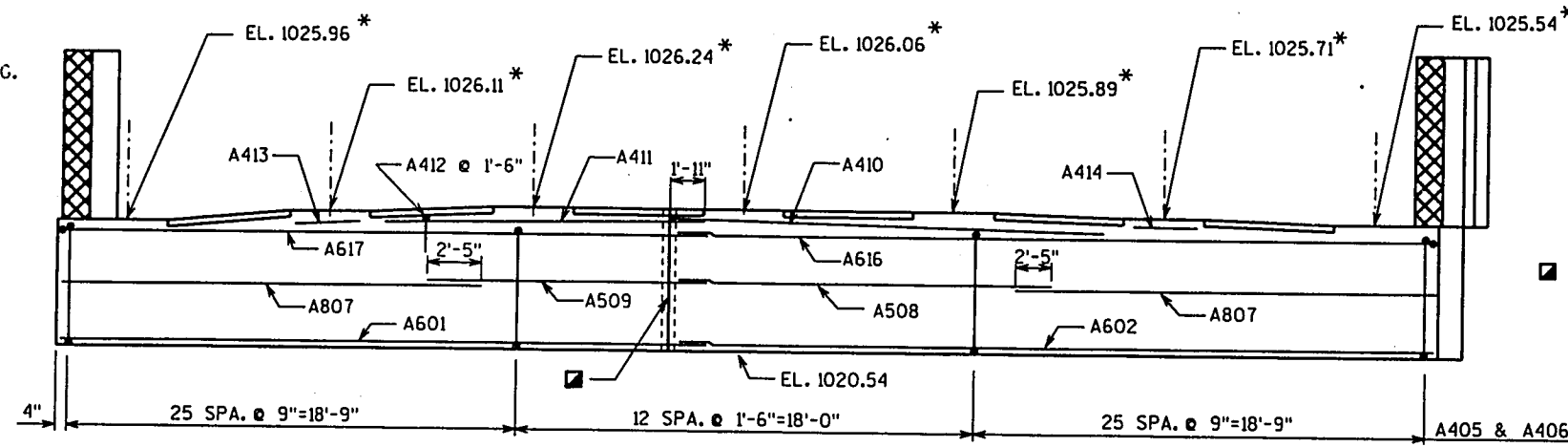
No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-13-414			
Const. Spec.	WS. '89	Drawn By MDW	Plane Checked T.M.G.
GENERAL PLAN			SHEET 2
			X84062



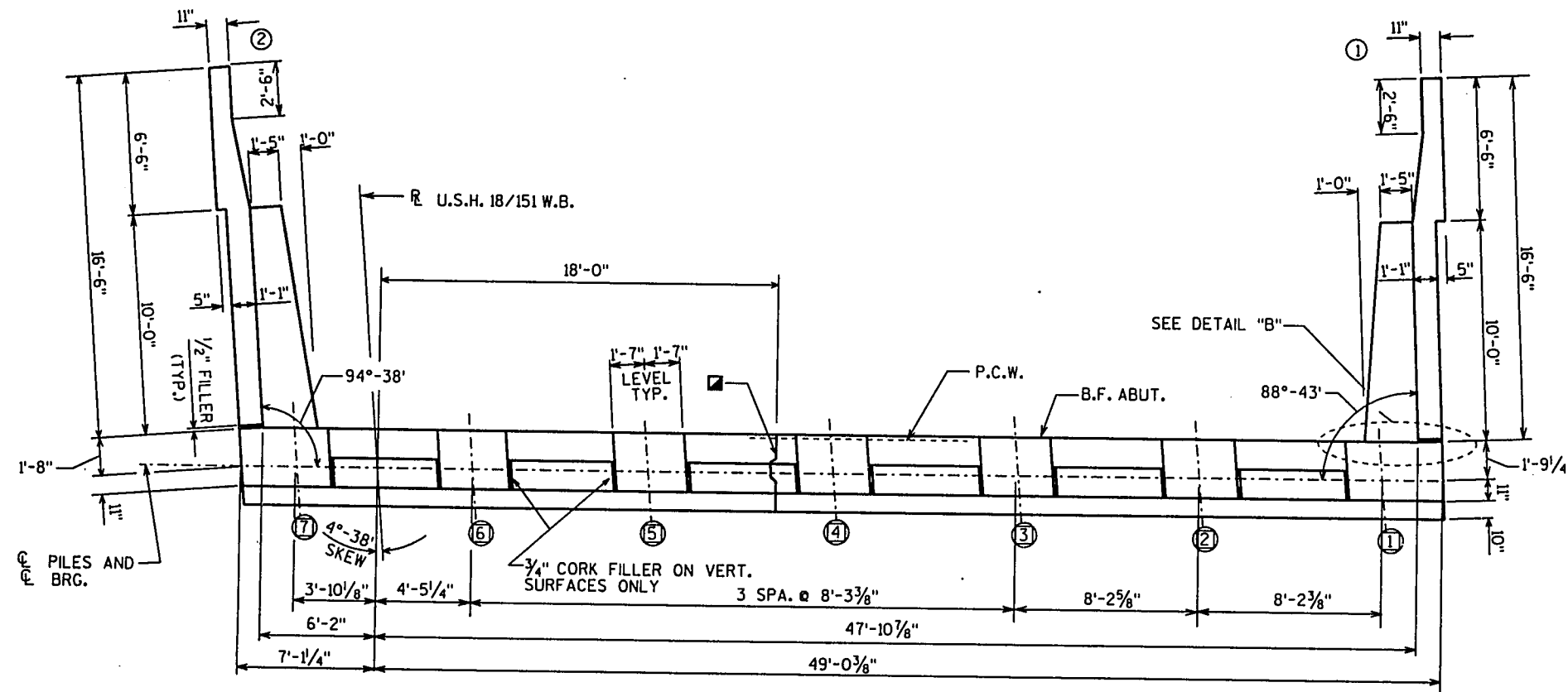
STATE PROJECT NUMBER		SHEET NO.	
1201-04-76		8.39	
ABBREVIATIONS			
F _____ FINE		M _____ MEDIUM	
WS _____ WEATHERED		C _____ COARSE	
		SO _____ SOUND	
MATERIAL SYMBOLS			
TOPSOIL	SILT	SHALE	
SAND	CLAY	LIMESTONE/ DOLOMITE	
GRAVEL	BOULDERS/ COBBLES	SANDSTONE	
LEGEND OF BORING			
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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-13-414			
Const. Spec.	W.S. '89	Drawn By MDW	Plane Checked P.W.
SUBSURFACE EXPLORATION			SHEET 3 X84062

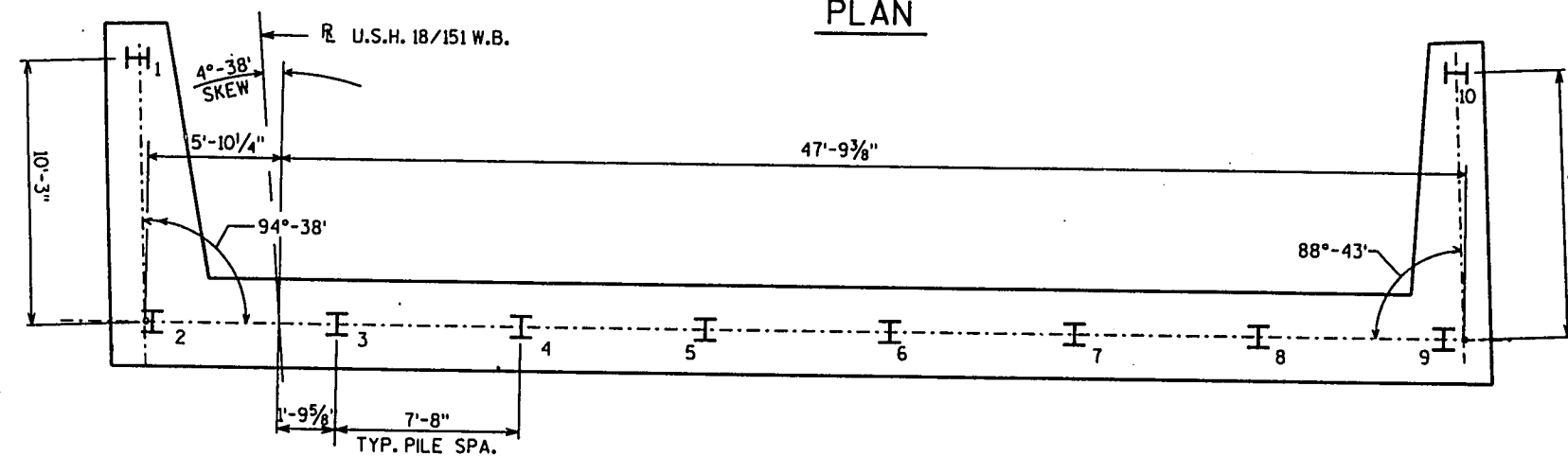
* ELEVATIONS GIVEN @ C. BRG.



ELEVATION
LOOKING SOUTH



PLAN

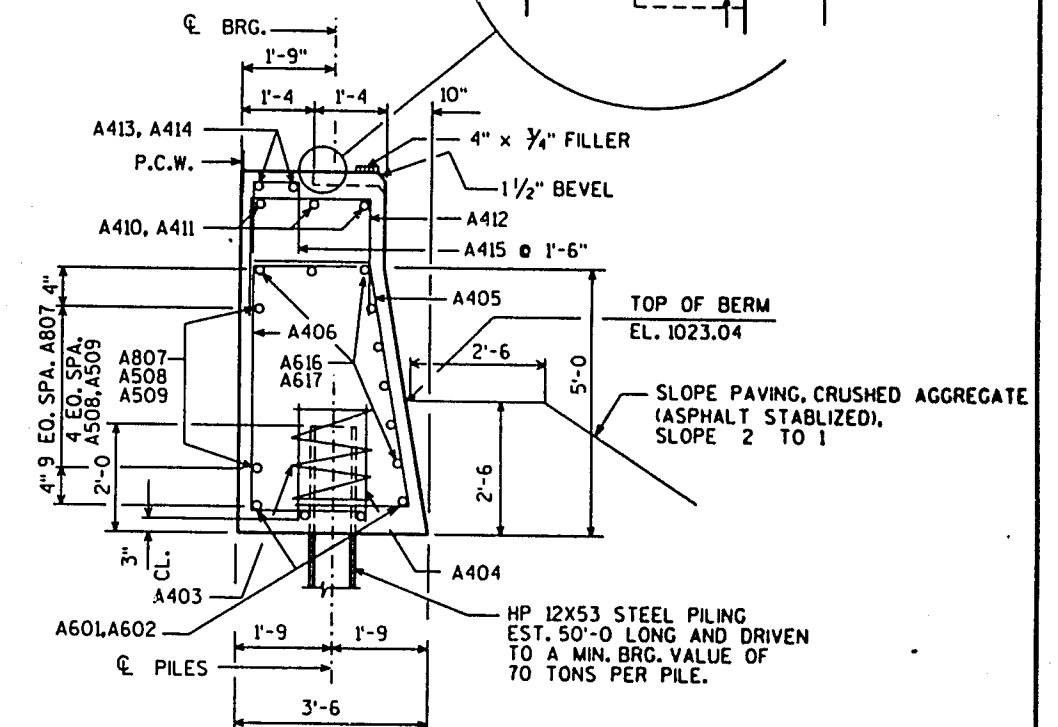


PILE PLAN

NOTE:
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. [HOLD 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE]. AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

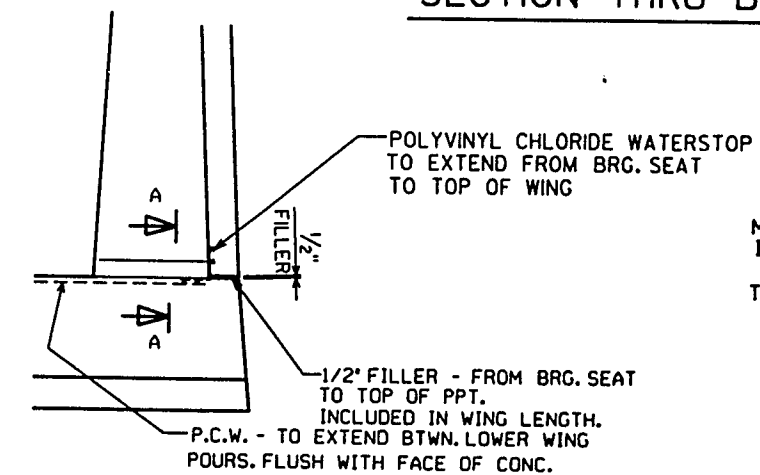
VERTICAL CONSTRUCTION JOINT. RUN BAR STEEL THRU JOINT, BEVEL EXPOSED EDGES 1" AND SEAL B.F. OF JOINT WITH P.C.W.

STEEL TROWEL TOP SURFACE OF ABUTMENT PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE .03" MIN)

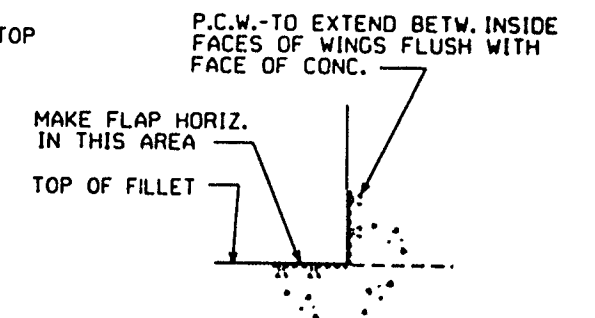


SECTION THRU BODY

NOTE: FILL TO BOTT. OF ABUT. BEFORE DRIVING PILING.



DETAIL "B"



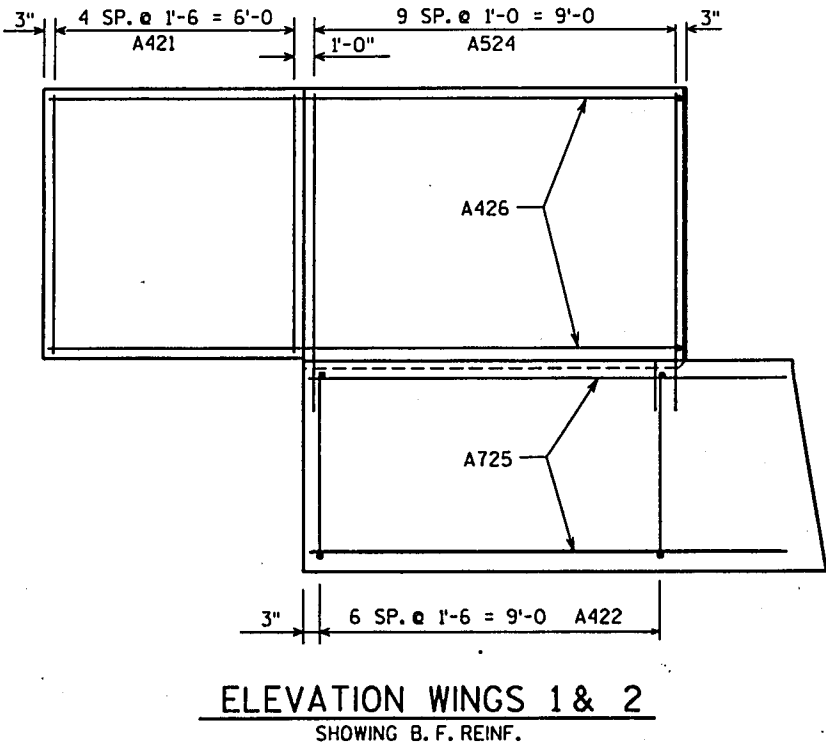
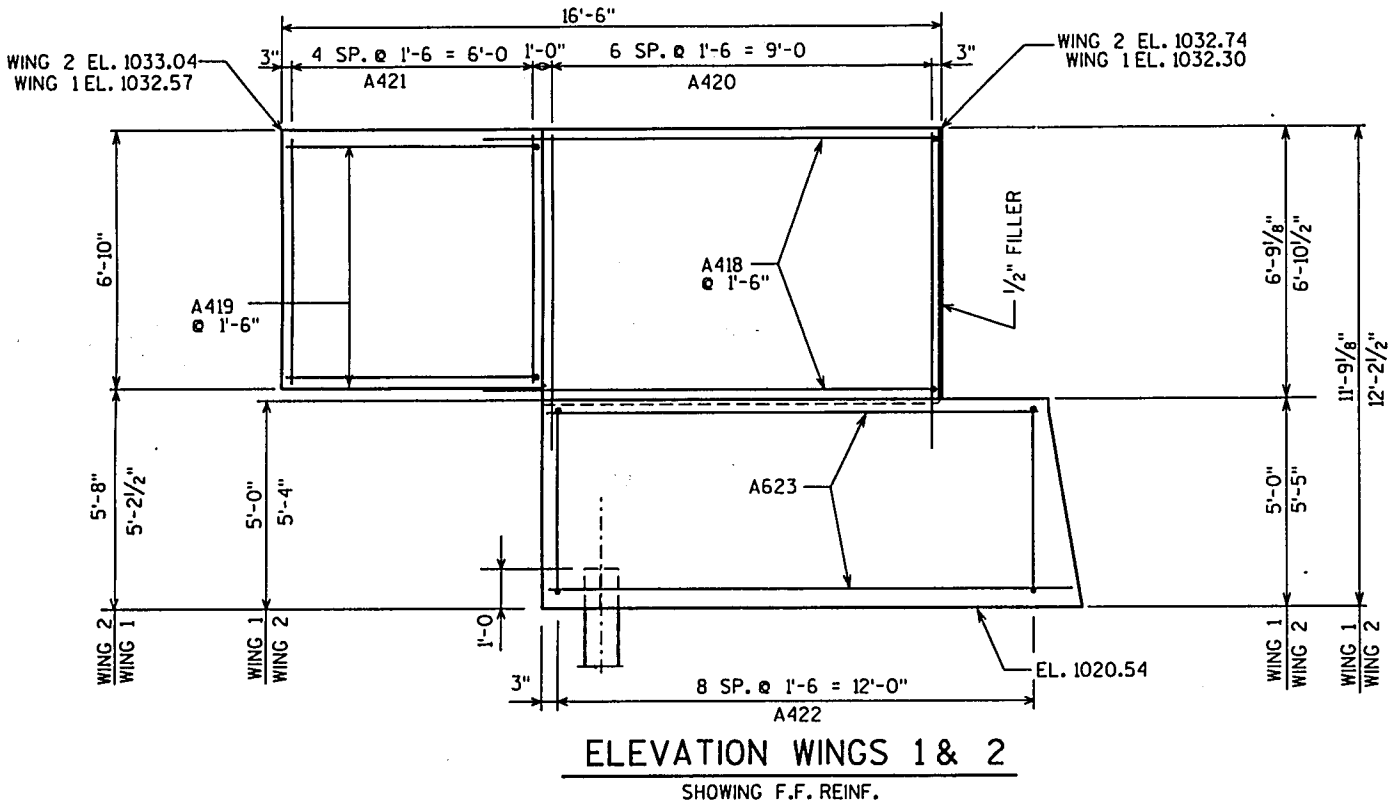
SECTION A-A

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MDW
		PLANS C.R.D.	FWG
SOUTH ABUTMENT		SHEET 4	
		X84062	

BILL OF BARS

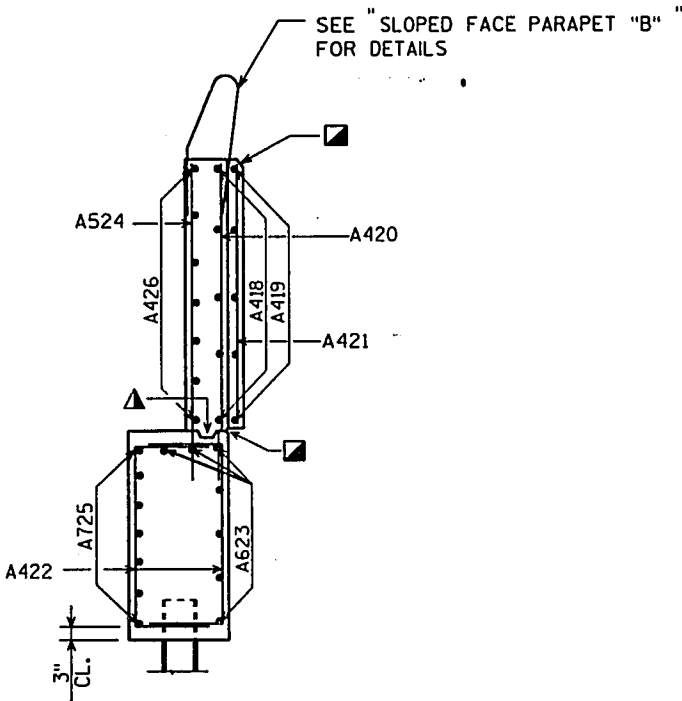
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
A601		4	27-11				BODY-HORIZ.
A602		4	30-0				BODY-HORIZ.
A403		8	28-0	X			BODY PILES
A404		16	2-3				BODY 2/PILE
A405		63	7-11	X			BODY-VERT.-STIRRUP
A406		63	8-7	X			BODY-VERT.-STIRRUP
A807		14	16-6				BODY-HORIZ.
A508		5	16-9				BODY-HORIZ.
A509		5	13-4				BODY-HORIZ.
A410		3	18-6				BODY-HORIZ.-TOP
A411		3	14-6				BODY-HORIZ.-TOP
A412		22	4-10	X			BODY-VERT.-TOP-STIRRUP
A413		2	26-10				BODY TOP-HORIZ.
A414		2	31-0				BODY TOP-HORIZ.
A415		38	3-4	X			BODY TOP-VERT.-STIRRUP
A616		8	31-9	X			BODY-HORIZ.
A617		8	28-8	X			BODY-HORIZ.
A418		10	11-11	X			WINGS 1 & 2-HORIZ.
A419		10	7-3	X			WINGS 1 & 2-HORIZ.
A420		14	7-11				WINGS 1 & 2-VERT.F.F.
A421		20	6-4				WINGS 1 & 2-VERT.F.F. & B.F.
A422		32	8-10	X			WINGS 1 & 2-VERT.F.F. & B.F.
A623		14	12-2				WINGS 1 & 2-HORIZ.-F.F.
A524		20	8-1				WINGS 1 & 2-VERT.-B.F.
A725		14	12-5	X			WINGS 1 & 2-HORIZ.-B.F.
A426		14	16-9	X			WINGS 1 & 2-HORIZ.-B.F.

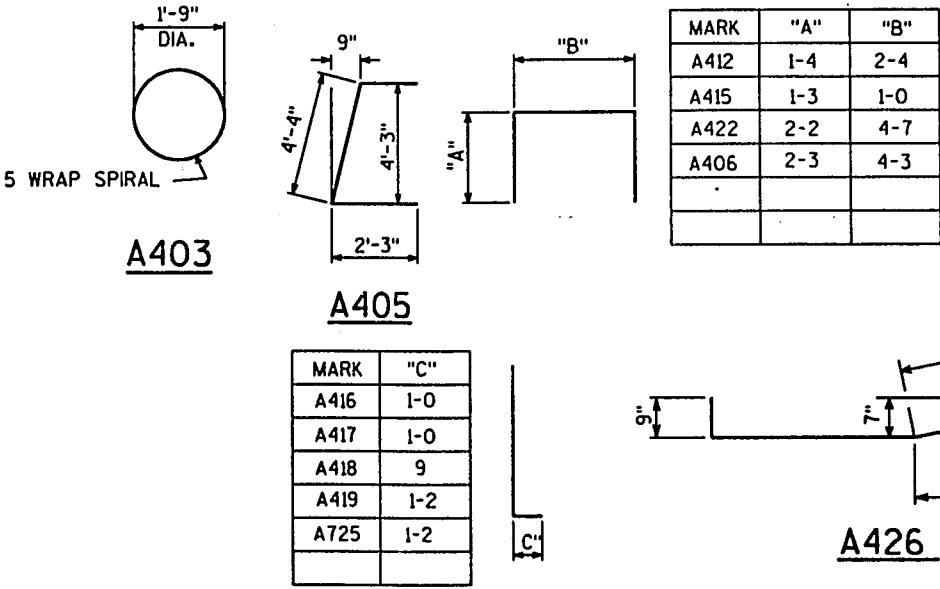


▲ OPT. CONST. JT. KEYWAY FORMED BY SURFACED BEVELED 2"x6"

■ 3/4" V-GROOVE ON F.F. OF WINGWALL



SECTION THRU WINGS 1 & 2



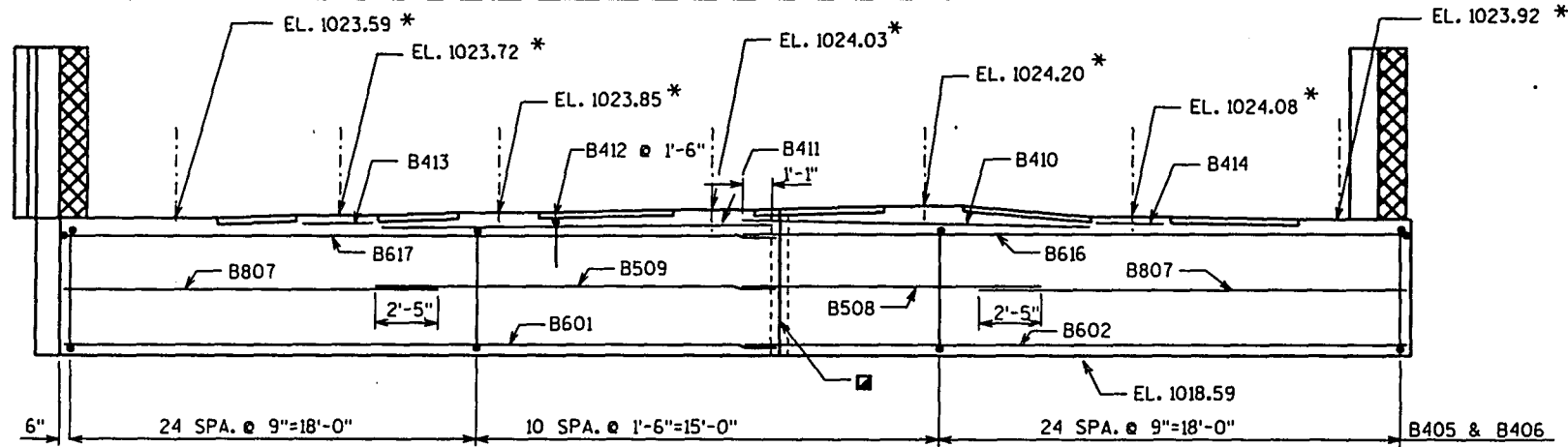
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MDW
SOUTH ABUTMENT		PLANS C.D.	FWG
		SHEET 5	
		X84062	

NOTE:
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (HOLD 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

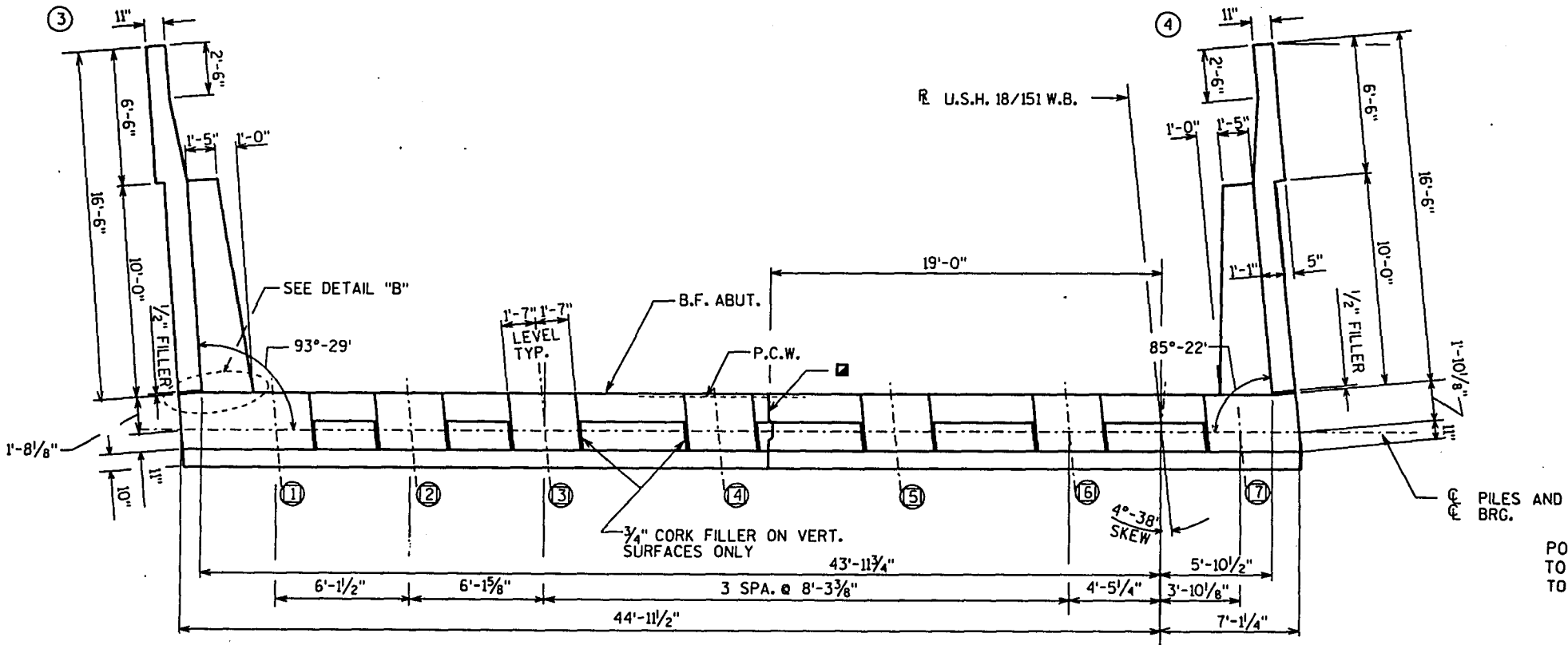
■ VERTICAL CONSTRUCTION JOINT. RUN BAR STEEL THRU JOINT, BEVEL EXPOSED EDGES 1" AND SEAL B.F. OF JOINT WITH P.C.W.

* ELEVATIONS GIVEN @ C. BRG.

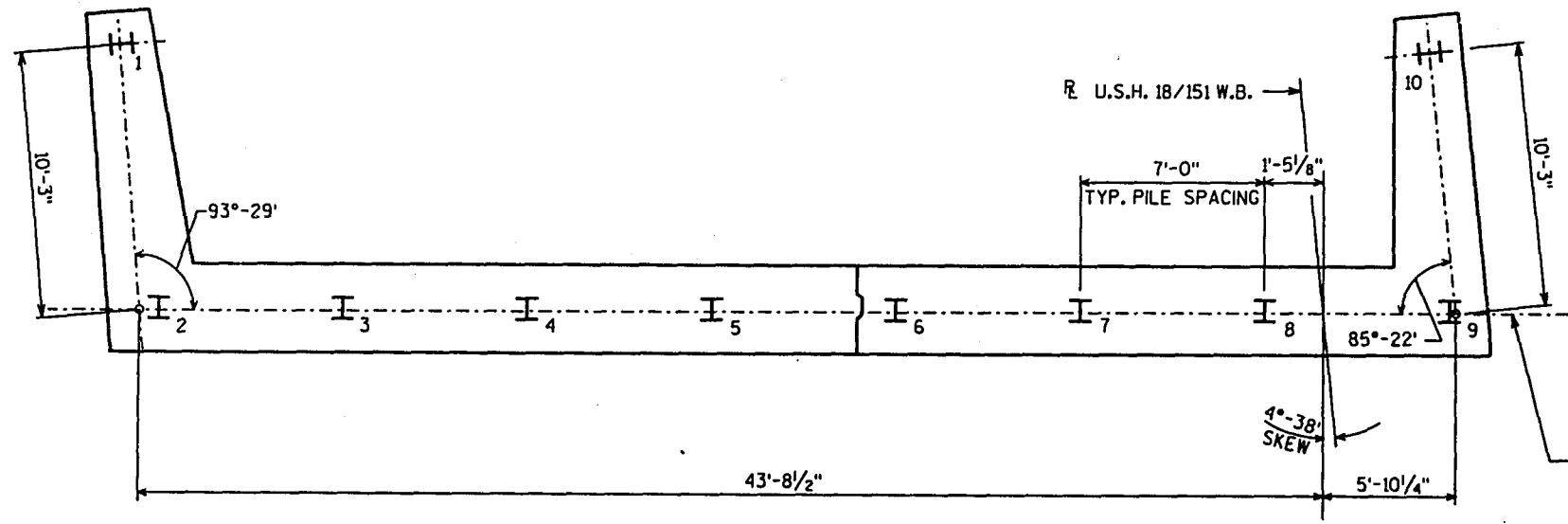
STEEL TROWEL TOP SURFACE OF ABUTMENT PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE .03" MIN)



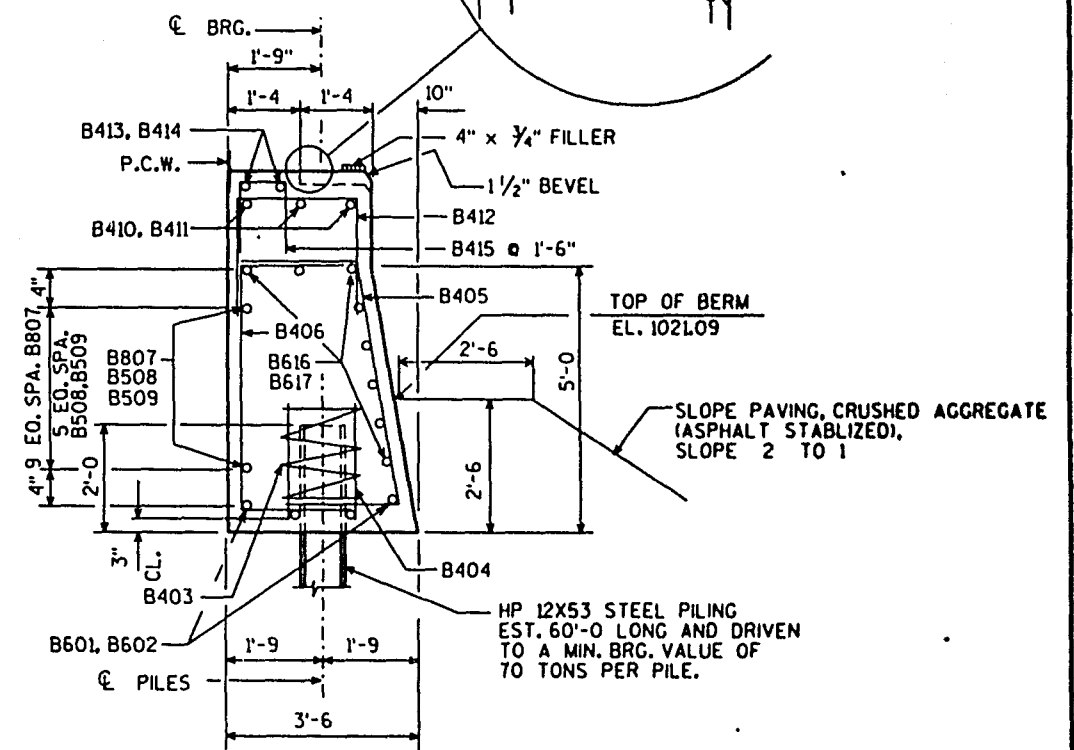
ELEVATION
LOOKING NORTH



PLAN



PILE PLAN

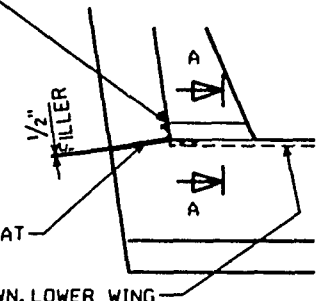


SECTION THRU BODY

NOTE: FILL TO BOTT. OF ABUT. BEFORE DRIVING PILING.

POLYVINYL CHLORIDE WATERSTOP TO EXTEND FROM BRG. SEAT TO TOP OF WING.

P.C.W. - TO EXTEND BETW. INSIDE FACES OF WINGS FLUSH WITH FACE OF CONC.

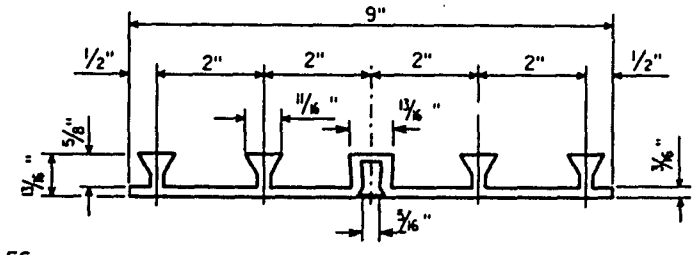


DETAIL 'B'

MAKE FLAP HORIZ. IN THIS AREA

SECTION A-A

1/2" FILLER - FROM BRG. SEAT TO TOP OF PPT. INCLUDED IN WING LENGTH.
P.C.W. - TO EXTEND BTWN. LOWER WING POURS, FLUSH WITH FACE OF CONC.



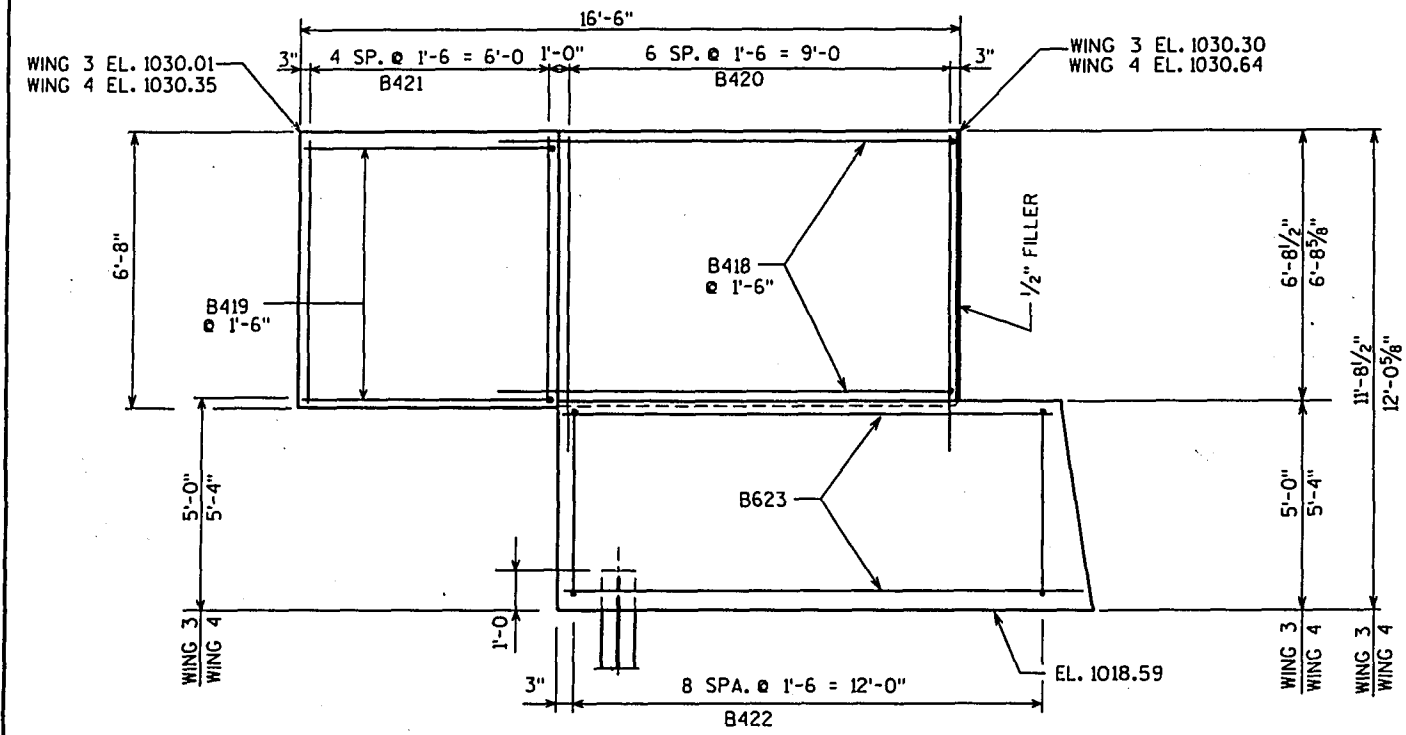
P.C.W.

(POLYVINYL CHLORIDE WATERSTOP)

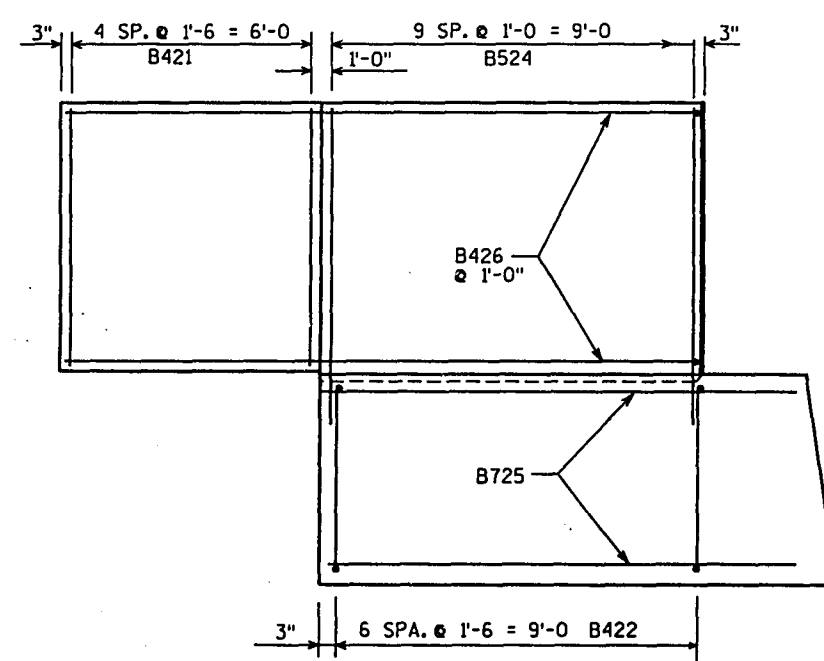
P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MON
NORTH ABUTMENT		PLANS C.A.D.	F.W.G.
SHEET 6		X84062	

41ANSBUT.DGN SCALE 4:1

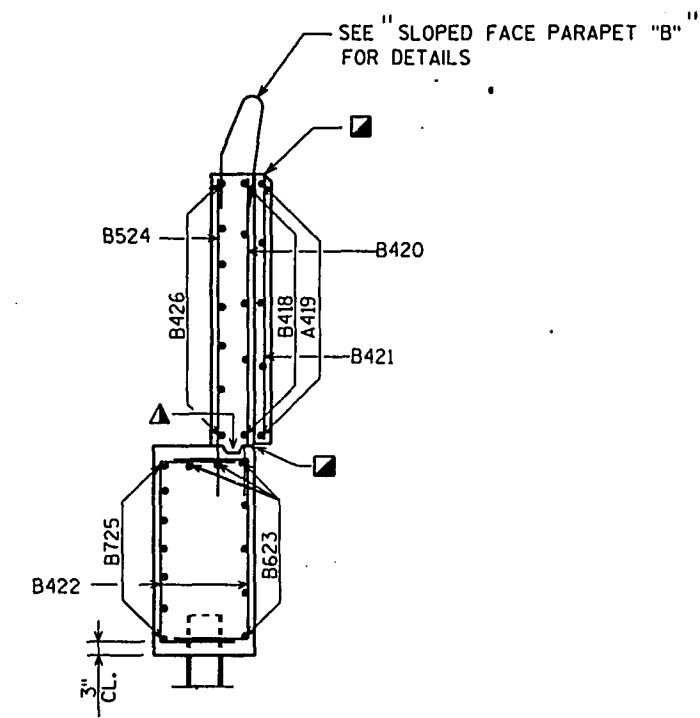


ELEVATION WINGS 3 & 4
SHOWING F.F. REINF.

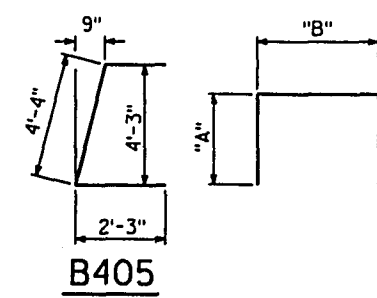
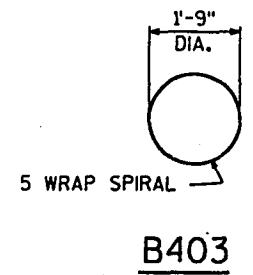


ELEVATION WINGS 3 & 4
SHOWING B.F. REINF.

- ▲ OPT. CONST. JT. KEYWAY FORMED BY SURFACED BEVELED 2"x6"
- 3/4" V-GROOVE ON F.F. OF WINGWALL

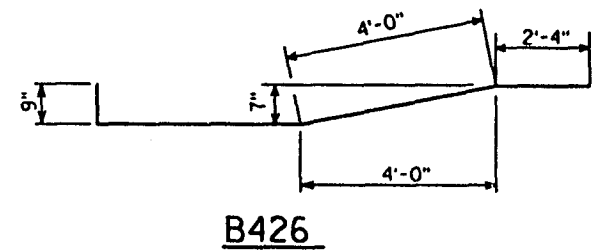


SECTION THRU WINGS 3 & 4



MARK	"A"	"B"
B412	1-4	2-4
B415	1-3	1-0
B422	2-2	4-7
B406	2-3	4-3

MARK	"C"
B416	1-0
B417	1-0
B418	9
B419	1-2
B725	1-2

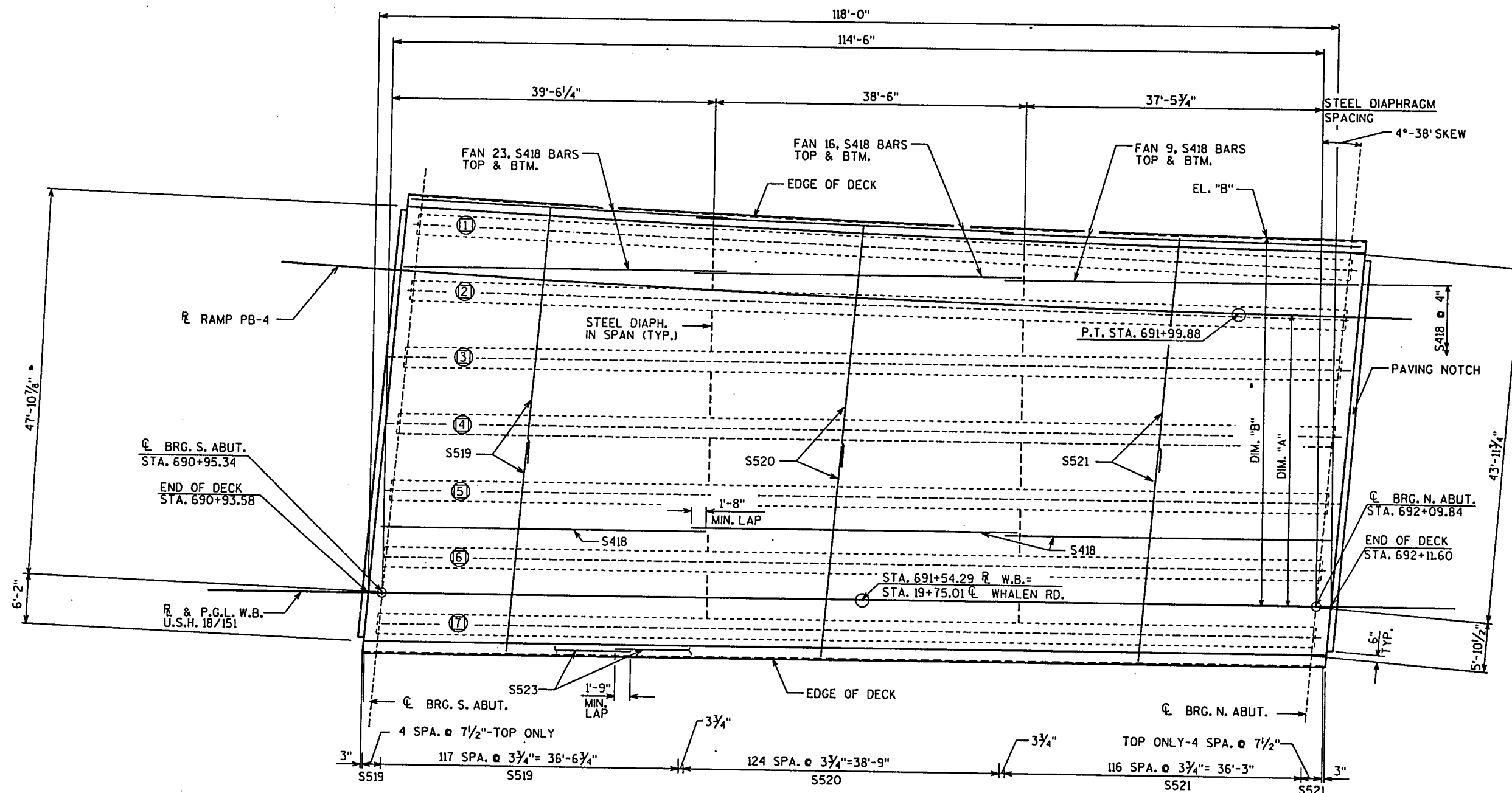


BILL OF BARS

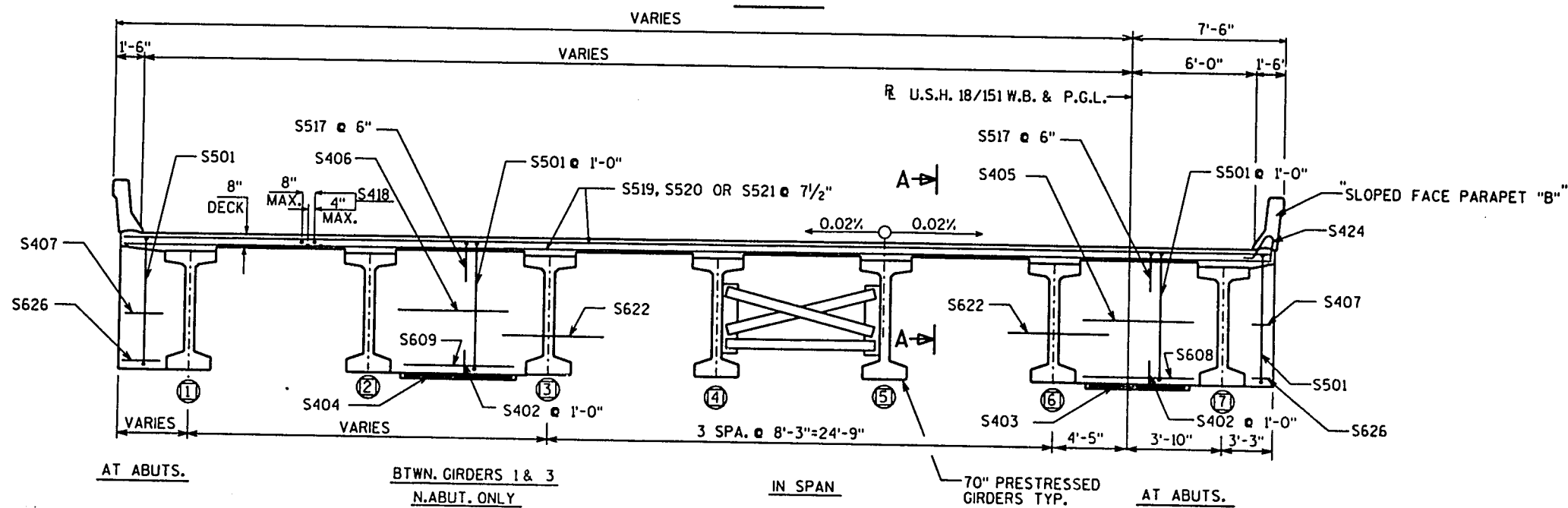
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	QTY	NO. REQ'D.	LENGTH	BEND	CUT. DIAG.	BUNDLE	LOCATION
B601		4	25-0				BODY-HORIZ.
B602		4	28-10				BODY-HORIZ.
B403		8	28-0	X			BODY @ PILES
B404		16	2-3				BODY 2/PILE
B405		59	7-11	X			BODY-VERT.-STIRRUP
A406		59	8-7	X			BODY-VERT.-STIRRUP
B807		20	16-6				BODY-HORIZ.
B508		5	14-6				BODY-HORIZ.
B509		5	11-6				BODY-HORIZ.
B410		3	15-0				BODY-HORIZ.-TOP
B411		3	14-9				BODY-HORIZ.-TOP
B412		20	4-10	X			BODY-VERT.-TOP-STIRRUP
B413		2	25-8				BODY TOP-HORIZ.
B414		2	28-0				BODY TOP-HORIZ.
B415		36	3-4	X			BODY TOP-VERT.-STIRRUP
B616		8	29-9	X			BODY-HORIZ.
B617		8	26-8	X			BODY-HORIZ.
B418		10	11-11	X			WINGS 3 & 4-HORIZ.-F.F.
B419		10	7-3	X			WINGS 3 & 4-HORIZ.-F.F.
B420		14	7-11				WINGS 3 & 4-VERT.F.F.
B421		20	6-2				WINGS 3 & 4-VERT.F.F. & B.F.
B422		32	8-10	X			WINGS 3 & 4-VERT.F.F. & B.F.
B623		14	12-3				WINGS 3 & 4-HORIZ.-F.F.
B524		20	7-10				WINGS 3 & 4-VERT.-B.F.
B725		14	12-5				WINGS 3 & 4-HORIZ.-B.F.
B426		14	16-9	X			WINGS 3 & 4-HORIZ.-B.F.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MON
NORTH ABUTMENT		SHEET 7	
		X84062	



PLAN

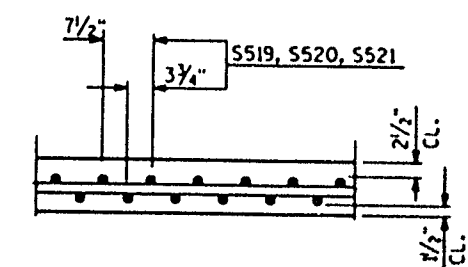


CROSS SECTION THRU ROADWAY LOOKING NORTH

TANGENT OFFSET TABLE

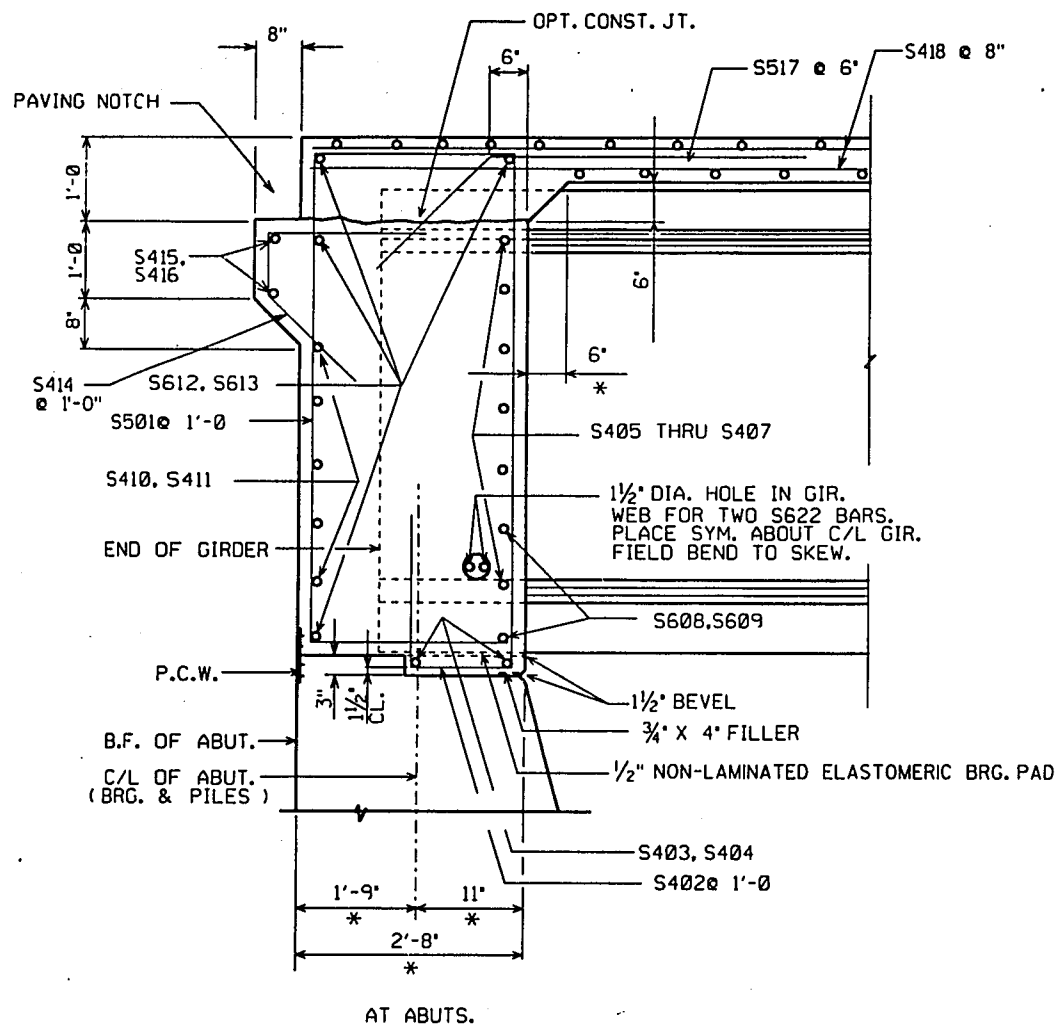
* POINT	STATION	DIM. "A"	DIM. "B"	EL. "B"
☼ BRG. S. ABUT.	690+95.34	39'-11 $\frac{5}{8}$ "	49'-1 $\frac{1}{8}$ "	1032.32
1/8 SPAN	691+06.65	39'-2 $\frac{3}{8}$ "	48'-3 $\frac{3}{4}$ "	1032.08
1/4 SPAN	691+23.96	38'-6 $\frac{1}{4}$ "	47'-7 $\frac{7}{8}$ "	1031.84
3/8 SPAN	691+38.28	37'-10 $\frac{3}{8}$ "	46'-11 $\frac{1}{4}$ "	1031.60
1/2 SPAN	691+52.59	37'-4"	46'-5"	1031.36
5/8 SPAN	691+66.90	36'-10 $\frac{1}{8}$ "	45'-11 $\frac{1}{8}$ "	1031.11
3/4 SPAN	691+81.21	36'-5 $\frac{1}{8}$ "	45'-6 $\frac{1}{8}$ "	1030.86
7/8 SPAN	691+95.52	36'-1"	45'-2"	1030.62
☼ BRG. N. ABUT.	692+09.84	35'-9 $\frac{1}{2}$ "	44'-10 $\frac{1}{2}$ "	1030.37

* MEASURED ALONG R & P.C.L. W.B.
U.S.H. 18/151



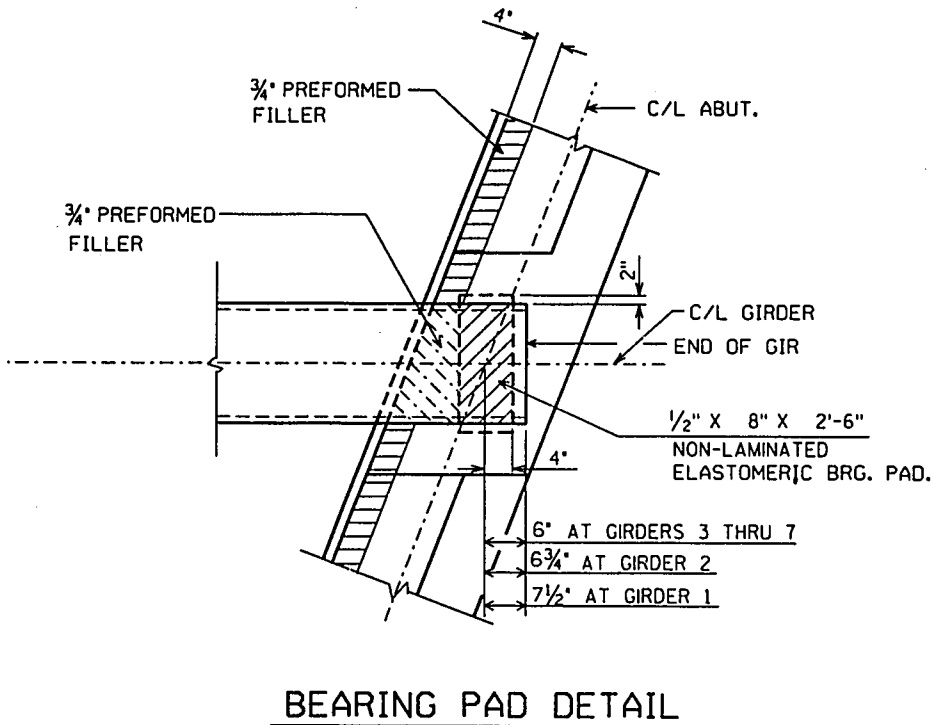
SECTION A-A

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	PLANS C.D. F.W.G.
SUPERSTRUCTURE		SHEET B	
		X84062	



PART LONGIT. SECTION

* DIM. TAKEN NORMAL TO C SUBSTRUCTURE



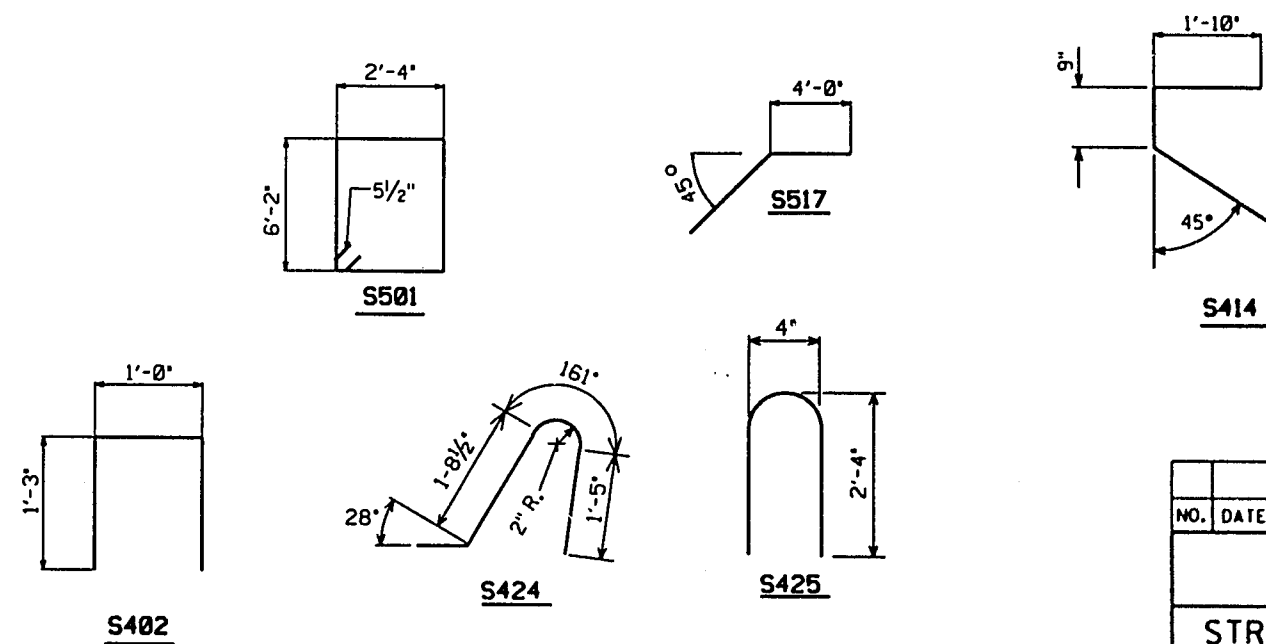
BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BEND	CUT. DIAG.	BUN- DLE	LOCATION
S501	X	76	17-7	X			ABUT. DIAPH.-VERT. STIRRUPS
S402	X	68	3-4	X			ABUT. DIAPH.-VERT. STIRRUPS
S403	X	20	4-9				ABUT. DIAPH.-HORIZ.
S404	X	4	2-8				ABUT. DIAPH HORIZ. BTWN GIR. 1 & 3 N. ABUT.
S405	X	60	5-9				ABUT. DIAPH.-HORIZ.
S406	X	12	3-8				ABUT. DIAPH HORIZ. BTWN GIR. 1 & 3 N. ABUT.
S407	X	24	1-10				ABUT. DIAPH.-HORIZ.-AT ENDS
S608	X	20	5-9				ABUT. DIAPH.-HORIZ.
S609	X	4	3-8				ABUT. DIAPH.-HORIZ. BTWN GIR. 1 & 3 N. ABUT.
S410	X	10	29-0				ABUT. DIAPH.-HORIZ. S. ABUT.
S411	X	10	27-0				ABUT. DIAPH.-HORIZ. N. ABUT.
S612	X	8	29-8				ABUT. DIAPH.-HORIZ. S. ABUT.
S613	X	8	27-8				ABUT. DIAPH.-HORIZ. N. ABUT.
S414	X	106	4-10	X			ABUT.-PAVING NOTCH-VERT.
S415	X	4	27-8				ABUT.-PAVING NOTCH-HORIZ.-S. ABUT.
S416	X	4	25-6				ABUT.-PAVING NOTCH-HORIZ.-N. ABUT.
S517	X	188	6-10	X			SLAB @ ABUT. DIAPH.-LONGIT.
S418	X	486	40-4				SLAB-LONGIT.
S519	X	244	29-4				SLAB-TRANS.
S520	X	250	28-8				SLAB-TRANS.
S521	X	242	28-0				SLAB-TRANS.
S622	X	28	6-0				ABUT. DIAPH.-THRU GIRDERS-HORIZ.
S523	X	30	40-6				PARAPET B-HORIZ.
S424	X	316	4-3	X			SLAB & PARAPET B-VERT.
S425	X	316	4-10	X			PARAPET B-VERT.
S626	X	8	1-10				ABUT. DIAPH. HORIZ. @ ENDS

TOP OF DECK ELEVATIONS

	C BRG. S. ABUT.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	C BRG. N. ABUT.
GIRDER 1	1032.33	1032.08	1031.84	1031.60	1031.35	1031.11	1030.87	1030.62	1030.38
GIRDER 2	1032.50	1032.25	1032.00	1031.75	1031.51	1031.26	1031.01	1030.76	1030.51
GIRDER 3	1032.68	1032.42	1032.17	1031.91	1031.66	1031.40	1031.15	1030.90	1030.64
GIRDER 4	1032.85	1032.60	1032.35	1032.09	1031.84	1031.58	1031.33	1031.07	1030.82
GIRDER 5	1033.03	1032.78	1032.52	1032.27	1032.01	1031.76	1031.50	1031.25	1030.99
GIRDER 6	1032.91	1032.65	1032.40	1032.14	1031.89	1031.63	1031.38	1031.12	1030.87
GIRDER 7	1032.75	1032.50	1032.24	1031.99	1031.73	1031.48	1031.22	1030.97	1030.71



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY MOW	PLANS CAD. FWG
SUPERSTRUCTURE DETAILS			SHEET 9
			X84062

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOVED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

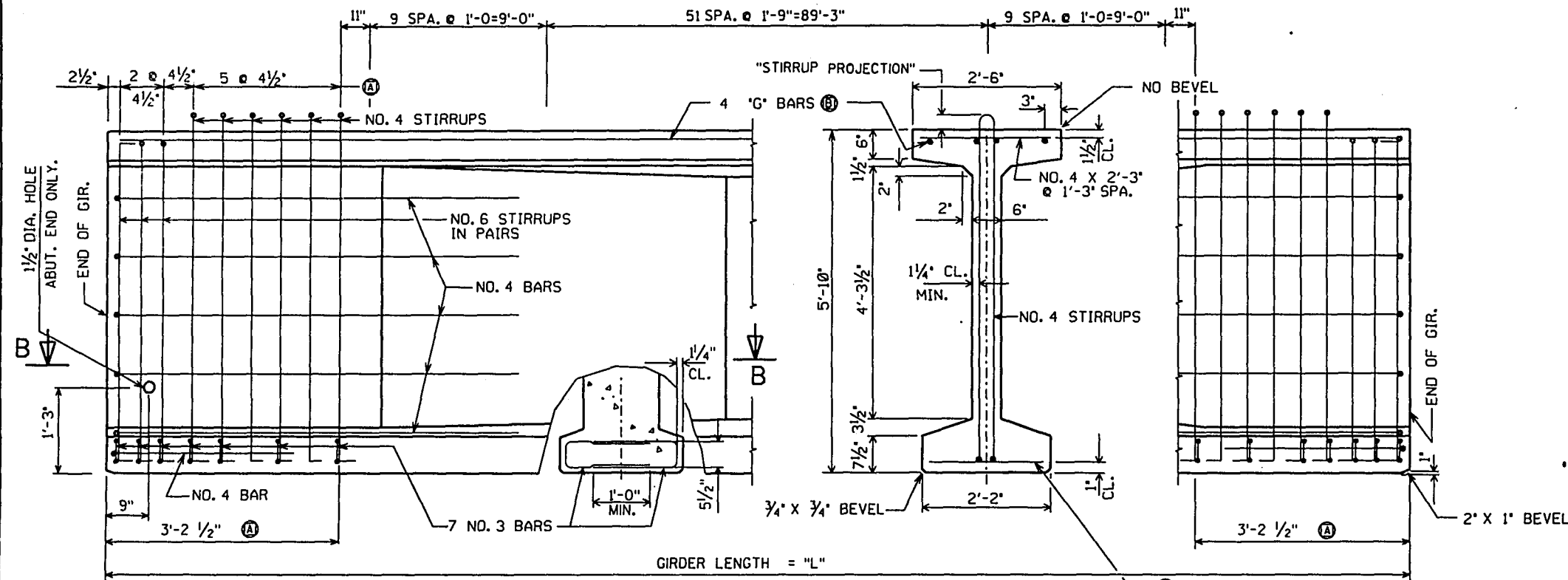
PRESTRESSING STRANDS SHALL BE $\frac{1}{2}$ " - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF NO. 4 STIRRUPS $\frac{1}{2}$ " AND NO. 6 STIRRUPS $\frac{3}{4}$ ".

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

ON MULTIPLE SPAN STRUCTURES, SET THE END BLOCK LENGTHS OF GIRDERS RESTING ON THE SAME PIER TO ± 2 ". ON SIMPLE SPANS, SET THE END BLOCK LENGTH ON BOTH GIRDER ENDS TO ± 2 ".

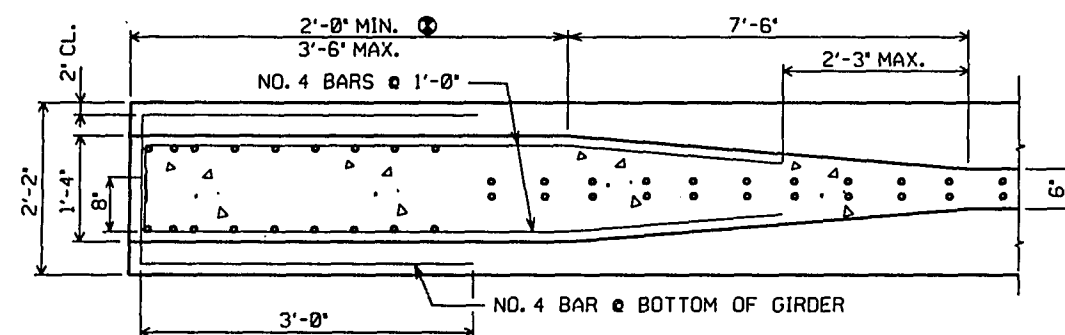
IF THE CONTRACTOR USES BOTTOM FLANGE TO SUPPORT CONSTRUCTION FORMS, THE CONTRACTOR SHALL SUBMIT FALSEWORK PLANS FOR APPROVAL OF THE ENGINEER.



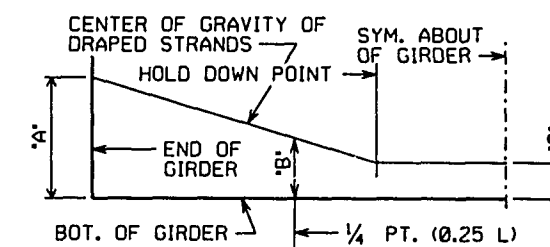
SIDE VIEW & TYPICAL SECTION IN SPAN

DETAIL TYP. AT EACH END.

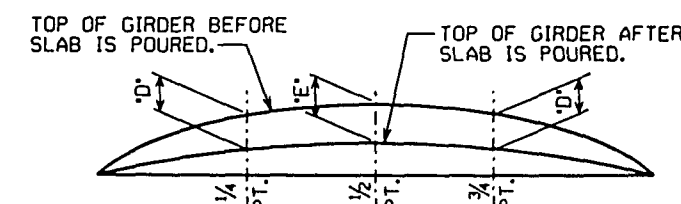
NO. 4 BARS x 1'-11" LG. AT STIRRUP SPA. EXCEPT WITHIN 3'-2" OF EACH END OF GIRDER.



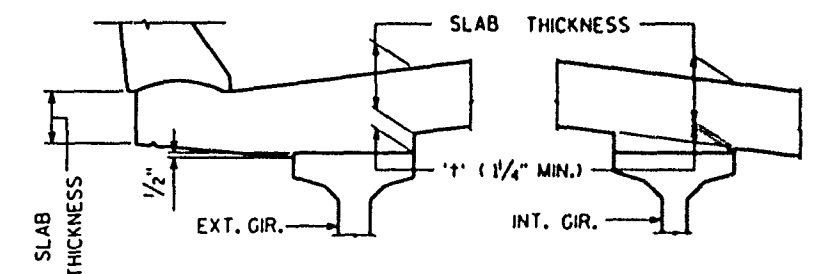
SECTION B



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM

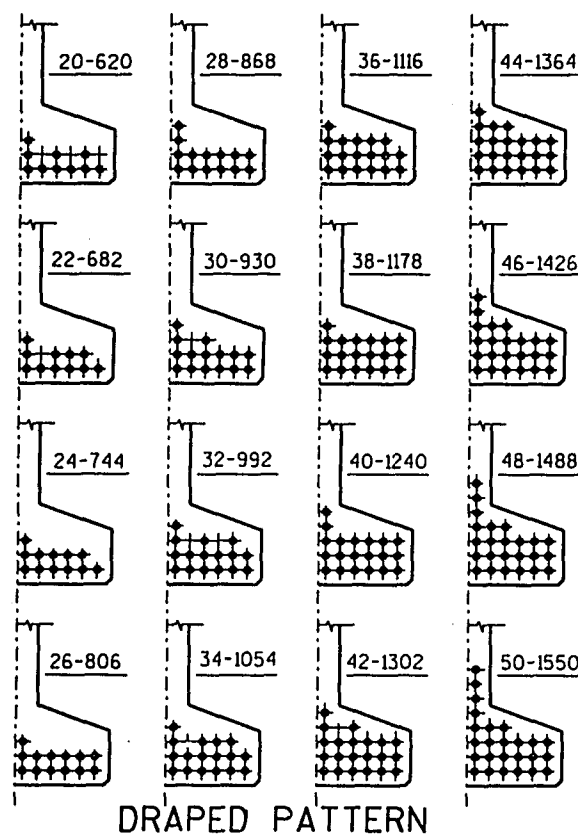


SLAB HAUNCH DETAIL

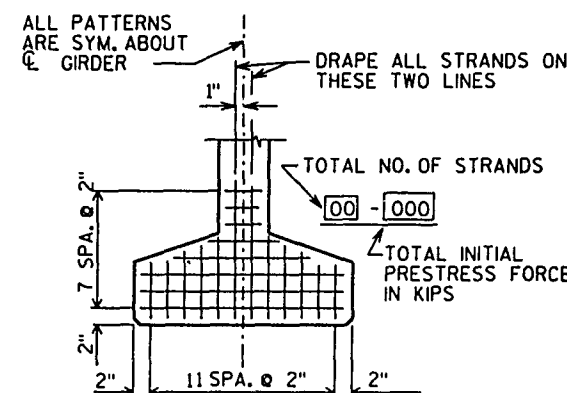
IF $\frac{1}{4}$ " MINIMUM HAUNCH HEIGHT "Y" CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE "Y" ELEV. OF TOP OF GIRDERS AT $\frac{1}{4}$ OF SUBSTRUCTURE UNITS & AT $\frac{1}{4}$ 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 "Y"



DRAPED PATTERN



TYP STRAND PATTERN

GIRDER DATA						No. 4 "G" BARS, MAY BE SPICED AT THE 1/3 POINTS. USE 1'-11" MIN. LAP.					
SPAN	GIRDER LENGTH "L"	DEAD LOAD DEF. (IN.)		CONC. STRGTH. (p.s.i.)	STIRRUP PROJECTION	DRAPED PATTERN					
		"D"	"E"			TOTAL NO. OF STRANDS	f'ci (p.s.i.)	"A"	"B" MIN.	"B" MAX.	"C"
1	115'-6"	1	1 1/8	6,000	6"	42	5,100	60	19 1/2	22 1/2	6

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE 8-13-414

CONST. SPEC. 1989

DRAWN BY MDW

PLAN BY CGL

70" PRESTRESSED GIRDER DETAILS

SHEET 10

X84062

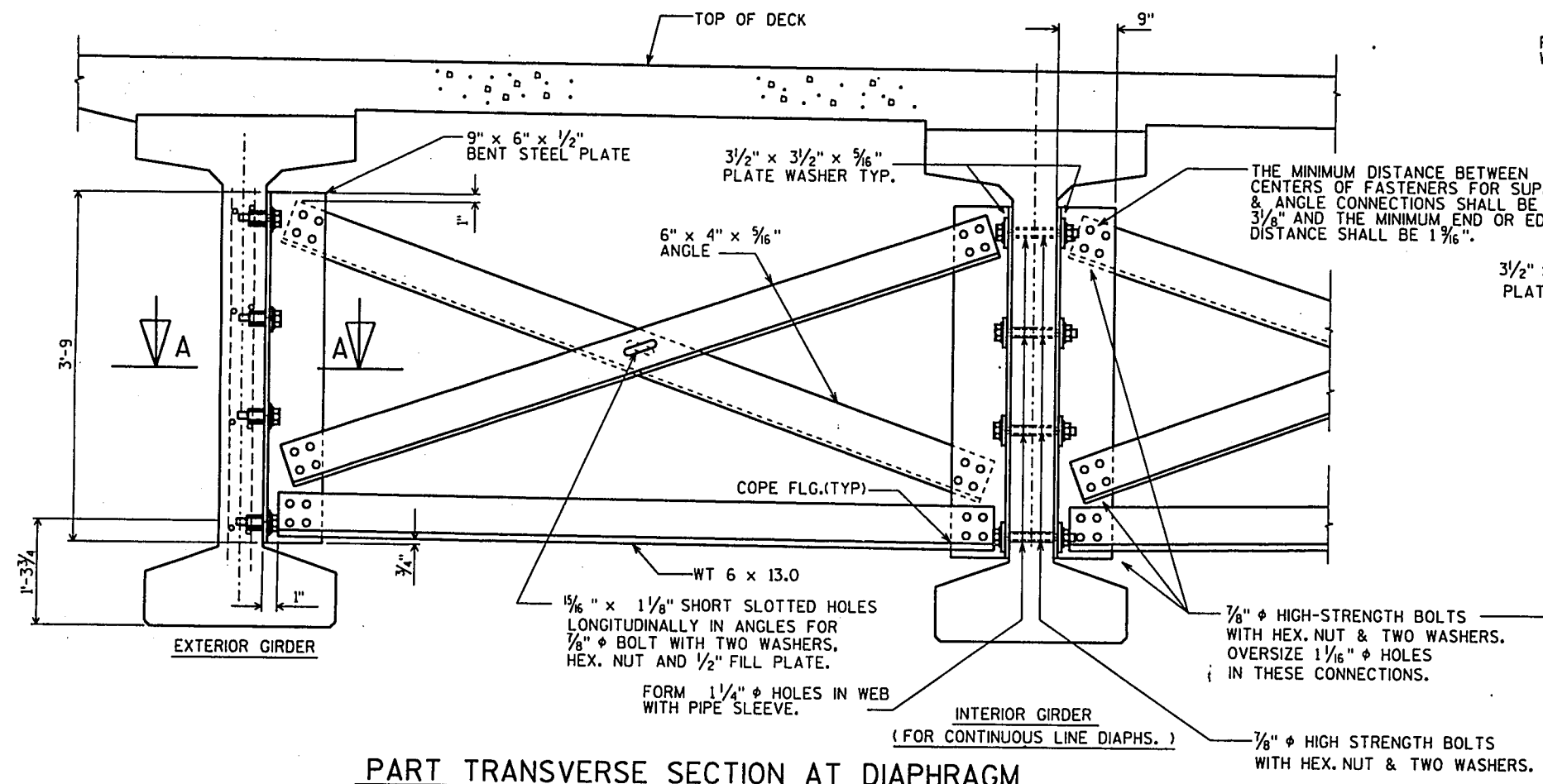
NOTES

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

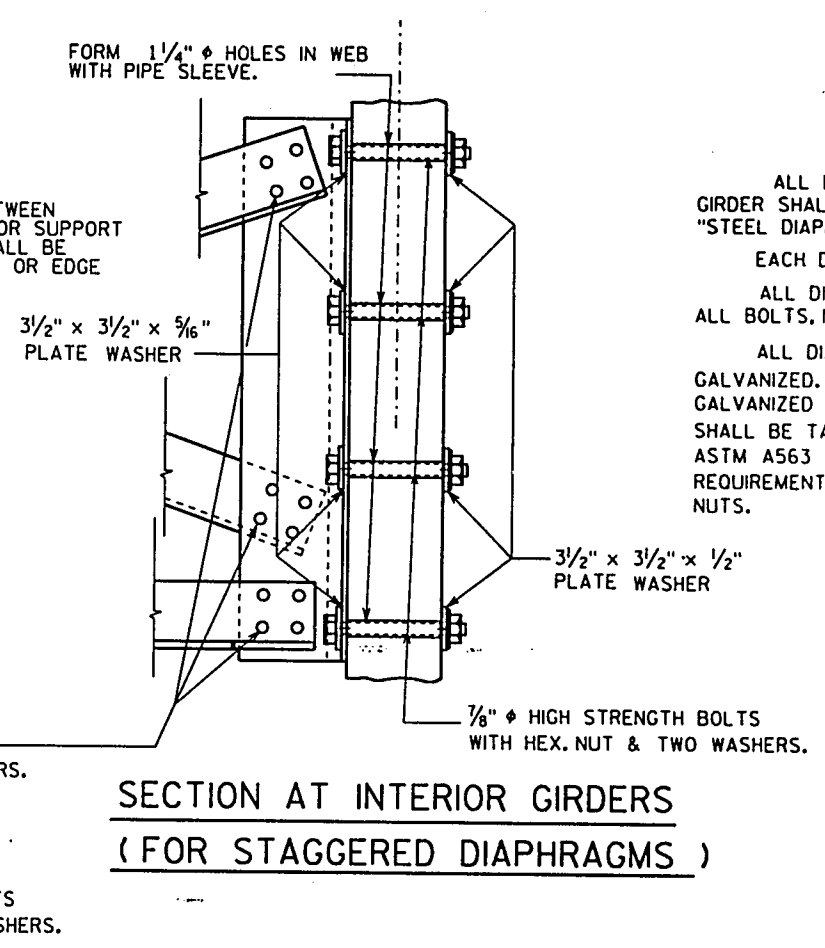
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

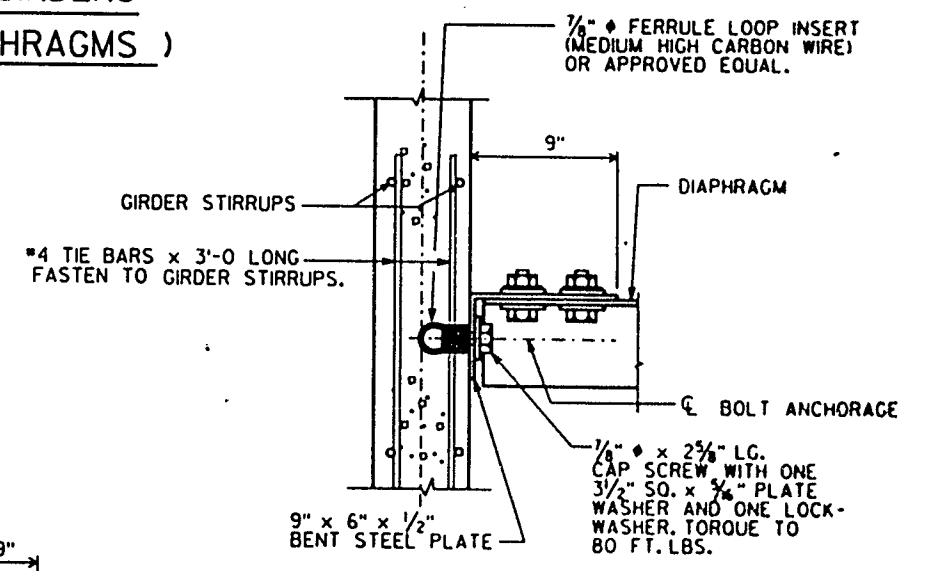
ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563. LUBRICANT AND TEST FOR COATED NUTS.



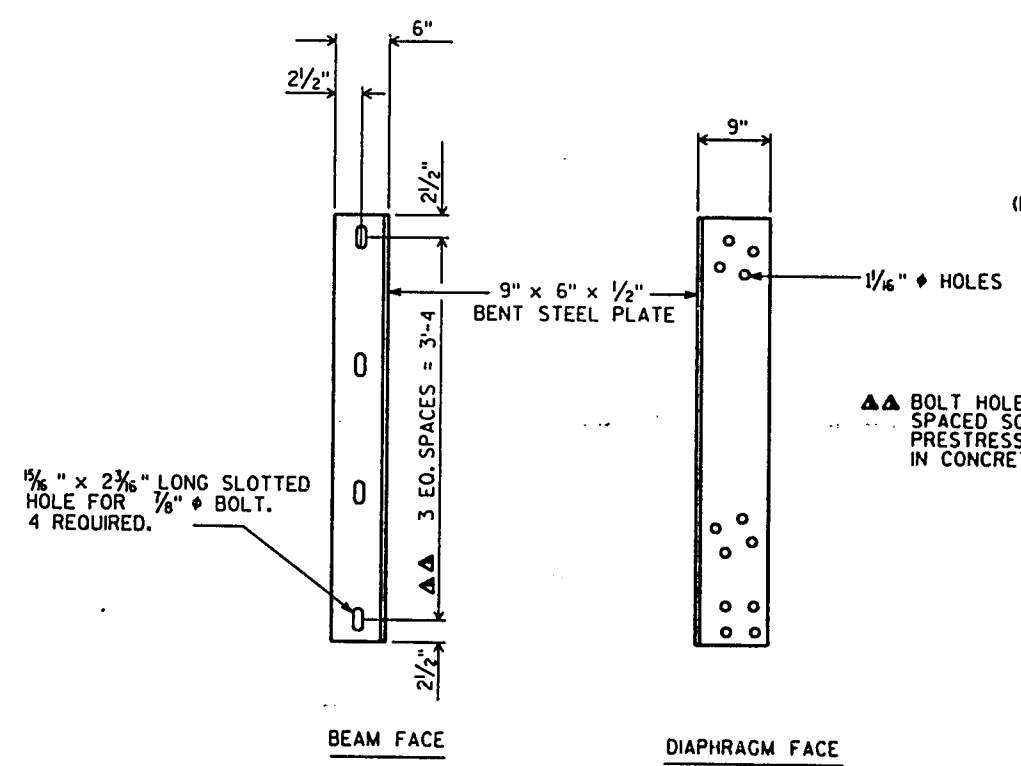
PART TRANSVERSE SECTION AT DIAPHRAGM



**SECTION AT INTERIOR GIRDERS
(FOR STAGGERED DIAPHRAGMS)**



**SECT. A-A
(FOR EXTERIOR ATTACHMENT)**



DIAPHRAGM SUPPORT

▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

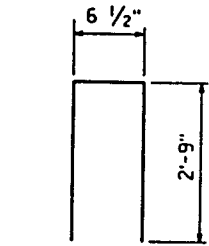
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MDW
		PLANT C.D.	FWG
STEEL DIAPHRAGM			SHEET 1.
			X84062

BILL OF BARS

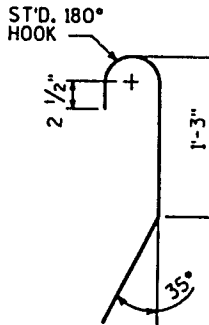
FOR ABUTMENT PARAPETS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.
EPOXY COAT ALL PARAPET REINF.

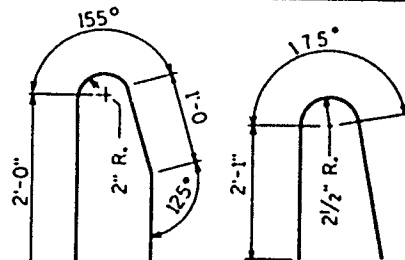
BAR MARK	NO.	REQ'D.	LENGTH	BENT	LOCATION
	SOUTH ABUT.	NORTH ABUT.			
R401	30	30	5-10	X	WINGS STIRRUPS
R402	8	8	3-1	X	WINGS
R403	28	28	4-9	X	WINGS STIRRUPS
R404	30	30	4-9	X	WINGS
R505	12	12	6-2		WINGS
R406	28	28	4-10	X	WINGS
R507	10	10			WINGS



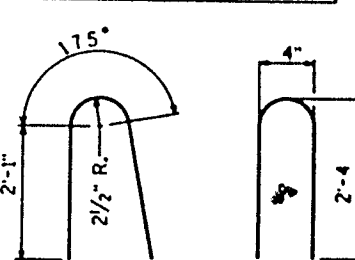
R401



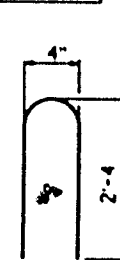
R402



R403

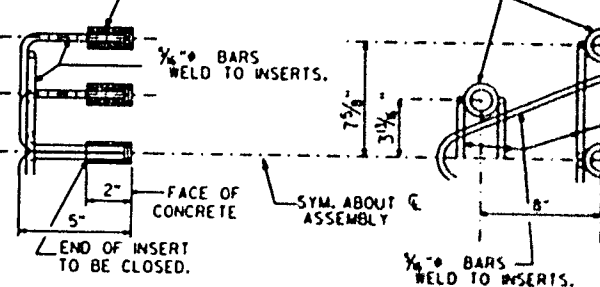


R404



R406

THREADED INSERTS FOR 1/4" x 2" LONG GALVANIZED HEX. HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1 1/4" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1 1/4".

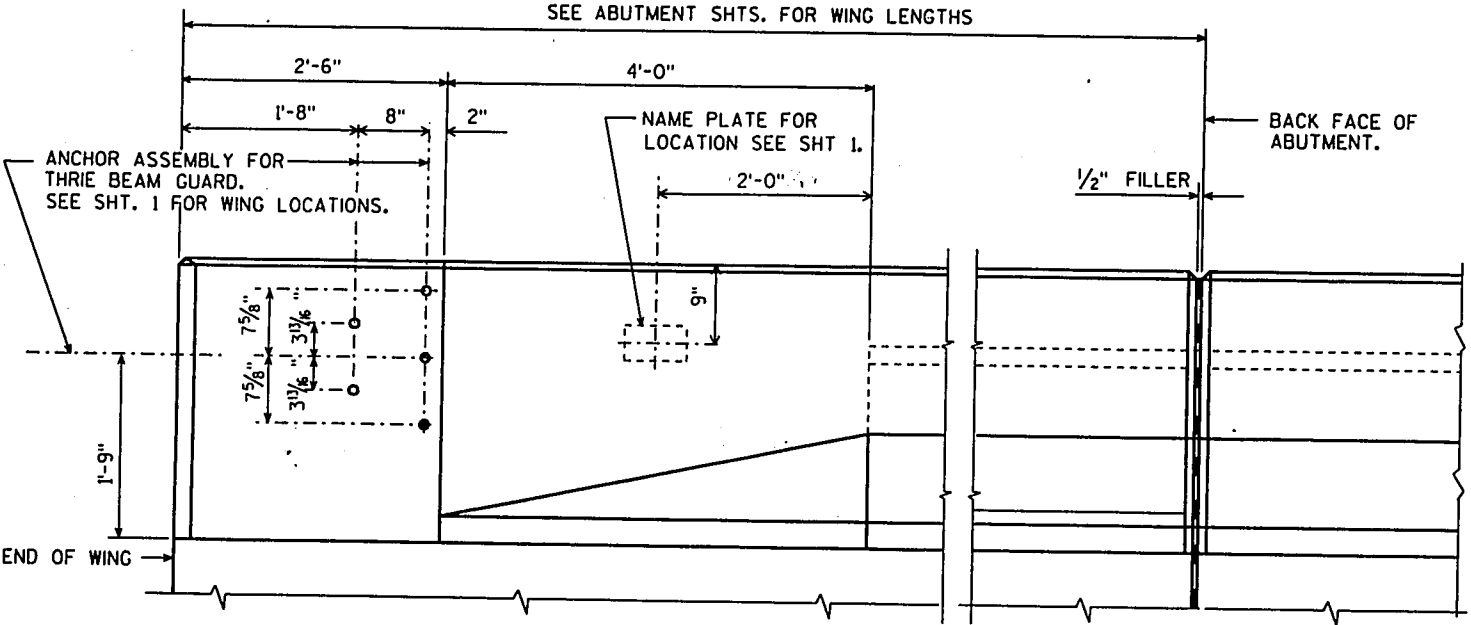


DETAIL OF ANCHOR ASSEMBLY

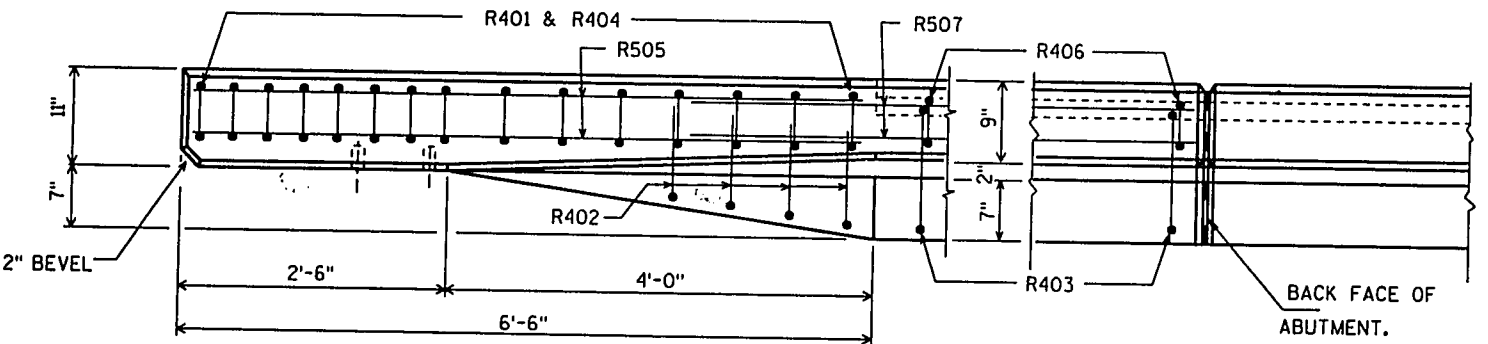
NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. SEE SHEET 1 FOR LOCATION.

NO.	DATE	REVISION	BY

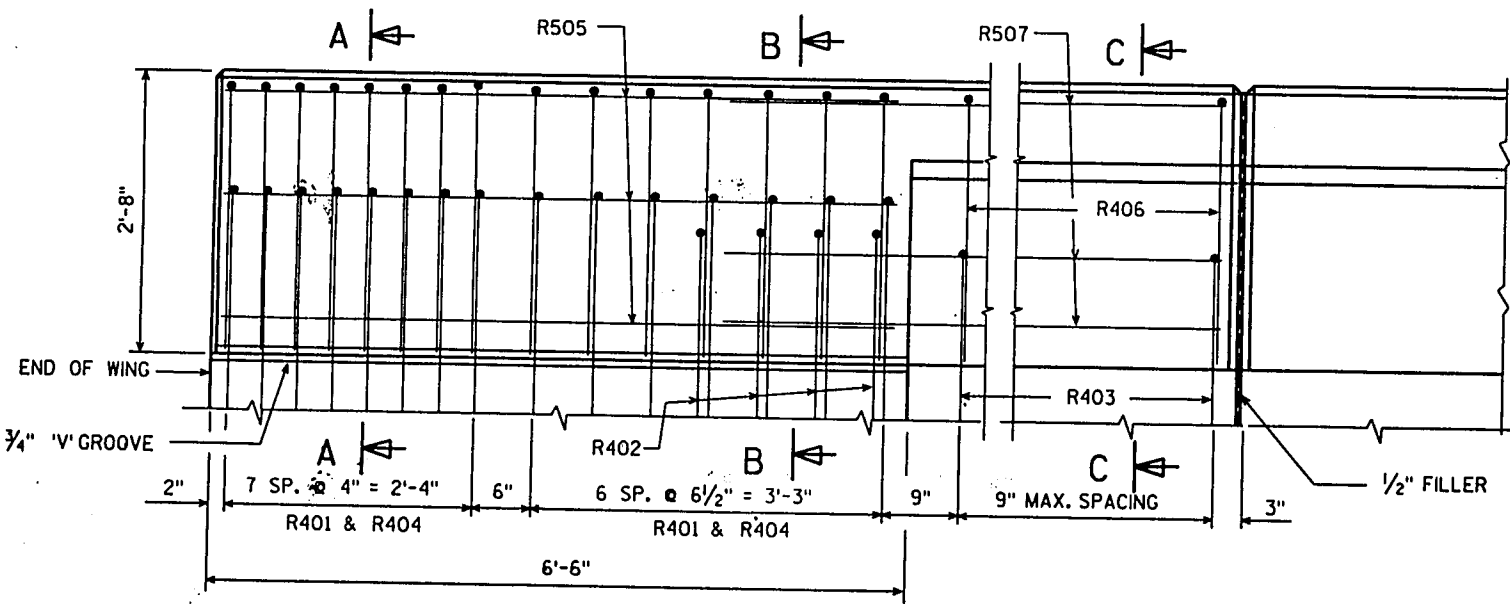
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-414			
CONST. SPEC.	1989	DRAWN BY	MDM
SLOPED FACE PARAPET "B"		PLANS C.D.	FNG
SHEET 12		X84062	



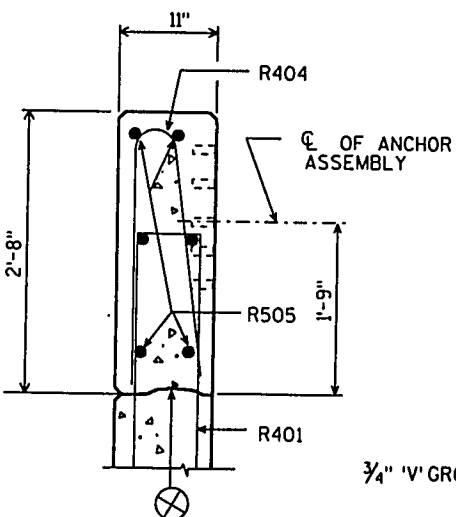
INSIDE ELEVATION



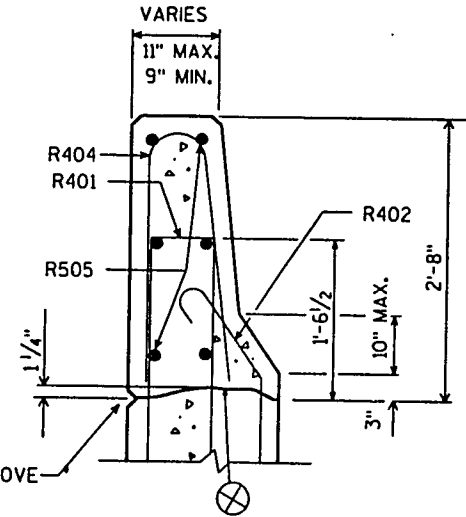
PLAN



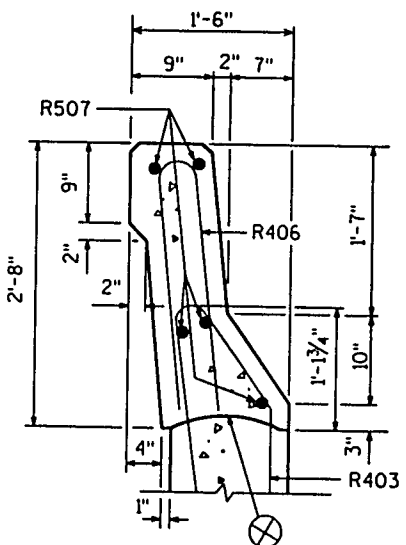
OUTSIDE ELEVATION



SECTION A

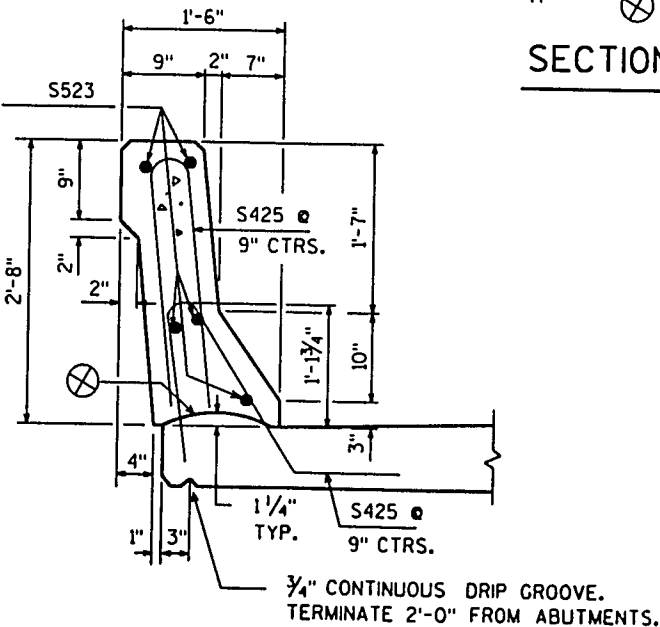


SECTION B



SECTION C

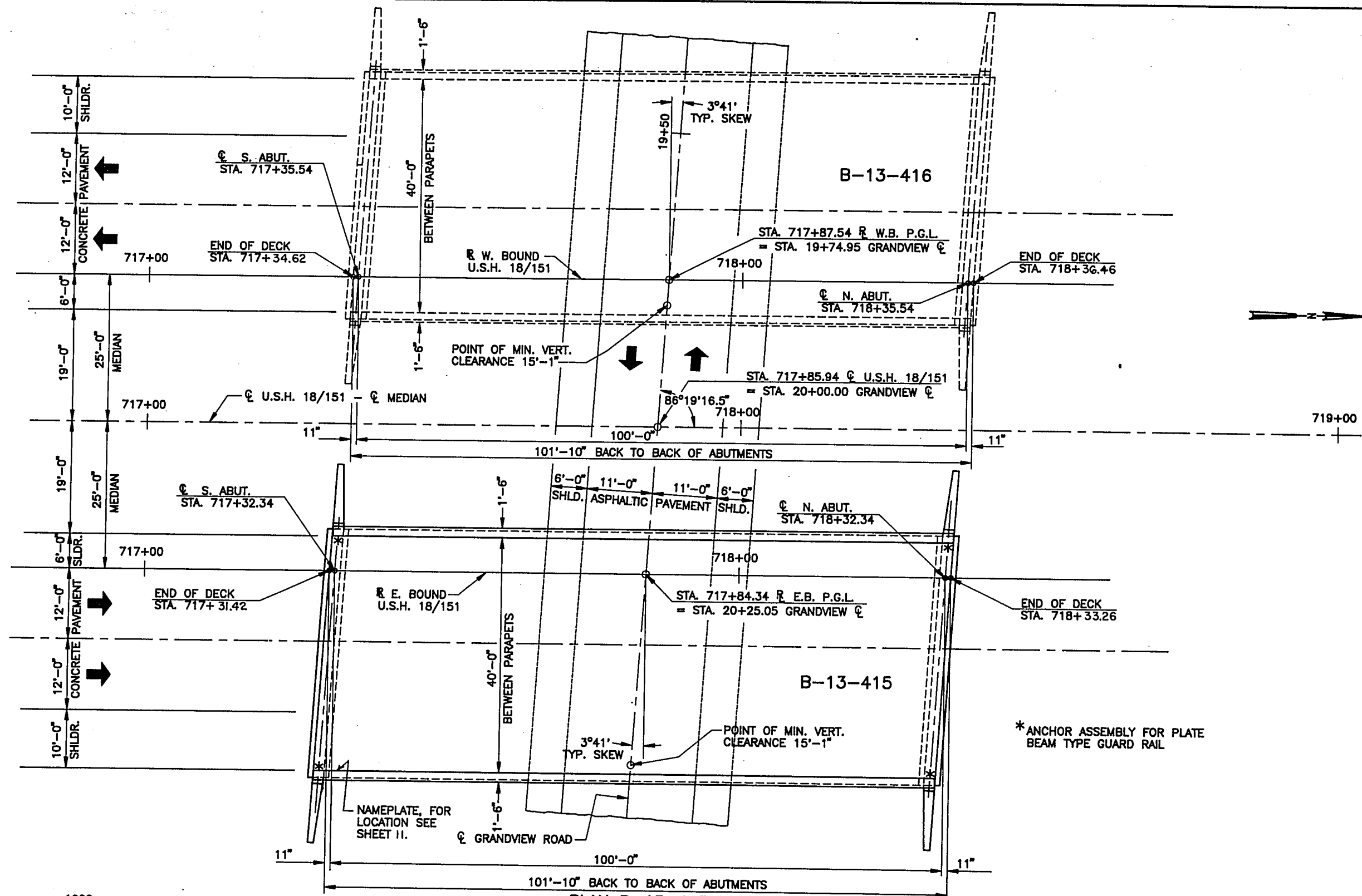
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 1" 'V' GROOVE.



SECTION THRU PARAPET ON BRIDGE

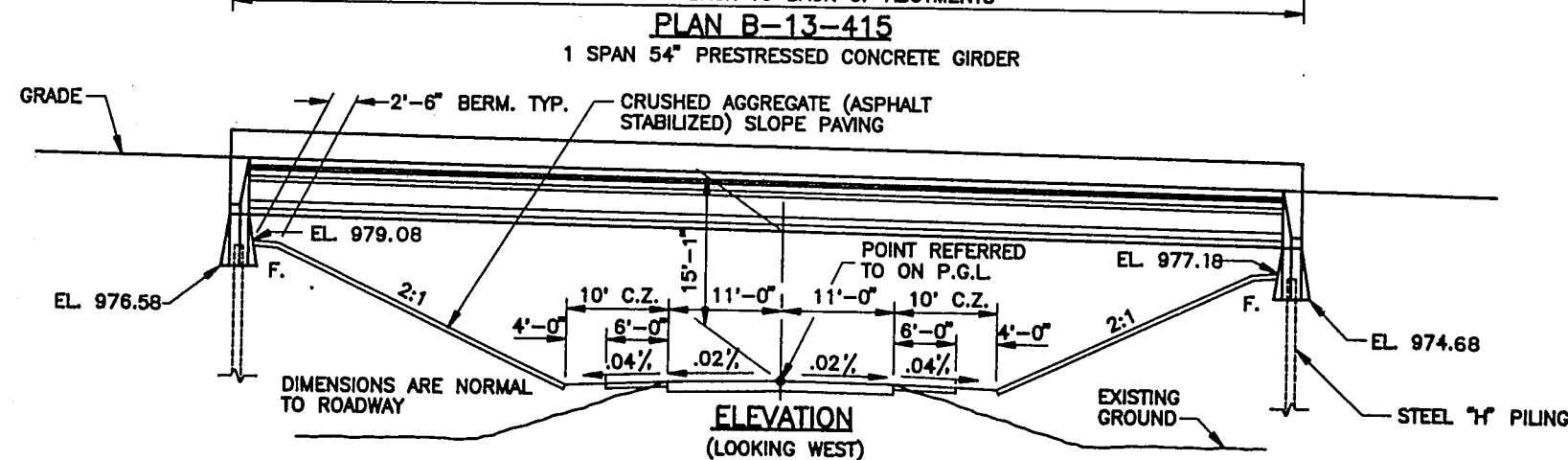
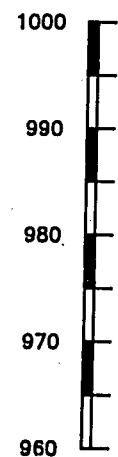
CONST. JOINT - STRIKE OFF AS SHOWN.

P.T.F.DGN SCALE 1



LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL PLAN
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. ABUTMENT DETAILS
6. NORTH ABUTMENT
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. 54" PRESTRESSED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SLOPED FACE PARAPET "B"



BRIDGE OFFICE CONTACT: (608)266-8488, R. REESE

No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-415			
USH 18/151 E.B. OVER GRANDVIEW RD.			
County	DANE	Town	VERONA
Design Spec.	AASHTO '90	Load	HS-20
Designed By	KAK	Design Ch'd.	KTN
Drawn By	JHG	Checked	DJK
Approved	Robert L. Reese		11/25/88
State Bridge Engineer			Date
GENERAL PLAN			SHEET 1 OF 11
			X 84077

8.50

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH & TRUE.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH CRUSHED AGGREGATE TO THE EXTENT SHOWN ON SHT. 1 & IN THE ABUTMENT DETAILS.

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE THE EXISTING GROUNDLINE.



BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-415	L.S.	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	156	32	32	220
PROTECTIVE SURFACE TREATMENT	GAL.	32	—	—	32
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	2, 600	2, 600	5, 200
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	24, 050	—	—	24, 050
PRESTRESSED GIRDER, I TYPE, 54-INCH	L.F.	606	—	—	606
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	12	—	—	12
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	—	320	360	680
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	—	—	4
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	175	158	333
STEEL DIAPHRAGM	EACH	10	—	—	10
NON-BID ITEMS					
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	54	54	108
FILLER	SIZE	—	—	—	1/2" & 3/4"

LIVE LOAD:

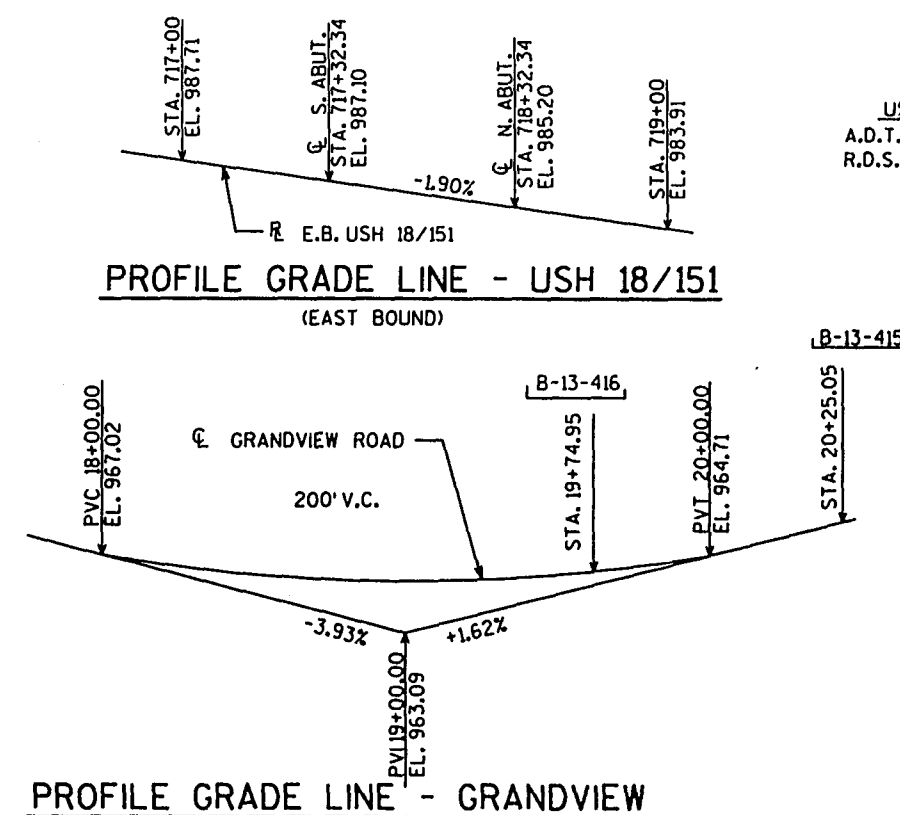
DESIGN RATING: HS-20
INVENTORY RATING: HS-24
OPERATIONAL RATING: HS-47
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:

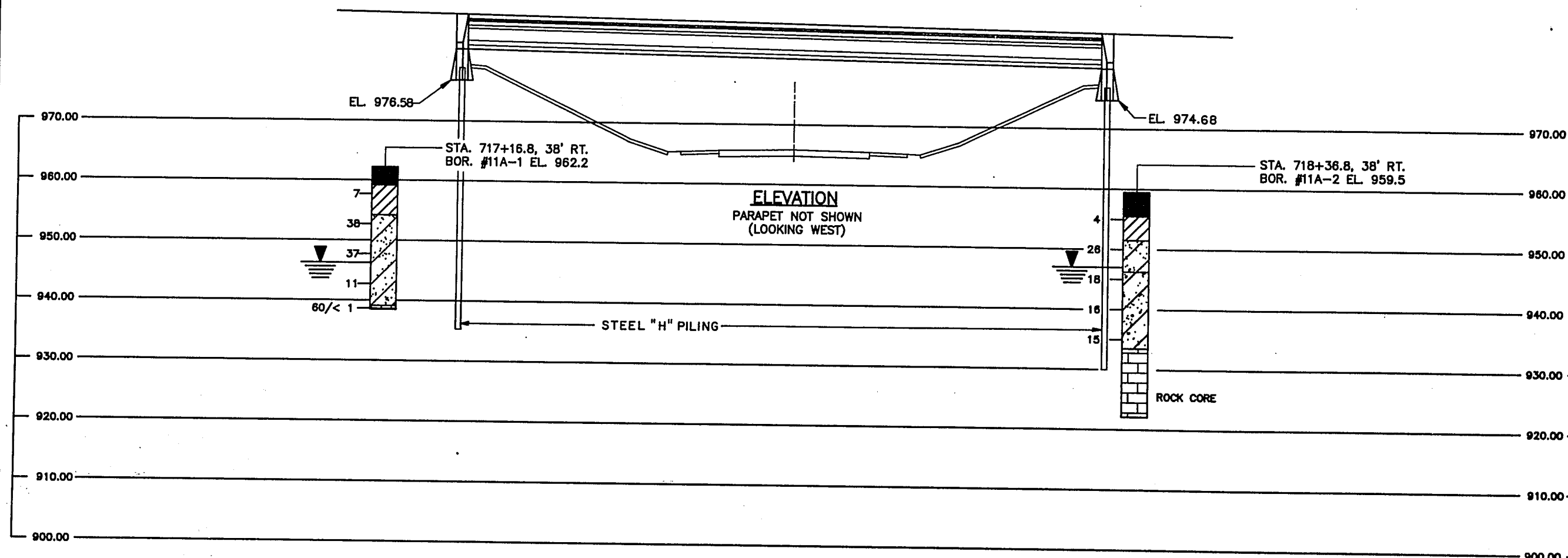
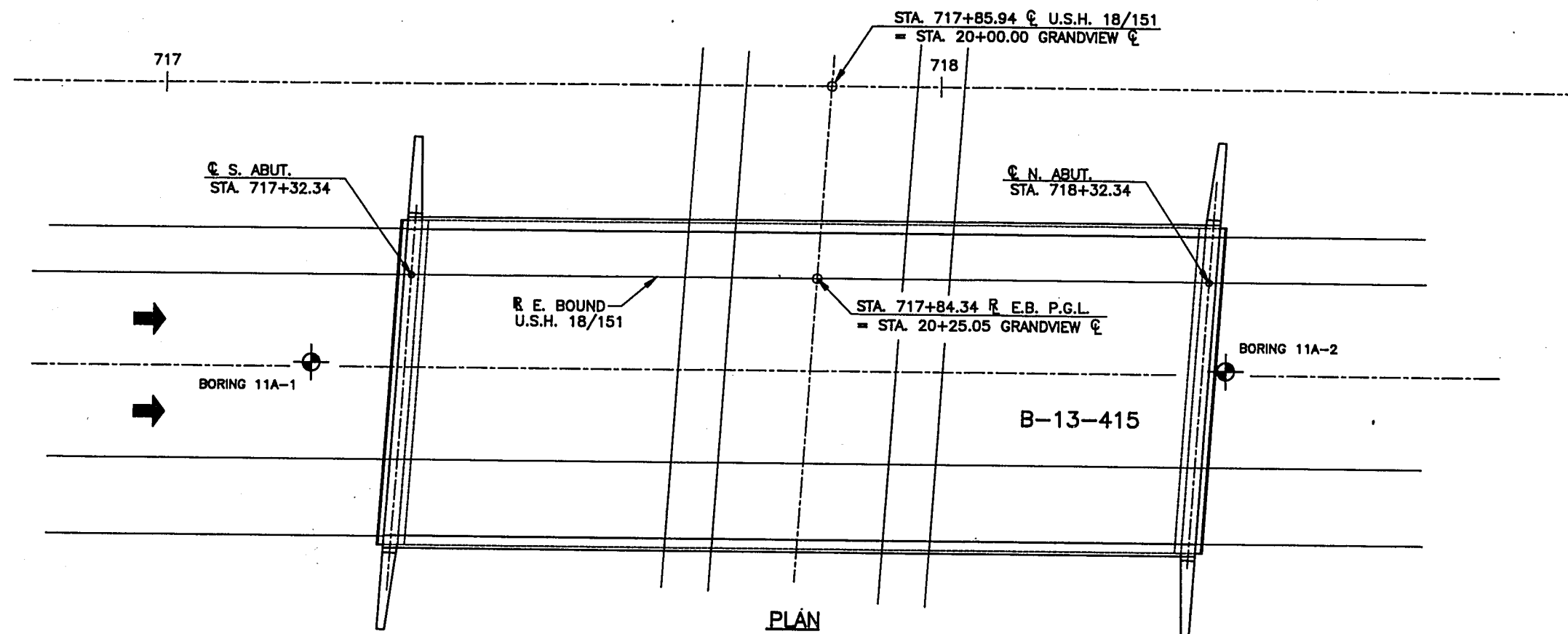
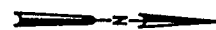
CONCRETE MASONRY SLAB — $f'_c = 4,000$ P.S.I. ALL OTHER — $f'_c = 3,500$ P.S.I.
 BAR STEEL REINFORCEMENT, GRADE 60 _____ $f_y = 60,000$ P.S.I.
 54" PRESTRESSED GIRDERS, CONCRETE MASONRY _____ $f'_c = 6,000$ P.S.I.
 STRANDS- $\frac{1}{2}$ " ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

USH 18/151
A.D.T.=9,000 (2012)
R.D.S.=65 M.P.H.

GRANDVIEW
A.D.T.=420 (2012)
R.D.S.=50 M.P.H.



NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS					
STRUCTURE B-13-415					
CONST. SPEC.	1989	DRAWN BY	JHC	PLANS C&D	DJK
GENERAL PLAN				SHEET	
				X84077	



STATE PROJECT NUMBER SHEET NO.

1201-04-76

B.51

ABBREVIATIONS
F FINE M MEDIUM C COARSE
WS WEATHERED SO SOUND

MATERIAL SYMBOLS

TOPSOIL SILT SHALE
SAND CLAY LIMESTONE/DOLOMITE
GRAVEL BOULDERS/COBBLES SANDSTONE

LEGEND OF BORING

Elev. Boring No. Sta.
Unconfined Strength 7.7 Sandy Gravel
Blows per Ft. Using 140# Wt. Falling 30' F. Boulders or Cobbles
Wash Sample * Sand
Shelby Tube S.T. Silty Clay
Ground Water Elevation No Ground Water Observed Above This Elevation So Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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

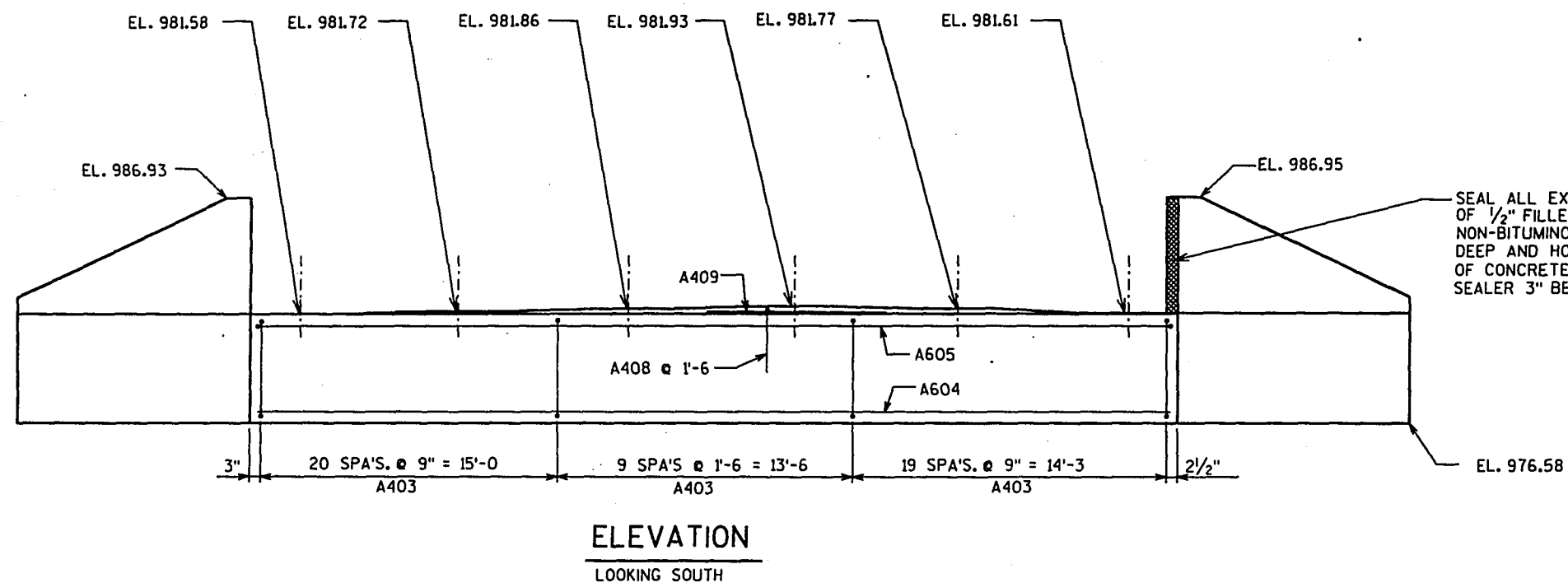
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-415

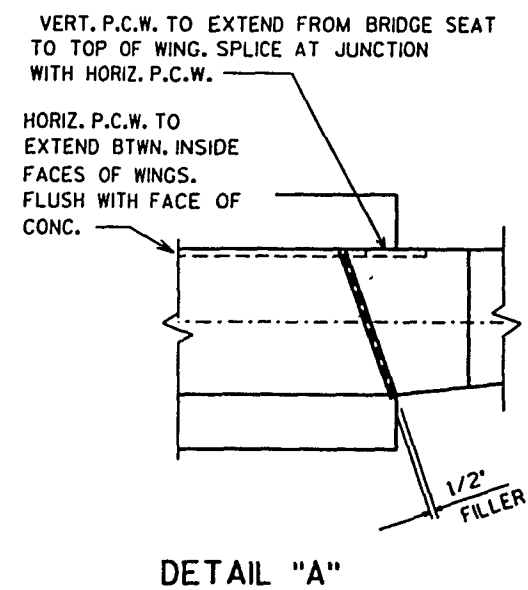
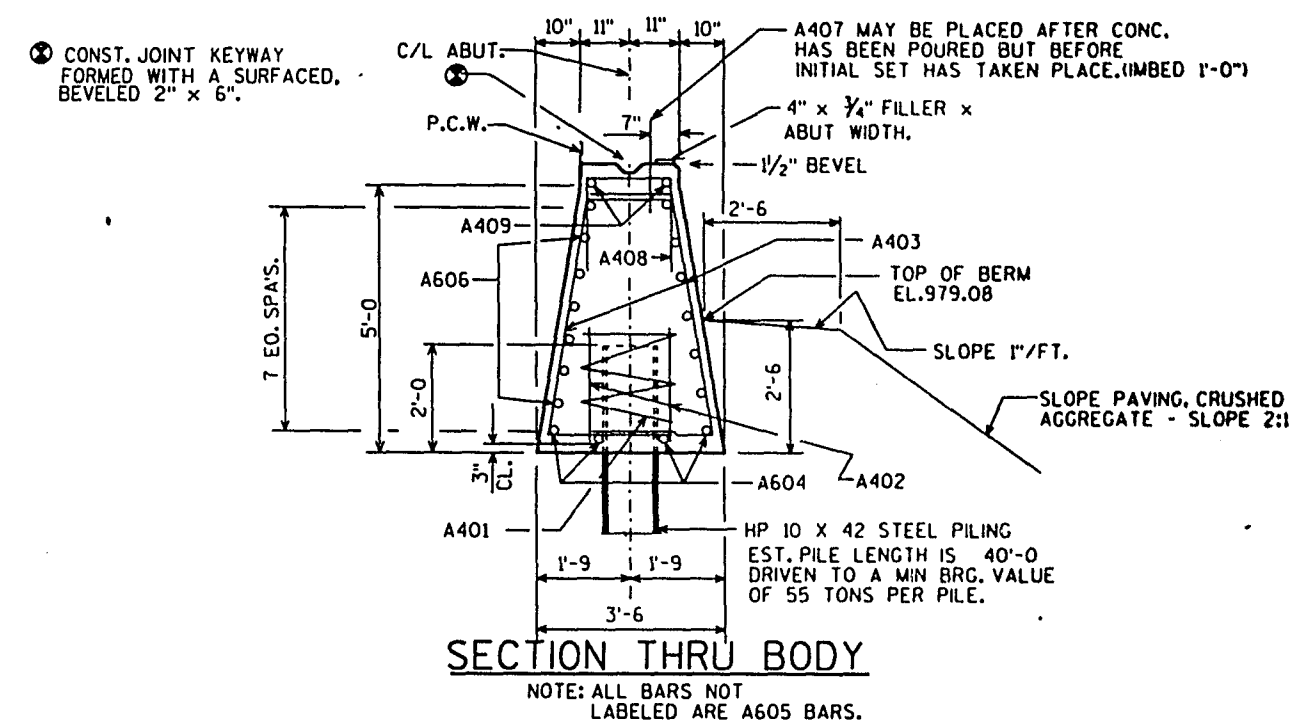
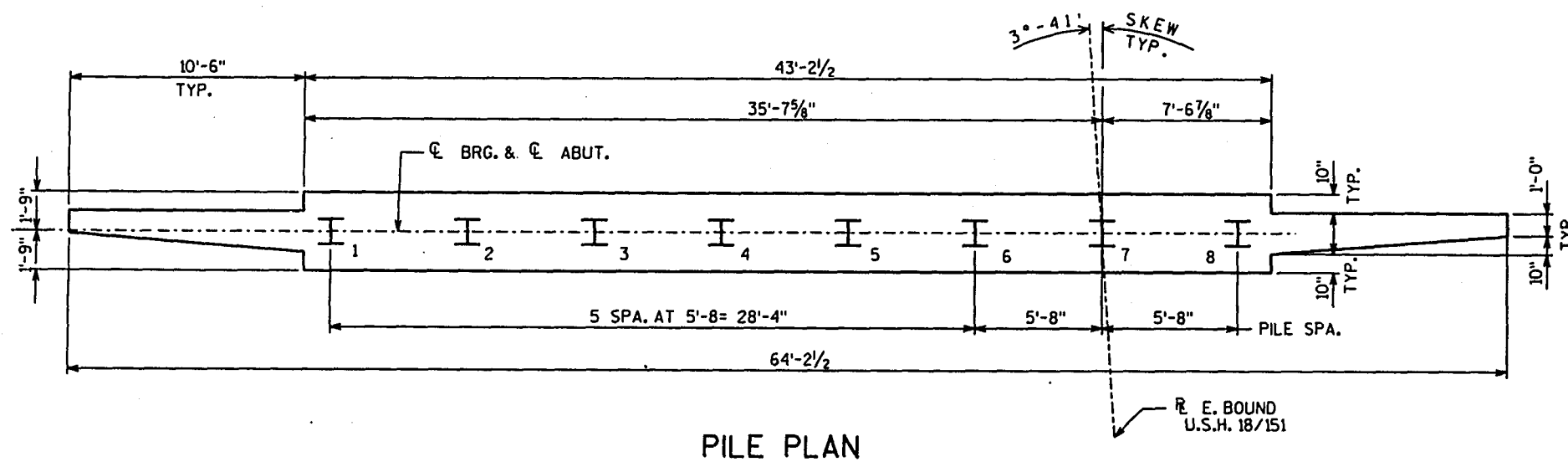
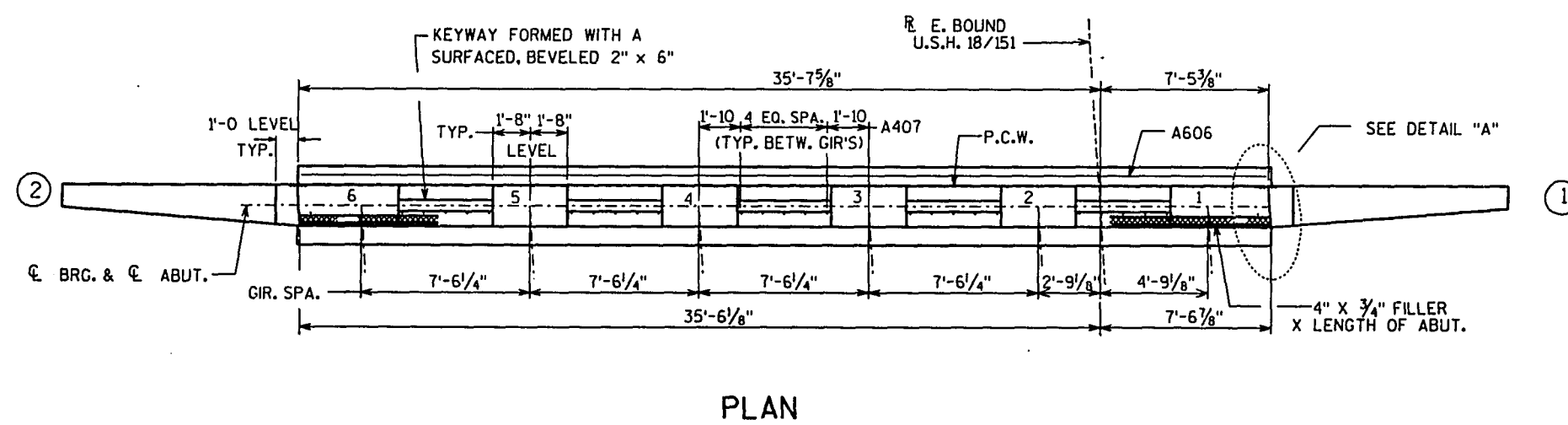
Const. Spec. WIS. 89 Drawn By JIK Plans Checked DIX

SUBSURFACE EXPLORATION

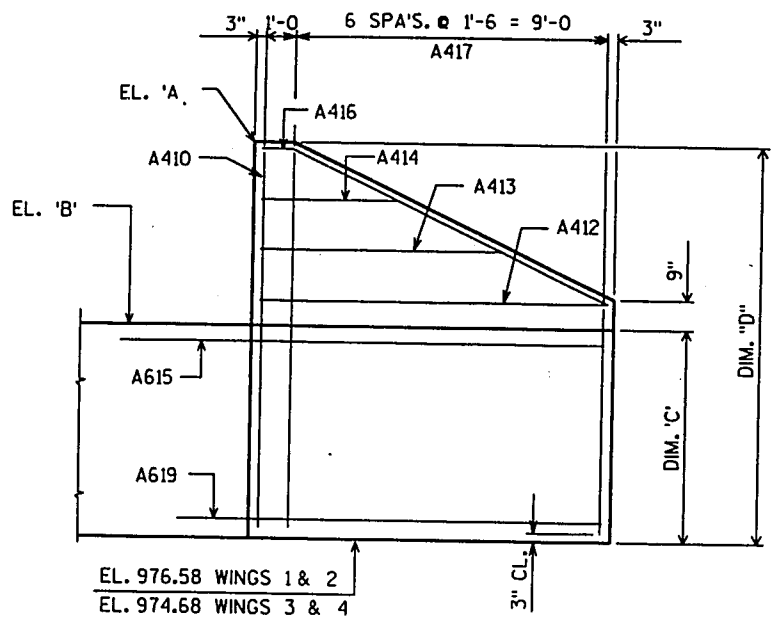
SHEET 3
X84077



SEAL ALL EXPOSED HORIZ. & VERT. SURFACES
OF 1/2" FILLER WITH NON-STAINING GRAY
NON-BITUMINOUS JOINT SEALER. [1"
DEEP AND HOLD 1/8" BELOW SURFACE
OF CONCRETE]. AT GUTTER LINE, EXTEND
SEALER 3" BELOW GUTTER LINE ELEVATION.

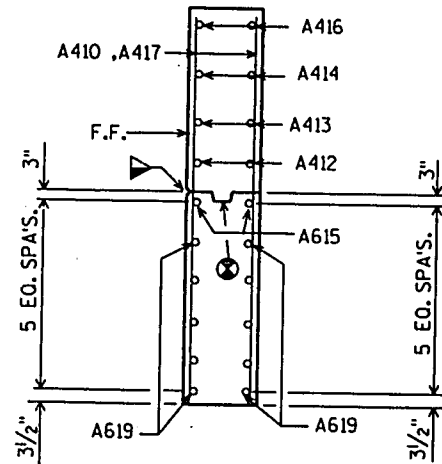


NO.	DATE	REVISION	BT
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-415			
CONST. SPEC.	1989	DRAWN BT	PLANS C.A.D. DJK
SOUTH ABUTMENT		SHEET 4	
		X84077	



WING	EL. 'A'	EL. 'B'	DIM. 'C'	DIM. 'D'
1	986.95	981.61	5'-0 ³ / ₈	10'-4 ³ / ₈
2	986.93	981.58	5'-0	10'-4 ¹ / ₄
3	985.02	979.71	5'-0 ³ / ₈	10'-4 ¹ / ₈
4	984.99	979.68	5'-0	10'-3 ³ / ₄

WING ELEVATION



SECT. THRU
WING

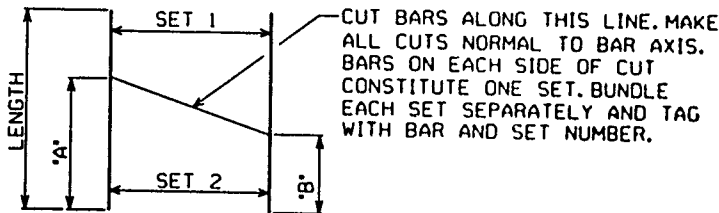
- ▶ 3/4" V-GROOVE F.F. ONLY
- ⊙ OPT. CONST. JOINT FORMED WITH A SURFACED, BEVELED 2" x 6".

BILL OF BARS

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

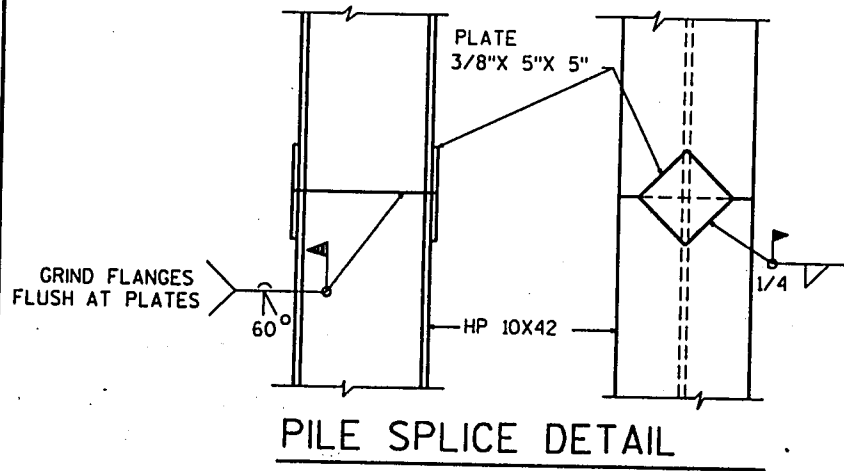
BAR MARK	COAT	NO.* REO'D.	LENGTH	BENT	CUT. DIAG.	BUN- DLE	LOCATION
A401		8	28-0	X			ONE PER PILE
A402		16	2-3				TWO PER PILE
A403		98	8-1	X			BODY STIRRUPS
A604		4	42-10				BODY BOTTOM
A605		7	44-8	X			BODY HORIZ.
A606		6	42-10				BODY HORIZ. B.F.
A407		27	2-0				BODY TOP DOWELS
A408		10	4-2	X			BODY TOP STIRRUPS
A409		2	15-0				BODY TOP HORIZ.
A410		4	9-11				WINGS VERT.
A412		4	10-1				WINGS HORIZ.
A413		4	7-0				WINGS HORIZ.
A414		4	3-11				WINGS HORIZ.
A615		4	13-7				WINGS HORIZ.
A416		4	11-1	X			WINGS TOP
A417		14	15-2		X		WINGS VERT.
A619		20	12-1				WINGS HORIZ.

* NO. REO'D. IS FOR ONE ABUT. ONLY. OTHER ABUT. IS IDENTICAL.

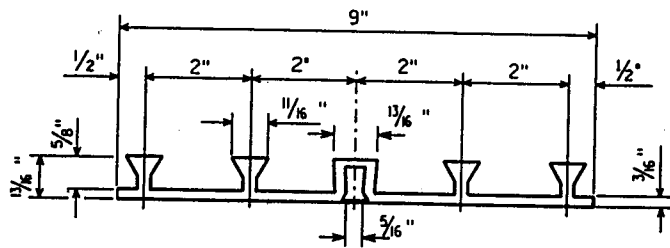


CUTTING DIAGRAM

MARK	'A'	'B'	NO. OF BARS/SET	NO. OF EACH SET
A417	9-9	5-5	7	2



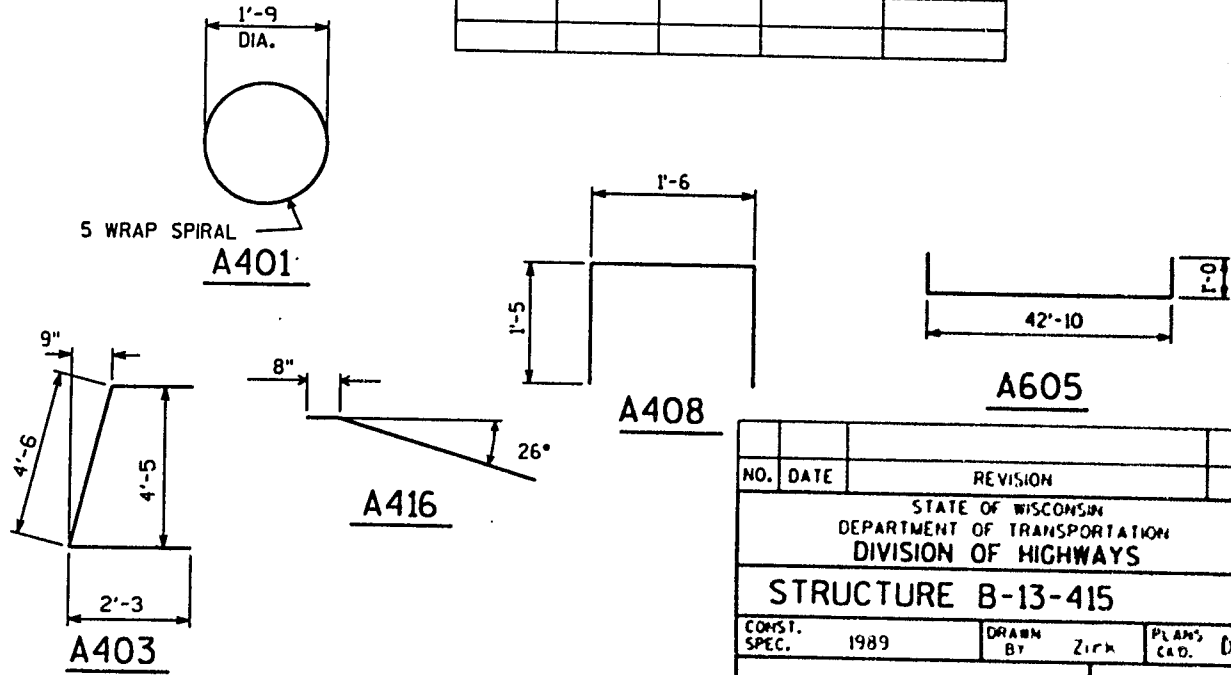
PILE SPlice DETAIL



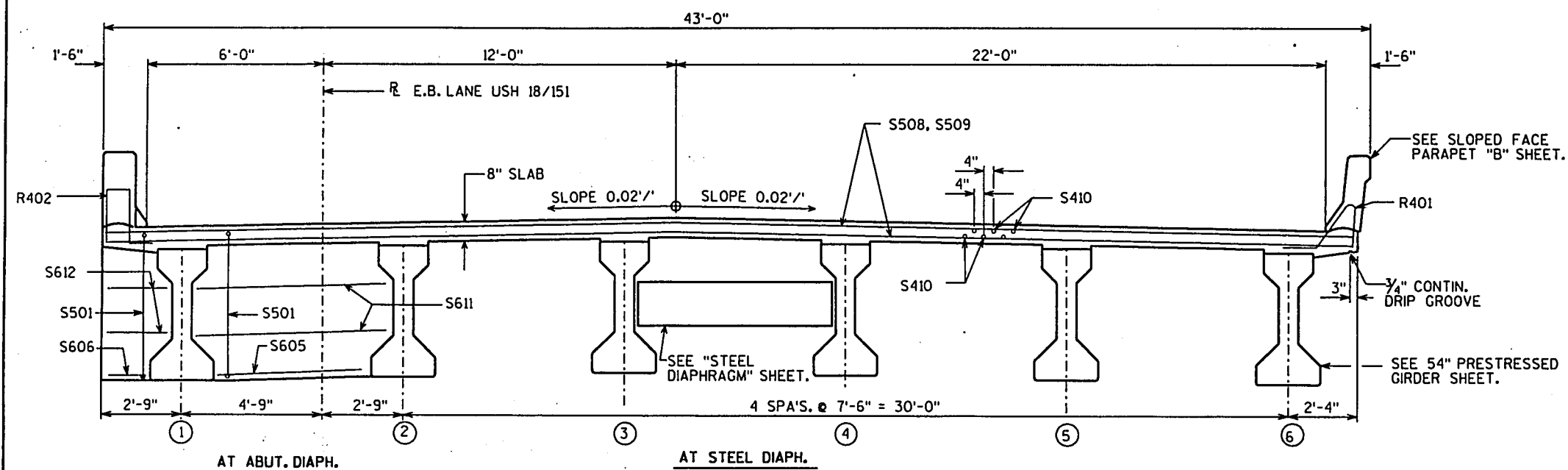
P.C.W.

(POLYVINYL CHLORIDE WATERSTOP)

P.C.W. SHALL BE BUTT SPliced AT ALL INTERSECTIONS BY USING A HEATED SPlicing IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.

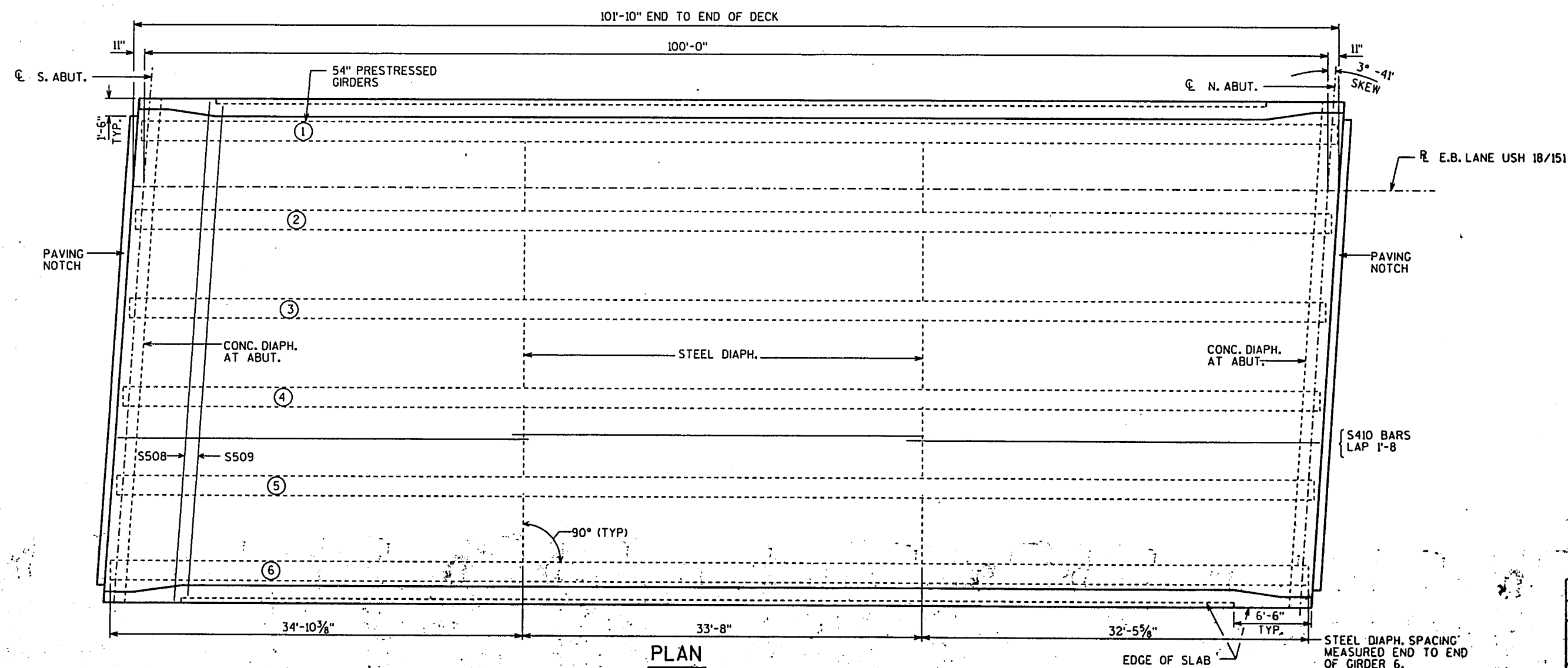


NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-415			
CONST. SPEC.	1989	DRAWN BY Zirk	PLANS C.D. DJK
ABUTMENT DETAILS			SHEET 5
			X84077



CROSS SECT. THRU RDWY.

(LOOKING NORTH)



PLAN

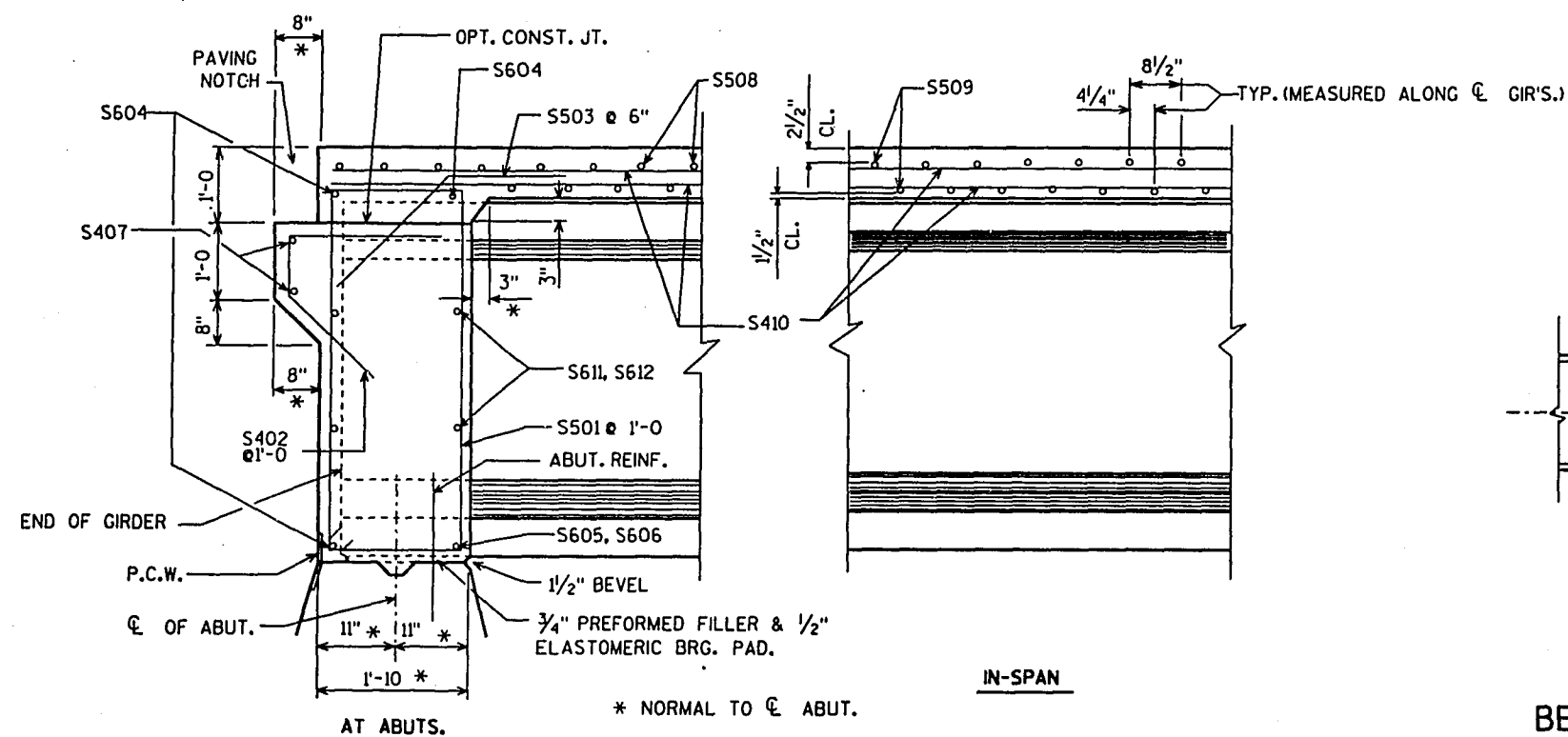
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-415			
CONST. SPEC.	1989	DRAWN BY	PLANS (C.D.) DJK
SUPERSTRUCTURE			SHEET 7
			X84077

TOP OF DECK ELEVATIONS

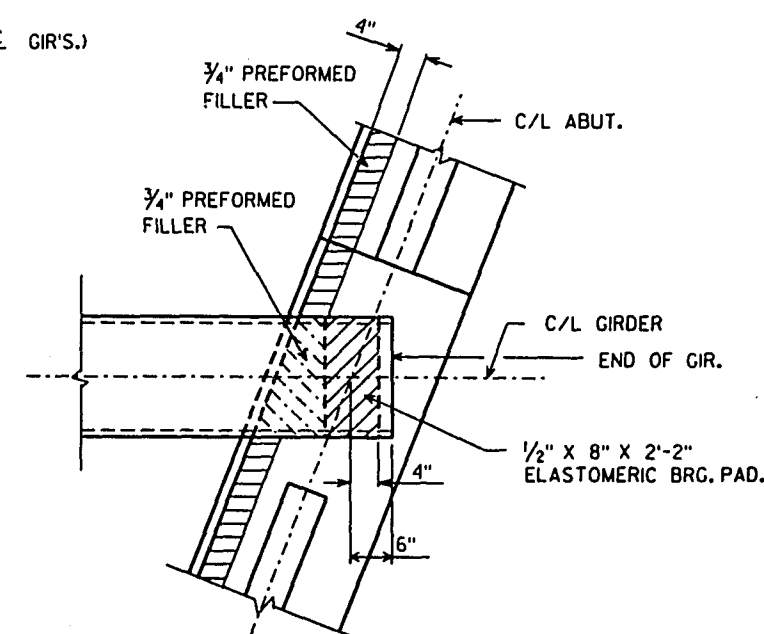
	₹ BRG. S. ABUT.	⅓ PT.	¼ PT.	⅕ PT.	½ PT.	⅔ PT.	¾ PT.	⅞ PT.	₹ BRG. N. ABUT.
GIRDER 1	986.99	986.76	986.52	986.28	986.04	985.81	985.57	985.33	985.09
GIRDER 2	987.15	986.92	986.68	986.44	986.20	985.97	985.73	985.49	985.25
GIRDER 3	987.31	987.08	986.84	986.60	986.36	986.13	985.89	985.65	985.41
GIRDER 4	987.24	987.01	986.77	986.53	986.29	986.06	985.82	985.58	985.34
GIRDER 5	987.10	986.86	986.63	986.39	986.15	985.91	985.68	985.44	985.20
GIRDER 6	986.96	986.72	986.49	986.25	986.01	985.77	985.54	985.30	985.06

BILL OF BARS

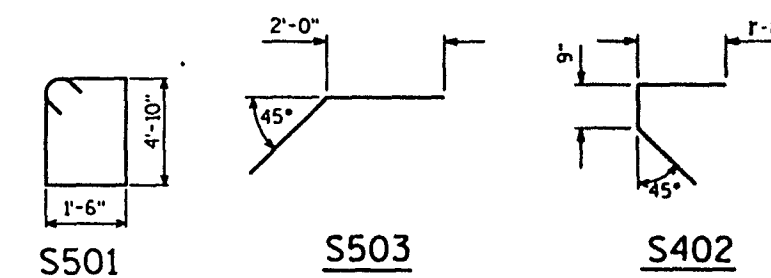
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

[illegible]

LONGIT. SECT. THRU RDWY.

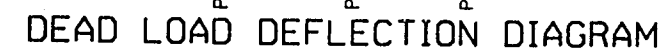
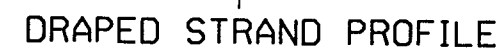
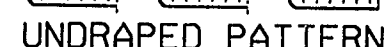
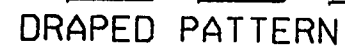
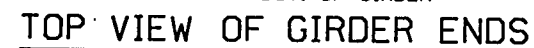
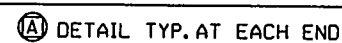


BEARING PAD DETAIL



NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-13-415				
CONST. SPEC.	1989	DRAWN BT	CHK. JMC	PLAN. C.B.D. DJK
SUPERSTRUCTURE DETAILS			SHEET 11	
			X84077	

ENDS OF STRANDS SHALL BE PAINTED WITH
NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
(THIS APPLIES ONLY TO THOSE ENDS OF GIRDERS THAT ARE
FINALLY EXPOSED.)



TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
- SLAB THICKNESS

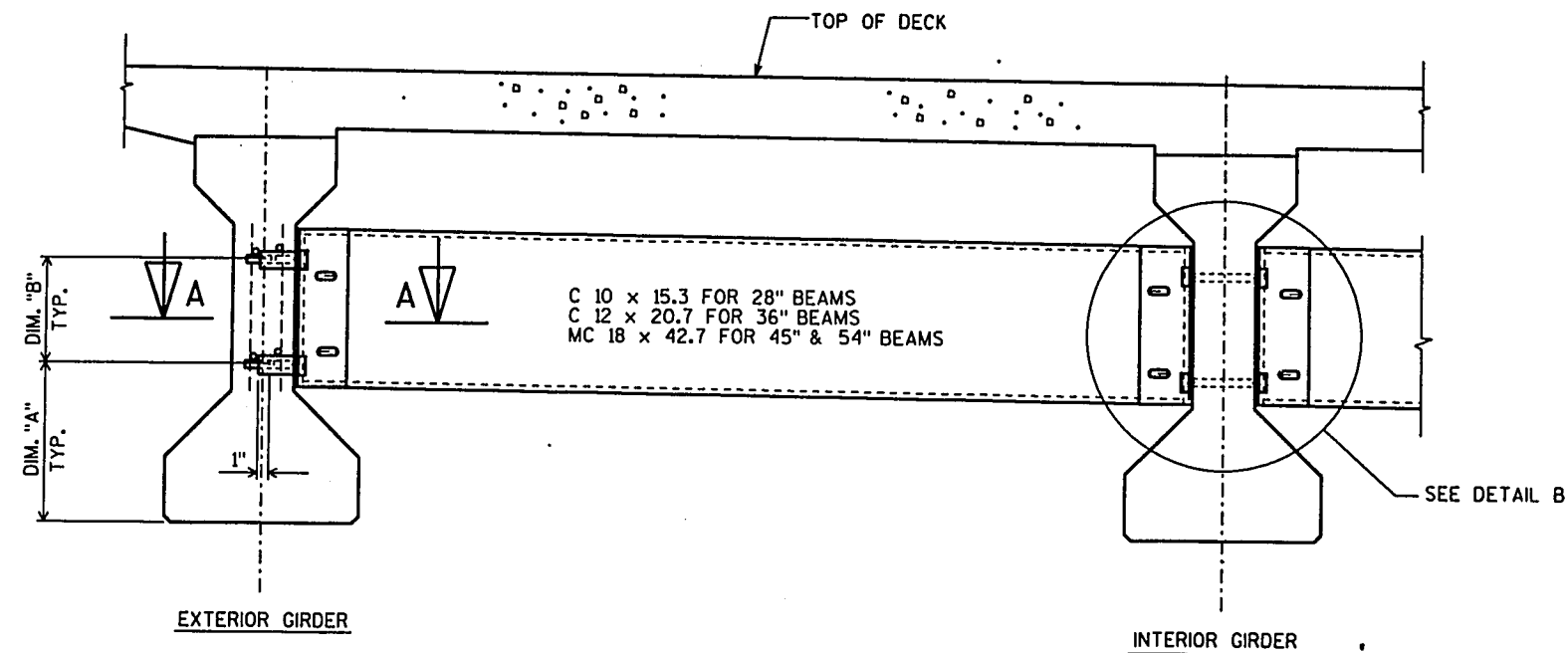
= HAUNCH HEIGHT 'H'

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-415			
CONST. SPEC.	1989	DRAWN BY JHC	PLANNED C.D. DJK
54" PRESTRESSED GIRDER DETAILS		SHEET 9 X84077	

TABLE

GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



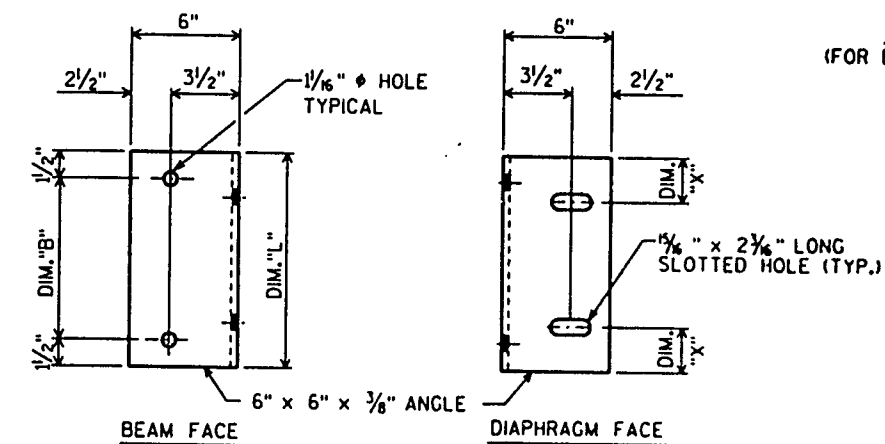
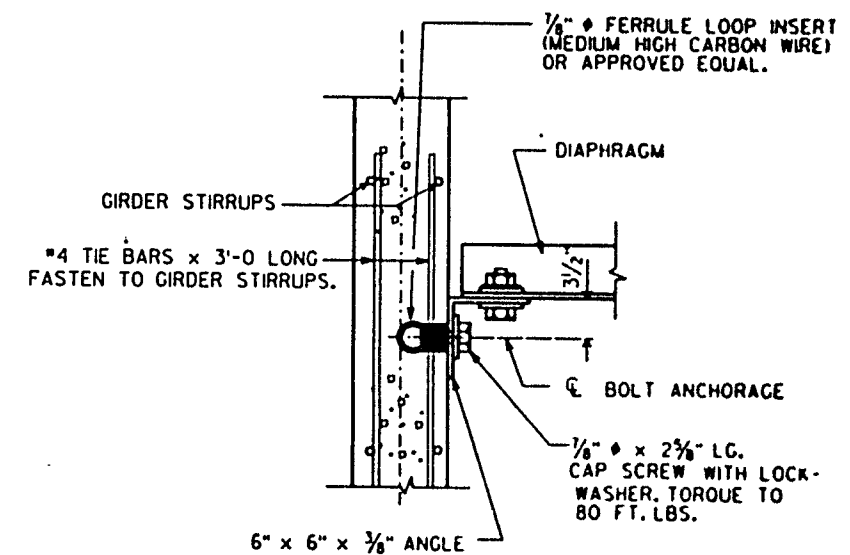
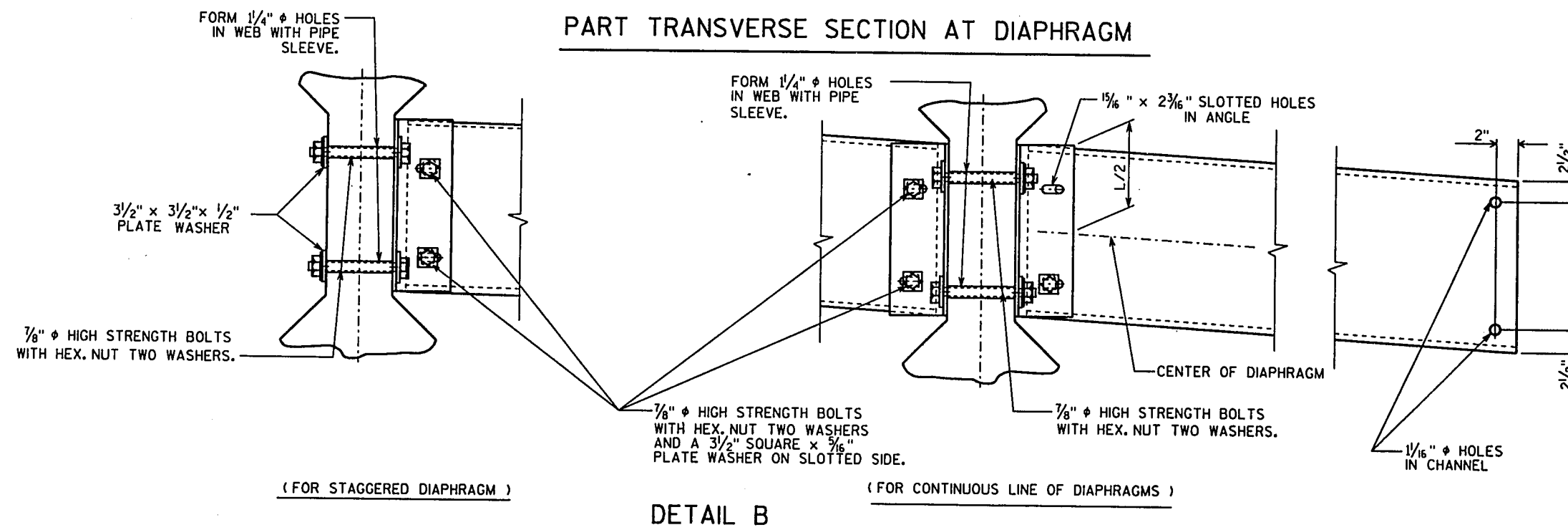
NOTES

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

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

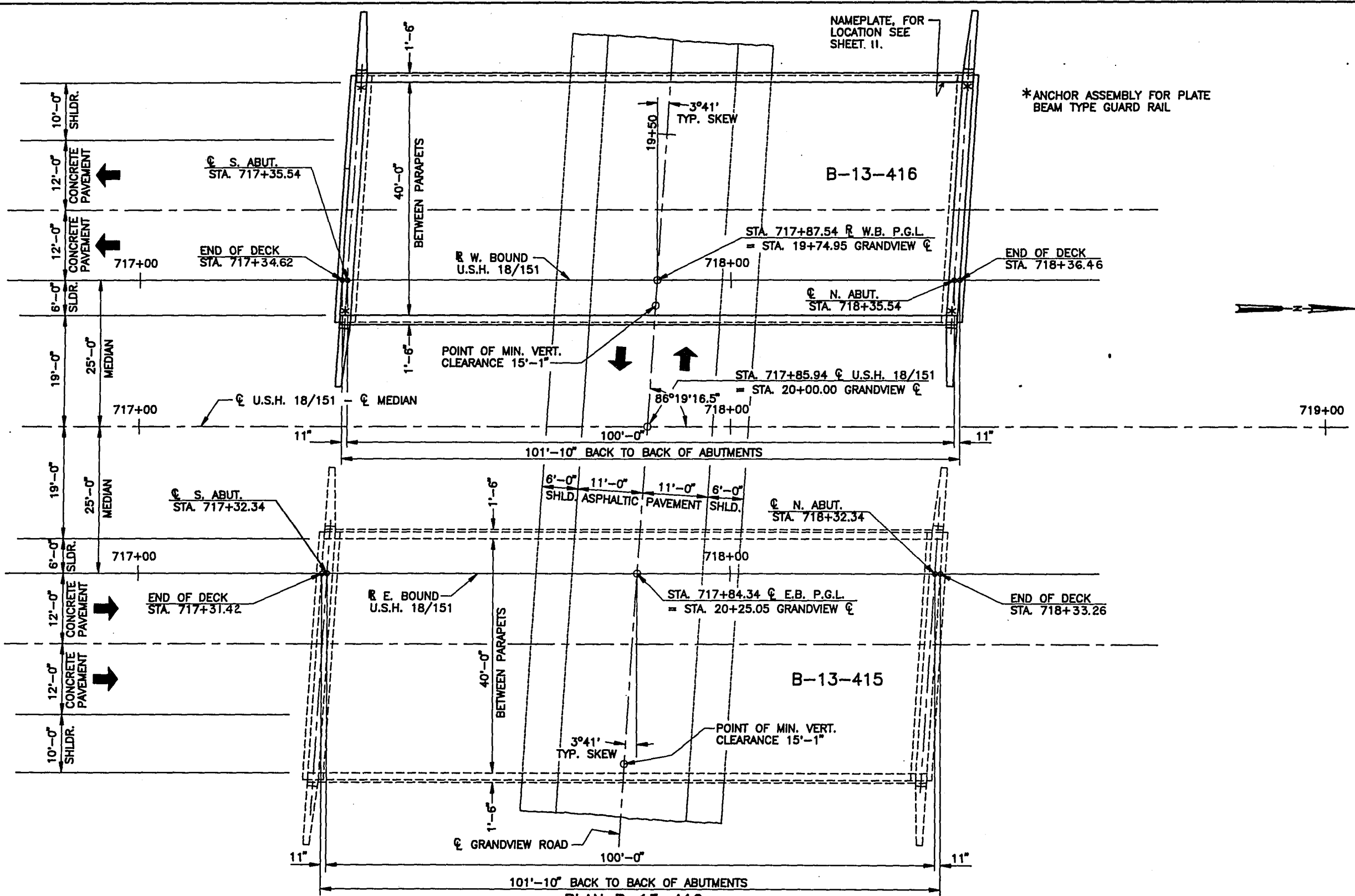
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE L.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.

SECT. A-A
(FOR EXTERIOR ATTACHMENT)

DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY
		STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS	
		STRUCTURE B-13-415	
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C&D. DJK
		STEEL DIAPHRAGM	SHEET 10
			X84077



*ANCHOR ASSEMBLY FOR PLATE BEAM TYPE GUARD RAIL

LIST OF DRAWINGS

1. GENERAL PLAN
2. GENERAL PLAN
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. ABUTMENT DETAILS
6. NORTH ABUTMENT
7. SUPERSTRUCTURE
8. SUPERSTRUCTURE DETAILS
9. 54" PRESTRESSED GIRDER DETAILS
10. STEEL DIAPHRAGM
11. SLOPED FACE PARAPET "B"

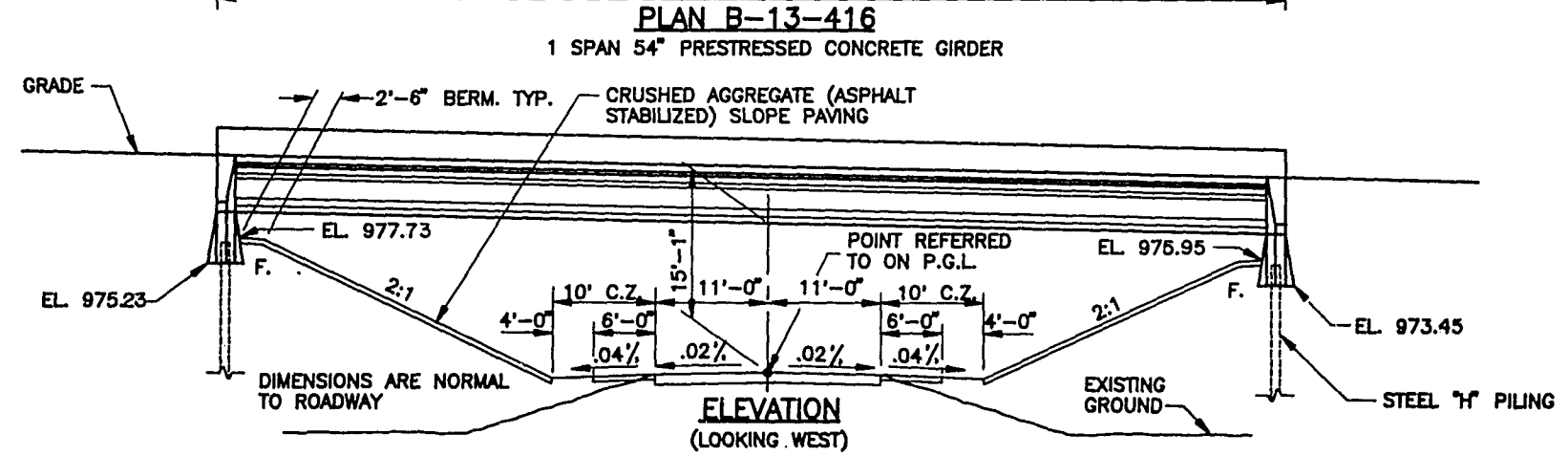
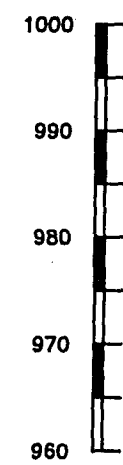
BRIDGE OFFICE CONTACT: (608)266-8488, R. REESE

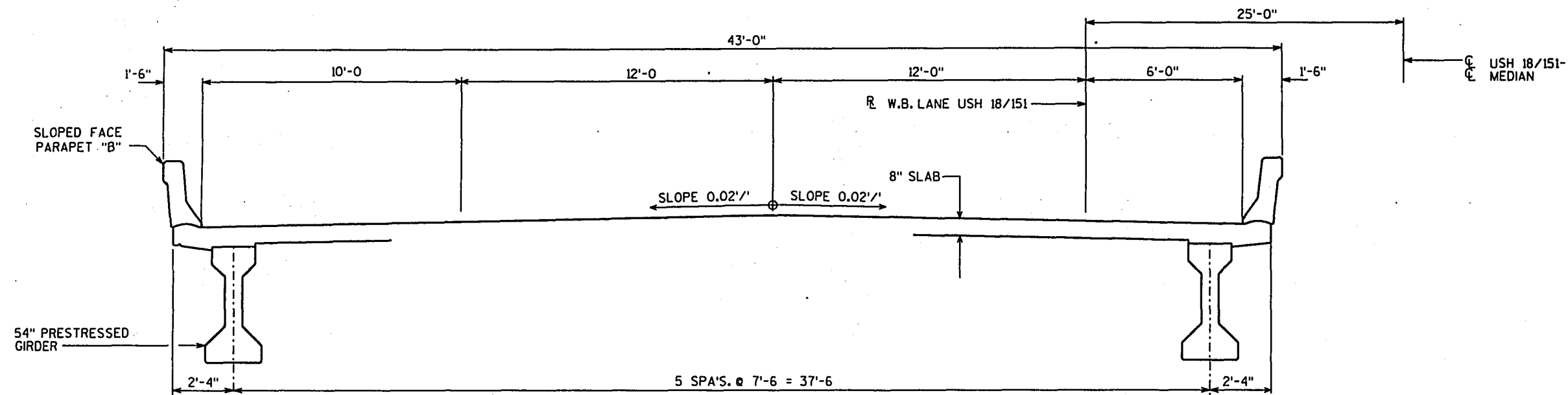
No.	Date.	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
USH 18/151 E.B. OVER GRANDVIEW RD.			
County	DANE	Town	VERONA
Design Spec.	AASHTO '90	Load	HS-20
Designed By	KAK	Drawn By	JHG
Checked	CTN	Checked	DJA
Approved	Robert L. Reese State Bridge Engineer		
Date	1/25/84		

GENERAL PLAN

SHEET 1 OF 11

X84078





CROSS SECT. THRU RDWY.
(LOOKING NORTH)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH & TRUE.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH CRUSHED AGGREGATE TO THE EXTENT SHOWN ON SHT. 1 & IN THE ABUTMENT DETAILS.

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE THE EXISTING GROUNDLINE.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	SOUTH ABUT.	NORTH ABUT.	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-416	L.S.	—	—	—	1
CONCRETE MASONRY, BRIDGES	C.Y.	156	32	32	220
PROTECTIVE SURFACE TREATMENT	GAL.	32	—	—	32
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	—	2,600	2,600	5,200
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	24,050	—	—	24,050
PRESTRESSED GIRDER, TYPE, 54-INCH	L.F.	606	—	—	606
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	12	—	—	12
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.	—	360	400	760
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	L.S.	—	—	—	4
SLOPE PAVING, CRUSHED AGGREGATE	S.Y.	—	175	158	333
STEEL DIAPHRAGM	EACH	10	—	—	10
NON-BID ITEMS					
POLYVINYL CHLORIDE WATERSTOP	L.F.	—	54	54	108
FILLER	SIZE	—	—	—	1/2" & 3/4"

DESIGN DATA

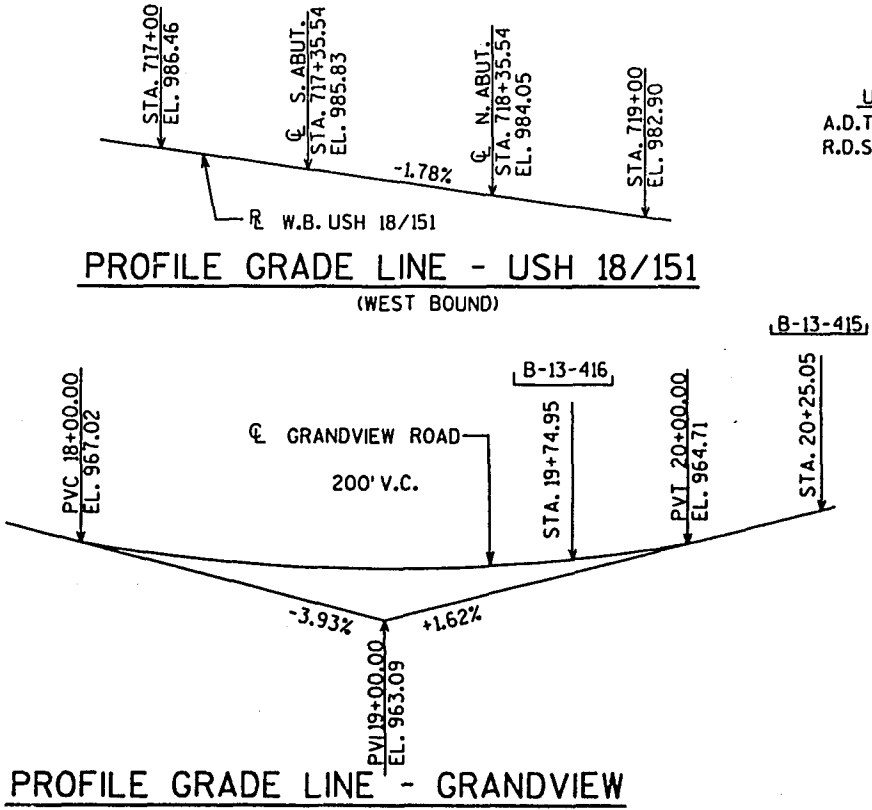
LIVE LOAD:
DESIGN RATING; HS-20
INVENTORY RATING; HS-24
OPERATIONAL RATING; HS-47
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

ULTIMATE DESIGN STRESSES:
CONCRETE MASONRY SLAB — $f'_c = 4,000$ P.S.I. ALL OTHER — $f'_c = 3,500$ P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — $f_y = 60,000$ P.S.I.
54" PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 6,000$ P.S.I.
STRANDS-1/2" ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

TRAFFIC VOLUME

USH 18/151
A.D.T.=9,000 (2012)
R.D.S.=65 M.P.H.

GRANDVIEW
A.D.T.=420 (2012)
R.D.S.=50 M.P.H.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS (A.D.) DJK
GENERAL PLAN			SHEET 8
			X84078

STATE PROJECT NUMBER		SHEET NO.	
1201-04-76		8.62	

ABBREVIATIONS		
F FINE	M MEDIUM	C COARSE
WS WEATHERED	SO SOUND	

MATERIAL SYMBOLS		
TOPSOIL	SILT	SHALE
SAND	CLAY	LIMESTONE/DOLOMITE
GRAVEL	BOULDERS/COBBLES	SANDSTONE

LEGEND OF BORING	
Elev. → Unconfined Strength → 7.7 Blows per Ft. Using 140# Wt. Falling 30" → * Wash Sample → * Shelby Tube → S.T. Ground Water Elevation → No Ground Water Observed Above This Elevation →	Boring No. Sta. → Sandy Gravel F. Boulders or Cobbles Sand Silty Clay So Limestone

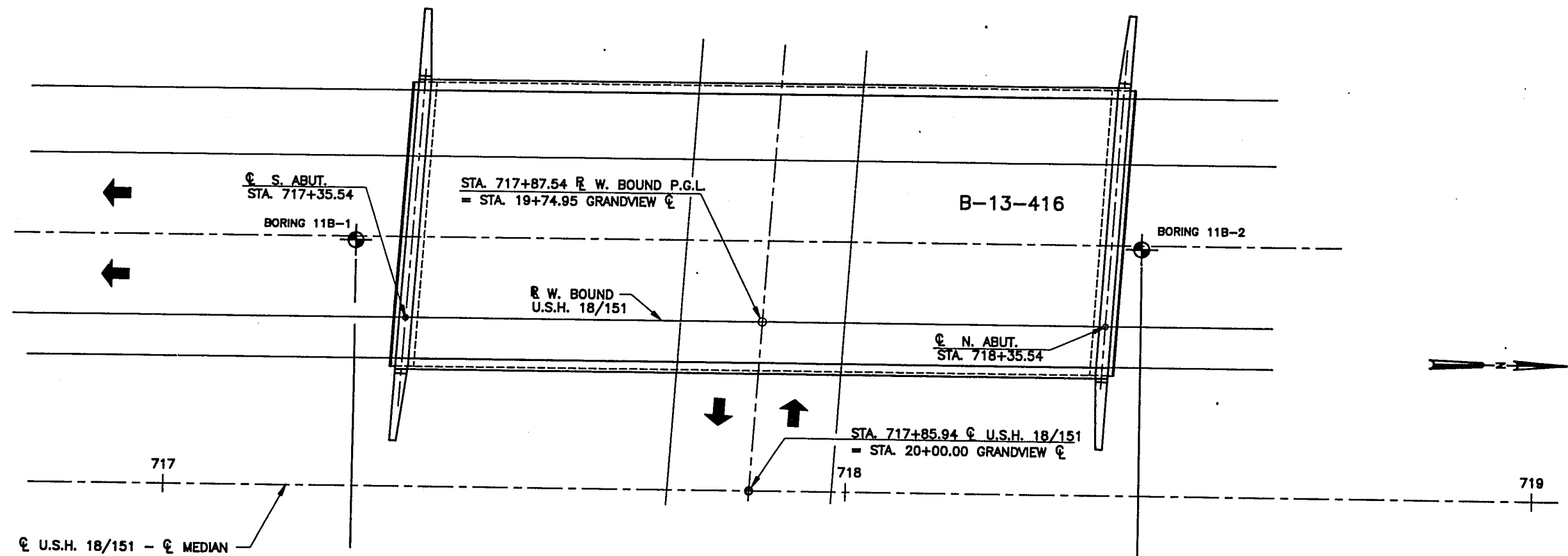
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive 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.			

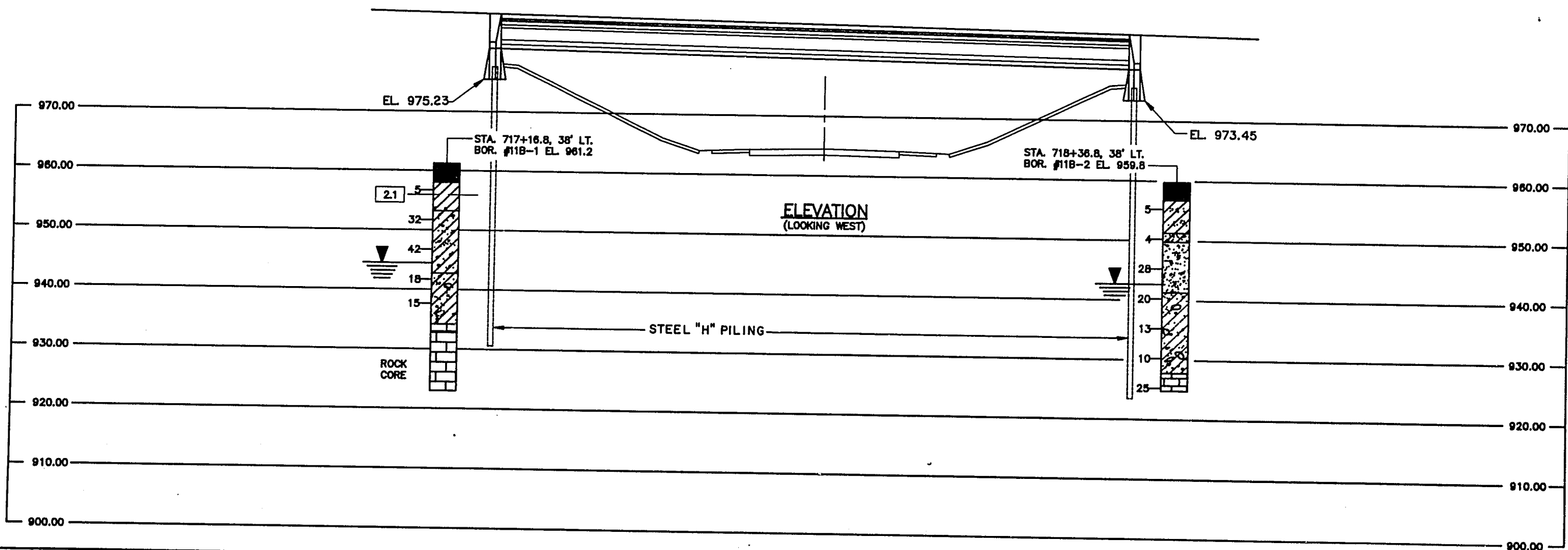
No.	Date.	Revision	By

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
Const. Spec.	WIS. '90	Drawn By	JHG
		Plane Checked	DJK

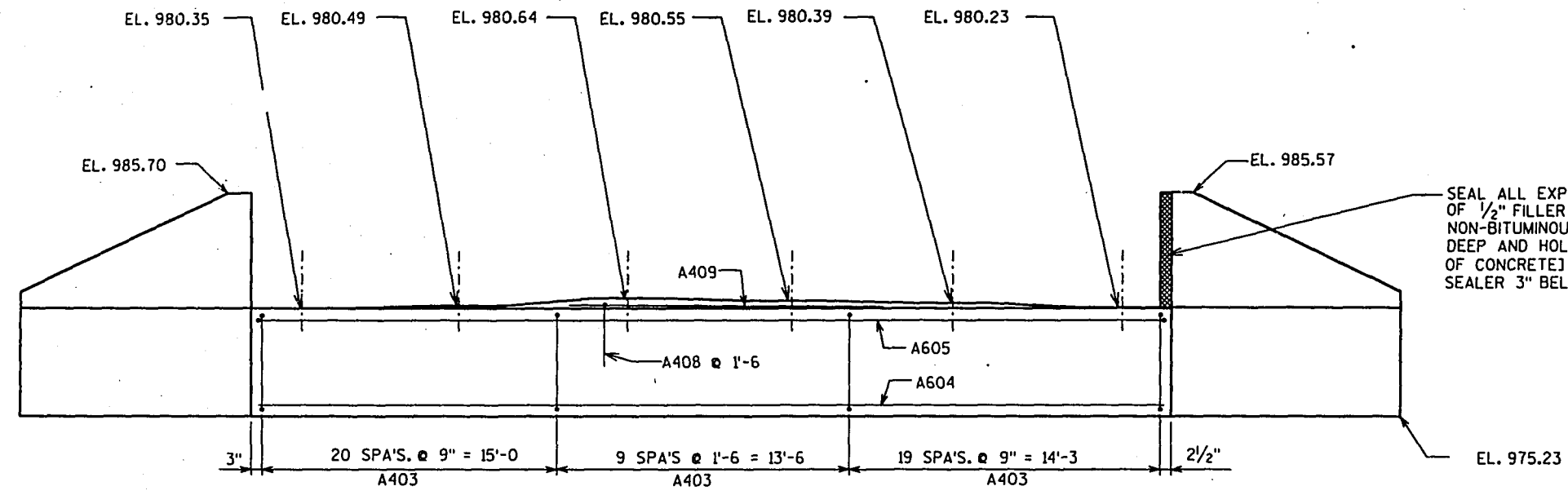
SUBSURFACE EXPLORATION	SHEET 3
	X 84078



PLAN

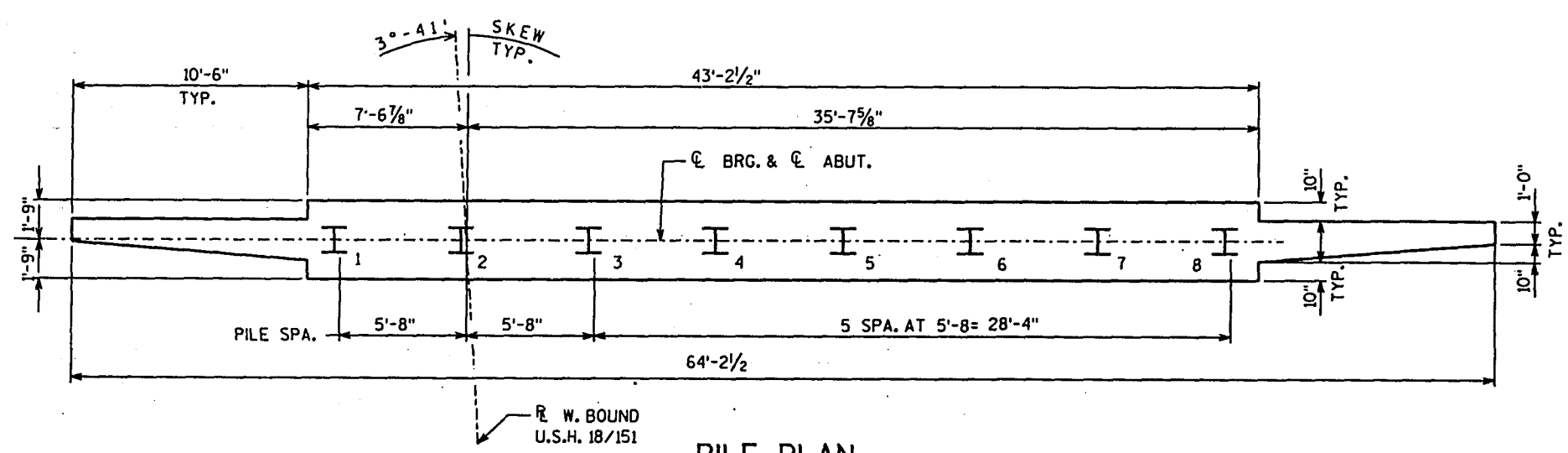
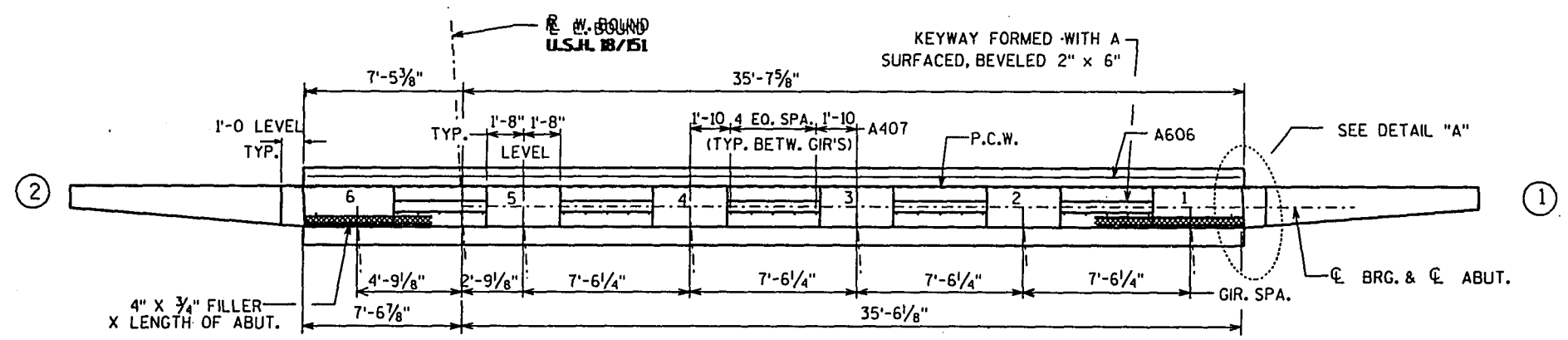
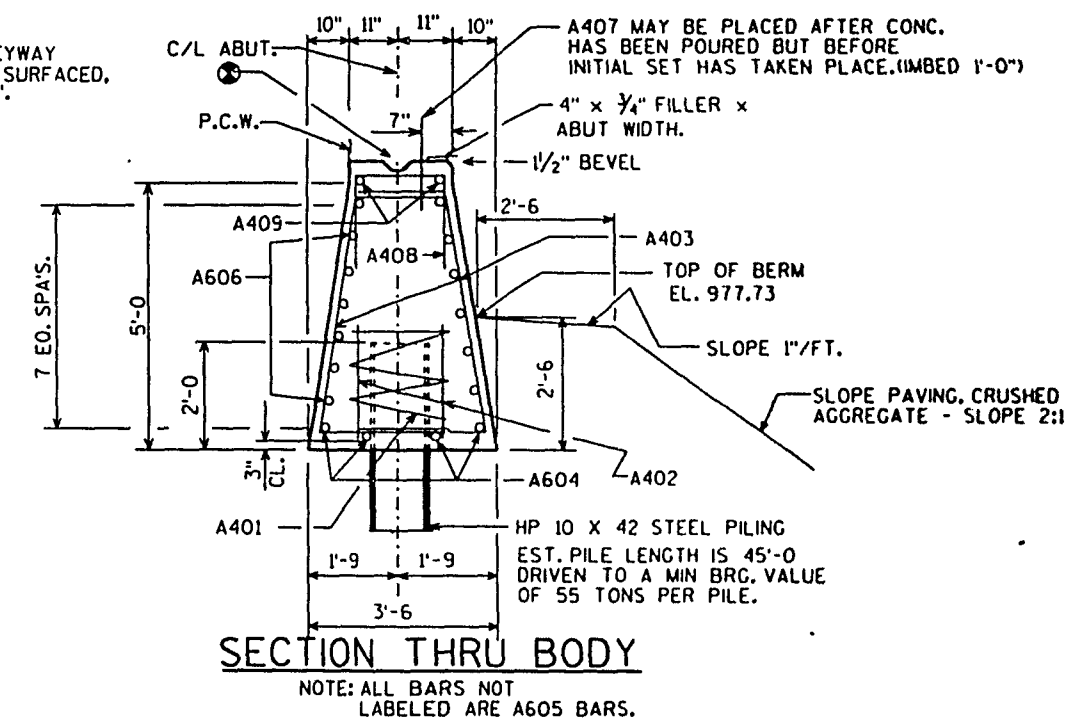


ELEVATION
(LOOKING WEST)



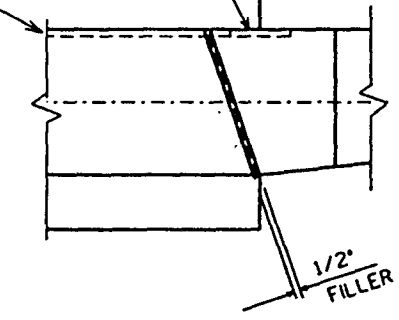
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 2" x 6".

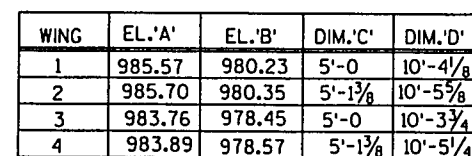


VERT. P.C.W. TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. P.C.W.

HORIZ. P.C.W. TO EXTEND BTWN. INSIDE FACES OF WINGS. FLUSH WITH FACE OF CONC.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DRAWN BY ZHR	PLAN, A.D. DJK
SOUTH ABUTMENT			SHEET 1
			X84078

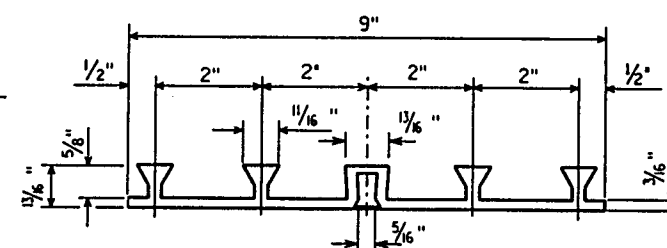


⊗ OPT. CONST. JOINT
FORMED WITH A SURFACED,
BEVELED 2" x 6".

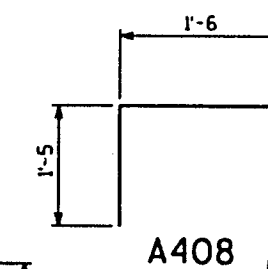
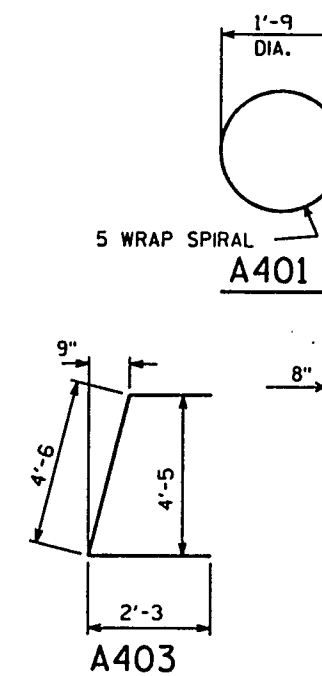
BAR MARK	COAT	NO.* REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN- DLE	LOCATION
A401		8	28-0	X			ONE PER PILE
A402		16	2-3				TWO PER PILE
A403		98	8-1	X			BODY STIRRUPS
A604		4	42-10				BODY BOTTOM
A605		7	44-8	X			BODY HORIZ.
A606		6	42-10				BODY HORIZ. B.F.
A407		27	2-0				BODY TOP DOWELS
A408		10	4-2	X			BODY TOP STIRRUPS
A409		2	15-0				BODY TOP HORIZ.
A410		4	9-11				WINGS VERT.
A412		4	10-1				WINGS HORIZ.
A413		4	7-0				WINGS HORIZ.
A414		4	3-11				WINGS HORIZ.
A615		4	13-7				WINGS HORIZ.
A416		4	11-1	X			WINGS TOP
A417		14	15-2		X		WINGS VERT.
A619		20	12-1				WINGS HORIZ.

Diagram illustrating the layout of a reinforcement bar. The bar is divided into two sets, SET 1 and SET 2, along a diagonal line. The total length of the bar is labeled 'LENGTH'. The distance from the top end to the start of the diagonal cut is labeled 'A'. The distance from the bottom end to the end of the diagonal cut is labeled 'B'. The text indicates that cuts should be made normal to the bar axis, and each set should be bundled separately and tagged with the bar and set number.

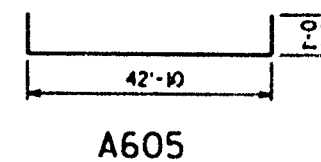
MARK	'A'	'B'	NO. OF BARS/SET	NO. OF EACH SET
A417	9-9	5-5	7	2



P.C.W. SHALL BE BUTT SPICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.



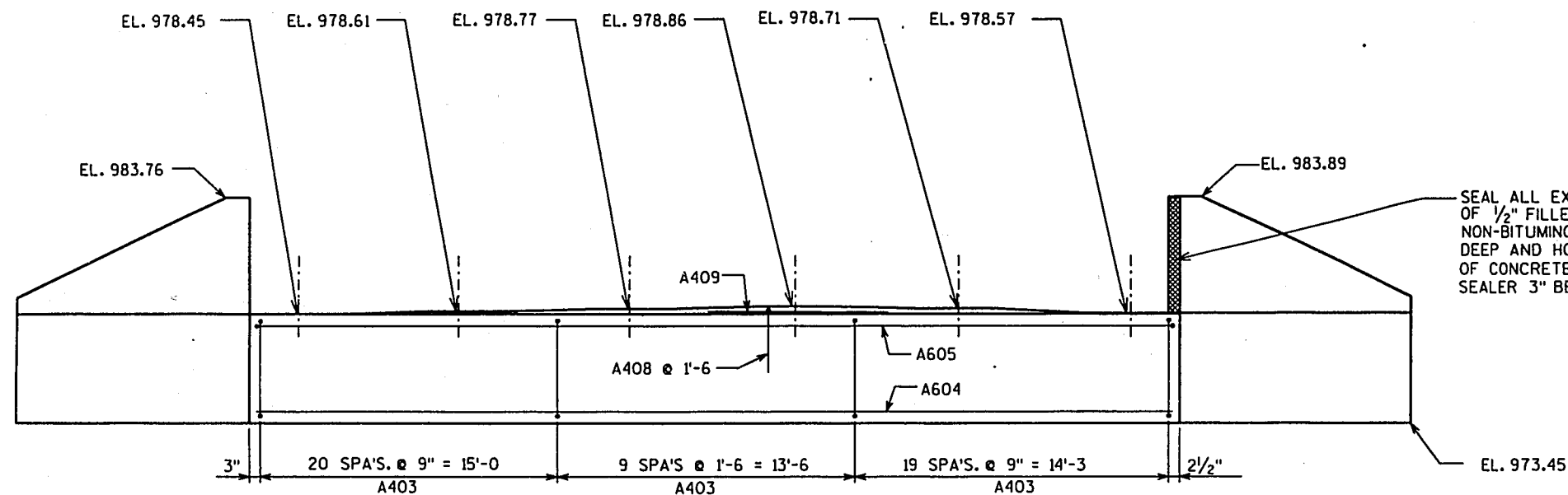
A408



NO.	DATE	REVISION		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-13-416				
CONST. SPEC.	1989	DESIGN BY	Z. R. H.	PLANS C. O. D.
ABUTMENT DETAILS			SHEET 5	
			X84078	

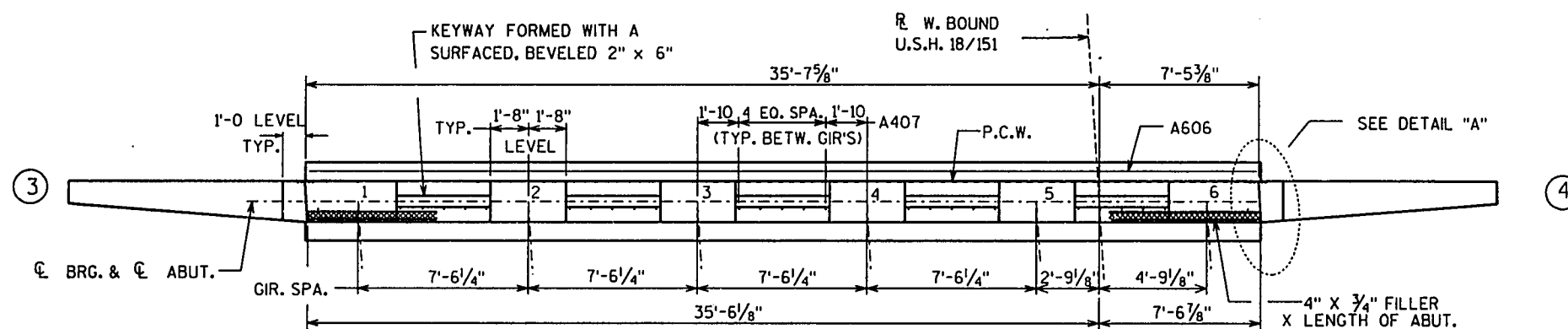
1201-04-76

E.65

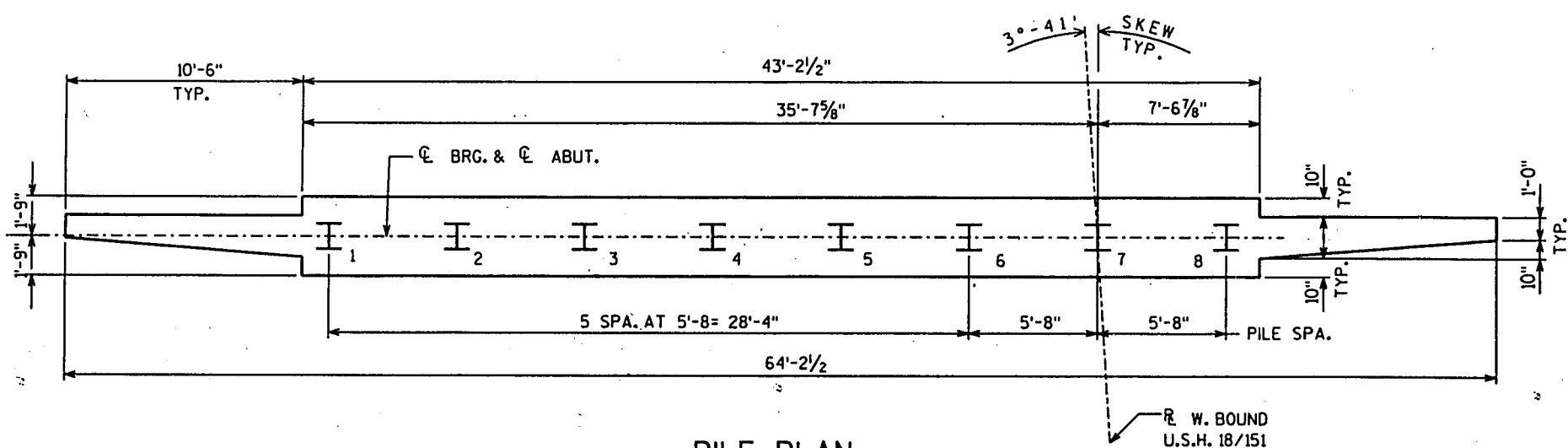


ELEVATION

LOOKING NORTH

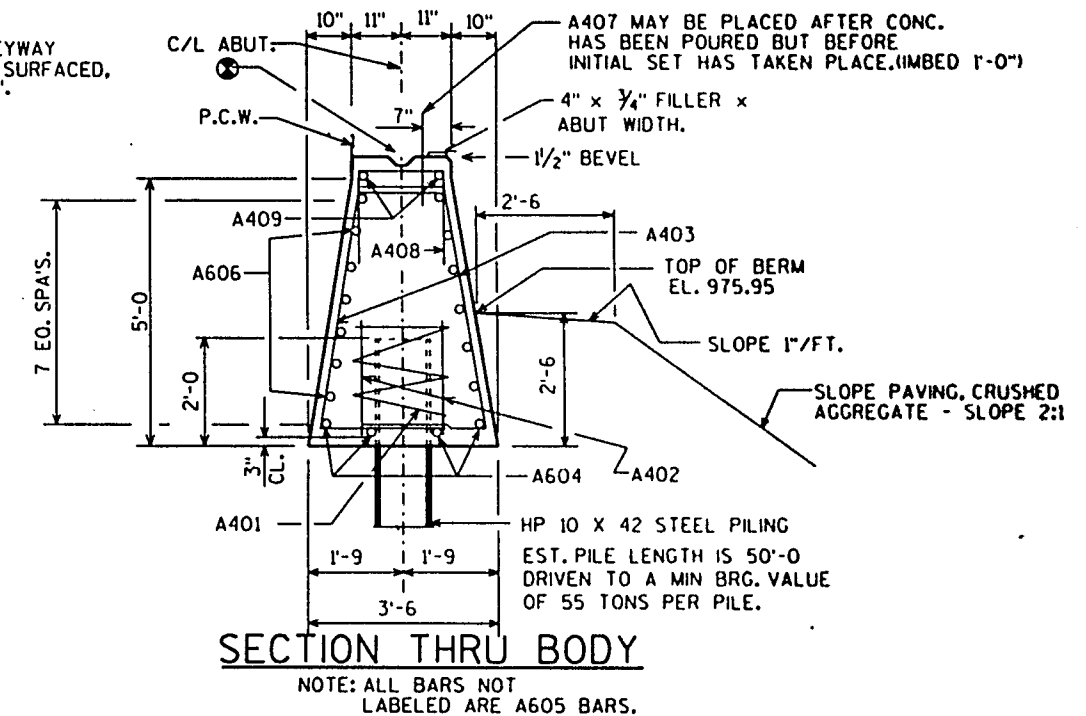


PLAN



PILE PLAN

CONST. JOINT KEYWAY FORMED WITH A SURFACED, BEVELED 2" x 6".

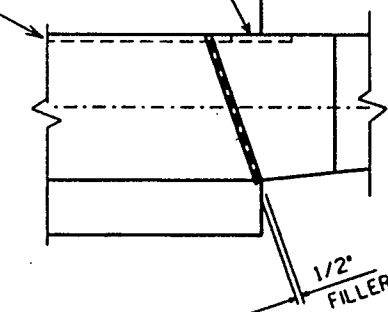


SECTION THRU BODY

NOTE: ALL BARS NOT LABELED ARE A605 BARS.

VERT. P.C.W. TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. P.C.W.

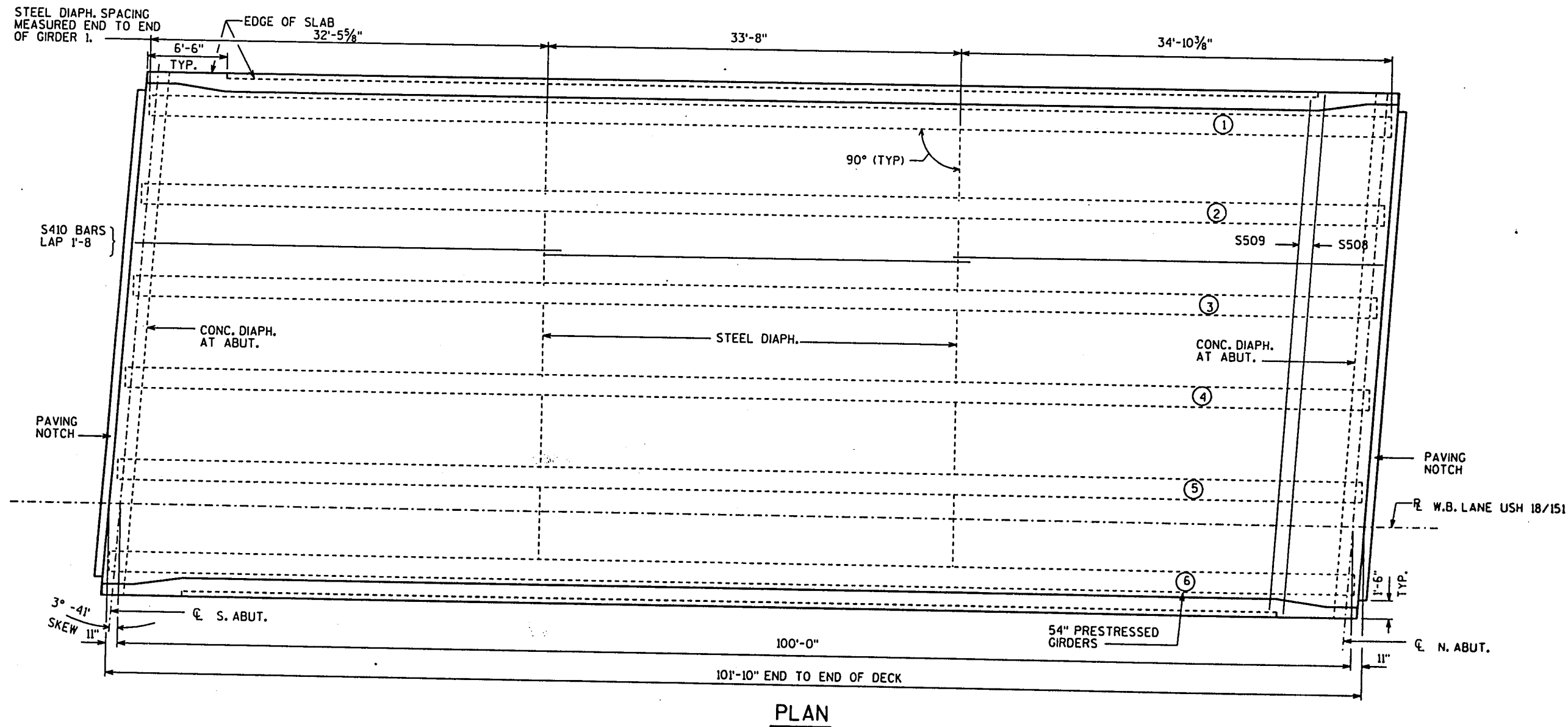
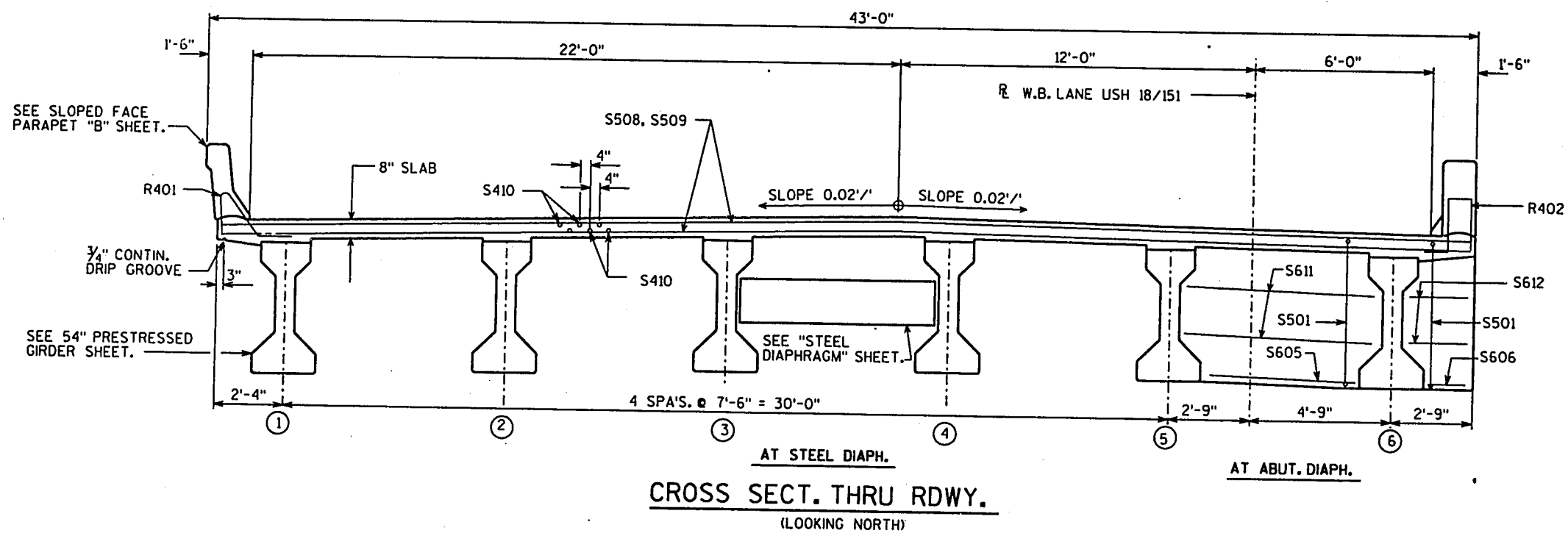
HORIZ. P.C.W. TO EXTEND BTWN. INSIDE FACES OF WINGS. FLUSH WITH FACE OF CONC.



DETAIL "A"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DRAWN BY	ZJK
NORTH ABUTMENT		PLANNED BY	DJK
		SHEET NO.	6
		PROJECT NO.	X84078

STATE PROJECT NUMBER	SHEET NO.
1201-04-76	B.66



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DESIGN BY	PLAN BY
SUPERSTRUCTURE			SHEET 7
			X84078

1201-04-76

8.68

GIRDER NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

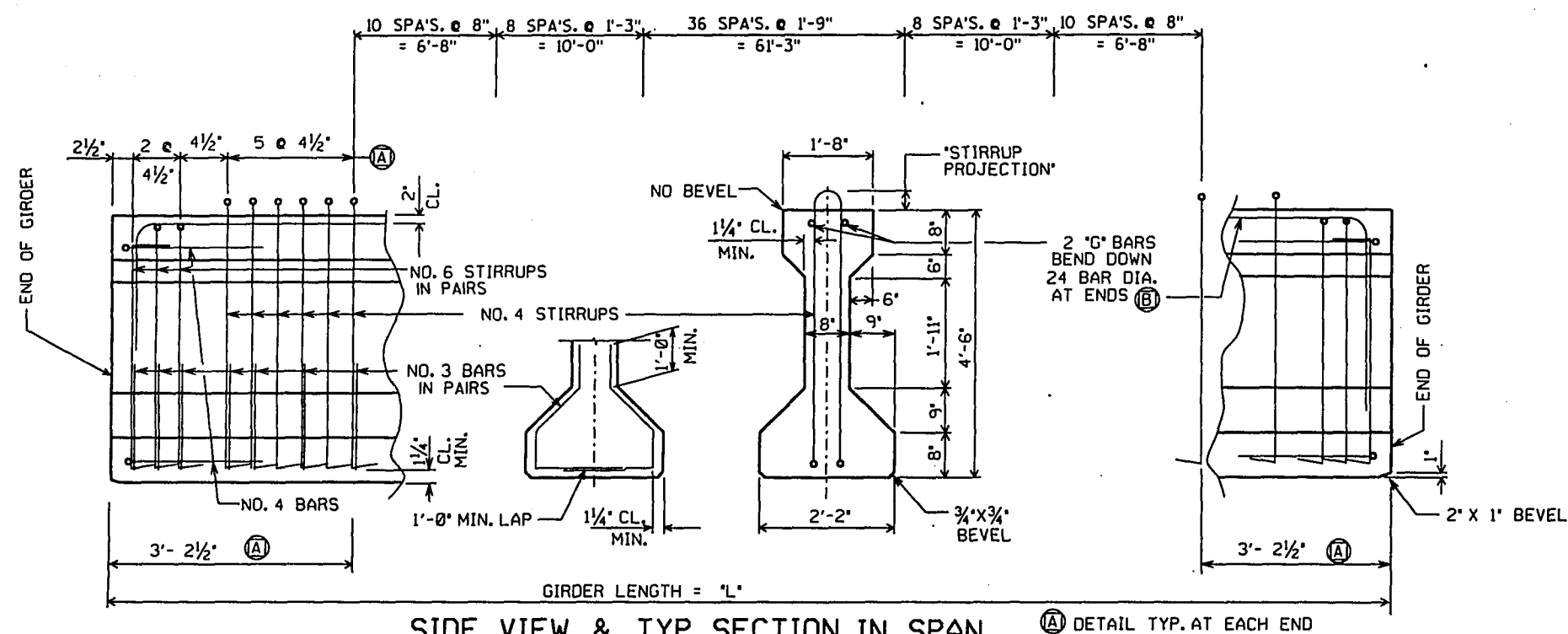
THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

PRESTRESSING STRANDS SHALL BE $\frac{1}{2}$ " - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF NO. 4 STIRRUPS $4\frac{1}{2}$ " AND NO. 6 STIRRUPS $6\frac{1}{2}$ ".

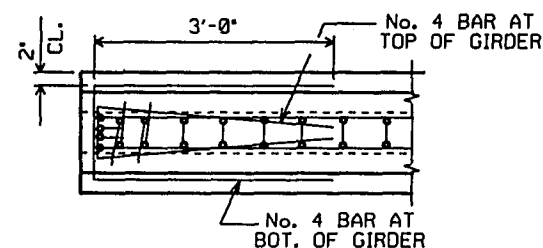
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.

COAT ABUTMENT ENDS OF GIRDERS EMBEDDED IN CONCRETE WITH PARAFFIN WAX PRIOR TO SEATING GIRDERS.

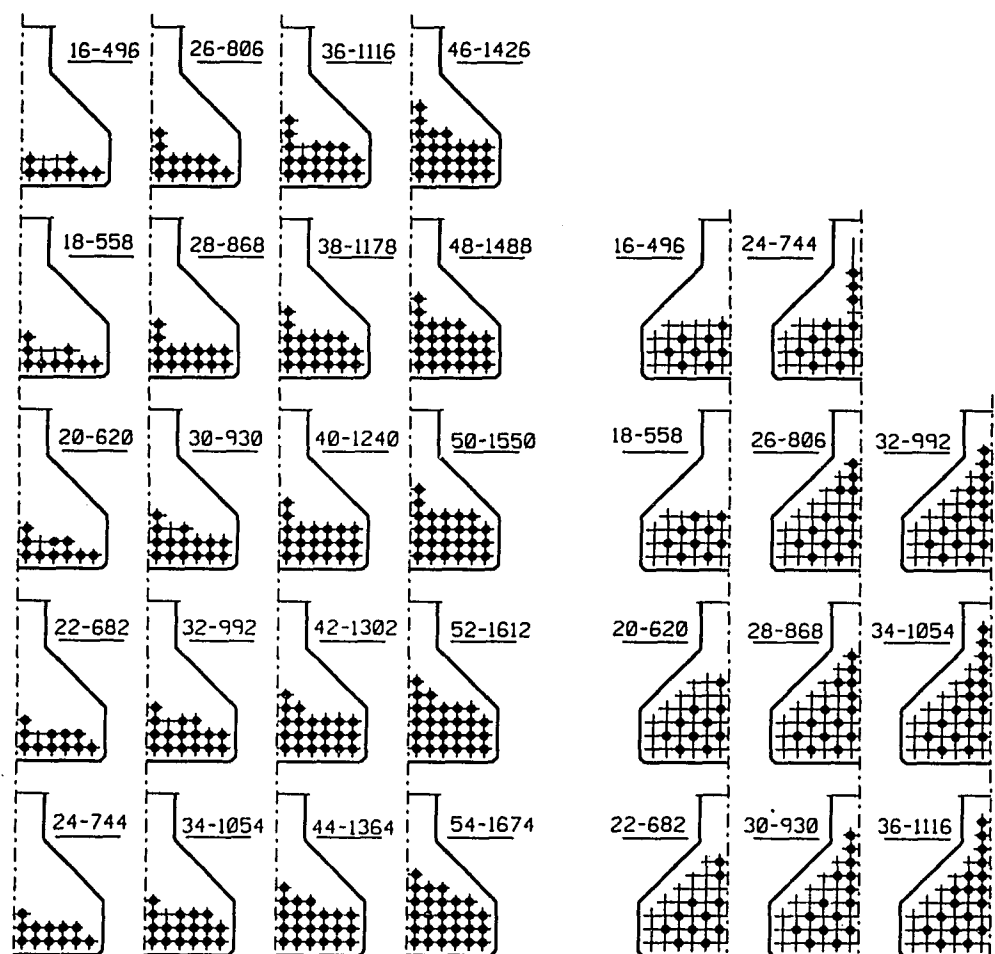


SIDE VIEW & TYP. SECTION IN SPAN

A DETAIL TYP. AT EACH END

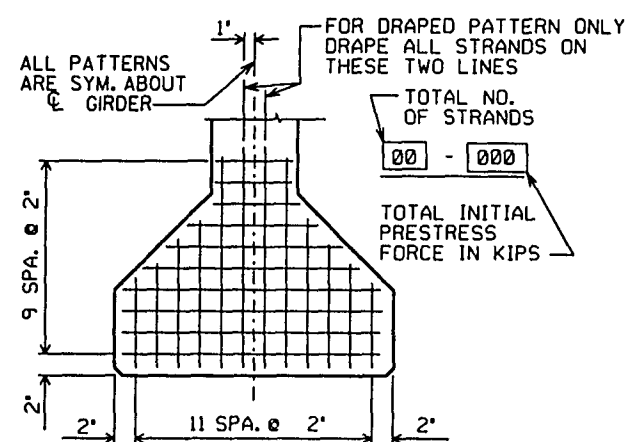


TOP VIEW OF GIRDER ENDS

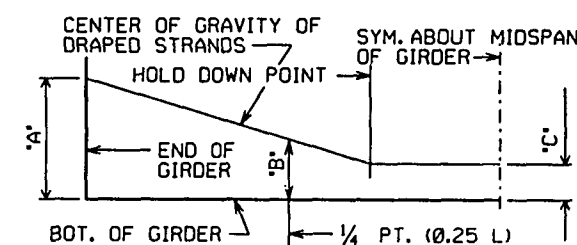


DRAPED PATTERN

UNDRAPED PATTERN

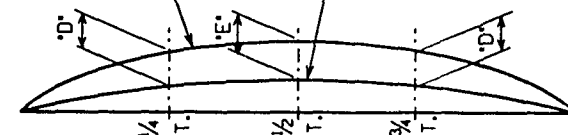


TYP. STRAND PATTERN

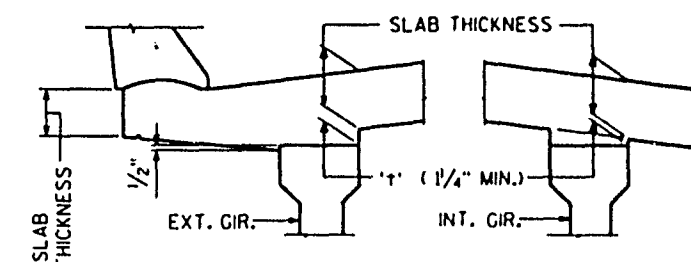


DRAPED STRAND PROFILE

TOP OF GIRDER BEFORE SLAB IS POURED.



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF $1\frac{1}{4}$ " MINIMUM HAUNCH HEIGHT 'H' 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. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 'H', ELEV. OF TOP OF GIR'S. AT $\frac{1}{4}$ OF SUBSTRUCTURE UNITS & AT $\frac{1}{4}$ POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

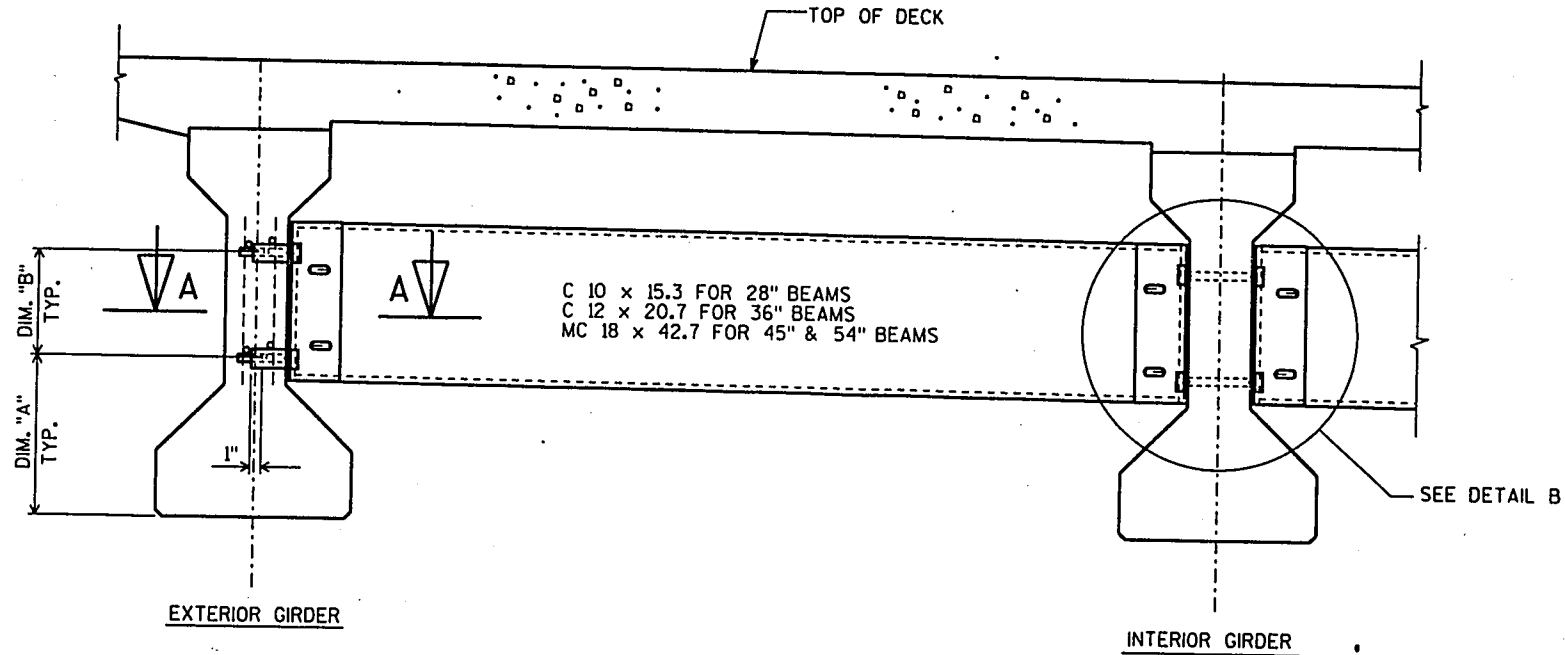
TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
- SLAB THICKNESS
= HAUNCH HEIGHT 'H'

GIRDER DATA						No. 4 "G" BARS, MAY BE SPLICED AT THE 1/3 POINTS. USE 1'-11" MIN. LAP.					
SPAN	GIRDER LENGTH 'L'	DEAD LOAD DEF. (IN.)		CONC. STRGTH. (p.s.i.)	STIRRUP PROJECTION	DRAPED PATTERN (INCHES)				UNDRAPED PATTERN	
		'D'	'E'			TOTAL NO. OF STRANDS	f'ci (p.s.i.)	'A'	'B' MIN.	'B' MAX.	'C'
1	101'-0"	1	1 1/4	6,000	5"	38	4,800	48	16 1/2	19 1/2	6

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DESIGNED BY JHC	CHECKED BY DJM
54" PRESTRESSED GIRDER DETAILS			X84078

TABLE				
GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



NOTES

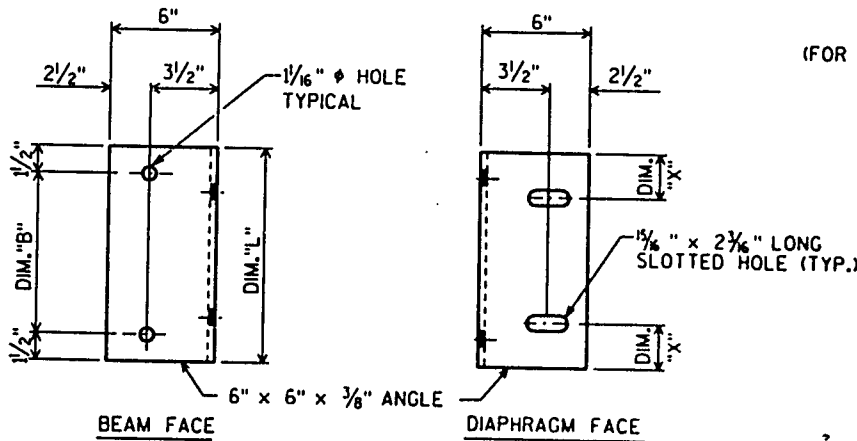
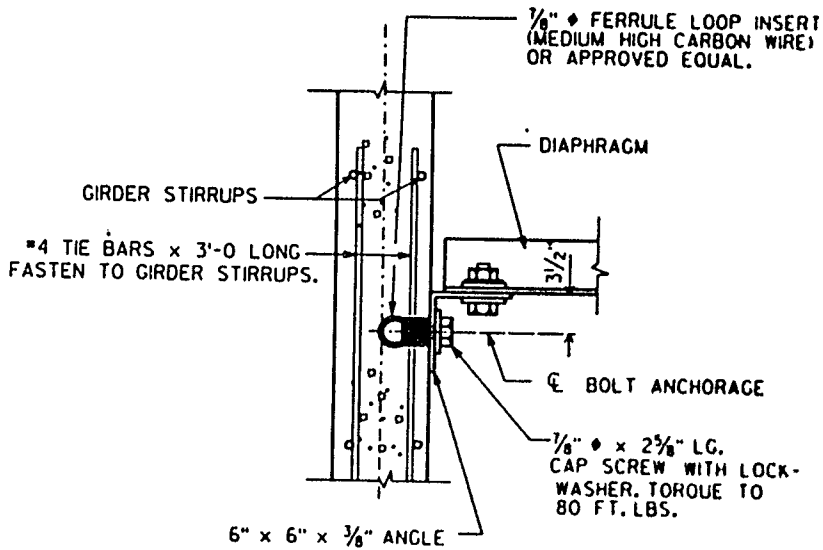
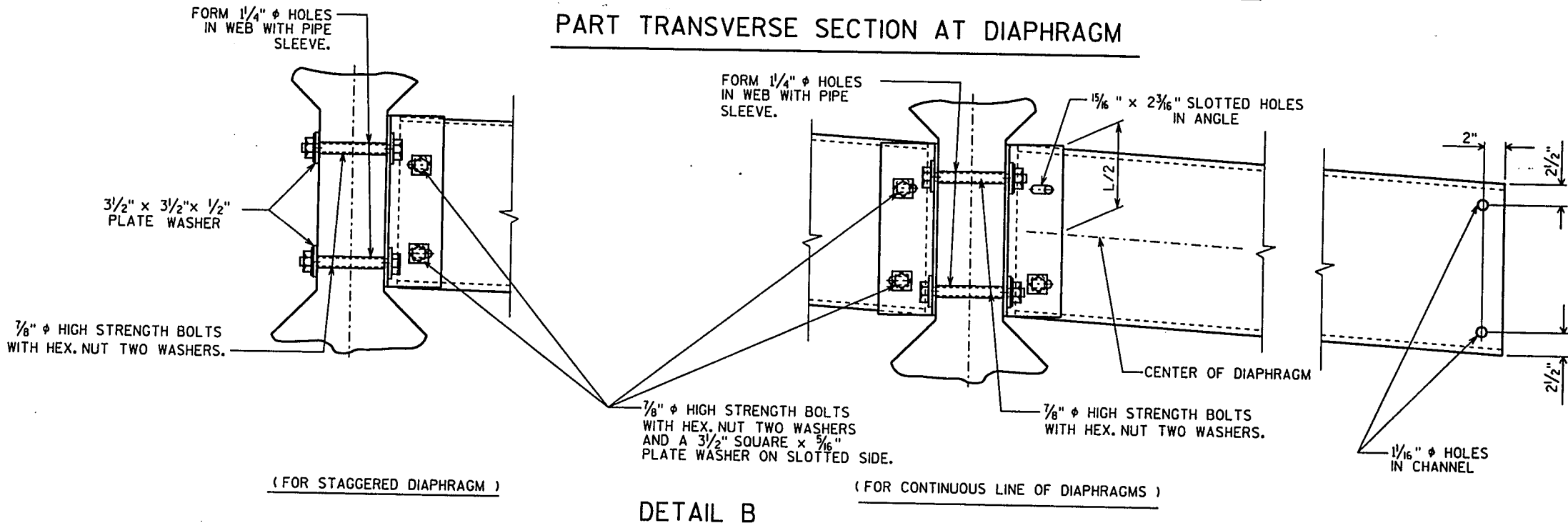
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

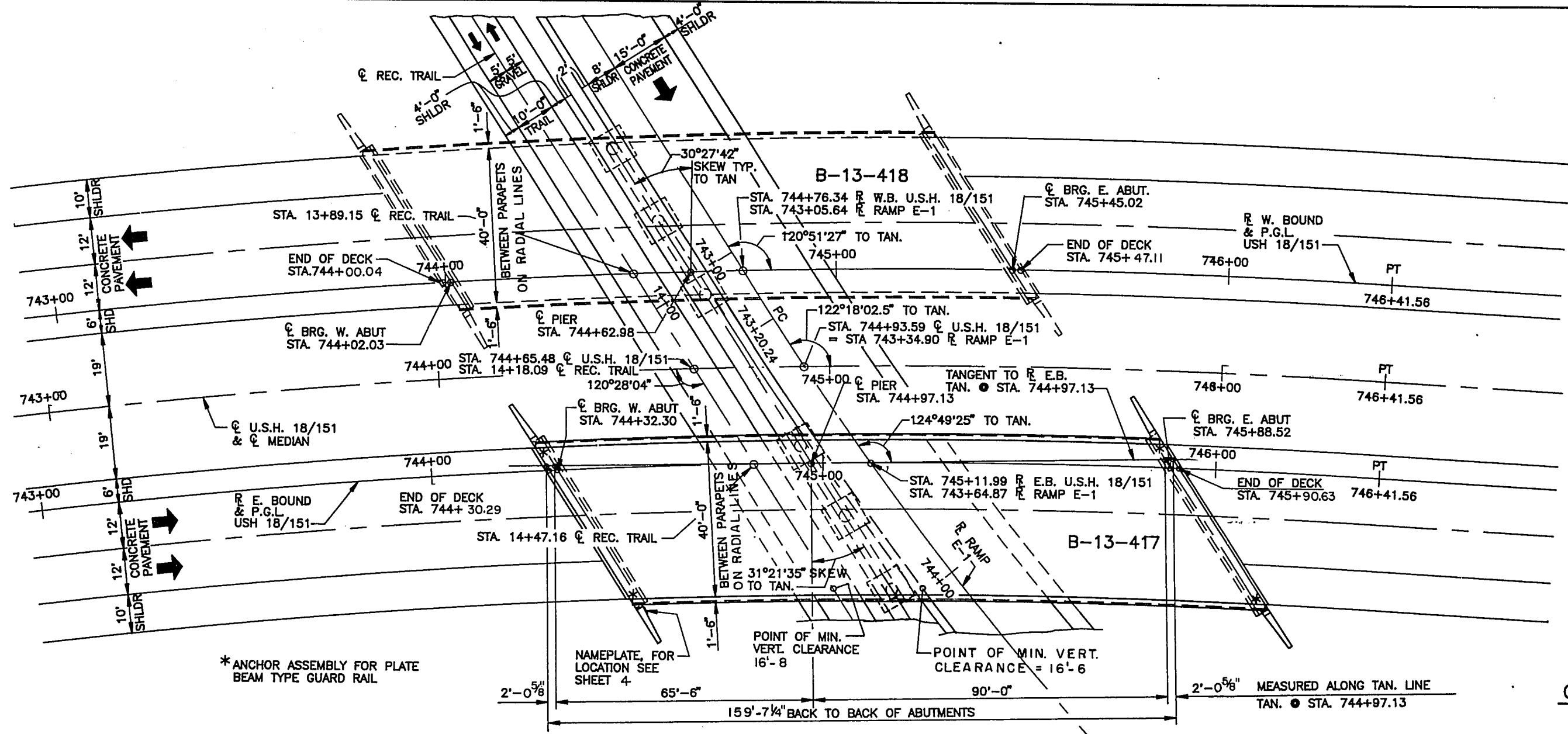
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A36.

ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 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 A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-416			
CONST. SPEC.	1989	DRAWN BY JHG	PLANS C&D DJL
STEEL DIAPHRAGM			SHEET NO.
			X94078



CURVE DATA - RAMP E-1

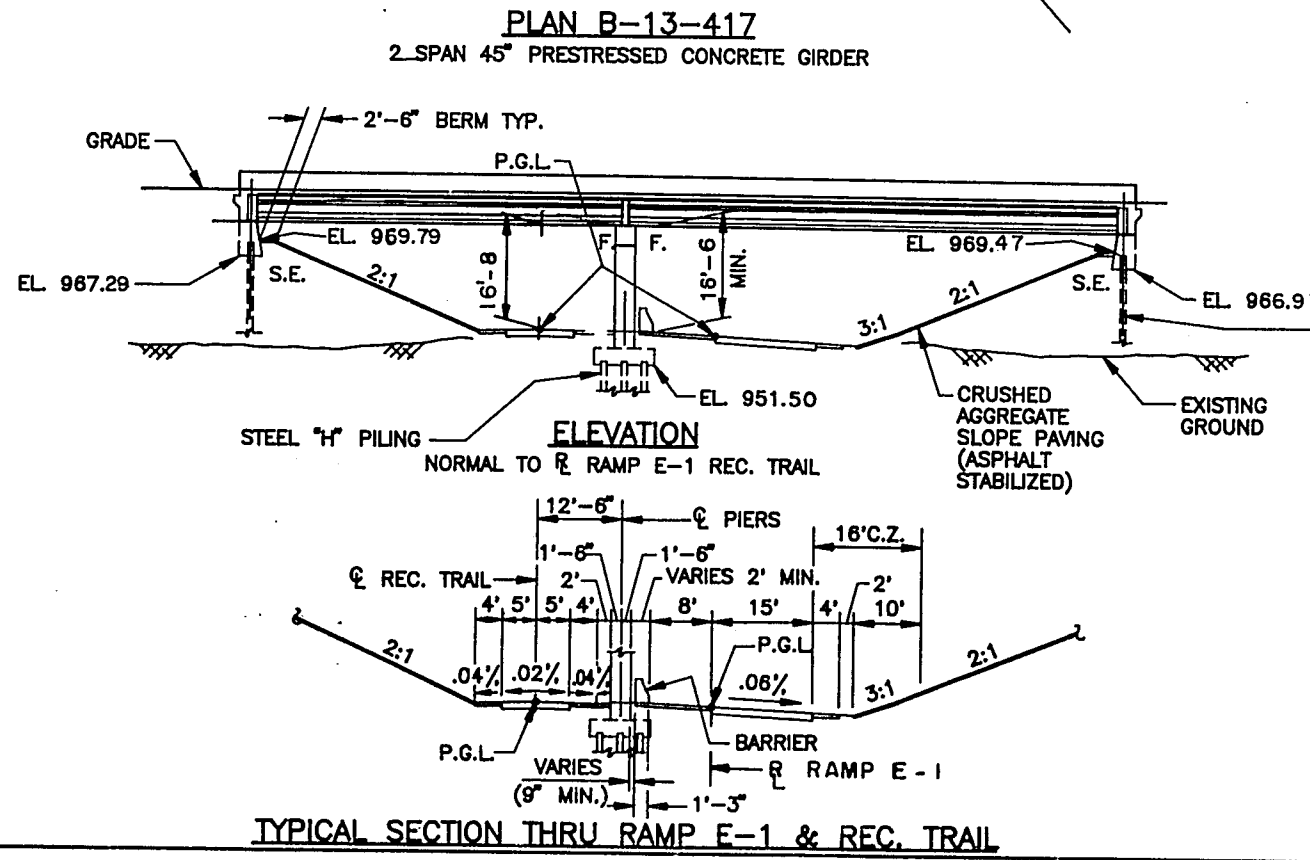
P.I. STA. 750+01.49
 $\Delta = 77^\circ 30' 00''$
 $D = 06^\circ 45' 00''$
 $R = 848.83'$
 $L = 1148.15'$
 $T = 681.26'$
 $S.E. = .06 \text{ ft./ft.}$
 $P.C. \text{ STA. } 743+20.24$
 $P.T. \text{ STA. } 754+68.39$

CURVE DATA - U.S.H. 18/151

P.I. STA. 736+84.25
 $\Delta = 65^\circ 45' 00''$
 $D = 03^\circ 00' 00''$
 $R = 1909.88'$
 $L = 2,191.67'$
 $T = 1,234.38'$
 $S.E. = .06 \text{ ft./ft.}$
 $P.C. = \text{STA. } 724+49.89$
 $P.T. = \text{STA. } 746+41.56$

CURVE DATA - R. E.B. U.S.H. 18/151

P.I. STA. 736+98.78
 $\Delta = 65^\circ 45' 00''$
 $D = 03^\circ 02' 23.25''$
 $R = 1884.88'$
 $L = 2,162.98'$
 $T = 1,218.20'$
 $S.E. = .06 \text{ ft./ft.}$
 $P.C. = \text{STA. } 724+78.58$
 $P.T. = \text{STA. } 746+41.56$



LIST OF DRAWINGS

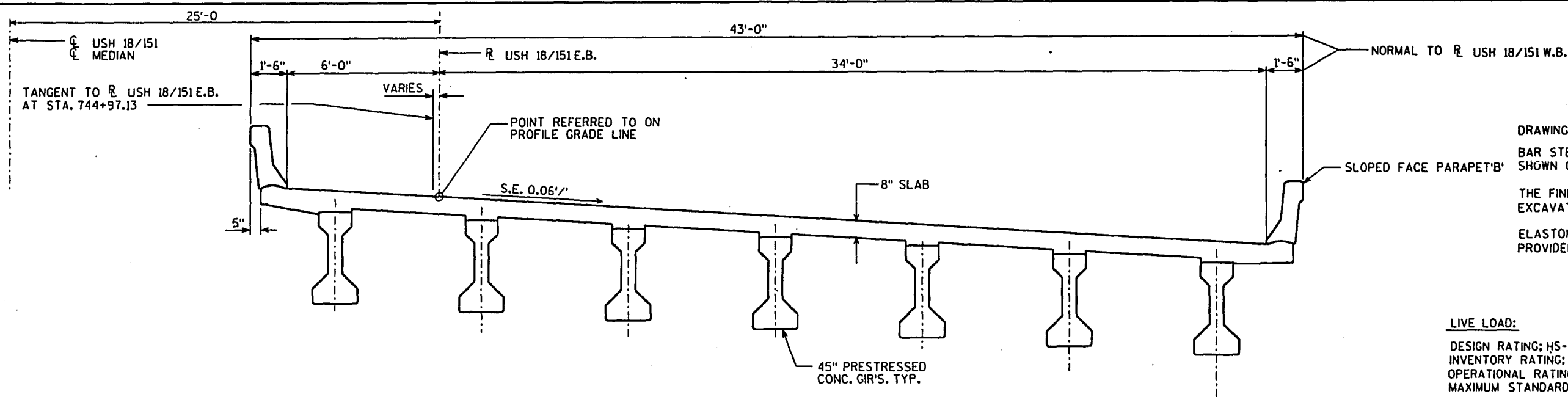
1. GENERAL PLAN
2. QUANTITIES & CROSS SECT.
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. ABUTMENT DETAILS
6. EAST ABUTMENT
7. PIER
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. SUPERSTRUCTURE DETAILS
11. 45" PRESTRESSED GIRDER DETAILS
12. STEEL DIAPHRAGM
13. SLOPED FACE PARAPET "B"

BRIDGE OFFICE CONTACT: (608)266-8488, R. REESE

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
USH 18/151 E.B. OVER RAMP			
County	DANE	Town	VERONA
Design Spec.	AASHTO '91	Load	HS-20
Designed By	CMH	Design C'd. By	MGW
Drawn By	JHG	Checked	MHW
Approved	State Bridge Engineer		
			Date

GENERAL PLAN

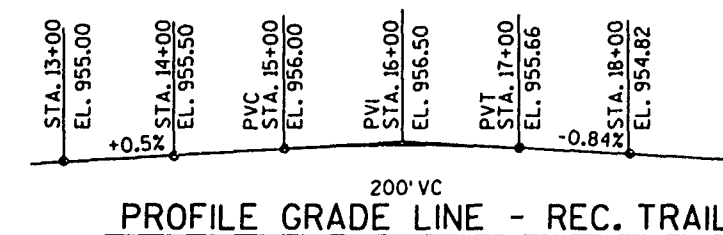
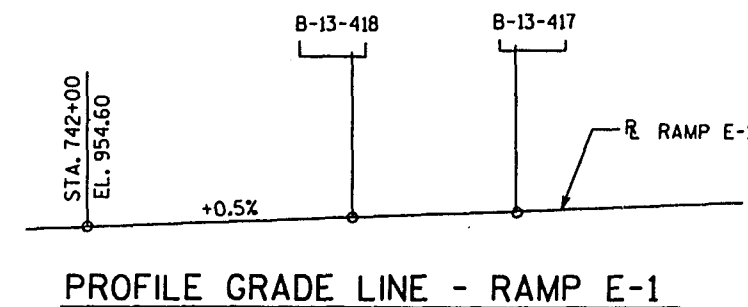
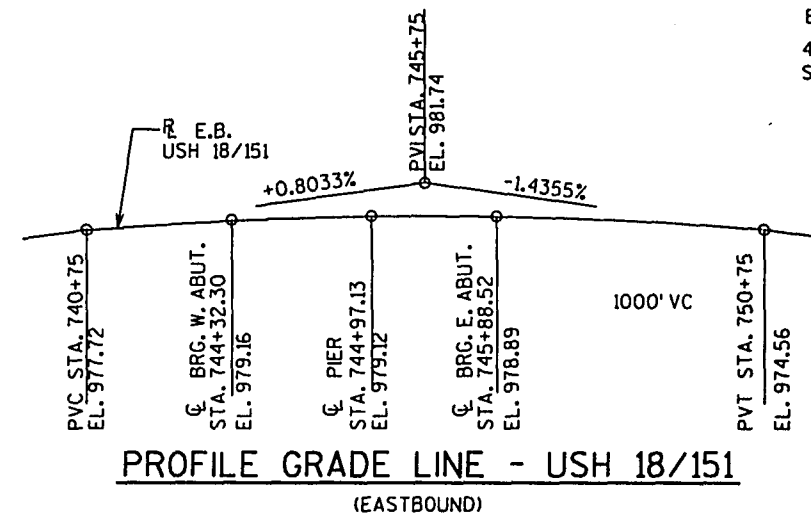
SHEET 1 OF 13
X 84132



CROSS SECTION THRU RDWY.
(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES

BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	PIER	TOTALS
EXCAVATION FOR STRUCTURES, BRIDGES, B-13-417	L.S.					1
CONCRETE MASONRY, BRIDGES	C.Y.	268	54	57	50	429
PROTECTIVE SURFACE TREATMENT	GAL.	50				50
HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.		3, 150	3, 310	380	6, 840
COATED HIGH-STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	LB.	45, 180			6, 520	51, 700
NON-LAMINATED ELASTOMERIC BEARING PADS	EACH	21				21
PRESTRESSED GIRDER, I TYPE, 45-INCH	L.F.	1102				1102
STEEL DIAPHRAGM	EACH	18				18
STEEL PILING, DELIVERED AND DRIVEN, HP 10-INCH 42 POUND	L.F.		240	270	800	1310
SLOPED PAVING, CRUSHED AGGREGATE	S.Y.		195	234		429
ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4				4
NON-BID ITEMS						
POLYVINYL CHLORIDE WATERSTOP	L.F.		60	62		122
FILLER	SIZE					1/2" & 3/4"



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FINISHED GRADED SECTION SHALL BE USED AS THE UPPER LIMITS OF EXCAVATION AT THE PIERS.
- ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH & TRUE.

DESIGN DATA

- LIVE LOAD:
- DESIGN RATING: HS-20
INVENTORY RATING: HS-24
OPERATIONAL RATING: HS-32
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS.
- STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.
- ULTIMATE DESIGN STRESSES:
- CONCRETE MASONRY SLAB — $f'_c = 4,000$ P.S.I. ALL OTHER — $f'_c = 3,500$ P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60 — $f_y = 60,000$ P.S.I.
- 45" PRESTRESSED GIRDERS, CONCRETE MASONRY — $f'_c = 6,000$ P.S.I.
STRANDS — $1/2"$ ϕ WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I. — $f'_c = 6,500$ P.S.I.

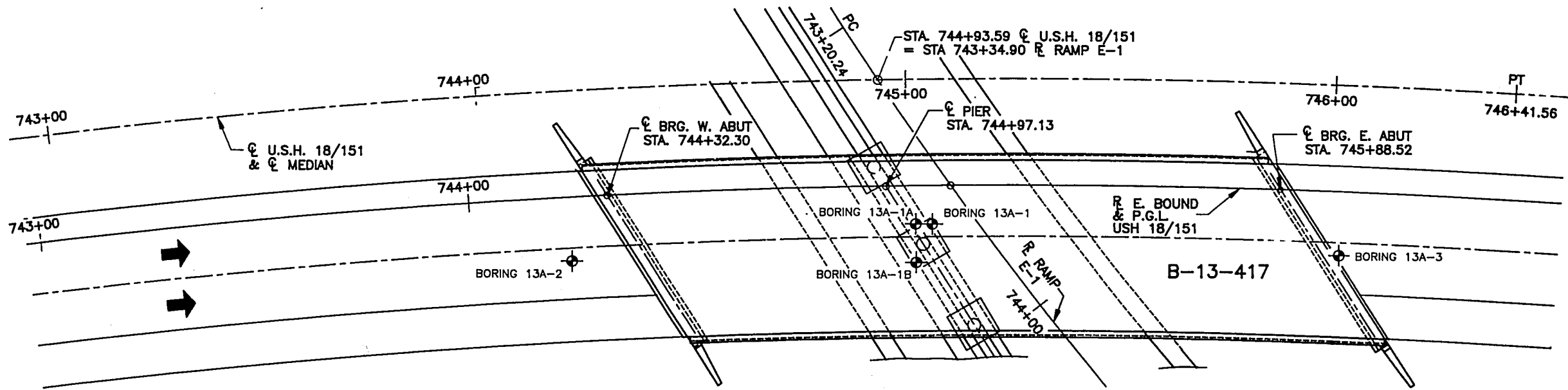
TRAFFIC VOLUME

- USH 18/151 RAMP E-1
A.D.T.=7, 000 (2012) A.D.T.=6, 000 (2012)
R.D.S.=65 M.P.H. R.D.S.=50 M.P.H.

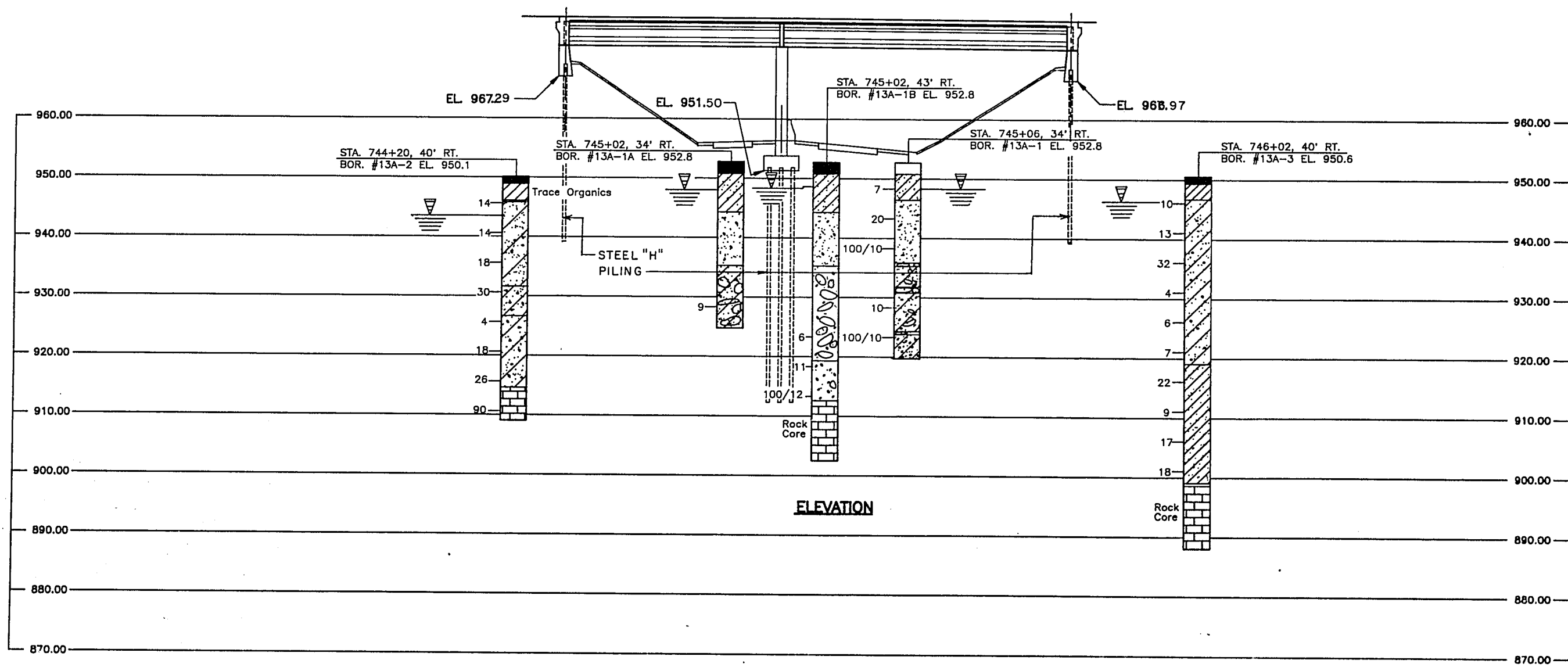
FOUNDATION DATA

SUBSTRUCTURE UNITS TO BE SUPPORTED ON STEEL PILES

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C&D M&W
QUANTITIES & CROSS SECT.		SHEET 2	
		X84132	



PLAN



ELEVATION

STATE PROJECT NUMBER		SHEET NO.	
1201-04-76		8.73	

ABBREVIATIONS		
F FINE	M MEDIUM	C COARSE
WS WEATHERED	SO SOUND	

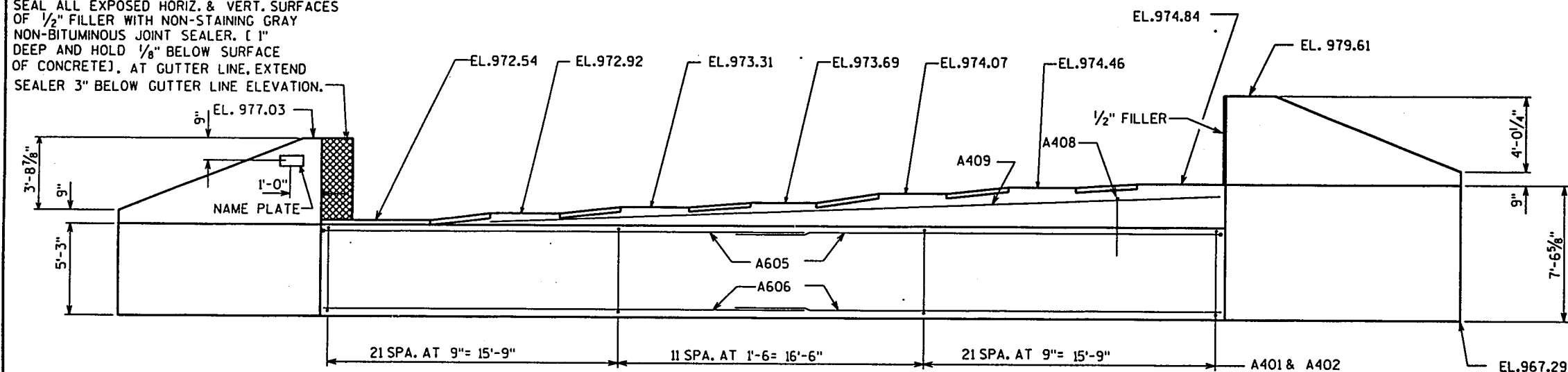
MATERIAL SYMBOLS		
TOPSOIL	SILT	SHALE
SAND	CLAY	LIMESTONE/DOLOMITE
GRAVEL	BOULDERS/COBBLES	SANDSTONE

LEGEND OF BORING	
Elev. 7.7 Unconfined Strength 7.7 Blows per Ft. Using 140# Wt. Falling 30" Wash Sample * Shelby Tube S.T. Ground Water Elevation ▽ No Ground Water Observed Above This Elevation X	Boring No. Sta. Sandy Gravel F. Boulders or Cobbles Sand Silty Clay So Limestone

Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". The blow count is taken in undisturbed soil immediately below a cased or open hole eliminating side friction on the drive pipe.

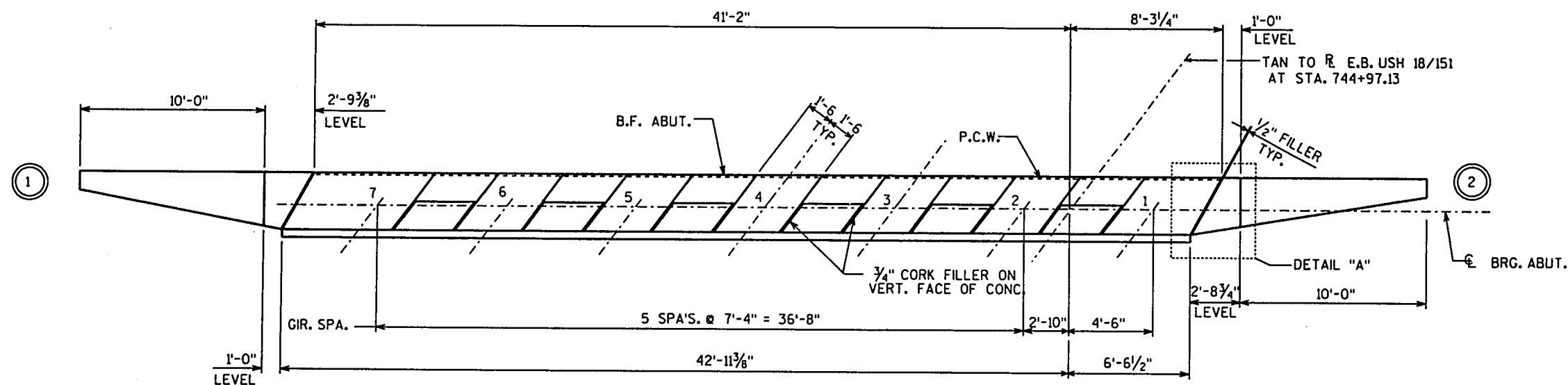
SUBSURFACE EXPLORATION FOR FOUNDATION			
DESIGN AND BIDDERS INFORMATION			
To obtain relative data concerning the character of material in and upon which the foundation might be built, borings and/or soundings were made at points approximately as indicated on this drawing. The data presented herein represents 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			
DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
Const. Spec.	WIS. 89	Drawn By	TL
Plane Checked	M. J. W.	SHEET 3	X84132

SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

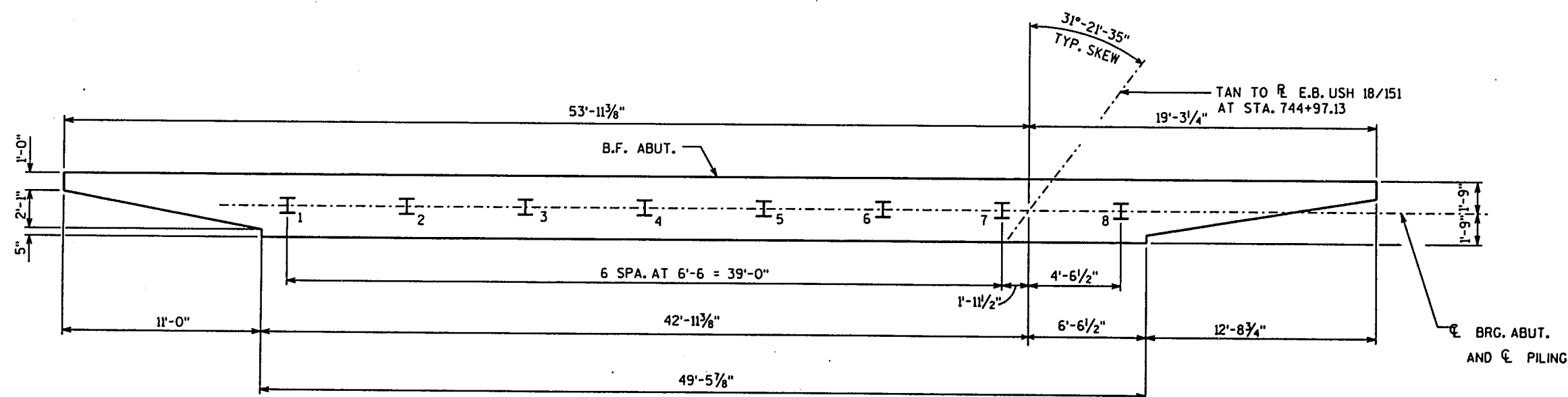


ELEVATION

LOOKING WEST



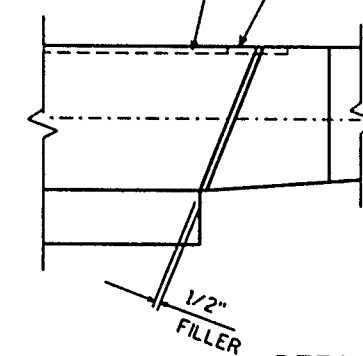
PLAN



PILE PLAN

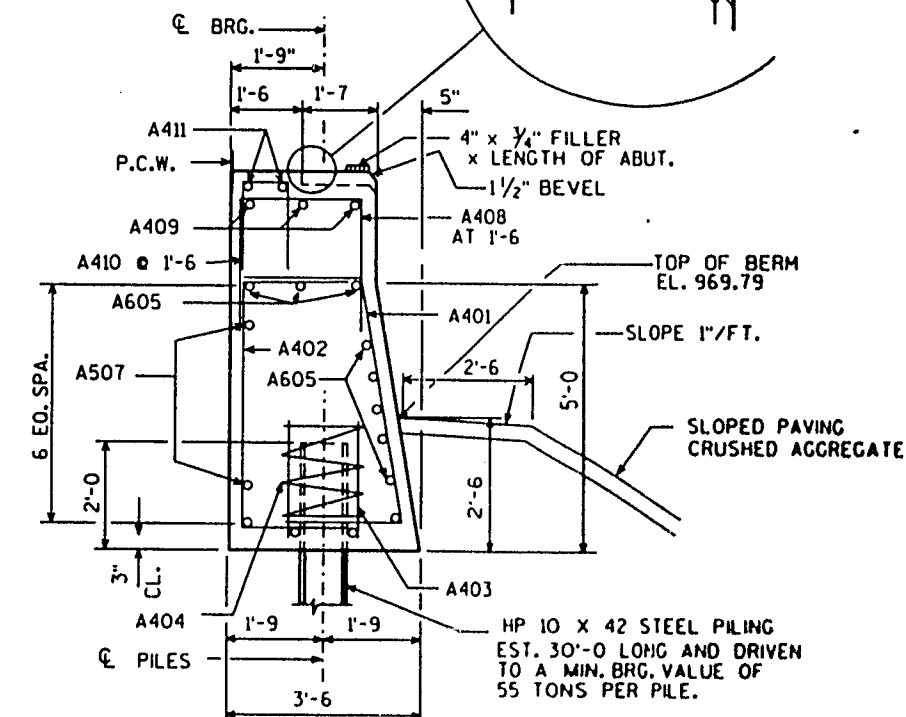
HORIZ. P.C.W. TO EXTEND BTWN. INSIDE FACES OF WINGS, FLUSH WITH FACE OF CONC.

VERT. P.C.W. TO EXTEND FROM BRIDGE SEAT TO TOP OF WING, SPLICE AT JUNCTION WITH HORIZ. P.C.W.



DETAIL "A"

STEEL TROWEL TOP SURFACE OF ABUTMENT PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE .03" MIN)



SECTION THRU BODY

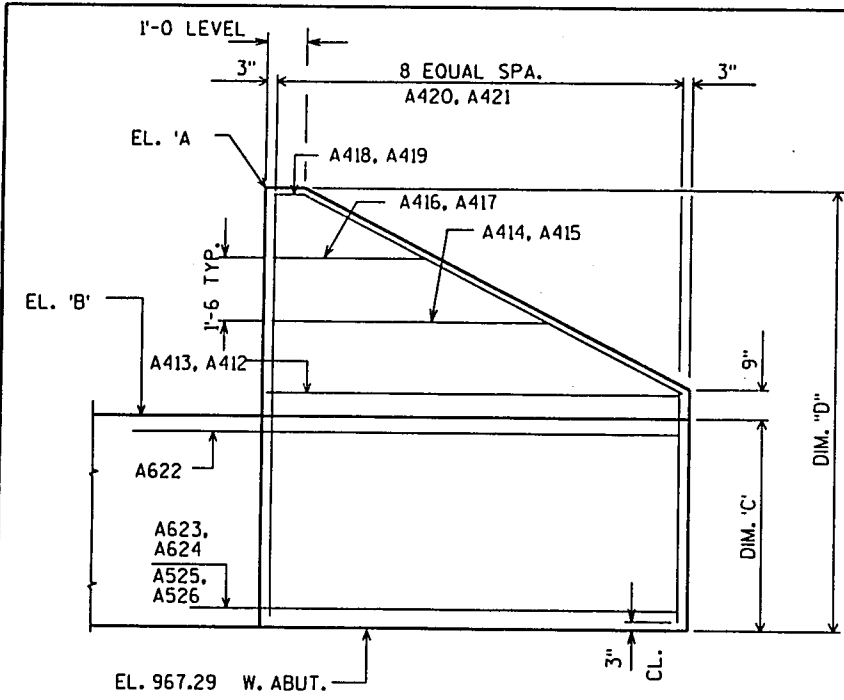
HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE A606 BARS.

NOTE: FILL TO BOTT. OF ABUT. BEFORE DRIVING PILING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JIC	PLANS CRD. MOW
WEST ABUTMENT		SHEET 4	
		X84132	

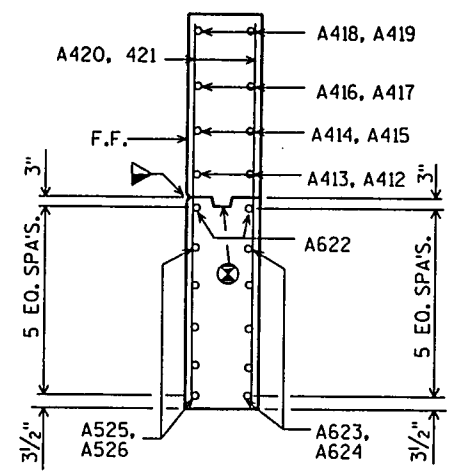
SCALE 4:1

BR 13-417-ABUT



WING 1 & 2 ELEVATION
(WEST ABUT.)

WING	EL.'A'	EL.'B'	DIM.'C'	DIM.'D'
1	977.03	972.54	5'-3"	9'-8 7/8"
2	979.61	974.84	7'-6 5/8"	12'-3 1/8"
3	979.36	974.49	7'-6 1/4"	12'-4 3/4"
4	976.67	972.22	5'-3"	9'-8 3/8"



SECT. THRU
WING 1 & 2

3/4" V-GROOVE
F.F. ONLY

OPT. CONST. JOINT KEYWAY
FORMED WITH A SURFACED,
BEVELED 2" X 6".

WEST ABUT.

BILL OF BARS

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

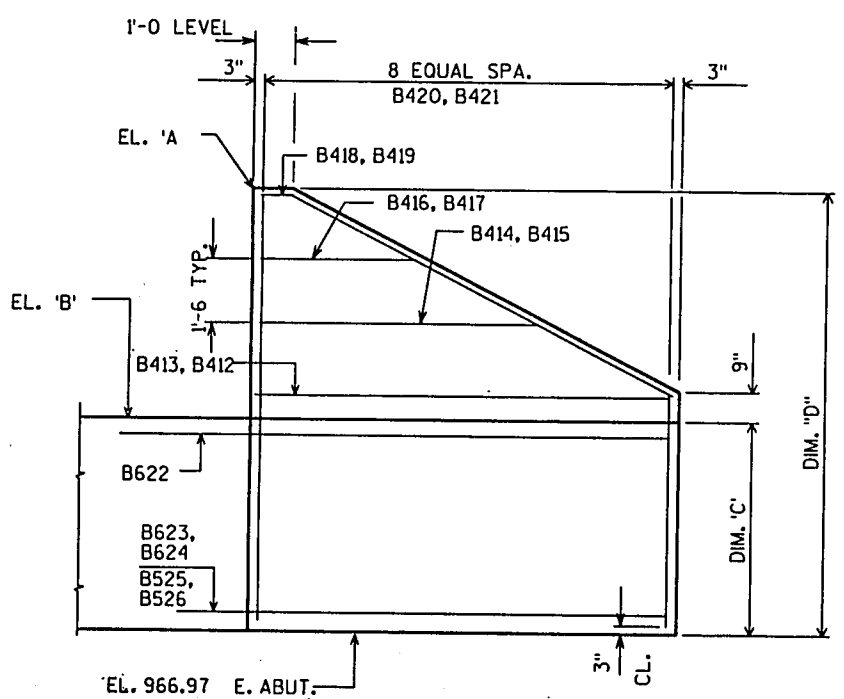
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A401		54	8-6	X			BODY VERT. F.F.
A402		54	8-11	X			BODY VERT. B.F.
A403		16	2-3				BODY, TWO PER PILE
A404		8	28-0	X			BODY, ONE PER PILE
A605		16	26-11	X			BODY HORIZ.
A606		8	26-1				BODY HORIZ.
A507		10	25-10				BODY HORIZ.
A408		27	8-10	X			BODY TOP VERT.
A409		3	40-0				BODY TOP HORIZ.
A410		33	3-7	X			BODY TOP VERT.
A411		4	25-7				BODY TOP HORIZ.
A412		2	12-4				WING HORIZ.
A413		2	10-8				WING HORIZ.
A414		2	7-4				WING HORIZ.
A415		2	9-0				WING HORIZ.
A416		2	4-1				WING HORIZ.
A417		2	5-8				WING HORIZ.
A418		2	11-4	X			WING HORIZ.
A419		2	12-11	X			WING HORIZ.
A420		9	14-7		X		WING VERT. WING 1
A421		9	19-6		X		WING VERT. WING 2
A622		4	15-9				WING HORIZ.
A623		5	14-3				WING HORIZ. WING 1
A624		5	12-7				WING HORIZ. WING 2
A525		5	14-0				WING HORIZ. WING 2
A526		5	12-4				WING HORIZ. WING 1

EAST ABUT.

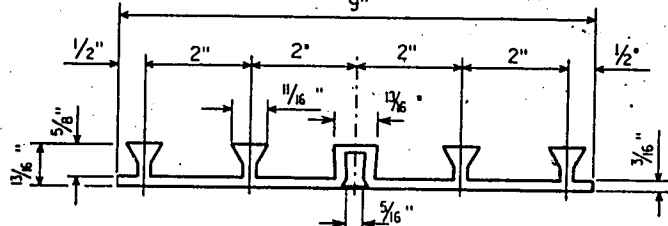
BILL OF BARS

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

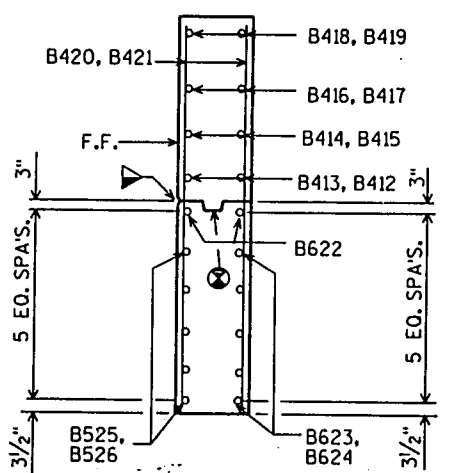
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
B401		57	8-6	X			BODY VERT. F.F.
B402		57	8-11	X			BODY VERT. B.F.
B403		18	2-3				BODY, TWO PER PILE
B404		9	28-0	X			BODY, ONE PER PILE
B605		16	28-2	X			BODY HORIZ.
B606		8	27-4				BODY HORIZ.
B507		10	27-1				BODY HORIZ.
B408		29	8-10	X			BODY TOP VERT.
B409		3	43-0				BODY TOP HORIZ.
B410		35	3-7	X			BODY TOP VERT.
B411		4	26-10				BODY TOP HORIZ.
B412		2	12-8				WING HORIZ.
B413		2	10-8				WING HORIZ.
B414		2	7-4				WING HORIZ.
B415		2	9-3				WING HORIZ.
B416		2	4-1				WING HORIZ.
B417		2	5-11				WING HORIZ.
B418		2	11-4	X			WING HORIZ.
B419		2	13-2	X			WING HORIZ.
B420		9	19-6		X		WING VERT. WING 3
B421		9	14-7		X		WING VERT. WING 4
B622		4	16-3				WING HORIZ.
B623		5	14-9				WING HORIZ. WING 3
B624		5	12-7				WING HORIZ. WING 4
B525		5	14-6				WING HORIZ. WING 4
B526		5	12-4				WING HORIZ. WING 3



WING 3 & 4 ELEVATION
(EAST ABUT.)

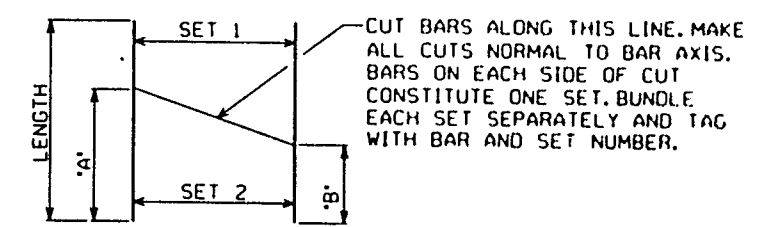
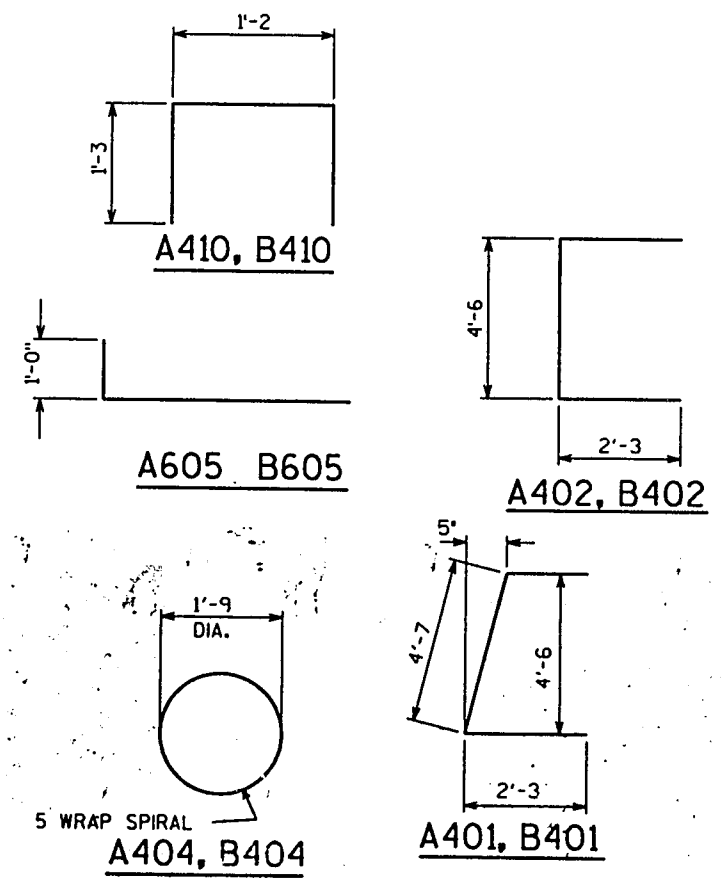


P.C.W.
(POLYVINYL CHLORIDE WATERSTOP)



SECT. THRU
WING 3 & 4

P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A
HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS
OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.



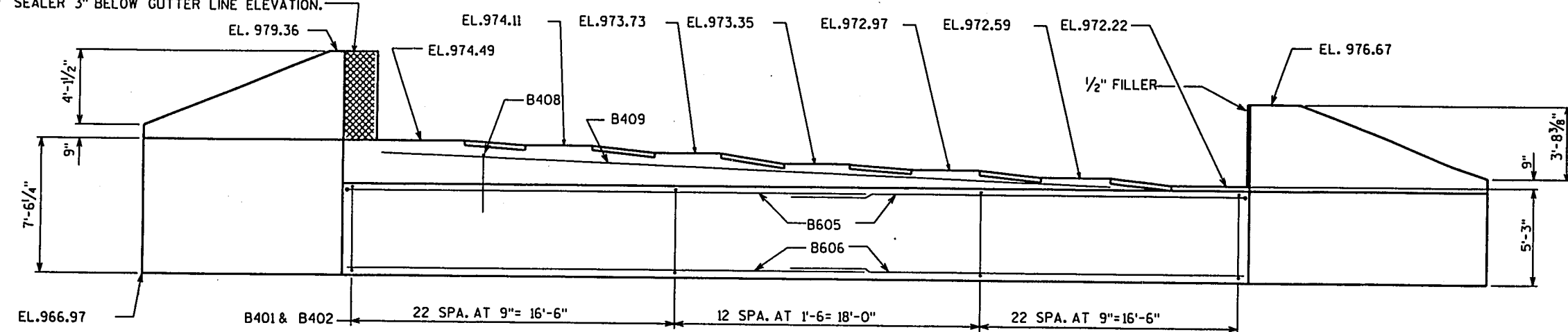
CUTTING DIAGRAM

MARK	'A'	'B'	NO. OF BARS/SET	NO. OF EACH SET
A420	9'-3"	5'-4"	9	1
A421	11'-11"	7'-7"	9	1
B420	11'-11"	7'-7"	9	1
B421	9'-3"	5'-4"	9	1

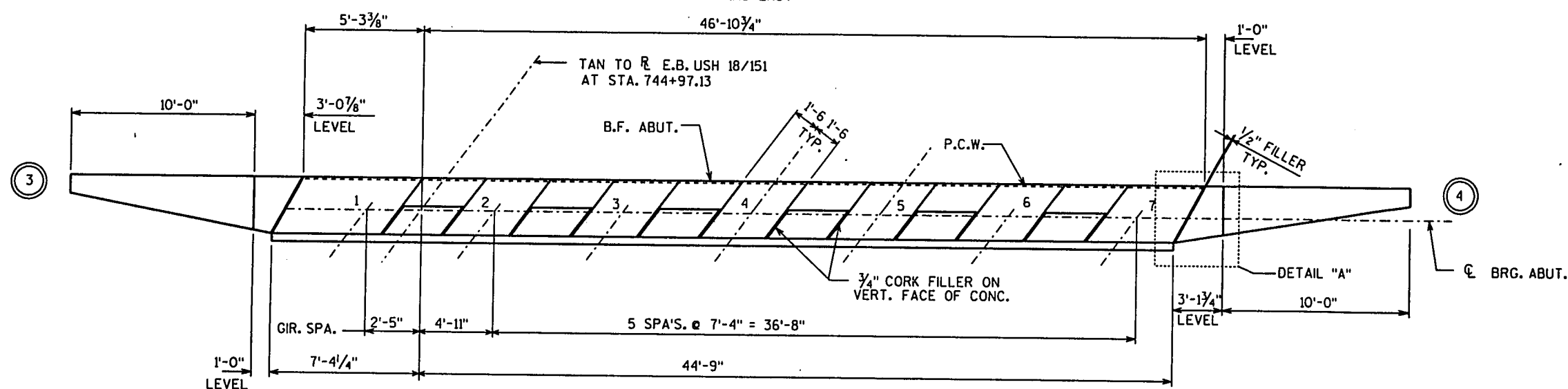
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY	PLANS C.E.D. M.G.W.
ABUTMENT DETAILS			SHEET 5
			X84132

SCALE 4:1

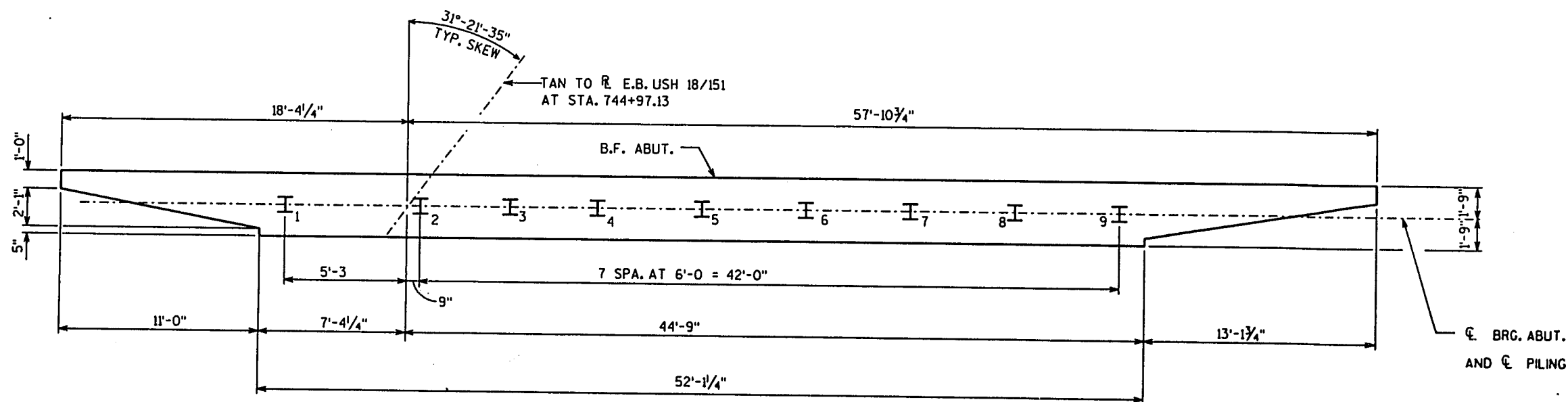
SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. [1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE]. AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.



ELEVATION
LOOKING EAST

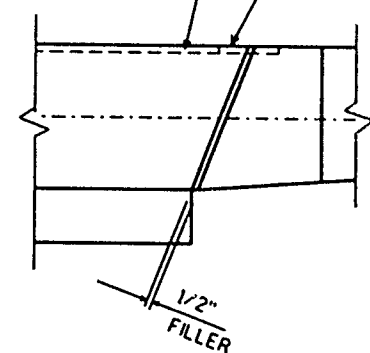


PLAN



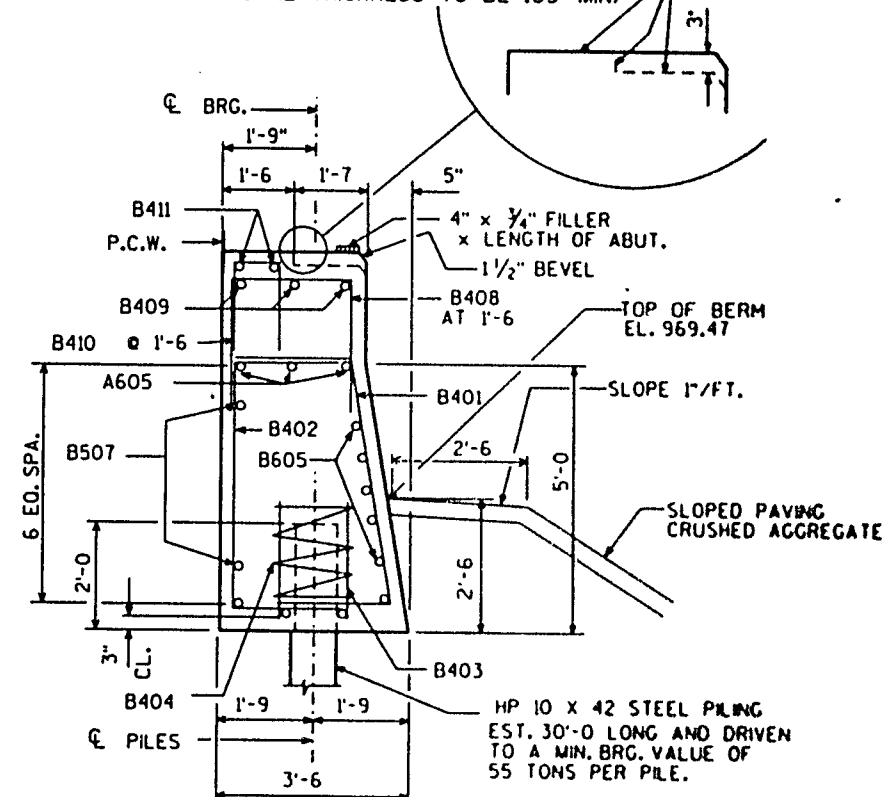
PILE PLAN

HORIZ. P.C.W. TO EXTEND BTWN. INSIDE FACES OF WINGS. FLUSH WITH FACE OF CONC.
VERT. P.C.W. TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SPLICE AT JUNCTION WITH HORIZ. P.C.W.



DETAIL "A"

STEEL TROWEL TOP SURFACE OF ABUTMENT PLACE MULTIPLE LAYERS OF POLYETHELENE SHEETING OVER ENTIRE ABUTMENT BEFORE PLACING BEARING PADS. (TOTAL THICKNESS TO BE .03" MIN)



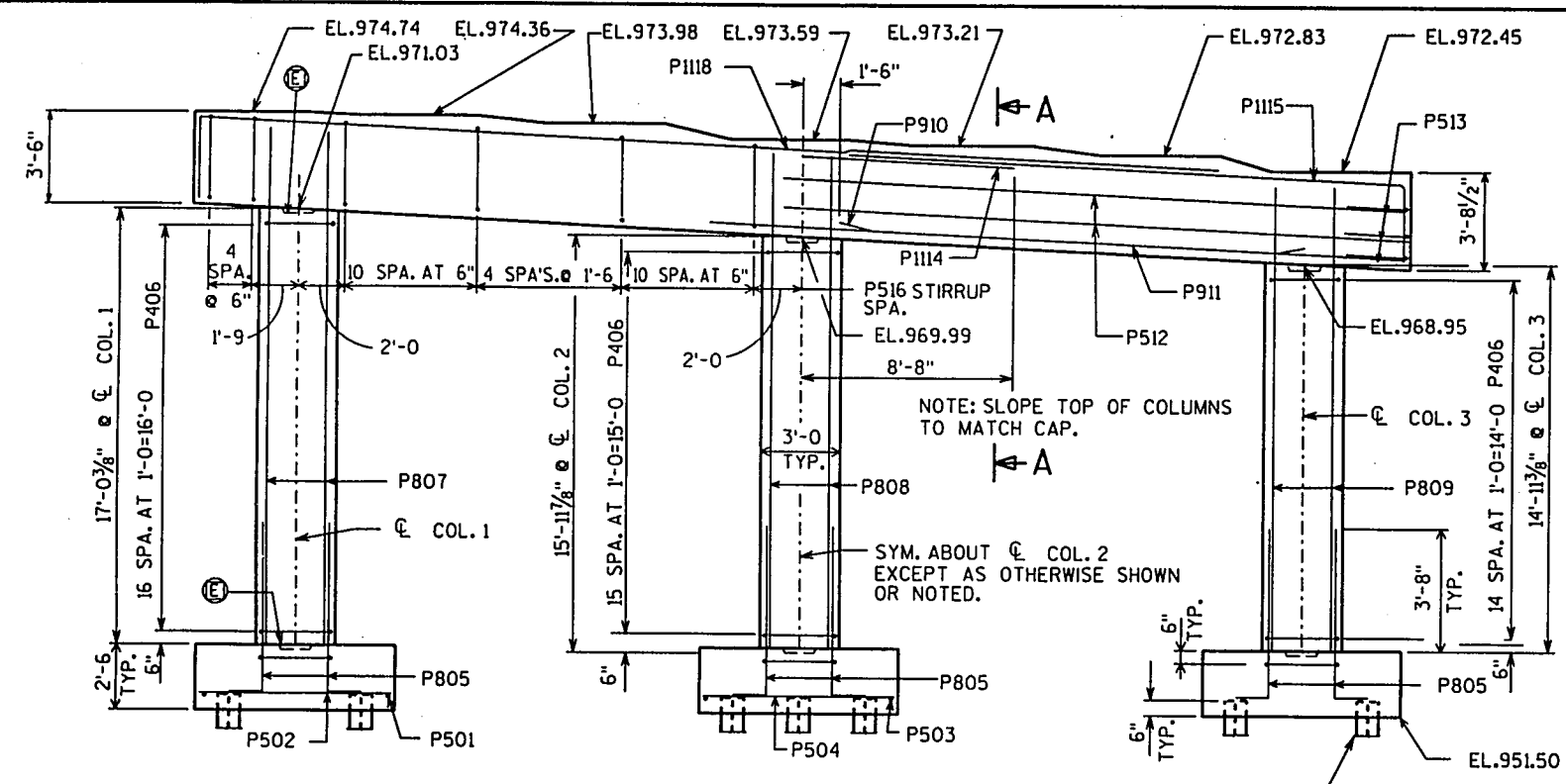
SECTION THRU BODY

HORIZ. BARS NOT OTHERWISE IDENTIFIED ARE B606 BARS.

NOTE: FILL TO BOT. OF ABUT. BEFORE DRIVING PILING.

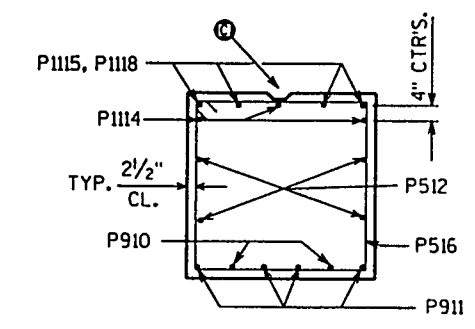
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C.A.D. MGW
EAST ABUTMENT			SHEET 6
			X84132

SCALE 4:1
BRL 3/24/77:7/27/87



ELEVATION
LOOKING EAST

HP 10 X 42 STEEL PILING.
EST. LENGTH 40'-0"
DRIVEN TO A MIN. BRG
VALUE OF 55 TONS PER PILE.

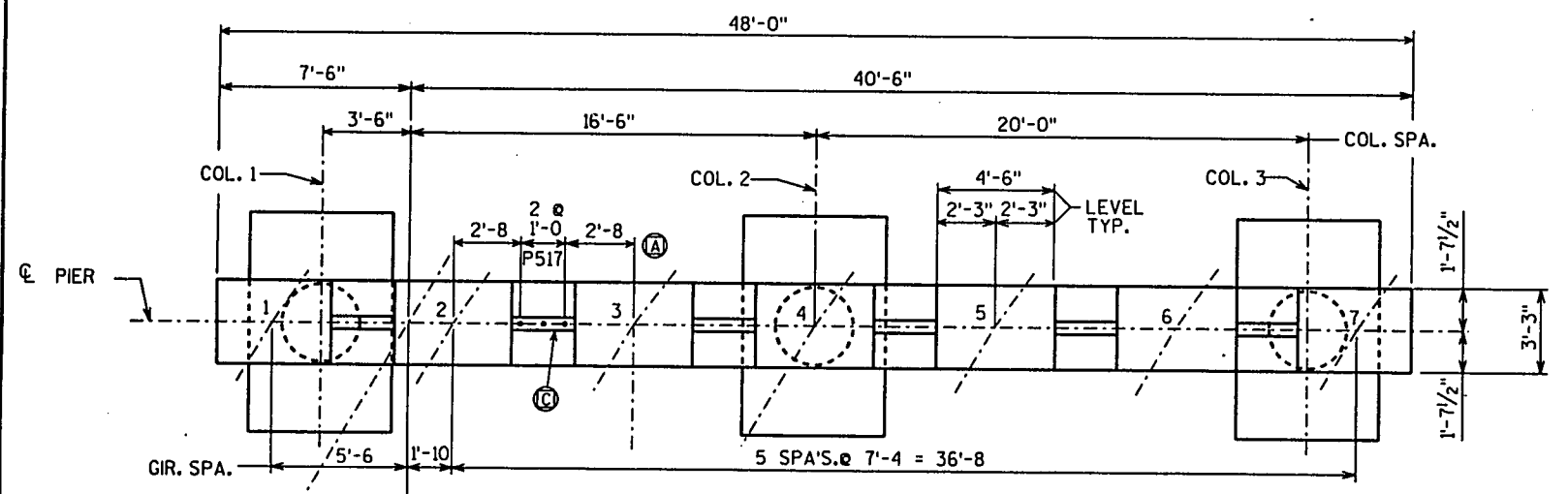


SECTION A

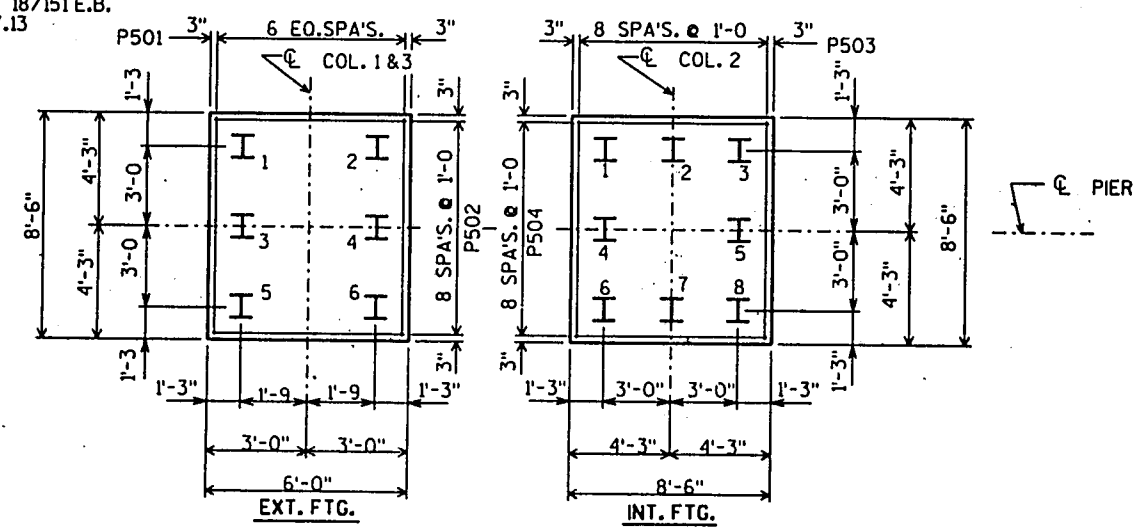
BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
P501		14	8-2				EXTERIOR FOOTING
P502		18	5-8				EXTERIOR FOOTING
P503		9	8-2				INTERIOR FOOTING
P504		9	8-2				INTERIOR FOOTING
P805	X	36	6-9	X			FOOTING AND COL. DOWELS
P406	X	51	9-2	X			FOOTING AND COL. HOOPS
P807	X	12	20-0				COL. 1 VERT.
P808	X	12	18-11				COL. 2 VERT.
P809	X	12	17-11				COL. 3 VERT.
P910	X	4	18-6				CAP HORIZ. BOT
P911	X	8	27-4				CAP HORIZ. BOT
P512	X	8	25-4				CAP HORIZ. SIDES
P513	X	6	8-5	X			CAP HORIZ. ENDS
P1114	X	3	17-4				CAP HORIZ. TOP
P1115	X	4	23-9	X			CAP HORIZ. TOP
P516	X	60	12-7	X			CAP STIRRUPS
P517	X	18	2-0				CAP DOWELS
P1118	X	4	41-3	X			CAP HORIZ. TOP

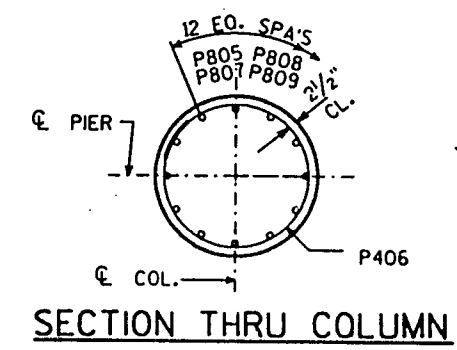


PLAN

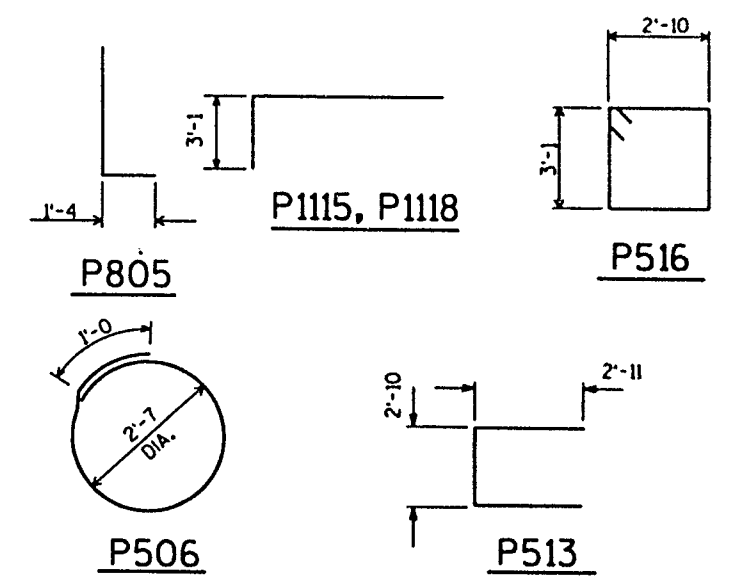


FOOTING PLAN

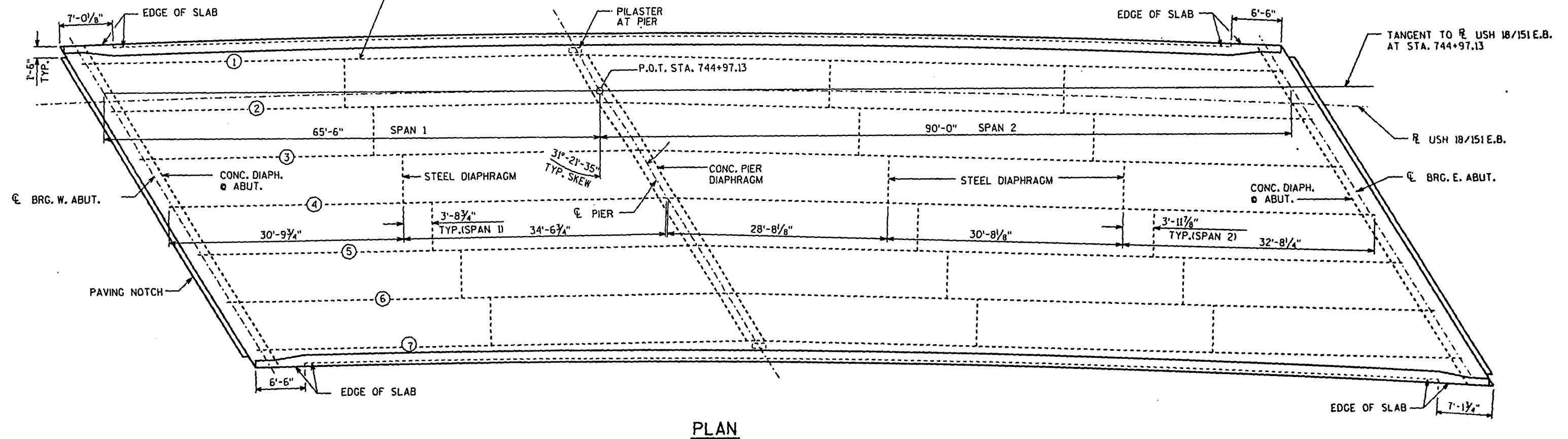
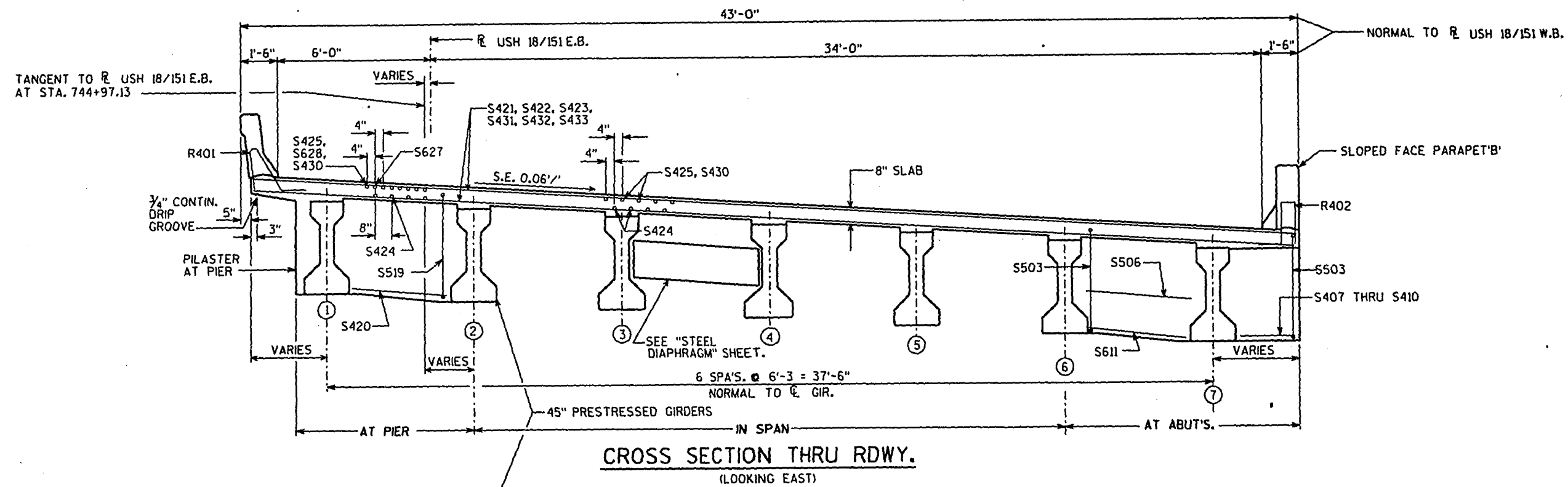
- (A) EMBED P517 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.
- (C) 2" X 6" KEYWAY BETWEEN GIRDER SEATS.
- (E) 1'-3 X 1'-3 X 2" CONST. JOINT FORMED BY SURFACED BEVELED KEYWAY. TYP. AT ALL COL. AND FOOTINGS



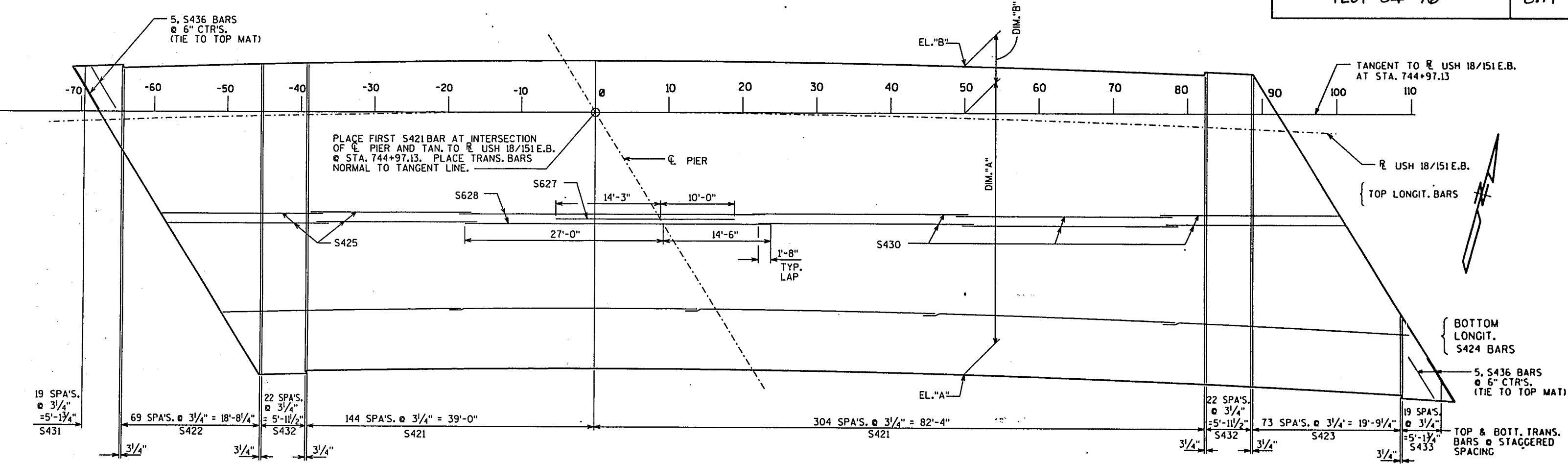
SECTION THRU COLUMN



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY	PLANS C.D. MOW
PIER			SHEET 1
			X 84132



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY	PLANS C.D. MGW
SUPERSTRUCTURE			SHEET 8
			X84132



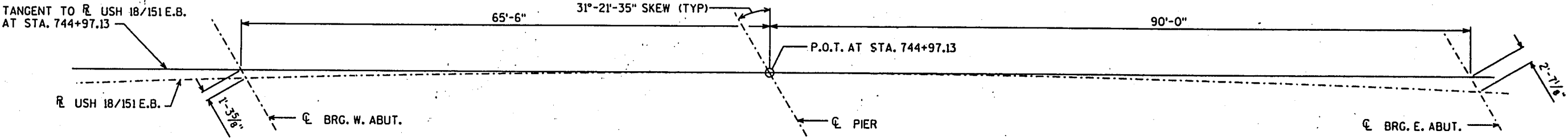
REINFORCEMENT PLAN & TANGENT OFFSETS

TABLE OF TAN. OFFSETS
(OFFSETS ARE NORMAL TO TAN. LINE.)

DIST.	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110
DIM. "A"	36'-9 3/4"	36'-5 5/8"	36'-2 1/8"	35'-11 1/8"	35'-3 7/8"	35'-2 1/4"	35'-1 1/4"	35'-1"	35'-1 1/4"	35'-2 1/4"	35'-3 3/8"	35'-6 1/8"	35'-9 1/8"	36'-0 5/8"	36'-4 3/4"	36'-9 3/4"	37'-3 1/4"	37'-9 3/8"	38'-9 1/4"
EL. "A"	977.04	977.04	977.04	977.03	977.05	977.04	977.03	977.01	977.00	976.98	976.96	976.94	976.91	976.89	976.86	976.82	976.79	976.75	976.69
DIM. "B"	6'-2 3/8"	6'-1 1/2"	6'-5"	6'-7 7/8"	6'-10 1/8"	6'-11 5/8"	7'-0 5/8"	7'-1"	7'-0 5/8"	6'-11 5/8"	6'-10 1/8"	6'-7 7/8"	6'-5"	6'-1 1/2"	5'-9 3/8"	5'-4 5/8"	5'-4 1/4"	4'-10 1/4"	4'-3 1/2"
EL. "B"	979.61	979.59	979.59	979.59	979.58	979.57	979.56	979.54	979.53	979.51	979.49	979.47	979.45	979.42	979.39	979.36	979.35	979.31	979.27

TOP OF DECK ELEVATIONS

	CL BRG. W. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	CL PIER	1/4 PT.	1/2 PT.	3/4 PT.	CL BRG. E. ABUT.
GIRDER 1	979.47	979.45	979.43	979.42	979.41	979.34	979.27	979.21	979.16
GIRDER 2	979.09	979.07	979.05	979.04	979.03	978.96	978.89	978.83	978.78
GIRDER 3	978.70	978.68	978.67	978.66	978.65	978.58	978.51	978.45	978.40
GIRDER 4	978.32	978.30	978.29	978.27	978.26	978.20	978.13	978.07	978.02
GIRDER 5	977.94	977.92	977.91	977.89	977.88	977.82	977.75	977.70	977.64
GIRDER 6	977.55	977.54	977.52	977.51	977.50	977.44	977.37	977.32	977.26
GIRDER 7	977.17	977.16	977.14	977.13	977.12	977.06	976.99	976.94	976.89



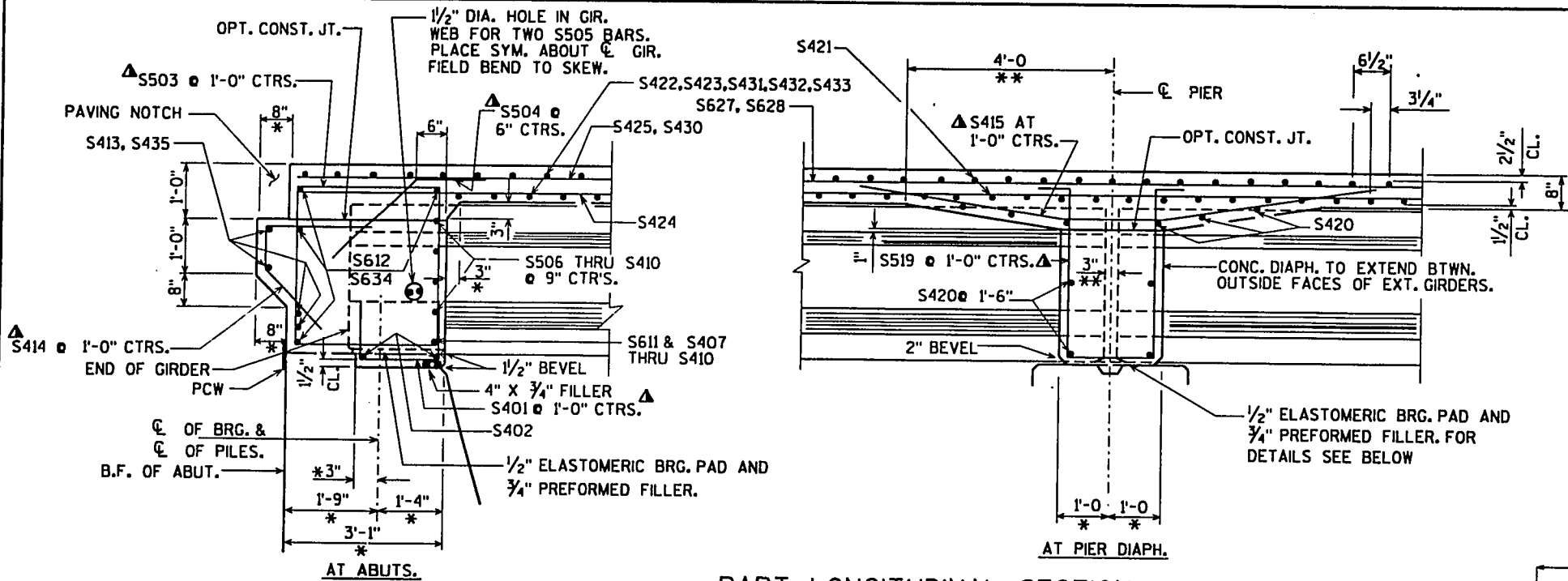
SUBSTRUCTURE LAYOUT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C.E.D. MOW
SUPERSTRUCTURE DETAILS			SHEET 9
			X84132

BILL OF BARS

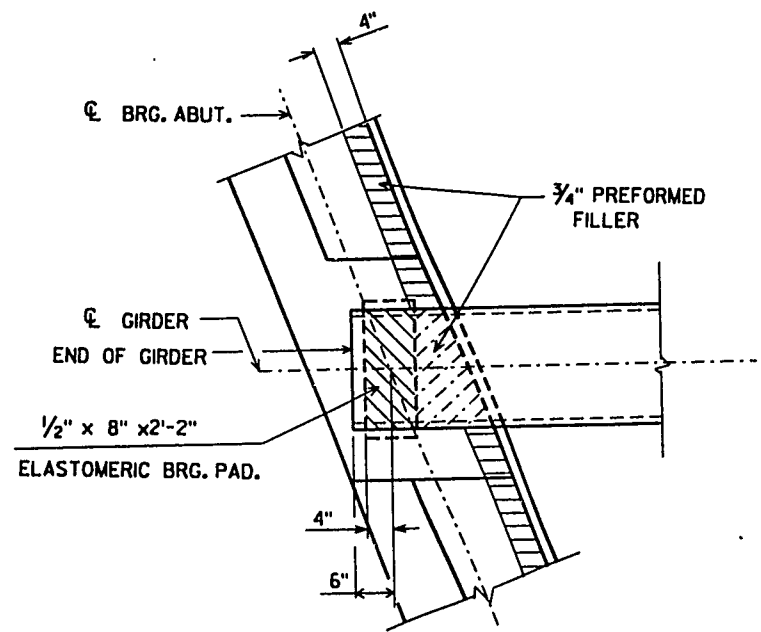
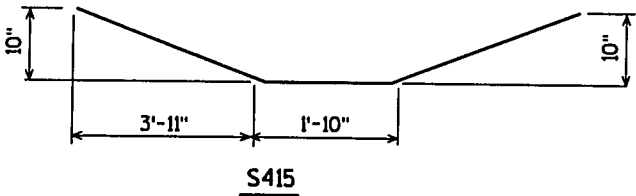
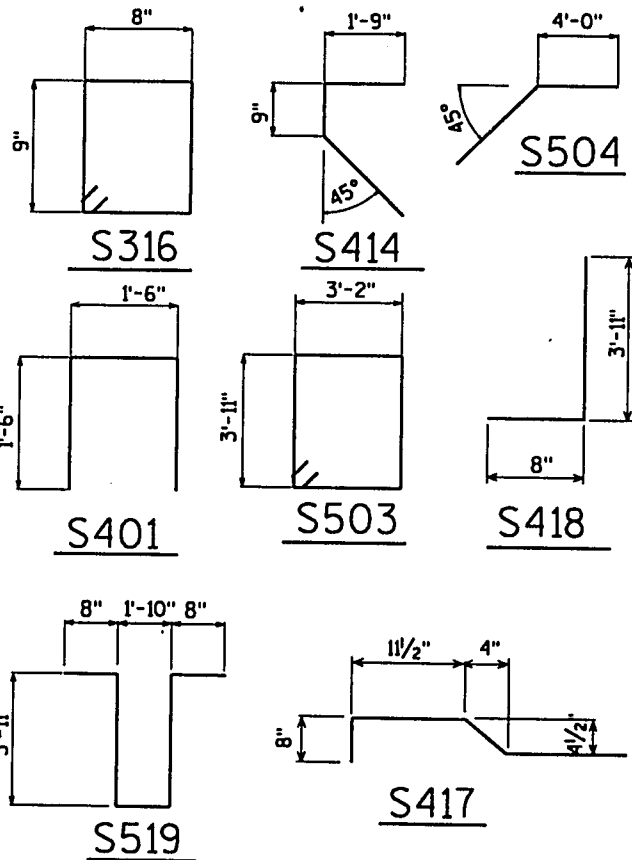
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	QTY	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUNDLE	LOCATION
S401	X	60	4-4	X			DIAPH. @ ABUT.
S402	X	24	4-0				DIAPH. @ ABUT.
S503	X	70	14-11	X			DIAPH. @ ABUT.
S504	X	124	7-0	X			DIAPH. @ ABUT.
S505	X	28	6-0				DIAPH. @ ABUT. (THRU GIR'S.)
S506	X	48	4-11				DIAPH. @ ABUT. BETW. GIR'S.
S407	X	5	0-11				DIAPH. @ W. ABUT. - N. SIDE
S408	X	5	0-9				DIAPH. @ W. ABUT. - S. SIDE
S409	X	5	2-1				DIAPH. @ E. ABUT. - N. SIDE
S410	X	5	2-1				DIAPH. @ E. ABUT. - S. SIDE
S611	X	12	4-11				DIAPH. @ ABUT. BETW. GIR'S.
S612	X	8	26-5				DIAPH. @ W. ABUT.
S413	X	8	24-2				DIAPH. @ W. ABUT.
S414	X	97	4-2	X			CORBEL @ ABUT.
S415	X	36	9-10	X			DIAPH. @ PIER
S316	X	6	3-4	X			PILASTER @ PIER
S417	X	4	3-4	X			PILASTER @ PIER
S418	X	4	4-6	X			PILASTER @ PIER
S519	X	36	10-8	X			DIAPH. @ PIER
S420	X	60	4-11				DIAPH. @ PIER
S421	X	449	41-10				SLAB - TOP & BOTTOM TRANS.
S422	X	35	53-3		X		SLAB - TOP & BOTTOM TRANS.
S423	X	37	52-7		X		SLAB - TOP & BOTTOM TRANS.
S424	X	315	34-2				SLAB - BOTTOM LONGIT.
S425	X	128	22-4				SLAB - TOP SPAN 1 LONGIT.
S627	X	63	24-3				SLAB - TOP - @ PIER LONGIT.
S628	X	64	41-6				SLAB - TOP - @ PIER LONGIT.
S430	X	192	28-11				SLAB - TOP SPAN 2 LONGIT.
S431	X	10	13-4		X		SLAB - TOP & BOTT. TRANS. NEAR W. ABUT.
S432	X	46	42-3				SLAB - TOP & BOTT. TRANS. NEAR ABUTS.
S433	X	10	13-0		X		SLAB - TOP & BOTT. TRANS. NEAR E. ABUT.
S634	X	8	27-8				DIAPH. @ E. ABUT.
S435	X	8	25-7				DIAPH. @ E. ABUT.
S436	X	10	5-0				SLAB TOP @ N.E. & S.W. CORNERS

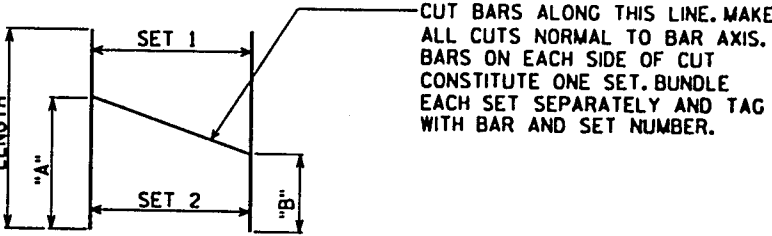
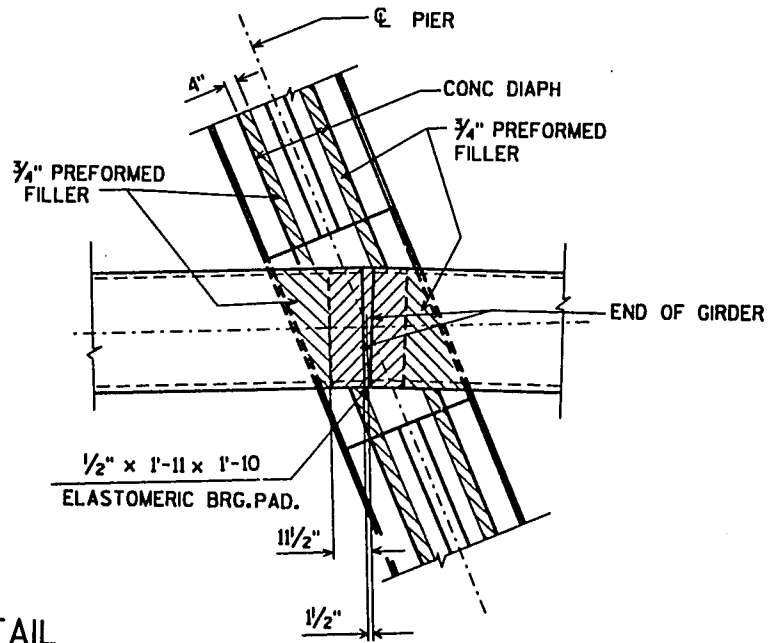


PART LONGITUDINAL SECTION

* DIMS. TAKEN NORMAL TO CL SUBSTRUCTURE.
** DIMS. TAKEN ALONG CL OF GIRDERS.
▲ PARALLEL TO GIRDER



BEARING PAD DETAIL



CUTTING DIAGRAM

MARK	"A"	"B"	NO. OF BARS/SET	NO. OF EACH SET
S422	26-5	11-0	35	1
S423	26-0	10-7	37	1
S431	6-5	2-4	10	1
S433	6-4	2-5	10	1

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STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C.D. M.G.W.
SUPERSTRUCTURE DETAILS			SHEET 10
			X84132

SCALE 2:1

GIRDER NOTES

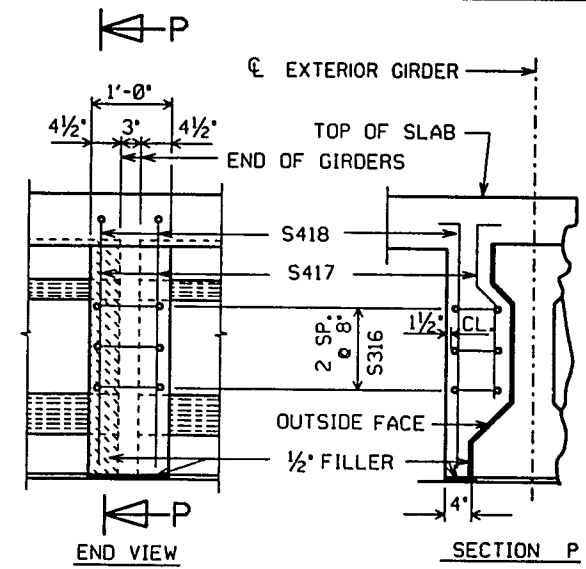
TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL BE TROWEL FINISHED.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

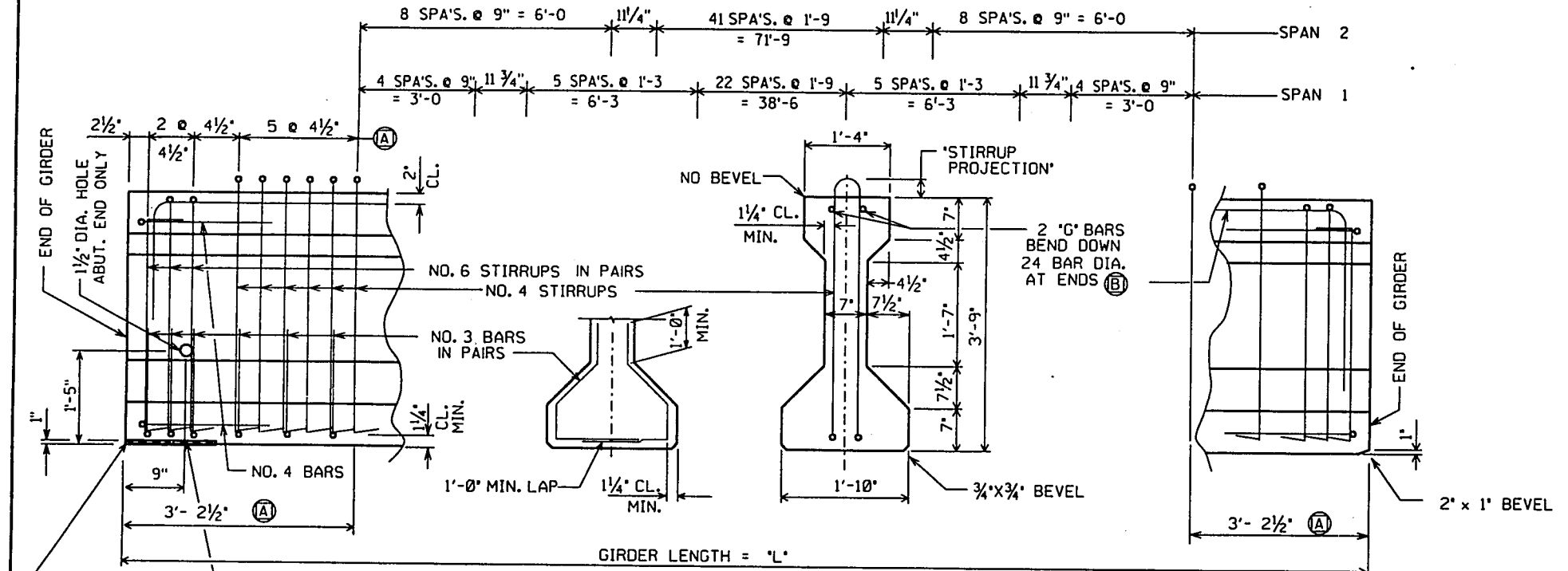
PRESTRESSING STRANDS SHALL BE 1/2" - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi AND SHALL BE FLUSH WITH THE ENDS OF THE GIRDER.

BEND EACH END OF NO. 4 STIRRUPS 4 1/2" AND NO. 6 STIRRUPS 6 1/2".

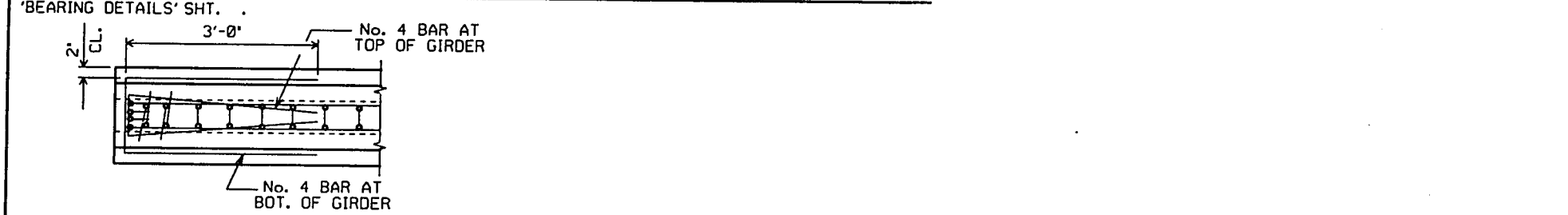
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



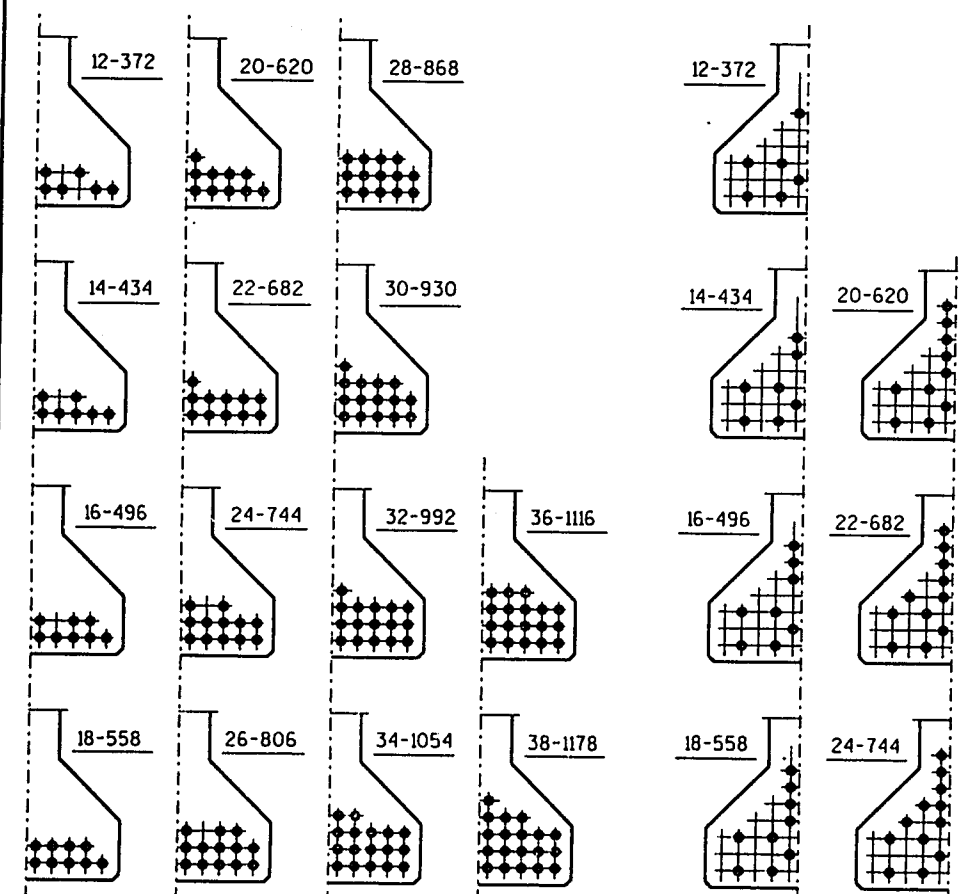
PILASTER DETAILS AT PIERS



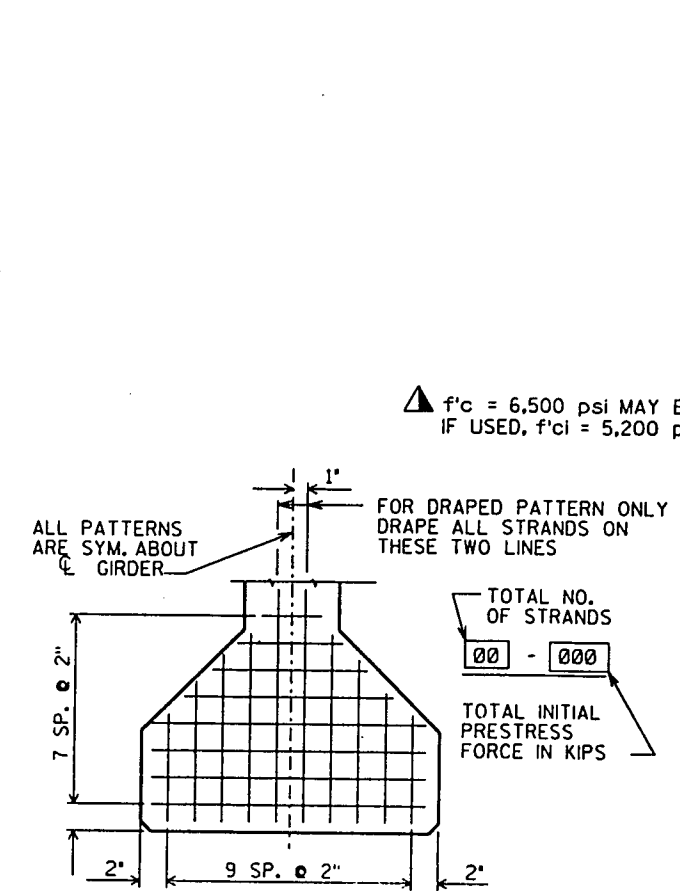
SIDE VIEW & TYP. SECTION IN SPAN



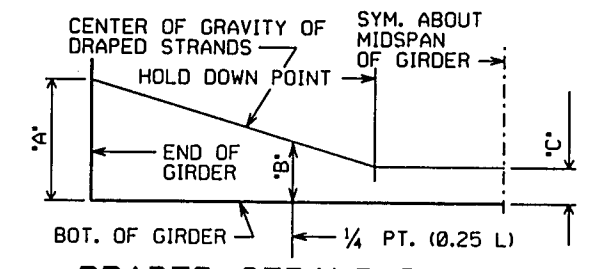
TOP VIEW OF GIRDER ENDS



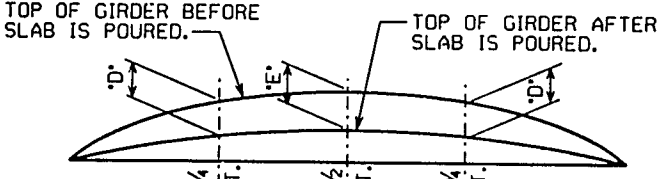
DRAPED PATTERN



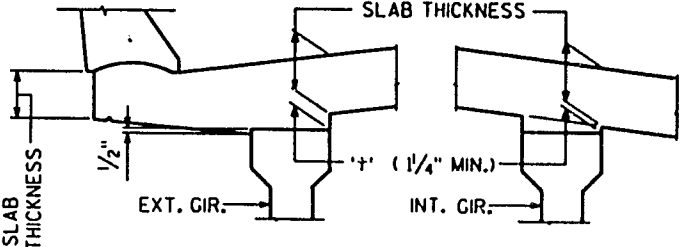
TYP. STRAND PATTERN



DRAPED STRAND PROFILE



DEAD LOAD DEFLECTION DIAGRAM



SLAB HAUNCH DETAIL

IF 1/4" 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. MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

TO DETERMINE 't', ELEV. OF TOP OF GIR'S. AT C OF SUBSTRUCTURE UNITS & AT 1/4 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'

GIRDER DATA						*STIRRUP PROJECTION*	No. 4 "C" BARS, MAY BE SPICED AT THE 1/3 POINTS. USE 1'-11" MIN. LAP.						
SPAN	GIRDER LENGTH 'L'	DEAD LOAD DEFL. (IN.)		CONC. STRGTH. f'c (p.s.i.)	DRAPED PATTERN					UNDRAPED PATTERN			
		'D'	'E'		TOTAL NO. OF STRANDS		f'c1 (p.s.i.) *	(INCHES)			TOTAL NO. OF STRANDS	f'c1 (p.s.i.) *	
								'A'	'B' MIN.	'B' MAX.			'C'
1	65'-4 1/2"	1/4	3/8	6,000	6"	14	4,800	34	10 3/4	13 3/4	3	_____	_____
2	92'-0 1/2"	1 1/4	1 5/8	6,500	6"	30	5,200	40	13 3/4	16 3/4	5	_____	_____

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

STRUCTURE B-13-417

CONST. SPEC. 1989

CRAWN BY JHG

PLANS CKD MGH

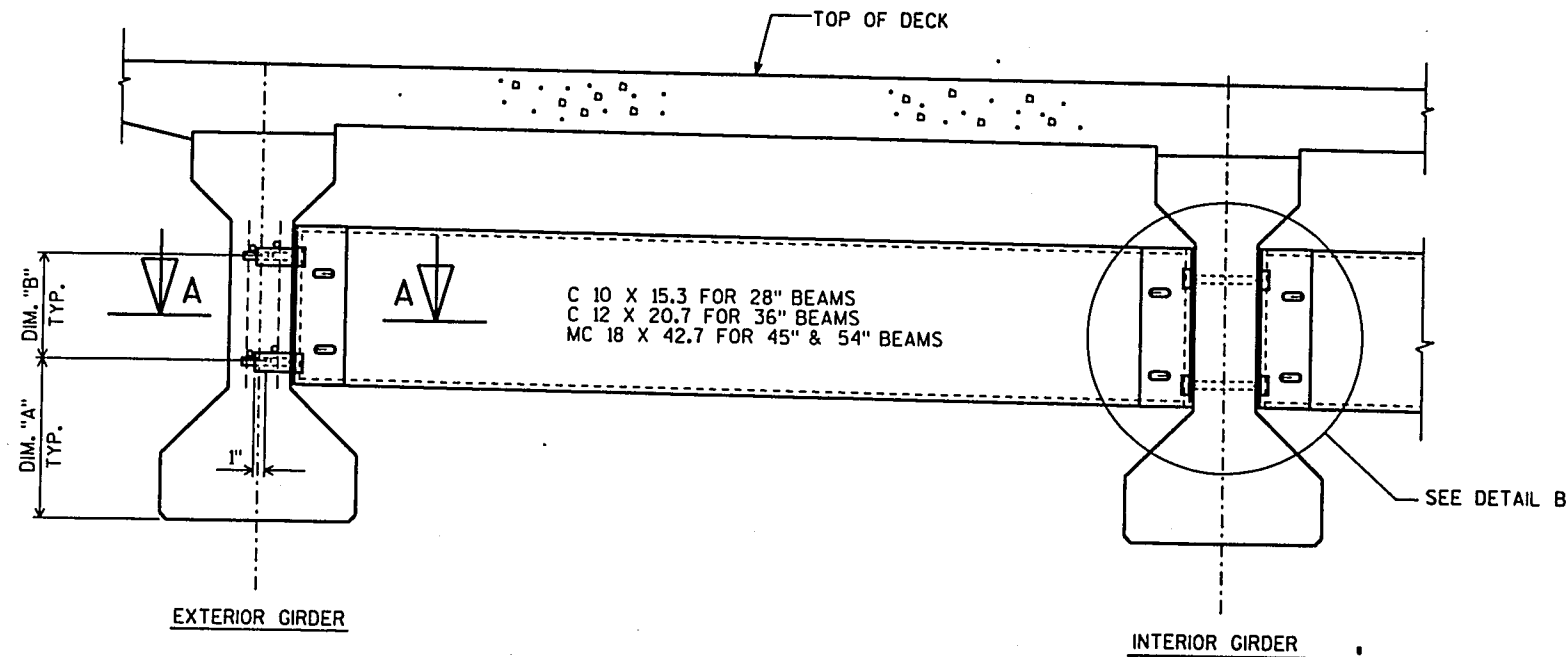
45" PRESTRESSED GIRDER DETAILS

SHEET 11

X84132

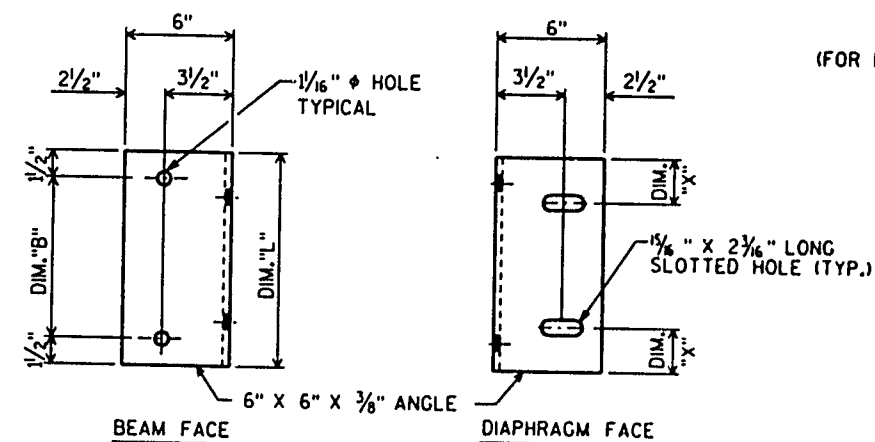
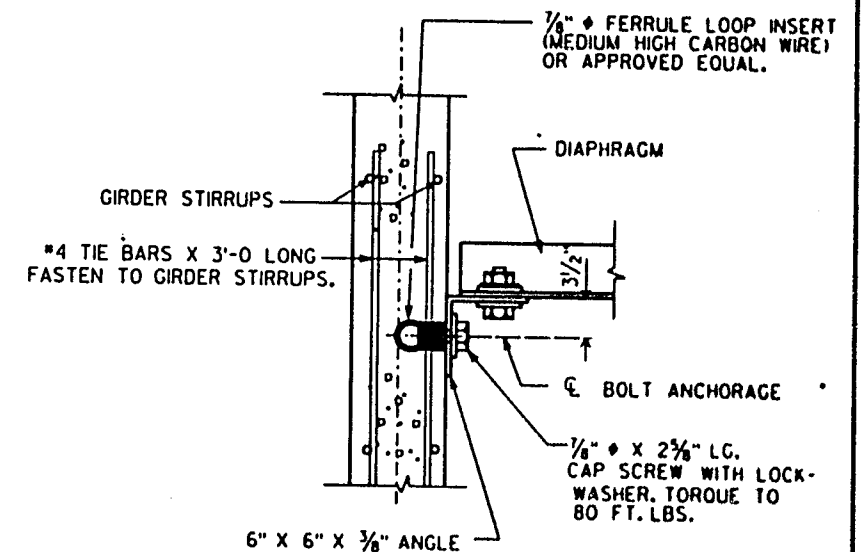
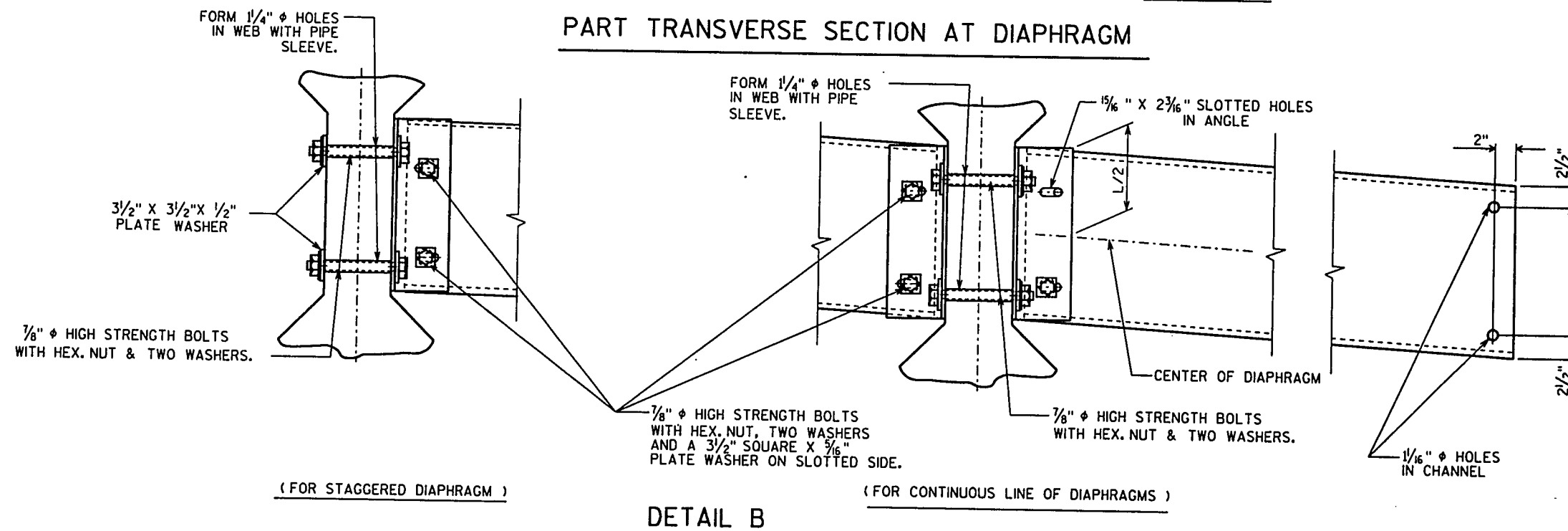
SCALE 2:666667

TABLE				
GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



NOTES

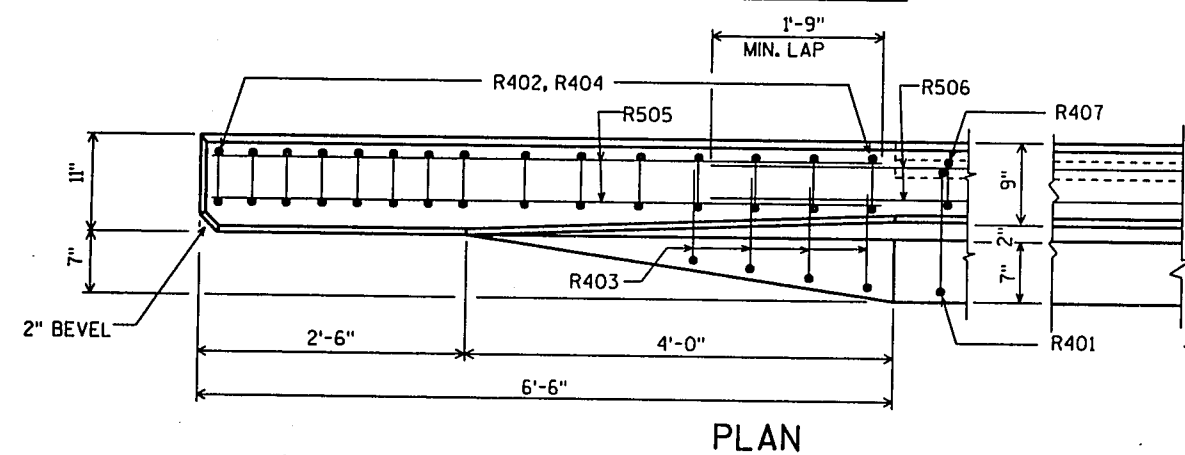
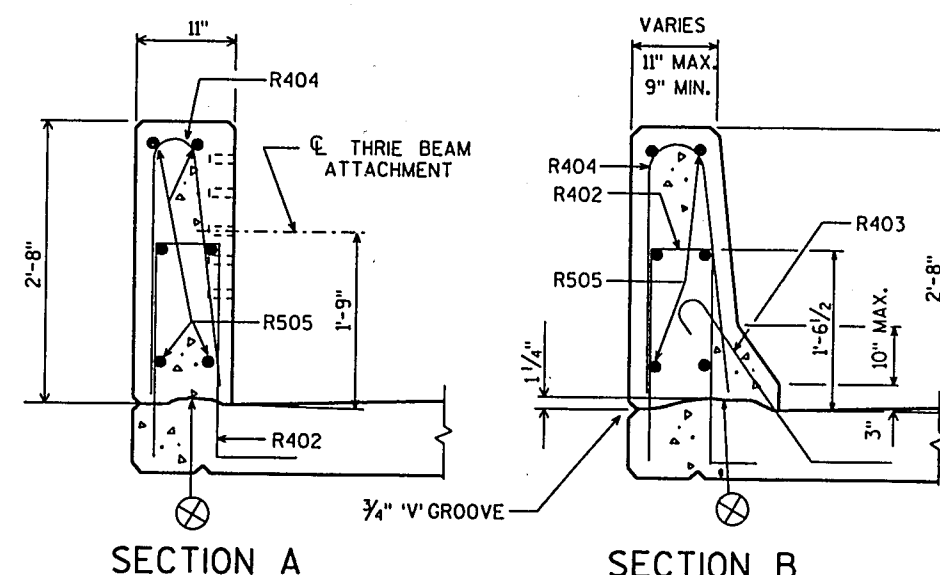
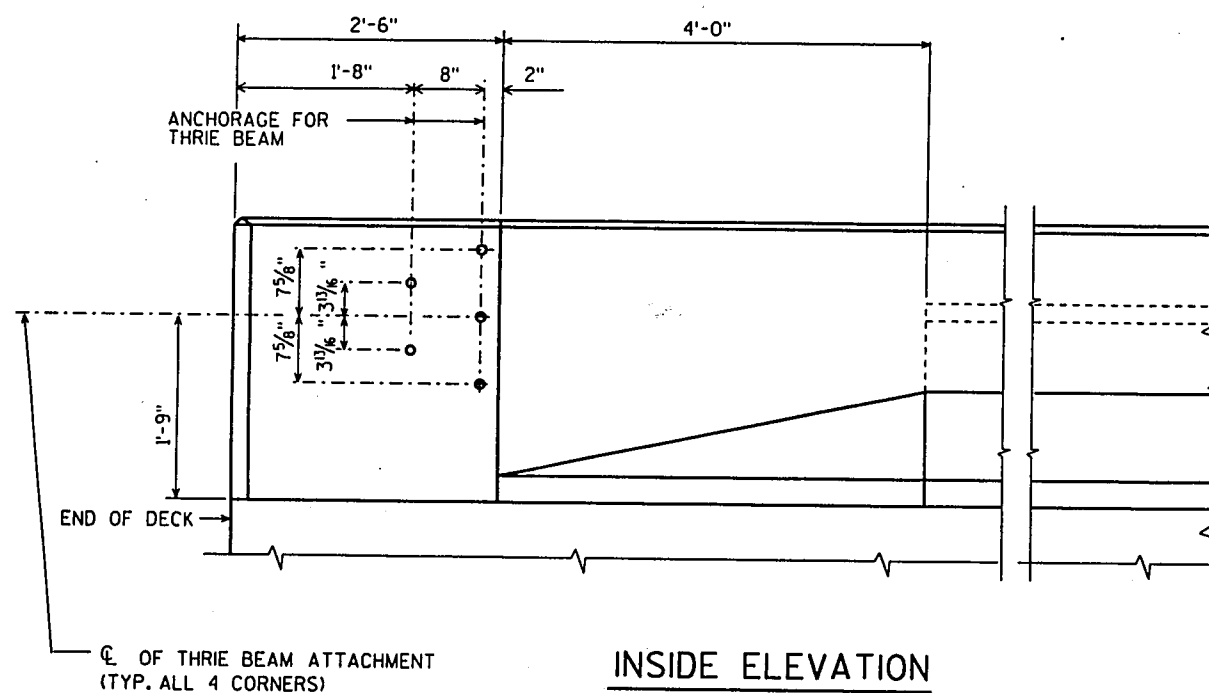
- ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGM".
- EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.
- ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.
- ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



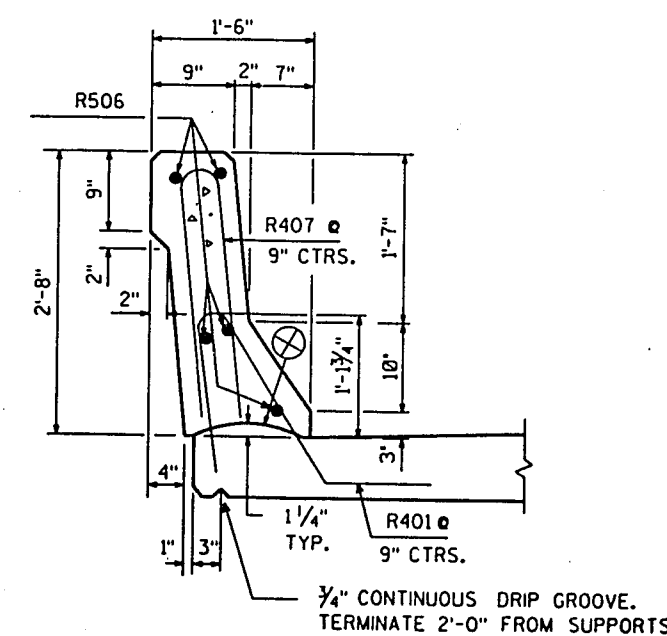
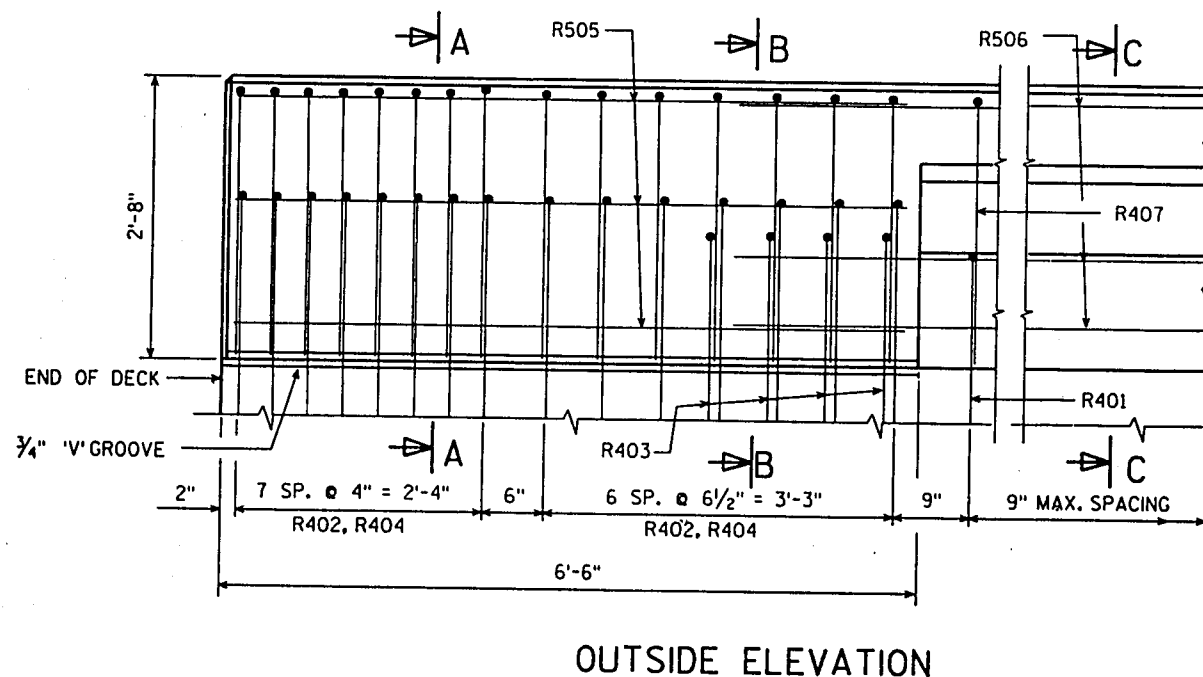
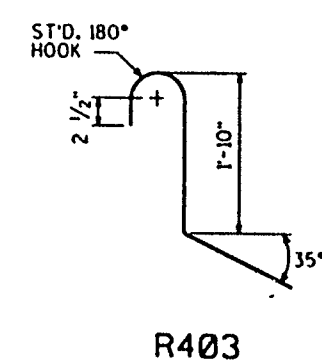
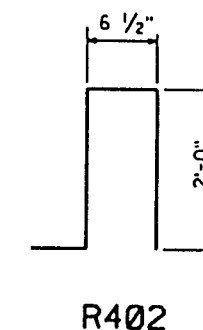
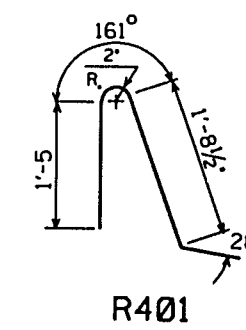
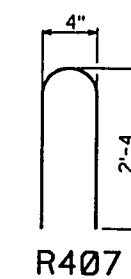
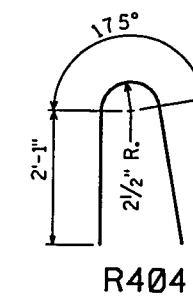
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C&D. MSW
STEEL DIAPHRAGM			SHEET 12
			X84132

BILL OF BARS

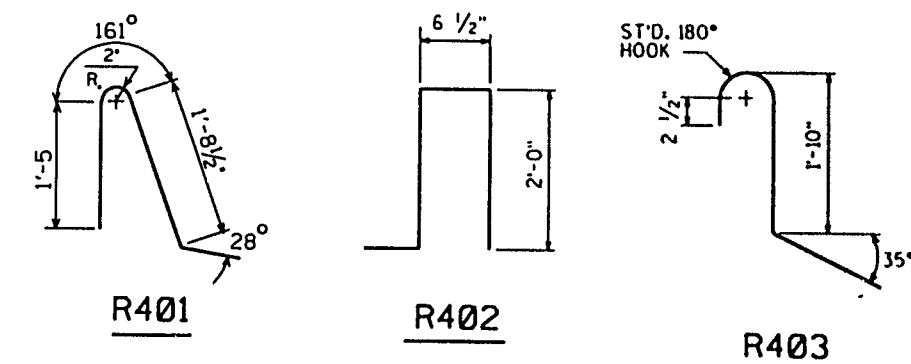
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE
BAR MARK SIGNIFIES THE BAR SIZE.

[illegible]

OPTIONAL CONSTRUCTION JOINTS
IN THE PARAPETS MAY BE USED.
RUN BAR REINF THRU THE JOINT.
LAP LONGIT. BARS A MIN. OF 1'-9".
MIN. JOINT SPACING OF 80'-0".
DEFINE CONST. JOINT
WITH A 1" 'V' GROOVE.



SECTION C



THREADED INSERTS FOR 1/4" X 2" LONG GALVANIZED HEX. HEAD CAP SCREWS. CAP SCREWS TO BE THREADED A MIN. OF 1 1/8" AND SHALL BE SUPPLIED, INCLUDING WASHERS, WITH ASSEMBLY. INSERTS TO BE THREADED A MINIMUM OF 1 3/4".

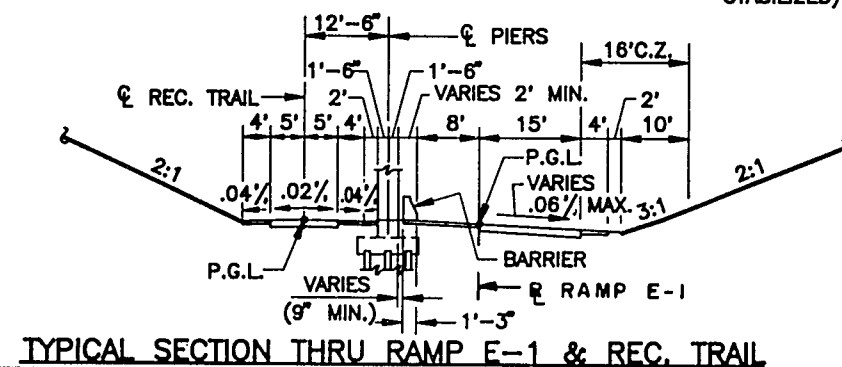
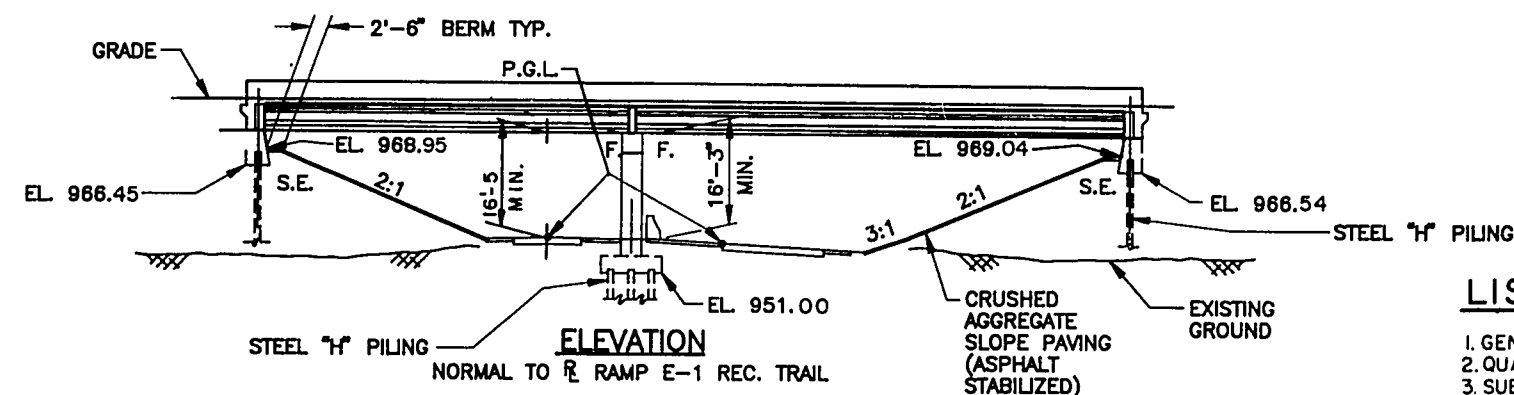
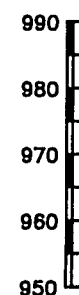
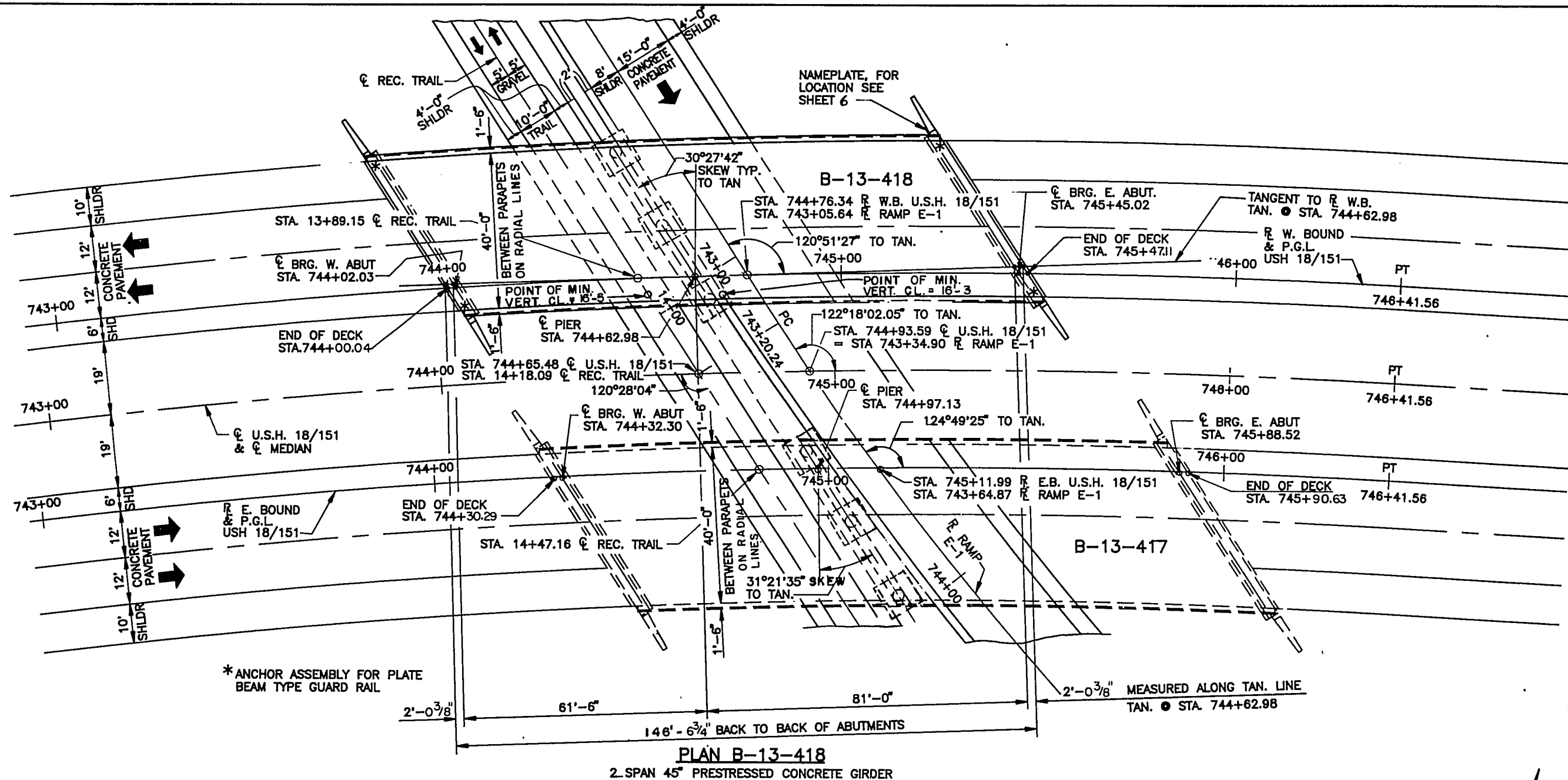
DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX. HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C. SEE SHEET 1 FOR LOCATION.

⊗ CONST. JOINT - STRIKE OFF
AS SHOWN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-417			
CONST. SPEC.	1989	DRAWN BY	CHK. C.A.D. MGW
SLOPED FACE PARAPET "B"		SHEET 13	
		X84132	

SCALE = 1



CURVE DATA - RAMP E-1

P.I. STA. 750+01.49
 $\Delta = 77^{\circ}30'00''$
 $D = 06^{\circ}45'00''$
 $R = 848.83'$
 $L = 1148.15'$
 $T = 681.28'$
 $S.E. = .08 \text{ ft./ft.}$
P.C. STA. 743+20.24
P.T. STA. 754+68.39

CURVE DATA - C U.S.H. 18/151

P.I. STA 736+84.25
 $\Delta = 65^{\circ}45'00''$
 $D = 03^{\circ}00'00''$
 $R = 1909.86'$
 $L = 2,191.87$
 $T = 1,234.36$
 $S.E. = .06 \text{ ft./ft.}$
 $P.C. = \text{STA } 724+49.89$
 $P.T. = \text{STA } 746+41.56$

CURVE DATA - R W.B. U.S.H. 18/151

P.I. STA 736+71.73
 $\Delta = 65^{\circ}45'00''$
 $D = 02^{\circ}57'40.48''$
 $R = 1934.86'$
 $L = 2,220.35$
 $T = 1,250.52'$
 $S.E. = .06 \text{ ft./ft.}$
 $P.C. = \text{STA } 724+21.21$
 $P.T. = \text{STA } 746+41.56$

BRIDGE OFFICE CONTACT: (608)268-8488, R. REESE

No.	Date.	Revision		By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS				
STRUCTURE B-13-418				
USH 18/151 W.B. OVER RAMP				
County	DANE	Town	VERONA	
Design Spec.	AASHTO '91	Load	HS-20	Contract No. WIS '88
Designed By	DJK Design Co's. MGW	Drawn By	JHG	Plans Checked MGW
Approved	<i>Robert L. Harris</i> State Bridge Engineer			<i>1/25/88</i> Date

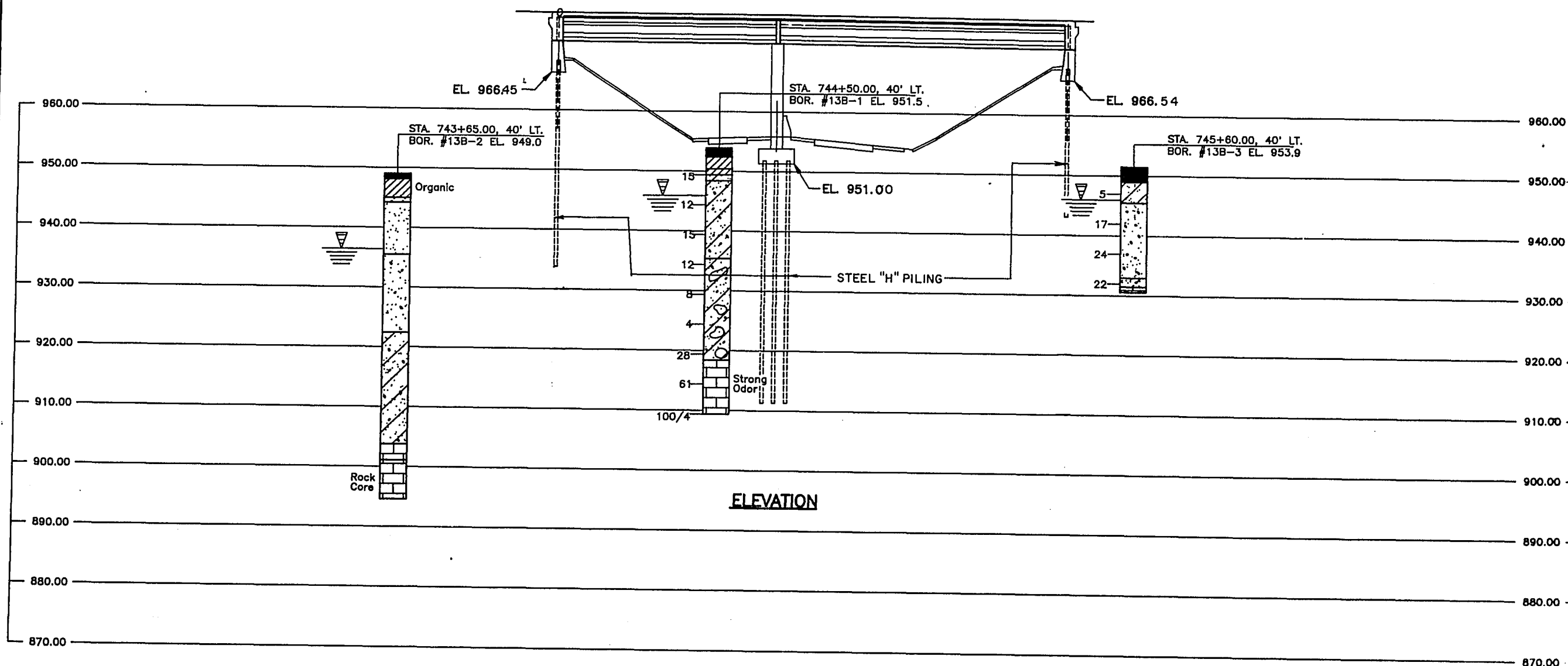
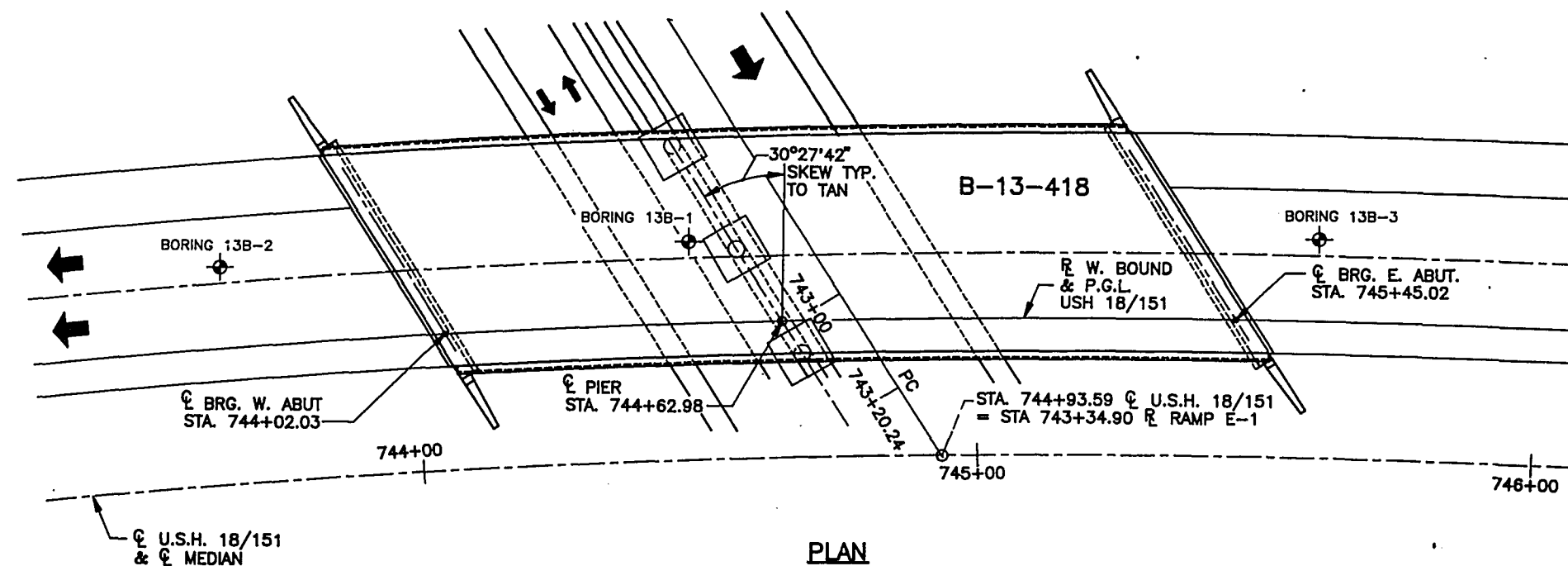
LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES & CROSS SECT.
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. ABUTMENT DETAILS
6. EAST ABUTMENT
7. PIER
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. SUPERSTRUCTURE DETAILS
11. 45" PRESTRESSED GIRDER DETAILS
12. STEEL DIAPHRAGM
13. SLOPED FACE PARAPET "B"

GENERAL PLAN

SHEET 1 OF 13

X 84133



STATE PROJECT NUMBER		SHEET NO.	
1201-04-76		E.86	
ABBREVIATIONS F FINE M MEDIUM C COARSE WS WEATHERED SO SOUND			
MATERIAL SYMBOLS			
TOPSOIL	SILT	SHALE	
SAND	CLAY	LIMESTONE/DOLOMITE	
GRAVEL	BOULDERS/COBBLES	SANDSTONE	
LEGEND OF BORING			
Elev.	Boring No.	Sta.	
Unconfined Strength 7.7	7.7	Sandy Gravel	
Blows per Ft. Using 140# Wt. Falling 30"	*	F. Boulders or Cobbles	
Wash Sample	*	Sand	
Shelby Tube S.T.	S.T.	Silty Clay	
Ground Water Elevation		So	
No Ground Water Observed Above This Elevation	X	Limestone	
Unless otherwise specified, the blows per foot at the locations indicated are based on driving a 2" O.D. X 1.4" I.D. split spoon sampler with a 140# hammer having a free fall of 30". 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			
DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
Const. Spec.	WIS. 89	Drawn By	TL
Phone Checked	M. J. W.		
SUBSURFACE EXPLORATION		SHEET 3	
		X84133	

SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). AT GUTTER LINE, EXTEND SEALER 3" BELOW GUTTER LINE ELEVATION.

Diagram showing a cross-section of a bridge deck with various components and elevations:

- Elevations: EL.971.70, EL.972.24, EL.972.77, EL.973.30, EL.973.83, EL.978.66, EL.966.45, EL.976.15.
- Components: 1/2" FILLER, A408, A409, A605, A606, A401 & A402.
- Dimensions: 3'-8 3/8", 9", 5'-3", 4'-1", 9", 7'-4 1/2".
- Spacing: 21 SPA. AT 9" = 15'-9", 11 SPA. AT 1'-6" = 16'-6", 21 SPA. AT 9" = 15'-9".

ELEVATION
LOOKING WEST



DETAIL "A"

(TOTAL THICKNESS TO BE .03" MIN)

CL BRG. 1'-9" 1'-6" 1'-7" 5" 4" x 3/4" FILLER x LENGTH OF ABUT. 1 1/2" BEVEL A411 P.C.W. A409 A410 1'-6" A605 A507 A402 A605 A401 A408 AT 1'-6" A403 A404 1'-9" 1'-9" 3'-6" 6 EQ. PILES

TOP OF BERM EL. 968.95 SLOPE 1" PER FOOT SLOPE PAVING (CRUSHED AGGREGATE)

HP 10 x 42 STEEL PILING EST. 35'-0 LONG AND DRIVEN TO A MIN. BRG. VALUE OF 55 TONS PER PILE.

SECTION THRU BODY

NOTE: FILL TO BOTT. OF
ABUT. BEFORE
DRIVING PILING.

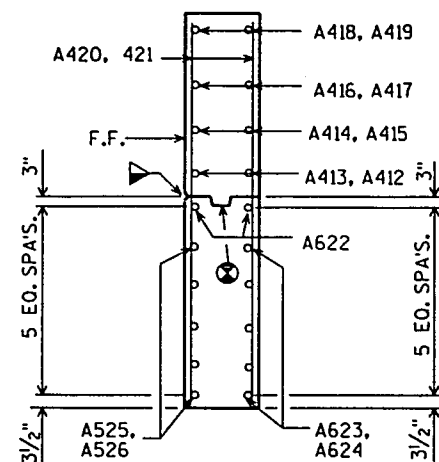
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
CONST. SPEC.	1989	DRAWN BY	PLANN. C&G. MOW
WEST ABUTMENT		SHEET 4	
		X84133	

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	CUT, DIAG.	BUN- DLE	LOCATION
A401		54	8-6	X			BODY VERT. F.F.
A402		54	8-11	X			BODY VERT. B.F.
A403		16	2-3				BODY, TWO PER PILE
A404		8	28-0	X			BODY, ONE PER PILE
A605		16	26-7	X			BODY HORIZ.
A606		8	25-9				BODY HORIZ.
A507		10	25-5				BODY HORIZ.
A408		24	8-10	X			BODY TOP VERT.
A409		3	35-0				BODY TOP HORIZ.
A410		33	3-7	X			BODY TOP VERT.
A411		4	25-3				BODY TOP HORIZ.
A412		2	12-4				WING HORIZ.
A413		2	10-8				WING HORIZ.
A414		2	7-4				WING HORIZ.
A415		2	9-0				WING HORIZ.
A416		2	4-1				WING HORIZ.
A417		2	5-8				WING HORIZ.
A418		2	11-4	X			WING HORIZ.
A419		2	12-11	X			WING HORIZ.
A420		9	14-7		X		WING VERT. WING 1
A421		9	19-6		X		WING VERT. WING 2
A622		4	15-9				WING HORIZ.
A623		5	14-3				WING HORIZ. WING 1
A624		5	12-7				WING HORIZ. WING 2
A525		5	14-0				WING HORIZ. WING 2
A526		5	12-4				WING HORIZ. WING 1

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

BAR MARK	COAT	NO. REO'D.	LENGTH	BENT	CUT. DIAG.	BUN- DLE	LOCATION
B401		56	8-6	X			BODY VERT. F.F.
B402		56	8-11	X			BODY VERT. B.F.
B403		16	2-3				BODY, TWO PER PILE
B404		8	28-0	X			BODY, ONE PER PILE
B605		16	27-8	X			BODY HORIZ.
B606		8	26-10				BODY HORIZ.
B507		10	26-7				BODY HORIZ.
B408		25	8-10	X			BODY TOP VERT.
B409		3	38-0				BODY TOP HORIZ.
B410		35	3-7	X			BODY TOP VERT.
B411		4	26-4				BODY TOP HORIZ.
B412		2	12-8				WING HORIZ.
B413		2	10-8				WING HORIZ.
B414		2	7-4				WING HORIZ.
B415		2	9-3				WING HORIZ.
B416		2	4-1				WING HORIZ.
B417		2	5-11				WING HORIZ.
B418		2	11-4	X			WING HORIZ.
B419		2	13-2	X			WING HORIZ.
B420		9	19-6		X		WING VERT. WING 3
B421		9	14-7		X		WING VERT. WING 4
B622		4	16-3				WING HORIZ.
B623		5	14-9				WING HORIZ. WING 3
B624		5	12-7				WING HORIZ. WING 4
A525		5	14-6				WING HORIZ. WING 4
A526		5	12-4				WING HORIZ. WING 3

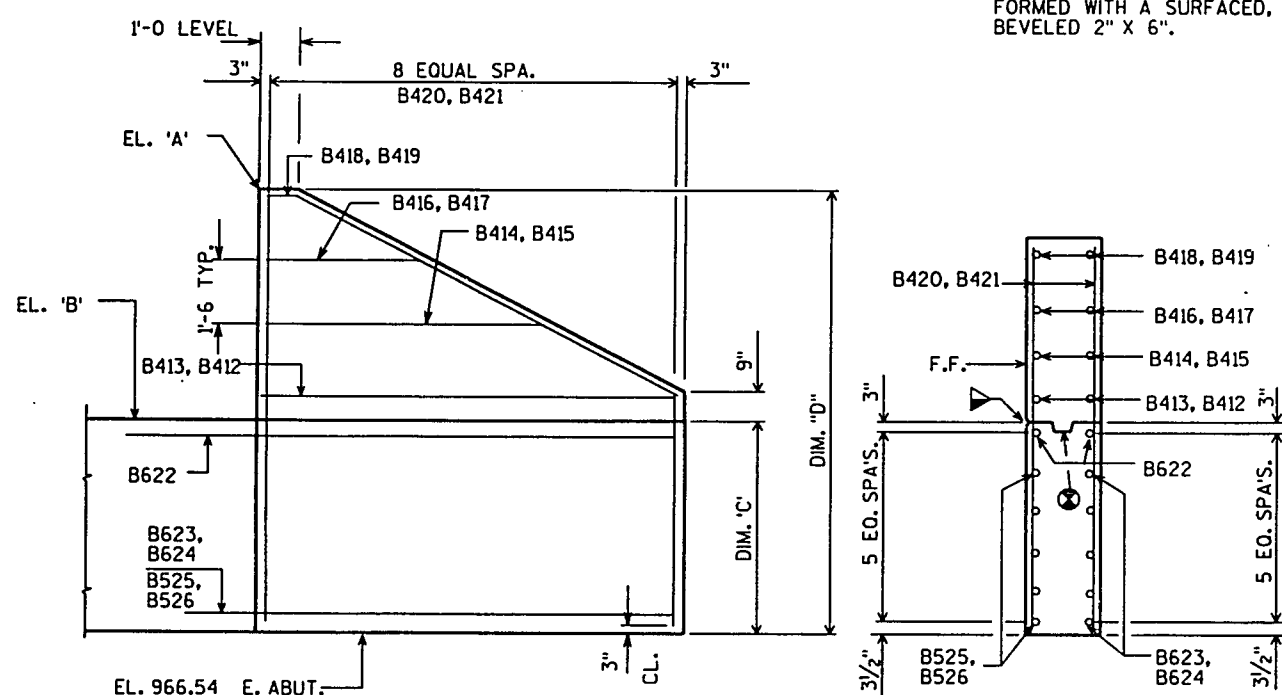


SECT. THRU
WING 1 & 2

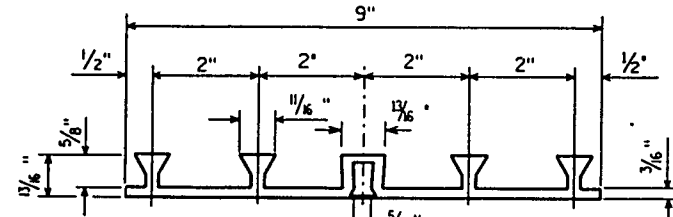
WING	EL.'A'	EL.'B'	DIM.'C'	DIM.'D'
1	976.15	971.70	5'-3	9'-8 $\frac{3}{8}$
2	978.66	973.83	7'-4 $\frac{1}{2}$	12'-2 $\frac{1}{8}$
3	978.86	973.92	7'-4 $\frac{3}{8}$	12'-3 $\frac{1}{8}$
4	976.27	971.79	5'-3	9'-8 $\frac{3}{8}$

▶ 3/4" V-GROOVE
F.F. ONLY

⊗ OPT. CONST. JOINT KEYWAY
FORMED WITH A SURFACED,
BEVELED 2" X 6".



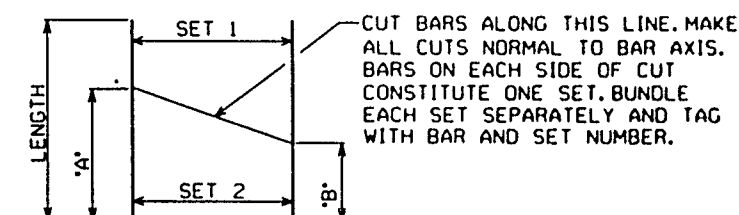
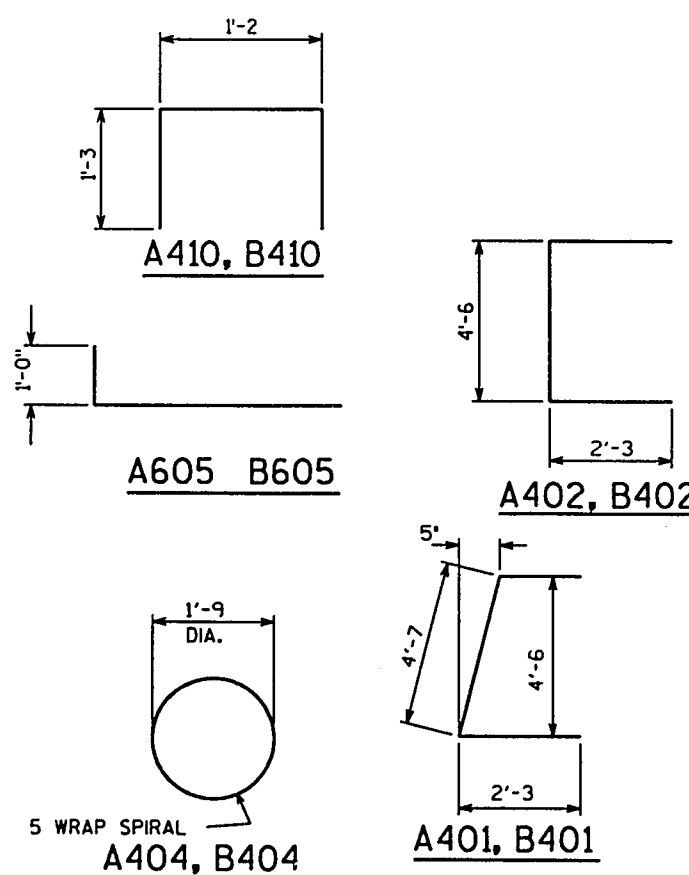
SECT. THRU
WING 3 & 4



P.C.W.

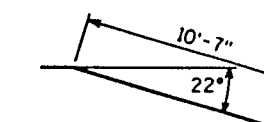
(POLYVINYL CHLORIDE WATERSTOP)

P.C.W. SHALL BE BUTT SPLICED AT ALL INTERSECTIONS BY USING A HEATED SPLICING IRON. HOLD P.C.W. FLUSH WITH CONCRETE. SEAL ALL VERT. ENDS OF P.C.W. WITH NON-STAINING NON-BITUMINOUS JOINT SEALER.

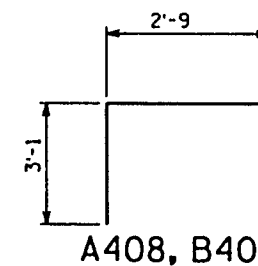


CUTTING DIAGRAM

MARK	'A'	'B'	NO. OF BARS/SET	NO. OF EACH SET
A420	9'-3	5'-4	9	1
A421	11'-11	7'-7	9	1
B420	11'-11	7'-7	9	1
B421	9'-3	5'-4	9	1



A418, A419
B418, B419



NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
CONST. SPEC.	1989	DRAWN BY	PLANS C.E.D. M.G.W.
ABUTMENT DETAILS		SHEET 5	
		X84133	

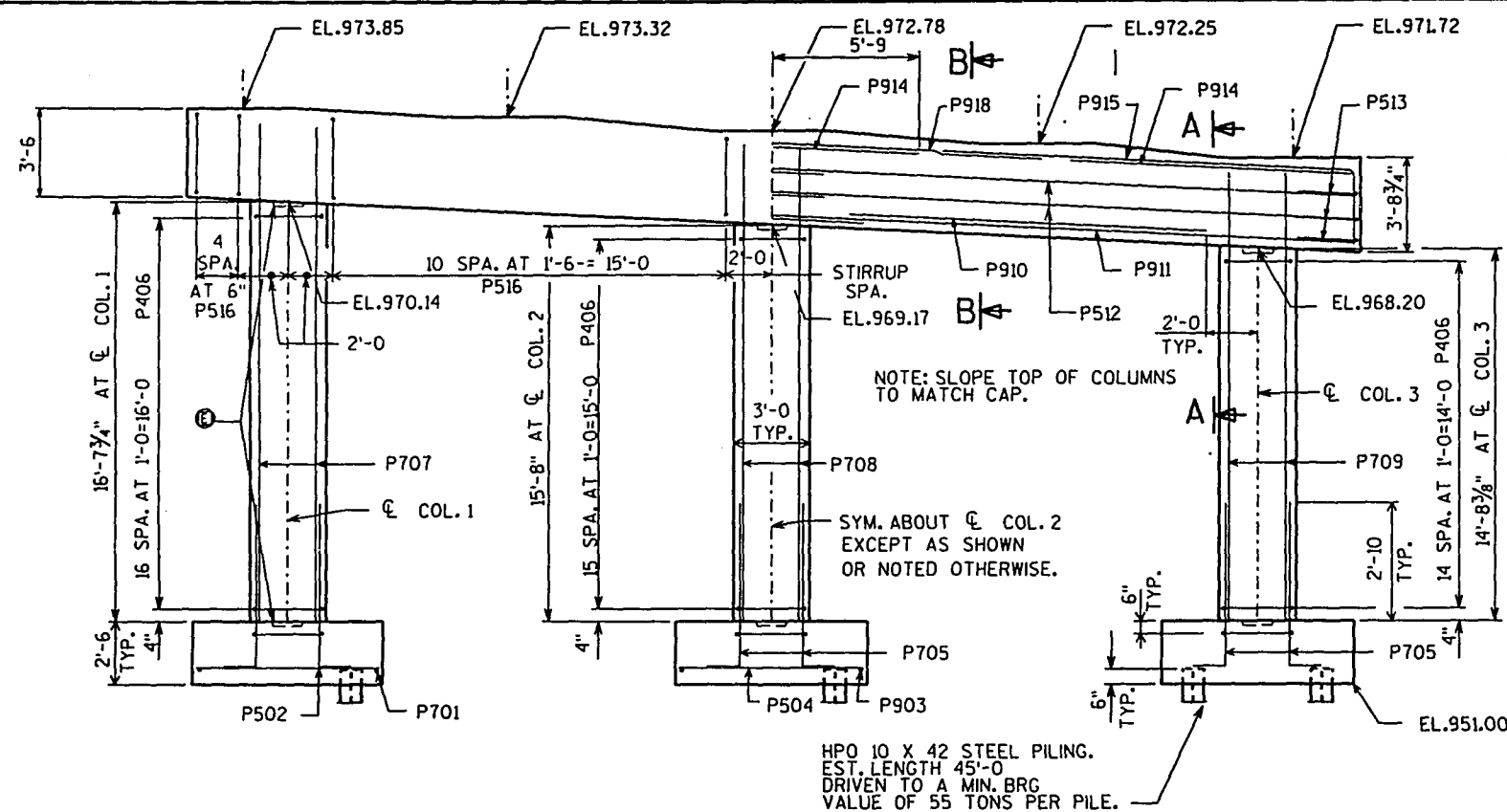
1201-04-76

8.90

BILL OF BARS

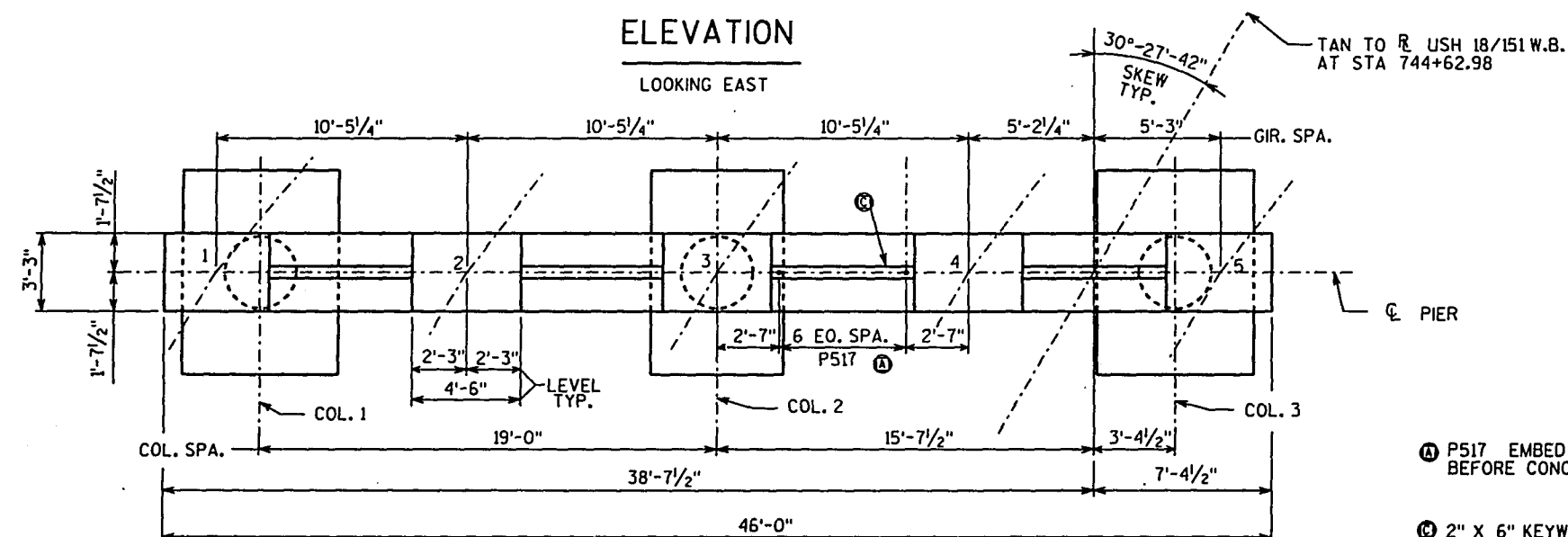
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	QTY	NO. REQ'D.	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
P701		14	8-2				EXTERIOR FOOTING
P502		9	6-2				EXTERIOR FOOTING
P903		6	8-2				INTERIOR FOOTING
P504		9	5-2				INTERIOR FOOTING
P705	X	36	5-10	X			FOOTING AND COL. DOWELS
P406	X	51	9-2	X			FOOTING AND COL. HOOPS
P707	X	12	19-8				COL. 1 VERT.
P708	X	12	18-8				COL. 2 VERT.
P709	X	12	17-8				COL. 3 VERT.
P910	X	4	14-0				CAP HORIZ. BOT
P911	X	6	26-4				CAP HORIZ. BOT
P512	X	8	24-4				CAP HORIZ. SIDES
P513	X	6	8-5	X			CAP HORIZ. ENDS
P914	X	6	11-6				CAP HORIZ. TOP
P915	X	4	19-11	X			CAP HORIZ. TOP
P516	X	32	12-7	X			CAP STIRRUPS
P517	X	28	2-0				CAP DOWELS
P918	X	4	39-1	X			CAP HORIZ. TOP

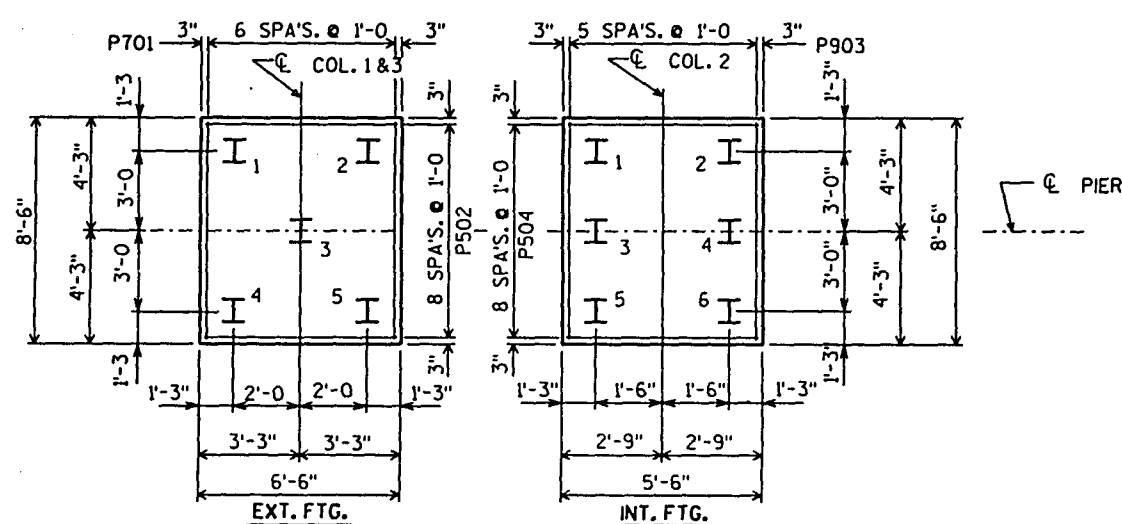


ELEVATION

LOOKING EAST



PLAN

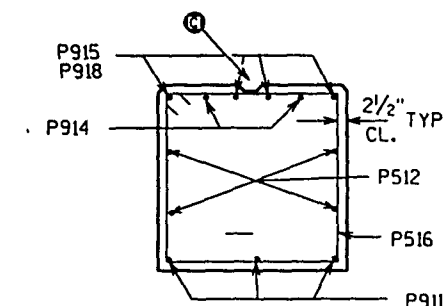


FOOTING PLAN

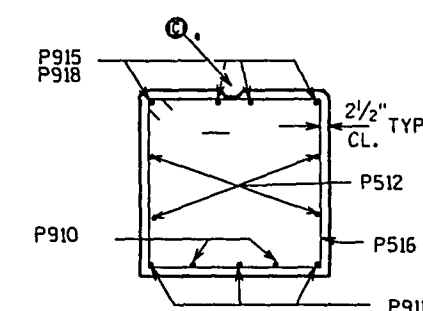
Ⓐ P517 EMBED 1'-0". PLACE BARS BEFORE CONCRETE HAS TAKEN INITIAL SET.

Ⓑ 2" X 6" KEYWAY BETWEEN GIRDER SEATS.

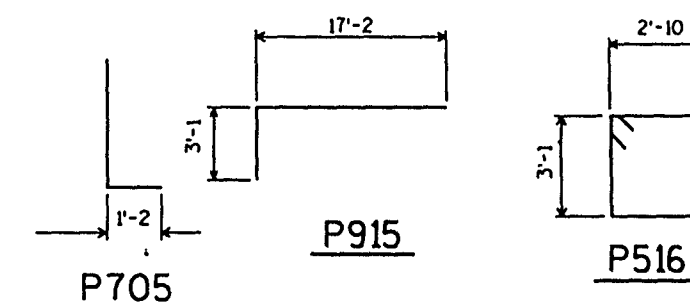
Ⓒ 1'-3 X 1'-3 X 2" CONST. JOINT FORMED BY SURFACED BEVELED KEYWAY. TYP. AT ALL COL. AND FOOTINGS.



SECTION A



SECTION B



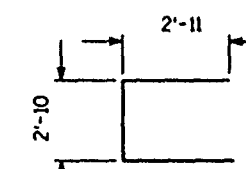
P705

P915

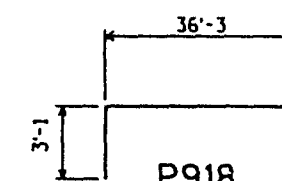
P516



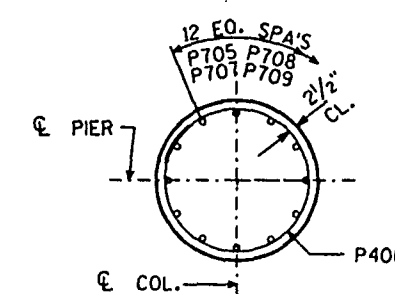
P406



P513

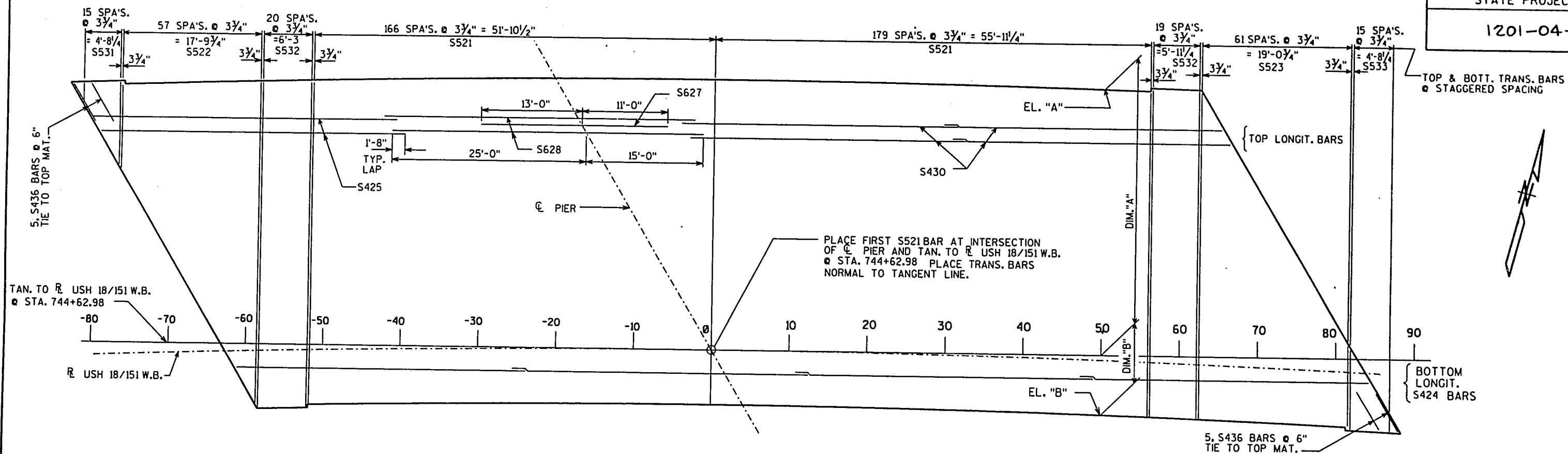


P918



SECTION THRU COLUMN

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
CONST. SPEC.	1989	DRAWN BY Zirk	PLANS C.E.O. M.G.W.
PIER			SHEET 1
			X84133



REINFORCEMENT PLAN & TANGENT OFFSETS

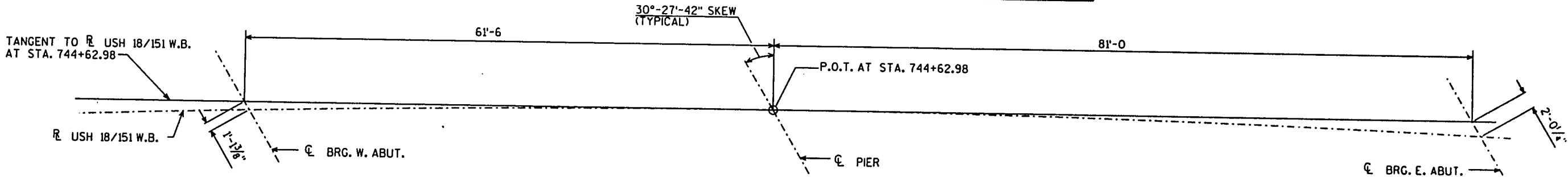
TABLE OF TAN. OFFSETS

(OFFSETS ARE NORMAL TO TAN. LINE.)

DIST.	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90
DIM."A"	33'-10 1/2"	33'-10"	34'-2"	34'-5 1/4"	34'-8"	34'-10 1/4"	34'-11 1/4"	35'-0 5/8"	35'-1"	35'-0 5/8"	34'-11 1/4"	34'-10 1/4"	34'-8"	34'-5 1/4"	34'-7"	34'-3"	34'-3 1/2"	33'-5 1/4"
EL. "A"	978.66	978.67	978.70	978.72	978.74	978.76	978.78	978.80	978.81	978.82	978.83	978.84	978.84	978.84	978.86	978.85	978.85	978.84
DIM."B"	9'-1 1/8"	8'-9 1/4"	8'-5 1/8"	7'-8 3/4"	7'-6"	7'-3 3/4"	7'-2 1/4"	7'-1 1/4"	7'-1"	7'-1 1/4"	7'-2 1/4"	7'-3 3/4"	7'-6"	7'-8 3/4"	8'-0 1/8"	8'-4 1/4"	8'-8 1/8"	9'-7 1/8"
EL. "B"	976.09	976.12	976.14	976.19	976.21	976.23	976.25	976.27	976.28	976.29	976.30	976.30	976.31	976.31	976.31	976.30	976.30	976.27

TOP OF DECK ELEVATIONS

	CL BRG. W. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	CL PIER	1/4 PT.	1/2 PT.	3/4 PT.	CL BRG. E. ABUT.
GIRDER 1	978.52	978.53	978.54	978.56	978.57	978.58	978.60	978.62	978.64
GIRDER 2	977.99	978.00	978.01	978.02	978.04	978.05	978.07	978.08	978.11
GIRDER 3	977.45	977.46	977.47	977.49	977.50	977.52	977.53	977.55	977.58
GIRDER 4	976.91	976.92	976.94	976.95	976.97	976.98	977.00	977.02	977.04
GIRDER 5	976.38	976.39	976.40	976.42	976.44	976.45	976.47	976.49	976.51



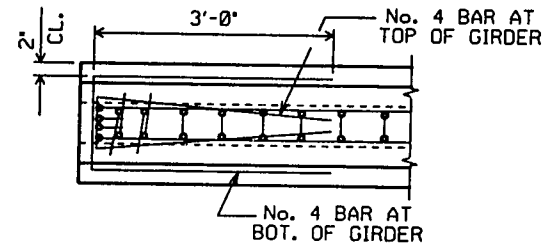
SUBSTRUCTURE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
CONST. SPEC.	1989	DRAWN BY	JHC
		PLANNED BY	MOW
SUPERSTRUCTURE DETAILS			SHEET 9
			X84133

SCALE 2:67:1

COAT ABUTMENT ENDS OF GIRDERS EMBEDDED IN
CONCRETE WITH PARAFFIN WAX PRIOR TO SEATING GIRDERS.



12-372	20-620	28-868
14-434	22-682	30-930
16-496	24-744	32-992
18-558	26-806	34-1054
		36-1116
		38-1178

12-372

14-434

16-496

18-558

20-620

22-682

24-744

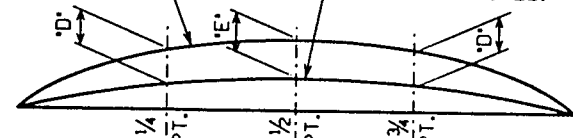
Diagram illustrating the cross-section of a prestressed concrete girder. The diagram shows a trapezoidal cross-section with a central vertical axis. Key dimensions and labels include:

- ALL PATTERNS ARE SYM. ABOUT GIRDER**: Indicated by a dashed vertical line and arrows pointing to the symmetrical pattern of strands.
- FOR DRAPED PATTERN ONLY DRAPE ALL STRANDS ON THESE TWO LINES**: Points to two vertical lines near the top corners of the girder neck, with a dimension of **1"** between them.
- TOTAL NO. OF STRANDS**: A box containing the calculation **00 - 000**.
- TOTAL INITIAL PRESTRESS FORCE IN KIPS**: A label with an arrow pointing to the strand layout.
- Dimensions**:
 - Top width: **7 SP. @ 2"**
 - Bottom width: **9 SP. @ 2"**
 - Bottom flange width: **2"**

Diagram illustrating the geometry of a draped strand girder. The diagram shows a cross-section of the girder with a draped strand profile. Key dimensions and labels include:

- CENTER OF GRAVITY OF DRAPED STRANDS**: Indicated by a vertical line from the top of the strand to the center of gravity.
- SYM. ABOUT MIDSPAN OF GIRDER**: Indicated by a vertical line from the top of the strand to the midspan of the girder.
- HOLD DOWN POINT**: Indicated by a vertical line from the top of the strand to the hold down point.
- END OF GIRDER**: Indicated by a vertical line from the top of the strand to the end of the girder.
- BOT. OF GIRDER**: Indicated by a vertical line from the bottom of the girder to the end of the girder.
- Dimensions**:
 - a' : Vertical distance from the top of the strand to the center of gravity.
 - b' : Vertical distance from the center of gravity to the hold down point.
 - c' : Vertical distance from the hold down point to the end of the girder.
 - $\frac{1}{4}$ PT. ($0.25 L$): Horizontal distance from the center of gravity to the end of the girder.

TOP OF GIRDER BEFORE
SLAB IS POURED.

[illegible]

IF 1 1/4" MINIMUM HAUNCH HEIGHT 'H' 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.
MAXIMUM HAUNCH HEIGHT EQUALS "STIRRUP PROJECTION" MINUS 3 INCHES.

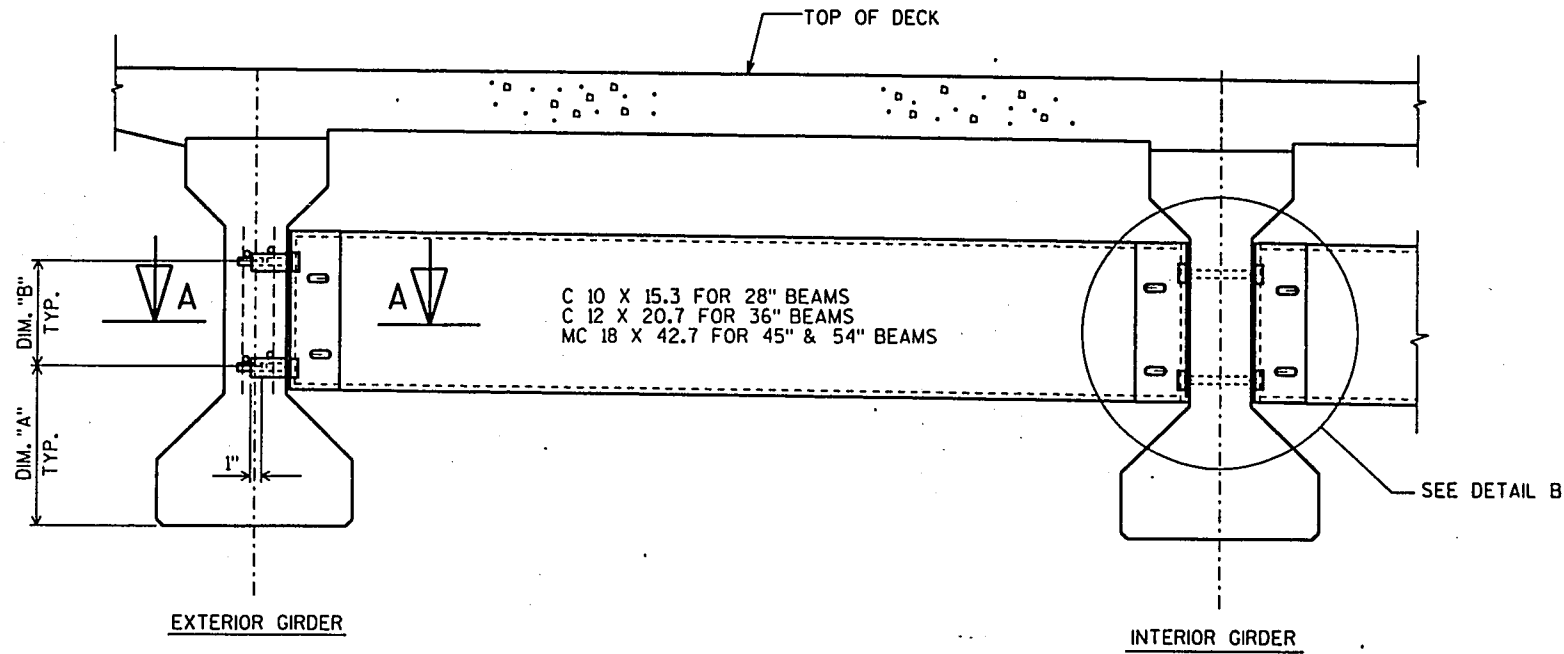
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT Q. OF SUBSTRUCTURE
UNITS & AT 1/4 POINTS OF EACH SPAN SHALL BE TAKEN. THEN
FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
- TOP OF GIRDER ELEVATION
+ DEADLOAD DEFLECTION
- SLAB THICKNESS

= LAUNCH HEIGHT 'T'

NO.	DATE	REVISION	BY
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STRUCTURE B-13-418			
CONST. SPEC.	1989	DESIGNED BY JHC	PLANS C.D. P. 1000
45" PRESTRESSED		SHEET 11	
GIRDER DETAILS		X84133	

TABLE				
GIRDER HEIGHT	DIM. "A"	DIM. "B"	DIM. "L"	DIM. "X"
28"	1'-0"	7"	10"	2 1/2"
36"	1'-2"	11"	1'-2"	3 1/2"
45"	1'-4 1/2"	1'-3"	1'-6"	2 1/2"
54"	1'-7"	1'-7"	1'-10"	4 1/2"



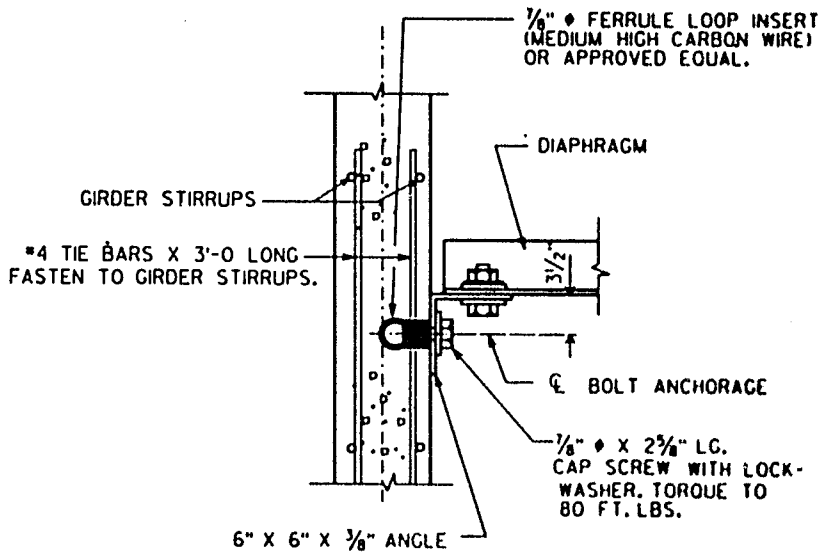
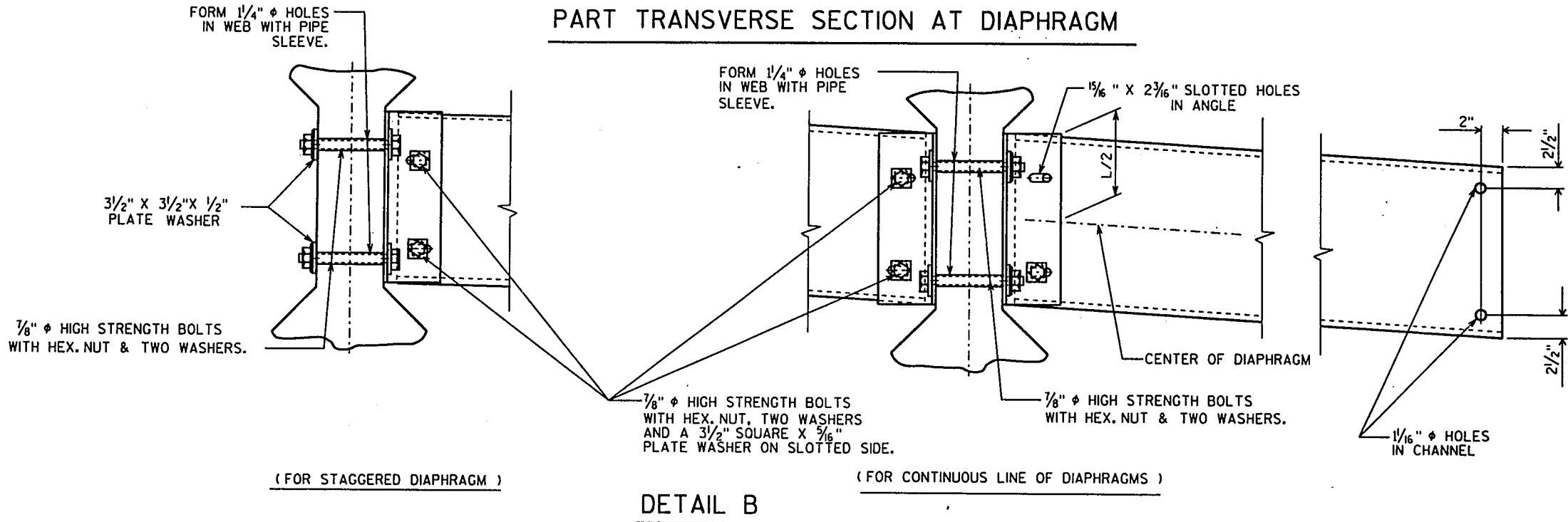
NOTES

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

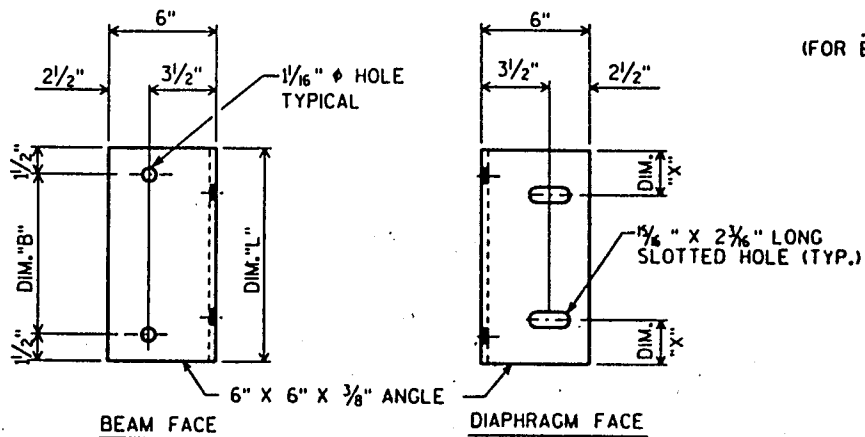
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZE IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



SECT. A-A (FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-13-418			
CONST. SPEC.	1989	DRAWN BY JHC	PLANS C.E.D. MGW
STEEL DIAPHRAGM			SHEET 12
			X84133

