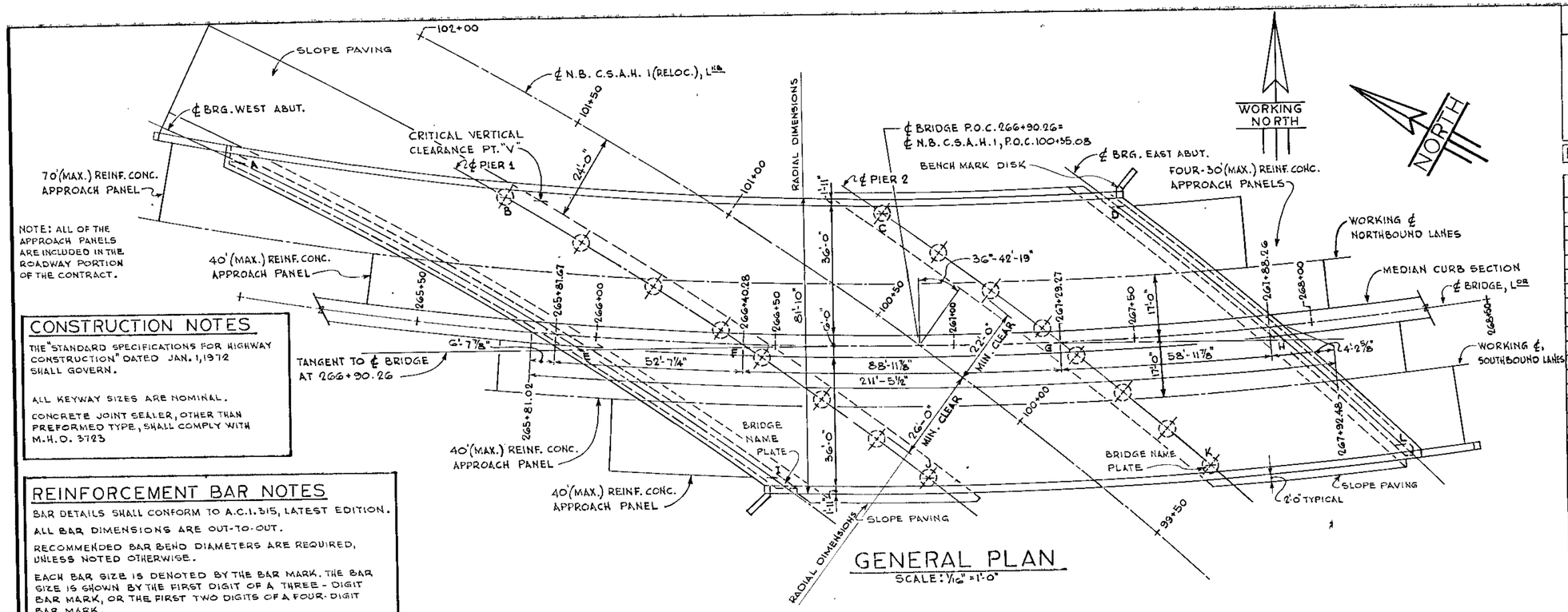


GENERAL PLAN
SCALE: 1/16" = 1'-0"

CONSTRUCTION NOTES

THE "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION" DATED JAN. 1, 1972 SHALL GOVERN.

ALL KEYWAY SIZES ARE NOMINAL.

CONCRETE JOINT SEALER, OTHER THAN PREFORMED TYPE, SHALL COMPLY WITH M.H.D. 3723

REINFORCEMENT BAR NOTES

BAR DETAILS SHALL CONFORM TO A.C.I. 315, LATEST EDITION.

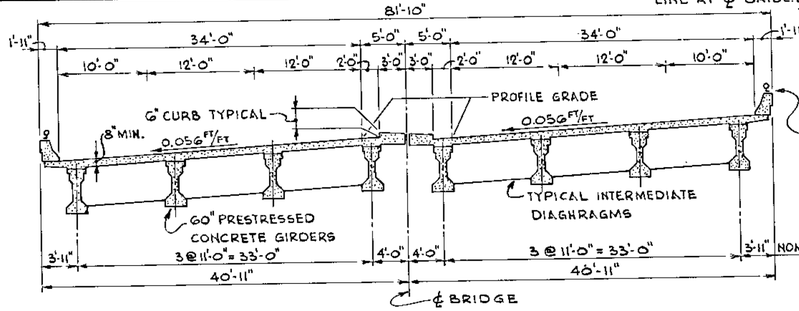
ALL BAR DIMENSIONS ARE OUT-TO-OUT.

RECOMMENDED BAR BEND DIAMETERS ARE REQUIRED, UNLESS NOTED OTHERWISE.

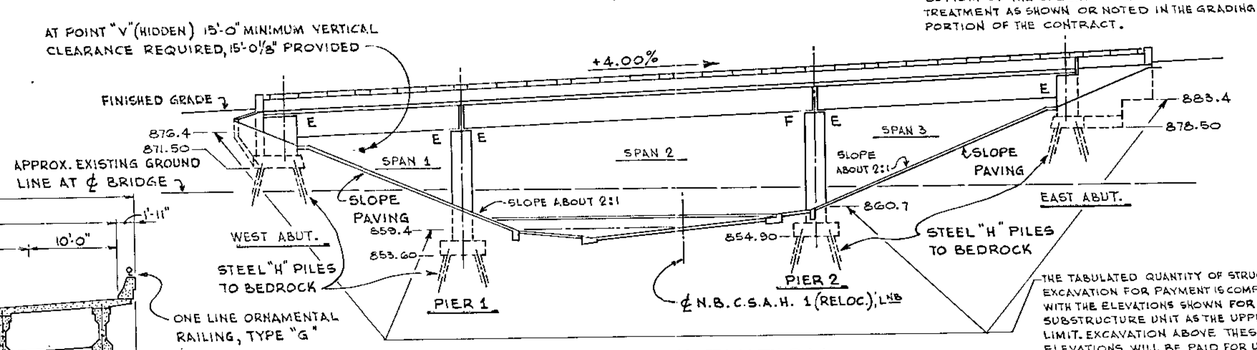
EACH BAR SIZE IS DENOTED BY THE BAR MARK. THE BAR SIZE IS SHOWN BY THE FIRST DIGIT OF A THREE-DIGIT BAR MARK, OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK.
REINFORCEMENT BARS OTHER THAN SPIRAL ROD STOCK SHALL BE DEFORMED BILLET STEEL BARS CONFORMING TO ASTM - A615, GRADE 60

PILING NOTE

PILES, IN GENERAL, ARE BATTERED AT 3:12 PERPENDICULAR TO ℄ OF PIER OR ℄ OF ABUTMENT BEARING. BECAUSE OF THIS BATTER COMBINED WITH VERY GREAT LENGTH OF PILES, IT WOULD BE POSSIBLE FOR PILE TIPS TO INTERFERE WITH PILES IN THE NEXT ABUTMENT OR PIER, CONTRACTOR SHALL TAKE SUITABLE PRECAUTIONS TO ASSURE THAT PILES DO NOT STRIKE ONE ANOTHER DURING DRIVING. CONTRACTOR MAY BATTER ANY PILE NOT MORE THAN 1:12 PARALLEL TO A ℄ PIER OR A ℄ BEARING, FOR THIS PURPOSE.



TYPICAL SECTION
SCALE: 1/8" = 1'-0"



GENERAL ELEVATION
SCALE: 1/16" = 1'-0"

CONSTRUCTION AT EACH ABUTMENT SHALL NOT BE STARTED UNTIL THE APPROACH FILL AT THE ABUTMENT HAS BEEN CONSTRUCTED TO THE BOTTOM OF THE SPECIAL GRANULAR APPROACH TREATMENT AS SHOWN OR NOTED IN THE GRADING PORTION OF THE CONTRACT.

THE TABULATED QUANTITY OF STRUCTURE EXCAVATION FOR PAYMENT IS COMPUTED WITH THE ELEVATIONS SHOWN FOR EACH SUBSTRUCTURE UNIT AS THE UPPER LIMIT. EXCAVATION ABOVE THESE ELEVATIONS WILL BE PAID FOR UNDER GRADING PORTION OF CONTRACT.

AS BUILT
10-16-73
B.J.o.R.

2452.511	2452.510	2452.520	2452.520	2452.520
STEEL H-PILING DELIVERED	STEEL H-PILING DRIVEN	STEEL H-TEST PILES IN PLACE 140-FT. LONG	STEEL H-TEST PILES IN PLACE 130-FT. LONG	STEEL H-TEST PILES IN PLACE 120-FT. LONG
LIN. FT.	LIN. FT.	EACH	EACH	EACH
9540	9372	2	2	4

SCHEDULE OF QUANTITIES FOR ENTIRE BRIDGE

ITEM NO.	2401.501	2401.501	2401.501	2401.501	2401.541	2401.543	2402.521	2402.583	2402.593	2402.594	2402.594	2405.501	2405.501	2405.501	2405.501	2405.501	2405.501	2405.501	2401.521	401.601
ITEM	CONCRETE, MIX NO. 1A43	CONCRETE, MIX NO. 3Y43	CONCRETE, MIX NO. 3Y43 A	CONCRETE, MIX NO. 3Y43 A SPECIAL	REINFORCEMENT BARS	SPIRAL REINFORCEMENT	STRUCTURAL STEEL, (M.H.D. 3304)	ORNAMENTAL METAL RAILING	FIXED BEARING ASSEMBLIES TYPE 1	EXPANSION BRG. ASS'YS TYPE 1 (WITHOUT LUGS)	EXPANSION BRG. ASS'YS TYPE 1 (WITH LUGS)	PRESTRESSED CONCRETE GIRDER, TYPE GO-106	PRESTRESSED CONCRETE GIRDER, TYPE GO-100	PRESTRESSED CONCRETE GIRDER, TYPE GO-95	PRESTRESSED CONCRETE GIRDERS, TYPE GO-86	PRESTRESSED CONCRETE GIRDERS, TYPE GO-76	PRESTRESSED CONCRETE GIRDERS, TYPE GO-64	PRESTRESSED CONCRETE GIRDERS, TYPE GO-58	PRESTRESSED CONCRETE GIRDERS, TYPE GO-51	STRUCTURE EXCAVATION CLASS E	SLOPE PAVING
UNIT	CU. YD.	CU. YD.	CU. YD.	CU. YD.	POUND	POUND	POUND	LIN. FT.	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	CU. YD.	SQ. YD.
QUANTITY	732 (P)	621 (P)	669 (P)	57 (P)	274290 (P)	12450 (P)	2040	466	8	24	16	1	1	1	4	2	4	5	6	2070	1520 (P)

DESIGN DATA

1969 A.A.S.H.O. DESIGN SPECIFICATIONS
DESIGN LOADING: HS-20
f_c = 1600 P.S.I. n = 8
f_s = 24000 P.S.I. REINFORCING STEEL, ASTM-A615, GRADE 60
f_s = 20,000 P.S.I. STRUCT. STEEL, M.H.D. 3306

DECK AREA: 17,621 SQ. FT.

LIST OF SHEETS

BENCH MARK ELEV. 874.34 (M.S.L. DATUM UNKNOWN) RAILROAD SPIKE IN 18" OAK TREE 90-FT. RT. OF 263+96 ON L^SB

BATHER RINGROSE WOLSFELD INC. — ROSEVILLE, MINN.
BAKKE & KOPP INC. — MINNEAPOLIS, MINN.

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
SIGNED Robert J. McSalin
DATE 11/3/71 REG NO 6452

ANOKA COUNTY STATE AID HIGHWAY NO. 1
STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

Bridge No. 02522

COON RAPIDS BOULEVARD BY-PASS OVER EAST RIVER ROAD NORTHBOUND (C.S.A.H. 1) IN COON RAPIDS
53'-89'-53' PRESTRESSED GIRDER SPANS
72-FT. ROADWAY, 53°17'-41" SKEW, 6-FT. MEDIAN

GENERAL PLAN AND ELEVATION

SEC 26 T 31 N R 24 W
CITY OF COON RAPIDS — ANOKA COUNTY

APPROVED 12-21-71
BRIDGE DESIGN AND PLANNING ENGINEER

DES. R.J.M. DR. W.K. CHK. MODY CHK. R.J.M.

02522

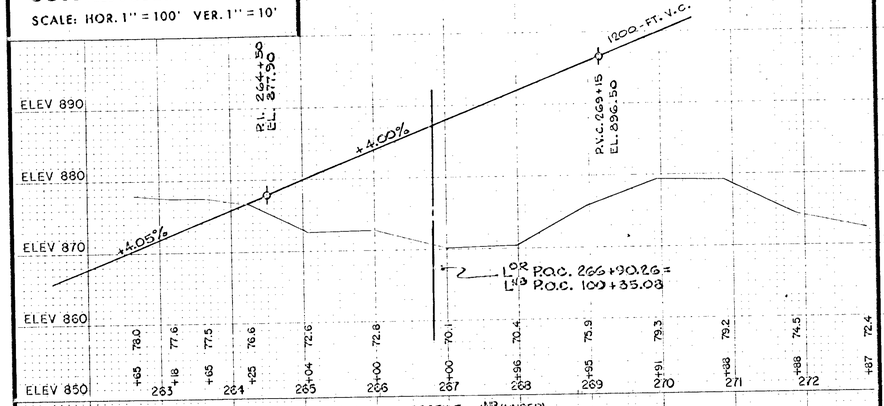
State Proj. No. S.A.P. 14-116-03 M.T.B. **Sheet No.** 1 **of** 35 **Sheets**

NORTHSTAR # 116

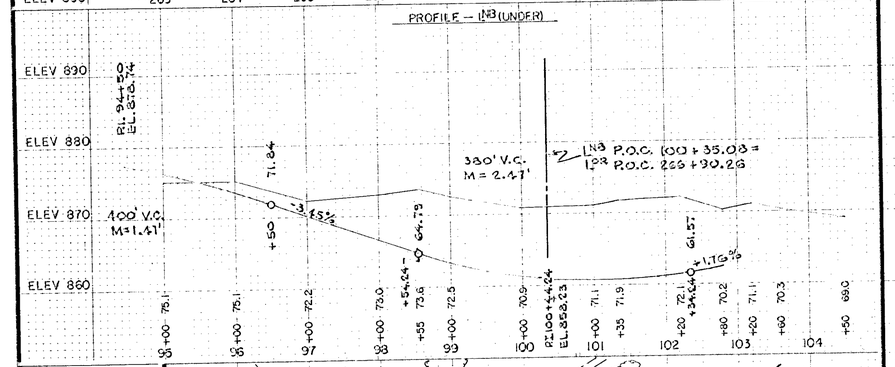
CONTRACTED PROFILE

SCALE: HOR. 1" = 100' VER. 1" = 10'

PROFILE – L^{OR} (OVER)

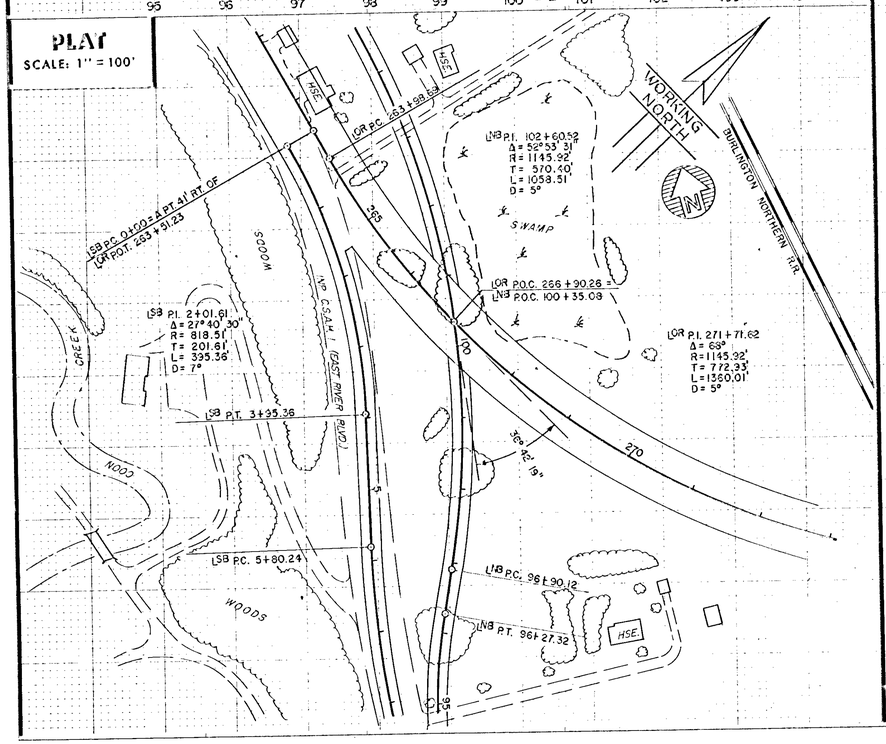


PROFILE – L^{LN3} (UNDER)



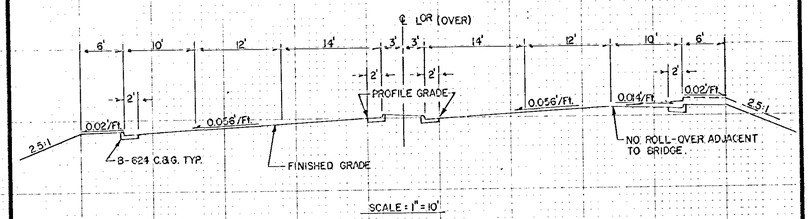
PLAT

SCALE: 1" = 100'

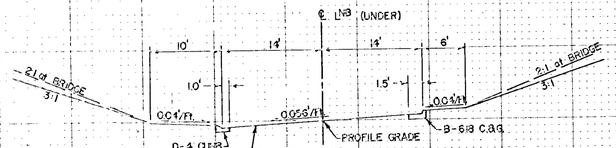


TYPICAL SECTIONS & PERTINENT DATA

SCALES AS SHOWN



SCALE: 1" = 10'



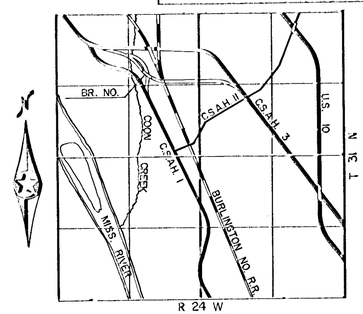
SCALE: 1" = 10'

B.M. ELEV 874.34
R.R. SPK. 18" OAK,
90' RT. L^{OR} 263+96

(M.S.L. 19 ADJ.)
(DATUM UNKNOWN)

AS BUILT
10-16-73
B. Jahr

SEE SHEET 35 OF 35 SHEETS FOR PLAN AND PROFILE



R 24 W
INDEX MAP
(FOUR SECTIONS)

FOLLOW SEPARATE "INSTRUCTIONS FOR PREPARATION OF BRIDGE SURVEYS" WHEN MAKING BRIDGE SURVEYS.

DATA

1. Preliminary recommendations of Engineer in charge of Bridge Survey:
   a. Net span length and type of bridge: 53'-89'-53' PRESTRESSED CONCRETE GIRDER SPANS
   b. Width of roadway on bridge: TWO-36 FT. ROADWAYS AND ONE-6 FT. MEDIAN
   c. Number and width of sidewalks, if any: NONE
   d. Locate center of bridge at station: 266 + 90.26
   e. If a skew bridge is recommended, the angle of skew should be: 53°-17'-41"
   f. Is piling required? YES
2. Special features: Waterfalls, dams, exceptional floods, ice, driftwood, sliding banks, logging, etc.
3. Changes: In height or length from that of old bridge, and reasons why
4. Other bridges in vicinity:
   a. Over same stream (particularly structures which carry high water without overflow of roadway); give location, length, height above water, net cross-sectional area at high water stage and estimated age
   b. Over or under same highway or railroad; give location, length, horizontal and vertical clearances and estimated age
   c. Reasons why these bridges are, or are not, fair indications of what length the proposed bridge should be
5. If structure is over a drainage ditch, is ditch gradient liable to be altered?
6. Navigation clearances required, if any
7. Information and evidence in regard to high water stages was obtained as follows:
8. Must contractor provide for traffic during construction of proposed bridge? NO
   If so, by what means?

HYDRAULIC ENGINEERS RECOMMENDATION

HIGH AND LOW WATER ELEVATIONS

Data obtained from ..... reflects highest water elevation in the area of this construction to be ..... and the lowest water elevation to be ..... The above figures are for information-al purposes only. The state neither warrants nor represents that these figures for high water and low water are in any way indica-tive of the high water or low water to be expected or encountered during this construction.

SHIPPING POINT

Proposed Bridge is IN THE CITY of * COON RAPIDS which is the nearest Railroad shipping point.

*(Give name of town, station or siding)

Date ..... Project or County Engineer .....

Date ..... District Engineer .....

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BRIDGE SURVEY

FOR

PROPOSED BRIDGE LOCATED IN THE CITY OF COON RAPIDS (TOWN OR CITY) ON C.S.A.H. NO. 1 (T.H., C.S.A.H. OR C.A.R. NUMBER)

SEC. 26 TWP. 31 N R. 24 W

CITY OF COON RAPIDS - ANOKA COUNTY

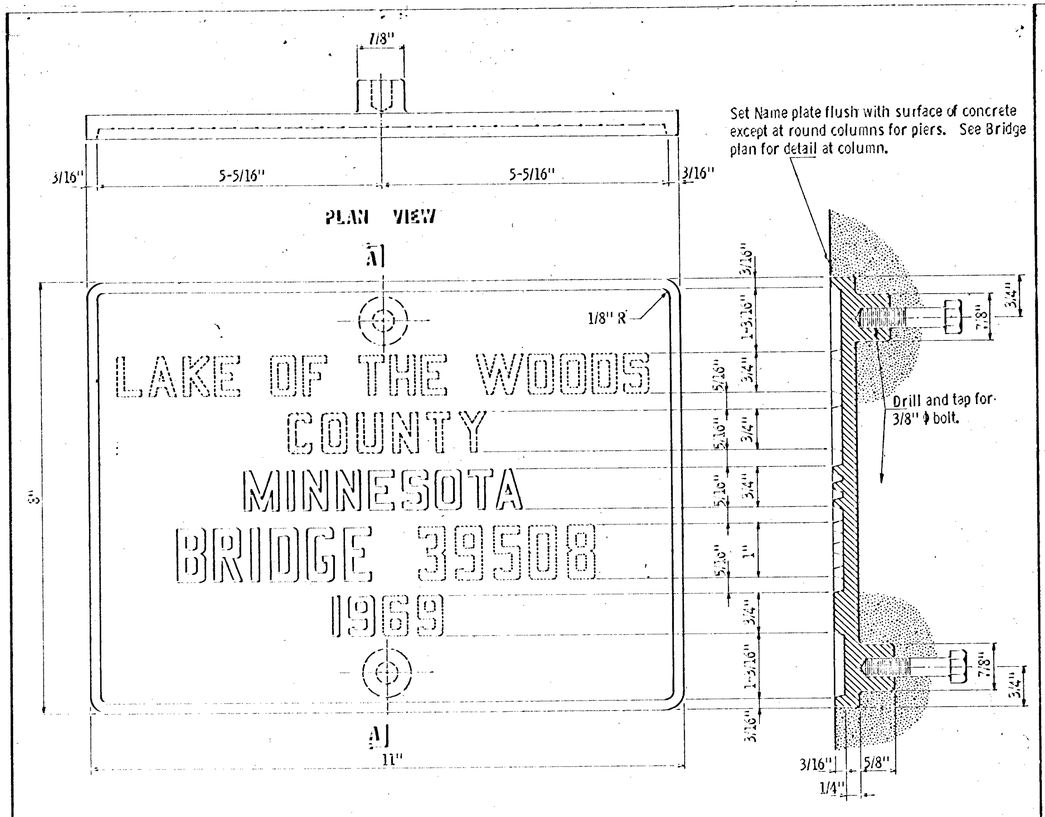
SURVEY MADE DURING MONTH OF DECEMBER 1970

SURVEY MADE BY J. MALONEY

BRIDGE NO. 02522

Bridge Survey Sheet (Sheet 1 of 2)

State Proj. No. S.A.P. 14-116-03 M.T.B Sheet No. 34 of 35 Sheets



A B C D E F G H I J K L M N

O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 0

LETTERS FOR NAME PLATES

NOTES:

Numbers and letters shall conform to those shown.
Draft on letters shall not be more than 3" in 12"
Horizontal spacing of letters shall produce a balanced layout in proportion to spacing shown.
Top surface of letters and frames shall be burnished.
Background of plate shall have a deep brown oxidized finish.
Furnish 2 steel bolts 3/8" ϕ x 3" long with each plate.
Plates ordered in pairs shall be cast from the same heat.
Numbers and letters shown dotted are to be obtained from Bridge plans.
All dimensions for 3/4" high letters and numbers shall be in direct proportion to those shown for the 1" high letters and numbers.

Specification reference:
2471, 3H, 3327 (Bronze castings)

APPROVED July 1, 1969
Design Standards Engineer
ENGINEERING STANDARDS DIVISION

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS
BRIDGE NAME PLATE
COUNTY BRIDGES
(STATE AID)

REVISION

DETAIL NO. B103

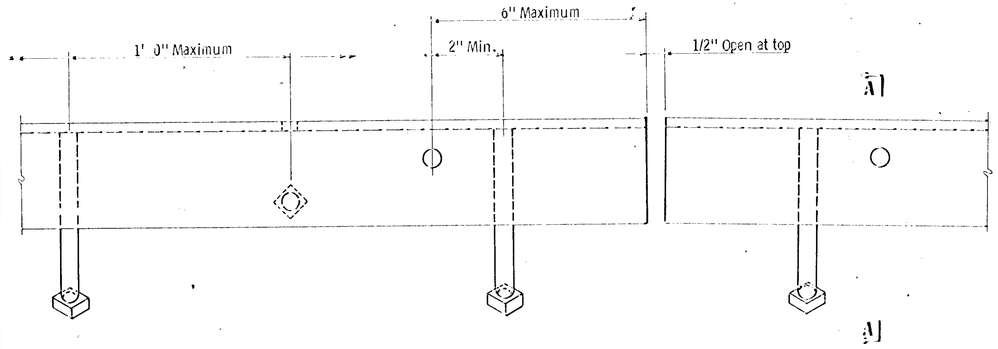
AS BUILT
10-16-73
B. Lahr

TITLE: DETAILS

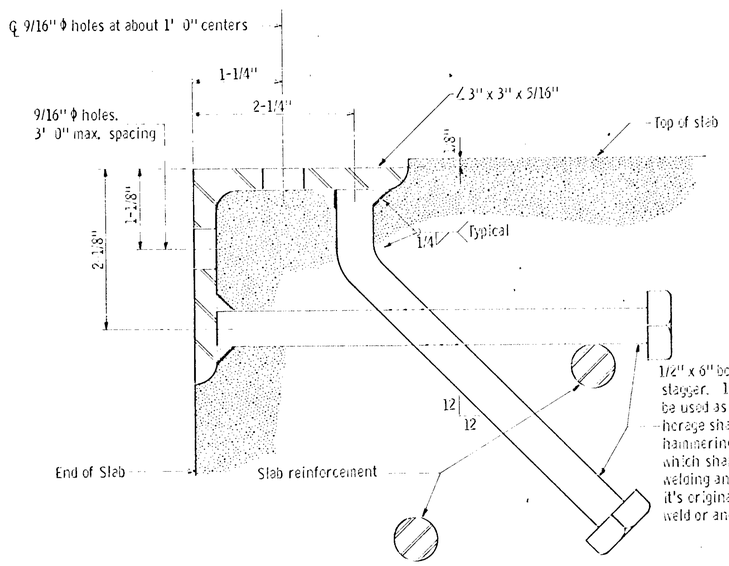
DES: M.H.D. CHK: R.M.S.
DR: M.H.D. CHK: R.M.S.
APPROVED: 12-31-71

Sheet No. 33 of 35 Sheets

Bridge No. 02522



ELEVATION
(Concrete not shown)



1/2" x 6" bolts at 12" centers with alternate stagger. 1/2" x 6" stud welded fasteners may be used as an alternate for bolts. The anchorage shall be capable of being bent cold by hammering thru a 30° angle (the apex of which shall be at the fusion point) after welding and subsequently straightened to it's original position without fracture of the weld or anchorage.

NOTE:
SEE DECK PLANS FOR LENGTHS AND RADII OF CURVATURE OF PROTECTION ANGLES. LENGTHS GIVEN ON DECK PLANS ARE HORIZONTAL DIMENSIONS, NOT SLOPE DIMENSIONS.

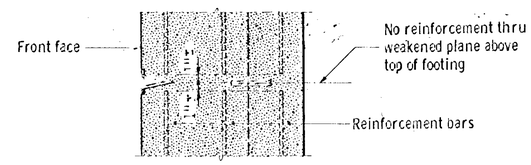
SECTION A - A

NOTES:
Angles shall extend full width of roadway between curbs with a 1/2" open joint at each break in crown profile. Maximum length 22 feet.

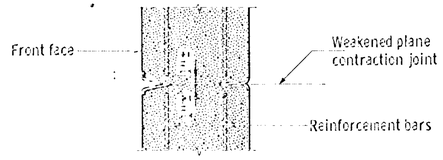
Material: Structural steel per M.H.D. 3306. Galvanize after fabrication per M.H.D. 3394

Set angle to proper grade and crown.

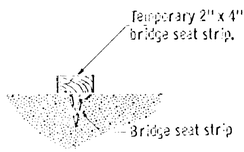
APPROVED July 1 1969	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISION	DETAIL NO.
Design Standards Engineer ENGINEERING STANDARDS DIVISION	**PROTECTION ANGLE FOR END OF SLAB**		**3551**



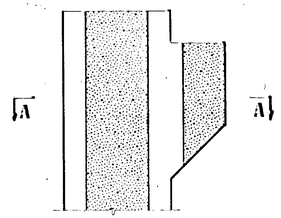
SECTION A - A



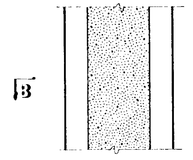
SECTION B - B



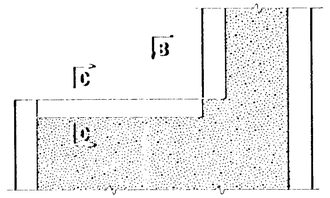
SECTION C - C



SECTION THRU PAVING BRACKET

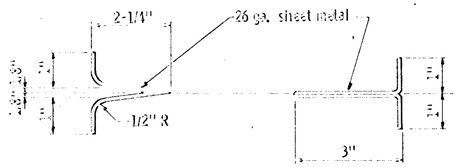


SECTION THRU WALL



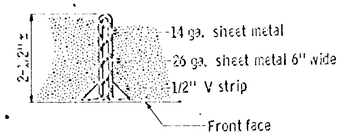
SECTION THRU BRIDGE SEAT

PART SECTION THRU ABUTMENT AT JOINT



BRIDGE SEAT and FRONT STRIP
6" wide

BACK STRIP
8" wide



ALTERNATE BRIDGE SEAT and FRONT STRIP

NOTES:
The methods and materials indicated hereon shall be considered as suggested only. Variations will be permitted, subject to approval by the Engineer, but must provide dummy joints of a depth not less than the depth shown, and a width at the front face of the abutment of not greater than 5/16". The separation of the horizontal reinforcement bars shall be not less than 1-1/2" nor more than 3", centered as shown, regardless of the procedure used for forming the dummy joint.

Front and bridge seat strips shall be removed with forms, except if a suitable plastic or other durable material, satisfactory to the Engineer, is used the material may be left in place. Back strip to remain in place.

Strips to be removed shall be oiled or greased as necessary to permit removal without spalling the concrete.

Metal strips to be galvanized sheet metal. Fasten to forms with 7/8" roofing nails about 6" centers.

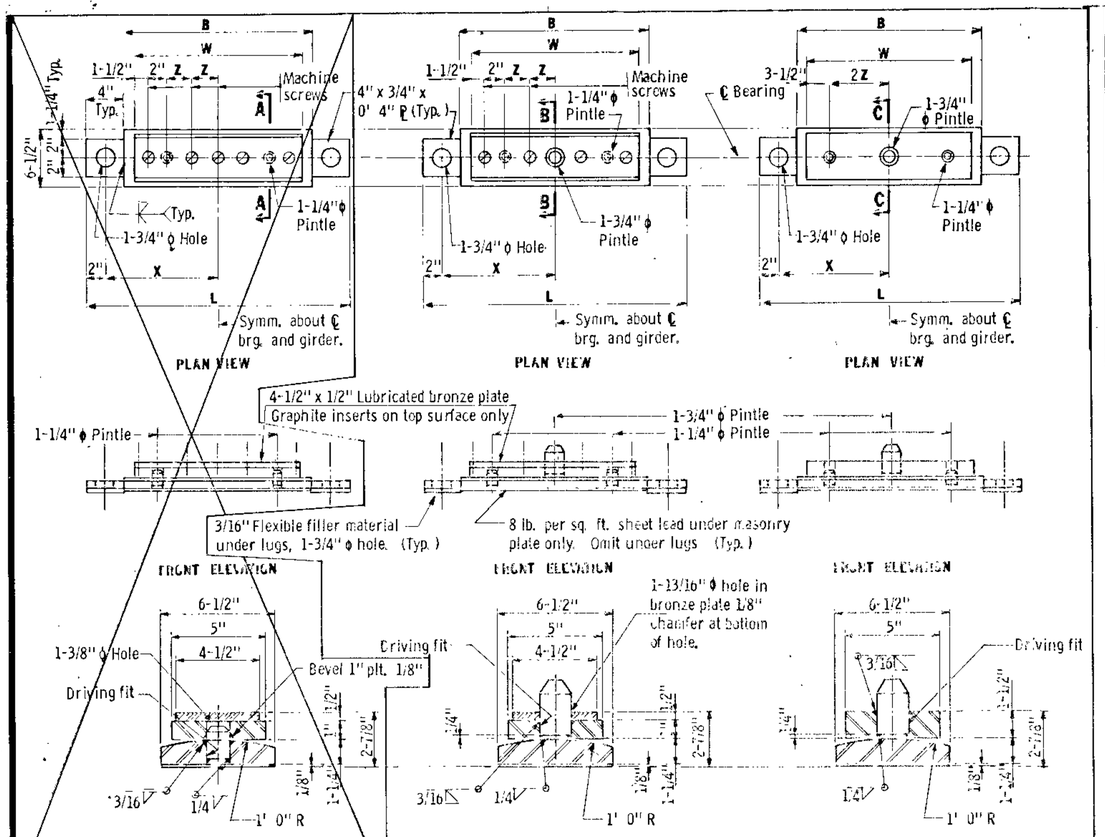
All metal in front face to be oiled for easy removal.

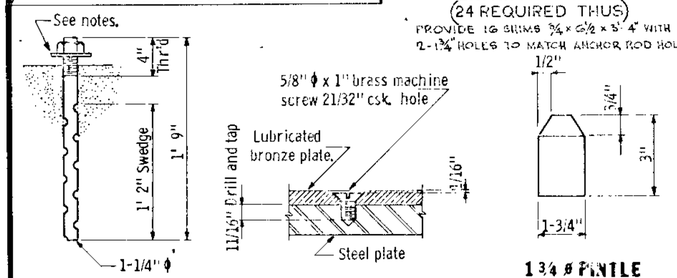
Cost of forming joint to be included in price bid for other items.

APPROVED July 1, 1969	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS	REVISION	DETAIL NO.
Design Standards Engineer ENGINEERING STANDARDS DIVISION	**CONTRACTION JOINT**		**3301**

AS BUILT
10-16-73
B. Jahr

TITLE:	DES: M.H.D. CHK: RJM	DR: M.H.D. CHK: RJM	APPROVED: 12-31-71	Bridge No.
DETAILS	Sheet No. 32 of 35 Sheets			02522





ANCHOR ROD DETAIL MACHINE SCREW DETAIL

GIRDER TYPE	L	B	W	X	Z	LOAD (KIPS)	TOTAL MAX. DESIGN MOVEMENT
28"	2' 4"	1' 8"	1' 4"	1' 0"	2 1/4"	125	2 1/2"
36"	2' 6"	1' 10"	1' 6"	1' 1"	2 3/4"	140	2 1/2"
40" & 45"	2' 10"	2' 2"	1' 10"	1' 3"	3 3/4"	165	2 1/2"
54" & 60"	3' 4"	2' 8"	2' 2"	1' 6"	4-3/4"	205	2-1/2"

NOTES:

Lubricated bronze plates shall comply with M. H. D. 3329.

All plates except lubricated bronze shall comply with M. H. D. 3306.

Pintles shall comply with M. H. D. 3314, Type II.

Steel plates and pintles shall be galvanized per M. H. D. 3394. No paint. SHIMS SHALL ALSO BE GALVANIZED.

Anchor rods shall be galvanized per M. H. D. 3392. No paint, with one cut washer and nut. Anchor rods shall project 3/8" above nuts.

Finish center 3" on top of base plate to 250 Micro. A 1/16" tolerance in thickness will be permitted.

Scale weights shall be furnished in accordance with the requirements of M. H. D. 2471.3 M1 and shall be listed on the shipping statements for the individual items.

Payment for bearing assembly shall include all material on this detail.

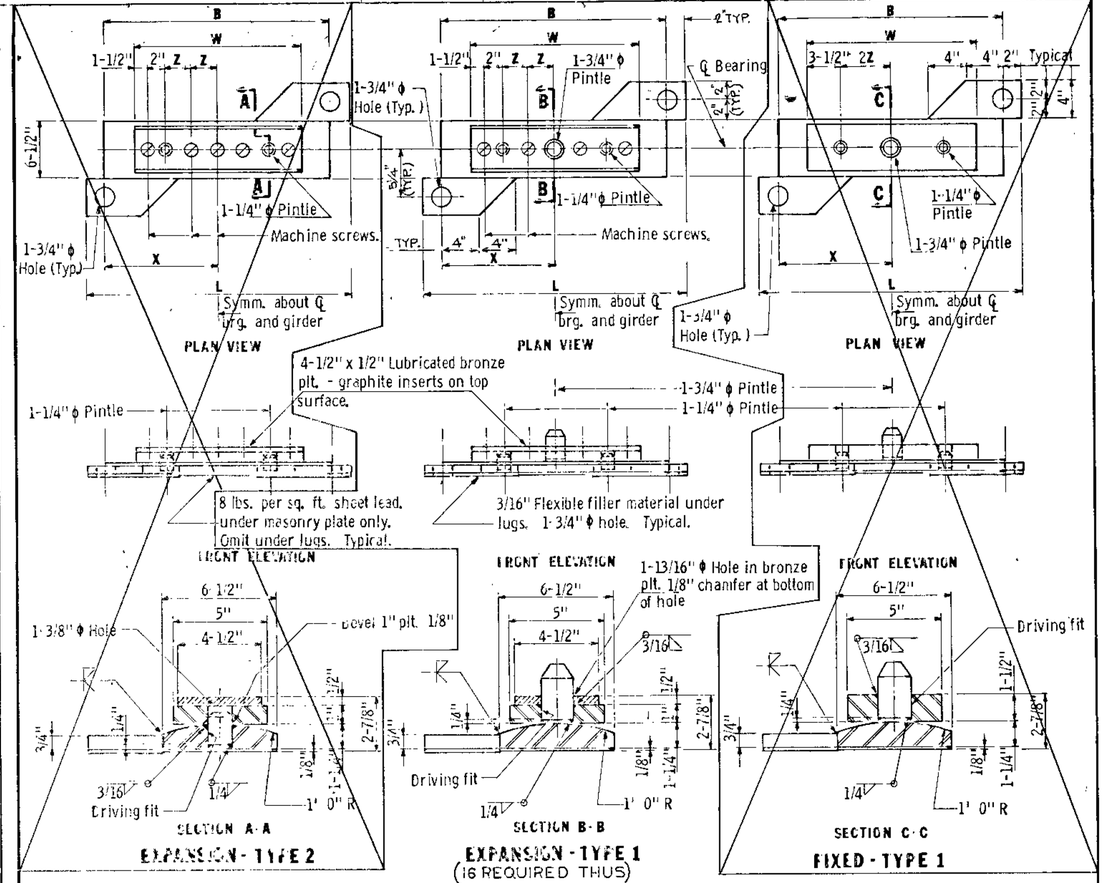
APPROVED April 23, 1971

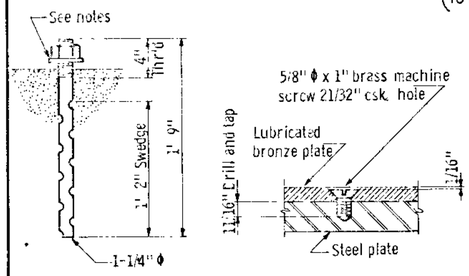
Bridge Design Standards Engineer
RESEARCH AND STANDARDS DIVISION

STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BEARING ASSEMBLIES
PRESTRESSED CONCRETE GIRDERS

DETAIL NO. **B302**





ANCHOR ROD DETAIL MACHINE SCREW DETAIL

GIRDER TYPE	L	B	W	X	Z	LOAD (KIPS)	TOTAL MAX. DESIGN MOVEMENT
28"	2' 0"	1' 8"	1' 4"	10"	2 1/4"	125	2 1/2"
36"	2' 2"	1' 10"	1' 6"	11"	2-3/4"	140	2 1/2"
40" & 45"	2' 6"	2' 2"	1' 10"	1' 1"	3-3/4"	165	2 1/2"
54" & 60"	3' 0"	2' 8"	2' 2"	1' 4"	4-3/4"	205	2-1/2"

NOTES:

Lubricated bronze plates shall comply with M. H. D. 3329.

All plates except lubricated bronze shall comply with M. H. D. 3306.

Pintles shall comply with M. H. D. 3314, Type II.

Steel plates and pintles shall be galvanized per M. H. D. 3394. No paint.

Anchor rods shall be galvanized per M. H. D. 3392. No paint, with one cut washer and nut. Anchor rods shall project 3/8" above nuts.

Position of anchor rod lugs shown is for left skews; for right skews, lugs are to be reversed.

Finish center 3" of top of base plate to 250 Micro. A 1/16" tolerance in thickness will be permitted.

Scale weights shall be furnished in accordance with the requirements of M. H. D. 2471.3M1 and shall be listed on the shipping statements for the individual items.

Payment for bearing assembly shall include all material on this detail.

AS BUILT 10-16-73 B. Jack

DES.	M.H.D.
CHK.	R.M.S.
DR.	M.H.D./W.K.
CHK.	R.M.S.

STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS

Bridge No. 02522 DETAILS

APPROVED 12-21-73

02522

Sheet No. 31 of 35 Sheets

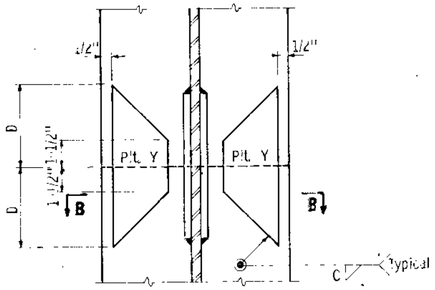
APPROVED April 23, 1971

Bridge Design Standards Engineer
RESEARCH AND STANDARDS DIVISION

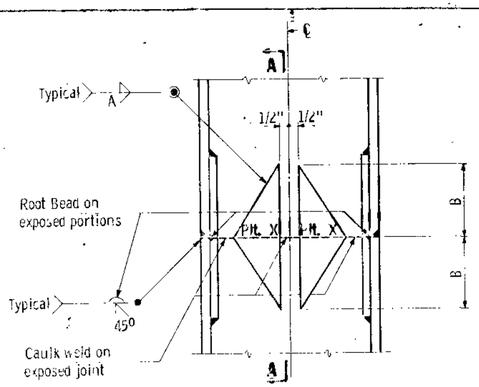
STATE OF MINNESOTA
DEPARTMENT OF HIGHWAYS

BEARING ASSEMBLIES
PRESTRESSED CONCRETE GIRDERS

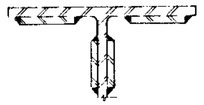
DETAIL NO. **B301**



SECTION A - A



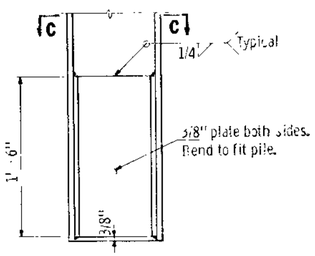
ELEVATION



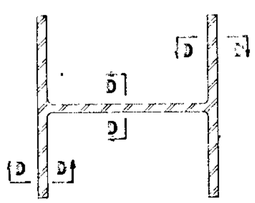
SECTION B - B

PILE SECTION	PLATE X Size	A	B	PLATE Y Size	C	D
10 BP 42	2 1/2 x 3/8	1/4	4	3 x 3/8	5/16	4
10 BP 57	2 1/2 x 1/2	5/16	4	3 x 1/2	5/16	5
12 BP 53	3 1/2 x 3/8	1/4	5	4 x 3/8	5/16	5
12 BP 74	3 1/2 x 1/2	5/16	6	4 x 1/2	5/16	6
14 BP 73	4 1/2 x 3/8	1/4	7	5 x 3/8	5/16	6
14 BP 89	4 1/2 x 7/16	5/16	7	5 x 1/2	5/16	7
14 BP 102	4 1/2 x 1/2	5/16	7	5 x 9/16	5/8	7
14 BP 117	4 1/2 x 9/16	5/8	7	5 x 5/8	5/8	8

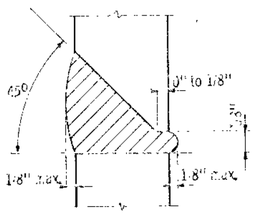
PILE SPLICE



ELEVATION

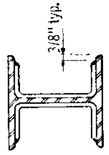


SECTION AT JOINT



SECTION D - D

ALTERNATE 200% BUTT WELDED PILE SPLICE



SECTION C - C

Each pile tip reinforcement will be paid for in amount equal to 5 linear feet of piling delivered.

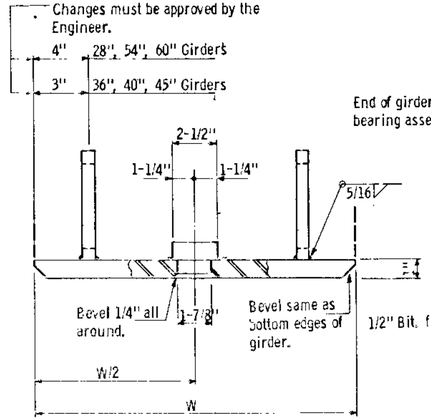
No pile tips shall be reinforced except by written order of the Engineer.

DETAIL OF PILE TIP REINFORCEMENT

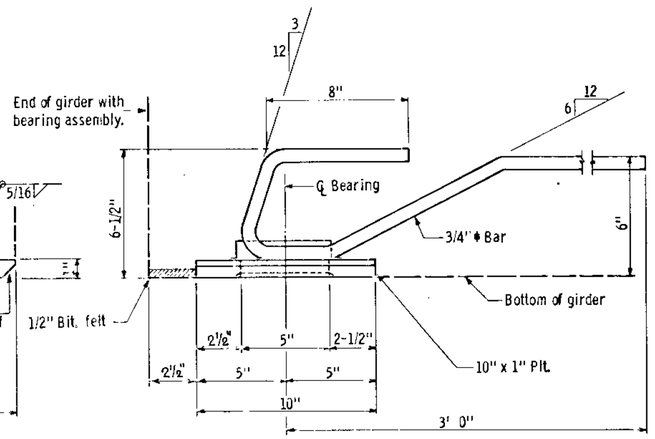
NOTES: Pile ends at splice to be square.
Welding electrodes per M. H. D. 3339.
With D.C. reverse polarity (electrode positive) only use A. S. T. M. classification E6010.
With D.C. reverse polarity or AC use A. S. T. M. classification E6011.
Where moisture control is properly enforced A. S. T. M. classification E6016 or E7016 may be used.
Recommended moisture content, per cent of coating:
E6010 3.0 to 5.0 % D. C. R. only
E6011 2.0 to 4.0 % AC or D. C. R.
E6016 Less than 0.4 % AC or D. C. R.
E7016 Less than 0.4 % AC or D. C. R.
All welding per M. H. D. 2471.3J.
Steel plates per M. H. D. 3306.

APPROVED July 1, 1969 Design Standards Engineer ENGINEERING STANDARDS DIVISION	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS **PILE SPLICE and TIP REINFORCEMENT STEEL H BEARING PILES 10" TO 14"**	REVISION	DETAIL NO. **B202**

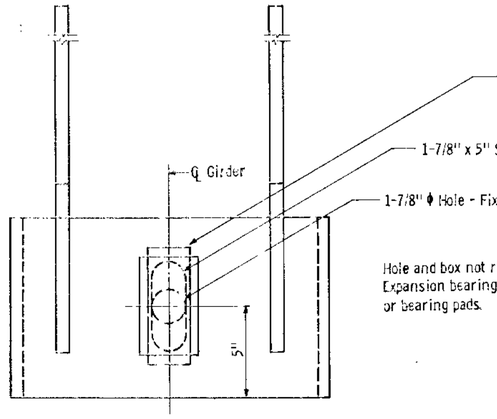
These dimensions may be modified to clear post tensioning tubes. Changes must be approved by the Engineer.



FRONT VIEW
(Area at hole shown as a section). Dimension "W" to be the width at the bottom flange of the girder.



SIDE VIEW
Showing placement in girder.



PLAN VIEW

NOTES:
Material to be Structural Steel per M. H. D. 3306.

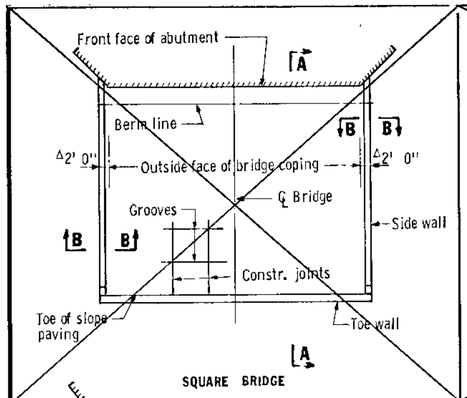
Sole plate to be hot dipped galvanized as per M. H. D. 3394 after fabrication.

Payment for sole plates to be included in price bid for Prestressed Concrete Girders.

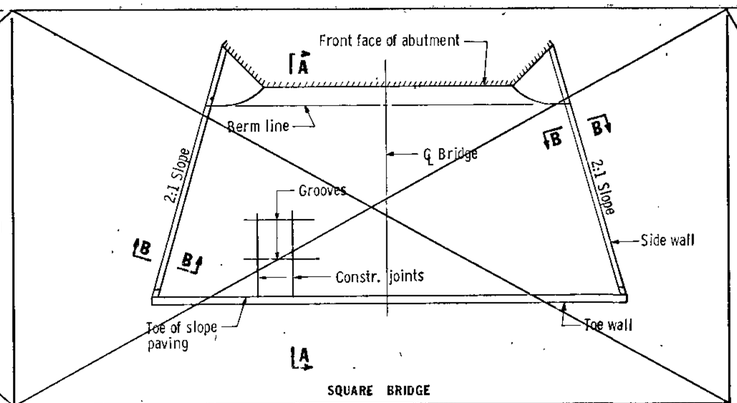
APPROVED Feb. 9, 1970 Bridge Design Engineer RESEARCH AND STANDARDS DIVISION	STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS **SOLE PLATE PRESTRESSED CONCRETE GIRDERS**	REVISION	DETAIL NO. **B303**

AS BUILT
10-16-73
B. Jahr

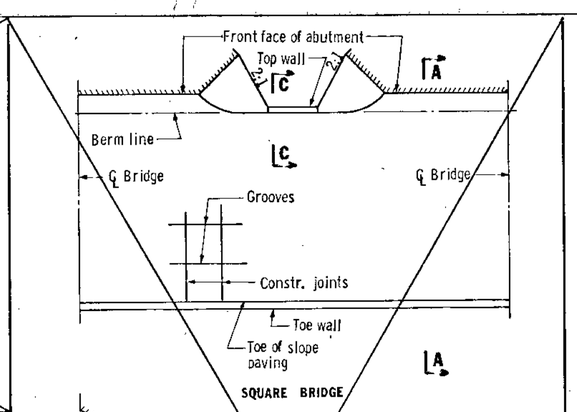
TITLE: DETAILS	DES: M.H.D. CHK: R.W.S.	DR: M.H.D. CHK R.W.S.	APPROVED: 12-21-71	Bridge No. 02522
	Sheet No. 30 of 35 Sheets			



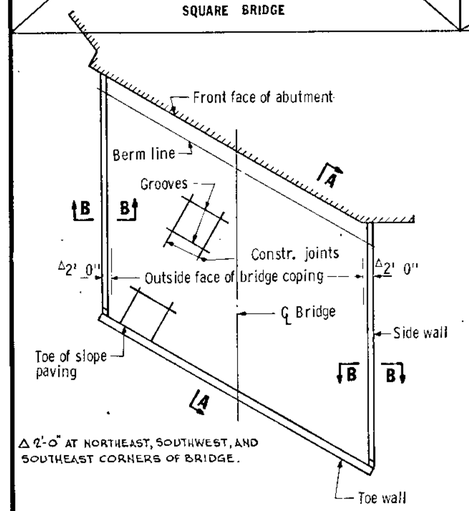
SQUARE BRIDGE



SQUARE BRIDGE



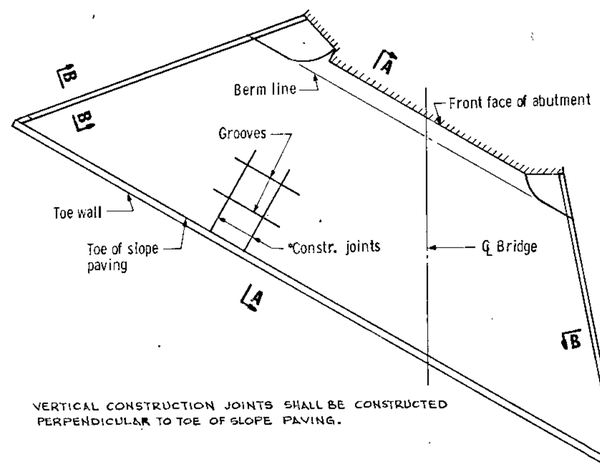
SQUARE BRIDGE



Δ 2'-0" AT NORTHEAST, SOUTHWEST, AND SOUTHEAST CORNERS OF BRIDGE.

SKEWED BRIDGE

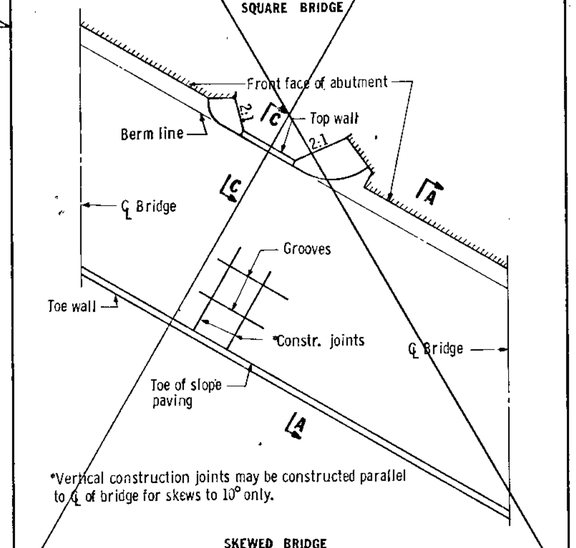
LAYOUTS FOR SLOPES 2:1 OR FLATTER



VERTICAL CONSTRUCTION JOINTS SHALL BE CONSTRUCTED PERPENDICULAR TO TOE OF SLOPE PAVING.

SKEWED BRIDGE

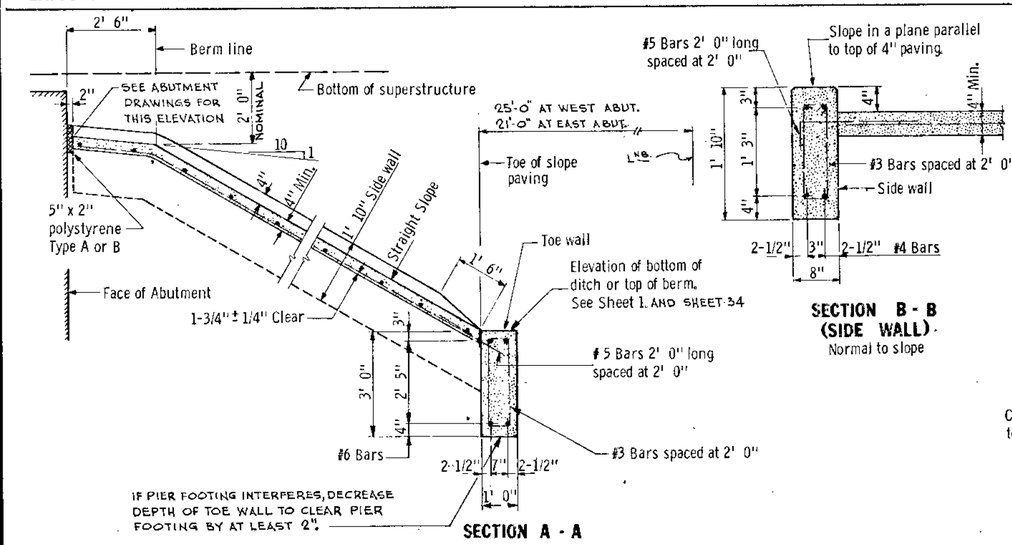
LAYOUTS FOR SLOPES STEEPER THAN 2:1



*Vertical construction joints may be constructed parallel to ℄ of bridge for skews to 10° only.

SKEWED BRIDGE

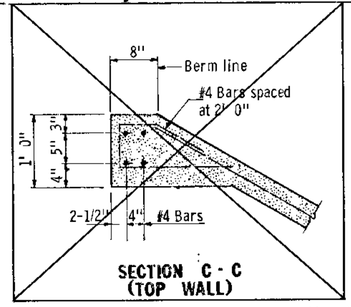
LAYOUTS FOR SLOPES STEEPER THAN 2:1 BETWEEN BRIDGES



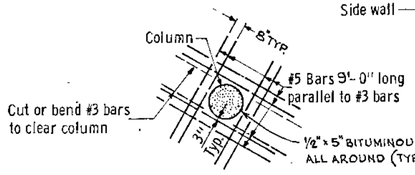
IF PIER FOOTING INTERFERES, DECREASE DEPTH OF TOE WALL TO CLEAR PIER FOOTING BY AT LEAST 2".

SECTION A - A

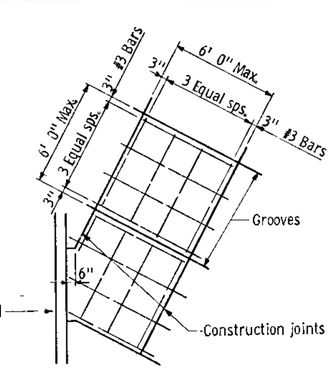
SECTION B - B (SIDE WALL)
Normal to slope



SECTION C - C (TOP WALL)



DETAIL WHERE PIER COLUMN EXTENDS THRU SLOPE PAVING



PAVING DETAIL

CONSTRUCTION NOTES

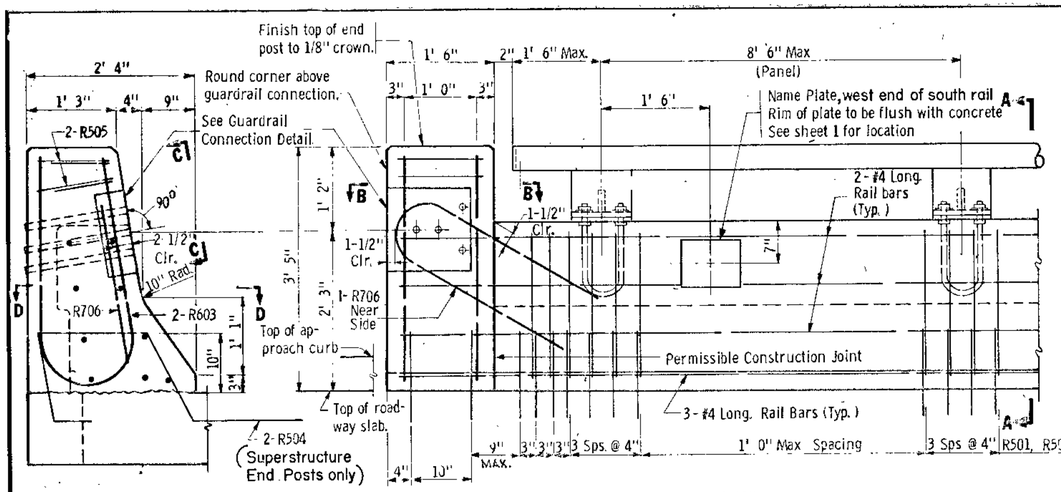
The slope paving shall be constructed of cast-in-place concrete, in accordance with the applicable sections of MHD 2401, and the following:

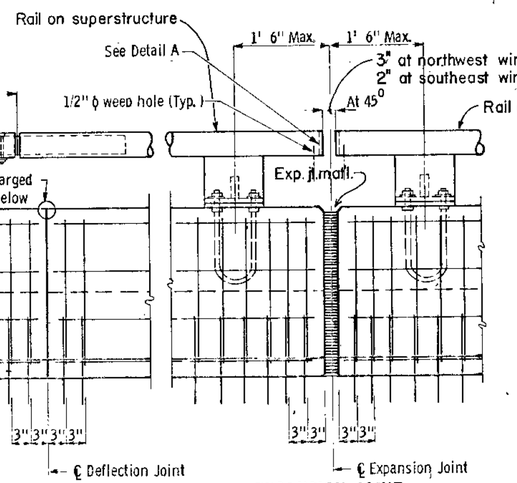
1. The concrete shall be Mix 3A34
   The concrete slump may be adjusted, subject to approval of the Engineer, as may be necessary to obtain the desired results.
2. Metal reinforcement shall conform to ASTM A615 grade 60. Lap 36 diameters at splices.
3. The slopes shall conform to the section shown on the General Plan and Elevation sheet in these Plans, except as otherwise provided for below: In the event the Engineer determines that a deficiency in material exists on the approach embankments constructed by others, he may order that the dimensions shown for the berm (see upper left of Section A-A) be revised to the extent necessary to construct the slope without hauling additional material. Such revision should, however, be limited to a decrease of not more than three inches, as applied to the height and/or width of the berm.
   In the event additional fill is required in order to conform to the slope lines staked by the Engineer, on approach embankments completed by others, the cost of furnishing, hauling, placing and compacting additional material ordered by the Engineer will be paid for as Extra Work.
   In the event the Engineer determines that an excess of material is present on approach embankments completed by others, he may order that the width of the berm be increased to the extent necessary to utilize such material, but not by more than 1' - 6".
   Excess material, beyond that which is required to dress the slope to true lines and to the grades staked by the Engineer, shall be used as directed by the Engineer for purposes such as widening the shoulders adjacent to the sidewalls, flaring out these shoulders, and shaping up adjacent side slopes. The disposal of excess material, except material deposited by the Contractor during excavation for substructure units or related work, which can not be incorporated into the slopes as hereinbefore defined, and which the Engineer directs to be hauled from the site, will be paid for as Extra Work.
   Any revision in berm grades and dimensions should be applied uniformly for the full length of the berm. Compaction will be required.
4. Toe and side walls shall be in place before casting remainder of slope paving.
5. Slope paving shall, in general, be poured in equal alternate vertical strips with a maximum width of 6 ft. The strips shall be cut into sections by grooves spaced at equal distances not exceeding 6 ft. and shall be at right angles to the strips. Other patterns for strips and grooves will be considered if requested by the contractor. Subgrade shall be moist when concrete is placed.
6. The forms shall be set to accurate grade and alignment, and shall be rigidly supported. Deviations of greater than 1/4" from a ten-foot straight edge shall be corrected.
7. Care shall be taken in placement of concrete so as not to disturb the grade on which it is placed, or to contaminate the concrete.
8. Sufficient hand spading and/or tamping shall be done to secure a dense paving relatively free of voids and honeycomb.
9. The top surface shall be struck off immediately after placing the concrete. When the concrete has set sufficiently to hold its shape, it shall be struck off again, after which it shall be given a final finish by hand floating with a cork or wooden float. The finished appearance shall be reasonably smooth and uniform. The finished concrete shall not vary more than 3/8" from a ten-foot straight edge.
10. All edges shall be finished with an edger or 1/2" V strip. Grooves shall be cut using a sidewalk grooving tool. The trails left by the flanges of these tools shall be removed by floating.
11. The concrete shall be cured for at least 72 hours after casting by any of the methods outlined in MHD 2401. 3G, including membrane curing compound.
12. Reinforcement shall be supported on concrete bricks or mortar blocks, or other support satisfactory to the Engineer.
13. For correct position of abutment wings and piers, see bridge plans.
14. Where piers extend thru slope paving, provide 1/2" x 5" bit. felt around piers.
15. Slope paving will be measured by area of the top surface bounded by the outside edges of the toewall and sidewalls and the front face of the abutment.
16. Payment for furnishing and placing the slope paving will be made as Item No. 401.601 at the Contract price per square yard, which price shall be compensation in full for all costs of furnishing all materials, equipment, tools, and labor necessary for the satisfactory completion of work, except as otherwise provided for in Item 3.
17. THE SLOPE OF THE SLOPE PAVING VARIES. USE "LAYOUTS FOR SLOPES 2:1 OR FLATTER", IN GENERAL FOR NORTHEAST, SOUTHWEST, AND SOUTHEAST CORNERS. USE "LAYOUTS FOR SLOPES STEEPER THAN 2:1", IN GENERAL FOR NORTHWEST CORNER. LIMITS OF SLOPE PAVING AS SHOWN ON SHEET 1 WILL GOVERN.

AS BUILT
10-16-73
B Jack

Fig. 5-397.301
Jan. 11, 1971

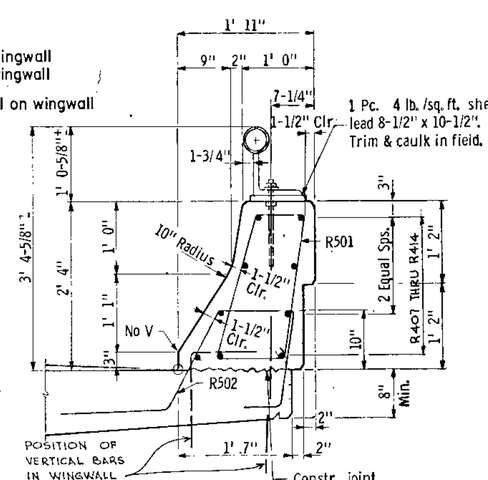
TITLE: CLASS B SLOPE PAVING UNDER BRIDGES	DES: M.H.D.	DR: M.H.D./W.K.	APPROVED: 12-21-71	Bridge No. 02522
	CHK: R.J.M.	CHK: R.J.M.	Sheet No. 29 of 35 Sheets	





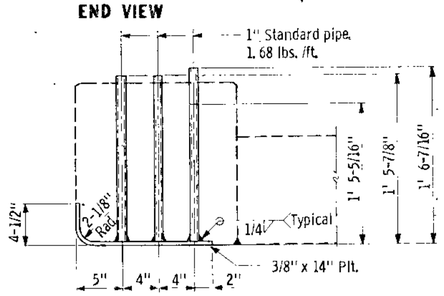
DEFLECTION JOINT

EXPANSION JOINT

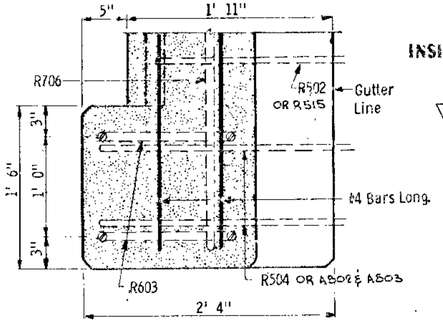


SECTION A-A (SUPERSTRUCTURE)

END VIEW

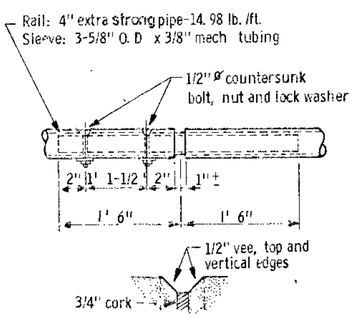


SECTION B-B

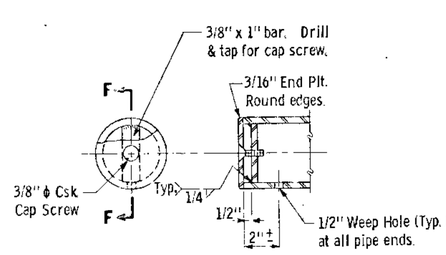


SECTION D-D

INSIDE ELEVATION OF RAILING

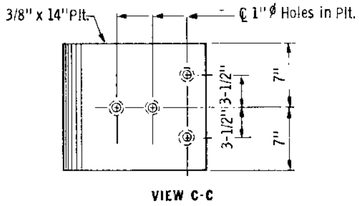


DEFLECTION JOINT DETAIL



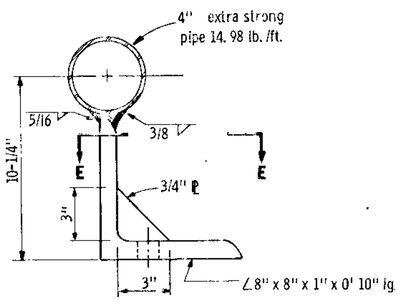
SECTION F-F

DETAIL "A"

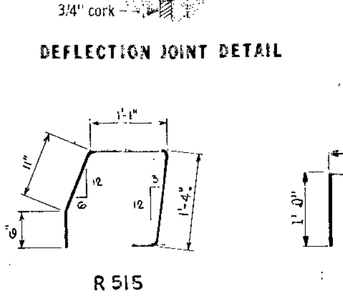


VIEW C-C

GUARDRAIL CONNECTION DETAIL
GALVANIZE AFTER FABRICATION PER M.H.D. 3394
Est. Wt. 37 Lbs.

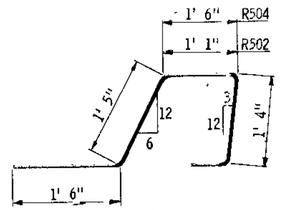


POST DETAIL

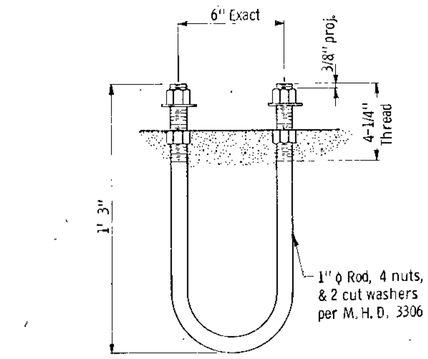


R 515

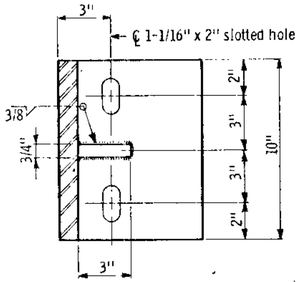
R505



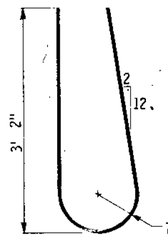
R502 & R504



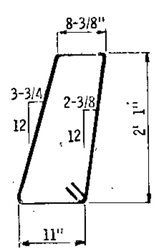
RAILPOST ANCHORAGE



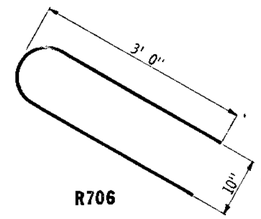
SECTION E-E



R603



R501



R706

BILL OF REINFORCEMENT FOR RAILING				
BAR	NO.	LENGTH	SHAPE	LOCATION
R501	692	6' 11"	Bent	Rail Vertical
R502	638	5' 10"	Bent	Rail Vertical
R603	8	7' 1"	Bent	End Vertical
R504	4	6' 3"	Bent	End Vertical
R505	16	3' 1"	Bent	End Long.
R706	4	6' 6"	Bent	End at G. R. Conn.
R407	9	18'-7"	STR.	RAIL, LONG, ABUT.
R408	9	15'-7"	STR.	RAIL, LONG, ABUT.
R409	9	26'-1"	STR.	RAIL, LONG.
R410	72	24'-1"	STR.	RAIL, LONG.
R411	9	26'-5"	STR.	RAIL, LONG.
R412	9	23'-10"	STR.	RAIL, LONG.
R413	54	22'-10"	STR.	RAIL, LONG.
R414	9	22'-5"	STR.	RAIL LONG.
R515	54	4'-4"	BENT	WINGWALL RAIL

GENERAL NOTES

Railbase to be Concrete Mix No. 3Y46A, special.

Pipe shall comply with M. H. D. 3362. The 4" ϕ pipe shall have a minimum yield point of 35000 P. S. I.

Structural steel shall comply with M. H. D. 3306.

Finish all edges of railbase and end post with 1/2" vee, except where otherwise noted.

Anchorages shall be accurately placed to provide correct alignment of railing. Set normal to grade.

Galvanize pipe and structural steel per M. H. D. 3394 after fabrication. Galvanize bolts and anchorages per M. H. D. 3392

See superstructure sheet for joint spacing.

Maximum spacing of concrete deflection joints shall be 30' 0". Railpipe deflection joints shall be placed in same panel as concrete deflection joints.

Price bid for ornamental metal railing includes the post anchorages and all material above railbase. Guardrail connection to be included in weight of structural steel M. H. D. 3306

Length of ornamental metal railing for payment is measured end to end of pipe.

Railing quantities are included in summary of quantities for superstructure, or in summary of quantities for abutments

AS BUILT
10-16-73
B. Jack

Fig. 5-397.109
June 2, 1971

TITLE: CONCRETE RAILING (TYPE G) WITH PIPE AND INTEGRAL END POST

DES: M.H.D./ [illegible] DR: M.H.D./ W.W. APPROVED: 12-21-71
CHK: MODY CHK: [illegible]

Sheet No. 28 of 35 Sheets

Bridge No. 02522

SUMMARY OF QUANTITIES FOR SUPERSTRUCTURE

CONCRETE MIX NO. 3Y43 A	669	CU. YD.
CONCRETE MIX NO. 3Y46A (SPECIAL)	50	CU. YD.
REINFORCEMENT BARS	176,280	LBS.
STRUCTURAL STEEL (M.H.D.3306)	2040	LBS.
ORNAMENTAL METAL RAILING (TYPE G)	433	LIN.FT.
FIXED BEARING ASSEMBLIES (TYPE 1)	8	UNITS
EXP. BEARING ASSEMBLIES (TYPE 1 WITHOUT LUGS)	24	UNITS
EXP. BEARING ASSEMBLIES (TYPE 1 WITH LUGS)	16	UNITS
PRESTRESSED CONCRETE GIRDERS: TYPE 60-106	1	
TYPE 60-100	1	
TYPE 60-95	1	
TYPE 60-86	4	
TYPE 60-76	2	
TYPE 60-64	4	
TYPE 60-59	5	
TYPE 60-51	6	
PREFORMED JOINT FILLER (SEE LIST)		
BRIDGE NAME PLATE (DETAIL B103)	ONE PLATE	

QUANTITY NOTES

1. THE ABOVE SUMMARY INCLUDES RAILING QUANTITIES, FOR THE PORTION OF RAILING ON THE SUPERSTRUCTURE.
2. STRUCTURAL STEEL, AS TABULATED ABOVE, INCLUDES PROTECTION ANGLES AND GUARDRAIL CONNECTIONS.
3. THE VOLUME OF CONCRETE MIX NO. 3Y43A, FOR PAYMENT, WILL BE COMPUTED USING AN AVERAGE STOOL HEIGHT OF 2".
4. PREFORMED JOINT FILLER IS INCLUDED FOR PAYMENT WITH OTHER ITEMS.
5. BRIDGE NAME PLATE IS INCLUDED FOR PAYMENT WITH OTHER ITEMS. NAME PLATE LETTERING:

CITY OF
COON RAPIDS
MINNESOTA
BRIDGE 02522
1972

6. SIXTEEN SHIMS ¾ x 6½ x 3'-4", DRILLED FOR ANCHOR RODS, SHALL BE PROVIDED AND INCLUDED FOR PAYMENT WITH EXP. BEARING ASSEMBLIES (TYPE 1 WITHOUT LUGS)
7. CONCRETE MIX NO. 3Y46A (SPECIAL) INCLUDES RAILBASES AND END POSTS.
   CONCRETE MIX NO. 3Y43A INCLUDES SLAB, MEDIAN, AND DIAPHRAGMS.

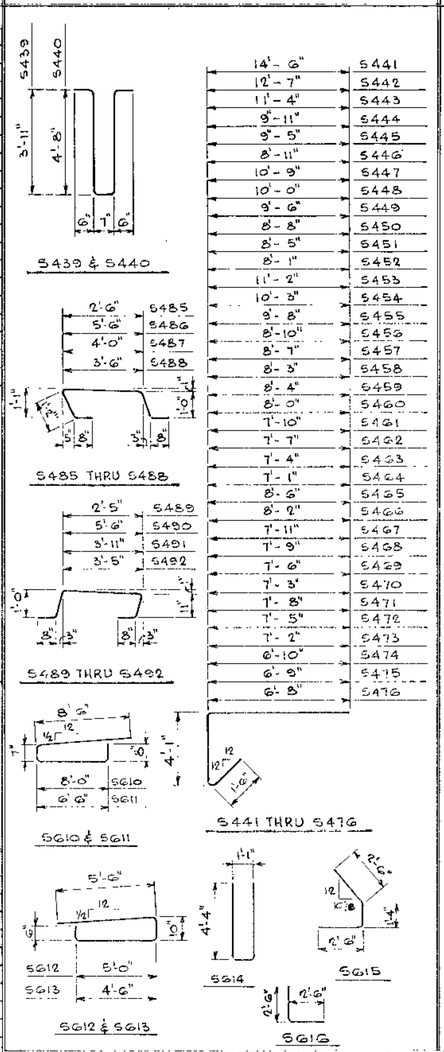
PREFORMED JOINT FILLER LIST

TYPE	NO.	SIZE	LOCATION	SEE SH. NO.
POLYSTYRENE	1	5"x 2"x ABT. 205 FT.	BET. SL. PV. & W. ABUT.	29
POLYSTYRENE	1	5"x 2"x ABT. 114 FT.	BET. SL. PV. & E. ABUT.	29
BIT. FELT	16	½"x 5"x ABT. 13½ FT.	BET. SL. PV & PIER COLS	29
BIT. FELT	1	½"x 16"x ABT. 175 FT.	ON W. ABUT. BACKWALL	21
BIT. FELT	1	½"x 18"x ABT. 6 FT.	ON W. RBUT. BACKWALL	21
BIT. FELT	1	½"x 16"x ABT. 113 FT.	ON E. ABUT. BACKWALL	21
POLYSTYRENE	1	1"x 4"x ABT. 212 FT.	ON ℄ OF MEDIAN	24
CORK	16	¾"x 1'-5"(IRREG) x 2'-4"	DEFLECTION JTS. IN RAILING	28
CORK	1	1"x 15"x ABT. 19 FT.	BET. APP. SLAB & R.W. WING WALL	2
CORK	1	1"x 18"x ABT. 16 FT.	BET. APP. SLAB ℄S E. WINGWALL	2
CORK	1	3"x 1'-9"(IRREG) x 3'-4"	EXP. JT. RAILING & N.W. WINGWALL	2
CORK	1	2"x 1'-5"(IRREG) x 3'-8"	EXP. JT.-RAILING & S.E. WINGWALL	2
CORK	1	3"x 15" x 4'-0"	BET. DECK & APP. SLAB - W ABUT.	2
CORK	1	2"x 16" x ABT. 88 FT.	BET. DECK & APP. SLAB - N.W.	2
CORK	1	2"x 21" x ABT. 14 FT.	MEDIAN @ W. ABUT.	24
CORK	1	2"x 15" x ABT. 71 FT.	BET. DECK & APP. SLAB - S.W.	2
CORK	1	2"x 18" x ABT. 1 FT.	BET. WING & S.W. END POST	2
CORK	1	2"x 18"x ABT. 53 FT.	BET. DECK & APP. SLAB - N.E.	2
CORK	1	2"x 24"x ABT. 9 FT.	MEDIAN @ E. ABUT.	25
CORK	1	2"x 18"x ABT. 40 FT.	BET. DECK & APP. SLAB - S.E.	2
CORK	1	2"x 18"x ABT. 1 FT.	BET. WING & N.E. END POST	2

JOINT FILLER NOTES

1. CORK SHALL COMPLY WITH M.H.D. 3702 AND A.A.S.H.O. M-153, TYPE 2.
2. SECURE CORK JOINT FILLER WITH 11 GAGE COPPER NAILS, OF SUITABLE LENGTH, AT ABOUT 18" CENTERS. CORK AND NAILS SHALL BE INCLUDED IN PRICE BID FOR OTHER ITEMS. TRIM CORK TO BOTTOM OF "V" AND SEAL WITH CONCRETE JOINT SEALER.
3. POLYSTYRENE SHALL BE TYPE A OR B. SEE SPECIAL PROVISIONS.
4. BITUMINOUS FELT SHALL COMPLY WITH M.H.D. 3702
5. THE JOINT FILLER LIST IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. ANY ADDITIONAL JOINT FILLER REQUIRED AS SHOWN ON THE PLANS, SHALL BE FURNISHED BY THE CONTRACTOR WITH NO ADDITIONAL COMPENSATION.

BENDING DIAGRAMS



BILL OF REINFORCEMENT FOR SUPERSTRUCTURE

BENT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
S439	531	9'- 1"		END DIAPHS. TRANS.
S440	578	10'- 7"		INT. DIAPHS. TRANS.
S441	4	19'-11"		DIAPH. D1 LONG.
S442	4	18'- 0"		" D2 "
S443	4	16'- 9"		" D3 "
S444	4	15'- 4"		" D4 "
S445	4	14'-10"		" D5 "
S446	4	14'- 4"		" D6 "
S447	4	16'- 2"		" D7 "
S448	4	15'- 5"		" D8 "
S449	4	14'-11"		" D9 "
S450	4	14'- 1"		" D10 "
S451	4	13'-10"		" D11 "
S452	4	13'- 6"		" D12 "
S453	4	16'- 7"		" D13 "
S454	4	15'- 8"		" D14 "
S455	4	15'- 1"		" D15 "
S456	4	14'- 8"		" D16 "
S457	4	14'- 0"		" D17 "
S458	4	13'- 8"		" D18 "
S459	4	13'- 9"		" D19 "
S460	4	13'- 5"		" D20 "
S461	4	13'- 8"		" D21 "
S462	4	13'- 0"		" D22 "
S463	4	12'- 9"		" D23 "
S464	4	12'- 6"		" D24 "
S465	4	13'-11"		" D25 "
S466	4	13'- 7"		" D26 "
S467	4	13'- 4"		" D27 "
S468	4	13'- 2"		" D28 "
S469	4	12'-11"		" D29 "
S470	4	12'- 8"		" D30 "
S471	4	13'- 1"		" D31 "
S472	4	12'-10"		" D32 "
S473	4	12'- 7"		" D33 "
S474	4	12'- 3"		" D34 "
S475	4	12'- 2"		" D35 "
S476	4	12'- 1"		DIAPH. D36 LONG.
S485	205	5'- 8"		MEDIAN, SOUTHBOUND LANE
S486	1	2'- 8"		" " "
S487	1	1'- 2"		" " "
S488	1	6'- 8"		MEDIAN, SOUTHBOUND LANE
S489	209	5'- 5"		MEDIAN, NORTHBOUND LANE
S490	1	2'- 6"		" " "
S491	1	6'-11"		" " "
S492	1	6'- 5"		MEDIAN, NORTHBOUND LANE
S610	85	17'- 3"		SLAB END
S611	55	15'- 9"		SLAB END
S612	55	11'- 4"		SLAB END
S613	35	10'-10"		SLAB END
S614	4	9'- 5"		SLAB CORNER
S615	2	6'- 2"		SLAB CORNER
S616	2	4'- 10"		SLAB CORNER

STRAIGHT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
S301	208	43'- 9"		SLAB, LONG. TOP
S302	NOTE 1	NOTE 1		" " "
S303	260	45'- 1"		" " "
S304	NOTE 2	NOTE 2		SLAB, LONG. TOP
S401	2	31'- 0"		DIAPH. D1 LONG.
S402	2	26'- 9"		" D2 "
S403	2	23'-11"		" D3 "
S404	2	20'-10"		" D4 "
S405	2	19'- 7"		" D5 "
S406	2	18'- 6"		" D6 "
S407	2	22'-11"		" D7 "
S408	2	21'- 3"		" D8 "
S409	2	19'-11"		" D9 "
S410	2	18'- 2"		" D10 "
S411	2	17'- 4"		" D11 "
S412	2	16'- 7"		" D12 "
S413	2	23'- 3"		" D13 "
S414	2	21'- 5"		" D14 "
S415	2	20'- 0"		" D15 "
S416	2	18'- 3"		" D16 "
S417	2	17'- 6"		" D17 "
S418	2	16'- 9"		" D18 "
S419	2	17'- 3"		" D19 "
S420	2	16'- 6"		" D20 "
S421	2	16'- 0"		" D21 "
S422	2	15'- 2"		" D22 "
S423	2	14'- 5"		" D23 "
S424	2	14'- 6"		" D24 "
S425	2	17'- 5"		" D25 "
S426	2	16'- 8"		" D26 "
S427	2	16'- 2"		" D27 "
S428	2	15'- 5"		" D28 "
S429	2	14'-11"		" D29 "
S430	2	14'- 8"		" D30 "
S431	2	15'- 4"		" D31 "
S432	2	14'-10"		" D32 "
S433	2	14'- 1"		" D33 "
S434	2	13'- 11"		" D34 "
S435	2	13'- 9"		" D35 "
S436	2	13'- 5"		DIAPH. D36 LONG
S437	188	15'- 0"		SLAB LONG. AT PIERS
S438	188	21'- 0"		SLAB LONG. AT PIERS
S477	4	8'- 2"		INT. DIAPH. LONG.
S478	8	8'- 4"		" " "
S479	24	8'- 6"		" " "
S480	26	8'- 8"		" " "
S481	26	8'-10"		" " "
S482	16	9'- 0"		" " "
S483	4	9'- 2"		" " "
S484	4	9'- 4"		INT. DIAPH. LONG.
S493	25	43'- 6"		MEDIAN, SOUTHBOUND LANE
S494	25	44'- 6"		MEDIAN, NORTHBOUND LANE
S501	4	5'- 6"		INT. DIAPH. LONG.
S502	8	9'- 8"		" " "
S503	24	9'- 10"		" " "
S504	26	10'- 0"		" " "
S505	28	10'- 2"		" " "
S506	14	10'- 4"		" " "
S507	4	10'- 6"		" " "
S508	4	10'- 8"		INT. DIAPH. LONG.
S509	212	44'- 0"		SLAB, LONG BOTTOM
S510	NOTE 3	NOTE 3		" " "
S511	265	43'- 3"		" " "
S512	NOTE 4	NOTE 4		SLAB, LONG BOTTOM

STRAIGHT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
S601	1164	40'- 0"		SLAB TRANSVERSE
S602	NOTE 5	NOTE 5		" "
S603	NOTE 6	NOTE 6		" "
S604	NOTE 7	NOTE 7		" "
S605	NOTE 8	NOTE 8		SLAB TRANSVERSE
S606	4	31'- 0"		SLAB END
S607	4	27'- 6"		" "
S608	4	4'- 0"		" "
S609	6	33'- 0"		SLAB END
S801	2	19'- 5"		DIAPH. D5 LONG.
S802	2	18'- 4"		" D6 "
S803	2	19'- 9"		" D9 "
S804	2	18'- 0"		" D10 "
S805	2	17'- 2"		" D11 "
S806	2	16'- 5"		" D12 "
S807	2	19'- 10"		" D15 "
S808	2	18'- 1"		" D16 "
S809	2	17'- 4"		" D17 "
S810	2	16'- 7"		" D18 "
S811	2	17'- 1"		" D19 "
S812	2	16'- 4"		" D20 "
S813	2	15'- 10"		" D21 "
S814	2	15'- 0"		" D22 "
S815	2	14'- 7"		" D23 "
S816	2	14'- 4"		" D24 "
S817	2	17'- 3"		" D25 "
S818	2	16'- 6"		" D26 "
S819	2	16'- 0"		" D27 "
S820	2	15'- 3"		" D28 "
S821	2	14'- 9"		" D29 "
S822	2	14'- 6"		" D30 "
S823	2	15'- 2"		" D31 "
S824	2	14'- 8"		" D32 "
S825	2	14'- 5"		" D33 "
S826	2	13'- 9"		" D34 "
S827	2	13'- 7"		" D35 "
S828	2	13'- 3"		DIAPH. D36 LONG.
S829	4	8'- 2"		INT. DIAPH. LONG.
S830	8	8'- 4"		" " "
S831	24	8'- 6"		" " "
S832	26	8'- 8"		" " "
S833	26	8'- 10"		" " "
S834	16	9'- 0"		" " "
S835	4	9'- 2"		" " "
S836	4	9'- 4"		INT. DIAPH. LONG.
S901	2	23'- 9"		DIAPH. D3 LONG.
S902	2	20'- 8"		" D4 "
S903	2	22'- 3"		" D7 "
S904	2	21'- 1"		" D8 "
S905	2	23'- 1"		" D13 "
S906	2	21'- 3"		DIAPH. D14 LONG.
S1001	2	30'- 10"		DIAPH. D1 LONG.
S1002	2	26'- 7"		DIAPH. D2 LONG.
T601	32	7'- 4"		DIAPH. THRU GIRDER
T801	12	7'- 6"		" " "
T802	4	5'- 0"		" " "
T803	12	5'- 8"		" " "
T804	8	6'- 6"		" " "
T805	8	7'- 0"		" " "
T806	4	7'- 8"		" " "
T807	12	9'- 0"		" " "
T901	8	7'- 8"		DIAPH. THRU GIRDER

NOTES

1. FOR S302, NUMBER IS ONE SERIES OF 52 BARS; LENGTH VARIES FROM 43'-6" TO 44'-0" IN 6" INCREMENTS.
2. FOR S304, NUMBER IS ONE SERIES OF 52 BARS; LENGTH VARIES FROM 9'-3" TO 45'-3" IN 8" INCREMENTS.
3. FOR S510, NUMBER IS ONE SERIES OF 53 BARS; LENGTH VARIES FROM 18'-9" TO 44'-9" IN 6" INCREMENTS.
4. FOR S512, NUMBER IS ONE SERIES OF 53 BARS; LENGTH VARIES FROM 9'-6" TO 44'-2" IN 8" INCREMENTS.
5. FOR S602, NUMBER IS FOUR SERIES OF 72 BARS; LENGTH VARIES FROM 2'-8" TO 20'-5" IN 3" INCREMENTS.
6. FOR S603, NUMBER IS FOUR SERIES OF 64 BARS; LENGTH VARIES FROM 2'-1⅝" TO 21'-2" IN 3⅝" INCREMENTS.
7. FOR S604, NUMBER IS FOUR SERIES OF 110 BARS; LENGTH VARIES FROM 2'-6" TO 20'-8" IN 2" INCREMENTS.
8. FOR S605, NUMBER IS FOUR SERIES OF 166 BARS; LENGTH VARIES FROM 3'-11¾" TO 21'-2" IN ¼" INCREMENTS.

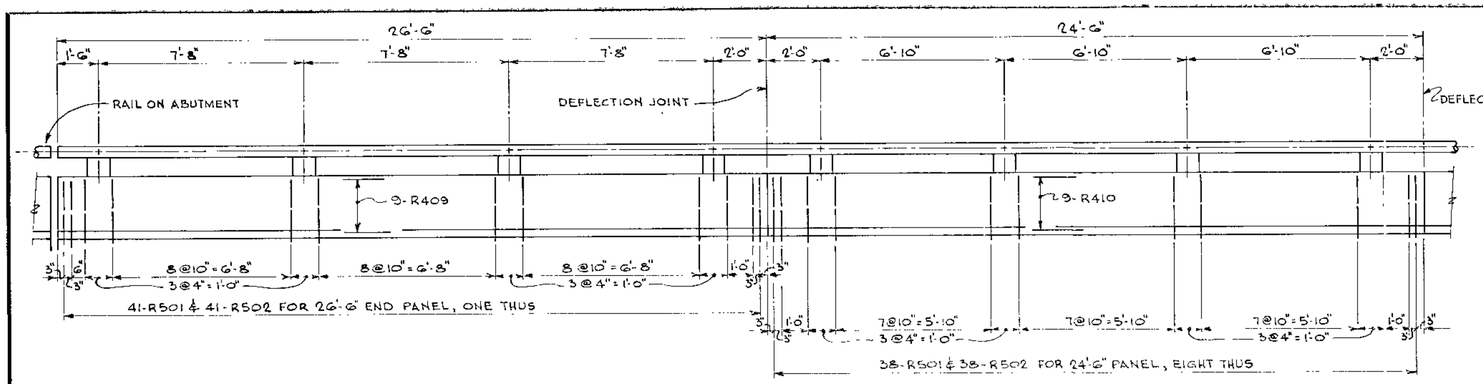
AS BUILT
10-16-13
B. Jahn

TITLE: SUPERSTRUCTURE BAR LIST & ESTIMATED QUANTITIES

DES. [illegible] DR. W.K. APPROVED
CHK: MDPY CHK. [illegible]

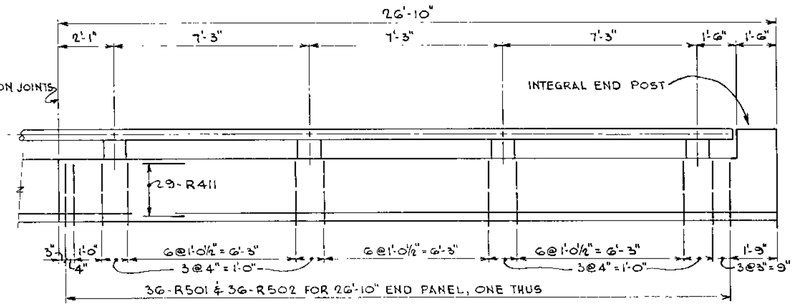
Sheet No. 27 of 35 Sheets

Bridge No. 02522



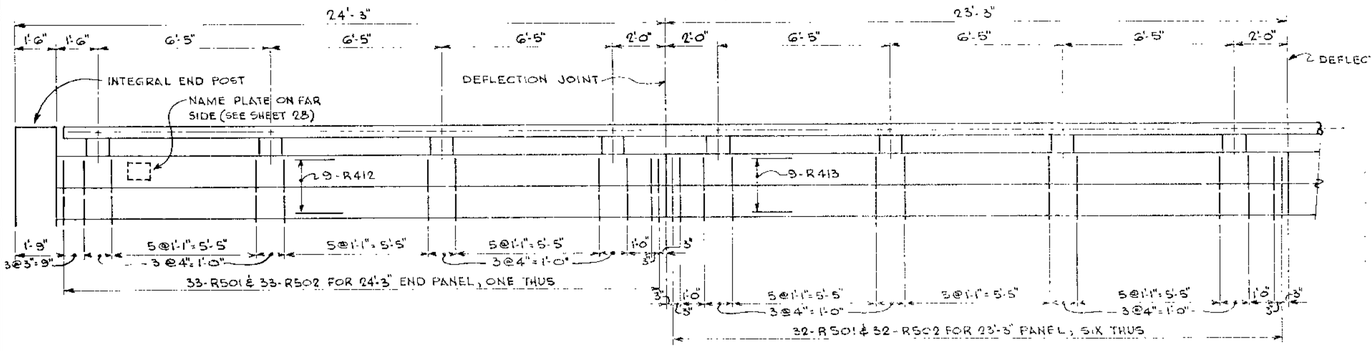
PARTIAL ELEVATION OF NORTH RAILING

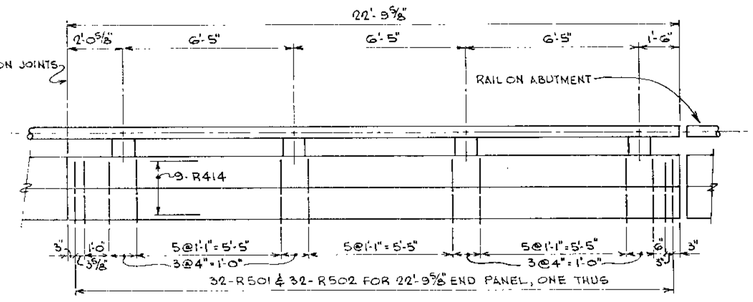
(VIEWED TOWARD THE NORTH) SCALE: 3/8" = 1'-0"



NOTES

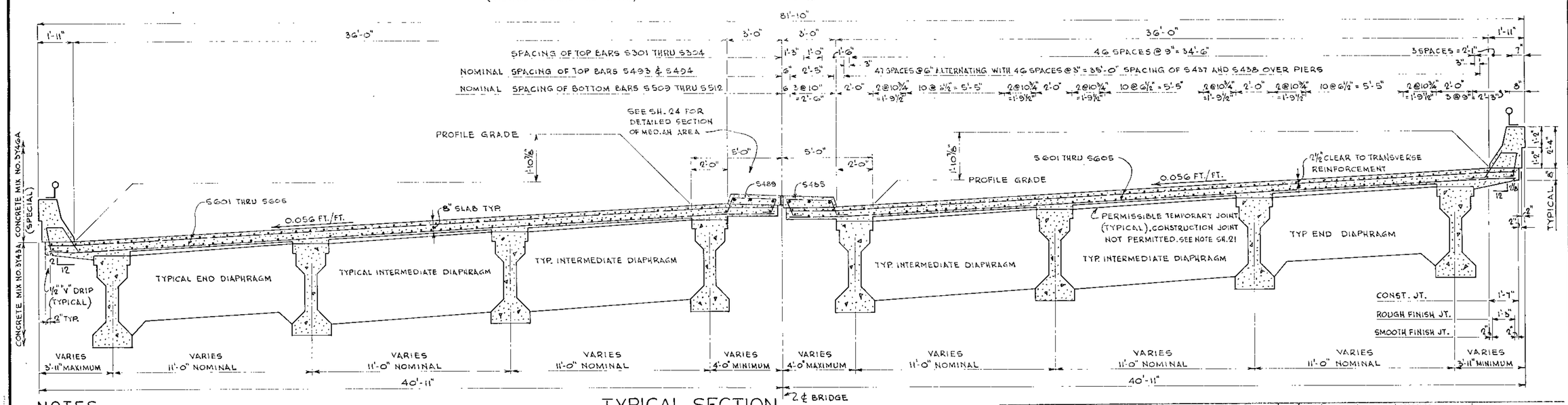
1. R501, R502, R409 THRU R414, ARE ALL INCLUDED IN BAR LIST FOR RAILING, SHEET 28
2. SEE SECTION A-A, SHEET 28, FOR PLACEMENT OF BARS R501, R502, R409 THRU R414
3. BARS FOR INTEGRAL END POSTS ARE BILLED ON ELEVATION VIEW AND END VIEW, SHEET 28, AND ARE INCLUDED IN BAR LIST FOR RAILING, SHEET 28.
4. RAILBASES SHALL NOT BE PLACED UNTIL ENTIRE DECK SLAB HAS BEEN PLACED.





PARTIAL ELEVATION OF SOUTH RAILING

(VIEWED TOWARD THE NORTH) SCALE: 3/8" = 1'-0"



TYPICAL SECTION

SCALE: 3/8" = 1'-0"

NOTES

1. SEE SECTION ALONG FASCIA GIRDER, SHEET 21, AND TABULATION, SHEET 23, FOR DIAPHRAGM BARS.
2. ON TYPICAL SECTION, BAR SPACINGS ARE SYMMETRICAL ABOUT ℄ BRIDGE.
3. WORK THIS SHEET WITH SHEETS 21 THRU 25, 27 AND 28.

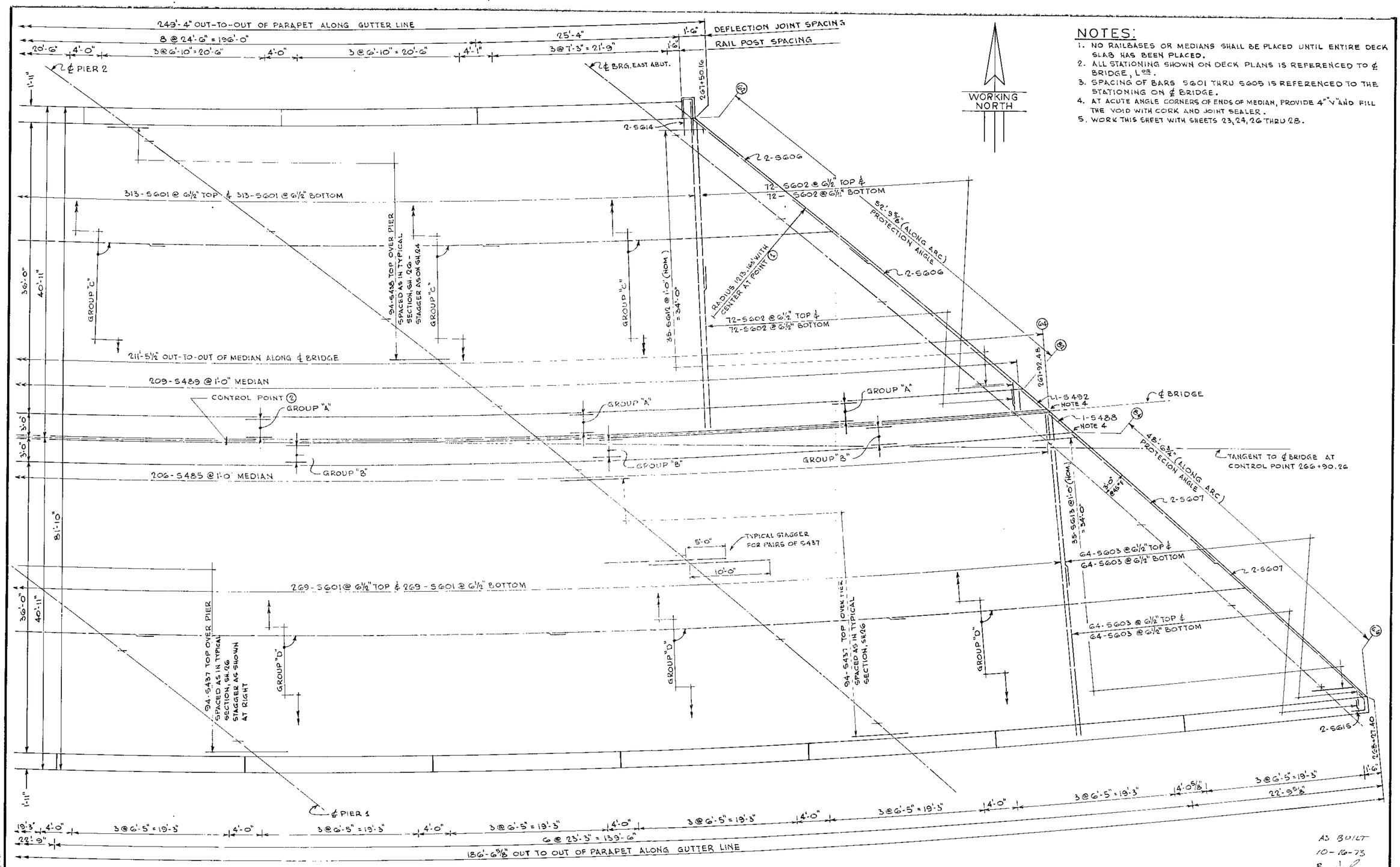
AS BUILT 10-16-78 B. Jahn

TITLE: DECK SECTION AND RAILING ELEVATIONS

DES: RJM DR: W.K. CHK: MODY CHK: RJM APPROVED.

Sheet No. 26 of 35 Sheets

Bridge No. 02522



NOTES:

1. NO RAILBASES OR MEDIANS SHALL BE PLACED UNTIL ENTIRE DECK SLAB HAS BEEN PLACED.
2. ALL STATIONING SHOWN ON DECK PLANS IS REFERENCED TO ℄ BRIDGE, L^{ORG}.
3. SPACING OF BARS S601 THRU S605 IS REFERENCED TO THE STATIONING ON ℄ BRIDGE.
4. AT ACUTE ANGLE CORNERS OF ENDS OF MEDIAN, PROVIDE 4" "V" AND FILL THE VOID WITH CORK AND JOINT SEALER.
5. WORK THIS SHEET WITH SHEETS 23, 24, 26 THRU 28.

AS BUILT
10-16-73
B. Mody

PART DECK PLAN

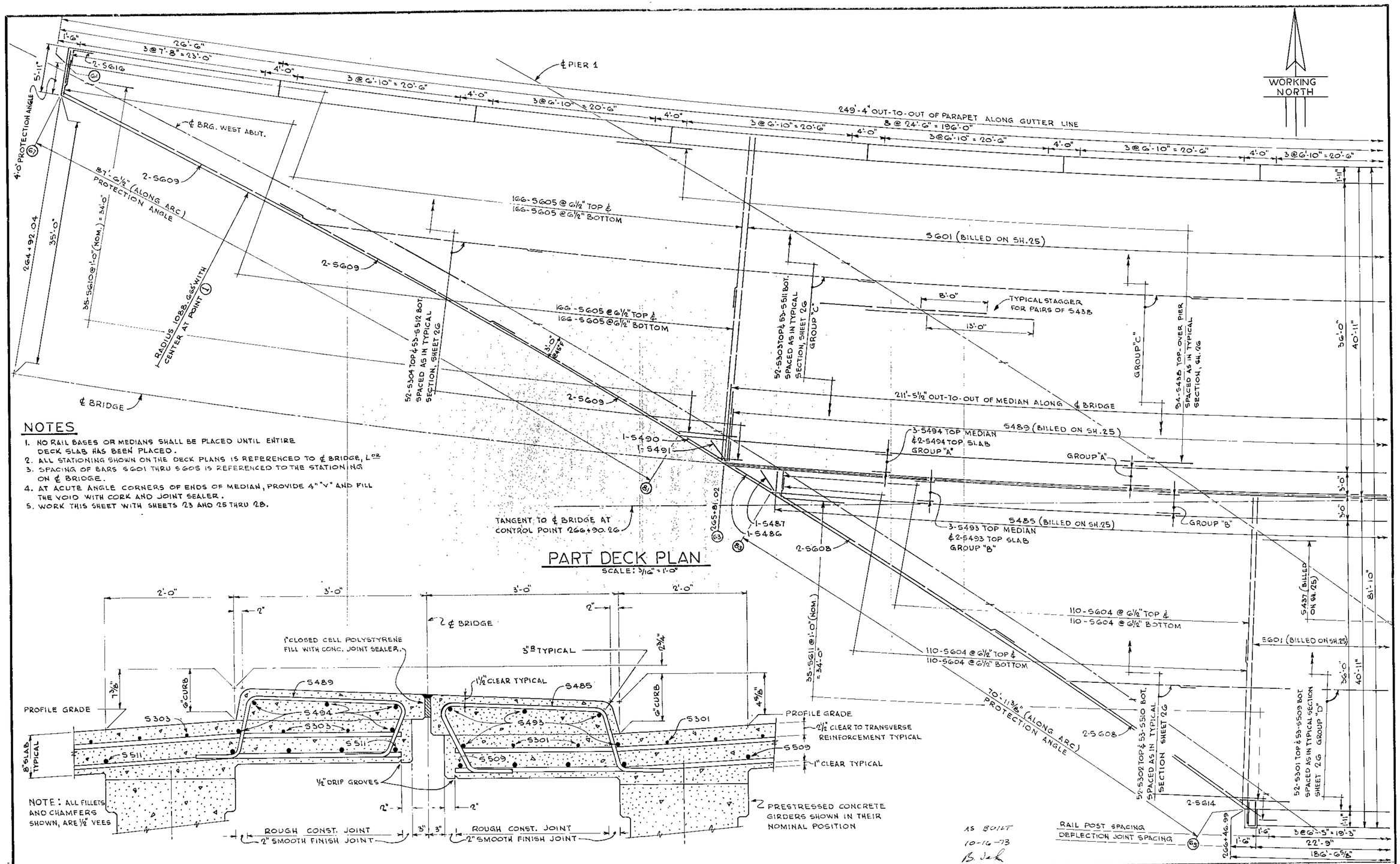
SCALE: 3/16" = 1'-0"

TITLE: PART DECK PLAN-E.

DES: [illegible] DR: W.K. APPROVED
CHK: B MODY CHK: [illegible]

Sheet No. 25 of 35 Sheets

Bridge No. 02522



NOTES

1. NO RAIL BASES OR MEDIANS SHALL BE PLACED UNTIL ENTIRE DECK SLAB HAS BEEN PLACED.
2. ALL STATIONING SHOWN ON THE DECK PLANS IS REFERENCED TO ℄ BRIDGE, L^OR
3. SPACING OF BARS S601 THRU S605 IS REFERENCED TO THE STATIONING ON ℄ BRIDGE.
4. AT ACUTE ANGLE CORNERS OF ENDS OF MEDIAN, PROVIDE 4" "V" AND FILL THE VOID WITH CORK AND JOINT SEALER.
5. WORK THIS SHEET WITH SHEETS 23 AND 25 THRU 28.

PART DECK PLAN

SCALE: 3/16" = 1'-0"

NOTE: ALL FILLETS AND CHAMFERS SHOWN, ARE ½" VEES

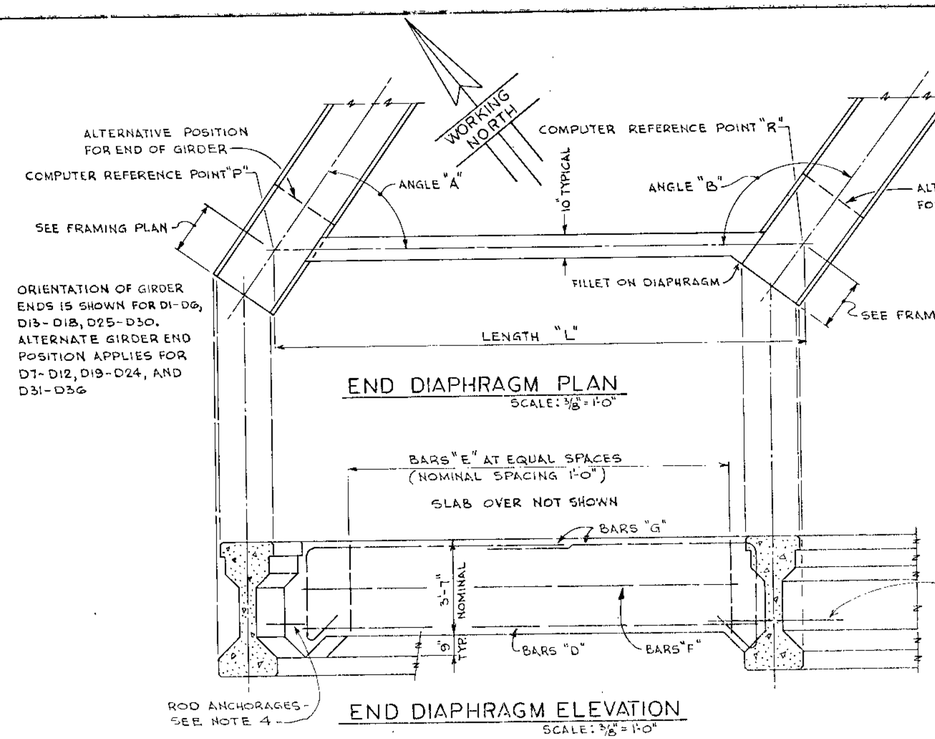
TYPICAL SECTION OF MEDIAN

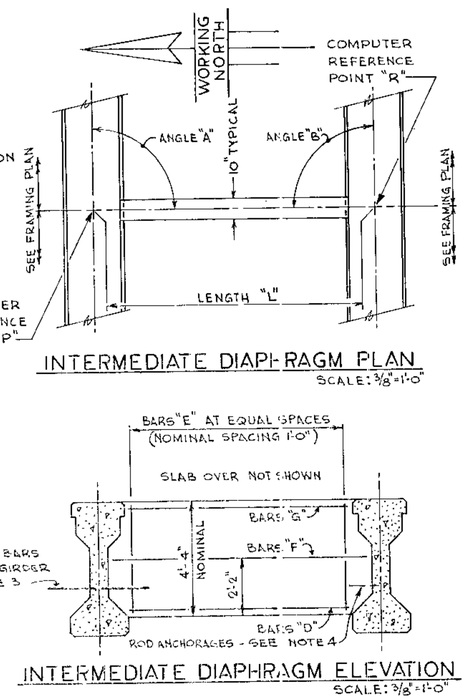
SCALE: 1½" = 1'-0"

AS BUILT 10-16-73 B. Jah

TITLE:	DES: RMcT	DR: W.K.	APPROVED:	Bridge No.
PART DECK PLAN — W.	CHK. MODY	CHK: RMcT		02522

Sheet No. 24 of 35 Sheets





INTERMEDIATE DIAPHRAGM DATA

LOCATION	DIAPHRAGM MARK	COMP. REF. POINT "P"	COMP. REF. POINT "R"	LENGTH "L"	ANGLE "A"	ANGLE "B"	BARS "D"	BARS "E"	BARS "F"	BARS "G"
SPAN 1 NORTH	D 37	201	206	11'- 5 7/8"	90°-00'	88°-36'	2-S835	11-S440	2-S507	2-S483
	D 38	202	207	11'- 1 3/8"	90°-00'	88°-36'	2-S833	10-S440	2-S505	2-S481
	D 39	203	208	10'- 8 3/4"	90°-00'	88°-36'	2-S830	10-S440	2-S502	2-S478
	D 40	208	209	11'- 3 5/8"	91°-24'	87°-24'	2-S834	11-S440	2-S506	2-S482
	D 41	204	210	10'- 9 1/2"	90°-00'	88°-48'	2-S831	10-S440	2-S503	2-S479
	D 42	210	211	11'- 2 5/8"	91°-12'	87°-44'	2-S833	11-S440	2-S505	2-S481
	D 43	205	212	10'- 9 7/8"	90°-00'	88°-56'	2-S831	10-S440	2-S503	2-S479
SPAN 1 SOUTH	D 44	217	213	11'- 2 1/8"	89°-07'	90°-00'	2-S833	11-S440	2-S505	2-S481
	D 45	218	219	10'- 10 3/4"	88°-16'	90°-50'	2-S831	10-S440	2-S503	2-S479
	D 46	219	214	11'- 1 3/4"	89°-10'	90°-00'	2-S833	10-S440	2-S505	2-S481
	D 47	220	221	10'- 11 1/8"	88°-25'	90°-46'	2-S832	10-S440	2-S504	2-S480
	D 48	221	215	11'- 1 3/4"	89°-14'	90°-00'	2-S833	10-S440	2-S505	2-S481
	D 49	222	216	10'- 10 7/8"	89°-14'	90°-00'	2-S831	10-S440	2-S503	2-S479
SPAN 2 NORTH	D 50	223	230	11'- 3"	90°-00'	89°-01'	2-S836	11-S440	2-S508	2-S484
	D 51	224	231	11'- 4 3/4"	90°-00'	88°-01'	2-S834	11-S440	2-S506	2-S482
	D 52	231	235	11'- 7 1/2"	90°-59'	88°-08'	2-S836	11-S440	2-S508	2-S484
	D 53	225	232	11'- 1"	90°-00'	89°-01'	2-S832	10-S440	2-S504	2-S480
	D 54	232	236	11'- 4 1/8"	90°-59'	88°-08'	2-S834	11-S440	2-S506	2-S482
	D 55	236	240	11'- 6 5/8"	91°-52'	87°-19'	2-S835	11-S440	2-S507	2-S483
	D 56	226	233	10'- 9 1/8"	90°-00'	89°-01'	2-S831	10-S440	2-S503	2-S479
	D 57	233	237	11'- 1"	90°-59'	88°-08'	2-S832	10-S440	2-S504	2-S480
	D 58	237	241	11'-3 3/4"	91°-52'	87°-19'	2-S834	11-S440	2-S506	2-S482
	D 59	227	234	10'- 6"	90°-00'	89°-01'	2-S828	10-S440	2-S501	2-S477
	D 60	234	238	10'- 9 3/4"	90°-59'	88°-08'	2-S831	10-S440	2-S503	2-S479
	D 61	238	242	11'- 0 3/4"	91°-52'	87°-19'	2-S832	10-S440	2-S504	2-S480
	D 62	228	239	10'- 6 3/4"	90°-00'	89°-01'	2-S829	10-S440	2-S501	2-S477
	D 63	239	243	10'- 9 7/8"	90°-53'	88°-18'	2-S831	10-S440	2-S503	2-S479
	D 64	229	244	10'- 7 3/8"	90°-00'	89°-11'	2-S830	10-S440	2-S502	2-S478
SPAN 2 SOUTH	D 65	250	245	11'- 4 7/8"	89°-17'	90°-00'	2-S834	11-S440	2-S506	2-S482
	D 66	251	252	11'- 2 1/4"	88°-37'	90°-40'	2-S833	11-S440	2-S505	2-S481
	D 67	252	246	11'- 4"	89°-20'	90°-00'	2-S834	11-S440	2-S506	2-S482
	D 68	253	254	10'- 11 5/8"	87°-59'	91°-18'	2-S832	10-S440	2-S504	2-S480
	D 69	254	255	11'- 1 1/2"	88°-42'	90°-38'	2-S833	10-S440	2-S505	2-S481
	D 70	255	247	11'- 3"	89°-22'	90°-00	2-S833	11-S440	2-S505	2-S481
SPAN 3 NORTH	D 71	256	257	10'- 8 5/8"	87°-59'	91°-18'	2-S830	10-S440	2-S502	2-S478
	D 72	257	258	10'- 10 5/8"	88°-42'	90°-38'	2-S831	10-S440	2-S503	2-S479
	D 73	258	248	11'- 0 5/8"	89°-22'	90°-00'	2-S832	10-S440	2-S504	2-S480
	D 74	259	249	10'- 9 1/4"	89°-22'	90°-00'	2-S831	10-S440	2-S503	2-S479
	D 75	260	265	11'- 3 3/8"	90°-00'	89°-17'	2-S834	11-S440	2-S506	2-S482
	D 76	261	266	11'- 1 1/4"	90°-00'	89°-17'	2-S833	10-S440	2-S505	2-S481
	D 77	266	267	11'- 3"	90°-43'	88°-37'	2-S834	11-S440	2-S505	2-S482
	D 78	262	268	10'- 11 1/4"	90°-00'	89°-17'	2-S832	10-S440	2-S504	2-S480
	D 79	268	269	11'- 1 1/8"	90°-43'	88°-37'	2-S833	10-S440	2-S505	2-S481
SPAN 3 SOUTH	D 80	269	270	11'- 2 7/8"	91°-23'	87°-59'	2-S833	11-S440	2-S505	2-S481
	D 81	263	271	10'- 9"	90°-00'	88°-17'	2-S830	10-S440	2-S502	2-S478
	D 82	271	272	10'- 11 1/8"	90°-43'	88°-37'	2-S832	10-S440	2-S504	2-S480
	D 83	272	273	11'- 0 7/8"	91°-23'	87°-59'	2-S832	10-S440	2-S504	2-S480
	D 84	264	274	10'- 10 1/4"	90°-00'	89°-22'	2-S831	10-S440	2-S503	2-S479
	D 85	279	275	11'- 2"	89°-26'	90°-00'	2-S833	10-S440	2-S505	2-S481
	D 86	280	281	10'- 11 7/8"	88°-23'	91°-03'	2-S832	10-S440	2-S504	2-S480
	D 87	281	282	11'- 1"	88°-57'	90°-31'	2-S832	10-S440	2-S504	2-S480
	D 88	282	276	11'- 2 1/8"	89°-29'	90°-00'	2-S833	11-S440	2-S505	2-S481
	D 89	283	284	10'- 9 3/4"	88°-23'	91°-03'	2-S831	10-S440	2-S503	2-S479
	D 90	284	285	10'- 11 1/8"	88°-57'	90°-31'	2-S832	10-S440	2-S504	2-S480
	D 91	285	277	11'- 0 1/4"	89°-29'	90°-00'	2-S832	10-S440	2-S504	2-S480
	D 92	286	278	10'- 10 1/2"	89°-29'	90°-00'	2-S831	10-S440	2-S503	2-S479

END DIAPHRAGM DATA

LOCATION	DIAPHRAGM MARK	COMP. REF. POINT "P"	COMP. REF. POINT "R"	LENGTH "L"	ANGLE "A"	ANGLE "B"	BARS "D"	BARS "E"	BARS "F"	BARS "G"
W. ABUT.	D 1	101	102	33'-7 1/8"	20°-04'	158°-32'	2-S1001	25-S439	2-S401	4-S441
	D 2	102	103	29'-0 3/8"	25°-06'	155°-41'	2-S1002	21-S439	2-S402	4-S442
	D 3	103	104	26'-0 3/8"	25°-46'	155°-10'	2-S901	19-S439	2-S403	4-S443
	D 4	105	106	22'-7 3/4"	29°-47'	149°-19'	2-S902	17-S439	2-S404	4-S444
	D 5	106	107	21'-3 3/8"	31°-50'	147°-20'	2-S801	16-S439	2-S405	4-S445
	D 6	107	108	20'-1 3/4"	33°-45'	145°-23'	2-S802	15-S439	2-S406	4-S446
PIER 1	D 7	111	112	25'-2 7/8"	23°-38'	154°-58'	2-S903	19-S439	2-S407	4-S447
	D 8	112	113	23'-3 1/2"	26°-16'	153°-32'	2-S904	18-S439	2-S408	4-S448
	D 9	113	114	21'-9 1/2"	28°-36'	150°-20'	2-S803	16-S439	2-S409	4-S449
	D10	115	116	19'-10"	32°-10'	146°-56'	2-S804	15-S439	2-S410	4-S450
	D11	116	117	18'-11 1/8"	34°-05'	145°-08'	2-S805	14-S439	2-S411	4-S451
	D12	117	118	18'-2 5/8"	35°-48'	143°-25'	2-S806	14-S439	2-S412	4-S452
	D13	121	122	25'-2 7/8"	27°-56'	151°-06'	2-S905	19-S439	2-S413	4-S453
	D14	122	123	23'-2 3/4"	30°-09'	148°-58'	2-S906	18-S439	2-S414	4-S454
	D15	123	124	21'-8 3/4"	32°-12'	146°-59'	2-S807	16-S439	2-S415	4-S455
	D16	125	126	19'-8 1/2"	35°-26'	143°-51'	2-S808	15-S439	2-S416	4-S456
	D17	126	127	18'-11"	37°-09'	142°-11'	2-S809	14-S439	2-S417	4-S457
	D18	127	128	18'-2 1/8"	38°-42'	140°-36'	2-S810	14-S439	2-S418	4-S458
PIER 2	D19	131	132	18'-11 7/8"	32°-36'	146°-26'	2-S811	14-S439	2-S419	4-S459
	D20	132	133	18'-2 5/8"	34°-28'	144°-38'	2-S812	14-S439	2-S420	4-S460
	D21	133	134	17'-6 3/4"	36°-14'	142°-57'	2-S813	13-S439	2-S421	4-S461
	D22	135	136	16'-7 3/4"	38°-01'	140°-16'	2-S814	13-S439	2-S422	4-S462
	D23	136	137	16'-2 3/8"	40°-32'	138°-48'	2-S815	12-S439	2-S423	4-S463
	D24	137	138	15'-3 5/8"	41°-59'	137°-24'	2-S816	12-S439	2-S424	4-S464
	D25	141	142	18'-10 1/2"	36°-48'	142°-29'	2-S817	14-S439	2-S425	4-S465
	D26	142	143	18'-1 3/4"	38°-20'	140°-54'	2-S818	14-S439	2-S426	4-S466
	D27	143	144	17'-6 1/4"	39°-58'	139°-25'	2-S819	13-S439	2-S427	4-S467
	D28	145	146	16'-7 7/8"	42°-31'	136°-55'	2-S820	13-S439	2-S428	4-S468
	D29	146	147	16'-2"	43°-53'	135°-34'	2-S821	12-S439	2-S429	4-S469
	D30	147	148	15'-9 1/4"	45°-13'	134°-17'	2-S822	12-S439	2-S430	4-S470
E. ABUT.	D31	151	152	16'-8"	39°-20'	139°-56'	2-S823	13-S439	2-S431	4-S471
	D32	152	153	16'-2 5/8"	40°-50'	138°-30'	2-S824	12-S439	2-S432	4-S472
	D33	153	154	15'-9 7/8"	42°-16'	137°-06'	2-S825	12-S439	2-S433	4-S473
	D34	155	156	15'-2 5/8"	44°-35'	134°-50'	2-S826	11-S439	2-S434	4-S474
	D35	156	157	14'-11"	45°-52'	133°-35'	2-S827	11-S439	2-S435	4-S475
	D36	157	158	14'-7 3/4"	47°-07'	132°-23'	2-S828	11-S439	2-S436	4-S476

NOTES:

1. WORK THIS SHEET WITH SHEETS 21 AND 22
2. ALL REINFORCEMENT NOTED IN THESE TABLES IS INCLUDED IN BAR LIST ON SHEET 27.
3. REINFORCEMENT BARS THROUGH HOLES IN GIRDER WEBS ARE BILLED ON SHEETS 21 & 22. THEY ARE PREFIXED "T" AND ARE INCLUDED IN BAR LIST FOR SUPERSTRUCTURE, SH. 27.
4. ROD ANCHORAGES IN FASCIA GIRDERS AND AT NON-CONTINUOUS DIAPHRAGMS IN INTERIOR GIRDERS, ARE DETAILED ON SHEETS 13 THRU 20, AND ARE BILLED ON SHEETS 21 & 22.

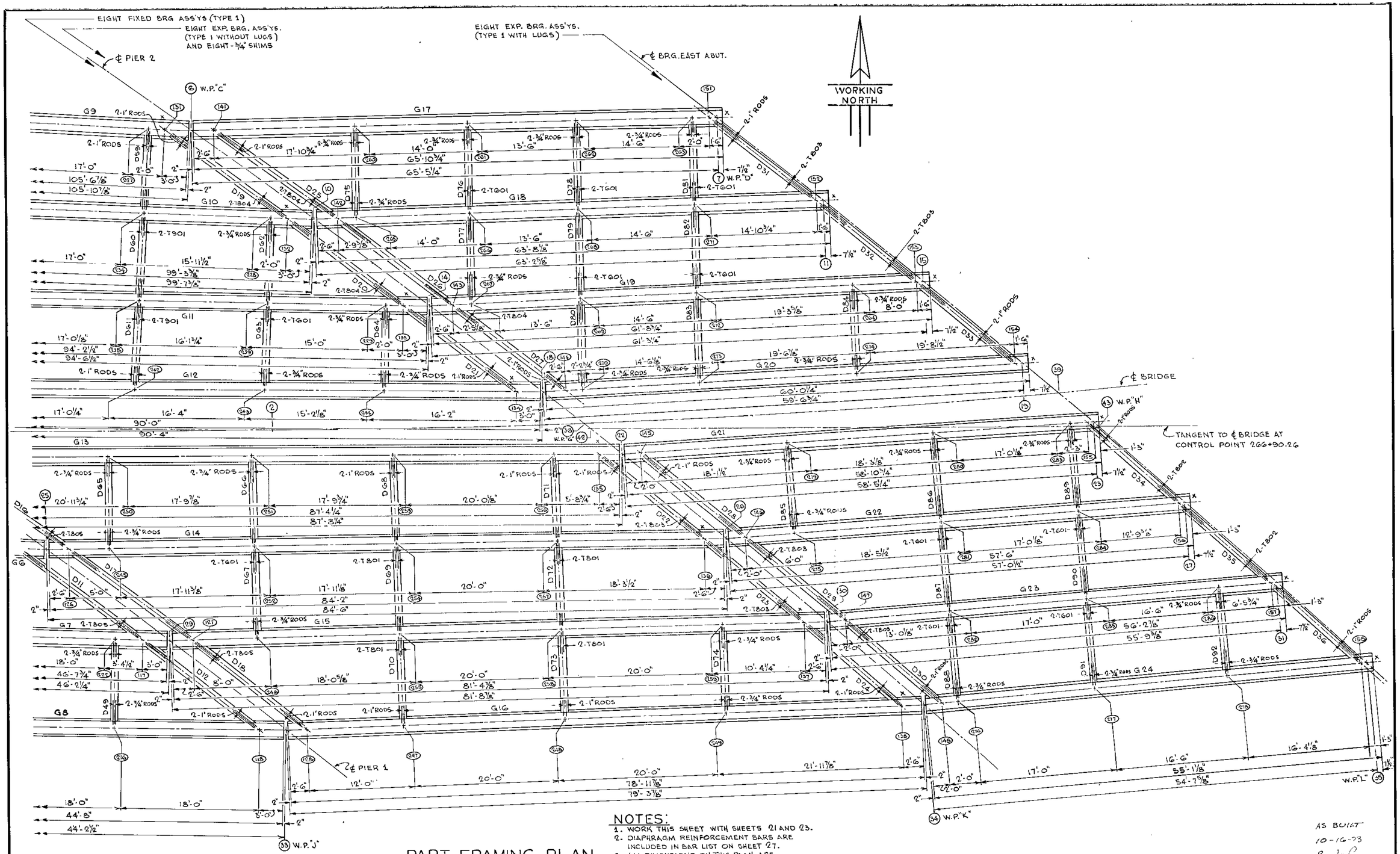
AS BUILT
10-16-78
B. Johns

TITLE: DIAPHRAGMS AND FRAMING DETAILS

DES: RMM DR W.W. APPROVED.
CHK: MODY CHK. RMM

Sheet No. 23 of 35 Sheets

Bridge No. 02522



PART FRAMING PLAN

SCALE: 3/16" = 1'-0"

NOTES:

1. WORK THIS SHEET WITH SHEETS 21 AND 23.
2. DIAPHRAGM REINFORCEMENT BARS ARE INCLUDED IN BAR LIST ON SHEET 27.
3. ALL DIMENSIONS ON THIS PLAN ARE HORIZONTAL. SEE SHEETS 13 THRU 20 FOR TRUE LENGTHS OF GIRDERS ALONG SLOPE.
4. THE "T" SERIES OF REINFORCEMENT BARS ARE DIAPHRAGM BARS THRU GIRDER WEBS, AND ARE INCLUDED IN BAR LIST FOR SUPERSTRUCTURE, SH. 27

AS BUILT
10-16-73
B. Jahn

TITLE: PART FRAMING PLAN-E.	DES: RJMcF	DR. W.K.	APPROVED:	Bridge No. 02522
	CHK: MODY	CHK: RJMcF		
	Sheet No. 22 of 35 Sheets			

NOTES:

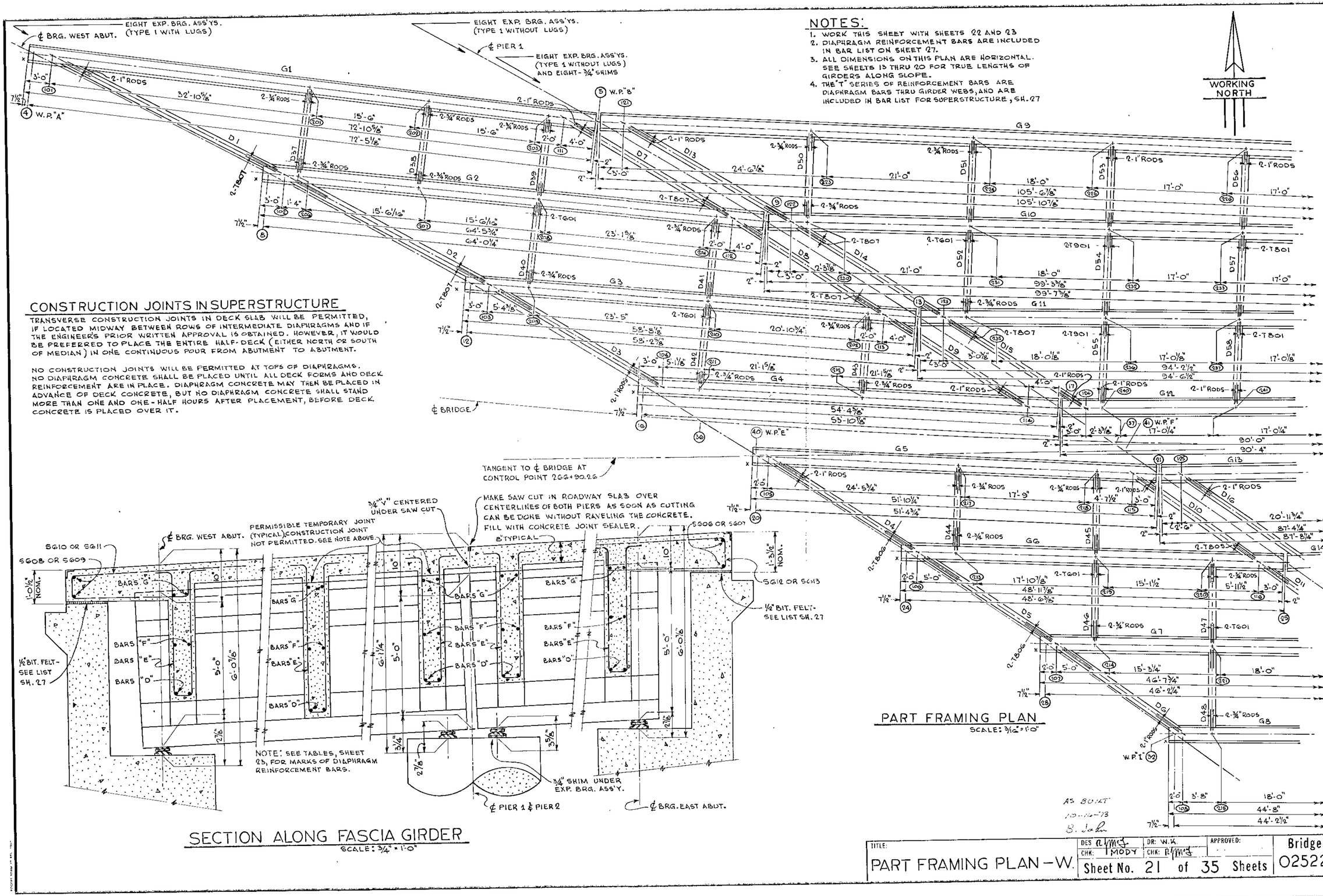
1. WORK THIS SHEET WITH SHEETS 22 AND 23
2. DIAPHRAGM REINFORCEMENT BARS ARE INCLUDED IN BAR LIST ON SHEET 27.
3. ALL DIMENSIONS ON THIS PLAN ARE HORIZONTAL. SEE SHEETS 13 THRU 20 FOR TRUE LENGTHS OF GIRDERS ALONG SLOPE.
4. THE "T" SERIES OF REINFORCEMENT BARS ARE DIAPHRAGM BARS THRU GIRDER WEBS, AND ARE INCLUDED IN BAR LIST FOR SUPERSTRUCTURE, SH. 27

WORKING NORTH

CONSTRUCTION JOINTS IN SUPERSTRUCTURE

TRANSVERSE CONSTRUCTION JOINTS IN DECK SLAB WILL BE PERMITTED, IF LOCATED MIDWAY BETWEEN ROWS OF INTERMEDIATE DIAPHRAGMS AND IF THE ENGINEER'S PRIOR WRITTEN APPROVAL IS OBTAINED. HOWEVER, IT WOULD BE PREFERRED TO PLACE THE ENTIRE HALF-DECK (EITHER NORTH OR SOUTH OF MEDIAN) IN ONE CONTINUOUS POUR FROM ABUTMENT TO ABUTMENT.

NO CONSTRUCTION JOINTS WILL BE PERMITTED AT TOPS OF DIAPHRAGMS. NO DIAPHRAGM CONCRETE SHALL BE PLACED UNTIL ALL DECK FORMS AND DECK REINFORCEMENT ARE IN PLACE. DIAPHRAGM CONCRETE MAY THEN BE PLACED IN ADVANCE OF DECK CONCRETE, BUT NO DIAPHRAGM CONCRETE SHALL STAND MORE THAN ONE AND ONE-HALF HOURS AFTER PLACEMENT, BEFORE DECK CONCRETE IS PLACED OVER IT.



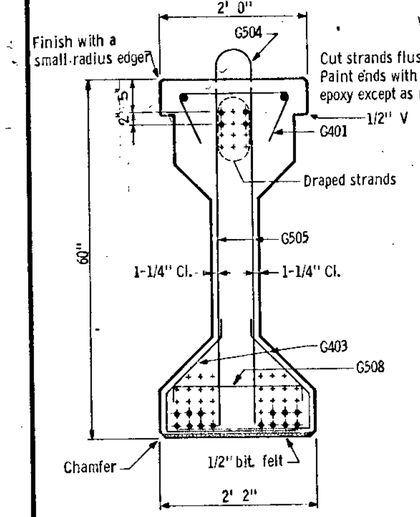
SECTION ALONG FASCIA GIRDER

SCALE: ¾" = 1'-0"

PART FRAMING PLAN

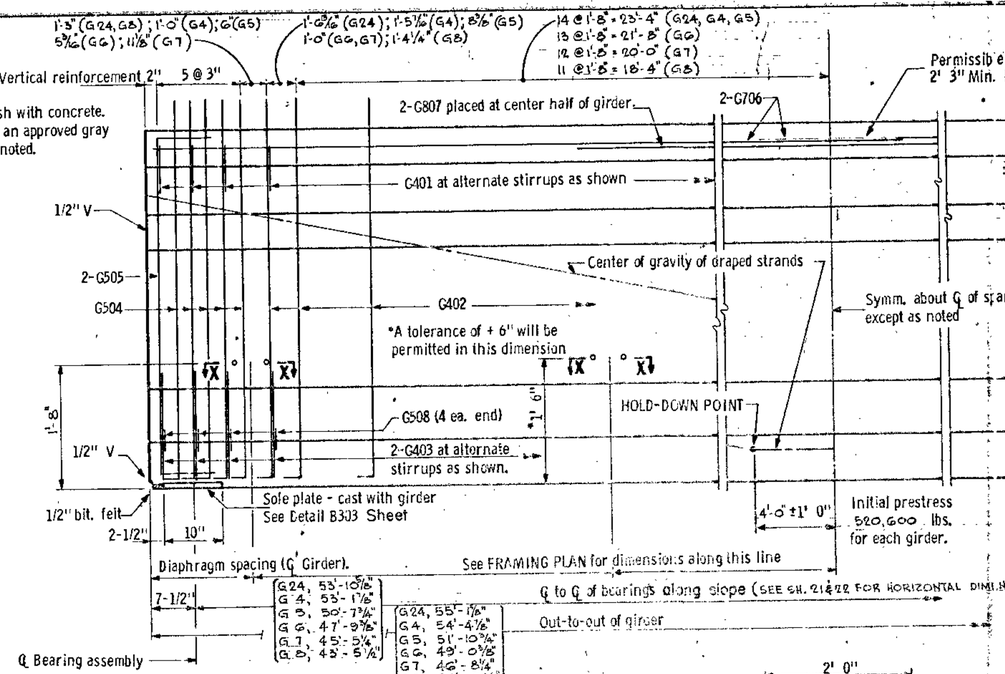
SCALE: 3/16" = 1'-0"

TITLE: PART FRAMING PLAN – W.	DES: R.M.S. CHK: MODY	DR: W.K. CHK: R.M.S.	APPROVED:
Sheet No. 21 of 35 Sheets			Bridge No. 02522

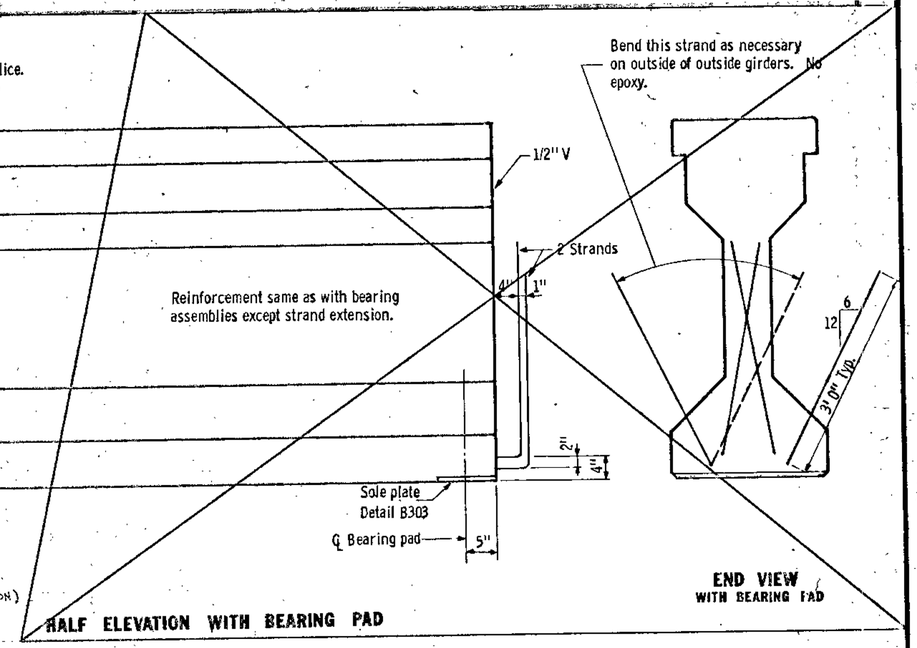


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY

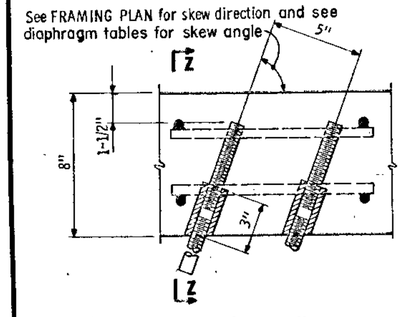


HALF ELEVATION WITH BEARING ASSEMBLY

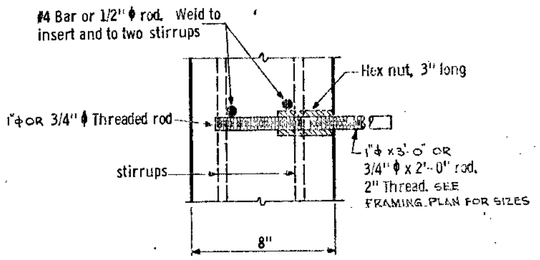


END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

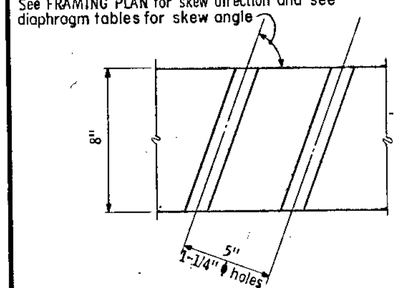


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



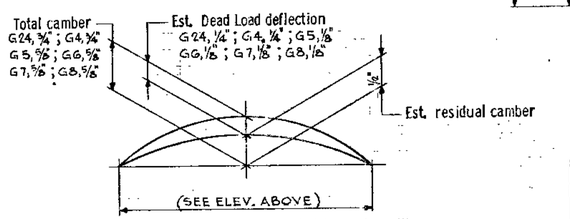
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



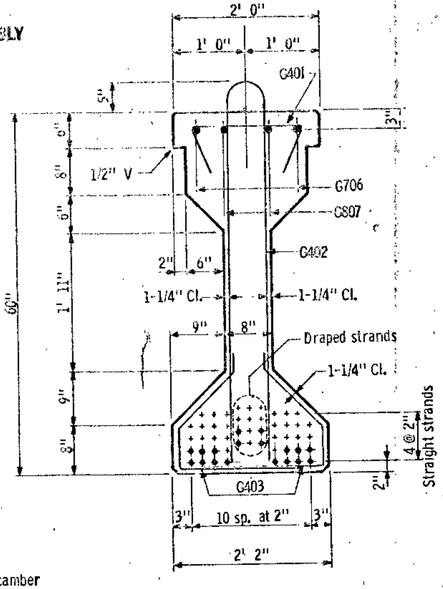
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



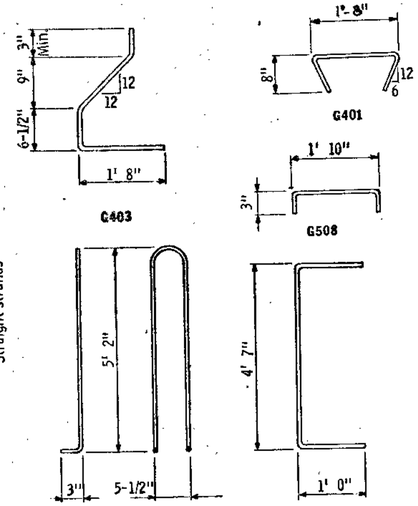
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)	NO.	℄ SPAN	END
Straight strands	14	2.86"	
Draped strands	4	6.00"	54.00"
Total strands	18	3.56"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

*A tolerance of ± 2" will be permitted in this dimension.



First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

AS BUILT 10-16-73 B. Jahn

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder G24, 26.8 TONS; G4, 26.5 TONS; G5, 25.3 TONS; G6, 23.9 TONS; G7, 22.7 TONS; G8, 21.8 TONS.

MINIMUM CONCRETE STRENGTH - P.S.I.	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	2080	2300
Required Min. Concrete Strength	4500	5000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

Fig. S-397.506
Oct. 15, 1969

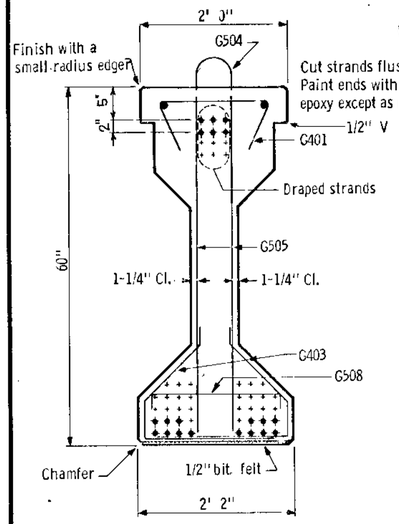
GIRDERS G24, G4, G5, G6, G7, G8

TITLE: **60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60 - 5**

DES: [illegible] DR: M.H.D./W.K. APPROVED: 12-21-71
CHK: MODY CHK: [illegible]

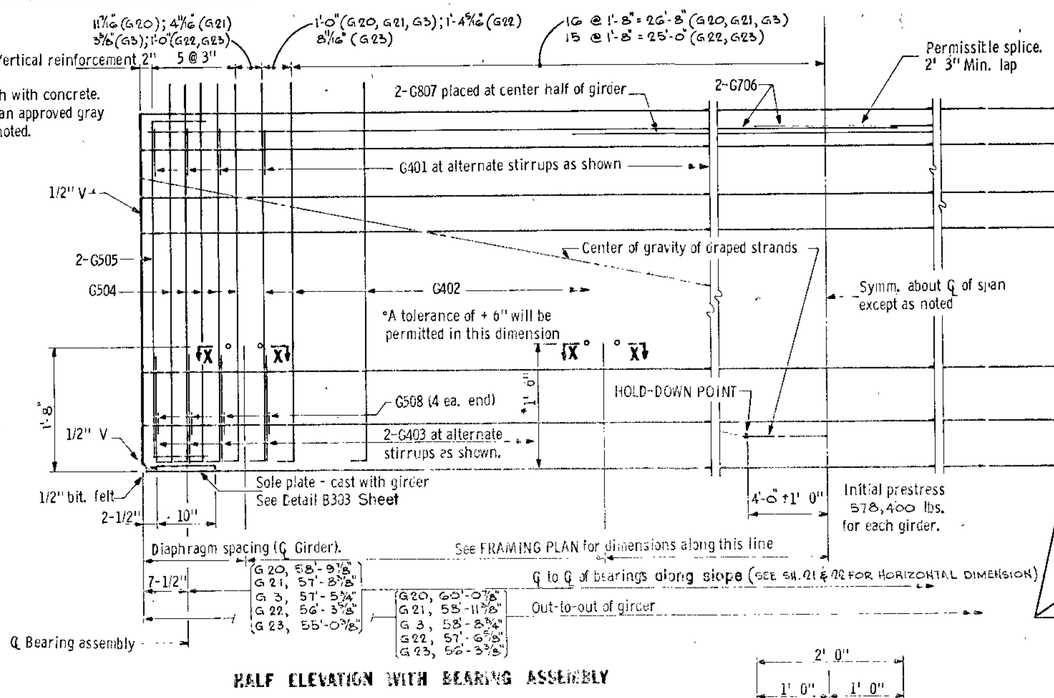
Sheet No. 20 of 35 Sheets

Bridge No. 02522

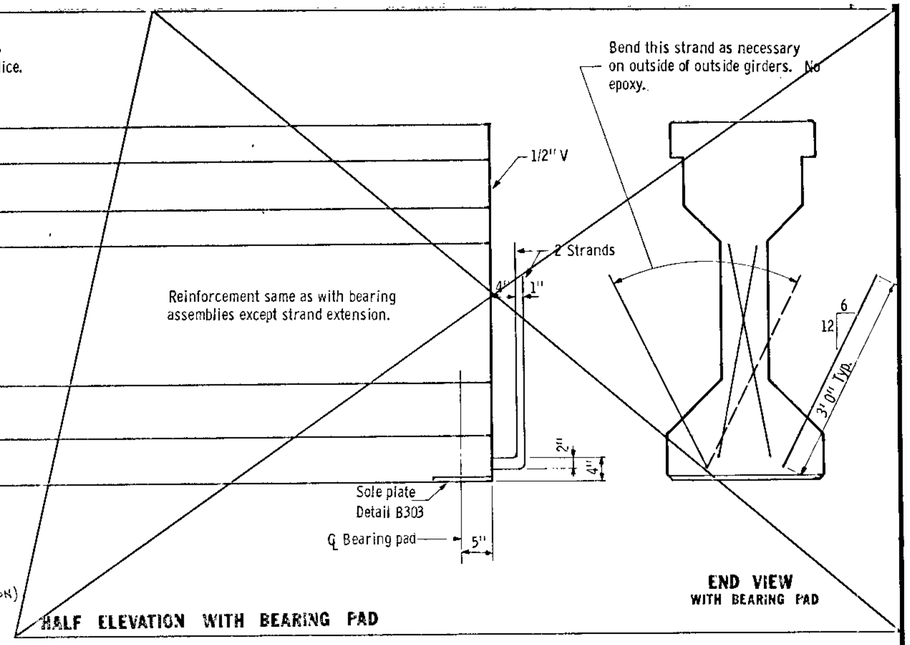


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY



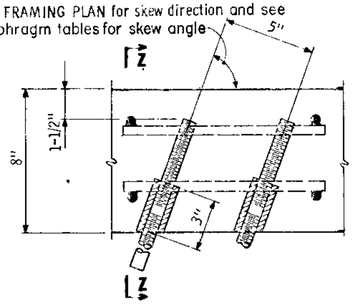
HALF ELEVATION WITH BEARING ASSEMBLY



END VIEW
WITH BEARING PAD

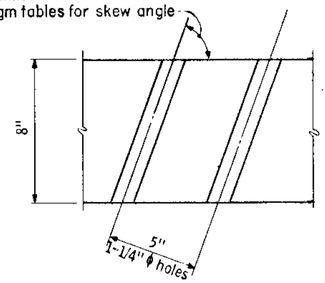
HALF ELEVATION WITH BEARING PAD

See FRAMING PLAN for skew direction and see diaphragm tables for skew angle



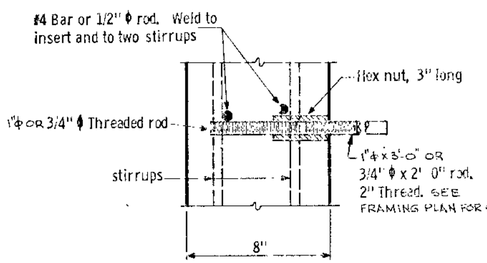
SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS

See FRAMING PLAN for skew direction and see diaphragm tables for skew angle



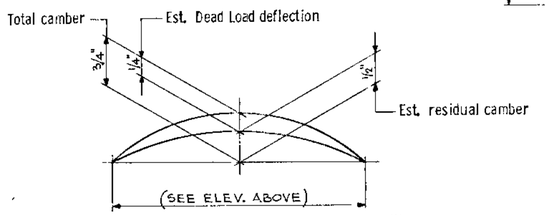
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



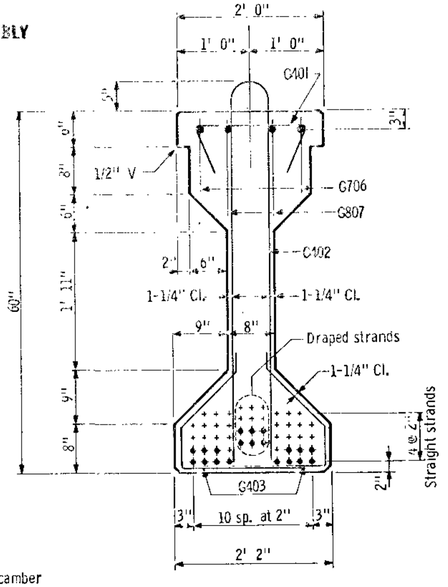
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



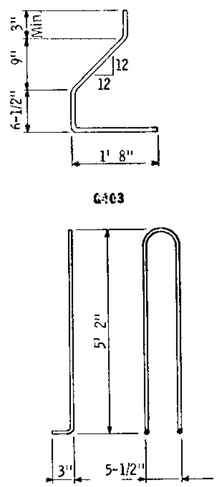
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)			
	NO.	℄ SPAN	END
Straight strands	14	2.86"	
Draped strands	6	6.00"	54.00"[a]
Total strands	20	3.80"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

[a] A tolerance of ± 2" will be permitted in this dimension.



First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

AS BUILT 10-16-73 B. Jahr

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder G20, 29.2 TONS; G21, 28.7 TONS; G3, 28.6 TONS; G22, 28.0 TONS; G23, 27.4 TONS.

MINIMUM CONCRETE STRENGTH - P.S.I.		
	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	2120	2320
Required Min. Concrete Strength	4500	5000

① Minimum concrete strength at time of prestress transfer.

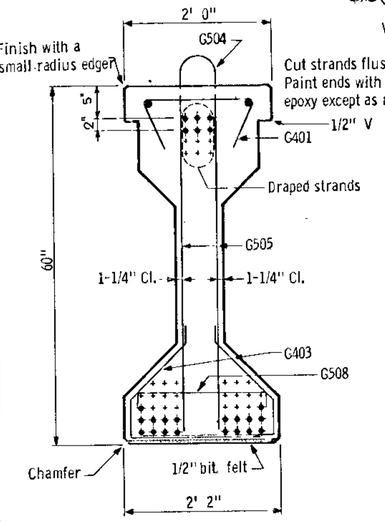
② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

Fig. 5-397.506
Oct. 15, 1969

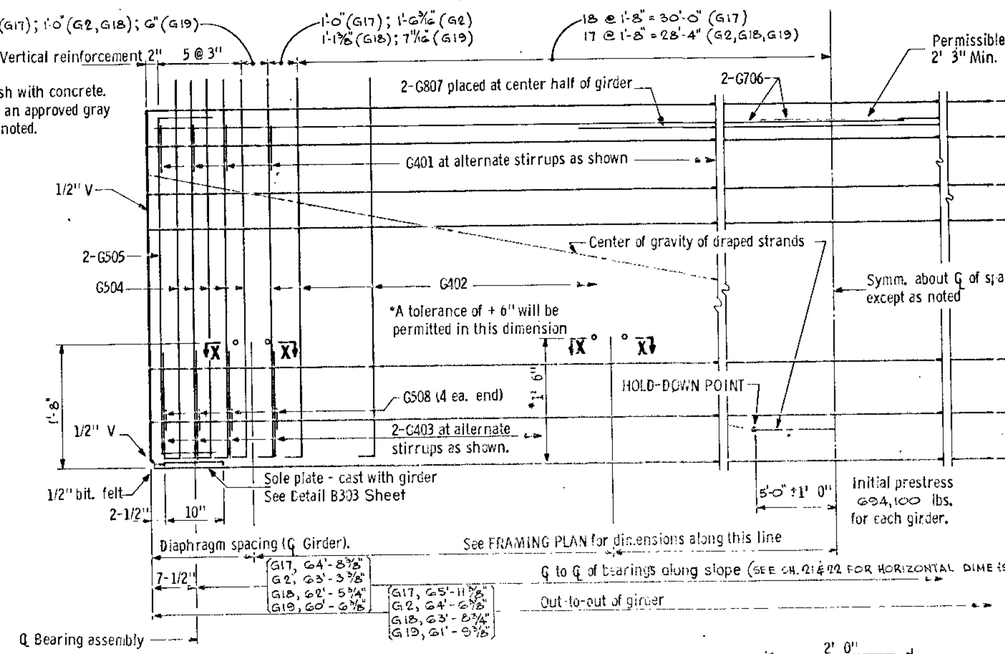
GIRDERS G20, G21, G3, G22, G23

TITLE:	DES:	DR: M.H.D./W.K.	APPROVED:	Bridge No.
60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60-59	CHK: MODY	CHK:	12-21-71	02522
	Sheet No. 19 of 35 Sheets			

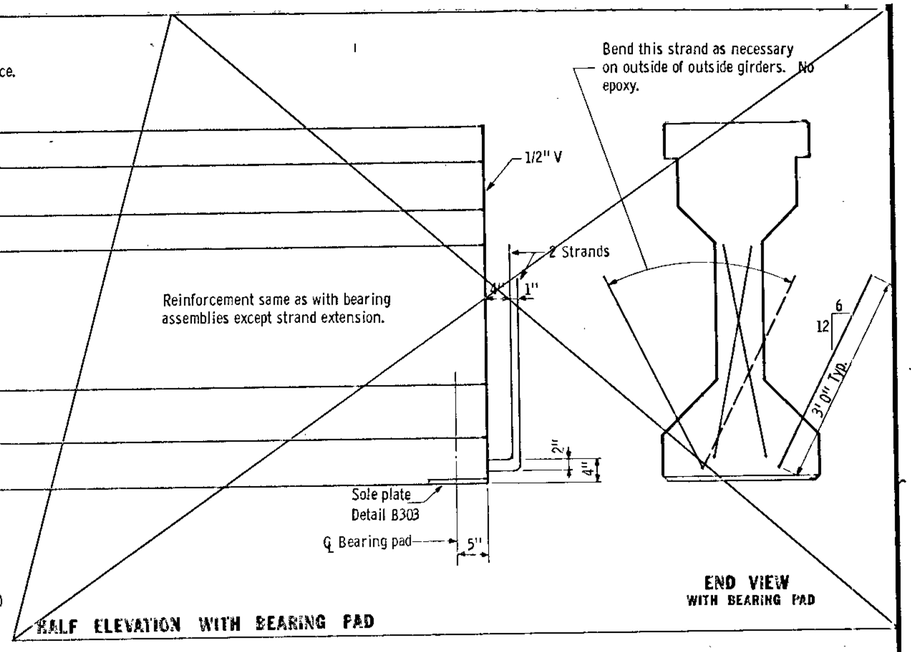


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY

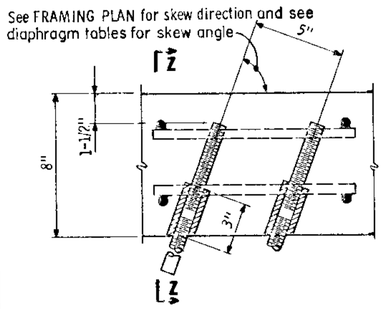


HALF ELEVATION WITH BEARING ASSEMBLY

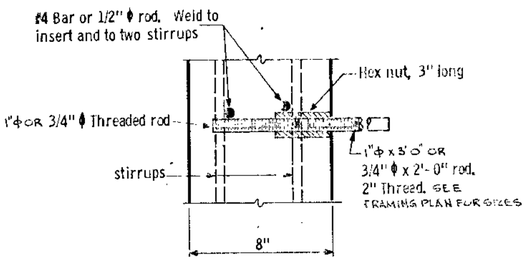


END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

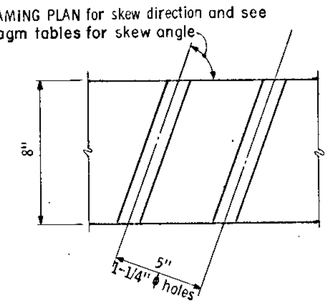


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



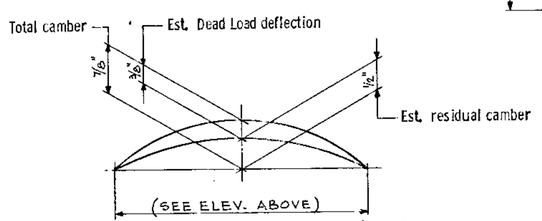
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



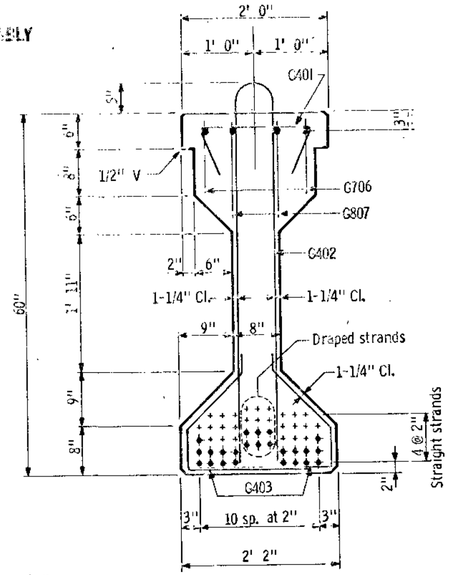
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



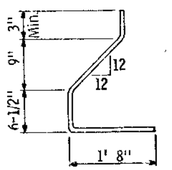
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)	NO.	℄ SPAN	END
Straight strands	18	3.33"	
Draped strands	6	6.00"	54.00"
Total strands	24	4.00"	

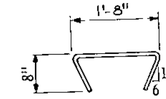
Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

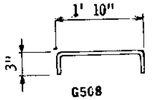
°A tolerance of ± 2" will be permitted in this dimension.



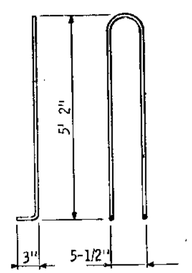
G403



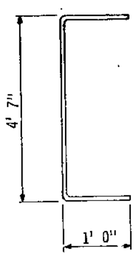
G401



G508



G402 & G504



G505

First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

AS BUILT 10-16-73 B.J.

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder G17, 32.1 TONS; G2, 31.4 TONS; G18, 31.0 TONS; G19, 30.1 TONS

MINIMUM CONCRETE STRENGTH - P.S.I.	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	2460	3270
Required Min. Concrete Strength	4500	5000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

Fig. 5-397.506
Oct. 15, 1969

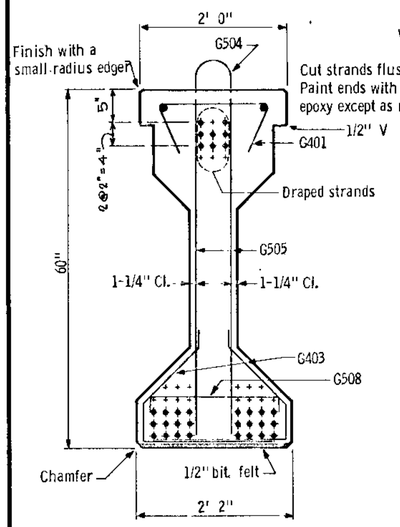
GIRDERS G17, G2, G18, G19

TITLE: **60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60-64**

DES: R.W.M.J. DR: M.H.D./W.K. APPROVED: 12-21-71
CHK: T. MOPY CHK: R.W.M.J.

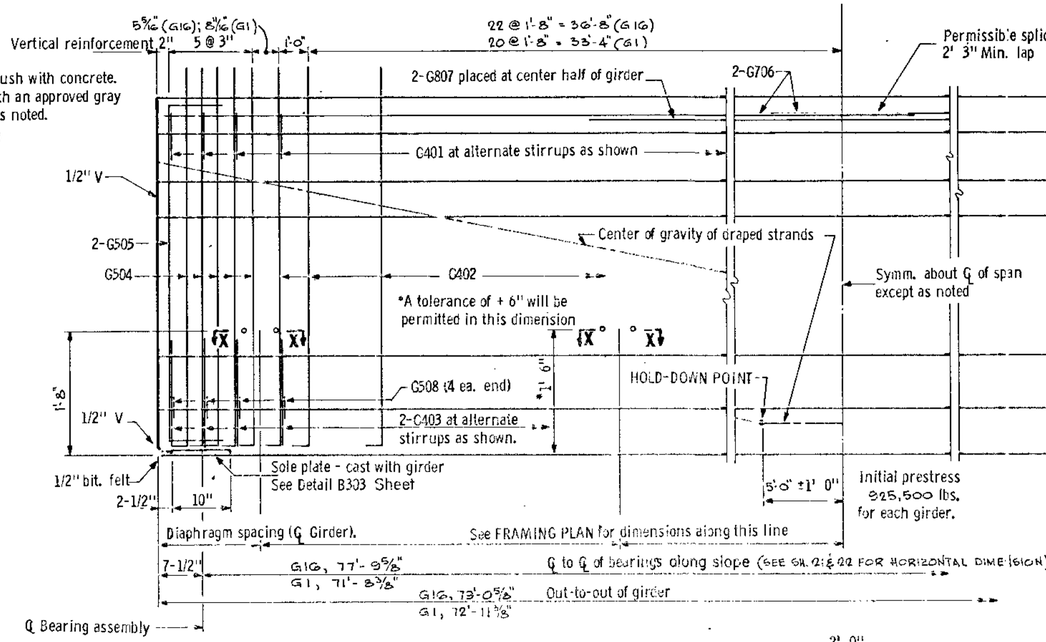
Sheet No. 18 of 35 Sheets

Bridge No. 02522

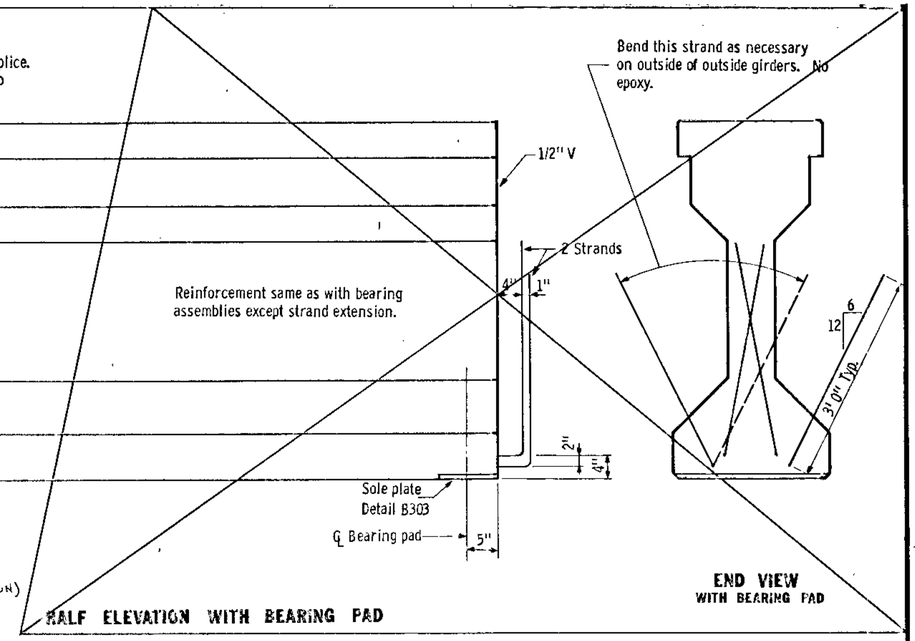


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY

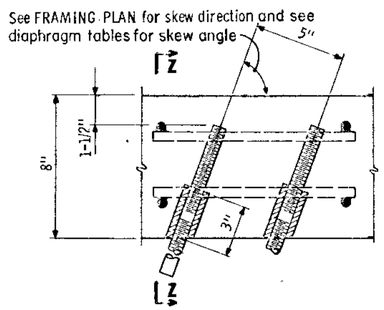


HALF ELEVATION WITH BEARING ASSEMBLY

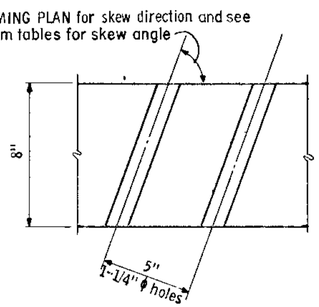


END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

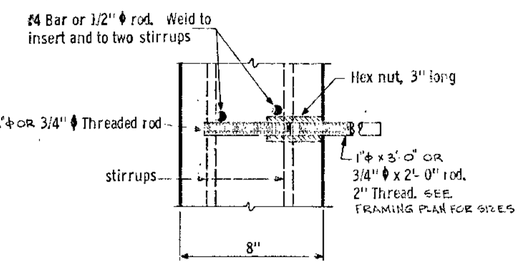


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



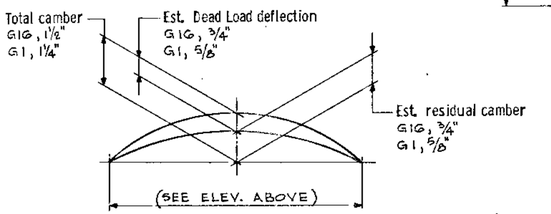
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



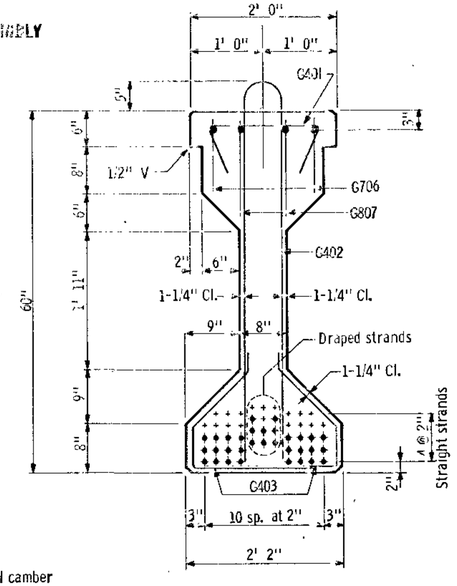
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



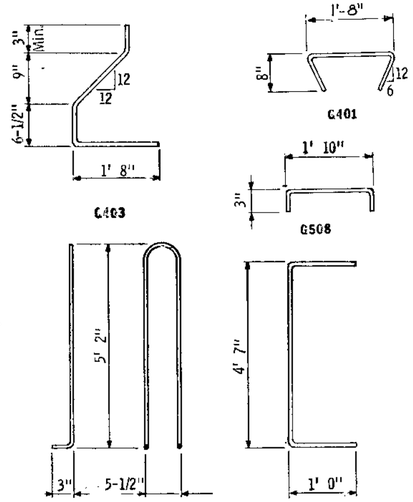
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)	NO.	℄ SPAN	END
Straight strands	24	4.00"	
Draped strands	8	6.75"	52.75"[1]
Total strands	32	4.69"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

[1] A tolerance of ± 2" will be permitted in this dimension.



G402 & G504

First digit of bar mark indicates bar size.
All bar dimensions are out-to-out.

AS BUILT 10-16-73 B Jack

GIRDERS G1G, G1

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder G1G, 38.5 TONS; G1, 35.5 TONS

MINIMUM CONCRETE STRENGTH - P.S.I.	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	3240	4000
Required Min. Concrete Strength	4500	5000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

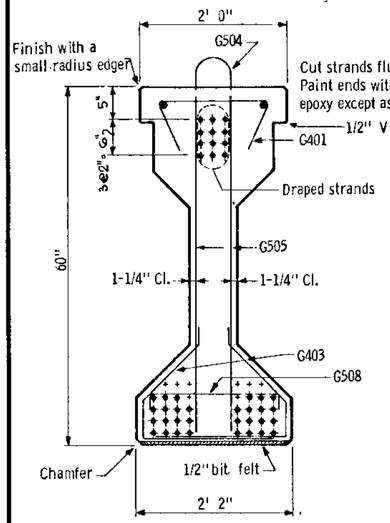
Fig. 5-397.506
Oct. 15, 1969

TITLE:
60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60-76

DES: ℄ MOODY | DR: M.H.D./W.K. | APPROVED: 12-21-71
CHK: ℄ MOODY | CHK: ℄

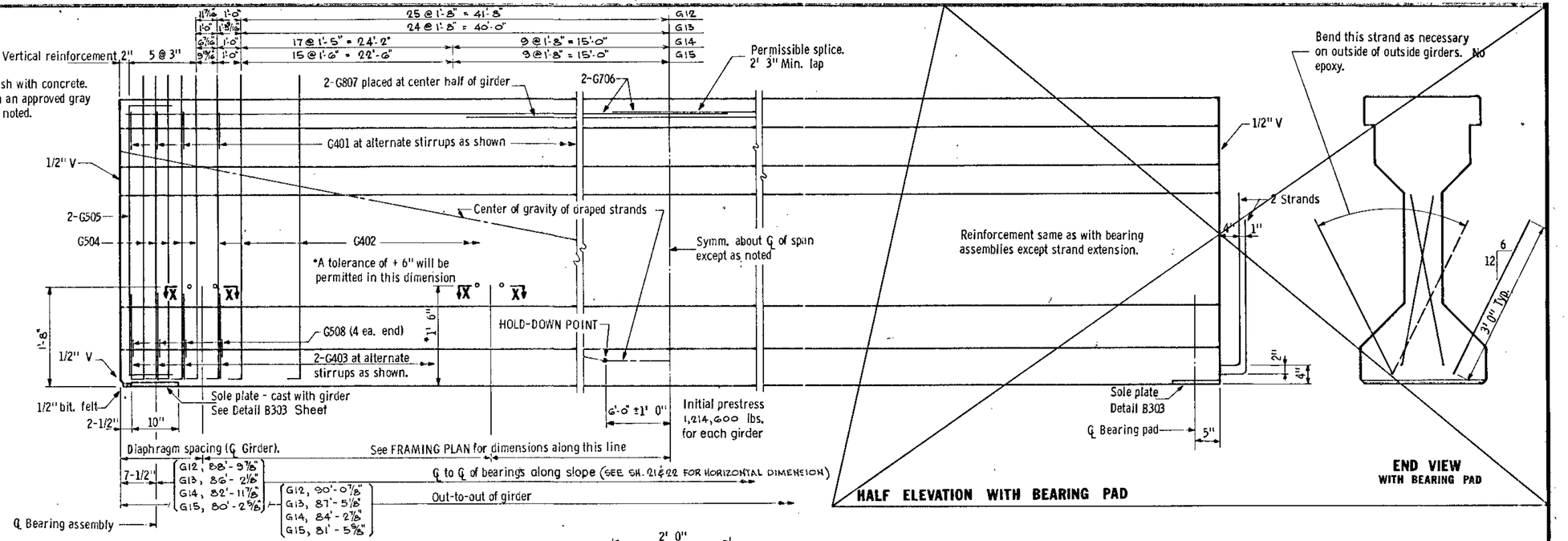
Sheet No. 17 of 35 Sheets

Bridge No. 02522



Details not shown are the same as the SECTION AT ℄ GIRDER

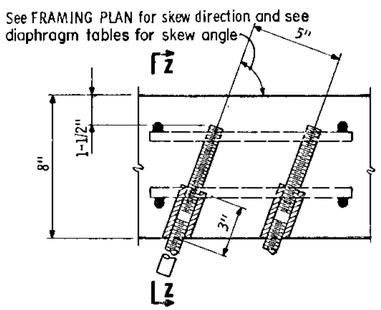
END VIEW
WITH BEARING ASSEMBLY



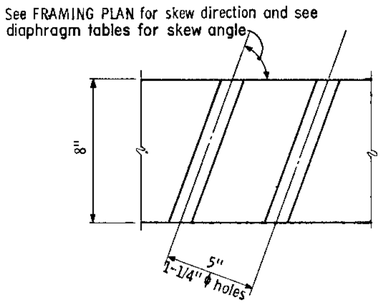
HALF ELEVATION WITH BEARING ASSEMBLY

END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

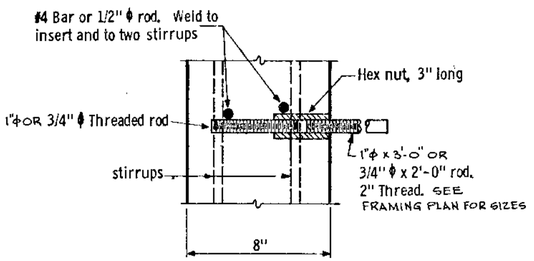


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



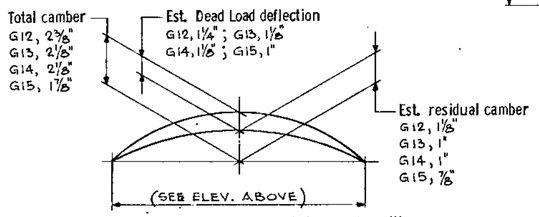
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



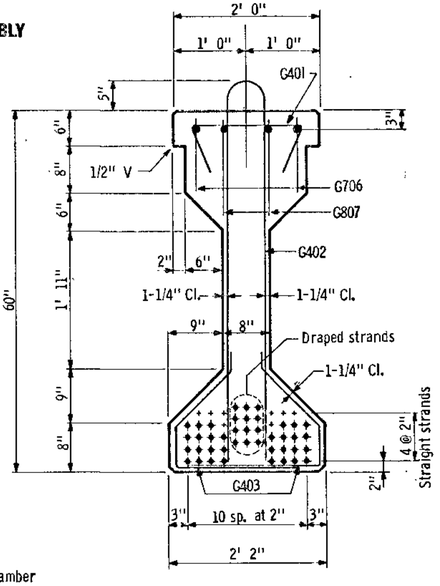
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



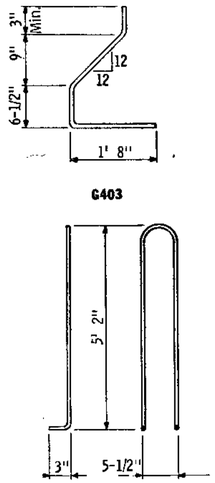
SECTION AT ℄ GIRDER

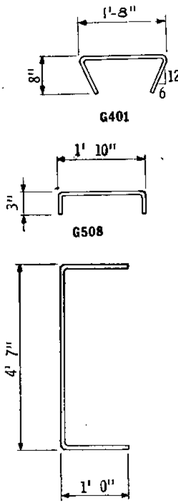
Y DISTANCES (IN INCHES)	NO.	℄ SPAN	END
Straight strands	30	4.80"	
Draped strands	12	8.00"	52.00"[a]
Total strands	42	5.71"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

[a] A tolerance of ± 2" will be permitted in this dimension.





First digit of bar mark indicates bar size.
All bar dimensions are out-to-out.

AS BUILT 10-16-73 B. Jak

GIRDERS G12, G13, G14, G15

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder G12, 43.8 TONS; G13, 42.5 TONS; G14, 41.0 TONS; G15, 39.6 TONS

MINIMUM CONCRETE STRENGTH - P.S.I.	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	4160	4850
Required Min. Concrete Strength	4500	5000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

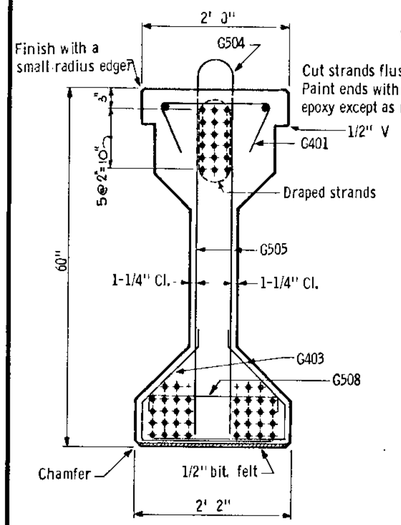
Fig. 5-397.506
Oct. 15, 1969

TITLE: **60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60-86**

DES: [illegible] DR: M.H.D./W.K. APPROVED: 12-21-71
CHK: T MODY CHK: [illegible]

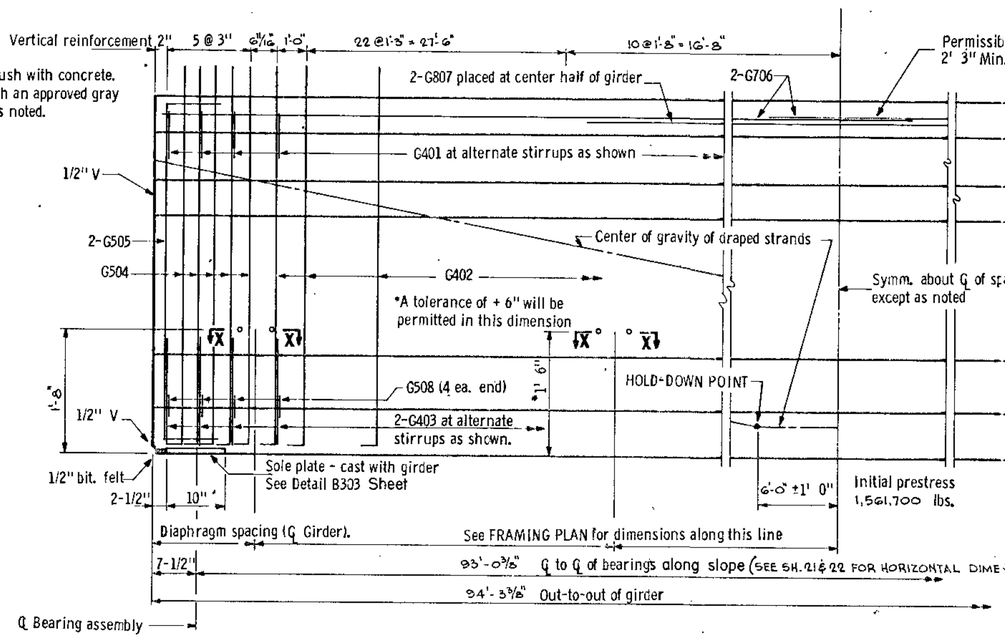
Sheet No. 16 of 35 Sheets

Bridge No. 02522

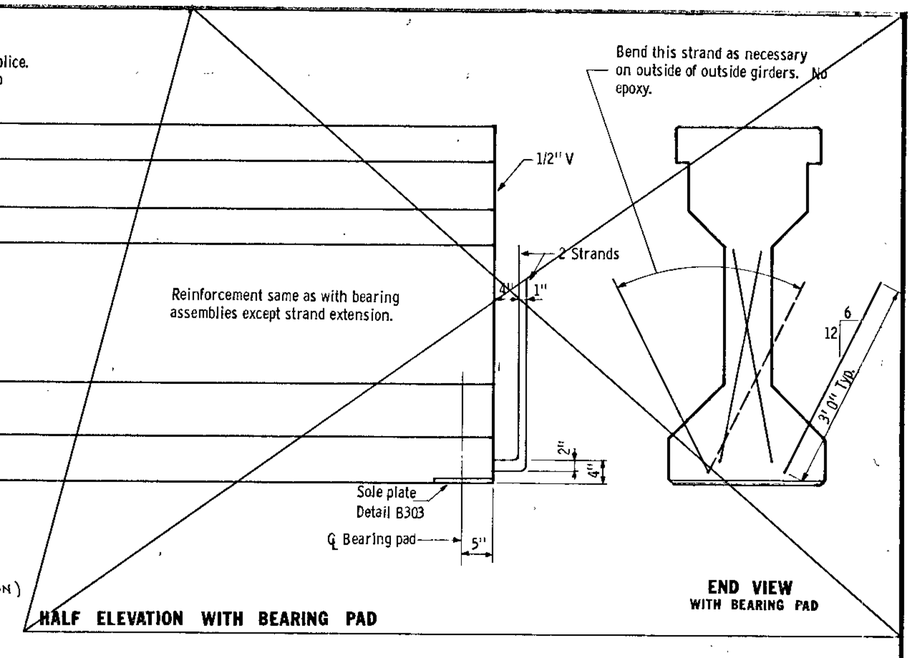


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY

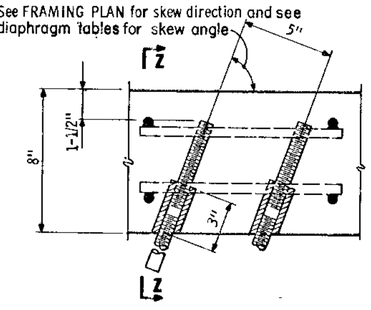


HALF ELEVATION WITH BEARING ASSEMBLY

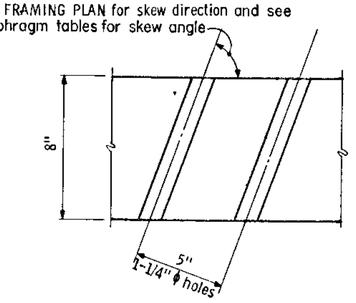


END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

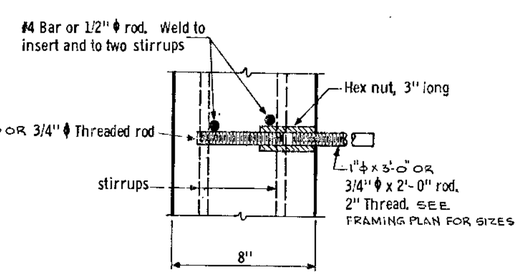


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



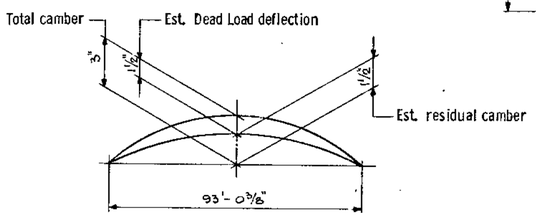
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



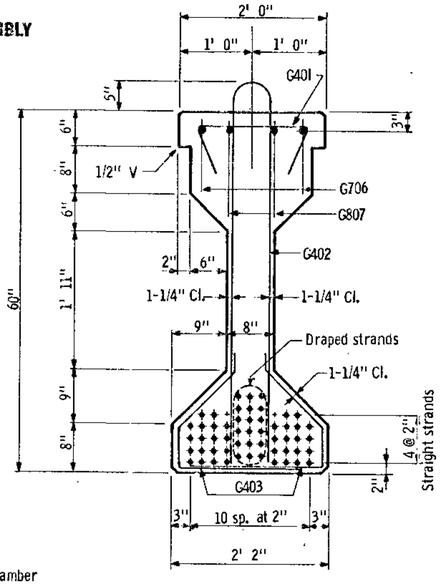
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



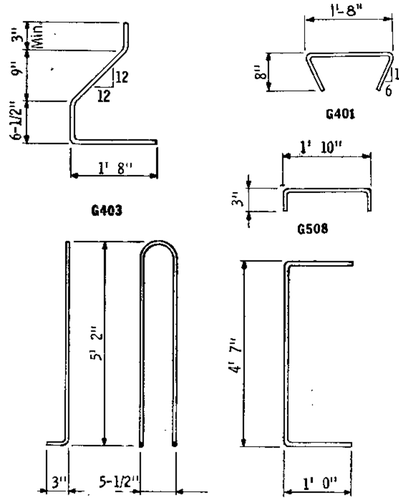
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)			
	NO.	℄ SPAN	END
Straight strands	36	5.56"	
Draped strands	18	8.00"	52.00"□
Total strands	54	6.37"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

□ A tolerance of ± 2" will be permitted in this dimension.



First digit of bar mark indicates bar size.
All bar dimensions are out-to-out.

AS BUILT 10-16-73 B. Jak

GIRDER G11

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder 45.9 tons.

MINIMUM CONCRETE STRENGTH - P.S.I.		
	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	5530	5560
Required Min. Concrete Strength	5530	5560

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

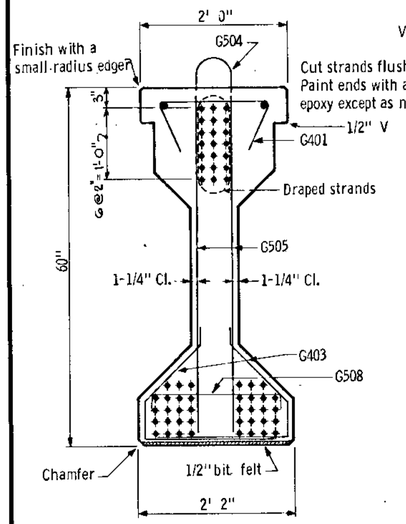
Fig. 5-397.506
Oct. 15, 1969

TITLE: **60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60-95**

DES: [illegible] DR: M.H.D./W.K. APPROVED: 12-21-71
CHK: MODY CHK: [illegible]

Sheet No. 15 of 35 Sheets

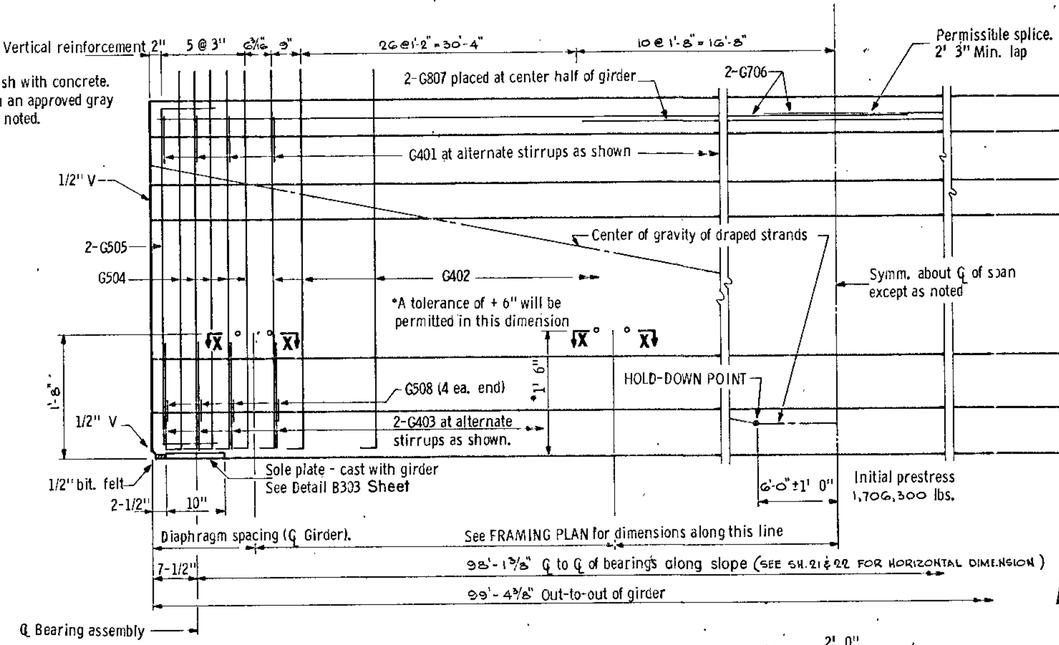
Bridge No. 02522



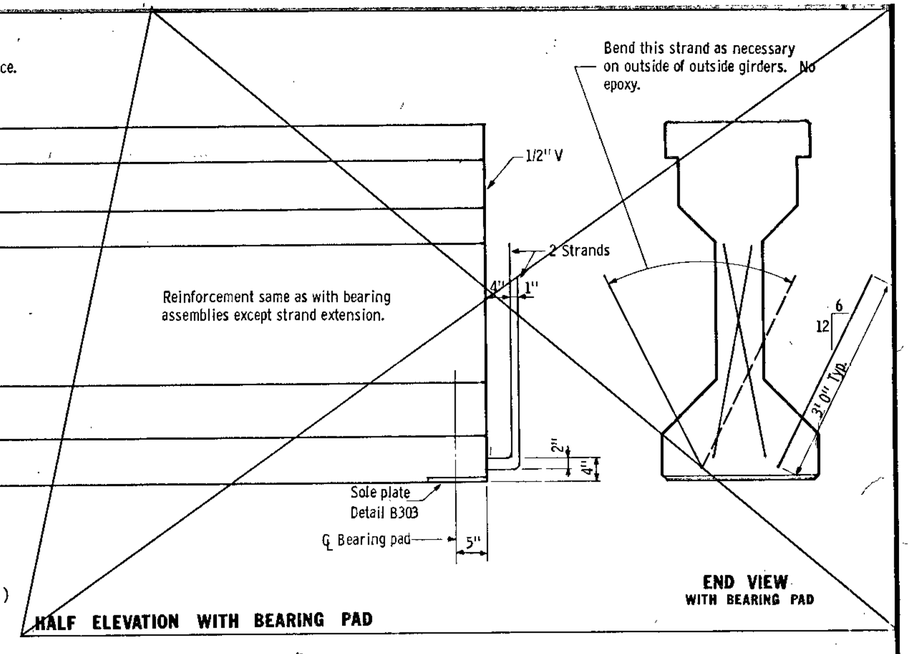
Cut strands flush with concrete. Paint ends with an approved gray epoxy except as noted.

Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY



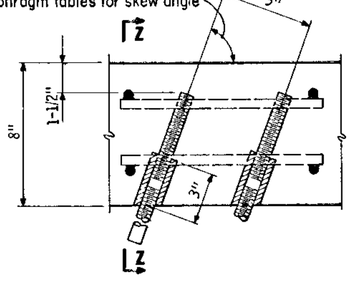
HALF ELEVATION WITH BEARING ASSEMBLY



END VIEW
WITH BEARING PAD

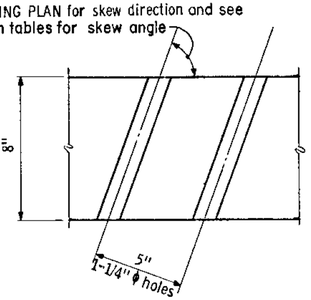
HALF ELEVATION WITH BEARING PAD

See FRAMING PLAN for skew direction and see diaphragm tables for skew angle



SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS

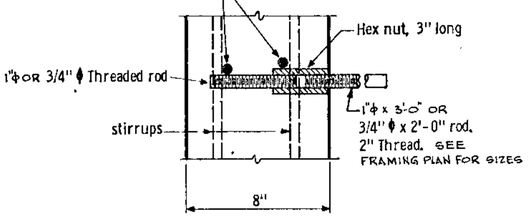
See FRAMING PLAN for skew direction and see diaphragm tables for skew angle



Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

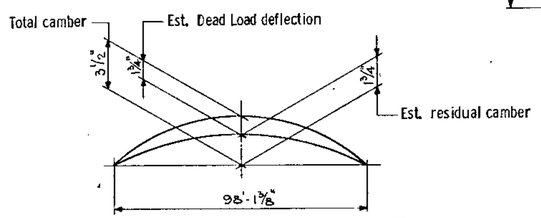
SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS

#4 Bar or 1/2" ϕ rod. Weld to insert and to two stirrups



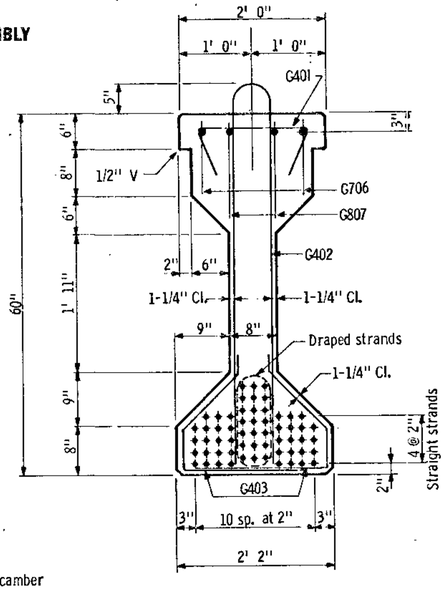
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



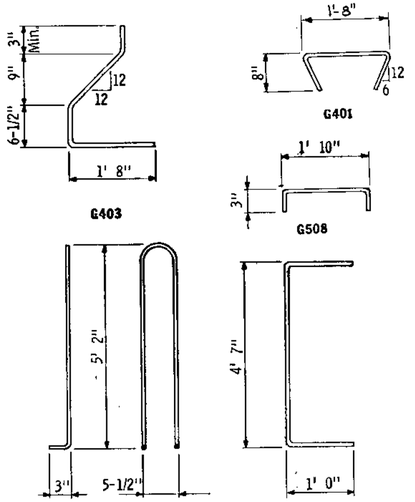
SECTION AT ℄ GIRDER

Y DISTANCES (IN INCHES)	NO.	℄ SPAN	END
Straight strands	38	5.79"	
Draped strands	21	9.00"	51.00" [a]
Total strands	59	6.93"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

[a] A tolerance of ± 2" will be permitted in this dimension.



First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

AS BUILT
10-10-73
B. Jack

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder 48.3 tons.

MINIMUM CONCRETE STRENGTH - P.S.I.	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	5880	6000
Required Min. Concrete Strength	5880	6000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

Fig. 5-397.506
Oct. 15, 1969

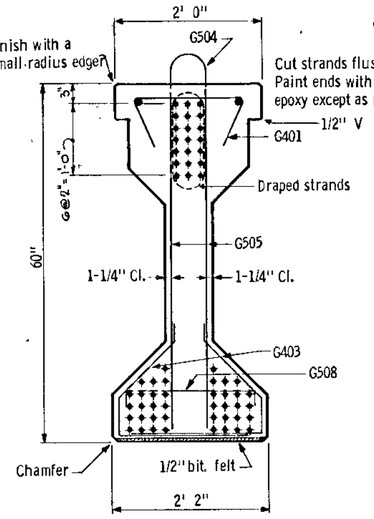
GIRDER G 10

TITLE: **60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60 - 100**

DES: [illegible] DR: M.H.D./W.K. APPROVED: 12-21-71
CHK: MODY CHK: [illegible]

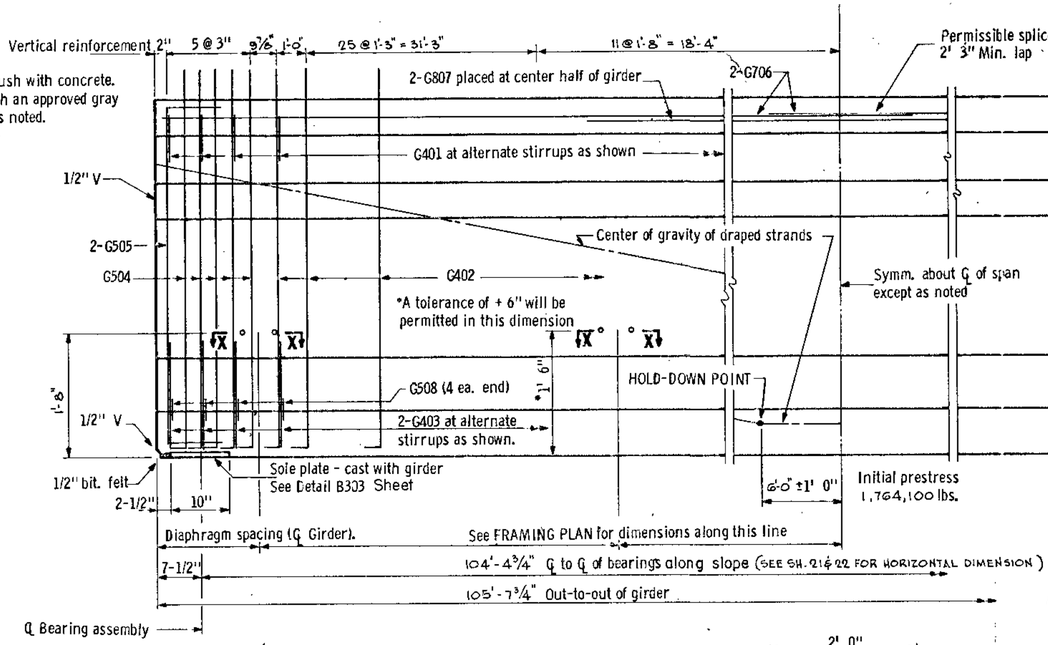
Sheet No. 14 of 35 Sheets

Bridge No. 02522

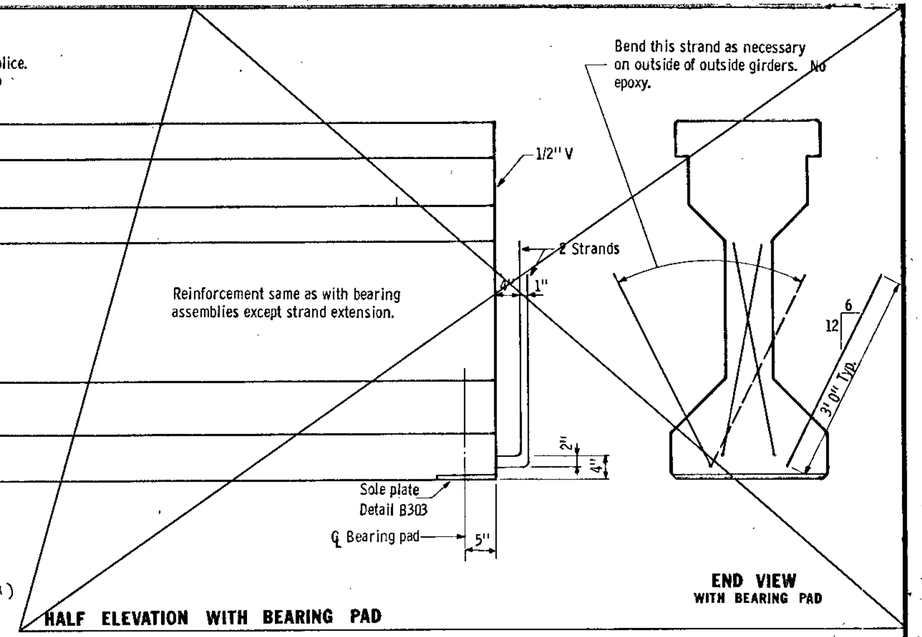


Details not shown are the same as the SECTION AT ℄ GIRDER

END VIEW
WITH BEARING ASSEMBLY

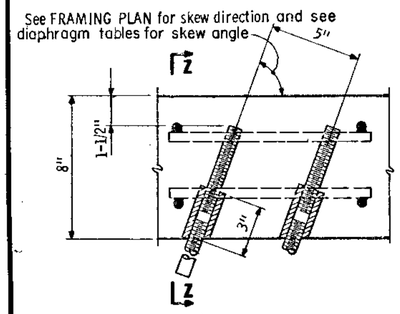


HALF ELEVATION WITH BEARING ASSEMBLY

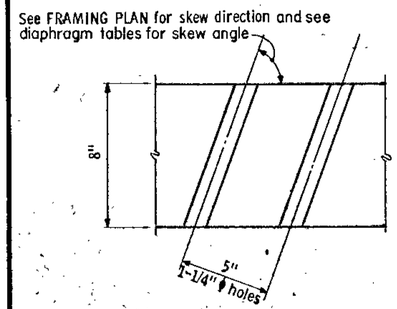


END VIEW
WITH BEARING PAD

HALF ELEVATION WITH BEARING PAD

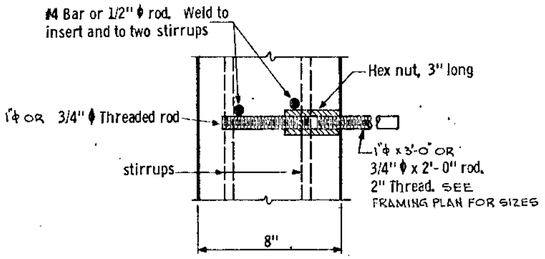


SECTION X - X
USE AT FACIA GIRDER AND INTERIOR GIRDER WITH STAGGERED DIAPHRAGMS



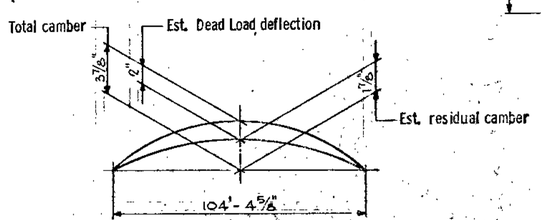
Intermediate stirrups may be shifted the minimum distance required to clear holes or inserts for intermediate diaphragms.

SECTION X - X
USE AT INTERIOR GIRDER WITH CONTINUOUS DIAPHRAGMS



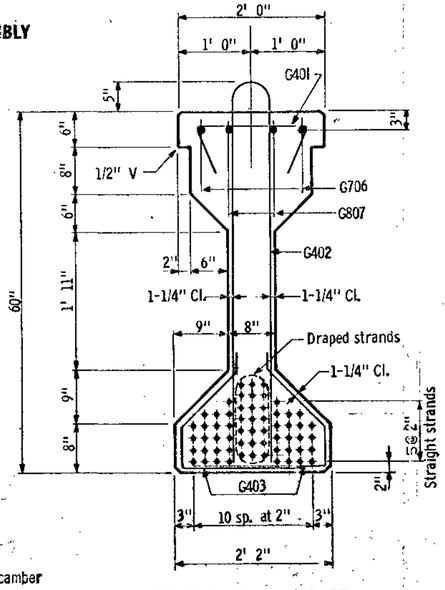
Nuts and rods per M. H. D. 3306. No paint

SECTION Z - Z



Deflections shown are for weight of slab, curb, railing, sidewalk, median and diaphragms only. Engineer will take elevations at top of girders after erection and will allow for deflections shown to enable contractor to build forms to correct grade and specified slab thickness.

CAMBER DIAGRAM



SECTION AT ℄ GIRDER

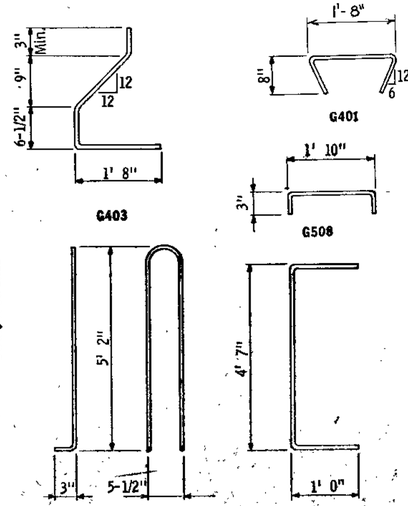
Y DISTANCES (IN INCHES)

	NO.	℄ SPAN	END
Straight strands	40	6.10"	
Draped strands	21	9.00"	51.00"
Total strands	61	7.10"	

Y = distance of Center of Gravity of strands from bottom of girder. All strands spaced 2" c-c, horizontally and vertically.

All strands 1/2" ϕ 270 kip, ultimate strength.

* A tolerance of ± 2" will be permitted in this dimension.



G402 & G504 G505

First digit of bar mark indicates bar size. All bar dimensions are out-to-out.

GENERAL NOTES:

Tops of girders shall be rough floated and broomed transversely for bond.

Provide handling hooks or devices as required by Contractor. Hooks or devices provided will be subject to approval of Engineer and shall be installed within 4' 0" of the end of girder.

A modified strand pattern which does not change center of gravity of strands may be submitted to the Engineer for approval.

A post-tensioned girder may be used as an alternate for the pretensioned design shown. M. H. D. will have plans available for the post-tensioned alternate.

Each girder shall be marked, showing bridge number, casting date, and individual identification letters and numbers. Markings shall be made on the face of the girder, near the end, so located that they will be exposed after the end diaphragms have been cast. Facia girders shall be marked on an inside face. All markings shall be stencilled and be clearly legible. For location of girders, see framing plan.

All material and work shown or noted on this sheet shall be included in unit price bid for prestressed concrete girders. See M. H. D. 2405.

See framing plan for girder ends marked "X".

Approximate weight of girder 51.4 tons.

MINIMUM CONCRETE STRENGTH - P.S.I.

	① ③ f'ci	② ③ f'c
Computed Min. Concrete Strength	5880	6000
Required Min. Concrete Strength	5880	6000

① Minimum concrete strength at time of prestress transfer.

② Minimum concrete strength when curing can be discontinued and girder transported and installed.

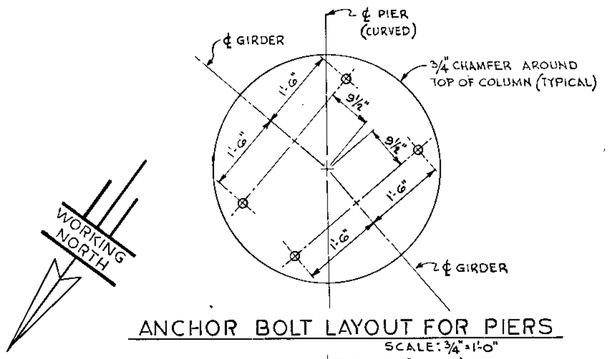
③ Required minimum concrete strength shall be used. Computed minimum concrete strength is for information only.

AS BUILT 10-16-73 B. Jak.

GIRDER G 9

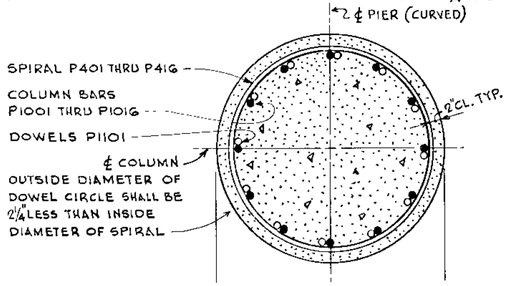
Fig. 5-397.506
Oct. 15, 1969

TITLE:	DES:	DR: M.H.D/W.K.	APPROVED:	Bridge No.
60" PRESTRESSED CONCRETE GIRDER (PRETENSIONED) TYPE 60 106	CHK: MDPY	CHK:	12-27-71	02522
	Sheet No. 13 of 35 Sheets			



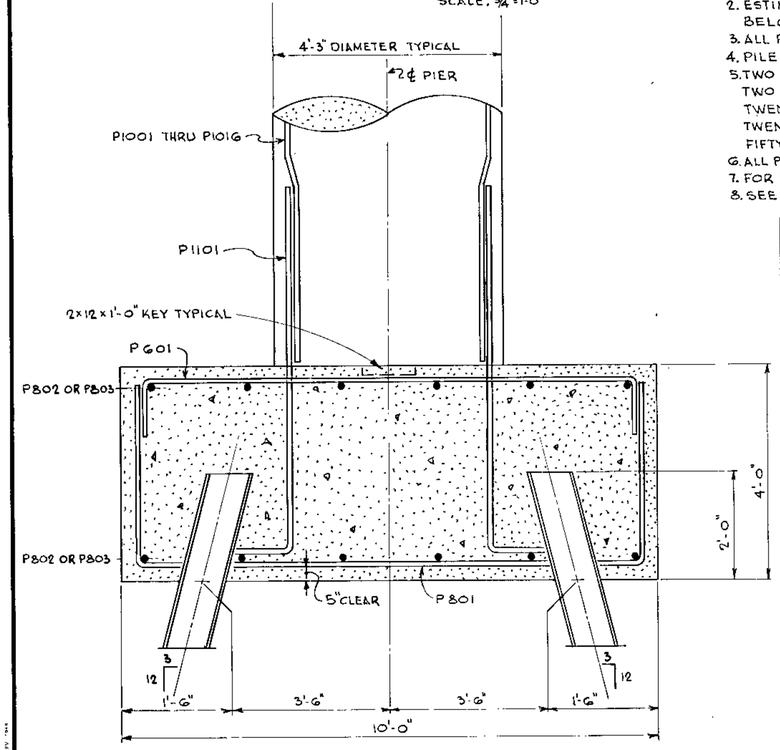
ANCHOR BOLT LAYOUT FOR PIERS

SCALE: ¾"=1'-0"



TYPICAL COLUMN SECTION

SCALE: ¾"=1'-0"



TYPICAL FOOTING SECTION

SCALE: ¾"=1'-0"

SUMMARY OF QUANTITIES FOR PIERS 1 AND 2

EXCAVATION, CLASS E	790 CU. YD.
CONCRETE, MIX NO 1A43	409 CU. YD.
CONCRETE, MIX NO 3Y43	192 CU. YD.
REINFORCEMENT BARS	51,640 LBS.
SPIRAL REINFORCEMENT	12,450 LBS.
FOUR STEEL TEST PILES 120 FT. LONG	
STEEL PILING DELIVERED	4,830 LIN. FT.
STEEL PILING DRIVEN	4,738 LIN. FT.
BRIDGE NAME PLATE	ONE

QUANTITY NOTES

1. THE TABULATED QUANTITIES FOR STEEL PILING, DELIVERED, AND FOR STEEL PILING, DRIVEN, DO NOT INCLUDE TEST PILES.
2. NO SPLICES IN TEST PILES OR MEASURED PILES WILL BE ELEGIBLE FOR EXTRA COMPENSATION, EXCEPT STRICTLY UNDER THE CONDITIONS OF M.H.D. 2452.58
3. BRIDGE NAME PLATE IS INCLUDED FOR PAYMENT WITH OTHER ITEMS. NAME PLATE LETTERING:

CITY OF
COON RAPIDS
MINNESOTA
BRIDGE NO. 02522
1972

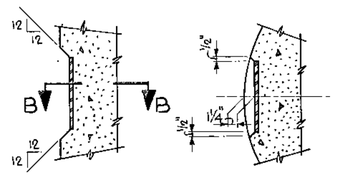
PILE NOTES

1. PILES SHALL BE BATTERED 3" PER FOOT IN THE DIRECTION SHOWN THUS: ⊢►
2. ESTIMATED PENETRATION IS TWO FEET LESS THAN LENGTH GIVEN BELOW.
3. ALL PILES ARE STEEL "H", 10BP 57, CONFORMING TO M.H.D. 3372
4. PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
5. TWO STEEL TEST PILES 120-FT. LONG FOR PIER 1.
   TWO STEEL TEST PILES 120-FT. LONG FOR PIER 2.
   TWENTY-FOUR STEEL PILES 105-FT. LONG FOR PIER 1.
   TWENTY-TWO STEEL PILES 105-FT. LONG FOR PIER 2.
   FIFTY STEEL PILES, TOTAL FOR TWO PIERS.
6. ALL PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK.
7. FOR PILE SPLICES AND TIP REINFORCEMENT, SEE DETAIL B202, SHEET 50
8. SEE PILE NOTE, SHEET 1, FOR DEEP INTERFERENCE.

COMPUTED PILE LOADS TONS PER PILE

DEAD LOAD	68.7
LIVE LOAD	8.1
OVERTURNING	(NONE FOR GROUP I)
TOTAL *	76.8/100% = 76.8

*GROUP I - NO REDUCTION - SEE A.A.S.H.O. 1.2.22



SECTION A-A

SCALE: 1½"=1'-0"

(FROM SH. 11)

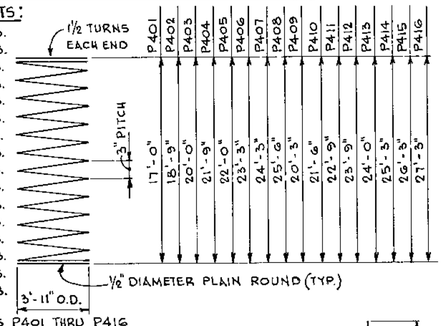
SECTION-B B

SCALE: 1½"=1'-0"

REINFORCEMENT BAR BENDING DIAGRAMS

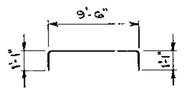
ESTIMATED WEIGHTS:

P401,	590 LB.
P402,	650 LB.
P403,	690 LB.
P404,	750 LB.
P405,	750 LB.
P406,	790 LB.
P407,	830 LB.
P408,	870 LB.
P409,	700 LB.
P410,	740 LB.
P411,	780 LB.
P412,	810 LB.
P413,	820 LB.
P414,	860 LB.
P415,	890 LB.
P416,	930 LB.

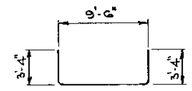


SPIRALS P401 THRU P416

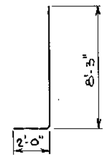
(NOT TO SCALE)



P601



P801



P1101

BILL OF REINFORCEMENT FOR PIERS

	MARK	NUMBER	LENGTH	SHAPE	LOCATION
BENT BARS	P401	1			COLUMN SPIRAL
	P402	1			" "
	P403	1			" "
	P404	1			" "
	P405	1			" "
	P406	1			" "
	P407	1			" "
	P408	1			" "
	P409	1			" "
	P410	1			" "
	P411	1			" "
	P412	1			" "
	P413	1			" "
	P414	1			" "
	P415	1			" "
	P416	1			COLUMN SPIRAL
	P601	228	11'-4"	⌐¬	FOOTING, TRANS.
	P801	228	15'-10"	⌐¬	FOOTING, TRANS.
	P1101	192	9'-11"	⌐	COLUMN DOWEL
	P802	48	40'-0"	——	LONG. PIER 1
	P803	36	43'-6"	——	LONG. PIER 2
STRAIGHT BARS	P1001	12	17'-0"	|	COLUMN VERT.
	P1002	12	18'-7"	|	" "
	P1003	12	20'-0"	|	" "
	P1004	12	21'-5"	|	" "
	P1005	12	21'-10"	|	" "
	P1006	12	23'-1"	|	" "
	P1007	12	24'-3"	|	" "
	P1008	12	25'-6"	|	" "
	P1009	12	20'-1"	|	" "
	P1010	12	21'-4"	|	" "
	P1011	12	22'-7"	|	" "
	P1012	12	23'-9"	|	" "
	P1013	12	24'-0"	|	" "
	P1014	12	25'-1"	|	" "
	P1015	12	26'-2"	|	" "
	P1016	12	27'-3"	|	COLUMN VERT.

NOTES:

1. WORK THIS SHEET WITH SHEETS 10 AND 11
2. SEE SHEET 31 FOR DETAIL OF 1¼"ø ANCHOR BOLT
3. COLUMN REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF HOLES FOR ANCHOR BOLTS.
4. THE SUPERSTRUCTURE GIRDERS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING ANCHOR BOLT HOLES AND PLACING ANCHOR BOLTS.

AS BUILT
10-16-73
B. Jak

TITLE: PIER DETAILS

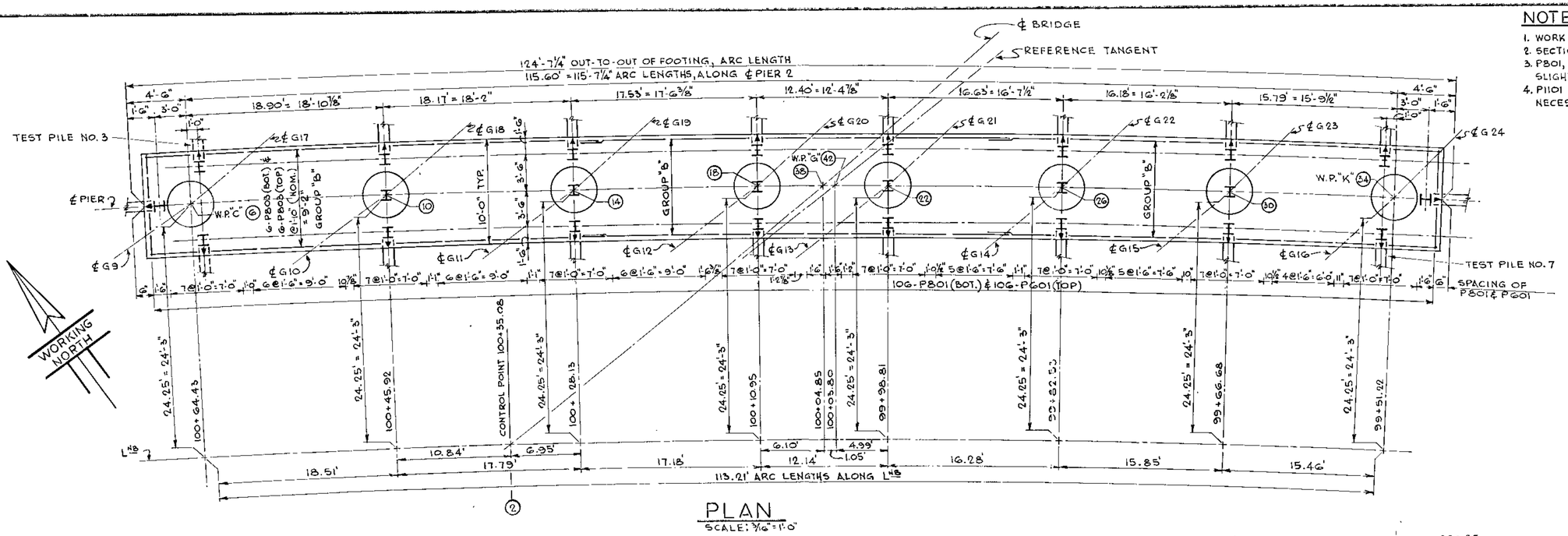
DES: R.M.G. DR: W.K. APPROVED:
CHK: MODY CHK: R.M.G.

Sheet No. 12 of 35 Sheets

Bridge No. 02522

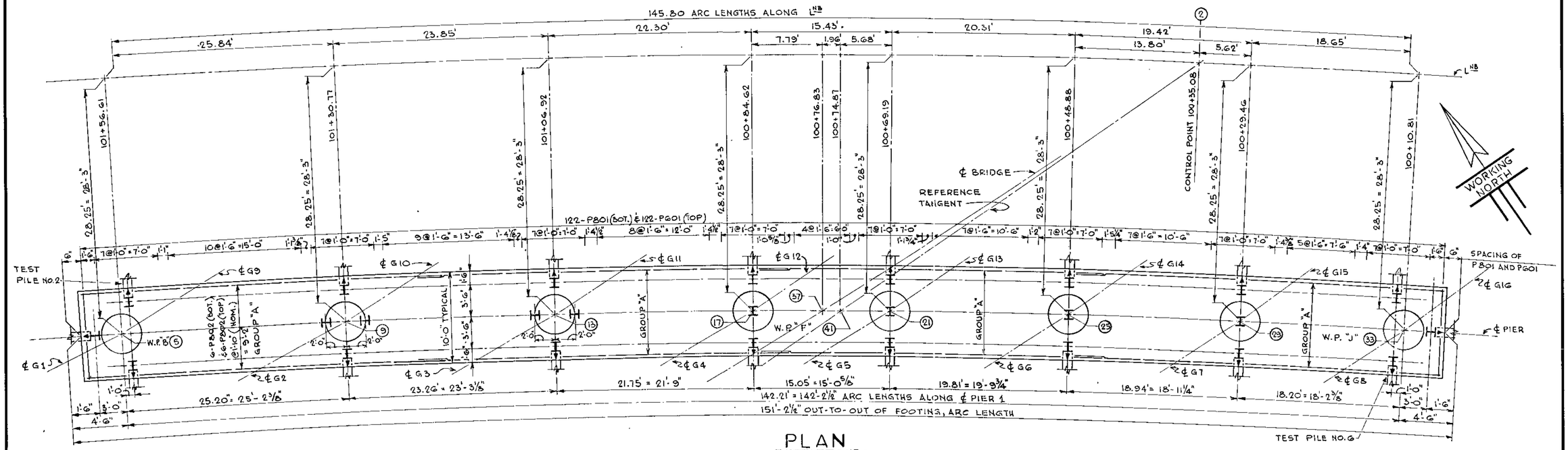
NOTES:

1. WORK THIS SHEET WITH SHEETS 10 AND 12.
2. SECTION A-A IS ON SHEET 12.
3. P801, P803 AND PG01 MAY BE SHIFTED SLIGHTLY TO CLEAR PILE HEADS.
4. P1101 DOWELS MAY BE ROTATED AS NECESSARY TO CLEAR PILE HEADS.

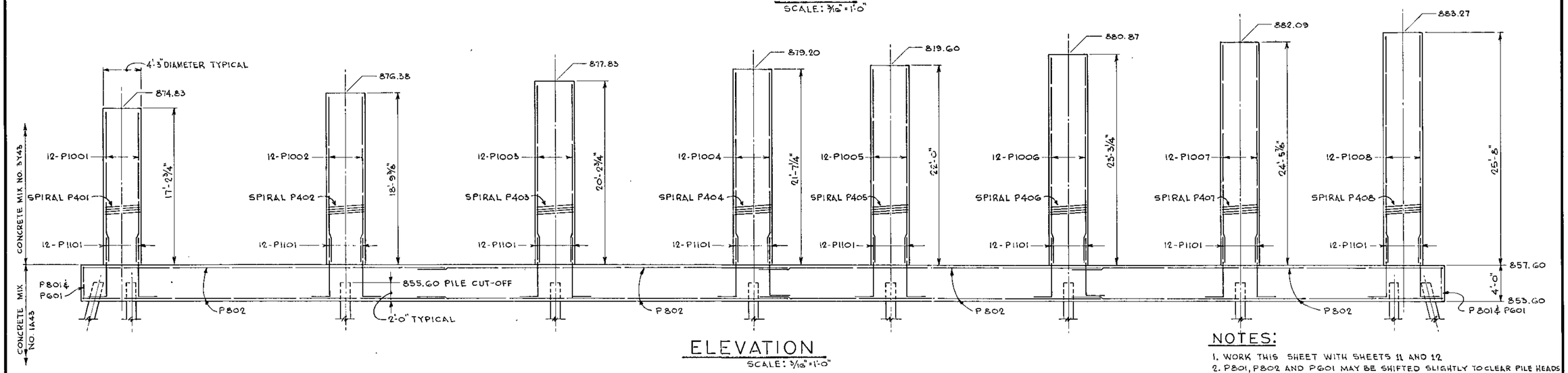


AS BUILT
10-16-73
B. Jahn

TITLE:	DES: R.M.C.J.	DR: W.K.	APPROVED:	Bridge No.
PIER 2	CHK: MODY	CHK: R.M.C.J.		02522
	Sheet No. 11 of 35 Sheets			



PLAN
SCALE: 3/16" = 1'-0"

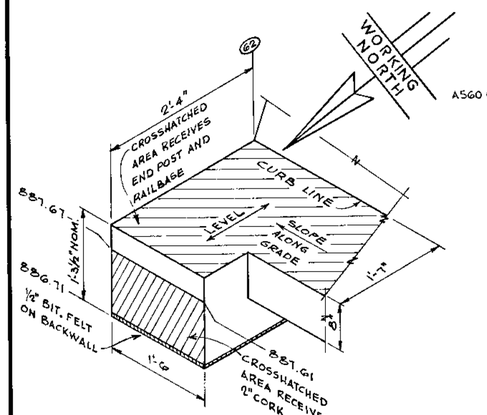


ELEVATION
SCALE: 3/16" = 1'-0"

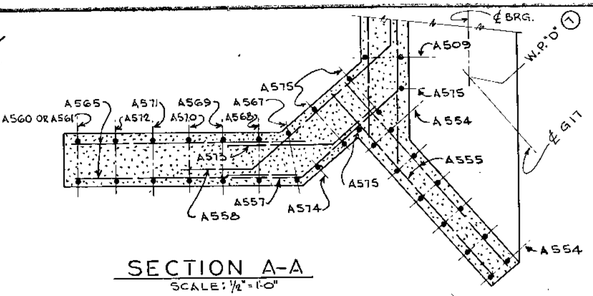
NOTES:
1. WORK THIS SHEET WITH SHEETS 11 AND 12
2. P801, P802 AND P601 MAY BE SHIFTED SLIGHTLY TO CLEAR PILE HEADS
3. P1101 DOWELS MAY BE ROTATED AS NECESSARY TO CLEAR PILE HEADS

AS BUILT
10-16-73
B. Jahn

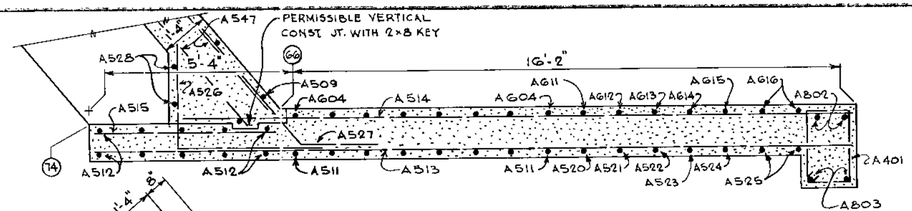
TITLE: PIER 1	DES: MODY	DR: W.K.	APPROVED:
	CHK: MODY	CHK: MODY	Bridge No. 02522
	Sheet No. 10 of 35 Sheets		



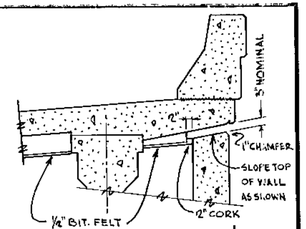
ISOMETRIC DETAIL OF END OF SLAB AT NORTHEAST CORNER
SCALE: 1"=1'-0"



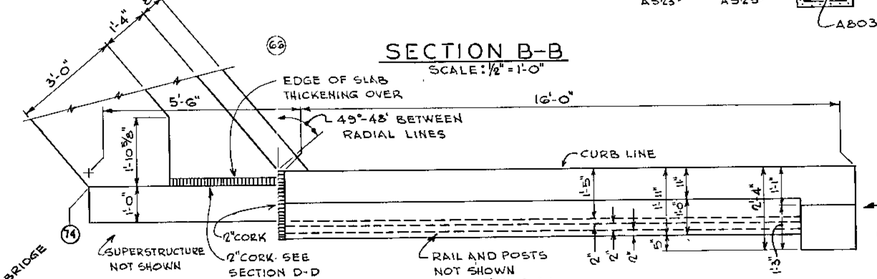
SECTION A-A
SCALE: ½"=1'-0"



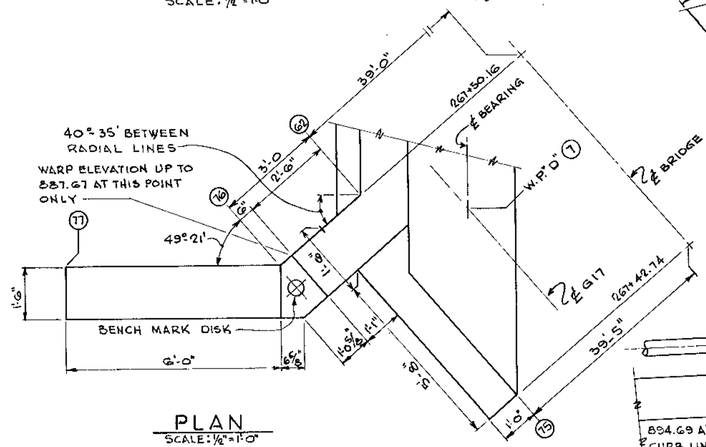
SECTION B-B
SCALE: ½"=1'-0"



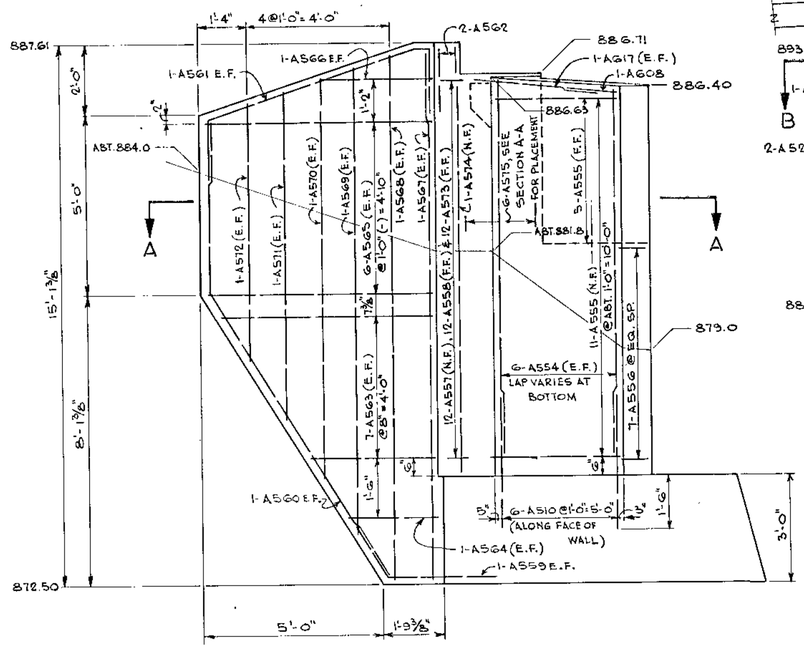
SECTION D-D
SCALE: ½"=1'-0"



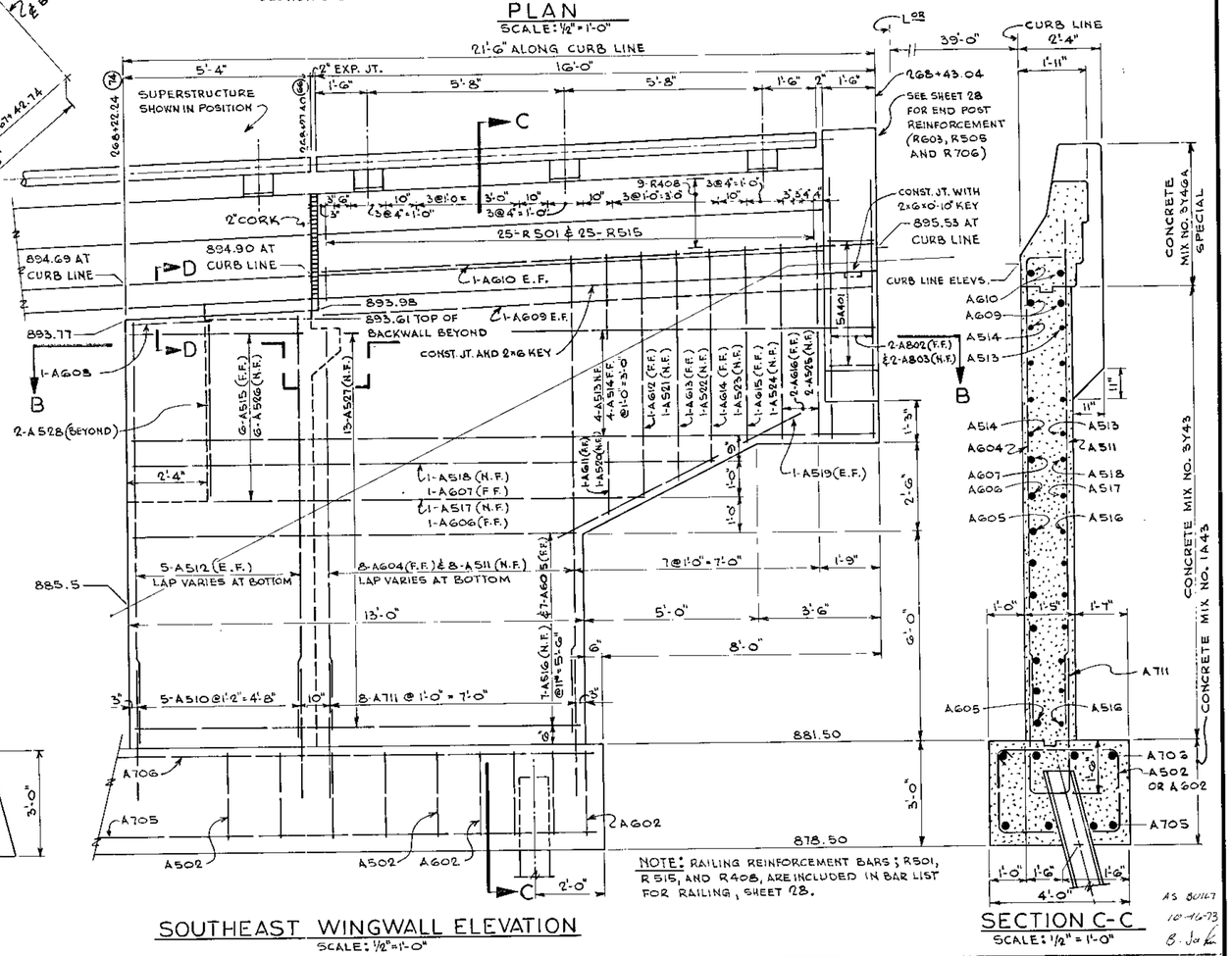
PLAN
SCALE: ½"=1'-0"



PLAN
SCALE: ½"=1'-0"



NORTHEAST WINGWALL ELEVATION
SCALE: ½"=1'-0"



SOUTHEAST WINGWALL ELEVATION
SCALE: ½"=1'-0"

SECTION C-C
SCALE: ½"=1'-0"

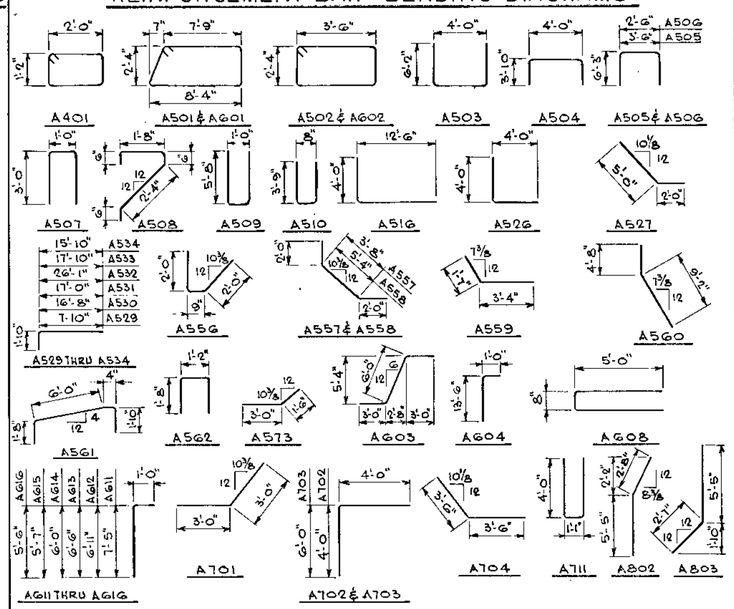
AS BUILT 10-16-73 B. Jack

TITLE: EAST ABUTMENT - DETAILS	DES: RJMcG DR: W. K. APPROVED:	CHK: MDPY CHK: RJMcG	Bridge No. 02522
	Sheet No. 9 of 35 Sheets		

REINFORCEMENT BAR NOTES

1. FOR A 708, NUMBER IS TWO SERIES OF SEVEN BARS; LENGTH VARIES FROM 9'-0" TO 17'-0" IN 1'-4" INCREMENTS.
2. FOR A 563, NUMBER IS TWO SERIES OF SEVEN BARS; LENGTH VARIES FROM 5'-9" TO 3'-3" IN 5" INCREMENTS.
3. BAR LOCATION ABBREVIATIONS:
   - E.F. EACH FACE
   - N.F. NEAR FACE
   - F.F. FAR FACE
   - T. TOP
   - B. BOTTOM

REINFORCEMENT BAR BENDING DIAGRAMS



BILL OF REINFORCEMENT FOR EAST ABUTMENT

BENT BARS

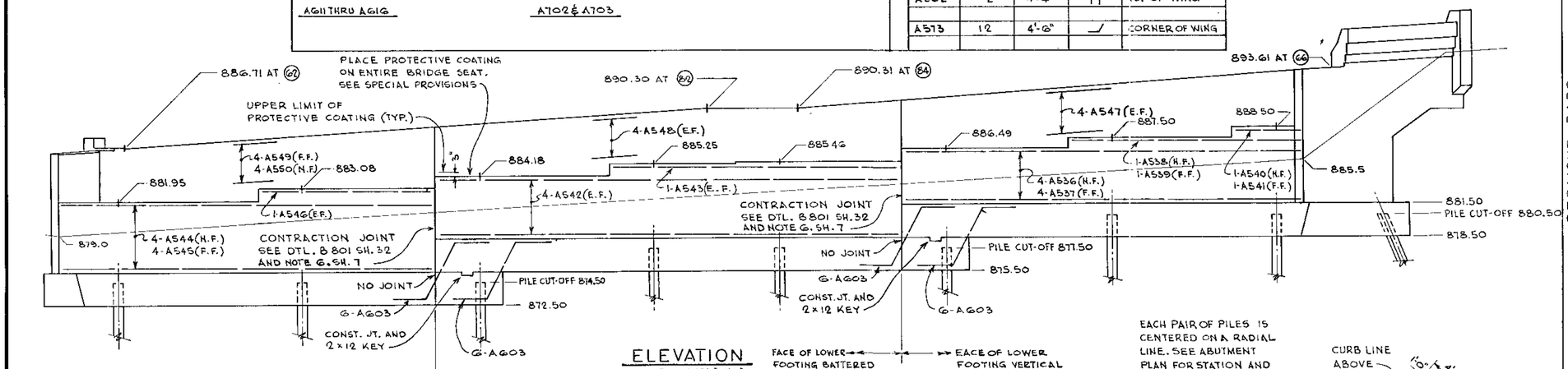
MARK	NUMBER	LENGTH	SHAPE	LOCATION
A501	68	21'-7"		FOOTING, TRANS.
A502	5	12'-5"		WING FTG. TRANS.
A503	88	16'-2"		ABUT. VERT.
A504	126	11'-6"		SEAT TRANS.
A505	1	15'-10"		SEAT TRANS.
A506	1	14'-10"		SEAT TRANS.
A507	111	6'-10"		TOP BACKWALL
A508	111	5'-3"		BRACKET
A509	111	12'-2"		BACKWALL VERT.
A510	11	8'-0"		WINGWALL DOWELS
A516	7	16'-5"		WINGWALL HORIZ.
A526	6	7'-11"		WINGWALL CORNER
A527	13	7'-0"		WINGWALL CORNER
A529	3	9'-7"		TOP OF SEAT
A530	3	18'-5"		TOP OF SEAT
A531	3	18'-9"		TOP OF SEAT
A532	3	21'-10"		TOP OF SEAT
A533	3	19'-7"		TOP OF SEAT
A534	3	17'-7"		TOP OF SEAT
A556	7	4'-7"		CORNER OF WING
A557	12	7'-8"		CORNER OF WING
A558	12	9'-4"		CORNER OF WING
A559	2	4'-11"		WING DOWEL
A560	2	13'-10"		WING EDGE
A561	2	9'-8"		WING EDGE
A562	2	4'-4"		TOP OF WING
A573	12	4'-6"		CORNER OF WING

BENT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
A401	5	6'-11"		END POST TIES
AG01	32	21'-6"		FOOTING, TRANS.
AG02	4	12'-4"		WING FTG. TRANS.
AG03	24	12'-0"		FOOTING STEPS
AG04	8	14'-4"		WINGWALL VERT.
AG08	2	10'-6"		TOP WINGWALL
AG11	1	8'-3"		WINGWALL VERT.
AG12	1	7'-9"		WINGWALL VERT.
AG13	1	7'-4"		WINGWALL VERT.
AG14	1	6'-10"		WINGWALL VERT.
AG15	1	6'-5"		WINGWALL VERT.
AG16	2	6'-4"		WINGWALL VERT.
A701	2	6'-0"		FTG. CORNER
A702	2	7'-10"		FTG. CORNER
A703	2	9'-10"		FTG. CORNER
A704	2	7'-0"		FTG. CORNER
A711	8	8'-9"		WINGWALL DOWEL
A802	2	8'-1"		END POST DOWEL
A803	2	8'-0"		END POST DOWEL

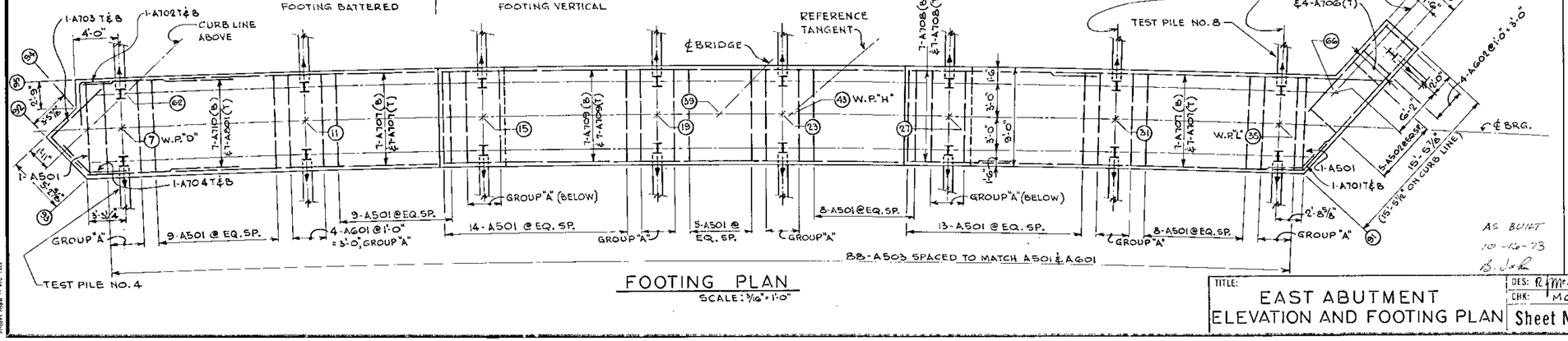
STRAIGHT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
A511	8	14'-10"		WINGWALL VERT.
A512	10	12'-1"		WINGWALL VERT.
A513	4	21'-2"		WINGWALL HORIZ.
A514	4	18'-8"		WINGWALL HORIZ.
A515	6	5'-0"		WINGWALL HORIZ.
A517	1	14'-6"		WINGWALL HORIZ.
A518	1	16'-6"		WINGWALL HORIZ.
A519	2	9'-0"		WINGWALL FILLET
A520	1	8'-8"		WINGWALL VERT.
A521	1	8'-2"		WINGWALL VERT.
A522	1	7'-9"		WINGWALL VERT.
A523	1	7'-3"		WINGWALL VERT.
A524	1	6'-10"		WINGWALL VERT.
A525	2	6'-9"		WINGWALL VERT.
A528	2	4'-10"		FILLET VERT.
A535	3	21'-0"		TOP OF SEAT
A536	4	36'-5"		ABUT. HORIZ.
A537	4	39'-5"		ABUT. HORIZ.
A538	1	21'-6"		ABUT. HORIZ.
A539	1	24'-6"		ABUT. HORIZ.
A540	1	6'-10"		ABUT. HORIZ.
A541	1	9'-10"		ABUT. HORIZ.
A542	8	41'-11"		ABUT. HORIZ.
A543	2	26'-1"		ABUT. HORIZ.
A544	4	33'-10"		ABUT. HORIZ.
A545	4	30'-0"		ABUT. HORIZ.
A546	2	15'-10"		ABUT. HORIZ.
A547	8	38'-4"		BACKWALL HORIZ.
A548	8	42'-0"		BACKWALL HORIZ.
A549	4	29'-10"		BACKWALL HORIZ.
A550	4	31'-0"		BACKWALL HORIZ.
A551	1	40'-0"		BRACKET
A552	1	42'-1"		BRACKET
A553	1	30'-0"		BRACKET
A554	12	10'-8"		WING VERT.
A555	16	6'-10"		WING HORIZ.
A563	(NOTE 2)	(NOTE 2)		WING HORIZ.
A564	2	2'-6"		WING HORIZ.
A565	12	6'-2"		WING HORIZ.
A566	2	3'-2"		WING HORIZ.
A567	2	14'-9"		WING VERT.
A568	2	14'-6"		WING VERT.
A569	2	13'-1"		WING VERT.
A570	2	11'-2"		WING VERT.
A571	2	9'-2"		WING VERT.
A572	2	7'-3"		WING VERT.
A574	1	11'-11"		WING VERT.
A575	6	11'-0"		WING VERT.
AG05	7	12'-6"		WINGWALL HORIZ.
AG06	1	12'-0"		WINGWALL HORIZ.
AG07	1	14'-0"		WINGWALL HORIZ.
AG09	2	18'-8"		WINGWALL HORIZ.
AG10	2	15'-8"		WINGWALL HORIZ.
AG17	2	6'-10"		WING HORIZ.
A705	4	15'-1"		WING FOOTING
A706	4	14'-1"		WING FOOTING
A707	28	30'-0"		FOOTING LONG
A708	(NOTE 1)	(NOTE 1)		FOOTING LONG
A709	14	47'-9"		FOOTING LONG
A710	7	14'-3"		FOOTING LONG. BOT.
A801	7	14'-3"		FOOTING LONG. TOP



ELEVATION
SCALE: 3/16"=1'-0"

FACE OF LOWER FOOTING BATTERED — FACE OF LOWER FOOTING VERTICAL



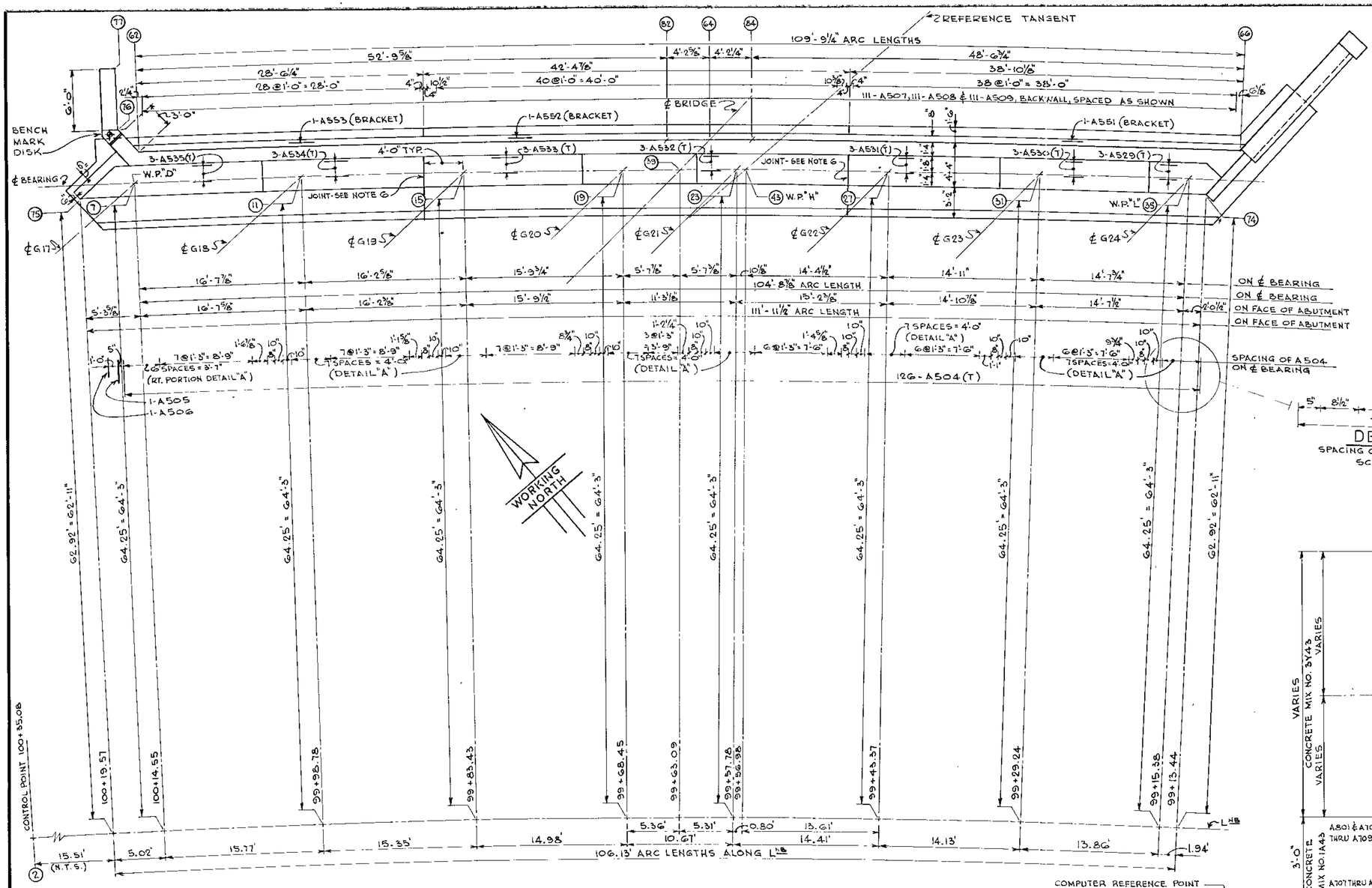
FOOTING PLAN
SCALE: 3/16"=1'-0"

TITLE: EAST ABUTMENT ELEVATION AND FOOTING PLAN

DES: R. Moody | DR: W.K. | APPROVED:
CHK: MODY | CHK: R. Moody

Sheet No. 8 of 35 Sheets

Bridge No. 02522

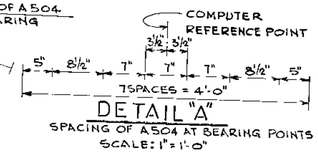


COMPUTED PILE LOADS TONS PER PILE

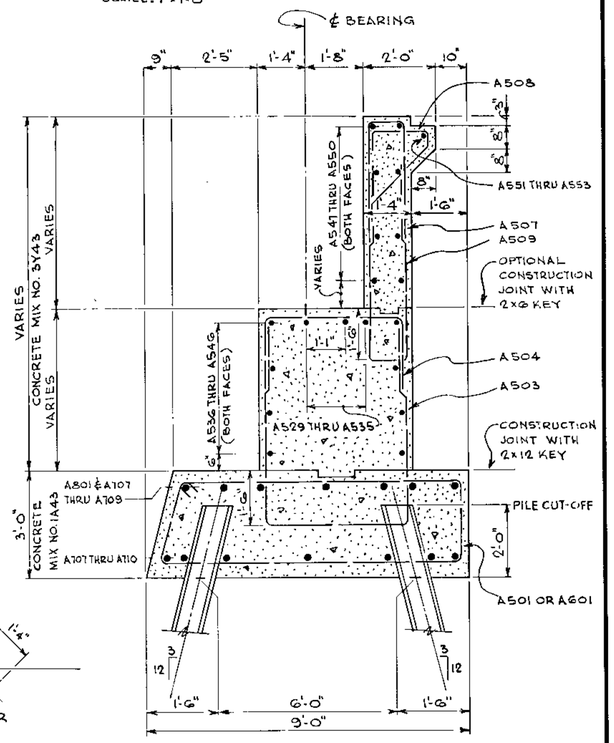
ITEM	FRONT ROW	BACK ROW
DEAD LOAD	49.4	69.8
LIVE LOAD	15.7	15.7
OVERTURNING	10.4	-10.4
TOTAL	75.5	75.1

PILE NOTES:

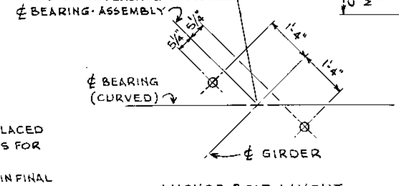
1. ALL PILES SHALL BE BATTERED 5" PER FOOT IN THE DIRECTION SHOWN THUS = H►
2. ESTIMATED PENETRATION IS TWO FEET LESS THAN LENGTH GIVEN BELOW.
3. ALL PILES ARE STEEL "H", 10BP57, CONFORMING TO M.H.D. 3372
4. PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
5. TWO STEEL TEST PILES 140-FT. LONG.
   FIFTEEN STEEL PILES 130-FT. LONG.
   SEVENTEEN STEEL PILES, TOTAL FOR EAST ABUTMENT.
6. ALL PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK.
7. FOR PILE SPLICES, AND TIP REINFORCEMENT, SEE DETAIL B202, SHEET 30.
8. SEE PILE NOTE, SHEET 1, FOR DEEP INTERFERENCE.



DETAIL "A"
SPACING OF A504 AT BEARING POINTS
SCALE: 1" = 1'-0"



TYPICAL SECTION
SCALE: ½" = 1'-0"



ANCHOR BOLT LAYOUT

ABUTMENT PLAN AND LAYOUT

SCALE: 3/16" = 1'-0"

SUMMARY OF QUANTITIES FOR EAST ABUTMENT

STRUCTURE EXCAVATION, CLASS E	440	CU.YD.
CONCRETE, MIX NO. 1A43	126	CU.YD.
CONCRETE, MIX NO. 3Y43	164	CU.YD.
CONCRETE, MIX NO. 3Y46A, SPECIAL	3	CU.YD.
REINFORCEMENT BARS	18,550	LBS.
TWO STEEL TEST PILES IN PLACE 140-FT. LONG		
STEEL PILING DELIVERED	1,950	LIN. FT.
STEEL PILING DRIVEN	1,920	LIN. FT.
ORNAMENTAL METAL RAILING (TYPE G)	15	LIN. FT.
BENCH MARK DISK	ONE UNIT	

QUANTITY NOTES:

1. THIS SUMMARY INCLUDES RAILING CONCRETE, FOR THE PORTION OF RAILING ON THE SOUTHEAST WINGWALL.
2. THE TABULATED QUANTITIES FOR STEEL PILING, DELIVERED, AND FOR STEEL PILING, DRIVEN, DO NOT INCLUDE TEST PILES.
3. NO SPLICES IN TEST PILES OR MEASURED PILES WILL BE ELEGIBLE FOR EXTRA COMPENSATION, EXCEPT STRICTLY UNDER THE CONDITIONS OF M.H.D. 2452.58.
4. THE OWNER WILL FURNISH THE BENCH MARK DISK. PAYMENT FOR PLACING WILL BE INCLUDED IN PRICE BID FOR OTHER ITEMS. SEE STANDARD PLATE NO. 9301 (NOT INCLUDED IN THESE DRAWINGS) FOR PLACING.

NOTES:

1. WORK THIS SHEET WITH SHEETS 8 AND 9
2. SEE SHEET 31 FOR DETAIL OF 1¼" ø ANCHOR BOLT.
3. BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF HOLES FOR ANCHOR BOLTS.
4. THE SUPERSTRUCTURE GIRDERS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING ANCHOR BOLT HOLES AND PLACING ANCHOR BOLTS.
5. REFER TO SHEET 28 FOR DIMENSIONS OF RAILING, DIMENSIONS OF END POST, AND DETAIL OF GUARD RAIL ANCHOR. ANCHOR IS STRUCTURAL STEEL, INCLUDED WITH SUPERSTRUCTURE QUANTITIES.
6. EITHER, OR BOTH, OF THE TWO CONTRACTION JOINTS MAY BE A CONSTRUCTION JOINT. USE 2x4 VERTICAL KEY FULL HEIGHT FROM TOP OF FOOTING TO TOP OF BACKWALL.

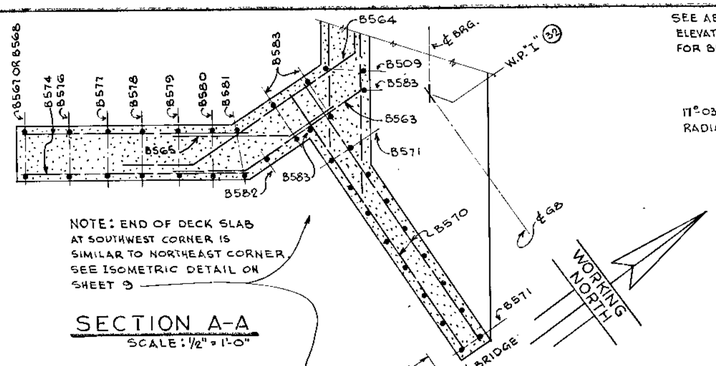
AS BUILT
10-16-73
B. Lahr

TITLE: EAST ABUTMENT PLAN AND LAYOUT

DES: R.J.M.S. | DR: W.K. | APPROVED:
CHK: MDPY | CHK: R.J.M.S.

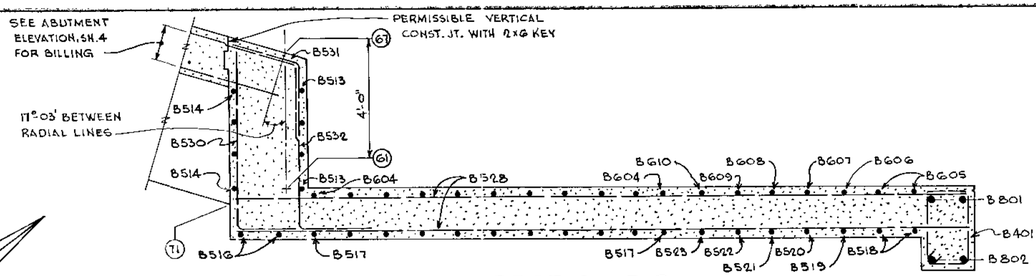
Sheet No. 7 of 35 Sheets

Bridge No. 02522

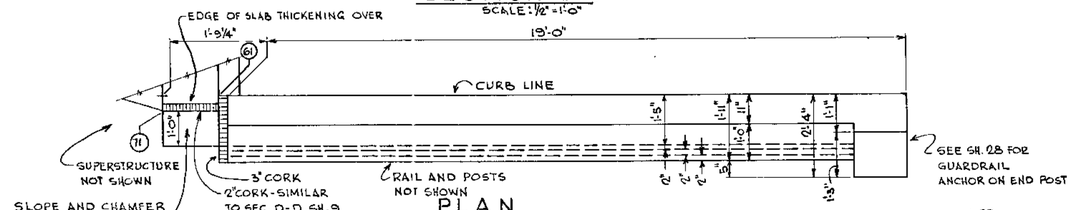


NOTE: END OF DECK SLAB AT SOUTHWEST CORNER IS SIMILAR TO NORTHEAST CORNER. SEE ISOMETRIC DETAIL ON SHEET 9

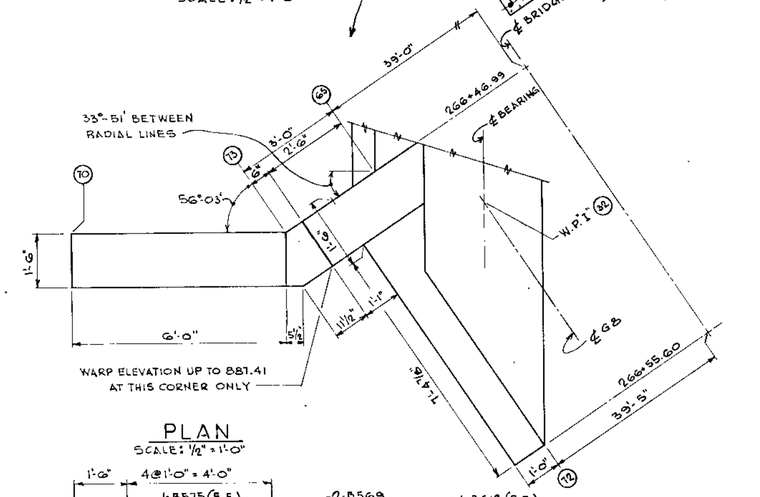
SECTION A-A
SCALE: 1/2" = 1'-0"

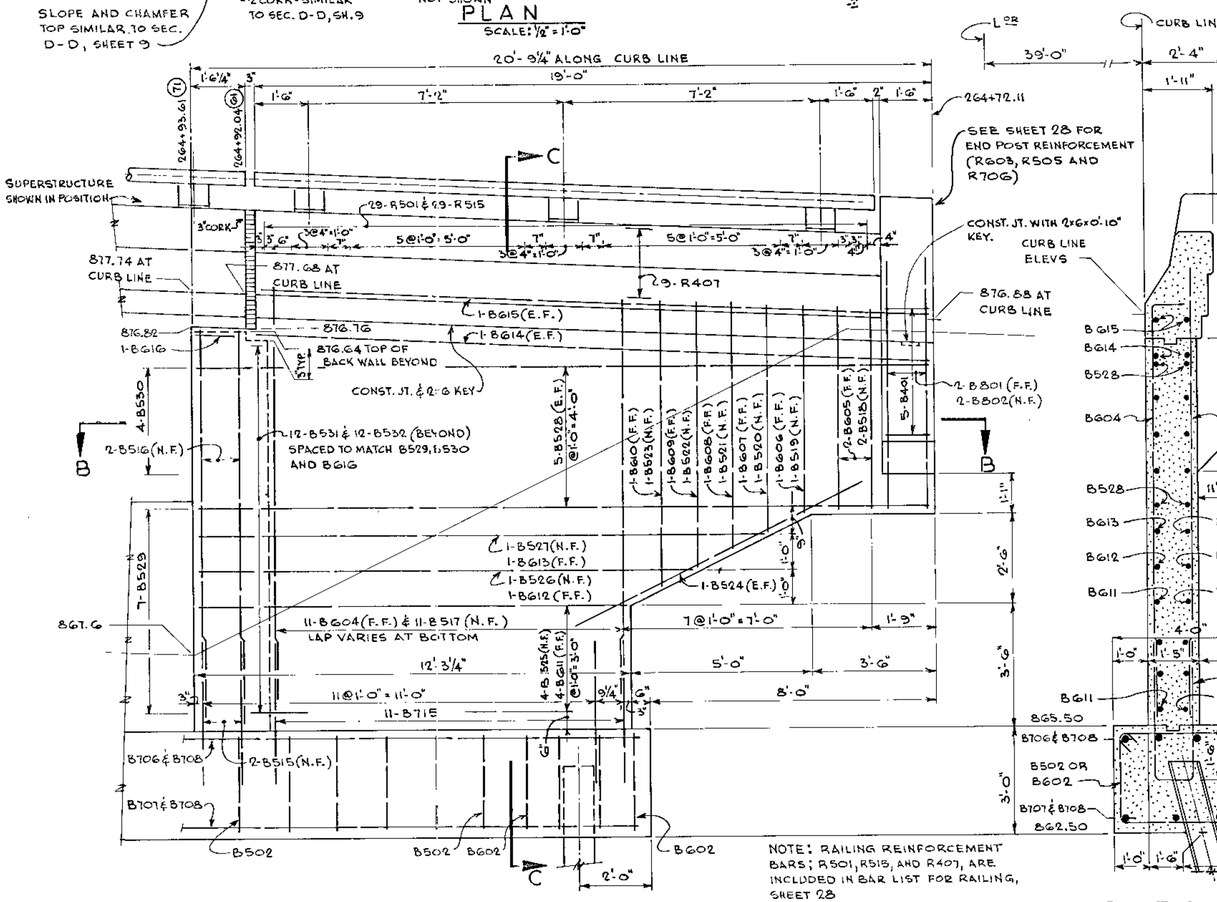


SECTION B-B
SCALE: 1/2" = 1'-0"



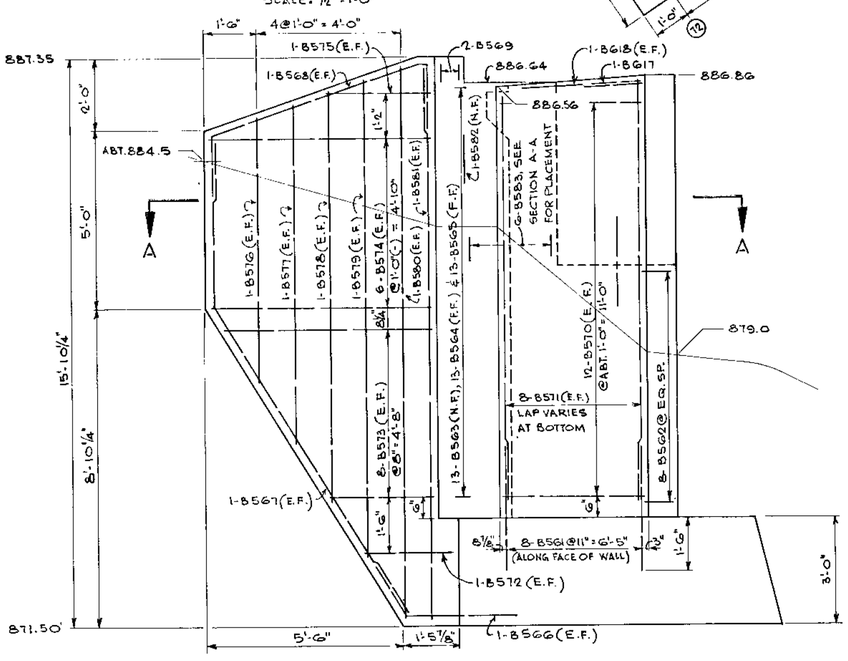
PLAN
SCALE: 1/2" = 1'-0"





NOTE: RAILING REINFORCEMENT BARS; R501, R515, AND R407, ARE INCLUDED IN BAR LIST FOR RAILING, SHEET 28

NORTHWEST WINGWALL ELEVATION
SCALE: 1/2" = 1'-0"



SOUTHWEST WINGWALL ELEVATION
SCALE: 1/2" = 1'-0"

SECTION C-C
SCALE: 1/2" = 1'-0"

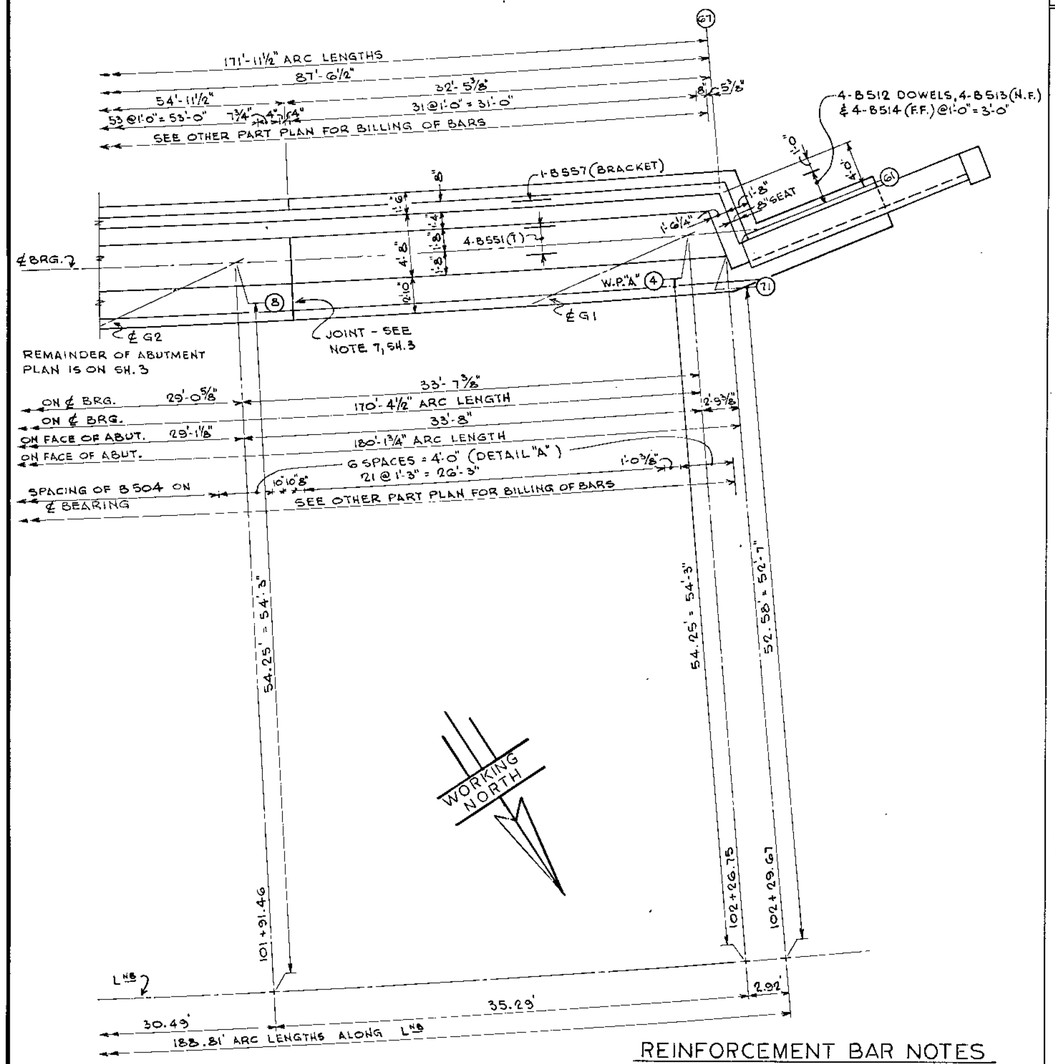
AS BUILT
10-16-73
B. Jeh

TITLE: WEST ABUTMENT-DETAILS

DES. RJMc | DR. W.K. | APPROVED:
CHK: MOPY | CHK RJMc

Sheet No. 6 of 35 Sheets

Bridge No. 02522



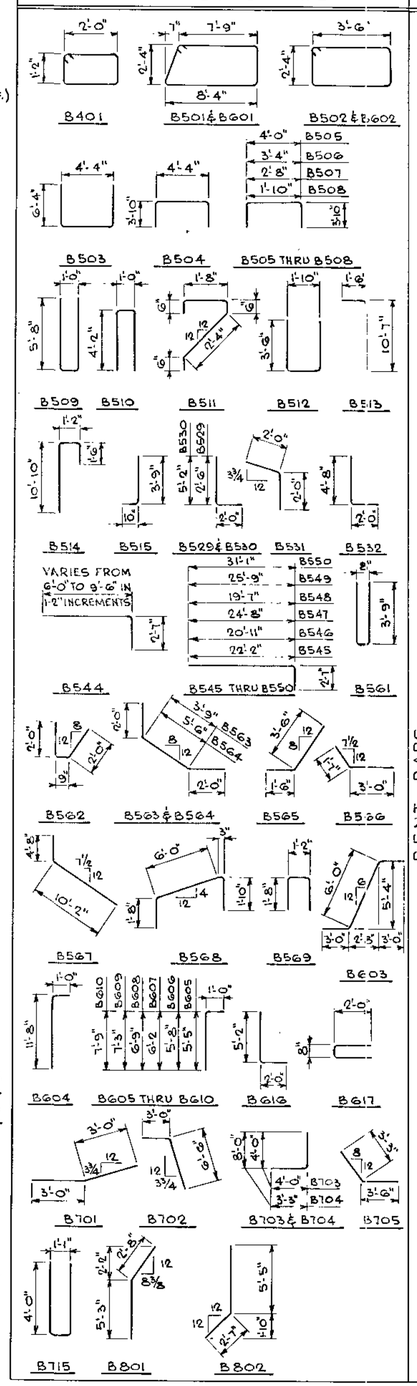
PART ABUTMENT PLAN AND LAYOUT

SCALE: 3/16" = 1'-0"

REINFORCEMENT BAR NOTES

1. FOR B544, NUMBER IS ONE SERIES OF FOUR BARS; LENGTH VARIES FROM 8'-6" TO 12'-0" IN 1'-2" INCREMENTS.
2. FOR B573, NUMBER IS TWO SERIES OF EIGHT BARS; LENGTH VARIES FROM 2'-9" TO 5'-2" IN 5" INCREMENTS.
3. BAR LOCATION ABBREVIATIONS:
   - E. F. EACH FACE
   - N. F. NEAR FACE
   - F. F. FAR FACE
   - T. TOP
   - B. BOTTOM

REINFORCEMENT BAR BENDING DIAGRAMS



BILL OF REINFORCEMENT FOR WEST ABUTMENT

BENT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
B401	5	6'-11"		END POST TIES
B501	114	21'-7"		FOOTING, TRANS.
B502	6	12'-5"		WING FTG. TRANS.
B503	138	16'-10"		ABUT. VERT.
B504	170	11'-10"		SEAT TRANS.
B505	1	11'-6"		SEAT TRANS
B506	1	10'-10"		SEAT TRANS
B507	1	10'-2"		SEAT TRANS
B508	1	9'-4"		SEAT TRANS
B509	175	12'-2"		BACKWALL VERT.
B510	175	9'-2"		TOP BACKWALL
B511	175	5'-3"		BRACKET
B512	4	8'-8"		DOWEL
B513	4	12'-0"		BACKWALL VERT.
B514	4	13'-4"		BACKWALL VERT.
B515	2	4'-6"		WINGWALL DOWEL
B529	7	4'-5"		WINGWALL CORNER
B530	4	7'-1"		WINGWALL CORNER
B531	12	4'-0"		WINGWALL CORNER
B532	12	6'-7"		WINGWALL CORNER
B544	(NOTE 1)	(NOTE 1)		TOP OF SEAT
B545	4	24'-8"		TOP OF SEAT
B546	4	23'-5"		TOP OF SEAT
B547	4	27'-2"		TOP OF SEAT
B548	4	22'-1"		TOP OF SEAT
B549	4	28'-3"		TOP OF SEAT
B550	4	33'-7"		TOP OF SEAT
B561	8	8'-0"		WINGWALL DOWEL
B562	8	4'-7"		CORNER OF WING
B563	13	7'-8"		CORNER OF WING
B564	13	9'-5		CORNER OF WING
B565	13	5'-0"		CORNER OF WING
B566	2	4'-7"		WING DOWEL
B567	2	14'-10"		WING EDGE
B568	2	9'-7"		WING EDGE
B569	2	4'-4"		TOP OF WING
B601	40	21'-6"		FOOTING, TRANS.
B602	4	12'-4"		WING FTG. TRANS.
B603	36	12'-0"		FOOTING STEPS
B604	11	12'-6"		WINGWALL VERT.
B605	2	6'-3"		WINGWALL VERT.
B606	1	6'-6"		WINGWALL VERT.
B607	1	7'-0"		WINGWALL VERT.
B608	1	7'-7"		WINGWALL VERT.
B609	1	8'-1"		WINGWALL VERT.
B610	1	8'-7"		WINGWALL VERT.
B616	1	7'-0"		WINGWALL CORNER
B617	1	4'-6"		TOP WINGWALL
B701	2	6'-0"		FOOTING CORNER
B702	2	9'-6"		FOOTING CORNER
B703	2	7'-10"		FOOTING CORNER
B704	2	11'-1"		FOOTING CORNER
B705	2	6'-9"		FOOTING CORNER
B715	11	8'-9"		WINGWALL DOWEL
B801	2	7'-11"		END POST DOWEL
B802	2	8'-0"		END POST DOWEL

STRAIGHT BARS

MARK	NUMBER	LENGTH	SHAPE	LOCATION
B516	2	11'-0"		WINGWALL VERT.
B517	11	13'-0"		WINGWALL VERT.
B518	2	6'-9"		WINGWALL VERT.
B519	1	7'-0"		WINGWALL VERT.
B520	1	7'-6"		WINGWALL VERT.
B521	1	8'-1"		WINGWALL VERT.
B522	1	8'-7"		WINGWALL VERT.
B523	1	9'-1"		WINGWALL VERT.
B524	2	9'-0"		WINGWALL FILLET
B525	4	11'-10"		WINGWALL HORIZ.
B526	1	13'-10"		WINGWALL HOR. Z.
B527	1	15'-10"		WINGWALL HOR. Z.
B528	10	20'-4"		WINGWALL HOR. Z.
B533	4	34'-0"		ABUT. HORIZ.
B534	4	32'-1"		ABUT. HORIZ.
B535	2	25'-9"		ABUT. HORIZ.
B536	16	28'-3"		ABUT. HORIZ.
B537	2	20'-11"		ABUT. HORIZ.
B538	2	43'-8"		ABUT. HORIZ.
B539	16	31'-7"		ABUT. HORIZ.
B540	1	10'-4"		ABUT. HORIZ.
B541	1	5'-0"		ABUT. HORIZ.
B542	4	30'-6"		ABUT. HORIZ.
B543	4	25'-2"		ABUT. HORIZ.
B551	4	33'-0"		TOP OF SEAT
B552	8	32'-9"		BACKWALL HORIZ.
B553	16	28'-2"		BACKWALL HORIZ
B554	16	31'-6"		BACKWALL HORIZ.
B555	4	26'-8"		BACKWALL HORIZ.
B556	4	25'-0"		BACKWALL HORIZ.
B557	1	32'-7"		BRACKET
B558	2	28'-1"		BRACKET
B559	2	31'-3"		BRACKET
B560	1	24'-6"		BRACKET
B570	24	8'-6"		WING, HORIZ.
B571	16	11'-10"		WING, VERT.
B572	2	9'-6"		WING, HORIZ.
B573	(NOTE 2)	(NOTE 2)		WING, HORIZ.
B574	12	6'-1"		WING, HORIZ.
B575	2	3'-1"		WING, HORIZ.
B576	2	7'-5"		WING, VERT.
B577	2	9'-4"		WING, VERT.
B578	2	11'-3"		WING, VERT.
B579	2	13'-3"		WING, VERT.
B580	2	15'-2"		WING, VERT.
B581	2	15'-4"		WING, VERT.
B582	1	12'-6"		WING, VERT.
B583	6	11'-11"		WING, VERT.
B611	4	11'-10"		WINGWALL HORIZ.
B612	1	13'-10"		WINGWALL HORIZ.
B613	1	15'-10"		WINGWALL HORIZ
B614	2	20'-4"		WINGWALL HORIZ
B615	2	18'-8		WINGWALL HORIZ.
B618	2	8'-6"		WINGWALL HOR Z.
B706	1	11'-4"		WING FOOTING
B707	1	18'-9"		WING FOOTING
B708	6	15'-6"		WING FOOTING
B709	14	30'-0"		FOOTING LONG
B710	14	13'-1"		FOOTING LONG
B711	28	31'-7"		FOOTING LONG
B712	28	34'-10"		FOOTING LONG
B713	14	20'-0"		FOOTING LONG
B714	7	14'-2"		FTG. LONG., BOT.
B901	7	14'-10"		FTG. LONG., TOP

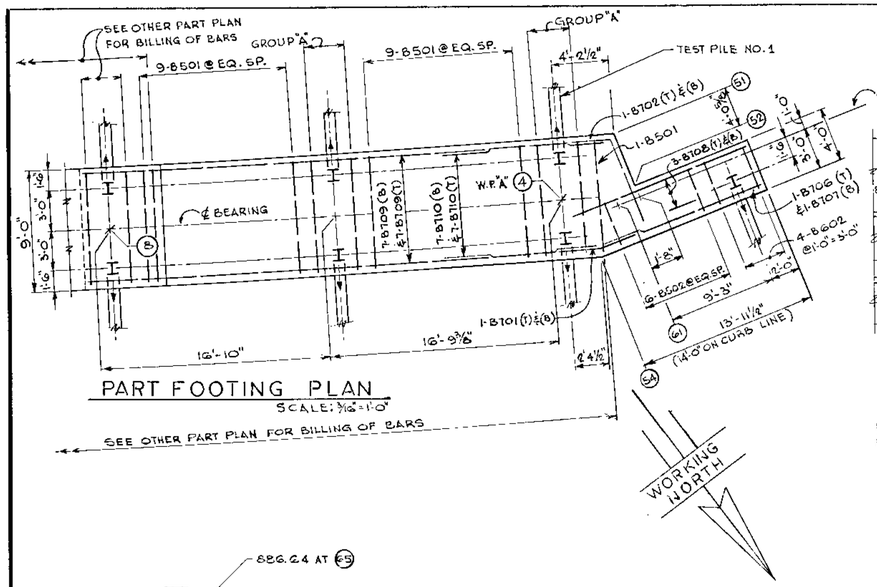
AS BUILT
10-16-73
B. Jahn

TITLE: WEST ABUTMENT PART PLAN AND DETAILS

DES: R M-S | DR. W.H. | APPROVED:
CHK: MODY | CHK: R M-S

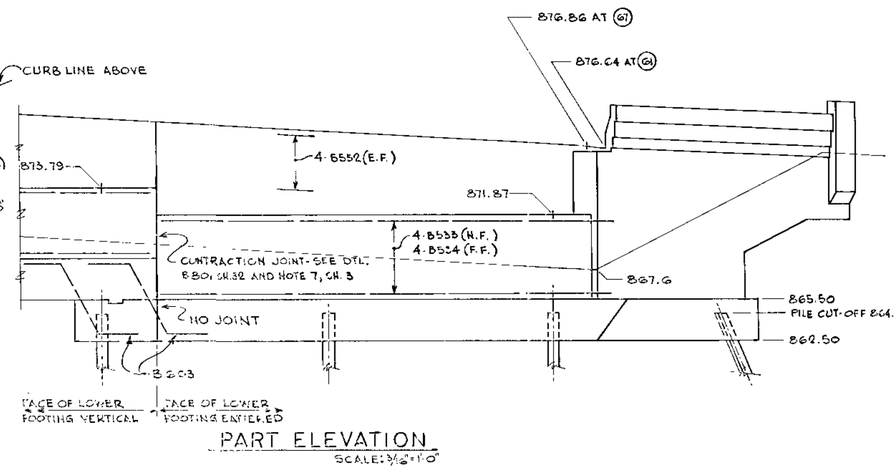
Sheet No. 5 of 35 Sheets

Bridge No. 02522



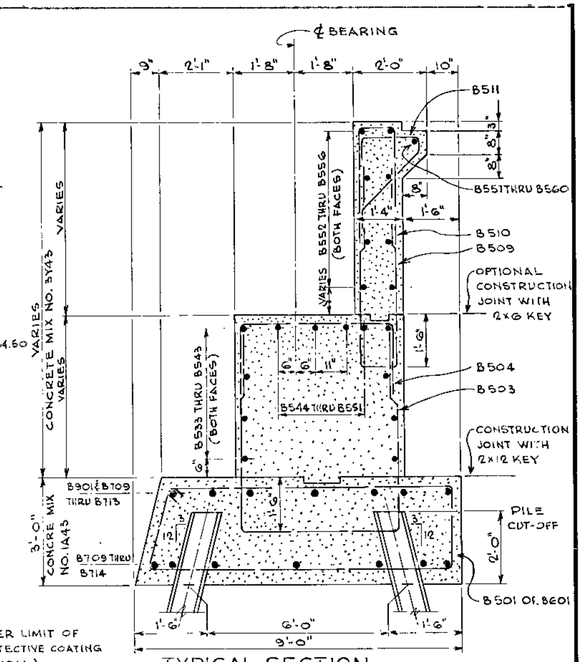
PART FOOTING PLAN

SCALE: 3/16" = 1'-0"



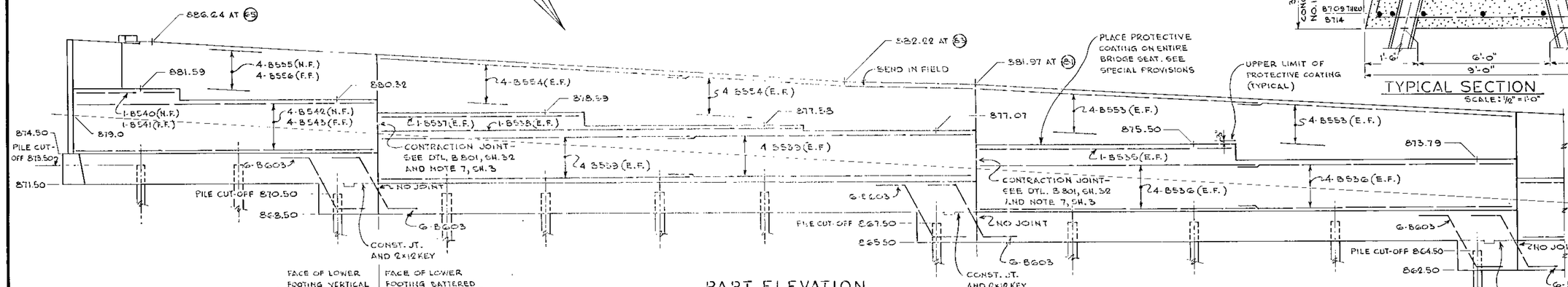
PART ELEVATION

SCALE: 3/16" = 1'-0"



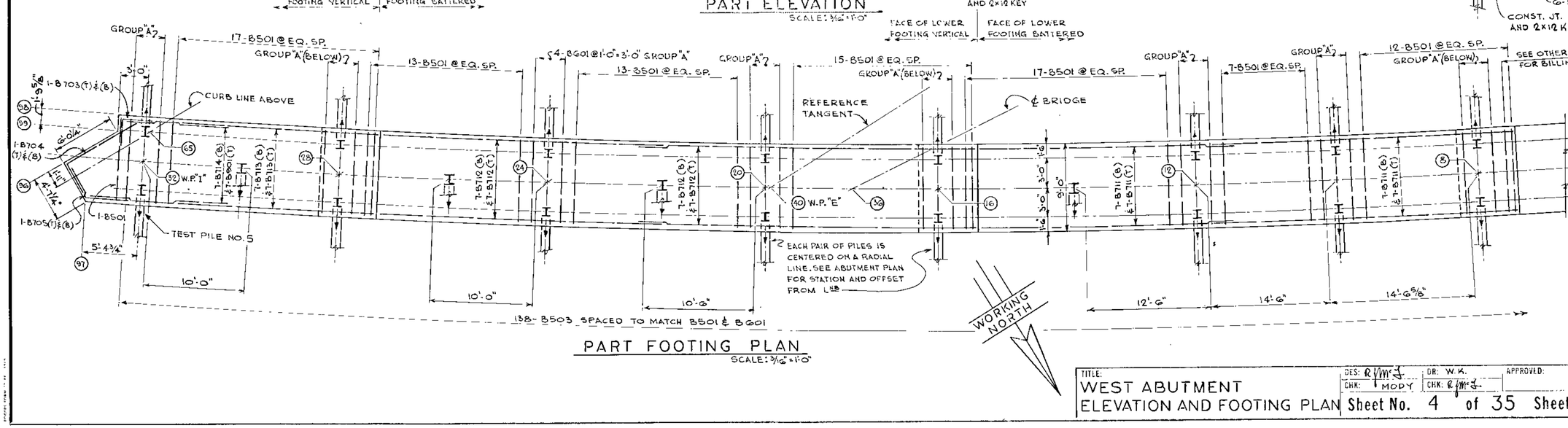
TYPICAL SECTION

SCALE: 1/2" = 1'-0"



PART ELEVATION

SCALE: 3/16" = 1'-0"

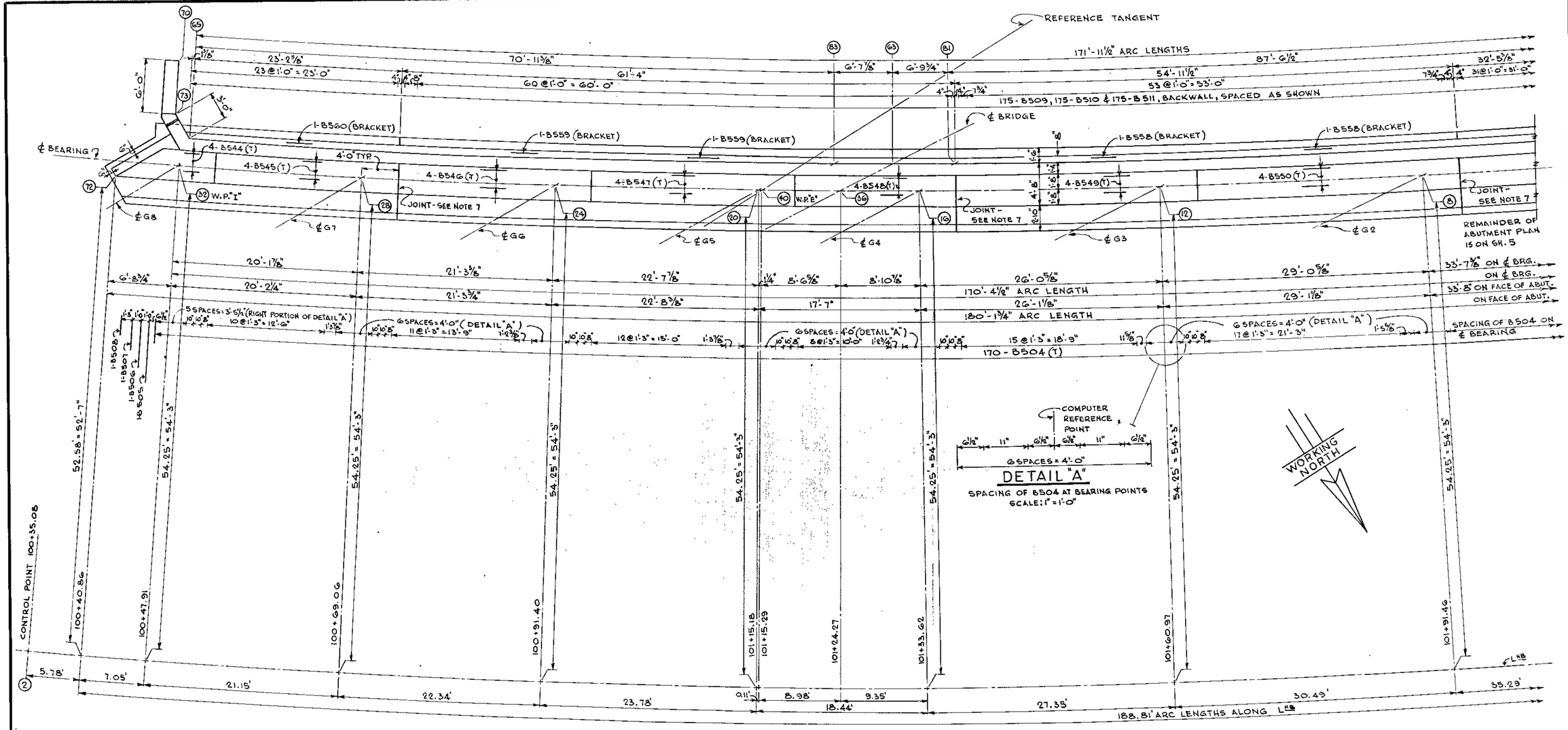


PART FOOTING PLAN

SCALE: 3/16" = 1'-0"

AS BUILT 10-16-73 B. Jack

TITLE:	DES: R.M.S.	DR: W.K.	APPROVED:	Bridge No.
WEST ABUTMENT ELEVATION AND FOOTING PLAN	CHK: MDPY	CHK: R.M.S.		02522
	Sheet No. 4 of 35 Sheets			



PART ABUTMENT PLAN AND LAYOUT

SCALE: 3/16" = 1'-0"

SUMMARY OF QUANTITIES FOR WEST ABUTMENT

STRUCTURE EXCAVATION, CLASS E	840	CU. YD.
CONCRETE, MIX NO. 1A43	197	CU. YD.
CONCRETE, MIX NO. 3Y43	265	CU. YD.
CONCRETE, MIX NO. 3Y46A, SPECIAL	4	CU. YD.
REINFORCEMENT BARS	27,820	LBS.
TWO STEEL TEST PILES IN PLACE, 130-FT. LONG		
STEEL PILING DELIVERED	2,760	LIN. FT.
STEEL PILING DRIVEN	2,714	LIN. FT.
ORNAMENTAL METAL RAILING (TYPE G)	18	LIN. FT.

QUANTITY NOTES:

1. THIS SUMMARY INCLUDES RAILING CONCRETE, FOR THE PORTION OF RAILING ON THE NORTHWEST WINGWALL.
2. THE TABULATED QUANTITIES FOR STEEL PILING, DELIVERED AND FOR STEEL PILING, DRIVEN, DO NOT INCLUDE TEST PILES.
3. NO SPLICES IN TEST PILES OR MEASURED PILES WILL BE ELEGIBLE FOR EXTRA COMPENSATION, EXCEPT STRICTLY UNDER THE CONDITIONS OF M.H.D. 2452.58

NOTES

1. WORK THIS SHEET WITH SHEETS 4, 5 & 6.
2. SEE SHEET 31 FOR DETAIL OF 1¼" ø ANCHOR BOLT.
3. SEE SHEET 7 FOR ANCHOR BOLT LAYOUT.
4. BRIDGE SEAT REINFORCEMENT SHALL BE CAREFULLY PLACED TO AVOID INTERFERENCE WITH THE DRILLING OF HOLES FOR ANCHOR BOLTS.
5. THE SUPERSTRUCTURE GIRDERS SHALL BE ERECTED IN FINAL POSITION PRIOR TO DRILLING ANCHOR BOLT HOLES AND PLACING ANCHOR BOLTS.
6. REFER TO SHEET 28 FOR DIMENSIONS OF RAILING, DIMENSIONS OF END POST, AND DETAIL OF GUARD RAIL ANCHOR. ANCHOR IS STRUCTURAL STEEL, INCLUDED WITH SUPERSTRUCTURE QUANTITIES.
7. ANY, OR ALL, OF THE THREE CONTRACTION JOINTS MAY BE A CONSTRUCTION JOINT. USE 2x4 VERTICAL KEY FULL HEIGHT FROM TOP OF FOOTING TO TOP OF BACKWALL.

PILE NOTES

1. ALL PILES SHALL BE BATTERED 3" PER FOOT IN THE DIRECTION SHOWN THUS: H→
2. ESTIMATED PENETRATION IS TWO FEET LESS THAN LENGTH GIVEN BELOW.
3. ALL PILES ARE STEEL "H", 10 BP 57, CONFORMING TO M.H.D. 3372.
4. PILE SPACING SHOWN IS AT BOTTOM OF FOOTING.
5. TWO STEEL TEST PILES 130-FT. LONG.
   TWENTY-THREE STEEL PILES 120-FT. LONG.
   TWENTY-FIVE STEEL PILES, TOTAL FOR WEST ABUTMENT.
6. ALL PILES SHALL BE DRIVEN TO REFUSAL ON BEDROCK.
7. FOR PILE SPLICES AND TIP REINFORCEMENT, SEE DETAIL B 202, SHEET 30.
8. SEE PILE NOTE, SHEET 4, FOR DEEP INTERFERENCE.

COMPUTED PILE LOADS TONS PER PILE

ITEM	FRONT ROW	BACK ROW
DEAD LOAD	45.5	74.0
LIVE LOAD	14.8	14.8
OVERTURNING	14.6	-14.6
TOTAL	74.9	74.2

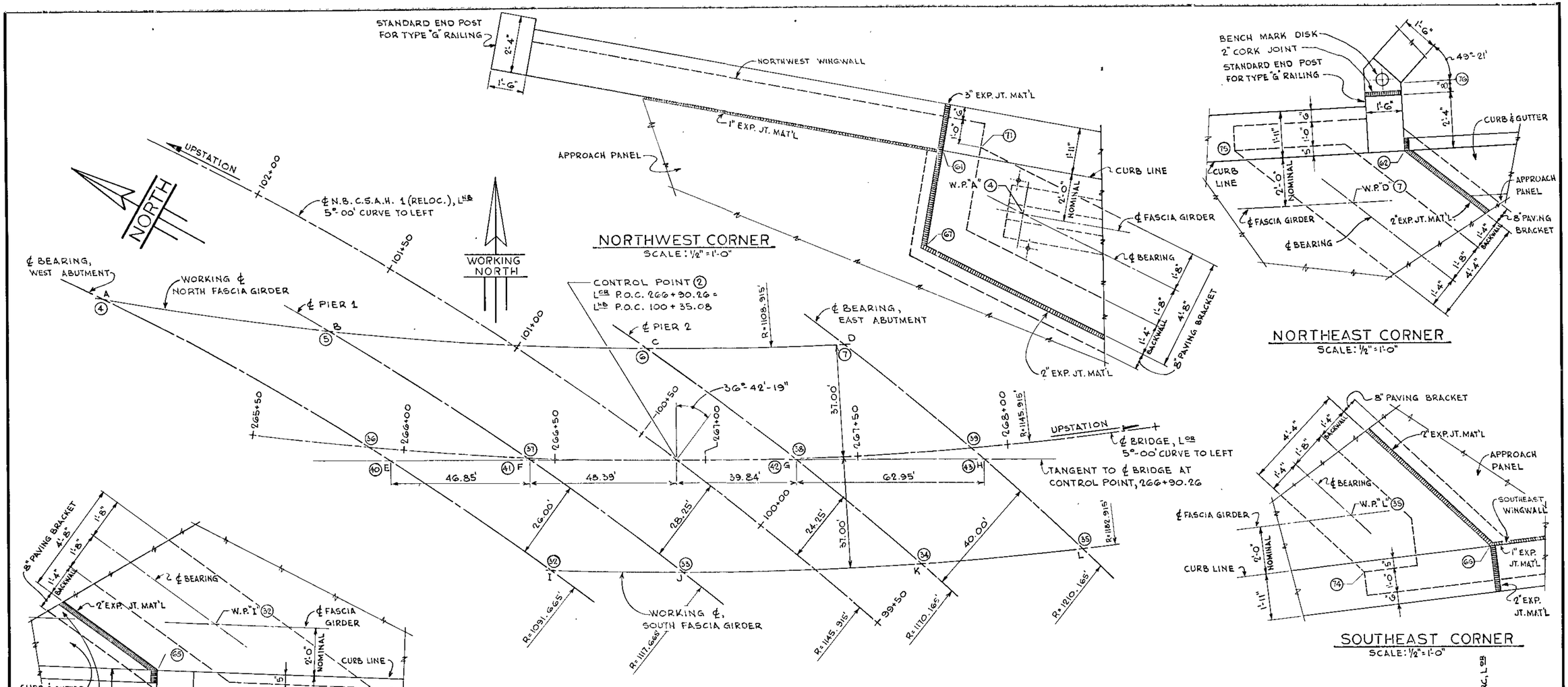
AS BUILT
10-16-73
B. Jahn

TITLE: PART WEST ABUTMENT PLAN AND LAYOUT

DES: RJM DR: W.K. APPROVED:
CHK: MODY CHK. RJM

Sheet No. 3 of 35 Sheets

Bridge No. 02522



NORTHWEST CORNER
SCALE: ½" = 1'-0"

NORTHEAST CORNER
SCALE: ½" = 1'-0"

SOUTHEAST CORNER
SCALE: ½" = 1'-0"

SOUTHWEST CORNER
SCALE: ½" = 1'-0"

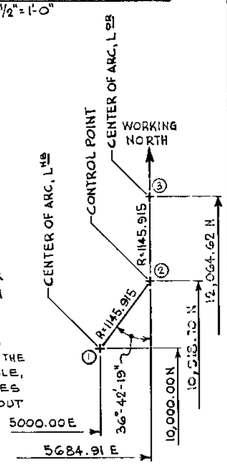
LAYOUT SHOWING WORKING POINTS
SCALE: 1/16" = 1'-0"

REFERENCE NOTE

ALL WORKING POINTS INCLUDED IN THE COMPUTER NETWORK ARE NUMBERED, AND ARE DENOTED THUS (5) ON THE DRAWINGS. THE TWELVE STANDARD WORKING POINTS ALL ARE DENOTED BY LETTERS, AND THE CORRESPONDING POINT NUMBERS ARE ALSO SHOWN FOR EASE OF REFERENCE TO THE COMPUTER NETWORK.

COORDINATE NOTE

COORDINATES OF MOST OF THE IMPORTANT POINTS ARE AVAILABLE, REFERENCED TO THE SYSTEM SHOWN ON THE SKETCH AT THE RIGHT. COORDINATE INFORMATION, IN THE FORM OF COMPUTER OUTPUT, MAY BE MADE AVAILABLE TO THE CONTRACTOR UPON REQUEST. SUCH INFORMATION IS NOT A PART OF THE CONTRACT. IT IS INTENDED THAT THE BASIC LAYOUT STAKING BE DONE FROM DIMENSIONS AND OTHER INFORMATION GIVEN ON THE DRAWINGS. THEN, WHEREVER POSSIBLE, IT IS INTENDED THAT THE COORDINATES BE USED TO CHECK THE BASIC LAYOUT STAKING.



DIMENSIONS BETWEEN WORKING POINTS

POINT	STATION	A (4)	B (5)	C (6)	D (7)	E (40)	F (41)	G (42)	H (43)	I (32)	J (33)	K (34)	L (35)
A (4)	264+95.84	——											
B (5)	265+70.10	72.43	——										
C (6)	266+80.18		105.90	——									
D (7)	267+47.81			65.44	——								
E (40)	265+95.24	106.14				——							
F (41)	266+41.90	148.59	79.71			46.85	——						
G (42)	267+30.09		161.18	61.91			88.23	——					
H (43)	267+92.78			118.49	60.79			62.95	——				
I (32)	266+49.31	170.21	107.92	80.17		64.19				——			
J (33)	266+92.14	209.47	142.11	74.96	92.58	103.99	62.47			44.21	——		
K (34)	267+69.00	282.25	211.33	115.56	76.97		134.05	53.69			79.32	——	
L (35)	268+21.93		261.30	159.76	104.70			100.13	43.94			54.64	——

ELEVATIONS

TOP OF SLAB EL.	SLAB TO BR. SEAT	BRIDGE SEAT EL.
877.94	6.07	871.87
880.93	6.10	874.83
885.31	6.10	879.21
888.02	6.07	881.95
887.66	6.07	881.59
888.37	6.10	882.27
892.45	6.10	886.35
894.57	6.07	888.50

AS BUILT
10-12-73
B. Jak

TITLE: BRIDGE LAYOUT

DES: RJMcS | DR. W.K. | APPROVED:
CHK: MODY | CHK: RJMcS

Sheet No. 2 of 35 Sheets

Bridge No. 02522

TEST PILE NO. 1 - SEE SHEET 4 FOR LOCATION

TEST PILE NO. 2

ST-5

W.P. "B" (5)

L_NB 5° CURVE 101

W.P. "C" (6)

ST-6

TEST PILE NO. 3

W.P. "D" (7)

TEST PILE NO. 4

SCALE: 1" = 10'

WORKING NORTH

268

266 L_OR

ST-9

5° CURVE

267

L_OR POC 266 + 90.26 =
L_NB POC 100 + 35.08

36°-42'-0"

100

W.P. "L" (35)

ST-3

TEST PILE NO. 8

W.P. "I" (32)

W.P. "J" (33)

W.P. "K" (34)

TEST PILE NO. 5

TEST PILE NO. 6

ST-4

℄ PIER 1

TEST PILE NO. 7

℄ PIER 2

℄ BRG. WEST ABUT.

℄ BRG. EAST ABUT.

+4.00%

FINISHED GRADE

ELEV 890

ELEV 880

ELEV 870

ELEV 860

ELEV 850

ELEV 840

ELEV 830

ELEV 820

ELEV 810

ELEV 800

ELEV

TOP SOIL

MEDIUM DENSE — 12 FINE SAND - BROWN, MOIST TO WET

MEDIUM DENSE — 9 SILT LOAM GREY, WET

SOFT TILL — 5 SANDY LOAM GREY MOIST TO WET

STEEL TEST PILES

SOFT TO MEDIUM TILL — 5 SANDY CLAY LOAM GREY WET TO MOIST

VERY STIFF — LEAN TO MEDIUM RED CLAY, MOIST

MEDIUM DENSE TO VERY DENSE — SILT LOAM, NON-PLASTIC, GREY, WET VARVED W/RED CLAY

(NO SAMPLES ABOVE ELEV. 796 FOR BORING ST-5)

STEEL TEST PILES

20' RT. ℄

TOP SOIL

FINE SAND 20 FT. MEDIUM DENSE

SILT LOAM VERY LOOSE TO DENSE

SANDY LOAM MEDIUM TILL

SANDY CLAY LOAM RATHER STIFF TILL

LEAN TO MEDIUM RED CLAY, MOIST

VERY STIFF

SILT LOAM, NON-PLASTIC, GREY, WET VARVED W/ RED CLAY

MEDIUM DENSE

ELEV. 800

MEDIUM STIFF — 16 / 12 / 10 SILT LOAM, NON-PLASTIC GREY TO DARK RED, WET VARVED W/RED CLAY

14

DENSE — 20 SILT LOAM & SANDY LOAM, PLASTIC, DARK RED, WET

VERY DENSE — 131 MEDIUM SAND, REDDISH GREY, WET

100/6"

VERY DENSE — 120/6" SAND & GRAVEL, YELLOW & BLACK, WET

100/6" JORDAN SANDSTONE CLEAR & RUST YELLOW

133

ELEV. 750

125/6"

STEEL TEST PILES

PEAT & MUCK BLACK WET

FINE TO MED. SAND MEDIUM DENSE

SILT LOAM LOOSE

SANDY LOAM RATHER SOFT TILL

SANDY CLAY LOAM

RATHER SOFT TO MEDIUM TILL

LEAN TO MEDIUM RED CLAY, MOIST

VERY STIFF

SILT LOAM, NON-PLASTIC, GREY, WET - VARVED W/RED CLAY

VERY LOOSE TO DENSE

STEEL TEST PILES

STEEL TEST PILES

MEDIUM DENSE — FINE SAND

RATHER STIFF — SILTY CLAY

SOFT TILL — SANDY LOAM

MEDIUM TILL — SANDY CLAY LOAM

RATHER STIFF TO VERY STIFF — LEAN TO MEDIUM RED CLAY MOIST

MEDIUM DENSE TO DENSE — SILT LOAM, NON-PLASTIC, GREY, WET VARVED W/RED CLAY

B.M. ELEV. 874.34
R.R. SPK. 8" OAK
90 RT. L_OR 263 + 96

(M.S.L. 19 ADJ.)
(DATUM UNKNOWN)

266

267

268

BORINGS SHOWN ✦ ST- TAKEN WITH STD. 140 LB. HAMMER 30 INCH DROP 2 INCH O.D. SAMPLER

AS-BUILT 10-16-73 B.J.L.

ANOKA C.S.A.H. NO. 1
STATE OF MINNESOTA
DEPT. OF HIGHWAYS

BRIDGE NO. 02522

BRIDGE SURVEY
PLAN AND PROFILE

SEE SHEET NO 34 FOR ADDITIONAL INFORMATION

Bridge Survey Sheet (Sheet 2 of 2)

State Proj. No. S.A.P. 14-116-03 M.T.B. Sheet No. 35 of 35 Sheets