NORTHEAST ELEVATION

ABERDEEN AVE.

CLARK, DIXON AND MONTSEN BRIDGE CO.

16 PANELS @ 21'-0" = 340'-0"

16 PANELS @ 21'-0" = 340'-0"

H.W. 1028

EL. POOL ELEV. 735.00

345'-0"

342'-0"

GRADE 3.028%

6 SPS @ 37'-0" = 222'-0"

8 PANELS @ 17'-6" = 140'-0"

EL. 1028.40 TOP OF RAIL

EL. 1028.40 TOP OF RAIL

EL. 735.00

MONONGAHELA RIVER

PIER III

PIER IV

WATER ST.

CENTER ST.

THIRD ST.

PEDESTAL A

PEDESTAL A

STEEL CYL. LINE

B. LINE

B. LINE

WEST ABUTMENT

BRIDGE

OVER

MONONGAHELA RIVER

AT

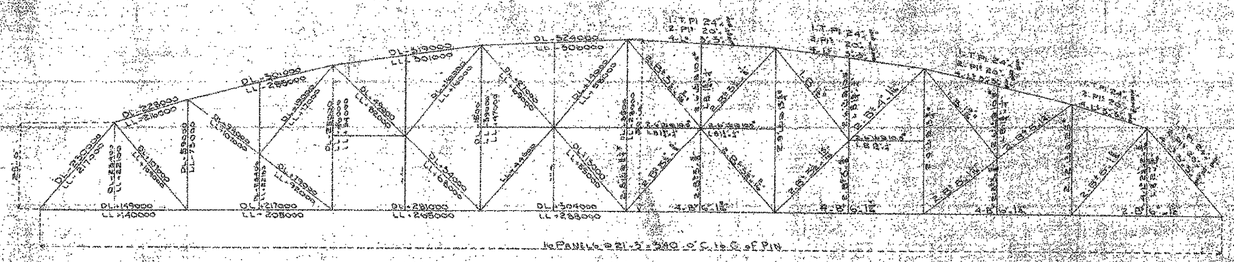
NORTH CHARLEROI

PROFILE & PLAN AND GENERAL ELEVATION

SCALE 1-50

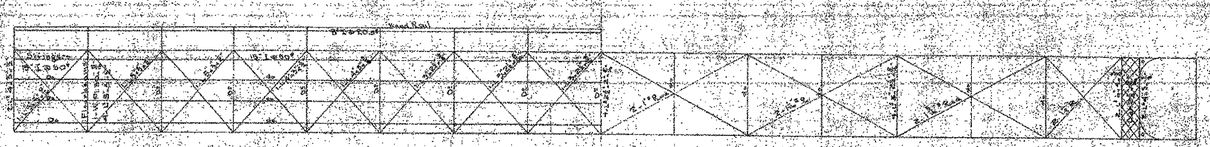
CHARLEROI AND MONNESSEN BRIDGE CO.

HERMANN, LANE, C.E.
LEWIS BLOCK, PITTSBURG, PA.



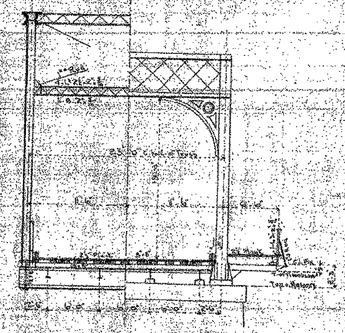
STRAIN AND SECTION-DIAGRAM FOR 340'-0" THROUGH SPANS

SCALE 20'-1"



PLAN SHOWING BOTTOM AND TOP LATERAL BRACING

SCALE 20'-1"

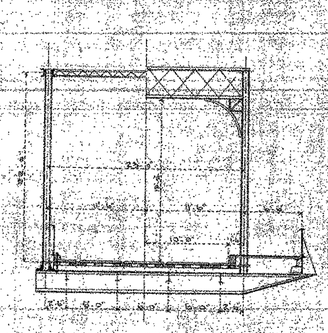


CROSS-SECTION OF 340' & 286' SPANS

SCALE 8'-1"

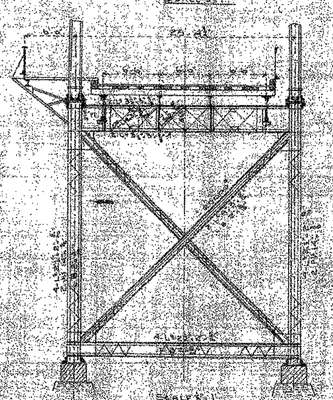
CROSS-SECTION OF PLATE-GIRDERS

SCALE 8'-1"



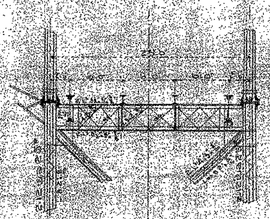
CROSS-SECTION OF 140' & 113' SPANS

SCALE 8'-1"



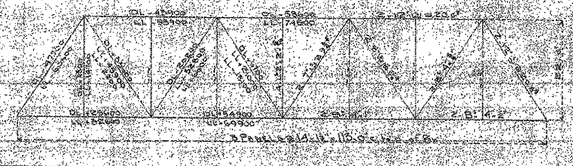
SUPPORT OF 140' SPAN ACCOMMODATING 97' PLATE GIRDER SPAN

SCALE 8'-1"



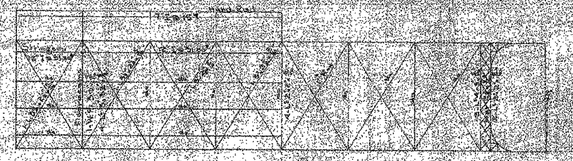
SUPPORT OF 113' SPAN ACCOMMODATING 97' PLATE GIRDER SPAN

SCALE 8'-1"



STRAIN AND SECTION-DIAGRAM FOR 113'-0" THROUGH SPAN

SCALE 15'-1"



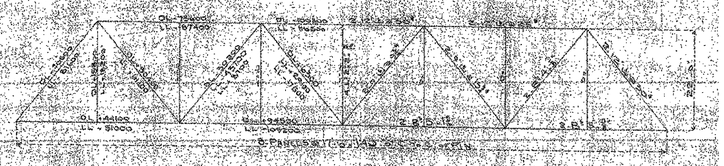
PLAN SHOWING BOTTOM AND TOP LATERAL BRACING

SCALE 15'-1"



PLAN SHOWING BOTTOM AND TOP LATERAL BRACING

SCALE 20'-1"



STRAIN AND SECTION-DIAGRAM FOR 140'-0" THROUGH SPAN

SCALE 15'-1"



PLAN SHOWING BOTTOM AND TOP LATERAL BRACING

SCALE 15'-1"



ELEVATION OF PLATE-GIRDERS

SCALE 4'-1"

BRIDGE

OVER

MONONGAHELA RIVER

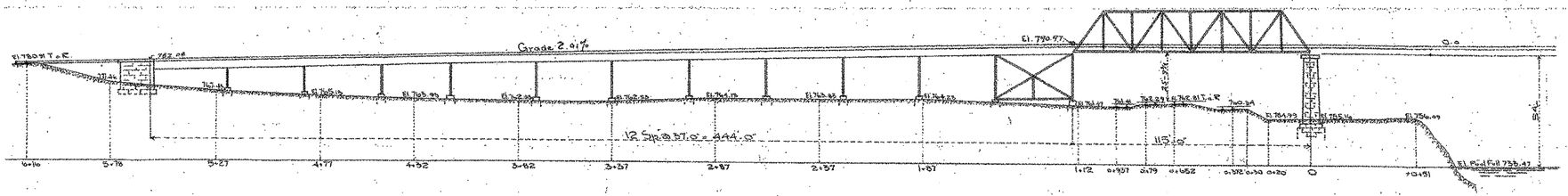
AT

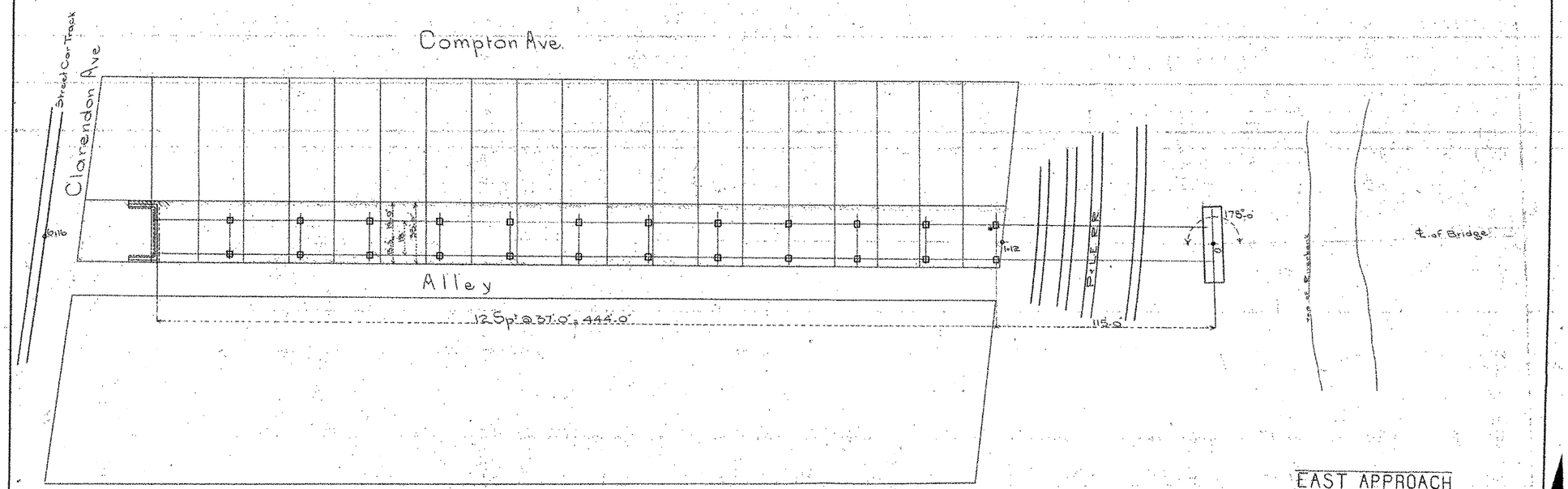
NORTH CHARLEROI

STRAIN AND SECTION-DIAGRAMS

SCALES AS MARKED ON DRAWING

HERMANN V. KUBLER
LOUIS BLOCK, PITTSBURGH

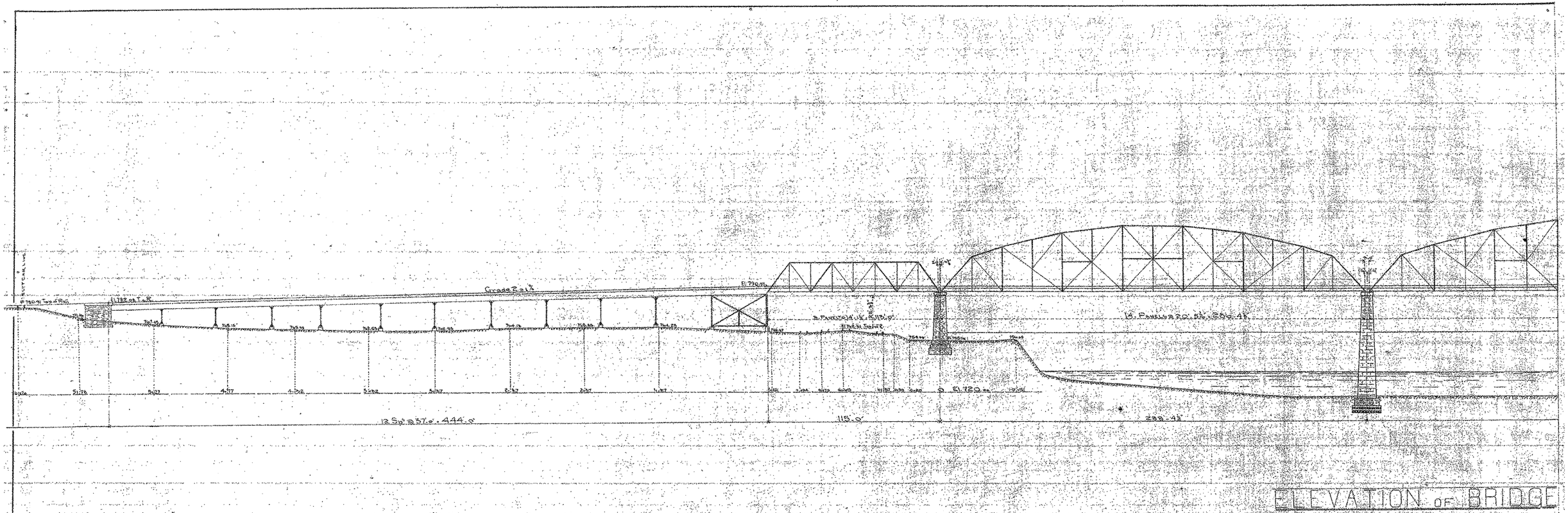




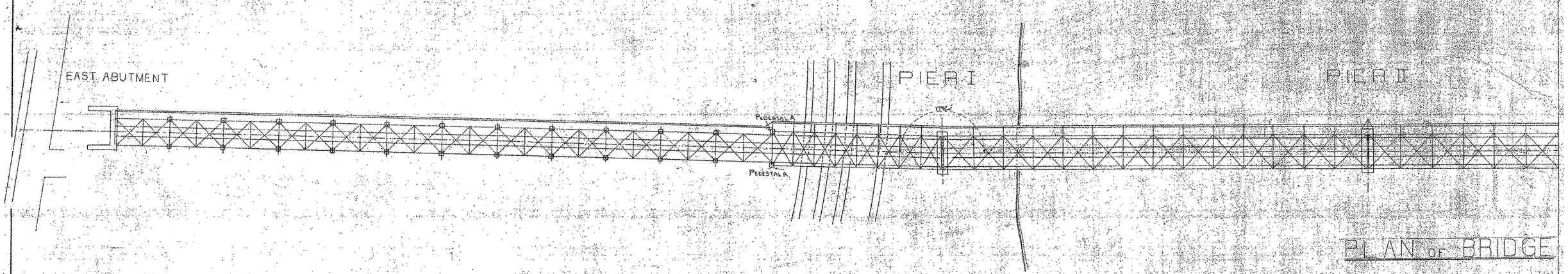
EAST APPROACH
OF
BRIDGE over MONONGAHELA RIVER
AT NORTH CHARLEROI
scale 1" = 30'

CHARLEROI AND MONNESSEN BRIDGE CO

Hermann Laub C.E.
Pittsburgh Pa. Lewis Block

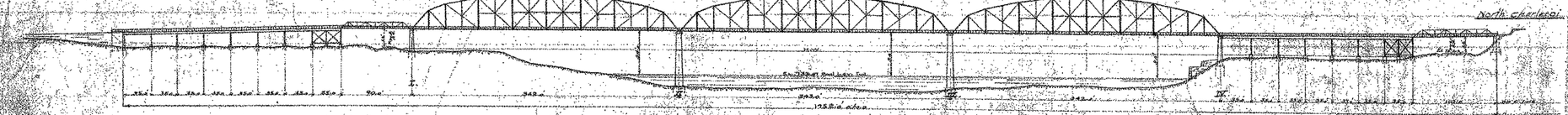


ELEVATION OF BRIDGE

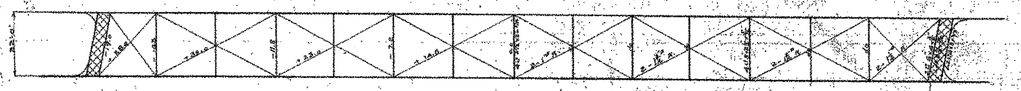


PLAN OF BRIDGE

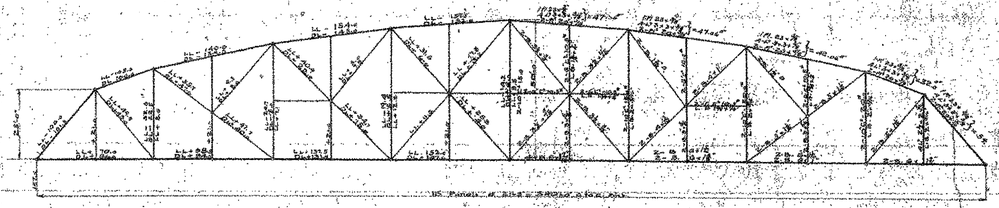
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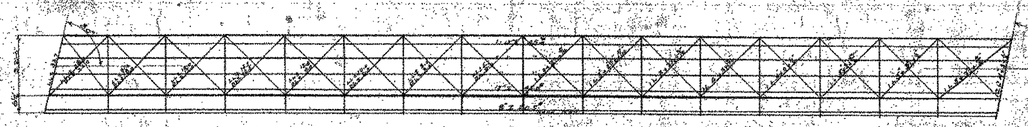
ELEVATION OF BRIDGE.



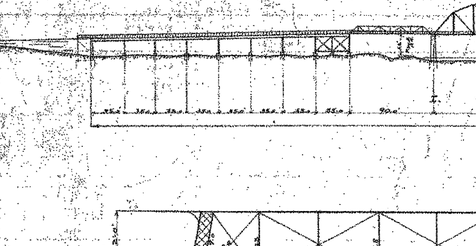
TOP LATERAL BRACING.



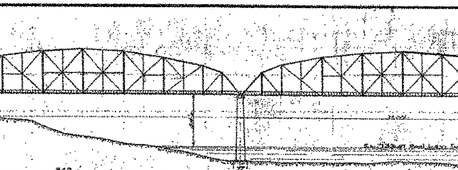
ELEVATION.



BOTTOM LATERAL BRACING.



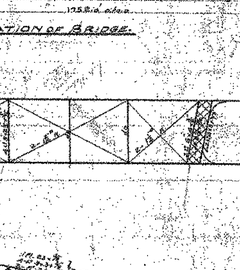
CROSS SECTION FOR 340' SPANS.



CROSS SECTIONS.



CROSS SECTION OF POST TRUSSES.

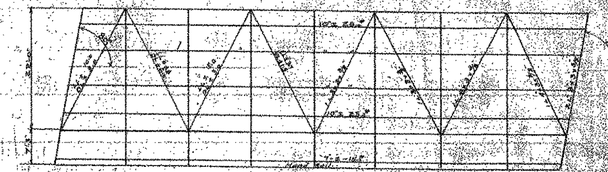


SECTION OF PLATE GIRDER ENDS.

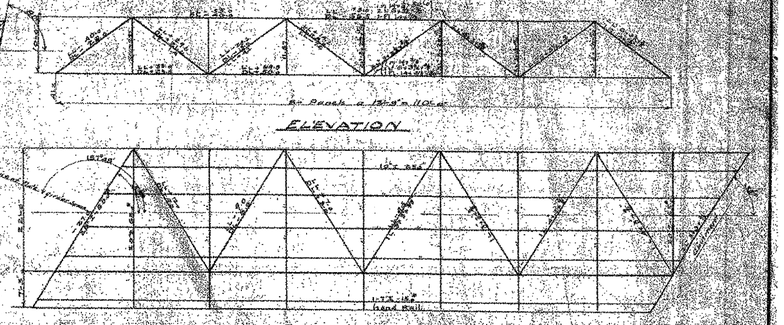


PLATE GIRDERS.

Note. Quantities taken for 18-28' spans to be repeated to each opening.
Lateral Bracing for Bottom Joint Rivets, Rivets as shown for Laterals on Upper Floor.



ELEVATION.



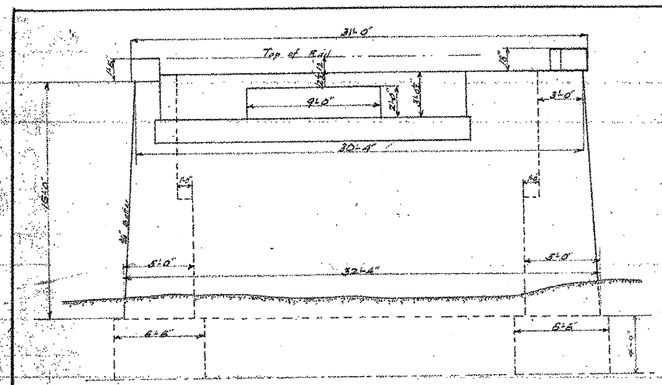
BOTTOM LATERAL BRACING.

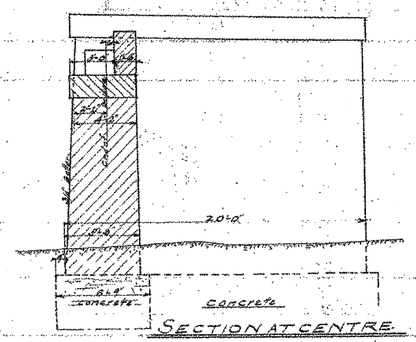
STRAINS and SECTIONS DIAGRAM FOR BRIDGE AT NORTH CHARLEROI

Scale 60% Inch

Pittsburgh Engineering Co.
Penna. Steel Engineers

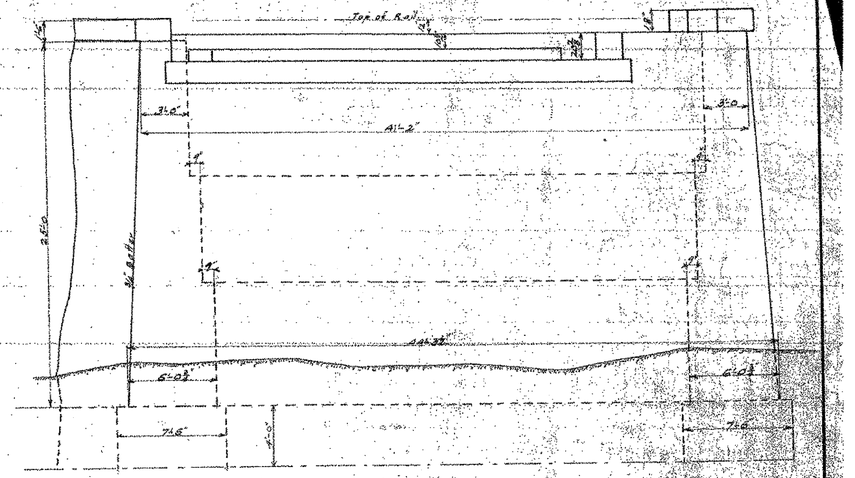
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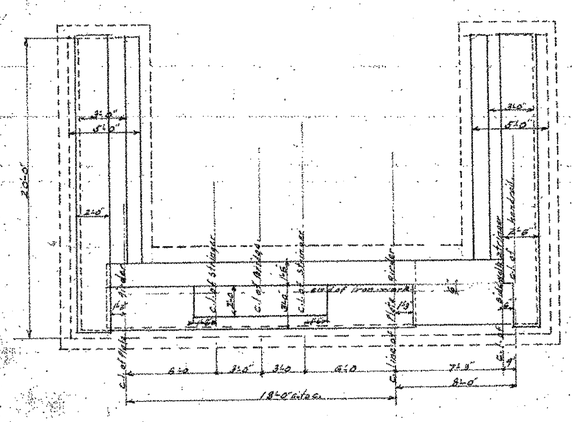




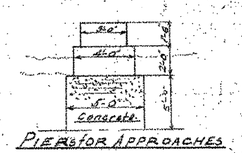
Concrete

SECTION AT CENTRE.

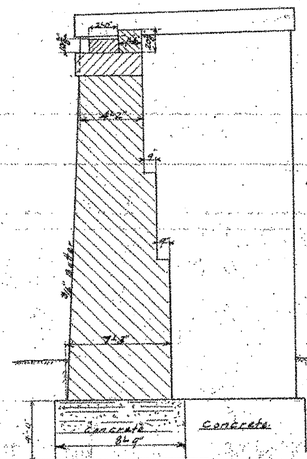




SOUTH ABUTMENT.

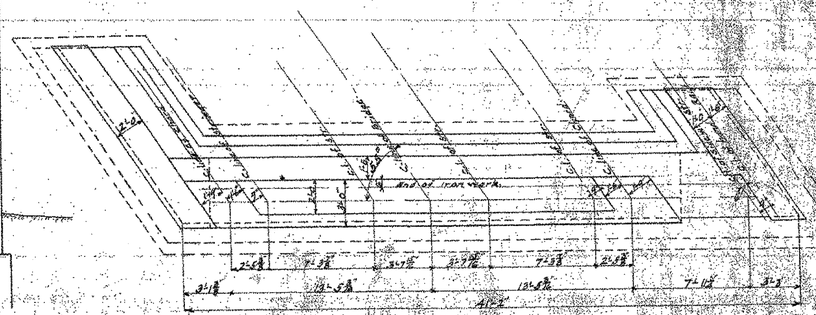


PIER FOR APPROACHES
34 REQUIRED



SECTION AT CENTER.

Note: Elevations to be given later. Skew of abutment to be checked in field.



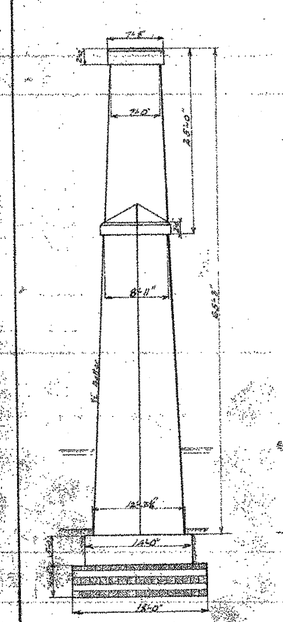
NORTH ABUTMENT.

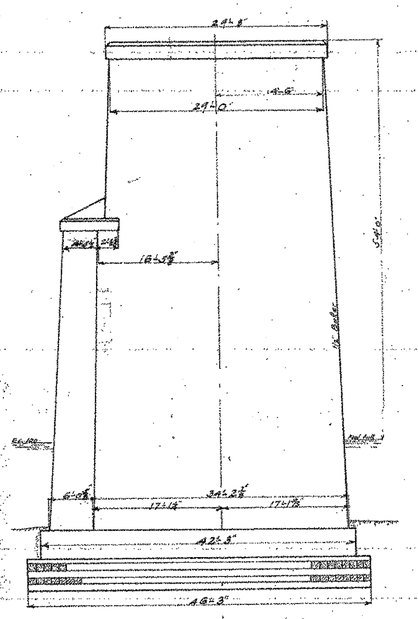
ABUTMENTS FOR
BRIDGE AT NORTH CHARLEROI

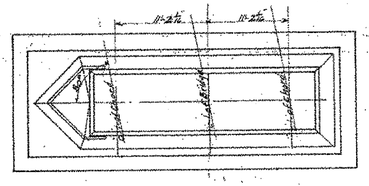
Scale 1/2" = 1'-0"

Thompson Starrett Co.
Engrs. Const. Mgrs.

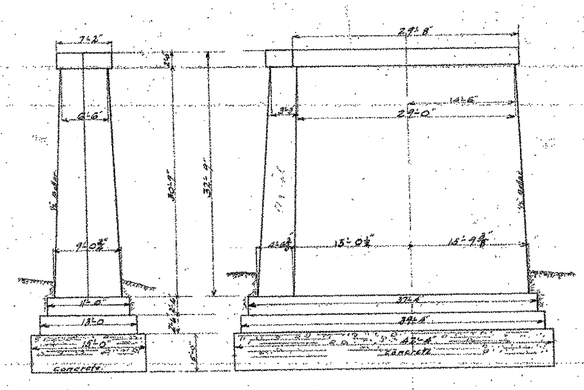
(2.)

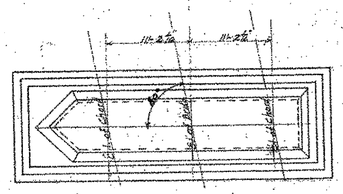




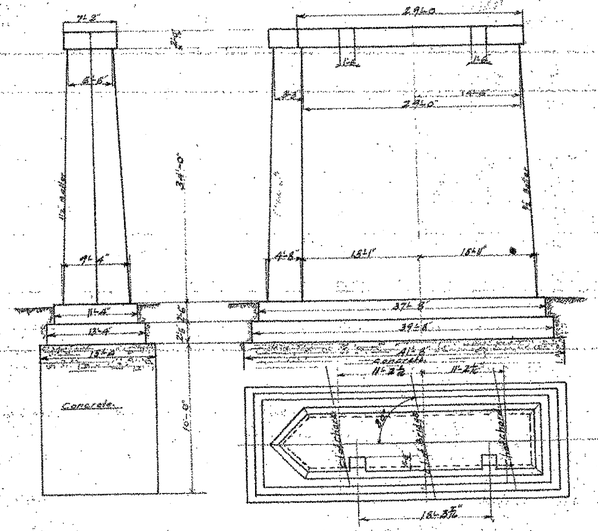


PIERS Nº II & III.
(Two River Piers only.)





PIER Nº I.



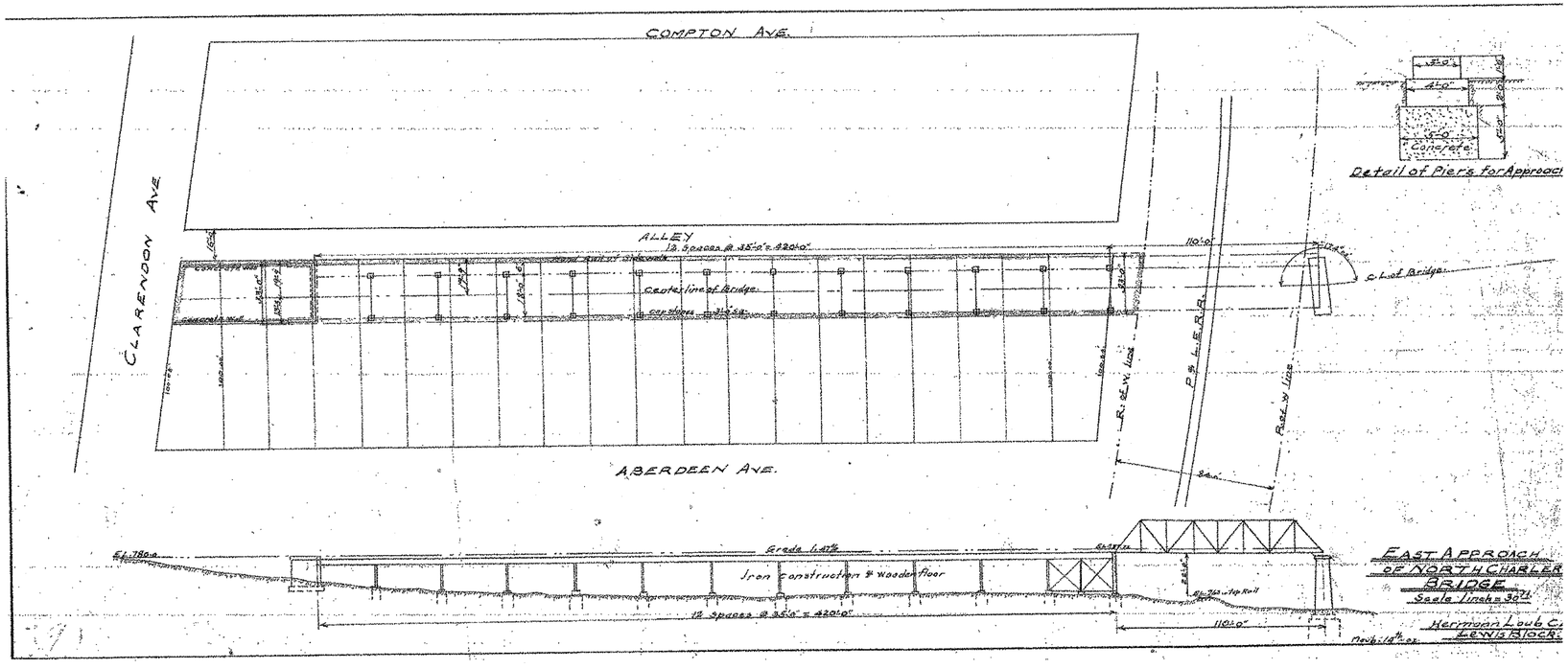
PIER Nº IV.

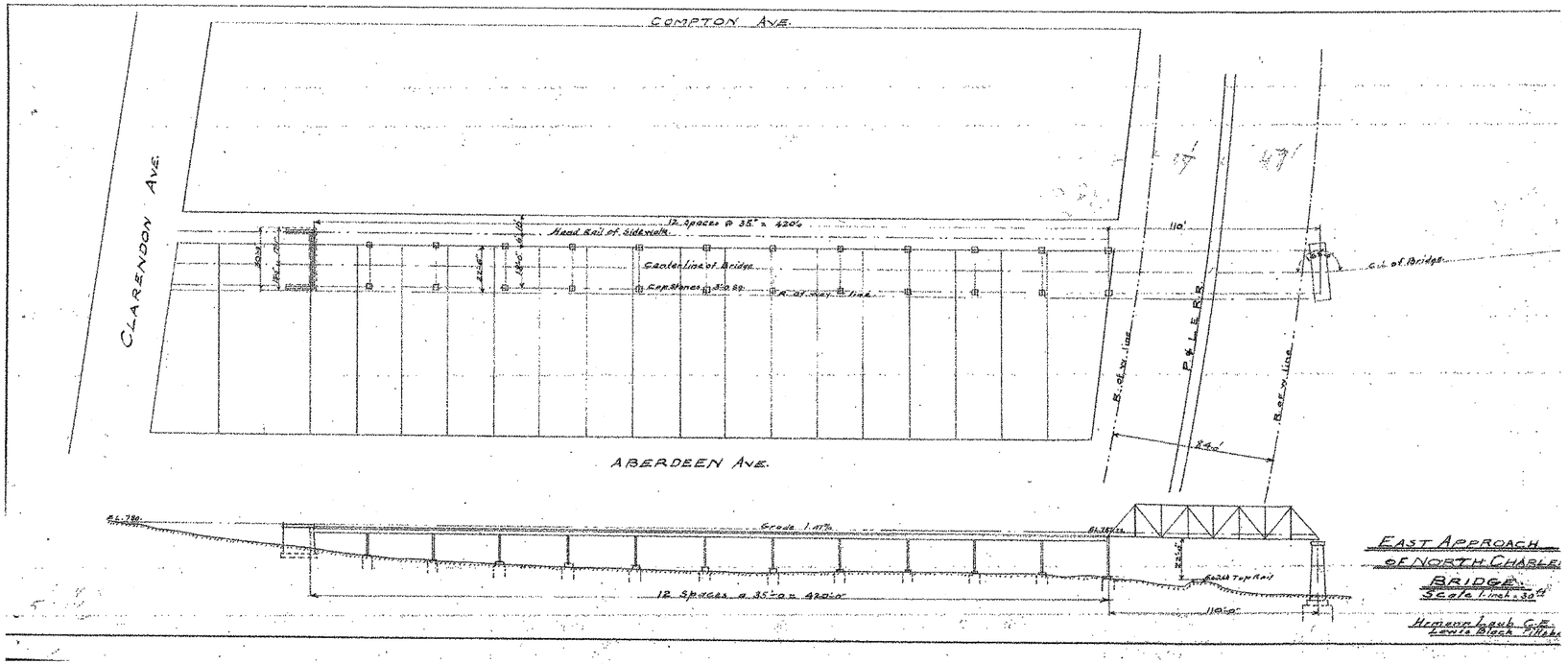
Note: Elevations to be given later.

MASONRY PIERS FOR
BRIDGE AT NORTH CHARLEROI
Scale: 1"=10'

Hermann Laub C.E.
Lewis Block Pittsburg Pa.

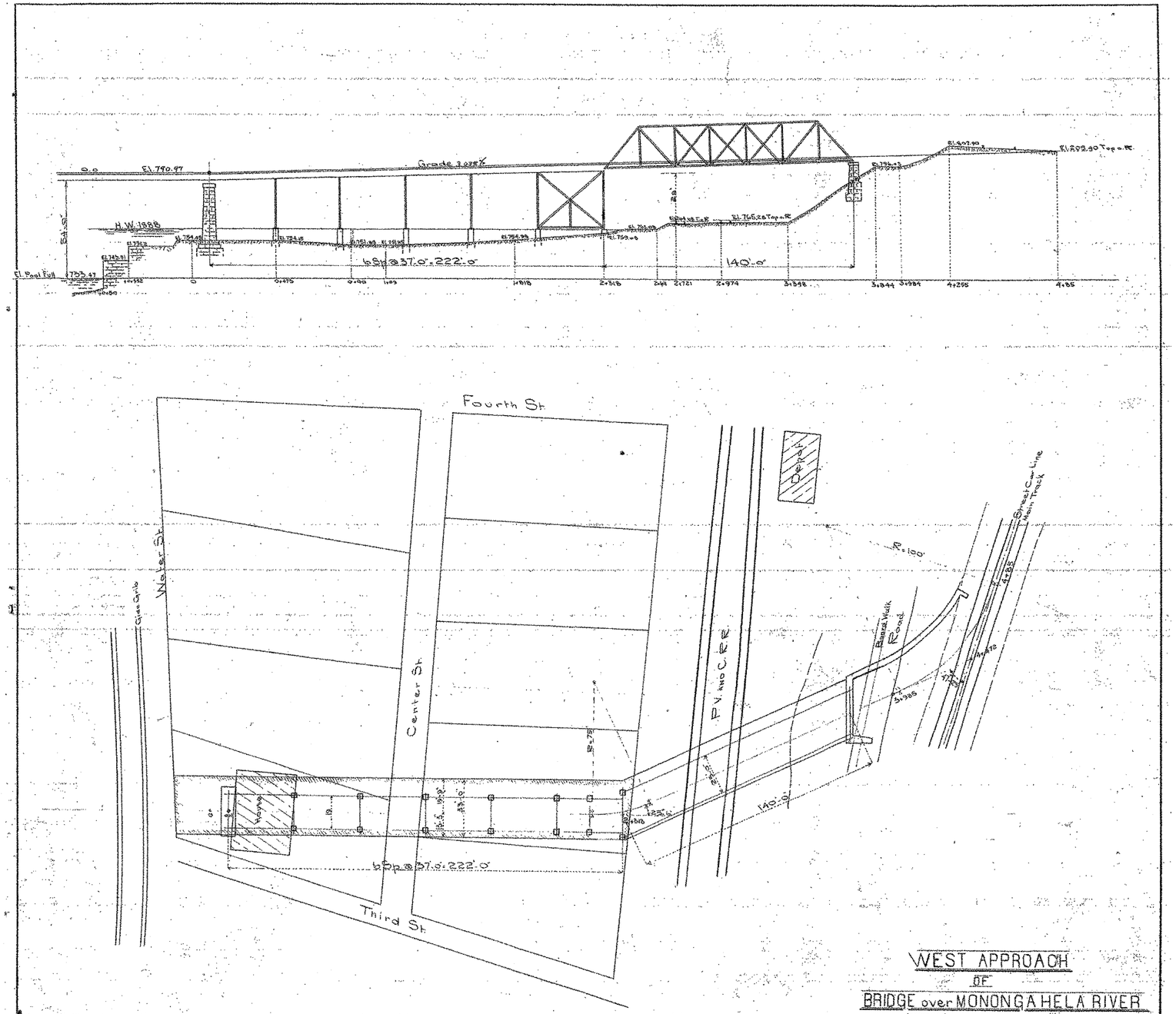
1a.


COMPTON AVE.
CLARENDON AVE
ALLEY
12 Spaces @ 35'-0" = 420'-0"
Center line of Bridge
ABERDEEN AVE.
R. of E.W. Line
P.R.R.R.
Road W. Line
110'-0"
c.l. of Bridge
Detail of Piers for Approach
Concrete
Grade 1.47%
Iron construction & Wooden floor
12 Spaces @ 35'-0" = 420'-0"
110'-0"
EAST APPROACH
OF NORTH CHARLES
BRIDGE
Scale 1 inch = 30 ft.
Herman Louis C.
LEVY & BLOCK
Nov. 14th 1902.



EAST APPROACH
OF NORTH CHARLES
BRIDGE.
Scale 1 inch = 30 ft

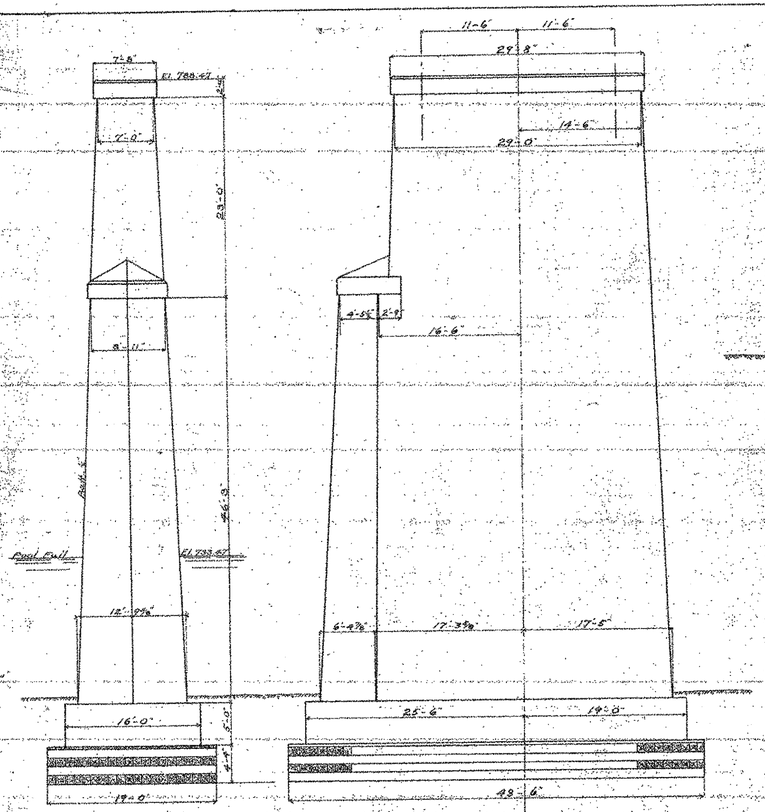
Hemmingway C.E.
Lewis Block Hall

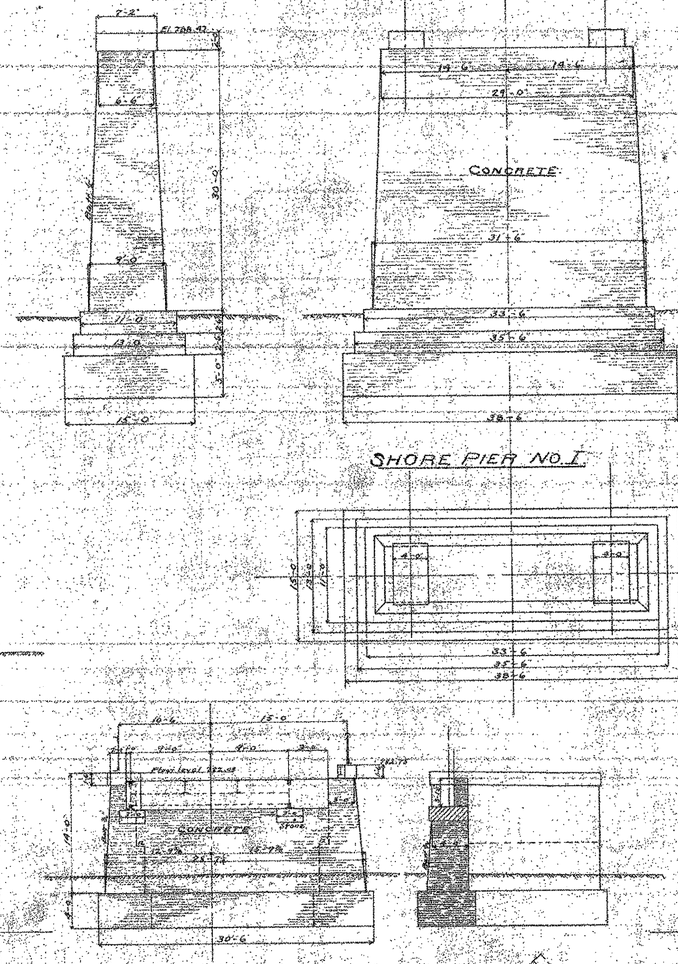


WEST APPROACH
OF
BRIDGE over MONONGAHELA RIVER
AT NORTH CHARLEROI
scale 1"=30'

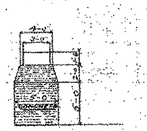
CHARLEROI AND MONNESSEN BRIDGE CO

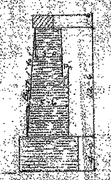
Hermann Laub C.E.
Pittsburg, Pa.






PEDESTALS - A
4 REQUIRED


PEDESTALS
32 REQUIRED


SECTION A-B


SECTION C-D

MASONRY PLAN
For
PIERS & ABUTMENTS
NORTH CHARLEROI BRIDGE
SCALE 8'=1'

HERMANN LAUB C.E.
LEWIS GLEIM, PITTSB.

AUBREY ST.

CLARENDON AVE.

COMPTON AVE.

Center line of Bridge

APPROACH NO. 2

ABERDEEN AVE.

385'-0"

APPROACH NO. 1

P.R.R.R.

Original Cen. Line of Bridge

New Cent. Line of Bridge

PROFILE ON CENTER LINE OF ABERDEEN AVE.

EAST APPROACH OF PROPOSED BRIDGE
AT NORTH CHARLEROI
SCALE: 1"=50'

HERMANN, LAUB, C.E.
LEWIS GLOCK,
PITTSBURGH, PA.

Street Railway Track

Concrete

Stone

Ground Line

Concrete

Granolithic

Street Railway Track

Brick on Concrete Base

Street Railway Track

Granolithic

Coping Stone 2'-0" each side of pier

29'

Ct. line of abutment

Grade 0.66⅔

Top of Roadway

Elev. 788.68

Concrete

Concrete

Elev. + 782.13

Stone

Ground Line

Concrete

Elev. + 768.63

4'-6"

4'-6"

Abutment No. 1

Elev. 771.5 Pedestal No. 2

Elev. 768.0 No. 3

Elev. 766.8 No. 4

Elev. 768.0 No. 5

Elev. 764.0 No. 6

Pier No. 7

Top of Rail, Elev. + 791.08.

Top of Rail, Elev. + 782.42

735.28 Elev. Pool Full.

Pier No. 8

ct. of girder bearings.

ct. of abutment

60'-0"

61'-6"

60'-0"

60'-0"

60'-0"

60'-0"

62'-0"

202'-6"

2-S

3-S

4-S

5-S

6-S

2-N

3-N

4-N

5-N

6-N

Grade 66⅔% throughout

Plan of Sub-Coping showing arrangement of stones

62'-0" ct. of pier to pedestal no. 6.

202'-6" to ct. of pier No. 8.

ct. line of Pier

25'-9"

33'-9"

Elev. 784.77

Elev. 783.98

Elev. 782.42

Stone

Stone

Batter 1 per foot

Batter 1 per foot

Batter 3 per foot

Plant for Water Supply of Steel Mills

780.66 Elev. High Water

780.13 Elev. Ground

Portland cement concrete 1:2½:5

Elev. 749.87

PIER No. 7.

ct. line of truss

ct. line of truss

735.28 Elev. Pool Full.

25'-9"

33'-10"

35'-6"

Section at top of upper footing course.

Elev. 764.5 Ground Line

Elev. 756.0

Plat for 10 Pedestals

Elev. Top = 771.5 Batt = 764.0

Elev. Top = 768.0 Batt = 757.5

Elev. Top = 765.5 Batt = 756.0

Elev. Top = 765.0 Batt = 754.5

Elev. Top = 764.0 Batt = 753

No. 2S

No. 3S

No. 4S

No. 5S

No. 6S

No. 2N

No. 3N

No. 4N

No. 5N

No. 6N

61'-6"

60'-0"

60'-0"

60'-0"

60'-0"

EAST VIADUCT MASONRY
— OF —
ST. RAILWAY & HIGHWAY BRIDGE
— OVER —
THE MONONGAHELA RIVER
— ABOVE —
LOCK No 4
— FOR —
THE MERCANTILE BRIDGE Co.

62 2018 0010 0052

Emil Swensson C.E.
Frick Building, Pittsburg, Pa.

Plan of Sub Coping showing arrangement of Stones.

Elev. 746.66

Stone

Stone

Rock face Ashlar masonry with backing of Portland Cement concrete

Batter 1" per foot

Batter 3" per foot

760.66 ft. Elev. High water

738.28 ft. Elev. Pool Full.

Elev. = 732.46

Elev. = 723.21

Hardpan or Rock

PIER NO. 8

Plan of Sub Coping showing arrangement of Stones.

Elev. = 737.61

Rock face Ashlar masonry with backing of Portland cement concrete 2.5'

Batter 1" per foot

Batter 3" per foot

Elev. 726.31

Elev. 714.81

PIER NO. 9

Plan of Sub Coping showing arrangement of Stones.

Elev. = 738.66

Stone

Stone

Rock face Ashlar masonry with backing of Portland Cement concrete 2.5'

Batter 1" per foot

Batter 3" per foot

Crib work

Elev. = 731.78

Elev. 722.03

Hardpan or Rock

PIER NO. 10

Not less than 20' long

of line of grillage

of line of Pier

Section of pier at top surface of belt course.

316 Piles not less than 20' long to be cut from 30' sticks.

of line of Cribb

of line of Pier

Section of pier at top surface of belt course

120 Piles not less than 20' long

of line of grillage

of line of Pier

Section of pier at top surface of belt course.

Elev. Roadway Grade 66⅔

El. 742.42

El. 743.10

El. 742.84

No. 8

No. 9.

No. 10.

Full Pool Level Elev. = 738.28

103'-9"

408'-3"

For East Viaduct Masonry See drawing no. 2

For West Viaduct Masonry See drawing no. 4.

of line of bridge.

of line of West Viaduct

N

S

E

W

PIERS
OF
ST. RAILWAY & HIGHWAY BRIDGE
OVER
THE MONONGAHELA RIVER
ABOVE
LOCK No 4
FOR
THE MERCANTILE BRIDGE Co.

Emil Swensson C.E.
Frick Building, Pittsburg, Pa.

3

curb open to a such end

Intermediate Floor Beam and Trolley Wire Frame.

Railing Post and Post Bracket.

Support for Railing at Intermediate Points — two per panel.

Plan of Ties.

Railing Post and Post Bracket.

Outer End of Sidewalk Bracket.

Support for Railing at Intermediate points — two per panel.

Railing and Curb Stringer Connection to Intermediate Posts of Trusses.

Support for Railing at Intermediate points — two per panel.

Roadway Railing.

Sidewalk Inner Railing.

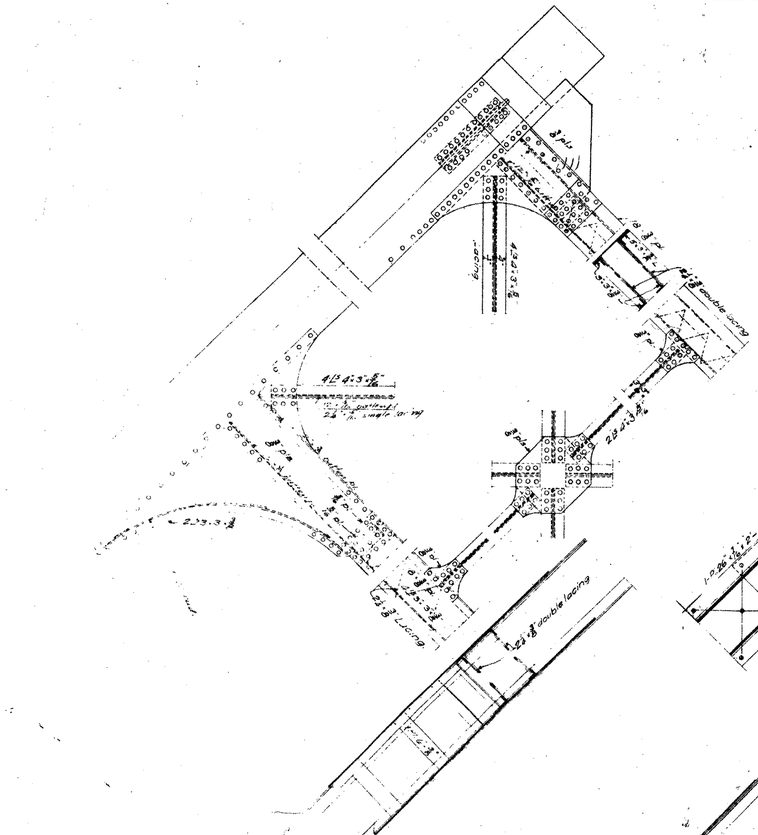
Sidewalk Outer Railing.

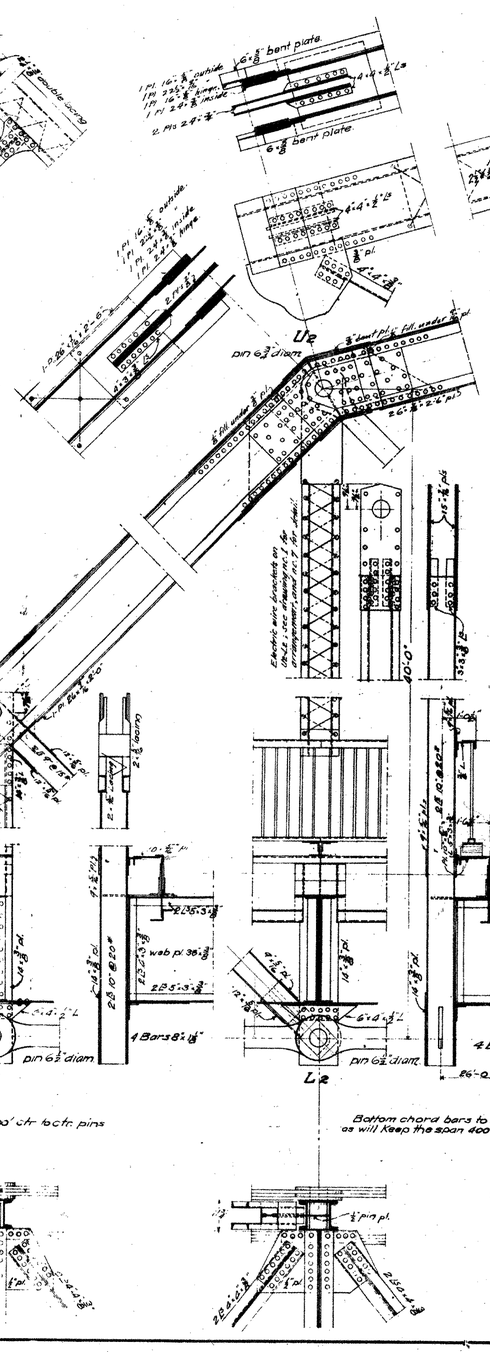
Cast Iron Scupper.

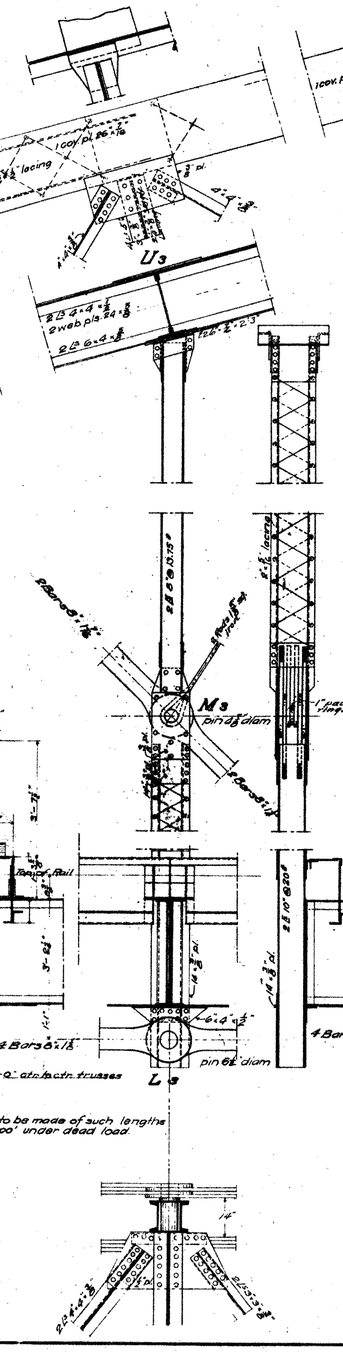
Expansion Shoe for 400 ft. Span.

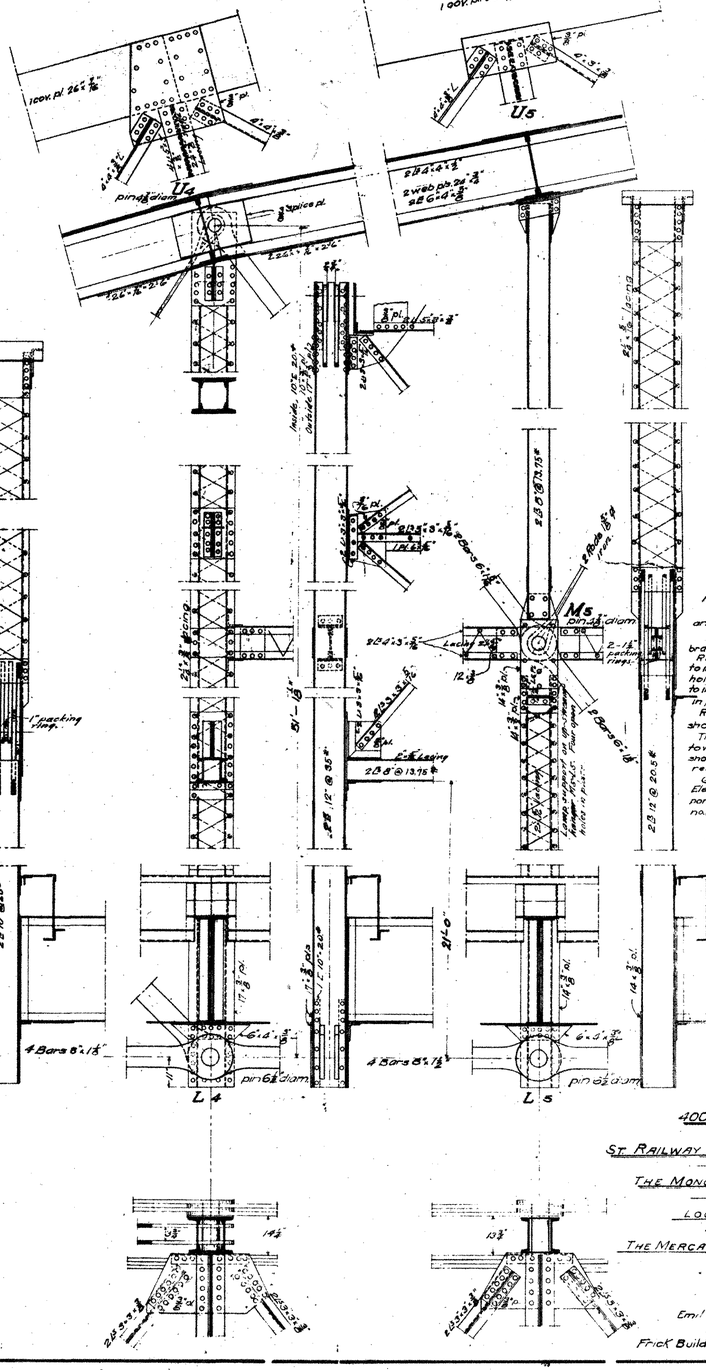
DETAILS
— OF —
St. Railway & Highway Bridge
— OVER —
The Monongahela River
— ABOVE —
Lock No. 4
— FOR —
The Mercantile Bridge Co.

Emil Swensson C.E.
Frick Building Pittsburg Pa









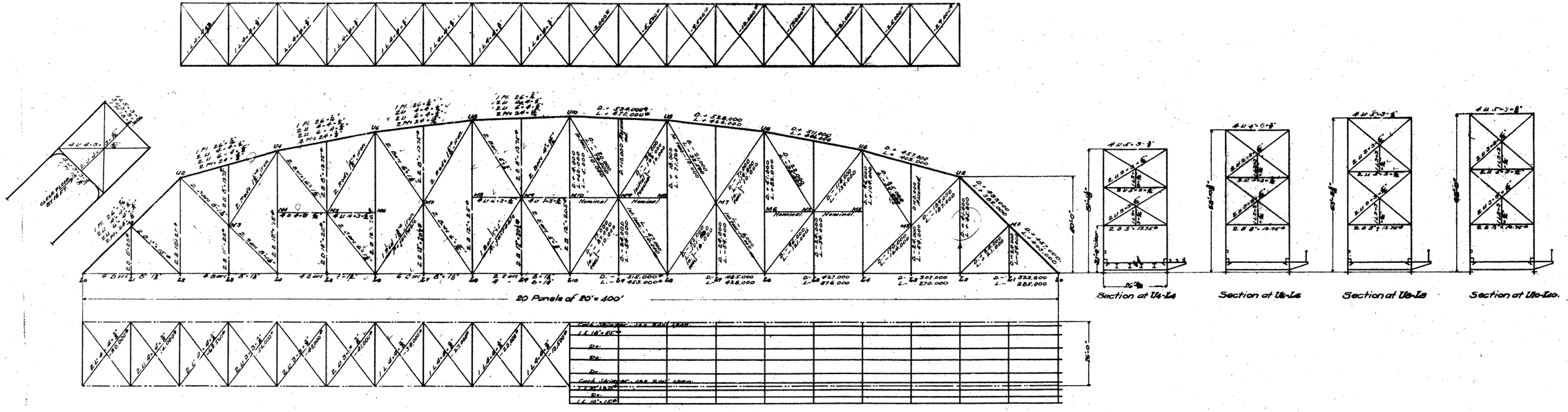
NOTES:—
Rivets in top chor
and end posts ⅞" diam.
Rivets in floor membe
bracing, etc. ⅞" diam.
Rivets at floor beam connec
to intermediate posts, ⅞ diam
holes for which are to be rea
to mat template or with memb
in place.
Railing and its connection
shown on drawing no. 12.
The 200' span and west v. iad.
to which these 400' spans jo
shown on drawing no. 7 and
respectively.
General arrangement of
Electric Wire Brackets, lamp
posts, etc. are shown on drawi
no.

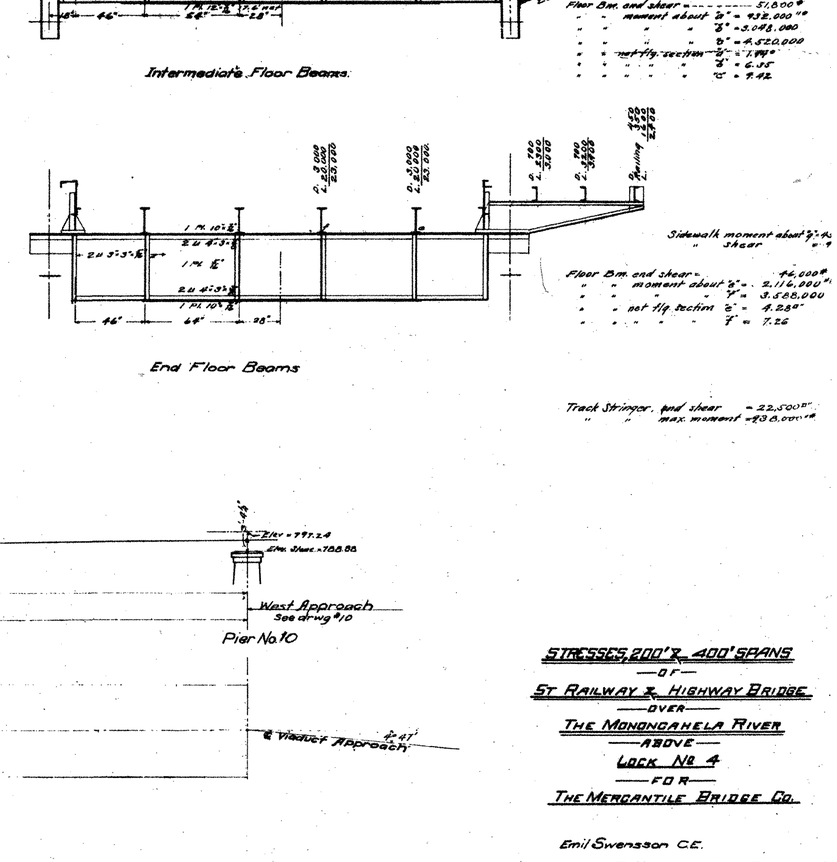
20 Panels of 20'-400' ctr. to ctr. pins

Bottom chord bars to be made of such lengths as will keep the span 400' under dead load.

400 FT SPAN
— OF —
ST RAILWAY & HIGHWAY BRIDGE
— OVER —
THE MONONGAHELA RIVER
— ABOVE —
LOCK No 4
— FOR —
THE MERCANTILE BRIDGE Co.

Emil Swensson CE
Frick Building, Pittsburg, Pa





STRESSES, 200'& 400' SPANS
—OF—
ST. RAILWAY & HIGHWAY BRIDGE
—OVER—
THE MONONGAHELA RIVER
—ABOVE—
LOCK No 4
—FOR—
THE MERCANTILE BRIDGE CO.

Emil Swensson C.E.
Frick Building, Pittsburg, Pa.

60' Girder Span:
Girder end shear = 63,000#
Shear 10' from end = 61,000
" 20' " " = 55,000
Moment at center = 15,720,000"#
Net bottom flange section 10' from end = 8.8"²
" " " " 20' " " = 16.1
" " " " 30' " " = 16.3
Stiffeners 5' apart.

Floor Beam end shear = 46,000#
Moment at outer stringer = 2,116,000"#
" " inner " = 3,588,000
Net Flange section outer " = 4.26 "²
" " inner " = 7.26
Stiffeners under stringers.
Stringer end shear = 22,500#
Moment, max. = 938,000"#

Transverse Section at Intermediate Floor Beam, also showing Brace Midway Between Floor Beams.

Transverse Section at Column Bent.

Girder ends fixed & sliding. Girder ends fixed

Sliding Joint for Stringers.

Notes:
Rivets in girders and columns, ⅞" diam.
Rivets in floor members, brackets etc., ¾" diam.
Rivets in floor beam connection to girders, ⅞" diam., the holes for which are to be reamed in floor beam to iron template while members in place.
Railing and its connections to girders, the plan and profiles of which are shown on drawing no. 12.
The 200' span to which this viaduct joins over pier no. 7, drawing No.1
The abutment No.1, drawing no. 2.

EAST VIADUCT
—OF—
ST. RAILWAY & HIGHWAY BRIDGE
—OVER—
THE MONONGAHELA RIVER
—ABOVE—
LOCK No 4
—FOR—
THE MERCANTILE BRIDGE Co.

Emil Swensson CE
Frick Building, Pittsburg, Pa.

U1 U2 U3 U4 U5

L0 L1 L2 L3 L4 L5

pin 4½" diam.

pin 3½" diam.

2 Bars 6"x 1/16"

4 Bars 6"x 1/16"

10 Panels of 20'-0" = 200'-0" ctr. to ctr. end pins.

Bottom chord bars to be made of such lengths as will keep the span 200' long under the dead load.

Rivets ⅞" diam. throughout except rivets in floor beam connection to intermediate posts are ⅝". The holes for which are to be reamed to iron templet or with members in place.
Railing and its connections are shown on dwg. no. 12.
The East viaduct and the 400' curve to which this span joins are shown on drawing no. 5 and no. 8 respectively.
General arrangement of railing, electric wire brackets, lamp supports, etc. shown on drawing no. 12.

Top of floor plank and of track rail.

Cov. pl. 12"x ⅞"x 17'-11" net length.

Web pl. 36"x ⅜"

Cov. pl. 18"x ⅞"x 17'-9" net length.

Ct. line of 4 pins.

25'-9" ct. to ct. of trusses.

Sidewalk Bracket - Ex.

Connection - Ex.

2" plank.

Support for laterals.

This pipe support on all int. sidewalk brackets of first span.

200 Ft. Span
of
St. Railway & Highway Bridge
over
The Monongahela River
above
Lock No. 4
for
The Mercantile Bridge Co.

Emil Swensson C.E.
Frick Building, Pittsburg, Pa.

Bottom chord bars to be made of such lengths as will keep the "span 200' under the dead load.

20 Panels of 20'-0" = 400' ctr. to ctr. pins

Notes

Rivets in top chord [illegible]

Rivets in floor members, bracing, & [illegible]

Rivets in floor beam connections to intermed[iate] posts [illegible] diam, the holes of which are to be reamed for template or with members in place.

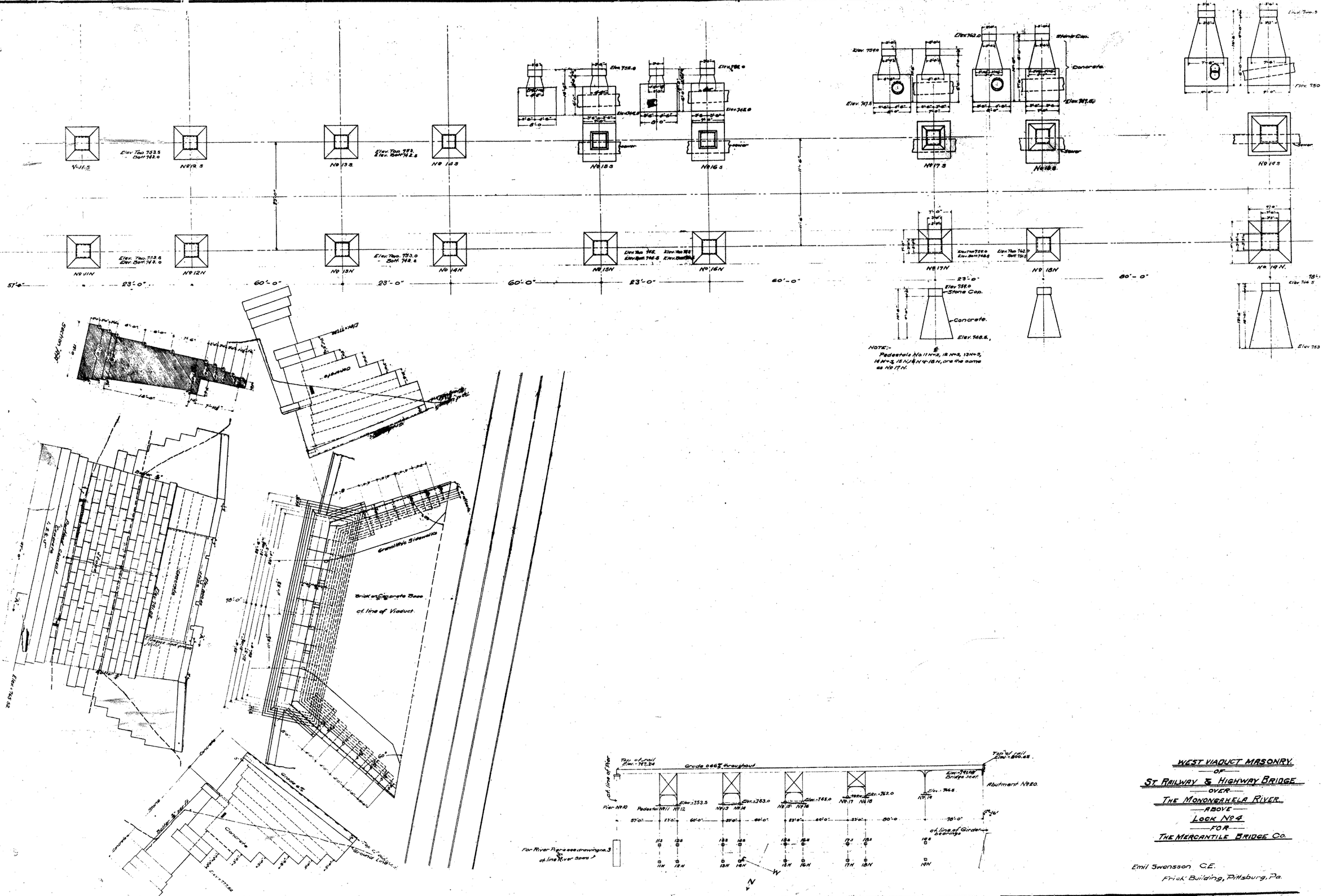
Railing and its connections are shown on drawing no. 12

The 200 ft span and west [illegible] adjoining 200 ft spans are joined are shown on drawing no 7 and no 10 respectively.

General arrangement of Railing, Electric Wiring Brackets, lamp supports etc are shown on drawing N°1

400 FT SPAN
—OF—
ST. RAILWAY & HIGHWAY BRIDGE
—OVER—
THE MONONGAHELA RIVER
—ABOVE—
LOCK No 4
—FOR—
THE MERCANTILE BRIDGE CO.

Emil Swensson C.E.
[illegible] Building Pittsburg Pa.


No 11 S
No 12 S
No 13 S
No 14 S
No 15 S
No 16 S
No 17 S
No 18 S
No 19 S
No 11 N
No 12 N
No 13 N
No 14 N
No 15 N
No 16 N
No 17 N
No 18 N
No 19 N
Elev. Top 753.5
Elev. Bott 743.0
Elev. Top 753.0
Elev. Bott 742.5
Elev. Top 753.0
Elev. Bott 743.5
Elev. Top 752.
Elev. Bott 741.5
Elev. Top 752.
Elev. Bott 741.5
Elev. Top 752.0
Elev. Bott 740.5
Elev. Top 752.0
Elev. Bott 740.5
Elev. Top 742.7
Elev. Bott 731.5
Elev. 744.5
Elev. 753
Elev. 750
Elev. 741.5
Elev. 762.0
Stone Cap.
Concrete.
Elev. 741.62
Sewer
57'-0"
23'-0"
60'-0"
80'-0"
76'-0"
Elev. 758.0
Stone Cap.
Concrete.
Elev. 746.5,
NOTE:-
Pedestals No. 11 N=S, 12 N=S, 13 N=S, 14 N=S, 15 N & N, 16 N, are the same as No 17 N.
Elev. Top 753.5
Elev. Bott 743.0
Elev. Top 753.0
Elev. Bott 743.5
Elev. Top 753.0
Elev. Bott 743.5
Elev. Top 752.
Elev. Bott 741.5
Elev. Top 752.
Elev. Bott 741.5
Elev. Top 752.0
Elev. Bott 740.5
Elev. Top 752.0
Elev. Bott 740.5
Elev. Top 742.7
Elev. Bott 731.5
Elev. 744.5
Elev. 753
Elev. 750
Elev. 741.5
Elev. 762.0
Stone Cap.
Concrete.
Elev. 741.62
Sewer
57'-0"
23'-0"
60'-0"
80'-0"
76'-0"
Elev. 758.0
Stone Cap.
Concrete.
Elev. 746.5,
NOTE:-
Pedestals No. 11 N=S, 12 N=S, 13 N=S, 14 N=S, 15 N & N, 16 N, are the same as No 17 N.
Elev. 763.58
Elev. 763.58
Elev. 763.58

Railing Post Brackets

Ctr. Line of Viaduct

Pedestal No. 19.

Pedestal No. 18.

Pedestal No. 19

80'-0"

78'-0"

23'-0" ctr to ctr cols

NOTES:-

Rivets in girders & columns ⅞" diam.

Rivets in bracing, floor members etc ¾" diam.

Rivets in floor beam connection to girder ⅞" diam. the holes for which are to be reamed in floor beams to iron templets with members in place.

Railing and its connections to girder, tie plan, and trolley wire frame are shown on drawing No 12.

Remainder of West Viaduct drawings. Abutment and pedestals drawing no. 1

80' Girder Span:

Girder and shear	= 87,000#
Shear 10' from end	= 83,000
" 20' " "	= 79,000
Moment at center	= 31,836,000"#
Net bottom flange section 10'	= 9.74"
" " " " 20'	= 18.93
" " " " 30'	= 22.3
" " " " 40' (ctr.)	= 25.3

Stiffeners 5' apart.

Floor Beam - See drawing No. 5

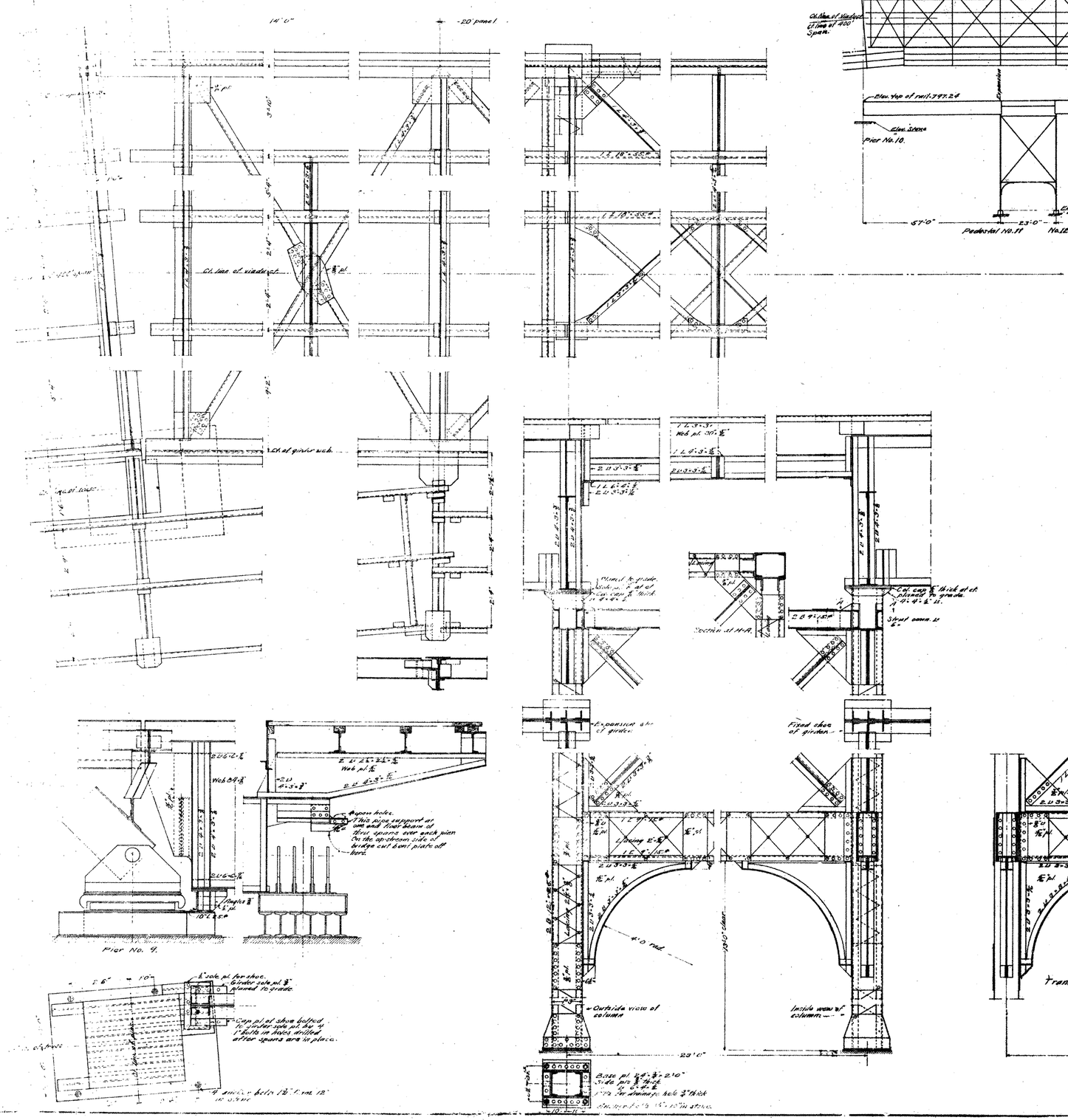
Sidewalk Bracket - " " 5

Columns - 2 B 15"- 40#

WEST VIADUCT
OF
ST. RAILWAY & HIGHWAY BRIDGE.
OVER
THE MONONGAHELA RIVER
ABOVE
LOCK No 4
FOR
THE MERCANTILE BRIDGE CO.

Emil Swensson C.E.

Frick Building, Pittsburg, Pa


14'-0"
20' panel
Ctr. line of viaduct
Ctr. line of girder web
Ctr. line of bent
Ctr. line of viaduct
Ctr. line of girder

Wireton Approach B 2955

363'-0"

200'-0" B 2956

400'-0" Span B 2957

1008'-6"

400'-0" Span B 2958

Clairton Approach B 2959

488'-6"

Typical Floor System

Half Cross Section 60'-0" Spans
Wireton Approach "A" & "B"
Clairton Approach "A" & "B"

Half Cross Section 400'-0" Spans

Half Cross Section 200'-0" Spans

Floor Planking to be fitted neatly about Frame

Scupper Grating

Frame

3" Floor Plank

4" Hy Spiking Pc

Tie

Cast Iron Scupper

Spiking Pc 2⅝"x6"x1½"
CL of Hand Railing

CL of Girder

CL of Floor Beam

Roadway:
Planking pieces to be laid in 16'-0" lengths and to be laid with ends staggered joints.
Flooring to be laid with tight joints and fitted tight to curbs and curbs.

Sidewalk:
Flooring to be laid with openings not to exceed ¼" width, and to be fitted neatly around railing posts.

REVISED
Lists of Steel Bills of Structure to Floor

FLOOR FRAMING
BRIDGE OVER MONONGAHELA RIVER
AT LOCK #4
MERCANTILE BRIDGE CO.

6955

Ambridge

Amb'g. E.C.H.
R.L.H. 3-5-06
E.C.H.

B 2960 1

Allow for Expansion of 200'-0" Span

TOP Coping on Wing Wall

See Sec X-X for these posts

Trolley Frame

Lamp Post

Expansion Joint

Allow for Expansion of 200'-0" Span

200'-0" Span

Grade 6.66% ↓

℄ Complete Line of Railing for Wireton Approach.

SECTION X-X

Pipe pinned to Posts with ¾" Pins. ¾" Metal.

¾" ϕ Rods Spaced 4½" C. to C.

Holes Coped

SECTION B-B

Section A-A

Detail of Railing Post also lower end of Lamp Post.

CONNECTION OF RAILING TO TROLLEY FRAMES

Holes to be drilled in girders after railing is in position

Intermediate support for Railing for all panels between points A & B 2 for each Panel

Holes for Castings to be drilled in E.P. Cover Plate after Railing is erected.

Allow for Expansion of 400'-0" Span

Grade 6.66% ↓

℄ Complete Line of Railing for North Charleroi Approach

PLAN OF RAILING FOR ENTIRE BRIDGE
Full lines indicate railings shown on this sheet

Notes:

Railing maker will furnish Railing complete as shown with Cast Posts & Cast Connections for connecting to structural work.

American Bridge Co. will furnish Bolts for connecting to Structural work.

Drawing for Lamp Posts to be submitted to Emil Swensson for his Approval. All Posts placed normal to Grade except as specially noted on railing sketches.

All castings to have corners well and neatly rounded.

Above notes apply also to Sheet #3

Hand Railing Up Stream Side Wireton and Charleroi Approaches

Bridge over Monongahela River at Lock #4

Mercantile Bridge Co.

Amerigge

6949

B.2960 2

Field Checked G.M.D. 6-13-24

Allow in length of rails for possible error in setting. Must not be measured.

Expansion for 120'

Lamp Post

Expansion for 240'

Expansion for 200'

Allow for expansion of 400' span.

Lamp Post

Lamp Post

Lamp Post

19'-6" 9'-9" 9'-9" 38'-6"

15'-6" 15'-6" 15'-6" 15'-9" 62'-3"

2'-8½" 5 Panels @ 20'-0" = 100'-0" 121'-8½"

20'-0"

5 Panels @ 20'-0" = 100'-0" 120'-0"

6 Panels @ 20'-0" = 120'-0"

2'-6" 22'-4⅜" 31'-3½"

10 Panels @ 20'-0" = 200'-0" 203'-6" 200'-0" Span

2'-6"

10 Panels @ 20'-0" = 200'-0"

400'-0"

10 Panels @ 20'-0" = 200'-0"

400'-0" Span

Wireton Approach

Post B

Post A

Grade 0.66% About

Grade 0.66%

Detail for Ill. Ext. Lamp. Posts

4 at 8 Lights

4'0 Oct.

6'0" Oct.

6½" sq.

6½" sq.

4'8"

7" sq.

1'-4"

Sec. AA

5'0" Oct.

6½" Round

10"x7"

9"x6"

10"x7"

3'-11½"

Detail for New Lamp Posts at Ex tremity Ends

12"

10"

Lamp Post

4'-0"

15'-4"

10 Panels @ 20'-0" = 200'-0"

400'-6"

400'-0" Span

Allow for Exp. of 400'-0" Span

Details for Posts same as shown on Sheet #7

Conn. of Posts A & B to S.W. Stringers

Expansion for 120'

Expansion for 240'

Lamp Post

Expansion for 200'

Lamp Post

(Allow length of rails for possible error in setting. Must not be measured.)

20'-0" 20'-0" 23'-0" 3 Panels @ 20'-0" = 60'-0" 166'-0" 23'-0" 20'-0" 20'-0" 7'-6" 23'-0" 7 Panels @ 20'-0" = 140'-0" 166'-3½"

40'-0"

106'-0"

45'-6"

North Chesterai Approach

Lamp Post

Parts Vertical

Lamp Post

Grade 0.66% About

Grade 0.66%

See Sheet #2 for Notes

Sheet #2 Wireton Approach — 200 ft Span — Sheet #4 — 400 ft Span — Sheet #4 — 400 ft Span — Sheet #4 — North Chesterai Approach — Sheet #12

Side walk Railing for Fabric Bridge on this sheet Down Stream Side

PLAN of RAILING for FABRIC BRIDGE

Full lines indicate railings shown on this Sheet

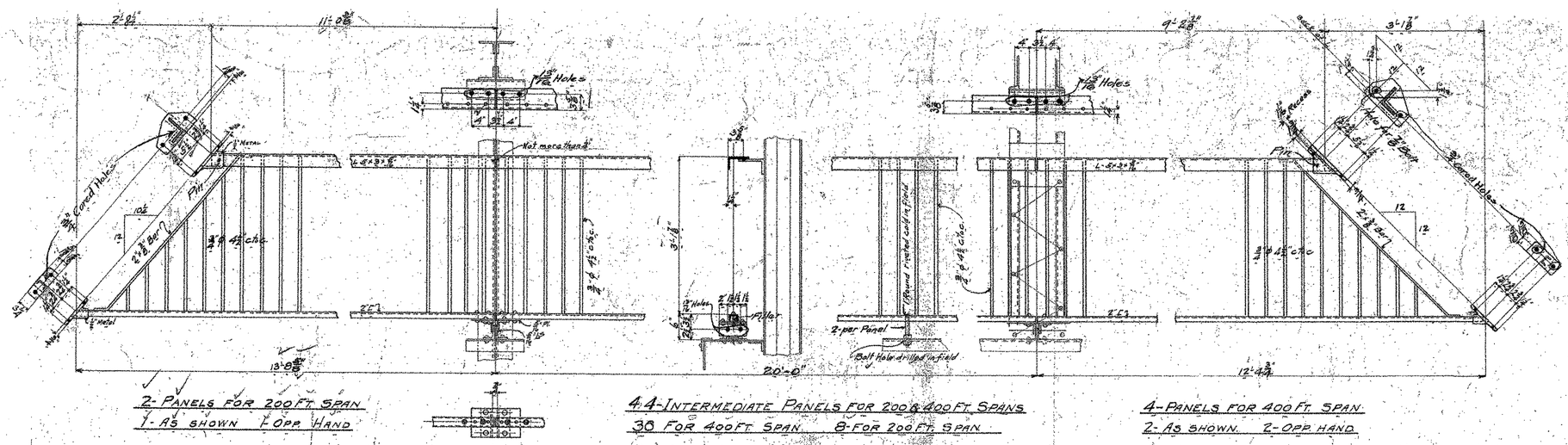
HAND RAILING DOWN STREAM SIDE
BRIDGE OVER MONONGAHELA RIVER
AT LOCK #4
MERCANTILE BRIDGE CO.

6756

Amb. #7 E.C.N. 3-5-04

B2960 3

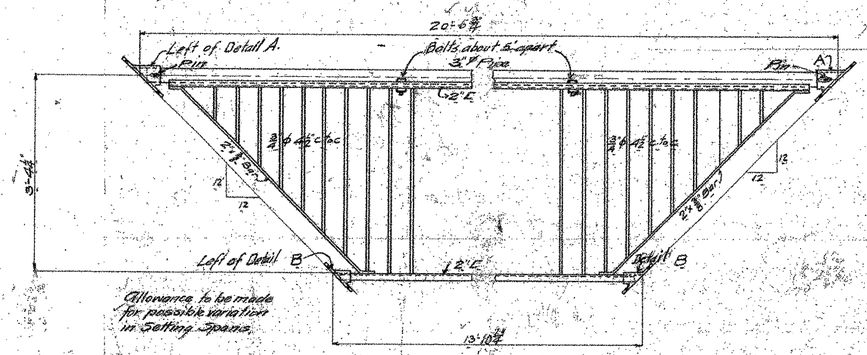
Tied Checked



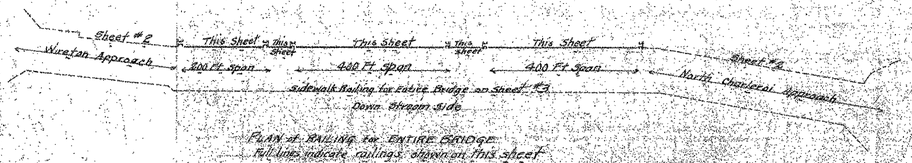
2- PANELS FOR 200 FT. SPAN
1- AS SHOWN 1 OPP. HAND

44- INTERMEDIATE PANELS FOR 200 & 400 FT. SPANS
36 FOR 400 FT. SPAN 8- FOR 200 FT. SPAN

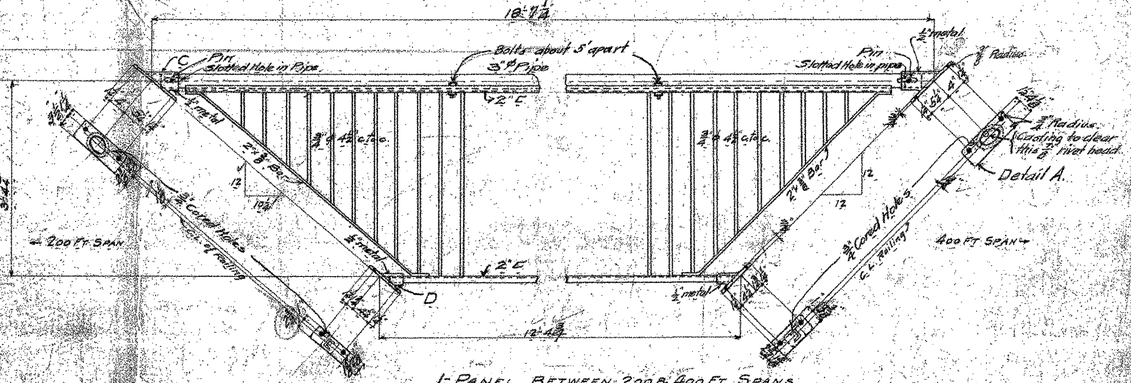
4- PANELS FOR 400 FT. SPAN
2- AS SHOWN. 2- OPP HAND.



1- PANEL BETWEEN 400 FT. SPANS
AT PIER #9
FIXED BOTH ENDS.



PLAN of RAILING for ENTIRE BRIDGE
Full lines indicate railings shown on this sheet



1- PANEL BETWEEN 200 & 400 FT. SPANS
AT PIER #8
ALLOW FOR EXPANSION of 400 FT. SPAN

HAND RAILING FOR PIN SPANS
BRIDGE OVER MONONGAHELA RIVER
AT LOCK #4
MERCANTILE BRIDGE CO.

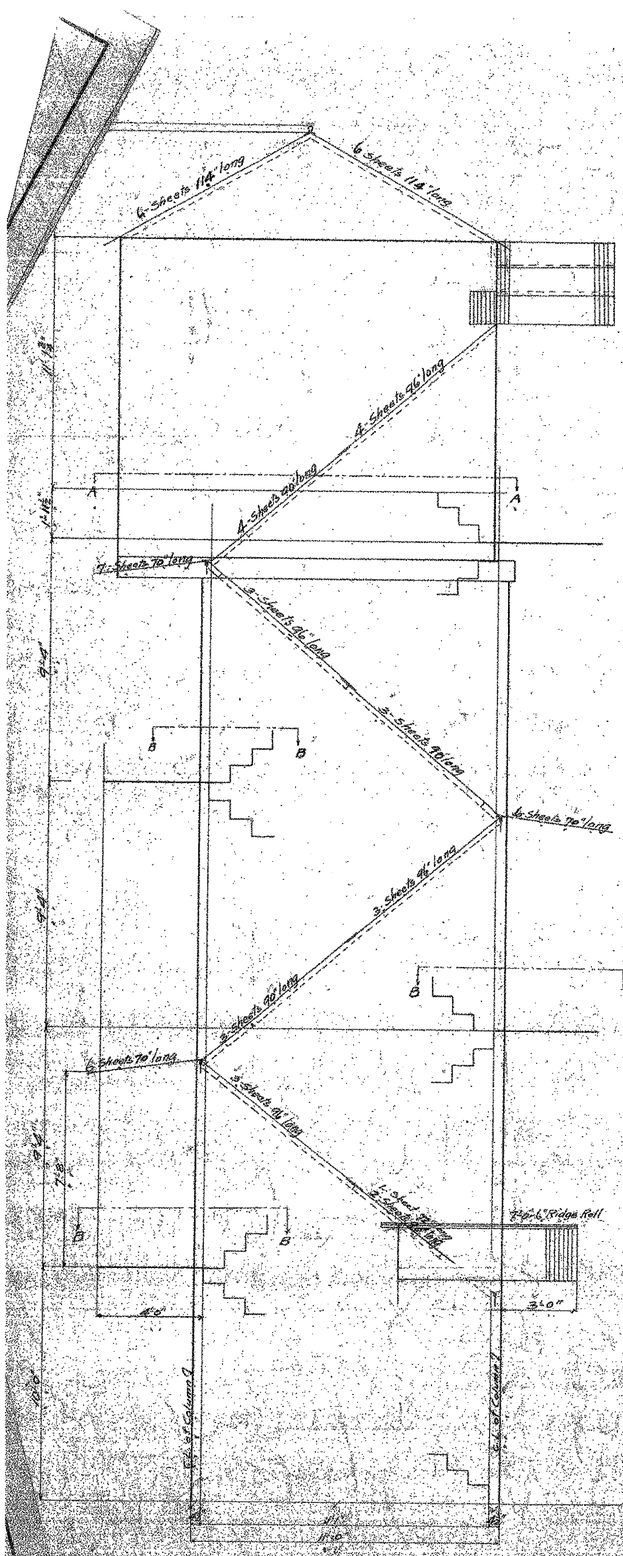
6758

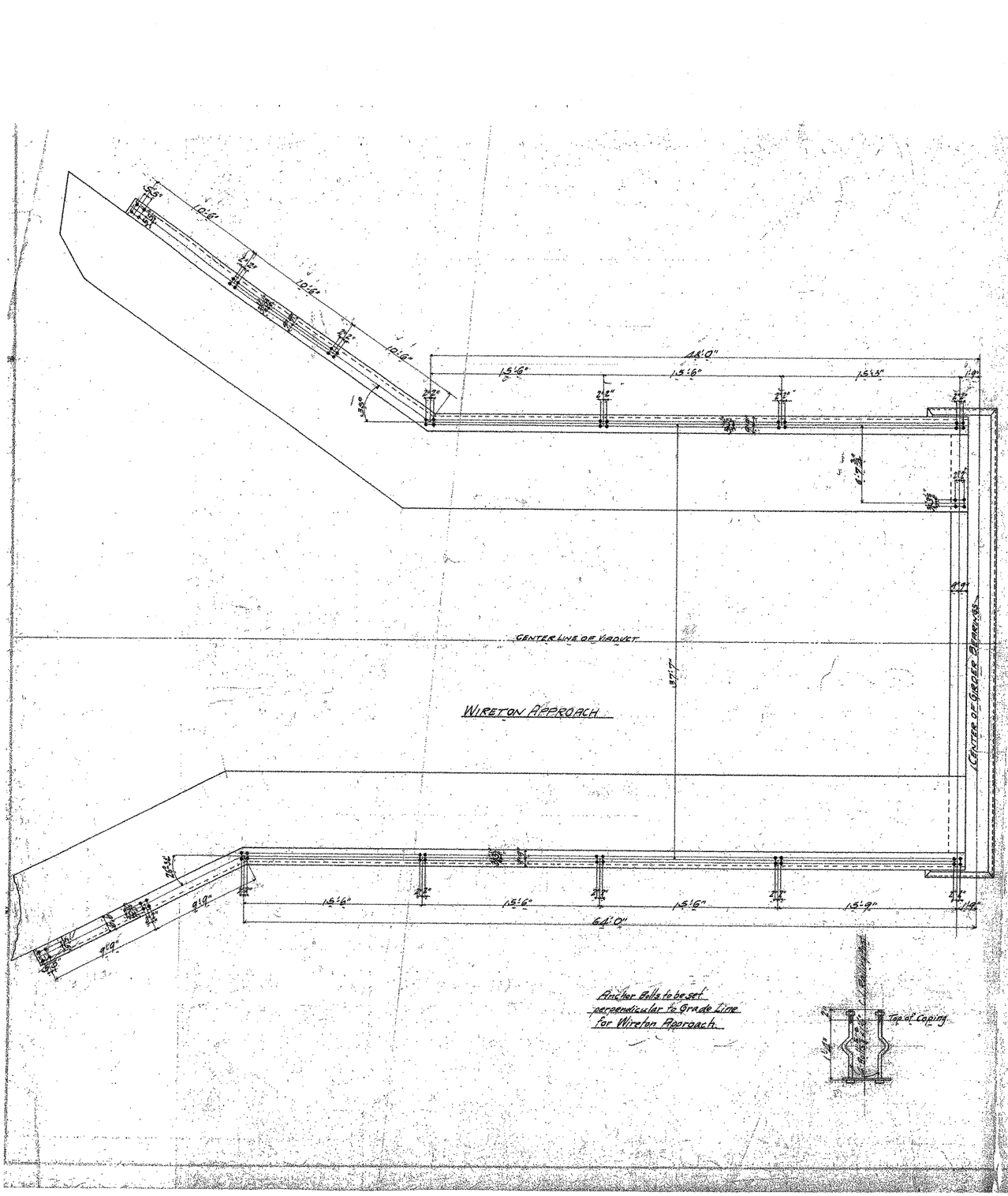
Ambridge
Ams #7 E.C.M.
ELN&RLH 3-16-06
S.T.S. LT 7-26-06

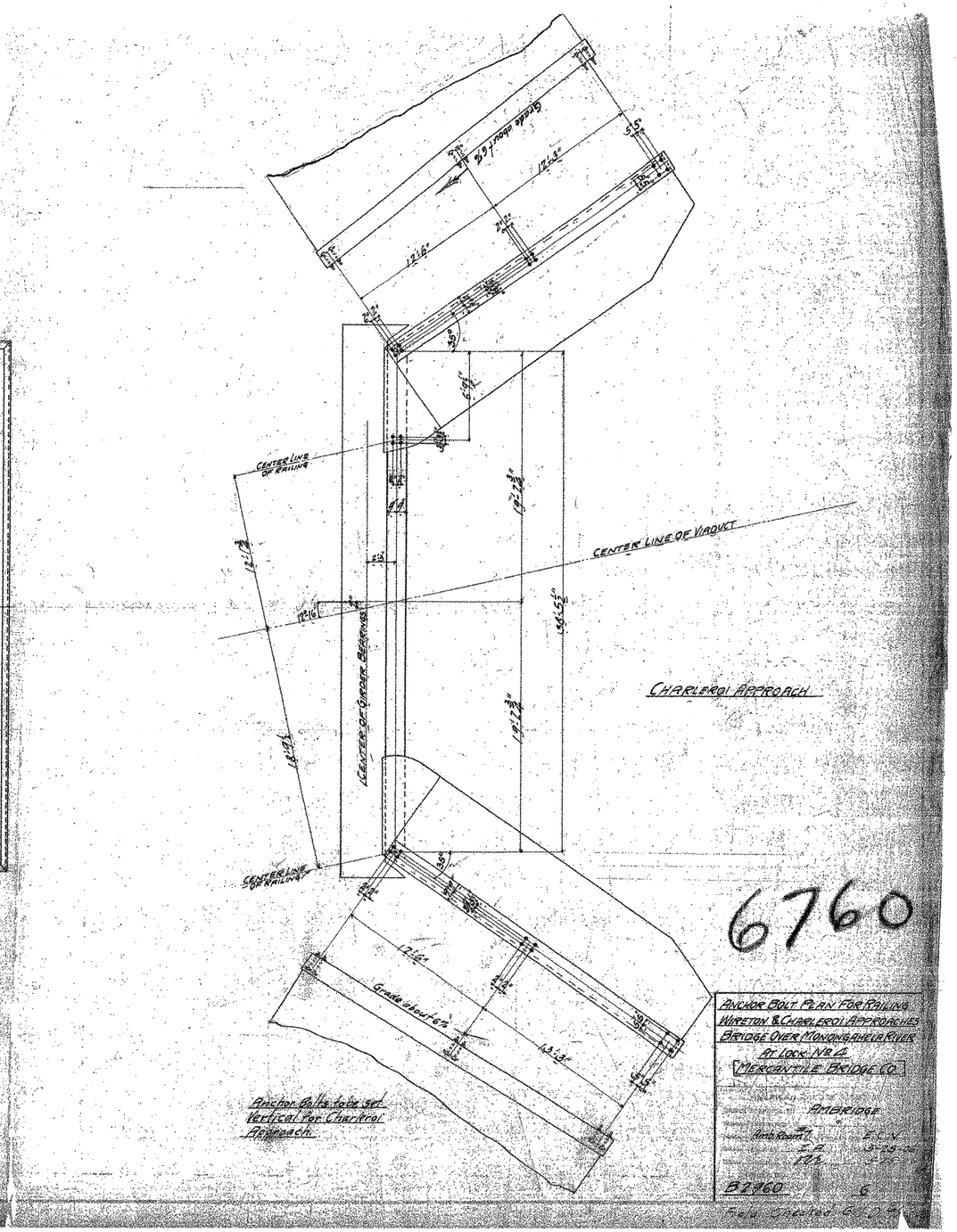
B2960 A

Field Checked C.M.D. 6-11-06

REVISED			
Dimensions on Detail D			


4 Sheets 114" long
6 Sheets 114" long
4 Sheets 96" long
4 Sheets 90" long
7 Sheets 78" long
3 Sheets 96" long
3 Sheets 96" long
4 Sheets 78" long
3 Sheets 96" long
3 Sheets 78" long
3 Sheets 78" long
4 Sheets 96" long
4 Sheets 78" long
4 Sheets 96" long
4 Sheets 78" long
4 Sheets 78" long
4 Sheets 78





6760

ANCHOR BOLT PLAN FOR RAILING
WIRETON & CHARLEROI APPROACHES
BRIDGE OVER MONONGAHELA RIVER
AT LOCK NO 4
[MERCANTILE BRIDGE CO.]

AMBRIDGE

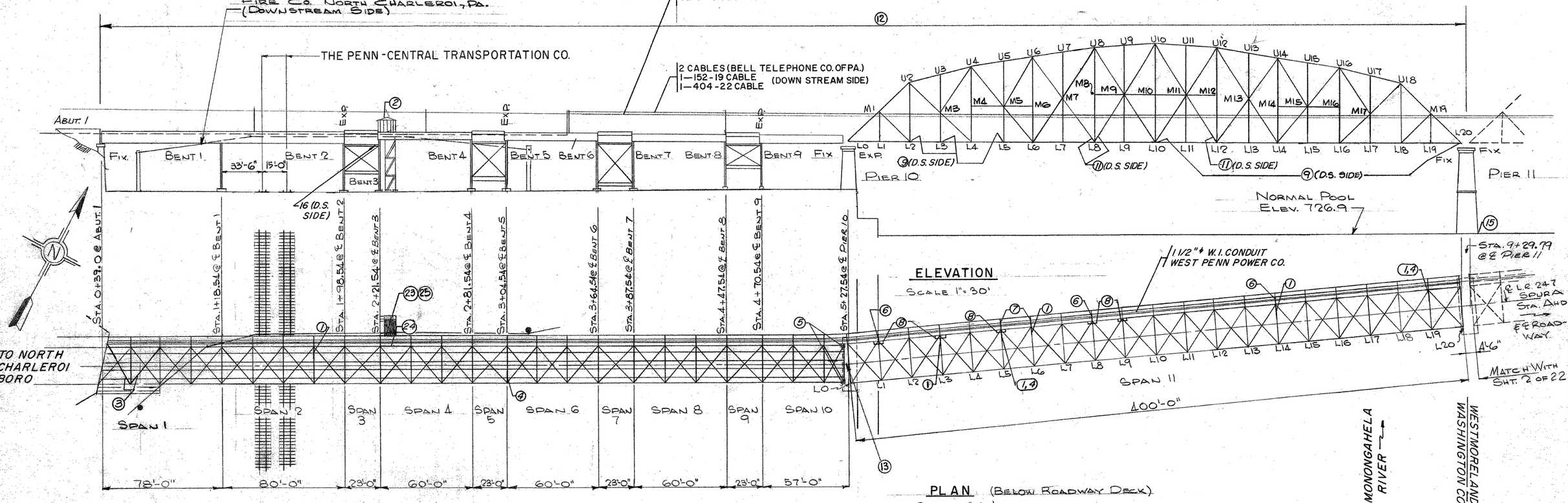
B2960 6

FIRE ALARM CABLE - LOCK & VOLUNTEER FIRE CO. NORTH CHARLEROI, PA. (DOWNSTREAM SIDE)

1-CABLE (UP STREAM SIDE) TEX-VIDEO INC.

THE PENN-CENTRAL TRANSPORTATION CO.

2 CABLES (BELL TELEPHONE CO. OF PA.)
1-152-19 CABLE
1-404-22 CABLE (DOWN STREAM SIDE)



ELEVATION

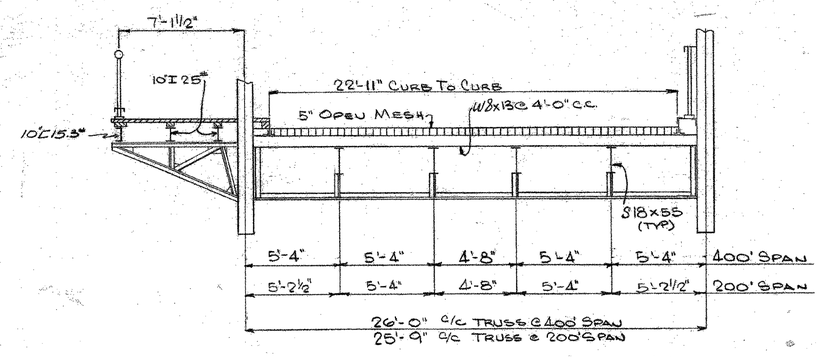
SCALE 1" = 30'

PLAN (BELOW ROADWAY DECK)

SCALE 1" = 30'

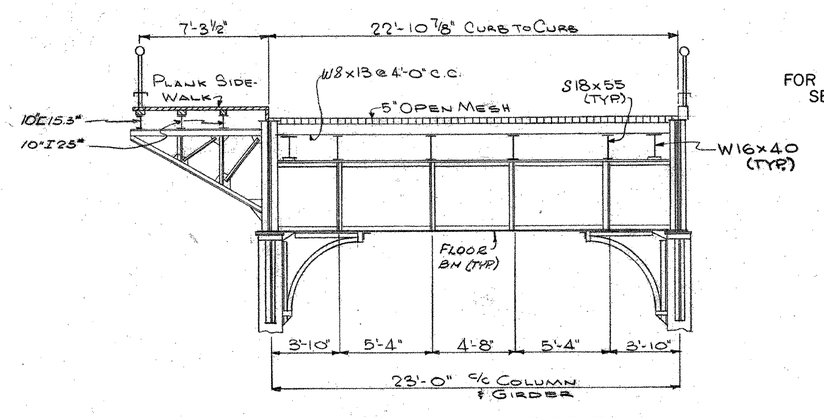
MONONGAHELA RIVER

WESTMORELAND CO. WASHINGTON CO.



TYPICAL TRUSS SECTION

SCALE 1/4" = 1'-0"



TYPICAL VIADUCT SECTION

SCALE 1/4" = 1'-0"

FOR REFERENCE ITEM NUMBERS, REPAIR PROCEDURE AND INDEX OF DRAWINGS SEE SHEET 2 of 22.

TYPICAL DECK SECTIONS

CURBS AND GUTTERS	R.C. 64	3-7-73
PAY LIMIT OF SUBBASE AND SUB-GRADE	R.C. 13	3-7-73
BACKFILL AT STRUCTURES	R.C. 12	12-1-71
REINFORCEMENT BAR FAB. DETAILS	BC-336	4-1-71
CONSTRUCTION ℄ EXP. JOINT DETAILS	BC-335	4-1-71
FLAME SHORTENING DETAIL	56409	5-15-63
DESCRIPTION	DWG. NO.	APPR. DATE

SUPPLEMENTAL DRAWINGS

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION

GENERAL PLAN

APPROVED DEC 16 1974
B.F. Katalik SRS
BRIDGE ENGINEER

SHEET 1 OF 22

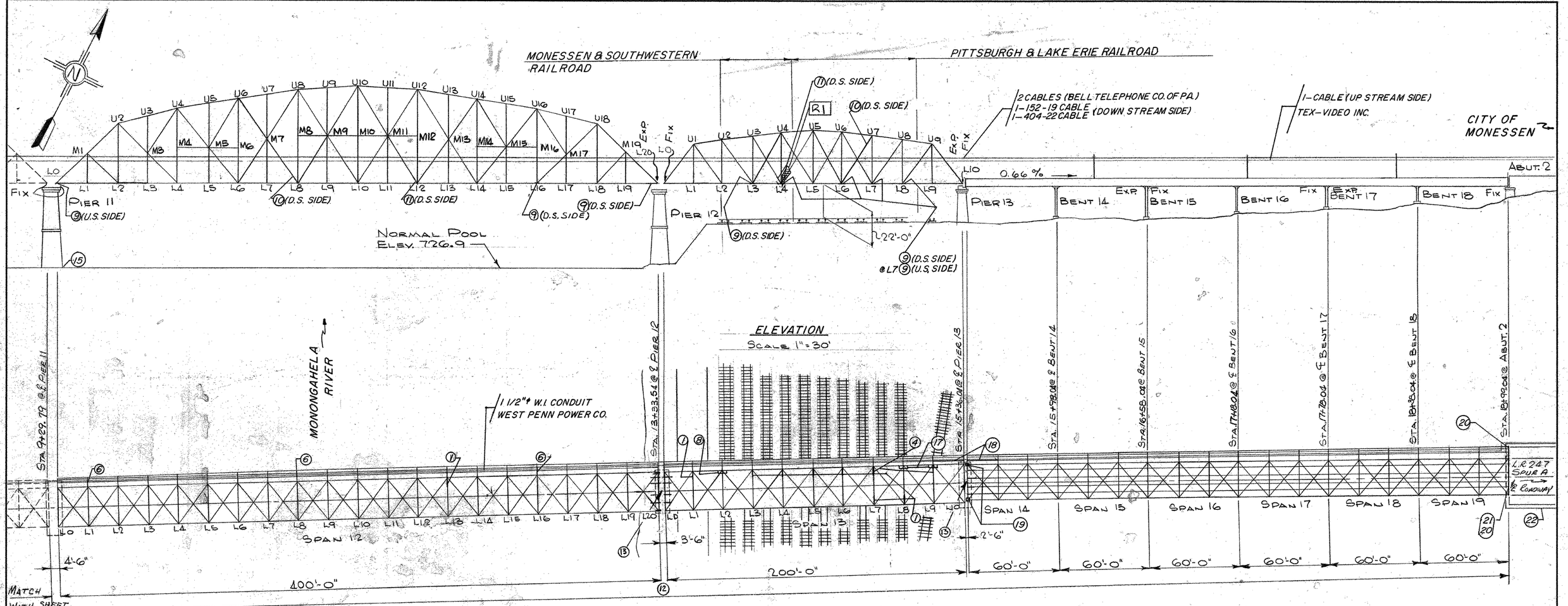
S-11438

Designed: WYL, TRS
Drawn: RRB, TRS
Traced: TRS, RRB
Checked: DES

PREPARED BY PENNSYLVANIA DEPARTMENT OF TRANSPORTATION, DIST. 12-0 BRIDGE UNIT, UNIONTOWN, PA.

RNS Jr.

BARCLAY BROTHERS, INC. #4101-B



ELEVATION

Scale 1" = 30'

PLAN

Scale 1" = 30'
(Below Roadway Deck)

SHEET NUMBER	REFERENCE ITEM NO.	REPAIR ITEMS
4	1	**REPAIR** TOP FLG. AT END OF FL. BM.
5	2	REMOVE TOLLHOUSE & RD'WY CANOPY
5	3	REPLACE LATERAL BRACING
4	4	**REPAIR** BOTTOM FLG. AT END OF FL. BM.
7	5	**ANCHORING OF GIRDERS**
4	6	REPAIR TOP FLG. OF SIDEWALK BRACKETS
10	7	REPLACE SIDEWALK BRACKET
4	8	**REPAIR** GUSSET PL. LOWER CHORD BRACING
7	9	1-BAR JOINT REPAIR
2	10	FLAME SHORTENING
6	11	REPAIR DIAGONALS AT PIN CONN.
16 thru 18	12	REPLACEMENT OF OPEN MESH - DECK
19 thru 22	13	REPLACE SLIDING R's ON EXP. DAMS (PIERS 10, 12, 13)
5	25	STEEL RAILING (STA. 2+31.5)
12	15	REPOINTING OF PIER
4	16	**REPAIR** HORIZONTAL MEMBER

SHEET NUMBER	REFERENCE ITEM NO.	REPAIR ITEMS
10	17	REPLACE GUSSET PL. LOWER CHORD BRACING
11	18	REPLACE SIDEWALK STRINGERS
7	19	REPLACE BEARING PL. & ANCHOR BOLTS
9	20	**REPAIR FIXED BEARINGS**
9	21	REPLACE FLOORBEAM
13	22	REBUILD PORTIONS OF EXIST. RD'WY., CURB, SIDEWALK STA. 18+99.04 — STA. 19+25.22
5	23	**REPLACE SIDEWALK CHANNEL**
8	24	REPAIR TOP FLANGE OF GIRDER
*	26	REMOVAL OF PORTION OF EXISTING STRUCTURE STA. 18+96.72

*SEE SPECIAL PROVISIONS

INDEX OF DRAWINGS

TITLE	SHT. NO.
GENERAL PLAN	1
GENERAL PLAN	2
GENERAL NOTES & QUANTITIES	3
MISCELLANEOUS STRUCTURAL REPAIRS	4
MISCELLANEOUS REPAIRS SPANS 1 & 4	5
REPAIR DIAGONALS AT PIN CONNECTIONS	6
MISCELLANEOUS BEARING REPAIRS	7
GIRDER REPAIR SPAN 4	8
FLOOR BEAM REPAIR EAST ABUTMENT	9
S.W. BRACKET & GUSSET PL. REPLACEMENT	10
S.W. STRINGER REPLACEMENT SPANS 13 & 14	11
POINTING AT PIER 11	12
EAST ABUT. BACKWALL, & WINGS REPAIR	13
BAR SCHEDULE — EAST ABUTMENT	14
APPROACH REPAIR	15
FLOORING PLAN	**16**
TYPICAL DECK SECTIONS & DETAILS	17
TYPICAL DECK SECTIONS & EXP. DETAILS	18
EXPANSION DAM PIER 10	19
EXPANSION DAM PIER 12	20
EXPANSION DAM PIER 13	21
EXP. DAM CURB REPAIRS AT PIERS 10, 12, 13	22

Mark	Description	By	Chk'd.	App'd.	Date
R1	ELIMINATE REPAIR TO JT. L4-U5	T.A.S.	W.Y.L.	DES	5/17/76
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON WESTMORELAND COUNTIES
L.R. 247 SPUR A. STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION

GENERAL PLAN

APPROVED DEC 16 1974
B.Z. Kotali
BRIDGE ENGINEER

SHEET 2 OF 22

S-11438

BARCLAY BROTHERS, INC. #4101-B

GENERAL NOTES

MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH SPECIFICATION FORMS 408/73, 409/73 AND SPECIAL PROVISIONS.

NEW STRUCTURAL STEEL SHALL CONFORM TO ASTM DESIGNATION A-36

DESIGN SPECIFICATIONS: DESIGN DIVISION OF 1973 AASHO, "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" AND AS SUPPLEMENTED BY THE DESIGN MANUAL PART 4, STRUCTURES. ALSO THE 1974 AASHTO "INTERIM SPECIFICATIONS FOR HIGHWAY BRIDGES.

LIVE LOAD: EXISTING STRUCTURE H12, PARTS REPAIRED HS20.

2" CONCRETE COVER SHALL BE PROVIDED ON REINFORCEMENT BARS EXCEPT WHERE NOTED OTHERWISE.

THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD BEFORE STARTING REPAIRS.

EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 1"x1" EXCEPT AS NOTED.

NO WELDING WILL BE ALLOWED WHEN SURFACES ARE WET OR EXPOSED TO RAIN, SNOW, WIND OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL HAMPER GOOD WORKMANSHIP.

NO WELDING OR BURNING WILL BE ALLOWED WHEN THE TEMPERATURE IS LOWER THAN 0°F. WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0°F. AND 32°F., THE METAL SHALL BE PREHEATED TO AT LEAST 70°F. AND MAINTAINED AT THIS MINIMUM TEMPERATURE DURING WELDING AND BURNING. THE AREA TO BE HEATED SHALL EXTEND AT LEAST 3 INCHES BEYOND THE WELD IN ALL DIRECTIONS.

ANY MOISTURE FROM FOG, DEW, ETC. PRESENT AT THE POINT OF WELDING SHALL BE DRIVEN OFF BY HEAT BEFORE WELDING COMMENCES. WIND BREAKERS SHALL BE REQUIRED TO PROTECT WORKING AREA FROM DIRECT WIND.

SURFACES OF EXISTING METAL WHICH ARE TO BE COVERED BY NEW MATERIAL SHALL BE CLEANED OF DIRT, RUST AND OTHER FOREIGN MATTER EXCEPT ADHERENT PAINT FILM THE PORTIONS OF SUCH SURFACES THAT ARE TO RECEIVE WELDS SHALL BE CLEANED THOROUGHLY OF ALL FOREIGN MATTER INCLUDING PAINT FILM FOR A DISTANCE OF 2 INCHES FROM EACH SIDE OF OUTSIDE LINES OF WELD.

EDGES THAT ARE TO BE WELDED AND HAVE BEEN REDUCED TO A THICKNESS WHICH IS LESS THAN THE SIZE OF WELD SPECIFIED SHALL BE CUT AWAY OR BUILT UP TO PROVIDE THICKNESS EQUAL TO THE SIZE OF WELD UNLESS CALLED FOR BY PLAN OR DIRECTED BY THE ENGINEER.

CLASS A CEMENT CONCRETE SHALL BE USED IN ABUTMENT BACKWALL AND WINGWALL.

SUMMARY OF QUANTITIES*

ITEM	UNIT	SUPER-STRUCT.	PIER #11	WEST ABUTMENT	EAST ABUTMENT	TOTAL
FABRICATED STRUCTURAL STEEL	L.S.	(APPROX.) (2432 LBS.)				L.S.
FABRICATED STRUCTURAL STEEL	LBS.	962				962
MASONARY REPOINTING - TYPE B	L.F.		524			524
MASONARY REPOINTING, Underwater	L.F.		174			174
REMOVAL OF EXISTING BRIDGE FLOORING	L.S.	42,600 SQ. FT.				L.S.
STEEL RAILING (STA. 2+31.5)	L.F.	16				16
LUMBER	F.B.M.	500				500
REPLACE FIXED BEARINGS	EACH	2				2
REPAIR OF FIXED BEARINGS	EACH	2				2
PAINTING OF EXISTING BRIDGE STA. 9+26.75	L.S.	L.S.				L.S.
FLAME SHORTENING	EACH	2				2
REMOVAL OF TOLL HOUSE & ROWY. CANOPY	L.S.					L.S.
DOWEL HOLES 18" DEPTH	EACH				98	98
CLASS 3 EXCAVATION, SPECIAL	C.Y.				46 C.Y.	46
CLASS A CEMENT CONCRETE	C.Y.				39	39
REINFORCEMENT BARS	LBS.				3068	3068
REBUILD PORTION OF EXISTING ROAD, CURB & SIDEWALK	L.S.					L.S.
Selected Borrow Excavation Structure Backfill	C.Y.				30	30
6"ø PERF. V.C. OR P.C.C. PIPE ★	L.F.				62	62
#2B COARSE AGGREGATE	C.Y.				9	9
OPEN STEEL BEAM BRIDGE FLOORING, TYPE PL	SQ. FT.	42,567				42,567
REPAIR TO TOP FLANGE OF SIDEWALK BRACKET	EACH	6				6
REPAIRS TO DIAGONALS AT PIN CONNECTION	EACH	4				4
ANCHORING OF GIRDERS	EACH	2				2
REPLACEMENT OF SIDEWALK STRINGERS	EACH	2				2
REPLACEMENT OF SIDEWALK CHANNEL	L.S.	L.S.				L.S.
REPAIR TO THE TOP FLANGE OF GIRDER	L.S.	L.S.				L.S.
REPAIR EXPANSION DAM STATION 5+27.54	L.S.	L.S.				L.S.
REPAIR EXPANSION DAM STATION 13+33.54	L.S.	L.S.				L.S.
REPAIR EXPANSION DAM STATION 15+36.04	L.S.	L.S.				L.S.

*ALL QUANTITIES ARE APPROXIMATE

★ Structure Foundation Drain

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON - WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9 + 26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION

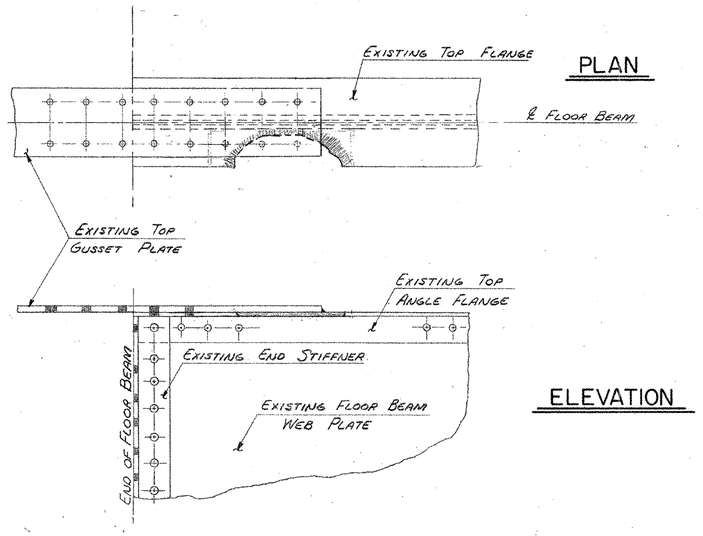
GENERAL NOTES & QUANTITIES

APPROVED DEC 16 1974
B E Rotabil
BRIDGE ENGINEER

SHEET 3 OF 22

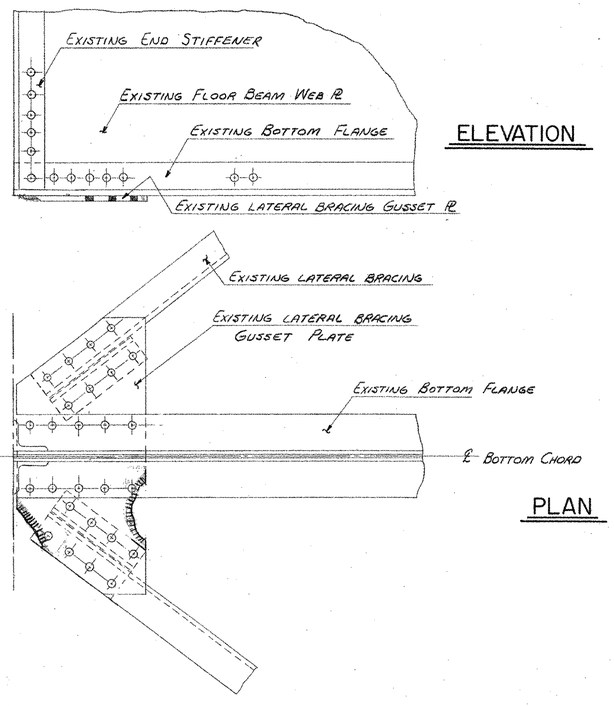
S- 11438

BARCLAY BROTHERS, INC. #4101-B



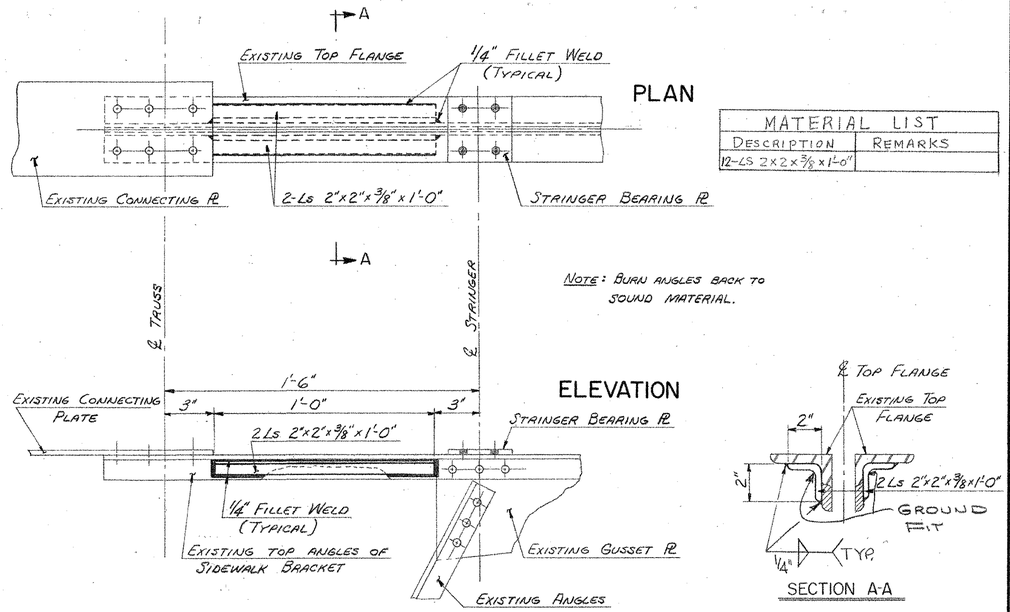
TYP. REPAIR TO TOP FLANGE OF FLOOR BEAM (ITEM-1)

UP-STREAM		DOWN-STREAM
L7, L8	200' Span 13	L1, L3, L4, L5, L6, L7
	400' Span 12	L13
	400' Span 11	L5, L6, L14, L19, L3
	80' Span 2	Next to Bent 3



TYP. REPAIR TO GUSSET PLATE LOWER CHORD BRACING (ITEM-8)

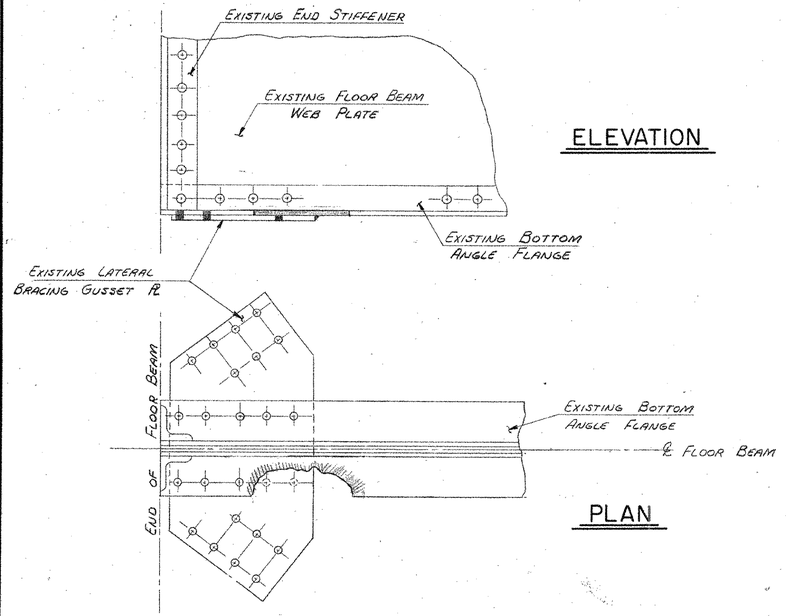
UP-STREAM	DOWN-STREAM
200' Span 13	L2
400' Span 11	L1, L3, L5, L8, L9



MATERIAL LIST	
DESCRIPTION	REMARKS
12-Ls 2"x2"x3/8"x1'-0"	

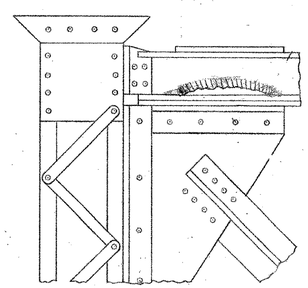
REPAIR TO TOP FLANGE OF SIDEWALK BRACKETS (ITEM-6)

UP-STREAM		DOWN-STREAM
NONE	400' Span 12	L1, L8, L16
	400' Span 11	L1, L8, L14



TYP. REPAIR TO BOTTOM FLANGE OF FLOOR BEAM (ITEM-4)

UP-STREAM		DOWN-STREAM
	200' Span 13	L7, L9
	400' Span 11	L5, L19
Bent 5	60' Span 6	



TYP. REPAIR TO HORIZONTAL MEMBER (ITEM-16)

UP-STREAM		DOWN-STREAM
	23' Span 3	Bent 3

NOTE:
ITEMS 1, 4, 8, & 16 ARE TO BE REPAIRED AS SET FORTH IN THE SPECIAL PROVISIONS UNDER ITEM 1075-0001 "PAINTING OF EXISTING BRIDGE."

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION

MISCELLANEOUS STRUCTURAL REPAIRS

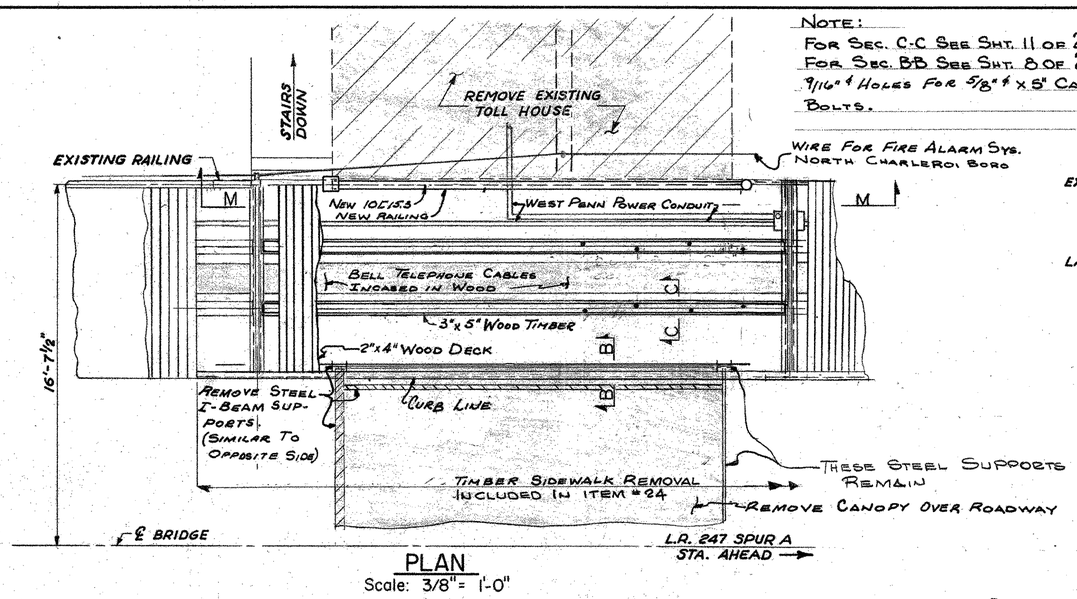
APPROVED DEC 16 1974
B.Z. Katalil
BRIDGE ENGINEER

SHEET 4 OF 22
NO SCALE
S-11438

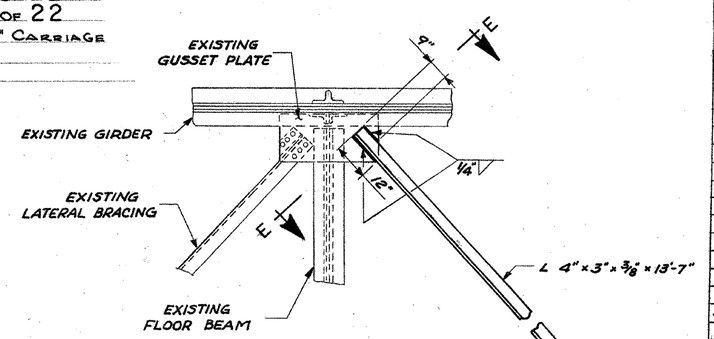
Checked YSL Lapsley 3-16-73

#128 B PRI-X POLYCHROME CORPORATION

NOTE:
FOR SEC. C-C SEE SHT. 11 OF 22
FOR SEC. BB SEE SHT. 8 OF 22
9/16" ϕ HOLES FOR 5/8" ϕ x 5" CARRIAGE BOLTS.

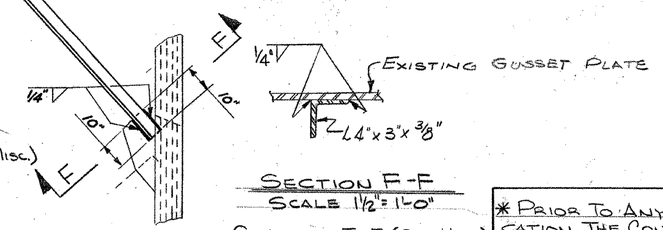


PLAN
Scale: 3/8" = 1'-0"



PLAN (LOOKING UP)
SCALE 1/2" = 1'-0"

**PAID FOR UNDER ITEM
FABRICATED STRUCTURAL STEEL (MISC.)

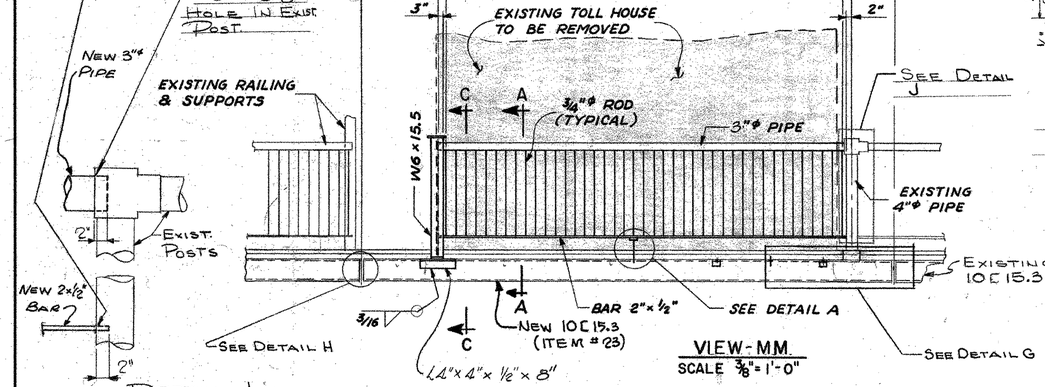


SECTION F-F
SCALE 1 1/2" = 1'-0"

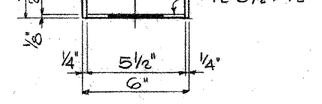
SECTION E-E (OPP. HAND)
SCALE 1 1/2" = 1'-0"

STEEL SCHEDULE	
DESCRIPTION	REMARKS
2 Ls 4"x3"x 3/8" x 13'-7"	To be verified in field
MAT'L FOR ITEMS #25	℄ #23
1-W6x15.5 x 4'-6 1/16	FOR ITEM #25
1-PL 7 3/4" x 1/2" x 7 3/4"	
1-PL 6" x 1/2" x 6"	
1-PL 5 1/2" x 1/2" x 7"	
1-L 3"x3"x 1/2" x 3"	
1- 3" ϕ STEEL PIPE	
1- PL 2" x 1/2"	
41- 3/4" ϕ RODS	
1- 3/4" ϕ ROD BENT	
1- PL 2" x 1/2" x 9"	
1-C10x15.0	FOR ITEM #23
1-L 4"x 4"x 1/2" x 8"	
4-L 4"x4"x 3/8"	
5-L 3"x3" x 3/8"	

REPLACEMENT OF LATERAL BRACING** SPAN #1 (ITEM #3)

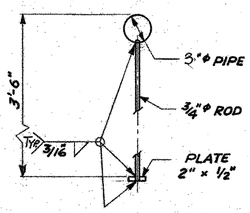


VIEW-MM
SCALE 3/8" = 1'-0"

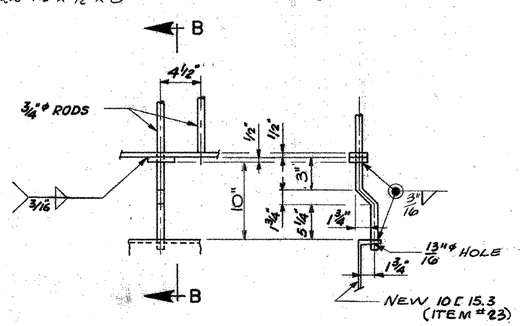


SECTION F-F
SCALE 3" = 1'-0"

DETAIL J
SCALE 1" = 1'-0"

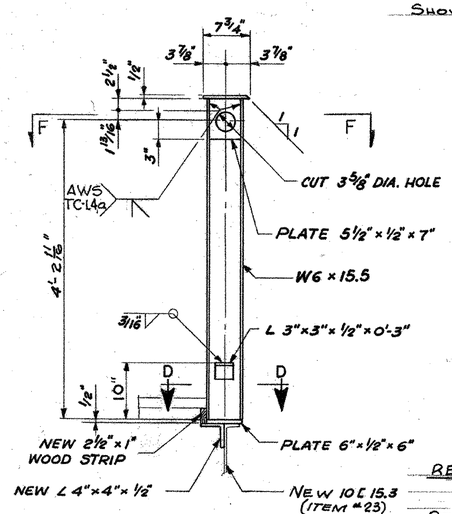


SECTION A-A
SCALE 1" = 1'-0"

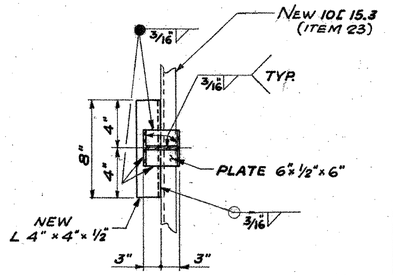


DETAIL A
SCALE 1 1/2" = 1'-0"

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



SECTION C-C
SCALE 1" = 1'-0"



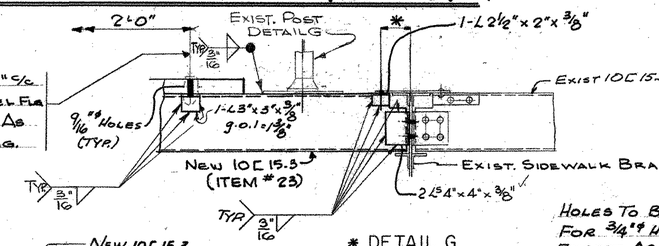
SECTION D-D
SCALE 1" = 1'-0"

REPLACEMENT OF SIDEWALK CHANNEL (SPAN 1) (ITEM #23)

REMOVAL OF TOLLHOUSE AND ROADWAY CANOPY (ITEM #2)

STEEL BRIDGE RAILING (STA. 2+31.5) (ITEM #25)

PLACE L3"x3"x 3/8" AT 4'-0" C/C. PLACE HOLES IN CHANNEL FLG AT 4'-0" C/C. ALTERNATE AS SHOWN ON THE DRAWING.



HOLES TO BE 13/16" ϕ FOR 3/4" ϕ H.S.B. EXCEPT AS NOTED.

* DETAIL G
* DETAIL H (OPP. HAND)
SCALE 1" = 1'-0"

* PRIOR TO ANY FABRICATION, THE CONTRACTOR WILL VERIFY THE DIM. OF EXISTING HOLES FOR PROPER FIT OF CONNECTION ANGLES.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON - WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
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CHARLEROI - MONESSEN BRIDGE REHABILITATION

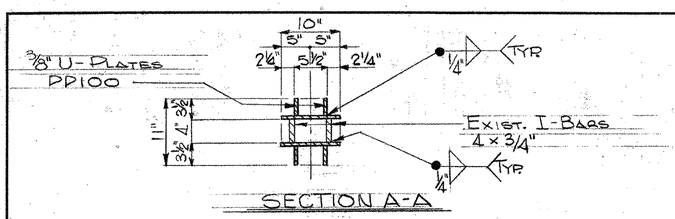
MISCELLANEOUS REPAIRS SPANS #1 & #4

APPROVED DEC 16 1974
B.J. Kotalik
BRIDGE ENGINEER

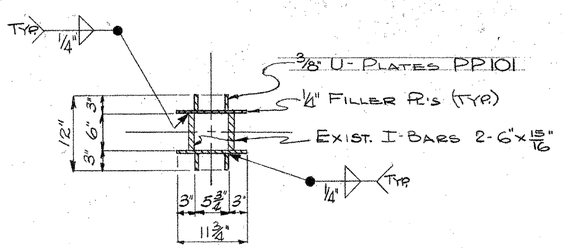
SHEET 5 OF 22
S- 11438

DETAILS OF STEEL RAILING (STA. 2+31.5) (ITEM #25)

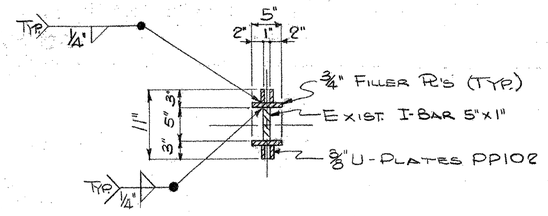
BARCLAY BROTHERS, INC. #4101-B



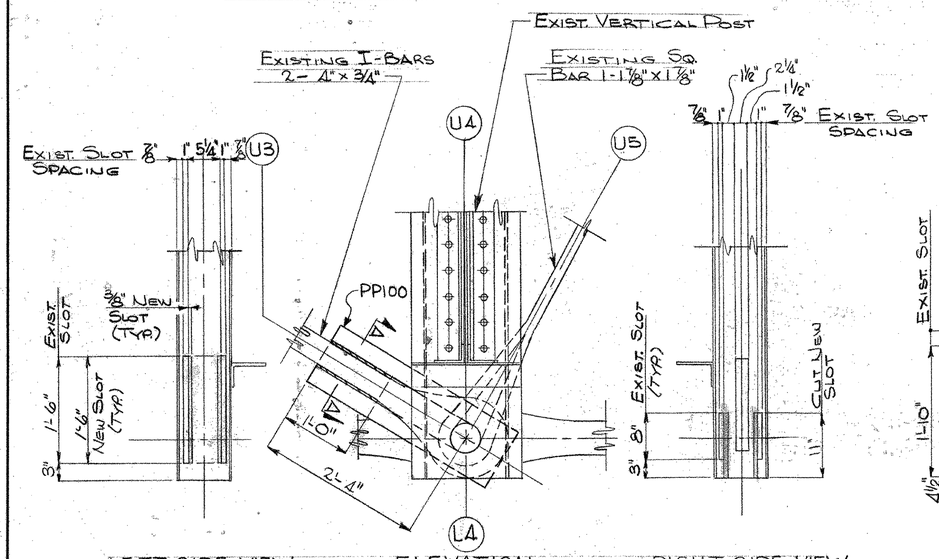
SECTION A-A



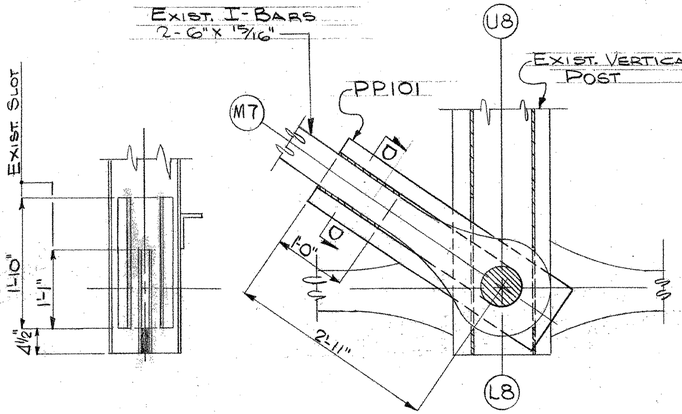
SECTION D-D



SECTION E-E

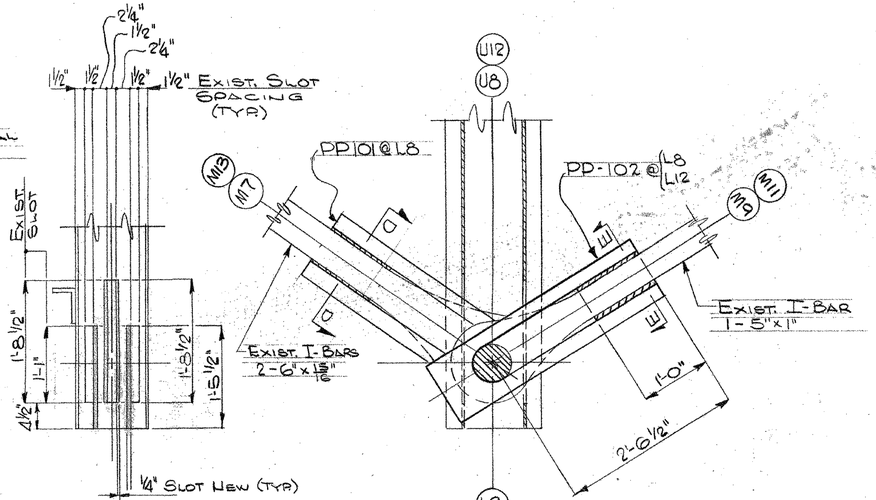


LEFT SIDE VIEW ELEVATION RIGHT SIDE VIEW

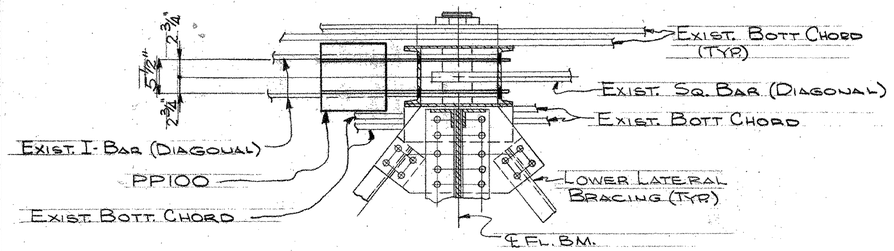


LEFT SIDE VIEW SECTION C-C @ L8

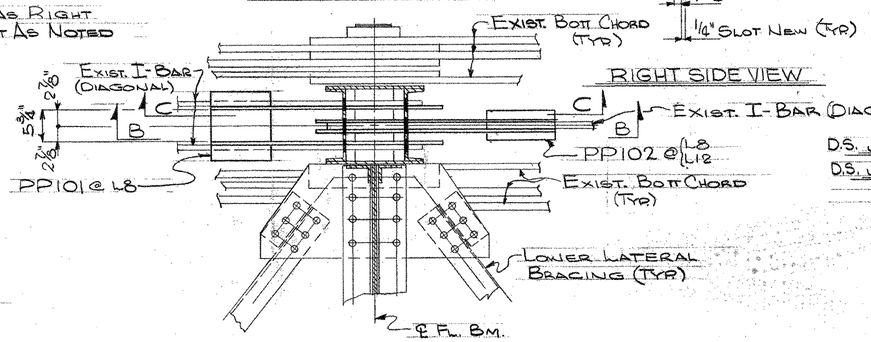
Same As Right Except As Noted



RIGHT SIDE VIEW SECTION B-B @ L8 L12



PLAN DS JOINT L4, SPAN 13 (200' TRUSS)
(ITEM #11)
SCALE 1"=1'-0"



PLAN

D.S. JOINT L8 SPAN 11 (400' TRUSS)
D.S. JOINT L12 SPAN 11 & 12 (400 TRUSS)
(ITEM #11)
SCALE 1"=1'-0"

CONSTRUCTION SEQUENCE

(1.) Pre-Drill "a" To The Diameter Of Pin (+1/32) And Cut "e" As Shown To Clear The Pin.

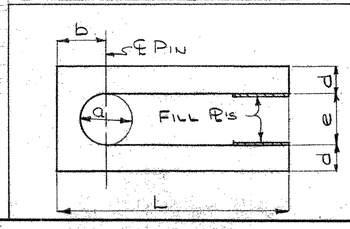
(2.) Weld The Filler Plates To The I-Bars As Required.

(3.) In Order To Place New U-Plates PP100, 101 & 102 In Position, New Slots Will Be Cut Carefully So As Not To Damage The Exist. Vertical Posts As Shown In The Drawing So As To Provide Room For The New U-Plates To Slide In. After Positioning The New U-Plates They Will Then Be Welded To The Filler Plates As Shown In The Drawings.

REPAIRS TO DIAGONALS AT PIN CONNECTIONS

(ITEM #11)

TYPE I



PIN PLATE ASSEMBLIES

MARK	DESCRIPTION	NO	TYPE	L	a	b	c	d	e
PP100	⅜" Thick U-Shape R.	2	I	2'-11"	4⅞"+1/32	7"	11"	3 1/16	4⅞"+1/32
	10" x 7/16" x 1'-0" Fill R For PP100	(2)							
PP101	⅜" Thick U-Shape R	2	I	3'-9"	6½"+1/32	10"	12"	2¾"	6½"+1/32
	11¾" x ¼" x 1'-0" Fill R For PP101	(2)	C	R1					
PP102	⅜" Thick U-Shape R	2	I	3'-4⅛"	6½"+1/32	10"	11"	2¼"	6½"+1/32
	5" x ¾" x 1'-0" Fill R For PP102	(2)	C	R1					

(1) Joints To Be Thoroughly Cleaned And Re-Inspected Before Fabrication.

(2.) All Dimensions To Be Verified In The Field.

(3) All New And Existing Steel Involved In These Repairs Will Be Painted According To Form 409/73, Sections 1060 And 1070.

Mark	Description	By	Chk'd.	App'd.	Date
R1	Rev. To Quantity Of PP102 & Fill R	TRS	WHL	DES	5/17/76

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON WESTMORELAND COUNTIES
L.R. 247 SPUR-A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI MONESSEN BRIDGE REHABILITATION
REPAIR DIAGONALS AT PIN CONNECTIONS

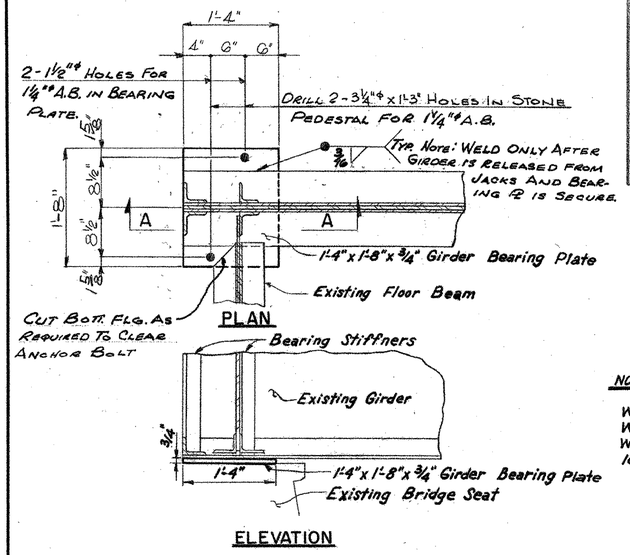
APPROVED DEC 16 1974
B.F. Ketchel
BRIDGE ENGINEER

SHEET 6 OF 22

S-11438

mgf checked 5/17/76

BARCLAY BROTHERS, INC. #4101-B

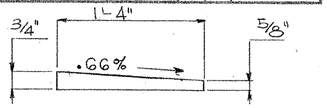


REPLACE FIXED BEARINGS (SPAN 14) (ITEM #19)

SCALE 1" = 1'-0"

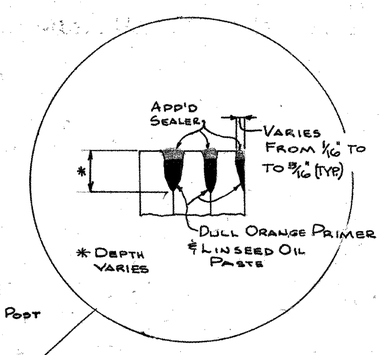
STEEL SCHEDULE

NO.	DESCRIPTION	length ft.	length in.	REMARKS
2	Bearing ℙ 1'-4" x ¾"	1	8	
4	Anchor Bolt 1¼" ϕ	1	3	

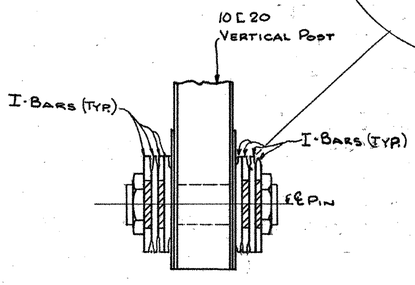


SECTION A-A
NO SCALE

NOTE:
ALL NEW & EXISTING STEEL INVOLVED WITH THE REPAIRS ON THIS SHEET WILL BE PAINTED IN ACCORDANCE WITH FORM 409/73 SECTIONS 1060 & 1070.



DETAIL C
TYPICAL REPAIR DETAIL



TYPICAL I-BAR JOINT REPAIR
NO SCALE
(ITEM #9)

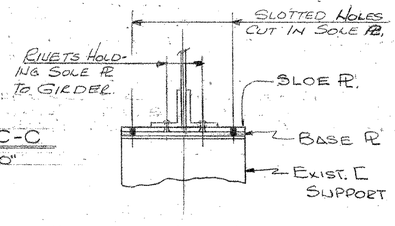
JOINTS TO BE REPAIRED

SPAN 11
REPAIR JOINTS AT
UPSTREAM — None
DOWNSTREAM — L2, L3, L5, L10, L20

SPAN 12
REPAIR JOINTS AT
UPSTREAM — L0
DOWNSTREAM — L16, L20

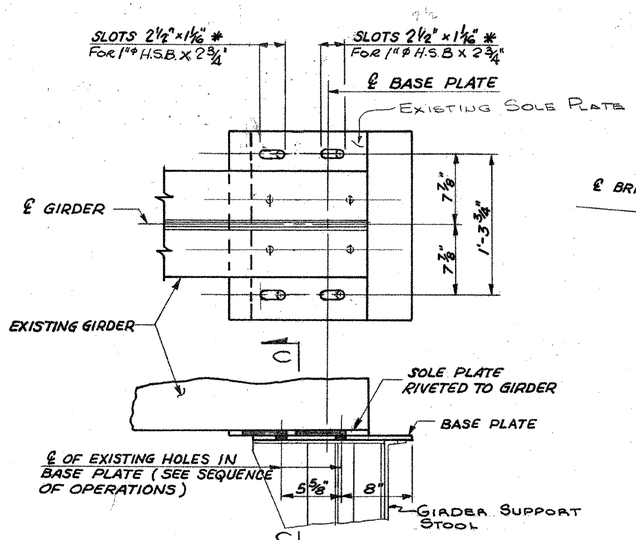
SPAN 13
REPAIR JOINTS AT
UPSTREAM — L7
DOWNSTREAM — L3, L4, L6, L7, L8

NOTES:
ITEM #9 IS TO BE REPAIRED AS SET FORTH IN THE SPECIAL PROVISIONS UNDER ITEM 1075-0001 "PAINTING OF EXISTING BRIDGE".



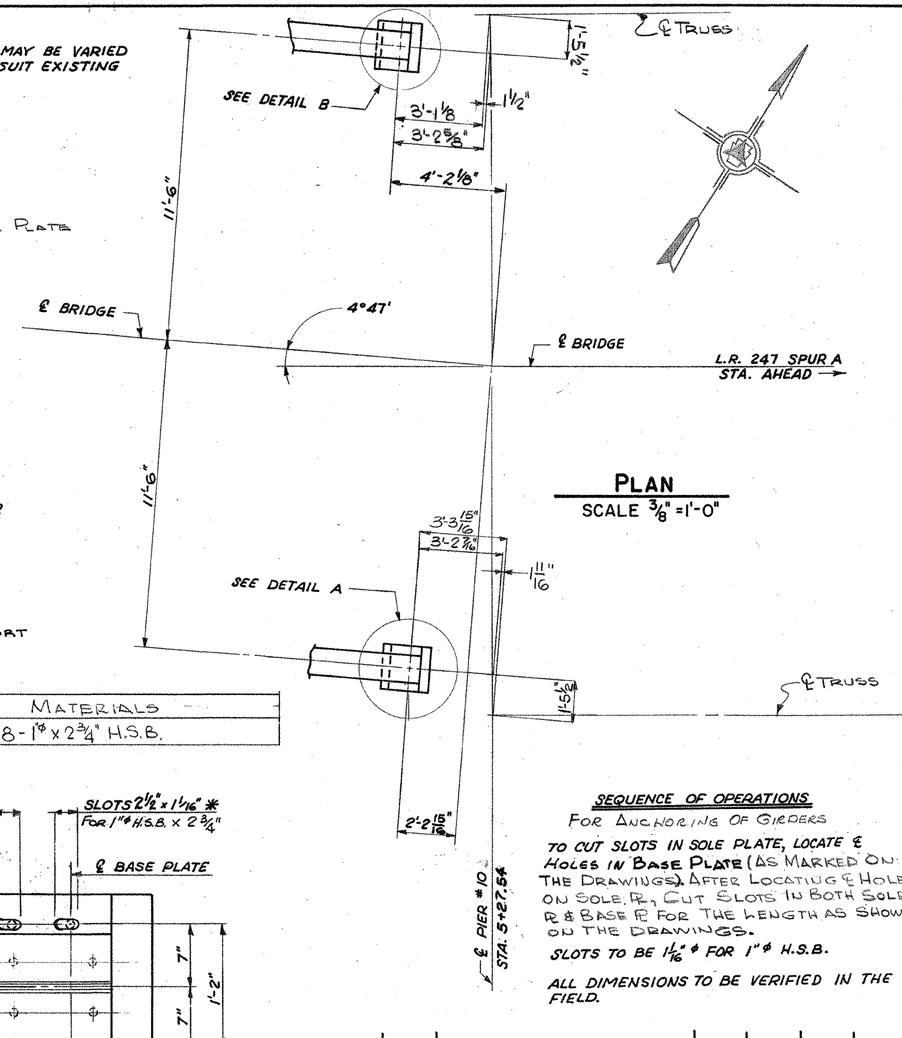
SECTION C-C
SCALE 1" = 1'-0"

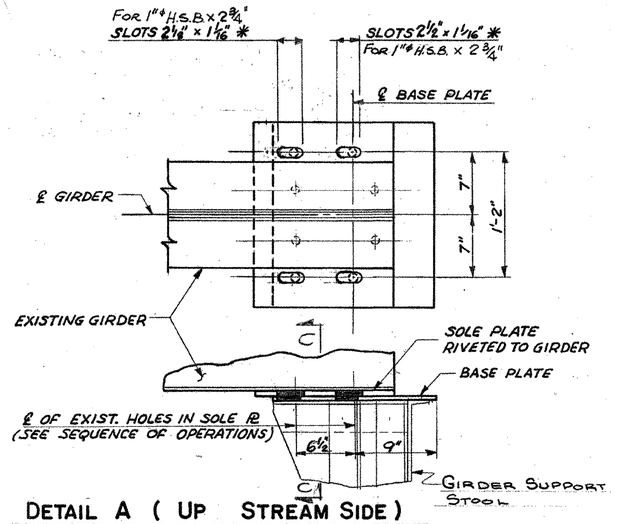
* DIMENSIONS MAY BE VARIED IN FIELD TO SUIT EXISTING CONDITIONS.



DETAIL B (DOWN STREAM SIDE)
SCALE 1½" = 1'-0"

MATERIALS
8-1"ϕ x 2¾" H.S.B.





DETAIL A (UP STREAM SIDE)
SCALE 1½" = 1'-0"

ANCHORING OF GIRDERS
SPAN #10 (ITEM #5)

SEQUENCE OF OPERATIONS
FOR ANCHORING OF GIRDERS

TO CUT SLOTS IN SOLE PLATE, LOCATE ℄ HOLES IN BASE PLATE (AS MARKED ON THE DRAWINGS). AFTER LOCATING ℄ HOLES ON SOLE ℙ, CUT SLOTS IN BOTH SOLE ℙ & BASE ℙ FOR THE LENGTH AS SHOWN ON THE DRAWINGS.

SLOTS TO BE 1⅛" ϕ FOR 1"ϕ H.S.B.

ALL DIMENSIONS TO BE VERIFIED IN THE FIELD.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI MONESSEN BRIDGE REHABILITATION
MISCELLANEOUS JOINT & BEARING REPAIRS

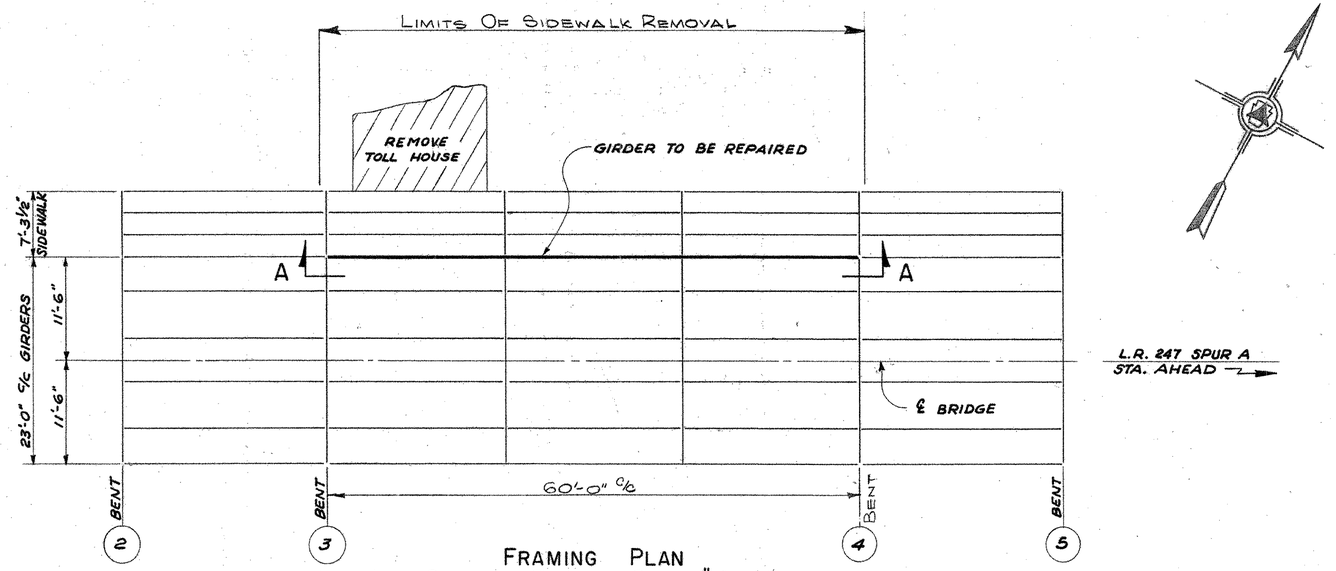
APPROVED DEC 16 1974
B.Z. Katalil
BRIDGE ENGINEER

SHEET 7 OF 22

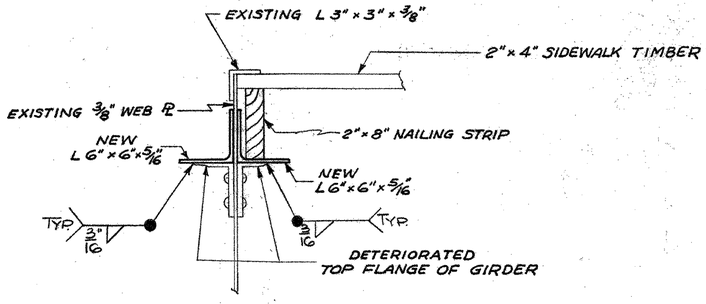
S-11438

checked 3-23-73 Yost & Evans

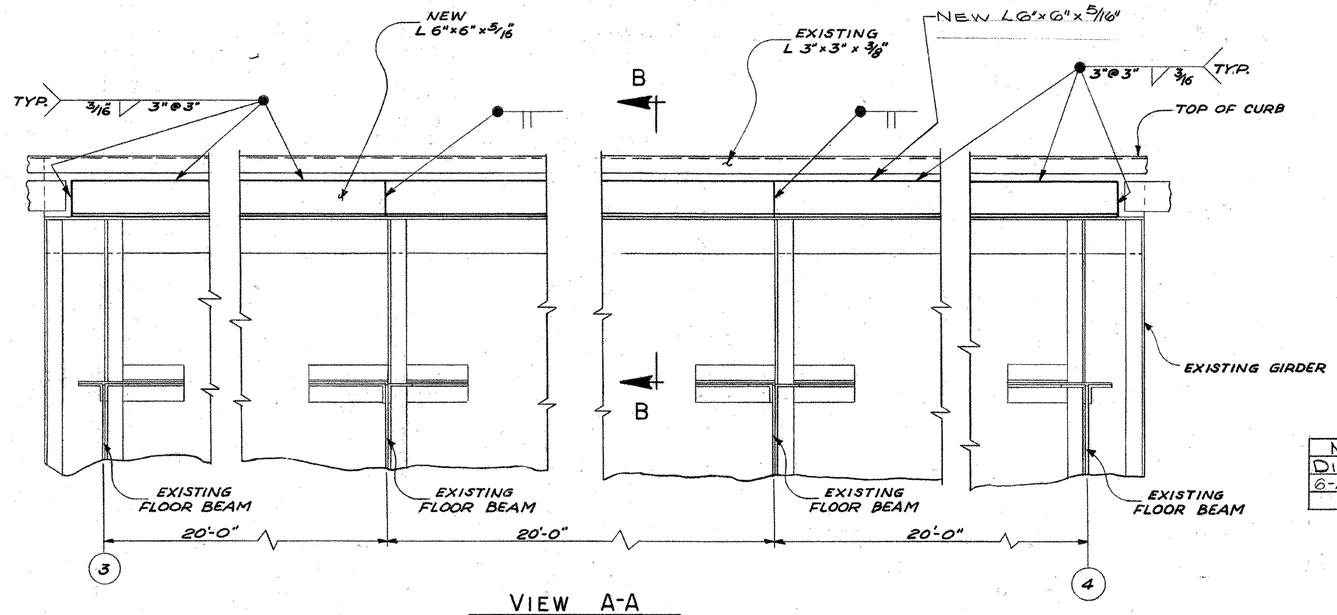
©128 B PEL-X POLYCHROME CORPORATION



FRAMING PLAN
GIRDER REPAIR SPAN #4
SCALE 1/8"=1'-0"



SECTION B-B
SCALE 1½"=1'-0"



VIEW A-A
SCALE 1" = 1'-0"

REPAIR T.O TOP FLANGE OF GIRDER SPAN 4 (ITEM # 24)

NOTES:

THE NEW Ls 6"x6"x 5/16" WILL BE INSTALLED IN 20' LENGTHS OR SMALLER LENGTHS SUITABLE FOR THE CONTRACTOR TO USE.

THE EXISTING TOP FLANGE OF THE GIRDER AND EXTENDED ⅜" WEB PLATE SHALL BE CLEANED TO BARE METAL AND PAINTED WITH A COAT OF DULL ORANGE PRIMER IN ACCORDANCE WITH FORM 409/73 SECTION 1070, PRIOR TO THE PLACEMENT OF THE 6"x6" ANGLES.

NO PAINT WITHIN 1" OF ANY AREA TO BE WELDED.

MATERIAL LIST	
DISCRIPTION	REMARKS
6-L6"x6"x 5/16"x 20'-0"	

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

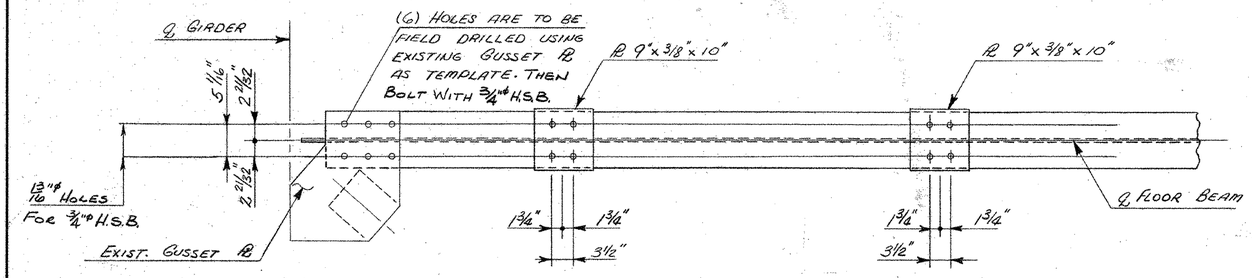
WASHINGTON – WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI – MONESSEN BRIDGE REHABILITATION
GIRDER REPAIR SPAN #4

APPROVED DEC 16 1974
BZ Kotalik
BRIDGE ENGINEER

SHEET 8 OF 22
S-11438

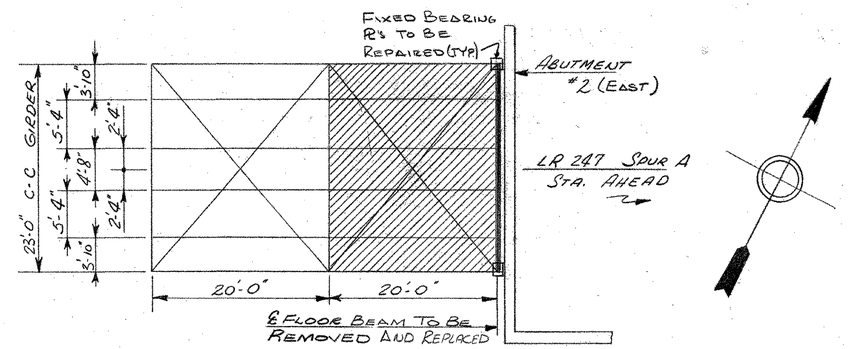
Checked Yost Kopen 3-7-75

BARCLAY BROTHERS, INC. #4101-B



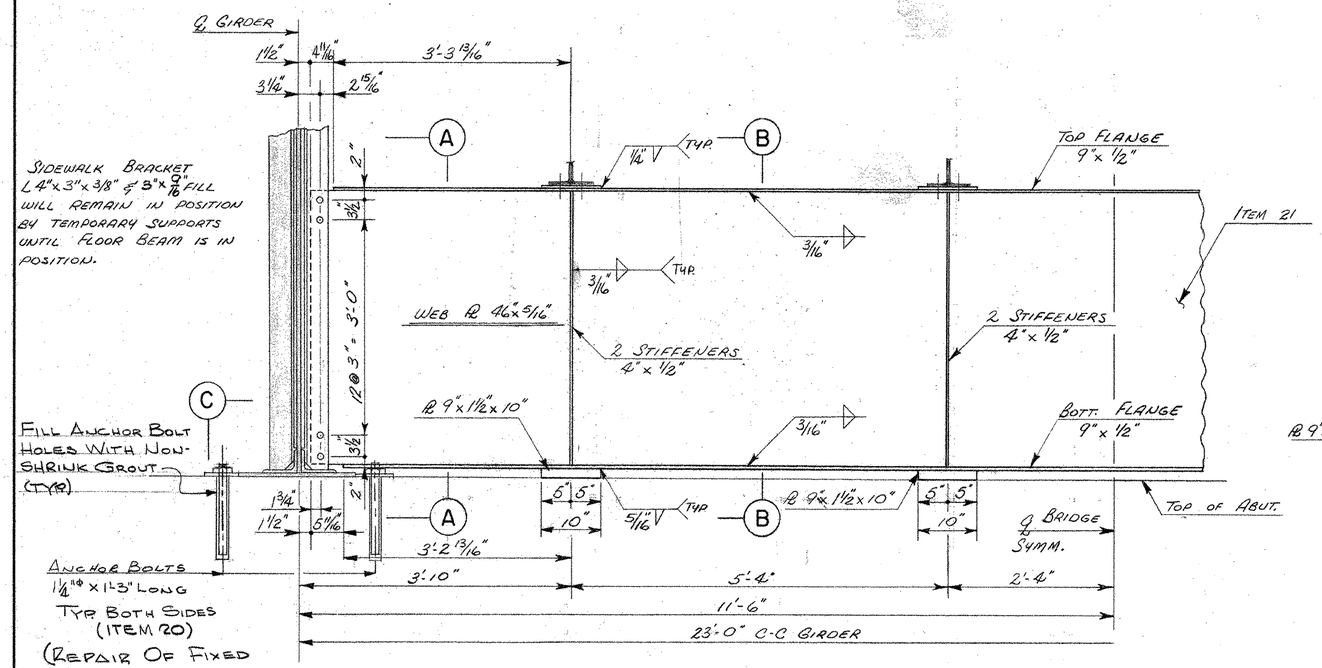
PLAN

SCALE: 1"=1'-0"



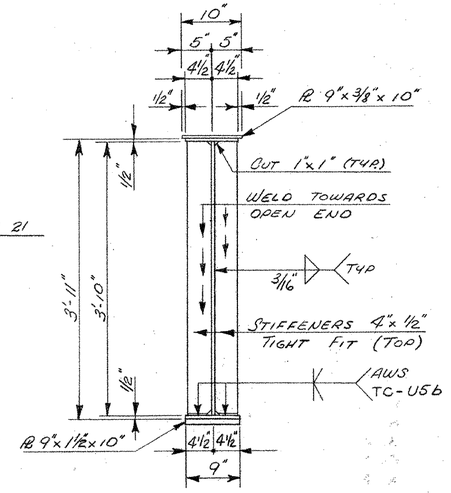
FLOOR BEAM LOCATION

NO SCALE



ELEVATION

SCALE: 1"=1'-0"

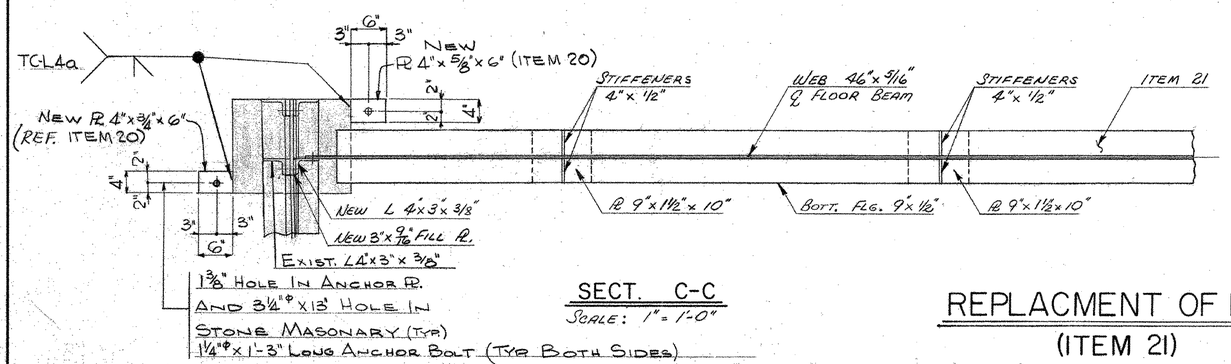


SECT. B B

SCALE: 1"= 1'-0"

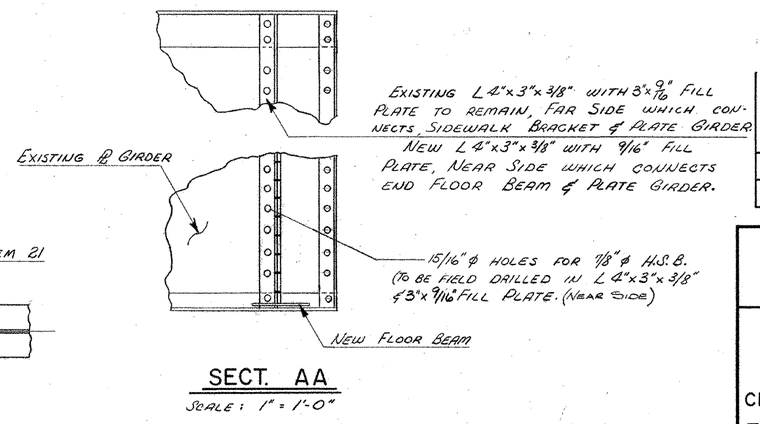
NOTES:

- CROSS HATCHED AREA REPRESENTS AMOUNT OF STEEL TO BE REMOVED IN ORDER TO GET AT FLOOR BEAM. THIS INCLUDES: 2 W16x40 FLOOR STRINGERS, 18-W18 x 13 BEAMS LAID TRANSVERSELY ON 4-W18 x 55 FLOOR STRINGERS, 4-4"x 3"x 3/8" ANGLE LATERAL BRACING, 8-4"x 3"x 5/16" DIAPHRAGMS AND CONNECTORS.
- ALL EXISTING STEEL WILL BE CAREFULLY REMOVED BY EITHER BURNING EXISTING RIVETS OR WELDS. ANY RIVETS THAT HAVE BEEN REMOVED WILL BE REPLACED BY HIGH STRENGTH BOLTS AND NEW WELDS PLACED WHERE ANY HAVE BEEN REMOVED WHEN REPLACING EXISTING STEEL.
- PAINT: STEEL TO BE PREPARED IN ACCORDANCE WITH FORM 409/73 SECTION 1060 "PAINTING STRUCTURAL STEEL."
- SHADED AREA DENOTES EXISTING STRUCTURE.
- REPLACEMENT OF FLOOR BEAM SHALL BE PAID FOR UNDER THE ITEM "FABRICATED STRUCTURAL STEEL (FLOOR BEAM)".
- REPAIR OF FIXED BEARINGS SHALL BE PAID FOR UNDER THAT ITEM.



SECT. C-C

SCALE: 1"= 1'-0"



SECT. AA

SCALE: 1"= 1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

REPLACMENT OF FLOORBEAM

(ITEM 21)

REPAIR OF FIXED BRGS.

(ITEM 20)

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON — WESTMORELAND COUNTIES
L R 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI — MONESSEN BRIDGE REHABILITATION

FLOOR BEAM REPAIR AT EAST ABUTMENT

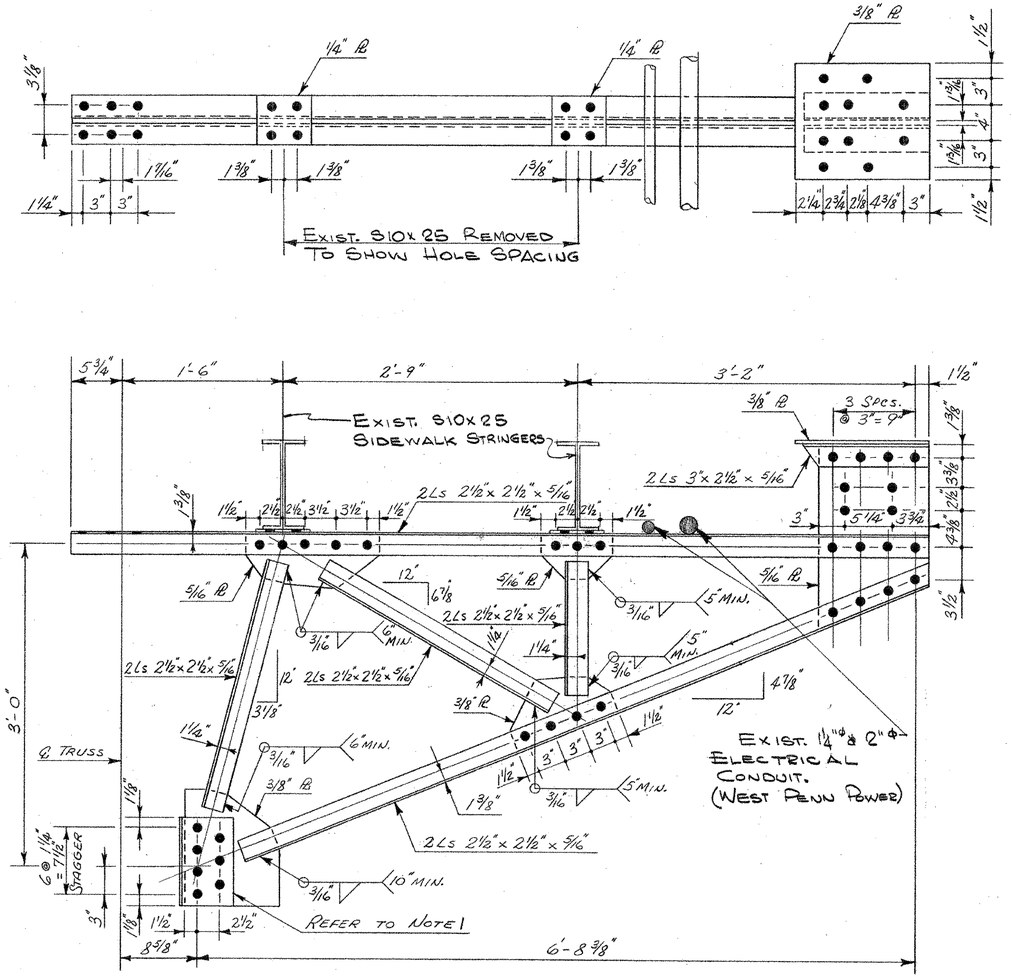
APPROVED DEC 16 1974
B J Kotalik
BRIDGE ENGINEER

SHEET 9 OF 22

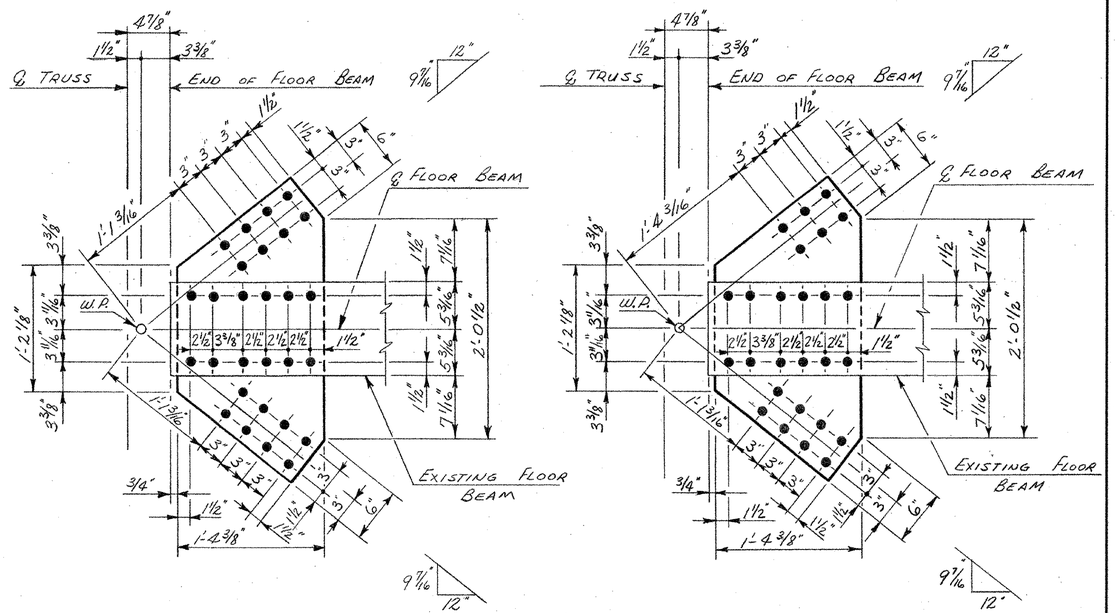
S-11438

3/25/73

BARCLAY BROTHERS, INC. #4101-B



REPLACEMENT OF SIDEWALK BRACKET AT JOINTS* L5 & L6 (SPAN 11)
(ITEM 7)



REPLACEMENT OF LOWER CHORD GUSSET PLATES* AT L8 & L9 (200' SPAN 13)
(ITEM 17)

NOTES:
- 1. THIS IS OUTLINE OF EXISTING FRAMING ANGLE ATTACHED TO VERTICAL POST. SHOWN HERE FOR CALCULATION PURPOSES ONLY.
- 2. HOLES TO BE 13/16" ø FOR 3/4" ø H.S.B.
- 3. PAINT: STEEL TO BE PREPARED IN ACCORDANCE WITH FORM 409/73 SECTION 1060 "PAINTING STRUCTURAL STEEL."

* PAID FOR UNDER THE ITEM "FABRICATED STRUCTURAL STEEL (MISC.)"

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

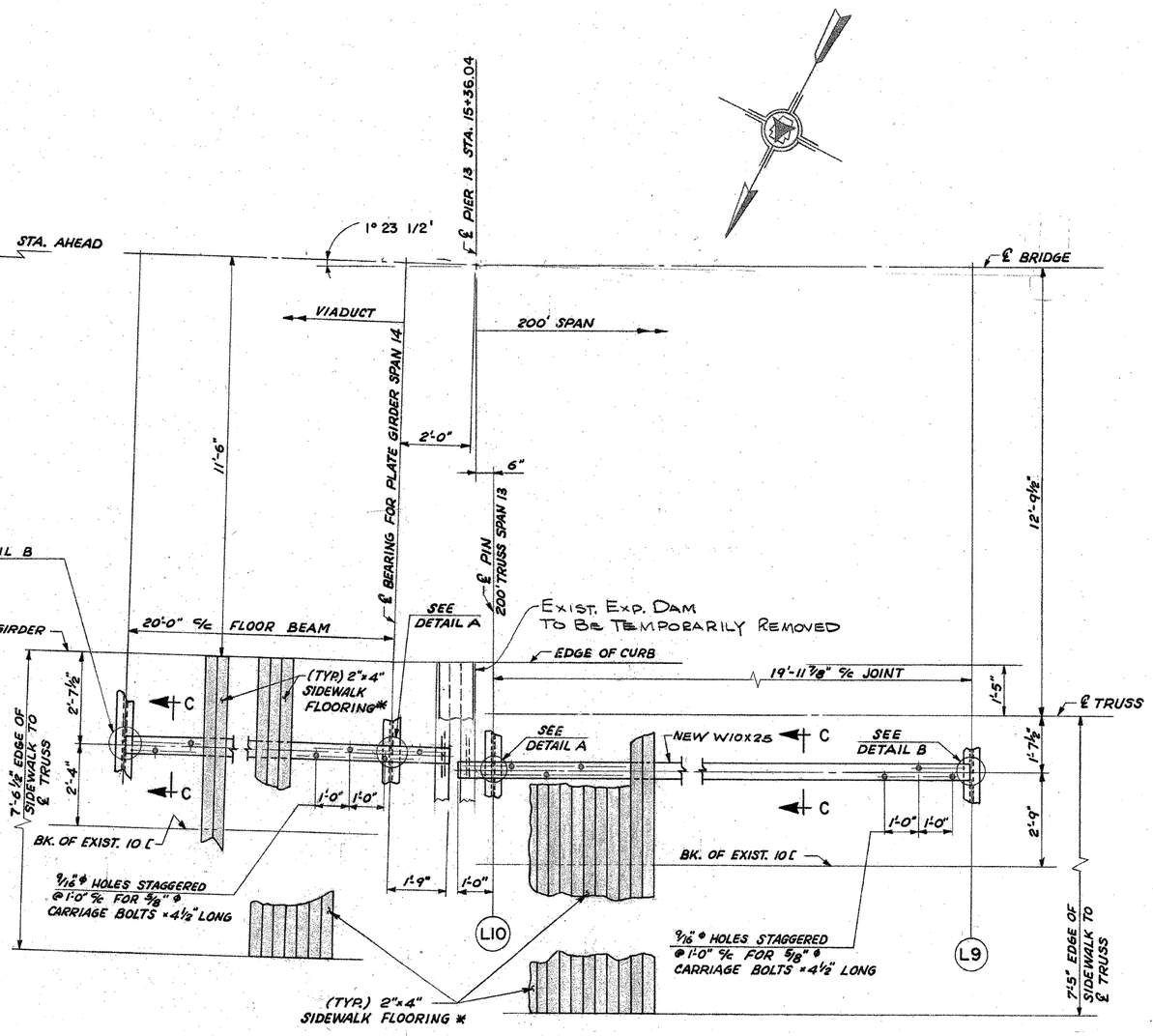
WASHINGTON–WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI MONESSEN BRIDGE REHABILITATION
S. W. BRACKET & GUSSET PL. REPLACEMENT

APPROVED DEC 16 1974
B.Z. Kotalik
BRIDGE ENGINEER

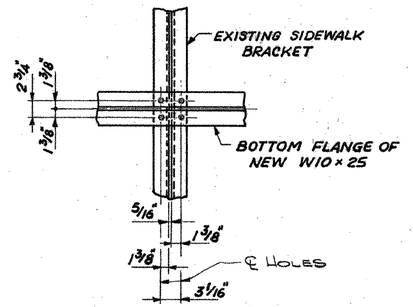
SHEET 10 OF 22
Scale: 1'2"=1'-0"
S-11438

Checked 1/25/74

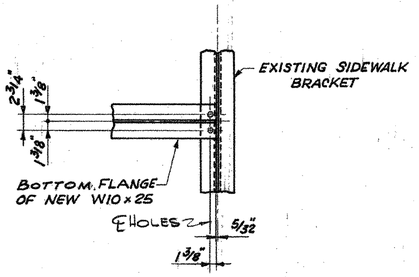
BARCLAY BROTHERS, INC. #4101-B



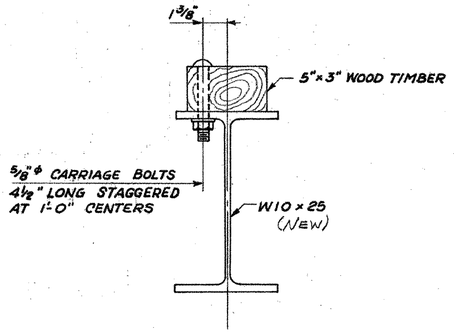
PLAN



DETAIL A (DETAIL OF BOTTOM FLANGE OF W10 x 25)
SCALE 1"=1'-0"



DETAIL B (DETAIL OF BOTTOM FLANGE OF W10 x 25)
SCALE 1"=1'-0"



SECTION C-C
SCALE 3"=1'-0"

MATERIAL LIST	
DESCRIPTION	REMARKS
1 - W10 x 25 x 20'-11¾"	200' TRUSS
1 - W10 x 25 x 21'-8⅜"	60' GIRDER SPAN
5/8" ϕ BOLTS x 4½"	
12 - ¾" ϕ H.S.B.	

REPLACEMENT OF SIDEWALK STRINGERS (SPANS 13 AND 14)
(ITEM #18)
SCALE ½"=1'-0"

* SIDEWALK TIMBER FLOORING SHALL BE CAREFULLY REMOVED AND STORED. THE FLOORING WILL BE REUSED, WITH ANY DAMAGED TIMBERS BEING REPLACED.

NOTES:
HOLES TO BE 13/16" ϕ FOR ¾" ϕ H.S.B UNLESS NOTED OTHERWISE.

5" x 3" WOOD TIMBERS & ⅝" ϕ CARRIAGE BOLTS INCIDENTAL TO REPLACEMENT OF SIDEWALK STRINGERS.

PAINT : STRINGERS TO BE PREPARED IN ACCORDANCE WITH FORM 409/73 SECTION 1060 "PAINTING STRUCTURAL STEEL."

ALL DIMENSIONS TO BE VERIFIED IN THE FIELD.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Checked Plot Replaced 3-19-73

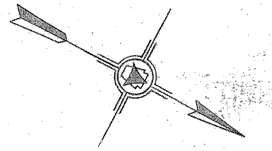
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

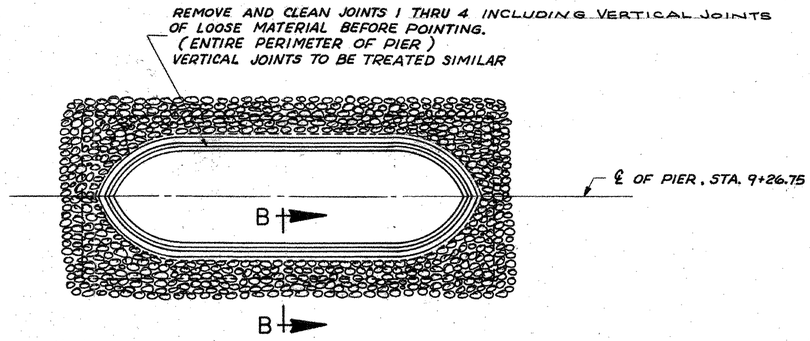
WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION
S.W. STRINGER REPLACEMENT SPANS #13 & #14

APPROVED DEC 16 1974
B Z Kotalik
BRIDGE ENGINEER

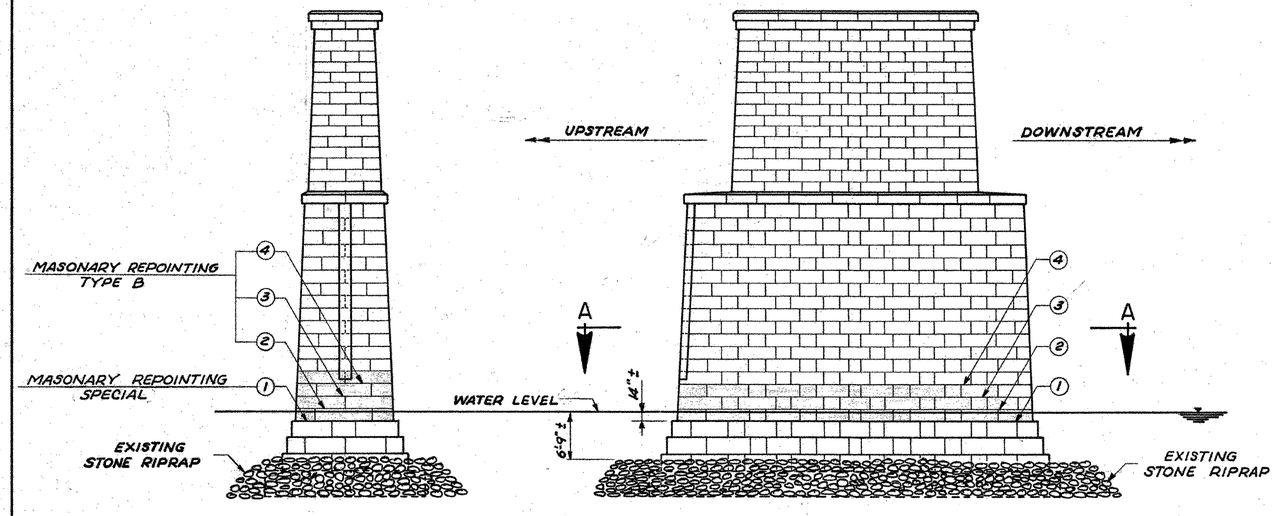
SHEET 11 OF 22
S-11438

BARCLAY BROTHERS, INC. #4101-B



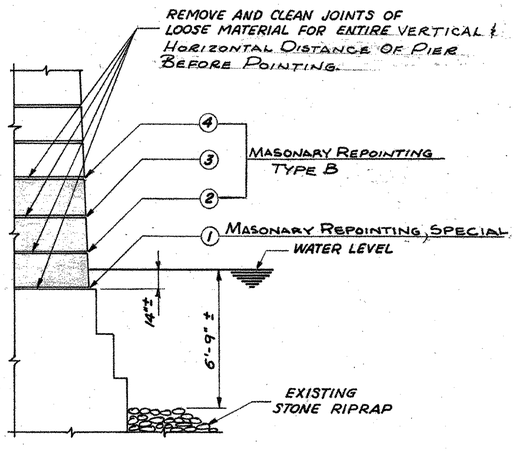


SECTION A-A
SCALE 3/32"=1'-0"



UPSTREAM ELEVATION
SCALE 3/32"=1'-0"

SIDE ELEVATION
SCALE 3/32"=1'-0"



SECTION B-B
SCALE 1/4"=1'-0"

SHADED AREA DENOTES REPOINTING BOTH VERTICAL & HORIZONTAL

TYPE B MASONRY REPOINTING AT PIER #11
(ITEM #15)

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI – MONESSEN BRIDGE REHABILITATION
POINTING AT PIER #11

APPROVED DEC 16 1974
B.J. Kotalik
BRIDGE ENGINEER

SHEET 12 OF 22

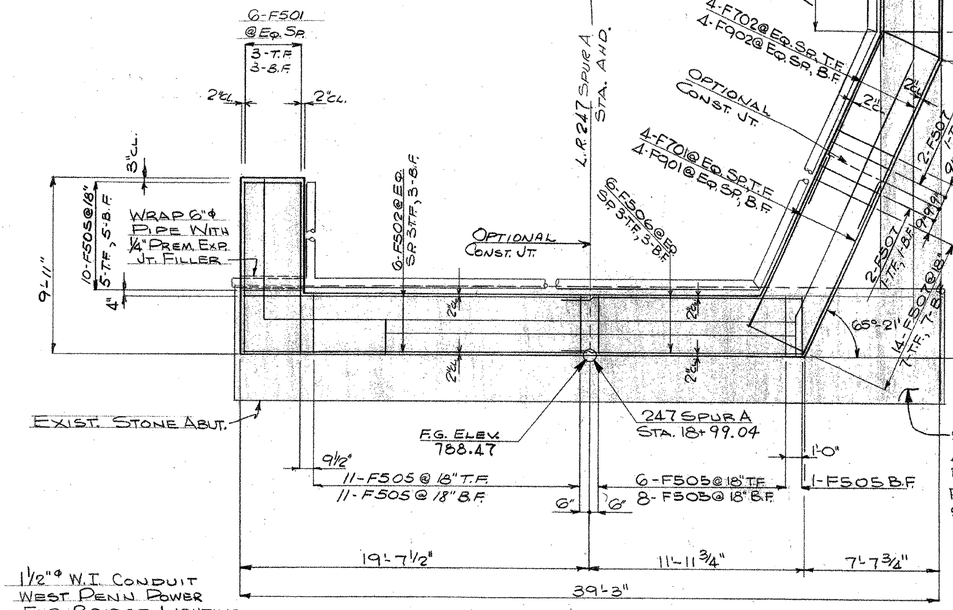
S- 11438

Checked 3-23-73 Yost Kaufman

BARCLAY BROTHERS, INC. #4101-B

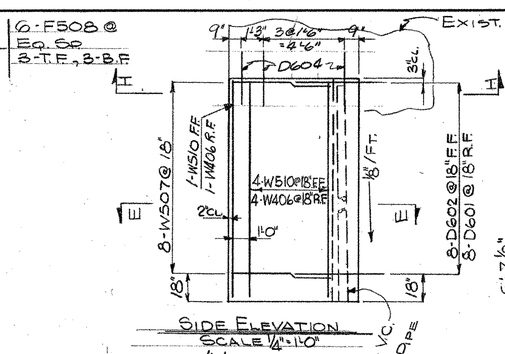
* CONCRETE SHALL BE PLACED UNDER THE ANGLES AND VIBRATED UNTIL THE CONCRETE IS FORCED THROUGH 7/8"ϕ HOLES. STRIKE OFF EXCESS CONCRETE. AFTER CONCRETE HAS CURED, INSPECT THE HOLES AND REMOVE UNSOUND CONCRETE. CLEAN THE HOLES WITH AN AIR JET AND FILL WITH AN APPROVED SEALER.

LEGEND
T.F. = TOP FACE
B.F. = BOTTOM FACE
E.F. = EACH FACE
R.F. = REAR FACE
F.F. = FRONT FACE
M.R. = MIDDLE ROW
Eq. SP. = EQUAL SPACING

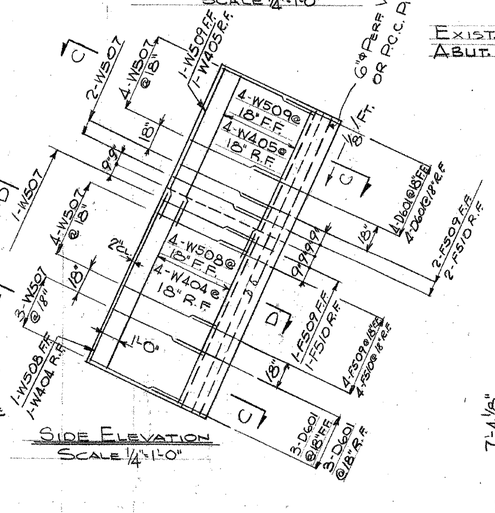


PLAN
SCALE ¼"=1'-0"

SHADED AREA DENOTES EXISTING STRUCTURE



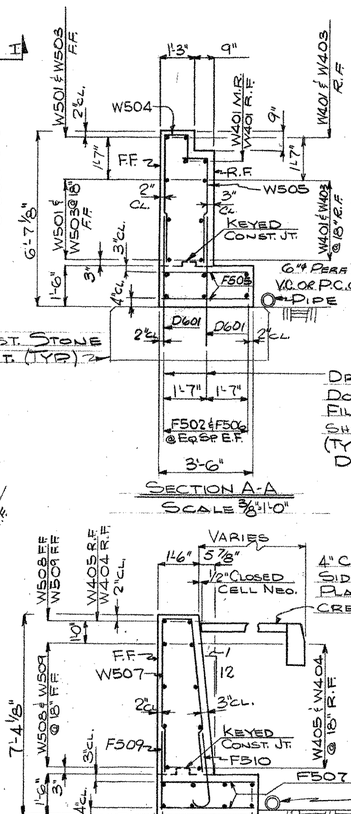
SIDE ELEVATION
SCALE ¼"=1'-0"



SIDE ELEVATION
SCALE ¼"=1'-0"

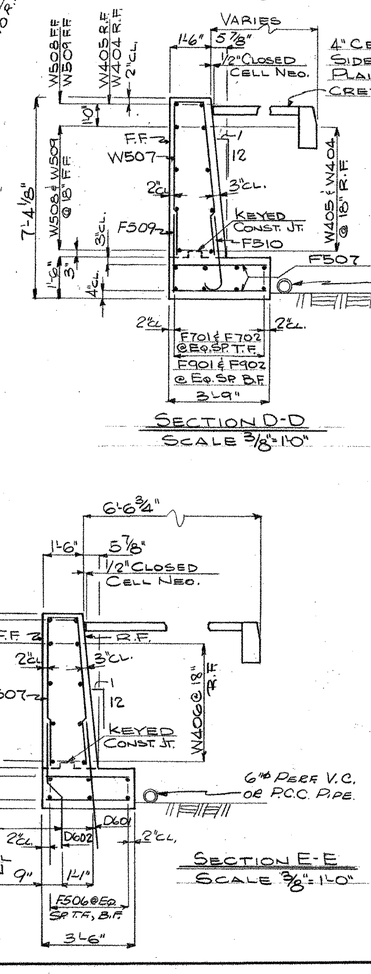
NOTE:
FOR BAR SCHEDULE SEE SHT. 14 OF 22

FOR SECTIONS G-G & H-H SEE SHT. 15 OF 22



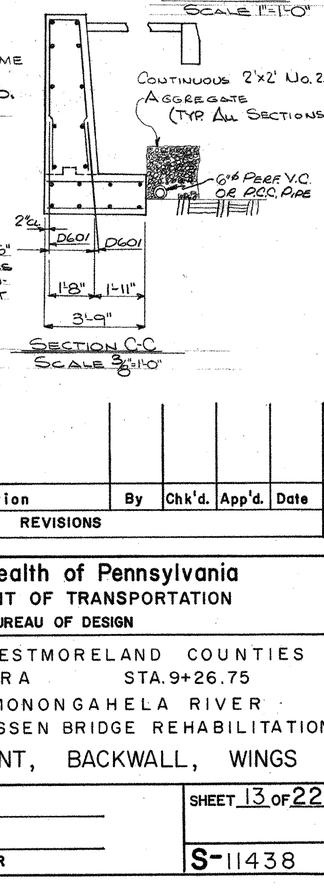
SECTION A-A
SCALE ⅜"=1'-0"

SECTION B-B
SCALE ⅜"=1'-0"

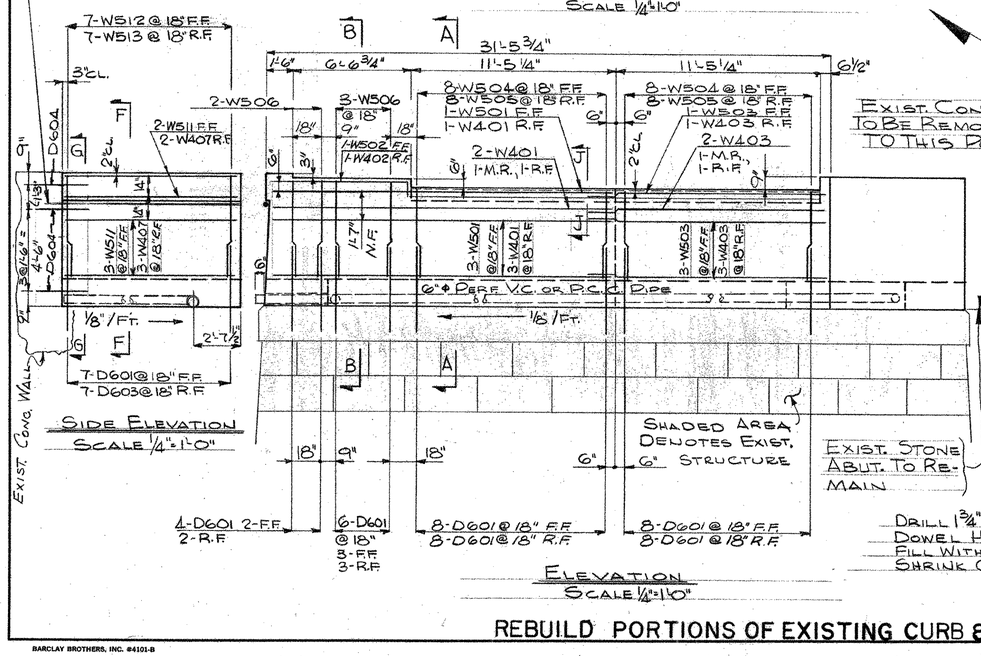


SECTION C-C THE SAME AS SECTION D-D EXCEPT AS NOTED.

SECTION D-D
SCALE ⅜"=1'-0"



SECTION C-C
SCALE ⅜"=1'-0"



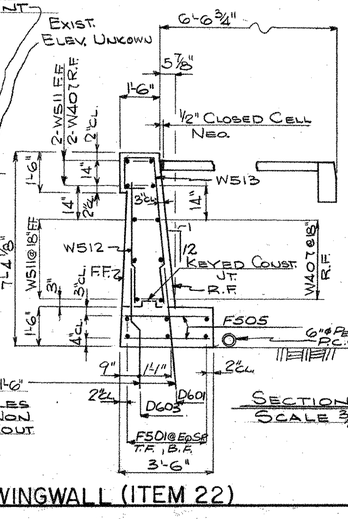
SIDE ELEVATION
SCALE ¼"=1'-0"

ELEVATION
SCALE ¼"=1'-0"

SHADED AREA DENOTES EXIST. STRUCTURE

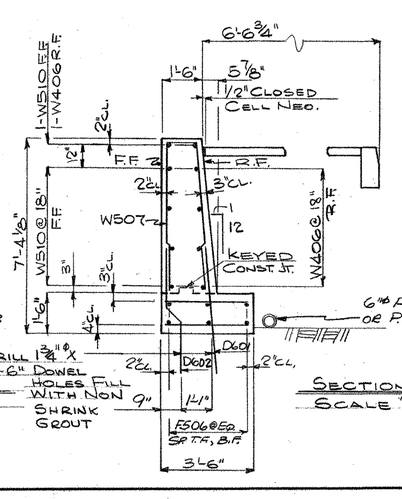
EXIST. CONC. TO BE REMOVED TO THIS POINT

EXIST. STONE ABUT. TO REMAIN



DRILL 1¾"ϕ x 1'-6" DOWEL HOLES FILL WITH NON SHRINK GROUT

SECTION F-F
SCALE ⅜"=1'-0"



SECTION E-E
SCALE ⅜"=1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI - MONESSEN BRIDGE REHABILITATION

EAST ABUTMENT, BACKWALL, WINGS

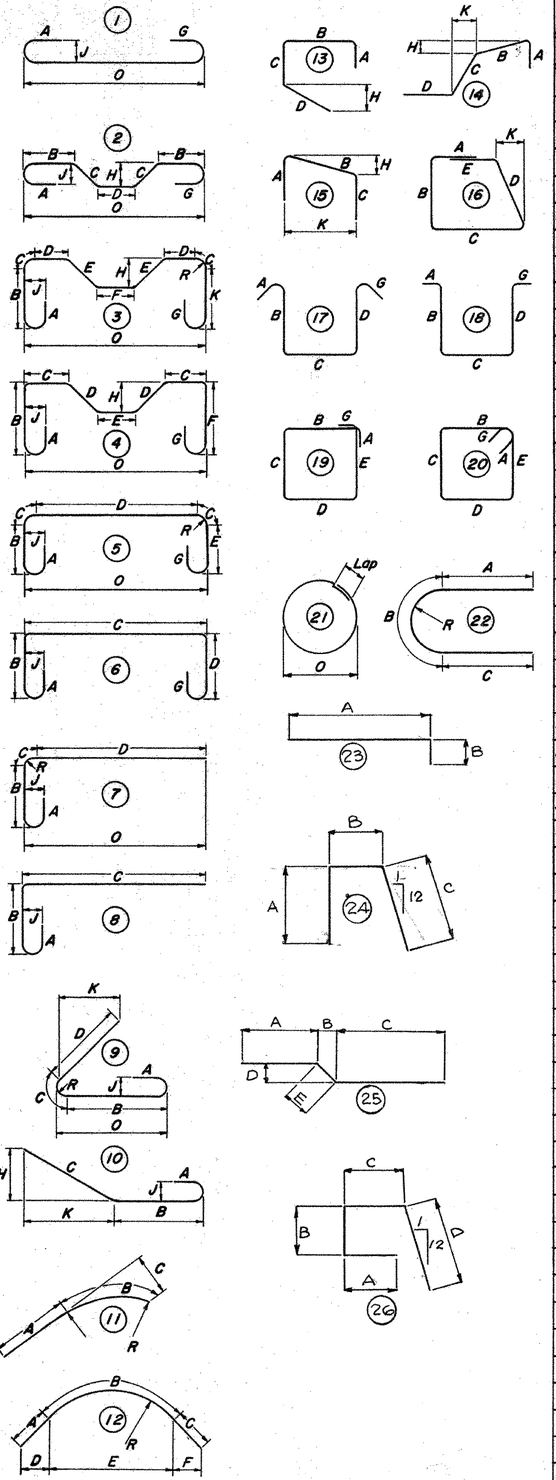
APPROVED DEC 16 1974
B.Z. Kotalik
BRIDGE ENGINEER

SHEET 13 OF 22

S-11438

REBUILD PORTIONS OF EXISTING CURB & WINGWALL (ITEM 22)

BARCLAY BROTHERS, INC. #4101-B



REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	K	R	O	REMARKS
F501	5	9'-6"	6	STR.												
F502	5	19'-5"	6	STR.												
F505	5	3'-2"	63	STR.												
F506	5	13'-0"	6	STR.												
F507	5	3'-5"	28	STR.												
F508	5	12'-0"	6	STR.												
F509	5	2'-9"	7	STR.												
F510	5	3'-3"	7	1	7"						0"				2'-8	
F701	7	10'-6"	4	STR.												
F702	7	10'-8"	4	STR.												
F901	7	10'-6"	4	STR												
F902	9	10'-3"	4	STR												
W501	5	19'-2"	4	STR.												
W502	5	8'-6"	1	23	7'-8"	0'-10"										
W503	5	13'-4"	4	STR.												
W504	5	6'-7"	16	13	4'-9"	0'-10"	1'-0"	0"				0"				
W505	5	5'-0"	16	13	0"	1'-0"	4'-0"	0"				0"				
W506	5	12'-3"	5	13	5'-4"	1'-7"	5'-4"	0"				0"				
W507	5	12'-3"	22	24	5'-4"	1'-7"	5'-4"									
W508	5	10'-5"	5	STR												
W509	5	9'-0"	5	STR.												
W510	5	12'-0"	5	STR.												
W511	5	9'-6"	5	STR.												
W512	5	4'-8"	7	STR.												
W513	5	8'-6"	7	26												
W401	4	19'-2"	6	STR												
W402	4	8'-6"	1	23	7'-8"	10"										
W403	4	13'-4"	6	STR.												
W404	4	10'-5"	5	STR.												
W405	4	9'-0"	5	STR.												
W406	4	12'-0"	5	STR.												
W407	4	9'-6"	5	STR.												

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	K	R	REMARKS
D601	6	4'-10 1/2"	71	STR.											DOWEL
D602	6	5'-2 7/8"	8	25	2'-5"	0'-7"	2'-0"	0'-7"	0'-9 7/8"						
D603	6	7'-2 1/2"	7	25	3'-0"	0'-6"	3'-3"	0'-6"	0'-8 1/2"						
D604	6	3'-0"	16	STR.											

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

NOTES

Figures in circles denote types.

Bar dimensions shown are out to out.

"R" Dimensions are measured to the inside of the bar.

For Reinforcement Bar Fabrication Details, refer to Standard Drawing BC-336.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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WASHINGTON – WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI – MONESSEN BRIDGE REHABILITATION

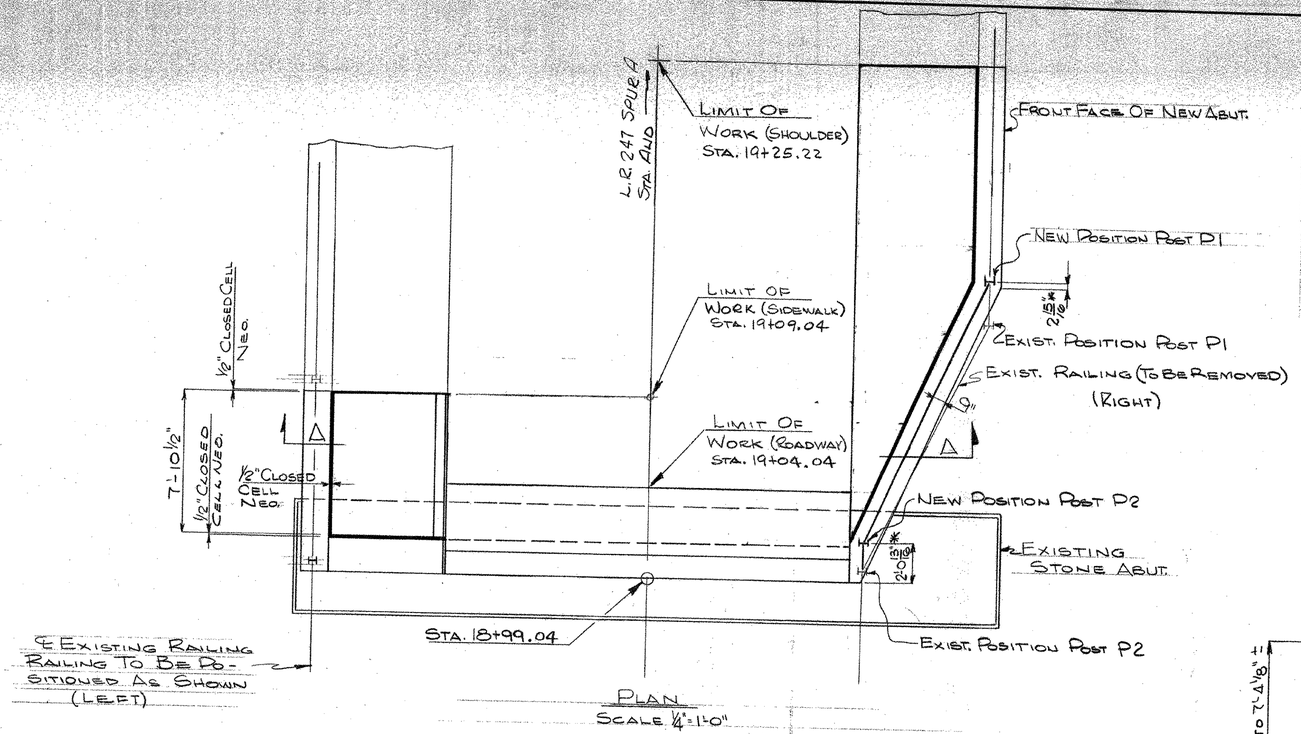
BAR SCHEDULE – EAST ABUTMENT

APPROVED DEC 16 1974
B.Z. Kotalik
BRIDGE ENGINEER

SHEET 14 OF 22

S-11438

BRUNING 44-560 15307



PLAN

SCALE ¼"=1'-0"

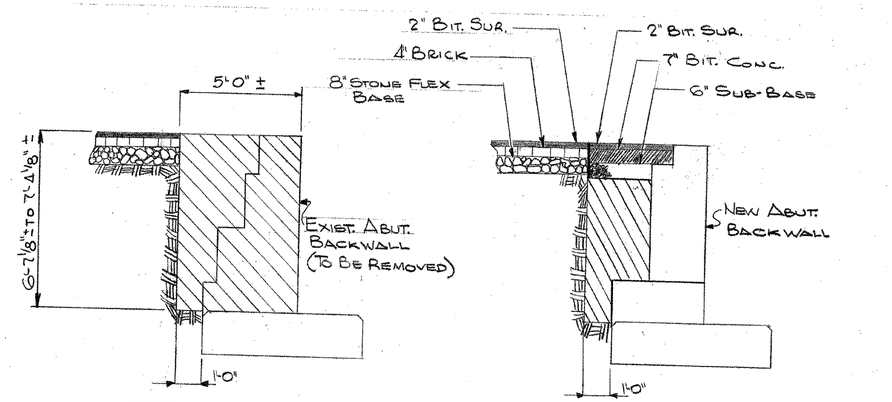
SEQUENCE OF OPERATIONS FOR RAILING MODIFICATIONS

1) PRIOR TO REMOVAL OF THE EAST ABUTMENT BACKWALL THE EXISTING STEEL RAILING AND P... REMOVED AS INDICATED ON THE DRAWINGS. THE LEFT SIDE WILL CONSIST OF TEM... DRILLING & PLACING ANCHOR BOLTS AND REINSTALLATION OF POSTS & RAILING. THE R... CONSIST OF TEMPORARY REMOVAL AND MODIFICATIONS TO THE RAILING PRIO... STALLATION.

2) THE MODIFICATIONS TO THE RIGHT SIDE WILL CONSIST OF REMOVAL OF THE RAILIN... SHOWN ON THE DRAWINGS. POSTS P1 & P2 WILL BE POSITIONED AS SHOWN. EXISTING ... THE BASE PLATE WILL BE MARKED AND DRILLED, ANCHOR BOLTS WILL BE PLACED AND HO... FILLED WITH NON-SHRINK GROUT. (NOTE: THE CONTRACTORS ATTENTION IS DIRECTED TO THE DI... MENSIONS FOR PLACEMENT OF POSTS P1 & P2 MARKED THUS *. THESE DIMENSIONS ARE TO BE VERIFIED IN THE FIELD AS DIRECTED AND DETERMINED BY THE ENGINEER.) AFTER ERECTION OF POST P1 & P2 THE EXISTING RAILING WILL BE GIVEN A TRIAL FITTING FOR PROPER LENGTH. IF ANY ADDITIONAL MATERIAL THE ENGINEER WILL DETERMINE THE AMOUNT NEEDED.

REBUILD PORTIONS OF EXISTING CURB ROADWAY & SIDEWALK STA. 18+99.04	SUB-BASE	7" BIT. CONC.	2" BIT. CONC.	CLASS B CEMENT CONCRETE (SIDEWALK)	PLAIN CEMENT CONCRETE (CURB)
TOTAL ●	22 SQ. YDS.	21 SQ. YDS.	24 SQ. YDS.	6 SQ. YDS.	7'-10½" L.F.

● THESE QUANTITIES ARE APPROXIMATE AND ARE FOR BIDDING INFORMATION ONLY

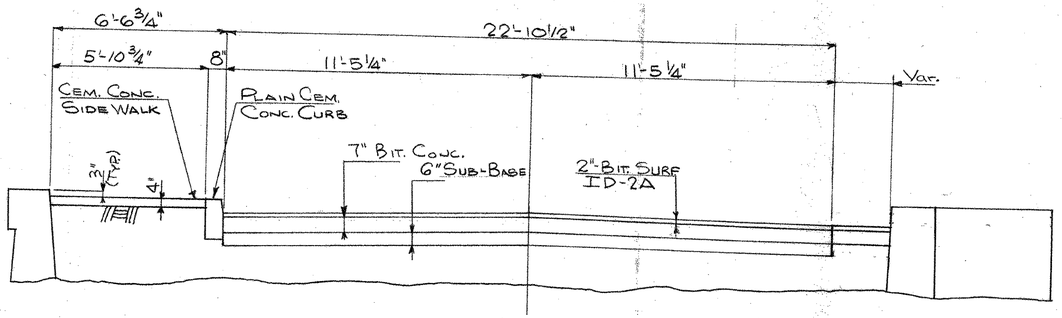


CLASS III EXCAVATION (SPECIAL)

NO SCALE

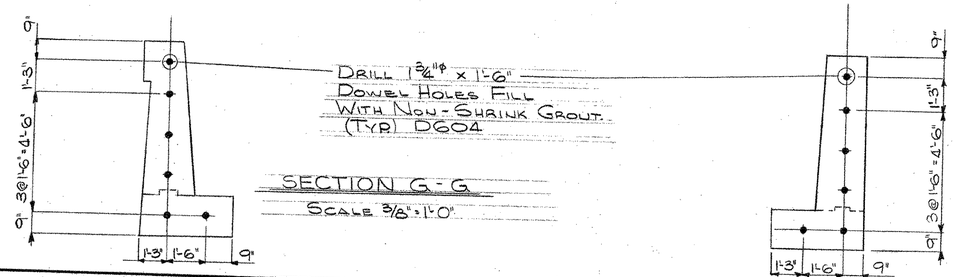
SELECT BORROW EXCAVATION STRUCTURE BACKFILL

NO SCALE



SECTION A-A

SCALE ⅜"=1'-0"



SECTION G-G

SCALE ⅜"=1'-0"

SECTION H-H

SCALE ⅜"=1'-0"

NOTES:

FOR ADDED DETAILS ON CURB SEE PENN D.O.T. STD. DWG. R.C. 64

SEE SHT. 13 OF 22 FOR ABUT. DETAILS AND LOCATIONS OF SECTIONS G-G & H-H

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON-WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI — MONESSEN BRIDGE REHABILITATION

APPROACH REPAIR (EAST ABUT.)

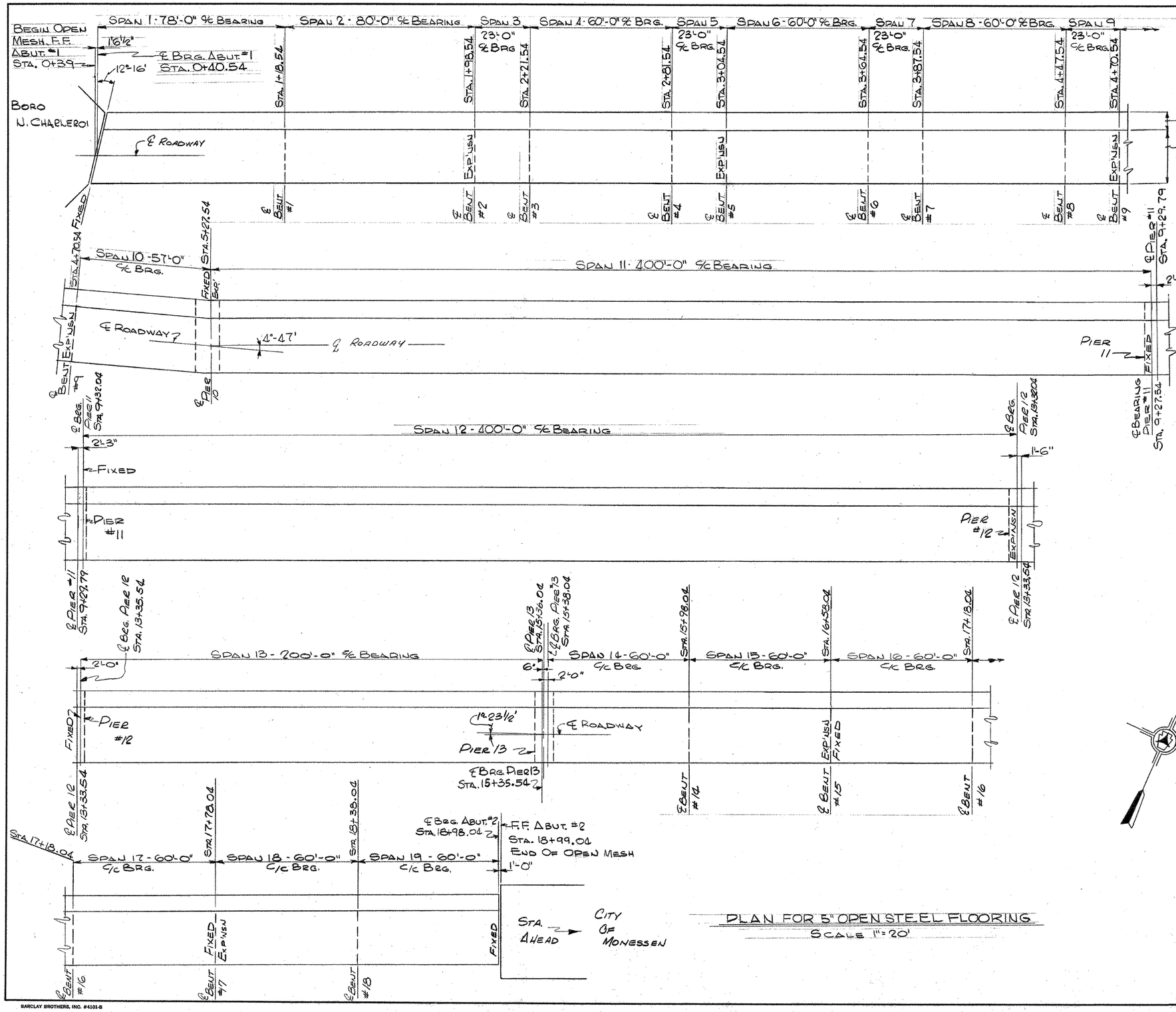
APPROVED DEC 16 1974
B.Z. Kotalik

SHEET 15 OF 22

BARCLAY BROTHERS, INC. #4101-B

NOTES:
5" OPEN STEEL FLOORING (TYPE PL) WILL BE PLACED FROM STA. 0+39 THRU STA. 18+99.04.

SEE SHT. 17 & 18 OF 22 FOR TYP DETAILS & DECK SECTIONS



PLAN FOR 5" OPEN STEEL FLOORING
SCALE 1" = 20'

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON—WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI—MONESSEN BRIDGE REHABILITATION

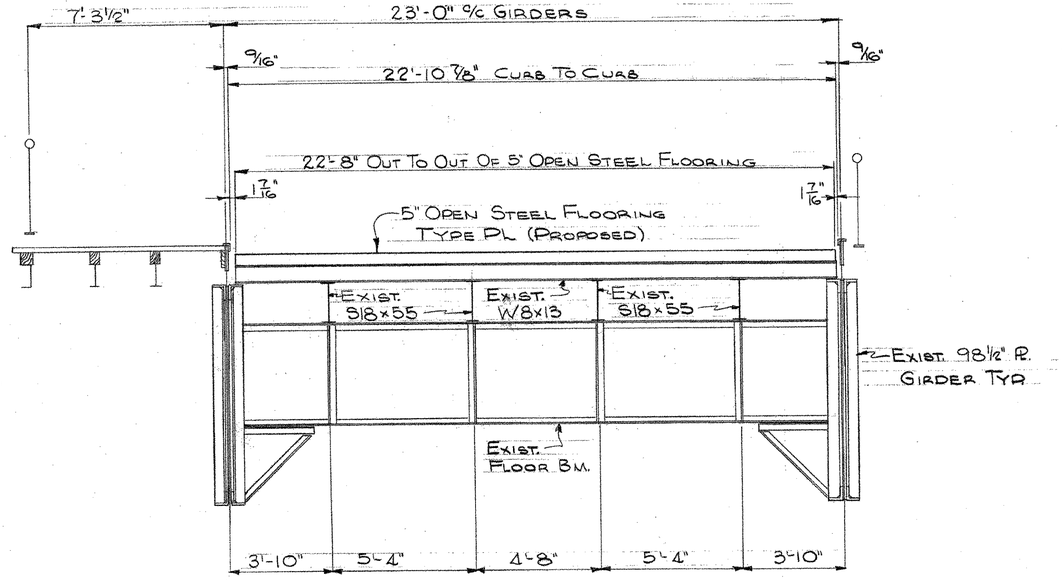
FLOORING PLAN

APPROVED DEC 16 1974
B Z Kotalik
BRIDGE ENGINEER

SHEET 16 OF 22

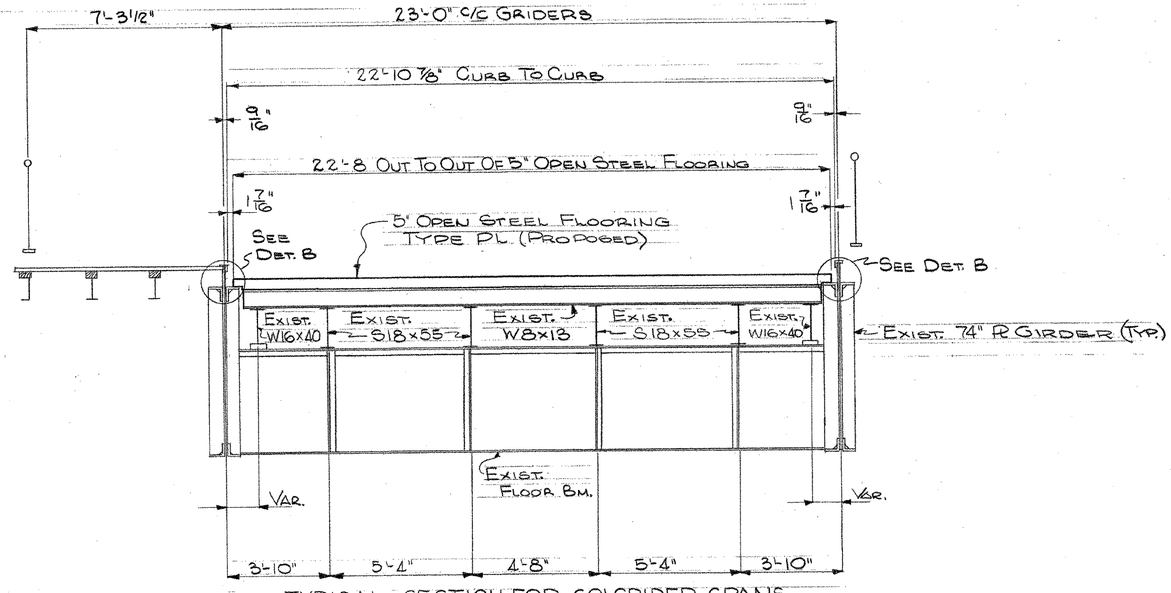
S-11438

BARCLAY BROTHERS, INC. #4101-B



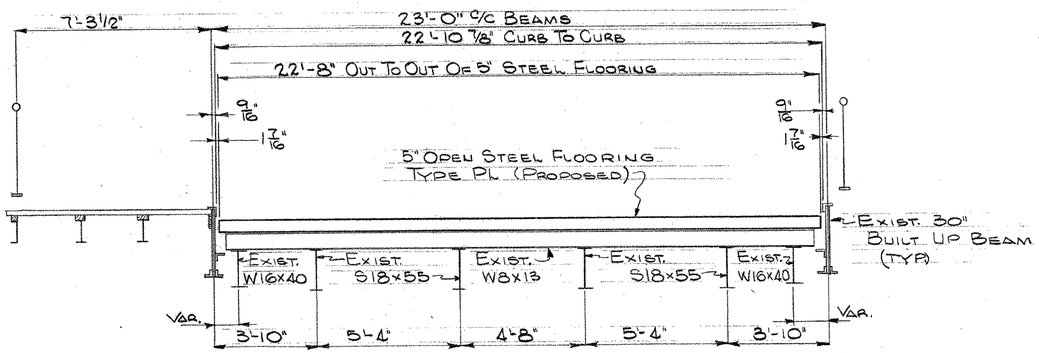
TYPICAL SECTION FOR 78' & 80' GIRDER

SCALE 3/8" = 1'-0"



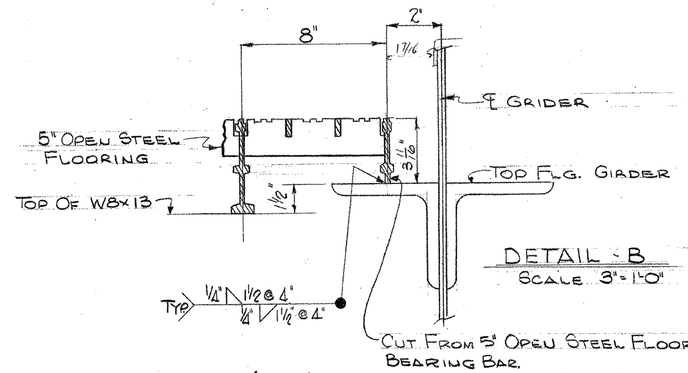
TYPICAL SECTION FOR 60' GRIDER SPANS

SCALE 3/8" = 1'-0"



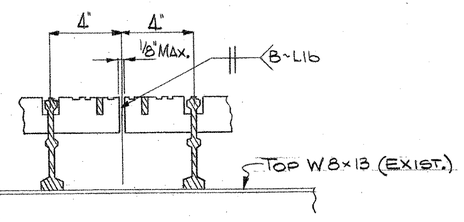
TYPICAL SECTION FOR 23' SPANS

SCALE 3/8" = 1'-0"



DETAIL - B

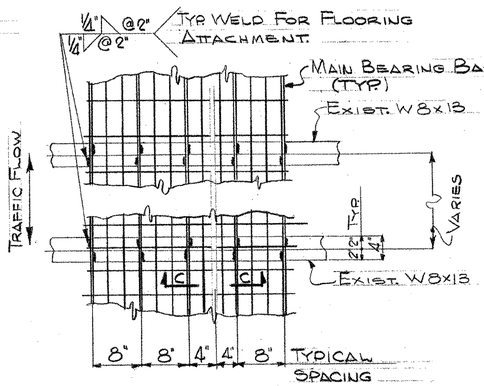
SCALE 3" = 1'-0"



SECTION C-C

TYPICAL SPLICE FOR ALL PANEL JOINTS

SCALE 3"=1'-0"



TYPICAL PLAN VIEW OF METHOD OF ATTACHMENT FOR STEEL FLOORING (NO SCALE)

NOTES:

5" Open Steel Flooring Will Be Type PL As Per Specification Of Form 408/73 Section 1011.3 (c).

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI MONESSEN BRIDGE REHABILITATION
TYPICAL DECK SECTIONS & DETAILS

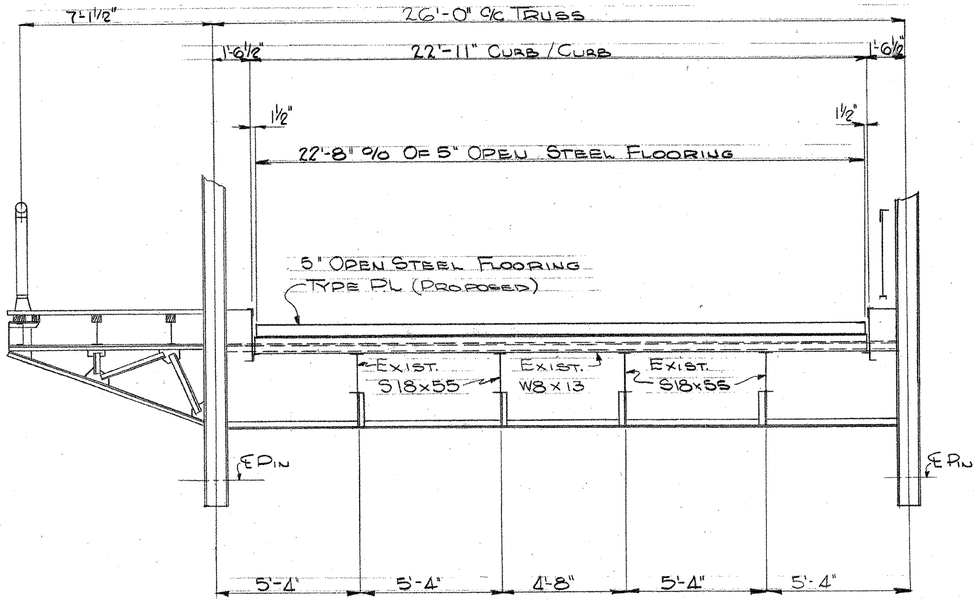
APPROVED DEC 16 1974
B.Z. Katalil
BRIDGE ENGINEER

SHEET 17 OF 22

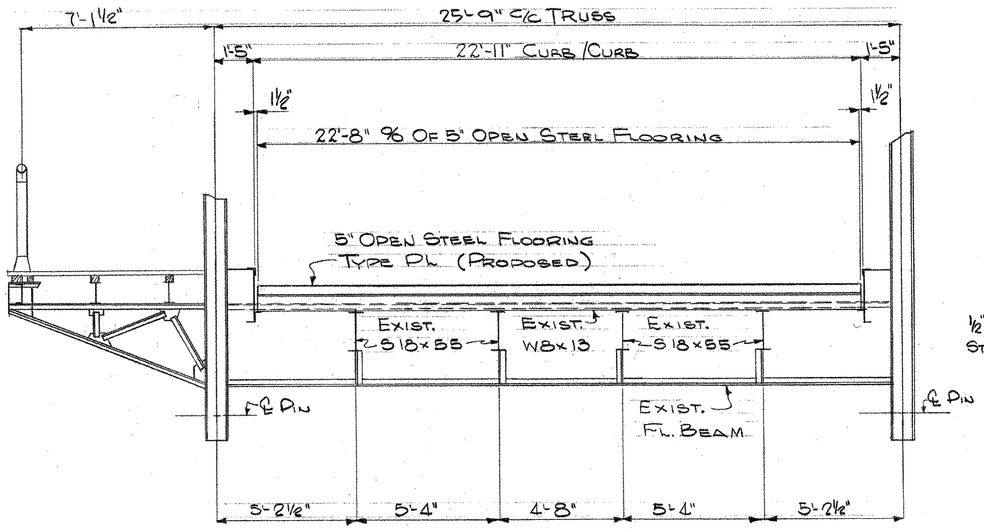
S- 11438

4/20/74

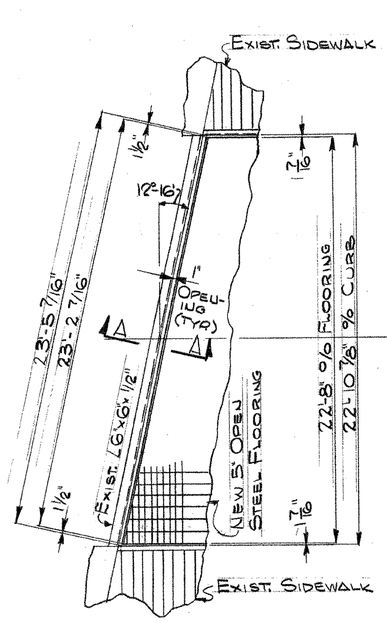
BARCLAY BROTHERS, INC. #4101-B



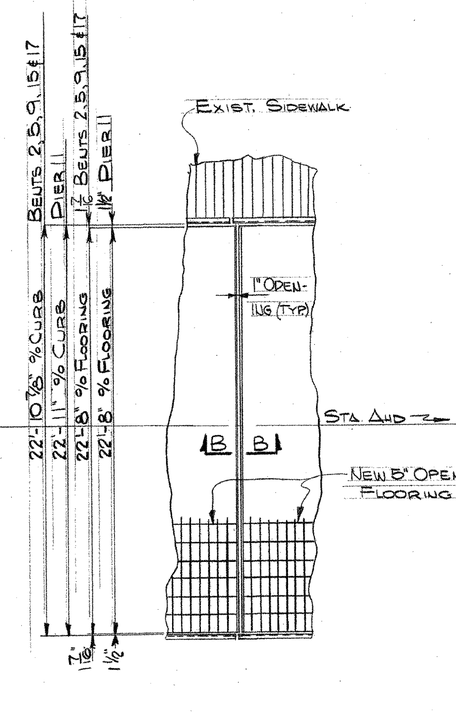
TYPICAL SECTION FOR 400' TRUSSES
SCALE 3/8" = 1'-0"



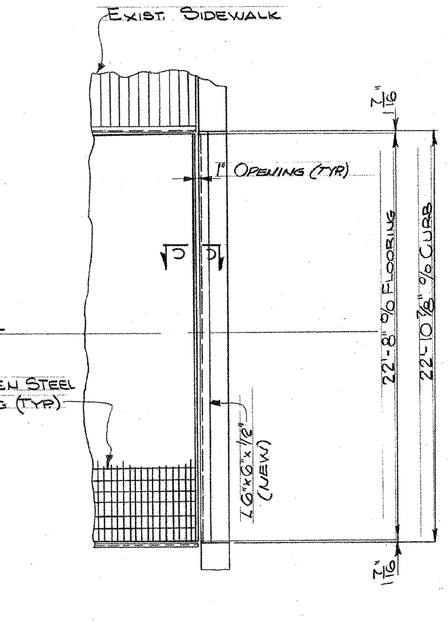
TYPICAL SECTION FOR 200' TRUSS
SCALE 3/8" = 1'-0"



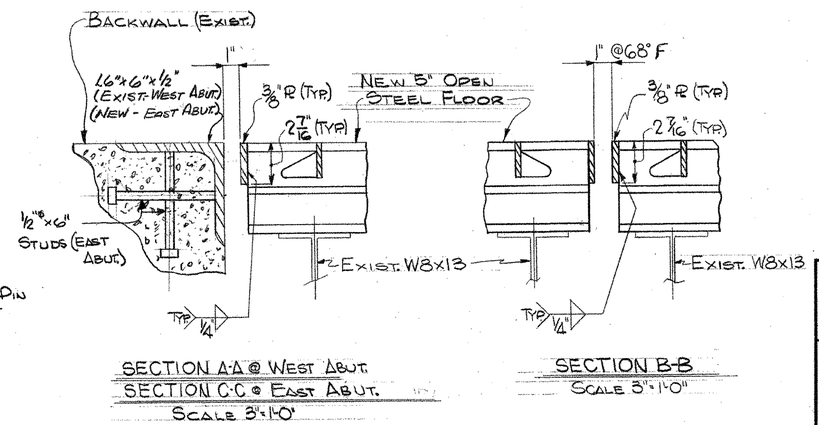
PLAN
@ WEST ABUT.
SCALE 1/4" = 1'-0"



PLAN
@ BENTS 2,5,9,15, & 17
& PIER 11
SCALE 1/4" = 1'-0"



PLAN
@ EAST ABUT.
SCALE 1/4" = 1'-0"



SECTION A-A @ West Abut.
SECTION C-C @ East Abut.
SCALE 3" = 1'-0"

SECTION B-B
SCALE 3" = 1'-0"

NOTES:
FOR DETAILS OF FLOORING ATTACHMENT AND TYPICAL PANEL SPLICE SEE SHT. 17 OF 22.

5" OPEN STEEL FLOORING WILL BE TYPE PL AS PER SPECIFICATION FORM 408/73 SECTION 1011.3(c)

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

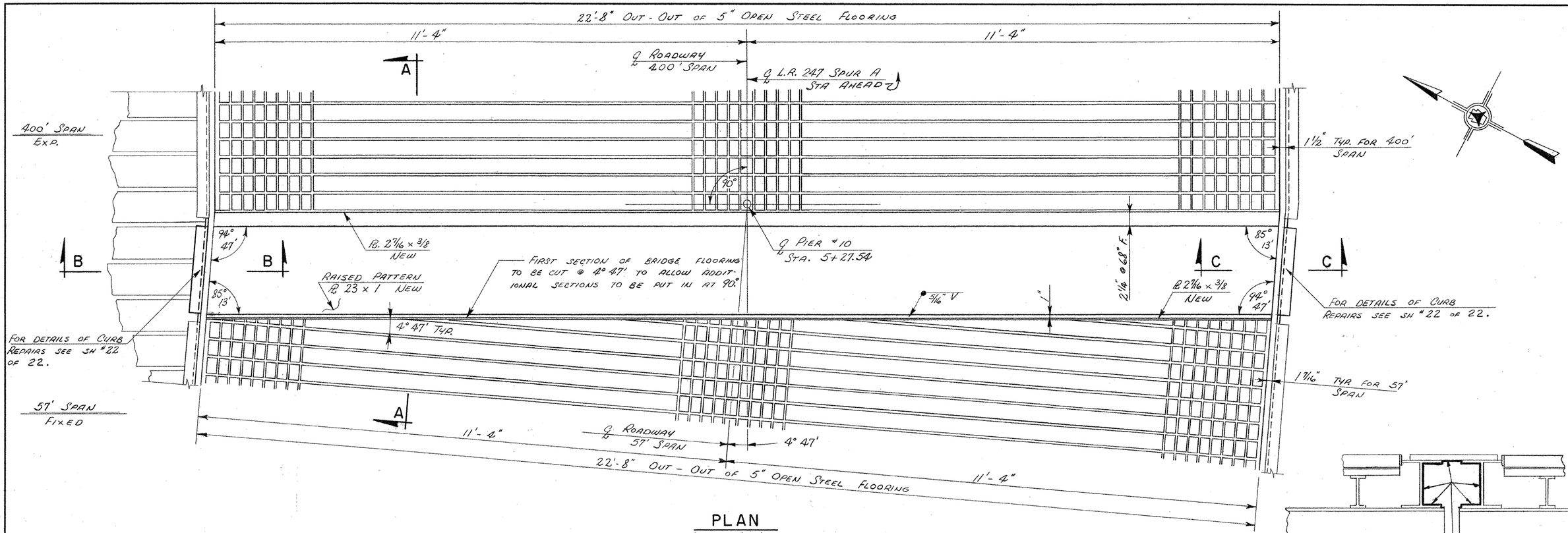
WASHINGTON WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI MONESSEN BRIDGE REHABILITATION
TYPICAL DECK SECTIONS & EXPANSION DETAIL

APPROVED DEC 16 1974
B.E. Kistler
BRIDGE ENGINEER

SHEET 18 OF 22
S-11438

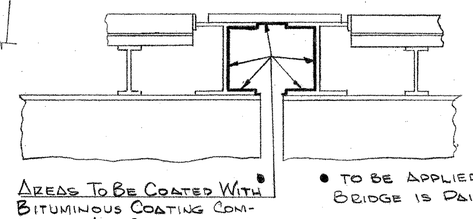
4/22/74

BARCLAY BROTHERS, INC. #4101-B



PLAN

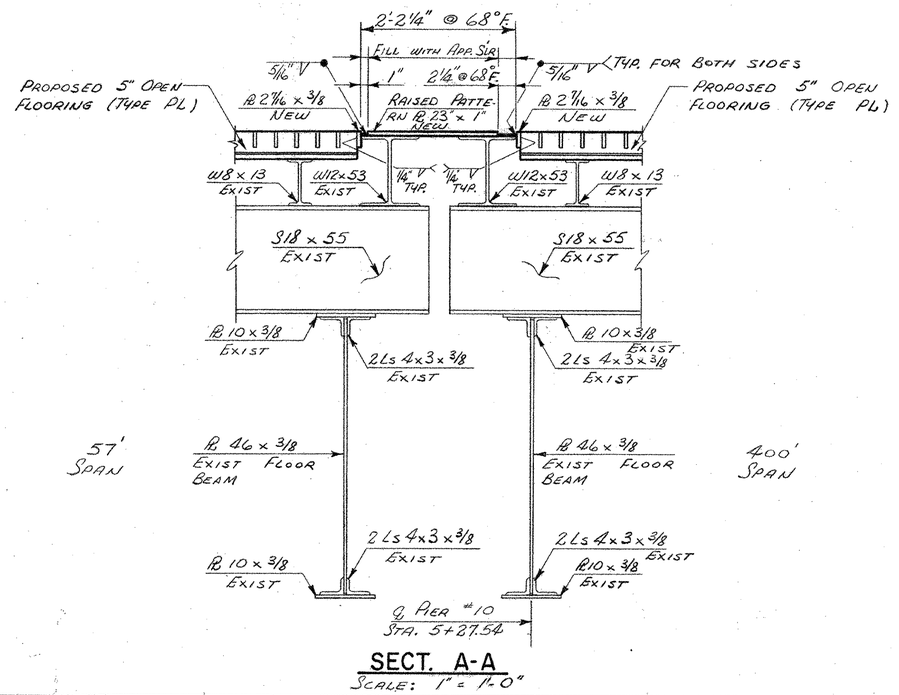
Scale: 1" = 1'-0"



Areas To Be Coated With Bituminous Coating Compound As Specified In Form 409/73 Sec. 1063.04(b)

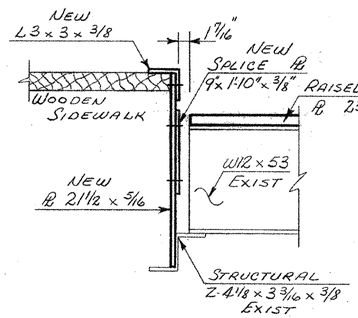
• To be Applied When Bridge is Painted.

COATING DETAIL
No Scale



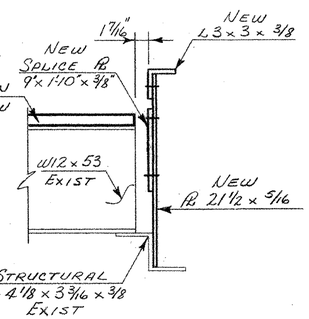
SECT. A-A

Scale: 1" = 1'-0"



SECT. B-B

Scale: 1½" = 1'-0"



SECT. C-C

Scale: 1½" = 1'-0"

Mark	Description	By	Chk'd.	App'd.	Date

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON—WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI — MONESSEN BRIDGE REHABILITATION

EXPANSION DAM PIER # 10

APPROVED DEC 16 1974
B.Z. Katalil
BRIDGE ENGINEER

SHEET 19 OF 22

S-11438

5/12/74

BARCLAY BROTHERS, INC. #4101-B

22'-8" Out To Out Of 5" Open Steel Flooring

11'-4" | 11'-4"

1½" | 200' Span Fixed | 1½"

L.R. 247 Spur A Sta. AHD

For details of Curb Repairs see Sh " 22 of 22

New Raised Pattern R 22"x1"

90° (Typ)

Note: Flooring To Be Put In @ 90° To Expansion Plate.

℄ Pier 12 Sta. 13+33.54

R 2 7/16" x 3/8"

2½" @ 68°F

For details of Curb Repairs see Sh " 22 of 22

400' Span Exp.

PLAN
Scale - None

▲ Rasied Pattern R 22"x1"

2'-1¼" @ 68°F

2¼" @ 68°F

Fill With App'r. Sealer

1"

5/16"

Typ Weld For 3/8" R To Exist. Bm. Flg.

Proposed 5" Open Steel Flooring (Typ Both Sides)

R 2 7/16" x 3/8"

W12x53 (Exist.)

W8x13 (Exist.)

S18x55 (Exist.)

Typ

¼"

Cut 1½"

R 10" x 7/16"

2 L 4" x 3" x 3/8"

℄ Pier 12 Sta. 13+33.54

R 46 13/16" x 3/8"

(Exist. Fl. Bm.)

1'-6" | 2'-0"

R 43 1/16" x 5/16"

(Exist. Fl. Bm.)

200'-Span 13

2 L 4" x 3" x 3/8"

R 10" x 7/16"

SECTION A-A
Scale 1"=1'-0"

℄ Brg. Sta. 13+32.04

℄ Beg. Sta. 13+35.54

*Stringers To Be Cut To Dimensions Show. Grind All Edges After Cutting.

400' Span 12

1½"

New Raised Pattern R 22"x1"

New L 3"x3"x 3/8"

Wood Sidewalk

New R 21½"x 5/16"

W12x53 (Exist.)

New Splice R 9"x1'-10"x3/8"

Structural Z 4 1/8" x 3 3/16" x 3/8" (Exist)

SECTION B-B
Scale 1½"=1'-0"

New L 3"x3"x 3/8"

New R 21½"x 5/16"

New Splice R 9"x1'-10"x3/8"

Structural Z 4 1/8" x 3 3/16" x 3/8" (Exist)

SECTION C-C
Scale 1½"=1'-0"

Areas To Be Coated With Bituminous Coating Compound As Specified Form 409/73 Sec. 1063.04(b)

● To Be Applied When Bridge Is Painted.

COATING DETAIL
No Scale

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON—WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI—MONESSEN BRIDGE REHABILITATION

EXPANSION DAM PIER # 12

APPROVED DEC 16 1974
B Z Kotalik
BRIDGE ENGINEER

SHEET 20 OF 22

S-11438

MPF 5/2/74

BARCLAY BROTHERS, INC. #4101-B

60' GIRDER SPAN (FIXED)

22'-8" OUT TO OUT OF 5" OPEN STEEL FLOORING

11'-4" | 11'-4"

1 7/16 TYP FOR 60' GIRDER SPAN

L.R. 247 SPUR A STA AHD

FOR DETAILS OF CURB REPAIR SEE SHT. 22 OF 22

NEW RAISED PATTERN R 28"x 1"

PL 2 7/16" x 3/8"

91° 23½'

FIRST SECTION OF BRIDGE FLOORING TO BE CUT AT 1°23½' TO ALLOW ADDITIONAL SECTIONS TO BE PUT IN AT 90°

℄ PIER 13 STA. 15+36.01

90°

1°-23½' (TYP.)

PL 2 7/16" x 3/8"

FOR DETAIL OF CURB REPAIR SEE SHT. 22 OF 22

B B

C C

200' TRUSS SPAN EXP

℄ ROADWAY 60' GIRDER SPAN

1°-23½'

℄ ROADWAY 200' TRUSS SPAN

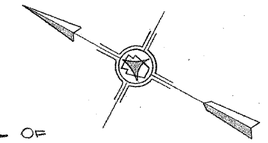
11'-4" | 11'-4"

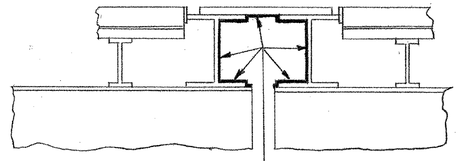
1½' TYP. FOR 200' TRUSS SPAN

22'-8" OUT TO OUT OF 5" OPEN STEEL FLOORING

PLAN

SCALE 1"=1'-0"





AREAS TO BE COATED WITH BITUMINOUS COATING COMPOUND AS SPECIFIED IN FORM 409/73 SEC. 1063.04 (b)

• TO BE APPLIED WHEN BRIDGE IS PAINTED.

COATING DETAIL

NO SCALE

✱ RAISED PATTERN R 28"x 1"

2'-7 5/8" @ 68°F

FILL WITH APPR SEALER

2'@68°F

TYP WELD FOR 3/8" PL TO EXIST. BM. FLG.

5/16

1 3/8"

5/16

PROPOSED 5" OPEN FLOORING (TYPE DL) (TYP BOTH SIDES)

PL 2 7/16" x 3/8"

PL 2 7/16" x 3/8"

W12x53 (EXIST.)

W8x13 (EXIST.)

W8x13 (EXIST.)

S18x55 (EXIST.)

1/4" TYP.

1/4" TYP.

S18x55 (EXIST.)

PL 10" x 7/16"

2 ℒ 4" x 3" x 3/8"

PL 10" x 3/8"

2 - ℒ 4" x 3" x 3/8"

FL. BM. (EXIST.)

200' SPAN

PL 38¾" x 5/16"

FL. BM. (EXIST.)

60' SPAN

PL 46" x 3/8"

2 ℒ 4" x 3" x 3/8"

PL 10" x 7/16"

2 ℒ 4" x 3" x 3/8"

PL 10" x 3/8"

6" | 2'-0"

℄ BRG. STA. 15+35.54

℄ PIER #13 STA. 15+36.01

℄ BRG STA. 15+38.01

SECTION A-A

SCALE 1"=1'-0"

NEW SPLICE PL 9"x 1'-10" x 3/8"

NEW L 3"x 3"x 3/8"

NEW RAISED PATTERN PL 28"x 1"

WOOD SIDEWALKS

NEW PL 21½" x 5/16"

W12x53 (EXIST.)

STRUCTURAL L 4⅛" x 3 3/16" x 3/8" (EXIST.)

SECTION B-B

SCALE 1½"=1'-0"

1 7/16"

L 3"x 3"x 3/8" NEW

NEW SPLICE PL 9"x 1'-10" x 3/8"

PL 21½" x 5/16" NEW

STRUCTURAL L 4⅛" x 3 3/16" x 3/8" (EXIST.)

SECTION C-C

SCALE 1½"=1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

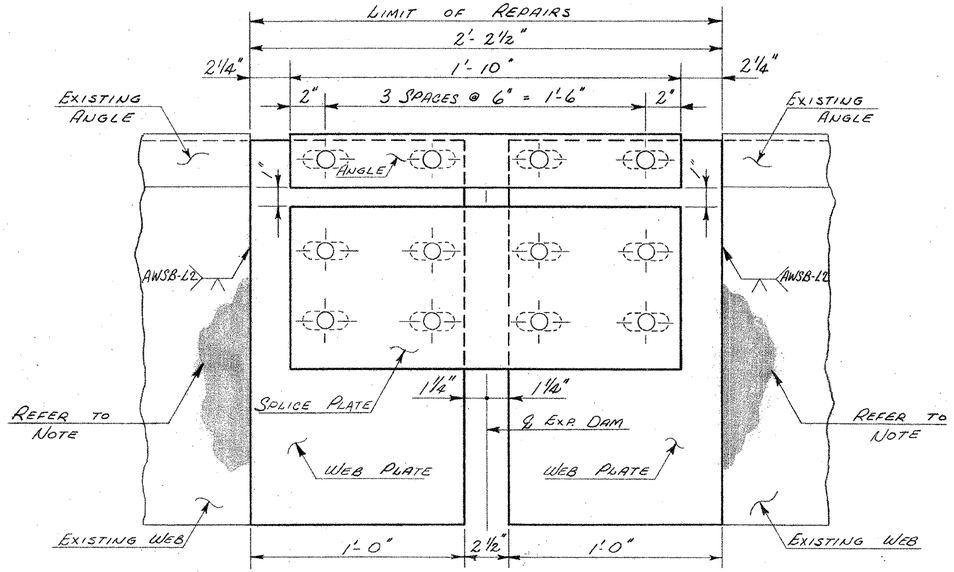
WASHINGTON—WESTMORELAND COUNTIES
L.R. 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI—MONESSEN BRIDGE REHABILITATION
EXPANSION DAM PIER # 13

APPROVED DEC 16 1974
B J Kotalik
BRIDGE ENGINEER

SHEET 21 OF 22

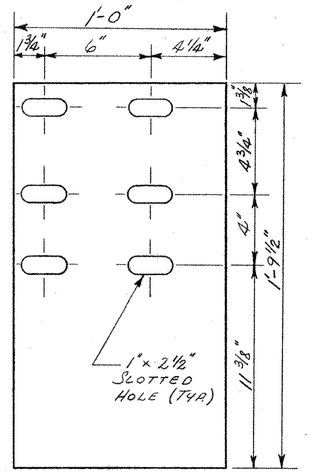
S-11438

BARCLAY BROTHERS, INC. #4101-8



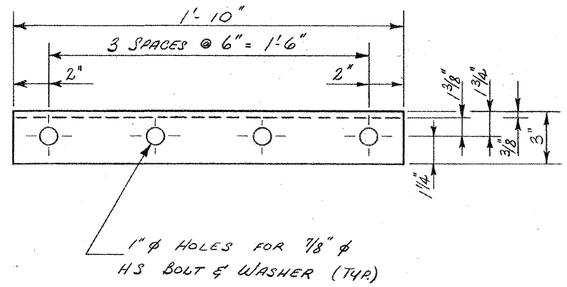
EXPANSION DAM CURB AT PIERS 10, 12, 13

SCALE: 3" = 1'-0"



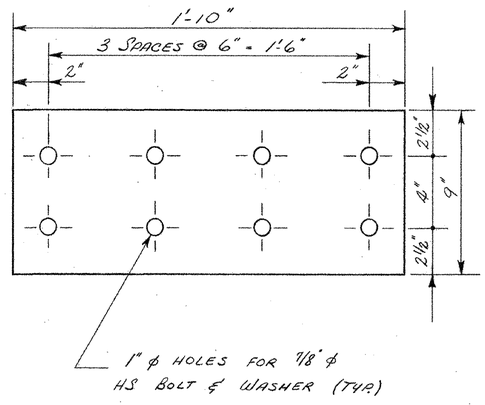
WEB PLATE DETAILS

SCALE: 3" = 1'-0"



ANGLE DETAILS

SCALE: 3" = 1'-0"



SPLICE PLATE DETAILS

SCALE: 3" = 1'-0"

QUANTITIES		
WEB PLATE	12	1'-9½" x 1'-0" x 5/16"
SPLICE PLATE	6	9" x 1'-0" x ⅜"
ANGLE	6	3" x 3" x ⅜"

NOTE:

IF PORTIONS OF THE EXISTING CURB WEB PLATES ARE DETERIORATED THEY SHALL BE THOROUGHLY CLEANED & PAINTED AS SPECIFIED IN THE SPECIAL PROVISIONS UNDER ITEM 1075-0001 "PAINTING OF EXISTING BRIDGE."

PAYMENT OF THESE MATERIALS AND WORK IS INCLUDED IN THE ITEM FOR "REPAIR EXPANSION DAMS" AT EACH LOCATION.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON—WESTMORELAND COUNTIES
L R 247 SPUR A STA. 9+26.75
OVER THE MONONGAHELA RIVER
CHARLEROI—MONESSEN BRIDGE REHABILITATION
EXPANSION DAM CURB REPAIRS
AT PIERS 10, 12, 13

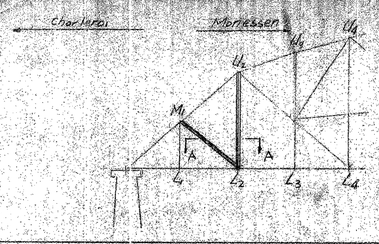
APPROVED DEC 16 1974
B Z Kotalik
BRIDGE ENGINEER

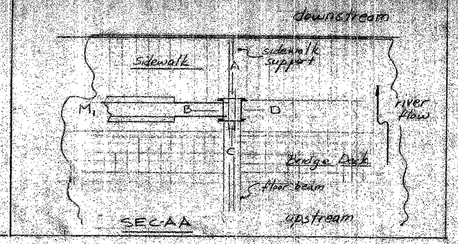
SHEET 22 OF 22

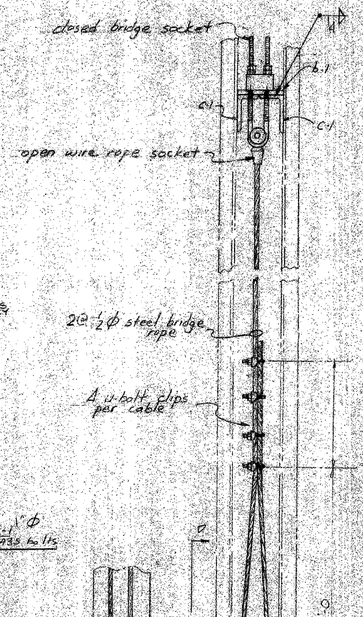
S-11438

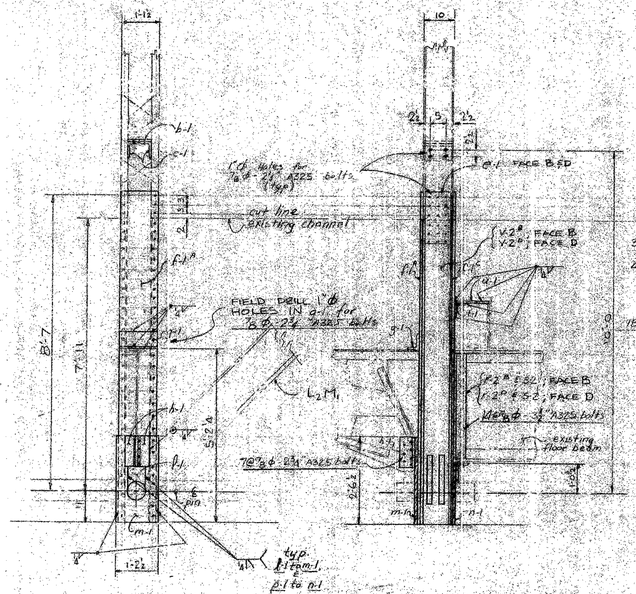
6/11/74

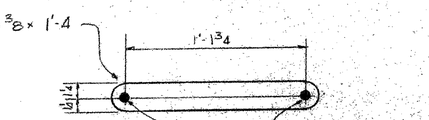
BARCLAY BROTHERS, INC. #4101-B



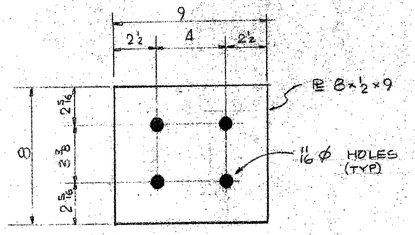




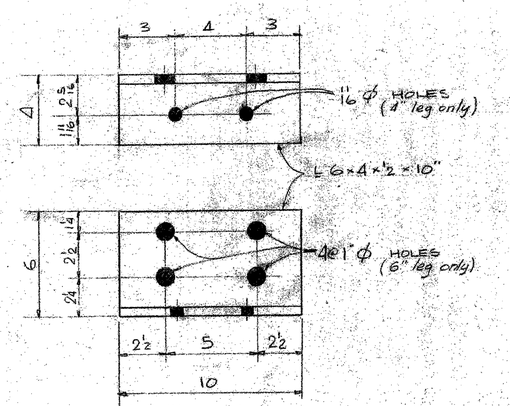

1-12
10
2½
5
2½
c.1
f.1
h.1
g.1
1¼
1¼
1¼



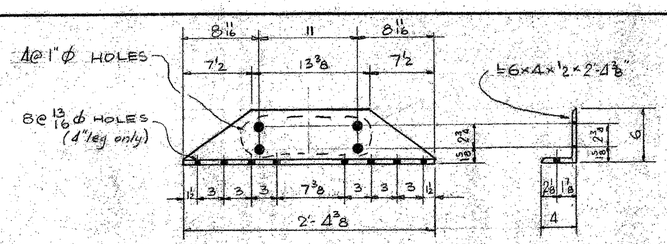
- LACING BARS - a1



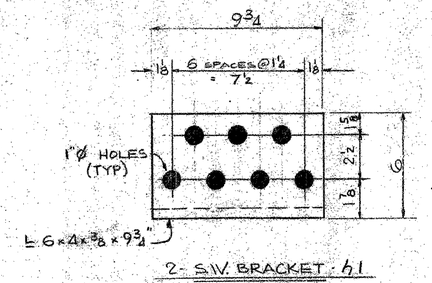
ONE - UPPER CABLE SUPPORT - b1



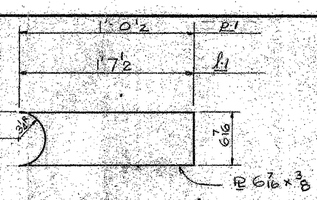
2 - UPPER CABLE SUPPORT - c1



ONE - FLOOR BEAM SUPPORT - k1

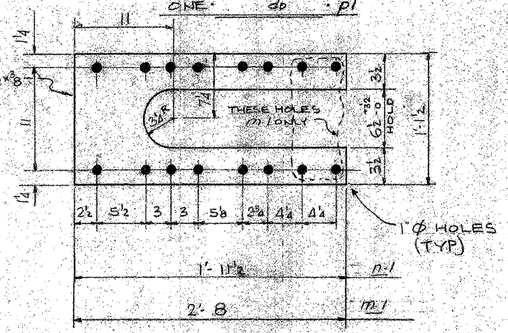


2 - S.W. BRACKET - h1



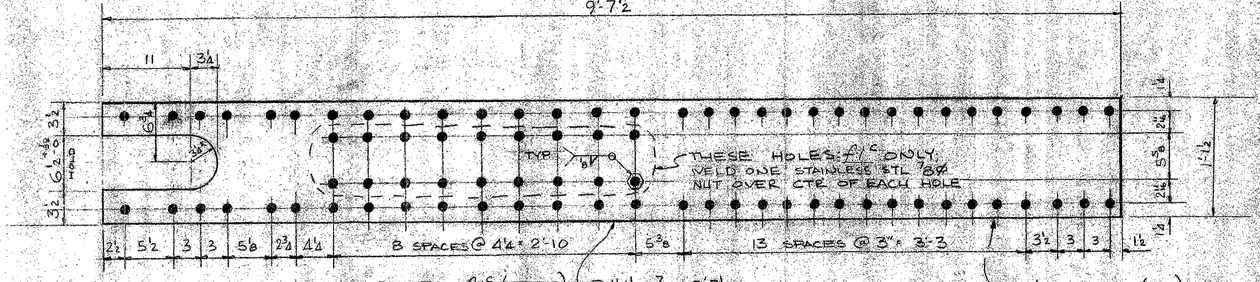
ONE - FILLER PLATE - l1

ONE - do - p1



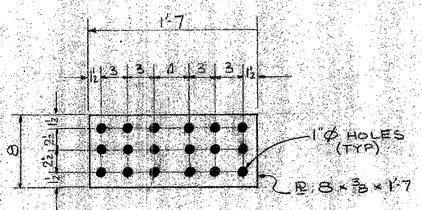
ONE - GUSSET PL m1 (SHOWN)

ONE - do - n1



ONE - SIDE PLATE - f1 C (SHOWN) PL 1'-1½ × 7/16 × 9'-7½

ONE - do - f1 A

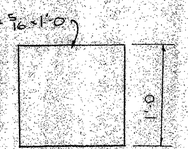


2 SPLICE PLATES - e1



ONE - S.W. BRACKET - g1 L 6×6×½

ONE - CURB ANGLE - t1 L 3×3×5/16



ONE - CURB PLATE - u1

LINE	NO. PCS.	SECTION	LENGTH FT	LENGTH INCH	PK MARK	REMARKS	P.O.# ITEM	CALCULATED WEIGHT
1		PL 2¼ × ⅜	1	4	a-1			
2	1	PL 8 × ½	0	9	b-1			10
3	2	L 6 × 4 × ½	0	10	c-1			27
4								
5	2	PL 8 × ⅜	1	7	e-1			32
6	2	PL 1'-½ × 7/16	9	7½	f-1			386
7	1	L 6 × 6 × ½	1	1½	g-1			20
8	2	L 6 × 4 × ⅜	0	9¾	h-1			19
9	1	L 6 × 4 × ½	2	4⅜	k-1			37
10	1	PL 6⅞ × ⅜	1	7½	l-1			13
11	1	PL 1'-1½ × ⅜	2	8	m-1			27
12	1	do	1	11½	n-1			34
13	1	PL 6⅞ × ⅜	1	0½	p-1			9
14	1	L 3 × 3 × ⅝	1	1½	r-1			6
15	1	PL 1'-0 × ⅝	1	0	u-1			13
16	110	BOLTS & NUTS		2¼		FIELD BOLTS		
17	55	do		2¾		do		
18	4	do		3		do		
19	14	do		3½		do		

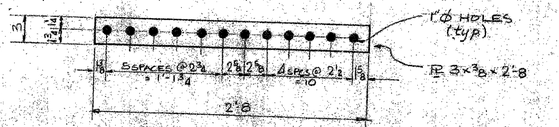
- See sheet E1 of 1 for general notes.
- All steel to be A36.
- All material this sheet to be used on vertical member L's U.N. unless noted.

CONN FABRICATING & ENGINEERING CO.
NEW CASTLE, PENNA.

WASHINGTON and WESTMORELAND CO.
LR 247 SPUR A
CHARLEROI-MONESSEN BRIDGE REHAB.

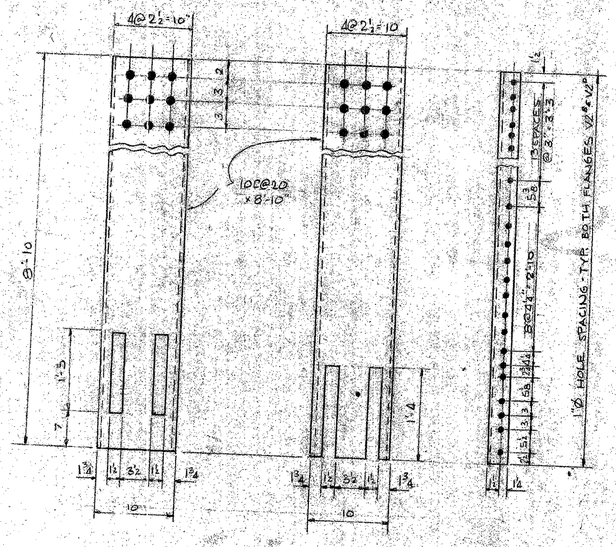
REVISIONS	SCALE N.T.S. unless noted	DATE 15 NOVEMBER 19
	DRAWN BY T.P.K. & T.E.L.C.	APPROVED
	TRACED	No. 1 OF 2
	CKD. BY	

DUSTRIES INC., PGH., PA. RECORDER 3044



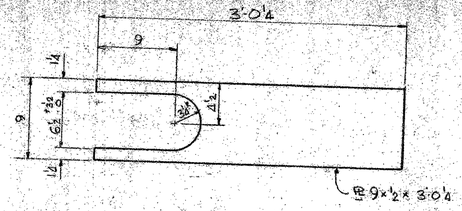
2 - FLOOR BEAM FILL PL's2

(Vertical Member L_2U_2)



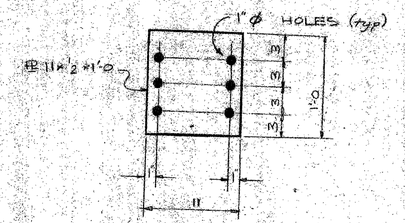
ONE - SIDE CHANNEL - V2^A ONE - SIDE CHANNEL - V2^D

(Vertical Member L_2U_2)



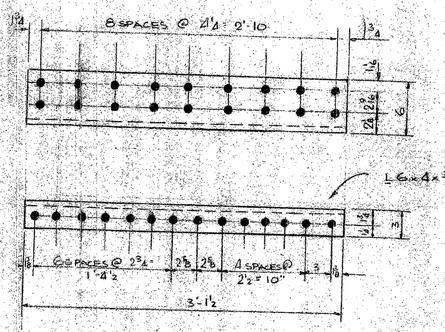
2 - SIDE PLATES - x2

(Diagonal Member U_2M_1)



2 - TIE PLATES - w2

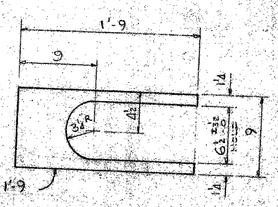
(Diagonal Member U_2M_1)



ONE - FLOOR BEAM ANGLE - L2^B (AS SHOWN)

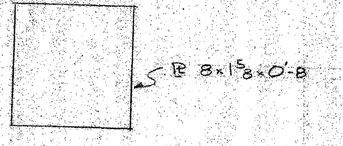
ONE - do - L2^D (OPP HAND)

(Vertical Member L_2U_1)

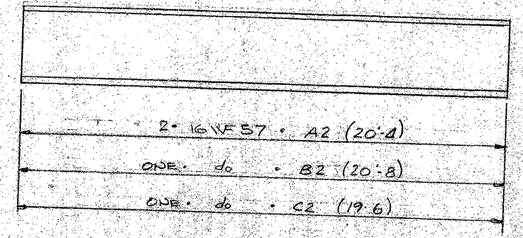


2 - GUSSET PLATE - g2

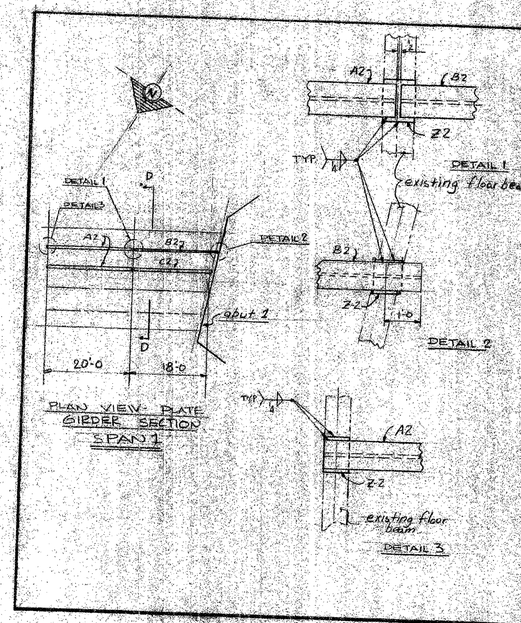
(Diagonal Member L_2M_1)



6 - SHIM PLATES - Z2

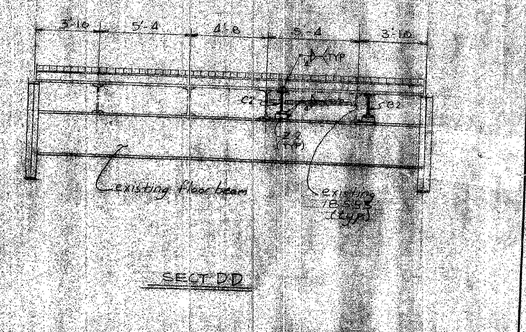


ITEM	NO REQ	SECTION	LENGTH FT	LENGTH INCH	R MARK	REMARKS	PO# ITEM	CALCULATED WEIGHT
1	2	PL ⅜x3'-½	3	7½	P2			54
2	2	PL ⅜x3'-8	3	8	S2			54
3	2	10CP20#	8	10	T2			20
4	2	PL ⅜x9x-½	1	9	W2			353
5	2	PL ⅜x9x-½	2	0¼	X2			54
6	2	PL ½x11½	1	0	W1			93
7								37
8								
9	6	PL ⅜x1'-6	0	8	Z2			
10	2	16WF57	20	4	A2			777
11	1	do	20	8	B2			831
12	1	do	19	6	C2			1178
								1772



GENERAL NOTES:

- Z2 to be located alongside existing S18@55 beam as shown near 16WF57 stringers (A2, B2, C2) to be placed from underside of span, located atop #2 plates and welded in place.



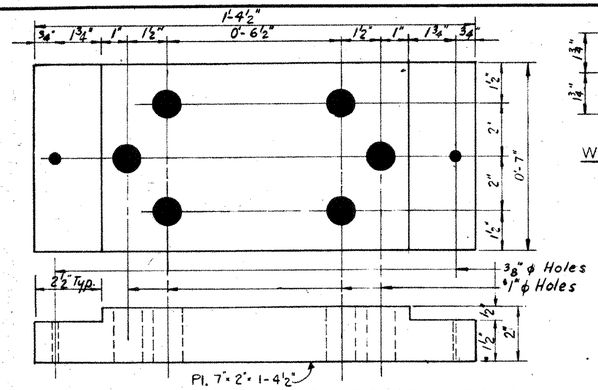
- See sheet #1 of 2 for general notes.
- All steel to be A36.

REVISIONS		
	SCALE N.T.S. unless noted	DATE 18 NOVEMBER 1981
	DRAWN BY T.P. Hostetler	APPROVED
	TRACED	No. 2 OF 2
	CKD. BY	

CONN FABRICATING & ENGINEERING CO.
NEW CASTLE, PENNA.

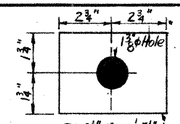
WASHINGTON and WESTMORELAND CO.
L.R.247 SPUR A
CHARLEROI-MONESSEN BRIDGE REHAB.

OCE INDUSTRIES INC., PGH., PA. REORDER 0064



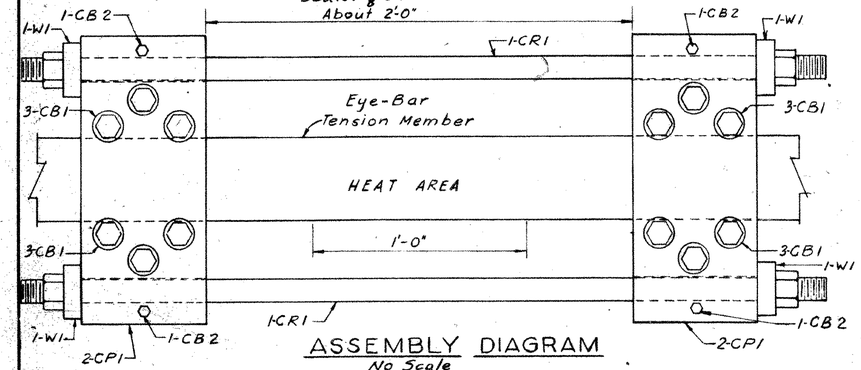
CLAMP PLATES - MK. CP-1

Scale: 3/8" = 1"



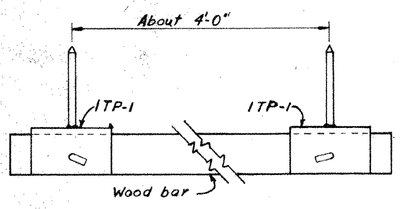
WASHER - MK. W-1

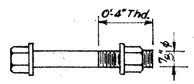
No Scale



ASSEMBLY DIAGRAM

No Scale



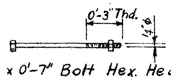


⅞" ϕ x 0'-8" High-Strength Bolt, Hex Head

⅞" ϕ Hex Nut, Hardened W'shr's. (6 per bolt)

CLAMP BOLT MK. CB-1

Scale: 1½" = 1"



1¼" ϕ x 0'-7" Bolt Hex. Head & Nut

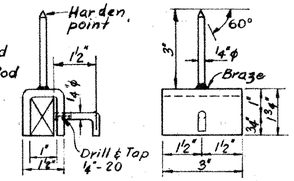
CLAMP BOLT MK. CB-2

Scale: 1½" = 1"

3"x 4⅜"x 0'-4½" Bent Pl.

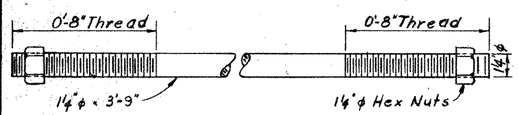
1¼" ϕ x 0'-3" Pointed Rod

1¼" ϕ x 0'-2½" Locking Rod



TRAMMEL POINTS MK. TP-1

Scale: ⅜" = 1"



CLAMP RODS - MK. CR-1

Scale: 1½" = 1"

REQUIRED LIST		
No.	Description	MK
4	Clamp Plates	CP-1
12	Clamp Bolts	CB-1
4	Clamp Bolts	CB-2
2	Clamp Rods	CR-1
4	Washers	W-1
2	Trammel Points	TP-1
1	Wood bar ⅞" x 1½" x 4'-6"	—

DETAILS OF CLAMP ASSEMBLY

E.B. | J.L.S. | 4-63

GENERAL PROCEDURE FOR FLAME-SHORTENING OF EYEBARS

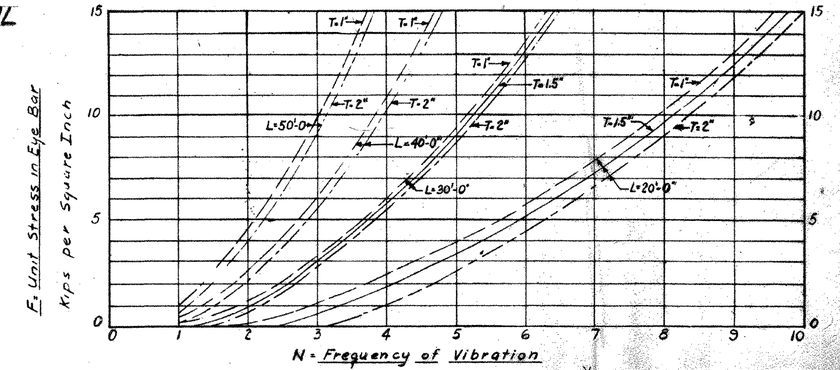
FINAL

- Remove paint from bar where clamp plates will be fastened, and from 12"± length between clamp-plate areas, where heat will be applied.
- Bolt clamp plates to bar, allowing ample thread below nuts of clamp rods for movement during upsetting operations. Clamp-bolts shall be tightened ½-turn beyond snug tight condition to insure proper clamping force on plates. Clamp-rod nuts shall be run up finger-tight prior to heating eyebar.
- On inclined eyebars install block and falls lines about 6 feet above clamp plate to eliminate sag during and after heating and upsetting operations. Do not provide excess uplift.
- Traffic lanes contributing the majority of Live Load stresses to the bar being shortened, should be closed during heating, upsetting and cooling operations, and restricted speed limits should be enforced for all traffic on the span during these periods.
- Simultaneously heat both sides of the bar, for a length of 12 inches midway between the clamp-plates, to a Cherry-Red color (1600°F to 1800°F) applying heat uniformly on both sides. An Oxweld #150 tip, or one with equal flame flare is used when Oxygen with Acetylene or other suitable gas is used. Provide wind shields to protect the heated areas, when required.
- Continue application of heat as directed by the Engineer, so that the interior of the bar becomes thoroughly and uniformly heated. Do not heat beyond Cherry-Red Color (1800°F±) except as directed by the Engineer.
- Shortening of eyebar by upsetting shall be performed in increments of approximately ¼" for each heating. The trammel shall be used to measure these increments, through use of punch marks or scratches on the bar, outside the clamp-plates.
- When heated areas are at proper temperature, the nuts on clamp-rods shall be tightened simultaneously, upsetting the rod in the heated area. Nuts on both rods must be tightened the same amount to prevent kinking of the bar.
- Buckling tendencies shall be corrected by C-clamping beam or channel sections on each side of the bar between the clamp plates, striking with a maul, if necessary, to straighten the bar. By side push on the bar close to the pin-head, it can be determined if the heads are tight against the pins.
- If it is desired to keep the initial or dead-load stress in the eyebar low, the No. 150 tips shall be quickly replaced by No. 60 tips, and a 3 or 4 inch length of the bar in the middle of the 12 inch heated area maintained at 1600-1800°F for 3 or 4 minutes. This short heated section will allow elongation in this area while the remainder of the heated area is cooling and contracting.
- Normal traffic may be resumed on the bridge after the heated area has cooled to 300°F. Successive applications of the method to a given bar should also be delayed until bar has cooled to the satisfaction of the Engineer, clamp-plates being moved to a new position or retained at the same location as directed by the Engineer.
- Unit stress in eyebars can be determined with reasonable accuracy through use of the graph and data given on this sheet. Shortening shall be continued to the satisfaction of the Engineer. On paired eyebars, frequencies of vibration should be essentially equal at the conclusion of the operations.
- The Contractor shall have available at the site, sufficient forces and equipment as to satisfactorily perform all necessary and incidental operations during the course of the work. Minimum required equipment will include: two torches, nozzles, fuel tanks, strong-back beams (L~19'-6"), maul, wrenches, assorted C-clamps, pry-bars, block & falls ass'y, etc.
- Flame-shortening shall not be done on any heat treated eye bars.
- Temperature shall be measured with a pyrometer.

JUDGING HIGH TEMPERATURES BY COLOR

Temp., °F	Color of Heat
975 ±	Red Heat, visible in the daylight
1075 ±	Red Heat, visible in the sunlight
1290 ±	Dark Red
1470 ±	Dull Cherry-Red
1650 ±	Cherry-Red
1830 ±	Bright Cherry-Red
2010 ±	Orange-Red
2190 ±	Orange-Yellow
2370 ±	Yellow-White

Note: Flame-shortening methods set forth on this sheet may be applied to structural members of bridges only with the authorization of the Chief Bridge Engineer, and under the supervision of his designated representative.



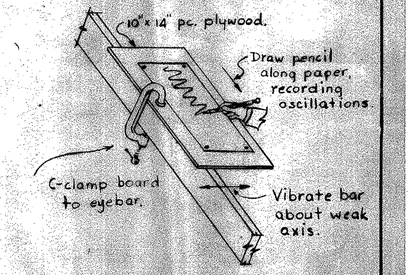
Frequency of Vibration and Unit Stress Curves for Eyebar Tension Members.

Equation: $F = 0.00293\,N^2L^2 - 24{,}700{,}000(I)^2$

Where: F = Unit Stress in kips per square inch. L = Length of eye-bar in inches.
N = Frequency of Vibration (Number of complete oscillations per second).
T = Thickness of eye-bar in inches.

The frequency of vibration of the eyebar or the number of complete oscillations per second can be measured in the following manner: (Refer to sketch, below.)

1. Remove the clamp plates and bolts.
2. Clip a sheet of paper or cardboard to a 10"x 14" pc. of plywood clamped to the edge of the eye bar.
3. Vibrate the bar by hand about its weak axis.
4. Hold a pencil on the paper or cardboard and then draw the pencil lengthwise along the eyebar for a definite interval of time, say a 10-sec. interval. The pencil will then record the number of oscillations for this interval of time.



FREQUENCY MEASUREMENT & STRESS DETERMINATION

Approved: APR 1 1980

B. F. Kotalik
Bridge Engineer

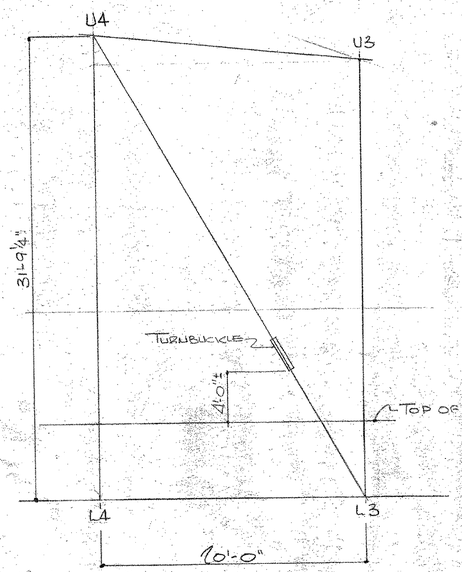
COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION
BRIDGE UNIT

FLAME-SHORTENING DETAILS FOR TIGHTENING LOOSE EYEBARS IN TRUSS BRIDGES

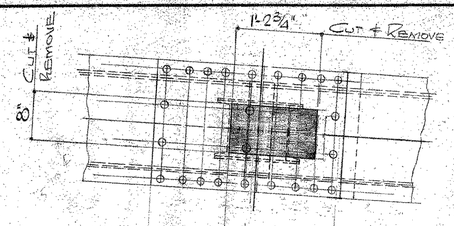
SHEET 1 OF 1

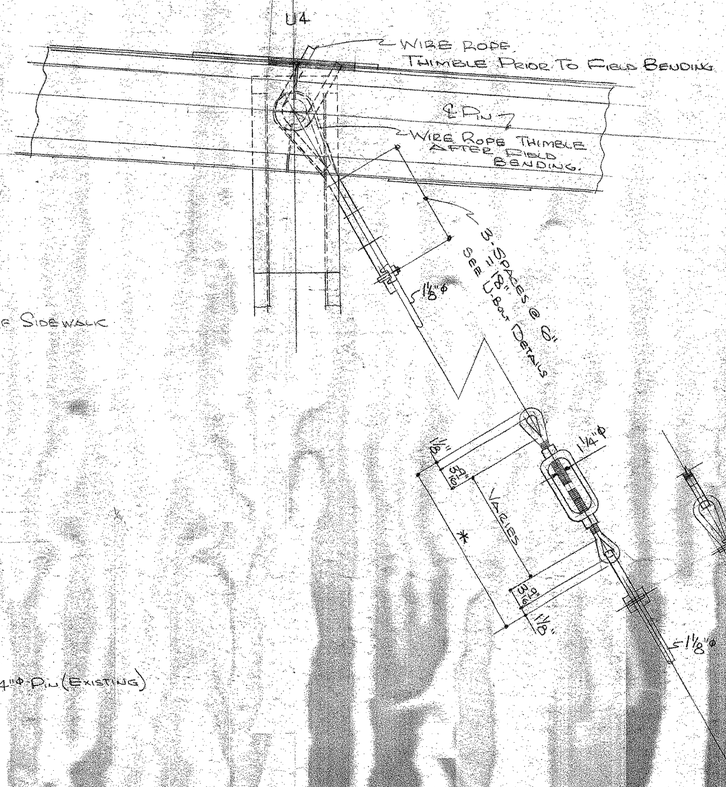
S-6409

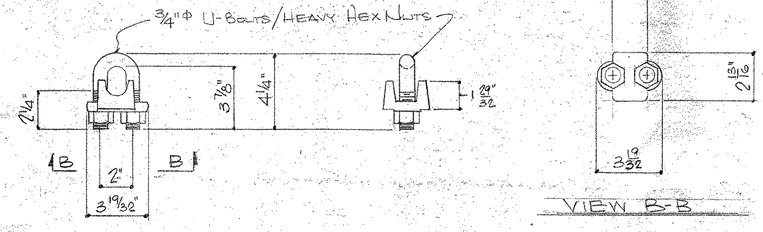


ELEVATION

SCALE 3/16" = 1'-0"







U-BOLT CLIP DETAILS (16 REQD)

SCALE 3"=1'-0"

NOTES:

ALL U-BOLT CLIPS WILL BE ATTACHED SO THAT THE BASE BEARS AGAINST THE LIVE END OF THE ROPE, WHILE THE "U" OF THE BOLT PRESSES AGAINST THE DEADEND. THE "U" OF THE CLIPS SHOULD NEVER BEAR AGAINST THE LIVE END OF THE ROPE, BECAUSE OF THE POSSIBILITY OF THE ROPE BEING CUT OR KINKED.

BEFORE THE ROPES ARE PLACED UNDER TENSION THE NUTS ON THE CLIPS WILL BE TIGHTENED. AFTER THE ROPES HAVE BEEN PLACED IN TENSION THE NUTS ON THE CLIPS WILL THEN BE CHECKED FOR PROPER TIGHTNESS.

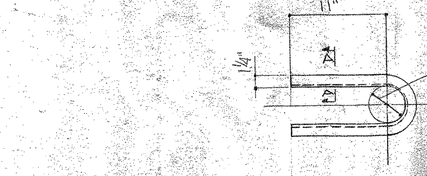
* TURNBUCKLE WILL BE OPENED ENOUGH TO ALLOW THE CABLES TO TIGHTENED 1 3/16" TOTAL TO ACHIEVE PROPER TENSION.

CABLE WILL BE 6x7 : WITH 6 STRANDS, 7 WIRES PER STRAND, WIRE STRAND CORE ZINC COATED.

AREAS THAT HAVE BEEN CUT OPEN TO GAIN ACCESS WILL BE REPAIRED WITH 3/8" PL EXTENDING AT LEAST 3" ON EACH SIDE OF THE HOLE. WELDS WILL BE 1/4".

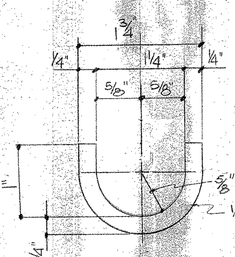
TURNBUCKLE WILL BE 1¼"Φ X 28 3/8" (CLOSED) EYE & EYE END FITTINGS DROP FORGED STEEL WELDLESS BREAKING STRENGTH 38K MADE BY BETHLEHEM STEEL OR APPROVED EQUAL AASHTO REPAIRS

THE CABLE AND ALL FITTINGS WILL BE PAINTED AS PER SPECIAL PROVISIONS ON BRIDGE PAINTING.



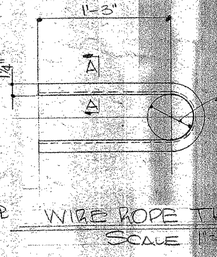
WIRE ROPE THIMBLE @ U4 (4"Φ PIN)

SCALE 1"=1'-0"



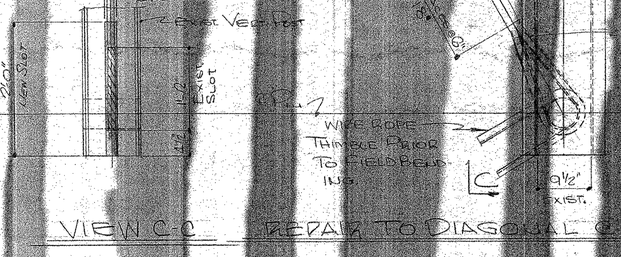
SECTION A-A

SCALE - FULL

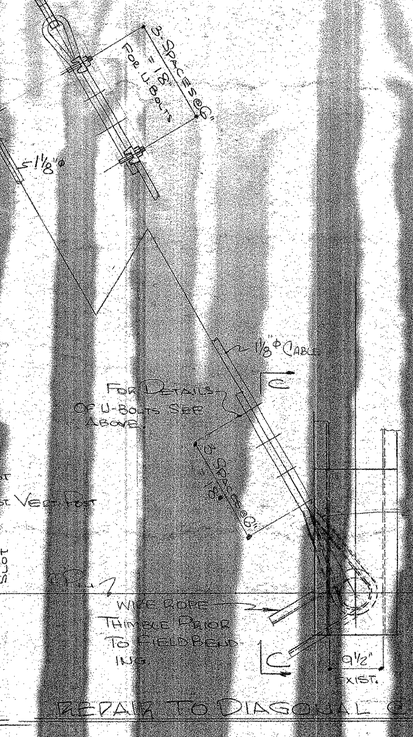


WIRE ROPE THIMBLE @ U3 (5"Φ)

SCALE 1"=1'-0"



VIEW C-C



REPAIR TO DIAGONAL @ L3-U4 (NO. TRUSS)

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

REPAIR TO [illegible] (NO. TRUSS)

[illegible] SPAN [illegible]

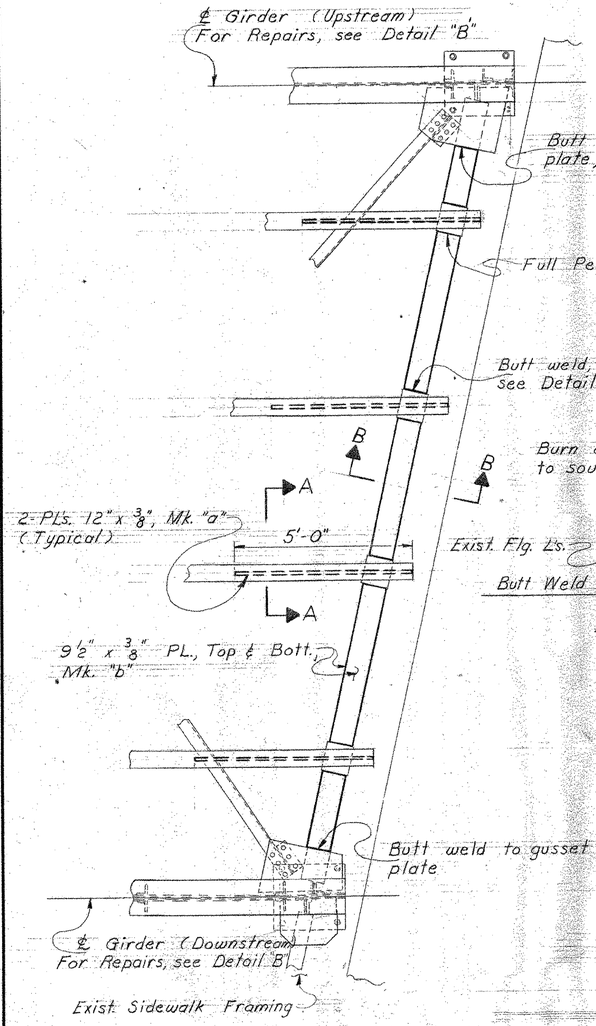
APPROVED _____

BRIDGE ENGINEER

SHEET ___ OF ___

S-

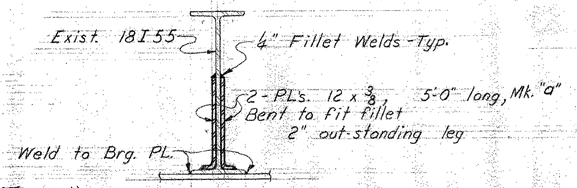
Trans 10-74 W2931



LOCATION PLAN

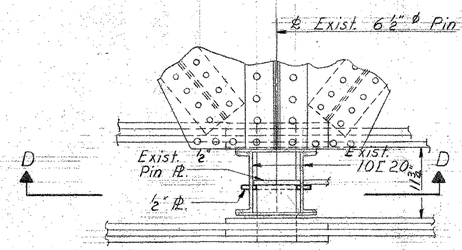
REPAIRS AT WEST ABUTMENT

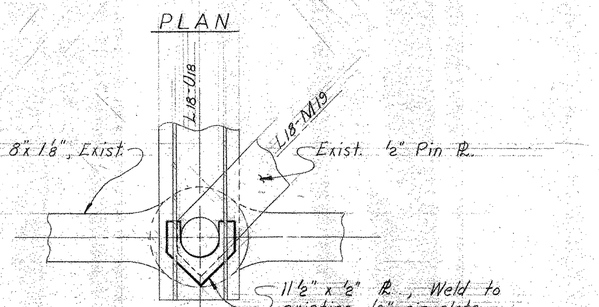
SCALE: 1"=1'-0"



SECTION A-A

NO SCALE

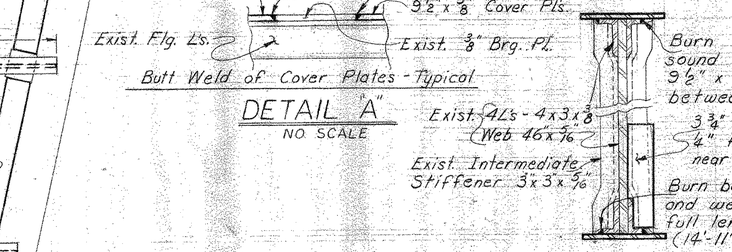




SECTION D-D

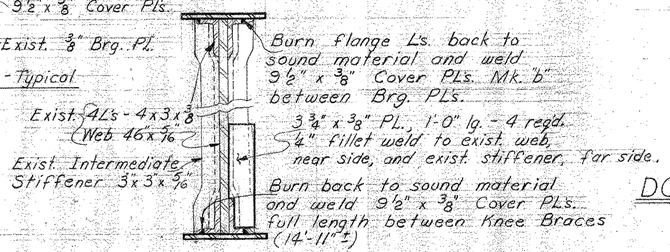
DOWNSTREAM TRUSS L 18 - M 19 - SPAN NO. 9

SCALE: 1"=1'-0"



DETAIL "A"

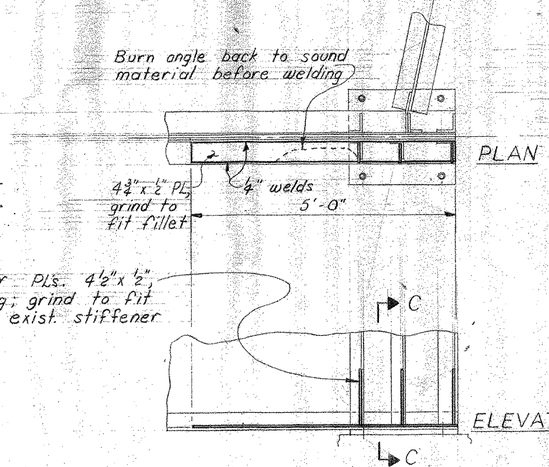
NO SCALE



SECTION B-B

NO SCALE

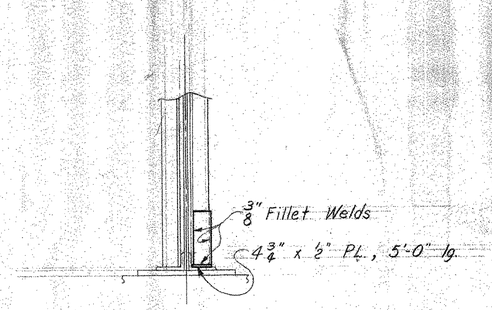
Bearings at the East Abutment for upstream and downstream girders in Span No. 1 are to be repaired similiar to the repair shown in Detail "B" and "B'" for the girder bearings at the West Abutment.



DETAIL "B"

DETAIL B' IS SIMILIAR

NO SCALE



SECTION C-C

NO SCALE

APPROVED: M. S. Prince

Dec. 6, 1968

BRIDGE ENGINEER

Commonwealth of Pennsylvania

DEPARTMENT OF HIGHWAYS

BRIDGE DIVISION

WASHINGTON - WESTMORELAND COUNTIES

L.R. 247 SPUR A

STA. 9+27

CHARLEROI-MONESSEN BRIDGE

EMERGENCY MISCELLANEOUS REPAIRS

SHEET 2 OF 2

S-

#120 B PIEL-X SPEIDEL CORPORATION

LIST OF SHEETS

SH. NO.	TITLE
1	LIST OF SHEETS AND GENERAL NOTES
2	GENERAL NOTES (CONT.)
3-4	ESTIMATE OF STRUCTURE QUANTITIES
5	GENERAL PLAN
6	ELEVATIONS AND SECTIONS
7	STAKE-OUT PLAN
8-12	ABUTMENT 1
13	BENT 1
14	BENT 2
15	BENT 3
16	BENT 4
17	BENT 9
18	BENT 10
19	BENT 11
20-22	ABUTMENT 2
23	REINFORCING SCHEDULE - ABUTMENT 1
24	REINFORCING SCHEDULE - BENT 1 TO 4 AND BENT 9 TO 10
25	REINFORCING SCHEDULE - BENT 11 & ABUTMENT 2
26	FRAMING PLAN - SPANS 1 TO 5
27	SHEAR & MOM. DIAGRAMS - SPANS 1 TO 5
28	STRINGER DETAILS - SPANS 1 TO 3
29	STRINGER DETAILS - SPANS 4 & 5
30	FRAMING PLAN - SPANS 9 TO 12
31	STRINGER DETAILS - SPANS 9 TO 12
32	SUBSTRINGER DETAILS
33	CROSS-GIRDER AT PIER 5
34	CROSS-GIRDER AT PIER 8
35	CROSS-GIRDER BEARING & LOCATION PLAN
36-37	STEEL DETAILS
38	SIGN STRUCTURE SUPPORT
39	EXPANSION DAM AT ABUTMENT 1
40	EXPANSION DAM AT BENTS 3 AND 10
41	EXPANSION DAM AT ABUTMENT 2
42	EXPANSION DAM DETAILS
43-45	DRAINAGE DETAILS
46-47	SIDEWALK FENCE DETAILS
48	DECK PAVING - SPANS 1 TO 3
49	DECK PAVING - SPANS 4 AND 5
50	DECK PAVING - SPANS 9 AND 10
51	DECK PAVING - SPANS 11 AND 12
52	DECK PAVING CROSS SECTIONS AND DETAILS
53-54	DECK PAVING DETAILS
55	DECK PAVING BAR SCHEDULE
56	DECK CONTOURS - SPANS 1 TO 5
57	DECK CONTOURS - SPANS 9 TO 12
58	DEMOLITION PLAN
59-62	TEST BORINGS
63	TRUSS SPAN FRAMING - SPAN 6
64	TRUSS SPAN FRAMING - SPANS 7 AND 8
65	STRESS TABLES - SPAN 6 AND FLOOR SYSTEM
66	STRESS TABLES - SPAN 7
67	STRESS TABLES - SPAN 8
68	GRID DECK PLAN - SPANS 6 AND 7
69	GRID DECK PLAN - SPAN 8
70	GRID DECK DETAILS
71	SIDEWALK AND GRATING PLAN
72-74	SIDEWALK AND GRATING DETAILS
75-80	METAL PARAPET AND ANCHORAGE DETAILS
81-82	EXPANSION DAM AND TROUGH AT PIER 5
83	TROUGH DETAILS AT PIER 5
84	EXPANSION DAM AT PIER 7
85-86	EXPANSION DAM AT PIER 8
87-98	STRUCTURE REPAIR DETAILS

DES	EAD
DWN	DMY
CHK	EAD

GENERAL NOTES

MATERIALS AND WORKMANSHIP SPECIFICATIONS: DEPARTMENT PUBLICATION 408/1983, INCLUDING CURRENT SUPPLEMENTS; AWS/1980; AASHTO "STANDARD SPECIFICATIONS FOR WELDING OF STRUCTURAL STEEL HIGHWAY BRIDGES," 1981; AND THE SPECIAL PROVISIONS.

DESIGN SPECIFICATIONS: DESIGN DIVISION OF 1977 AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" (INCLUDING INTERIMS THROUGH 1983), AND AS SUPPLEMENTED BY THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION DESIGN MANUAL, PART 4, STRUCTURES (INCLUDING JAN. 1984 REVISION AND CURRENT BRIDGE DIRECTIVES).

(REHABILITATED TRUSS SPANS)

LIVE LOADS: HS20-44 (MS-18) LOADING, OR ALTERNATE MILITARY LOADING, (ARTICLE 1.2.5(G) AASHTO 1979 INTERIM SPECIFICATIONS) OF TWO AXLES FOUR FEET (1.219M) APART, WITH EACH AXLE WEIGHING 24,000 POUNDS (108KN), WHICHEVER PRODUCES THE GREATER STRESS.

ALL PORTIONS OF THE TRUSS SPAN STRUCTURE ARE ANALIZED AND REPAIRS DESIGNED BY SERVICE LOAD METHODS.

(NEW APPROACH SPANS)

LIVE LOAD: HS25 [125% OF HS20-44 (MS-18)] LOADING, OR 125% X ALTERNATE MILITARY LOADING [ARTICLE 1.2.5(G) AASHTO 1979 INTERIM SPECIFICATIONS] OF TWO AXLES FOUR FEET (1.219M) APART, WITH EACH AXLE WEIGHING 1.25 X 24,000 POUNDS (108 KN) = 30,000 POUNDS (135 KN), WHICHEVER PRODUCES THE GREATER STRESS. SUPERSTRUCTURE DESIGN CHECKED FOR A 204,000 POUND (918 KN) PERMIT VEHICLE IN ACCORDANCE WITH BD 82-33, DATED AUGUST 6, 1982.

LOADING	FACTORED LOAD
HS25 (125% OF HS20-44)	1.3 [D + 5/3 (L + I)]
ALTERNATE MILITARY LOADING x 125% (2 AXLES OF 24 KIPS x 1.25 = 30 KIPS)	1.3 [D + 5/3 (L + I)]
COMBINATION 204 KIPS PERMIT VEHICLE, ONE LANE WITH HS25 IN REMAINING LANES	1.3[D + (L + I) COMB.]

DEAD LOADS: INCLUDES 30 LBS. PER SQ. FT. FOR FUTURE WEARING SURFACE ON THE DECK SLAB AND INCLUDES 15 LBS. (WEIGHT OF FORMS PLUS WEIGHT OF CONCRETE IN THE VALLEYS OF FORMS) PER SQ. FT. OF DECK AREA FORMED USING PERMANENT METAL DECK FORMS.

BEARINGS, BEARING PRESSURES AND PILE LOADS ARE DESIGNED BY SERVICE LOAD METHODS. ALL OTHER PORTIONS OF THE STRUCTURE ARE DESIGNED BY LOAD FACTOR METHODS.

PERMANENT METAL DECK FORMS OR REMOVABLE FORMS MAY BE USED IN PLACING THE DECK.

ALL STRUCTURE DIMENSIONS ARE BASED ON A NORMAL TEMPERATURE OF 68 F, (20 C). ALL PLAN DIMENSIONS ARE HORIZONTAL UNLESS NOTED.

PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS EXCEPT WHERE NOTED OTHERWISE.

USE CLASS AAA CEMENT CONCRETE FOR DECK AND SIDEWALK SLABS (APPROACH SPANS).

USE CLASS AA CEMENT CONCRETE FOR ABUTMENT BACKWALLS, SIDEWALKS (TRUSS SPANS), CURBS AND WALLS ABOVE THE PARAPET CONSTRUCTION JOINT. WHERE NO PARAPET CONSTRUCTION JOINT IS SHOWN FOR LOW WALLS, ALL CONCRETE ABOVE THE TOP OF FOOTING IS CLASS AA UNLESS NOTED.

USE CLASS A CEMENT CONCRETE FOR BENTS, ABUTMENTS BELOW BRIDGE SEAT, PEDESTALS, WALLS BELOW PARAPET CONSTRUCTION JOINTS, AND ALL FOOTINGS.

CHAMFER EXPOSED CONCRETE EDGES 1"x1" EXCEPT AS NOTED.

USE A RETARDING ADMIXTURE CONFORMING TO SECTIONS 711.3 AND 1001.3(K5) IN THE CONCRETE DECK SLABS.

ALL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF ASTM DESIGNATION 615, 616 OR 617, GRADE 60, AS SET FORTH IN PUBLICATION 408. EXCEPT THAT GRADE 40 REINFORCEMENT MAY BE USED FOR COLUMN TIES.

MINIMUM LAP AND EMBEDMENT LENGTH OF CONCRETE REINFORCEMENT SHALL BE 30 DIAMETERS UNLESS OTHERWISE NOTED.

DECK SLAB THICKNESS INCLUDES 1/2" INTEGRAL WEARING SURFACE.

APPLY TWO-COAT PAINTED WATERPROOFING IN ACCORDANCE WITH SECTION 680 TO THE REAR FACES OF ALL WALLS AND ABUTMENTS UP TO A LINE ONE FOOT BELOW THE FINISHED GRADE, OR AS NOTED.

APPLY A PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES IN ACCORDANCE WITH SECTION 1019 TO THE EXPOSED CONCRETE ROADWAY AND SIDEWALK SURFACE OF THE DECK, APPROACH SLABS, AND FRONT FACE, REAR FACE AND TOP SURFACES OF PARAPETS.

ABUTMENT BACKWALLS MAY BE PLACED UP TO A CONSTRUCTION JOINT BELOW THE LEVEL OF THE BOTTOM OF DECK SLAB PRIOR TO CONSTRUCTION OF THE SUPERSTRUCTURE.

ABUTMENT BACKWALL CONSTRUCTION IS TO BE COMPLETED PRIOR TO CONSTRUCTION OF THE ADJACENT SUPERSTRUCTURE DECK SLABS.

APPLY AN EPOXY COATING TO THE TOP SURFACE OF ALL ABUTMENT BRIDGE SEATS AND TO THE EXPOSED FACE OF ALL ABUTMENT BACKWALLS. APPLY AN EPOXY COATING TO THE TOP SURFACE OF ALL BENTS WHERE THERE IS ANY TYPE OF EXPANSION DAM ABOVE THE BENT.

PLACE BEARING PADS MONOLITHICALLY WITH THE TOP OF BENTS OR TOP OF ABUTMENT BRIDGE SEATS.

FINISH BEARING AREAS IN ACCORDANCE WITH SECTION 1001.3(k)8. PLACE BEARINGS ON 1/8"THICK BEDDING MATERIAL FOR BRIDGE BEARINGS CONFORMING TO SECTION 1107.02(p).

SET ANCHOR BOLTS IN PREFORMED HOLES. FILL THE PREFORMED HOLES AND THE CLEARANCE BETWEEN ANCHOR BOLTS AND HOLES IN MASONRY PLATES WITH NON-SHRINK GROUT. GALVANIZE ALL ANCHOR BOLTS.

VERIFY ALL DIMENSIONS, ELEVATIONS AND GEOMETRY OF THE EXISTING TRUSS STRUCTURE IN THE FIELD. SEE SPECIAL PROVISONS AND "NOTE TO CONTRACTOR."

REFER TO THE EXISTING BRIDGE DESIGN PLANS, TRUSS FABRICATION DRAWINGS AND 1975 AND 1981 REHABILITATION DRAWINGS FOR EXISTING CONSTRUCTION. THE DEPARTMENT DOES NOT GUARANTEE THE ACCURACY OF THE EXISTING DRAWINGS. EXISTING BRIDGE DESIGN PLANS, TRUSS FABRICATION DRAWINGS AND 1975 AND 1981 REHABILITATION DRAWINGS MAY BE OBTAINED BY THE CONTRACTOR, ON REQUEST, FROM THE DEPARTMENT'S DISTRICT 12-0 OFFICE.

WHEN PORTIONS OF THE EXISTING BRIDGE ARE REMOVED, CARE SHALL BE TAKEN THAT THE REMAINING PARTS OF THE STRUCTURE AND THE REINFORCING BARS NOTED TO REMAIN ARE NOT DAMAGED. ANY STRUCTURE MEMBERS OR REINFORCING BARS DAMAGED SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

REFERENCE DRAWINGS - EXISTING BRIDGE

SH. NO.	DESCRIPTION
2-12	ORIGINAL DESIGN DRAWINGS, SUBSTRUCTURE
-	AND SUPERSTRUCTURE, DATED 1905.
E1&	SHOP FABRICATION DRAWINGS, 200 FT.
2-9	TRUSS, DATED 1906, B2956.
E1,E2&	SHOP FABRICATION DRAWINGS, 400 FT.
1-15	TRUSS, DATED 1906, B2957-8.
2-OF-2	EMERGENCY MISCELLANEOUS STRUCTURE
-	REPAIRS, DATED 1968.
1-3&	APPROACH ROADWAY AND STRUCTURE
1-22	REHABILITAITON PLANS, S-11438,
-	DATED 1975.
1-22	SHOP FABRICATION PLANS - GRID DECK
-	APPROACHES AND TRUSS SPANS, S-11438,
-	DATED 1976.
1-4	BRIDGE REHABILITATION, S-14278, DATED 1981.

REFERENCE DRAWINGS OF EXISTING BRIDGE ARE AVAILABLE FROM PADOT DISTRICT 12-0 OFFICE UPON REQUEST OF THE CONTRACTOR.

FURNISH AND INSTALL A DEBRIS PROTECTIVE SYSTEM OVER THE RAILROADS BENEATH THE BRIDGE AS APPROVED BY THE ENGINEER WHILE THE EXISTING DECK PROTECTION PLATES, MISCELLANEOUS DETAILS AND SIDEWALK ARE REMOVED. NO DEBRIS IS TO BE ALLOWED TO ACCUMULATE UNDER THE BRIDGE.

SANDBLAST CLEAN AND PROPERLY ALIGN REINFORCEMENT BARS, WHICH ARE TO REMAIN IN THE STRUCTURE, BEFORE PLACING NEW CEMENT CONCRETE.

REMOVE LOOSE MATERIAL BY BLAST CLEANING ALL EXISTING CONCRETE AND MASONRY SURFACES WHICH COME IN CONTRACT WITH NEW CEMENT CONCRETE. COAT THE CLEANED CONCRETE AND MASONRY SURFACES WITH AN APPROVED EPOXY BONDING COMPOUND JUST PRIOR TO PLACING NEW CEMENT CONCRETE. THE EPOXY BONDING COMPOUND IS TO BE INCIDENTAL TO THE CEMENT CONCRETE BEING PLACED.

SPECIALLY SELECTED MATERIAL WHICH CONTAINS NO ROCK TO INTERFERE WITH PILE DRIVING SHALL BE PLACED AND COMPACTED TO FOOTING ELEVATION BEFORE DRIVING PILES. AUGERING WILL BE PERMITTED TO THE ORIGINAL GROUND.

ALL PILES ARE HP 10x57 WITH PILE TIP REINFORCEMENT, AND ARE DESIGNED FOR 75 TONS PER PILE. SEE SPECIAL PROVISIONS FOR DRIVING REQUIREMENTS.

* AS MODIFIED BY PA DOT STD. SKETCH SK363

DESCRIPTION	DWG. NO.	APPR. DATE
BACKFILL AT STRUCTURE	RC-12,	MAY 2, 1983
CLASSIFICATION OF EARTHWORK FOR STRUCTURES	RC-11,	MAY 2, 1983
ARMORED PREFORMED NEOPRENE COMPRESSION DAM *	BC-363,	OCT. 20, 1970
BEARINGS	BC-355A,	NOV. 10, 1980
CONCRETE DECK SLAB DETAILS	BC-352,	APRIL 1, 1971
BRIDGE DRAINAGE	BC-351,	JULY 1, 1970
BRIDGE TERMINAL CONNECTION AND INLET PLACEMENT	BC-339A,	NOV. 4, 1981
RAILING ANCHOR SYSTEM	BC-337A,	MARCH 2, 1981
REINFORCEMENT BAR FABRICATION DETAILS	BC-336A,	NOV. 4, 1981
CONSTRUCTION AND EXPANSION JOINT DETAILS	BC-335A,	NOV. 4, 1981
THREADED INSERT ANCHOR ASSEMBLY	BC-334A,	MARCH 2, 1981
PERMANENT METAL DECK FORMS	BC-332B,	JUNE 21, 1982
LIGHTING POLE ANCHORAGE	BC-322A,	JUNE 20, 1980
ELECTRICAL DETAILS	BC-321A,	JUNE 20, 1980
PEDESTRIAN-TRAFFIC BARRIER (TERMINAL DETAILS)	BC-317A,	MARCH 2, 1981
ALUMINUM PEDESTRIAN RAILING	BC-316A,	MARCH 2, 1981
PROTECTIVE FENCE	BC-301A,	MARCH 2, 1981

SUPPLEMENTAL DRAWINGS

PREPARED BY:

RICHARDSON, GORDON & ASSOCIATES
CONSULTING ENGINEERS
PITTSBURGH, PA

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ERNEST A. DOZZI — ENGINEER No. 13538-E

JULY 17, 1984

Mark	Description	By	Chk'd	App'd	Date

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B 10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI -
MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
LIST OF SHEETS AND GENERAL NOTES

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 1 OF 98 + SUPPLEMENTAL DRAWINGS

S-15296

STEELWORK GENERAL NOTES

USE STRUCTURAL STEEL FOR THE NEW APPROACH STRUCTURE AND FOR STEELWORK REPAIRS CONFORMING TO AASHTO DESIGNATION A36, EXCEPT AS OTHERWISE NOTED.

ALL STEEL IN MAIN LOAD CARRYING MEMBER COMPONENTS SUBJECT TO TENSILE STRESS IS DESIGNATED ON THE PLANS (CVN) AS REQUIRING CHARPY V-NOTCH TESTING. PROVIDE STEEL CONFORMING TO THE SUPPLEMENTAL IMPACT PROPERTIES FOR ZONE 2 AS GIVEN IN THE AASHTO MATERIAL SPECIFICATIONS FOR THESE MEMBERS.

ALL STEEL IN MAIN LOAD CARRYING MEMBERS OR MEMBER COMPONENTS WHICH ARE FRACTURE CRITICAL IS DESIGNATED ON THE PLANS BY THE SYMBOL "FCM". FABRICATE "FCM" STEEL IN ACCORDANCE WITH THE SEPTEMBER 1978 AASHTO "GUIDE SPECIFICATIONS FOR FRACTURE CRITICAL NON-REDUNDANT STEEL BRIDGE MEMBERS".

WELDING OF PERMANENT METAL DECK FORMS OR OTHER ATTACHMENTS TO GIRDER TOP FLANGES IN TENSION AREAS IS NOT PERMITTED. TENSION AREAS OF TOP FLANGES ARE DESIGNATED ON THE PLANS.

WHEN TRANSVERSE STIFFENERS ARE REQUIRED TO STIFFEN THE GIRDER WEBS, PLACE STIFFENERS ON EITHER FACE OF THE INTERIOR GIRDERS AND ON THE INSIDE FACE OF THE EXTERIOR GIRDERS.

USE 7/8" A.S.T.M. A325, TYPE 1, HIGH STRENGTH BOLTS EXCEPT WHERE NOTED OTHERWISE. PLACE BOLTS, WHERE FEASIBLE, SO THAT THE THREADED ENDS ARE PROTECTED FROM THE WEATHER.

REAMING IS REQUIRED FOR REPAIR ITEMS AND/OR LOCATIONS REQUIRING FIELD DRILLING OF EXISTING STEEL FOR INSTALLATION OF HIGH STRENGTH BOLTS.

GROOVE WELDS SHOWN ARE SUGGESTED ACCEPTABLE WELDS. THE CONTRACTOR MAY USE ANY PREQUALIFIED GROOVE WELDS APPROVED BY THE ENGINEER.

PAINTING OF NEW AND EXISTING STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

TOP FLANGES OF STRINGERS AND FLOOR BEAMS ARE TO BE CLEANED IN ACCORDANCE WITH SPECIAL PROVISIONS AND FREE OF EXISTING BURRS AND/OR WELDED METAL AND ARE TO BE PROPERLY RESTORED BEFORE THE NEW STEEL BEAM BRIDGE FLOORING IS INSTALLED (TRUSS SPANS).

TOP FLANGES OF ALL STEEL FRAMING SUPPORTING THE GRID DECK ARE TO BE CLEANED IN ACCORDANCE WITH SPECIAL PROVISIONS AND RECEIVE THE PRIME COAT OF PAINT AS SPECIFIED IN THE SPECIAL PROVISION FOR PAINTING EXISTING STRUCTURAL STEEL PRIOR TO PLACING THE NEW STEEL BEAM BRIDGE FLOORING.

ZINC-COATED STEEL STRUCTURAL WIRE ROPE IS TO CONFORM TO ASTM DESIGNATION A 603-70, FURNISHED WITH CLASS A WEIGHT ZINC-COATED WIRES THROUGH OUT, WITH A PLURALITY OF SIX (6) STRANDS OF SEVEN (7) WIRES LAID HELICALLY AROUND A CORE COMPOSED OF NINETEEN (19) WIRE STRAND.

PREPARE AND SUBMIT TO THE DEPARTMENT FOR APPROVAL COMPLETE CONSTRUCTION AND DETAIL DRAWINGS FOR ALL STRUCTURAL STEEL, STRUCTURAL STEEL REPAIRS, DOWNSPOUTING, EXPANSION DAMS, ANCHOR BOLT SETTING DIAGRAMS, WIRE ROPE REPAIRS AND FALSEWORK IF REQUIRED.

STEEL FRAMEWORK SHALL BE BRACED (FIXED) IN LONGITUDINAL AND LATERAL DIRECTIONS UNTIL MEMBERS ARE IN STABLE (FINAL BRACED) CONDITION.

DECK PAVING NOTE

PLACE THE CONCRETE DECK SLAB IN ACCORDANCE WITH THE PLACEMENT SEQUENCE SHOWN. A 7-DAY CURING PERIOD IS REQUIRED BEFORE CONCRETE MAY BE PLACED IN THE SUCCEEDING SEQUENCE, UNLESS ALL CONCRETE PLACED IN THE PRECEEDING SEQUENCE IS STILL PLASTIC.

UTILITY NOTE

KNOWN UTILITY LOCATIONS ARE SHOWN ON THE ROADWAY DRAWINGS. KNOWN UTILITIES WITHIN 5 FEET OF FOOTINGS ARE SHOWN ON THE INDIVIDUAL FOOTING DETAIL DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL UTILITIES PRIOR TO EXCAVATION.

"NOTE TO CONTRACTOR"

THE DEPARTMENT DOES NOT GUARANTEE THE LOCATION OR LIMITS OF DETERIORATED STEEL AS SHOWN AND/OR REFERRED TO ON THE DRAWINGS. NEITHER DOES THE DEPARTMENT GUARANTEE THAT ALL DEFECTS ARE SHOWN. THE REPAIR DETAILS SHOWN ARE FOR THE CONTRACTOR'S GUIDANCE AS TO THE MINIMUM REQUIRED REPAIR MATERIAL THICKNESS, BOLT DIAMETER AND/OR WELD SIZE, AND REQUIRED METHOD OF REPAIR.

THE CONTRACTOR IS RESPONSIBLE FOR ALL MEASUREMENT NEEDED FOR FABRICATION AND FOR ALL ELEVATION CHECKS REQUIRED TO COMPLETE THE REPAIR.

ACCESS TO ALL AREAS, FOR THE ENGINEER AND THE REQUIRED SCAFFOLDING AND SHORING NEEDED TO COMPLETE THE REPAIR, IS TO BE PROVIDED BY THE CONTRACTOR. COMPENSATION IS TO BE INCLUDED IN THE PRICE BID FOR THE RESPECTIVE REPAIR AND NO SEPARATE PAYMENT IS TO BE MADE.

LEGEND (ABBREVIATIONS)

ABT.	ABOUT	JT.	JOINT
ABUT.	ABUTMENT	LG.	LONG
BRG.	BEARING	MAT'L	MATERIAL
BOTT.	BOTTOM	MAX.	MAXIMUM
COL.	COLUMN	MIN.	MINIMUM
CONC.	CONCRETE	MOM.	MOMENT
COND.	CONDUIT	N.S.	NEAR SIDE
CL.	CLEARANCE	PED.	PEDESTAL
CONST.	CONSTRUCTION	PL	PLATE
DET.	DETAIL	POS.	POSITIVE
DIA.	DIAMETER	REINF.	REINFORCING
DWG.	DRAWING	REQD.	REQUIRED
EL.	ELEVATION	R.F.	REAR FACE
EXIST.	EXISTING	SAN.	SANITARY
EXP.	EXPANSION	SEC.	SECTION
F.F.	FRONT FACE	SH.	SHEET
FLG.	FLANGE	SHLD.	SHOULDER
FIN.	FINISH	S.L.	SIGN LIGHTING
FIX.	FIXED	SPA.	SPACING
F.S.	FAR SIDE	ST.	STREET
GIR.	GIRDER	STA.	STATION
G.L.	GROUND LINE	STD.	STANDARD
GR.	GROUND	STR.	STRINGER
H.L.	HIGHWAY LIGHTING	STIFF.	STIFFENER
HORIZ.	HORIZONTAL	SYMM.	SYMMETRICAL
H.S.	HIGH STRENGTH	TYP.	TYPICAL
INV.	INVERT	VERT.	VERTICAL

Mark	Description	By	Chk'd	App'd	Date
	REVISIONS				

DES	EAD
DWN	DMY
CHK	EAD

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
GENERAL NOTES (CONT.)

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 2 OF 98

S-15296

D 9002 (2-83) 6-83 A1329+

ESTIMATE OF QUANTITIES - BRIDGE STRUCTURE AS DESIGNED. S-15296 (APPROACH SPANS)

ITEM NO.	DESCRIPTION	UNIT	ABUT. 1	ABUT. 1 S.WALL	BENT 1	BENT 2	BENT 3	BENT 4	BENT 9	BENT 10	BENT 11	ABUT. 2	ABUT. 2 N.WALL	ABUT. 2 S.WALL	SUPERSTRUCTURE SPANS 1 TO 5	SUPERSTRUCTURE SPANS 9 TO 12	TOTAL
*	CLASS 3 EXCAVATION	CY	385	140	340	180	145	110	60	60	50	6	69				1545
*	SELECT BORROW EXCAVATION-STRUCTURE BACKFILL	CY	2376	1703								177	194	35			4485 ⊙
*	CLASS AAA CEMENT CONCRETE	CY													555	447	1002 ⊠
*	CLASS AA CEMENT CONCRETE	CY	36	19								17	1	5	109	90	277
*	CLASS A CEMENT CONCRETE	CY	520	235	265	200	185	142	63	68	65	120	105	28			1996
*	JUNCTION BOXES, JB-25	EA		1											10	4	15
*	1 1/4 INCH CONDUIT IN STRUCTURE	LF													90	70	160
*	2 INCH CONDUIT IN STRUCTURE	LF	4	180								4			895	720	1803
*	LIGHTING POLE ANCHORAGE	EA													3	2	5 Δ
*	2 INCH EXPOSED CONDUIT GALV. RIGID STEEL	LF													85		85
*	PROTECTIVE COATING FOR CONCRETE SURFACE	SY	5	70									15	20	2825	2300	5235
*	REINFORCEMENT BARS	LB	56050	15850	29550	24950	19775	18250	9950	8400	11750	6385	5590	1500			208,000
*	REINFORCEMENT BARS, EPOXY COATED	LB	1620	2225								1775	100	525	179,175	144,900	330,320
*	STEEL BEAM TEST PILES, HP 10x57	LS	(2@25)	(1@20) (1@15)	(2@41.0)	(2@42.5)	(2@47)	(2@61)	(2@65.5)	(2@66.5)	(2@64.5)	(1@63)	(1@61)	(1@69.5)			(1055 LF)
*	ARMORED PREF. NEO. COMP. DAM, 1" MOVEMENT	LF														50	50
*	ARMORED PREF. NEO. COMP. DAM, 1 1/2" MOV.	LF													69		69
*	ARMORED PREF. NEO. COMP. DAM, 2" MOVEMENT	LF													50	50	100
*	FABRICATED STRUCTURAL STEEL	LB													579,450	481,550	1,061,000
*	DOWNSPOUTING - 10"ϕ PVC	LF													205	42	247 ⊙
*	DOWNSPOUTING - 10"ϕ GAL. STEEL PIPE	LF													40	30	70 ⊙
*	SCUPPER, TYPE D	EA													1	1	2
*	SCUPPER, TYPE E	EA													2	2	4
*	SCUPPER, TYPE F	EA													2		2
*	SCUPPER, TYPE G	EA														1	1
*	BRIDGE BEARING, POT TYPE "A"	EA														2	2 ⊙
*	BRIDGE BEARING, POT TYPE "B"	EA													2		2 ⊙
*	SIDEWALK PROTECTIVE FENCE - 8'-0" HIGH	LF													365	346	711
*	SIDEWALK PROTECTIVE FENCE - 5'-8" HIGH	LF	10												84		94
*	PARAPET PROTECTIVE FENCE - 5'-8" HIGH	LF													432	360	792
*	PEDESTRIAN RAILING	LF											70			15	85
*	NO. 57 COARSE AGGREGATE	CY	5									5					10
*	GEOTEXTILES, CLASS I	SY	35									29					64
1005-1102	STEEL BEAM BEARING PILES, HP 10x57	LF	1950	439	928	771	663	1228	923	937	909	1120	1250	355			11,473 ⊙
1005-1152	STEEL BEAM PILE TIP REINF., HP 10x57	EA	97	27	24	20	16	22	16	16	16	19	21	6			300
1018-0050	REMOVAL OF PORTION OF EXISTING BRIDGE	LS															(1200 TONS) ⊙
2000-1300	DYNAMIC PILE TEST-INITIAL DRIVING	EA															4 ∓ ⊙
2000-1400	DYNAMIC PILE TEST-REDRIVING	EA															4 ∓ ⊙

* QUANTITIES SHOWN ARE FOR INFORMATION ONLY, ALL WORK IS INCLUDED IN ITEM NO. 2000-1001.

∓ FOR COMPARISON OF BIDS ONLY, ACTUAL QUANTITY WILL VARY AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION.

APPROXIMATE QUANTITY FOR LUMP SUM ITEM IN ( ) FOR INFORMATION ONLY.

FOR ITEM NO. 1018-0050, THE QUANTITY INCLUDES ALL STEEL FOR APPROACH SPANS AND BENTS, AND ROADWAY GRATING, SIDEWALK RAILING, SIDEWALK STRINGER, AND PROTECTION PLATES FOR THE TRUSS SPANS.

⊠ DOES NOT INCLUDE CONCRETE IN VALLEY OF STAY-IN-PLACE FORMS.

Δ DOES NOT INCLUDE JB-25 AND CONDUITS.

ALL QUANTITIES ARE APPROXIMATE.

⊙ INDICATES SPECIAL PROVISION WRITTEN FOR ITEM.

FOR ITEM 1005-1152, THE QUANTITY INCLUDES PILE TIPS FOR TEST PILES.

DES.	MJP
DWN.	DMY
CHK.	EAD

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ESTIMATE OF STRUCTURE QUANTITIES

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 3 OF 98
S-15296

D 9002 (2-83) 6-83 A1329*

ESTIMATE OF QUANTITIES
BRIDGE STRUCTURE AS DESIGNED. S-15296 (REHABILITATED TRUSS SPANS)

ITEM NO.	DESCRIPTION	UNIT	PIER 5	PIER 6	PIER 7	PIER 8	SPAN 6	SPAN 7	SPAN 8	TOTAL
1002-0053	REINFORCEMENT BARS, EPOXY COATED	LB					2830	2830	1415	7075 ⊙
1012-0001	PEDESTRIAN RAILING	LF					406	403	202	1011
1021-0002	ARMORED PREFORMED NEOPRENE COMPRESSION DAM, 1"MOV.	LF		32						32 ⊙
1056-0100	FABRICATED STRUCTURAL STEEL	LB					82,140	82,140	41,920	206,200 ⊙
1056-0110	FABRICATED STRUCTURAL STEEL, GALVANIZED	LB					94,850	94,850	47,425	237,125 ⊙
1056-0400	WELDING	LF					3	3	3	9 ⊕ ⊙
1056-0450	FLAME CUTTING	EA					1	1	1	3 ⊕ ⊙
1056-0460	FLAME SHORTENING	EA					1	1	1	3 ⊕ ⊙
1070-0001	PAINTING EXISTING STRUCTURAL STEEL	LS					(694 TONS)	(694 TONS)	(263 TONS)	LS ⊙
1090-0025	REPAIR EXPANSION BEARING	EA			2					2 ⊙
2000-1007	STEEL BEAM BRIDGE FLOORING	SF					9900	9900	4950	24,750 ⊙
2000-1008	2" FILLED STEEL GRID SIDEWALK FLOORING	SF					2722	2734	1421	6877 ⊙
2000-1009	CLASS AA CEMENT CONCRETE, (SPECIAL)	CY					45	45	24	114 ⊙
2000-1010	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "A"	EA					4	4	1	9 ⊙
2000-1011	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "B"	EA					8	7		15 ⊙
2000-1012	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "C"	EA					2			2 ⊙
2000-1013	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "D"	EA					1			1 ⊙
2000-1014	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "E"	EA							5	5 ⊙
2000-1015	REPAIR TRUSS VERTICAL, PIN SUPPORT - TYPE "F"	EA							1	1 ⊙
2000-1016	ARMORED PREFORMED NEOPRENE STRIP SEAL DAM, 3"MOV.	LF				31				31 ⊙
2000-1017	ARMORED PREFORMED NEOPRENE STRIP SEAL DAM, 4"MOV.	LF			32					32 ⊙
2000-1018	REPAIR SLACK TRUSS DIAGONAL - TYPE "A"	EA					5			5 ⊙
2000-1019	REPAIR SLACK TRUSS DIAGONAL - TYPE "B"	EA					2	2	3	7 ⊙
2000-1020	CAULK EYEBAR HEADS	EA					5	2	5	12 ⊙
2000-1030	REPLACE ROADWAY STRINGER	EA					43	5	4	52 ⊙
2000-1040	REPLACE FLOORBEAM TOP FLANGE COVER PLATE	EA					1			1 ⊙
2000-1041	REPAIR FLOORBEAM BEARING STIFFENER	EA					2	1		3 ⊙
2000-1042	REPAIR INTERIOR FLOORBEAM BOTTOM FLANGE	EA							2	2 ⊙
2000-1043	REPAIR END FLOORBEAM END CONNECTION PLATE	EA					4	4	4	12 ⊙
2000-1050	REPLACE TOP CHORD BRACING - TYPE "A"	EA					2			2 ⊙
2000-1051	REPLACE TOP CHORD BRACING - TYPE "B"	EA					1			1 ⊙
2000-1060	REPLACE BOTTOM CHORD BRACING END GUSSET PLATE	EA					4	5	3	12 ⊙
2000-1070	REPLACE RIVET WITH H.S. BOLT, TOP CHORD WEB	EA					2			2 ⊙
2000-1071	REPLACE RIVET WITH H.S. BOLT, TRUSS MEMBER	EA						8	5	13 ⊙
2000-1072	REPLACE RIVET WITH H.S. BOLT, RANDOM	EA					2	2	2	6 ⊕ ⊙
2000-1080	INSPECT ROADWAY LIGHTING WELDED ATTACHMENT	EA					4	4	2	10 ⊙
2000-1090	INSPECT WELD REPAIR, TRUSS VERTICAL	EA					13	9	2	24 ⊙
2000-1091	INSPECT WELD REPAIR, TRUSS DIAGONAL	EA					4	1	5	10 ⊙
2000-1100	REPAIR TRUSS VERTICAL, CHANNEL WEB	EA							1	1 ⊙
2000-1101	REPAIR TRUSS DIAGONAL, CHANNEL WEB	LS					(1)			(1) ⊙
2000-1110	REPLACE TRUSS MEMBER, HORIZONTAL STRUT	EA					1			1 ⊙
2000-1130	REPAIR SIDEWALK END BRACKET	EA					1			1 ⊙
2000-1131	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "A"	EA					4	2		6 ⊙
2000-1132	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "B"	EA					1	5		6 ⊙
2000-1133	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "C"	EA					1	7		8 ⊙

ESTIMATE OF QUANTITIES (CONTINUED)
BRIDGE STRUCTURE AS DESIGNED. S-15296 (REHABILITATED TRUSS SPANS)

ITEM NO.	DESCRIPTION	UNIT	PIER 5	PIER 6	PIER 7	PIER 8	SPAN 6	SPAN 7	SPAN 8	TOTAL
2000-1134	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "D"	EA					1	1		2 ⊙
2000-1135	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "E"	EA							1	1 ⊙
2000-1136	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "F"	EA							1	1 ⊙
2000-1137	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "G"	EA							1	1 ⊙
2000-1138	REPAIR SIDEWALK INTERIOR BRACKET - TYPE "H"	EA							1	1 ⊙
2000-1140	CLEAN & LUBRICATE EXPANSION BEARING	EA	2		2	2				6 ⊙
2000-1150	INSPECT STRINGER BOTTOM FLANGE WELD ATTACHMENT	EA							539	539 ⊙
2000-1160	REMOVE MOORING CHAIN - PIER 6	LS		(120 LF)						LS ⊙
2000-1170	INSTALL MASONRY ANCHOR - PIER 6	EA		4						4 ⊙
2000-1180	REPOINT MASONRY MORTAR JOINTS - DRY	LF		122						122 ⊙
2000-1181	REPOINT MASONRY MORTAR JOINTS - BELOW WATER	LF		34						34 ⊙
2000-1190	SANDBLAST CLEAN EXPOSED MASONRY	SF	3200	6850	4650	1400				16,100 ⊙
2000-1200	REPAIR DAMAGED TRUSS MEMBER	LS							LS	LS ⊙
2000-1210	REINFORCE TRUSS DIAGONAL - TYPE "A"	LS					(1)			LS ⊙
2000-1211	REINFORCE TRUSS DIAGONAL - TYPE "B"	LS					(1)			LS ⊙
2000-1212	REINFORCE TRUSS DIAGONAL - TYPE "C"	LS							(2)	LS ⊙
2000-1213	REINFORCE TRUSS DIAGONAL - TYPE "D"	LS							(1)	LS ⊙
2000-1214	REINFORCE TRUSS DIAGONAL - TYPE "E"	LS							(1)	LS ⊙
2000-1220	REHABILITATE TOP PIER 5	LS	LS							LS ⊙
2000-1230	REHABILITATE TOP PIER 8	LS				LS				LS ⊙
2000-1240	NAVIGATION LIGHT SUPPORT REPAIR - TYPE "A"	EA						1		1 ⊙
2000-1241	NAVIGATION LIGHT SUPPORT REPAIR - TYPE "B"	EA						2		2 ⊙
2000-1242	INSPECT EXISTING NAVIGATION LIGHT SUPPORT	EA						2		2 ⊙
2000-1250	ROADWAY LIGHT SUPPORT - TYPE "A"	EA							2	2 ⊙
2000-1251	ROADWAY LIGHT SUPPORT - TYPE "B"	EA					4	4		8 ⊙

⊕ QUANTITIES SHOWN ARE FOR BIDDING PURPOSES ONLY.
QUANTITY FOR LUMP SUM ITEM IN ( ) FOR INFORMATION ONLY.
⊙ INDICATES SPECIAL PROVISION WRITTEN FOR ITEM

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	REW
DWN.	DMY
CHK.	EAD

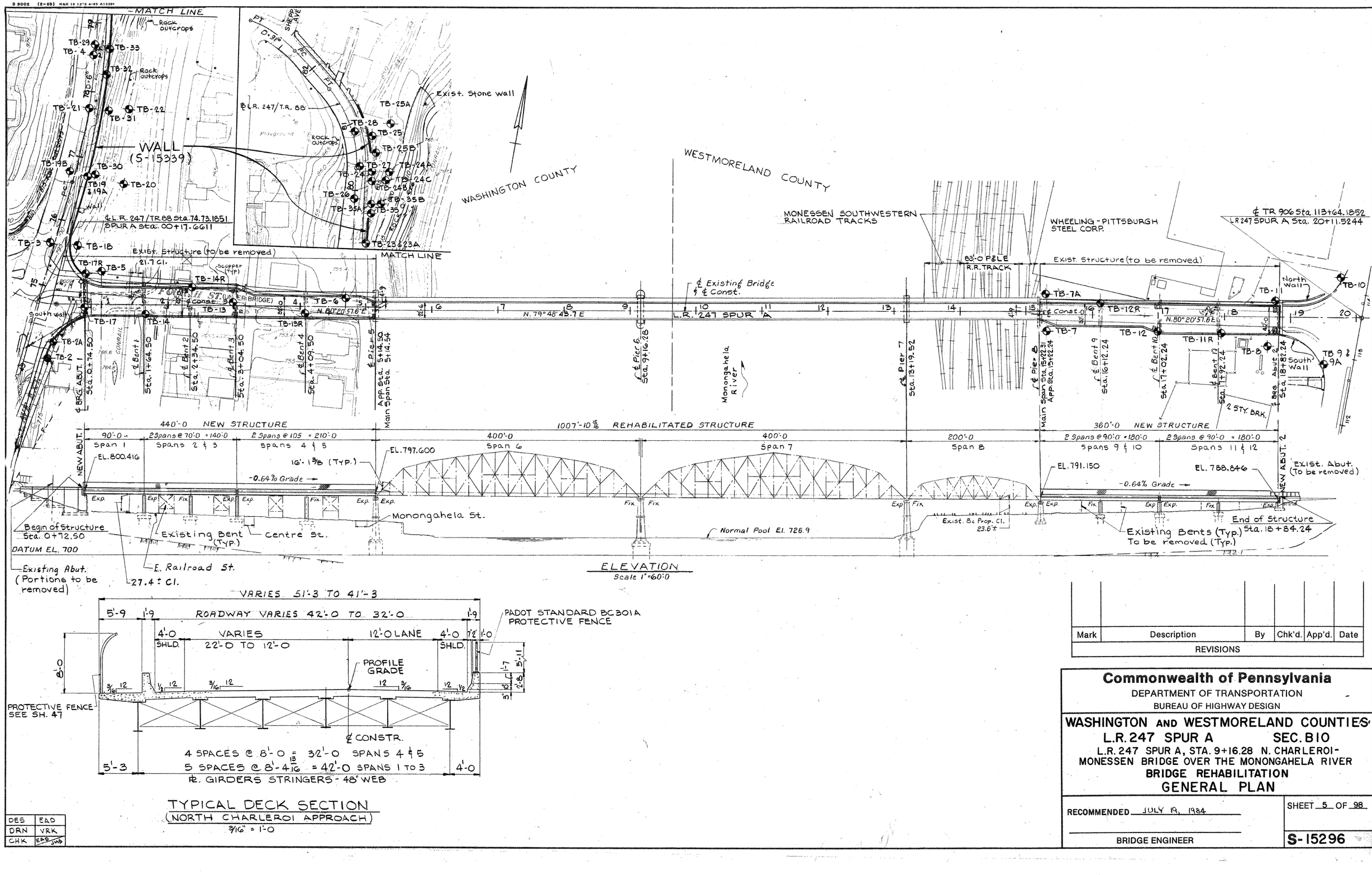
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ESTIMATE OF STRUCTURE QUANTITIES

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 4 OF 98
S- 15296

D 9002 (2-83) KAK 19 12'83 4-83 A1329+



ELEVATION
Scale 1"=60'0

TYPICAL DECK SECTION
(NORTH CHARLEROI APPROACH)
3/16" = 1'-0

DES	EAD
DRN	VRK
CHK	EAD JWB

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

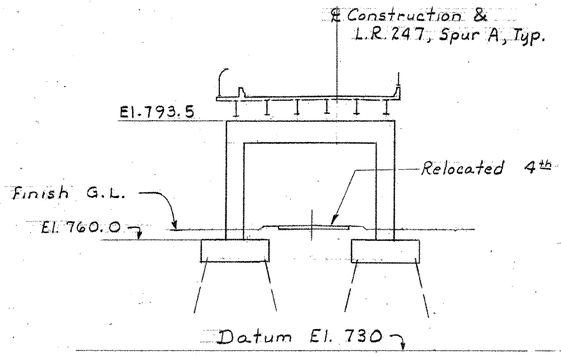
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
GENERAL PLAN

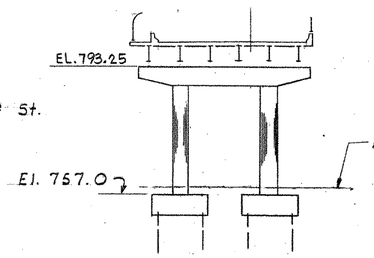
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 5 OF 98
S-15296

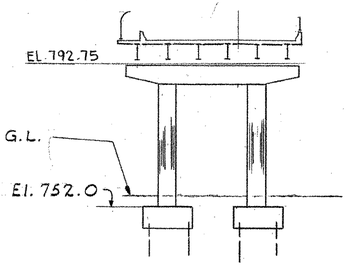
D 9002 (2-83) KAE 19 1253 4-83 A1329*



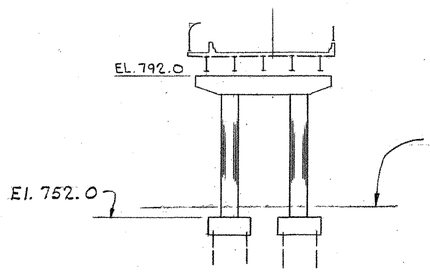
BENT 1



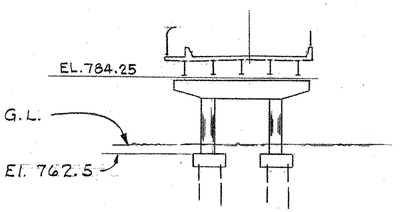
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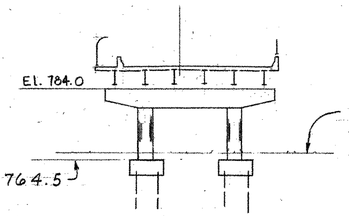
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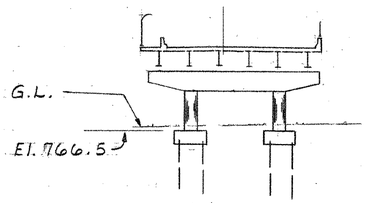


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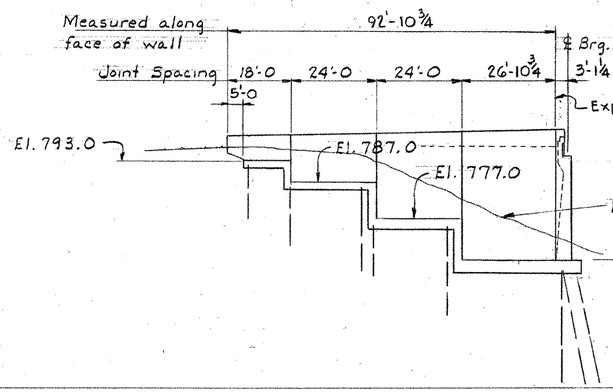
BENT 9



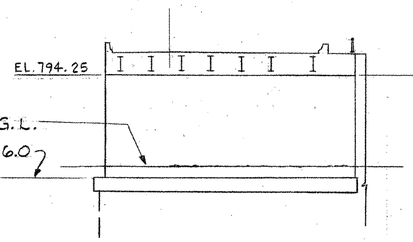


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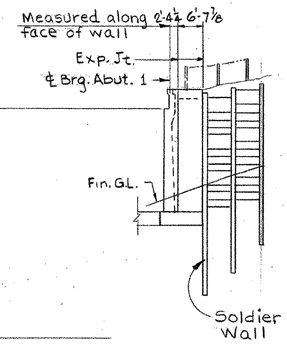
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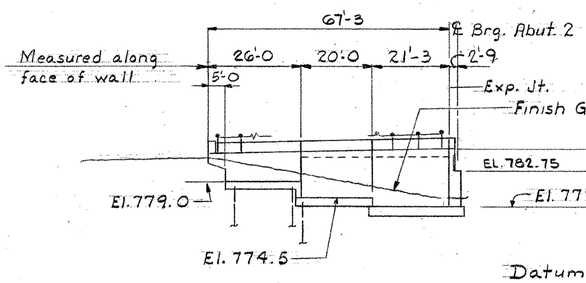
ABUT. 1 - SOUTH WING



ABUTMENT 1

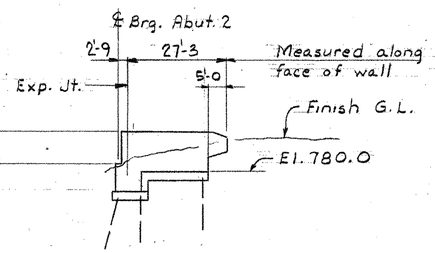


ABUT. 1 NORTH WING



ABUT. 2 - NORTH WING

ABUTMENT 2



ABUT. 2 - SOUTH WING

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES.	R.L.F.
DWN.	A.V.G.
CHK.	R.W.B.

Scale : 1" = 20'-0

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI – MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION

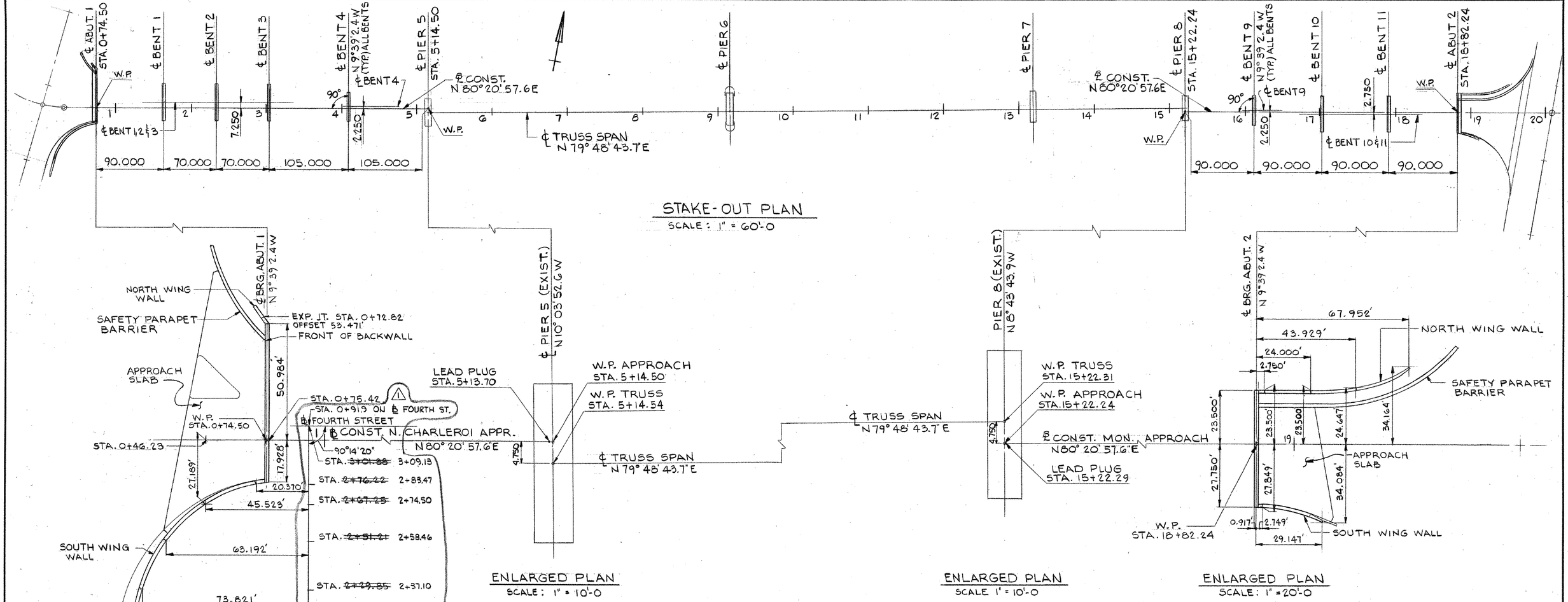
ELEVATIONS AND SECTIONS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 6 OF 98

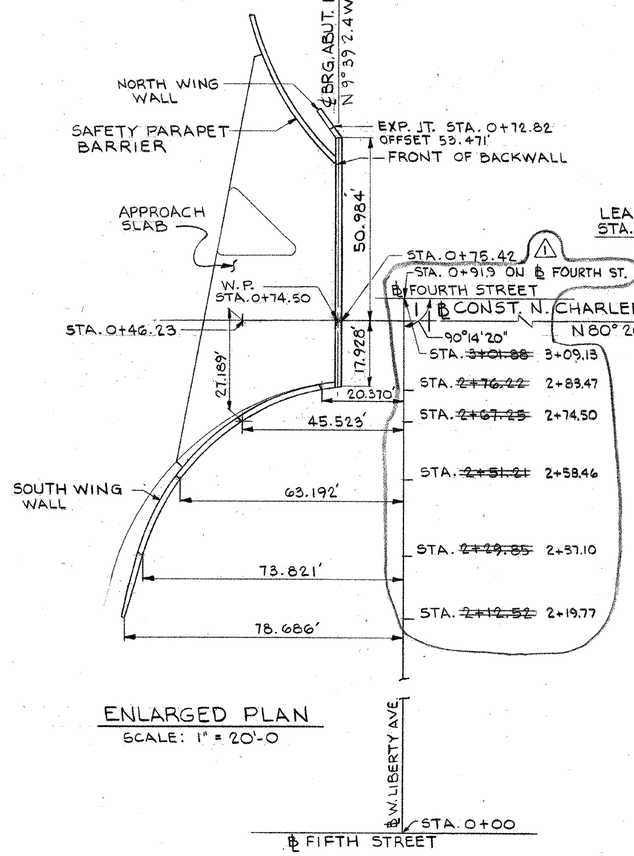
S- 15296

D 9002 (2-83) K&E 10 1253 4-83 A1329*



STAKE-OUT PLAN

SCALE : 1" = 60'-0



ENLARGED PLAN
SCALE: 1" = 20'-0

ENLARGED PLAN
SCALE: 1" = 10'-0

ENLARGED PLAN
SCALE 1" = 10'-0

ENLARGED PLAN
SCALE: 1" = 20'-0

NOTE
FOR GEOMETRY & DETAILS OF SAFETY PARAPET BARRIER & APPROACH SLAB, SEE ROADWAY PLANS SHEETS 10, 11, 27 & 28.

Mark	Description	By	Chk'd.	App'd.	Date
⚠	REVISED STATIONS	G.P.H.	~~ERW~~	GWT	12-12-84
REVISIONS					

DES	~~EAD~~ RLF		
DRN	V.R.K		
CHK	GRM		

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

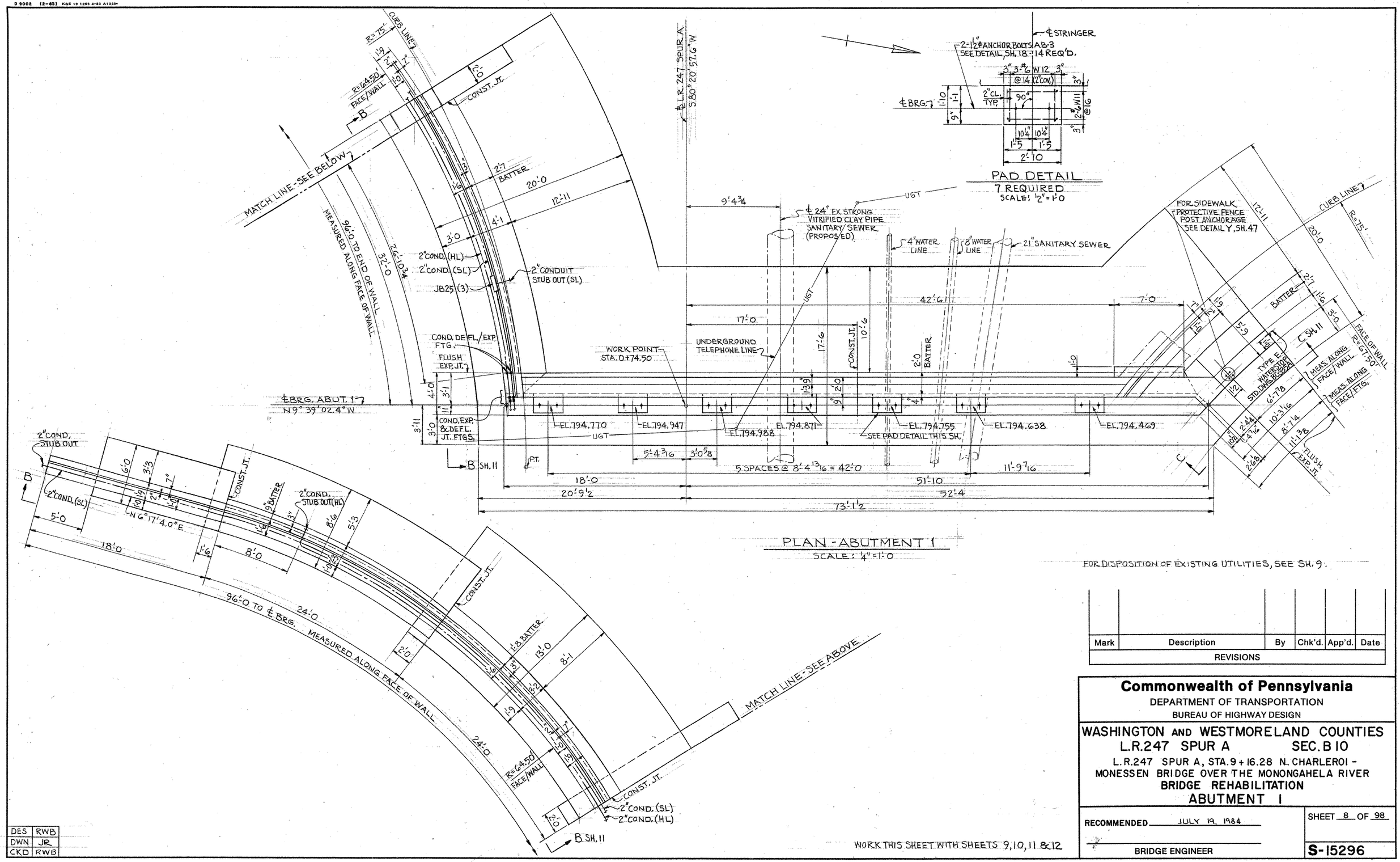
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STAKE-OUT PLAN

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 7 OF 98

S-15296

D 9002 (2-83) KAE 19 1253 4-83 A1325*



PLAN - ABUTMENT 1
SCALE: 1" = 1'-0

FOR DISPOSITION OF EXISTING UTILITIES, SEE SH. 9.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	RWB
DWN	JR
CKD	RWB

WORK THIS SHEET WITH SHEETS 9, 10, 11 & 12

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

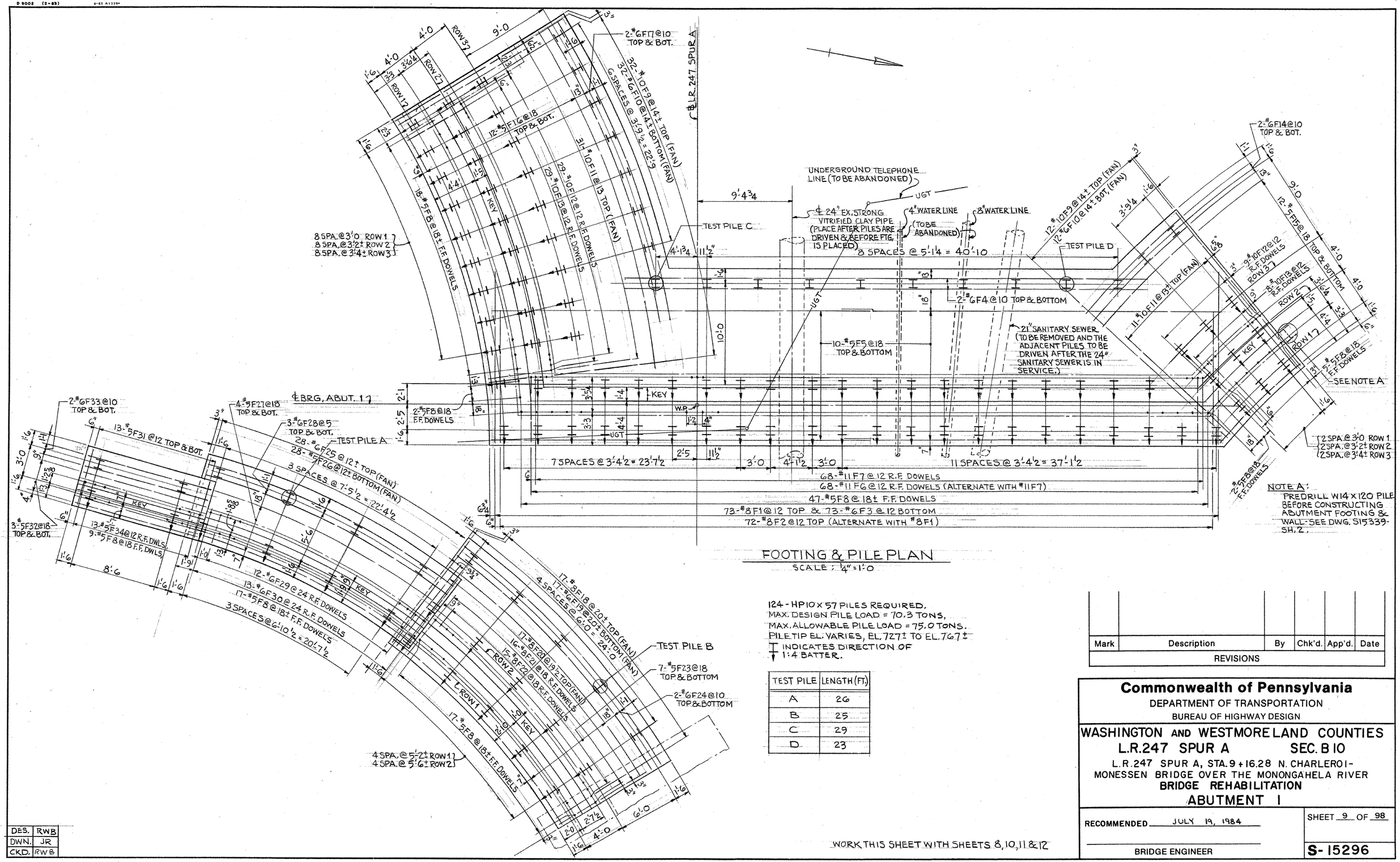
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 8 OF 98

S-15296

D 9002 (2-83) 4-83 A1329+



NOTE A:
PREDRILL W14 x 120 PILE BEFORE CONSTRUCTING ABUTMENT FOOTING & WALL - SEE DWG. 515339-SH. 2.

FOOTING & PILE PLAN

SCALE: ¼" = 1'-0

124 - HP10 x 57 PILES REQUIRED.
MAX. DESIGN PILE LOAD = 70.3 TONS,
MAX. ALLOWABLE PILE LOAD = 75.0 TONS.
PILE TIP EL. VARIES, EL. 727± TO EL. 767±
⊥ INDICATES DIRECTION OF 1:4 BATTER.

TEST PILE	LENGTH (FT.)
A	26
B	25
C	29
D	23

WORK THIS SHEET WITH SHEETS 8, 10, 11 & 12

DES.	RWB
DWN.	JR
CKD.	RWB

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

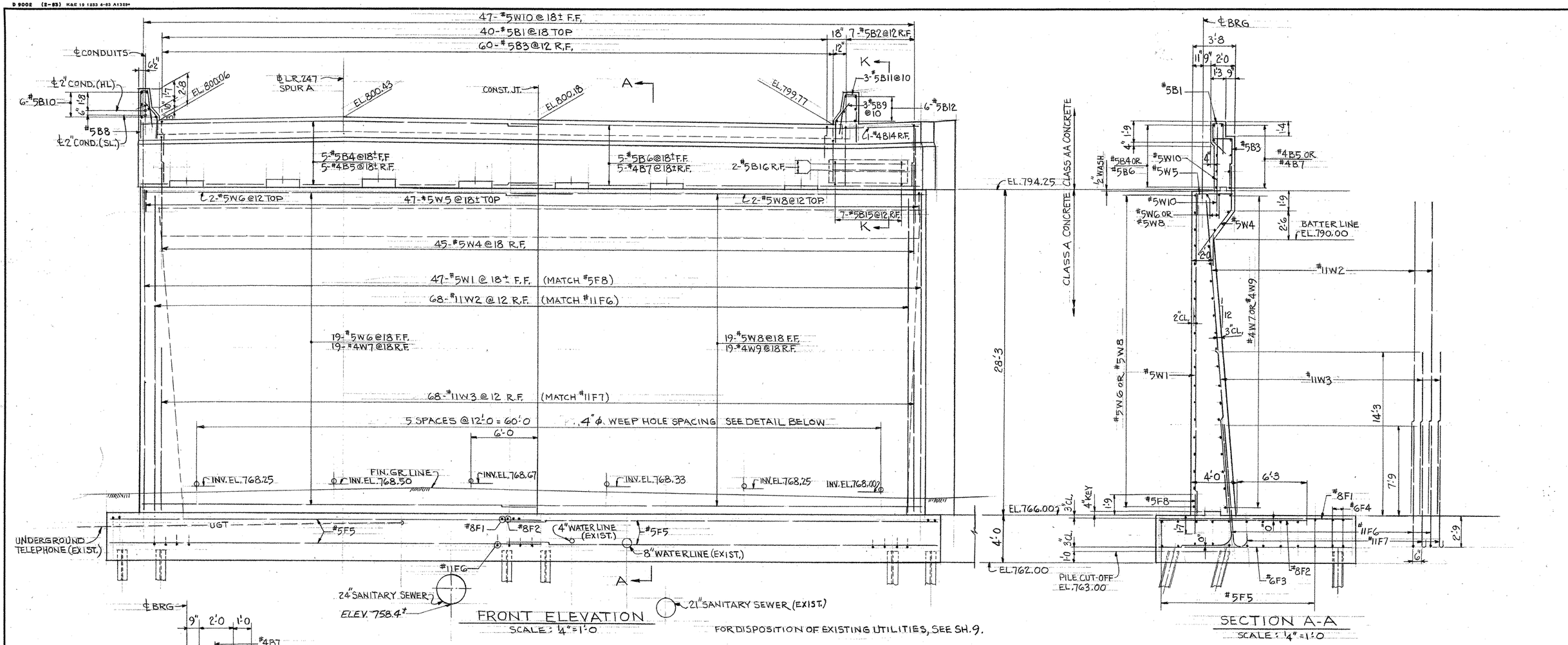
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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WASHINGTON AND WESTMORELAND COUNTIES
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BRIDGE REHABILITATION
ABUTMENT 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 9 OF 98
S-15296

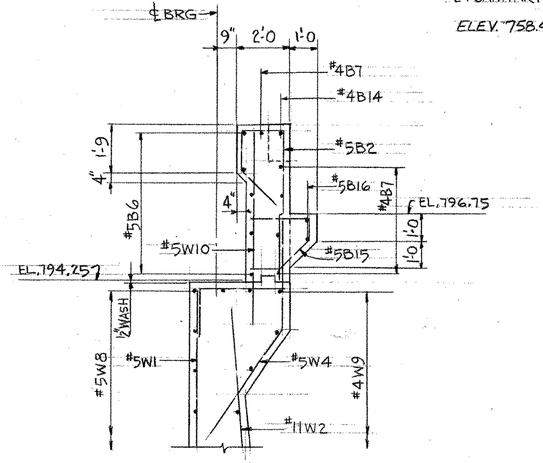
D 9002 (2-83) KAE 10 1253 4-83 A1329+



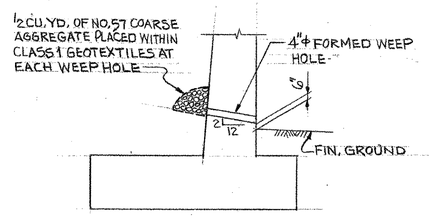
FRONT ELEVATION
SCALE: ¼" = 1'-0

FOR DISPOSITION OF EXISTING UTILITIES, SEE SH. 9.

SECTION A-A
SCALE: ¼" = 1'-0



SECTION K-K
SCALE: ⅜" = 1'-0



WEEP HOLE DETAIL
NO SCALE

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 1

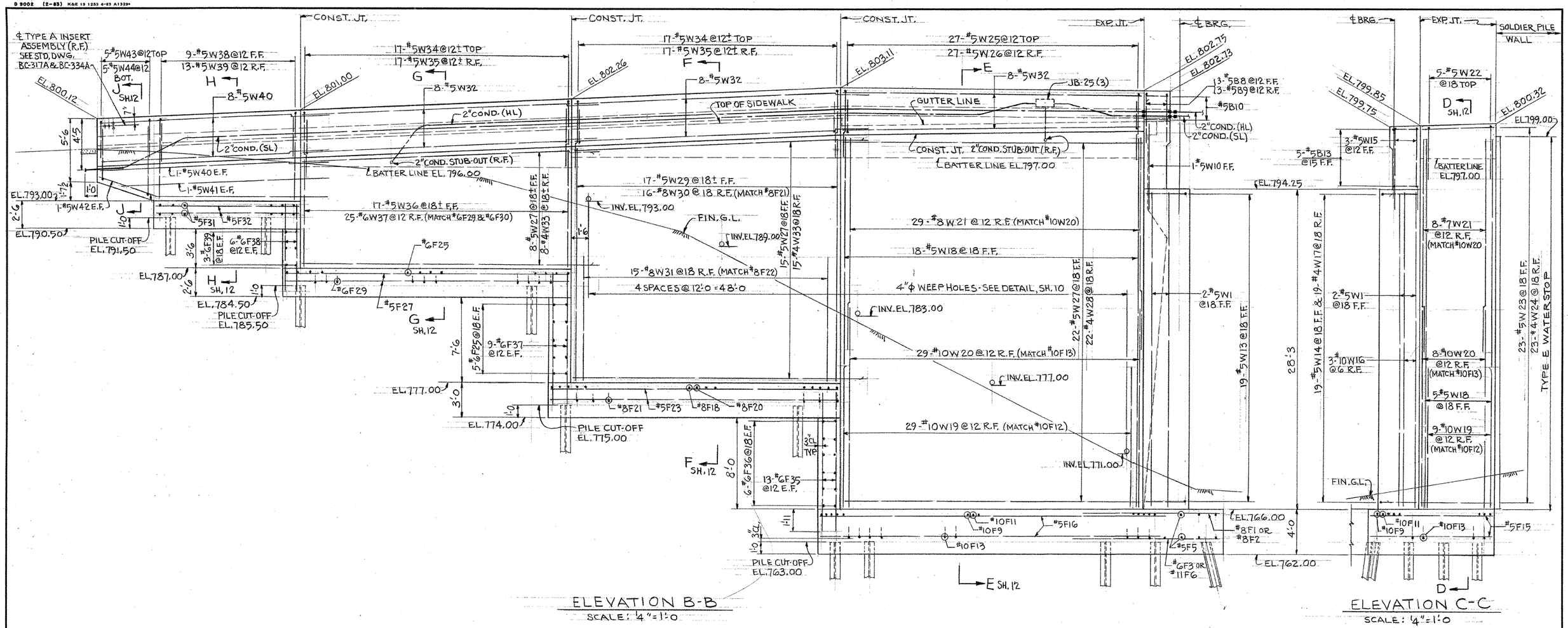
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 10 OF 98
S-15296

DES	RWB
DWN	JR
CKD	RWB

WORK THIS SHEET WITH SHEETS 8, 9, 11 & 12.

D 9002 (2-83) KAE 10 1253 4-83 A1329



ELEVATION B-B
SCALE: 1/4"=1'-0

ELEVATION C-C
SCALE: 1/4"=1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
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BRIDGE REHABILITATION
ABUTMENT 1

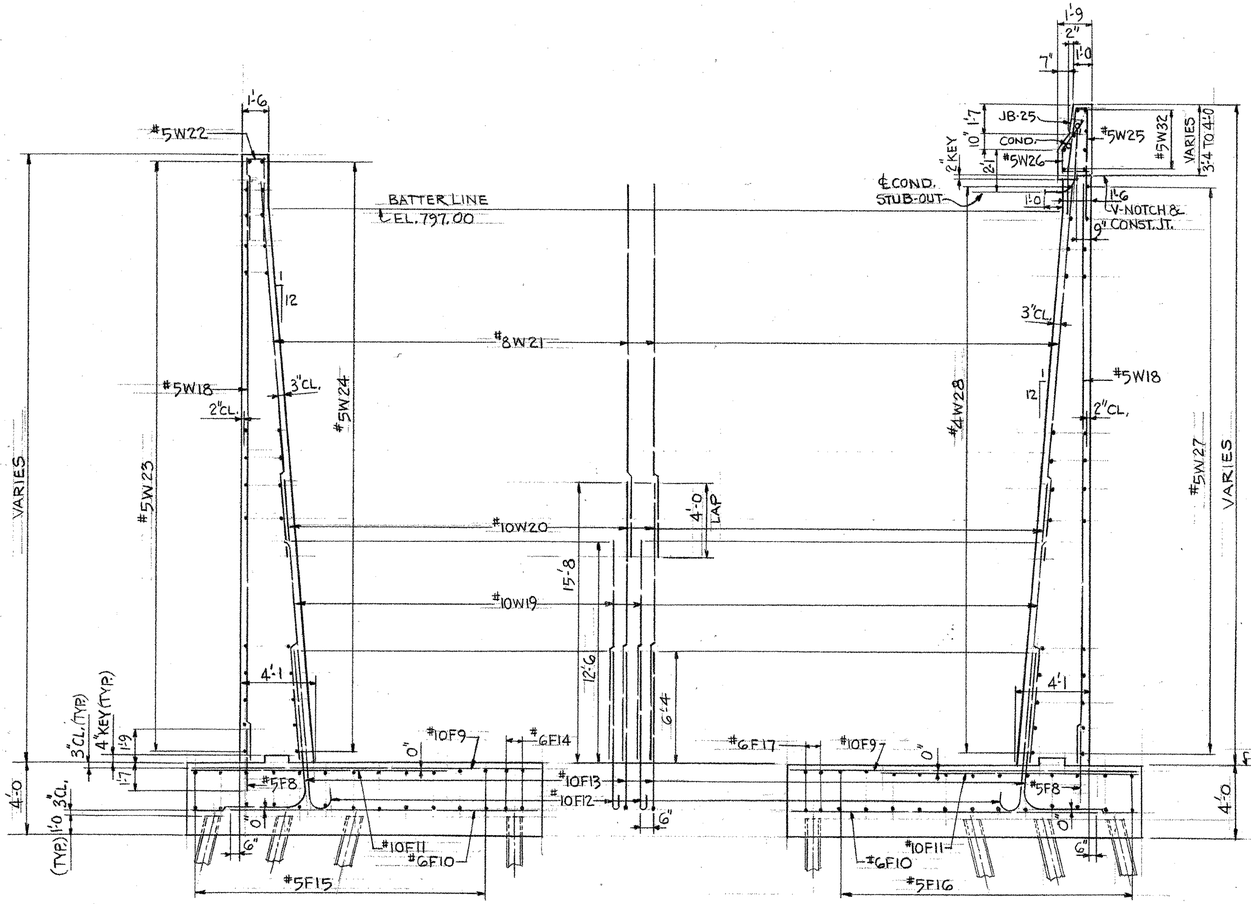
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 11 OF 98
S- 15296

DES	RWB
DWN	JR
CKD	RWB

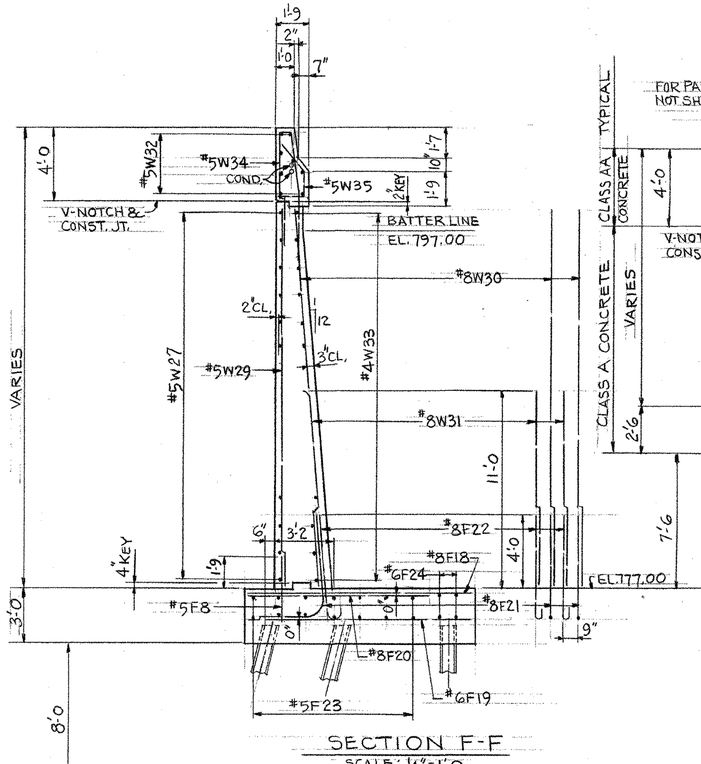
WORK THIS SHEET WITH SHEETS 8, 9, 10 & 12.

D 9002 (2-83) 4-83 A1329*

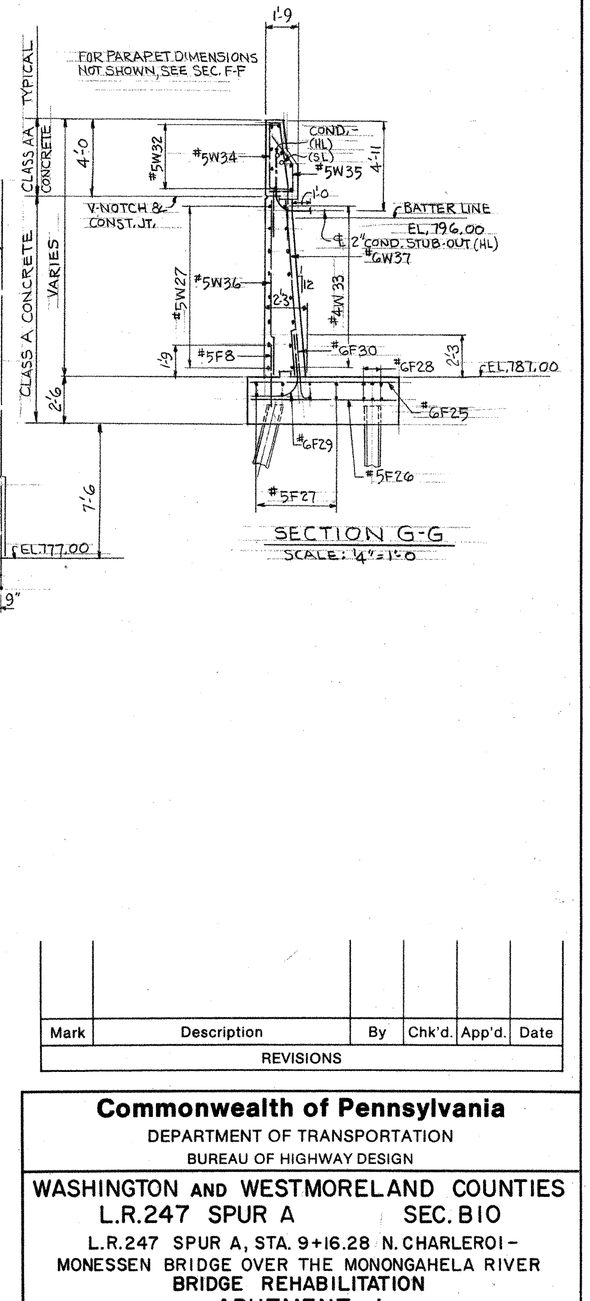


SECTION D-D
SCALE: 1/4"=1'-0

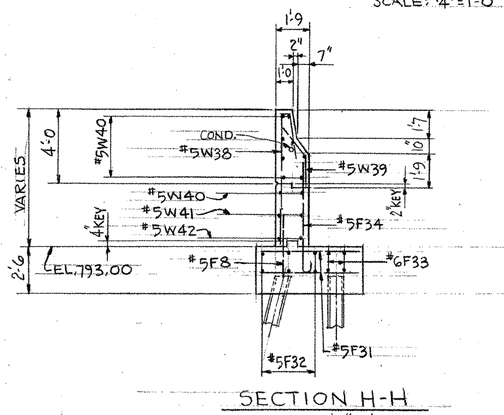
SECTION E-E
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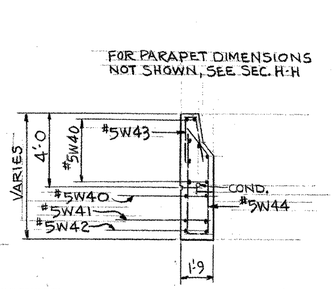
SECTION F-F
SCALE: 1/4"=1'-0



SECTION G-G
SCALE: 1/4"=1'-0



SECTION H-H
SCALE: 1/4"=1'-0



SECTION J-J
SCALE: 1/4"=1'-0

DES	RWB
DWN	JR
CKD	RWB

WORK THIS SHEET WITH SHEETS 8, 9, 10 & 11.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

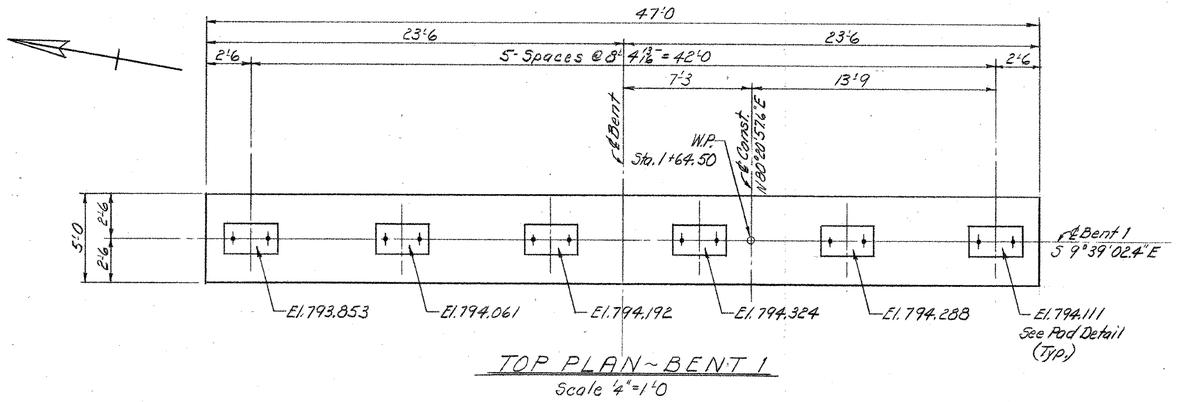
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI – MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

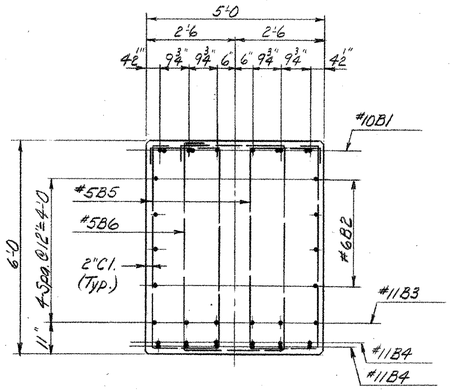
SHEET 12 OF 98

S- 15296

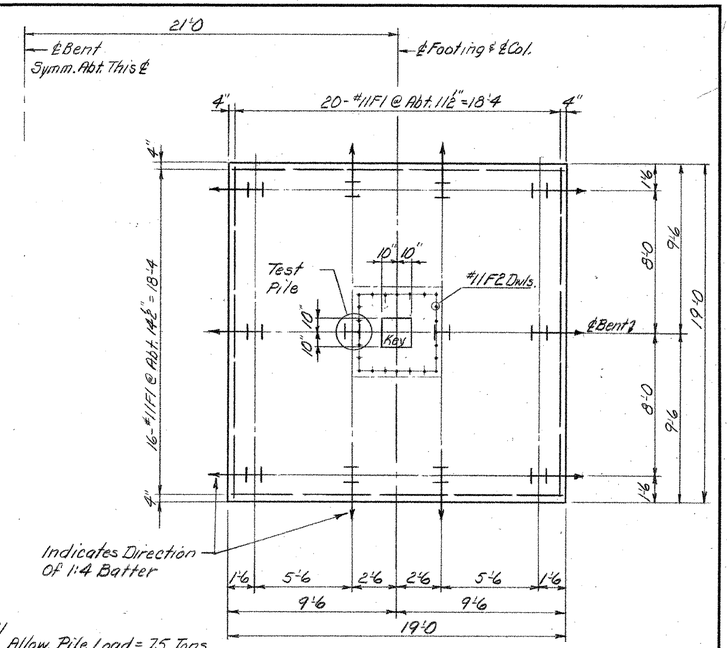
D 9002 (2-85) K&E 19 1253 4-83 A1329*



TOP PLAN ~ BENT 1
Scale 4" = 1'0

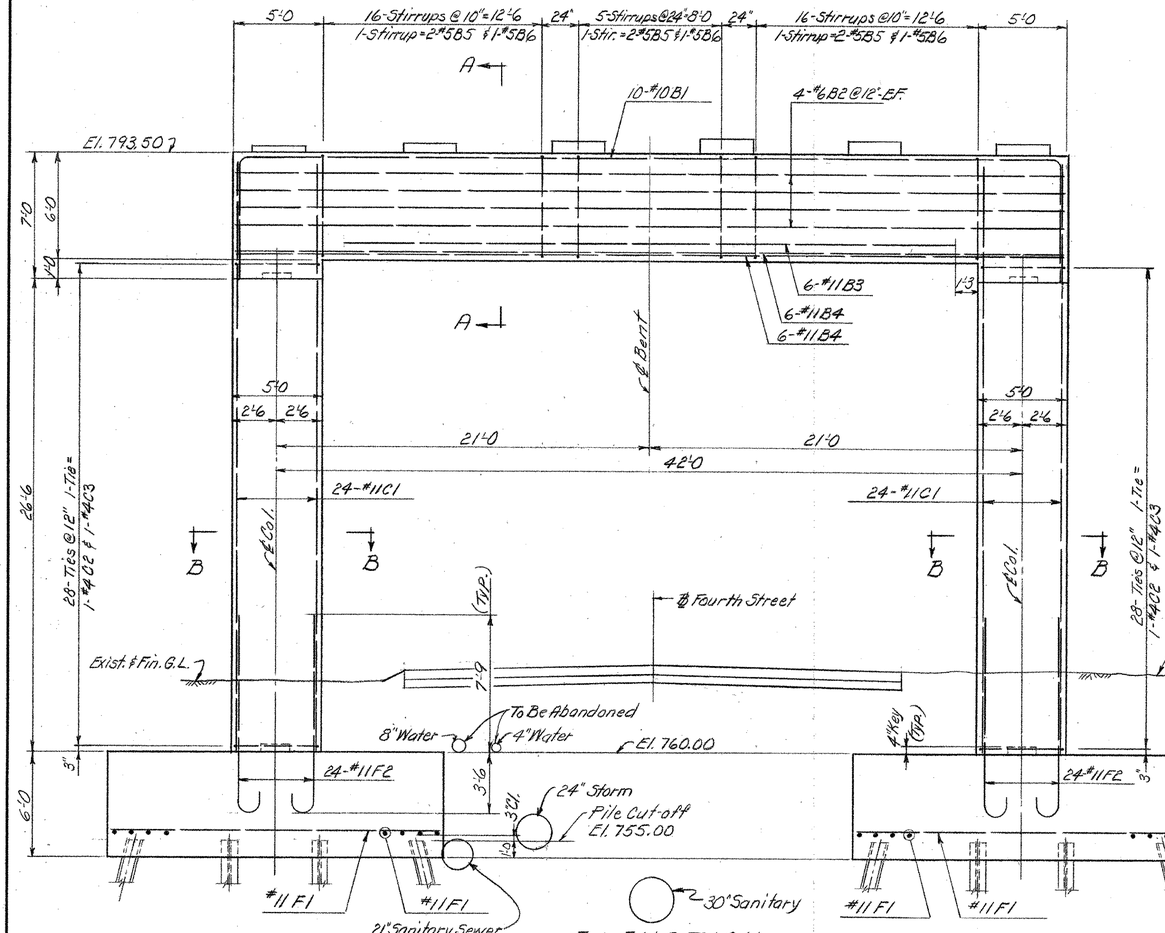


SECTION A-A
Scale 1/2" = 1'0



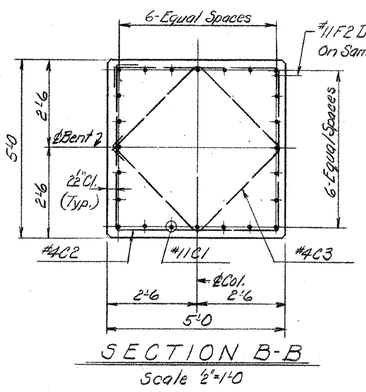
Allow. Pile Load = 75 Tons
Max. Design Pile Load = 75 Tons.
Estimated Pile Tip El. 714±

FOOTING PLAN
12- HP10x57 Piles Req'd. Each Ftg.
Scale 4" = 1'0

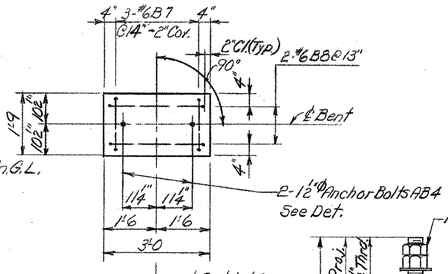


ELEVATION
Scale 4" = 1'0

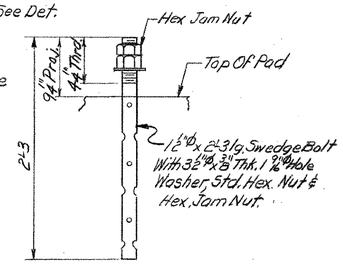
Place 30" Sanitary Sewer Prior To Ftg. Const.
Place 24" Storm Sewer After Ftg. Const.



SECTION B-B
Scale 1/2" = 1'0



PAD DETAIL
Typ. For 6
Scale 2" = 1'0



ANCHOR BOLT AB4
12 Req'd.

For Reinf. Bar Schedule, See Sh. 24.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Des.	RLF
Dwn.	NWB
Chk	RWB

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

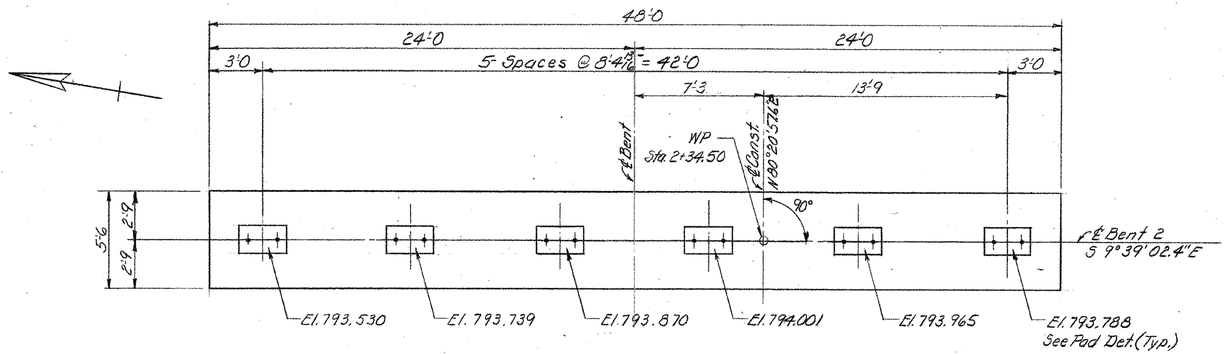
WASHINGTON - WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
BENT 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

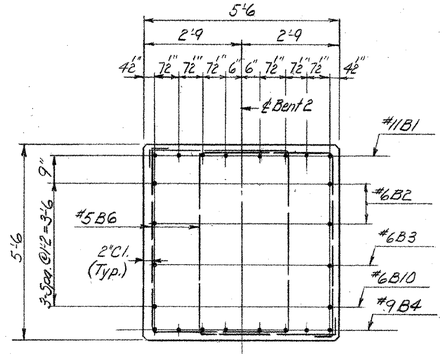
SHEET 13 OF 98
S-15296

D 9002 (2-89) K&E 19 1253 4-93 A1329*



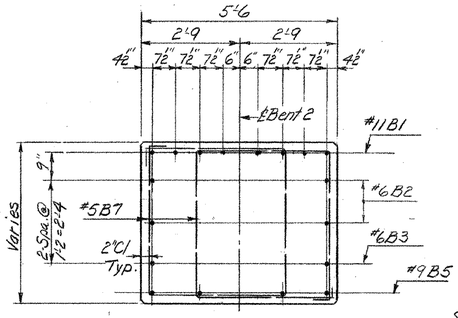
TOP PLAN ~ BENT 2

Scale 4" = 1'-0



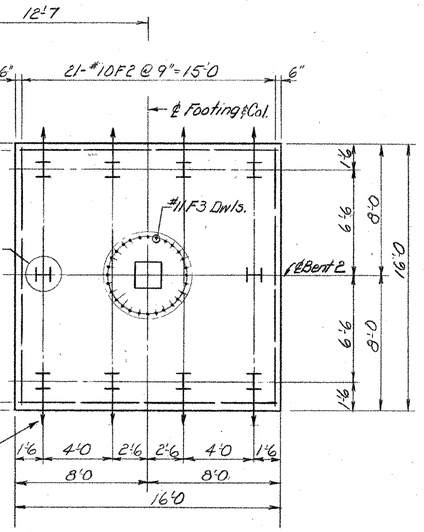
SECTION A-A

Scale 2" = 1'-0



SECTION B-B

Scale 2" = 1'-0

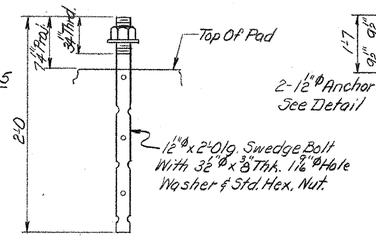


Allow. Pile Load = 75 Tons
Max. Design Pile Load = 70.8 Tons
Estimated Pile Tip El. 710±

FOOTING PLAN

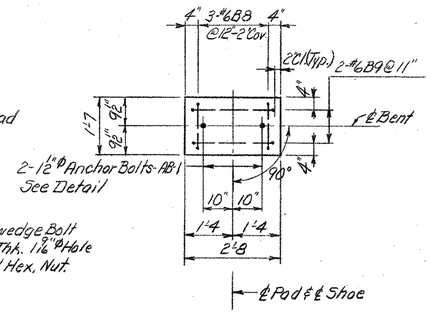
10-HP 10x57 Piles Req'd. Eq. Ftg.

Scale 4" = 1'0



ANCHOR BOLT AB-1

12-Req'd. Bent 2
24-Req'd. Bent 3



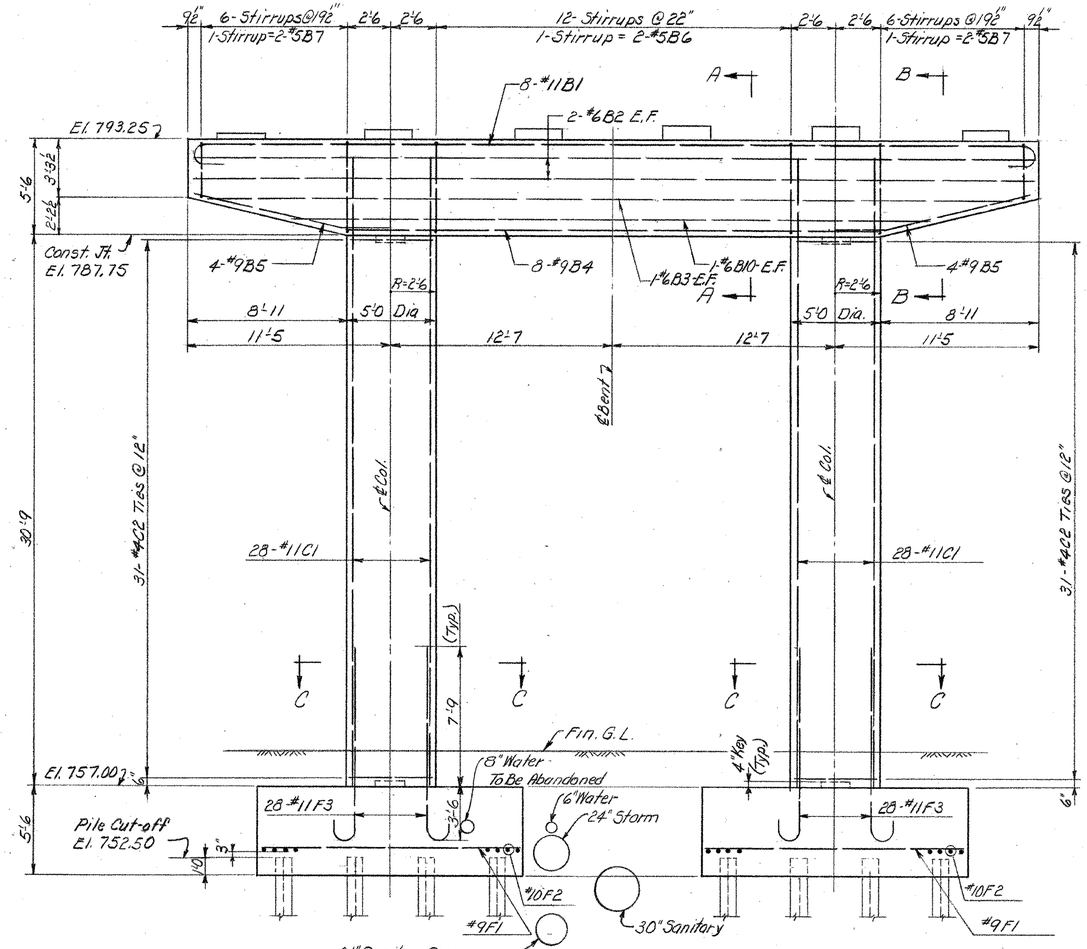
PAD DETAIL

Typ. For 6

Scale 2" = 1'-0

SECTION C-C

Scale 2" = 1'-0



ELEVATION

Scale 4" = 1'-0

Place 30" Sanitary Sewer Prior To Ftg. Const.
Place 24" Storm Sewer & 6" Water After Ftg. Const.

For Reinf. Bar Schedule, See Sh. 24.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	RLF
Dwn.	NWB
Chk.	RWB

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R. 247 · SPUR A SEC. B10

L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

BENT 2

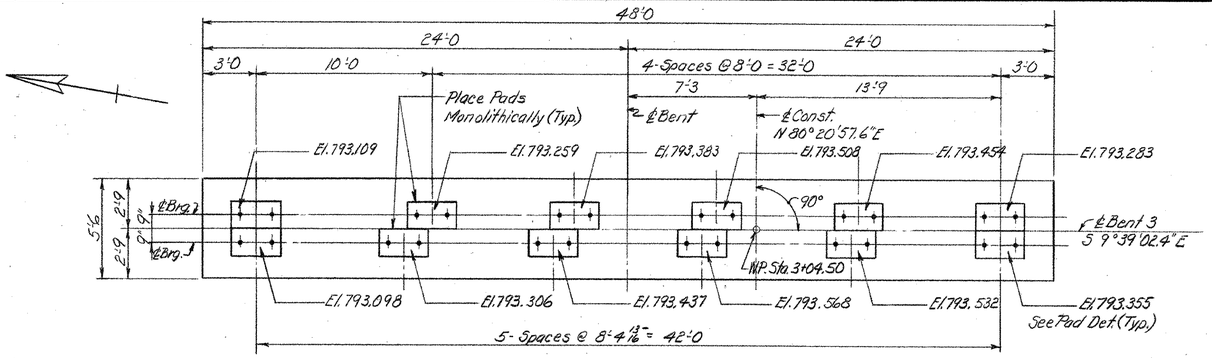
RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

SHEET 14 OF 98

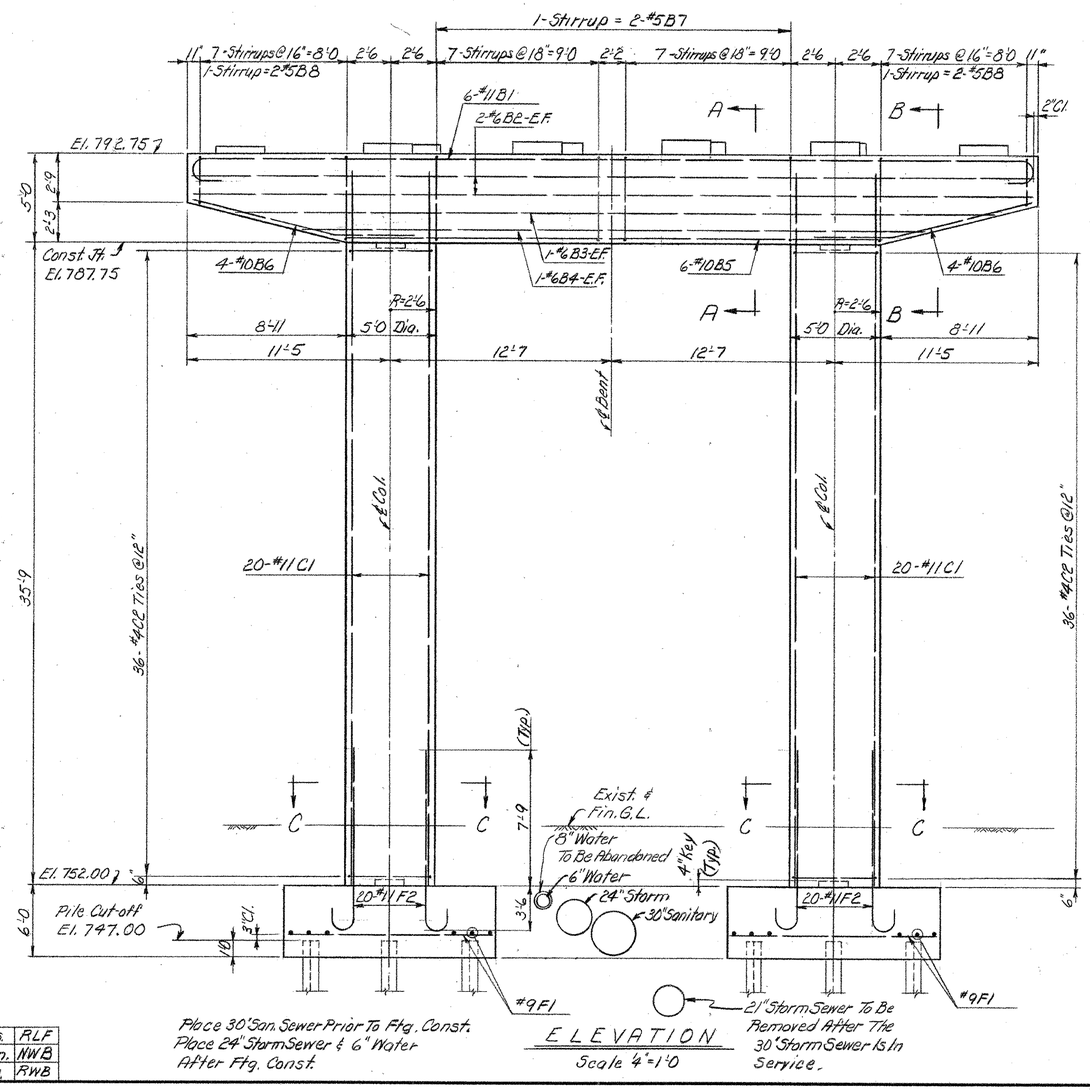
S-15296

D 9002 (2-83) KAE 19 1283 4-83 A1328*



TOP PLAN ~ BENT 3

Scale 1/4" = 1'0

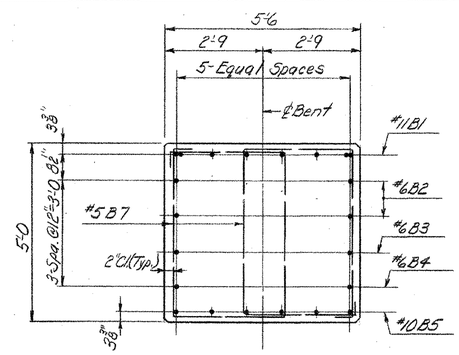


Place 30" San. Sewer Prior To Ftg. Const.
Place 24" Storm Sewer & 6" Water After Ftg. Const.

ELEVATION

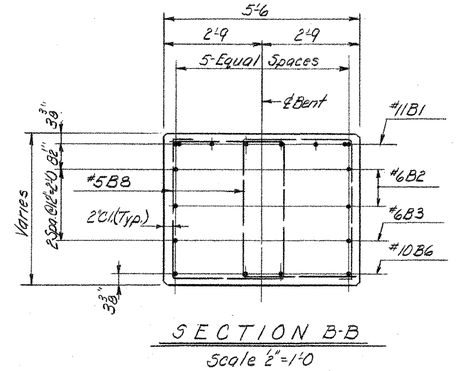
Scale 1/4" = 1'0

21" Storm Sewer To Be Removed After The 30" Storm Sewer Is In Service.



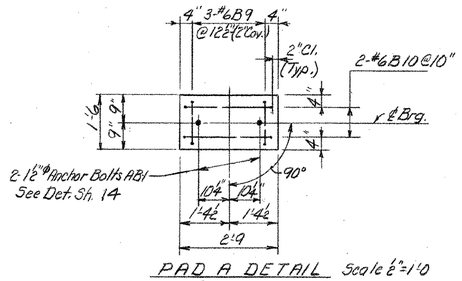
SECTION A-A

Scale 1/2" = 1'0



SECTION B-B

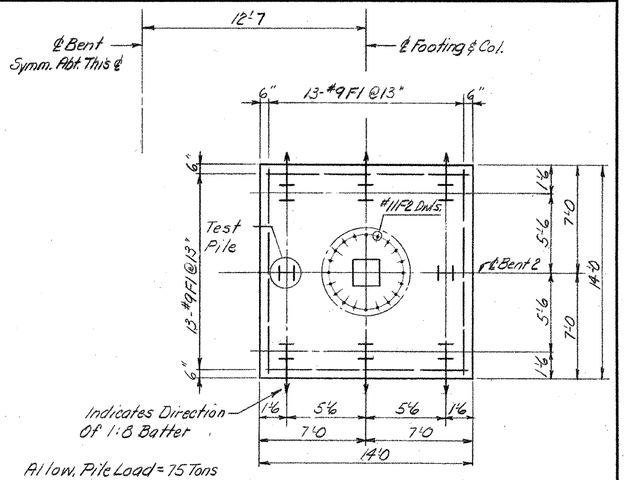
Scale 1/2" = 1'0



PAD A DETAIL Scale 1/2" = 1'0

12 - Req'd.

For Reinf. Bar Schedule, See Sh. 24.

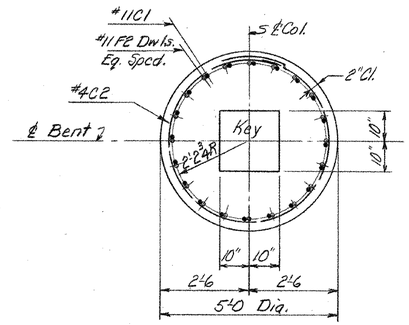


Allow. Pile Load = 75 Tons
Max. Design Pile Load = 60.0 Tons
Estimated Pile Tip El. 700±

FOOTING PLAN

8-HP10x57 Piles Req'd. Ea. Ftg.

Scale 1/4" = 1'0



SECTION C-C

Scale 1/2" = 1'0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Des.	RLF
Dwn.	NWB
Chk.	RWB

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

BENT 3

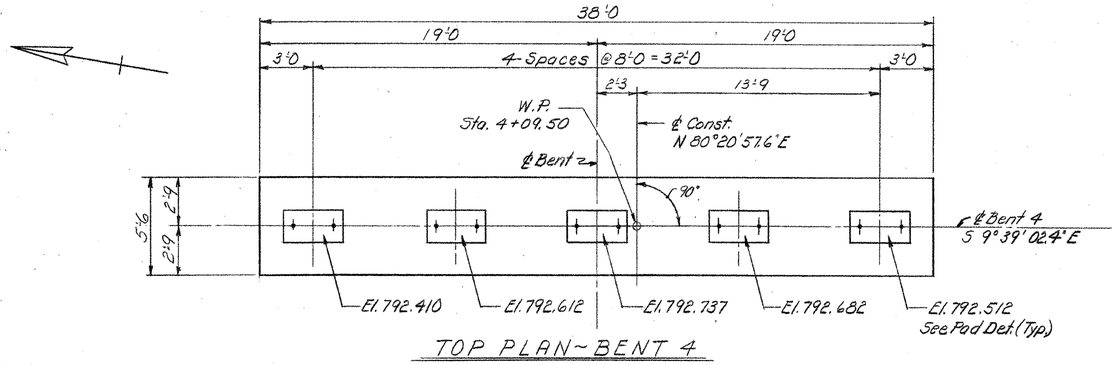
RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

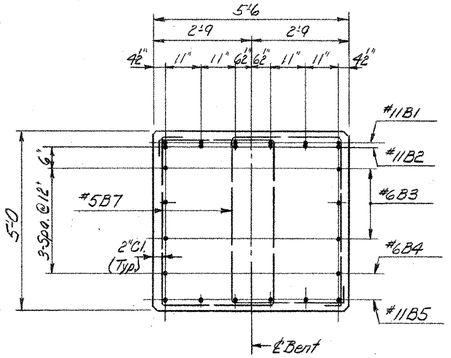
SHEET 15 OF 98

S-15296

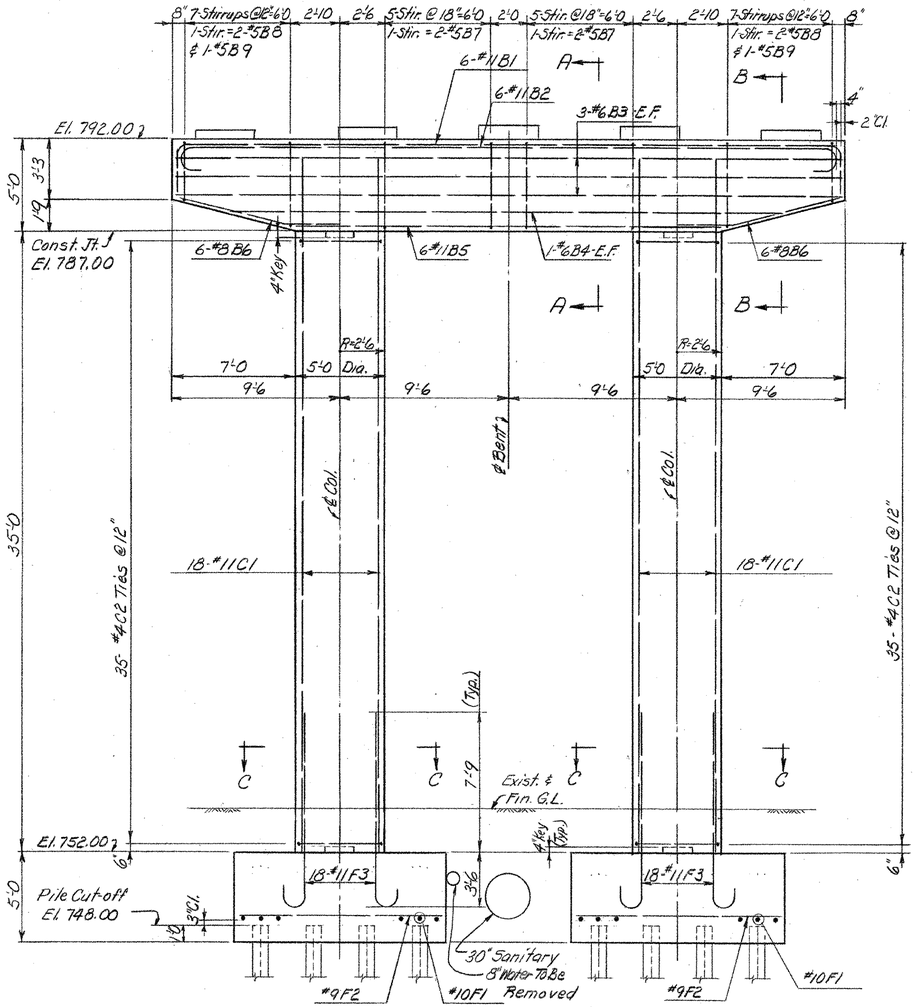
D 9002 (2-83) KBE 19 1253 4-83 A1329*



TOP PLAN ~ BENT 4

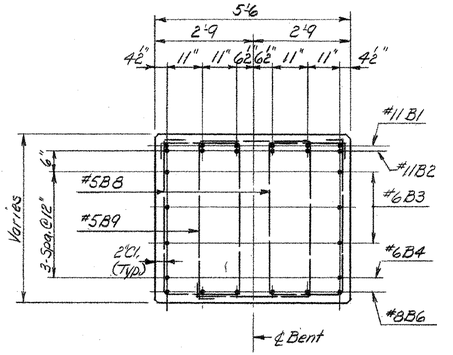


SECTION A-A

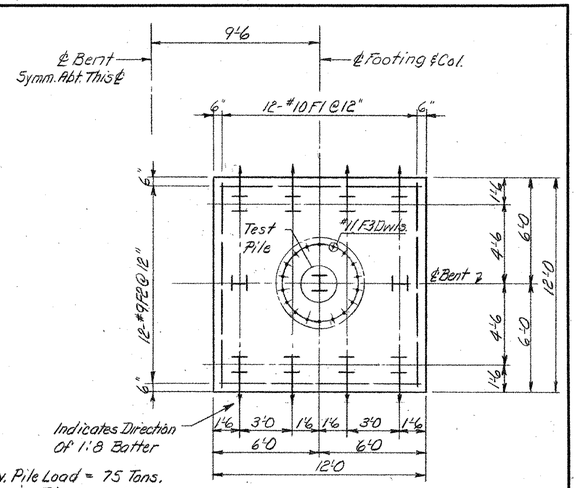


ELEVATION

Place 30" Sanitary Sewer Prior To Ftg. Const.



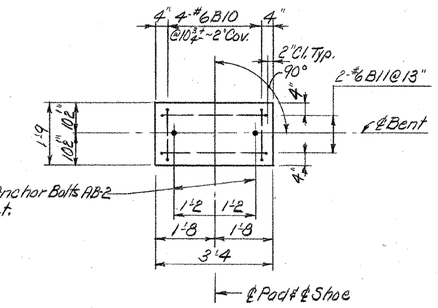
SECTION B-B



Allow. Pile Load = 75 Tons.
Max. Design Pile Load = 66 Tons.
Estimated Pile Tip El. 687 ±

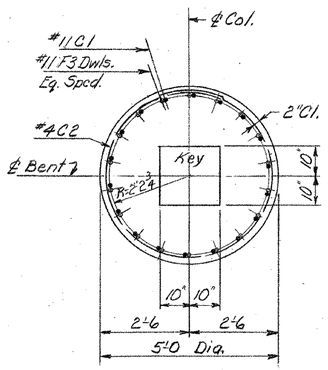
FOOTING PLAN

11-HP10×57 Piles Req'd. Eq. Ftg.
Scale 4"=1'-0



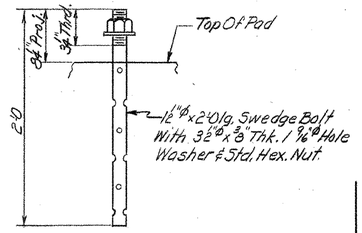
PAD DETAIL

Typ. For 5
Scale ½"=1'-0



SECTION C-C

Scale ½"=1'-0



ANCHOR BOLT AB-2

10-Req'd. Bent 4
10-Req'd. Bent 9
12-Req'd. Bent 11

For Reinf. Bar Schedule, See Sh. 24.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Des.	RJH
Dwn.	NWB
Chk.	RWB

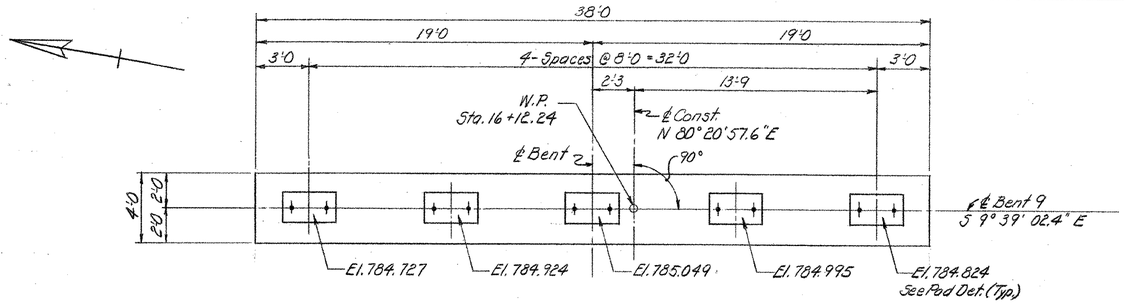
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
BENT 4

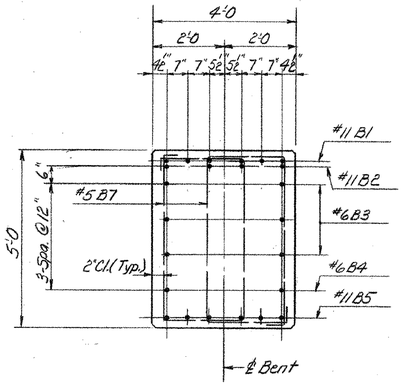
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 16 OF 98
S-15296

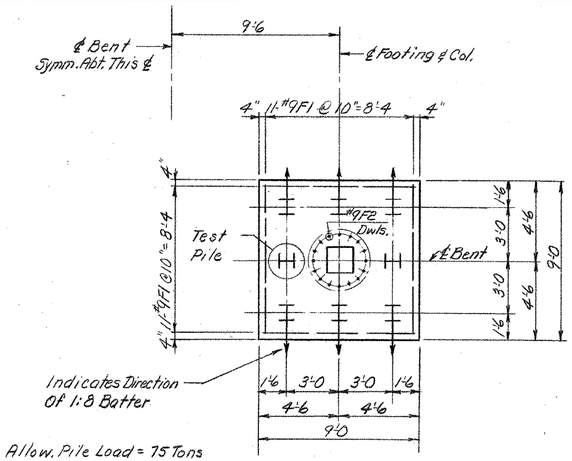
D 9002 (2-83) K&E 19 1263 4-83 A1338*



TOP PLAN ~ BENT 9
Scale 4" = 1'0

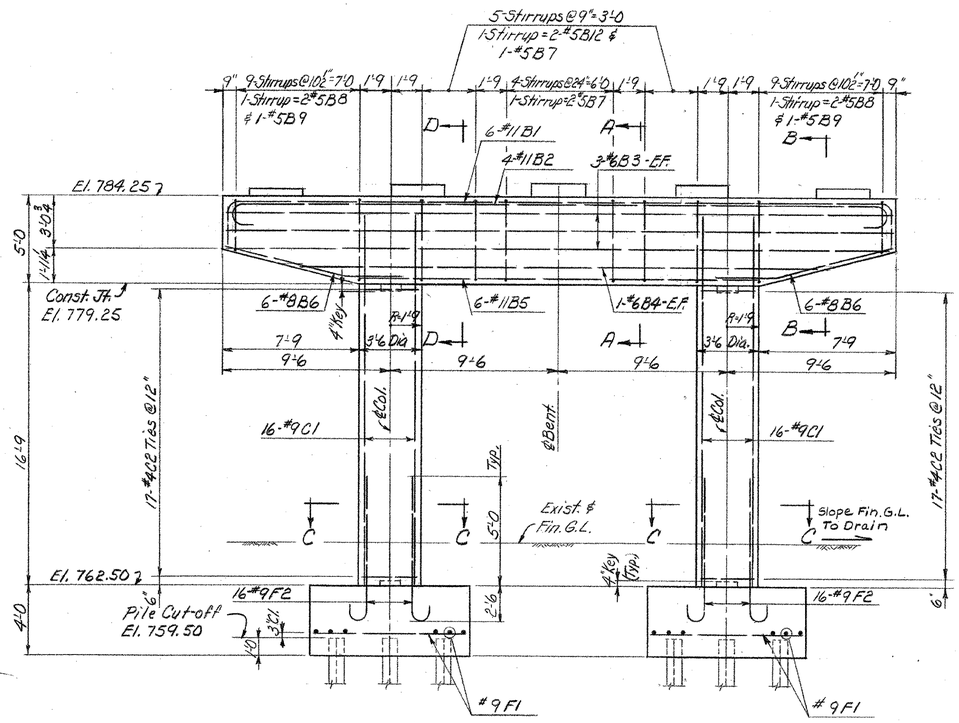


SECTION A-A
Scale ½" = 1'0

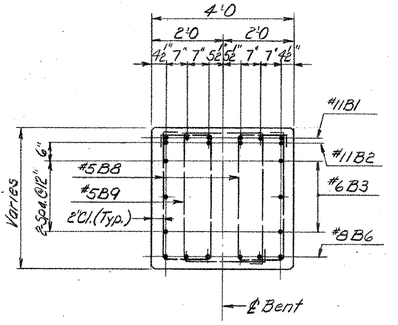


Allow. Pile Load = 75 Tons
Max. Design Pile Load = 65 Tons
Estimated Pile Tip El. 694±

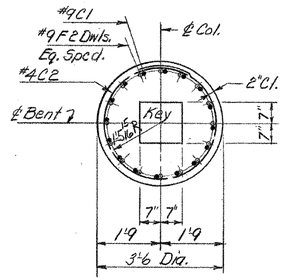
FOOTING PLAN
8-HP10x57 Piles Req'd. Eo. Ftg.
Scale 4" = 1'0



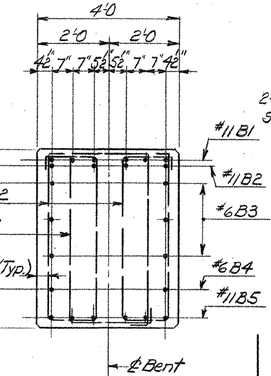
ELEVATION
Scale 4" = 1'0



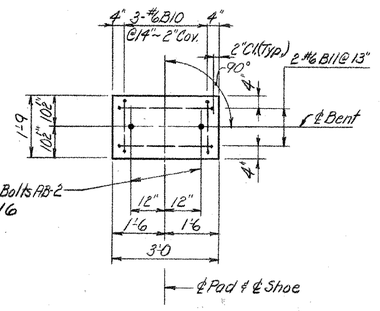
SECTION B-B
Scale ½" = 1'0



SECTION C-C
Scale ½" = 1'0



SECTION D-D
Scale ½" = 1'0



PAD DETAIL
Typ. For 5
Scale ½" = 1'0

For Reinf. Bar Schedule, See Sh. 24.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	RJH
Dwn.	NWB
Chk.	RWB

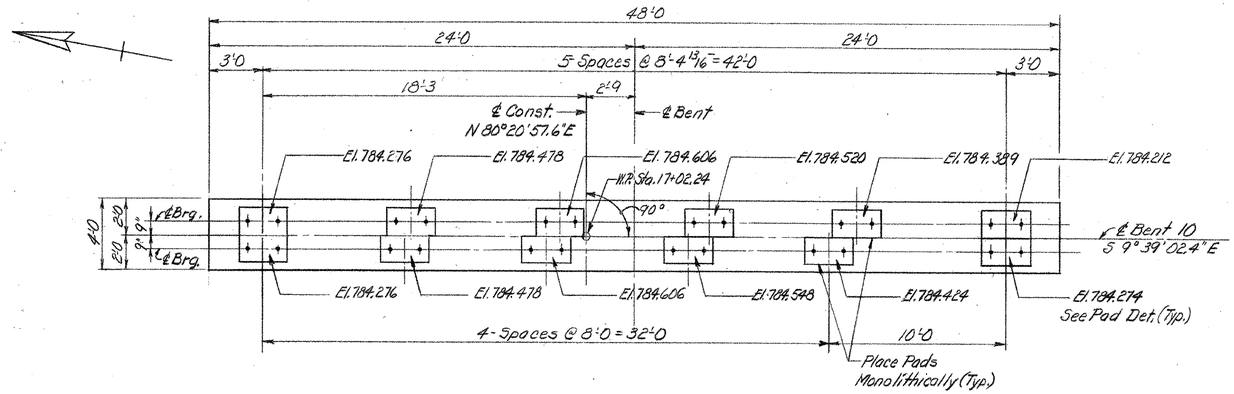
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
BENT 9

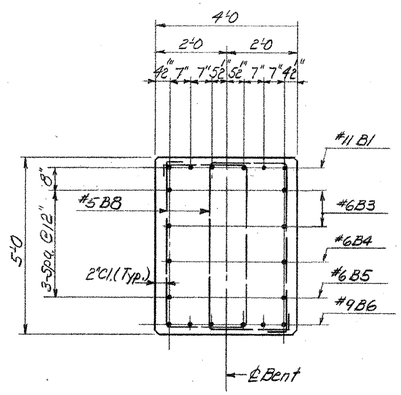
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 17 OF 98
S-15296

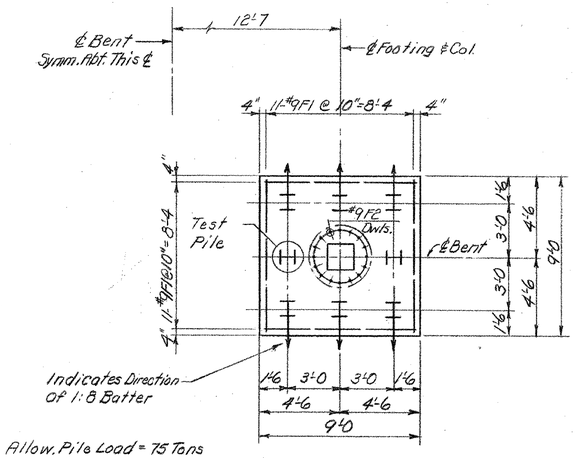
D 9002 (2-85) K&E 19 1293 4-83 A1328+



TOP PLAN - BENT 10
Scale 4" = 1'-0

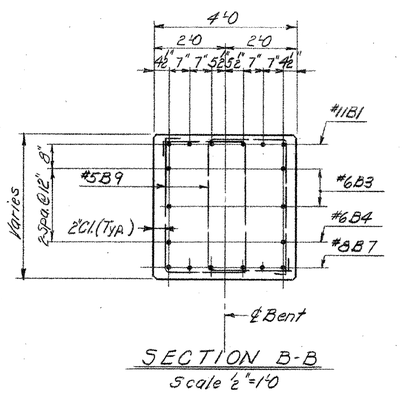


SECTION A-A
Scale 1/2" = 1'-0

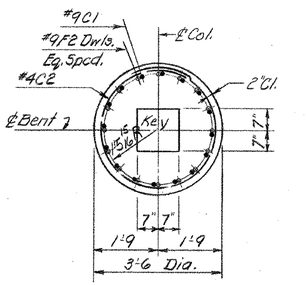


Allow. Pile Load = 75 Tons
Max. Design Pile Load = 55 Tons
Estimated Pile Tip El. 695±

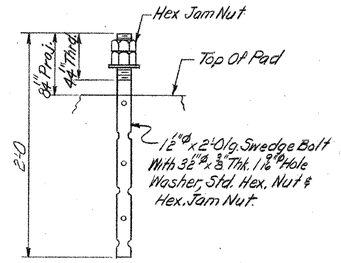
FOOTING PLAN
8-HP10x57 Piles Req'd. Eq. Ftg.
Scale 4" = 1'-0



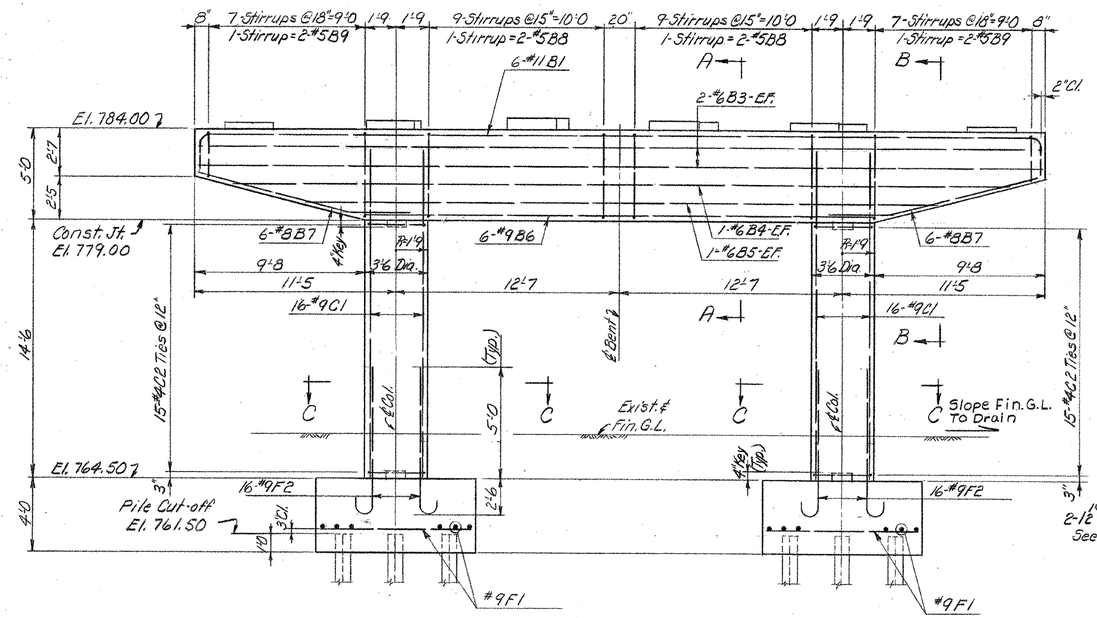
SECTION B-B
Scale 1/2" = 1'-0



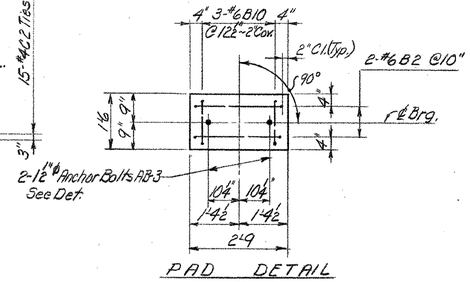
SECTION C-C
Scale 1/2" = 1'-0



ANCHOR BOLT AB-3
24 Req'd. Bent 10
12 Req'd. Abut. 2



ELEVATION
Scale 4" = 1'-0



PAD DETAIL
12 - Req'd
Scale 1/2" = 1'-0

For Reinf. Bar Schedule, See Sh. 24

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	RJH
Dwn.	NWB
Chk.	RWB

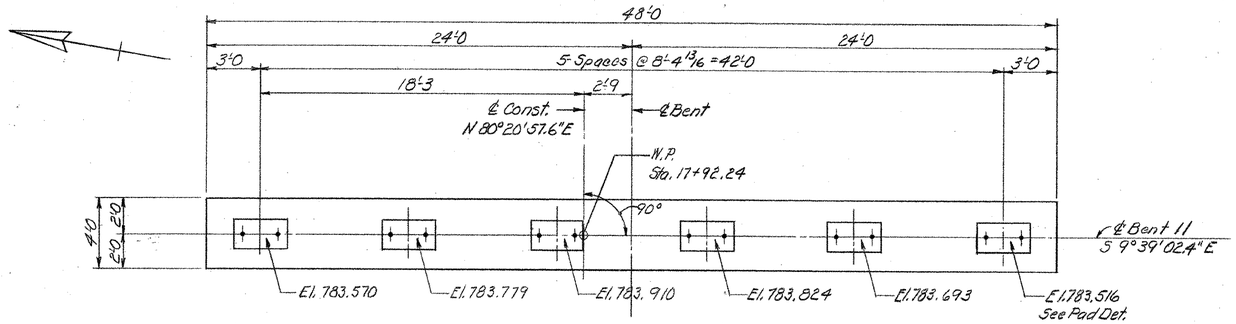
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
BENT 10

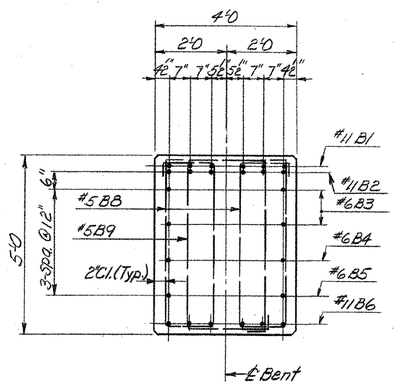
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 18 OF 98
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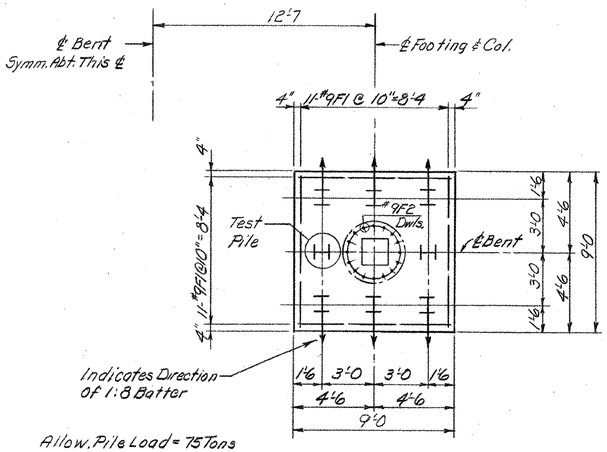
D 9002 (2-83) KaE 19 1283 4-83 A1329*



TOP PLAN ~ BENT 11
Scale 4"=1'0

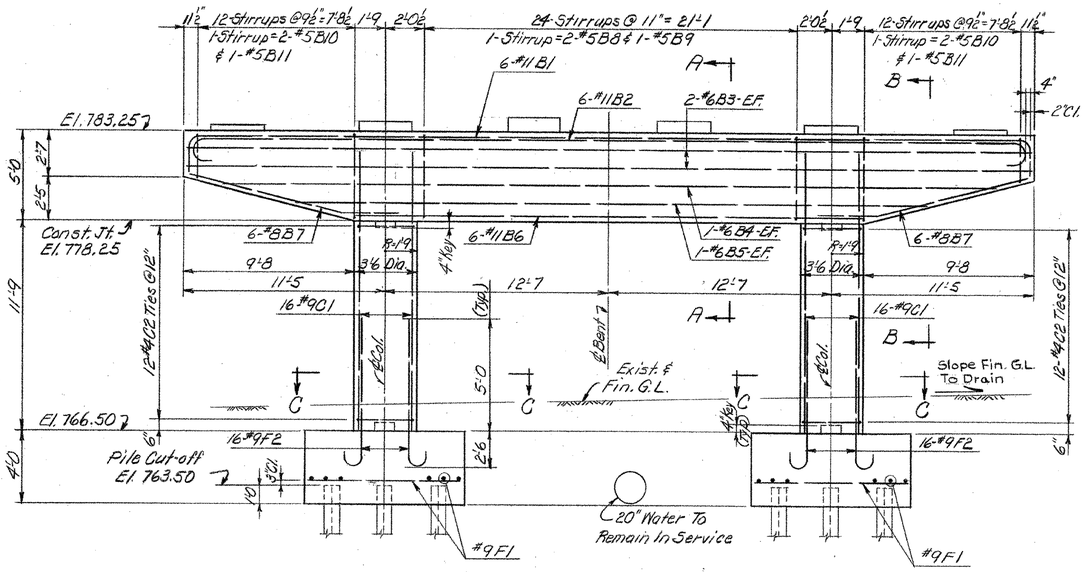


SECTION A-A
Scale 1/2"=1'0

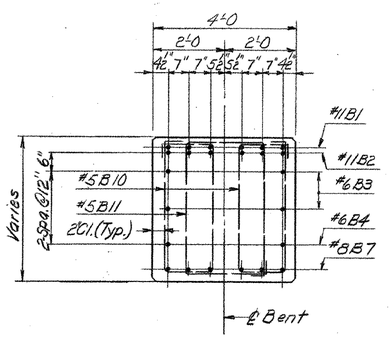


Allow. Pile Load = 75 Tons
Max. Design Pile Load = 64 Tons
Estimated Pile Tip El. 699±

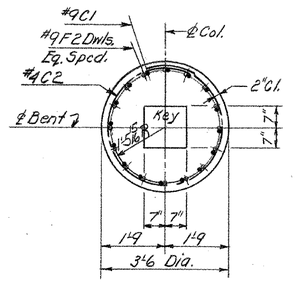
FOOTING PLAN
8-HP10x57 Piles Req'd. Eq. Ftg.
Scale 4"=1'0



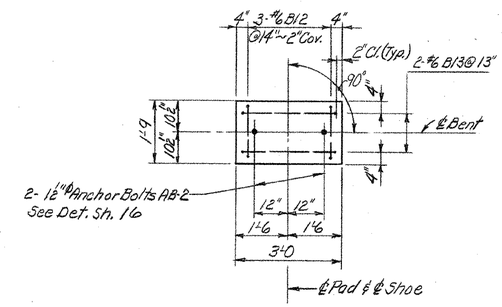
ELEVATION
Scale 4"=1'0



SECTION B-B
Scale 1/2"=1'0



SECTION C-C
Scale 1/2"=1'0



PAD DETAIL
Typ. For 6
Scale 1/2"=1'0

For Reinf. Bar Schedule, See Sh. 25

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des	RJH
Dwn.	NWB
Chk.	RWB

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

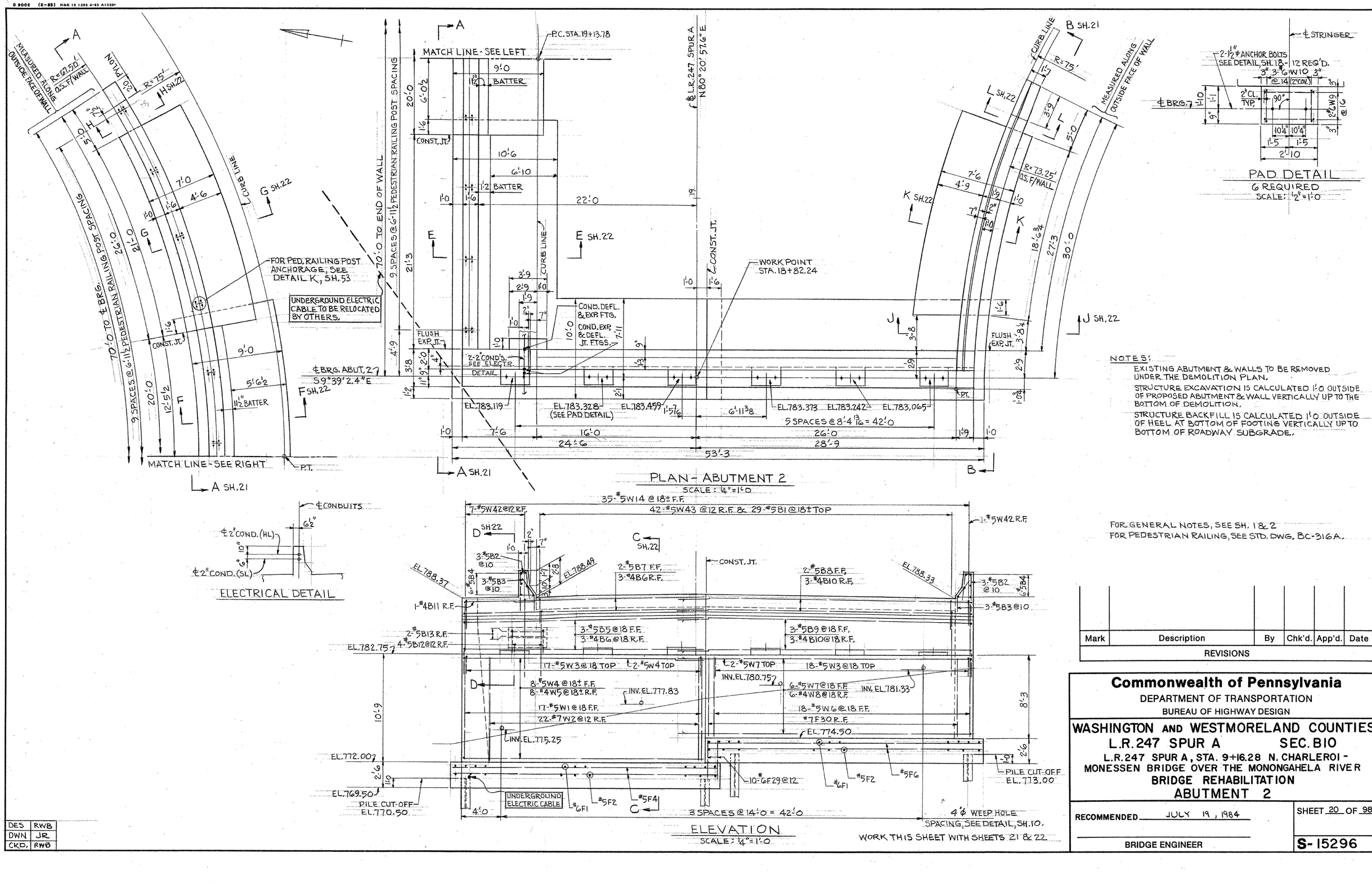
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
BENT 11

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 19 OF 98

S-15296

D 9002 (2-83) KAE 19 1253 4-83 A1329*



NOTES:

EXISTING ABUTMENT & WALLS TO BE REMOVED UNDER THE DEMOLITION PLAN.

STRUCTURE EXCAVATION IS CALCULATED 1'-0 OUTSIDE OF PROPOSED ABUTMENT & WALL VERTICALLY UP TO THE BOTTOM OF DEMOLITION.

STRUCTURE BACKFILL IS CALCULATED 1'-0 OUTSIDE OF HEEL AT BOTTOM OF FOOTING VERTICALLY UP TO BOTTOM OF ROADWAY SUBGRADE.

FOR GENERAL NOTES, SEE SH. 1 & 2
FOR PEDESTRIAN RAILING, SEE STD. DWG. BC-316A.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	RWB
DWN	JR
CKD.	RWB

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

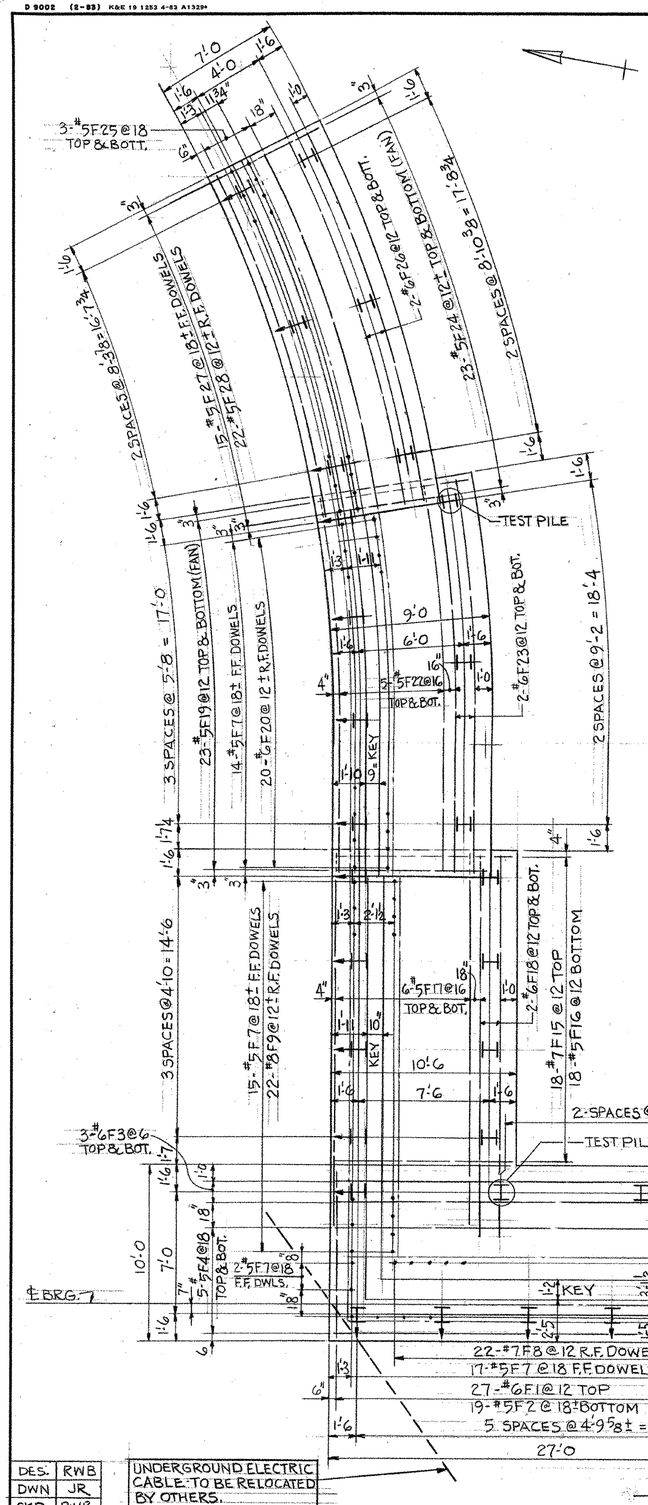
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 2

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

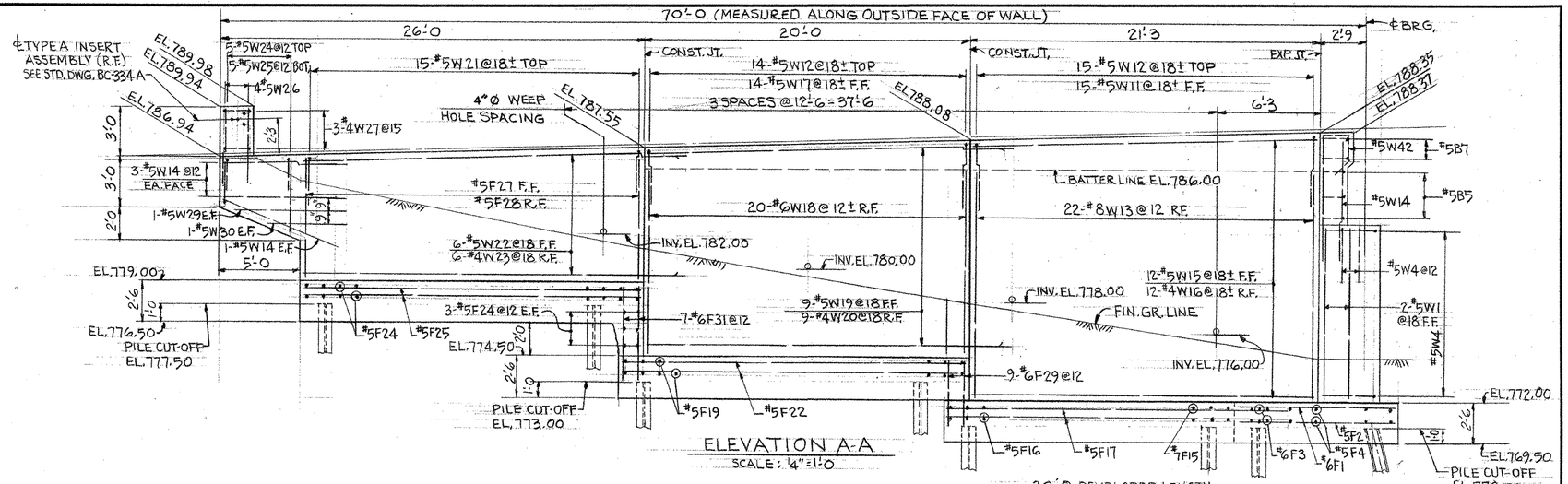
SHEET 20 OF 98

S-15296

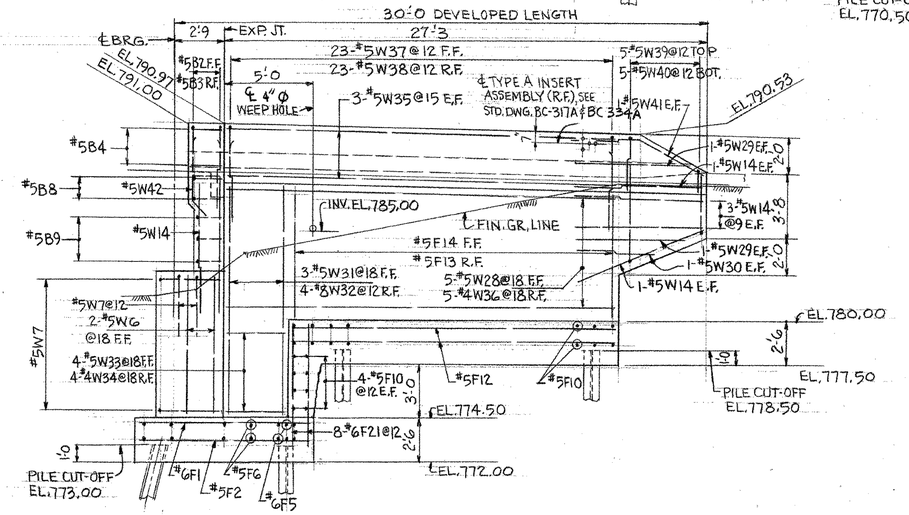
D 9002 (8-83) KDE 19 1253 4-83 A1329*



FOOTING & PILE PLAN
SCALE: 1/4" = 1'-0



ELEVATION A-A
SCALE: 1/4" = 1'-0



ELEVATION B-B
SCALE: 1/4" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES.	RWB
DWN	JR
CKD.	RWB

FOR REINFORCEMENT SCHEDULE, SEE SH. 25

WORK THIS SHEET WITH SHEETS 20 & 22

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

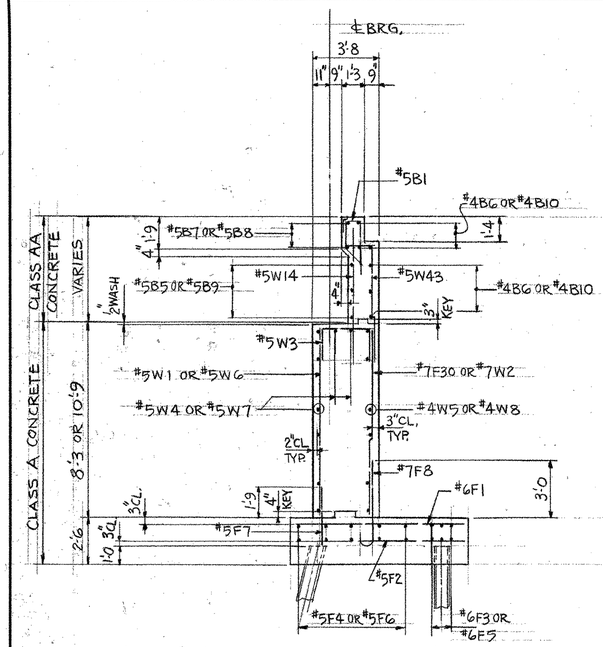
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 2

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

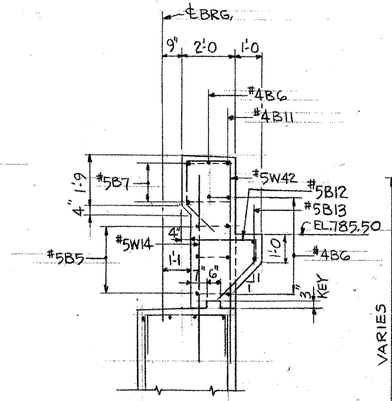
SHEET 21 OF 98

S-15296

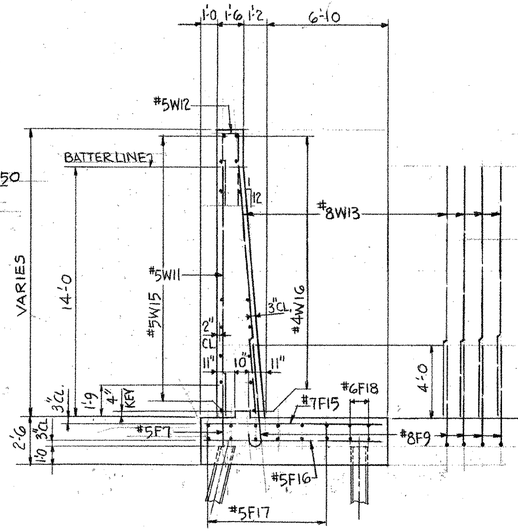
D 9002 (2-85) K&E 19 1253 4-93 A1329*



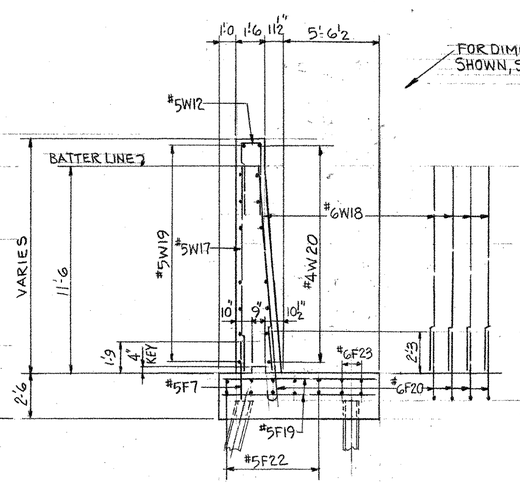
SECTION C-C
SCALE: 1/4" = 1'-0



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

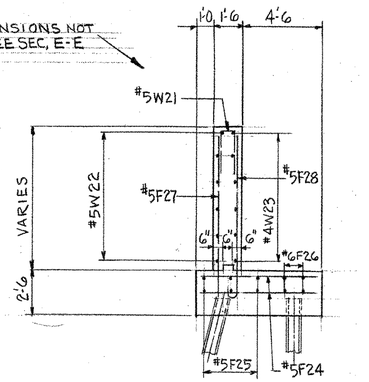


SECTION E-E
SCALE: 1/4" = 1'-0

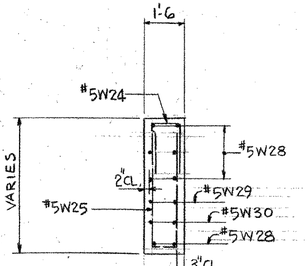


SECTION F-F
SCALE: 1/4" = 1'-0

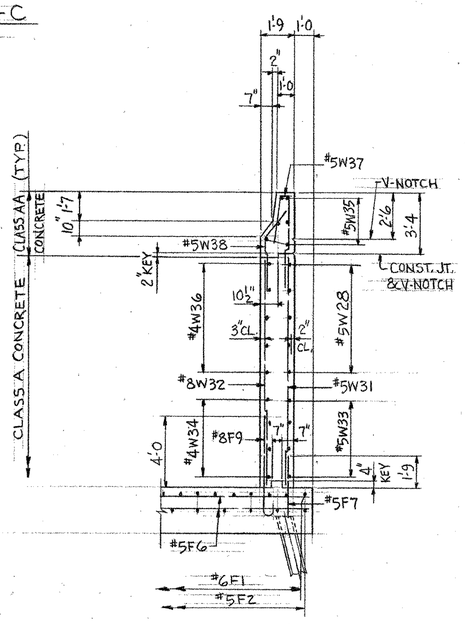
FOR DIMENSIONS NOT SHOWN, SEE SEC. E-E



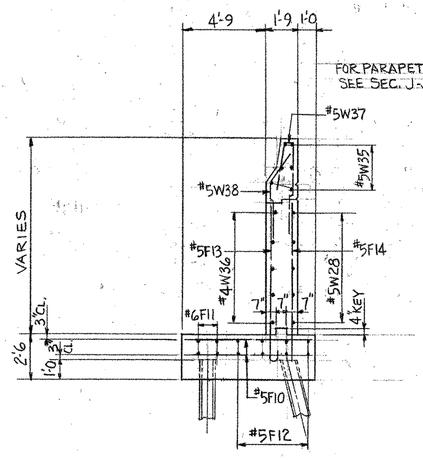
SECTION G-G
SCALE: 1/4" = 1'-0



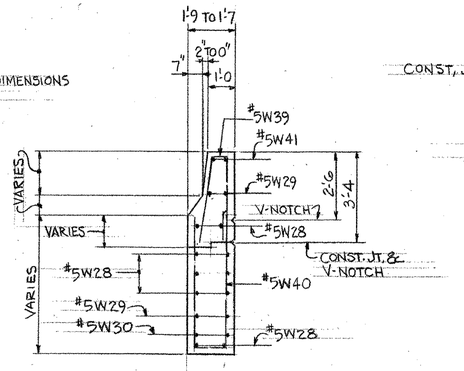
SECTION H-H
SCALE: 3/8" = 1'-0



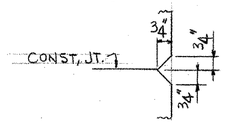
SECTION J-J
SCALE: 1/4" = 1'-0



SECTION K-K
SCALE: 1/4" = 1'-0



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



V-NOTCH
NO SCALE

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	RWB
DWN	JR.
CKD	RWB

WORK THIS SHEET WITH SHEETS 20 & 21

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
ABUTMENT 2

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

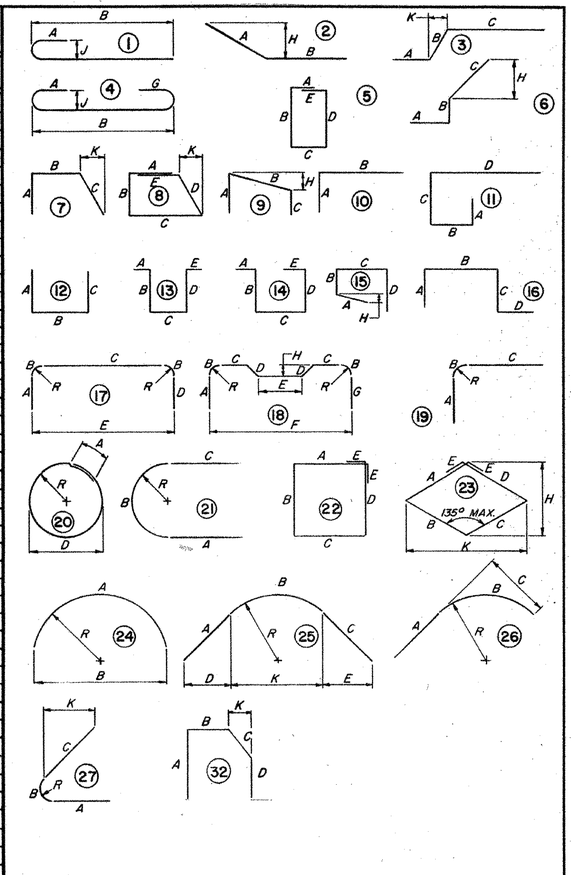
SHEET 22 OF 98

S-15296

7530-2350-0210

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
				ABUTMENT 1												
F1	8	17'-0	73	STR.												
F2	8	13'-0	72	STR.												
F3	6	17'-0	73	STR.												
F4	6	52'-0	4	STR.												
F5	5	37'-9	40	STR.												
F6	11	16'-8	68	27	5'-6	1'-8	9'-6							9 1/2"	1'-0	
F7	11	12'-2	68	1	1'-7	10'-7										
F8	5	3'-4	117	STR.												
F9	10	19'-6	44	STR.												
F10	6	17'-3	44	STR.												
F11	10	14'-3	42	STR.												
F12	10	10'-8	38	1	1'-7	9'-1										
F13	10	15'-3	37	27	5'-7	1'-8	8'-0							8"	1'-0	
F14	6	13'-6	4	STR.												
F15	5	11'-0 TO 13'-0	24	STR.												2 OF EACH, VARY EA. BAR BY 2 1/2" ±
F16	5	29'-6 TO 35'-6	24	STR.												2 OF EACH, VARY EA. BAR BY 6 1/2" ±
F17	6	32'-0	4	STR.												
F18	8	12'-6	17	STR.												
F19	6	11'-6	17	STR.												
F20	8	10'-2	17	STR.												
F21	8	9'-8	16	27	3'-4	1'-8	4'-8							4 3/4"	1'-0	
F22	8	6'-8	15	1	11"	5'-9										
F23	5	25'-0 TO 28'-6	14	STR.												2 OF EACH, VARY EA. BAR BY 7"
F24	6	29'-3	4	STR.												
F25	6	8'-0	38	STR.												
F26	5	8'-0	28	STR.												
F27	5	25'-0 TO 26'-9	8	STR.												2 OF EACH, VARY EA. BAR BY 7"
F28	6	27'-0	6	STR.												
F29	6	5'-11	12	27	1'-10	1'-8	2'-5							2 1/2"	1'-0	
F30	6	4'-2	13	1	8"	3'-6										
F31	5	5'-6	26	STR.												
F32	5	12'-6	6	STR.												
F33	6	12'-6	4	STR.												
F34	5	6'-4 TO 7'-1	13	1	7	5'-9 TO 6'-6										1 OF EACH, VARY B BY 3/4"
F35	6	12'-2	26	STR.												
F36	6	12'-6	12	STR.												
F37	6	11'-8	18	STR.												
F38	6	7'-8	12	STR.												
F39	6	5'-6	6	STR.												
W1	5	28'-0	51	STR.												
W2	11	27'-6	68	STR.												
W3	11	14'-3	68	STR.												
W4	5	8'-9	45	2	4'-9	4'-0						2'-8				
W5	5	5'-0	47	10	1'-9	3'-3										
W6	5	34'-9	21	STR.												
W7	4	35'-0	19	STR.												
W8	5	36'-3	21	STR.												
W9	4	37'-0	19	STR.												
W10	5	7'-3	48	STR.												
W11	6	7'-6	14	12	2'-6	2'-6	2'-6									
W12	6	6'-6	21	12	2'-6	1'-6	2'-6									
W13	5	5'-5	19	10	1'-9	3'-8										
W14	5	5'-3	19	2	1'-9	3'-6						1'-4				
W15	5	8'-6	3	10	1'-4	7'-2										E
W16	10	28'-0	3	STR.												
W17	4	31'-9	19	STR.												
W18	5	32'-6	23	STR.												
W19	10	12'-6	38	STR.												
W20	10	15'-8	37	STR.												
W21	8	21'-0	37	STR.												
W22	5	10'-2	5	12	4'-6	1'-2	4'-6									E
W23	5	6'-4	23	STR.												
W24	4	6'-4	23	STR.												
W25	5	12'-2	27	32	5'-9	8"	3'-3	2'-6						4"		E
W26	5	4'-1 TO 4'-9	27	7	1'-4	9" TO 1'-5	2'-0							1'-6		1 OF EACH, VARY B BY 1/4" ± E
W27	5	26'-6	45	STR.												
W28	4	27'-3	22	STR.												
W29	5	20'-9 TO 21'-9	17	STR.												1 OF EACH, VARY EA. BAR BY 3/4"
W30	8	20'-9 TO 21'-9	16	STR.												1 OF EACH, VARY EA. BAR BY 3/4" ±
W31	8	11'-0	15	STR.												
W32	5	26'-6	24	STR.												E
W33	4	26'-0	23	STR.												
W34	5	13'-2	34	32	6'-3	8"	3'-3	3'-0						4"		E
W35	5	4'-9	34	7	1'-4	1'-5	2'-0							3"		E
W36	5	9'-3 TO 10'-3	17	STR.												1 OF EACH, VARY EA. BAR BY 3/4"
W37	6	9'-3 TO 10'-3	25	STR.												1 OF EACH, VARY EA. BAR BY 1/2"
W38	5	10'-4 TO 10'-11	9	7	7'-2 TO 7'-9	8"	2'-6							3"		1 OF EACH, VARY A BY 3/4" ± E
W39	5	3'-9	13	2	2'-0	1'-9						1'-2				E
W40	5	20'-3	10	STR.												E
W41	5	18'-6	2	STR.												E
W42	5	20'-6	2	2	5'-3	15'-3						1'-8				
W43	5	5'-8	5	7	2'-6	8"	2'-6							3"		E
W44	5	10'-10 TO 13'-10	5	15	2'-0	3'-0 TO 4'-6	1'-4	4'-6 TO 6'-0				1'-2				1 OF EACH, VARY B & D BY 4 1/2" E
B1	5	6'-7	40	15	1'-9	1'-5	11"	2'-6				1'-3				E
B2	5	10'-3	7	15	1'-9	1'-5	1'-7	5'-6				1'-3				E
B3	5	5'-10	60	10	1'-7	4'-3										E
B4	5	35'-0	5	STR.												E
B5	4	35'-0	5	STR.												E
B6	5	37'-9	5	STR.												E
B7	4	37'-0	5	STR.												E
B8	5	7'-5	3	7	4'-3	8"	2'-6							3"		E
B9	5	3'-8	6	2	1'-10	1'-10						1'-1				E
B10	5	2'-0	6	STR.												E
B11	5	7'-9	3	7	4'-3	1'-0	2'-6							3"		E
B12	5	2'-2	6	STR.												E
B13	5	4'-2	5	10	2'-1	2'-1										E
B14	4	7'-9	1	STR.												E
B15	5	5'-10	7	32	2'-7	9"	1'-6	1'-0						1'-1		E
B16	5	6'-6	2	STR.												E



- "E" Denotes Epoxy Coated Bars
- "J" Dimensions on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
- All dimensions are out to out of bar except "A" and "G" on standard 135° and 180° hooks, and "R" which is shown to the inside of the bar.
- For Reinforcement Bar Fabrication Details, refer to Standard Drawing BC-336.
- Figures in circles show types.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
REINFORCING SCHEDULE-ABUT. 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 23 OF 98

S-15296

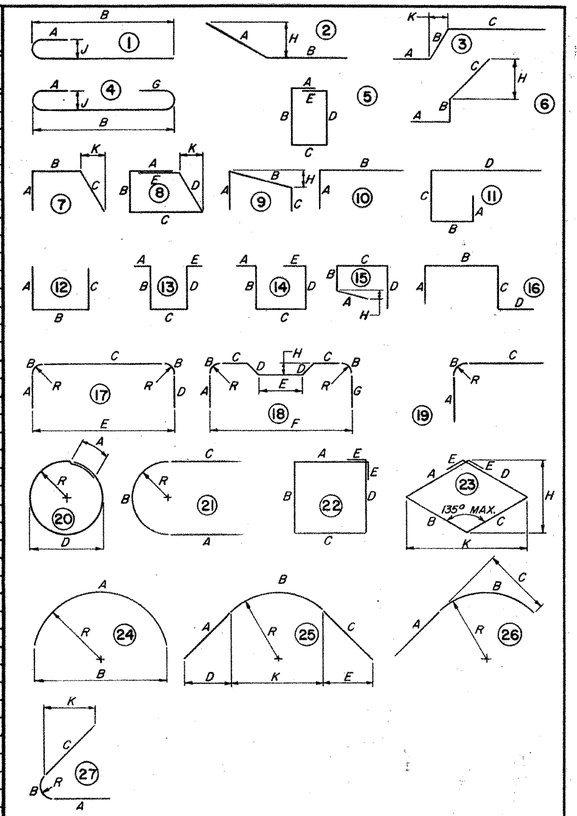
ROBERT H. WALTON CO.

7530-2350-0210

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
				BENT 1												
F1	11	18'-6	72	STR.												
F2	11	12'-10	48	1	1'-7	11'-3										
C1	11	33'-0	48	STR.												
C2	4	19'-4	56	22	4'-7	4'-7	4'-7	4'-7	6"	6"						
C3	4	14'-0	56	22	3'-3	3'-3	3'-3	3'-3	6"	6"						
B1	10	59'-9	10	12	6'-9	46'-3	6'-9									
B2	6	46'-8	8	STR.												
B3	11	34'-6	6	STR.												
B4	11	46'-6	12	STR.												
B5	5	16'-4	74	22	2'-0	5'-8	2'-0	5'-8	6"	6"						
B6	5	18'-4	37	22	3'-0	5'-8	3'-0	5'-8	6"	6"						
B7	6	6'-5	18	12	2'-6	1'-5	2'-6									
B8	6	7'-8	12	12	2'-6	2'-8	2'-6									
				BENT 2												
F1	9	15'-6	40	STR.												
F2	10	15'-6	42	STR.												
F3	11	12'-10	56	1	1'-7	11'-3										
C1	11	35'-3	56	STR.												
C2	4	16'-0	62	20	1'-4			4'-8							2'-3½	
B1	11	50'-10	8	4	1'-7	47'-8					1'-7					
B2	6	47'-8	4	STR.												
B3	6	46'-5	2	STR.												
B4	9	30'-2	8	STR.												
B5	9	12'-0	8	2	9'-0	3'-0						2'-2¼				
B6	5	19'-0	24	22	3'-10	5'-2	3'-10	5'-2	6"	6"						
B7	5	15'-0 TO 19'-0	24	22	3'-10	3'-2 TO 5'-2	3'-10	3'-2 TO 5'-2	6"	6"						4 OF EACH, VARY B & D BY 4⅞"±
B8	6	6'-3	18	12	2'-6	1'-3	2'-6									
B9	6	7'-4	12	12	2'-6	2'-4	2'-6									
B10	6	37'-0	2	STR.												
				BENT 3												
F1	9	13'-6	52	STR.												
F2	11	12'-10	40	1	1'-7	11'-3										
C1	11	39'-9	40	STR.												
C2	4	16'-0	72	20	1'-4			4'-8							2'-3½	
B1	11	50'-10	8	4	1'-7	47'-8					1'-7					
B2	6	47'-8	4	STR.												
B3	6	45'-8	2	STR.												
B4	6	37'-10	2	STR.												
B5	10	30'-2	6	STR.												
B6	10	12'-9	8	2	9'-0	3'-9						2'-2¼				
B7	5	16'-10	28	22	3'-3	4'-8	3'-3	4'-8	6"	6"						
B8	5	12'-9 TO 16'-10	28	22	3'-3	2'-7½ TO 4'-8	3'-3	2'-7½ TO 4'-8	6"	6"						4 OF EACH, VARY B & D BY 4"±
B9	6	6'-2	36	12	2'-6	1'-2	2'-6									
B10	6	7'-5	24	12	2'-6	2'-5	2'-6									

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
				BENT 4												
F1	10	11'-6	24	STR.												
F2	9	11'-6	24	STR.												
F3	11	12'-10	36	1	1'-7	11'-3										
C1	11	39'-0	36	STR.												
C2	4	16'-0	70	20	1'-4			4'-8							2'-3½	
B1	11	43'-2	6	12	2'-9	37'-8	2'-9									
B2	11	40'-2	6	4	1'-7	37'-0					1'-7					
B3	6	37'-8	6	STR.												
B4	6	32'-2	2	STR.												
B5	11	24'-0	6	STR.												
B6	8	9'-6	12	2	7'-0	2'-6						1'-8⅜				
B7	5	16'-10	20	22	3'-3	4'-8	3'-3	4'-8	6"	6"						
B8	5	11'-16 TO 14'-8	28	22	2'-2	3'-1 TO 4'-8	2'-2	3'-1 TO 4'-8	6"	6"						4 OF EACH, VARY B & D BY 3⅛"±
B9	5	13'-8 TO 16'-10	14	22	3'-3	3'-1 TO 4'-8	3'-3	3'-1 TO 4'-8	6"	6"						2 OF EACH, VARY B & D BY 3⅛"±
B10	6	6'-5	20	12	2'-6	1'-5	2'-6									
B11	6	8'-0	10	12	2'-6	3'-0	2'-6									
				BENT 9												
F1	9	8'-6	44	STR.												
F2	9	8'-9	32	1	1'-3	7'-6										
C1	9	20'-9	32	STR.												
C2	4	11'-3	34	20	1'-4			3'-2							1'-6½	
B1	11	42'-10	6	12	2'-7	37'-8	2'-7									
B2	11	40'-2	4	4	1'-7	37'-0					1'-7					
B3	6	37'-8	6	STR.												
B4	6	30'-8	2	STR.												
B5	11	22'-6	6	STR.												
B6	8	10'-3	12	2	7'-9	2'-6						1'-11¼				
B7	5	15'-2	18	22	2'-5	4'-8	2'-5	4'-8	6"	6"						
B8	5	9'-10 TO 13'-4	36	22	1'-6	2'-11 TO 4'-8	1'-6	2'-11 TO 4'-8	6"	6"						4 OF EACH, VARY B & D BY 2⅝"
B9	5	11'-8 TO 15'-2	18	22	2'-5	2'-11 TO 4'-8	2'-5	2'-11 TO 4'-8	6"	6"						2 OF EACH, VARY B & D BY 2⅝"
B10	6	6'-5	15	12	2'-6	1'-5	2'-6									
B11	6	7'-8	10	12	2'-6	2'-8	2'-6									
B12	5	13'-4	20	22	1'-6	4'-8	1'-6	4'-8	6"	6"						
				BENT 10												
F1	9	8'-6	44	STR.												
F2	9	8'-9	32	1	1'-3	7'-6										
C1	9	18'-6	32	STR.												
C2	4	11'-3	30	20	1'-4			3'-2							1'-6½	
B1	11	51'-10	6	12	2'-1	47'-8	2'-1									
B2	6	7'-5	24	12	2'-6	2'-5	2'-6									
B3	6	47'-8	4	STR.												
B4	6	45'-4	2	STR.												
B5	6	37'-0	2	STR.												
B6	9	28'-8	6	STR.												
B7	8	12'-3	12	2	9'-9	2'-6						2'-5¼				
B8	5	15'-2	36	22	2'-5	4'-8	2'-5	4'-8	6"	6"						
B9	5	10'-8 TO 15'-2	28	22	2'-5	2'-5 TO 4'-8	2'-5	2'-5 TO 4'-8	6"	6"						4 OF EACH, VARY B & D BY 4½"
B10	6	6'-2	36	12	2'-6	1'-2	2'-6									



- "J" Dimensions on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
- All dimensions are out to out of bar except "A" and "G" on standard 135° and 180° hooks, and "R" which is shown to the inside of the bar.
- For Reinforcement Bar Fabrication Details, refer to Standard Drawing BC-336.
- Figures in circles show types.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10

L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
REINF. SCH.-BENT 1 TO BENT 4 & BENT 9 TO BENT 10

RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

SHEET 24 OF 98

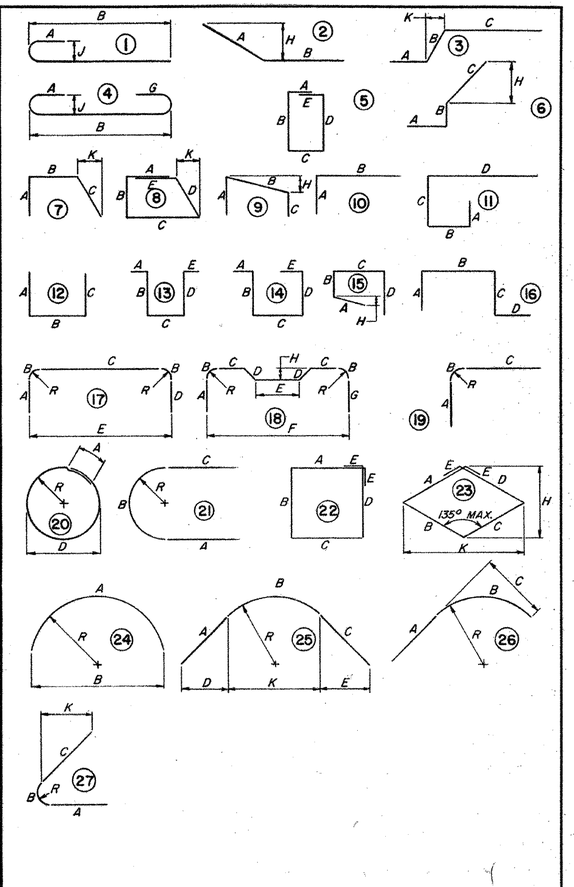
S-15296

ROBERT H. WALTON CO.

7530-2350-0210

REINFORCEMENT BAR SCHEDULE

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
				BENT 11												
F1	9	8'-6	44	STR.												
F2	9	8'-9	32	1	1'-3	7'-6										
C1	9	15'-9	32	STR.												
C2	4	11'-3	24	20	1'-4			3'-2							1'-6½	
B1	11	51'-10	6	12	2'-1	47'-8	2'-1									
B2	11	50'-2	6	4	1'-7	47'-0					1'-7					
B3	6	47'-8	4	STR.												
B4	6	44'-10	2	STR.												
B5	6	36'-8	2	STR.												
B6	11	28'-8	6	STR.												
B7	8	12'-3	12	2	9'-9	2'-6						2'-5¼				
B8	5	13'-4	48	22	1'-6	4'-8	1'-6	4'-8	6"	6"						
B9	5	15'-2	24	22	2'-5	4'-8	2'-5	4'-8	6"	6"						
B10	5	9'-0 TO 13'-4	48	22	1'-6	2'-6 TO 4'-8	1'-6	2'-6 TO 4'-8	6"	6"						4 OF EACH, VARY B & D BY 2 3/8"
B11	5	10'-10 TO 15'-2	24	22	2'-5	2'-6 TO 4'-8	2'-5	2'-6 TO 4'-8	6"	6"						2 OF EACH, VARY B & D BY 2 3/8"
B12	6	6'-5	18	12	2'-6	1'-5	2'-6	"								
B13	6	7'-8	12	12	2'-6	2'-8	2'-6									
				ABUTMENT 2												
F1	6	9'-6	55	STR.												
F2	5	9'-6	38	STR.												
F3	6	26'-6	6	STR.												
F4	5	26'-6	10	STR.												
F5	6	27'-3	6	STR.												
F6	5	27'-3	10	STR.												
F7	5	3'-4	71	STR.												
F8	7	5'-4	22	1	10"	4'-6										
F9	8	6'-5	26	1	11"	5'-6										
F10	5	7'-0	48	STR.												
F11	6	19'-4	4	STR.												
F12	5	18'-0 TO 19'-3	8	STR.												2 OF EACH, VARY EA. BAR BY 5"
F13	5	9'-4	20	1	7"	8'-9										
F14	5	9'-0	13	STR.												
F15	7	10'-0	18	STR.												
F16	5	10'-0	18	STR.												
F17	5	20'-9	12	STR.												
F18	6	21'-6	4	STR.												
F19	5	8'-6	46	STR.												
F20	6	4'-5	20	1	8"	3'-9										
F21	6	6'-9	16	STR.												
F22	5	20'-10 TO 22'-0	10	STR.												2 OF EACH, VARY EA. BAR BY 3½"
F23	6	22'-3	4	STR.												
F24	5	6'-6	52	STR.												
F25	5	19'-9 TO 20'-9	6	STR.												2 OF EACH, VARY EA. BAR BY 6".
F26	6	21'-9	4	STR.												
F27	5	9'-5	15	STR.												
F28	5	9'-7	22	1	7"	9'-0										
F29	6	3'-9	38	STR.												
F30	7	10'-5	26	1	10"	9'-7										
F31	6	5'-9	14	STR.												
F32	6	6'-9	16	STR.												
W1	5	10'-6	19	STR.												
W2	7	10'-6	22	STR.												
W3	5	6'-9	35	12	1'-9	3'-3	1'-9									
W4	5	27'-5	10	10	3'-3	24'-2										
W5	4	24'-2	8	STR.												
W6	5	8'-0	20	STR.												
W7	5	32'-3	8	10	3'-3	29'-0										
W8	4	28'-6	6	STR.												
W9	6	7'-6	12	12	2'-6	2'-6	2'-6									
W10	6	6'-6	18	12	2'-6	1'-6	2'-6									
W11	5	14'-0	15	STR.												
W12	5	9'-2	29	12	4'-0	1'-2	4'-0									
W13	8	14'-1	22	STR.												
W14	5	7'-6	53	STR.												E
W15	5	20'-11	12	STR.												
W16	4	20'-11	12	STR.												
W17	5	11'-6	14	STR.												
W18	6	11'-7	20	STR.												
W19	5	22'-6	9	STR.												
W20	4	22'-0	9	STR.												
W21	5	6'-10	15	12	2'-11	1'-0	2'-11									
W22	5	23'-6	6	STR.												
W23	4	23'-0	6	STR.												
W24	5	4'-6	5	12	1'-9	1'-0	1'-9									E
W25	5	6'-6 TO 9'-6	5	12	2'-9 TO 4'-3	1'-0	2'-9 TO 4'-3									1 OF EACH, VARY A & C BY 4½" E
W26	5	4'-6	4	STR.												E
W27	4	6'-5	3	22	1'-8	1'-2	1'-8	1'-2	4½"	4½"						E
W28	5	21'-10	5	STR.												E
W29	5	6'-6	6	STR.												E
W30	5	4'-9	4	STR.												E
W31	5	12'-11	3	STR.												
W32	8	12'-9	4	STR.												
W33	5	3'-4	4	STR.												
W34	4	3'-4	4	STR.												
W35	5	22'-6	6	STR.												E
W36	4	21'-10	5	STR.												
W37	5	8'-2	23	7	5'-0	8"	2'-6							3"		E
W38	5	5'-0	23	2	2'-0	3'-0						1'-2				E
W39	5	3'-2 TO 6'-2	5	7	1'-3 TO 2'-9	8"	1'-3 TO 2'-9							1½" TO 3½"		I OF EACH, VARY A & C BY 4½" E
W40	5	11'-7 TO 7'-7	5	12	5'-3 TO 3'-3	1'-1	5'-3 TO 3'-3									I OF EACH, VARY A & C BY 6" E
W41	5	8'-2	2	2	4'-2	4'-0						1'-10				E
W42	5	12'-0	8	15	1'-3	1'-7	1'-8	7'-6				10 5/8"				E
W43	5	7'-9	42	10	1'-7	6'-2										E
B1	5	6'-6	29	15	1'-3	1'-7	11"	2'-9				10 5/8"				E
B2	5	7'-3	6	7	4'-1	8"	2'-6							3"		E
B3	5	3'-9	6	2	2'-0	1'-9						1'-2				E
B4	5	1'-8	12	STR.												E
B5	5	25'-6	3	10	1'-4	24'-2										E
B6	4	24'-2	6	STR.												E
B7	5	25'-10	2	10	1'-8	24'-2										E
B8	5	30'-8	2	10	1'-8	29'-0										E
B9	5	30'-4	3	10	1'-4	29'-0										E
B10	4	28'-6	6	STR.												E
B11	4	7'-2	1	STR.												E
B12	5	5'-0	4	7	2'-3	9"	2'-0							1'-5		E
B13	5	3'-3	2	STR.												E



- "E" Denotes Epoxy Coated Bars
- "J" Dimensions on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
- All dimensions are out to out of bar except "A" and "G" on standard 135° and 180° hooks, and "R" which is shown to the inside of the bar.
- For Reinforcement Bar Fabrication Details, refer to Standard Drawing BC-336.
- Figures in circles show types.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

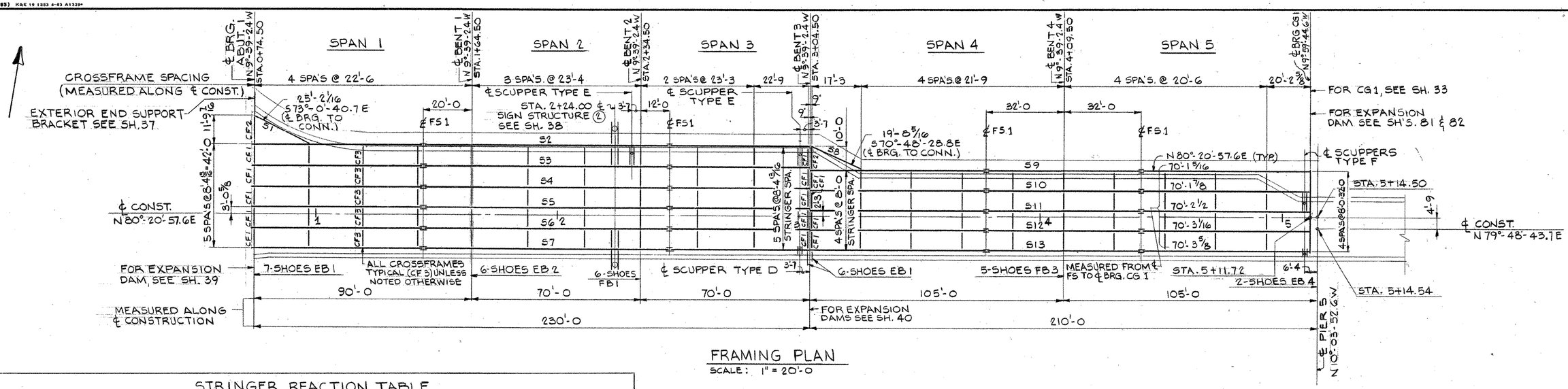
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
REINFORCING SCHEDULE-BENT 11 & ABUT. 2

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 25 OF 98
S-15296

ROBERT H. WALTON CO.

D 9002 (2-83) KAE 15 1253 4-83 A1329*



FRAMING PLAN

SCALE: 1" = 20'-0

STRINGER REACTION TABLE

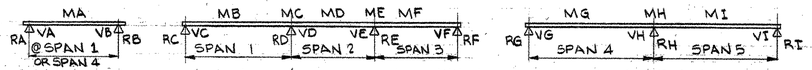


DIAGRAM I — DIAGRAM II — DIAGRAM III

STRINGER MARK		MAX. REACTION (KIPS) LOC.	D.L.	L.L.	I	TOTAL	MAX. BENDING MOMENT (K-FT) LOC.	D.L. 1	D.L. 2	LL+I	TOTAL	MAX. SHEAR (KIPS) LOC.	DL. 1	D.L. 2	LL+I	TOTAL
S1 AND S8 DIAGRAM I		RA	30	41	12	83	MA	147	34	367	548	VA	25	5	53	83
		RB	26	41	12	79						VB	21	5	53	79
S2 THRU S7 DIAGRAM II		RC	62	65	15	142	MB	858	261	1242	2361	VC	48	14	81	143
		RD	162	86	21	269	MC	-1093	-291	-959	-2343	VD	72	21	80	173
		RE	123	77	20	220	MD	-28	7	756	735	VE	55	16	79	150
		RF	49	63	16	128	ME	-595	-171	-742	-1508	VF	38	11	79	128
							MF	546	160	928	1634					
S9 THRU S13 DIAGRAM III		RG	61	64	14	139	MG	802	287	1412	2501	VG	46	15	78	139
		RH	231	101	22	354	MH	-2221	-628	-1514	-4363	VH	88	27	76	191
		RI	61	64	14	139	MI	802	287	1412	2501	VI	46	15	78	139

STRINGER ELEVATIONS AT CENTER LINE OF BEARING

STRINGER MARK	℄ BRG. - ABUT. 1 BOTT. OF STRINGER	TOP OF MASONRY PAD	℄ BENT 1 BOTT. OF STRINGER	TOP OF MASONRY PAD	℄ BENT 2 BOTT. OF STRINGER	TOP OF MASONRY PAD	℄ BRG. - BENT 3, SPAN 3 BOTT. OF STRINGER	TOP OF MASONRY PAD	℄ BRG. - BENT 3, SPAN 4 BOTT. OF STRINGER	TOP OF MASONRY PAD	℄ BENT 4 BOTT. OF STRINGER	TOP OF MASONRY PAD
S1 OR S8	794.854	794.469							793.494	793.109		
S2 OR S9	795.022	794.638	794.322	793.853	793.916	793.530	793.483	793.098	793.644	793.259	792.879	792.410
S3 OR S10	795.140	794.755	794.530	794.061	794.124	793.739	793.691	793.306	793.769	793.383	793.081	792.612
S4 OR S11	795.257	794.871	794.661	794.192	794.255	793.870	793.822	793.437	793.894	793.508	793.206	792.737
S5 OR S12	795.374	794.988	794.792	794.324	794.386	794.001	793.953	793.568	793.839	793.454	793.151	792.682
S6 OR S13	795.333	794.947	794.757	794.288	794.350	793.965	793.917	793.532	793.669	793.283	793.980	792.512
S7	795.156	794.770	794.580	794.111	794.173	793.788	793.741	793.355				

FOR GENERAL NOTES SEE SH'S. 1 & 2

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	GRM
DRN	VRK
CHK	MJP

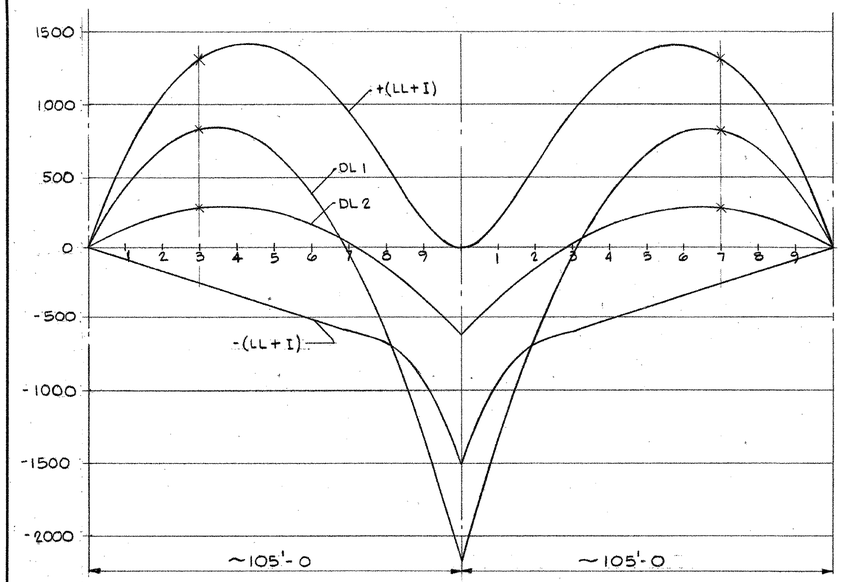
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
FRAMING PLAN - SPANS 1 TO 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

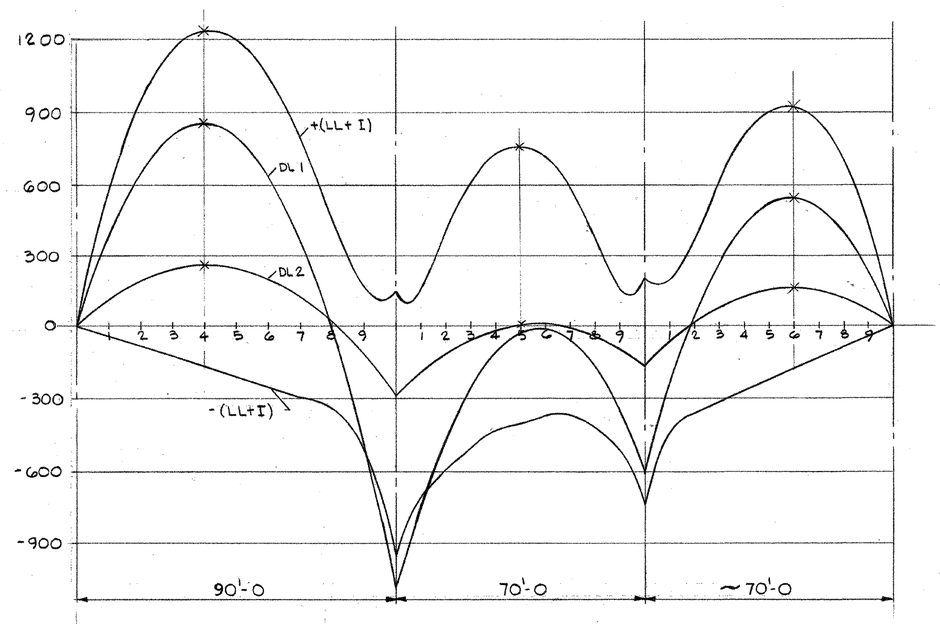
SHEET 26 OF 98
S-15296

D 9002 (2-83) 4-83 A1329*



MOMENT DIAGRAM (SPANS 4+5)

SCALE: HORZ. 1"=20' VERT. 1"=500 K-FT

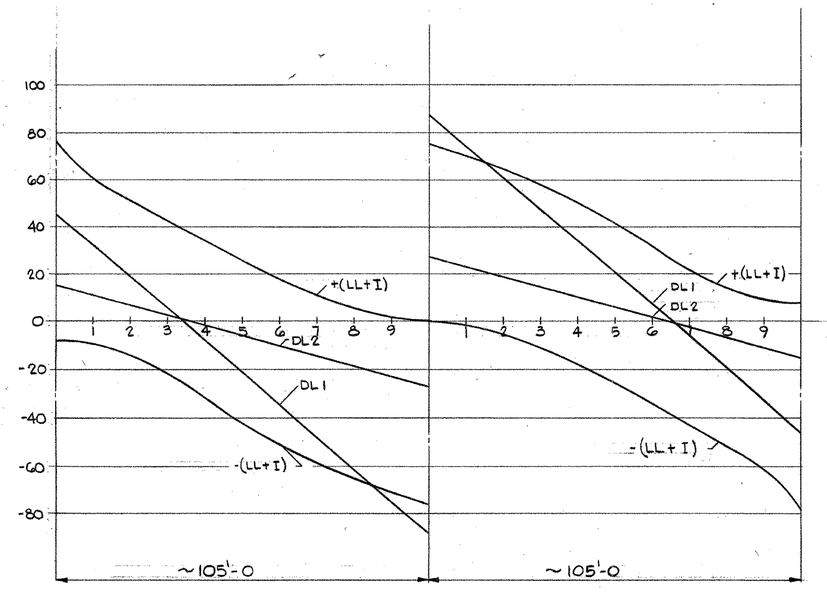


MOMENT DIAGRAM (SPANS 1,2+3)

SCALE: HORZ. 1"=20' VERT. 1"=300K-FT

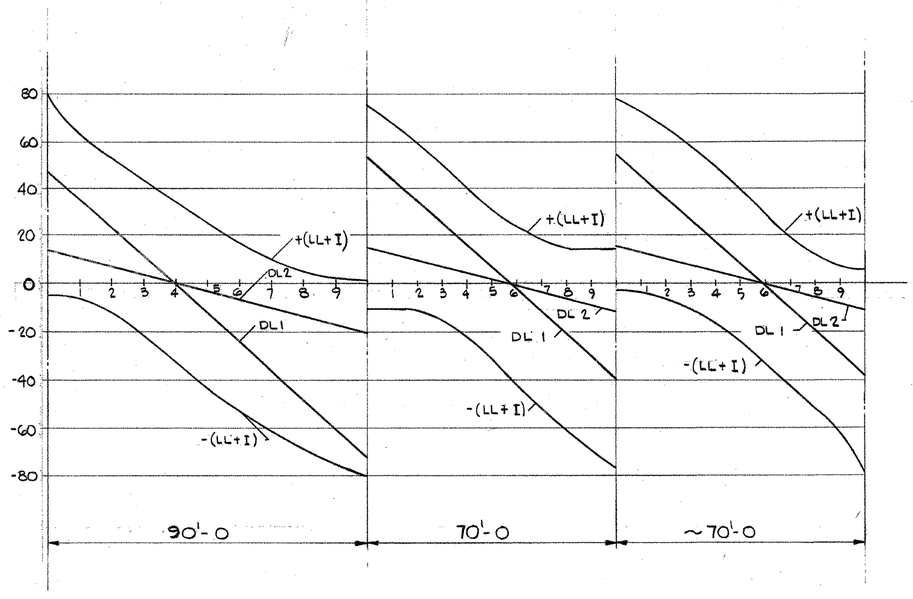
NOTES

1. FOR GENERAL NOTES SEE SH'S. 1 & 2
2. PLOTTED MOMENTS & SHEARS ARE FOR INTERIOR STRINGER SERVICE LOADS (UNFACTORED).
3. FOR NUMERICAL MAXIMUMS OF PLOTS SEE RESPECTIVE REACTION TABLES.



SHEAR DIAGRAM (SPANS 4+5)

SCALE: HORZ. 1"=20' VERT 1"= 30K



SHEAR DIAGRAM (SPANS 1,2+3)

SCALE: HORZ. 1"=20' VERT. 1"=30K

DES	GRM
DRN	VRK
CHK	MJP

WORK THIS SH. WITH SH'S. 28 & 29

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

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WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

SHEAR & MOM. DIAGRAMS-SPANS 1 TO 5

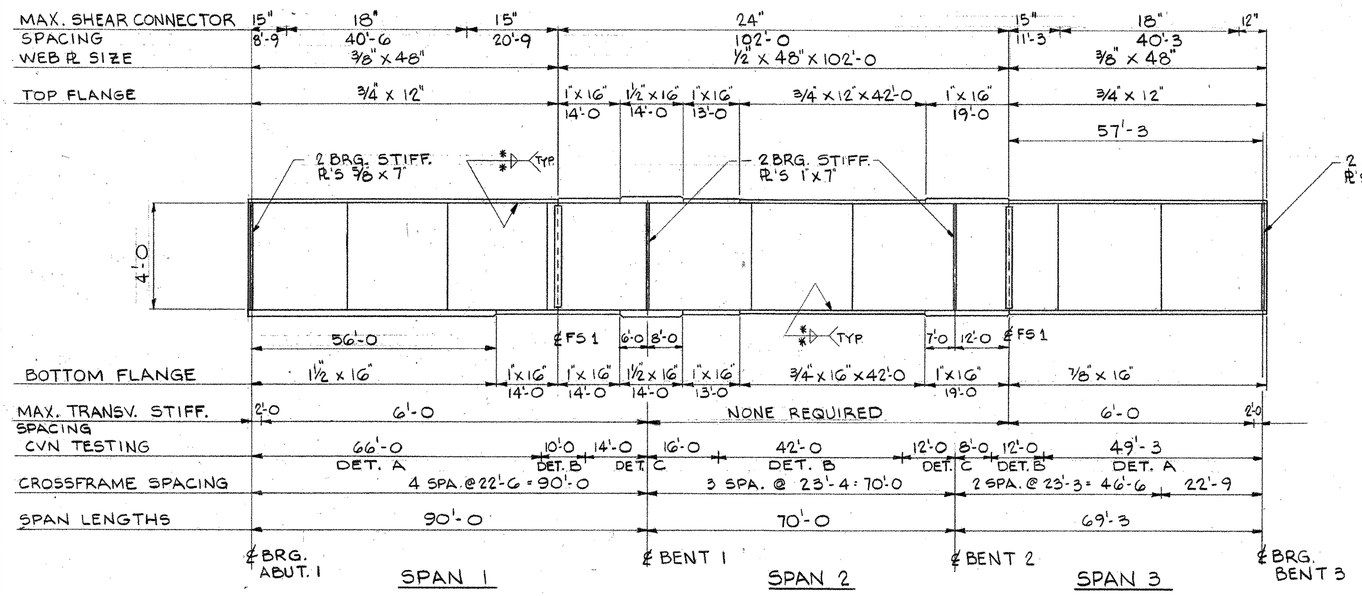
RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

SHEET 27 OF 98

S-15296

D 9002 (2-83) KAE 19.1283 4-83 A1329*



STRINGER ELEVATION S2 THRU S7

SCALE : HORZ. 1/16" = 1'-0 VERT. 3/8" = 1'-0

* SEE NOTE 4

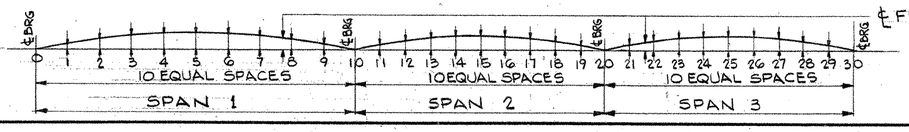
NOTES

1. FOR GENERAL NOTES SEE SH'S. 1 & 2
2. ADJUST SHEAR CONNECTORS TO AVOID SCUPPERS, FIELD SPLICES, FLANGE TRANSITIONS & EXPANSION DAM SUPPORTS. ALL SHEAR CONNECTORS ARE 7/8" Ø x 5" LONG STUDS AT 3 PER ROW.
3. ALL TRANSVERSE STIFFENERS SHALL CONSIST OF ONE PLATE ATTACHED TO THE WEB PLATE AS SHOWN ON DETAILS "A", "B" & "C" (SEE SH. 36). ON THE FASCIA STRINGERS, THE TRANSVERSE STIFFENERS SHALL BE PLACED ON THE INSIDE FACE OF THE WEB. USE A PL 3/8" x 4" FOR ALL TRANSVERSE STIFFENERS EXCEPT THE FIRST AND LAST STIFFENER SHALL BE A PL 3/8" x 5" AND THOSE STIFFENERS USED AS CROSSFRAME CONNECTOR PLATES SHALL BE A PL 9/16 x 7. MOVE TRANSVERSE STIFFENERS TO AVOID FIELD SPLICES.
4. FOR MINIMUM FILLET WELD SIZE SEE SH. 36.
5. ALL STRINGER WEB PLATES, TOP FLANGE PLATES IN DETAIL "B" AND "C" (TRANVERSE STIFFENER WELDING) AREAS, BOTTOM FLANGE PLATES IN DETAIL "A" & "B" AREAS, AND ALL STRINGER SPLICE MATERIAL SHALL BE TESTED FOR AND CONFORM TO CVN (CHARPY V-NOTCH) REQUIREMENTS.

CAMBER ORDINATES "Y" IN INCHES

STRINGER MARK	CAMBER	SPAN 1										SPAN 2										SPAN 3									
		1	2	3	4	5	6	7	F.S.	8	9	11	12	13	14	15	16	17	18	19	21	F.S.	22	23	24	25	26	27	28	29
S2	A	0.19	0.36	0.47	0.52	0.52	0.46	0.35	0.26	0.23	0.10	-0.05	-0.08	-0.10	-0.10	-0.09	-0.08	-0.07	-0.06	-0.03	0.05	0.09	0.10	0.15	0.19	0.21	0.21	0.18	0.14	0.07
	B	0.69	1.28	1.69	1.89	1.86	1.65	1.28	0.92	0.82	0.36	-0.19	-0.30	-0.35	-0.36	-0.34	-0.30	-0.26	-0.21	-0.12	0.17	0.31	0.36	0.54	0.68	0.75	0.74	0.65	0.49	0.26
	C	0.04	0.07	0.09	0.11	0.11	0.10	0.08	0.06	0.05	0.02	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.01	0.02	0.02	0.04	0.05	0.05	0.05	0.05	0.03	0.02
	D	-0.16	-0.48	-0.92	-1.12	-0.75	-0.60	-0.45	-0.33	-0.30	-0.15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	0.76	1.23	1.33	1.40	1.74	1.61	1.26	0.91	0.80	0.33	-0.25	-0.39	-0.47	-0.47	-0.44	-0.39	-0.34	-0.28	-0.16	0.23	0.42	0.48	0.73	0.92	1.01	1.00	0.88	0.66	0.35
S3	A	0.15	0.28	0.37	0.42	0.42	0.37	0.29	0.21	0.19	0.08	-0.04	-0.06	-0.07	-0.07	-0.07	-0.06	-0.06	-0.05	-0.03	0.04	0.08	0.09	0.14	0.18	0.20	0.20	0.18	0.13	0.07
	B	0.47	0.87	1.16	1.31	1.31	1.17	0.92	0.66	0.59	0.26	-0.13	-0.20	-0.23	-0.23	-0.22	-0.20	-0.18	-0.15	-0.09	0.14	0.25	0.30	0.45	0.57	0.64	0.63	0.56	0.42	0.22
	C	0.04	0.07	0.09	0.11	0.11	0.10	0.08	0.06	0.05	0.02	-0.01	-0.01	-0.02	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.01	0.02	0.02	0.04	0.05	0.05	0.05	0.05	0.03	0.02
	D	-0.18	-0.32	-0.28	-0.24	-0.20	-0.16	-0.12	-0.09	-0.08	-0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	0.48	0.90	1.34	1.60	1.64	1.48	1.17	0.84	0.75	0.32	-0.18	-0.27	-0.32	-0.31	-0.30	-0.27	-0.25	-0.21	-0.13	0.19	0.35	0.41	0.63	0.80	0.89	0.88	0.79	0.58	0.31
S4	A					SEE S3									SEE S3									SEE S3						
	B					" "									" "									" "						
	C					" "									" "									" "						
	D	-0.10	-0.19	-0.16	-0.14	-0.12	-0.09	-0.07	-0.05	-0.05	-0.02				" "									" "						
	E	0.56	1.03	1.46	1.70	1.72	1.55	1.22	0.88	0.78	0.34				" "									" "						
S5	A					SEE S3									SEE S3									SEE S3						
	B					" "									" "									" "						
	C					" "									" "									" "						
	D	-0.03	-0.05	-0.04	-0.04	-0.03	-0.03	-0.02	-0.01	-0.01	-0.01				" "									" "						
	E	0.63	1.17	1.58	1.80	1.81	1.61	1.27	0.92	0.82	0.35				" "									" "						
S6 & S7	A					SEE S3									SEE S3									SEE S3						
	B					" "									" "									" "						
	C					" "									" "									" "						
	D	—	—	—	—	—	↓	—	—	—	—				" "									" "						
	E	0.66	1.22	1.62	1.84	1.84	1.64	1.29	0.93	0.83	0.36				" "									" "						

A = CAMBER DUE TO DEAD LOAD OF STEEL
B = CAMBER DUE TO DEAD LOAD OF DECK CONCRETE
C = CAMBER DUE TO SUPERIMPOSED DEAD LOAD OF CONC. PARAPET & FENCE
D = GEOMETRIC CAMBER
E = TOTAL CAMBER (A+B+C+D)



POSITIVE CAMBER IN UPWARD DIRECTION

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	GRM
DRN	VRK
CHK	MJP

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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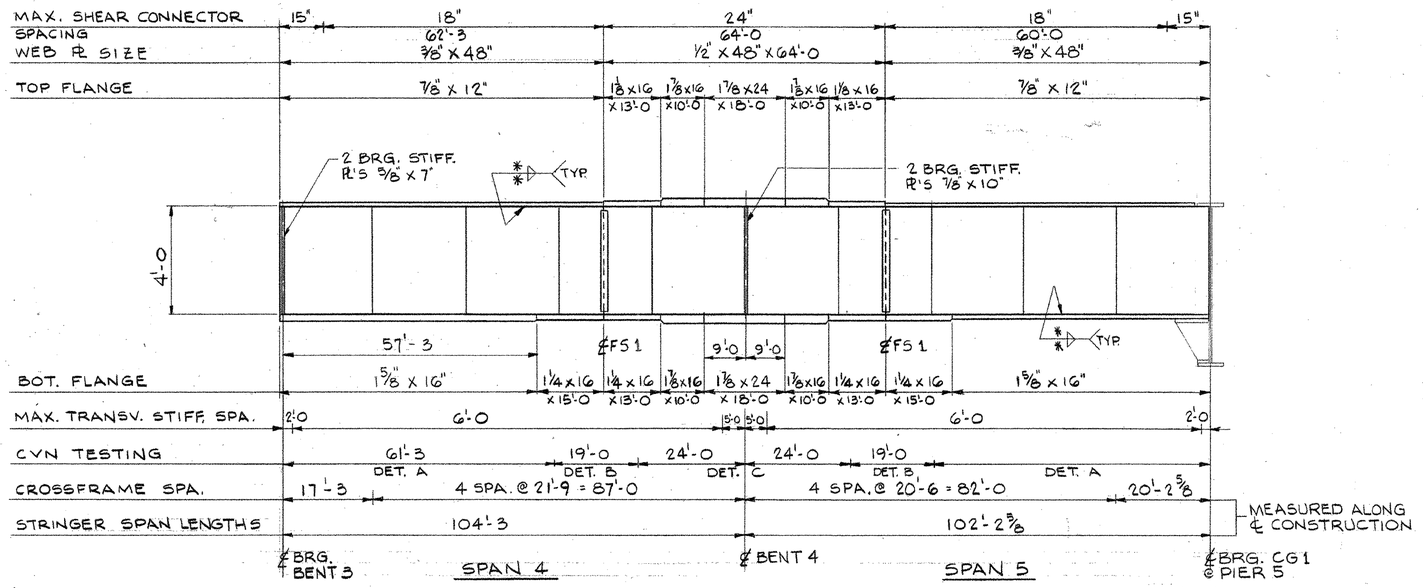
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRINGER DETAILS SPANS 1 TO 3

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 28 OF 98

S-15296

D 9002 (2-83) KAE 10 1253 4-83 A1329*



STRINGER ELEVATION S9 THRU S13

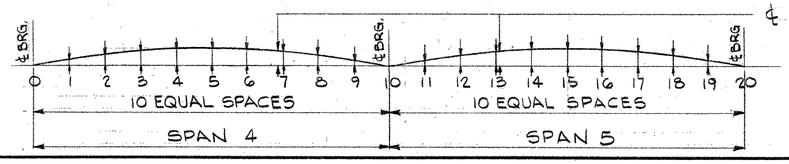
SCALE: HORZ. 1/16" = 1'-0 VERT. 3/8" = 1'-0

* SEE NOTE 4

CAMBER ORDINATES "Y" IN INCHES

STRINGER MARK	CAMBER	SPAN 4										SPAN 5									
		1	2	3	4	5	6	FS	7	8	9	11	12	13	FS	14	15	16	17	18	19
S9	A	0.16	0.29	0.38	0.41	0.38	0.30	0.20	0.20	0.10	0.03	0.03	0.10	0.20	0.20	0.30	0.38	0.41	0.38	0.29	0.16
	B	0.56	1.03	1.33	1.43	1.32	1.06	0.71	0.69	0.34	0.09	0.09	0.34	0.69	0.71	1.06	1.32	1.43	1.33	1.03	0.56
	C	0.06	0.10	0.13	0.15	0.14	0.11	0.08	0.08	0.04	0.01	0.01	0.04	0.08	0.08	0.11	0.14	0.15	0.13	0.10	0.06
	D	-0.33	-0.74	-0.65	-0.56	-0.46	-0.37	-0.28	-0.28	-0.18	-0.09	-0.16	-0.49	-0.41	-0.40	-0.23	-0.02	0.31	0.30	0.30	0.08
	E	0.45	0.68	1.19	1.43	1.38	1.10	0.71	0.69	0.30	0.04	-0.03	-0.01	0.56	0.59	1.24	1.82	2.30	2.14	1.72	0.86
S10	A	0.16	0.30	0.38	0.41	0.38	0.31	0.20	0.20	0.10	0.03	0.03	0.10	0.20	0.20	0.31	0.38	0.41	0.38	0.30	0.16
	B	0.49	0.89	1.15	1.24	1.15	0.92	0.62	0.60	0.29	0.08	0.08	0.29	0.60	0.62	0.92	1.15	1.24	1.15	0.89	0.49
	C	0.06	0.10	0.13	0.15	0.14	0.11	0.08	0.08	0.04	0.01	0.01	0.04	0.08	0.08	0.11	0.14	0.15	0.13	0.10	0.06
	D	—	—	—	—	—	—	—	—	—	—	-0.24	-0.44	-0.49	-0.50	-0.71	-0.60	-0.35	-0.24	-0.16	-0.14
	E	0.71	1.29	1.66	1.80	1.67	1.34	0.90	0.88	0.43	0.12	-0.12	-0.01	0.39	0.40	0.63	1.07	1.45	1.42	1.13	0.57
S11	A					SEE S10						0.03	0.10	0.20	0.20	0.31	0.38	0.41	0.38	0.30	0.16
	B					" "						0.08	0.29	0.60	0.62	0.92	1.15	1.24	1.15	0.89	0.49
	C					" "						0.01	0.04	0.08	0.08	0.11	0.14	0.15	0.13	0.10	0.06
	D					" "						-0.04	-0.08	-0.12	-0.12	-0.16	-0.16	-0.13	-0.09	-0.06	-0.03
	E					" "						0.08	0.35	0.76	0.78	1.18	1.51	1.67	1.57	1.23	0.68
S12	A					SEE S10						0.03	0.10	0.20	0.20	0.31	0.38	0.41	0.38	0.30	0.16
	B					" "						0.08	0.29	0.60	0.62	0.92	1.15	1.24	1.15	0.89	0.49
	C					" "						0.01	0.04	0.08	0.08	0.11	0.14	0.15	0.13	0.10	0.06
	D					" "						-0.10	-0.21	-0.31	-0.32	-0.41	-0.40	-0.32	-0.24	-0.16	-0.08
	E					" "						0.02	0.22	0.57	0.58	0.93	1.27	1.48	1.42	1.13	0.63
S13	A					SEE S10						0.03	0.10	0.20	0.20	0.31	0.38	0.41	0.38	0.30	0.16
	B					" "						0.08	0.29	0.60	0.62	0.92	1.15	1.24	1.15	0.89	0.49
	C					" "						0.01	0.04	0.08	0.08	0.11	0.14	0.15	0.13	0.10	0.06
	D					" "						-0.30	-0.49	-0.35	-0.37	-0.65	-0.69	-0.55	-0.41	-0.28	-0.14
	E					" "						-0.18	-0.06	0.53	0.53	0.69	0.98	1.25	1.25	1.01	0.57

A = CAMBER DUE TO DEAD LOAD OF STEEL
B = CAMBER DUE TO DEAD LOAD OF DECK CONCRETE
C = CAMBER DUE TO SUPERIMPOSED DEAD LOAD OF CONC. PARAPET & FENCE
D = GEOMETRIC CAMBER
E = TOTAL CAMBER (A+B+C+D)



℄ FIELD SPLICE

POSITIVE CAMBER IN UPWARD DIRECTION

NOTES

1. FOR GENERAL NOTES, SEE SH'S. 1 & 2
2. ADJUST SHEAR CONNECTORS TO AVOID SCUPPERS, FIELD SPLICES, FLANGE TRANSITIONS, & EXPANSION DAM SUPPORTS. ALL SHEAR CONNECTORS ARE 7/8"ϕ X 5" LONG STUDS AT 3/ROW.
3. ALL TRANSVERSE STIFFENERS SHALL CONSIST OF ONE PLATE ATTACHED TO THE WEB PLATE AS SHOWN ON DETAILS "A", "B" & "C" (SEE SH. 36). ON THE FASCIA STRINGERS, THE TRANVERSE STIFFENERS SHALL BE PLACED ON THE INSIDE FACE OF THE WEB. USE A PL 3/8 X 5" FOR 12" & 16" FLANGES & FOR 24" FLANGES USE A PL 7/16 X 6. TRANSVERSE STIFFENERS USED AS CROSSFRAME CONNECTOR PLATES SHALL BE A PL 9/16 X 7". MOVE STIFFENER TO AVOID FIELD SPLICES.
4. FOR MINIMUM FILLET WELD SIZE SEE SH. 36.
5. FOR STRINGER LENGTHS OF SPAN 5, SEE FRAMING PLAN SH. 26
6. ALL STRINGER WEB PLATES, TOP FLANGE PLATES IN DETAIL "B" AND "C" (TRANVERSE STIFFENER WELDING) AREAS, BOTTOM FLANGE PLATES IN DETAIL "A" AND "B" AREAS, AND ALL STRINGER SPLICE MATERIAL SHALL BE TESTED FOR AND CONFORM TO CVN (CHARPY V-NOTCH) REQUIREMENTS.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES	GRM
DRN	VRK
CHK	MJP

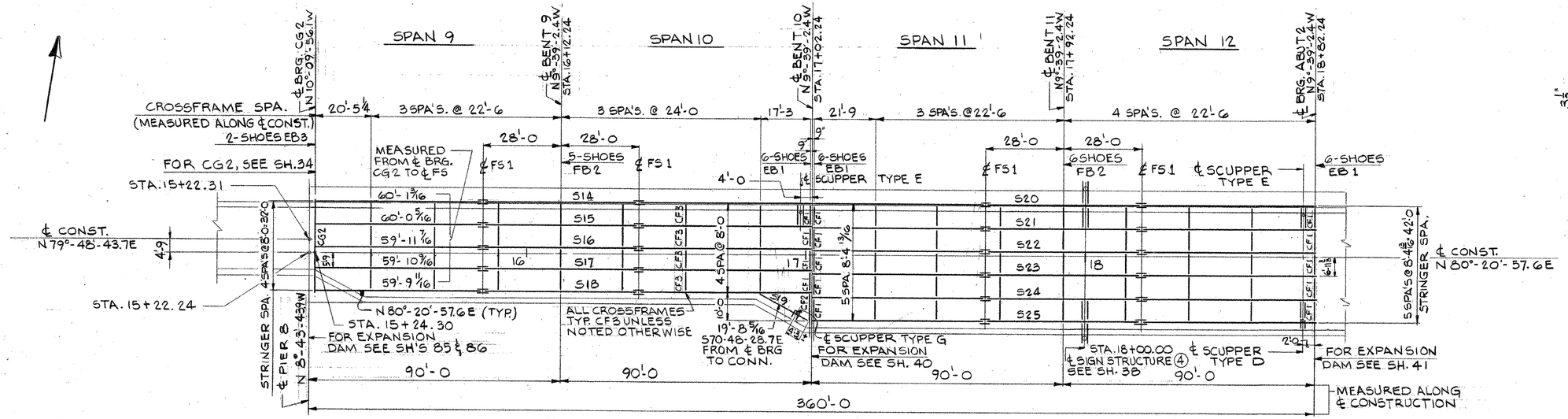
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN, BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRINGER DETAILS SPANS 4 & 5

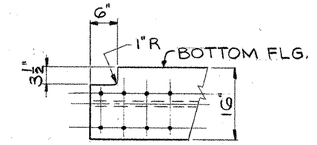
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 29 OF 98
S-15296

D 9002 (2-83) K&E 19 1253 4-83 A1329*

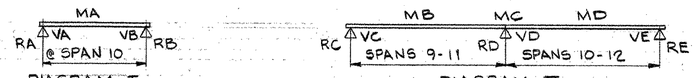


FRAMING PLAN
SCALE : 1" = 20'-0

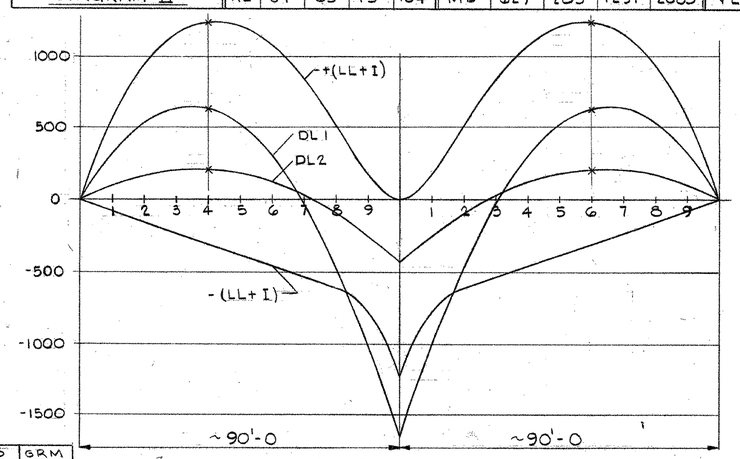


SECTION A-A SH. 31
SCALE : ¾" = 1'-0
FOR S17 ONLY

STRINGER REACTION TABLE



STRINGER MARK	MAX. REACTION (KIPS)					MAX. BENDING MOMENT (K-FT)					MAX. SHEAR (KIPS)				
	LOC.	D.L.	L.L.	I	TOTAL	LOC.	D.L.1	D.L.2	LL+I	TOTAL	LOC.	D.L.1	D.L.2	LL+I	TOTAL
S19	RA	26	41	12	79	MA	147	34	367	548	VA	21	5	53	79
DIAGRAM I	RB	30	41	12	83						VB	25	5	53	83
S14 THRU S18	RC	54	65	15	134	MB	629	203	1251	2083	VC	41	13	81	135
S20 THRU S25	RD	201	95	22	318	MC	-1665	-435	-1237	-3337	VD	78	22	79	179
DIAGRAM II	RE	54	65	15	134	MD	629	203	1251	2083	VE	41	13	81	135



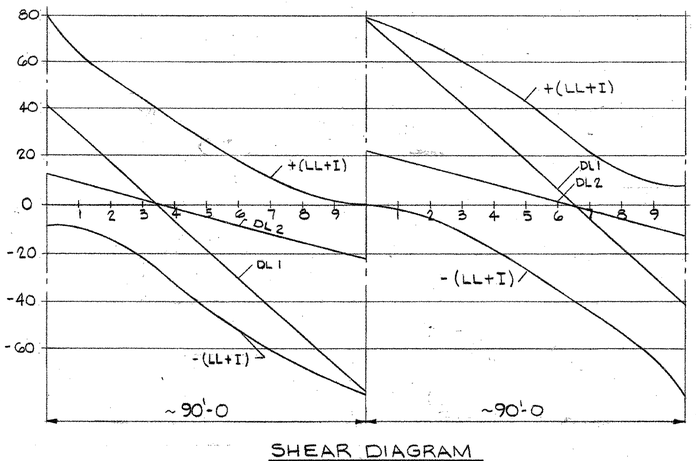
MOMENT DIAGRAM
SCALE: HORZ. 1" = 20' VERT. 1" = 500K-FT.

DES	GRM
DRN	VRK
CHK	MJP

STRINGER ELEVATION AT CENTER LINE OF BEARING

STRINGER MARK	℄ BRG. - BENT 9		℄ BRG. BENT 10, SPAN 10		℄ BRG. BENT 10, SPAN 11		℄ BRG. BENT 11		℄ BRG. - ABUT. 2	
	BOTT. OF STRINGER	TOP OF MASONRY PAD	BOTT. OF STRINGER	TOP OF MASONRY PAD	BOTT. OF STRINGER	TOP OF MASONRY PAD	BOTT. OF STRINGER	TOP OF MASONRY PAD	BOTT. OF STRINGER	TOP OF MASONRY PAD
S14 OR S20	785.191	784.727	784.662	784.276	784.661	784.276	784.039	783.570	783.505	783.119
S15 OR S21	785.393	784.924	784.864	784.478	784.863	784.478	784.247	783.779	783.713	783.328
S16 OR S22	785.518	785.049	784.991	784.606	784.991	784.606	784.378	783.910	783.844	783.459
S17 OR S23	785.463	784.995	784.934	784.548	784.906	784.520	784.293	783.824	783.758	783.373
S18 OR S24	785.293	784.824	784.809	784.424	784.775	784.389	784.162	783.693	783.627	783.242
S19 OR S25			784.659	784.274	784.598	784.212	783.985	783.516	783.451	783.065

NOTE:
PLOTTED MOMENTS & SHEARS ARE FOR INTERIOR STRINGER SERVICE LOADS (UNFACTORED)



SHEAR DIAGRAM
SCALE: HORZ 1" = 20' VERT. 1" = 30K

FOR GENERAL NOTES SEE SH'S. 1 & 2

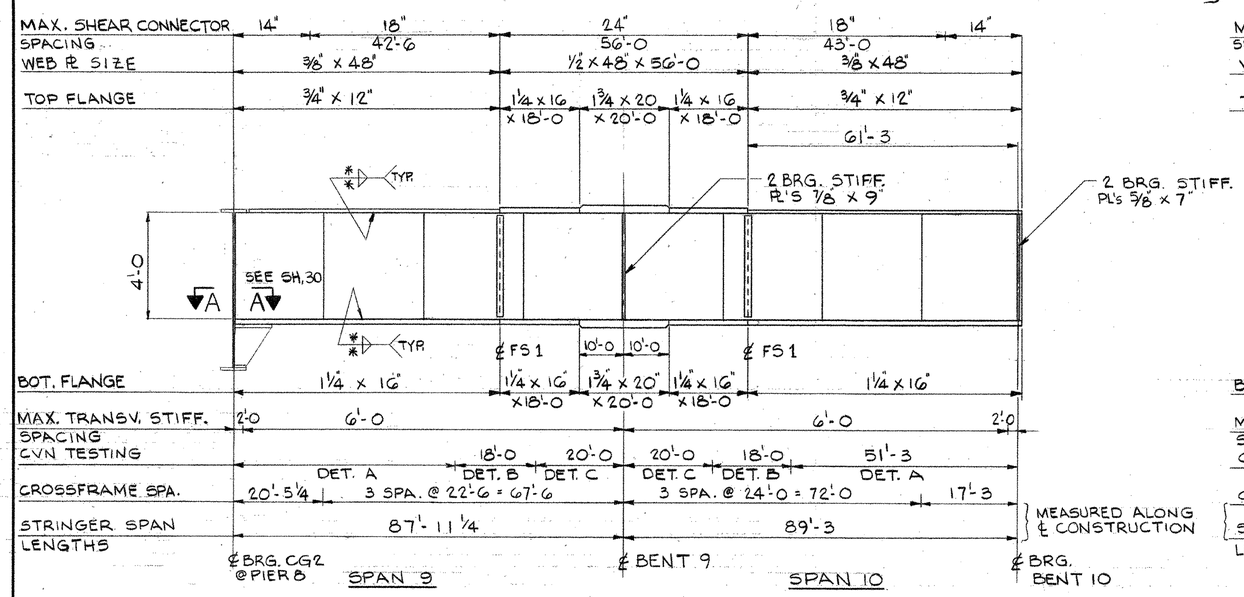
Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
FRAMING PLAN - SPANS 9 TO 12

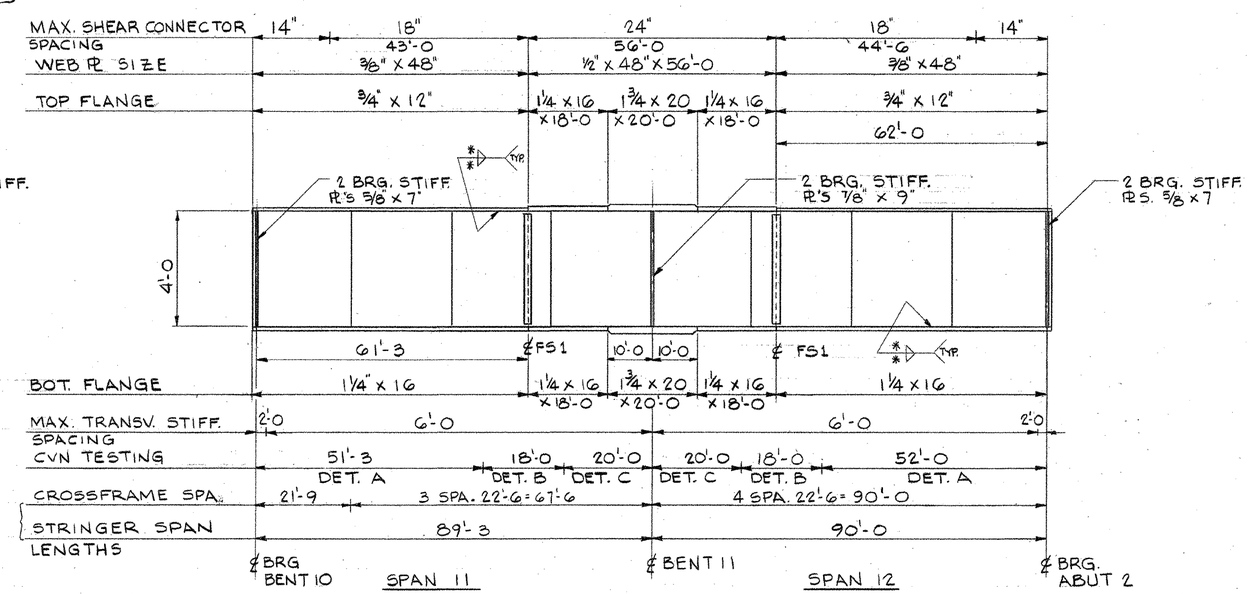
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 30 OF 98
S-15296



STRINGER ELEVATION S14 THRU S18

SCALE : HORZ. 1/16" = 1'-0 VERT. 3/8" = 1'-0

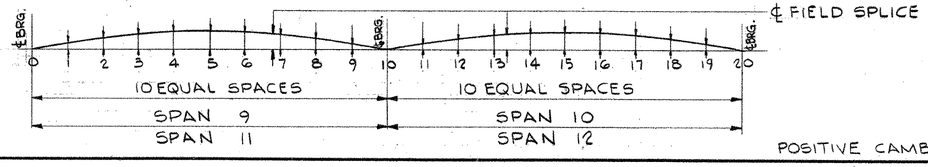


STRINGER ELEVATION S20 THRU S25

SCALE : HORZ. 1/16" = 1'-0 VERT. 3/8" = 1'-0

CAMBER ORDINATES "Y" IN INCHES

STRINGER MARK	CAMBER	SPAN 9										SPAN 10									
		1	2	3	4	5	6	F.S.	7	8	9	11	12	13	F.S.	14	15	16	17	18	19
S14	A	0.10	0.19	0.24	0.26	0.24	0.19	0.14	0.13	0.06	0.02	0.02	0.06	0.13	0.14	0.19	0.24	0.26	0.24	0.19	0.10
	B	0.37	0.67	0.86	0.92	0.86	0.68	0.48	0.45	0.22	0.06	0.06	0.22	0.45	0.48	0.68	0.86	0.92	0.86	0.67	0.37
	C	0.04	0.06	0.08	0.09	0.09	0.07	0.05	0.05	0.03	0.01	0.01	0.03	0.05	0.05	0.07	0.09	0.09	0.08	0.06	0.04
	D	-0.02	-0.11	-0.17	-0.17	-0.17	-0.18	-0.18	-0.18	-0.23	-0.22	—	—	—	—	—	—	—	—	—	—
	E	0.49	0.81	1.01	1.10	1.02	0.76	0.49	0.45	0.08	-0.13	0.09	0.31	0.63	0.67	0.94	1.19	1.27	1.18	0.92	0.51
S15	A	0.11	0.19	0.25	0.27	0.25	0.20	0.14	0.13	0.06	0.02	0.02	0.06	0.13	0.14	0.20	0.25	0.27	0.25	0.19	0.11
	B	0.32	0.58	0.75	0.80	0.74	0.59	0.41	0.39	0.19	0.05	0.05	0.19	0.39	0.41	0.59	0.74	0.80	0.75	0.58	0.32
	C	0.04	0.06	0.08	0.09	0.09	0.07	0.05	0.05	0.03	0.01	0.01	0.03	0.05	0.05	0.07	0.09	0.09	0.08	0.06	0.04
	D	-0.10	-0.19	-0.29	-0.39	-0.48	-0.58	-0.56	-0.56	-0.37	-0.19	—	—	—	—	—	—	—	—	—	—
	E	0.37	0.64	0.79	0.77	0.60	0.28	0.04	0.01	0.09	0.11	0.08	0.28	0.57	0.60	0.86	1.08	1.16	1.08	0.83	0.47
S16	A					SEE S15										SEE S15					
	B					" "										" "					
	C					" "										" "					
	D	-0.02	-0.04	-0.06	-0.08	-0.11	-0.13	-0.12	-0.12	-0.08	-0.04					" "					
	E	0.45	0.79	1.02	1.08	0.97	0.73	0.48	0.45	0.20	0.04					" "					
S17	A					SEE S15										SEE S15					
	B					" "										" "					
	C					" "										" "					
	D	-0.05	-0.11	-0.16	-0.22	-0.27	-0.32	-0.31	-0.31	-0.21	-0.10					" "					
	E	0.42	0.72	0.92	0.94	0.81	0.54	0.29	0.26	0.07	-0.02					" "					
S18	A					SEE S15										SEE S15					
	B					" "										" "					
	C					" "										" "					
	D	0.65	0.52	0.35	0.22	0.10	-0.06	-0.18	-0.19	-0.08	-0.02	-0.06	-0.11	-0.16	-0.17	-0.22	-0.27	-0.33	-0.38	-0.19	0.06
	E	1.12	1.35	1.43	1.38	1.18	0.80	0.42	0.38	0.20	0.06	0.02	0.17	0.41	0.43	0.64	0.81	0.83	0.70	0.64	0.53



POSITIVE CAMBER IN UPWARD DIRECTION

* SEE NOTE 4

CAMBER ORDINATES "Y" IN INCHES

STRINGER MARK	CAMBER	SPAN 11										SPAN 12									
		1	2	3	4	5	6	F.S.	7	8	9	11	12	13	F.S.	14	15	16	17	18	19
S20	A	0.10	0.19	0.24	0.26	0.24	0.19	0.14	0.13	0.06	0.02	0.02	0.06	0.13	0.14	0.19	0.24	0.26	0.24	0.19	0.10
	B	0.37	0.68	0.88	0.94	0.87	0.70	0.49	0.46	0.23	0.06	0.06	0.23	0.46	0.49	0.70	0.87	0.94	0.88	0.68	0.37
	C	0.03	0.05	0.07	0.08	0.07	0.06	0.04	0.04	0.02	0.01	0.01	0.02	0.04	0.04	0.06	0.07	0.08	0.07	0.05	0.03
	D	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	0.50	0.92	1.19	1.28	1.18	0.95	0.67	0.63	0.31	0.09	0.09	0.31	0.63	0.67	0.95	1.18	1.28	1.19	0.92	0.50
S21 THRU S25	A	0.11	0.19	0.25	0.27	0.25	0.20	0.14	0.13	0.06	0.02	0.02	0.06	0.13	0.14	0.20	0.25	0.27	0.25	0.19	0.11
	B	0.33	0.61	0.78	0.84	0.78	0.62	0.43	0.41	0.20	0.05	0.05	0.20	0.41	0.43	0.62	0.78	0.84	0.78	0.61	0.33
	C	0.03	0.05	0.07	0.07	0.07	0.06	0.04	0.04	0.02	0.01	0.01	0.02	0.04	0.04	0.06	0.07	0.07	0.07	0.05	0.03
	D	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	E	0.47	0.85	1.10	1.18	1.10	0.88	0.61	0.58	0.28	0.08	0.08	0.28	0.58	0.61	0.88	1.10	1.18	1.10	0.85	0.47

A = CAMBER DUE TO DEAD LOAD OF STEEL
B = CAMBER DUE TO DEAD LOAD OF DECK CONCRETE
C = CAMBER DUE TO SUPERIMPOSED DEAD LOAD OF CONC. PARAPET & FENCE
D = GEOMETRIC CAMBER
E = TOTAL CAMBER (A+B+C+D)

NOTES

1. FOR GENERAL NOTES, SEE SH'S. 1 & 2
2. ADJUST SHEAR CONNECTORS TO AVOID SCUPPERS, FIELD SPLICES, FLANGE TRANSITIONS, & EXPANSION DAM SUPPORTS. ALL SHEAR CONNECTORS ARE 7/8"Ø x 5" LONG STUDS AT 3/ ROW.
3. ALL TRANSVERSE STIFFENERS SHALL CONSIST OF ONE PLATE ATTACHED TO THE WEB PLATE AS SHOWN ON DETAILS "A", "B" & "C" (SEE SH. 36). ON THE FASCIA STRINGERS, THE TRANSVERSE STIFFENERS SHALL BE PLACED ON THE INSIDE FACE OF WEB. ALL TRANSVERSE STIFFENERS SHALL BE A PL 3/8" x 5", EXCEPT THOSE USED AS CROSSFRAME CONNECTOR SHALL BE A PL 9/16" x 7". MOVE STIFFENERS TO AVOID FIELD SPLICES.
4. FOR MINIMUM FILLET WELD SIZE, SEE SH. 36.
5. FOR STRINGER LENGTHS OF SPAN 9, SEE FRAMING PLAN SH. 30
6. ALL STRINGER WEB PLATES, TOP FLANGE PLATES IN DETAIL "B" AND "C" (TRANSVERSE STIFFENER WELDING) AREAS, BOTTOM FLANGE PLATES IN DETAIL "A" AND "B" AREAS, AND ALL STRINGER SPLICE MATERIAL SHALL BE TESTED FOR AND CONFORM TO CVN (CHARPY V-NOTCH) REQUIREMENTS.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	GRM
DRN	VRK
CHK	MJP

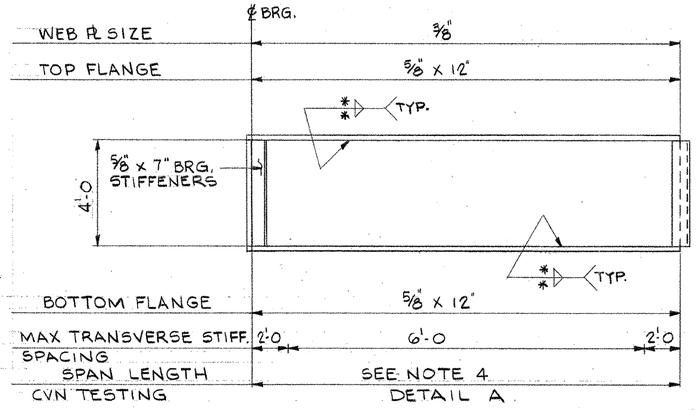
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRINGER DETAILS - SPANS 9 TO 12

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 31 OF 98
S-15296

D 9002 (2-83) KAE 19 1253-4-83 A1929*

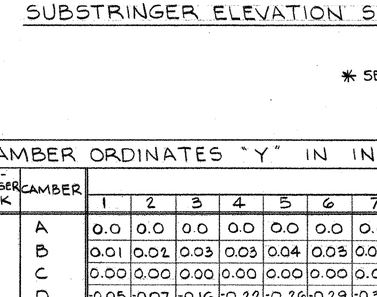


SUBSTRINGER ELEVATION S1, S8 OR S19

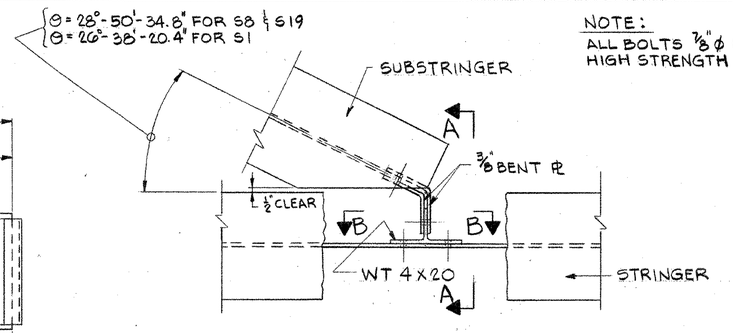
* SEE NOTE 3.

CAMBER ORDINATES "Y" IN INCHES										
SUB-STRINGER MARK	CAMBER	1	2	3	4	5	6	7	8	9
51	A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	B	0.01	0.02	0.03	0.03	0.04	0.03	0.03	0.02	0.01
	C	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D	-0.05	-0.07	-0.16	-0.22	-0.26	-0.29	-0.38	-0.29	-0.12
	E	-0.04	-0.05	-0.13	-0.19	-0.22	-0.26	-0.35	-0.27	-0.11

TURN MILL CAMBER UP FOR SUBSTRINGERS, S8 & S19

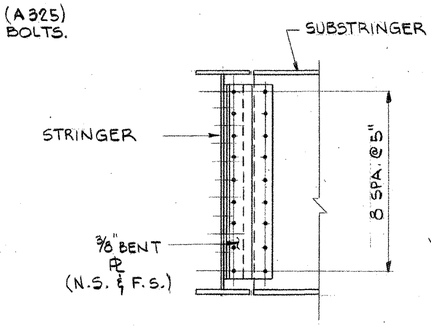


A = CAMBER DUE TO DEAD LOAD OF STEEL
B = CAMBER DUE TO DEAD LOAD OF CONCRETE
C = CAMBER DUE TO SUPERIMPOSED DEAD LOAD OF CONC. PARAPET & FENCE
D = GEOMETRIC CAMBER
E = TOTAL CAMBER (A+B+C+D)

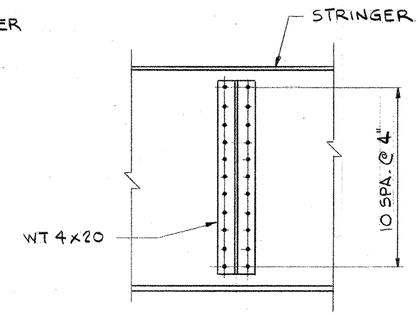


SUBSTRINGER TO STRINGER CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0

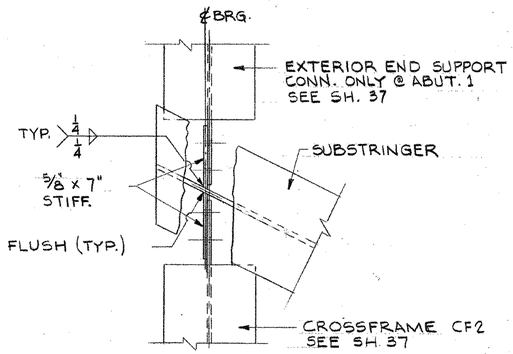
NOTE:
ALL BOLTS 7/8" ϕ (A325) HIGH STRENGTH BOLTS.



SECTION A-A
SCALE: 3/4" = 1'-0



SECTION B-B
SCALE: 3/4" = 1'-0



SUBSTRINGER TO CROSSFRAME CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0

NOTES

1. FOR GENERAL NOTES SEE SH'S. 1 & 2
2. ALL TRANSVERSE STIFFENERS SHALL CONSIST OF ONE PLATE ATTACHED TO THE WEB PLATE AS SHOWN ON DETAIL "A" SEE SH. 36. ALL TRANSVERSE STIFFENERS SHALL BE PLACED ON THE INSIDE FACE OF THE WEB AND SHALL BE A PL 3/8" X 5"
3. FOR MINIMUM FILLET WELD SIZE, SEE SH. 36.
4. FOR SUBSTRINGER LENGTHS, SEE RESPECTIVE FRAMING PLANS SEE SHS. 26 & 30
5. ALL STRINGER WEB PLATES, TOP FLANGE PLATES IN DETAIL 'B' AND 'C' (TRANSVERSE STIFFENER WELDING) AREAS, BOTTOM FLANGE PLATES IN DETAIL 'A' AND 'B' AREAS, AND ALL STRINGER SPLICE MATERIAL SHALL BE TESTED FOR AND CONFORM TO CVN (CHARPY V-NOTCH) REQUIREMENTS.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

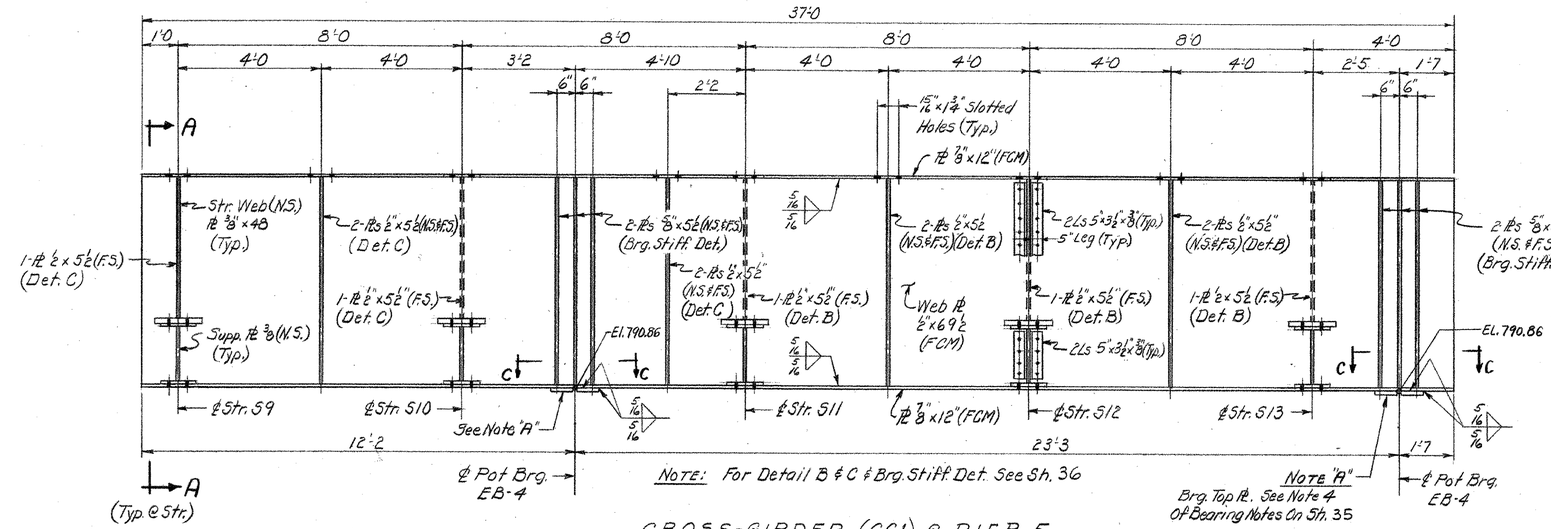
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SUBSTRINGER DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 32 OF 98
S-15296

DES	GAM
DRN	V.R.K
CHK	MJP

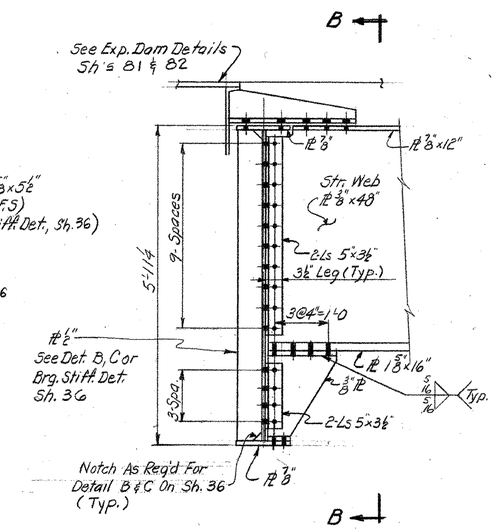
D 9002 (E-83) K&E 19 1255 4-83 A1329



NOTE: For Detail B & C & Brg. Stiff. Det. See Sh. 36

CROSS-GIRDER (CG1) @ PIER 5

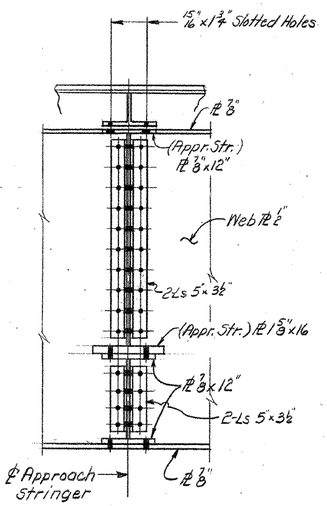
Scale 1/2" = 1'-0



SECTION A-A

Scale 3/4" = 1'-0

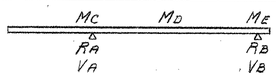
(Typ. Approach Stringer Conn.)



SECTION B-B

Scale 3/4" = 1'-0

CROSS-GIRDER (CG1) STRESS TABLE



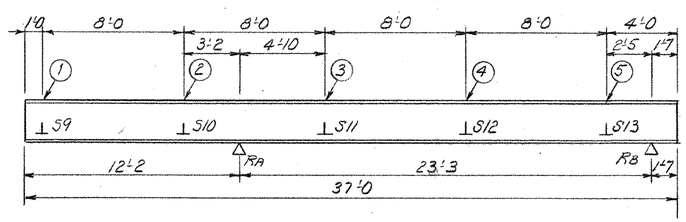
	Maximum Reaction (Kips)					Maximum Bending Moment (Kip-Ft.)					Maximum Shear (Kips)				
	Loc.	DL	LL*	I*	Total	Loc.	DL1	DL2	LL+I	Total	Loc.	DL1	DL2	LL+I	Total
Cross Girder @ Pier 5	RA	258.7	99.5	21.9	380.1	MC	-752	-219	-416	-1387	VA	101.4	30.6	98.5	230.5
	RB	62.5	103.2	22.7	188.4	MD	103	43	657	803	VB	46.3	15.9	157.4	219.6
						ME	0.0	0.0	0.0	0.0					

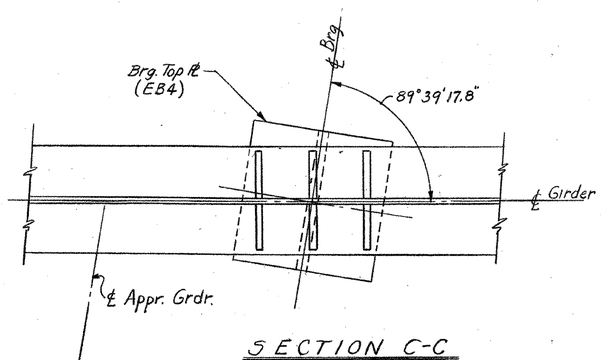
* Live Load Is H520 Loading For Bearing Design

		Camber Ordinates (Inches)				
	Camber	①	②	③	④	⑤
Cross Girder @ Pier 5 (CG1)	A	0.02	0.00	0.00	0.00	0.00
	B	0.06	0.01	-0.01	0.00	0.00
	C	0.01	0.00	0.00	0.00	0.00
	D	-1.08	-0.13	0.19	0.16	0.10
	E	-0.99	-0.12	0.18	0.16	0.10

Negative (-) Camber Is Downward

A = Camber Due To Dead Load Of Steel.
B = Camber Due To Dead Load Of Deck Concrete
C = Camber Due To Superimposed Dead Load Of Conc. Parapet & Fence
D = Geometric Camber
E = Total Camber (A+B+C+D)





SECTION C-C

Scale 1 1/2" = 1'-0

NOTES

1. For General Notes, See Sh. 1 & 2
2. All Structural Steel Shall Be ASTM Designation A-36.
3. For Bearings, See Sh. 35
4. Cross Girder Member Components Which Are Fracture Critical Are Designated By The Symbol (FCM) And Shall Be Fabricated In Accordance With Sept. 1978 AASHTO Guide Specifications For Fracture Critical Non-Redundant Steel Bridge Members.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	JZ
Dwn.	NWB
Chk.	JZ

Work This Sheet With Sheets 35 & 95

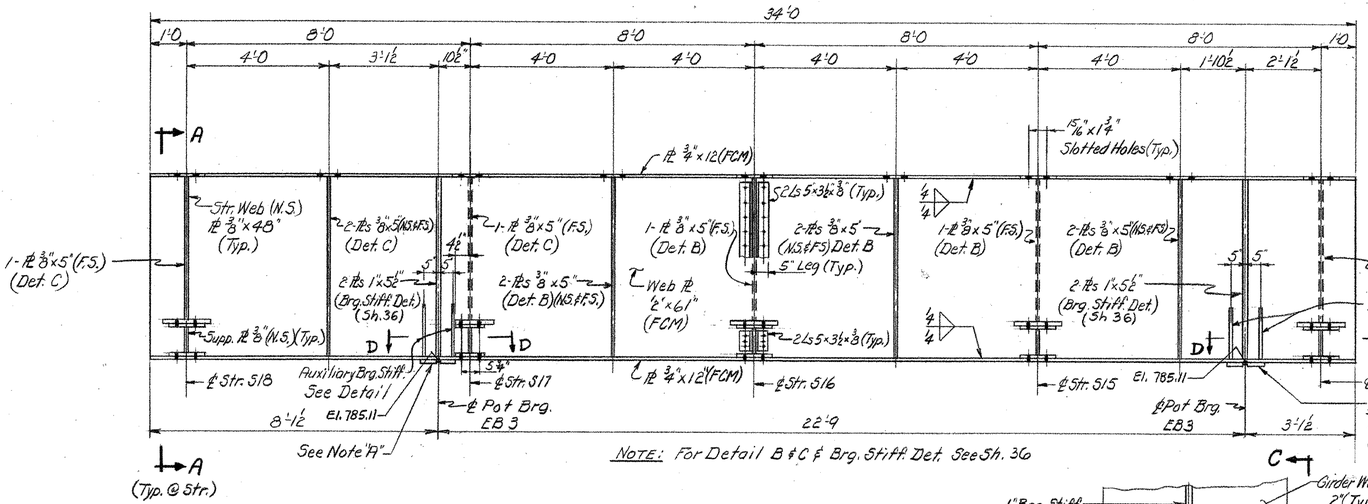
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
CROSS-GIRDER AT PIER 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

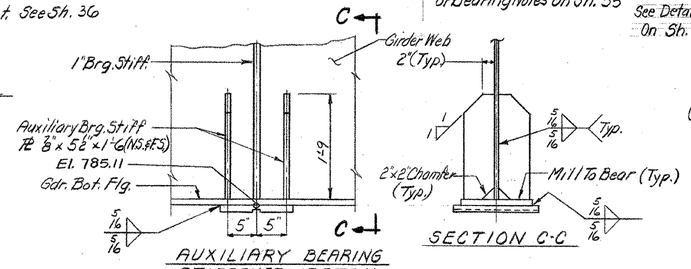
SHEET 33 OF 98

S-15296



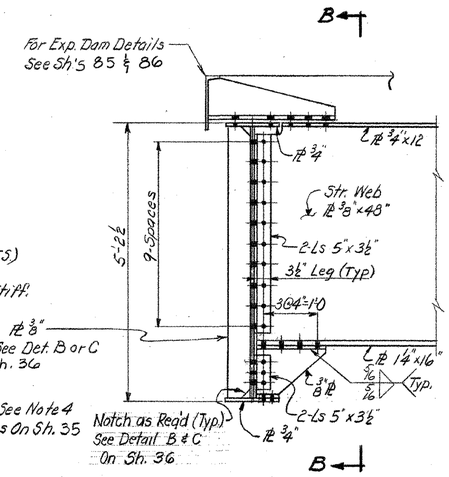
NOTE: For Detail B & C & Brg. Stiff. Det. See Sh. 36

CROSS-GIRDER (CG2) @ PIER 8
Scale ½"=1'-0
Looking Back On Stations

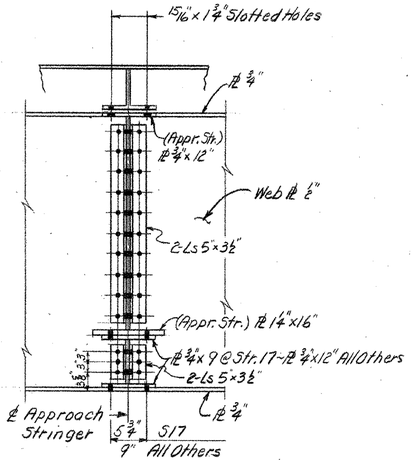


AUXILIARY BEARING STIFFENER DETAIL
Scale 1"=1'-0

SECTION C-C



SECTION A-A
Scale ¾"=1'0
(Typ. Approach Stringer Conn.)



SECTION B-B
Scale ¾"=1'0

NOTES

1. For General Notes See Sh. 1.
2. All Structural Steel Shall Be ASTM Designation A36.
3. For Bearings See Sh. 35
4. Cross Girder Member Components Which Are Fracture Critical Are Designated By The Symbol (FCM) And Shall Be Fabricated In Accordance With September 1978 AASHTO "Guide Specifications For Fracture Critical Non-Redundant Steel Bridge Members."

CROSS-GIRDER (CG2) STRESS TABLE
(Looking Back On Stations)



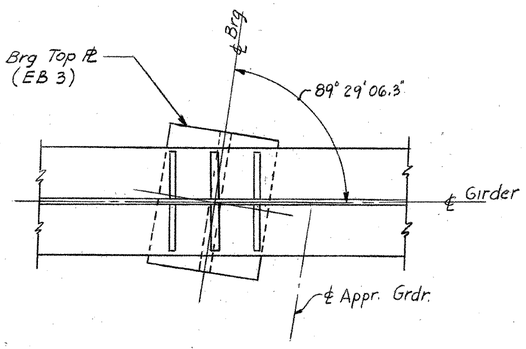
	Maximum Reaction (Kips)					Maximum Bending Moment (Kip-Ft)					Maximum Shear (Kips)				
	Loc.	D.L.	L.L*	I*	Total	Loc.	DL1	DL2	LL+I	Total	Loc.	DL1	DL2	LL+I	Total
Cross Girder @ Pier 8	RA	112.2	65.0	14.9	192.1	MC	-97	-27	-23	-147	VA	45.8	12.6	66.9	145.3
	RB	168.8	66.3	15.3	250.4	MD	131	39	596	766	VB	87.3	25.8	103.9	217.0
						ME	-302	-90	-436	-828					

* Live Load Is HS20 Loading For Bearing Design

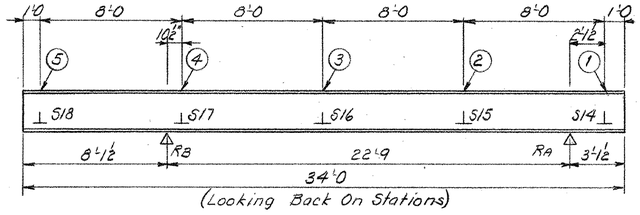
		Camber Ordinate In Inches				
	Camber	①	②	③	④	⑤
Cross Girder @ Pier 8 (CG2)	A	0.00	0.00	0.00	0.00	0.00
	B	0.00	0.01	0.01	0.00	0.01
	C	0.00	0.00	0.00	0.00	0.00
	D	-0.08	0.02	0.06	0.01	-0.92
	E	-0.08	0.03	0.07	0.01	-0.91

Negative (-) Camber Is Downward

A = Camber Due To Dead Load Of Steel.
B = Camber Due To Dead Load Of Deck Concrete.
C = Camber Due To Superimposed Dead Load Of Conc. Parapet & Fence.
D = Geometric Camber
E = Total Camber (A+B+C+D)



SECTION D-D
Scale 1½"=1'-0



Work This Sheet With Sheets 35 & 96

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

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BUREAU OF HIGHWAY DESIGN

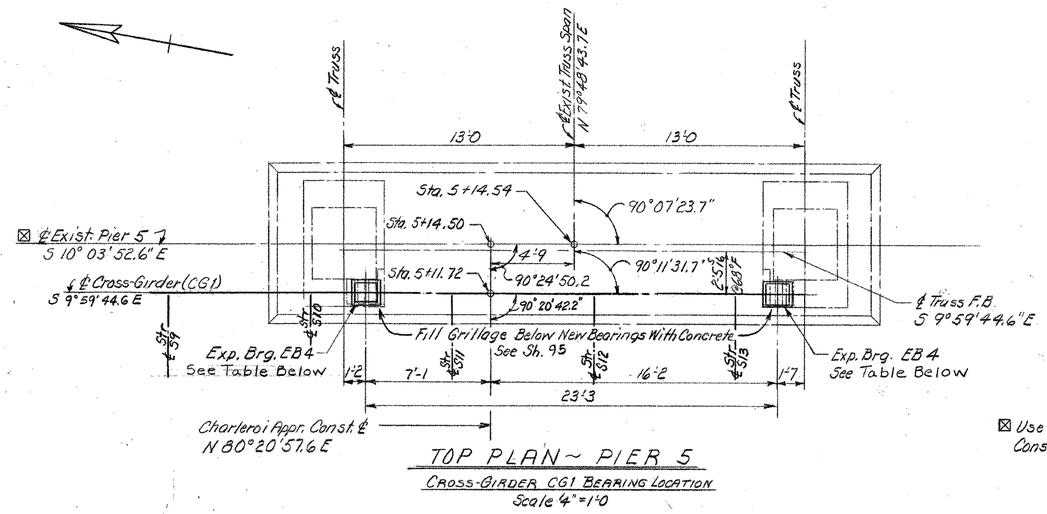
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
CROSS-GIRDER AT PIER 8

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 34 OF 98
S-15296

Des.	JZ
Dwn.	NWB
Chk.	JZ

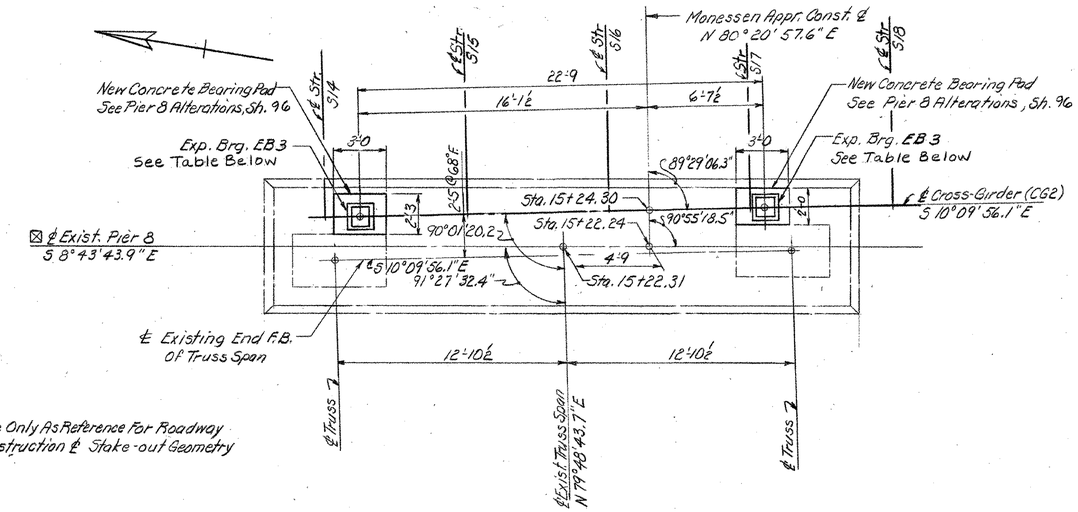
D 9002 (2-83) KAR 19 1253 4-83 A1329*



TOP PLAN ~ PIER 5

CROSS-GIRDER CG1 BEARING LOCATION

Scale 4" = 1'0

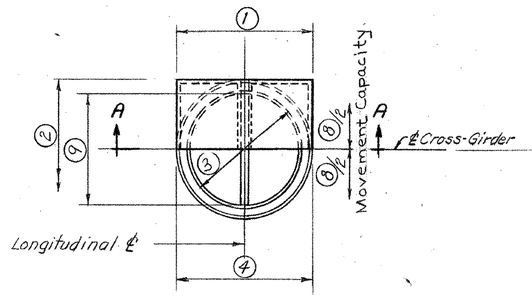


☒ Use Only As Reference For Roadway Construction ℄ Stake-out Geometry

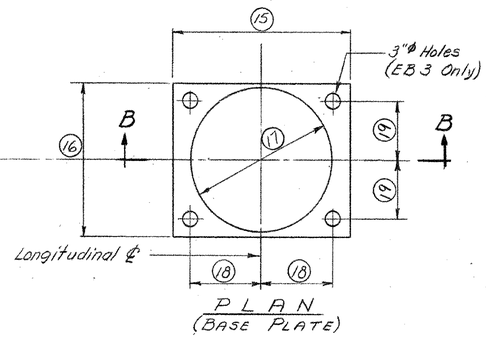
TOP PLAN ~ PIER 8

CROSS-GIRDER CG2 BEARING LOCATION

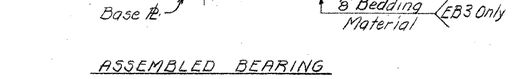
Scale 4" = 1'0



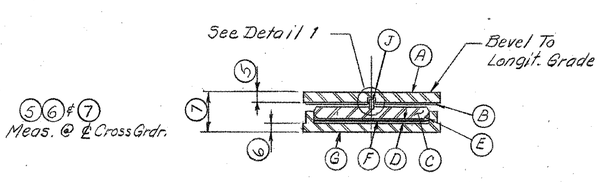
PLAN (BEARING)



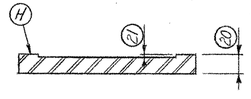
PLAN (BASE PLATE)



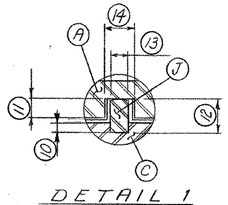
ASSEMBLED BEARING



SECTION A-A



SECTION B-B



DETAIL 1

EXPANSION BEARINGS ~ LATERALLY RESTRICTED

Bearing Mark	Vert. Load	Bearings (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	Base Plates (15)	(16)	(17)	(18)	(19)	(20)	(21)	Number Req'd
EB 3	250K	12½"	14⅝"	10.51"	12½"	11.01"	0.75"	3½"	2"	9⅞"	0.27"	0.44"	¾"	½"	0.81"	24"	20½"	12⅝"	8¾"	7"	2 7/16"	⅜"	2
EB 4	400K	15⅝"	15⅝"	13.09"	15⅝"	11.22"	1.02"	4⅜"	2"	12 5/16"	0.37"	0.56"	1"	½"	0.81"	20"	17"	15¾"	—	—	2 5/16"*	⅜"	2

* Minimum Dimension For Base Plate. May be Increased To Suit Field Conditions Of Existing Steel Grillage At Pier 5. See Grillage Preparation On Sh. 95

LEGEND

(A) Steel Top ℄

(B) Stainless Steel, ASTM A240 Type 304, 14Ga.(Min), With Mating Surface Finish Of Less Than 10 Microinches R.M.S. On The Side In Contact With The TFE.

(C) Steel Piston With Mating Surface Of 15% Glass Filled Florogold And Press Fit Key.

(D) Polytetrafloroethylene (TFE) Shear Reducer Discs. Min. Thickness = 64".

(E) O-Ring Seal (Brass)

(F) Neoprene, 50 Durometer, Conforming To AASHTO Specs.

(G) Steel Bottom Plate With Cylinder.

(H) Steel Base ℄

(J) Xylan Coated C1018 Cold Drawn Key.

BEARING NOTES

1. All Bearing Steel Shall Be ASTM A588, Unless Noted.
2. Bearing Elements Shall Be Fabricated And Assembled In Accordance With Manufacturer's Standard Procedure And Shall Meet The Tests And Requirements Stipulated On This Drawing And In The Special Provisions.
3. Bearing Details May Deviate From Those Shown On This Drawing Subject To Approval Of The Engineer. Total Bearing Dimensions Must Be Maintained.
4. Bearings Shall Be Wrapped With Dust Proof And Moisture Proof Covers For Shipment. Top Plate Which Is Welded To Girder In The Shop Shall Be Protected From Damage During Operations, Including Shipment To Site.
5. For Anchor Bolt Details And Placement, See Sh. 96

Work this sheet with Sh. 33, 34, 95 & 96

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	JE
Dwn.	NWB
Chk.	JE

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

CROSS-GIRDER BEARINGS & LOC. PLAN

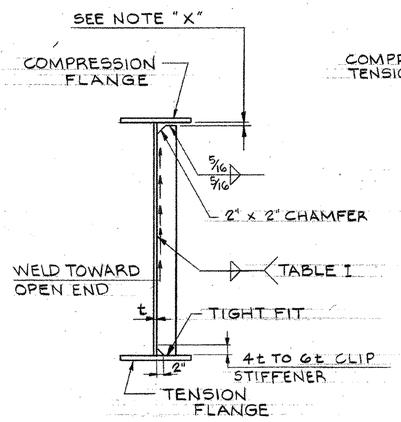
RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

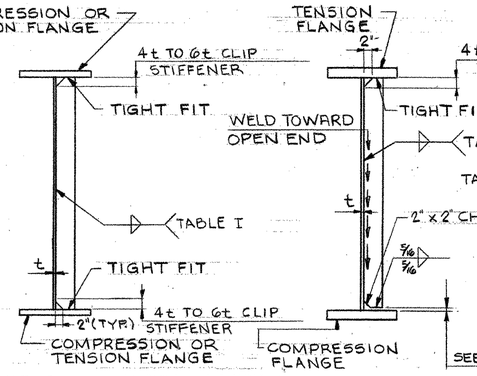
SHEET 35 OF 98

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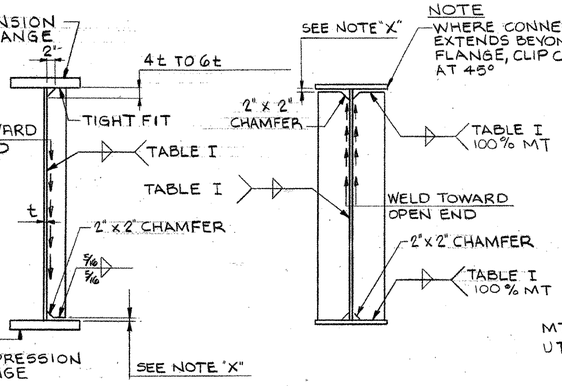
D 9002 (2-83) K&E 19 1253 4-83 A1329*



DETAIL "A"



DETAIL "B"



DETAIL "C"

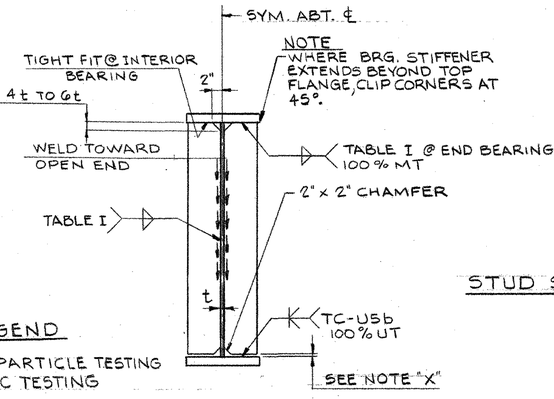
TRANSVERSE STIFFENER DETAILS

CVN (CHARPY V-NOTCH) TESTING REQUIREMENTS

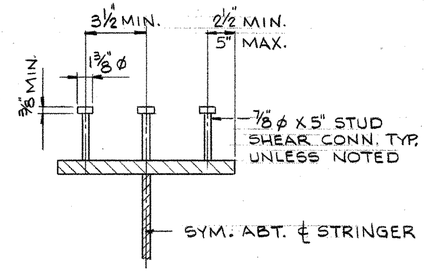
STRINGER FLANGE AND WEB PLATES SHALL CONFORM TO CVN TEST REQUIREMENTS AS FOLLOWS:

DETAIL "A" ~ BOTTOM FLANGE AND WEB
DETAIL "B" ~ TOP & BOTTOM FLG'S. & WEB
DETAIL "C" ~ TOP FLANGE AND WEB

NOTE "X"
1/8 MAX. CLEAR BEFORE WELDING



END & INTERIOR BEARING



STUD SHEAR CONNECTOR DETAIL
NO SCALE

LEGEND
MT = MAGNETIC PARTICLE TESTING
UT = ULTRASONIC TESTING

INTERIOR STRINGER (TYP.)
SEE NOTE "Z"

CROSSFRAME CONN. PLATE DETAILS

NOTE "Z"
CONN. Ø'S REQ'D. ON INSIDE ONLY OF EXTERIOR STRINGERS

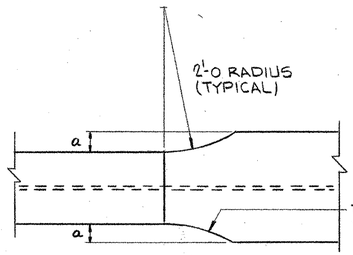
BEARING STIFFENER DETAILS

STIFFENER NOTES

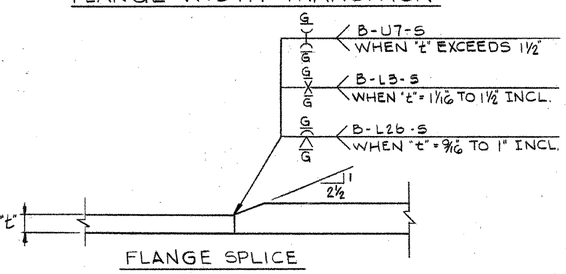
ALL BEARING STIFFENERS SHALL BE VERTICAL.
TRANSVERSE STIFFENERS AND CROSSFRAME CONN. PLATES MAY BE EITHER VERTICAL OR NORMAL TO THE FLANGE.
TRANSVERSE STIFFENERS ON EXTERIOR STRINGERS SHALL BE PLACED ON THE INSIDE FACE OF THE WEB.

TABLE I	
MATERIAL THICKNESS OF THICKER PART JOINED	MIN. FILLET WELD SIZE
¾" OR LESS	¼" *
OVER ¾" TO 1½"	5/16
OVER 1½" TO 2¼"	⅜" **
OVER 2¼ TO 6"	½" **

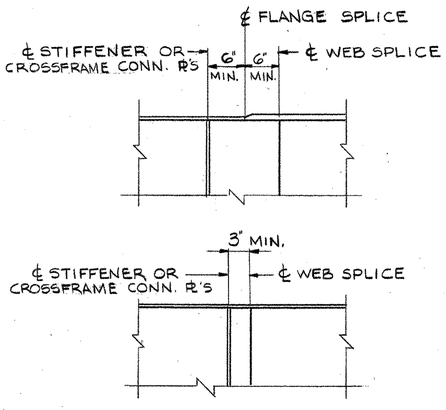
NOTE:
SIZE OF FILLET WELD NEED NOT EXCEED THICKNESS OF THINNER Ø JOINED
*EXCEPT 3/16 WHERE NOTED
**EXCEPT 5/16 FOR STRINGER WEB TO FLANGE



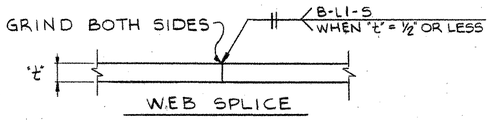
FLANGE WIDTH TRANSITION



FLANGE SPLICE



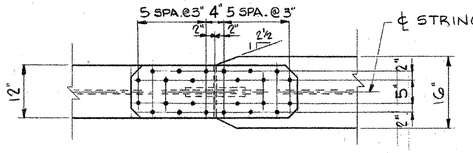
SHOP SPLICE CLEARANCE DETAILS



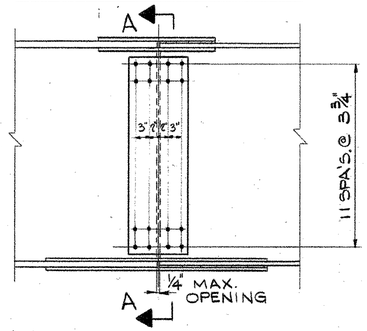
WEB SPLICE

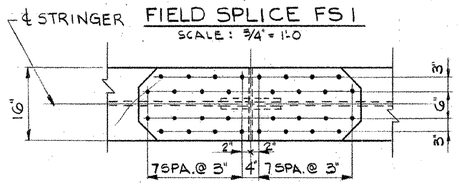
PLACEMENT OF BOLTS:
WEB SPLICES - PLACE BOLT HEAD ON EXPOSED SIDE OF FASCIA STRINGERS
FLANGE SPLICES - PLACE NUTS ON TOP SURFACE OF FLANGE SPLICE PLATES

FOR GENERAL NOTES SEE SH'S. 1 & 2

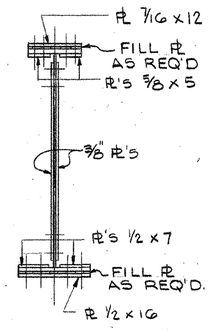


TOP FLANGE SPLICE FS1





BOT. FLANGE SPLICE FS1



SECTION A-A

NOTE
ALL BOLTS ARE ⅞" Ø A325 HIGH STRENGTH BOLTS UNLESS NOTED.

TYPICAL STRINGER SHOP SPLICE DETAILS
NO SCALE

DES	GRM
DRN	VRK
CHK	MJP

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

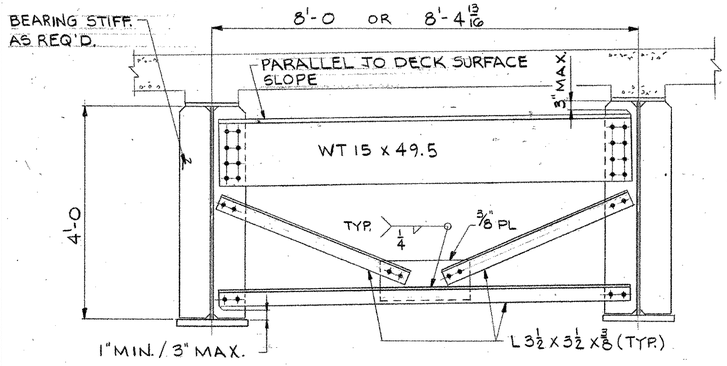
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STEEL DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 36 OF 98
S- 15296

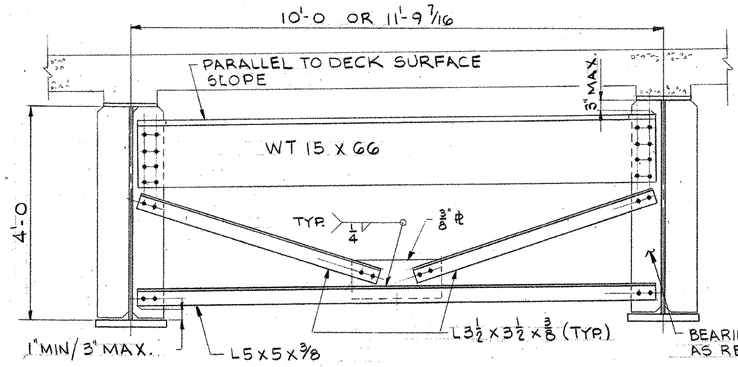
D 9002 (2-85) K&E 10 1293 4-83 A1329*



CROSS FRAME CF1

N.T.S.

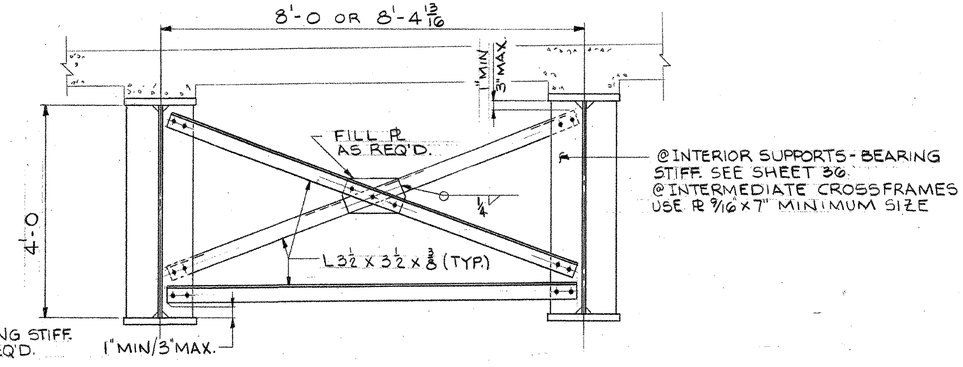
CF 1 TYPICAL AT ABUTMENTS & END BENTS UNLESS NOTED



CROSS FRAME CF2

N.T.S.

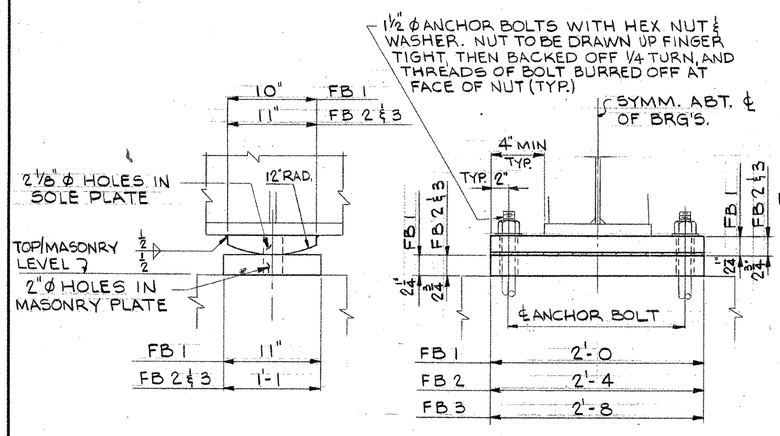
CF 2 AT ABUTMENT 1, BENT 3, & BENT 10 (FOR END CROSSFRAME BETWEEN EXTERIOR STRINGER & SUBSTRINGER)



CROSS FRAME CF3

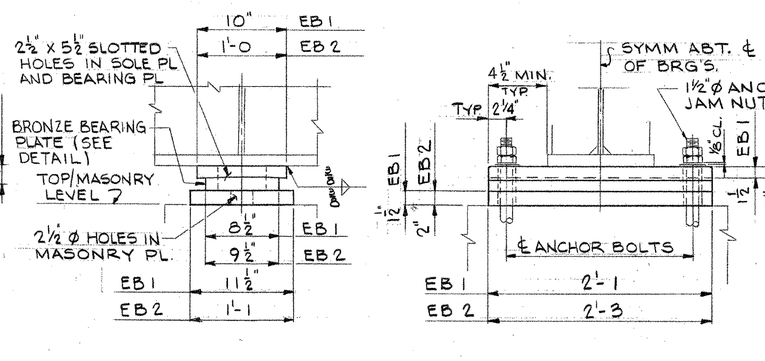
N.T.S.

CF 3 TYPICAL FOR INTERIOR & INTERMEDIATE CROSSFRAMES



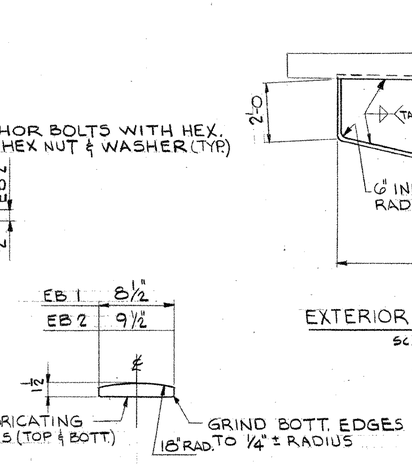
FIXED BEARINGS FB1, FB2 & FB3

N.T.S



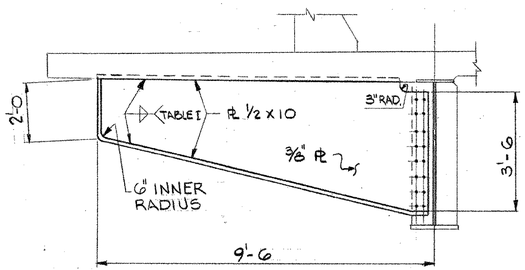
EXPANSION BEARINGS EB1 & EB2

N.T.S.



BRONZE BEARING PL DETAIL

N.T.S.



EXTERIOR END SUPPORT BRACKET @ ABUT. 1

SCALE : 1/2" = 1'-0

NOTE FOR BEARINGS:

FOR ADDITIONAL DETAILS SEE PADOT STD. DRAWING, SH. BC-355A.

HOLES IN MASONRY PLATE SHALL BE FILLED WITH MOLTEN ZINC.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES	M.J.P
DRN	V.R.K
CHK	M.J.P

FOR GENERAL NOTES, SEE SH'S. 1 & 2

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

STEEL DETAILS

RECOMMENDED JULY 19, 1984

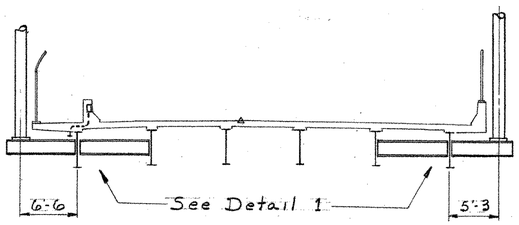
BRIDGE ENGINEER

SHEET 37 OF 98

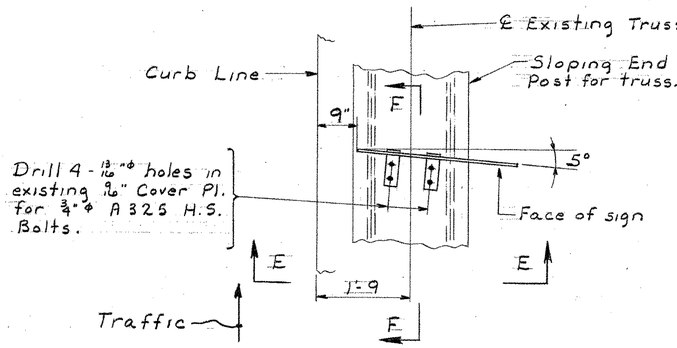
S-15296

D 9002 (2-83) 4-83 A1329*

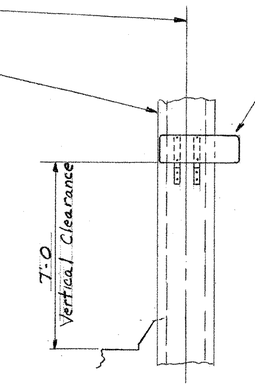
For Steel Sign Structures
see Roadway drawing Sh 9 of 10.



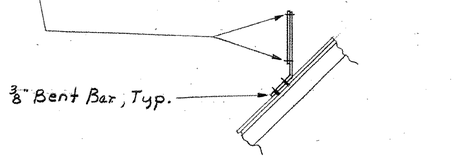
CROSS SECTION AT STA. 18+00.00 (SHOWN)
CROSS SECTION AT STA. 2+24.00 (SIMILAR)
Scale: 1/8" = 1'-0



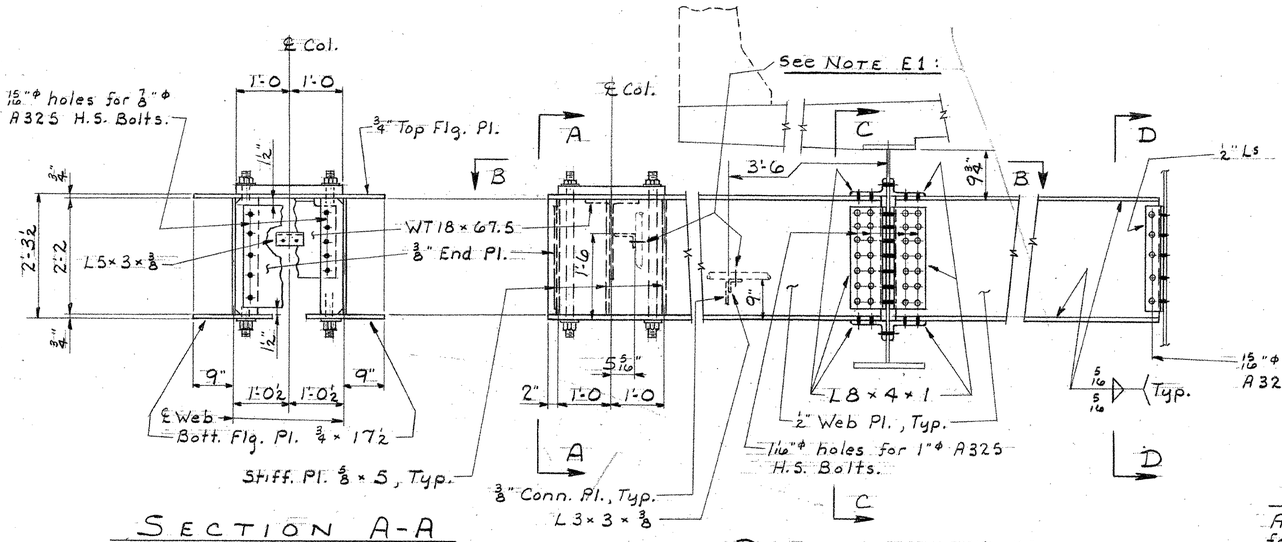
PLAN
Sign location, 4 required.



SECTION E-E
Scale: 3/8" = 1'-0



SECTION F-F



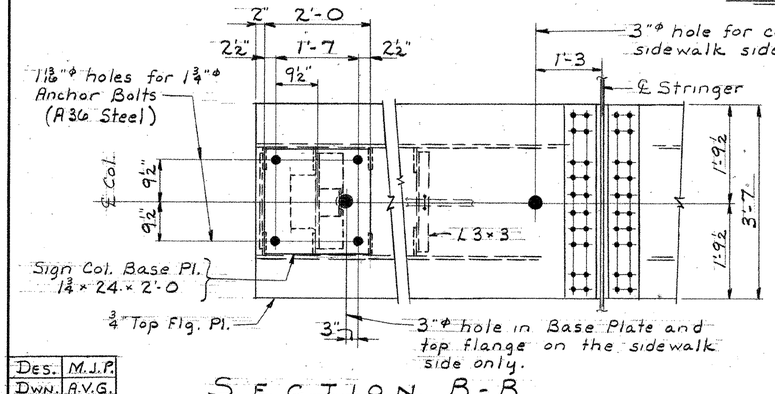
SECTION A-A

DETAIL 1

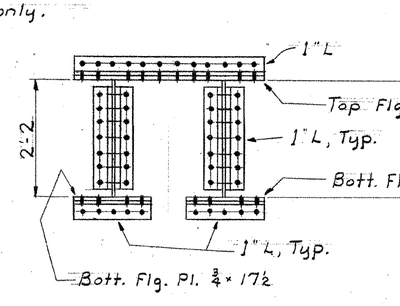
NOTE E1:
7/16"Φ holes for 3/8"Φ U-Bolt for 14" conduit.

NOTE:
All open holes to be 1 1/16"Φ for 1"Φ A325 H.S. Bolts, U.N.

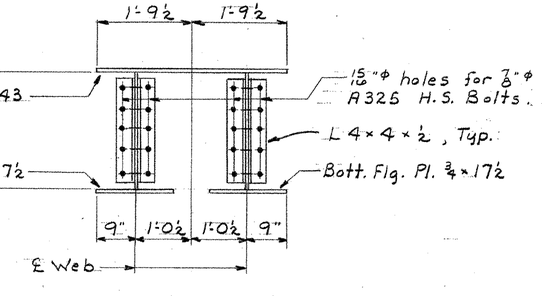
NOTES:
- For General Notes see Sh's. 1 & 2.
- All structural steel ASTM A36.
- All material shall conform to Publication 408.



SECTION B-B



SECTION C-C



SECTION D-D
Scale: 3/4" = 1'-0, U.N.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

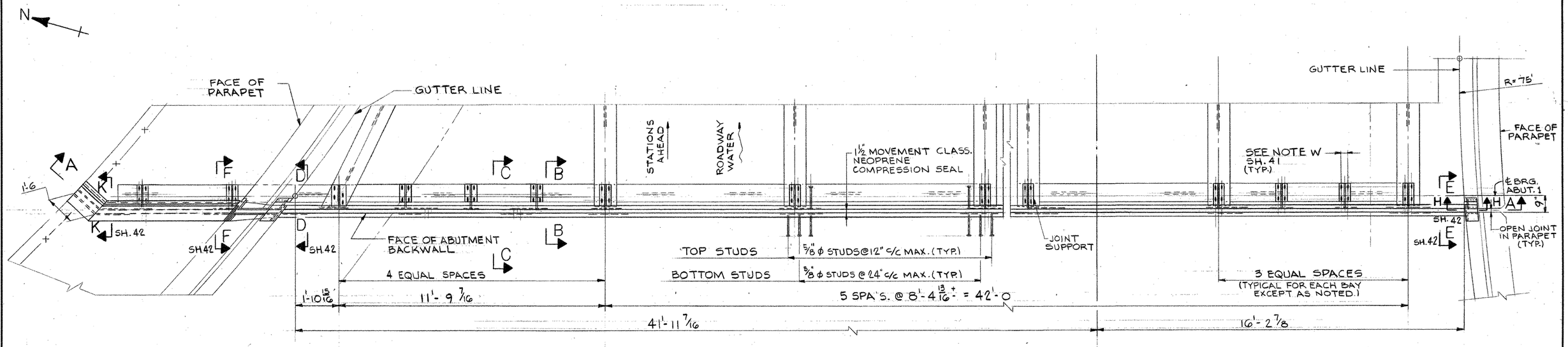
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SIGN STRUCTURE SUPPORT

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 38 OF 98
S- 15296

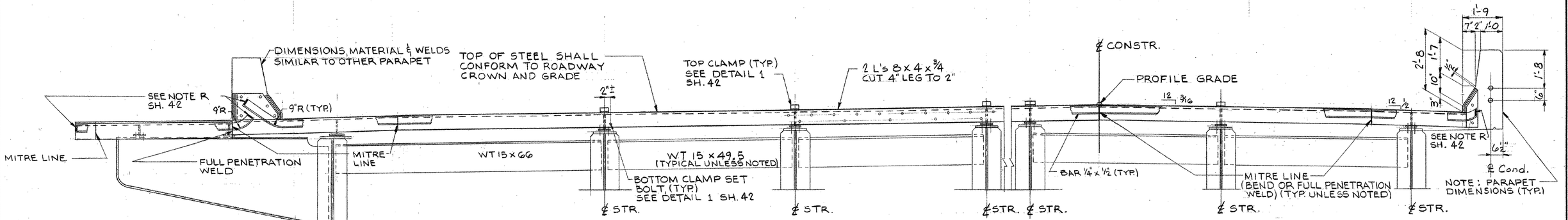
DES.	M.J.P.
DWN.	A.V.G.
CHK.	M.J.P.

D 9002 (2-83) K&E 19 1253 4-83 A1329*



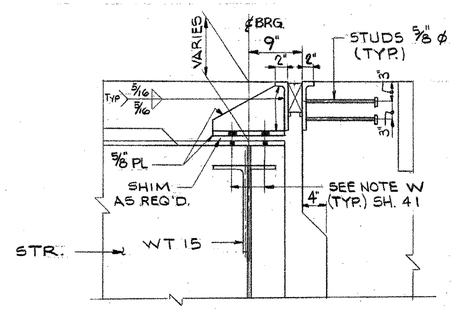
PLAN OF ABUTMENT 1 EXPANSION DAM

SCALE: ½"=1'-0



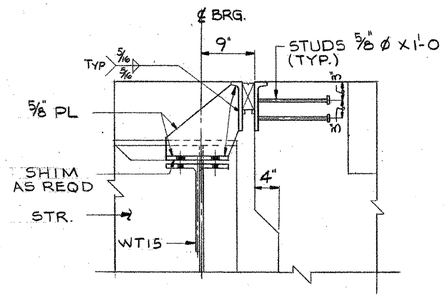
SECTION A-A

SCALE: ½"=1'-0



SECTION B-B

SCALE: 1"=1'-0



SECTION C C

SCALE: 1"=1'-0

(FOR DIMENSIONS & DETAILS NOT SHOWN SEE SECTION B-B

DES.	MJP
DRN	VRK
CHK	MJP

FOR GENERAL NOTES SEE SH'S. 1 & 2
WORK THIS SH. WITH SH'S. 40, 41 & 42

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

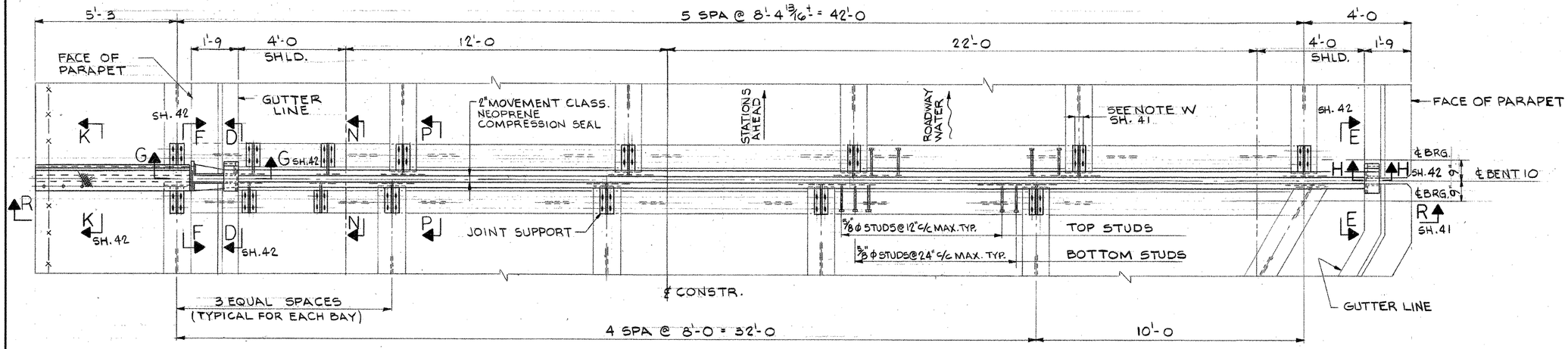
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT ABUTMENT 1

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER.

SHEET 39 OF 98
S-15296

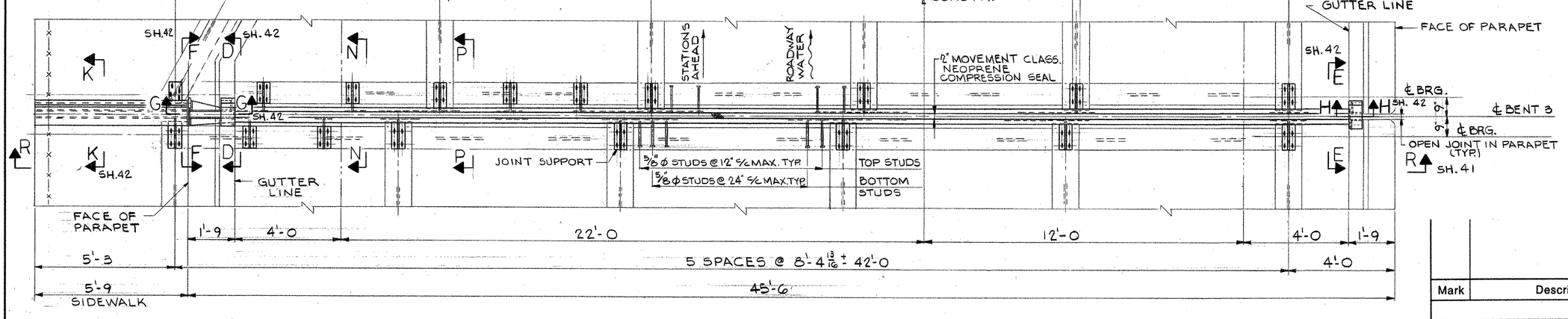
D 9002 (2-83) KAE 10 1253 4-93 A1329*

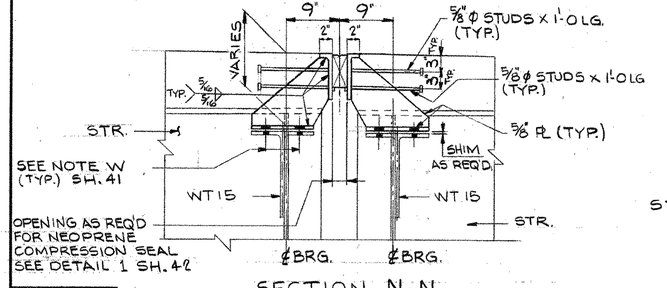


N

PLAN OF BENT 10 EXPANSION DAM

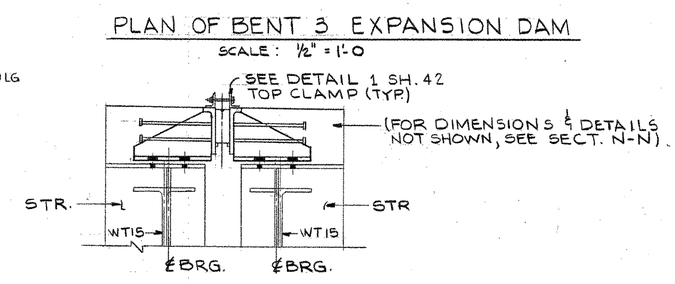
SCALE : 1/2" = 1'-0





SECTION N-N

SCALE : 1" = 1'-0



PLAN OF BENT 3 EXPANSION DAM

SCALE : 1/2" = 1'-0

SECTION P-P

SCALE : 1" = 1'-0

DES	MJP
DRN	VRK
CHK	MJP

FOR GENERAL NOTES SEE SH'S. 1 & 2
WORK THIS SH WITH SH'S. 39, 41 & 42

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

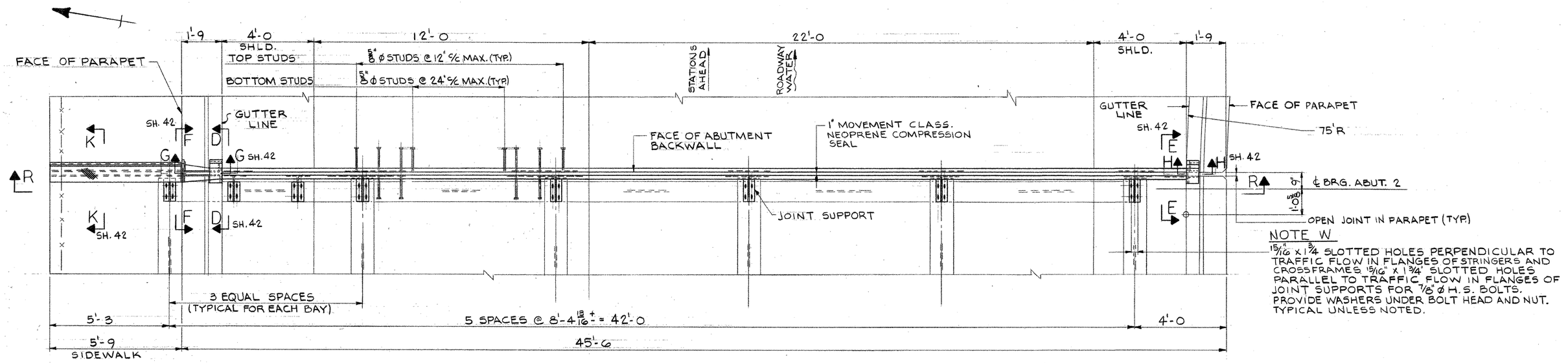
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT BENT 3 & 10

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 40 OF 98
S- 15296

D 9002 (2-83) KAE 19 1253 4-83 A1329*

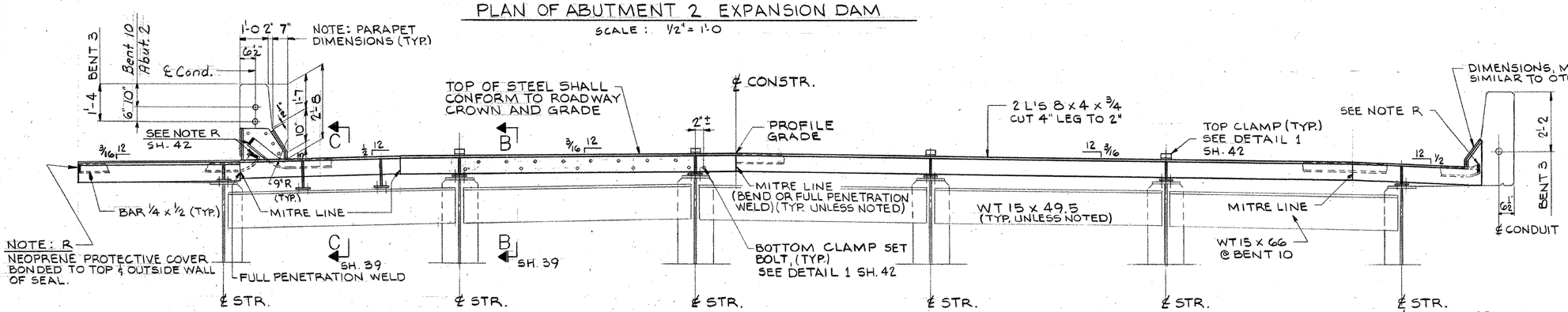


NOTE W

15/16" x 1 3/4" SLOTTED HOLES PERPENDICULAR TO TRAFFIC FLOW IN FLANGES OF STRINGERS AND CROSSFRAMES 15/16" x 1 3/4" SLOTTED HOLES PARALLEL TO TRAFFIC FLOW IN FLANGES OF JOINT SUPPORTS FOR 7/8" ø H.S. BOLTS. PROVIDE WASHERS UNDER BOLT HEAD AND NUT. TYPICAL UNLESS NOTED.

PLAN OF ABUTMENT 2 EXPANSION DAM

SCALE : 1/2" = 1'-0



SECTION R-R

SCALE 1/2" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT ABUTMENT 2

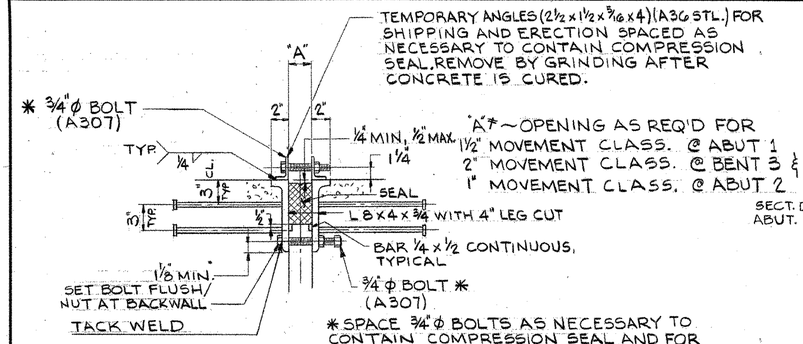
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 41 OF 98
S-15296

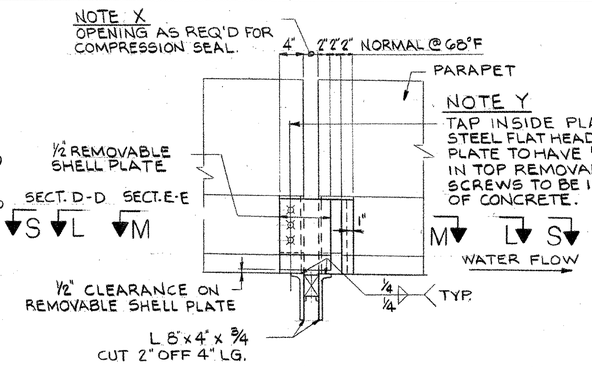
DES	M.J.P
DRN	V.R.K
CHK	M.J.P

FOR GENERAL NOTES SEE SH'S. 1 & 2
WORK THIS SH. WITH SH'S. 39, 40 & 42

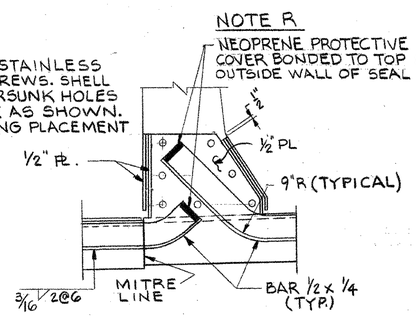
D 9002 (2-83) KAE 19 1253 4-83 A1328*



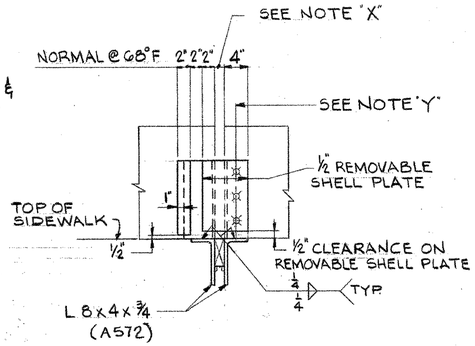
DETAIL 1
SCALE: 1½" = 1'-0



SECTION D-D (AS SHOWN)
SECTION E-E (OPP. HAND SIMILAR)
SCALE: 1" = 1'-0

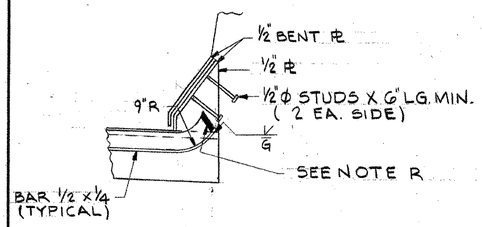


SECTION G-G
SCALE 1" = 1'-0

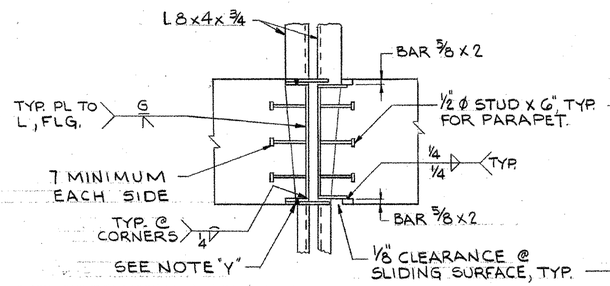


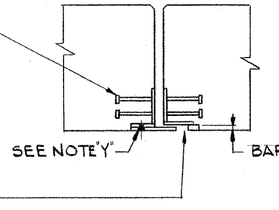
SECTION F-F
SCALE: 1" = 1'-0

FOR DETAILS & DIMENSIONS NOT SHOWN, SEE SECT. H-H

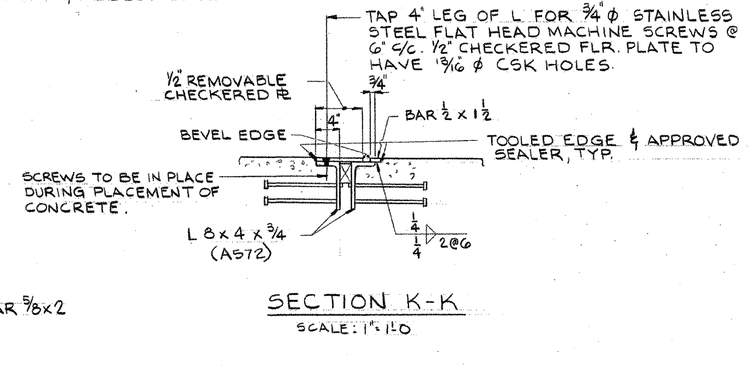


SECTION H-H
SCALE 1" = 1'-0



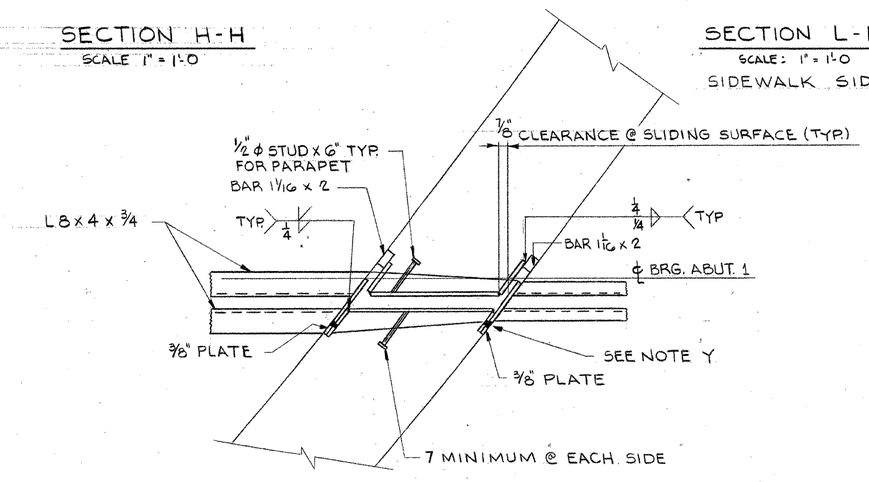


SECTION L-L
SCALE: 1" = 1'-0
SIDEWALK SIDE



SECTION K-K
SCALE: 1" = 1'-0

SECTION M-M
SCALE: 1" = 1'-0



SECTION S-S
SCALE: 1" = 1'-0

DL & LL DISPLACEMENT TABLE		
LOCATION	DISPLACEMENTS	
	DL	LL
@ ABUT. 1	0.45"	0.10"
@ ℄ BRG. SPAN 3, BENT 3	0.28"	0.08"
@ ℄ BRG. SPAN 4, BENT 3	0.49"	0.12"
@ ℄ BRG. SPAN 10, BENT 10	0.36"	0.11"
@ ℄ BRG. SPAN 11, BENT 10	0.36"	0.11"
@ ABUT 2	0.36"	0.11"

(-) IMPLIES CONTRACTION OF DAM

NOTE:
FABRICATOR OF DAM SHALL PROVIDE A TABLE FOR DIMENSION "A" AT 10° INTERVALS RANGING FROM -10°F TO 110°F.

FOR GENERAL NOTES SEE SH'S. 1 & 2
WORK THIS SH WITH SH'S. 39, 40 & 41

DES	MJP
DRN	V.R.K
CHK	MJP

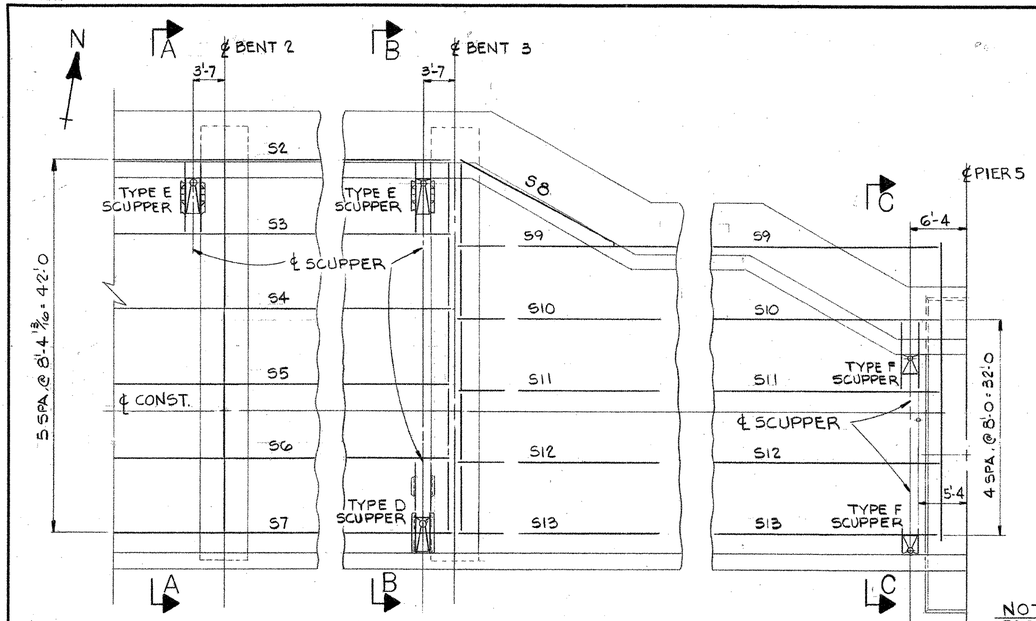
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

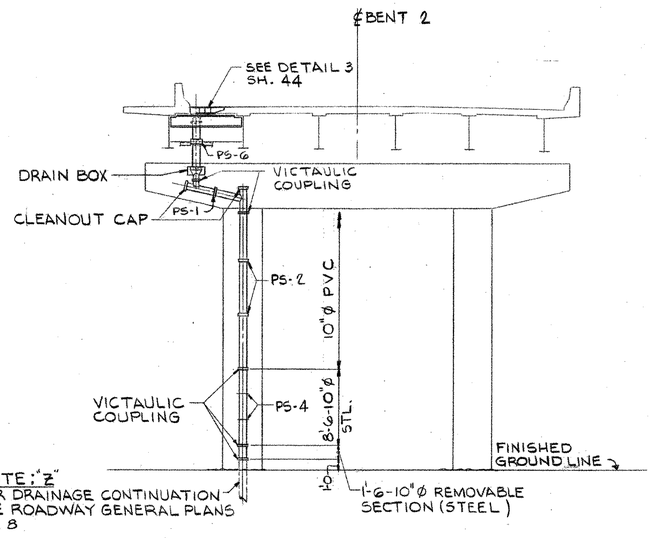
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

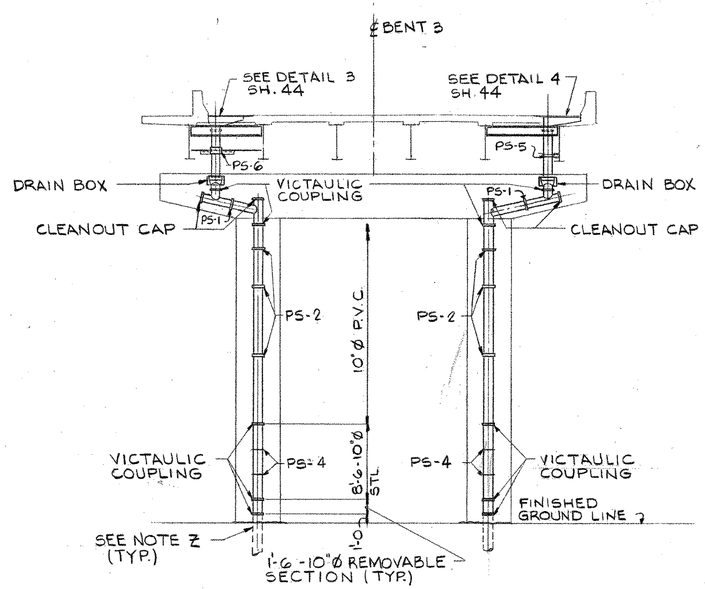
SHEET 42 OF 98
S-15296



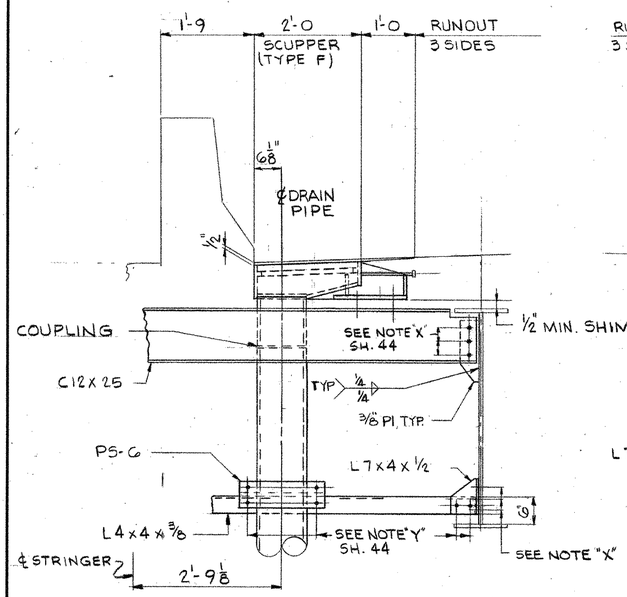
PARTIAL PLAN
SCALE : 1/8" = 1'-0



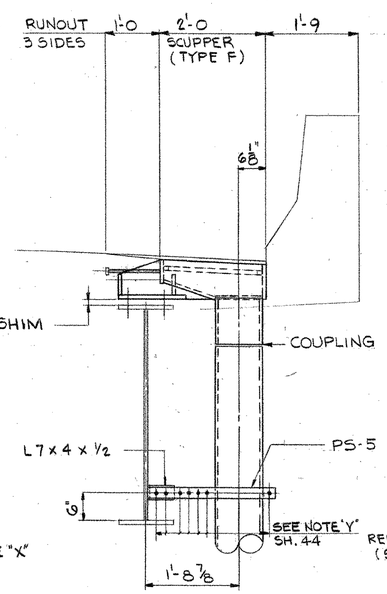
SECTION A-A
SCALE : 1/8" = 1'-0



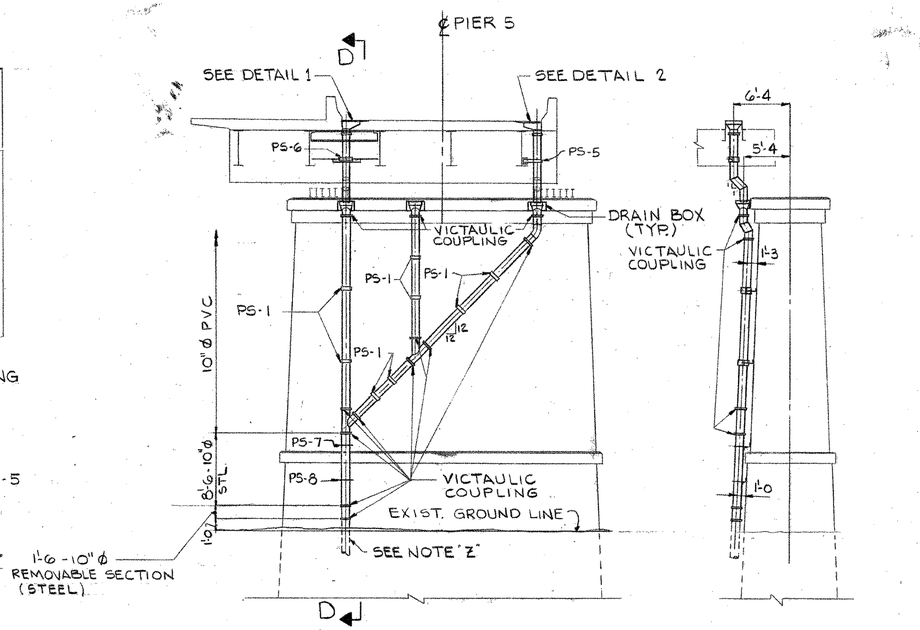
SECTION B-B
SCALE : 1/8" = 1'-0



DETAIL 1
SCALE 3/4" = 1'-0



DETAIL 2
SCALE 3/4" = 1'-0



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

SECTION D-D

NOTES:
FOR GENERAL NOTES, SEE SH'S. 1 & 2

FOR SCUPPERS & DRAIN BOX DETAILS & NOTES, & PIPE SUPPORTS PS-1, PS-2, PS-3, PS-4, PS-7 & PS-8 SEE SH. 45

FOR PIPE SUPPORTS PS-5 & PS-6 SEE SH. 44

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	MJP
DRN	V.R.K
CHK	MJP

K&E 10 1233 12-81 MC 3200

WORK THIS SH. WITH SHT. 44 & 45

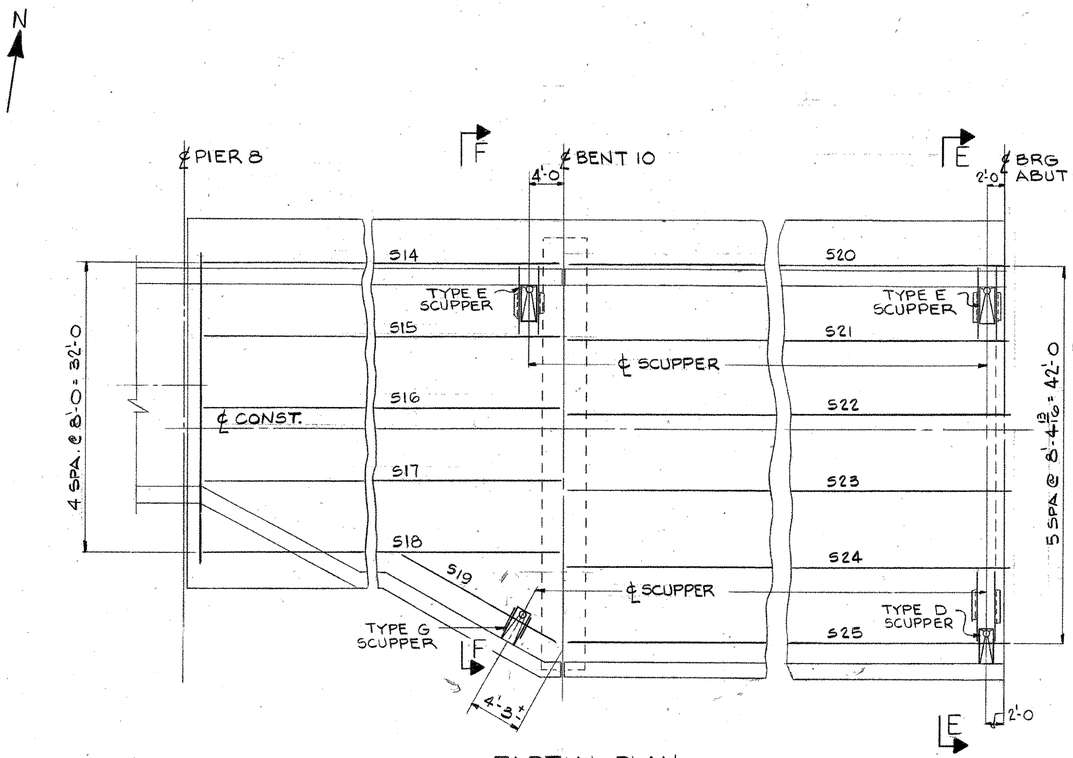
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DRAINAGE DETAILS

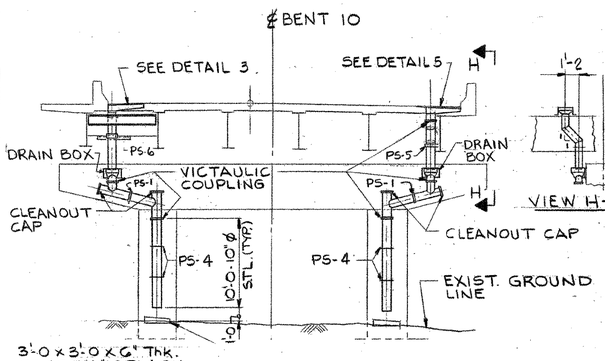
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 43 OF 98
S-15296

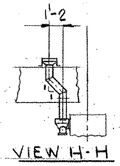
D 9002 (2-83) K&E 10 1253 4-83 A1329*

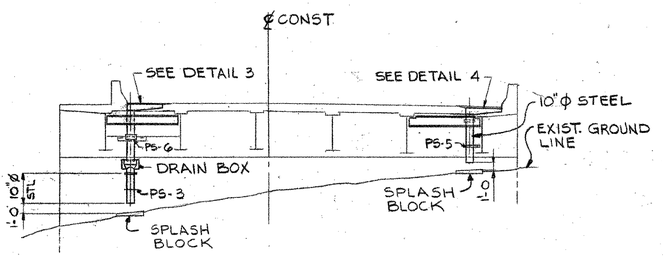


PARTIAL PLAN
SCALE: 1/8" = 1'-0

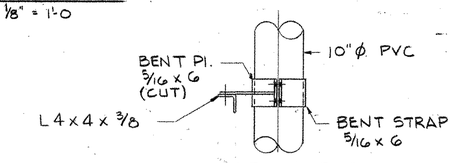


SECTION F-F
1/8" = 1'-0





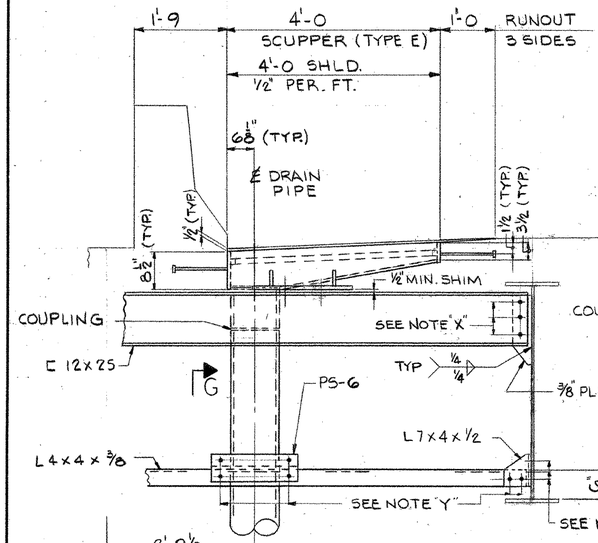
SECTION E-E
1/8" = 1'-0



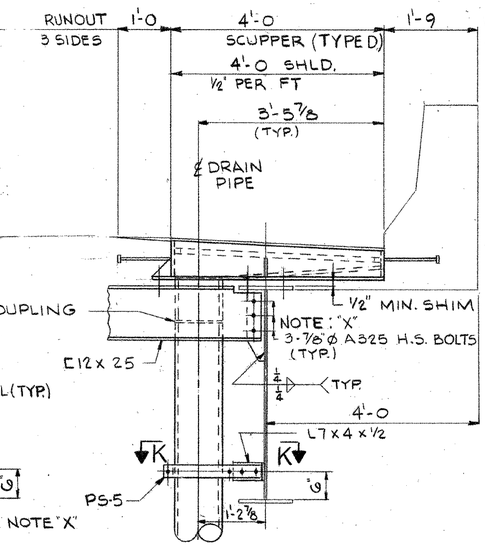
SECTION G-G

NOTES:
FOR GENERAL NOTES, SEE SH'S. 1 & 2

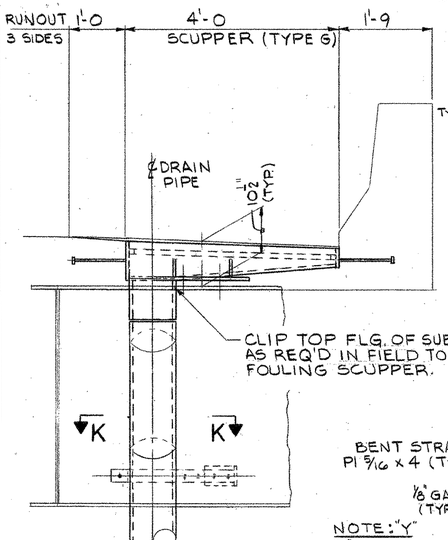
FOR SCUPPERS & DRAIN BOX DETAILS & NOTES, & PIPE SUPPORTS PS-1, PS-2, PS-3 & PS-4 SEE SH. 45



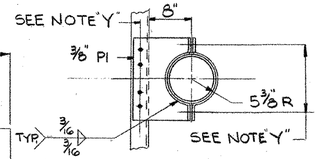
DETAIL 3
SCALE: 3/4" = 1'-0



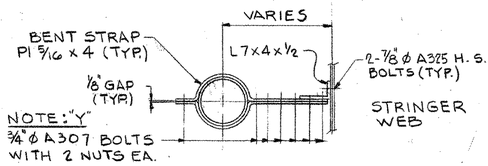
DETAIL 4
SCALE: 3/4" = 1'-0



DETAIL 5
SCALE: 3/4" = 1'-0



PIPE SUPPORT PS-6
SCALE: 3/4" = 1'-0



SECTION K-K
PIPE SUPPORT PS-5
SCALE: 3/4" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	MJP
DRN	VRK
CHK	MJP

WORK THIS SH WITH SH'S. 43 & 45

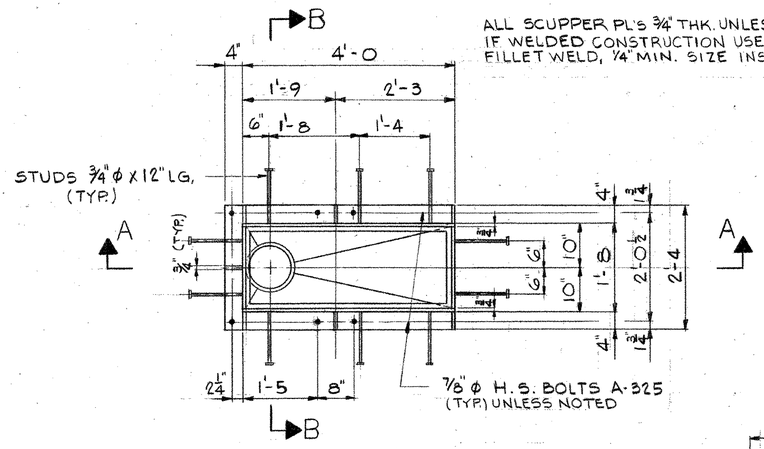
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DRAINAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

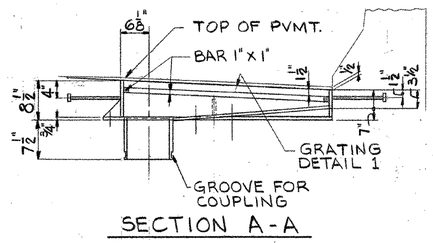
SHEET 44 OF 98
S 15296

D 9002 (2-83) K&E 19 1253 4-83 A1329*

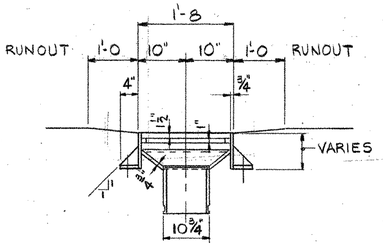


ALL SCUPPER PL'S ¾" THK. UNLESS NOTED.
IF WELDED CONSTRUCTION USE CONTINUOUS FILLET WELD, ¼" MIN. SIZE INSIDE & OUTSIDE.

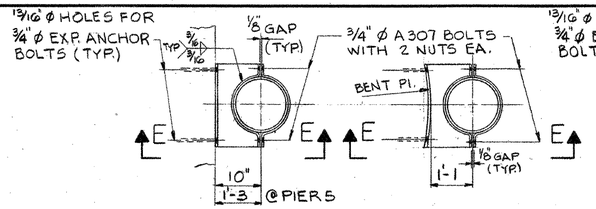
PLAN TYPE D SCUPPER



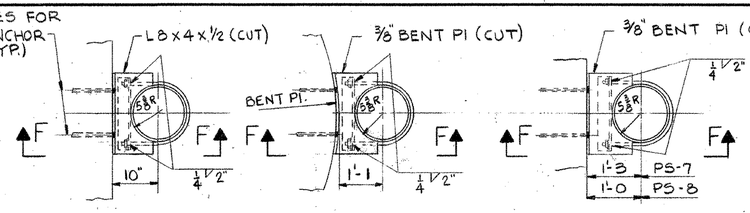
SECTION A-A



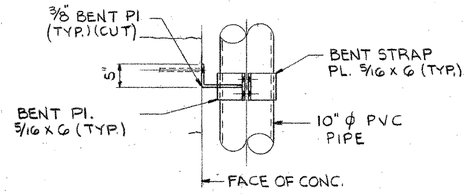
SECTION B-B



PIPE SUPPORT PS-1 | PIPE SUPPORT PS-2 (NO SCALE)

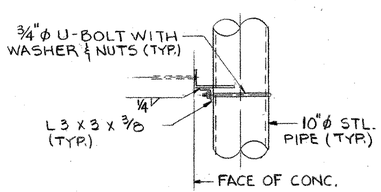


PIPE SUPPORT PS-3 | PIPE SUPPORT PS-4 (NO SCALE) | PIPE SUPPORT PS-7 & PS-8 (NO SCALE)



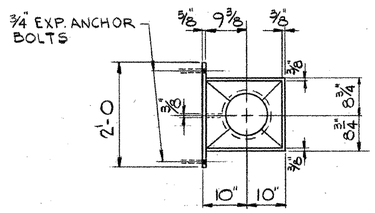
VIEW E-E

MAXIMUM SPACING: VERTICAL = 8'-0
SLOPING OR HORIZONTAL = 5'-0

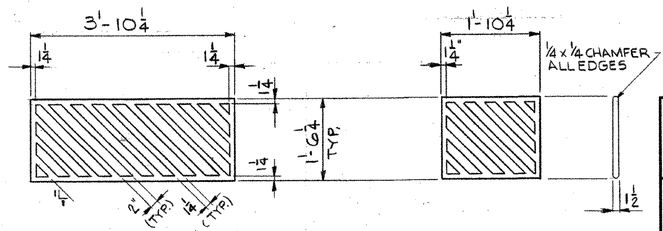


VIEW F-F

MAXIMUM SPACING 10'-0

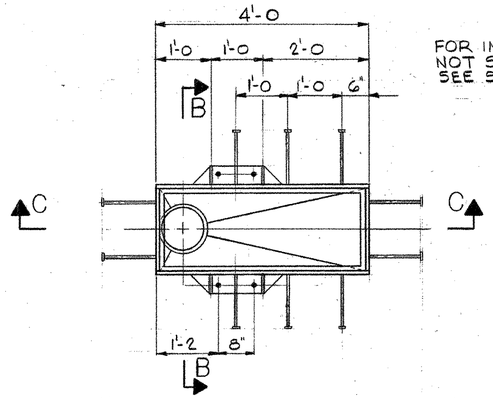


DRAIN BOX DETAIL



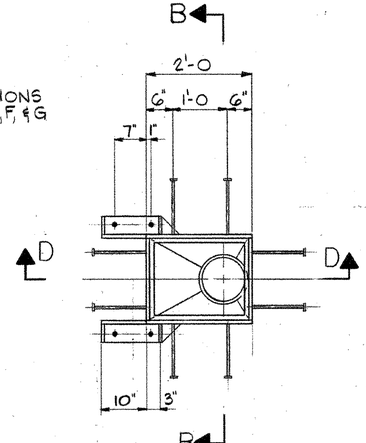
DETAIL 1 | DETAIL 2

(SEE DETAIL 1 FOR DIMENSIONS NOT SHOWN)

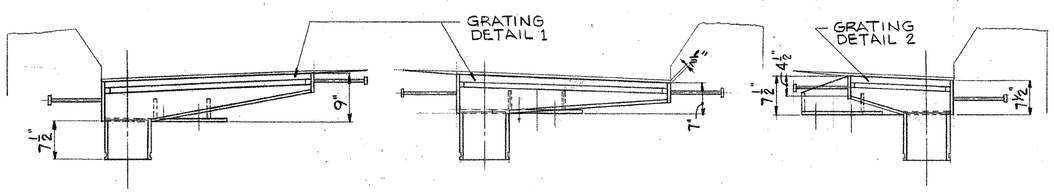


PLAN TYPE E & G SCUPPER

FOR INFORMATION AND DIMENSIONS NOT SHOWN IN SCUPPERS TYPE E, F & G SEE SCUPPER TYPE D



PLAN TYPE F SCUPPER



SECTION C-C
SCUPPER TYPE E

SECTION C-C
SCUPPER TYPE G

SECTION D-D

SCALE : ¾" = 1'-0 UNLESS NOTED

NOTES:

FOR GENERAL NOTES, SEE SH'S. 1 & 2

ALL STEEL PIPES SHALL BE 10" ϕ STANDARD PIPE CONFORMING TO ASTM A53.

STRUCTURAL STEEL FOR PIPE SUPPORTS SHALL BE ASTM A 36

SCUPPER, DRAIN BOX, AND GRATING MATERIAL SHALL BE MALLEABLE IRON (ASTM A47 GRADE 35018), CAST STEEL (ASTM A27 GRADE 65-35) OR DUCTILE IRON (ASTM A 536 GRADE 60-40-18) UNLESS WELDED CONSTRUCTION IS USED, IN WHICH CASE STRUCTURAL STEEL (ASTM A 36) SHALL BE USED.

ALL DRAINAGE MATERIAL (SCUPPERS, DRAIN BOX, & STEEL PIPE SUPPORTS, COUPLINGS AND CLEANOUT CAPS) SHALL BE GALVANIZED.

AFTER ERECTION, AREAS UPON WHICH THE GALVANIZING HAS BEEN DAMAGED SHALL BE CLEANED, THEN COATED WITH A GALVANIZING REPAIR COMPOUND CONFORMING TO FEDERAL SPEC. O-G-93.

WELDING OF CAST MAT'L WILL NOT BE PERMITTED.

WELDED PIPE JOINTS SHALL BE MADE BY COMPLETE JOINT PENETRATION PREQUALIFIED AWS WELDS

IF SCUPPER, DRAIN BOXES AND GRATING ARE OF WELDED CONSTRUCTION WELDING SHALL PRECEDE GALVANIZING.

ALL PVC PIPE SHALL BE 10" ϕ (POLY VINYL CHLORIDE) PVC PIPE ASTM DESIGNATION D-1785, SCHEDULE 40.

MAT'L. FOR PVC DRAIN PIPE, WHICH WILL BE EXPOSED TO SUNLIGHT, SHALL CONTAIN AN ULTRAVIOLET INHIBITOR.

PVC PIPE JOINTS, EXCEPT AS NOTED, SHALL BE SOLVENT CEMENTED JOINTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.

PIPE SUPPORT BRACKETS SHALL BE CAREFULLY ALIGNED AND THERE SHALL BE NO ROUGH OR SHARP EDGES IN CONTACT WITH THE PVC PIPE. PVC PIPE SHALL NOT BE IN CONTACT WITH CONCRETE SURFACES

THE ¾" ϕ A307 CLAMPING BOLTS FOR PVC PIPE SUPPORTS SHALL BE TIGHTENED WITH CARE TO PREVENT CRUSHING OF THE PVC PIPE

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	MJP
DRN	VRK
CHK	MJP

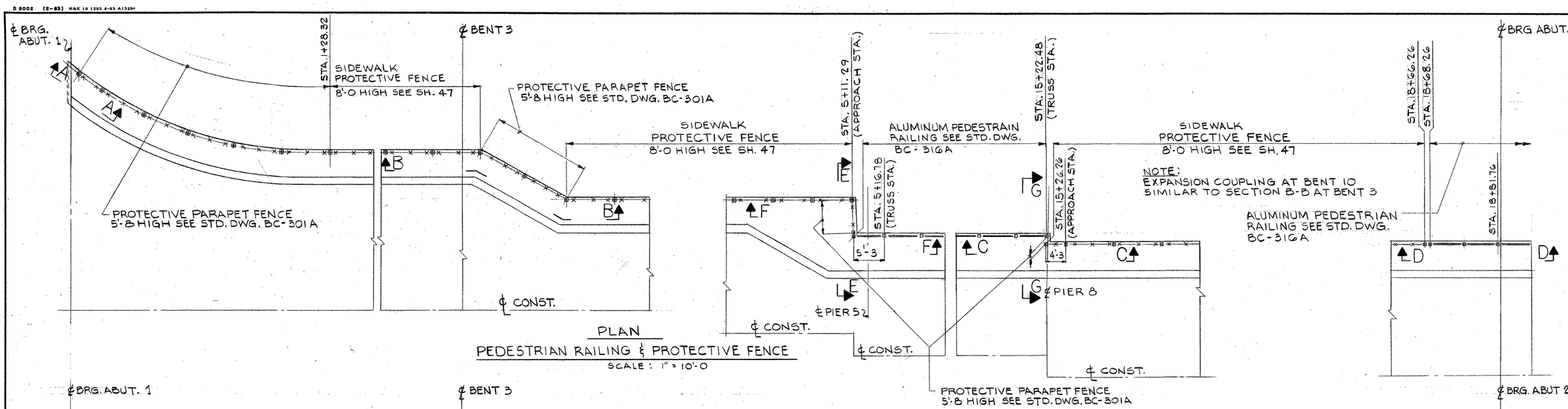
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DRAINAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 45 OF 98
S-15296

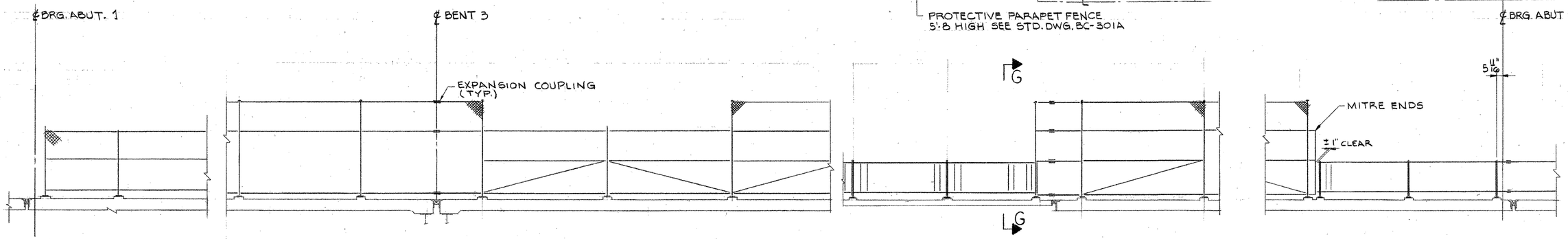
D 9002 (2-83) K&E 19 1293 4-83 A1329*



PLAN

PEDESTRIAN RAILING & PROTECTIVE FENCE

SCALE : 1" = 10'-0



SECTION A-A @ ABUT. 1

SCALE : 1/4" = 1'-0

SECTION B-B @ BENT 3

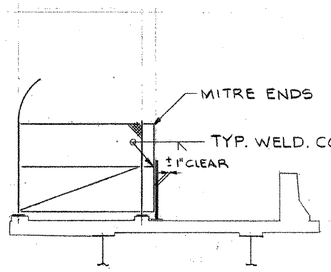
SCALE : 1/4" = 1'-0

SECTION C-C @ PIER 8

SCALE : 1/4" = 1'-0

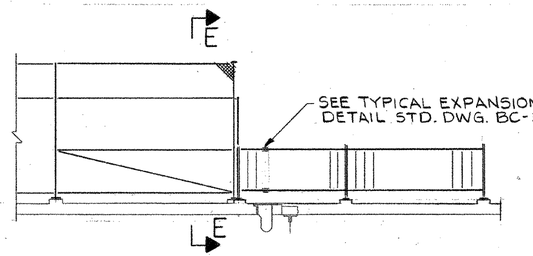
SECTION D-D @ ABUT. 2

SCALE : 1/4" = 1'-0



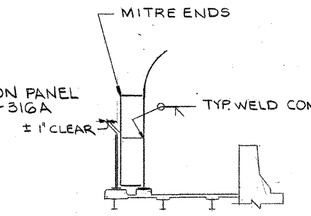
SECTION E E

SCALE : 1/4" = 1'-0



SECTION F-F @ PIER 5

SCALE : 1/4" = 1'-0



SECTION G-G

SCALE : 1/4" = 1'-0

NOTES:

FOR GENERAL NOTES, SEE SH'S. 1 & 2

FOR SIDEWALK PROTECTIVE FENCE POST SPA. & PARAPET PROTECTIVE FENCE POST SPA. SEE DECK PAVING PLANS SH. 48 TO SH. 51.

FOR PROTECTIVE PARAPET FENCE DETAILS REFERENCED IN STD. DWG. 301A, USE SIDEWALK MOUNTED POST DETAILS.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R. 247 SPUR A SEC. B 10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

SIDEWALK FENCE DETAILS

RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

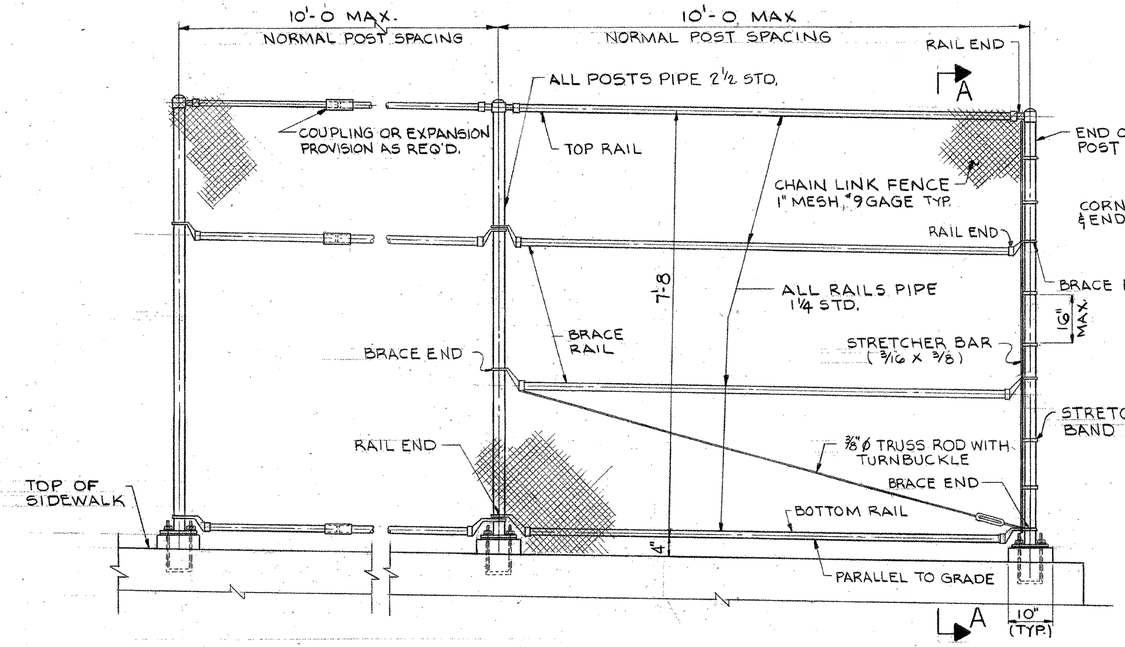
SHEET 46 OF 98

S-15296

DES	M.J.P.
DRN	V.R.K.
CHK	MJP

WORK THIS SH WITH SH. 47

D 9002 (2-85) K&E 10 1253 4-83 A1329*

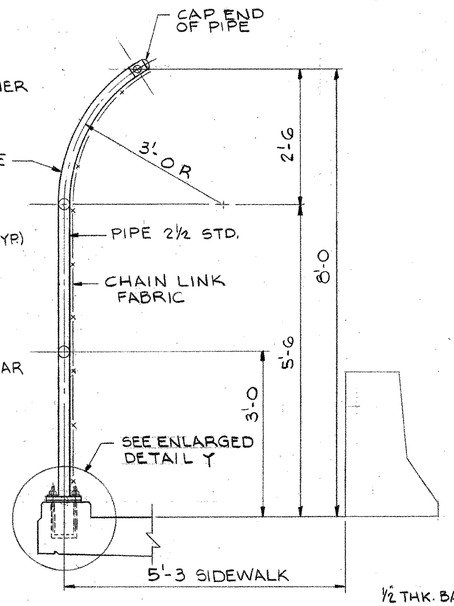


TYPICAL INTERMEDIATE PANEL

TYPICAL END PANEL

ELEVATION OF SIDEWALK PROTECTIVE FENCE PANELS

SCALE ¾" = 1'-0



SECTION A-A

SCALE: ¾" = 1'-0

NOTES

MATERIALS, WORKMANSHIP AND METHOD OF PAYMENT SHALL BE IN ACCORDANCE WITH PUBLICATION 408. FOR SIDEWALK PROTECTIVE FENCE.

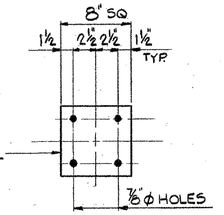
SHIMS SHALL BE OF APPROVED ALLOY.

MATERAILS SHALL NOT BE PAINTED.

FENCE POSTS AND U BOLTS SHALL BE TRULY VERTICAL. RAILS SHALL BE PARALLEL TO GRADE.

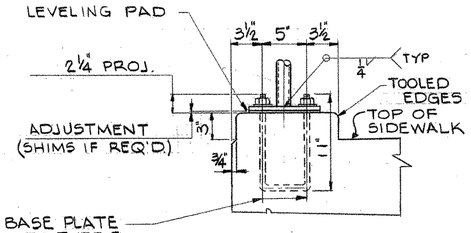
AT BRIDGE EXPANSION JOINTS THE FABRIC AND RAILS SHALL BE FREE TO EXPAND OR CONTRACT.

FOR GENERAL NOTES, SEE SH'S. 1 & 2



BASE PLATE

⅞" ϕ HOLES IN BASE PLATE FOR ¾" ϕ U-BOLTS TYPE E SEE STD. DWG. BC-337A 2 - REQUIRED PER POST.



DETAIL Y

SCALE: 1½" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

SIDEWALK FENCE DETAILS

RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

SHEET 47 OF 98

S-15296

DES	M.J.P.
DRN	V.R.K
CHK	MJP

WORK THIS SH WITH SH. 46

D 9002 (2-83) K&E 19 1253 4-83 A1329*

Sections A B C D E F G H K M N R S T W

Details A B C D E G I K M N

Notes A B

NOTES:
- For General Notes see Sh's. 1 & 2
- Work this sheet with Sheets 49 to 54

℄ Brg. Abut. 1 | ℄ Bent 1 | ℄ Bent 2 | ℄ Bent 3

90'-0 SPAN 1 | 70'-0 SPAN 2 | 70'-0 SPAN 3

For details see Sh. 47

Sidewalk Protective Fence Post Spcg. - Open Joint Spacing

See Det. H

13'-7⅛"±

6 Spaces @ 13'-4 = 80'-0 | 17 Spaces @ 10'-0 = 170'-0 | 5 Spaces @ 14'-0 | 5 Spaces @ 14'-0

6'-2⅜

35'-0

℄ Light Pole Anchorage Sta. 2+69.50, See Det. C, Sh. 54

Detail M See Sh. 54

12-#5P1@15"±
12-#5515@15"±
4-#4P10

R = 67.50'

6 Locations: 12-#5P1@14"± / 12-#5515@14"± / 4-#4P4

9 Locations: 12-#5P1@15" / 12-#5515@15" / 4-#4P2

℄ Sign 2, Sta. 2+24.00

Conduit outlet Sta. 2+24.00

14" Cond. in deck (SL)

JB 25 (SL)

2" Cond. (SL)

12-#5P1@15"±
12-#5515@15"±
4-#4P5

6" Typ.

5'-9 Sidewalk

1:9

Sidewalk

7'-7⅝

2'-2⅜

19-#4510 Top
31-#5511 Bott.

68'-0⅛

41'-11⅞

46'-#5537

19-#653@5" Top
19-#654@5" Bott.

Sh. 54

2-#5538

93-#555@5" Top
93-#556@5" Bott.

11'-0

50-#458 Top*
80-#559 Bott.*
Cond. outlet

50-#458 Top*

50-#559 Top*
80-#559 Bott.*

49-#5513 Top*
Extra

49-#559 Top*
Extra

℄ Scupper

29'-6

2" Cond. below deck (SL)

50-#5513 Top*
80-#559 Bott.*

50-#4514 Top*

14" Cond. in deck (HL)

50-#4514 Top*
80-#5512 Bott.*

℄ Scupper

2-#5528 Bott.

35-#5537

N 80°-20'-57.6" E
℄ Construction

14" Cond. in deck (HL)

76'-2⅜

19-#651@5" Top
19-#652@5" Bott.

93-#5539@5" Top
93-#5540@5" Bott.

JB 25 (HL)

2" Cond. (HL)

441-#557@5" Top
441-#557@5" Bott.

2" Cond. (SL)

JB 25 (SL)

JB 25 (HL)
2" Cond. (HL)

℄ Scupper

16'-0

42'-0 Roadway

51'-3

4-#4P6

13-#5P1@15"±
13-#5515@15"±

4-#4P3
13-#5P1@15"
13-#5515@15"
5 Locations

4-#4P2
12-#5P1@15"
12-#5515@15"
9 Locations

4-#4P5
12-#5P1@15"±
12-#5515@15"±

℄ Light Pole Anchorage, Sta. 0+82.50, see Det. C, Sh. 54

Pos. Mom. Area | Neg. Mom. Area | Pos. Mom. Area

8'-0 | 21'-3 | 70'-0 | 16'-1 | 15'-0+

5 Spaces @ 15'-0 = 75'-0 | 5 Spaces @ 14'-0 | 5 Spaces @ 14'-0

8'-7 | 8'-7 | 5 Sps. @ 10'-0 = 50'-0 | 9'-0 | 14 Spaces @ 10'-0 = 140'-0 | 5'-0

10"

Open Joint Spacing

Parapet Protective Fence Post Spacing

For details see PA Dot Std. Dwg. BC-301A

℄ Brg. Abut. 1

68'-0 Rad. | 6'-0 | 5 Sps. @ 10'-0 = 50'-0 | See Sps. on Plan

First Post 9" | 1'-9¾ | 1'-0 | 1'-6

Edge of sidewalk

℄ Prot. Fence

Sta. 1+28.32 ℄ Const.

C
Sh. 52

DECK PAVING PLAN
Scale: 1" = 10'-0

LEGEND:
HL = Highway Lighting
SL = Sign Lighting
JB = Junction Box
NL = Navigation Lighting

* = See Typical Cross Section, Sh. 52 for top and bottom Reinf. bar location.

DETAIL H
No Scale

#6 S Bars @ Abut. 1
#5 S Bars

#4 S Bars

#5 S Bars

#5537 @ longitudinal top bar spacing between stringers.

NOTE "A": Cut as required in field to clear Exp. Dam stools.

6" Typ.

WT 15

9"

#5538 ~ Sect. A-A
#5528 ~ Sect. K-K
(Cut if required in field to clear stringers.)

SECTION A-A
SECTION K-K (Similar, Sh. 51)
Scale: 1" = 1'-0

#5528, cut if required in field to clear stringers.

NOTE "A":

#5 S Bars

#4 S Bars

#5 S Bars

#5 S Bars

#5537 @ longitudinal top bar spacing between stringers.

WT 15

WT 15

NOTE "A":

9" | 9"

℄ Brg.

℄ Brg. ℄ Bent 3, 10

SECTION B-B (Shs. 49, 50 & 51)
Scale: 1" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

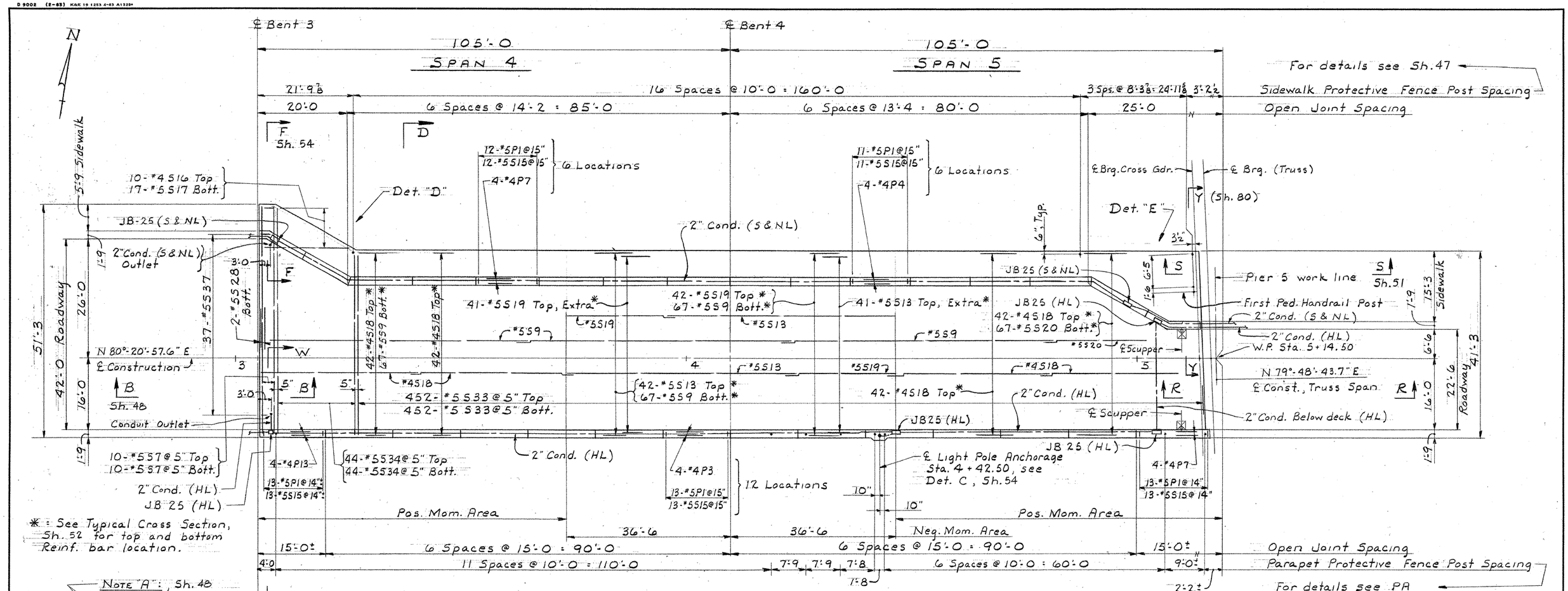
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING - SPANS 1 TO 3

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

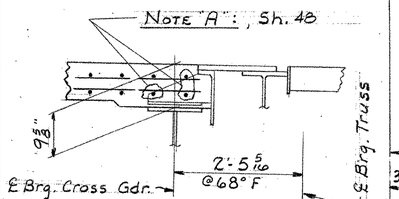
SHEET 48 OF 98
S- 15296

Des.	GRM
Dwn.	A.V.G.
Chk.	MJP

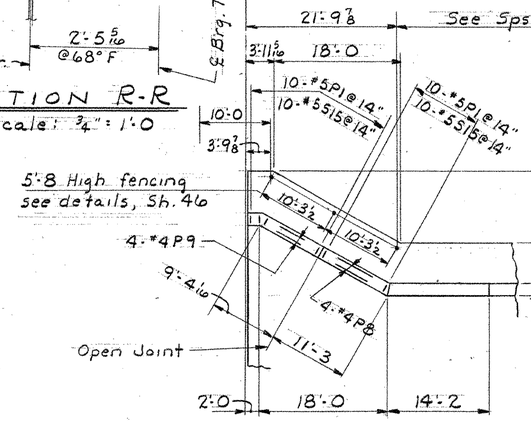
D 9002 (2-83) KME 19 1253 4-83 A1329+



✱ : See Typical Cross Section, Sh. 52 for top and bottom Reinf. bar location.

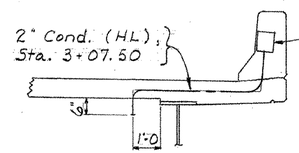


SECTION R-R
Scale: ¾" = 1'-0

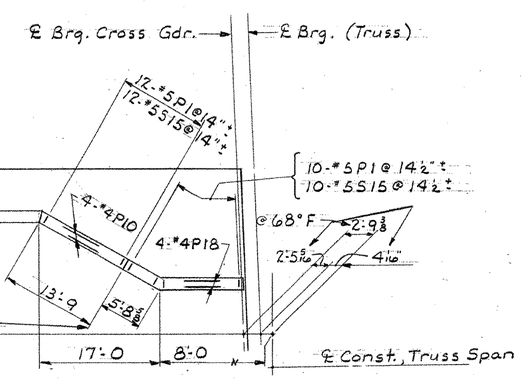


DETAIL "D"
Scale: 1" = 10'-0

DECK PAVING PLAN
Scale: 1" = 10'-0



SECTION W-W
No Scale



DETAIL "E"
Scale: 1" = 10'-0

NOTES:
- For General Notes see Shs 1 & 2
- Work this sheet with Sheet Nos. 48, 50, 51, 52, 53 & 54

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	G.R.M.
Dwn.	A.V.G.
Chk.	M.J.P.

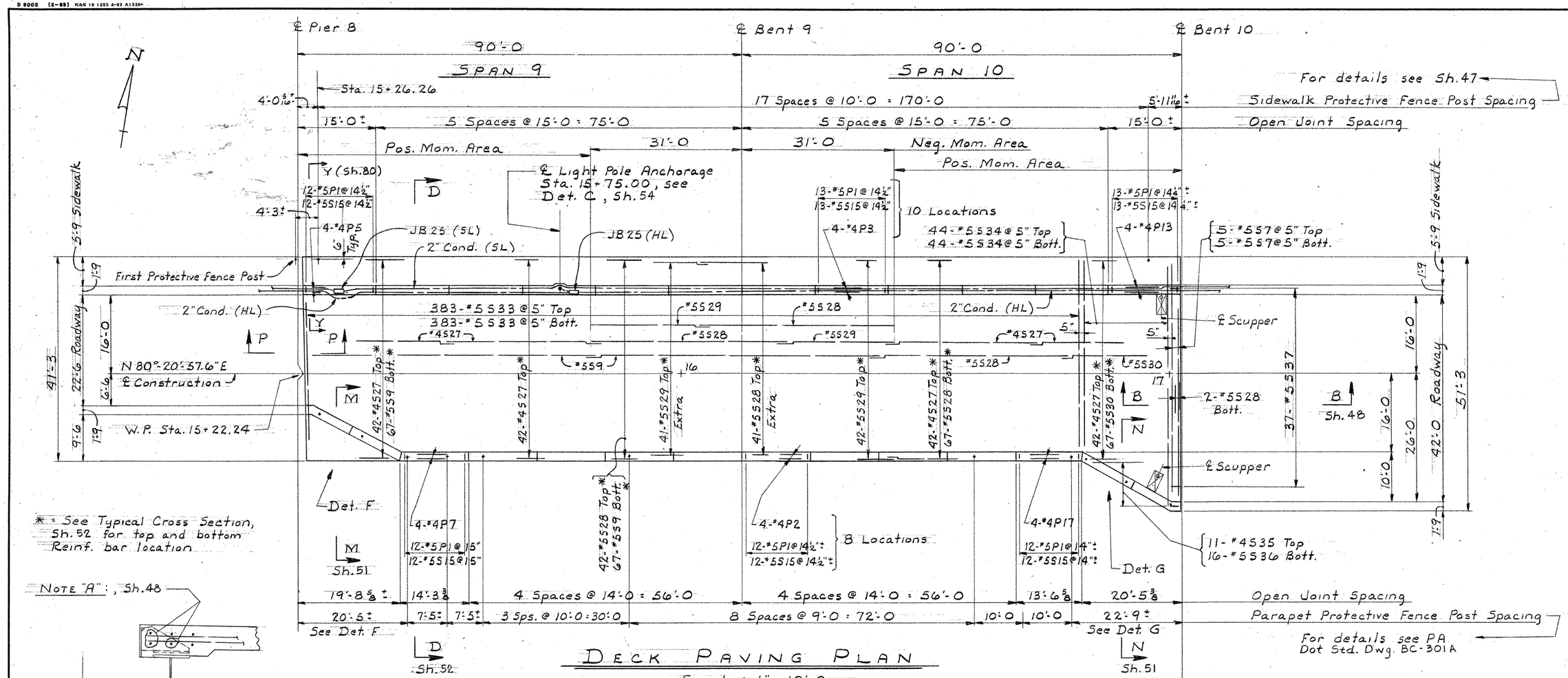
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING - SPANS 4 AND 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

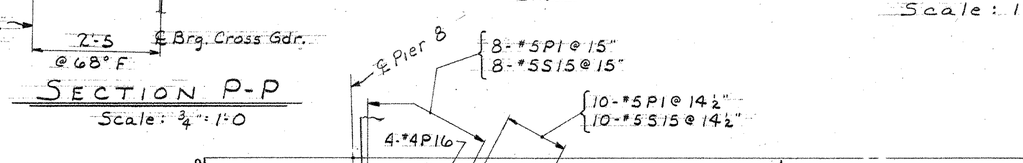
SHEET 49 OF 98
S-15296

D 9002 (2-83) K&E 19 1253 4-83 A1329*



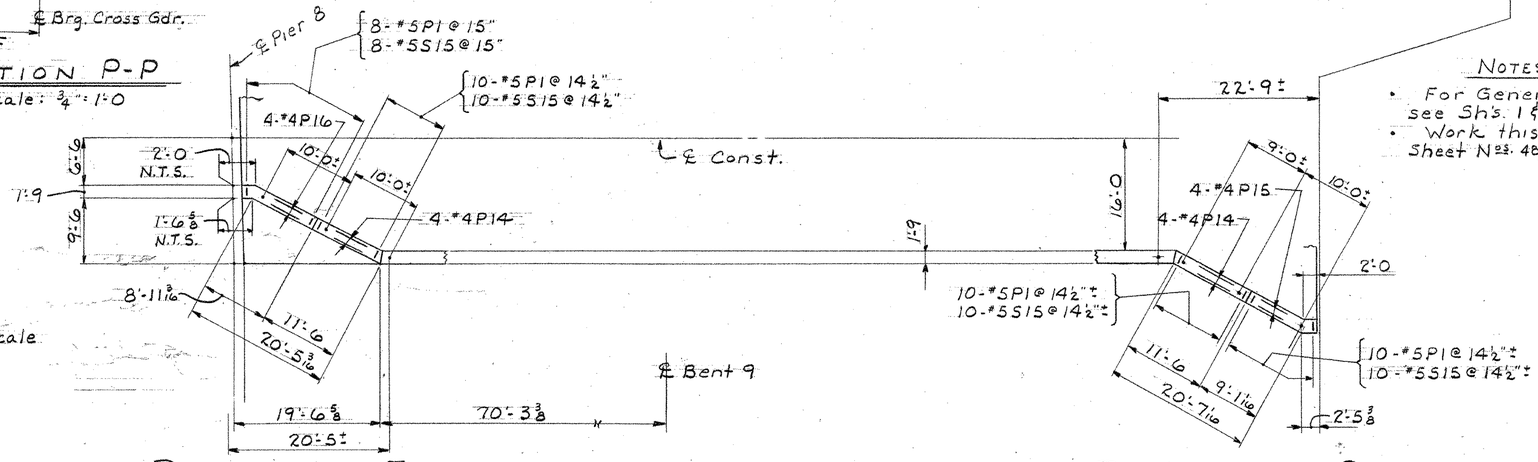
DECK PAVING PLAN

Scale: 1" = 10'-0



SECTION P-P

Scale: ¾" = 1'-0



N.T.S. = Not to scale

DETAIL F

Scale: 1" = 10'-0

DETAIL G

Scale: 1" = 10'-0

Des.	GRM
Dwn.	A.V.G.
Chk.	MJP

NOTES:

- For General Notes see Sh's. 1 & 2
- Work this sheet with Sheet Nos. 48, 49, 51, 52, 53, & 54

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10

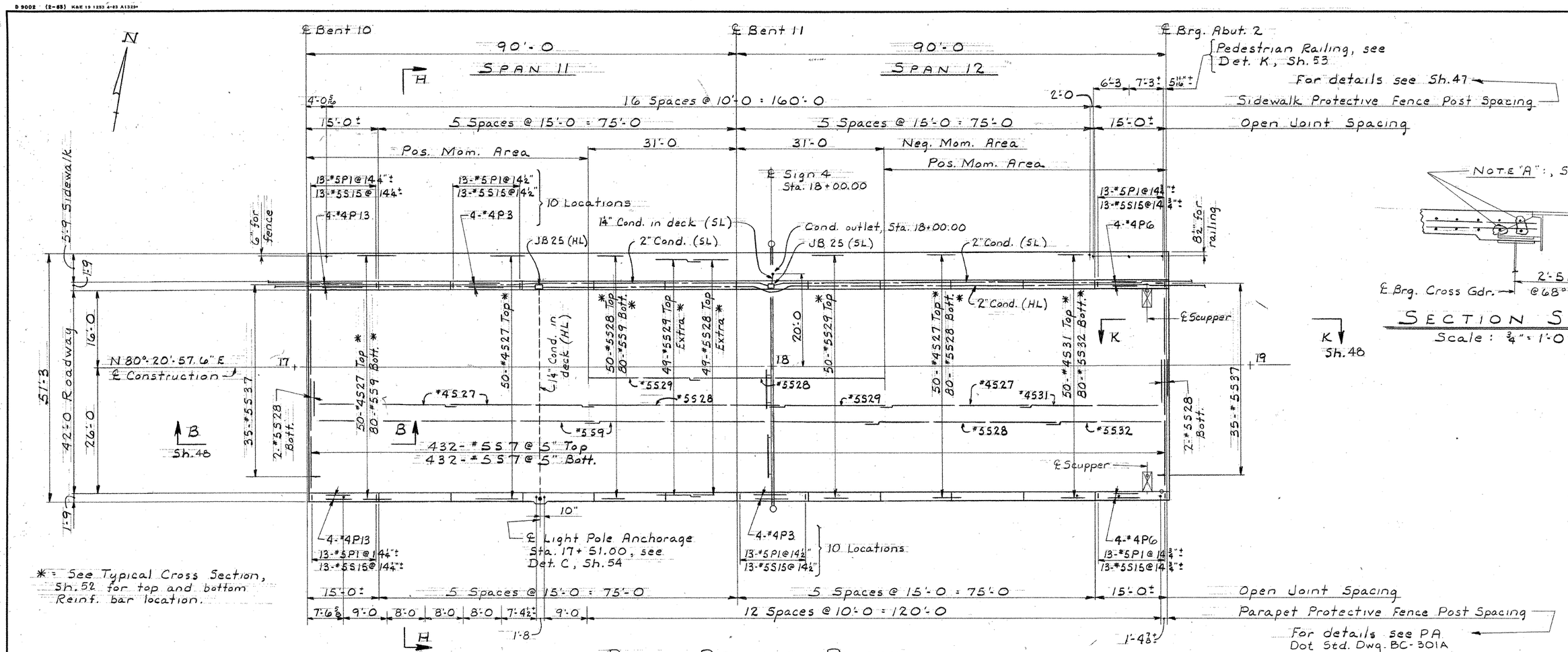
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING - SPANS 9 AND 10

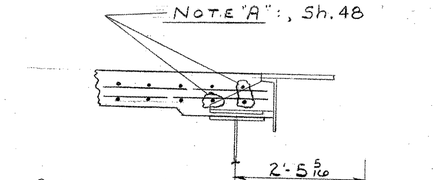
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 50 OF 98

S- 15296

D 9002 (2-83) KAE 19 1253 4-83 A1329*

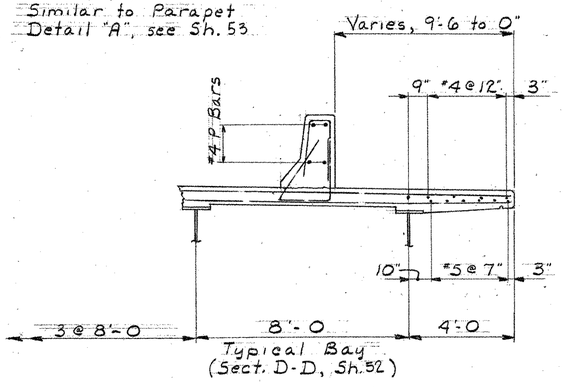




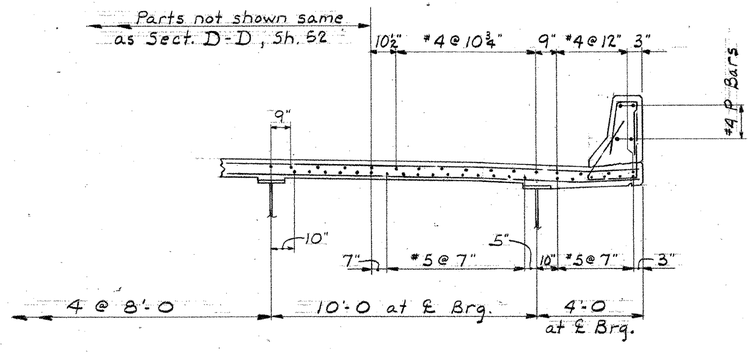
SECTION S-S
Scale: 3/4" = 1'-0 (Sh. 49)

* = See Typical Cross Section, Sh. 52 for top and bottom Reinf. bar location.

DECK PAVING PLAN
Scale: 1" = 10'-0



SECTION M-M (Sh. 50)
Scale: 3/8" = 1'-0



SECTION N-N (Sh. 50)
Scale: 3/8" = 1'-0

NOTES:
- For General Notes see Shs. 1 & 2
- Work this sheet with Sheet Nos 48, 49, 50, 52, 53 & 54

For Parapet Detail "B" see Sh. 53

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	GRM
DWN.	A.V.G.
CHK.	MJP

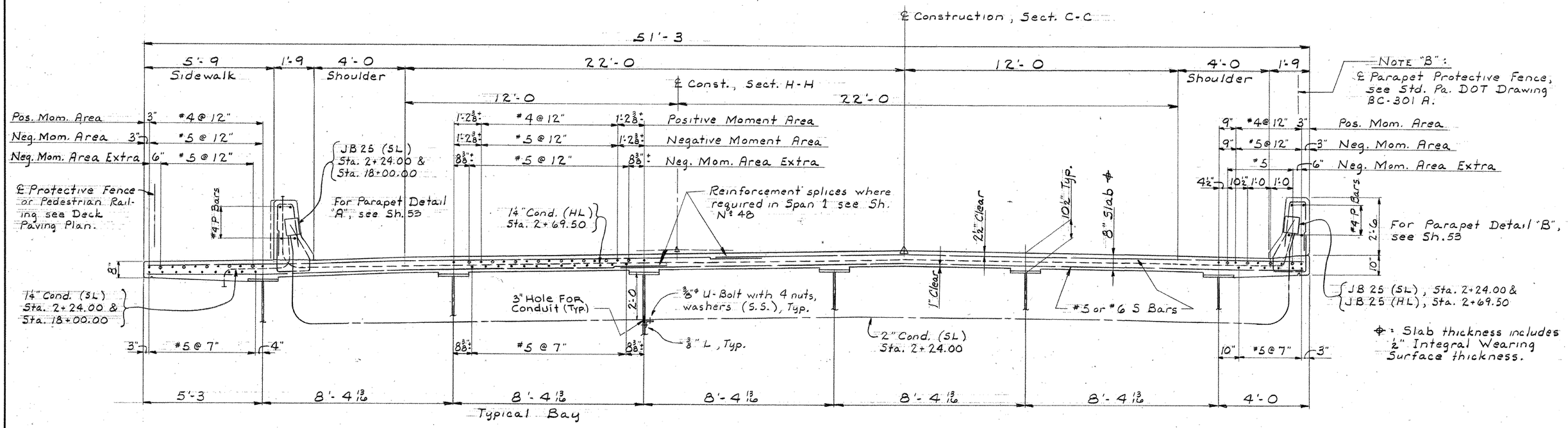
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING - SPANS 11 AND 12

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 51 OF 98
S- 15296

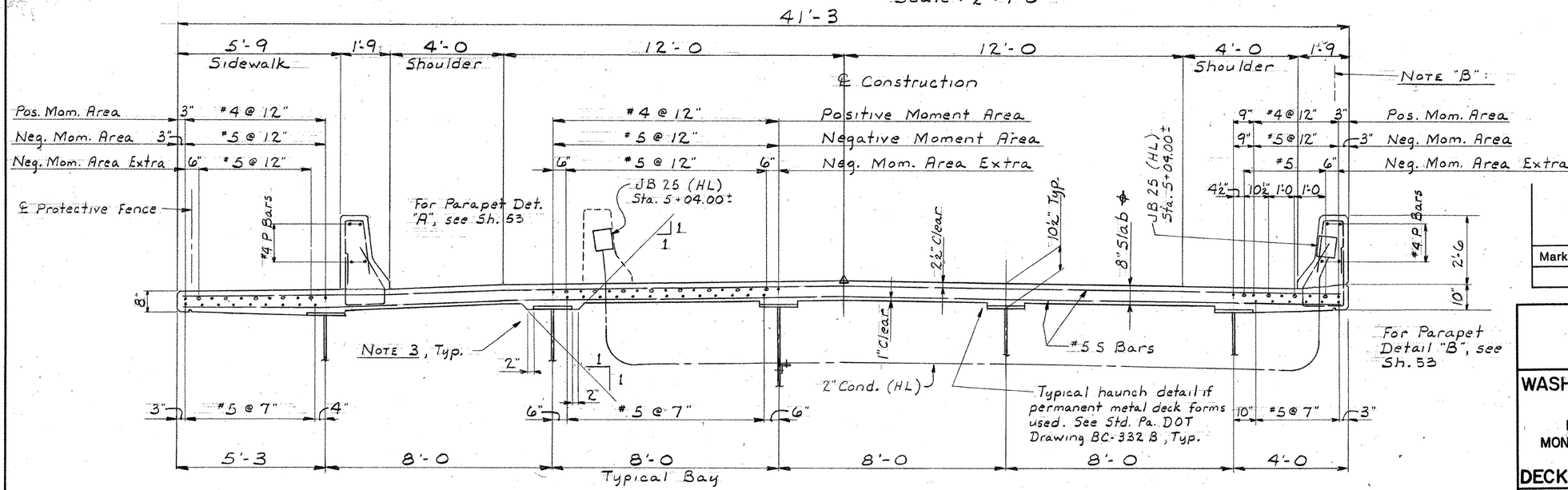
D 9002 (2-83) K&E 19 1283 4-83 A1329*



SECTION C-C (Sh. 48)

SECTION H-H (Similar, Sh. 51)

Scale: ½" = 1'-0



SECTION D-D (Shs 49 & 50)

Scale: ½" = 1'-0

NOTES:

1) For General Notes see Shs. 1 & 2
2) For Cross-Slopes see Contour Sheet Nº 56 & 57.
3) Haunch detail if removable deck forms are used.

Work this sheet with Sheet Nº 48, 49, 50, 51, 53 & 54

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	GRM
Dwn.	A.V.G.
Chk.	MSP

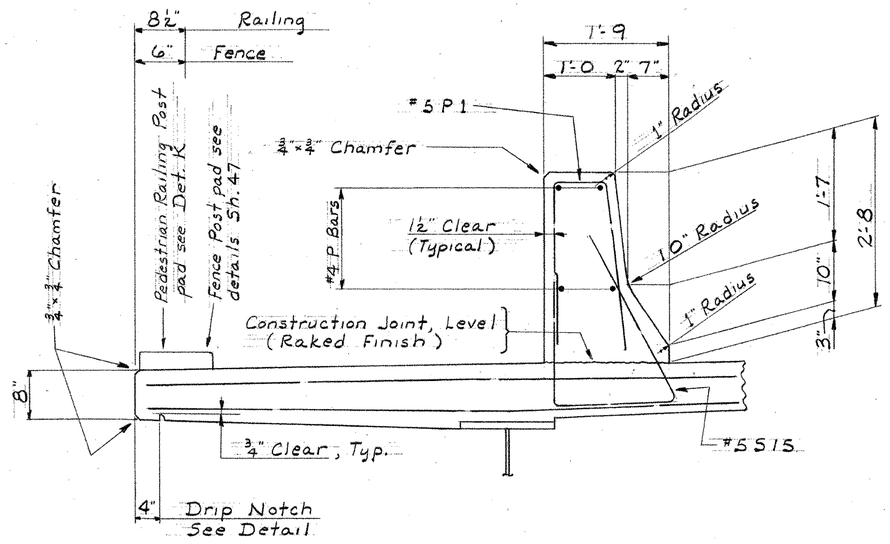
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING CROSS SECTIONS AND DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 52 OF 98
S-15296

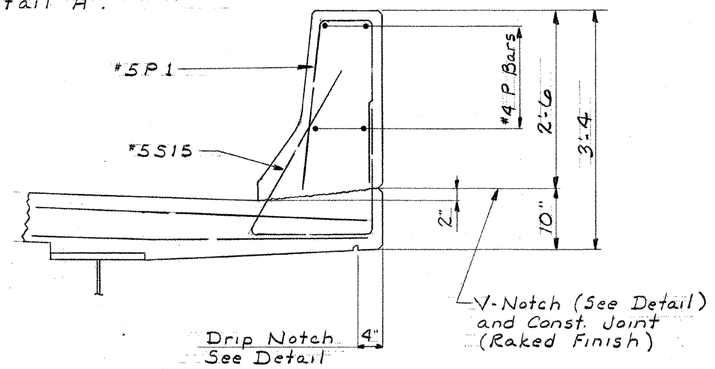
D 9002 (2-83) KBE 10 1253 4-83 A1329*



PARAPET DETAIL "A"

Scale: 1" = 1'-0

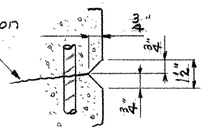
Dimensions not shown same as Parapet Detail "A".



PARAPET DETAIL "B"

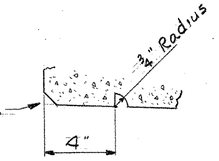
Scale: 1" = 1'-0

Raked finish construction joint, typical.



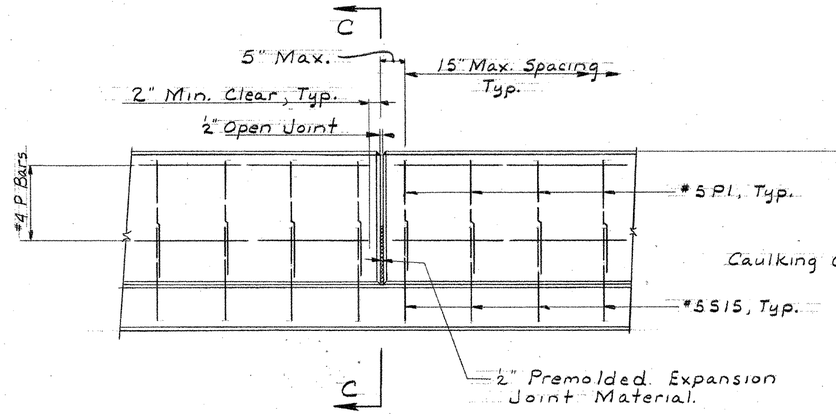
V-NOTCH DETAIL

Scale: 3" = 1'-0



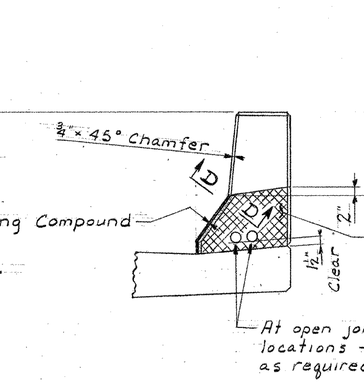
DRIP NOTCH DETAIL

Scale: 3" = 1'-0



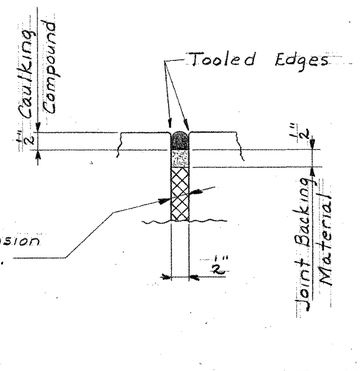
OPEN JOINT DETAIL (TYPICAL)

Scale: ¾" = 1'-0



SECTION C-C

Scale: ¾" = 1'-0



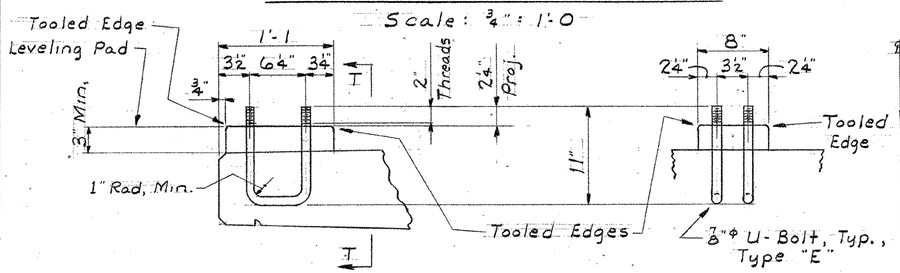
SECTION D-D

Scale: 6" = 1'-0

NOTES:

- Open Joint Detail materials shall meet the requirements of Publication 408.
- Premolded Expansion Joint Filler, Sect. 705.1.
- Joint Backing Material, Sect. 705.9.
- Caulking Compound, Sect. 705.8 (b).
- For General Notes see Sh. Nos 1 & 2

Work this sheet with Shs. 48, 49, 50, 51, 52, & 54

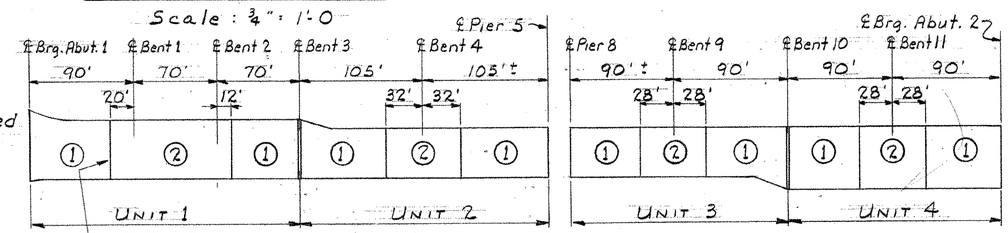


DETAIL K

Scale: 1½" = 1'-0

SECTION T-T

Scale: 1½" = 1'-0



CONCRETE DECK PLACEMENT SEQUENCE

No Scale

NOTE: Deck sections to be placed in order ① and ②. See General Notes for Alternate Placement Scheme.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	GRM
DWN.	A.V.G.
CHK.	MJP

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

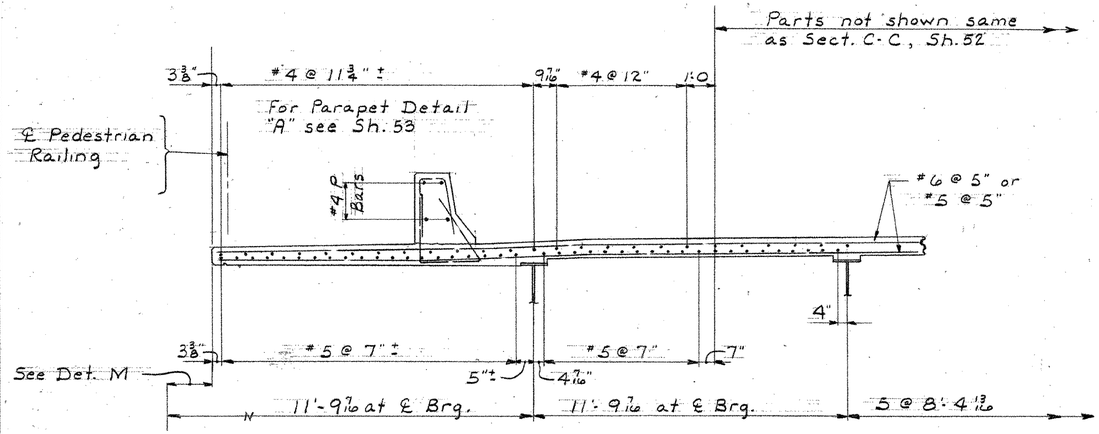
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B 10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 53 OF 98

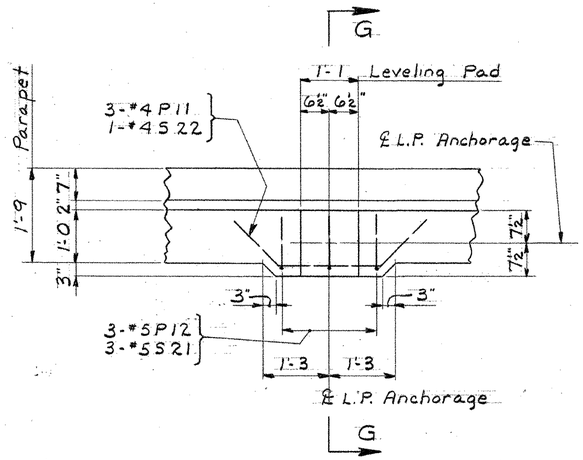
S- 15296

D 9002 (2-83) K&E 19 1253 4-83 A1329*



SECTION E-E (Sh. 48)

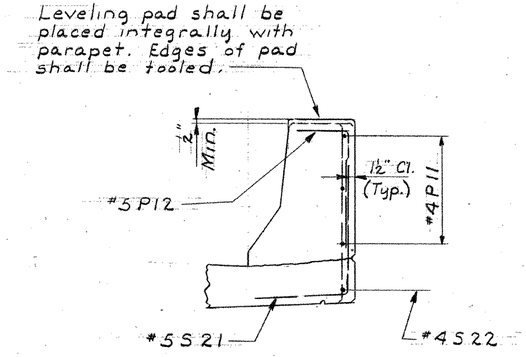
Scale: ⅜" = 1'-0



DETAIL "C"

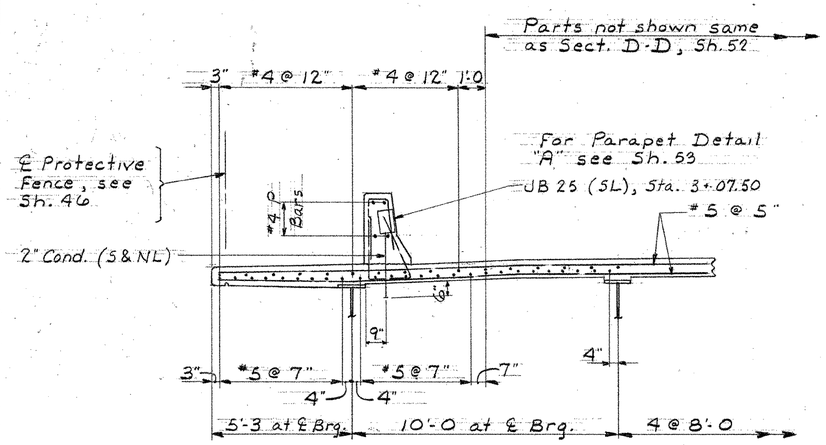
For Anchor Bolts and Details for Lighting Pole Anchorage not shown see Std. Sh. BC-322A. (For Lighting Pole Mounting heights 35'-0 maximum.)

Scale: ¾" = 1'-0



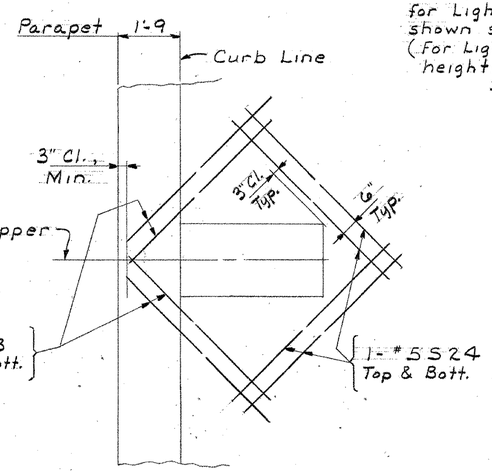
SECTION G-G

Scale: ¾" = 1'-0



SECTION F-F (Sh. 49)

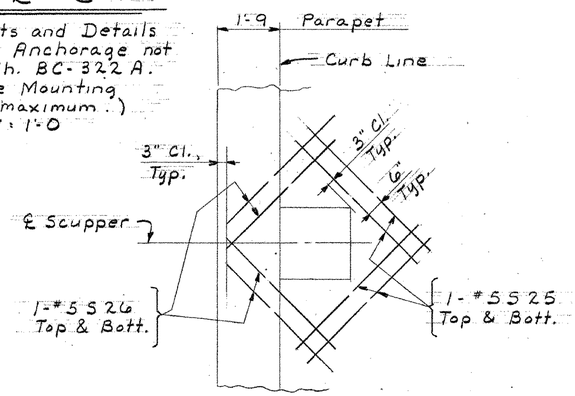
Scale: ⅜" = 1'-0



ADDITIONAL REINF. PLAN

SCUPPER TYPE "D", "E" & "G"

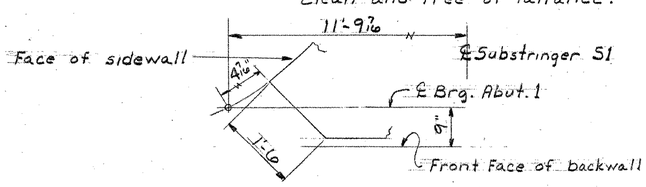
Scale: ½" = 1'-0



ADDITIONAL REINF PLAN

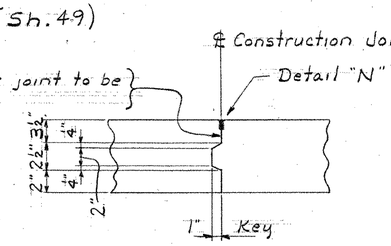
SCUPPER TYPE "F"

Scale: ½" = 1'-0



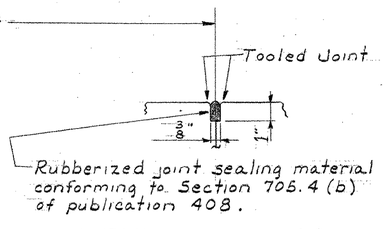
DETAIL M

Scale: ¾" = 1'-0



TRANSVERSE CONSTRUCTION JOINT

Scale: 1½" = 1'-0



DETAIL N

Scale: 3" = 1'-0

NOTES:

1. Cut or bend deck or parapet reinforcing bars in field as required to clear scupper.
2. For Scupper locations see Framing Plans Sheets Nº 26 & 30
3. Cut or bend additional reinforcement to clear expansion dams, support stools, etc.
4. For General Notes see Sh. Nºs. 1 & 2
5. Work this sheet with Sh. Nºs. 48 to 53

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	GRM
DWN.	A.V.G.
CHK.	MJP

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION

DECK PAVING DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 54 OF 98

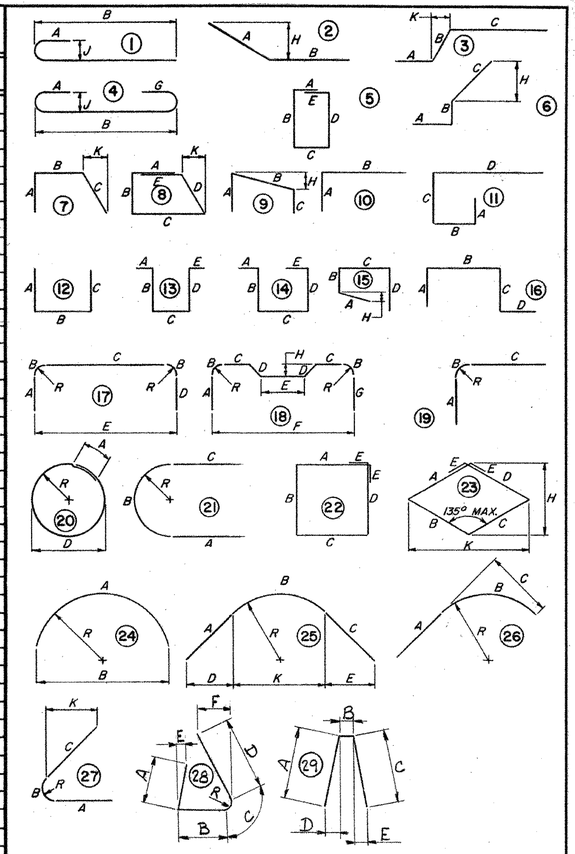
S- 15296

7530-2350-0210

REINFORCEMENT BAR SCHEDULE *

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
S1	6	25'-10	19	STR.												
S2	6	30'-0	19	STR.												
S3	6	44'-0 to 39'-10 (VARY)	19	STR.												1 SET OF 19 VARY EACH BY 2¾"
S4	6	39'-9 to 35'-7 (VARY)	19	STR.												1 SET OF 19 VARY EACH BY 2¾"
S5	5	39'-8 to 27'-3 (VARY)	93	STR.												1 SET OF 93 VARY EACH BY 1⅝"
S6	5	35'-5 to 23'-2 (VARY)	93	STR.												1 SET OF 93 VARY EACH BY 1⅜"
S7	5	50'-11	1776	STR.												
S8	4	36'-0	100	STR.												
S9	5	60'-0	834	STR.												
S10	4	1'-0 to 45'-0 (VARY)	19	STR.												1 SET OF 19 VARY EACH BY 2'-5½
S11	5	1'-0 to 45'-0 (VARY)	31	STR.												1 SET OF 31 VARY EACH BY 1'-5¾
S12	5	56'-3	80	STR.												
S13	5	50'-6	182	STR.												
S14	4	28'-3	100	STR.												
S15	5	6'-3	1389	28	1'-9½	1'-4	7½"	2'-6	0	1'-2	–	–	–	–	3"	
S16	4	3'-8 to 21'-3 (VARY)	10	STR.												1 SET OF 10 VARY EACH BY 1'-11½
S17	5	3'-8 to 21'-3 (VARY)	17	STR.												1 SET OF 17 VARY EACH BY 1'-1¼
S18	4	35'-6	168	STR.												
S19	5	24'-6	83	STR.												
S20	5	34'-9	67	STR.												
S21	5	4'-3	15	10	1'-9	2'-6										LIGHT POLE
S22	4	4'-6	5	29	1'-3½	1'-11	1'-3½	11"	11"							LIGHT POLE
S23	5	6'-0	56	STR.												SCUPPER
S24	5	6'-3	56	STR.												"
S25	5	5'-0	16	STR.												"
S26	5	4'-9	16	STR.												SCUPPER
S27	4	30'-9	318	STR.												
S28	5	40'-0	339	STR.												
S29	5	24'-0	182	STR.												
S30	5	24'-9	67	STR.												
S31	4	31'-0	50	STR.												
S32	5	25'-3	80	STR.												
S33	5	40'-11	1670	STR.												
S34	5	50'-9 to 40'-11 (VARY)	176	STR.												4 SETS OF 44 VARY EACH BY 2¾" ±
S35	4	20'-0 to 2'-2 (VARY)	11	STR.												1 SET OF 11 VARY EACH BY 1'-9⅜
S36	5	20'-0 to 2'-2 (VARY)	16	STR.												1 SET OF 16 VARY EACH BY 1'-2¼
S37	5	6'-0	225	15	9"	1'-3	9"	3'-3	–	–	–	9"				
S38	5	53'-0	2	STR.												
S39	5	25'-10	93	STR.												
S40	5	30'-0	93	STR.												

MARK	SIZE	LENGTH	NO.	TYPE	A	B	C	D	E	F	G	H	J	K	R	REMARKS
P1	5	5'-5	1389	7	2'-3½	9"	2'-4½									
P2	4	13'-8	104	STR.												
P3	4	14'-8	188	STR.												
P4	4	13'-0	48	STR.												
P5	4	13'-7	12	STR.												
P6	4	14'-9	12	STR.												
P7	4	13'-10	32	STR.												
P8	4	10'-11	4	STR.												
P9	4	10'-3	4	2	9'-0	1'-3	–	–	–	–	–	4'-4½				
P10	4	13'-5	8	STR.												
P11	4	4'-6	15	29	1'-3½	1'-11	1'-3½	11"	11"							LIGHT POLE
P12	5	3'-4	15	10	1'-0	2'-4										LIGHT POLE
P13	4	14'-6	16	STR.												
P14	4	11'-2	8	STR.												
P15	4	10'-5	4	2	8'-7	1'-10	–	–	–	–	–	4'-2				
P16	4	9'-1	4	2	8'-9	4"	–	–	–	–	–	4'-1				
P17	4	13'-2	4	STR.												
P18	4	10'-8	4	2	5'-4	5'-4	–	–	–	–	–	2'-7				



* = All reinforcing bars Epoxy Coated.

- "J" Dimensions on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
- All dimensions are out to out of bar except "A" and "G" on standard 135° and 180° hooks, and "R" which is shown to the inside of the bar.
- For Reinforcement Bar Fabrication Details, refer to Standard Drawing BC-336.
- Figures in circles show types.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16 28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK PAVING BAR SCHEDULE

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

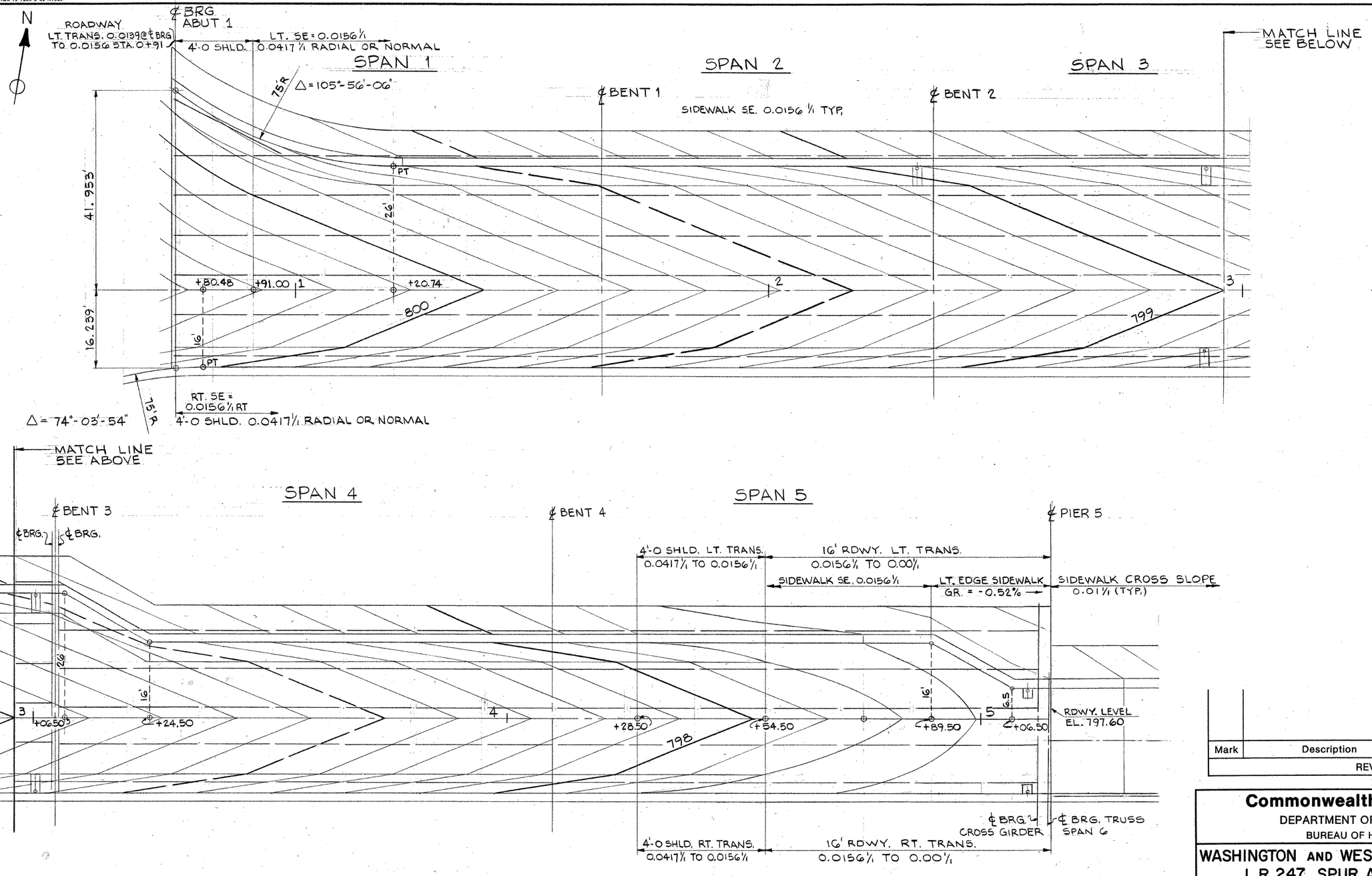
SHEET 55 OF 98

S-15296

DWN. AVG
CHK. MJP

ROBERT H. WALTON CO.

D 9002 (2-83) K&E 10 1253 4-83 A1329*



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES	GRM
DRN	VRK
CHK	REW

SCALE : 1" = 10'-0

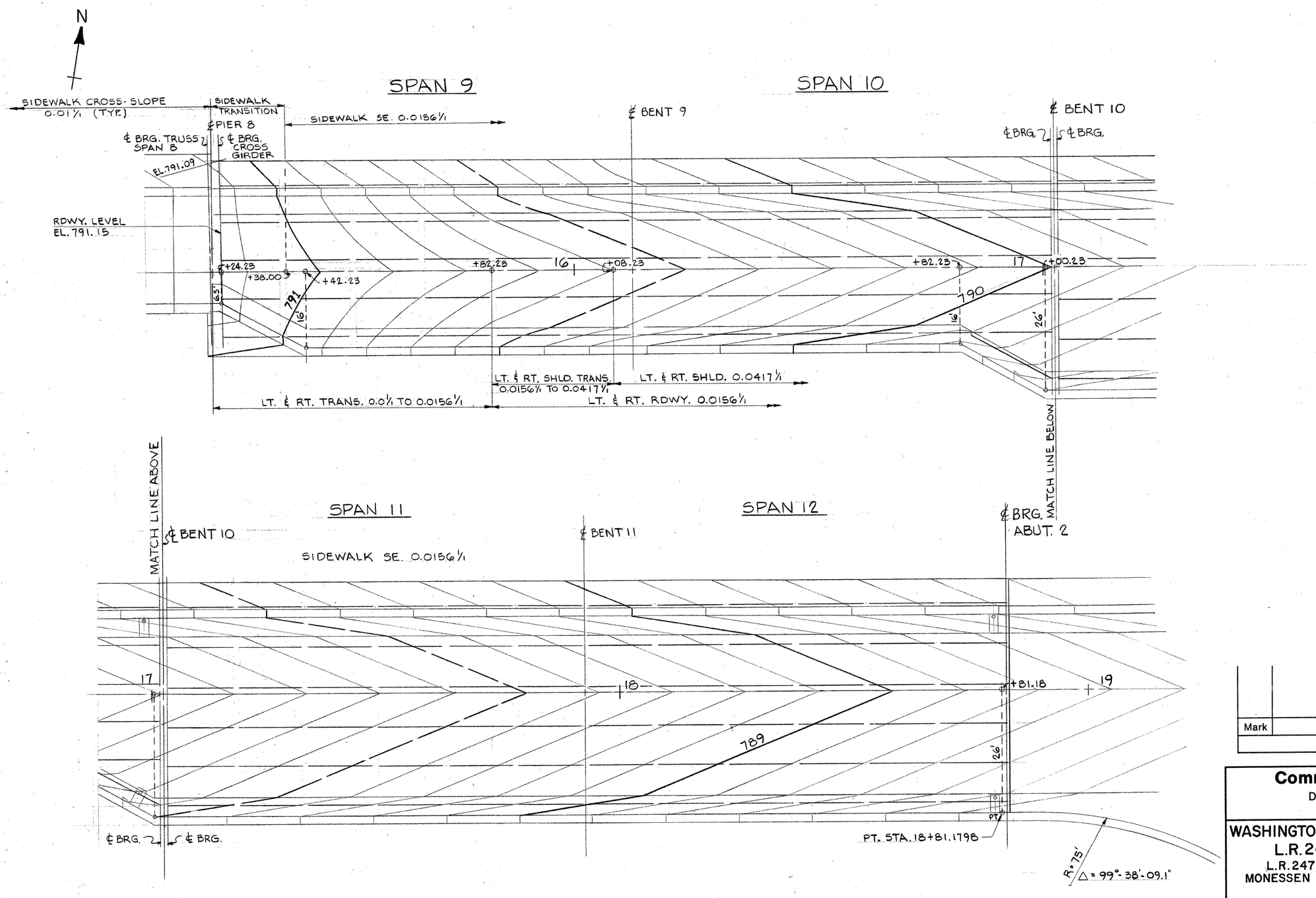
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DECK CONTOURS - SPANS 1 TO 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 56 OF 98
S-15296

D 9002 (2-83) KAR 19 1283 4-83 A1329+



SCALE 1" = 10'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION

DECK CONTOURS - SPANS 9 TO 12

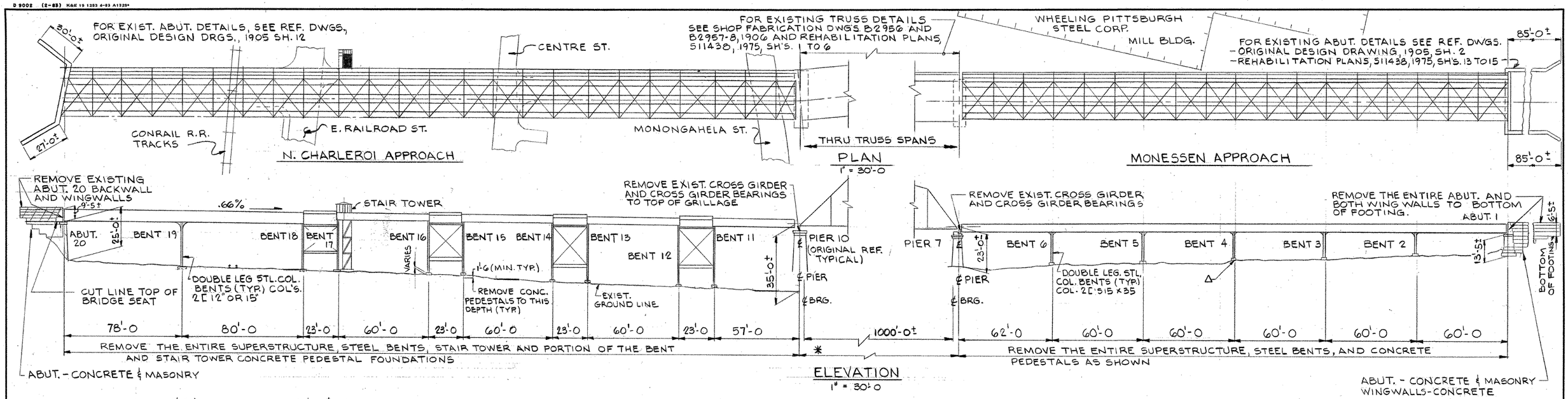
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

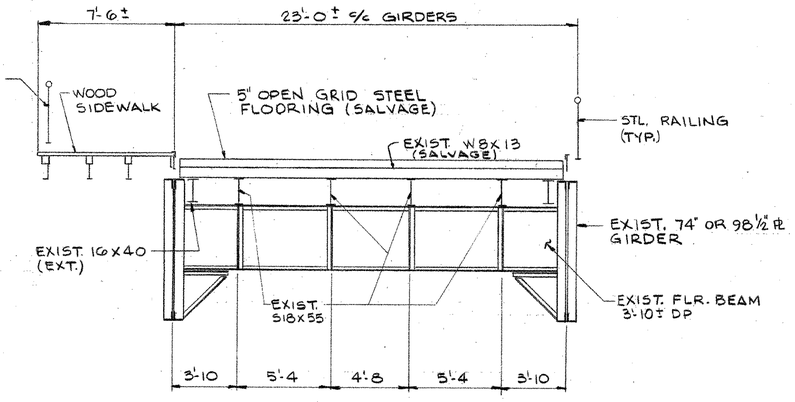
SHEET 57 OF 98

S-15296

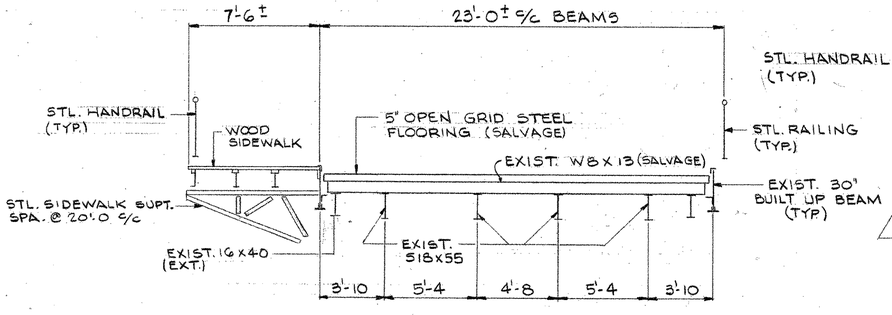
DES	GRM
DRN	VRK
CHK	REW

D 9002 (2-83) K&E 19 1253 4-83 A1325*

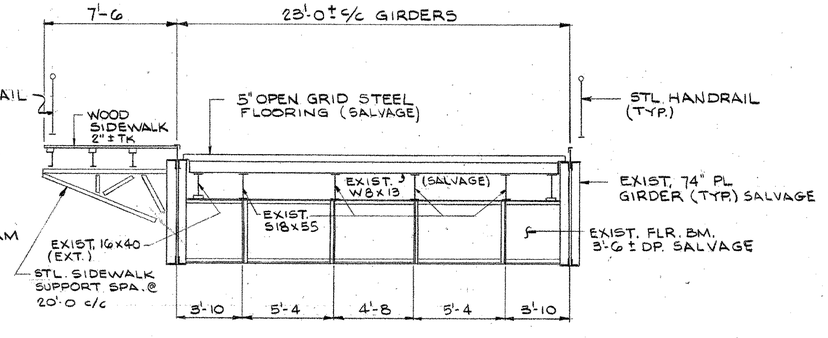




TYPICAL SECTION FOR 78' & 80' GIRDER
(SHOWN FOR INFORMATION ONLY)



TYPICAL SECTION FOR 23' SPANS
(SHOWN FOR INFORMATION ONLY)



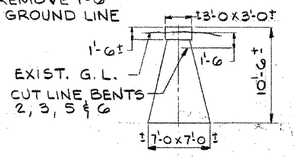
TYPICAL SECTION FOR 60' GIRDER SPANS
(SHOWN FOR INFORMATION ONLY)

*PORTIONS OF TRUSS SPAN SUPERSTRUCTURE TO BE REMOVED ARE AS FOLLOWS :
- ENTIRE GRID DECK INCLUDING W8 SUPPORT BEAMS (SALVAGE)
- PLATE EXPANSION DAMS
- ENTIRE WOOD SIDEWALK, SIDEWALK STRINGERS AND PEDESTRIAN RAILING
- ROADWAY CURBS AND RAILINGS
- ABANDONED BRACKETS AND STRINGERS, SOUTH SIDE
- PROTECTION PLATES, SPAN 8 SEE SH. G4

SEE SH. G3 FOR EXIST. TRUSS SPAN CROSS SECTION

NOTE :
FOR REMOVAL OF EXISTING ELECTRICAL DETAILS SEE SPECIAL PROVISIONS FOR DETAILS OF EXISTING GRID DECK SEE REF. DWG'S., SHOP FABRICATION PLANS, 511438, 1976.

△ENTIRE PEDESTALS @ BENT (4) TO BE REMOVED ALL OTHERS REMOVE 1'-6 BELOW EXIST. GROUND LINE



TYPICAL PEDESTAL
MONESSEN APPROACH
(INFORMATION ONLY)

DES	EAD
DRN	VRK
CHK	EAD

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
DEMOLITION PLAN

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 58 OF 98
S-15296

D 9002 (2-83) KeE 19 1253 4-83 A1328*

TOP OF FTG., ABUT. 1
SOUTH WINGWALL
AT TB 2 = 793.0

DATUM
780
775
770
765
760
755
750
745
740
735
730
725
720

HP 10x57 PILES @ 75T.
TIP ELEV. @ TB2 = 769±

BORING NO. 2
STATION 73+94, 40' RT.

	A	B	C	
G.E. 775.2				
1 HR. 0.7 ▼	1.3	19-10		(BRICK & CINDER BASE 0.0 TO 0.5) MED. DENSE, BROWN SANDY SILT; W/TRACE OF CLAY & FEW ROCK FRAGS.; DAMP 772.2
	4.5	18-48-61		VERY DENSE, BROWN SANDY SILT; SHALEY; DRY 770.7
	6.5	75%	0%	MED. HARD TO HARD, BROWN & GRAY SANDY SHALE & SANDSTONE*; FEW CLAY SEAMS THROUGHOUT; BROKEN
	11.5	90%	16%	RQD = 11% 763.7

STARTED: 2-22-83 COMPLETED: 2-23-83
DRILLER: CHARLES W. ULANOSKY
FILLED FOR SAFETY
* MEDIUM TO COARSE GRAINED SANDSTONE

TOP OF FTG. SO. WINGWALL ABUT. 1 AT TB 2A = 787.0
HP 10x57 PILES @ 75T.
TIP ELEV. @ TB 2A = 767±

BORING NO. 2A
STATION 74+23, 42' RT.

	A	B	C	
G.E. 773.9				
	3.6	50/.1		BRICK AND SUBBASE; 771.9
	8.6	92%	0%	MED. STIFF, CLAYEY SILT & SHALE FRAGS.; DAMP 770.4
	8.8	50/.2		HARD, GRAY SANDSTONE BOULDER 768.8
	13.8	100%	0%	SOFT TO MED. HARD, BROWN AND GRAY SILTSHALE WITH FEW CLAY SEAMS THROUGHOUT; CRUMBLED RQD = 0%
	19.0	90%	33%	758.9 MED. TO HARD, DARK GRAY SILTSHALE SLIGHTLY STAINED & BROKEN; MOST BREAKS AT 45° RQD = 43% 754.9

1 HR. 19.0 ▼

STARTED: 3-7-83 COMPLETED: 3-7-83
DRILLER: C. ULANOSKY
FILLED FOR SAFETY

TOP OF FOOTING ABUT. 1
766.0 ▼
9.5 ▼
HP 10x57 PILES @ 75T.
TIP ELEV. @ TB 17 = 730±

BORING NO. - 17
STATION 0+70, 4' RT.

	A	B	C	
G.E. 768.7				
	1.5	2- -7		TOPSOIL & FILL 766.7
	5.0	10-5-4		MED. STIFF TO STIFF BROWN SILTY CLAY W/FEW SHALE & SANDSTONE FRAGMENTS & TRACE OF SAND; DAMP
	10.0	10-12-12		
	15.0	9-10-12		750.7
	20.0	2-2-3		SOFT, GRAY CLAYEY SILT W/SOME SAND; WET 745.2
	24.0	6-11-10		MED. STIFF TO STIFF, BROWN & GRAY SILTY CLAY WITH FEW SHALE FRAGS. & ANGULAR GRAVEL; DAMP
	29.0	14-24-33		
	30.5	10-23-33		734.2
	35.0	19-53		SOFT RED, BROWN & GRAY CLAYSTONE; LIMEY 39.7-40.0
	40.0	22%	0%	728.7

STARTED: 9-14-83 COMPLETED: 9-15-83
DRILLER: C. ULANOSKY
1 HR. GWL = 3.0'

TOP OF FOOTING ABUT. 1
766.0 ▼
48 HR. 6.4 ▼
HP 10x57 PILES @ 75T.
TIP ELEV. @ TB 17R = 739±

BORING NO. - 17R
STATION 0+72, 46' LT.

	A	B	C	
G.E. 768.7				
	1.5	3-7-14		SOFT TO MED. STIFF, BROWN SILTY CLAY WITH FEW SHALE FRAGS.; DAMP
	6.5	10-12-15		752.2
	11.5	6-7-12		MED. DENSE, GRAY SANDY SILT; WET 748.7
	16.5	6-10-9		MED. STIFF, GRAY CLAYEY SILT WITH FEW SHALE FRAGS.; DAMP
	19.0	3-5-9		743.2
	21.5	5-7-20		SOFT TO MED. HARD, GRAY, SOME REDDISH, CLAYSTONE; BADLY BROKEN RQD = 0%
	25.5	50		738.2
	28.0	40%	0%	
	28.5	100%	0%	
	30.5	50%	0%	

STARTED: 9-6-83 COMPLETED: 9-7-83
DRILLER: C. ULANOSKY
24 HR. GWL = 6.6'

NOTE: FOR ABUT. 1, PILE TIP ELEVATIONS VARY FROM 729± TO 752±.

BORING NO. - 5
STATION 1+00, 50' LT.

DATUM

8 DAY 7.8 ▼

	A	B	C	
G.E. 766.4				
	1.5	14-10-8		MED. DENSE, BROWN & BLACK SANDY FILL W/SOME GRAVEL; DAMP TO MOIST 763.4
	4.5	3-3-5		SOFT, BROWN SILTY CLAY WITH SOME ROCK & SHALE FRAGS.; TRACE OF SAND; SANDSTONE COBBLES 10.5-10.8, 12.0-12.6; DAMP TO MOIST
	6.5	4-6-10		
	11.5	5-18-11		752.4
	12.3	50/.3		SOFT, BROWN & GRAY CLAYEY SILT; MOIST
	14.5	73%	0%	
	16.5	3-4-7		746.4
	21.5	2-2-3		SOFT, GRAY SILT; WET TO MOIST
	26.5	4-8-16		740.4
	30.4	50/.4		VERY STIFF, REDDISH BROWN SILTY CLAY WITH SOME SHALE AND ROCK FRAGS.; DAMP 736.0
	35.4	54%	0%	SOFT, REDDISH BROWN CLAY-SHALE; RQD = 0% 733.0
				SOFT, BROWN SANDY CLAYSTONE CLAY SEAM 34.2-34.4 RQD = 0% 732.0
				MEDIUM HARD, GRAY SANDY SILTSHALE; RQD = 0% 731.0

STARTED: 2-17-83 COMPLETED: 2-18-83
DRILLER: EARL HOFFMAN
1 HR. GWL = 13.0'
4 DAY GWL = 8.0'

NOTE: FOR ABUT. 1 SOUTH WINGWALL, TOP OF FOOTINGS VARY FROM 766.0 - 793.0; PILE TIP ELEVATIONS VARY FROM 740± TO 772±.

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT AND SHALL NOT BE CONSIDERED AS A PART OF THE CONTRACT DRAWINGS. (SEE SECTION 102.05 OF PUBLICATION 408/83.)

GENERAL NOTES:

COLUMN A BOTTOM OF SAMPLE OR CORE RUN.

COLUMN B BLOWS PER 6" FOR 18" SAMPLE BY 140 LB. HAMMER DROPPING 30" ON SPLIT SPOON SAMPLER, OR PERCENT OF CORE RECOVERY.

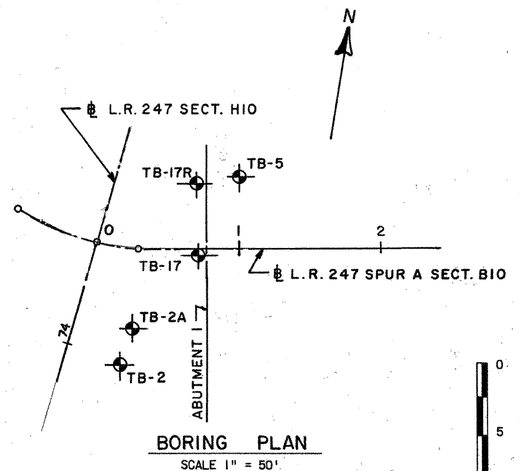
COLUMN C RQD OF CORE RUNS.

RQD DENOTES "ROCK QUALITY DESIGNATION" = $\frac{\text{CUMULATIVE LENGTH OF SOUND CORE PIECES} \geq 4" \times 100}{\text{STRATUM THICKNESS}}$

GWL DENOTES "GROUND WATER LEVEL"

▼ DENOTES GWL 24 HR. AFTER COMPLETION UNLESS OTHERWISE NOTED.

G.E. DENOTES GROUND ELEVATION



BORING PLAN
SCALE 1" = 50'

0
5
10
BORING SCALE

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

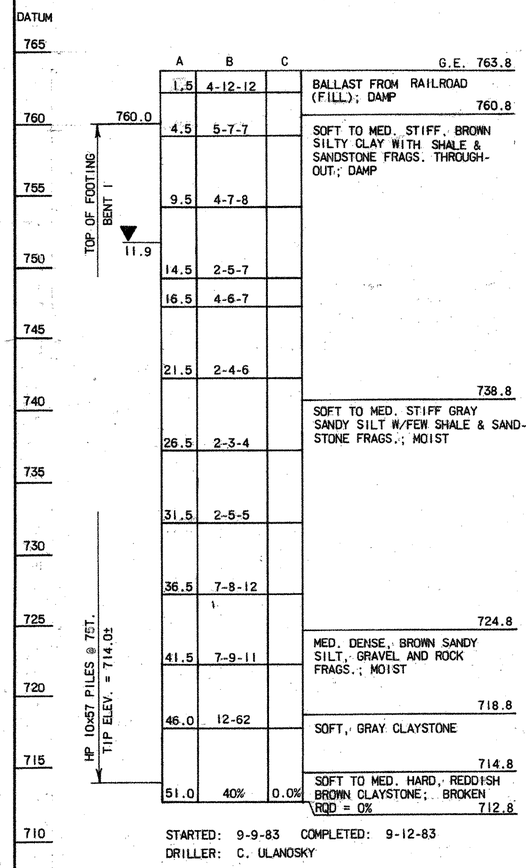
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TEST BORINGS

DES	JMS
DWN	DMY
CKD	RLF

SHEET 59 OF 98
S-15296

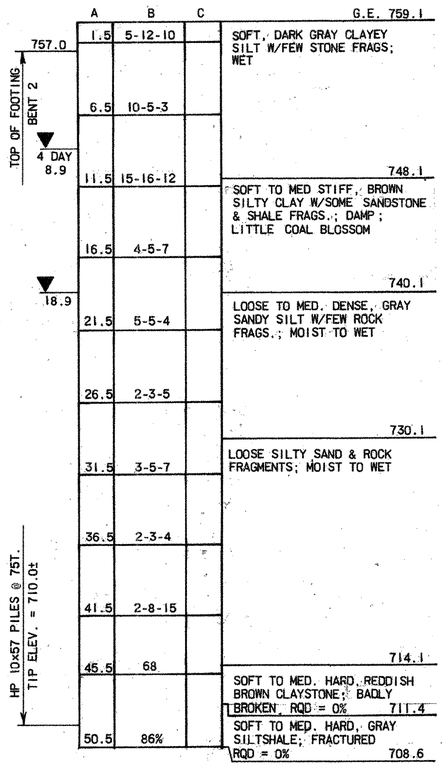
D 9002 (2-83) K&E 19 1253 4-83 A1329*

BORING NO. - 14
STATION 1+67, 14' RT.



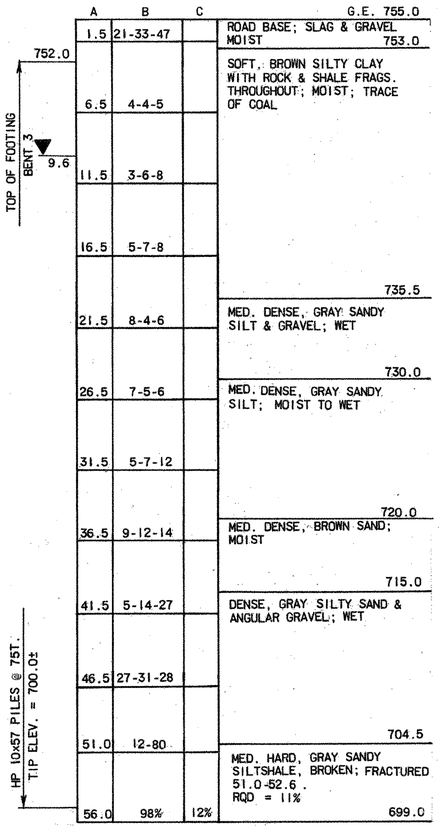
STARTED: 9-9-83 COMPLETED: 9-12-83
DRILLER: C. ULANOSKY
1 HR. GWL = 16.1'

BORING NO. - 14R
STATION 2+35, 27' LT.



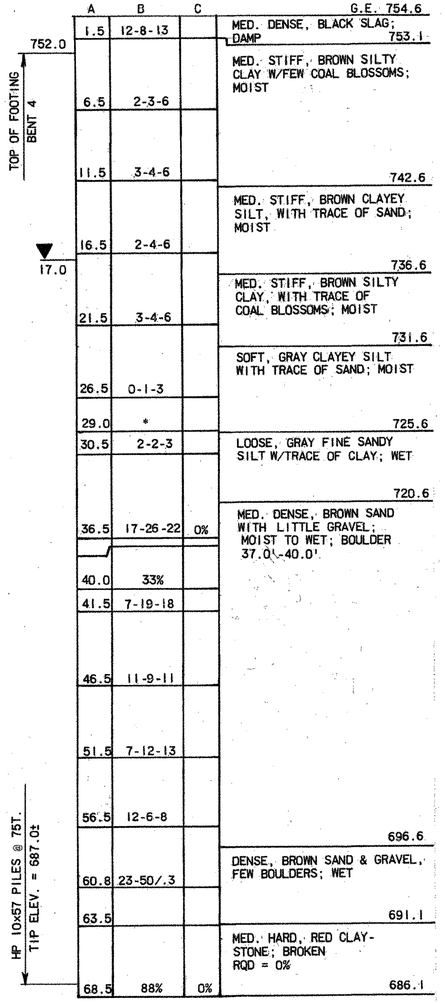
STARTED: 9-8-83 COMPLETED: 9-8-83
DRILLER: C. ULANOSKY
1 HR. GWL = 15.5'

BORING NO. - 13
STATION 2+98, 5' LT.



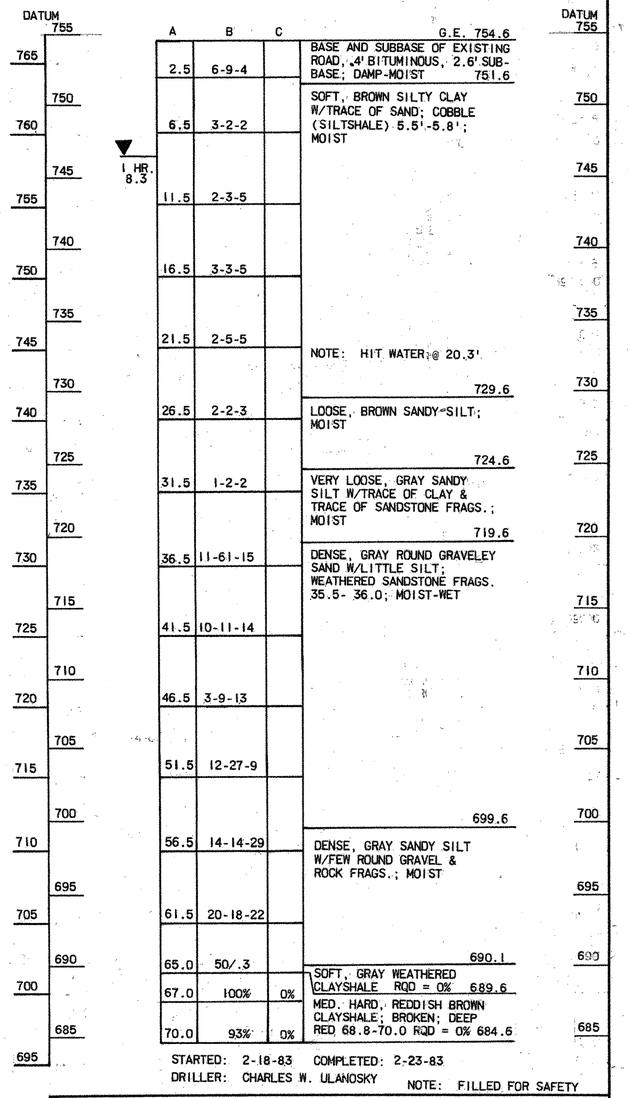
STARTED: 9-12-83 COMPLETED: 9-13-83
DRILLER: C. ULANOSKY
1 HR. GWL = 4.7'

BORING NO. - 13R
STATION 4+07, 10' RT.



STARTED: 10-13-83 COMPLETED: 10-14-83
DRILLER: DAVID WADDELL
1 HR. GWL = 6.8'.
* SHELBY TUBE 27.0'-29.0'. 2.0' RECOVERY

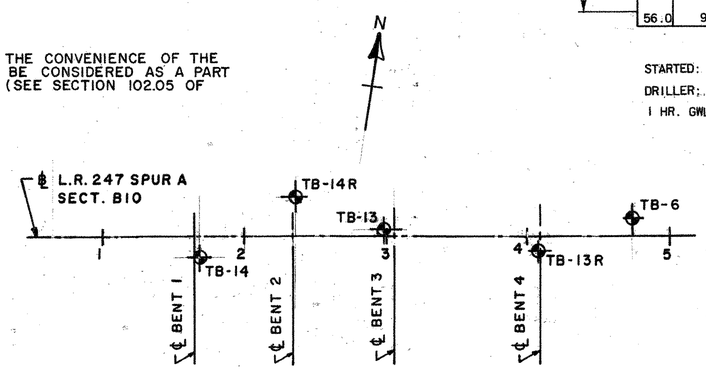
BORING NO. - 6
STATION 4+69, 12' LT.



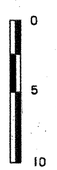
STARTED: 2-18-83 COMPLETED: 2-23-83
DRILLER: CHARLES W. ULANOSKY
NOTE: FILLED FOR SAFETY

FOR GENERAL NOTES, SEE SHEET 59

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT AND SHALL NOT BE CONSIDERED AS A PART OF THE CONTRACT DRAWINGS. (SEE SECTION 102.05 OF PUBLICATION 408/83.)



BORING PLAN
SCALE 1" = 50'



BORING SCALE

DES	JMS
DWN	DMY
CKD	RLF

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TEST BORINGS

SHEET 60 OF 98

S-15296

DATUM 770 765 760 755 750 745 740 735 730 725 720 715 710 705 700 695 690

BORING NO. - 7A
STATION 15+30, 30' LT.

	A	B	C	
				G.E. 763.3
	1.5	7-8-3		LOOSE, GRAY SLAG; MOIST 761.8
				MED. STIFF, BROWN SILTY CLAY WITH FEW COAL AND SHALE FRAGS.; MOIST
	6.5	2-6-8		
				10.0
	11.5	5-8-11		*
				12.0
				749.3
				MED. DENSE, SANDY SILT WITH LITTLE GRAVEL; WET 747.3
	16.5	3-5-6		LOOSE, BROWN SANDY SILT WITH SOME CLAY; WET
▼ 21.6				20.0
	21.5	2-2-3		*
				22.0
	26.5	2-2-3		
	31.5	3-3-4		
	36.5	4-5-5		
	41.5	2-2-3		722.3
				LOOSE, GRAY-BROWN FINE SANDY SILT; WET
	46.5	3-5-5		
				713.3
	51.5	5-6-7		MED. DENSE TO DENSE, BROWN SILTY SAND AND ROCK FRAGS. WITH TRACE OF COAL FRAGS.; MOIST
	56.5	12-20-45		
	61.5	30-42-50		
	66.4	15-20 50/4		696.8
	66.5			MEDIUM HARD, GRAY SILTSHALE; BADLY BROKEN RQD = 0% 692.3
	71.5	94%	0%	HARD, GRAY SANDSTONE RQD = 0% 691.8

BOTTOM OF FOUNDATION EXISTING PIER 8 ELEV. 749.6±

STARTED: 9-27-83 COMPLETED: 9-28-83

DRILLER: DAVID WADDELL

1 HR. GWL = 8.7'

* SHELBY TUBES TAKEN AT
10.0'-12.0' 2.0' REC.
20.0'-22.0' 2.0' REC.
MOVED 2.0', MADE NEW HOLE FOR SHELBY TUBES.

BORING NO. - 7
STATION 15+32, 25' RT.

	A	B	C	
				G.E. 763.3
	1.5	9-19-10		BLACK SLAG (FILL)
				760.3
				SOFT, BROWN SILTY CLAY WITH TRACE OF COAL & TRACE OF ROCK FRAGS.; DAMP
	6.5	6-8-11		756.3
				SOFT, BROWN CLAYEY SILT WITH TRACE OF SAND & TRACE OF COAL; DAMP TO MOIST
	11.5	4-7-8		
	14.5	4-5-9		
				746.3
	17.5	4-7-11		MED. DENSE, BROWN SANDY SILT W/FEW ROCK FRAGS.; (ROUND & ANGULAR); MOIST 743.8
▼ 3 DAY 23.2	19.5	*		
	21.0	6-4-6		LOOSE TO MED. DENSE, BROWN SANDY SILT; MOIST TO WET
	25.5	1-2-3		
	28.5	2-2-3		NOTE: HIT WATER @ 24.5'
	31.5	2-4-6		731.8
	34.5	2-3-4		LOOSE TO MED. DENSE, BROWN SILT W/FEW ROCK FRAGS.; WET 729.3
	37.5	3-3-4		SOFT TO MED. STIFF, BROWN CLAYEY SILT SLIGHTLY LAMINATED; MOIST
	40.5	1-2-3		
	43.5	2-3-3		720.8
	46.5	4-14-9		LOOSE, BROWN SANDY SILT WITH LITTLE GRAVEL & FEW SHALE FRAGS.; MOIST
	51.5	2-4-5		
	56.5	10-13-14		
				703.3
	51.5	26-36-34		VERY DENSE, BROWN SAND & GRAVEL WITH TRACE OF SILT; MOIST TO WET
	65.0	100/.2		698.5
	70.0	92%	0%	MEDIUM HARD, REDDISH BROWN & GRAY SILTSHALE; BADLY BROKEN; SLIGHT REACTION TO ACID RQD = 0% 693.3

STARTED: 3-3-83 COMPLETED: 3-4-83

DRILLER: CHARLES W. ULANOSKY

1 HR. GWL = 18.8'

* SHELBY TUBE, REC. 1.7'

BORING NO. - 12R
STATION 16+12, 18' LT.

	A	B	C	
				G.E. 764.7
	1.5	11-7-9		MED. DENSE, GRAY SLAG; DRY 763.2
TOP OF FOOTING BENT 9 762.5				MED. DENSE, BROWN SANDY SILT; DRY
	6.5	7-8-10		
				8.0 756.7
	11.5	3-4-5		*
				10.0
				LOOSE, BROWN SANDY SILT WITH SOME CLAY; WET
▼ 16.8	16.5	1-2-3		
				18.0
	21.5	1-3-2		* 744.7
				20.0
				LOOSE, BROWN SILTY FINE SAND; WET 740.7
	26.5	3-3-4		SOFT, BROWN CLAYEY SILT, W/ LITTLE FINE SAND; WET
				736.7
	31.5	2-2-4		30.0
				*
	36.5	4-4-5		32.0
				SOFT, GRAY CLAYEY SILT WITH SOME SAND; WET
	41.5	2-2-5		
				720.7
	46.5	4-4-5		LOOSE GRAY SANDY SILT; WET
				716.7
	51.5	7-8-7		MED. DENSE TO DENSE, BROWN SILTY SAND AND ROCK FRAGS. WITH TRACE OF COAL FRAGS.; MOIST
	56.5	13-13-21		
	60.9	43-50/.4		
	65.9	50/.4		698.8
	70.9	60%	0%	MED. HARD, GRAY SILTSHALE; BADLY BROKEN; RQD = 0% 693.8

HP 10x57 PILES @ 75T TIP ELEV. = 694.0±

STARTED: 9-23-83 COMPLETED: 9-27-83

DRILLER: DAVID WADDELL

1 HR. GWL = 8.7'

* SHELBY TUBES TAKEN AT
8.0'-10.0' 2.0' REC.
18.0'-20.0' 2.0' REC.
30.0'-32.0' 2.0' REC.
MOVED 2.0', MADE NEW HOLE FOR SHELBY TUBES.

BORING NO. - 12
STATION 16+98, 18' RT.

	A	B	C	
				G.E. 766.4
764.5				BLACK SLAG & IRON
TOP OF FOOTING BENT 10				763.4
	6.5	3-3-4		SOFT TO MED. STIFF, BROWN CLAYEY SILT WITH TRACE OF SHALE & ROCK FRAGS.; DAMP TO MOIST
	8.5	*		
	10.0	7-9-11		
				752.9
▼ 12.6	15.0	1-1-2		LOOSE, BROWN SILT WITH TRACE OF CLAY; MOIST TO WET
	20.0	2-3-5		
	22.0	*		
	23.5	3-3-4		742.9
				GRAY SILT WITH TRACE OF CLAY; DAMP
	28.5	3-4-6		737.9
				MED. DENSE, GRAY SILT WITH TRACE OF SAND & CLAY & SHALE FRAGS.; LIGHT BROWN 41.0' TO 42.0'; WET
	33.5	4-6-9		
	35.5	*		
	37.0	5-6-8		
	42.0	6-3-10		
	47.0	3-5-10		
				716.4
	52.0	2-6-5		MED. DENSE, BROWN SANDY CLAYEY SILT WITH FEW ROCK & SHALE FRAGS.; MOIST TO WET
				711.4
	57.0	6-12-14		DENSE TO VERY DENSE, BROWN SILTY SAND & FINE ROUND GRAVEL AND ROCK FRAGS.; COAL AT 66.0'; WET
	62.0	15-16-27		
	67.0	12-9-18		699.5
	67.5	50/0		SOFT, DARK GRAY SILTSHALE
	70.5	87%	0%	RQD = 0%
	72.5	90%	0%	693.9

HP 10x57 PILES @ 75T. TIP ELEV. = 696.0±

STARTED: 9-16-83 COMPLETED: 9-20-83

DRILLER: DAVID WADDELL

NOTE: HIT WATER @ 35.0' WL IN HOLE DURING DRILLING ~ 45.0'

1 HR. GWL = 13.5'

* SHELBY TUBES TAKEN AT
6.5'-8.5' 1.8' REC.
20.0'-22.0' 0.0' REC.
33.5'-35.5' 2.0' REC.

NOTE: 766.4-763.4 HOLE DRILLED IN STEEL MILL. LARGE PERCENTAGE OF SCRAP IRON IN SURFACE LAYER.

BORING NO. - 11R
STATION 17+95, 19' RT.

	A	B	C	
				G.E. 768.8
766.5	1.5	13-11-14		MED. STIFF, DARK BROWN SILTY CLAY WITH SLAG; MOIST 767.3
TOP OF FOOTING BENT 11				MED. STIFF, BROWN SILTY CLAY WITH FEW COAL FRAGS.; MOIST
	6.5	4-4-7		
	11.5	4-8-12		756.8
				SOFT BROWN CLAYEY SILT; MOIST
	16.5	4-4-4		751.8
▼ 18.0				MED. DENSE, BROWN SANDY SILT WITH SOME SHALE FRAGS.; MOIST
	21.5	3-4-6		
				744.8
	26.5	2-4-5		MED. DENSE GREY SANDY SILT WITH SOME SHALE FRAGS.; MOIST
				738.8
	31.5	3-7-7		MED. DENSE, BROWN SANDY SILT WITH SOME GRAVEL & ROCK FRAGS.; MOIST
				734.8
	36.5	3-6-8		SOFT, GRAY SANDY SILT WITH FEW COAL FRAGS.; WET
	41.5	4-5-7		
				726.8
	46.5	3-4-6		SOFT, BROWN SILTY SAND WITH LITTLE GRAVEL; WET
	51.5	3-4-6		
	56.5	3-5-9		
				711.8
				DENSE, BROWN SILTY SAND AND ROCK FRAGS.; WET
	61.5	9-13-12		
	65.9	17-50/.2		703.1
	66.0			MED. TO HARD, RED & GRAY SHALE; VERY BADLY BROKEN RQD = 0%
	71.0	96%	0%	698.3 MED. HARD GRAY SHALE; BROKEN RQD = 0% 697.8

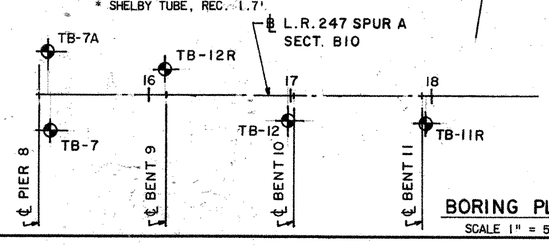
HP 10x57 PILES @ 75T. TIP ELEV. = 699.0±

STARTED: 10-5-83 COMPLETED: 10-6-83

DRILLER: DAVID WADDELL 1 HR. GWL = 6.5'.

BORING SCALE 0 5 10

DES	JMS
DWN	DMY
CKD	RLF



BORING PLAN
SCALE 1" = 50'

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT AND SHALL NOT BE CONSIDERED AS A PART OF THE CONTRACT DRAWINGS. (SEE SECTION 102.05 OF PUBLICATION 408/83.)

FOR GENERAL NOTES, SEE SHEET 59.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. BIO
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TEST BORINGS

D 9002 (2-83) K&E 19 1253 4-83 A1329*

BORING NO. - 10

STATION 19+75, 52' LT.

A	B	C	G.E. 787.0
1.5	2-5-6		FILL: MED. STIFF, BROWN & GRAY SILTY CLAY W/SOME ROCK FRAGS.; DAMP
			6.0 781.0
6.0	19-50		MED. STIFF, BROWN SILTY CLAY WITH FEW COAL & SANDSTONE FRAGS.; DAMP
11.5	5-8-11		
16.5	8-10-10		
19.5 ▼			
21.5	5-7-11		
			23.0 765.0
26.5	4-7-6		MED. STIFF TO STIFF, GRAY SILTY CLAY WITH FEW COAL AND SANDSTONE FRAGS.; MOIST
31.5	2-5-4		
36.5	4-4-7		
41.5	4-7-12		
46.5	8-9-12		
48.1	50/.1		48.1 739.0
			SANDSTONE BOULDER
51.1	33%	0%	51.1 736.0
52.6	4-16-13		STIFF, GRAY SANDY SILTY CLAY WITH FEW COAL AND SANDSTONE FRAGS.; WET
56.5	12-13-11		
60.8	28-50/.3		60.8 726.2
			VERY SOFT, RED SHALE 725.0
65.8	20%	0%	MEDIUM HARD, BROWN SHALE; BADLY BROKEN RQD = 0%
			68 719.0
70.8	94%	44%	HARD, GRAY FINE SANDSTONE RQD = 79% 716.2

STARTED: 10-3-83 COMPLETED: 10-4-83

DRILLER: DAVID WADDELL

1 HR. GWL = 20.5'

TOP OF FOOTING NORTH WINGWALL ABUT. 2

779.0

772.0

BORING NO. - 11

STATION 18+77, 25' LT.

A	B	C	G.E. 772.9
			SOFT, DARK BROWN SILTY CLAY WITH FEW COAL AND SHALE FRAGS.; DAMP
6.5	6-6-10		
10.5	5-8-12		
12.5	*		
15.5	2-5-7		
			757.9
18.2 ▼			MED. STIFF LIGHT BROWN AND LIGHT GRAY CLAYEY SILT WITH COAL AND SHALE FRAGS.; MOIST TO WET
20.5	3-3-4		
25.5	2-4-6		
27.5	*		
29.0	4-10-8		
34.0	6-8-12		
39.0	4-5-6		
44.0	6-6-10		
49.0	9-13-11		
54.3	4-7-9		
56.3	*		
57.8	4-6-9		
59.5	13-14-17		
			730.9
			MED. DENSE, LIGHT GRAY SANDY GRAVELLY SILT; MOIST
			725.9
			SOFT TO MED. STIFF, BROWN AND GRAY CLAYEY SILT WITH FEW SHALE FRAGS. AND COAL BLOSSOM; DAMP TO MOIST
			710.4
64.5	12-14-25		SOFT, BROWN & GREENISH GRAY, WEATHERED CLAY SHALE; BADLY BROKEN & FRACTURED RQD = 0%
65.0	50		
			705.7
			SOFT, REDDISH BROWN CLAY-SHALE; BROKEN RQD = 0% 702.9
70.0	92%	0%	

HP 10x57 PILES @ 75T.
TIP ELEV. 713.0± TO 706.0±

1 HR. GWL = 16.5'

STARTED: 9-20-83 COMPLETED: 9-22-83

DRILLER: DAVID WADDELL

* SHELBY TUBES
10.5-12.5 NO REC.
25.5-27.5 2.0' REC.
54.3-56.3 2.0' REC.

BORING NO. - 8

STATION 18+65, 45' RT.

774.5

772.0

TOP OF FOOTING ABUT. 2

2 DAY 24.2 ▼

A	B	C	G.E. 776.0
1.5	4-9-9		SOFT, BROWN CLAYEY SILT WITH FEW ROCK & SHALE FRAGS.; POSSIBLE FILL; DAMP
6.5	7-7-8		
			9.5 766.5
11.5	5-5-7		SOFT, YELLOW BROWN CLAYEY SILT WITH TRACE OF COAL FRAGS.; MOIST
			15.0 761.0
16.5	5-6-9		MED. STIFF, YELLOW BROWN CLAYEY SILT WITH SOME SHALE FRAGS. & TRACE OF COAL FRAGS.; DAMP
			20.0 756.0
21.5	3-3-5		SOFT, LIGHT BROWN CLAYEY SILT WITH FEW SHALE FRAGS.; MOIST TO WET
26.5	3-3-5		
31.5	6-6-10		
			35.0 741.0
36.5	6-6-10		SOFT, LIGHT GRAY CLAYEY SILT WITH FEW SHALE FRAGS. AND TRACE OF COAL BLOSSOM; MOIST
41.5	5-7-8		
46.5	7-8-9		
			50.0 726.0
51.5	5-3-7		SOFT, BROWN & GRAY SILT WITH TRACE OF CLAY & WITH FEW SHALE FRAGS.; MOIST
56.5	6-6-33		
			60.0 716.0
61.5	10-10-10		MED. STIFF, BROWN SILT WITH TRACE OF CLAY & SHALE FRAGS.; WET
			65.0 711.0
66.5	9-19-23		SAND & GRAVEL WITH ROCK FRAGS. 709.0
67.5	26-90		SOFT, BROWN & GRAY CLAYSHALE & CLAY SEAMS (LAYERED) CRUMBLED, RQD = 0% 705.5
			SOFT TO MED. HARD, REDDISH BROWN CLAYSHALE; BROKEN RQD = 0% 703.5
72.5	68%	0%	

HP 10x57 PILES @ 75T.
TIP ELEV. = 709.0± TO 706.0±

STARTED: 3-1-83 COMPLETED: 3-2-83

DRILLER: CHARLES W. ULANOSKY

1 HR. GWL = 14.1'

BORING NO. - 9

STATION 19+51, 70' RT.

780.0

11.5 ▼

TOP OF FOOTING SOUTH WINGWALL ABUT. 2

A	B	C	G.E. 789.9
			MED. STIFF TO STIFF BROWN SILTY CLAY W/SOME ROCK FRAGS; DAMP (FILL)
6.5	13-13-12		
			782.9
			MED. STIFF DARK BROWN SILTY CLAY WITH FEW COAL & ROCK FRAGS.; DAMP
11.5	4-5-12		
			770.4
16.5	6-7-11		SOFT LT. BROWN CLAYEY SILT W/TRACE OF COAL; MOIST 768.1
21.5	4-5-8		
21.9	50/.1		
24.0	81%	24%	VERY HARD GRAY LIMESTONE WITH FEW SOFT CLAY & SHALE LAYERS* RQD = 10%
26.9	34%	0%	26.9 763.0

STARTED: 9-15-83 COMPLETED: 9-15-83

DRILLER: DAVID WADDELL

*NOTE: BELIEVED TO BE CORING IN BOULDER. SEE TB 9A

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT AND SHALL NOT BE CONSIDERED AS A PART OF THE CONTRACT DRAWINGS. (SEE SECTION 102.05 OF PUBLICATION 408/83.)

BORING NO. - 9A

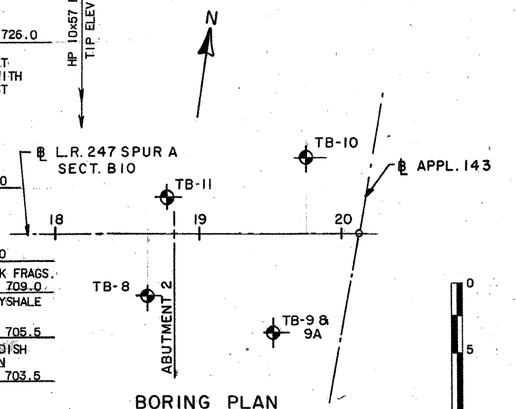
STATION 19+53, 70' RT.

A	B	C	G.E. 789.9
			AUGERED TO 20.0'.
			NOTE: SEE TB-9 FOR DESCRIPTION OF OVERBURDEN TO 20.0'
			769.9
21.5	3-3-4		MED. STIFF, BROWN SILTY CLAY WITH SOME COAL AND SANDSTONE FRAGS.; MOIST
26.5	11-10-9		
31.5	9-12-12		
36.9 ▼			
36.5	9-8-8		
			35 751.9
41.5	2-5-8		MED STIFF, BROWN AND GRAY SILTY CLAY WITH SOME COAL AND SANDSTONE FRAGS.; MOIST TO WET
46.5	4-5-6		
51.5	14-10-10		
			735.9
56.5	8-9-13		MED. STIFF, GRAY SILTY CLAY WITH SOME COAL AND SAND-STONE FRAGS.; MOIST
			60 729.9
61.5	15-24-35		STIFF, BROWN AND GRAY SILTY CLAY WITH SOME COAL AND SHALE FRAGS.; MOIST
65.4	50/.4		724.9
66.5			SOFT WEATHERED BROWN CLAYSHALE; MOIST 723.5
			SOFT BROWN CLAYSHALE 721.9 RQD = 0%
			HARD, GRAY FINE SANDSTONE RQD = 29%
71.5	80%	20%	71.5 718.5

NOTE: TB-9A IS 2 FEET FROM TB-9. (SEE TB-9 LOG)

STARTED: 10-6-83 COMPLETED: 10-7-83

DRILLER: DAVID WADDELL 1 HR. GWL = 18.6'



BORING PLAN

SCALE 1" = 50'

FOR GENERAL NOTES, SEE SHEET 59

0 5 10
BORING SCALE

DES	JMS
DWN	DMY
CKD	RLF

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R. 247 SPUR A SEC. B10

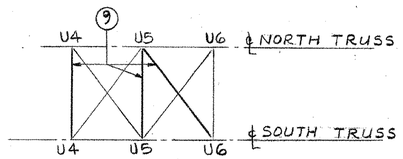
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

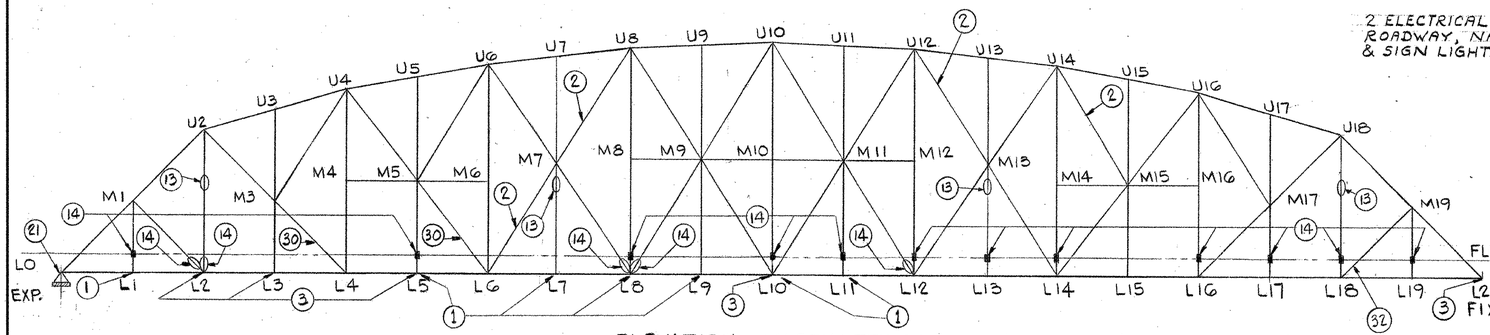
TEST BORINGS

SHEET 62 OF 98

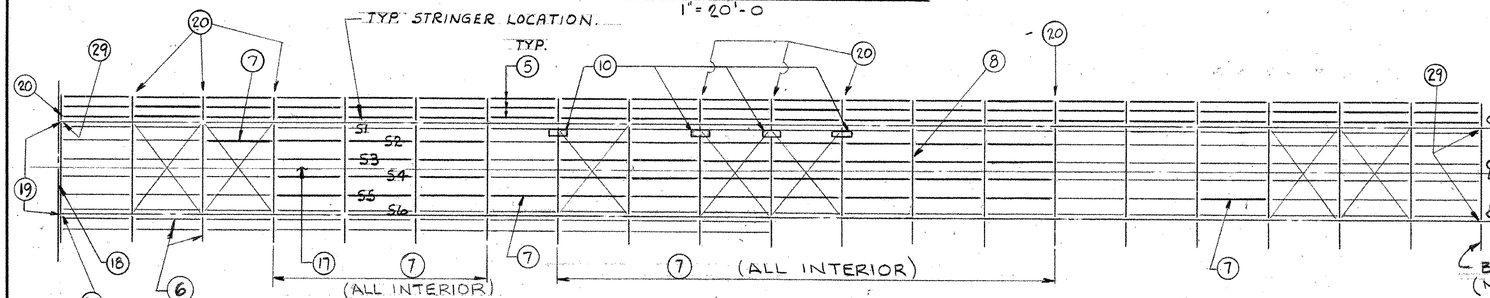
S-15296



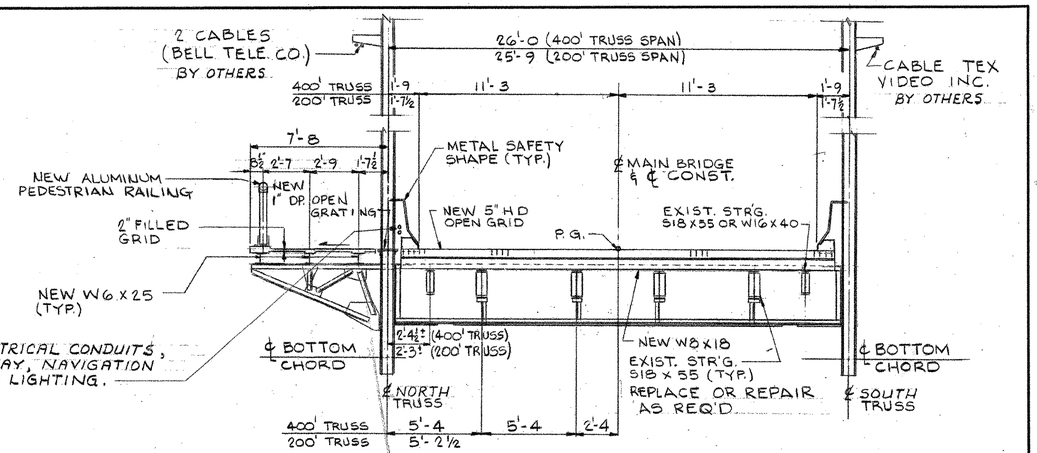
PARTIAL PLAN TOP CHORD



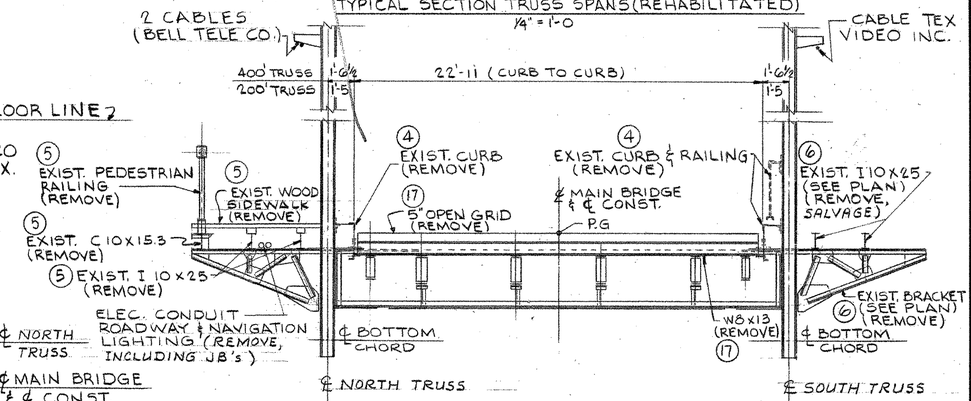
ELEVATION NORTH TRUSS
1" = 20'-0



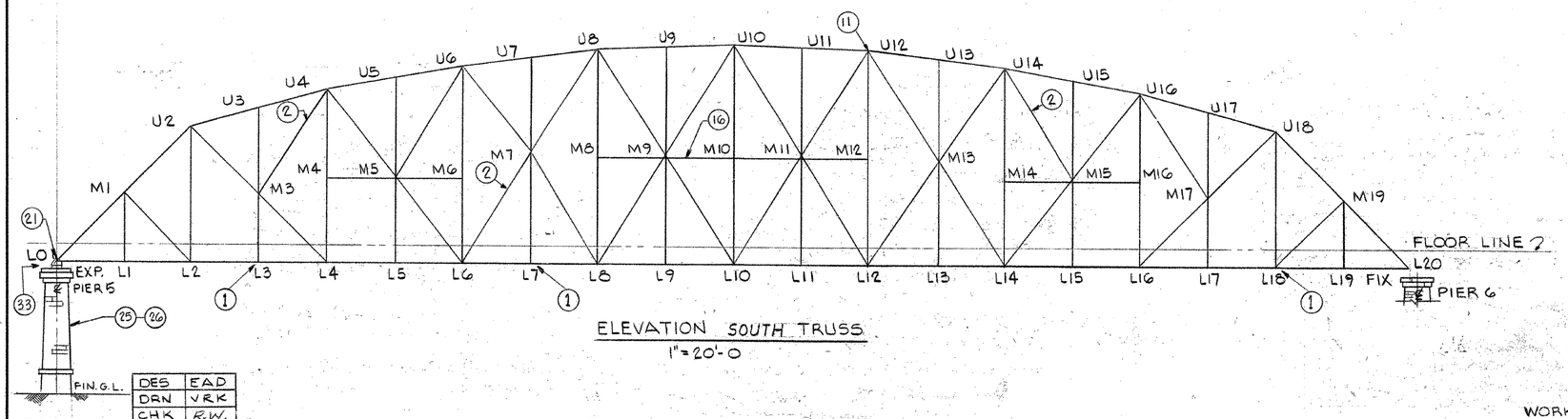
PLAN FLOOR SYSTEM & BOTTOM CHORD BRACING (SPAN 6) (27)
1" = 20'-0



TYPICAL SECTION TRUSS SPANS (REHABILITATED)
¼" = 1'-0



TYPICAL SECTION TRUSS SPANS (EXISTING)
¼" = 1'-0



ELEVATION SOUTH TRUSS
1" = 20'-0

DES	EAD
DRN	VRK
CHK	R.W.

WORK THIS SHT. WITH SHT 64

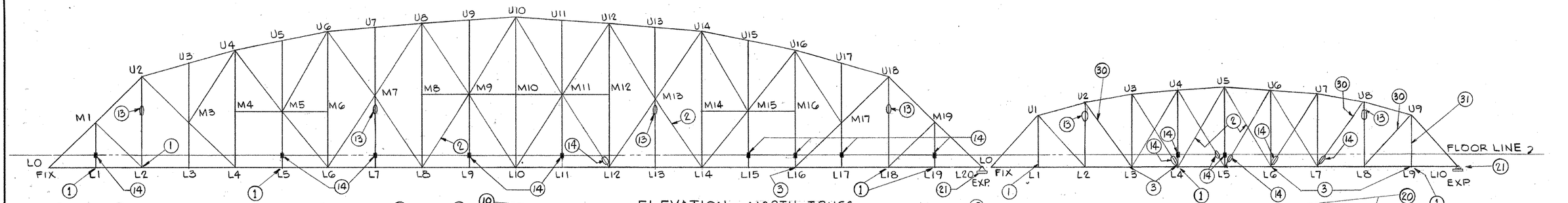
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

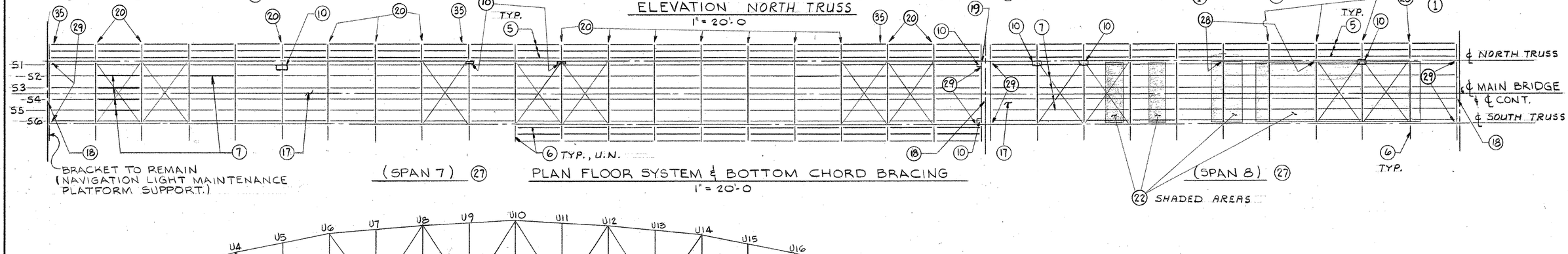
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-
MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TRUSS SPAN FRAMING - SPAN 6

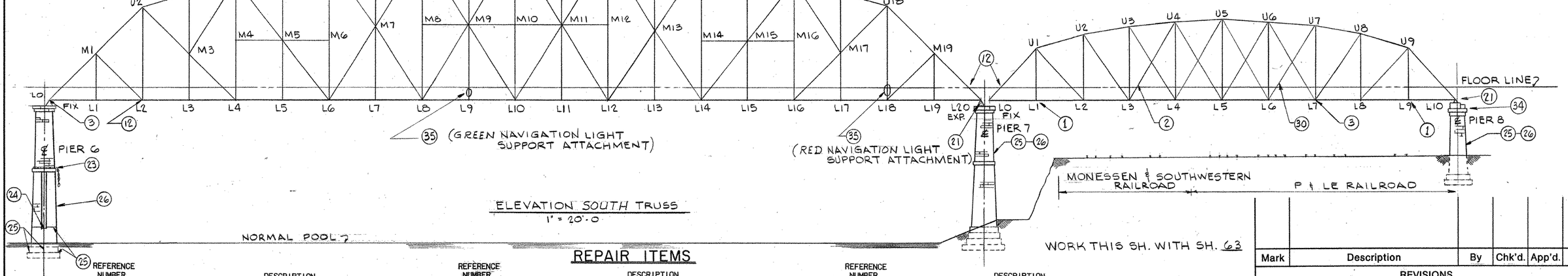
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 63 OF 98
S-15296



ELEVATION NORTH TRUSS
1" = 20'-0





ELEVATION SOUTH TRUSS
1" = 20'-0

WORK THIS SH. WITH SH. 63

REPAIR ITEMS

REFERENCE NUMBER	DESCRIPTION
(1)	REPAIR TRUSS VERTICAL, PIN SUPPORT. (SH. 87)
(2)	REPAIR SLACK TRUSS DIAGONAL. (SH. 92)
(3)	CLEAN OUT AND RE-CAULK TOP OF EYEBAR HEADS. (SH. 88)
(4)	REMOVE EXISTING CURB AND/OR RAILING. (SH. 88)
(5)	REMOVE EXISTING WOOD SIDEWALK, SIDEWALK STRINGERS AND HAND-RAIL. (SH. 89)
(6)	REMOVE EXISTING ABANDONED BRACKETS AND STRINGERS AT SOUTH TRUSS. (SH. 88)
(7)	REPLACE EXISTING INTERIOR ROADWAY STRINGERS. (SH. 88)
(8)	REPLACE FLOORBEAM TOP FLANGE COVER PLATE. (SH. 89)
(9)	REPLACE TOP CHORD BRACING MEMBER ELEMENTS. (SH. 89)
(10)	REPLACE BOTTOM CHORD LATERAL BRACING END GUSSET PLATE. (SH. 89)
(11)	INSTALL HIGH STRENGTH BOLTS IN MEMBER WEB SPLICE. (SH. 89)
(12)	INSTALL HIGH STRENGTH BOLTS IN TRUSS MEMBERS. (SH. 93)
(13)	REMOVE ROADWAY LIGHTING WELDED SUPPORT ATTACHMENT AND INSPECT FOR CRACKS. (SH. 89)
(14)	INSPECT PREVIOUS WELDED REPAIR OF TRUSS MEMBERS, VERTICALS AND DIAGONALS. (SH. 92)
(15)	REINFORCE PREVIOUS WELDED REPAIR TO WEB OF TRUSS VERTICAL. (SH. 90)
(16)	REPLACE TRUSS MEMBER, HORIZONTAL STRUCT. (SH. 90)
(17)	REMOVE EXISTING GRID DECK AND W8x13 SUPPORT BEAMS AND PLATE EXPANSION DAMS. (SH. 90)
(18)	REPLACE EXPANSION DAMS. (SH. 90)
(19)	REPAIR FLOORBEAM BEARING STIFFENERS. (SH. 90)
(20)	REPAIR SIDEWALK BRACKETS. (SH. 91)
(21)	REPAIR AND/OR CLEAN AND LUBRICATE TRUSS EXPANSION BEARING. (SH. 93)
(22)	REMOVE PROTECTION PLATES AND INSPECT STRINGER BOTTOM FLANGES AT WELDED ATACHMENTS. (SH. 91)
(23)	REMOVE MOORING CHAIN. (SH. 91)
(24)	REPLACE MISSING ATTACHMENT ANCHORS. (SH. 91)
(25)	REPOINT MASONRY MORTAR JOINTS. (SH. 91)
(26)	SANDBLAST CLEAN ALL EXPOSED MASONRY. (SH. 91)
(27)	CLEAN AND PAINT SUPERSTRUCTURE (SEE SPECIAL PROVISIONS)
(28)	REPAIR INTERIOR FLOORBEAM BOTTOM FLANGE. (SH. 92)
(29)	REPAIR END FLOORBEAM END CONNECTION PLATE. (SH. 92)
(30)	REINFORCE TRUSS DIAGONAL (SH. 94)
(31)	REPAIR TRUSS MEMBER, L9-U9, SPAN 8 NORTH. (SH. 93)
(32)	REPAIR TRUSS MEMBER CHANNEL WEB. (SH. 92)
(33)	REHABILITATE TOP OF PIER 5. (SH. 95)
(34)	REHABILITATE TOP OF PIER 8. (SH. 96)
(35)	REPAIR AND/OR INSPECT NAVIGATION LIGHT SUPPORT. (SH. 98)
(36)	INSTALL ROADWAY LIGHTING SUPPORTS. (SH. 97)
(37)	PROVIDE AND INSTALL NEW GRID DECK AND EXP. DAMS. (SH'S. 68-70 & 84-86)
(38)	PROVIDE AND INSTALL METAL SAFETY SHAPE PARAPETS. (SH'S. 75-80)
(39)	PROVIDE AND INSTALL NEW SIDEWALK, SIDEWALK STRINGERS, PEDESTRAIN RAILING AND 1" DEEP OPEN GRATING. (SH'S. 71-74)

DES	REW
DWN	JSK AJG
CHK	RW

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TRUSS SPAN FRAMING-SPANS 7&8

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 64 OF 98

S-15296

STRESS TABLE - NORTH TRUSS - SPAN 6

MEMBER LOCATION	ORIGINAL AREA (IN^2)	MAX. AXIAL FORCE (KIPS) DL	HS20 LL+I	HS20 TOTAL	AXIAL STRESS (KSI) ACTUAL	ALLOWABLE	REMARKS
		TOP CHORD					
L_0-M_1	75.8	-559.4	-225.1	-784.5	-10.4	-13.6	
M_1-U_2	75.8	-531.4	-213.3	-744.7	-9.8	-13.6	
U_2-U_4	60.6	-561.6	-225.5	-787.1	-13.0	-13.9	
U_4-U_6	66.6	-626.8	-250.8	-877.6	-13.2	-13.9	
U_6-U_8	69.6	-656.4	-262.4	-918.8	-13.2	-13.9	
U_8-U_{10}	69.6	-656.9	-265.7	-922.6	-13.3	-13.9	
U_{10}-U_{12}	69.6	-656.9	-265.7	-922.6	-13.3	-13.9	
U_{12}-U_{14}	69.6	-656.4	-262.4	-918.8	-13.2	-13.9	
U_{14}-U_{16}	66.6	-626.8	-250.8	-877.6	-13.2	-13.9	
U_{16}-U_{18}	60.6	-561.6	-225.5	-787.1	-13.0	-13.9	
U_{18}-M_{19}	75.8	-531.4	-213.3	-744.7	-9.8	-13.6	
M_{19}-L_{20}	75.8	-559.4	-225.1	-784.5	-11.2	-13.6	
		BOTTOM CHORD					
L_0-L_2	36.0	395.5	159.2	554.7	15.4	16.0	
L_2-L_4	36.0	375.7	150.8	526.5	14.6	16.0	
L_4-L_6	48.0	526.0	209.9	735.9	15.3	16.0	
L_6-L_8	54.0	601.6	243.1	844.7	15.6	16.0	
L_8-L_{10}	58.0	646.7	255.7	902.4	15.6	16.0	
L_{10}-L_{12}	58.0	646.7	255.7	902.4	15.6	16.0	
L_{12}-L_{14}	54.0	601.6	243.1	844.7	15.6	16.0	
L_{14}-L_{16}	48.0	526.0	209.9	735.9	15.3	16.0	
L_{16}-L_{18}	36.0	375.7	150.8	526.5	14.6	16.0	
L_{18}-L_{20}	36.0	395.5	159.2	554.7	15.4	16.0	
		VERTICALS					
L_1-M_1	10.02	29.3	59.7	89.0	10.3	16.0	
L_2-U_2	10.02	50.1	73.9	124.0	16.1	16.0	
L_3-M_3	10.02	29.3	59.7	89.0	11.5	16.0	
L_4-U_4	20.60	-118.1	-62.1	-180.2	-10.1	-12.2	
L_5-M_5	10.16	30.2	59.7	89.9	8.8	16.0	
L_6-U_6	17.64	-63.7	-51.8	-115.5	-6.5	-11.3	
L_7-M_7	10.16	30.9	59.7	90.6	8.9	16.0	
L_8-U_8	14.7	-10.1	-46.2	-56.3	-3.8	-11.3	
	12.7		49.1	39.0	3.1	16.0	
L_9-M_9	10.16	31.3	59.7	91.0	9.5	16.0	
L_{10}-U_{10}	12.16	22.1	-39.8	-17.7	-1.5	-11.4	
	10.16		58.1	80.2	7.9	16.0	
L_{11}-M_{11}	10.16	31.3	59.7	91.0	9.0	16.0	
L_{12}-U_{12}	14.7	-10.1	-46.2	-56.3	-4.0	-11.3	
	12.7		49.1	39.0	3.3	16.0	
L_{13}-M_{13}	10.16	30.9	59.7	90.6	10.0	16.0	
L_{14}-U_{14}	17.64	-63.7	-51.8	-115.5	-6.5	-11.3	
L_{15}-M_{15}	10.16	30.2	59.7	89.9	11.9	16.0	
L_{16}-U_{16}	20.6	-118.1	-62.1	-180.2	-10.1	-12.2	
L_{17}-M_{17}	10.02	29.3	59.7	89.0	8.9	16.0	
L_{18}-U_{18}	10.02	50.1	73.9	124.0	12.4	16.0	
L_{19}-M_{19}	10.02	29.3	59.7	89.0	8.9	16.0	

STRESS TABLE - NORTH TRUSS SPAN 6

MEMBER LOCATION	ORIGINAL AREA (IN^2)	MAX. AXIAL FORCE (KIPS) DL	HS20 LL+I	HS20 TOTAL	AXIAL STRESS (KSI) ACTUAL	ALLOWABLE	REMARKS
		DIAGONALS & COUNTERS					
M_1-L_2	8.8	-28.0	-42.2	-70.2	-8.5	-10.5	
U_2-M_3	23.0	234.0	109.3	343.3	14.9	16.0	
M_3-L_4	20.0	212.5	101.2	313.7	23.2 Δ	16.0	$1\frac{3}{8}$"φ,702K
M_3-U_4	5.28	28.1	43.2	71.3	13.5	14.6	
U_4-M_5	15.75	145.0	84.3	229.3	14.6	16.0	
M_5-L_6	13.5	122.7	76.8	199.5	36.3 Δ	16.0	$1\frac{1}{8}$"φ,428K
M_5-U_6	5.28	26.6	37.7	64.3	12.2	14.6	
U_6-M_7	13.5	89.8	74.1	163.9	12.1	16.0	
M_7-L_8	11.25	66.9	66.5	133.4	11.9	16.0	
L_6-M_7	1.89	0.0	12.1	12.1	6.4	14.6	
M_7-U_8	5.28	25.4	34.3	59.7	- Δ	14.6	$1\frac{1}{8}$"φ,214K
U_8-M_9	10.5	32.2	68.4	100.6	9.6	16.0	
M_9-L_{10}	8.75	8.2	54.5	62.7	9.0	16.0	
L_8-M_9	5.0	-14.0	26.0	12.0	2.4	16.0	
M_9-U_{10}	7.5	11.5	32.3	43.8	5.8	16.0	
M_{11}-U_{10}	7.5	11.5	32.3	43.8	5.8	16.0	
L_{12}-M_{11}	5.0	-14.0	26.0	12.0	2.4	16.0	
M_{11}-L_{10}	8.75	8.2	54.5	62.7	8.3	16.0	
U_{12}-M_{11}	10.5	32.2	68.4	100.6	9.6	16.0	
M_{13}-U_{12}	5.28	25.4	34.3	59.7	22.6 Δ	14.6	$\frac{7}{8}$"φ,140K
L_{14}-M_{13}	1.89	0.0	12.1	12.1	6.4	14.6	
M_{13}-L_{12}	11.25	66.9	66.5	133.4	12.7	16.0	
U_{14}-M_{13}	13.5	89.8	74.1	163.9	12.1	16.0	
M_{15}-U_{14}	5.28	26.6	37.7	64.3	- Δ	14.6	$\frac{7}{8}$"φ,140K
M_{15}-L_{14}	13.5	122.7	76.8	199.5	14.8	16.0	
U_{16}-M_{15}	15.75	145.0	84.3	299.3	14.6	16.0	
M_{17}-U_{16}	5.28	28.1	43.2	71.3	13.5	14.6	
M_{17}-L_{16}	20.0	212.5	101.2	313.7	18.5	16.0	
U_{18}-M_{17}	23.0	234.0	109.3	343.3	14.9	16.0	
M_{19}-L_{18}	8.8	-28.0	-42.2	-70.2	-8.0	-10.5	

STRESS TABLE - FLOOR SYSTEM

MEMBER LOCATION	ORIGINAL SEC. MOD. (IN^3)	MAX. MOMENT (KIP-FT) DL	HS20 LL + I	HS20 TOTAL	MAX. SHEAR (KIPS) DL	HS20 LL + I	HS20 TOTAL	BENDING STRESS (KSI) ACTUAL	BENDING STRESS (KSI) ALLOW	SHEAR STRESS (KSI) ACTUAL	SHEAR STRESS (KSI) ALLOW
		STRINGERS (SPANS 6, 7 & 8)									
(CURBS)											
W16x40	64.4	9.4	54.1	63.5	1.8	14.1	15.9	11.8	15.8	3.2	12.0
S18x54.7	88.4	10.2	54.1	64.3	2.0	14.1	16.1	8.7	15.7	1.9	12.0
(INTERIOR)											
NEW S18x54.7	88.4	10.3	103.9	114.2	2.0	27.0	29.0	15.5	19.5	3.5	12.0
EXISTING S18x54.7	88.4	10.3	103.9	114.2	2.0	27.0	29.0	17.3#	15.7	3.5	9.5
		OPEN GRID FLOORING (SPANS 6, 7 & 8)									
W8x18	15.2	0.3	24.3	24.6	0.3	10.4	10.7	19.4	20.0	5.7	12.0
5",4 WAY HD.	4.541	0.0	6.6	6.6	0.0	6.2	6.2	17.4	18.2	1.7	12.0
		FLOORBEAMS (SPAN 6)									
END P.P. PIER 5	423	49	397	446	8.4	56.3	64.7	13.2*	15.8	4.5*	9.5
INT. P.P. (TYPICAL)	410	74	434	508	13.0	60.1	73.1	15.7*	15.8	6.2*	9.5
INT. P.P. @ L12, L16 & L18	410	74	434	508	13.0	60.1	73.1	14.9	15.8	5.1	9.5
END P.P. PIER 6	453	49	397	446	8.4	56.3	64.7	11.8	15.8	3.7	9.5
		(SPAN 7)									
END P.P. PIER 6	453	49	397	446	8.4	56.3	64.7	13.2*	15.8	4.5*	9.5
INT. P.P. (TYPICAL)	410	74	434	508	13.0	60.1	73.1	15.7*	15.8	6.2*	9.5
INT. P.P. @ L10, L11 & L15	410	74	434	508	13.0	60.1	73.1	14.9	15.8	5.1	9.5
END P.P. PIER 7	453	49	397	446	8.4	56.3	64.7	13.7*	15.8	5.6*	9.5
		(SPAN 8)									
END P.P. PIER 7	389	49	397	446	8.4	56.3	64.7	13.8	15.8	4.8	9.5
INT. P.P L_1-L_5	410	74	434	508	13.0	60.1	73.1	14.9	15.8	5.1	9.5
INT. P.P. L_6-L_9	410	74	434	508	13.0	60.1	73.1	15.7*	15.8	6.2*	9.5
END P.P. PIER 8	344	49	397	446	8.4	56.3	64.7	16.4*	15.8	6.7*	9.5

TYPICAL INTERIOR STRINGER BENDING STRESS DUE TO CORROSION LOSS (REDUCED SECTION MODULUS)

* REDUCED SECTION MODULUS AND WEB AREA USED TO CALCULATE STRESS VALUES.

Δ BRIDGE WIRE ROPE REPAIR PROVIDED, SEE REMARKS FOR SIZE AND CAPACITY.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES	GRM
DRN	DMY
CHK	GRM

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRESS TABLES-SPAN 6 AND FLOOR SYSTEM

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 65 OF 98

S- 15296

D.9002 (2-83) 4-83 A1329*

STRESS TABLE - NORTH TRUSS - SPAN 7

MEMBER LOCATION	ORIGINAL AREA (IN^2)	MAX. AXIAL FORCE (KIPS) DL	HS20 LL+I	HS20 TOTAL	AXIAL STRESS (KSI) ACTUAL	AXIAL STRESS (KSI) ALLOWABLE	REMARKS
		TOP CHORD					
L_0-M_1	75.8	-559.4	-225.1	-784.5	-10.8	-13.6	
U_1-U_2	75.8	-531.4	-213.3	-744.7	-9.8	-13.6	
U_2-U_4	60.6	-561.6	-225.5	-787.1	-13.0	-13.9	
U_4-U_6	66.6	-626.8	-250.8	-877.6	-13.2	-13.9	
U_6-U_8	69.6	-656.4	-262.4	-918.8	-13.2	-13.9	
U_8-U_{10}	69.6	-656.9	-265.7	-922.6	-13.3	-13.9	
U_{10}-U_{12}	69.6	-656.9	-265.7	-922.6	-13.3	-13.9	
U_{12}-U_{14}	69.6	-656.4	-262.4	-918.8	-13.2	-13.9	
U_{14}-U_{16}	66.6	-626.8	-250.8	-877.6	-13.2	-13.9	
U_{16}-U_{18}	60.6	-561.6	-225.5	-787.1	-13.0	-13.9	
U_{18}-U_{19}	75.8	-531.4	-213.3	-744.7	-9.8	-13.6	
M_{19}-L_{20}	75.8	-559.4	-225.1	-784.5	-10.8	-13.6	
		BOTTOM CHORD					
L_0-L_1	36.0	395.5	159.2	554.7	15.4	16.0	
L_1-L_2	36.0	395.5	159.2	554.7	16.3	16.0	
L_2-L_4	36.0	375.7	150.8	526.5	14.6	16.0	
L_4-L_5	48.0	526.0	209.9	735.9	15.3	16.0	
L_5-L_6	48.0	526.0	209.9	735.9	15.7	16.0	
L_6-L_7	54.0	601.6	243.1	844.7	16.4	16.0	
L_7-L_8	54.0	601.6	243.1	844.7	15.6	16.0	
L_8-L_9	58.0	646.7	255.7	902.4	15.9	16.0	
L_9-L_{12}	58.0	646.7	255.7	902.4	15.6	16.0	
L_{12}-L_{13}	54.0	601.6	243.1	844.7	15.8	16.0	
L_{13}-L_{14}	54.0	601.6	243.1	844.7	16.1	16.0	
L_{14}-L_{15}	48.0	526.0	209.9	735.9	16.0	16.0	
L_{15}-L_{16}	48.0	526.0	209.9	735.9	15.3	16.0	
L_{16}-L_{17}	36.0	375.7	150.8	526.5	14.6	16.0	
L_{17}-L_{18}	36.0	375.7	150.8	526.5	14.8	16.0	
L_{18}-L_{19}	36.0	395.5	159.2	554.7	16.5	16.0	
L_{19}-L_{20}	36.0	395.5	159.2	554.7	15.5	16.0	
		VERTICALS					
L_1-M_1	10.02	29.3	59.7	89.0	8.9	16.0	
L_2-U_2	10.02	50.1	73.9	124.0	12.4	16.0	
L_3-M_3	10.02	29.3	59.7	89.0	8.9	16.0	
L_4-U_4	20.6	-118.1	-62.1	-180.2	-8.7	-12.2	
L_5-M_5	10.16	30.2	59.7	89.9	8.8	16.0	
L_6-U_6	17.64	-63.7	-51.8	-115.5	-6.5	-11.3	
L_7-M_7	10.16	30.9	59.7	90.6	8.9	16.0	
L_8-U_8	14.7	-10.1	-46.2	-56.3	-4.0	-11.3	
	12.7		49.1	39.0	3.3	16.0	
L_9-M_9	10.16	31.3	59.7	91.0	9.0	16.0	
L_{10}-U_{10}	12.16	22.1	-39.8	-17.7	-1.5	-11.4	
	10.16		58.1	80.2	8.0	16.0	
L_{11}-M_{11}	10.16	31.3	59.7	91.0	9.0	16.0	
L_{12}-U_{12}	14.7	-10.1	-46.2	-56.3	-3.9	-11.3	
	12.7		49.1	39.0	3.1	16.0	
L_{13}-M_{13}	10.16	30.9	59.7	90.6	8.9	16.0	
L_{14}-U_{14}	17.64	-63.7	-51.8	-115.5	-6.5	-11.3	
L_{15}-M_{15}	10.16	30.2	59.7	89.9	8.8	16.0	
L_{16}-U_{16}	20.6	-118.1	-62.1	-180.2	-8.7	-12.2	
L_{17}-M_{17}	10.02	29.3	59.7	89.0	8.9	16.0	
L_{18}-U_{18}	10.02	50.1	73.9	124.0	12.4	16.0	
L_{19}-M_{19}	10.02	29.3	59.7	89.0	8.9	16.0	

STRESS TABLE - NORTH TRUSS - SPAN 7

MEMBER LOCATION	ORIGINAL AREA (IN^2)	MAX. AXIAL FORCE (KIPS) DL	HS20 LL + I	HS20 TOTAL	AXIAL STRESS (KSI) ACTUAL	AXIAL STRESS (KSI) ALLOWABLE	REMARKS
		DIAGONALS & COUNTERS					
M_1-U_2	8.8	-28.0	-42.2	-70.2	-8.0	-10.5	
U_2-M_3	23.0	234.0	109.3	343.3	14.9	16.0	
M_3-L_4	20.0	212.5	101.2	313.7	15.7	16.0	
M_3-U_4	5.28	28.1	43.2	71.3	13.5	14.6	
U_4-M_5	15.75	145.0	84.3	229.3	14.6	16.0	
M_5-L_6	13.5	122.7	76.8	199.5	14.8	16.0	
M_5-U_6	5.28	26.6	37.7	64.3	12.2	14.6	
U_6-M_7	13.5	89.8	74.1	163.9	12.1	16.0	
M_7-L_8	11.25	66.9	66.5	133.4	11.9	16.0	
L_6-M_7	1.89	0.0	12.1	12.1	6.4	14.6	
M_7-U_8	5.28	25.4	34.3	59.7	11.3	14.6	
U_8-M_9	10.5	32.2	68.4	100.6	9.6	16.0	
M_9-L_{10}	8.75	8.2	54.5	62.7	12.6	16.0	
L_8-M_9	5.0	-14.0	26.0	12.0	2.4	16.0	
M_9-U_{10}	7.5	11.5	32.3	43.8	5.8	16.0	
M_{11}-U_{10}	7.5	11.5	32.3	43.8	5.8	16.0	
L_{12}-M_{11}	5.0	-14.0	26.0	12.0	2.4	16.0	
M_{11}-L_{10}	8.75	8.2	54.5	62.7	10.7	16.0	
U_{12}-M_{11}	10.5	32.2	68.4	100.6	9.6	16.0	
M_{13}-U_{12}	5.28	25.4	34.3	59.7	11.3	14.6	
L_{14}-M_{13}	1.89	0.0	12.1	12.1	6.4	14.6	
M_{13}-L_{12}	11.25	66.9	66.5	133.4	11.9	16.0	
U_{14}-M_{13}	13.5	89.8	74.1	163.9	12.1	16.0	
M_{15}-U_{14}	5.25	26.6	37.7	64.3	12.2	14.6	
M_{15}-L_{14}	13.5	122.7	76.8	199.5	14.8	16.0	
			-36.1	83.2	6.2		
U_{16}-M_{15}	15.75	145.0	84.3	299.3	14.6	16.0	
M_{17}-U_{16}	5.28	28.1	43.2	71.3	13.5	14.6	
M_{17}-L_{16}	20.00	212.5	101.2	313.7	16.8	16.00	
U_{18}-M_{17}	23.0	234.0	109.3	343.3	19.9(L)*	16.0	
			55.0	289.0	16.8(T)*	16.0	
M_{19}-L_{18}	8.8	-28.0	-42.2	-70.2	-8.0	-10.5	

* LOADS SHOWN FOR COMPARISON, (L) LANE LIVE LOAD + IMPACT, AND (T) TRUCK LIVE LOAD + IMPACT.

* LOADS SHOWN FOR COMPARISON, (L) LANE LIVE LOAD + IMPACT, AND (T) TRUCK LIVE LOAD + IMPACT.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRESS TABLES - SPAN 7

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 66 OF 98

S- 15296

DES	GRM
DRN	DMY
CHK	GRM

D 9002 (2-85) 6-83 A1328*

STRESS TABLE - NORTH TRUSS - SPAN 8

MEMBER LOCATION	ORIGINAL AREA (IN^2)	MAX. AXIAL FORCE (KIPS) DL	HS20 LL+I	HS20 TOTAL	AXIAL STRESS (KSI) ACTUAL	ALLOWABLE	REMARKS
		TOP CHORD					
L_0-U_1	34.12	-194.0	-117.3	-311.3	-10.2	-13.0	
U_1-U_2	29.24	-189.3	-114.0	-303.3	-10.4	-13.7	
U_2-U_3	29.24	-216.7	-130.3	-347.0	-11.9	-13.7	
U_3-U_4	29.24	-229.7	-137.8	-367.5	-12.6	-13.7	
U_4-U_5	29.24	-233.2	-139.9	-373.1	-12.7	-13.7	
U_5-U_6	29.24	-233.2	-139.9	-373.1	-12.7	-13.7	
U_6-U_7	29.24	-229.7	-137.8	-367.5	-12.6	-13.7	
U_7-U_8	29.24	-216.7	-130.3	-347.0	-11.9	-13.7	
U_8-U_9	29.24	-189.3	-114.0	-303.3	-10.4	-13.7	
U_9-U_{10}	34.12	-194.0	-117.3	-311.3	-10.4	-13.0	
		BOTTOM CHORD					
L_0-L_1	12.75	125.7	76.0	201.7	15.8	16.0	
L_1-L_2	12.75	125.7	76.0	201.7	15.8	16.0	
L_2-L_3	18.75	183.0	110.2	293.2	15.6	16.0	
L_3-L_4	22.5	213.0	128.1	341.1	15.2	16.0	
L_4-L_5	24.0	228.3	137.0	365.3	16.0	16.0	
L_5-L_6	24.0	228.3	137.0	365.3	15.2	16.0	
L_6-L_7	22.5	213.0	128.1	341.1	15.2	16.0	
L_7-L_8	18.75	183.0	110.2	293.2	15.6	16.0	
L_8-L_9	12.75	125.7	76.0	201.7	15.8	16.0	
L_9-L_{10}	12.75	125.7	76.0	201.7	15.8	16.0	
		VERTICALS					
L_1-U_1	9.65	27.2	59.7	86.9	17.1	16.0	
L_2-U_2	11.76	-38.7	-40.4	-79.1	-8.21	-12.4	
L_3-U_3	7.4	-14.5	42.9	28.4	3.8	16.0	
	8.82		-33.1	-47.6	-5.4	-12.0	
L_4-U_4	7.4	4.3	45.1	49.4	6.7	16.0	
	8.82		-30.8	-26.5	-3.0	-11.7	
L_5-U_5	7.4	12.7	20.3	33.0	14.6	16.0	
L_6-U_6	7.4	4.3	45.1	49.4	6.7	16.0	
	8.82		-30.8	-26.5	-3.0	-11.7	
L_7-U_7	7.74	-14.5	42.9	28.4	4.1	16.0	
	8.82		-33.1	-47.6	-5.7	-12.0	
L_8-U_8	11.76	-38.7	-40.4	-79.1	-6.7	-12.4	
L_9-U_9	9.65	27.2	59.7	86.9	10.1	16.0	
		DIAGONALS					
U_1-L_2	10.0	88.3	66.2	154.5	17.6	16.0	
U_2-L_3	7.0	52.7	51.5	104.2	18.1 Δ	16.0	$1\frac{1}{8}$"φ,214K
U_3-L_4	6.0	29.2	44.5	73.	15.9	16.0	
U_4-L_5	6.0	9.5	42.7	52.2	10.2	16.0	
U_4-L_3	1.0	0.0	9.5	9.5	20.1	83.0	
U_5-L_4	3.52	0.0	20.7	20.7	5.9	16.0	
U_5-L_6	3.52	0.00	20.7	20.7	5.9	16.0	
U_6-L_7	1.0	0.0	9.5	9.5	9.5	14.6	
U_6-L_5	6.0	9.5	42.7	52.2	14.1	16.0	
U_7-L_6	6.0	29.2	44.5	73.7	16.3	16.0	
U_8-L_7	7.0	52.7	51.5	104.2	18.9 Δ	16.0	$1\frac{1}{8}$"φ,214K
U_9-L_8	10.0	88.3	66.2	154.5	19.0 Δ	16.0	$1\frac{3}{8}$"φ,351K

Δ BRIDGE WIRE ROPE REPAIR PROVIDED, SEE REMARKS FOR SIZE AND CAPACITY.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10

L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRESS TABLES - SPAN 8

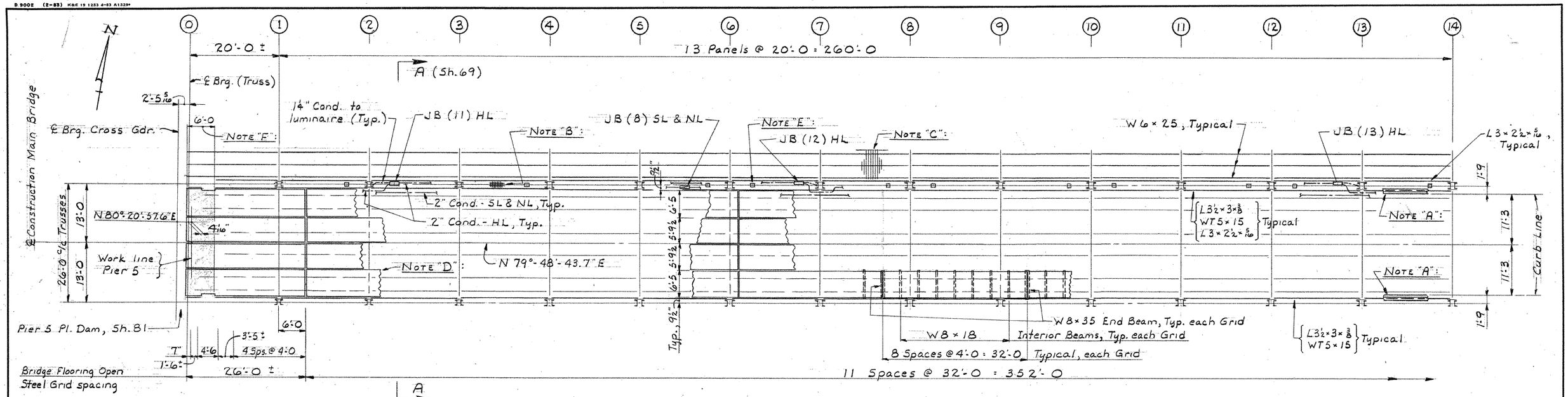
RECOMMENDED July 19, 1984
BRIDGE ENGINEER

SHEET 67 OF 98

S- 15296

DES	GRM
DRN	DMY
CHK	GRM

D 9002 (2-83) K&E 10 1253 4-83 A1329*



Note "F": Steel Flooring Grid concrete filled (top half only).

Note "A": For Steel Parapet Details see Sheet 75 thru 80.

Note "B": For Open Grating Details see Sheet 71.

Note "C": For Sidewalk Flooring Concrete-Filled Panels Details see Sh. 71, 72.

Note "D": For Steel Flooring Grid Details see Sh. 70.

Note "E": Provide openings for channel, bar or rod diagonals, typical. See detail, Sh. 69.

SPAN 6 FLOOR PLAN

Showing new Flooring Grid, Steel Parapet, Sidewalk Flooring, Grating, Sidewalk Beams and supporting members.
Span 7 Floor Plan similar unless noted.
Scale: 1" = 10'-0

ELECTRICAL LEGEND & NOTES

Junction Boxes JB-25 Special 1

JB (N°) SL & NL - Sign and Navigation Lighting (Location N°).

JB (N°) HL - Highway Lighting (Location N°)

JB's and Conduit inside steel parapet. For installation, see Structure Plans. Work sheet 68 and 69 with Highway Lighting, Signing & Pav't. Markings Plans.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	EAD
Dwn.	A.V.G.
Chk.	R.W.

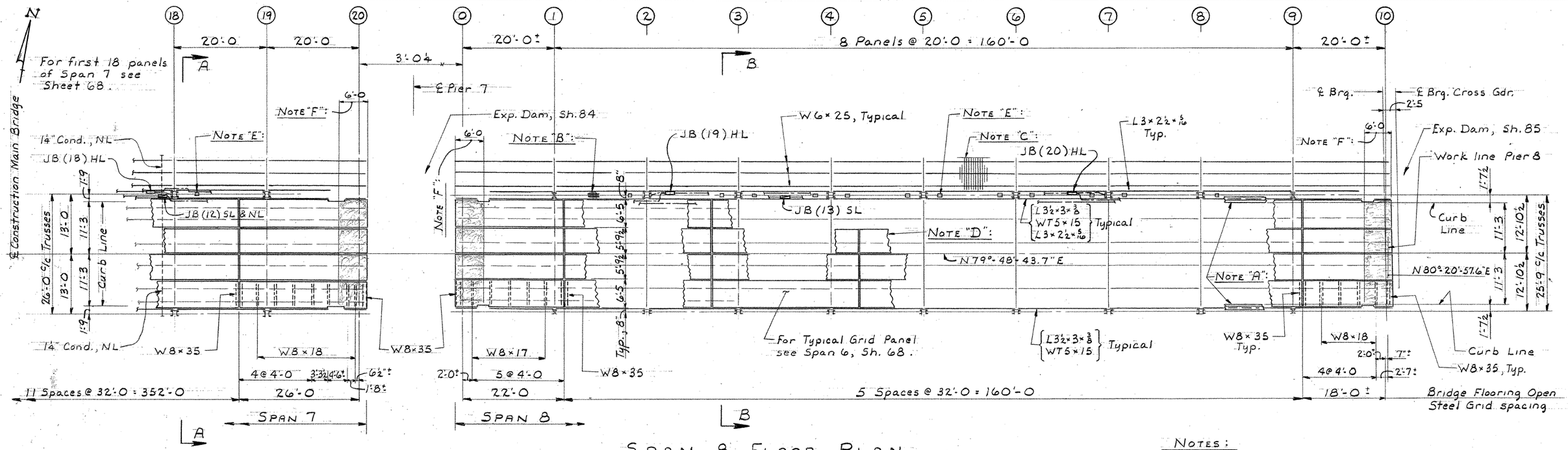
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
GRID DECK PLAN - SPANS 6 AND 7

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 68 OF 98
S-15296

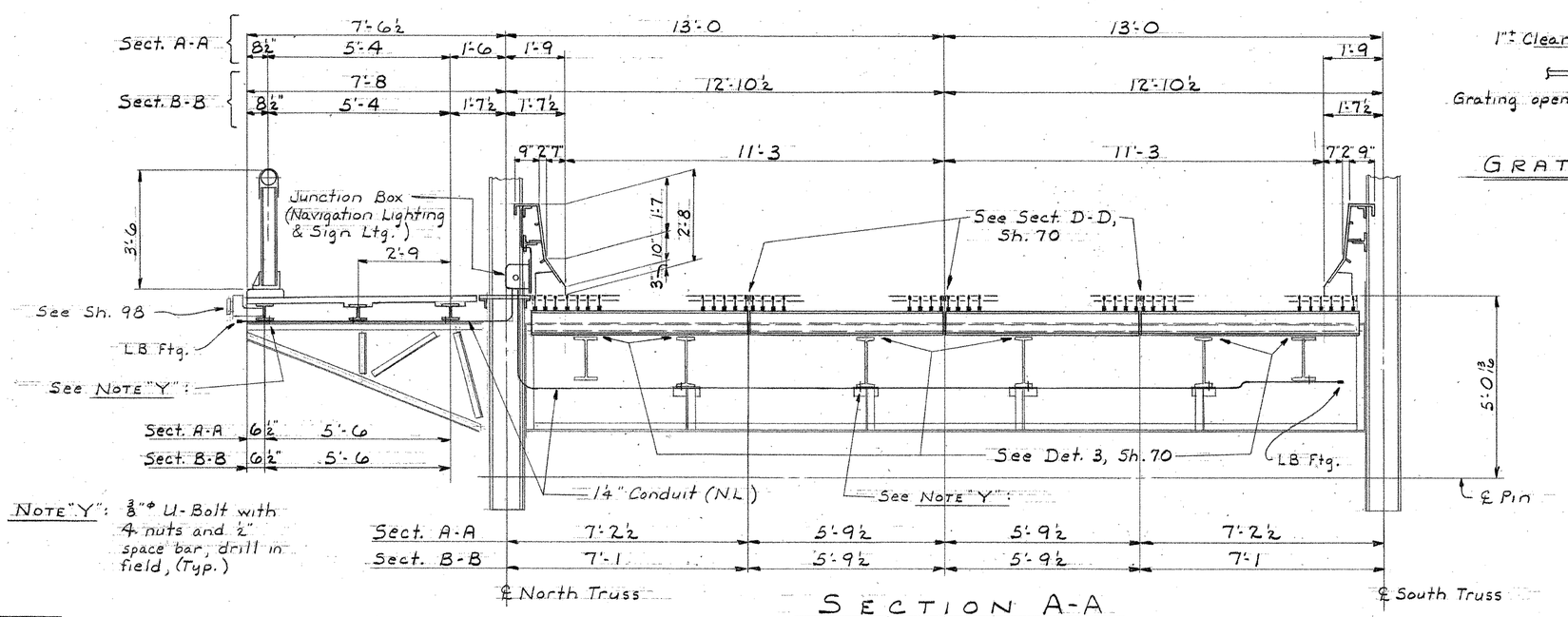
D 9002 (2-83) KAE 19 1253 4-83 A1329*



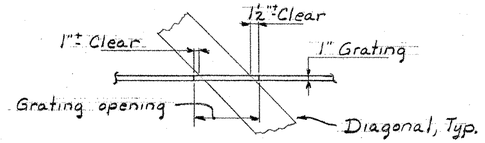
SPAN 8 FLOOR PLAN

Showing new Flooring Grid, Steel Parapet, Sidewalk Flooring, Grating, Sidewalk Beams and supporting members.
Scale: 1" = 10'-0

NOTES:
- For Note "A", "B", "C", "D", "E" & "F" see Sh. 68.
- For Electrical Legend and Notes see Sh. 68.



SECTION A-A
SECTION B-B
Scale: ½" = 1'-0



GRATING OPENING DETAIL (NOTE "E":)
No Scale

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

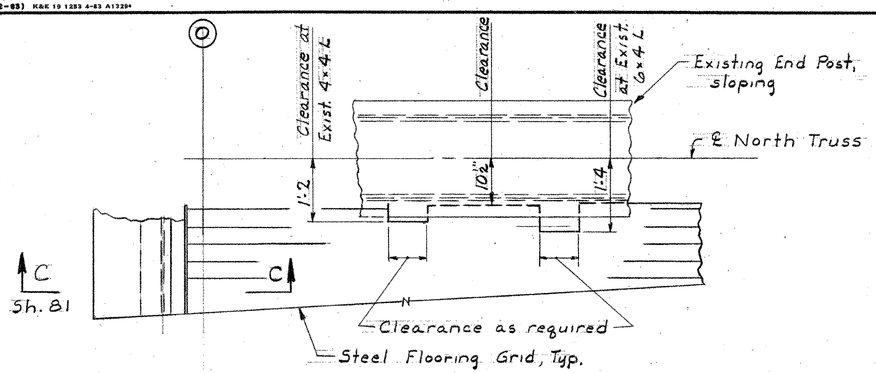
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
GRID DECK PLAN - SPAN 8

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

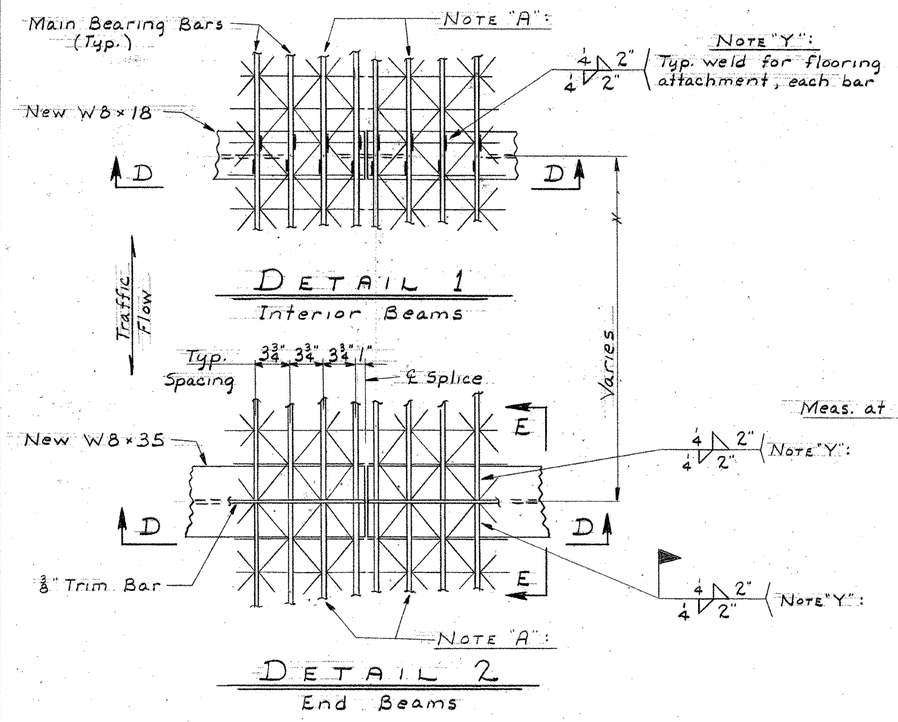
SHEET 69 OF 98
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D 9002 (8-85) K&E 10 1283 4-83 A1329*



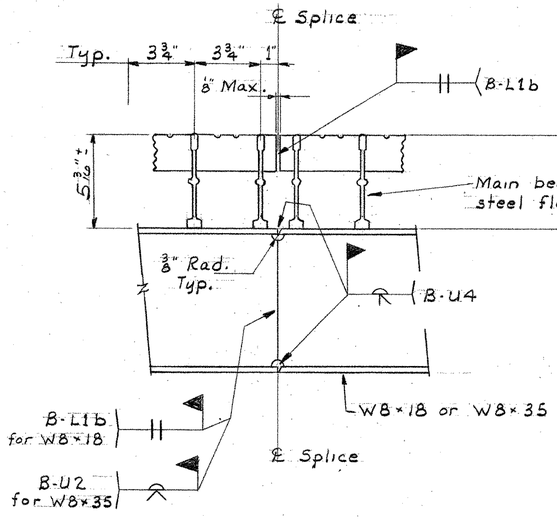
PARTIAL PLAN OF STEEL FLOORING GRID

At North Truss Pier 5 shown.
South Truss similar, unless noted.
Similar details required at Pier 6, 7 and 8, unless noted.
Scale: ¾" = 1'-0



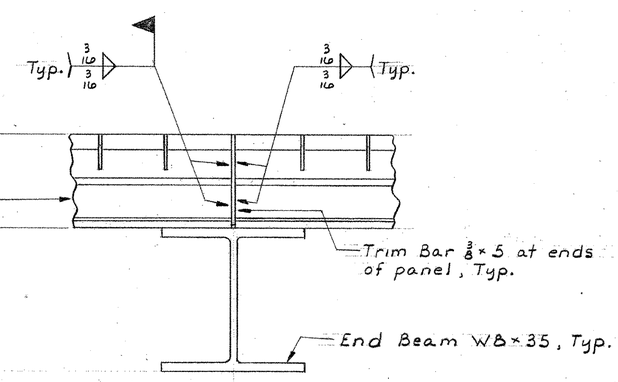
TYPICAL PLAN VIEW OF ATTACHMENT METHOD FOR STEEL FLOORING GRID

Scale: 1½" = 1'-0



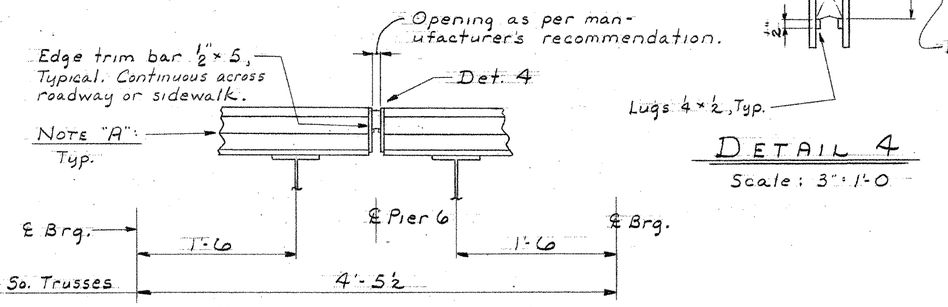
SECTION D-D

Showing field welding of W8's grid support beams across bridge.
Scale: 3" = 1'-0



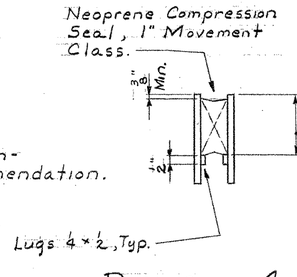
SECTION E-E

Scale: 3" = 1'-0



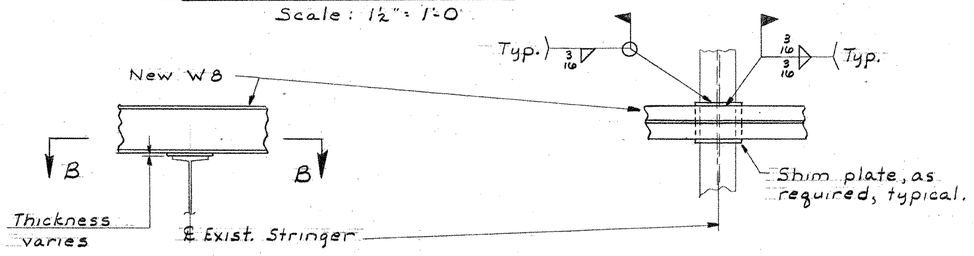
SECTION F-F (Shown) Sh. 71
SECTION X-X (Similar) Sh. 71

Scale: 1½" = 1'-0



DETAIL 4

Scale: 3" = 1'-0



DETAIL 3 (Sh. 69)

Scale: 1" = 1'-0

SECTION B-B

PIER 6		
DL & LL DISPLACEMENTS ~ INCHES		
SPAN - BRG.	DEAD LOAD	LIVE LOAD
Span 6 - ℄ Brg.	0.20	0.04
Span 7 - ℄ Brg.	0.20	—

NOTE "A":
See Special Provisions for Section Properties required.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

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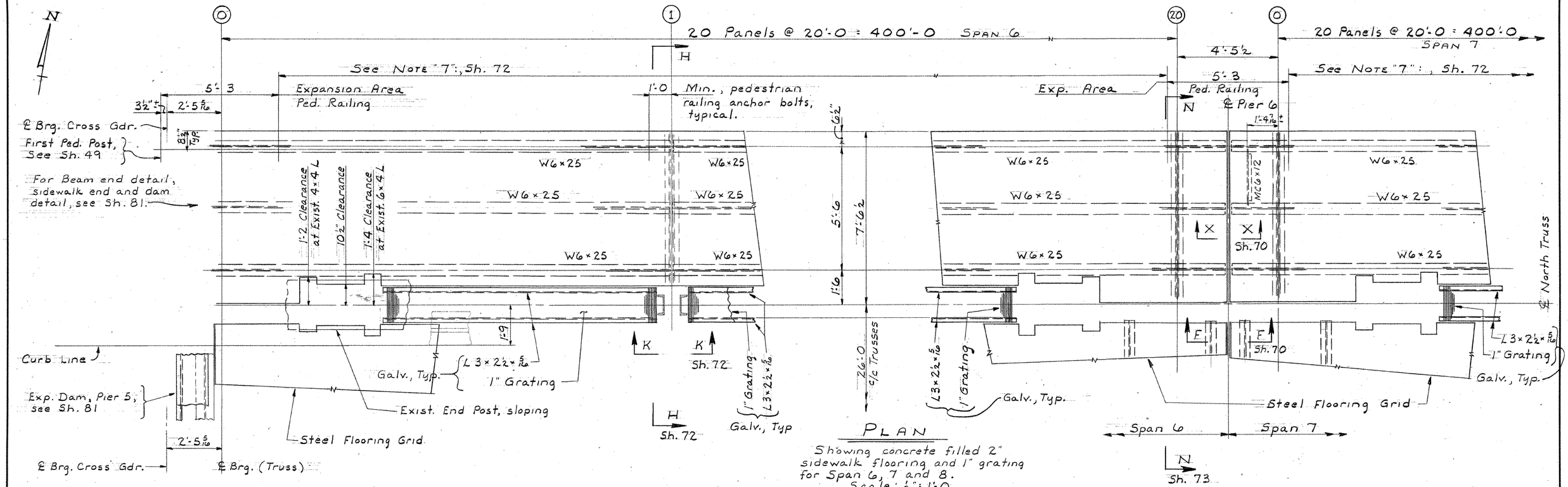
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
GRID DECK DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 70 OF 98
S-15296

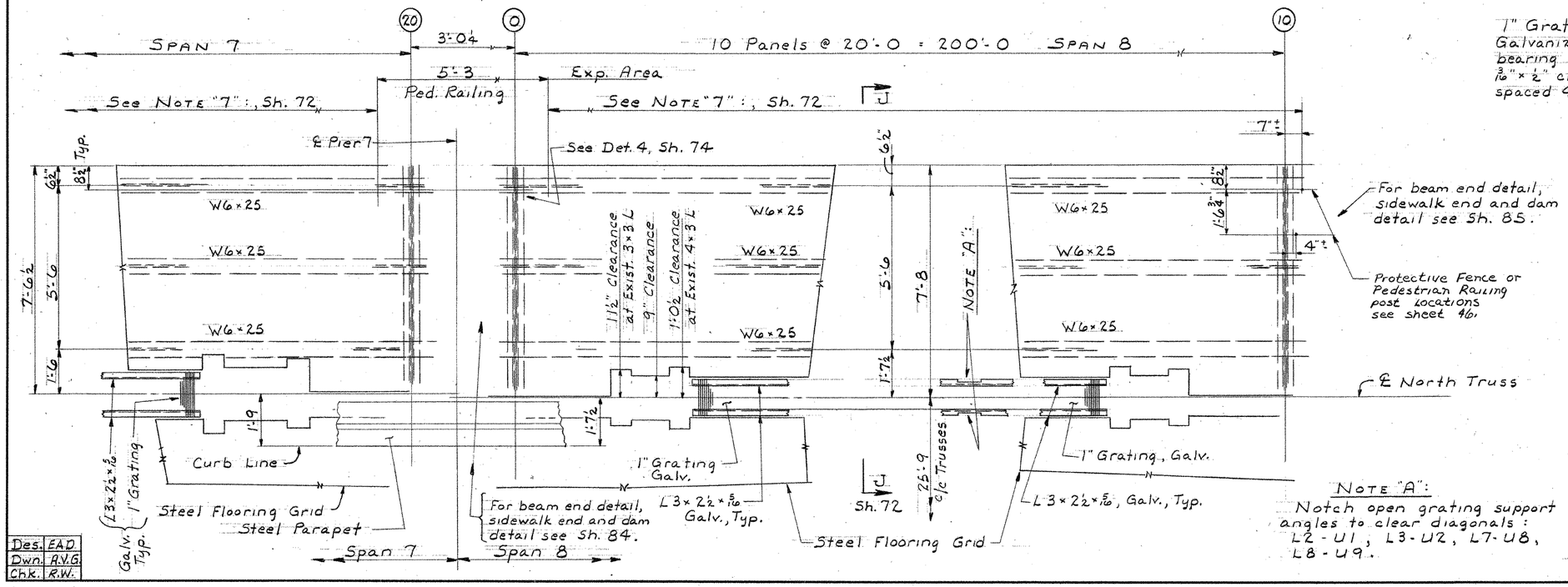
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-83) K&R 19 1253 4-83 A1329*



PLAN

Showing concrete filled 2" sidewalk flooring and 1" grating for Span 6, 7 and 8.
Scale: ½" = 1'-0



NOTE "A":
Notch open grating support angles to clear diagonals: L2-U1, L3-U2, L7-U8, L8-U9.

NOTE:
1" Grating material conform to ASTM Designation A36, Galvanized. 1" open grating is welded rectangular design. Main bearing bars are 3/16" × 1" spaced 1 3/16" c-c. Resistance weld 3/16" × ½" cross bars at right angles to bearing bars and spaced 9" c-c. All welding precedes Galvanizing.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	EAD
Dwn.	A.V.G.
Chk.	R.W.

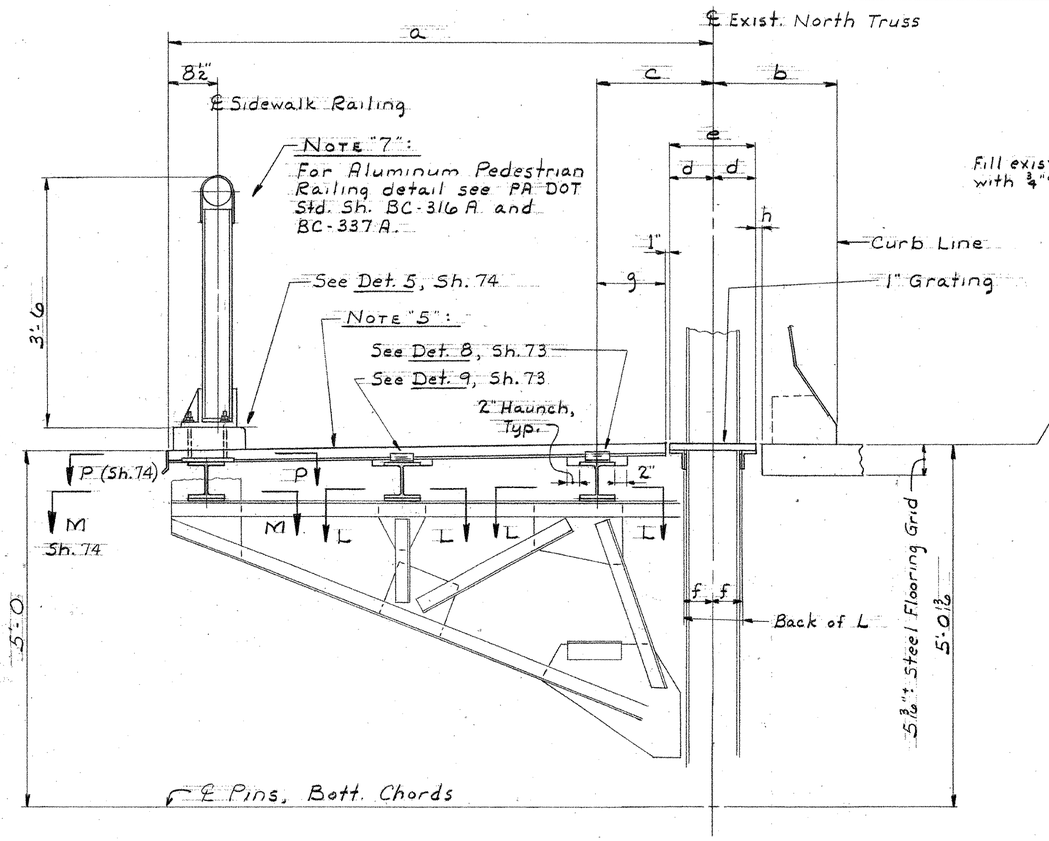
Commonwealth of Pennsylvania
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BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SIDEWALK AND GRATING PLAN

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 71 OF 98
S-15296

D 9002 (2-83) K&E 10 1253 4-93 A1329*



SECTION H-H (Span 6 & 7, Sh. 71)

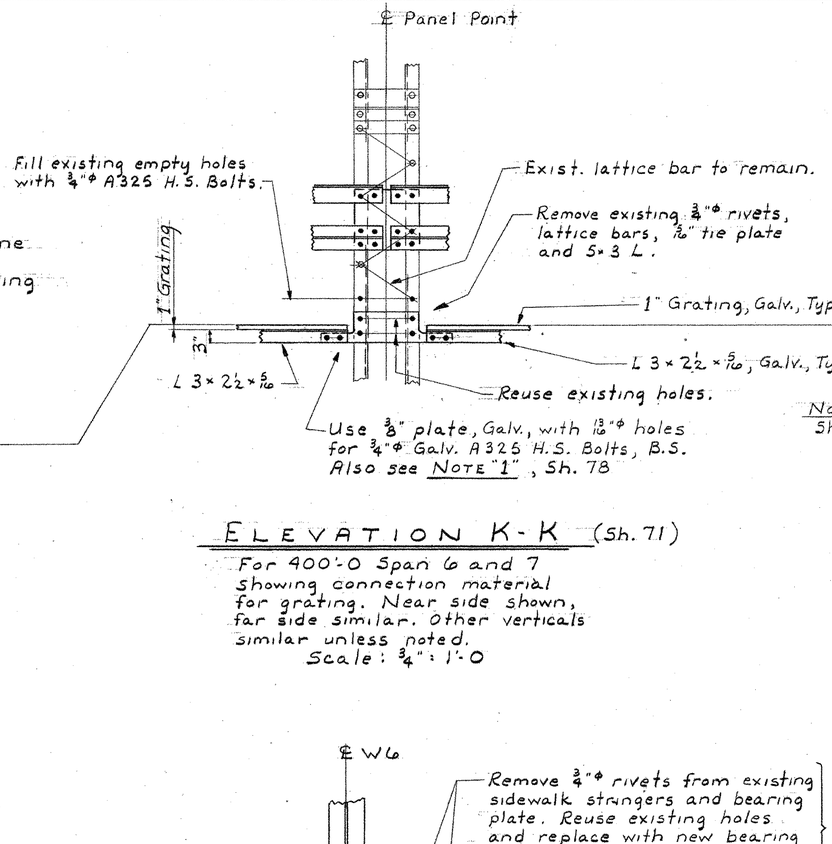
SECTION J-J (Span 8, Sh. 71)

Interior sidewalk bracket shown.
Scale: 1" = 1'-0

Span / Dim.	Sect. H-H 6 & 7	Sect. J-J 8
a	7'-6½	7'-8
b	1'-9	1'-7½
c	1'-6	1'-7½
d	8⅞"	7⅞"
e	1'-5¾	1'-2¾
f	6⅜"	4⅞"
g	8⅛"	11⅛"
h	⅝"	⅝"

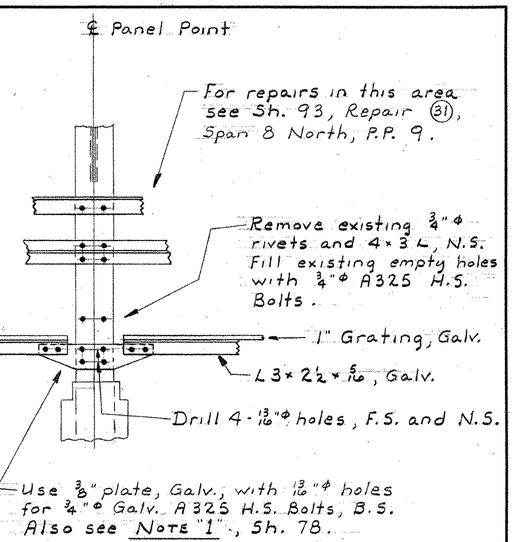
NOTE "5":
2" Steel sidewalk concrete filled flooring grid panels.

Sidewalk flooring grid consists of panels fabricated of A36 steel in maximum widths of 8'-0 with 2" x 2" Tee Bars as bearing bars at 6" c-c and secondary bars ¾" x ¼" at right angles to bearing bars are spaced at 4" c-c. Tack weld 20 gauge form pan to bottom flanges of Tee sections. Outside area of flooring grid is painted and the inside area is unpainted. Concrete fill paid for under Class AA, Cement Concrete (Special) - Item No. 2000-1009.



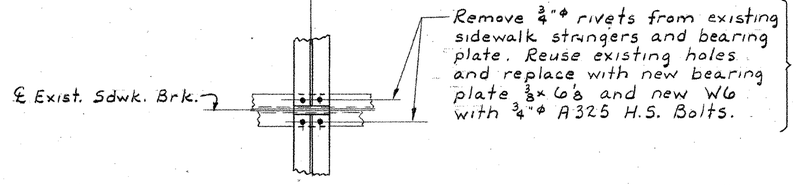
ELEVATION K-K (Sh. 71)

For 400'-0 Span 6 and 7 showing connection material for grating. Near side shown, far side similar. Other verticals similar unless noted.
Scale: ¾" = 1'-0



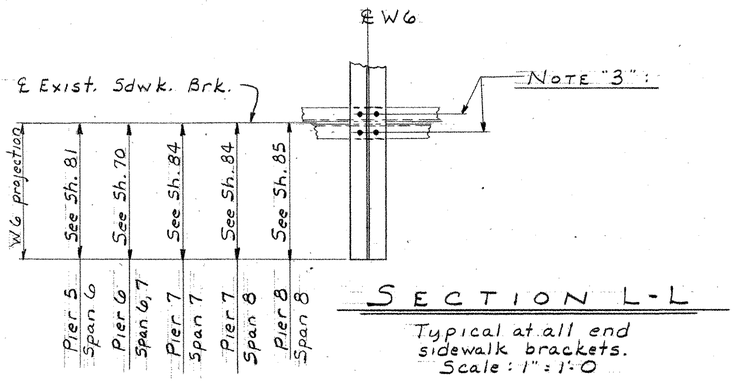
ELEVATION K-K (Sh. 71)

For 200'-0 Span 8 showing connection material for grating at P.P. 1 and 9. Near side shown, far side similar. Other vertical connections similar to Span 6 and 7.
Scale: ¾" = 1'-0



SECTION L-L

Typical at all interior sidewalk brackets.
Scale: 1" = 1'-0



SECTION L-L

Typical at all end sidewalk brackets.
Scale: 1" = 1'-0

NOTE "3"
- B.S. = Both Sides
- F.S. = Far Side
- N.S. = Near Side

LEGEND

NOTES
- For General Notes see Sh. 1 & 2.
- For Grating Notes see Sh. 71.

Mark	Description	By	Chk'd.	App'd.	Date

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SIDEWALK AND GRATING DETAILS

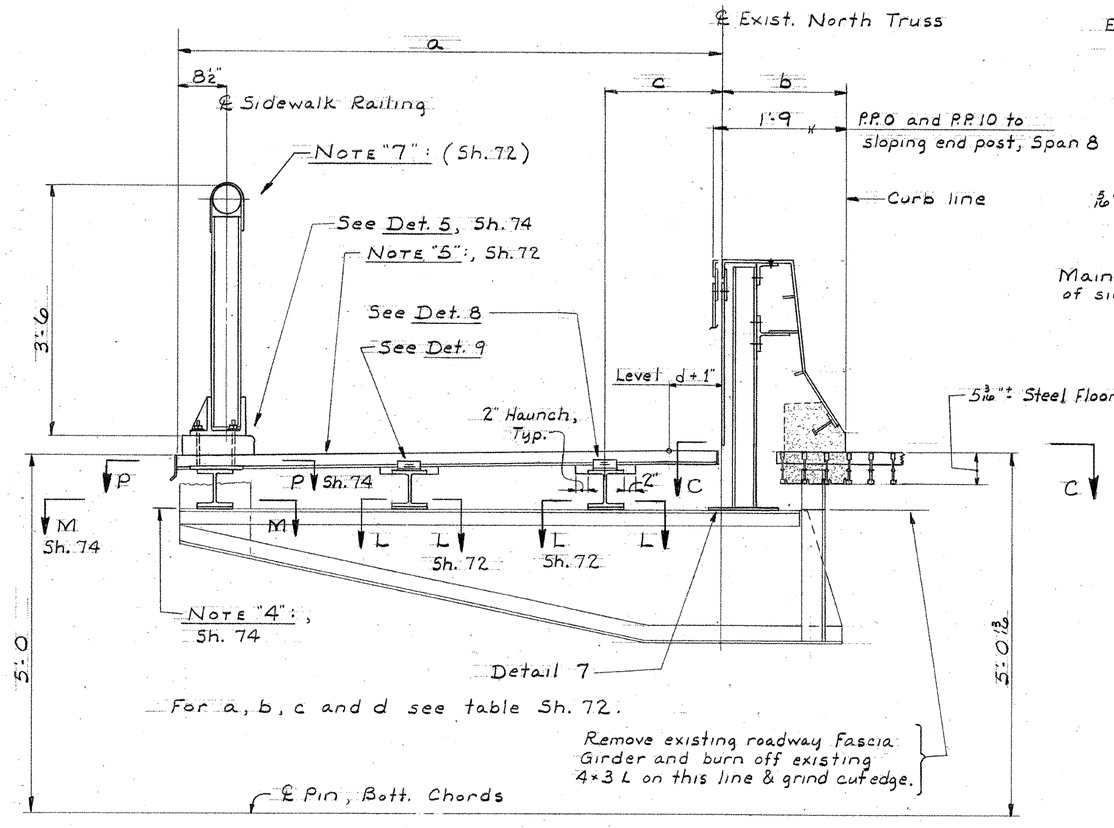
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 72 OF 98

S-15296

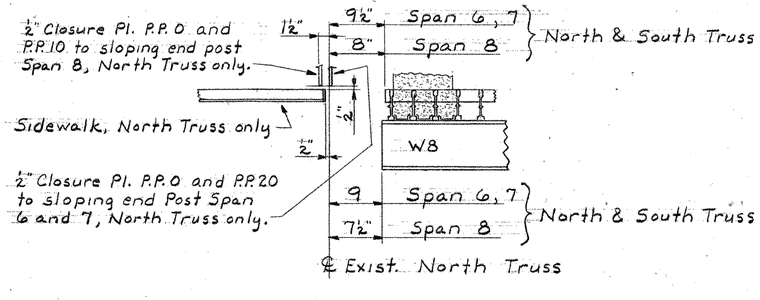
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-85) K&K 19 1293 4-82 A1329*



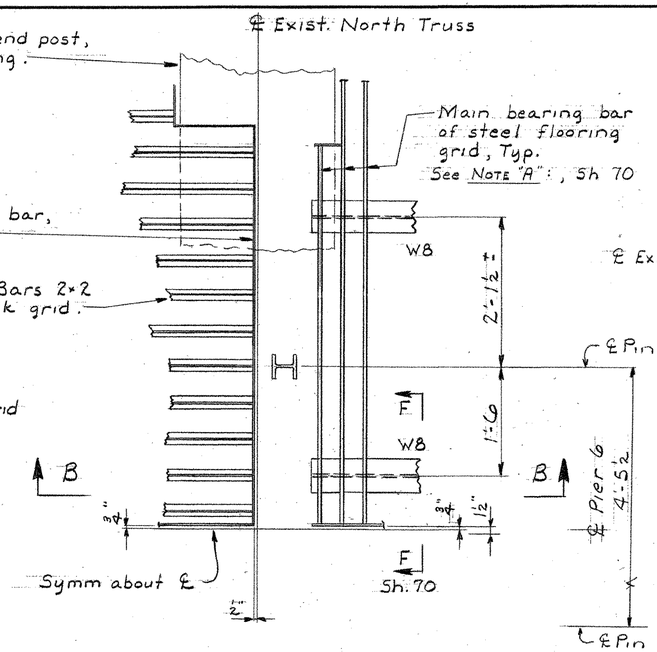
SECTION N-N (Sh. 71)

End sidewalk bracket at Pier 6 shown.
End sidewalk bracket at Pier 5, 7 and 8 similar.
Scale: 1" = 1'-0



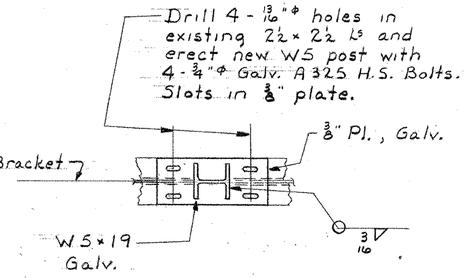
SECTION B-B

North Truss shown and noted.
South Truss similar.
Scale: 1" = 1'-0



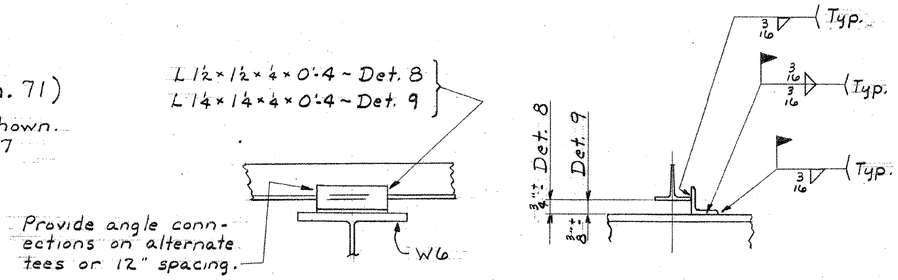
PLAN VIEW C-C

Scale: 1" = 1'-0



DETAIL 7

Scale: 1½" = 1'-0



DETAIL 8 (Sh. 72)

DETAIL 9 (Sh. 72)

Scale: 3" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

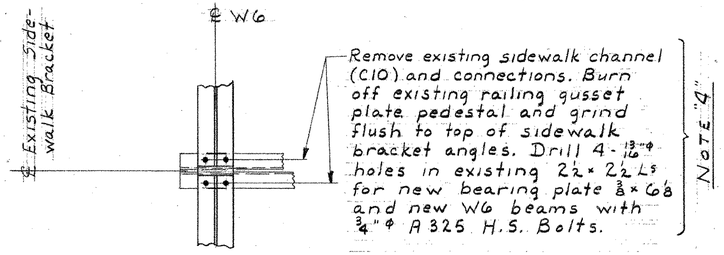
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SIDEWALK AND GRATING DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

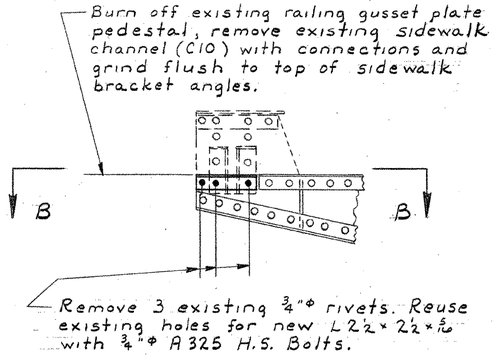
SHEET 73 OF 98
S-15296

D 9002 (2-83) K&E 19 1283 4-83 A1329*



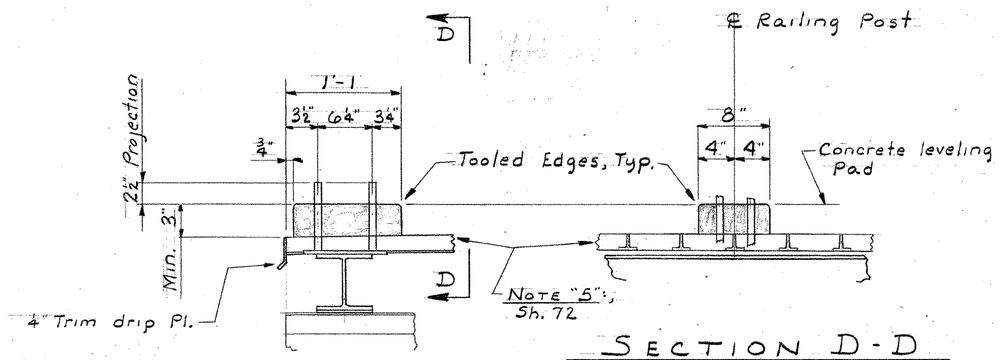
SECTION M-M (Sh. 72)

Typical at all interior sidewalk brackets.
Scale: 1" = 1'-0



DETAIL 4 (Sh. 71)

At end sidewalk bracket P.P. O, Span 8.
Scale: 1" = 1'-0

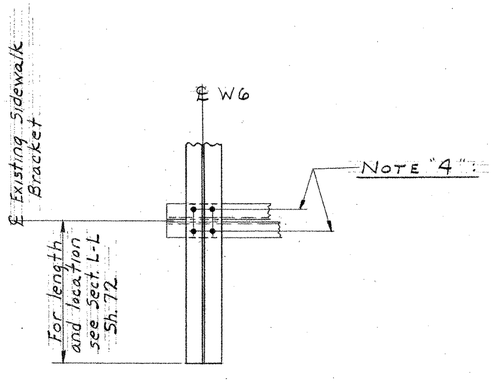


SECTION D-D

Scale: 1½" = 1'-0

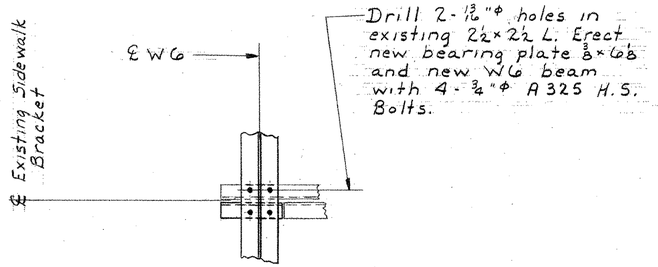
DETAIL 5 (Sh. 72, 73)

Scale: 1½" = 1'-0



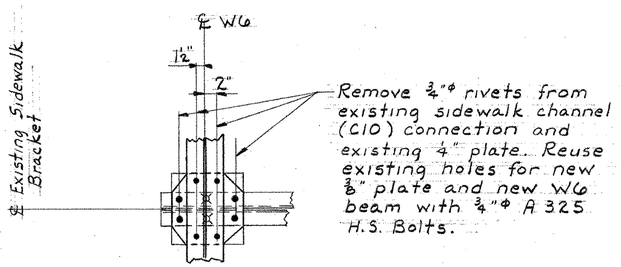
SECTION M-M (Sh. 73)

Typical at all end sidewalk brackets, unless noted.
Scale: 1" = 1'-0



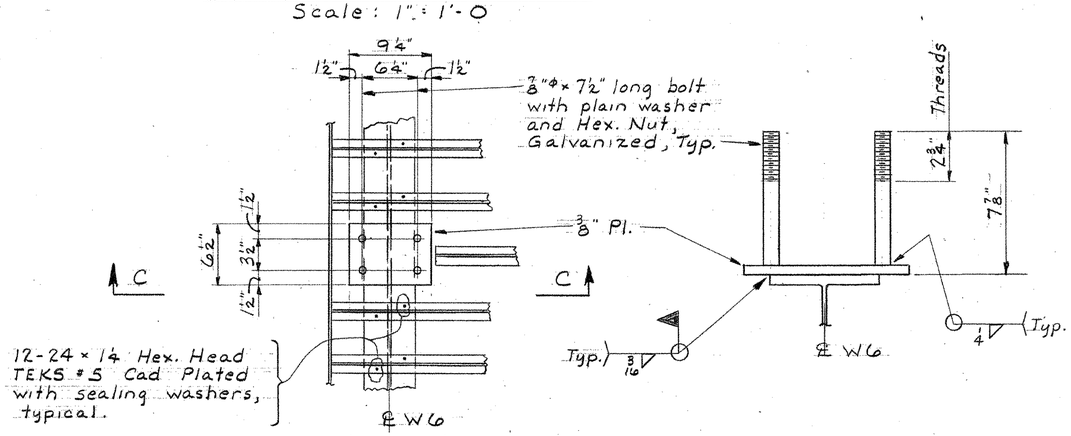
SECTION B-B

Scale: 1" = 1'-0



SECTION M-M (Sh. 73)

At end sidewalk bracket P.P. 10, Span 8.
Scale: 1" = 1'-0



SECTION P-P (Sh. 72, 73)

Showing field placement of pedestrian railing anchor bolts, typical.
Scale: 1½" = 1'-0

SECTION C-C

Scale: 3" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	E.A.P.
Dwn.	A.V.G.
Chk.	R.W.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

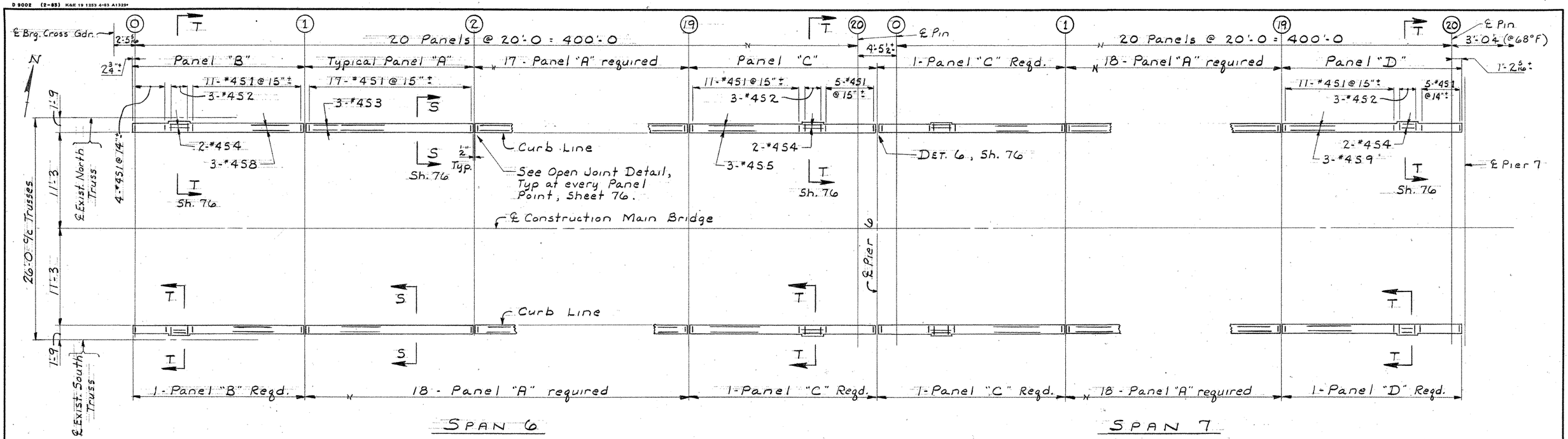
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
SIDEWALK AND GRATING DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 74 OF 98

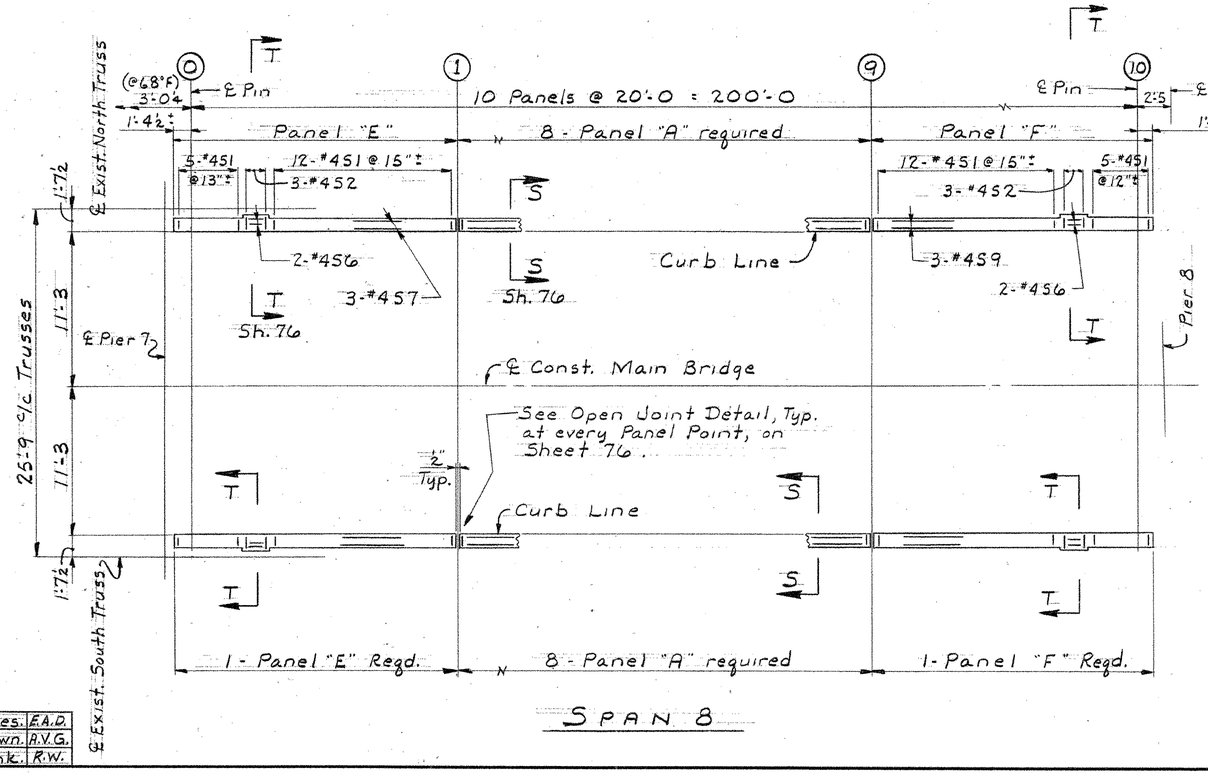
S-15296

D 9002 (2-83) KAR 19 1253 4-83 A1329*



SPAN 6

SPAN 7



SPAN 8

PLAN

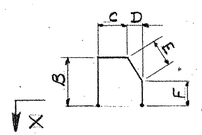
Showing part concrete flooring grid area and curb paving for Span 6, 7 and 8.
Scale: 3/16" = 1'-0

Work this sheet with Sheet 76.

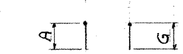
REINFORCEMENT BAR SCHEDULE *

Mark	Size	Length	No.	Type	A	B	C	D	E	F	G	H
S1	4	2'-8	1690	30	3"	10"	4"	3"	6"	6"	3"	
S2	4	3'-3	36	30	3"	1'-2	3"	5"	9"	7"	3"	
S3	4	19'-6	264	Str.								
S4	4	2'-6	16	Str.								
S5	4	21'-9	12	Str.								
S6	4	1'-6	8	Str.								
S7	4	21'-0	6	Str.								
S8	4	19'-10	6	Str.								
S9	4	20'-9	12	Str.								

* All reinforcing bars are Epoxy Coated.



TYPE 30
Bar Bending



SECTION X-X

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

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DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION

METAL PARAPET AND ANCHORAGE DETAILS

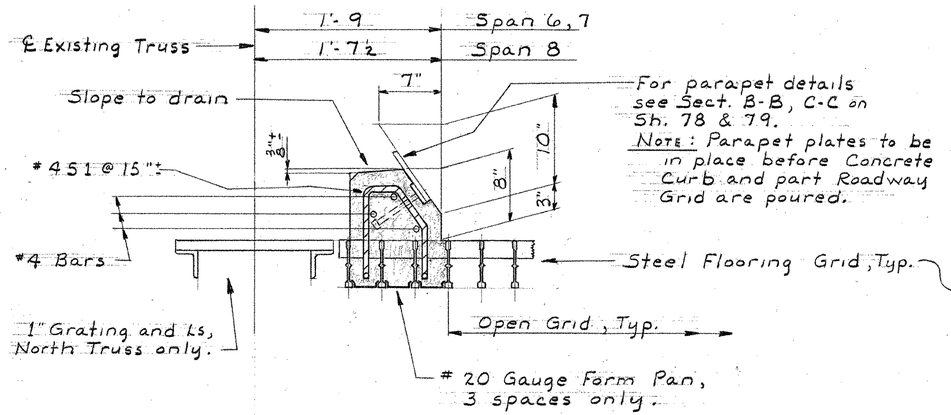
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 75 OF 98

S-15296

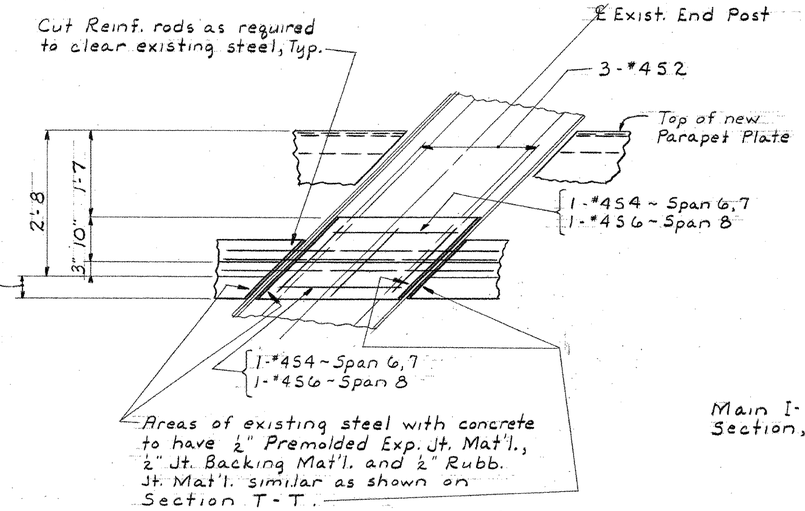
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-83) KAE 19 1253 4-83 A1329*



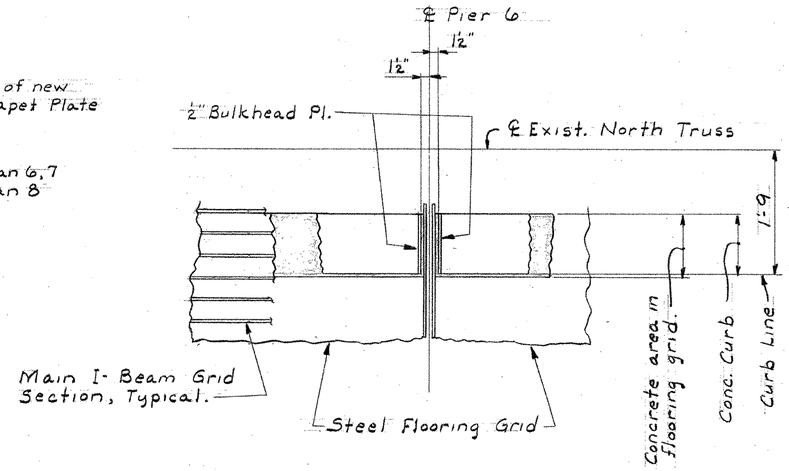
SECTION S-S (Sh. 75)

Scale: 1½" = 1'-0



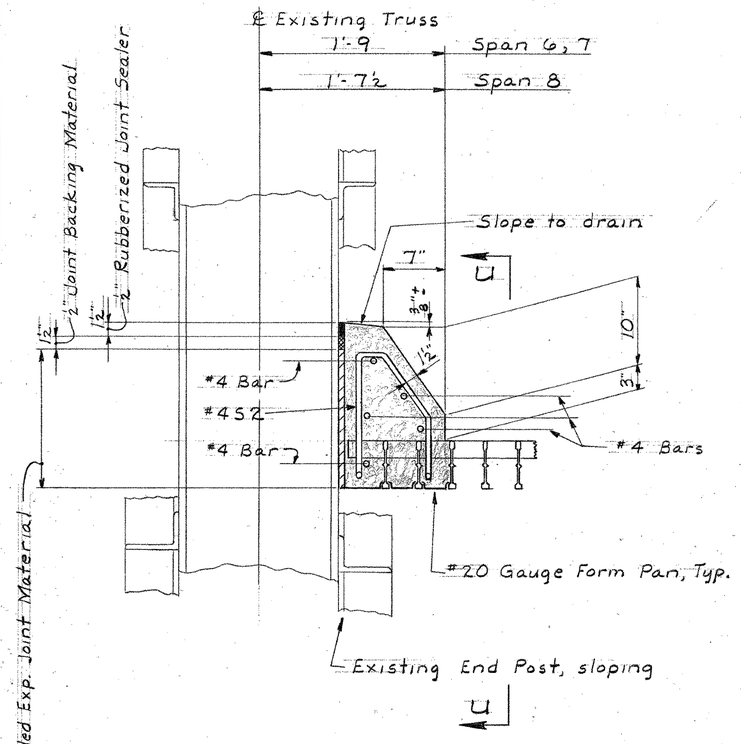
ELEVATION U-U

Span 6 and 7 shown.
Span 8 similar.
Scale: ¾" = 1'-0



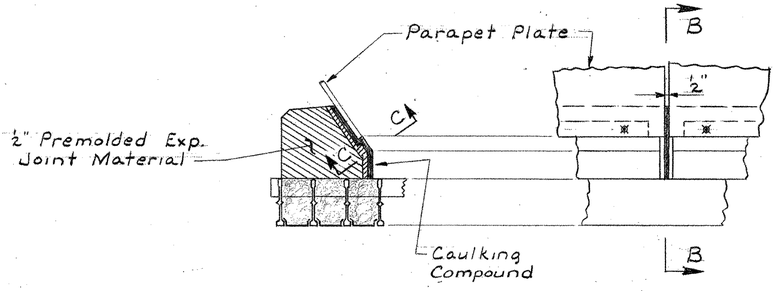
PLAN DETAIL 6 (Sh. 75)

Shown at Pier 6, North truss.
South truss similar.
Scale: 1" = 1'-0



SECTION T-T (Sh. 75)

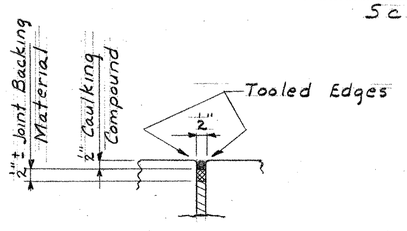
Span 6 and 7 shown.
Span 8 similar.
Scale: 1½" = 1'-0



SECTION B-B ELEVATION

OPEN JOINT DETAIL

Scale: 1½" = 1'-0



SECTION C-C

No Scale

Work this sheet with Sh. 75.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

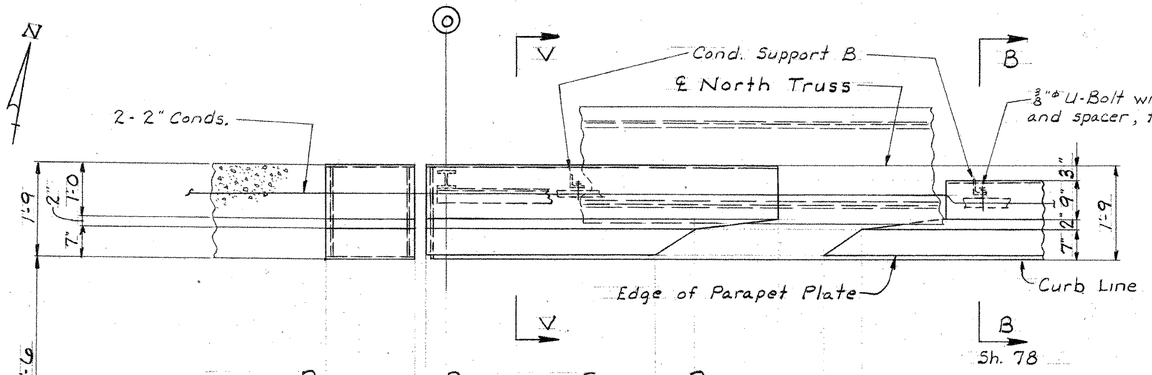
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 · N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
METAL PARAPET AND ANCHORAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 76 OF 98
S-15296

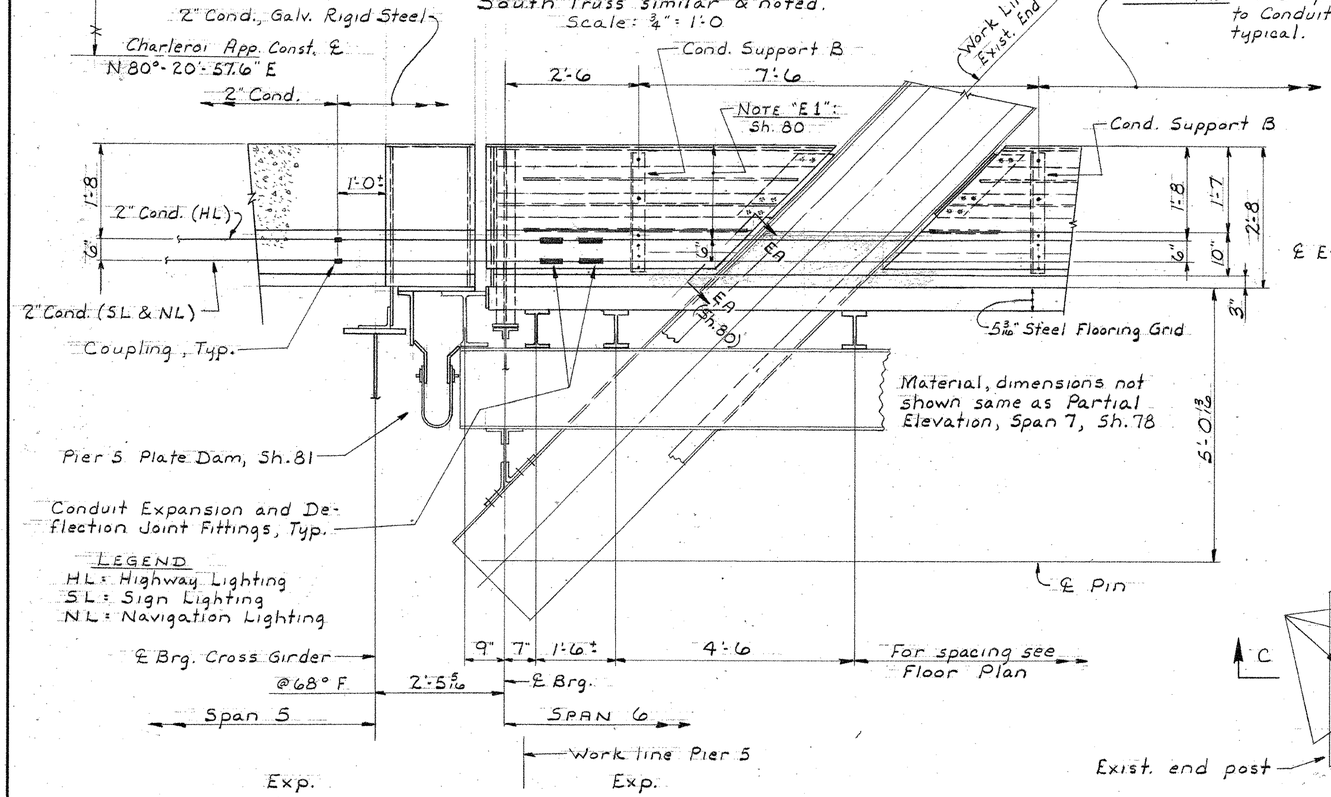
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-83) K&E 19 1253 4-83 A1329*



PARTIAL PLAN OF STEEL PARAPETS

North Truss Pier 5 shown.
South Truss similar & noted.
Scale: ¾" = 1'-0

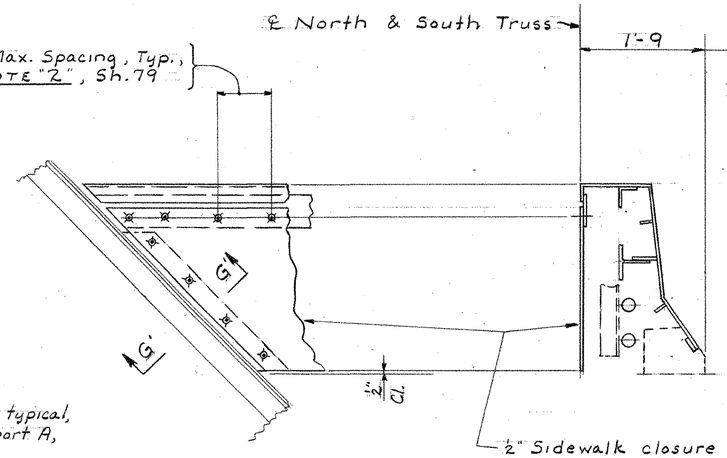


PARTIAL ELEVATION

Scale: ¾" = 1'-0

Conduit detail at and adjacent to Pier 5 - Northside Parapet.

NOTE: Conduit Support A and B detailed on Sh. 80.

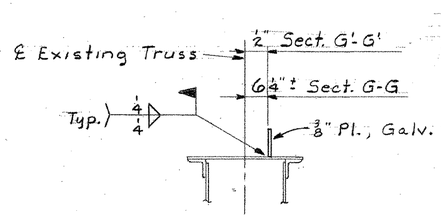


ELEVATION

Scale: 1" = 1'-0

SECTION V-V

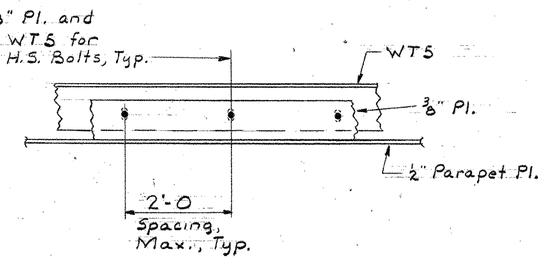
Scale: 1" = 1'-0



SECTION G-G (Sh. 78)

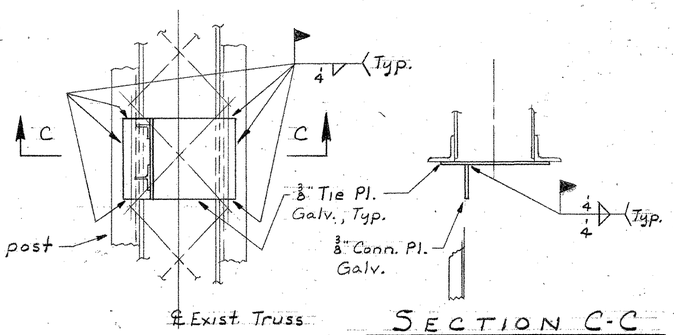
SECTION G'-G'

Scale: ¾" = 1'-0



SECTION Q-Q (Sh. 78)

Scale: 1½" = 1'-0



SECTION R-R (Sh. 78)

Remove existing ¾"ø rivets and required ½ x 2½ lattice bars and erect new ⅜" tie plate. Fill open holes with ¾"ø A325 H.S. Bolts. Any alternate method must be accepted by Engineer.
Scale: ¾" = 1'-0

SECTION C-C

Scale: ¾" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
METAL PARAPET AND ANCHORAGE DETAILS

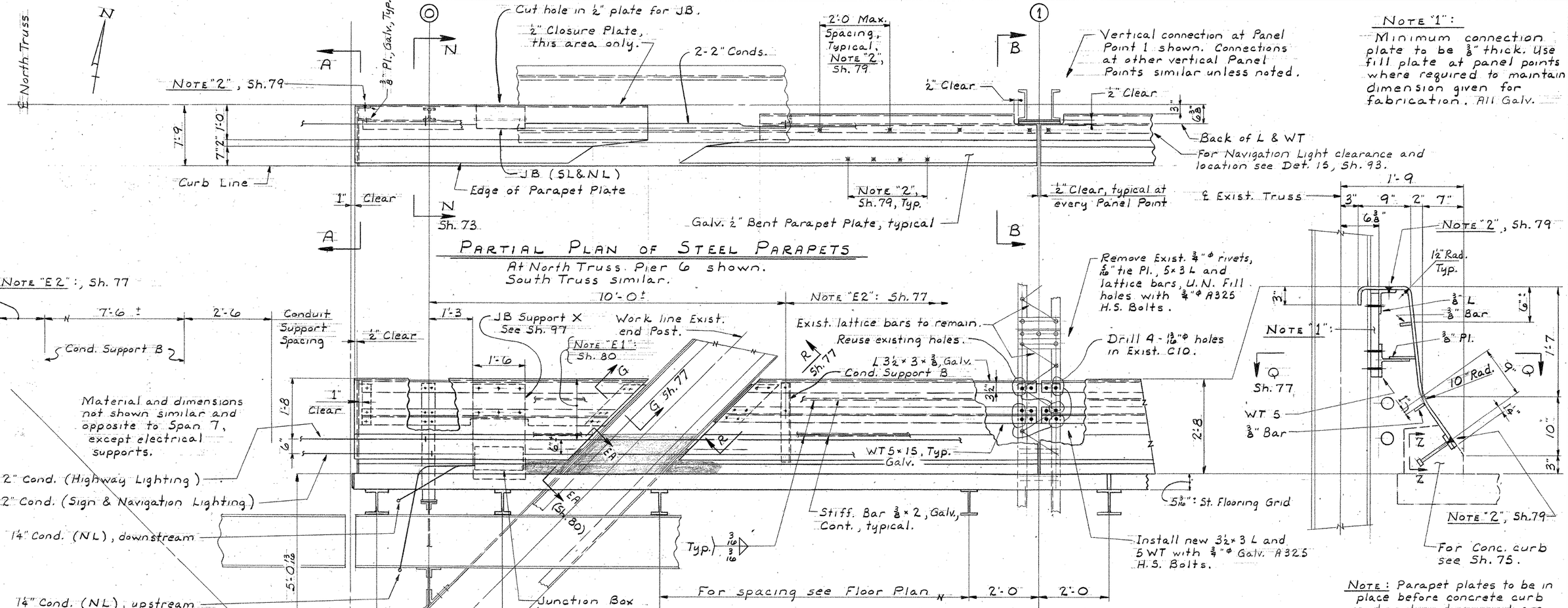
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 77 OF 98
S-15296

D 9002 (2-83) K&E 19 1283 4-83 A1329*

PARTIAL PLAN OF STEEL PARAPETS

At North Truss Pier 6 shown.
South Truss similar.



Typical JB (SL & NL) and conduits installation - Span 7, P.P.O

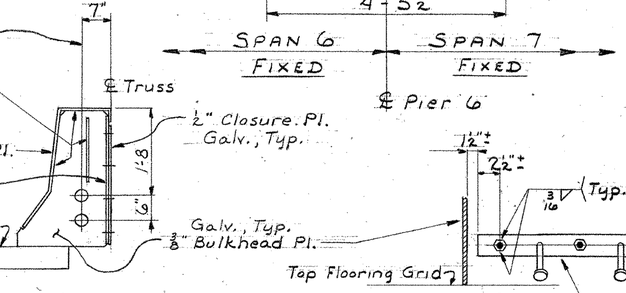
Note: Conduit Support A and B detailed on Sh. 80.

Note "1": Minimum connection plate to be 3/8" thick. Use fill plate at panel points where required to maintain dimension given for fabrication. All Galv.

Note: Parapet plates to be in place before concrete curb and part roadway grid are placed.

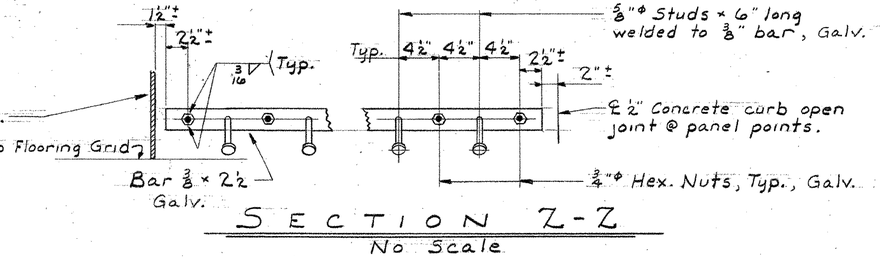
SECTION B-B

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



SECTION A-A

Scale: 3/4" = 1'-0

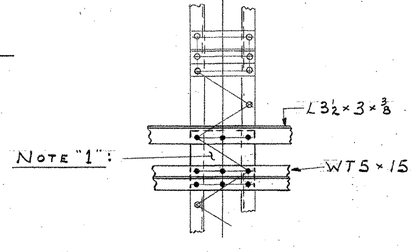


SECTION Z-Z

No Scale

PARTIAL ELEVATION

Scale: 3/4" = 1'-0



OPTIONAL CONNECTION

Showing parapet support material continuous over 2 panel maximum length. Connection similar to above.
Scale: 3/4" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	F.A.D.
Dwn.	A.V.G.
Chk.	R.W.

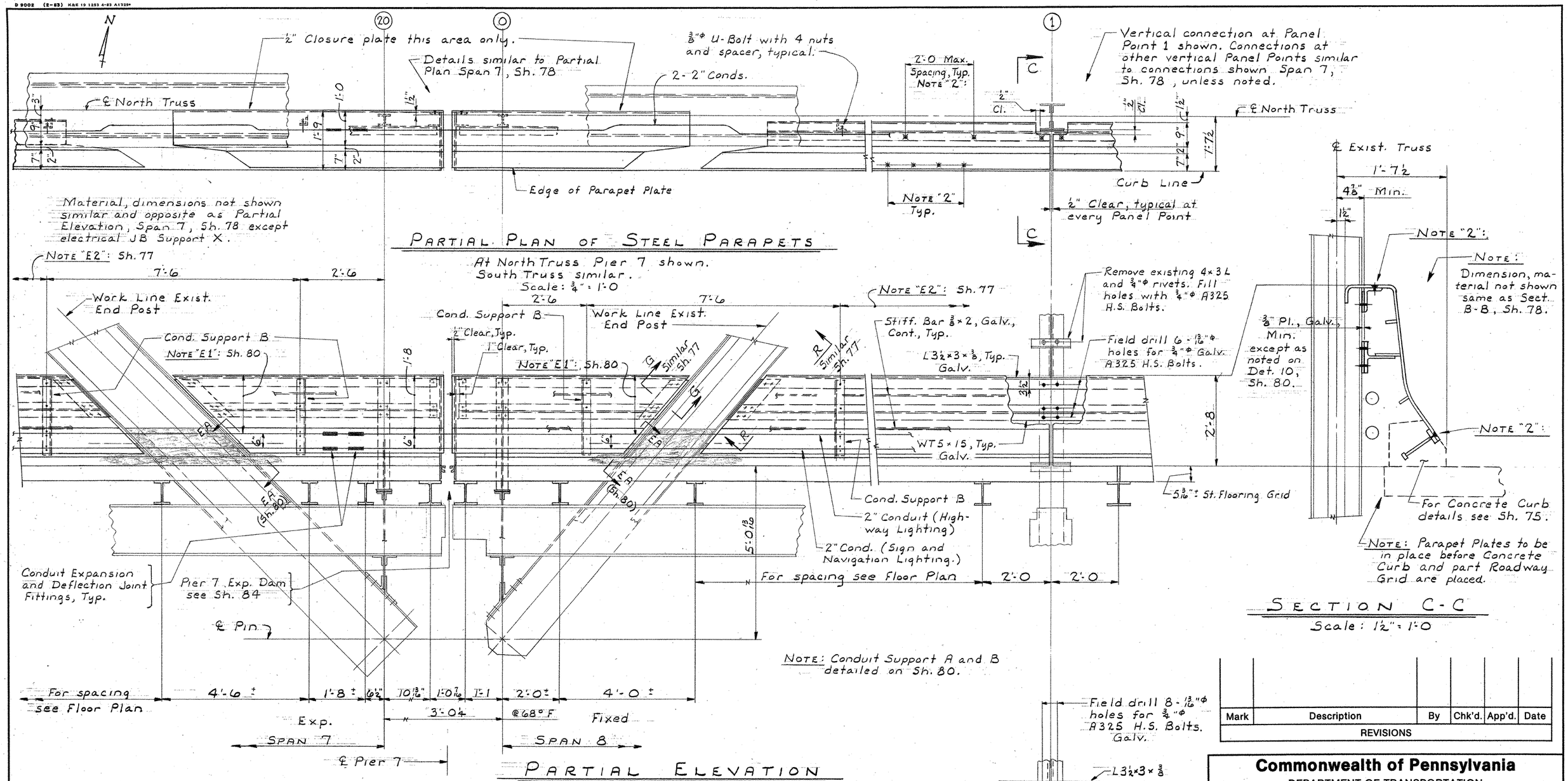
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
METAL PARAPET AND ANCHORAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 78 OF 98
S- 15296

D 9002 (E-83) K&E 10 1283 4-83 A1329*



Partial Plan of Steel Parapets

At North Truss Pier 7 shown. South Truss similar.
Scale: ¾" = 1'-0

Partial Elevation

Scale: ¾" = 1'-0

Section C-C

Scale: 1½" = 1'-0

Optional Connection

Showing parapet support material at Panel Point, minimum length.
Scale: ¾" = 1'-0

Note:

- All steel used in the fabrication and erection of new metal parapets is ASTM A36 designation.
- Hot-dip Galvanize (ASTM A123) all steel parapet sections, stiffeners, connection plates, angles, tees, fill plates, electrical conduit supports in parapet, parapet support post and base plates after fabrication.

Note "2":

All holes in Steel Parapet Plates shall be 13/16"ϕ countersunk top and front surface for ¾"ϕ flat head bolts, nuts and washers of stainless steel. Omit washers where noted at partial Section Z-Z, Sh. 78. All other holes for connection plates and angles shall be 13/16"ϕ for ¾"ϕ H.S. Bolts with nuts and washers. (Grease threads of bolts to be embedded in concrete.)

Des.	E.A.D.
Dwn.	R.V.G.
Chk.	R.W.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

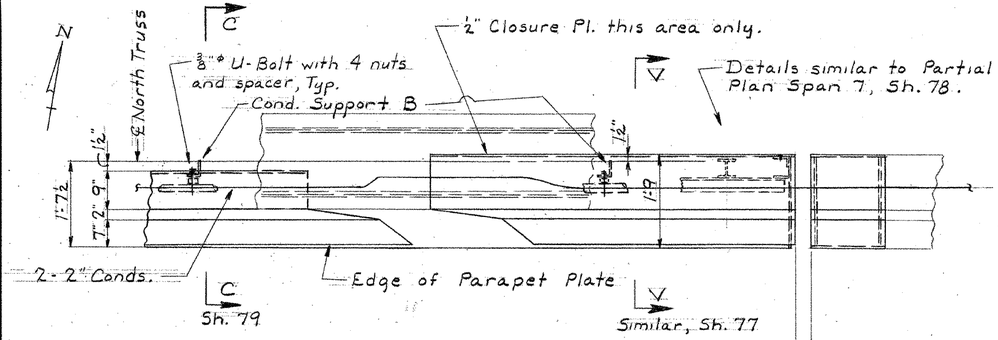
Commonwealth of Pennsylvania
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WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R.247 SPUR A, STA.9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
METAL PARAPET AND ANCHORAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

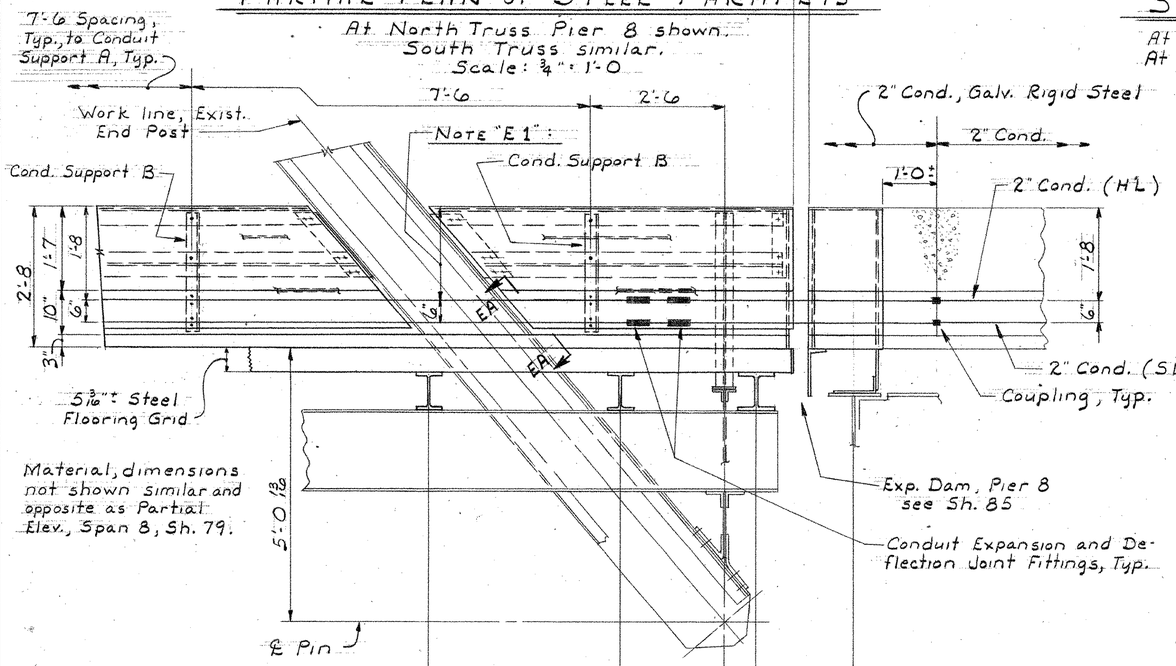
SHEET 79 OF 98
S-15296

D 9002 (2-83) K&E 19 1253 4-83 A1329*



PARTIAL PLAN OF STEEL PARAPETS

At North Truss Pier 8 shown.
South Truss similar.
Scale: ¾" = 1'-0

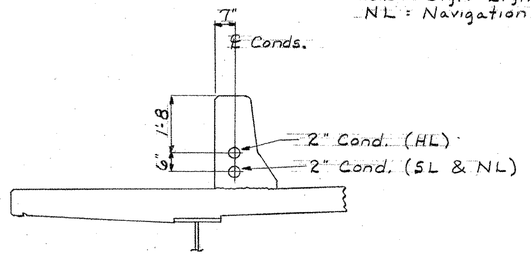


Note "E1":
Vertical dimension as required to clear existing lattice bars on bottom of end post by minimum of ½".

PARTIAL ELEVATION

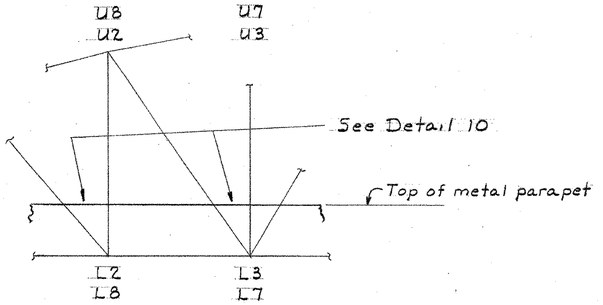
Scale: ¾" = 1'-0
Conduit detail at and adjacent to Pier 8 - Northside Parapet.

LEGEND
HL = Highway Lighting
SL = Sign Lighting
NL = Navigation Lighting



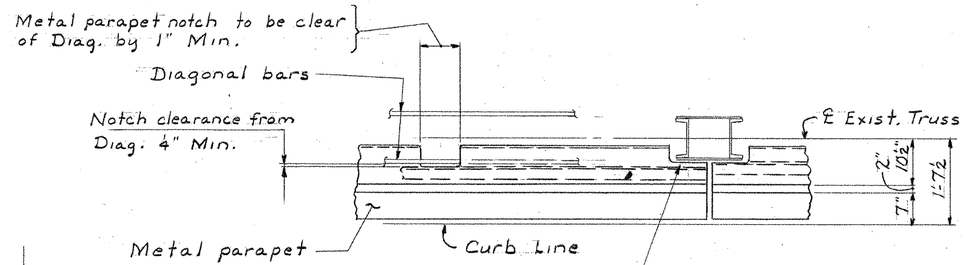
SECTION Y-Y (SH. 49, 50)

At Pier 5, adjacent to Expansion Dam.
At Pier 8, adjacent to Expansion Dam.
No Scale

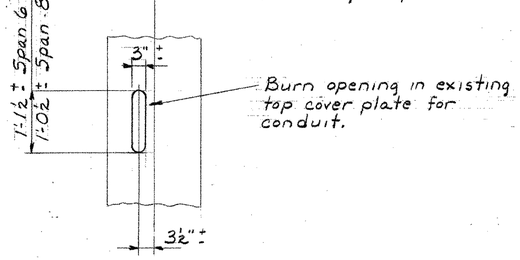


PART ELEVATION

Span 8, North & South Trusses.
No Scale



Note:
Minimum connection plate to be ⅜" thick except use fill plate* at panel points where required to maintain clearance from diagonals.
*: Thick. = 1⅛"±

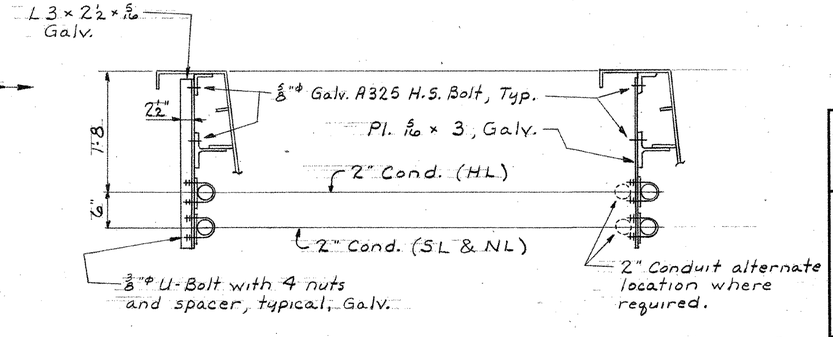


SECTION EA-EA

Scale: ¾" = 1'-0

DETAIL 10

For typical cross section of metal parapet see Sect. C-C, Sh. 79.
Scale: ¾" = 1'-0



CONDUIT SUPPORT B

CONDUIT SUPPORT A

Scale: 1" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

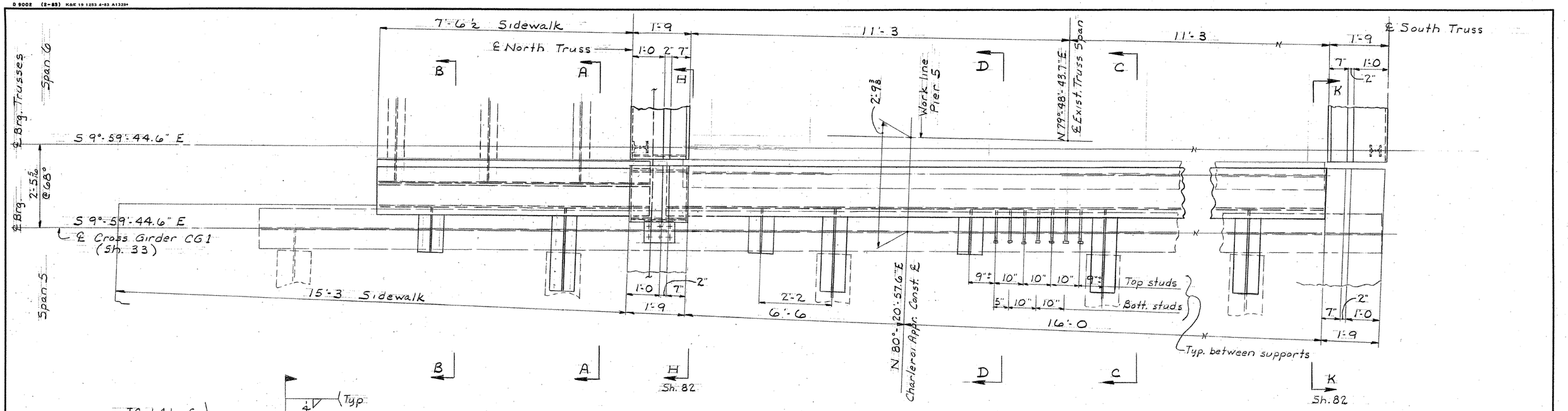
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
METAL PARAPET AND ANCHORAGE DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 80 OF 98
S-15296

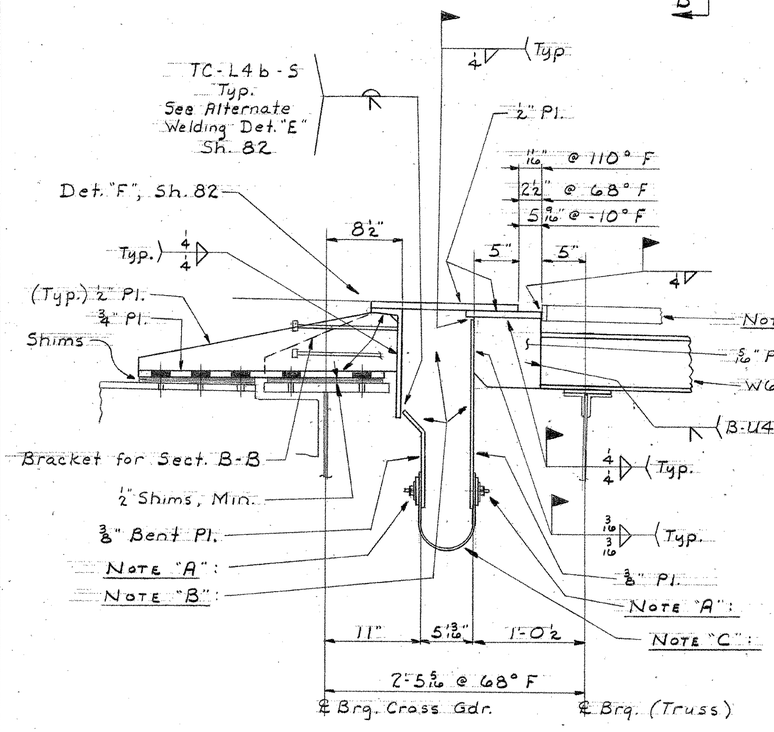
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-83) K&E 19 1253 4-83 A1329*



PLAN OF PLATE DAM AT PIER 5

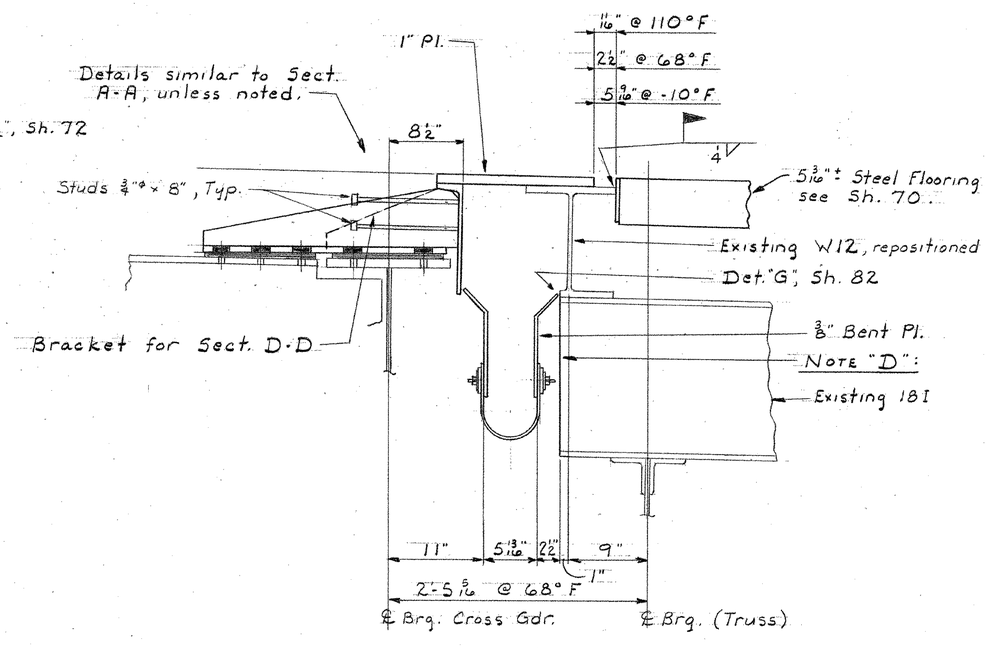
Scale: ¾" = 1'-0



SECTION A-A (Shown)

SECTION B-B (Similar)

Scale: 1½" = 1'-0



SECTION C-C (Shown)

SECTION D-D (Similar)

Scale: 1½" = 1'-0

NOTES:

NOTE "A": ⅜ × 3 Continuous bar (A36) and ⅜"ø Stainless Steel Studs, nuts and washer @ 12"± centers. Studs to be on ⅜" Plate.

NOTE "B": Shop paint inside faces of plates, MC18 piece using the three coat system. See Special Provisions.

NOTE "C": 4" thick continuous reinforced sheet neoprene (50 durometer) drain trough.

NOTE "D": Cut existing stringers and existing W12 as shown.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Des.	R.W.
Dwn.	A.V.G.
Chk.	R.W.

Work this sheet with Sh. 82.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

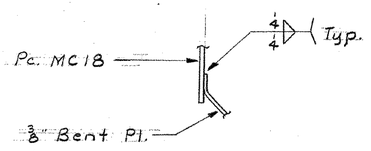
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AND TROUGH AT PIER 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

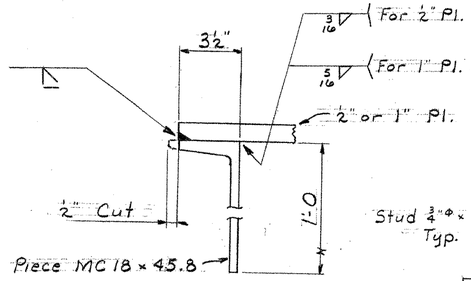
SHEET 81 OF 98

S-15296

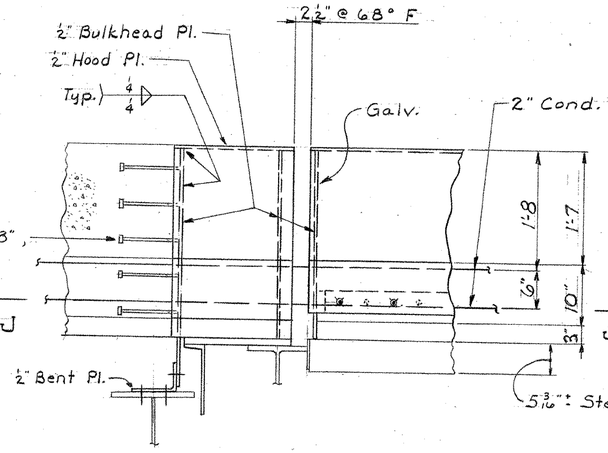
D 9002 (2-83) MAR 19 1253 4-83 A1329+



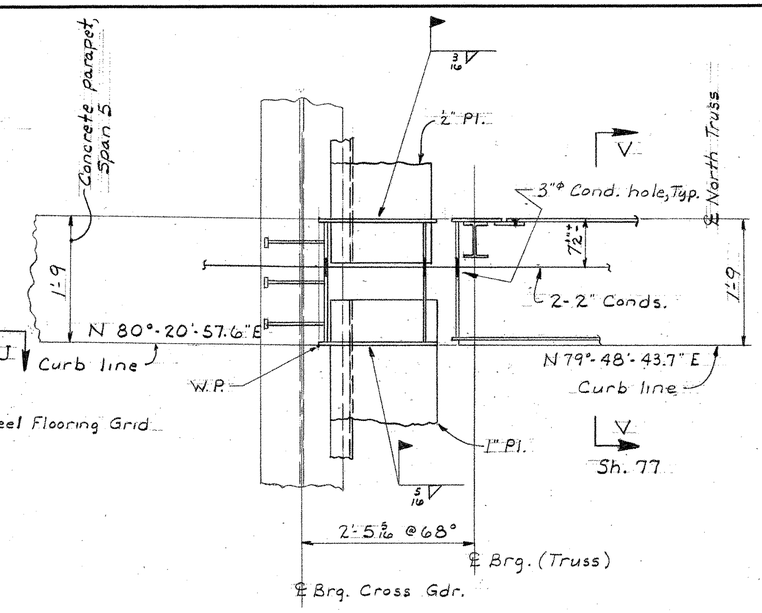
DETAIL "E" (Sh. 81)
Alternate Welding Detail
Scale : 1½" = 1'-0



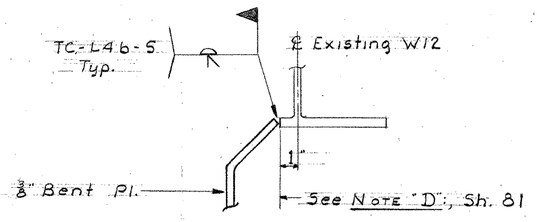
DETAIL "F" (Sh. 81)
Scale : 3" = 1'-0



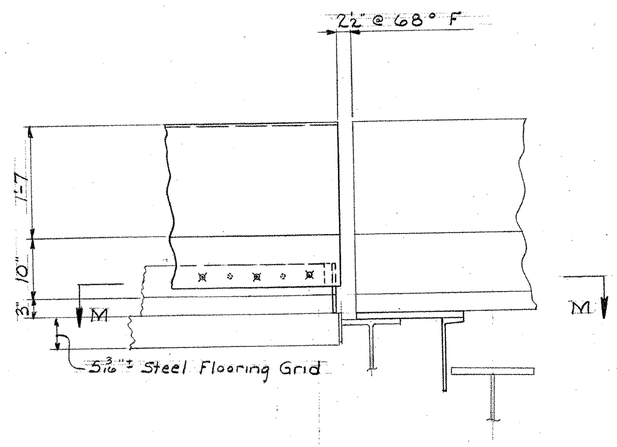
SECTION H-H (Sh. 81)
Scale : 1" = 1'-0



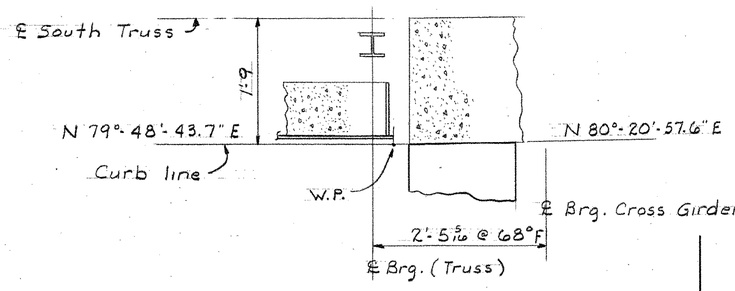
SECTION J-J
Scale : 1" = 1'-0



DETAIL "G" (Sh. 81)
Scale : 3" = 1'-0



SECTION K-K (Sh. 81)
Scale : 1" = 1'-0



SECTION M-M
Scale : 1" = 1'-0

PIER 5		
D.L. & L.L. DISPLACEMENTS - INCHES		
SPAN ~ BRG.	DEAD LOAD	LIVE LOAD
Span 5 - ℄ Brg.	0.66	0.16
Span 6 - ℄ Brg.	-1.43	-0.23

(-) Indicates Contraction.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

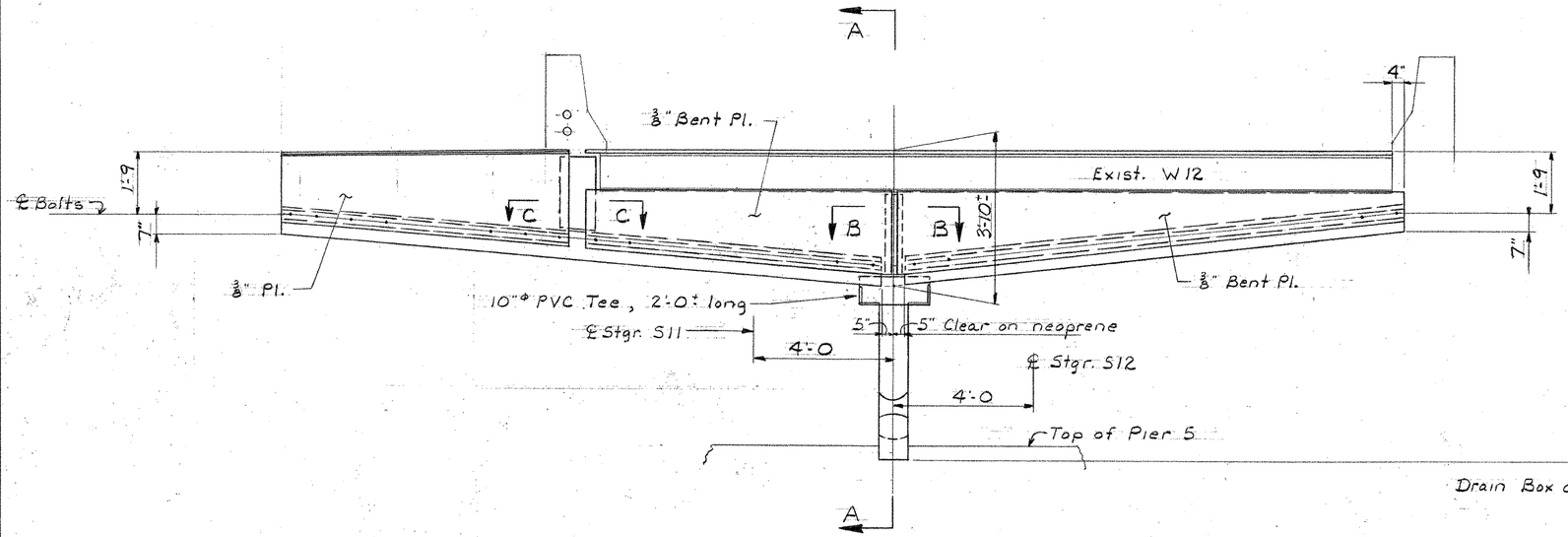
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI – MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AND TROUGH AT PIER 5

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 82 OF 98
S- 15296

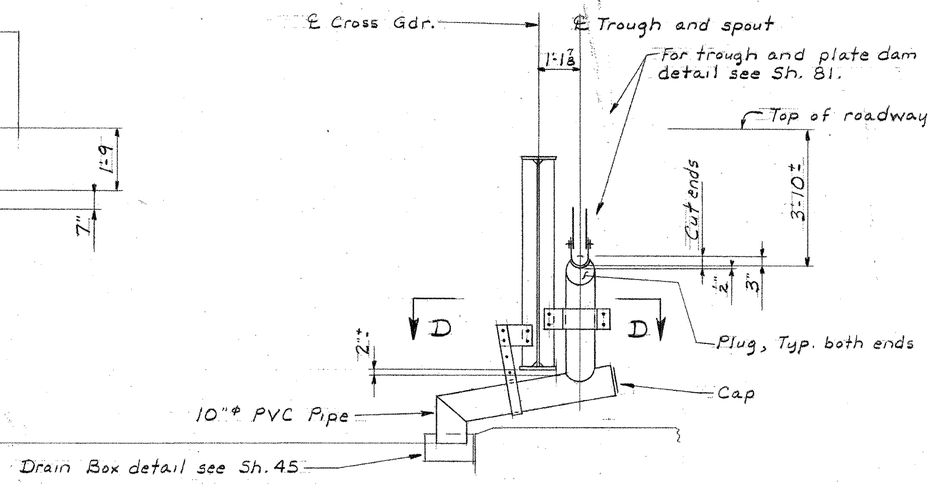
Des.	E.A.D.
Dwn.	A.V.G.
Chk.	R.W.

D 9002 (2-83) K&E 19 1283 4-83 A1329*



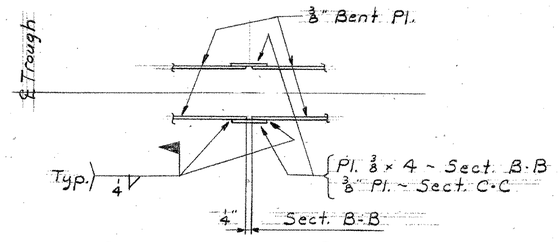
SECTION @ ℄ TROUGH AT PIER 5

Looking East
Scale: 1/2" = 1'-0



SECTION A-A

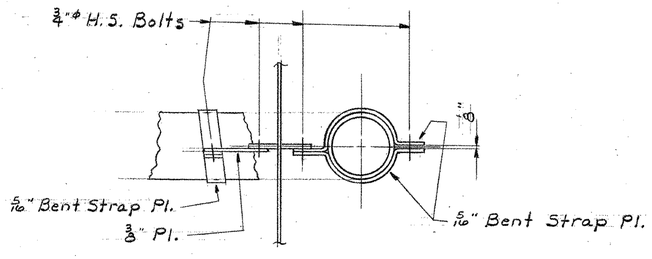
Scale: 1/2" = 1'-0



SECTION B-B (Shown)

SECTION C-C (Similar)

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



SECTION D-D

Scale: 1" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI - MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
TROUGH DETAILS AT PIER 5

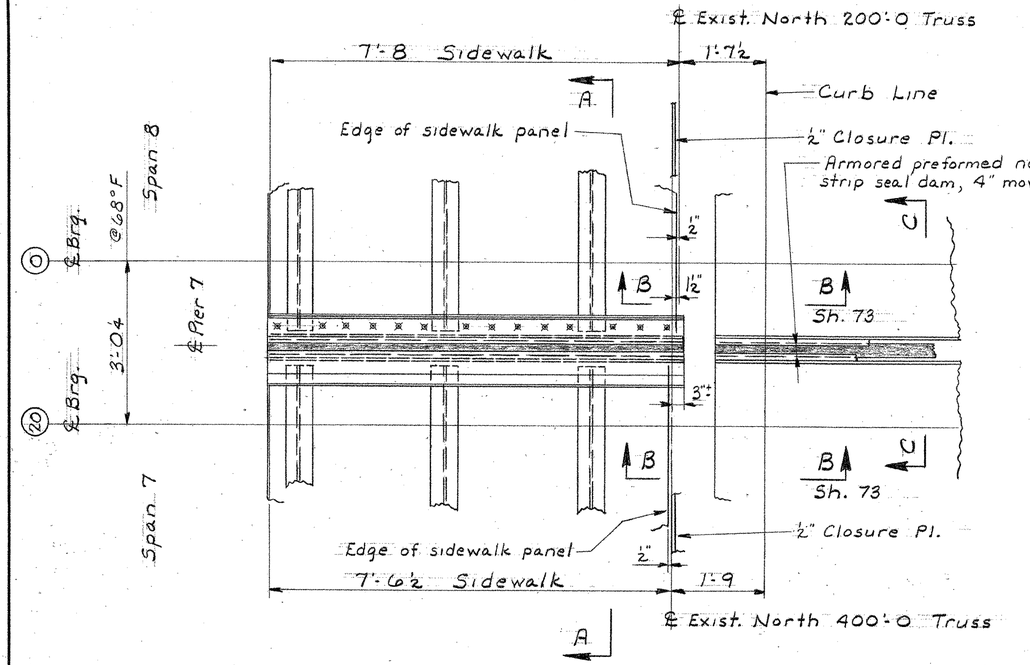
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 83 OF 98

S- 15296

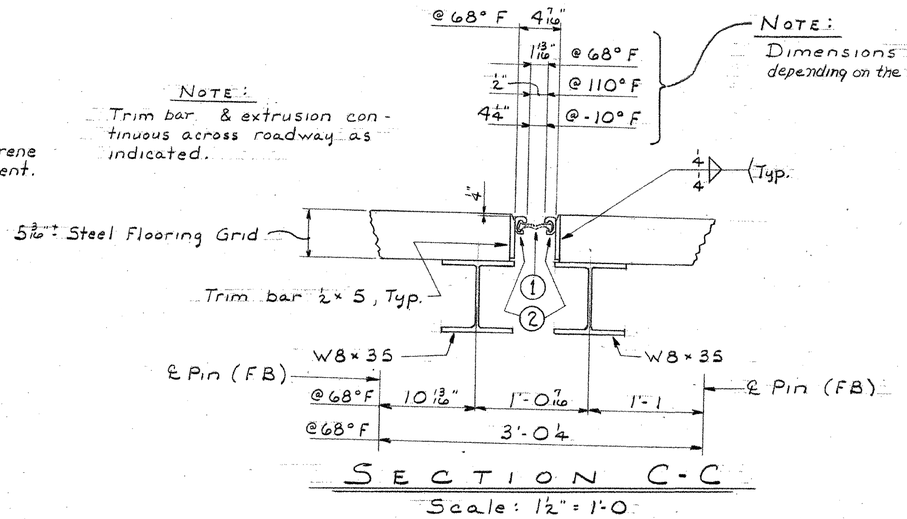
DES.	E.A.D.
DWN.	A.V.G.
CHK.	R.W.

D 9002 (2-85) KAK 19 1283 4-83 A1329*



PLAN OF EXPANSION DAM AT PIER 7

Scale: ¾" = 1'-0

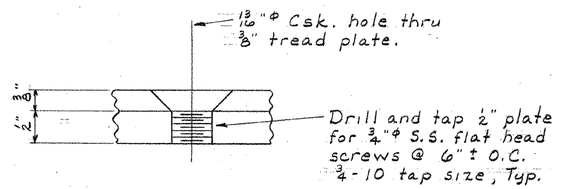


SECTION C-C

Scale: 1½" = 1'-0

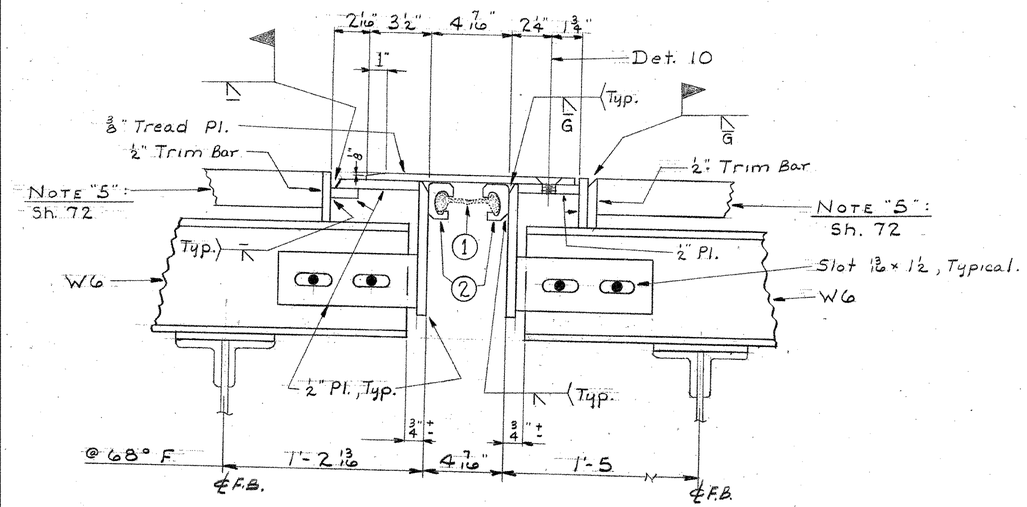
NOTES:

1. Neoprene Strip Seal Gland.
2. Steel Extrusion.



PIER 7		
D.L. & L.L. DISPLACEMENTS - INCHES		
SPAN ~ BRG.	DEAD LOAD	LIVE LOAD
Span 7 - ℄ Brg.	- 1.43	- 0.23
Span 8 - ℄ Brg.	0.15	0.09

(-) Indicates Contraction.



SECTION A-A

Scale: 3" = 1'-0

DETAIL 10

No Scale

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

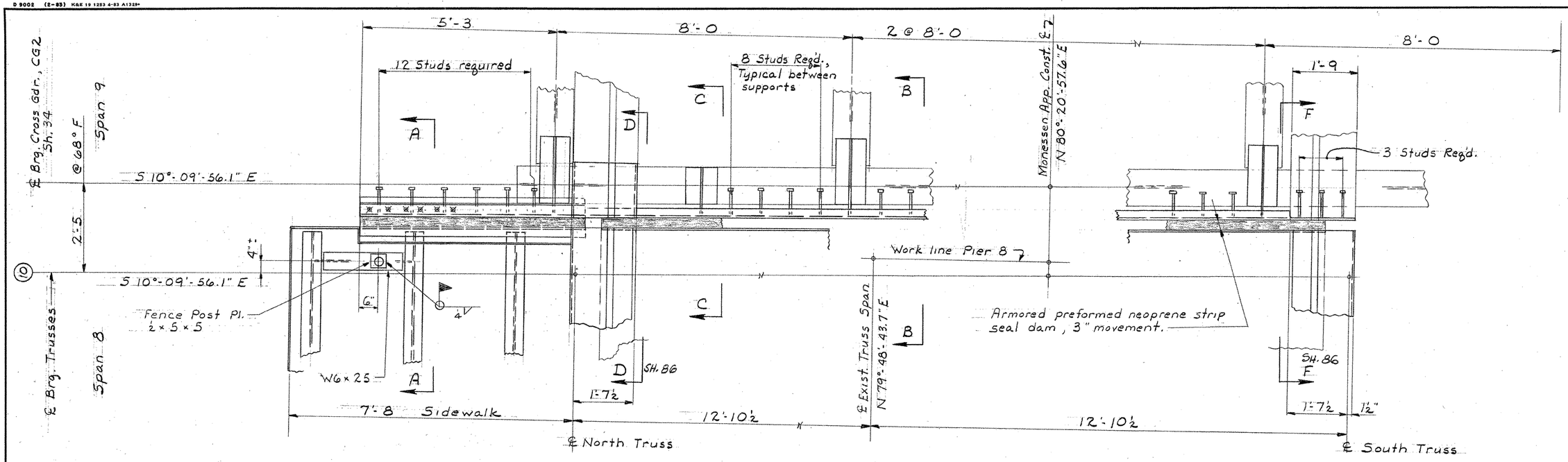
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC.B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT PIER 7

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

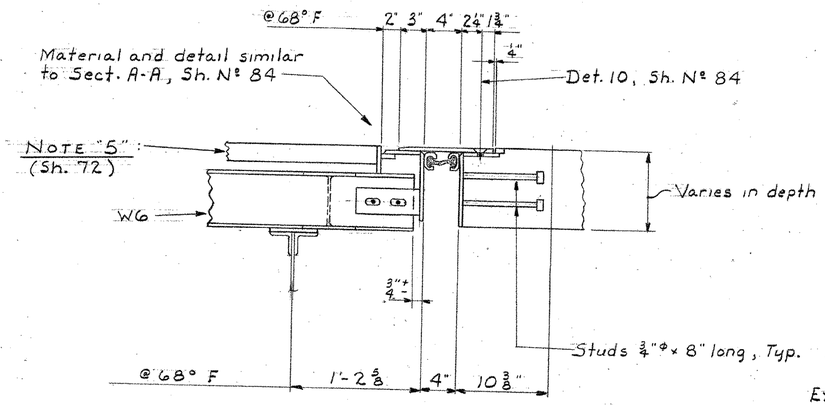
SHEET 84 OF 98
S-15296

D 9002 (E-85) K&E 19 1283 4-83 A1329*



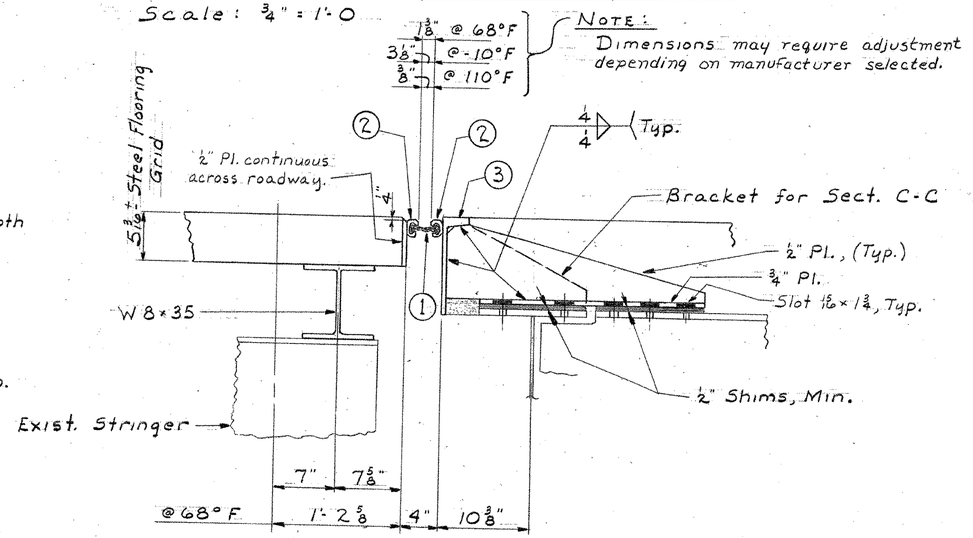
PLAN OF EXPANSION DAM AT PIER 8

Scale: ¾" = 1'-0



SECTION A-A

Scale: ½" = 1'-0



SECTION B-B (Shown)
SECTION C-C (Similar)

Scale: ½" = 1'-0

NOTES:

1. Neoprene Strip Seal Gland.
2. Steel Extrusion.
3. Piece MC 18 × 45.8 varies in depth to conform to concrete depth.

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

Work this sheet with Sh. 86

PIER 8		
D.L. & L.L. DISPLACEMENTS - INCHES		
SPAN ~ BRG.	DEAD LOAD	LIVE LOAD
Span 8 - ℄ Brg.	-0.55	-0.21
Span 9 - ℄ Brg.	0.43	0.13

(-) Indicates Contraction.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

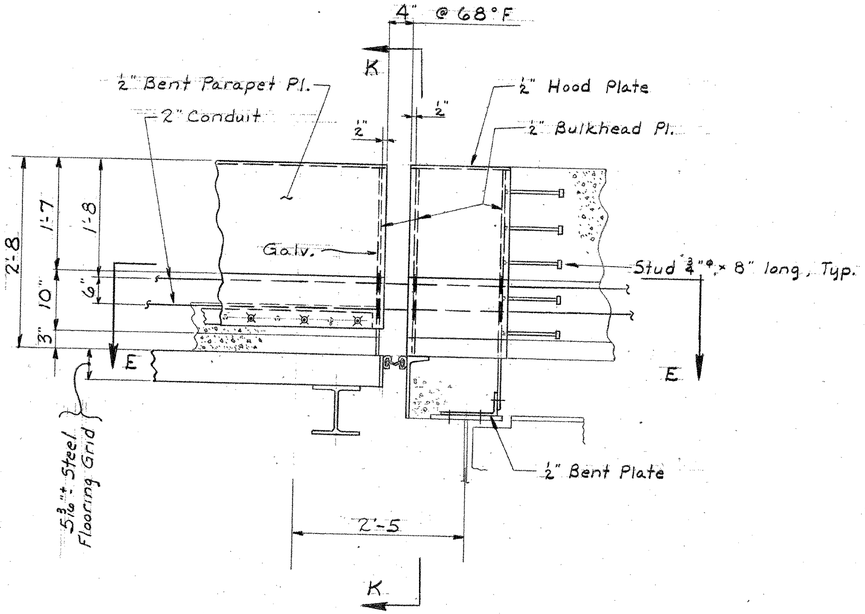
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R. 247 SPUR A, STA 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT PIER 8

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 85 OF 98

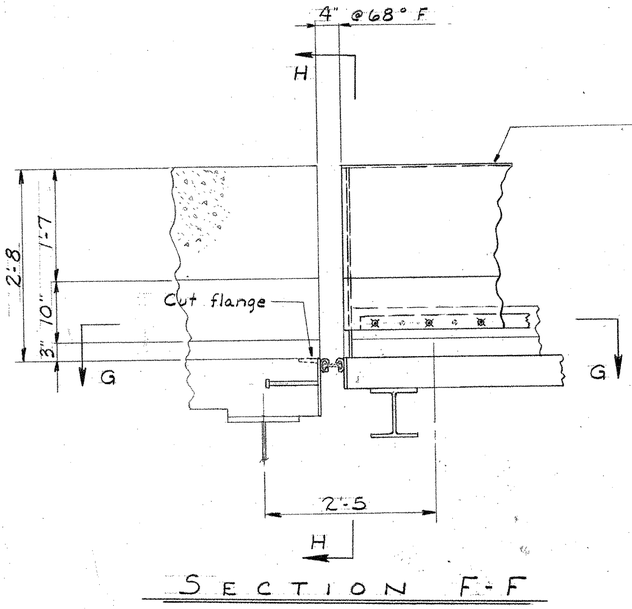
S-15296

D 9002 (2-83) KAE 19 1253 4-83 A1329*



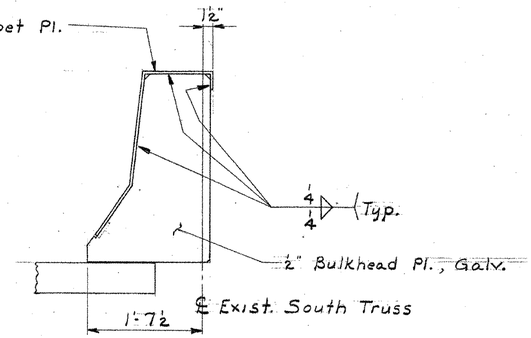
SECTION D-D

Scale: 1" = 1'-0



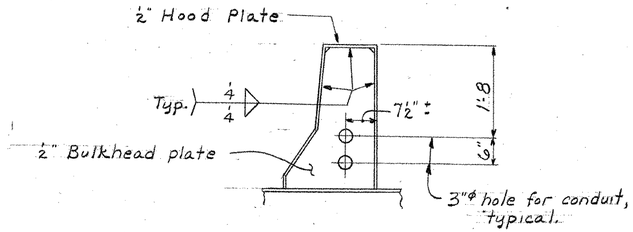
SECTION F-F

Scale: 1" = 1'-0



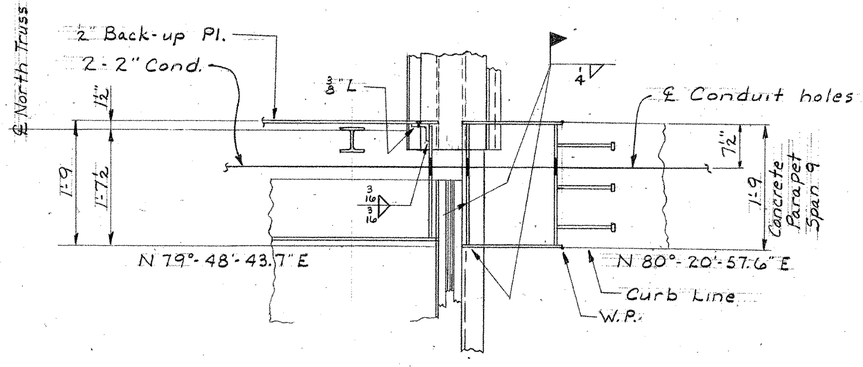
SECTION H-H

Scale: 1" = 1'-0



SECTION K-K

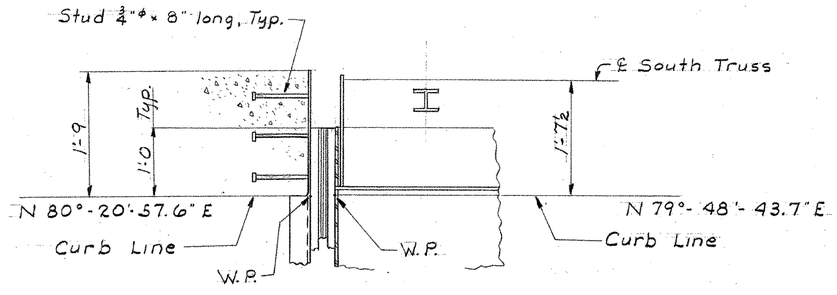
Scale: ¾" = 1'-0



SECTION E-E

Scale: 1" = 1'-0

Conduit holes in Northside Parapet Bulkhead Plates.
Pier 8 as shown.
Pier 5 opposite hand.



SECTION G-G

Scale: 1" = 1'-0

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
EXPANSION DAM AT PIER 8

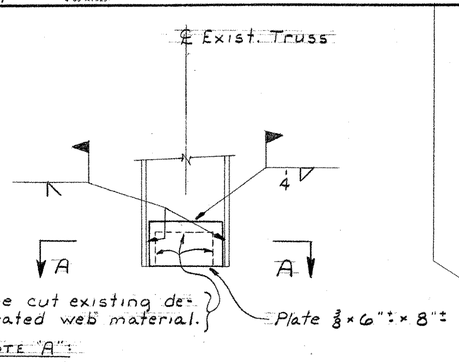
RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 86 OF 98
S- 15296

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

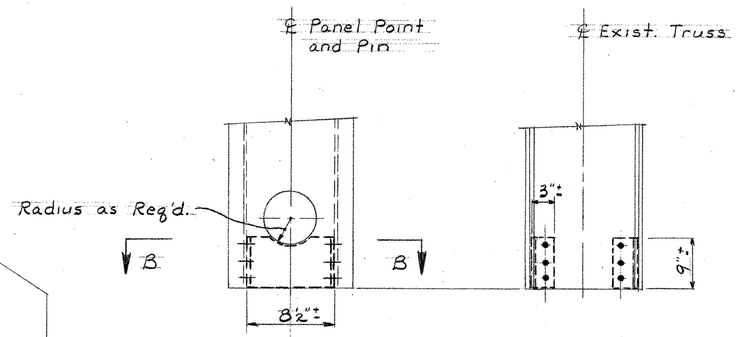
Work this sheet with Sh. 85

D 9002 (2-85) 4-83 A1329*



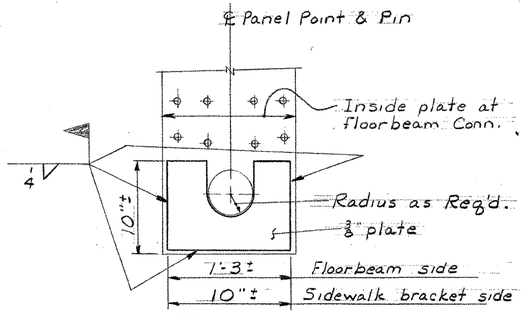
REPAIR (1), TYPE A

Pay Item Nº 2000-1010



REPAIR (1), TYPE B

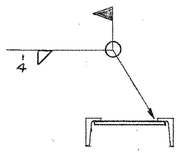
Pay Item Nº 2000-1011



REPAIR (1), TYPE E

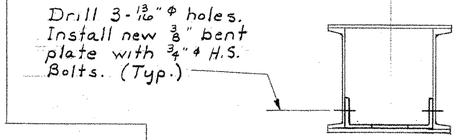
Pay Item Nº 2000-1014

No Scale



SECTION A-A

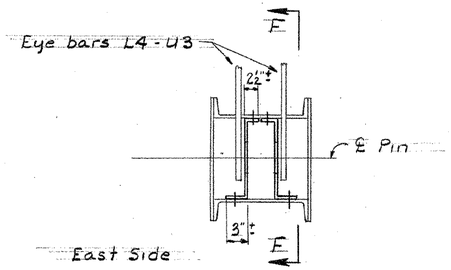
No Scale



SECTION B-B

One side shown.

No Scale



REPAIR (1), TYPE F

Pay Item Nº 2000-1015

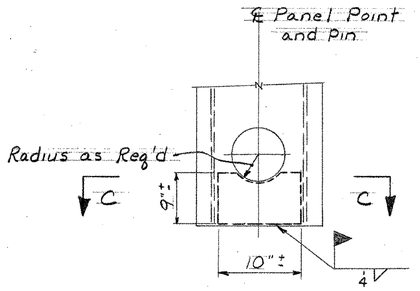
No Scale

TABLE 1			
SPAN	LOCATION PANEL POINT	POST ELEMENT	REPAIR TYPE
6N	L1	West L web	A
6S	L3	North Pin Plate	B
6N	L5	Both L webs	A
6S	L7	North Pin Plate	B
6N	L7	North & South Pin Pl.	B
6N	L8	North & South inside Pin Plates	C
6N	L9	East L web North & South Pin Pl.	A B
6N	L10	East L web	D
6N	L11	North Pin Plate	B
6S	L18	South Pin Plate	B
7N	L1	West L web	A
7N	L2	West L web North & South Pin Pl.	A B
7N	L5	West L web North Pin Plate	A B
7N	L18	North & South Pin Pl.	B
7N	L19	East L web North & South Pin. Pl.	A B
8S	L1	Straighten, clean, North Pin Pl.	E
8N	L1	Straighten, clean Pin Pls.	E
8N	L4	East L web 27 Bars Btwn. L webs	A F
8N	L9	Straighten, clean Pin Pls. North Pin Pl.	E
8S	L9	Straighten, clean Pin Pls. North Pin Pl.	E

LEGEND

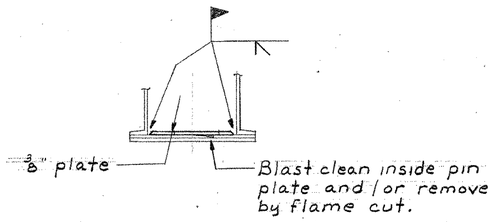
N = North Truss

S = South Truss



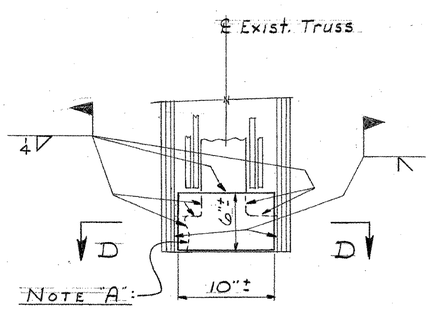
REPAIR (1), TYPE C

Pay Item Nº 2000-1012



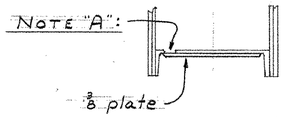
SECTION C-C

No Scale



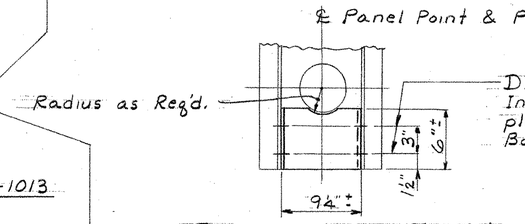
REPAIR (1), TYPE D

Pay Item Nº 2000-1013



SECTION D-D

No Scale



SECTION F-F

No Scale

Work this sheet with Sh. Nº 63 and 64

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES

L.R.247 SPUR A SEC. B10

L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI

MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

STRUCTURE REPAIR DETAILS

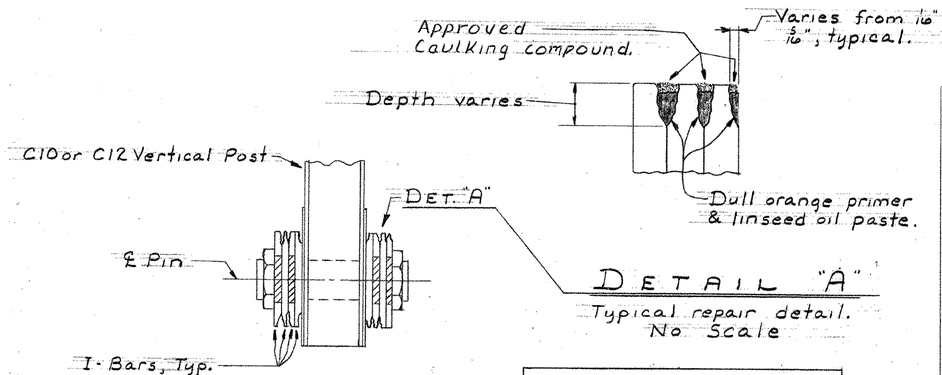
RECOMMENDED JULY 19, 1984

BRIDGE ENGINEER

SHEET 87 OF 98

S-15296

D 9002 (2-85) K&E 10 1253 4-83 A1329*



DETAIL "A"

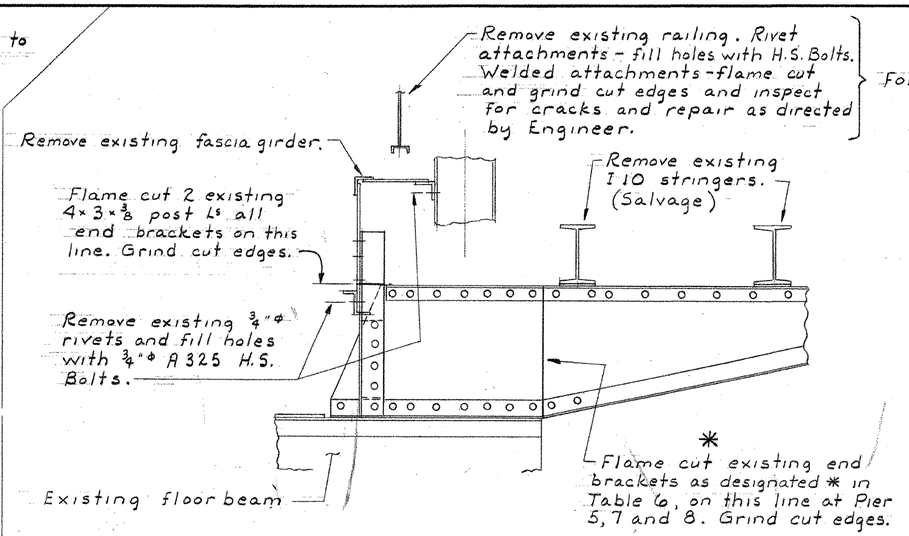
Typical repair detail.
No Scale

REPAIR ③

No Scale

Repair Reference Number ③
Pay Item Number 2000-1020

TABLE 3	
SPAN	LOCATION
6N	L2, L3, L5, L10, L20
7N	L16
7S	L0
8N	L3, L4, L6, L9
8S	L7



REPAIR ⑥

Typical for end brackets.
Scale: 1" = 1'-0

TABLE 6	
SPAN	LOCATION
6S	L0*, L20•
7S	L0•, L20*
8S	L0*, L10*

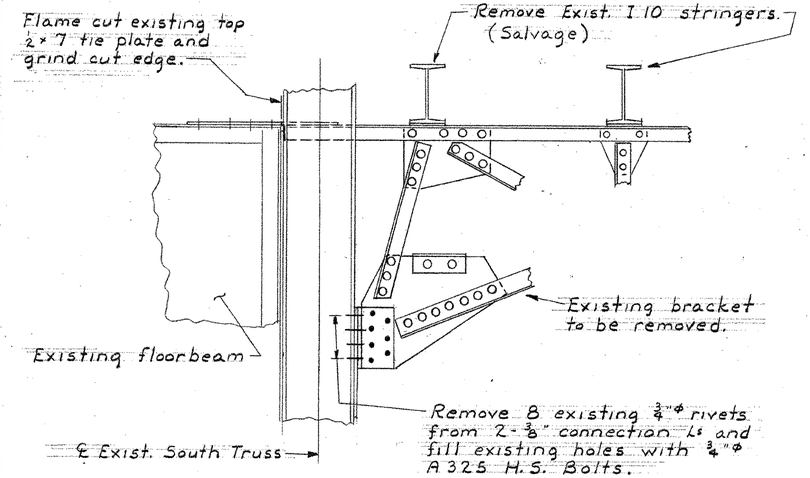
* = As Noted.
• = To remain for Nav. Ltg. supports.

Repair Reference Number ⑥ Pay Item Number 1018-0050

REPAIR ④

Remove existing curbs and railing.
(See REPAIR ⑥ Detail)

Repair Reference Number ④ Pay Item Number 1018-0050

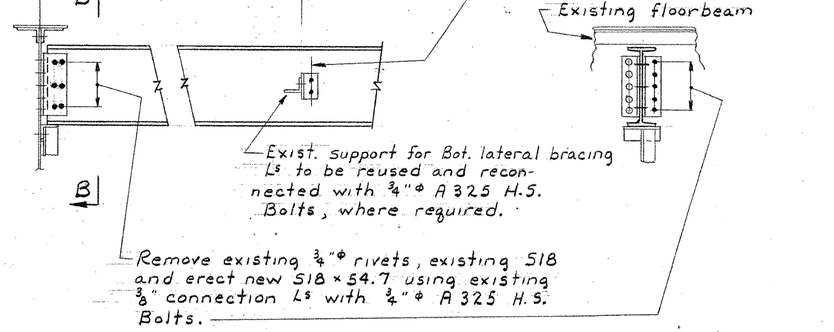


Repair Reference Number ⑥ Pay Item Number 1018-0050

REPAIR ⑥

Typical for interior brackets.
Scale: 1" = 1'-0

TABLE 6	
SPAN	LOCATION
6S	L1 thru L19
7S	L1 thru L19
8S	L1 thru L9



ELEVATION REPAIR ⑦

SECTION B-B

Scale: 3/4" = 1'-0

TABLE 7			
SPAN	BAY	STGR. DESIGNATION	REQ'D.
6	L2-L3	S2	1
6	L3-L6	S2, S3, S4, S5	12
6	L6-L7	S5	1
6	L7-L14	S2, S3, S4, S5	28
6	L16-L17	S5	1
7	L1-L2	S2, S3, S4, S5	4
7	L3-L4	S2	1
8	L1-L2	S2, S3, S4, S5	4
TOTAL			52

Repair Reference Number ⑦ Pay Item Number 2000-1030

LEGEND
N = North Truss
S = South Truss

Work this sheet with Sh. 63, 64.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

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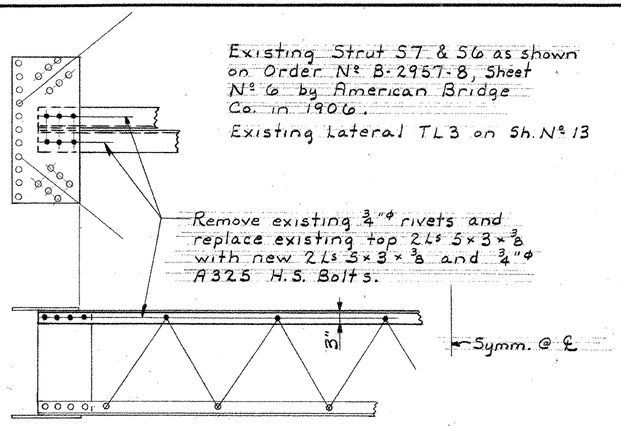
WASHINGTON AND WESTMORELAND COUNTIES
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BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

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SHEET 88 OF 98

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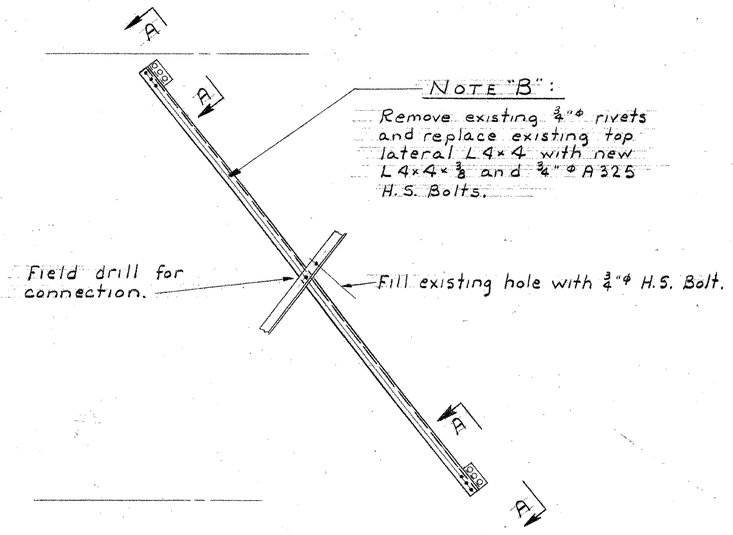
D 9002 (2-85) KAE 19 1253 4-83 A1329*



REPAIR (9) TYPE A

Span 6, U5 South to U5 North, Strut S7, shown.
Span 6, U4 South to U4 North, Strut S6, similar.
Scale: ¾" = 1'-0

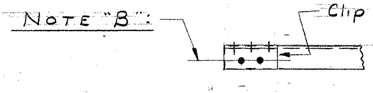
Repair Reference Number (9) Pay Item Number 2000-1050



REPAIR (9) TYPE B

Span 6, U5 North to U6 South, Lateral TL3.
No Scale

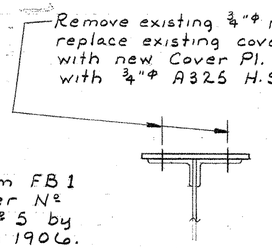
Repair Reference Number (9) Pay Item Number 2000-1051



SECTION A-A

Scale: 1" = 1'-0

Des.	R.W.
Dwn.	A.V.G.
Chk.	R.W.



REPAIR (8)

Span 6, Floorbeam at P.P. L12
Scale: 1½" = 1'-0

Repair Reference Number (8) Pay Item Number 2000-1040

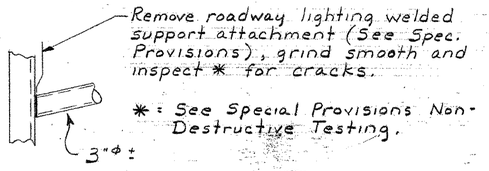
REPAIR (10)

Replace bottom chord lateral bracing end gusset plate. Remove existing ¾"Φ bolts or rivets from bracing members and plate and replace with new plate and ¾"Φ A325 H.S. Bolts (Approx. 290 Bolts), see Table 10.

Repair Reference Number (10) Pay Item Number 2000-1060

TABLE 10

SPAN	LOCATION	MATERIAL	REFERENCE DWGS.
6 N	L7	Pl. ⅜×18×3'-2¼	B-2957-8, Sh. 5
6 N	L9	Pl. ⅜×15×3'-1	↕
6 N	L10	Pl. ⅜×15×3'-1	
6 N	L11	Pl. ⅜×15×3'-1	
7 N	L5	Pl. ⅜×20×3'-4½	
7 N	L9	Pl. ⅜×15×3'-1	
7 N	L11	Pl. ⅜×15×3'-1	B-2957-8, Sh. 5
7 N	L20	Pl. ½×25½×2'-10½	B-2957-8, Sh. 12
7 S	L20	Pl. ½×25½×2'-10½	B-2957-8, Sh. 12
8 N	L1	Pl. ⅜×17×3'-0	B-2956, Sh. 7
8 N	L8	Pl. ⅜×17×2'-10	B-2956, Sh. 7
8 N	L2	Pl. ⅜×17×2'-10	B-2956, Sh. 7



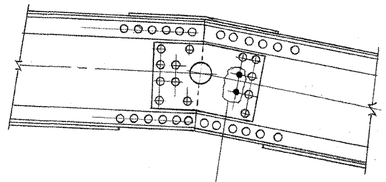
REPAIR (13)

No Scale

Repair Reference Number (13)
Pay Item Number 2000-1080

TABLE 13

SPAN	LOCATION
6 N	U2 - L2
6 N	U7 - L7
6 N	U13 - L13
6 N	U18 - L18
7 N	U2 - L2
7 N	U7 - L7
7 N	U13 - L13
7 N	U18 - L18
8 N	U2 - L2
8 N	U8 - L8



Drill out sheared rivet shanks, clean out pack-out between web plates and install 2-⅞"Φ A325 H.S. Bolts. Inspect remaining rivets at splice for soundness. Ref. drawing B-2957-8, Sh. 3.

REPAIR (11)

Span 6, South Truss, South Web Splice Plate at P.P. U12.
No Scale

Repair Reference Number (11) Pay Item Number 2000-1070

REPAIR (5)

Remove existing wood sidewalk, sidewalk stringers and handrail. For details see Repair (20), Sh. 91.

Repair Reference Number (5) Pay Item Number 1018-0050

LEGEND
N = North Truss
S = South Truss
P.P. = Panel Point

Work this sheet with Sh. Nº 63, 64.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

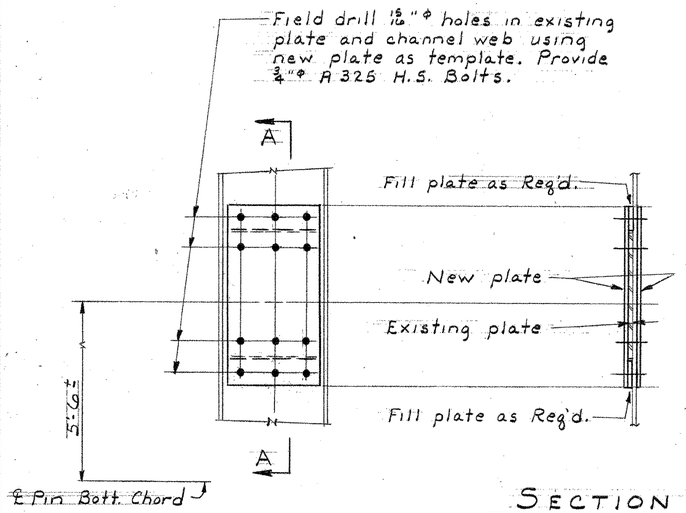
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WASHINGTON AND WESTMORELAND COUNTIES
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L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 89 OF 98
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D 9002 (2-83) KAE 10 1253 4-83 A1329*



SECTION A-A
No Scale

REPAIR (15)

Reinforce previous welded repair to web of truss member Panel Point 4, Span 8 N. At all other tabulated members, add plates only if required after inspection and as directed by the Engineer. See Repair (14), Sh. 92.

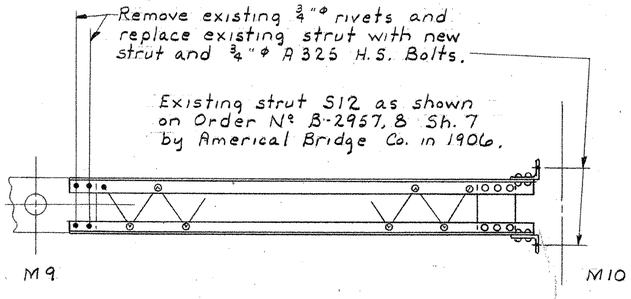
Φ Table for information only.

TABLE 15 Φ

SPAN	PANEL POINT	LOCATION	MATERIAL*
6 N	1	West Web	2 Pls. 3/8 × 8 × 2'-6½
↑	5	↕	2 Pls. 3/8 × 10 × 2'-6½
	8	↓	2 Pls. 3/8 × 8 × 2'-0
	10	West Web	2 Pls. 3/8 × 8 × 2'-6
	10	East Web	2 Pls. 3/8 × 8 × 2'-6
	11	West Web	2 Pls. 3/8 × 10 × 2'-6
	11	East Web	2 Pls. 3/8 × 10 × 2'-6
	12	West Web	2 Pls. 3/8 × 10 × 2'-6
	13	↕	2 Pls. 3/8 × 8 × 2'-0
	14		2 Pls. 3/8 × 10 × 2'-6
	16	↓	2 Pls. 3/8 × 10 × 2'-6
	17	West Web	2 Pls. 3/8 × 8 × 2'-0
	17	East Web	2 Pls. 3/8 × 8 × 2'-6
	18	West Web	↕
↓	19	West Web	
6 N	19	East Web	2 Pls. 3/8 × 8 × 2'-6
7 N	1	West Web	2 Pls. 3/8 × 8 × 2'-0
↑	1	East Web	2 Pls. 3/8 × 8 × 2'-0
	5	West Web	2 Pls. 3/8 × 8 × 2'-0
	7	West Web	2 Pls. 3/8 × 10 × 2'-6
	7	East Web	↕
	9	East Web	
	11	West Web	
	11	East Web	
	15	West Web	
	16	West Web	↓
	16	East Web	2 Pls. 3/8 × 10 × 2'-6
	17	West Web	2 Pls. 3/8 × 8 × 2'-6
↓	17	East Web	2 Pls. 3/8 × 8 × 2'-6
7 N	19	↕	2 Pls. 3/8 × 8 × 2'-6
8 N	4	↕	2 Pls. 3/8 × 7½ × 2'-0 ← See repair note above.
8 N	5	↓	2 Pls. 3/8 × 7½ × 2'-0
8 N	6	East Web	2 Pls. 3/8 × 7½ × 2'-0

* = Plates may require additional length to cover full channel web section, to be determined by the Engineer.

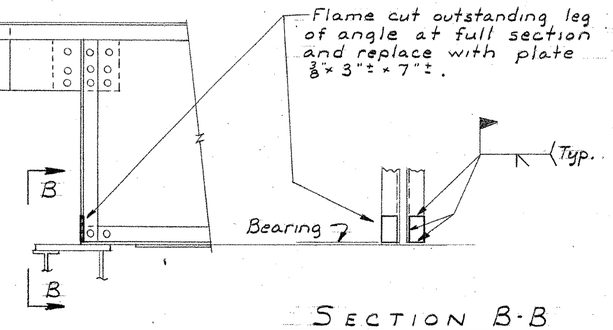
Repair Reference Number (15) Pay Item Number 2000-1100



REPAIR (16)

Span 6, South Truss, M9 to M10, Strut S12, replace.
No Scale

Repair Reference Number (16) Pay Item Number 2000-1110



SECTION B-B

REPAIR (19)

Repair floorbeam bearing stiffeners. Repair at Span 6 at P.P. L 0, North and South Ends also at Span 7 at P.P. L 20, North End. Reference to Sh. 5, Order N° 2957-8.
No Scale

Repair Reference Number (19) Pay Item Number 2000-1041

REPAIR (17)

Remove existing grid deck, W8×13 support beams and plate expansion dams. Retain grid and W8×13 for salvage. See Greulich Bridge Flooring Job N° 75G36, Dwg. N°s 10165-01 to 10165-22 along with Pa. Dept. of Transp. Bureau of Design Job 5-11438, 22 sheets in about 1975 for reference.

Repair Reference Number (17) Pay Item Number 1018-0050

REPAIR (18)

Provide Expansion Dams at Pier 5, 6, 7 and 8.

Repair Reference Number (18) Pay Item Number as follows:
1056-0100 Pier 5, see Sh. 81
1021-0002 Pier 6, see Sh. 70
2000-1016 Pier 7, see Sh. 84
2000-1017 Pier 8, see Sh. 85

LEGEND
N = North Truss
S = South Truss

Work this sheet with Sh. 63, 64.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

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BUREAU OF HIGHWAY DESIGN

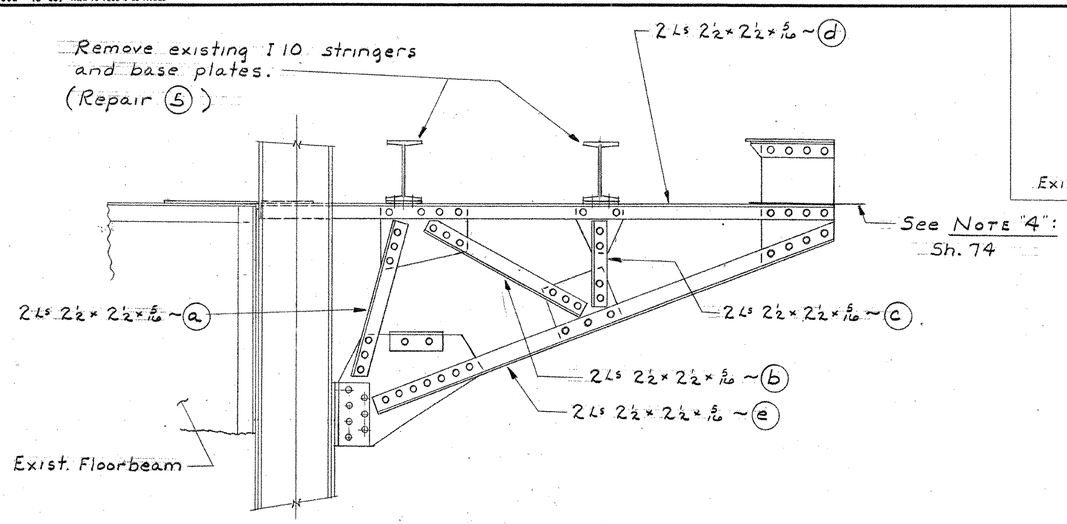
WASHINGTON AND WESTMORELAND COUNTIES
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MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 90 OF 98
S-15296

DES. R.W.
DWN. A.V.G.
CHK. R.W.

D 9002 (2-85) MAK 10 1253 4-83 A1329*



REPAIR (20)

* = Sidewalk bracket repair or replacement. Remove existing rivets as necessary to accommodate material to be replaced same from orginal design. Bolt new material with ¾"ø A325 H.S. Bolts.

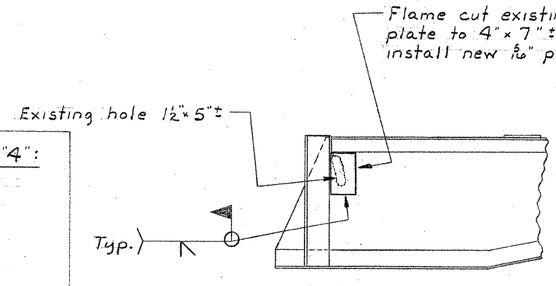
Existing brackets shown on Order Nº B-2957-8, Sh. Nº 7 and Order Nº B-2956, Sh. Nº 8 by American Bridge Co. in 1906.

Scale: 1" = 1'-0

Repair Reference Number (20) Pay Item Numbers: 2000-1131 thru 2000-1138 (Type A thru Type H)

TABLE 20

SPAN	PANEL POINT	REPAIR *	TYPE
6 N	1	Replace Bracket	A
↕	2	Replace Bracket	A
	3	Replace Bracket	A
	9	e	D
	10	d	C
↓	11	a, d	B
6 N	14	Replace Bracket	A
7 N	1	d	C
↕	2	Replace Bracket	A
	5	a, d	B
	6	a, d	B
	7	a, d	B
	8	a, d	B
	11	d	C
	12	Replace Bracket	A
	13	e	D
	14	d	C
	15	d	C
	16	d	C
↓	17	a, d	B
	18	d	C
7 N	19	d	C
8 N	6	b	E
↕	7	a, b	F
	8	b, e	G
8 N	9	a	H



REPAIR (20)

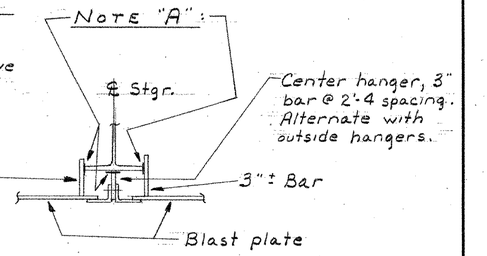
Repair hole in sidewalk bracket web at P.P. L0, Span 6, North Truss.

Scale: 1" = 1'-0

Repair Reference Number (20) Pay Item Number 2000-1130

INTERIOR STGR. SHOWN

Exterior stringer have outside hangers on one side only.



REPAIR (22)

Remove protection plates, Span 8.

NOTE "A": Burn off attachment plates to Stringer bottom flanges, grind smooth and inspect (see Special Provision Non-Destructive Testing) for crack defects. (Approx. 539 weld locations.)

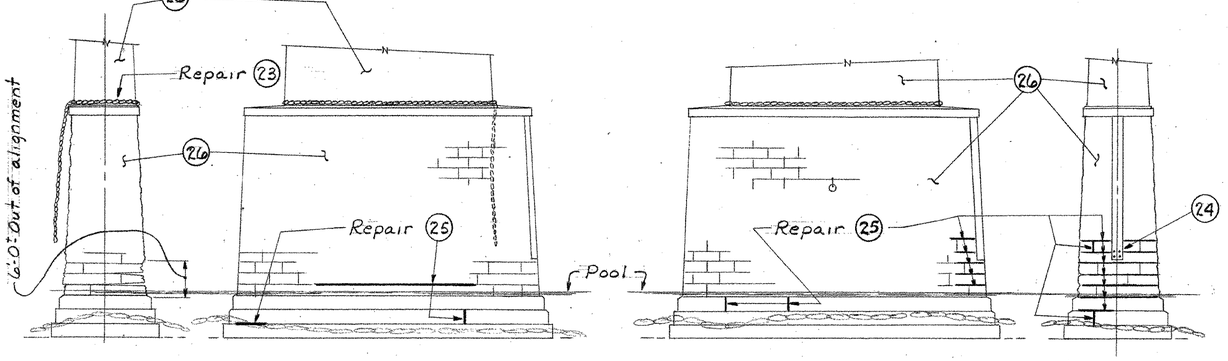
No Scale

Repair Reference Number (22) Pay Item Number as follows: Inspect - 2000-1150

Removal - 1018-0050

NOTE:

Pier 6 shown for Repair 23, 24, 25 and 26. Pier 5, 7 and 8 are similar for Repair 25 and 26. See Special Provisions.



NORTH END — EAST ELEVATION — WEST ELEVATION — SOUTH END

PIER 6

REPAIR (23)

Remove mooring chain.

REPAIR (26)

Sandblast clean all exposed masonry. (Piers 5 thru 8.)

REPAIR (24)

Replace bottom 2 missing attachment anchors and replace 2 sheared-off attachment anchors. Field drill masonry and install ⅞"ø × 6" Expansion Bolt Anchors.

REPAIR (25)

Random regrouting and repointing of missing mortar at joints. Use epoxy waterproof material.

Repair Reference Number (23) Pay Item Number 2000-1160

Repair Reference Number (24) Pay Item Number 2000-1170

Repair Reference Number (25) Pay Item Number 2000-1180 Dry Joints; Pay Item Number 2000-1181 Under Water Joints

Repair Reference Number (26) Pay Item Number 2000-1190

LEGEND

N = North Truss

Work this sheet with Sh. 63, 64.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

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WASHINGTON AND WESTMORELAND COUNTIES

L.R. 247 SPUR A SEC. B10

L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER

BRIDGE REHABILITATION

STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984

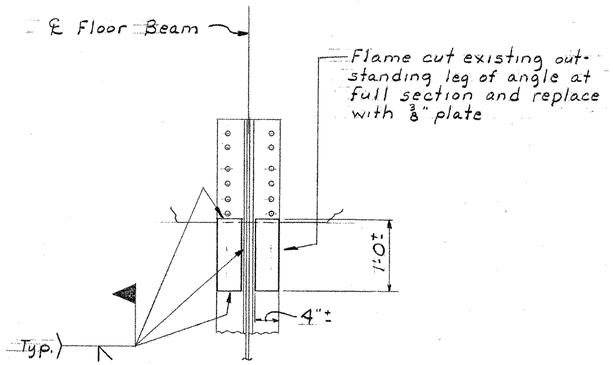
BRIDGE ENGINEER

SHEET 91 OF 98

S- 15296

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

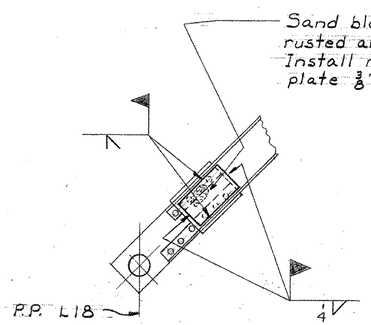
D 9002 (2-83) 4-83 A1329*



REPAIR (28)

Repair at existing bottom flange Ls at floorbeam at Panel Point L5 and L7 in Span 8, North Truss.
Scale: 1" = 1'-0

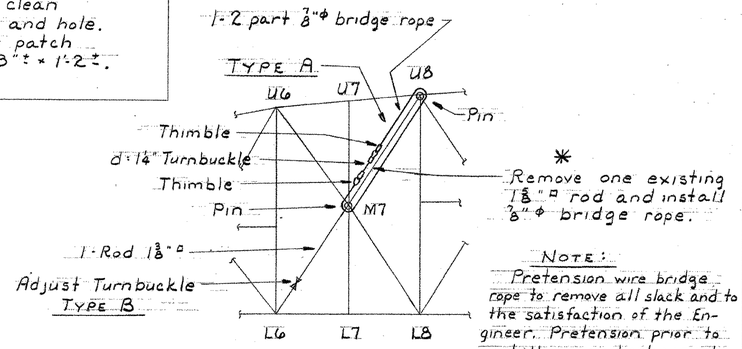
Repair Reference Number (28) Pay Item Number 2000-1042



REPAIR (32)

Repair to South channel at Panel Point L18 - M19, North Truss, Span 6. (Looking North)
Scale: ¾" = 1'-0

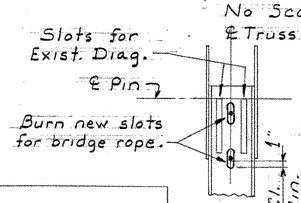
Repair Reference Number (32) Pay Item Number 2000-1101



NOTE:
Pretension wire bridge rope to remove all slack and to the satisfaction of the Engineer. Pretension prior to installing new bridge and sidewalk flooring.

PARTIAL ELEVATION

Span 6, North Truss shown other repair locations similar.
No Scale



DETAIL 6

Shown at P.P. U14 N. Truss and P.P. U4, U14 S. Truss, Span 6.
No Scale

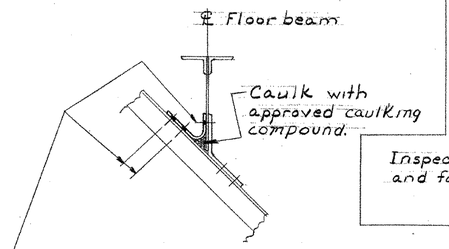
TABLE 2			
SPAN	MEMBER	TYPE	PIN-PIN LENGTHS
6 N	L6-M7	B	—
6 N	* M7-U8	A	39.4'±
6 N	* M13-U12	A	39.4'±
6 N	M15-U14 ●	A	38.8'±
6 S	M3-U4 ●	A	36.9'±
6 S	L6-M7	B	—
6 S	M15-U14 ●	A	38.8'±
7 N	L8-M9	B	—
7 N	L14-M13	B	—
8 N	L4-U5	B	—
8 N	L6-U5	B	—
8 S	L3-U4	B	—

Repair Reference Number (2)
TYPE A
Pay Item Number 2000-1018

Provide ⅞"ϕ Bridge Rope (6x7 with WSC. Capacity: 35T)
1 - 2 Part Rope Loop
1 - Turnbuckle with d = 1¼" Cap. = 38 T
2 - ⅜" Thimbles
8 - ¾" U-Bolt Clips * (4@5'4"/Tie)

* = Use number of U-Bolt clips as recommended by manufacturer.

Repair Reference Number (2)
TYPE B
Pay Item Number 2000-1019
Adjust existing turnbuckle..



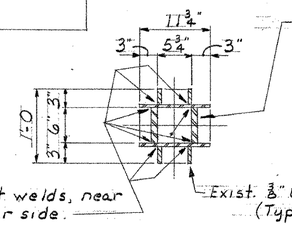
Remove at each location 17 or 15 ~ ¾"ϕ existing rivets and replace existing bent plate with new ⅜" Bent Pl. & ¾"ϕ H.S. Bolts.

REPAIR (29)

Scale: 1" = 1'-0

TABLE 29	
SPAN	LOCATION
6 N	L0 & L20
6 S	L0 & L20
7 N	L0 & L20
7 S	L0 & L20
8 N	L0 & L10
8 S	L0 & L10

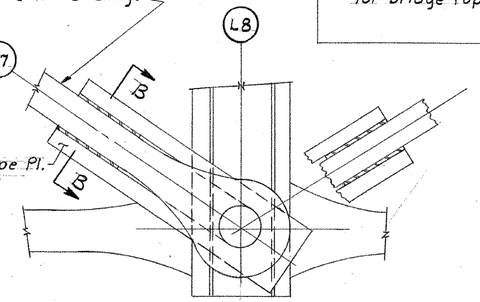
Repair Reference Number (29) Pay Item Number 2000-1043



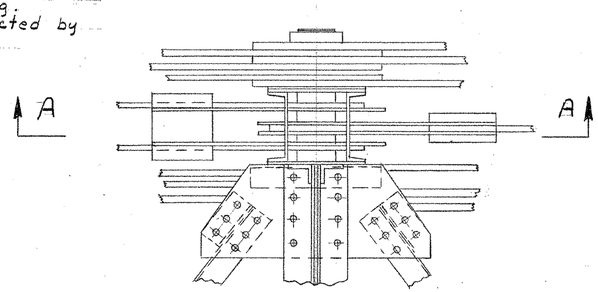
SECTION B-B

PROCEDURE

1) Sandblast clean weld connections to eyebars and plates.
2) Inspect members - See Special Provisions - Non-Destruction Testing.
3) Repair as directed by Engineer.



SECTION A-A



PLAN - REPAIR (14)

Inspect weld repair.
Scale: 1" = 1'-0

Repair Reference Number (14), Truss Diagonal, Pay Item Number 2000-1091

TABLE 14 (VERTICAL)	
LOCATION	MEMBER
Span 6 No. Truss	L1, L2, L5, L8, L10, L11, L12, L13, L14, L16, L17, L18, L19
Span 7 No. Truss	L5, L7, L9, L11, L15, L16, L17, L19, L1
Span 8 No. Truss	L5, L4

Repair Reference Number (14), Truss Vertical, Pay Item Number 2000-1090
See Repair (15), Sheet 90.

TABLE 14 (DIAGONAL)	
LOCATION	MEMBER
Span 6 No. Truss	L2-M1 @ L2
" " " "	L8-M7 @ L8
" " " "	L8-M9 @ L8
" " " "	L12-M11 @ L12
Span 7 No. Truss	L12-M11 @ L12
Span 8 No. Truss	L4-U3 @ L4
" " " "	L5-U4 @ L5
" " " "	L5-U6 @ L5
" " " "	L6-U7 @ L6
" " " "	L7-U8 @ L7

LEGEND
N = North Truss
S = South Truss
PP = Panel Point

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

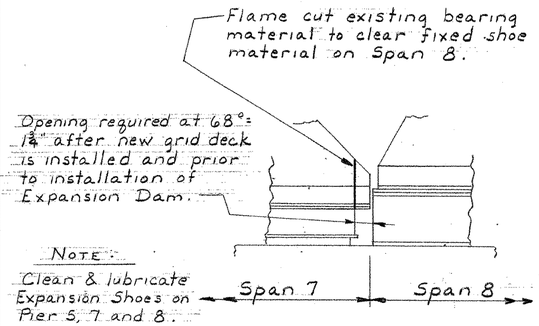
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

WASHINGTON AND WESTMORELAND COUNTIES
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L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 92 OF 98
S-15296

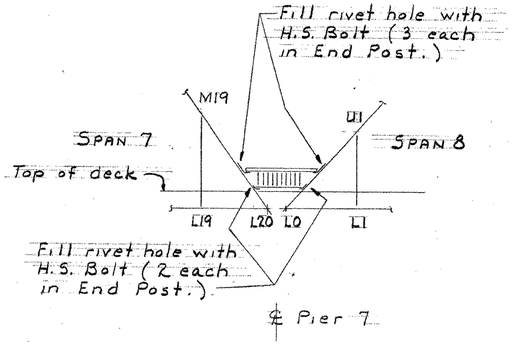
D 9002 (2-83) 4-83 A1329*



REPAIR (21)

Expansion Bearing repair on Span 7, North and South Truss on Pier 7.
No Scale

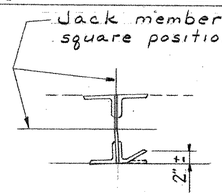
Repair Reference Number (21)
Pay Item Number 2000-1140 Clean & Lubricate
Pay Item Number 1090-0025 Flame Cut



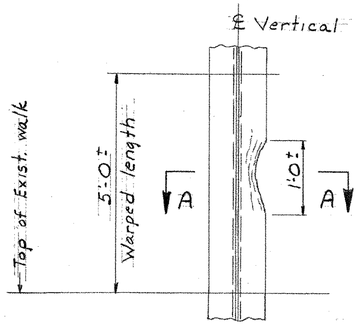
REPAIR (12)

Provide H.S. Bolts in connection of truss members at South Truss at Pier 7.
No Scale

Repair Reference Number (12)
Pay Item Number 2000-1071.



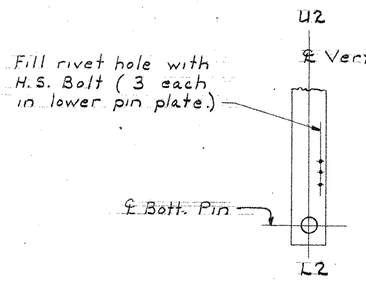
SECTION A-A



REPAIR (31)

Repair Truss Member L9-U9, Span 8 North Truss, South Elevation shown.
No Scale

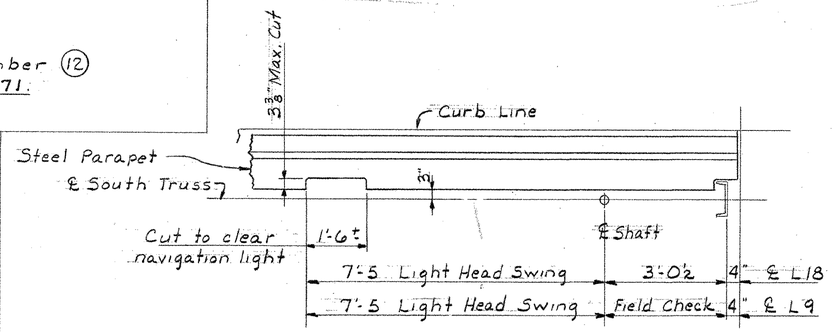
Repair Reference Number (31)
Pay Item Number 2000-1200.



REPAIR (12)

Provide missing H.S. Bolts in connection of South Truss member Span 7, looking North.
No Scale

Repair Reference Number (12)
Pay Item Number 2000-1071.



PLAN - DETAIL 15 (Sh. 78)

Clearance opening in steel parapet for existing navigation light on Span 7 South Truss between P.P. L17-L18 and L8-L9.
No Scale

LEGEND
N. = North Truss
S. = South Truss
P.P. = Panel Point

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
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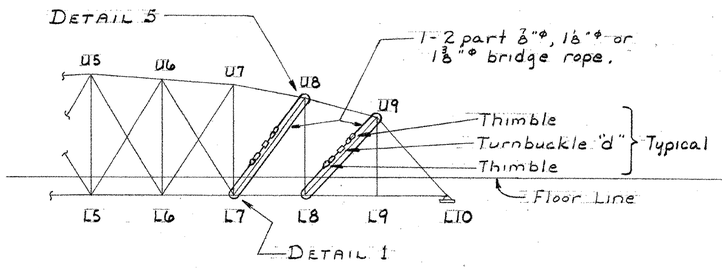
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BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 93 OF 98
S- 15296

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

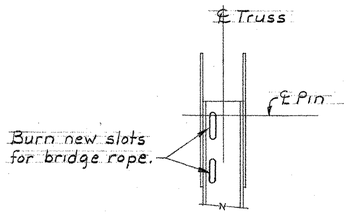
D 9002 (2-83) 4-83 A1329*



PARTIAL ELEVATION

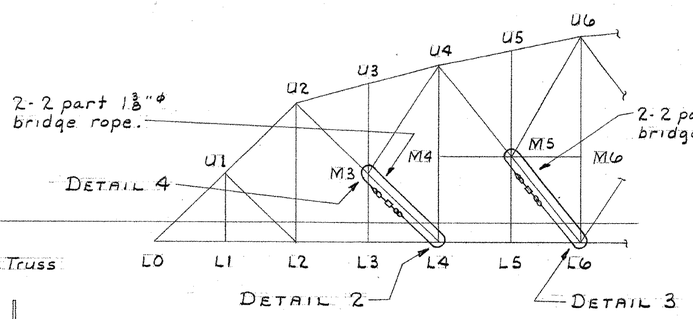
Span 8, North Truss shown, other repair locations similar.
No Scale

REPAIR (30)



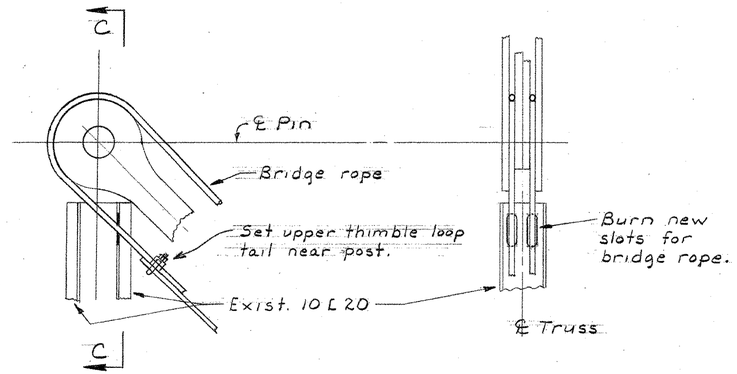
DETAIL 5

Shown at P.P. U2, N. Truss, Span 8.
Similar at P.P. U8, N. Truss and P.P. U7, S. Truss, Span 8.
No Scale



PARTIAL ELEVATION

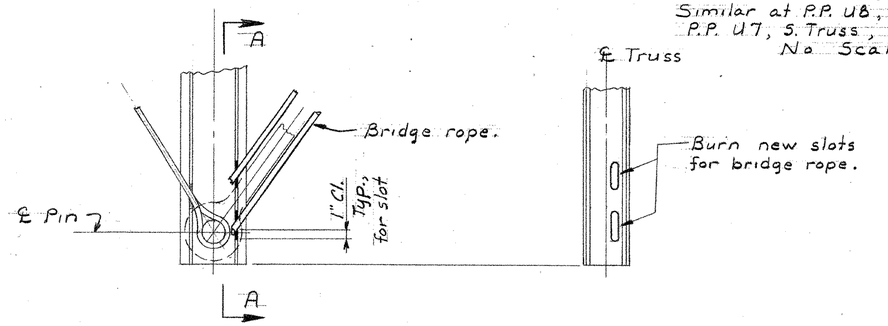
Span 6, North Truss.
No Scale



DETAIL 4

SECTION C-C

Scale: 3/4" = 1'-0

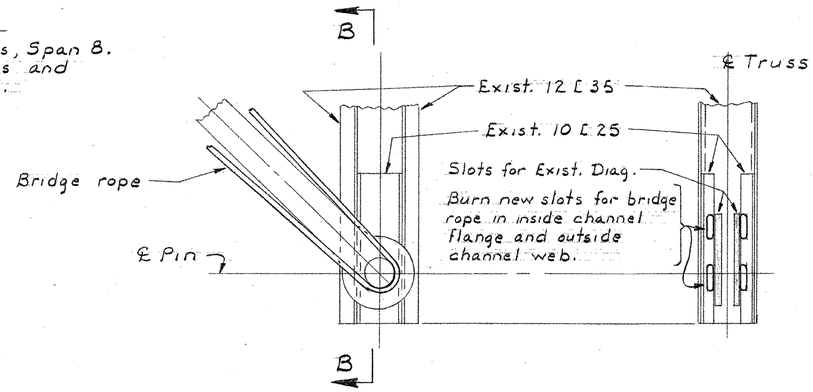


DETAIL 1

Shown at P.P. L7 N. Truss.
Other P.P.'s similar.
Scale: 3/4" = 1'-0

SECTION A-A

Shown at P.P. L7 N. Truss.
Similar at P.P. L3 N. Truss and P.P. L6 S. Truss
At P.P. L8 N. Truss slots on ℄ existing L web.
Scale: 3/4" = 1'-0



DETAIL 2

Shown at P.P. L4 N. Truss

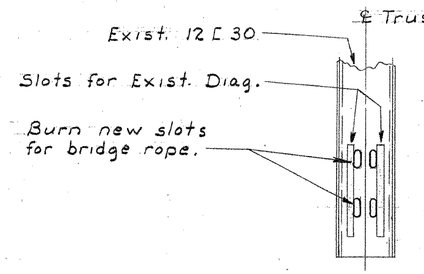
DETAIL 3

Similar at P.P. L6 N. Truss

SECTION B-B

At P.P. L4

Scale: 3/4" = 1'-0



SECTION B-B

At P.P. L6

TABLE 30

Span	Member	Pin To Pin Length	Bridge Rope System	Rope Capacity	Turnbuckles			Thimbles		U-Bolts ★				Pay Item Number
					Nº Reqd.	"d"	Capacity	Nº Reqd.	Size	Size	Nº Reqd./Tie	Spacing	Total Nº	
6N	L4-M3	28.3'±	2-2part 1 3/8"φ loops	87.8 Ton	2	2"	92.5 Ton	4	1 3/8"	7/8"	6	8 1/4"	24	2000-1210
6N	L6-M5	32.4'±	2-2 part 1 1/8"φ loops	57.8 Ton	2	1 1/2"	53.5 Ton	4	1 1/8"	3/4"	5	6 3/4"	20	2000-1211
8N	L3-U2	35.1'±	1-2 part 1 1/8"φ loop	57.8 Ton	1	1 1/2"	53.5 Ton	2	1 1/8"	3/4"	5	6 3/4"	10	2000-1212
8N	L7-U8	35.1'±	1-2 part 1 1/8"φ loop	57.8 Ton	1	1 1/2"	53.5 Ton	2	1 1/8"	3/4"	5	6 3/4"	10	2000-1212
8N	L8-U9	30.8'±	1-2 part 1 3/8"φ loop	87.8 Ton	1	2"	92.5 Ton	2	1 3/8"	7/8"	6	8 1/4"	12	2000-1213
8S	L6-U7	38.2'±	1-2 part 7/8"φ loop	35.0 Ton	1	1 1/4"	38.0 Ton	2	7/8"	3/4"	4	5 1/4"	8	2000-1214

★ = Figures shown are for estimating. Use size, number required and spacing as recommended by manufacturer.

Repair Reference Number (30)

LEGEND
N = North Truss
S = South Truss
P.P. = Panel Point

NOTE:
Pretension wire bridge rope to remove all slack and to the satisfaction of the Engineer. Pretension prior to installing new bridge and sidewalk flooring.

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES.	R.W.
DWN.	A.V.G.
CHK.	R.W.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

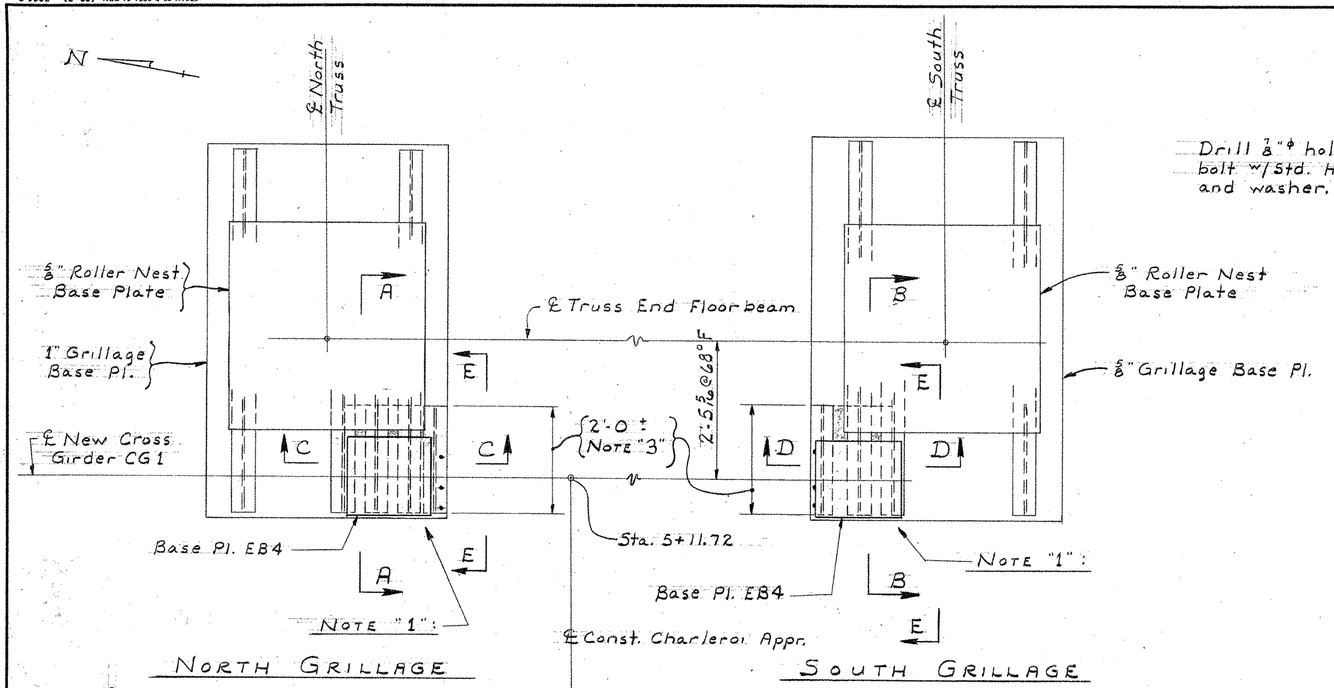
WASHINGTON AND WESTMORELAND COUNTIES
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L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI
MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 94 OF 98

S-15296

D 9002 (2-83) KGE 10 1253 4-83 A1329*

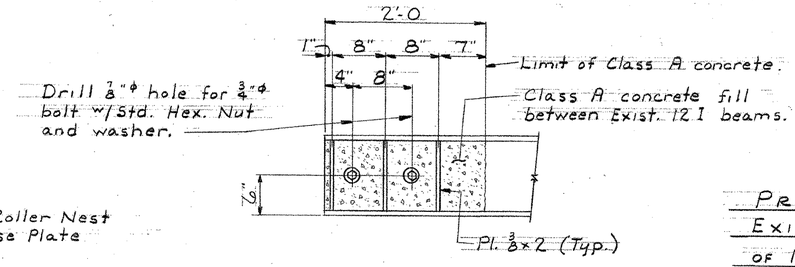


NORTH GRILLAGE

SOUTH GRILLAGE

TOP PLAN - PIER 5

Scale: ¾" = 1'-0



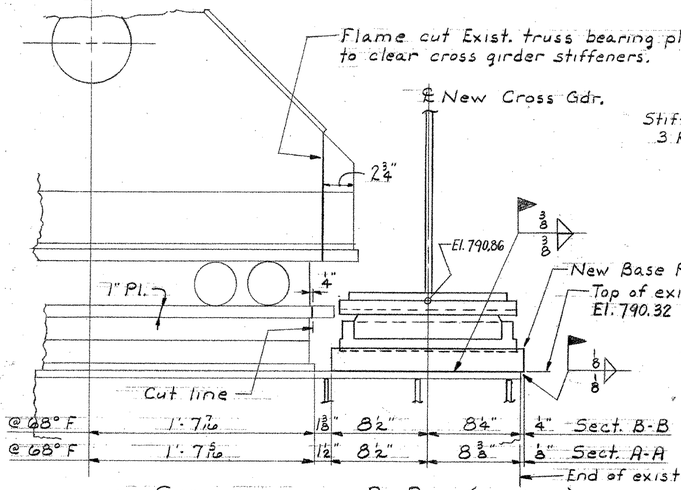
SECTION E-E

No Scale

PROCEDURE FOR PREPARATION OF EXISTING GRILLAGE AND PLACEMENT OF NEW CROSS GIRDER BEARING BASE PLATES

1. Remove existing approach girder stool and Base Plate from grillage and plug weld all open holes in top flange of grillage. Grind top flange of existing grillage to provide a smooth and level bearing surface (El. 790.32) for new Base Plate EB4.
2. Drill holes in webs of 12 I beam grillage and install ¾"ϕ bolts. Weld stiffeners to webs of exterior I-beam grillage.
3. Clean the voids of the grillage and place Class A concrete into the grillage voids to the limits shown.
4. Flame cut existing truss bearing plates to clear new cross girder stiffeners.
5. Place bearing base plate and bearing on grillage. Erect cross girder and align base plates and cross girder to final position. Complete all superstructure connections to cross girder.
6. When final alignment of superstructure and cross girder is completed, weld bearing base plate to top of grillage beams.

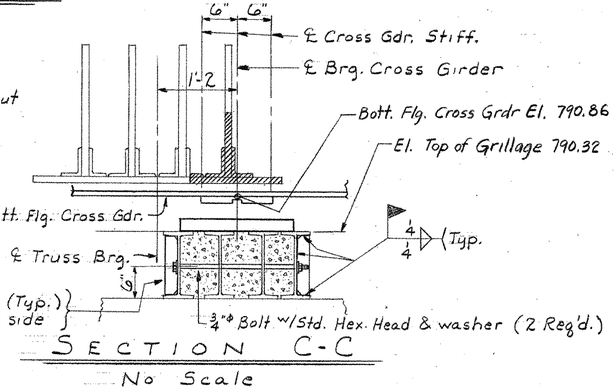
NOTE:
Cross hatched area to be cut back to clear cross girder stiffeners.



SECTION B-B (Shown)

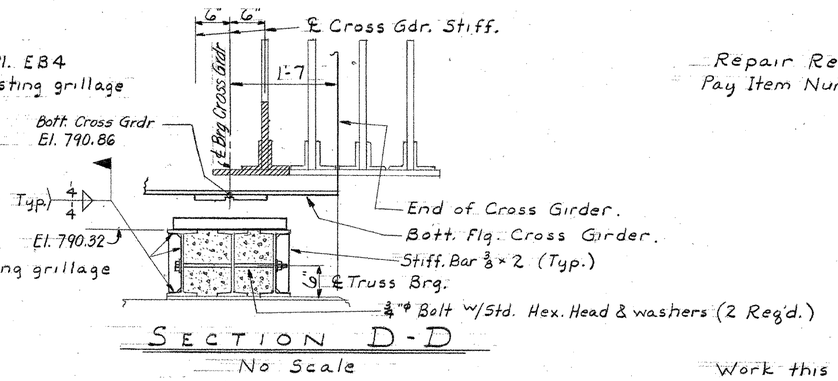
SECTION A-A (Similar)

No Scale



SECTION C-C

No Scale



SECTION D-D

No Scale

Repair Reference Number (33)
Pay Item Number 2000-1220

Work this sheet with Sh. 33 & 35

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

DES.	JZ
DWN.	A.V.G.
CHK.	J.Z.

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

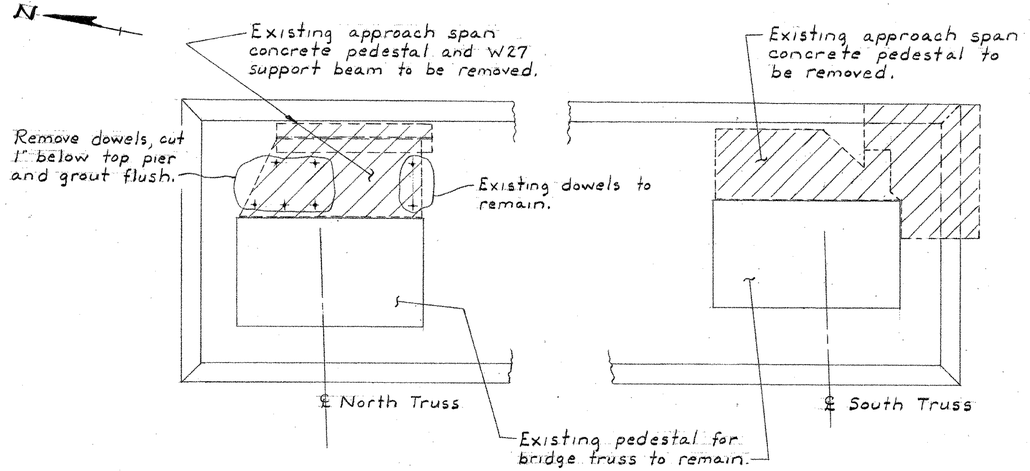
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 95 OF 98

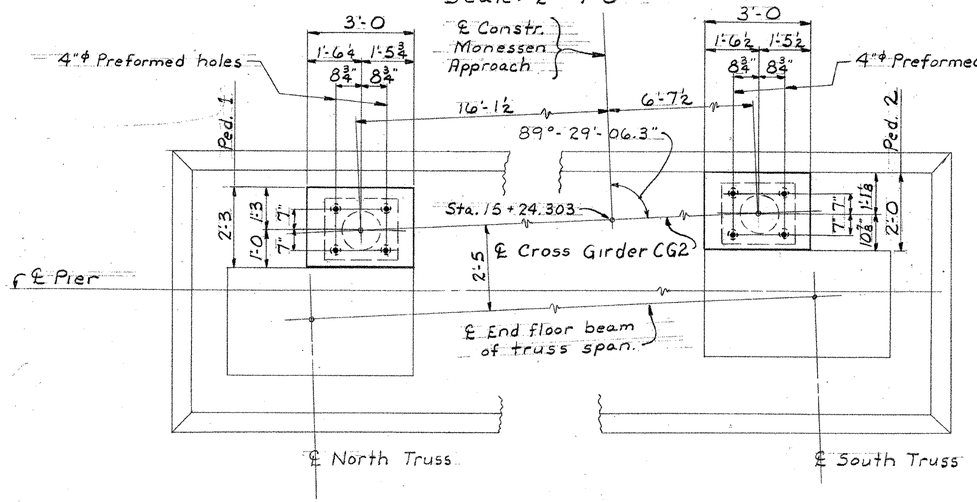
S- 15296

D 9002 (2-83) 4-83 A1329*



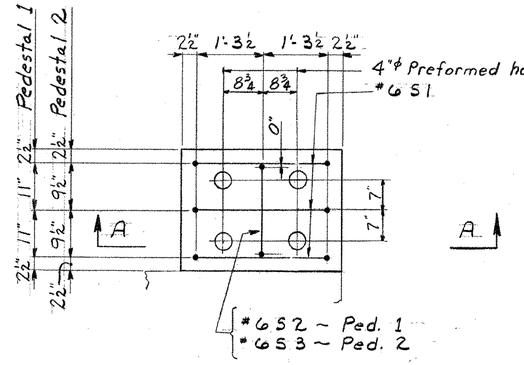
TOP PLAN - PIER 8 EXISTING

Scale: ½" = 1'-0



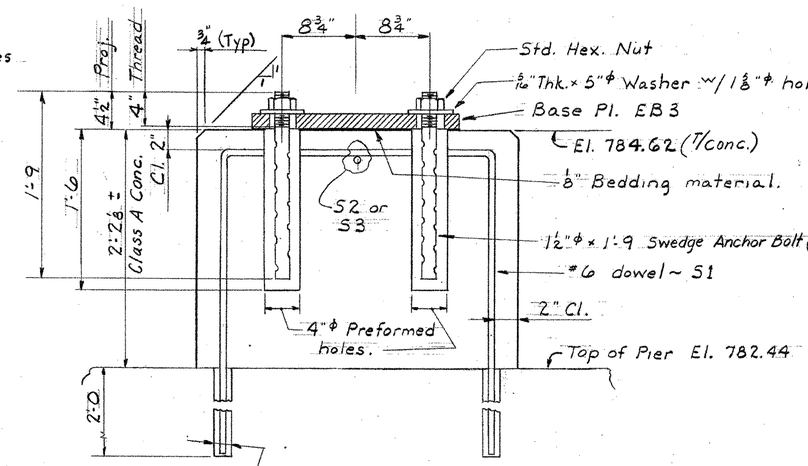
TOP PLAN - PIER 8 NEW

Scale: ½" = 1'-0



PEDESTAL 1
PEDESTAL 2

Scale: ¾" = 1'-0

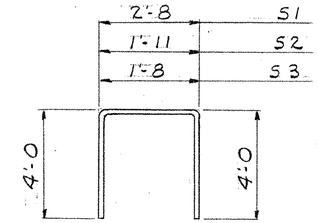


SECTION A-A

Scale: 1½" = 1'-0

Repair Reference Number (34)
Pay Item Number 2000-1230

Work this sheet with Sh. 34 & 35



REINF. DOWEL

#6 S1 × 10'-8 long ~ 6 Req'd.
#6 S2 × 9'-11 " ~ 1 "
#6 S3 × 9'-8 " ~ 1 "

PROCEDURE FOR ANCHOR BOLT INSTALLATION FOR BEARING

1. Provide preformed holes and protect against water entry and accumulation during freezing periods.
2. Clean preformed holes and remove all free standing water.
3. Place Base Plate of bearing and suspend anchor bolts, with nuts and washers in place, in hole. Do not grout.
4. Place bearing and cross girder, with top plate of bearing attached, and adjust masonry plate as required. Complete all superstructure steel placement.
5. Lift anchor bolts sufficiently to place non-shrink grout in the annular space between the anchor bolt and sidewall of the pre-formed hole. Work anchor bolt up and down to assure space or void is filled with grout. Also fill annular space in masonry plate to top of plate with non-shrink grout.
6. After non-shrink grout has cured and reached its design strength, tighten anchor bolt nuts.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

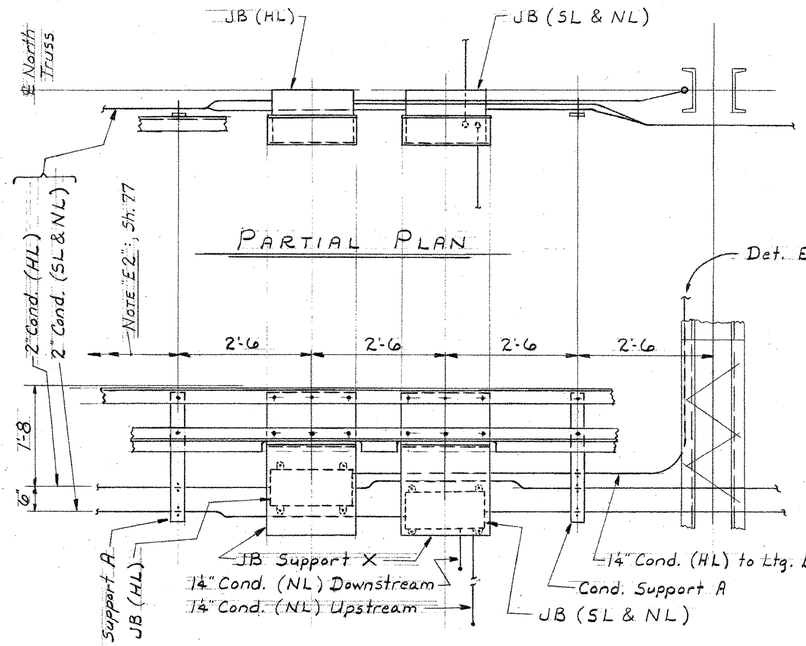
WASHINGTON AND WESTMORELAND COUNTIES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 96 OF 98
S- 15296

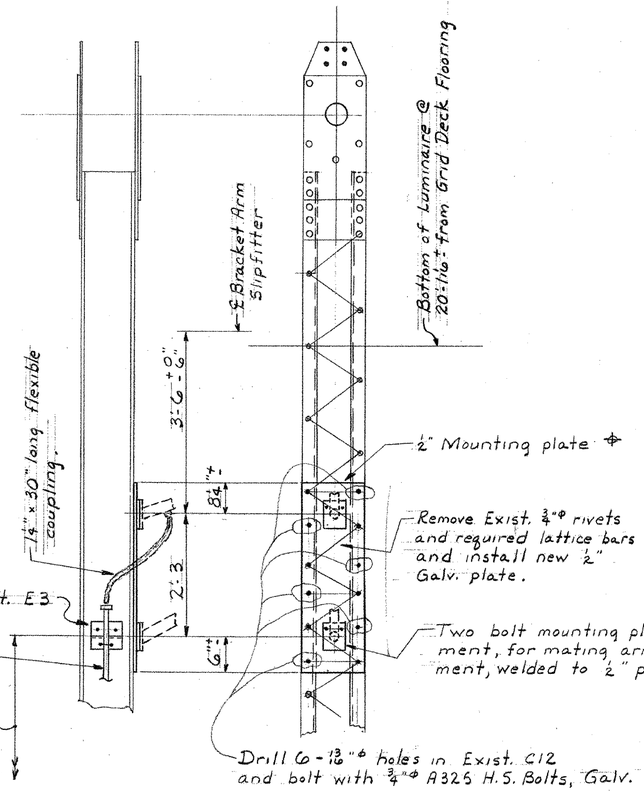
DES.	J.Z.
DWN.	A.V.G.
CHK.	J.Z.

D 9002 (2-83) 4-83 A1328*



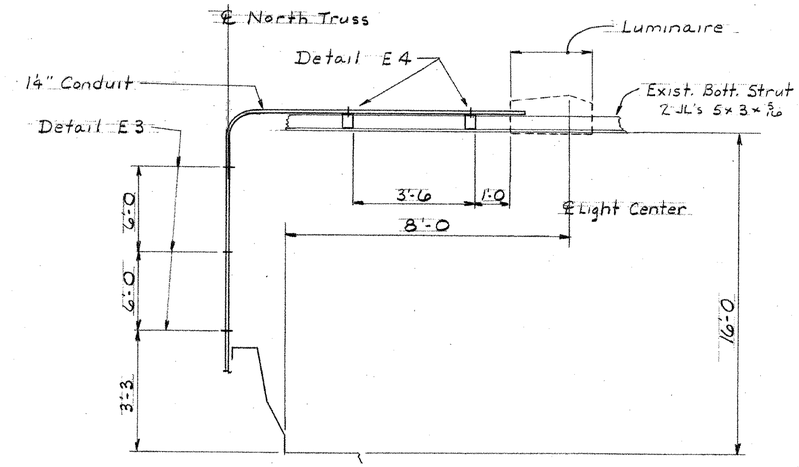
ELEVATION

Shown at Span 7, P.P. 18.
Span 7, P.P. 9 JB (SL&NL) only.
Span 8, P.P. 7 JB (HL) only.
Scale: 3/4" = 1'-0



DETAIL E1

Roadway light support.
Shown at Span 6 ~ P.P. 7, P.P. 13 and Span 7 ~ P.P. 7, P.P. 13.
Similar at Span 6 ~ P.P. 2, P.P. 18 and Span 7 ~ P.P. 2, P.P. 18.
For Steel Bracket Arm see "Highway & Navigation Lighting Plan Sh. 3."
Scale: 3/4" = 1'-0



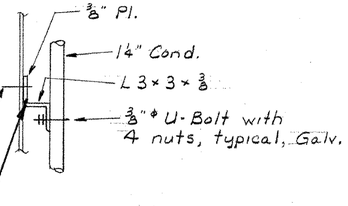
DETAIL E2

Roadway light support.
Shown at Span 8 ~ P.P. 2, P.P. 7.
No Scale

REPAIR (36)

Type A

Repair Reference Number (36)
Pay Item Number 2000-1250

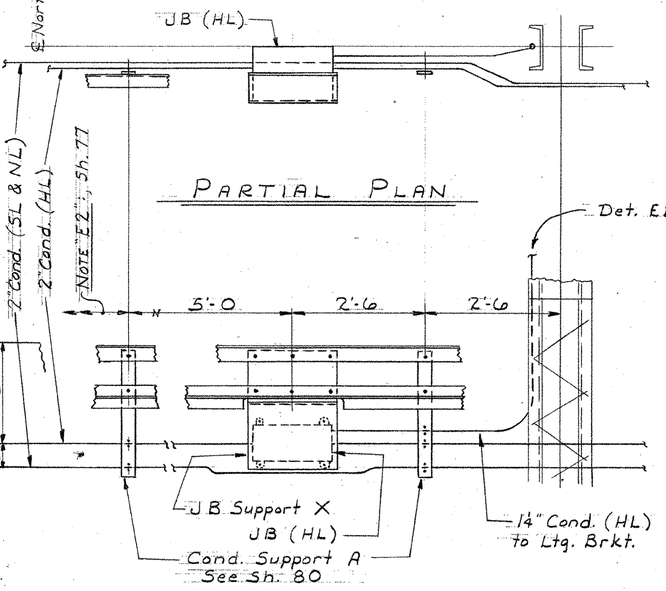


DETAIL E3

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

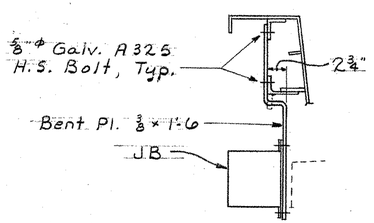
✠ = Plate and attachments Hot Dip Galv. after fabrication.

LEGEND
HL - Highway Lighting
NL - Navigation Lighting
SL - Sign Lighting

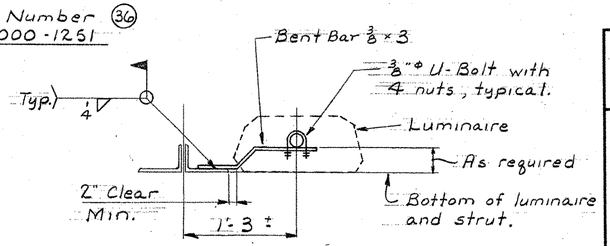


ELEVATION

Shown at Span 6 ~ P.P. 7, P.P. 13, P.P. 18 and Span 7 ~ P.P. 7, P.P. 13.
Opposite hand at Span 6 ~ P.P. 2 and Span 7 ~ P.P. 2 and Span 8 ~ P.P. 2.
Scale: 3/4" = 1'-0



JB SUPPORT X



DETAIL E4

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

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

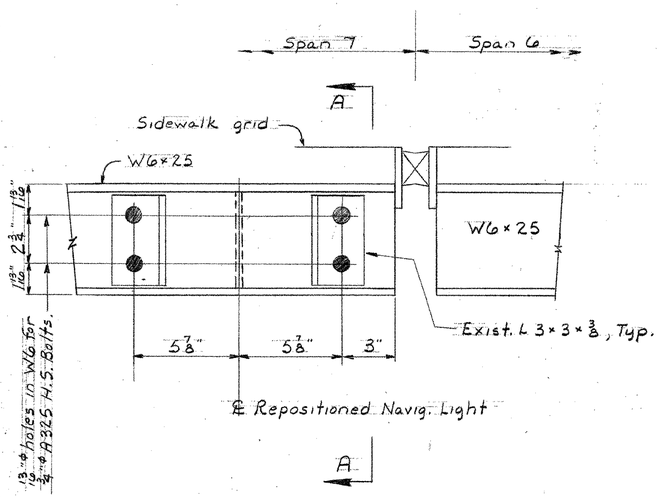
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B 10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI
MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 97 OF 98
S-15296

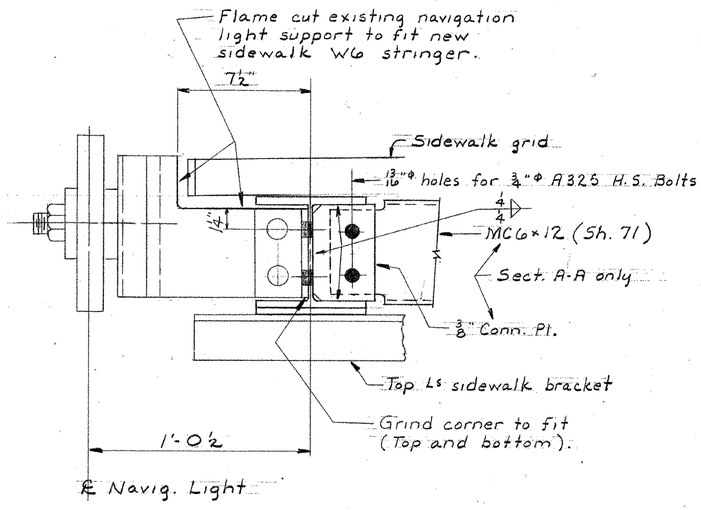
DES.	H.L.W.
DWN.	A.V.G.
CHK.	R.W.

D 9002 (2-83) 4-83 A1329*



REPAIR (35)

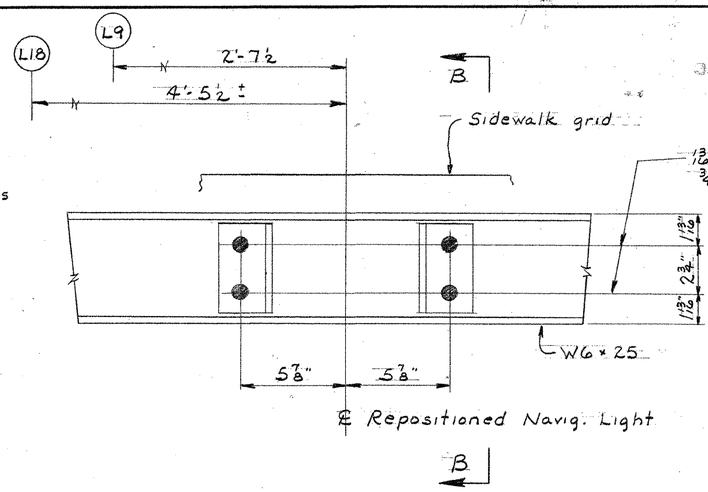
Type A ~ Repair to Navig. Light Support.
At Pier 6, North Truss side, exterior sidewalk stringer, looking South.
Existing pull chain, pull bar, locking pin, etc. to be repositioned on handrail. * *
Scale: 3" = 1'-0



SECTION A-A (Shown)

SECTION B-B

Scale: 3" = 1'-0



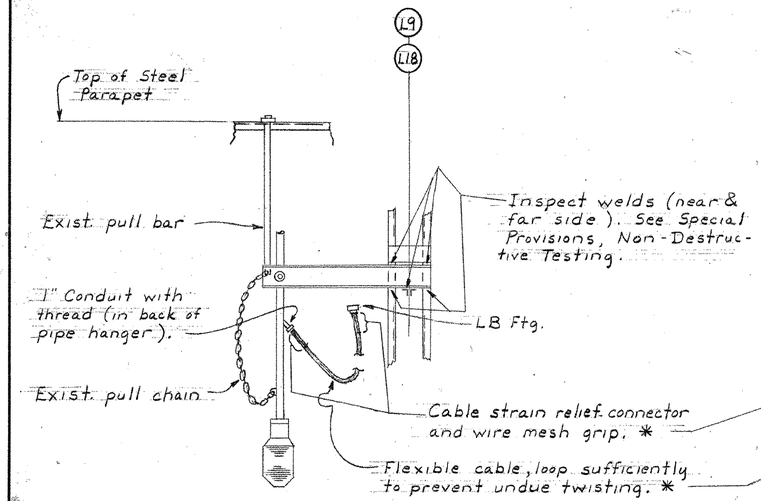
REPAIR (35)

Type B ~ Repair to Navig. Light Support.
Span 7, North Truss side @ P.P. L9, L18 exterior sidewalk stringer, looking South.
Existing pull chain, pull bar, locking pin, etc. to be repositioned on handrail. * *
Scale: 3" = 1'-0

** = Furnish and install additional hardware and/or, fabricated steel, as required, to complete working installation.

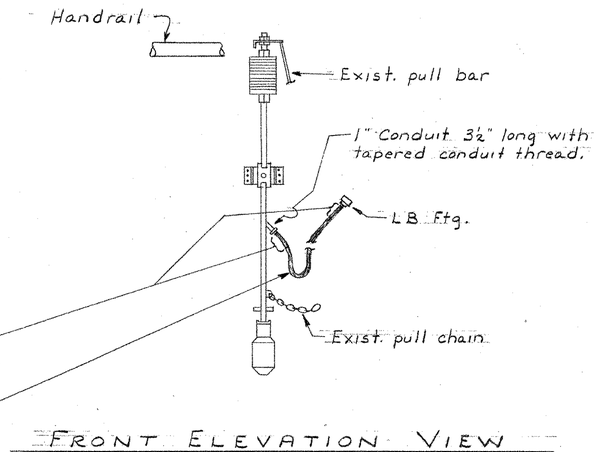
Repair Reference Number (35)

Pay Item Number 2000-1240 ~ Type A
Pay Item Number 2000-1241 ~ Type B
Pay Item Number 2000-1242



REPAIR (35)

Inspect Navig. Light Support.
Span 7, South Truss side @ P.P. L9, L18 looking North.
Existing pull chain, pull bar, locking pin, etc. to be altered (if required) and repositioned on Steel Parapet. * *
No Scale



FRONT ELEVATION VIEW

Span 7, North Truss side; looking South.
No Scale

DES.	RW.
DWN.	A.V.G.
CHK.	RW.

* = This contract.

Work this sheet with Sh. 64 and 71.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

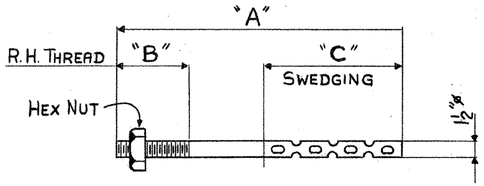
WASHINGTON AND WESTMORELAND COUNTIES
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28 N. CHARLEROI-MONESSEN BRIDGE OVER THE MONONGAHELA RIVER
BRIDGE REHABILITATION
STRUCTURE REPAIR DETAILS

RECOMMENDED JULY 19, 1984
BRIDGE ENGINEER

SHEET 98 OF 98

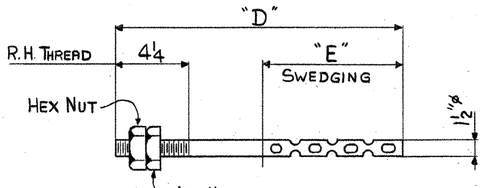
S-15296

AF 22693A



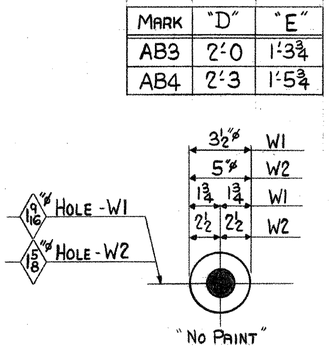
"No Paint"

MARK	"A"	"B"	"C"
AB1	2'-0	3¼	1'-4¾
AB2	2'-0	3¼	1'-3¾
AB5	1'-9	4	1'-4½



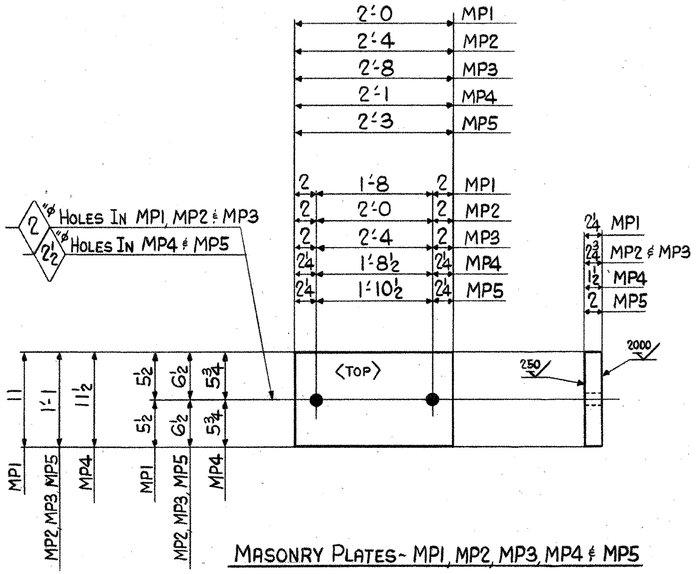
"No Paint"

MARK	"D"	"E"
AB3	2'-0	1'-3¾
AB4	2'-3	1'-5¾

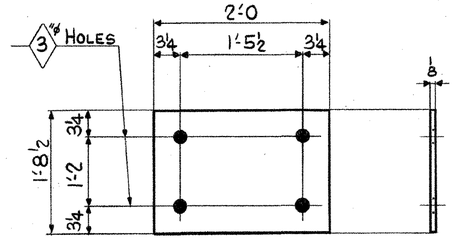


"No Paint"

WASHERS - W1 & W2

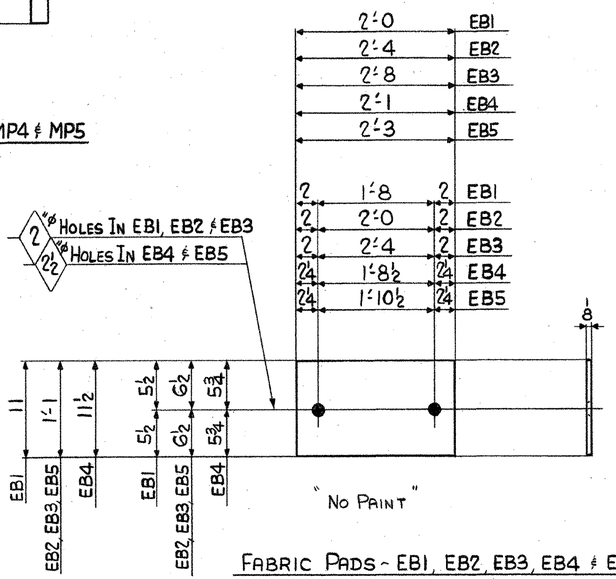


MASONRY PLATES - MP1, MP2, MP3, MP4 & MP5



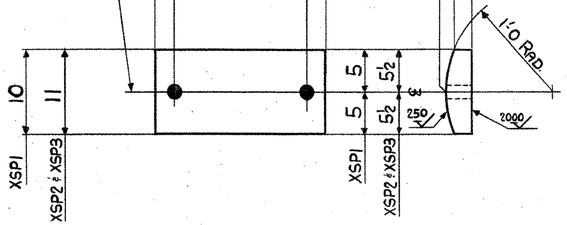
"No Paint"

FABRIC PAD - EB6

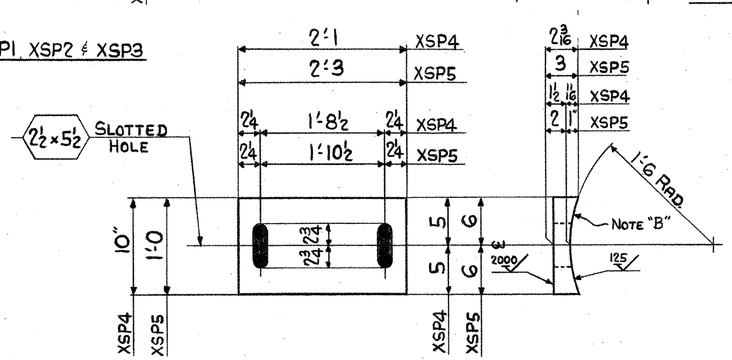


"No Paint"

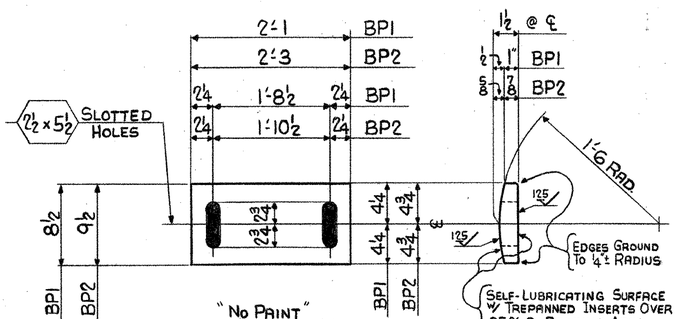
FABRIC PADS - EB1, EB2, EB3, EB4 & EB5



SOLE PLATES - XSP1, XSP2 & XSP3



SOLE PLATES - XSP4 & XSP5



"No Paint"

BRONZE PLATES - BP1 & BP2

NOTE:
SOLE PLS XSP1 THRU XSP5 ARE TO BE PAINTED (U.N.) AFTER BEING WELDED TO GIRDER IN SHOP.

NOTE "B"
NO PAINT; COAT FINISHED SURFACE WITH COSMOLINE.

SHOP NOTE

HOLES: AS NOTED
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG N1.

CODE 6000

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EA.
12	-	12	AB1	1½"ø SWEDGE BOLT	2	0	W1-A563 GR A STD HEX NUT GALV. A153	1/3	13
10	22	32	AB2	1½"ø	2	0		1/4	13
-	8	8	AB5	1½"ø	1	9		1/7	11
38	36	74	AB3	1½"ø SWEDGE BOLT	2	0	W1-JAM NUT & 1-A563 GR A STD HEX NUT GALV. A153	1/5	14
12	-	12	AB4	1½"ø	2	3		1/6	15
72	58	130	W1	3½"ø WASHER ⅜" THK			GALV. A153	1/8	.8
-	8	8	W2	5"ø WASHER 5/16" THK				1/9	1.5
19	18	37	BP1	BRONZE PL 8½ x 1½	2	1	ASTM B22 ALLOY 911, 2½% LEAD ALLOWED	1/28	78
6	-	6	BP2	BRONZE PL 9½ x 1½	2	3		1/28	90
6	-	6	MP1	PL 11 x 2¼	2	0		1/13	168
-	11	11	MP2	PL 13 x 2¾	2	4		1/12	284
5	-	5	MP3	PL 13 x 2¾	2	8		1/11	324
19	18	37	MP4	PL 11½ x 1½	2	1		1/15	122
6	-	6	MP5	PL 13 x 2	2	3		1/14	199
6	-	6	XSP1	PL 10 x 2¼	2	0		1/19	119
-	11	11	XSP2	PL 11 x 2¾	2	4		1/18	186
5	-	5	XSP3	PL 11 x 2¾	2	8		1/17	212
19	18	37	XSP4	PL 10 x 2 3/16	2	1		1/21	133
6	-	6	XSP5	PL 12 x 3	2	3		1/20	230
6	-	6	EB1	FABRIC PAD 11 x ⅛	2	0	FABRIC PADS AS PER PA D.O.T. SPEC FORM 408-1983 PER SECT. 1107.02 (P) XI	1/29	-
-	11	11	EB2	13 x ⅛	2	4		1/29	-
5	-	5	EB3	13 x ⅛	2	8		1/29	-
19	18	37	EB4	11½ x ⅛	2	1		1/29	-
6	-	6	EB5	13 x ⅛	2	3		1/29	-
-	2	2	EB6	FABRIC PAD 20½ x ⅛	2	0		1/29	-

NO.	REVISION	DATE

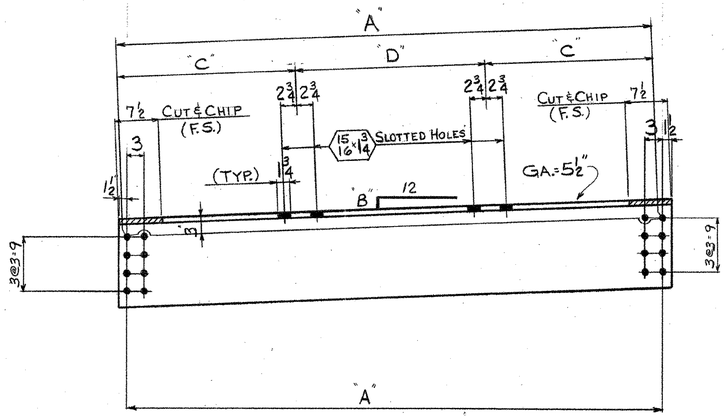
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

BEARING DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

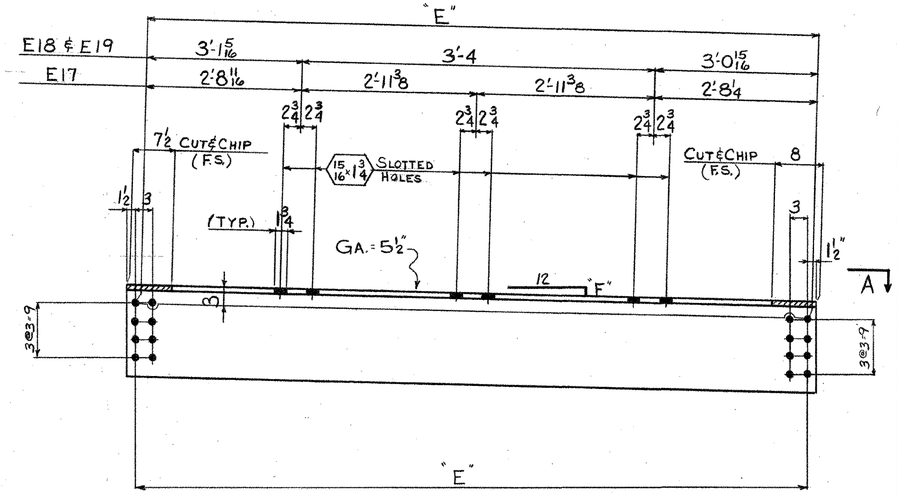
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: JTC CHK.D. BY: THS DATE: 1-21-85
CONTRACT NUMBER: PA-84197-1 & 2 DRAWING NUMBER: 1 OF 76

© GRAF POLYTRACE 036

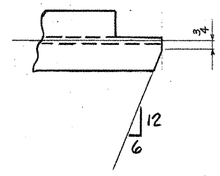
AF 22683A



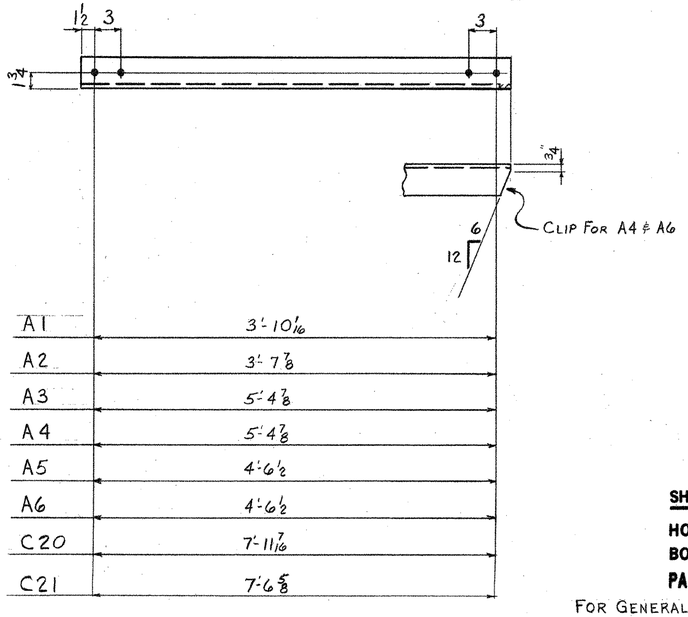
MARK	"A"	"B"	"C"	"D"
	E1	7'-11 7/16	1/16	2'-6 15/16	2'-9 9/16
OPP. HD.	E2		1/16		
	E3		1/8		
OPP. HD.	E4		1/8		
	E5		3/16		
OPP. HD	E6		3/16		
	E7		1/4		
OPP. HD.	E8		1/4		
	E9		5/16		
OPP. HD.	E10		5/16		
	E11	7'-6 5/8	1/8	2'-5 5/16	2'-8
OPP. HD.	E12		1/8		
	E13		3/16		
OPP. HD.	E14		3/16		
	E15		1/4		
	E16		5/16		



MARK	E	F
E17	11'-3 11/16	1/4
E18	9'-6 1/4	5/16
E19	9'-6 1/4	1/4



SECT. A



A1	3'-10 1/16
A2	3'-7 7/8
A3	5'-4 7/8
A4	5'-4 7/8
A5	4'-6 1/2
A6	4'-6 1/2
C20	7'-11 7/16
C21	7'-6 5/8

SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: NONE
PAINT: SEE DWG. N1
FOR GENERAL NOTES SEE DWG. N1

CODE 5300

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EACH
1	—	ONE	E1	WT.15 × 49.5	8	2½		7/8	406
1	—	ONE	E2		8	2½			406
—	1	ONE	E3		8	2 5/8			407
—	1	ONE	E4		8	2 5/8			407
2	2	4	E5		8	2¾			407
3	2	5	E6		8	2¾			407
1	1	2	E7		8	2¾			407
1	1	2	E8		8	2¾			407
1	1	2	E9		8	2 7/8			408
—	1	ONE	E10		8	2 7/8			408
1	—	ONE	E11		7	9¾			387
—	1	ONE	E12		7	9¾			387
—	1	ONE	E13		7	9 7/8			387
2	1	3	E14		7	9 7/8			387
1	—	ONE	E15		7	10			388
—	1	ONE	E16	WT 15 × 49.5	7	10		7/8	388
1	—	ONE	E17	WT 15 × 66	11	7		1/2	764
1	—	ONE	E18	WT 15 × 66	9	9 5/8		1/2	647
—	1	ONE	E19	WT 15 × 66	9	9 5/8		1/2	647
20	20	40	A1	4 3½ × 3½ × 3/8	4	1⅛		7/1	35
8	8	16	A2		3	10 7/8			33
1	—	ONE	A3		5	7 7/8			48
1	—	ONE	A4		5	7 7/8			48
1	1	2	A5		4	9½			41
1	1	2	A6		4	9½			41
45	35	80	C20		8	2½			70
36	28	64	C21	4 3½ × 3½ × 3/8	7	9 5/8		7/7	66

NO.	REVISION	DATE

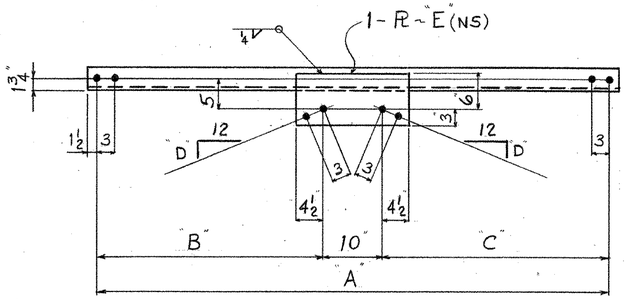
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

CROSS FRAME DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

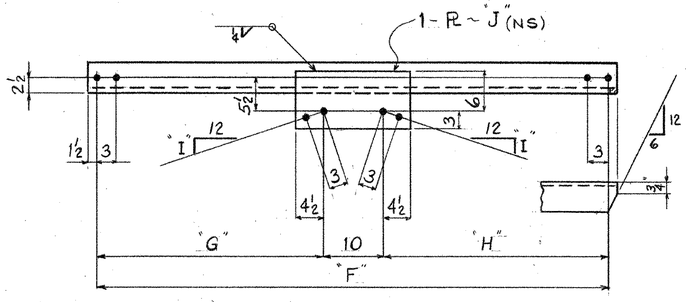
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: JTC DATE: 1-23-85
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: 2 OF 76

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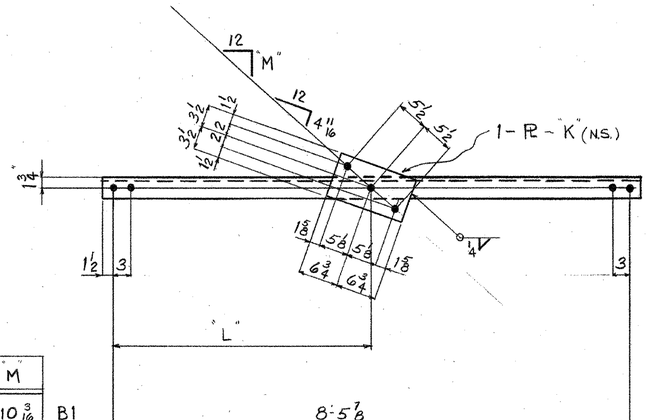
AF 22693A



	MARK	"A"	"B"	"C"	"D"	"E"
	C1	7'-11 7/16	3'-6 13/16	3'-6 5/8	4 7/8	mα
OPP. HD.	C2		3'-6 13/16	3'-6 5/8		
	C3		3'-6 15/16	3'-6 1/2		
OPP. HD.	C4		3'-6 15/16	3'-6 1/2		
	C5		3'-7 1/16	3'-6 3/8		
OPP. HD.	C6		3'-7 1/16	3'-6 3/8		
	C7		3'-7 3/16	3'-6 1/4		
OPP. HD.	C8		3'-7 3/16	3'-6 1/4		
	C9		3'-7 5/16	3'-6 1/8		
OPP. HD.	C10		3'-7 5/16	3'-6 1/8		
	C11	7'-6 5/8	3'-4 1/2	3'-4 1/8	5 1/8	mb
OPP. HD.	C12		3'-4 1/2	3'-4 1/8		
	C13		3'-4 11/16	3'-3 15/16		
OPP. HD.	C14		3'-4 11/16	3'-3 15/16		
	C15		3'-4 13/16	3'-3 13/16		
	C16		3'-4 15/16	3'-3 11/16		



MARK	"F"	"G"	"H"	"I"	"J"
C17	11'-3 11/16	5'-2 3/8	5'-3 5/16	3 1/16	mc
C18	9'-6 1/4	4'-3 5/8	4'-4 5/8	3 11/16	md
C19	9'-6 1/4	4'-3 5/8	4'-4 5/8	3 11/16	md



"K"	"L"	"M"		
mf	4'-2 15/16	10 3/16	B1	8'-5 7/8
mf	4'-3	10 3/16	B2	8'-6
mf	4'-3 1/16	10 3/16	B3	8'-6 1/8
mf	4'-3 3/16	10 3/16	B4	8'-6 3/8
mf	4'-3 1/4	10 3/16	B5	8'-6 1/2
mf	4'-0 11/16	10 7/8	B6	8'-1 3/8
mf	4'-0 7/8	10 7/8	B7	8'-1 3/4
mf	4'-0 15/16	10 7/8	B8	8'-1 7/8
mf	4'-1 1/16	10 7/8	B9	8'-2 1/8
mg	4'-2 15/16	10 3/16	B10	8'-5 7/8
mg	4'-3	10 3/16	B11	8'-6
mg	4'-3 1/16	10 3/16	B12	8'-6 1/8
mg	4'-3 1/8	10 3/16	B13	8'-6 1/4
mg	4'-3 3/16	10 3/16	B14	8'-6 3/8
mg	4'-3 1/4	10 3/16	B15	8'-6 1/2
mg	4'-0 5/8	10 7/8	B16	8'-1 1/4
mg	4'-0 11/16	10 7/8	B17	8'-1 3/8
mg	4'-0 3/4	10 7/8	B18	8'-1 1/2
mg	4'-0 13/16	10 7/8	B19	8'-1 5/8
mg	4'-0 7/8	10 7/8	B20	8'-1 3/4
mg	4'-0 15/16	10 7/8	B21	8'-1 7/8
mg	4'-1	10 7/8	B22	8'-2
mg	4'-1 1/16	10 7/8	B23	8'-2 1/8

SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EACH
2	3	5	B18	∠3 1/2 × 3 1/2 × 3/8	8	4 1/2		7/7	86
1	—	ONE	B19		8	4 5/8			86
8	7	15	B20		8	4 3/4			86
5	2	7	B21		8	4 7/8			87
3	—	3	B22		8	5			87
1	3	4	B23	∠3 1/2 × 3 1/2 × 3/8	8	5 1/8		7/7	87
14	9	23	mf	PL 7 × 15/16	1	1 1/2	FOR B1 - B9	7/9	
67	54	121	mg	PL 7 × 9/16	1	1 1/2	FOR B10 - B23	7/10	

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EACH
1	—	ONE	C1	∠3 1/2 × 3 1/2 × 3/8	8	2 1/2		7/7	88
1	—	ONE	C2		8	2 1/2			88
—	1	ONE	C3		8	2 1/2			88
—	1	ONE	C4		8	2 1/2			88
2	2	4	C5		8	2 1/2			88
3	2	5	C6		8	2 1/2			88
1	1	2	C7		8	2 1/2			88
1	1	2	C8		8	2 1/2			88
1	1	2	C9		8	2 1/2			88
—	1	ONE	C10		8	2 1/2			88
1	—	ONE	C11		7	9 5/8			85
—	1	ONE	C12		7	9 5/8			85
—	1	ONE	C13		7	9 5/8			85
2	1	3	C14		7	9 5/8			85
1	—	ONE	C15		7	9 5/8			85
—	1	ONE	C16		7	9 5/8		7/7	85
10	10	20	ma	PL 9 × 3/8	1	7	FOR C1 - C10	7/11	
4	4	8	mb	PL 9 × 3/8	1	7	FOR C11 - C16	7/11	
1	—	ONE	C17	∠5 × 5 × 3/8	11	6 3/4		7/5	160
1	—	ONE	C18	∠5 × 5 × 3/8	9	9 4		7/5	138
—	1	ONE	C19	∠5 × 5 × 3/8	9	9 4		7/5	138
1	—	1	mc	PL 9 × 3/8	1	7	FOR C17	7/11	
1	1	2	md	PL 9 × 3/8	1	7	FOR C18 & C19	7/11	
2	—	2	B1	∠3 1/2 × 3 1/2 × 3/8	8	8 7/8		7/7	99
—	1	ONE	B2		8	9			99
4	2	6	B3		8	9 1/8			100
2	1	3	B4		8	9 3/8			100
2	1	3	B5		8	9 1/2			100
1	1	2	B6		8	4 3/8			96
1	1	2	B7		8	4 3/4			96
1	1	2	B8		8	4 7/8			97
1	1	2	B9		8	5 1/8			97
7	—	7	B10		8	8 1/8			89
—	6	6	B11		8	9			89
14	12	26	B12		8	9 1/8			90
1	—	ONE	B13		8	9 1/4			90
8	6	14	B14		8	9 3/8			90
5	6	11	B15		8	9 1/2			90
1	1	2	B16		8	4 1/4			86
11	8	19	B17	∠3 1/2 × 3 1/2 × 3/8	8	4 3/8		7/7	86

SHOP NOTE

HOLES: 15/16 ϕ

BOLTS: NONE

PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1

CODE 5300

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.

1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211

A Subsidiary of High Industries, Inc.

CROSS FRAME DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

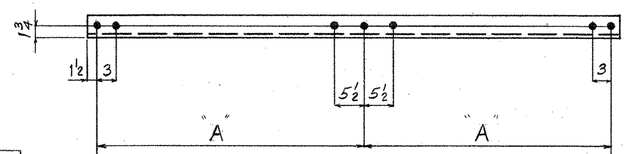
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: JTC DATE: 1-23-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: 3 OF 76

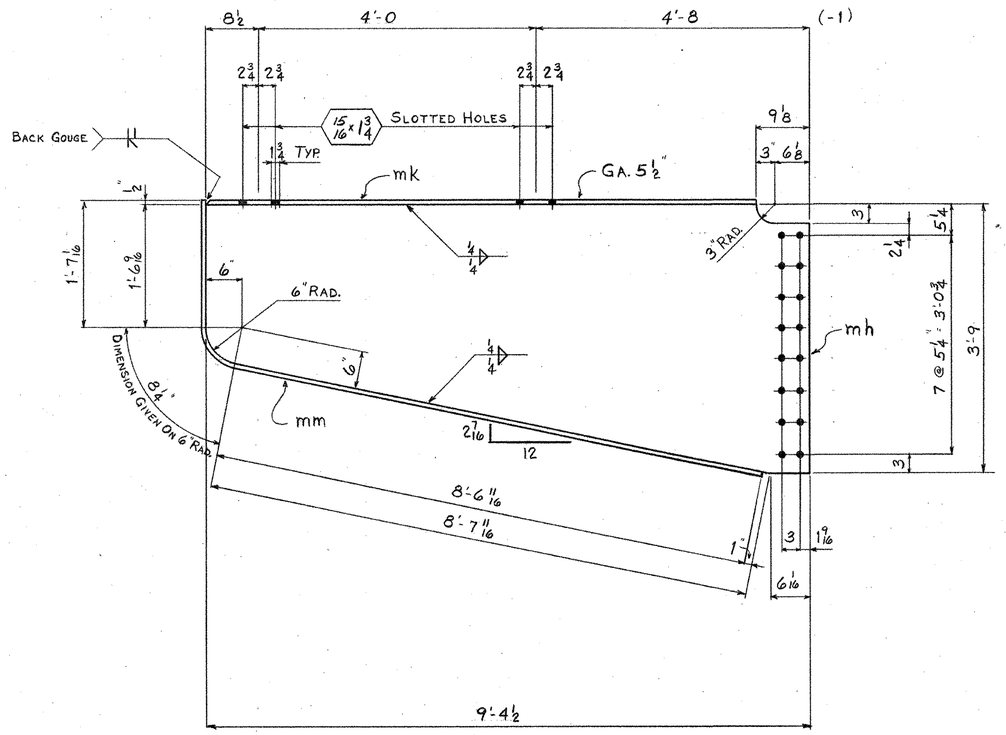
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AF 22683A

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001



"A"		
4'-2¾	A7	8'-5½
4'-2⅝	A8	8'-5¼
4'-2⁹⁄₁₆	A9	8'-5⅛
4'-2½	A10	8'-5
4'-2⁷⁄₁₆	A11	8'-4⅞
4'-0½	A12	8'-1
4'-0⁷⁄₁₆	A13	8'-0⅞
4'-0⅜	A14	8'-0¾
4'-0⁵⁄₁₆	A15	8'-0⅝
4'-0¼	A16	8'-0½
4'-0³⁄₁₆	A17	8'-0⅜
4'-0⅛	A18	8'-0¼



BRACKET MK. BR1

SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EACH
9	—	9	A7	∠3½×3½×⅜	8	8½		7/7	74
—	7	7	A8		8	8¼			74
18	14	32	A9		8	8⅛			74
11	7	18	A10		8	8			74
7	7	14	A11		8	7⅞			74
5	4	9	A12		8	4			71
8	6	14	A13		8	3⅞			71
3	3	6	A14		8	3¾			71
8	6	14	A15		8	3⅝			71
7	5	12	A16		8	3½			70
3	—	3	A17		8	3⅜			70
2	4	6	A18	∠3½×3½×⅜	8	3¼		7/7	70
1	—	ONE BRACKET MK. BR1							748
		1	mh	R 45 × ⅜	9	4½		7/15	
		1	mk	R 10 × ½	8	7⅜		7/16	
		1	mm	R 10 × ½	10	10	BENT	7/16	

SHOP NOTE

HOLES: 15/16" Ø (U.N.)
BOLTS: NONE
PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1

CODE: 5300

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

CROSS FRAME & BRACKET DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

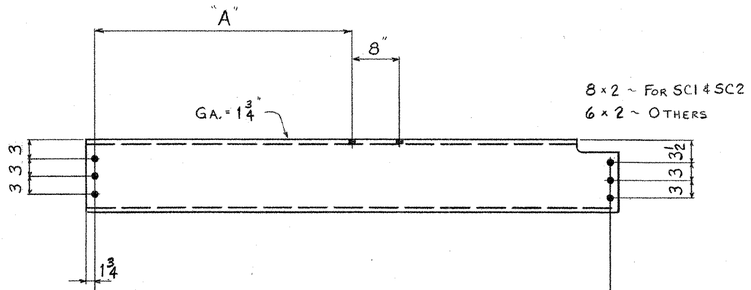
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: JTC DATE: 1-24-85

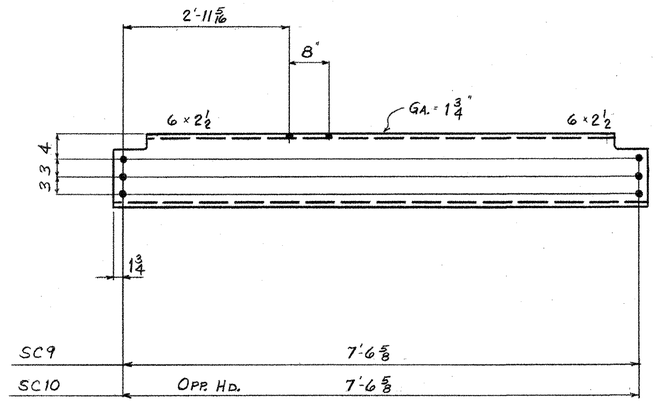
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: 4 OF 76

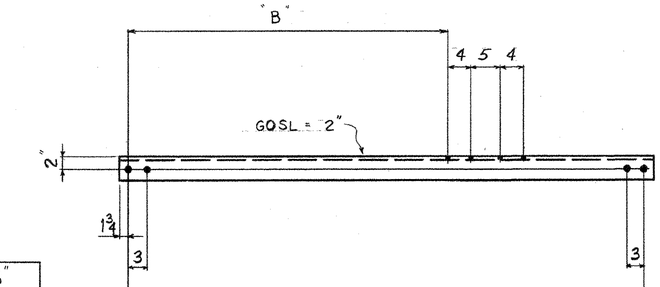
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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

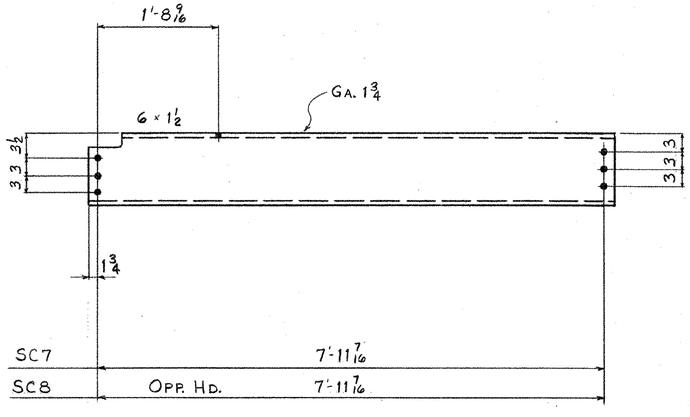


"A"			
4'-1 1/16	SC1		7'-11 5/16
4'-1 1/16	SC2	OPP. HD.	7'-11 5/16
4'-1 1/8	SC3		7'-11 7/16
4'-1 1/8	SC4	OPP. HD.	7'-11 7/16
3'-8 5/16	SC5		7'-6 5/8
3'-8 5/16	SC6	OPP. HD.	7'-6 5/8





"B"		
4'-10 7/16	MS1	7'-11 5/16
4'-10 1/2	MS2	7'-11 7/16
4'-5 11/16	MS3	7'-6 5/8



SHIPMENT 1	SHIPMENT 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT EACH
1	–	ONE	SC1	C12 x 25	8	3		7/20	205
1	–	ONE	SC2		8	3		7/20	205
1	1	2	SC3		8	3		7/20	205
1	1	2	SC4		8	3		7/20	205
–	1	ONE	SC5		7	10		7/21	195
–	1	ONE	SC6	C12 x 25	7	10		7/21	195
1	1	2	SC7	C12 x 25	8	3		7/20	205
1	1	2	SC8	C12 x 25	8	3		7/20	205
1	–	ONE	SC9	C12 x 25	7	10		7/21	195
1	–	ONE	SC10	C12 x 25	7	10		7/12	195
1	–	ONE	MS1	L 4 x 4 x 3/8	8	3		7/22	80
1	1	2	MS2	4 x 4 x 3/8	8	3		7/22	80
1	1	2	MS3	4 x 4 x 3/8	7	10		7/23	76

SHOP NOTE

HOLES: 15/16" ϕ

BOLTS: NONE

PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1

CODE: 5100

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.

1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211

A Subsidiary of High Industries, Inc.

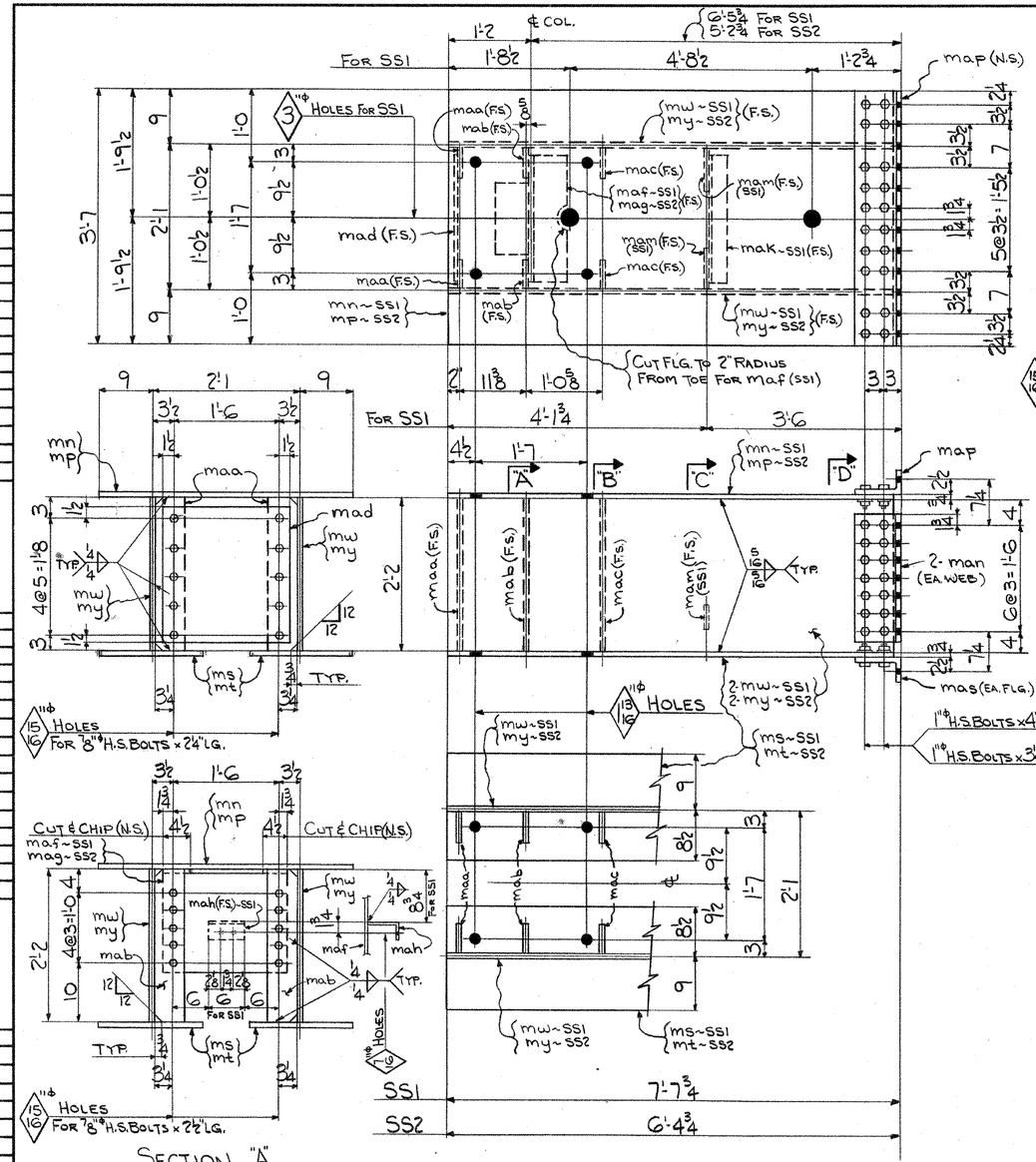
SCUPPER CHANNEL DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-1-85

CONTRACT NUMBER: PA-84197 1 & 2 DRAWING NUMBER: 5 OF 76

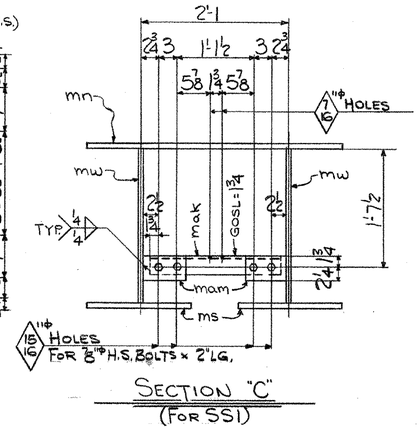
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	N32-P014-001



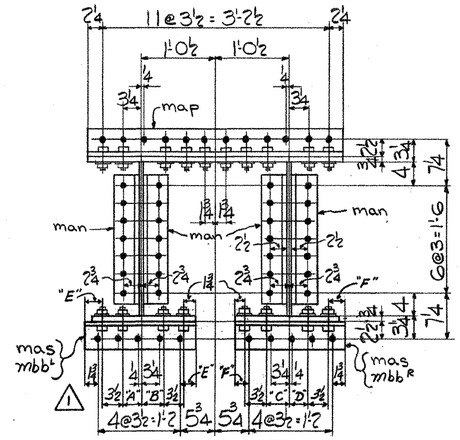
SECTION "A"

SECTION "B"

SIGN SUPPORTS MK. SS1 & SS2

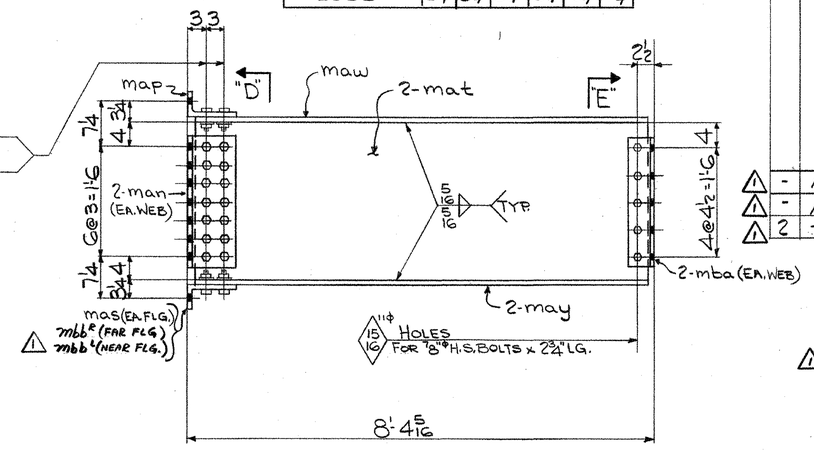


SECTION "C"
(FOR SS1)

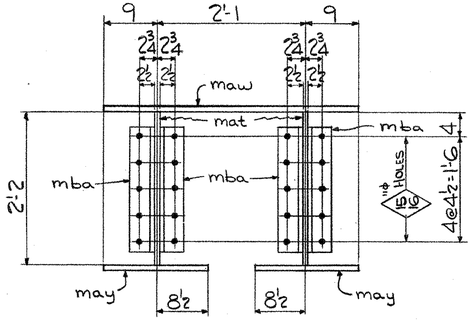


SECTION "D"

MARK	"A"	"B"	"C"	"D"	"E"	"F"
SS1 SS2 & SS3	3¾	3¼	3¼	3¾	1½	1¾
SS3A	3¾	3¼	3¾	3¼	1¾	2¼
SS3B	3¼	3¾	3¼	3¾	2¼	1¾



SIGN SUPPORT MK. SS3, SS3A & SS3B



SECTION "E"

SHOP NOTE

HOLES: 1 11/16" (U.N.)

BOLTS: AS NOTED

PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1

CODE: 6800

BILL OF MATERIAL

SHT. PT. 1	SHT. PT. 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHT. & WEIGHT EACH
1	1	2	SS1	SIGN SUPPORTS					3129
1	1	2	SS2	SIGN SUPPORTS					2737
		2	mn	PL 43 x ¾	7	7	SS1	8/3	
		2	mp	PL 43 x ¾	6	4	SS2	8/3	
		4	ms	PL 17½ x ¾	7	7	SS1	8/4	
		4	mt	PL 17½ x ¾	6	4	SS2	8/4	
		4	mw	PL 26 x ½	7	7	SS1	8/5	
		4	my	PL 26 x ½	6	4	SS2	8/5	
		8	maa	BAR 5 x 5/8	2	2		8/10	
		8	mab	BAR 5 x 5/8	2	2		8/10	
		8	mac	BAR 5 x 5/8	2	2		8/10	
		4	mad	PL 21 x 3/8	1	11		8/20	
		2	maf	WT 18 x 67.5	1	9½	SS1	8/12	
		2	mag	WT 18 x 67.5	1	9½	SS2	8/12	
		2	mah	L 5 x 3 x 3/8	0	6	SS1	8/17	
		2	mak	L 3 x 3 x 3/8	1	11	SS1	8/18	
		4	mam	PL 4 x 3/8	0	7	SS1	8/20	
		16	man	L 8 x 4 x 1	1	9½		8/14	
		4	map	L 8 x 4 x 1	3	7		8/14	
		8	mas	L 8 x 4 x 1	1	5½		8/14	
		8		7/8" H.S. BOLTS	0	2	SS1	B1/19	
		40		7/8" H.S. BOLTS	0	2¾		B1/20	
		40		7/8" H.S. BOLTS	0	2½		B1/21	
		144		1" H.S. BOLTS	0	3¼		B1/25	
		112		1" H.S. BOLTS	0	4		B1/26	
		48		WASHERS FOR 7/8" H.S. BOLTS			SS1	B1/28	
		40		DO. DO.			SS2	B1/28	
		256		WASHERS FOR 1" H.S. BOLTS				B1/29	
1	/	ONE	SS3A	SIGN SUPPORT					3061
1	/	ONE	SS3B	SIGN SUPPORT					3061
2	-	2	SS3	SIGN SUPPORTS					3061
		8	mat	PL 26 x ½	8	3		8/5	
		4	maw	PL 43 x ¾	8	3		8/3	
		8	may	PL 17½ x ¾	8	3		8/4	
		16	man	L				8/14	
		4	map	L				8/14	
		6	mas	L			(4) SS3 (1) EA SS3A & SS3B	8/14	
		16	mba	L 4 x 4 x ½	1	9		8/15	
		40		7/8" H.S. BOLTS	0	2¾		B1/22	
		144		1" H.S. BOLTS	0	3¼		B1/25	
		112		1" H.S. BOLTS	0	4		B1/26	
		40		WASHER FOR 7/8" H.S. BOLTS				B1/28	
		256		WASHER FOR 1" H.S. BOLTS				B1/29	
1		1	mbb^R	L 8 x 4 x 1"	1	6	SS3A	8A/3	
1		1	mbb^L	L 8 x 4 x 1"	1	6	SS3B	8A/3	

NO.	REVISION	DATE
1	NEW HOLES IN COMMTS DUE TO FAB ERROR	7-2-85

HIGH STEEL STRUCTURES, INC.
1005 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

SIGN SUPPORTS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

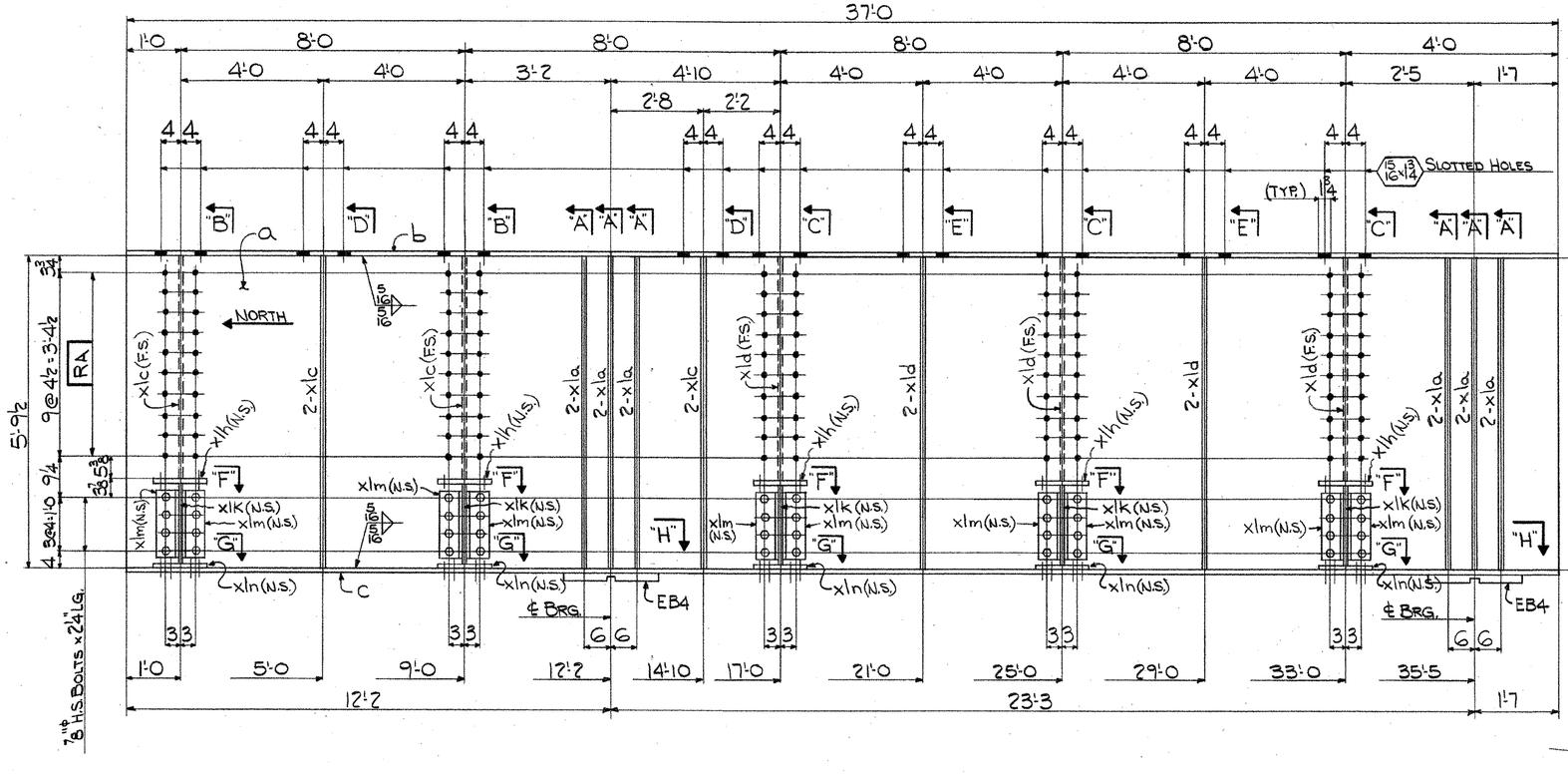
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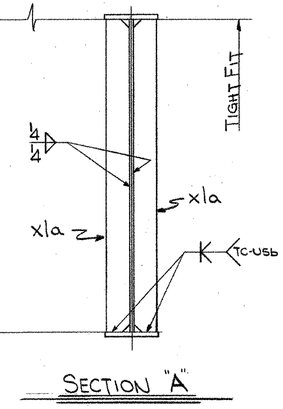
IN CHARGE: COLONIAL MADE BY: THS CHK'D. BY: JTC DATE: 2-11-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: 6 OF 76

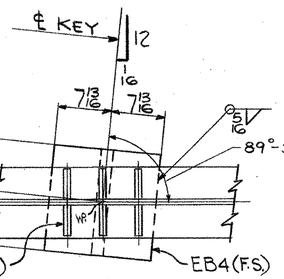
AF 22683A

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

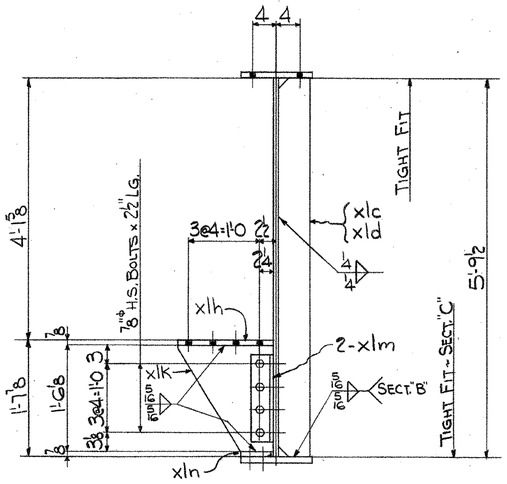




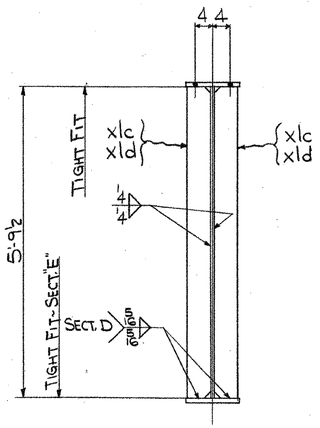
SECTION "A"



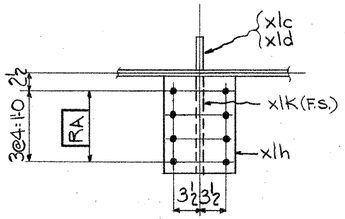
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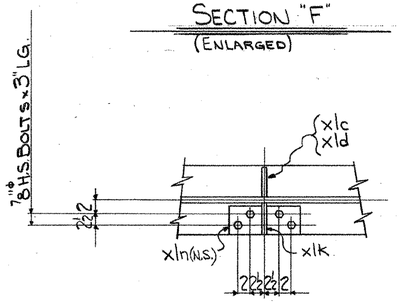
SECTION "B" & "C"
(ENLARGED)



SECTION "D" & "E"



SECTION "F"
(ENLARGED)



SECTION "G"
(ENLARGED)

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHT. P. WEIGHT
ONE	CG1	GIRDER					9,176
1	a	PL 69½ x ½	37	0	FCM		
1	b	PL 12 x ⅞	37	0	FCM		
1	c	PL 12 x ⅞	37	0	FCM		
12	x1a	BAR 5½ x ⅝	5	9½			
6	x1c	BAR 5½ x ½	5	9½			
7	x1d	BAR 5½ x ½	5	9½			
5	x1h	PL 12 x ⅞	1	4			
5	x1k	PL 16 x ⅜	1	6⅛			
10	x1m	L 5 x 3½ x ⅜	1	3			
5	x1n	BAR 5½ x ⅞	1	0			
40		⅞"ø H.S. BOLTS	0	2¼		B1 20	
20		⅞"ø H.S. BOLTS	0	2½		B1 21	
20		⅞"ø H.S. BOLTS	0	3		B1 23	
80		WASHERS FOR ⅞"ø H.S. BOLTS				B1 28	
2	EB4	SOLE PLS			DET. ON DWG. PB2		

SHOP NOTE

HOLES: 15/16"ø (U.N.)
BOLTS: AS NOTED
PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
NOTE: STIFFENERS TO BE PLACED 90° TO ℄ BRG. CHORD LINE.

CODE: 4700

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER CG1
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

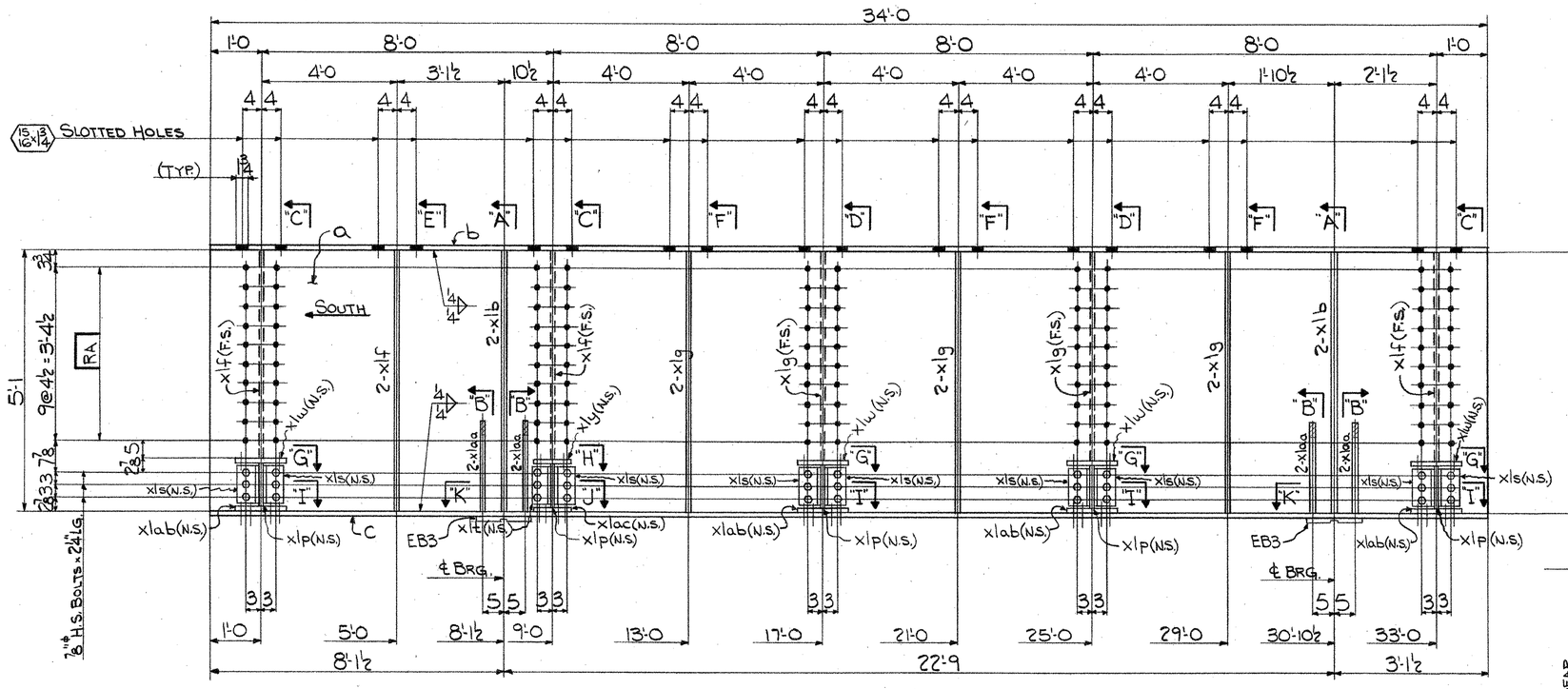
IN CHARGE: COLONIAL MADE BY: THS CHK'D. BY: JTC DATE: 1-22-85

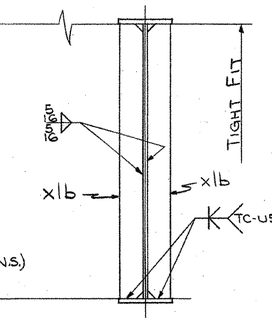
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 7 OF 76

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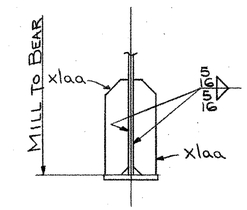
AF 22683A

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014--001

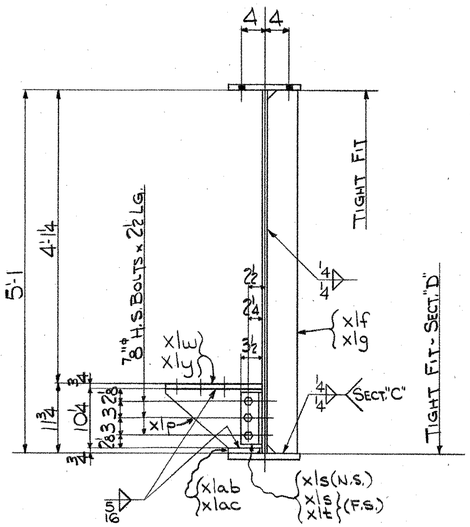




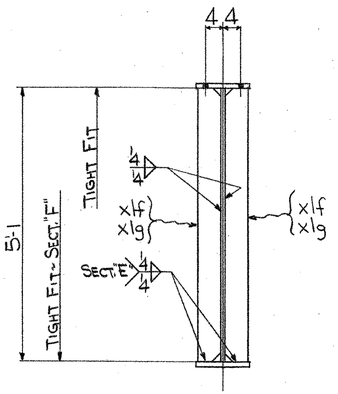
SECTION "A"



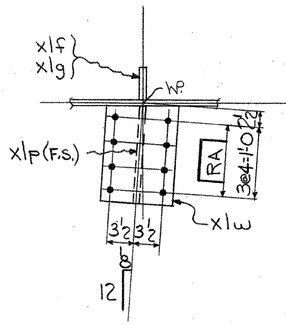
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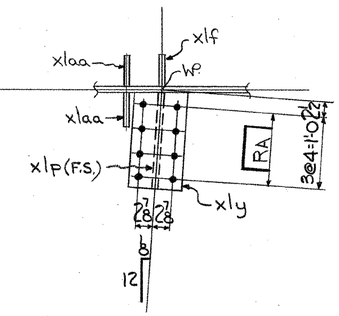
SECTION "C" & "D"
(ENLARGED)



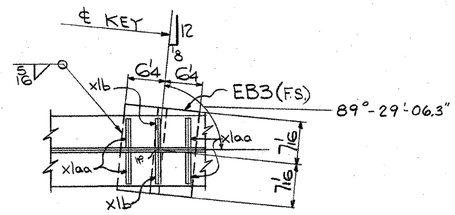
SECTION "E" & "F"



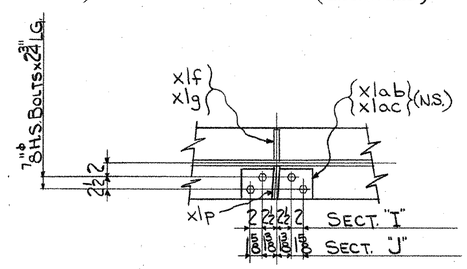
SECTION "G"
(ENLARGED)



SECTION "H"
(ENLARGED)



SECTION "K"



SECTION "I" & "J"
(ENLARGED)

SHOP NOTE

HOLES: 15/16"ϕ (U.N.)
BOLTS: AS NOTED
PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
NOTE: STIFFENERS TO BE PLACED 90° TO ℄ BRG. CHORD LINE.

CODE: 4700

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP. WEIGHT
ONE	CG2	GIRDER					7,108
1	a	PL 61 x ½	34	0	FCM		
1	b	PL 12 x ¾	34	0	FCM		
1	c	PL 12 x ¾	34	0	FCM		
4	x1b	BAR 5½ x 1	5	1			
5	x1f	BAR 5 x ⅜	5	1			
8	x1g	BAR 5 x ⅜	5	1			
5	x1p	PL 10¼ x ⅜	1	4			
9	x1s	L 5 x 3½ x ⅜	0	9			
1	x1t	L 4½ x 3½ x ⅜	0	9	(CUT 5 x 3½)		
4	x1w	PL 12 x ¾	1	4			
1	x1y	PL 9 x ¾	1	4			
8	x1aa	BAR 5½ x ⅞	1	9			
4	x1ab	BAR 5½ x ¾	1	0			
1	x1ac	BAR 5½ x ¾	0	9			
30		7/8" H.S. BOLTS	0	2¼		B1 20	
15		7/8" H.S. BOLTS	0	2½		B1 21	
20		7/8" H.S. BOLTS	0	2¾		B1 22	
65		WASHERS FOR 7/8" H.S. BOLTS				B1 28	
2	EB3	SOLE PLS			DET. ON DWG. FB2		

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER CG2
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK'D. BY: JTC DATE: 1-22-85

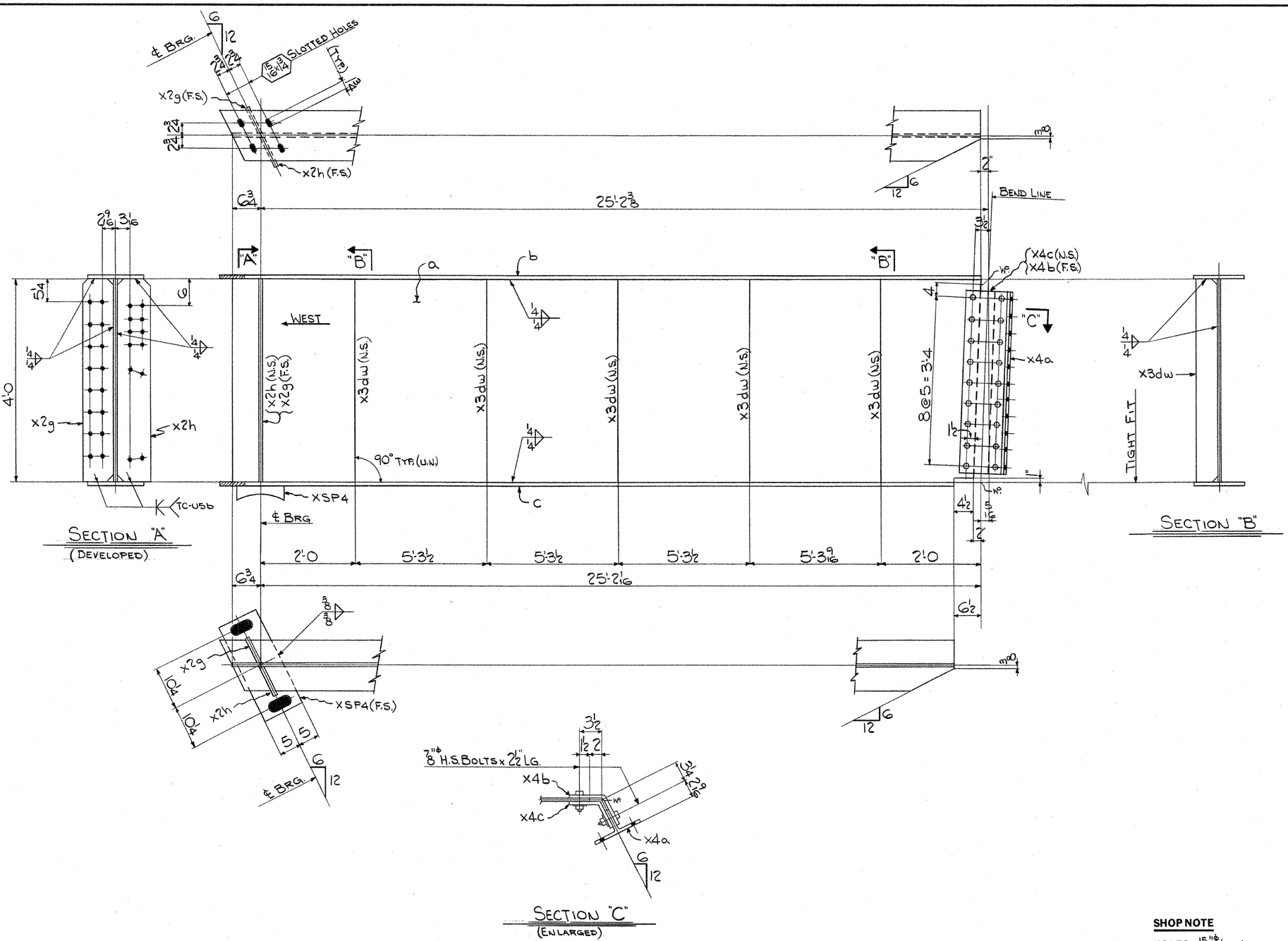
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 8 OF 76

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FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	I-32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G1A	GIRDER					3442
1	a	PL 48 x 3/8	25	7 1/8			
1	b	PL 12 x 5/8	25	10 1/8			
1	c	PL 12 x 5/8	25	5 5/16			
1	x2g	BAR 7 x 5/8	4	0			
1	x2h	BAR 8 x 5/8	4	0			
5	x3dw	BAR 5 x 3/8	4	0			
1	x4a	WT 4 x 20	3	7			
1	x4b	PL 43 x 3/8	0	10 1/4	BENT		
1	x4c	PL 43 x 3/8	0	9 1/4	BENT		
1	XSP4	SOLE PL			DET. ON DWG. 1		
18		7/8" H.S. BOLTS	0	2 1/2		B1 / B1	21 / 28
18		WASHERS FOR 7/8" H.S. BOLTS					



SHOP NOTE

HOLES: $\frac{15}{16}$"ϕ (U.N.)
BOLTS: AS NOTED
PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1
FOR CAMBER DIAGRAM SEE DWG. WC1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

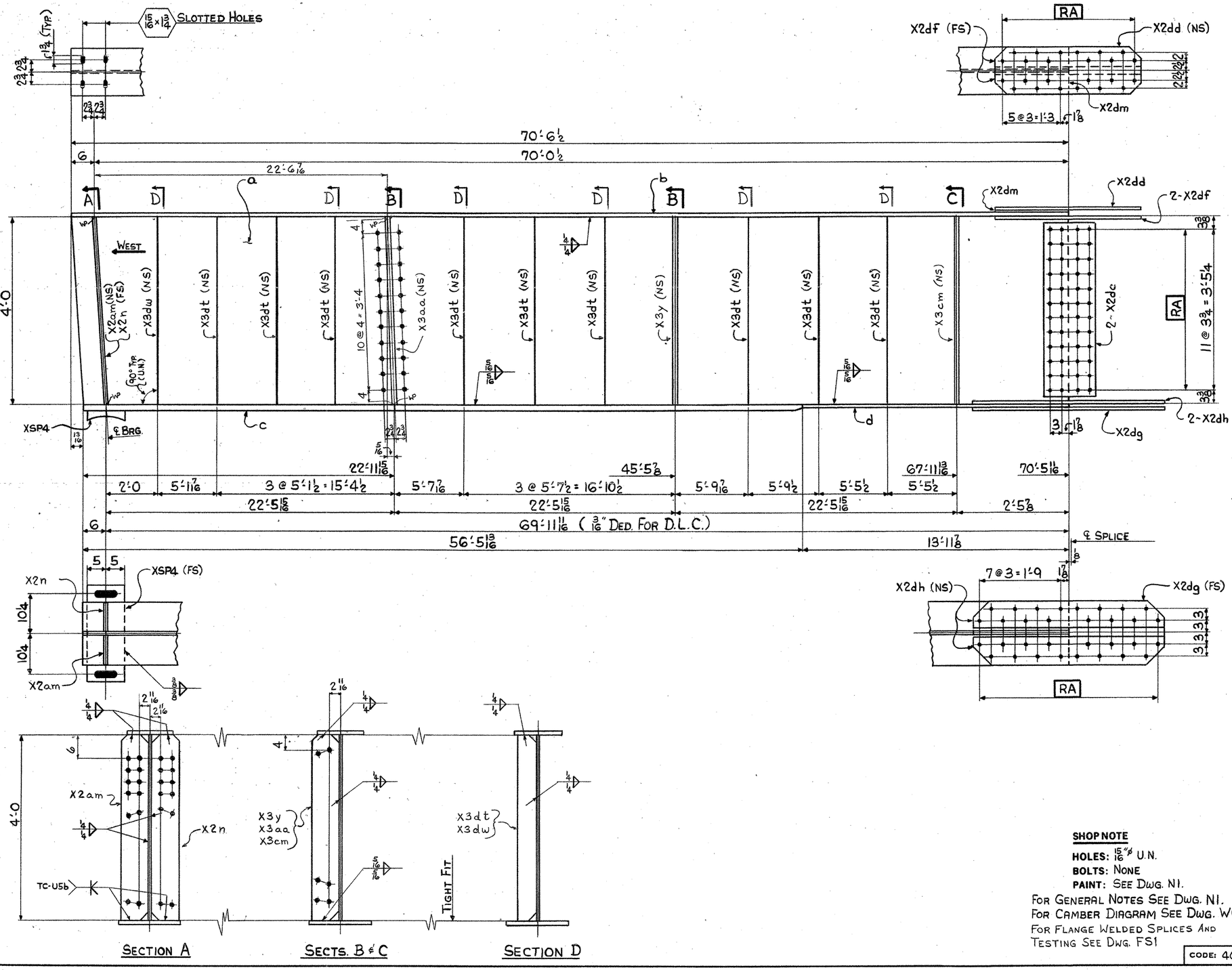
GIRDER G1A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 2-8-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 9 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G2A	GIRDER					12,815
1	a	PL 48 x 3/8	70	6 1/2			
1	b	PL 12 x 3/4	70	6 1/2			
1	c	PL 16 x 1 1/2	56	5 13/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 444 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2n	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
1	X3aa	BAR 7 x 9/16	4	0			
1	X3cm	BAR 7 x 9/16	4	0			
1	X3y	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G2A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

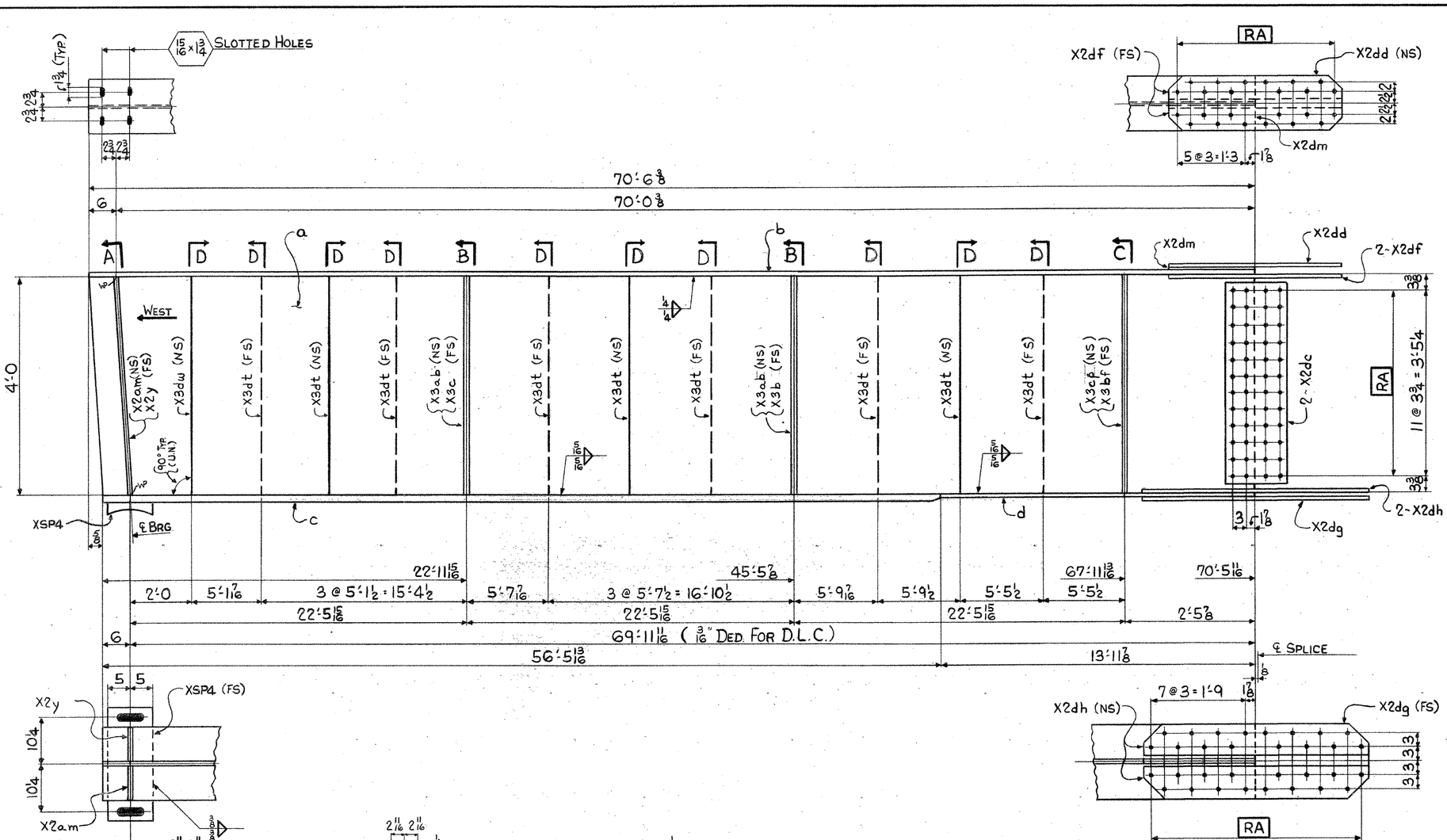
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-4-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 10 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

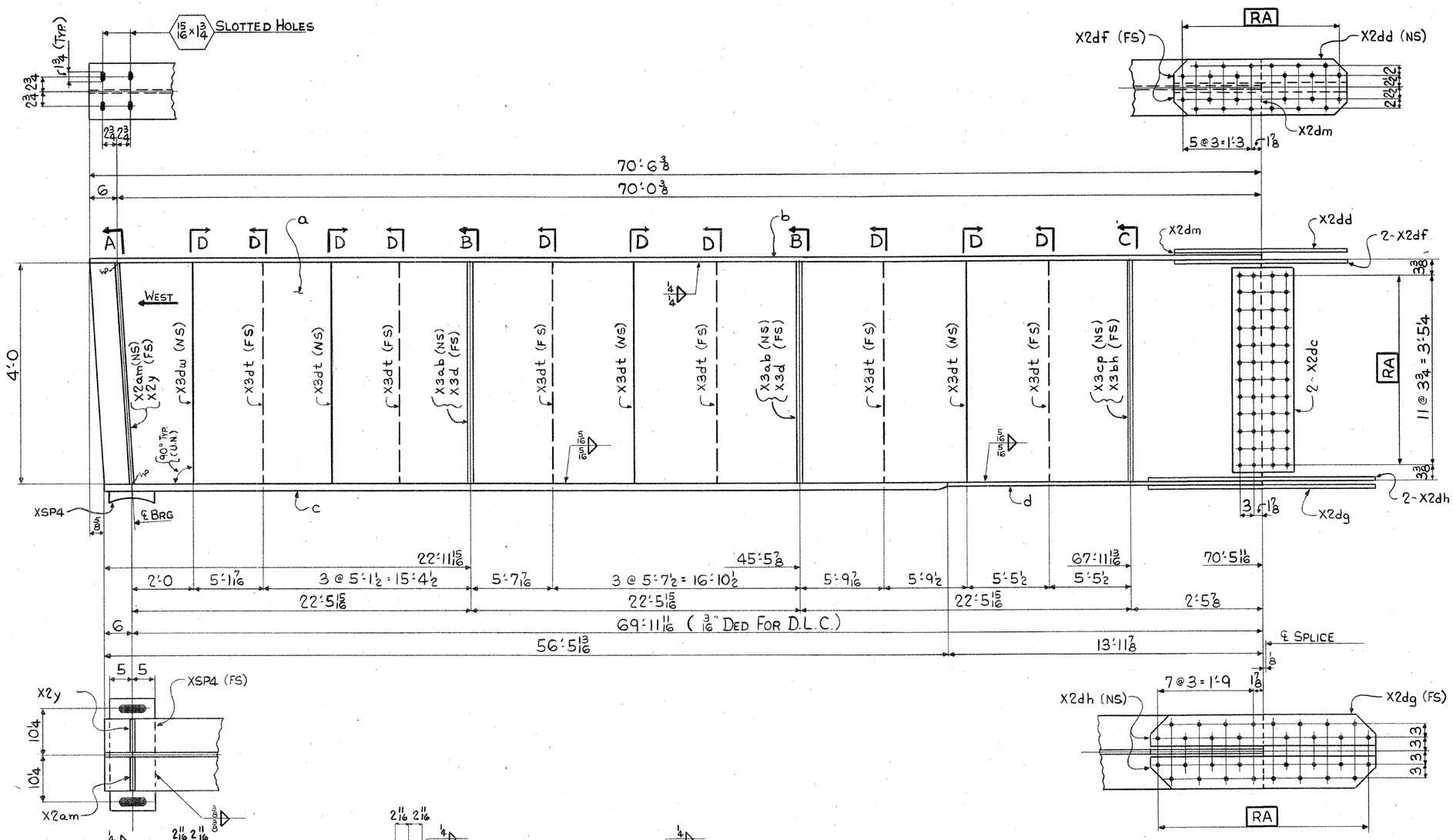
NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G3A	GIRDER					13,109
1	a	PL 48 x 3/8	70	6 3/8			
1	b	PL 12 x 3/4	70	6 3/8			
1	c	PL 16 x 1 1/2	56	5 13/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2y	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
1	X3b	BAR 7 x 9/16	4	0			
1	X3c	BAR 7 x 1/16	4	0			
2	X3ab	BAR 7 x 1/16	4	0			
1	X3bf	BAR 7 x 1/16	4	0			
1	X3cp	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		


15/16 x 13/4 SLOTTED HOLES
1 3/4 (TYP)
2 3/4
X2df (FS)
RA
X2dd (NS)
X2dm
5 @ 3 = 1'-3
1 7/8
70'-6 3/8
70'-0 3/8
6
A
D
B
C
a
b
X2dm
X2dd
2-X2df
WEST
4'-0
X2am (NS)
X2y (FS)
X3dw (NS)
X3dt (FS)
X3dt (NS)
X3ab (NS)
X3b (FS)
X3c (FS)
X3cp (NS)
X3bf (FS)
90° TYP (U.N.)
1/4
3/16
3/16
3/16

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G4A	GIRDER					13,109
1	a	PL 48 x 3/8	70	6 3/8			
1	b	PL 12 x 3/4	70	6 3/8			
1	c	PL 16 x 1 1/2	56	5 15/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 4 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 1 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2y	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
2	X3d	BAR 7 x 1 9/16	4	0			
2	X3ab	BAR 7 x 1 9/16	4	0			
1	X3bh	BAR 7 x 1 9/16	4	0			
1	X3cp	BAR 7 x 1 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G4A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-4-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 12 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G5A	GIRDER					13,109
1	a	PL 48 x 3/8	70	6 3/8			
1	b	PL 12 x 3/4	70	6 3/8			
1	c	PL 16 x 1 1/2	56	5 13/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2y	BAR 7 x 5/8	4	0			
1	X2ab	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3g	BAR 7 x 9/16	4	0			
1	X3bh	BAR 7 x 7/16	4	0			
1	X3bk	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

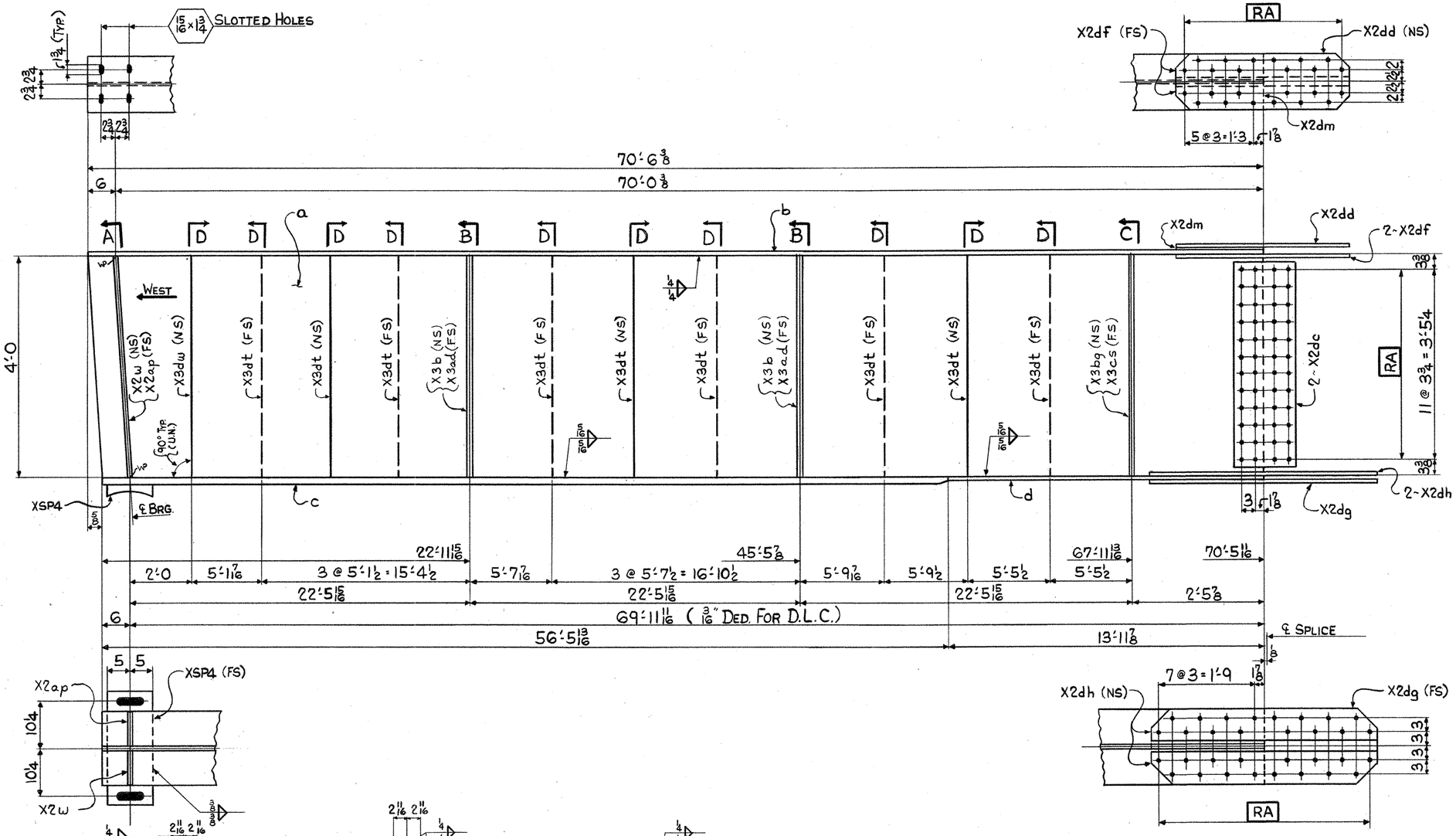
GIRDER - G5A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-4-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 13 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G6A	GIRDER					13,109
1	a	PL 48 x 3/8	70	6 3/8			
1	b	PL 12 x 3/4	70	6 3/8			
1	c	PL 16 x 1 1/2	56	5 15/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 1/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2w	BAR 7 x 5/8	4	0			
1	X2ap	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
2	X3b	BAR 7 x 9/16	4	0			
2	X3ad	BAR 7 x 9/16	4	0			
1	X3bg	BAR 7 x 9/16	4	0			
1	X3cs	BAR 7 x 3/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES & TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G6A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

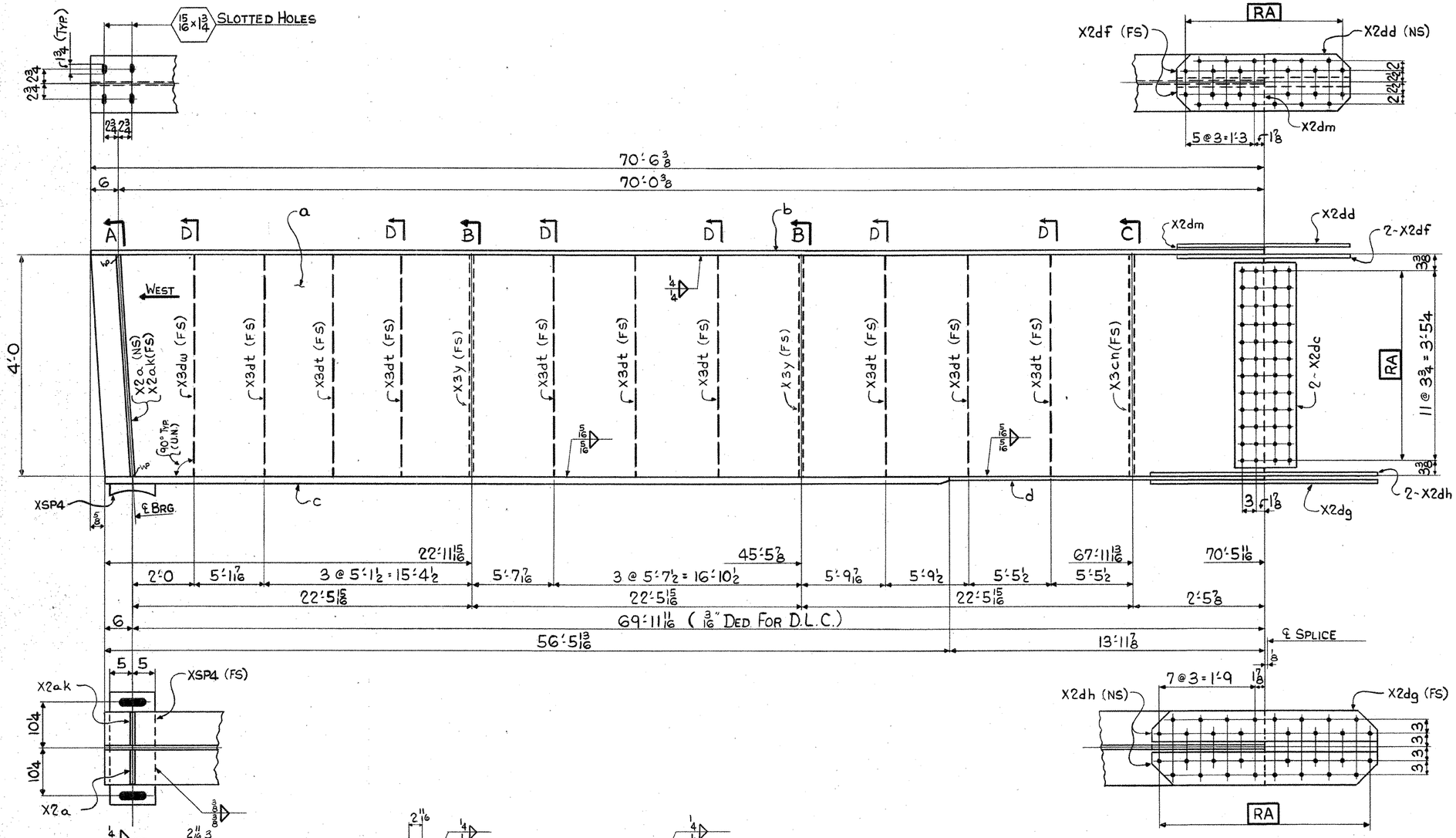
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-4-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 14 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G7A	GIRDER					12,948
1	a	PL 48 x 3/8	70	6 3/8			
1	b	PL 12 x 3/4	70	6 3/8			
1	c	PL 16 x 1 1/2	56	5 13/16			
1	d	PL 16 x 1	13	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 1 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2a	BAR 7 x 5/8	4	0			
1	X2ak	BAR 7 x 5/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
9	X3dt	BAR 4 x 3/8	4	0			
2	X3y	BAR 7 x 1 9/16	4	0			
1	X3cn	BAR 7 x 1 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

GIRDER - G7A
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

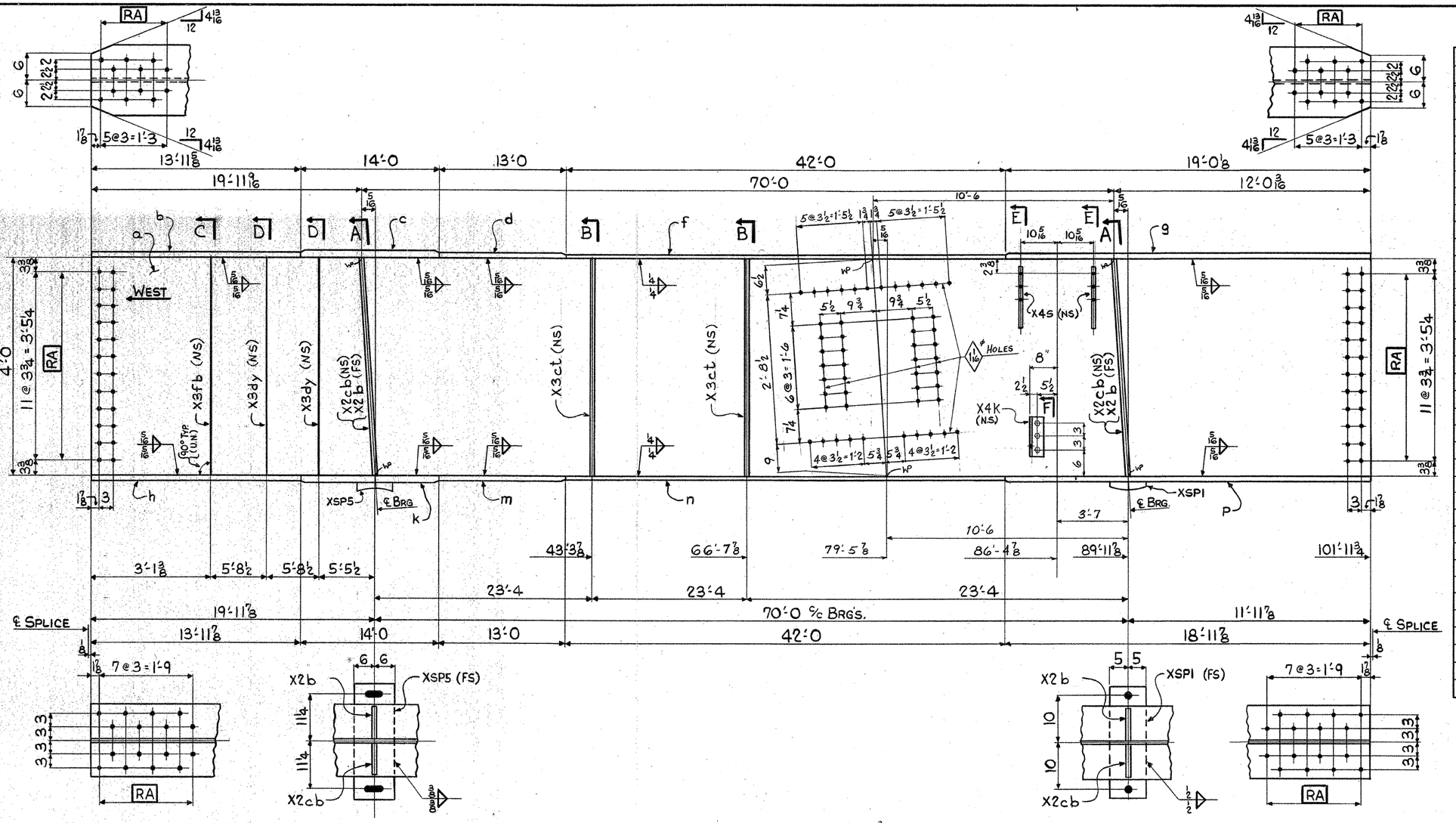
IN CHARGE: COLONIAL MADE BY: RAS CHK.D BY: THS DATE: 2-4-85

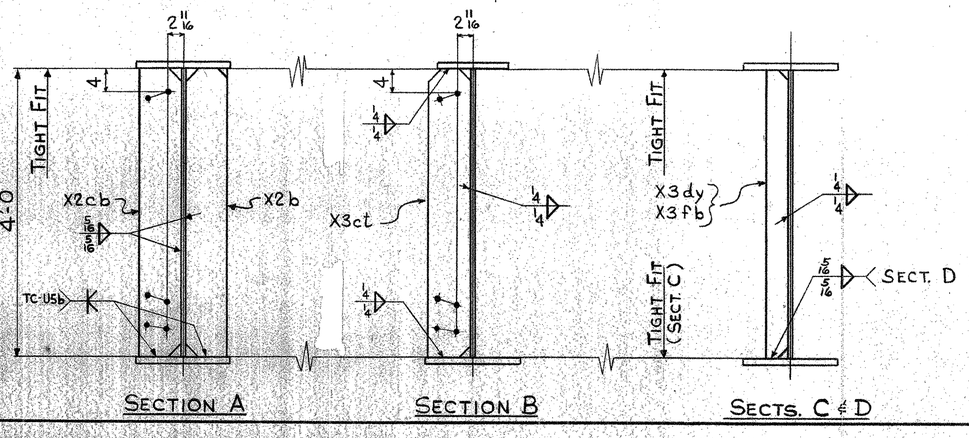
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 15 OF 76

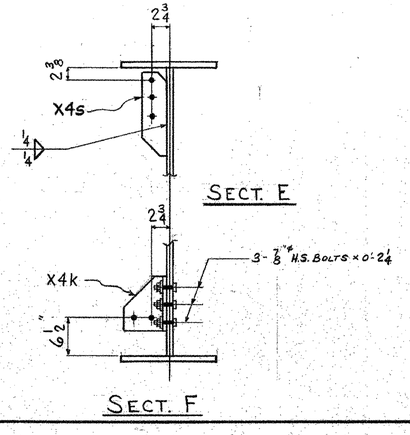
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP. WEIGHT
ONE	G2B	GIRDER					19,181
1	a	PL 48 x ½	101	11¾			
1	b	PL 16 x 1	13	11⅝			
1	c	PL 16 x 1½	14	0			
1	d	PL 16 x 1	13	0			
1	f	PL 12 x ¾	42	0			
1	g	PL 16 x 1	19	0⅛			
1	h	PL 16 x 1	13	11⅛			
1	k	PL 16 x 1½	14	0			
1	m	PL 16 x 1	13	0			
1	n	PL 16 x ¾	42	0			
1	p	PL 16 x 1	18	11⅛			
2	X2b	BAR 7 x 1	4	0			
2	X2cb	BAR 7 x 1	4	0			
1	X3fb	BAR 4 x ⅜	4	0			
2	X3dy	BAR 4 x ⅜	4	0			
2	X3ct	BAR 7 x 16	4	0			
2	X4s	PL 4 x ⅜	1	2			
1	X4K	L 7 x 4 x ½	0	9			
1	XSP5	SOLE PL			DET. ON DWG. 1		
1	XSP1	SOLE PL			DET. ON DWG. 1		
3		⅞" H.S. BOLTS	0	2¼		B1/20	
3		WASH. FOR ⅞" H.S. BOLTS				B1/28	







SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G2B
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE 2-4-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 16 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHOP WEIGHT
ONE	G3B	GIRDER					19,288
1	a	PL 48 x 1/2	101	11 3/4			
1	b	PL 16 x 1	13	11 5/8			
1	c	PL 16 x 1 1/2	14	0			
1	d	PL 16 x 1	13	0			
1	f	PL 12 x 3/4	42	0			
1	g	PL 16 x 1	19	0 1/8			
1	h	PL 16 x 1	13	11 7/8			
1	k	PL 16 x 1 1/2	14	0			
1	m	PL 16 x 1	13	0			
1	n	PL 16 x 3/4	42	0			
1	p	PL 16 x 1	18	11 7/8			
2	X2ba	BAR 7 x 1	4	0			
2	X2cd	BAR 7 x 1	4	0			
1	X3fb	BAR 4 x 3/8	4	0			
2	X3dy	BAR 4 x 3/8	4	0			
2	X3bm	BAR 7 x 1/16	4	0			
2	X3cy	BAR 7 x 1/16	4	0			
2	X4g	PL 4 x 3/8	1	2			
1	X4k	L 7 x 4 x 1/2	0	9			
1	XSP5	SOLE PL			DET. ON DWG. 1		
1	XSP1	SOLE PL			DET. ON DWG. 1		
3		7/8" H.S. BOLTS	0	2 1/4			BI 20
3		WASH. FOR 7/8" H.S. BOLT					BI 28

SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

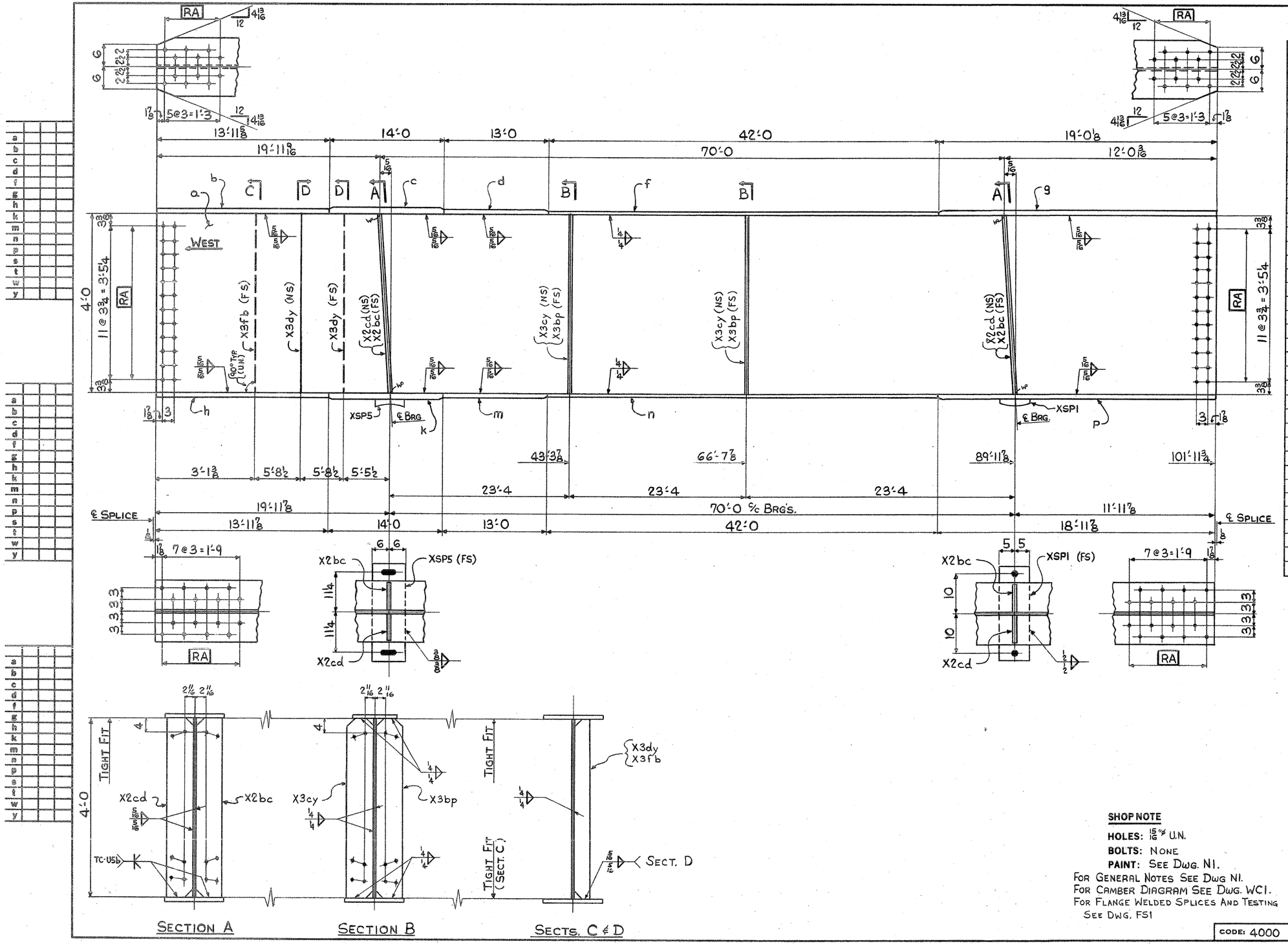
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G3B
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D BY: THS DATE: 2-4-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 17 OF 76



SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

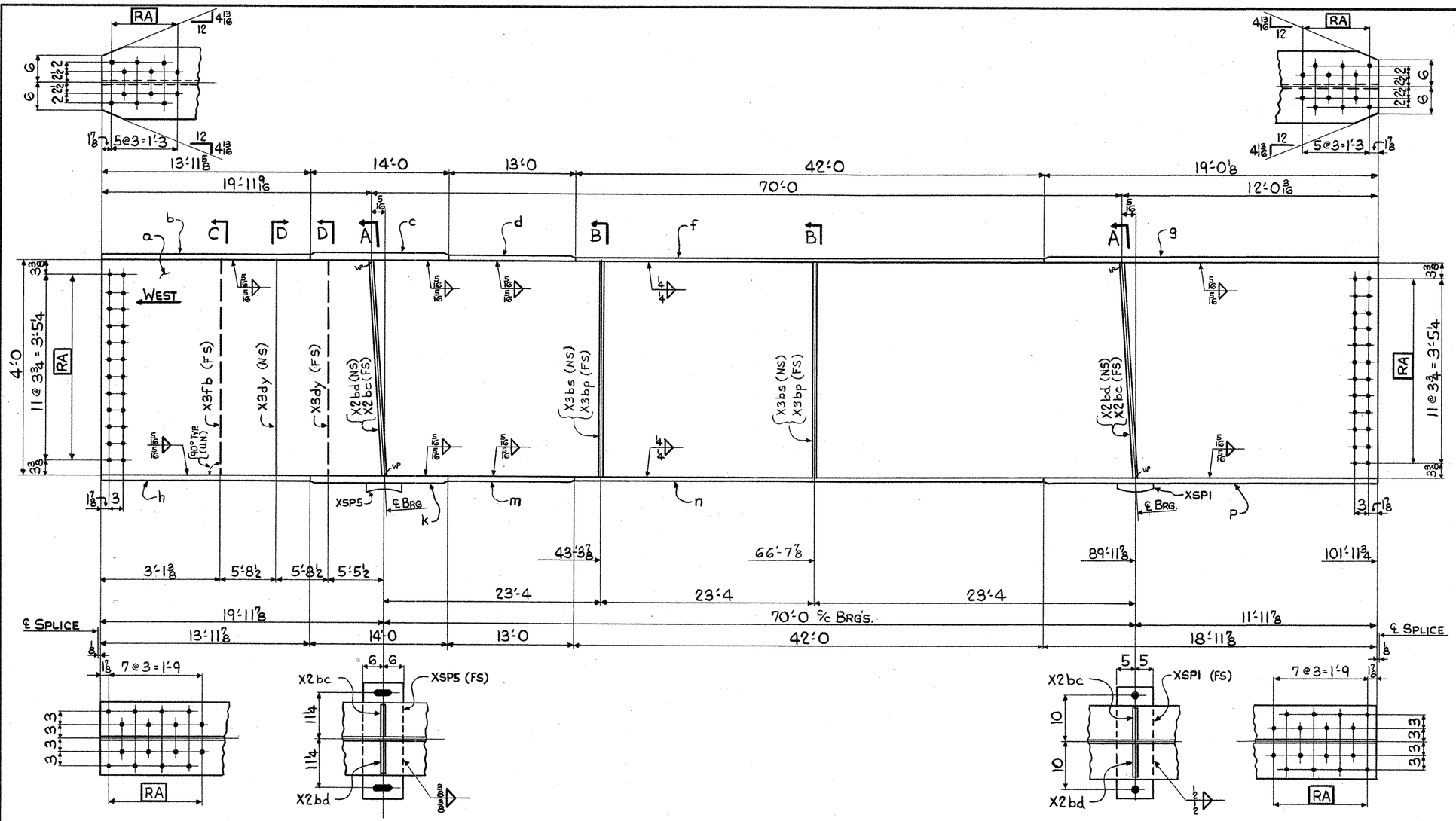
FOR GENERAL NOTES SEE DWG N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

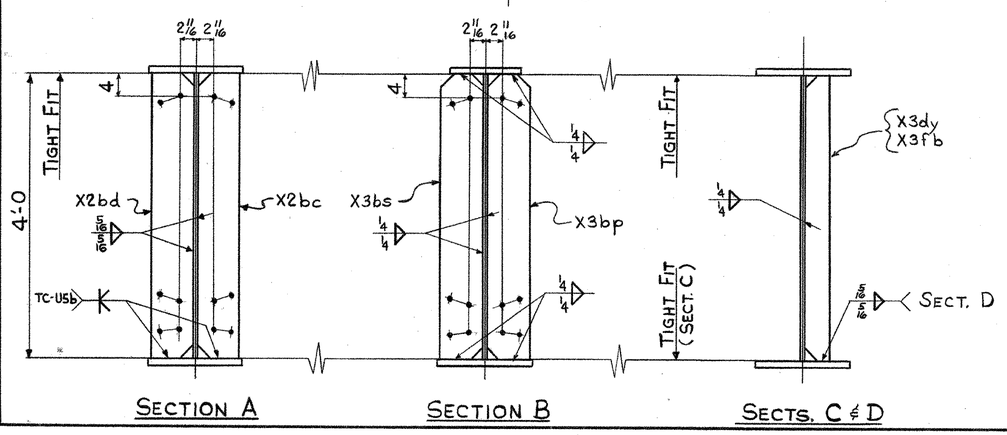
CODE: 4000

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G5B	GIRDER					17249
1	a	PL 48 x 1/2	101	11 3/4			
1	b	PL 16 x 1	13	11 5/8			
1	c	PL 16 x 1 1/2	14	0			
1	d	PL 16 x 1	13	0			
1	f	PL 12 x 3/4	42	0			
1	g	PL 16 x 1	19	0 1/8			
1	h	PL 16 x 1	13	11 7/8			
1	k	PL 16 x 1 1/2	14	0			
1	m	PL 16 x 1	13	0			
1	n	PL 16 x 3/4	42	0			
1	p	PL 16 x 1	18	11 7/8			
2	X2bc	BAR 7 x 1	4	0			
2	X2bd	BAR 7 x 1	4	0			
1	X3fb	BAR 4 x 3/8	4	0			
2	X3dy	BAR 4 x 3/8	4	0			
2	X3bp	BAR 7 x 5/16	4	0			
2	X3bs	BAR 7 x 5/16	4	0			
1	XSP5	SOLE PL			DET. ON DWG. 1		
1	XSP1	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G5B
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-5-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 19 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G6B	GIRDER				19249
1	a	PL 48 x 1/2	101 11 3/4			
1	b	PL 16 x 1	13 11 5/8			
1	c	PL 16 x 1 1/2	14 0			
1	d	PL 16 x 1	13 0			
1	f	PL 12 x 3/4	42 0			
1	g	PL 16 x 1	19 0 3/8			
1	h	PL 16 x 1	13 11 7/8			
1	k	PL 16 x 1 1/2	14 0			
1	m	PL 16 x 1	13 0			
1	n	PL 16 x 3/4	42 0			
1	p	PL 16 x 1	18 11 7/8			
2	X2bb	BAR 7 x 1	4 0			
2	X2cf	BAR 7 x 1	4 0			
1	X3fb	BAR 4 x 3/8	4 0			
2	X3dy	BAR 4 x 3/8	4 0			
2	X3bn	BAR 7 x 15/16	4 0			
2	X3da	BAR 7 x 9/16	4 0			
1	XSP5	SOLE PL		DET. ON DWG. 1		
1	XSP1	SOLE PL		DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1908 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries Inc

GIRDER - G6B
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP
IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 20 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G7B	GIRDER					19,148
1	a	PL 48 x ½	101	11¾			
1	b	PL 16 x 1	13	11⅝			
1	c	PL 16 x 1½	14	0			
1	d	PL 16 x 1	13	0			
1	f	PL 12 x ¾	42	0			
1	g	PL 16 x 1	19	0⅛			
1	h	PL 16 x 1	13	11⅞			
1	k	PL 16 x 1½	14	0			
1	m	PL 16 x 1	13	0			
1	n	PL 16 x ¾	42	0			
1	p	PL 16 x 1	18	11⅞			
2	X2b	BAR 7 x 1	4	0			
2	X2cc	BAR 7 x 1	4	0			
1	X3fb	BAR 4 x ⅜	4	0			
2	X3dy	BAR 4 x ⅜	4	0			
2	X3cw	BAR 7 x 9/16	4	0			
1	XSP5	SOLE PL			DET. ON DWG. 1		
1	XSP1	SOLE PL			DET. ON DWG. 1.		

SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike, Lancaster, Pennsylvania 17602, Phone 717/299-5211
A Subsidiary of High Industries, Inc.

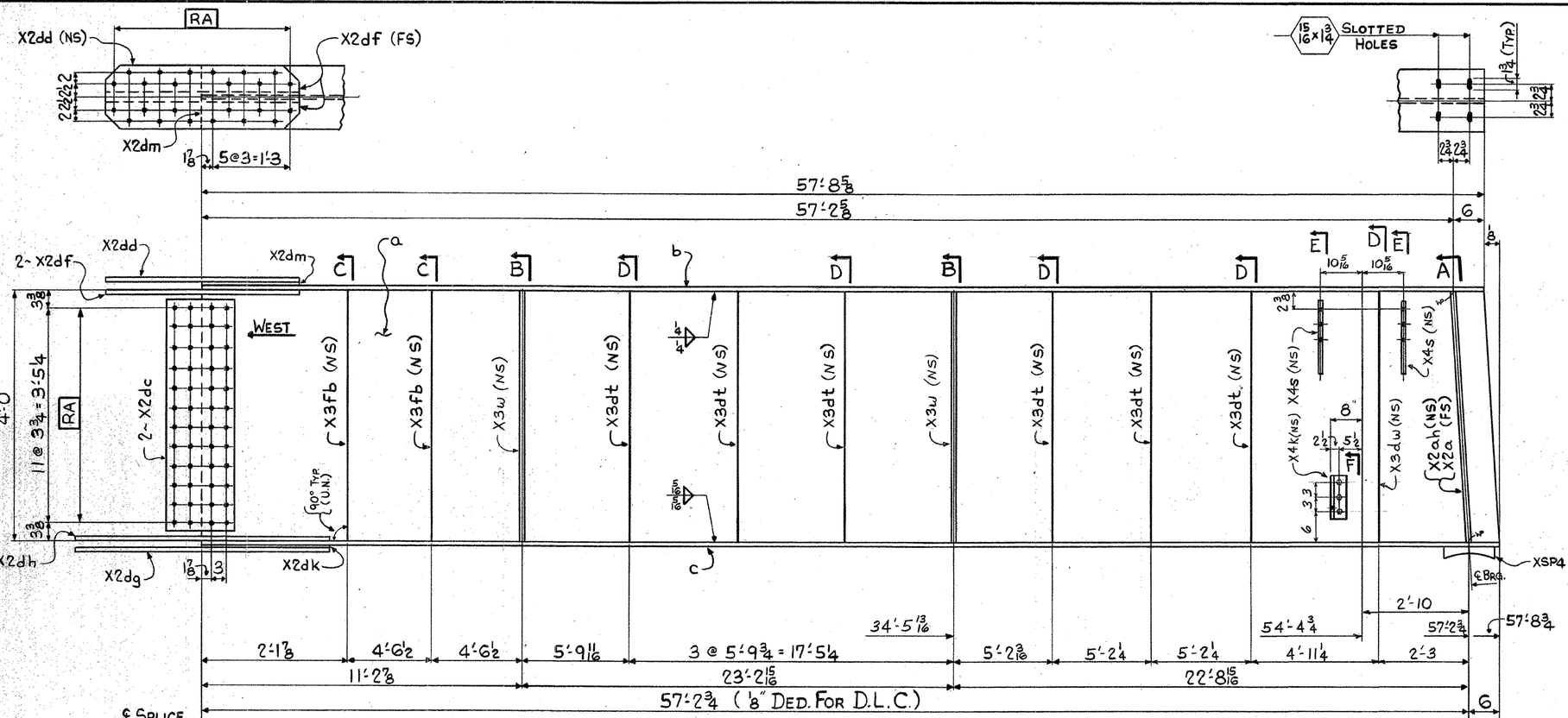
GIRDER - G7B
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85
CONTRACT NUMBER PA 84197-1 DRAWING NUMBER 21 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G2C	GIRDER					9108
1	a	PL 48 x 3/8	57	8 3/4			
1	b	PL 12 x 3/4	57	8 5/8			
1	c	PL 16 x 7/8	57	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2dk	PL 16 x 10 GA	2	0 3/8			
1	X2a	BAR 7 x 5/8	4	0			
1	X2ah	BAR 7 x 5/8	4	0			
2	X3fb	BAR 4 x 3/8	4	0			
6	X3dt	BAR 4 x 3/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
2	X3w	BAR 7 x 9/16	4	0			
2	X4s	PL 4 x 3/8	1	2			
1	X4k	L 7 x 4 x 1/2	0	9			
1	XSP4	SOLE PL			DET. ON DWG. 1		
3		7/8" H.S. BOLTS	0	2 1/4		BI 20	
3		WASH. FOR 7/8" H.S. BOLTS				BI 28	



SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

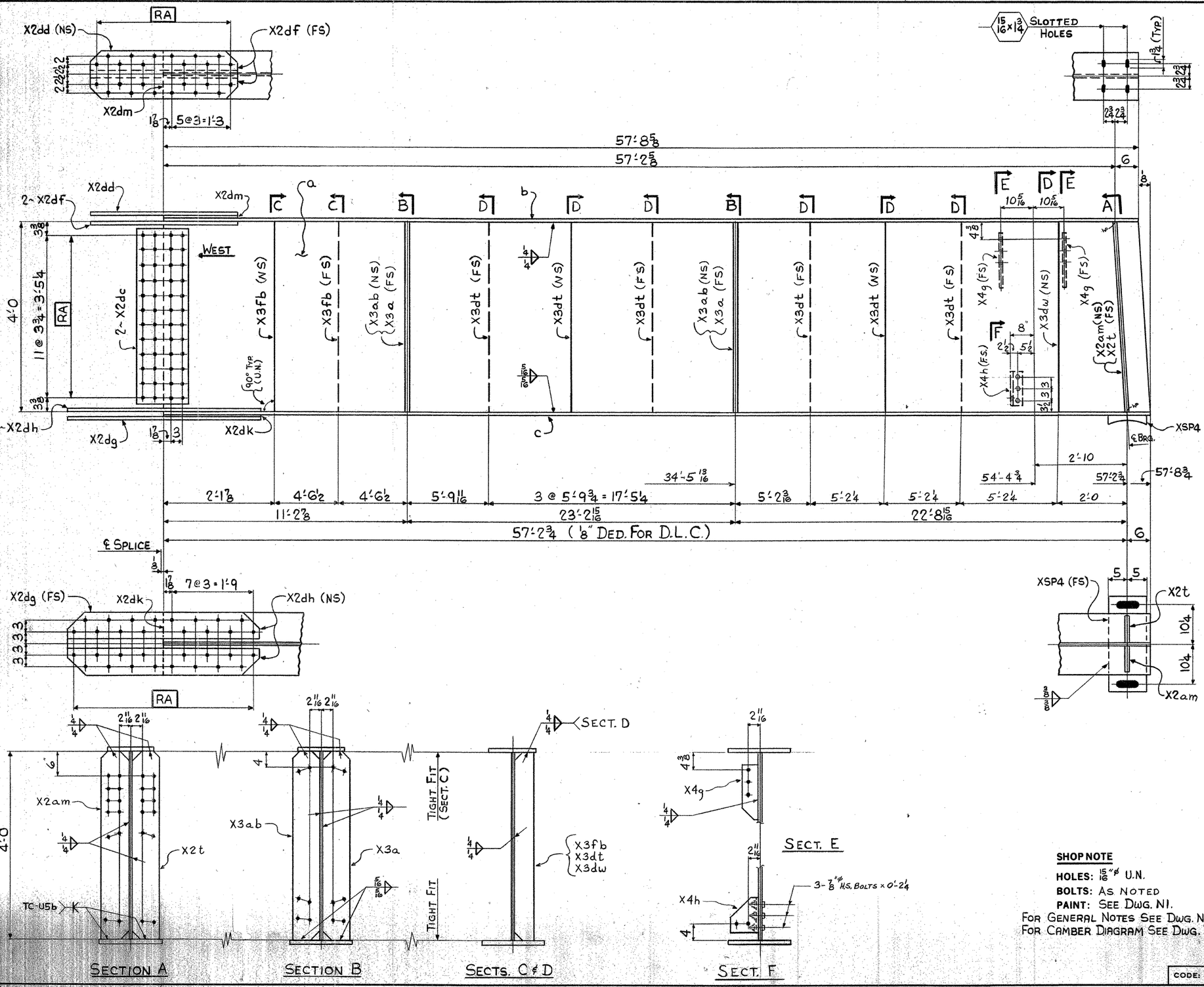
GIRDER ~ G2C
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-5-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 22 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP. WEIGHT
ONE	G3C	GIRDER					9215
1	a	PL 48 x 3/8	57	8 3/4			
1	b	PL 12 x 3/4	57	8 5/8			
1	c	PL 16 x 7/8	57	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2dk	PL 16 x 10 GA	2	0 3/8			
1	X2t	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
2	X3fb	BAR 4 x 3/8	4	0			
6	X3dt	BAR 4 x 3/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
2	X3a	BAR 7 x 9/16	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		
1	X4h	L 7 x 4 x 1/2	0	9			
2	X4g	PL 4 x 3/8	1	2			
3		7/8"ø H.S. BOLTS	0	2 1/4		B1 20	
3		WASH. FOR 7/8"ø H.S. BOLTS				B1 28	



SHOP NOTE

HOLES: 15/16"ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

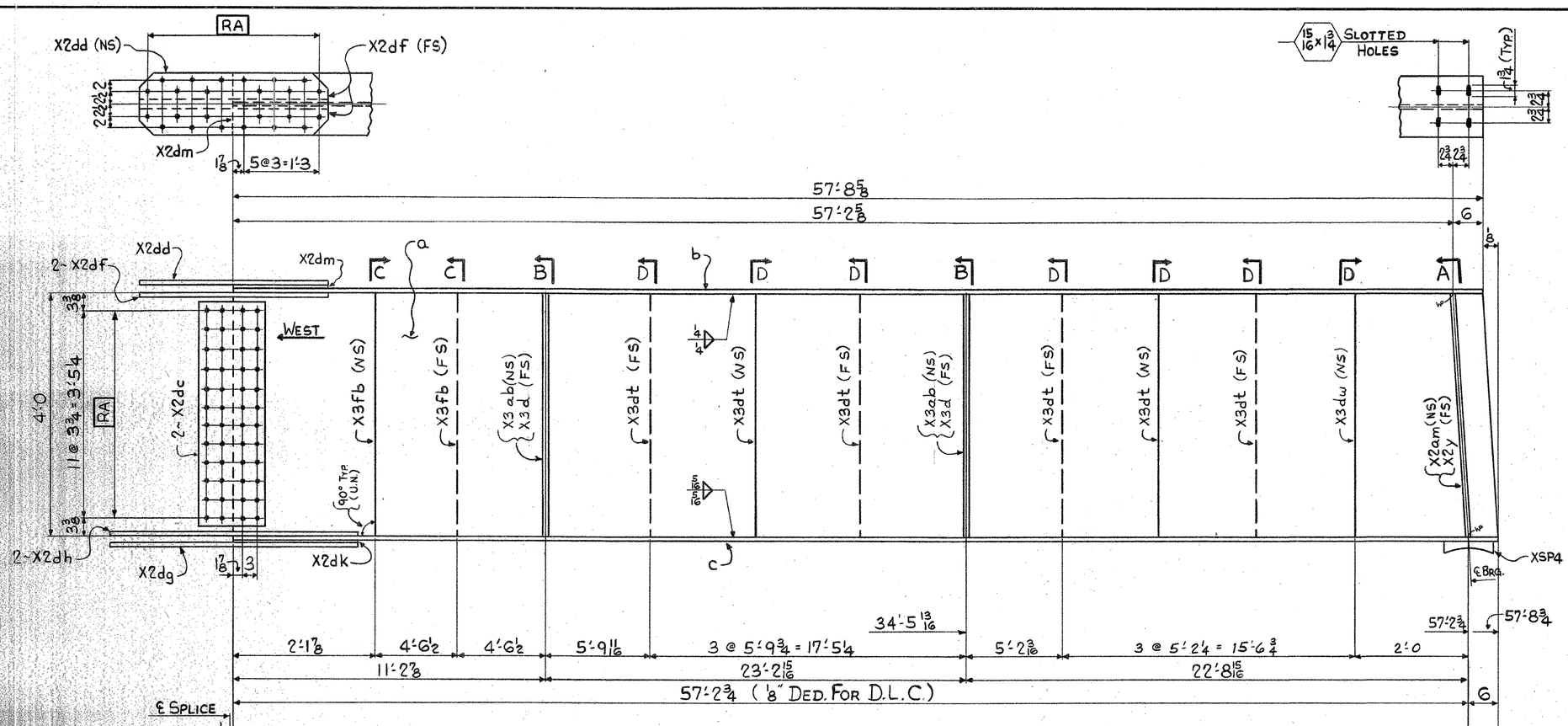
GIRDER - G3C
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 23 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G4C	GIRDER					9187
1	a	PL 48 x 3/8	57	8 3/4			
1	b	PL 12 x 3/4	57	8 5/8			
1	c	PL 16 x 7/8	57	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2dk	PL 16 x 10 GA	2	0 3/8			
1	X2y	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
2	X3fb	BAR 4 x 3/8	4	0			
6	X3dt	BAR 4 x 3/8	4	0			
1	X3dw	BAR 5 x 3/8	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16"ø U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

NO.	REVISION	DATE

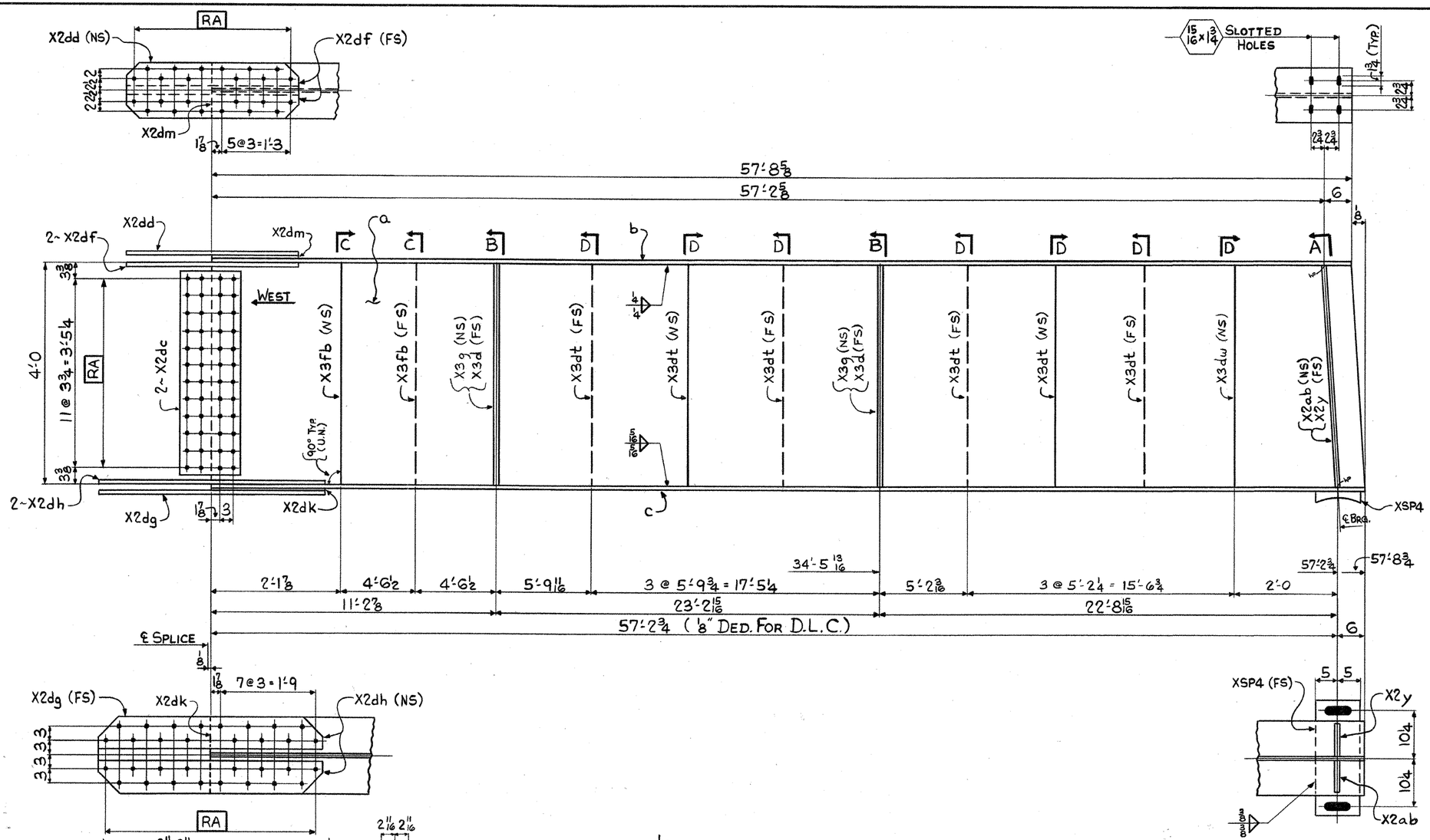
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G4C
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85

CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 24 OF 76



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G5C	GIRDER					9187
1	a	PL 48 x 3/8	57	8¾			
1	b	PL 12 x ¾	57	8⅝			
1	c	PL 16 x ⅞	57	8¾			
2	X2dc	PL 44¼ x ⅜	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x ⅝	3	1			
1	X2dm	PL 12 x ¼	1	6⅜			
1	X2dg	PL 16 x ½	4	1			
2	X2dh	BAR 7 x ½	4	1			
1	X2dk	PL 16 x 10 GA	2	0⅜			
1	X2y	BAR 7 x ⅝	4	0			
1	X2ab	BAR 7 x ⅝	4	0			
2	X3fb	BAR 4 x ⅜	4	0			
6	X3dt	BAR 4 x ⅜	4	0			
1	X3dw	BAR 5 x ⅜	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3g	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1.		

SHOP NOTE

HOLES: 15/16" ⌀ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

NO.	REVISION	DATE

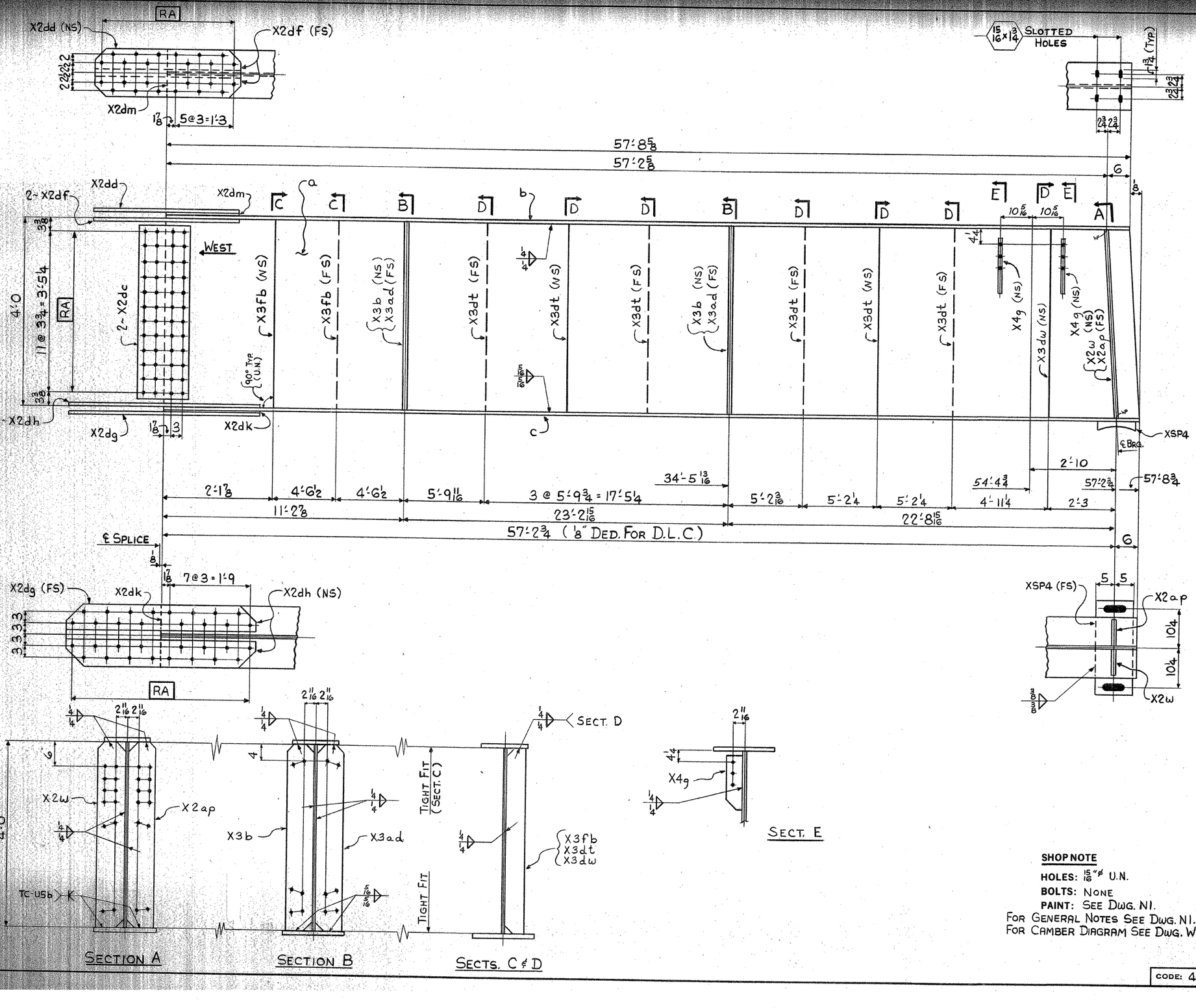
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
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GIRDER ~ G5C
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-5-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 25 OF 76



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G6C	GIRDER				9199
1	a	PL 48 x 3/8	57 8 3/4			
1	b	PL 12 x 3/4	57 8 5/8			
1	c	PL 16 x 7/8	57 8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1 1			
1	X2dd	PL 12 x 7/16	3 1			
2	X2df	BAR 5 x 5/8	3 1			
1	X2dm	PL 12 x 1/4	1 6 3/8			
1	X2dg	PL 16 x 1/2	4 1			
2	X2dh	BAR 7 x 1/2	4 1			
1	X2dk	PL 16 x 10 GA	2 0 3/8			
1	X2w	BAR 7 x 5/8	4 0			
1	X2ap	BAR 7 x 5/8	4 0			
2	X3fb	BAR 4 x 3/8	4 0			
6	X3dt	BAR 4 x 3/8	4 0			
1	X3dw	BAR 5 x 3/8	4 0			
2	X3b	BAR 7 x 9/16	4 0			
2	X3ad	BAR 7 x 9/16	4 0			
2	X4g	PL 4 x 3/8	1 2			
1	XSP4	SOLE PL		DET. ON DWG. 1		

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
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GIRDER - G6C
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: S-15296 CONTRACTOR: BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-5-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 26 OF 76

SHOP NOTE

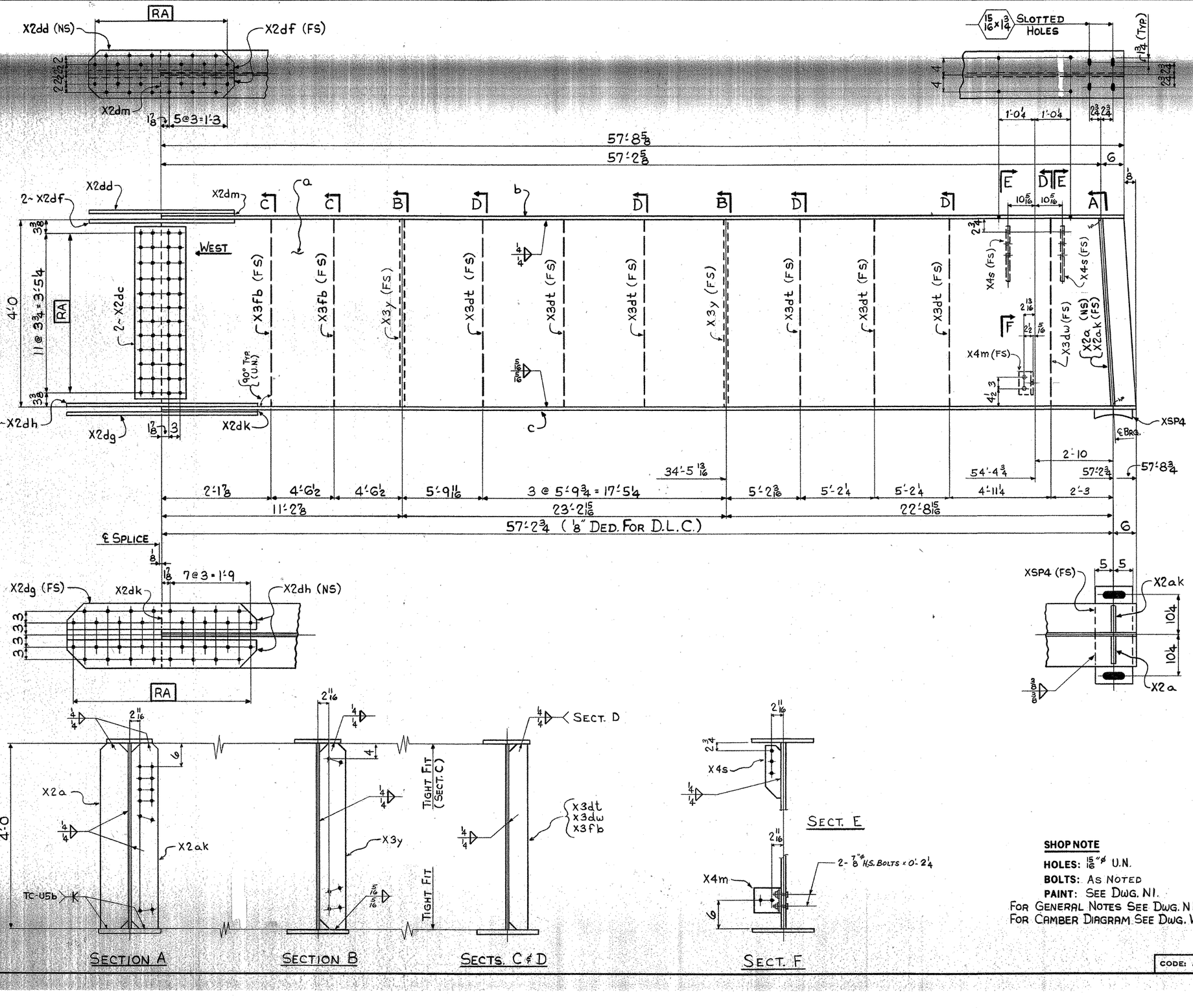
HOLES: 15/16"ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G7C	GIRDER				9107
1	a	PL 48 x 3/8	57 8 3/4			
1	b	PL 12 x 3/4	57 8 5/8			
1	c	PL 16 x 7/8	57 8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1 1			
1	X2dd	PL 12 x 7/16	3 1			
2	X2df	BAR 5 x 5/8	3 1			
1	X2dm	PL 12 x 1/4	1 6 3/8			
1	X2dg	PL 16 x 1/2	4 1			
2	X2dh	BAR 7 x 1/2	4 1			
1	X2dk	PL 16 x 10 GA	2 0 3/8			
1	X2a	BAR 7 x 5/8	4 0			
1	X2ak	BAR 7 x 5/8	4 0			
2	X3fb	BAR 4 x 3/8	4 0			
6	X3dt	BAR 4 x 3/8	4 0			
1	X3dw	BAR 5 x 3/8	4 0			
2	X3y	BAR 7 x 9/16	4 0			
2	X4s	PL 4 x 3/8	1 2			
1	X4m	L 7 x 4 x 1/2	0 6			
1	XSP4	SOLE PL		DET. ON DWG. 1		
2		7/8" H.S. BOLTS	0 2 1/4		B1/20	
2		WASH. FOR H.S. BOLTS			B1/28	



SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.

CODE: 4000

NO.	REVISION	DATE

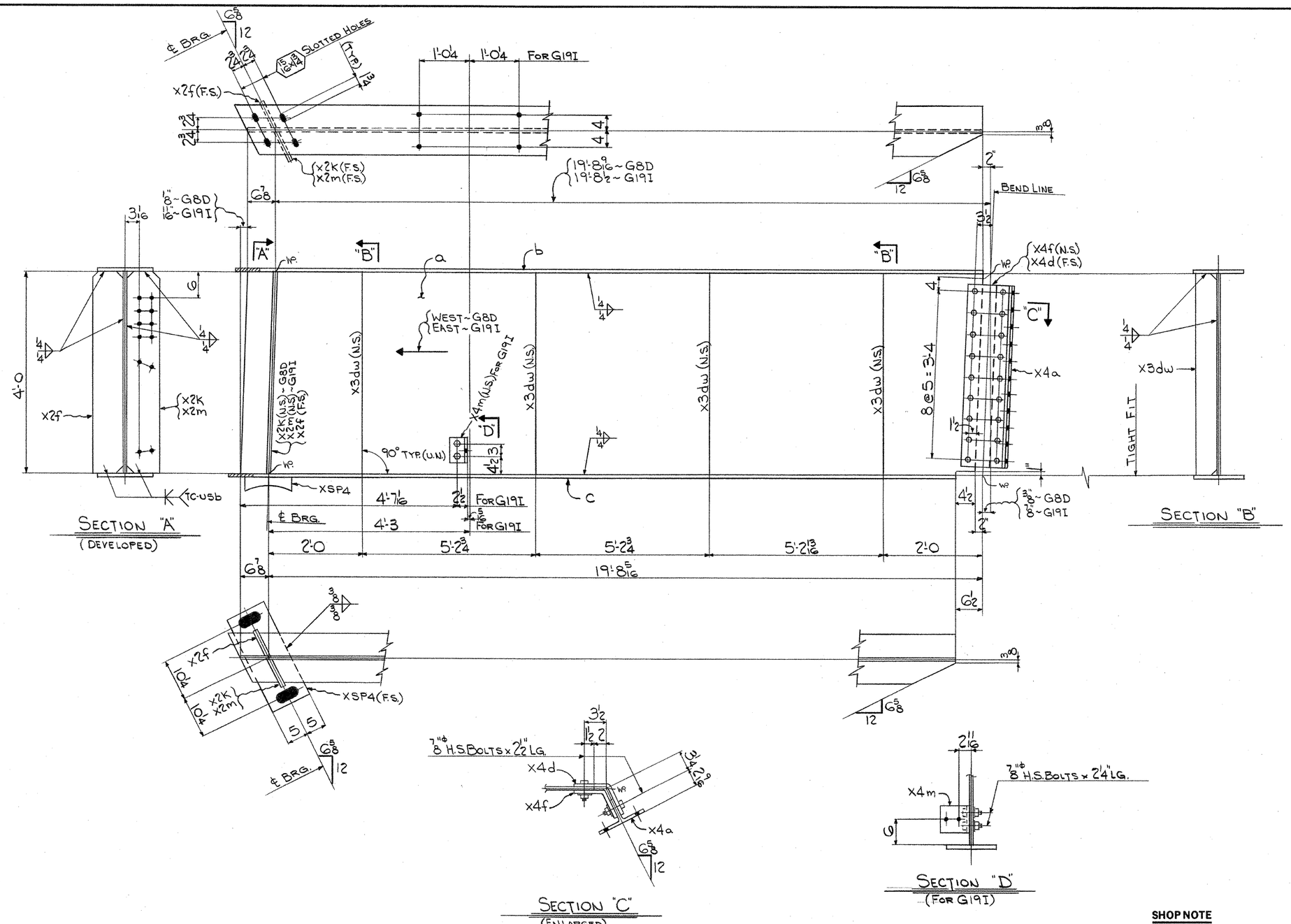
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G7C
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 27 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

SHIPT. 1	SHIPT. 2	NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
				BILL OF MATERIAL					
1	-	ONE	G8D	GIRDER					2804
-	1	ONE	G19I	GIRDER					2815
		1	a	PL 48 x 3/8	20	19/16	G8D		
		1	a	PL 48 x 3/8	20	2 1/16	G19I		
		1	b	PL 12 x 5/8	20	4 3/4	G8D		
		1	b	PL 12 x 5/8	20	4 11/16	G19I		
		2	c	PL 12 x 5/8	20	0			
		2	x2f	BAR 7 x 5/8	4	0			
		1	x2m	BAR 8 x 5/8	4	0	G19I		
		1	x2K	BAR 8 x 5/8	4	0	G8D		
		8	x3dw	BAR 5 x 3/8	4	0			
		2	x4a	WT 4 x 20	3	7			
		2	x4d	PL 43 x 3/8	0	10 1/4	BENT		
		2	x4f	PL 43 x 3/8	0	9 1/4	BENT		
		1	x4m	L 7 x 4 x 1/2	0	6	G19I		
		2	xSP4	SOLE PL			DET. ON DWG. 1		
		2		7/8" ϕ H.S. BOLTS	0	2 1/4	G19I	B1/20	
		36		7/8" ϕ H.S. BOLTS	0	2 1/2		B1/21	
		18		WASHERS FOR 7/8" ϕ H.S. BOLTS			G8D	B1/28	
		20		WASHER FOR 7/8" ϕ H.S. BOLTS			G19I	B1/28	



SHOP NOTE

HOLES: 15/16" ϕ (U.N.)
BOLTS: AS NOTED
PAINT: SEE DWG. N1

FOR GENERAL NOTES SEE DWG. N1
FOR CAMBER DIAGRAMS SEE DWGS. WC1 & WC2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDERS G8D & G19I
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK'D BY: JTC DATE: 2-8-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: 28 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G9D	GIRDER					14,298
1	a	PL 48 x 3/8	72	9 3/8			
1	b	PL 12 x 7/8	72	9 3/8			
1	c	PL 16 x 1 5/8	57	8 7/8			
1	d	PL 16 x 1 1/4	14	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2p	BAR 7 x 5/8	4	0			
1	X2aw	BAR 7 x 5/8	4	0			
9	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3af	BAR 7 x 9/16	4	0			
1	X3ag	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G9D
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP

IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-5-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 29 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G10D	GIRDER					14,459
1	a	PL 48 x 3/8	72	9 3/8			
1	b	PL 12 x 7/8	72	9 3/8			
1	c	PL 16 x 1 5/8	57	8 7/8			
1	d	PL 16 x 1 1/4	14	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2af	BAR 7 x 5/8	4	0			
1	X2aw	BAR 7 x 5/8	4	0			
9	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3h	BAR 7 x 9/16	4	0			
1	X3k	BAR 7 x 9/16	4	0			
3	X3ah	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" Ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G10D
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-5-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 30 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G11D	GIRDER					14459
1	a	PL 48 x 3/8	72	9 3/8			
1	b	PL 12 x 3/8	72	9 3/8			
1	c	PL 16 x 1 5/8	57	8 7/8			
1	d	PL 16 x 1 1/4	14	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2af	BAR 7 x 5/8	4	0			
1	X2ag	BAR 7 x 5/8	4	0			
9	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
3	X3m	BAR 7 x 9/16	4	0			
3	X3p	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC1.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G11D

L.R. 247 SPUR A SEC B10

L.R. 247 SPUR A STA. 9+16.28

WASHINGTON & WESTMORELAND CO. PA

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP

IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-5-85

CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 31 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G12D	GIRDER					14,459
1	a	PL 48 x 3/8	72	9 3/8			
1	b	PL 12 x 7/8	72	9 3/8			
1	c	PL 16 x 1 5/8	57	8 7/8			
1	d	PL 16 x 1 1/4	14	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2ad	BAR 7 x 5/8	4	0			
1	X2ay	BAR 7 x 5/8	4	0			
9	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
3	X3k	BAR 7 x 9/16	4	0			
3	X3am	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16 Ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G12D
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

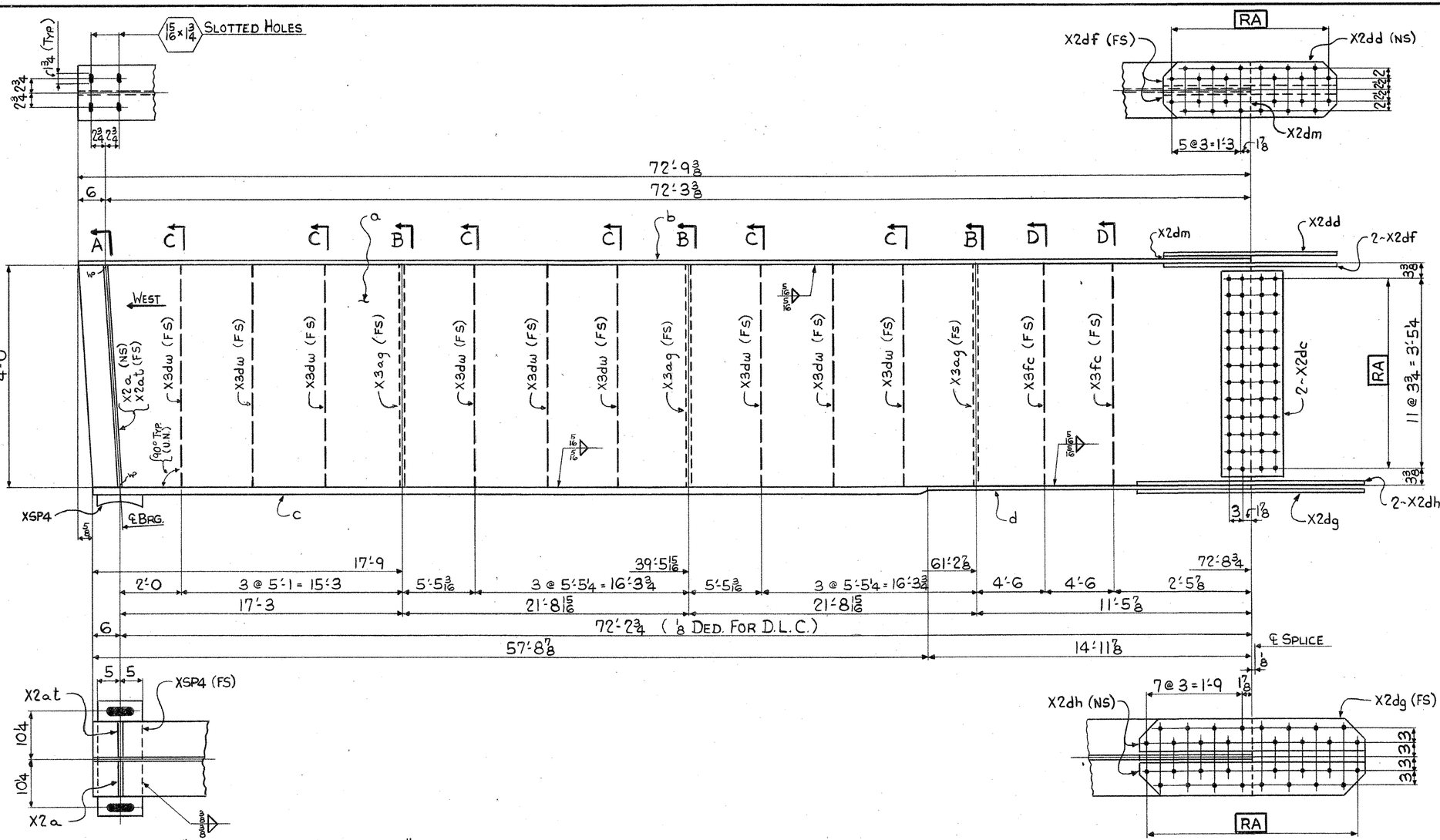
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-5-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 32 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G13D	GIRDER					14,298
1	a	PL 48 x 3/8	72	9 3/8			
1	b	PL 12 x 7/8	72	9 3/8			
1	c	PL 16 x 1 5/8	57	8 7/8			
1	d	PL 16 x 1 1/4	14	11 7/8			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2a	BAR 7 x 5/8	4	0			
1	X2at	BAR 7 x 5/8	4	0			
9	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
3	X3ag	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
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GIRDER - G13D
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L.R. 247 SPUR A, STA. 9+16.28
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-5-85

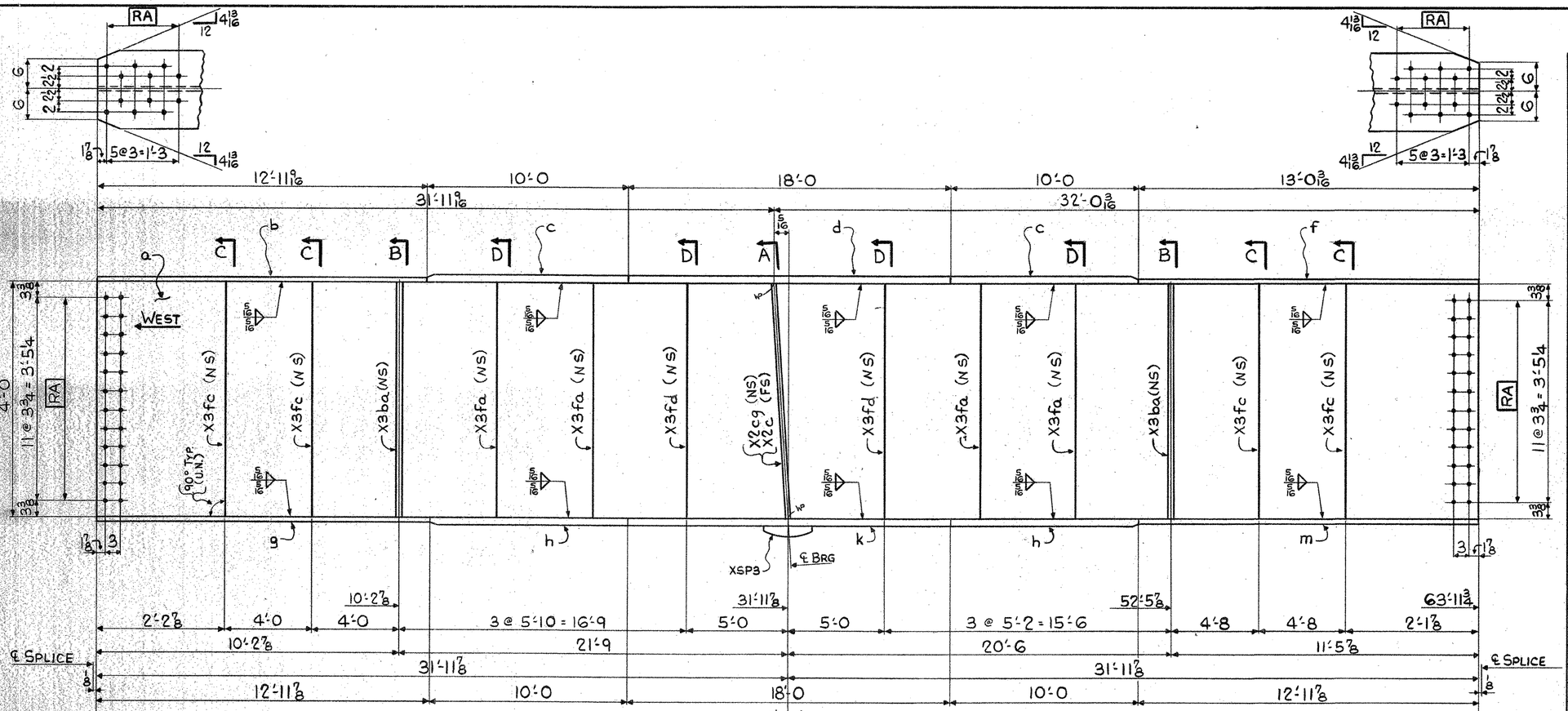
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 33 OF 76

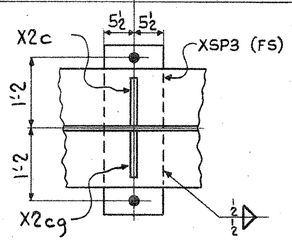
G13D

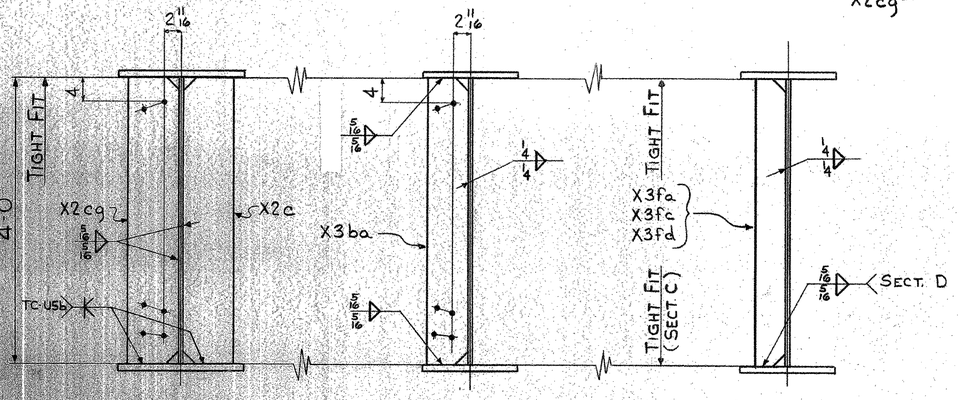
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G9E	GIRDER					19005
1	a	PL 48 x 1/2	63	11 3/4			
1	b	PL 16 x 1 1/8	12	11 9/16			
2	c	PL 16 x 1 1/8	10	0			
1	d	PL 24 x 1 1/8	18	0			
1	f	PL 16 x 1 1/8	13	0 3/16			
1	g	PL 16 x 1 1/4	12	11 7/8			
2	h	PL 16 x 1 1/8	10	0			
1	k	PL 24 x 1 1/8	18	0			
1	m	PL 16 x 1 1/4	12	11 7/8			
1	X2c	PL 10 x 7/8	4	0			
1	X2cg	PL 10 x 1 1/8	4	0			
4	X3fa	BAR 5 x 3/8	4	0			
4	X3fc	BAR 5 x 3/8	4	0			
2	X3fd	BAR 6 x 1/16	4	0			
2	X3ba	BAR 7 x 9/16	4	0			
1	XSP3	SOLE PL			DET ON DWG. 1		







SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1906 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

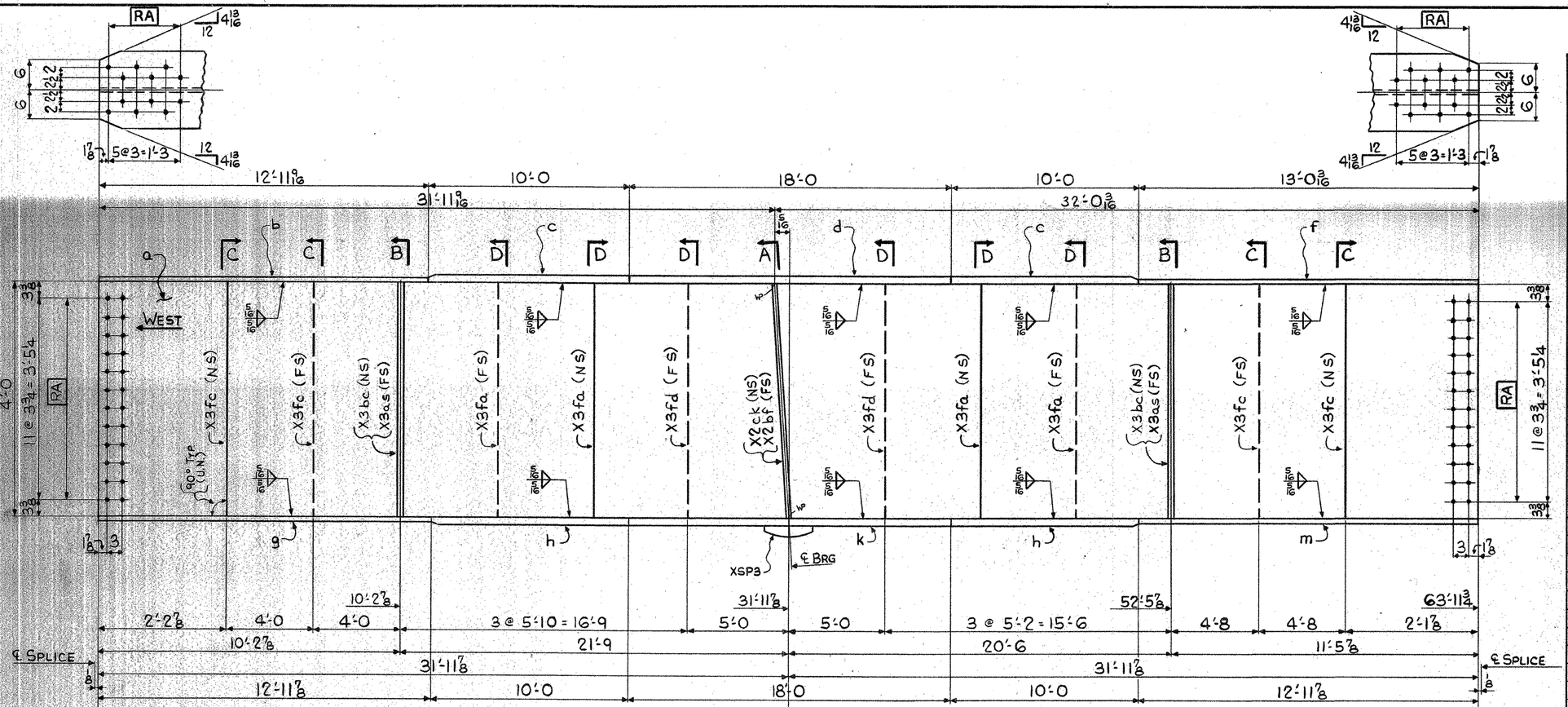
GIRDER - G9E
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

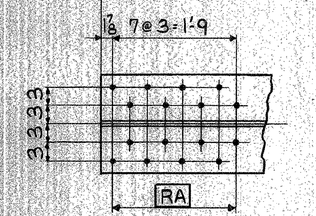
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-5-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 34 OF 76

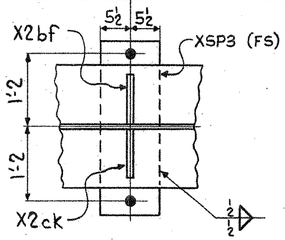
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

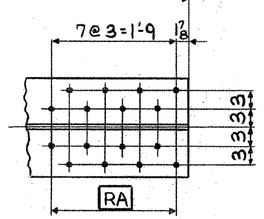
BILL OF MATERIAL

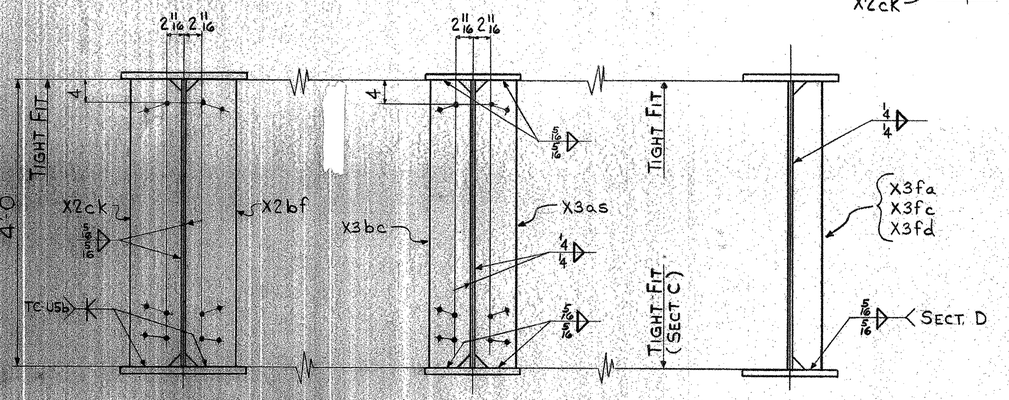
NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G10E	GIRDER					19,112
1	a	PL 48 x 1/2	63	11 3/4			
1	b	PL 16 x 1 1/8	12	11 9/16			
2	c	PL 16 x 1 1/8	10	0			
1	d	PL 24 x 1 1/8	18	0			
1	f	PL 16 x 1 1/8	13	0 3/16			
1	g	PL 16 x 14	12	11 1/8			
2	h	PL 16 x 1 1/8	10	0			
1	k	PL 24 x 1 1/8	18	0			
1	m	PL 16 x 14	12	11 1/8			
1	X2bf	PL 10 x 7/8	4	0			
1	X2ck	PL 10 x 7/8	4	0			
4	X3fa	BAR 5 x 3/8	4	0			
4	X3fc	BAR 5 x 3/8	4	0			
2	X3fd	BAR 6 x 7/16	4	0			
2	X3as	BAR 7 x 9/16	4	0			
2	X3bc	BAR 7 x 9/16	4	0			
1	XSP3	SOLE PL			DET ON DWG. 1		











SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1900 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries Inc

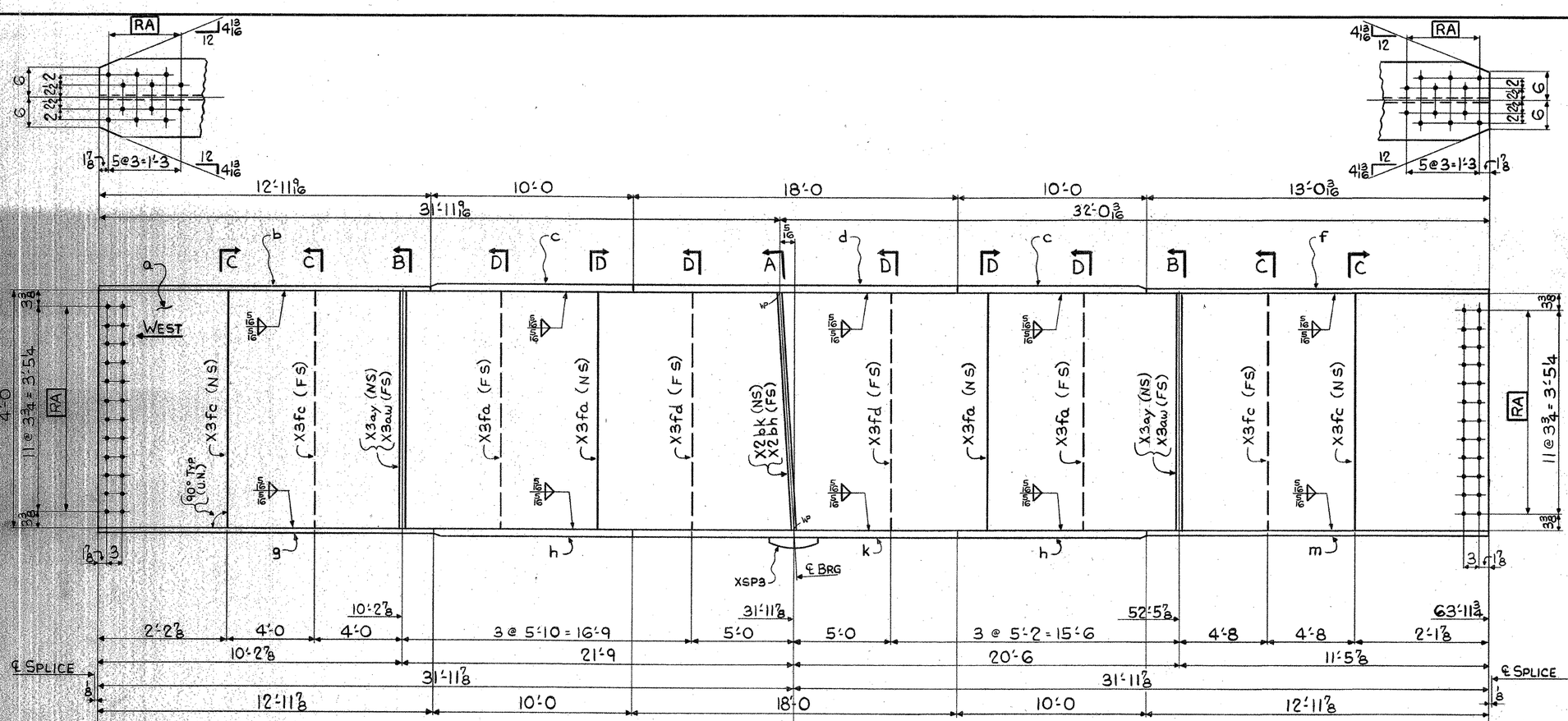
GIRDER ~ G10E
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

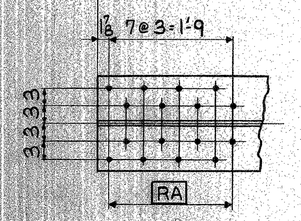
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-6-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 35 OF 76

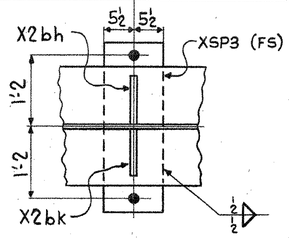
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

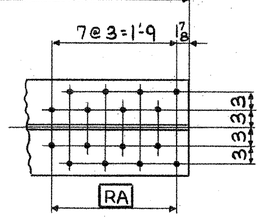
BILL OF MATERIAL

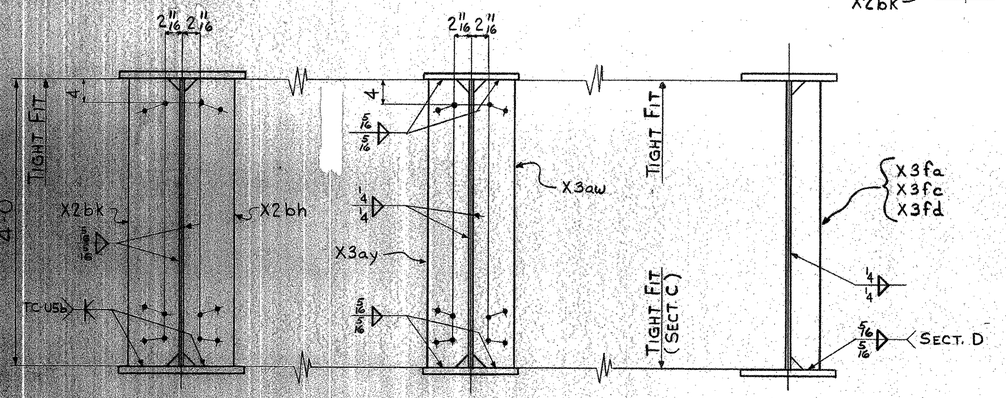
NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G11E	GIRDER					19,112
1	a	PL 48 x 1/2	63	11 3/4			
1	b	PL 16 x 1 1/8	12	11 7/16			
2	c	PL 16 x 1 1/8	10	0			
1	d	PL 24 x 1 1/8	18	0			
1	f	PL 16 x 1 1/8	13	0 3/16			
1	g	PL 16 x 1 1/4	12	11 7/8			
2	h	PL 16 x 1 1/8	10	0			
1	k	PL 24 x 1 1/8	18	0			
1	m	PL 16 x 1 1/4	12	11 7/8			
1	X2bh	PL 10 x 7/8	4	0			
1	X2bk	PL 10 x 7/8	4	0			
4	X3fa	BAR 5 x 3/8	4	0			
4	X3fc	BAR 5 x 3/8	4	0			
2	X3fd	BAR 6 x 7/16	4	0			
2	X3aw	BAR 7 x 1/2	4	0			
2	X3ay	BAR 7 x 1/2	4	0			
1	XSP3	SOLE PL			DET. ON DWG. 1		











SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc

GIRDER - G11E
L.R. 247 SPUR A SEC B10
L.R. 247 SPUR A STA 9 + 16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP

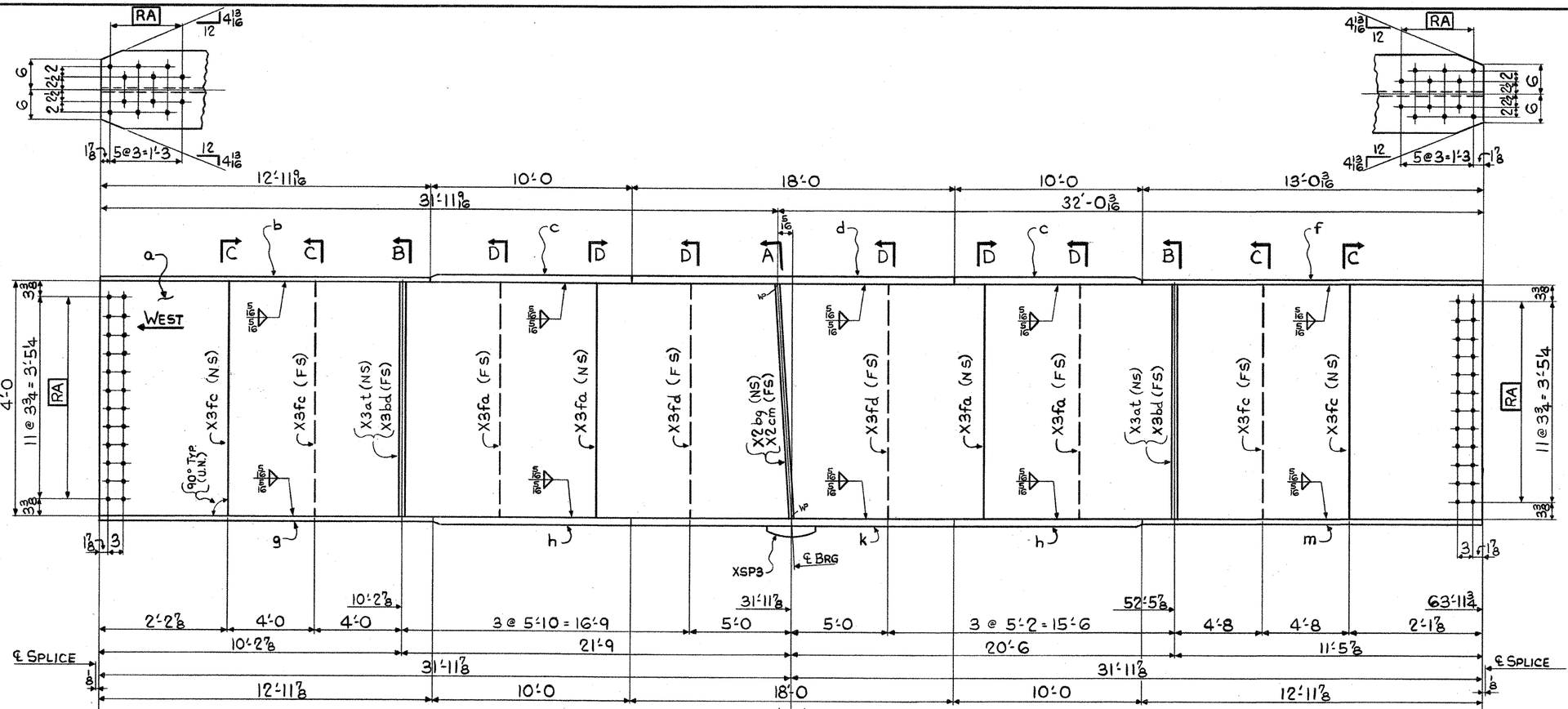
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-6-85

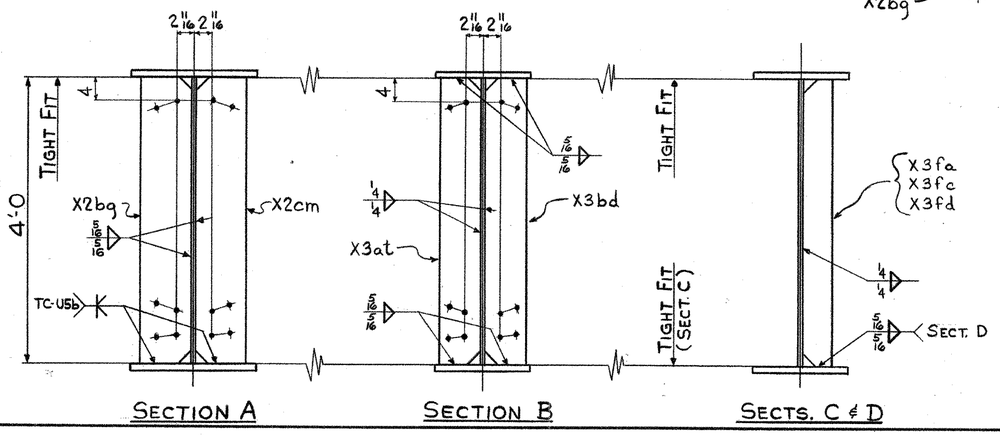
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 36 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G12E	GIRDER					19,112
1	a	PL 48 x 1/2	63	11 3/4			
1	b	PL 16 x 1 1/8	12	11 9/16			
2	c	PL 16 x 1 1/8	10	0			
1	d	PL 24 x 1 1/8	18	0			
1	f	PL 16 x 1 1/8	13	0 3/16			
1	g	PL 16 x 1 1/4	12	11 1/8			
2	h	PL 16 x 1 1/8	10	0			
1	k	PL 24 x 1 1/8	18	0			
1	m	PL 16 x 1 1/4	12	11 1/8			
1	X2bg	PL 10 x 7/8	4	0			
1	X2cm	PL 10 x 7/8	4	0			
4	X3fa	BAR 5 x 3/8	4	0			
4	X3fc	BAR 5 x 3/8	4	0			
2	X3fd	BAR 6 x 7/16	4	0			
2	X3at	BAR 7 x 3/16	4	0			
2	X3bd	BAR 7 x 3/16	4	0			
1	XSP3	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G12E
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-6-85

CONTRACT NUMBER PA-84197-1 DRAWING NUMBER: 37 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G13E	GIRDER				19,005
1	a	PL 48 x 1/2	63 11 3/4			
1	b	PL 16 x 1 1/8	12 11 9/16			
2	c	PL 16 x 1 1/8	10 0			
1	d	PL 24 x 1 1/8	18 0			
1	f	PL 16 x 1 1/8	13 0 3/16			
1	g	PL 16 x 1 1/4	12 11 3/8			
2	h	PL 16 x 1 1/8	10 0			
1	k	PL 24 x 1 1/8	18 0			
1	m	PL 16 x 1 1/4	12 11 3/8			
1	X2c	PL 10 x 7/8	4 0			
1	X2ch	PL 10 x 7/8	4 0			
4	X3fc	BAR 5 x 3/8	4 0			
4	X3fa	BAR 5 x 5/16	4 0			
2	X3bb	BAR 7 x 1/2	4 0			
2	X3fd	BAR 6 x 1/2	4 0			
1	XSP3	SOLE PL		DET ON DWG.		

SHOP NOTE

HOLES: 15/16" ø U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC1.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.

1853 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717-299-521

A Subsidiary of Kaiser Industries, Inc.

GIRDER - G13E
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP

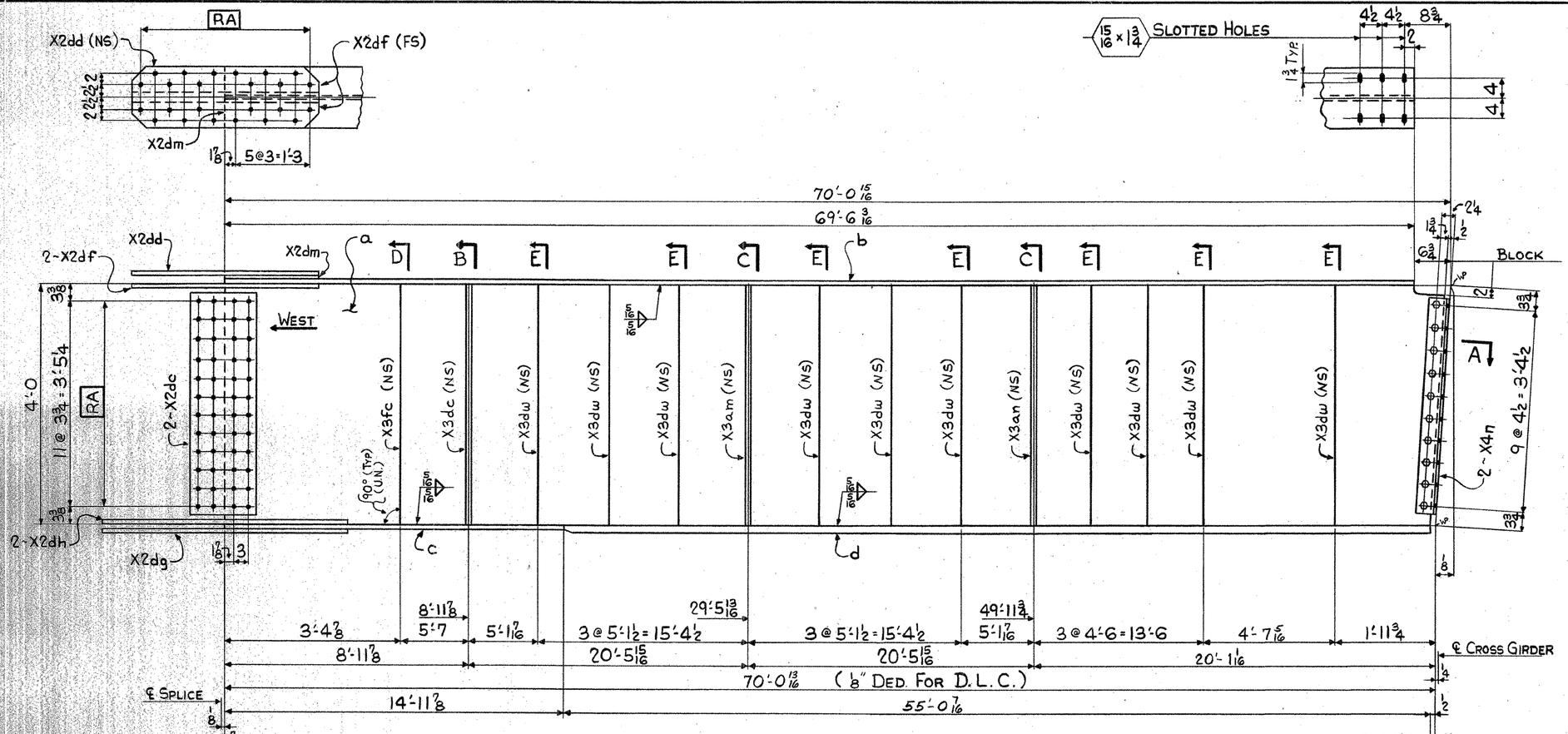
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-6-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER 38 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G9F	GIRDER					13,661
1	a	PL 48 x 3/8	70	0 7/16			
1	b	PL 12 x 7/8	69	6 3/16			
1	c	PL 16 x 1 1/4	14	11 7/8			
1	d	PL 16 x 1 7/8	55	0 7/16			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
2	X4n	∠ 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3fc	BAR 5 x 3/8	4	0			
10	X3dw	BAR 5 x 3/8	4	0			
1	X3am	BAR 7 x 9/16	4	0			
1	X3an	BAR 7 x 9/16	4	0			
1	X3dc	BAR 7 x 9/16	4	0			
10		7/8" H.S. BOLTS	0	2 1/2		B1/21	
10		WASH. FOR 7/8" H.S. BOLTS				B1/28	



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1500 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

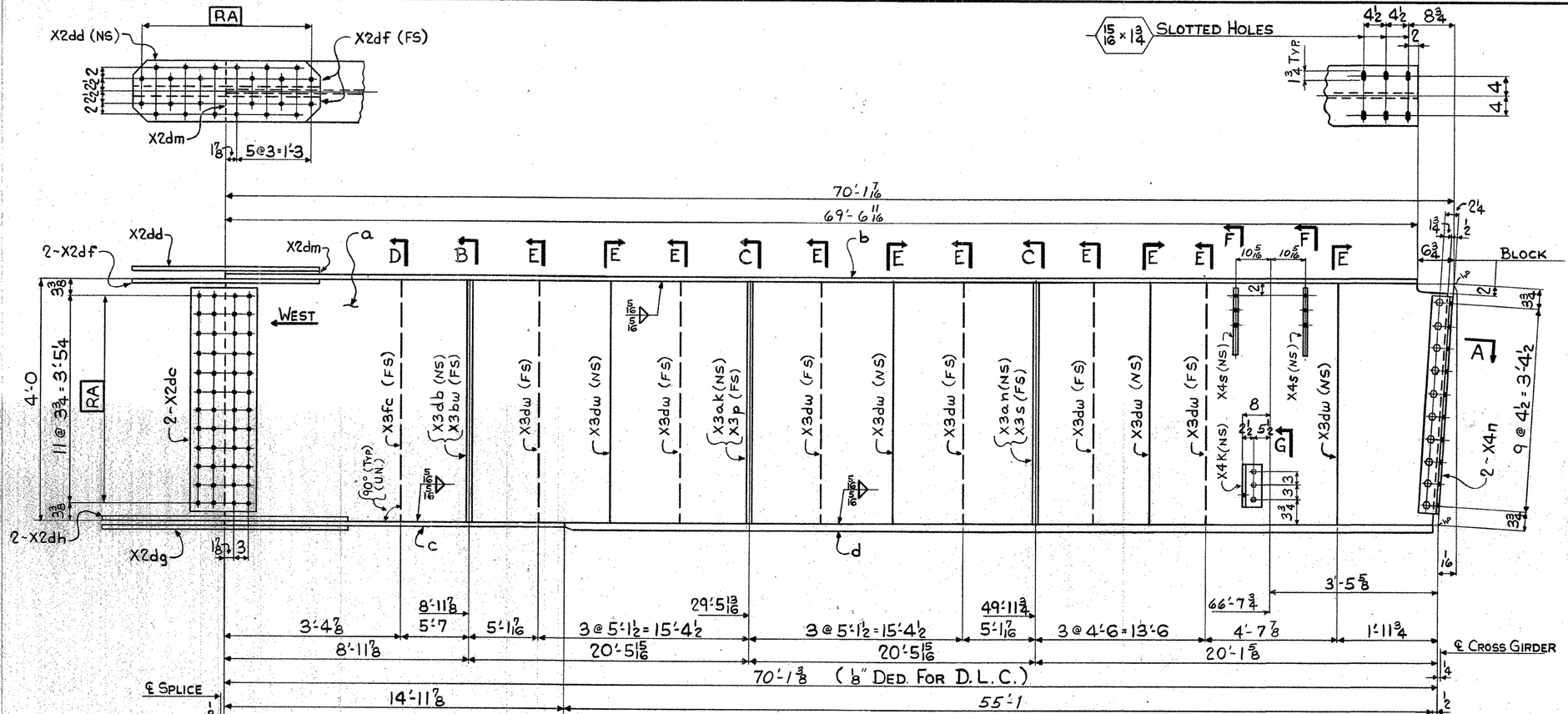
GIRDER ~ G9F
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP.
IN CHARGE COLONIAL MADE BY RAS CHK'D. BY THS DATE 2-8-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 39 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G10F	GIRDER				13,866
1	a	PL 48 x 3/8	70 0 15/16			
1	b	PL 12 x 7/8	69 6 11/16			
1	c	PL 16 x 1 1/4	14 11 7/8			
1	d	PL 16 x 1 5/8	55 1			
2	X2dc	PL 44 1/4 x 3/8	1 1			
1	X2dd	PL 12 x 7/16	3 1			
2	X2df	BAR 5 x 5/8	3 1			
1	X2dm	PL 12 x 1/4	1 6 3/8			
1	X2dg	PL 16 x 1/2	4 1			
2	X2dh	BAR 7 x 1/2	4 1			
2	X4n	L 5 x 3 1/2 x 3/8	3 7 1/2			
1	X3fc	BAR 5 x 3/8	4 0			
10	X3dw	BAR 5 x 3/8	4 0			
1	X3p	BAR 7 x 9/16	4 0			
1	X3s	BAR 7 x 9/16	4 0			
1	X3ak	BAR 7 x 9/16	4 0			
1	X3an	BAR 7 x 9/16	4 0			
1	X3bw	BAR 7 x 9/16	4 0			
1	X3db	BAR 7 x 9/16	4 0			
2	X4s	PL 4 x 3/8	1 2			
1	X4k	L 7 x 4 x 1/2	0 9			
10		7/8" H.S. BOLTS	0 2 1/2		B1/21	
13		WASH. FOR 7/8" H.S. BOLTS			B1/28	
3		7/8" H.S. BOLTS	0 2 1/4		B1/20	



SHOP NOTE

HOLES: 15/16"ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1805 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries Inc

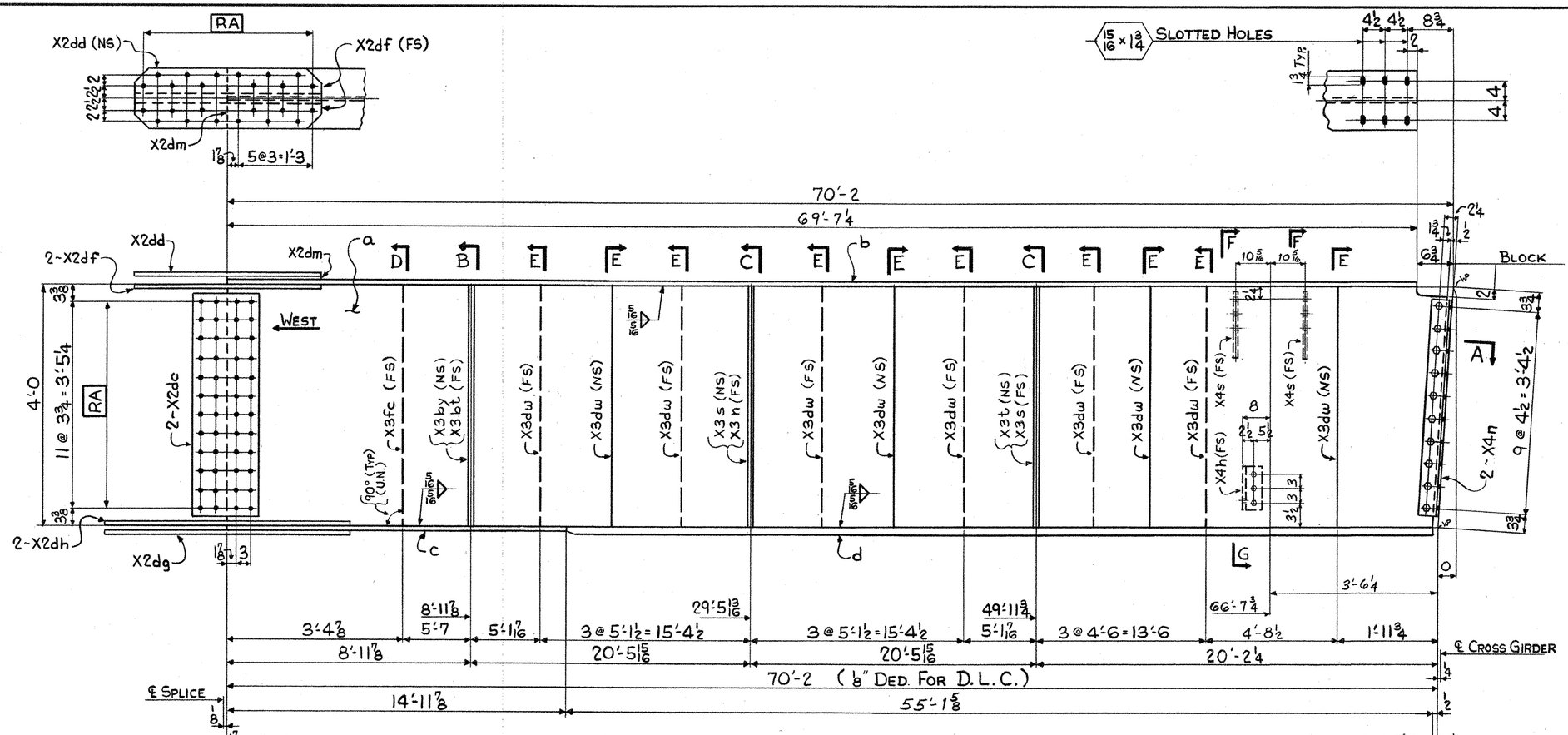
GIRDER ~ G10F
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE COLONIAL MADE BY RAS CHK'D BY THS DATE 2-8-85
CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 40 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G11F	GIRDER					13,875
1	a	PL 48 x 3/8	70	1½			
1	b	PL 12 x 7/8	69	7¼			
1	c	PL 16 x 1¼	14	11⅞			
1	d	PL 16 x 1⅝	55	1⅝			
2	X2dc	PL 444 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x ¼	1	6⅜			
1	X2dg	PL 16 x ½	4	1			
2	X2dh	BAR 7 x ½	4	1			
2	X4n	∠ 5 x 3½ x 3/8	3	7½			
1	X3fc	BAR 5 x 3/8	4	0			
10	X3dw	BAR 5 x 3/8	4	0			
1	X3n	BAR 7 x 9/16	4	0			
2	X3s	BAR 7 x 9/16	4	0			
1	X3t	BAR 7 x 9/16	4	0			
1	X3bt	BAR 7 x 9/16	4	0			
1	X3by	BAR 7 x 9/16	4	0			
2	X4s	PL 4 x 3/8		1	2		
1	X4h	∠ 7 x 4 x ½	0	9			
10		7/8" H.S. BOLTS	0	2½			B1/21
13		WASH. FOR 7/8 H.S. BOLTS					B1/28
3		7/8" H.S. BOLTS	0	2¼			B1/20



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

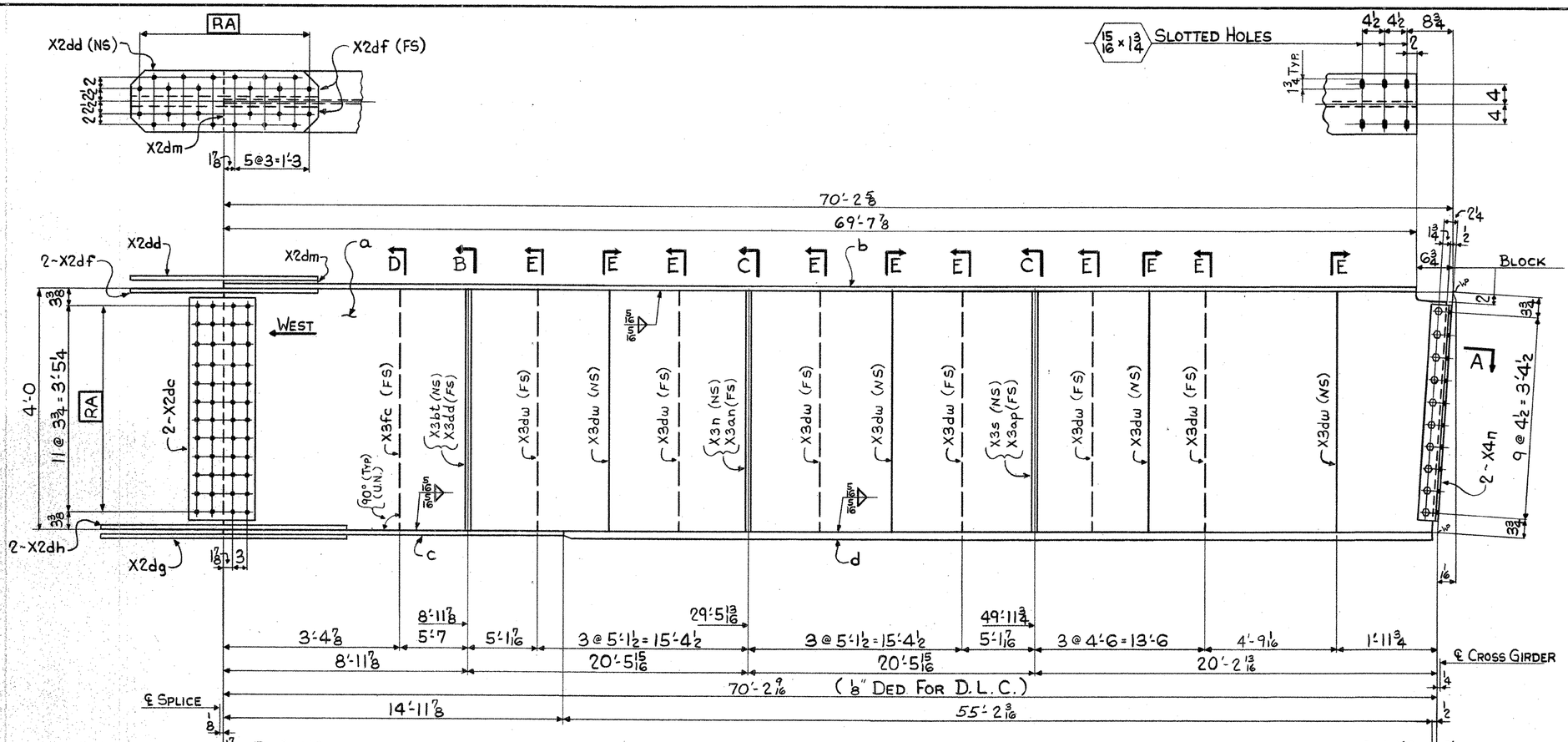
GIRDER ~ G11F
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON ℄ WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

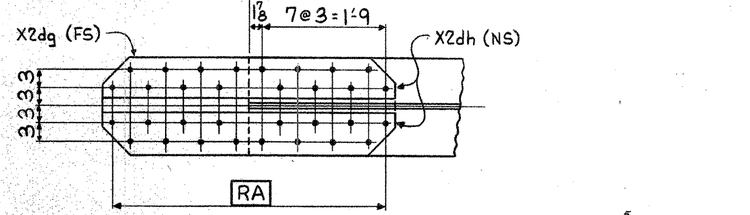
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-8-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 41 OF 76

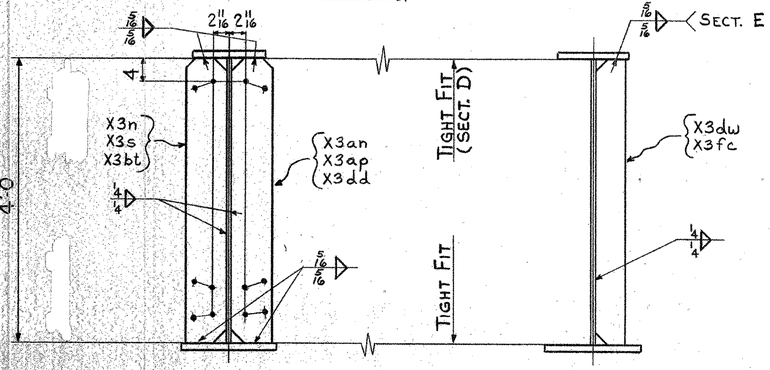
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G12F	GIRDER					13,848
1	a	PL 48 x 3/8	70	2 1/8			
1	b	PL 12 x 7/8	69	7 7/8			
1	c	PL 16 x 1 1/4	14	11 7/8			
1	d	PL 16 x 1 5/8	55	2 3/16			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 1/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
2	X4n	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3fc	BAR 5 x 3/8	4	0			
10	X3dw	BAR 5 x 3/8	4	0			
1	X3n	BAR 7 x 9/16	4	0			
1	X3an	BAR 7 x 9/16	4	0			
1	X3s	BAR 7 x 9/16	4	0			
1	X3ap	BAR 7 x 9/16	4	0			
1	X3bt	BAR 7 x 9/16	4	0			
1	X3dd	BAR 7 x 9/16	4	0			
10		7/8" H.S. BOLTS	0	2 1/2		B1/21	
10		WASH FOR 7/8" H.S. BOLTS				B1/28	

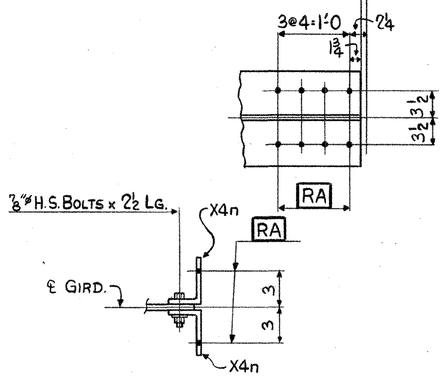






SECTS. B ℄ C

SECTS. D ℄ E



SECT. A
(ENLARGED)

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G12F
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

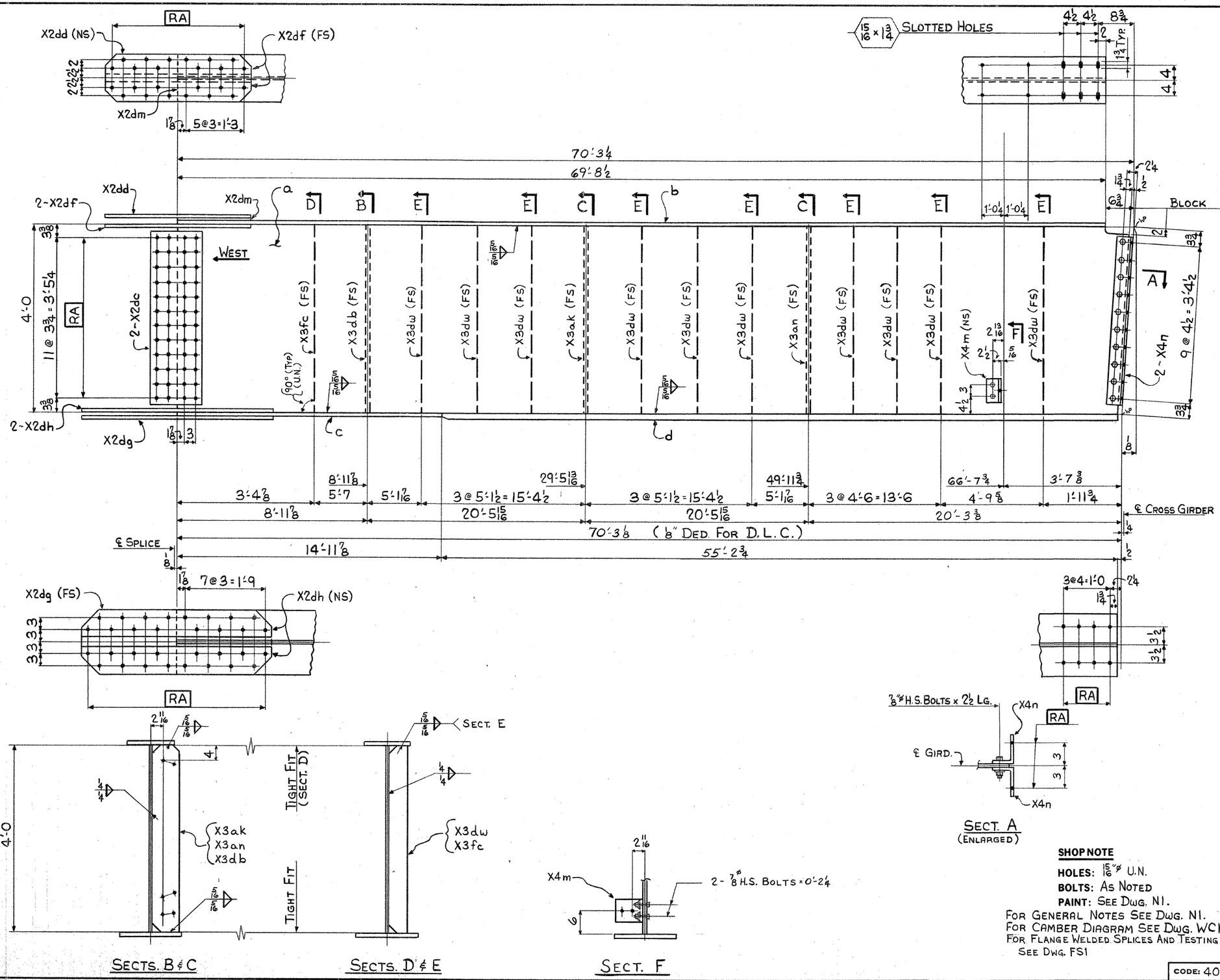
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-9-85

CONTRACT NUMBER PA-84197-1 DRAWING NUMBER 42 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G13F	GIRDER					13,708
1	a	PL 48 x 3/8	70	2 3/4			
1	b	PL 12 x 7/8	69	8 1/2			
1	c	PL 16 x 1 1/4	14	11 3/8			
1	d	PL 16 x 1 5/8	55	2 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dm	PL 12 x 1/4	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
2	X4n	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3fc	BAR 5 x 3/8	4	0			
10	X3dw	BAR 5 x 3/8	4	0			
1	X3ak	BAR 7 x 9/16	4	0			
1	X3an	BAR 7 x 9/16	4	0			
1	X3db	BAR 7 x 9/16	4	0			
1	X4m	L 7 x 4 x 1/2	0	6			
10		7/8" H.S. BOLTS	0	2 1/2		B1/21	
12		WASH. FOR 7/8" H.S. BOLTS				B1/28	
2		7/8" H.S. BOLTS	0	2 1/4		B1/20	



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC1.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS1

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

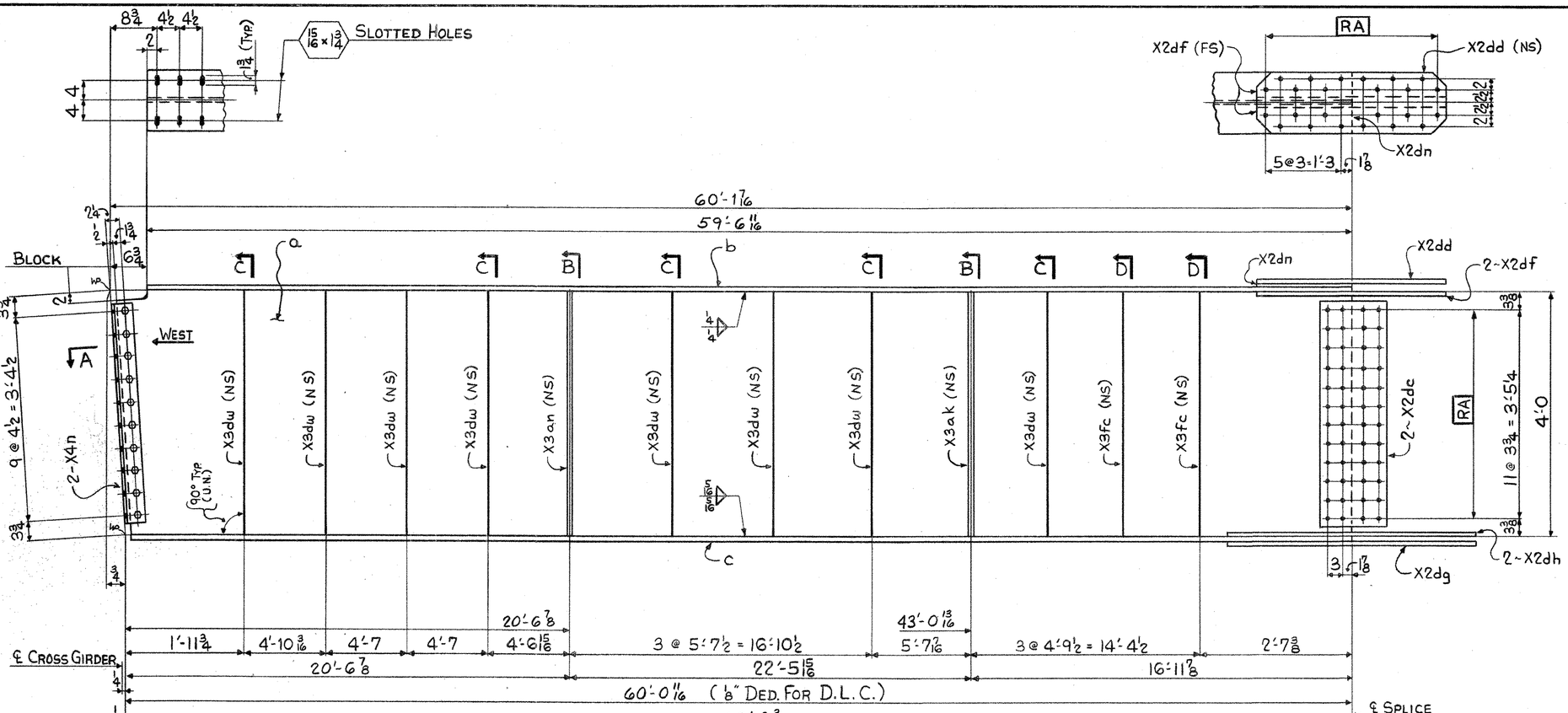
GIRDER ~ G13F
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

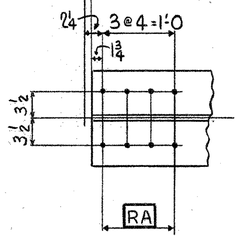
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE 2-9-85
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: 43 OF 76

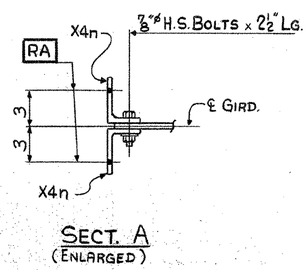
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

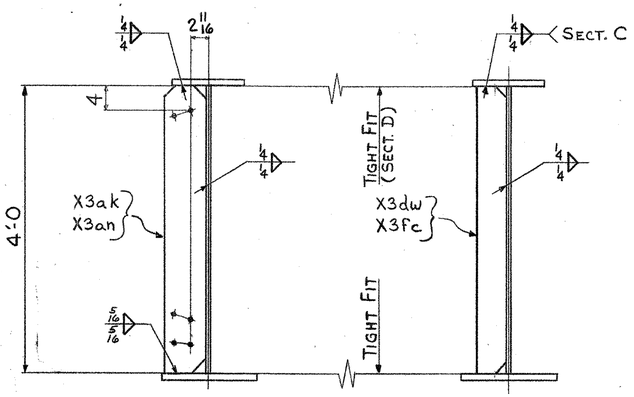
NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G14G	GIRDER					10,522
1	a	PL 48 x 3/8	60	0 15/16			
1	b	PL 12 x 3/4	59	6 11/16			
1	c	PL 16 x 1 1/4	60	0 3/16			
2	X2dc	PL 444 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X4n	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3ak	BAR 7 x 9/16	4	0			
1	X3an	BAR 7 x 9/16	4	0			
10		7/8" ø H.S. BOLTS	0	2 1/2		B1/21	
10		WASHERS FOR 7/8" ø H.S. BOLTS				B1/28	







SECT. A
(ENLARGED)



SECTION B

SECTS. C & D

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

GIRDER ~ G14G
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

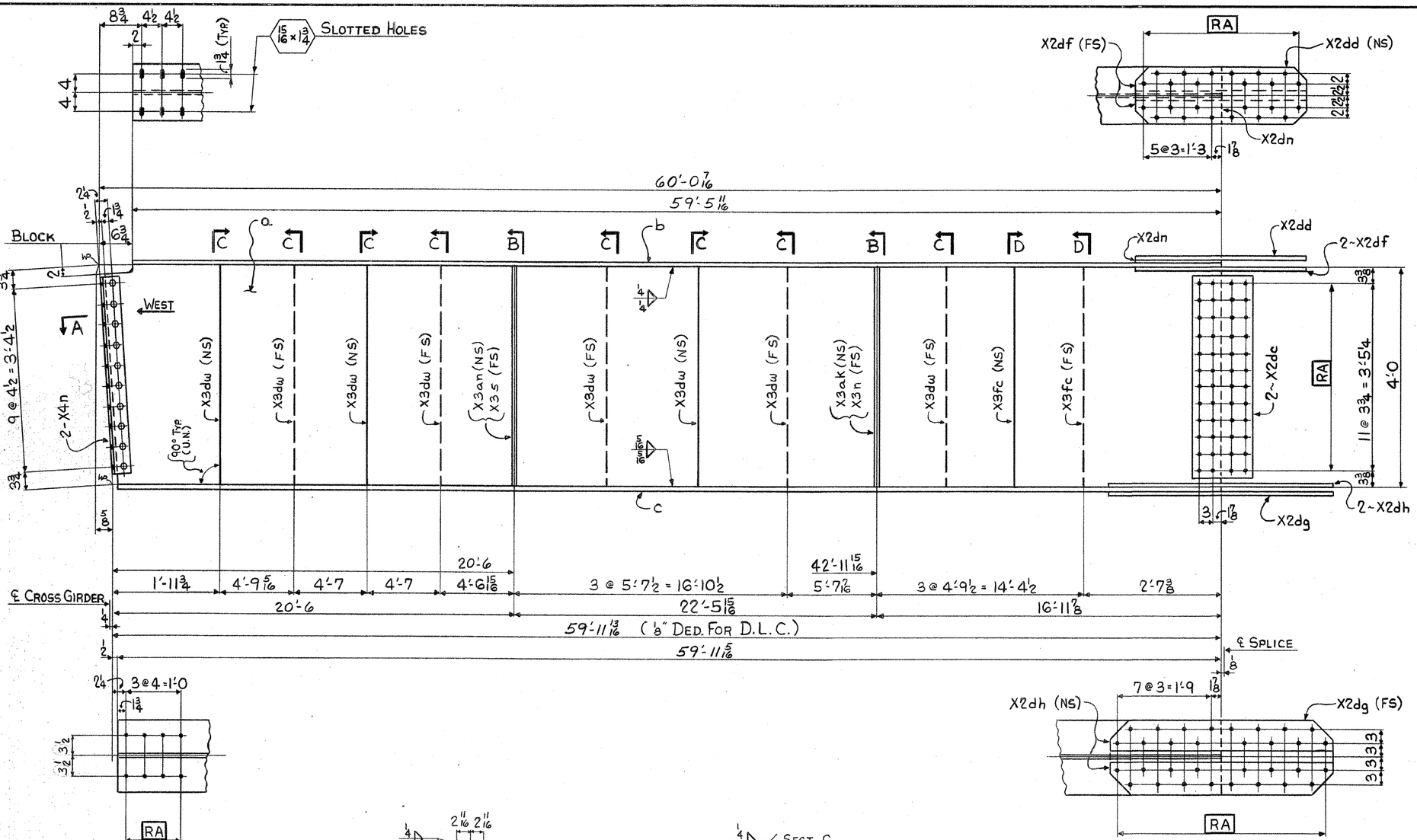
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-9-85

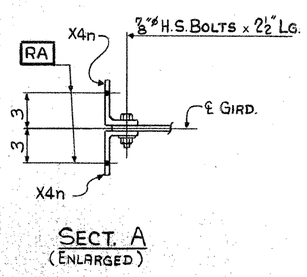
CONTRACT NUMBER PA-84197-2 DRAWING NUMBER: 44 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

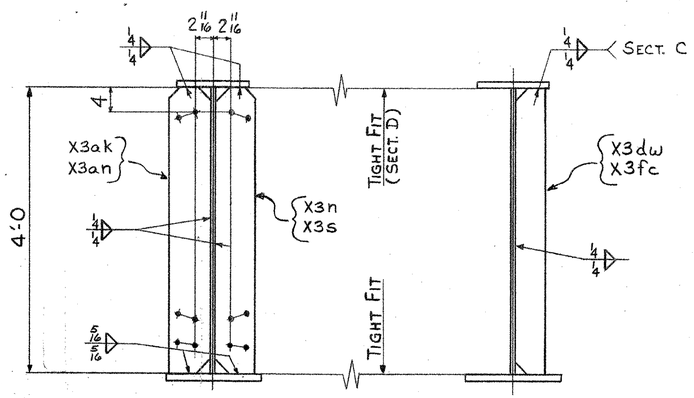
BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G15G	GIRDER					10,616
1	a	PL 48 x 3/8	59	11 15/16			
1	b	PL 12 x 3/4	59	5 11/16			
1	c	PL 16 x 1 1/4	59	11 5/16			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X4n	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3an	BAR 7 x 9/16	4	0			
1	X3s	BAR 7 x 9/16	4	0			
1	X3ak	BAR 7 x 9/16	4	0			
1	X3n	BAR 7 x 9/16	4	0			
10		7/8" H.S. BOLTS	0	2 1/2		B1/21	
10		WASHERS FOR 7/8" H.S. BOLTS				B1/28	





SECT. A
(ENLARGED)



SECTION B

SECTS. C ℄ D

SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
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GIRDER ~ G15G
L.R. 247 SPUR A SEC. B10
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WASHINGTON ℄ WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

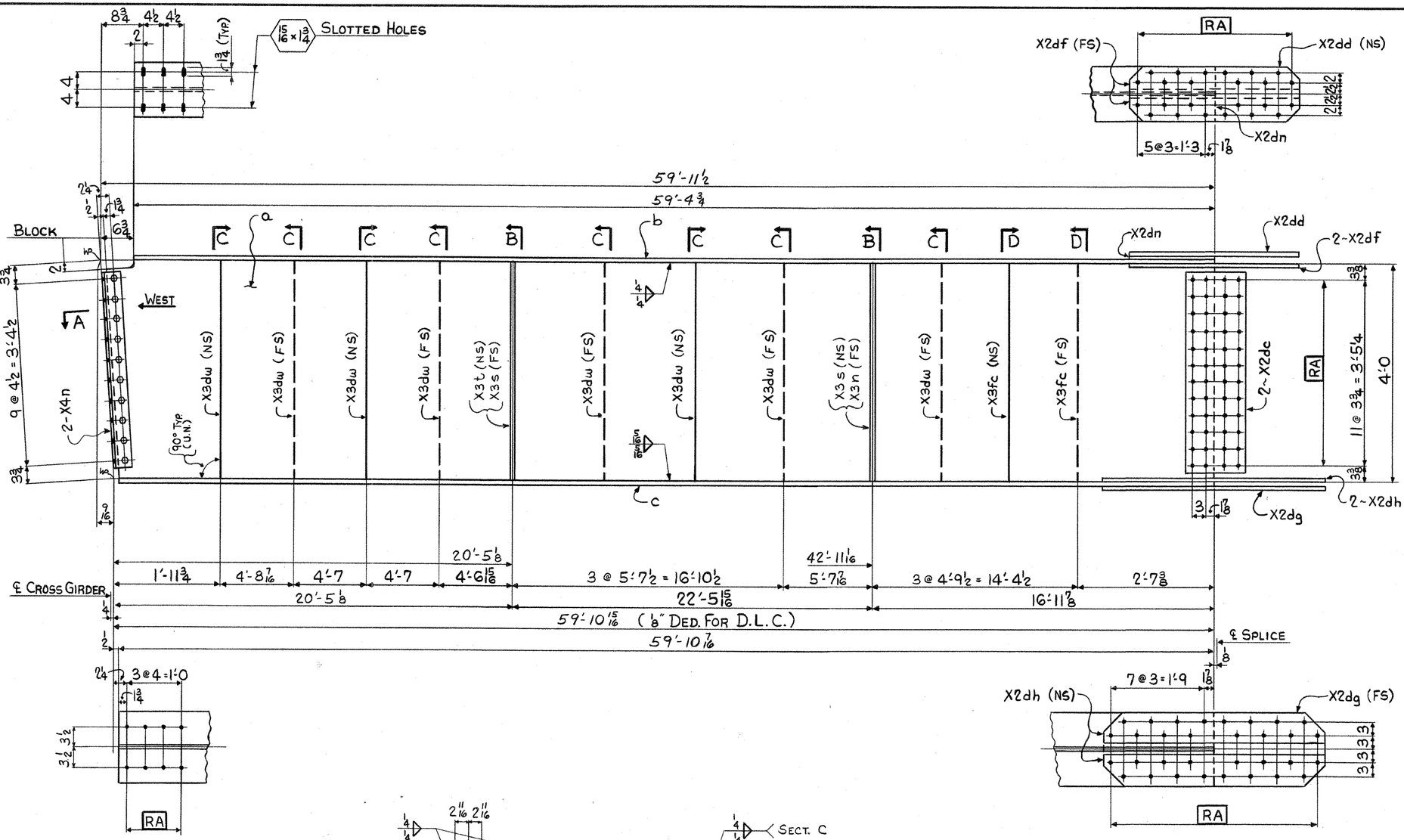
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-9-85

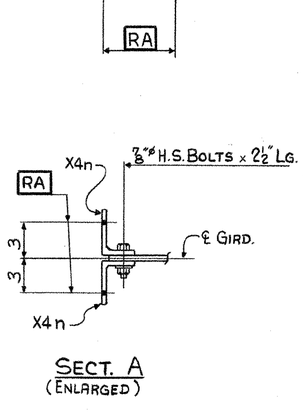
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 45 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

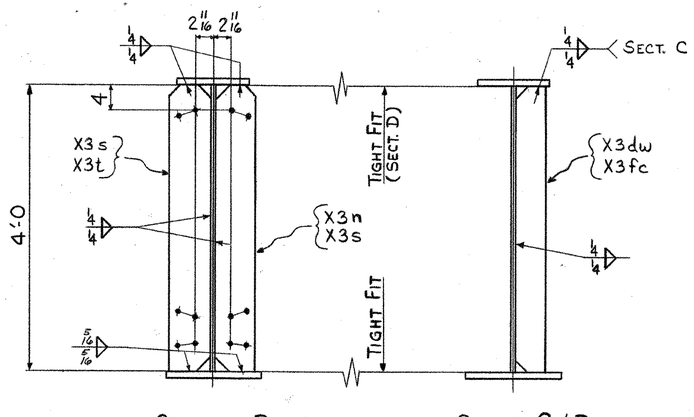
BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE	G1GG	GIRDER				10,604
1	a	PL 48 x 3/8	59 11			
1	b	PL 12 x 3/4	59 4 3/4			
1	c	PL 16 x 1 1/4	59 10 7/16			
2	X2dc	PL 44 1/4 x 3/8	1 1			
1	X2dd	PL 12 x 7/16	3 1			
2	X2df	BAR 5 x 5/8	3 1			
1	X2dn	PL 12 x 1/2	1 6 3/8			
1	X2dg	PL 16 x 1/2	4 1			
2	X2dh	BAR 7 x 1/2	4 1			
8	X3dw	BAR 5 x 3/8	4 0			
2	X3fc	BAR 5 x 3/8	4 0			
2	X4n	L 5 x 3 1/2 x 3/8	3 7 1/2			
1	X3n	BAR 7 x 9/16	4 0			
2	X3s	BAR 7 x 9/16	4 0			
1	X3t	BAR 7 x 9/16	4 0			
10		7/8" ϕ H.S. BOLTS	0 2 1/2		B1/21	
10		WASHERS FOR 7/8" H.S. BOLTS			B1/28	





SECT. A
(ENLARGED)



SECTION B

SECTS. C ℄ D

SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
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GIRDER ~ G1GG
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

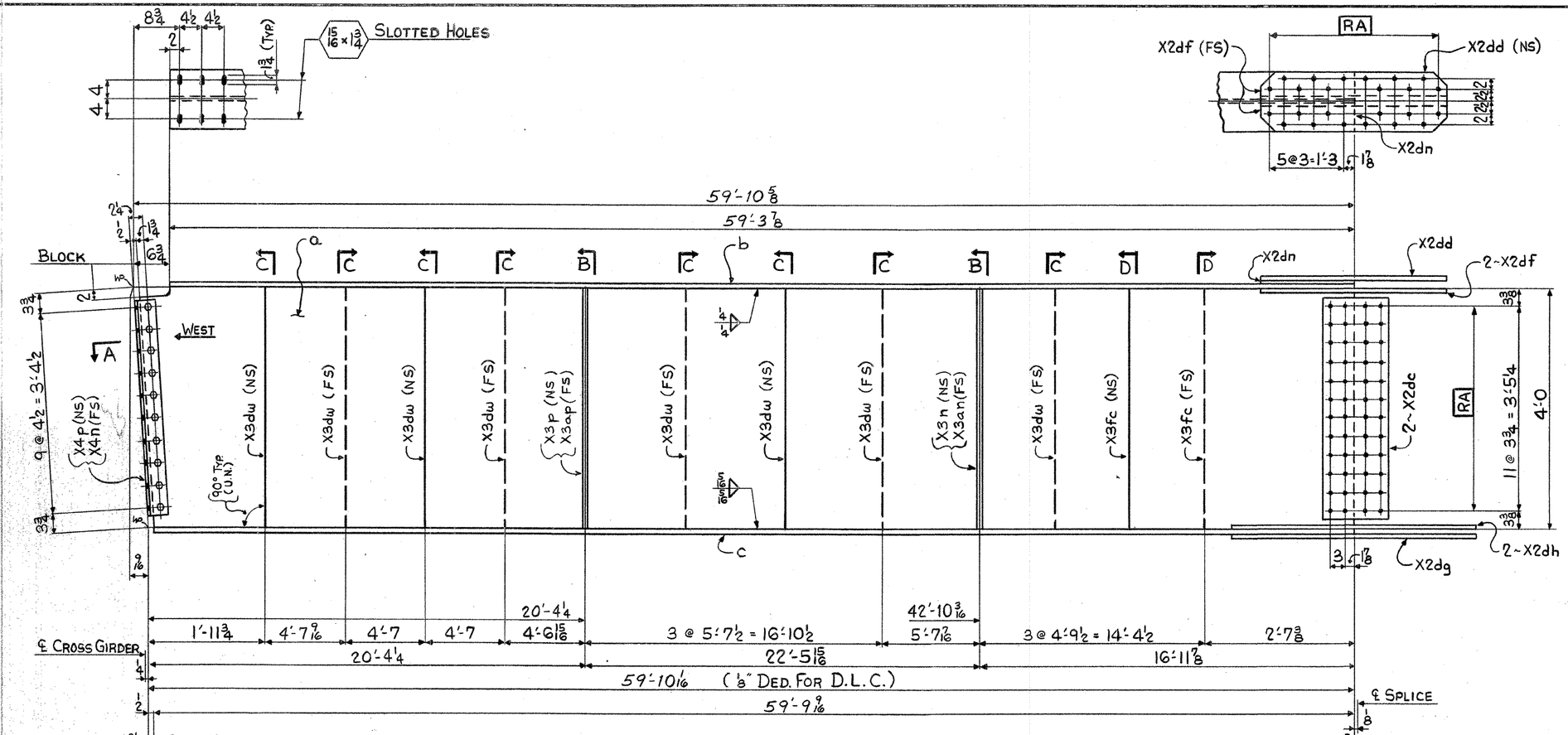
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-9-85

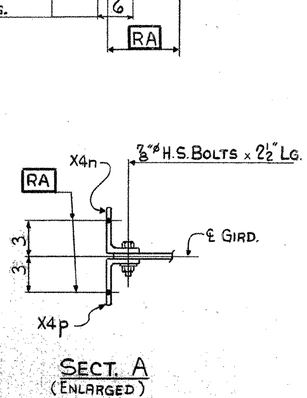
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 46 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

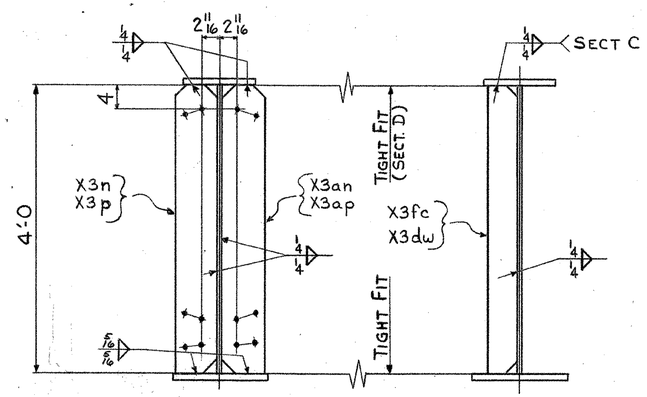
BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G17G	GIRDER					10,598
1	a	PL 48 x 3/8	59	10 5/8			
1	b	PL 12 x 3/4	59	3 7/8			
1	c	PL 16 x 1 1/4	59	9 9/16			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
1	X4n	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X4p	L 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3p	BAR 7 x 9/16	4	0			
1	X3ap	BAR 7 x 9/16	4	0			
1	X3n	BAR 7 x 9/16	4	0			
1	X3an	BAR 7 x 9/16	4	0			
10		7/8" H.S. BOLTS	0	2 1/2		B1/21	
10		WASHERS FOR 7/8" H.S. BOLTS				B1/28	





SECT. A
(ENLARGED)



SECTION B

SECTS. C & D

SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
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GIRDER ~ G17G
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
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DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

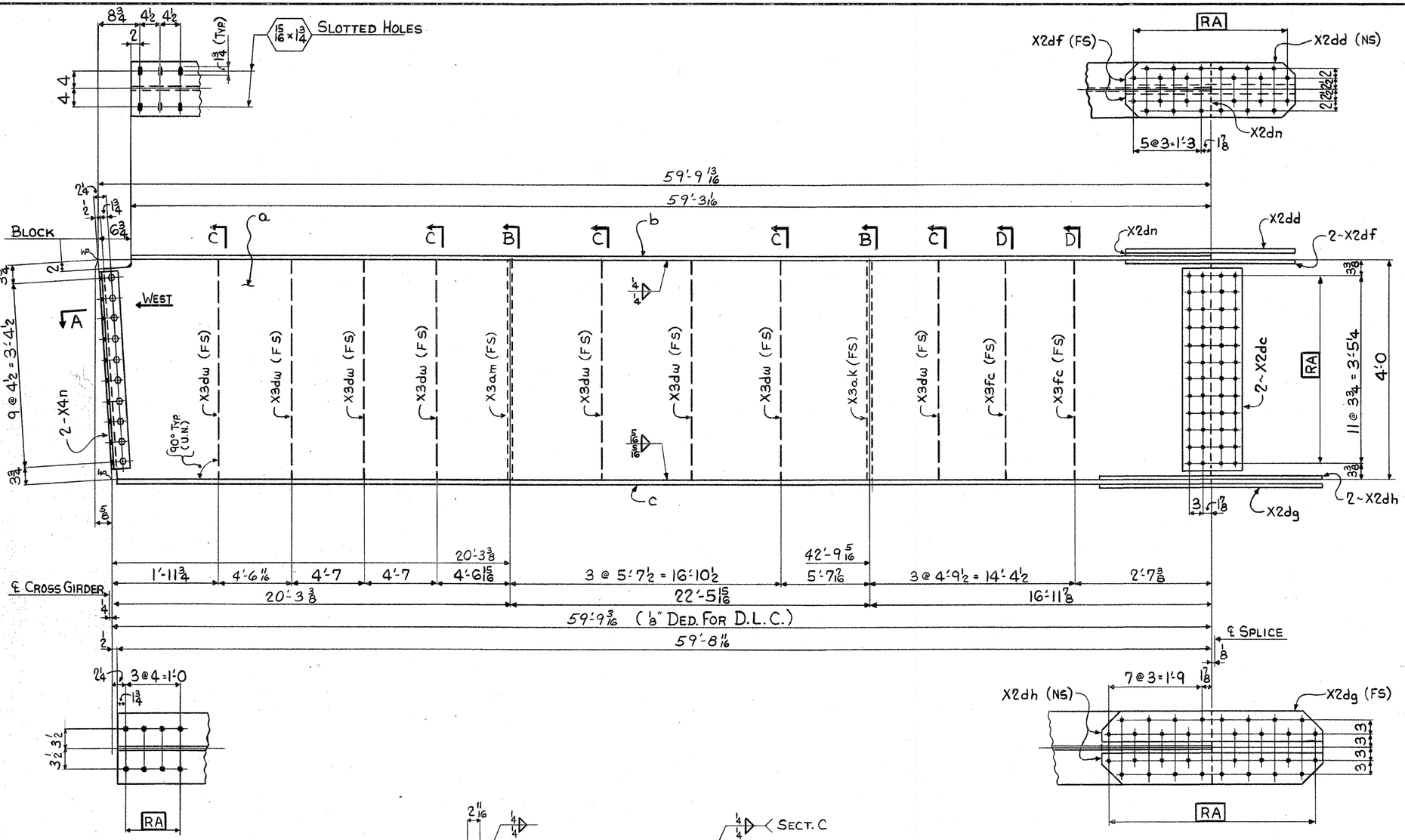
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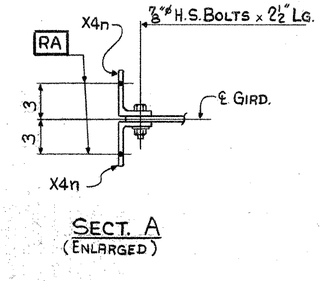
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 47 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

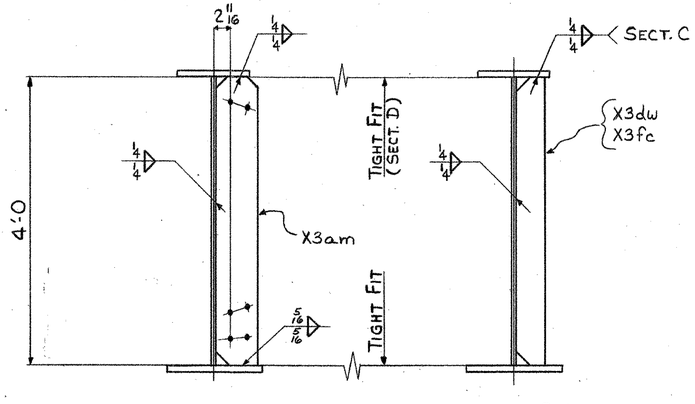
BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G18G	GIRDER					10458
1	a	PL 48 x 3/8	59	9 5/16			
1	b	PL 12 x 3/4	59	3/16			
1	c	PL 16 x 1 1/4	59	8 11/16			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X4n	∠ 5 x 3 1/2 x 3/8	3	7 1/2			
1	X3ak	BAR 7 x 9/16	4	0			
1	X3am	BAR 7 x 9/16	4	0			
10		7/8" ϕ H.S. BOLTS	0	2 1/2		B1/21	
10		WASHERS FOR 7/8" ϕ H.S. BOLTS				B1/28	





SECT. A
(ENLARGED)



SECTION B

SECTS. C ℄ D

SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G18G
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON ℄ WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-11-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 48 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G14H	GIRDER					14919
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 1/2			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 1/4			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2d	PL 9 x 7/8	4	0			
1	X2cn	PL 9 x 7/8	4	0			
1	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
1	X3dh	BAR 7 x 9/16	4	0			
1	X3df	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

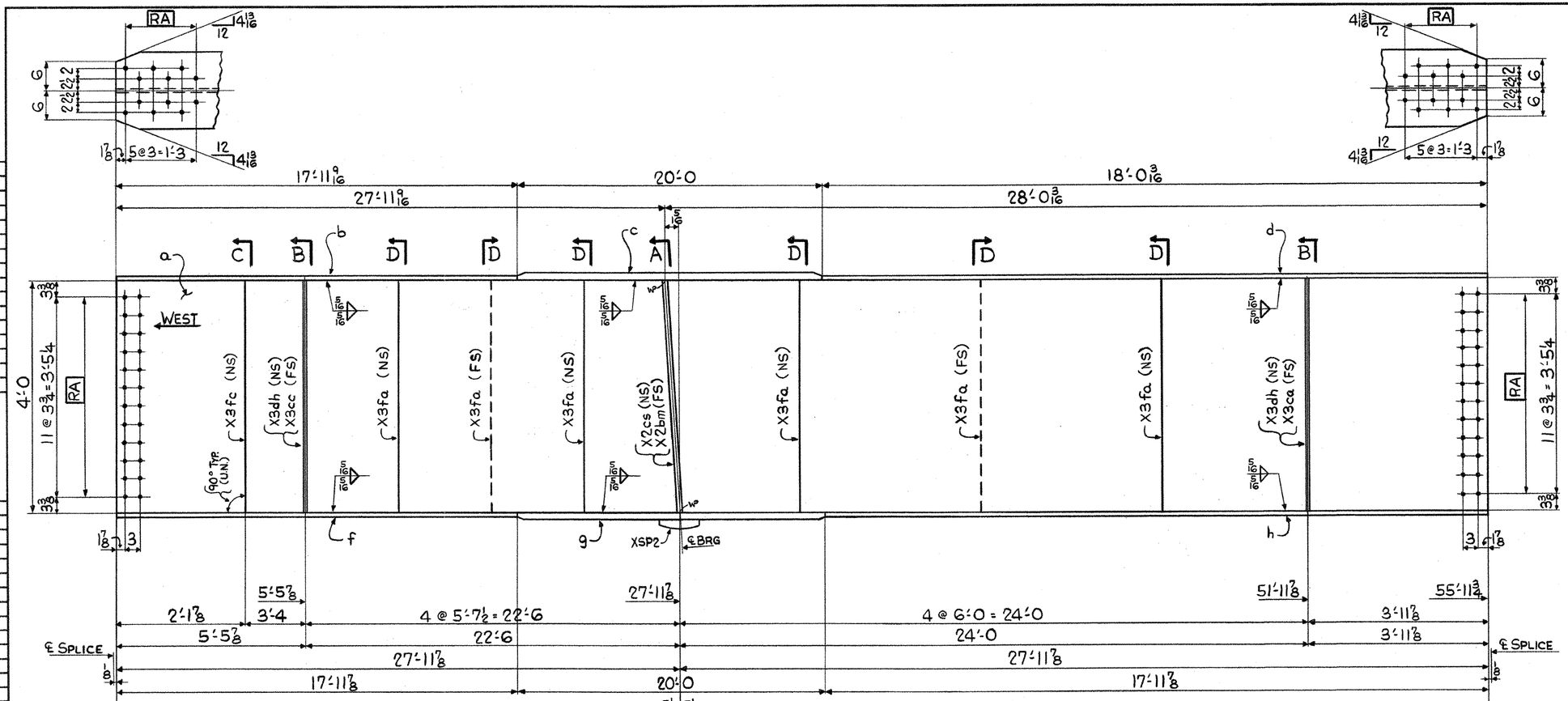
GIRDER ~ G14H
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

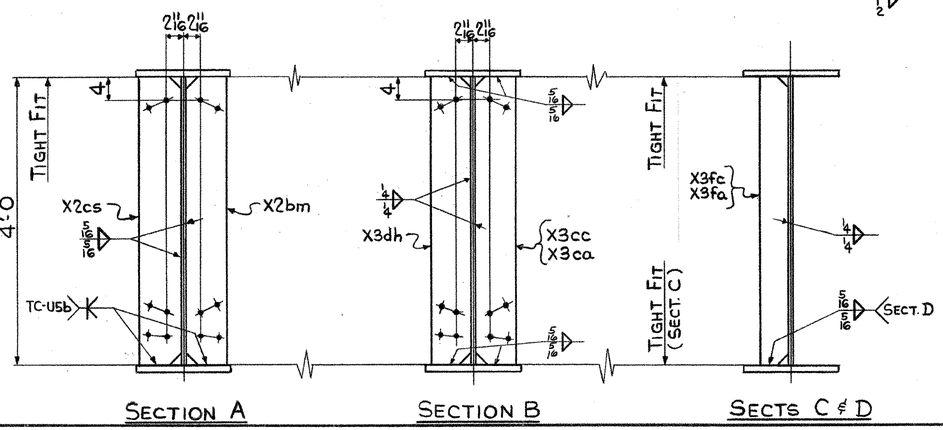
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-11-85
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 49 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G15H	GIRDER					15,026
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2cs	PL 9 x 7/8	4	0			
1	X2bm	PL 9 x 7/8	4	0			
1	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3dh	BAR 7 x 9/16	4	0			
1	X3cc	BAR 7 x 9/16	4	0			
1	X3ca	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC2.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G15H

L.R. 247 SPUR A SEC. B10

L.R. 247 SPUR A STA. 9 + 16.28

WASHINGTON & WESTMORELAND CO., PA.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO: S-15296 CONTRACTOR: BRAYMAN CONST. CORP.

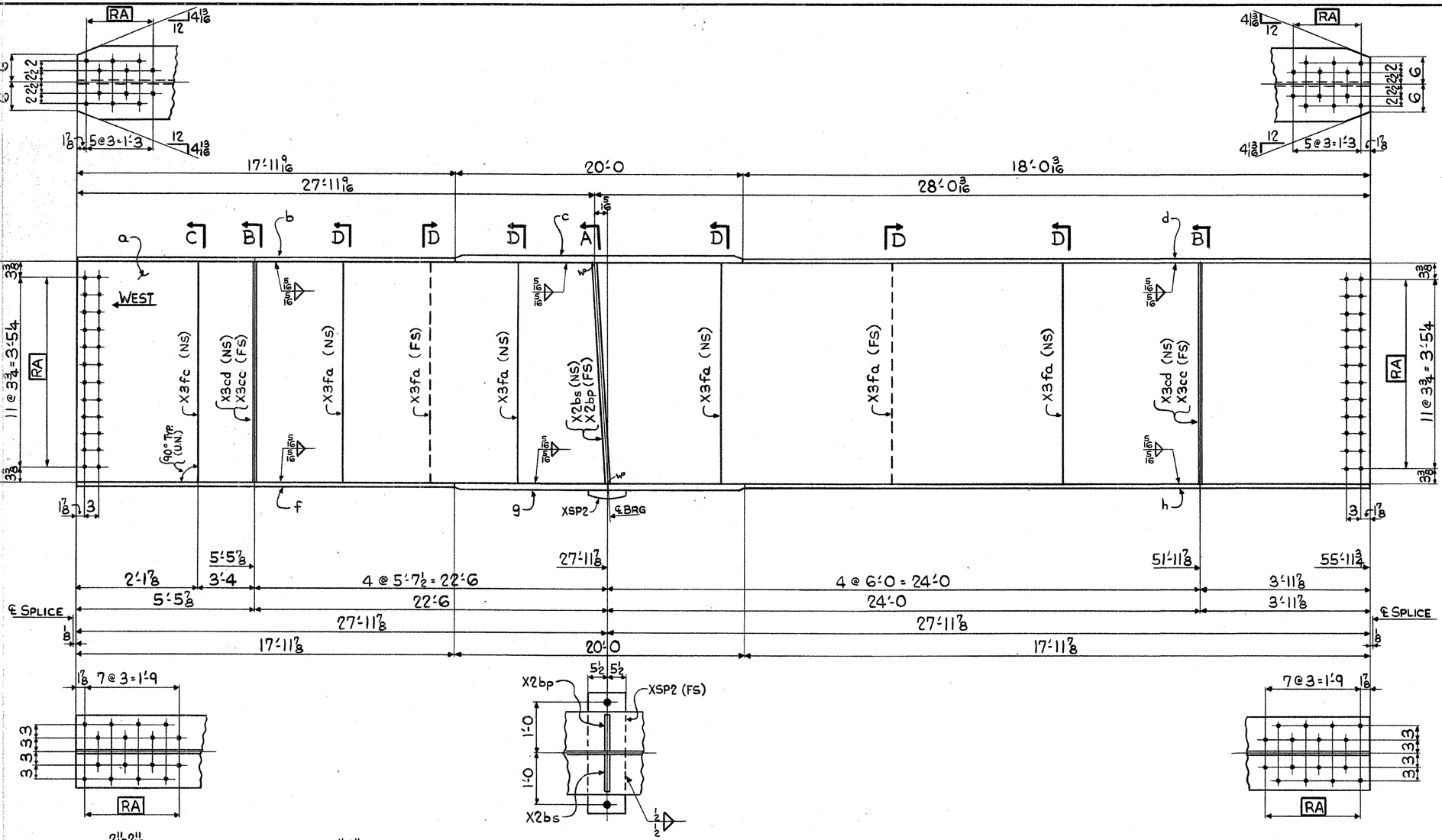
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-11-85

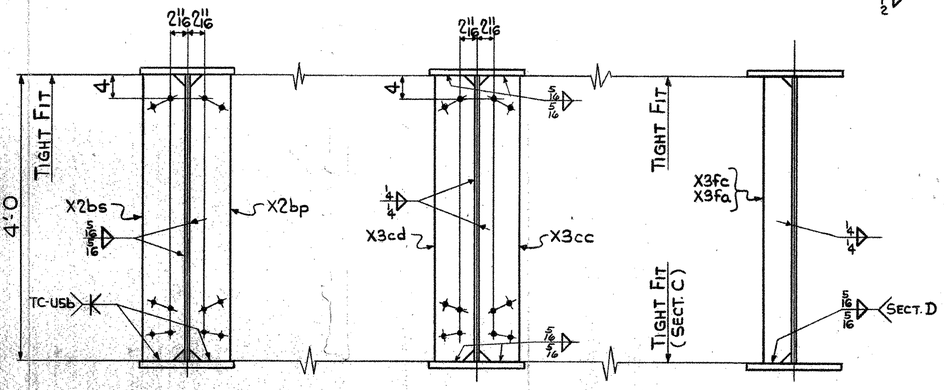
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 50 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G1GH	GIRDER					15,026
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2bs	PL 9 x 7/8	4	0			
1	X2bp	PL 9 x 7/8	4	0			
1	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3cd	BAR 7 x 9/16	4	0			
2	X3cc	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G1GH
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

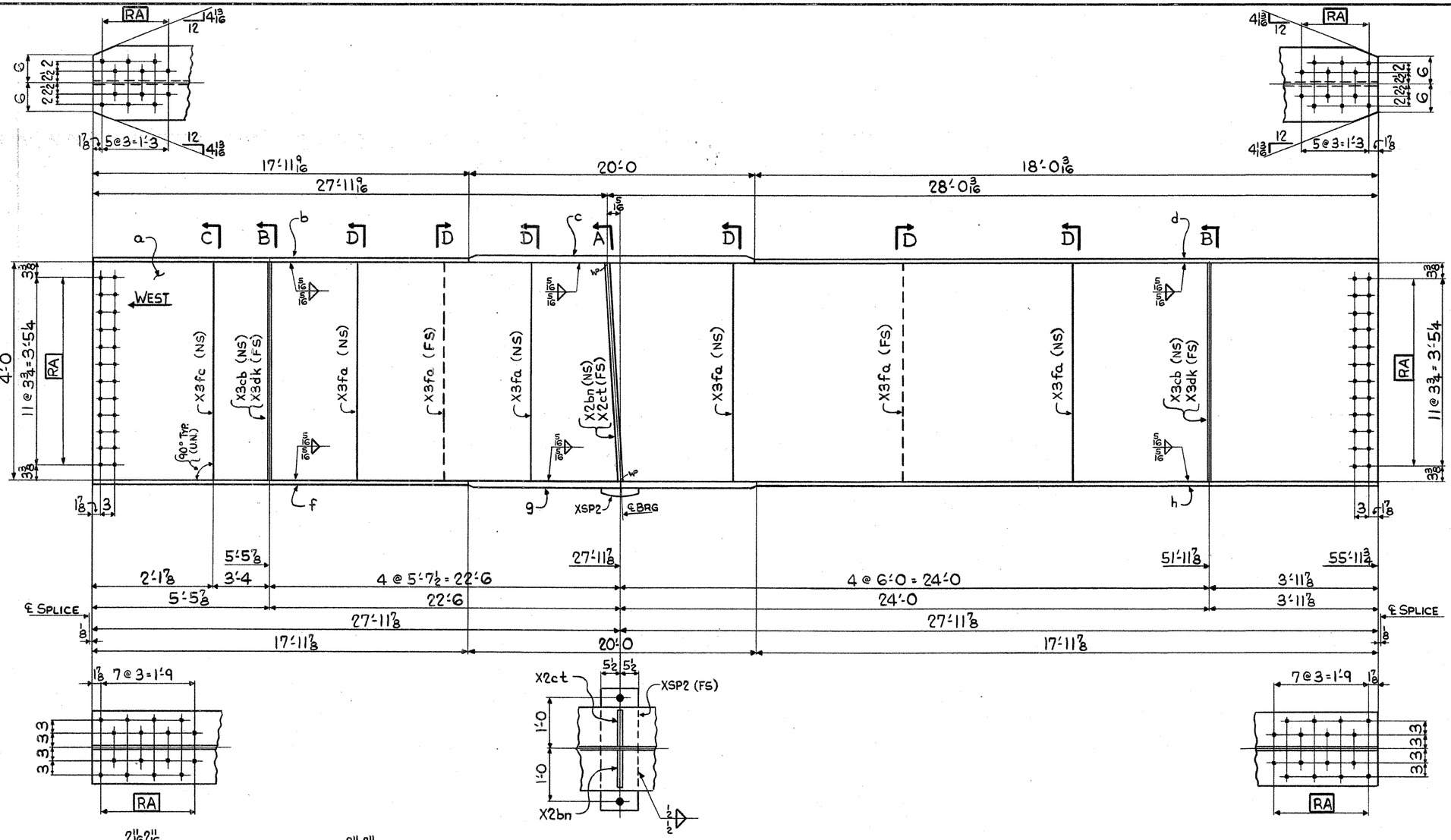
IN CHARGE: COLONIAL MADE BY: JTC CHK.D. BY: THS DATE: 2-11-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 51 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G17H	GIRDER					15,026
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2bn	PL 9 x 7/8	4	0			
1	X2ct	PL 9 x 7/8	4	0			
1	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3cb	BAR 7 x 5/16	4	0			
2	X3dk	BAR 7 x 5/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		



SECTION A SECTION B SECTS C & D

SHOP NOTE

HOLES: 15/16" Ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike, Lancaster, Pennsylvania 17603 Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G17H
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

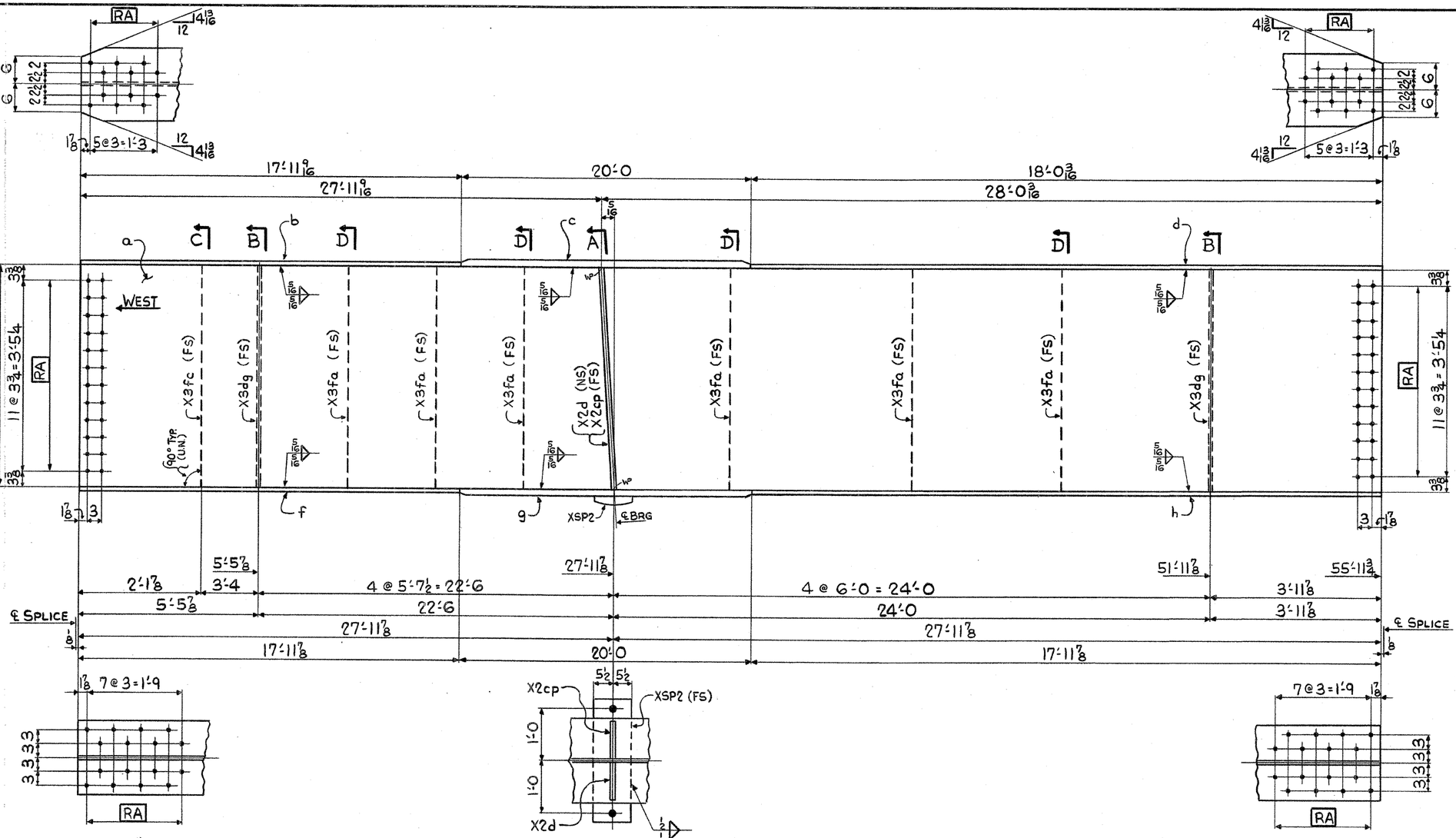
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-11-85

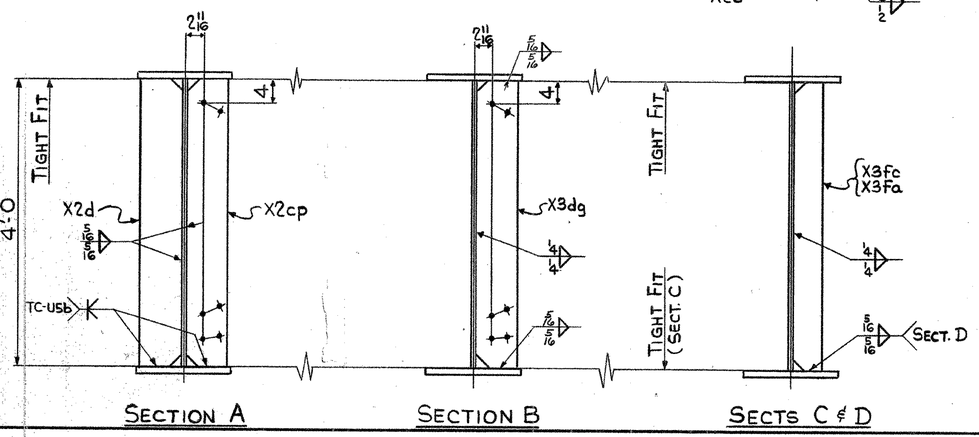
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 52 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G18H	GIRDER					14,919
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2d	PL 9 x 7/8	4	0			
1	X2cp	PL 9 x 7/8	4	0			
1	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3dg	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G18H
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON ℄ WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP.

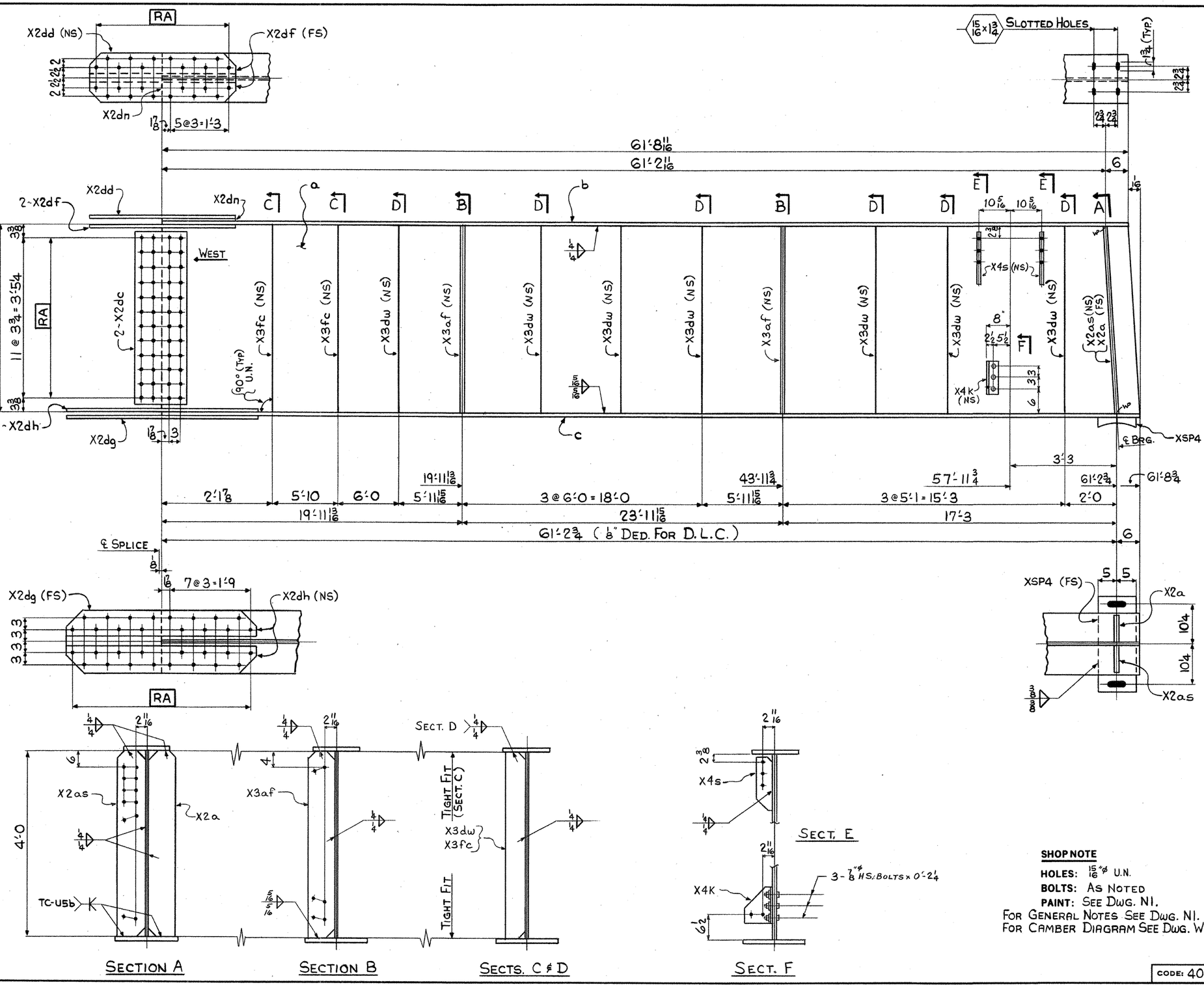
IN CHARGE: COLONIAL MADE BY: JTC CHK.D. BY: THS DATE: 2-11-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 53 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G141	GIRDER					10,976
1	a	PL 48 x 3/8	61	8 3/4			
1	b	PL 12 x 3/4	61	8 1/16			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2a	BAR 7 x 5/8	4	0			
1	X2as	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
7	X3dw	BAR 5 x 3/8	4	0			
2	X3af	BAR 7 x 9/16	4	0			
1	X4K	L 7 x 4 x 1/2	0	9			
2	X4s	PL 4 x 3/8	1	2			
1	XSP4	SOLE PL			DET. ON DWG. 1		
3		7/8" H.S. BOLTS	0	2 4			B1/20
3		WASH. FOR 7/8" H.S. BOLTS					B1/28



SHOP NOTE

HOLES: 15/16"ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G141
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

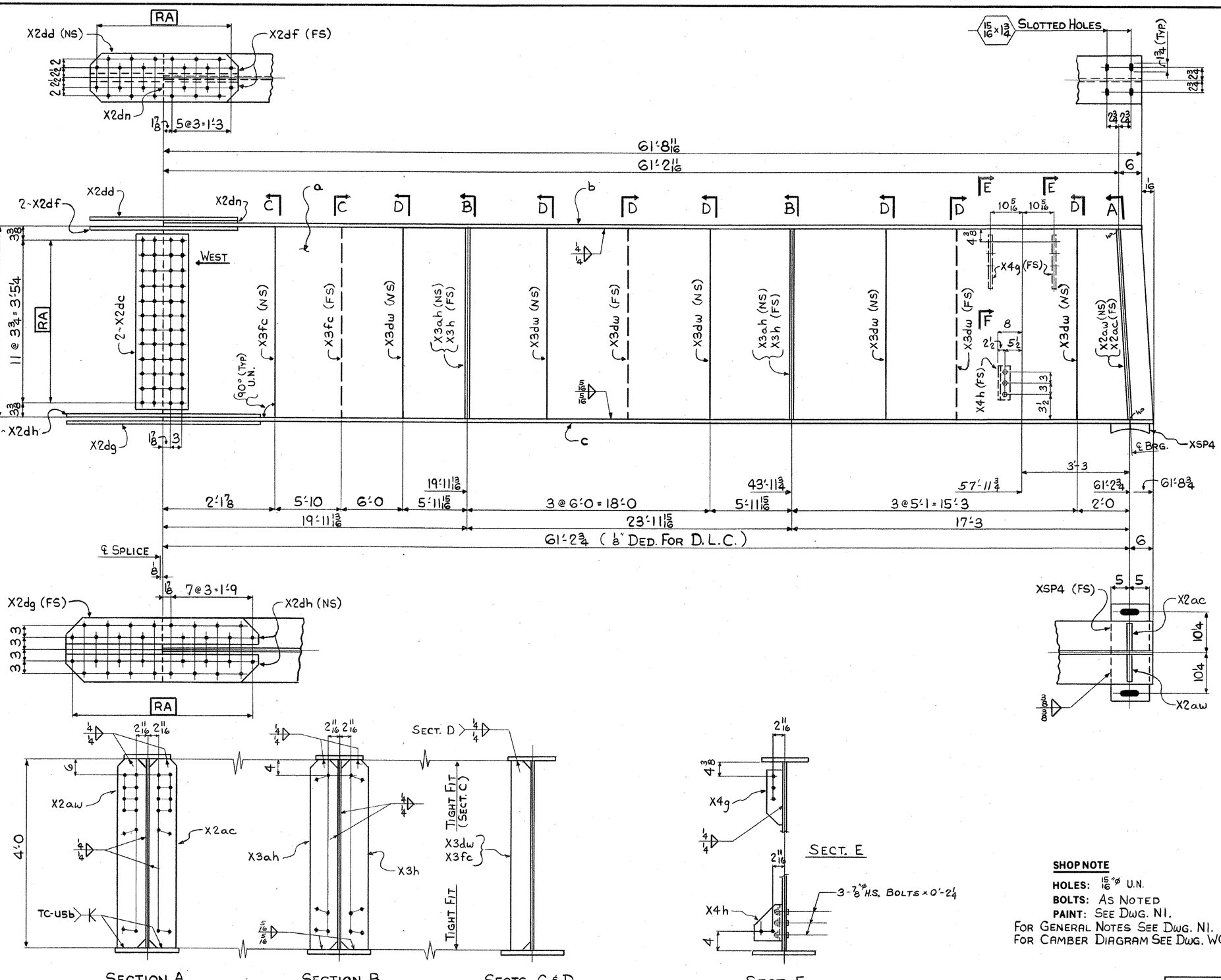
IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 54 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G15I	GIRDER					11,084
1	a	PL 48 x 3/8	61	8 3/4			
1	b	PL 12 x 3/4	61	8 11/16			
1	c	PL 16 x 1/4	61	8 3/4			
2	X2dc	PL 4 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2ac	BAR 7 x 5/8	4	0			
1	X2aw	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
7	X3dw	BAR 5 x 3/8	4	0			
2	X3ah	BAR 7 x 9/16	4	0			
2	X3h	BAR 7 x 9/16	4	0			
1	X4h	L 7 x 4 x 1/2	0	9			
2	X4g	PL 4 x 3/8	1	2			
1	XSP4	SOLE PL			DET. ON DWG. 1		
3		7/8" H.S. BOLTS	0	2 1/4		B1 20	
3		WASH. FOR 7/8" H.S. BOLTS				B1 28	



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G15I
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

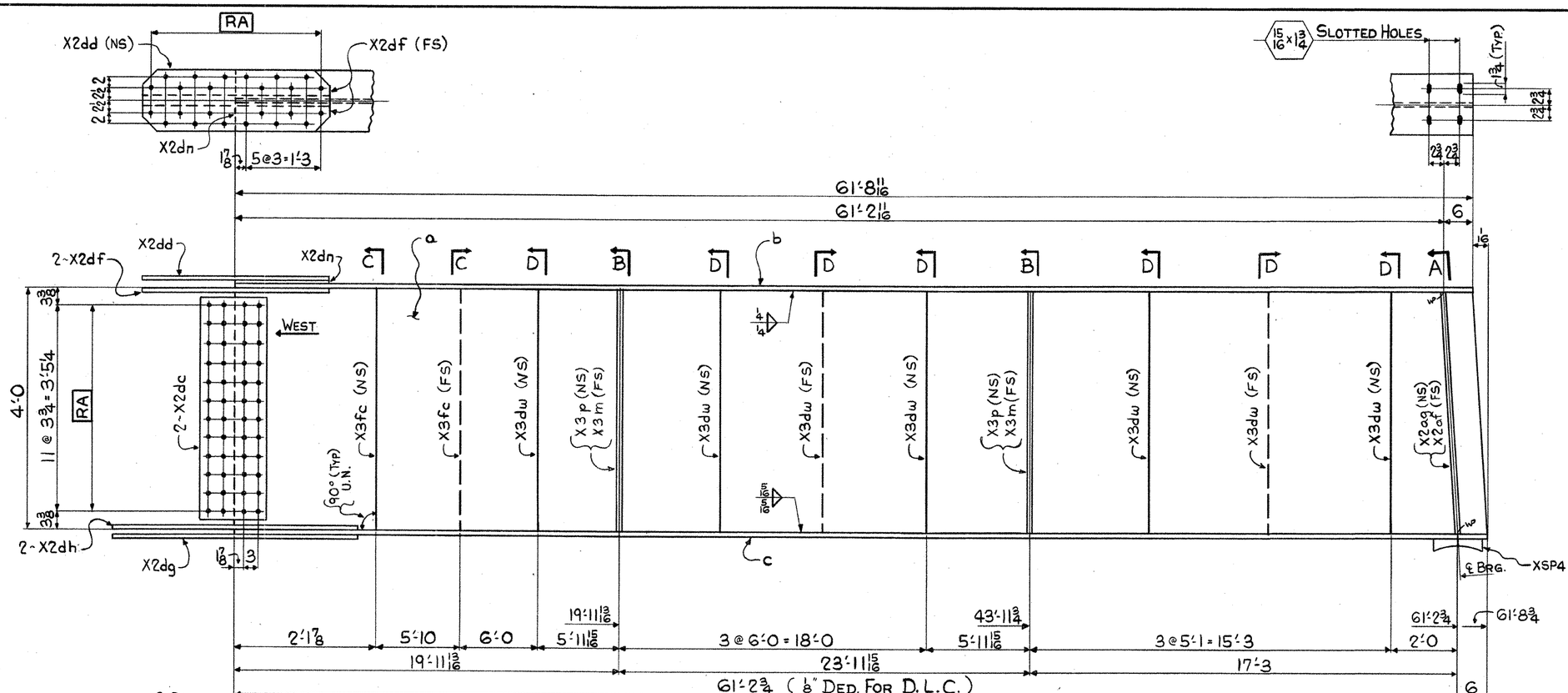
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-12-85
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 55 OF 76

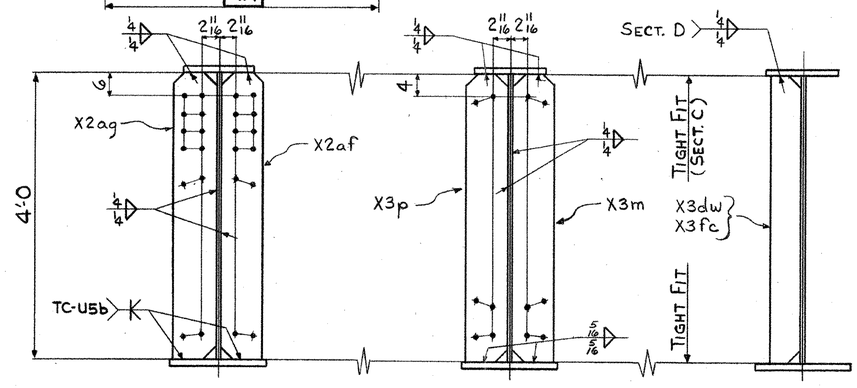
CODE: 4000

FED ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G16I	GIRDER					11,059
1	a	PL 48 x 3/8	61	8 3/4			
1	b	PL 12 x 3/4	61	8 11/16			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2af	BAR 7 x 5/8	4	0			
1	X2ag	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
7	X3dw	BAR 5 x 3/8	4	0			
2	X3m	BAR 7 x 9/16	4	0			
2	X3p	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		





SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2

CODE: 4000

NO.	REVISION	DATE

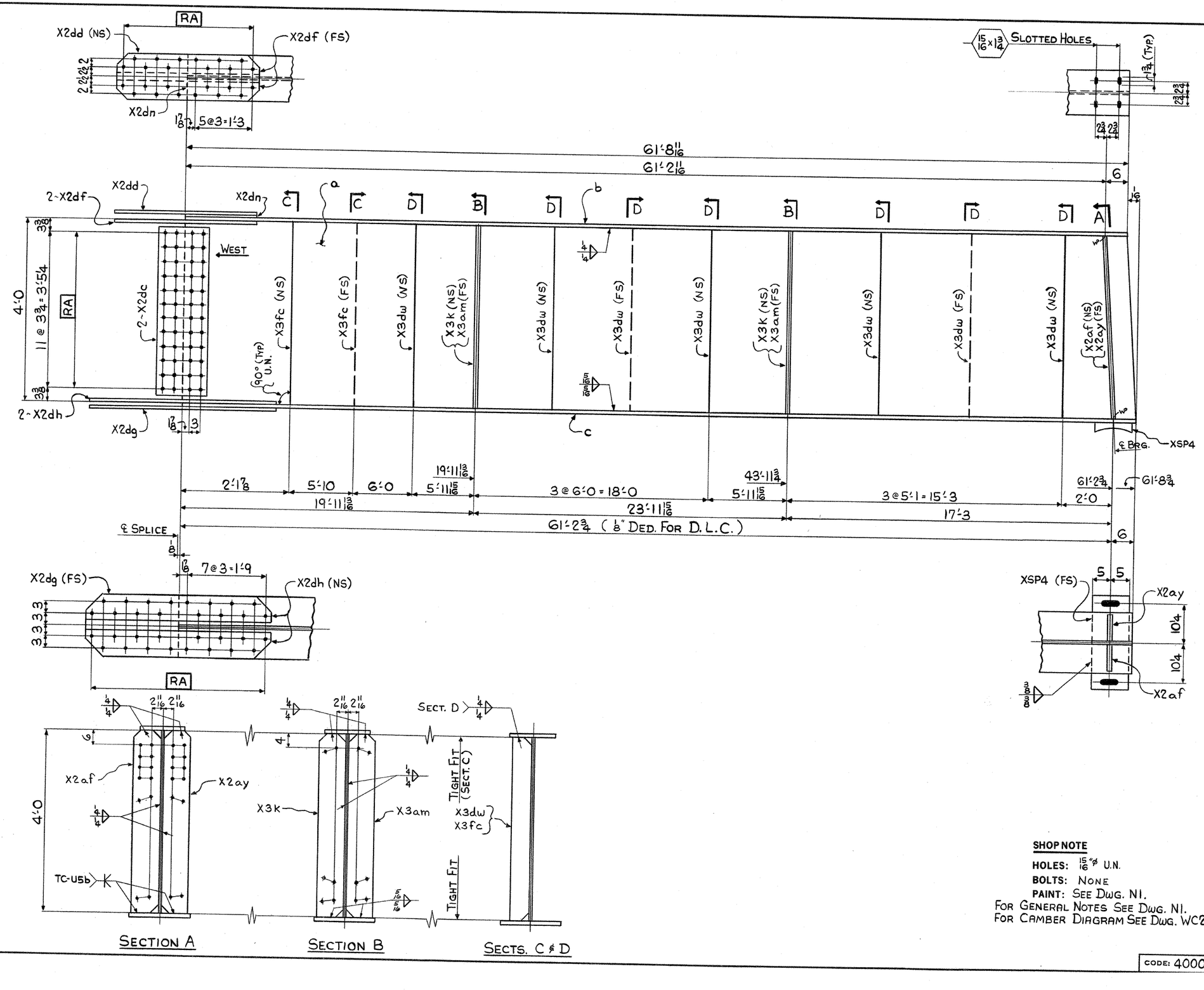
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G16I
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 56 OF 76



FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP. WEIGHT
ONE	G17I	GIRDER					11,059
1	a	PL 48 x 3/8	61	8 3/4			
1	b	PL 12 x 3/4	61	8 11/16			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2af	BAR 7 x 5/8	4	0			
1	X2ay	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
7	X3dw	BAR 5 x 3/8	4	0			
2	X3k	BAR 7 x 9/16	4	0			
2	X3am	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G17I
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND Co., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

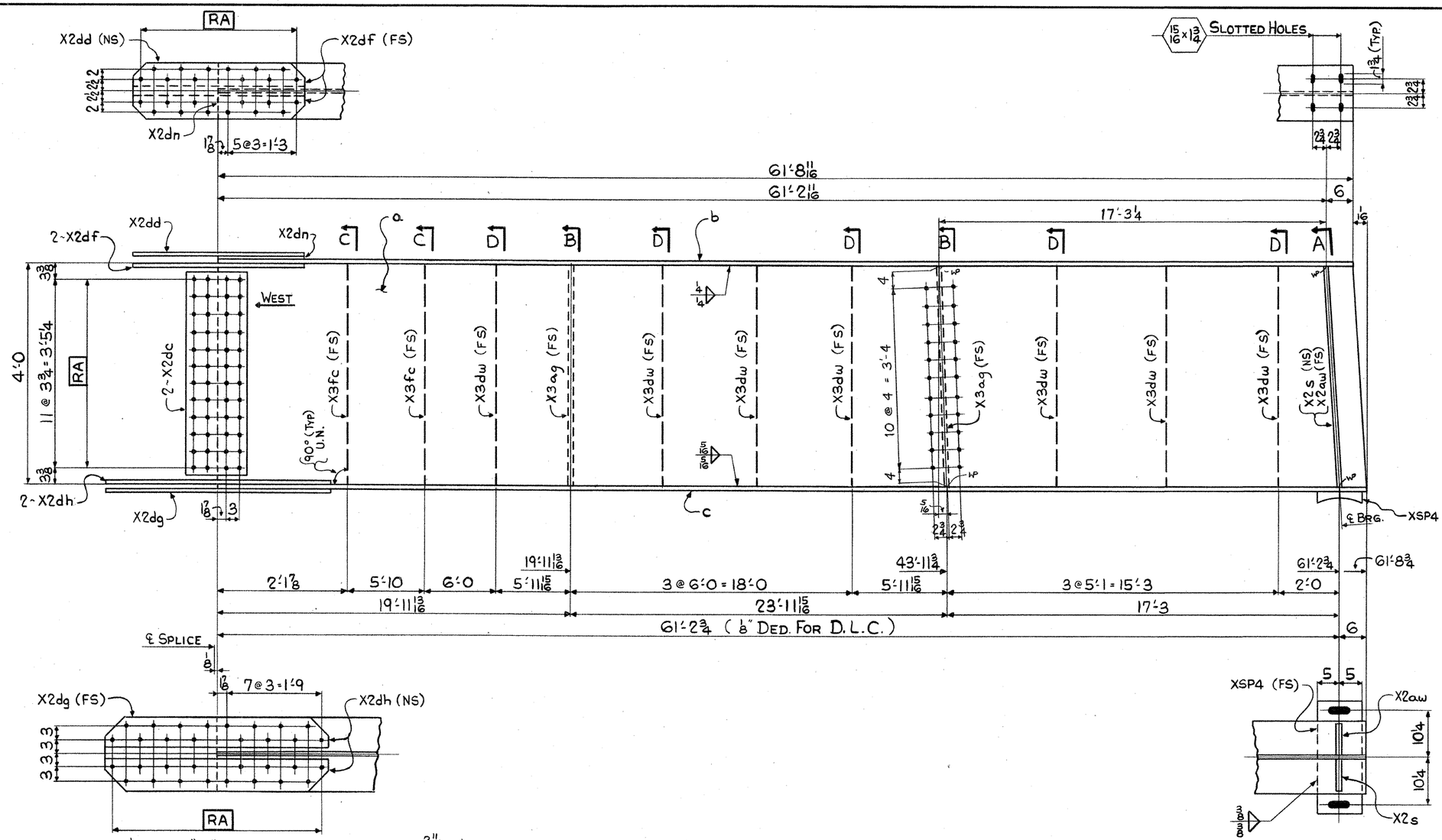
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 57 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G181	GIRDER					10,948
1	a	PL 48 x 3/8	61	8 3/4			
1	b	PL 12 x 3/4	61	8 11/16			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2s	BAR 7 x 5/8	4	0			
1	X2aw	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
7	X3dw	BAR 5 x 3/8	4	0			
2	X3ag	BAR 7 x 7/16	4	0			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of Hoh Industries, Inc.

GIRDER ~ G181
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

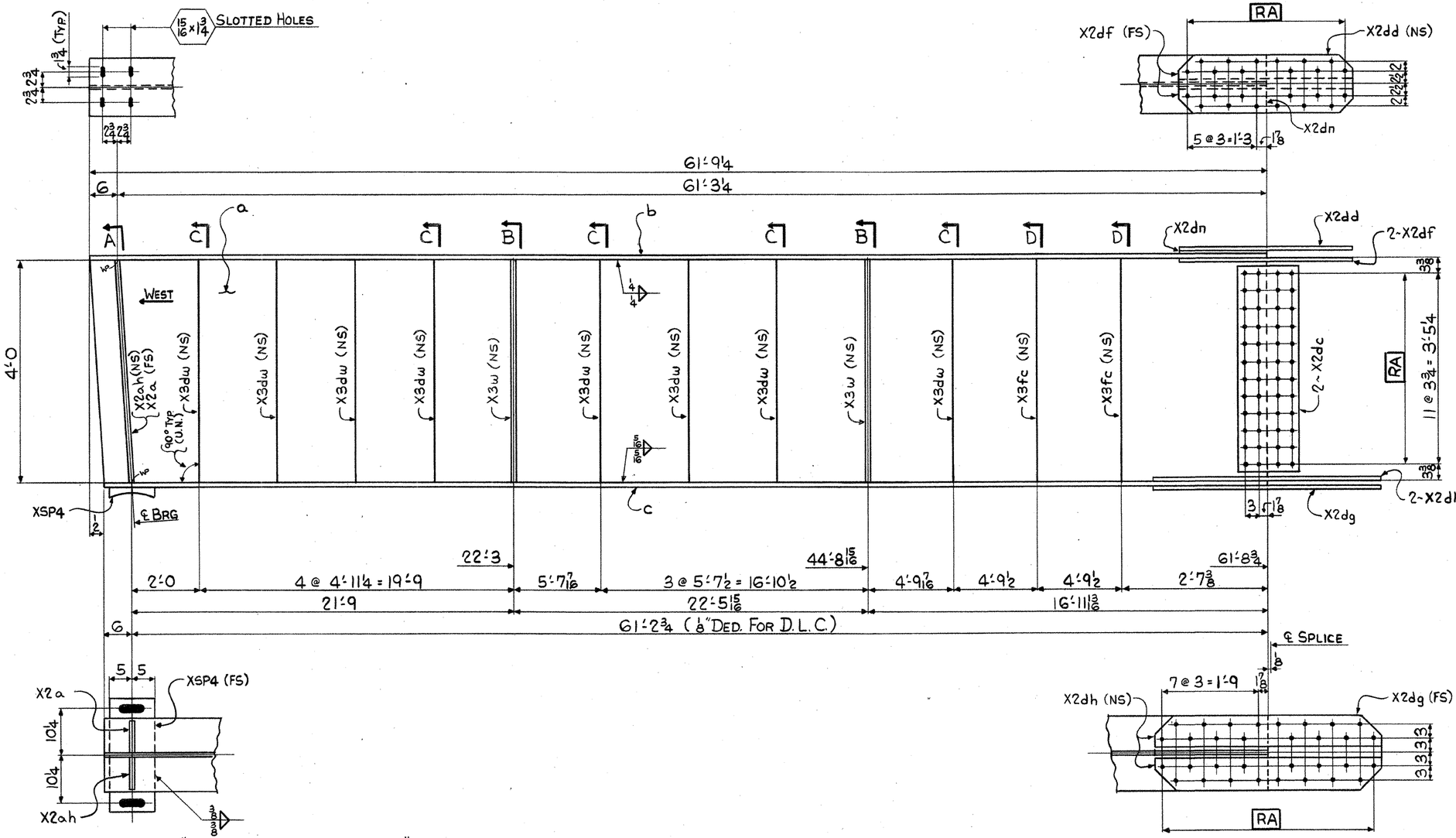
IN CHARGE: COLONIAL MADE BY: RAS CHK.D BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 58 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G20J	GIRDER					10,977
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2ah	BAR 7 x 5/8	4	0			
1	X2a	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3w	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717-299-5211
A Subsidiary of High Industries, Inc.

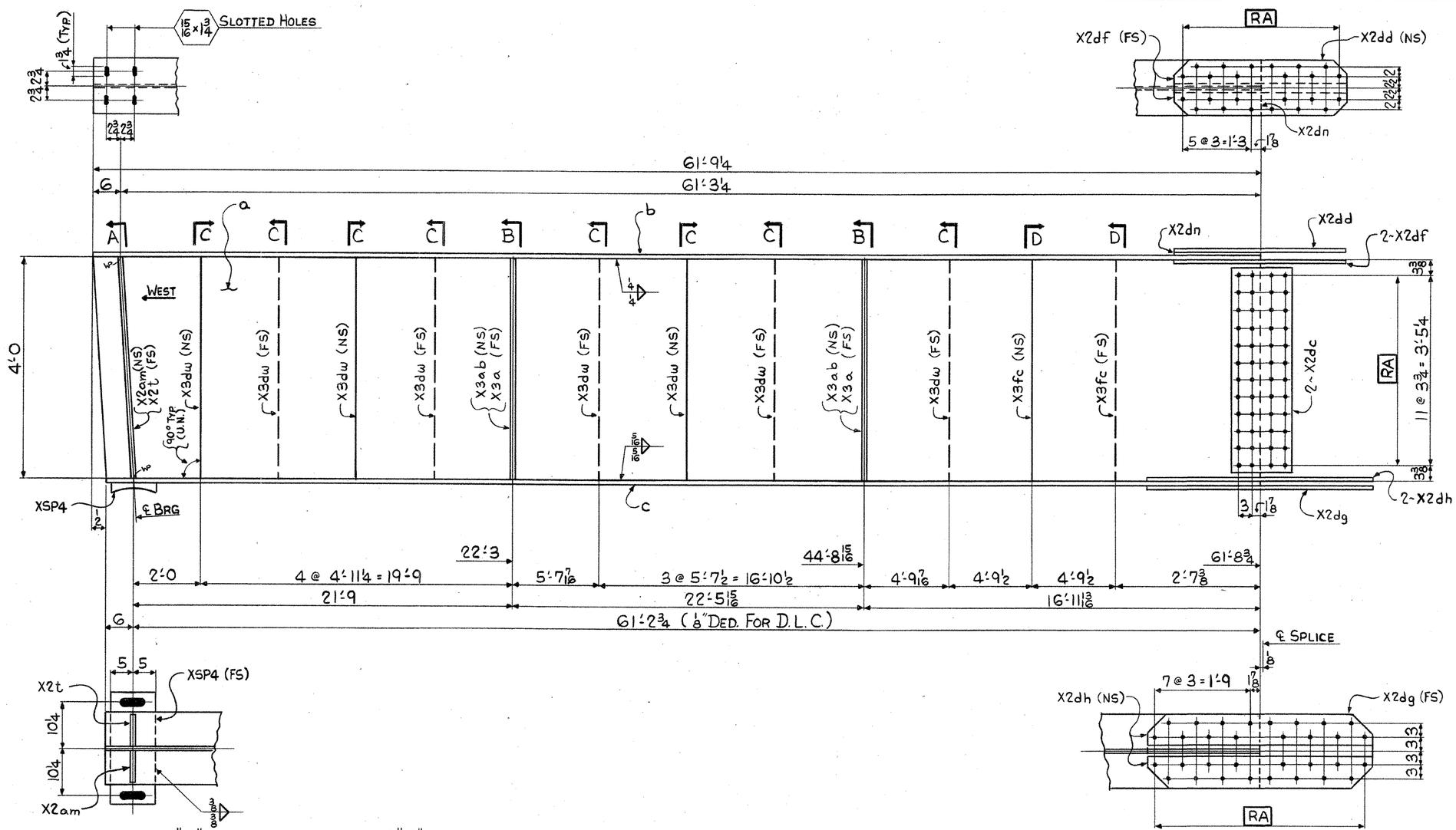
GIRDER ~ G20J
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-13-85
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 59 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G21J	GIRDER					11,084
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2t	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3a	BAR 7 x 9/16	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SECTION A SECTION B SECTS C & D

SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G21J
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

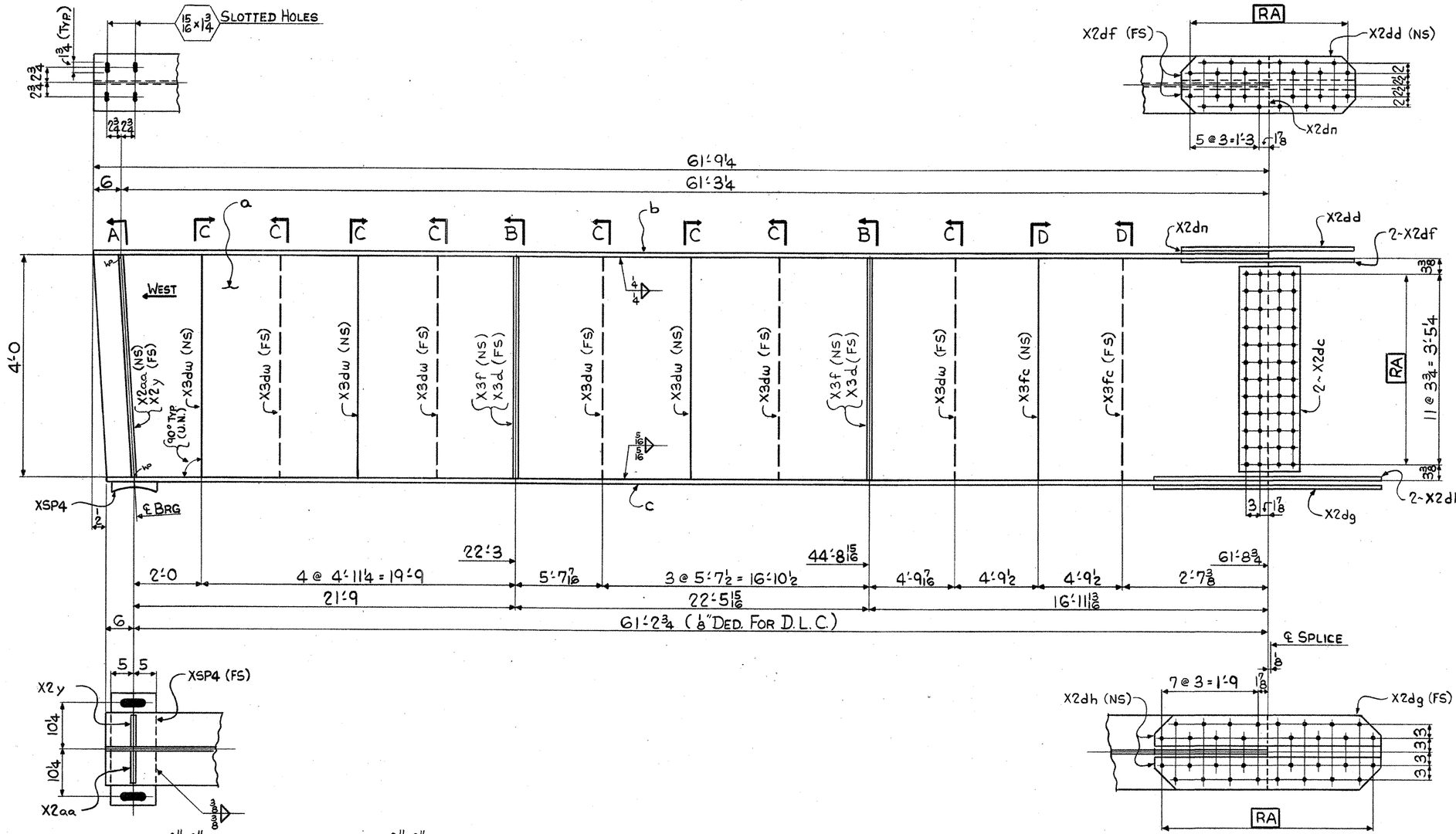
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-13-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 60 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G22J	GIRDER					11,084
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 4 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2aa	BAR 7 x 5/8	4	0			
1	X2y	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3f	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G22J
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

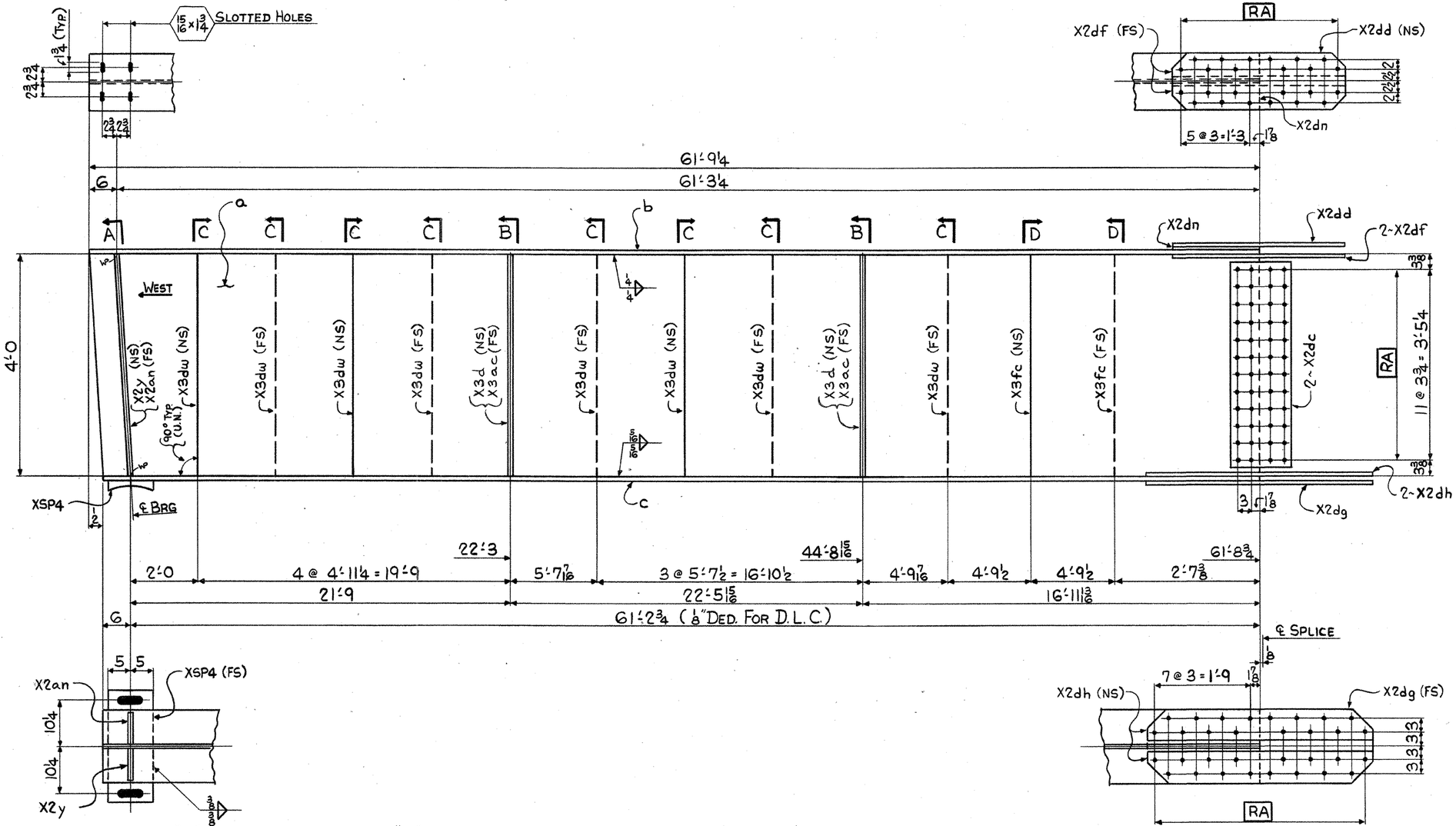
IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 2-13-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 61 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G23J	GIRDER					11,084
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 4 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2y	BAR 7 x 5/8	4	0			
1	X2an	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3ac	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16 ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G23J
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

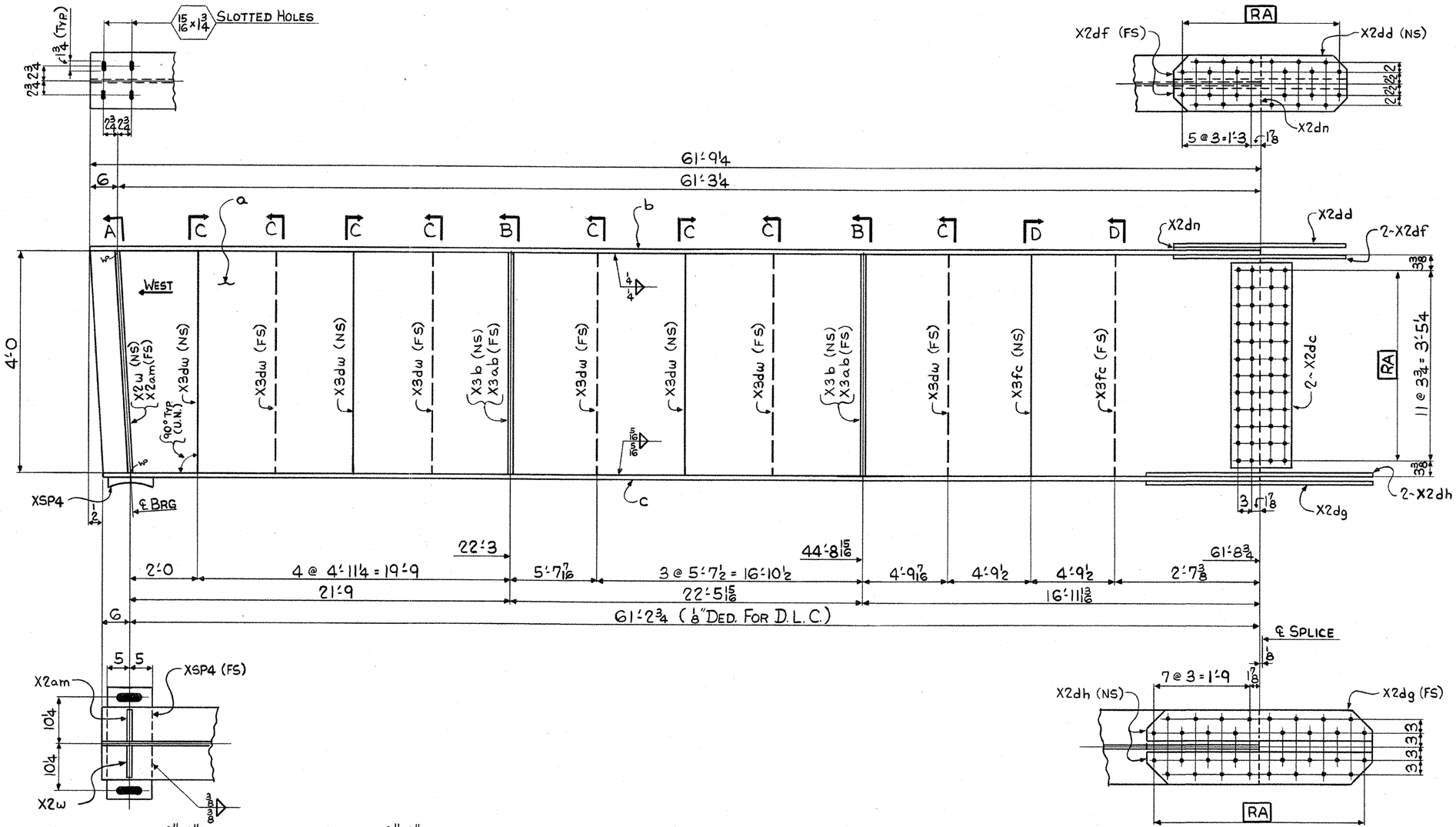
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-13-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 62 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G24J	GIRDER					11,084
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 1 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2w	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3b	BAR 7 x 1 9/16	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SECTION A SECTION B SECTS C & D

SHOP NOTE

HOLES: 15/16" ℄ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

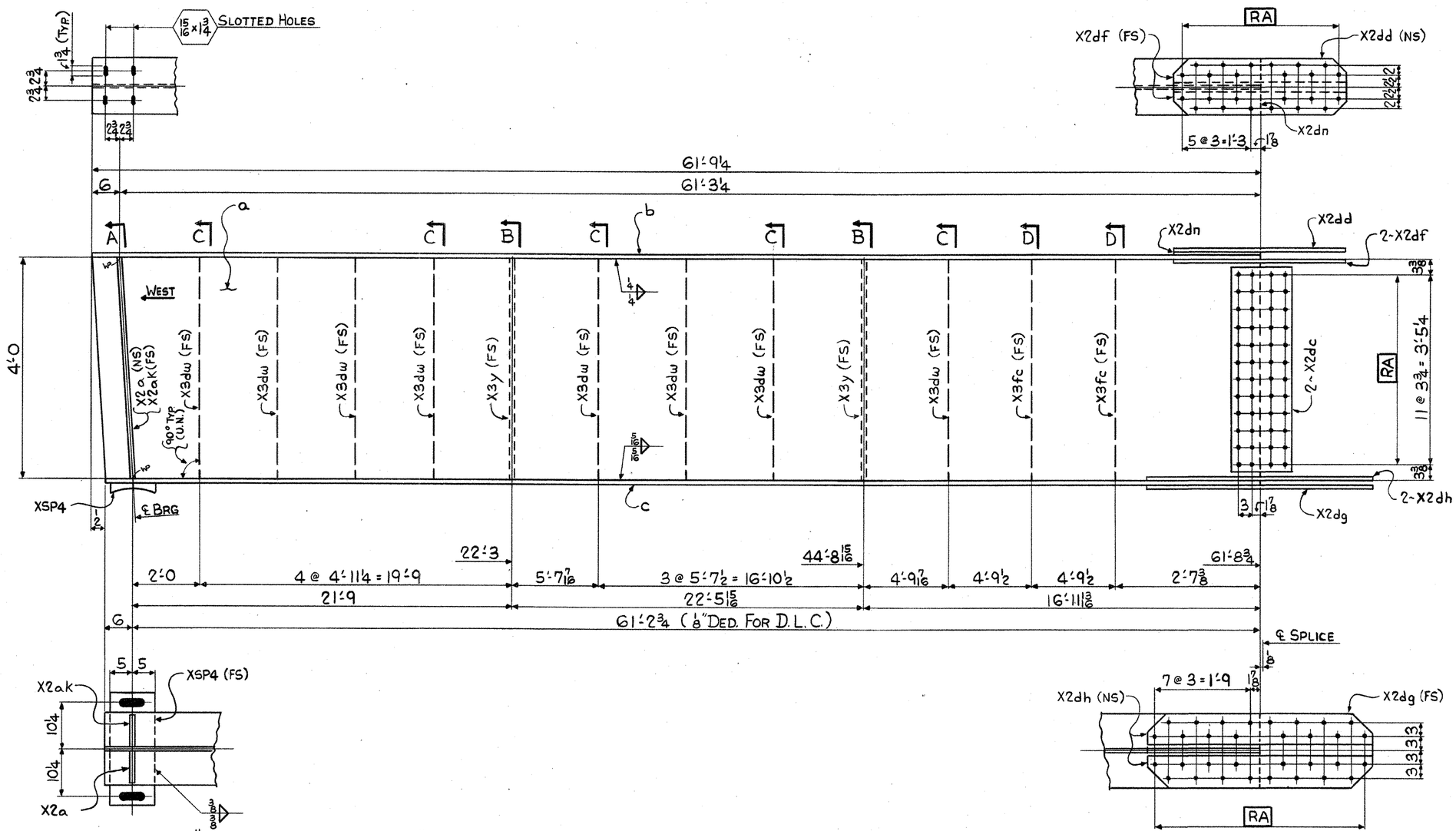
GIRDER ~ G24J
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 2-13-85
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 63 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G25J	GIRDER					10,977
1	a	PL 48 x 3/8	61	9 1/4			
1	b	PL 12 x 3/4	61	9 1/4			
1	c	PL 16 x 1 1/4	61	8 3/4			
2	X2dc	PL 444 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2a	BAR 7 x 5/8	4	0			
1	X2ak	BAR 7 x 5/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
2	X3y	BAR 7 x 7/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
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Lancaster, Pennsylvania 17603
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GIRDER ~ G25J
L.R. 247 SPUR A SEC. B10
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WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

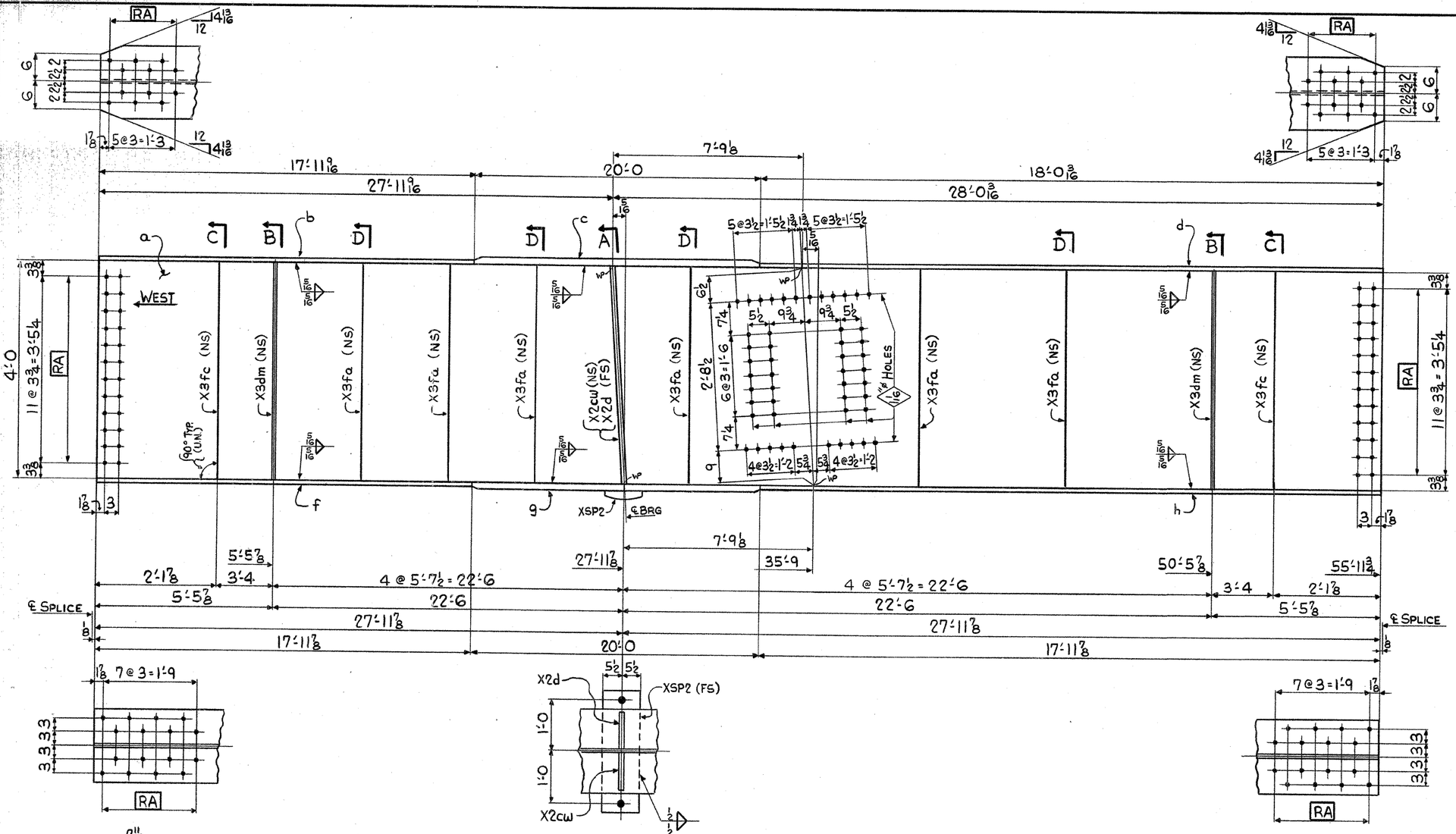
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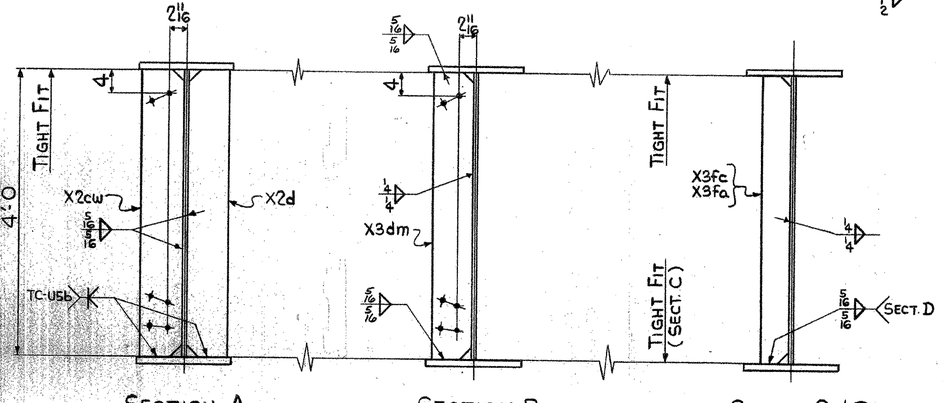
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 64 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G20K	GIRDER					14,945
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 7/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2d	PL 9 x 7/8	4	0			
1	X2cw	PL 9 x 7/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3dm	BAR 7 x 1/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SECTION A SECTION B SECTS C & D

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G20K
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

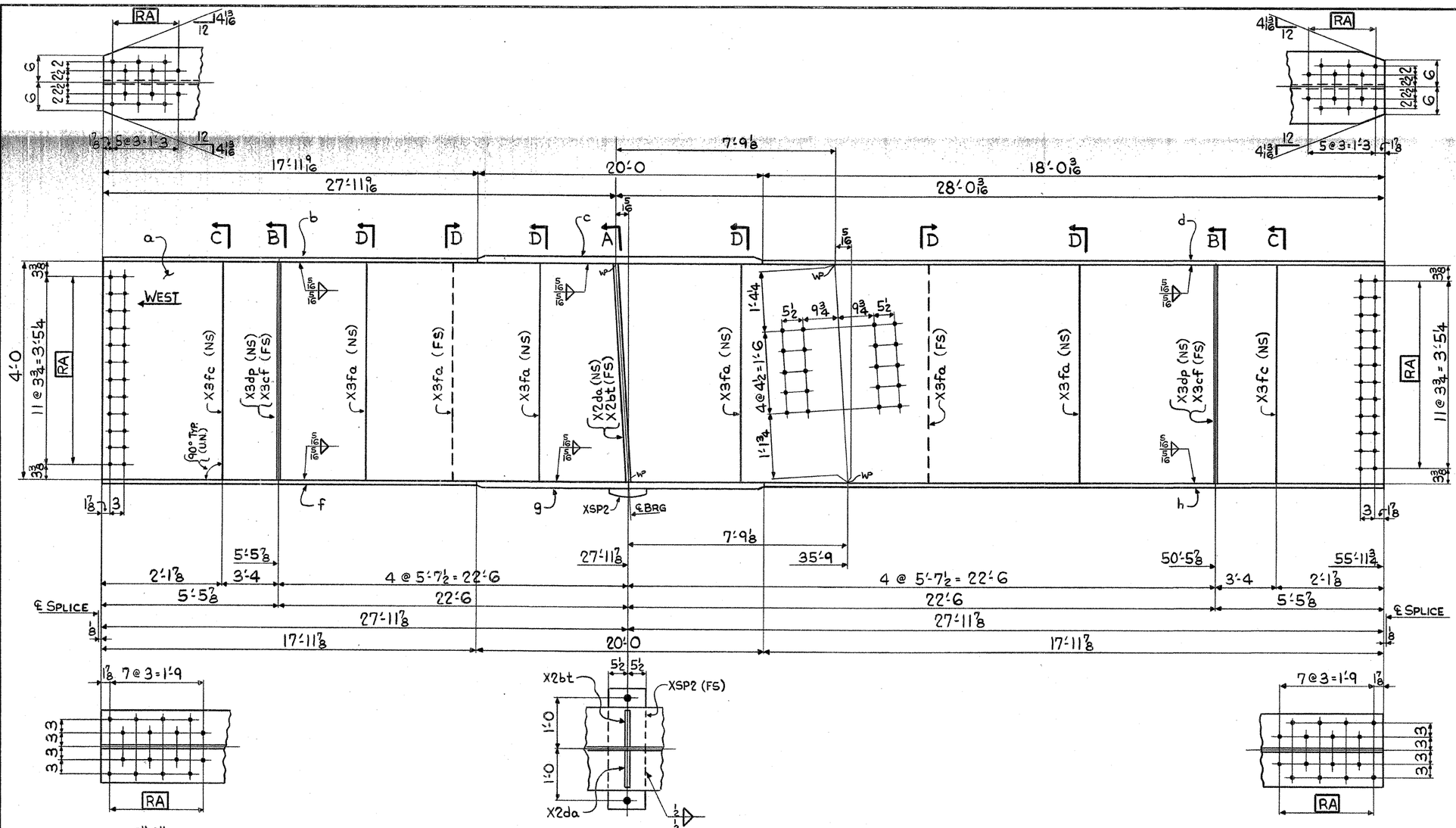
IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE: 2-11-85

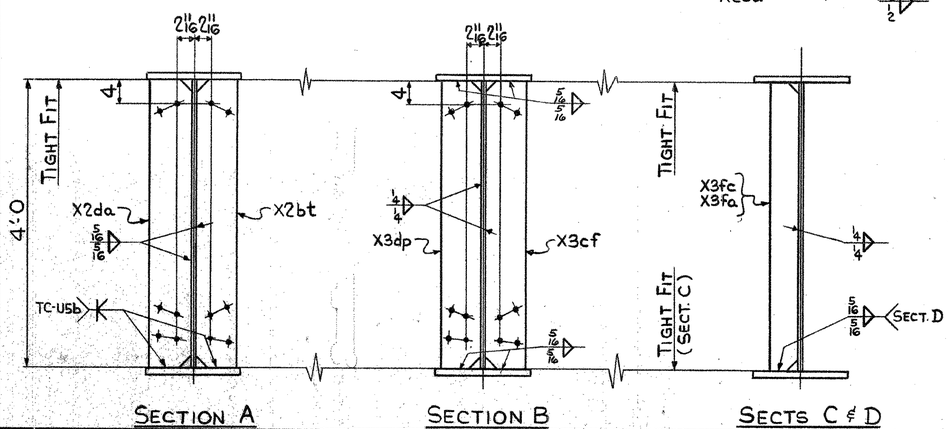
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 65 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHTR WEIGHT
ONE	G21K	GIRDER					15,052
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2da	PL 9 x 7/8	4	0			
1	X2bt	PL 9 x 7/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3dp	BAR 7 x 9/16	4	0			
2	X3cf	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" ø U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC2.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G21K

L.R. 247 SPUR A SEC. B10

L.R. 247 SPUR A STA. 9 + 16.28

WASHINGTON & WESTMORELAND CO., PA.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP

IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE: 2-11-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 66 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G22K	GIRDER					15,052
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2ca	PL 9 x 7/8	4	0			
1	X2by	PL 9 x 7/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3ck	BAR 7 x 9/16	4	0			
2	X3ch	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15/16" ø U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC2.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G22K
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP.

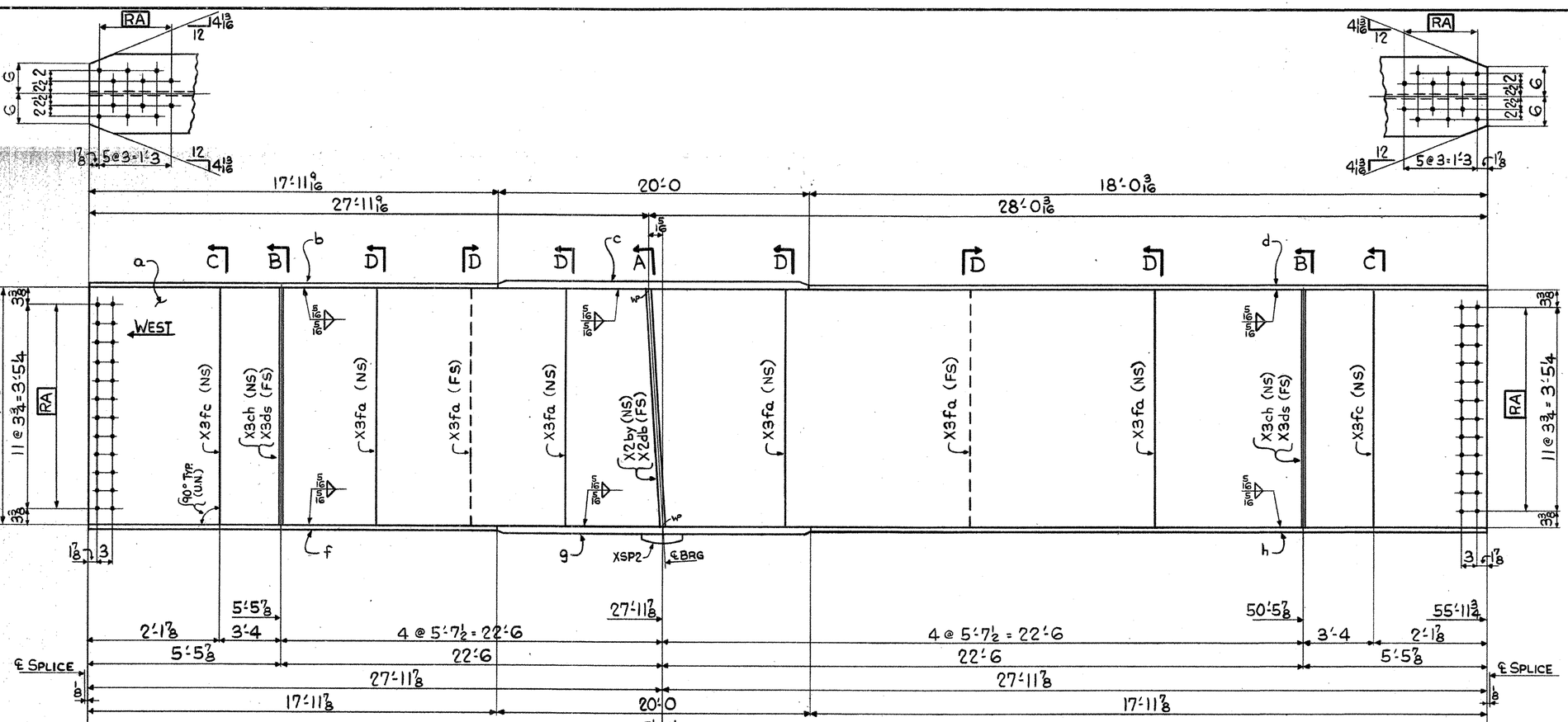
IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE: 2-12-85

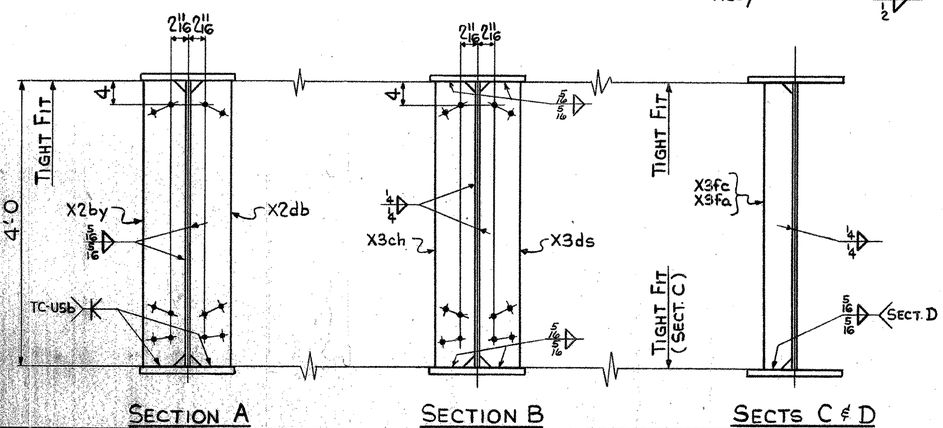
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 67 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G23K	GIRDER					15,052
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2by	PL 9 x 7/8	4	0			
1	X2db	PL 9 x 7/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3ch	BAR 7 x 9/16	4	0			
2	X3ds	BAR 7 x 9/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" ø U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC2.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G23K
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP

IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 68 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G24K	GIRDER					15,052
1	a	PL 48 x ½	55	11¾			
1	b	PL 16 x 1¼	17	11⁹⁄₁₆			
1	c	PL 20 x 1¾	20	0			
1	d	PL 16 x 1¼	18	0³⁄₁₆			
1	f	PL 16 x 1¼	17	11⅞			
1	g	PL 20 x 1¾	20	0			
1	h	PL 16 x 1¼	17	11⅞			
1	X2bw	PL 9 x ⅞	4	0			
1	X2da	PL 9 x ⅞	4	0			
2	X3fc	BAR 5 x ⅜	4	0			
6	X3fa	BAR 5 x ⅜	4	0			
2	X3cg	BAR 7 x ⁹⁄₁₆	4	0			
2	X3dp	BAR 7 x ⁹⁄₁₆	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		

SHOP NOTE

HOLES: 15⁄16" ϕ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.
FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G24K
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9 + 16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP

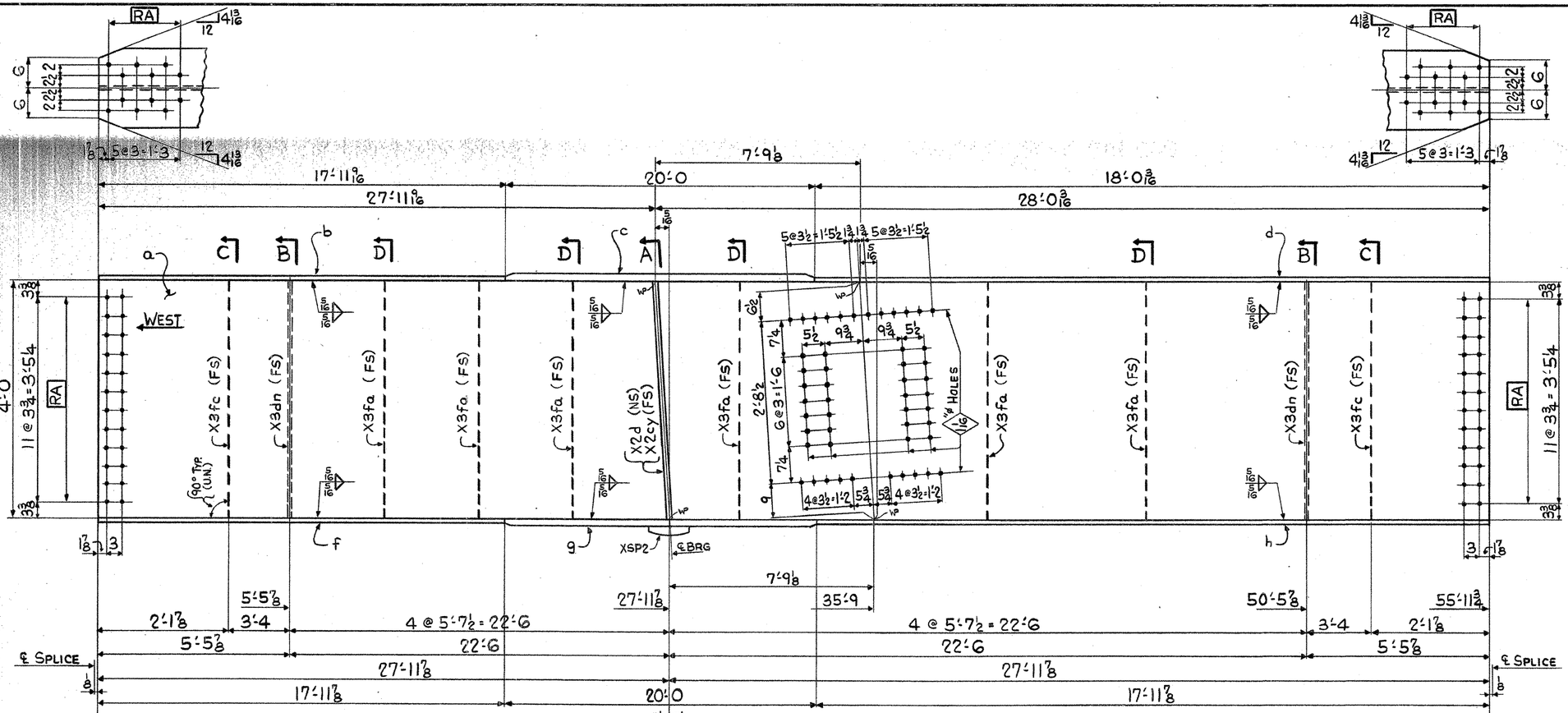
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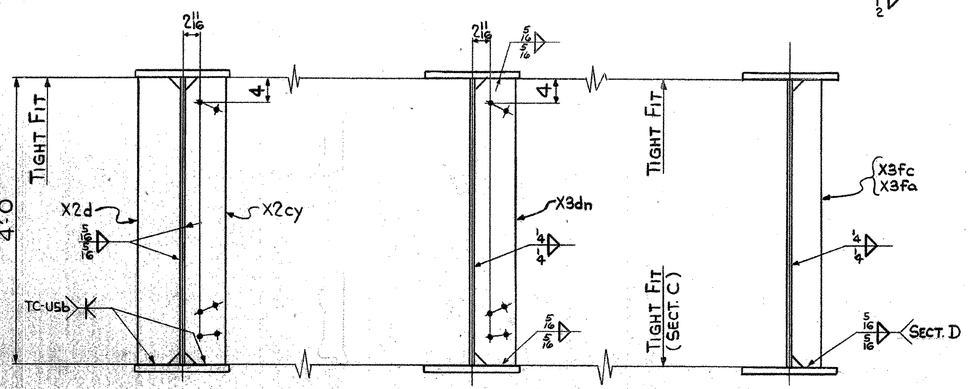
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 69 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G25K	GIRDER					14,945
1	a	PL 48 x 1/2	55	11 3/4			
1	b	PL 16 x 1 1/4	17	11 9/16			
1	c	PL 20 x 1 3/4	20	0			
1	d	PL 16 x 1 1/4	18	0 3/16			
1	f	PL 16 x 1 1/4	17	11 7/8			
1	g	PL 20 x 1 3/4	20	0			
1	h	PL 16 x 1 1/4	17	11 7/8			
1	X2d	PL 9 x 7/8	4	0			
1	X2cy	PL 9 x 7/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
6	X3fa	BAR 5 x 3/8	4	0			
2	X3dn	BAR 7 x 1/16	4	0			
1	XSP2	SOLE PL			DET. ON DWG. 1		





SHOP NOTE

HOLES: 15/16" U.N.

BOLTS: NONE

PAINT: SEE DWG. N1.

FOR GENERAL NOTES SEE DWG. N1.

FOR CAMBER DIAGRAM SEE DWG. WC2.

FOR FLANGE WELDED SPLICES AND TESTING SEE DWG. FS2

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike, Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G25K

L.R. 247 SPUR A SEC. B10

L.R. 247 SPUR A STA. 9 + 16.28

WASHINGTON & WESTMORELAND CO., PA.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST CORP.

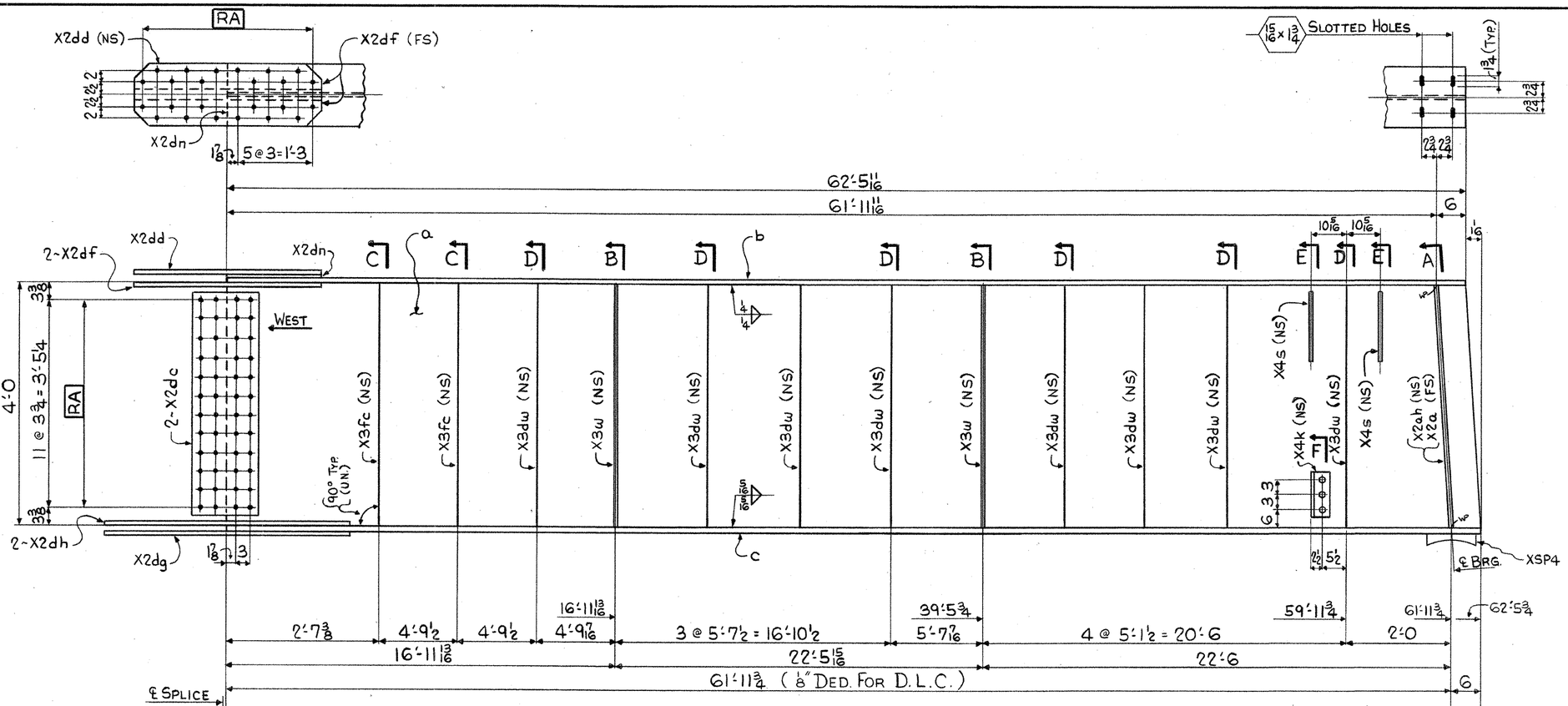
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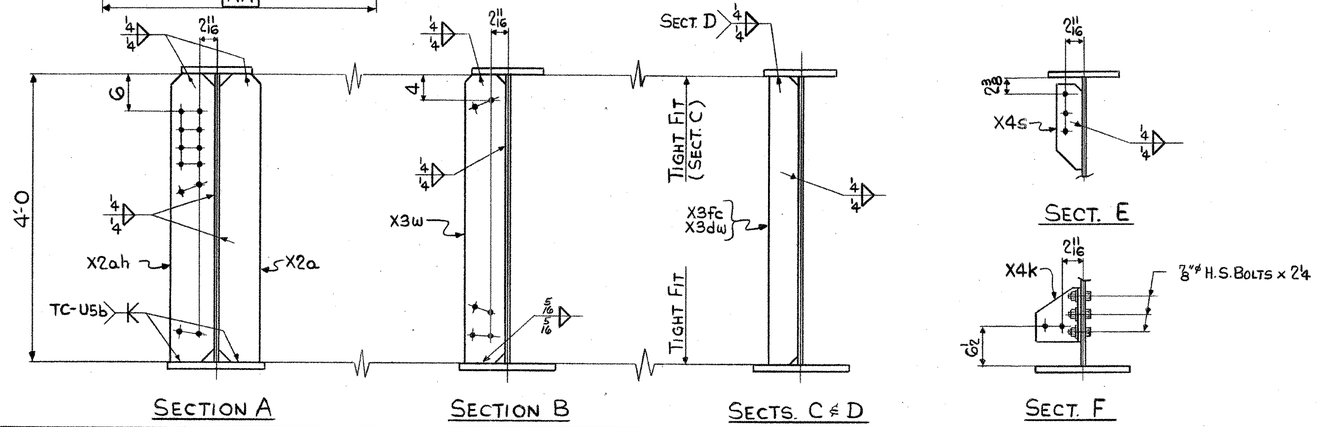
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 70 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G20L	GIRDER					11,121
1	a	PL 48 x 3/8	62	5 3/4			
1	b	PL 12 x 3/4	62	5 11/16			
1	c	PL 16 x 1 1/4	62	5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2ah	BAR 7 x 5/8	4	0			
1	X2a	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3w	BAR 7 x 9/16	4	0			
2	X4s	BAR 4 x 3/8	1	2			
1	X4k	∠ 7 x 4 x 1/2	0	9			
1	XSP4	SOLE PL			DET ON DWG. 1		
3		7/8" H.S. BOLTS	0	2 1/4		B1 20 / B1 28	
3		WASHERS FOR 7/8" H.S. BOLTS					





SHOP NOTE

HOLES: 15/16" U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G20L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-12-85

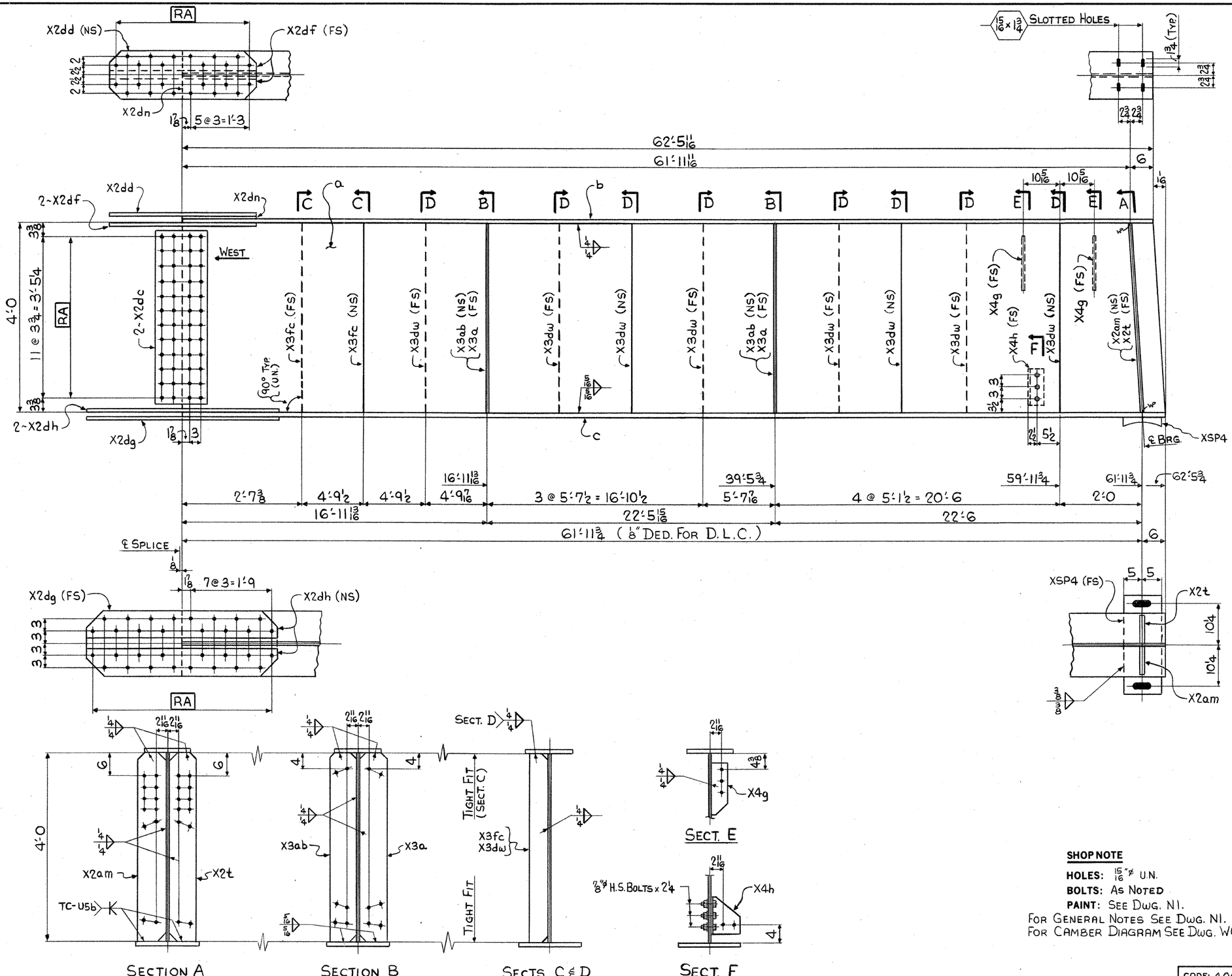
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 71 OF 76

CODE: 4000

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G21L	GIRDER					11,228
1	a	PL 48 x 3/8	62	5 3/4			
1	b	PL 12 x 3/4	62	5 11/16			
1	c	PL 16 x 1 1/4	62	5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2am	BAR 7 x 5/8	4	0			
1	X2t	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
2	X3a	BAR 7 x 9/16	4	0			
2	X4g	BAR 4 x 3/8	1	2			
1	X4h	⌐ 7 x 4 x 1/2	0	9			
1	XSP4	SOLE PL			DET ON DWG. 1		
3		7/8" H.S. BOLTS	0	24		B1/20	
3		WASHERS FOR 7/8" H.S. BOLTS				B1/28	



SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

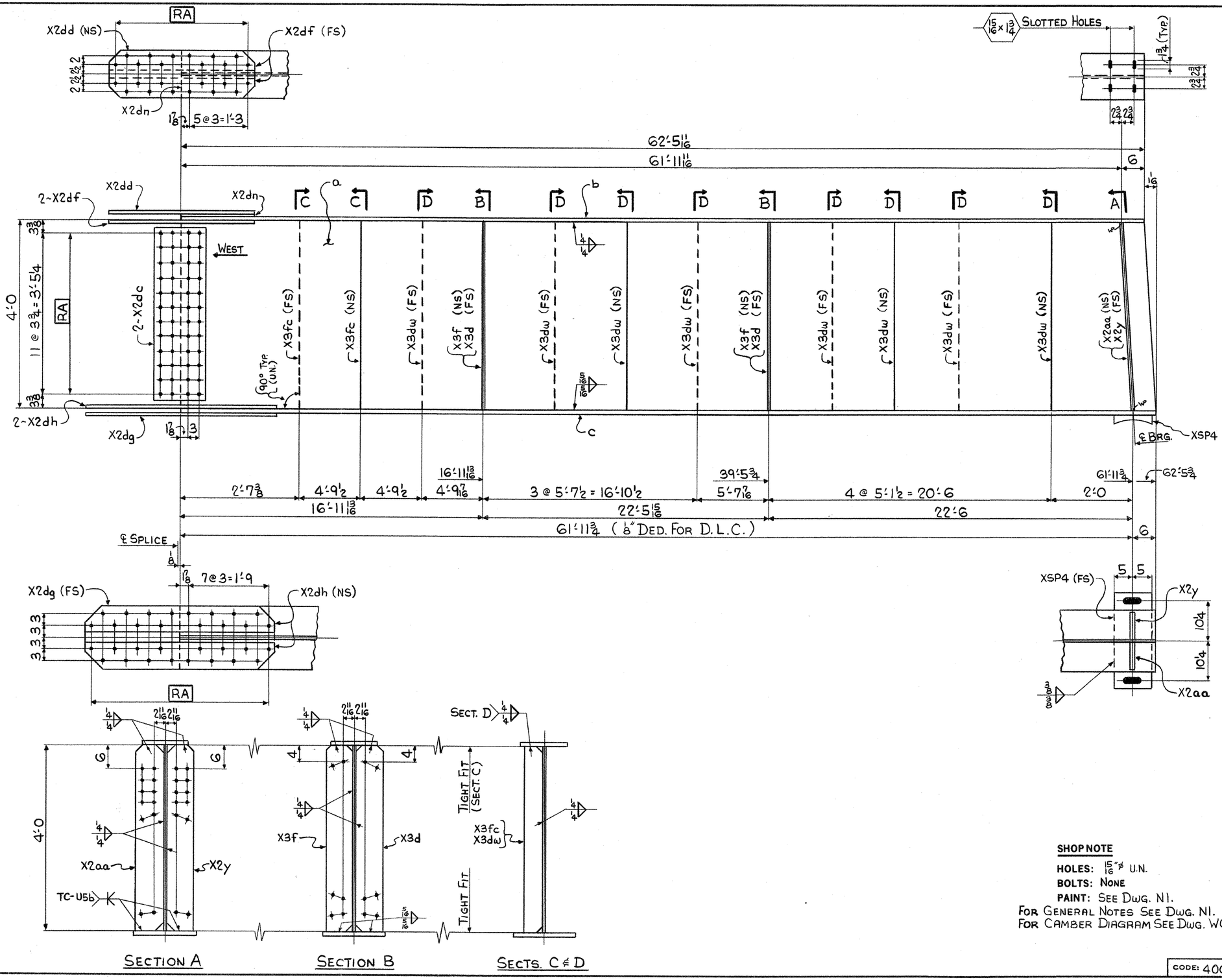
GIRDER - G21L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE 2-12-85
CONTRACT NUMBER PA-84197-2 DRAWING NUMBER 72 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G22L	GIRDER					11,200
1	a	PL 48 x 3/8	62	5 3/4			
1	b	PL 12 x 3/4	62	5 11/16			
1	c	PL 16 x 1 1/4	62	5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2aa	BAR 7 x 5/8	4	0			
1	X2y	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3f	BAR 7 x 9/16	4	0			
2	X3d	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ⌀ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

GIRDER - G22L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

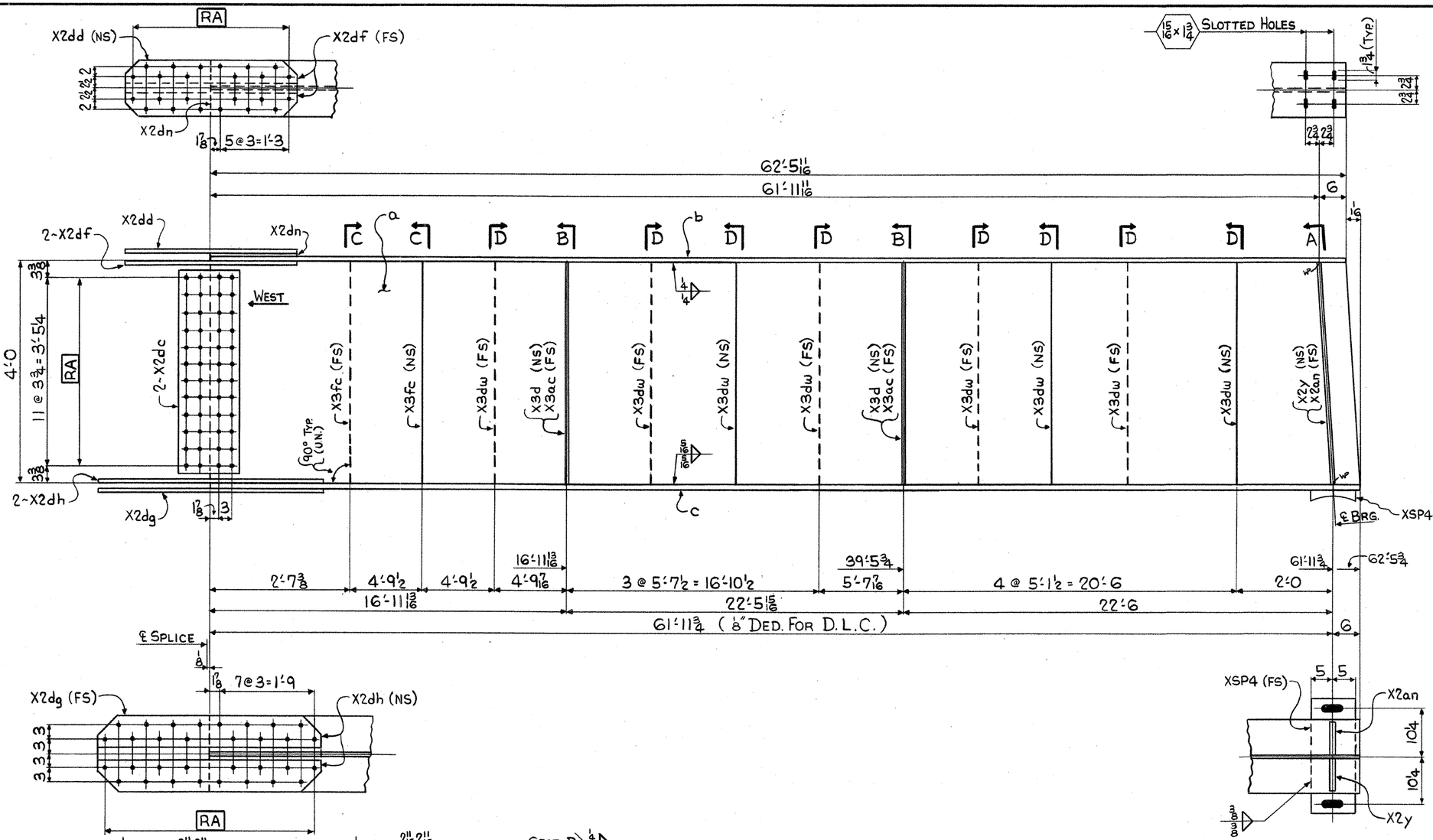
IN CHARGE: COLONIAL MADE BY: JTC CHK'D BY: THS DATE: 2-17-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 73 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G23L	GIRDER					11,200
1	a	PL 48 x 3/8	62	5 3/4			
1	b	PL 12 x 3/4	62	5 11/16			
1	c	PL 16 x 1 1/4	62	5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2y	BAR 7 x 5/8	4	0			
1	X2an	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3d	BAR 7 x 9/16	4	0			
2	X3ac	BAR 7 x 9/16	4	0			
1	XSP4	SOLE PL			DET. ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ϕ U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER ~ G23L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

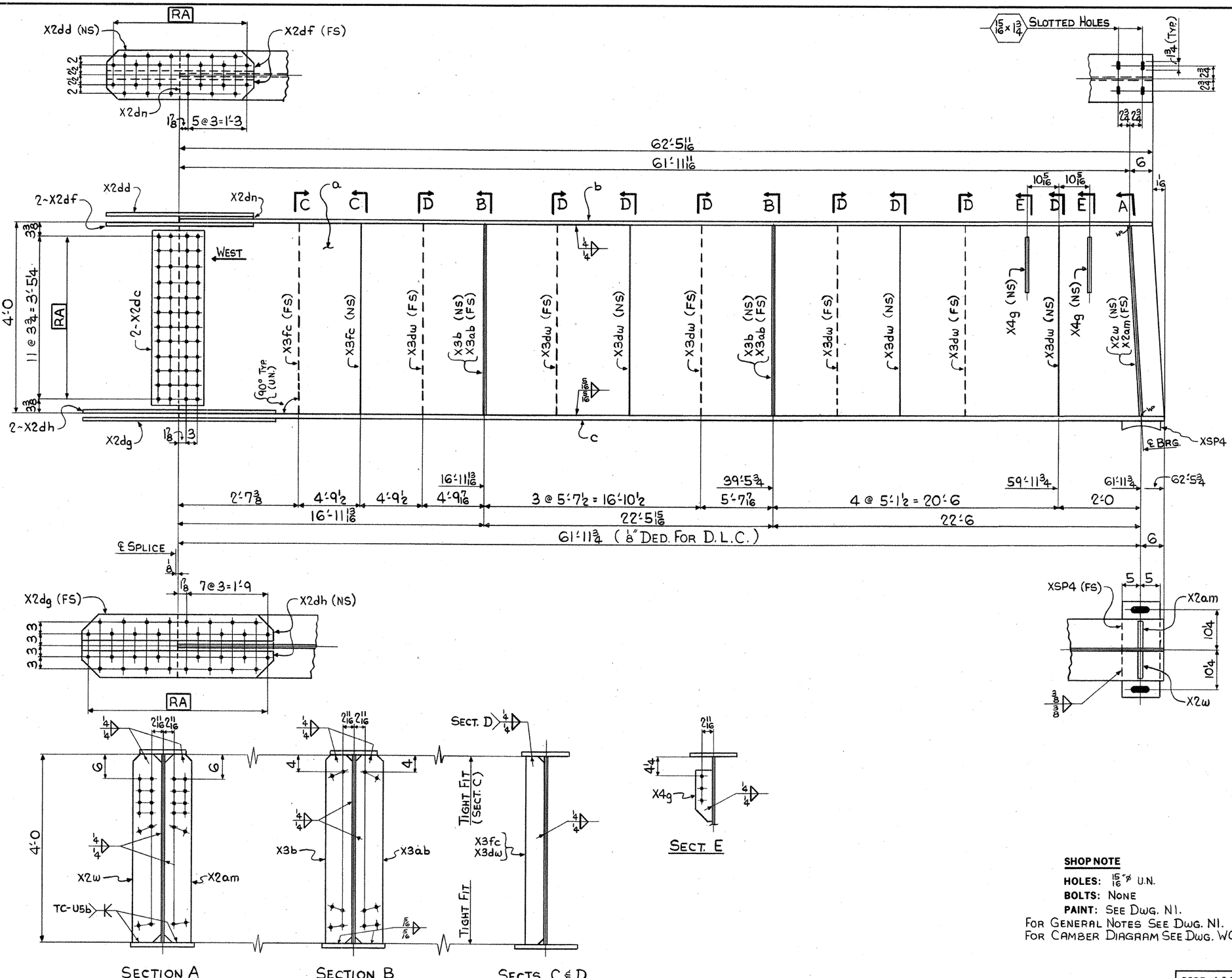
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 74 OF 76

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP WEIGHT
ONE	G24L	GIRDER					11,212
1	a	PL 48 x 3/8	62	5 3/4			
1	b	PL 12 x 3/4	62	5 11/16			
1	c	PL 16 x 1 1/4	62	5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1	1			
1	X2dd	PL 12 x 7/16	3	1			
2	X2df	BAR 5 x 5/8	3	1			
1	X2dn	PL 12 x 1/2	1	6 3/8			
1	X2dg	PL 16 x 1/2	4	1			
2	X2dh	BAR 7 x 1/2	4	1			
1	X2w	BAR 7 x 5/8	4	0			
1	X2am	BAR 7 x 5/8	4	0			
2	X3fc	BAR 5 x 3/8	4	0			
8	X3dw	BAR 5 x 3/8	4	0			
2	X3b	BAR 7 x 9/16	4	0			
2	X3ab	BAR 7 x 9/16	4	0			
2	X4g	BAR 4 x 3/8	1	2			
1	XSP4	SOLE PL			DET ON DWG. 1		



SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: SEE DWG. N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG. WC2.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

GIRDER - G24L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

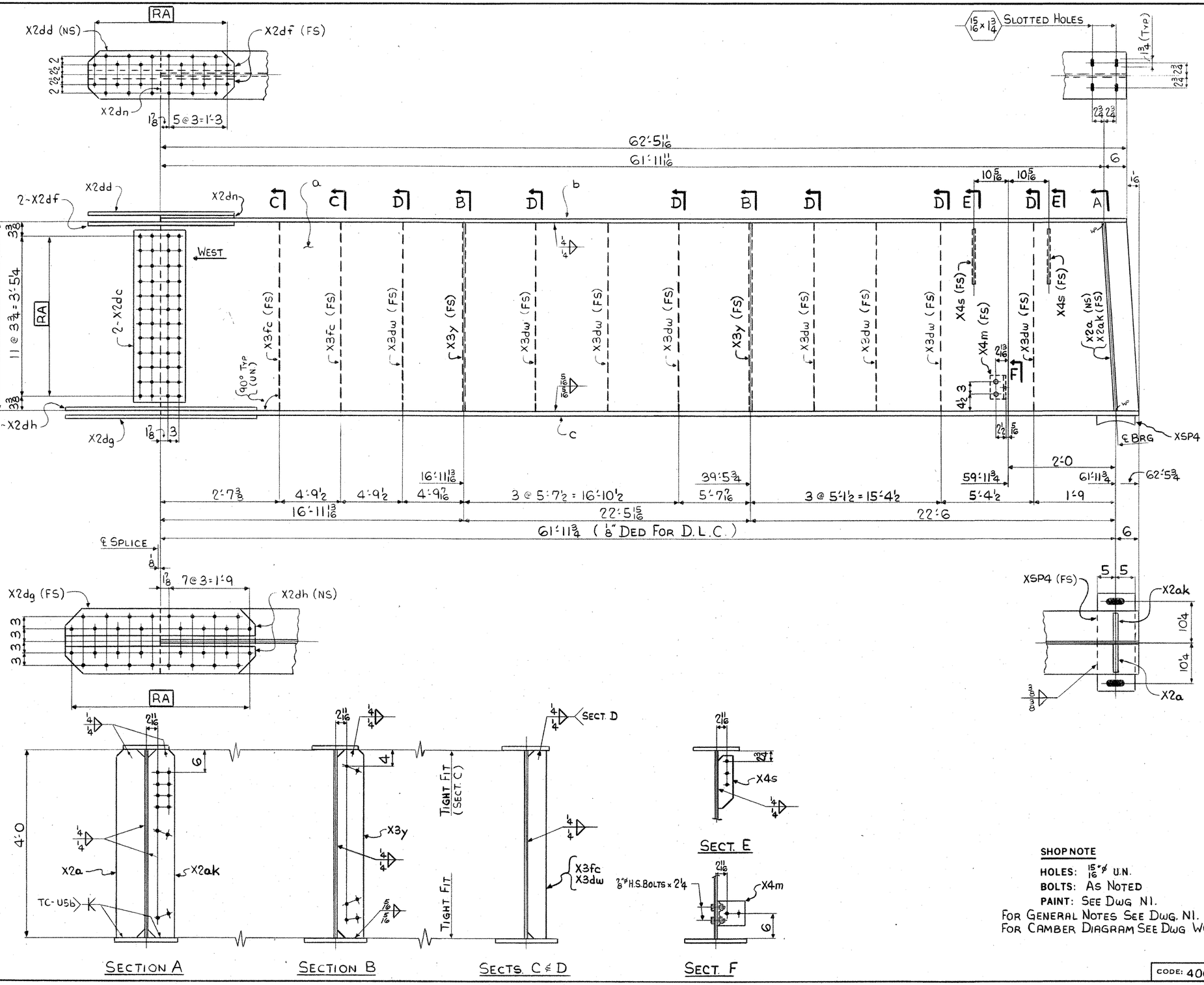
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 2-12-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: 75 OF 76

FED ROAD DIV NO	STATE	FED AID PROJ NO
	PA.	W32-P014-001

BILL OF MATERIAL

NO.	MARK	DESCRIPTION	LENGTH	REMARKS	ITEM	SHIP WEIGHT
ONE G25L		GIRDER				11,116
1	a	PL 48 x 3/8	62 5 3/4			
1	b	PL 12 x 3/4	62 5 11/16			
1	c	PL 16 x 1 1/4	62 5 3/4			
2	X2dc	PL 44 1/4 x 3/8	1 1			
1	X2dd	PL 12 x 7/16	3 1			
2	X2df	BAR 5 x 5/8	3 1			
1	X2dn	PL 12 x 1/2	1 6 3/8			
1	X2dg	PL 16 x 1/2	4 1			
2	X2dh	BAR 7 x 1/2	4 1			
1	X2a	BAR 7 x 5/8	4 0			
1	X2ak	BAR 7 x 5/8	4 0			
2	X3fc	BAR 5 x 3/8	4 0			
8	X3dw	BAR 5 x 3/8	4 0			
2	X3y	BAR 7 x 9/16	4 0			
2	X4s	BAR 4 x 3/8	1 2			
1	X4m	∠ 7 x 4 x 1/2	0 6			
1	XSP4	SOLE PL		DET ON DWG 1		
2		7/8" H.S. BOLTS	0 24		BL 20 / BL 28	
2		WASHER FOR 7/8" H.S. BOLTS				



SHOP NOTE

HOLES: 15/16" ∅ U.N.
BOLTS: AS NOTED
PAINT: SEE DWG N1.
FOR GENERAL NOTES SEE DWG. N1.
FOR CAMBER DIAGRAM SEE DWG WC2.

CODE: 4000

NO	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717-299-5211
A Subsidiary of High Industries Inc

GIRDER - G25L
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE COLONIAL MADE BY JTC CHK'D BY THS DATE 2-12-85

CONTRACT NUMBER PA-84197-2 DRAWING NUMBER 76 OF 76

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	PA.	W32-P014-001

SHOP NOTES

1. STAINLESS STEEL TO BE TIG WELDED AROUND ENTIRE PERIMETER OF PLATES, EXCEPT IN KEYWAY.
2. BRASS RINGS ARE TO BE SNUG FIT INTO POT AND BUTT BRAZED USING A 60,000 PSI SILVER SOLDER.
3. ALL A588 SURFACES TO BE BLAST CLEANED TO NEAR-WHITE, SSPC-SP10, AND TO BE PAINTED WITH INORGANIC ZINC PAINT, PER PENN D.O.T. SPECIFICATION 1060.
4. BEARINGS ARE TO BE MARKED FOR IDENTIFICATION AND HAVE MATED MARKS INDICATING NORMAL POSITION OF THE BEARING @ 68° F. AND ORIENTATION BETWEEN SOLE PLATE AND MASONRY PLATE IN FINAL POSITION.
5. SOLE PLATES ARE TO BE SHOP WELDED TO THE GIRDERS. THE BEARING IS TO BE SECURED AS AN ENTIRE UNIT ON THE GIRDERS AND WILL BE WRAPPED IN PLASTIC TO KEEP OUT MOISTURE AND DUST.
6. DO NOT SUPPORT GIRDERS ON POT BEARINGS DURING HANDLING AND SHIPPING.

MATERIALS	SPECIFICATIONS
STEEL	ASTM A588
STAINLESS STEEL	14 GAUGE, ASTM A240 TYPE 304, NO. 8 MIRROR FINISH, SURFACE FINISH LESS THAN 10 MICRO INCHES RMS.
BRASS RING	HALF HARD BRASS ROD PER FEDERAL SPECIFICATION QQB626 COMPOSITION 22.
TFE SHEAR DISCS	.015" THICK, VIRGIN UNFILLED TFE, CONFORMING TO AASHTO 2.27.2 AND ASTM D1457 SPECIFICATIONS.
TFE DISC	1/16 TFE, 15% GLASS FILLED, ETCHED ON ONE SIDE FOR BONDING TO PISTON, CONFORMING TO AASHTO 2.27.2 AND ASTM D1457 SPECIFICATIONS.
ELASTOMER	AASHTO GRADE NEOPRENE, HARDNESS 50 DUROMETER (±5), CONFORMING TO AASHTO SPECIFICATIONS 2.25.2 AND 2.25.3
KEY	ASTM A-108, GRADE C1018 COLD FINISH BAR , COATED WITH XYLAN TFE 1014 BLACK, 1½ MILS.

BEARING CHARACTERISTICS

BEARING MARK	EB3	EB4
VERTICAL CAPACITY	250K	400K
HORIZONTAL CAPACITY	25K	40K
ROTATION CAPACITY	.015 RADIANS	.015 RADIANS
HORIZONTAL MOVEMENT	2"	2"
MAX. STRESS ON ELASTOMER	2880 PSI	2970 PSI
MAX. STRESS ON TEFLON SURFACE	3180 PSI	3220 PSI
MAXIMUM COEFFICIENT OF FRICTION	3%	3%

THESE POT BEARINGS ARE TO BE FABRICATED AT HIGH STEEL STRUCTURES, INC. LOCATED IN LANCASTER, PA.

INDIVIDUAL RESPONSIBLE FOR COORDINATING PRODUCTION, INSPECTON, SAMPLING AND TESTING WITH THE STRUCTURAL MATERIALS SECTION, MATERIAL AND TESTING DIVISION WILL BE:

HOWARD THOMPSON, INDUSTRIAL ENGINEER
HIGH STEEL STRUCTURES, INC.
1905 OLD PHILADELPHIA PIKE
LANCASTER, PA. 17604
(717) 299-5211

INSTALLATION NOTES

1. FINISHED BEARING ELEVATIONS CONFORM TO CONTRACT DRAWINGS.
2. WHEN WELDING THE SOLE PLATE TO THE GIRDER FLANGE, USE TEMP STICKS TO INSURE THAT SURFACES CONTACTING TFE SURFACES DO NOT EXCEED 250° F., WHICH WOULD DAMAGE THE TFE.
3. THICK EDGE OF SOLE PLATE IS DENOTED ⊗
4. PROTECT STAINLESS AND TFE SURFACES FROM DIRT, WELD SPLATTER AND FOREIGN MATERIAL. AVOID EXPOSURE OF TFE SURFACES TO SUNLIGHT, AS THIS WILL CAUSE DAMAGE.
5. SEE NOTE 6 UNDER 'SHOP NOTES'.

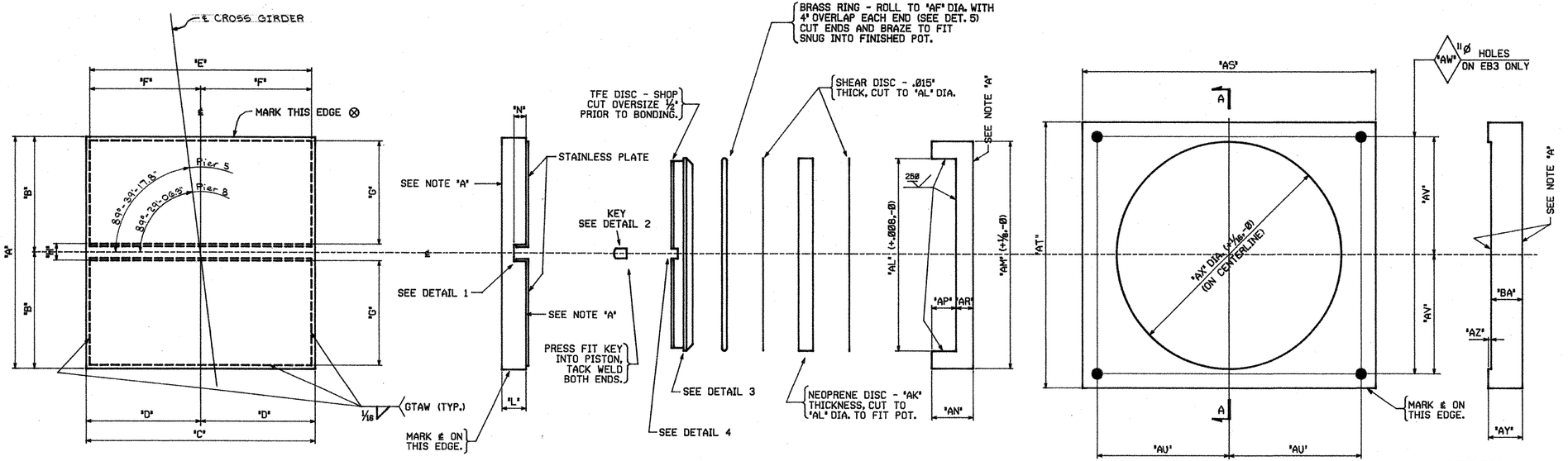
NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

POT BEARING GENERAL NOTES
L.R. 247 SPUR A SEC. B10 MONESSEN BR. OVER MONONGAHELA RIV.
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF.NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: HEFFNER MADE BY: S.J.A. CHK.D. BY: BJK DATE: 2-4-85
CONTRACT NUMBER: PA-84197-11 DRAWING NUMBER: PB1

FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	PA.	W32-PØ14-ØØ1

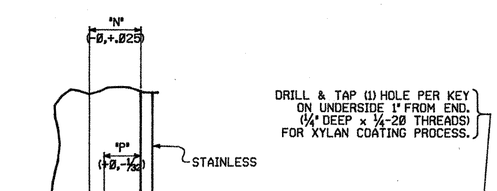


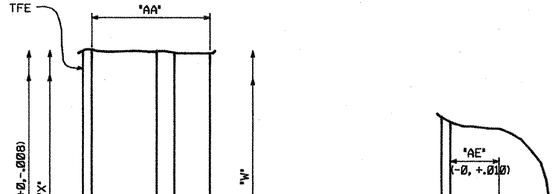
SECTION A-A

BRG. MARK	CAPACITY	REQ'D.	SOLE PLATE & STAINLESS													KEY				PISTON							BRASS RING			NEOPRENE		POT					MASONRY PLATE									FINISHED OVERALL BEARING HEIGHT ON ℄	SHIPPING WEIGHT EACH
			"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"		"L"		"N"	"P"	"R"	"S"	"T"	"U"	"V"	"W"	"X"	"Y"	"Z"	"AA"	"AB"	"AC"	"AD"	"AE"	"AF"	"AG"	"AH"	"AK"	"AL"	"AL"	"AM"	"AN"	"AP"	"AR"	"AS"	"AT"	"AU"	"AV"	"AW"	"AX"	"AY"	"AZ"	"BA"		
EB3	25ØK	2	12½	6¼	14⅛	7⅛	13⅝	6 13/16	5⅝	.81		1.01		.44	5/16	3/16	.500	1/16	1⅜	9 13/16	9.73	10.33	10.47	.50	1.06	.13	.37	.500	.27	10¾	5/16	41¾	½	10.51	10.51	12½	2.09	1.34	.75	20½	24	7	8¾	3	12⅝	2 7/16	3/16	2¼	5¾	450
EB4	4ØØK	2	15⅝	7 13/16	15⅝	7 13/16	15⅛	7⅜	7⅜	.81		1.22		.56	7/16	3/16	.500	15/16	1⅜	12 5/16	12.31	12.89	13.05	.50	1.36	.13	.37	.500	.37	13⅜	5/16	50	5/8	13.09	13.09	15⅝	2.53	1.51	1.02	17	20	——	——	——	15¾	2 5/16	3/16	2⅛	6½	437

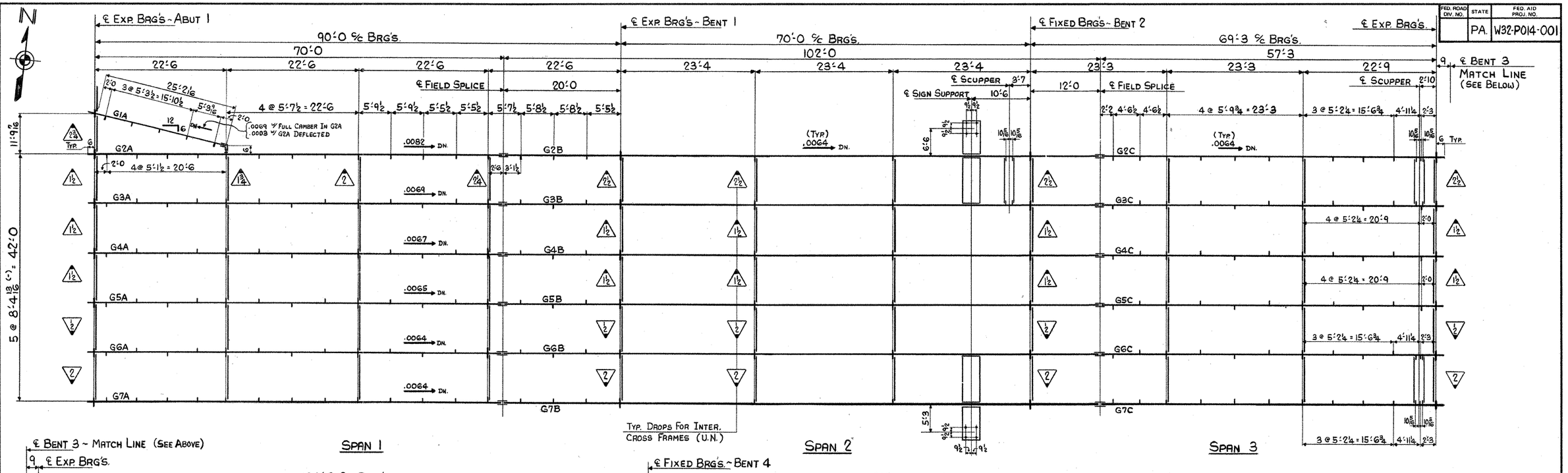
VERIFY IN FIELD

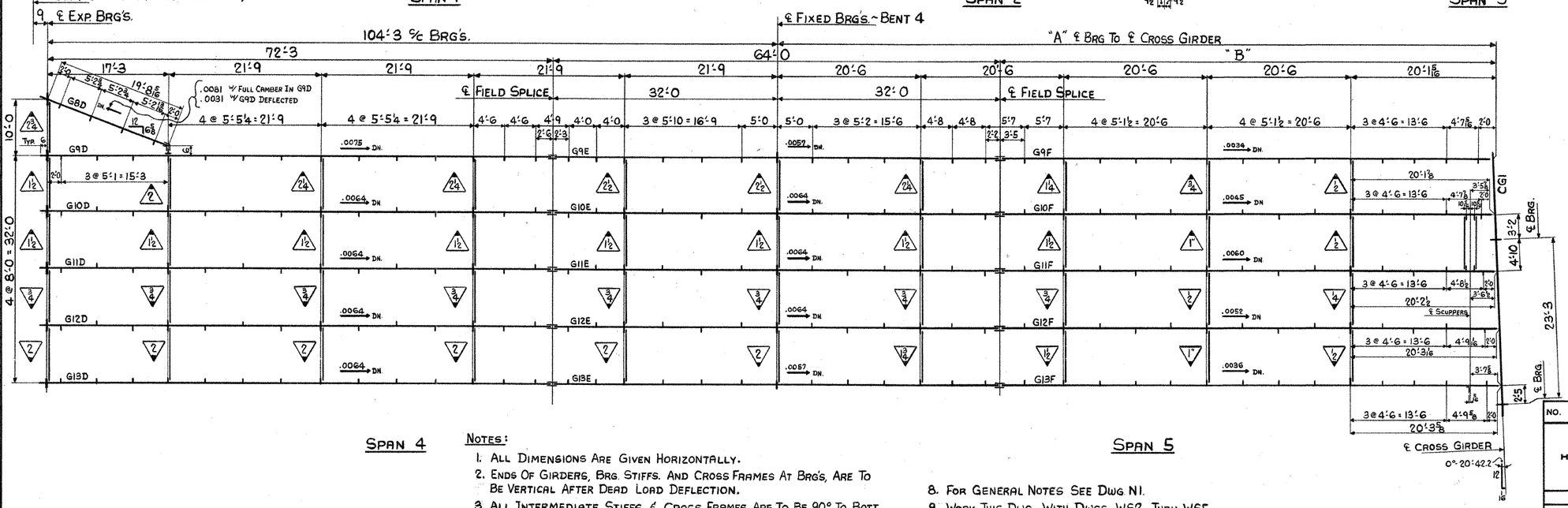
NO.	BRG. TYPE	DESCRIPTION	LENGTH		REMARKS	ITEM	SHIP. WEIGHT EA.
		SOLE PLATES					
2	250	℄ 12½ x 1.01	1	2⅛		1/5	
4	250	℄ 13⅝x14 GA.	Ø	6	STAINLESS STEEL PLATE (BENT)	1/11	
2	400	℄ 15⅝ x 1.22	1	3⅝		1/4	
4	400	℄ 15⅛x14 GA.	Ø	7 11/16	STAINLESS STEEL PLATE (BENT)	1/10	
		KEYS					
2	250	BAR 1⅛x.500	Ø	9 13/16		1/13	
2	400	BAR 15/16x.500	1	Ø 5/16		1/12	
		PISTONS					
2	250	℄ 10.47"ø x 1.06 THK.				1/7	
4	250	TFE DISC 4.915 x 1/16 x 10.318				1/19	
2	400	℄ 13.05"ø x 1.36 THK.				1/6	
4	400	TFE DISC 6.195 x 1/16 x 12.880				1/19	
		BRASS RINGS					
2	250	ROD 5/16"ø	2	8⅛		1/14	
2	400	ROD 5/16"ø	3	4⅛		1/14	
		SHEAR DISCS					
4	250	PAD 10.51"ø x .015 THK.				1/21	
4	400	PAD 13.09"ø x .015 THK.				1/21	
		NEOPRENE DISCS					
2	250	PAD 10.51"ø x ½ THK.				1/17	
2	400	PAD 13.09"ø x 5/8 THK.				1/16	
		BASE PLATES					
2	250	℄ 12½"ø x 2.09 THK.				1/9	
2	400	℄ 15⅝"ø x 2.53 THK.				1/8	
		MASONRY PLATES					
2	250	℄ 20½ x 2 7/16	2	Ø		1/3	
2	400	℄ 17 x 2⅝	1	8		1/2	





FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001





Girder Line	"A"	"B"
G9	102'-1 5/16	70'-1 5/16
G10	102'-1 7/8	70'-1 7/8
G11	102'-2 1/2	70'-2 1/2
G12	102'-3 1/16	70'-3 1/16
G13	102'-3 5/8	70'-3 5/8

Span 4

Span 5

Notes:

1. All Dimensions Are Given Horizontally.
2. Ends Of Girders, Brg. Stiffs. And Cross Frames At Brg's, Are To Be Vertical After Dead Load Deflection.
3. All Intermediate Stiffs. & Cross Frames Are To Be 90° To Bott. Flg..
4. Dims. Shown Thus: 1/2 Is The Diff. Between Tops Of Gird. Webs At Time Of Erection. Arrow Points Toward Low Girder.
5. All Stiffener Spacing Is Given To ℄ Of Stiffeners.
6. All Steel To Be A.S.T.M. A36.
7. Girder Web Pls, Flg. Pls In Tension & Splice Material To Have Charpy V-Notch Test.
8. For General Notes See Dwg N1.
9. Work This Dwg. With Dwgs. WS2 Thru WS5.
10. Figures Given Thus: .0082 DN. Are Deflected Grade Tans. (U.N.)

Figuring Plan

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

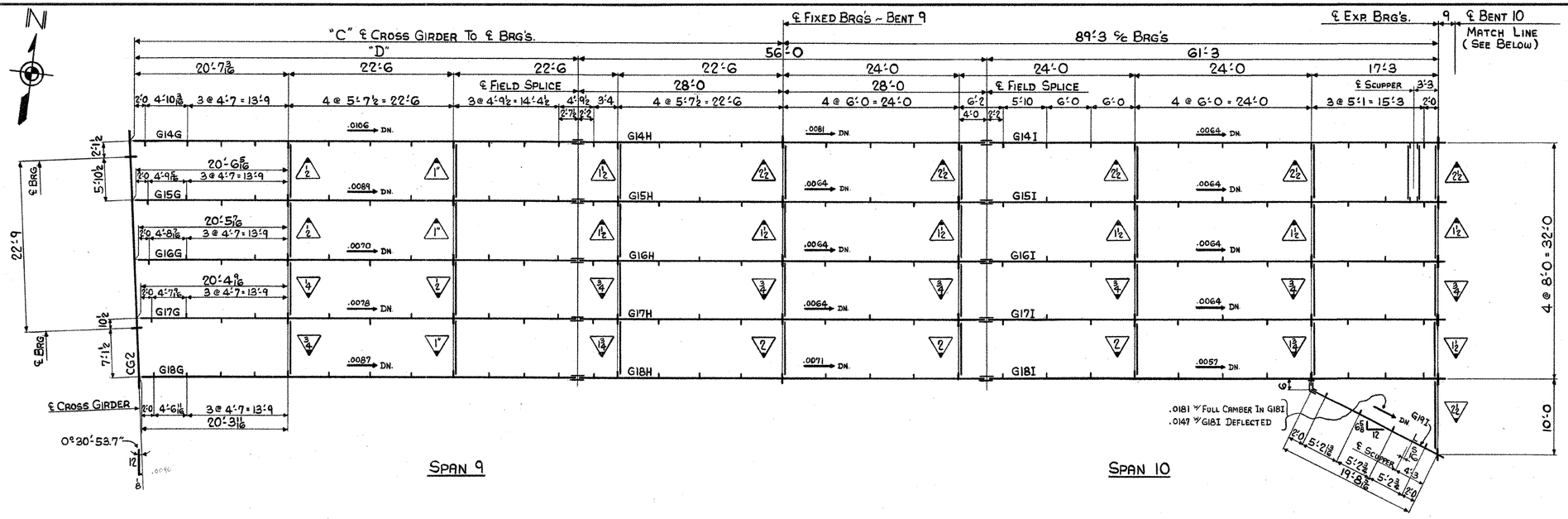
Figuring Plan
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A Sta. 9+16.28
Washington & Westmoreland Co. Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const. Corp

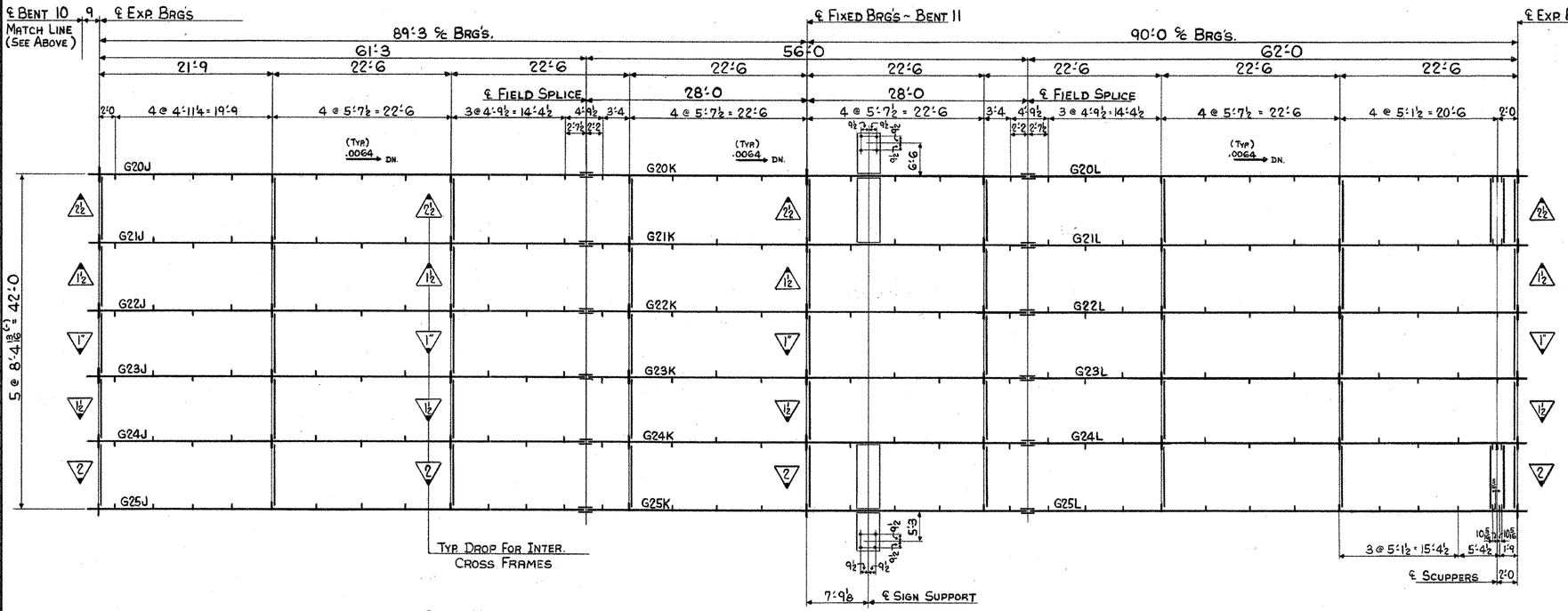
IN CHARGE: Colonial MADE BY: JTC CHK.D BY: THS DATE: 1-8-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: WS1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001



Girder Line	"C"	"D"
G14	88'-1 3/16	60'-1 3/8
G15	88'-0 5/16	60'-0 5/16
G16	87'-11 7/16	59'-11 7/16
G17	87'-10 9/16	59'-10 9/16
G18	87'-9 11/16	59'-9 11/16



Figuring Plan

Work This Dwg. With Dwgs. WS1, WS3, WS4 & WS5

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

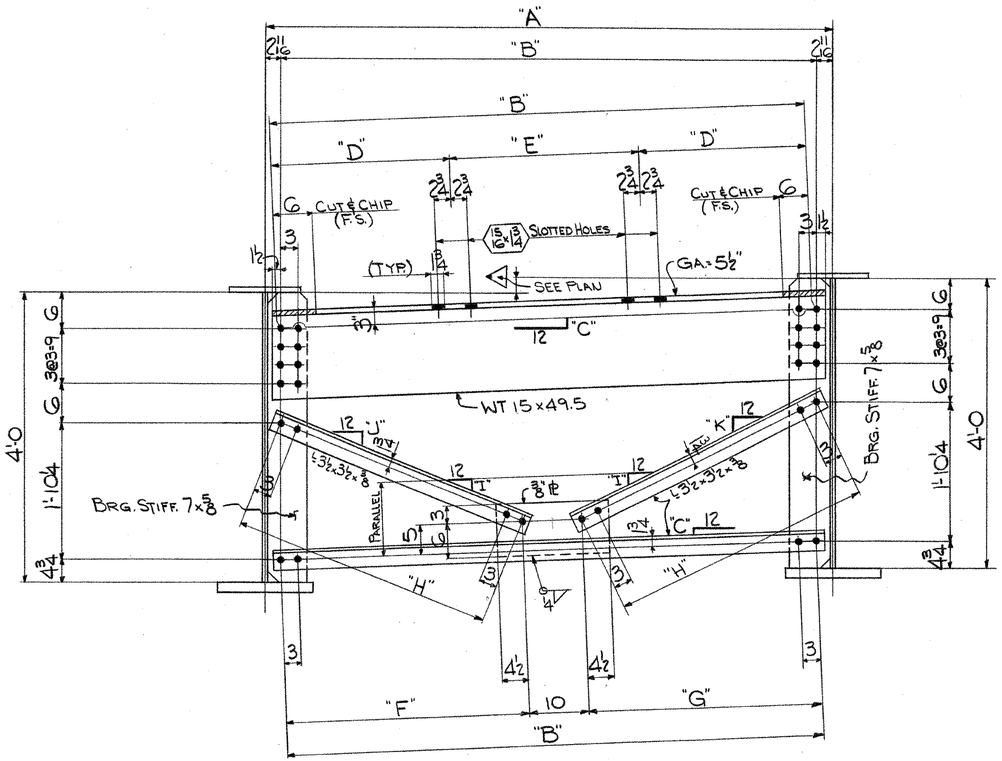
Figuring Plan
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A Sta. 9 + 16.28
Washington & Westmoreland Co., Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const. Corp.

IN CHARGE: Colonial MADE BY: JTC CHK.D. BY: THS DATE: 1-9-85

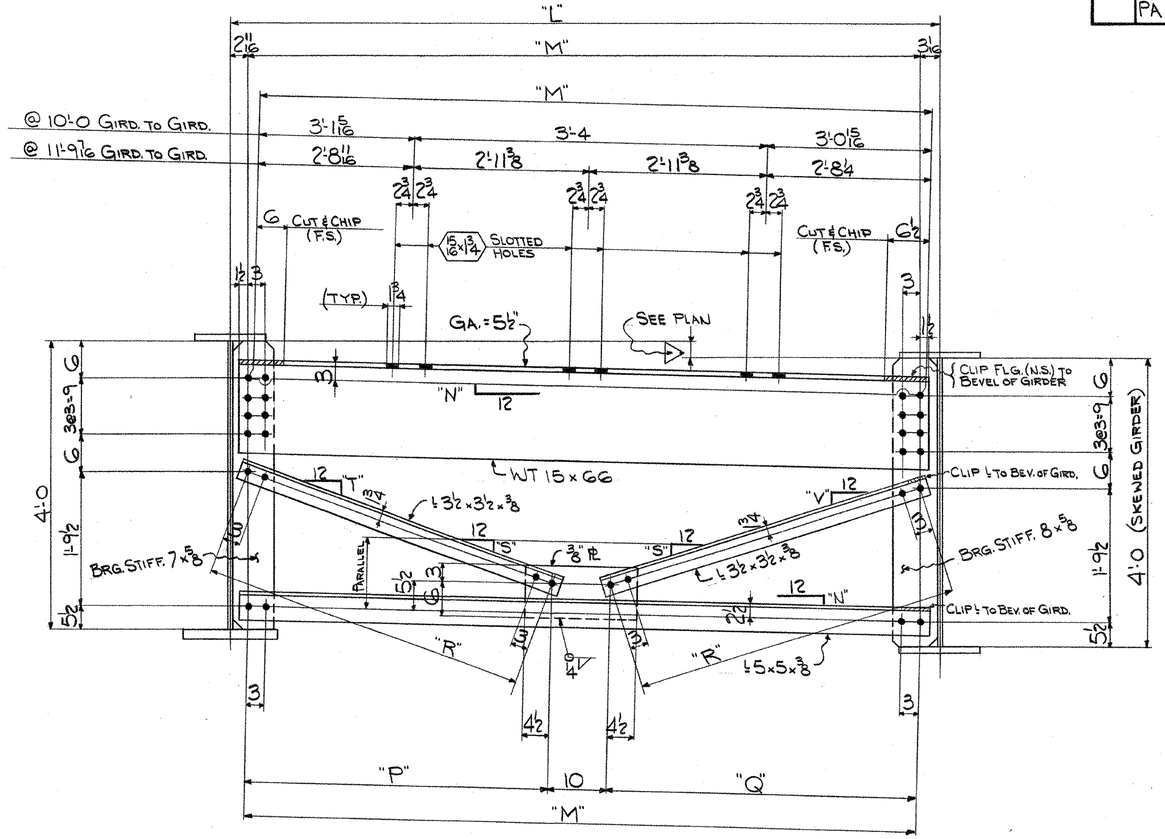
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: WS2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-FOH-001



END CROSS FRAME LAYOUT (TYPE CF1)

◁	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"	"K"
½	8'-4 13/16	7'-11 7/16	1/16	2'-6 15/16	2'-9 9/16	3'-6 13/16	3'-6 5/8	3'-10 1/16	4⅞	4¾	4 15/16
1			⅛			3'-6 15/16	3'-6½			4 11/16	5
1½			3/16			3'-7 1/16	3'-6 3/8			4⅝	5 1/16
2			¼			3'-7 3/16	3'-6¼			4 9/16	5⅛
2½			5/16			3'-7 5/16	3'-6⅛			4½	5 3/16
¾	8'-0	7'-6⅝	⅛	2'-5 5/16	2'-8	3'-4½	3'-4⅛	3'-7⅞	5⅛	5	5¼
1½			3/16			3'-4 11/16	3'-3 15/16			4⅞	5⅜
2			¼			3'-4 13/16	3'-3 13/16			4 13/16	5 7/16
2½			5/16			3'-4 15/16	3'-3 11/16			4¾	5 9/16



END CROSS FRAME LAYOUT (TYPE CF2)

▷	"L"	"M"	"N"	"P"	"Q"	"R"	"S"	"T"	"V"
2¾	11'-9 7/16	11'-3 11/16	¼	5'-2 3/8	5'-3 5/16	5'-4⅞	3 1/16	3 5/16	2 13/16
2¾	10'-0	9'-6¼	5/16	4'-3 5/8	4'-4 5/8	4'-6½	3 11/16	4	3⅜
2½	10'-0	9'-6¼	¼	4'-3 5/8	4'-4 5/8	4'-6½	3 11/16	4	3⅜

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
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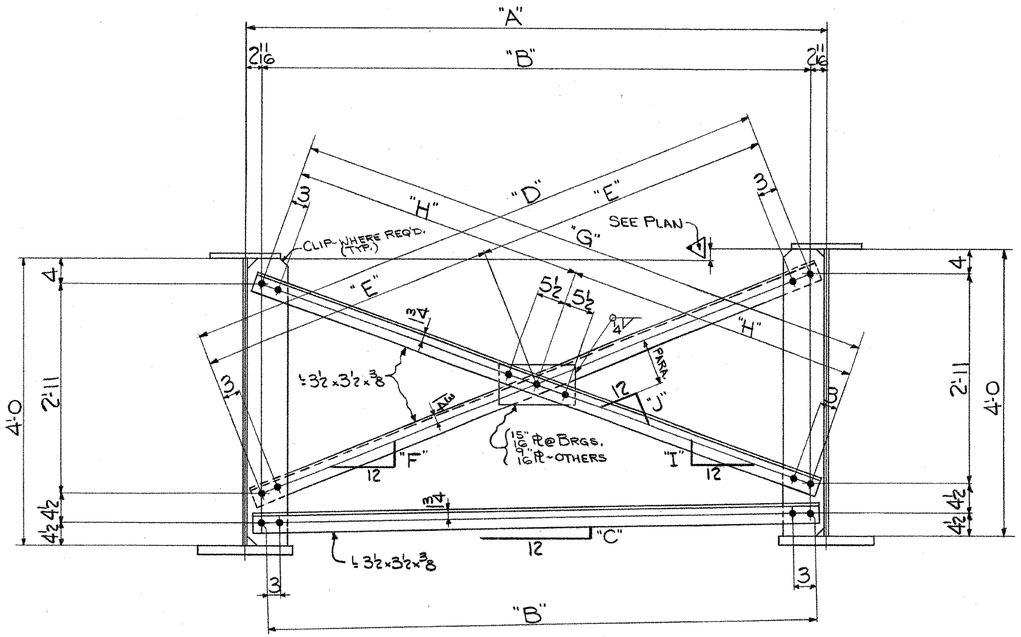
CROSS FRAME LAYOUTS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 1-16-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: WS3

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



INTERMEDIATE CROSS FRAME LAYOUT (TYPE CF3)

◁	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	"I"	"J"
½	8'-4 13/16	7'-11 7/16	1/16	8'-5 7/8	4'-2 15/16	4 7/16	8'-5½	4'-2 3/4	4 5/16	10 3/16
1	↓	↓	1/8	8'-6	4'-3	4½	8'-5¼	4'-2 5/8	4¼	↓
1½			3/16	8'-6 1/8	4'-3 1/16	4 9/16	8'-5⅛	4'-2 9/16	4 3/16	
1¾			¼	8'-6¼	4'-3⅛	4 5/8	8'-5	4'-2½	4 1/16	
2			¼	8'-6⅜	4'-3 3/16	4 5/8	8'-5	4'-2½	4⅛	
2¼			5/16	8'-6½	4'-3¼	4 11/16	8'-4⅞	4'-2 7/16	4⅛	
2½	↓	↓	5/16	8'-6½	4'-3¼	4 11/16	8'-4⅞	4'-2 7/16	4 1/16	↓
¼	8'-0	7'-6 5/8	1/16	8'-1¼	4'-0 5/8	4 11/16	8'-1	4'-0½	4 5/8	10⅞
½	↓	↓	1/16	8'-1 3/8	4'-0 11/16	4 11/16	8'-1	4'-0½	4 9/16	↓
¾			⅛	8'-1 3/8	4'-0 11/16	4¾	8'-0⅞	4'-0 7/16	4 9/16	
1			⅛	8'-1½	4'-0¾	4¾	8'-0¾	4'-0⅜	4½	
1¼			3/16	8'-1 5/8	4'-0 15/16	4 15/16	8'-0¾	4'-0⅜	4½	
1½			3/16	8'-1¾	4'-0⅞	4 15/16	8'-0⅝	4'-0 5/16	4 7/16	
1¾			¼	8'-1¾	4'-0⅞	4⅞	8'-0½	4'-0¼	4⅜	
2			¼	8'-1⅞	4'-0 15/16	4⅞	8'-0½	4'-0¼	4⅜	
2¼			5/16	8'-2	4'-1	4 15/16	8'-0⅜	4'-0 5/16	4 5/16	
2½	↓	↓	5/16	8'-2⅛	4'-1 1/16	4 15/16	8'-0¼	4'-0⅛	4 5/16	↓

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603 · Phone 717/299-5211
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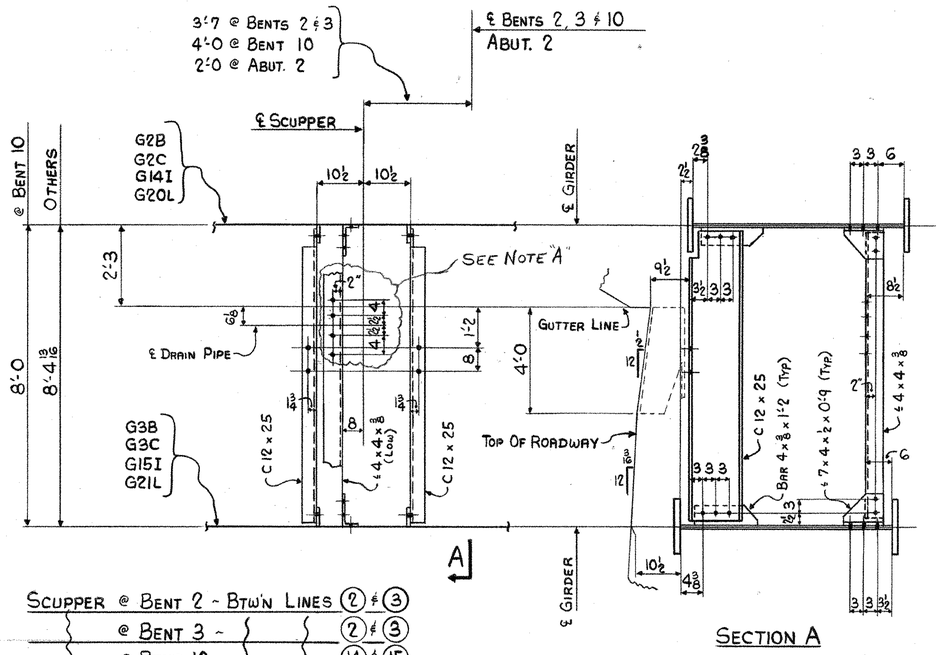
CROSS FRAME LAYOUTS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO, PA
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS. CHK.D. BY: JTC DATE: 1-16-85

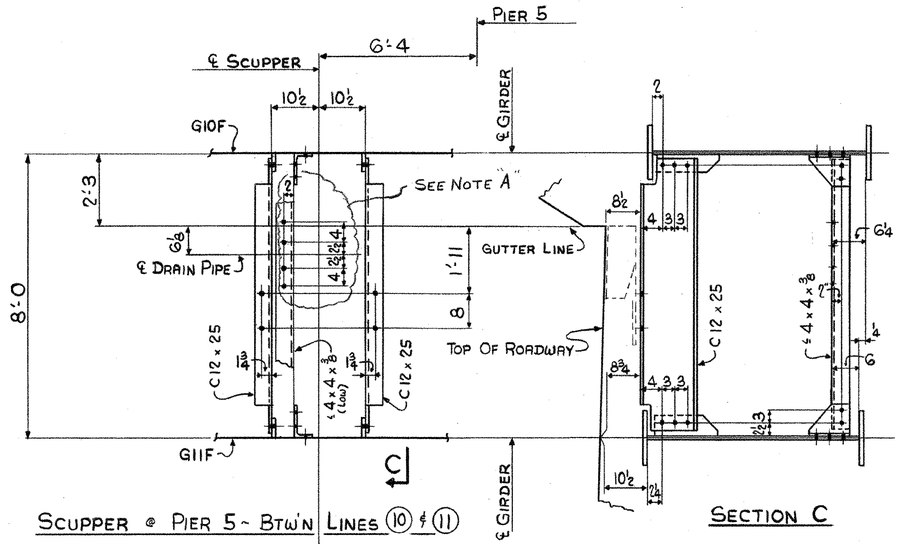
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: WS4

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



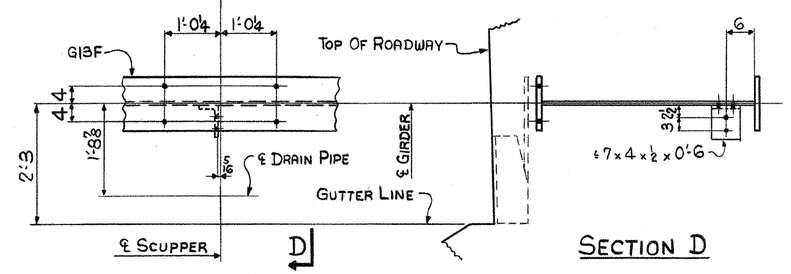
Scupper @ Bent 2 ~ Btw'n Lines (2) & (3)
@ Bent 3 ~ (2) & (3)
@ Bent 10 ~ (14) & (15)
@ Abut 2 ~ (20) & (21)

Section A



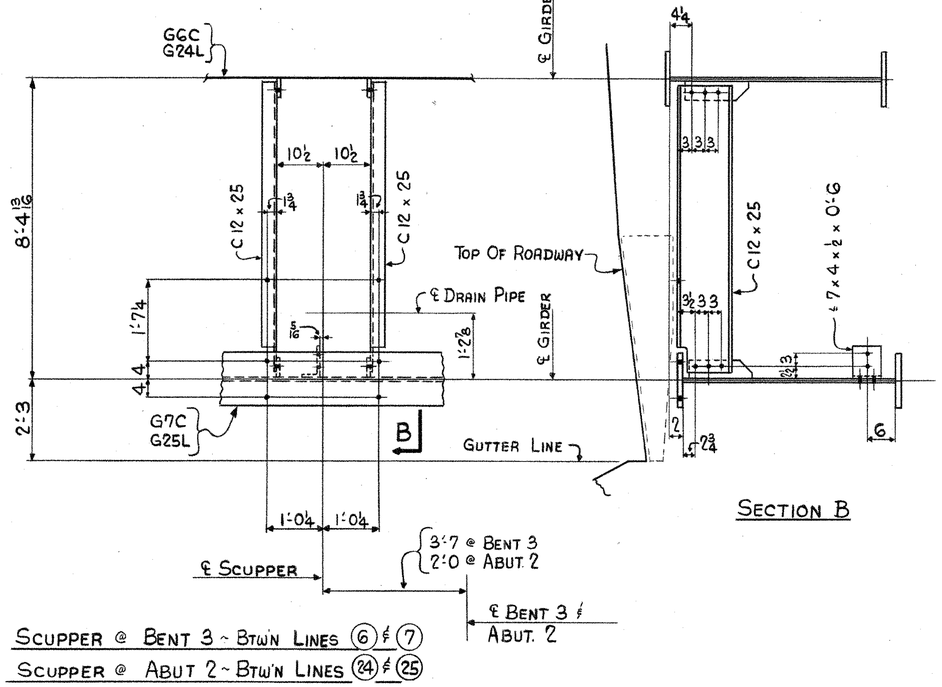
Scupper @ Pier 5 ~ Btw'n Lines (10) & (11)

Section C



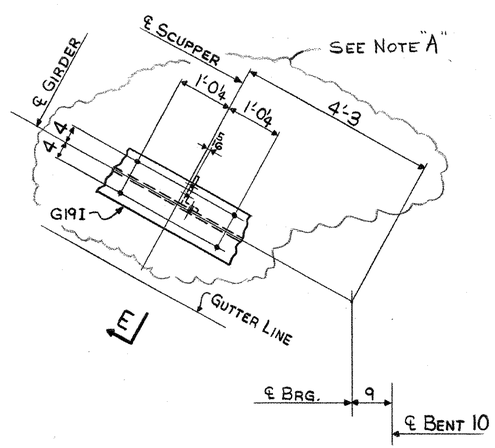
Scupper @ Pier 5 ~ On Line (13)

Section D

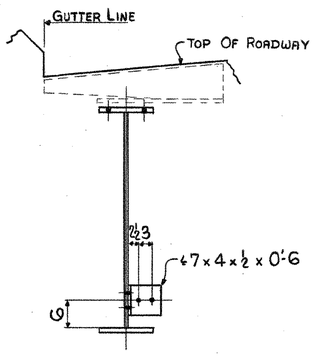


Scupper @ Bent 3 ~ Btw'n Lines (6) & (7)
Scupper @ Abut 2 ~ Btw'n Lines (24) & (25)

Section B



Scupper @ Bent 10 ~ Line (19)



Section E

Note "A":
To Be Verified By Contractor

Work This Dwg. With Dwgs. WS1 Thru WS4.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

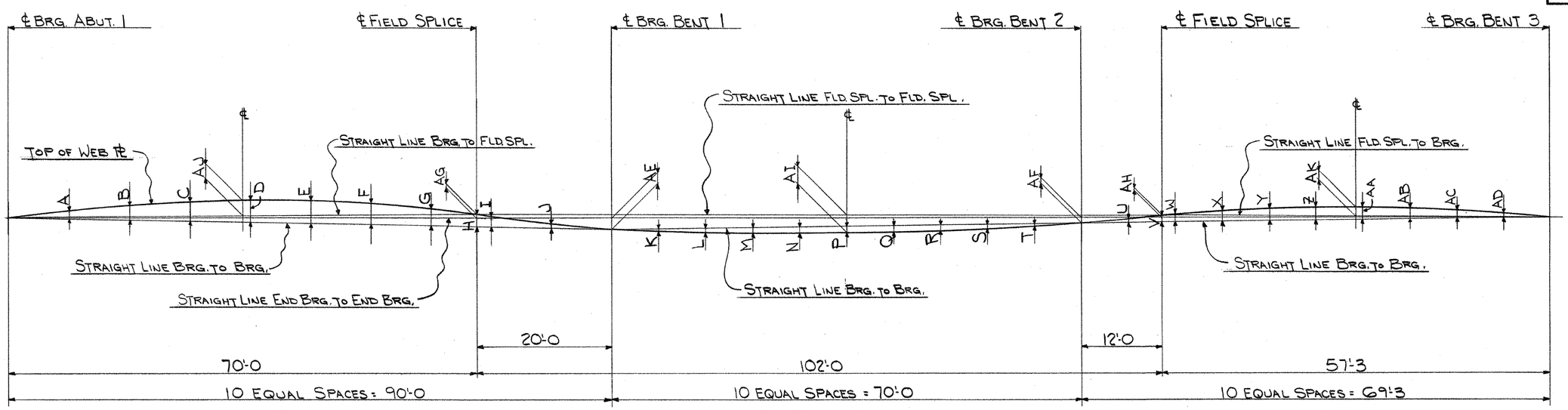
Scupper Support Layouts
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A, Sta. 9 + 16.28
Washington & Westmoreland Co. Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const. Corp.

IN CHARGE: Colonial MADE BY: JTC CHK'D. BY: THS DATE: 1-22-85

CONTRACT NUMBER: PA-84197 1 & 2 DRAWING NUMBER: WS5

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



CAMBER DIAGRAM

GIRDER	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK
G2	.76	1.23	1.33	1.40	1.74	1.61	1.26	.91	.80	.33	.25	.39	.47	.47	.44	.39	.34	.28	.16	.23	.42	.48	.73	.92	1.01	1.00	.88	.66	.35	7/8	7/16	1/4	1/16	1 1/4	15/16	13/16
G3	.48	.90	1.34	1.60	1.64	1.48	1.17	.84	.75	.32	.18	.27	.32	.31	.30	.27	.25	.21	.13	.19	.35	.41	.63	.80	.89	.88	.79	.58	.31	1/4	1/8	5/8	1/4	15/16	3/16	11/16
G4	.56	1.03	1.46	1.70	1.72	1.55	1.22	.88	.78	.34	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	1/8	1/16	3/4	5/16	15/16	1 1/4	11/16
G5	.63	1.17	1.58	1.80	1.81	1.61	1.27	.92	.82	.35	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	0	0	15/16	3/8	15/16	1 5/16	11/16
G6	.66	1.22	1.62	1.84	1.84	1.64	1.29	.93	.83	.36	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	0	0	15/16	3/8	15/16	1 3/8	11/16
G7	.66	1.22	1.62	1.84	1.84	1.64	1.29	.93	.83	.36	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	⌇	0	0	15/16	3/8	15/16	1 3/8	11/16

ORDINATES GIVEN IN INCHES

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

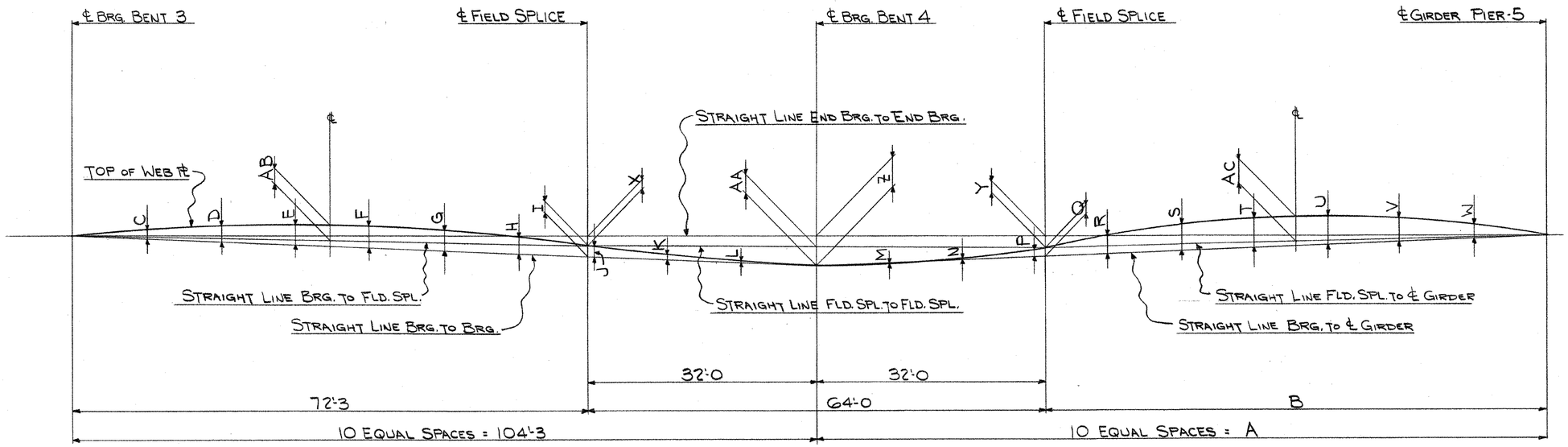
CAMBER DIAGRAM
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 1-9-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: CD1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



CAMBER DIAGRAM

GIRDER	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
G9	102'-15/16	70'-15/16	.45	.68	1.19	1.43	1.38	1.10	.71	.69	.30	.04	-.03	0	.56	.59	1.24	1.82	2.30	2.14	1.72	.86	11/16	13/16	2	1 1/4	15/16	1 15/16
G10	102'-1 7/8	70'-1 7/8	.71	1.29	1.66	1.80	1.67	1.34	.90	.88	.43	.12	-.12	0	.39	.40	.63	1.07	1.45	1.42	1.13	.57	(+5/16)	3/16	13/16	7/8	1 1/4	1 1/4
G11	102'-2 1/2	70'-2 1/2	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	+.08	.35	.76	.78	1.18	1.51	1.67	1.57	1.23	.68	(+3/4)	(+5/8)	3/16	7/8	1 1/4	1 1/4
G12	102'-3 3/16	70'-3 3/16	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	+.02	.22	.57	.58	.93	1.27	1.48	1.42	1.13	.63	(+1/2)	(+1/4)	1/2	7/8	1 1/4	1 3/16
G13	102'-3 5/8	70'-3 5/8	〃	〃	〃	〃	〃	〃	〃	〃	〃	〃	-.18	-.06	.53	.53	.69	.98	1.25	1.25	1.01	.57	3/16	9/16	1 1/16	1 3/16	1 1/4	1

ORDINATES GIVEN IN INCHES

DIMS. GIVEN THUS: (+5/16) ARE ABOVE STRAIGHT LINE END BRG. TO END BRG.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

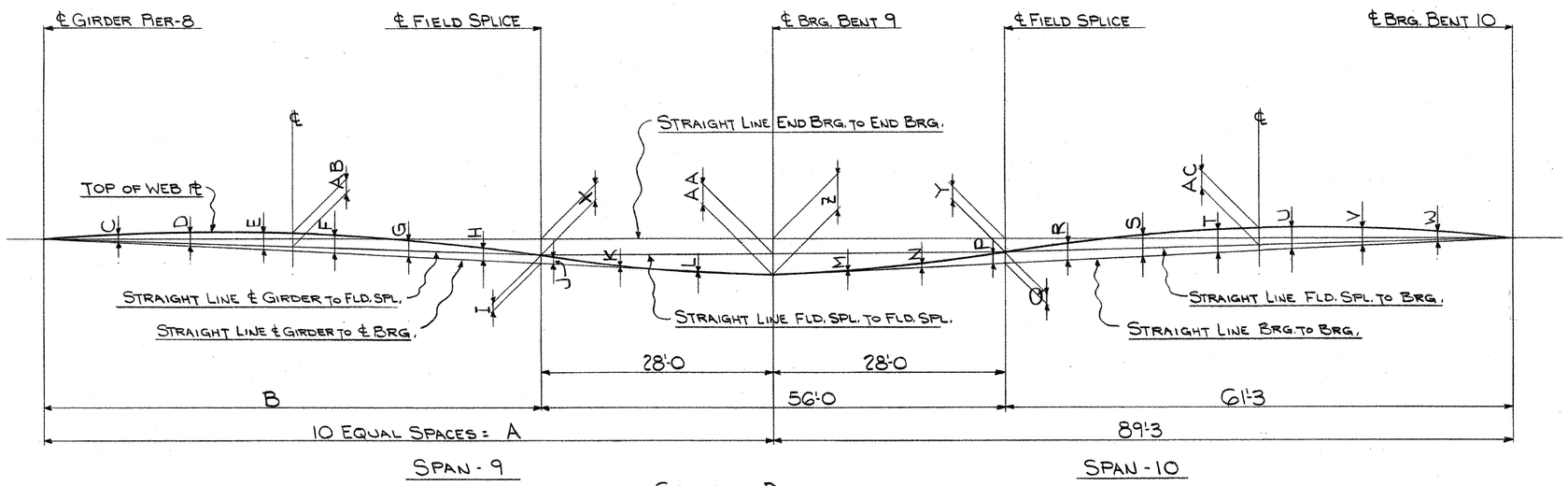
CAMBER DIAGRAM
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK.D BY: JTC DATE: 1-9-85

CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: CD2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

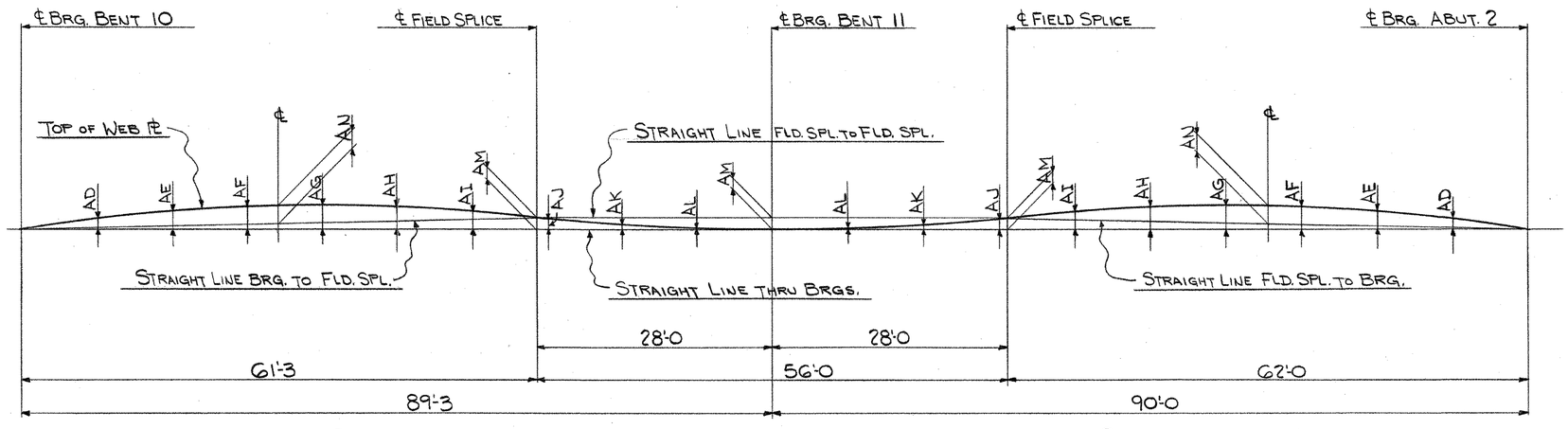


CAMBER DIAGRAM

GIRDER	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC
G14	88'-1 3/16	60'-1 3/16	.49	.81	1.01	1.10	1.02	.76	.49	.45	.08	-.13	+.09	.31	.63	.67	.94	1.19	1.27	1.18	.92	.51	15/16	3/4	2 1/8	1 1/4	13/16	7/8
G15	88'-0 5/16	60'-0 5/16	.37	.64	.79	.77	.60	.28	.04	.01	-.09	-.11	+.08	.28	.57	.60	.86	1.08	1.16	1.08	.83	.47	9/16	0	15/16	5/8	3/4	13/16
G16	87'-11 7/16	59'-11 7/16	.45	.79	1.02	1.08	.97	.73	.48	.45	.20	+.04	+.08	.28	.57	.60	.86	1.08	1.16	1.08	.83	.47	(+5/16)	(+7/16)	1/4	5/8	13/16	13/16
G17	87'-10 9/16	59'-10 9/16	.42	.72	.92	.94	.81	.54	.29	.26	.07	-.02	+.08	.28	.57	.60	.86	1.08	1.16	1.08	.83	.47	0	(+1/4)	1/2	5/8	3/4	13/16
G18	87'-9 11/16	59'-9 11/16	1.12	1.35	1.43	1.38	1.18	.80	.42	.38	.20	+.06	+.02	.17	.41	.43	.64	.81	.83	.70	.64	.53	7/16	7/16	1 5/16	7/8	1 1/8	9/16

ORDINATES GIVEN IN INCHES

(DIMS. GIVEN THUS: (+5/16) ARE ABOVE STRAIGHT LINE END BRG. TO END BRG.



CAMBER DIAGRAM

GIRDER	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN
G20	.50	.92	1.19	1.28	1.18	.95	.63	.31	.09	11/16	7/8
G21 THRU G25	.47	.85	1.10	1.18	1.10	.88	.58	.28	.08	5/8	13/16

ORDINATES GIVEN IN INCHES

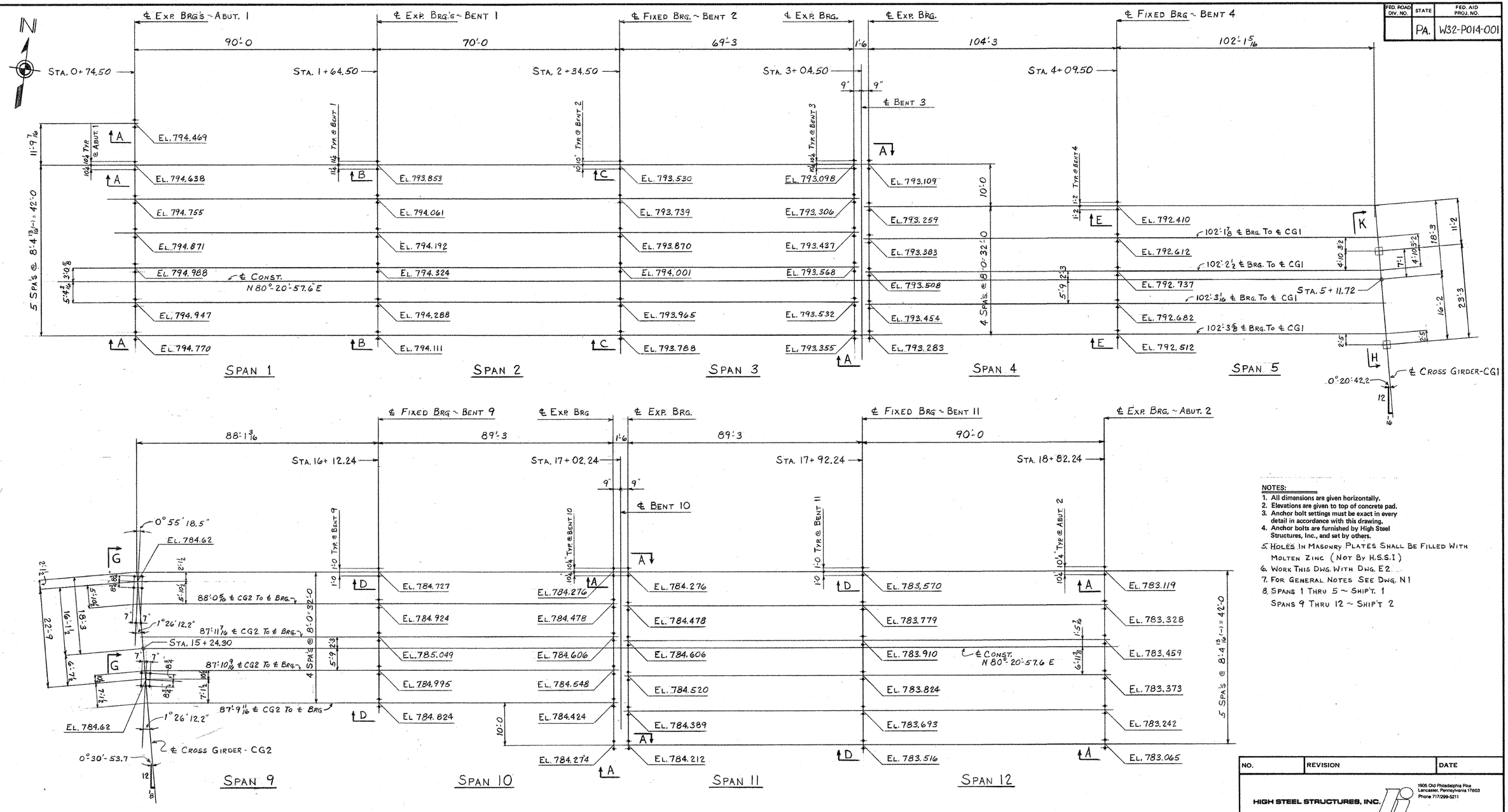
NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

CAMBER DIAGRAM
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO.: S-15296 CONTRACTOR: BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 1-10-85
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: CD3

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001



NOTES:

1. All dimensions are given horizontally.
2. Elevations are given to top of concrete pad.
3. Anchor bolt settings must be exact in every detail in accordance with this drawing.
4. Anchor bolts are furnished by High Steel Structures, Inc., and set by others.
5. Holes In Masonry Plates Shall Be Filled With Molten Zinc (Not By H.S.S.I)
6. Work This Dwg. With Dwg. E2
7. For General Notes See Dwg. N1
8. Spans 1 Thru 5 ~ Ship't. 1
   Spans 9 Thru 12 ~ Ship't 2

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

Anchor Bolt Plan

L.R. 247 Spur A Sec. B10
L.R. 247 Spur A, Sta. 9+16.28
Washington & Westmoreland Co., Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

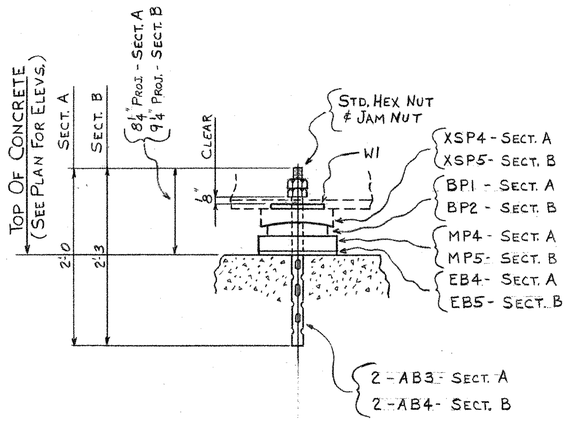
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const. Corp.

IN CHARGE: Colonial MADE BY: RAS CHK.D. BY: THS DATE: 1-21-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: E1

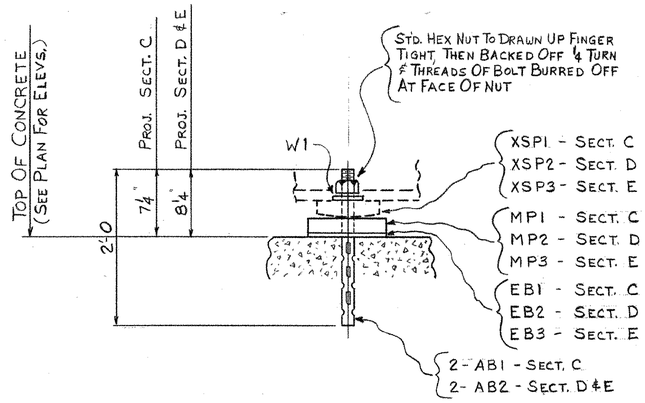
Anchor Bolt Plan

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



SECTION A

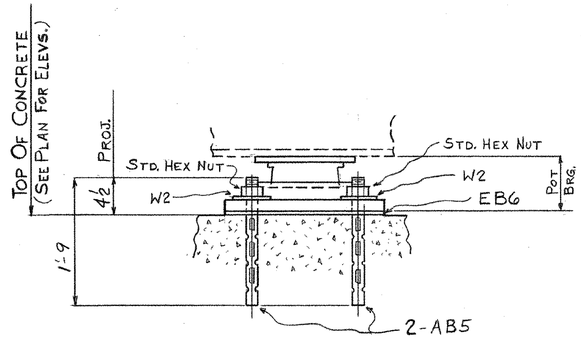
SECTION B



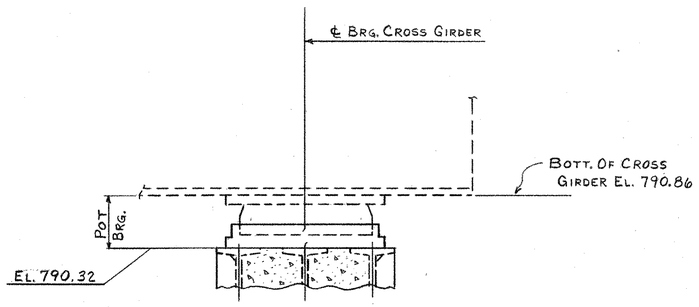
SECTION C

SECTION D

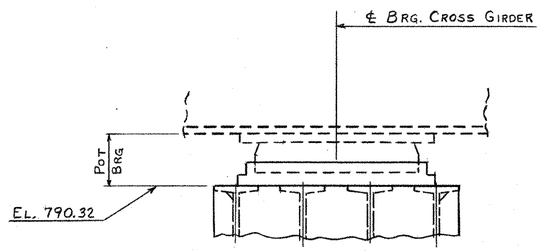
SECTION E



SECTION G



SECTION H



SECTION K

WORK THIS DWG. WITH DWG. E1

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

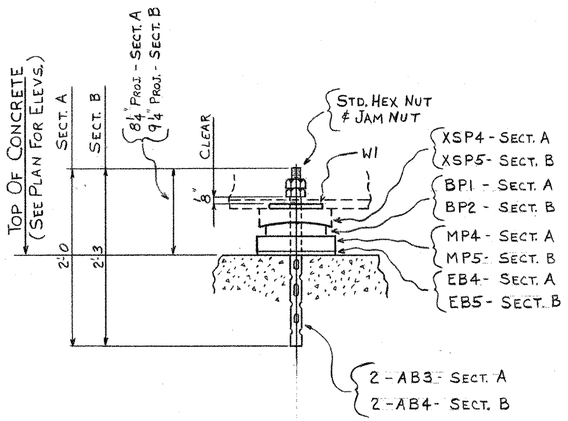
ANCHOR BOLT SECTIONS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 1-21-86

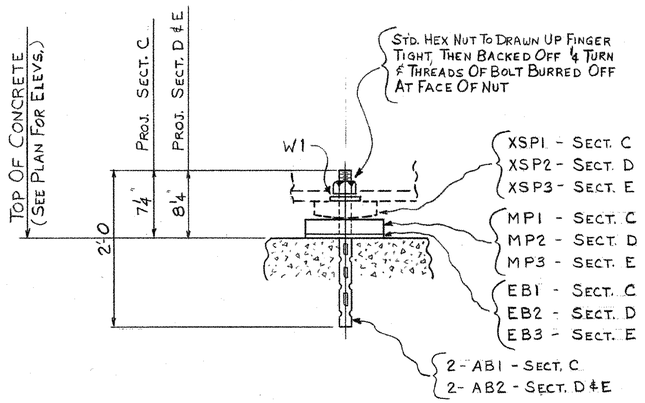
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: E2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



SECTION A

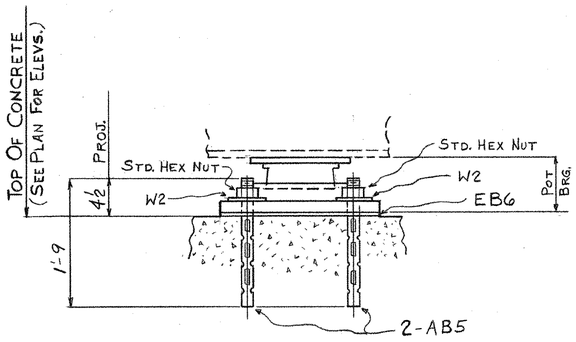
SECTION B



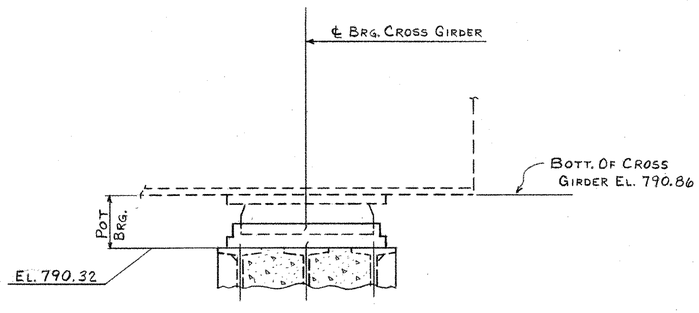
SECTION C

SECTION D

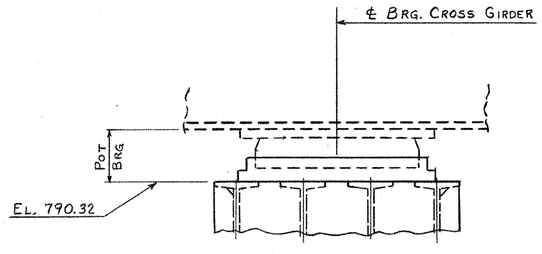
SECTION E



SECTION G



SECTION H



SECTION K

WORK THIS DWG. WITH DWG. E1

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

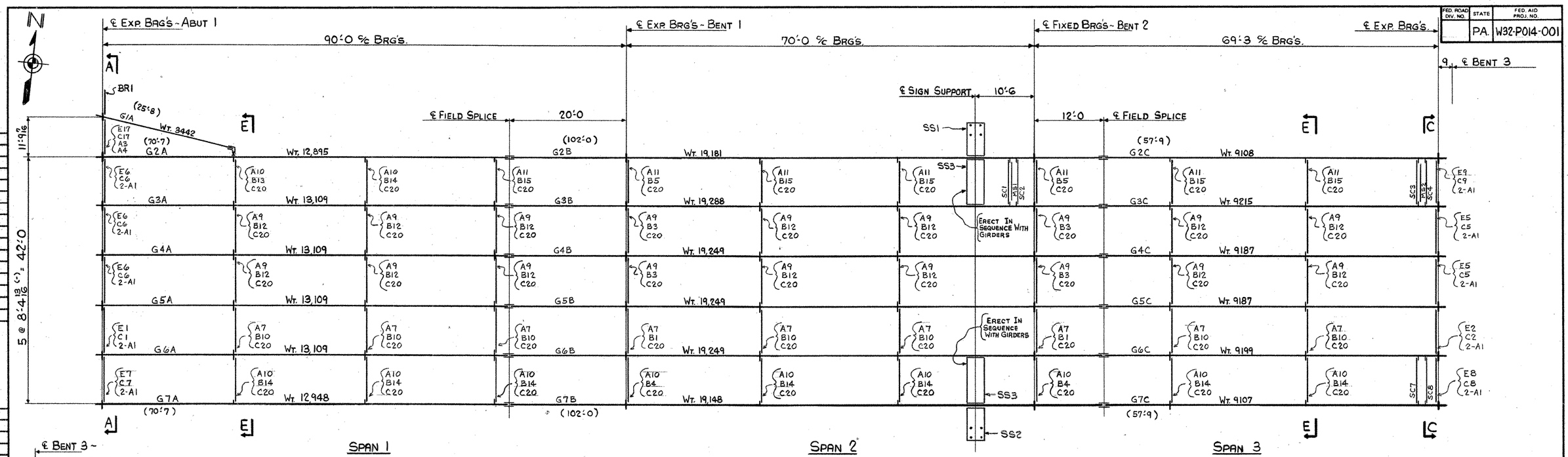
ANCHOR BOLT SECTIONS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND Co., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 1-21-85

CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: E2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001



Erection Plan (Ship't 1)

Notes

1. Structural Steel To Be ASTM A36.
2. All Dimension Are Given Horizontally.
3. Dimensions Shown Thus: (70'-7) Are Shipping Lengths Out To Out Of Girders.
4. Stud Shear Connectors, Exp. Dam Mat'l., Scuppers & Any Other Bridge Drainage & Anchor Bolts For Sign Cols. Not By H.S.S.I..
5. Nuts To Be Placed On Anchor Bolts Before Erecting Bottom Strut Of Cross Frames At Bearings.
6. Web Splices ~ Place Bolt Head On Exposed Side Of Fascia Girder. Flange Splices ~ Place Nut On Top Surface Of Flange Splice Plates.
7. For General Notes See Dwg. N1.
8. Work This Dwg. With Dwgs. E1, E2, E4 & E5

Field Bolt Summary

(A325 Type 1 W/ A563 Gr. C Hex Nut Each.)

Shipment 1	Shipment 2	
115	99	- 7/8" H.S. Bolts x 0'-2 Lg.
1316	1077	7/8" x 0'-2 1/4 Lg.
1401	1446	7/8" x 0'-2 1/2 Lg.
221	74	7/8" x 0'-2 3/4 Lg.
15	10	7/8" x 0'-3 Lg.
396	41	7/8" x 0'-3 1/4 Lg
873	725	7/8" x 0'-3 1/2 Lg.
41	544	7/8" H.S. Bolts x 0'-3 3/4 Lg
103	103	1" H.S. Bolts x 0'-4 Lg.
4378	4016	-Hard Flat Washers For 7/8" H.S. Bolts (F436)
103	103	-Hard Flat Washers For 1" H.S. Bolts (F436)

Erection Note:

No credit will be allowed for work performed by others in replacing or correcting materials or workmanship covered by this drawing unless expressly authorized by High Steel Structures, Inc.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

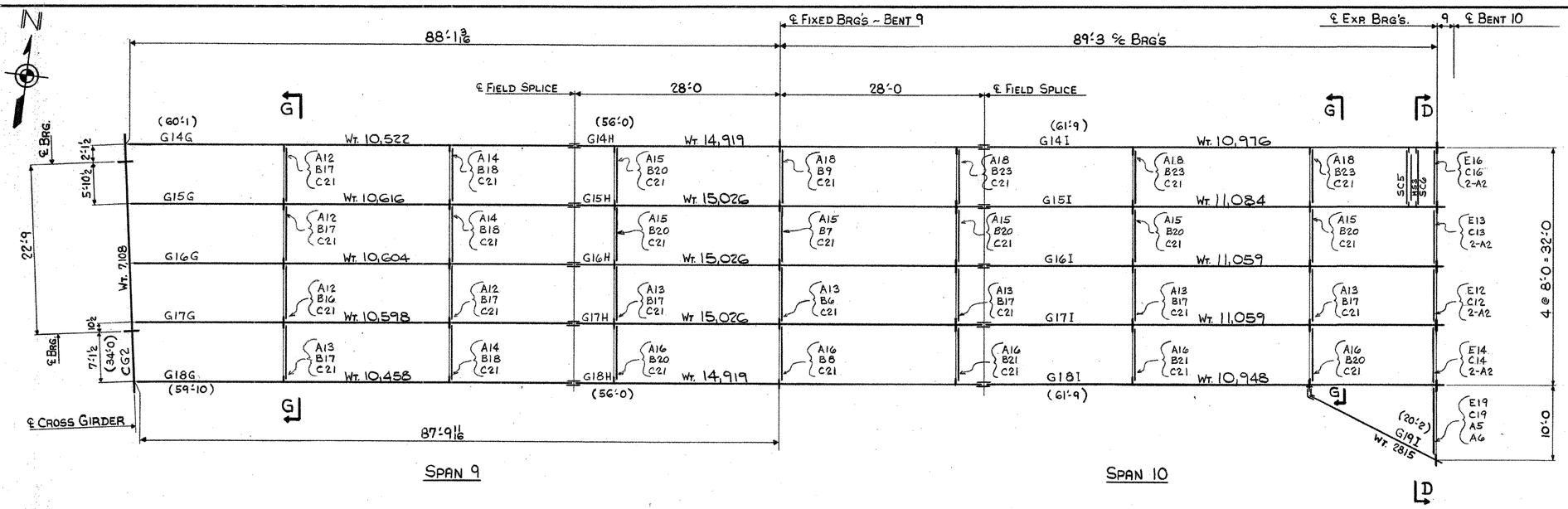
Erection Plan
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A Sta. 9+16.28
Washington & Westmoreland Co. Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

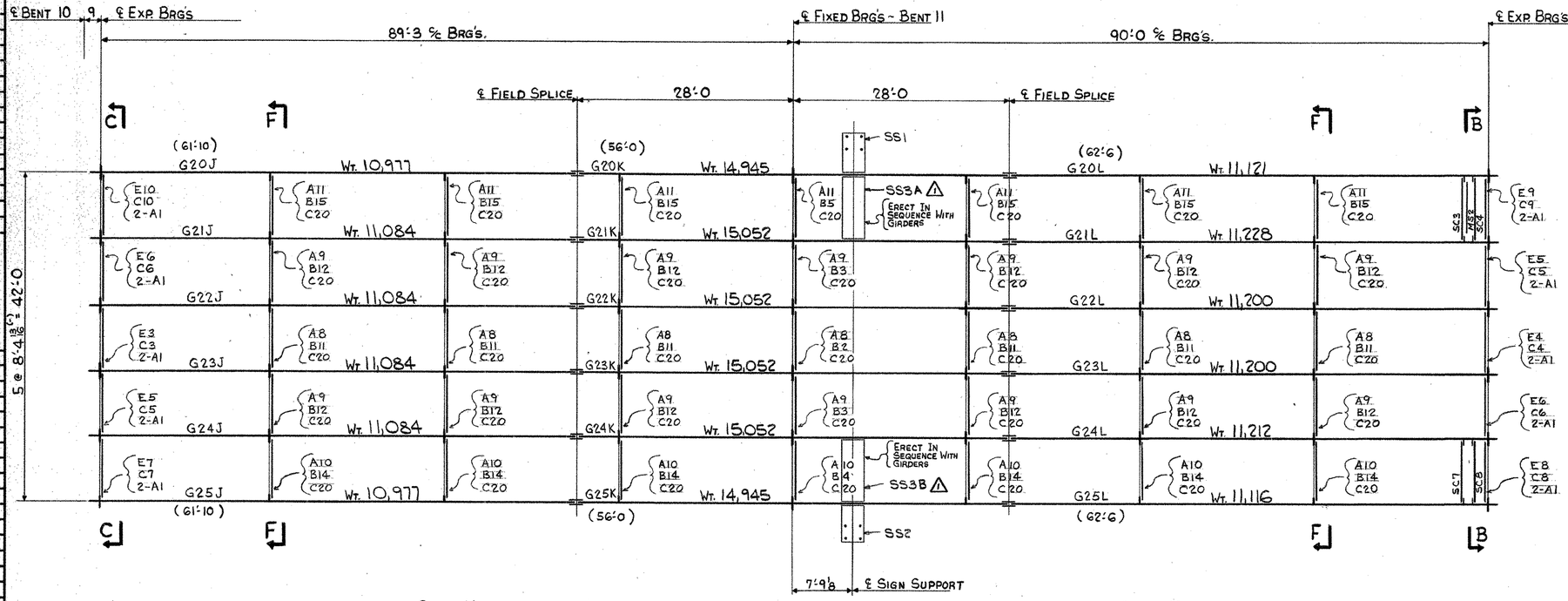
State Contract or Ref. No. S-15296 Contractor Brayman Const. Corp.

In Charge: Colonial Made By: JTC Chk'd. By: THS Date: 2-7-85

Contract Number: PA-84197-1&2 Drawing Number: E3

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001





Erection Plan (Ship't. 2)

Work This Dwg. With Dwgs. E1, E2, ~~E3~~ & E5

NO.	REVISION	DATE
⚠1	Rev. Mk. for Shipments Due to FAD Error	7-2-85

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

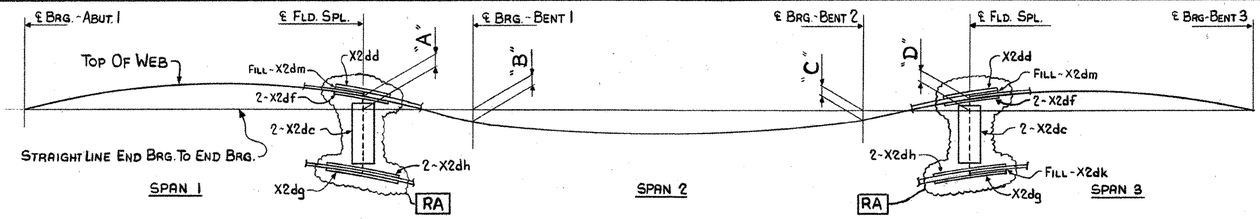
Erection Plan
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A Sta. 9+16.28
Washington & Westmoreland Co. Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

State Contract or Ref. No. S-15296 Contractor Brayman Const. Corp.

In Charge: Colonial Made By: JTC Chk'd. By: THS Date: 2-7-85

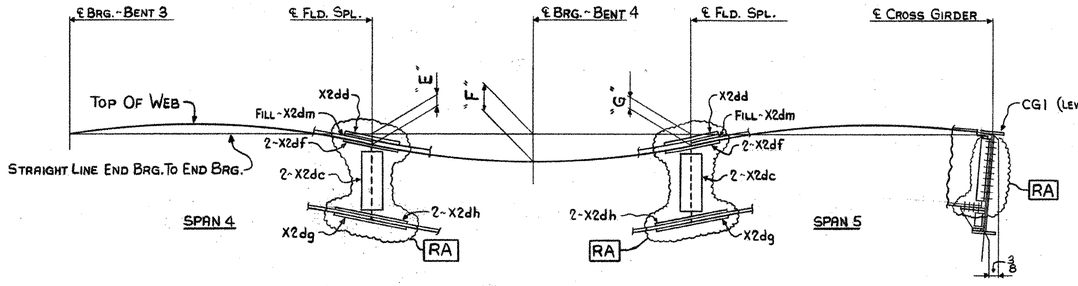
Contract Number: PA-84197-2 Drawing Number: E4

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



Reaming Diagram - Spans 1, 2 & 3

Girder Line	"A"	"B"	"C"	"D"
G2	1/4	7/8	7/16	1/16
G3	5/8	1/4	1/8	1/4
G4	3/4	1/8	1/16	5/16
G5	15/16	0	0	3/8
G6	15/16	0	0	3/8
G7	15/16	0	0	3/8

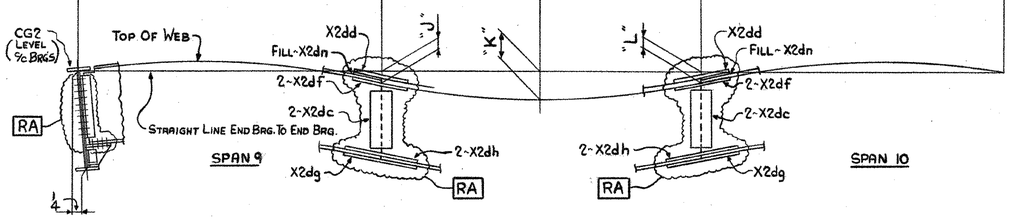


Reaming Diagram - Spans 4 & 5

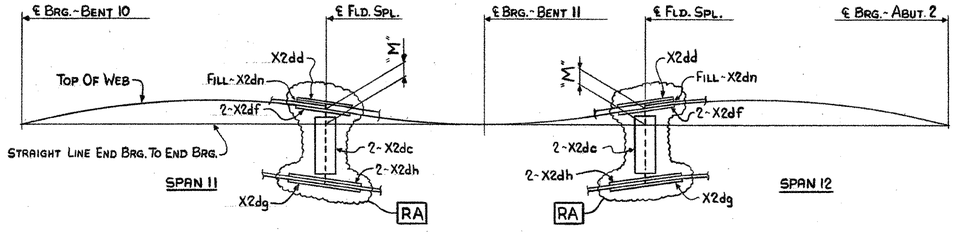
Girder Line	"E"	"F"	"G"
G9	11/16	2	13/16
G10	(+5/16)	13/16	3/16
G11	(+3/4)	3/16	(+5/8)
G12	(+1/2)	1/2	(+1/4)
G13	3/16	9/16	9/16

Dims. Given Thus: (+5/16) Are Above Straight Line End Brg. To End Brg.

Girder Line	"J"	"K"	"L"
G14	15/16	2 3/8	3/4
G15	9/16	15/16	0
G16	(+5/16)	1/4	(+7/16)
G17	0	1/2	(+1/4)
G18	7/16	1 5/16	7/16



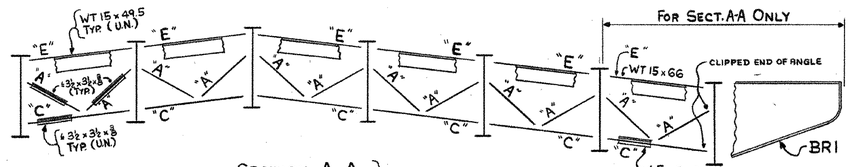
Reaming Diagram - Spans 9 & 10



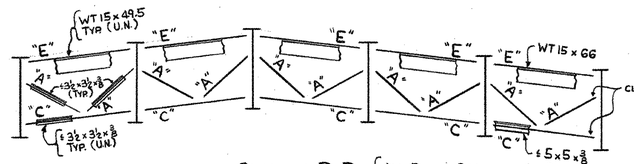
Reaming Diagram - Spans 11 & 12

Girder Line	"M"
G20	11/16
G21	5/8
G22	5/8
G23	5/8
G24	5/8
G25	5/8

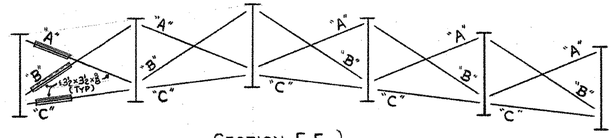
RA NOTE:
HOLES MARKED RA TO BE SUB-PUNCHED 11/16"ϕ AND REAMED TO 15/16"ϕ WITH CONNECTING PARTS ASSEMBLED AND MATCH MARKED.



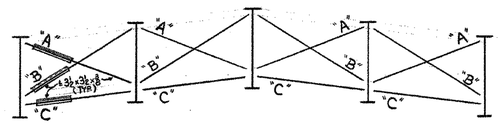
Section A-A
Section B-B
(Opp Hand) Section C-C
} All Pieces Prefixed As Shown See Plan For Marks



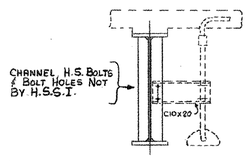
Section D-D { All Pieces Prefixed As Shown See Plan For Marks



Section E-E
(Opp. Hand) Section F-F
} All Pieces Prefixed As Shown See Plan For Marks



Section G-G { All Pieces Prefixed As Shown See Plan For Marks



Luminaire No. NC-26 Mounting Detail

Work This Dwg. With Dwgs. E1, E2, E3 & E4

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

Erection Plan
L.R. 247 Spur A Sec. B10
L.R. 247 Spur A Sta. 9 + 16.28
Washington & Westmoreland Co., Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const. Corp.
IN CHARGE: Colonial MADE BY: JTC CHK.D. BY: THS DATE: 2-7-85
CONTRACT NUMBER: PA-84197 1 & 2 DRAWING NUMBER: E5

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

G2A THRU G7A	PL 12 × ¾ × 70'-8 (T)	⅛ ORD. LENGTH
G9D THRU G13D	PL 12 × ⅞ × 72'-11 (T)	¼ ORD. LENGTH

ONE FLG. PL ASSY. EA. MK. G2A, G3A, G4A, G5A, G6A, G7A, G9D, G10D, G11D, G12D, & G13D

RT

G2A THRU G7A	PL 16 × 1½ × 56'-8 (T) ³/₁₃	PL 16 × 1 × 14'-2 (T) ³/₂₇	ORD. LENGTH
G9D THRU G13D	PL 16 × 1⅝ × 57'-11 (T) ³/₁₀	PL 16 × 1¼ × 15'-2 (T) ³/₂₁	ORD. LENGTH

PL 12 × ⅞ × 70'-0 (T) ⁴/₅ ORD. LENGTH

ONE FLG. PL ASSY. EA. MK. G9F, G10F, G11F, G12F, & G13F

RT

PL 16 × 1¼ × 15'-2 (T) ³/₂₁ PL 16 × 1⅝ × 55'-6 (T) ³/₁₁ ORD. LENGTH

BEVEL PL BEFORE WELDING

60°

4 13/16 : 12

GRIND SMOOTH

3/8"

GRIND FLUSH

0"

GOUGE OUT TO SOUND WELD METAL AND WELD AFTER WELDING BEVELED SIDE

TYPICAL FLANGE PLATE SPLICE
(B-L2c-S)

PL 16 × 1 × 14'-2 (T) ³/₂₇ | PL 16 × 1½ × 14'-1 (14'-0) (T) ³/₁₄ | PL 16 × 1 × 13'-1 (13'-0) (T) ³/₂₈ | PL 12 × ¾ × 42'-1 (42'-0) (T) ⁴/₁₃ | PL 16 × 1 × 19'-2 (T) ³/₂₆ | ORD. LENGTH

RT RT RT RT

ONE FLG. PL ASSY. EA. MK. G2B, G3B, G4B, G5B, G6B, & G7B

RT-25% RT-25% RT RT-25%

PL 16 × 1 × 14'-2 (T) ³/₂₇ | PL 16 × 1½ × 14'-1 (14'-0) ³/₁₅ | PL 16 × 1 × 13'-1 (13'-0) (T) ³/₂₈ | PL 16 × ¾ × 42'-1 (42'-0) (T) ⁴/₁ | PL 16 × 1 × 19'-2 (T) ³/₂₆ | ORD. LENGTH

℄ SPLICE

2'-0 RAD. TYP.

℄ RDWY

TRANSITION BEFORE WELDING

PLAN VIEW AT FLANGE TRANSITION

G2C THRU G7C	PL 12 × ¾ × 57'-11 (T)	⁴/₁₂ ORD. LENGTH
G1A	PL 12 × ⅝ × 26'-6	⁴/₁₆ ORD. LENGH
G8D	PL 12 × ⅝ × 21'-0	⁴/₁₈ ORD. LENGTH
CG1	PL 12 × ⅞ × 37'-2 (FCM)	⁶/₅ (CODE: 4700) ORD. LENGTH

ONE FLG. PL ASSY. EA. MK. G2C, G3C, G4C, G5C, G6C, G7C, G1A, G8D, & CG1

G2C THRU G7C	PL 16 × ⅞ × 57'-11 (T)	⁴/₃ ORD. LENGTH
G1A	PL 12 × ⅝ × 26'-6 (T)	⁴/₁₅ ORD. LENGTH
G8D	PL 12 × ⅝ × 21'-0 (T)	⁴/₁₇ ORD. LENGTH
CG1	PL 12 × ⅞ × 37'-2 (FCM)	⁶/₅ (CODE: 4700) ORD. LENGTH

PL 16 × 1⅛ × 13'-2 (T) ³/₂₄ | PL 16 × 1⅞ × 10'-1 (10'-0) (T) ³/₄ | PL 24 × 1⅞ × 18'-1 (18'-0) (T) ³/₂ | PL 16 × 1⅞ × 10'-1 (10'-0) (T) ³/₄ | PL 16 × 1⅛ × 13'-2 (T) ³/₂₄ | ORD. LENGTH

RT RT RT RT

ONE FLG. PL ASSY. EA. MK. G9E, G10E, G11E, G12E, & G13E

RT-25% RT-25% RT-25% RT-25%

PL 16 × 1¼ × 13'-2 (T) ³/₂₂ | PL 16 × 1⅞ × 10'-1 (10'-0) ³/₁₅ | PL 24 × 1⅞ × 18'-1 (18'-0) ³/₃ | PL 16 × 1⅞ × 10'-1 (10'-0) ³/₁₅ | PL 16 × 1¼ × 13'-2 (T) ³/₂₂ | ORD. LENGTH

NOTES:

1. STEEL TO BE A.S.T.M. A36
2. (T) INDICATES CHARPY TEST REQ'D.
3. FCM INDICATES FRACTURE CRITICAL MEMBER
4. SPLICES MARKED RT TO BE RADIOGRAPHICALLY INSPECTED 100% (U.N.) BY A QUALIFIED TECHNICIAN IN THE PRESENCE OF AN INSPECTOR
5. FOR GENERAL NOTES SEE DWG. N1

(CODE: 4000 U.N.)

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

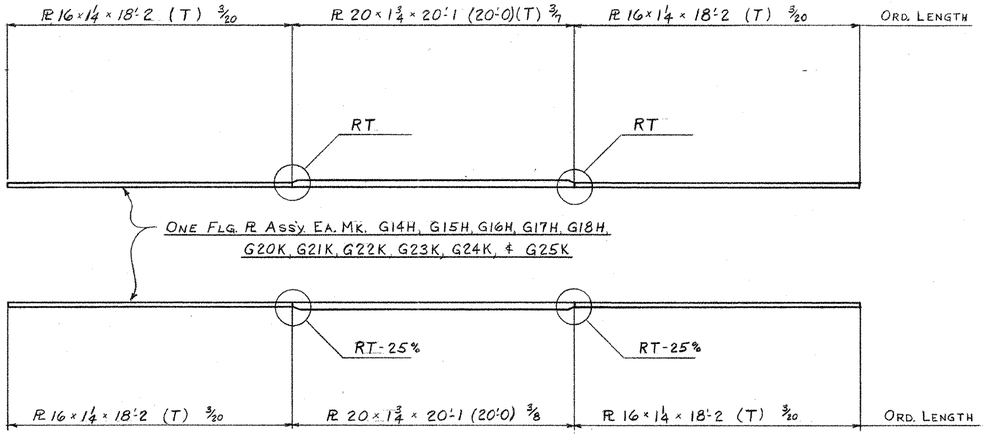
FLANGE SPLICE DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

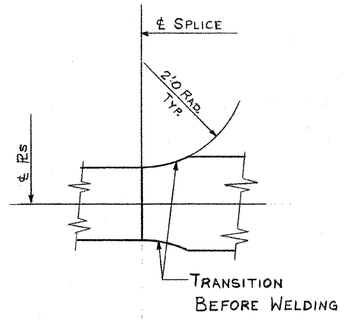
STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK.D. BY: THS DATE: 1-22-85

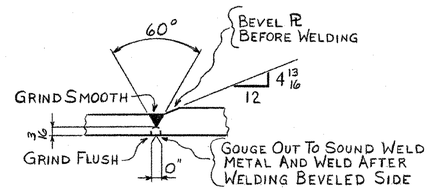
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: FS1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001

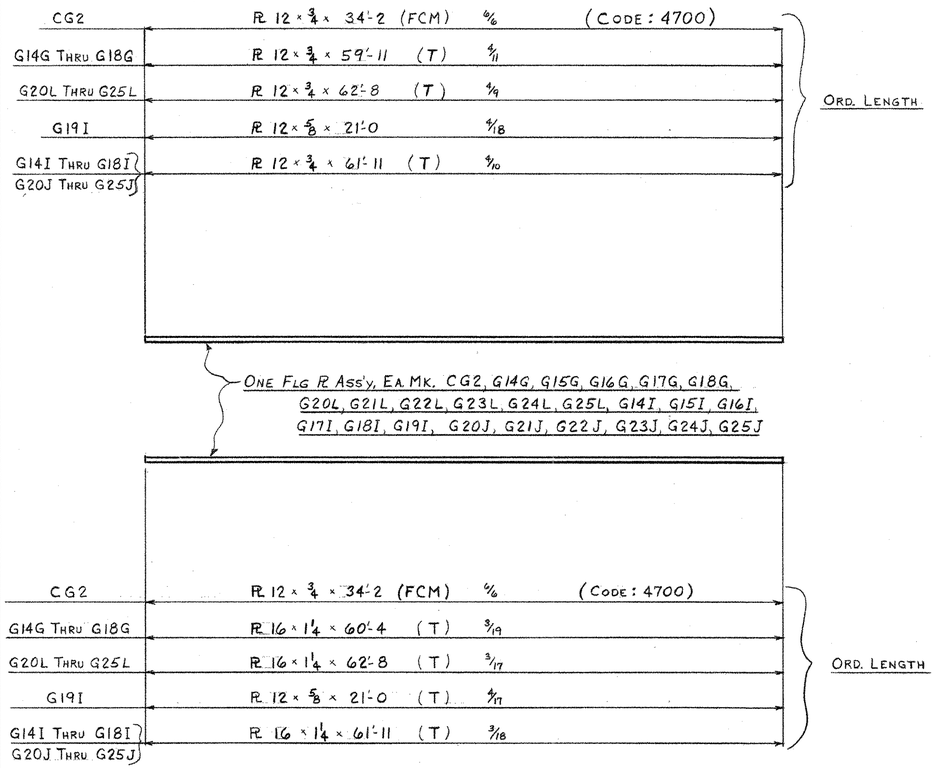




PLAN VIEW AT FLANGE TRANSITION



TYPICAL FLANGE PLATE SPLICE
(B-L2c-S)



NOTES:

1. STEEL TO BE A.S.T.M. A36
2. (T) INDICATES CHARPY TEST REQUIRED
3. FCM INDICATES FRACTURE CRITICAL MEMBER
4. SPLICES MARKED RT TO BE RADIOGRAPHICALLY INSPECTED 100% (U.N.) BY A QUALIFIED TECHNICIAN IN THE PRESENSE OF AN INSPECTOR
5. FOR GENERAL NOTES SEE DWG. N1

CODE: 4000 (U.N.)

NO.	REVISION	DATE

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1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

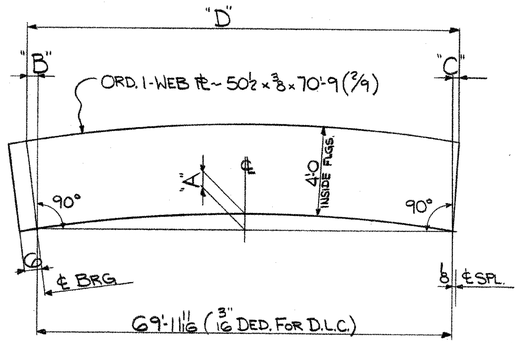
FLANGE SPLICE DETAILS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND Co., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D. BY: THS DATE: 1-22-85

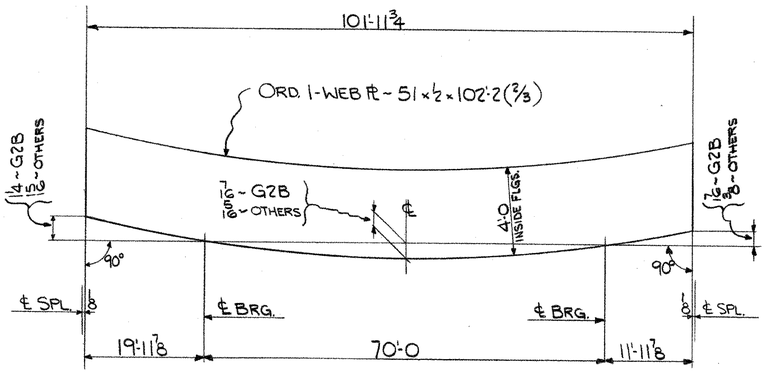
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: FS2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

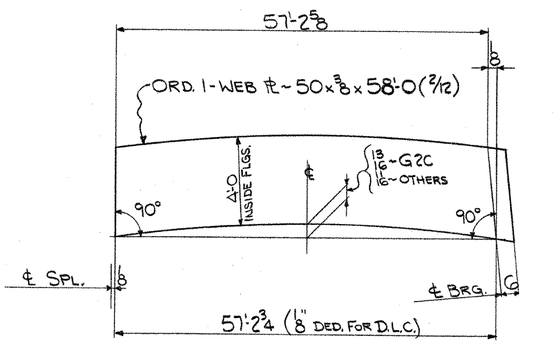


GIRDER	"A"	"B"	"C"	"D"
G2A	15/16	13/16	0"	70'-0½
G3A	13/16	⅝	1/16	70'-0 3/8
G4A	1¼	″	″	″
G5A	15/16	″	″	″
G6A	1⅜	″	″	″
G7A	1⅜	″	″	″

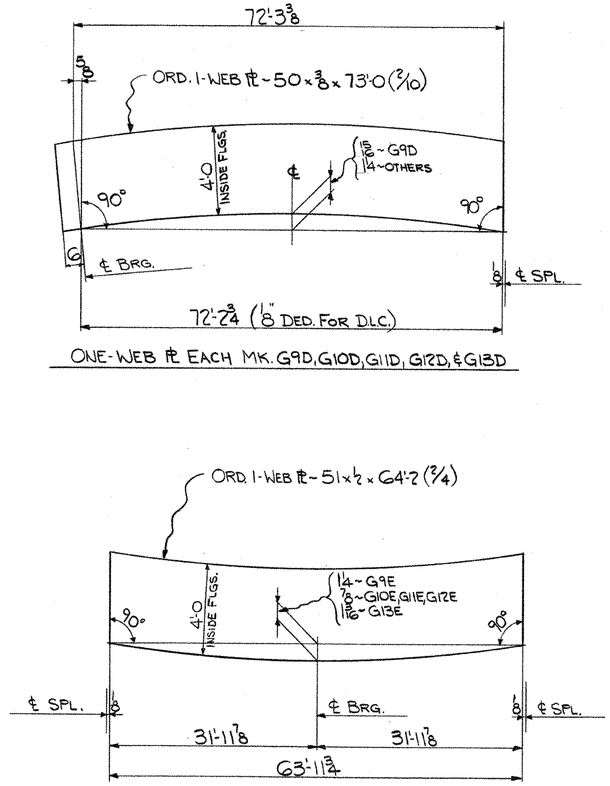
ONE-WEB PL EACH MK. G2A THRU G7A



ONE-WEB PL EACH MK.-G2B, G3B, G4B, G5B, G6B, & G7B

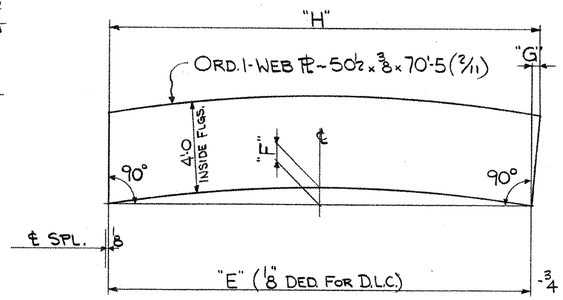


ONE-WEB PL EACH MK.-G2C, G3C, G4C, G5C, G6C, & G7C



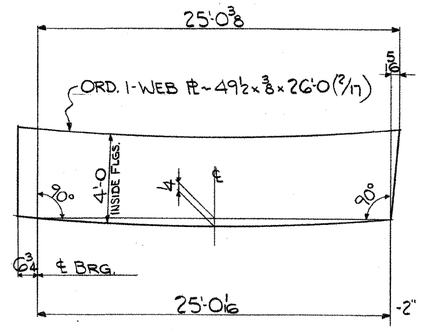
ONE-WEB PL EACH MK. G9D, G10D, G11D, G12D, & G13D

ONE-WEB PL EACH MK. G9E, G10E, G11E, G12E, & G13E

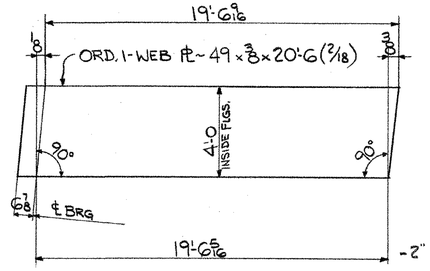


GIRDER	"E"	"F"	"G"	"H"
G9F	70'-0 5/16	1 15/16	⅛	70'-0 1/16
G10F	70'-0 7/8	1¼	1/16	70'-0 15/16
G11F	70'-1½	1¼	0	70'-1½
G12F	70'-2 1/16	1 3/16	1/16	70'-2 1/8
G13F	70'-2⅜	1"	⅛	70'-2 3/4

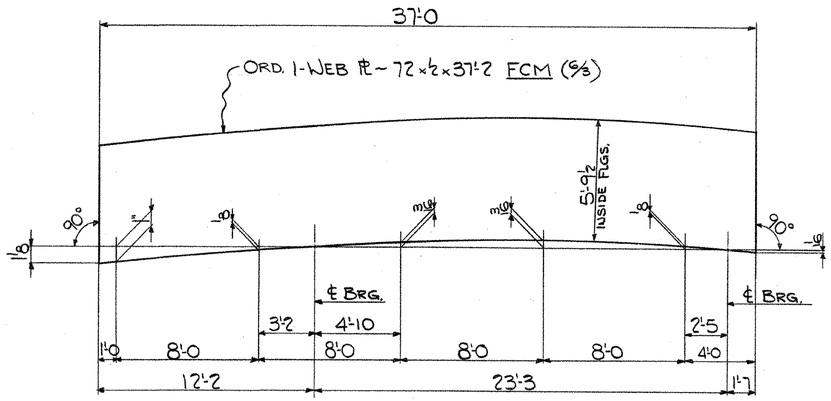
ONE-WEB PL EACH MK. G9F THRU G13F



ONE-WEB PL MK. G1A



ONE-WEB PL MK. G8D



ONE-WEB PL MK. CG1

NOTES:

1. FOR GENERAL NOTES SEE DWG. N1
2. ALL STEEL TO BE A36 W/CHARPY TESTS (U.O.N.).
3. FCM INDICATES FRACTURE CRITICAL MEMBER.

CODE : 4000

NO.	REVISION	DATE

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1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

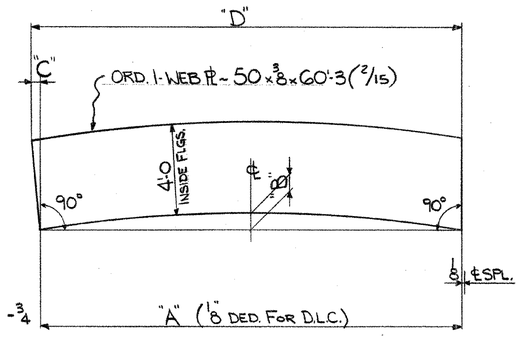
CAMBER DIAGRAMS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 1-10-85

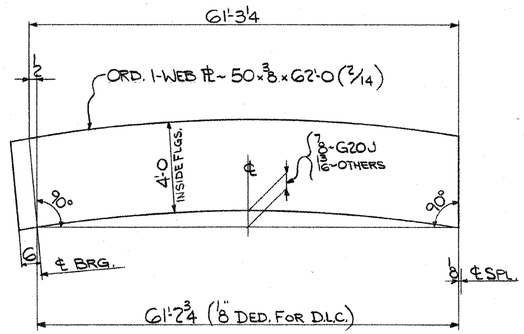
CONTRACT NUMBER: PA-84197-1 DRAWING NUMBER: WC1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

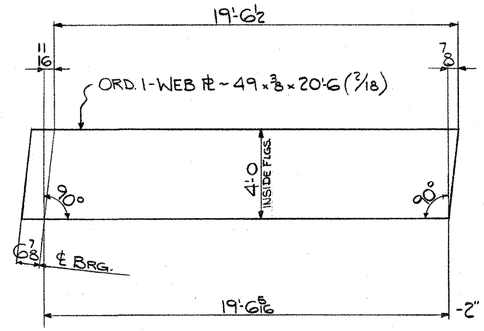


GIRDER	"A"	"B"	"C"	"D"
G14G	60'-0 3/16	13/16	3/4	60'-0 15/16
G15G	59'-11 5/16	3/4	5/8	59'-11 15/16
G16G	59'-10 7/16	13/16	9/16	59'-11
G17G	59'-9 9/16	3/4	9/16	59'-10 1/8
G18G	59'-8 11/16	1/8	5/8	59'-9 5/16

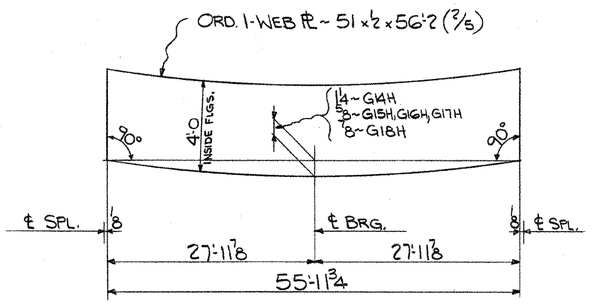
ONE-WEB ℄ EACH MK. G14G THRU G18G



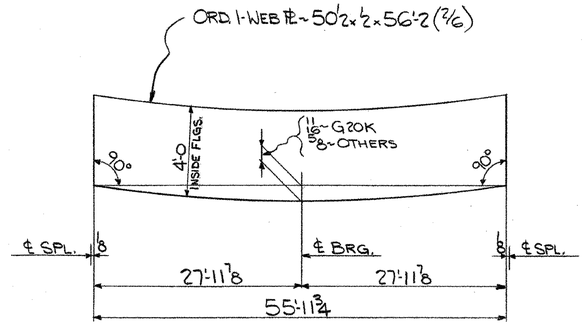
ONE-WEB ℄ EACH MK. G20J, G21J, G22J, G23J, G24J, & G25J



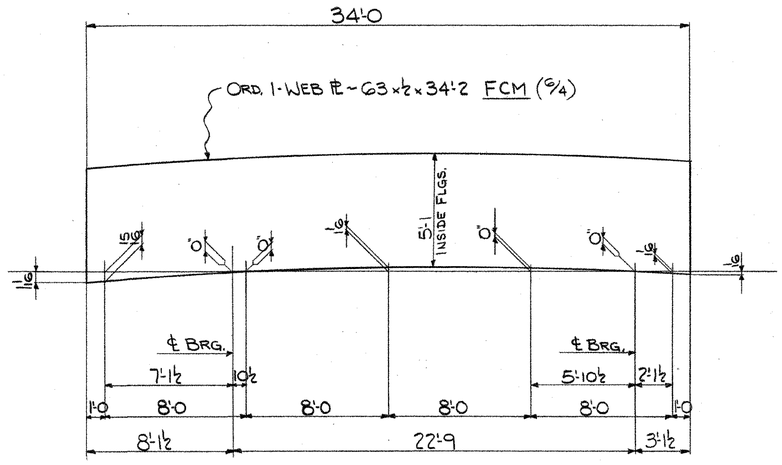
ONE-WEB ℄ MK. G19I



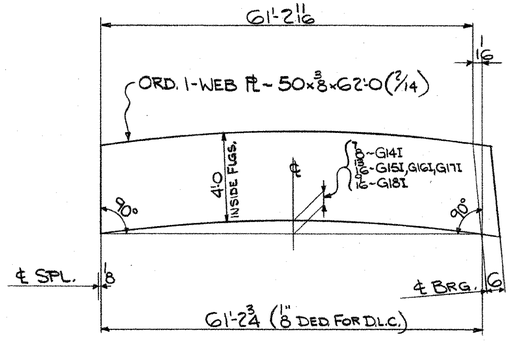
ONE-WEB ℄ EACH MK. G14H, G15H, G16H, G17H, & G18H



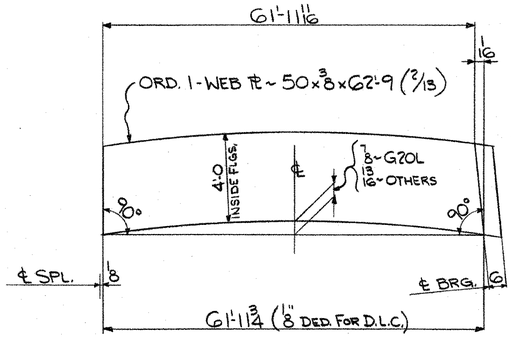
ONE-WEB ℄ EACH MK. G20K, G21K, G22K, G23K, G24K, & G25K



ONE-WEB ℄ MK. CG2



ONE-WEB ℄ EACH MK.~ G14I, G15I, G16I, G17I, & G18I



ONE-WEB ℄ EACH MK.~ G20L, G21L, G22L, G23L, G24L, & G25L

NOTES:

1. FOR GENERAL NOTES SEE DWG. N1
2. ALL STEEL TO BE A36 W/CHARPY TESTS (U.O.N.).
3. FCM INDICATES FRACTURE CRITICAL MEMBER

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1005 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

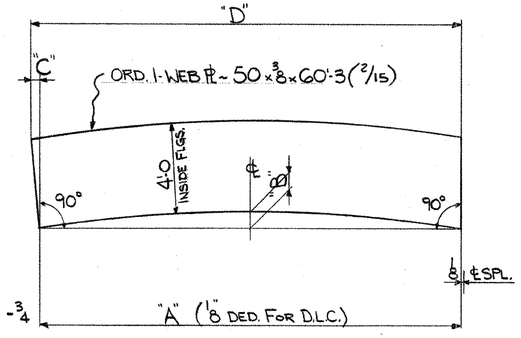
CAMBER DIAGRAMS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: THS CHK.D. BY: JTC DATE: 1-10-85

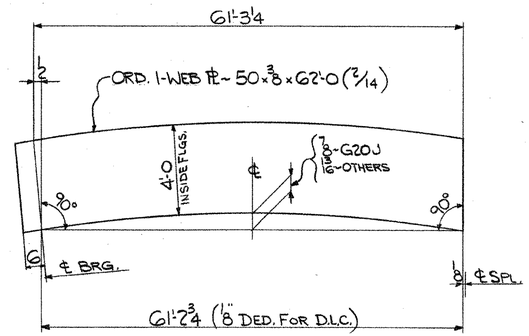
CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: WC2

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

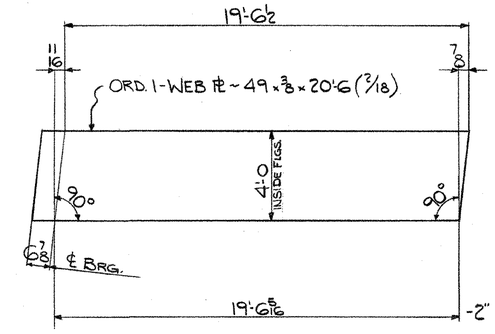


GIRDER	"A"	"B"	"C"	"D"
G14G	60'-0 3/16	13/16	3/4	60'-0 15/16
G15G	59'-11 5/16	3/4	5/8	59'-11 15/16
G16G	59'-10 7/16	13/16	9/16	59'-11
G17G	59'-9 9/16	3/4	9/16	59'-10 1/8
G18G	59'-8 11/16	1/8	5/8	59'-9 5/16

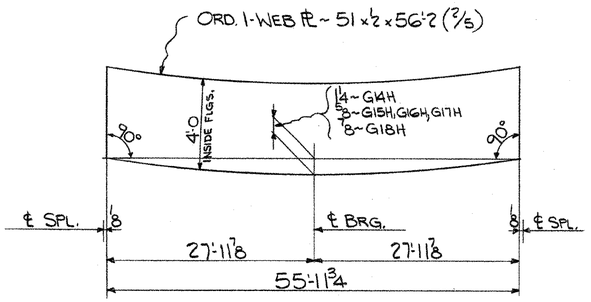
ONE-WEB ℄ EACH MK. G14G THRU G18G



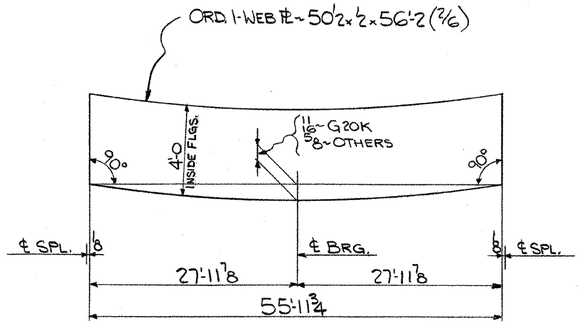
ONE-WEB ℄ EACH MK. G20J, G21J, G22J, G23J, G24J, & G25J



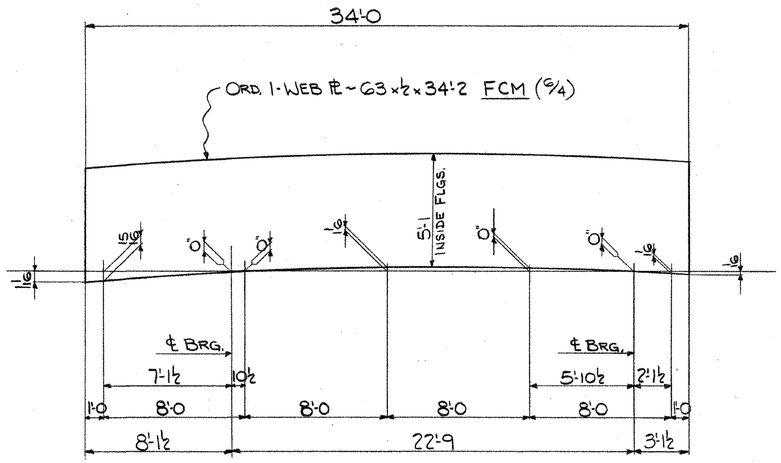
ONE-WEB ℄ MK. G19I



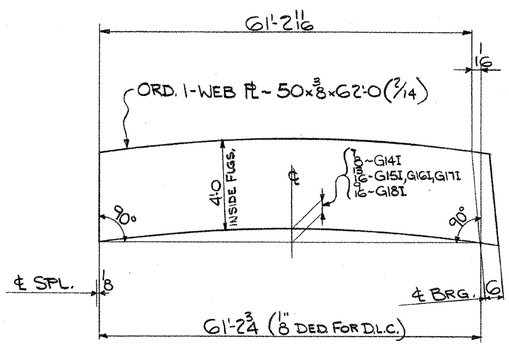
ONE-WEB ℄ EACH MK. G14H, G15H, G16H, G17H, & G18H



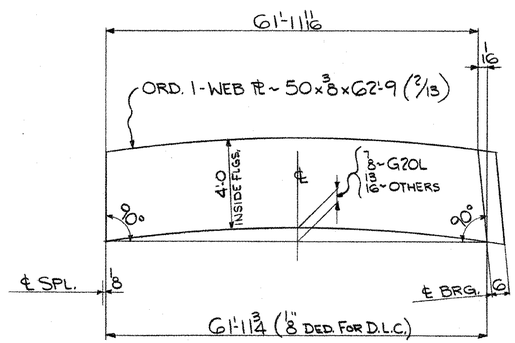
ONE-WEB ℄ EACH MK. G20K, G21K, G22K, G23K, G24K, & G25K



ONE-WEB ℄ MK. CG2



ONE-WEB ℄ EACH MK. ~ G14I, G15I, G16I, G17I, & G18I



ONE-WEB ℄ EACH MK. ~ G20L, G21L, G22L, G23L, G24L, & G25L

NOTES:

1. FOR GENERAL NOTES SEE DWG. N1
2. ALL STEEL TO BE A36 W/CHARPY TESTS (U.O.N.).
3. FCM INDICATES FRACTURE CRITICAL MEMBER

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

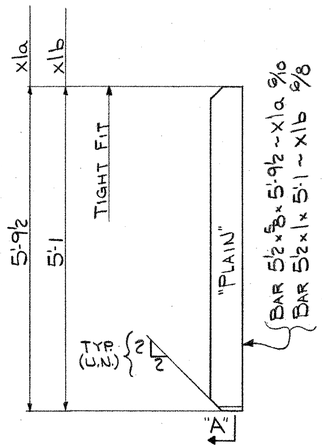
CAMBER DIAGRAMS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

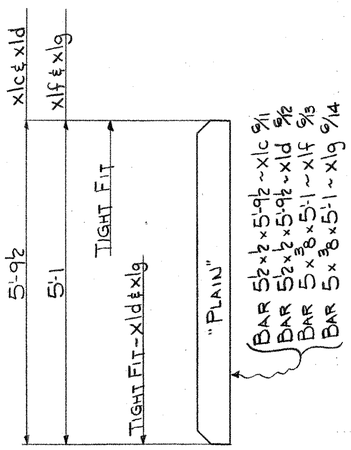
IN CHARGE: COLONIAL MADE BY: THS CHK.D BY: JTC DATE: 1-10-85

CONTRACT NUMBER: PA-84197-2 DRAWING NUMBER: WC2

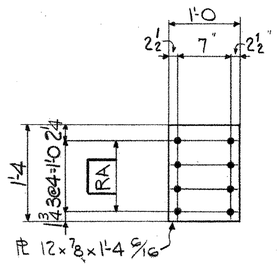
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



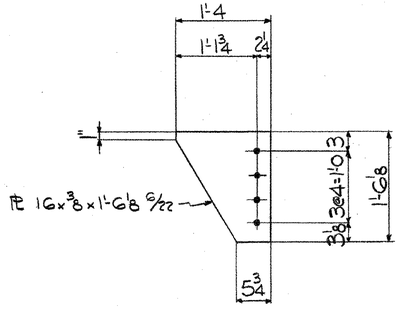
12-BRG. STIFFS. MK. x1a (SHIP'T. 1)
4-BRG. STIFFS. MK. x1b (SHIP'T. 2)



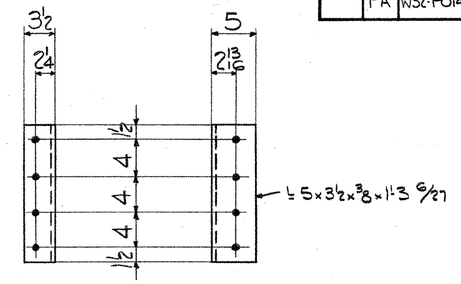
6-	STIFFS. MK. x1c	(SHIP'T. 1)
7-	MK. x1d	(SHIP'T. 1)
5-	MK. x1f	(SHIP'T. 2)
8-	MK. x1g	(SHIP'T. 2)



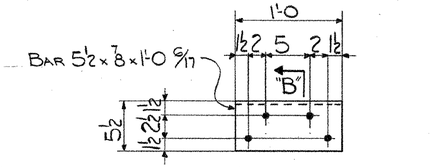
5-SEAT PLS MK. x1h (SHIP'T. 1)



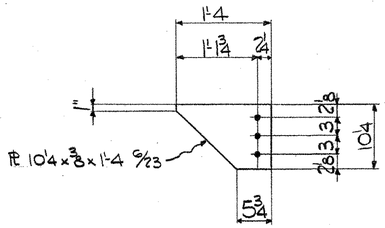
5-SEAT STIFF. PLS MK. x1k (SHIP'T. 1)



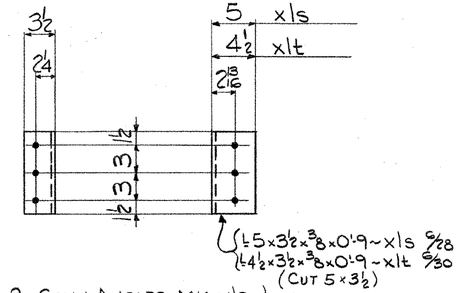
10-CONN. ANGLES MK. x1m (SHIP'T. 1)



5-FLG. STIFF. PLS MK. x1n (SHIP'T. 1)



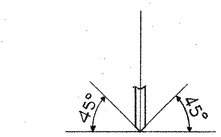
5-SEAT STIFF. PLS MK. x1p (SHIP'T. 2)



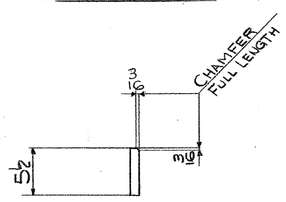
9-CONN. ANGLES MK. x1s
ONE-CONN. ANGLE MK. x1t
(SHIP'T. 2)

4-SEAT PLS MK. x1w (SHIP'T. 2)

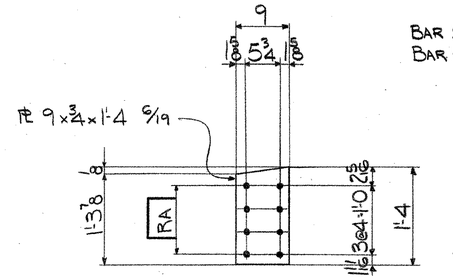
8-BRG. STIFFS. MK. x1aa (SHIP'T. 2)



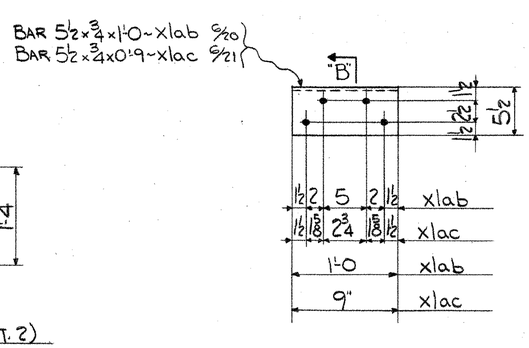
SECTION "A"



SECTION "B"



ONE-SEAT PL MK. x1y (SHIP'T. 2)



4-FLG. STIFF. PLS MK. x1ab
ONE-FLG. STIFF. PL MK. x1ac
(SHIP'T. 2)

SHOP NOTE

HOLES: 15/16" (U.N.)
BOLTS: NONE
PAINT: NONE

FOR GENERAL NOTES SEE DWG. N1

CODE: 4700

NO.	REVISION	DATE

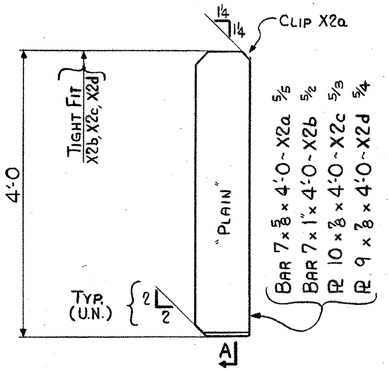
HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
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JOB STANDARDS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: COLONIAL MADE BY: THS CHK'D BY: JTC DATE: 1-22-85
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: X1

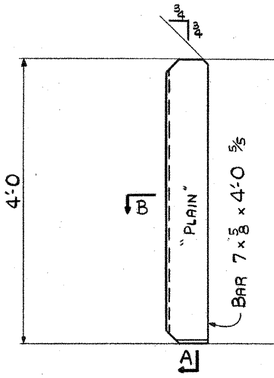
AF 226838
POLYTRACE® 038

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



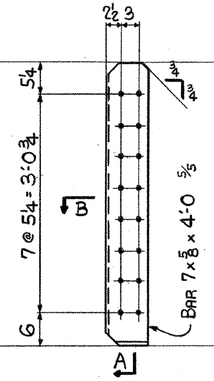
BRG. STIFF.

SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK
4	5	9	X2a
4	-	4	X2b
2	-	2	X2c
-	4	4	X2d



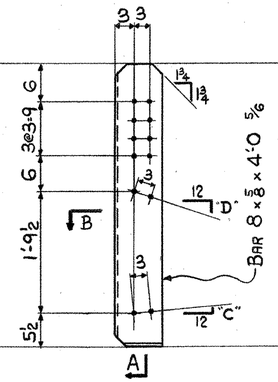
BRG. STIFF.

SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK
1	1	2	X2f



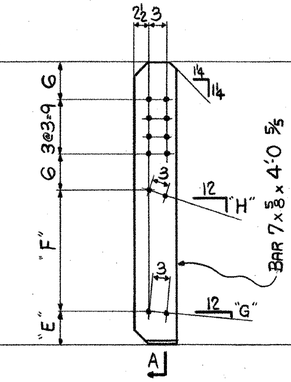
BRG. STIFF.

SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK
1	-	ONE	X2g



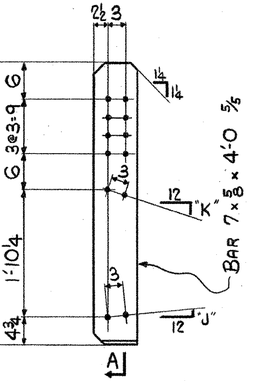
BRG. STIFF

SHIPMENT 1	SHIPMENT 2	NO. REQ'D	MARK	"C"	"D"
1	-	ONE	X2h	1/4	2 13/16
1	-	ONE	X2k	5/16	3 3/8
-	1	ONE	X2m	1/4	3 3/8



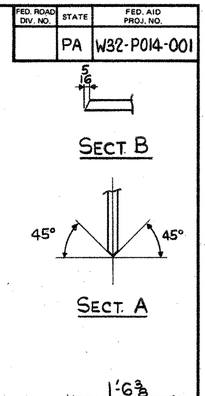
BRG. STIFF.

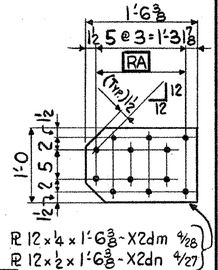
SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK	"E"	"F"	"G"	"H"
1	-	ONE	X2n	5 1/2	1'-9 1/2	1/4	3 5/16
1	-	ONE	X2p	5 1/2	1'-9 1/2	5/16	4
-	1	ONE	X2s	5 1/2	1'-9 1/2	1/4	4
1	2	3	X2t	4 3/4	1'-10 1/4	5/16	5 3/16
2	2	4	X2w			1/4	5 1/8
5	4	9	X2y			3/16	5 1/16
-	2	2	X2aa			1/8	5
2	-	2	X2ab			1/16	4 15/16
-	1	ONE	X2ac			5/16	5 9/16
1	-	ONE	X2ad			1/4	5 7/16
2	2	4	X2af			3/16	5 3/8
1	1	2	X2ag	4 3/4	1'-10 1/4	1/8	5 1/4



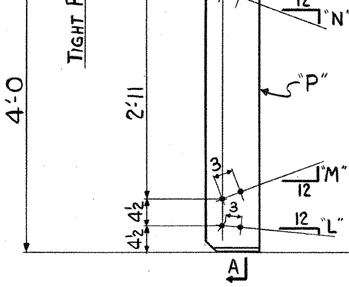
BRG. STIFF.

SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK	"J"	"K"
1	2	3	X2ah	5/16	4 1/2
2	2	4	X2ak	1/4	4 9/16
5	4	9	X2am	3/16	4 5/8
-	2	2	X2an	1/8	4 11/16
2	-	2	X2ap	1/16	4 3/4
-	1	ONE	X2as	5/16	4 3/4
1	-	ONE	X2at	1/4	4 13/16
2	2	4	X2aw	3/16	4 7/8
1	1	2	X2ay	1/8	5



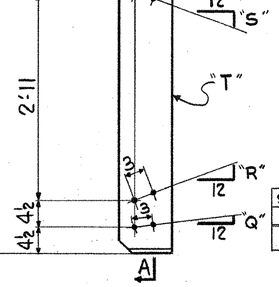


SHIPMENT 1	SHIPMENT 2	
22	-	22 - FILL RS MK X2dm
-	22	22 - FILL RS MK X2dn



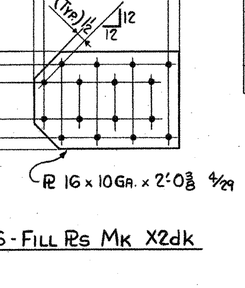
BRG. STIFF.

SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK	"L"	"M"	"N"	"P"
2	-	2	X2ba	5/16	4 1/16	4 11/16	BAR 7 x 1 x 4'-0 5/2
2	-	2	X2bb	1/4	4 1/8	4 5/8	
4	-	4	X2bc	3/16	4 3/16	4 9/16	
2	-	2	X2bd	1/16	4 5/16	4 7/16	
1	-	ONE	X2bf	5/16	4 5/8	4 15/16	PL 10 x 7/8 x 4'-0 5/3
1	-	ONE	X2bg	1/4	4 3/8	4 7/8	
1	-	ONE	X2bh	3/16	4 7/16	4 13/16	
1	-	ONE	X2bk	1/8	4 9/16	4 3/4	
-	1	ONE	X2bm	5/16	4 5/16	4 15/16	PL 9 x 7/8 x 4'-0 5/4
-	1	ONE	X2bn	1/4	4 3/8	4 5/8	
-	1	ONE	X2bp	3/16	4 7/16	4 13/16	
-	1	ONE	X2bs	1/8	4 1/16	4 3/4	
-	1	ONE	X2bt	5/16	4 1/16	4 11/16	
-	1	ONE	X2bw	1/4	4 1/8	4 5/8	
-	2	2	X2by	3/16	4 3/16	4 9/16	
-	1	ONE	X2ca	1/8	4 1/4	4 1/2	

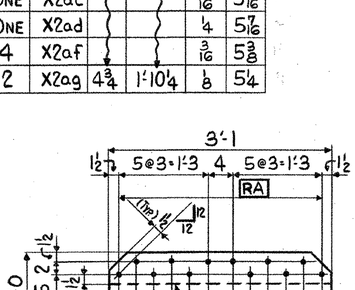


BRG. STIFF.

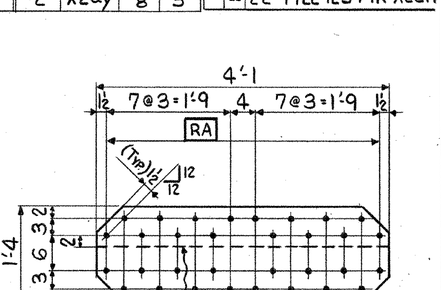
SHIPMENT 1	SHIPMENT 2	NO. REQ'D.	MARK	"Q"	"R"	"S"	"T"
2	-	2	X2cb	5/16	4 11/16	4 1/16	BAR 7 x 1 x 4'-0 5/2
2	-	2	X2cc	1/4	4 5/8	4 1/8	
4	-	4	X2cd	3/16	4 9/16	4 3/16	
2	-	2	X2cf	1/16	4 7/16	4 5/16	
1	-	ONE	X2cg	5/16	4 15/16	4 5/16	PL 10 x 7/8 x 4'-0 5/3
1	-	ONE	X2ch	1/4	4 7/8	4 3/8	
1	-	ONE	X2ck	3/16	4 13/16	4 7/16	
1	-	ONE	X2cm	1/8	4 3/4	4 9/16	
-	1	ONE	X2cn	5/16	4 15/16	4 5/16	PL 9 x 7/8 x 4'-0 5/4
-	1	ONE	X2cp	1/4	4 7/8	4 3/8	
-	1	ONE	X2cs	3/16	4 13/16	4 7/16	
-	1	ONE	X2ct	1/8	4 3/4	4 9/16	
-	1	ONE	X2cw	5/16	4 11/16	4 1/16	
-	1	ONE	X2cy	1/4	4 5/8	4 1/8	
-	2	2	X2da	3/16	4 9/16	4 3/16	
-	1	ONE	X2db	1/8	4 1/2	4 1/4	



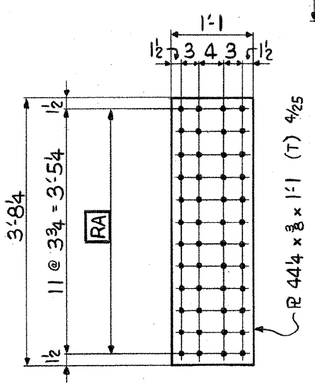
SHIPMENT 1	SHIPMENT 2	
6	-	6 - FILL RS MK X2dk



SHIPMENT 1	SHIPMENT 2	
22	22	44 - SPLICE RS MK X2dd
44	44	88 - SPLICE RS MK X2df



SHIPMENT 1	SHIPMENT 2	
22	22	44 - SPLICE RS MK X2dg
44	44	88 - SPLICE RS MK X2dh



SHIPMENT 1	SHIPMENT 2	
44	44	88 - SPLICE RS MK X2dc

SHOP NOTE

HOLES: 15/16" ø U.N.
BOLTS: NONE
PAINT: NONE

FOR GENERAL NOTES SEE DWG. N1.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

JOB STANDARDS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO. PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

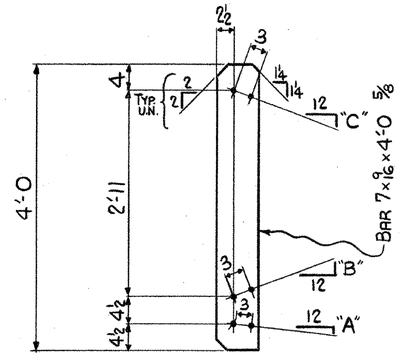
STATE CONTRACT OR REF. NO.: S-15296 CONTRACTOR: BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: JTC CHK.D BY: THS DATE: 1-23-85

CONTRACT NUMBER: PA-84197 1&2 DRAWING NUMBER: X2

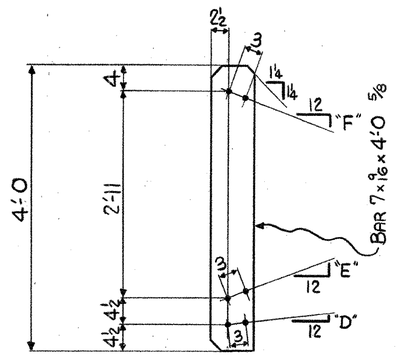
AF 226838
POLYTRACE 038

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001



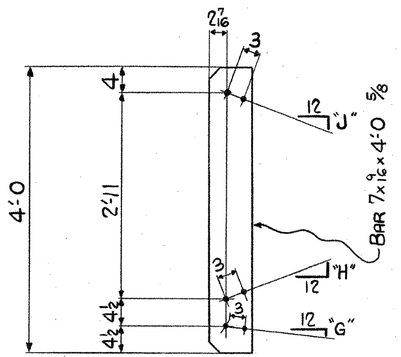
CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"A"	"B"	"C"
2	4	6	X3a	5/16	4 1/16	4 11/16
5	4	9	X3b	1/4	4 3/8	4 5/8
1	-	ONE	X3c	1/4	4 3/16	4 5/8
8	8	16	X3d	3/16	4 3/16	4 3/16
-	4	4	X3f	1/8	4 1/4	4 1/2
4	-	4	X3g	1/16	4 5/16	4 5/16
2	2	4	X3h	5/16	4 5/16	4 5/16
4	2	6	X3k	1/4	4 3/8	4 3/8
3	2	5	X3m	3/16	4 7/16	4 7/16
2	3	5	X3n	1/8	4 1/2	4 3/4
4	3	7	X3p	1/8	4 7/16	4 3/4
4	3	7	X3s	1/16	4 9/16	4 11/16
1	1	2	X3t	1/16	4 5/8	4 11/16



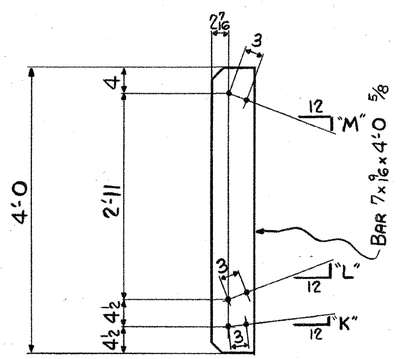
CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"D"	"E"	"F"
2	4	6	X3w	5/16	4 1/16	4 1/16
5	4	9	X3y	1/4	4 3/8	4 3/8
1	-	ONE	X3aa	1/4	4 5/8	4 3/16
8	8	16	X3ab	3/16	4 5/16	4 5/16
-	4	4	X3ac	1/8	4 1/2	4 1/4
4	-	4	X3ad	1/16	4 7/16	4 5/16
2	2	4	X3af	5/16	4 5/16	4 5/16
4	2	6	X3ag	1/4	4 3/8	4 3/8
3	2	5	X3ah	3/16	4 13/16	4 7/16
2	3	5	X3ak	1/8	4 3/4	4 1/2
4	3	7	X3am	1/8	4 3/4	4 9/16
4	3	7	X3an	1/16	4 11/16	4 9/16
1	1	2	X3ap	1/16	4 11/16	4 5/8



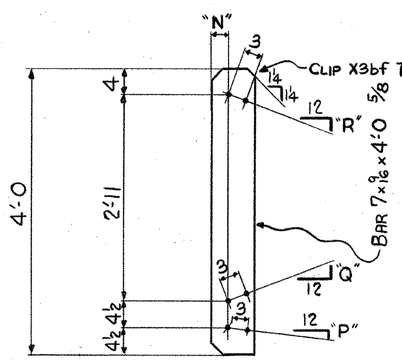
CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"G"	"H"	"J"
2	-	2	X3as	5/16	4 5/16	4 5/16
2	-	2	X3at	1/4	4 3/8	4 3/8
2	-	2	X3aw	3/16	4 7/16	4 13/16
2	-	2	X3ay	1/8	4 9/16	4 3/4



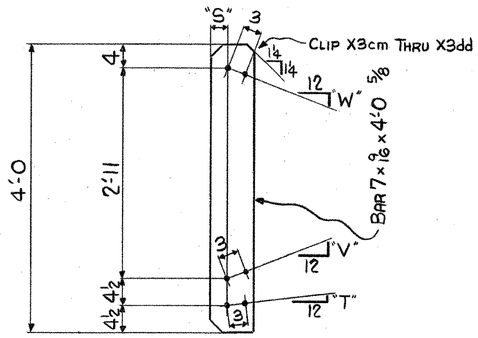
CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"K"	"L"	"M"
2	-	2	X3ba	5/16	4 15/16	4 15/16
2	-	2	X3bb	1/4	4 3/8	4 3/8
2	-	2	X3bc	3/16	4 13/16	4 7/16
2	-	2	X3bd	1/8	4 3/4	4 9/16



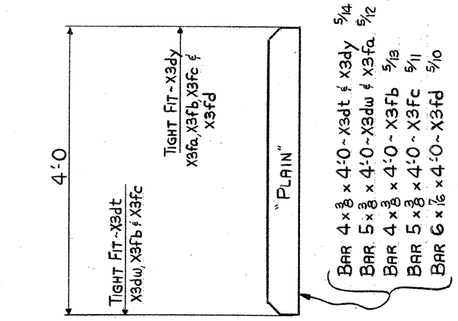
CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"N"	"P"	"Q"	"R"
1	-	ONE	X3bf	2½	5/16	4 1/8	4 11/16
1	-	ONE	X3bg	2½	1/4	4 1/8	4 5/8
2	-	2	X3bh	2½	3/16	4 3/16	4 9/16
1	-	ONE	X3bk	2½	1/16	4 5/16	4 7/16
2	-	2	X3bm	2 7/16	5/16	4 1/16	4 11/16
2	-	2	X3bn	2 7/16	1/4	4 1/8	4 5/8
4	-	4	X3bp	2 7/16	3/16	4 3/16	4 9/16
2	-	2	X3bs	2 7/16	1/16	4 5/16	4 7/16
2	-	2	X3bt	2½	3/16	4 7/16	4 13/16
1	-	ONE	X3bw	2½	3/16	4 1/2	4 13/16
1	-	ONE	X3by	2½	1/8	4 9/16	4 3/4
-	1	ONE	X3ca	2 7/16	5/16	4 5/16	4 15/16
-	2	2	X3cb	2 7/16	1/4	4 3/8	4 7/8
-	3	3	X3cc	2 7/16	3/16	4 7/16	4 13/16
-	2	2	X3cd	2 7/16	1/8	4 9/16	4 3/4
-	2	2	X3cf	2 7/16	5/16	4 1/16	4 11/16
-	2	2	X3cg	2 7/16	1/4	4 1/8	4 5/8
-	4	4	X3ch	2 7/16	3/16	4 3/16	4 7/16
-	2	2	X3ck	2 7/16	1/8	4 1/4	4 1/2



CONN. P

SHIPMENT 1	SHIPMENT 2	No. REQ'D.	MARK	"S"	"T"	"V"	"W"
1	-	ONE	X3cm	2½	5/16	4 11/16	4 1/8
1	-	ONE	X3cn	2½	1/4	4 5/8	4 1/8
2	-	2	X3cp	2½	3/16	4 9/16	4 3/16
1	-	ONE	X3cs	2½	1/16	4 7/16	4 5/16
2	-	2	X3ct	2 7/16	5/16	4 11/16	4 1/16
2	-	2	X3cw	2 7/16	1/4	4 5/8	4 1/8
4	-	4	X3cy	2 7/16	3/16	4 9/16	4 3/16
2	-	2	X3da	2 7/16	1/16	4 7/16	4 5/16
2	-	2	X3db	2½	3/16	4 13/16	4 7/16
1	-	ONE	X3dc	2½	3/16	4 13/16	4 1/2
1	-	ONE	X3dd	2½	1/8	4 3/4	4 9/16
-	1	ONE	X3df	2 7/16	5/16	4 15/16	4 5/16
-	2	2	X3dg	2 7/16	1/4	4 7/8	4 3/8
-	3	3	X3dh	2 7/16	3/16	4 13/16	4 7/16
-	2	2	X3dk	2 7/16	1/8	4 3/4	4 9/16
-	2	2	X3dm	2 7/16	5/16	4 11/16	4 1/16
-	2	2	X3dn	2 7/16	1/4	4 5/8	4 1/8
-	4	4	X3dp	2 7/16	3/16	4 9/16	4 3/16
-	2	2	X3ds	2 7/16	1/8	4 1/2	4 1/4



SHIPMENT 1	SHIPMENT 2	
90	-	90 - INTER. STIFF. MK X3dt
116	175	291 - MK X3dw
12	-	12 - MK X3dy
20	66	86 - MK X3fa
18	-	18 - MK X3fb
35	61	96 - MK X3fc
10	-	10 - MK X3fd

SHOP NOTE

HOLES: 15/16"ø

BOLTS: NONE

PAINT: NONE

FOR GENERAL NOTES SEE DWG N1.

CODE: 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

JOB STANDARDS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

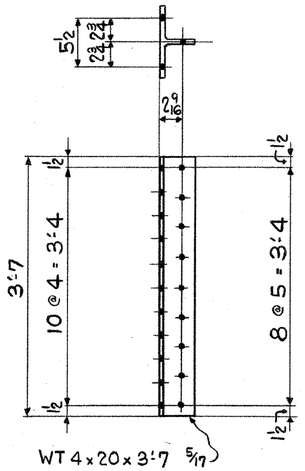
IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 1-23-85

CONTRACT NUMBER: PA-84197 1 & 2 DRAWING NUMBER: X3

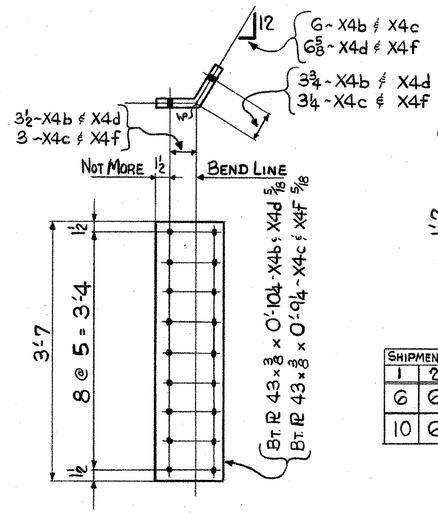
AP 225838

POLYTRACE 038

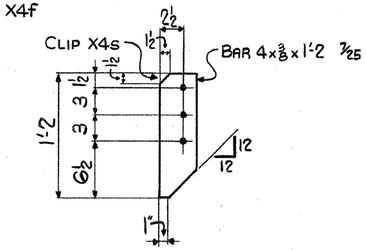
FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA.	W32-P014-001



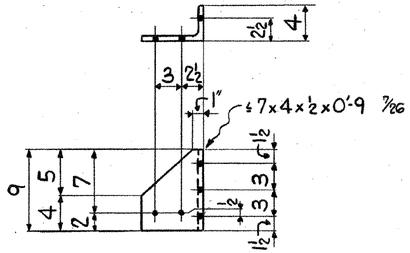
SHIPMENT 1	SHIPMENT 2	
2	1	3 - CONN. TEES MK X4a



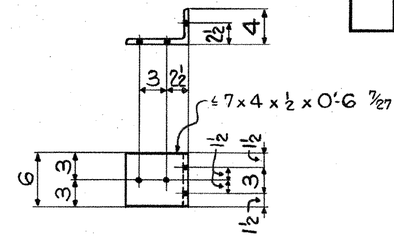
SHIPMENT 1	SHIPMENT 2	
1	-	ONE - CONN. PL MK X4b
1	-	ONE - MK X4c
1	1	2 - MK X4d
1	1	2 - MK X4f



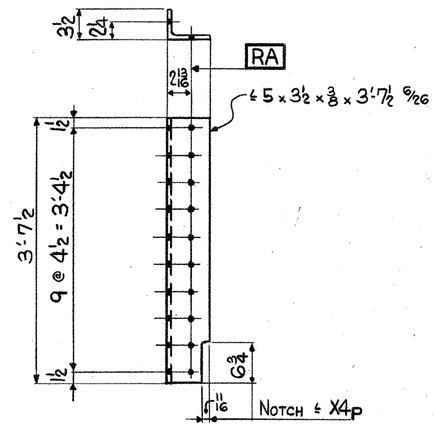
SHIPMENT 1	SHIPMENT 2	
6	6	12 - CONN. PLS. MK X4g
10	6	16 - CONN. PLS MK X4s



SHIPMENT 1	SHIPMENT 2	
3	2	5 - CONN. ANGLES MK X4h
(OPP HAND) 3	2	5 - CONN. ANGLES MK X4k



SHIPMENT 1	SHIPMENT 2	
2	2	4 - CONN. ANGLES MK X4m



SHIPMENT 1	SHIPMENT 2	
10	9	19 - FRAMING ANGLES MK X4n
-	1	ONE - FRAMING ANGLE MK X4p

SHOP NOTE

HOLES: 15/16" ϕ (U.N.)
BOLTS: NONE
PAINT: NONE

FOR GENERAL NOTES SEE DWGS. N1.

CODE : 4000

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/299-5211
A Subsidiary of High Industries, Inc.

JOB STANDARDS
L.R. 247 SPUR A SEC. B10
L.R. 247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: JTC CHK'D. BY: THS DATE: 1-24-85

CONTRACT NUMBER: PA-84197 1 & 2 DRAWING NUMBER: X4

AF 226938
POLYTRACE 038

BEARING MATERIAL

	0	1	2	3	4	5	6	7	8	9
0		MASONRY PLS - DWG. 1								
1		ANCHOR BOLTS - DWG. 1								
2		WASHERS - DWG. 1								
3		BRONZE PLS - DWG. 1								
4		FABRIC PADS - DWG. 1								
5		SOLE PL - DWG. 1								
6										
7										
8										
9										

CROSS FRAMES (A)

	0	1	2	3	4	5	6	7	8	9
0	X	2	2	2	2	2	2	4	4	4
1	4	4	4	4	4	4	4	4	4	
2										
3										
4										
5										
6										
7										
8										
9										

CROSS FRAMES (B)

	0	1	2	3	4	5	6	7	8	9
0	X	3	3	3	3	3	3	3	3	3
1	3	3	3	3	3	3	3	3	3	3
2	3	3	3	3						
3										
4										
5										
6										
7										
8										
9										

CROSS FRAMES (C)

	0	1	2	3	4	5	6	7	8	9
0	X	3	3	3	3	3	3	3	3	3
1	3	3	3	3	3	3	3	3	3	3
2	2	2								
3										
4										
5										
6										
7										
8										
9										

CROSS FRAMES (E)

	0	1	2	3	4	5	6	7	8	9
0	X	2	2	2	2	2	2	2	2	
1	2	2	2	2	2	2	2	2	2	
2										
3										
4										
5										
6										
7										
8										
9										

BRACKET (BR)

	0	1	2	3	4	5	6	7	8	9
0	X	4								
1										
2										
3										
4										
5										
6										
7										
8										
9										

FED. ROAD DIV. NO. | STATE | FED. AID PROJ. NO.

PA W32-P014-001

SCUPPER SUPPORTS (SC)

	0	1	2	3	4	5	6	7	8	9
0	X	5	5	5	5	5	5	5	5	5
1	5									
2										
3										
4										
5										
6										
7										
8										
9										

MISC. SUPPORTS (MS)

	0	1	2	3	4	5	6	7	8	9
0	X	5	5	5						
1										
2										
3										
4										
5										
6										
7										
8										
9										

SIGN SUPPORTS (SS)

	0	1	2	3A	3B	6	7	8	9
0	X	6	6	6	6	6			
1									
2									
3									
4									
5									
6									
7									
8									
9									

CROSS GIRDER (CG)

	0	1	2	3	4	5	6	7	8	9
0	X	7	8							
1										
2										
3										
4										
5										
6										
7										
8										
9										

GIRDERS (G)

	A	B	C	D	E	F	G	H	I	J
0	X	X	X							
1	9	X	X							
2	10	16	22							
3	11	17	23							
4	12	18	24							
5	13	19	25							
6	14	20	26							
7	15	21	27							
8				28						
9				29	34	39				

GIRDERS (G)

	A	B	C	D	E	F	G	H	I	J
10				30	35	40				
11				31	36	41				
12				32	37	42				
13				33	38	43				
14							44	49	54	
15							45	50	55	
16							46	51	56	
17							47	52	57	
18							48	53	58	
19									28	

GIRDERS (G)

	I	K	L
20	57	65	71
21	60	66	72
22	61	67	73
23	62	68	74
24	63	69	75
25	64	70	76
26			
27			
28			
29			

NO.	REVISION	DATE

MAC-I STEEL STRUCTURES, INC.
1606 Old Philadelphia Pike
Lancaster, Pennsylvania 17602
Phone 717/293-5211
A Subsidiary of High Industries, Inc.

INDEX

L.R. 247 SPUR A SEC B10

L.R. 247 SPUR A STR. 1+16.26

WASHINGTON & WESTMORELAND Co., PA.

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: COLONIAL MADE BY: RAS CHK'D BY: JTC DATE: 2-16-85

CONTRACT NUMBER: PA-84197-1:2 DRAWING NUMBER: K1

FED. AID PROJ. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

General Notes

Specifications:

All Material And Workmanship To Be In Accordance With The Pennsylvania Department Of Transportation Specifications, Publication 408 Dated 1983.

Material:

Steel To Be ASTM A36.

(T) Indicates Charpy V-Notch Testing Required.
(FCM) Indicates Fracture Critical Member.

Shop Procedure:

All Flange Splices To Be Made Before Final Fitting And Welding Into Girder.

Camber Tolerance: -0 To +3/4.

All Re-Entrant Cuts To Have 3/4" Min. Radius.

For Sole Plate Details, See Drawing 1.

Sole Plates Are Uniform Thickness.

Inspection

Shop Inspection By: Trans-Eastern Inspection, Inc..

Welding:

All Welding Is To Conform To AWS Specifications D1.1-80 And '81 AASHTO And '78 FCM Guide.

Non-Destructive Testing:

Flange Plate Splices To Be Radiographically Tested, As Called For On Drawings Prefixed "FS", By A Qualified Technician In The Presence Of The Inspector As Follows:

a. Tension Flg. Splices: 100% (Marked R.T. On "FS" Dwg.)
Compression Flg. Splices: 25% Of Each Joint.

Magnetic Particle Inspection Is Required On 10% Of All Fillet Welds In Main Members.

Full Penetration Bearing Stiffener Welds To Receive 100% Ultrasonic Inspection.

Reaming:

Holes Marked [RA] On Detail Drawings To Be Sub-Punched 11/16" And Reamed To 15/16" With Connecting Parts Assembled And Match Marked.

Cleaning:

All Steel To Be Blast Cleaned To SSPC-SP10 (Near White).

Painting:

All Steel To Be Painted (Unless Noted) With One Coat Of Inorganic Zinc As Per Specs. With A Minimum Dry Film Thickness Of 3.0 Mils & A Maximum Dry Film Thickness Of 10.0 Mils. (U.N.)

Drawing. Reference:

Flange Splices - Prefixed "FS"
Web Camber - Prefixed "WC"
Girder Job Standards - Prefixed "X"

Ream Assembly - Dwg. "E5"

Shop Bolts

Shop Bolted Connections Are To Be Made With 7/8" or 1" H.S. Bolts (As Noted) (A325 Type 1) W/ Hex Hd. & 1-A563 Gr. C Hex Nut & 1-F436 Washer Per Bolt.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1600 Old Philadelphia Pike, Lancaster, Pennsylvania 17602, Phone 717/299-5251
A Subsidiary of Kidde Consultants, Inc.

GENERAL NOTES
L.R. 247 Spur A Sec B10
L.R. 247 Spur A Sta 9+16.28
Washington & Westmoreland Co., Pa.
Commonwealth Of Pennsylvania
Department Of Transportation

STATE CONTRACT OR REF. NO. S-15296 CONTRACTOR Brayman Const Corp.
IN CHARGE Colonial MADE BY UTC CHK'D BY THS DATE 2-8-85
CONTRACT NUMBER PA-84197 1 & 2 DRAWING NUMBER N1

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FED.ROAD DIV.NO.	STATE	FED.AID PROJ.NO.
	PA	W32-P014-001

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W2

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SMAW
MANUAL OR MACHINE..... MANUAL
POSITION OF WELDING..... 1F AND 2F (FLAT AND HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.1-78
WELD METAL CLASSIFICATION..... E7018
FLUX..... D.N.A.
POLARITY..... DC+ OR AC
ELECTRICAL STICK OUT (INCHES)..... D.N.A.
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	CURRENT RANGE (AMPS) DC+	CURRENT RANGE (AMPS) AC	TRAVEL IPM	JOINT DETAIL
1	1/8	90-150	110-170	6-9	TACK WELDS
1	5/32	120-190	135-225	8-13	GROOVE ROOT PASSES AND REPAIR WELDS
1	5/32	120-190	135-225	8-13	FILLET WELDS (1/8-3/8)
1	3/8	170-280	280-380	9-15	" " (3/16-1/4)
ALL	7/32	210-330	260-380	9-16	" " (1/4-5/16)
ALL	1/4	290-430	325-440	11-17	" " (5/16-3/8)

E-7028 ELECTRODE (OPTIONAL)

• WELD SIZE DETERMINED BY TRAVEL SPEED
•VOLTAGE ADJUSTED FOR PROPER BEAD SHAPE (DC)

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W11

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 2F (HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 860 OR 761/L61
POLARITY..... SEE BELOW
ELECTRICAL STICK OUT (INCHES)..... 1
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE (DC-)

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
1	3/32	450	37	24	1/4" FILLET
1	3/32	450	37	17	5/16" FILLET

TOLERANCES:
AMPS: 405-495
WIRE FEED SPEED: 132-168
VOLTS: 34.5-39.5
TRAVEL SPEED: 24" - 20.4-27.6
17" - 14.5-19.5

WELDING PROCEDURE (DC+)

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
1-2	3/32	400	32	11	5/16" FILLET

TOLERANCES:
AMPS: 368-440
WIRE FEED SPEED: 71-96
VOLTS: 29.8-34.2
TRAVEL SPEED: 11" - 9.4-12.6

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W14

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 2F (HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS 5.17-80
FILLER METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 860 /L61 (3/32 DIA.)
SINGLE OR MULTIPLE ARC..... SINGLE
POLARITY..... SEE BELOW
ELECTRICAL STICK OUT..... 1"
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT AND INTERPASS CHART

WELDING PROCEDURE

PASS NO.	POLARITY DC	WELDING AMPS	WELDING VOLTS	TRAVEL (IPM)	JOINT DETAIL AND PASS SEQUENCE
1	STRAIGHT	470	37	18	3/8
2	REVERSE	420	32	18	
1	STRAIGHT	450	36	16	1/2
2	STRAIGHT	450	36	16	
3	REVERSE	420	32	18	
1	STRAIGHT	470	37	15	5/8
2	STRAIGHT	470	37	15	
3	REVERSE	430	32	16	

TOLERANCES	AMPS	VOLTS	TRAVEL SPEED
	420: 378-462	32: 30-34	15: 13-17
	430: 387-477	36: 33.5-38.5	16: 13.5-18.5
	450: 405-495	37: 34.5-39.5	18: 15-21
	470: 423-517		

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W22

PROCEDURE SPECIFICATIONS

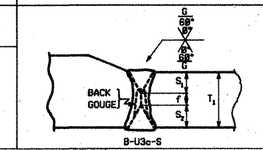
MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 1G (FLAT)
FILLER METAL SPECIFICATION..... AWS A5.17-80
FILLER METAL CLASSIFICATION..... F7A2-EM12K
FLUX..... LINCOLN 860
SINGLE OR MULTIPLE ARC..... LINCOLN L61 SINGLE
POLARITY..... DC+
ELECTRICAL STICK OUT..... STANDARD
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE ATTACHED PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
ALL	3/32	450	34	17	f IS DETERMINED BY THE THICKNESS OF THE THINNER PART.
ALL	3/32	600	36	17	1/4 "f FOR THICKNESS OVER 1/2 - 1"
					1/2 "f FOR THICKNESS OVER 1" TO 1 1/2
					5/8 "f FOR THICKNESS OVER 1 1/2 TO 2"

TOLERANCES: (450 AMPS)
AMPS: 405-495
WIRE FEED SPEED: 82-107
VOLTS: 31.7-36.3
TRAVEL SPEED: 14.5-19.5

TOLERANCES: (600 AMPS)
AMPS: 540-660
WIRE FEED SPEED: 121-175
VOLTS: 33.5-38.5
TRAVEL SPEED: 14.5-19.5



NOTE: f DIMENSIONS ARE MAXIMUMS B-L2c-S

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W3

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM , A-36, A-572, A-588
WELDING PROCESS..... SMAW
MANUAL OR MACHINE..... MANUAL
POSITION OF WELDING..... 4F (OVERHEAD)
FILLER METAL SPECIFICATION..... AWS A5.1-78
WELD METAL CLASSIFICATION..... E7018
FLUX..... D.N.A.
POLARITY..... DC+ OR AC
ELECTRICAL STICK OUT (INCHES)..... D.N.A.
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	CURRENT RANGE (AMPS) DC+	CURRENT RANGE (AMPS) AC	TRAVEL IPM	JOINT DETAIL
1	1/8	90-150	110-170	6-9	TACK WELDS
1	5/32	120-190	135-225	8-11	TACK WELDS

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W12

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE (DART)
POSITION OF WELDING..... 2F (HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 761/L61
POLARITY..... DC-
ELECTRICAL STICK OUT (INCHES)..... 1"
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
1'	3/32	400	32	24"	1/4" FILLET
1	3/32	400	32	16.5"	5/16" FILLET

TOLERANCES:
AMPS: 368-440
WIRE FEED SPEED: 115-145
VOLTS: 29.8-34.2
TRAVEL SPEED: 24" - 20.4-27.6
16.5" - 14-19

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W16

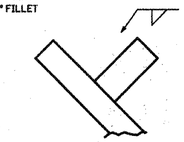
PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE OR SEMIAUTOMATIC
POSITION OF WELDING..... 1F (FLAT)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 761 OR 860/L61
POLARITY..... DC- OR DC +
ELECTRICAL STICK OUT (INCHES)..... 1"
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
1	3/32	450	37	24	1/4" FILLET
1	3/32	450	37	17	5/16" FILLET
1	3/32	450	37	11	3/4 "FILLET
**1-2	3/32	450	37	15	1/2 "FILLET
1	3/32	600	39	19	3/4 "FILLET
1	3/32	600	39	12	1/2 "FILLET

TOLERANCES:
450 AMPS
AMPS: 405-495
WIRE FEED SPEED: 137-168
VOLTS: 34.5-39.5
TRAVEL SPEED: 24" - 20.4-27.6
17" - 14.5-19.5
15" - 12.8-17.2
11" - 9.4-12.6
600 AMPS
AMPS: 540-660
WIRE FEED SPEED: 198-268
VOLTS: 36.5-41.5
TRAVEL SPEED: 19" - 16.2-21.8
12" - 10.2-13.8
**NOTE: MULTIPLE PASS FILLET WELDS MUST BE DONE WITH 860 FLUX.



WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W23

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 1G (FLAT)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 860/L61
POLARITY..... DC+
ELECTRICAL STICK OUT (INCHES)..... 1
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
ALL	3/32	450	34	17	
ALL	3/32	600	36	17	

TOLERANCES: (450 AMPS)
AMPS: 405-495
WIRE FEED SPEED: 82-107
VOLTS: 31.7-36.3
TRAVEL SPEED: 14.5-19.5

TOLERANCES: (600 AMPS)
AMPS: 540-660
WIRE FEED SPEED: 121-175
VOLTS: 33.5-38.5
TRAVEL SPEED: 14.5-19.5

B-U3c-S

TO FIND S_1: USE TABLE BELOW

OVER T_1	TO	S_1
2	2 1/2	1 3/8
2 1/2	3	1 3/4
3	3 3/8	2 1/8
3 3/8	4	2 3/8
4	4 3/4	2 3/4
4 3/4	5 1/2	3 1/4
5 1/2	6 1/4	3 3/4

TO FIND S_2: $S_2 = T_1 - (S_1 + 1/4)$

FOR T_1 GREATER THAN 6 1/4, OR T_1 LESS THAN OR EQUAL TO 2.
$S_1 = 2/3\ (T_1 - 1/4)$

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W4

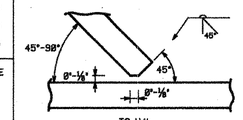
PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SMAW
MANUAL OR MACHINE..... MANUAL
POSITION OF WELDING..... 2G (HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.1-78
WELD METAL CLASSIFICATION..... E7018
FLUX..... D.N.A.
POLARITY..... DC+ OR AC
ELECTRICAL STICK OUT (INCHES)..... D.N.A.
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	CURRENT RANGE (AMPS) DC+	CURRENT RANGE (AMPS) AC	TRAVEL IPM	JOINT DETAIL
ALL	5/32	120-190	135-225	8-13	
ALL	3/8	170-280	280-380	9-15	
ALL	7/32	210-330	260-380	9-16	

NOTE: GOUGE ROOT OF JOINT BEFORE WELDING OTHER SIDE.



TC-U4b

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W5

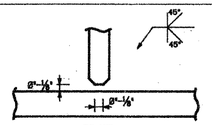
PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SMAW
MANUAL OR MACHINE..... MANUAL
POSITION OF WELDING..... 1G OR 2G (FLAT OR HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.1-78
WELD METAL CLASSIFICATION..... E7018
FLUX..... D.N.A.
POLARITY..... DC+ OR AC
ELECTRICAL STICK OUT (INCHES)..... D.N.A.
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	CURRENT RANGE (AMPS) DC+	CURRENT RANGE (AMPS) AC	TRAVEL IPM	JOINT DETAIL
1	5/32	120-190	135-225	8-13	
2+	3/8	170-280	280-380	9-15	
2+	7/32	210-330	260-380	9-16	

NOTE: GOUGE ROOT OF JOINT BEFORE WELDING OTHER SIDE.



TC-U5b

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W13

PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 2F (HORIZONTAL)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 761/L61
POLARITY..... DC+
ELECTRICAL STICK OUT (INCHES)..... 2 1/4
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
1	3/32	400	32	20	1/4" FILLET
1	3/32	400	32	16.5	5/16" FILLET

TOLERANCES:
AMPS: 368-440
WIRE FEED SPEED: 96-138
VOLTS: 29.8-34.2
TRAVEL SPEED: 28" - 17-23
16.5 - 14-19

WELDING PROCEDURE FOR AWS PREQUALIFIED JOINTS

W21

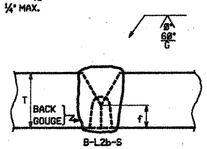
PROCEDURE SPECIFICATIONS

MATERIAL SPECIFICATION..... ASTM, A-36, A-572, A-588
WELDING PROCESS..... SAW, SINGLE ELECTRODE
MANUAL OR MACHINE..... MACHINE
POSITION OF WELDING..... 1G (FLAT)
FILLER METAL SPECIFICATION..... AWS A5.17-80
WELD METAL CLASSIFICATION..... F7A2-EM12K
FLUX/WIRE..... LINCOLN 860/L61
POLARITY..... DC+
ELECTRICAL STICK OUT (INCHES)..... 1
ROOT TREATMENT..... MANUAL CLEANING
PREHEAT AND INTERPASS TEMPERATURE.... SEE PREHEAT CHART

WELDING PROCEDURE

PASS NO.	WIRE SIZE	WELDING CURRENT AMPS	WELDING CURRENT VOLTS	TRAVEL IPM	JOINT DETAIL
ALL	3/32	450	34	17	T= OVER 1/4" TO 1" INCLUSIVE
ALL	3/32	600	36	17	f= 1/4" MAX.

TOLERANCES: (450 AMPS)
AMPS: 405-495
WIRE FEED SPEED: 82-107
VOLTS: 31.7-36.3
TRAVEL SPEED: 14.5-19.5
TOLERANCES: (600 AMPS)
AMPS: 540-660
WIRE FEED SPEED: 121-175
VOLTS: 33.5-38.5
TRAVEL SPEED: 14.5-19.5



B-L2b-S

MINIMUM PREHEAT AND INTERPASS TEMPERATURE

SHIELDED METAL-ARC WELDING
WITH LOW HYDROGEN ELECTRODES OR
SUBMERGED ARC WELDING

THICKNESS OF THICKEST PART AT POINT OF WELDING - INCHES	ASTM A36; A441; A572 GRADES 42, 45, AND 50; A588
TO 3/4 ,INCL.	50° F
OVER 3/4 TO 1 1/2 , INCL.	70° F
OVER 1 1/2 TO 2 1/2 , INCL.	150° F
OVER 2 1/2	225° F

1. WELDING SHALL NOT BE DONE WHEN THE AMBIENT TEMPERATURE IS LOWER THAN 0° F. WHEN THE BASE METAL IS BELOW THE TEMPERATURE LISTED FOR THE WELDING PROCESS BEING USED AND THE THICKNESS OF MATERIAL BEING WELDED, IT SHALL BE PREHEATED (EXCEPT AS OTHERWISE PROVIDED) IN SUCH MANNER THAT THE SURFACE OF THE PARTS ON WHICH WELD METAL IS BEING DEPOSITED ARE AT OR ABOVE THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN 3 INCHES, BOTH LATERALLY AND IN ADVANCE OF THE WELDING. PREHEAT AND INTERPASS TEMPERATURES MUST BE SUFFICIENT TO PREVENT CRACK FORMATION. TEMPERATURE ABOVE THE MINIMUM SHOWN MAY BE REQUIRED FOR HIGHLY RESTRAINED WELDS.
2. WHEN THE BASE METAL TEMPERATURE IS BELOW 32° F, PREHEAT THE BASE METAL TO AT LEAST 70° F AND MAINTAIN THIS MINIMUM TEMPERATURE DURING WELDING.

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-521
A Subsidiary of High Industries, Inc.

WELDING PROCEDURES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF.NO. S-15296 CONTRACTOR BRAYMAN CONST. CORP.
IN CHARGE: T.M. MADE BY: S.J.A. CHK.D. BY: T.M. DATE: 4-4-85
CONTRACT NUMBER: PA-84197-1&2 DRAWING NUMBER: WP1

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.
	PA	W32-P014-001

WELDING PROCEDURE FOR A.W.S. PREQUALIFIED JOINTS

W1-FCM

PROCEDURE SPECIFICATION

Material Specification.....ASTM A-36
Welding Process.....SMAW
Manual or Machine.....Manual
Position of Welding.....1F and 2F(flat and horizontal)
Filler Metal Specification.....AWS A5.1- 80
Filler Metal Classification.....E-7018
Flux.....N/A
Single or Multiple Arc.....Single
Polarity.....DC+ or AC
Electrical Stick Out.....N/A
Root Treatment.....Manual Cleaning
Preheat and Interpass Temperature...See Pre-heat Chart

WELDING PROCEDURE

LOT NUMBER 1213

Pass No.	Wire Size	AMPS VOLTS	Travel IPM	Joint Detail
1	1/8	102-125	6-9	Tack Welds, Root Passes
		20.7-24.0		3/16", 1/4" Fillet Welds Repair Welds

WELDING PROCEDURE FOR A.W.S. PREQUALIFIED JOINTS

W2-FCM

PROCEDURE SPECIFICATION

Material Specification.....ASTM A-36
Welding Process.....SMAW
Manual or Machine.....Manual
Position of Welding.....1F
Filler Metal Specification.....AWS A5.1- 80
Filler Metal Classification.....E-7018
Flux.....N/A
Single or Multiple Arc.....Single
Polarity.....DC+ or AC
Electrical Stick Out.....N/A
Root Treatment.....Manual Cleaning
Preheat and Interpass Temperature...See Pre-heat Chart

WELDING PROCEDURE

LOT NUMBER 1213

Pass No.	Wire Size	AMPS VOLTS	Travel IPM	Joint Detail
1	1/8	102-125	6-9	Tack Welds
		20.7-24.0		3/16", 1/4" Fillet Welds Repair Welds

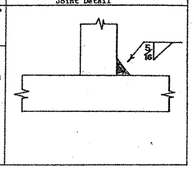
WELDING PROCEDURE FOR A.W.S. PREQUALIFIED JOINTS

MS/HSF FCM

PROCEDURE SPECIFICATION

Material Specification.....ASTM A-36, A-572, A-588
Welding Process.....SAW
Manual or Machine.....AUTOMATIC (semi)
Position of Welding.....2F HORIZONTAL
Filler Metal Specification.....F7A2-EM12K
Filler Metal Classification.....A5.17-80
Flux/Wire.....LINCOLN 761/L66
Single or Multiple Arc.....Single
Polarity.....DC-
Electrical Stick Out.....1"
Root Treatment.....Manual Cleaning
Preheat and Interpass Temperature...See Preheat and Interpass Chart

WELDING PROCEDURE

Pass No.	Wire Size	Welding Current Amps/Volts	Travel IPM*	Joint Detail
1	3/32	385 35.5	20	

TOLERANCES:
Amps: 347-425
Volts:33-37.5
Travel Speed: 16-24

LOT NUMBERS:
Wire: Lot 1251
Flux: Lot 1258

* Revised 5-3-83

MINIMUM PREHEAT AND INTERPASS TEMPERATURE

Shielded Metal-Arc Welding with Low Hydrogen Electrodes or Submerged Arc Welding

Thickness of Thickest Part at Point of Welding - Inches	ASTM A36 ASTM A572	ASTM A588
To 3/4, incl.	100°F	100°F
Over 3/4 to 1-1/2, incl.	150°F	200°F
Over 1-1/2 to 2-1/2, incl.	200°F	300°F
Over 2-1/2	300°F	350°F

FCM WELDS ONLY

NO.	REVISION	DATE

HIGH STEEL STRUCTURES, INC.
1905 Old Philadelphia Pike
Lancaster, Pennsylvania 17603
Phone 717/299-5211
A Subsidiary of High Industries, Inc

FCM-WELDING PROCEDURES
L.R.247 SPUR A SEC. B10
L.R.247 SPUR A, STA. 9+16.28
WASHINGTON & WESTMORELAND CO., PA.
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

STATE CONTRACT OR REF. NO. S-152916 CONTRACTOR BRAYMAN CONST. CORP.

IN CHARGE: HEFFNER MADE BY: FDS CHK.D BY: SK DATE 4-4-85

CONTRACT NUMBER: PA-84197-162 DRAWING NUMBER: WP2 A

AS 15515 B
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