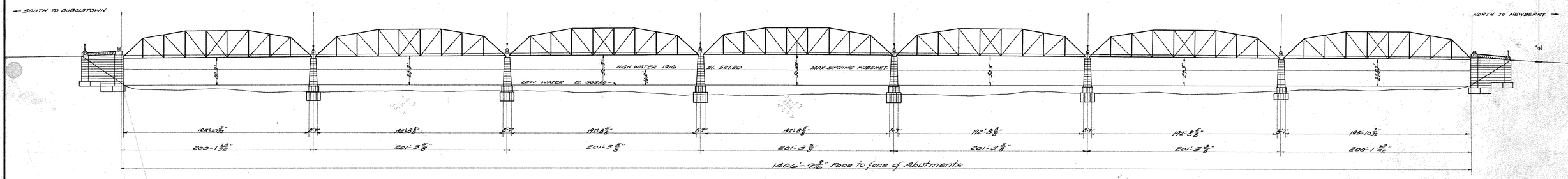


SUMMARY OF QUANTITIES

CONCRETE - CLASS A	14	CU. YDS.
CONCRETE - CLASS B	1339	CU. YDS.
CONCRETE - CLASS C	4640	CU. YDS.
TOTAL CONCRETE	5993	CU. YDS.
REINFORCING STEEL	191,000	POUNDS
REINFORCING FABRIC		POUNDS
STRUCTURAL STEEL	2,200,000	POUNDS
PAVEMENT W.B.Floor	3,175	SQ. YDS.
WATERPROOFING		SQ. YDS.
ELECTRIC CONDUIT	1,637	LIN. FT.
LAMP STANDARDS	10	
EXCAVATION	4,910	CU. YDS.
FILL		CU. YDS.

NOTE- 1889 FLOOD El. 534.00
1892 FLOOD El. 530.00
1916 HIGH WATER El. 521.20
MEAN VELOCITY-LOW WATER-0.47 M.P.H.
MEAN VELOCITY-HIGH WATER-3.40 M.P.H.

SCALE-1"=50'

LOCATION PLAN
SCALE-1"=1000'

MARK C. KRAUSE
CONSULTING ENGINEER
WILLIAMSPORT, PA.

EXAMINED & APPROVED
M.C.Krause
MAY, 18 1920

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

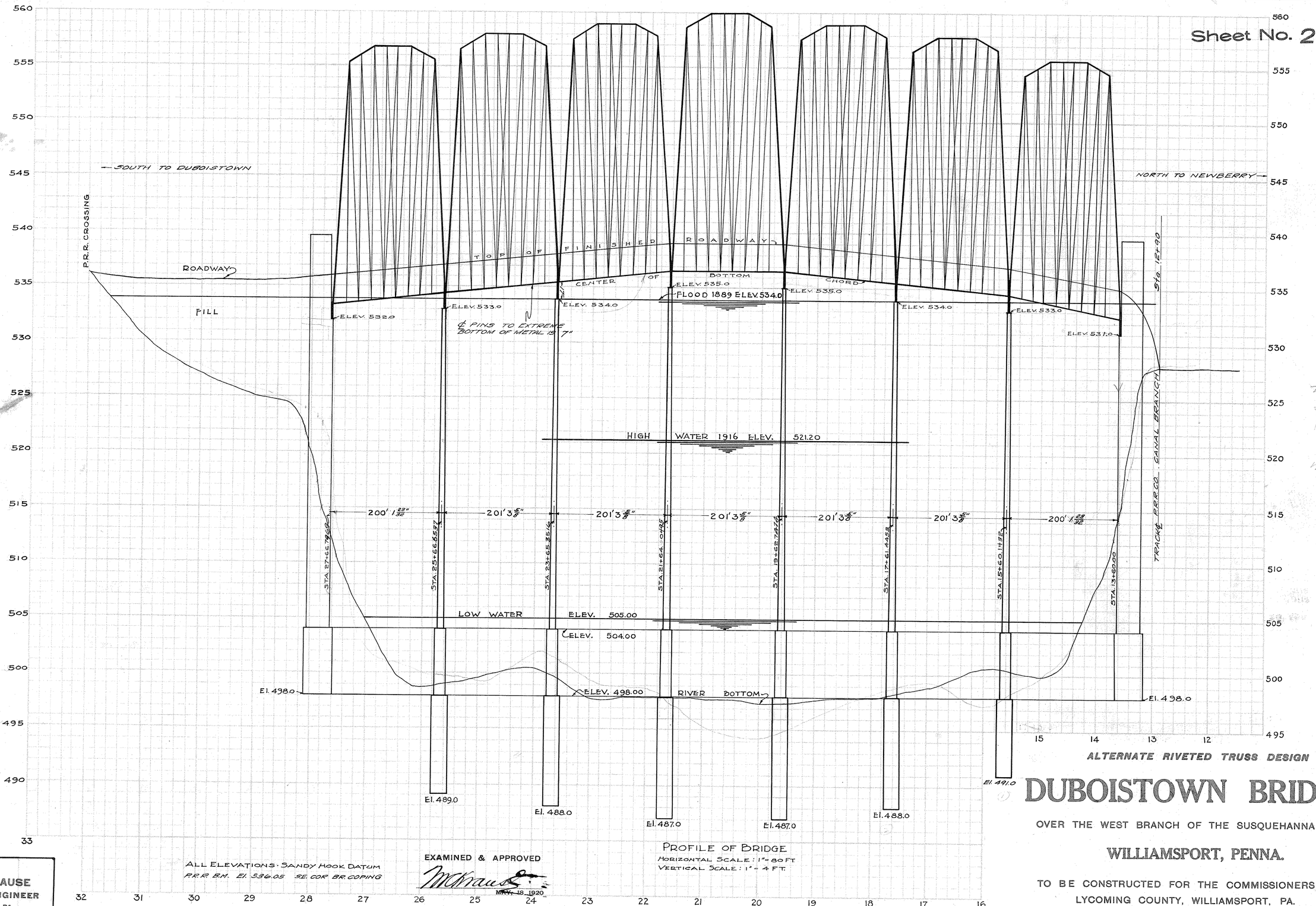
OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

TO BE CONSTRUCTED FOR THE COMMISSIONERS OF
LYCOMING COUNTY, WILLIAMSPORT, PA.

FILE: 1002-1 SCALES: AS NOTED MAY, 1920

H.B.C.



2766.6
1340
14068

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

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FILE: 1002-1 SCALES; AS NOTED MARCH, 1920

PROFILE OF BRIDGE
HORIZONTAL SCALE: 1" = 80 FT
VERTICAL SCALE: 1" = 4 FT.

ALL ELEVATIONS · SANDY HOOK DATUM
P.R.R. B.M. EL. 536.05 SE. COR BR. COPING

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MAY 18 1920

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WILLIAMSPORT, PA.

Sheet No. 2 of 12

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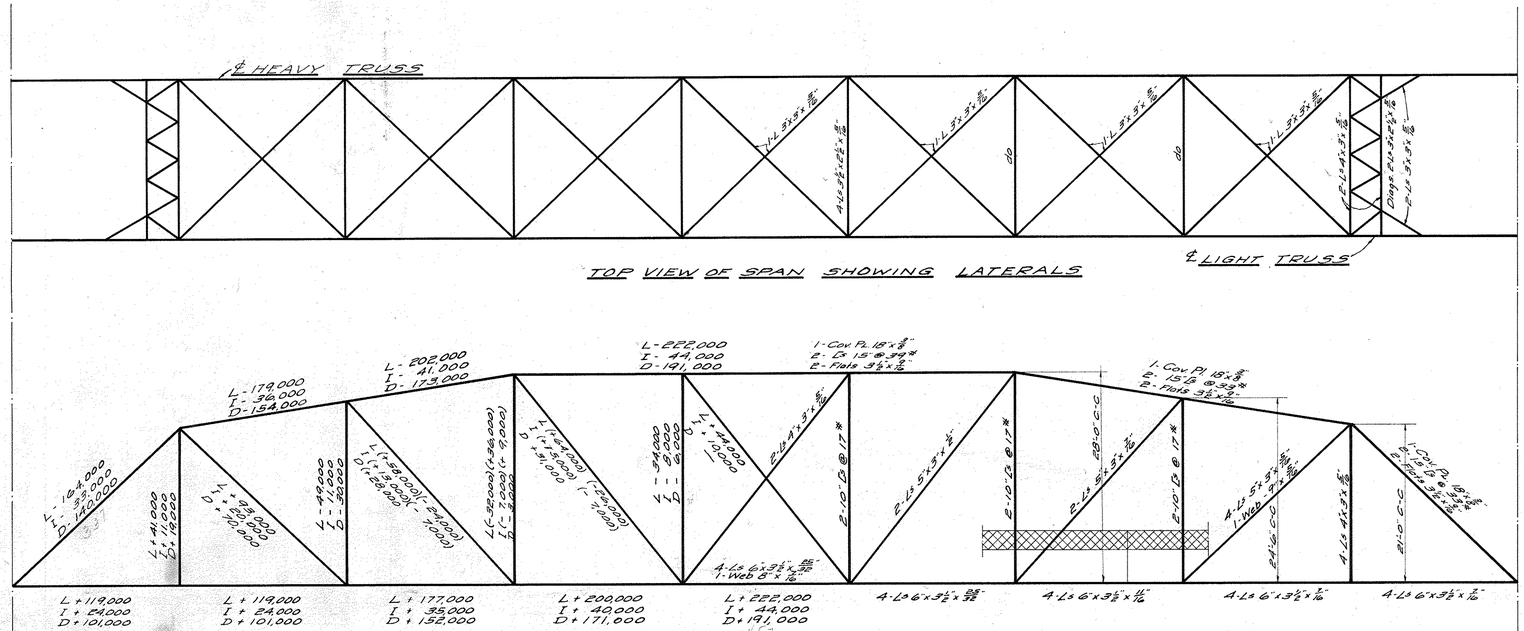
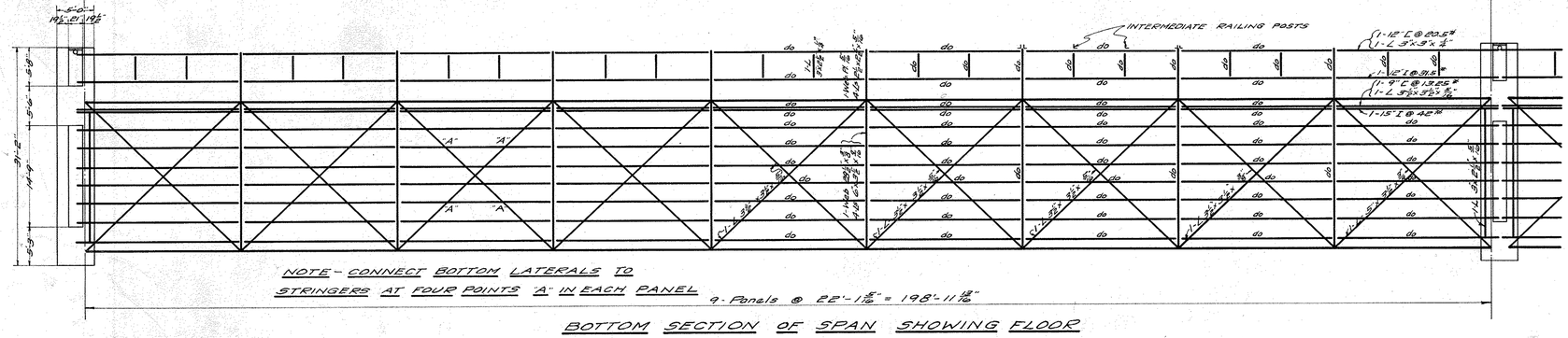


TOP VIEW OF SPAN SHOWING LATERALS

OUTSIDE ELEVATION OF LIGHT TRUSS

INSIDE ELEVATION OF HEAVY TRUSS



NOTE - CONNECT BOTTOM LATERALS TO STRINGERS AT FOUR POINTS 'A' IN EACH PANEL

BOTTOM SECTION OF SPAN SHOWING FLOOR

SPECIFICATIONS

LIVE LOADS { 1-20 TON TRUCK, AXLE LOADS
100 # PER SQ.FT. ON ROADWAY & SIDEWALK

LIVE LOAD FOR FUTURE STREET CAR TRACK (LOCATION AS SHOWN)

AXLE LOADS 2-CARS COUPLED TOGETHER

IMPACT 300/(300+L) × L.L. STRESS WHERE 'L' = LOADED LENGTH IN FEET

DEAD LOAD
- TIMBER FLOOR & CONC. SIDEWALK COMPLETE 960 # PER FT.
- STEEL, INCLUDING RAILING ETC. 1850 # " "
- TOTAL (61 % TO HEAVY TRUSS, 39 % TO LIGHT TRUSS) 2810 # " "

UNIT STRESSES
- TENSION 17000 # PER SQ.IN. ON NET SECTION
- COMPRESSION 17000 - 75 l/r l = UNSUPPORTED LENGTH IN INCHES, r = LEAST RADIUS OF GYRATION
- SHEAR
  - (SHOP RIVETS & PINS 13,000 # PER SQ.IN.
  - FIELD " 11,000 " " "
- BEARING
  - (SHOP RIVETS & PINS 26,000 " " "
  - FIELD " 22,000 " " "
  - EXPANSION ROLLERS 600 d (d = DIA. IN INCHES)
  - MASONRY 600 # PER SQ. IN.

MINIMUM METAL 5/16" THICK EXCEPT FOR RAILING & FASCIAS

RIVETS 7/8" ø EXCEPT FOR RAILING

GUSSET PLATES 7/16 THK. FOR HEAVY TRUSS, 3/8" THK. FOR LIGHT TRUSS

FIELD CONNECTIONS ALL HOLES FOR FIELD CONNECTIONS (EXCEPT BRACING & RAILING) TO BE DRILLED TO IRON TEMPLET, EITHER FROM THE SOLID OR FROM 1/2" PUNCHED HOLES.

WORKMANSHIP CHARACTER AND METHOD OF WORKMANSHIP (AND ALSO ALL DETAILS OF DESIGN NOT OTHERWISE PRESCRIBED ON THIS DRAWING) SHALL BE GOVERNED BY COOPER'S SPECIFICATIONS FOR HIGHWAY BRIDGES.

MATERIAL QUALITY OF MATERIAL TO BE AS REQUIRED BY MANUFACTURER'S STANDARD SPECIFICATIONS.

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

TO BE CONSTRUCTED FOR THE COMMISSIONERS OF LYCOMING COUNTY, WILLIAMSPORT, PA.

FILE: 1002-1 SCALES: AS NOTED MAY, 1920

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MAY, 18 1920

Sheet No. 3 of 12

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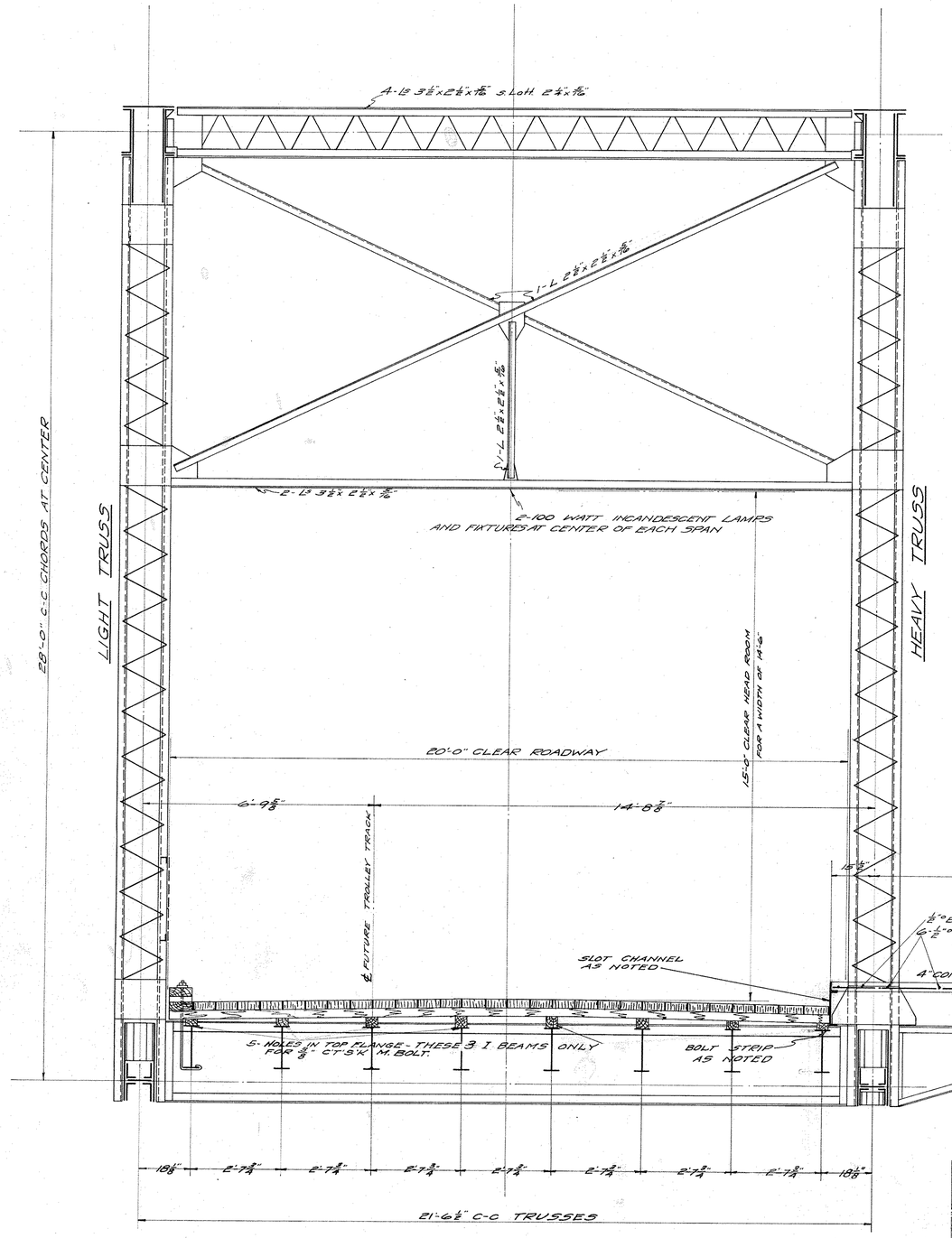
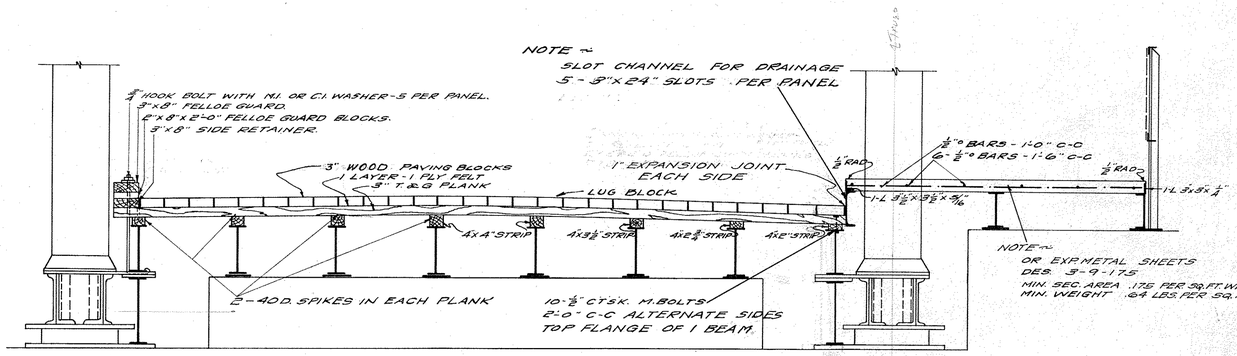
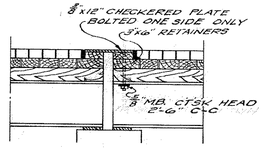


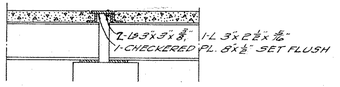
CROSS SECTION - LOOKING SOUTH
SCALE - ½"=1'-0"



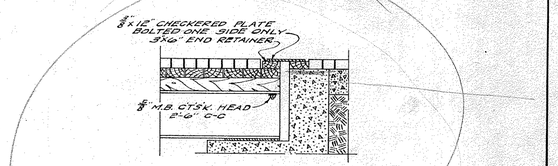
END ELEVATION AT PIER - LOOKING SOUTH
SCALE - ½"=1'-0"



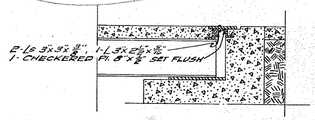
ROADWAY EXPANSION JOINT AT PIER
SCALE - ½"=1'-0"



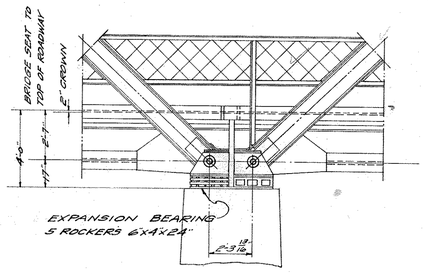
SIDEWALK EXPANSION JOINT AT PIER
SCALE - ½"=1'-0"



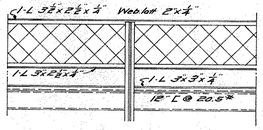
ROADWAY EXPANSION JOINT AT ABUTMENT
SCALE - ½"=1'-0"



SIDEWALK EXPANSION JOINT AT ABUTMENT
SCALE - ½"=1'-0"



OUTSIDE ELEVATION AT PIER
LIGHT TRUSS
SCALE - ½"=1'-0"



RAILING POST AT PANEL POINT
2-L@ 3"x2½"x½"
INTER. RAILING POST (2 for Panel)
1-L 3"x2½"x½"

EXAMINED & APPROVED
MAY, 18 1920

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

TO BE CONSTRUCTED FOR THE COMMISSIONERS OF LYCOMING COUNTY, WILLIAMSPORT, PA.

FILE: 1002-1 SCALES: AS NOTED MAY, 1920

MARK C. KRAUSE
CONSULTING ENGINEER
WILLIAMSPORT, PA.

Sheet No. 4 of 12

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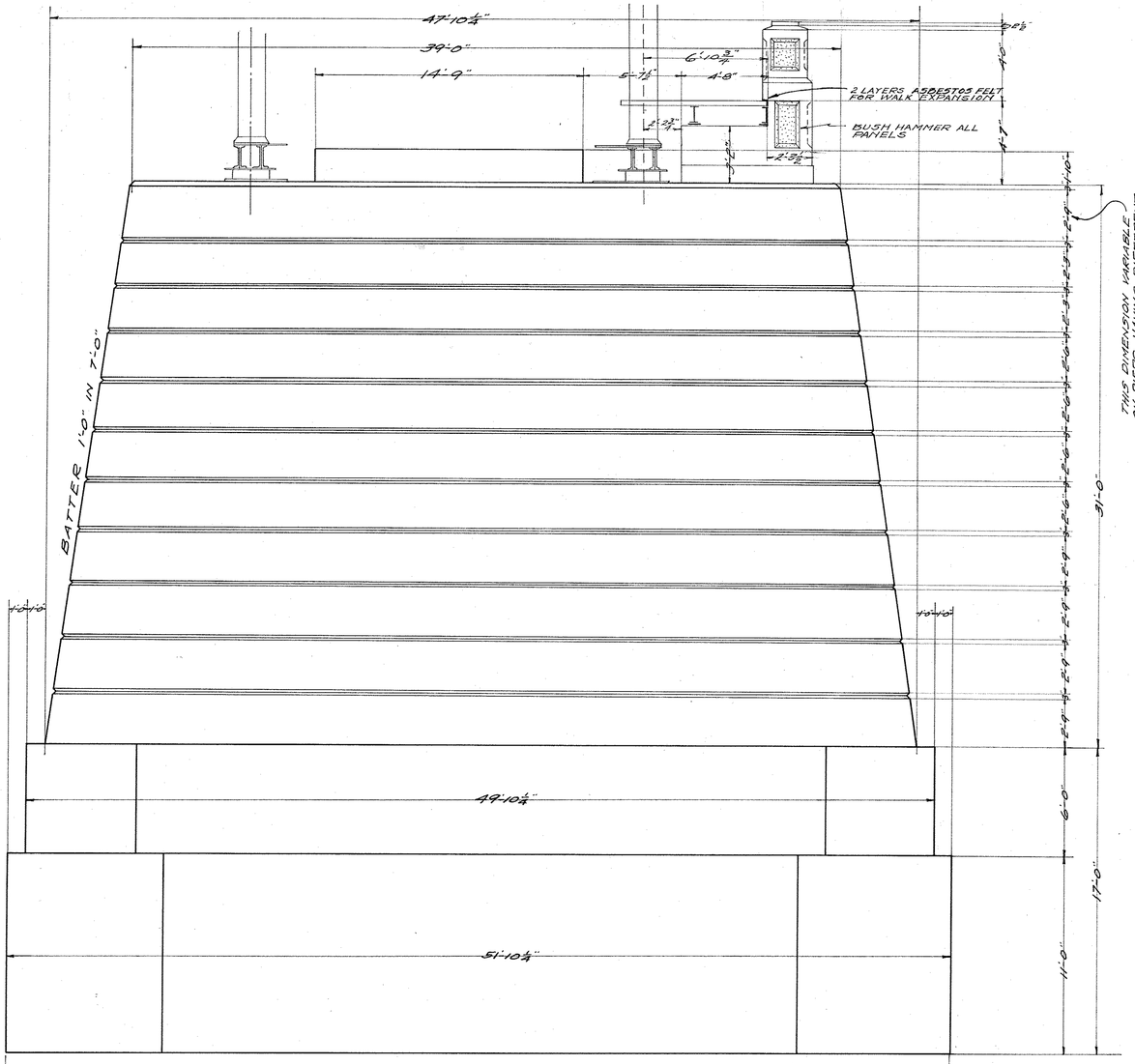
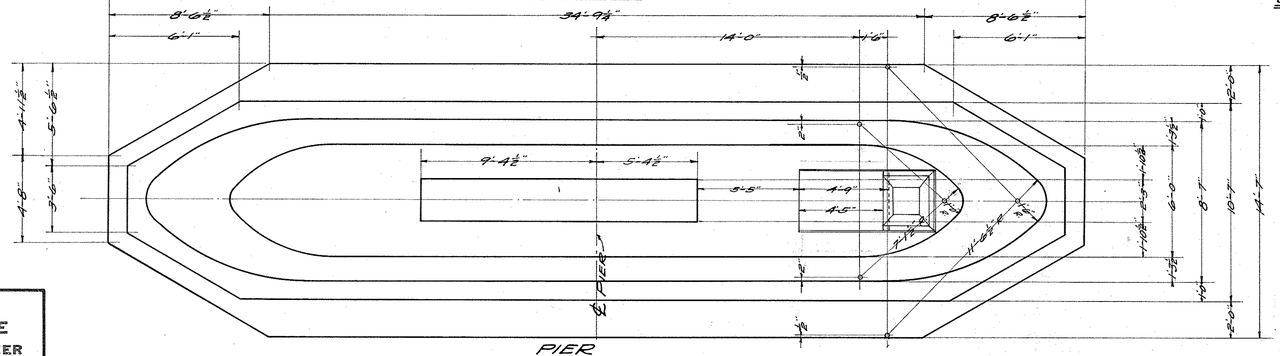


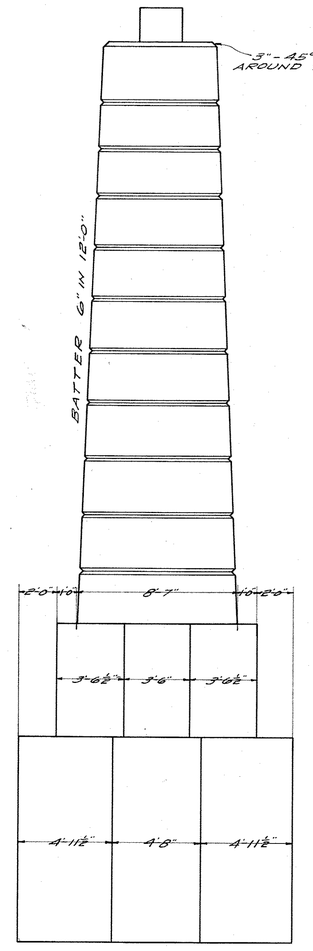
PIER
SIDE ELEVATION
SCALE-¼"=1'-0"



PIER
PLAN
SCALE-¼"=1'-0"

NOTE- ALL PIERS OF CLASS "C" CONCRETE

NOTE- SEE SHEET N° 12 FOR DETAIL OF CONCRETE LAMP STANDARD FOR PIERS.



PIER
END ELEVATION
SCALE-¼"=1'-0"

EXAMINED & APPROVED
M.C. Krause Jr.
MAY, 18 1920

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

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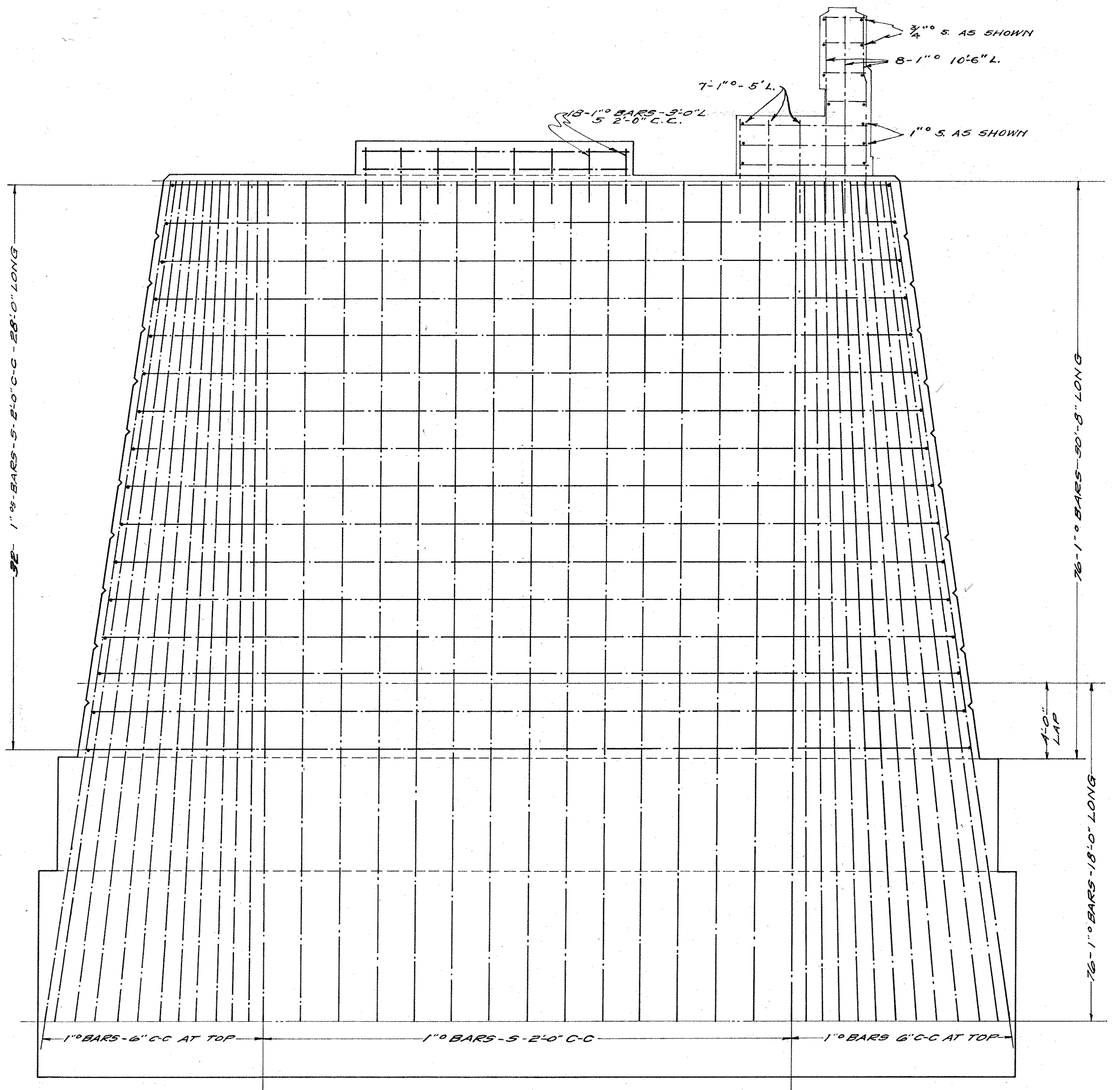
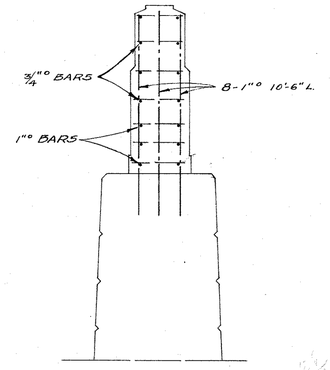
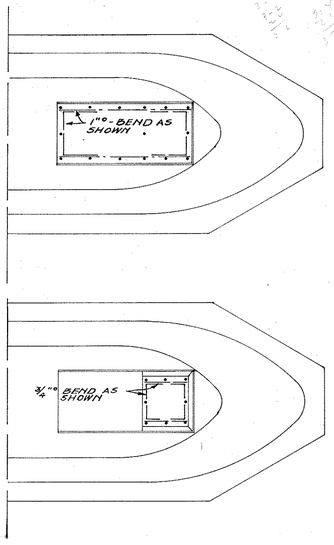
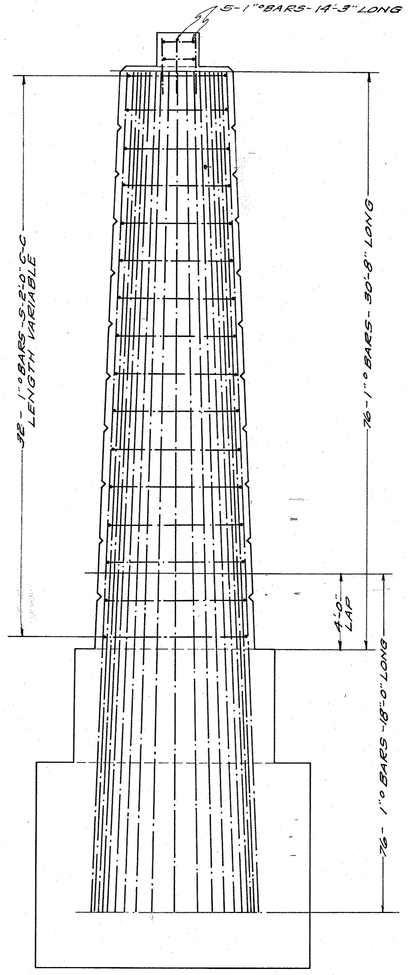


SIDE ELEVATION



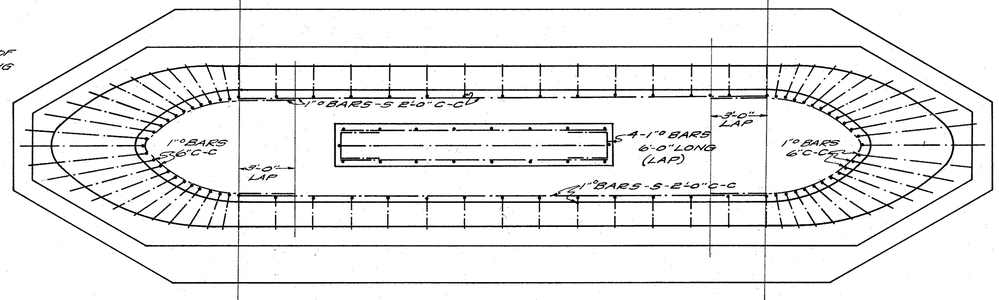




END ELEVATION

NOTE—
PLACE ALL BARS 4" FROM FACE OF CONCRETE ON PIERS ONLY UNLESS OTHERWISE SPECIFIED.

NOTE—
3-60 LB. R.R. RAILS IN NOSE OF EVERY PIER-AGAINST SCORING UP-STREAM END



PLAN

PIER REINFORCEMENT
SCALE ¼"=1'-0"

EXAMINED & APPROVED
M. C. Krause
MAY, 18 1920

MARK C. KRAUSE
CONSULTING ENGINEER
WILLIAMSPORT, PA.

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

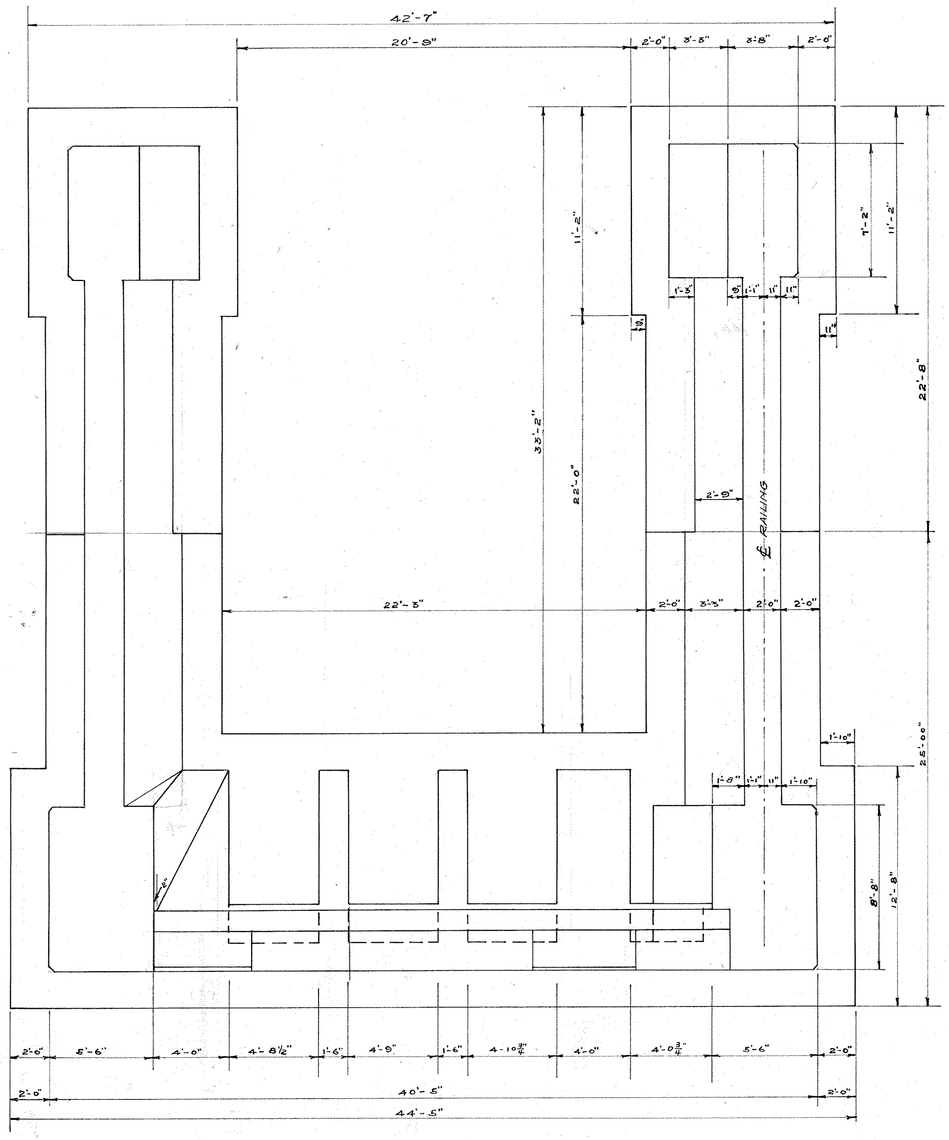
TO BE CONSTRUCTED FOR THE COMMISSIONERS OF LYCOMING COUNTY, WILLIAMSPORT, PA.

FILE: 1002-I SCALES: AS NOTED MAY, 1920

KBC

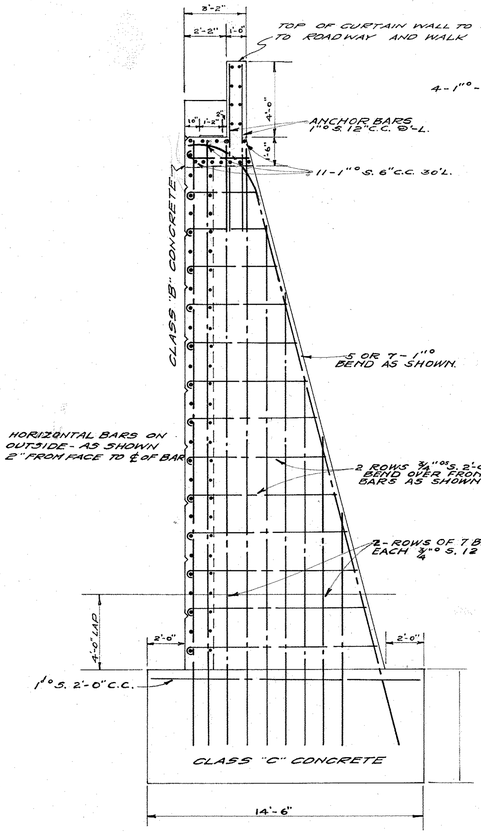
Sheet No. 6 of 12

Sheet No. 6 of 12



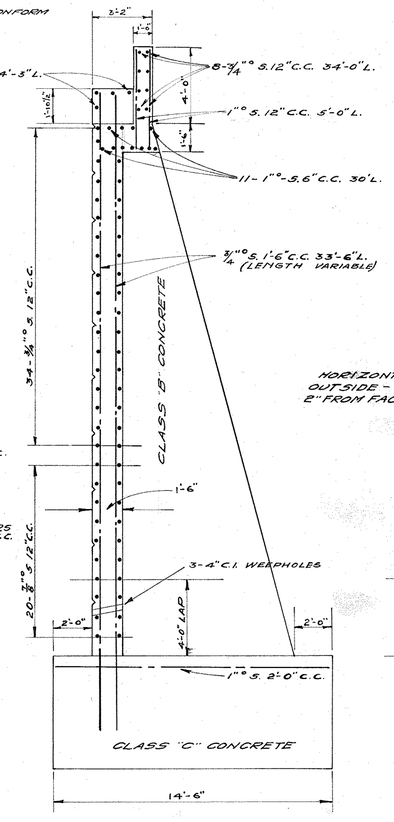
PLAN OF ABUTMENT

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



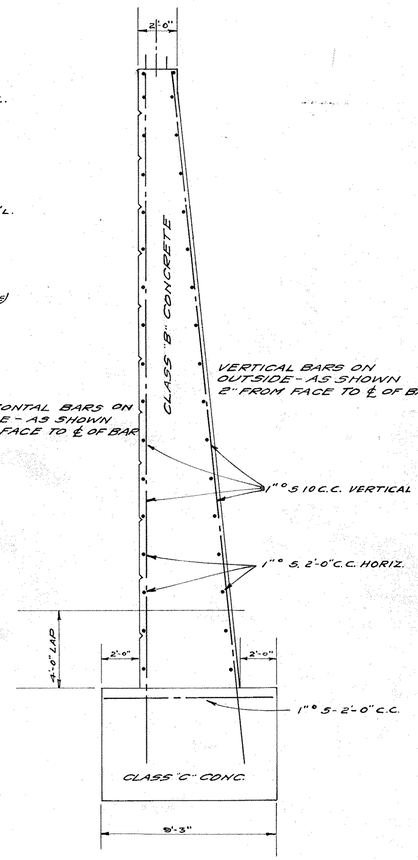
SECTION - BUTTRESS WALL

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



SECTION - FRONT WALL

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



SECTION - SIDE WALL

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

NOTE — NOTE LOCATION OF VERT. & HORIZ. BARS ALL BARS TO BE PLACED 1" + DIA. OF BAR FROM FACE TO ℄ OF BAR.

EXAMINED & APPROVED

M C Krause & Co.

MAY, 18 1920

Sheet No. 7 of 12

MARK C. KRAUSE
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ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

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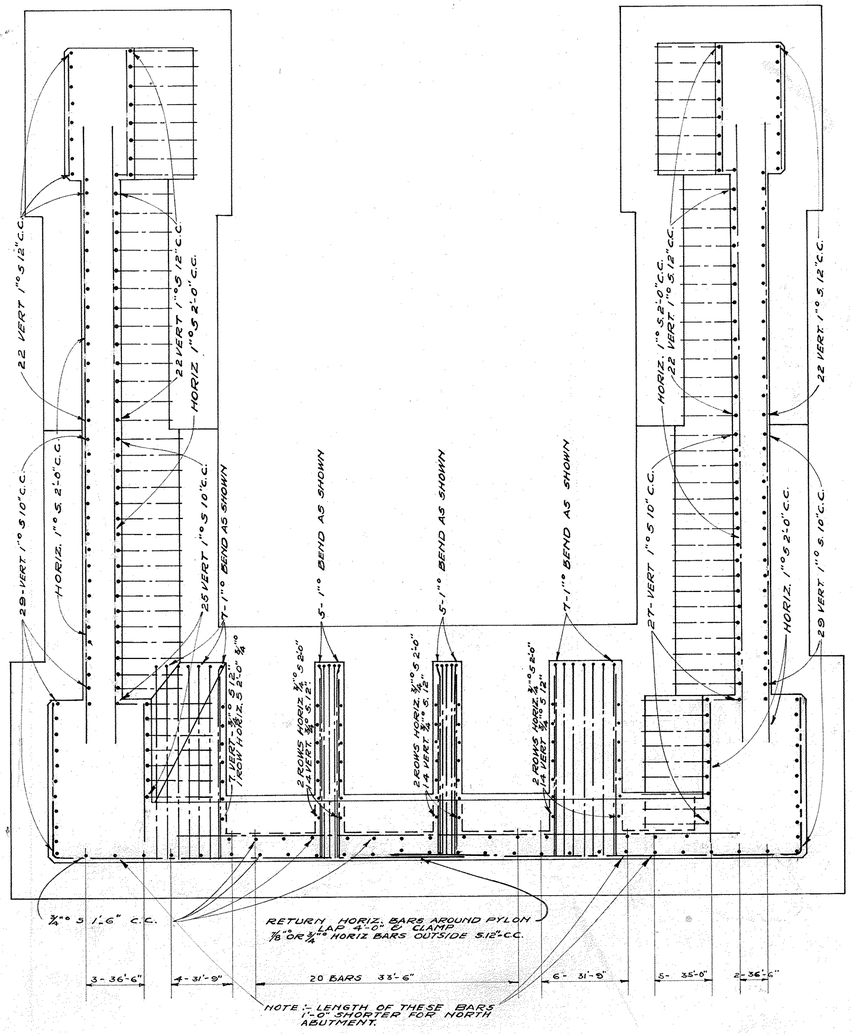
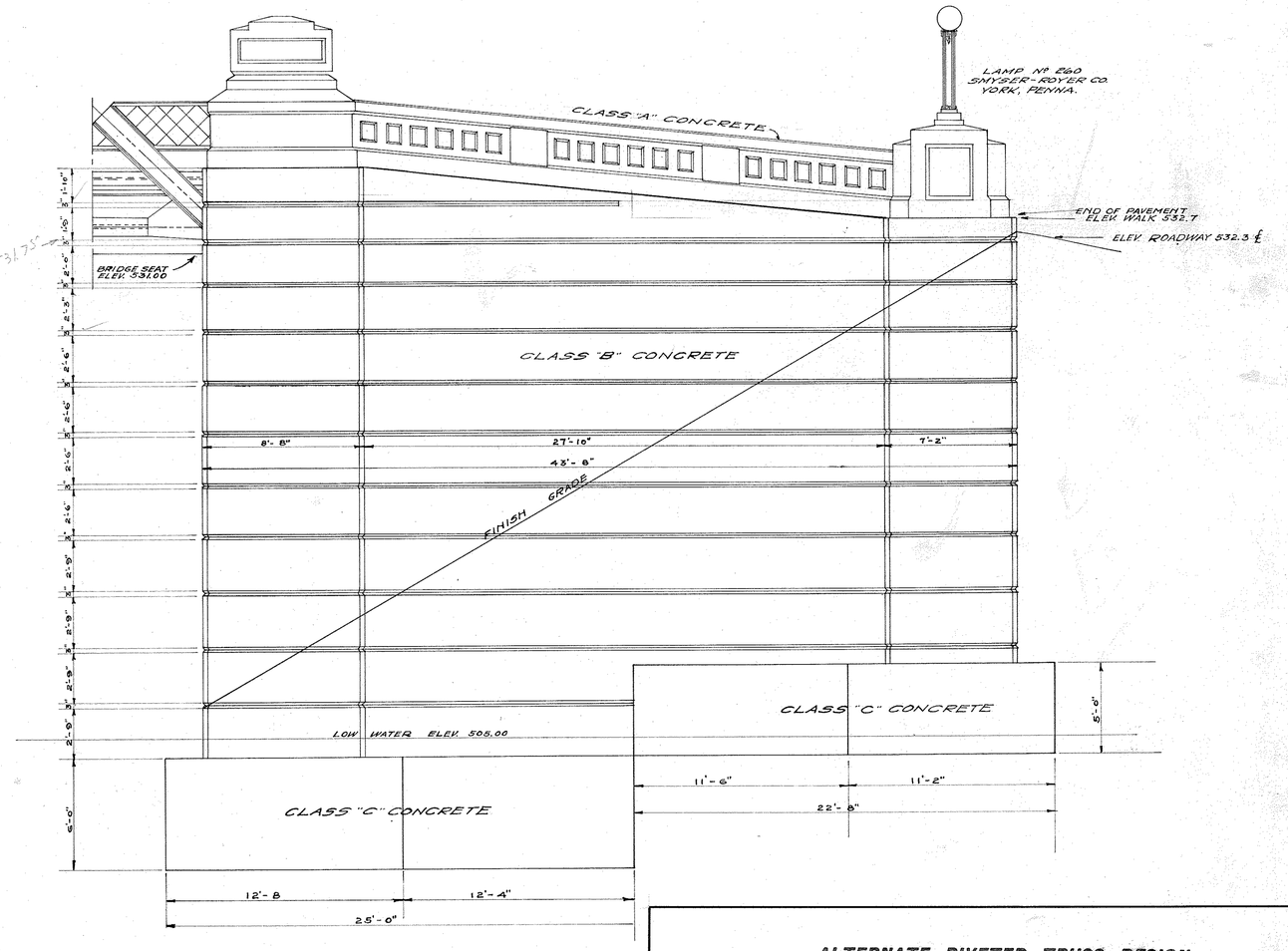
W.S.S.

Sheet No. 7 of 12



PLAN OF ABUTMENT
SHOWING STEEL
SCALE - 1/4" = 1'-0"



ELEVATION
NORTH ABUTMENT
SCALE - 1/4" = 1'-0"

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WILLIAMSPORT, PA.

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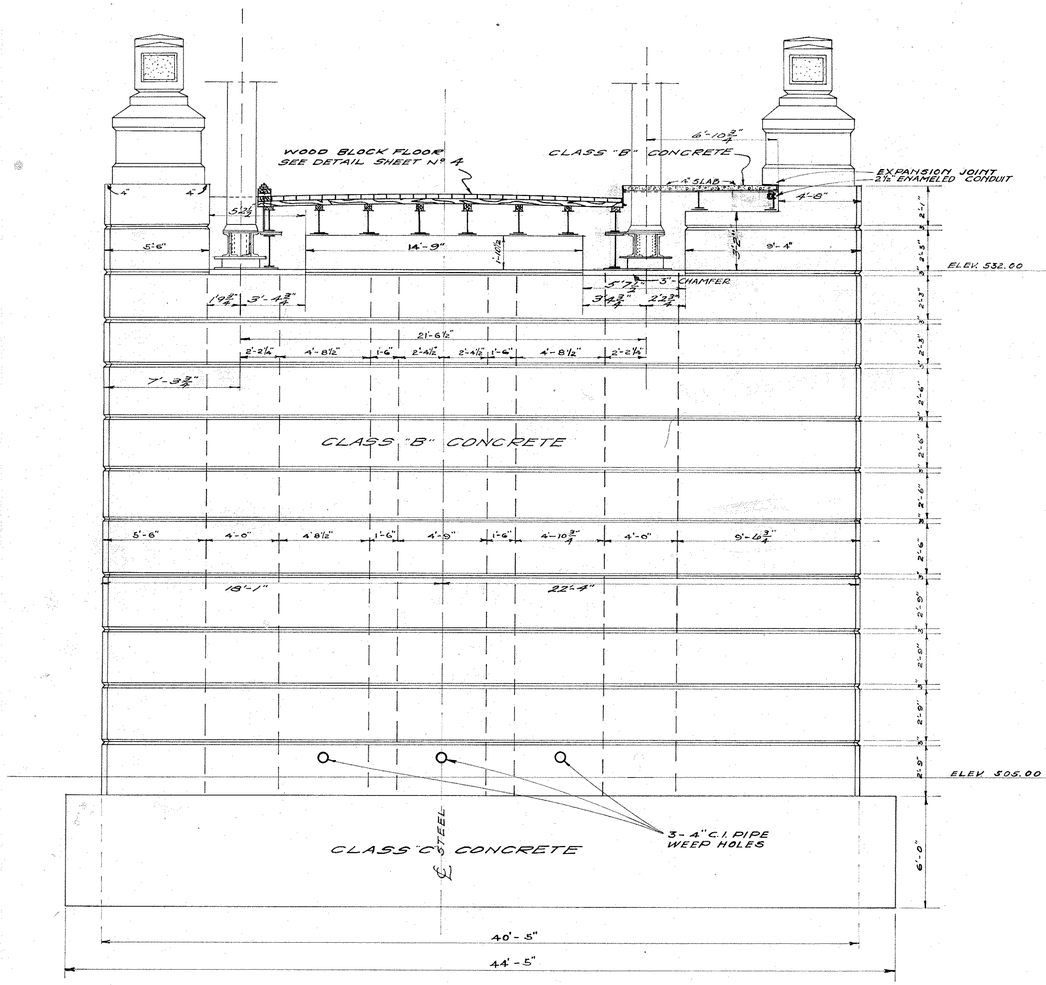
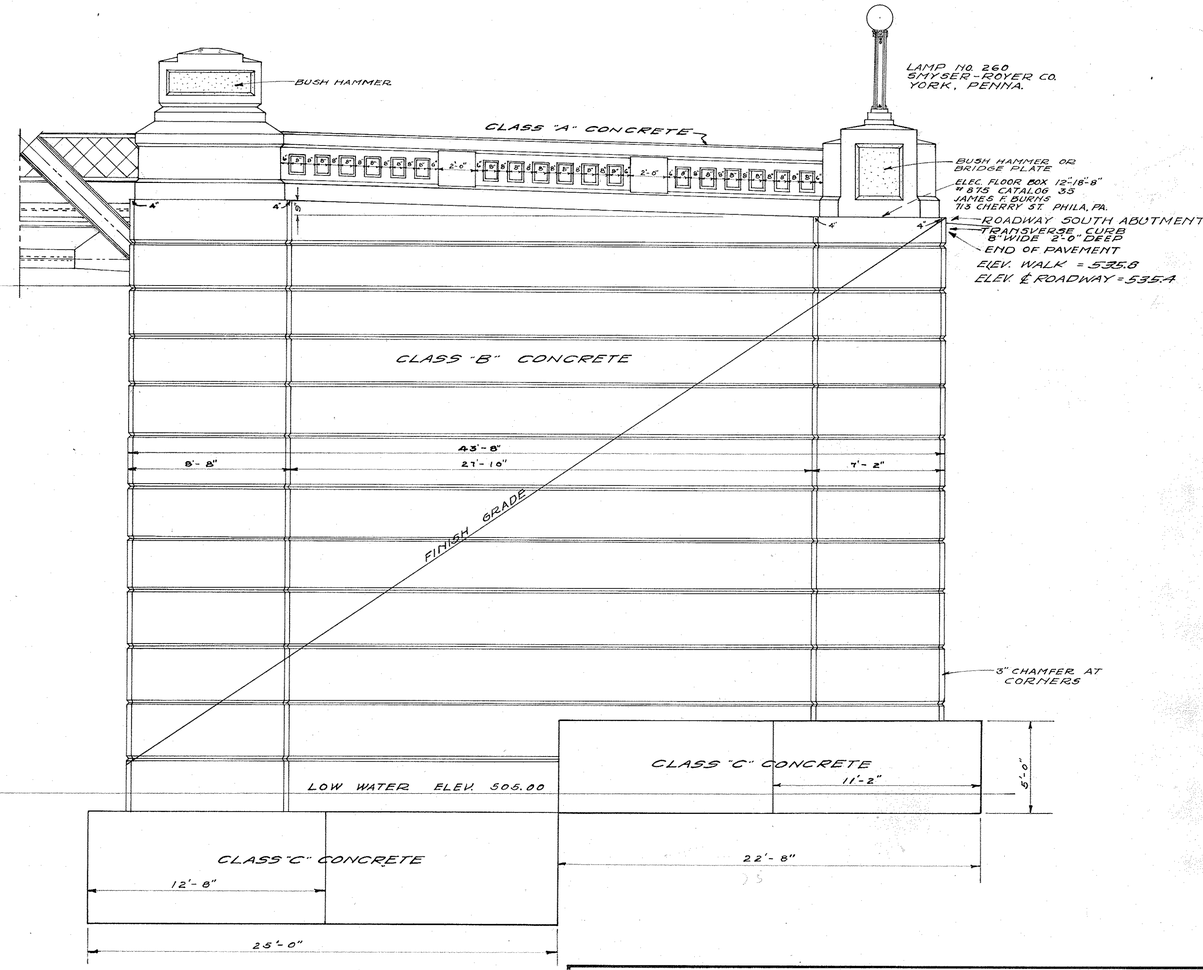
FILE : 1002-1 SCALES : AS NOTED MAY, 1920

Sheet No. 8 of 12



FRONT VIEW
SOUTH ABUTMENT
SCALE - ¼" = 1'-0"



ELEVATION
SOUTH ABUTMENT
SCALE - ¼" = 1'-0"

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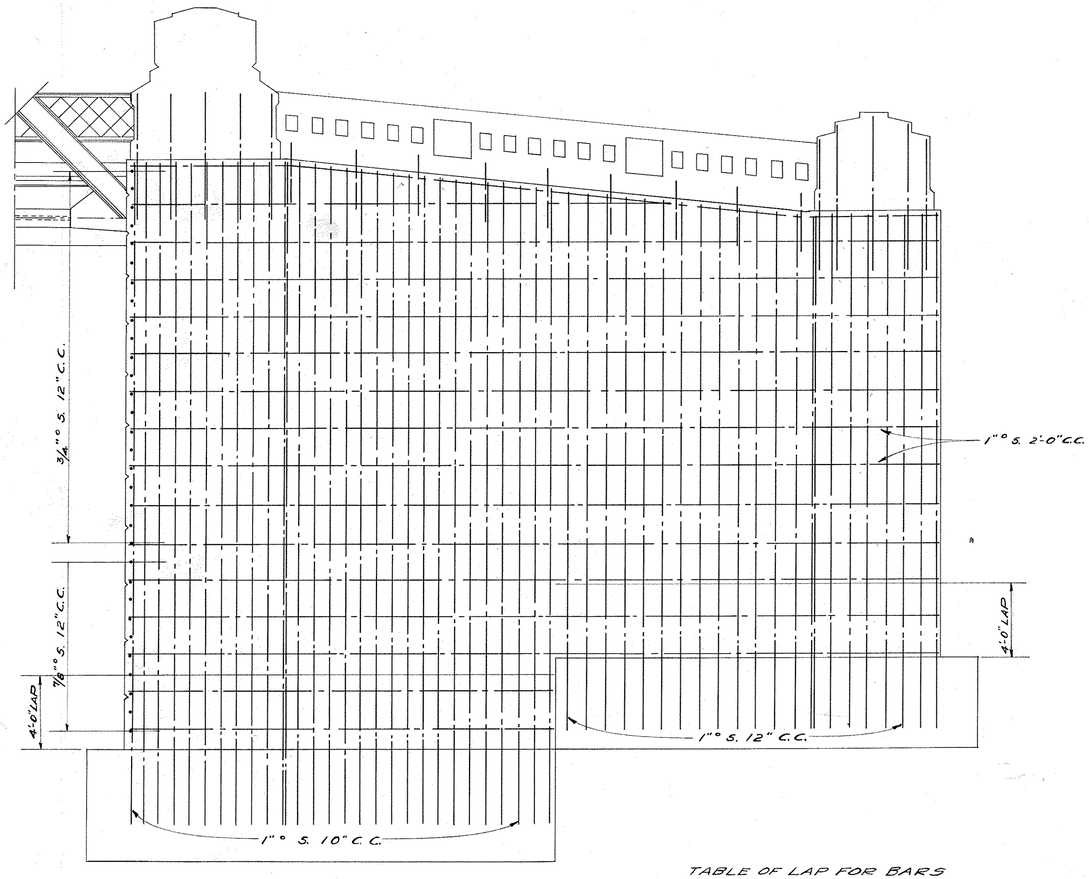
W.E.S.

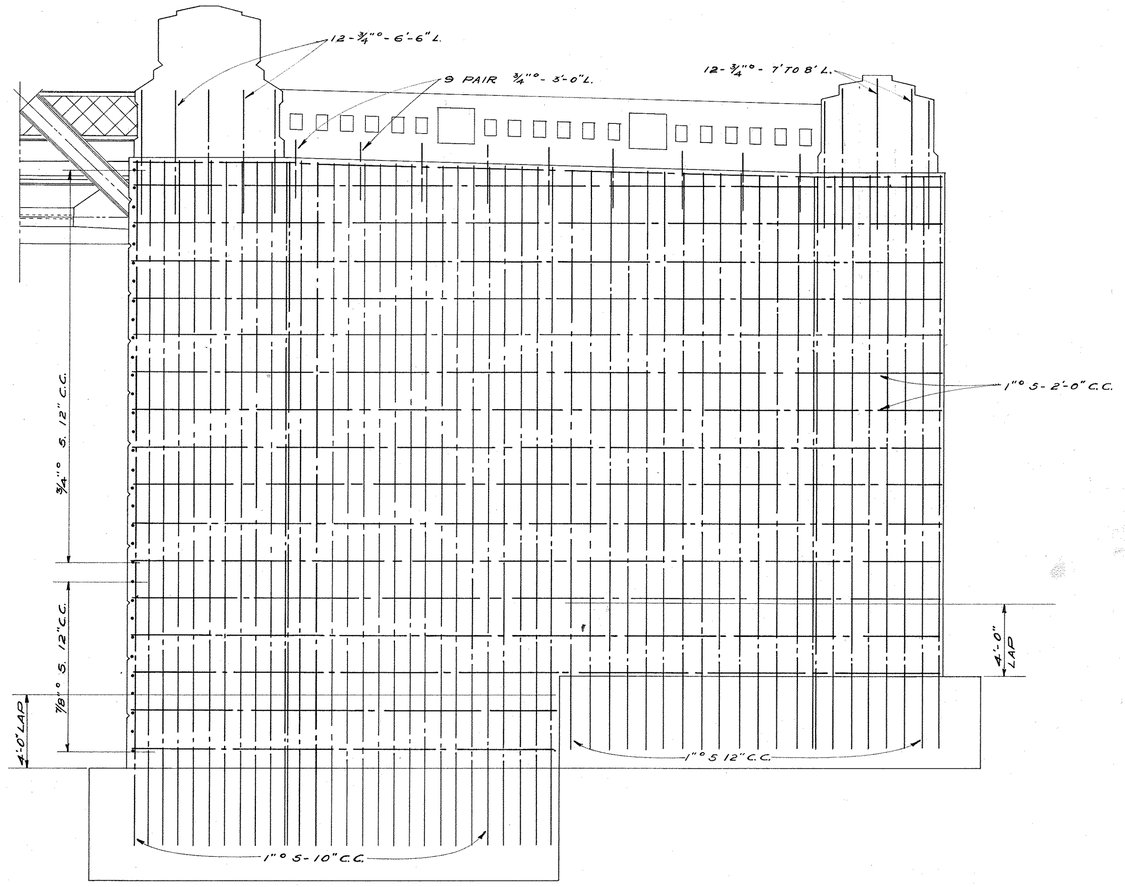
Sheet No. 9 of 12



NORTH ABUTMENT
SCALE 1/4" = 1 FT.

TABLE OF LAP FOR BARS

SIZE	BAR	BOND
1/2"	ROUND	20"
5/8"	"	25"
3/4"	"	30"
7/8"	"	35"
1"	"	40"
1 1/4"	"	50"



SOUTH ABUTMENT
SCALE 1/4" = 1 FT

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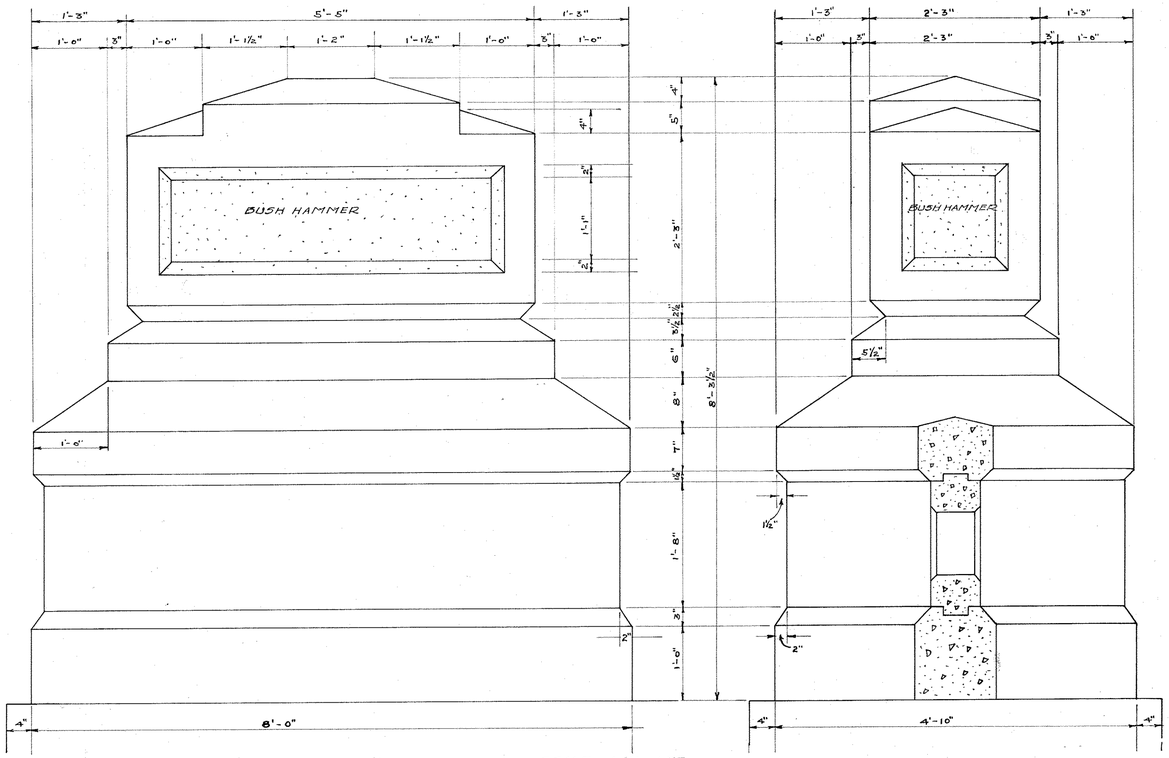
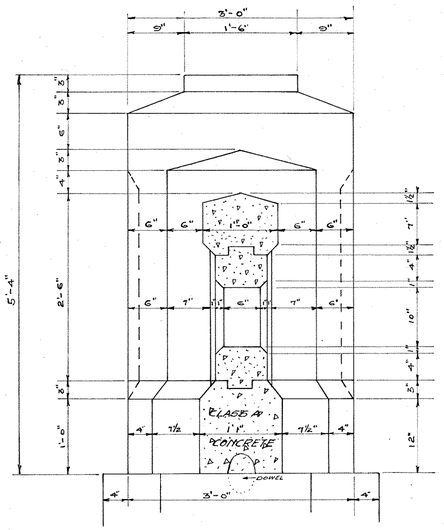
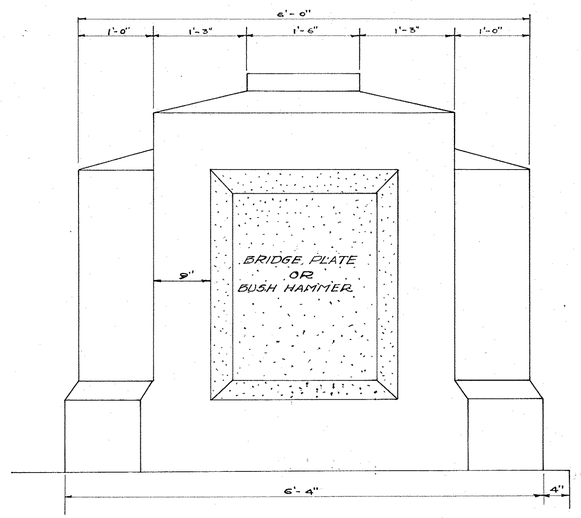
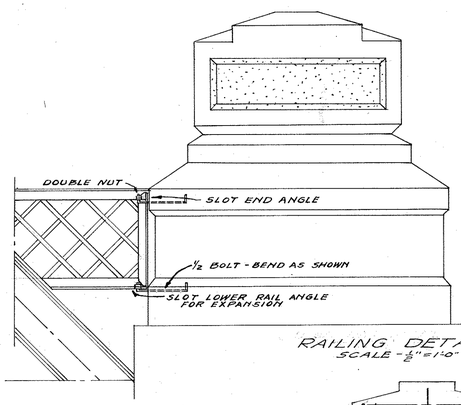
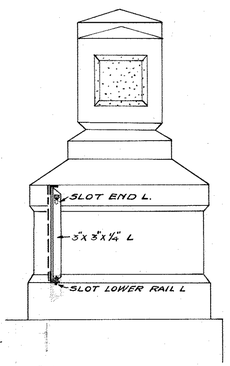




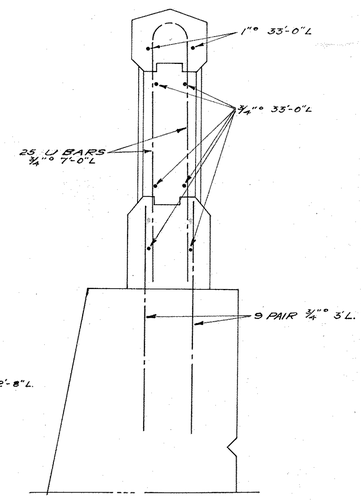


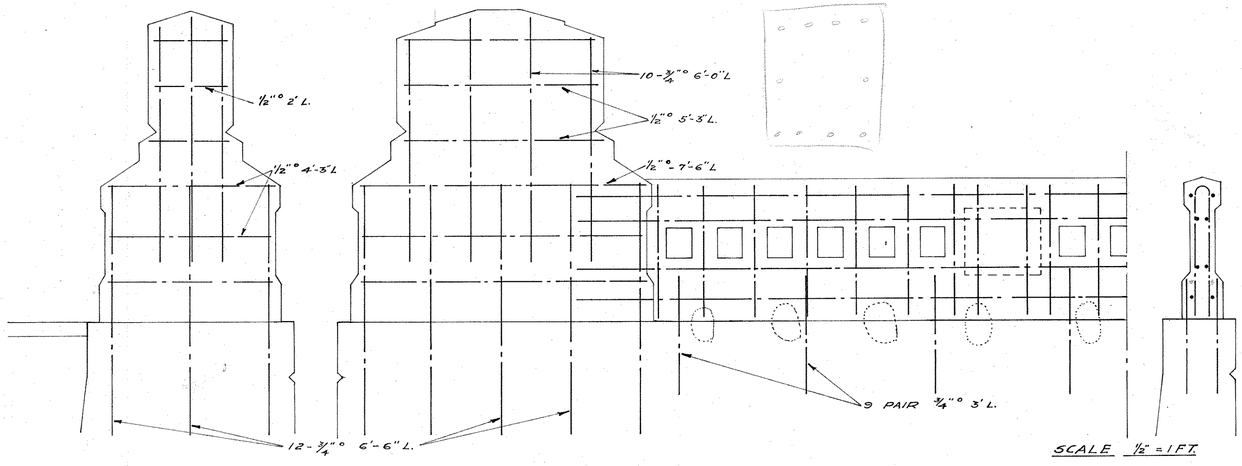
SCALE 1" = 1 FT.



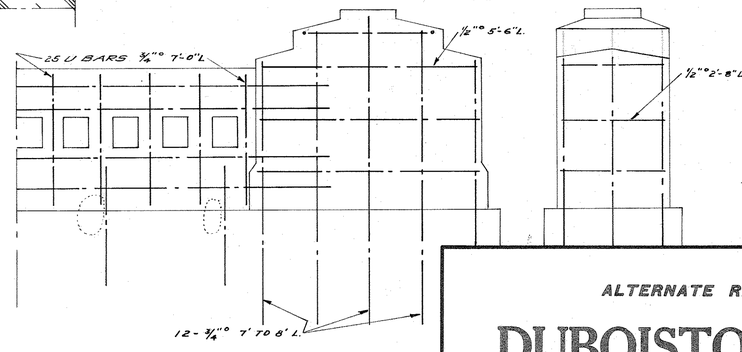


RAILING DETAIL
SCALE - ½" = 1'-0"





SCALE ½" = 1 FT.



ABUTMENT - PYLON AND RAILING DETAILS
SCALE - AS NOTED

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

TO BE CONSTRUCTED FOR THE COMMISSIONERS OF LYCOMING COUNTY, WILLIAMSPORT, PA.

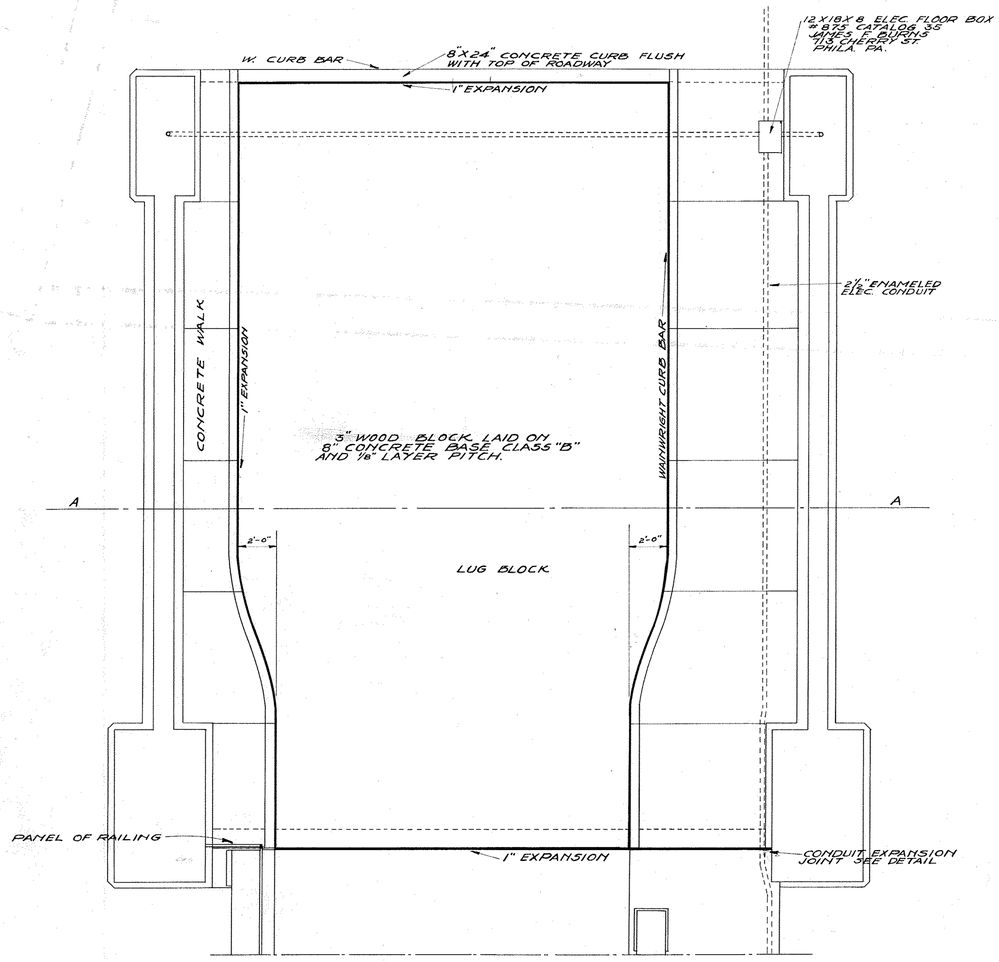
FILE : 1002-1 SCALES : AS NOTED MAY, 1920

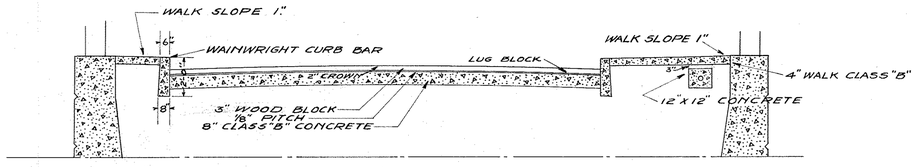
W.S.S.

MARK C. KRAUSE
CONSULTING ENGINEER
WILLIAMSPORT, PA.

EXAMINED & APPROVED
MAY, 18 1920

Sheet No. 11 of 12





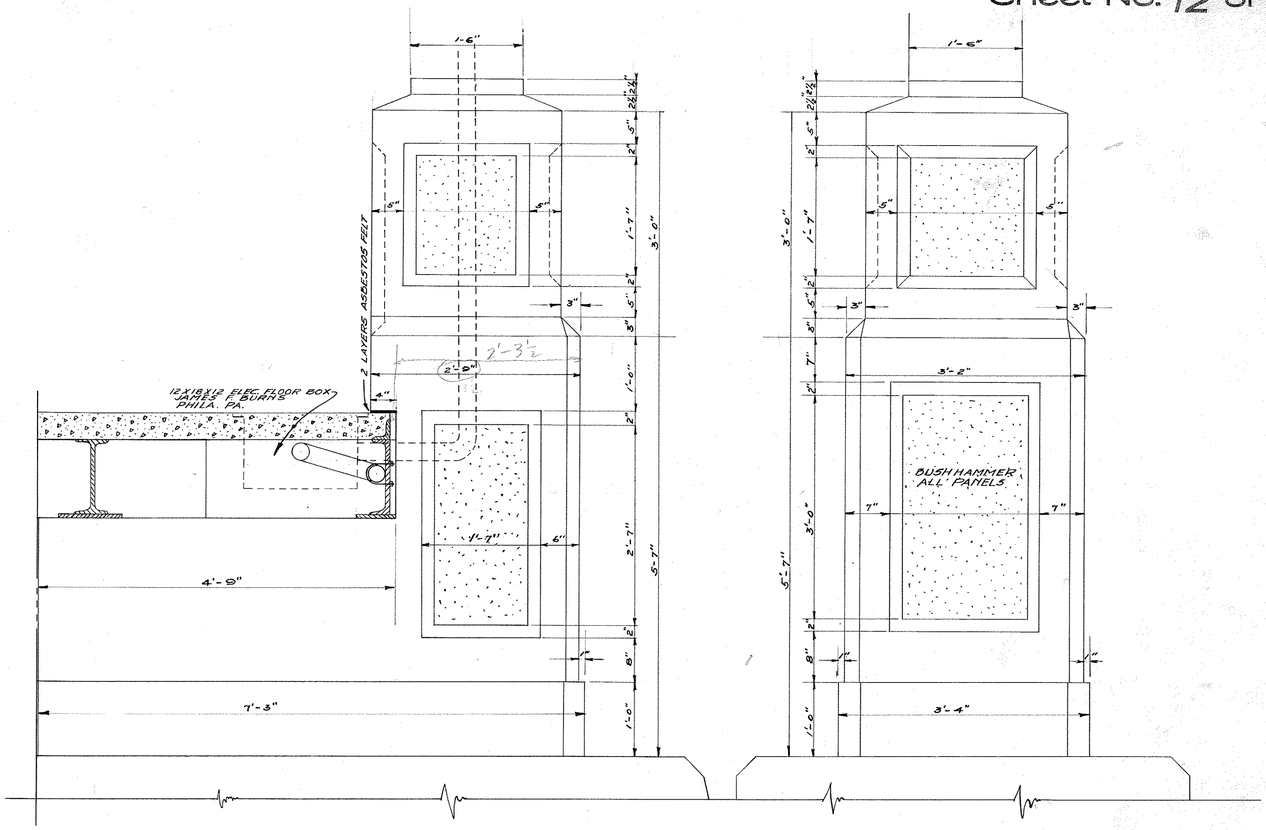
SECTION A-A.

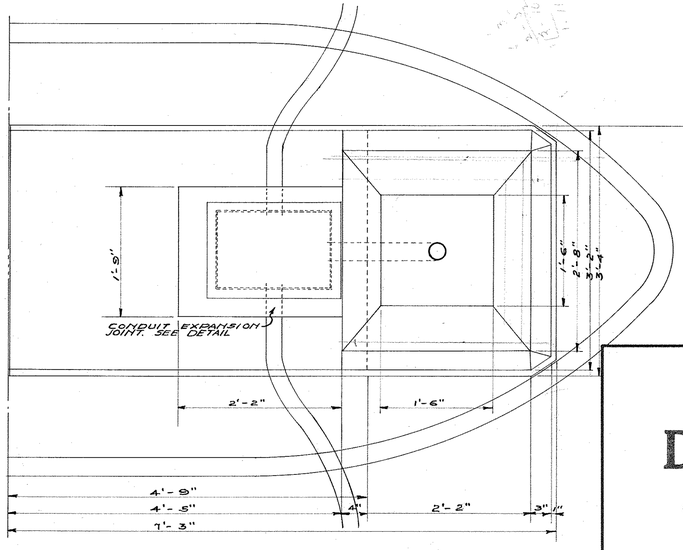
ABUTMENT ROADWAY

SCALE 1"=1'-0"

EXAMINED & APPROVED

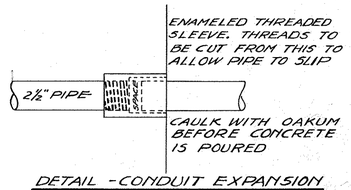
MAY, 18 1920





LAMP-STANDARD-POST FOR PIERS

SCALE - 1"=1'-0"



DETAIL - CONDUIT EXPANSION

MARK C. KRAUSE
CONSULTING ENGINEER
WILLIAMSPORT, PA.

ALTERNATE RIVETED TRUSS DESIGN

DUBOISTOWN BRIDGE

OVER THE WEST BRANCH OF THE SUSQUEHANNA RIVER

WILLIAMSPORT, PENNA.

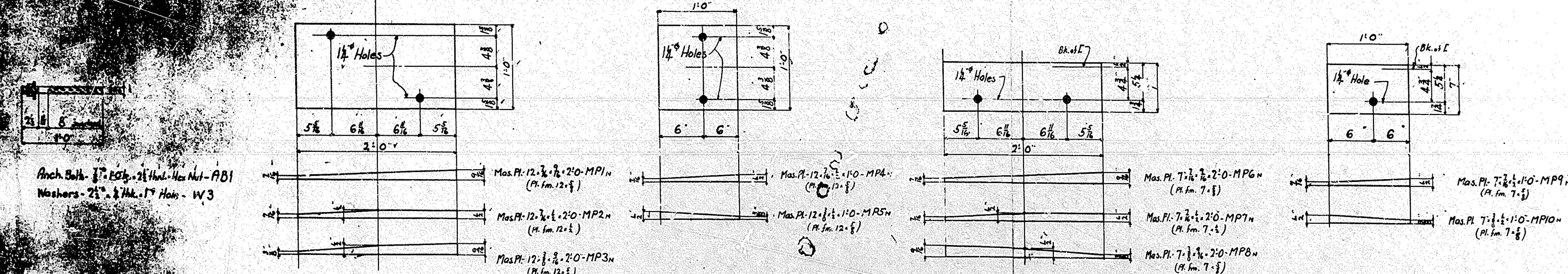
TO BE CONSTRUCTED FOR THE COMMISSIONERS OF LYCOMING COUNTY, WILLIAMSPORT, PA.

FILE: 1002-1 SCALES: AS NOTED MAY, 1920

W.E.S.

Sheet No. 12 of 12

Open Holes:- As noted.



Required List.

21 - Masonry Plates - MP1N		1 - Masonry Plates - MP7RN	
14 - " " - MP2N		1 - " " - MP7LN	
7 - " " - MP3N		1 - " " - MP8N	
7 - " " - MP4N		1 - " " - MP9N	
7 - " " - MP5N		1 - " " - MP10N	
2 - " " - MP6RN		126 - Anchor Bolts. - AB1	
1 - " " - MP6LN		126 - Washers - W3	

Masonry Plan

Duboistown Bridge

over the West Branch of the Susquehanna River

Williamsport Penna.

for

The Commissioners of Lycoming County, Williamsport, Pa.

Built by

Bethlehem Steel Co.

Steelton, Pa.

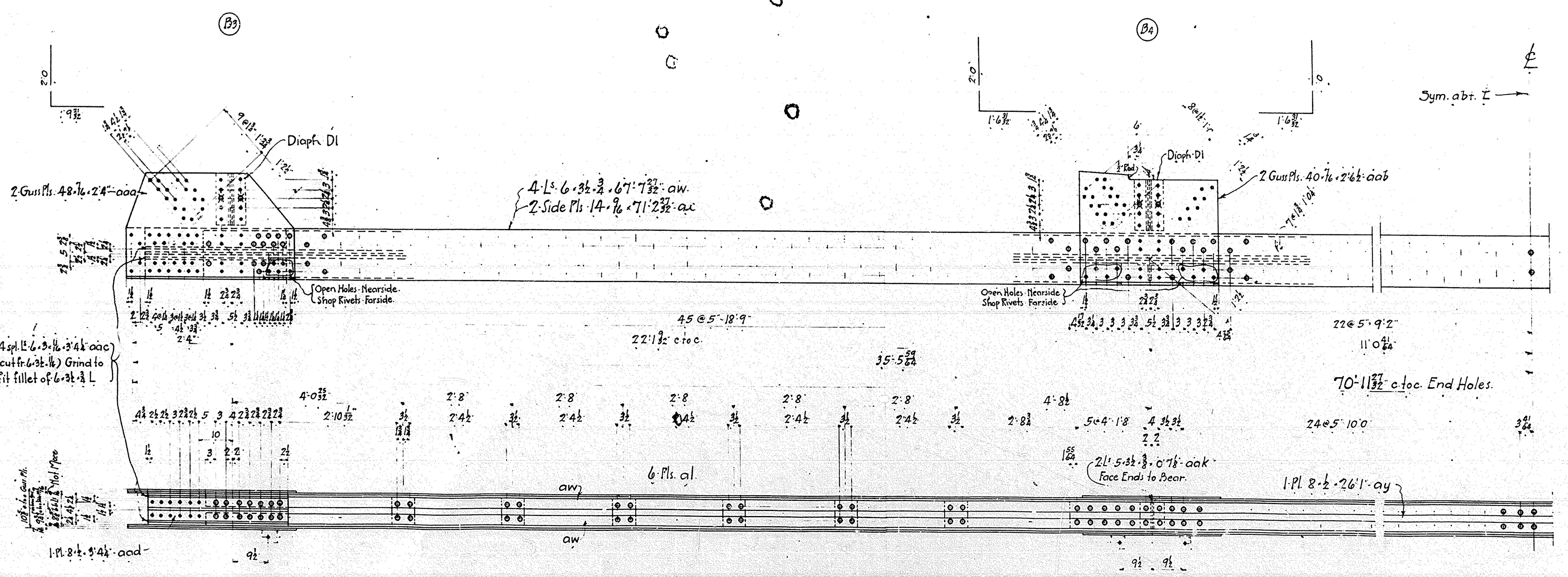
EB2625
Dwg. #1

Scale: ¾" & 1½" = 1'-0"
Made: RWAH.
: Hm
: CMB.
Sheets: 10.

Jan. 5th 1923

9 Panels @ 22'-1 5/8" = 198'-11 13/16"
200'-1 13/32" ¢ Pin to ¢ Pier
201'-3 5/8" C. to C. Piers.
1406'-9 9/16" C. to C. End Pins.
Elevation
Note:-
Elev. 532.0 etc. top of Bridge seat of Trusses
Elev. top of Bridge seat for Roadway Stringers - 1'-10 above that of Trusses.
Elev. top of Bridge seat for Sidewalk Stringers - 3'-2 above that of Trusses.
N
Light Truss
R3, R4, R5 (For Location see Elevation)
Note:- Camber at center of Span = 2"
9 Panels @ 22'-1 5/8" = 198'-11 13/16" C.C. Pins.
Heavy Truss
Floor Plan
Light Truss

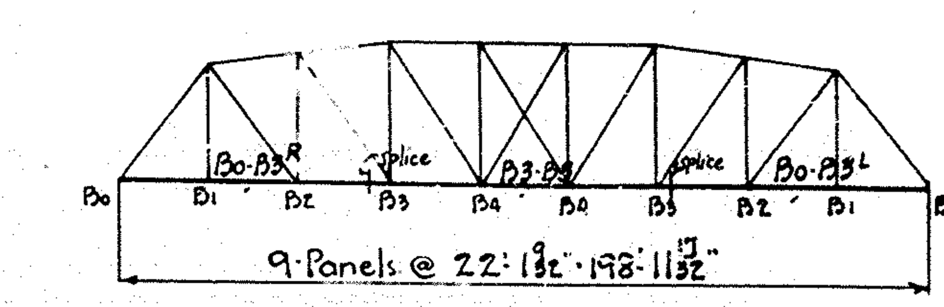
BOTTOM CHORD SECTION - B0-B3[R]



BOTTOM CHORD SECTION - B3-B3.

Required List.

7	Bottom Chord Sects.	B0-B3[R]
7	" " "	B0-B3[L]
7	" " "	B3-B3.



Marking Diagram - Heavy Truss.
(7 Spans Alike).

Bottom Chord Sections-Heavy Truss.

DUBOISTOWN BRIDGE

over the West Branch of the Susquehanna River.

Williamsport, Penna.

for

The Commissioners of Lycoming County, Williamsport, Pa.

Built by

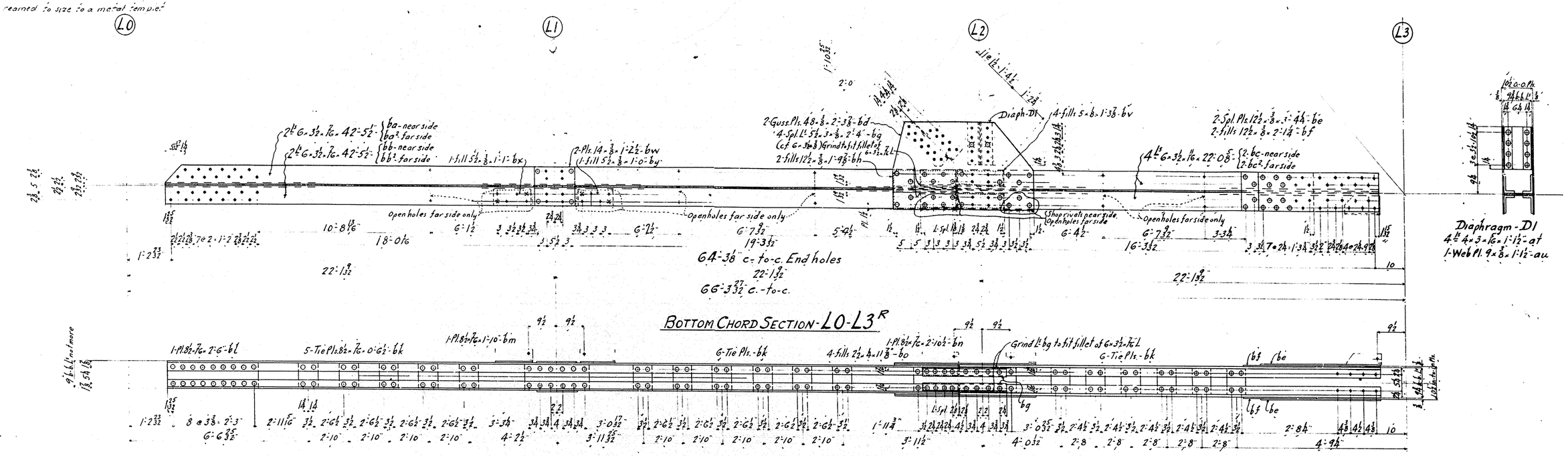
Bethlehem Steel Bridge Corporation.

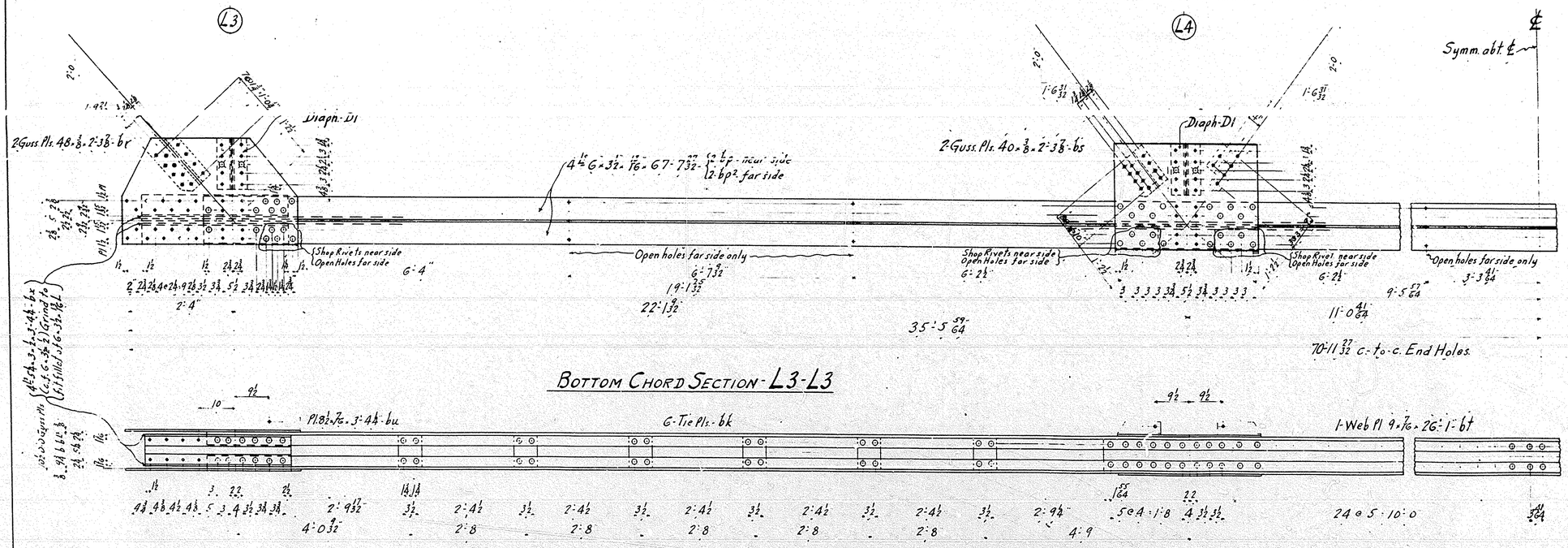
Steelton, Pa.

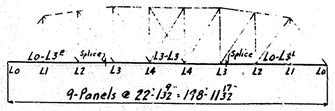
Scale: ¾"=1'0"   Dec. 6, 1922.

EB 2625

Open holes 7/8 dia.
Holes for floorbeam end connections to be punched 13/16 and reamed to size to a metal templet







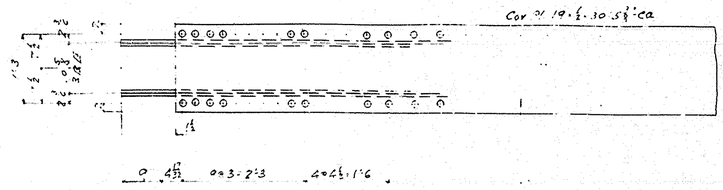
Marking Diagram - Light Truss
(7 Spans Alike)

Required List
7- Bottom Chord Sections - L0-L3R
7- " " " - L0-L3L
7- " " " - L3-L3

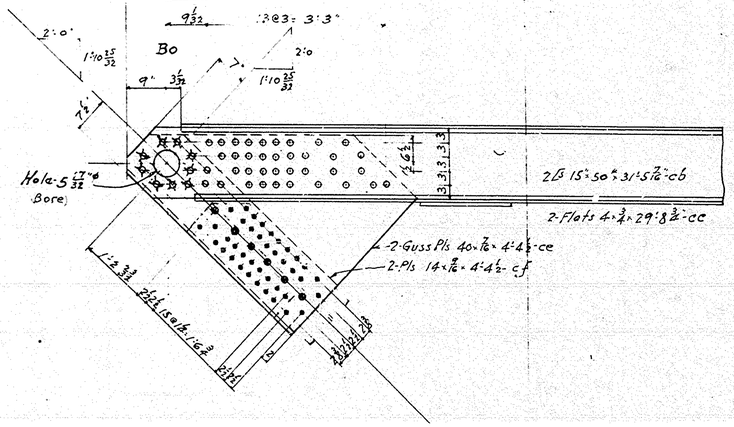
Bottom Chord Sections - Light Truss
DUBOISTOWN BRIDGE.
over the West Branch of the Susquehanna River
Williamsport Penna.
for
The Commissioners of Lycoming County, Williamsport, Pa.
Built by
Bethlehem Steel Co.
Steelton, Pa.
Dec. 13, 1922

Scale ¾" = 1'-0"
Made by: H.F.H.

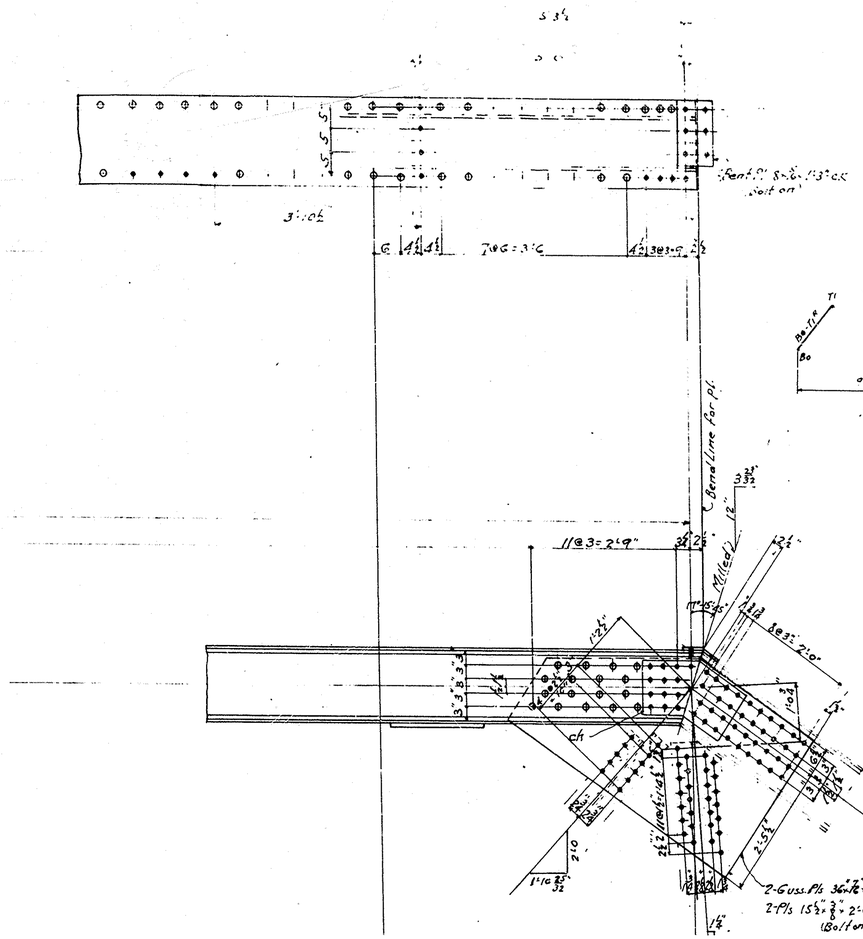
EB2625
Dwg No 4

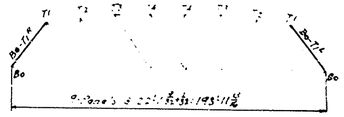


41@6=20'6"

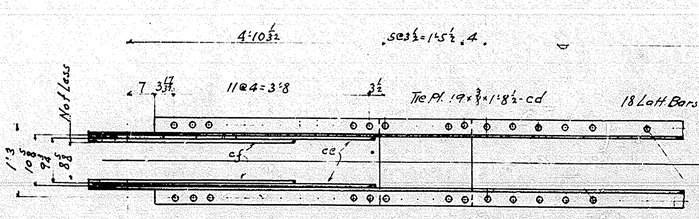


30'-6 1/32 c.to c.
23'-5 3/4

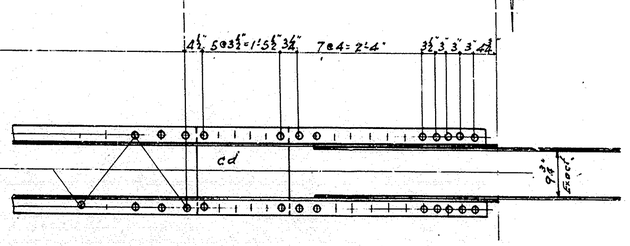




Marking Diagram-Heavy Truss
(7-Spans Alike)



{18@1'-0" 18'-0" Latt. Bars
36@6" 18'-0" Rivets}



Required List
7-End Posts - Bo-T1R
7 " " - Bo-T1L

Note: Compare templets with EB 2625 Dwg #6

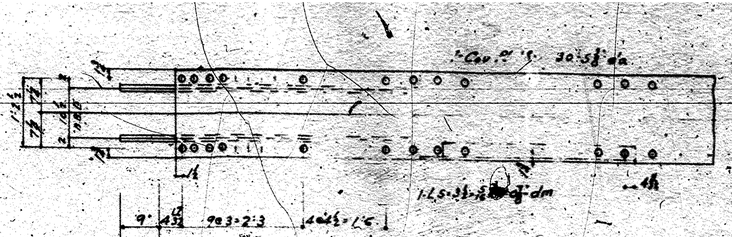
End Posts - Heavy Truss
DUBOISTOWN BRIDGE
over the West Branch of the Susquehanna River.
Williamsport Penna.
for
The Commissioners of Lycoming County, Williamsport Pa
Built by
Bethlehem Steel Co
Steelton, Pa

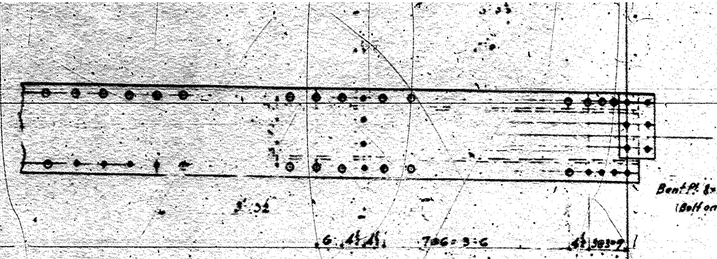
EB 2625
Dwg. # 5

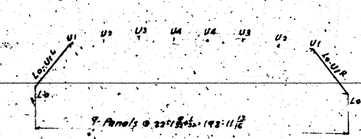
Dec-15-1922

Shop Paint:
One coat of vermillion redlead paint as per specifications

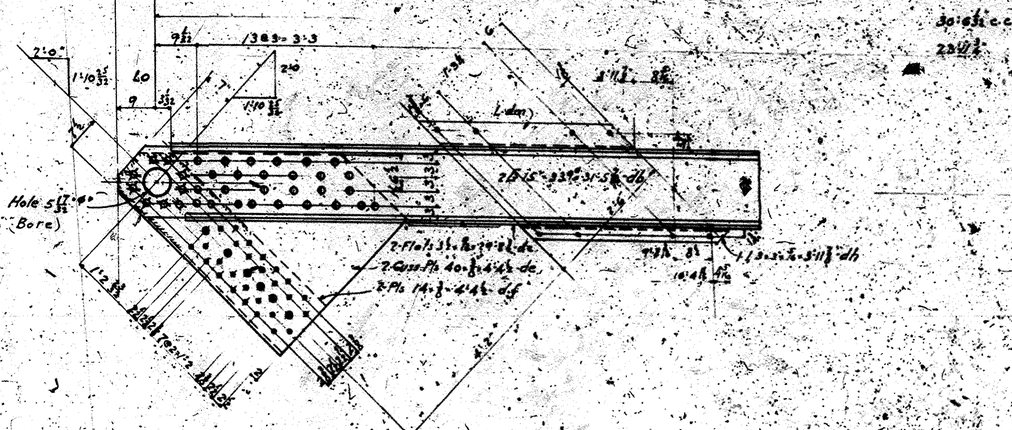
Scale ¾"=1'-0
Made by L.G.V.
Chkd. by "

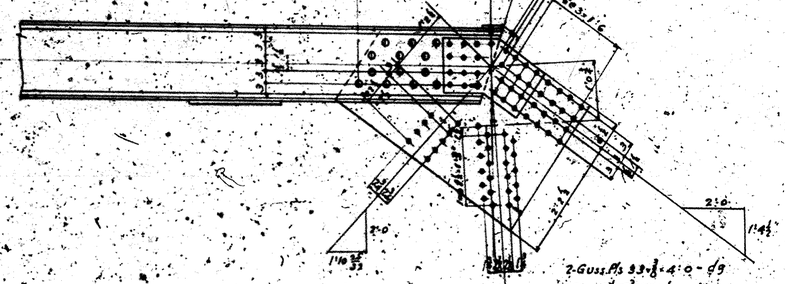


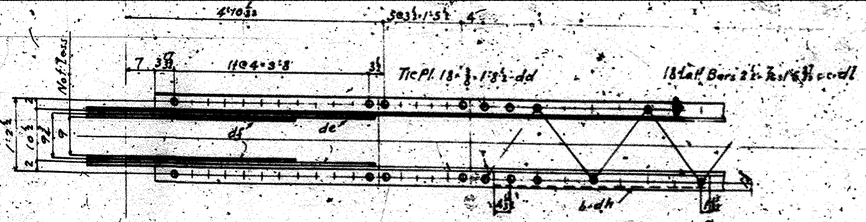


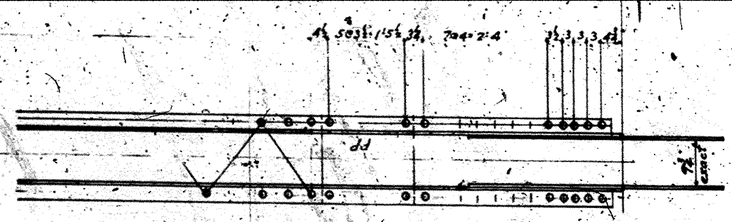


Marking Diagram - Light Truss
(7 Spans Alike)









Required List

7- End Posts - Lo-U1 R

7- End Posts - Lo-U1 L

Note: Compare templets with EB 2625 Dwg. 5

Shop Paint
One coat of vermillion red lead paint as per specifications.

End Posts - Light Truss

DUBOISTOWN BRIDGE

over the West Branch of the Susquehanna River

Williamsport, Penna.

for

The Commissioners of Lycoming County, Williamsport, Pa.

Built by

Bethlehem Steel Co

Steelton, Pa.

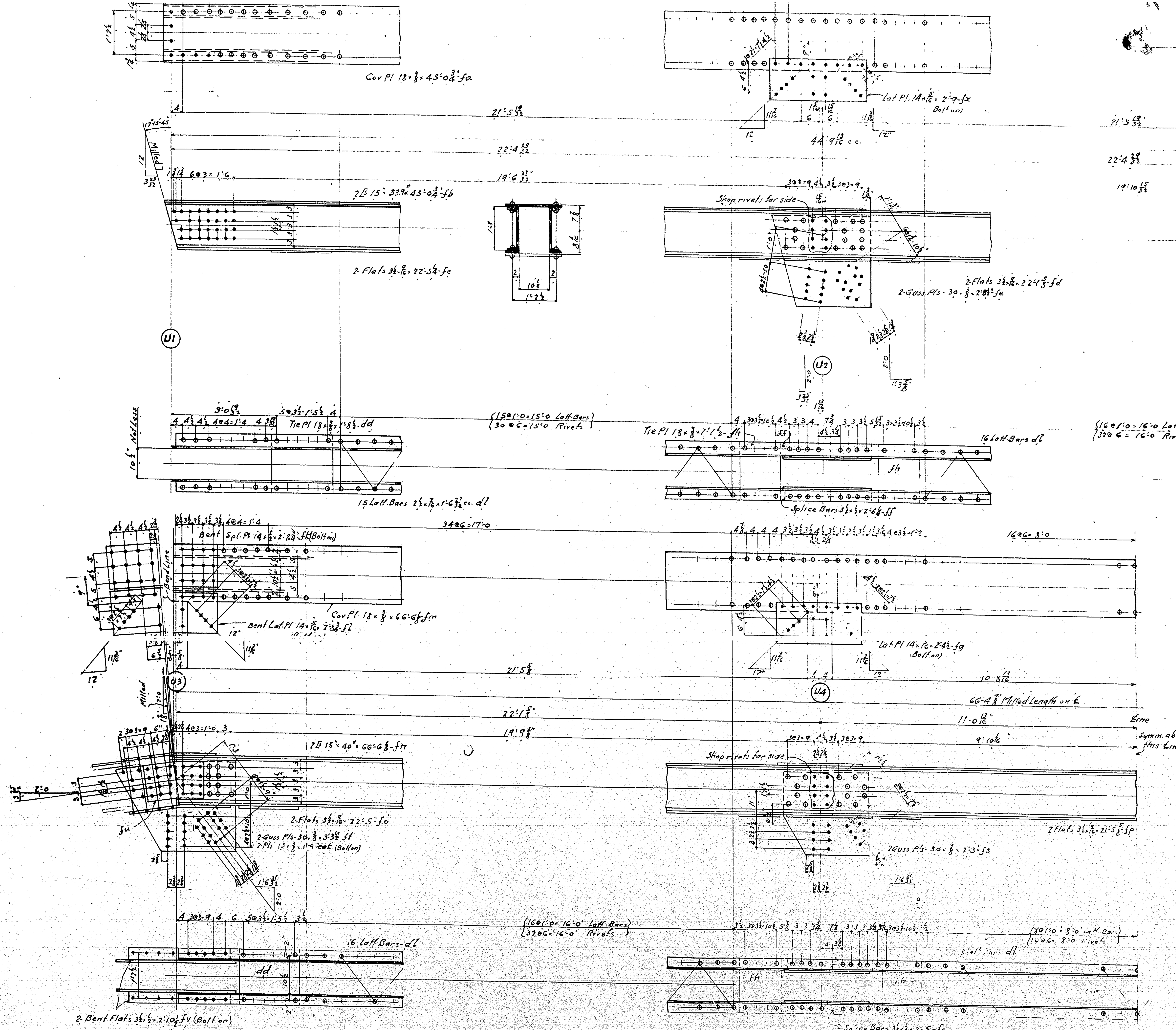
EB 7625

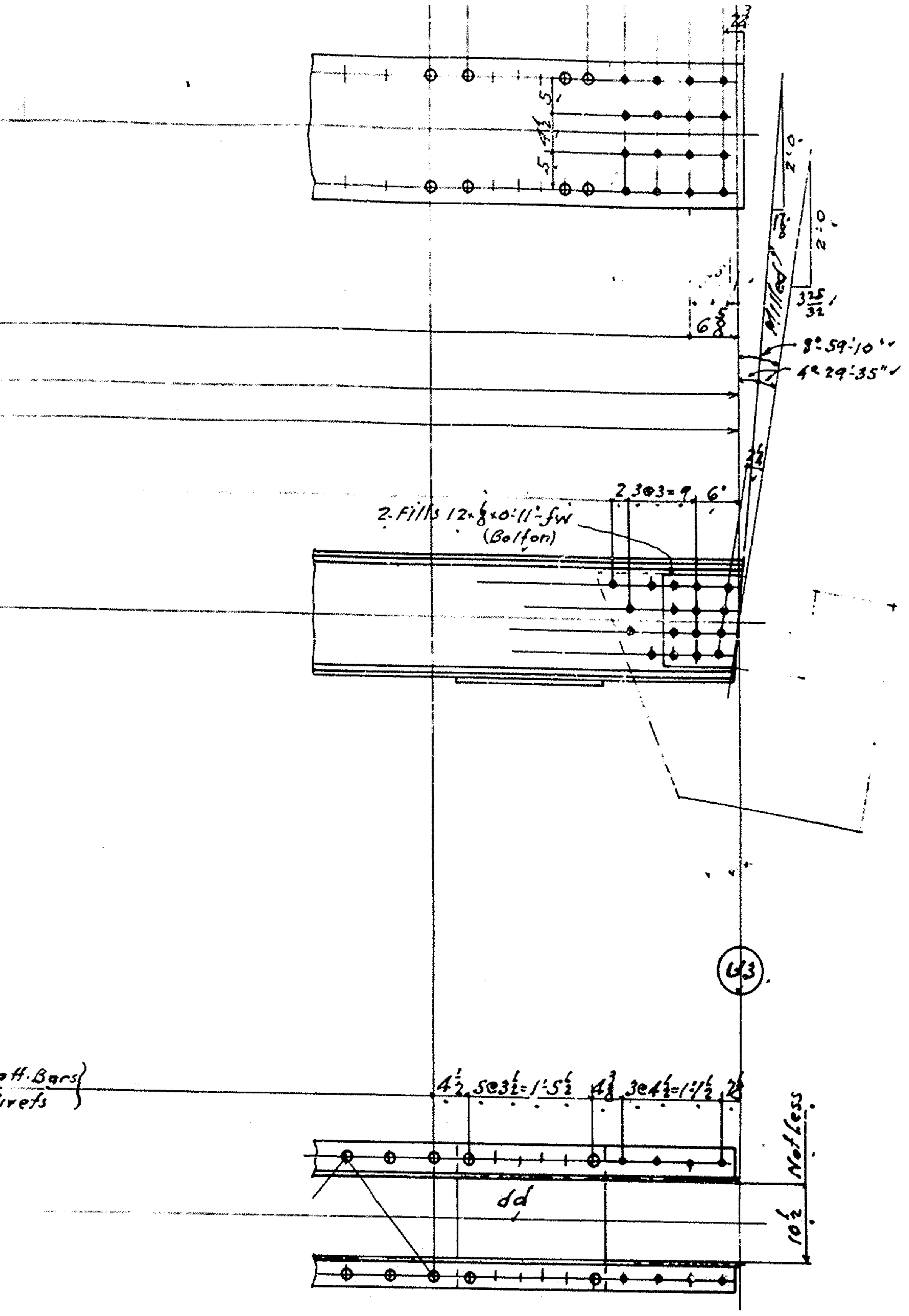
Dwg. 6

Dec-16-1922

Scale 3"=1'-0
Made by L.G.F.
Chkd by
In Charge
Bills C.

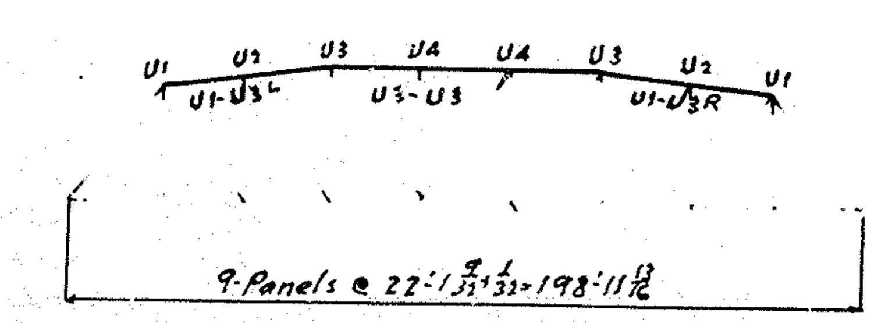

Cov. Pl. 19 x ½ x 22'-9⅞" ea
2 [15" 45# x 22'-9⅞" ec
2-Flats 4 x ½ x 22'-5¼" ef
T1
T2
T3
T4
15 Latt. Bars 2½ x ⅞ x 1'-7 7/32 c.c. cl
16 Latt Bars - cl
Splice Bar 4 x ½ x 2'-6¼" er
Bent Spl. Pl. 15 x ⅝ x 2'-8¾" eaf (Bolt on)
Bent Lat. Pl. 14 x 7/16 x 2'-8¾" eag (Bolt on)
omit rivets on these lines other side ℄ line
Cov. Pl. 19 x ½ x 43'-11⅞" ey
Shop Splice this side ℄ line only
66'-4⅞" Milled Length on ℄
Symm. abt. this ℄ except as noted
2 [15" 55# x 22'-6 7/16" eac
2 [15" 55# x 43'-11¾" eaa
2-Flats 4 x 13/16 x 22'-5" ead
2-Flats 4 x 13/16 x 21'-5⅝" eab
2-Guss. Pls. 36 x 7/16 x 3'-5" eah
2-Pls 13 x ⅜ x 1'-9" eak (Bolt on)
2Guss Pls - 32 x 7/16 x 2'-7" ew
2-Bent Flats 4 x ½ x 2'-10" eal (Bolt on)
2-Splice Bars 4 x ½ x 2'-5" eae
8 Latt. Bars - cl
Shop rivets far side
Milled
Required List
7 - Top Chord Sections - T1-T3R
7 - " " " T1-T3L
7 - " " " T3-T3
9-Panels @ 22'-1 3/32" = 198'-11 13/16"
Marking Diagram - Heavy Truss (7-Spans Alike)
Note: Compare templets with EB 2625 Drg #8
Shop Paint: One coat of vermillion red lead paint as per specifications.
Top Chord Sections - Heavy Truss
DUBOISTOWN BRIDGE
over the West Branch of the Susquehanna River
Williamsport Penna.
for
The Commissioners of Lycoming County, Williamsport, Pa.
Built by
Bethlehem Steel Co.
Steelton, Pa.
EB 2625
Dwg. # 7
Dec 14, 1922
Scale ⅜" = 1'-0
Made by L.G.V.
Chkd. by
In Charge


Cov Pl 18 x 3/8 x 45'-0 3/4 -fa
2 [15" 33.9# x 45'-0 3/4 -fb
2-Flats 3 1/2 x 7/16 x 22'-5 3/8 -fc
Lat Pl. 14 x 5/16 x 2'-9 -fx (Bolt on)
Shop rivets far side
2-Flats 3 1/2 x 7/16 x 22'-4 5/8 -fd
2-Guss Pls - 30 x 3/8 x 2'-8 1/2 -fe
15 Latt. Bars 2 1/4 x 7/16 x 1'-6 3/4 cc -dl
16 Latt. Bars dl
Cov Pl 18 x 3/8 x 66'-6 -fm
Lat Pl 14 x 5/16 x 2'-4 1/2 -fg (Bolt on)
66'-4 7/8 Milled Length on ℄
Symm. abt this Line
2 [15" 40# x 66'-6 -fn
Shop rivets far side
2-Flats 3 1/2 x 7/16 x 22'-5 -fo
2 Flats 3 1/2 x 7/16 x 21'-5 5/8 -fp
16 Latt. Bars - dl
2-Bent Flats 3 1/2 x 1/2 x 2'-10 1/2 -fv (Bolt on)
Splice Bars 3 1/2 x 1/2 x 2'-5 -fr
U1
U2
U3
U4



Required List

7- Top Chord Sections -	U1-U3 R
7- " " "	U1-U3 L
7- " " "	U3-U3



Marking Diagram - Light Truss
(7-Spans Alike)

Note: Compare templets with EB 2625 Dwg #7

Top Chord Sections - Light Truss

DUBOISTOWN BRIDGE.

over the West Branch of the Susquehanna River.

Williamsport Penna.

for

The Commissioners of Lycoming County. Williamsport, Pa

Built by

Bethlehem Steel Co

Steelton, Pa.

Dec-18-1922

EB 2625
Dwg #8

Scale 3/4" = 1'-0
Made by L.G.V.
Chkd by
In Charge C.W. Baucher

Shop Paint
One coat of vermillion red lead
paint as per specifications

Material for Expansion Shoe "ES"

- 2 - 15" [· 50# · 2'-0" - ga
- 2 - L's - 6 · 4 · $\frac{5}{8}$ · 2'-0 - gb
- 2 - Pls. - $14\frac{3}{4}$ · $\frac{11}{16}$ · 2'-0 - gc
- 2 - Fills - $10\frac{3}{4}$ · $\frac{5}{8}$ · 1'-$6\frac{1}{2}$ - gd
- 2 - L's - $3\frac{1}{2}$ · 3 · $\frac{3}{8}$ · 1'-$2\frac{1}{8}$ - ge
- 1 - Pl. - 12 · $\frac{3}{8}$ · 1'-$2\frac{1}{8}$ - gf
- 1 - Pl. - 24 · $\frac{7}{8}$ · $1\frac{3}{16}$ · 2'-9" - gg

Material for Fixed Shoe "FS"

- 2 - [s .... ga
- 2 - L's .... gb
- 2 - Pls. .... gc
- 2 - Fills .... gd
- 2 - L's .... ge
- 1 - Pl. .... gf
- 1 - Pl. - 24" · $\frac{7}{8}$ · 2'-9" - gh

Material for CB1-2-3-4 & 5

- 1 - 15" I · 42.9# · 2'-$4\frac{3}{4}$ - {gaa for CB1 & 2; gab for CB3 & 5; gac for CB4}
- 2 L's - 6 · 4 · $\frac{3}{8}$ · 1'-0 - gad for CB1-3 & 4
- 2 L's - 6 · $3\frac{1}{2}$ · $\frac{3}{8}$ · 1'-0 - gag for CB2 & 5
- 1 L - 6 · 4 · $\frac{3}{8}$ · 0'-11 - {gah for CB1 only; gak for CB2 only}
- 1 L - 6 · 4 · $\frac{3}{8}$ · 0'-$9\frac{1}{2}$ - gal for CB1 & 2 only

Material for Roller Nests - "RN"

- 1 - Seg. Roller - 6" · 4" · 2'-0" - gk Finished all over
- 4 " " - 6 · 4 · 2'-0 - gl " "
- 4 - Side Bars .... - gm
- 2 - Lock Bars .... - gn
- 4 - Stud Bolts - $3\frac{3}{8}$ lg. - go Shouldered Hex Nut $\frac{7}{8}$" tap
- 16 " " - $2\frac{3}{4}$ lg. - gp " "

Material for BP1

- 1 - Pl. 33 · $\frac{1}{2}$ · 4'-$3\frac{13}{16}$" - gr
- 1 - Pl. 24 · $\frac{5}{8}$ · $\frac{15}{16}$ · 2'-9 - gs
- 1 Pl. 24 · $\frac{5}{8}$ · 2'-9 - gt
- 8 Flats - 4 · $\frac{3}{4}$ · 2'-9 - {7-gu; 1-gu²}
- 8 " " " " - {7-gv; 1-gv²}
- 8 " " " " - {7-gw; 1-gw²}

Material for BP2

- 1 - Pl. - 33 · $\frac{1}{2}$ · 2'-0" - gx
- 1 - Pl. .... gt
- 8 - Flats .... {7-gu; 1-gu²}
- 8 .... {7-gv; 1-gv²}
- 8 .... {7-gw; 1-gw²}

Material for BP3

- 1 - Pl. 33 · $\frac{1}{2}$ · 2'-0 - gy
- 1 - Pl. .... gs

Anch. Bolts - $1\frac{1}{4}$" · 2'-0 lg. - 3 thrd. Hex Nut - AB
Washers 3" · $\frac{1}{4}$ thk · $1\frac{3}{8}$" hole W2
Gas Pipe - $1\frac{1}{4}$" · 0'-7 lg. - GP (to be used at Exp. Shoes only)
3 - · $\frac{7}{8}$" · - $3\frac{1}{2}$ lg. · $1\frac{1}{2}$ thrd. hex Hd & Nut - B1

Required List

7 - Expansion Shoes	ES[R]	1 - Bed Plates	BP3[R]
7 - " "	ES[L]	1 - " "	BP3[L]
7 - Fixed "	FS[R]	14 - Roller Nests	RN
7 - " "	FS[L]	42 - Pcs. Gas Pipe	GP
6 - Bed Plates	BP1[R]	84 - Anchor Bolts	AB
6 - " "	BP1[L]	112 - Bolts	B1
1 - " "	BP2[R]	224 - Beveled Washers	W1
1 - " "	BP2[L]	84 - Washers	W2
6 - Beams	CB1[R]	6 - Beams	CB3
6 - "	CB1[L]	6 - "	CB4
1 - "	CB2[R]	1 - "	CB5[R]
1 - "	CB2[L]	1 - "	CB5[L]

Shoes - Roller Nests - etc.

Duboistown Bridge

over the West Branch of the Susquehanna River

Williamsport Penna.

for

The Commissioners of Lycoming County, Williamsport Pa.

Built by

Bethlehem Steel Co.

Steelton, Pa.

EB 2625
Dwg. # 9

Scale: $1\frac{1}{2}$" = 1'-0 & Half size
Made by RWBH.
Checked by
In charge of CWB

Dec. 15th 1922

Rivets 3/4" dia.
Open holes 13/16" dia.
End connections of floorbeams and sidewalk brackets to be punched 9/16" and reamed to an iron template 1" thick.

Required List

14-	Floorbeams	FB1
14-	"	FB2
28-	"	FB3
56-	Side Walk Brackets	SWB
14-	Bottom Struts	BS1
7-	" Lat. Plates	LP1^R
7-	" " "	LP1^L
7-	" " "	LP2^R
7-	" " "	LP2^L
14-	" " "	LP3^R
14-	" " "	LP3^L
7-	" " "	LP4^R
7-	" " "	LP4^L
7-	" " "	LP5^R
7-	" " "	LP5^L
7-	" " "	LP6^R
7-	" " "	LP6^L
7-	" " "	LP7^R
7-	" " "	LP7^L
7-	" " "	LP8^R
7-	" " "	LP8^L
14-	" " "	LP9
~~7-~~	~~" " "~~	~~LP9^L~~
126-	Sidewalk Struts	SS1

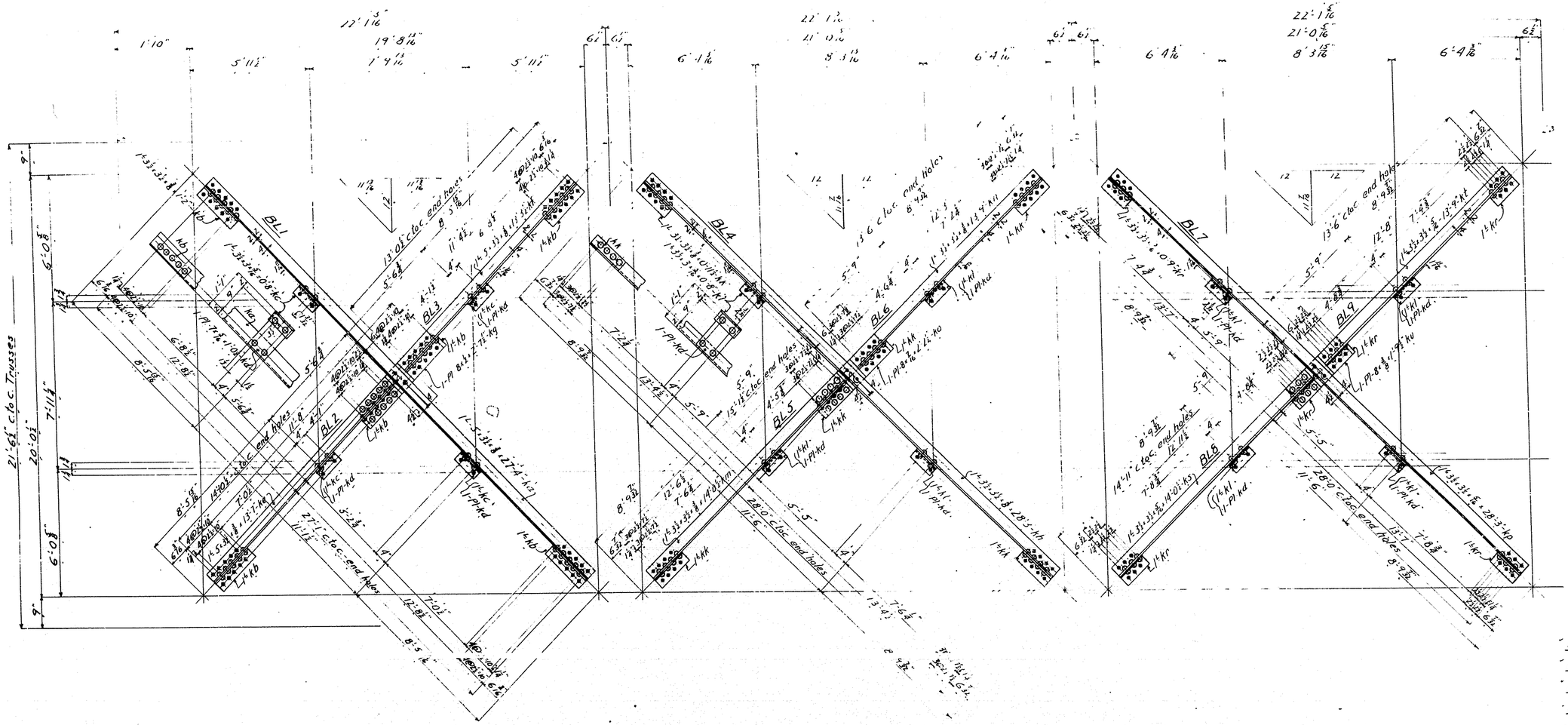
Floor beams, etc.
DUBOISTOWN BRIDGE.
over the West Branch of the Susquehanna River.
Williamsport Penna.
for
The Commissioners of Lycoming County, Williamsport, Pa.
Built by
Bethlehem Steel Co.
Steelton, Pa.

Dec. 19, 1922.

EB 2625

Scale 3/4" = 1'-0"

Rivets $\frac{3}{4}$"
Open Holes $\frac{13}{16}$"



Required List

- 14-Bottom Laterals-BL1
- 14- " " BL2
- 14- " " BL3
- 14- " " BL4
- 14- " " BL5
- 14- " " BL6
- 35- " " BL7
- 35- " " BL8
- 35- " " BL9
- 98 Top Laterals TLIN

Laterals.
DUBOISTOWN BRIDGE
over the West Branch of the Susquehanna R.
Williamsport, Penna.
for
The Commissioners of Lycoming County Wmsp't, Pa
Built by
Bethlehem Steel Co.
Steelton, Pa
Dec. 22, 1922.

EB2625
Dwg No. 11

Scale- ¾" 1 0
Made by - HFH
Traced by - R.S.R
Chkd by -
In Charge -

Shop Paint -

Diagonal - U1-L2
" - T1-B2

Diagonal - T2-B3

Diagonal - T3-B4

Diagonal - U2-L3

Diagonal - U3-L4

Marking Diagram - Heavy Truss
(7 Spans Alike)

Marking Diagram - Light Truss
(7 Spans Alike)

Required List

14	Diagonals	T1-B2
14	"	T2-B3
14	"	T3-B4
7	"	T4-B4
7	"	T4-M
7	"	M-B4
14	"	U1-L2
14	"	U2-L3
14	"	U3-L4
7	"	U4-L4
7	"	U4-M
7	"	M-L4

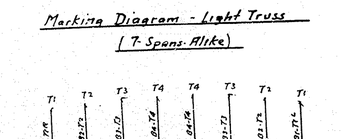
Diagonals
DUBOISTOWN BRIDGE
over the West Branch of the Susquehanna River.
Williamsport Penna.
for
The Commissioners of Lycoming County, Williamsport, Pa.
Built by
Bethlehem Steel Co.
Steelton, Pa.

EB 2625
Dwg # 12

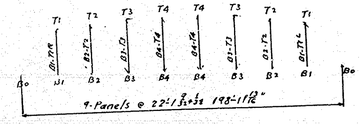
Dec. 22, 1922

Scale 3/4" = 1'-0"
Made Su L&V

Required List		
7	Hangers	L1-U1R
7	"	L1-U1L
7	"	B1-T1R
7	"	B1-T1L
14	Post	L2-U2
14	"	L3-U3
14	"	L4-U4
14	"	B2-T2
14	"	B3-T3
14	"	B4-T4



Marking Diagram - Light Truss
(7 Spans Alike)



Marking Diagram - Heavy Truss
(7 Spans Alike)

Posts & Hangers

DUBOISTOWN BRIDGE

over the West Branch of the Susquehanna River.
Williamsport Penna.
for
The Commissioners of Lycoming County. Williamsport Pa
Built by
Bethlehem Steel Co
Steelton. Pa

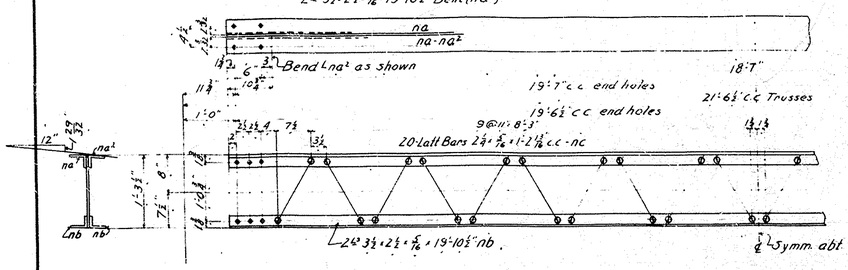
EB 2625
Dwg # 13

Dec 29. 1922

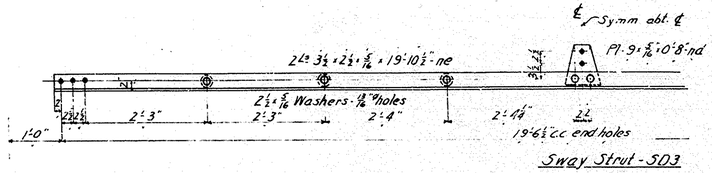
Scale ¾"=1'0
Made by L G V

Rivets - $\frac{3}{4}$"
Open Holes - $\frac{13}{16}$"

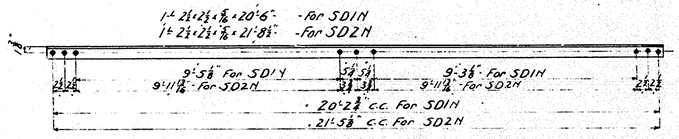
2 L's 3½ x 2½ x $\frac{5}{16}$ x 19'-10½" - na - For T2-U2 & T4-U4
2 L's 3½ x 2½ x $\frac{5}{16}$ x 19'-10½" - Bent {na / na²} For T3-U3

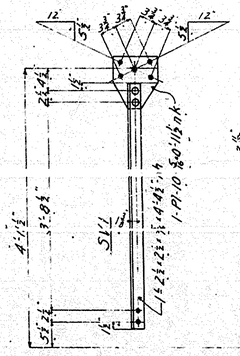


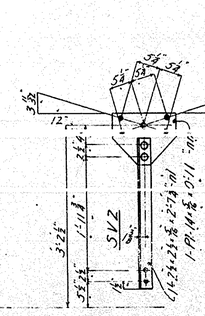
Strut - T2-U2
" - T3-U3
" - T4-U4

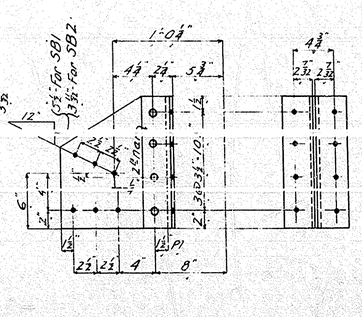


Sway Strut - SD3

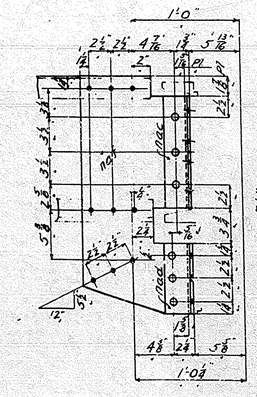


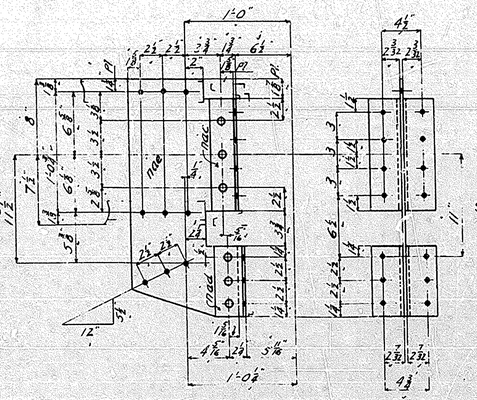


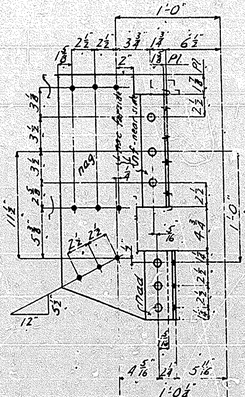


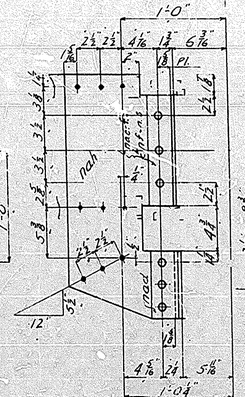


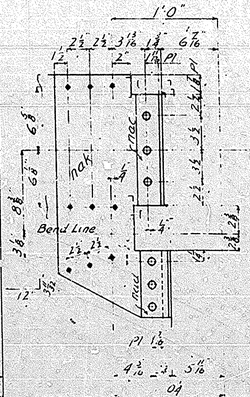
Brackets SB1 - SB2
2 L's 3½ x 3½ x ⅝ x 1'-2" - nan
1 Pl. 12 x ⅝ x 1'-2" - nao - For SB1"
1 Pl. 12 x ⅝ x 1'-2" - nao² - For SB2"

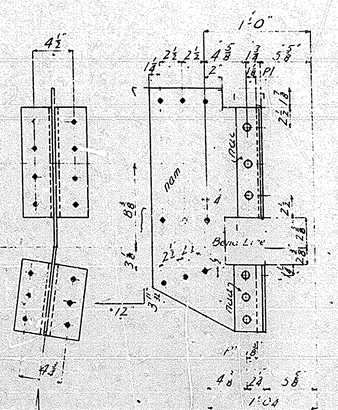


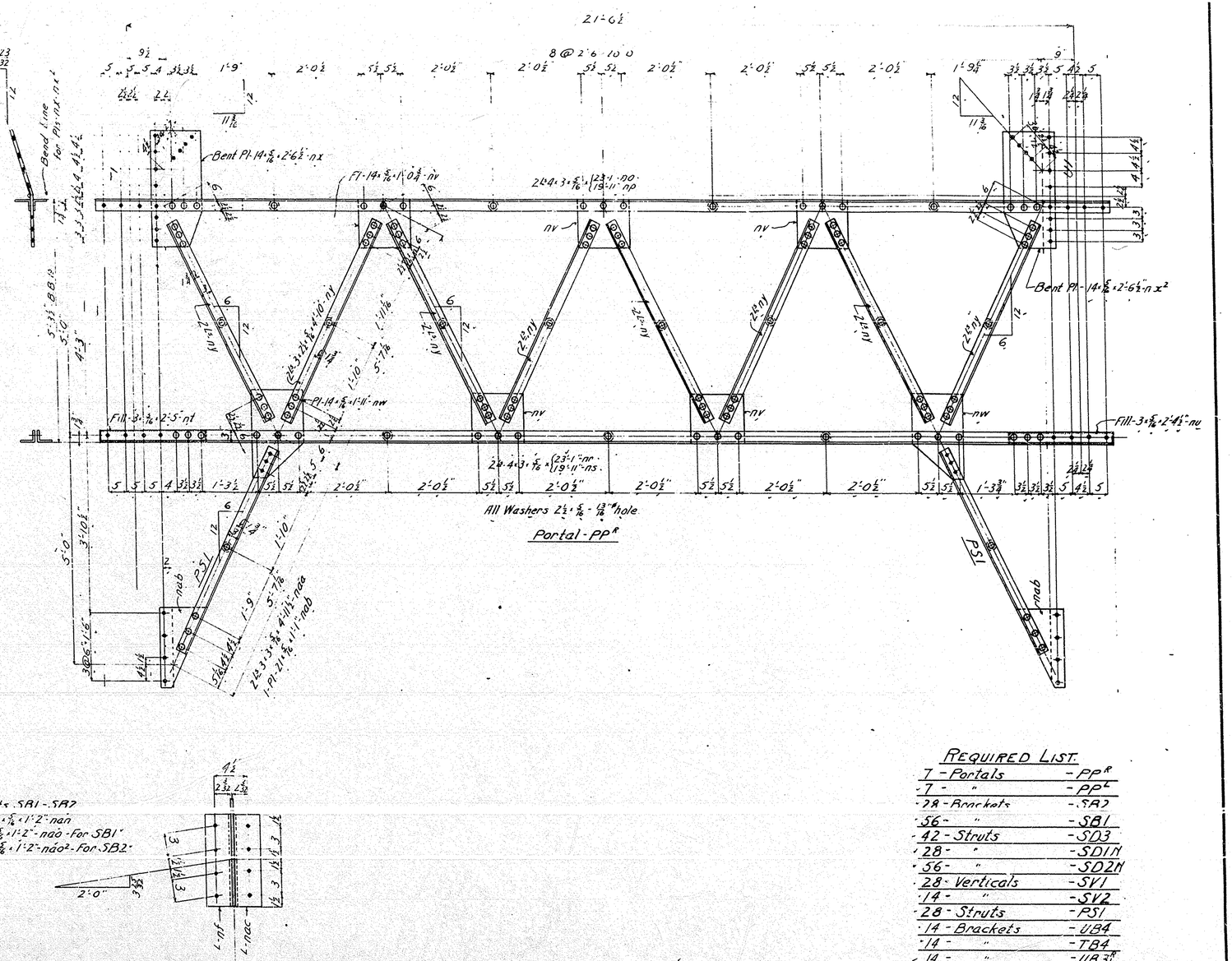












REQUIRED LIST.	
7 - Portals	- PP^R
7 - "	- PP^L
28 - Brackets	- SA3
56 - "	- SB1
42 - Struts	- SD3
28 - "	- SD1N
56 - "	- SD2N
28 - Verticals	- SV1
14 - "	- SV2
28 - Struts	- PS1
14 - Brackets	- UB4
14 - "	- TB4
14 - "	- UB3^R
14 - "	- TB3^R
7 - "	- UB2^R
7 - "	- UB2^L
7 - "	- TB2^R
7 - "	- TB2^L
14 - Struts	- T2-U2
14 - "	- T3-U3
14 - "	- T4-U4

Portals and Sway Braces
DUBOISTOWN BRIDGE.
over the West Branch of the Susquehanna River
Williamsport, Penna.
for
The Commissioners of Lycoming County - Williamsport, Pa
Built by
Bethlehem Steel Co.
Steelton, Pa

EB2625
Dwg. #14

Scale - ¾" = 1'-0"
Made by - LGV
Traced by - RSR
Jan. 5, 1923

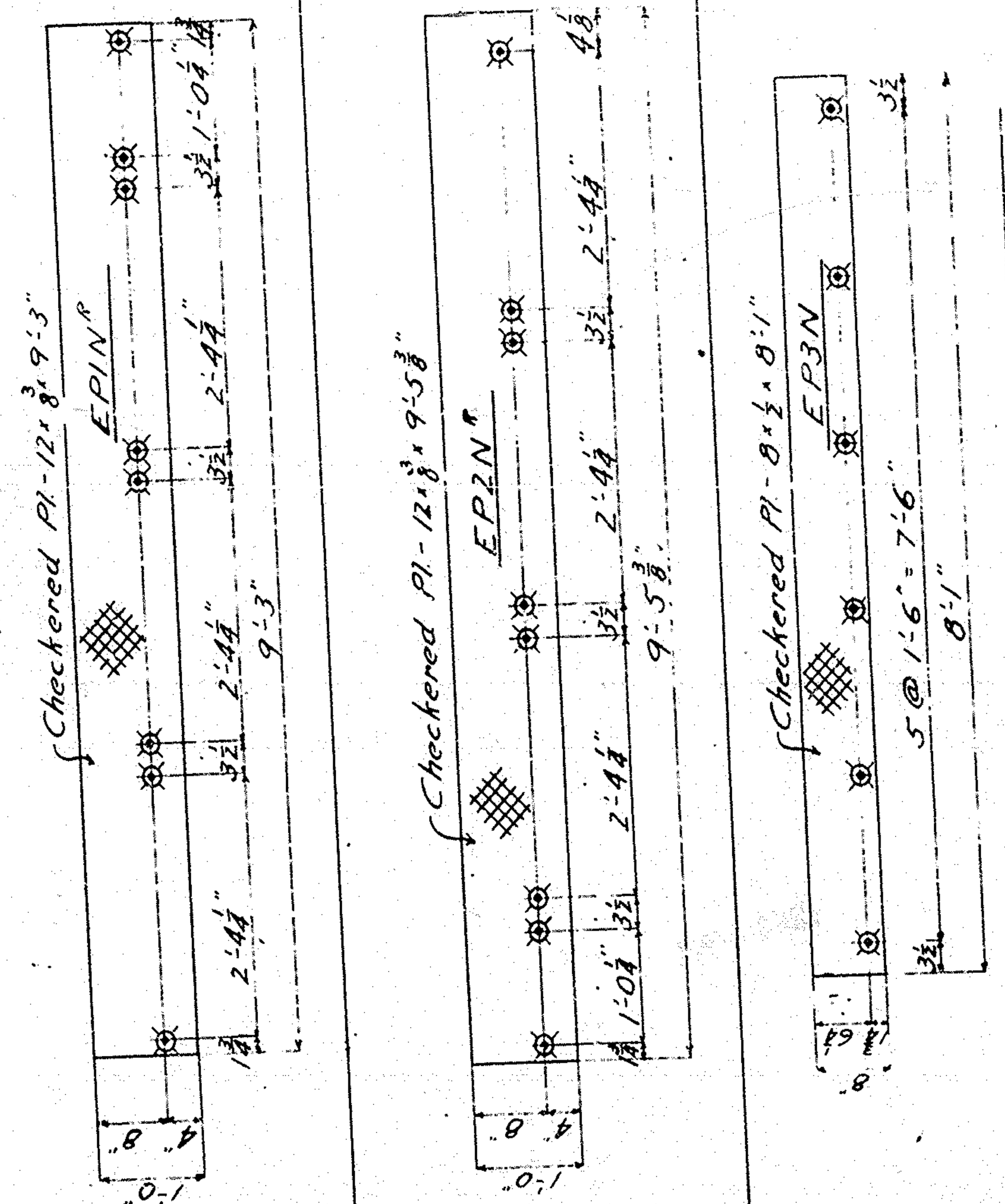
BETHLEHEM STEEL BRIDGE CORPORATION

Bill and Sketches for Checkered Plates [struck out] Duboistown Bridge
For The Commissioners of Lycoming County - Williamsport, Pa.
CONTRACT No. EB2625
SHEET No. F2
Paint One coat of vermillion red lead as per specifications
Sketches and Bill made by R.S.R. 11/26 1922

[redacted]

Mark	Description	Finished Size
EP1N 7 / EP1N 1	Checkered Pls. 12 x 3/8	9'-3"
EP2N 7 / EP2N 1	Checkered Pls. 12 x 3/8	9'-5 3/8"
EP3N 8	Checkered Pls. 8 x 1/4	8'-1"

[redacted]



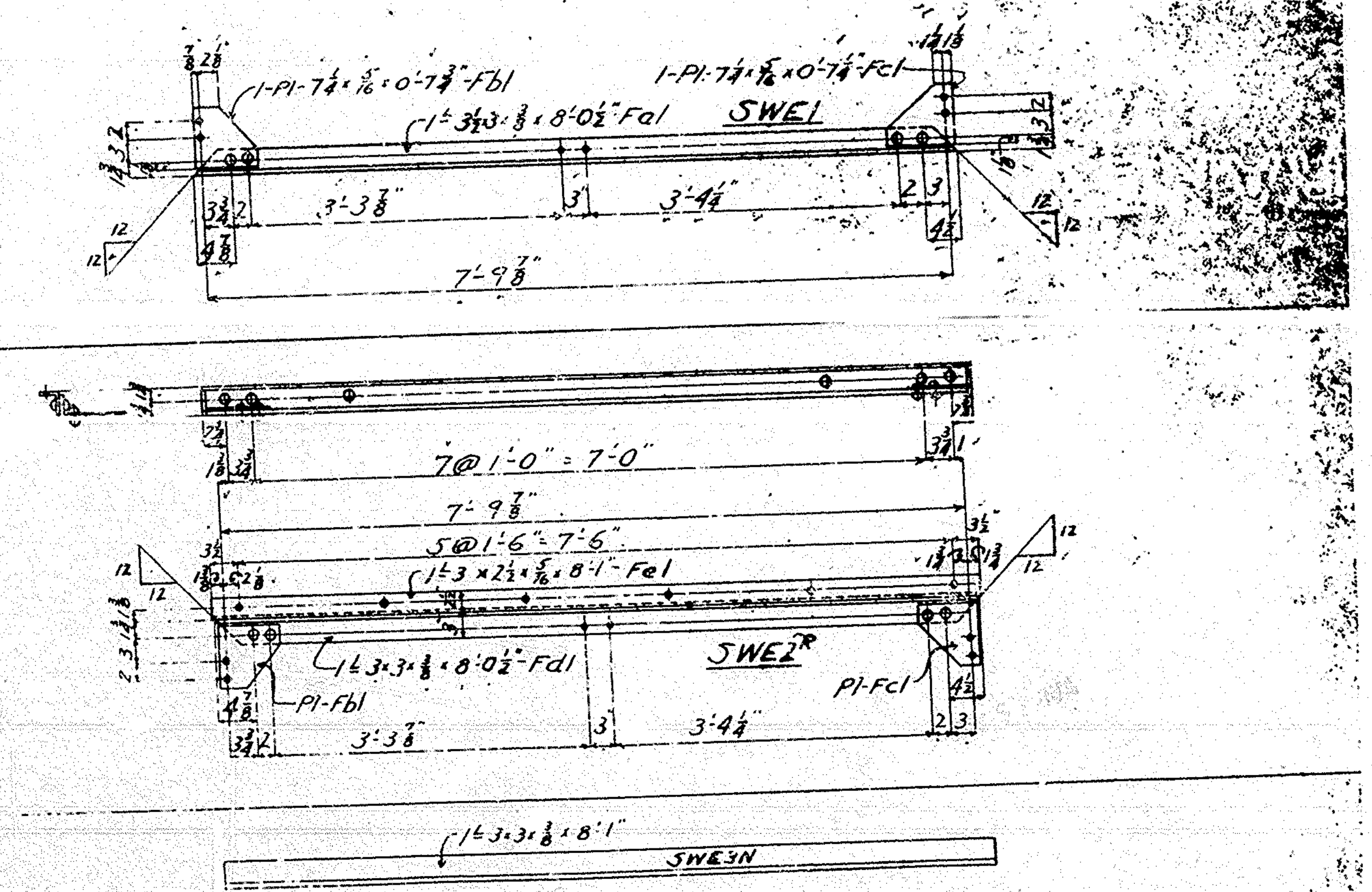
BETHLEHEM STEEL BRIDGE CORPORATION

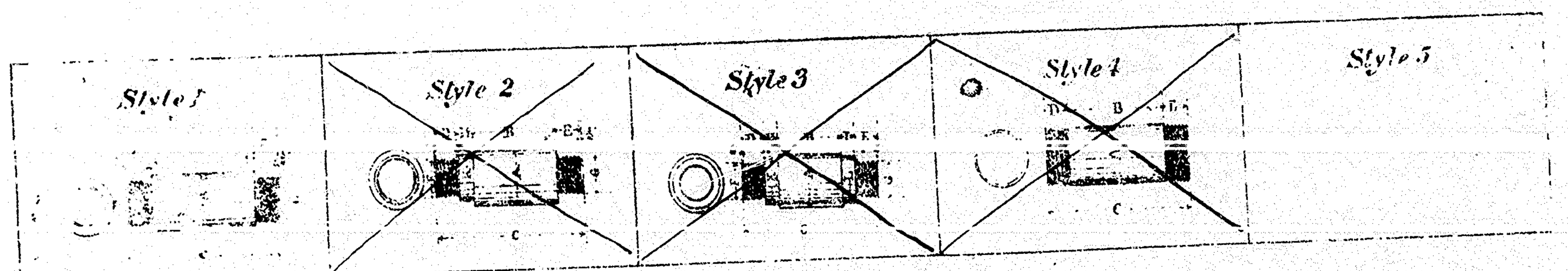
Bill and Sketches for Sidewalk Expansion Ls [Floor Beams struck out] Duboistown Bridge
For The Commissioners of Lycoming County - Williamsport, Pa.
CONTRACT No. EB2625
SHEET No. F1
Rivets 3/4"
Holes 13/16"
Paint One coat of vermillion red lead as per specifications.
Sketches and Bill made by R.S.R. 11/23 1922
Material Checked by .192
Finished Sheet Checked by 1-3- 1923

[redacted]

Mark	No.	Description	Section	Length
SWE1	6	Sidewalk Expansion Ls - SWE1		
	6	Ls	3 1/2 x 3 x 3/8	8'-0 1/2" Fal
	6	Pls.	7 1/4 x 3/8	0'-7 1/4" Fbl
	6	"		0'-7 1/4" Fcl
SWE2R / SWE2L	8	Sidewalk Expansion Ls (7-SWE2R, 1-SWE2L)		
	8	Ls	3 x 2 1/2 x 5/16	8'-1" Fel
	8	"	3 x 3 x 3/8	8'-0 1/2" Fdl
	8	Pls.	7 1/4 x 5/16	0'-7 1/4" Fbl
	8	"		0'-7 1/4" Fcl
SWE3N	2	Ls	3 x 3 x 3/8	8'-1"

[redacted]





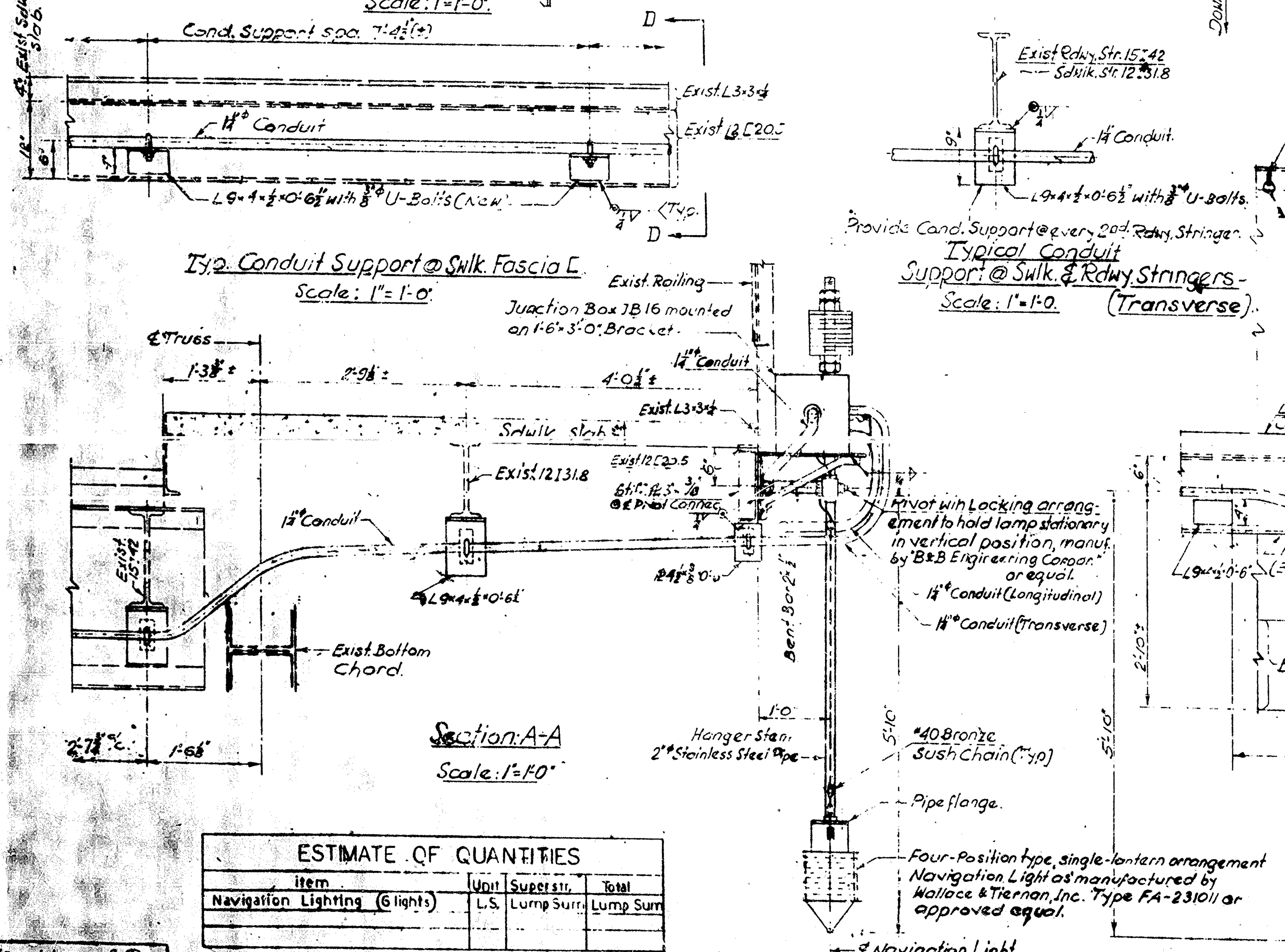
ENGINEER'S OFFICE
Bridge and Construction Department
BETHLEHEM STEEL COMPANY
Steelton, Pa. Dec. 15th 1922

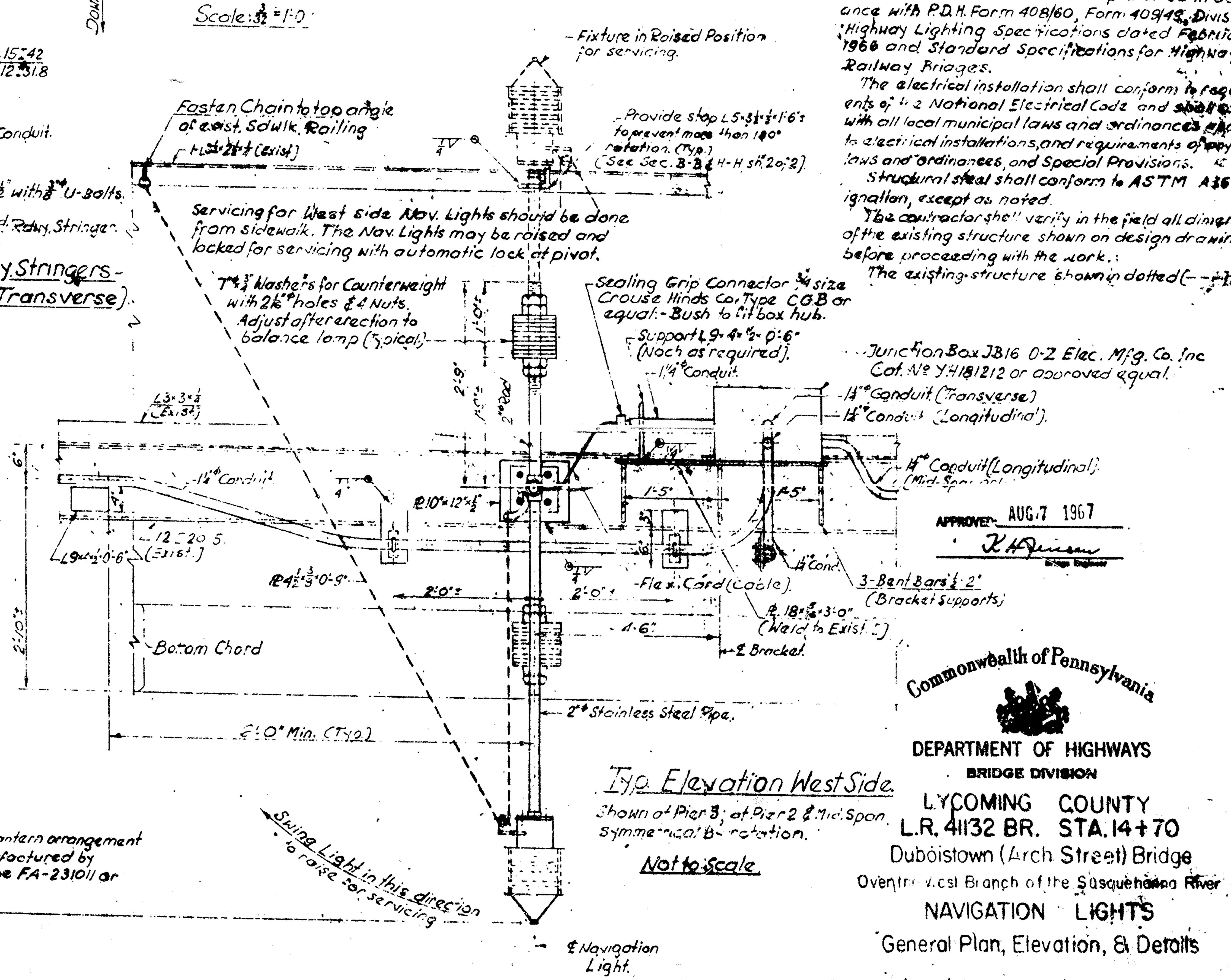
Checked 1-3-23
Contract No. EB2625
Drawing No. F3
Material.
Inspection.

Bill of Pins for Duboistown Bridge, over West Branch of Susquehanna River, for the Commissioners of Lycoming County.

Mark	Number Required	Style	A	B	C	D	E	F	G	H	I	K	L
P	28	1	5 1/2	1'-5 1/4	1'-8 1/2	1 5/8	1 5/8	4	4	—	—	—	—
P9	56	Lomas Nuts - P9 (Ship 2 on each pin)											
N15S	2	Short Pilot Nuts - N15s											
M9	2	Driving Nuts - M9											

P { WEBS 6348, MS 7139, SF 6347
P9 { MS 7109, SF 6347
N15S { MS 7109, MS 6346
M9 MS 6346





NOTES.

All materials and workmanship shall be in accordance with P.D.H. Form 408/60, Form 409/45, Division 10 Highway Lighting Specifications dated February 15, 1960 and Standard Specifications for Highway and Railway Bridges.

The electrical installation shall conform to requirements of the National Electrical Code and shall comply with all local municipal laws and ordinances relating to electrical installations, and requirements of any local laws and ordinances, and Special Provisions.

Structural steel shall conform to ASTM A36 designation, except as noted.

The contractor shall verify in the field all dimensions of the existing structure shown on design drawings before proceeding with the work.

The existing structure shown in dotted (- - -) lines.

ESTIMATE OF QUANTITIES			
Item	Unit	Superstr.	Total
Navigation Lighting (6 lights)	L.S.	Lump Sum	Lump Sum

Designed by: E.D.
Traced by: E.D.
Checked by: K.V.

Designed by P.D.H. - C.O. Bridge Div.

APPROVED: AUG 7 1967

Bridge Engineer

Commonwealth of Pennsylvania
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

LYCOMING COUNTY
L.R. 41132 BR. STA. 14+70
Duboistown (Arch Street) Bridge
Over the West Branch of the Susquehanna River
NAVIGATION LIGHTS
General Plan, Elevation, & Details

SHEET 1 OF 2

S-8728

Provide stop - 3½"x3½"x¼" to prevent more than 180° rotation (Typ.)

The electric Control Device facing North Sky (Provide clearance for Nav. Light)

5'-8"±

L 5x5x½

L4x4x½ Typ.

L3x3½

L3x3⅜

1'-2"

Weather proof Junction Box - Crouse Hinds Co. Type GUJB or equal, mounted on ser. platform floor plate.

Existing Railing (Provide Opening for Service Platf.)

4'-0"

3'-6"

2'-9"

1'-9"

2" ø Rod

Flexible (Cable)

Stainless Connector ¾" Size

¾" Conduit to Phot. Cell

Rise Box & Main Switch (Locked)

Primary Junction Box.

STA 18.5

2'-10"

12" Conduit to be bent up behind Serv. Platform. (See Sec E-E)

⅜" Floor Plate Sand Finish.

10 F 20 Exist.)

10 F 15.3

6'-3"

Shift ø 3'-6" ℄ Pivot Conn (Typ.)

12 F 20.7

ℛ 4½"x⅜"x 0'-9"

ℛ 10"x12"x½

EXISTING 24" WATER MAIN

Existing 10" Gas Main

1¼" Conduit

L 9"x4"x⅜"x 0'-6½"

10 WF 21 (New)

10 WF 49 (Exist.)

4'-11"

5'-1"

Provide with loading arrangement to hold large stationary in vert. position.

Hinge Stem 2"ø Std. Mass. Steel Pipe

1'-0"

℄ Nav. Light

℄ Pier #2

Exist. Truss Shoe

Span 3

Span 2

Downstream East Side

PLAN

Scale: ¼"=1'-0"

TYP. SERVICE PLATFORM SUPPORT DETAILS AT PIERS 2 & 3 - EAST SIDE.

(Shown Pier 2; Pier 3 similar by rotation.)

Designed by: E.D.
Traced by: L.W.
Checked by:

ℛ 4½"x⅜"x 0'-9" (Typ.) (New)

Meter Base, mounted on 10"ø Steel Pipe at El. 5'-3" above Roadway Surface.

ℛ 10"x⅜"x 1'-0" Welded to Exist. ℄

Meter to be supplied by others.

F

L3"x2½"x 5/16 (Exist.)

Exist. Railing

14" Conduit (New)

Top Exist. Deck

Bot. of Steel

18'-0"

2 L 2½"x2½"x 5/16 (Exist.)

Downstream

SECTION E-E.

Not to scale

G

℄ Truss.

L 2½"x2½"x 5/16

Service Head for Three (3) Wire Power Source and Extent of P.D.H. Work.

ℛ 4½"x⅜"x 2'-9" with ⅜" ø J-Bolt 1'-8" (New) (Typ.)

1½" Conduit (New)

10 C 17 (Exist)

℄ Exist. Truss

SECTION F-F

L 9"x4½"x⅜"x 0'-6½" (New)

L 2½"x2½"x 5/16 (Exist.)

SECTION G-G.

Scale: 1"=1'-0"

Fixture in Raised Position for Servicing

Foot Chain to Top Angle.

4'-0"

L3x3½

Typ.

L 5x5x½ (Both Corners)

10 C 15.3 (Both Sides)

⅜" Floor Sand Finish

Weather Proof Junction Box Crouse Hinds Co. Type GUJB or equal, mounted on Service Platf. Floor ℄.

Flex. Cord (Cable)

12 C 20.7

40 Bronze Sust. Chain

TYP. ELEVATION - EAST SIDE

SERV. PLATF. AT PIER #3 SIMILIAR BY ROTATION

SCALE: ¾"=1'-0"

Stop rotation at 180°

3'-6"

1'-2"

1'-0"

for notes see sheet 1 of 2.

For location of Section 'B-B' see sheet 1 of 2.

1'-0"±

Plate Hook

3½"x3½"x⅜" Rolled Angle

SECTION H-H

Scale: 1½"=1'-0"

10 WF 21 (New)

Exist. 10 WF 49 @ Panel Point

℄ N. Light #5 (Green) @ Mid. Span

11'-0⅝"

6'-6"±

N. Light #6 Red Near Pier #3

℄ Truss Brg. Pier #3

℄ Nav. Light & Serv. Plat.

N. Light #7 (Red) Near Pier #2

℄ Truss Brg. Pier #2

Weld Floor ⅜ to exist. 10 F 20

Exist. Railing

L 4x4x½

5'-8½"

5 Floor ⅜

10 C 15.3

2'-10"

S 14 W 66

3"x3"x⅜"

Weather Proof Junction Box

10 WF 21 (New)

L 5x5x½

Flex. Cord (Cable)

2'-0"

℄ Nav. Light & Serv. Plat.

TYP. SERV. PLATFORM PLAN - EAST SIDE

AT PIER 3 (NAV. LIGHT #6) SYMMETRICAL BY ROTATION

SCALE: ¾"=1'-0"

The existing structure shown in dotted (– – – –) lines.

10 WF 21 (New)

Varies

℄ 10"ø Exist. Gas Main

℄ 24"ø Exist. Water Main.

1'-1⅞"

2'-0½"

1'-0"

Exist. Pedestal (Pipe Support).

⅜"

8 WF 31 (New) 8'-9"

Shims as required.

1⅛"x 2" slotted holes in flange & shims for 1¼" ø anchor bolts. (Typ.)

Top Exist. Pier.

2" ø holes drilled in concrete for 1" ø anchor bolts and filled with non-shrink grout after anchor bolts are in place.

10'-0"±

SECTION C-C

Scale: 1½"=1'-0"

APPROVED AUG 7 1967

Commonwealth of Pennsylvania

DEPARTMENT OF HIGHWAYS

BRIDGE DIVISION

LYCOMING COUNTY

L.R. 41132 BR. STA. 14+70

Duboistown (Arch Street) Bridge

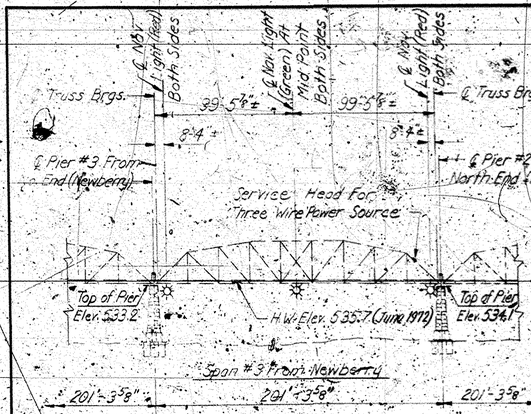
Over the West Branch of the Susquehanna River

NAVIGATION LIGHTS

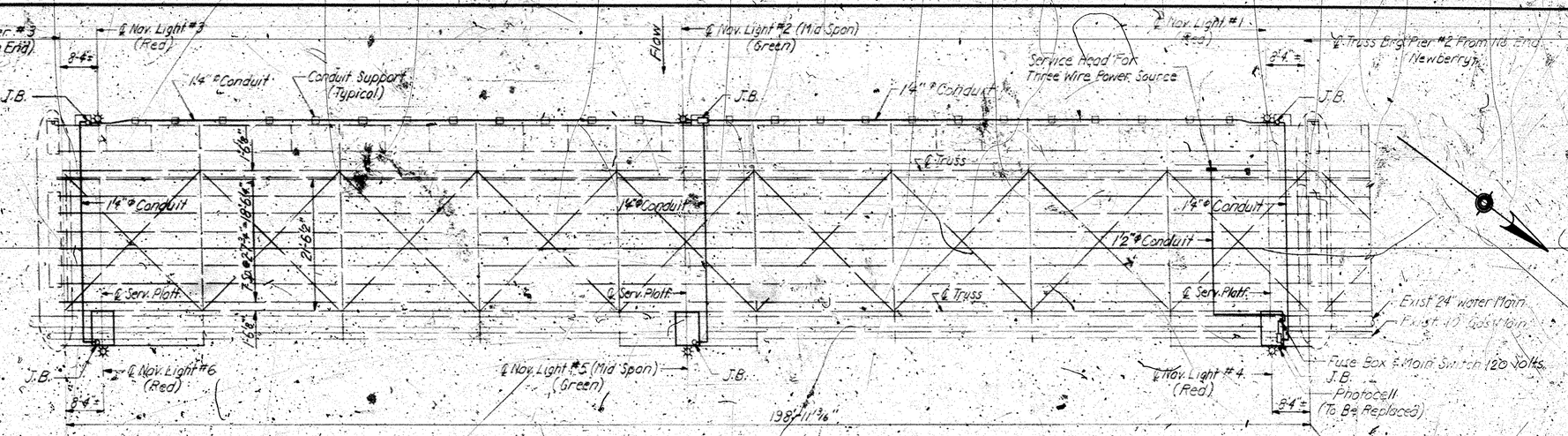
Details - East Side

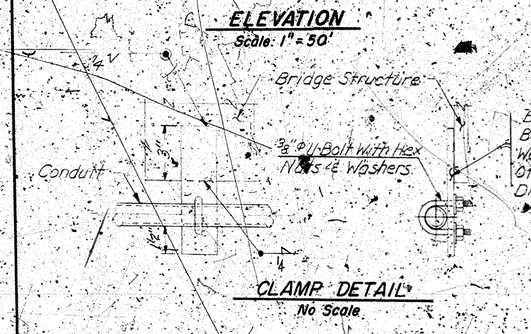
SHEET 2 OF 2

S-8728

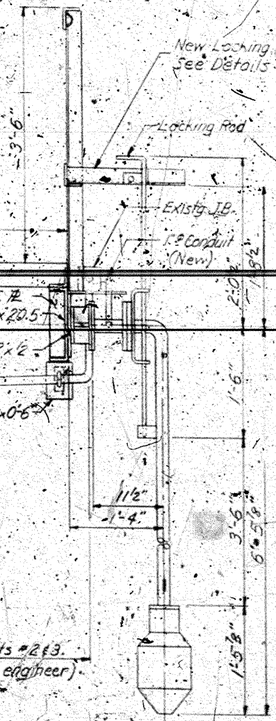


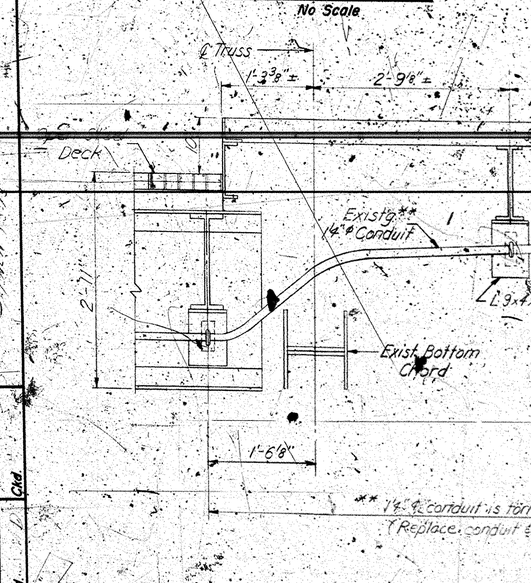
ELEVATION
Scale: 1" = 50'





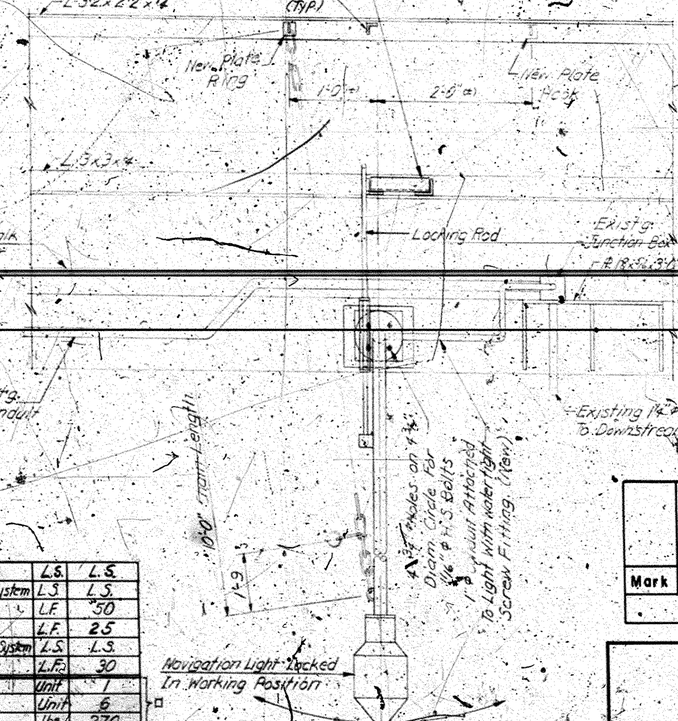
CLAMP DETAIL
No Scale



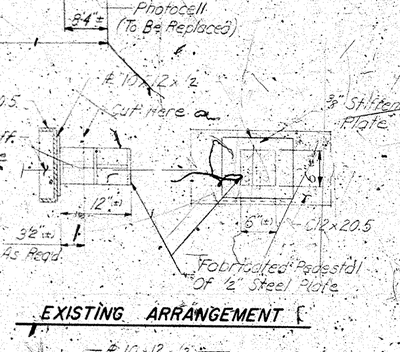


** 1¼" ø Conduit is torn off in this area at Lights #2 & 3. (Replace conduit & cables as directed by the engineer)

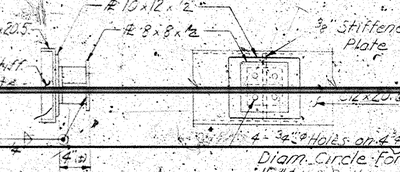
SIDE ELEVATION VIEW *
Scale: 1" = 1'-0"



FRONT ELEVATION VIEW *
Scale: 1" = 1'-0"



EXISTING ARRANGEMENT



PROPOSED ARRANGEMENT

ATTACHMENT DETAILS
Scale: 1" = 1'-0"

Navigation Lighting System	L.S.	L.S.
Removal of Portion of Existing Navi. Lighting System	L.S.	L.S.
AWG 10 Elect. Cable, Type THW, 1 Cond.	L.F.	*50
1" ø Galv. Rigid Steel Conduit	L.F.	25
Complete Testing of Entire Navigation Lighting System	L.S.	L.S.
1¼" ø Galv. Rigid Steel Conduit	L.F.	30
Photocell	Unit	1
Navigation Lights	Unit	6
Fabricated Structural Steel	lbs.	270
ITEM	Unit	Total

SUMMARY OF APPROX. QUANTITIES

These items are incidental to the lump sum item for "Navigation Lighting System. Quantity is shown for informational purposes only.

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

▲ For Reference Only.		
Original Design Plans ▲	S-8728	8-7-67
Electrical Details	BC 321	7-1-70
Description	Dwg. No.	App. Date
SUPPLEMENTAL DRAWINGS		

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

LYCOMING COUNTY
L.R. 41132 BR. SEC. 002
L.R. 41132 BR.-002 Sta. 14+70
over the Susquehanna River
NAVIGATION LIGHTS REPLACEMENT
PLAN & DETAILS UPSTREAM SIDE

APPROVED SEP. 5 1972
BRIDGE ENGINEER

SHEET 1 OF 2 + Supplemental Dwgs.
S-11683

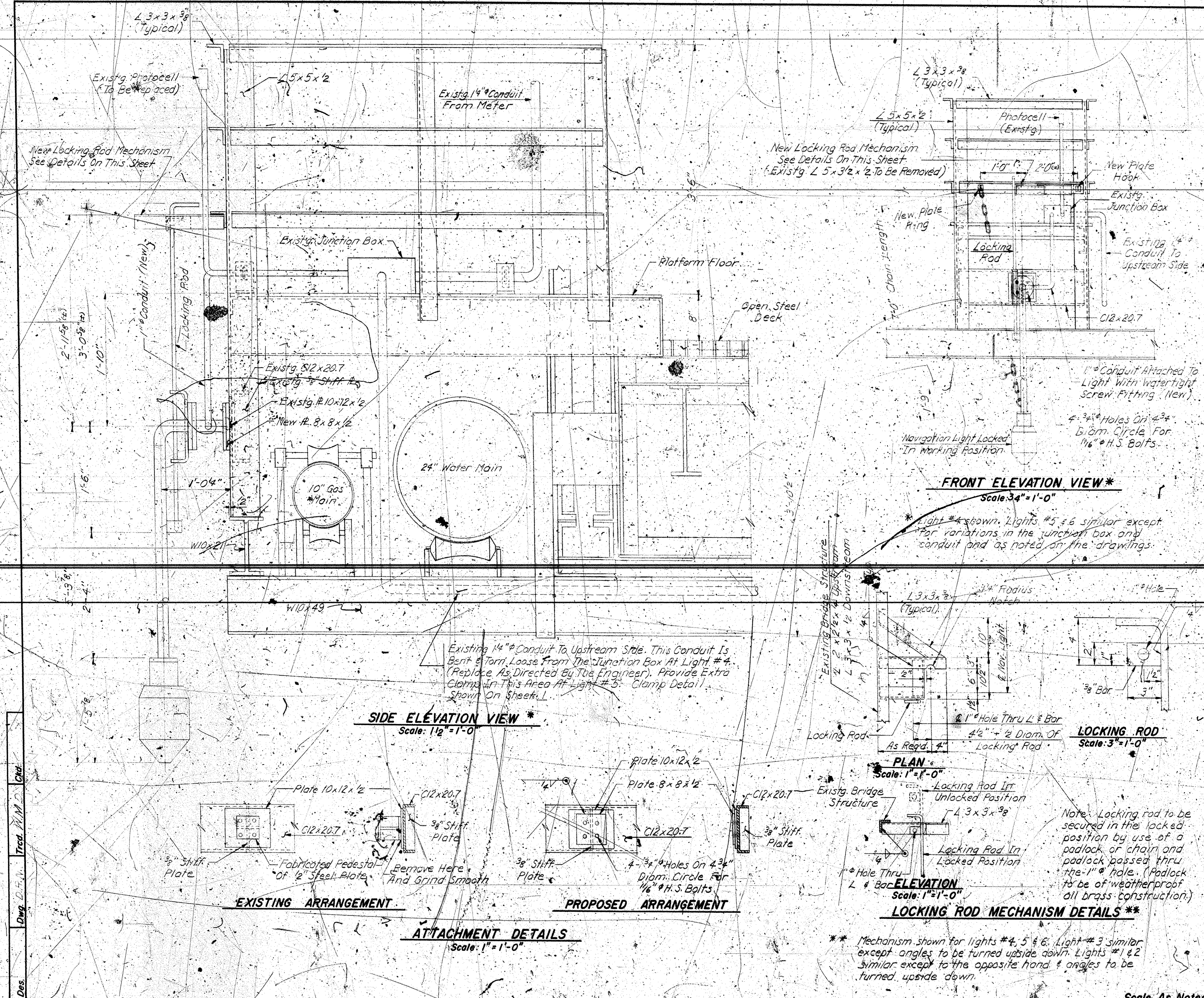
Scale As Noted

* Light #3 shown. Lights #1 and #2 similar except for variations in the junction box and conduit and as noted on the drawings.

Chkd. Trcd. Dwg. Des.

BARCLAY BROTHERS, INC. #4101-B

DESIGNED BY DISTRICT 3-0 BRIDGE UNIT



GENERAL NOTES

- Materials and workmanship shall be in accordance with Specifications Forms 408/73, 409/73, & Spec. Provisions.
- The electrical installation shall conform to requirements of the National Electrical Code and shall comply with all local municipal laws and ordinances applying to electrical installations, and requirements of any local laws and ordinances applying to electrical installations and attached Special Provisions.
- Structural steel shall conform to ASTM-A36 Designation except where noted otherwise.
- The contractor shall verify in the field all dimensions of the existing structure shown on design drawings before proceeding with the work.
- Navigation Lights shall be provided as follows: Red lights visible for 180°, 12 volts, 16 candlepower, 8 watt lamps, (Pennwalt Part No. FP-1620 or approved equal). Green lights visible for 360°, 12 volts, 4 candlepower, 8 watt lamps, (Pennwalt Part No. FP-1620 or approved equal).
- Extreme care shall be exercised when welding near gas pipe. Contractor shall inform the gas company of welding time and duration.
- All new structural steel and any areas damaged by welding shall be treated and painted in accordance with Form 409, except finish coat shall match the existing structure.
- Electrodes shall be of the low hydrogen type conforming to AWS Classification E7016, E7018 or E7028. Tack welds shall be made with the same type of electrode as the final weld.
- No welding will be allowed when surfaces are wet or exposed to rain, snow or wind or when welders are exposed to inclement conditions that will hamper good workmanship. Any moisture from fog, dew etc. present at the point of welding, shall be driven off by heat before welding commences. Windbreaks shall be required to protect working areas 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 two inches from each side of the outside lines of welds.
- Parts of the lighting system where paint has peeled off shall be repainted as directed by the engineer.
- All hardware & existing Navigation Lights to be removed shall be as called for on these plans and as directed by the Engineer. Such removed hardware & Lights shall be the property of the contractor.

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

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF DESIGN

LYCOMING COUNTY
L.R. 41132 BR. SEC. 002
L.R. 41132 BR. - 002 Sta. 14+70
over the Susquehanna River
NAVIGATION LIGHTS REPLACEMENT
DETAILS DOWNSTREAM SIDE

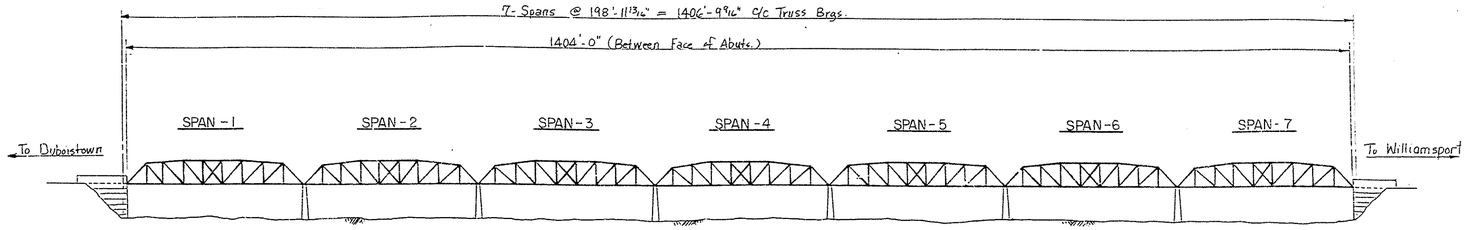
APPROVED
BRIDGE ENGINEER

SHEET 2 OF 2

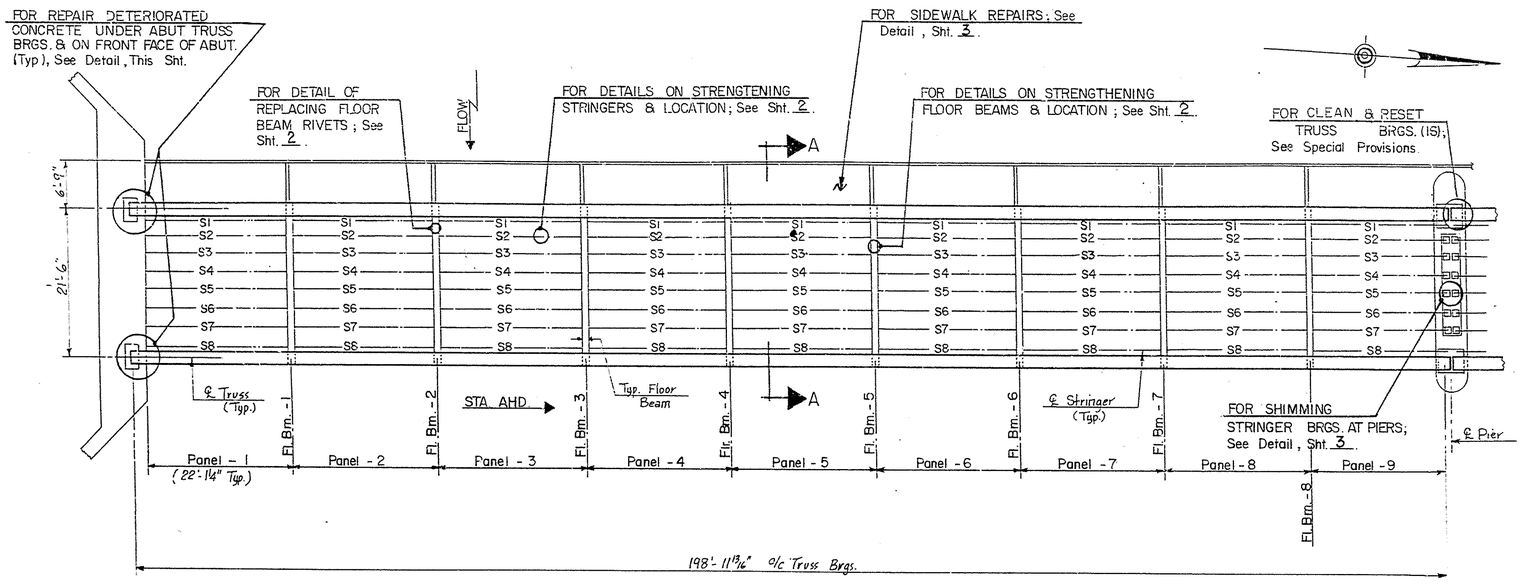
S-11683

Des. | Dwg. D.A.M. | Trcd. W.M. | Chk.

BARCLAY BROTHERS, INC. #4101-B

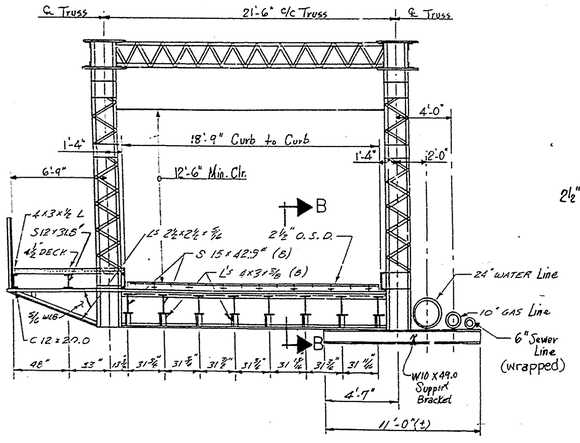


ELEVATION VIEW (Looking Upstream)
No Scale

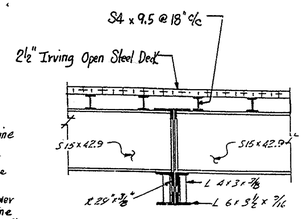


PLAN VIEW (SPAN -1 SHOWN) ✳
20 4 8 12 feet

✳= SPAN - 2 THRU SPAN-7 SIMILAR.



SECTION A-A
No Scale



SECTION B-B
No Scale

REPAIR DETERIORATED CONCRETE ⚠
No Scale

GENERAL NOTES

- All Materials and Workmanship shall be in accordance with the Pa. Dept. of Transportation Specifications Publication 408/82 and the Special Provisions.
- Design Specifications: Design Division of 1983 A.A.S.H.T.O. "Standard Specifications for Highway Bridges" and as supplemented by the Design Manual, Part 4, Structures. (Including 6-83 Revisions).
- Live Loads: H20, HS20, and ML80 Loading.
- Any portion of the Existing structure not specified for Removal, which is damaged by the Contractor shall be replaced in Kind at his expense to the Department.
- The Engineer reserves the right to change the nature and limits of the work to assure a satisfactory repair.
- All existing concrete that is to come in contact with new concrete shall be coated with Epoxy Bonding Compound just prior to placing the new concrete. The existing concrete shall be thoroughly blast cleaned prior to the application of the Epoxy. The cost of cleaning and Epoxy Application shall be incidental to the repair item to which it is applied. The Epoxy Resin Bonding Compound shall be Type II, Grade E, as described in ASTM C881-78.
- The existing Reinforcement bars shall be cleaned to remove any rust, dirt or foreign material prior to pouring new concrete.
- New Steel ASTM-A36, & H.S. bolts ASTM-A325.
- All dimensions shall be verified in the field by the Contractor before the start of construction.
- All materials and equipment used for jacking are incidental to Item for Clean and Reset Truss Bearings. For Jacking Details, See Sheet 4.
- 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 two inches from each side of the outside lines of weld.

⚠ = Includes Approx. 300 S.F. on Near Abut. Face & Bearing Areas and Approx. [illegible] on Far Abut. Face & Bearing Areas.

R1	Revised Drwg. Per Final Survey And As Built Plan.	G.L.F.			07/08/86
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

OR CLASS AAA MODIFIED CONC. WEARING SURFACE, 1 1/4" DEPTH	S.Y.		
EITHER SUPER-PLASTICIZED LOW SLUMP DENSE CEM. CONC. WRG. SURF., 1 1/4" DEPTH	S.Y.		
ITEM	UNIT		
(ITEM NO. 2000-0100) ACCEPTABLE ALTERNATES			

◐ = INCLUDES 600 3/4" ϕ x 2 1/2" LONG BOLTS & 43 3/4" ϕ x 3 1/4" LONG BOLTS.

ITEM NO.	ITEM	UNIT	TOTAL
2999-0002E	Conc. Deck Repair Type 1	S.F.	245
2090-0503	CONC. BRIDGE DECK REPAIR, TYPE-3 (Sidewalk)	S.F.	100
2056-0001	HIGH STRENGTH BOLTS ◐	EA.	~~643~~ 745
2000-0100	CONCRETE WEARING SURFACE, 1 1/4" DEPTH, GROUP NO. 1	S.Y.	1,265 ~~1,251~~
2000-0004	REPAIR DETERIORATED CONCRETE	S.F.	~~399~~ 450
2000-0003	REPAIR STRINGER BEARINGS, TYPE-2	EA.	~~31~~ 23
2000-0002	REPAIR STRINGER BEARINGS, TYPE-1	EA.	10
2000-0001	CLEAN & RESET TRUSS BEARINGS	EA.	16
1056-0100	FABRICATED STRUCTURAL STEEL	LBS.	~~8 270~~ 13,331

TABULATION OF BRIDGE BID ITEMS

Scale as Noted

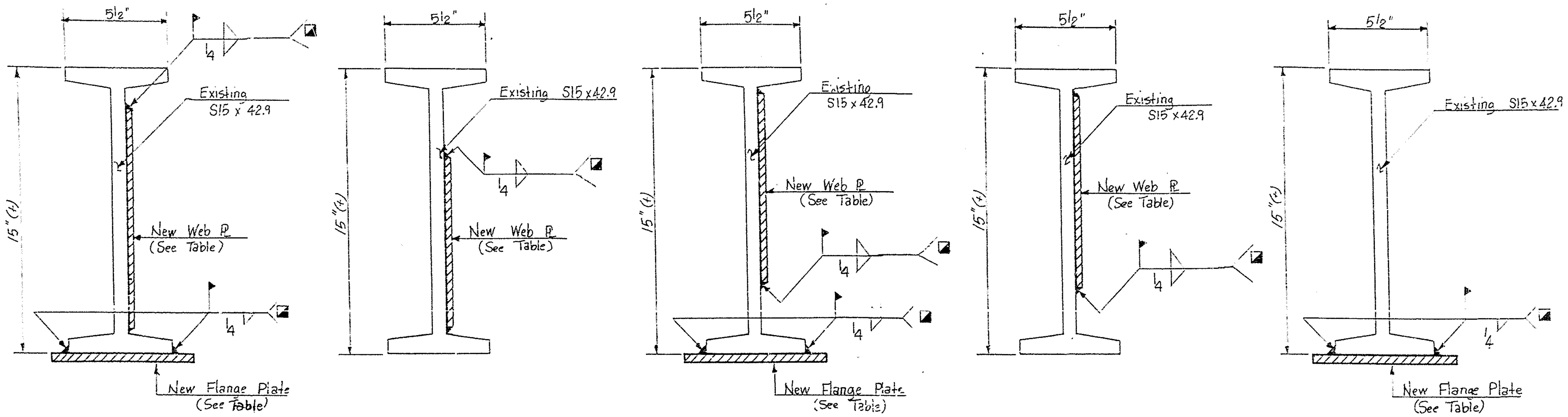
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

LYCOMING COUNTY
L.R. 41132 BR SEC. 004
L.R. 41132 BR-004 (Arch Street) Sta. 14+70.00 (S.L.D.)
Over West Branch of Susquehanna River
7-SPAN THRU TRUSS BRIDGE REHABILITATION
GENERAL PLAN

RECOMMENDED 2-4-85
R.C. Anw
DIST. BRIDGE ENGINEER

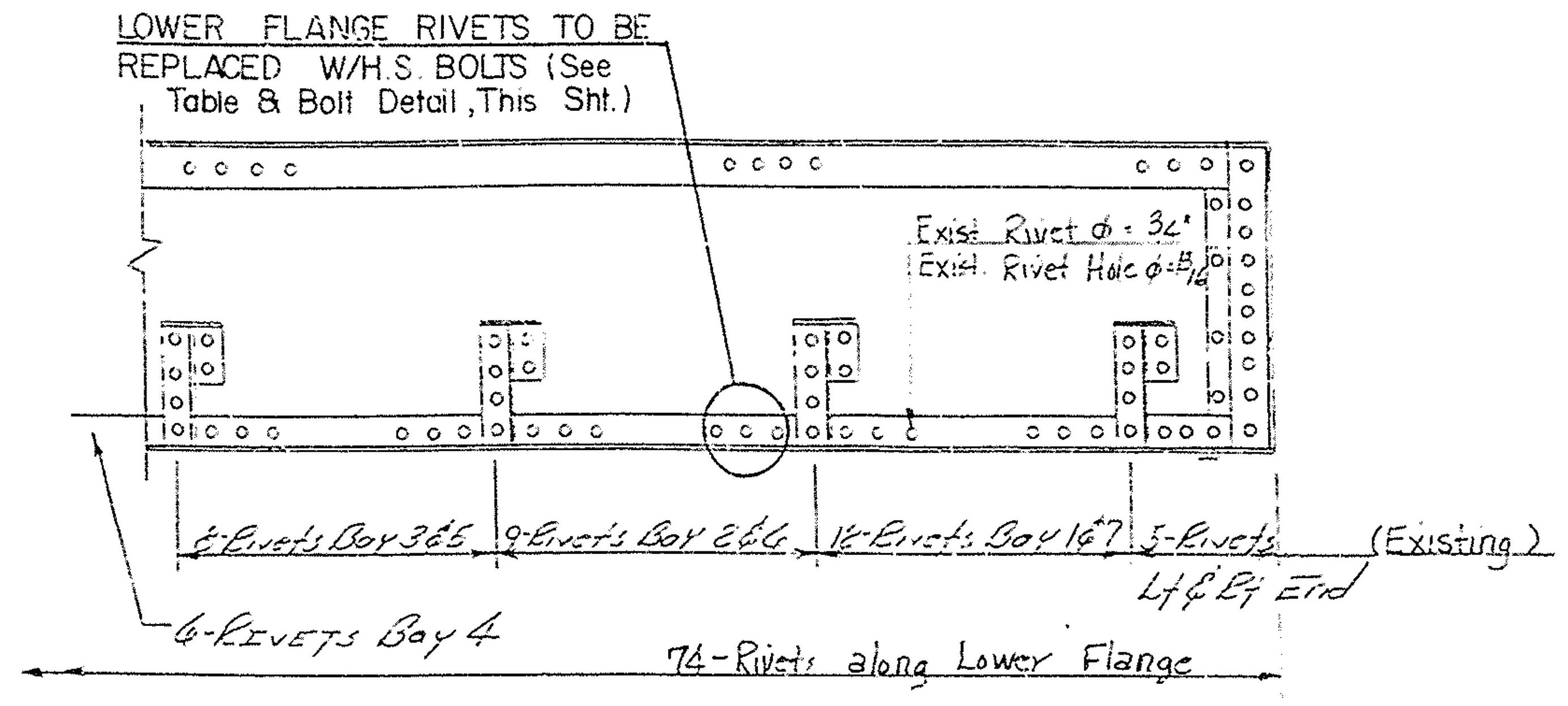
SHEET 1 OF 4
S-15986

DESIGNED BY DISTRICT 3-0 BRIDGE UNIT



DETAILS FOR STRENGTHENING SOME EXISTING STRINGERS
(See Table Below) No Scale

◪ = Weld should be stopped 1" min. from Ends of Plate and should not be welded on ends or corners. Ends should be caulked.

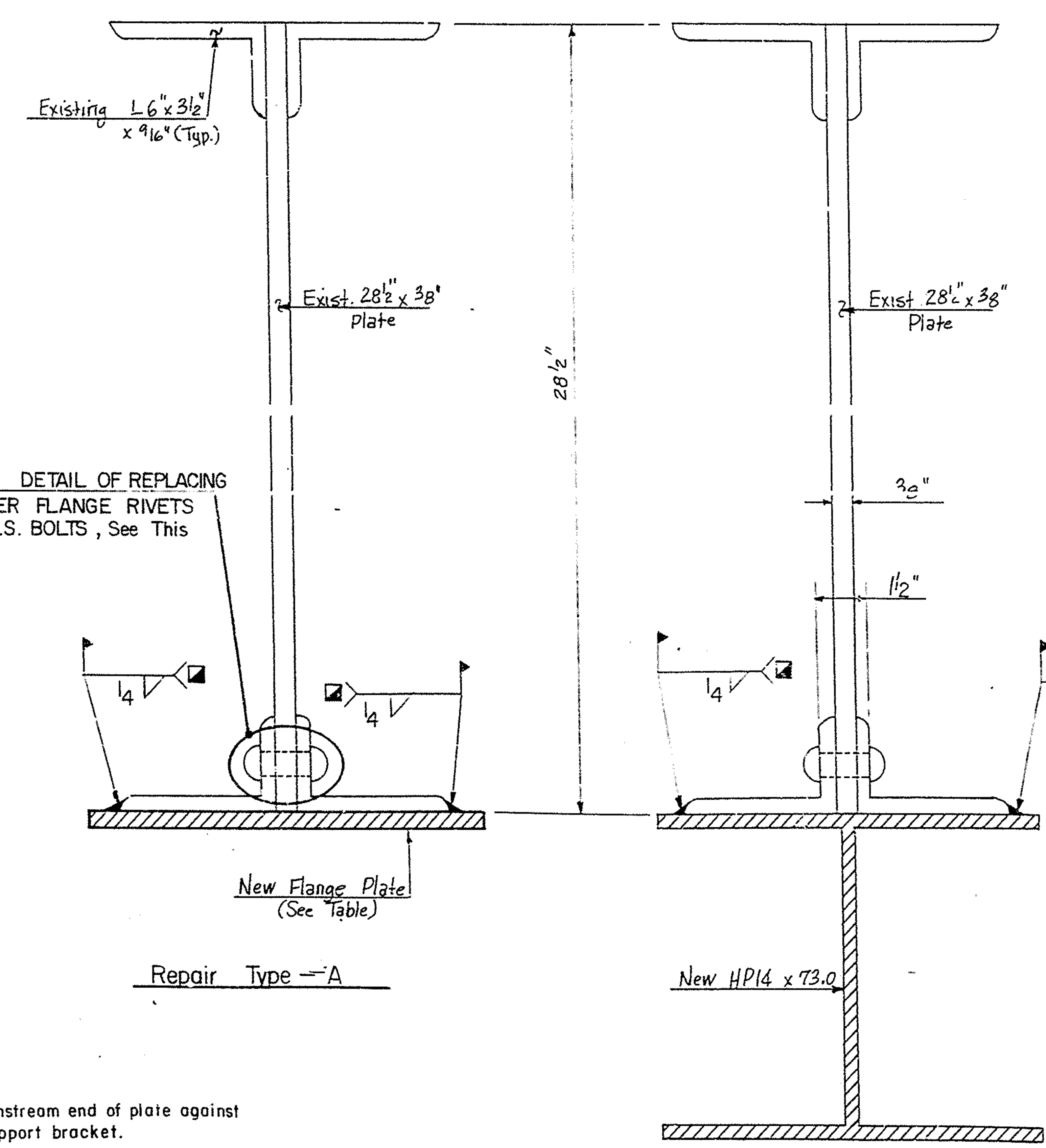


TYP. ELEVATION – FLOOR BEAM
No Scale

TABLE OF NO. OF NEW BOLTS PER FLOOR BEAM ✳									
SPAN NUMBER	F./B. 1	F./B. 2	F./B. 3	F./B. 4	F./B. 5	F./B. 6	F./B. 7	F./B. 8	SPAN TOTALS
1	62 ~~37~~	77 ~~74~~	—	83 ~~74~~	42 ~~37~~	—	—	—	264 ~~222~~
2	—	51 ~~37~~	—	—	—	—	—	—	51 ~~37~~
3	—	—	—	—	—	—	—	—	—
4	—	—	—	—	—	—	—	—	—
5	—	—	—	—	—	—	—	—	—
6	—	—	—	—	31 ~~15~~	30 ~~15~~	30 ~~23~~	—	91 ~~53~~
7	45 ~~37~~	44 ~~40~~	47 ~~37~~	30 ~~23~~	47 ~~40~~	46 ~~40~~	51 ~~40~~	79 ~~74~~	389 ~~331~~

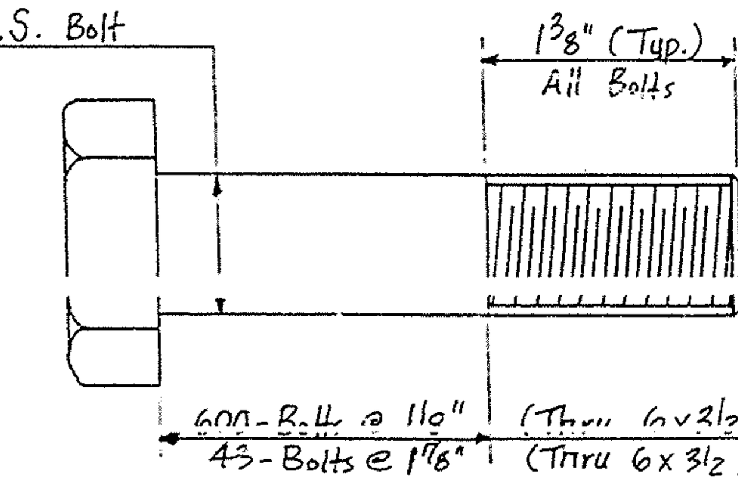
TABLE OF REPAIR TYPES & LOCATIONS FOR STRINGERS					
REPAIR TYPE	LOCATION			WEB PLATE SIZE	FLANGE PLATE SIZE
	SPAN NO.	PANEL NO.	STRINGER DESG.		
A	1	1	(S5)	12" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
A	1	1	(S6)	12" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
A	1	1	(S7)	12" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
A	1	2	(S7)	12" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
A	1	1	(S4)	10" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
A	1	2	(S5)	10" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
B	1	1	(S2)	8" x 3/8" x 6'-0"	———
B	1	2	(S4)	11" x 3/8" x 21'-9"	———
C	7	8	(S2)	10" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
C	7	8	(S5)	10" x 3/8" x 21'-9"	7 3/4" x 3/8" x 20'-11"
D	1	8	(S7)	10" x 3/8" x 21'-9"	———
E	1	1	(S3)	———	7 3/4" x 3/8" x 20'-11"
E	1	2	(S2)	———	7 3/4" x 3/8" x 20'-11"
E	1	2	(S3)	———	7 3/4" x 3/8" x 20'-11"
E	1	2	(S6)	———	7 3/4" x 3/8" x 20'-11"
E	7	9	(S4)	———	7 3/4" x 3/8" x 20'-11"
REPLACE	7	9	(S2)	———	Replace Stringer in Kind

TABLE OF REPAIR TYPES & LOCATION FOR FLOOR BEAMS △			
REPAIR TYPE	LOCATION		FLANGE PLATE SIZE
	SPAN NO.	FLOOR BEAM NO.	
A	1	4	1'-3 3/4" x 9/16" x 14'-0"
A	1	5	
A	6	5	
A	6	6	
A	7	1	
A	7	2	
A	7	3	
A	7	4	
A	7	5	
A	7	6	
A	7	7	
A	7	8	1'-3 3/4" x 9/16" x 14'-0"
B	1	1	(HP14 x 73) x 14'-0"



△ - Butt downstream end of plate against utility support bracket.

DETAILS FOR STRENGTHENING FLOOR BEAMS
(See Table at Left) No Scale



H. S. BOLT DETAIL
No Scale

✳ = All Rivets to be Replaced, having head loss ≥ 50%.

NOTE:

- For Reference Plan to all Span No's., Panel No's., and Stringer Designations, See Sht. 1.

Mark	Description	By	Chk'd.	App'd.	Date
R1	Revised Drwg. Per Final Survey and As Built Plan.	G.L.F.			07/08/86

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

LYCOMING COUNTY
L.R. 41132 BR SEC. 004
L.R. 41132 BR-004 (Arch Street) Sta. 14+70.00 (S.L.D.)
Over West Branch of Susquehanna River
7-SPAN THRU TRUSS BRIDGE REHABILITATION
STRINGER & FLOOR BEAM REPAIRS

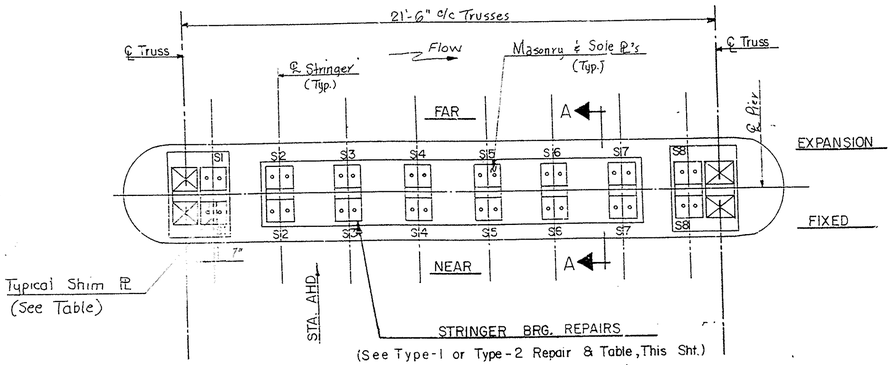
RECOMMENDED 2-4-85

SHEET 2 OF 4

Scale as Noted

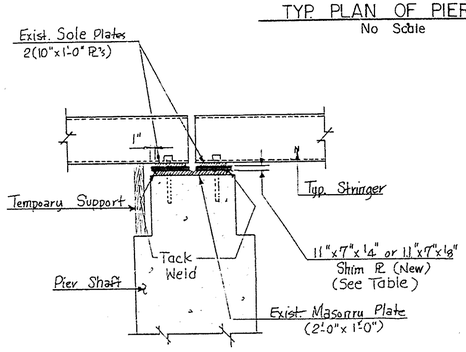
S-15986

DES. – DWN. – CKD.



TYP. PLAN OF PIER TOP

No Scale



SECTION A-A

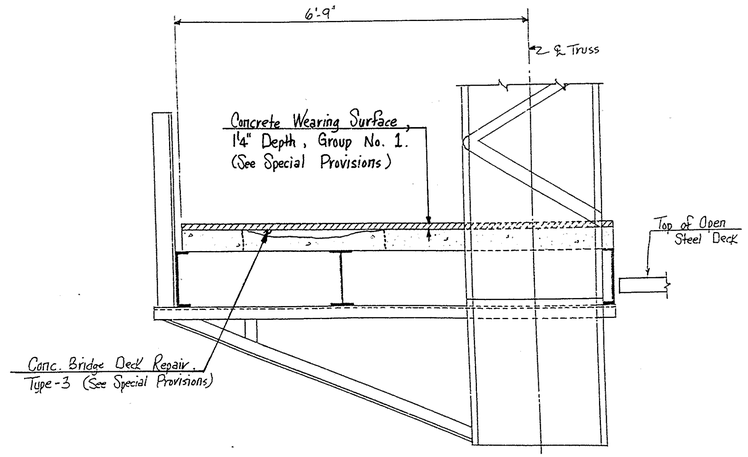
No Scale

TYPE-1 REPAIR

PROVIDE TEMPORARY SUPPORT FOR STRINGER TO STABILIZE BEARING PRIOR TO REPAIR. INSERT EPOXY RESIN BENEATH ENTIRE MASONRY PL. ALLOW ADEQUATE CURING TIME BEFORE REMOVING STRINGER BEARING SUPPORT.

TYPE-2 REPAIR

PROVIDE SHIM PLATES AS SHOWN BETWEEN MASONRY PLATES & BRG PLATES TO ELIMINATE VERTICAL MOVEMENT. TACK WELD SHIM PL's ALONG OUTER EDGE OF MASONRY PL's. TO PREVENT SLIPPAGE.



SIDEWALK REPAIR (SHOWING 1 1/4" OVERLAY)

No Scale

TABLE OF STRINGER BEARING REPAIRS

PIER — 1			PIER — 2		
BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.	BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.
S1-NR.	———	———	S1-NR.	———	———
S1-FR.	———	———	S1-FR.	———	———
S2-NR.	2	1/4"	S2-NR.	2	1/4"
S2-FR.	———	———	S2-FR.	1	1/4" (Gr.)
S3-NR.	2	1/4"	S3-NR.	2	1/4"
S3-FR.	———	———	S3-FR.	1	1/4" (Gr.)
S4-NR.	2	1/4"	S4-NR.	2	1/4"
S4-FR.	———	———	S4-FR.	1	1/4" (Gr.)
S5-NR.	———	———	S5-NR.	2	1/4"
S5-FR.	———	———	S5-FR.	1	1/4" (Gr.)
S6-NR.	———	———	S6-NR.	2	1/4"
S6-FR.	———	———	S6-FR.	1	1/4" (Gr.)
S7-NR.	———	———	S7-NR.	2	1/4"
S7-FR.	———	———	S7-FR.	1	1/4" (Gr.)
S8-NR.	———	———	S8-NR.	———	———
S8-FR.	———	———	S8-FR.	———	———

PIER — 3			PIER — 4		
BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.	BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.
S1-NR.	———	———	S1-NR.	———	———
S1-FR.	———	———	S1-FR.	———	———
S2-NR.	1 *	1/8" (Gr.)	S2-NR.	———	———
S2-FR.	2	1/8"	S2-FR.	———	———
S3-NR.	1	1/8" (Gr.)	S3-NR.	———	———
S3-FR.	2	1/8"	S3-FR.	———	———
S4-NR.	1	1/8" (Gr.)	S4-NR.	2	1/8"
S4-FR.	2	1/8"	S4-FR.	2	1/8"
S5-NR.	2	1/8"	S5-NR.	2	1/8"
S5-FR.	2	1/8"	S5-FR.	2	1/8"
S6-NR.	1	1/8" (Gr.)	S6-NR.	2	1/8"
S6-FR.	2	1/8"	S6-FR.	2	1/8"
S7-NR.	———	———	S7-NR.	2	1/8"
S7-FR.	———	———	S7-FR.	2	1/8"
S8-NR.	———	———	S8-NR.	———	———
S8-FR.	———	———	S8-FR.	———	———

PIER — 5			PIER — 6		
BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.	BRG. LOCATION	REPAIR TYPE	PL OR GROUT THK.
S1-NR.	———	———	S1-NR.	———	———
S1-FR.	———	———	S1-FR.	———	———
S2-NR.	———	———	S2-NR.	———	———
S2-FR.	———	———	S2-FR.	———	———
S3-NR.	2	1/4"	S3-NR.	———	———
S3-FR.	2	1/4"	S3-FR.	———	———
S4-NR.	2	1/4"	S4-NR.	———	———
S4-FR.	2	1/4"	S4-FR.	———	———
S5-NR.	2	1/4"	S5-NR.	———	———
S5-FR.	2	1/4"	S5-FR.	———	———
S6-NR.	2	1/8"	S6-NR.	———	———
S6-FR.	2	1/8"	S6-FR.	———	———
S7-NR.	———	———	S7-NR.	———	———
S7-FR.	———	———	S7-FR.	———	———
S8-NR.	———	———	S8-NR.	———	———
S8-FR.	———	———	S8-FR.	———	———

* Include repair to fractured concrete pedestal and replacement of 1" ø anchor bolt as directed.

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

REVISIONS

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

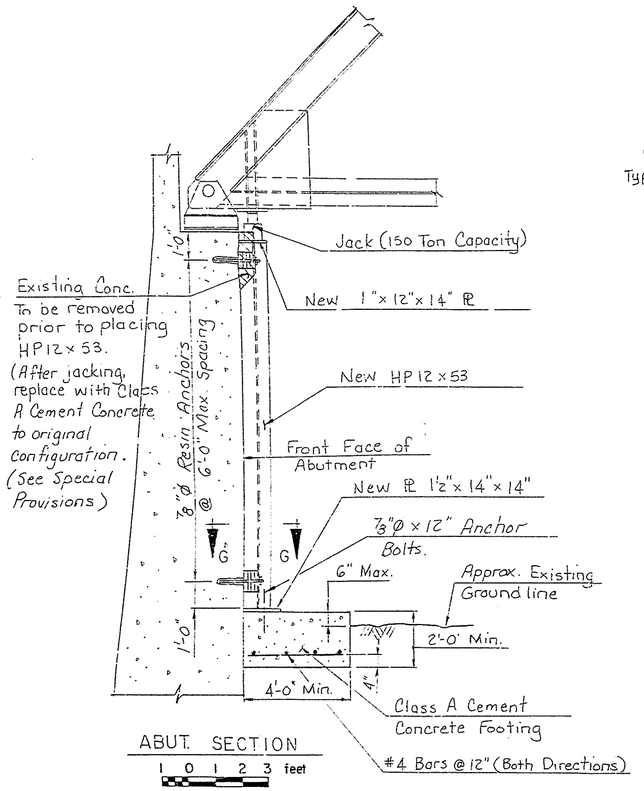
LYCOMING COUNTY
L.R. 41132 BR SEC. 004
L.R. 41132 BR-004 (Arch Street) Sta. 14+70.00 (S.L.D.)
Over West Branch of Susquehanna River
7-SPAN THRU-TRUSS BRIDGE REHABILITATION
STRINGER BRG. & SIDEWALK REPAIRS

RECOMMENDED 2-4-85

SHEET 3 OF 4

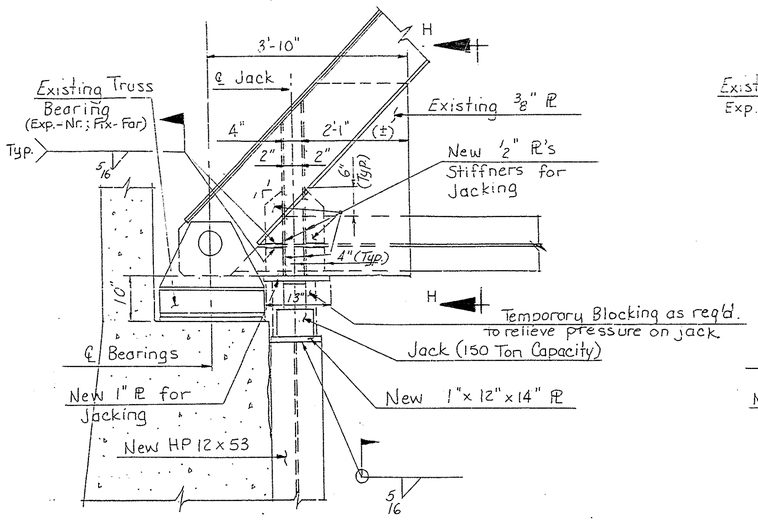
S-15986

Scale as Noted



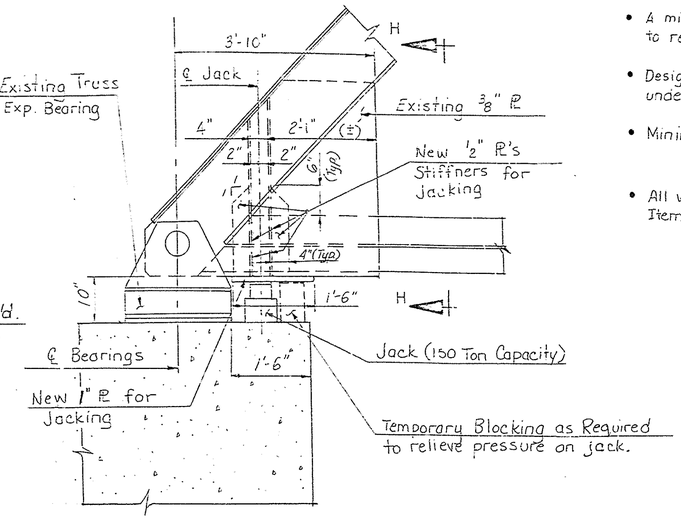
ABUT. SECTION

1 0 1 2 3 feet



ELEVATION - ABUT. TRUSS BRG.

12 0 12 inches

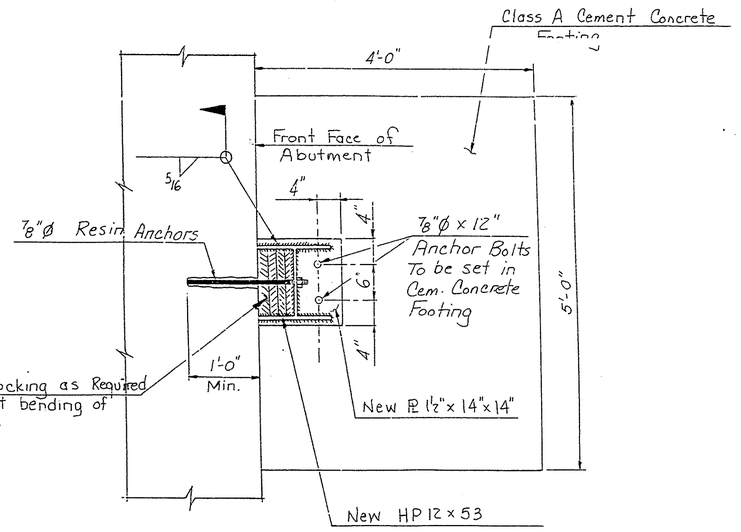


ELEVATION - PIER TRUSS BRG.

12 0 12 inches

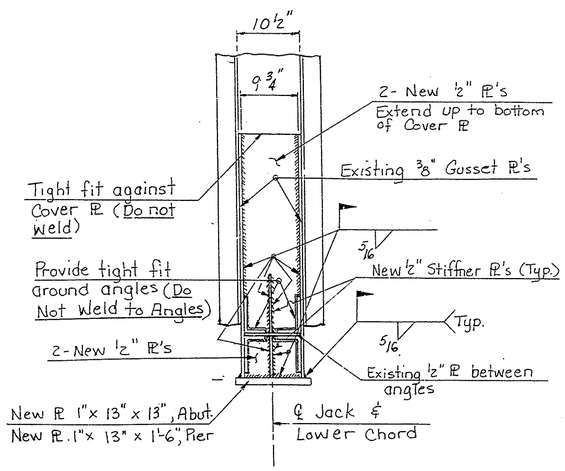
JACKING NOTES

- A minimum amount of jacking will be required to reset Bearing.
- Design is based on jack head bearing directly under Stiffners as shown.
- Minimum Jack Capacity = 150 Tons
- All work shown on this sheet is incidental to Item "Clean and Reset Truss Bearings".



SECTION G-G

6 0 6 12 inches



ELEVATION H-H

6 0 6 12 inches

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

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

LYCOMING COUNTY

L.R. 41132 BR SEC. 004

L.R. 41132 BR-004 (Arch Street) Sta. 14+70.00 (S.L.D.)

Over West Branch of Susquehanna River

7-SPAN THRU TRUSS BRIDGE REHABILITATION

JACKING DETAILS

RECOMMENDED 2-4-85

SHEET 4 OF 4

S- 15986

DES: D.W.L. DWG: D.L.D. CKD: K.V.B.

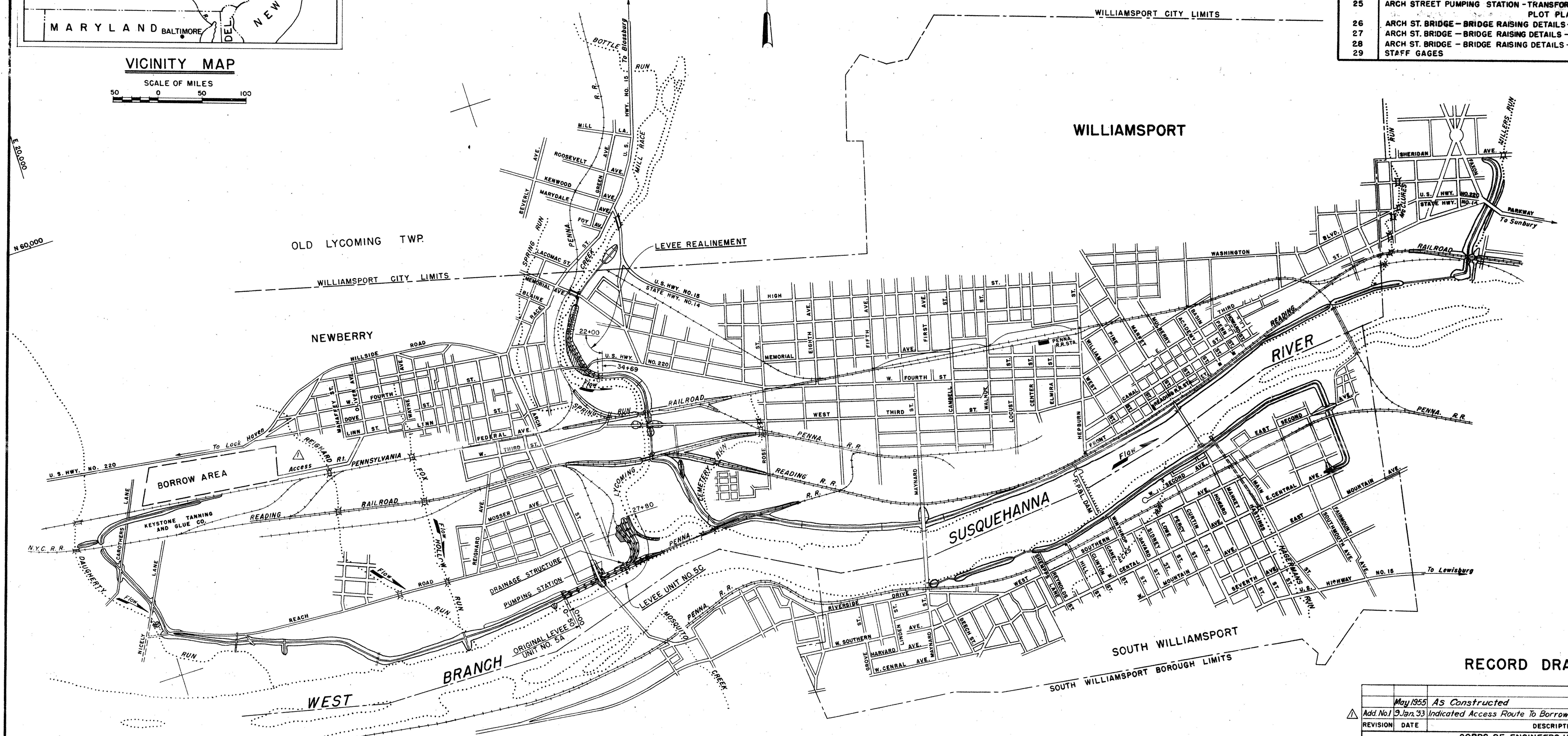
VICINITY MAP

SCALE OF MILES

50 0 50 100

INDEX TO DRAWINGS

SHEET NO.	TITLE	DRAWING NO.
1	LOCATION MAP & INDEX	6802-31
2	GENERAL PLAN	6802-32
3	HYDRAULIC DATA - WEST BRANCH SUSQUEHANNA RIVER	6809-18
4	HYDRAULIC DATA - LYCOMING CREEK	6809-19
5	FOUNDATION EXPLORATION & BORROW AREA LOGS - 1	6823-49
6	FOUNDATION EXPLORATION & BORROW AREA LOGS - 2	6823-50
7	BORROW AREA - PLAN AND SECTIONS	6898-23
8	PLAN AND PROFILE - STA. 0+00 TO STA. 13+50	6806-75
9	PLAN AND PROFILE - STA. 13+50 TO STA. 27+80	6806-76
10	PLAN AND PROFILE - PENNA. RAILROAD RAMPS	6806-77
11	PLAN AND PROFILE - LEVEE REALINEMENT	6806-78
12	TYPICAL LEVEE SECTIONS	6806-79
13	ARCH ST. RAMP - PLAN, PROFILE & SECTION	6806-80
14	DRAINAGE STRUCTURE NO. 4 - STA. 15+00	6835-42
15	SANITARY SEWER CROSSINGS AND MANHOLE DETAILS	6847-1
16	MISCELLANEOUS DETAILS AND SEEPAGE RELIEF WELLS	6866-21
17	ARCH ST. SEWER AND MANHOLE DETAILS	6847-2
18	ARCH STREET PUMPING STATION - PLANS AND ELEVATION	6844-175
19	ARCH STREET PUMPING STATION - ELEVATIONS	6844-176
20	ARCH STREET PUMPING STATION - SECTIONS AND DETAILS	6844-177
21	ARCH STREET PUMPING STATION - STEEL REINFORCEMENT	6844-178
22	ARCH STREET PUMPING STATION - ARRANGEMENT OF EQUIPMENT	6844-179
23	ARCH STREET PUMPING STATION - MISCELLANEOUS DETAILS	6844-180
24	ARCH STREET PUMPING STATION - ELECTRICAL SYSTEM & DETAILS	6844-181
25	ARCH STREET PUMPING STATION - TRANSFORMER SUBSTATION PLOT PLAN & DETAILS	6844-182
26	ARCH ST. BRIDGE - BRIDGE RAISING DETAILS - NO. 1	6857-6
27	ARCH ST. BRIDGE - BRIDGE RAISING DETAILS - NO. 2	6857-7
28	ARCH ST. BRIDGE - BRIDGE RAISING DETAILS - NO. 3	6857-8
29	STAFF GAGES	6809-20



LOCATION MAP

SCALE: 1 IN. = 1000 FT.

1000 0 1000 2000

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.
Add. No. 1	9 Jan. '53	Indicated Access Route To Borrow Area	[illegible]

CORPS OF ENGINEERS U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: S. K.
TRACED BY: S. K.
CHECKED BY: J. D. P.
REVIEWED BY SAFETY BRANCH: G.H.L.
SUBMITTED: [signature] HD. DESIGN BR. FLOOD CONTROL
APPROVED: C. F. Plummer, CHIEF, ENGINEERING DIVISION

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

LOCATION MAP & INDEX

APPROVED: [signature] COLONEL, CORPS OF ENGINEERS, DISTRICT ENGINEER

DATE: 8 DECEMBER, 1952

APPROVED FOR:

DATE:

SCALE: AS SHOWN

SPEC.

DRAWING NUMBER

SHEET 1 OF 29

6802-31

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT

PLANS FOR

WILLIAMSPORT
FLOOD PROTECTION PROJECT

LEVEE UNIT NO. 5C

WILLIAMSPORT, PENNSYLVANIA

LIST OF REVISIONS			
MARK	TYPE	DATE	SHEETS REVISED
1	ADD. NO. 1	9 JAN. '53	1-7-8-9-10-11-12-13-14-15-16-17-20-21-22-23 & 26
2	ADD. NO. 2	13 JAN. '53	18
3	C. O. NO. 1	27 APR. '53	9 & 15
4	S.A. NO. 2	26 OCT. '53	9 & 12
5	C.O. NO. 3	19 MAR. '53	25
6	C.O. NO. 4	5 FEB. '54	7

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

RECORD DRAWINGS

CONTRACT NO.	DA-18-020-ENG-557
CONTRACTOR	BUCK & DONOHUE, INC. NEWARK, N. J.
STARTING DATE	FEBRUARY 1953
COMPLETION DATE	OCTOBER 1954

TO ACCOMPANY SPECIFICATIONS SERIAL NO. CIVENG 18-020-53-40
DATED: 19 DECEMBER 1952

CORPS OF ENGINEERS

U. S. ARMY

VICINITY MAP

SCALE OF MILES

50 0 50 100

INDEX TO DRAWINGS

SHEET NO.	TITLE	DRAWING NO.
1	LOCATION MAP & INDEX	6802-31
2	GENERAL PLAN	6802-32
3	HYDRAULIC DATA - WEST BRANCH SUSQUEHANNA RIVER	6809-18
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5	FOUNDATION EXPLORATION & BORROW AREA LOGS - 1	6823-49
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7	BORROW AREA - PLAN AND SECTIONS	6809-23
8	PLAN AND PROFILE - STA. 0+00 TO STA. 13+50	6809-75
9	PLAN AND PROFILE - STA. 13+50 TO STA. 27+00	6809-76
10	PLAN AND PROFILE - PENNA. RAILROAD RAMPS	6809-77
11	PLAN AND PROFILE - LEVEE REALIGNMENT	6809-78
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15	SANITARY SEWER CROSSINGS AND MANHOLE DETAILS	6847-1
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17	ARCH ST. SEWER AND MANHOLE DETAILS	6847-2
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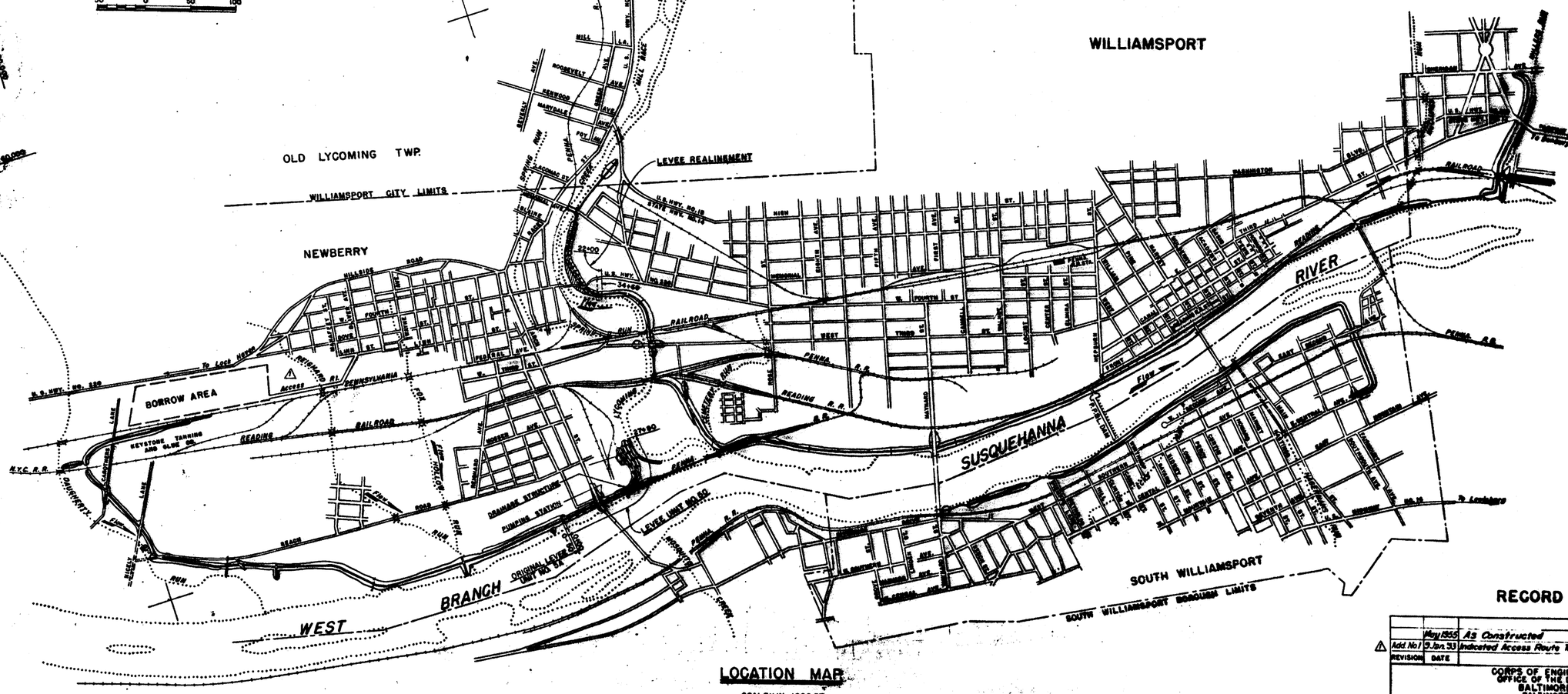
28	ARCH ST. BRIDGE - BRIDGE RAISING DETAILS - NO. 3	6857-8
29	STAFF GAGES	6809-20



LOCATION MAP

SCALE: 1 IN. = 1000 FT.

1000 0 1000 2000

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.
Add No. 1	9 Jan 53	Indicated Access Route To Borrow Area	GP

CORPS OF ENGINEERS U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: S. K.
TRACED BY: S. K.
CHECKED BY: J. D. P.
SUBMITTED: Chief, Design Branch
APPROVED: Chief, Engineering Division
DATE:

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

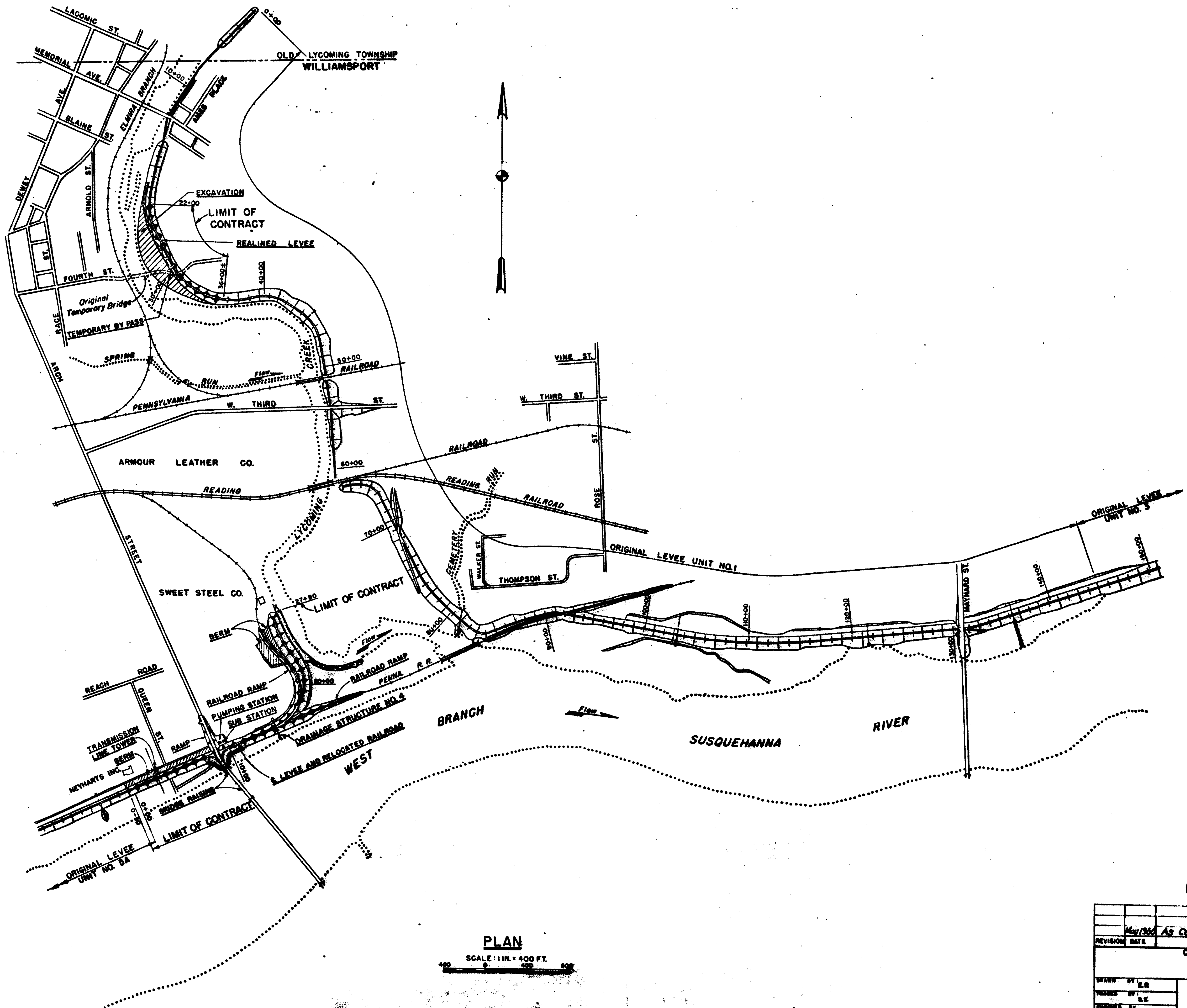
LOCATION MAP & INDEX

APPROVED: District Engineer
DATE: 8 MARCH 1955
SCALE: AS SHOWN
DATE:
SHEET 1 OF 29

6802-31

CORPS OF ENGINEERS

U. S. ARMY



PLAN

SCALE: 1 IN. = 400 FT.

RECORD DRAWING

REVISION	DATE	DESCRIPTION
	May 1956	As Constructed

CORPS OF ENGINEERS U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: E.R.
TRACED BY: S.K.
CHECKED BY: J.D.P.

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

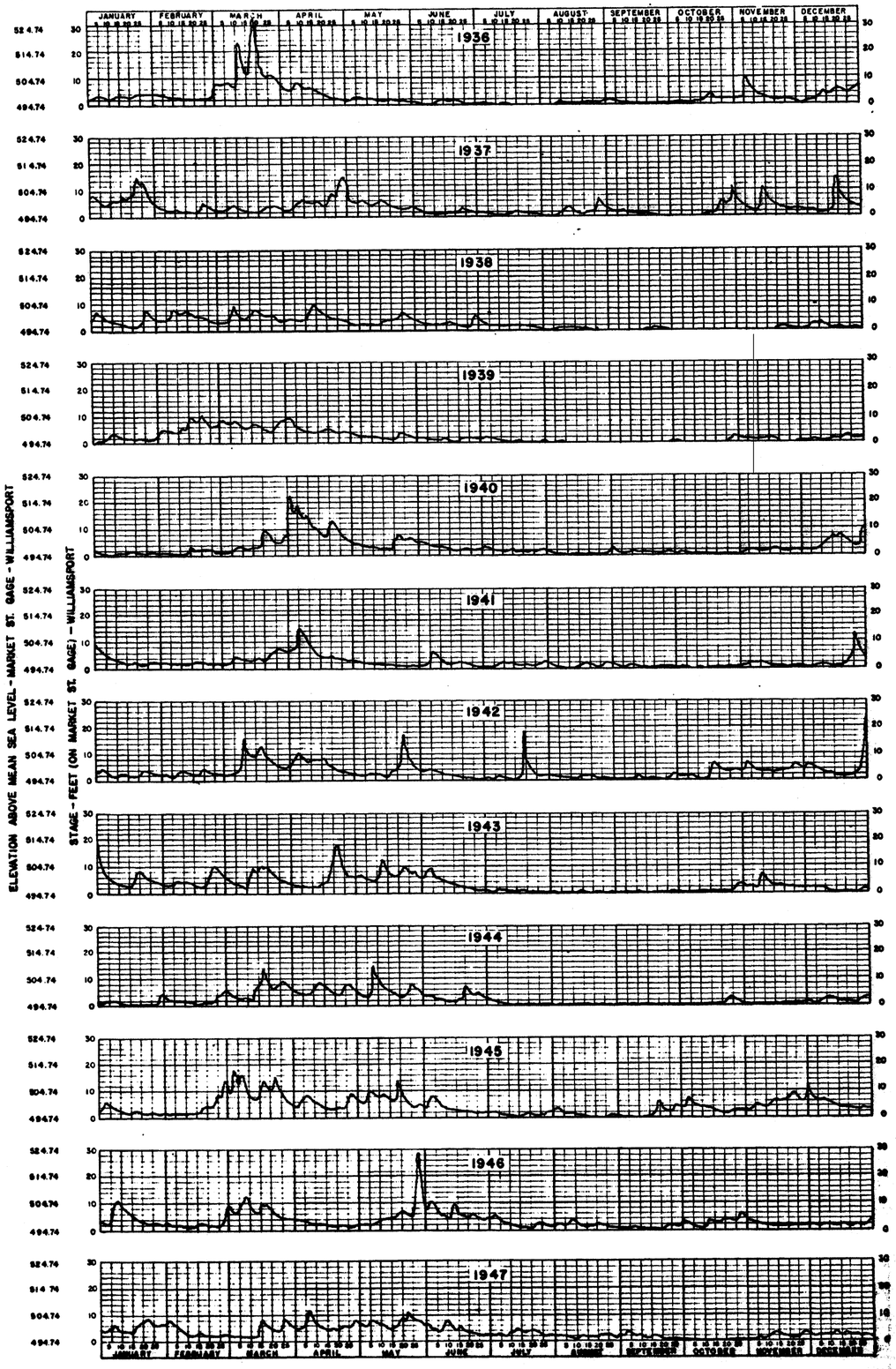
GENERAL PLAN

SHEET 2 OF 29

6802-32

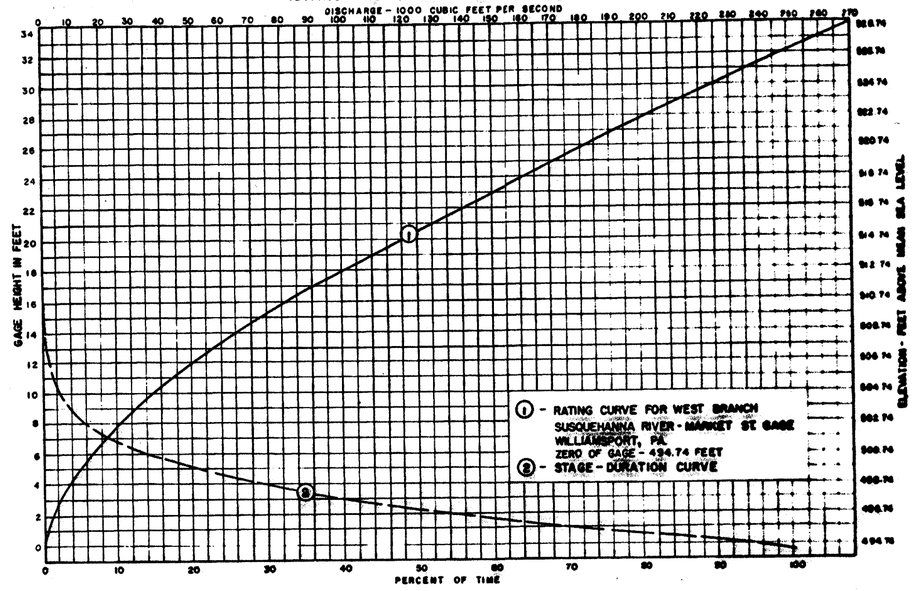
CORPS OF ENGINEERS

U.S. ARMY



HYDROGRAPHS - WILLIAMSPORT, PA.

RATING AND STAGE DURATION CURVES



TABULATION OF STAGES ABOVE BANKFULL STAGE
WEST BRANCH SUSQUEHANNA RIVER
MARKET ST. BRIDGE - WILLIAMSPORT, PA.

GAGE HEIGHT AT BANKFULL STAGE IS ABOUT 18 FEET

DATE	GAGE HEIGHT IN FEET	MOMENTARY PEAK DISCHARGES	
		CFS	CFS PER SQ MI
MAR. 13, 1846	24.0	159,000	28.0
OCT. 9, 1847	20.0	119,000	21.0
JULY 16, 1851	22.0	139,000	24.5
SEPT. 28, 1861	24.0	159,000	28.2
MAR. 17, 1865	26.0	180,000	31.7
JAN. 16, 1896	23.0	149,000	26.2
JUNE 1, 1889	32.4	251,000	44.1
FEB. 18, 1891	22.0	139,000	24.5
MAY 21, 1894	30.0	224,000	39.4
MAR. 24, 1898	21.0	129,000	22.7
DEC. 15, 1901	20.7	126,000	22.2
MAR. 1, 1902	21.7	136,000	23.9
MAR. 4, 1904	21.0	129,000	22.7
MAR. 20, 1905	19.4	113,000	19.9
MAY 1, 1909	21.0	129,000	22.7
MAR. 16, 1912	18.4	103,000	18.1
MAR. 27, 1913	20.4	123,000	21.7
MAR. 29, 1914	18.9	108,000	18.9
FEB. 25, 1915	18.8	107,000	18.8
MAR. 25, 1918	20.6	125,000	22.0
JUN 17, 18, 1916	21.0	129,000	22.7
FEB. 21, 1918	21.4	133,000	23.4
MAR. 15, 1918	20.0	119,000	20.9
MAY 22, 23, 1919	20.9	128,000	22.5
MAR. 13, 1920	20.4	123,000	21.6
MAR. 5, 1923	21.6	135,000	23.8
APR. 7, 1924	19.0	109,000	19.2
FEB. 12, 1925	19.5	114,000	20.1
JAN. 22, 1927	18.7	106,000	18.7
MAR. 12, 1936	23.7	156,000	27.9
MAR. 18, 1936	33.6	264,000	46.5
APR. 1, 1940	22.7	146,000	25.7
APR. 5, 1940	19.3	112,000	19.7
MAY 23, 1942	19.2 *	101,000	17.8
JULY 15, 1942	18.6	110,000	19.4
DEC. 31, 1942	23.0	149,000	26.0
APR. 22, 1943	19.0	109,000	19.2
MAY 26, 1946	28.7	220,000	38.7
APR. 15, 1948	20.65	124,000	21.8
MAR. 29, 1950	18.36	101,000	17.8
NOV. 26, 1950	28.11	206,000	36.3
MAR. 31, 1951	20.80	119,000	20.9

* Affected by backwater from Loyalsock Creek

GAGE HEIGHT AT MARKET ST.	WATER SURFACE ELEV. ABOVE ARCH ST. BRIDGE *
0	505.8
2	506.4
6	508.4
10	511.1
14	514.1
18	517.6
22	521.7

* Elevations are approximate based on average distribution of flow on Susquehanna River and Lycoming Creek.

GENERAL NOTES

Hydrographs shown on this sheet are mean daily stages and are based on the records of the gaging station at Market Street bridge, Williamsport, Pa. Tabulation of stages above bankfull stage is incomplete prior to 1895.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	F.J.

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

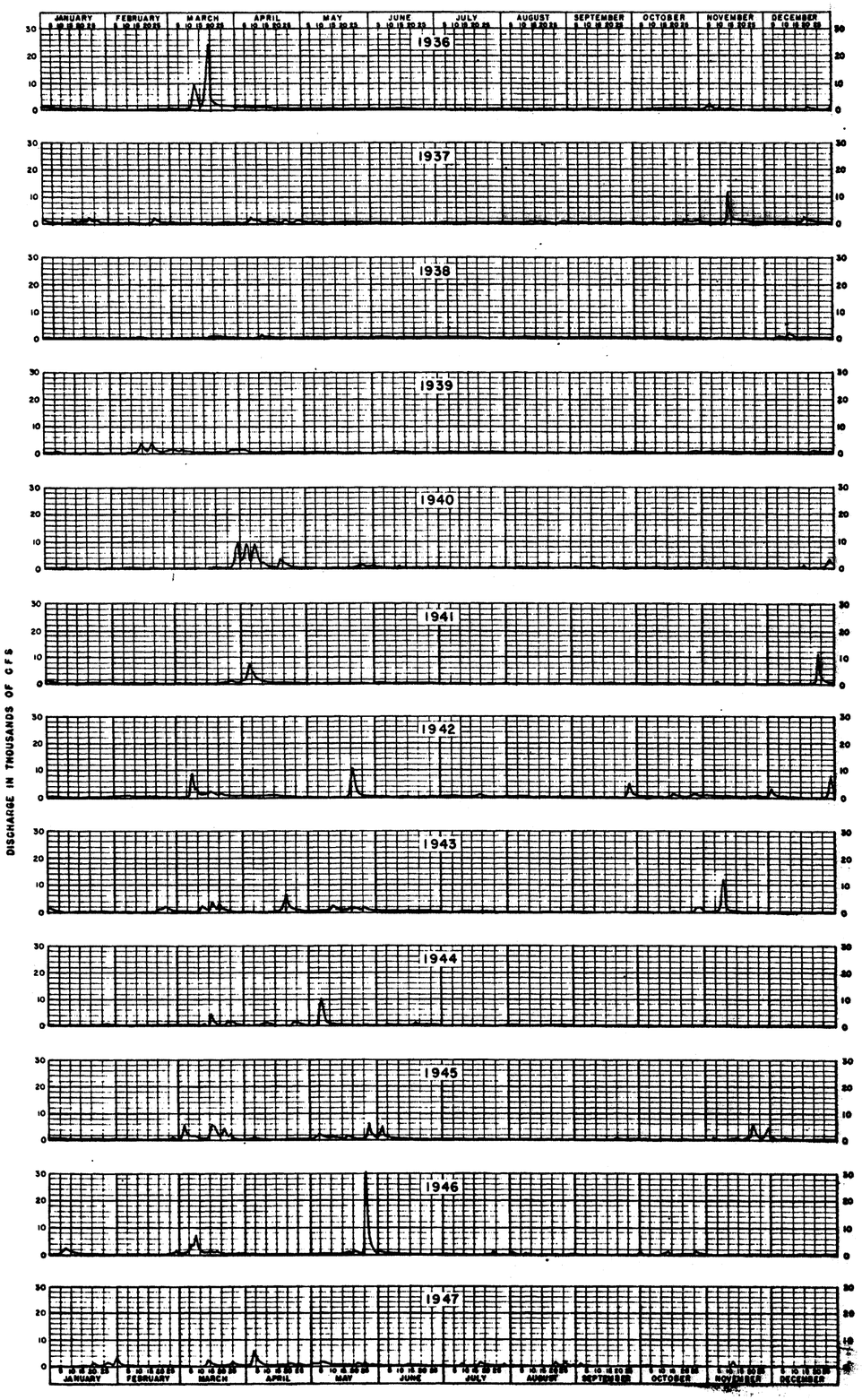
DRAWN BY E.K.S.
TRACED BY O.R.M.
CHECKED BY E.D.P.
REVIEWED BY (SAFETY ENGR.) J.M.
SUBMITTED
RECOMMENDED FOR APPROVAL
APPROVED
CHIEF, ENGINEERING DIVISION
APPROVED FOR CONSTRUCTION
DATE
CHIEF, CONSTRUCTION DIVISION
DATE

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
HYDRAULIC DATA
WEST BRANCH SUSQUEHANNA RIVER

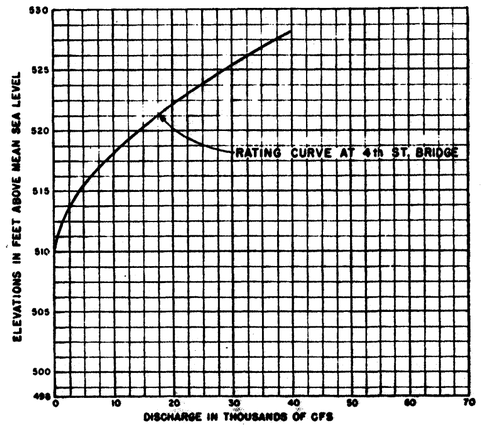
SCALE: AS SHOWN
SHEET 3 OF 29
6809-18

CORPS OF ENGINEERS

U. S. ARMY



HYDROGRAPHS - WILLIAMSPORT, PA.



APPROXIMATE RATING CURVE

GENERAL NOTES

The Hydrographs on this sheet were plotted from records of mean daily flow for Lycoming Creek near Trout Run, Pennsylvania, published by the U.S. Geological Survey
The discharges were increased by the ratio to the .8 power of the drainage area relationship
Drainage Area at Trout Run - 173 Sq Miles
Drainage Area at 4th Street Bridge - 269.2 Sq Miles

RECORD DRAWING

REVISION	DATE	DESCRIPTION
	May 1956	As Constructed

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

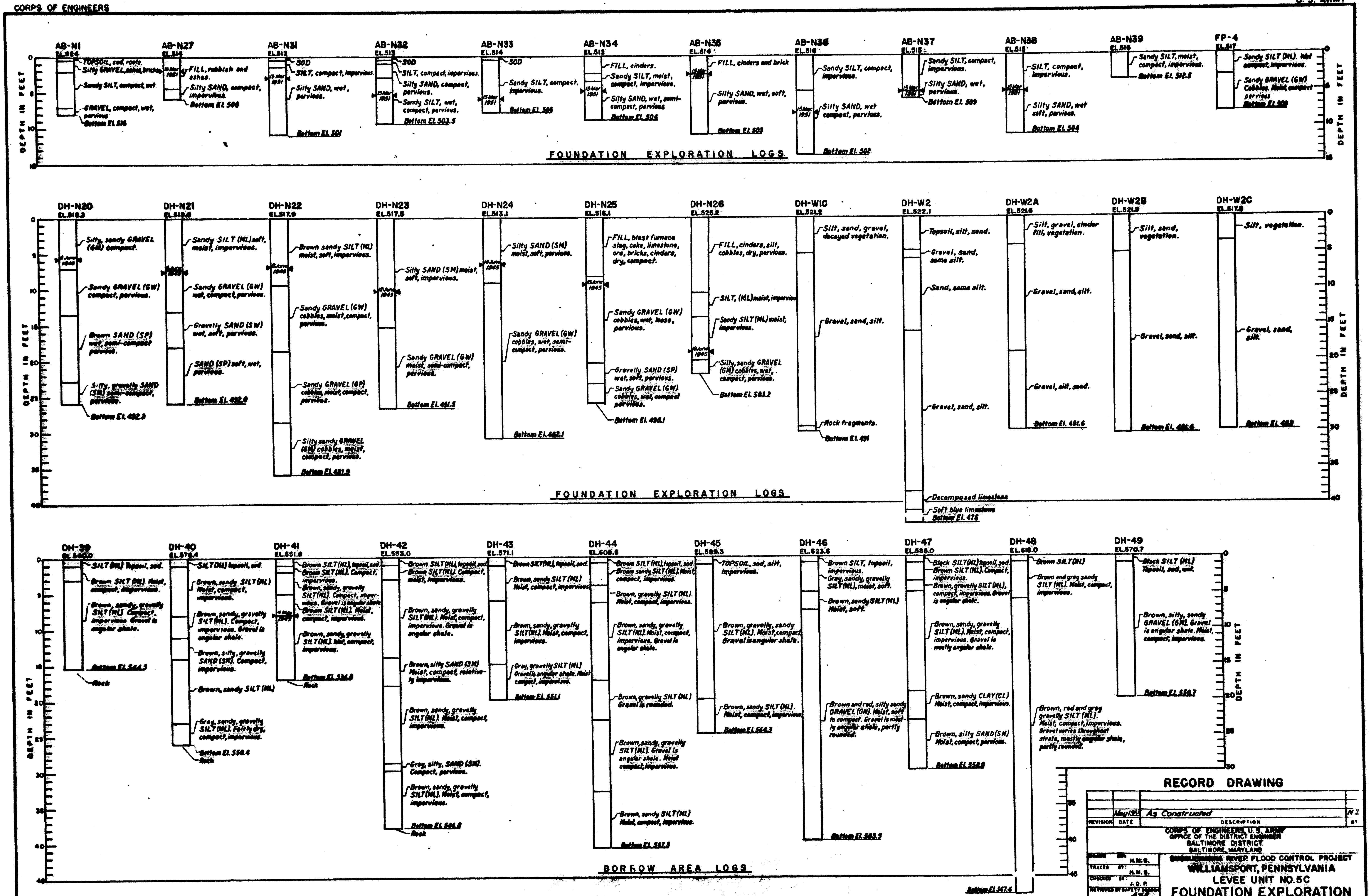
DRAWN BY: J.C.G.
TRACED BY: J.C.G.
CHECKED BY: J.D.R.
REVIEWED BY SUPERVISORY ENGINEER:
SUBMITTED:
APPROVED:
DATE: 9 DECEMBER 1954
APPROVED FOR CONSTRUCTION:
DATE:

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
HYDRAULIC DATA
LYCOMING CREEK

SCALE AS SHOWN
SHEET 4 OF 29

6809-19

CORPS OF ENGINEERS U. S. ARMY



NOTES:

Location of Drill Holes and Auger Borings .... Sheets 7, 8, 9, 10 & 11

Denotes ground water table at time of exploration.

RECORD DRAWING

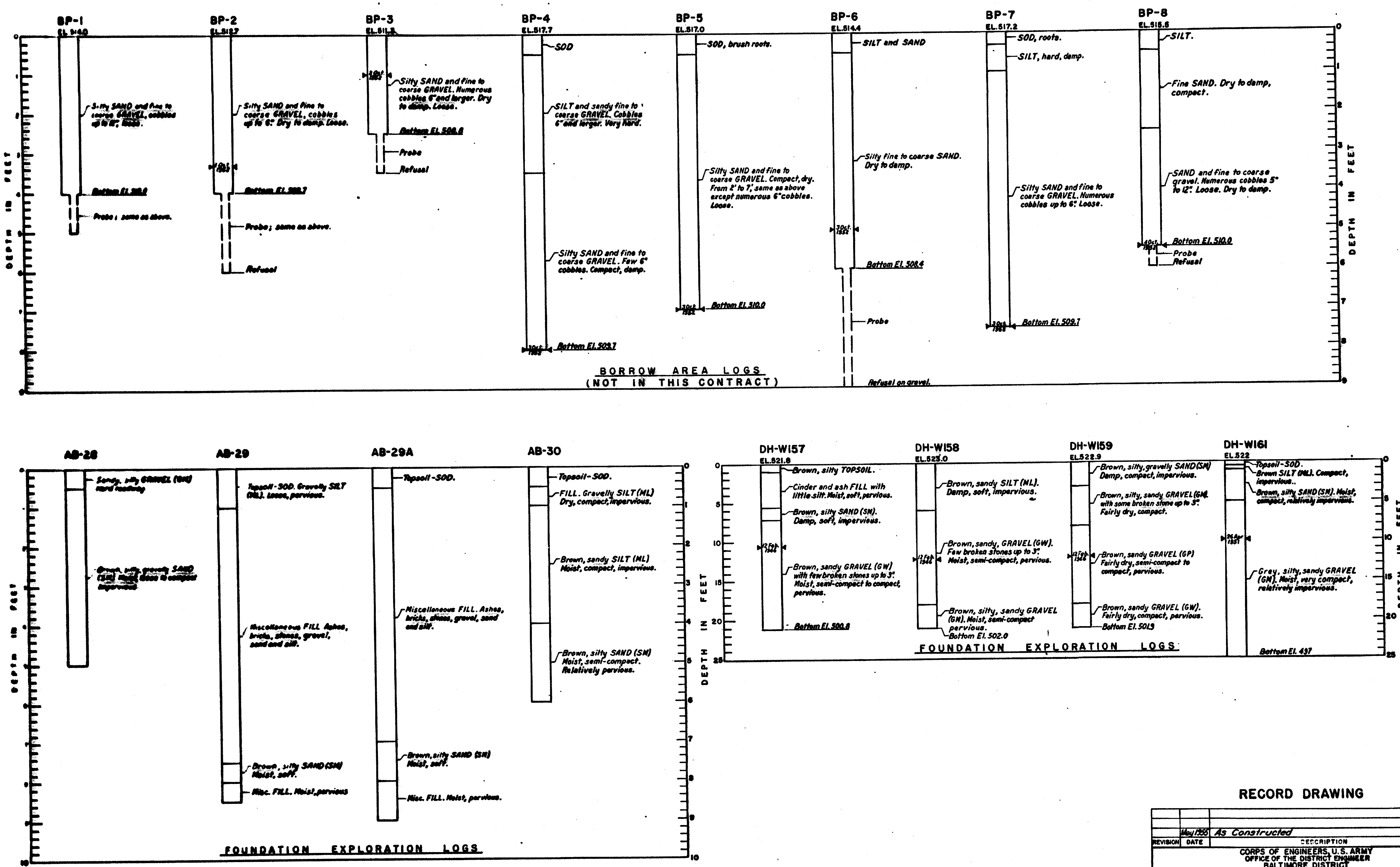
Revision	Date	Description	By
	May 1955	As Constructed	N Z

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

Drawn by: H.M.S.
Traced by: H.M.S.
Checked by: J.D.P.

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
FOUNDATION EXPLORATION & BORROW AREA LOGS-1

Date: 9 December, 1952
Scale: As shown
Sheet 5 of 29
6823-49



NOTES:

Location of Drill Holes and Auger Borings .... Sheet 11.

▸◂ Denotes ground water table at time of exploration.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.

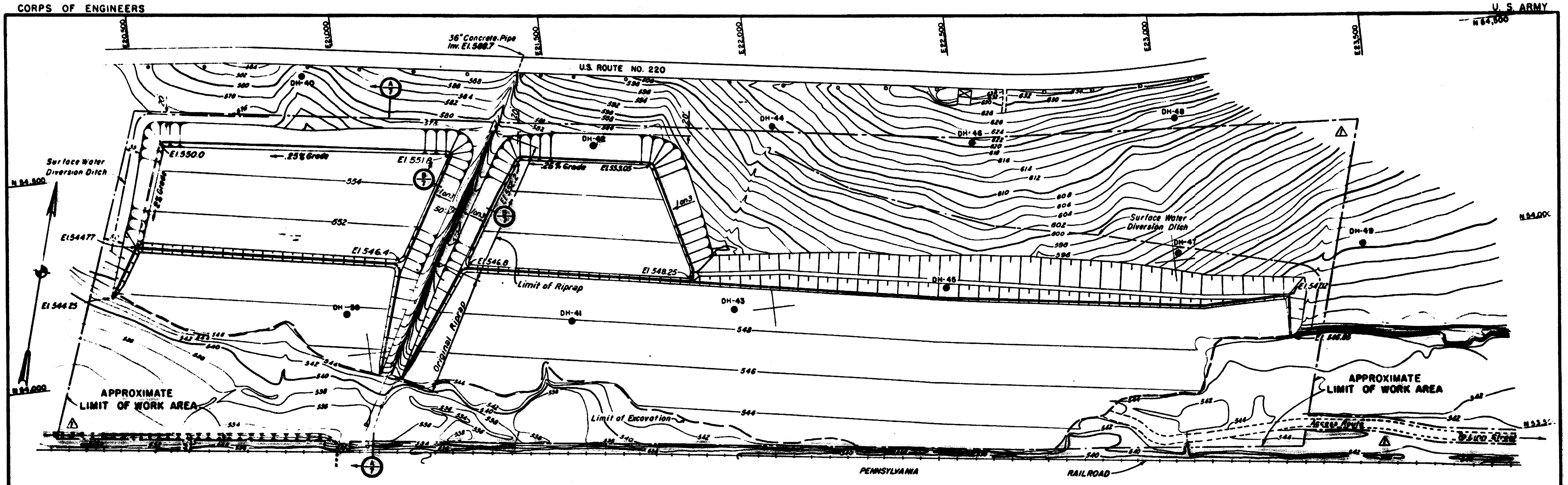
CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE MARYLAND

DRAWN BY: H.M.S.
TRACED BY: H.M.S.
CHECKED BY: J.D.R.
REVIEWED BY SAFETY BRANCH: G.H.Z.

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
FOUNDATION EXPLORATION & BORROW AREA LOGS-2

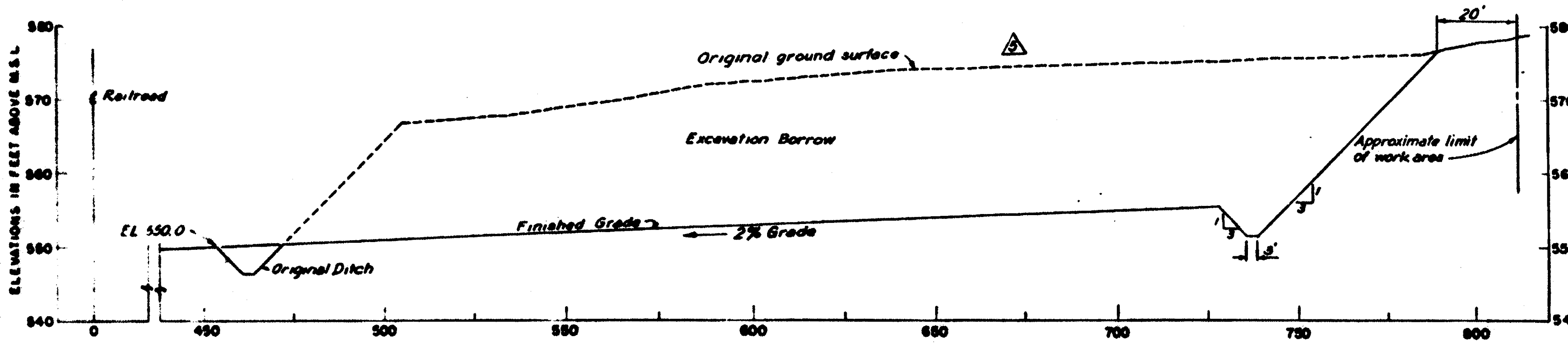
SUBMITTED: [signature]
APPROVED: [signature]
DATE: 8 DECEMBER 1952
SCALE: AS SHOWN
SPEC. NO.
DRAWING NUMBER
APPROVED FOR:
DATE
SHEET 6 OF 29
6823-50

CORPS OF ENGINEERS U. S. ARMY



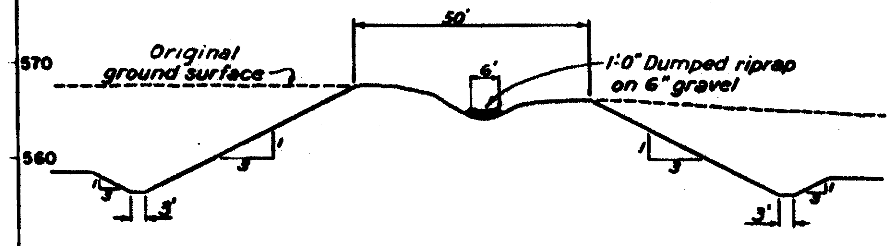
PLAN

SCALE: 1 IN. = 100 FT



SECTION

SCALES: HORIZ. 1 IN. = 20 FT. VERT. 1 IN. = 10 FT.



SECTION

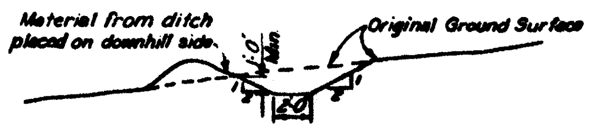
SCALE: 1 IN. = 20 FT.

GENERAL NOTES:

Drill Holes shown thus ● DH-5
Auger Borings shown thus ⊕ AB-10.
prefix W(5C) has been omitted from Drill Hole and Auger Boring numbers.
Elevations are in feet above Mean Sea Level
Sections are indicated thus ⊕ The numeral indicates the sheet on which the plan or section is shown
For additional General Notes see Sheet 6

REFERENCES:

Location of Borrow Area .... Sheet 1
Subsurface Exploration Logs .... Sheet 5



TYPICAL SECTION

SURFACE WATER DIVERSION DITCH

SCALE: 1 IN. = 5 FT.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	V.
CO No 4	5 Feb. '54	Deleted seeding from Borrow Area	CF
Add. No. 1	9 Jan. '53	Minor revisions	

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT

WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

BORROW AREA
PLAN AND SECTIONS

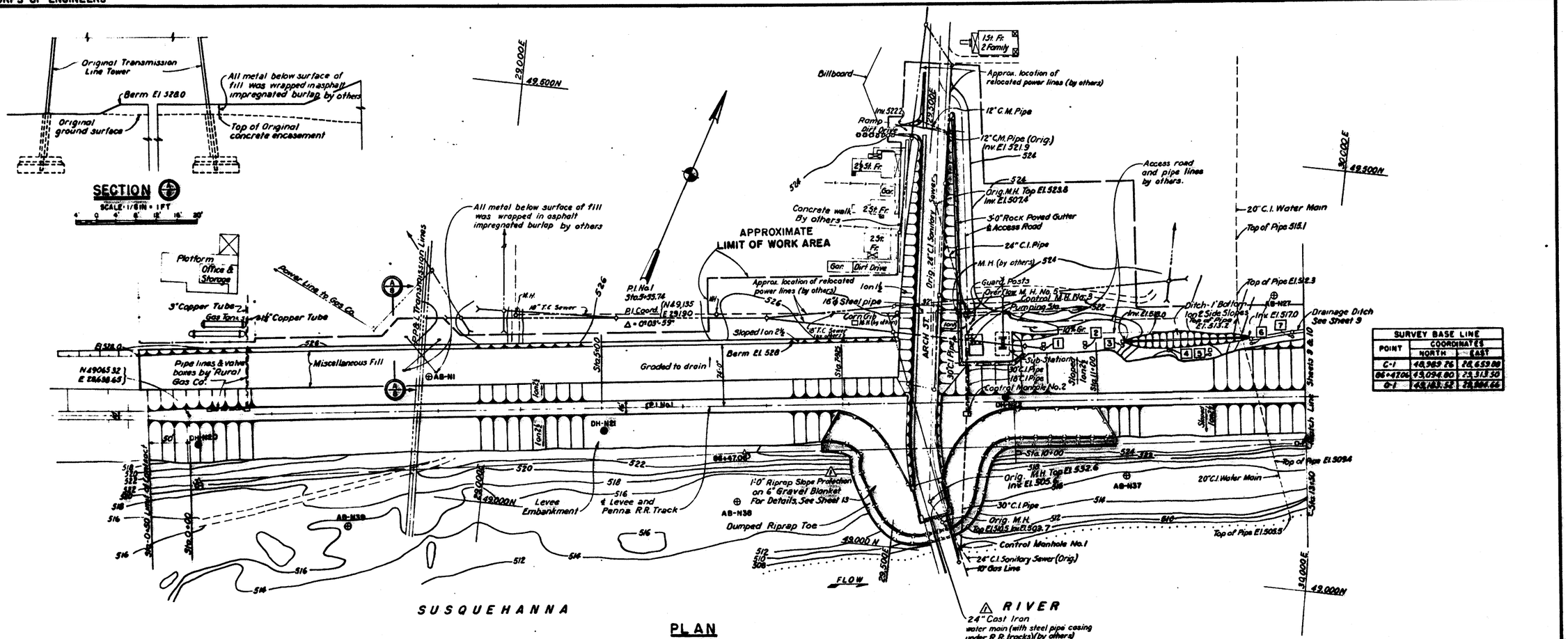
DRAWN BY: E.P. TRACED BY: C.R.W. CHECKED BY: J.D.P.
DATE: 8 DECEMBER, 1952
SCALE: AS SHOWN
SHEET 7 OF 29
6898-23

CORPS OF ENGINEERS

U. S. ARMY

SECTION

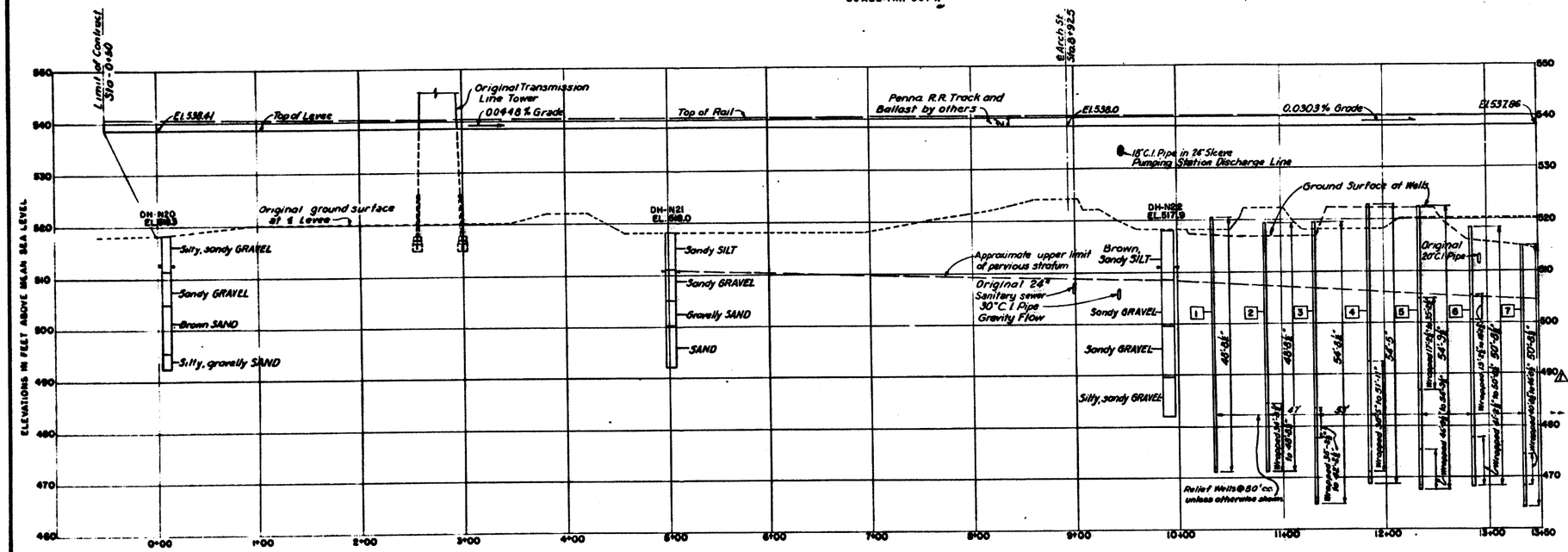
SCALE: 1/8 IN = 1 FT



SURVEY BASE LINE		
POINT	COORDINATES	
	NORTH	EAST
C-1	48,969.76	28,653.88
BS+47.06	49,094.80	29,313.30
C-1	48,183.52	28,887.66

PLAN

SCALE: 1 IN. = 50 FT.



PROFILE

SCALES: HORIZ. 1 IN. = 50 FT.
VERT. 1 IN. = 10 FT.

GENERAL NOTES:

Data concerning underground utilities have been obtained from available information. Accuracy of these data is not guaranteed.
All overhead utility lines that interfered with construction under this contract were relocated by others.
For additional General Notes see Sheet 7.

REFERENCES:

Foundation Exploration Logs ..... Sheet 5
Typical Levee Sections ..... Sheet 12
Seepage Wells ..... Sheet 16

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.F.
Add No. 1	9 Jan '93	Added proposed water main, made minor revisions	L.F.

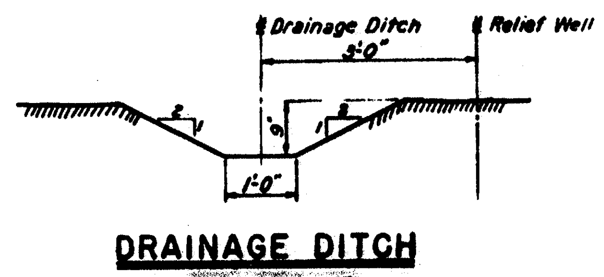
CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: G.S.H.
TRACED BY: G.A.A.
CHECKED BY: J.D.P.
REVIEWED BY SAFETY BRANCH: [illegible]
SUBMITTED: [illegible]
APPROVED: [illegible]
APPROVED POST: [illegible]
DATE: [illegible]

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
PLAN AND PROFILE
STA. 0+00 TO STA. 13+50

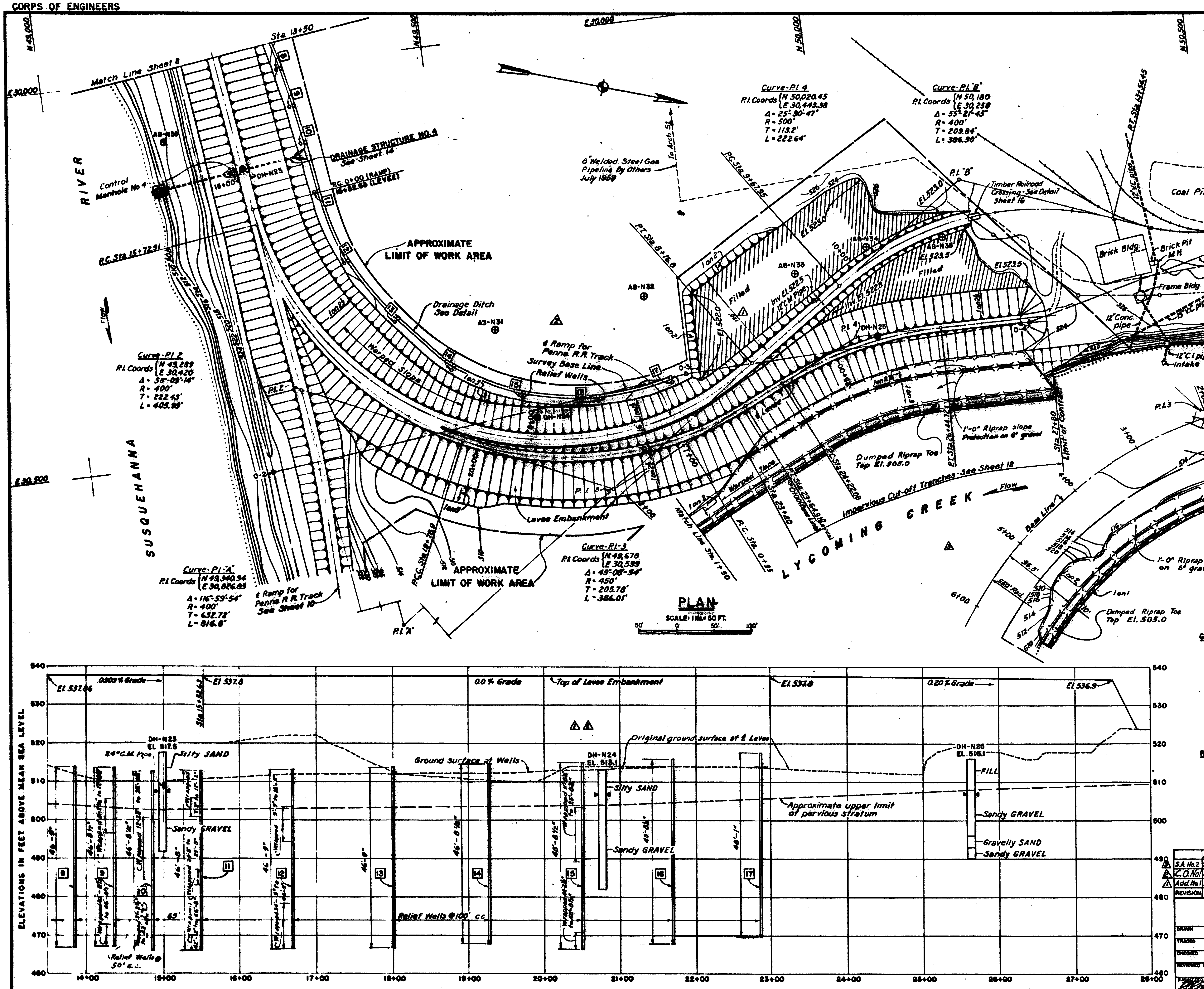
APPROVED: [illegible] DATE: 9 DECEMBER 1932
SCALE: AS SHOWN
SPEC. NO.
DRAWING NUMBER
SHEET 8 OF 29
6806-75

CORPS OF ENGINEERS | U. S. ARMY



DRAINAGE DITCH

SCALE: 3/4 IN. = 1 FT.



PROFILE

SCALES: HORIZ. 1 IN. = 50 FT. VERT. 1 IN. = 10 FT.

SURVEY BASE LINE		
POINT	COORDINATES	
	NORTH	EAST
O-2	49,241.64	30,521.53
O-3	49,791.29	30,461.95
O-4	50,247.03	30,453.02
O-5	50,624.62	30,317.98

GENERAL NOTES:
For General Notes see Sheets 7 and 8

REFERENCES:
Foundation Exploration Logs - Sheet 5
Typical Levee Sections - Sheet 12
Seepage Wells - Sheet 16

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	
3 S.A. No. 2	26 Oct '53	Added Slope Protection	
2 C.O. No. 1	27 APR '53	Deleted Control M.H. No. 6	
1 Add. No. 1	9 Jan '53	Minor Revisions	

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: R. B.
TRACED BY: E. P.
CHECKED BY: J. D. P.
REVIEWED BY SAFETY BRANCH
SUBMITTED: HD. DESIGN BR. - FLOOD CONTROL
APPROVED: CHIEF, ENGINEERING DIVISION
APPROVED: COLONEL, CORPS OF ENGINEERS, DISTRICT ENGINEER

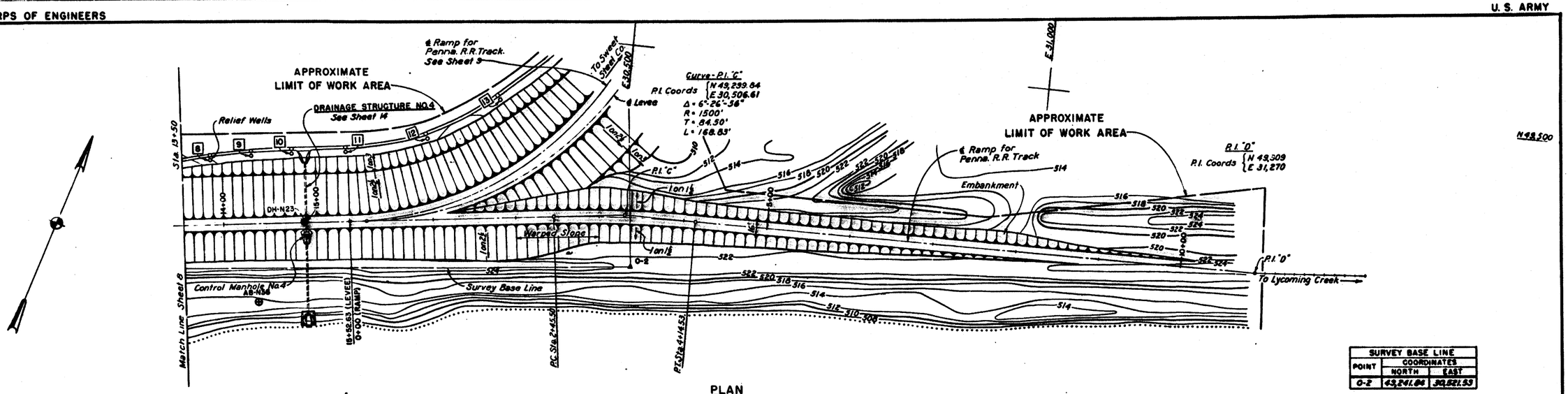
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
PLAN AND PROFILE
STA. 13+50 TO STA. 27+80

DATE: 8 DECEMBER 1952
SCALE: AS SHOWN
SPEC. NO.
APPROVED FOR: DATE

SHEET 9 OF 29 | 6806-76

CORPS OF ENGINEERS

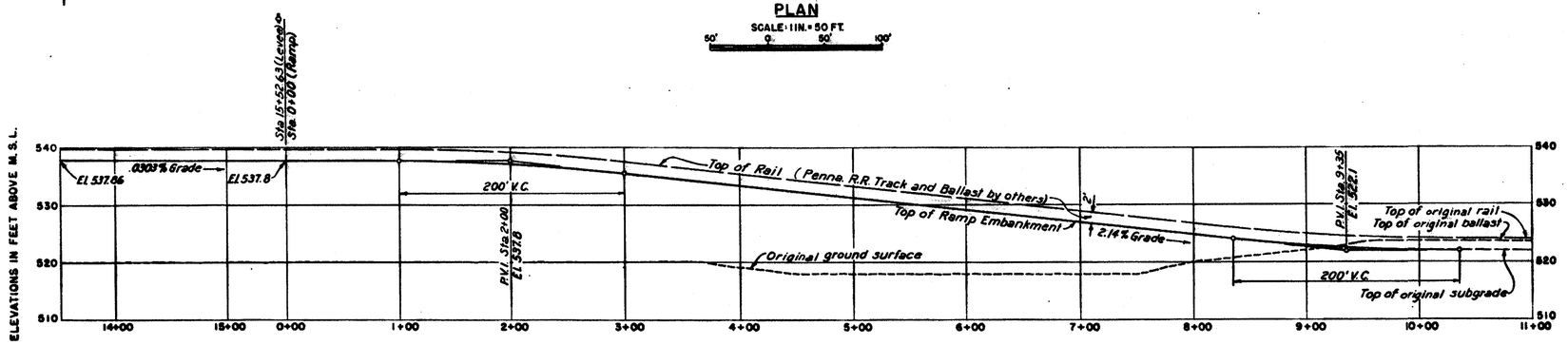
U. S. ARMY



PLAN

SCALE: 1 IN. = 50 FT.

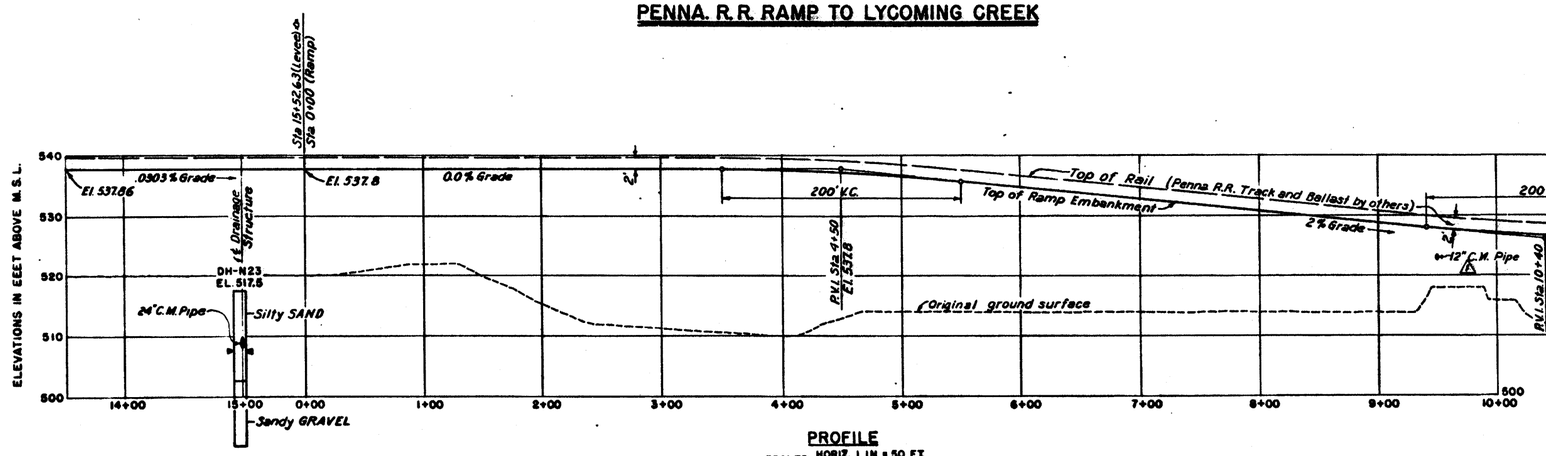
SURVEY BASE LINE		
POINT	COORDINATES	
	NORTH	EAST
O-2	43,241.84	30,521.53



PROFILE

SCALES: HORIZ. 1 IN. = 50 FT. VERT. 1 IN. = 10 FT.

PENNA. R.R. RAMP TO LYCOMING CREEK



PROFILE

SCALES: HORIZ. 1 IN. = 50 FT. VERT. 1 IN. = 10 FT.

PENNA. R.R. RAMP TO SWEET STEEL CO.

GENERAL NOTES:
For General Notes see Sheets 7 and 8

REFERENCES:
Foundation Exploration Logs ..... *Sheet 5*
Typical Levee Sections ..... *Sheet 12*
Seepage Wells ..... *Sheet 16*

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.C.
Add. No. 1	9 Jan '59	Minor Revisions	Cf

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

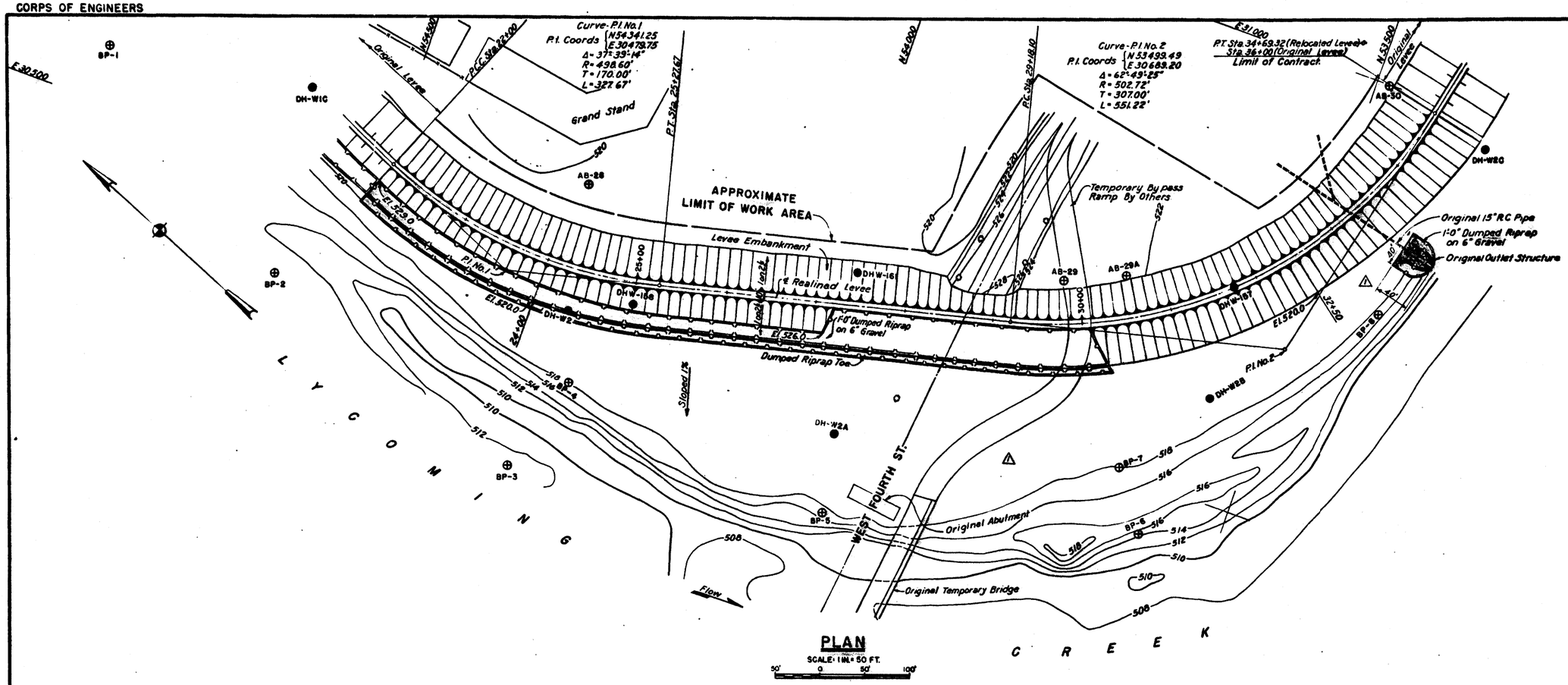
DRAWN BY: R. B.
TRACED BY: E. P.
CHECKED BY: J. D. R.
REVIEWED BY SAFETY BRANCH
SUBMITTED
CHIEF, ENGINEERING BRANCH
APPROVED FOR PUBLIC RELEASE
APPROVED
CHIEF, ENGINEERING DIVISION
DATE 9 DECEMBER 1952
DISTRICT ENGINEER
SCALE: AS SHOWN
SPEC. NO.
DRAWING NUMBER
DATE
SHEET 10 OF 29

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5G

PLAN AND PROFILE PENNA. RAILROAD RAMPS

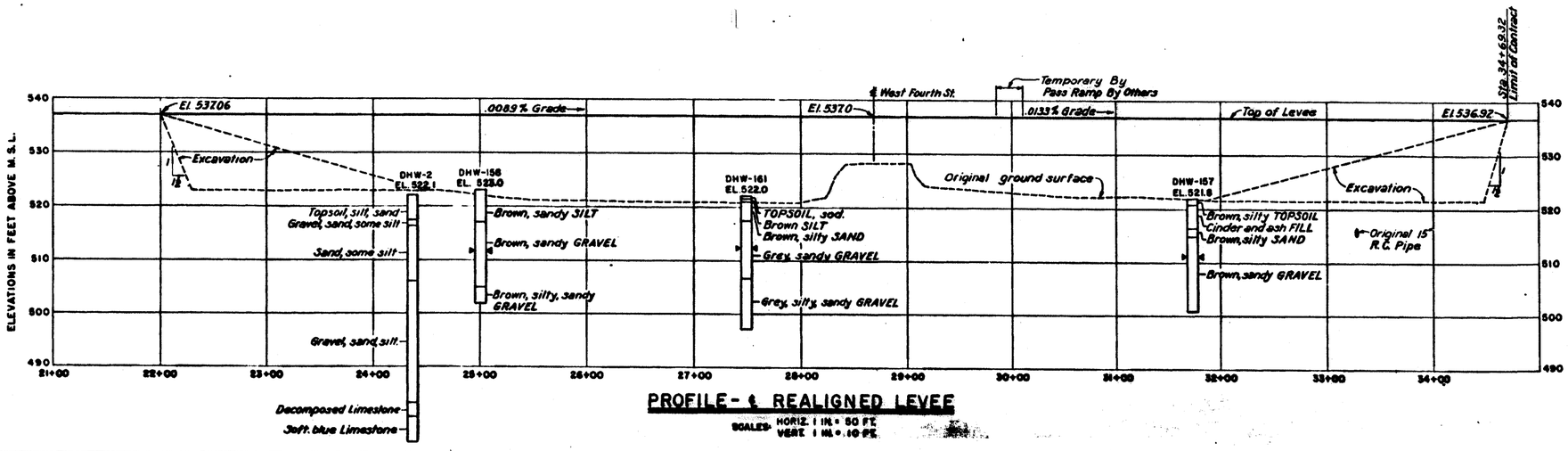
6806-77

CORPS OF ENGINEERS — U. S. ARMY



PLAN

SCALE: 1 IN. = 50 FT.



PROFILE - ℄ REALIGNED LEVEE

SCALES: HORIZ. 1 IN. = 50 FT. VERT. 1 IN. = 10 FT.

GENERAL NOTES:

For General Notes see Sheets 7 and 8.

REFERENCES:

Location Map and Index	Sheet 1
General Plan	Sheet 2
Foundation Exploration Logs	Sheets 5 & 6
Typical Levee Sections	Sheet 12

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1965	As Constructed	
Add No. 1	9 Jan '53	Minor Revisions	

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: E. R.
TRACED BY: E. R.
CHECKED BY:
REVIEWED BY CHIEF, BRANCH:
SUBMITTED:
APPROVED:
APPROVED:
DATE:

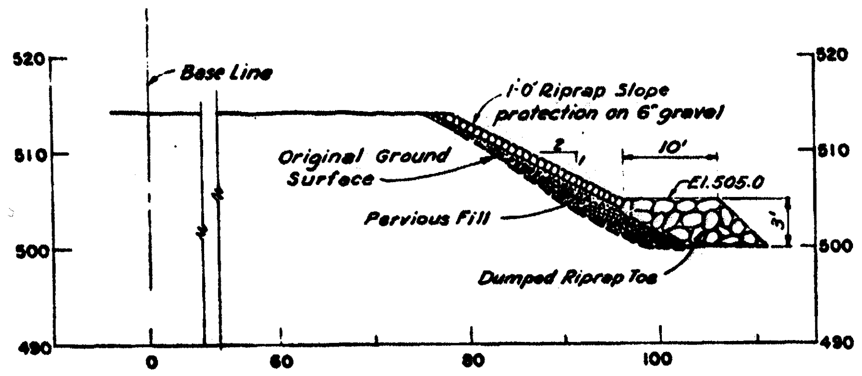
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

PLAN AND PROFILE LEVEE REALINEMENT

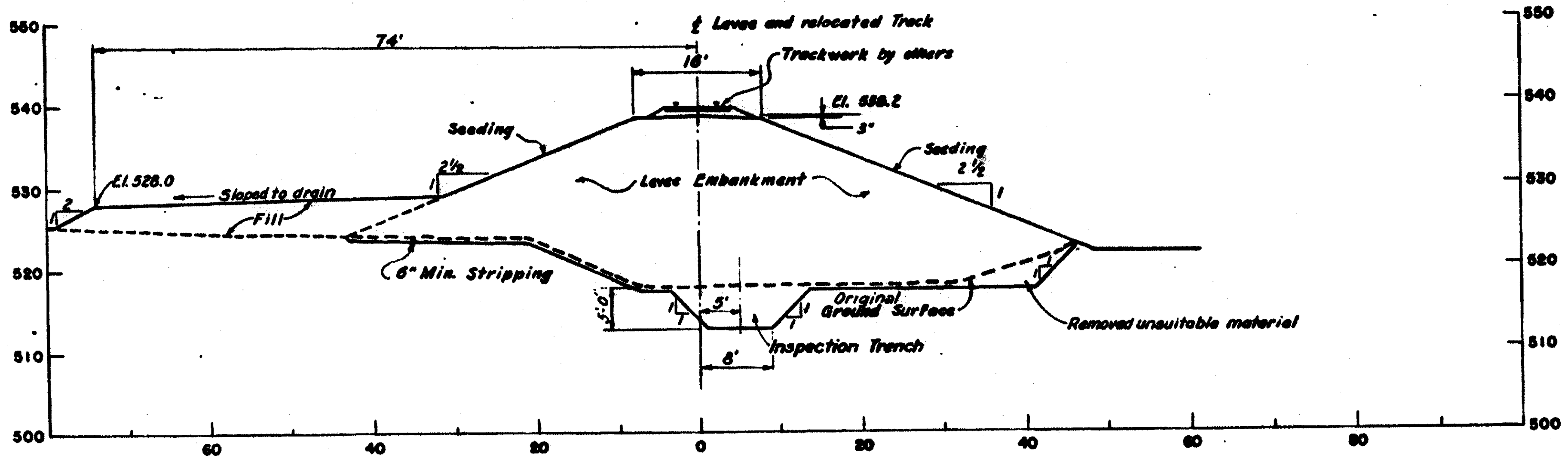
SCALE: AS SHOWN
SHEET NO. 11 OF 29

6806-78

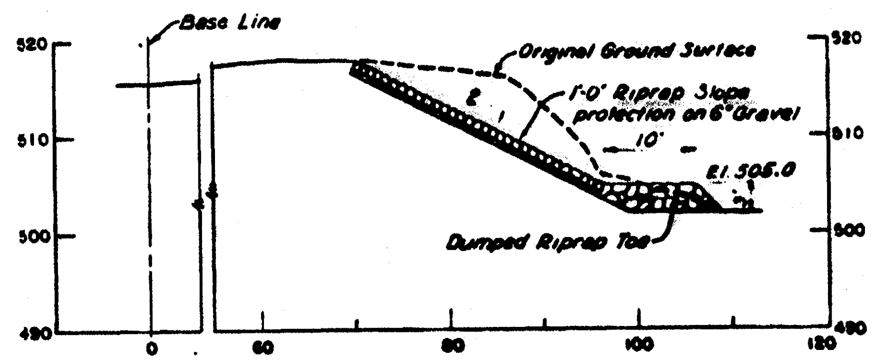
CORPS OF ENGINEERS | U. S. ARMY



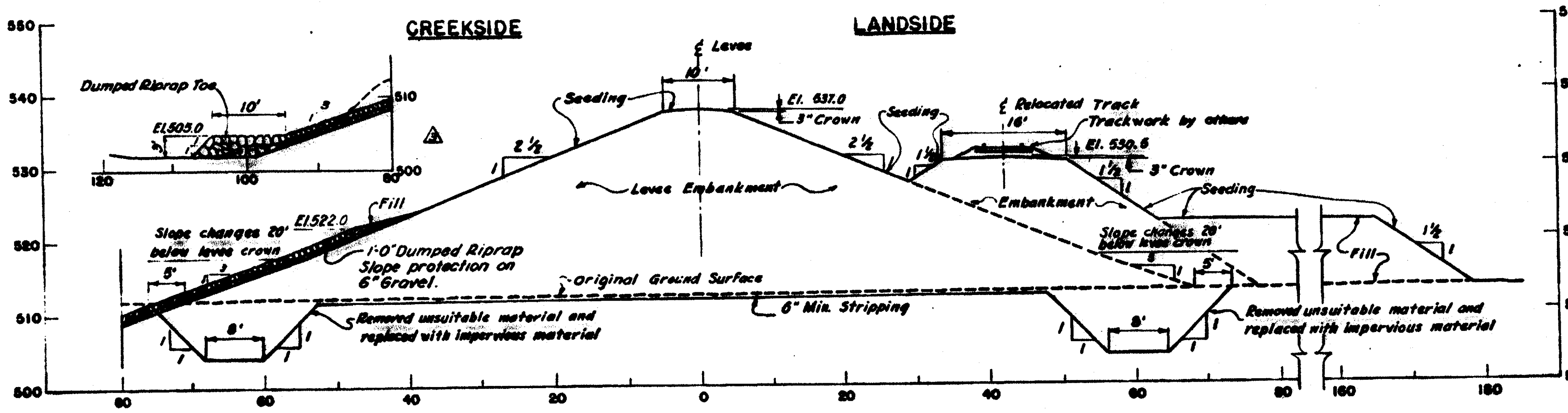
STATION 2+90 △
(SLOPE PROTECTION)



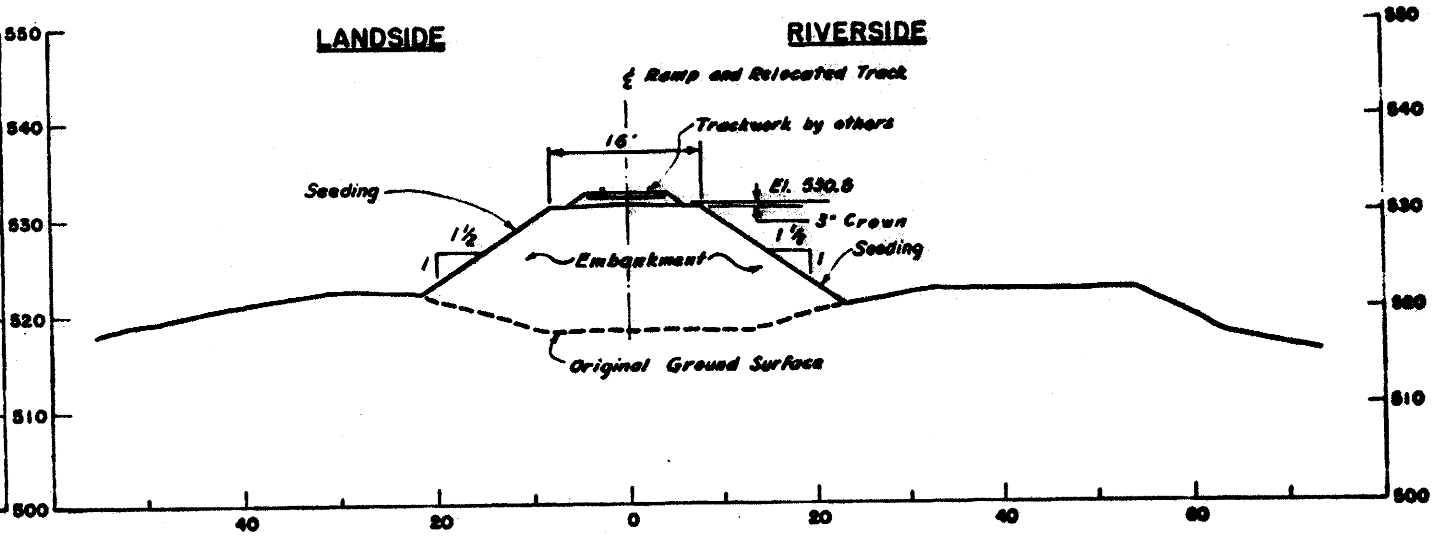
STATION 5+00
(LEVEE)



STATION 4+60 △
(SLOPE PROTECTION)



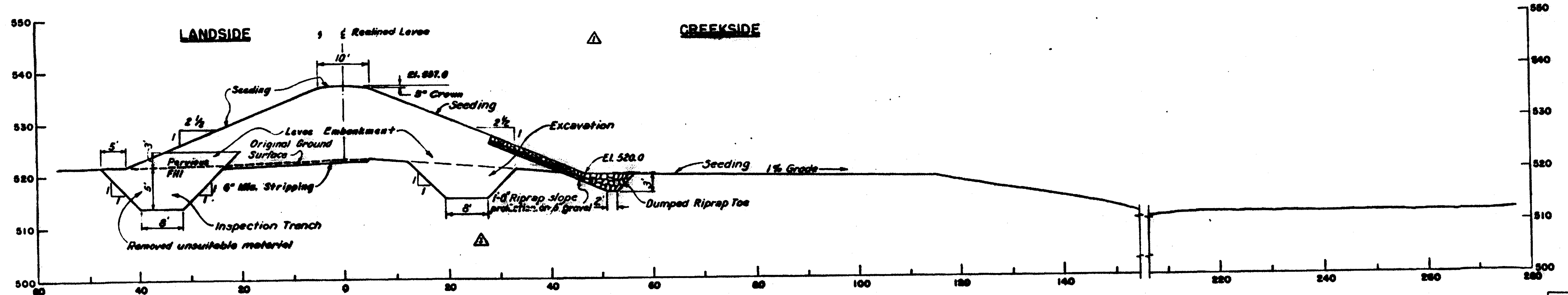
STATION 24+00
(LEVEE)



STATION 5+00
(PENNA. R. R. RAMP TO LYCOMING CREEK)

GENERAL NOTES:
All cross sections are taken looking downstream.
For additional General Notes see Sheets 7 & 8

REFERENCES:
Plan and Profile .... Sheets 8 to 11



STATION 24+50
(REALINED LEVEE)
(UNIT No. 1)

SCALE: 1 IN. = 10 FT.

RECORD DRAWING

Revision	Date	Description
	May 1955	As Constructed
△ 3A No. 2	26 Oct 53	Added Slope Protection
△ Add No. 1	19 Jan 51	Minor Revisions

CORPS OF ENGINEERS U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

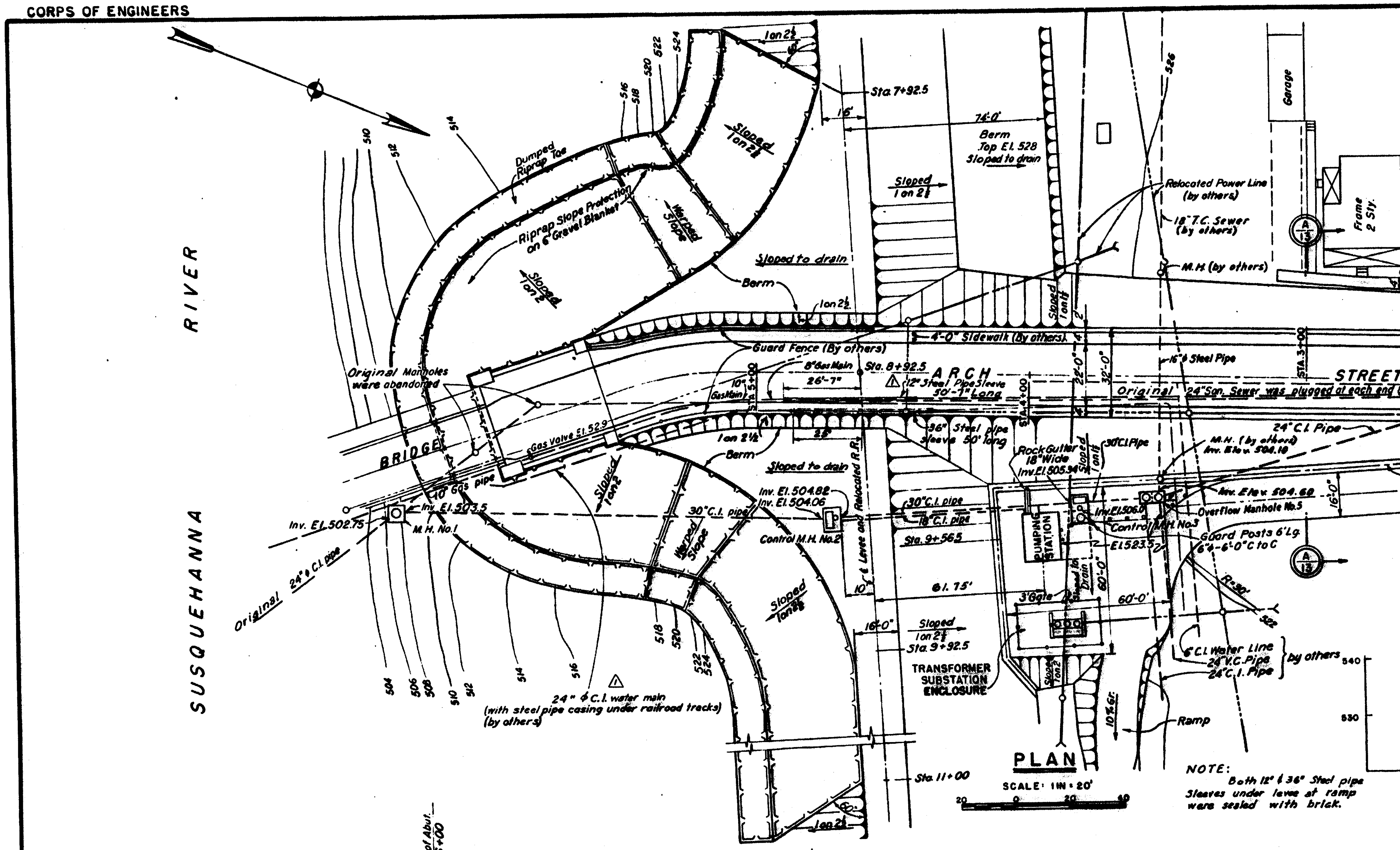
TYPICAL LEVEE SECTIONS

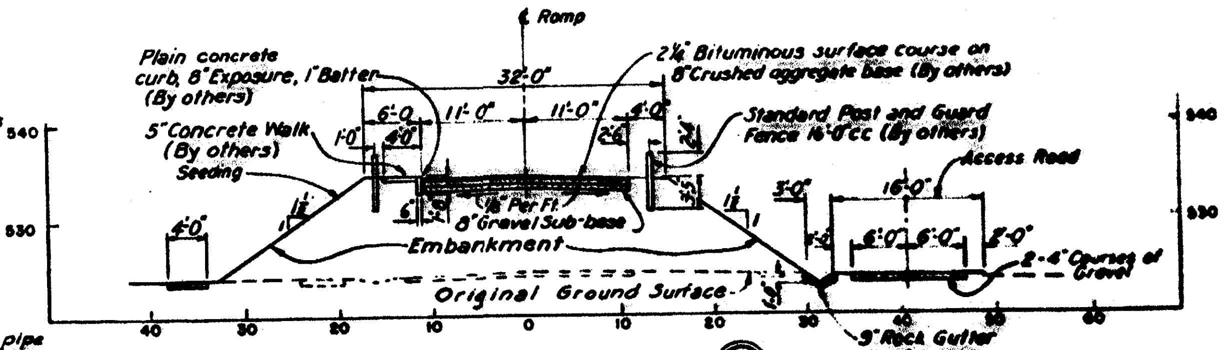
Sheet 12 of 29

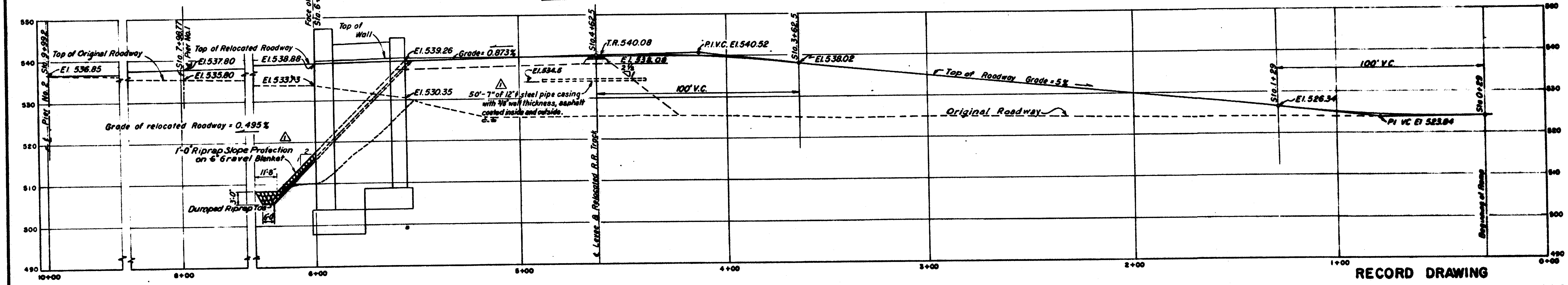
6806-79

CORPS OF ENGINEERS

U. S. ARMY







RECORD DRAWING

PROFILE

SCALES HOR. 1 IN = 20 FT. VER. 1 IN = 10 FT.

GENERAL NOTES:

All street surfacing, sidewalks, curbs and guard fence on Arch St. Ramp are not a part of this contract.
For additional General Notes, see Sheets 7 & 8.

REFERENCES:

For sewer details see sheet 17
For pumping station details see sheets 18 to 25

REVISION	DATE	DESCRIPTION
	May 1955	As Constructed
Add. No. 1	9 Jan. '53	Added proposed water main, made minor revisions.

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

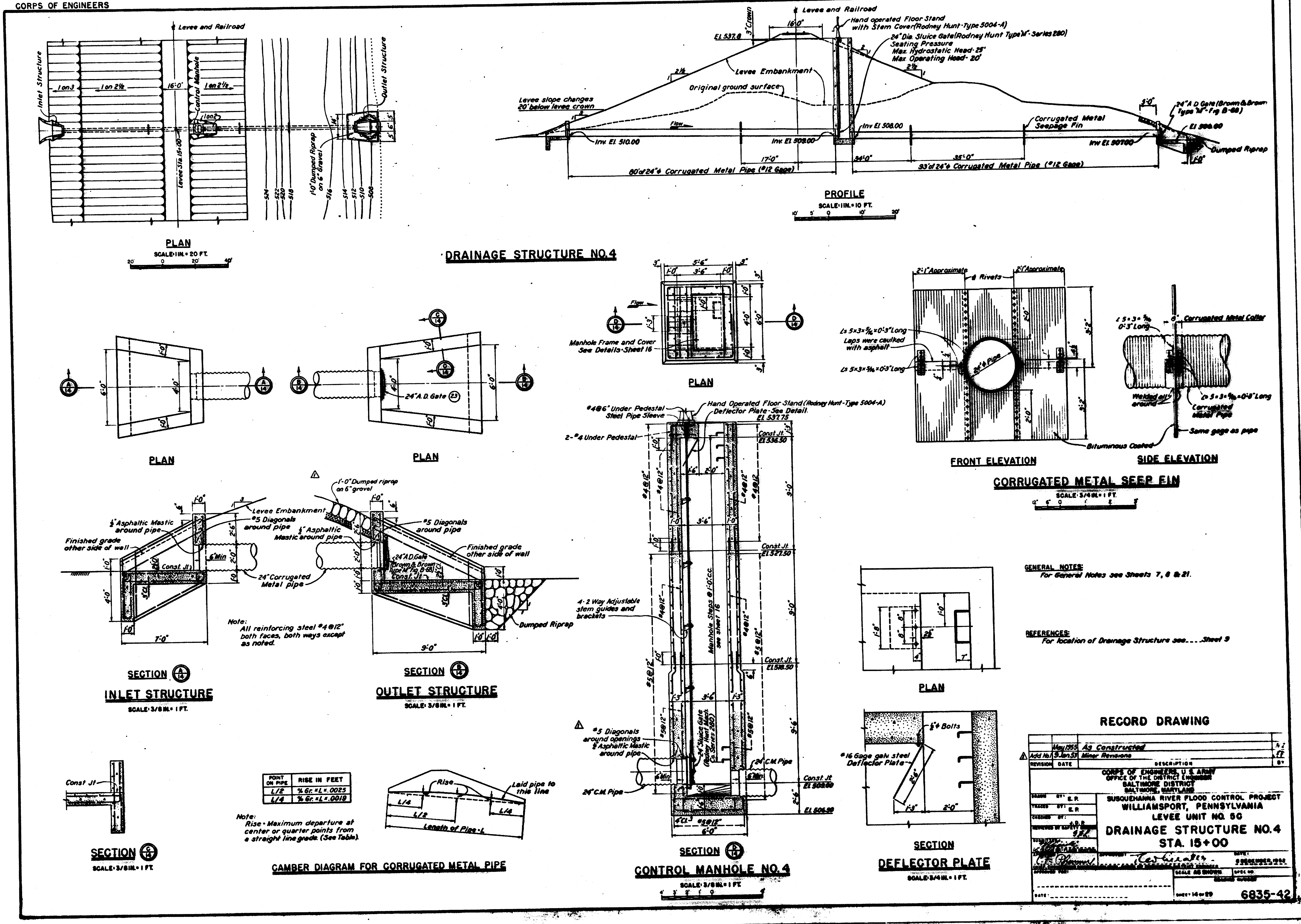
DRAWN BY: J. D. R.
TRACED BY: C. R. W.
CHECKED BY: J. D. P.

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH ST. RAMP
PLAN, PROFILE & SECTION

SCALE: AS SHOWN

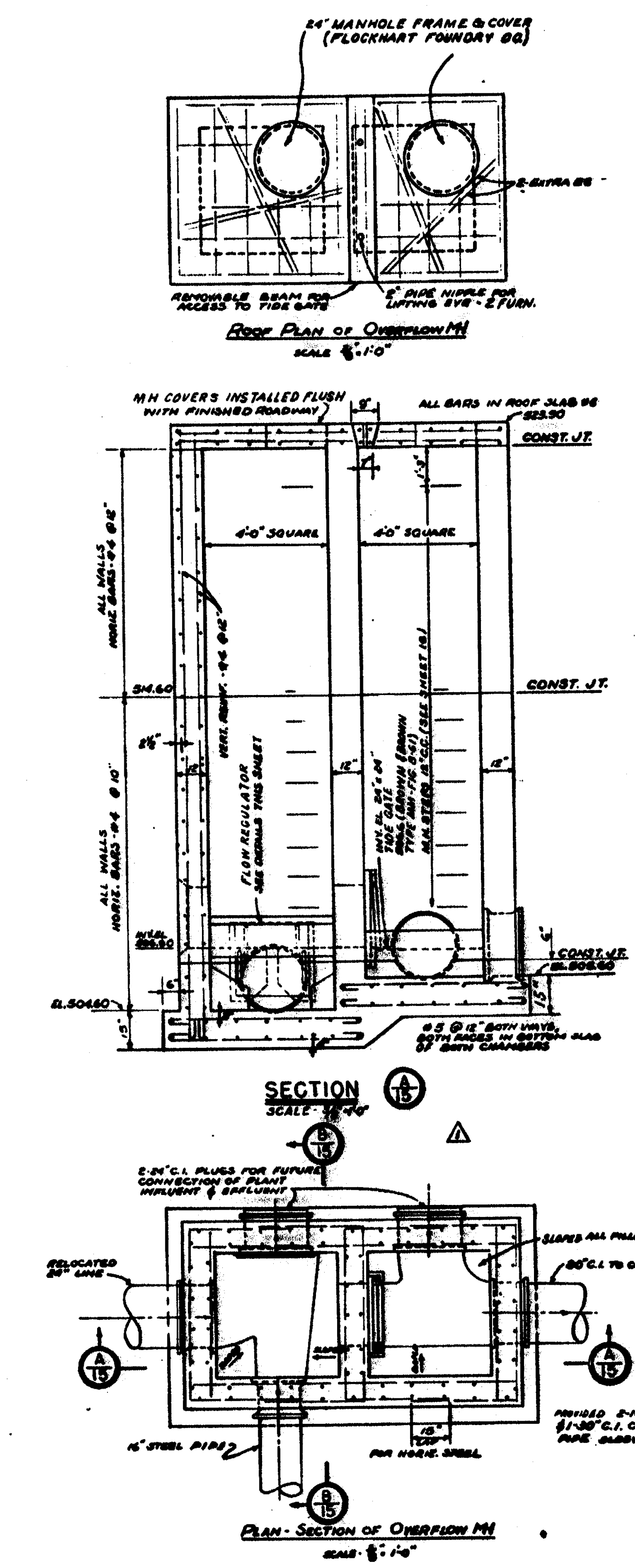
SHEET 13 OF 29

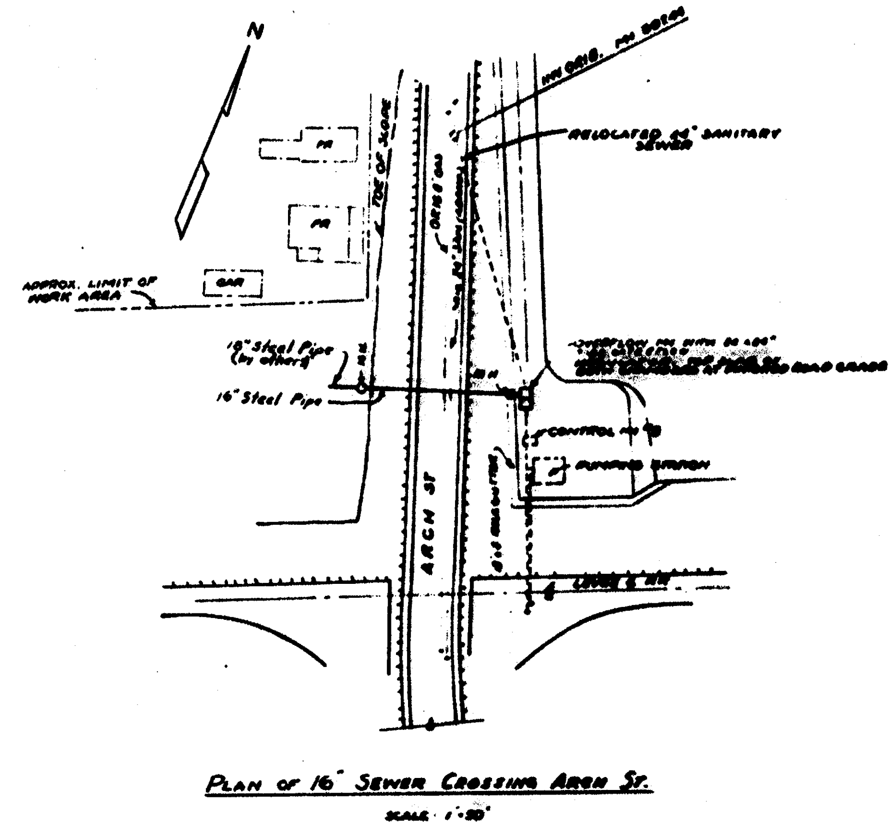
6806-80

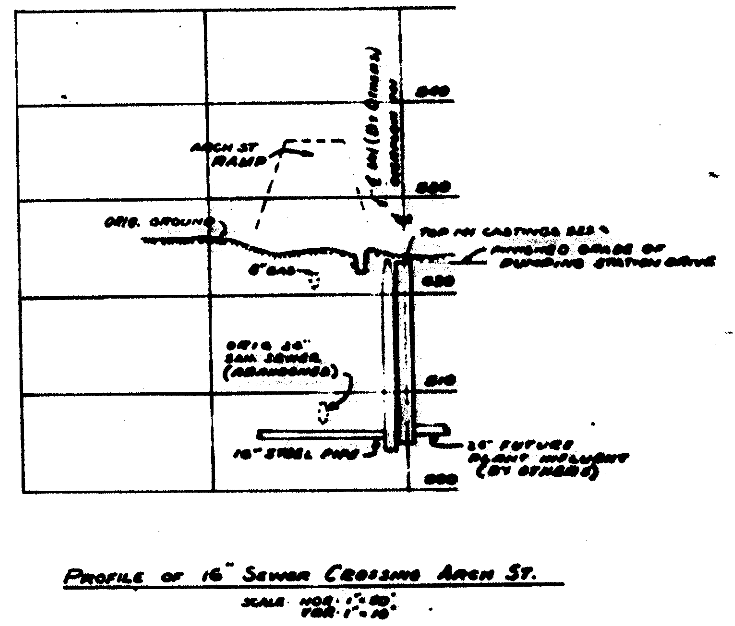


CORPS OF ENGINEERS
U. S. ARMY
DRAINAGE STRUCTURE NO. 4
Levee and Railroad
Inlet Structure
Outlet Structure
Control Manhole
Levee Sta. 15+00
1'-0" Dumped Riprap on 6" Gravel
PLAN
SCALE: 1 IN. = 20 FT.
Hand operated Floor Stand with Stem Cover (Rodney Hunt-Type 5004-A)
24" Dia. Sluice Gate (Rodney Hunt Type "M"-Series 280)
Seating Pressure
Max. Hydrostatic Head-25'
Max. Operating Head-20'
Levee Embankment
Original ground surface
Levee slope changes 20' below levee crown
Corrugated Metal Seepage Fin
24" A.D. Gate (Brown & Brown Type "M"-Fig. B-68)
Dumped Riprap
Inv. El. 510.00
Inv. El. 509.00
Inv. El. 508.00
Inv. El. 507.00
80' of 24" Corrugated Metal Pipe (#12 Gage)
93' of 24" Corrugated Metal Pipe (#12 Gage)
PROFILE
SCALE: 1 IN. = 10 FT.
PLAN
PLAN
24" A.D. Gate
Manhole Frame and Cover See Details-Sheet 16
PLAN
SECTION
INLET STRUCTURE
SCALE: 3/8 IN. = 1 FT.
SECTION
OUTLET STRUCTURE
SCALE: 3/8 IN. = 1 FT.
Note: All reinforcing steel #4 @ 12" both faces, both ways except as noted.
SECTION
CONTROL MANHOLE NO. 4
SCALE: 3/8 IN. = 1 FT.
Manhole Steps @ 1'-0" c.c. see sheet 16
4-2 Way Adjustable stem guides and brackets
CORRUGATED METAL SEEP FIN
FRONT ELEVATION
SIDE ELEVATION
SCALE: 3/4 IN. = 1 FT.
Laps were caulked with asphalt
Bituminous Coated
Corrugated Metal Collar
Same gage as pipe
GENERAL NOTES:
For General Notes see Sheets 7, 8 & 21.
REFERENCES:
For location of Drainage Structure see....Sheet 9
PLAN
SECTION
DEFLECTOR PLATE
SCALE: 3/4 IN. = 1 FT.
#16 Gage galv. steel Deflector Plate
SECTION
SCALE: 3/8 IN. = 1 FT.
POINT ON PIPE | RISE IN FEET
L/2 | ¼ Gr. × L × .0025
L/4 | ¾ Gr. × L × .0019
Note: Rise - Maximum departure at center or quarter points from a straight line grade. (See Table).
CAMBER DIAGRAM FOR CORRUGATED METAL PIPE
RECORD DRAWING
May 1955 As Constructed
Add. No. 1 9 Jan 53 Minor Revisions
CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
DRAINAGE STRUCTURE NO. 4
STA. 15+00
SCALE AS SHOWN
6835-42

CORPS OF ENGINEERS — U. S. ARMY

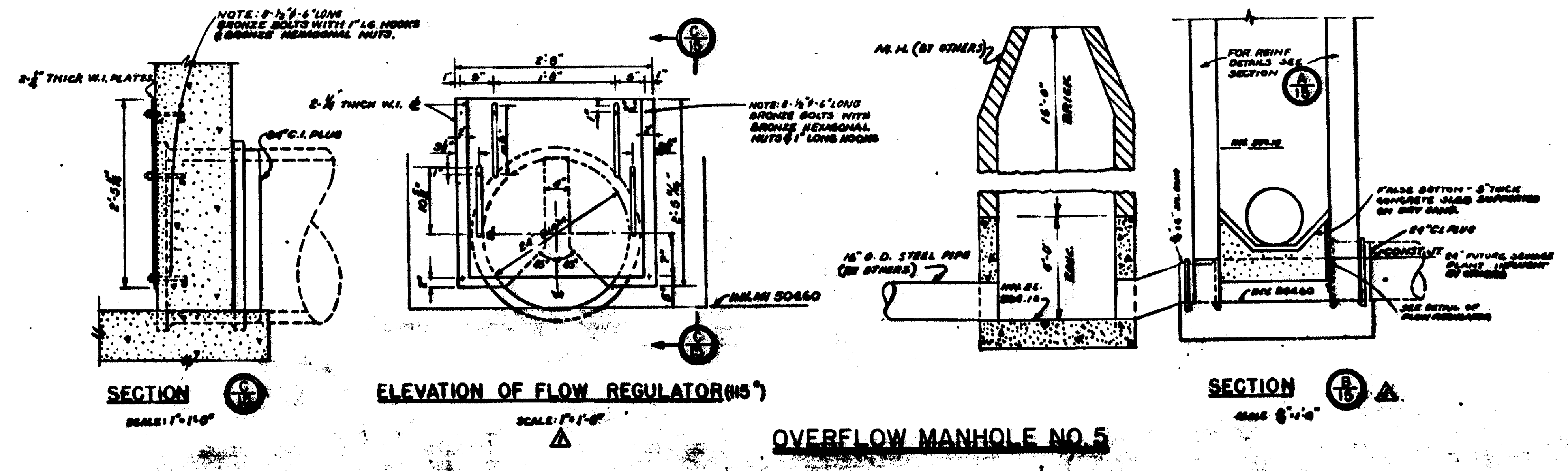






GENERAL NOTES:
For General notes see sheets 7, 8 and 21

REFERENCES:
Location Overflow Manhole..... Sheets 8 and 13
Location Control Manhole....... Sheet 9



RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	NZ
C.O. No. 1	27 APR. '53	Deleted Control M.H. No 6	GP
Add. No. 1	3 Jan. 53	Added section C/15 and made minor revisions	

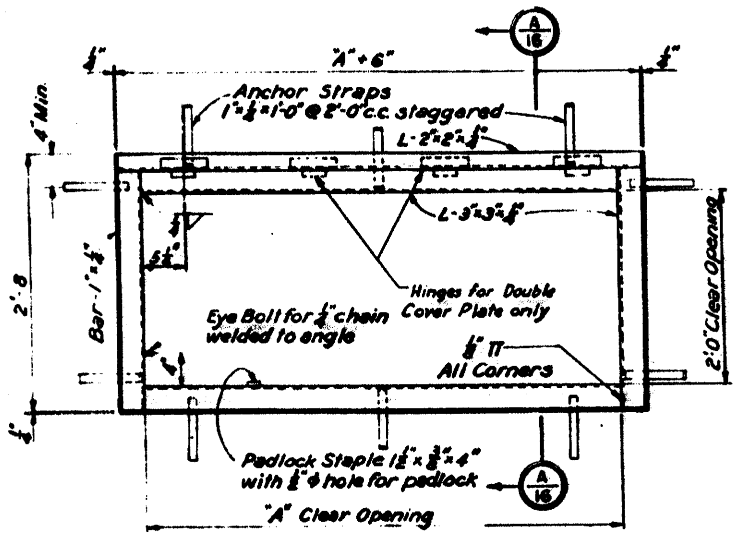
CORPS OF ENGINEERS U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

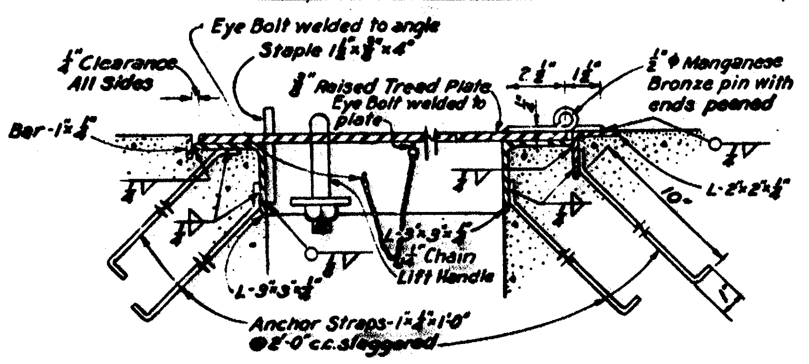
SANITARY SEWER CROSSINGS AND MANHOLE DETAILS

DRAWN BY: J.D.R.
TRACED BY: E.A.G.
CHECKED BY: J.D.R.

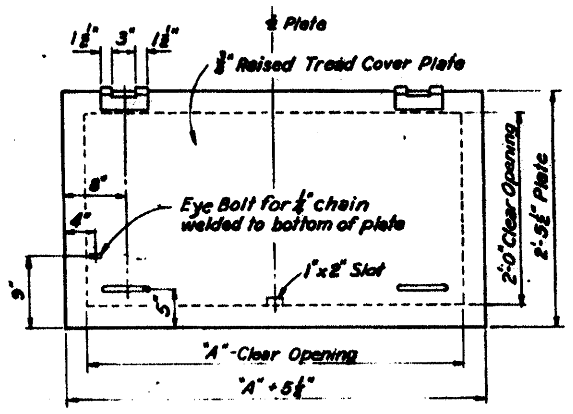
SCALE: AS SHOWN
SHEET 15 OF 29
6847-1



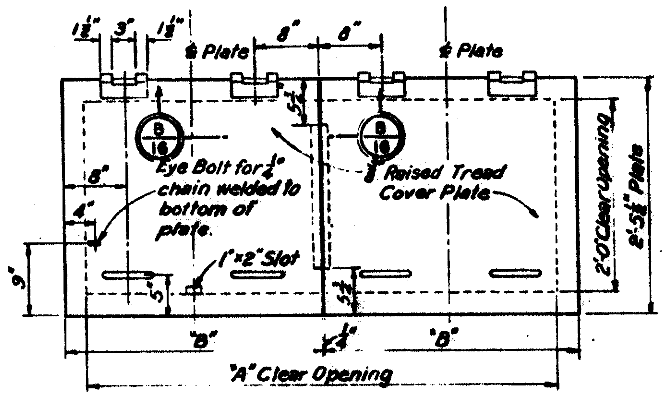
PLAN OF FRAME
SCALE: 1 IN. = 1 FT.



SECTION (A/16)
SCALE: 3 IN. = 1 FT.

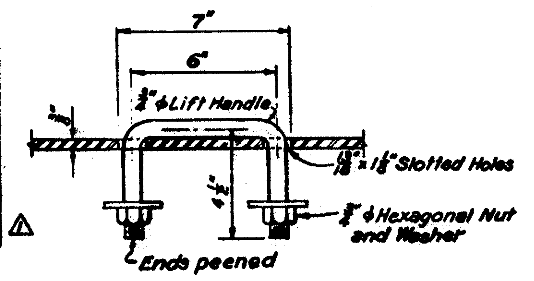


SINGLE COVER PLATE
SCALE: 1 IN. = 1 FT.

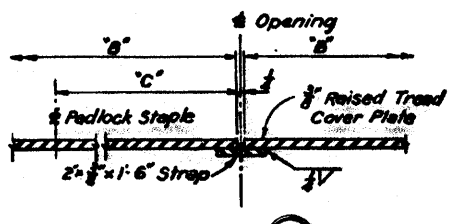


DOUBLE COVER PLATE
SCALE: 1 IN. = 1 FT.

FRAME AND COVER DIMENSIONS					
MANHOLE NO.	"A"	"B"	"C"	COVER	LOCATION
2	6'-6"	3'-5 5/8	1'-8 13/16	Double	Arch Street Pumping Station
3	4'-6"			Single	Arch Street Pumping Station
4	4'-0"			Single	Levee Unit No. 5C Sta. 15+00
1	4'-0"			Single	Under Arch Street Bridge

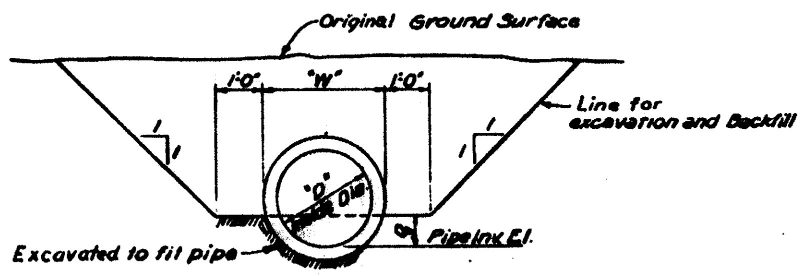


LIFT HANDLE
SCALE: 3 IN. = 1 FT.

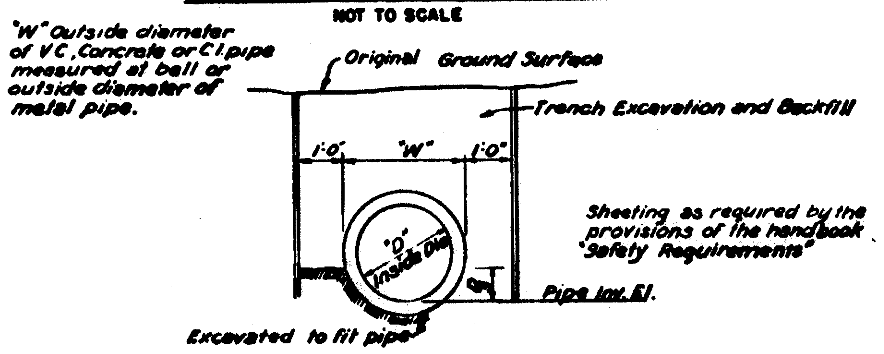


SECTION (B/16)
SCALE: 3 IN. = 1 FT.

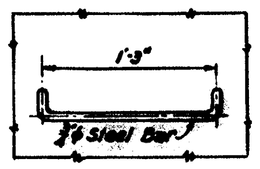
MANHOLE FRAME AND COVER



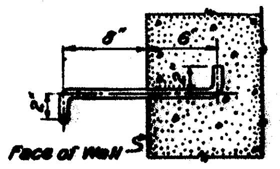
OPEN CUT EXCAVATION
NOT TO SCALE



TRENCH EXCAVATION
NOT TO SCALE

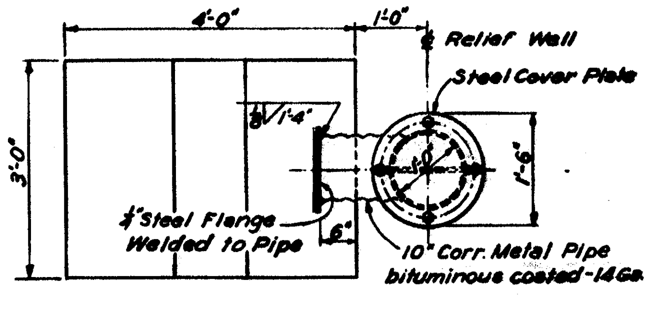


ELEVATION

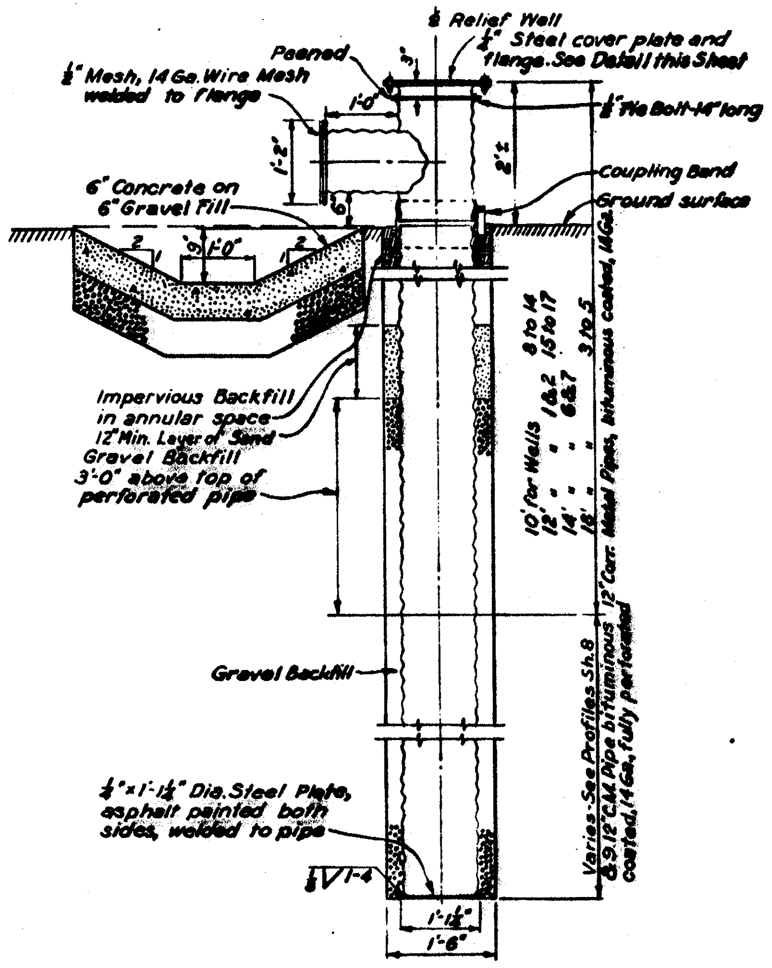


SECTION

MANHOLE STEPS
SCALE: 1 1/2 IN. = 1 FT.

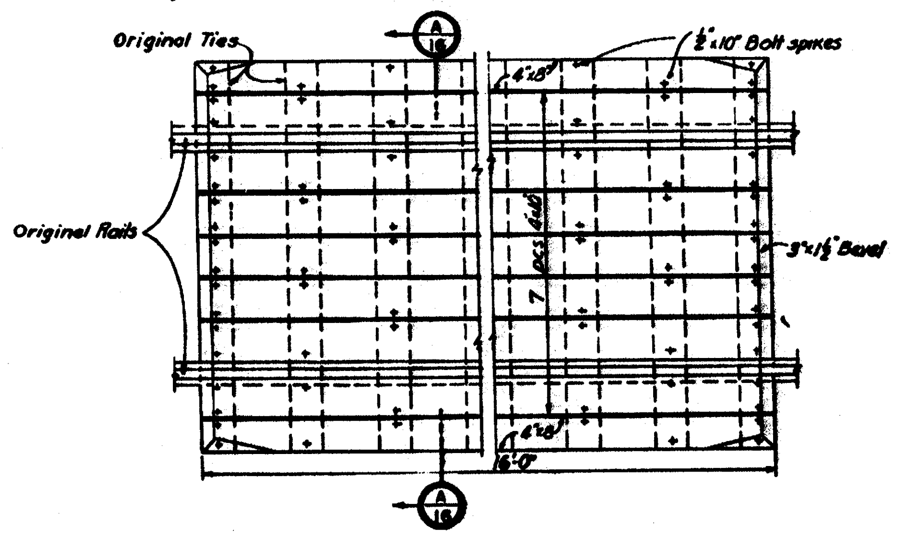


PLAN

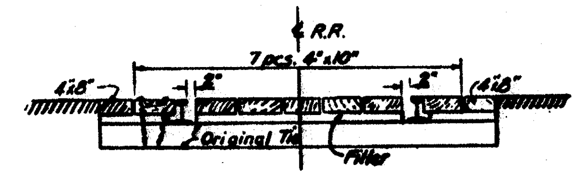


SECTION

TYPICAL SEEPAGE RELIEF WELL
SCALE: 3/4 IN. = 1 FT.

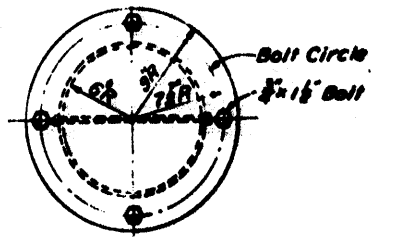


PLAN

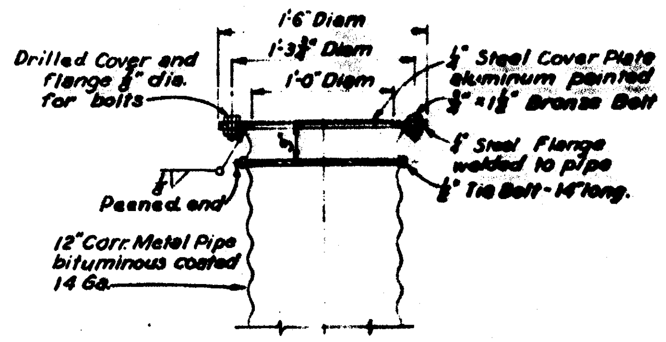


SECTION (A/16)

DETAIL OF RAILROAD CROSSING
SCALE: 1/2 IN. = 1 FT.

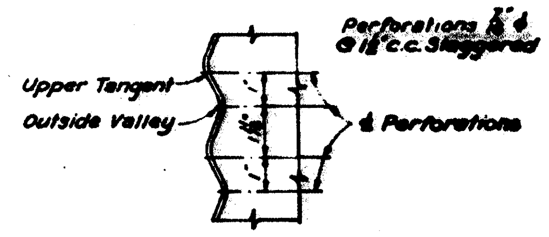


PLAN



SECTION

COVER PLATE & FLANGE
SCALE: 1 1/2 IN. = 1 FT.



WELL SCREEN PERFORATIONS
NOT TO SCALE

GENERAL NOTES:
For General Notes see Sheets 7, 8 & 21.

REFERENCES:
For Locations of relief wells see Sheets 8 & 9.
For Location of railroad crossing see Sheet 9.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	
Add. No. 1	9 Jan. '53	Minor Revisions	

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: E. R.
TRACED BY: S. K.
CHECKED BY: J. D. P.

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
MISCELLANEOUS DETAILS
AND SEEPAGE RELIEF WELLS

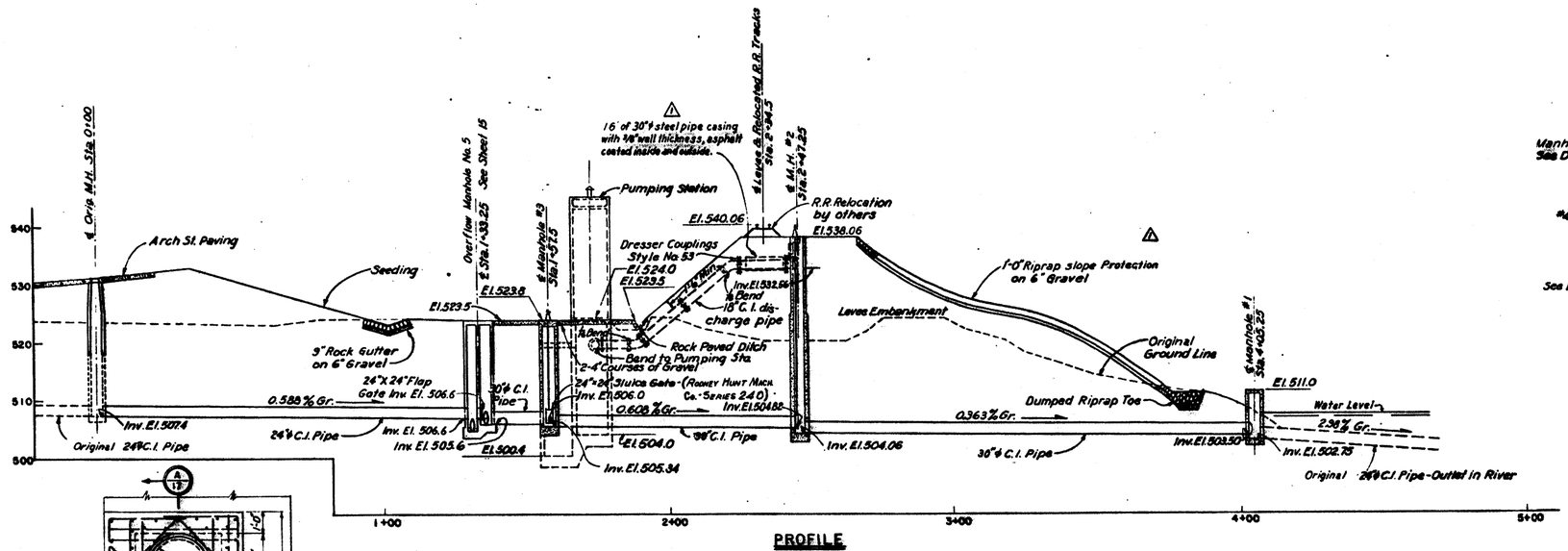
SCALE: AS SHOWN

SHEET 16 OF 29

6866-21

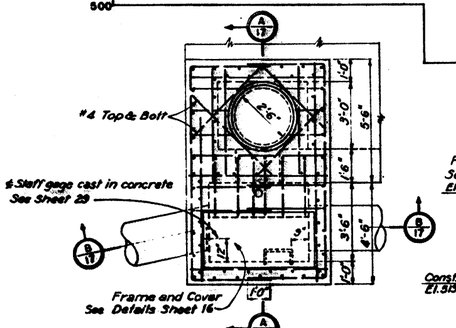
CORPS OF ENGINEERS

U.S. ARMY



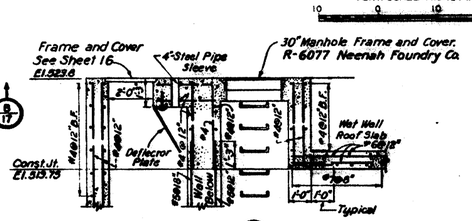
PROFILE

VERT. SCALE: 1 IN = 10 FT. HORIZ. SCALE: 1 IN. = 20 FT.



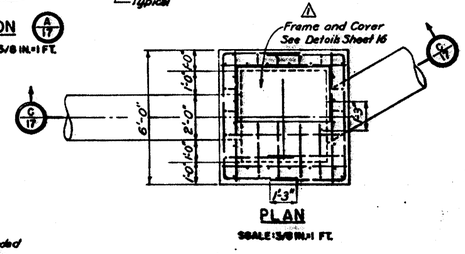
PLAN

SCALE: 3/8 IN. = 1 FT.



SECTION

SCALE: 3/8 IN. = 1 FT.



PLAN

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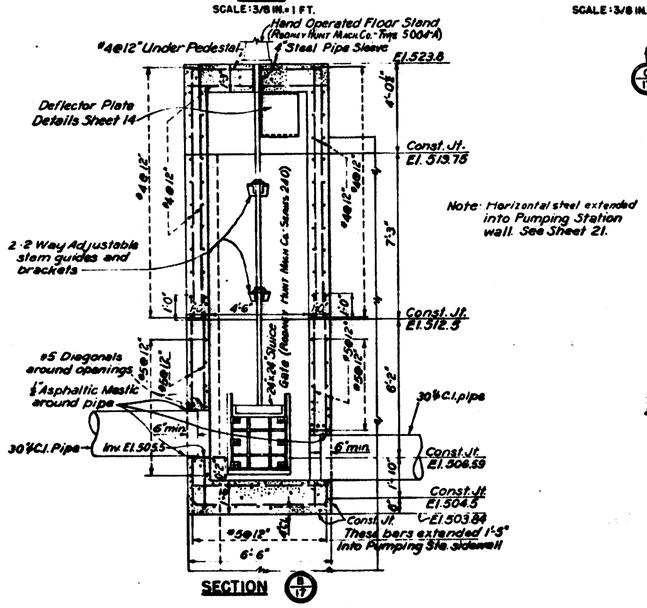
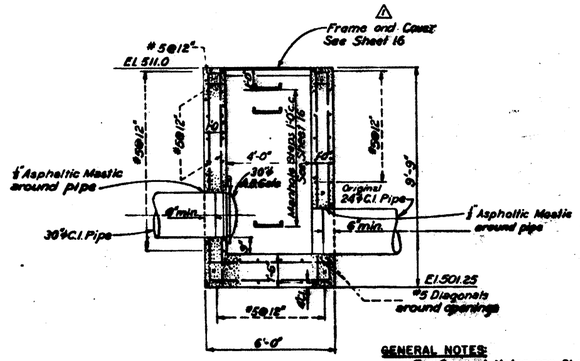


Note: Horizontal steel extended into Pumping Station wall. See Sheet 21.

SECTION

CONTROL MANHOLE NO. 3

SCALE: 3/8 IN. = 1 FT.



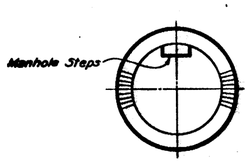
SECTION

MANHOLE NO. 1

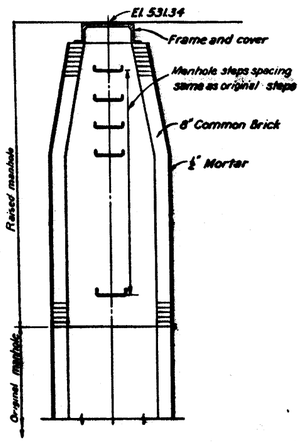
SCALE: 3/8 IN. = 1 FT.

GENERAL NOTES: For General Notes see Sheets 7 & 8 and 21.

REFERENCES: For location of sewer see Sheet 18



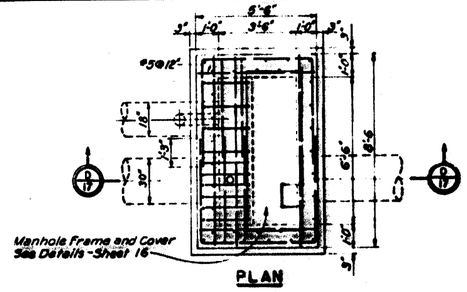
SECTIONAL PLAN



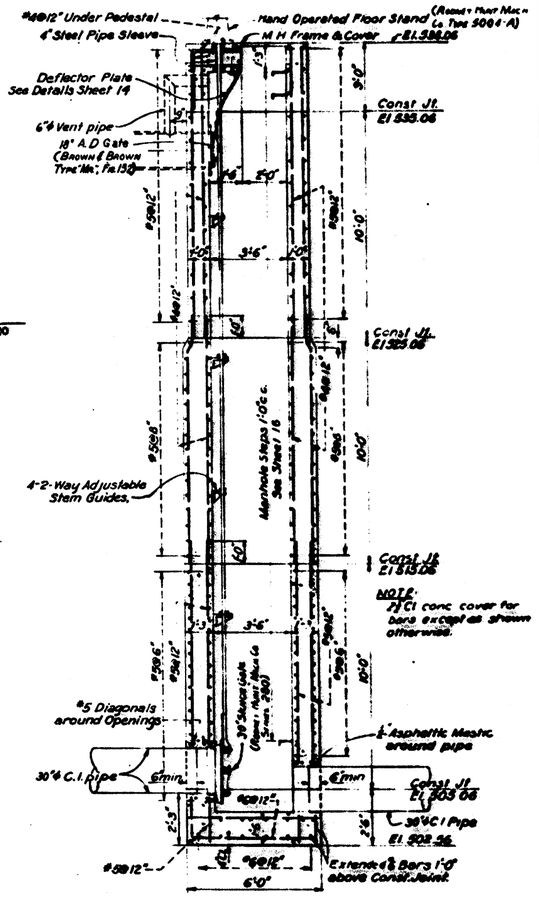
VERTICAL SECTION

ORIGINAL MANHOLE-STA. 0+00

SCALE: 3/8 IN. = 1 FT.



PLAN



SECTION

CONTROL MANHOLE NO. 2

SCALE: 3/8 IN. = 1 FT.

RECORD DRAWING

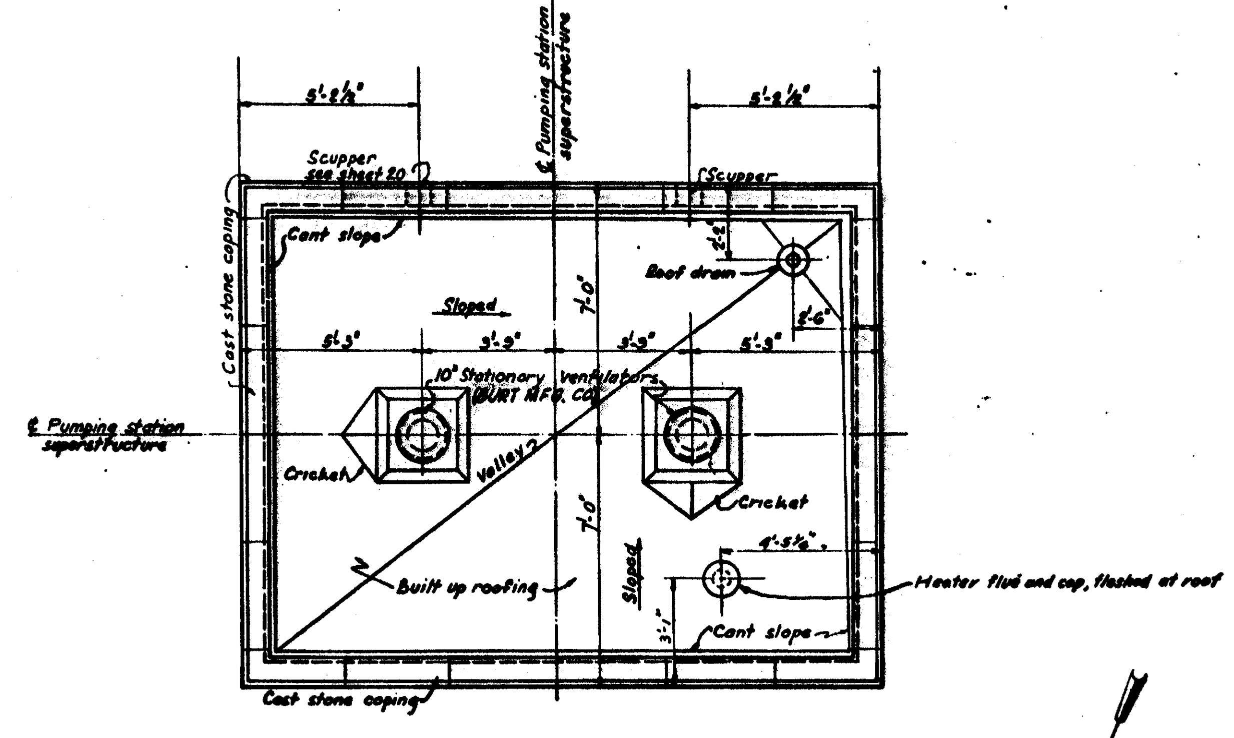
REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.
Add. No. 1	5 Jan '55	Revised details MH. No. 1 and discharge pipe casing.	C.W.

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: A.W.Y. & S.H.
TRACED BY: S.K.
CHECKED BY: J.D.P.
REVIEWED BY SAFETY ENGINEER:
SUBMITTED:
APPROVED:
APPROVED FOR CONSTRUCTION:
DATE:

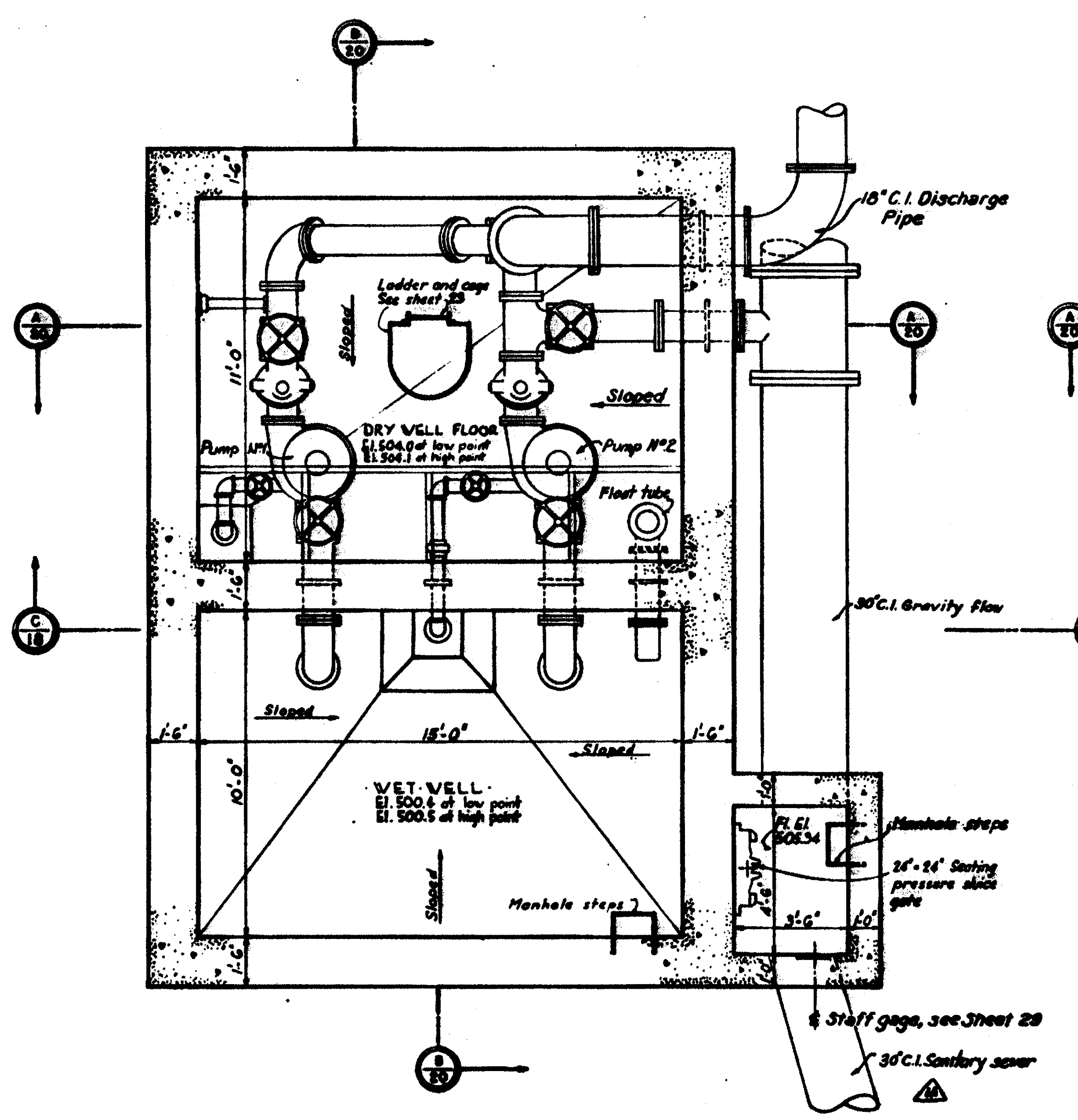
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET SEWER AND MANHOLE DETAILS

SCALE: AS SHOWN
SPEC. NO.
DRAWING NUMBER
SHEET 17 OF 29
6847-2



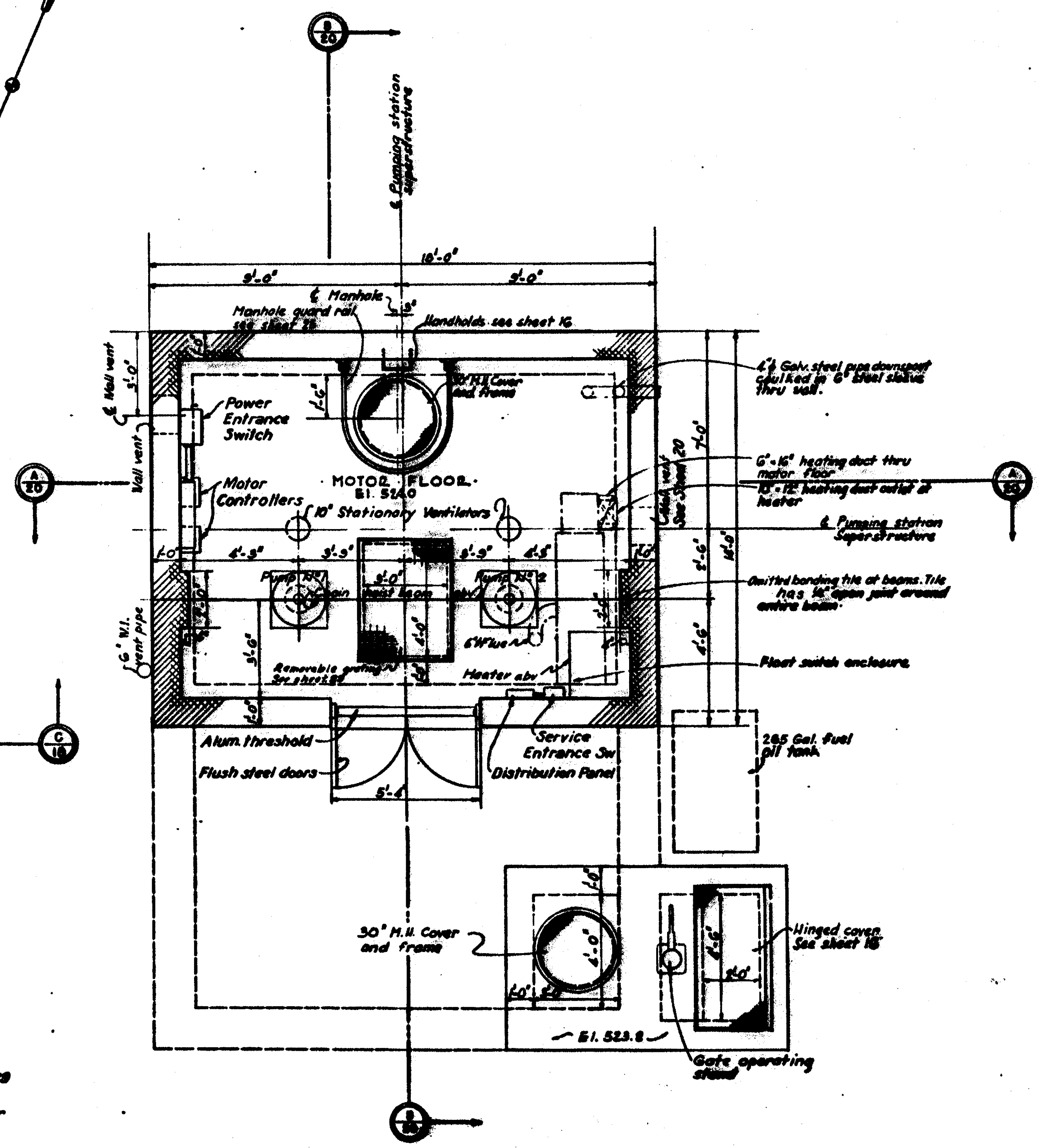
ROOF PLAN

SCALE: 3/8 IN. = 1 FT.



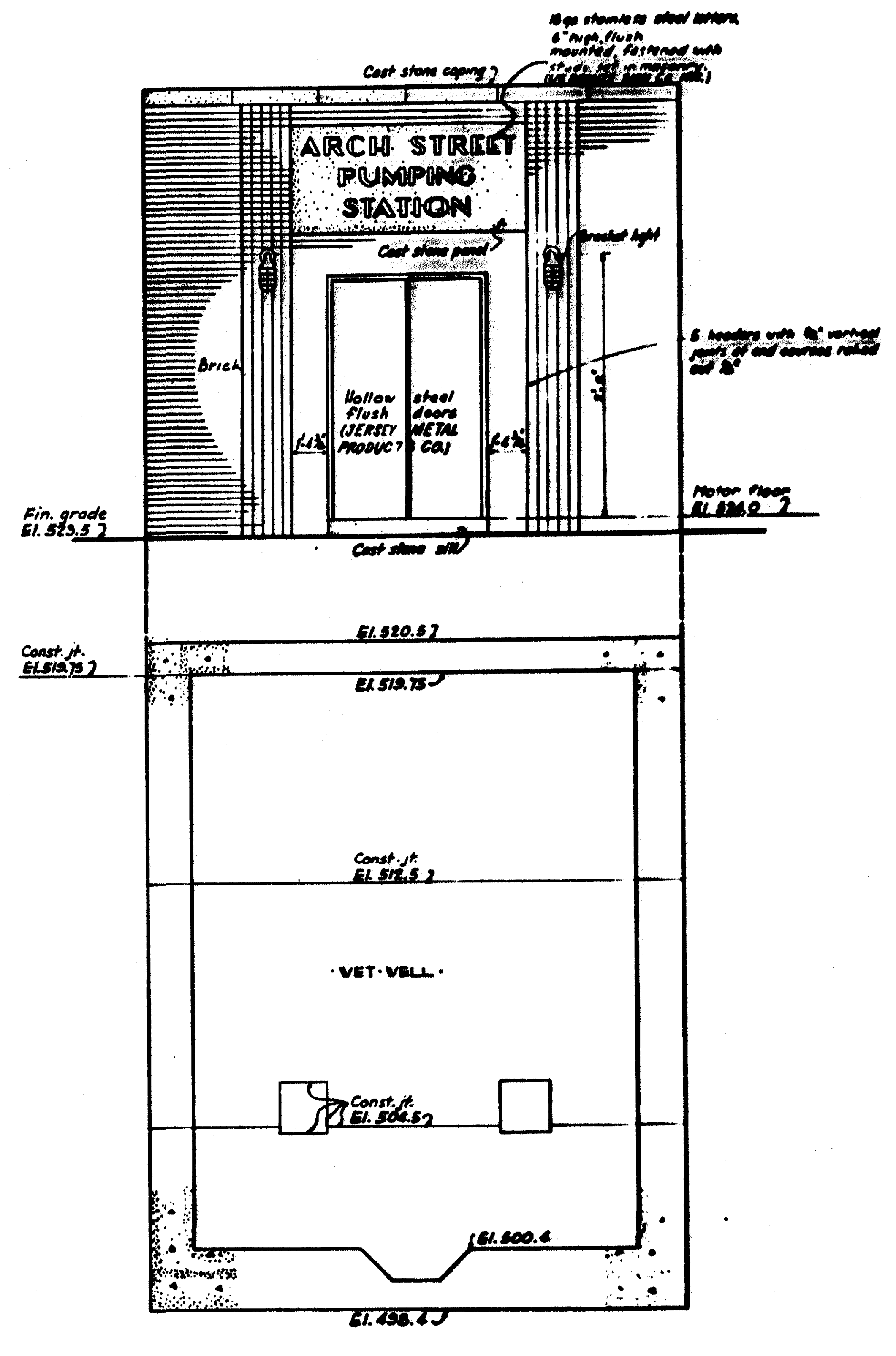
SUMP PLAN

SCALE: 3/8 IN. = 1 FT.



MOTOR FLOOR PLAN

SCALE: 3/8 IN. = 1 FT.



SECTIONAL ELEVATION

SCALE: 3/8 IN. = 1 FT.

GENERAL NOTES:
For General Notes see Sheets 7, 8, & 21

RECORD DRAWING

Revision	Date	Description	By
	May 1955	As Constructed	
Add No. 2	13 Jun 53	Changed C.I. Sanitary Sewer from 24" to 30"	CFP

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

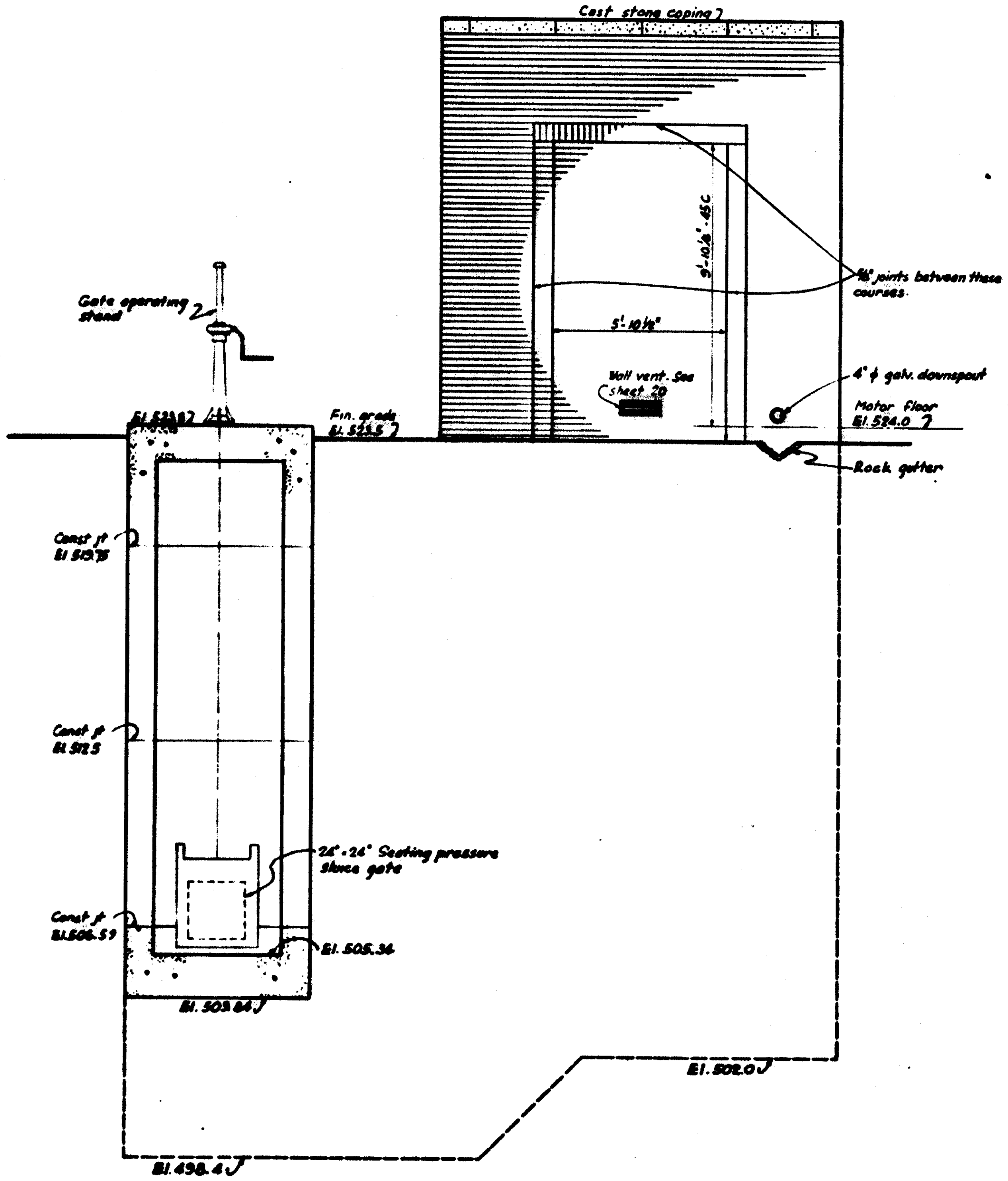
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
PLANS AND ELEVATION

Sheet 18 of 29

6844-175

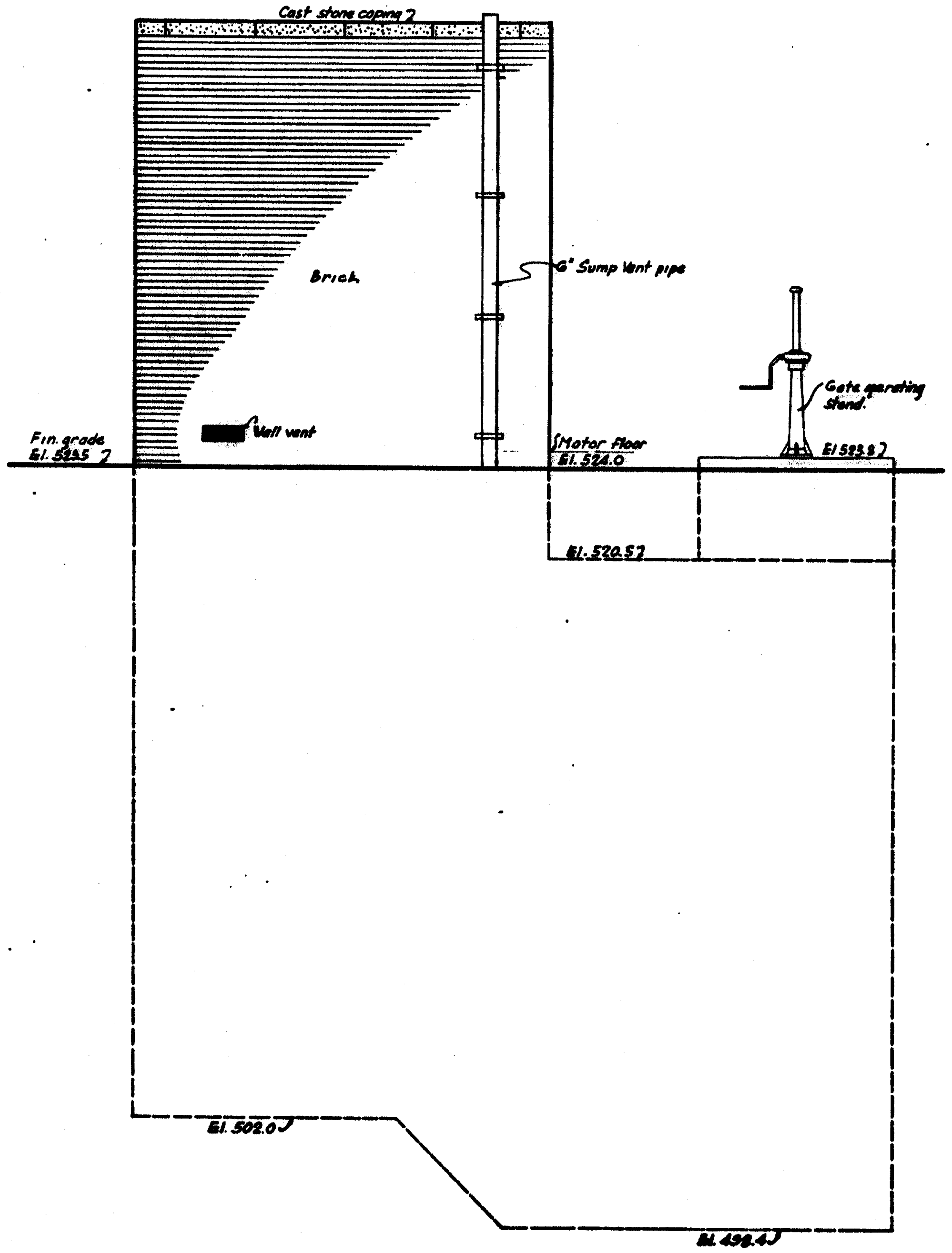
CORPS OF ENGINEERS

U.S. ARMY



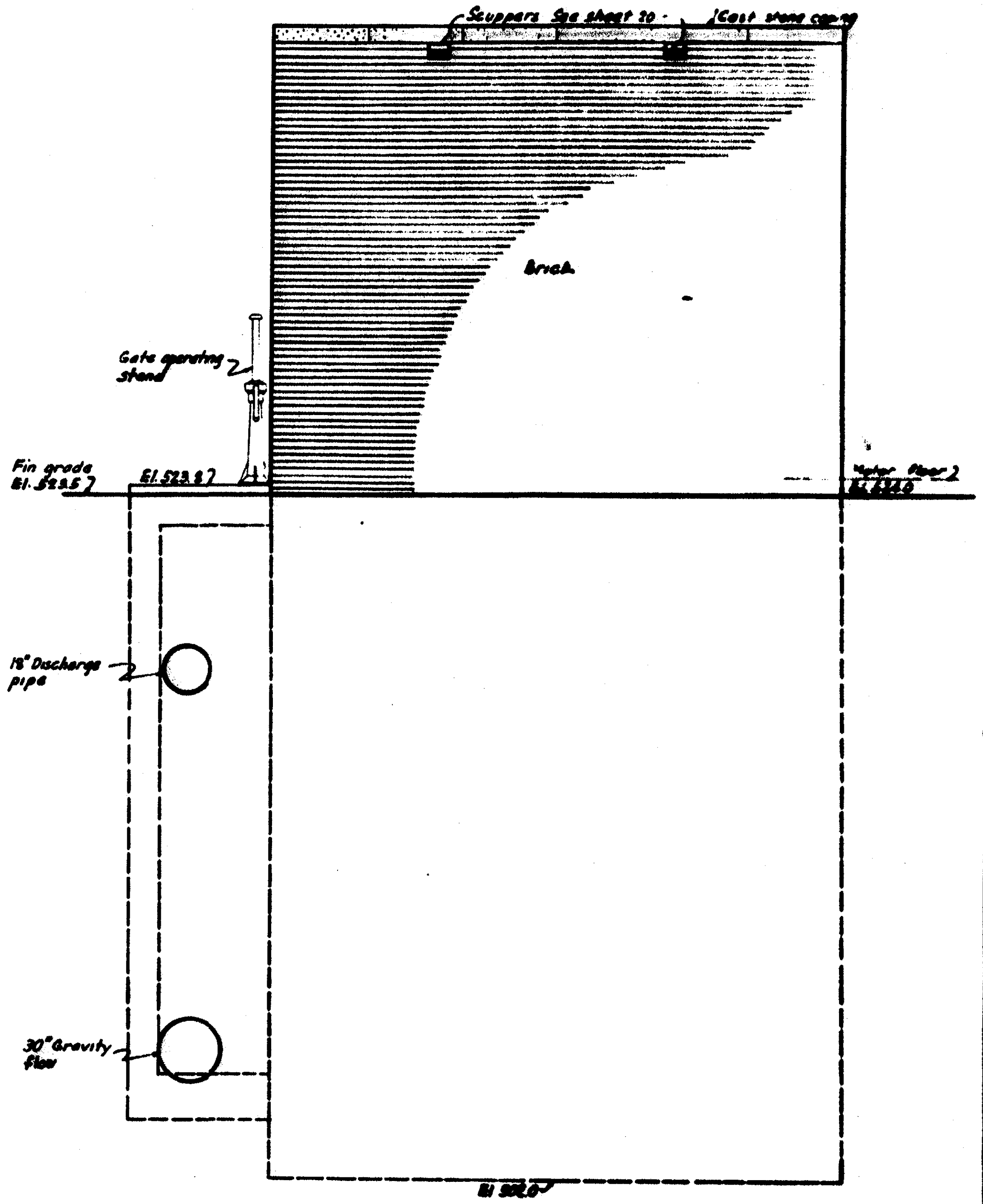
WEST ELEVATION

SCALE: 3/8 IN. = 1 FT.



EAST ELEVATION

SCALE: 3/8 IN. = 1 FT.



SOUTH ELEVATION

SCALE: 3/8 IN. = 1 FT.

GENERAL NOTES:
For General Notes see Sheets 7, 8 & 21.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May, 1950	As Constructed	

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
ELEVATIONS

DRAWN BY: M.H.S.
TRACED BY: M.H.S.
CHECKED BY: C.W.O.

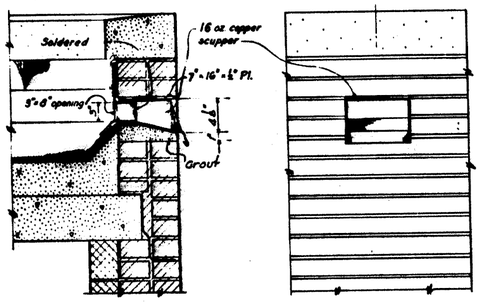
SCALE: AS SHOWN

SHEET 10 OF 29

6844-176

CORPS OF ENGINEERS

U. S. ARMY

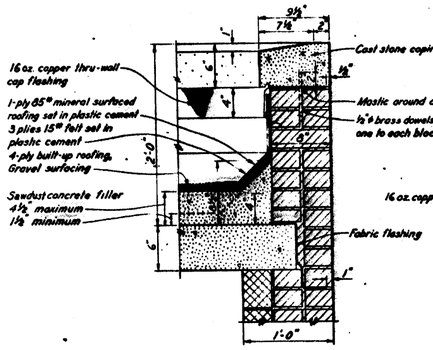


SECTION

ELEVATION

SCUPPER

SCALE: 1 1/2 IN. = 1 FT.



TYPICAL PARAPET SECTION

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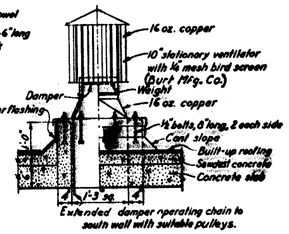
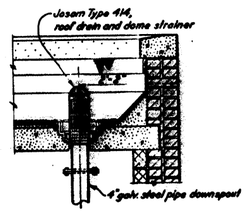


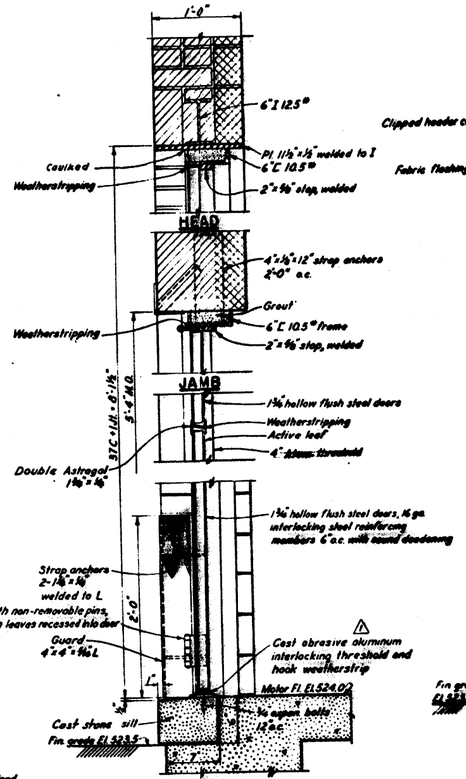
ROOF VENTILATOR

SCALE: 3/4 IN. = 1 FT.



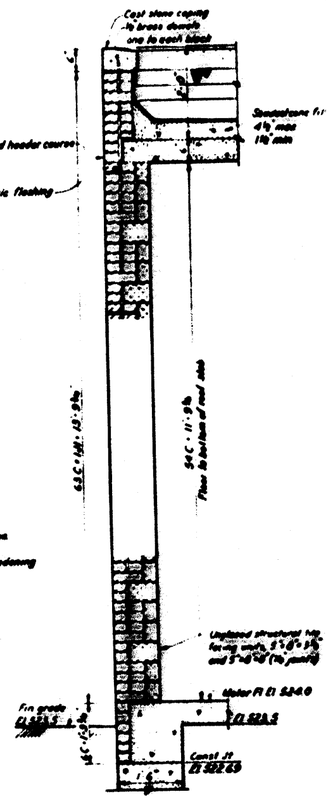
ROOF DRAIN

SCALE: 3/4 IN. = 1 FT.



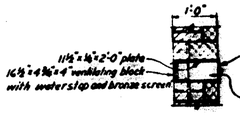
ENTRANCE DETAILS

SCALE: 1 1/2 IN. = 1 FT.



TYPICAL WALL SECTION

SCALE: 3/4 IN. = 1 FT.

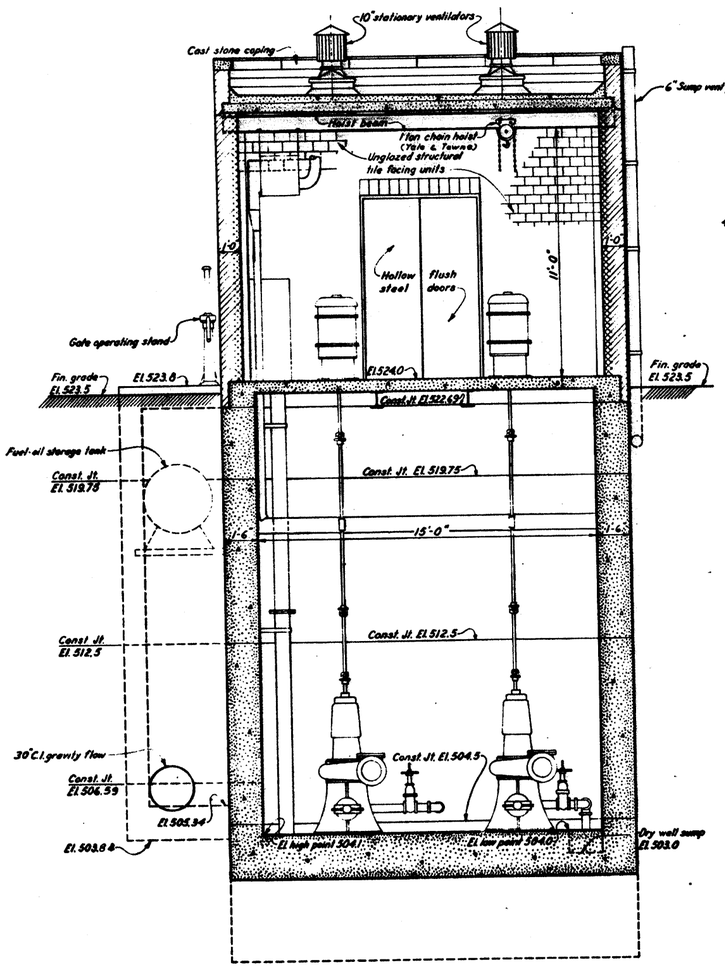


WALL VENT

SCALE: 3/4 IN. = 1 FT.

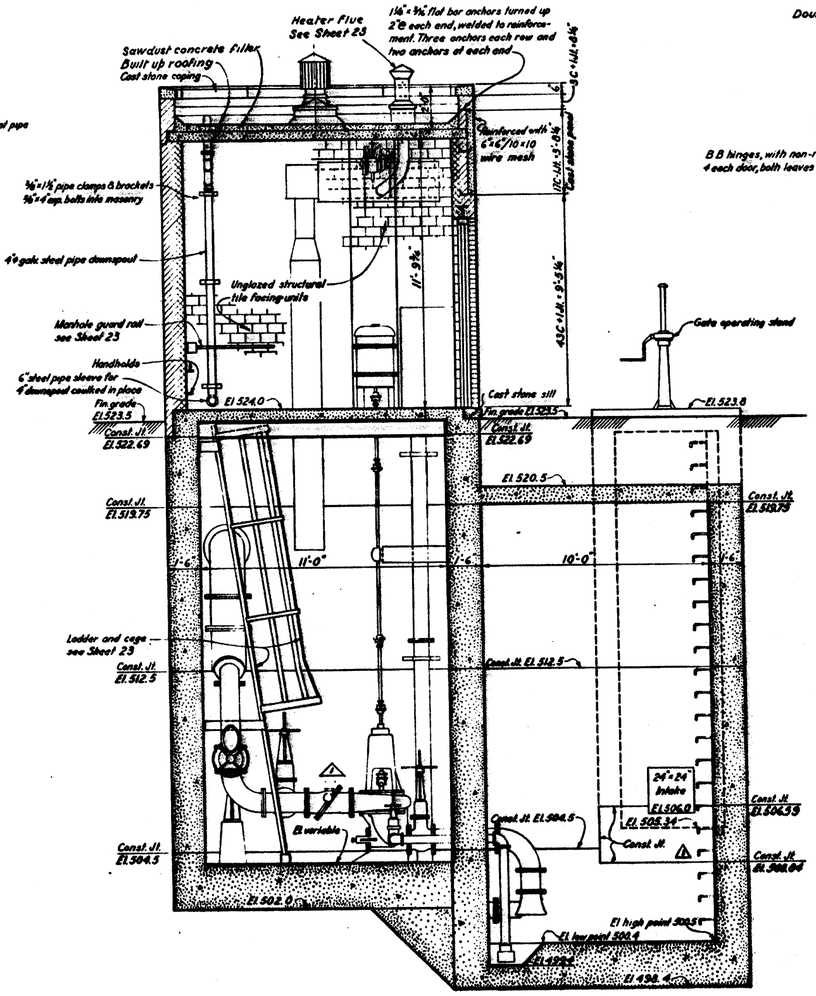
GENERAL NOTES

For General Notes see Sheets 7, 8 & 21.



SECTION A

SCALE: 3/8 IN. = 1 FT.



SECTION B

SCALE: 3/8 IN. = 1 FT.

RECORD DRAWING

REVISION	DATE	DESCRIPTION
	May, 1955	As Constructed
Add. No. 1	5 Jan. 53	Minor Revisions

CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DESIGNED BY: H. H. S.
TRACED BY: E. G. H.
CHECKED BY: C. W. W.
QUANTITIES BY: [illegible]
SUBMITTED: [illegible]
RECOMMENDED: [illegible]
APPROVED: [illegible]

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5G

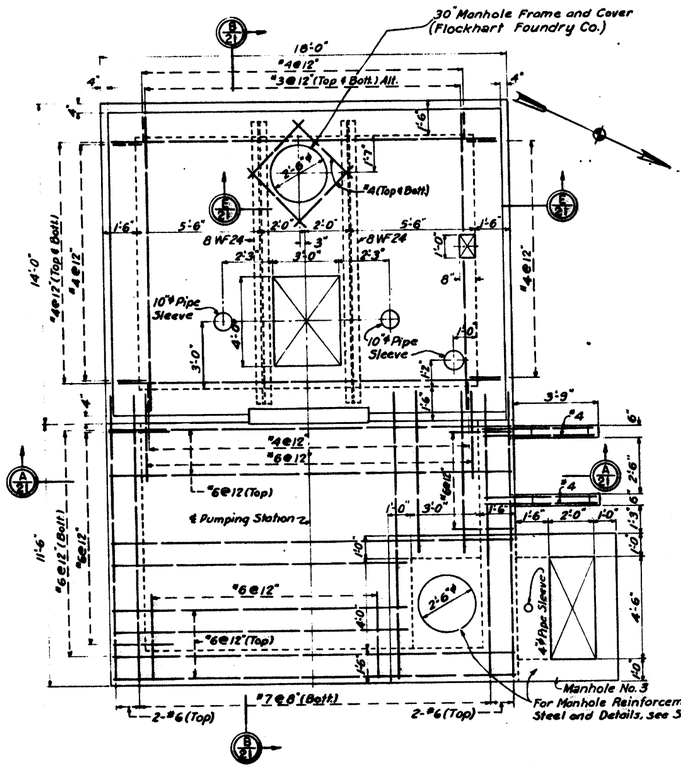
ARCH STREET PUMPING STATION
SECTIONS AND DETAILS

DRAWING NO. 6844-177

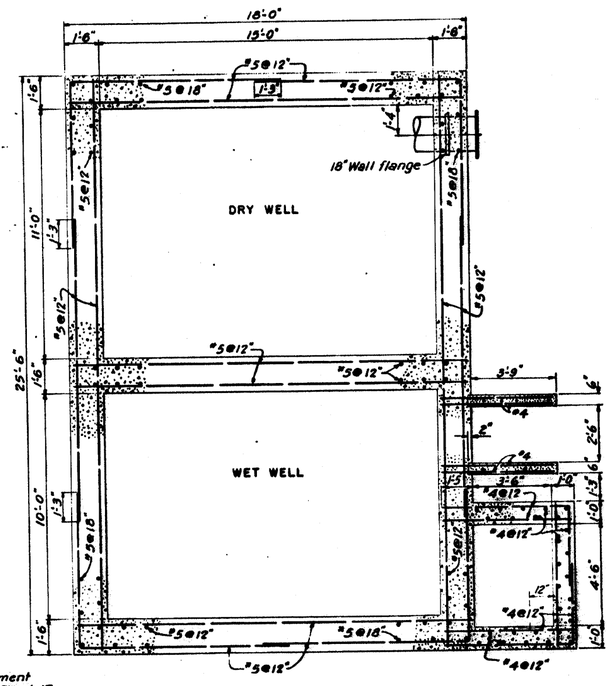
SHEET 20 OF 29

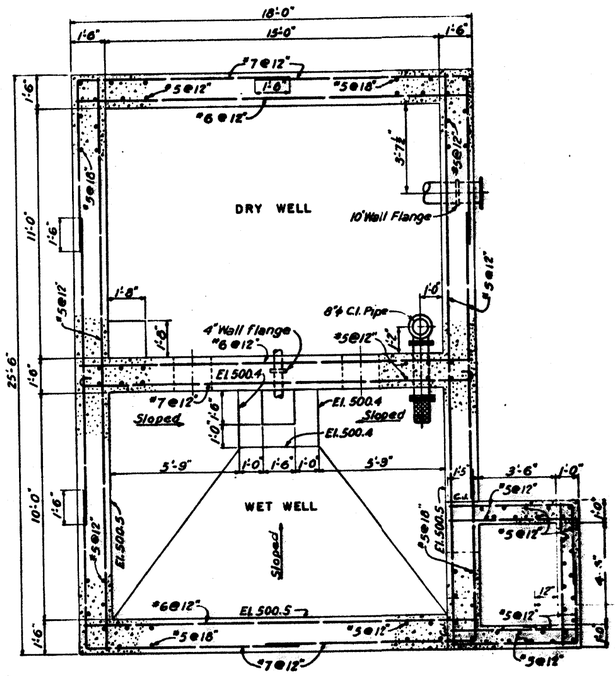
CORPS OF ENGINEERS

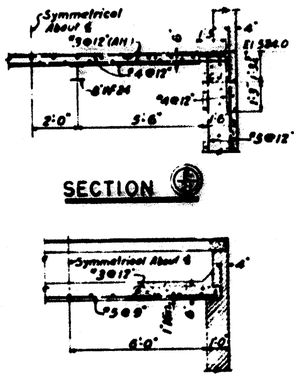
U.S. ARMY



MOTOR FLOOR PLAN



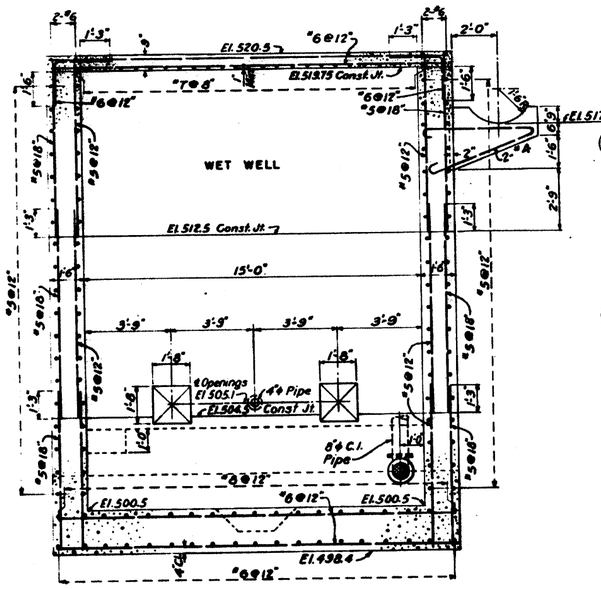




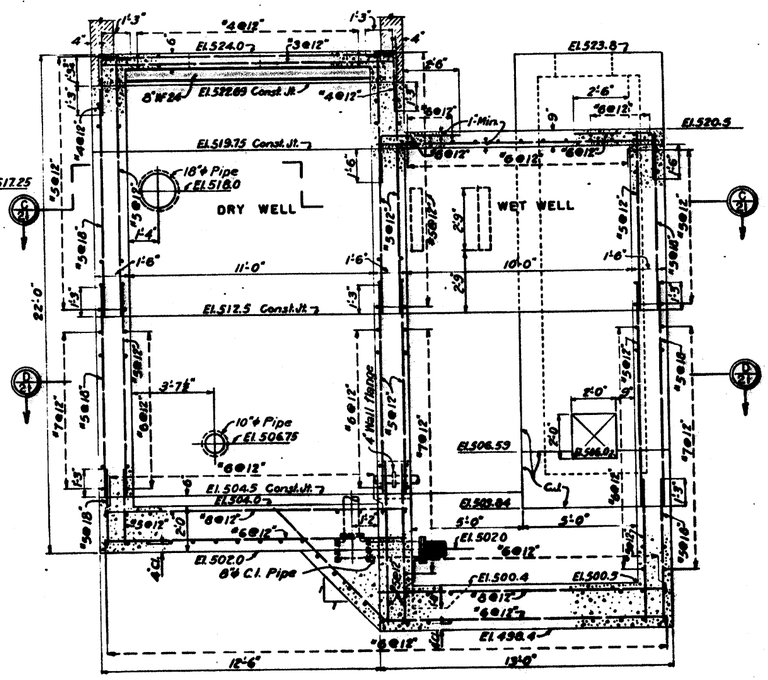
SECTION

ROOF SLAB

℄ Leg in concrete Staff Gage see sheet 29



SECTION



SECTION

SECTION

SCALE: 3/8 IN. = 1 FT.

GENERAL NOTES

All exposed edges of concrete were chamfered 1 4/8".
Reinforcement was placed with a minimum protective cover of 2½" unless otherwise shown.
For additional General Notes see sheets 7 and 8.

RECORD DRAWING

	May 1955	As Constructed	N.T.
⚠ Add No. 1	9 Jan 59	Minor Revisions	
REVISION	DATE	DESCRIPTION	BY

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE, DISTRICT
BALTIMORE, MARYLAND

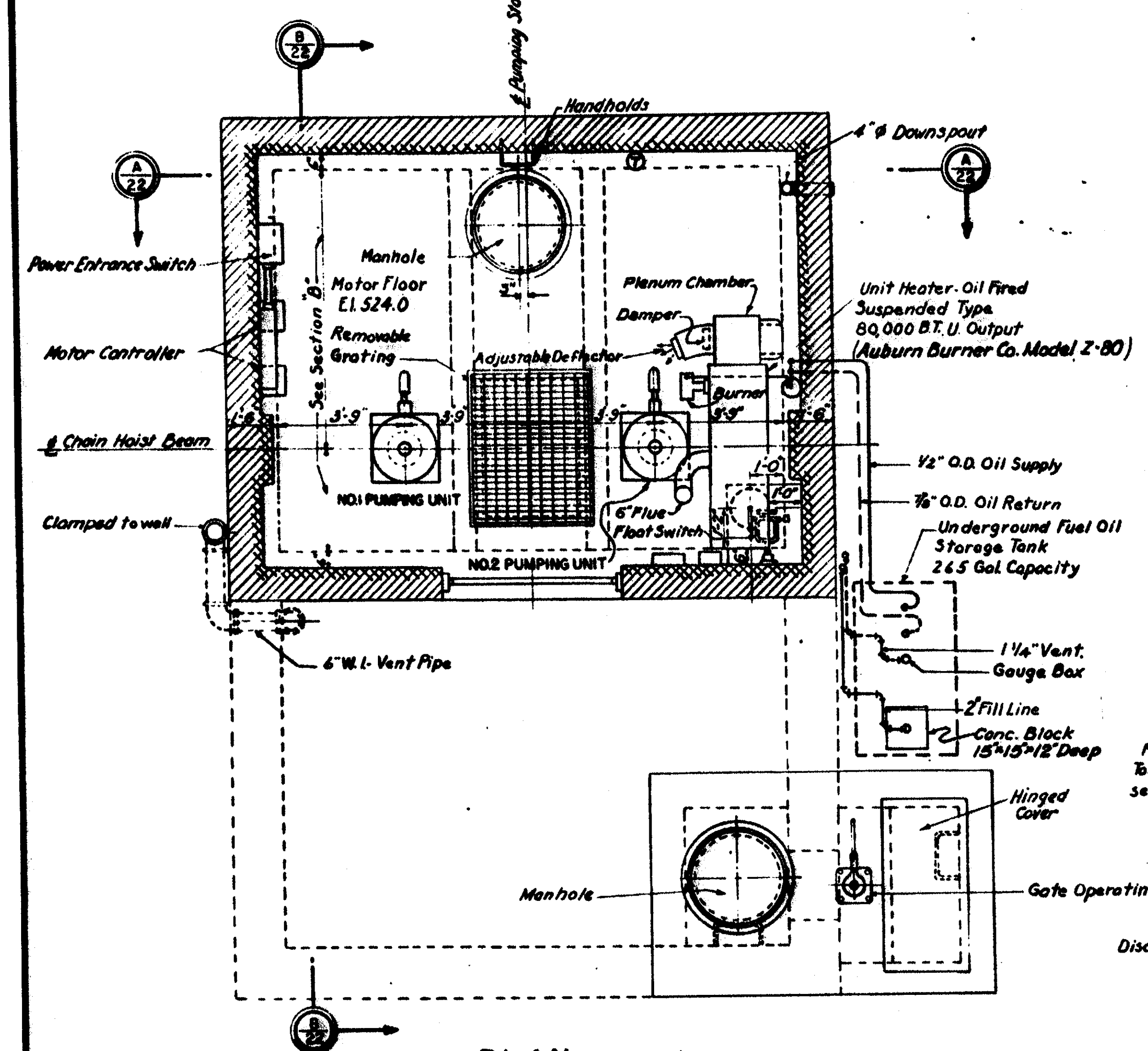
DRAWN BY E.R.
TRACED BY H.S.M.
CHECKED BY J.D.P.
REVIEWED BY SAFETY BOARD
SUBMITTED
APPROVED
APPROVED FOR:
DATE:

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
STEEL REINFORCEMENT

APPROVED
DATE
SCALE: 3/8 IN. = 1 FT.
SPEC. NO.
DRAWING NUMBER
SHEET 21 OF 29
6844-178

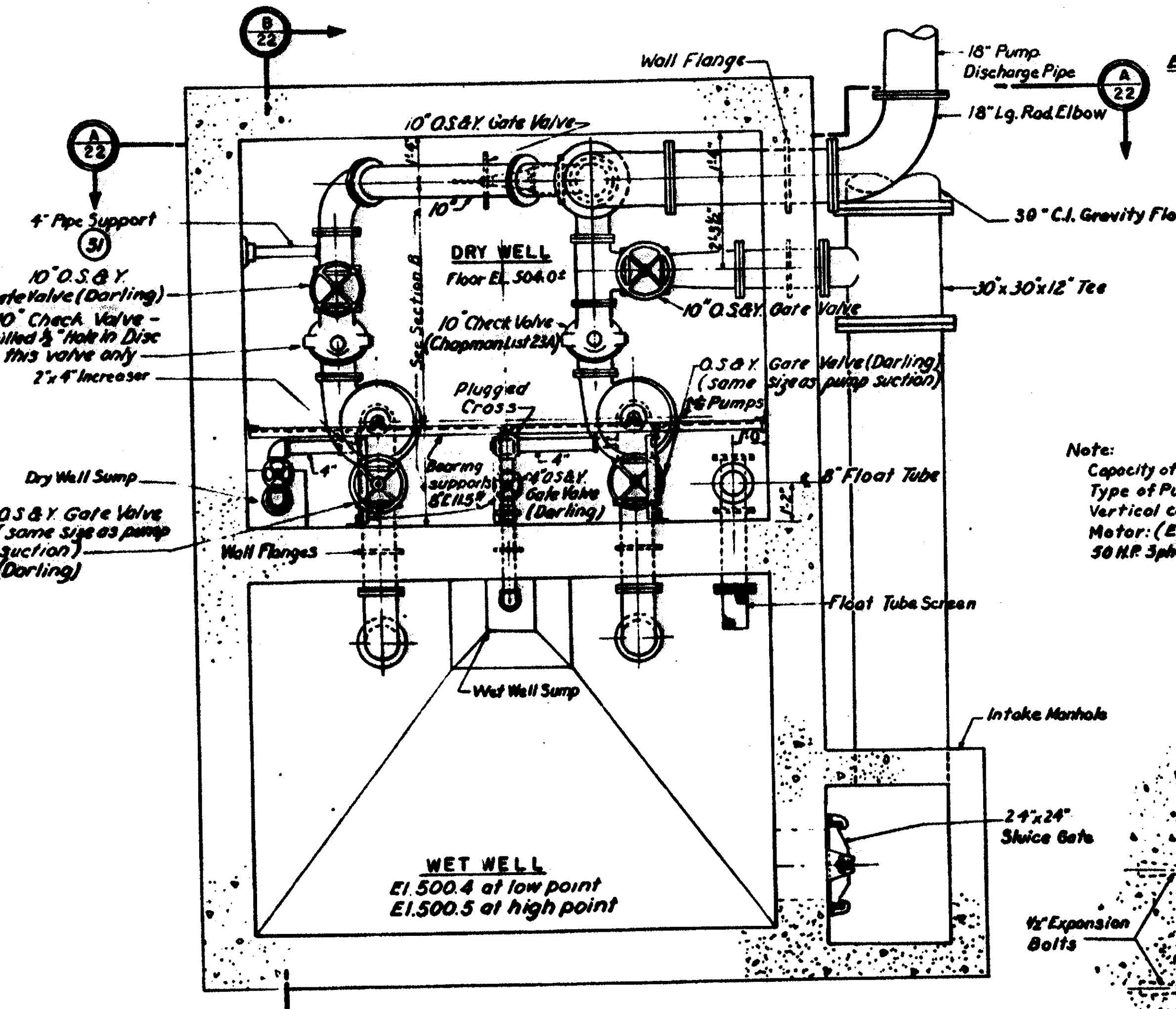
CORPS OF ENGINEERS

U. S. ARMY



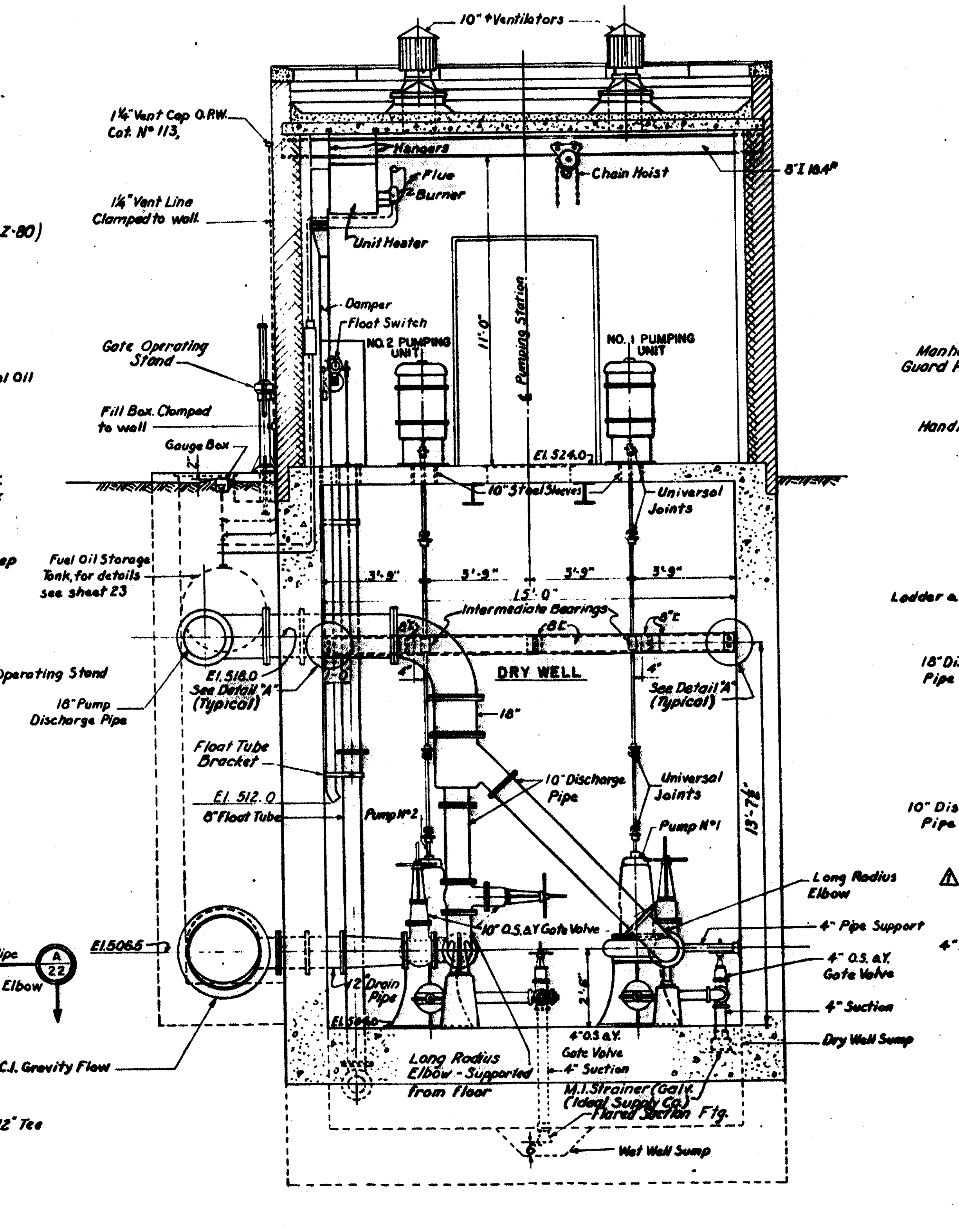
PLAN
MOTOR FLOOR

SCALE: 3/8 IN. = 1 FT.



PLAN
BELOW MOTOR FLOOR

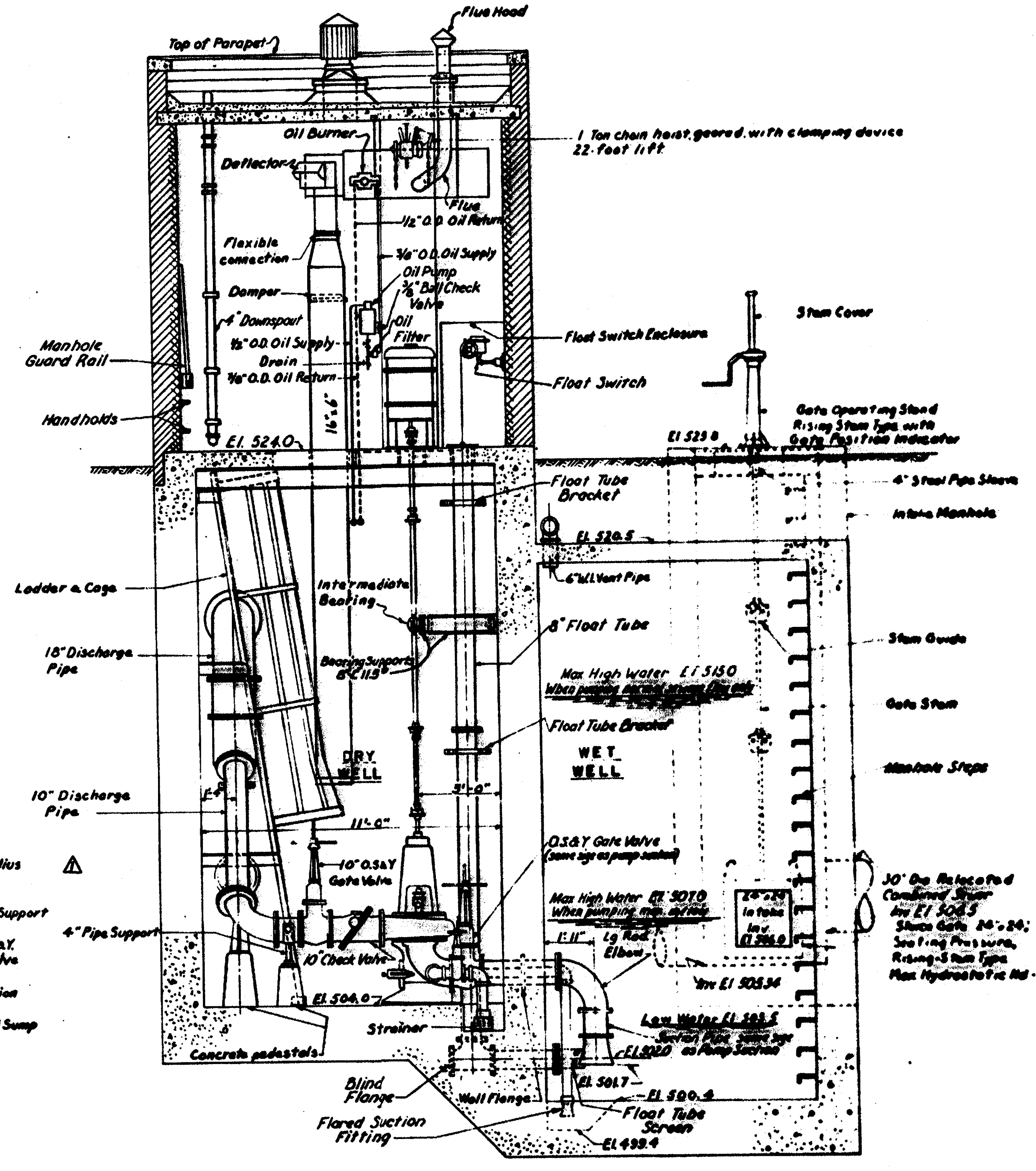
SCALE: 3/8 IN. = 1 FT.



Note:
Capacity of each pump: 3000 G.P.M. @ 48' T.D.H., 1150 R.P.M. Max.
Type of Pump: (Peerless Pump Div. of Food Mach. Corp.)
Vertical centrifugal Non-Clog, passes 4" Min. Spherical Solids
Motor: (Electro Dynamic Works)
50 H.P. 3 phase, 60 cycle, 440 volt, 1150 R.P.M.

SECTION A/22

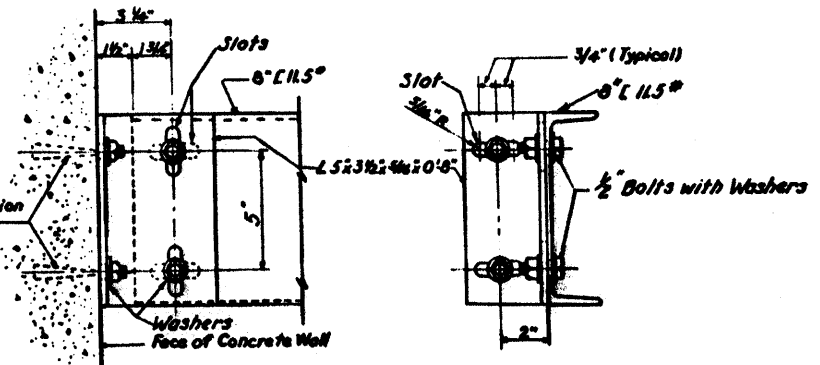
SCALE: 3/8 IN. = 1 FT.



SECTION B/22

GENERAL NOTES:
Sections are indicated thus (A/22). The numeral indicates the sheet on which the plan or section is shown
Wall flanges were provided on all pipes passing thru concrete walls at center of wall
For additional General Notes see Sheets 7 & 21

REFERENCES:
Miscellaneous Details .... Sheet 23
Electrical System and Details .... Sheet 24



DETAIL "A"

SCALE: 3 IN. = 1 FT.

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	
Add. No. 1	9 Jan. '53	Minor Revisions	

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

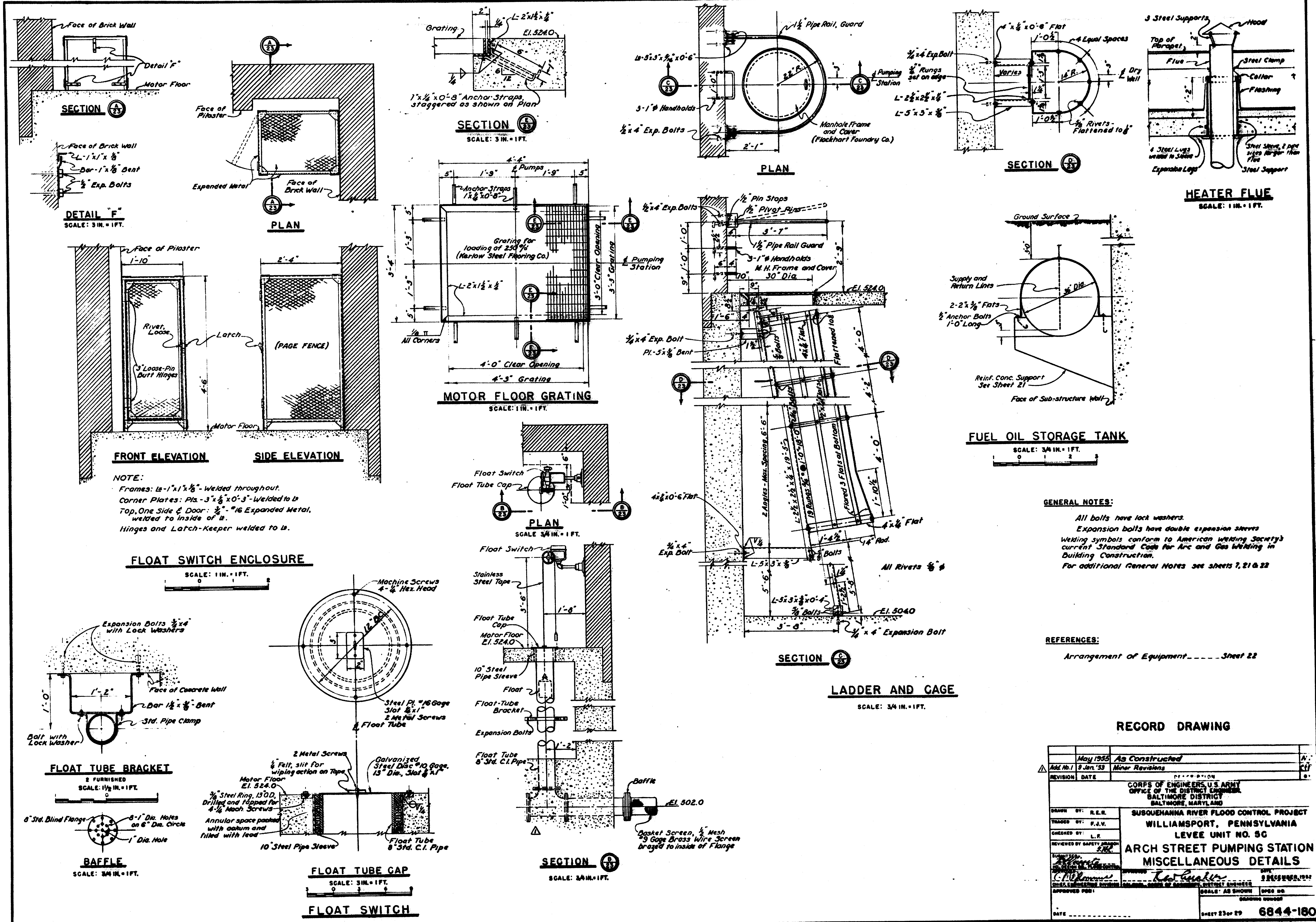
DRAWN BY: F.J.V. & R.E.R.
TRACED BY: H.E.K.
CHECKED BY: L.F.
REVIEWED BY SAFETY BOARD

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
ARRANGEMENT OF EQUIPMENT

SUBMITTED
APPROVED
APPROVED
DATE
APPROVED FOR
DATE
SCALE: AS SHOWN
SPEC. NO.
SHEET 22 OF 29
6844-179

CORPS OF ENGINEERS

U. S. ARMY



Face of Brick Wall
Detail "F"
Motor Floor
SECTION A/23
Face of Brick Wall
L-1"x1"x1/8"
Bar-1"x1/8" Bent
1/2" Exp. Bolts
DETAIL "F"
SCALE: 3 IN. = 1 FT.
Face of Pilaster
Expanded Metal
Face of Brick Wall
PLAN
Face of Pilaster
1'-10"
2'-4"
River, Loose
Latch
(PAGE FENCE)
3" Loose-Pin Butt Hinges
4'-6"
Motor Floor
FRONT ELEVATION
SIDE ELEVATION
NOTE:
Frames: Ls-1"x1"x1/8" - Welded throughout.
Corner Plates: Pls.-3"x1/8"x0'-3" - Welded to Ls
Top, One Side & Door: 3/4" - #16 Expanded Metal, welded to inside of Ls.
Hinges and Latch-Keeper welded to Ls.
FLOAT SWITCH ENCLOSURE
SCALE: 1 IN. = 1 FT.
Grating
L-2"x1 1/2"x1/4"
El. 524.0
1"x1/4"x0'-8" Anchor Straps, staggered as shown on Plan
SECTION E/23
SCALE: 3 IN. = 1 FT.
4'-4"
Pumps
Anchor Straps 1"x1/4"x0'-8"
Grating for loading of 250#
(Kerlow Steel Flooring Co.)
L-2"x1 1/2"x1/4"
Pumping Station
3'-0" Clear Opening
3'-3" Grating
All Corners
4'-0" Clear Opening
4'-3" Grating
MOTOR FLOOR GRATING
SCALE: 1 IN. = 1 FT.
Float Switch
Float Tube Cap
PLAN
SCALE 3/4 IN. = 1 FT.
Float Switch
Stainless Steel Tape
Float Tube Cap
Motor Floor El. 524.0
10" Steel Pipe Sleeve
Float
Float-Tube Bracket
Expansion Bolts
Float Tube 8" Std. C.I. Pipe
Baffle
El. 502.0
Basket Screen, 1/2" Mesh #9 Gage Brass Wire Screen brazed to inside of Flange
SECTION B/23
SCALE: 3/4 IN. = 1 FT.
Expansion Bolts 1/2"x4" with Lock Washers
Face of Concrete Wall
Bar 1 1/2"x 1/4" Bent
Std. Pipe Clamp
Bolt with Lock Washer
FLOAT TUBE BRACKET
2 FURNISHED
SCALE: 1 1/2 IN. = 1 FT.
6" Std. Blind Flange
8-1" Dia. Holes on 6" Dia. Circle
1" Dia. Hole
BAFFLE
SCALE: 3/4 IN. = 1 FT.
Machine Screws 4-1/4" Hex. Head
Steel Pl. #16 Gage Slot 1/4"x1"
2 Metal Screws
Float Tube
2 Metal Screws
1/4" Felt, slit for wiping action on Tape
Galvanized Steel Disc #10 Gage, 13" Dia., Slot 1/4"x1"
Motor Floor El. 524.0
3/8" Steel Ring, 13 OD, Drilled and tapped for 4-1/4" Mach. Screws
Annular space packed with oakum and filled with lead
10" Steel Pipe Sleeve
Float Tube 8" Std. C.I. Pipe
FLOAT TUBE CAP
SCALE: 3 IN. = 1 FT.
FLOAT SWITCH
1 1/2" Pipe Rail, Guard
Ls-5"x3"x5/16"x0'-6"
Pumping Station
3-1" Handholds
1/2"x4" Exp. Bolts
Manhole Frame and Cover (Flockhart Foundry Co.)
2'-1"
PLAN
1/2"x4" Exp. Bolts
1/2" Pin Stops
1/2" Pivot Pins
3'-7"
1 1/2" Pipe Rail Guard
3-1" Handholds
M. H. Frame and Cover 30" Dia.
El. 524.0
3/4"x4" Exp. Bolt
Pl.-5"x3/8" Bent
4 Angles - Max. Spacing 6'-6"
19 Rungs 3/4"
Flared 3 Flats at Bottom
4x1/4"x0'-6" Flat
3/4"x4" Exp. Bolt
L-5"x3"x3/8"
L-5"x3"x3/8"x0'-4"
3/8" Bolts
El. 504.0
3'-8"
3/4"x4" Expansion Bolt
4"x1/4" Flat
1/4" Rod.
All Rivets 3/8"
SECTION D/23
LADDER AND CAGE
SCALE: 3/4 IN. = 1 FT.
4"x1/4"x0'-6" Flat
4 Equal Spaces
3/4"x4 Exp. Bolt
3/4" Rungs set on edge
L-2 1/2"x2 1/2"x1/4"
L-5"x3"x3/8"
Varies
Dry Well
3/8" Rivets - Flattened to 1/8"
SECTION D/23
3 Steel Supports
Hood
Top of Parapet
Flue
Steel Clamp
Collar
Flashing
4 Steel Lugs welded to Sleeve
Steel Sleeve, 2 pipe sizes larger than flue
Expansion Legs
Steel Support
HEATER FLUE
SCALE: 1 IN. = 1 FT.
Ground Surface
Supply and Return Lines
36" Dia.
2-2 1/2"x3/8" Flats
1/2" Anchor Bolts 1'-0" Long
Reinf. Conc. Support See Sheet 21
Face of Sub-structure Wall
FUEL OIL STORAGE TANK
SCALE: 3/4 IN. = 1 FT.

GENERAL NOTES:

All bolts have lock washers.

Expansion bolts have double expansion sleeves

Welding symbols conform to American Welding Society's current Standard Code for Arc and Gas Welding in Building Construction.

For additional General Notes see sheets 7, 21 & 22

REFERENCES:

Arrangement of Equipment_ _ _ _ _Sheet 22

RECORD DRAWING

	May 1955	As Constructed
Add. No. 1	9 Jan. '53	Minor Revisions
REVISION	DATE	DESCRIPTION

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: R.E.R.
TRACED BY: F.J.V.
CHECKED BY: L.F.

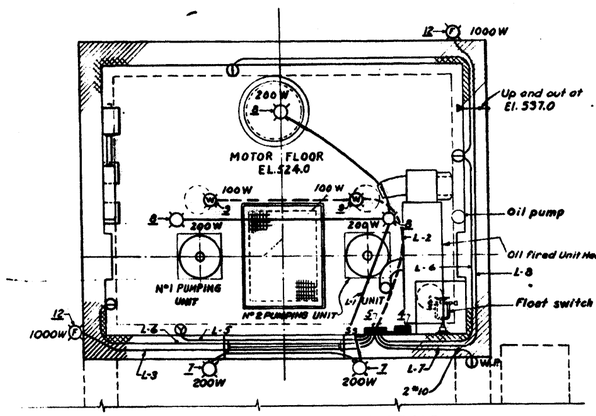
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
MISCELLANEOUS DETAILS

SCALE: AS SHOWN

SHEET 23 of 29 6844-180

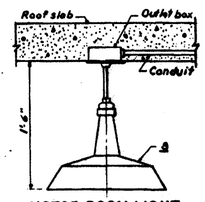
CORPS OF ENGINEERS

U. S. ARMY

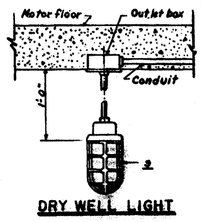


MOTOR FLOOR-LIGHTING

SCALE 3/8 IN.=1 FT.



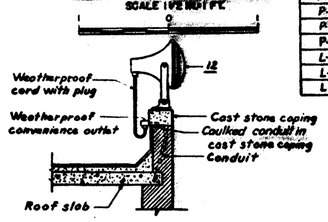
MOTOR ROOM LIGHT



DRY WELL LIGHT

TYPICAL CEILING LIGHT INSTALLATION

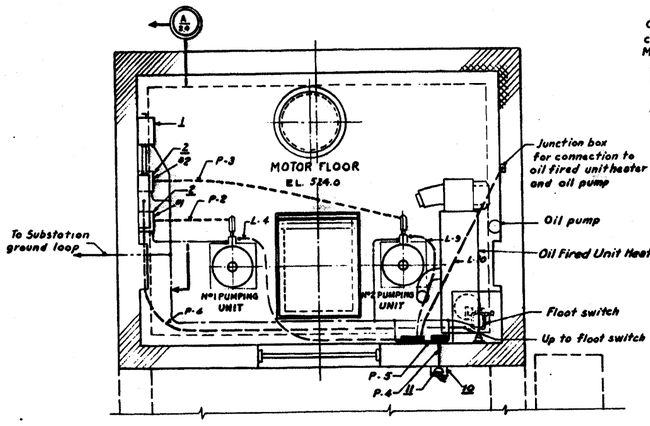
SCALE 1"=1 FT.



FLOODLIGHT DETAIL

SCALE 1/2 IN.=1 FT.

BILL OF MATERIAL		
ITEM NO.	NO. FURN.	DESCRIPTION
1	1	Power entrance switch- 200A 575V 3P. No Fuse
2	2	Motor controller - Westinghouse Class 11-203-N33
3	2	Selector switch-Westinghouse Type HDW with red & green indicating lights
4	1	Service entrance switch-60A. 250V 2P+3N. Fused 50A- Westinghouse Cat. AU-356
5	1	Distribution panel (C.B Type) 125/250V 60A mains. Lugs only- Westinghouse.
6	4	Motor strip heater, 100 W. 120V. - Watlow Electric Mfg. Co.
7	2	Bracket Fixture - Crouse-Hinds VGR 216
8	3	RLM dome reflector
9	2	Vaportight Fixture Crouse-Hinds VA2753
10	1	Meter socket, suitable for single phase outdoor metering
11	1	Weatherhead, 3 conductor, 600V. 1" - Crouse-Hinds F385
12	2	Floodlight- Westinghouse VRC-18 6'-0 Arm Bracket
13	1	Pilot light (Red) Crouse-Hinds FS 280-J1

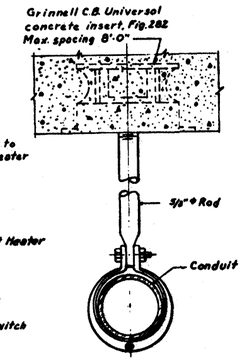


MOTOR FLOOR-POWER

SCALE 3/8 IN.=1 FT.

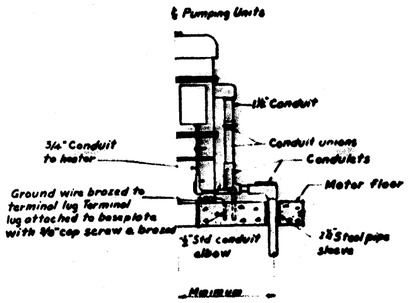
POWER CIRCUIT DATA

CIRCUIT NO	CONDUIT SIZE	CONDUCTOR SIZE	CONDUCTOR NO	CONDUCTOR INSULATION	FROM	TO
P-1	2½"	#3/0	3-Vc	R.T.R.I.-600V.	Transformer substation	Power entrance switch
P-2	1½"	#2	3-⅛		Motor controller #1	N°1 Pumping unit
P-3	1½"	#2	3-⅛		Motor controller #2	N°2 Pumping unit
P-4	1"	#6	3-⅛		Weatherhead	Service entrance switch
P-5	1"	#8	3-⅛		Service entrance switch	Distribution panel
P-6	1"	#12	6-⅛		Motor controllers #1&2	Float switch
L-4	½"	#12	2-⅛		Distribution panel	Heaters, N°1 Pumping Unit
L-9	½"	#12	2-⅛		Distribution panel	Heaters, N°2 Pumping Unit
L-10	½"	#12	2-⅛	R.T.R.I.-600	Distribution panel	To junction box



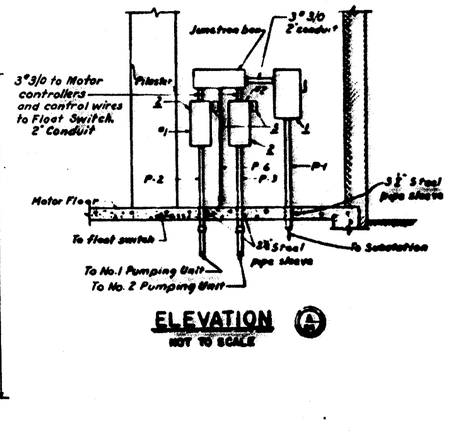
CONDUIT HANGER

NOT TO SCALE



MOTOR CONNECTION

NOT TO SCALE

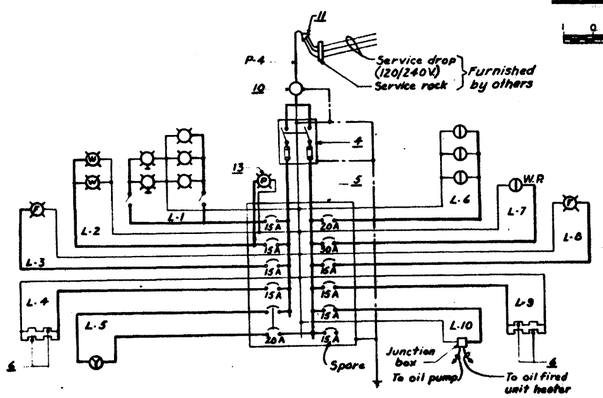


ELEVATION

NOT TO SCALE

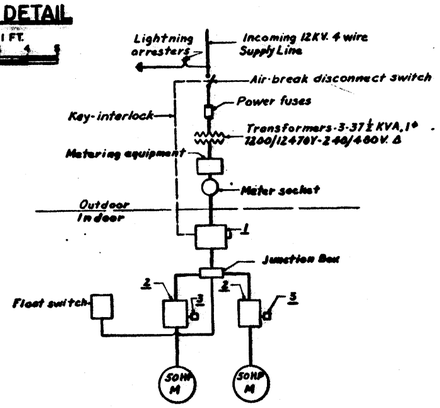
SECTION—120/240 V. SERVICE ENTRANCE

SCALE: 3/8"=1 FT.



DISTRIBUTION PANEL-WIRING DIAGRAM

NOT TO SCALE



ONE LINE DIAGRAM

NOT TO SCALE

LEGEND

- Ceiling light
- Dry Wall light
- Bracket light
- Flood light
- Pilot light
- Single convenience outlet with plug, polarized } Mounted 1'-0" up
- 20 A. 250 V. receptacle with plug, polarized
- W.P. 20 A. 125 V. weatherproof convenience outlet with plug and lock-type cover, polarized- Mounted 3'-0" up
- TE Telephone outlet- Mounted 1'-0" up
- S Single pole switch- Mounted 4'-0" up
- Branch circuit concealed in ceiling or wall
- Branch circuit concealed in floor
- Branch circuit exposed
- N°2 bare stranded copper ground wire
- 250 MCM bare stranded copper ground wire

GENERAL NOTES

Figures underlined indicate item numbers in Bill of Material
Bill of Material includes only principal items of equipment
Braze all ground wires to structure steel and to terminal lugs for connections to equipment frames
Where conduit was run exposed it was adequately supported with hangers spaced not more than 8 Ft. on centers, or less than one hanger per conduit
All conduits are ¾" unless otherwise noted.
Conductors are copper
All conductors are #12 unless otherwise noted.

REFERENCES:

Transformer Substation- Plot Plan & Details ..... Sheet 25

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

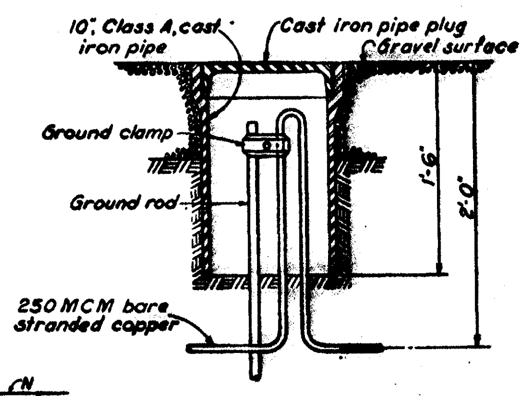
DRAWN BY F.D.
TRACED BY H.E.N.
CHECKED BY K.F.
RECOMMENDED BY SAFETY BOARD
SUBMITTED BY
APPROVED BY
CHIEF ENGINEERING DIVISION, CORPS OF ENGINEERS, U.S. ARMY

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO 5C
ARCH STREET PUMPING STATION
ELECTRICAL SYSTEM & DETAILS

APPROVED
DATE 2 SEPTEMBER 1955
APPROVED FOR:
DATE
SCALE
SPEC. NO
DRAWING NUMBER
SHEET 24 OF 29
6844-181

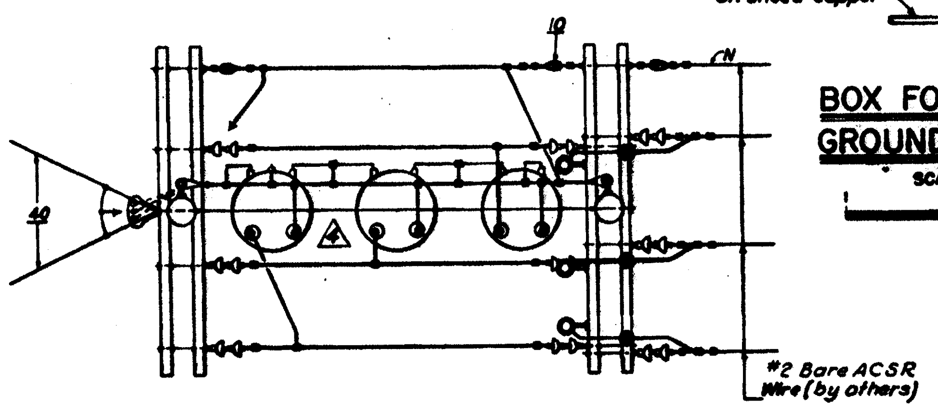
CORPS OF ENGINEERS

U. S. ARMY

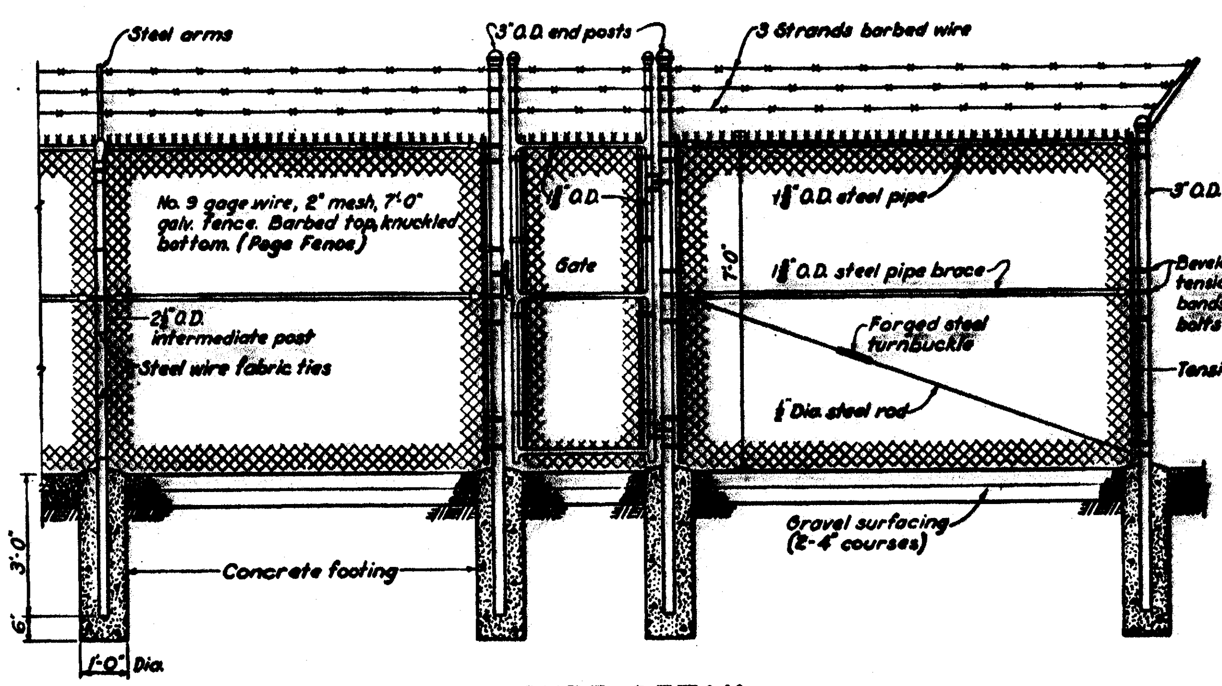


BOX FOR ACCESS TO GROUND WIRE CLAMP

SCALE: 1 1/2 IN. = 1 FT.

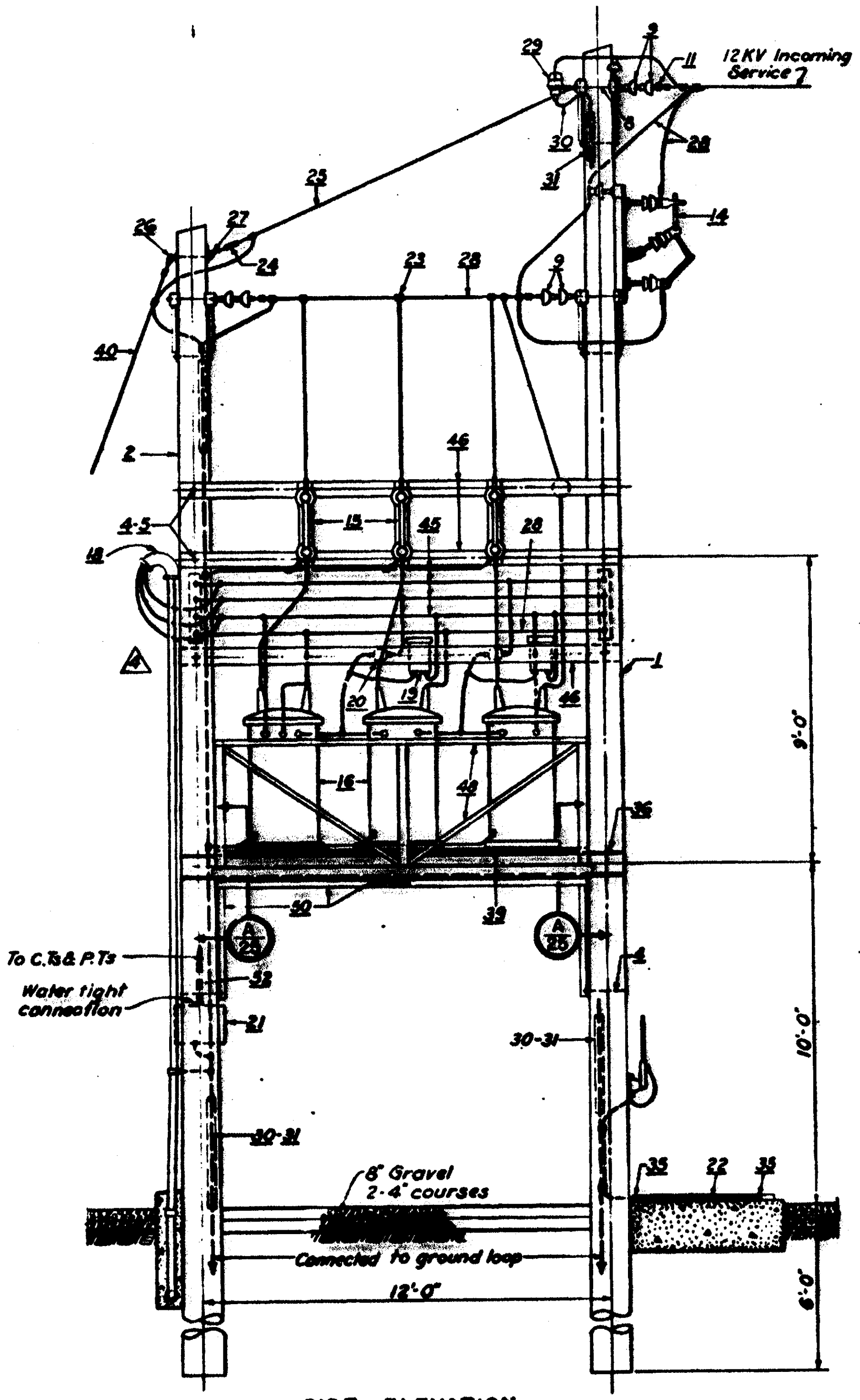


PLAN

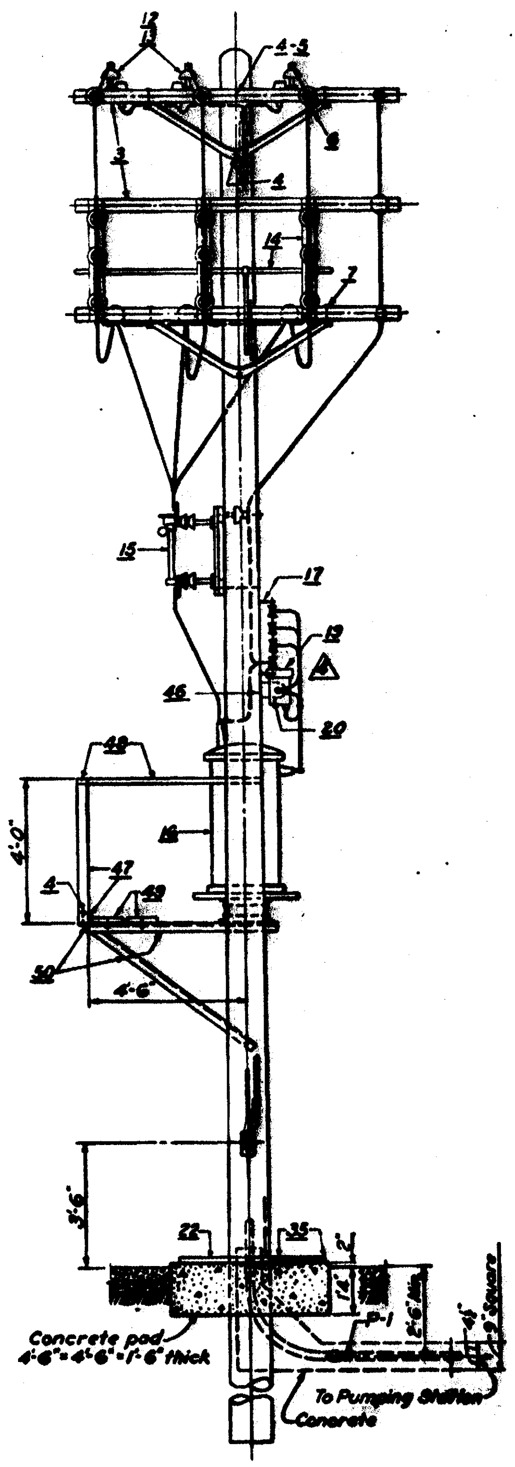


ENCLOSURE DETAIL

SCALE: 1/2 IN. = 1 FT.



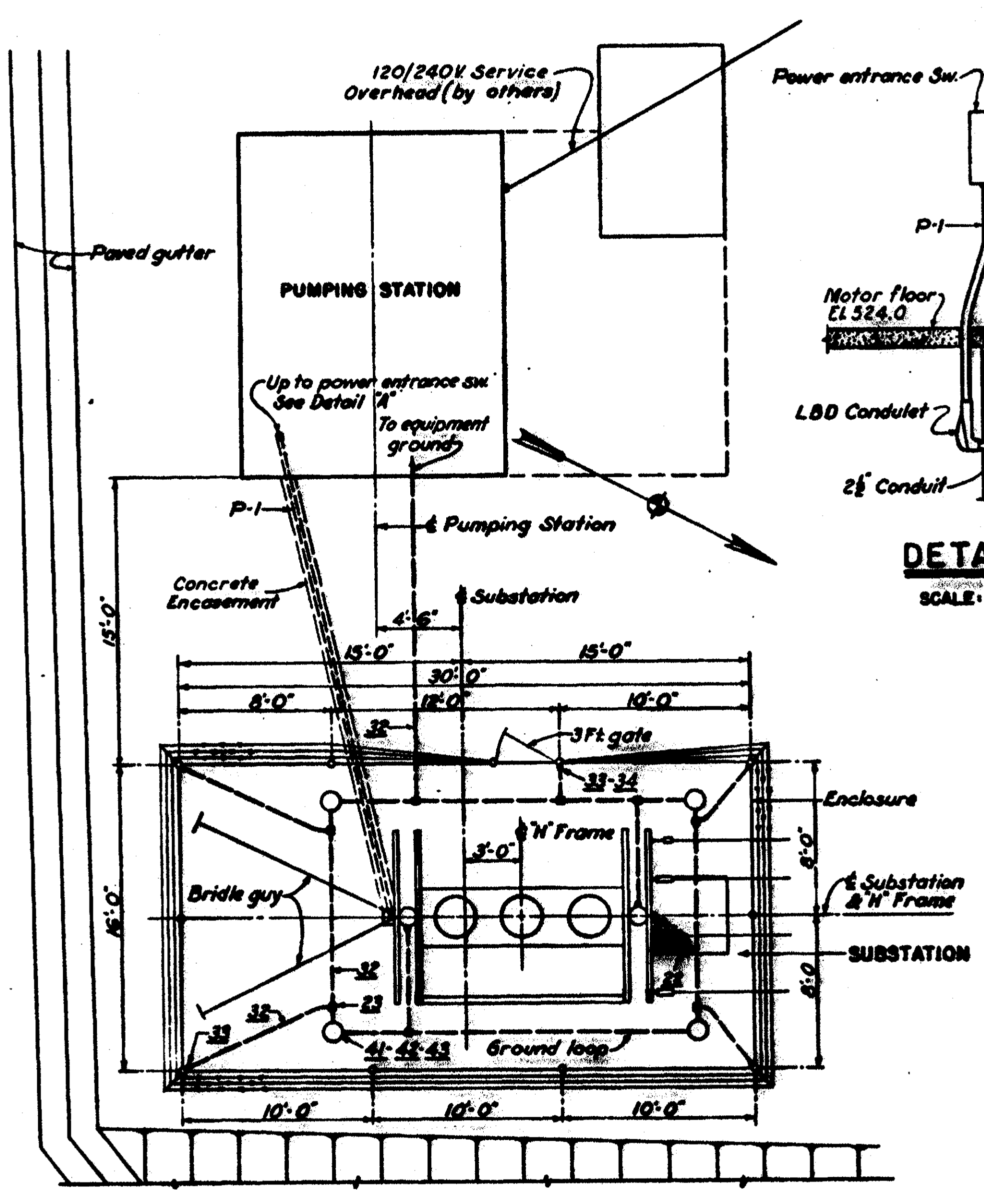
SIDE ELEVATION



END ELEVATION

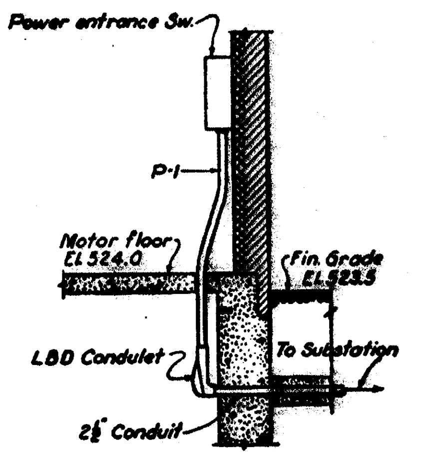
TRANSFORMER "H" FRAME

SCALE: 3/8 IN. = 1 FT.



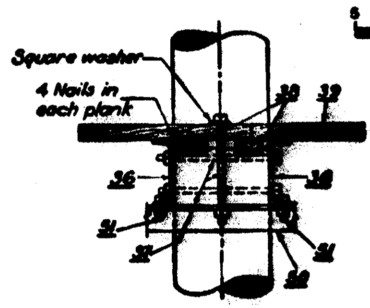
PLOT PLAN

SCALE: 1 IN. = 5 FT.



DETAIL "A"

SCALE: 3/8 IN. = 1 FT.



SECTION A

SCALE: 1 IN. = 1 FT.

BILL OF MATERIAL

ITEM NO.	NO. FURN.	DESCRIPTION
1	1	Pole, 40 foot, class 2, southern pine
2	1	Pole, 35 foot, class 2, southern pine
3	7	Crossarm, 3 1/2" x 4 1/2" x 9'-2", douglas fir
4	19	5/8" ϕ Bolt
5	25	Square washer, 2 1/4" x 2 1/4" x 3/16" for 5/8" bolt
6	6	Crossarm brace, Hubbard No. 7958
7	12	5/8" ϕ Bolt with 1 square washer
8	12	5/8" ϕ Bolt with 4 square washers and 3 nuts
9	18	Insulator, strain type, Joslyn No. L600
10	3	Insulator, strain type, Locke No. 5[illegible]
11	9	Thimble clevis, Joslyn No. J[illegible]
12	5	Insulator, Joslyn No. L1183
13	5	Insulator pin, Joslyn No. J376
14	1 Set	Disconnecting switch with operating mech. [illegible]
15	3	Power fuse, Westinghouse type BA 100
16	3	Transformer, 37 1/2 KVA, [illegible]
17	2	Rack, 4 spool, Joslyn No. J1169
18	1	Weatherhead, 3 conductor, 600V 2 1/2", Crouse-Hinds F 766
19	2	Potential Transformer G.E. Type JE-3
20	2	Current Transformer G.E. Type JKP-0
21	1	Meter socket, suitable for outdoor polyphase metering
22	1	Platform, 4'-0" x 4'-0", Kerlow type "C"
23	60	Connector, Burndy type "KS"
24	2	Clamp, Joslyn No. J1121
25	20 Ft.	3/8" Dia. std. 7 strand steel guy wire
26	1	Twineye, Hubbard No. 7564
27	1	Angle thimbleye bolt, Hubbard No. 6114
28	200 Ft.	No. 4 bare hard drawn stranded copper wire
29	3	Lightning arrester, 12 KV. with bracket. Line Material Co Type E
30	200 Ft.	Ground wire, No. 2 bare stranded copper
31	60 Ft.	Ground wire moulding with [illegible]
32	150 Ft.	Ground wire, 250 MCM [illegible] copper
33	5	Clamp, Burndy type [illegible]
34	2	Clamp, Burndy type [illegible]
35	3	Clamp, Burndy type [illegible]
36	2	6" C 12.5# 13'-0" long
37	6	3/4" ϕ Machine bolt
38	2	Southern pine timber, creosoted, 2" x 4" x 11'-0" long
39	11	Southern pine plank, 2" x 12" x [illegible] long, creosoted
40	1	Bridle guy complete with [illegible]
41	4	Ground rod, [illegible]
42	4	Clamp, Burndy type [illegible]
43	4	Access box, 10" class A cast iron pipe, 1'-6" long with plug
44	2	Crossarm for meter cabinet mounting
45	50 Ft.	Cable, single conductor No. 30, 600V type R.I.B.
46	3	Southern pine timber, 3" x 6" x 13'-0" long, creosoted
47	24 Ft.	Southern pine timber, 4" x 4", creosoted
48	36 Ft.	Southern pine timber, 2" x 4", creosoted
49	2	Southern pine plank, 2" x 12" x [illegible] long creosoted Bolted to [illegible] with 3 [illegible] bolts
50	40 Ft.	L 3" x 3" x [illegible]
51	6	Machine bolt, 3/4" x 2" long
52		Conduit, fittings and conductors

GENERAL NOTES:

(4) All angle irons, channels, conduit, current and potential Transformers on Transformer "H" Frame were grounded.

REFERENCES:

Electrical System & Details ---------------- Sheet 24

RECORD DRAWING

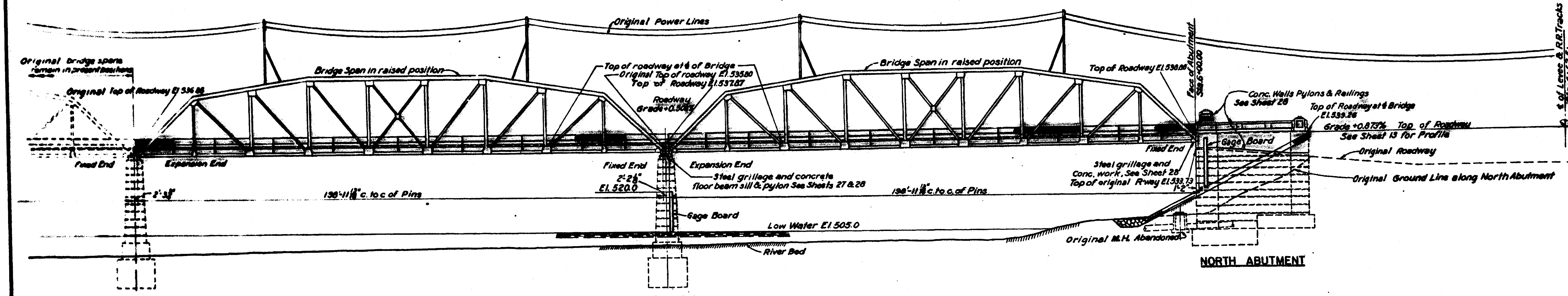
REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N Z
C.O. No. 3	19 Mar. '53	Changed metering equipment	C F P

CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH STREET PUMPING STATION
TRANSFORMER SUBSTATION
PLOT PLAN & DETAILS

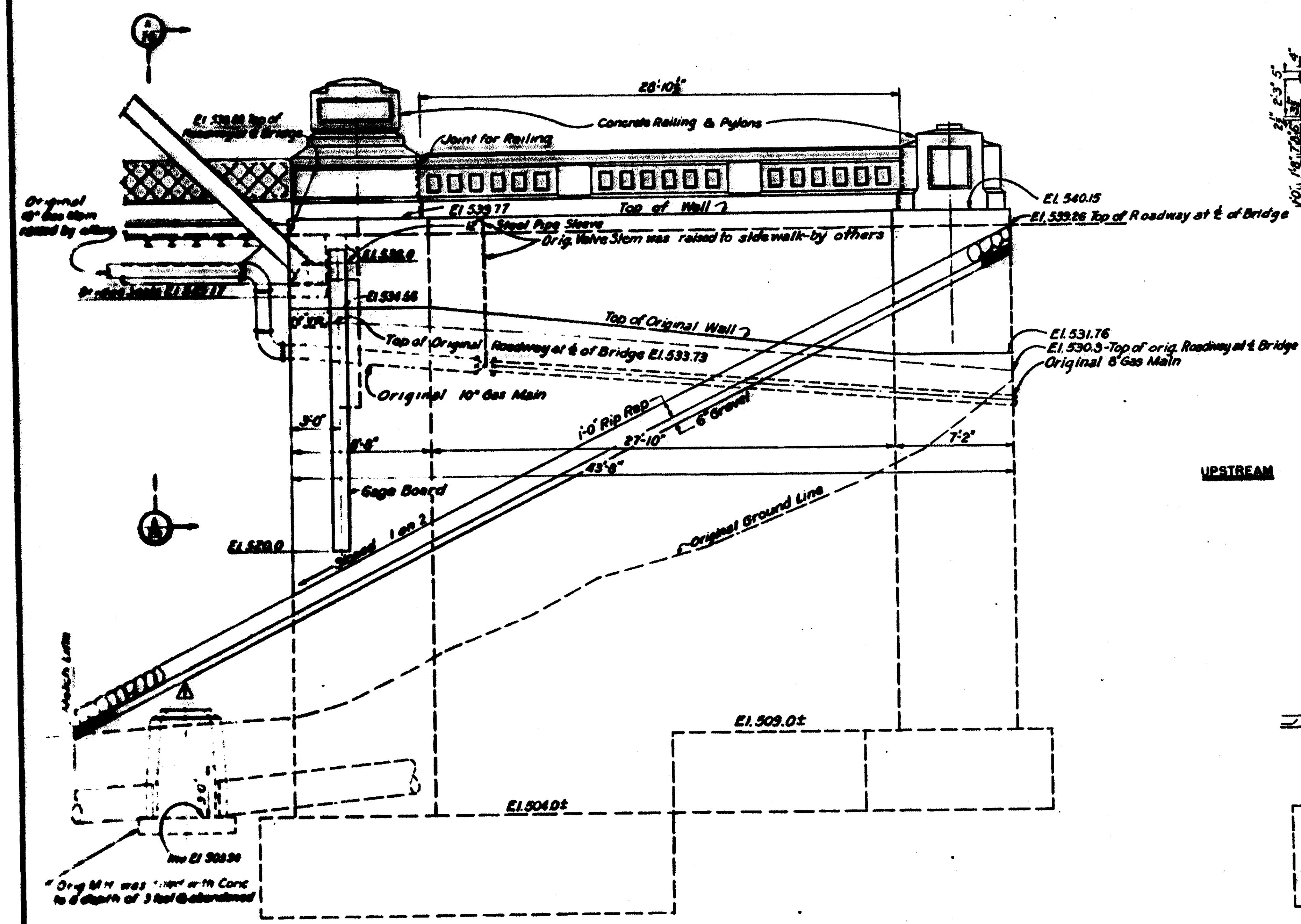
DRAWN BY: F. D.
TRACED BY: F. D.
CHECKED BY: K. F.
REVIEWED BY SAFETY BRANCH
SUBMITTED
APPROVED
APPROVED
DATE [illegible]
APPROVED FOR:
DATE
SCALE: AS SHOWN
SPEC. NO.
DRAWING NUMBER
SHEET 25 OF 29
6844-182

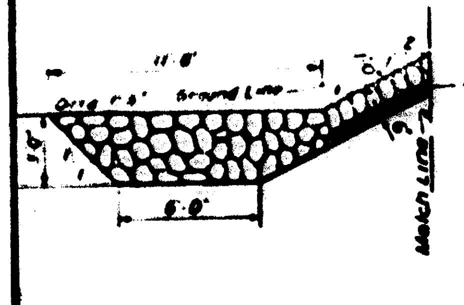
CORPS OF ENGINEERS | U. S. ARMY



DOWNSTREAM ELEVATION OF BRIDGE

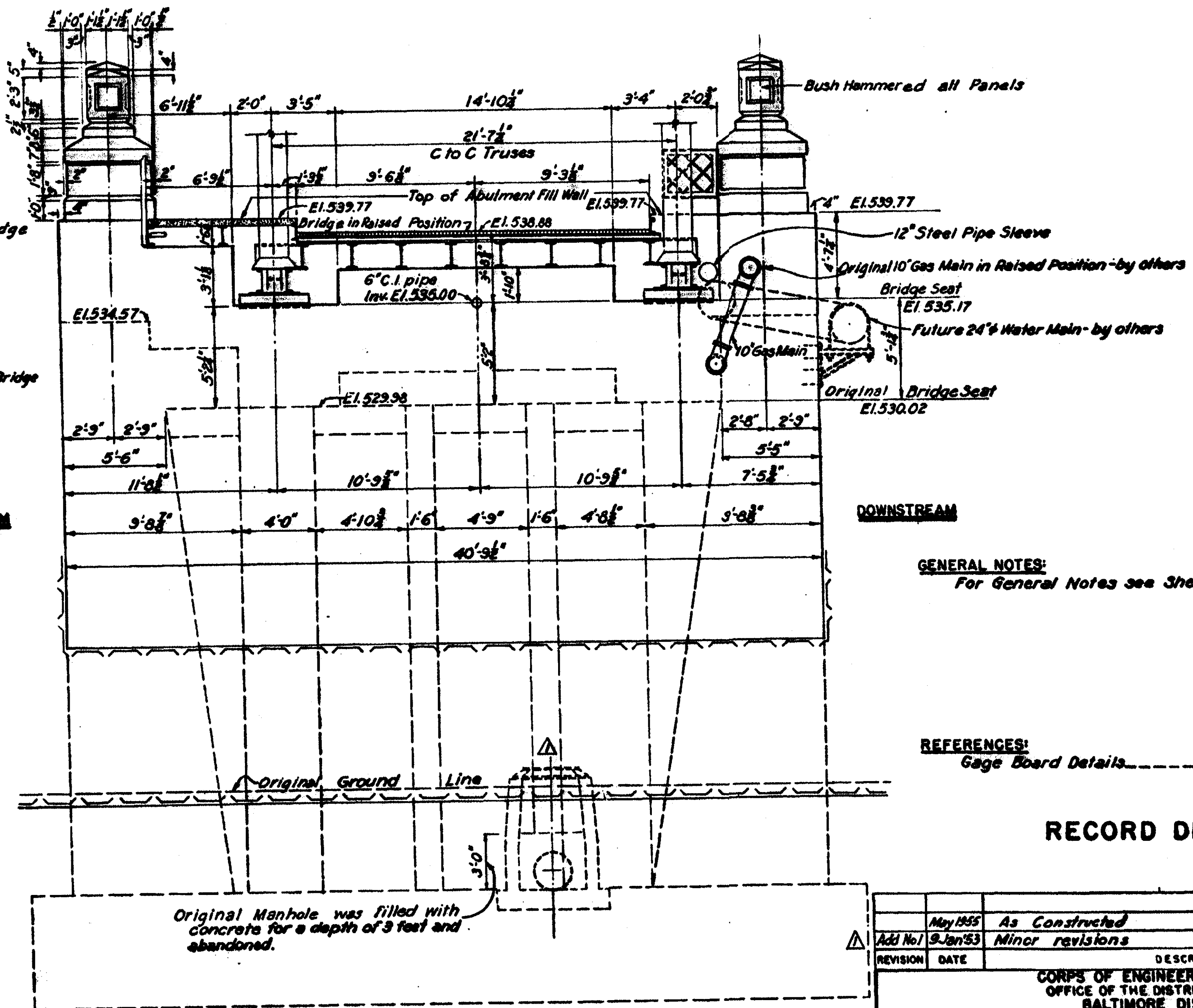
SCALE: 1/16 IN. = 1 FT.





NORTH ABUTMENT
EAST ELEVATION
WEST ELEVATION OPPOSITE HAND

SCALE: 1/4 IN. = 1 FT.



SECTION

SCALE: 1/4 IN. = 1 FT.

GENERAL NOTES:
For General Notes see Sheets 7, 8 & 21.

REFERENCES:
Gage Board Details .... Sheet 29

RECORD DRAWING

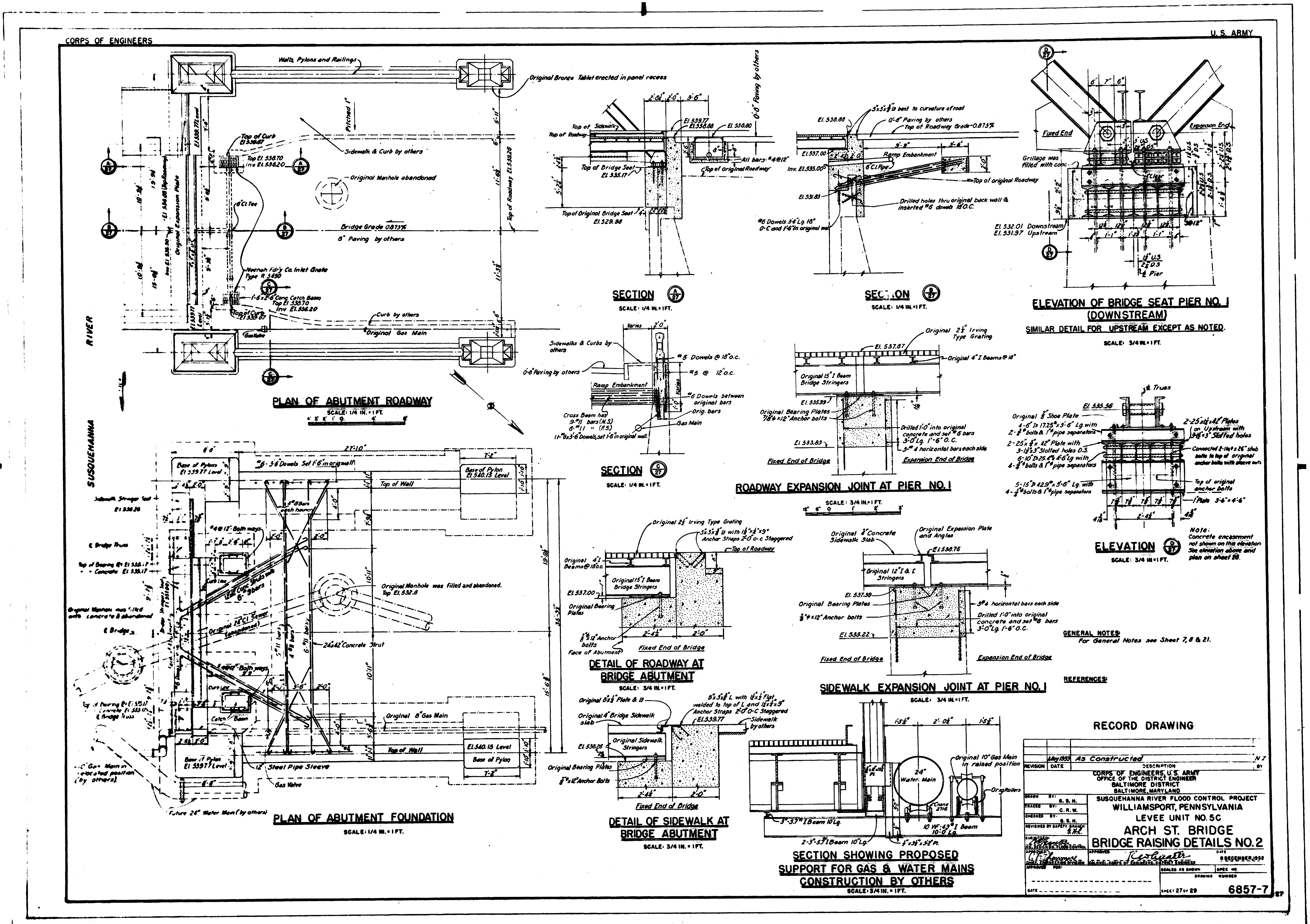
REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.
Add No. 1	9 Jan '53	Minor revisions	C.E.P.

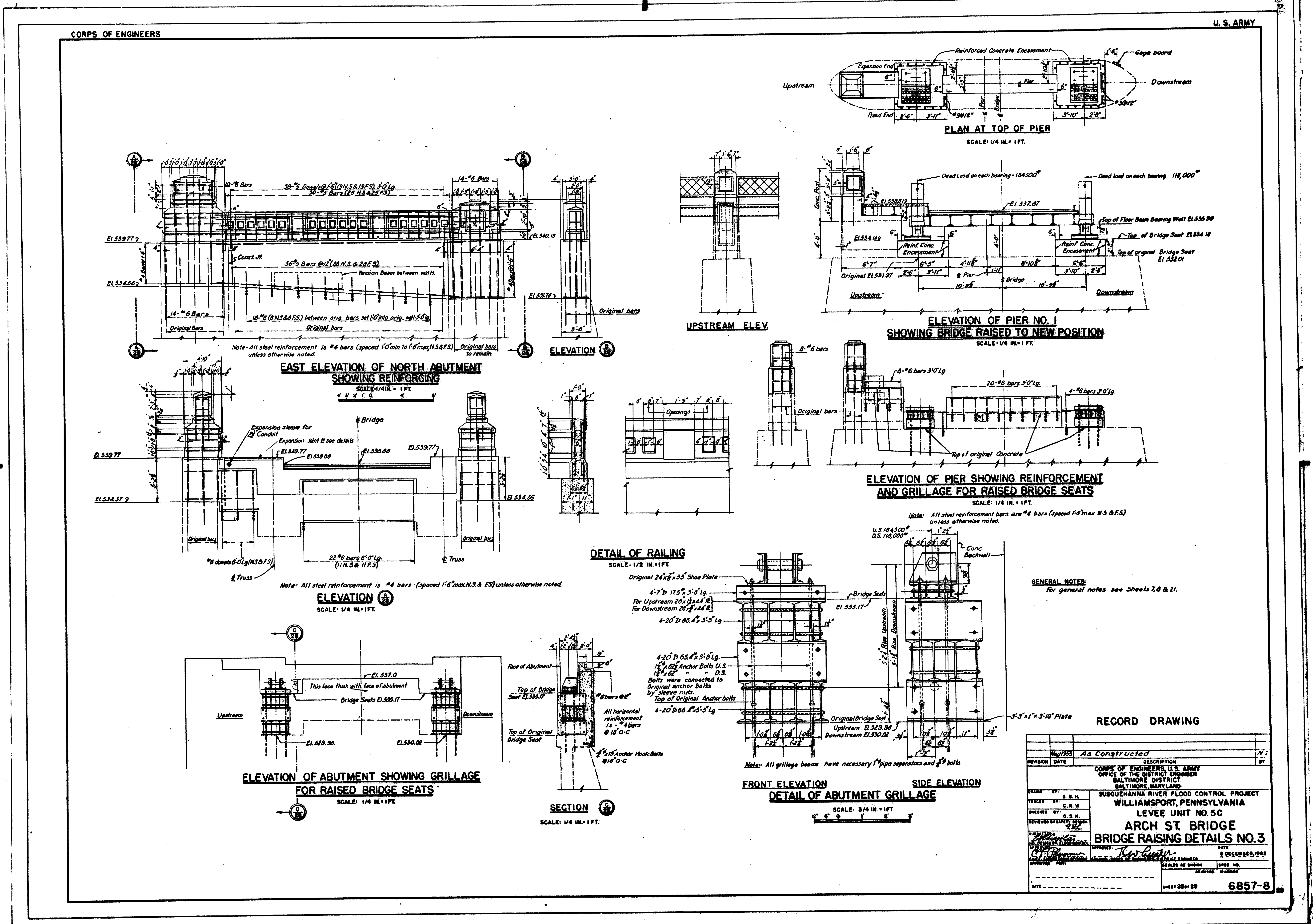
CORPS OF ENGINEERS, U. S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: G.S.H.
TRACED BY: S.K.
CHECKED BY: G.S.H.
REVIEWED BY SAFETY BRANCH

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH ST. BRIDGE
BRIDGE RAISING DETAILS-NO. 1

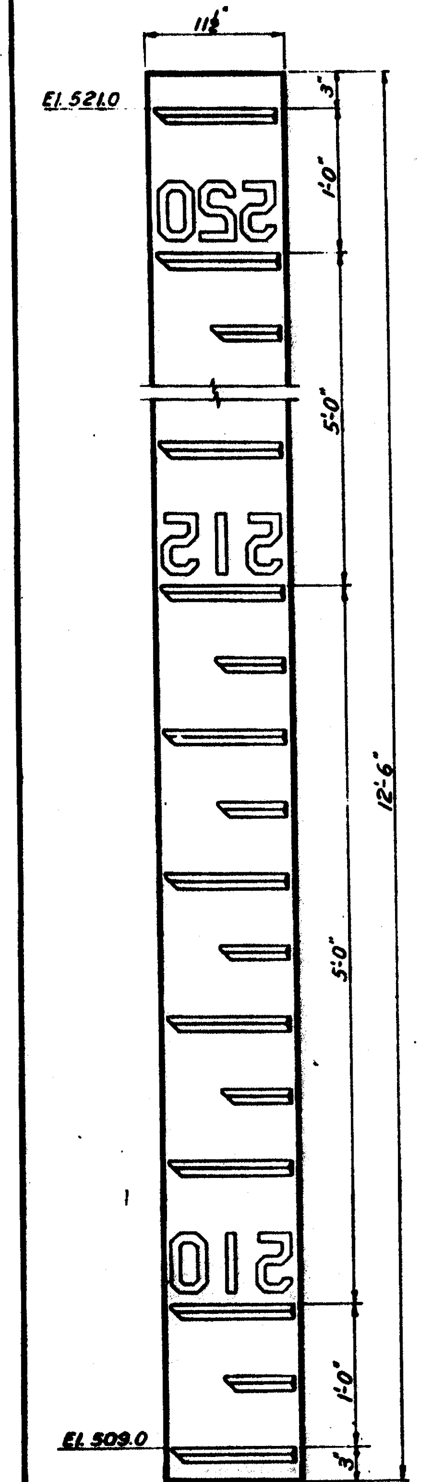
SUBMITTED: HD. DESIGN BR. FLOOD CONTROL
APPROVED: CHIEF, ENGINEERING DIVISION
APPROVED: COLONEL, CORPS OF ENGINEERS, DISTRICT ENGINEER
DATE: 8 DECEMBER 1952
APPROVED FOR:
DATE
SCALE: AS SHOWN
SPEC.
DRAWING NUMBER
SHEET 26 OF 29
6857-6


CORPS OF ENGINEERS
U. S. ARMY
PLAN OF ABUTMENT ROADWAY
SCALE: 1/4 IN. = 1 FT.
PLAN OF ABUTMENT FOUNDATION
SCALE: 1/4 IN. = 1 FT.
SUSQUEHANNA RIVER
SECTION A/27
SCALE: 1/4 IN. = 1 FT.
SECTION B/27
SCALE: 1/4 IN. = 1 FT.
SECTION C/27
SCALE: 1/4 IN. = 1 FT.
ELEVATION OF BRIDGE SEAT PIER NO. 1 (DOWNSTREAM)
SIMILAR DETAIL FOR UPSTREAM EXCEPT AS NOTED.
SCALE: 3/4 IN. = 1 FT.
ROADWAY EXPANSION JOINT AT PIER NO. 1
SCALE: 3/4 IN. = 1 FT.
ELEVATION D/27
SCALE: 3/4 IN. = 1 FT.
DETAIL OF ROADWAY AT BRIDGE ABUTMENT
SCALE: 3/4 IN. = 1 FT.
SIDEWALK EXPANSION JOINT AT PIER NO. 1
SCALE: 3/4 IN. = 1 FT.
DETAIL OF SIDEWALK AT BRIDGE ABUTMENT
SCALE: 3/4 IN. = 1 FT.
SECTION SHOWING PROPOSED SUPPORT FOR GAS & WATER MAINS CONSTRUCTION BY OTHERS
SCALE: 3/4 IN. = 1 FT.
Note: Concrete encasement not shown on this elevation. See elevation above and plan on sheet 28.
GENERAL NOTES:
For General Notes see Sheet 7, 8 & 21.
REFERENCES:
RECORD DRAWING
May 1955 As Constructed
CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH ST. BRIDGE
BRIDGE RAISING DETAILS NO. 2
DECEMBER 1952
SCALES AS SHOWN
SHEET 27 OF 29
6857-7



CORPS OF ENGINEERS
U. S. ARMY
PLAN AT TOP OF PIER
SCALE: 1/4 IN. = 1 FT.
Reinforced Concrete Encasement
Gage board
Upstream
Downstream
Expansion End
Fixed End
EAST ELEVATION OF NORTH ABUTMENT SHOWING REINFORCING
SCALE: 1/4 IN. = 1 FT.
Note - All steel reinforcement is #4 bars (spaced 1'-0" min. to 1'-6" max. N.S. & F.S.) unless otherwise noted.
Original bars to remain.
ELEVATION B
UPSTREAM ELEV.
ELEVATION OF PIER NO. 1 SHOWING BRIDGE RAISED TO NEW POSITION
SCALE: 1/4 IN. = 1 FT.
Dead Load on each bearing = 184500#
Dead load on each bearing 118,000#
Top of Floor Beam Bearing Wall El. 535.39
Top of Bridge Seat El. 534.18
Top of original Bridge Seat El. 532.01
ELEVATION OF PIER SHOWING REINFORCEMENT AND GRILLAGE FOR RAISED BRIDGE SEATS
SCALE: 1/4 IN. = 1 FT.
Note: All steel reinforcement bars are #4 bars (spaced 1'-6" max. N.S. & F.S.) unless otherwise noted.
Top of original Concrete
Expansion sleeve for 1 1/2" Conduit
Expansion Joint see details
ELEVATION A
SCALE: 1/4 IN. = 1 FT.
Note: All steel reinforcement is #4 bars (spaced 1'-6" max. N.S. & F.S.) unless otherwise noted.
DETAIL OF RAILING
SCALE: 1/2 IN. = 1 FT.
ELEVATION OF ABUTMENT SHOWING GRILLAGE FOR RAISED BRIDGE SEATS
SCALE: 1/4 IN. = 1 FT.
This face flush with face of abutment
Bridge Seats El. 535.17
SECTION C
SCALE: 1/4 IN. = 1 FT.
FRONT ELEVATION
SIDE ELEVATION
DETAIL OF ABUTMENT GRILLAGE
SCALE: 3/4 IN. = 1 FT.
Note: All grillage beams have necessary 1" pipe separators and 3/4" bolts
GENERAL NOTES:
For general notes see Sheets 7, 8 & 21.
RECORD DRAWING
May 1955 As Constructed
REVISION DATE DESCRIPTION BY
CORPS OF ENGINEERS, U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND
SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C
ARCH ST. BRIDGE
BRIDGE RAISING DETAILS NO. 3
DRAWN BY: G.S.H.
TRACED BY: C.R.W.
CHECKED BY: G.S.H.
8 DECEMBER 1952
SHEET 28 OF 29
6857-8

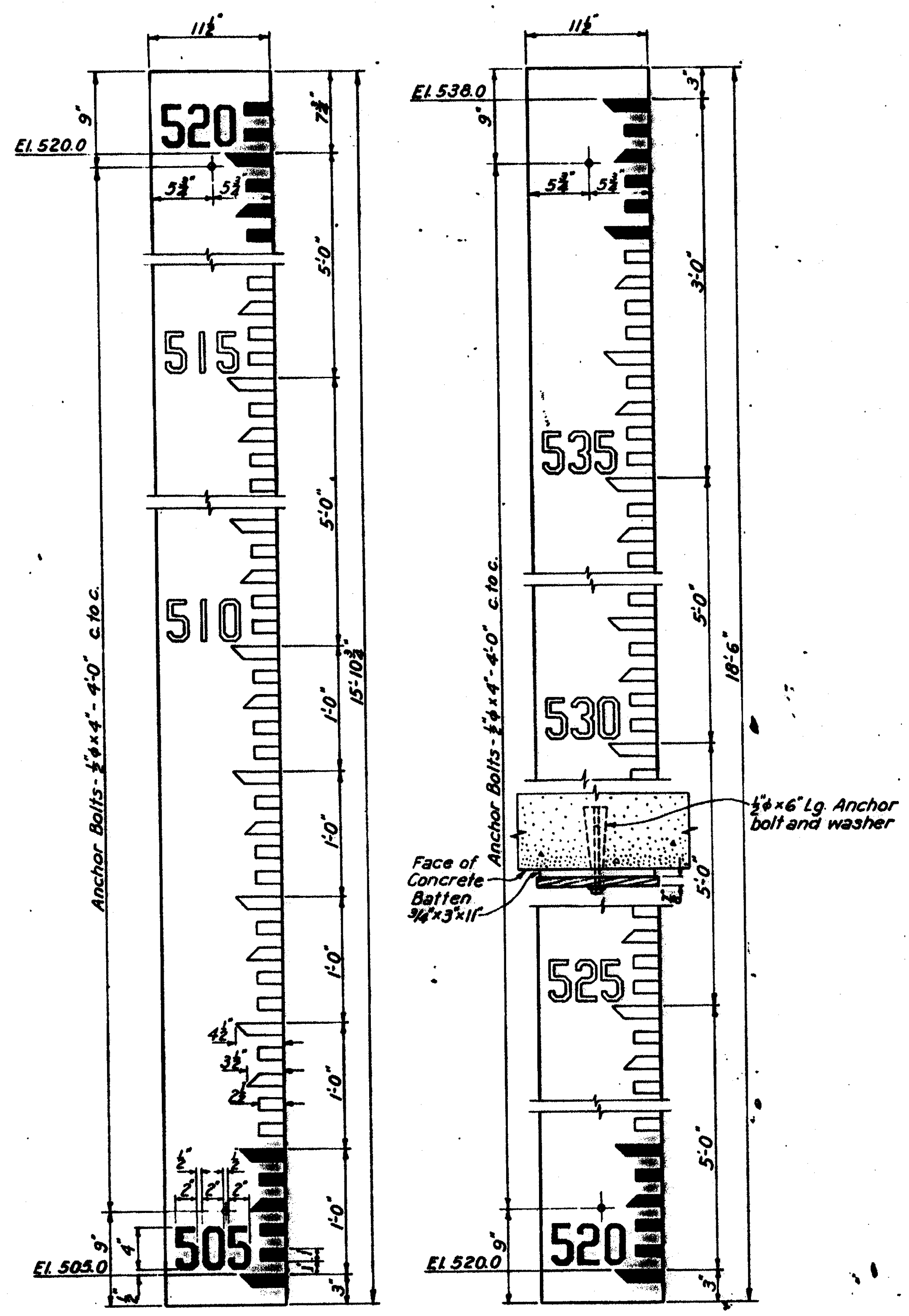
CORPS OF ENGINEERS U. S. ARMY



GAGE FORM - M. H. NO. 3

SCALE: 1 1/2 IN. = 1 FT.

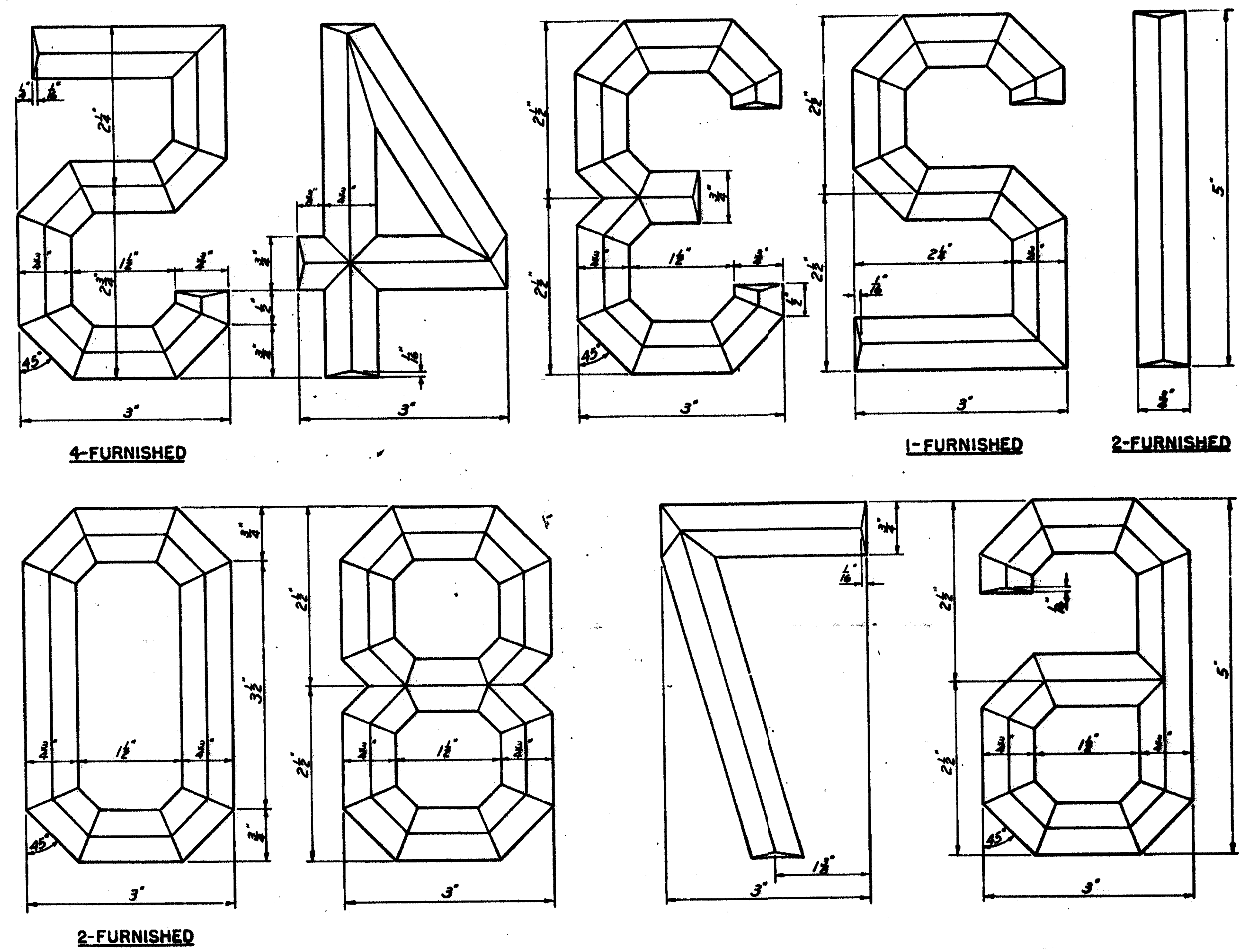
1-FURNISHED



GAGE BOARDS - ARCH ST. BRIDGE

SCALE: 1 1/2 IN. = 1 FT.

1-EACH FURNISHED



NUMERALS

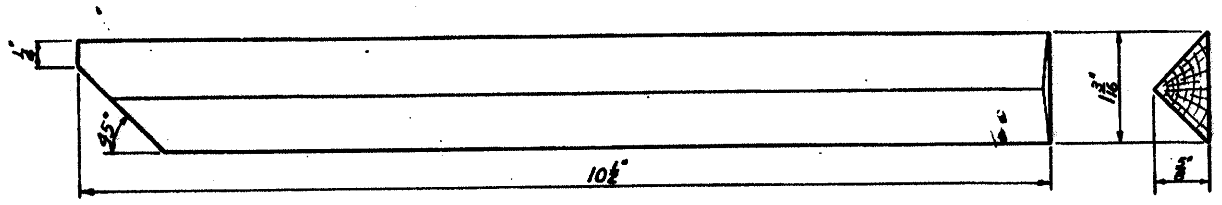
SCALE: FULL SIZE

GENERAL NOTES:

Numerals and division markers on gage boards are black paint on white paint background.

REFERENCES:

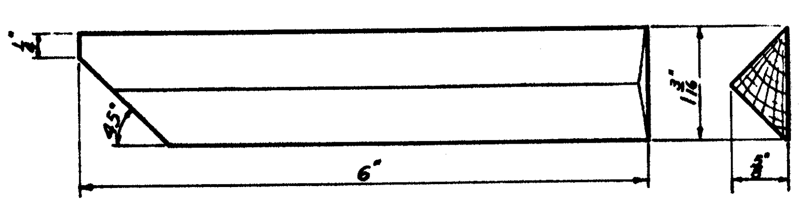
For location of Gage Form, see Sheets 17, 18 & 21.
For location of Gage Boards, see Sheets 26 & 28.



FOOT MARKER BAR

SCALE: FULL SIZE

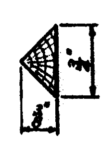
13-FURNISHED



HALF FOOT MARKER BAR

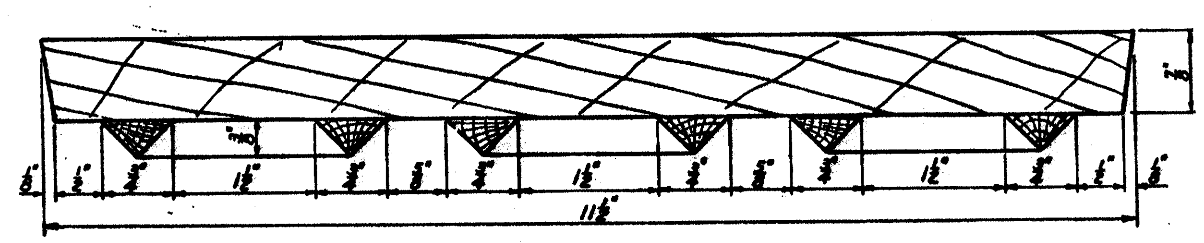
SCALE: FULL SIZE

9-FURNISHED



SECTION THRU NUMERALS

SCALE: FULL SIZE



SECTION THRU GAGE FORM

SCALE: FULL SIZE

RECORD DRAWING

REVISION	DATE	DESCRIPTION	BY
	May 1955	As Constructed	N.Z.

CORPS OF ENGINEERS U.S. ARMY
OFFICE OF THE DISTRICT ENGINEER
BALTIMORE DISTRICT
BALTIMORE, MARYLAND

DRAWN BY: E. R.
TRACED BY: E. R.
CHECKED BY: J. D. R.
REVIEWED BY SAFETY BRANCH
SUBMITTED:
HD. DESIGN BR. FLOOD CONTROL
APPROVED:
CHIEF, ENGINEERING DIVISION

SUSQUEHANNA RIVER FLOOD CONTROL PROJECT
WILLIAMSPORT, PENNSYLVANIA
LEVEE UNIT NO. 5C

STAFF GAGES

APPROVED:
DISTRICT ENGINEER

DATE: 2 DECEMBER 1952

APPROVED FOR:

DATE

SCALE: AS SHOWN
SPEC.
DRAWING NUMBER
SHEET 29 OF 29
6809-20

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