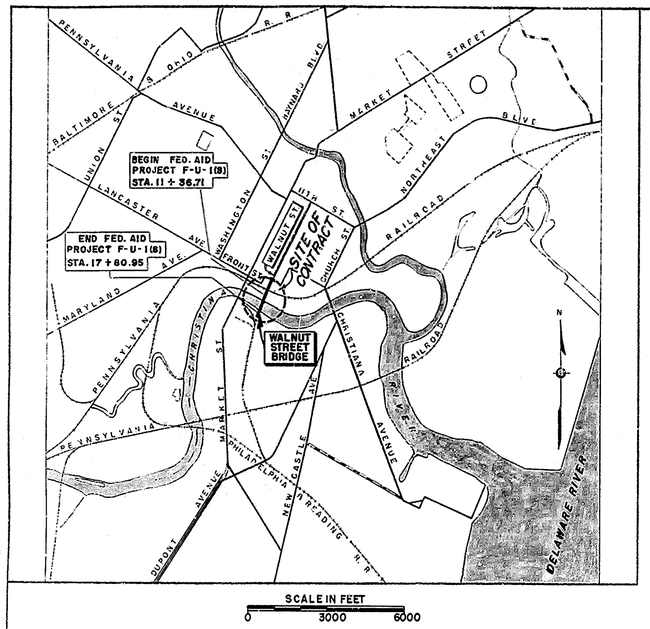
B-# 687 13-2 MICROFILMED

COUNTY	CONTRACT	P.R.A. DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	1	24



SCALE IN FEET
0 3000 6000

THE STATE OF DELAWARE

State of Delaware

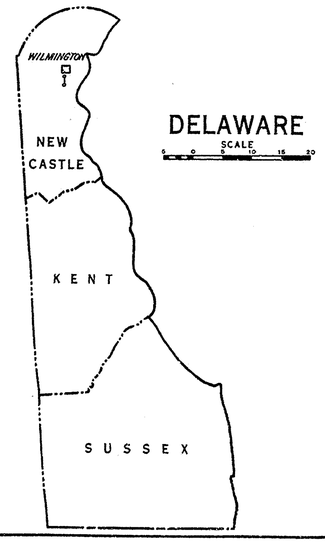
STATE HIGHWAY DEPARTMENT

PLAN
FOR
CONSTRUCTION OF CONTRACT Nº 1224-(3)

STA. 9 + 60 TO STA. 19 + 40
980 FEET: 0.185 MILES

FEDERAL AID PROJECT Nº F-U-1(8)

WALNUT STREET BRIDGE



BOOK NUMBER

THIS CONTRACT WILL BE CONSTRUCTED UNDER STANDARD SPECIFICATIONS DATED APRIL 1, 1941

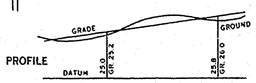
WALNUT STREET BRIDGE
SUBSTRUCTURE

LIST OF DRAWINGS

SHEET NO.	TITLE
1.	TITLE SHEET
2.	GENERAL PLAN & ELEVATION & QUANTITIES
3.	BORINGS
4.	ARCHITECTURAL ELEVATIONS AND SECTIONS
5.	STORAGE HOUSE ELEVATIONS
6.	CONTROL HOUSE ELEVATION
7.	CROSS-SECTION OF HOUSES
8.	NORTH ABUTMENT, RETAINING WALLS
8A.	BALLUSTRADE ON NORTH RETAINING WALLS
9.	SOUTH ABUTMENT, RETAINING WALLS
10.	APPROACH SPAN PIERS
11.	REINFORCING BARS IN ABUTMENTS AND PIERS
12.	LIVE-LOAD ANCHORAGE & RACK SUPPORT
13.	TRUNNION SUPPORT
14.	BASCULE PIERS - PLAN & SECTION
15.	BASCULE PIERS - SECTIONS
16.	BASCULE PIERS - CONTROL HOUSE
17.	BASCULE PIERS - STORAGE HOUSE
18.	REINFORCING BARS IN BASCULE PIERS - BASES, FRONT & REAR WALLS
19.	REINFORCING BARS IN BASCULE PIERS - SIDEWALLS
20.	REINFORCING BARS IN CONTROL HOUSE
21.	REINFORCING BARS IN STORAGE HOUSE
22.	BAR SCHEDULE FOR BASCULE PIERS
23.	BAR SCHEDULE FOR HOUSES
24.	FENDERS

CONVENTIONAL SIGNS

COUNTY LINE		WIRE FENCE	
CITY OR TOWN LINE		PRESENT CULVERT	
RIGHT OF WAY LINE		PROPOSED CULVERT	
CENTRE LINE, PROPOSED ROAD	240	TELEGRAPH POLE	
MACADAM, TRAVELLED ROAD		TREE	
TROLLEY OR RAILROAD			



PREPARED BY
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

DATE 7/6/54

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

EXAMINED 5-28 1954 John B. Larson
CONSTRUCTION ENGINEER

APPROVED 5/27 1954 Joe S. Robinson
BRIDGE ENGINEER

APPROVED 5/28 1954 W. A. McCullough
CHIEF ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

RECOMMENDED FOR APPROVAL:

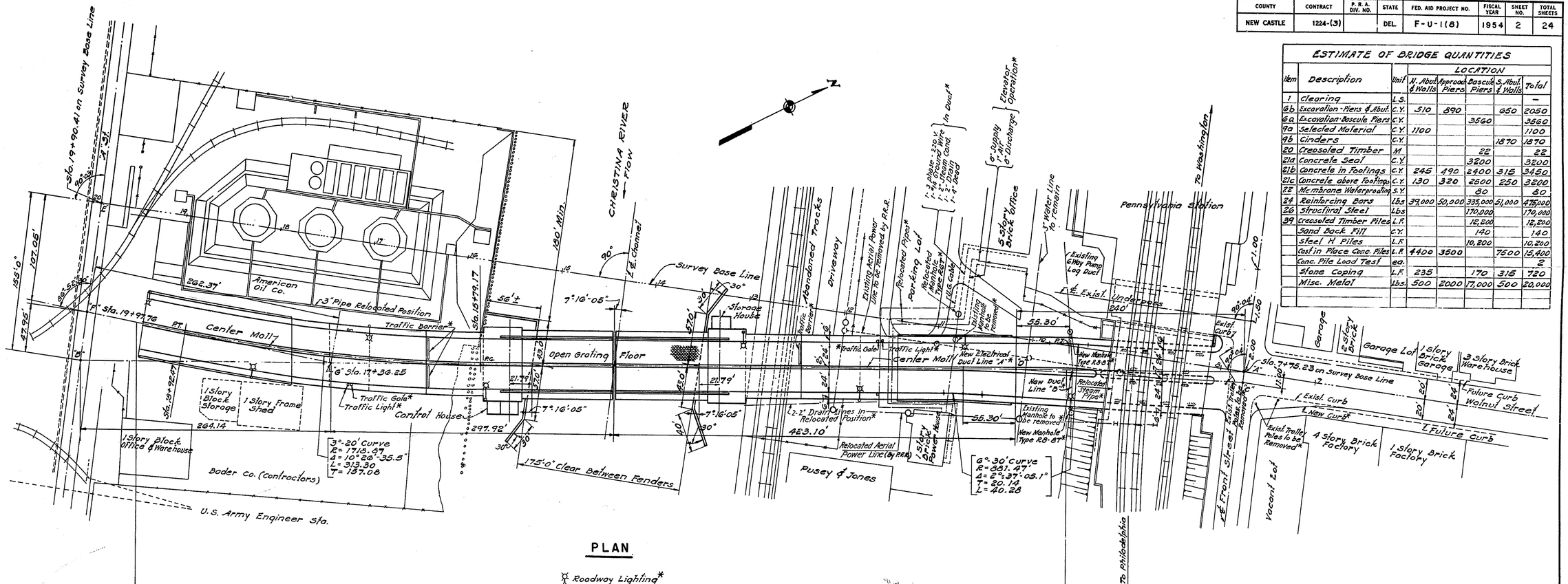
DISTRICT ENGINEER DATE

APPROVED:

DIVISION ENGINEER DATE

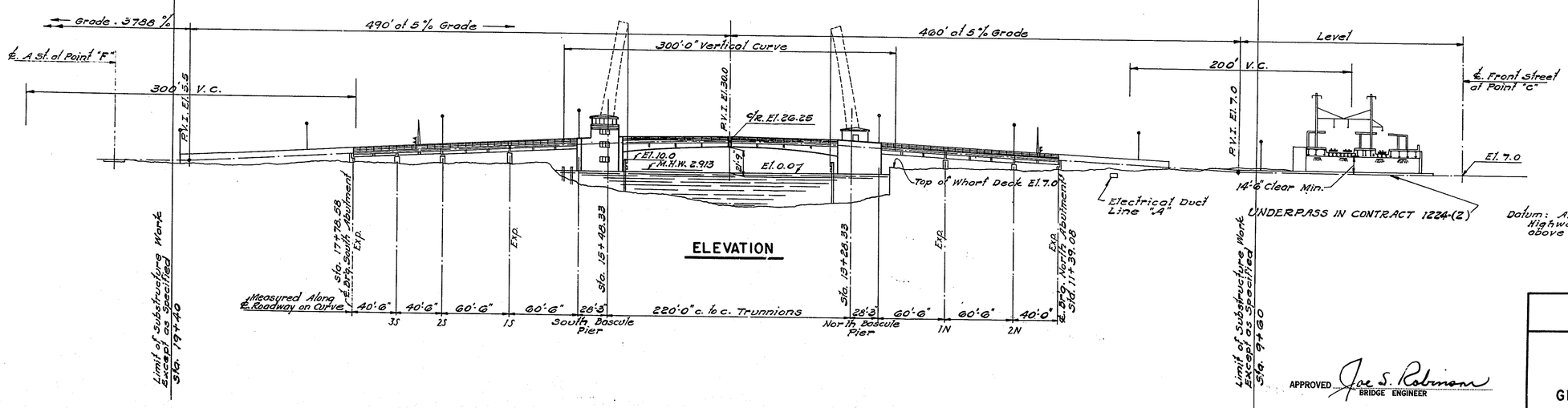
687 (1) 13-2 DISCONTINUED

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	2	24



PLAN

Roadway Lighting*
Fluorescent Lamps*
* Indicates work not included in this contract.



ELEVATION

Notes;
Duct Line "A" - 6 Way Vitrified Clay Duct Encased in 6" of Reinforced Concrete. See Pennsylvania R.R. Plan No. 24520 Sheet No. 6

Duct Line "B" - 12 Way Vitrified Clay Duct Encased in 6" of Reinforced Concrete. See Pennsylvania R.R. Plan No. 24520. Sheet No. 6

For Manhole Details See Pennsylvania R.R. Plan No. 25612

All Station Numbers are along ℄ of Bridge unless otherwise noted.

See Sheet No. 3 for extent of right of way.

Datum: All Elevations shown Refer to State Highway Dept Datum which is 0.087 Ft. above M.S.L. at Sandy Hook, N. J.

ESTIMATE OF BRIDGE QUANTITIES							
Item	Description	Unit	LOCATION N. Abut. & Walls	Approach Piers	Bascule Piers	S. Abut. & Walls	Total
1	Clearing	L.S.					–
6b	Excavation - Piers & Abut.	C.Y.	510	890		650	2050
6a	Excavation - Bascule Piers	C.Y.			3560		3560
9a	Selected Material	C.Y.	1100				1100
9b	Cinders	C.Y.				1870	1870
20	Creosoted Timber	M			22		22
21a	Concrete Seal	C.Y.			3200		3200
21b	Concrete in Footings	C.Y.	245	490	2400	315	3450
21c	Concrete above Footings	C.Y.	130	320	2500	250	3200
22	Membrane Waterproofing	S.Y.			80		80
24	Reinforcing Bars	Lbs	39,000	50,000	335,000	51,000	475,000
26	Structural Steel	Lbs			170,000		170,000
39	Creosoted Timber Piles	L.F.			12,200		12,200
	Sand Back Fill	C.Y.			140		140
	Steel H Piles	L.F.			10,200		10,200
	Cast in Place Conc. Piles	L.F.	4400	3500		7500	15,400
	Conc. Pile Load Test	ea.					2
	Stone Coping	L.F.	235		170	315	720
	Misc. Metal	Lbs.	500	2000	17,000	500	20,000

MADE BY J. F. E.
TRACED BY J.R.
CHECKED BY

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

GENERAL PLAN & ELEVATION

SCALE	DATE	SHEET NO.
1" = 50'	APRIL 1954	2

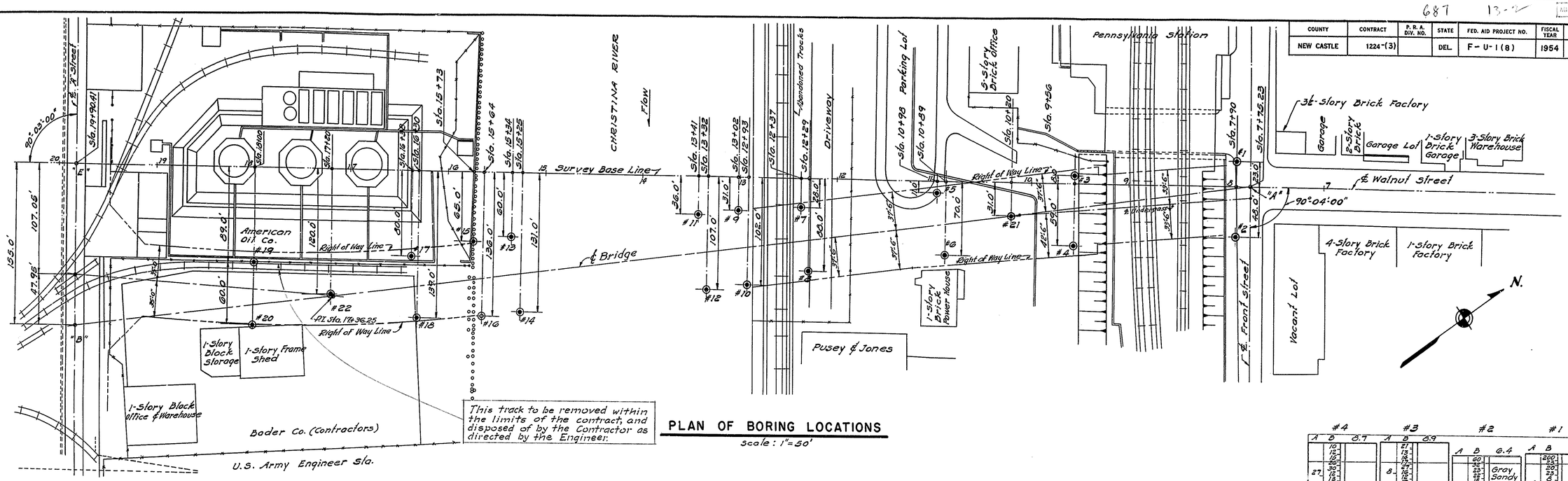
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

UB FREY CO., INC. 1941

687 13-2

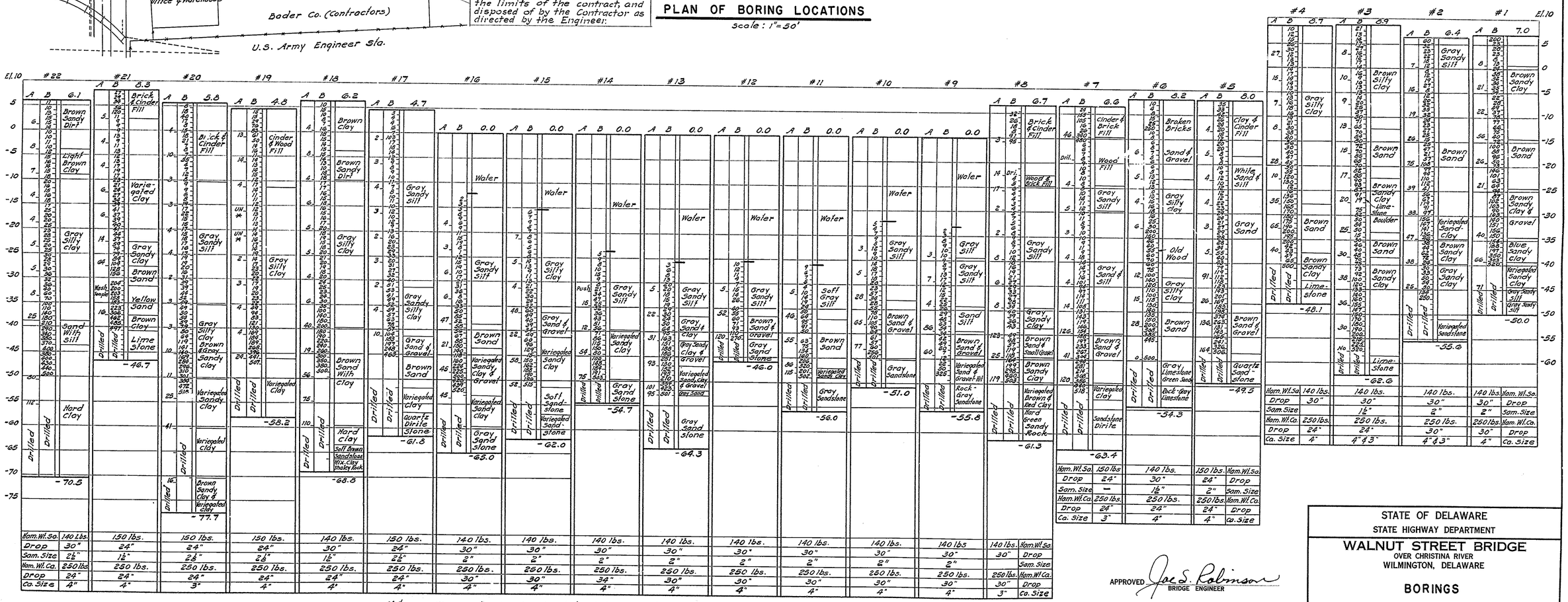
MICROFILMED

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	3	24



PLAN OF BORING LOCATIONS

Scale: 1" = 50'



Notes: All Elevations Refer to State Highway Dept. Datum which is 0.087 Ft. above M.S.L. at Sandy Hook, N.J.
Column A in Boring Logs indicate Hammer Blows on Sample, Sa.
Column B in Boring Logs indicate Hammer Blows on Casing, Ca.
* UN - Denotes Undisturbed Sample

MADE BY W. A. K.
TRACED BY H.
CHECKED BY A. T.

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

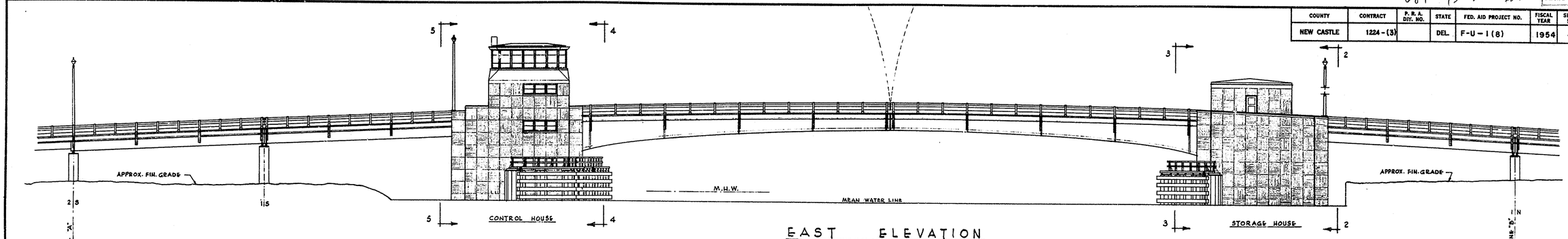
BORINGS

SCALE	DATE	SHEET NO.
1" = 50'	APRIL 1954	3

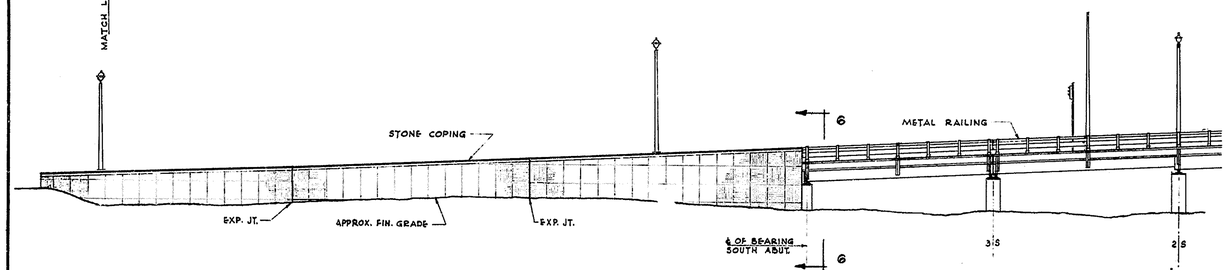
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

687 13-2

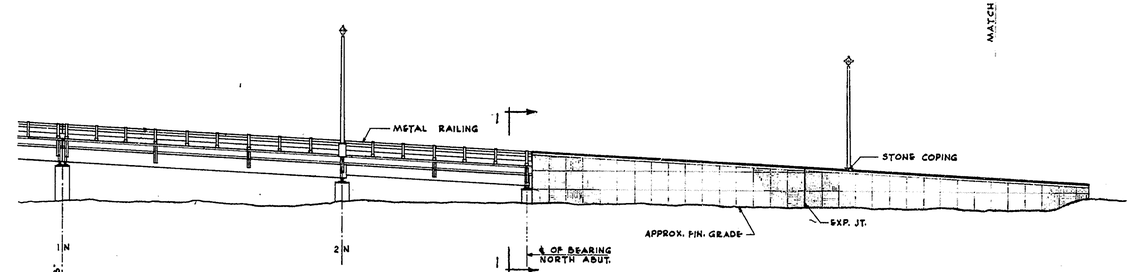
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	4	24



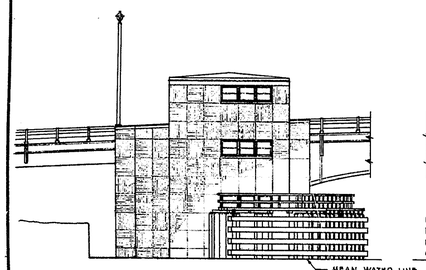
EAST ELEVATION



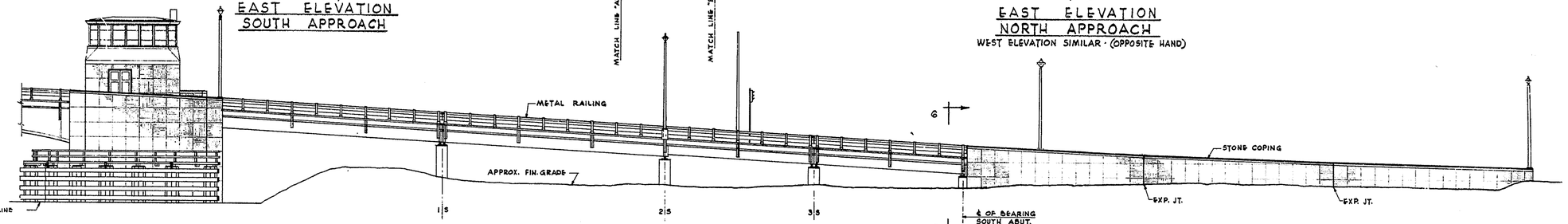
EAST ELEVATION
SOUTH APPROACH



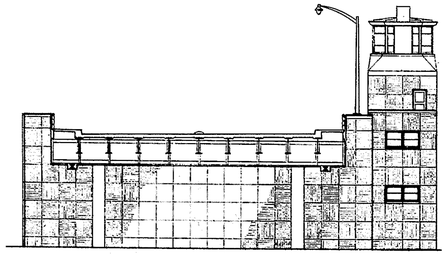
EAST ELEVATION
NORTH APPROACH
WEST ELEVATION SIMILAR · (OPPOSITE HAND)



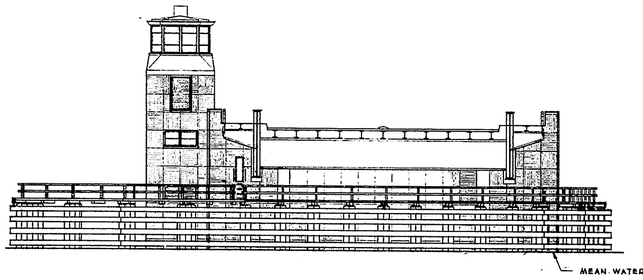
WEST ELEVATION
STORAGE HOUSE



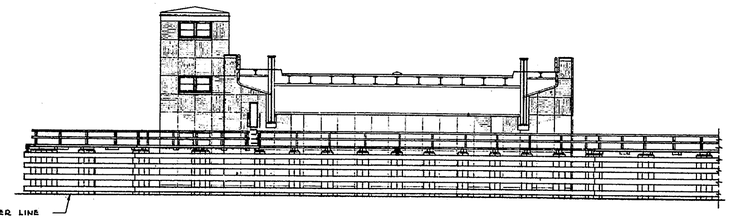
WEST ELEVATION
SOUTH APPROACH



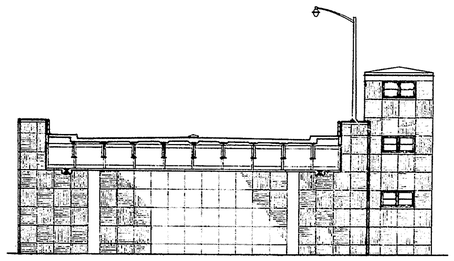
SECTION 5-5



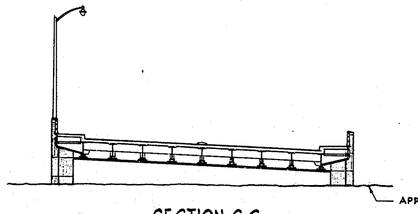
SECTION 4-4



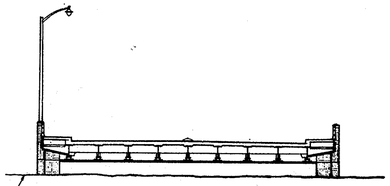
SECTION 3-3



SECTION 2-2



SECTION 6-6
SOUTH ABUTMENT



SECTION 1-1
NORTH ABUTMENT

APPROVED Jae S. Robinson
BRIDGE ENGINEER

MADE BY C.E.W.
TRACED BY C.E.W.
CHECKED BY R.W.H.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

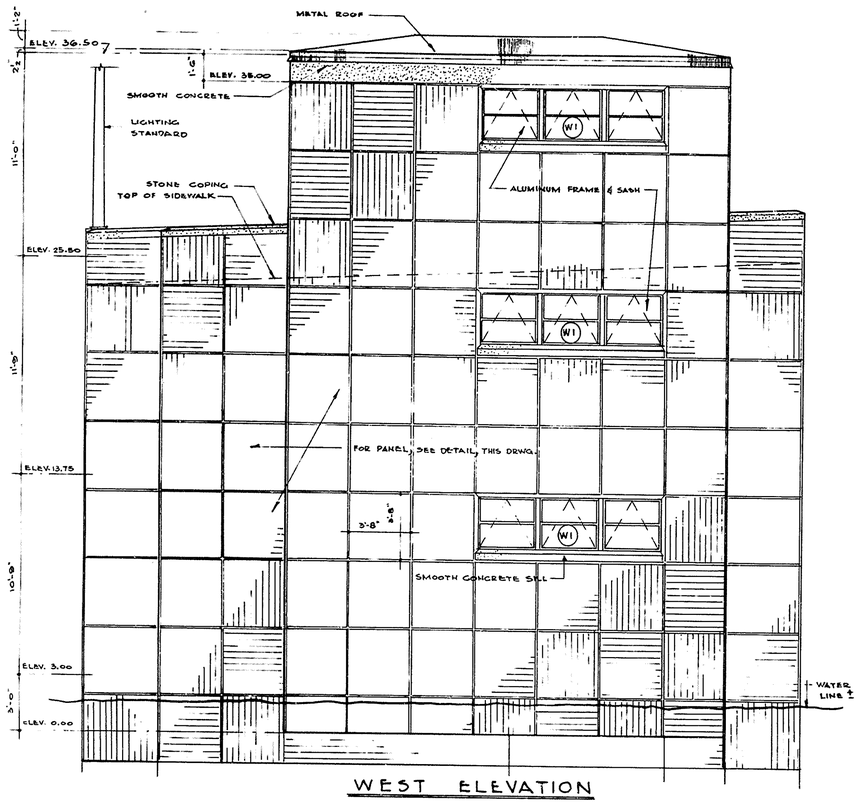
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

ARCHITECTURAL
ELEVATIONS AND SECTIONS

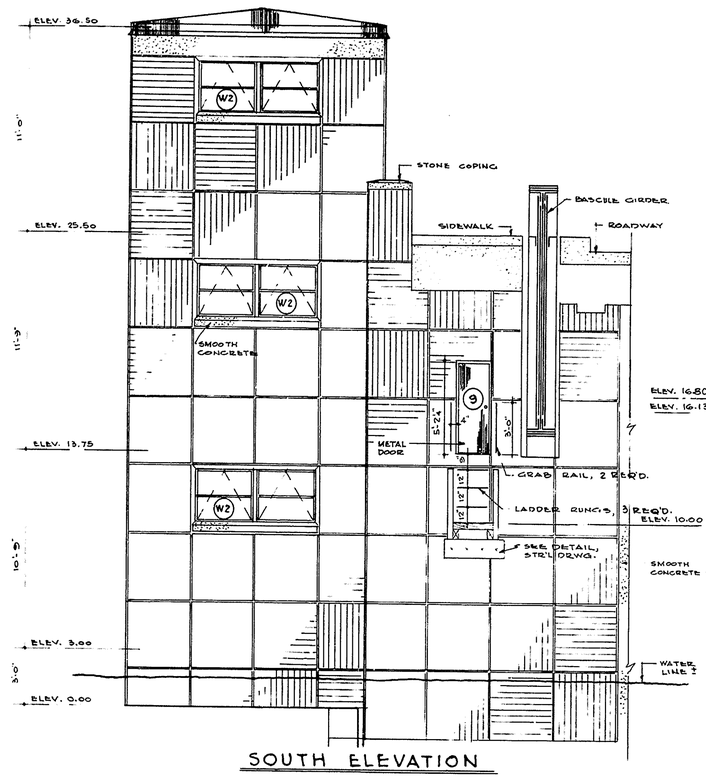
SCALE	DATE	SHEET NO.
1" = 15'-0"	APRIL 1954	4

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

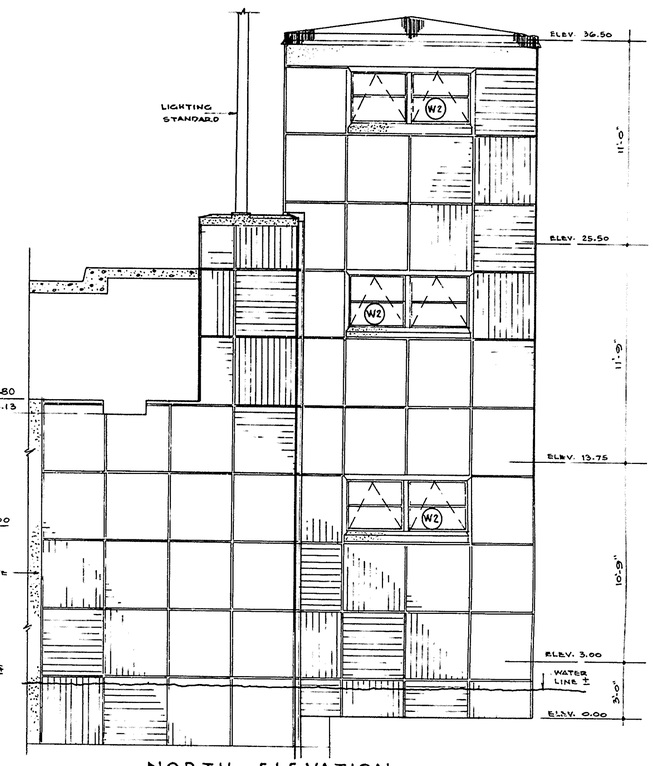
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL	F-U-1(8)	1954	5	24



WEST ELEVATION

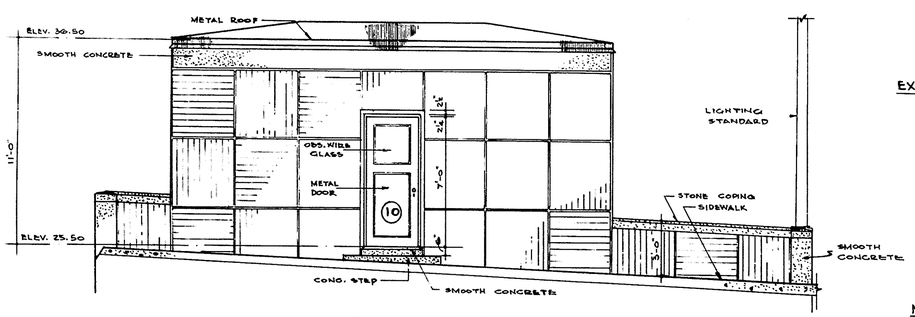


SOUTH ELEVATION

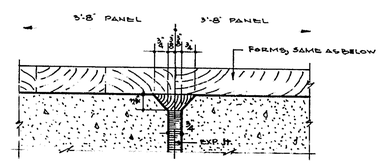


NORTH ELEVATION

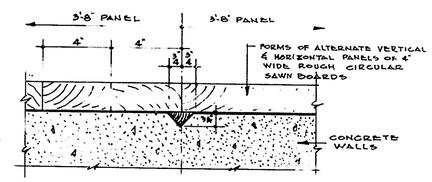
Note:
Drawings #2, 3, 4, 5 and 6 show Architectural Features of the complete structure. The steel members of the Bridge Superstructure, the Windows, doors, metal stairs, roof and floor covers, and the lighting equipments are not in this Contract. The construction of the concrete walls, floors of both houses and the concrete roof of the storage house is in the Substructure contract as shown on drawing 13, 14, 15 and 16. The Contractor shall execute the work to accomplish the architectural features and to install conduits, pipings and sleeves as described in the Specifications, shown on the drawings or required by the Engineer.



EAST ELEVATION



EXPANSION JOINT DETAIL IN RETAINING WALLS



NOTE: WHERE SMOOTH CONCRETE IS CALLED FOR, USE MASONITE PANEL FORMS.

PANEL JOINT DETAIL

TYPICAL PANEL DETAILS

SCALE 3"=1'-0"

APPROVED Jac S. Robinson BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

STORAGE HOUSE
ELEVATIONS

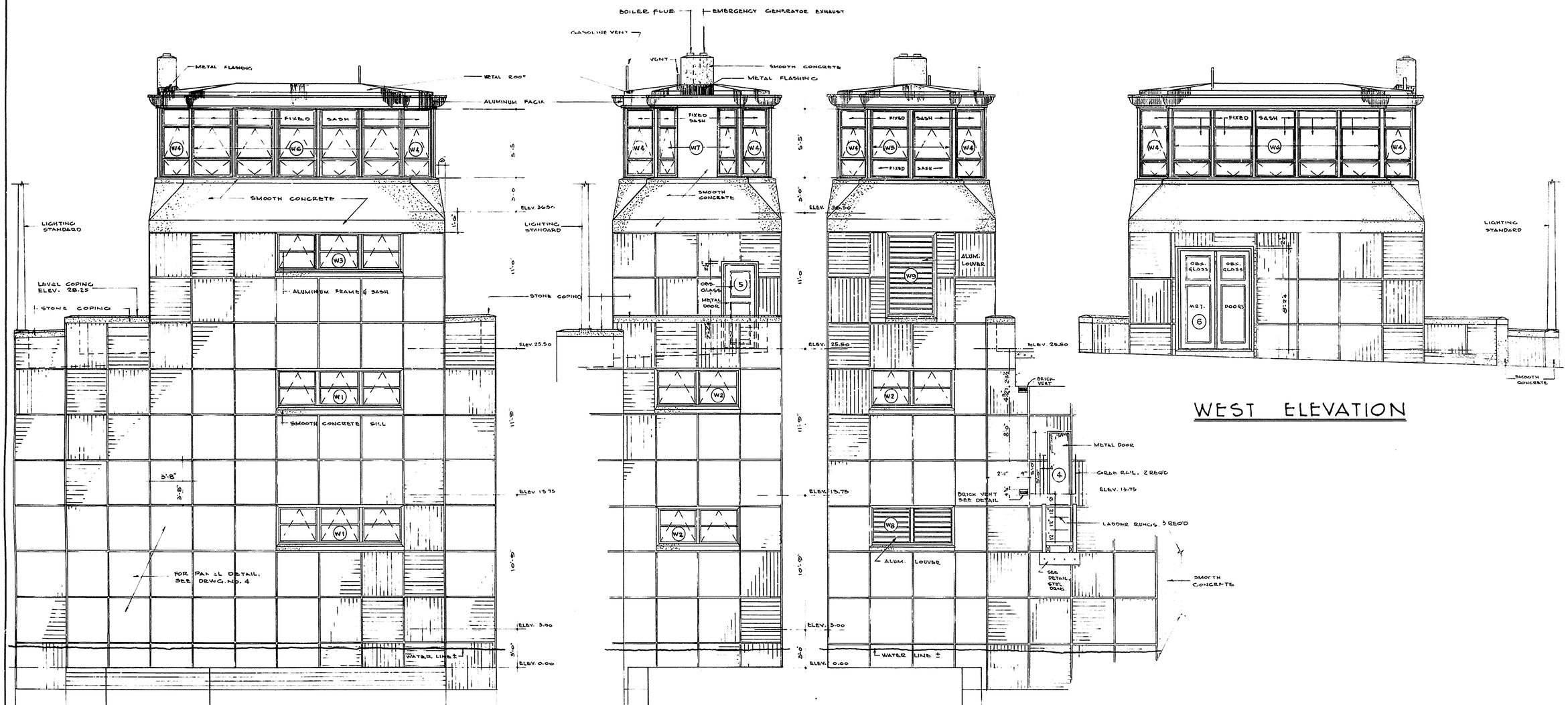
SCALE	DATE	SHEET NO.
1/4"=1'-0" & 3"=1'-0"	APRIL 1954	5

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY W. S. F.
TRACED BY A. J. B.
CHECKED BY R. W. N.

687 13

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1 (8)	1954	6	24



APPROVED Jae S. Robinson BRIDGE ENGINEER

MADE BY I.A.P.
TRACED BY A.J.B.
CHECKED BY R.W.N.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

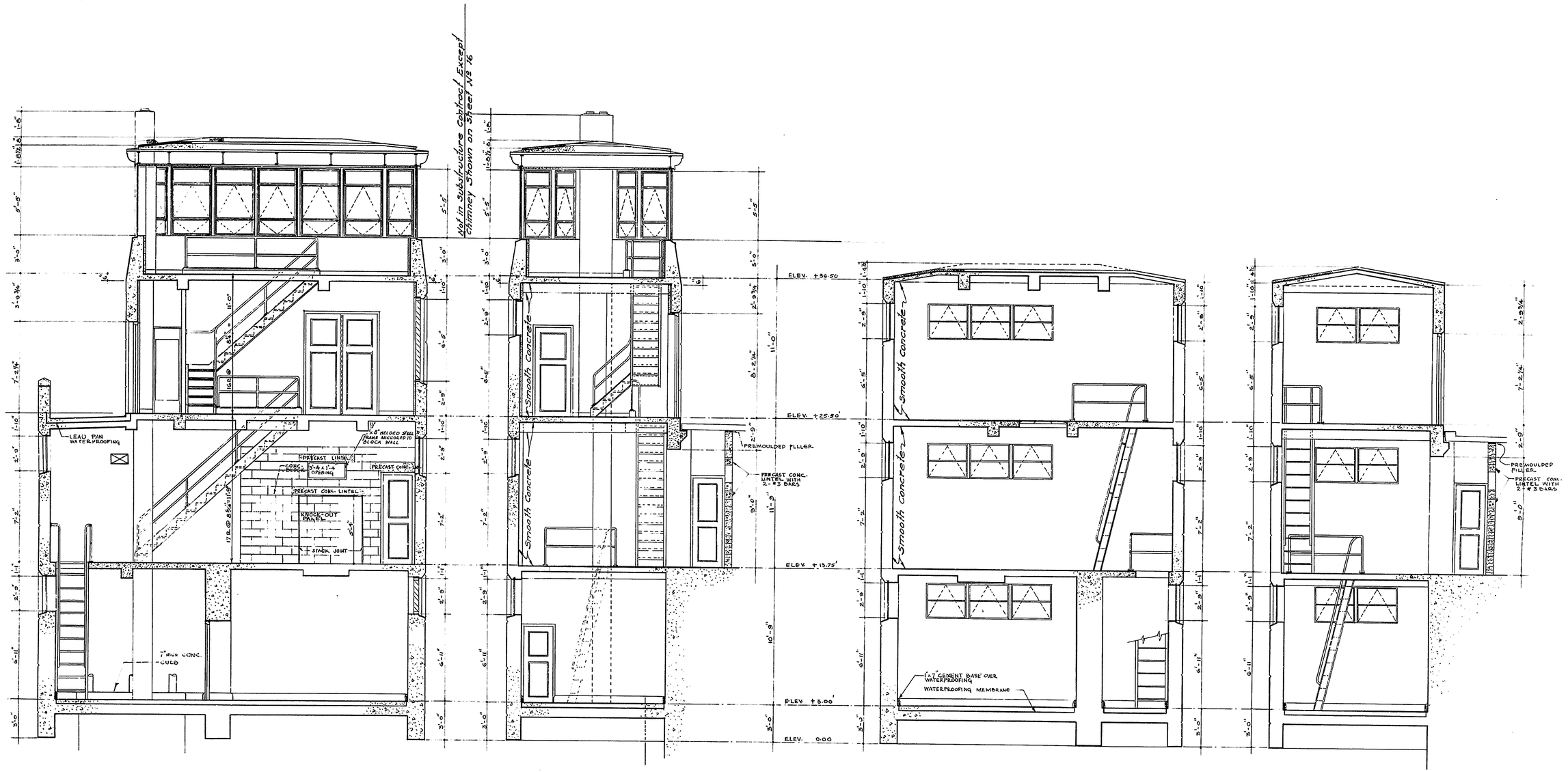
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

CONTROL HOUSE
ELEVATIONS

SCALE	DATE	SHEET NO.
1/4" = 1'-0"	APRIL 1954	6

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1 (8)	1954	7	24



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

MADE BY I.A.P.
TRACED BY L.G.A.
CHECKED BY R.W.N.

APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

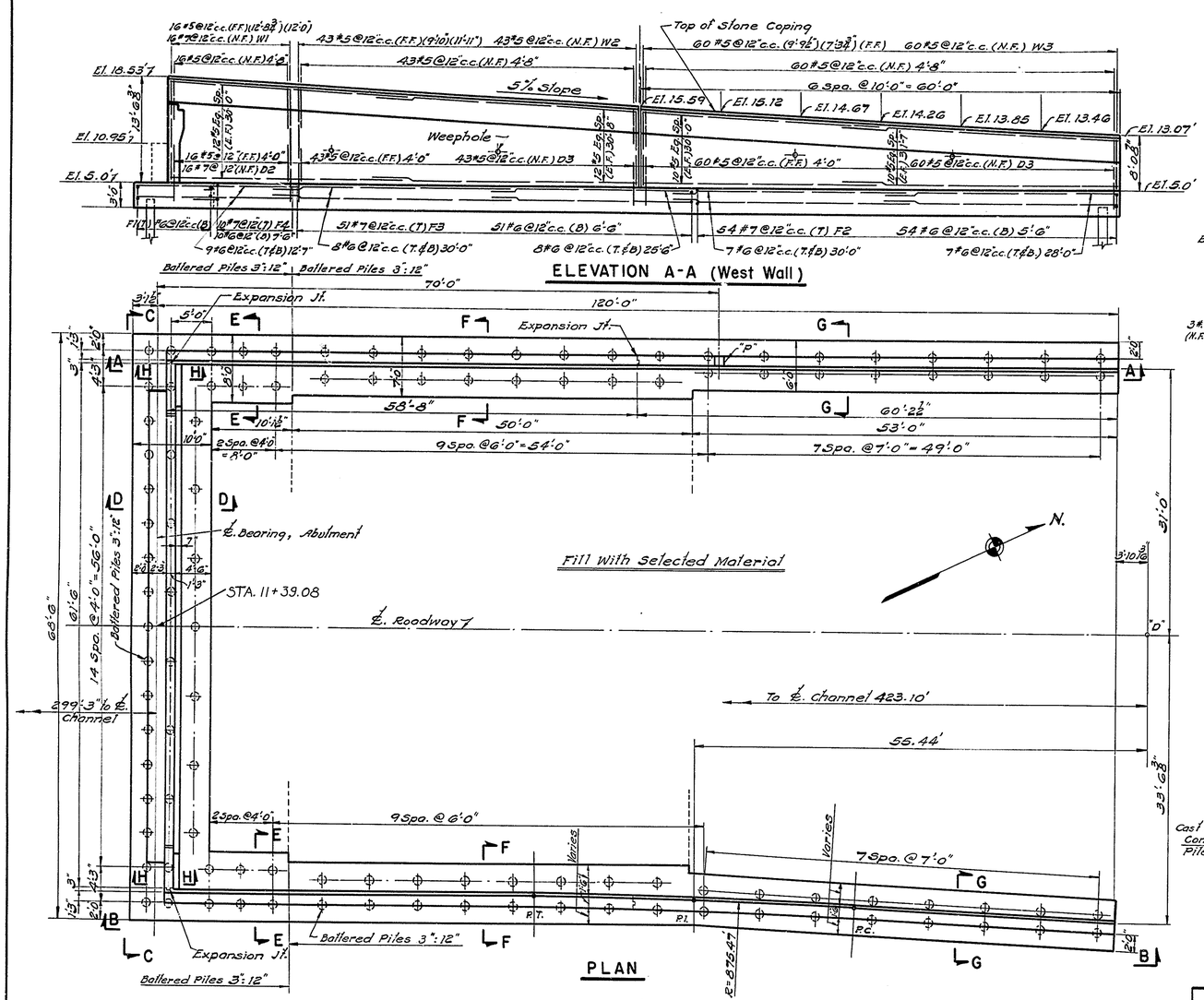
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

CROSS SECTIONS OF HOUSES

SCALE	DATE	SHEET NO
1/4" = 1'-0"	APRIL 1954	7

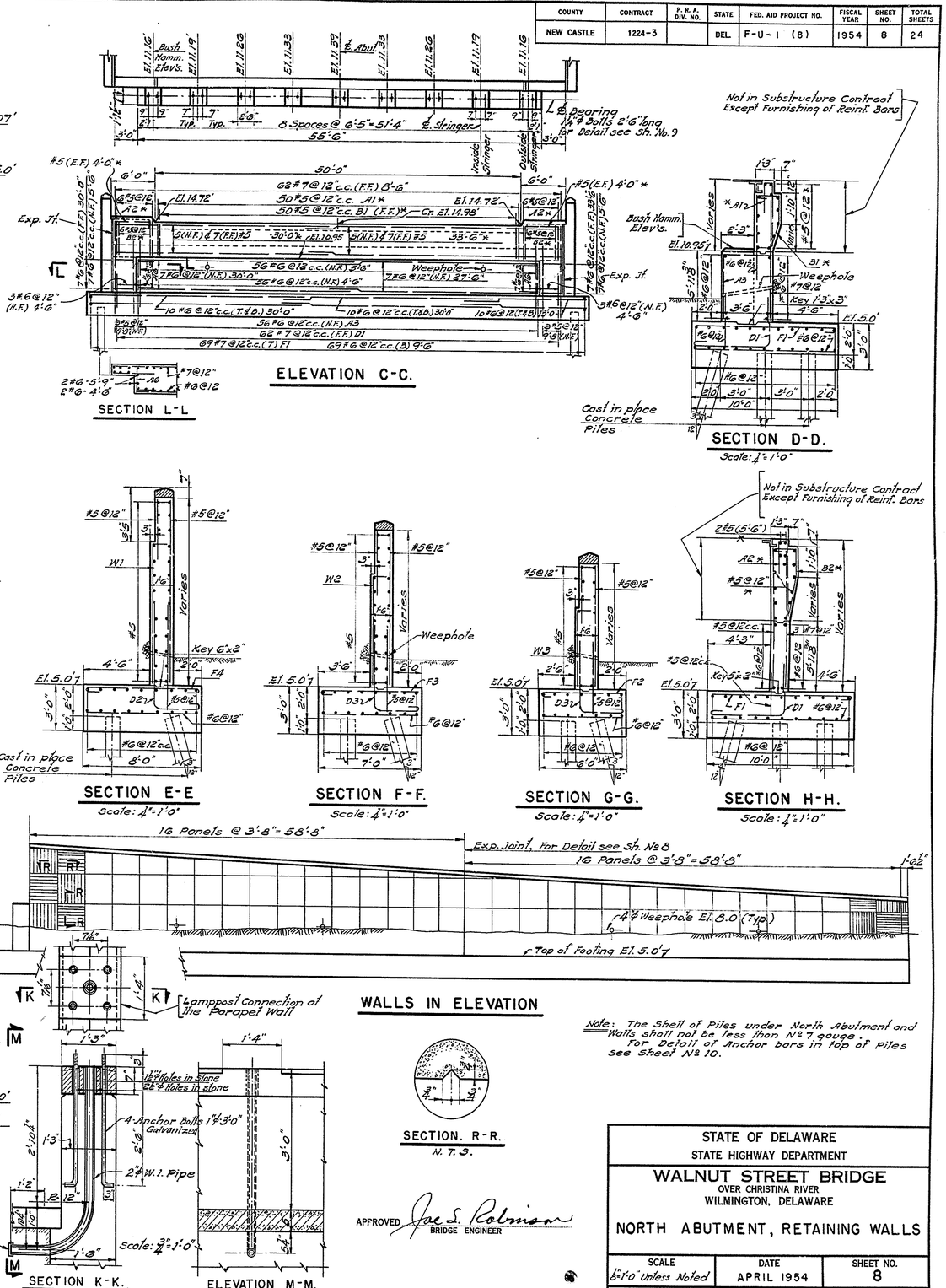
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-3		DEL	F-U-I (8)	1954	8	24



ELEVATION A-A (West Wall)

PLAN



SECTION L-L

ELEVATION C-C.

SECTION D-D.
Scale: ¼" = 1'-0"

SECTION E-E
Scale: ¼" = 1'-0"

SECTION F-F.
Scale: ¼" = 1'-0"

SECTION G-G.
Scale: ¼" = 1'-0"

SECTION H-H.
Scale: ¼" = 1'-0"

WALLS IN ELEVATION

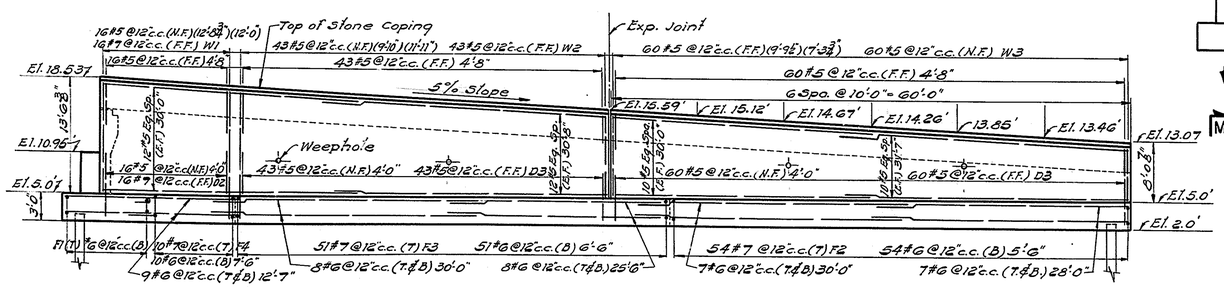
SECTION. R-R.
N. T. S.

SECTION K-K.

ELEVATION M-M.

DETAIL "P"

Note: The Shell of Piles under North Abutment and Wells shall not be less than No. 7 gauge. For Detail of Anchor bars in top of Piles see Sheet No. 10.



ELEVATION B-B (East Wall)

MADE BY A. T.
TRACED BY R. Donnevig.
CHECKED BY J. A. D.

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

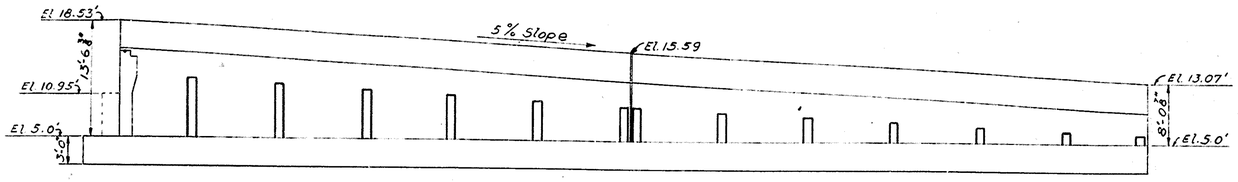
NORTH ABUTMENT, RETAINING WALLS

SCALE	DATE	SHEET NO.
1/8"=1'-0" Unless Noted	APRIL 1954	8

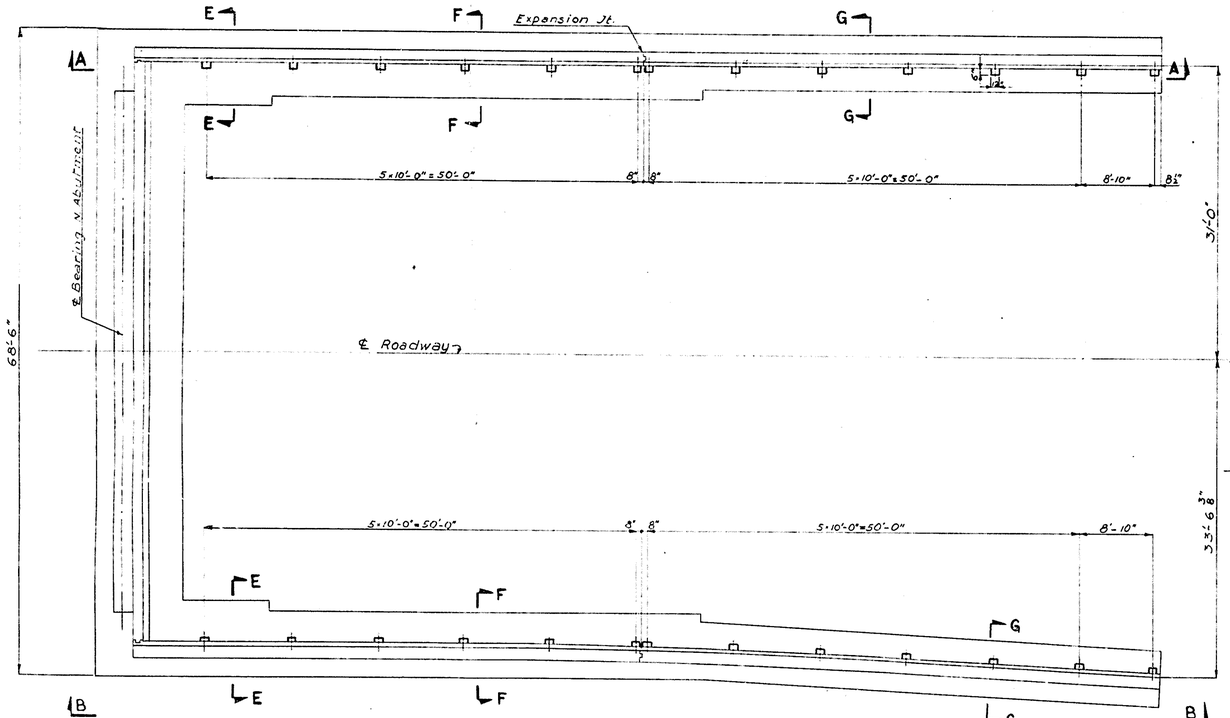
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

487 13-7 MICROFILMED

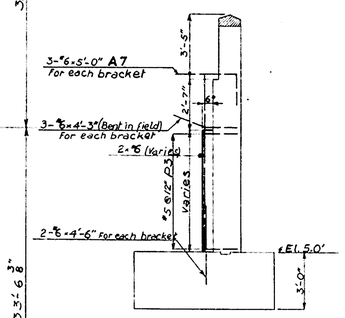
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-3		DEL.	F-U-1 (8)	1954	8A	24



ELEVATION A-A (West Wall)

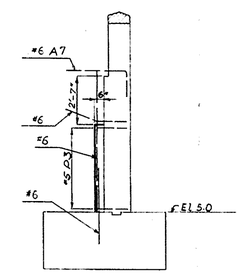


PLAN



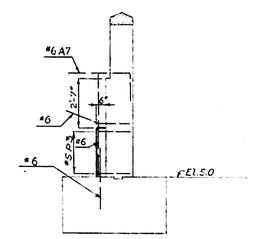
SECTION E-E

Scale: 1" = 1'-0"



SECTION F-F

Scale: 1" = 1'-0"



SECTION G-G

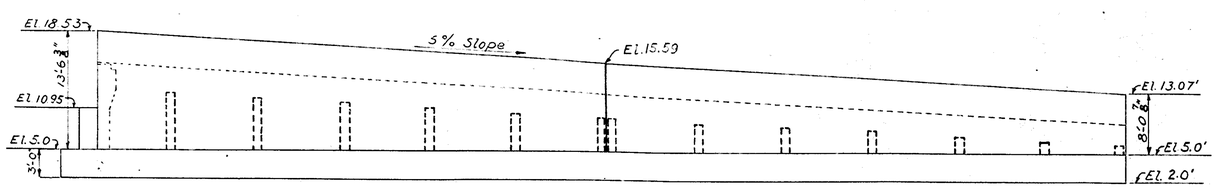
Scale: 1" = 1'-0"

With Letter of 4-22-54 P.B.H. (MacD) to A.L. Wilkstrom, Inc.

BAR SCHEDULE

STRAIGHT BARS No. REQUIRED					
SIZE	MARK	LENGTH	W. WALL	E. WALL	TOTAL
#6		(7'-5")-(9'-11") VARY EVERY 4 BARS 6"	12	12	24
#6		(4'-10")-(7'-4") VARY EVERY 4 BARS 5"	14	14	28
#6		4'-6"	26	26	52
#6		4'-3"	39	39	78

BENT BARS No. REQUIRED					
SIZE	MARK	LENGTH	W. WALL	E. WALL	TOTAL
#6	A7	5'-0"	39	39	78
#5	P3	3'-6"	71	71	142



ELEVATION B-B (East Wall)

Note: For dimensions of bent bars see sheet No. 11.
All details of North Abutment and retaining walls not shown on this drawing are same as shown on sheet No. 8

APPROVED ..... BRIDGE ENGINEER

APPROVED ..... CHIEF ENGINEER

MADE BY J. A. D.
TRACED BY
CHECKED BY A.T.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

BALUSTRADE ON NORTH RETAINING WALLS

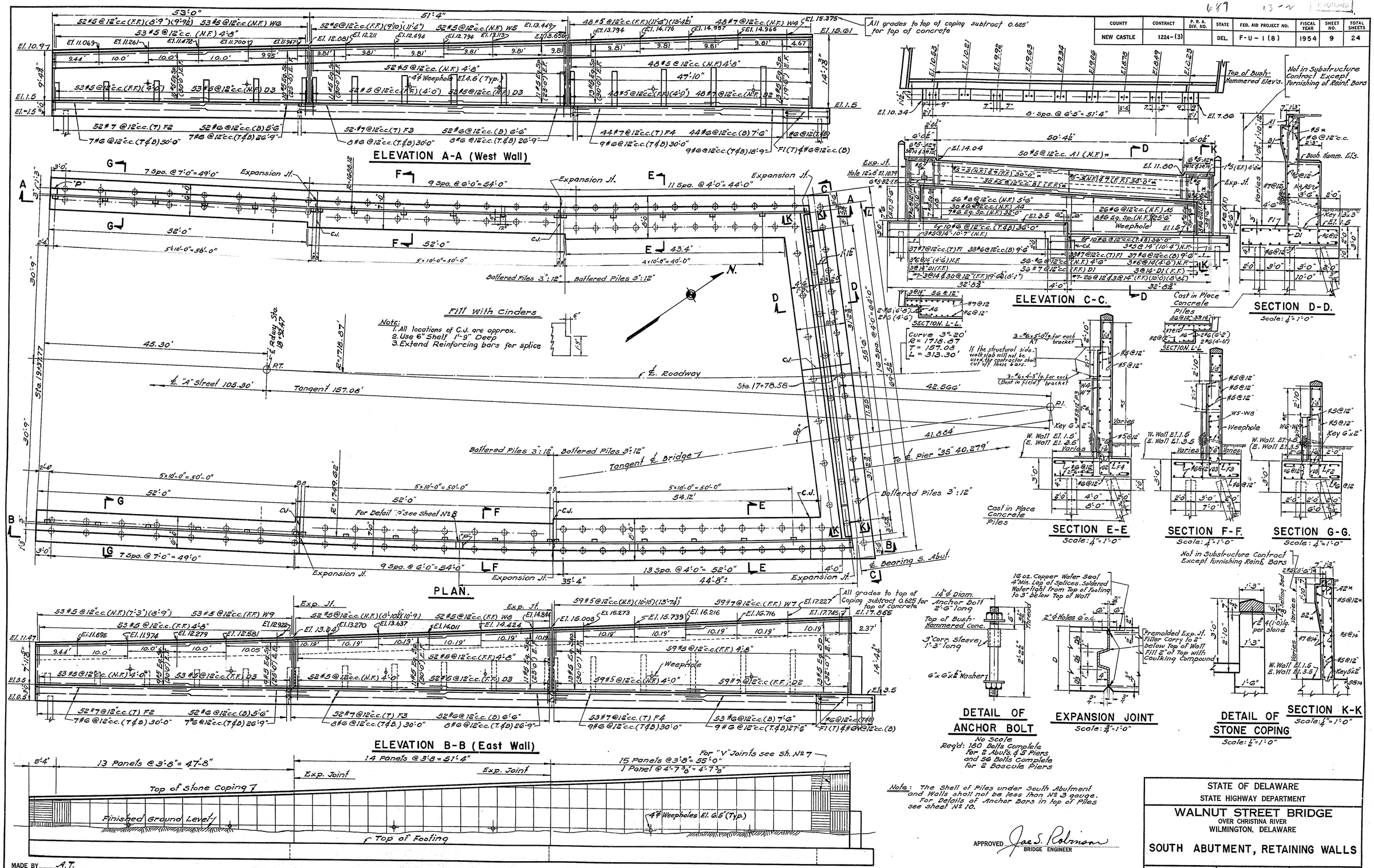
SCALE	DATE	SHEET NO.
1/8" = 1'-0" unless noted	NOVEMBER 1954	8A

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

689 13-2

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	9	24

All grades to top of coping subtract 0.625' for top of concrete



STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

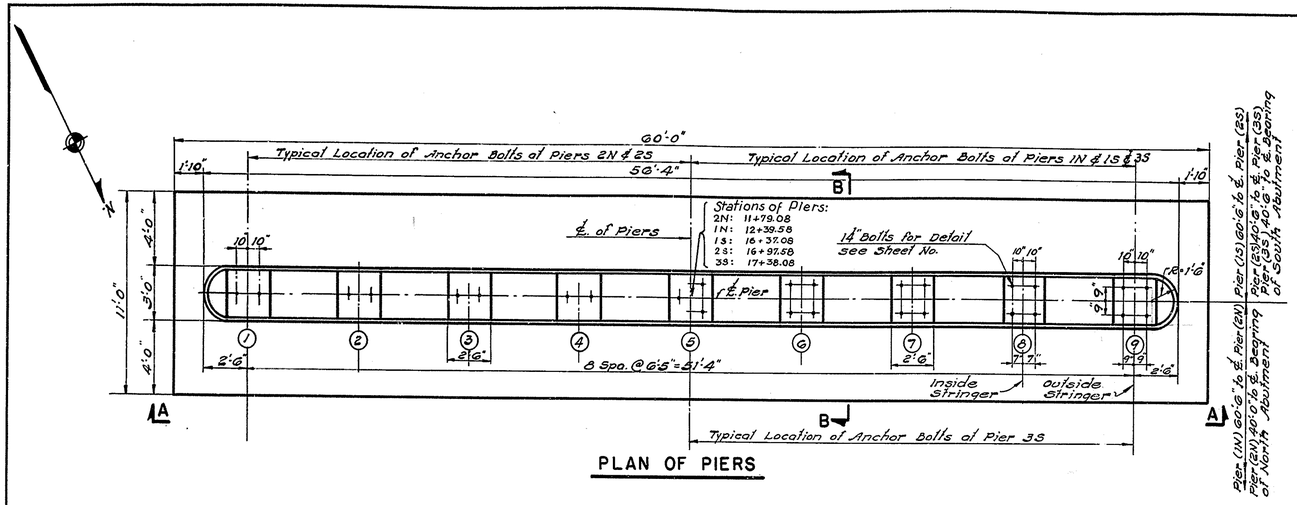
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

SOUTH ABUTMENT, RETAINING WALLS

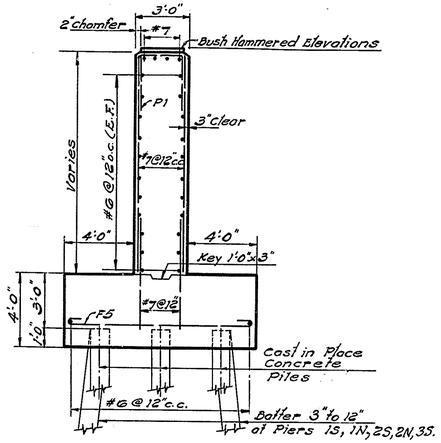
SCALE	DATE	SHEET NO.
1/8"=1'-0" Unless Noted	APRIL 1954	9

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-I (8)	1954	10	24



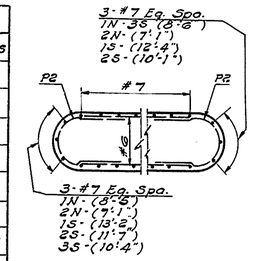
PLAN OF PIERS



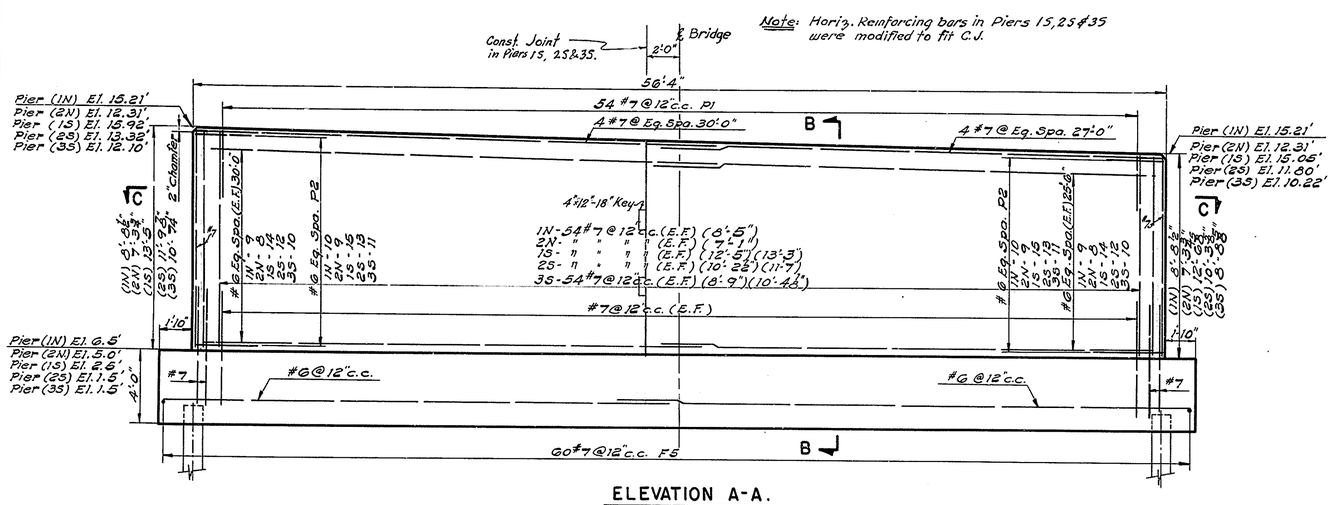
SECTION B-B.

	PIER 1N	PIER 2N	PIER 1S	PIER 2S	PIER 3S
1	15.38	12.48	16.08	13.49	12.32
2	15.46	12.56	15.99	13.31	12.06
3	15.53	12.62	15.88	13.13	11.82
4	15.59	12.69	15.78	12.94	11.58
5	15.66	12.76	15.67	12.76	11.34
6	15.59	12.69	15.55	12.56	11.11
7	15.53	12.62	15.43	12.37	10.87
8	15.46	12.56	15.31	12.17	10.63
9	15.38	12.48	15.19	11.97	10.42

BUSH-HAMMERED ELEV. OF PIERS



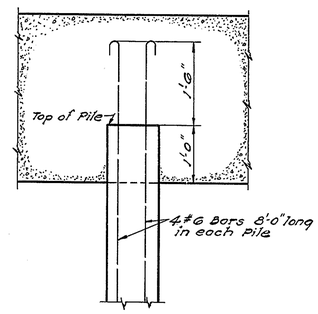
SECTION C-C.



Note: Horiz. Reinforcing bars in Piers 1S, 2S & 3S were modified to fit C.J.

ELEVATION A-A.

LOOKING TOWARD SOUTH.



TYPICAL ANCHOR IN TOP OF ALL CAST IN PLACE CONCRETE PILES

Note: Cost of Anchor Bars to be included in the price for each foot of Piles in place.
The Shell of Piles under the North Approach Piers shall not be less than No. 7 gauge and those under the South Approach Piers not less than No. 3 gauge.

GENERAL NOTES.

1- All work under this Contract shall be in accordance with the Standard Specifications of the State Highway Department of Delaware, dated April 1, 1941, the Addenda of March, 1947 and the special Provisions thereto dated March, 1954.

2- Live Loads: H20-S16 loading on roadways and wind load 50# psf on Fixed structure all in accordance with Division III of the 1953 Standard specifications for Highway Bridges of the American Association of State Highway Officials. Wind load on the bascule span in open position will be 15# psf on 60% of the area of the open gratings.

3- All Reinforcing bars shall be intermediate grade steel. Minimum cover shall be 3" except as shown in interior floor slabs and beams of houses where the minimum cover shall be 1" and in the exterior walls of houses where the minimum cover shall be 2". All splices shall have a minimum lap of 40 diameters, unless otherwise shown or noted.

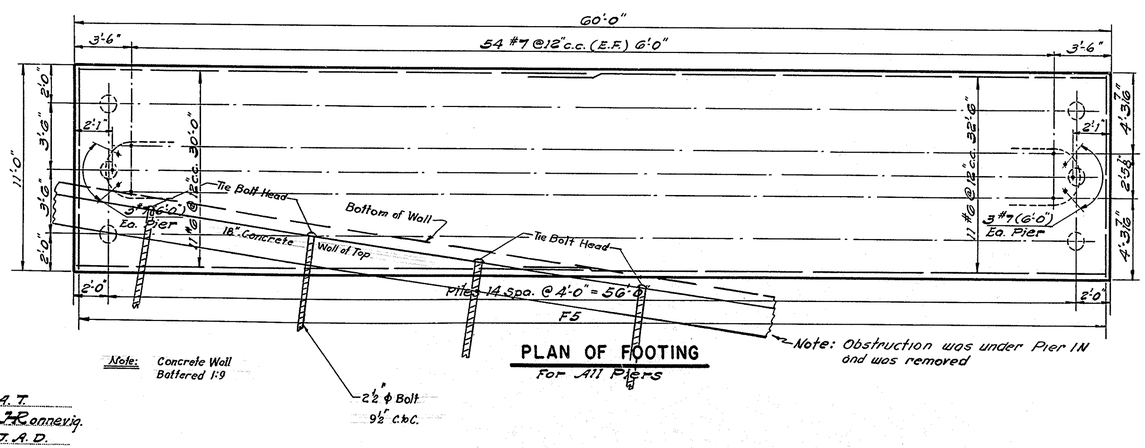
4- All construction or expansion joints in walls shall be centered on the V-grooves.

5- All structural steel frames or anchors and all metal inserts in the concrete, shown on the drawings or required by the Engineer, shall be furnished and placed by the substructure contractor.

6- All elevations of bearing area under beams and columns are finished elevations.

7- All exposed edges and corners of walls and piers shall be chamfered thus ½" unless otherwise shown.

8- Exposed surfaces of concrete walls shall be formed in accordance with the drawings and specifications.

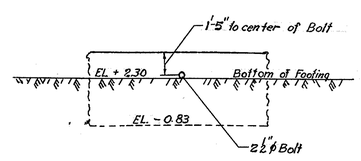


Note: Concrete Wall Battered 1:9

PLAN OF FOOTING
For All Piers

Note: Obstruction was under Pier 1N and was removed

VIEW OF FOOTING
LOOKING SOUTH



APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

APPROACH SPAN PIERS

SCALE	DATE	SHEET NO.
1/4" = 1'-0"	APRIL 1954	10

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY A.T.
TRACED BY H. Kennevig.
CHECKED BY J.A.D.

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1 (8)	1954	11	24

BAR SCHEDULE
FOR ABUTMENTS, PIERS AND RETAINING WALLS OF FLANKING SPANS

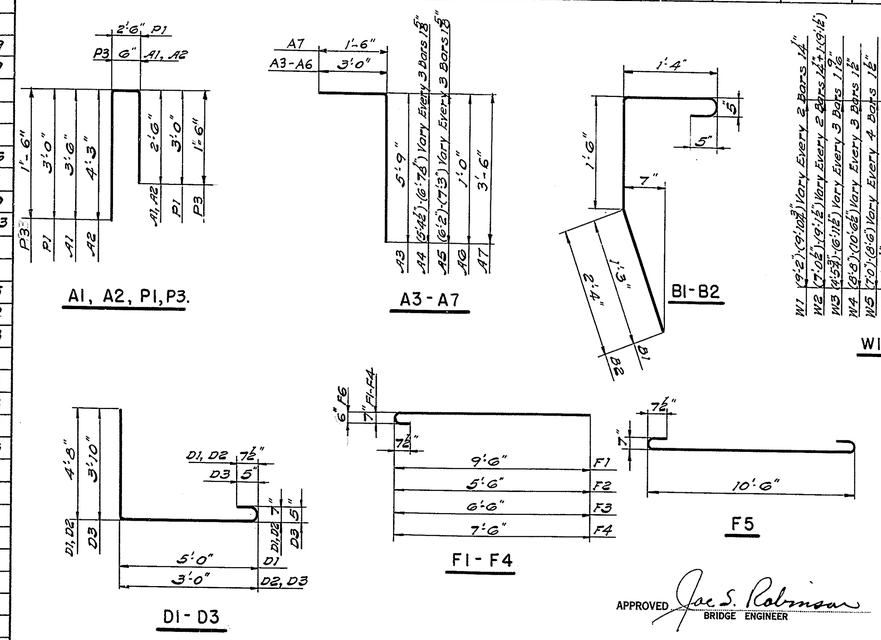
SIZE	LENGTH	STRAIGHT BARS NO. REQUIRED											
		SOUTH ABUTMENT			NORTH ABUTMENT			PIERS					TOTAL
		ABUTMENT	W. WALL	E. WALL	ABUTMENT	W. WALL	E. WALL	1S	2S	3S	1N	2N	
#6	36'-0"	40											40
#6	34'-6"	8											8
#5	34'-0"*	12											12
#6	33'-6"				7								7
#5	33'-6"*				12								12
#6	32'-6"							11	11	11	11	11	55
#6	32'-0"	7											7
#5	32'-0"			26									26
#5	31'-7"					20	20						40
#5	30'-8"					24	24						48
#7	30'-0"							4	4	4	4	4	20
#6	30'-0"	7	48	48	54	30	30	39	35	31	29	27	378
#5	30'-0"	12 *	68	66	12 *	44	44						240
#6	28'-0"					14	14						28
#6	27'-6"			18	7								25
#7	27'-0"							4	4	4	4	4	20
#6	26'-9"		30	30									60
#6	25'-6"	8				16	16	28	24	20	18	16	146
#5	25'-0"		20	18									38
#5	23'-0"		22	22									44
#5	19'-6"		26										26
#6	18'-9"		18										18
#7	13'-2"							3					3
#6	13'-0"				20								20
#6	12'-7"					18	18						36
#7	12'-4							3					3
#7	11'-7"								3				3
#7	10'-4"									3			3
#5	10'-4"	3											3
#5	10'-7"	3											3
#7	10'-1"								3				3
#5	9'-8"				6								6
#6	9'-6"	70			69								139
#7	8'-6"				62					3	114		179
#6	7'-6"		44	53		10	10						117
#7	7'-1"											114	114
#6	6'-8"	2											2
#6	6'-6"		52	52		51	51						206
#6	6'-2"	2											2
#7	6'-0"							114	114	114	114	114	570
#6	5'-6"	71	52	52	70	54	54						353
#5	5'-6"*	4			4								8
#5	5'-9"				4								4
#5	4'-8"		153	164		119	119						555
#6	4'-6"	66	34	36	66								202
#5	4'-0"	4 *	153	164	4 *	119	119						563
#5	(10'-10")-(13'-7¼")			59	(Vary Every 3 Bars 1¾")								59
#7	(12'-5")-(13'-5")							108	(Vary Every 6 Bars 1¼" in Each Face)				108
#5	(11'-6")-(13'-4½")		48 (Vary Every 3 Bars 1½")										48
#5	(12'-0")-(12'-8¾")					16	16 (Vary Every 2 Bars 1¼" in Each Wall)						32
#5	(9'-10")-(11'-11")					43	43 (Vary Every 2 Bars 1¼" in Each Wall + 1-(11'-11")						86
#7	(10'-2")-(11'-7")								108 (Vary Every 3 Bars 1" in Each Face)				108
#5	(9'-10")-(11'-4")		52 (Vary Every 4 Bars 1½")										52
#5	(8'-10½")-(10'-9")			52 (Vary Every 4 Bars 1⅞")									52
#7	(8'-8")-(10'-4½")									108 (Vary Every 3 Bars 1⅞" in each Face			108
#7	(8'-8½")-(10'-0")	29 (Vary Every 3 Bars 1¾")											29
#5	(7'-3¾")-(9'-9½")					60	60 (Vary Every 3 Bars 1 9/16" in each wall)						120
#5	(8'-9")-(9'-9½")		52 (Vary Every 4 Bars 1⅞") + 1-(9'-9½")										53
#7	(8'-7")-(9'-6½")	33 (Vary Every 3 Bars 1¾")											33
#5	(7'-3")-(8'-9")			52 (Vary Every 4 Bars 1½") + 1-(8'-9")									53
#6	4'-3"		51	54									105

SIZE	MARK	LENGTH	BENT BARS NO. REQUIRED											
			SOUTH ABUTMENT			NORTH ABUTMENT			PIERS					TOTAL
			ABUTMENT	W. WALL	E. WALL	ABUTMENT	W. WALL	E. WALL	1S	2S	3S	1N	2N	
#5	A1*	6'-6"	50			50								100
#5	A2*	7'-3"	12			12								24
#6	A3	8'-9"				56								56
#6	A4	(8'-4½")-(9'-7⅞")	30											30
#6	A5	(9'-2")-(10'-3")	26											26
#6	A6	4'-0	15			14								29
#5	B1*	4'-8"	50			50								100
#5	B2*	5'-9"	12			12								24
#7	W1	(10'-2")-(10'-10¾")					16	16						32
#5	W2	(8'-0½")-(10'-1½")					43	43						86
#5	W3	(6'-5¾")-(7'-11½")					60	60						120
#7	W4	(9'-8")-(11'-6½")		48										48
#5	W5	(8'-0")-(9'-6")		52										52
#5	W6	(6'-7½")-(7'-11")		53										53
#7	W7	(9'-0")-(11'-9¼")			59									59
#5	W8	(7'-0½")-(8'-11")			52									52
#5	W9	(5'-5")-(6'-11")			53									53
#7	D1	10'-6"	62			62								124
#7	D2	8'-6"		48	59		16	16						139
#5	D3	7'-5"		105	105		103	103						416
#7	P1	8'-6"							54	54	54	54	54	270
#6	P2	9'-0"							30	26	22	20	18	116
#7	F1	10'-4"	70			69								139
#7	F2	6'-4"		52	52		54	54						212
#7	F3	7'-4		52	52		51	51						206
#7	F4	8'-4"		44	53		10	10						117
#7	F5	12'-2"							60	60	60	60	60	300
#6	A7	5'-0"		51	54									105
#5	P3	3'-6"		100	93									193

Note:
Bars marked * for walls above construction joint at Abutments to be furnished by substructural contractor and placed by superstructural contractor.

BAR SCHEDULE CONTINUED

Size	Length	SOUTH Retaining walls West	Vary every 2 bars		
#6	(6'-3")(7'-3½")	12	2½"	#5	5'-9"
#6	(7'-4")(9'-0")	12	4"	#5	4'-8"
#6	(9'-0")(10'-8")	10	5"	#6	4'-6"
		East		#5	4'-0"
#6	(4-7½")(6'-3")	12	3½"	#5	(10'-10")-(13'-7¼")
#6	(6'-5")(8'-3½")	12	4½"	#7	(12'-5")-(13'-5")
#6	(8'-4")(10'-10")	12	6"	#5	(11'-6")-(13'-4½")
Total		70		#5	(12'-0")-(12'-8¾")
				#5	(9'-10")-(11'-11")
				#7	(10'-2")-(11'-7")
				#5	(9'-10")-(11'-4")
				#5	(8'-10½")-(10'-9")
				#7	(8'-8")-(10'-4½")
				#7	(8'-8½")-(10'-0")
				#5	(7'-3¾")-(9'-9½")
				#5	(8'-9")-(9'-9½")
				#7	(8'-7")-(9'-6½")
				#5	(7'-3")-(8'-9")
				#6	4'-3"



MADE BY J. A. D.
TRACED BY J.R.
CHECKED BY JAD

APPROVED Jac S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

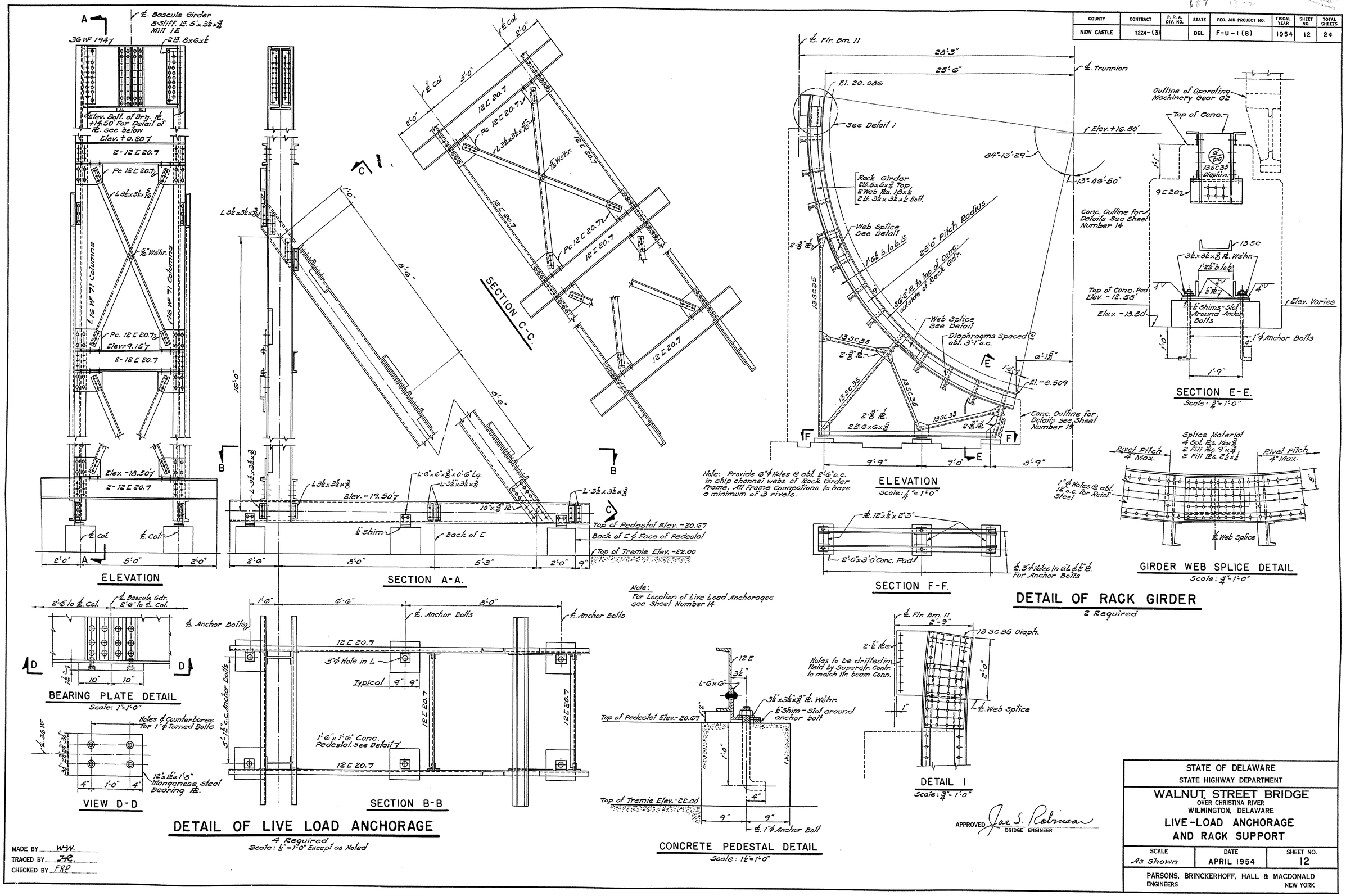
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

REINFORCING BARS
IN ABUTMENTS & PIERS

SCALE	DATE	SHEET NO.
None	APRIL 1954	11

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

COUNTY	CONTRACT	P. R. R. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	12	24



MADE BY WHW.
TRACED BY ZR.
CHECKED BY FRP

APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

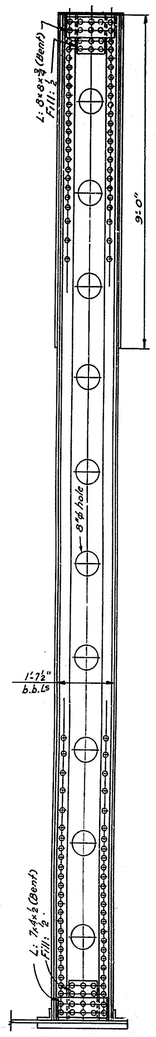
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

LIVE-LOAD ANCHORAGE AND RACK SUPPORT

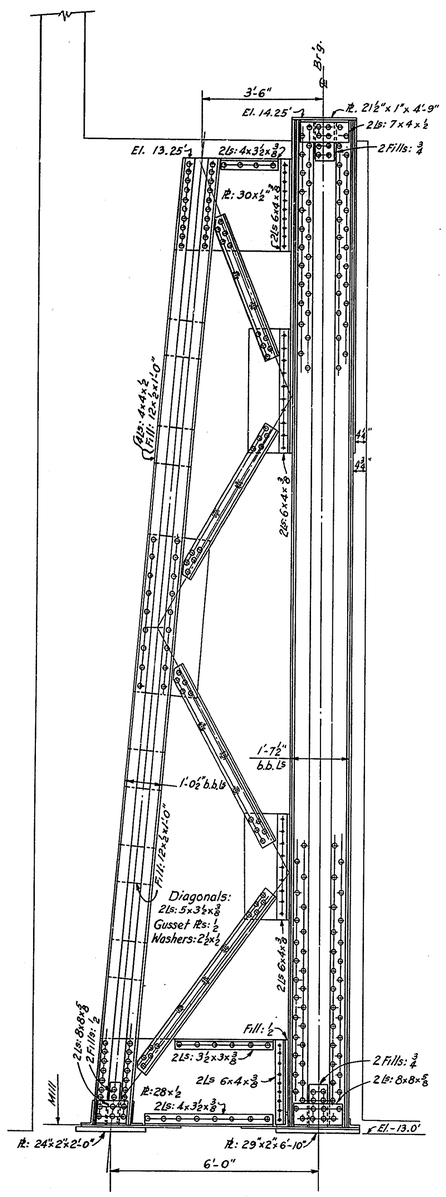
SCALE	DATE	SHEET NO.
As Shown	APRIL 1954	12

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

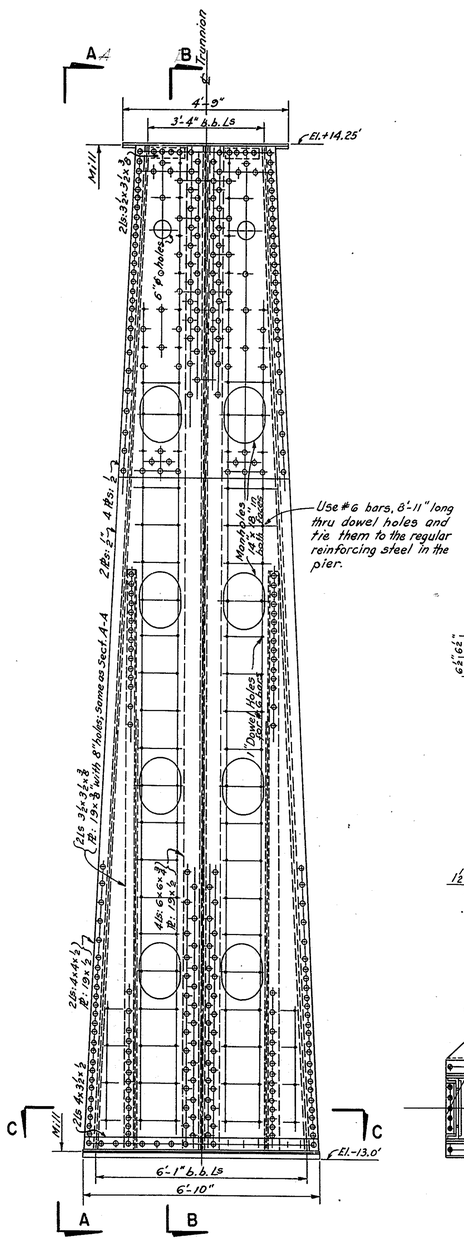
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1 (8)	1954	13	24



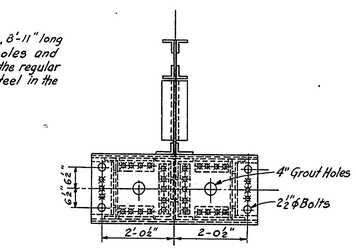
SECTION A-A



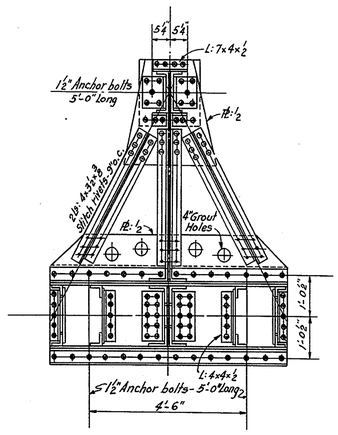
SECTION B-B



ELEVATION



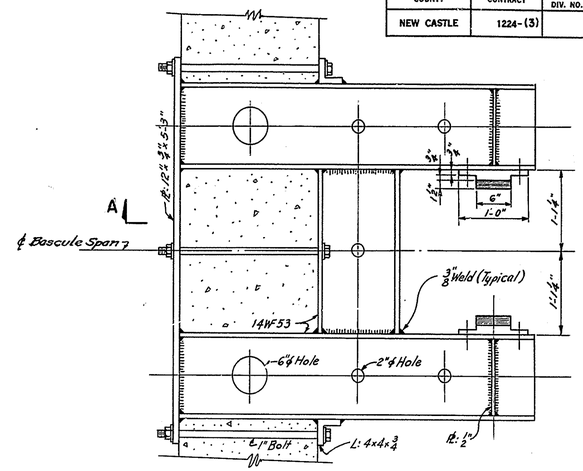
PLAN



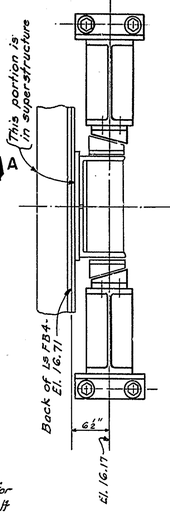
SECTION C-C

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

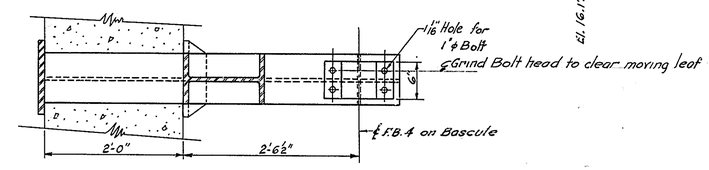
TRUNNION SUPPORT
4 Required



PLAN



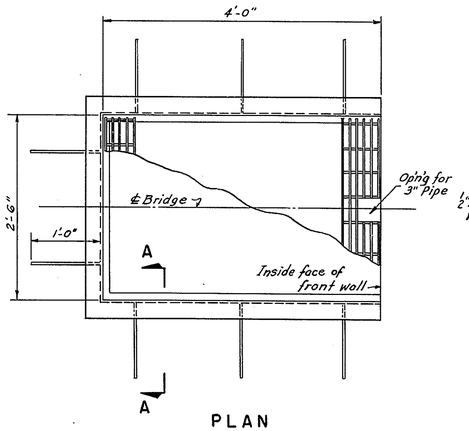
ELEVATION



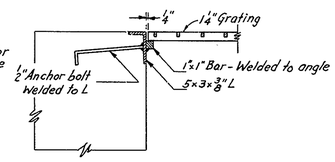
SECTION A-A

Scale: 1" = 1'-0"

WIND THRUST FRAME
2 Required



PLAN



SECTION A-A

Scale: 1" = 1'-0"

DETAIL OF SUMP FRAME & GRATE
2 Required

APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

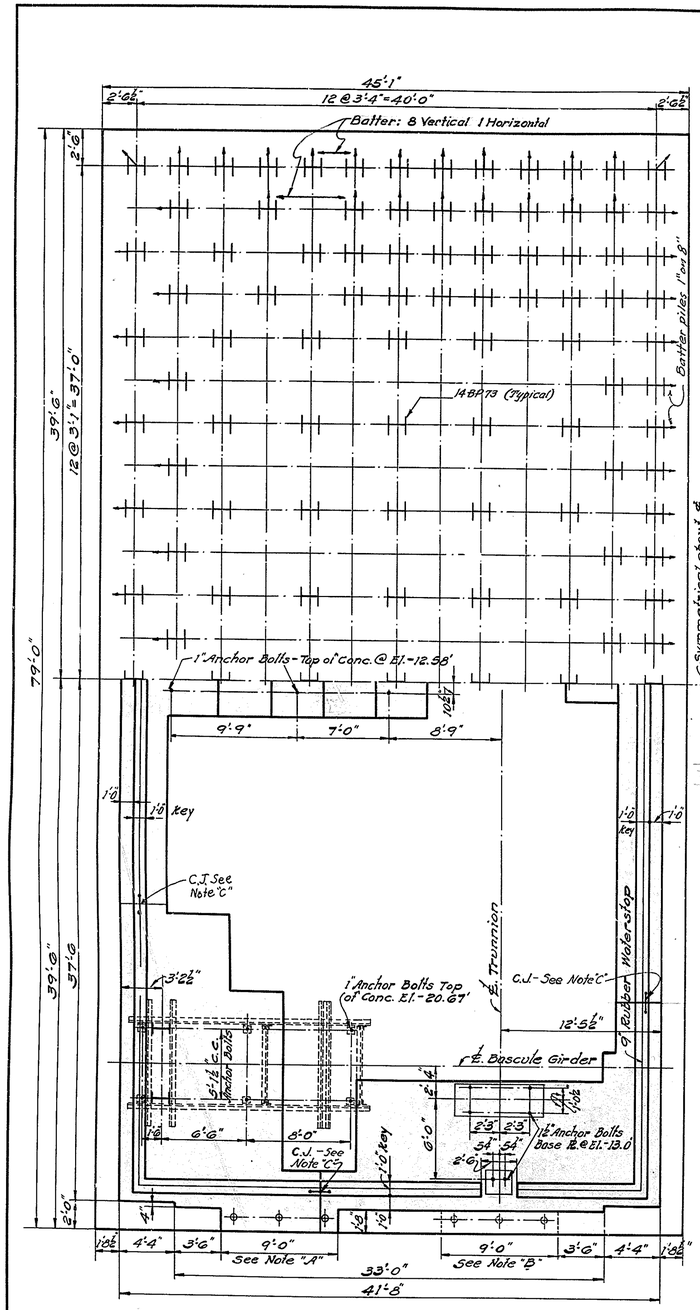
TRUNNION SUPPORT

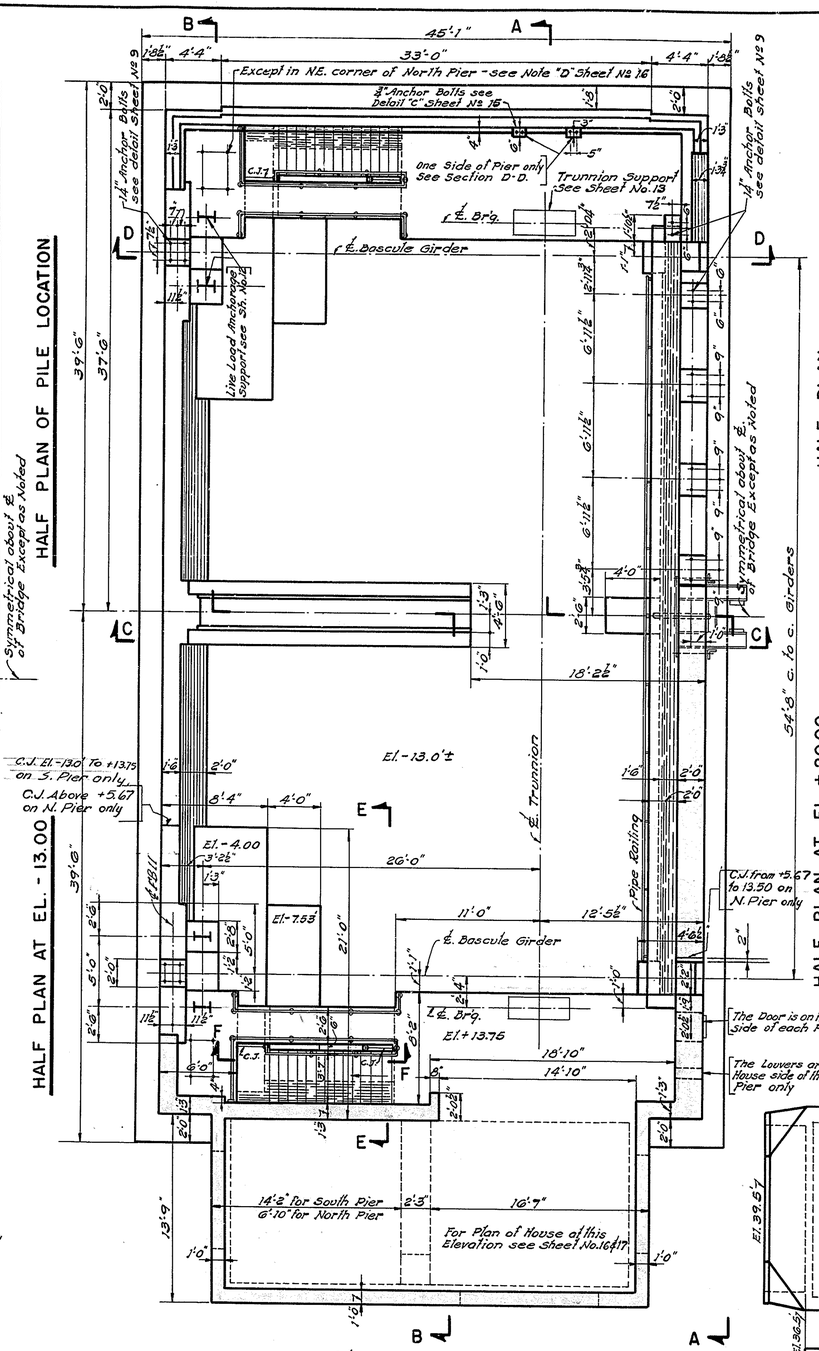
SCALE	DATE	SHEET NO.
As Shown	APRIL 1954	13

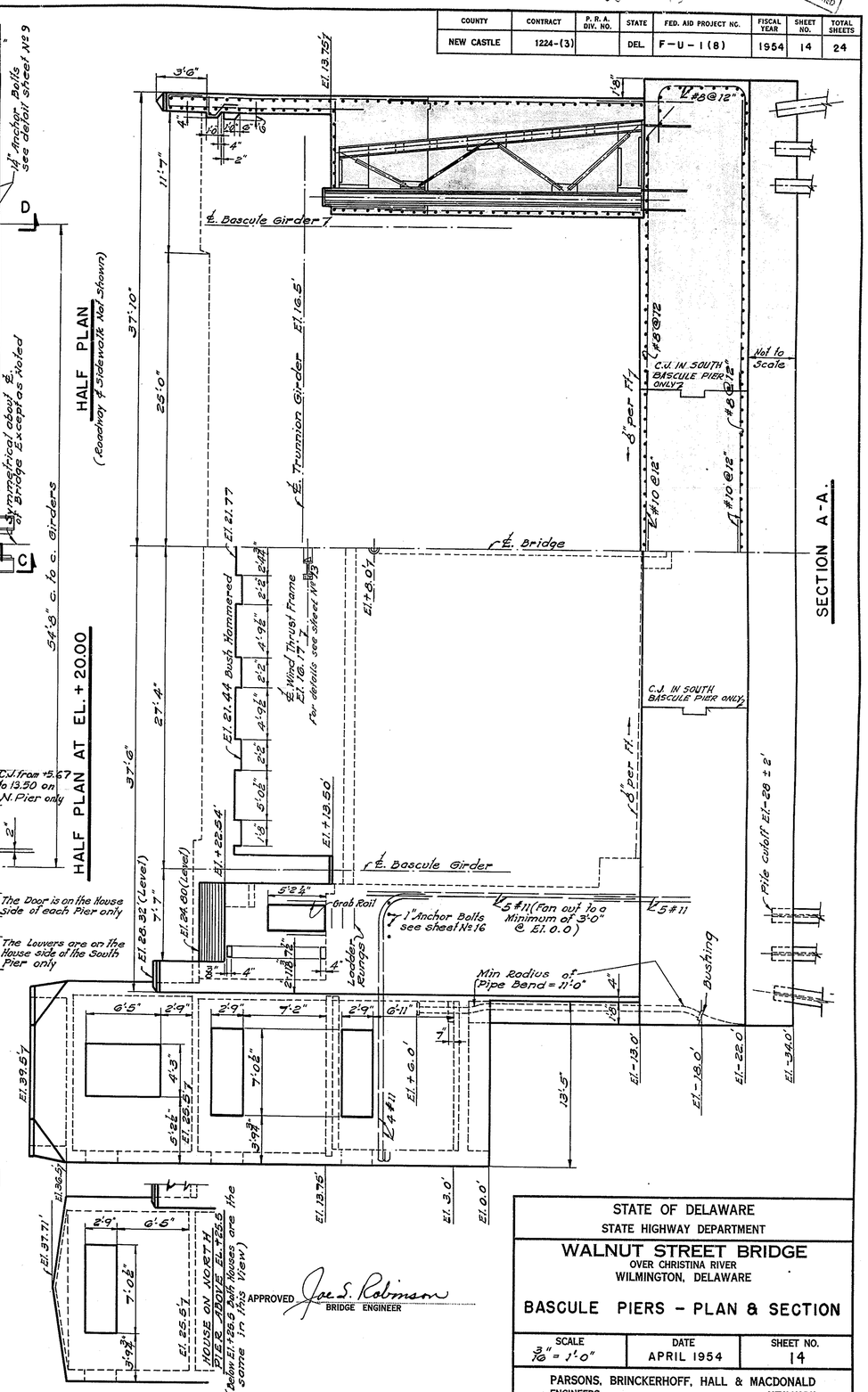
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY R.H.S.
TRACED BY R.C.R.
CHECKED BY R.S.

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	14	24







Note "A"
The 1'-8" x 9'-0" conc. block encasing the three 6" pipes as shown occurs only on the Control House side of the south bascule pier.

Note "B"
The 1'-8" x 9'-0" conc. block encasing the three 6" pipes as shown dotted occurs only on the Storage House side of the North bascule pier.

Note "C"
Construction Joint in walls of South Bascule Pier only. Each joint is provided with a 6" rubber water-stop in the middle of the wall [above El. -13.0'] and an I-GAS seal placed in a recess on the outside of the wall.

Note:
The Details relating to the Control House (South Pier) and Storage House (North Pier), including the reinforcing bars supporting the Houses shown in Sections "A" & "B", occur on one side of the Pier only.

Note:
For Sections B, C, D, E and F see Sheet No. 14
All Reinforcing steel shown is #6 @ 12" unless otherwise noted.

MADE BY R.H.S.
TRACED BY ZR
CHECKED BY RS

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

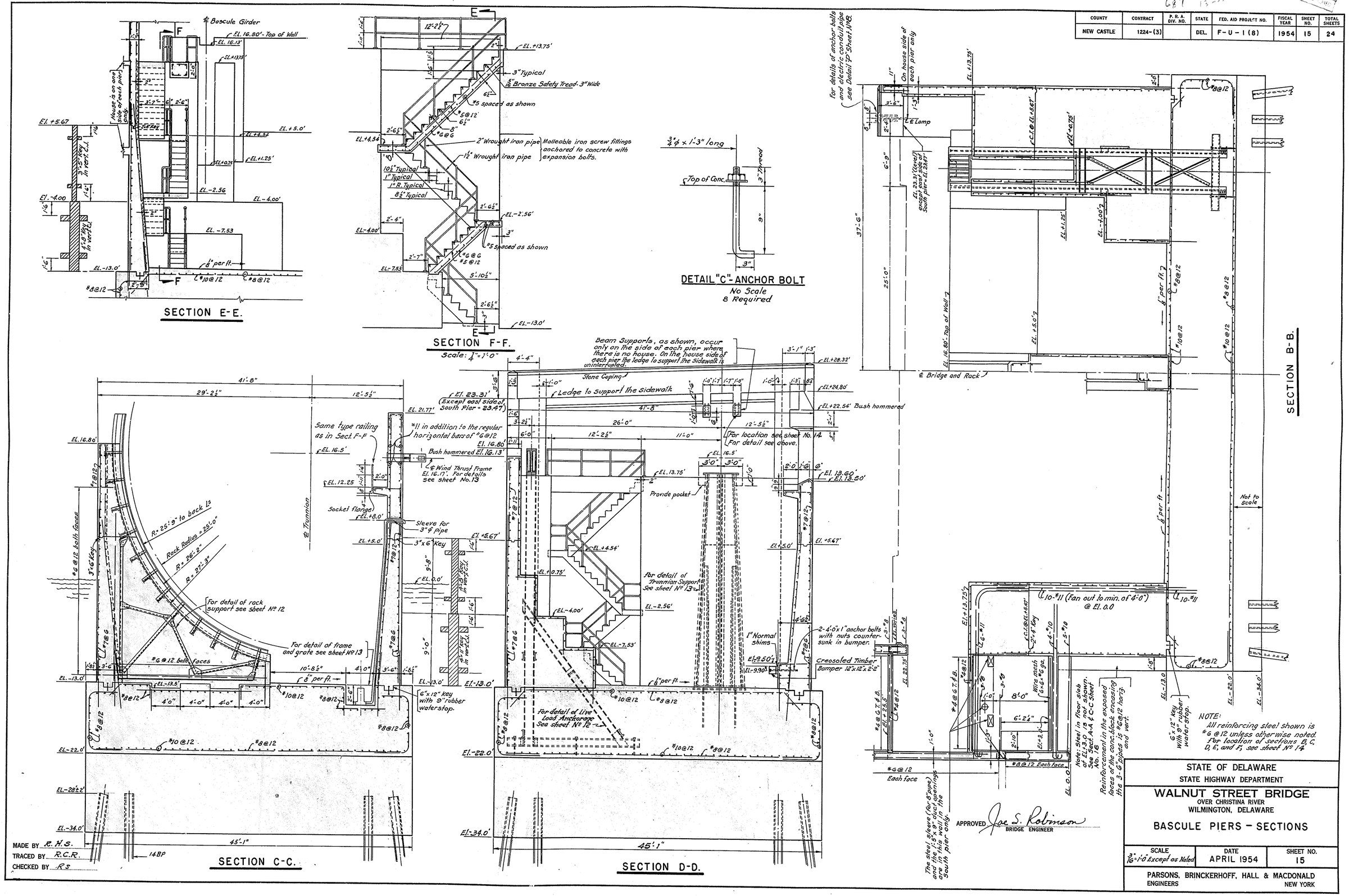
WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

BASCULE PIERS - PLAN & SECTION

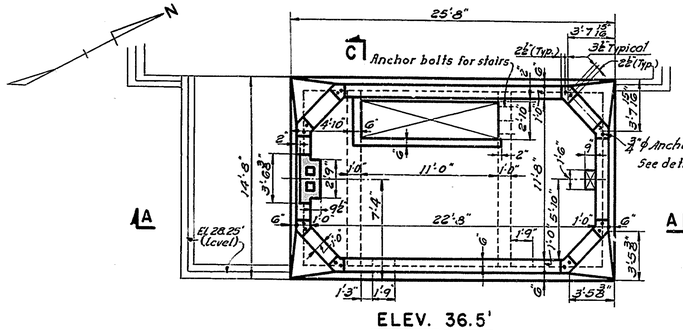
SCALE	DATE	SHEET NO.
3/16" = 1'-0"	APRIL 1954	14

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

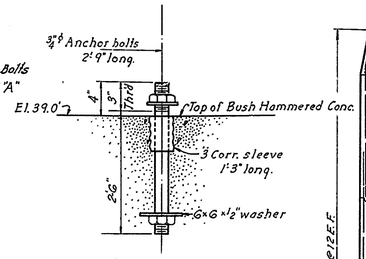
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJ.T NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	15	24



COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	16	24

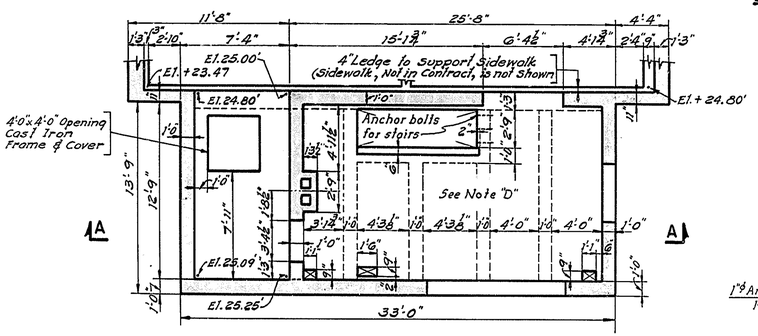


ELEV. 36.5'

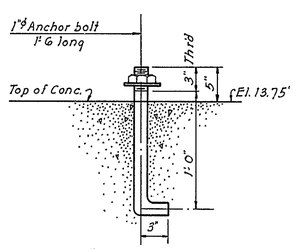


DETAIL "A"- ANCHOR BOLT

No Scale
16 Required

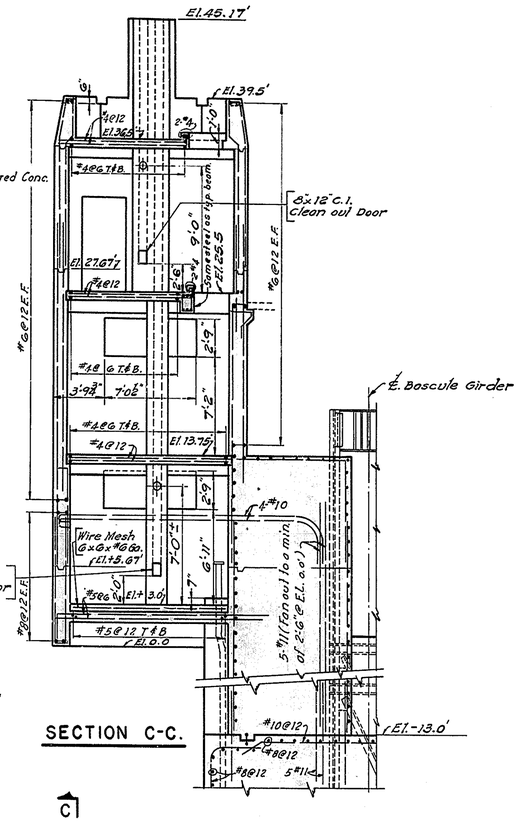


ELEV. 25.5'

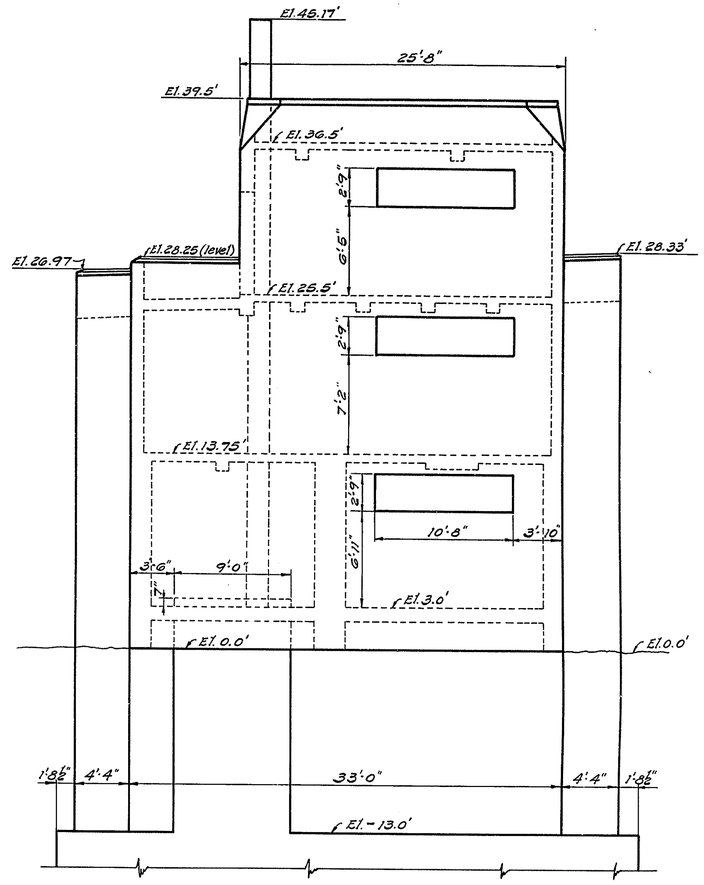


DETAIL "B"-ANCHOR BOLT

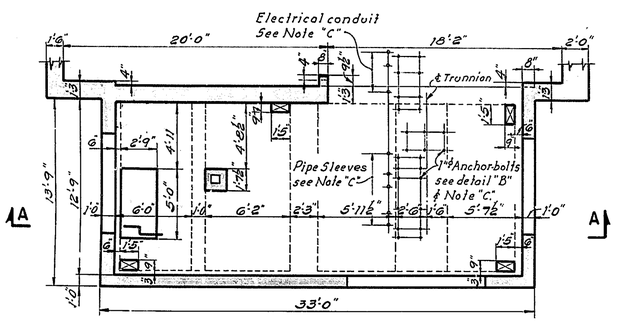
No Scale
26 Req'd in each house



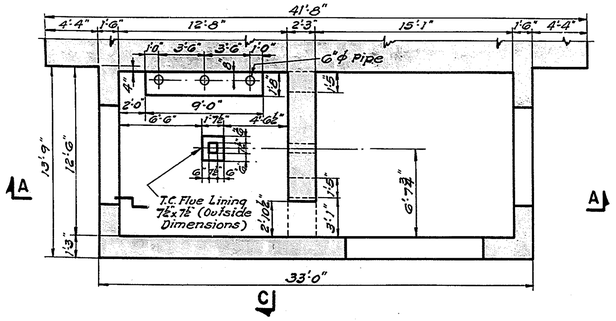
SECTION C-C.



LONGITUDINAL ELEVATION OF CONTROL HOUSE

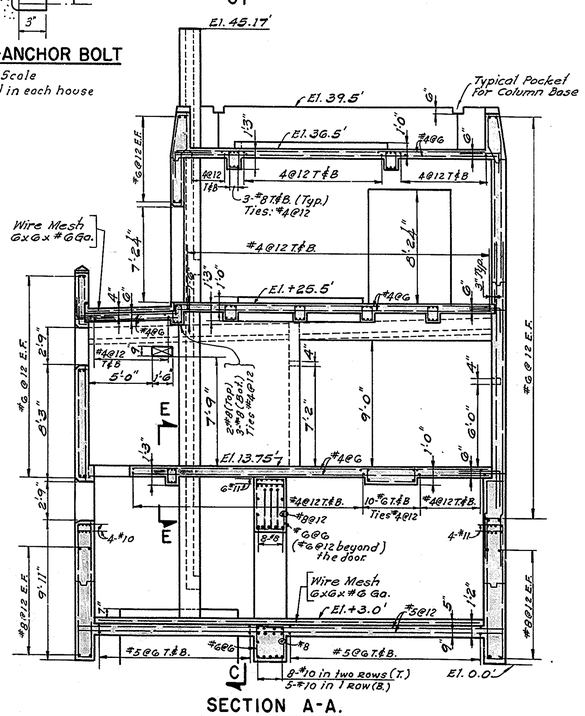


ELEV. 13.75'

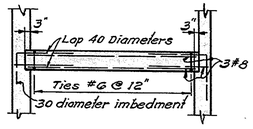


ELEV. 3.0'

PLANS



SECTION A-A.



SECTION E-E.

(Showing Typical Beam Reinforcement)

Note "C":
The location of the anchor bolts and the size and location of pipe sleeves and electrical conduits will be given by the engineer after the superstructure contract has been awarded.

Note "D":
Detail & location of anchor bolts in this floor will be given by the engineer after the superstructure contract has been awarded.

APPROVED Joe S. Robinson
BRIDGE ENGINEER

Notes:

Dimensions shown for windows and doors in concrete walls on sheets Nº 13, 14, 15 and 16 are for their clear openings only. The details around these openings are indicated on sheet Nº 6. The complete dimensions for the details of chamfers and recesses around these openings will be furnished to the Contractor by the Engineer.

All reinforcing steel shown is #6@12 unless otherwise noted.

Reinforcing in flue is not shown, use #3@12 horizontal ties & 4-#5's vertical. Extend vertical bars 40 diameters above El. 45.17'.

Below Elev. +5.67 the Control House was not poured monolithically. The Reinforcing bars were spliced at the face of the Bascule Piers and 4" deep recesses were placed in the Bascule Pier Walls, for the Floor, Beams, Walls of the Control House.

Both Rubber water stops and I-GAS were placed at these Joints to prevent water from leaking into house.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

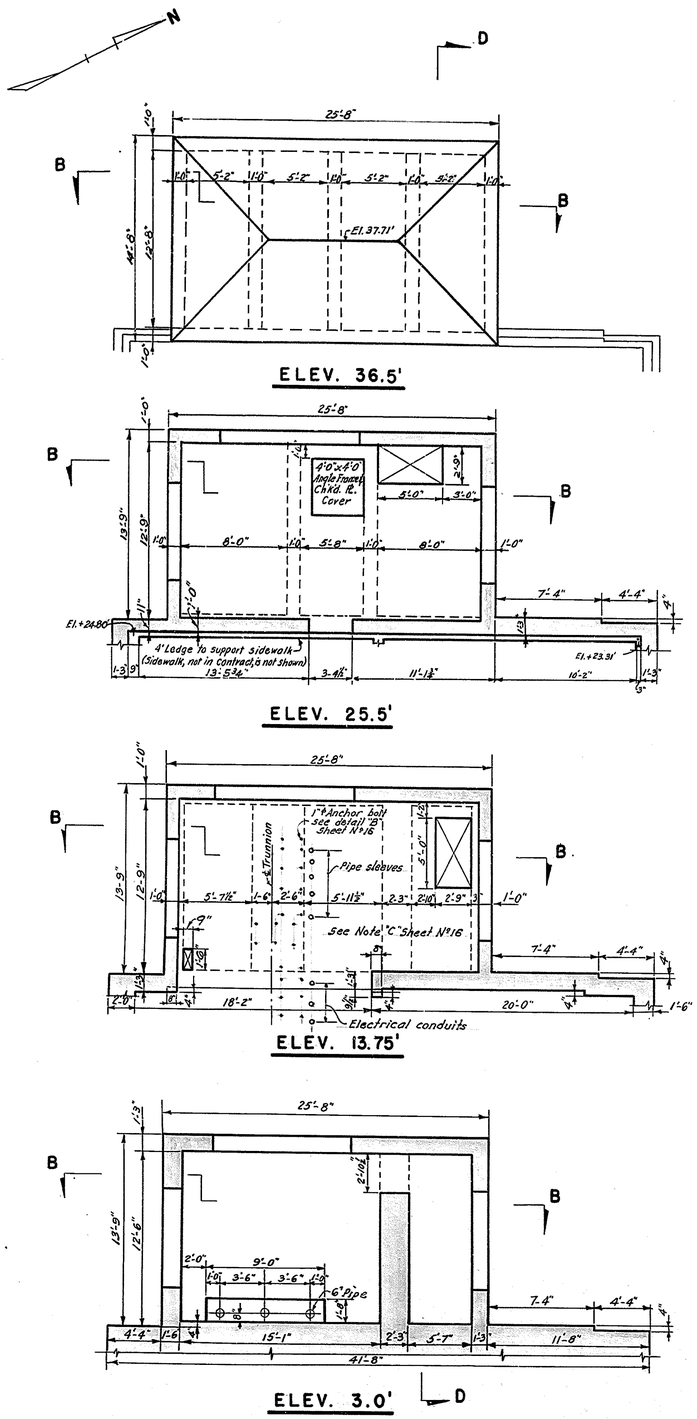
BASCULE PIER - CONTROL HOUSE

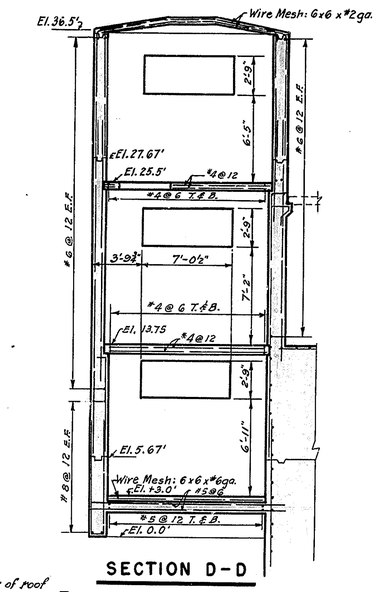
SCALE	DATE	SHEET NO.
3/16" = 1'-0"	APRIL 1954	16

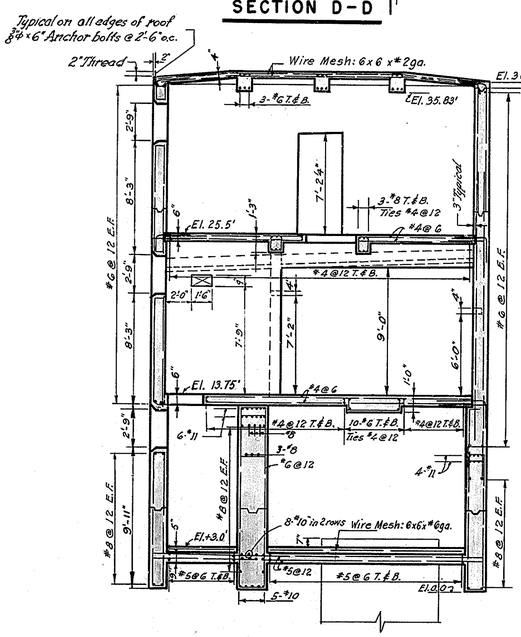
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY R. H. S.
TRACED BY H.
CHECKED BY R.S.

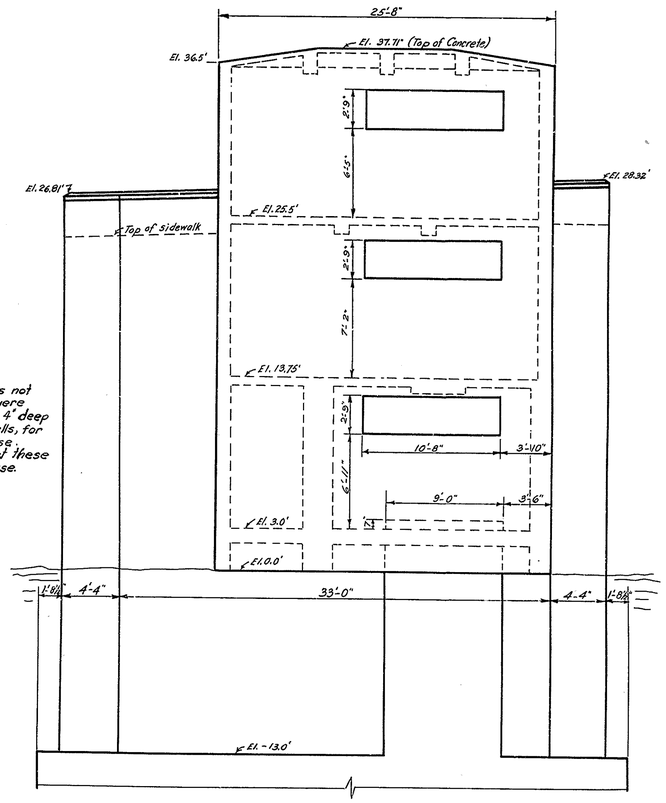
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-I (8)	1954	17	24







NOTE:
Below Elev. +5.67, the storage house was not poured monolithically. The reinforcing bars were spliced at the face of the Bascule Piers. and 4" deep recesses were placed in the Bascule Pier walls, for the floors, beams, and walls of the storage House. Both rubber stops and I-GAS were placed at these joints to stop water from leaking into house.



NOTE:
All reinforcing steel shown is #6 @ 12 unless otherwise noted.

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

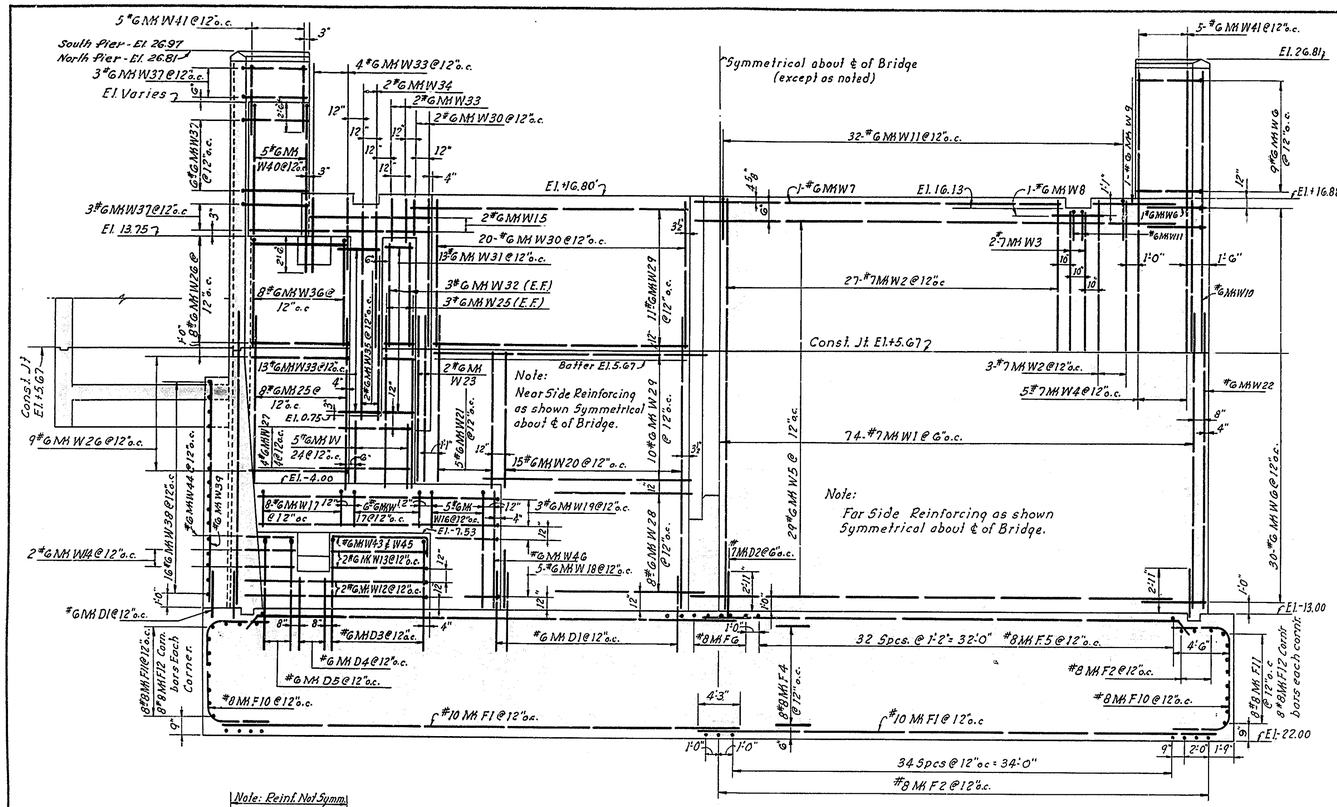
BASCULE PIER - STORAGE HOUSE

SCALE	DATE	SHEET NO.
3/16" = 1'-0"	APRIL 1954	17

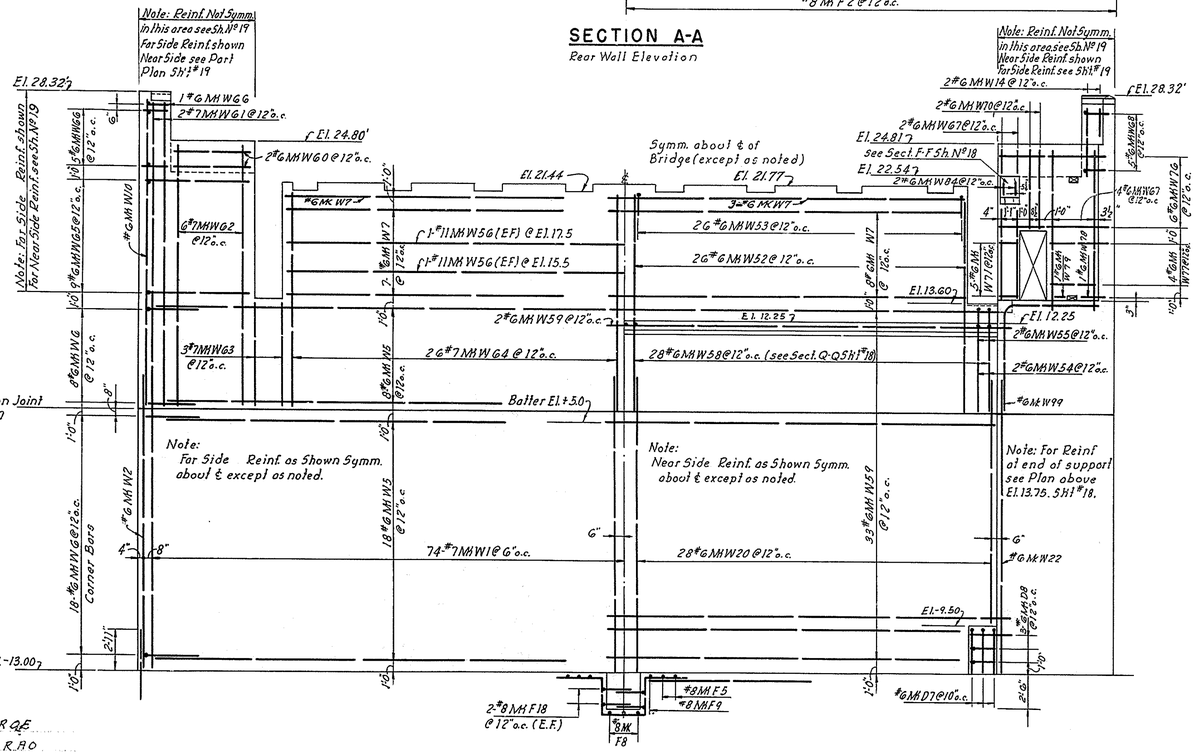
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY R.H.S.
TRACED BY S.M.M.
CHECKED BY RS

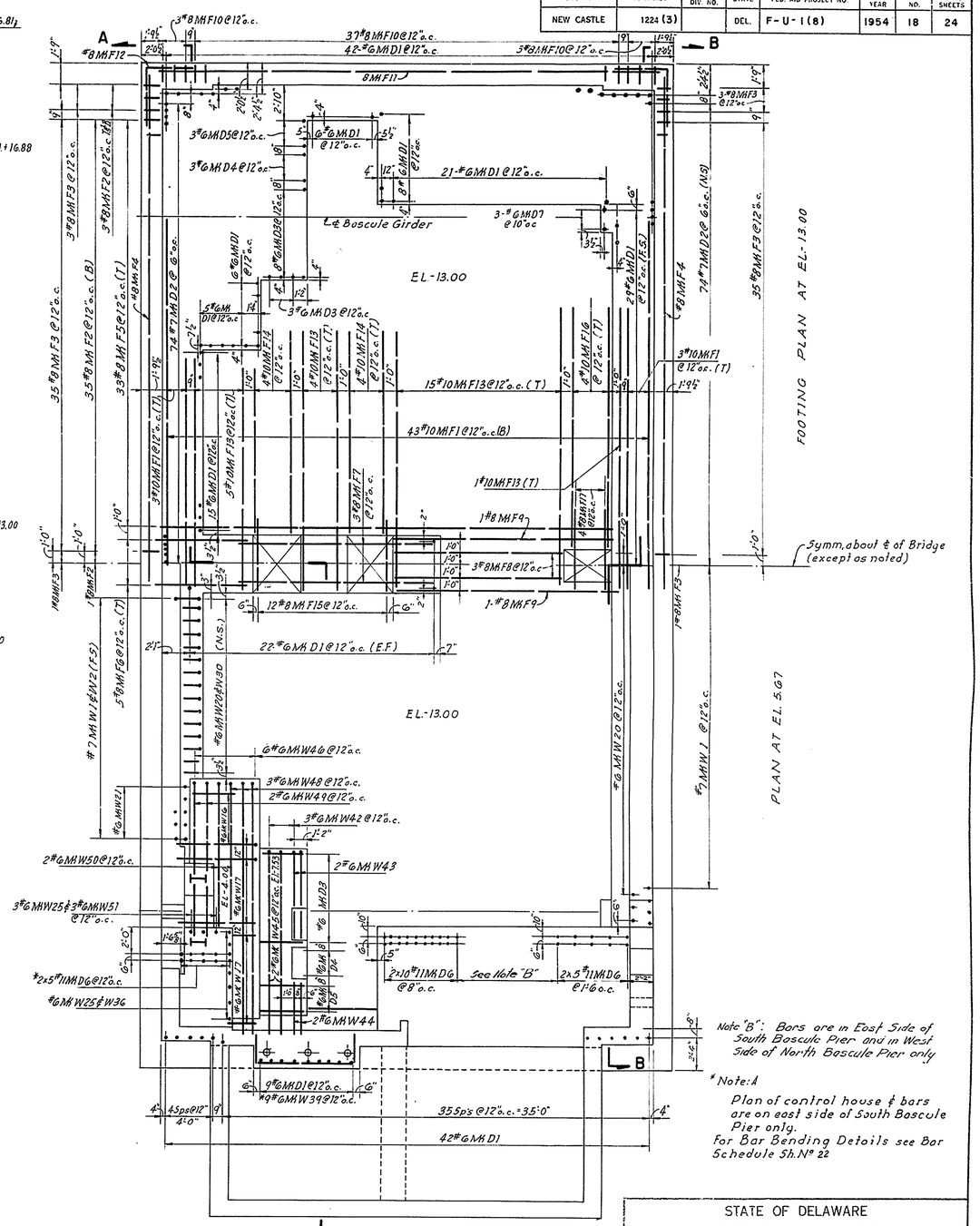
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224 (3)		DEL.	F-U-I(8)	1954	18	24



SECTION A-A
Rear Wall Elevation



SECTION B-B
Front Wall Elevation



PLAN

APPROVED Jac S. Robinson
BRIDGE ENGINEER

MADE BY R.G.E.
TRACED BY R.A.O.
CHECKED BY R.E.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE

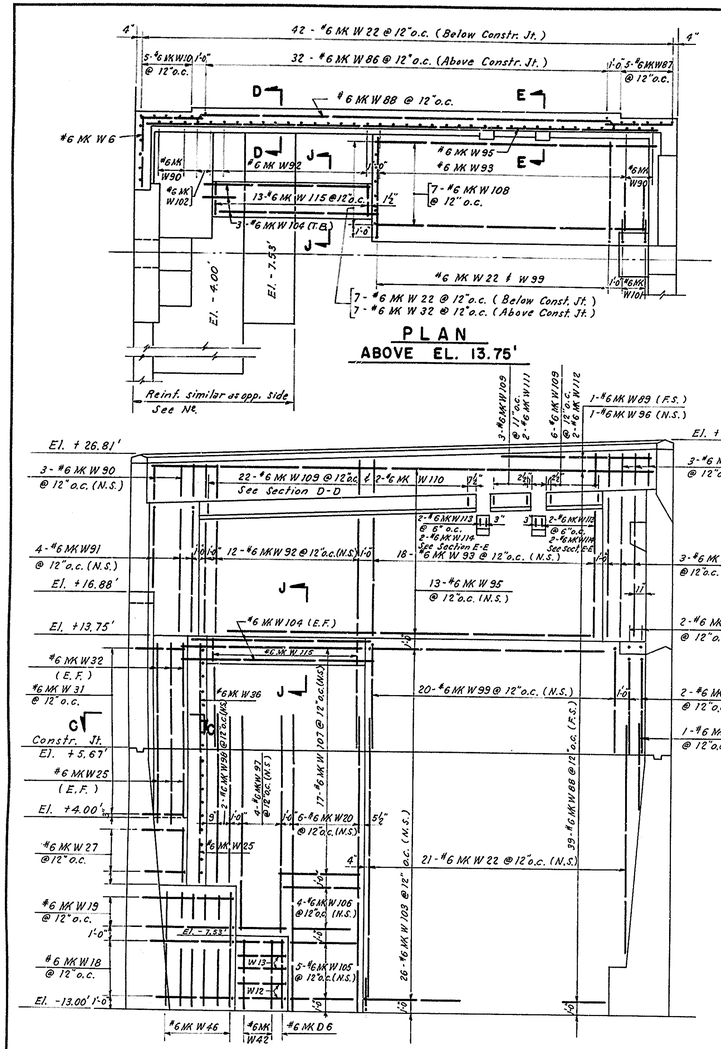
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

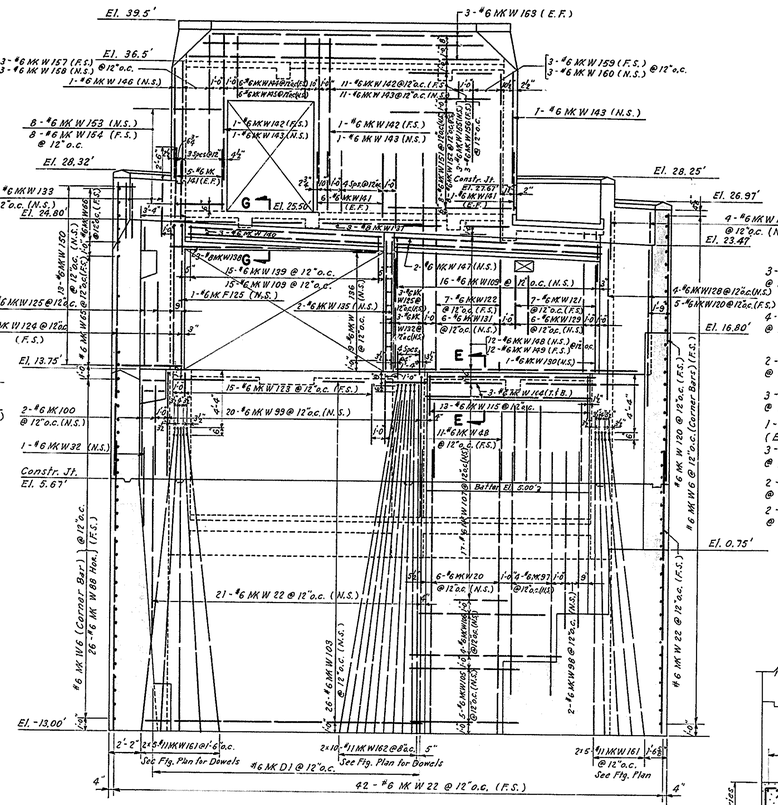
REINFORCING BARS IN BASCULE PIERS BASES, FRONT & REAR WALLS

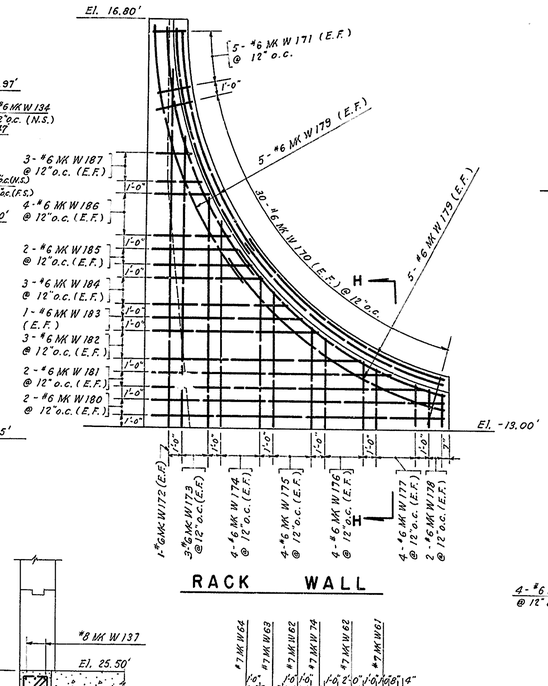
SCALE	DATE	SHEET NO.
3/16" = 1'-0"	APRIL 1954	18

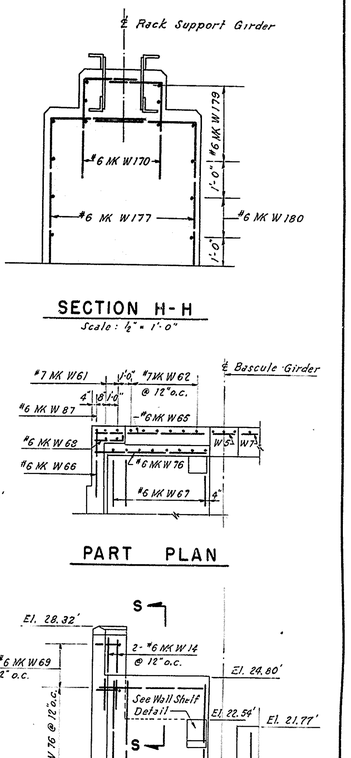
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

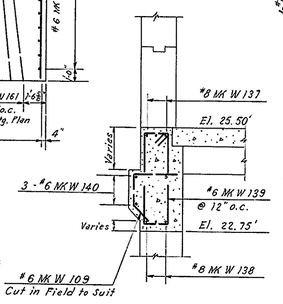
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	19	24

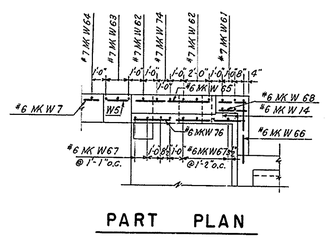


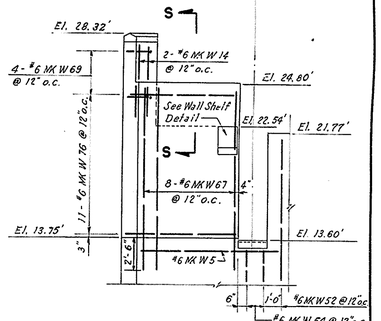


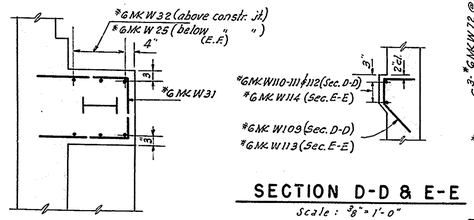


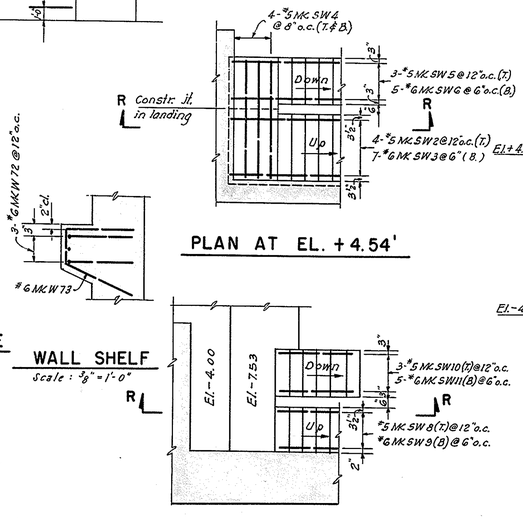


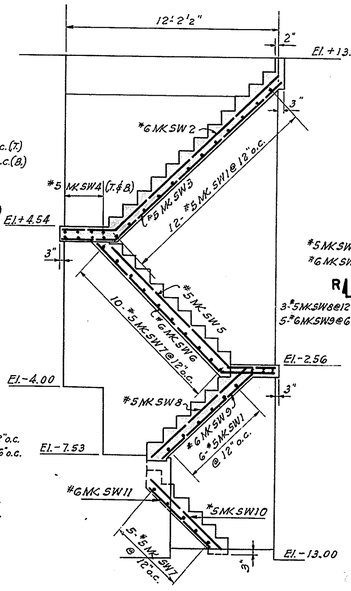


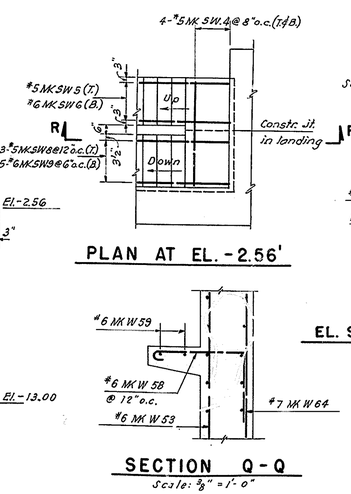


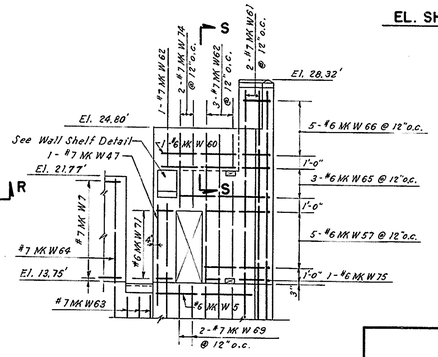


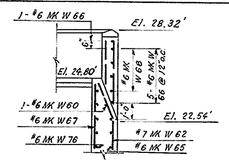












Note: For Bar Bending Details see Bar Schedule Sheet No. 22

APPROVED Jac S. Robinson BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

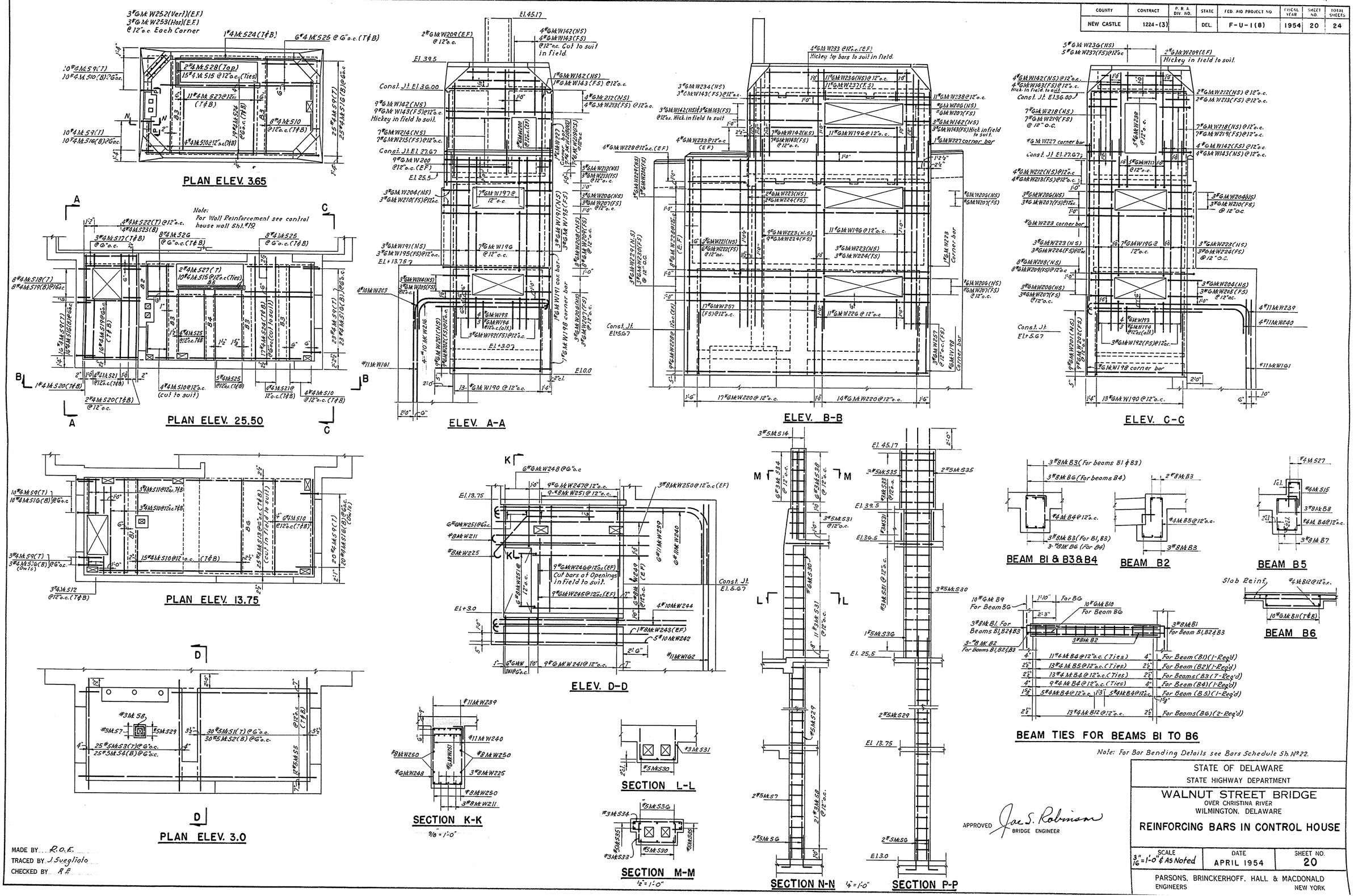
REINFORCING BARS IN BASCULE PIERS SIDE WALLS

SCALE	DATE	SHEET NO.
3/16" = 1'-0" & As Noted	APRIL 1954	19

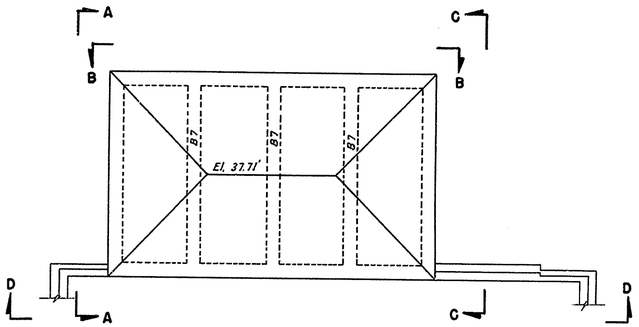
PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY R. O. E.
TRACED BY R. A. O.
CHECKED BY R.E.

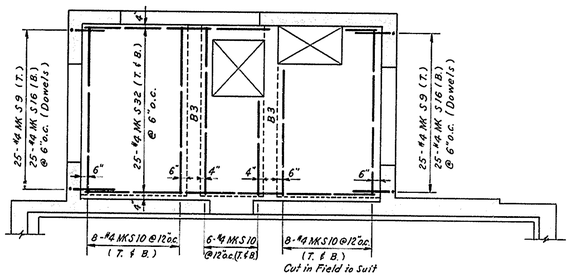
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	20	24



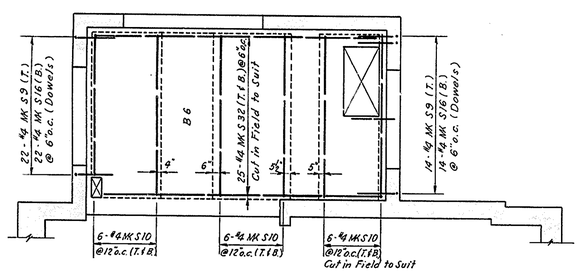
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL	F-U-I(8)	1954	21	24



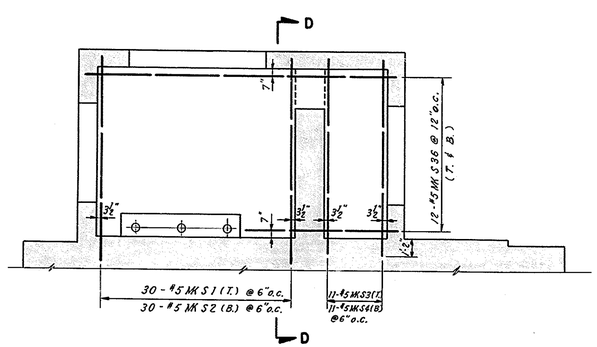
PLAN ELEV. 36.5'



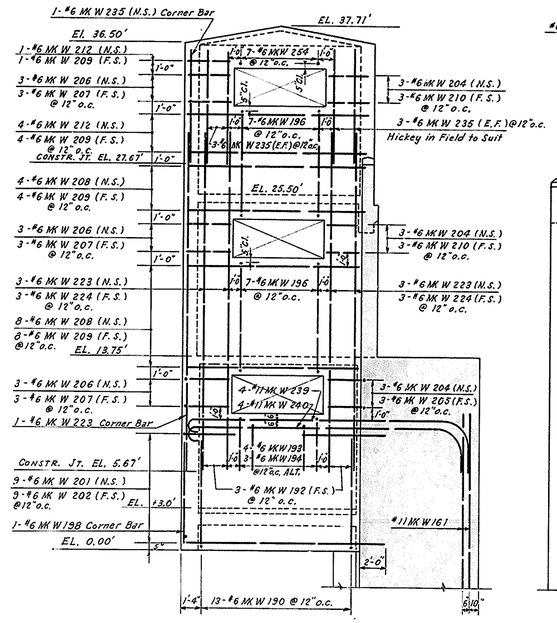
PLAN ELEV. 25.5'



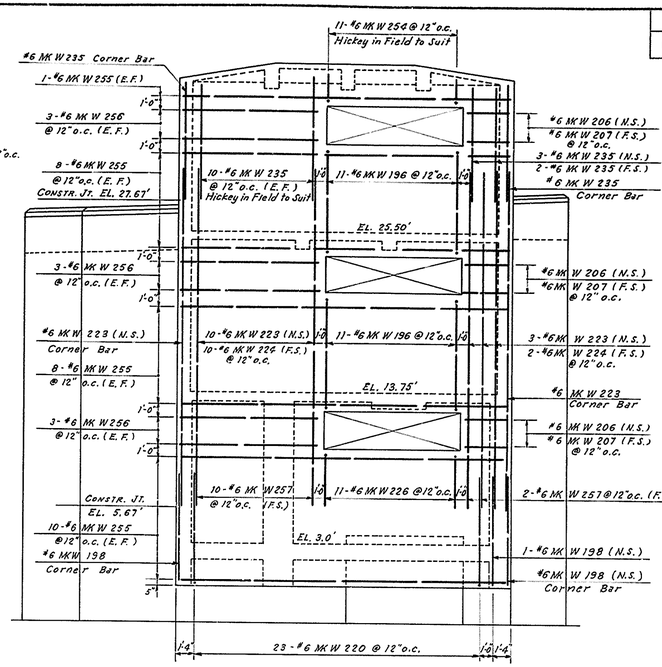
PLAN ELEV. 13.75'



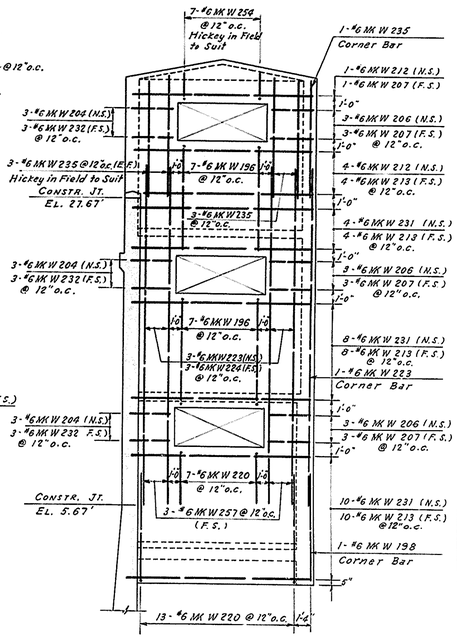
PLAN ELEV. 3.0'



ELEV. A - A



ELEV. B - B



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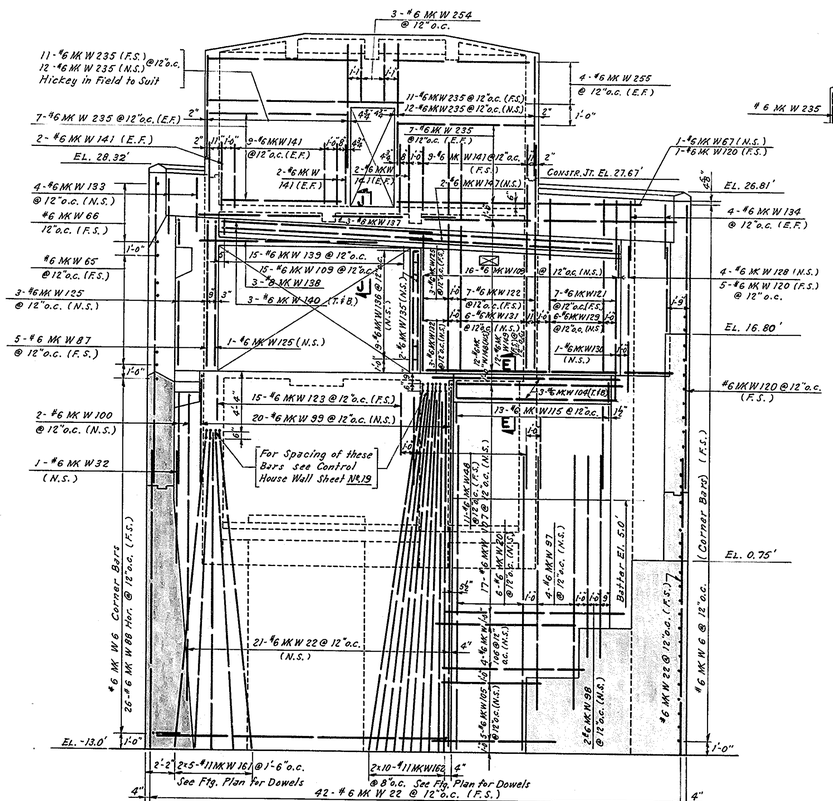

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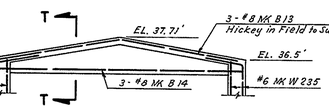
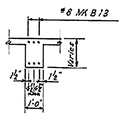


BEAM B7 (3 REQD.)



SECTION T-T

Note: For Reinforcing for Beams B3 and B6 see Sheet No. 20

NOTES:

For Reinforcing shown in ELEV. D-D see Bar Schedule Sheet No. 22

For Storage House Reinforcing see Bar Schedule Sheet No. 23

For Sections E-E & J-J see Sheet No. 19

APPROVED Joe S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

REINFORCING BARS IN STORAGE HOUSE

SCALE	DATE	SHEET NO.
3/16" = 1'-0"	APRIL 1954	21

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

MADE BY R. O. E.
TRACED BY R. A. O.
CHECKED BY R. E.

BAR SCHEDULE FOR 2 BASCULE PIER FOOTINGS

MK	Size	Length	Type	A	B	C	D	E	F	N	L	Total No. Req'd
F1	10	40-0	STR									196
F2	8	42-2	STR									168
F3		15-6	B	3-3	1-7½	5-9	1-7½	3-3			7-9	312
F4		40-0	STR									64
F5		39-6	C	1-6	36-6	1-6	1-1	1-1			38-8	132
F6		9-7	D	1-6	5-10	2-3						10
F7		14-6	STR									6
F8		24-8	E	2-3	14-0	2-6	5-11				19-11	6
F9		23-0	D	1-6	19-3	2-3					20-4	4
F10		15-4½	B	3-3	1-7½	5-7½	1-7½	3-3			7-7½	172
F11		42-4	STR									32
F12	8	9-0	F	4-6	4-6							64
F13	10	38-6	A	37-0	1-6						38-1	100
F14	10	34-3	A	32-9	1-6						33-10	32
F15	8	7-0	STR.									24
F16	10	35-3	A	33-9	1-6						34-10	16
F17	8	14-10	G	3-4	2-6	3-2	2-6	3-4				16
F18	8	9-9	F	3-4½	3-0	3-4½						8
D1	6	5-0	STR									546
D2	7	5-10	STR									592
D3	6	12-6	F	4-10½	7-7½							44
D4	6	4-9	STR									12
D5	6	12-5	F	4-10½	7-6½							12
D6	11	8-4	STR		HICKEY IN FIELD TO SUIT.							80
D7	6	9-6	F	5-9	3-9							12
D8	6	7-0	F	3-9	3-3							12

BAR SCHEDULE FOR 2 RACK WALLS

MK	Size	Length	Type	A	B	C	D	E	F	N	L	Total No. Req'd
W170	6	4-10	F	1-6	3-4							120
W171		4-0		1-6	2-6							20
W172		28-0		3-0	25-0							4
W173		19-5 TO 23-9		3-0	16-5 / 20-9	"B" VARIES 2-2 EVERY 4 BARS						12
W174		13-11 TO 17-2		3-0	10-11 / 14-2	"B" VARIES 1-1" EVERY 4 BARS						16
W175		10-4 TO 12-7		3-0	7-4 / 9-7	"B" VARIES 9" EVERY 4 BARS						16
W176		7-10 TO 9-4		3-0	4-10 / 6-4	"B" VARIES 6" EVERY 4 BARS						16
W177		6-7 TO 7-7		3-0	3-7 / 4-7	"B" VARIES 4" EVERY 4 BARS						16
W178		5-9	F	3-0	2-9							8
W179		20-9	STR									40
W180		23-0										8
W181		18-5 TO 21-6				EVERY 4 BARS VARIES 3-1						8
W182		12-10 TO 15-10				EVERY 4 BARS VARIES 1'-6"						12
W183		11-6										4
W184		8-3 TO 10-3				EVERY 4 BARS VARIES 1'-0"						12
W185		6-8 TO 7-6				EVERY 4 BARS VARIES 10"						8
W186		4-1 TO 5-10				EVERY 4 BARS VARIES 7"						16
W187	6	2-9 TO 3-9	STR.			EVERY 4 BARS VARIES 6"						12

BAR SCHEDULE FOR 4 STAIRWAYS

MK	Size	Length	Type	A	B	C	D	E	F	N	L	Total No. Req'd
SW1	5	3-3	STR									72
SW2	5	15-3	K	2-9	12-6	2-2	1-11					16
SW3	6	15-8	K	2-11	12-9	2-1	1-10					21
SW4	5	6-5	STR									64
SW5	5	15-2	X	1-11½	10-7	2-7½	1-5	1-4½	1-9	2-0		12
SW6	6	15-3	X	1-9½	10-7	2-10½	1-2	1-4½	1-11	2-1½		20
SW7	5	2-4	STR									60
SW8	5	9-0	X	1-11	7-1	—	1-4½	1-3½				12
SW9	6	8-0	X	1-8	6-4	—	1-3	1-1½				20
SW10	5	5-9	STR									12
SW11	6	5-0	STR.									20

MADE BY R.O.E.
TRACED BY S.P.
CHECKED BY R.E.

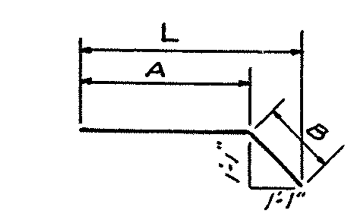
BAR SCHEDULE FOR BASCULE PIERS

MK	Size	Length	Type	A	B	C	D	E	F	N	L	2 Front Walls	2 Rear Walls	2 Side Walls	1-Wall at Control House	1-Wall at Storage House	Total No. Req'd
W1	7	21-7	STR									296	296	—	—	—	592
W2	7	10-9	STR									—	120	—	—	—	120
W3	7	10-0	STR									—	8	—	—	—	8
W4	7	20-4	STR									—	20	—	—	—	20
W5	6	36-6	STR									116	108	—	—	—	224
W6		9-8	F	4-6	5-2							156	104	—	—	—	260
W7		27-6	STR									72	2	—	—	—	74
W8		4-6	STR									—	8	—	—	—	8
W9		6-9	STR									—	4	—	—	—	4
W10		20-4	STR									—	—	10	—	—	10
W11		5-4	F	2-3	10"	2-3						—	128	—	—	—	128
W12		18-9	F	5-0	13-9							—	8	—	—	—	8
W13		12-6	F	5-0	7-6							—	8	—	—	—	8
W14		4-3	STR									4	8	—	—	—	12
W15		11-6	F	1-0	9-6	1-0						—	8	—	—	—	8
W16		15-8	F	8-8	7-0							—	20	—	—	—	20
W17		11-6	F	4-6	7-0							—	56	—	—	—	56
W18		14-9	F	7-9	7-0							—	20	—	—	—	20
W19		28-1	F	7-9	20-4							—	12	—	—	—	12
W20		21-5	N	18-1	3-4	18-0	1-6					112	60	12	6	6	196
W21		14-10½	N	11-6½	3-4	11-6	1½					—	20	—	—	—	20
W22		21-2	STR									—	—	140	63	63	266
W23		12-2	STR									—	8	—	—	—	8
W24		7-10	F	4-5	3-5							—	20	—	—	—	20
W25		14-9	STR									—	68	—	—	—	68
W26		13-7	F	5-1	8-6							—	68	—	—	—	68
W27		9-6	F	3-6	6-0							—	16	—	—	—	16
W28		19-4	STR									—	32	—	—	—	32
W29		25-9	STR									—	84	—	—	—	84
W30		11-0	STR									—	88	—	—	—	88
W31		9-2	F	3-5	2-4	3-5						—	52	—	—	—	52
W32		7-10	STR									—	24	16	8	8	56
W33		5-6	STR									—	76	—	—	—	76
W34		10-3	STR									—	8	—	—	—	8
W35		9-11	STR									—	8	—	—	—	8
W36		12-8	F	4-10	7-10							—	32	—	—	—	32
W37		7-6	F	3-0	4-6							—	48	—	—	—	48
W38		12-11	F	2-4	8-3	2-4						—	—	—	26	26	52
W39		16-3	STR									—	—	—	9	9	18
W40		12-0	F	11-0	1-0							—	20	—	—	—	20
W41		5-9	F	5-2	7"							—	20	—	—	—	20
W42		7-7	STR									—	12	—	—	—	12
W43		10-3	F	0-6	9-9							—	8	—	—	—	8
W44		3-10	STR									—	8	—	—	—	8
W45		14-6	F	0-6	14-0							—	8	—	—	—	8
W46	6	8-9	STR									—	24	—	—	—	24
W47	7	10-9	STR									2	—	—	—	—	2
W48	6	20-2	F	0-6	19-8							—	12	—	11	11	34
W49		7-10	F	0-6	7-4							—	8	—	—	—	8
W50		12-10	F	0-6	12-4							—	8	—	—	—	8
W51		15-7	F	7-9	7-10							—	12	—	—	—	12
W52		15-4	STR									108	—	—	—	—	108
W53		3-10	F	1-3	1-4	1-3						108	—	—	—	—	108
W54		7-0	STR									8	—	—	—	—	8
W55	6	3-11	H	1-3	0-10	0-7	1-3					8	—	—	—	—	8
W56	11	28-0	STR									8	—	—	—	—	8
W57	6	11-4	F	4-6	6-10							10	—	—	—	—	10
W58	6	6-6½	J	0-3	0-5½	3-4	2-6			0-3	3-6	112	—	—	—	—	112
W59	6	31-0	STR									140	—	—	—	—	140
W60	6	8-0	F	7-6	0-6							6	—	—	—	—	6
W61	7	22-0	STR									8	—	—	—	—	8
W62	7	19-0	K	16-10½	2-1½	2-0	1-1½					20	—	—	—	—	20
W63	7	7-8	STR									6	—	—	—	—	6
W64	7	15-6	STR									108	—	—	—	—	108
W65	6	13-1	F	4-6	8-7							24	—	—	—	—	24
W66	6	6-7	F	4-6	2-1							22	—	—	—	—	22
W67	6	13-4	STR									28	—	—	—	1	29
W68	6	3-1	F	1-0	2-1							10	—	—	—	—	10
W69	7	7-9½	STR									4	—	—	—	—	4
W70	6	9-10	STR									4	—	—	—	—	4
W71	6	6-0	L	0-3	1-6	1-3	1-6	1-3	0-3			10	—	—	—	—	10
W72	6	6-6	F	2-8	1-2	2-8						6	—	—	—	—	6
W73	6	7-4	M	2-8½	1-9	2-10½	2-9	1-0				4	—	—	—	—	4
W74	7	7-10½	K	5-9	2-1½	0-3¾	2-1					4	—	—	—	—	4
W75	6	6-11	F	4-6	2-5							2	—	—	—	—	2
W76		8-8	STR									34	—	—	—	—	34
W77		4-10	STR									8	—	—	—	—	8
W78		2-6	STR									2	—	—	—	—	2
W79		3-4	F	1-0	1-4	1-0						2	—	—	—	—	2
W86		20-8 TO 21-8¼	STR	VARY	EVERY 8 BARS 1¾							—	—	64	—	—	64
W87		21-8	STR									—	—	10	5	5	20
W88		34-3	C	0-11½	32-4	0-11½	0-9	0-9			33-10	—	—	78	26	26	130
W89		8-11	C	0-11½	7-11½	—	0-9	0-9			8-6½	—	—	2	—	—	2
W90		6-7	P	5-3	0-4	1-0	—	—				—	—	12	—	—	12
W91		12-5	F	0-8	11-9							—	—	6	—	—	6
W92		21-3 TO 21-6½	F	0-8	20-7 / 20-10½	"B" VARIES 1¾ EVERY 8 BARS.						—	—	24	—	—	24
W93		13-7 TO 14-4	F	0-8	12-11 / 13-8	"B" VARIES ½ EVERY 2 BARS.						—	—	38	—	—	38
W94		13-6	F	0-8	12-10							—	—	4	—	—	4
W95		40-0	STR									—	—	26	—	—	26
W96		12-0	STR									—	—	2	—	—	2
W97		18-6	N	15-2	3-4	15-1	1-3					—	—	8	4	4	16
W98		14-11	N	11-7	3-4	11-6	1-0					—	—	4	2	2	8
W99		16-6	B	6-10	1-7½	7-9						—	—	40	20	20	80
W100		8-0	F	7-0	1-0							—	—	4	2	2	8
W101		9-3	F	1-2	8-1							—	—	4	—	—	4
W102		15-7	F	0-8	14-11							—	—	4	—	—	4
W103		31-2	F	8-11	22-3							—	—	52	—	—	52
W104		14-3	STR									—	—	12	6	6	24
W105		10-10	STR									—	—	10	5	5	20
W106		14-10	STR									—	—	8	4	4	16
W107		17-2	STR									—	—	34	17	17	68
W108		22-9	STR									—	—	14	—	—	14
W109		3-8	M	1-2½	0-9	1-8½	1-2½	1-2½				—	—	62	31	31	124
W110		23-0	STR									—	—	4	—	—	4
W111		3-0	STR									—	—	4	—	—	4
W112		6-6	STR									—	—	4	—	—	4
W113	6	3-11	M	1-3½	0-9	1-10½	1-4	1-4				—	—	8	—	—	8

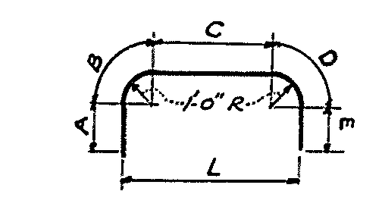
County	Contract	P.R.A. Div. No.	State	Fed. Aid Project No.	Fiscal Year	Sheet No.	Total Sheets
NEW CASTLE	1224-(3)		DEL.	F-U-1 (8)	1954	22	24

BAR SCHEDULE FOR BASCULE PIERS

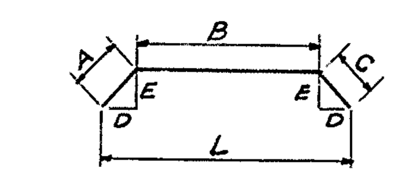
MK	Size	Length	Type	A	B	C	D	E	F	N	L	2 Front Walls	2 Rear Walls	2 Side Walls	1-Wall at Control House	1-Wall at Storage House	Total No. Req'd
W114	6	3-2	F	1-3	0-8	1-3						—	—	8	—	—	8
W115		8-2	L	0-3	1-8	2-2	1-8	2-2	0-3			—	—	26	13	13	52
W120		20-6	STR.									—	—	—	5	5	10
W121		19-3	F	0-8	18-7							—	—	—	7	7	14
W122		19-0	F	0-8	18-4							—	—	—	7	7	14
W123		7-10	STR									—	—	—	15	15	30
W124		21-10	STR									—	—	—	5	—	5
W125		14-0	F	0-8	13-4							—	—	—	7	7	14
W128		12-6	F	0-8	11-10							—	—	—	4	4	8
W129		18-8	STR									—	—	—	6	6	12
W130		15-3	STR									—	—	—	1	1	2
W131		24-6	STR									—	—	—	6	6	12
W132		16-5	STR									—	—	—	3	3	6
W133		6-1	STR									—	—	—	4	4	8
W134		5-4	STR									—	—	—	8	8	16
W135		12-6	STR									—	—	—	2	2	4
W136	6	3-9	F	1-8	0-5	1-8						—	—	—	9	9	18
W137	8	21-6	STR									—	—	—	3	—	3
W138	8	16-10	STR									—	—	—	3	3	6
W139	6	6-8	L	0-3	2-5	0-8	2-5	0-8	0-3			—	—	—	15	—	15
W140		16-9	STR									—	—	—	6	6	12
W141		7-6	STR									—	—	—	24	39	63
W142		11-2	K	2-10	8-4	2-10	0-5					—	—	—	13	—	13
W143		11-11	Q	8-7	0-8	2-0	0-8					—	—	—	14	—	14
W144		5-8	Q	2-4	0-8	2-0	0-8					—	—	—	6	—	6
W145		5-2	K	2-4	2-10	2-3½	0-4					—	—	—	6	—	6
W146		8-4	STR									—	—	—	1	—	1
W147		17-6	STR									—	—	—	2	2	4
W148		19-9	F	0-8	19-1							—	—	—	12	12	24
W149		17-1	C	—	16-1½	0-11½	0-9	0-9				—	—	—	12	12	24
W150		5-0	STR									—	—	—	13	—	13
W151		17-6	F	2-8	14-10							—	—	—	8	—	8
W152		16-4	F	2-2	14-2							—	—	—	8	—	8
W153		5-10	F	2-8	3-2							—	—	—	8	—	8
W154		5-10	F	2-2	3-8							—	—	—	8	—	8
W155		30-4	F	2-8	25-0	2-8						—	—	—	3	—	3
W156		24-0	STR									—	—	—	3	—	3
W157		8-10½ TO 10-6½	K	6½" TO 2-2½	8-4	"A" VARIES 10" EACH BAR						—	—	—	3	—	3
W158		8-9 TO 10-5	STR			EACH BAR VARIES 10"						—	—	—	3	—	3
W159		9-1 TO 10-9	K	9" TO 2-5	8-4	"A" VARIES 10" EACH BAR						—	—	—	3	—	3
W160	6	9-1 TO 10-9	STR.			EACH BAR VARIES 10"						—	—	—	3	—	3
W161	11	22-6	STR									—	—	—	20	10	30
W162	11	26-3	STR									—	—	—	20	20	40
W163	6	25-0	STR									—	—	—	6	—	6
W235	6	10-8	STR									—	—	—	—	74	74
W254	6	6-2	F	3-8	0-8	1-10						—	—	—	—	3	3
W255	6	25-4	STR									—	—	—	—	8	8



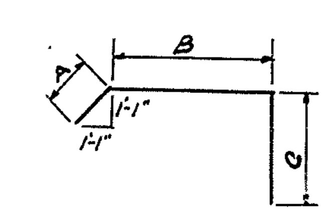
TYPE A



TYPE B



TYPE C



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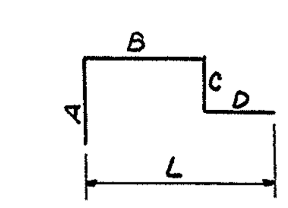

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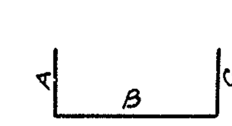

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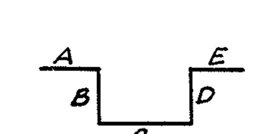

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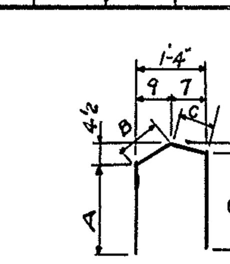

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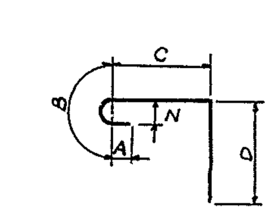

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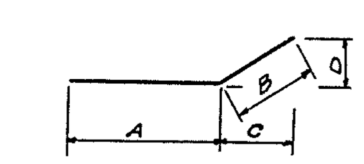

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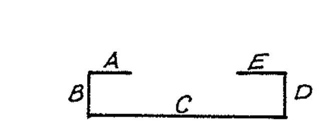

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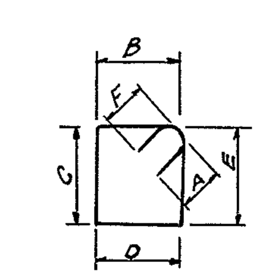

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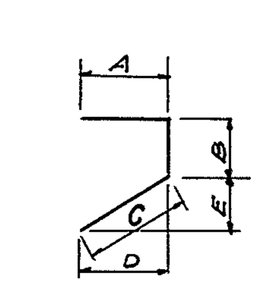

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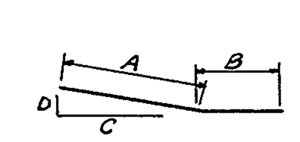

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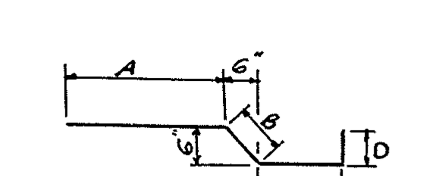

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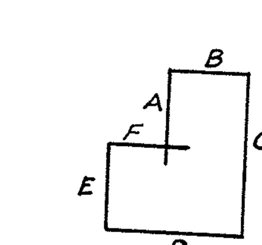

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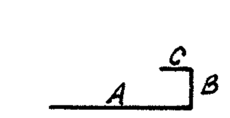

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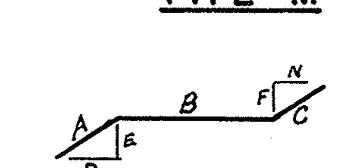
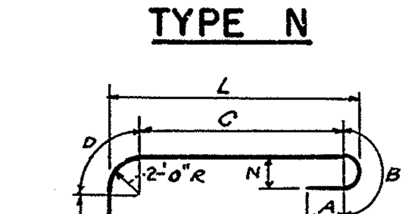


TYPE X



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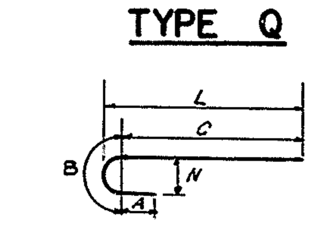
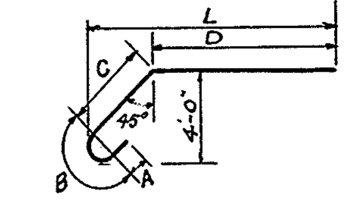


TYPE S

TYPE T



TYPE U

NOTE:

ALL DIMENSIONS GIVEN ARE OUT TO OUT OF BARS, EXCEPT AS NOTED.

APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

BAR SCHEDULE FOR BASCULE PIERS

SCALE	DATE	SHEET NO.
NONE	APRIL 1954	22

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

687 13-2

MICROFILMED

COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	23	24

BAR SCHEDULE FOR HOUSES

MK	SIZE	LENGTH	TYPE	A	B	C	D	E	F	N	L	CONTROL HOUSE	STORAGE HOUSE	TOTAL NO REQ'D
W190	6	13-10	F	7-10	1-2	7-10						26	13	39
W191		21-11	STR									7	—	7
W192		8-6	F	1-2	7-4							12	6	18
W193		8-10	F	3-10	1-2	3-10						8	4	12
W194		7-10	F	3-4	1-2	3-4						6	3	9
W195		16-4	STR									6	—	6
W196		16-8	L	0-3	0-8	7-5	0-8	7-5	0-3			72	50	122
W197		8-8	L	0-3	0-8	3-5	0-8	3-5	0-3			7	—	7
W198		7-10	STR									3	3	6
W200		6-0	STR									22	—	22
W201		18-0	F	2-6	15-6							18	9	27
W202	6	15-6	STR									18	9	27
W203	10	24-8	R	0-4	1-5	18-0	3-2	1-9			20-6	4	—	4
W204	6	4-0	F	1-2	2-10							12	18	30
W205		5-0	STR									6	3	9
W206		6-5	F	3-2	3-3							12	18	30
W207		5-4	F	2-8	2-8							12	19	31
W208		17-6	T	2-6	13-9	1-3						16	12	28
W209		14-6	STR									24	17	41
W210	6	3-7	STR									6	6	12
W211	8	11-0	S	0-4	1-2	9-6				0-8	9-11	3	3	6
W212	6	19-4	F	2-6	14-4	2-6						13	10	23
W213	6	14-4	STR									13	26	39
W214	6	11-9	F	2-6½	8-6½	0-8						7	—	7
W215	6	8-7	STR									7	—	7
W216	10	23-8	R	0-4	1-5	17-6	3-2	1-3			20-0	4	—	4
W217	6	9-8	L	0-3	3-11	0-8	3-11	0-8	0-3			5	—	5
W218		7-7½	F	4-7½	3-0							21	—	21
W219		4-10	F	1-2	3-8							21	—	21
W220		16-7	F	7-10	0-11	7-10						31	43	14
W221		21-9	STR									6	—	6
W222		16-3	STR									6	—	6
W223		24-6	STR									24	27	51
W224	6	19-0	STR									23	25	48
W225	8	13-3	U	0-4	1-2	5-3	6-6			0-8	10-4	3	3	6
W226	6	8-7	F	3-10	0-11	3-10						11	11	22
W227		8-4	STR									3	—	3
W228		32-8	STR									42	—	42
W229		18-6	F	0-6	18-0							6	—	6
W230		18-0	STR									6	—	6
W231		16-4	F	2-0	14-4							—	22	22
W232		3-3	STR									—	9	9
W233		25-0	STR									16	—	16
W234		9-2	F	0-6	10-8							3	—	3
W235		10-8	STR									3	51	54
W236		3-11	K	1-1	2-10	1-10½	0-2					16	—	16
W237		4-8	Q	1-4	0-8	2-0	0-8					16	—	16
W238	6	2-8	F	1-0	0-8	1-0						18	—	18
W239	11	25-11	R	0-4	1-5	19-3	3-2	1-9		0-10	21-9	10	4	14
W240	11	25-5	R	0-4	1-5	18-9	3-2	1-9		0-10	21-3	10	4	14
W241	6	7-10	L	0-3	1-9	1-11	1-9	1-11	0-3			14	—	14
W242	10	15-8	STR									5	—	5
W243	8	15-8	STR									2	—	2
W244	10	20-10	S	0-4	1-5	19-1				0-10	19-7	4	—	4
W245	6	8-0	STR									18	—	18
W246	6	7-8	STR									18	—	18
W247	6	16-9	F	7-5	1-11	7-5						9	—	9
W248	6	11-4	L	0-3	1-11	3-6	1-11	3-6	0-3			6	—	6
W249	8	11-6	STR									12	—	12
W250	8	15-8	STR									6	—	6
W251	6	3-11	F	1-0	1-11	1-0						21	—	21
W252		3-6	F	0-6	3-0							24	—	24
W253		4-6	STR									24	—	24
W254		6-2	F	3-8	0-8	1-10						—	25	25
W255		25-4	STR									—	54	54
W256		10-6	STR									—	18	18
W257	6	8-0	F	0-8	7-4							20	18	38
W142	6	11-2	K	2-10	8-4	2-10	0-5					35	—	35
W143	6	11-11	Q	8-7	0-8	2-0	0-8					35	—	35

BAR SCHEDULE FOR FLOOR SLABS

MK	SIZE	LENGTH	TYPE	A	B	C	D	E	F	N	L	CONTROL HOUSE	STORAGE HOUSE	TOTAL NO REQ'D
S1	5	16-9	F	1-7	15-2							30	30	60
S2		15-2	STR									30	30	60
S3		15-11	F	1-7	14-4							25	11	36
S4		14-4	STR									25	11	36
S5		32-6	STR									24	—	24
S6		3-5	F	0-6	2-11							4	—	4
S7		20-0	STR									2	—	2
S8	5	5-8	L	0-3	1-3½	1-3½	1-3½	1-3½	0-3			21	—	21
S9	4	3-3	F	0-10	2-5							117	86	203
S10		12-8	STR									98	80	178
S11		4-10	STR									6	—	6
S12		2-1	STR									6	—	6
S13	4	30-9	STR									50	—	50
S14	5	10-8	STR									3	—	3
S15	4	2-4	F	1-0	0-4	1-0						25	—	25
S16		2-5	STR									107	86	193
S17		8-4	STR									38	—	38
S18		3-1	F	1-5	1-8							8	—	8
S19		1-8	STR									8	—	8
S20		13-8	STR									6	—	6
S21		7-8	STR									16	—	16
S22		4-1	F	2-1	2-0							4	—	4
S23		2-0	STR									4	—	4
S24		24-0	STR									74	—	74
S25		9-8	STR									46	—	46
S26		4-1	STR									16	—	16
S27		9-4	STR									24	—	24
S28	4	14-8	F	3-2	11-6							2	—	2
S29	5	24-6	STR									2	—	2
S30	5	21-8	STR									3	—	3
S31	3	6-5	F	2-0	2-5	2-0						14	—	14
S32	4	23-6	STR									—	100	100
S33	3	4-11	F	1-3	2-5	1-3						6	—	6
S34	3	5-2	W	0-6	0-6	3-2	0-6	0-6				6	—	6
S35	5	8-6	STR									4	—	4
S36	5	25-4	STR									—	24	24

BAR SCHEDULE FOR BEAM REINFORCING

MK	SIZE	LENGTH	TYPE	A	B	C	D	E	F	N	L	CONTROL HOUSE	STORAGE HOUSE	TOTAL NO REQ'D
B1	8	7-7	F	4-3	3-4							48	12	60
B2	8	4-3	STR									48	12	60
B3	8	12-0	STR									17	12	29
B4	4	3-10	L	0-3	0-8	1-0	0-8	1-0	0-3			85	39	124
B5	4	3-7	Y	0-9	0-4	1-3	0-9	0-6				13	—	13
B6	8	9-8	STR									6	—	6
B7	8	11-0	STR									3	—	3
B8	8	12-0	F	0-6	11-0	0-6						3	—	3
B9	6	2-8	F	1-0	1-8							10	10	20
B10	6	2-8	STR									10	10	20
B11	6	14-8	STR									20	20	40
B12	4	5-4	F	0-10	3-8	0-10						13	13	26
B13	8	14-6	STR									—	9	9
B14	8	14-3	STR									—	35	35

NOTES:

1. ALL DIMENSIONS SHOWN ARE OUT TO OUT OF BARS, EXCEPT AS NOTED.
2. FOR BAR BENDING DETAILS SEE BAR SCHEDULE SHEET NO. 22.

MADE BY R.O.E
TRACED BY S.P.
CHECKED BY R.E

APPROVED Jae S. Robinson
BRIDGE ENGINEER

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

BAR SCHEDULE FOR HOUSES

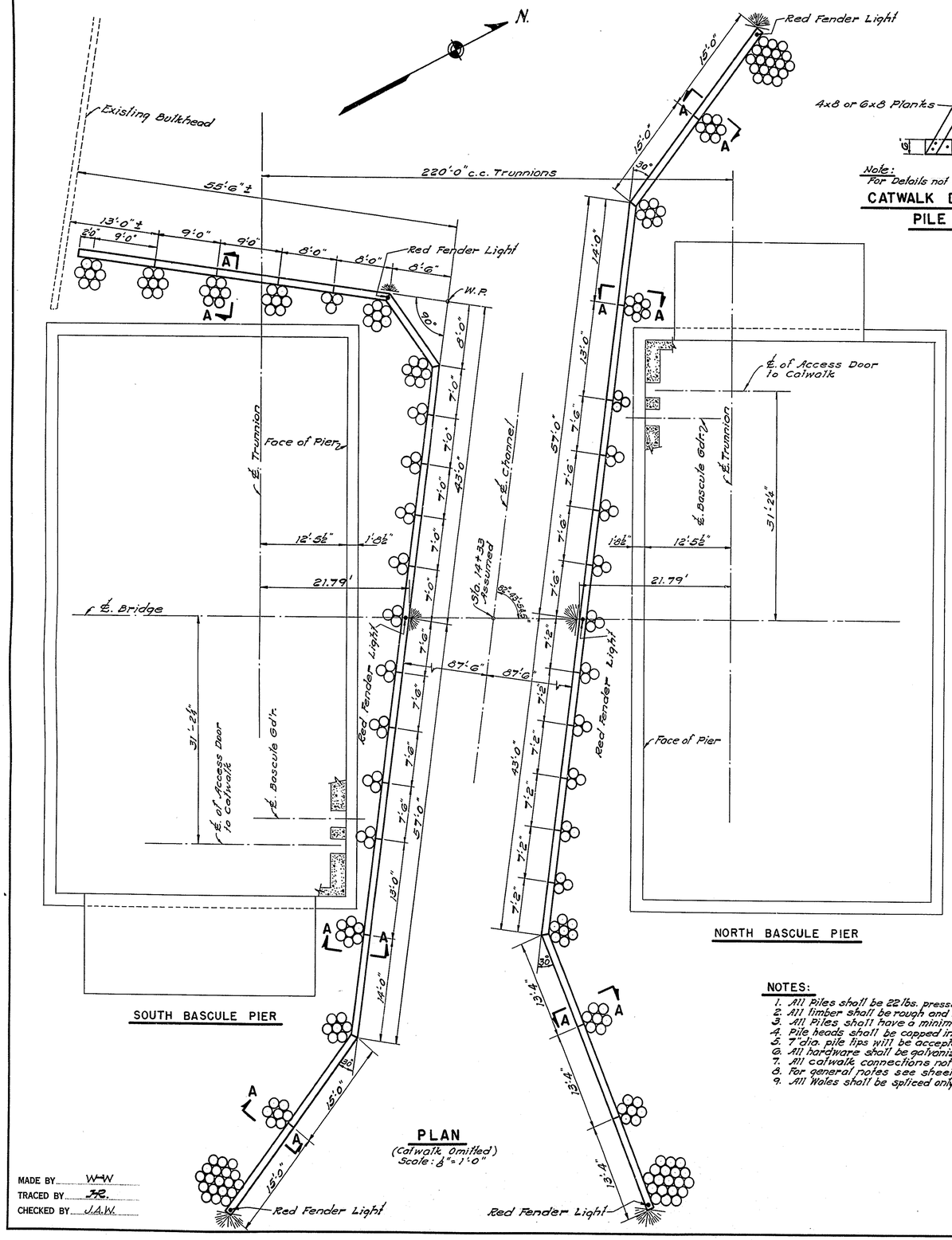
SCALE	DATE	SHEET NO.
NONE	APRIL 1954	23

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

687 13-W

MICROFILMED

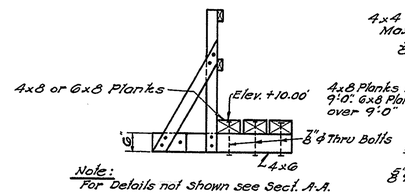
COUNTY	CONTRACT	P. R. A. DIV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	1224-(3)		DEL.	F-U-1(8)	1954	24	24



SOUTH BASCULE PIER

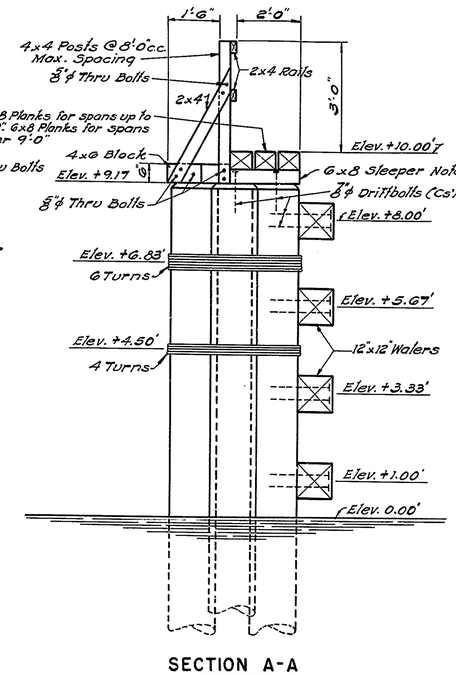
NORTH BASCULE PIER

PLAN
(Catwalk Omitted)
Scale: ⅛" = 1'-0"

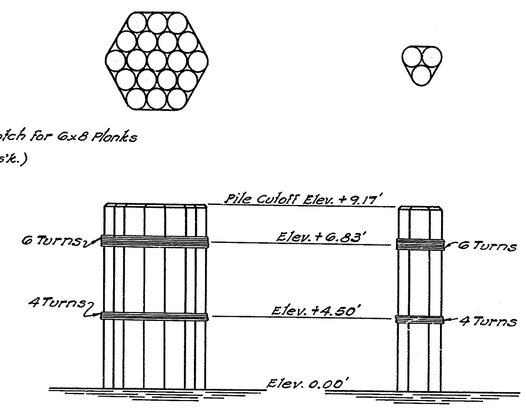


Note:
For Details not shown see Sect. A-A.

CATWALK DETAIL BETWEEN PILE CLUSTERS



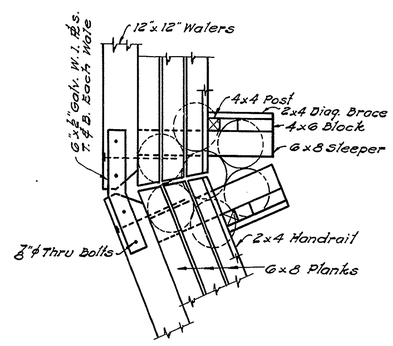
SECTION A-A



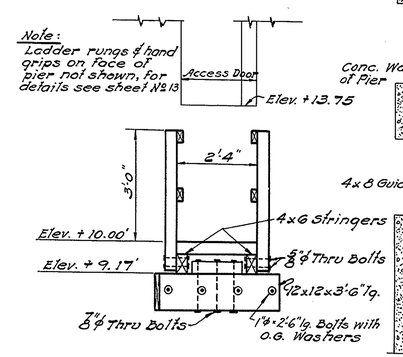
DETAIL OF NINETEEN PILE CLUSTER

DETAIL OF THREE PILE CLUSTER

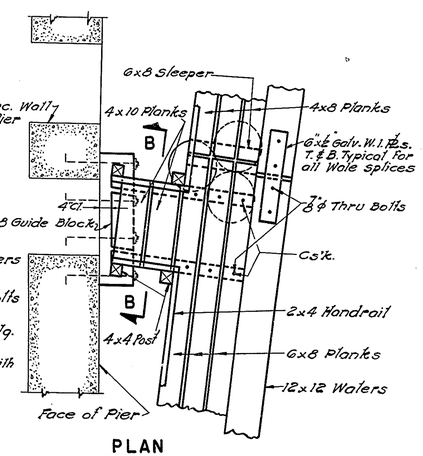
7 Pile Cluster - the outside piles shall be driven on a 6ft circle & drawn together at elevs. +4.5' & +6.8' with ¾"-8x19 galvanized wire rope. Wrap with number of turns as shown & secure each cable to face of alternate piles with ⅜" galv. iron staples. Piles to which walers are attached shall remain vertical.
19 Pile Cluster - 6 interior piles shall be equally spaced on a 6ft circle & outside piles shall be driven on a 10ft circle; other details similar to 7 pile cluster.
3 Pile Cluster - piles shall be driven on 3ft centers. Other details similar to 7 Pile Cluster.



TYPICAL CORNER DETAIL



SECTION B-B



PLAN

DETAIL OF CATWALK AT PIER ACCESS DOOR

NOTES:
1. All Piles shall be 22 lbs. pressure treated timber piles.
2. All timber shall be rough and shall be 12 lb. pressure treated.
3. All Piles shall have a minimum bearing capacity of 15 Tons per pile & min. penetration of 20'-0"
4. Pile heads shall be capped in accordance with specifications.
5. 7" dia. pile tips will be accepted on all timber piles.
6. All hardware shall be galvanized wrought iron except as noted.
7. All catwalk connections not specifically called for shall be galv. spikes.
8. For general notes see sheet No. 9
9. All Wales shall be spliced only at center of a pile cluster.

APPROVED Jos. S. Robinson
BRIDGE ENGINEER

MADE BY W-W
TRACED BY H.
CHECKED BY J.A.W.

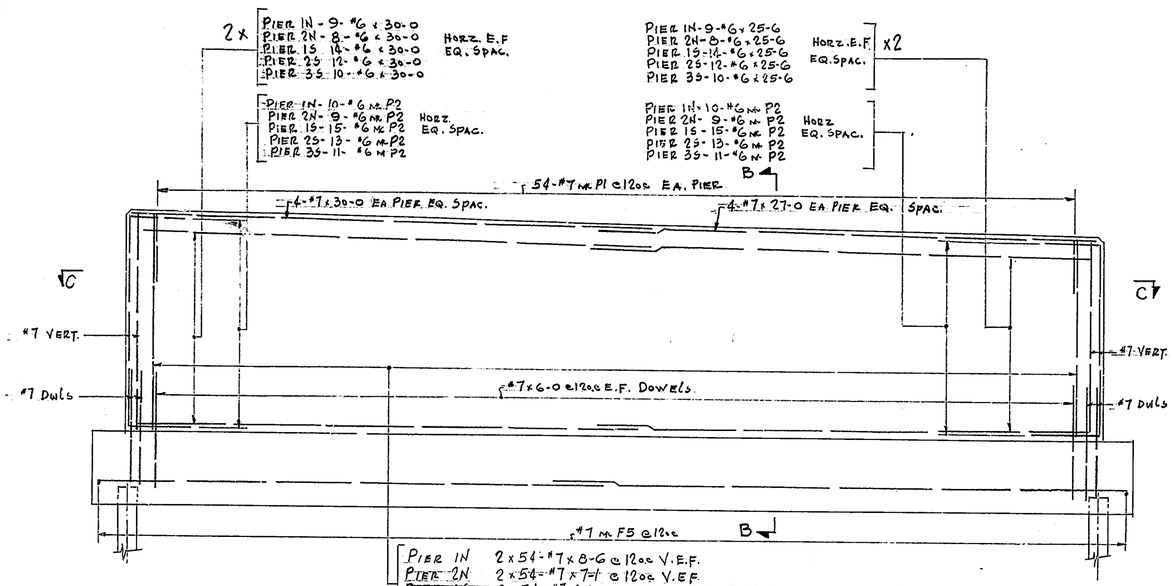
STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

FENDERS

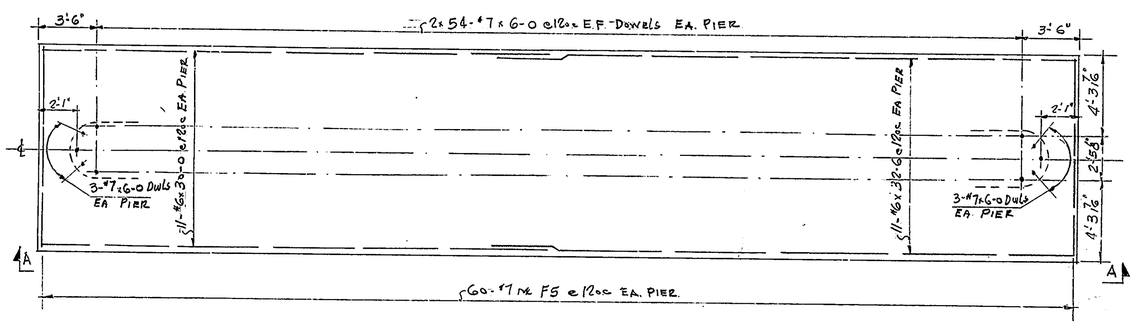
SCALE	DATE	SHEET NO.
⅛"=1'-0" Except as Noted	APRIL 1954	24

PARSONS, BRINCKERHOFF, HALL & MACDONALD
ENGINEERS NEW YORK

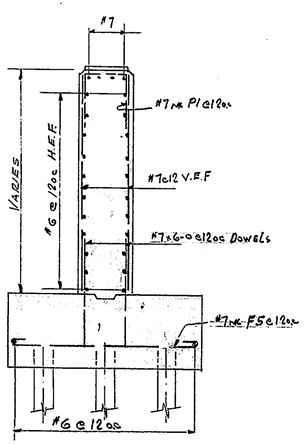


PIER 1N 2 x 54-#7 x 8-6 @ 12oc V.E.F.
PIER 2N 2 x 54-#7 x 7-1 @ 12oc V.E.F.
PIER 1S 2 x 54-#7 (6 EA 12-5, 12-6, 12-7½, 12-9, 12-10, 12-11, 13-0½, 13-2, 13-3) @ 12oc V.E.F
PIER 2S 2 x 54-#7 (3 EA 10-2 TO 11-7) BY 1" INCREMENT @ 12oc V.E.F.
PIER 3S 2 x 54-#7 (3 EA. 8-9, 8-10, 8-11, 9-0½, 9-1½, 9-2½, 9-4, 9-5, 9-6, 9-7, 9-8, 9-9½, 9-10½, 9-11½, 10-1, 10-2, 10-3, 10-4) @ 12oc V.E.F.

ELEVATION A-A

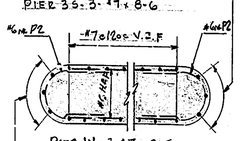


FOOTING PLAN
FOR ALL PIERS



SECTION B-B

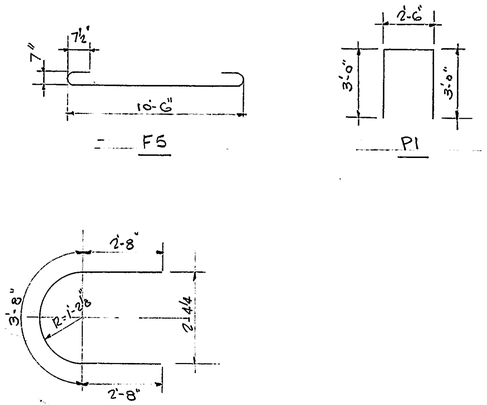
PIER 1N - 3-#7 x 8-6
PIER 2N - 3-#7 x 7-1
PIER 1S - 3-#7 x 12-4
PIER 2S - 3-#7 x 10-4
PIER 3S - 3-#7 x 8-6
VERT EQ. SPAC.



PIER 1N - 3-#7 x 8-6
PIER 2N - 3-#7 x 7-1
PIER 1S - 3-#7 x 12-2
PIER 2S - 3-#7 x 11-7
PIER 3S - 3-#7 x 10-4
VERT EQ. SPAC.

SECTION C-C

NOTE: FOR PIER LOCATION SEE CONT. DW'G SHEET #2
LAP BARS 40 DIA. MIN.



BENT BARS NO REQUIRED

SIZE	LENGTH	MARK	TYPE	1S	2S	3S	1N	2N	TOTAL
#7	12-2	F5		60	60	60	60	60	300
#7	8-6	P1		54	54	54	54	54	270
#6	9-0	P2		30	26	22	20	18	116

STRAIGHT BARS NO. REQUIRED.

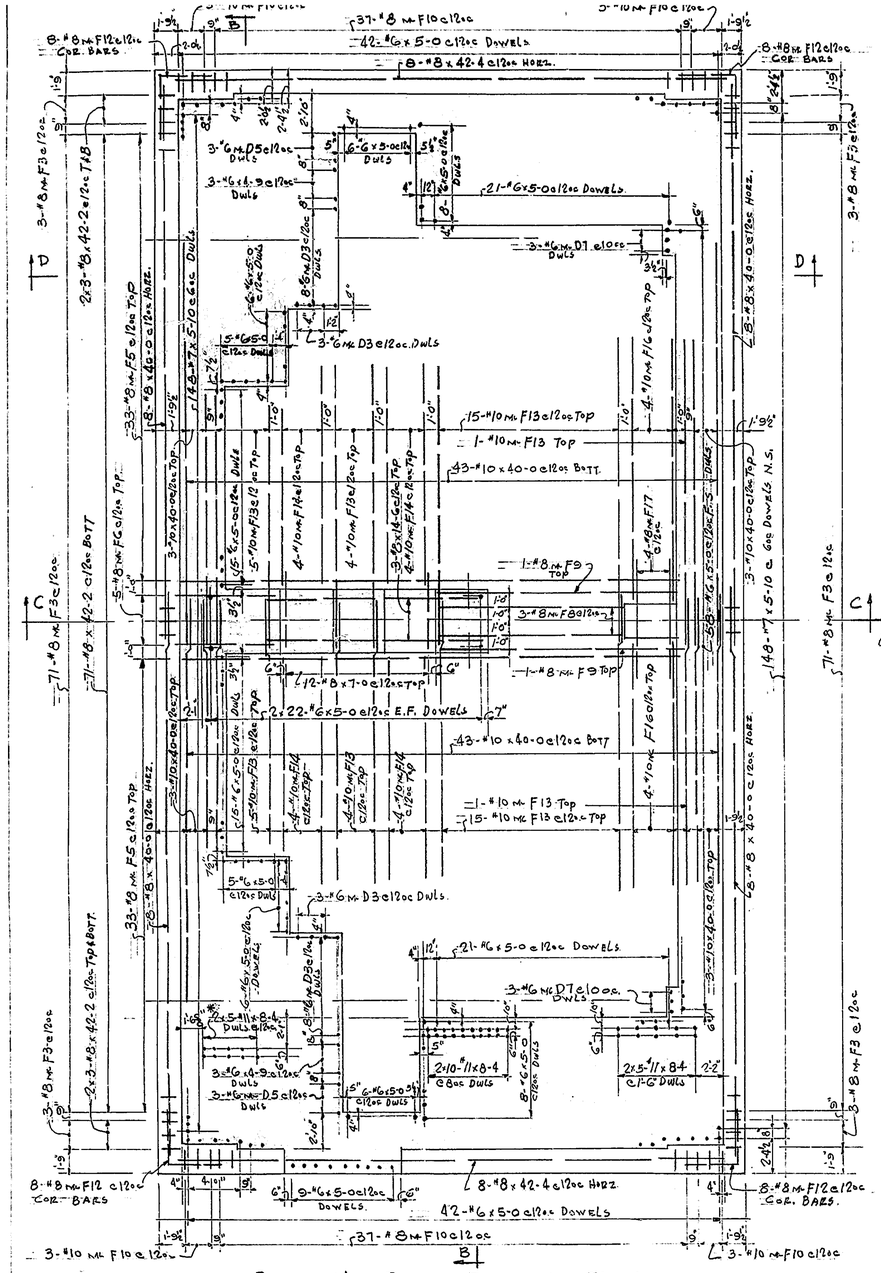
SIZE	LENGTH	1S	2S	3S	1N	2N	TOTAL
#6	32-6	11	11	11	11	11	55
#6	30-0	39	35	31	29	27	161
#6	25-6	28	24	20	18	16	106
#7	13-3	12					12
	13-2	15					15
	13-0½	12					12
	12-11	12					12
	12-10	12					12
	12-9	12					12
	12-7½	12					12
	12-6	12					12
	12-5	12					12
	12-4	15					15
	11-7		9				9
	11-6		6				6
	11-5		6				6
	11-4		6				6
	11-3		6				6
	11-2		6				6
	11-1		6				6
	11-0		6				6
	10-11		6				6
	10-10		6				6
	10-9		6				6
	10-8		6				6
	10-7		6				6
	10-6		6				6
	10-5		6				6
	10-4		6	9			15
	10-3		6	6			12
	10-2		6	6			12
	10-1		3	6			9
	9-11½			6			6
	9-10½			6			6
	9-9½			6			6
	9-8			6			6
	9-7			6			6
	9-6			6			6
	9-5			6			6
	9-4			6			6
	9-2½			6			6
	9-1½			6			6
	9-0½			6			6
	8-11			6			6
	8-10			6			6
	8-9			6			6
	8-6			3	114		117
	7-1					114	114
	6-0	114	114	114	114	114	570
	30-0	4	4	4	4	4	20
#7	27-0	4	4	4	4	4	20

CONT. #1224(3)

REINFORCING STEEL DETAILS

DETAILS FOR	APPROACH SPAN PIERS
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE.
ENGINEER	PARSONS, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC
	SKANEATALES N.Y.

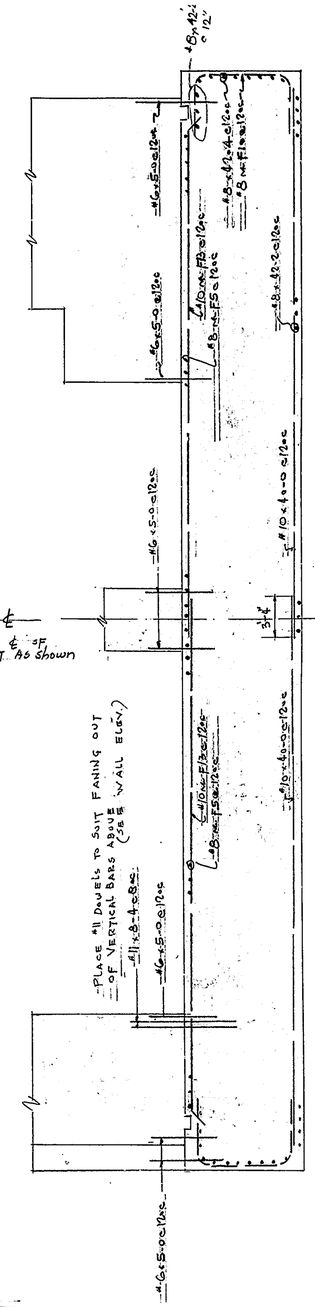
DRAWN BY: M CHECKED BY: NO. 1
DATE 9/14/54 REV 10/6/54 PER ENG. CORR.



BASCULE PIERS - FOOTING PLAN

NORTH PIER - ONE REQ'D
SOUTH PIER - ONE REQ'D

* IN SOUTH BASCULE PIER ONLY



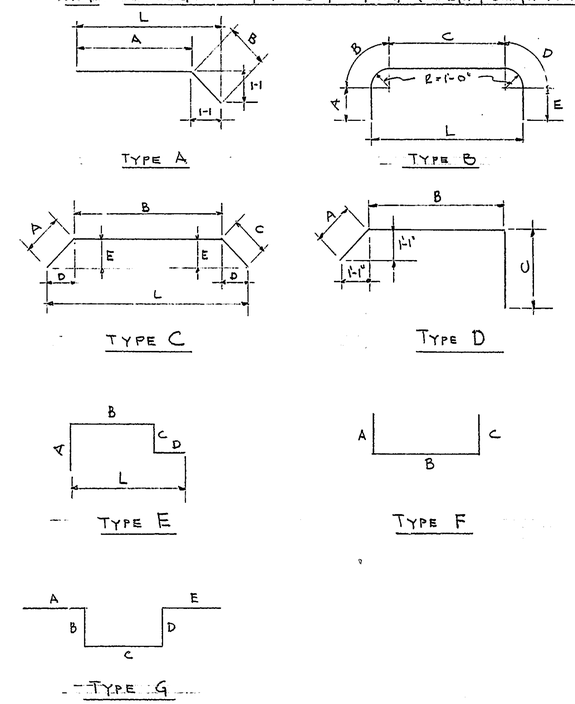
SECTION B-B

SIZE	LENGTH	No REQ'D
#10	40-0	196
#8	42-2	166
#8	40-0	64
#8	14-6	6
#8	42-4	32
#8	7-0	24
#6	5-0	546
#7	5-10	592
#6	4-9	12
#11	8-4	* 70

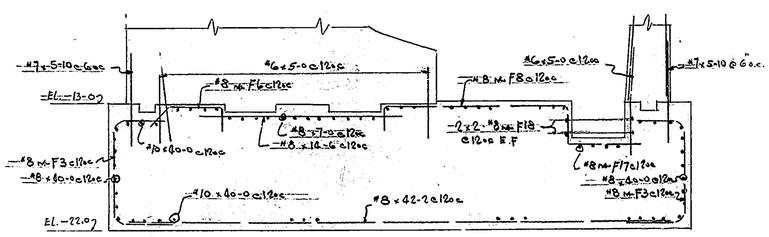
* 40 REQ'D FOR S.B. PIER
* 30 REQ'D FOR N.B. PIER

SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	L	No REQ'D
#8	15-6	F3	B	3-3	1-7½	5-9	1-7½	3-3	7-9	312
#8	39-6	F5	C	1-6	36-6	1-6	1-1	1-1	38-8	132
#8	9-7	F6	D	1-6	5-10	2-3				10
#8	24-8	F8	E	2-3	14-0	2-6	5-11		19-11	6
#8	23-0	F9	D	1-6	19-3	2-3			20-6	4
#8	15-6½	F10	B	3-3	1-7½	5-7½	1-7½	3-3	7-7½	172
#8	9-0	F12	F	4-6	4-6					64
#10	38-6	F13	A	37-0	1-6				38-1	100
#10	34-3	F14	A	32-9	1-6				33-10	32
#10	35-3	F16	A	35-3	1-6				34-10	16
#8	14-10	F17	G	3-4	2-6	3-2	2-6	3-4		8
#8	9-9	F18	F	3-4½	3-0	3-4½				8
#6	12-6	D3	F	4-10½	7-7½					44
#6	12-5	D5	F	4-10½	7-6½					12
#6	9-6	D7	F	5-9	3-9					12
#6	7-0	D8	F	3-9	3-3					12

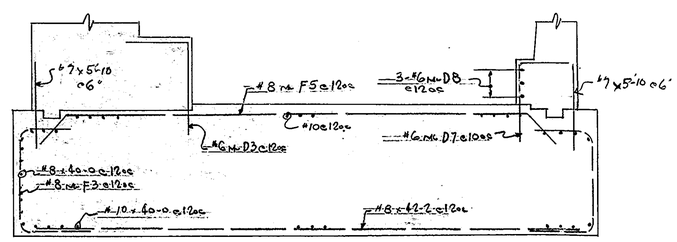
NOTE: BARS GIVEN FOR 2 FOOTING (NORTH & SOUTH PIERS)



NOTE: ALL DIMENSIONS GIVEN ARE OUT TO OUT
LAP BARS 40 DIA. MIN.



SECTION C-C



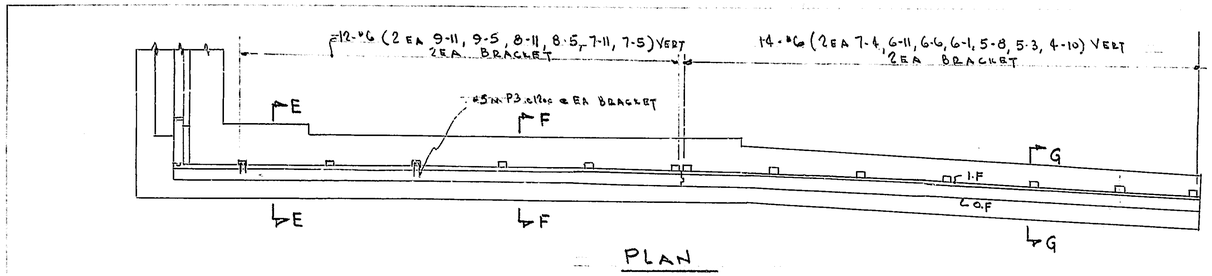
SECTION D-D

CONT. # 1224 (3)

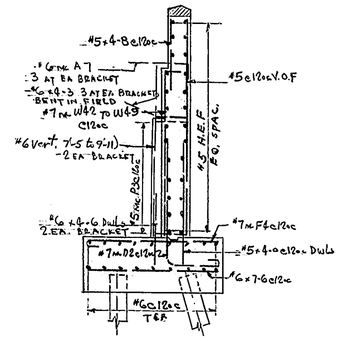
REINFORCING STEEL DETAILS

DETAILS FOR	FOOTING - BASCULE PIERS
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE
ENGINEER	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATALES N.Y.

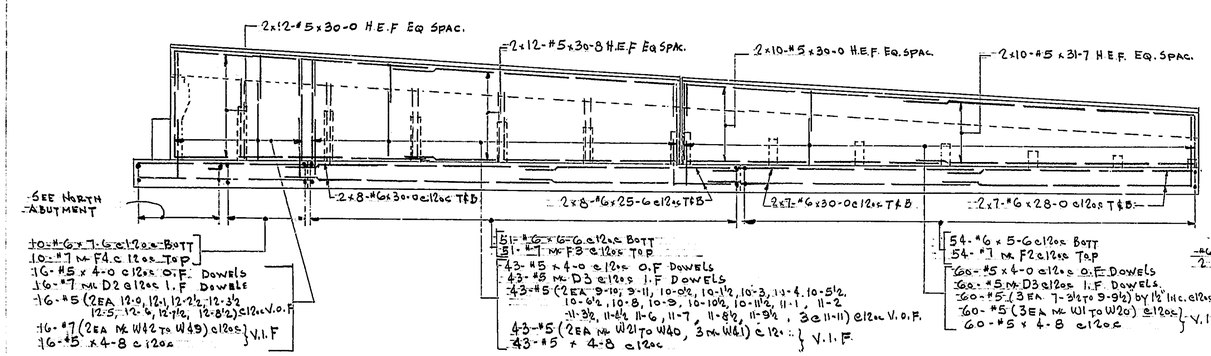
DRAWN BY M CHECKED BY ____ NO 2
DATE 9/15/54 REV 10-1-54



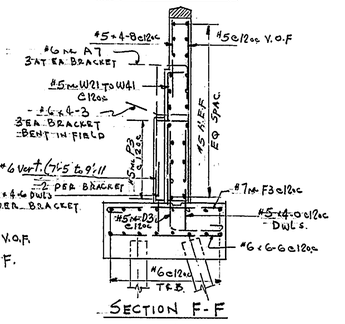
PLAN



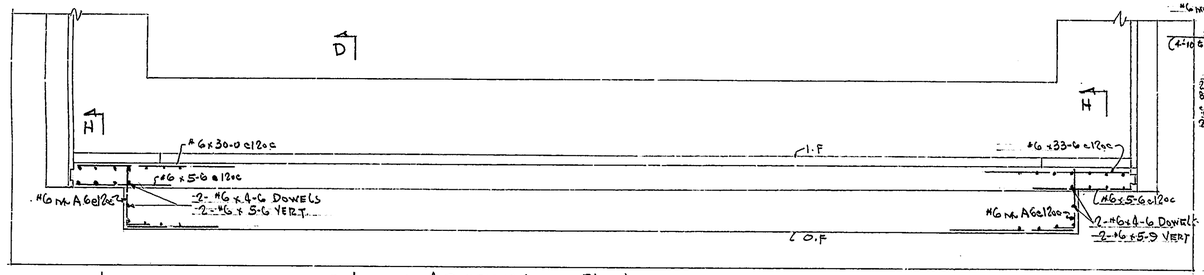
SECTION E-E



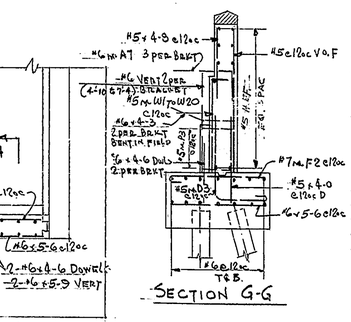
EAST RETAINING WALL ELEVATION SHOWN - ONE REQ'D.
WEST RETAINING WALL ELEVATION SIMILAR - ONE REQ'D



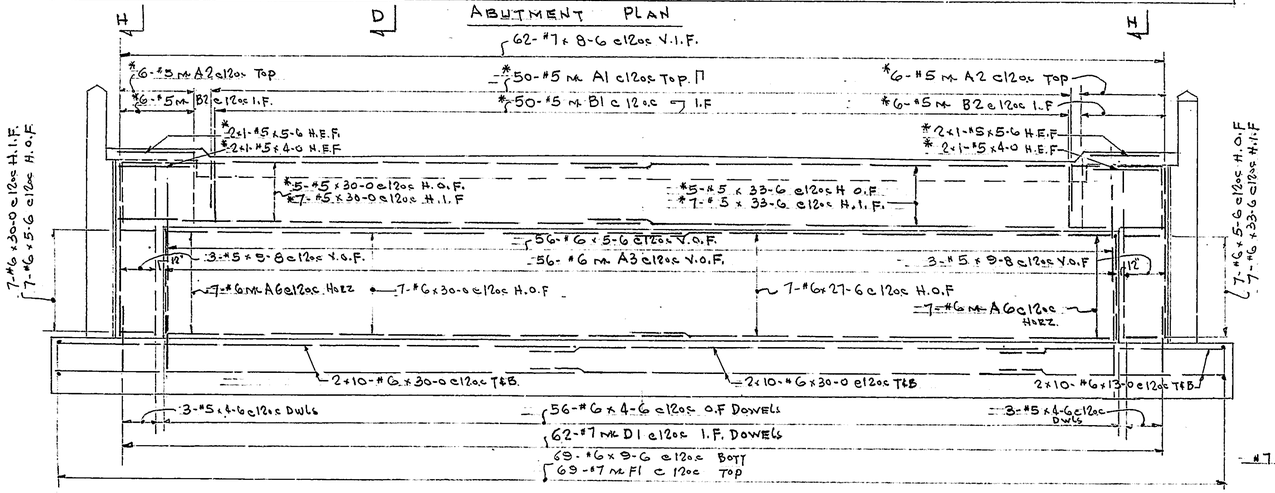
SECTION F-F



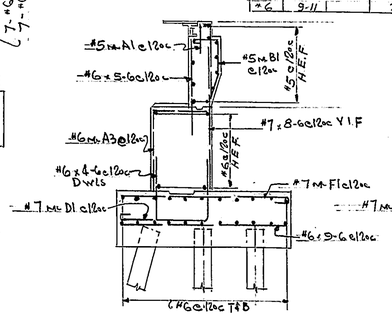
ABUTMENT PLAN



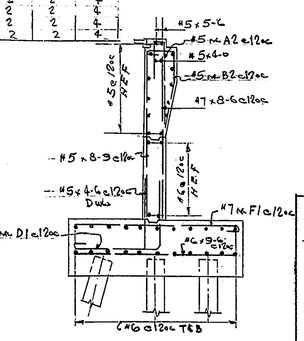
SECTION G-G



ABUTMENT ELEVATION



SECTION D-D



SECTION H-H

REV. 12/6/54 BRACKETS ADDED.

STRAIGHT-BARS REQUIRED

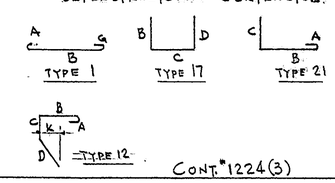
SIZE	LENGTH	ABUTMENT	W. WALL	E. WALL	TOTAL
#6	33-6	7			7
#5	33-6*	12			12
#5	31-7		20	20	40
#5	30-8		24	24	48
#6	30-0	54	30	30	114
#5	30-0	12*	44	44	100
#6	28-0		14	14	28
#6	27-6	7			7
#6	25-6		16	16	32
#6	13-0	20			20
#5	12-8½		2	2	4
#5	12-7½		2	2	4
#6	12-7		18	18	36
#5	12-6		2	2	4
#5	12-5		2	2	4
	12-3½		2	2	4
	12-2½		2	2	4
	12-1		2	2	4
	12-0		2	2	4
	11-11		3	3	6
	11-10½		2	2	4
	11-9½		2	2	4
	11-8		2	2	4
	11-7		2	2	4
	11-5½		2	2	4
	11-4		2	2	4
	11-3		2	2	4
	11-2		2	2	4
	11-1		2	2	4
	10-11½		2	2	4
	10-10½		2	2	4
	10-9		2	2	4
	10-8		2	2	4
	10-6½		2	2	4
	10-5½		2	2	4
	10-4		2	2	4
	10-3		2	2	4
	10-1½		2	2	4
	10-0½		2	2	4
	9-11		2	2	4
	9-10		2	2	4
	9-9½		3	3	6
	9-8	6			6
#5	9-6½		3	3	6
#6	9-6	69			69
#5	9-5		3	3	6
	9-3½		3	3	6
	9-2		3	3	6
	9-0½		3	3	6
	8-11		3	3	6
	8-9½		3	3	6
	8-8		3	3	6
#5	8-6½		3	3	6
#7	8-6	62			62
#5	8-5		3	3	6
	8-3½		3	3	6
	8-2		3	3	6
	8-0½		3	3	6
	7-11		3	3	6
	7-9½		3	3	6
	7-8		3	3	6
#5	7-6½		3	3	6
#6	7-6		10	10	20
#5	7-5		3	3	6
#5	7-3½		3	3	6
#6	6-6		53	53	106
#6	5-6	70	54	54	178
#5	5-6*	4			
#5	5-9	4			4
#5	4-8		119	119	238
#6	4-6	60	26	26	112
#5	4-0	4*	119	119	242
#5	4-6	6			6
#6	4-3		39	39	78
#6	4-10		2	2	4
#6	5-3		2	2	4
	5-8		2	2	4
	6-1		2	2	4
	6-6		2	2	4
	6-11		2	2	4
	7-4		2	2	4
	7-5		2	2	4
	7-11		2	2	4
	8-5		2	2	4
	8-11		2	2	4
	9-5		2	2	4
#6	9-11		2	2	4

BENT BARS REQUIRED

SIZE	LENGTH	MARK	TYPE	A	B	C	D	K	ABUTMENT	E. WALL	W. WALL	TOTAL
#5	6-6	A1*	17		3-6	6	2-6		50			50
#5	7-3	A2*	17		4-3	6	2-6		12			12
#6	8-9	A3	17			3-0	5-9		56			56
#6	4-0	A6	17			3-0	1-0		14			14
#5	4-8	B1*	12	7	1-4	1-6	1-3	7	50			50
#5	5-9	B2*	12	7	1-4	1-6	2-4	7	12			12
#7	10-6	D1	21	10	5-0	4-8			62			62
#7	8-6	D2	21	10	3-0	4-8				16	16	32
#5	7-5	D3	21	7	3-0	3-10				103	103	206
#7	10-4	F1	1	10	9-6				69			69
#7	6-4	F2	1	10	5-6					54	54	108
#7	7-4	F3	1	10	6-6					51	51	102
#7	8-4	F4	1	10	7-6					10	10	20
#5	5-5½	W1	17			1-0	4-5½			3	3	6
	5-7	W2					4-7			3	3	6
	5-8½	W3					4-8½			3	3	6
	5-10	W4					4-10			3	3	6
	6-0	W5					5-0			3	3	6
	6-1½	W6					5-1½			3	3	6
	6-3	W7					5-3			3	3	6
	6-4½	W8					5-4½			3	3	6
	6-6	W9					5-6			3	3	6
	6-8	W10					5-8			3	3	6
	6-9½	W11					5-9½			3	3	6
	6-11	W12					5-11			3	3	6
	7-0½	W13					6-0½			3	3	6
	7-2	W14					6-2			3	3	6
	7-3½	W15					6-3½			3	3	6
	7-5	W16					6-5			3	3	6
	7-7	W17					6-7			3	3	6
	7-8½	W18					6-8½			3	3	6
	7-10	W19					6-10			3	3	6
	7-11½	W20					6-11½			3	3	6
	8-0½	W21					7-0½			2	2	4
	8-1½	W22					7-1½			2	2	4
	8-3	W23					7-3			2	2	4
	8-4	W24					7-4			2	2	4
	8-5½	W25					7-5½			2	2	4
	8-6½	W26					7-6½			2	2	4
	8-8	W27					7-8			2	2	4
	8-9	W28					7-9			2	2	4
	8-10½	W29					7-10½			2	2	4
	8-11½	W30					7-11½			2	2	4
	9-1	W31					8-1			2	2	4
	9-2	W32					8-2			2	2	4
	9-3½	W33					8-3½			2	2	4
	9-4½	W34					8-4½			2	2	4
	9-6	W35					8-6			2	2	4
	9-7	W36					8-7			2	2	4
	9-8½	W37					8-8½			2	2	4
	9-9½	W38					8-9½			2	2	4
	9-11	W39					8-11			2	2	4
	10-0	W40					9-0			2	2	4
#5	10-1½	W41	17			1-0	9-1½			3	3	6
#7	10-2	W42	17			1-0	9-2			2	2	4
	10-3	W43					9-3			2	2	4
	10-4½	W44					9-4½			2	2	4
	10-5½	W45					9-5½			2	2	4
	10-7	W46					9-7			2	2	4
	10-8	W47					9-8			2	2	4
	10-9½	W48					9-9½			2	2	4
#7	10-10½	W49	17			1-0	9-10½			2	2	4
#6	5-0	A7	17			1-6	3-6			39	39	78
#5	3-6	P3	17			1-6	6	1-6		71	71	142

NOTE PREFIX ALL BENT BARS WITH LETTER 'N'

BARS MARKED * FOR WALLS ABOVE CONSTRUCTION JOINT AT ABUTMENT TO BE FURNISHED BY SUBSTRUCTURAL CONTRACTOR AND PLACED BY SUPERSTRUCTURAL CONTRACTOR.



CONT. "1224(3)

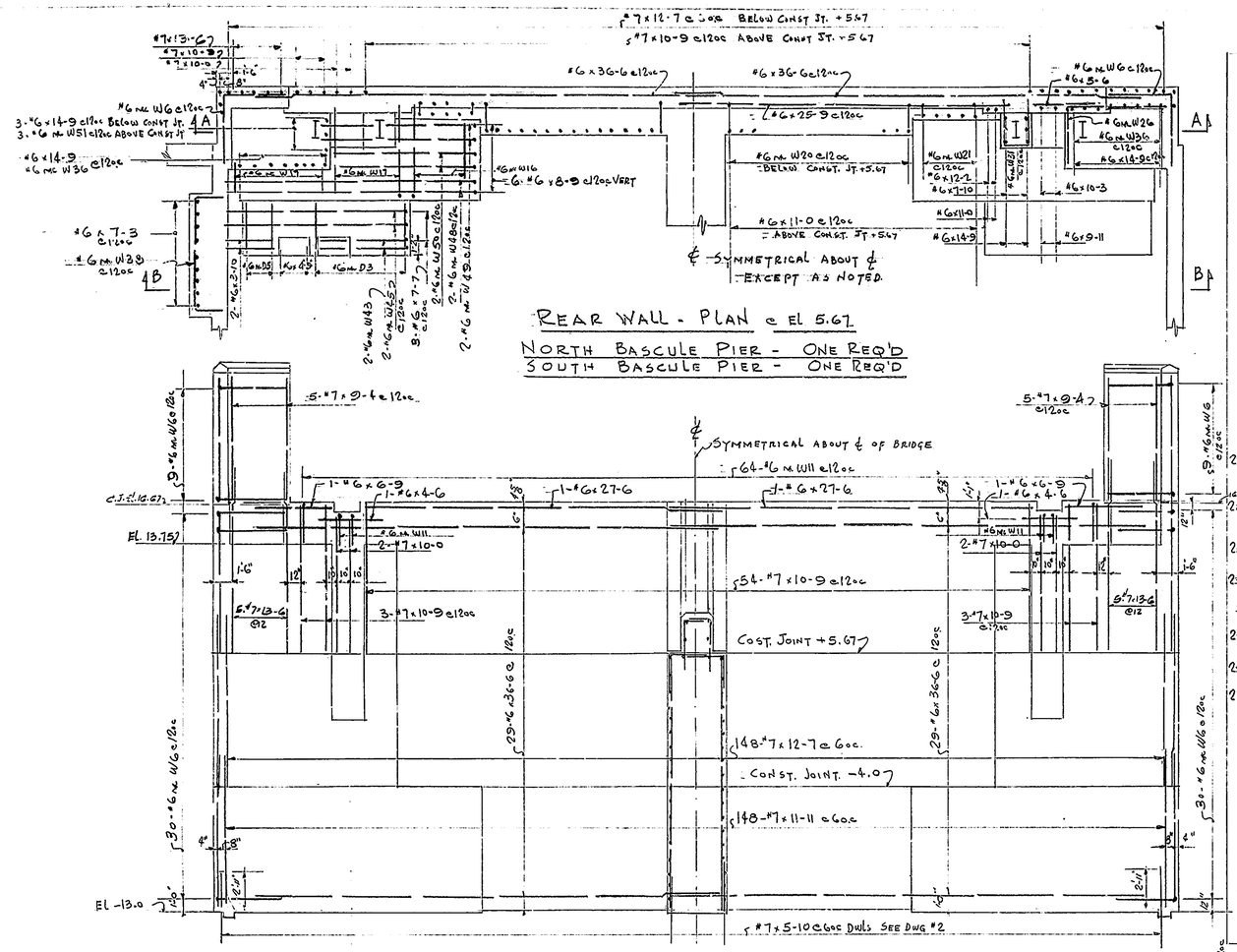
REINFORCING STEEL DETAILS

DETAILS FOR STRUCTURE	NORTH ABUTMENT & RETAINING WALLS
	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE.
ENGINEER	PARSONS, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATALES, N.Y.

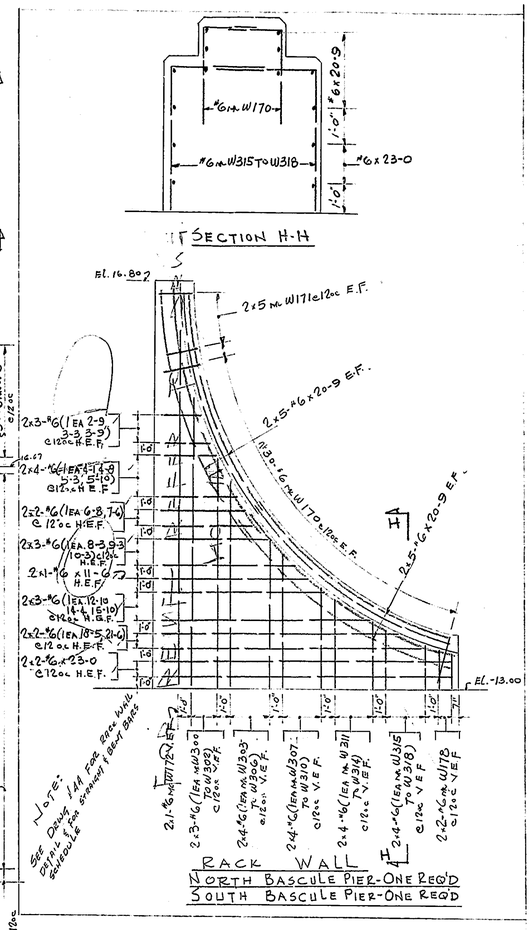
DRAWN BY M CHECKED BY _____ NO 3

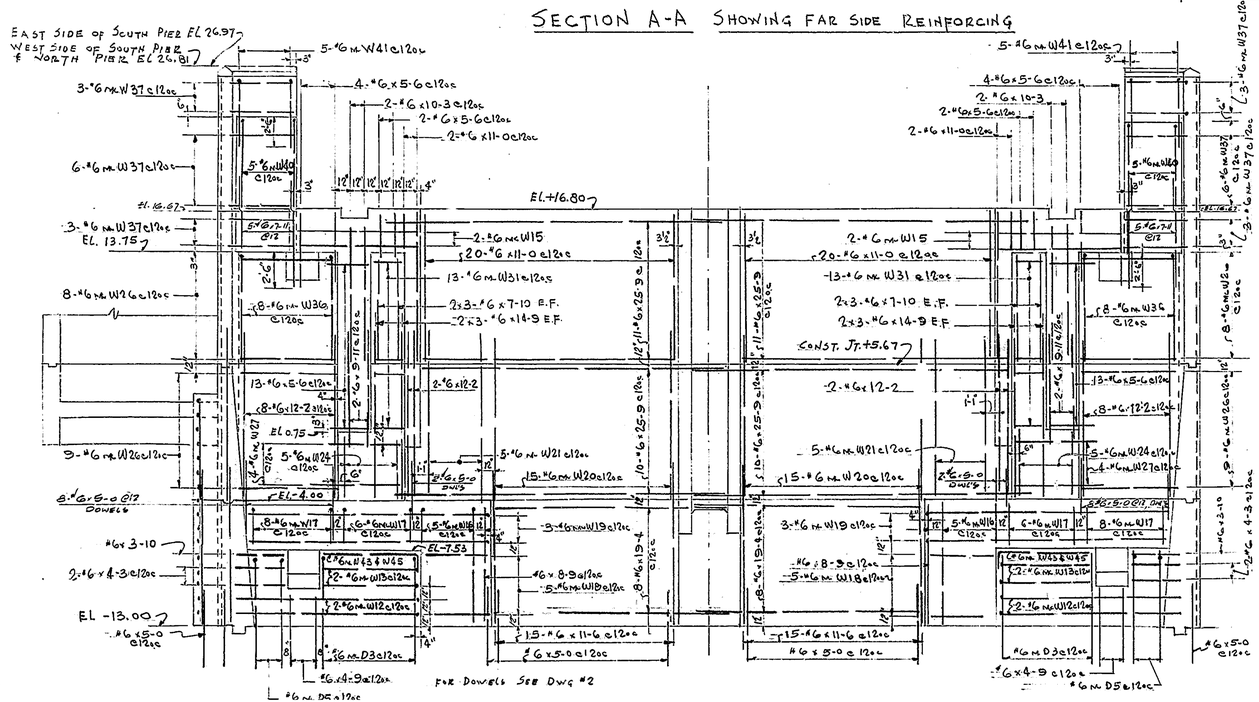
DATE 3/17/54 REV 10/6/54 PER ENG. CORR. 1-17-55

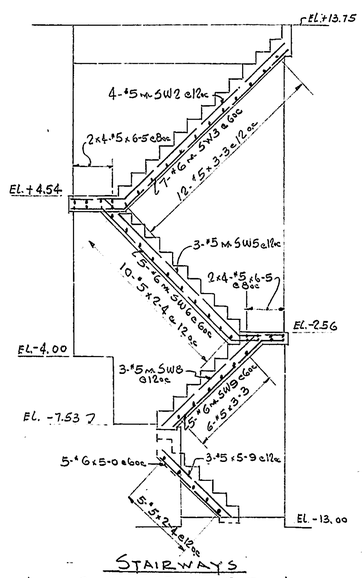
68' 13-7



SECTION A-A SHOWING FAR SIDE REINFORCING







BAR SCHEDULE FOR BASCULE PIER 2 REAR WALLS.

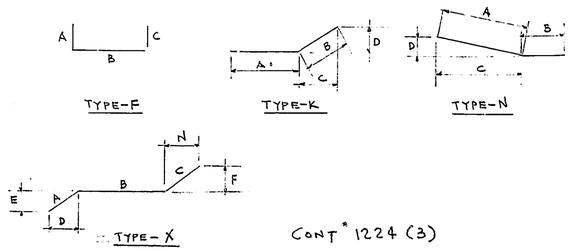
STRAIGHT BARS SIZE	LENGTH	TOTAL	BENT BARS SIZE	LENGTH	MARK	TYPE	A	B	C	D	TOTAL
#7	12-7	296	#6	9-8	W6	F	4-6	5-2			156
#7	10-9	120		5-4	W11	F	2-3	10	2-3		128
#7	10-0	8		18-9	W12	F	5-0	13-9			8
#7	9-4	20		12-6	W13	F	5-0	7-6			8
#6	36-6	116		11-6	W15	F	1-0	9-6	1-0		8
	27-6	4		15-8	W16	F	6-8	7-0			20
	4-6	8		11-6	W17	F	4-6	7-0			56
	6-9	4		14-9	W18	F	7-9	7-0			20
	4-3	8		28-1	W19	F	7-9	20-4			12
	12-2	8		12-5	W20	N	9-1	3-4	9-0	1-0	60
	14-9	68		14-10½	W21	N	11-6½	3-4	11-6	11½	20
	19-4	32		7-10	W24	F	4-5	3-5			20
	25-9	84		13-7	W26	F	5-1	8-6			68
	11-0	88		9-6	W27	F	3-6	6-0			16
	7-10	24		9-2	W31	F	3-5	2-4	3-5		52
	5-6	76		12-8	W36	F	4-10	7-10			32
	10-3	8		7-6	W37	F	3-0	4-6			48
	9-11	8		9-1	W40	F	8-1	1-0			20
	7-7	12		5-9	W41	F	5-2	0-7			20
	3-10	8		10-3	W43	F	0-6	9-9			8
#6	8-9	24		14-6	W45	F	0-6	14-0			8
#7	11-11	296		20-2	W48	F	0-6	19-8			8
#6	11-6	60		7-10	W49	F	0-6	7-4			8
#6	7-11	20		12-10	W50	F	0-6	12-4			8
#7	13-6	20	#6	15-7	W51	F	7-9	7-10			12

BAR SCHEDULE FOR 2 RACK WALLS.

STRAIGHT BARS SIZE	LENGTH	TOTAL	BENT BARS SIZE	LENGTH	MARK	TYPE	A	B	C	D	TOTAL
#6	20-9	40	#6	4-10	W170	F	1-6	3-4			120
	23-0	8		4-0	W171	F	1-6	2-6			20
	18-5	4		28-0	W172	F	3-0	25-0			4
	21-6	4		5-9	W178	F	3-0	2-9			8
	12-10	4		19-5	W300	F	3-0	16-5			4
	14-4	4		21-7	W301		3-0	18-7			4
	15-10	4		23-9	W302		3-0	20-9			4
	11-6	4		13-11	W303		3-0	10-11			4
	8-3	4		15-0	W304		3-0	12-0			4
	9-3	4		16-1	W305		3-0	13-1			4
	10-3	4		17-2	W306		3-0	14-2			4
	6-8	4		10-4	W307		3-0	7-4			4
	7-6	4		11-1	W308		3-0	8-1			4
	4-1	4		11-10	W309		3-0	8-10			4
	4-8	4		12-7	W310		3-0	9-7			4
	5-3	4		7-10	W311		3-0	4-10			4
	5-10	4		8-4	W312		3-0	5-4			4
	2-9	4		8-10	W313		3-0	5-10			4
	3-3	4	#6	9-4	W314	F	3-0	6-4			4
#6	3-9	4	#6	6-7	W315	F	3-0	3-7			4
			#6	6-11	W316	F	3-0	3-11			4
			#6	7-3	W317	F	3-0	4-3			4
			#6	7-7	W318	F	3-0	4-7			4

BAR SCHEDULE FOR 4 STAIRWAYS.

STRAIGHT BARS SIZE	LENGTH	TOTAL	BENT BARS SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	N	TOTAL
#5	3-3	72	#5	15-3	SW2	K	2-9	12-6	2-2	1-11				16
#5	6-5	64	#6	15-8	SW3	K	2-11	12-9	2-1	1-10				28
#5	2-4	60	#5	15-2	SW5	X	1-11½	10-7	2-7½	1-5	1-6½	1-9	2-0	12
#5	5-9	12	#6	15-3	SW6	X	1-9½	10-7	2-10½	1-2	1-4½	1-11	2-1½	20
#6	5-0	20	#5	9-0	SW8	X	1-11	7-1	—	1-4½	1-3½			12
			#6	8-0	SW9	X	1-8	6-4	—	1-3	1-1½			20



CONT. 1224 (3)

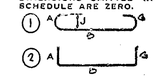
REV. CONST. JOINT ADDED AT -4-0 PER ENG. CORR.	11/22/54 12/15/54
REV. CONST. JOINT ADDED AT +16.67	7/18/55
RACK WALL REDESIGNED	7/6/55
REV. AS PER ENG. CORR.	7/25/55

REINFORCING STEEL DETAILS

DETAILS FOR STRUCTURE	BASCULE PIER REAR WALL, RACK WALLS & STAIRWAY
LOCATION	WALNUT STREET BRIDGE
	WILMINGTON, DELAWARE
	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATELES N.Y.

BENT BAR TYPES

ALL DIMENSIONS ARE OUT TO OUT OF BAR.
DIMENSIONS OMITTED IN SCHEDULE ARE ZERO.



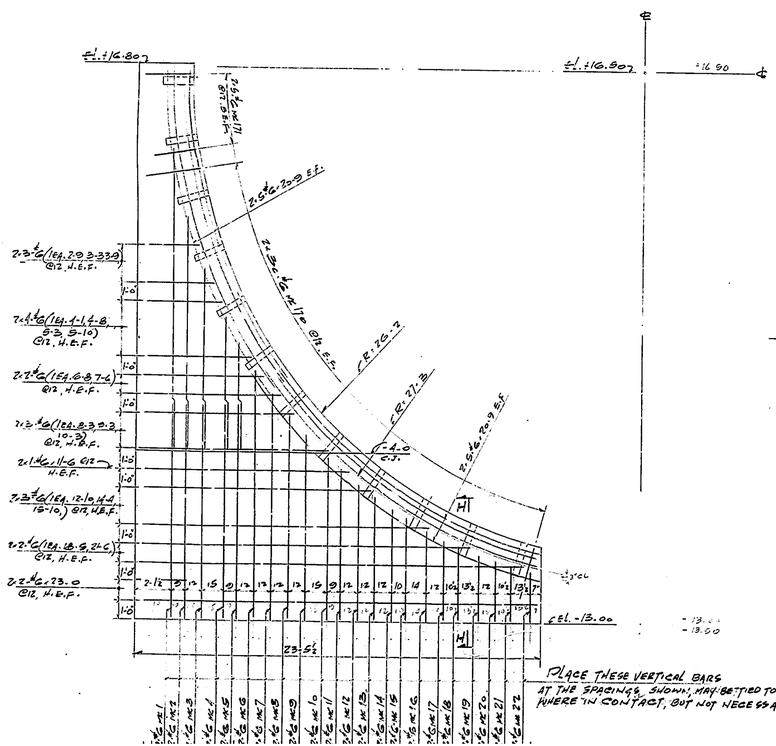
BENT BAR SCHEDULE
FOR 2 RACK WALLS

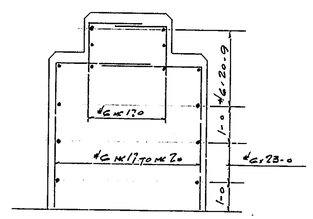
MICROFILMED

MARK	LGTH	SIZE	TYPE	A	B	C	D	E	F	G		TOTAL
MK1	19-4	#6	2	3-0	16-4							4
MK2	15-8			3-0	12-8							4
MK3	12-10			3-0	9-10							4
MK4	10-3			3-0	7-3							4
MK5	8-10			3-0	5-10							4
MK6	16-5			3-0	13-5							4
MK7	15-2			3-0	12-2							4
MK8	14-0			3-0	11-0							4
MK9	13-0			3-0	10-0							4
MK10	11-9			3-0	8-9							4
MK11	11-2			3-0	8-2							4
MK12	10-4			3-0	7-4							4
MK13	9-8			3-0	6-8							4
MK14	9-0			3-0	6-0							4
MK15	8-7			3-0	5-7							4
MK16	7-11			3-0	4-11							4
MK17	7-5			3-0	4-5							4
MK18	7-1			3-0	4-1							4
MK19	6-7			3-0	3-7							4
MK20	6-3			3-0	3-3							4
MK21	6-0			3-0	3-0							4
MK22	5-9			3-0	2-9							4
MK170	4-10	#6	2	1-6	3-4							120
MK171	4-0	#6	2	1-6	2-6							20

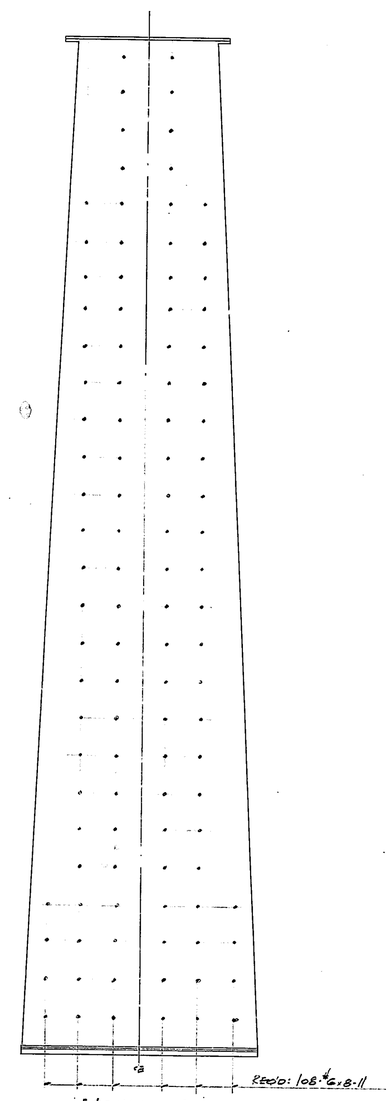
STR. BAR SCHEDULE
FOR 2 RACK WALLS

TOTAL	SIZE	LENGTH
40	#6	20-9
8		23-0
4		18-5
4		21-6
4		12-10
4		14-4
4		15-10
4		11-6
4		8-3
4		9-3
4		10-3
4		6-8
4		7-6
4		4-1
4		4-8
4		5-3
4		5-10
4		2-7
4		3-3
4	1	3-7
20	#6	11-6
FOR 4 TRUNNION SUPPORTS 432	#6	8-11





SECTION H-H



ELEVATION
TRUNNION SUPPORT
BARS SHOWN FOR ONE - 4 REQ'D

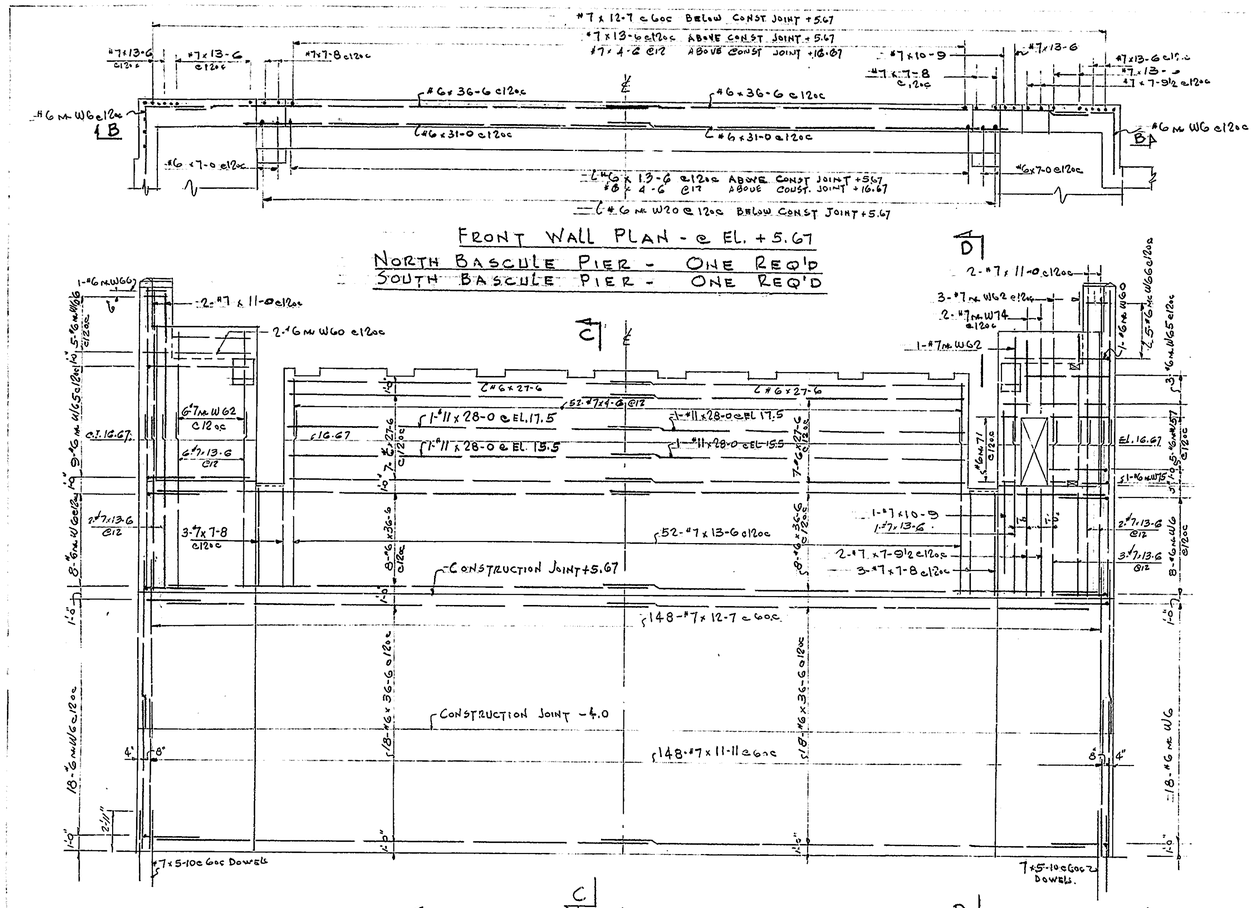
GOE BROTHERS
NEWARK, N. J.

WALNUT STREET BRIDGE
WILMINGTON DELAWARE
RACK WALL

CONT'R: A.S. WIKSTROM INC.

687 13-

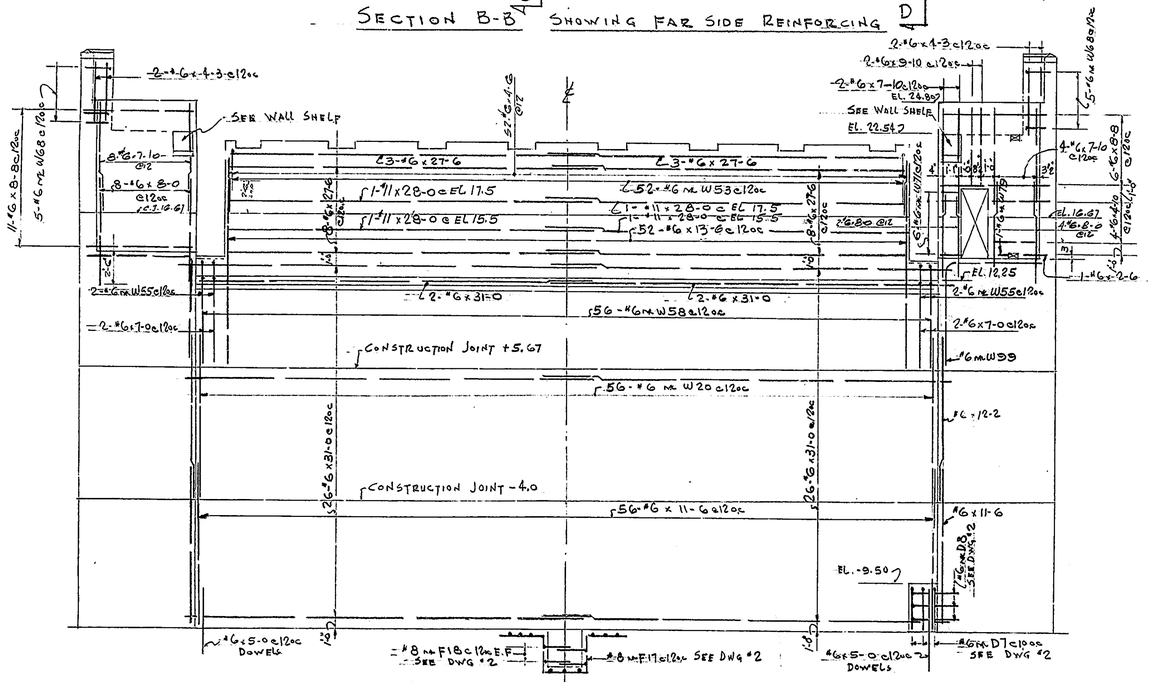
MICROFILMED



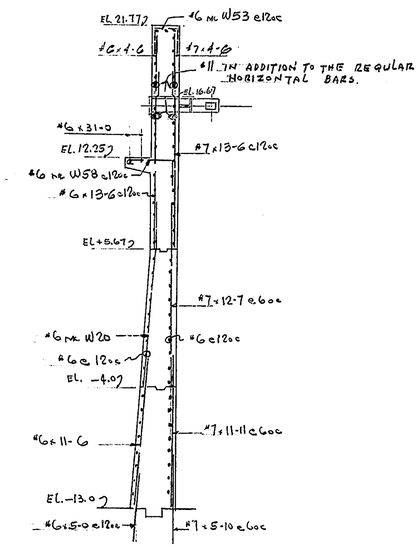
FRONT WALL PLAN - @ EL. +5.67

NORTH BASCULE PIER - ONE REQ'D
SOUTH BASCULE PIER - ONE REQ'D

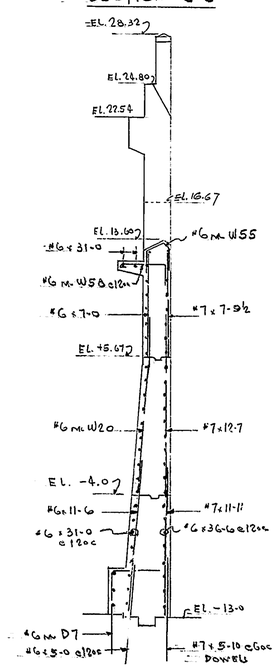
SECTION B-B SHOWING FAR SIDE REINFORCING



SECTION B-B - SHOWING NEAR SIDE REINFORCING



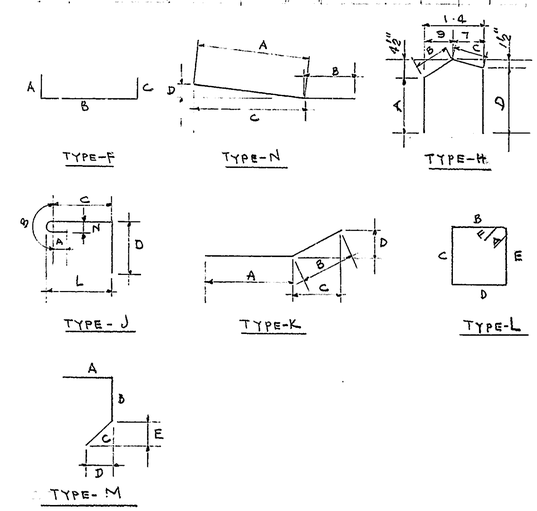
SECTION C-C

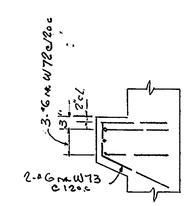


SECTION D-D

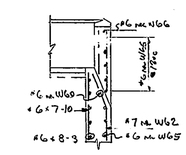
BAR SCHEDULE FOR 2 BASCULE PIER FRONT WALL

STRAIGHT BARS			BENT BARS											
SIZE	LENGTH	TOTAL	SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	H	L	TOTAL
#11	28-0	16	#6	9-8	W6	F	4-6	5-2							104
#7	12-7	296		12-5	W20	N	9-1	3-4	9-0	1-0					112
#7	10-9	2		3-10	W53	F	1-3	1-4	1-3						104
#6	36-6	104		3-11	W55	H	1-3	0-10	0-7	1-3					8
	27-6	72		11-4	W57	F	4-6	6-10							10
	4-3	8		6-6½	W58	J	0-3	0-5½	3-4	2-6			0-3	3-6	112
	13-6	104	#6	8-0	W60	F	7-6	0-6							6
	7-0	8	#7	8-0	W62	K	5-10½	2-1½	2-0	1-1½					20
#6	31-0	112	#6	13-1	W65	F	4-6	8-7							24
#7	11-0	8		6-7	W66	F	4-6	2-1							22
#7	7-8	12		3-1	W68	F	1-0	2-1							20
#7	4-6	104		6-0	W71	L	0-3	1-6	1-3	1-6	1-3	0-3			12
#6	8-0	28		6-6	W72	F	2-8	1-2	2-8						12
#7	7-9½	4	#6	7-4	W73	M	2-8½	1-9	2-10½	2-9	1-0				8
#6	9-10	4	#7	7-10½	W74	K	5-9	2-1½	0-3¾	2-1					4
#6	8-8	34	#6	6-11	W75	F	4-6	2-5							2
#6	4-10	8	#6	3-4	W79	F	1-0	1-4	1-0						2
#6	2-6	2													
#6	11-6	112													
#7	11-11	296													
#7	13-6	132													
#6	4-6	104													
#6	7-10	28													





WALL SHELF
NORTH PIER - 2 REQ'D
SOUTH PIER - 2 REQ'D



SECTION S-S

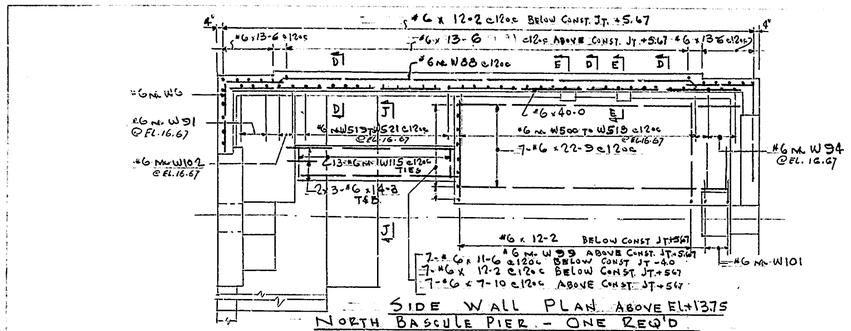
REV. CONST. JOINT ADDED AT +16.67 7/18/55
REV. AS PER ENG. CORR. 7/25/55

REV. CONST. JOINT ADDED AT -4.0 11/22/54
PER ENG CORR. 12/15/54.

CONTRACT 1224(3)

REINFORCING STEEL DETAILS

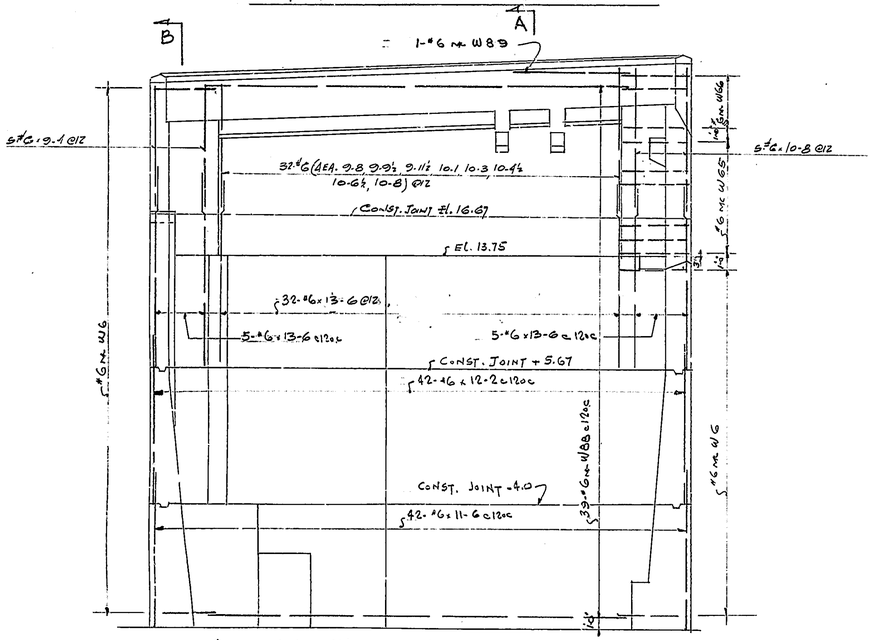
DETAILS FOR	BASCULE PIER - FRONT WALL
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE
ENGINEER	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATELES N.Y.



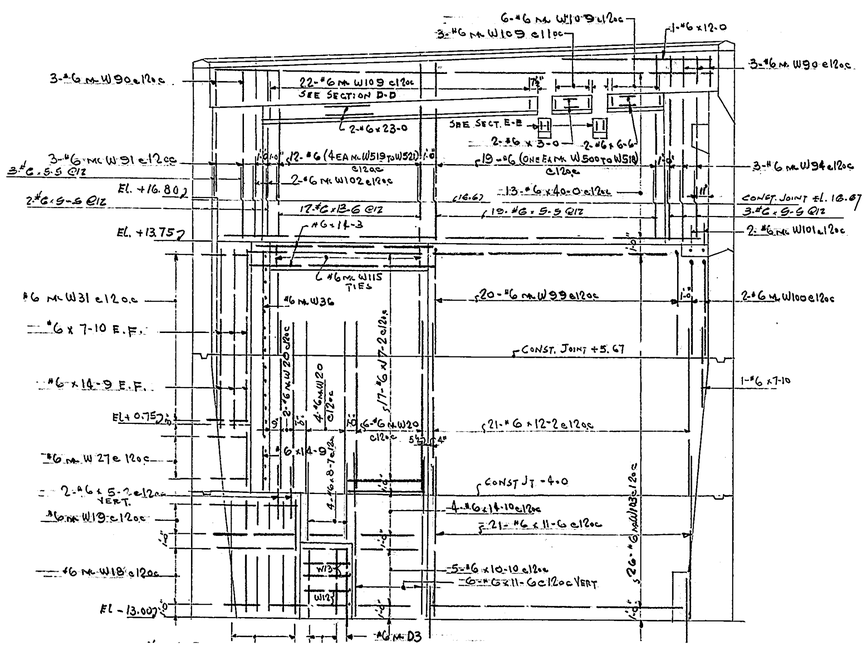
SIDE WALL PLAN ABOVE EL. +13.75

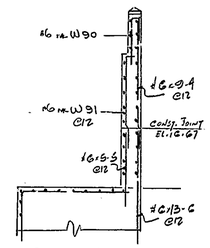
NORTH BASCULE PIER - ONE REQ'D

SOUTH BASCULE PIER - ONE REQ'D

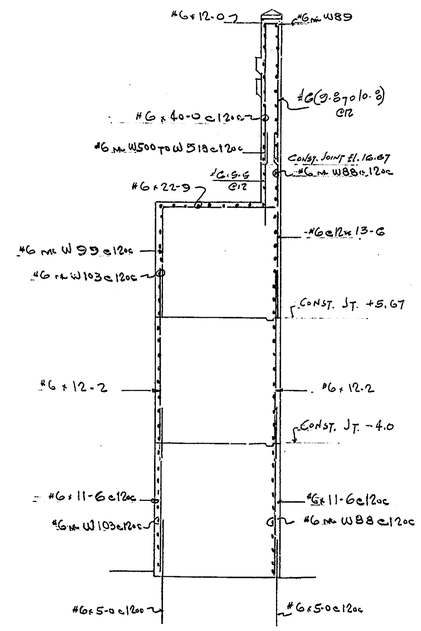


SIDE WALL ELEVATION - SHOWING FAR SIDE REINFORCING

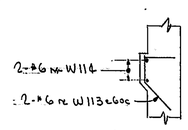




SECTION B-B



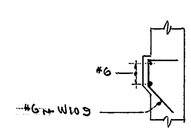
SECTION A-A



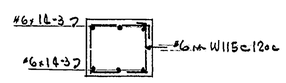
SECTION E-E

NORTH PIER - 2 REQ'D

SOUTH PIER - 2 REQ'D



SECTION D-D

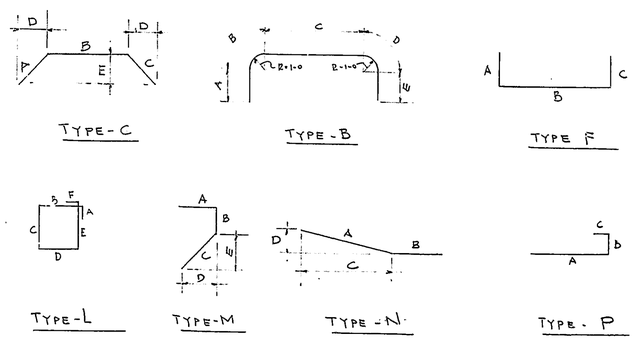


SECTION J-J

487 1272

BAR SCHEDULE FOR 2 SIDE WALLS.

STRAIGHT BARS SIZE	LENGTH	TOTAL	BENT BARS SIZE	LENGTH	MARK	TYPE	A	B	C	D	E		L	TOTAL
#6	9-4	10	#6	12-5	W20	N	9-1	3-4	9-0	1-0				24
	9-8	8		34-3	W88	C	0-11½	32-4	0-11½	0-9	0-9		33-10	78
	9-9½	8		8-11	W89	C	0-11½	7-11½	–	0-9	0-9		8-6½	2
	9-11½	8		6-7	W90	P	5-3	0-4	1-0					12
	10-1	8		9-6	W91	F	0-8	8-10						6
	12-2	140	#6	10-7	W94	F	0-8	9-11						6
	10-3	8												
	10-4½	8												
	10-6½	8	#6	16-6	W99	B	6-10	1-7½	7-9					40
	10-8	18		8-0	W100	F	7-0	1-0						4
	7-10	16		9-3	W101	F	1-2	8-1						4
	40-0	26		12-8	W102	F	0-8	12-0						4
	12-0	2		31-2	W103	F	8-11	22-3						52
	14-3	12		3-8	W109	M	1-2½	0-9	1-8½	1-2½	1-2½			62
	10-10	10		3-11	W113	M	1-3½	0-9	1-10½	1-4	1-4			8
	14-10	8		3-2	W114	F	1-3	0-8	1-3					8
	17-2	34		8-2	W115	L	0-3	1-8	2-2	1-8	2-2	0-3		26
	22-9	14		10-8	W500	F	0-8	10-0						2
	23-0	4		10-8½	W501			10-0½						2
	3-0	4		10-9	W502			10-1						2
#6	6-6	4		10-9½	W503			10-1½						2
#6	11-6	152		10-10	W504			10-2						2
#6	5-2	4		10-10½	W505			10-2½						2
#6	8-7	8		10-11	W506			10-3						2
#6	5-5	54		10-11½	W507			10-3½						2
#6	13-6	108		11-0	W508			10-4						2
				11-0½	W509			10-4½						2
				11-1	W510			10-5						2
				11-1½	W511			10-5½						2
				11-2	W512			10-6						2
				11-2½	W513			10-6½						2
				11-3	W514			10-7						2
				11-3½	W515			10-7½						2
				11-4	W516			10-8						2
				11-4½	W517			10-8½						2
				14-5	W518			10-9						2
				10-3	W519			9-7						8
				10-4½	W520			9-8½						8
			#6	10-6½	W521	F	0-8	9-10½						8



REV. CONST. JOINT ADDED AT -4.0 11/22/54

REV. CONST. JOINT ADDED AT EL. +16.67 7/18/55

REV. AS PER ENG. CORR. 7/25/55

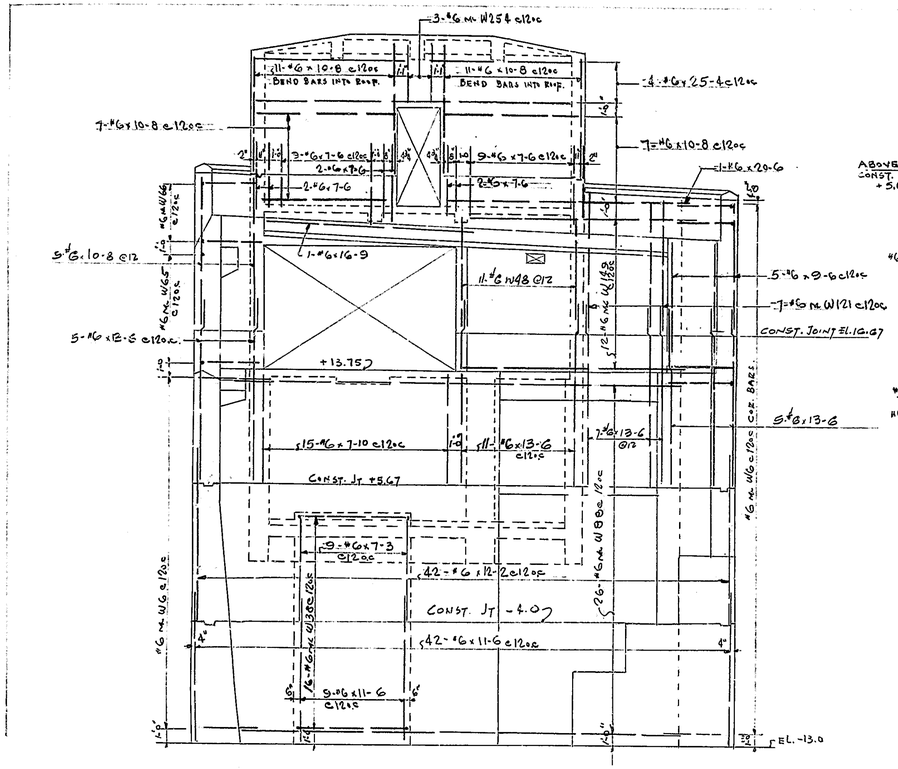
CONTRACT #1224-(3)

REINFORCING STEEL DETAILS

DETAILS FOR	BASCULE PIERS - SIDE WALL
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE
ENGINEER	PARSONS, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATELES, N.Y.

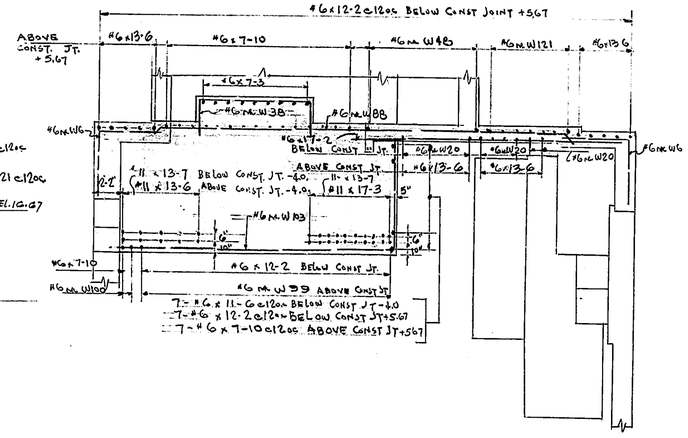
687 - 13 - 2

MICROFILMED



SIDE WALL - ELEVATION

SHOWING FAR SIDE REINFORCING



SIDE WALL (STORAGE HOUSE SIDE) - PLAN

AT CONSTRUCTION JOINT +5.67

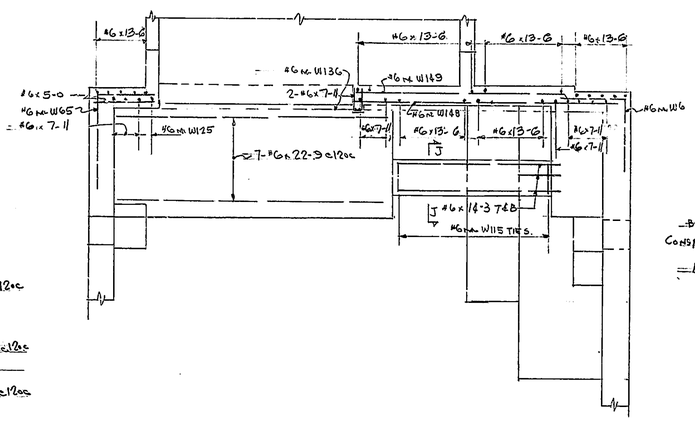
BAR SCHEDULE - NORTH BASCULE PIER STORAGE HOUSE SIDE WALL

STRAIGHT BARS

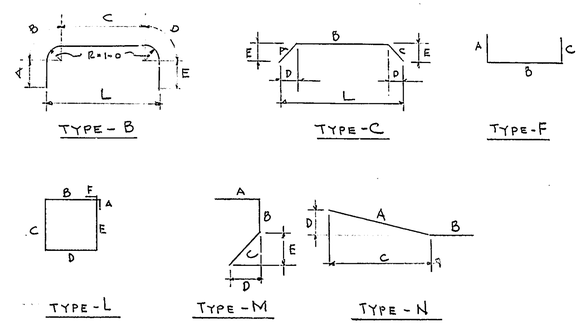
SIZE	LENGTH	TOTAL
#6	12-2	70
	7-10	23
	7-3	9
	13-4	1
	10-8	5
	14-3	6
	10-10	5
	14-10	4
	17-2	17
	22-9	7
	9-6	5
	7-8	7
	6-1	4
	5-4	4
#6	7-1	2
#8	21-6	3
#8	16-10	3
#6	16-9	3
#6	7-6	39
#6	17-6	2
#11	13-6	10
#11	17-3	20
#6	10-8	74
#6	25-4	8
#6	5-0	13
#6	11-6	35
#6	8-7	4
#6	5-2	2
#11	13-7	30
#6	7-11	14
#6	13-6	49
#6	20-6	1

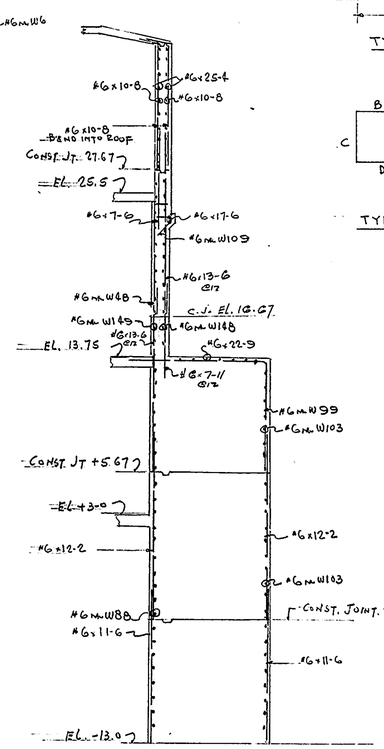
BENT BARS.

SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	N	L	TOTAL
#6	12-5	W20	N	9-1	3-4	9-0	1-0					12
	12-11	W38	F	2-4	8-3	2-4						16
	9-2	W48	F	0-6	8-8							11
#6	34-3	W88	C	0-11½	32-4	10-11½	0-9	0-9			33-10	26
#6	16-6	W99	B	6-10	1-7½	7-9						20
	8-0	W100	F	7-0	1-0							2
	31-2	W103	F	8-11	22-3							26
	3-8	W109	M	1-2½	0-9	1-8½	1-2½	1-2½				31
	8-2	W115	L	0-3	1-8	2-2	1-8	2-2	0-3			13
#6	8-3	W121	F	0-8	7-7							7
#6	8-7	W125	F	0-8	7-11							4
	7-1	W128	F	0-8	6-5							4
	3-9	W136	F	1-8	0-5	1-8						9
	6-8	W139	L	0-3	2-5	0-8	2-5	0-8	0-3			15
	19-9	W148	F	0-8	19-1							12
	17-1	W149	C	-	16-1½	0-11½	0-9	0-9				12
#6	6-2	W254	F	3-8	0-8	1-10						3

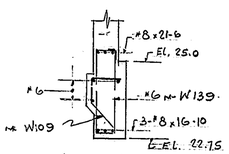


SIDE WALL - PLAN AT ELEV +13.75

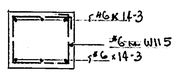




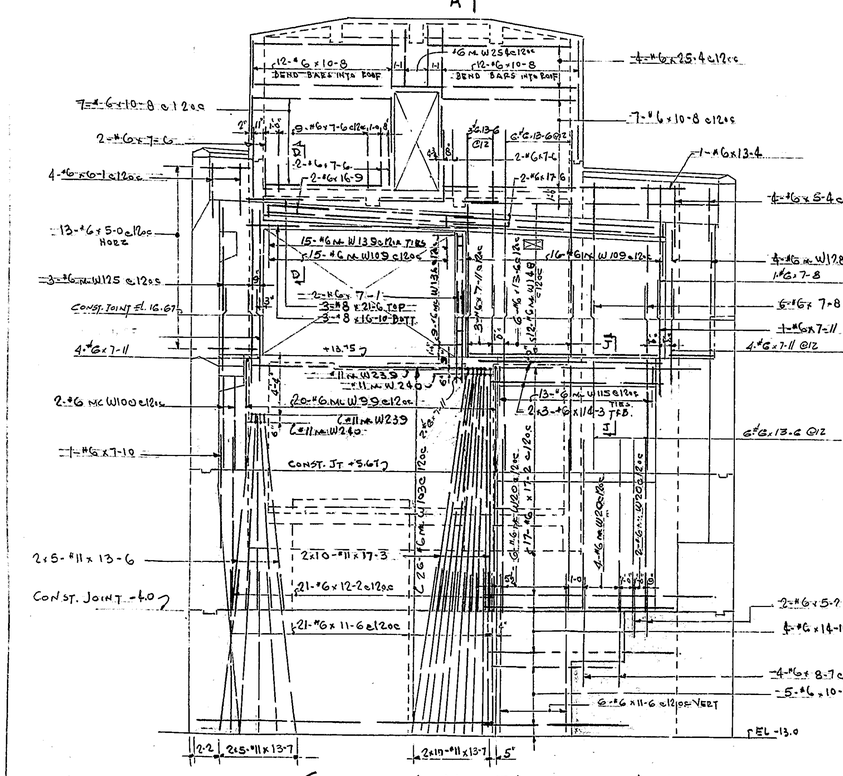
SECTION A-A



SECTION D-D



SECTION J-J



SIDE WALL ELEVATION

NOTE: SEE STORAGE HOUSE FRAMING DWG #8 FOR BARS INTO BASCULE PIER WALL.

REV. AS PER ENG. CORR. 7/25/55

REV. CONST. JOINT @ +10.67 ADDED 7/19/55

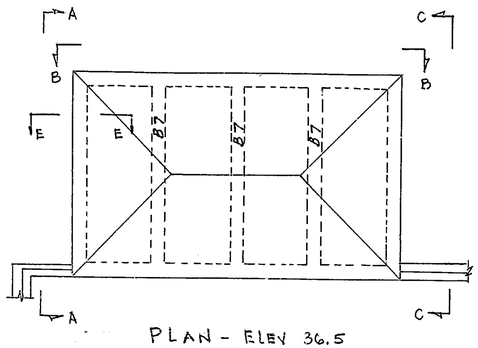
REV. CONST. JOINT @ -4.0 ADDED 11-22-54

CONTRACT # 1224-(3)

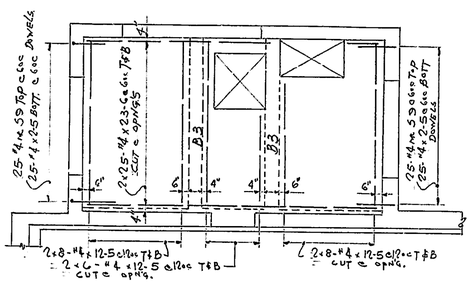
REINFORCING STEEL DETAILS

DETAILS FOR	BASCULE PIER SIDE WALL (STORAGE SIDE)
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON, DELAWARE
ENGINEER	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM, INC.
	SKANEATALES N.Y.

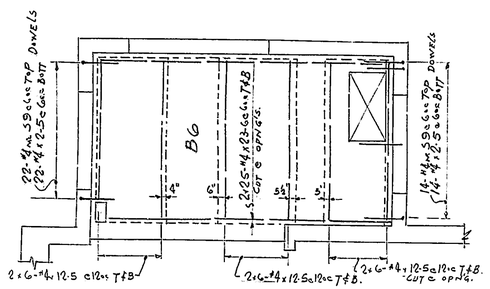
MICROFILMED



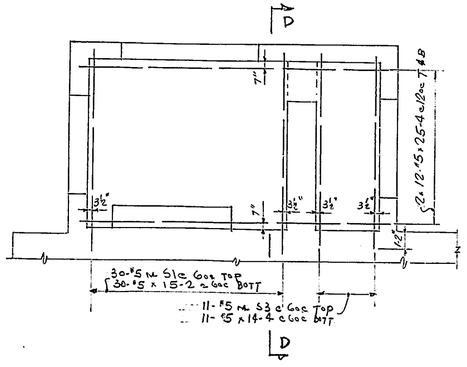
PLAN - ELEV 36.5



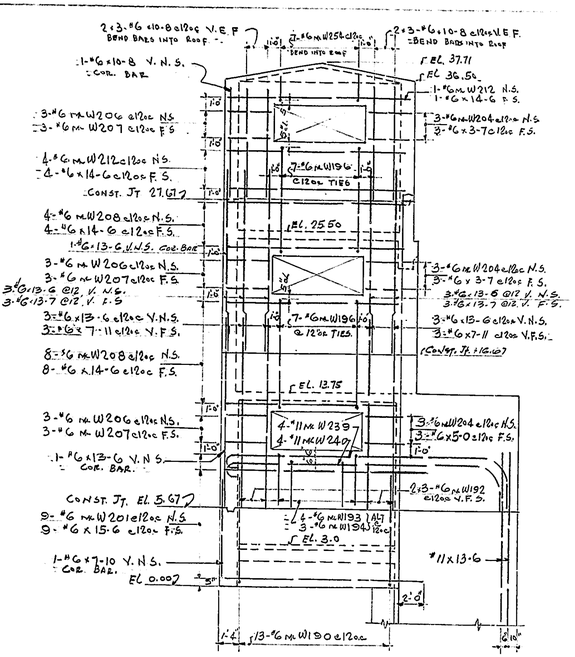
PLAN - ELEV. 25.5



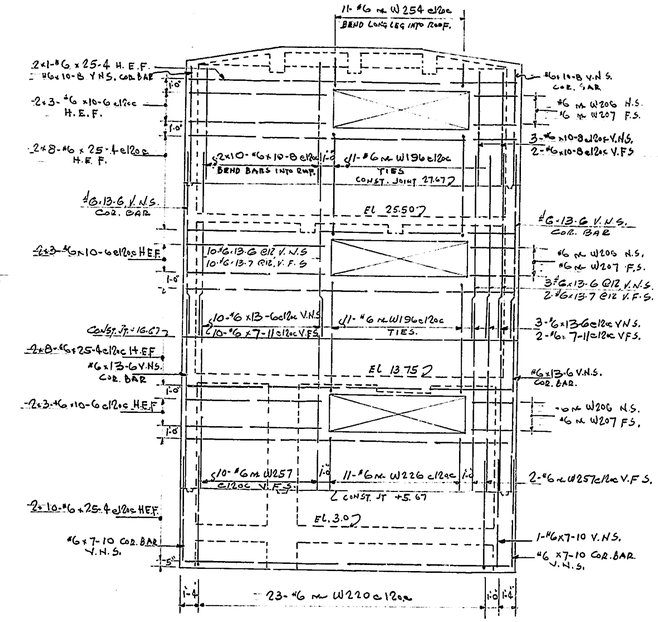
PLAN - ELEV 13.75



PLAN - ELEV. 3.0



ELEVATION A-A



ELEVATION B-B

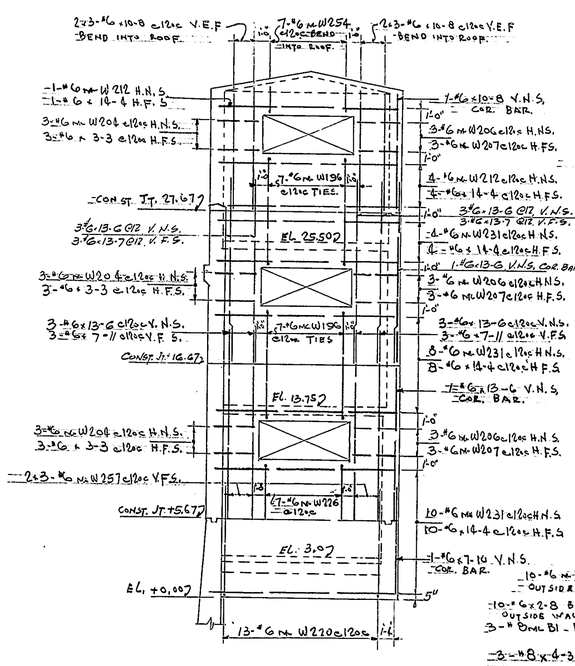
BAR SCHEDULE - STORAGE HOUSE, WALLS, SLAB, & BEAMS.

STRAIGHT BARS

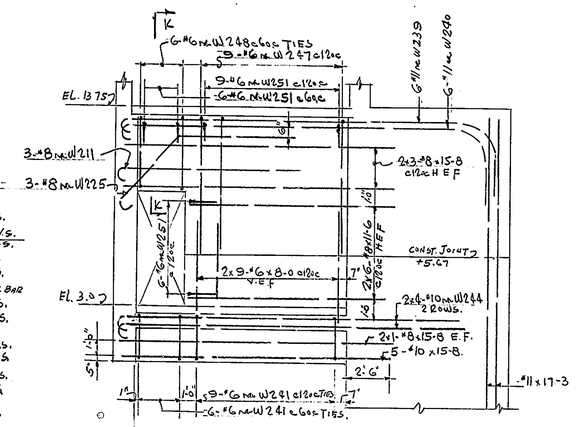
SIZE	LENGTH	TOTAL
#6	7-10	3
	15-6	9
	5-0	3
	14-6	17
	3-7	6
	14-4	27
	13-6	54
	13-7	24
	3-3	9
#6	10-8	51
#10	15-8	5
#8	15-8	8
#6	8-0	18
#6	7-8	
#8	11-6	12
#6	25-4	54
#6	10-6	18
#8	4-3	12
#8	12-0	12
#6	2-8	20
#6	14-8	20
#8	12-6	9
#8	14-3	9
#5	15-2	30
#5	14-4	11
#4	12-5	80
#4	2-5	86
#4	23-6	100
#5	25-4	24
#6	7-11	24

BENT BARS

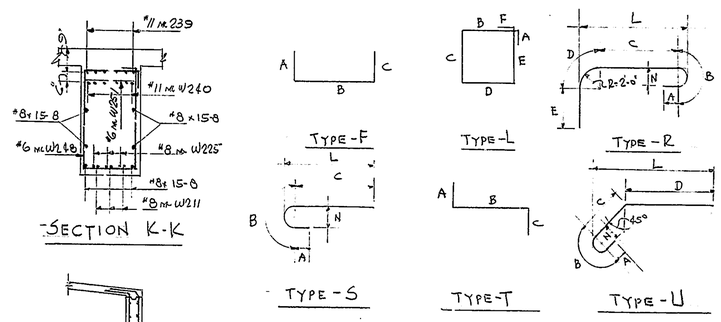
SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	N	L	TOTAL
#6	16-10	W190	F	7-10	1-2	7-10						13
	8-6	W192	F	1-2	7-6							6
	8-10	W193	F	3-10	1-2	3-10						4
	7-10	W194	F	3-6	1-2	3-6						3
	16-8	W196	L	0-3	0-8	7-5	0-8	7-5	0-3			30
	18-0	W201	F	2-6	15-6							9
	4-0	W204	F	1-2	2-10							18
	6-5	W206	F	3-2	3-3							18
	5-4	W207	F	2-8	2-8							18
#6	17-6	W208	T	2-6	13-9	1-3						12
S	11-0	W211	S	0-4	1-2	9-6				0-8	9-11	3
#6	13-4	W212	F	2-6	14-4	2-6						10
#6	16-7	W220	F	7-10	0-11	7-10						86
#8	13-3	W225	U	0-4	1-2	5-3	4-6			0-8	10-4	3
#6	8-7	W226	F	3-10	0-11	3-10						18
#6	16-4	W231	F	2-0	14-4							22
#11	25-11	W239	P	0-4	1-5	19-3	3-2	1-9		0-10	21-9	10
#11	24-11	W240	P	0-4	1-5	18-3	3-2	1-3		0-10	21-3	10
#6	7-10	W241	L	0-3	1-9	1-11	1-9	1-11	0-3			15
#10	20-10	W244	S	0-4	1-5	19-1				0-10	19-7	8
#6	16-9	W247	F	7-5	1-11	7-5						9
#6	11-4	W248	L	0-3	1-11	3-6	1-11	3-6	0-3			6
#6	3-11	W251	F	1-0	1-11	1-0						21
#6	6-2	W254	F	3-8	0-8	1-10						25
#6	8-0	W257	F	0-8	7-4							18
#8	7-7	B1	F	4-3	3-4							12
#4	3-10	B4	L	0-3	0-8	1-0	0-8	1-0	0-3			20
#6	3-6	B9	F	1-0	2-6							20
#4	5-4	B12	F	0-10	3-8	0-10						13
#5	16-9	S1	F	1-7	15-2							30
#5	15-11	S3	F	1-7	14-4							11
#4	3-3	S9	F	0-10	2-5							86



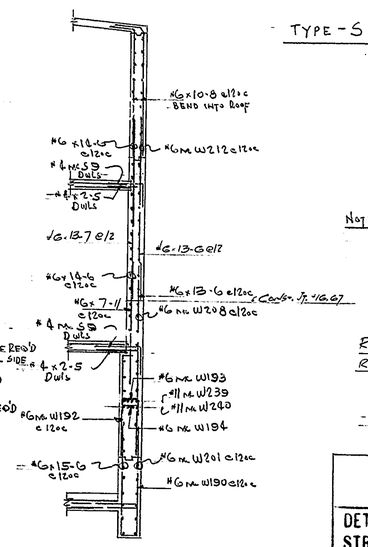
ELEVATION C-C



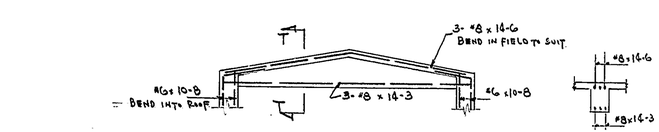
SECTION D-D

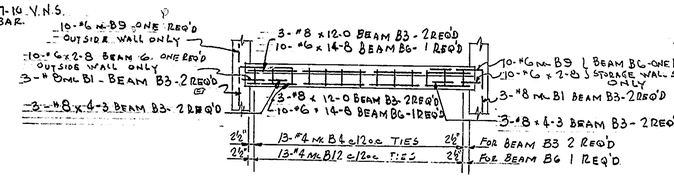


SECTION K-K



SECTION E-E





BEAMS B3 & B6

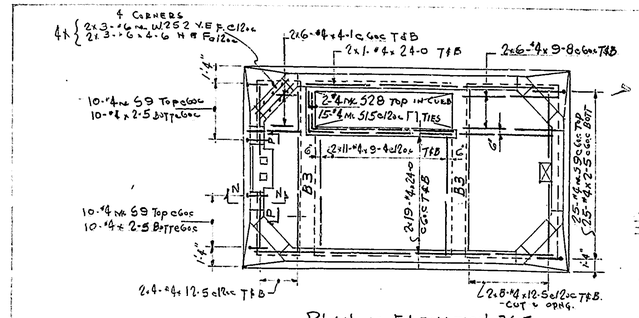
NOTE: FOR BASCULE PIER WALL STORAGE HOUSE SIDE SEE DWG #7.

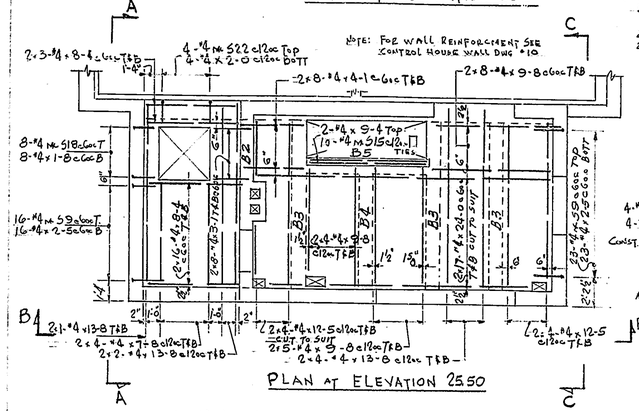
REV.	CONST. JOINT @ +16.67 ADDED	8/22/55
REV.	AS PER ENG. CORR.	8/30/55

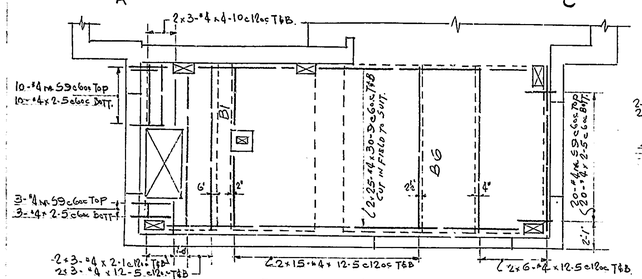
CONTRACT # 1224-(3)

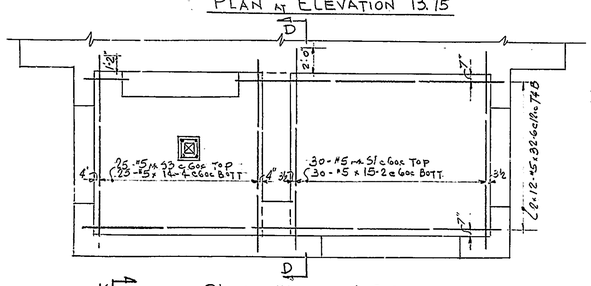
REINFORCING STEEL DETAILS

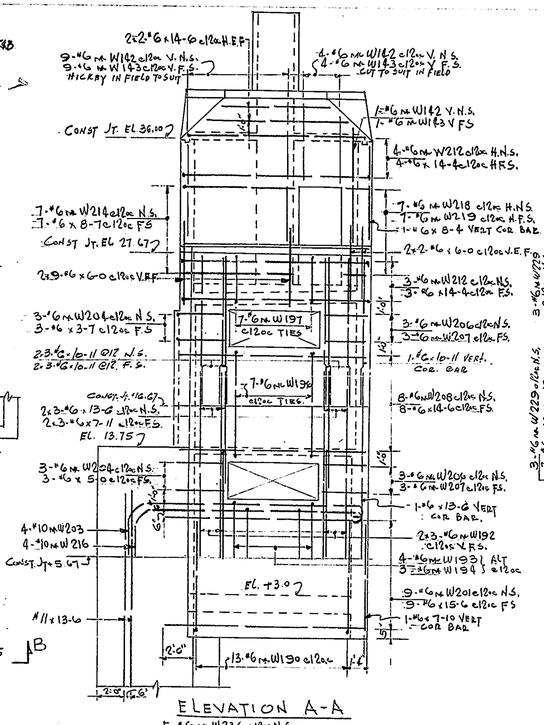
DETAILS FOR STRUCTURE	STORAGE HOUSE FRAMING.
LOCATION	WALNUT STREET BRIDGE
	WILMINGTON, DELAWARE
ENGINEER	PARSONS, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SCHENECTADY, N.Y.

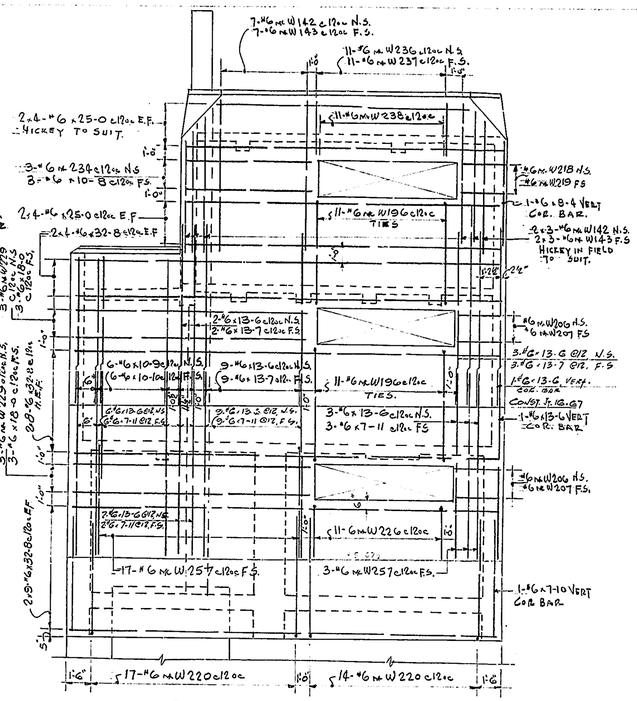


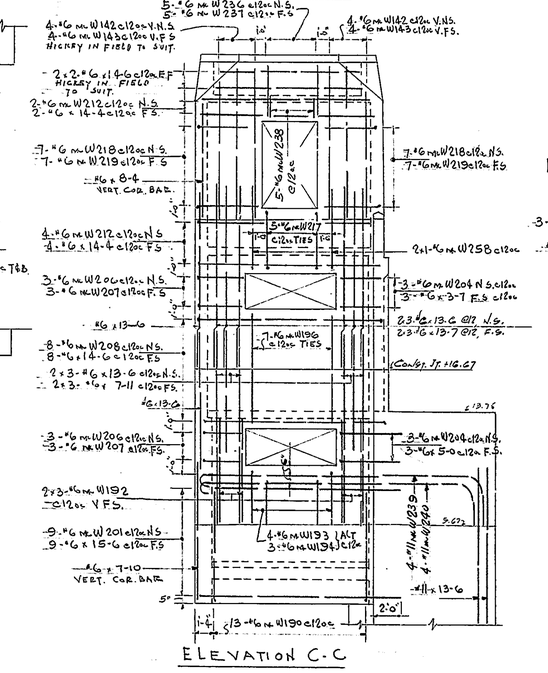


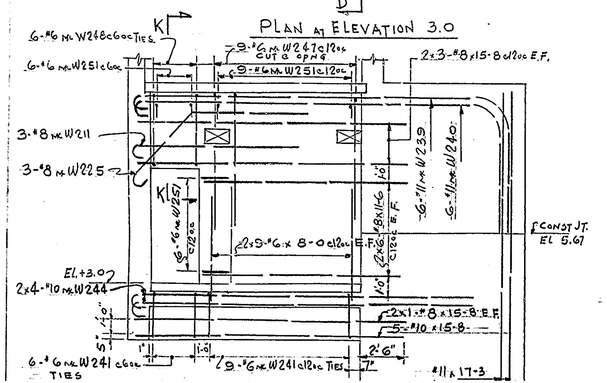


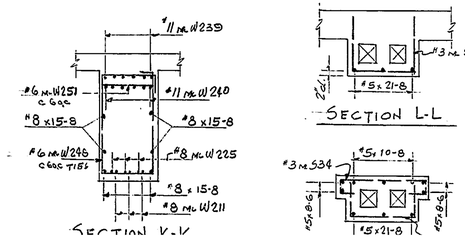


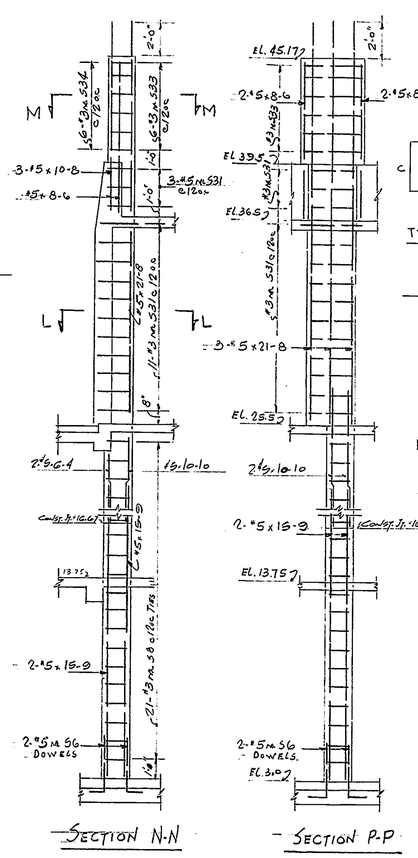


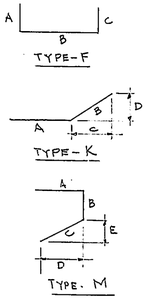


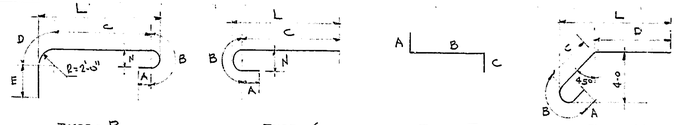










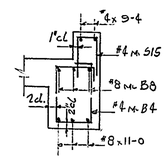


BAR SCHEDULE FOR CONTROL HOUSE

STRAIGHT BARS			BENT BARS											
SIZE	LENGTH	TOTAL	SIZE	MARK	LENGTH	TYPE	A	B	C	D	E	F	N	L	TOTAL
#6	13-6	55	#6	W190	16-10	F	7-10	1-2	7-10						26
	7-11	32		W192	8-6	F	1-2	7-4							12
	7-10	3		W193	8-10	F	3-10	1-2	3-10						8
	6-0	22		W194	7-10	F	3-4	1-2	3-4						6
	15-6	18		W196	16-8	L	0-3	0-8	7-5	0-8	7-5	0-3			36
	5-0	6	#6	W201	18-0	F	2-6	15-6							18
	14-6	24	#10	W203	24-8	R	0-4	1-5	18-0	3-2	1-9			20-3	4
	3-7	6	#6	W204	4-0	F	1-2	2-10							12
	14-4	13		W206	6-5	F	3-2	3-3							12
	8-7	7		W207	5-4	F	2-8	2-8							12
	10-11	13	#6	W208	17-6	T	2-6	13-9	1-3						16
	10-10	6	#8	W211	11-0	S	0-4	1-2	9-6				0-8	9-11	3
			#6	W212	19-4	F	2-6	14-4	2-6						13
			#6	W214	11-9	F	2-6½	8-6½	0-8						7
	8-4	3	#10	W216	2-8	R	0-4	1-5	17-6	3-2	1-3			20-0	4
	32-8	42	#6	W217	9-8	L	0-3	3-11	0-8	3-11	0-8	0-3			5
	18-0	6		W218	7-7½	F	4-7½	3-0							21
	25-0	16		W219	4-10	F	1-2	3-8							21
#6	10-8	3	#6	W220	16-7	F	7-10	0-11	7-10						31
#10	15-8	5	#8	W225	13-3	U	0-4	1-2	5-3	6-6			0-8	10-4	3
#8	15-8	8	#6	W226	8-7	F	3-10	0-11	3-10						11
#6	8-0	18		W229	18-6	F	0-6	18-0							6
#8	11-6	12		W234	11-2	F	0-6	10-8							3
#6	4-6	24		W236	3-11	K	1-1	2-10	1-10½	0-2					16
#8	4-3	45		W237	4-8	Q	1-4	0-8	2-0	0-8					16
	12-0	41	#6	W238	2-8	F	1-0	0-8	1-0						16
	9-8	6	#11	W239	25-11	R	0-4	1-5	19-3	3-2	1-9		0-10	21-9	10
#8	11-0	3	#11	W240	25-5	R	0-4	1-5	18-9	3-2	1-9		0-10	21-3	10
#6	2-8	20	#6	W241	7-10	L	0-3	1-9	1-11	1-9	1-11	0-3			15
#6	14-8	20	#10	W244	20-10	S	0-4	1-5	19-1				0-10	19-7	8
#5	15-2	30	#6	W247	16-9	F	7-5	1-11	7-5						9
	14-4	25		W248	11-4	L	0-3	1-11	3-6	1-11	3-6	0-3			6
	32-6	24		W251	3-11	F	1-0	1-11	1-0						21
#5	19-9	4		W252	3-6	F	0-6	3-0							24
#4	12-5	92		W257	8-0	F	0-8	7-4							20
	4-10	6		W258	14-4	F	6-10	0-8	6-10						2
	2-1	6		W142	11-2	K	2-10	8-4	2-10	0-5					35
#4	30-9	50	#6	W143	11-11	Q	8-7	0-8	2-0	0-8					35
#5	10-8	3	#8	B1	7-7	F	4-3	3-4							43
#4	2-5	117	#4	B4	3-10	L	0-3	0-8	1-0	0-8	1-0	0-3			95
	8-4	38	#4	B5	3-7	Y	0-9	0-4	1-3	0-9	0-6				13
	1-8	8	#8	B8	12-0	F	0-6	11-0	0-6						3
	13-8	14	#6	B9	3-6	F	1-0	2-6							20
	7-8	8	#4	B12	5-4	F	0-10	3-8	0-10						13
	2-0	4	#5	51	16-9	F	1-7	15-2							30
	24-0	74		53	15-11	F	1-7	14-4							25
	9-8	46		56	3-5	F	0-6	2-11							4
	4-1	28	#5	58	5-8	L	0-3	1-3½	1-3½	1-3½	1-3½	0-3			21
#4	9-4	24	#4	59	3-3	F	0-10	2-5							117
#5	6-4	2		515	2-4	F	1-0	0-4	1-0						25
#5	21-8	3		518	3-1	F	1-5	1-8							8
#5	8-6	4		522	4-1	F	2-1	2-0							4
#4	3-1	16	#4	528	14-8	F	3-2	11-6							2
#6	10-9	6	#3	531	6-5	F	2-0	2-5	2-0						14
#6	13-7	20	#3	533	4-11	F	1-3	2-5	1-3						6
#6	10-10	2	#3	534	5-2	W	0-6	0-6	3-2	0-6	0-6				6
			#6	W197	8-8	L	0-3	0-8	3-5	0-8	3-5	0-3			7

BEAM SCHEDULE

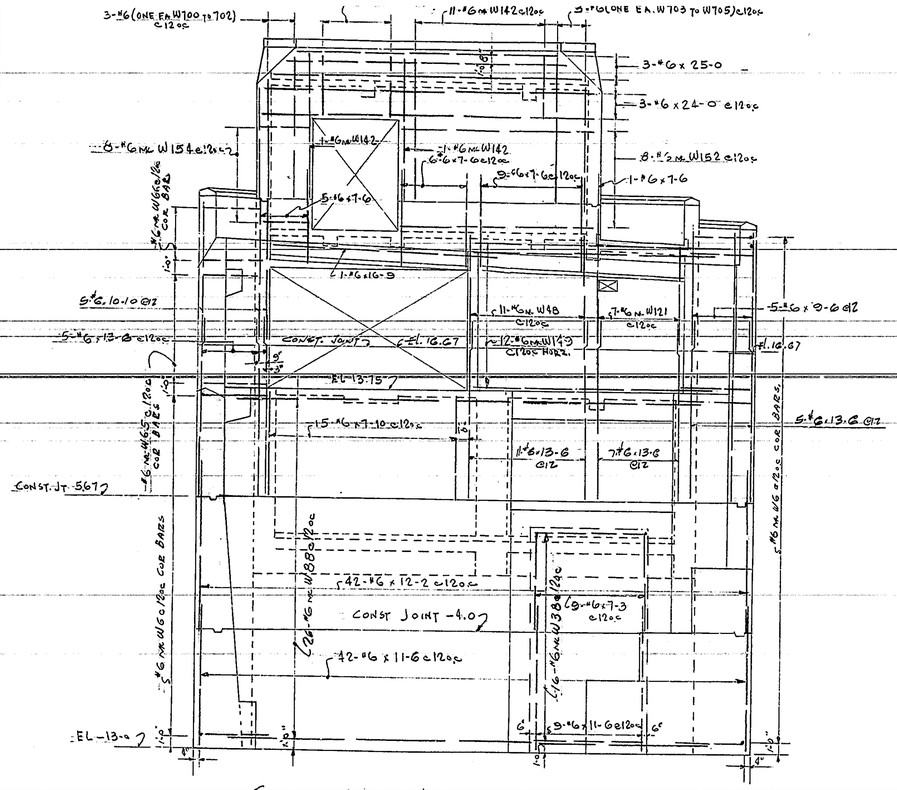
NO REQ'D	MARK	BOTTOM BARS & DOWELS, END	TOP BAR & TOP END BARS, END	DETAIL	TIES REQ'D	TYPE	TIE SPACING
1	B1	3-#8 x 12-0 2x3-#8 x 4-3	3-#8 x 12-0 2x3-#8 ea B1		11-#4 ea B4		1/6 EA END BAL @12 OC
1	B2	3-#8 x 12-0 2x3-#8 x 4-3	2-#8 x 12-0 2x2-#8 ea B1		13-#4 ea B5		1/2½ EA END BAL @12 OC
5	B3	3-#8 x 12-0 2x3-#8 x 4-3	3-#8 x 12-0 2x3-#8 ea B1		13-#4 ea B4		DO
1	B4	3-#8 x 9-8 3-#8 x 4-3 WALL SIDE ONLY	3-#8 x 9-8 3-#8 ea B1 WALL SIDE ONLY		9-#4 ea B4		DO 1/6 EA END BAL @12 OC
1	B5	3-#8 x 11-0	3-#8 ea B8		10-#4 ea B4		DO 1/2½ 4/12 EA END
1	B6	10-#6 x 14-8 2x10-#6 x 2-8	10-#6 x 14-8 2x10-#6 ea B9		13-#4 ea B12		1/2½ EA END BAL @12 OC



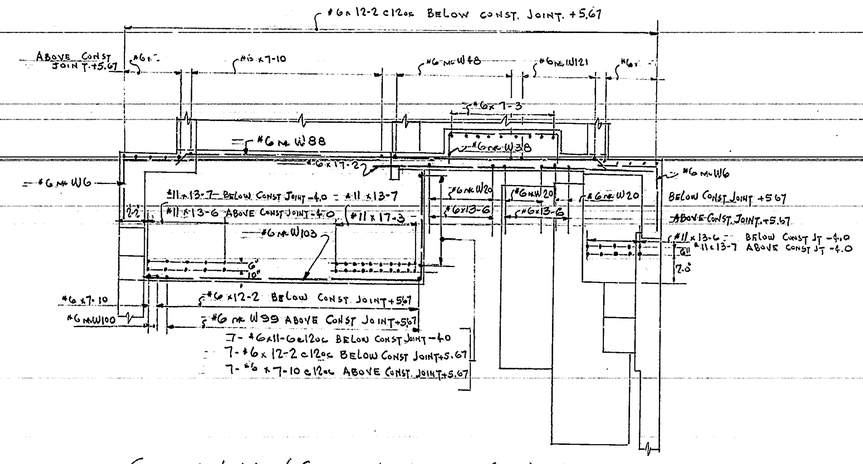
CONTRACT 1224-(3)

REINFORCING STEEL DETAILS

DETAILS FOR	CONTROL HOUSE
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON DELAWARE
ENGINEER	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATELES N.Y.



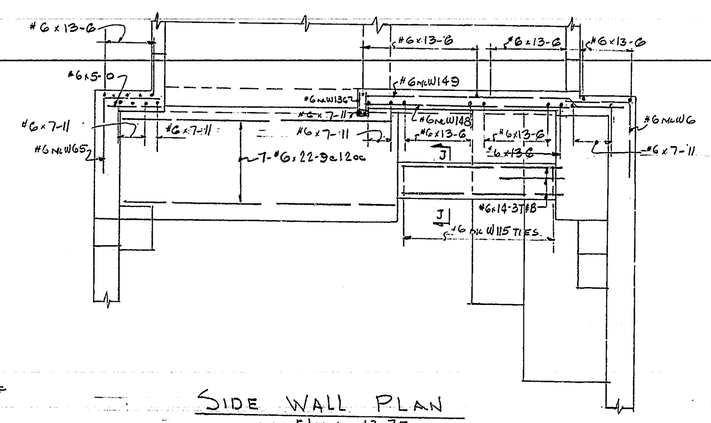
SIDE WALL ELEVATION
SHOWING FAR SIDE REINFORCING



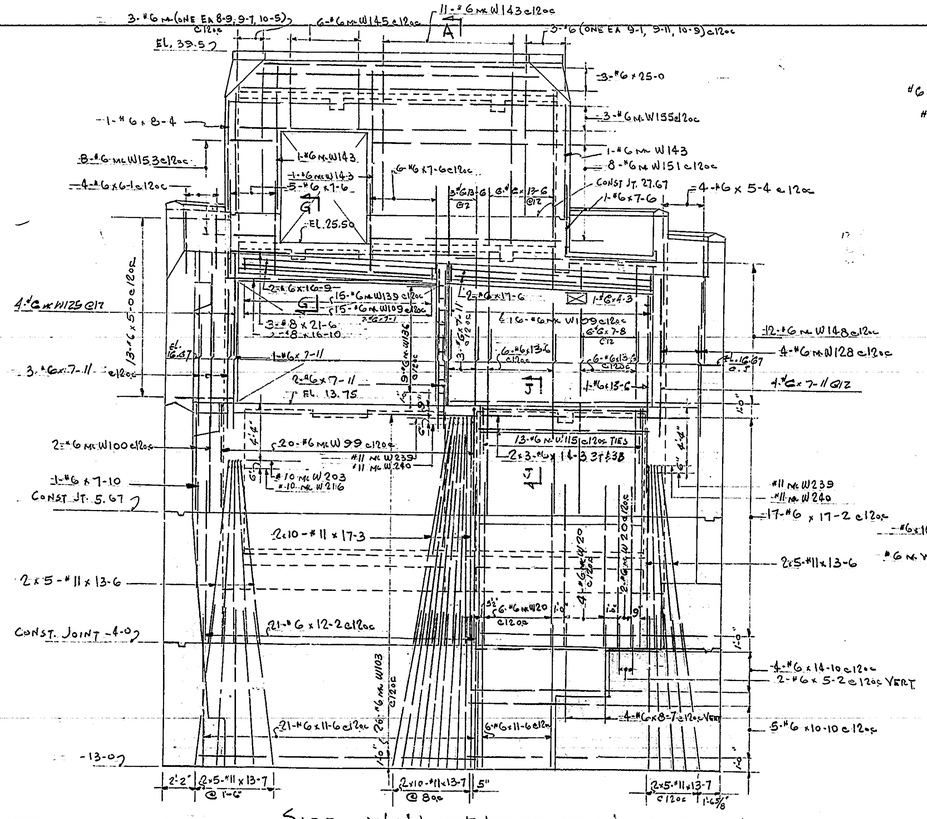
SIDE WALL (CONTROL HOUSE SIDE) - PLAN
AT ELEV +5.67

BAR SCHEDULE - SOUTH BASCULE PIER SIDE WALL CONTROL HOUSE SIDE

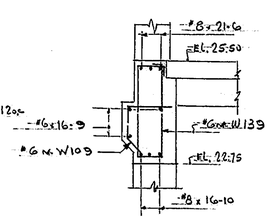
STRAIGHT BARS SIZE	LENGTH	TOTAL	BENT BARS SIZE	LENGTH	MARK	TYPE	A	B	C	D	E	F	N	L	TOTAL
#6	12-2	70	#6	12-5	W20	N	9-1	3-4	9-0	1-0					12
	7-10	23		12-11	W38	F	2-4	6-3	2-4						16
	7-3	9		9-2	W48	F	0-6	8-8							11
	14-3	6	#6	34-3	W88	C	0-11½	32-4	0-11½	0-9	0-9			33-10	26
	10-10	5													
	14-10	4													
	17-2	17	#6	16-6	W99	B	6-10	1-7½	7-9						20
	22-9	7		8-0	W100	F	7-0	1-0							2
	9-6	5		31-2	W103	F	8-11	22-3							26
	10-10	5		3-8	W109	M	1-2½	0-9	1-8½	1-2½	1-2½				31
	7-8	6		8-2	W115	L	0-3	1-8	2-2	1-8	2-2	0-3			13
	4-3	1		8-3	W121	F	0-8	7-7							7
				8-7	W125	F	0-8	7-11							4
				7-1	W128	F	0-8	6-5							4
	6-1	4		3-9	W136	F	1-8	0-5	1-8						9
	5-4	4		6-8	W139	L	0-3	2-5	0-8	2-5	0-8	0-3			15
#6	7-1	2		11-2	W142	K	2-10	8-4	12-10	0-5					13
#8	21-6	3		11-11	W143	Q	8-7	0-8	2-0	0-8					14
#8	16-10	3		5-8	W144	Q	2-4	0-8	2-0	0-8					6
#6	16-9	3		5-2	W145	K	2-4	2-10	2-3½	0-4					6
	7-6	33		19-9	W148	F	0-8	19-1							12
	8-4	1		17-1	W149	C		16-1½	0-11½	0-9	0-9				12
	17-6	2		17-6	W151	F	2-8	14-10							8
	5-0	13		16-4	W152	F	2-2	14-2							8
	24-0	3		5-10	W153	F	2-8	3-2							8
	8-9	1		5-10	W154	F	2-2	3-8							8
	9-7	1		30-4	W155	F	2-8	25-0	2-8						3
	10-5	1		8-10½	W700	K	0-6½	8-4	0-5	0-5					1
	5-1	1		9-8½	W701	K	1-4½	8-4	1-4	0-5					1
	9-11	1		10-6½	W702	K	2-2½	8-4	2-2	0-5					1
#6	10-9	1		9-1	W703	K	0-9	8-4	0-8	0-5					1
#11	13-6	20		9-11	W704	K	1-7	8-4	1-7	0-5					1
#11	17-3	20	#6	10-9	W705	K	2-5	8-4	2-5	0-5					1
#6	25-0	6													
#6	11-6	85													
#6	8-7	4													
#6	5-2	2													
#11	13-7	40													
#6	7-11	13													
#6	13-6	50													



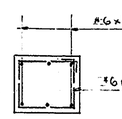
SIDE WALL PLAN
AT ELEV +13.75



SIDE WALL ELEVATION
SHOWING NEAR SIDE REINFORCING

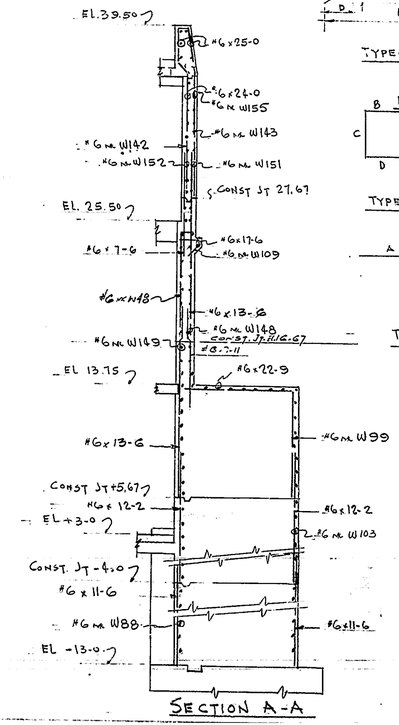


SECTION G-G

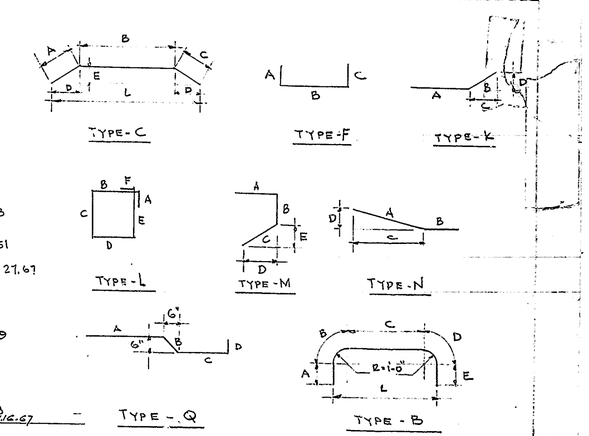


SECTION J-J

NOTE: SEE CONTROL HOUSE FRAMING FOR BARS INTO BASCULE PIER WALL



SECTION A-A



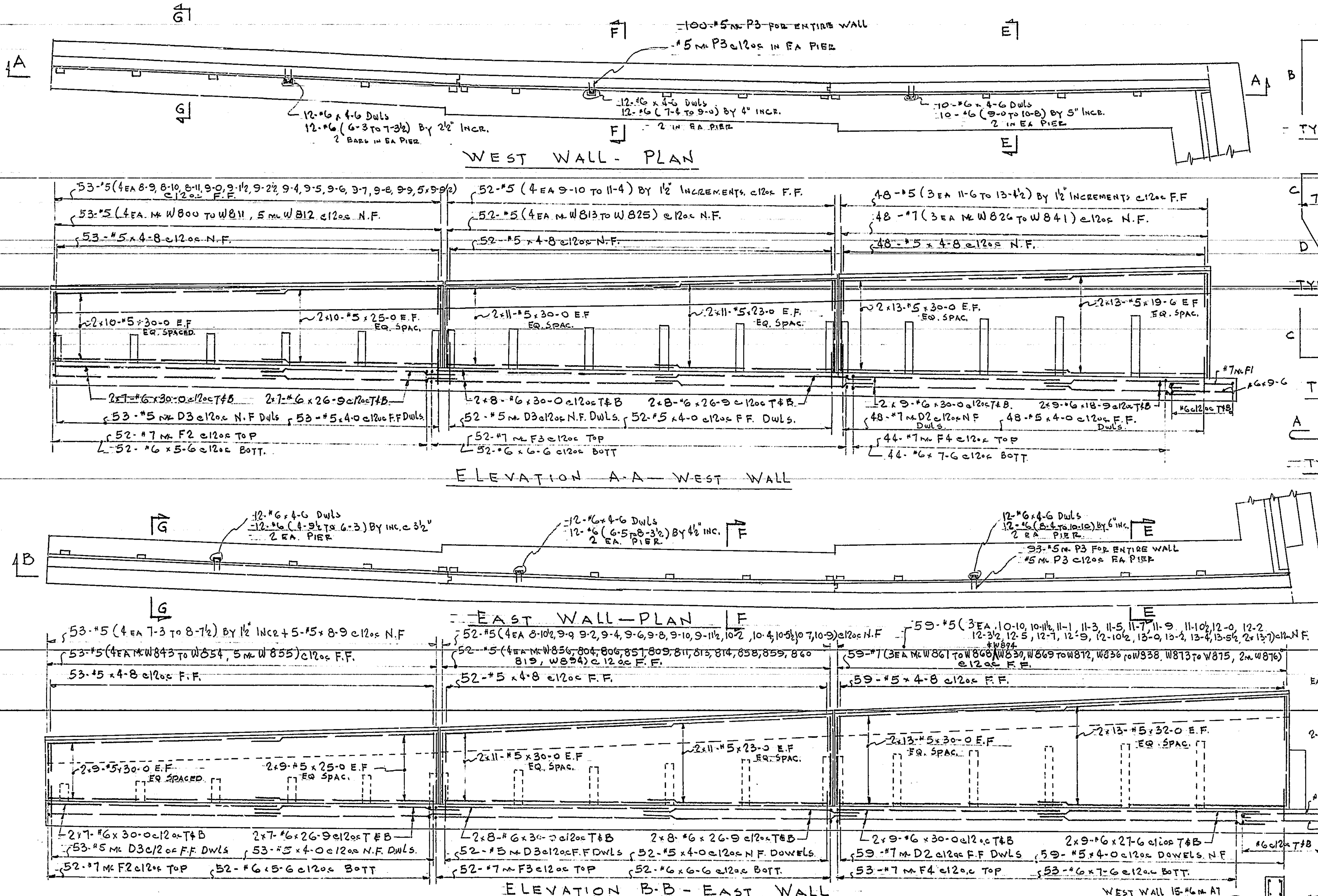
REV.	AS PER ENG. CORR.	7/25/55
REV.	CONST. JOINT ADDED @ +12.67	7/18/55
REV.	CONST JOINT ADDED @ -4.0	11/22/54

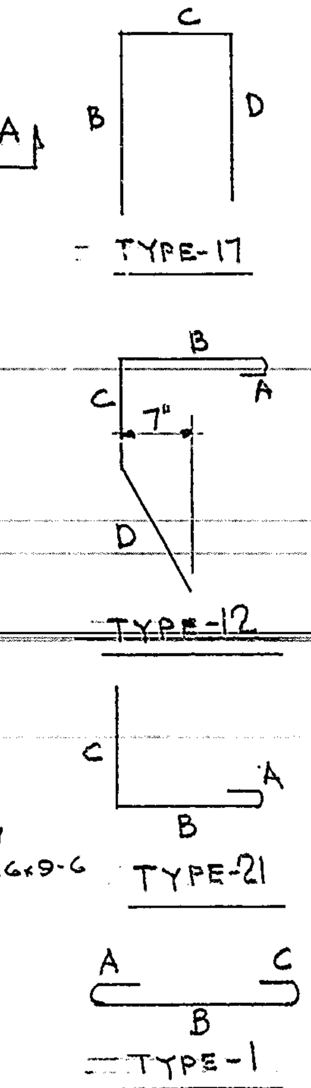
CONTRACT 1224-(3)

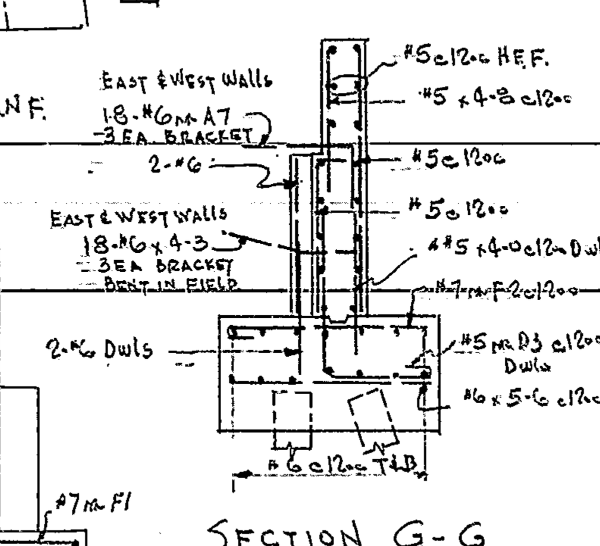
REINFORCING STEEL DETAILS

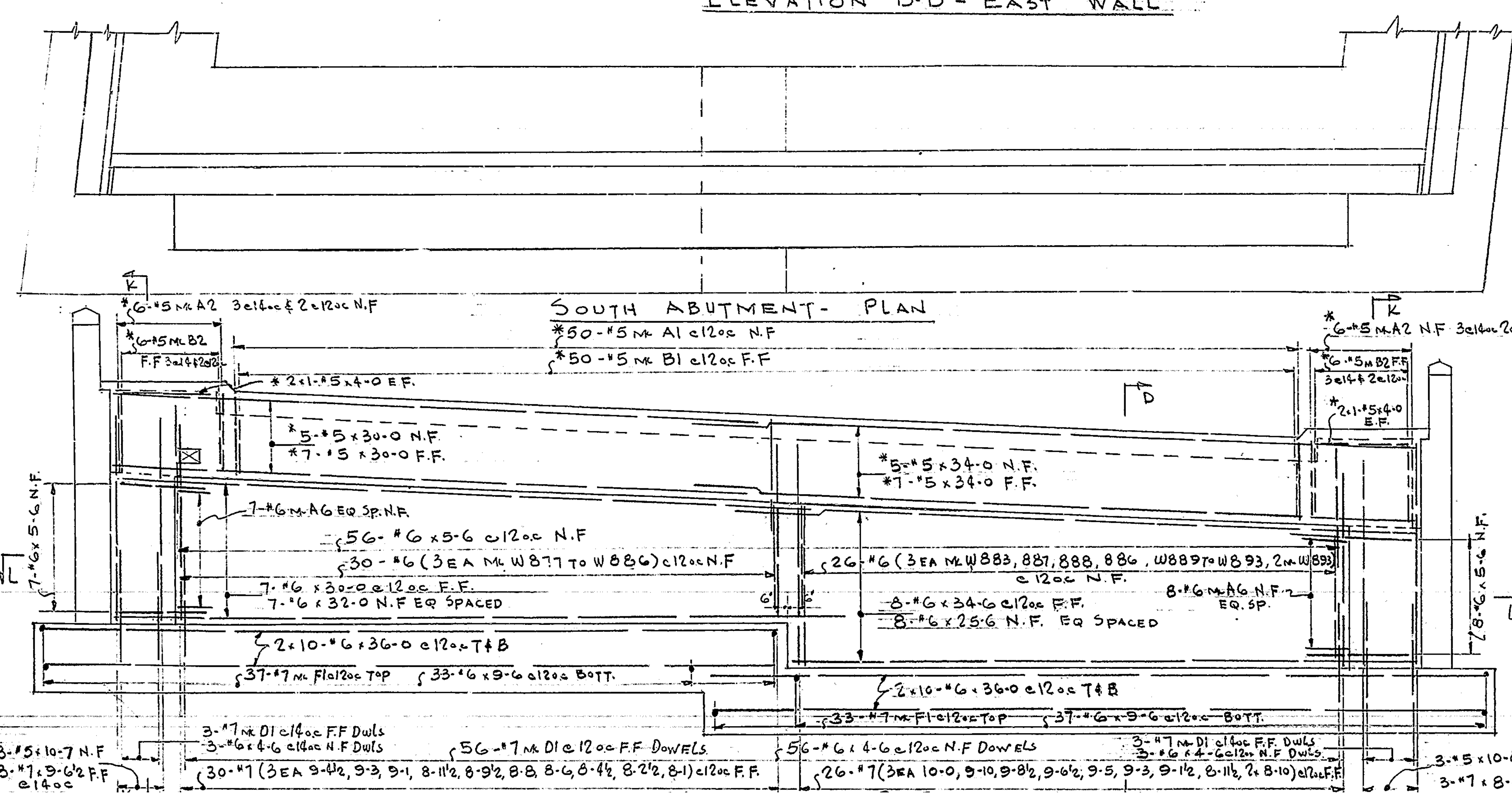
DETAILS FOR	BASCULE PIER SIDE WALL (CONTROL HOUSE SIDE)
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON DELAWARE
ENGINEER	PARSON, BRINCKERHOFF, HALL & MACDONALD
CONTRACTOR	A. S. WIKSTROM INC.
	SKANEATELES N.Y.

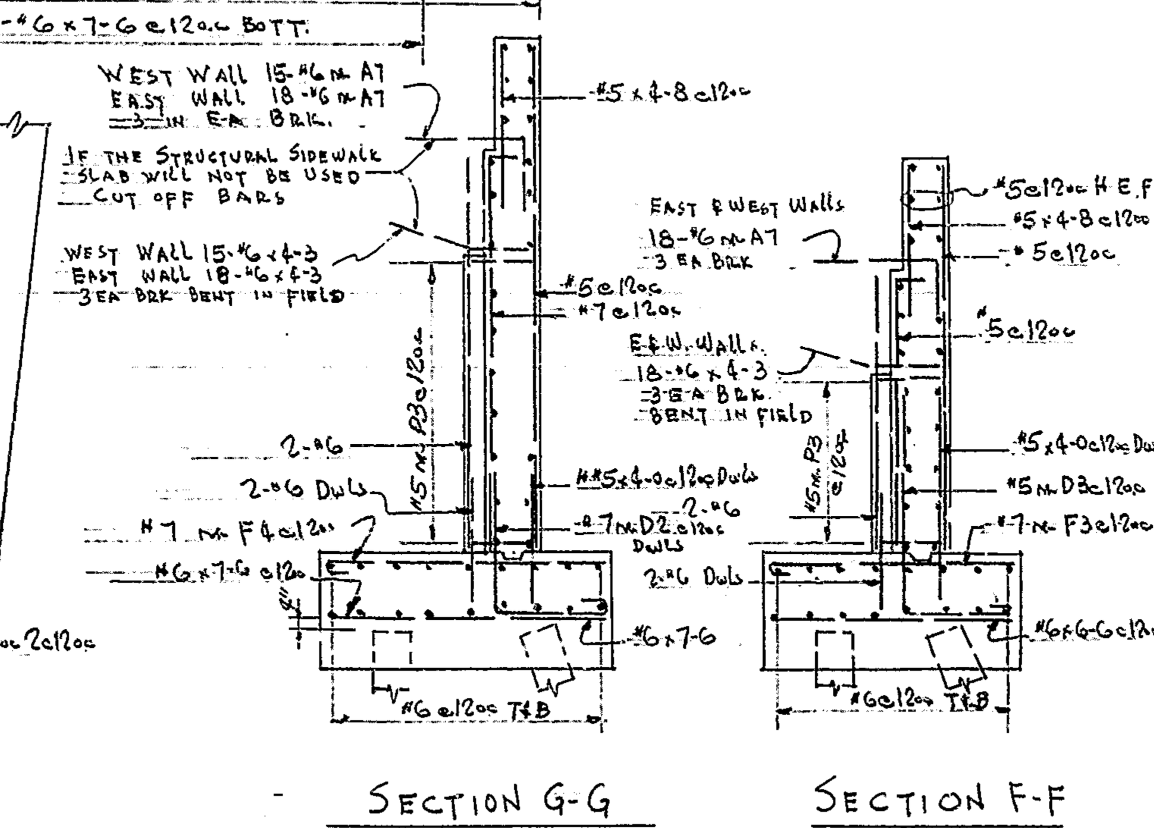
DRAWN BY M. CHECKED BY ____ NO. 10
DATE 11-3-54 REV PER ENG. CORR 12/5/54

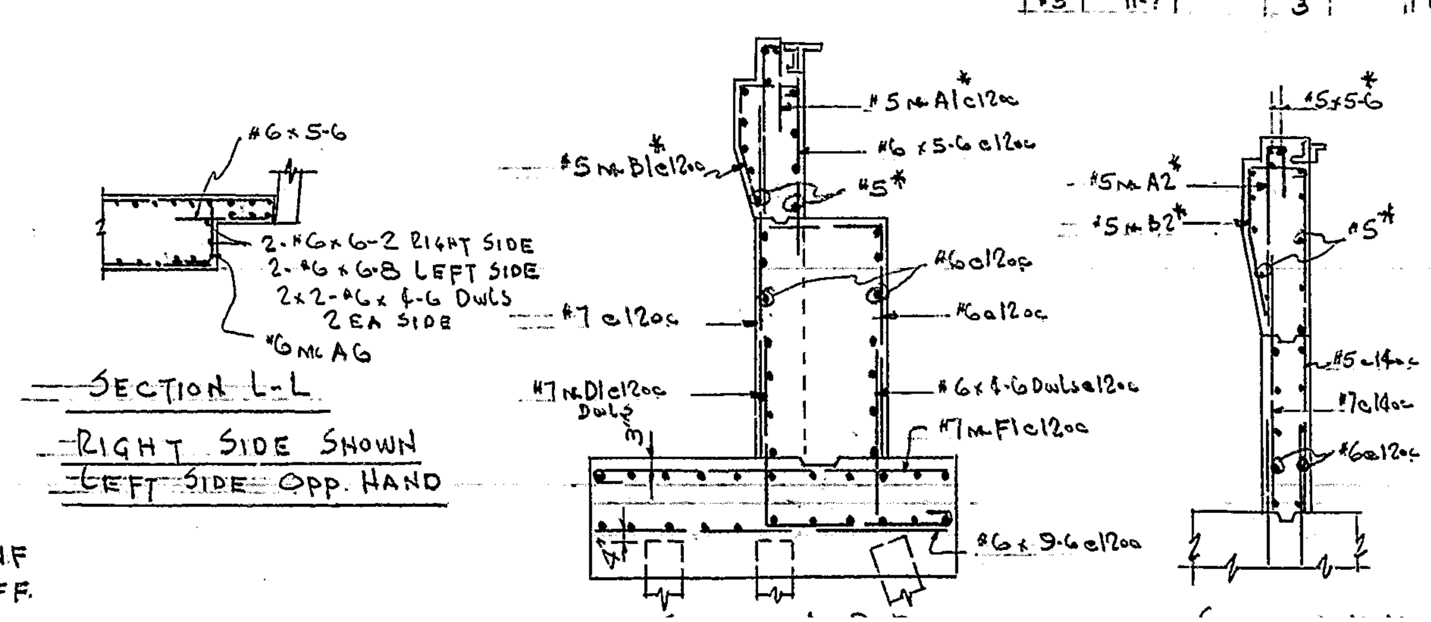












BAR SCHEDULE - SOUTH ABUTMENT & RETAINING WALLS

STRAIGHT BARS

SIZE	LENGTH	WEST WALL	EAST WALL	ABUTM.
#5	13-4		3	
#5	13-5½		3	
#5	13-7		2	
#6	4-9½		2	
	5-1		2	
	5-4½		2	
	5-8		2	
	5-11½		2	
	6-5		2	
	6-9½		2	
	7-2		2	
	7-6½		2	
	7-11		2	
#6	8-3½		2	
#7	8-1			3
	8-2½			3
	8-4½			3
	8-6			3
	8-8			6
	8-9½			3
	8-11½			6
	9-1			3
	9-3			6
	9-4½			3
	9-6½			6
	8-10			3
	9-1½			3
	9-5			3
	9-8½			3
	9-10			3
#7	10-0			3
#6	4-3	51	54	

STRAIGHT BARS

SIZE	LENGTH	WEST WALL	EAST WALL	ABUTM.
#6	36-0			40
#6	34-6			8
#5	34-0			12*
#6	32-0			7
#5	32-0		26	
#6	30-0	48	48	7
#5	30-0	68	66	12*
#6	27-6		18	
#6	26-9	30	30	
#6	25-6			8
#5	25-0	20	18	
#5	23-0	22	22	
#5	19-6	26		
#6	18-9	18		
#5	10-4			3
#5	10-7			3
#6	9-6			70
#6	7-6	44	53	
#6	6-8			2
#6	6-6	52	52	
#6	6-2			2
#6	5-6	52	52	71
#5	5-6			4*
#5	4-8	153	164	
#6	4-6	34	36	66
#5	4-0	153	164	4*
#5	8-9	4	5	
	8-10	4		
	8-11	4		
	9-0	4	4	
	9-1½	4		
	9-2½	4		
	9-4	4	4	
	9-5	4		
	9-6	4	4	
	9-7	4		
	9-8	4	4	
	9-9	4		
	9-9½	5		
	9-10	4	4	
	9-11½	4	4	
	10-1	4		
	10-2½	4		
	10-4	4	4	
	10-5½	4	4	
	10-7	4	4	
	10-8½	4		
	10-10	4	3	
	10-11½	4	3	
	11-1	4	3	
	11-2½	4		
	11-4	4		
	11-6	3		
	11-7½	3		
	11-5	3	3	
	11-10½	3	3	
	12-0	3	3	
	12-1½	3		
	12-3	3		
	12-4½	3		
	12-6	3		
	12-7½	3		
	12-9	3	3	
	12-10½	3	3	
	13-0	3	3	
	13-1½	3		
	13-3	3		
#5	13-4½	3		
#6	6-3	2	2	
	6-5½	2		
	6-8	2		
	6-10½	2		
	7-1	2		
	7-3½	2		
	7-4	2		
	7-8	2		
	8-0	2		
	8-4	2	2	
	8-8	2		
	9-0	4	2	
	9-5	2	2	
	9-10	2	2	
	10-3	2	2	
#6	10-8	2	2	
#5	7-3		4	
	7-4½		4	
	7-6		4	
	7-7½		4	
	7-9		4	
	7-10½		4	
	8-0		4	
	8-1½		4	
	8-3		4	
	8-4½		4	
	8-6		4	
	8-7½		4	
	8-10½		4	
	9-2		4	
	11-3		3	
	10-2		4	
	11-5		3	
	10-9		4	
	12-2		3	
	12-3½		3	
	12-5		3	
	12-7		3	
#5	13-2		3	
#5	11-7		3	

BENT BARS

SIZE	LENGTH	MARK	TYPE	A	B	C	D	WEST WALL	EAST WALL	ABUTM.
#5	6-6	A1	17		3-6	0-6	2-6			50*
#5	7-3	A2	17		4-3	0-6	2-6			12*
#6	4-0	A6	17		1-0	3-0				18
#5	4-8	B1	12	0-7	1-4	1-6	1-3			50*
#5	5-9	B2	12	0-7	1-4	1-6	2-4			12*
#7	10-6	D1	21	0-10	5-0	4-8				62
#7	8-6	D2	21	0-10	3-0	4-8		48	59	
#5	7-5	D3	21	0-7	3-0	3-10		105	105	
#7	10-4	F1	1	0-10	9-6					70
#7	6-4	F2	1	0-10	5-6			52	52	
#7	7-4	F3	1	0-10	6-6			52	52	
#7	8-4	F4	1	0-10	7-6			44	53	
#6	5-0	A7	17		3-6	1-6		51	54	
#5	3-6	P3	17		1-6	0-6	1-6	100	93	
#5	6-9½	W800	17		5-9½	1-0		4		
	6-10½	W801			5-10½			4		
	7-0	W802			6-0			4		
	7-1	W803			6-1			4		
	7-2	W804			6-2			4	4	
	7-3	W805			6-3			4		
	7-4	W806			6-4			4		
	7-5½	W807			6-5½			4	4	
	7-7	W808			6-7			4		
	7-8	W809			6-8			4	4	
	7-9	W810			6-9			4		
	7-10	W811			6-10			4	4	
	7-11	W812			6-11			5		
	8-0	W813			7-0			4	4	
	8-1½	W814			7-1½			4	4	
	8-3	W815			7-3			4		
	8-4½	W816			7-4½			4		
	8-6	W817			7-6			4		
	8-7½	W818			7-7½			4		
	8-9	W819			7-9			4	4	
	8-10½	W820			7-10½			4		
	9-0	W821			8-0			4		
	9-1½	W822			8-1½			4		
	9-3	W823			8-3			4		
	9-4½	W824			8-4½			4		
#5	9-6	W825			8-6			4		
#7	9-8	W826			8-8			3		
	9-9½	W827			8-9½			3		
	9-11	W828			8-11			3		
	10-0½	W829			9-0½			3		
	10-2	W830			9-2			3	3	
	10-3½	W831			9-3½			3		
	10-5	W832			9-5			3		
	10-6½	W833			9-6½			3		
	10-8	W834			9-8			3		
	10-9½	W835			9-9½			3		
	10-11	W836			9-11			3	3	
	11-0½	W837			10-0½			3	3	
	11-2	W838			10-2			3	3	
	11-3½	W839	17		10-3½			3		
	11-5	W840			10-5			3		
#7	11-6½	W841			10-6½	1-0		3		
#5	5-5	W843			4-5				4	
	5-6½	W844			4-6½				4	
	5-8	W845			4-8				4	
	5-9½	W846			4-9½				4	
	5-11	W847			4-11				4	
	6-0½	W848			5-0½				4	
	6-2	W849			5-2				4	
	6-3½	W850			5-3½				4	
	6-5	W851			5-5				4	
	6-6½	W852			5-6½				4	
	6-8	W853			5-8				4	
	6-9½	W854			5-9½				4	
	6-11	W855			5-11				5	
	7-0½	W856			6-0½				4	
	7-6	W857			6-6				4	
	8-3½	W858			7-3½				4	
	8-5	W859			7-5				4	
5	8-7	W860			7-7	1-0			4	
#7	9-3½	W861			8-3½	1-0			3	
#7	9-0	W862			8-0				3	
	9-2	W863			8-2				3	
	9-5	W864			8-5				3	
	9-7	W865			8-7				3	
	9-9	W866			8-9				3	
	9-10½	W867			8-10½				3	
	10-0	W868			9-0				3	
	10-4	W869			9-4				3	
	10-5½	W870			9-5½				3	
	10-7	W871			9-7				3	
	10-9	W872			9-9				3	
	11-4	W873			10-4				3	
	11-6	W874			10-6				3	
	11-7½	W875			10-7½				3	
#7	11-9	W876			10-9	1-0			2	
#6	8-4½	W877			5-4½	3-0				3
	8-6	W878			5-6	3-0				3
	8-7½	W879			5-7½					3
	8-9	W880			5-9					3
	8-11	W881			5-11					3
	9-0½	W882			6-0½					3
	9-2	W883			6-2					6
	9-4	W884			6-4					3
	9-5½	W885			6-5½					3
	9-7	W886			6-7					6
	9-3½	W887			6-3½					3
	9-5	W888			6-5					3
	9-8½	W889			6-8½					3
	9-10	W890			6-10					3
	9-11½	W891			6-11½					3
	10-1	W892			7-1					3
#6	10-3	W893	17		7-3	3-0				2
#5	8-11	W894	17		7-11	1-0			4	

NOTE: BARS MARKED * FOR WALLS ABOVE CONST JOINT AT ABUTMENTS TO BE FURNISHED BY SUBSTRUCTURAL CONTRACTOR & PLACED BY SUPERSTRUCTURAL CONTRACTOR.

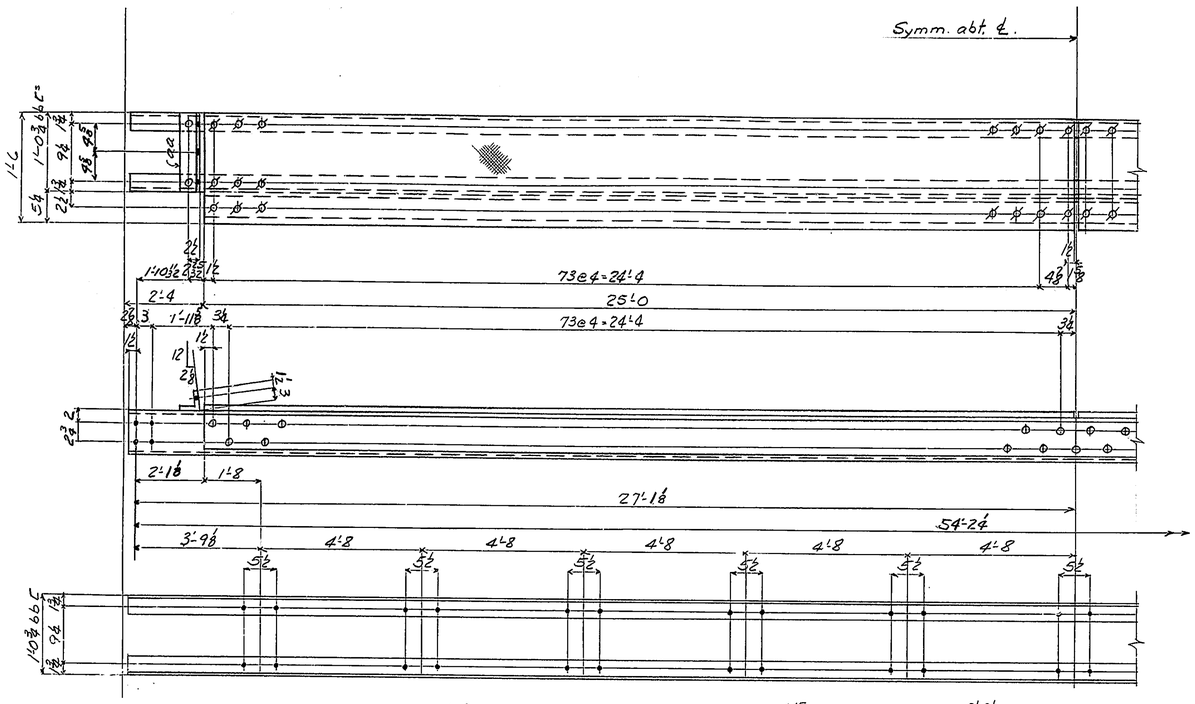
CONTRACT 1224-(3)

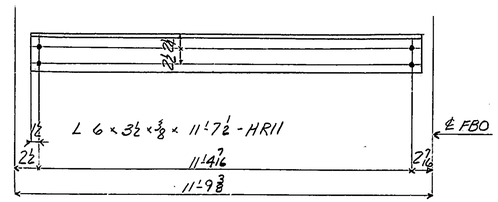
REINFORCING STEEL DETAILS

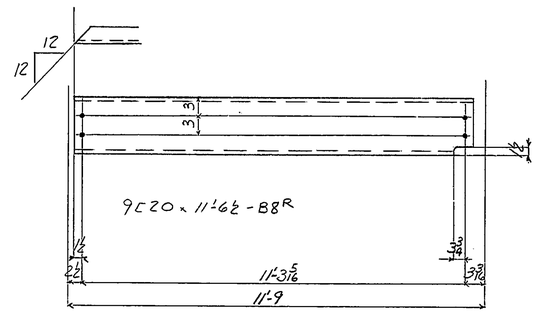
DETAILS FOR	SOUTH ABUTMENT & RETAINING WALLS
STRUCTURE	WALNUT STREET BRIDGE
LOCATION	WILMINGTON DELAWARE
ENGINEER	PARSONS, BRINCKERHOFF, HALL & MACDONALD.
CONTRACTOR	A. S. WIKSTROM INC.

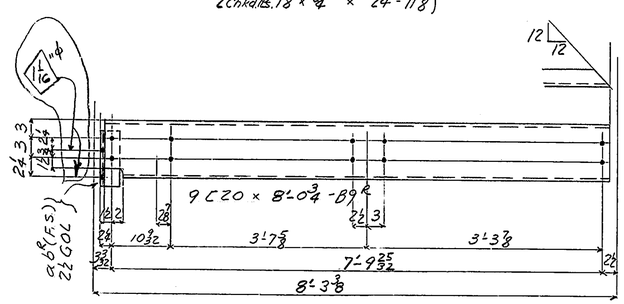
DRAWN BY M. CHECKED BY ______ NO. 11

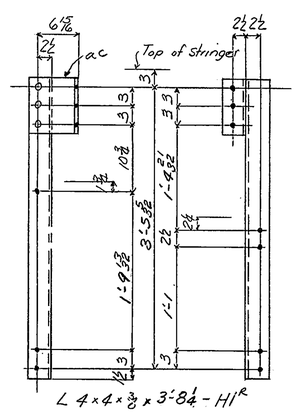
687 13-4 B-5 MICROFILMED

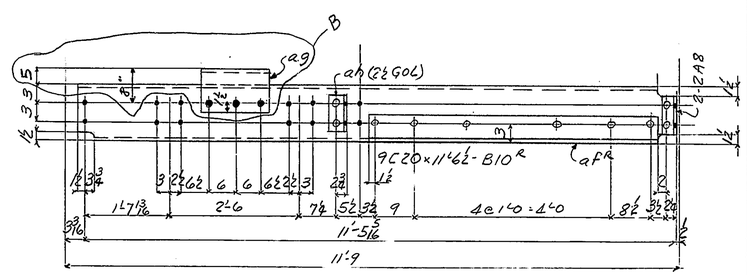


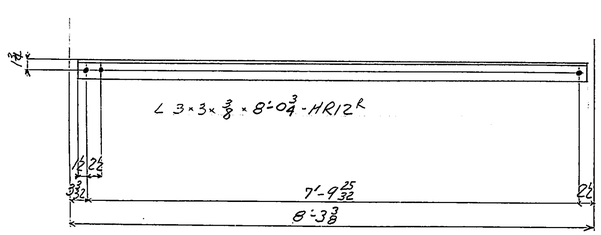


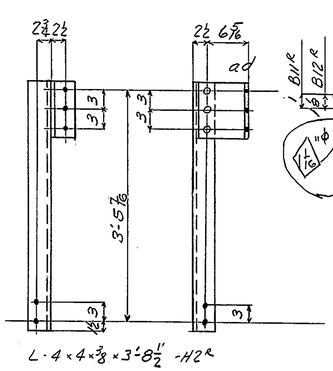


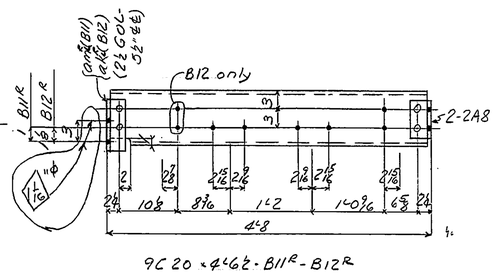












REAMING NOTE:
No reaming required.

Div. 1 2

LINE	Total No. of Pieces as in Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	ORDERED	ITEM	CALCULATED WEIGHT
1							54'6"			
2	1 1	2	2 EXPANSION JOINTS				EJ1	5714#		
3		4	7 5C 17.6	54	5¼				B18	3832
4		2	L^S 6 4 ⅜	50	0				B42 B515	2360
5		4	Chkd Pls 18 ¾	24	11⅜		M41		160	4808
6		4	L^S 4½ 4 ½	1	0¾	aa			B47	100
7							R+324			1100
8										324
9										1424
10	2	2	HANDRAILS				HR11	136#		
11		2	L^S 6 3½ ⅜	11	7½				B51	272
12										
13										
14	1		ONE CHANNEL				B8R	227#		
15	1		ONE CHANNEL				B8L	227#		
16		2	9 C 20	11	6½				B17	462
17								5-8		-8
18										454
19	1		ONE CHANNEL				B9R	166#		
20	1		ONE CHANNEL				B9L	166#		
21		2	9 C 20	8	0¾				B17	323
22		2	L^S 4 3½ ⅜	0	8¼	ab^R			B63 B529	13
23		4	SB ⅜ ø						A5	4
24								5-8		340
25										9
26	1		ONE HANDRAIL				HR12R	58#		332
27	1		ONE HANDRAIL				HR12L	58#		
28		2	L 3 3 ⅜	8	0¾				S	116
29										
30										
31	1		ONE HANGER				H1R	50#		
32	1		ONE HANGER				H1L	50#		
33		2	L^S 4 4 ⅜	3	8¼				B57	72
34		2	L 8 4 ½	0	9	ac			B38	29
35										101
36										
37	1		ONE HANGER				H2R	51#		
38	1		ONE HANGER				H2L	51#		
39		2	L^S 4 4 ⅜	3	8½				B57	72
40		2	L^S 8 4 ½	0	9	ad			B38	29
41										101
42										
43	1		ONE CHANNEL				B10R	328#		
44	1		ONE CHANNEL				B10L	328#		
45		2	9 C 20	11	6½				B17	462
46		2	L^S 5 3½ ⅜	5	8½	af^R			B55	119
47		4	L^S 4 3½ ⅜	0	5½	2A8			B63 B529	17
48		2	Pls 12 ⅜	1	3	ag			A5	52
49		2	L^S 4 4 ⅜	0	6	ah			B57	10
50							CB	R+B		660
51								5-12		-4
52	1		ONE CHANNEL				B11R	109#		656
53	1		ONE CHANNEL				B11L			
54	1		ONE CHANNEL				B12R			
55	1		ONE CHANNEL				B12L			
56		4	9 C 20	4	6½				B17	263
57		8	L^S			2A8			B567 B529	34
58		4	L^S 4 3½ ⅜	0	7½	ak^L	B12		B567 B529	21
59		4	L^S 4 3½ ⅜	0	7	am^L	B11		B567 B529	21
60								R+6		439
61								5-8		-2
62										437
63										
64										

Exp. Joint EJ1 + Platform Details

WALNUT STREET BRIDGE
WILMINGTON, DEL.
FED. AID PROJ. NO. S.U. 1-(10)

D-81X—2M—PENCILTEX
AMERICAN BRIDGE DIVISION
UNITED STATES STEEL CORPORATION

15/16 ø Holes
7/8 ø Rivets

PAINT: Yes
SHOP CONTACT SURFACES: No

REVISIONS	
F	
E	
D	
C	
B	19--bsr
X	19--bsr

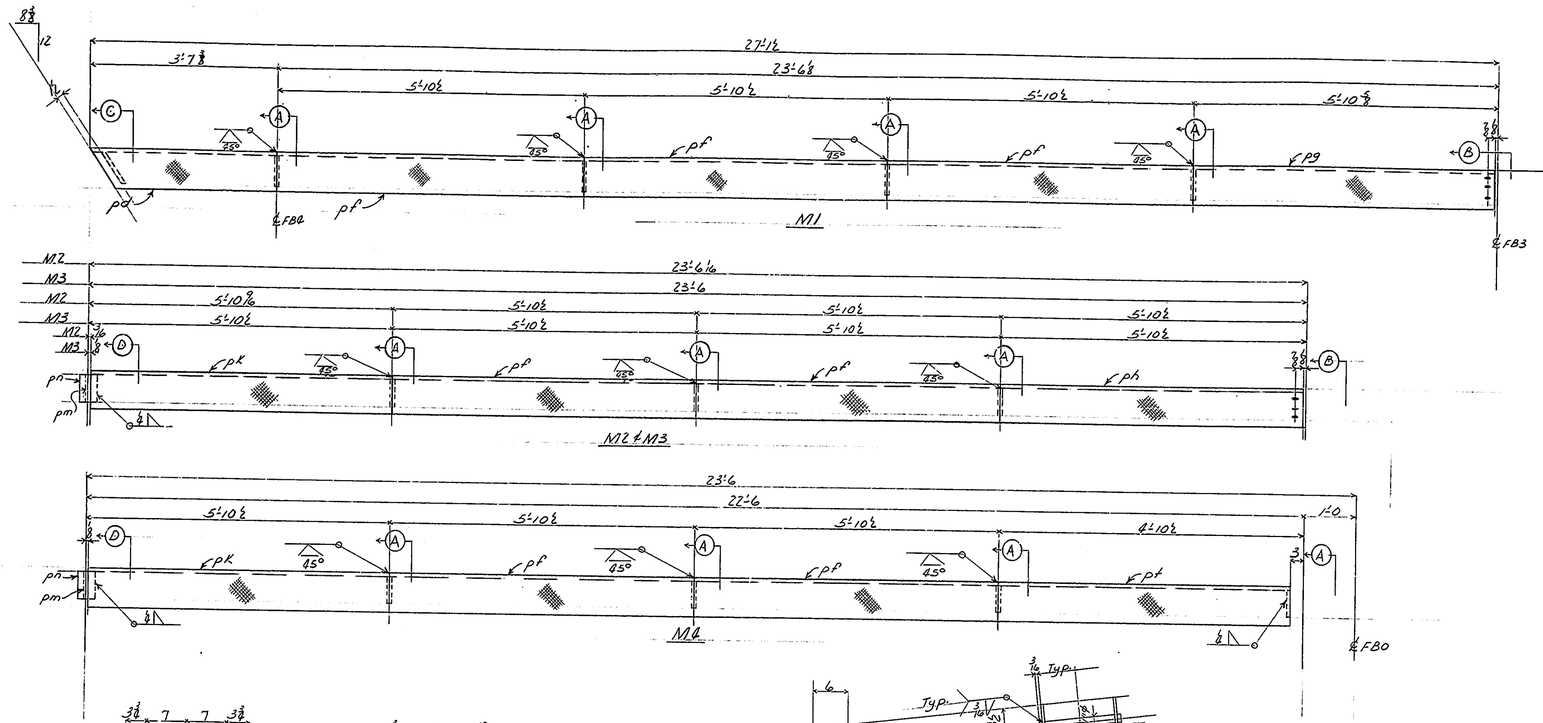
DRAWINGS MADE AT Roanoke PLANT
WORK FABRICATED AT Trenton PLANT
IN CHARGE OF Slusher
DRAW. MADE BY ATS DATE
DRAW. CHECKED BY CKB DATE

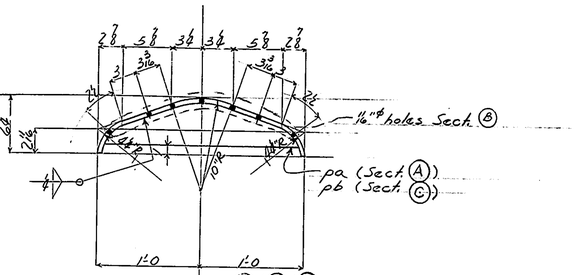
ORDER No. Q6834
SHEET No. 127

Adv. Bill 13

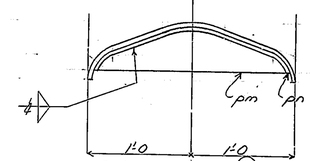
487 13-4

MICROFILMED

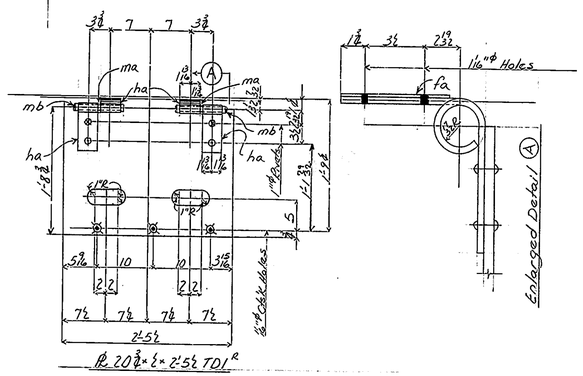


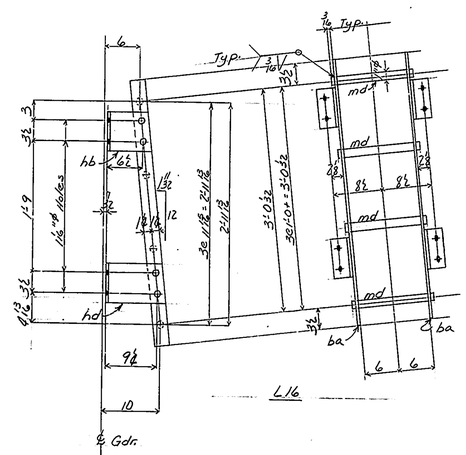


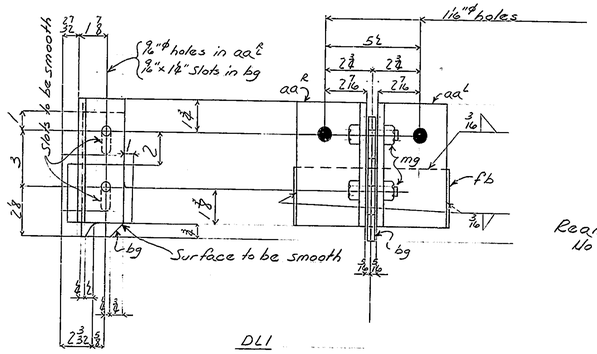
Enlarged Sect. (A) & (B) & (C)



Enlarged Sect. (D)
Dimensions not shown same as Sect. (A)







Reaming Note:
No Reaming required.

WALNUT STREET BRIDGE
WILMINGTON, DEL.
FED. AID PROJ. NO. S.U. I-(10)

LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	CALCULATED WEIGHT	ORDERED ITEM
1							Div. 1 2		
2		2	Walls M1			1435#	" 1 1		
3		2	Ohd Pls 28 × ½	3	7⅜	pd	weld M1	368	159
4		6	Ohd Pls 28 × ½	5	10½	pf	weld M1	1795	159
5		2	Ohd Pls 28 × ½	5	10½	pg	weld M1	598	159
6		8	Pls 12⅜ ⅜		1	10⅜	pa	(Abt)(weld)	92	B93
7		2	Pls 5⅞ ⅜		1	10⅜	pb	(Abt)(weld)	20	B93
8							S-12	2081	
9								-12	
10								2069	
11									
12									
13									
14									
15									

LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	CALCULATED WEIGHT	ORDERED ITEM
16							Div. 1 2		
17		2	Walls M2			1254#	" 1 1		
18		2	Walls M3			1254#	" 1 1		
19		4	Ohd Pls 28 × ½	5	10⅜	pk	weld M1	1195	159
20		8	Ohd Pls			pf	weld M1	2390	159
21		4	Ohd Pls 28 × ½	5	10⅜	ph	weld M1	1195	159
22		12	Pls			pa	(weld)	138	B93
23		4	Pls 4 ½	2	2	pn	weld(Abt)	59	M857
24		4	Pls 4½ ⅜	1	9⅜	pm	weld(Abt)	39	B93
25								5016	
26							Div. 1 2		
27		2	Walls M4			1204#	" 1 1		
28		2	Ohd Pls			pk	weld M1	598	159
29		4	Ohd Pls			pf	weld M1	1197	159
30		2	Ohd Pls 28 ½	4	7½	pf	weld M1	471	159

LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	CALCULATED WEIGHT	ORDERED ITEM
31		8	Pls			pa	weld	92	B93
32		2	Pls			pm	weld	20	B93
33		2	Pls			pn	weld	30	M857
34								2408	
35							Div. 1 2		
36		1	Trap Door TD1 R			118#	" 1 1		
37		1	Trap Door TD1 L			118#	" 1 1		
38		2	Pls 20⅜ ½	2	5½			177	AJ
39		8	Pls 5⅞ ⅜	1	0½	ha	(bent)(Abt)	38	AJ
40		4	Wash. 1⅛" ϕ × ⅝ × 1½" ϕ hole			na		—	AJ
41		4	Bolt 1" ϕ	0	8½	mb	H.H.&N.	11	AJ
42		4	Fills 5⅞ ½	0	7	fa	bolt	4	AJ
43		8	Sb ⅝" ϕ					8	AJ
44							S-4	238	
45							R-2	2	

LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	CALCULATED WEIGHT	ORDERED ITEM
46							Div. 1 2		
47		2	Ladders L16			77#	" 1 2		
48		4	Pls 2½ ⅜	3	7½	ba		46	AJ
49		4	Pls 6½ ⅜	0	11⅜	bb	(bent)	33	AJ
50		4	Pls 6½ ⅜	1	2⅜	bd	(bent)	41	AJ
51		8	Rings 1" ϕ	1	1⅜	md	weld	23	AS
52							S-7	143	
53							R-6	1	
54		2	Door Latches DL1				17# 2	142	
55		4	Ls 4 2⅜ ⅜	0	6½	aa	(Cut at 3½)	18	B&S 3589
56		2	Pls 3⅞ ½	0	6⅜	bg		6	AJ
57		2	Fills 2⅞ ⅜	0	9	fb	weld	8	AJ
58		4	Bolt ½" ϕ	0	2	mg	H.H.&N.	1	AJ
59								33	
60									

Rivets ⅞" ϕ U.H.
Holes 15/16" ϕ U.N.

Walls, Trap Door, Door Latch

D-82X—1M—PENCILTEX
AMERICAN BRIDGE
DIVISION
UNITED STATES STEEL CORPORATION

DRAWINGS MADE AT Roanoke PLANT
WORK FABRICATED AT Trenton PLANT
IN CHARGE OF Slusher
DRAW. MADE BY O.B.M. DATE
DRAW. CHECKED BY HKW DATE 8-18-55

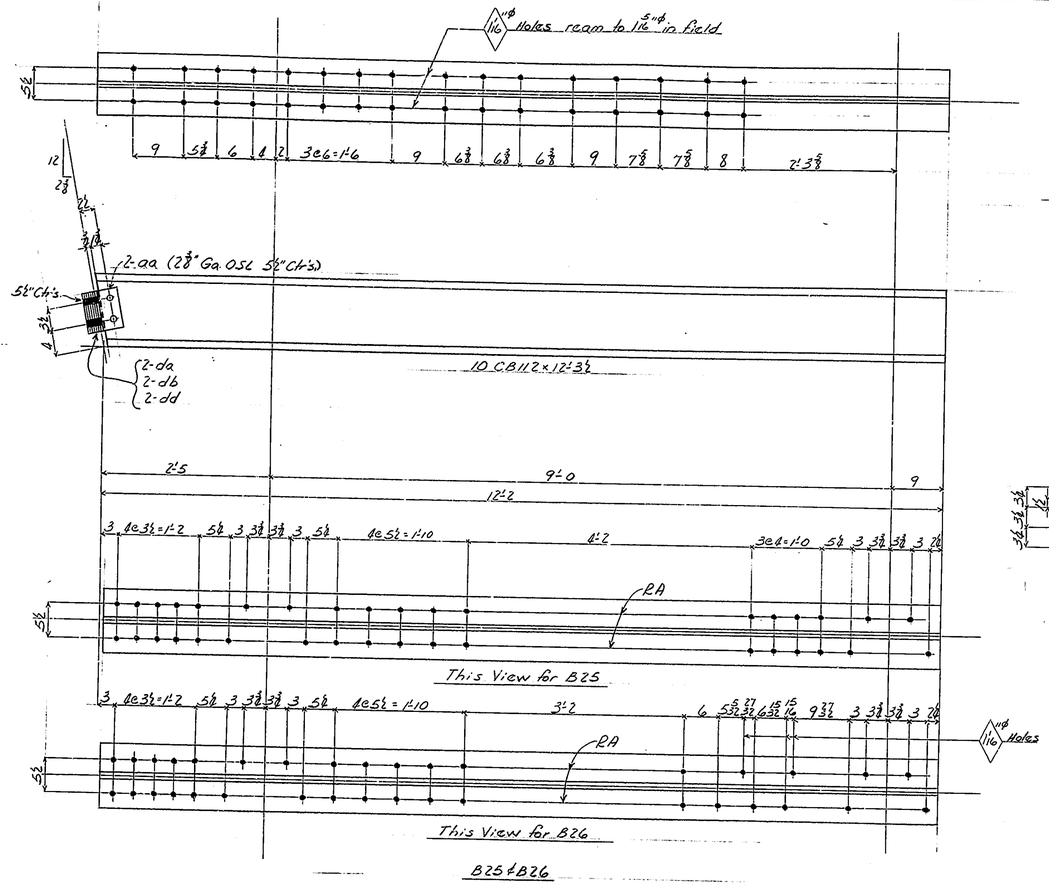
PAINT No. SHOP CONTACT SURFACES No.

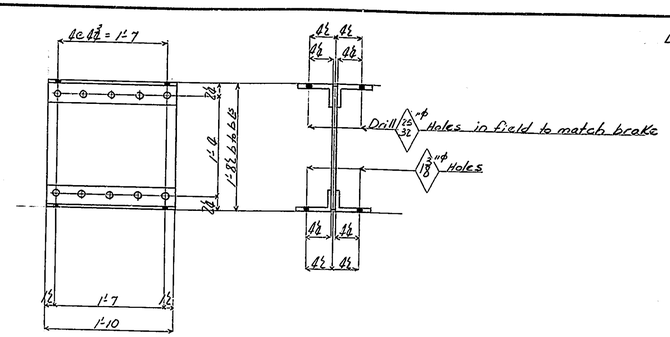
F	
E	
D	
C	
B	
X	11-7-55
REVISIONS	

ORDER No. Q6834
SHEET No. 129

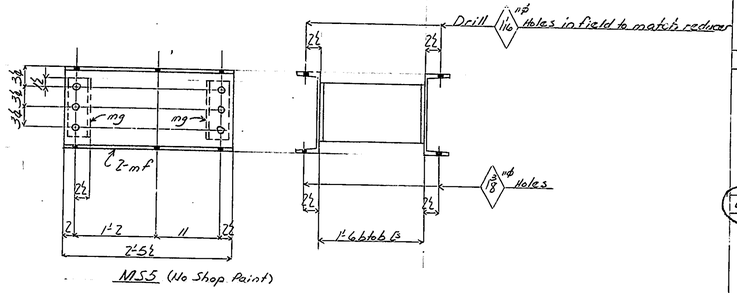
Welding

236





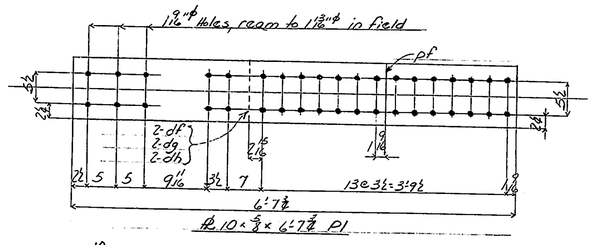
PL 20 × 1/2 × 1'-10
4 Ls 6 × 3 1/2 × 1/2 × 1'-10 } M54 (No Shop Paint)

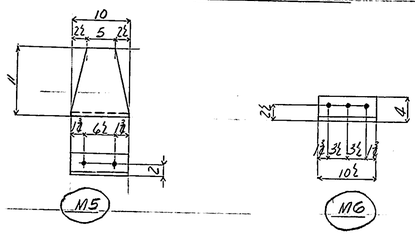


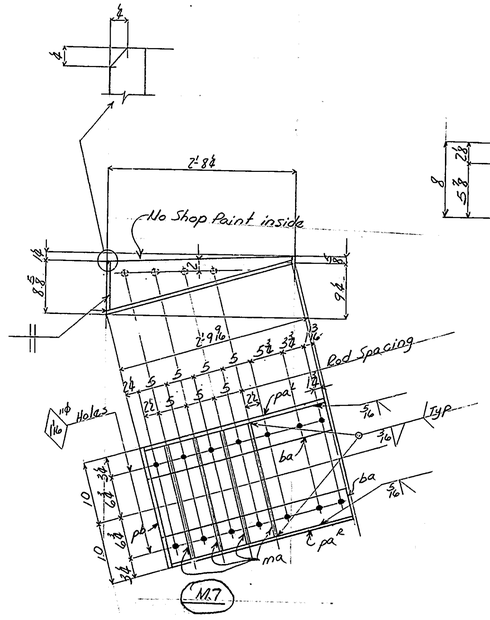
M55 (No Shop Paint)

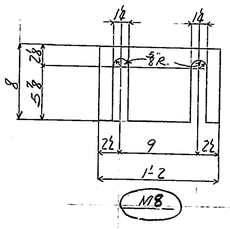
Reaming Note:
All holes marked R.A. shall be subpunched or subdrilled 3/4" small & reamed to size assembled with Counterweight. (See Dwg. "E101")

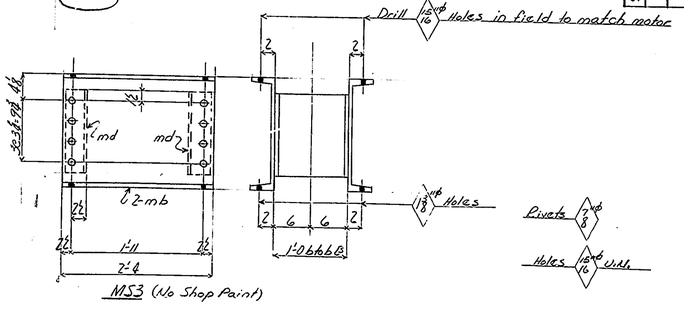
"B"











Beams, PL's, L's, L's, Sidewalk Boxes, Shims & Machinery Supports

Div.	1	2	LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL: Shape				Length Feet	Length Inches	ASSEMBLING MARK	REMARKS	ORDERED	ITEM	CALCULATED WEIGHT Approximate
			1													
	1	1	2		2	Beams				B25			1392#			
	1	1	3		2	Beams				B26			1392#			
			4		4	10	CB	112		12	3 1/2			12-4	B10	5507
			5		8	Ls	4	4	3/8	0	6 1/2	aa		45/50	B57	42
			6		8	Fills	6 1/2	1/2		0	8 3/4	da			A.S.	33
			7		8	Fills	6 1/2	1/2		0	8 3/4	db	S-40			17
			8		8	Fills	6 1/2	1/16		0	8 3/4	dd	R+3			8
			9													
	2	2	10		4	PLs	10	5/8		6	7 7/8	P1	373#		S	576
			11		4	PLs	10	3/8		4	7 1/2	pf			S	299
			12		8	PLs	10	1/2		4	2	df			A.S.	292
			13		8	PLs	10	1/2		4	2	dg				146
			14		8	PLs	10	1/16		4	2	dh				73
			15		8	S.B	7/8" ϕ									8
	1	1	16		2	PLs	15	C	33.9	0	10	M5	26#		A.S.	516
			17											S-4		4
			18													
			19													52
		4	20		4	Ls	7	4	3/8	0	10 1/2	M6	12#		S	48
			21													
			22													
			23													
	2	2	24		4	Sidewalk Boxes						M7	117#			
			25		8	PLs	9 1/2	1/2		2	7 1/16	pa	(weld)		S	340
			26		8	Bs	5	1/2		2	9 1/2	ba				190
			27		4	PLs	8	1/2		1	8	pb	(weld)			93
			28		16	Rods	5/8" ϕ			1	7	ma	(weld)		A.S.	17
			29											S-170		640
			30													170
			31													470
	4	4	32		8	Shim Packs						M8	27#			
			33		16	Shims	8	1/2		1	2				A.S.	131
			34		16	Shims	8	1/8		1	2					63
			35		16	Shims	8	1/16		1	2					33
			36											S-9		229
			37													9
			38													
	2	2	39		4	Machinery Supports				M53			287#			220
			40		8	18	C	42.7		2	4	mb			S	797
			41		8	12	SC	40		1	0 3/4	md			A.S.	340
			42											R+12		137
			43													12
			44													149
	3	3	45		6	Mach. Supports				M54			180#			
			46		6	PLs	20	1/2		1	10				S	392
			47		28	Ls	6	3 1/2	1/2	1	10			CF-24-1 1/2	B50	673
			48											R+22		1055
			49													22
			50													1077
	1	1	51		2	Mach. Supports				M55			266#			
			52		4	13	Slip B	40		2	5 1/2	mf		CF-21-2	B156	393
			53		4	18	E	42.7		0	9 1/2	mg			S	135
			54											R+4		520
			55													6
			56													532
			57													
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			62													
			63													
			64													

WALNUT STREET BRIDGE
WILMINGTON, DEL.
FED. AID. PROJ. NO. S.U.-1(10)

D-81X—2M—PENCIL TEX
AMERICAN BRIDGE
DIVISION
UNITED STATES STEEL CORPORATION

DRAWINGS MADE AT Roanoke PLANT
WORK FABRICATED AT Trenton PLANT
IN CHARGE OF Slusher
DRAW. MADE BY O.B.M. DATE
DRAW. CHECKED BY JKW DATE 8-31-55

REVISIONS	
F	
E	
D	
C	
B	10-28-55 (11)
X	10-6-55 (11)

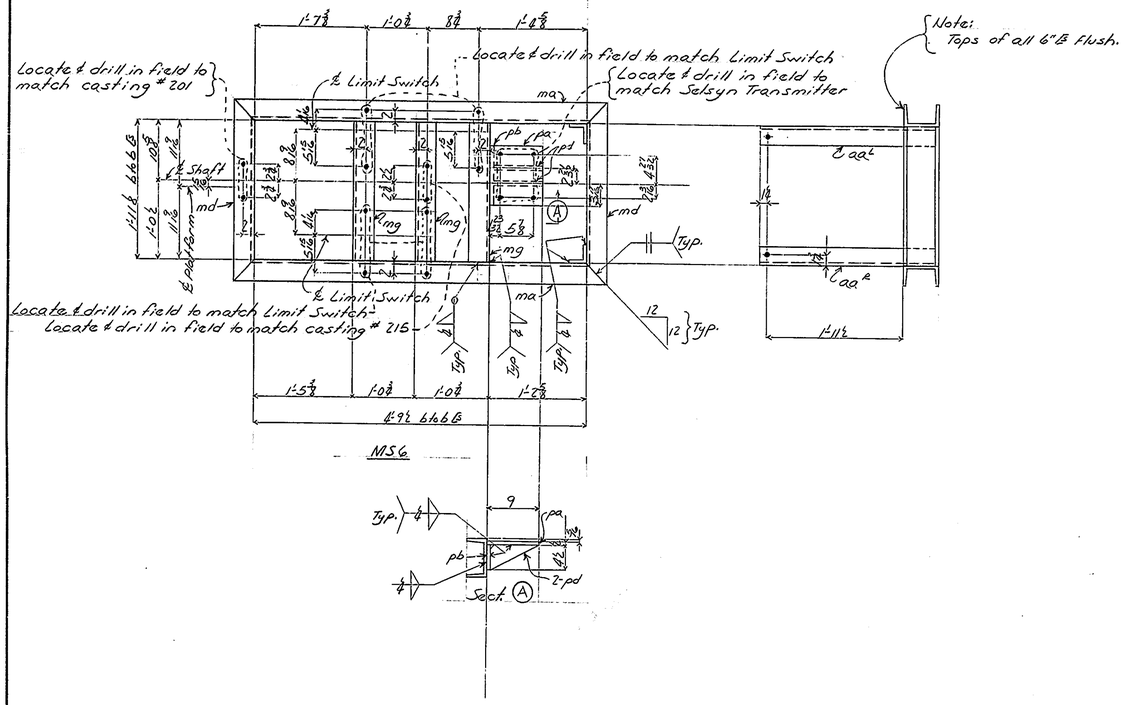
ORDER No. Q6834
SHEET No. 130

PAINT: Yes (U.N.)
SHOP CONTACT SURFACES: No

B14-5

687 13-4

MICROFILMED



LINE	Total No. of Pieces on the Order	No. of Pcs. on Sheet	MATERIAL SHAPE	LENGTH Feet	LENGTH Inches	ASSEMBLING MARK	REMARKS	ORDERED	ITEM	CALCULATED WEIGHT ~~CONTROL SHIP PIECE~~
1										
2		2	Mach. Supports MS6				388#			
3		4	6 Ship ⊏ 15.3	5	4½	ma		L.F. 50-0	B21	329
4		4	6 Ship ⊏ 15.3	2	6⅛	md	weld			154
5		6	6 Ship ⊏ 15.3	1	11⅛	mg	weld			177
6		4	⊏s 3 3 ⅜	2	6¼	aa ℄	weld		S	73
7		2	℞'s 9 ½	0	10	pa	weld		S	26
8		2	℞'s 4½ ½	0	10	pb	weld		S	13
9		4	℞'s 4½ ⅜	0	8½	pd	weld		S	16
10								S-12		788
11										12
12										776
13										
14										
15										
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MACHINERY SUPPORTS

WALNUT STREET BRIDGE
WILMINGTON, DEL.
FED. AID PROJ. NO. SU1-(10)

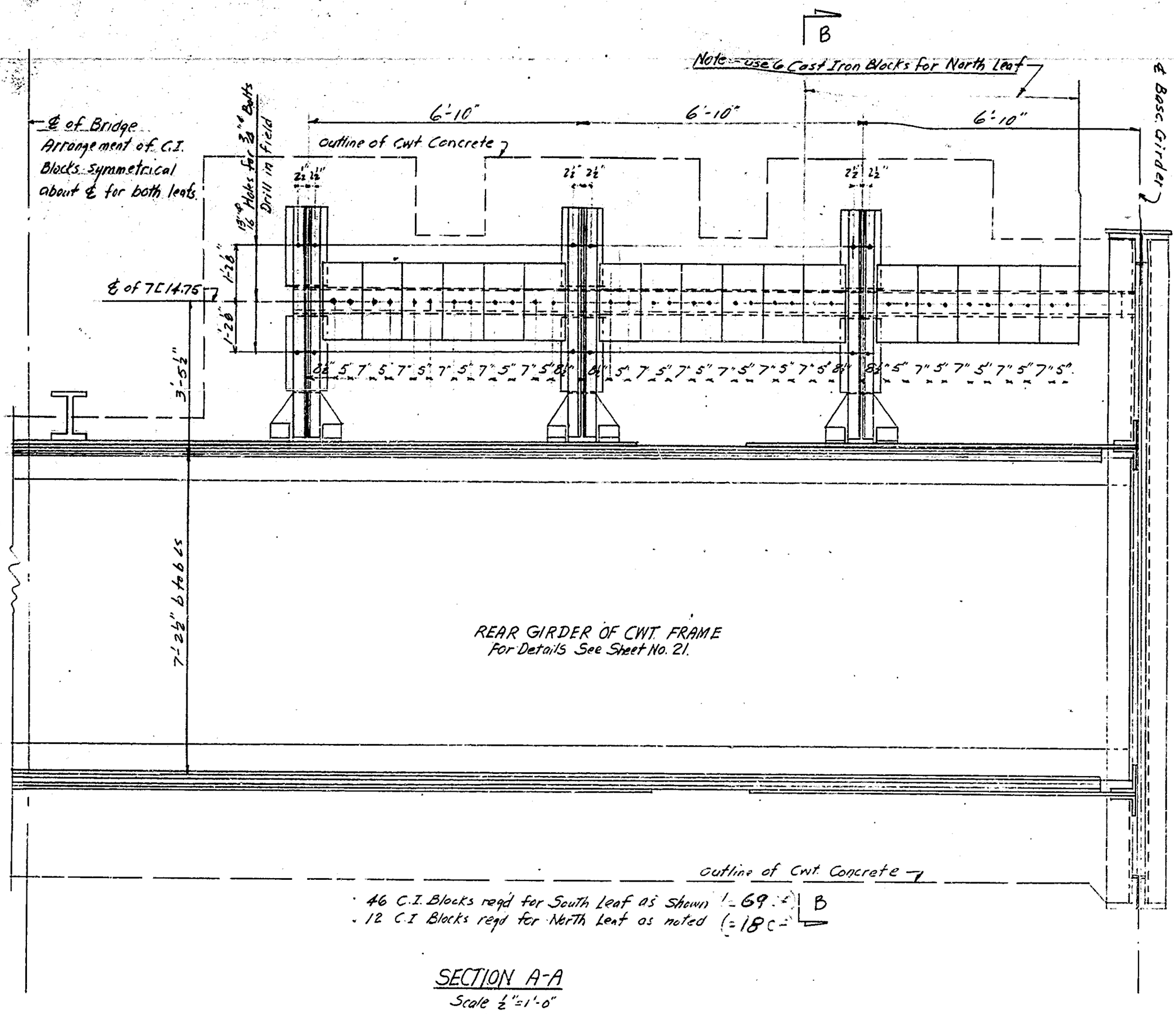
D-81X—4M—PENCILTEX
AMERICAN BRIDGE
DIVISION
UNITED STATES STEEL CORPORATION

Holes 13/16" ⌀ U.N.

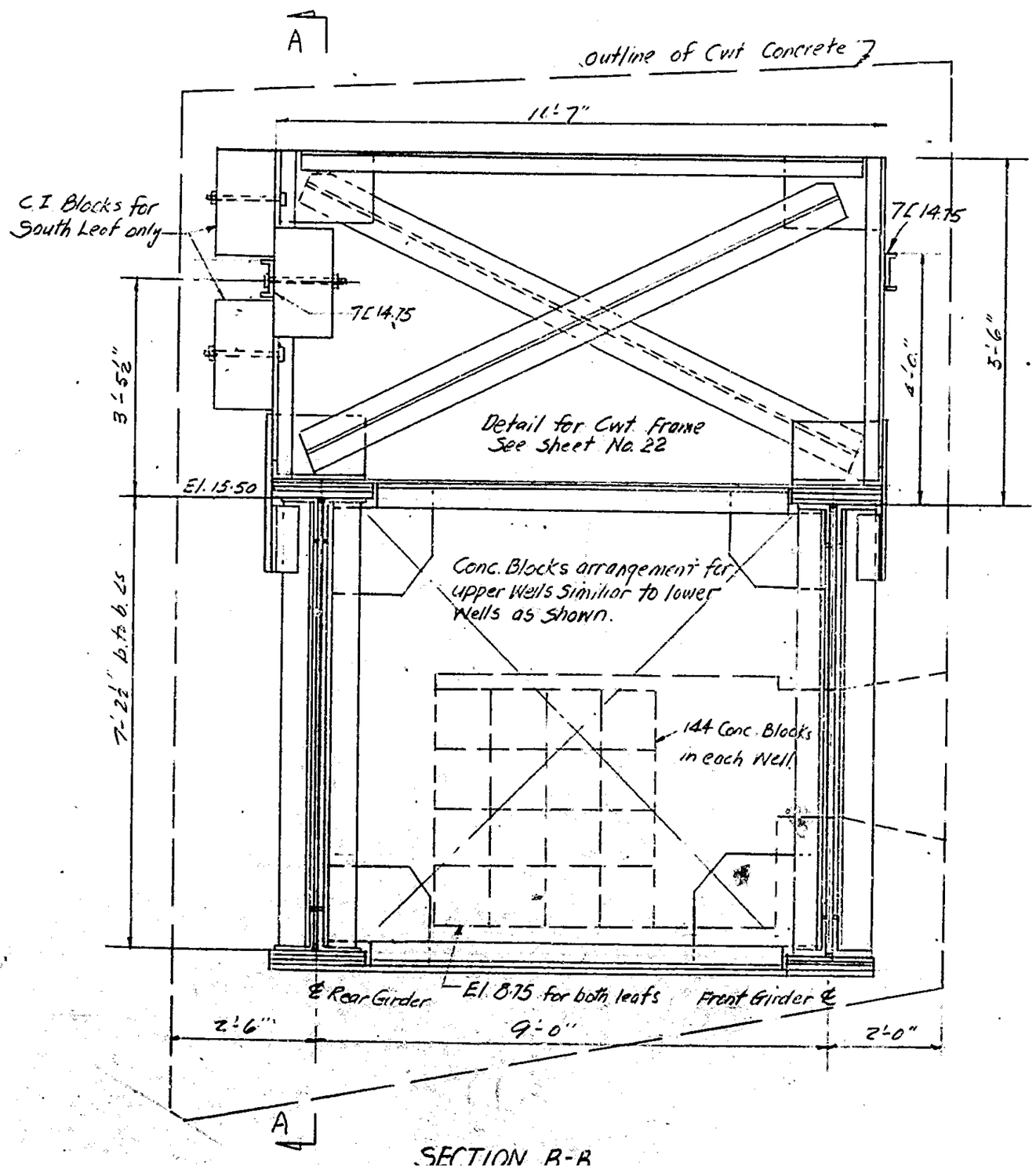
F	
E	
D	
C	
B	
X	
REVISIONS	

DRAWINGS MADE AT Roanoke PLANT
WORK FABRICATED AT Trenton PLANT
IN CHARGE OF Slusher
DRAW. MADE BY O.B.M. DATE
DRAW. CHECKED BY JKW DATE 10-5-55
ORDER NO. Q-6834
SHEET NO. 131

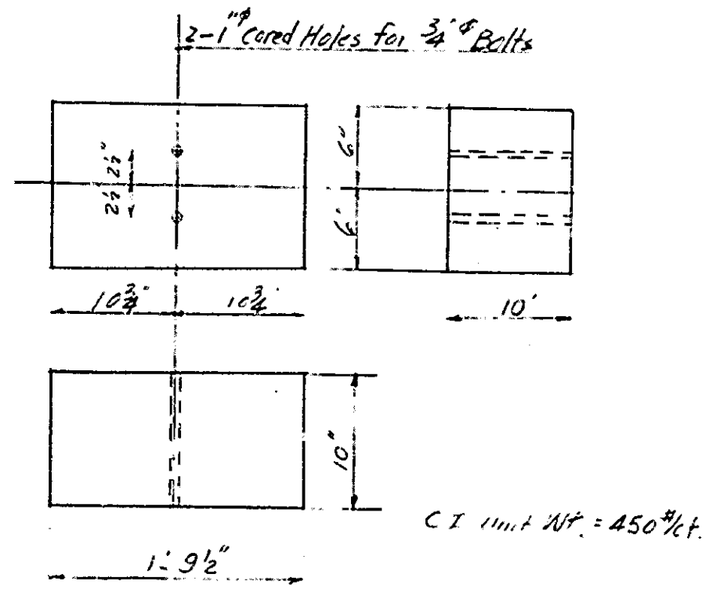
PAINT: Yes
SHOP CONTACT SURFACES: No
Welding



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



SECTION B-B



DETAIL OF CAST IRON BLOCK
Total reqd 58 Blocks
Scale 1"=1'-0"

Details of Cwt and balance same as shown on Contract Drawings Sheet No. 14, 21, 22 and 23 except follows:

1. Concrete to weigh ~~(527 #/c.f. (for 146# filler)~~ 149.0 #/c.f. (for 100# ") in South Leaf, ~~(525 #/c.f. (for 146# filler)~~ 150.2 #/c.f. (for 100# ")
2. Bottom of Lower Wells to be at El 8.75' for Both Leafs.
3. Concrete Balance Blocks required 576 for each Leaf.

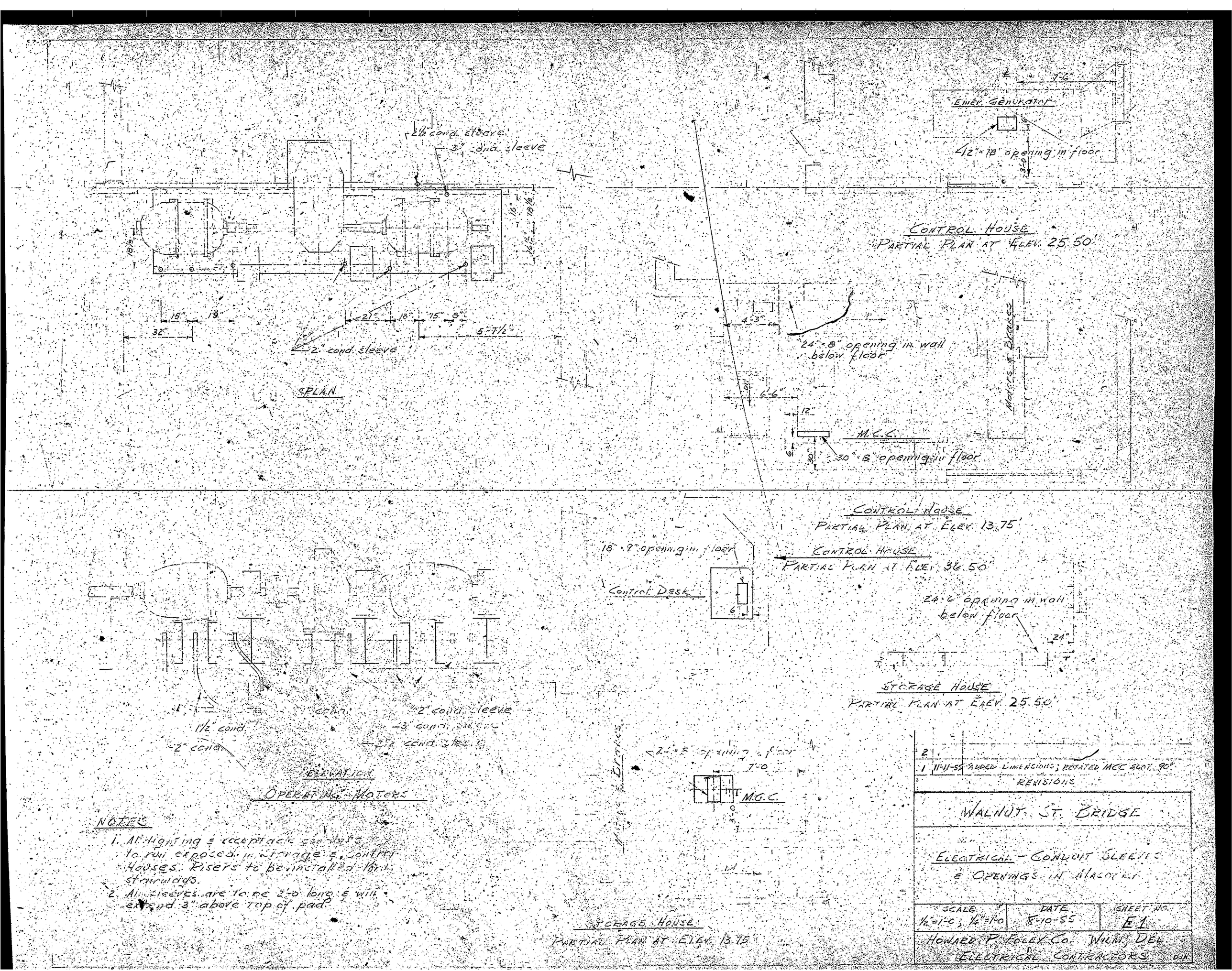
STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

WALNUT STREET BRIDGE
OVER CHRISTINA RIVER
WILMINGTON, DELAWARE

SUPPLEMENTARY DETAILS FOR COUNTERWEIGHT

SCALE	DATE	SHEET NO.
AS NOTED	FEB 1956	23A

MICROFIL



NOTES

1. All lighting & receptacle conduits to run exposed in Storage & Control Houses. Risers to be installed thru stairwaps.
2. All sleeves are to be 2'-0 long & will extend 3" above top of pad.

2		
1	11-11-55	ADDED DIMENSIONS; ROTATED MCC SLOT 90°

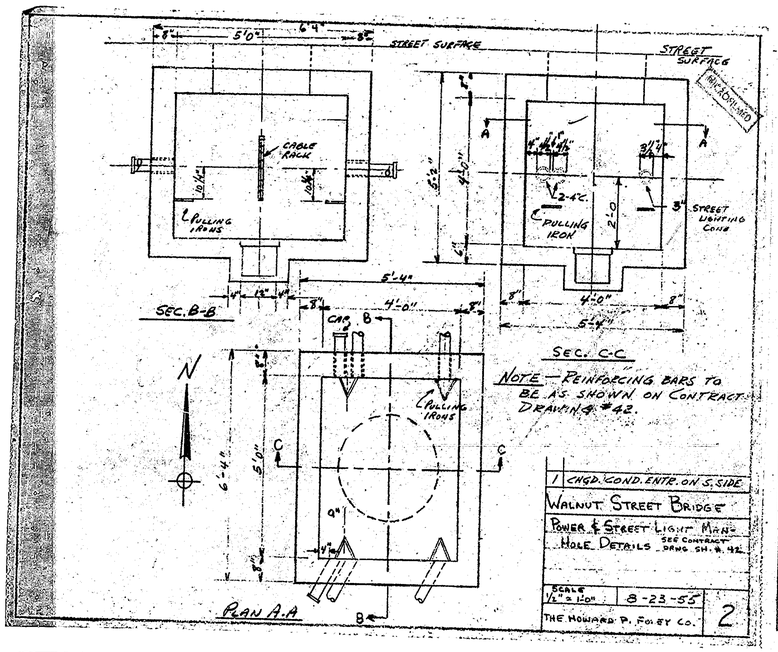
REVISIONS

WALNUT ST. BRIDGE

ELECTRICAL - CONDUIT SLEEVES & OPENINGS IN MASONRY

SCALE	DATE	SHEET NO.
½"=1'-0; ¼"=1'-0	8-10-55	E1

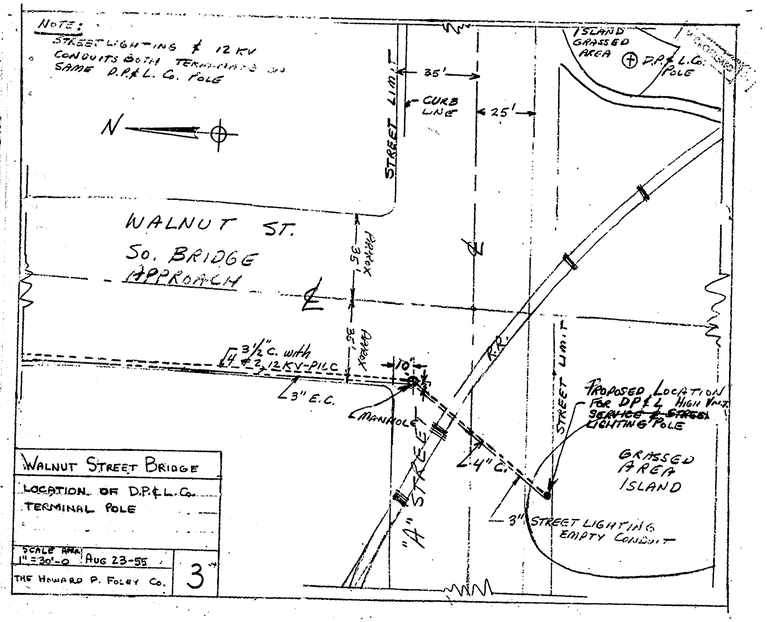
HOWARD P. FOLEY CO. WILM, DEL.
ELECTRICAL CONTRACTORS



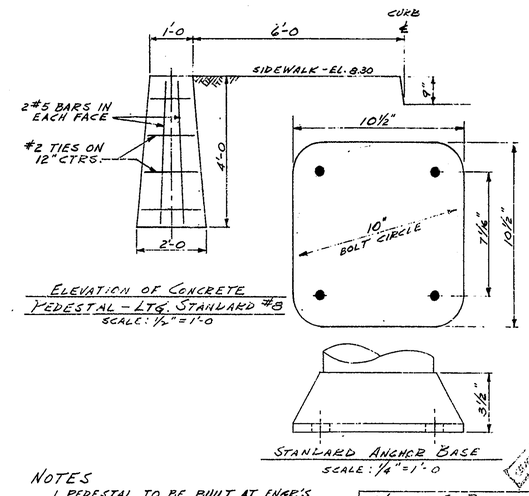
NOTE — REINFORCING BARS TO BE AS SHOWN ON CONTRACT DRAWING #42.

1	CHGD. COND. ENTR. ON S. SIDE

WALNUT STREET BRIDGE
POWER & STREET LIGHT MANHOLE DETAILS — SEE CONTRACT DRWG. SH. #42
SCALE 1/2" = 1'-0" | 8-23-55
THE HOWARD P. FOLEY CO. | 2



WALNUT STREET BRIDGE
LOCATION OF D.P.&L.CO. TERMINAL POLE
SCALE NONE 1" = 30'-0 | AUG 23-55
THE HOWARD P. FOLEY CO. | 3



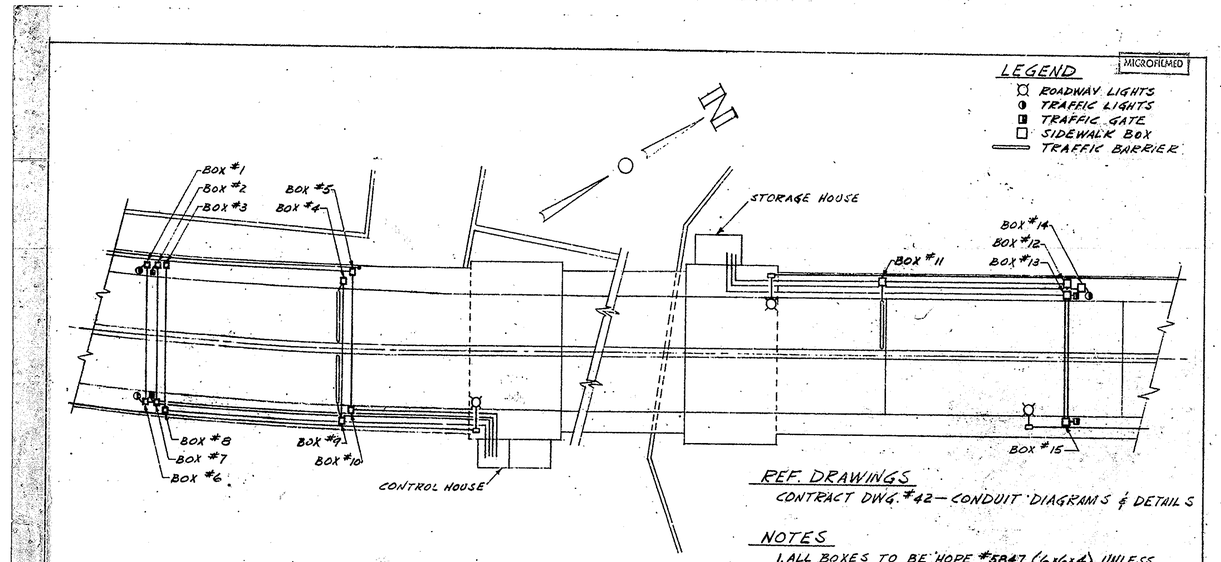
ELEVATION OF CONCRETE PEDESTAL - LTG. STANDARD #8
SCALE: 1/2" = 1'-0

STANDARD ANCHOR BASE
SCALE: 1/4" = 1'-0

NOTES
1. PEDESTAL TO BE BUILT AT ENGR.'S STA. 9+59.14.

2	3-22-56	CHGD. ELEV.; ADDED NOTE 1.	
1	3-12-56	GEN. REVISIONS	

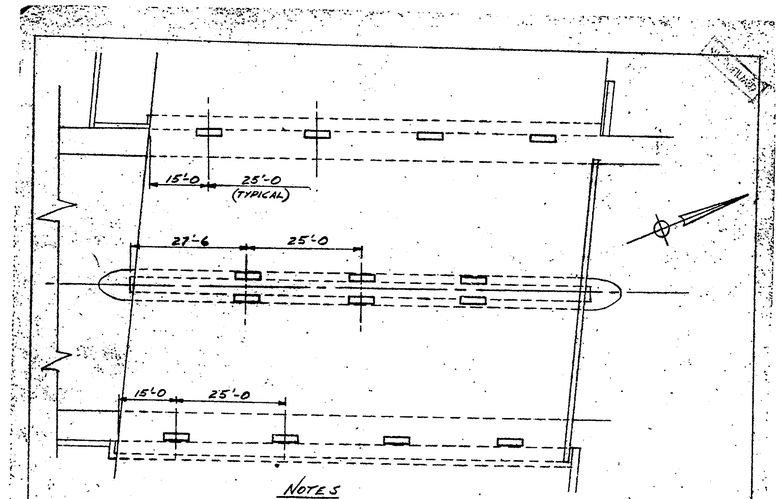
WALNUT ST. BRIDGE, WILM.
LTG. STANDARD #8 — DETAILS
10-13-55 | DJH | DWG. 4
HOWARD P. FOLEY CO.



REF. DRAWINGS
CONTRACT DWG. #42 — CONDUIT DIAGRAMS & DETAILS

NOTES
1. ALL BOXES TO BE HOPE #5847 (6×6×4) UNLESS OTHERWISE NOTED.

WALNUT STREET BRIDGE
PLAN — SIDEWALK BOX LOCATIONS
1" = 30'-0 | DJH | 10-18-55
HOWARD P. FOLEY CO. | 5

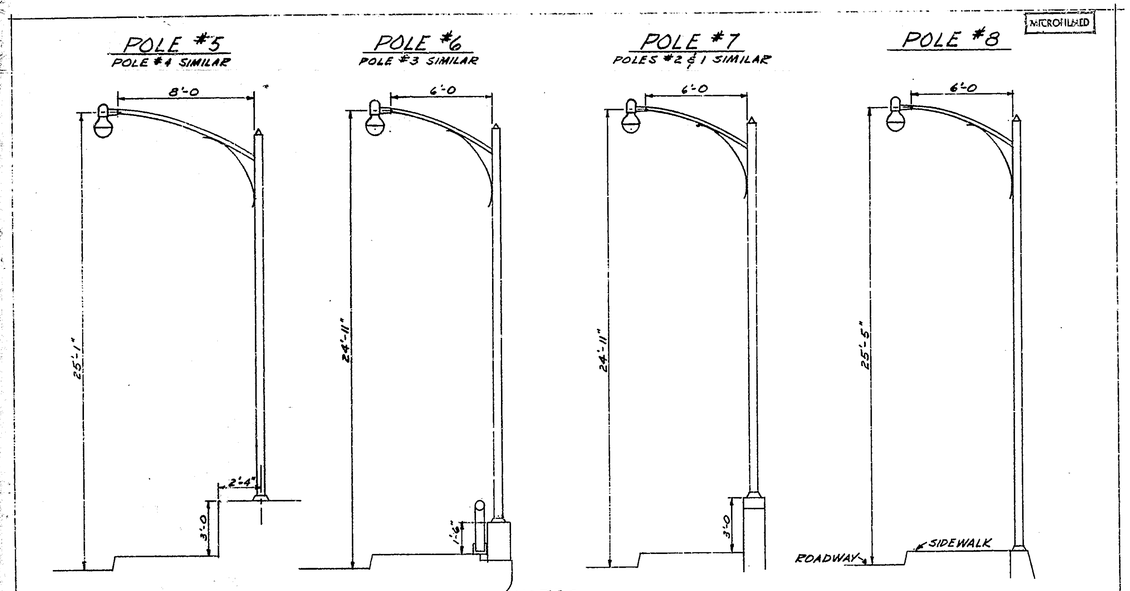


NOTES
1. ATTACH LUMINAIRES TO FACE OF CONCRETE WALL NEAR TOP OF SAME.
2. FOR REFERENCE, SEE CONTRACT DWG. #41.

WALNUT STREET BRIDGE
UNDERPASS LUMINAIRES — LOCATION PLAN
1/16" = 1'-0 | DJH | 1-16-56
HOWARD P. FOLEY CO. | 9

File B-20-A

MICROFILMED



POLE #	MTG. HT. (NOMINAL)	LOCATION	BOLT CIR. DIAM.	CAT. NO. (UNION METAL MFG. CO.)	MODIF.	DESIGN #
1	21'-1"	PARAPET	10"	1E-200-B1B	2B	70431A
2	21'-1"	PARAPET		1E-200-B1B	2B	70431A
* 3	24'-7"	STEEL		F-236-B1	2C	401
4	21'-3"	PARAPET		1E-200-C1B	2B	70431A
5	21'-3"	PARAPET		1E-200-C1B	2B	70431A
* 6	24'-7"	STEEL		F-236-B1	2C	401
7	21'-1"	PARAPET		1E-200-B1B	2B	70431A
8	24'-7"	PEDESTAL		F-236-B1	2C	401

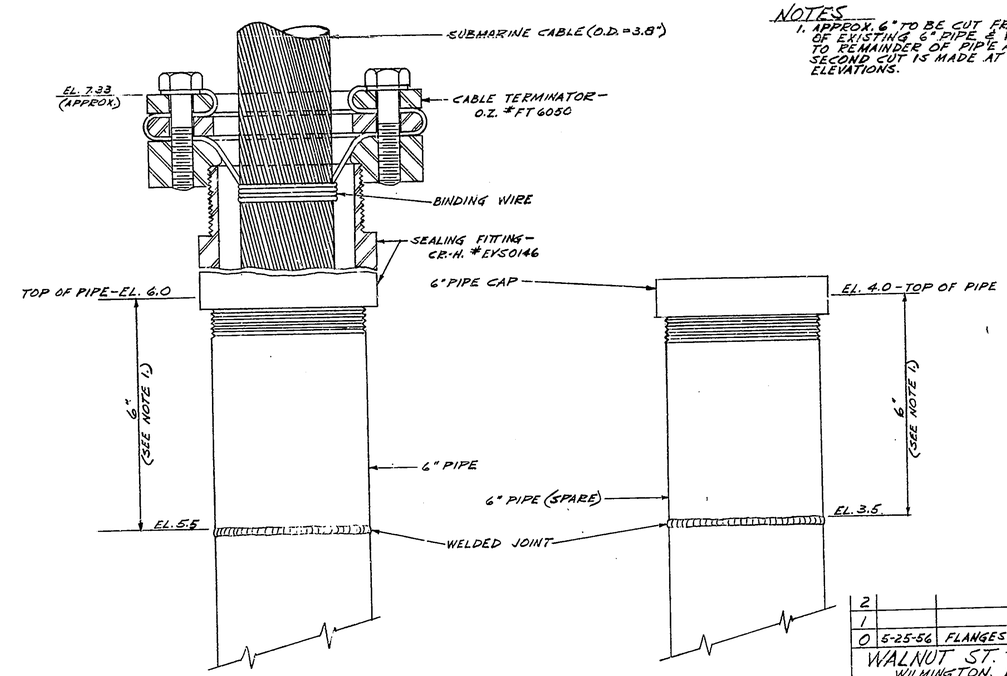
NOTES

* 1. ON LTG. STDS. #3 & 6, MAST ARM & SCROLL ARC TO BE MTD. 2' BELOW NORMAL; 2' IS TO BE CUT FROM TOP OF POLE.
2. FOR DETAILS OF CONCRETE PEDESTAL AT LTG. STD. #8, SEE FOLEY DWG. #4.

WALNUT STREET BRIDGE
ELECTRICAL – ROADWAY LTG.
STANDARD ELEVATIONS

1/4"=1'-0	DJH	3-12-56	13

HOWARD P. FOLEY CO.



NOTES

1. APPROX. 6" TO BE CUT FROM TOP OF EXISTING 6" PIPE & WELDED TO REMAINDER OF PIPE AFTER A SECOND CUT IS MADE AT INDICATED ELEVATIONS.

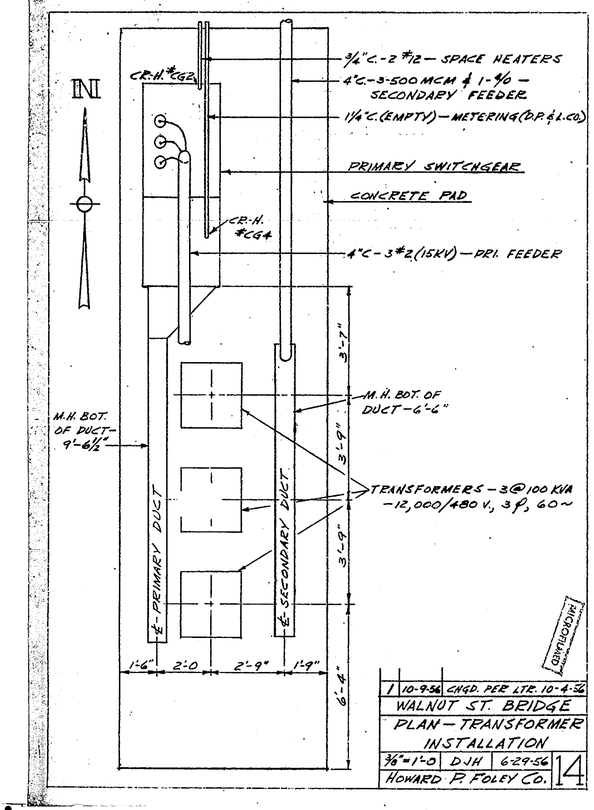
2		
1		
0	5-25-56	FLANGES OMITTED.

WALNUT ST. BRIDGE
WILMINGTON, DELAWARE

DETAILS – SUBMARINE CABLE TERMINATIONS

NO SCALE	D.J.H.	5-18-56	10

H.P. FOLEY CO., WILMINGTON

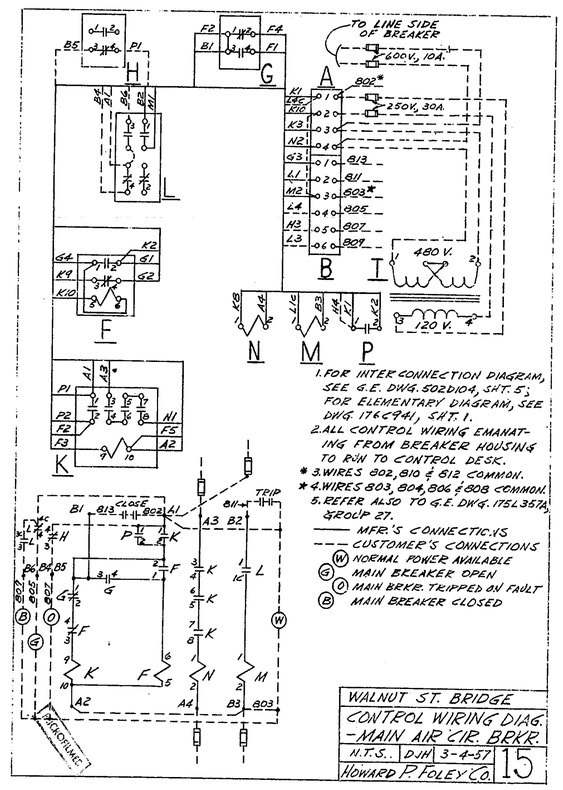


1	10-9-56	CHGD. PER LTR. 10-4-56	

WALNUT ST. BRIDGE
PLAN – TRANSFORMER INSTALLATION

3/8"=1'-0	DJH	6-29-56	14

HOWARD P. FOLEY CO.



1. FOR INTER CONNECTION DIAGRAM, SEE G.E. DWG. 5D2D104, SHT. 5; FOR ELEMENTARY DIAGRAM, SEE DWG. 17&C941, SHT. 1.
2. ALL CONTROL WIRING EMANATING FROM BREAKER HOUSING TO RUN TO CONTROL DESK.

* 3. WIRES 802, 810 & 812 COMMON.
* 4. WIRES 803, 804, 806 & 808 COMMON.
5. REFER ALSO TO G.E. DWG. 175L3574, GROUP 27.

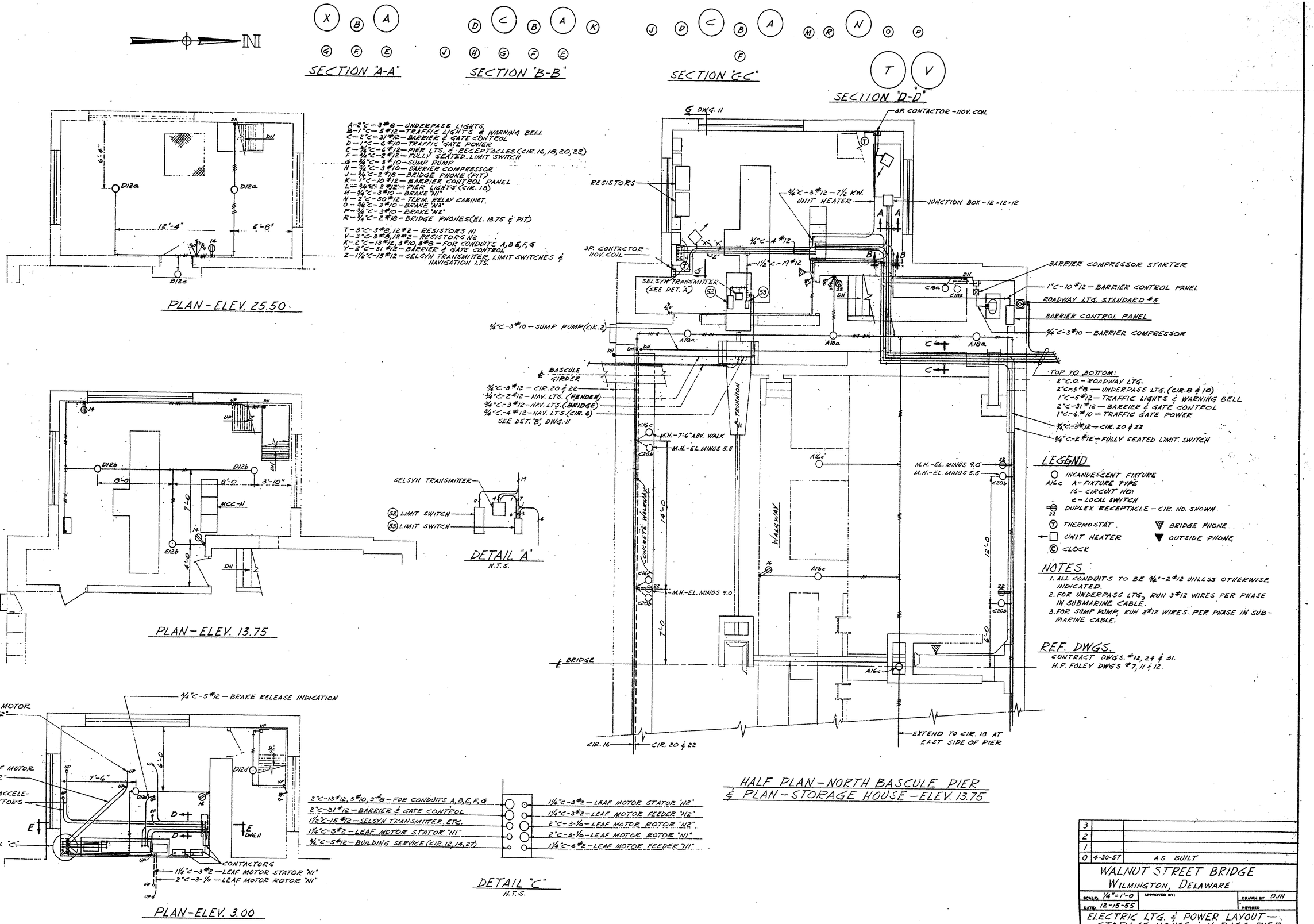
—— MFR.'S CONNECTIONS
- - - CUSTOMER'S CONNECTIONS
(W) NORMAL POWER AVAILABLE
(G) MAIN BREAKER OPEN
(O) MAIN BRKR. TRIPPED ON FAULT
(B) MAIN BREAKER CLOSED

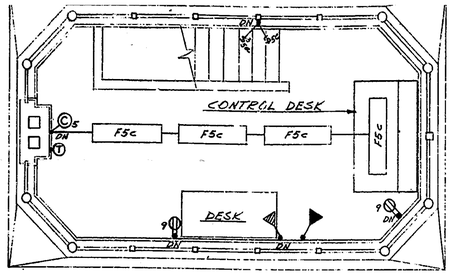
WALNUT ST. BRIDGE
CONTROL WIRING DIAG. – MAIN AIR CIR. BRKR.

N.T.S.	DJH	3-4-57	15

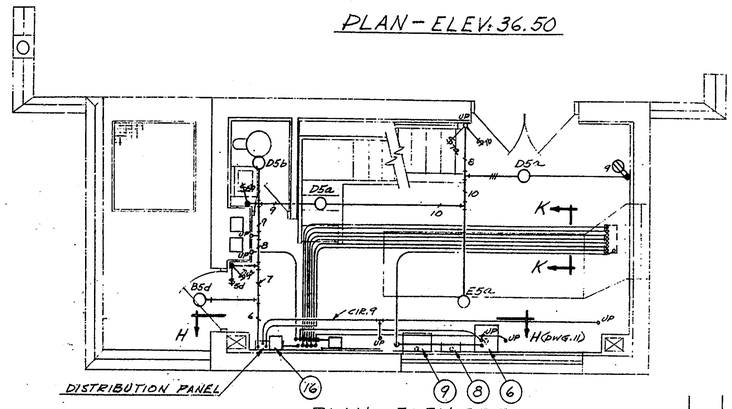
HOWARD P. FOLEY CO.

D C B A A B C D

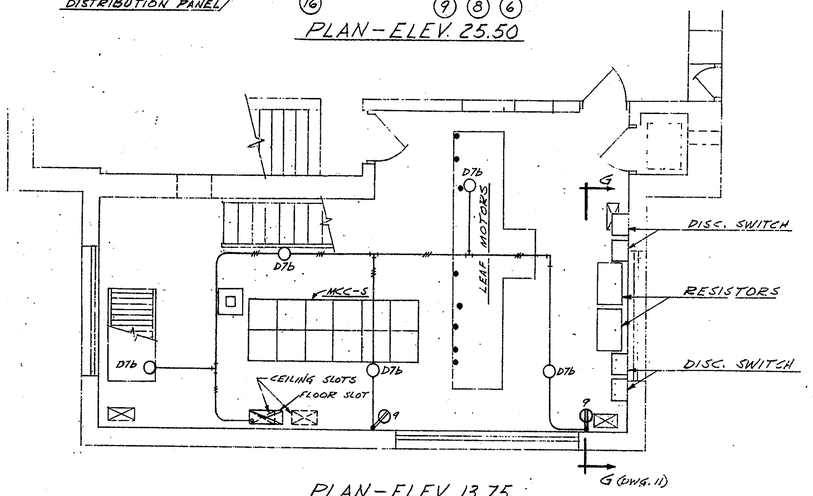

N
SECTION "A-A"
SECTION "B-B"
SECTION "C-C"
SECTION "D-D"
A-2"C-3#8 — UNDERPASS LIGHTS.
B-1"C-5#12 — TRAFFIC LIGHTS & WARNING BELL
C-2"C-31#12 — BARRIER & GATE CONTROL
D-1"C-6#10 — TRAFFIC GATE POWER
E-3/4"C-6#12 — PIER LTS. & RECEPTACLES (CIR. 16, 18, 20, 22)
F-3/4"C-2#12 — FULLY SEATED LIMIT SWITCH
G-3/4"C-3#10 — SUMP PUMP
H-3/4"C-3#10 — BARRIER COMPRESSOR
J-3/4"C-2#18 — BRIDGE PHONE (PIT)
K-1"C-10#12 — BARRIER CONTROL PANEL
L-3/4"C-2#12 — PIER LIGHTS (CIR. 18)
M-3/4"C-3#10 — BRAKE "N1"
N-2"C-30#12 — TERM. RELAY CABINET.
O-3/4"C-3#10 — BRAKE "N3"
P-3/4"C-3#10 — BRAKE "N2"
R-3/4"C-2#18 — BRIDGE PHONES (EL. 13.75 & PIT)
T-3"C-3#8, 12#2 — RESISTORS N1
V-3"C-3#8, 12#2 — RESISTORS N2
X-2"C-13#12, 3#10, 3#8 — FOR CONDUITS A, B, E, F, G
Y-2"C-31#12 — BARRIER & GATE CONTROL
Z-1 1/2"C-15#12 — SELSYN TRANSMITTER, LIMIT SWITCHES & NAVIGATION LTS.
PLAN-ELEV. 25.50
PLAN-ELEV. 13.75
DETAIL "A"
N.T.S.
SELSYN TRANSMITTER
LIMIT SWITCH
LIMIT SWITCH
PLAN-ELEV. 3.00
2"C-3-1/0 — LEAF MOTOR ROTOR "N2"
3/4"C-5#12 — BRAKE RELEASE INDICATION
1 1/4"C-3#2 — LEAF MOTOR STATOR "N2"
3"C-3#8, 12#2 — ACCELERATING CONTACTORS
SEE DETAIL "C"
CONTACTORS
1 1/4"C-3#2 — LEAF MOTOR STATOR "N1"
2"C-3-1/0 — LEAF MOTOR ROTOR "N1"
2"C-13#12, 3#10, 3#8 — FOR CONDUITS A, B, E, F, G
2"C-31#12 — BARRIER & GATE CONTROL
1 1/2"C-15#12 — SELSYN TRANSMITTER, ETC.
1 1/4"C-3#2 — LEAF MOTOR STATOR "N1"
3/4"C-5#12 — BUILDING SERVICE (CIR. 12, 14, 27)
1 1/4"C-3#2 — LEAF MOTOR STATOR "N2"
1 1/4"C-3#2 — LEAF MOTOR FEEDER "N2"
2"C-3-1/0 — LEAF MOTOR ROTOR "N2"
2"C-3-1/0 — LEAF MOTOR ROTOR "N1"
1 1/4"C-3#2 — LEAF MOTOR FEEDER "N1"
DETAIL "C"
N.T.S.
G DWG. 11
3P. CONTACTOR - 110V. COIL
RESISTORS
3/4"C-3#12 — 7 1/2 KW. UNIT HEATER
JUNCTION BOX - 12×12×12
3/4"C-4#12
1 1/2"C.-19#12
SELSYN TRANSMITTER (SEE DET. "A")
BARRIER COMPRESSOR STARTER
1"C-10#12 — BARRIER CONTROL PANEL
ROADWAY LTG. STANDARD #5
BARRIER CONTROL PANEL
3/4"C-3#10 — BARRIER COMPRESSOR
3/4"C.-3#10 — SUMP PUMP (CIR. 2)
℄ BASCULE GIRDER
3/4"C.-3#12 — CIR. 20 & 22
3/4"C.-2#12 — NAV. LTS. (FENDER)
3/4"C.-3#12 — NAV. LTS. (BRIDGE)
3/4"C.-4#12 — NAV. LTS. (CIR. 6)
SEE DET. "B", DWG. 11
℄ TRUNNION
M.H. - 7'-6" ABV. WALK
M.H. - EL. MINUS 5.5
M.H. - EL. MINUS 9.0
CONCRETE WALKWAY
WALKWAY
℄ BRIDGE
CIR. 16
CIR. 20 & 22
EXTEND TO CIR. 18 AT EAST SIDE OF PIER
TOP TO BOTTOM:
2"C.O. - ROADWAY LTG.
2"C.-3#8 — UNDERPASS LTG. (CIR. 8 & 10)
1"C-5#12 — TRAFFIC LIGHTS & WARNING BELL
2"C-31#12 — BARRIER & GATE CONTROL
1"C.-6#10 — TRAFFIC GATE POWER
3/4"C.-3#12 — CIR. 20 & 22
3/4"C-2#12 — FULLY SEATED LIMIT SWITCH
LEGEND
INCANDESCENT FIXTURE
A16c A - FIXTURE TYPE 16 - CIRCUIT NO. c - LOCAL SWITCH
DUPLEX RECEPTACLE - CIR. NO. SHOWN
THERMOSTAT
UNIT HEATER
CLOCK
BRIDGE PHONE
OUTSIDE PHONE
NOTES
1. ALL CONDUITS TO BE 3/4"-2#12 UNLESS OTHERWISE INDICATED.
2. FOR UNDERPASS LTG., RUN 3#12 WIRES PER PHASE IN SUBMARINE CABLE.
3. FOR SUMP PUMP, RUN 2#12 WIRES PER PHASE IN SUBMARINE CABLE.
REF. DWGS.
CONTRACT DWGS. #12, 24 & 31.
H.P. FOLEY DWGS #7, 11 & 12.
HALF PLAN - NORTH BASCULE PIER & PLAN - STORAGE HOUSE - ELEV. 13.75
3
2
1
0 4-30-57 AS BUILT
WALNUT STREET BRIDGE
WILMINGTON, DELAWARE
SCALE: 1/4"=1'-0
DATE: 12-15-55
APPROVED BY:
DRAWN BY DJH
REVISED
ELECTRIC LTG. & POWER LAYOUT — STORAGE HOUSE & N. BASC. PIER
HOWARD P. FOLEY CO., WILMINGTON
ELECTRICAL CONSTRUCTION
DRAWING NUMBER 6



PLAN – ELEV. 36.50

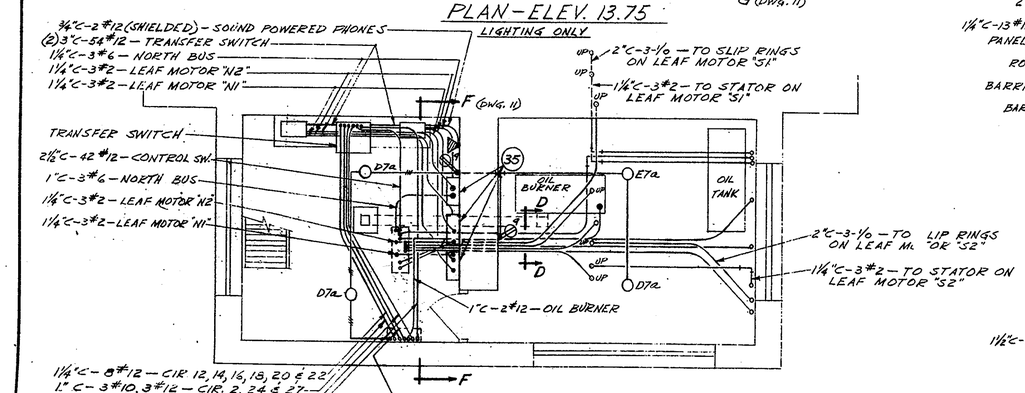


PLAN – ELEV. 25.50

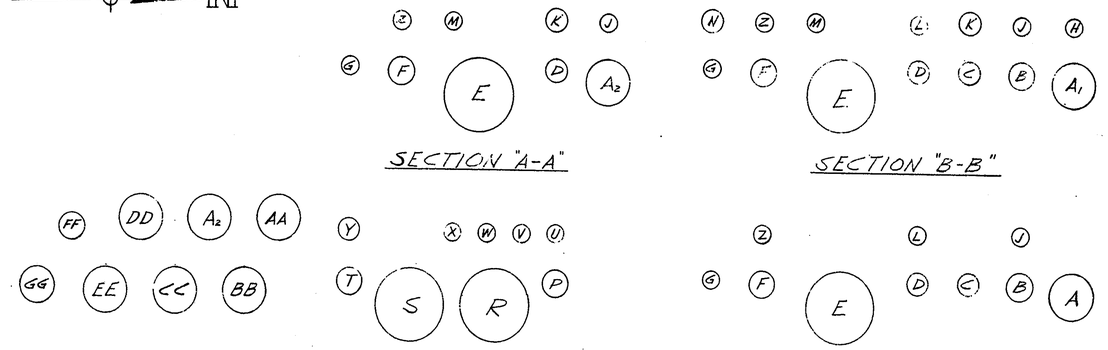


PLAN – ELEV. 13.75

LIGHTING ONLY

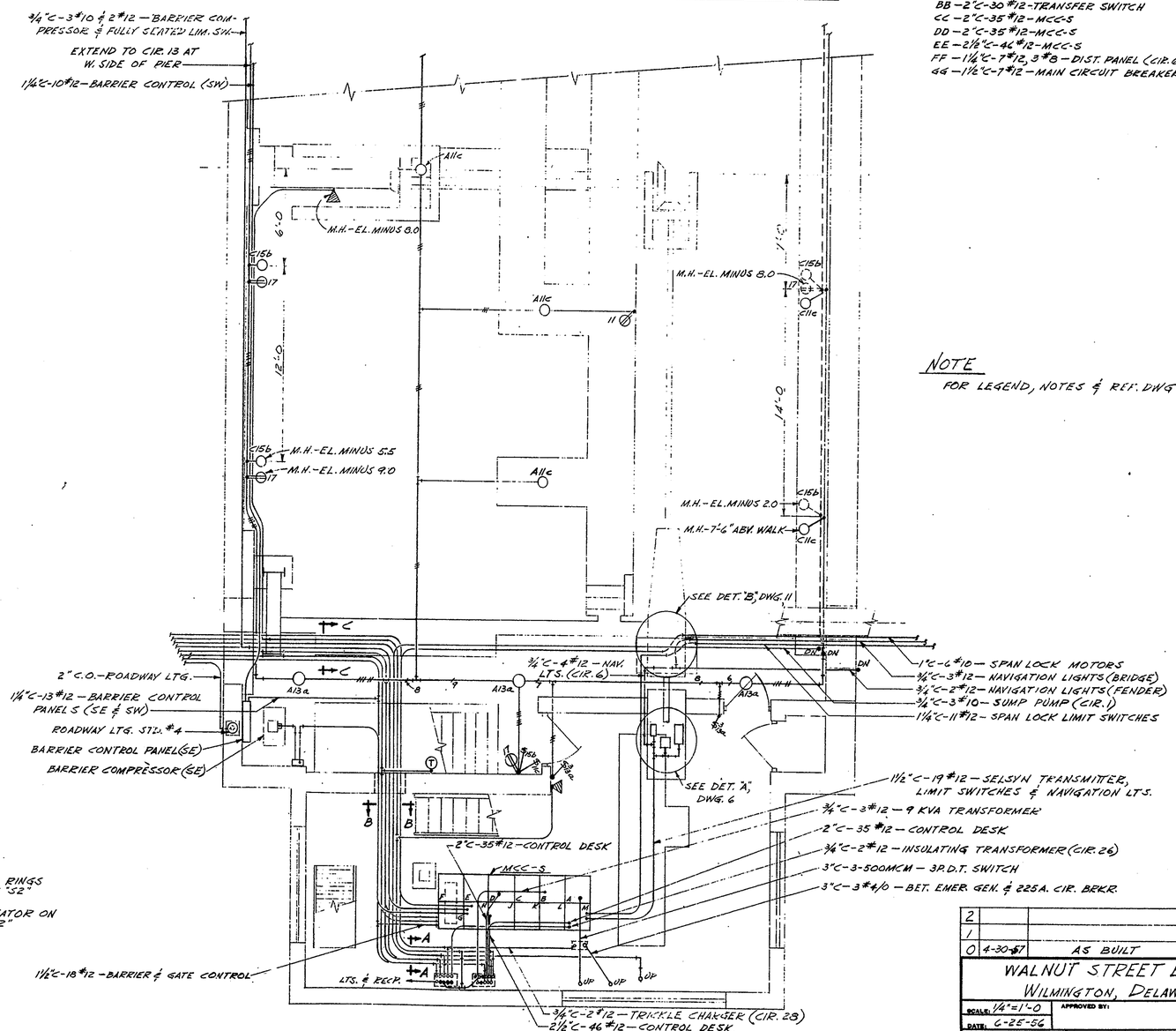


PLAN – ELEV. 3.00



SECTION "A-A" SECTION "B-B" SECTION "K-K" SECTION "D-D" SECTION "C-C"

A – 2"C-37#12 – BARRIER & GATE CONTROL
A1 – 2"C-39#12 – BARRIER & GATE CONTROL
A2 – 2"C-21#12 – BARRIER & GATE CONTROL
B – 1"C-5#12 – TRAFFIC SIGNALS & WARNING LTS.
C – 1"C-6#10 – TRAFFIC GATE POWER
D – 1"C. (EMPTY) – TELEPHONE SERVICE (D.S.T. CO.)
E – 4"C-3-500 MCM – MAIN 440-V. FEEDER
F – 1 1/4"C. (EMPTY) – METERING (D.P. & L. CO.)
G – 3/4"C-2#12 – SPACE HTRS. IN PRI. SWGR. (CIR. 28)
H – 3/4"C-3#10 – BARRIER COMPRESSOR (GE)
J – 3/4"C-4#12 – PIPE HEATING (CIR. 3 & 4)
K – 1"C-6#12 – PIER LTS. & RECP. (CIR. 11, 13, 15 & 17)
L – 3/4"C-3#10, 2#12 – BARR. COMP. (SW) & F.S. LIM. SW.
M – 3/4"C-3#10 – SUMP PUMP (CIR. 1)
N – 1"C-6#10 – SPAN LOCK MOTORS
P – 1 1/4"C-3#2 – 60 HP MOTOR SWITCH S2
R – 3"C-3#8, 12#2 – RESISTORS S2
S – 3"C-3#8, 12#2 – RESISTORS S1
T – 1 1/4"C-3#2 – 60 HP MOTOR SWITCH S1
U – 3/4"C-3#10 – BRAKE S2
V – 3/4"C-5#12 – BRAKE RELEASE INDICATION
W – 3/4"C-3#10 – BRAKE S3
X – 3/4"C-3#10 – BRAKE S1
Y – 3/4"C-3#18 – THERMOSTAT CONTROL
Z – 3/4"C-2#18 – BRIDGE PHONE
AA – 2"C-15#12 – TRANSFER SWITCH
BB – 2"C-30#12 – TRANSFER SWITCH
CC – 2"C-35#12 – MCC-S
DD – 2"C-35#12 – MCC-S
EE – 2 1/2"C-46#12 – MCC-S
FF – 1 1/4"C-7#12, 3#8 – DIST. PANEL (CIR. 6, 8, 10, 19, 21, 23, 25)
GG – 1 1/2"C-7#12 – MAIN CIRCUIT BREAKER CONTROL



HALF PLAN – SOUTH BASCULE PIER & PLAN – CONTROL HOUSE – ELEV. 13.75

NOTE

FOR LEGEND, NOTES & REF. DWGS., SEE DWG. #6.

2		
1		
0	4-30-57	AS BUILT

WALNUT STREET BRIDGE
WILMINGTON, DELAWARE

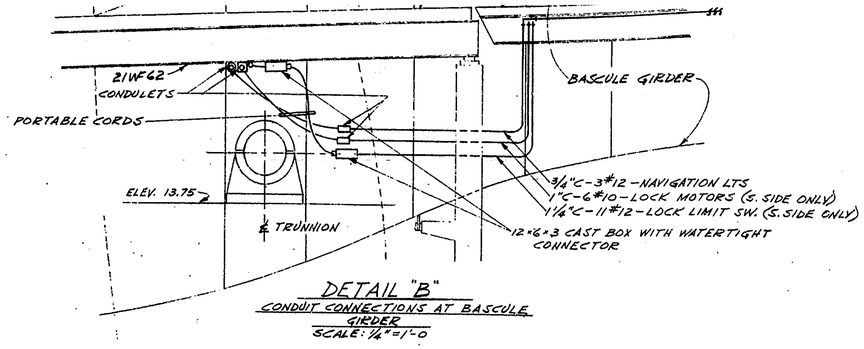
SCALE: 1/4" = 1'-0 | APPROVED BY: | DRAWN BY DJH
DATE: 6-25-56 | REVISED

ELECTRIC LTG. & POWER LAYOUT – CONTROL HOUSE & S. BASC. PIER

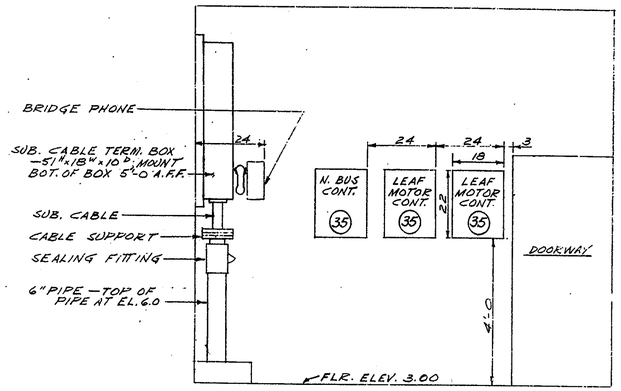
HOWARD P. FOLEY CO., WILMINGTON
ELECTRICAL CONSTRUCTION

DRAWING NUMBER 7

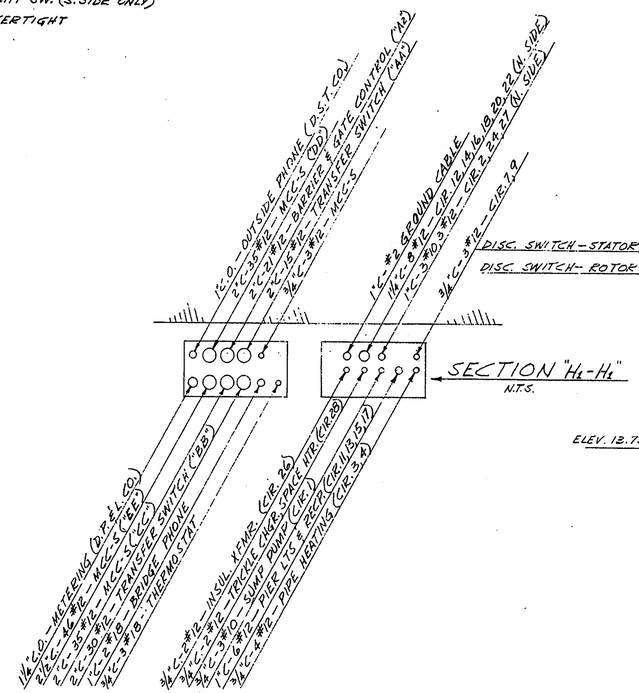
8X10 PRINTED ON NO. 1080H CLEARPRINT



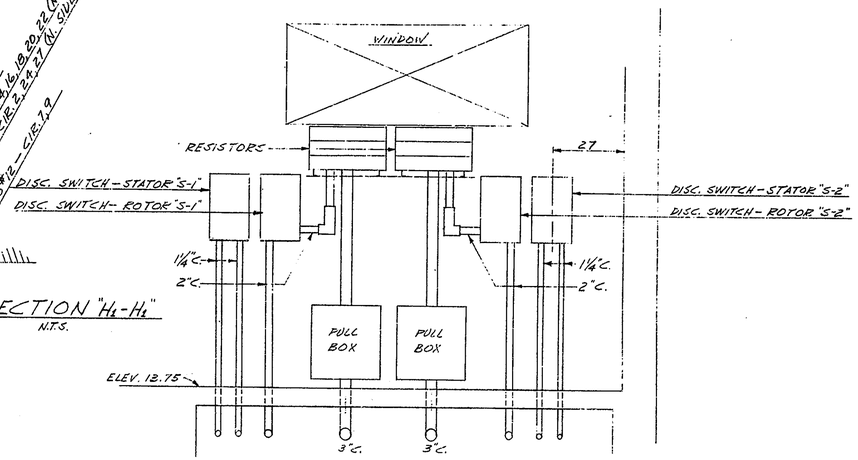
DETAIL "B"
CONDUIT CONNECTIONS AT BASCULE GIRDER
SCALE: 1/4"=1'-0



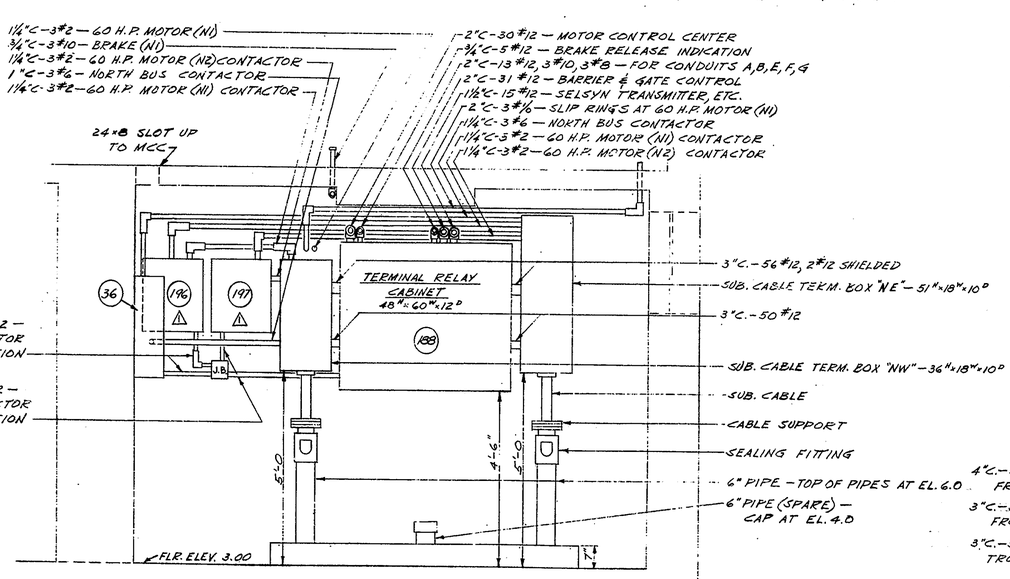
SECTION "F-F"
SCALE: 1/2"=1'-0
CONTROL HOUSE



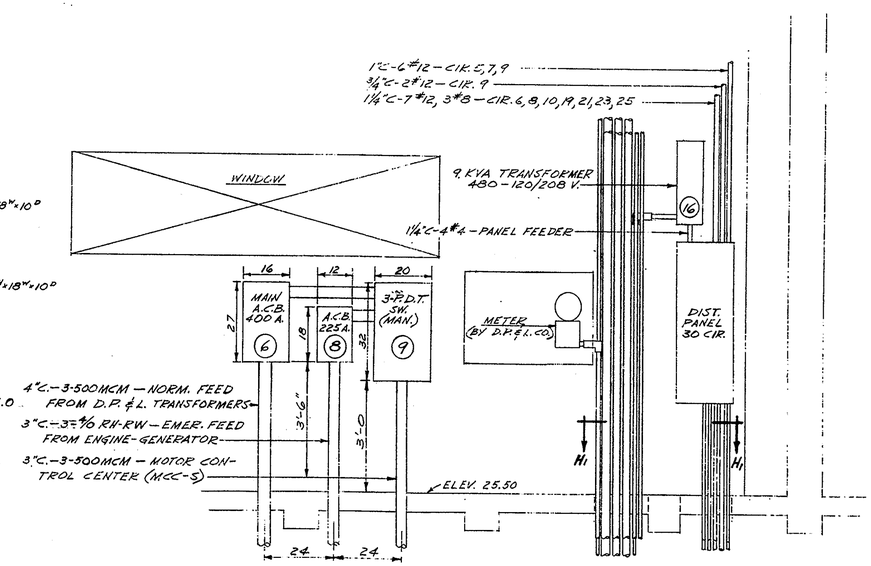
SECTION "H1-H1"
N.T.S.



SECTION "G-G"
SCALE: 1/2"=1'-0
CONTROL HOUSE
(STORAGE HOUSE SIMILAR)



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



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

2		
1		
0	4-30-57	AS BUILT

WALNUT STREET BRIDGE
WILMINGTON, DELAWARE

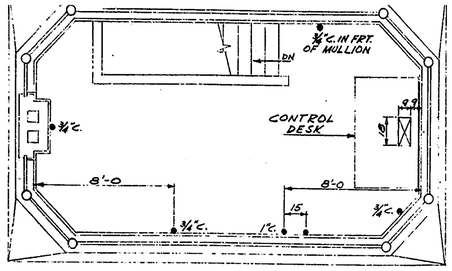
SCALE: AS NOTED | APPROVED BY: | DRAWN BY: DJH
DATE: 2-13-56 | REVISED

DETAILS - STORAGE & CONTROL HOUSES

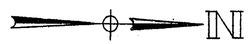
HOWARD P. FOLEY CO., WILMINGTON
ELECTRICAL CONSTRUCTION

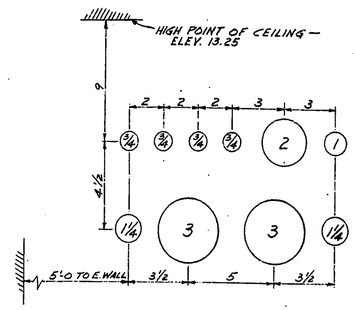
DRAWING NUMBER 11

SAXES PRINTED ON NO. 1000N CLEARPRINT

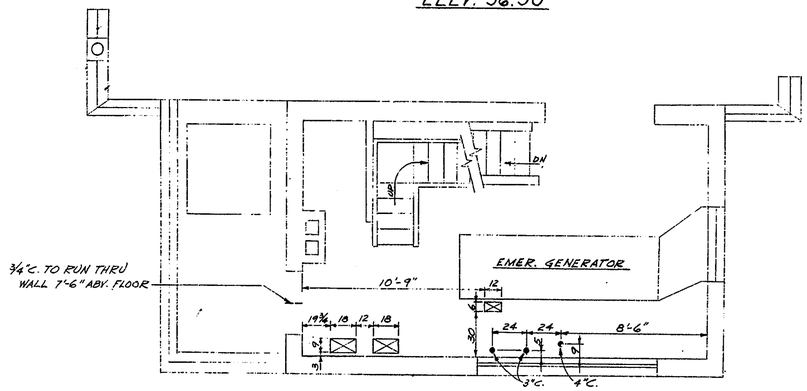


ELEV. 36.50

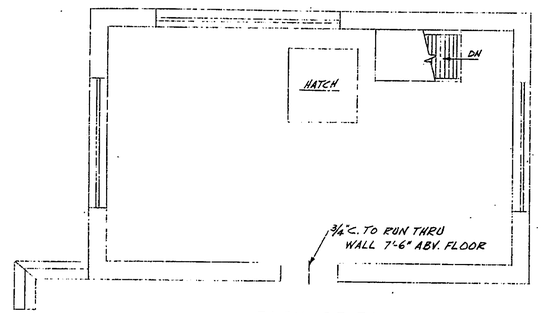




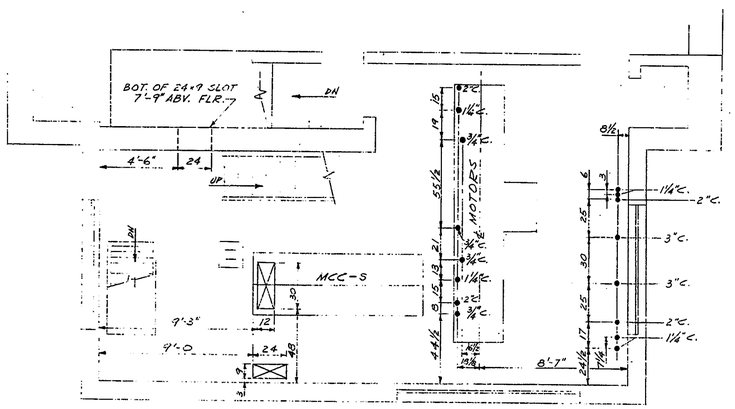
SECTION "A-A"
SCALE: 3"=1'-0



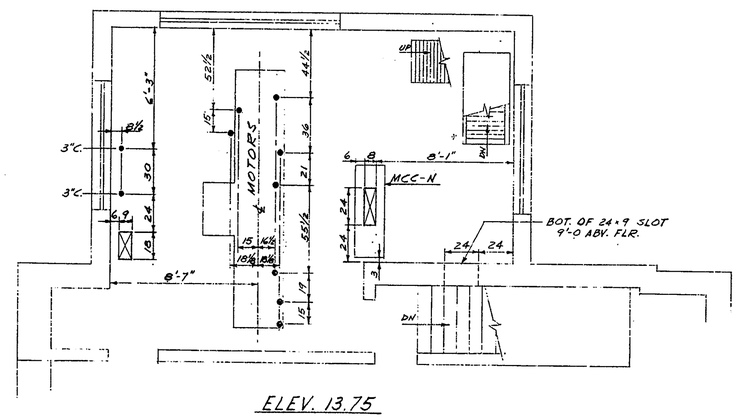
ELEV. 25.50



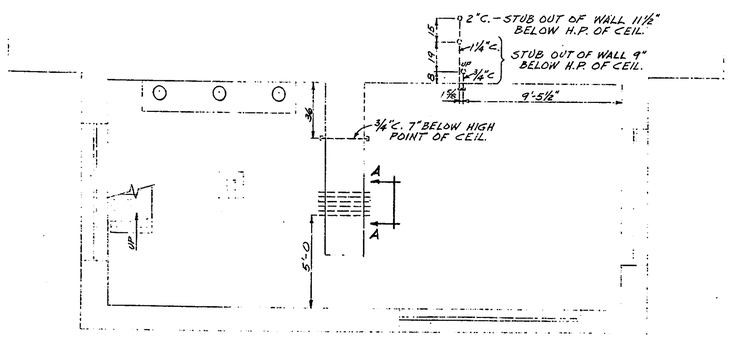
ELEV. 25.50



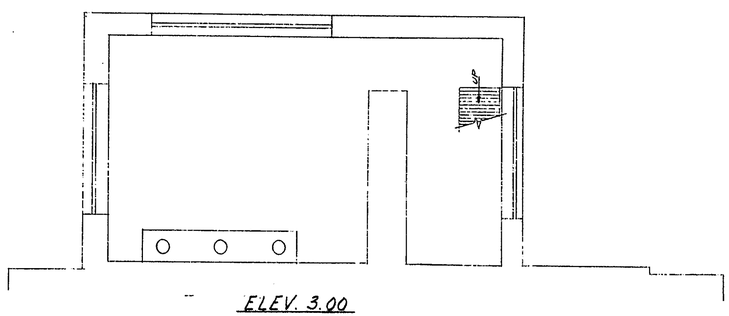
ELEV. 13.75



ELEV. 13.75



ELEV. 3.00
CONTROL HOUSE



ELEV. 3.00
STORAGE HOUSE

2		
1		
0	4-30-57	AS BUILT

WALNUT STREET BRIDGE
WILMINGTON, DELAWARE

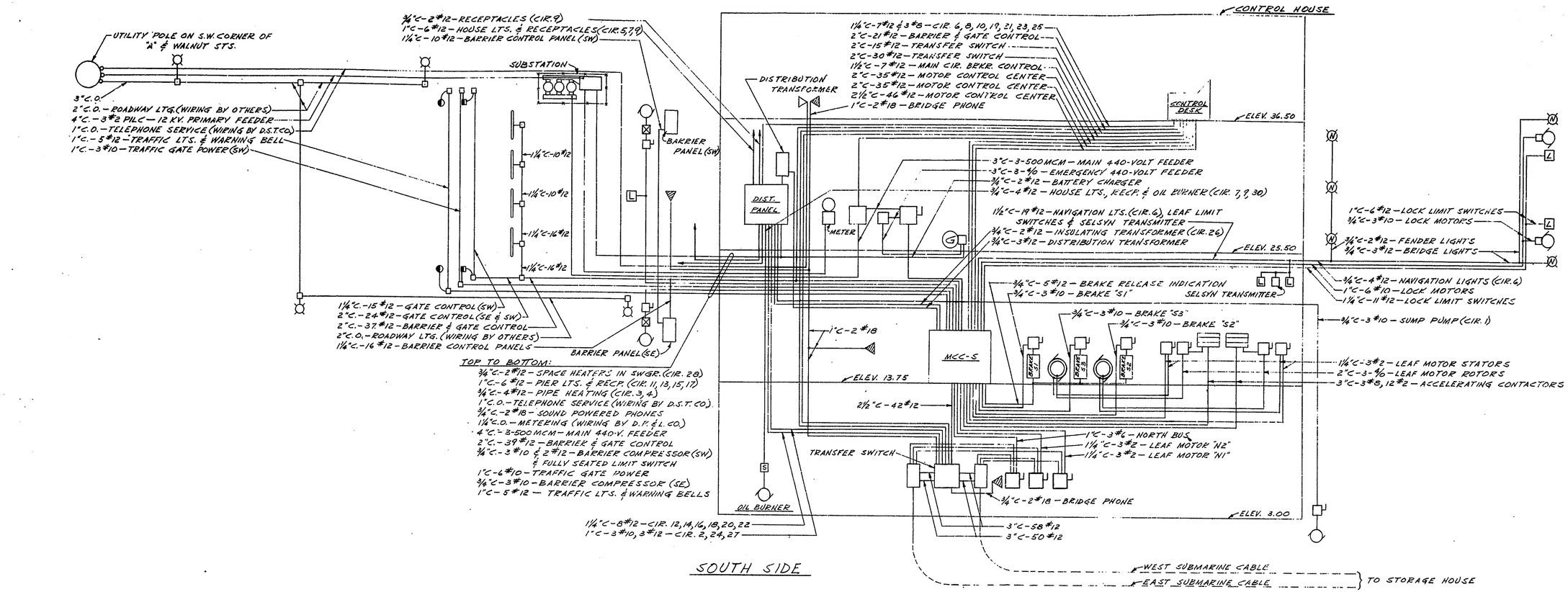
SCALE: 1/4"=1'-0	APPROVED BY:	DRAWN BY: BJH
DATE: 2-24-56		REVISED

ELECTRICAL — CONDUIT SLEEVES & SLOTS IN FLOORS & WALLS

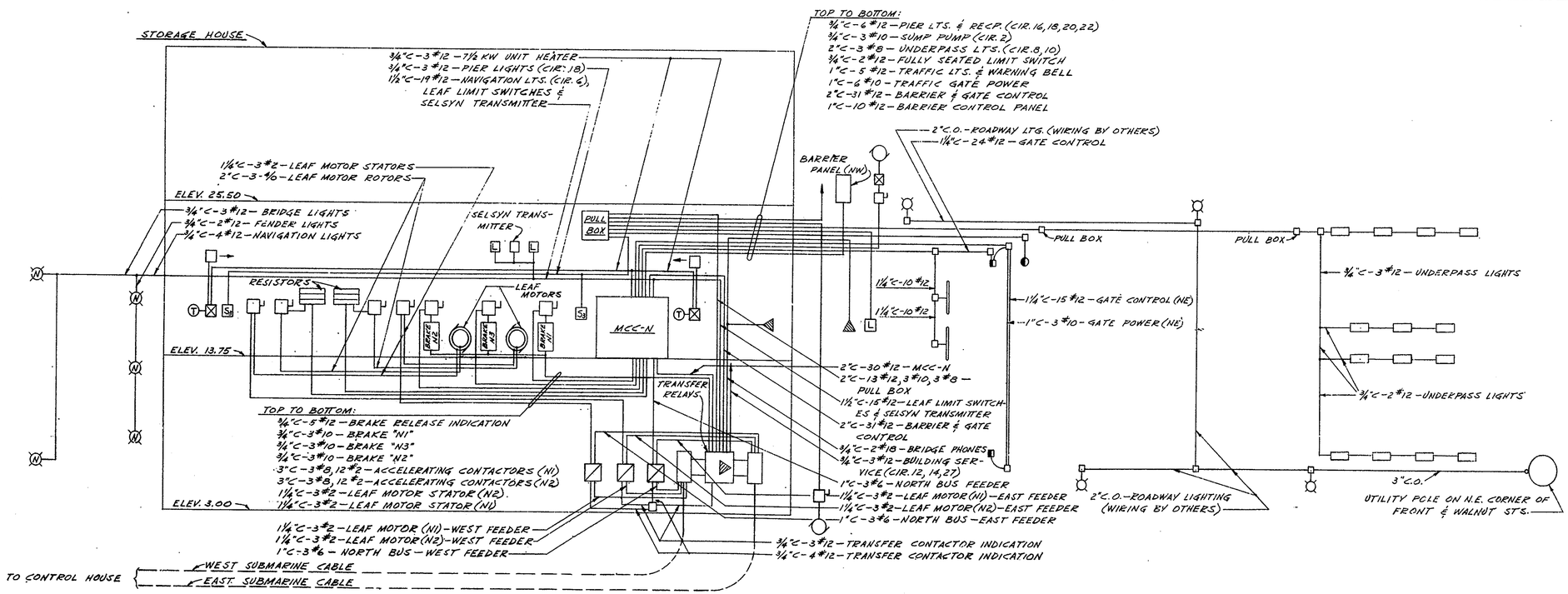
HOWARD P. FOLEY CO., WILMINGTON
ELECTRICAL CONSTRUCTION

DRAWING NUMBER 12

8X36 PRINTED ON NO. 1000H CLEARPRINT



SOUTH SIDE



NORTH SIDE

LEGEND

- INCANDESCENT FIXTURE
- NAVIGATION LIGHT
- FLUORESCENT FIXTURE
- TRAFFIC LIGHT
- TRAFFIC GATE
- TRAFFIC BARRIER
- SPACE HEATER
- LIMIT SWITCH
- SINGLE POLE SWITCH
- THREE-WAY SWITCH
- THERMOSTAT
- CONTACTOR
- STARTER
- DISCONNECT SWITCH
- BRIDGE PHONE
- OUTSIDE PHONE
- JUNCTION OR PULL BOX
- MOTOR

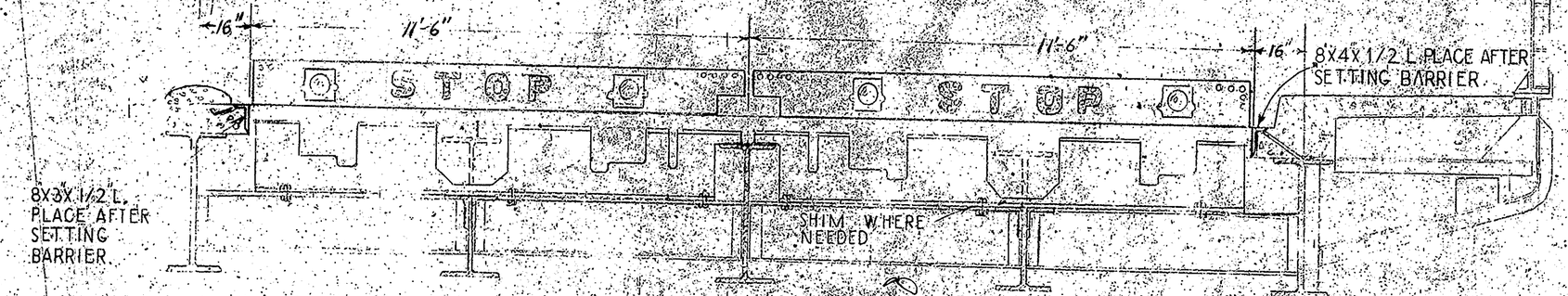
REVISIONS		
NO.	DATE	BY
2		
1		
0	4-30-57	AS BUILT
1		
2		
3		
4		
5		

WALNUT ST. BRIDGE
WILMINGTON, DELAWARE

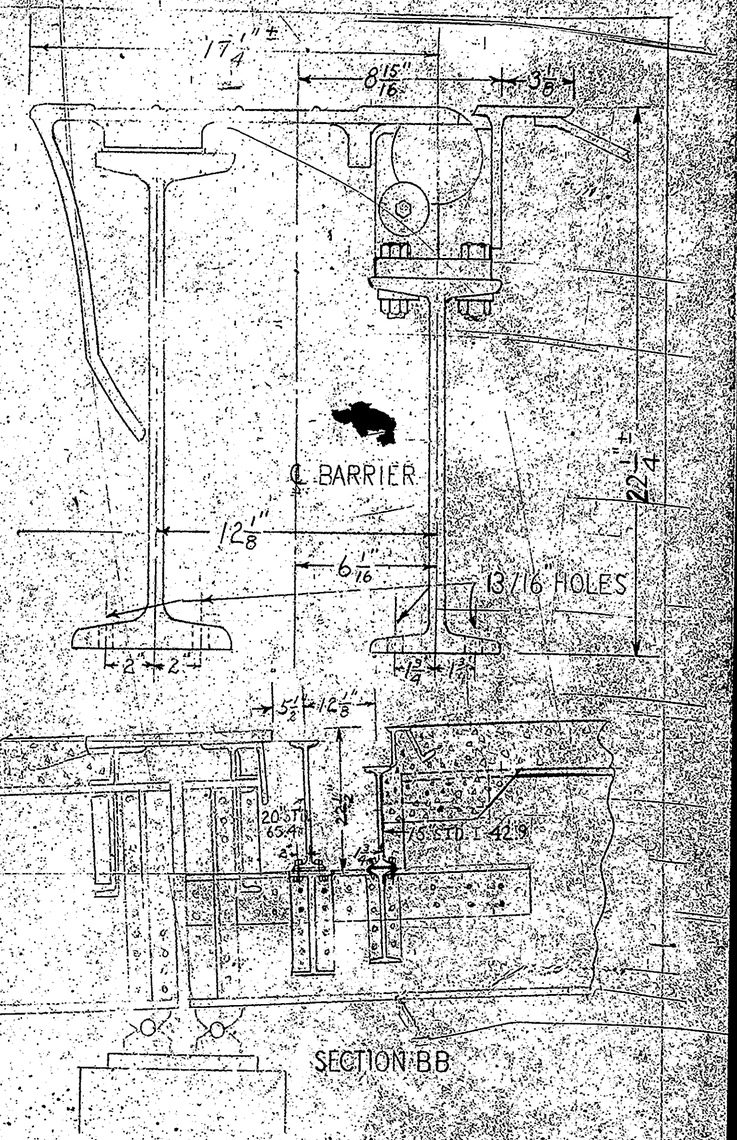
CONDUIT DIAGRAM

DRAWN BY D.J.H | SCALE NO SCALE | MATERIAL
CHK'D | DATE 4-18-57 | DRAWING NO. 17
TRACED | APP'D

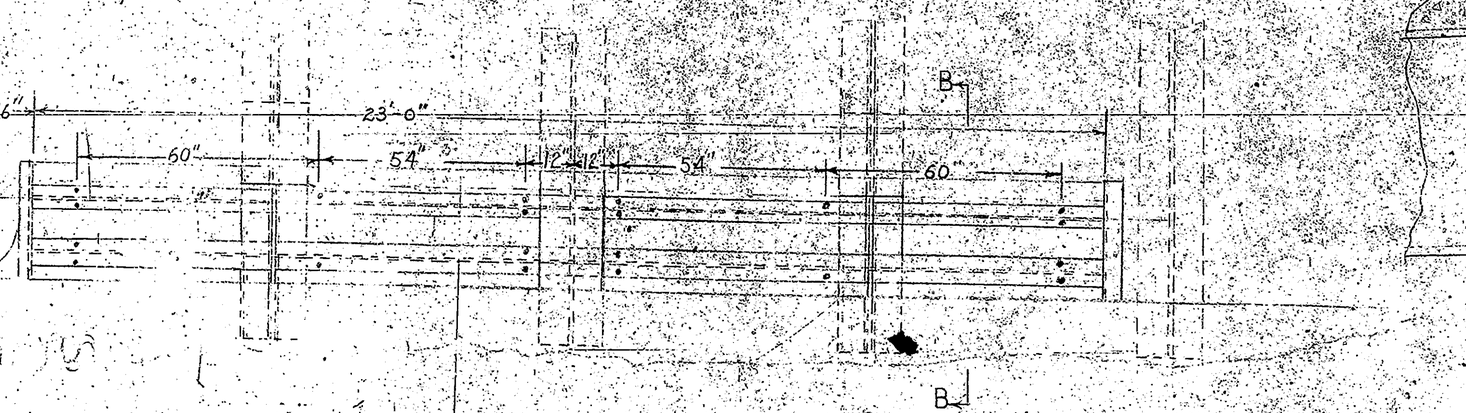
HOWARD P. FOLEY CO.
WILMINGTON, DELAWARE



VIEW SHOWING FRONT I BEAM



SECTION BB

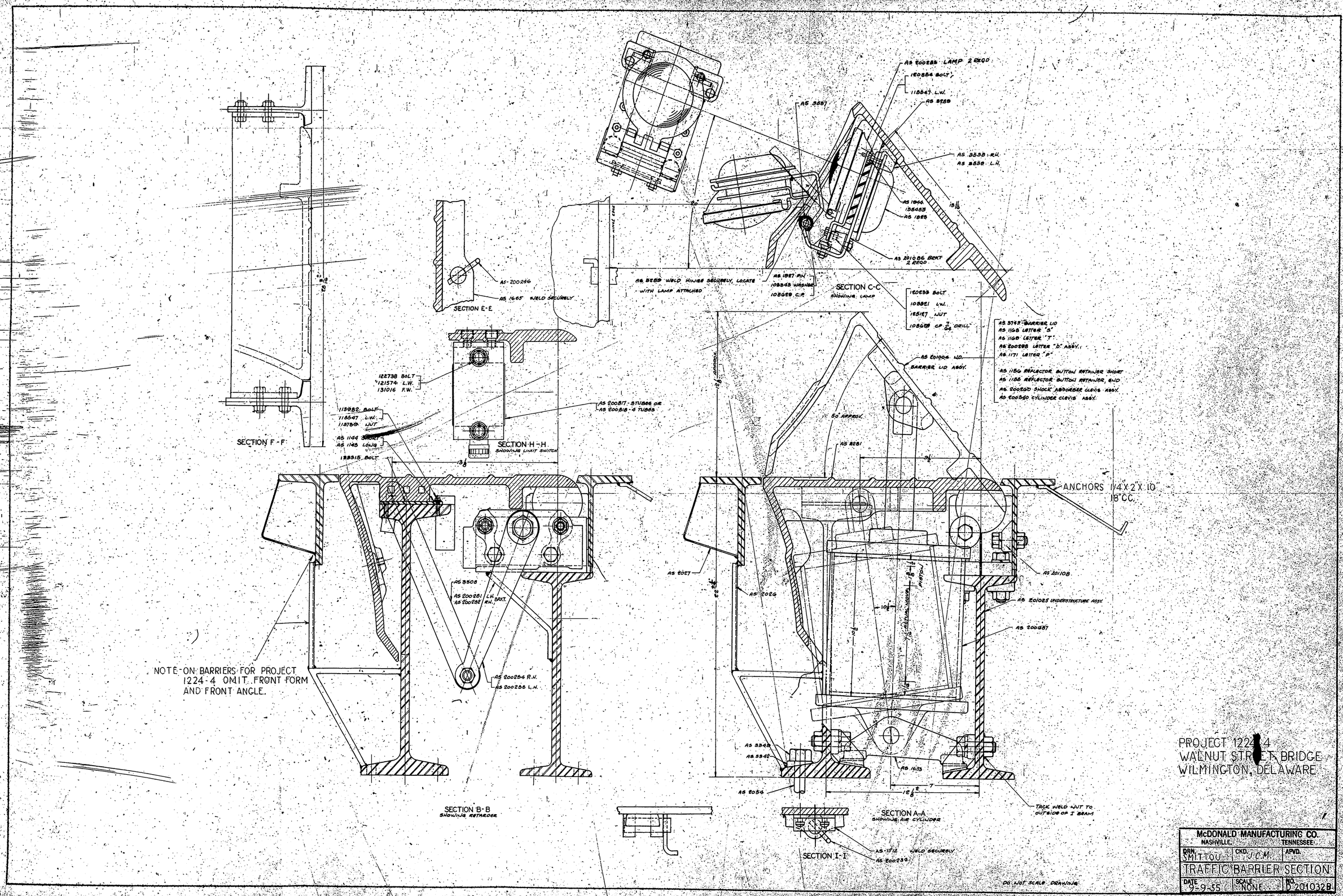


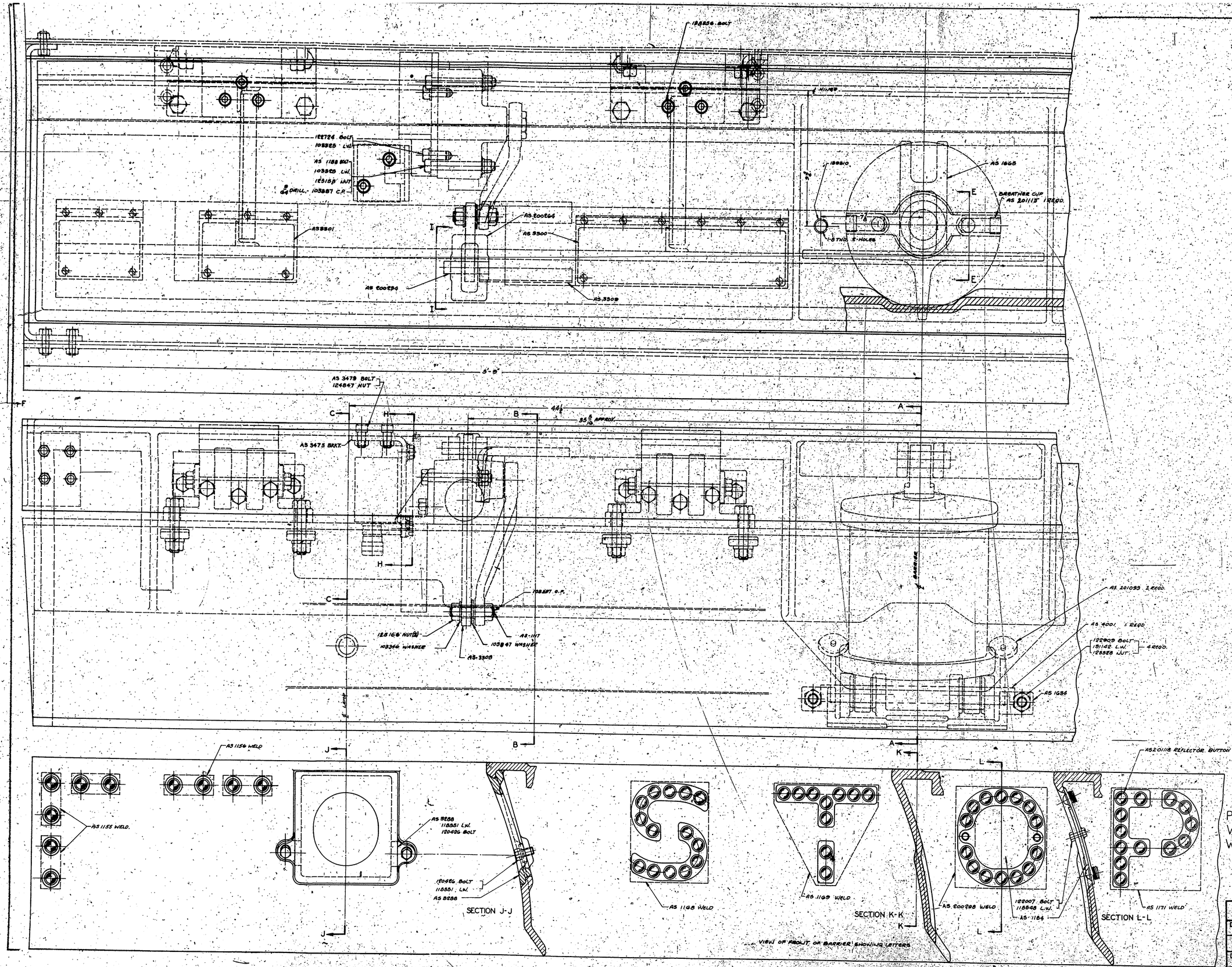
VIEW SHOWING BARRIER SUPPORTS BEFORE BARRIERS ARE PLACED

WALNUT STREET BRIDGE

McDONALD MANUFACTURING CO. NASHVILLE, TENNESSEE		
DRN.	CKD.	APVD.
SKETCH LOCATING BARRIERS		
DATE	SCALE	NO.

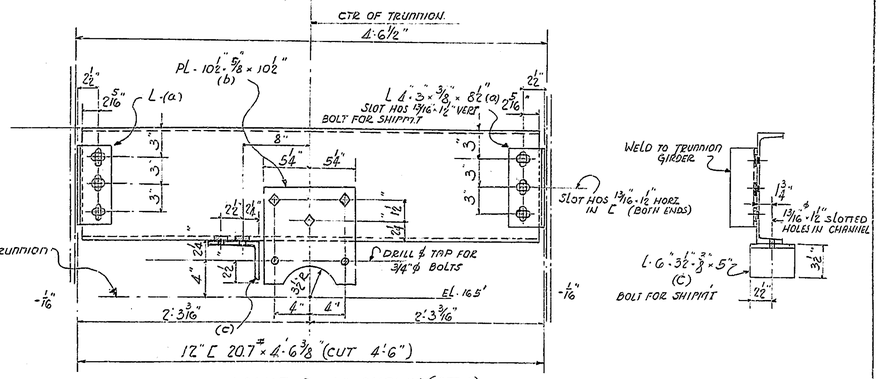
REVISED 6-6-55


AS 200285 LAMP 2 REQD.
120854 BOLT
118547 L.W.
AS 2559
AS 2551
AS 2558 R.H.
AS 2558 L.H.
AS 1944
135452
AS 1855
AS 201085 BKT 2 REQD.
AS-200246
AS 1665 WELD SECURELY
SECTION E-E
AS 2559 WELD HINGE SECURELY, LOCATE WITH LAMP ATTACHED
AS 1927 PIN
103863 WASHER
103629 C.P.
SECTION C-C
SHOWING LAMP
120659 BOLT
103821 L.W.
125167 NUT
108628 CP 7/64 DRILL
AS 3743 BARRIER LID
AS 1168 LETTER "S"
AS 1169 LETTER "T"
AS 200298 LETTER "D" ASSY.
AS 1171 LETTER "P"
AS 1156 REFLECTOR BUTTON RETAINER SHORT
AS 1155 REFLECTOR BUTTON RETAINER, END
AS 200260 SHOCK ABSORBER CLEVIS ASSY.
AS 200540 CYLINDER CLEVIS ASSY.
AS 201004 LID BARRIER LID ASSY.
122738 BOLT
121574 L.W.
131016 F.W.
118882 BOLT
118547 L.W.
118569 NUT
AS 1144 SHOCK
AS 1145 LOUIS
138515 BOLT
SECTION F-F
AS 200817 - STUBES OR
AS 200818 - 4 TUBES
SECTION H-H
SHOWING LIMIT SWITCH
50 APPROX.
AS 2551
ANCHORS 1/4 X 2 X 10" 18" CC.
AS 3508
AS 200251 L.H.
AS 200252 R.H. BRKT.
AS 2027
AS 2024
AS 201108
AS 201085 UNDERSTRUCTURE ASSY.
AS 200287
NOTE-ON BARRIERS FOR PROJECT 1224-4 OMIT FRONT FORM AND FRONT ANGLE.
AS 200254 R.H.
AS 200256 L.H.
AS 3542
AS 3542
AS 1635
AS 2054
SECTION B-B
SHOWING RETRIEVER
SECTION A-A
SHOWING AIR CYLINDER
TACK WELD NUT TO OUTSIDE OF I BEAM
AS-1512 WELD SECURELY
AS 200239
SECTION I-I
DO NOT SCALE DRAWING
PROJECT 1224-4
WALNUT STREET BRIDGE
WILMINGTON, DELAWARE
McDONALD MANUFACTURING CO.
NASHVILLE, TENNESSEE
DRN. SMITTOU
CKD. J.C.M.
APVD.
TRAFFIC BARRIER SECTION
DATE 9-9-55
SCALE NONE
NO. D-201032B

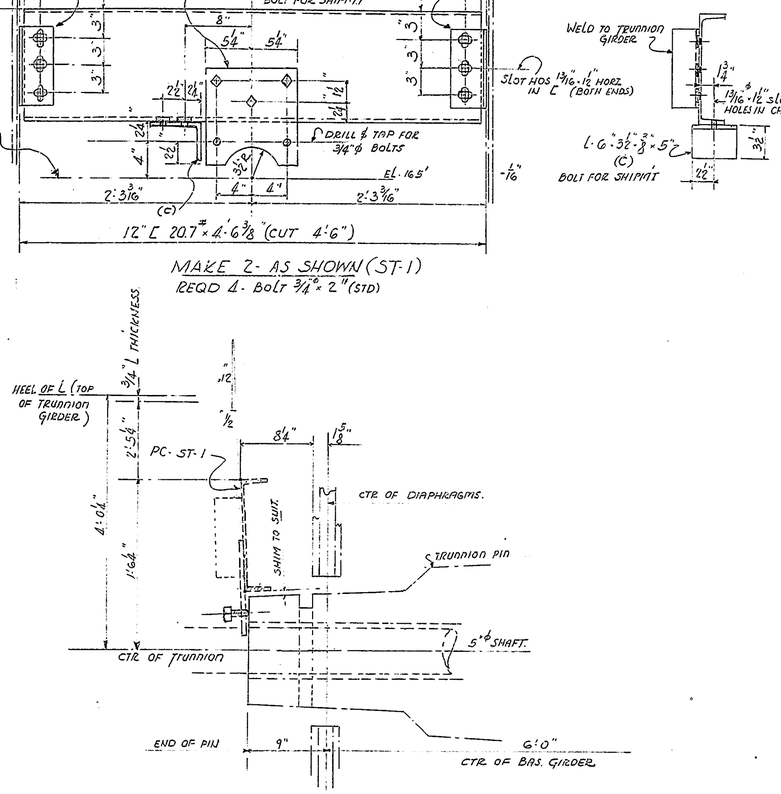


PROJECT 1224-4
WALNUT STREET BRIDGE
WILMINGTON, DELAWARE

McDONALD MANUFACTURING CO. NASHVILLE, TENNESSEE		
DRN. SMITTOU	CKD. J.C.M.	APVD.
TRAFFIC BARRIER PLAN		
DATE 7-9-55	SCALE NONE	NO. D201032-A1



MAKE 2- AS SHOWN (ST-1)
REQD 4- BOLT 3/4"ϕ x 2" (STD)



ELEV- SHOWING LOCATION OF TRUNNION STOP

TRUNNION STOP
WALNUT STREET BRIDGE WILMINGTON DEL.

CORNELL & CO INC. WOODBURY N.J.
(SH-1C)

MICROFILMED

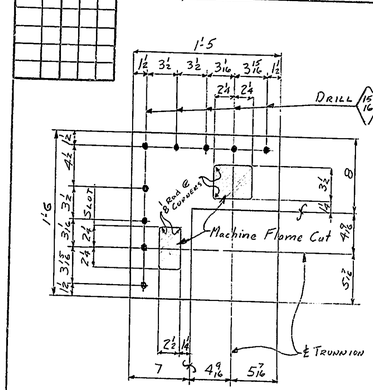
RIVETS

Dia.
Rivets

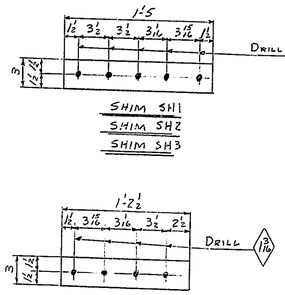
AGCO
SKETCH SHEET
AMERICAN BRIDGE
DIVISION
UNITED STATES STEEL CORPORATION

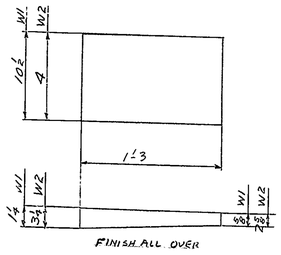
BOLTS

Hd..... Nut.....
Dia.
Bolts



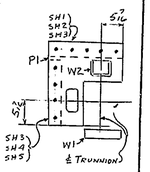
KEEPER PLATE P1





FINISH ALL OVER

WEDGE W1
WEDGE W2



LOCATION

RUSH

- SHIP VIA AIR EXPRESS OR AIR FREIGHT
- NEEDED IN FIELD BY ERECTION DEPT. FRIDAY JUNE. 15, 1956

MATERIAL- STRUCTURAL STEEL ASTM A7-55T

NO. PCS.	MATERIAL SHAPE	LENGTH FT	LENGTH INS.	MARK	CALCULATED WEIGHT FOR ONE SHIP PIECE	ORDERED	ITEM
4	KEEPER PLATE			P1			
4	PL 17 1/2	1	6	FINISH AS NOTED		S	
4	WEDGE			W1			
4	WEDGE			W2			
4	BEV PL 10 1/2 (5/8 in 1/4)	1	3	FINISH ALL OVER FOR W1		S	
4	BEV PL 4 (2 5/8 in 3/4)	1	3	FINISH ALL OVER FOR W2		S	

NO. PCS.	MATERIAL SHAPE	LENGTH FT	LENGTH INS.	MARK	CALCULATED WEIGHT FOR ONE SHIP. PIECE	ORDERED	ITEM
	SHIMS						
4	PL 3 1/4	1	5	SH1			S
4	PL 3 1/8	1	5	SH2			S
4	PL 3 1/16	1	5	SH3			S
4	PL 3 1/4	1	2 1/2	SH4			S
4	PL 3 1/8	1	2 1/2	SH5			S
4	PL 3 1/16	1	2 1/2	SH6			S

32	35	36	40	50	51	65	70	80	91	92	1	20	60
F1	MAIL	MACH	M	W	G	G	SB	SB-1	SB-2	SB-3	BOS	MAIL	MS
		✓			IP								

	RIVETS	HOLES	DRAWINGS	NAME	DATE
TRUNNION KEEPER PLATE			MADE BY	JM	6-13-56
PAINT No		AS NOTED	CHKD. BY		
CONTACT SURFACES No					

RESTRICTED: F E Q O B X

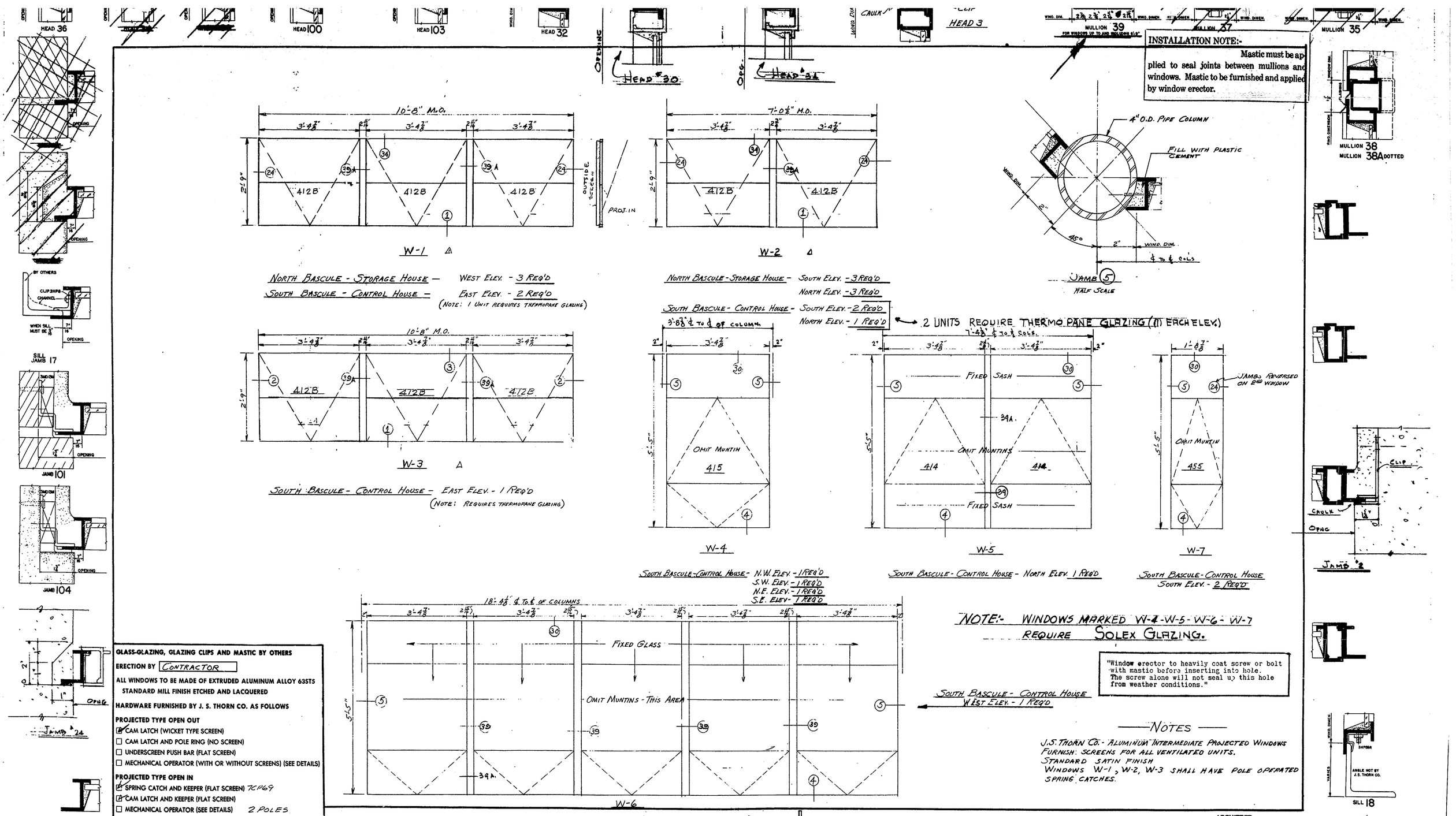
SHIPPING DIVISION: AMB #3
FABRICATION: AMBRIDGE

IN CHARGE OF: SHENEFELT
ORDER No. Q6835

#269
SHEET No. F1

NAME OF STRUCTURE
WALNUT STREET BRIDGE, WILMINGTON, DELAWARE

MICROFILMED



INSTALLATION NOTE:-

Mastic must be applied to seal joints between mullions and windows. Mastic to be furnished and applied by window erector.

NOTE:- WINDOWS MARKED W-4-W-5-W-6-W-7 REQUIRE SOLEX GLAZING.

"Window erector to heavily coat screw or bolt with mastic before inserting into hole. The screw alone will not seal up this hole from weather conditions."

NOTES

J.S. THORN CO. - ALUMINUM INTERMEDIATE PROJECTED WINDOWS
FURNISH: SCREENS FOR ALL VENTILATED UNITS.
STANDARD SATIN FINISH
WINDOWS W-1, W-2, W-3 SHALL HAVE POLE OPERATED SPRING CATCHES.

GLASS-GLAZING, GLAZING CLIPS AND MASTIC BY OTHERS

ERECTION BY CONTRACTOR

ALL WINDOWS TO BE MADE OF EXTRUDED ALUMINUM ALLOY 63ST5
STANDARD MILL FINISH ETCHED AND LACQUERED

HARDWARE FURNISHED BY J. S. THORN CO. AS FOLLOWS

PROJECTED TYPE OPEN OUT
- [x] CAM LATCH (WICKET TYPE SCREEN)
- [ ] CAM LATCH AND POLE RING (NO SCREEN)
- [ ] UNDERSCREEN PUSH BAR (FLAT SCREEN)
- [ ] MECHANICAL OPERATOR (WITH OR WITHOUT SCREENS) (SEE DETAILS)

PROJECTED TYPE OPEN IN
- [x] SPRING CATCH AND KEEPER (FLAT SCREEN) 7CP69
- [x] CAM LATCH AND KEEPER (FLAT SCREEN)
- [ ] MECHANICAL OPERATOR (SEE DETAILS) 2 POLES

SCREENS (ALUMINUM FRAMES, 18-14 MESH ALUMINUM WIRE CLOTH)
- [ ] WICKET SCREEN PROJECT OUT VENTS BY
- [ ] FLAT SCREENS PROJECT OUT VENTS BY
- [ ] FLAT SCREENS PROJECT IN VENTS BY

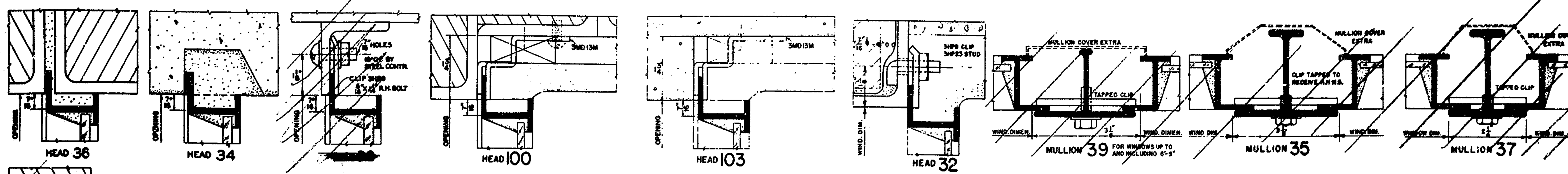
PRINTS				REVISIONS		
10				A	CHANGED PO-TO-PI-	11/16
2				2	Revised per corrected print	11/29/55
3				3	" " " " "	12/9
4				4	" " " " "	12/14
5						
6						
7						
8						

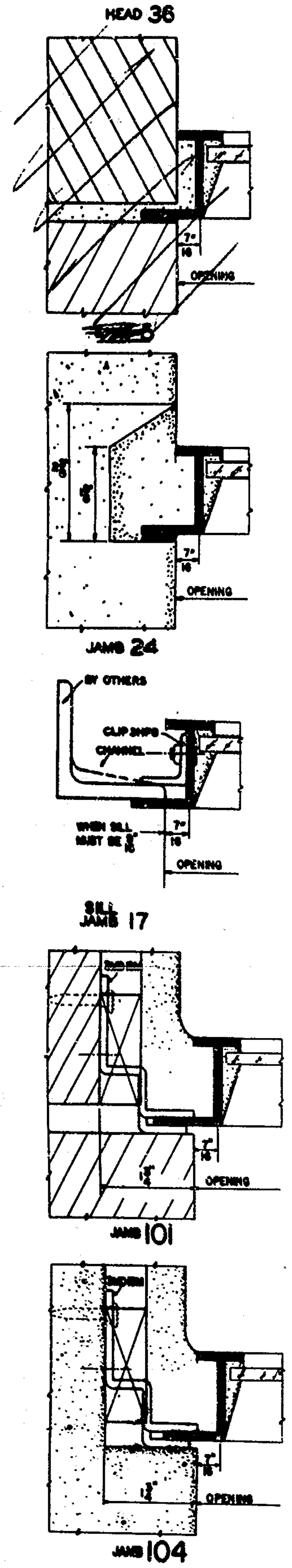
ARCHITECT

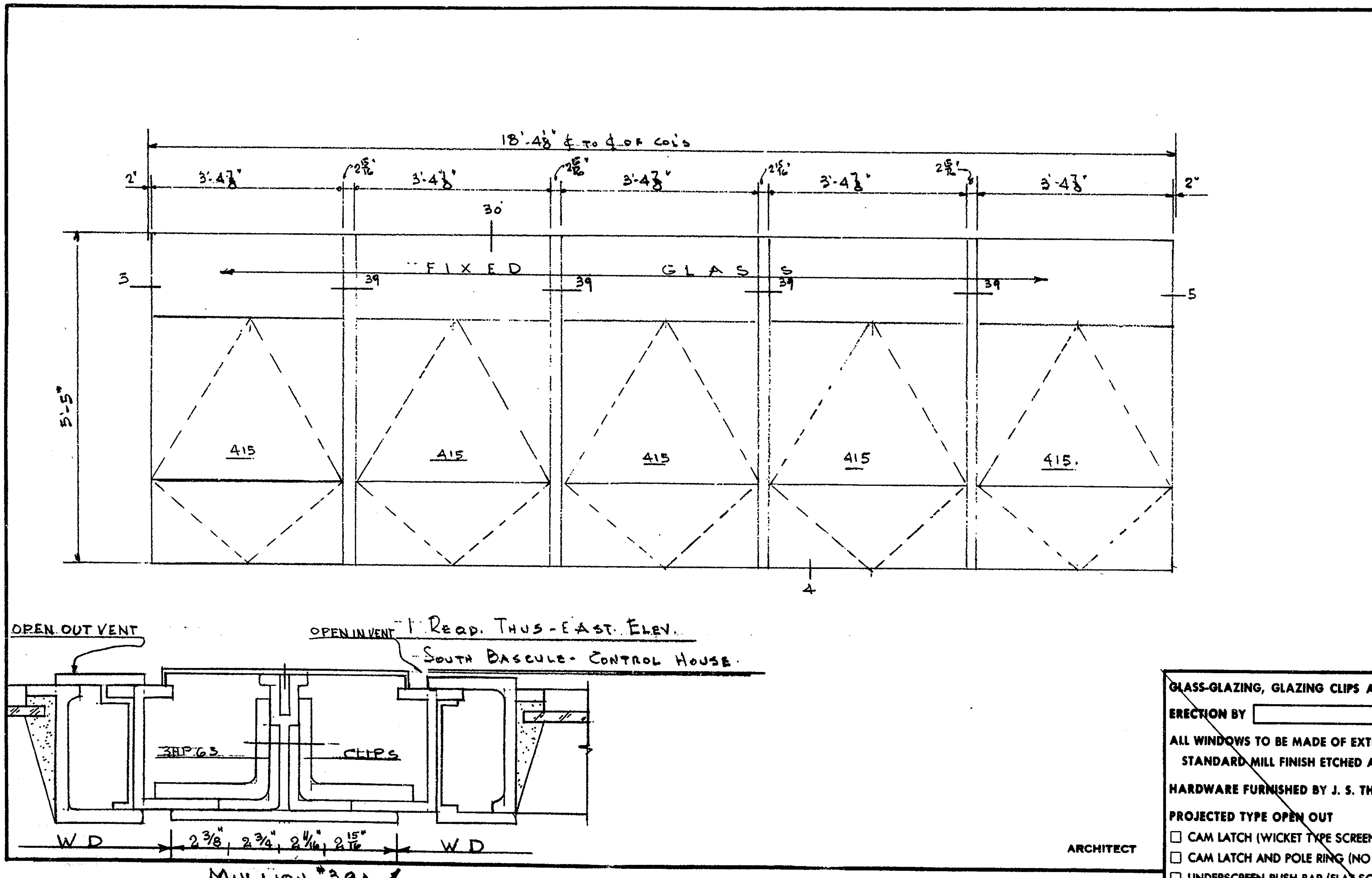
J. S. THORN COMPANY
PHILADELPHIA, PENNA.

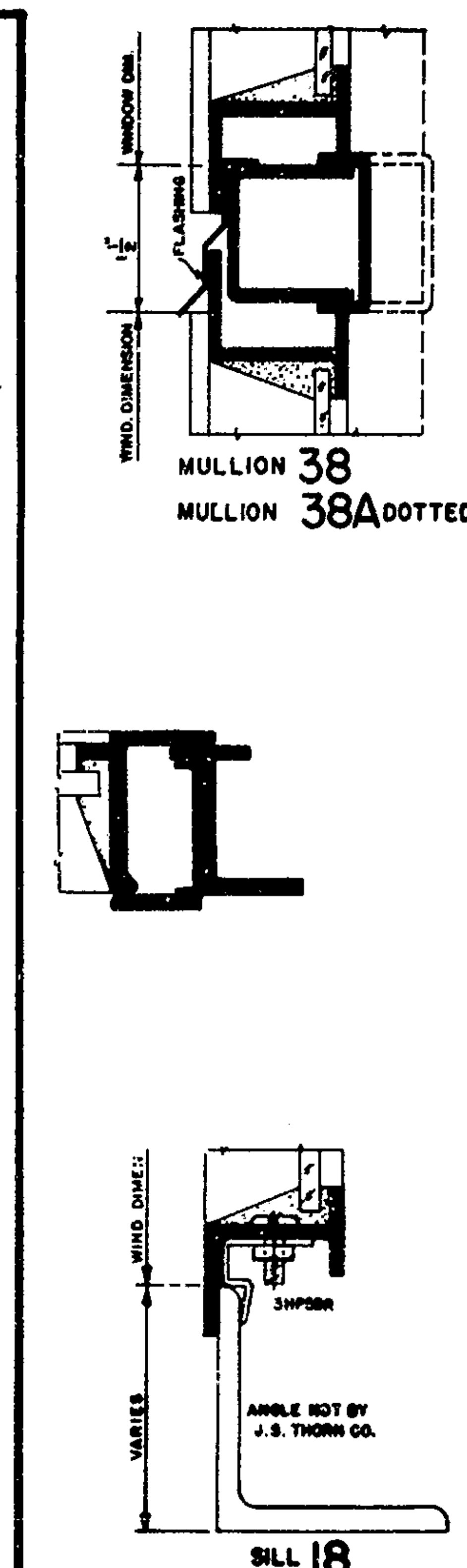
IN ALL COMMUNICATION REFERENCE TO THIS CONTRACT PLEASE REFER TO OUR ORDER NUMBER

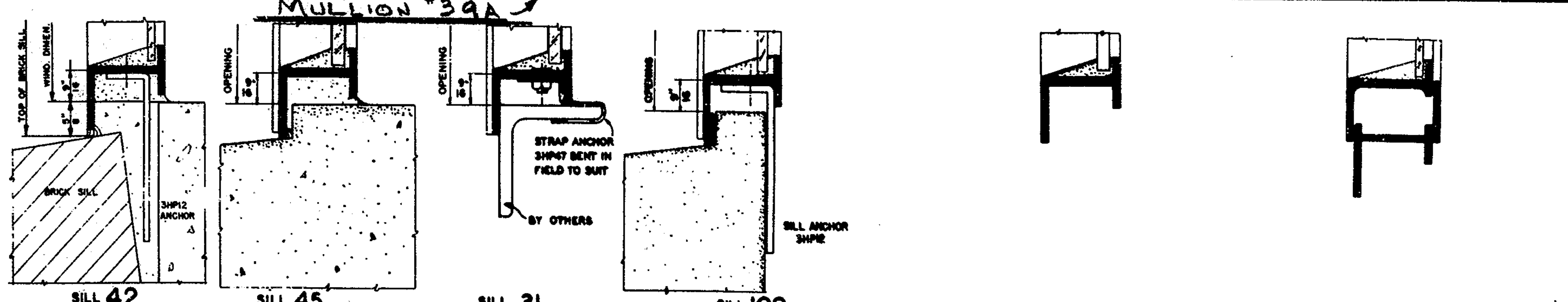
Subject: ALUMINUM PROJECTED WINDOW—OUTSIDE PUTTY GLAZED	Drawn: W.A.S.	Checked:	Sheet No. 1 OF 2.
Building: WALNUT STREET BRIDGE			
Location: WILMINGTON, DELAWARE	Date: 9-12-55		Order No. 4489
Ordered by: A.S. WIKSTROM, Inc.	Approved:		











GLASS-GLAZING, GLAZING CLIPS AND MASTIC BY OTHERS

ERECTION BY

ALL WINDOWS TO BE MADE OF EXTRUDED ALUMINUM ALLOY 63ST5
STANDARD MILL FINISH ETCHED AND LACQUERED

HARDWARE FURNISHED BY J. S. THORN CO. AS FOLLOWS

PROJECTED TYPE OPEN OUT
- ☐ CAM LATCH (WICKET TYPE SCREEN)
- ☐ CAM LATCH AND POLE RING (NO SCREEN)
- ☐ UNDERSCREEN PUSH BAR (FLAT SCREEN)
- ☐ MECHANICAL OPERATOR (WITH OR WITHOUT SCREENS) (SEE DETAILS)

PROJECTED TYPE OPEN IN
- ☐ SPRING CATCH AND KEEPER (FLAT SCREEN)
- ☐ CAM LATCH AND KEEPER (FLAT SCREEN)
- ☐ MECHANICAL OPERATOR (SEE DETAILS)

SCREENS (ALUMINUM FRAMES, 18-14 MESH ALUMINUM WIRE CLOTH)
- ☐ WICKET SCREEN PROJECT OUT VENTS BY
- ☐ FLAT SCREENS PROJECT OUT VENTS BY
- ☐ FLAT SCREENS PROJECT IN VENTS BY

PRINTS		
2	F. App	11/30
3	Files	12/9
1	Shop	11
5	Files	12-14

REVISIONS		
①	Rev as per conv print	R.B
②	" " " " "	12-14

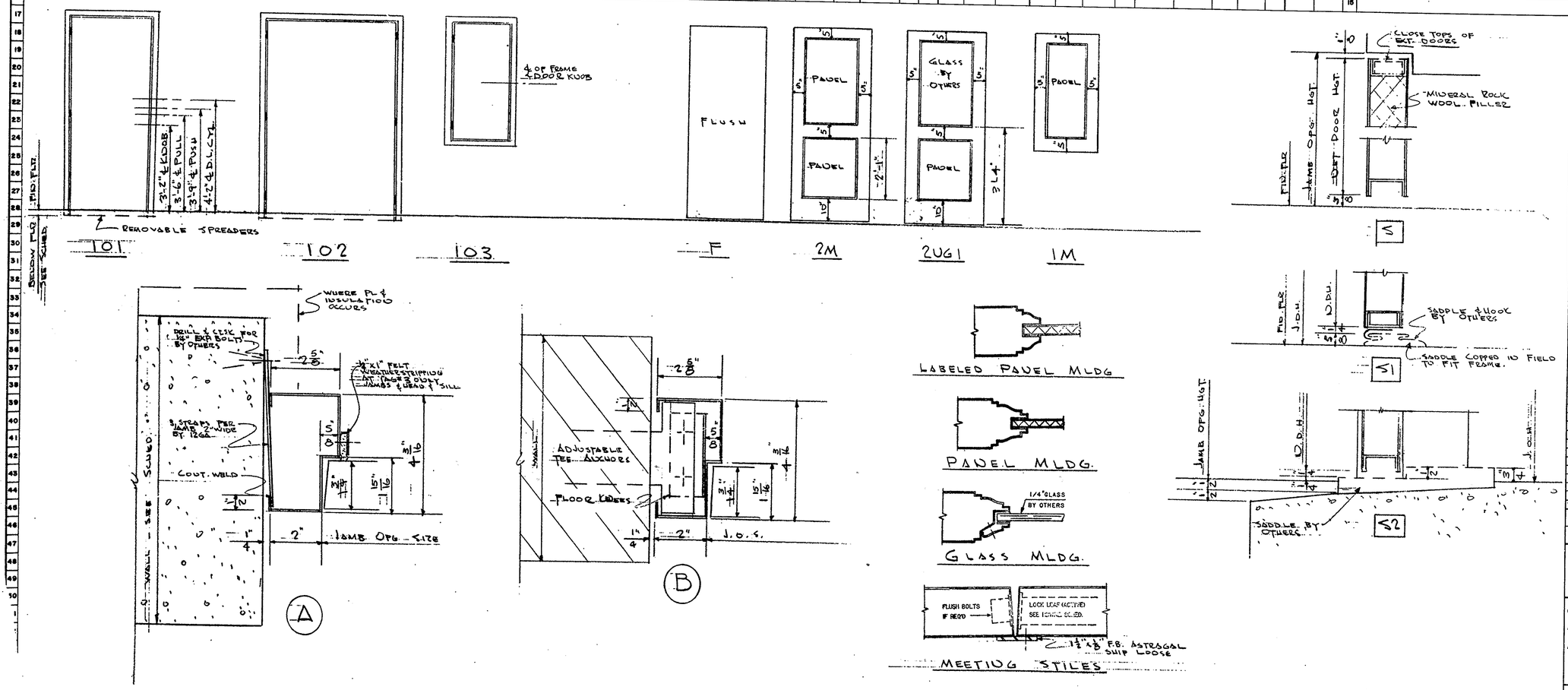
J. S. THORN COMPANY
PHILADELPHIA, PENNA.
IN ALL COMMUNICATION REFERENCE TO THIS CONTRACT PLEASE REFER TO OUR ORDER NUMBER

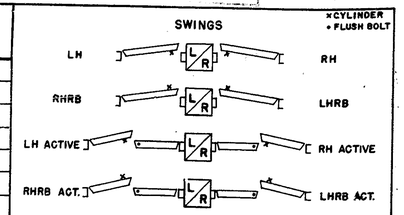
Subject: ALUMINUM PROJECTED WINDOW—OUTSIDE PUTTY GLAZED
Building: WALNUT STREET BRIDGE
Location: WILMINGTON, DELAWARE
Ordered by: A. S. WIKSTROM, INC.

Drawn: Qh. | Checked: | Sheet No. 2 of 2
Date 11-29-55. | Approved | Order No. 4489

17JH-BP SC-653

LINE NO.	FROM (NARROW OR STOP SIDE)	TO (WIDE OR HINGE SIDE)	TAG	ARCHT. MARK	QUANTITY L.H.	QUANTITY R.H.	DESCRIPTION	ELEV.	JAMB OPENING WIDTH	JAMB OPENING HEIGHT	BELOW FLOOR	TRANSOM OPENING HEIGHT	JAMB WIDTH	SECTION	LABEL	WALL THICK.	WALL FINISH NARROW SIDE	WALL FINISH WIDE SIDE	DOORS THICK.	DOORS MAT'L.	DOORS ELEV.	DOORS SILL SECT.	DOORS NET SIZE WIDTH	DOORS NET SIZE HEIGHT	DOORS LOOSE MLDG. SIDE	DOORS LABEL	HARDWARE CONTR. SET NO.	HARDWARE WSPCO SET NO.	LINE NO.	REMARKS
1	SPACE EL. 3.0'	STAIR		7			SINGLE SWING	101	2-7	6-0	0		4 3/16	A		2'-3"	—	—	1 3/4	H.M	2M	S	2-6 3/4	5-11 1/2			7		1	
2	STAIR	SPACE EL. 13.75'		8			S\SW	101	2-6	7-0	0		4 3/16	A, B		8"	—	—	1 3/4	H.M	2M	S	2-5 3/4	6-11 1/2			7		2	(A) (B)
3	EXTERIOR	TRANSITION AREA EL. 13.75'		9			S\SW	101	1-8	5-0	1/2"		4 3/16	A		2'-0	—	—	1 3/4	H.M	F	S1	1-7 3/4	4-11			8	2	3	
4	SPACE EL. 13.75	do		11			S\SW	101	2-6	7-0	0		4 3/16	B		8"	—	—	1 3/4	H.M	2M	S	2-5 3/4	6-11 1/2			10	1	4	
5	EXTERIOR	SPACE EL. 25.6'		10			S\SW	101	3-0	7-0	1/2"		4 3/16	A		19"	—	FL	1 3/4	H.M	2UG1	S1	2-11 3/4	6-11	WIDE		19	1C	5	
6																													6	
7																													7	
8	HEATER PM	SPACE EL. 3.00'		1																									8	
9	TRANSITION AREA EL. 13.75	SPACE EL. 13.75'		2	1		S\SW	101	2-6	6-0	0		4 3/16	A		2'-3"	—	—	1 3/4	H.M	2M	S	2-5 3/4	5-11 1/2			1	1	9	
10	GASOLINE STOR.	do		3	1		S\SW	101	2-6	7-0	0		4 3/16	A, B		8"	—	—	1 3/4	H.M	2M	S	2-5 3/4	6-11 1/2			1	1	10	(A) (B)
11	EXTERIOR EL. 13.75	TRANSITION AREA EL. 13.75'		4			S\SW	103	2-4	4-4	□		4 3/16	A, B		8"	—	—	1 3/4	H.M	1M	—	2-3 3/4	4-3 3/4		B	2	2	11	
12	TRANSITION AREA EL. 13.75	SPACE EL. 13.75'		12	1		S\SW	101	1-8	5-0	1/2"		4 3/16	A		2'-0	—	—	1 3/4	H.M	F	S1	1-7 3/4	4-11			3	2	12	
13	SPACE EL. 25.50'	EXTERIOR		5	1		S\SW	101	2-6	7-0	0		4 3/16	B		8"	—	—	1 3/4	H.M	2M	S	2-5 3/4	6-11 1/2			6	1	13	
14	EXTERIOR	SPACE EL. 25.50'		6	1		S\SW	101	3-0	7-0	1/2"		4 3/16	A		1'-2"	—	—	1 3/4	H.M	2UG1	S2	2-11 3/4	6-11 3/8	WIDE		4	1B	14	
15					(1P2)		FAIR SWING	102	6-0	8-0	1/2"		4 3/16	A		1'-2"	—	—	1 3/4	H.M	2UG1	S1	5-11 11/16	7-11	WIDE		5	3F	15	R.H.R.T.





GENERAL NOTES

HOLLOW METAL— MORTISE, REINF., DRILL & TAP FOR ALL MORTISED HDWRE. REINF. FOR ALL SURFACE-APPLIED HDWRE; DRILLING & TAPPING FOR SURFACE-APPLIED HDWRE. (CHECKS, BRACKETS, PUSHES., PULLS, KICKPLATES, AND ESCUTCHEONS) BY DOOR ERECTION CONTRACTOR IN FIELD.

KALAMEIN— ALL PREPARATION FOR HDWRE. BY ERECTION CONTR. IN FIELD. UNDERWRITER LABELED DOORS TO BE MORTISED, REINF., DRILLED, AND TAPPED FOR ALL MORTISED HDWRE. IN SHOP.

ROUGH BUCKS-CABINET JAMBS-APPLIED TRIM— ALL DRILLING, TAPPING, COUNTERSINKING, ETC. BY ERECTION CONTRACTOR IN FIELD-EXCEPT AS NOTED.

STRUCTURAL IRON— ALL CUTTING, DRILLING, TAPPING, ETC. BY OTHERS.

MATERIAL BY OTHERS— ALL GLASS, GLAZING, HARDWARE, AND ERECTION-EXCEPT AS NOTED.

NOTE— ALL MATERIAL SHOWN IS PREFABRICATED AND WILL BE MANUFACTURED TO FIXED DIMENSIONS. CONTRACTOR &/OR ARCHITECT MUST APPROVE PRINTS FOR BOTH DESIGN AND DIMENSIONS. ALL MATERIAL WILL BE FABRICATED IN STRICT ACCORDANCE WITH THESE DRAWINGS AFTER APPROVAL OF SAME.

THESE DRAWINGS HAVE BEEN PREPARED FOR THE USE OF WILLIAMSBURG STEEL PRODUCTS CO. ONLY. WE WILL NOT BE RESPONSIBLE FOR ANY ERRORS INCURRED THROUGH THEIR USE BY OTHER TRADES.

H.M. FRAMES- 14 GAGE- EXCEPT AS NOTED. C.R.S
FINISH- PRIME
H.M. DOORS- 18 GAGE- EXCEPT AS NOTED.
FINISH- BAKED PRIME
KALAMEIN - GAGE
FINISH-

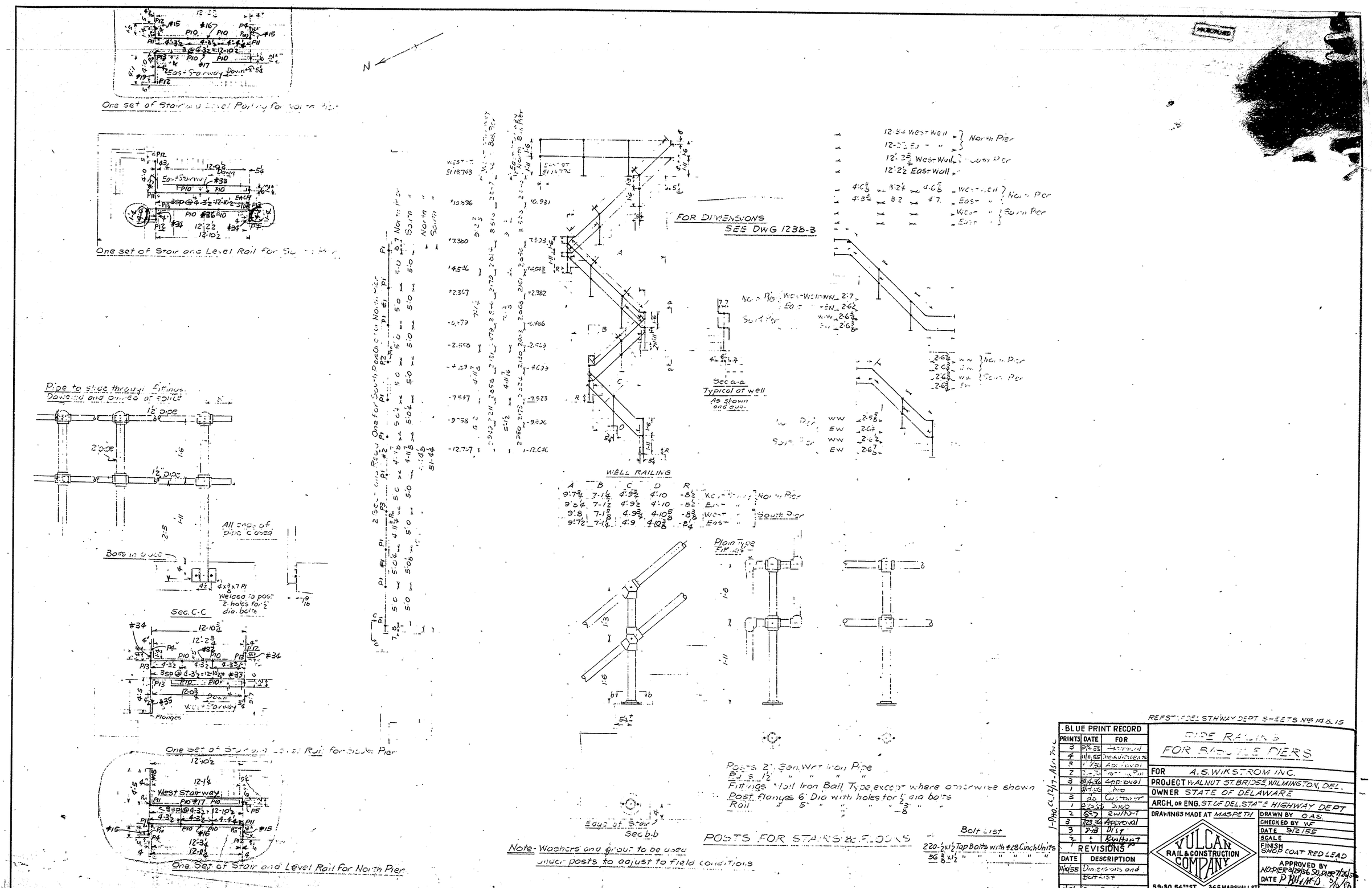
DATE	NO.	TO	BY	DATE
4-23-56	1	CLOTH PRINTS		
10-24-55	3	DISTR.		
10-4-55	4	FINAL APPV.		
9-19-55	4	APPV.	GED	M.V. 10-4

PRINTS ISSUED — REVISIONS

Williamsburg Steel Products
COMPANY BROOKLYN 22, N.Y.

CONTR. A. S. WILSTROM, INC.
AGENT J. FRANCIS BLAINE
ARCHT. PARSONS BRINCKERHOFF, HALL & MACDONALD - ELDER
JOB WALNUT ST. BRIDGE
WILMINGTON, DEL.

DRAWN BY- M.O.
CHECKED-
DRAWING NO. 1 of 1
JOB NO. 5-3240



REFS: DEL STHWAY DEPT SHEETS Nos 14 & 15

BLUE PRINT RECORD		
PRINTS	DATE	FOR
3	9/6/55	Approval
4	11/11/55	Dimensions
3	1/7/56	Approval
2	[illegible]	[illegible]
3	3/14/56	Approval
1	4/17/56	Shop
3	do	Customer
1	4/25/56	Shop
2	6-7	Rwhnt
3	7/23/56	Approval
3	8-13	Dist
2	"	Rwhnt
1	"	Shop

REVISIONS	
DATE	DESCRIPTION
11/10/55	Dimensions and Bolt List
1/19/56	Dim. For No. Pier
3/14/56	Stairs added Rail at El. 13.743 +13.774 E & W Stair North Base
7/23/56	Mega 50 Pts Pier

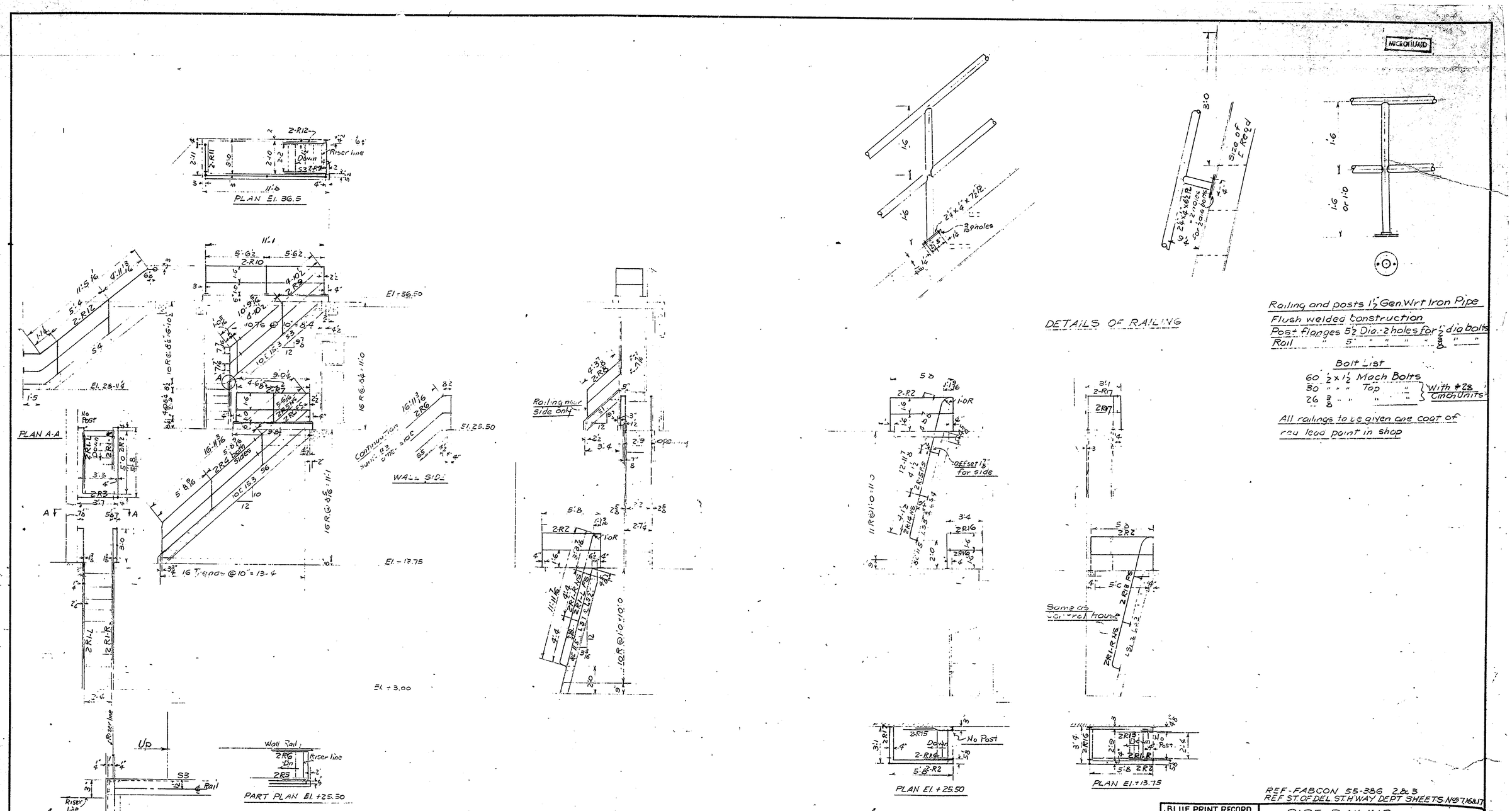
1-PHO. CL 12/17-ASM TRC

PIPE RAILING FOR BASCULE PIERS

FOR A.S. WIKSTROM INC.
PROJECT WALNUT ST. BRIDGE, WILMINGTON, DEL.
OWNER STATE OF DELAWARE
ARCH. OR ENG. ST. OF DEL. STATE HIGHWAY DEPT
DRAWINGS MADE AT MASPETH

VULCAN RAIL & CONSTRUCTION COMPANY
59-30 54TH ST, MASPETH NEW YORK
365 MARSHALL ST. BENWOOD WHEELING W.VA.

DRAWN BY O.A.S.
CHECKED BY WF
DATE 9/2/55
SCALE
FINISH SHOP COAT RED LEAD
APPROVED BY NO. PIER 3/29/56 SO. PIER 7/26/56
DATE P BH/MFD 5/10/56
DRAWING NO. 1238-1 of 3



Railing and posts 1½" Gen. Wrt Iron Pipe
Flush welded construction
Post flanges 5½" Dia. - 2 holes for ½" dia bolts
Rail " 5" " " " " ⅜" "

Bolt List
60 ½" x 1½" Mach Bolts
30 " " " Tap " } With #28 Cinch Units
26 ⅜" " " " "

All railings to be given one coat of red lead paint in shop

REF - FABCON 55-386 2 & 3
REF ST. OF DEL. ST. H'WAY DEPT SHEETS Nos 7, 16 & 17

BLUE PRINT RECORD		
PRINTS	DATE	FOR
3	9/6/55	Approval
1	2/14/56	Drafting Rm
3	4/14/56	Approval
3	4/24/56	Eng. Dep
2	4-30	R. Wilhoit
3	5/7/56	Approval
1	5/7/56	Drafting Room
3	5/22	A.S. W. Inc
2	6-7	R. Wilhoit
1 Ditto	n-7	A.S.W. Inc

REVISIONS	
DATE	DESCRIPTION
4/24/56	Dimensions
5/7/56	"

PIPE RAILING FOR BASCULE PIERS CONTROL & STORAGE HOUSES

FOR A. S. WIKSTROM, INC
PROJECT WALNUT ST. BRIDGE WILMINGTON DEL
OWNER STATE OF DELAWARE
ARCH. OR ENG. ST. OF DEL. STATE HIGHWAY DEPT
DRAWINGS MADE AT MASPETH

DRAWN BY O.A.S.
CHECKED BY WF
DATE 9/6/55
SCALE
FINISH SHOP COAT RED LEAD
APPROVED BY P.B.H. & M.D.
DATE 5/10/56
DRAWING NO. 1238 - 2 of 3

VULCAN RAIL & CONSTRUCTION COMPANY
59-30 54TH ST. MASPETH NEW YORK
365 MARSHALL ST. BENWOOD WHEELING W.VA.