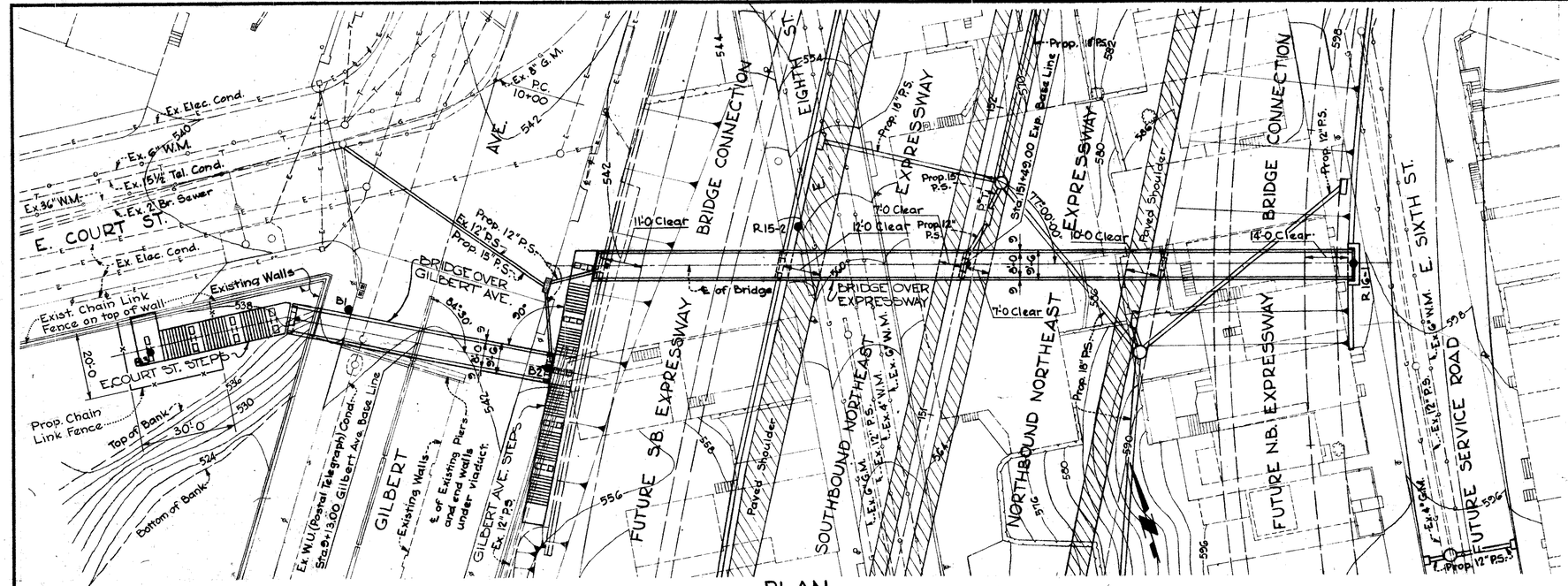
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

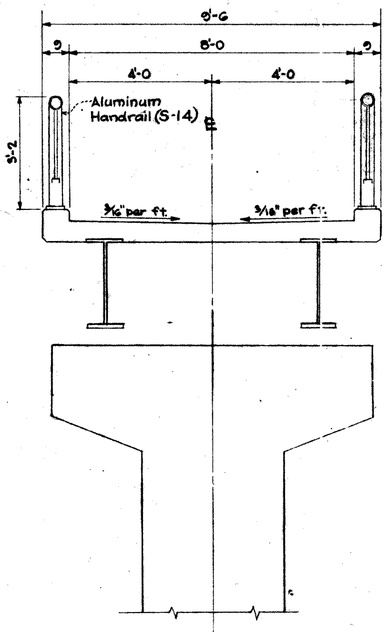
332
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

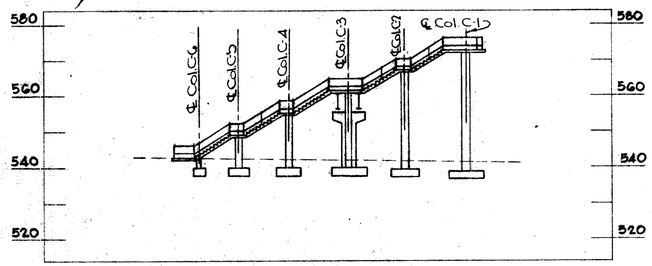


PLAN

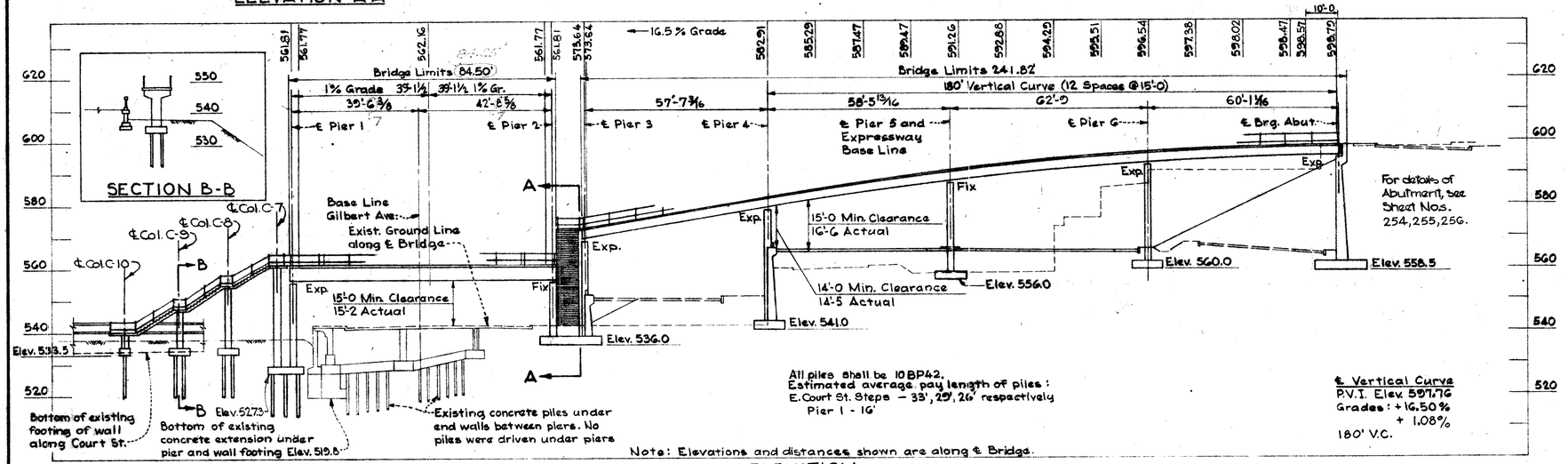
● Symbol denotes Test Boring.
For logs of borings see Sheet No. 7A.



SECTION THRU BRIDGE



ELEVATION A-A



All piles shall be 10BP42.
Estimated average pay length of piles:
E. Court St. Steps — 33', 29', 26' respectively
Pier 1 - 16'

℄ Vertical Curve
P.V.I. Elev. 597.76
Grades: +16.50%
+1.08%
180' V.C.

Note: Elevations and distances shown are along ℄ Bridge.

ELEVATION

PROPOSED STRUCTURE

TYPE: 4 Span Continuous Rolled Beam with reinforced concrete deck and substructure. Single Span Plate Girder with reinforced concrete deck and substructure.
SPANS: 56.73', 58.46', 62.75', 61.11' (Rolled Beam Structure). 82.25' (Plate Girder Structure).
WIDTH: 8'-0 Clear between curbs.
LOADING: 85 lb./sq. ft. (uniform)
SKEW: As shown on Plan.

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

SITE PLAN

BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

Sta. 151+49 N.B. Main Line

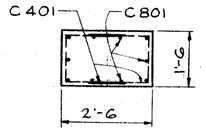
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.E.N.	J.D.A		W.W.	W.W	3-8-65	9-27-66

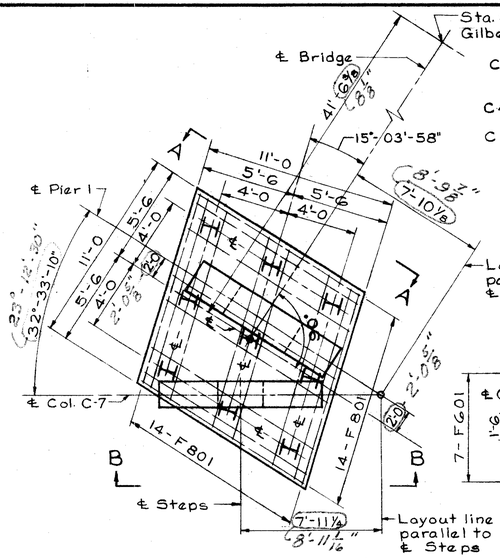
HAMILTON COUNTY
HAM-71-(15G)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

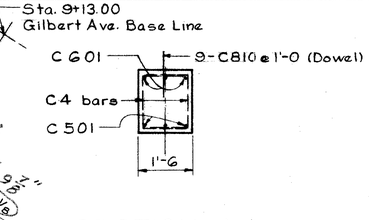
333
402



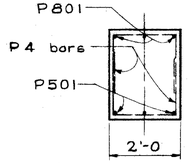
SECTION D-D



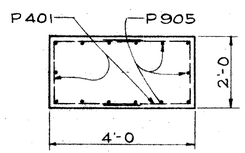
PLAN
(Pier 1 & Column C-7)



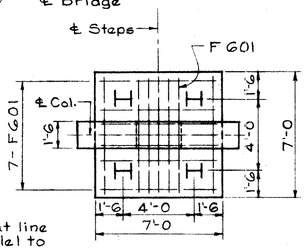
SECTION A-A



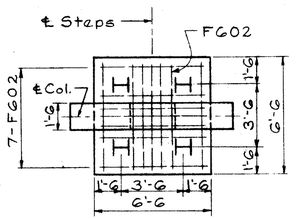
SECTION B-B



SECTION C-C

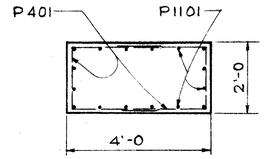


PLAN
(Column C-8)

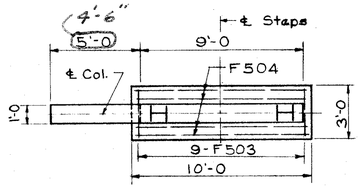


PLAN
(Column C-9)

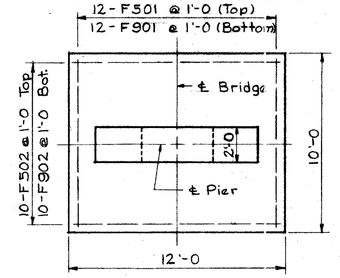
Typical for all plans this sheet.



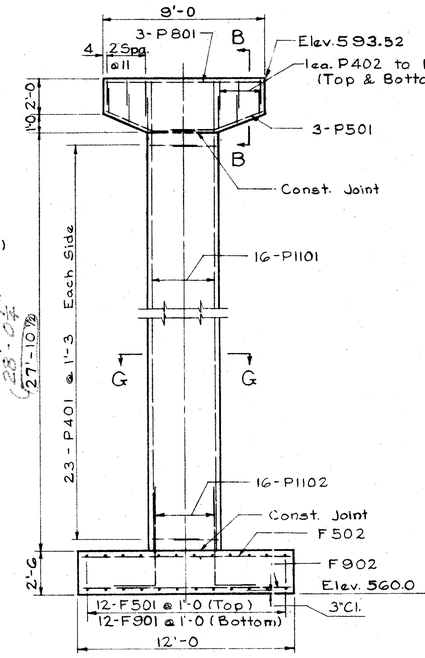
SECTION G-G



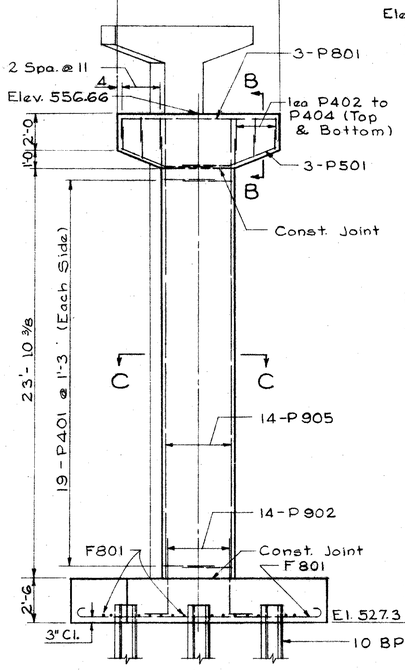
PLAN
(Column C-10)



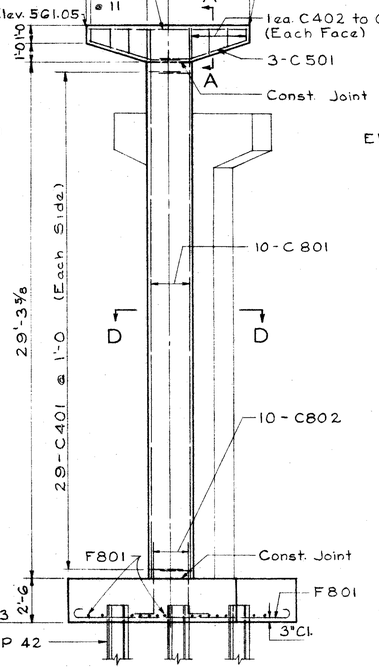
PLAN
(Pier 6)



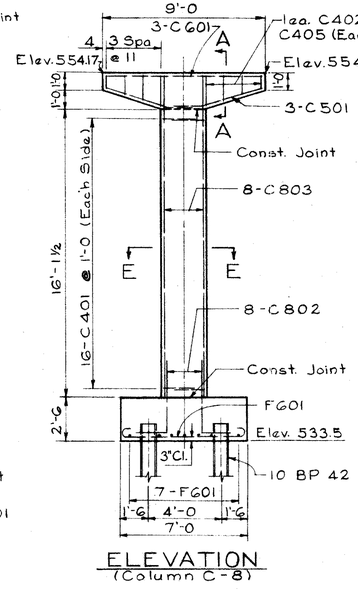
ELEVATION
(Pier 6)



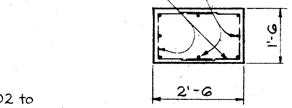
ELEVATION A-A
(Pier 1)



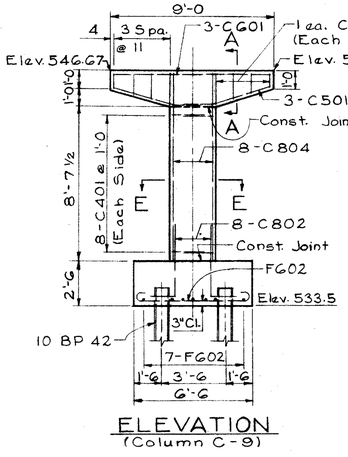
ELEVATION B-B
(Column C-7)



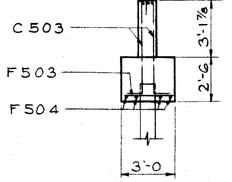
ELEVATION
(Column C-8)



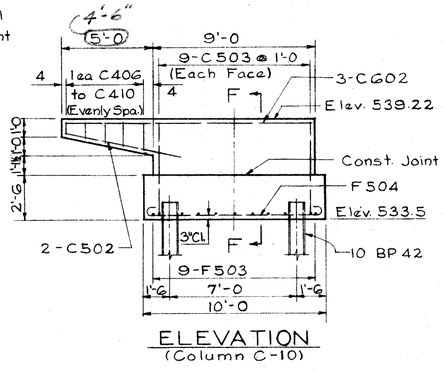
SECTION E-E



ELEVATION
(Column C-9)



SECTION F-F



ELEVATION
(Column C-10)

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FEB 20 1985

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PIER AND COLUMN DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

CINCY BRIDGE NO. 7

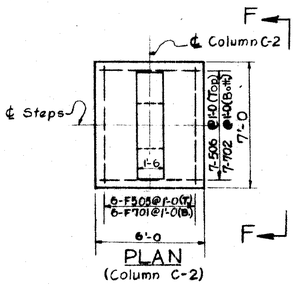
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.G.T.	J.G.T.		L.E.N.	W.W. 3-8-65		6-27-66

Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
Footing for Pier 6 shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.
Foundation Bearing Pressure: Footing for Pier 6 is designed for a maximum bearing pressure of 3 tons per sq. ft.

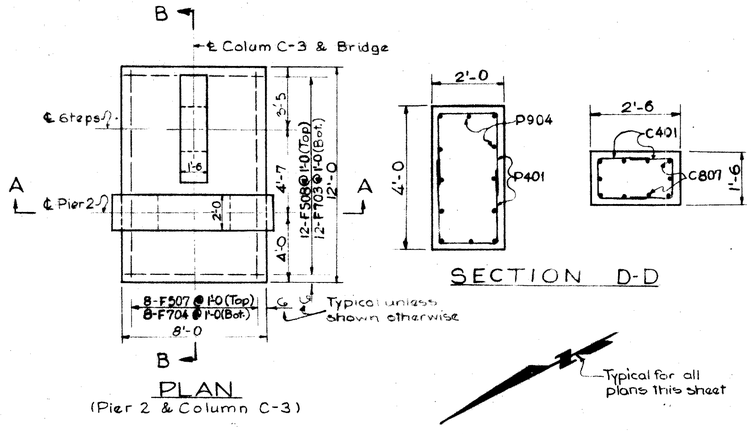
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

334
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



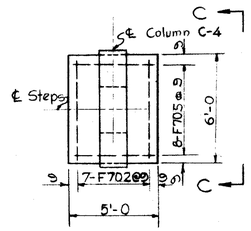
PLAN
(Column C-2)



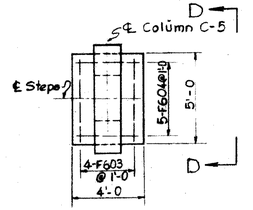
PLAN
(Pier 2 & Column C-3)

SECTION D-D

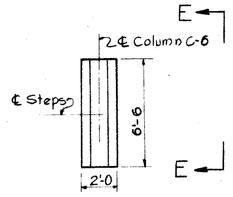
Typical for all plans this sheet



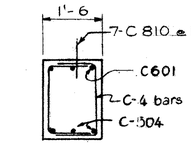
PLAN
(Column C-4)



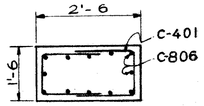
PLAN
(Column C-5)



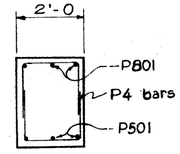
PLAN
(Column C-6)



SECTION A-A

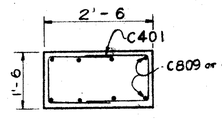


SECTION B-B

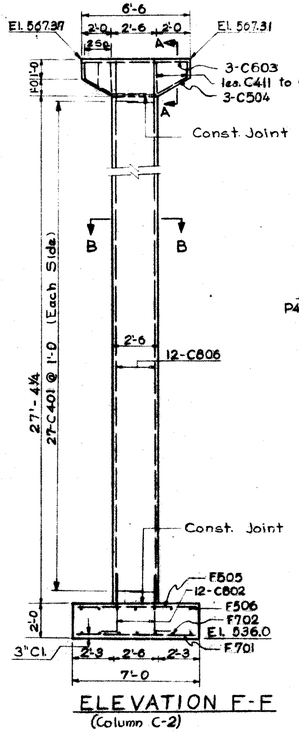


SECTION C-C

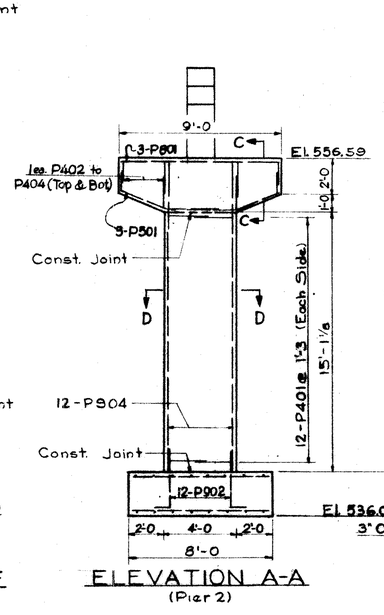
SECTION F-F



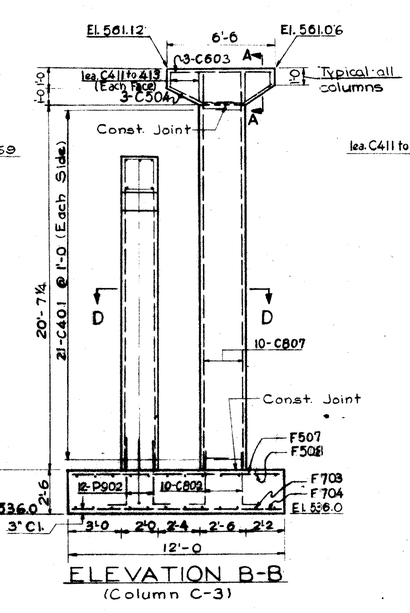
SECTION E-E



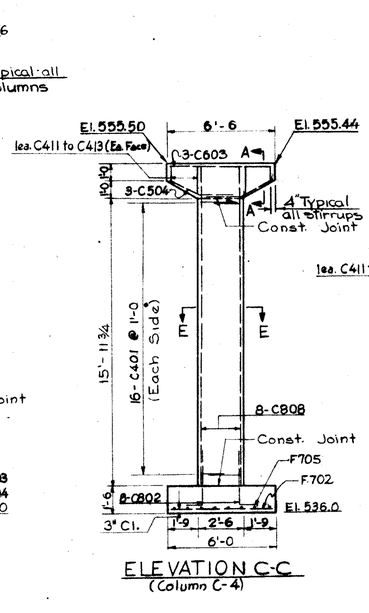
ELEVATION F-F
(Column C-2)



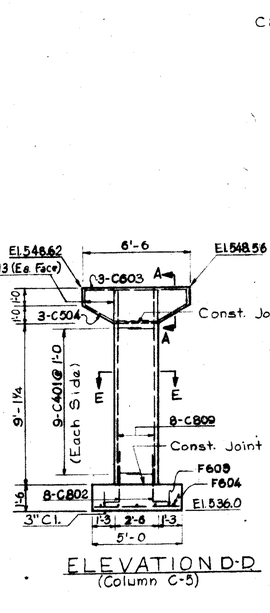
ELEVATION A-A
(Pier 2)



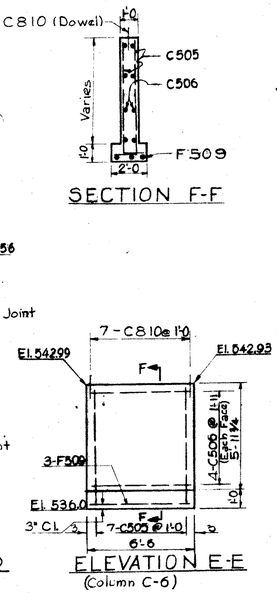
ELEVATION B-B
(Column C-3)



ELEVATION C-C
(Column C-4)



ELEVATION D-D
(Column C-5)



ELEVATION E-E
(Column C-6)

For ground wire to be placed at pier 3 see note on sheet 2/3.

Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

Foundation Bearing Pressure: Footings are designed for a maximum bearing pressure of 3 tons per sq. ft.

MICROFILMED
FEB 20 1985

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PIER AND COLUMN DETAILS

BRIDGE NO. HAM-71-01.57
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

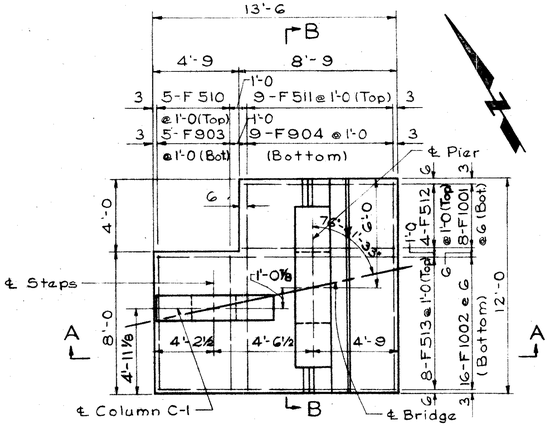
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.E.N.	L.E.N.		J.G.T.	W.W.	3-8-65	

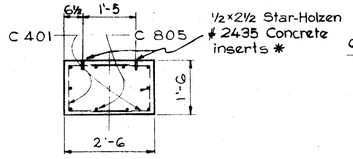
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

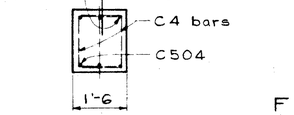
335/492



PLAN
(Pier 3 & Column C-1)

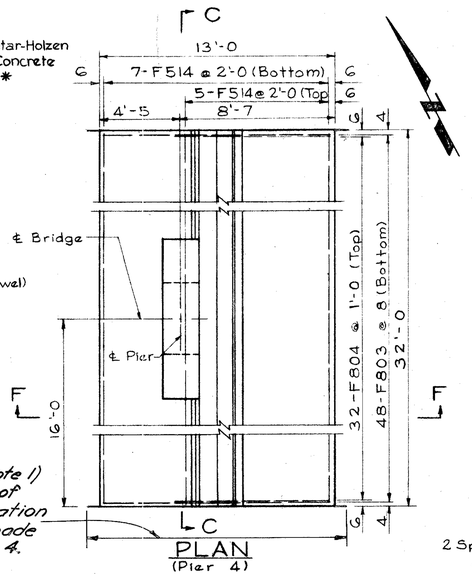


SECTION A-A

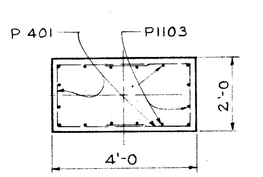


SECTION B-B

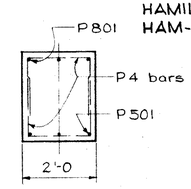
Steel sheeting piling (see note 1) shall extend the full width of the excavation, at the elevation of adjacent wall footings, made for the construction of Pier 4.



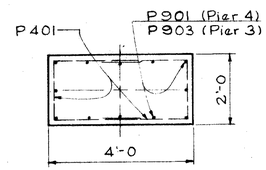
PLAN
(Pier 4)



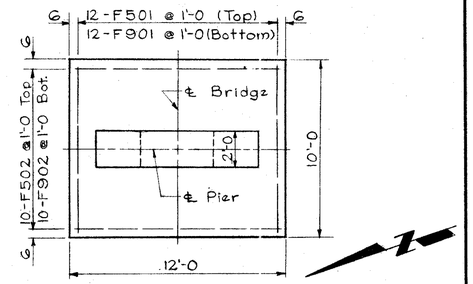
SECTION E-E



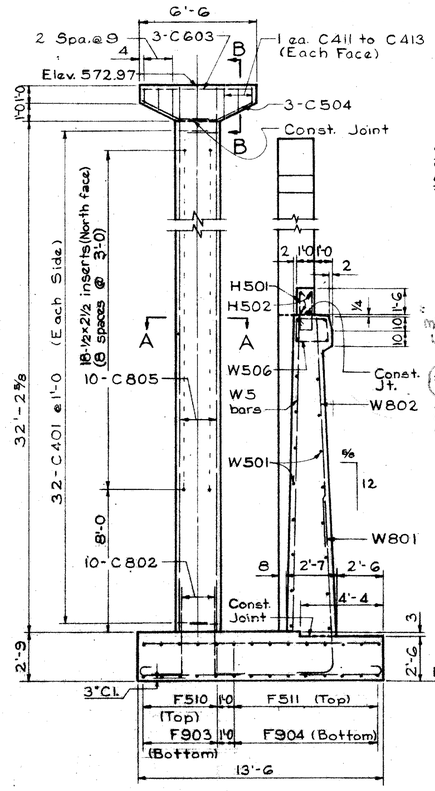
SECTION D-D



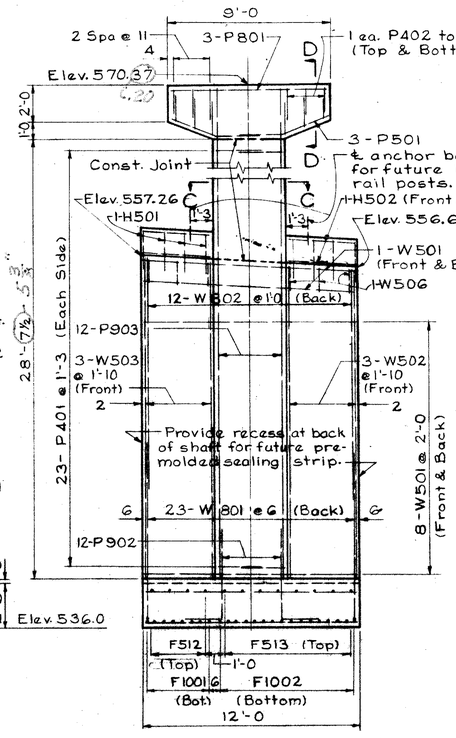
SECTION C-C



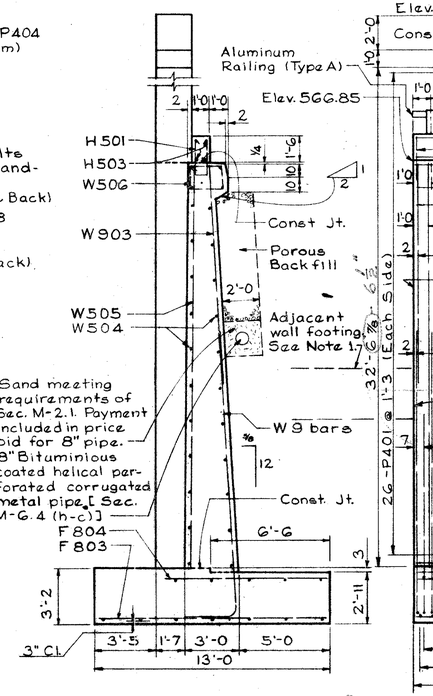
PLAN
(Pier 5)



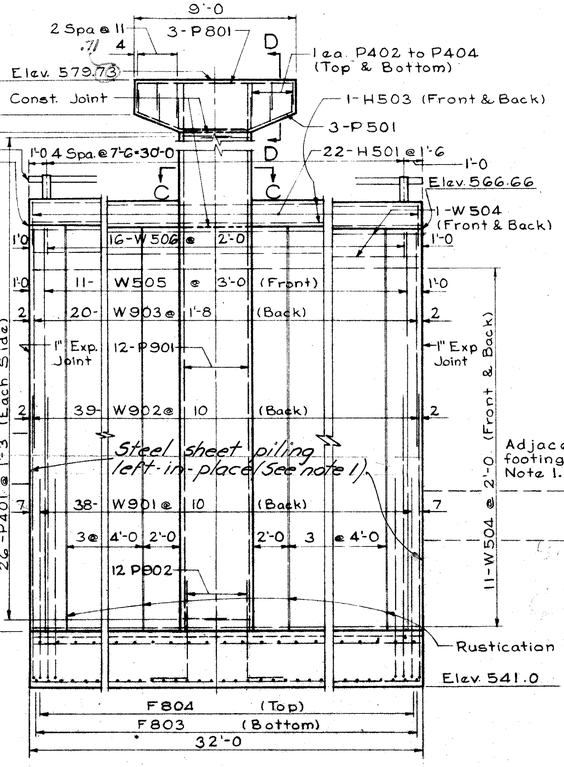
ELEVATION A-A
(Column C-1)



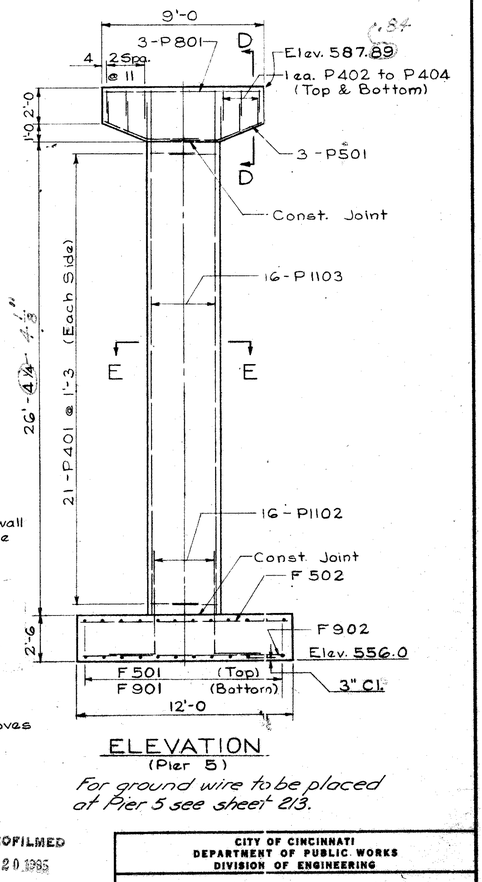
ELEVATION B-B
(Pier 3)



SECTION F-F



ELEVATION C-C
(Pier 4)



ELEVATION
(Pier 5)

For ground wire to be placed at Pier 5 see sheet 213.

Parapet and anchor bolts shall be included under Item S-14 Railing for payment.

* Inserts to be furnished by the C. & S. B. T. Co. Installation cost shall be included in price bid for Item S-1, - Class "C" Concrete, piers above footings.

NOTE 1: If adjacent wall footing is not on bed rock, the following shall apply:
Steel Sheet Piling having a minimum section modulus of 5.4 in³ per foot of wall, shall be driven into the ground at the offset in the wall footings where indicated. This sheet piling shall be driven to bed rock and shall extend to the bottom of the higher footing. This sheet piling is to be braced adequately at the top and is to be left in place. Payment will be made at the price bid per square foot measured from the bottom of sheet piling as driven; to the bottom of the higher footing; and on the sides to the actual limits as driven. Used piling in good condition may be used. *Mill test reports are not required.*
For details of expansion joints and rustication grooves, see Sheet Nos 245 & 246.

Bridge Seat Reinforcing: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
Footings for Piers 4 and 5 shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.
Foundation Bearing Pressure: Footings are designed for a maximum bearing pressure of 3 tons per sq. ft.
For Typical Railing Details, see Standard Drawing AR-1-57.

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

PIER AND COLUMN DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.G.T.	J.G.T.		L.E.N.	W.W.	3-8-65	1-7-66

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

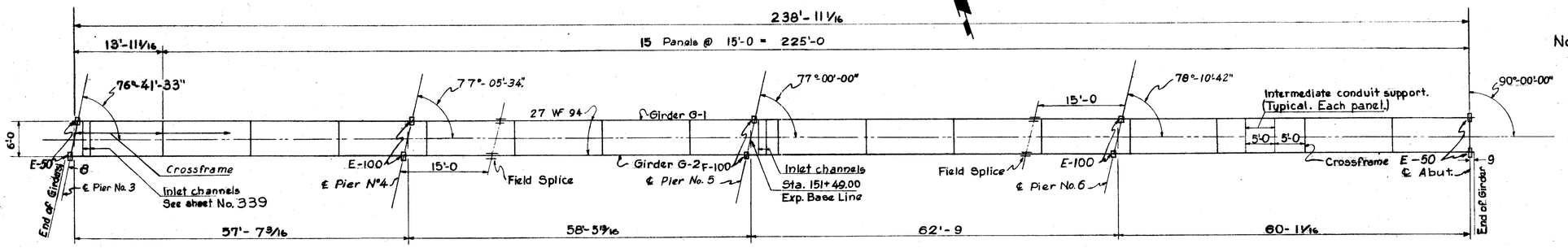
336
402

HAMILTON COUNTY
HAM-71-(15G)(2.51)

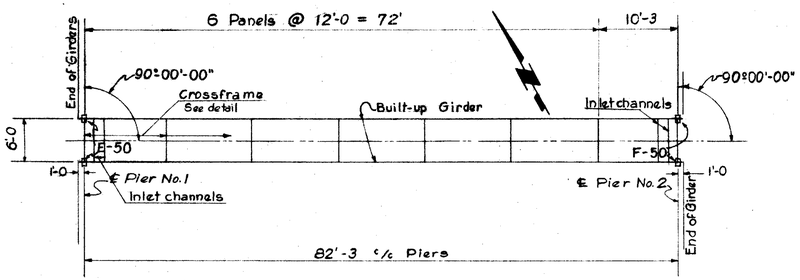
Note:

For Bolted Beam Splice Details, see Standard Drawing No. SD-2-64.

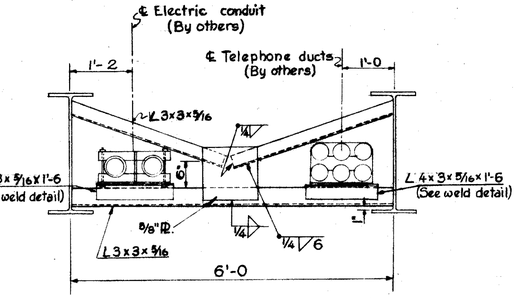
For Fixed and Sliding Bearings: Details see Standard Drawing No. FSB-1-62. Increase top plate thickness as necessary. End of girders and end crossframes shall be vertical. Cut flanges parallel to end of deck.
Angles 4x4x5/16 & 4x3x5/16 for conduit supports shall be chargeable to "Cincinnati Gas & Electric Co." and to "C.& S.B. Telephone Co."



FRAMING PLAN ON EXPRESSWAY - FOUR SPANS

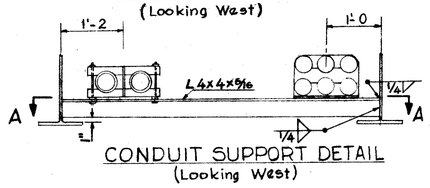


FRAMING PLAN ON GILBERT AVE.

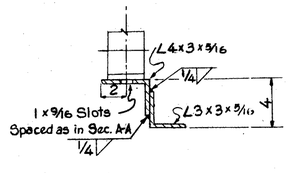


Crossframe angles-weld both sides of vertical leg and topside of horizontal leg to beam with 1/4" continuous fillet.

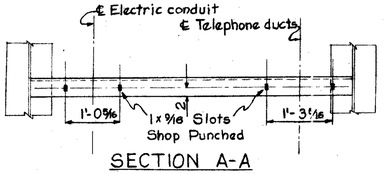
CROSSFRAME
(Looking West)



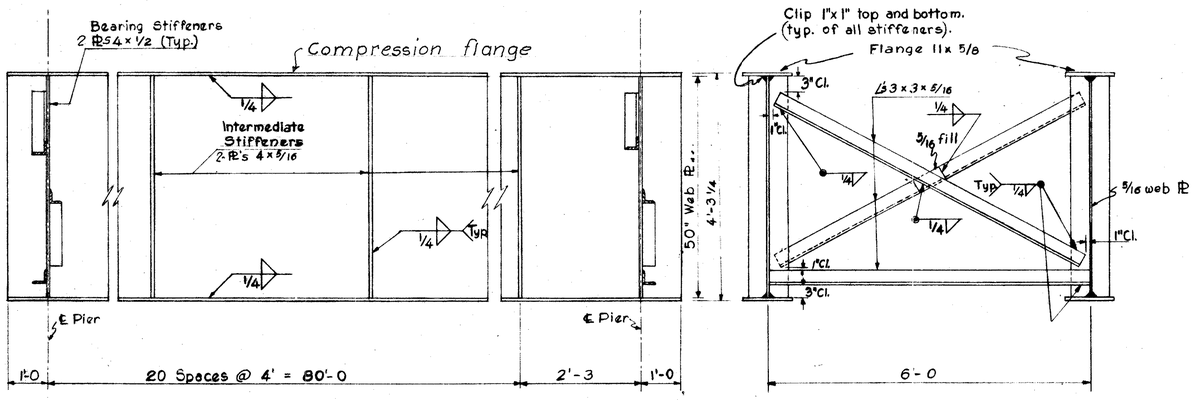
CONDUIT SUPPORT DETAIL
(Looking West)



WELD DETAIL



SECTION A-A



GIRDER ELEVATION - (INSIDE)

CROSSFRAME

NOTE:

Intermediate stiffeners of built-up girders shall have contact bearing with the compression flange, but may have a clearance of not more than 1/8 inch from the tension flange. In shop painting, care shall be taken to make certain that paint is forced through from one side to the other of the 1/8 inch opening.

Bearing stiffeners shall be grooved and fully butt-welded to the lower flange and fitted in close contact without welding to the upper flange.

DEFLECTION & CAMBER OF GIRDER			
LOCATION	WELDED BUILT-UP GIRDER		
	1/4 Span	℄ Span	3/4 Span
Deflection due to weight of steel.	1/4"	5/16"	1/4"
Deflection due to remaining dead load	3/4"	1 1/16"	3/4"
Convexity required for vertical curve	2 1/2"	5"	2 1/2"
Sum of deflection and convexity	3 1/2"	6 3/8"	3 1/2"
REQUIRED CAMBER	3 1/2"	6 3/8"	3 1/2"

DEFLECTION & CAMBER OF BEAMS

	PIER No.	3	4		5		6		Abut.	
GIRDER G-1 Lg 239'-7 3/16	LOCATION	℄	1/4 ℄	3/4	1/4 ℄	3/4	1/4 ℄	3/4	1/4 ℄	3/4
	Length c/c bearings	57.58'	58.48'		62.69'		59.46'			
	Deflection due to weight of steel.	1/8"	0"	1/32"	0"	1/32"	1/16"	1/32"	1/16"	1/8" 3/32"
	Deflection due to remaining dead load.	7/16"	1/32	3/32"	1/16"	5/32"	1/4"	3/32"	1/4"	1/2" 13/32"
	Convexity required for vertical curve.	0	3 3/8	4 7/16	3 1/2	3 15/16	5 1/16	3 13/16	3 3/8	4 7/16 3 3/8
	Sum of Deflection and Convexity	9/16	3 7/16	4 9/16	3 9/16	4 1/8	5 3/8	3 15/16	3 1/16	5 1/16 3 7/8
	REQUIRED CAMBER	none	3 7/16	4 9/16	3 9/16	4 1/8	5 3/8	3 15/16	3 1/16	5 1/16 3 7/8
GIRDER G-2 Lg 241'-0 5/16	PIER No.	3	4		5		6		Abut.	
	LOCATION	℄	1/4 ℄	3/4	1/4 ℄	3/4	1/4 ℄	3/4	1/4 ℄	3/4
	Length c/c bearings	57.62'	58.48'		62.81'		60.72'			
	Deflection due to weight of steel.	1/8	0	1/32	0	1/32	1/16	1/32	1/16	1/8 3/32
	Deflection due to remaining dead load.	7/16	1/32	3/32	1/16	5/32	1/4	7/32	1/4	1/2 13/32
	Convexity required for vertical curve.	0	3 3/8	4 7/16	3 3/8	3 13/16	5 3/16	3 13/16	3 5/8	4 1/16 3 1/2
	Sum of Deflection and Convexity.	9/16	3 7/16	4 9/16	3 7/16	4 1/4	5 1/2	4 1/16	3 15/16	5 5/16 4
	REQUIRED CAMBER	none	3 7/16	4 9/16	3 7/16	4 1/4	5 1/2	4 1/16	3 15/16	5 5/16 4

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FEB 20 1985

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

STRUCTURAL STEEL DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

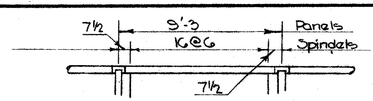
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LEN	LEN		RMB	W.W.	3-8-65	

FED. RD. DIV.	STATE	PROJECT.	FISCAL YEAR
2	OHIO		

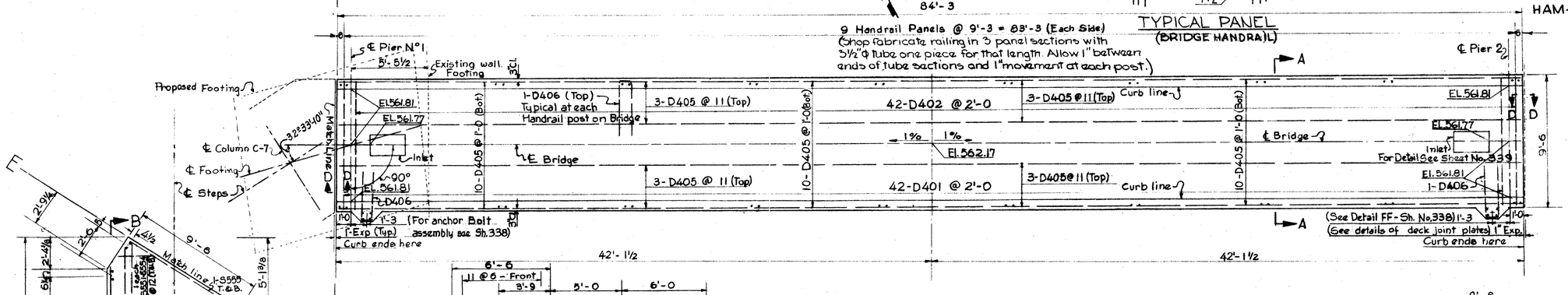
337
492

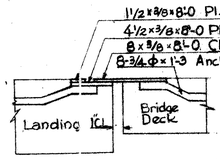
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



TYPICAL PANEL
(BRIDGE HANDRAIL)

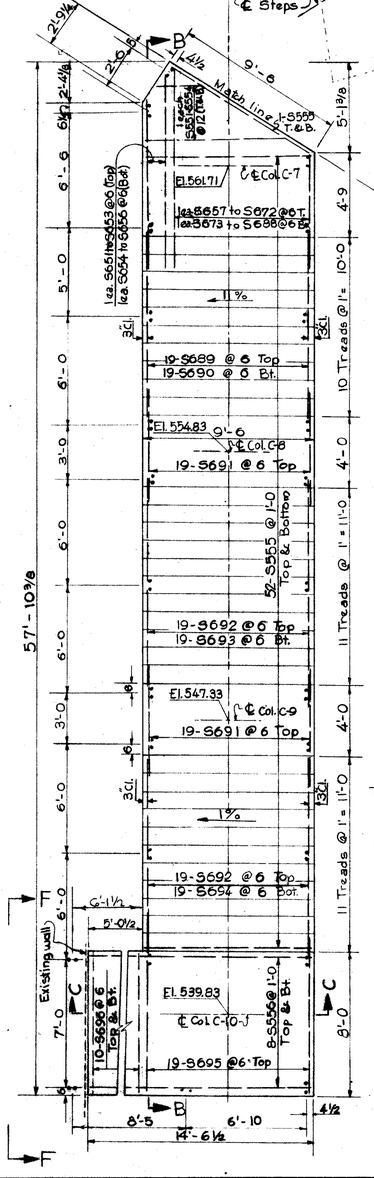
84'-3
9 Handrail Panels @ 9'-3 = 83'-3 (Each Side)
(Shop fabricate railing in 3 panel sections with 3½"ϕ tube one piece for that length. Allow 1" between ends of tube sections and 1" movement at each post.)

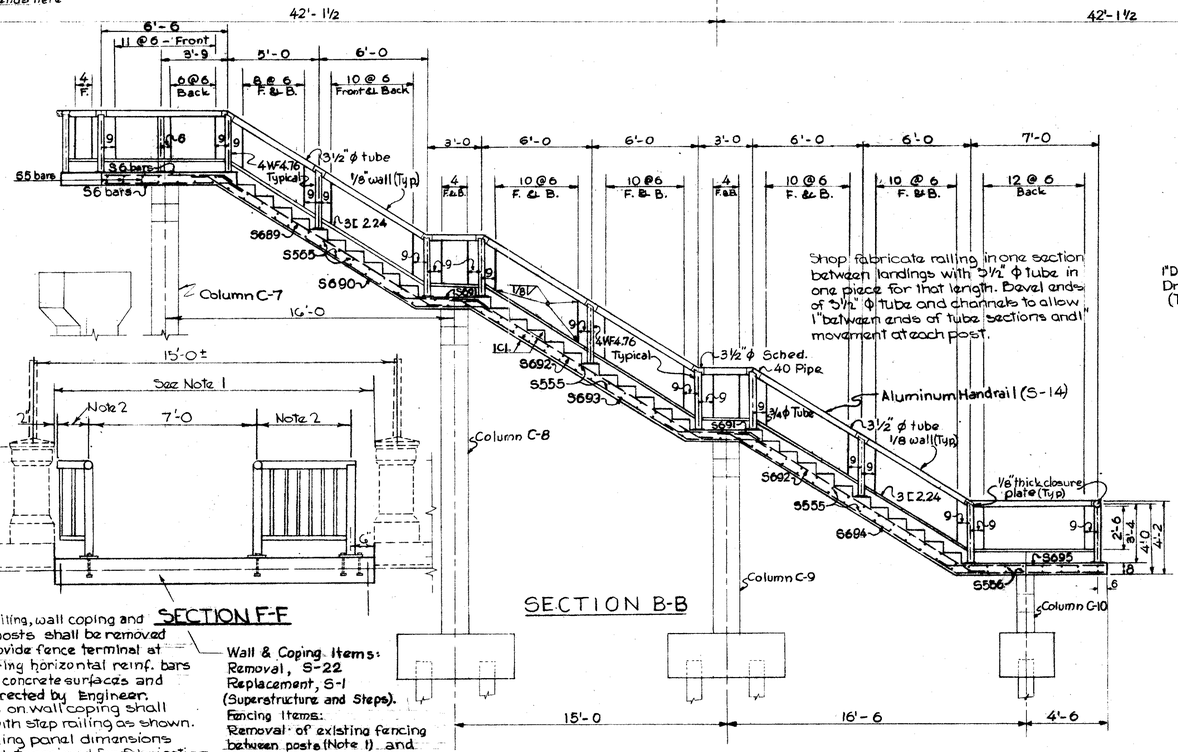




For details not shown see Joint Detail this sheet.

SECTION D-D





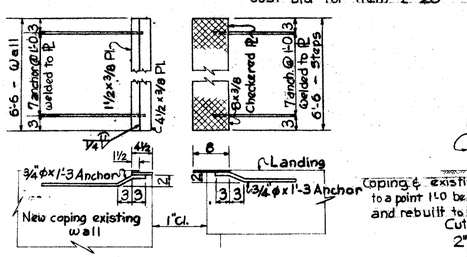
Shop fabricate railing in one section between landings with 3½" ϕ tube in one piece for that length. Bevel ends of 3½" ϕ tube and channels to allow 1" between ends of tube sections and 1" movement at each post.

SECTION B-B

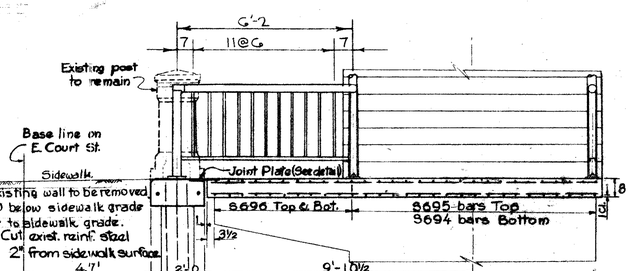
SECTION F-F

Note 1
The existing railing, wall coping and fence between posts shall be removed completely. Provide fence terminal at posts. Cut existing horizontal reinf. bars 1" behind cut concrete surfaces and refinish as directed by Engineer.
Note 2: Posts on wall coping shall be lined up with step railing as shown. Aluminum railing panel dimensions shall then be determined for fabrication with a nominal spindel c-c spacing not to exceed 6".

Wall & Coping Items:
Removal, S-22
Replacement, S-1
(Superstructure and Steps).
Fencing Items:
Removal of existing fencing between posts (Note 1) and providing terminal. Connections shall be included in cost bid for Item I-26

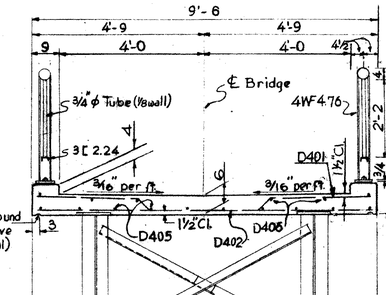


JOINT DETAIL



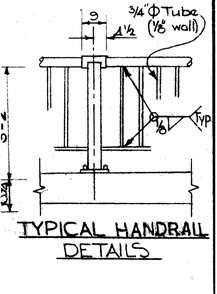
Existing reinforcement to remain as in Section F-F

SECTION C-C

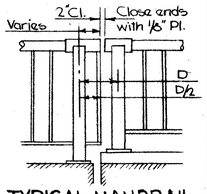


SECTION A-A

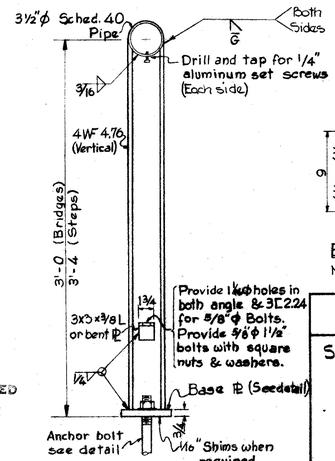
For lighting Details, see sheet No. 213.



TYPICAL HANDRAIL DETAILS

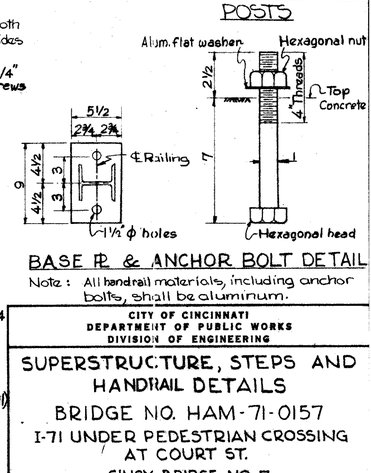


TYPICAL HANDRAIL CLOSURE BETWEEN POSTS



POST

Posts shall be vertical



BASE ℄ & ANCHOR BOLT DETAIL

Note: All handrail materials, including anchor bolts, shall be aluminum.

MICROFILMED
FEB 20 1985

This sheet superseded by Sheet No. 337A 9-27-66

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

SUPERSTRUCTURE, STEPS AND HANDRAIL DETAILS

BRIDGE NO. HAM-71-0157

I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

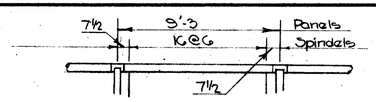
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.E.N.	L.E.N.		J.G.T.	W.W.	3-8-65	

FED. RD. DIV.	STATE	PROJECT.	FISCAL YEAR
2	OHIO		

337
492

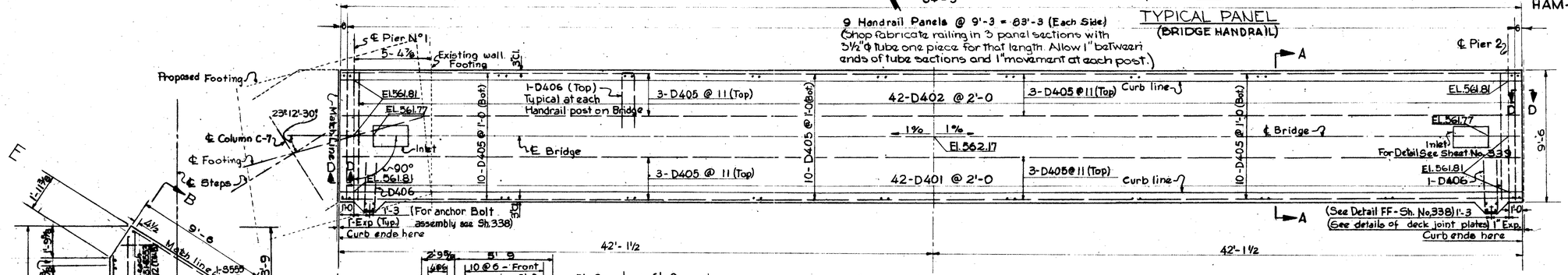
HAMILTON COUNTY
HAM-71-(1.5G)(2.51)

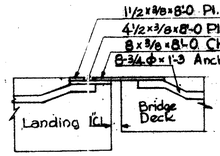


TYPICAL PANEL
(BRIDGE HANDRAIL)

84'-3

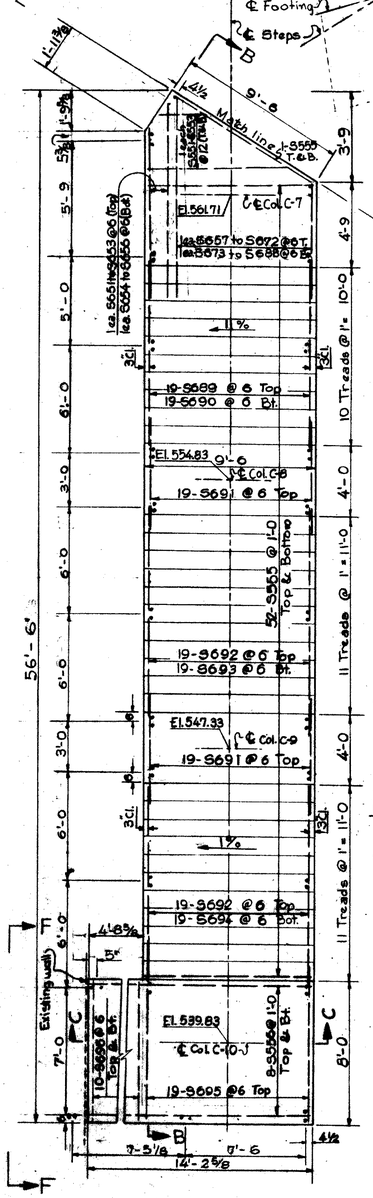
9 Handrail Panels @ 9'-3 = 83'-3 (Each Side)
Shop fabricate railing in 3 panel sections with 5½"ϕ tube one piece for that length. Allow 1" between ends of tube sections and 1" movement at each post.)





For details not shown see Joint Detail this sheet.

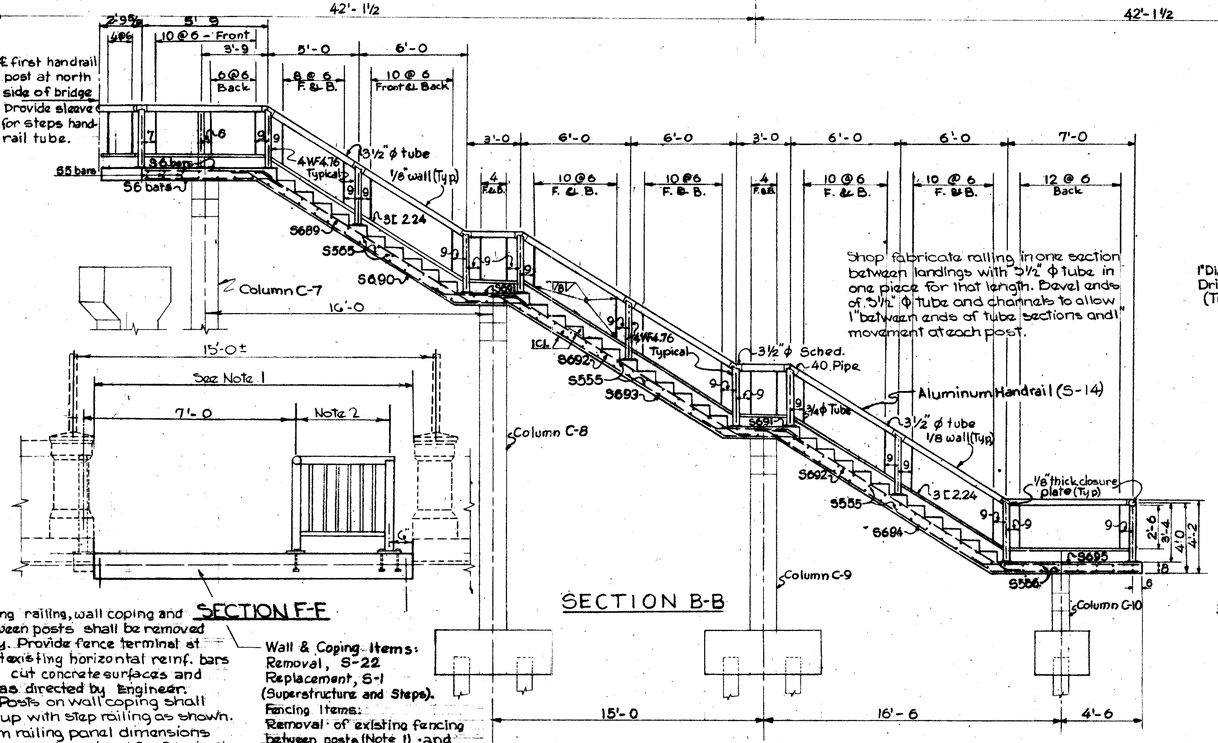
SECTION D-D



SECTION F-F

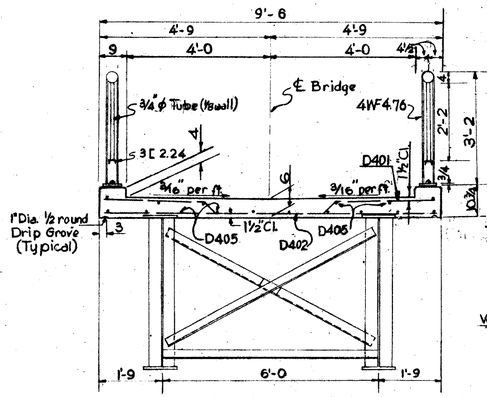
Note 1
The existing railing, wall coping and fence between posts shall be removed completely. Provide fence terminal at posts. Cut existing horizontal reinf. bars 1" behind cut concrete surfaces and refinish as directed by Engineer.
Note 2: Posts on wall coping shall be lined up with step railing as shown. Aluminum railing panel dimensions shall then be determined for fabrication with a nominal spindel c-c spacing not to exceed 6".

Wall & Coping Items:
Removal, S-22
Replacement, S-1
(Superstructure and Steps).
Fencing Items:
Removal of existing fencing between posts (Note 1) and providing terminal. Connections shall be included in cost bid for Item I-26



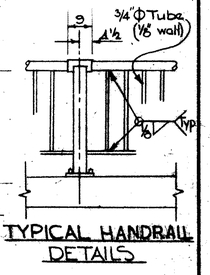
SECTION B-B

Shop fabricate railing in one section between landings with 5½" ϕ tube in one piece for that length. Bevel ends of 5½" ϕ tube and channels to allow 1" between ends of tube sections and 1" movement at each post.



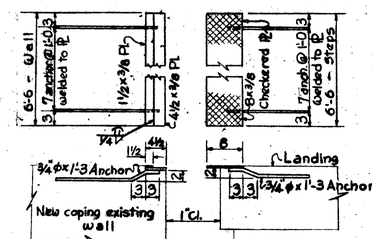
SECTION A-A

For lighting Details, see sheet No.

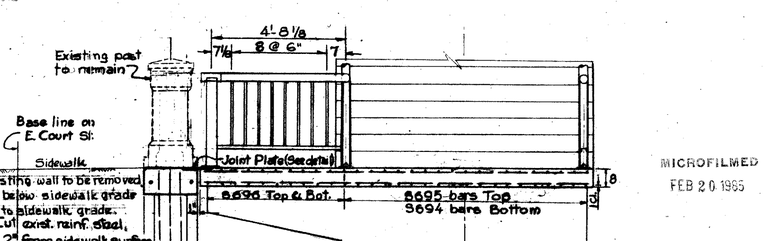


TYPICAL HANDRAIL DETAILS

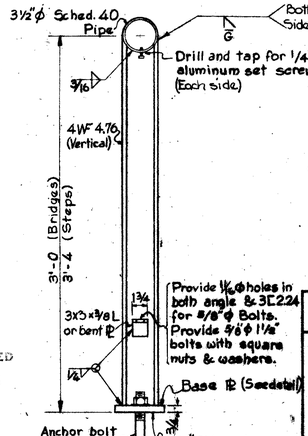
TYPICAL HANDRAIL CLOSURE BETWEEN POSTS



JOINT DETAIL

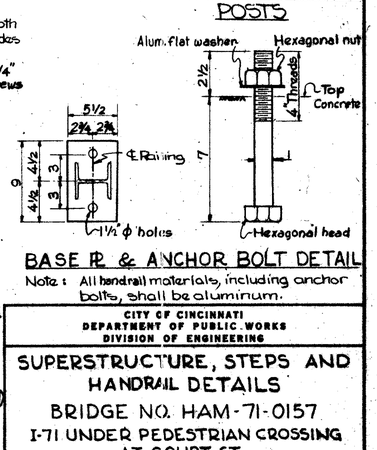


SECTION C-C



POST

Posts shall be vertical



BASE PL & ANCHOR BOLT DETAIL

Note: All handrail materials, including anchor bolts, shall be aluminum.

MICROFILMED
FEB 20 1985

This sheet supersedes sheet No. 337 9-27-66

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

SUPERSTRUCTURE, STEPS AND HANDRAIL DETAILS

BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.
CINCY BRIDGE NO. 7

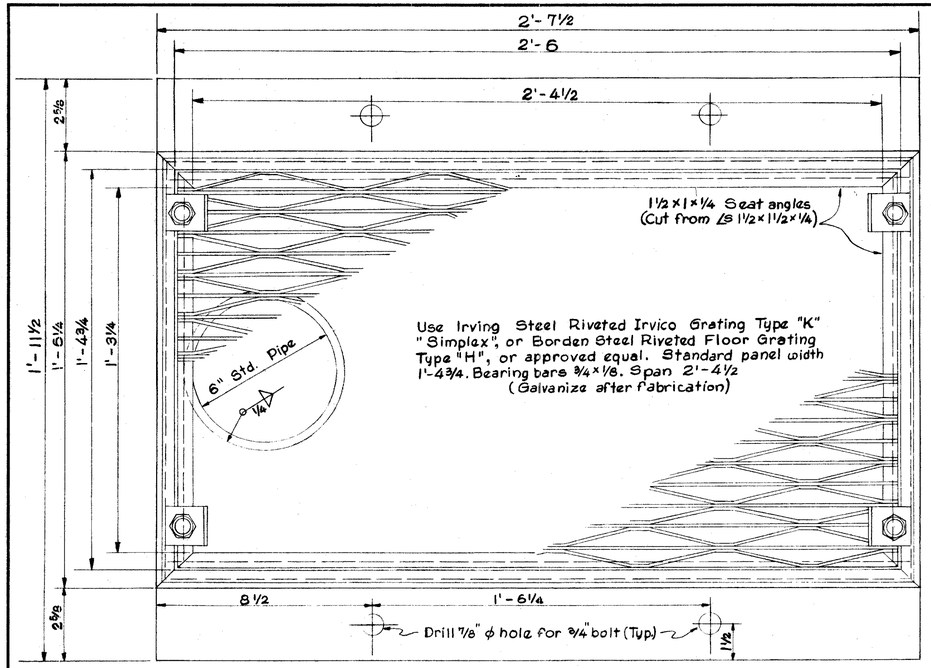
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.E.N.	L.E.N.		J.G.T.	W.W.	3-8-65	

HAMILTON COUNTY
HAM-71-(1.56)(2.51)
FED. RD. DIV. 2 | STATE OHIO | PROJECT | FISCAL YEAR
338/492
29 Handrail Panels @ 8'-0 = 232'-0 (Each Side)
For shop fabrication note, See Sheet Nº 337
Note: Stairway East Fascia Angle-point. Joint plate assembly parallel to end of bridge
*Vary cross-slope to meet joint plate within last 10'-0 of deck.
SECTION C-C
SECTION A-A
See Sheet No. 337 for Typical Handrail Details
For Lighting Details See Sh.
For Drainage Details See Sh. 339
DECK JOINT PLATES-DETAIL
SECTION B-B
Aluminum Handrail (S-14)
ANCHOR BOLT ASSEMBLY
TYPICAL STEP & ANCHORAGE DETAIL
DETAIL F-F
SECTION E-E
Note: For Abutment Details See Sheet Nos. 254, 255 & 256.
TYPICAL & END PANELS (Bridge Handrail - Looking north)
MICROFILMED FEB 20 1965
CITY OF CINCINNATI DEPARTMENT OF PUBLIC WORKS DIVISION OF ENGINEERING
SUPERSTRUCTURE, STEPS AND HANDRAIL DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.
CINCY BRIDGE NO. 7
DESIGNED LEN | DRAWN LEN | CHECKED JGT | REVIEWED W.W. | DATE 3-8-65

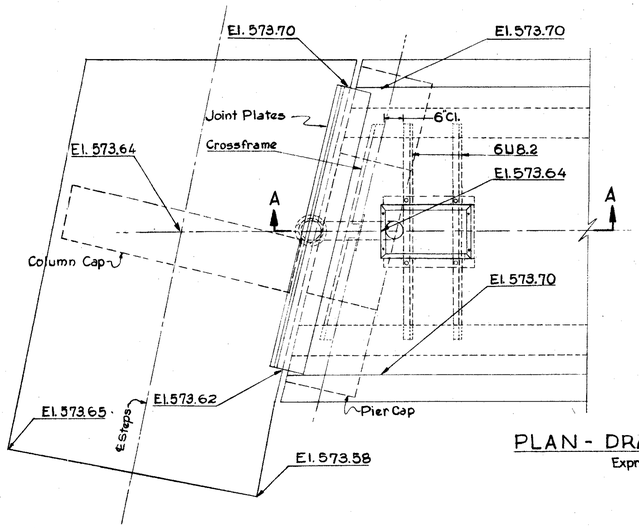
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

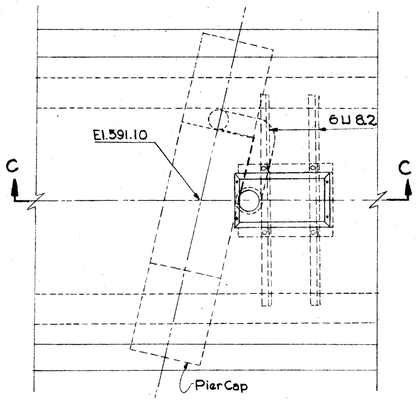
339
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

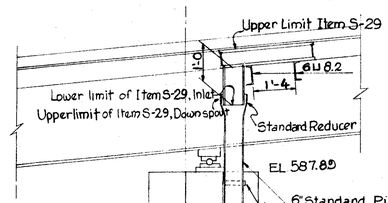


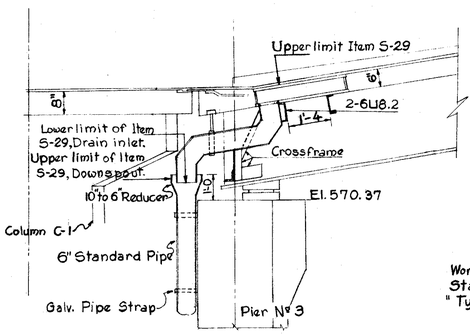
INLET FRAME & GRATING PLAN



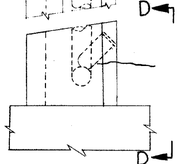


PLAN - DRAINAGE DETAILS
Expressway Bridge

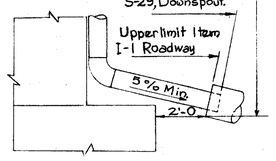




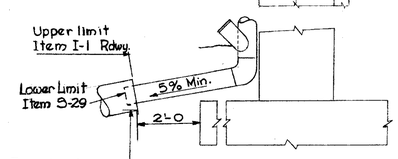
Work this Drawing with Standard Drawing Sheet No. 445 "Typical Drainage Details"



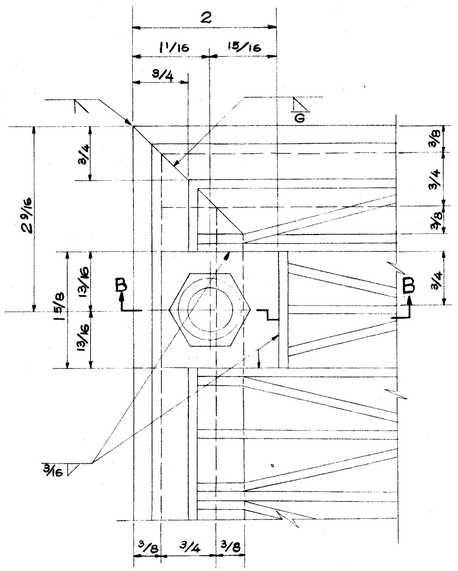
SECTION C-C



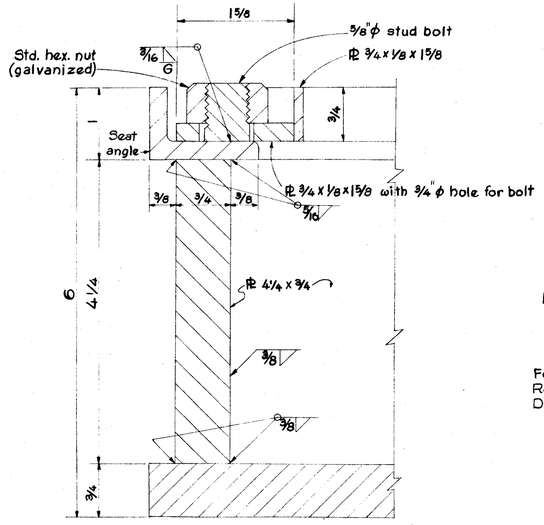
SECTION D-D
For Pier 5 Looking west
For Pier 2 Looking west



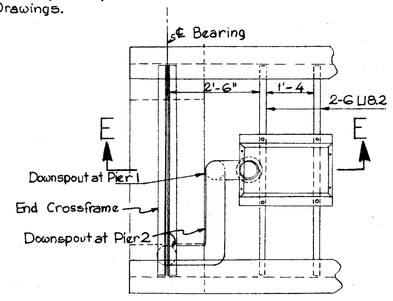
SECTION A-A



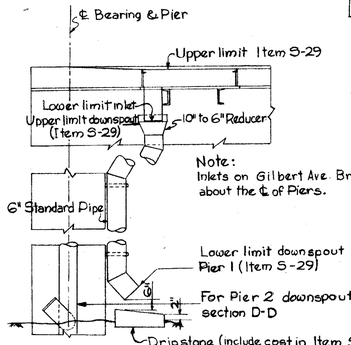
FASTENING DETAIL



SECTION B-B
Note: For details of Inlet Frame not shown see Standard Drawing Sheet No. 445



PLAN Gilbert Ave. Bridge



Note:
Inlets on Gilbert Ave. Bridge are similarly located about the ℄ of Piers.

SECTION E-E Looking North for Pier 1
Looking South for Pier 2

MICROFILMED
FEB 20 1965

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

DRAINAGE DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.E.N.	L.E.N.		R.M.B.	W.W.	3-8-65	

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

340
492

REINFORCING STEEL LIST

MARK	TYPE	NO.	LENGTH	WEIGHT
BRIDGE OVER EXPRESSWAY				
D401	58	120	9'-5	755
D402	Str.	120	5'-2	734
D403	"	112	35'-6	2657
D404	Str.	1	5'-6	6
D406	1	66	6'-9	287
TOTAL WEIGHT				4439
GILBERT AVE. STEPS				
S501	Str.	4	7'-0	29
S502	"	8	6'-10	58
S503	"	8	6-9	58
S504	Str.	176	6'-8	1224
S601				
S602	20	1	10'-8	16
S603	20	1	10'-9	16
S604	20	1	10'-11	16
S605	20	1	11'-0	17
S606	20	1	11'-1	17
S607	20	1	11'-2	17
S608	20	1	11'-4	17
S609	20	1	11'-5	17
S610	20	1	11'-6	17
S611	20	1	11'-7	17
S612	20	1	11'-9	18
S613	20	1	11'-10	18
S614	20	1	11'-11	18
S615	20	1	12'-0	18
S616	20	1	11'-10	18
S617	20	1	11'-11	18
S618	20	1	12'-1	18
S619	20	1	12'-2	18
S620	20	1	12'-3	18
S621	20	1	12'-4	19
S622	20	1	12'-6	19
S623	20	1	12'-7	19
S624	20	1	12'-8	19
S625	20	1	12'-9	19
S626	20	1	12'-11	19
S627	20	1	13'-0	20
S628	20	1	13'-1	20
S629	20	1	13'-2	20
S630	52	42	13'-9	867
S631		14	19'-11	419
S632	51	14	8'-2	172
S633	52	14	15'-0	315
S634		14	24'-8	519
S635	51	14	11'-8	245
S636		14	17'-11	377
S637	51	28	6'-2	259
S638	52	14	16'-2	340
S639		14	20'-4	428
S640	52	14	19'-9	415
S641	20	14	9'-0	189
TOTAL WEIGHT				10,587
BRIDGE OVER GILBERT AVE.				
D401	58	42	9'-5	264
D402	Str.	42	9'-2	257
D405	Str.	48	28'-10	925
D406	1	22	6'-9	99
TOTAL WEIGHT				1,545

MARK	TYPE	NO.	LENGTH	WEIGHT
E. COURT ST. STEPS				
S551	Str.	2	7'-7	16
S552	"	2	6'-0	13
S553	"	2	4'-5	9
S554	"	2	2'-2	5
S555	"	106	9'-2	1013
S556	Str.	16	14'-2	236
S651	20	1	7'-7	11
S652	20	1	8'-5	13
S653	20	1	9'-2	14
S654	20	1	8'-7	13
S655	20	1	9'-8	15
S656	20	1	10'-4	16
S657	20	1	9'-7	14
S658	20	1	9'-3	14
S659	20	1	8'-11	13
S660	20	1	8'-8	13
S661	20	1	8'-4	13
S662	20	1	8'-0	12
S663	20	1	7'-8	11
S664	20	1	7'-4	11
S665	20	1	7'-0	11
S666	20	1	6'-8	10
S667	20	1	6'-4	10
S668	20	1	6'-1	9
S669	20	1	5'-9	9
S670	20	1	5'-5	8
S671	20	1	5'-1	8
S672	20	1	4'-9	7
S673	20	1	10'-9	16
S674	20	1	10'-5	16
S675	20	1	10'-1	15
S676	20	1	9'-10	15
S677	20	1	9'-6	14
S678	20	1	9'-2	14
S679	20	1	8'-10	13
S680	20	1	8'-6	13
S681	20	1	8'-2	12
S682	20	1	7'-10	12
S683	20	1	7'-6	11
S684	20	1	7'-3	11
S685	20	1	6'-11	10
S686	20	1	6'-7	10
S687	20	1	6'-3	9
S688	20	1	5'-11	9
S689	52	10	16'-2	461
S690		10	20'-4	580
S691	51	38	6'-2	352
S692	52	38	17'-4	985
S693		10	21'-6	614
S694	52	10	24'-4	694
S695	20	10	10'-0	285
S696	Str.	20	7'-8	230
TOTAL WEIGHT				7,398
PIER 1				
P401	1	38	6'-8	170
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	14	7'-0	333
P905	Str.	14	26'-8	1269
F801	43	28	13'-2	984
TOTAL WEIGHT				2900

MARK	TYPE	NO.	LENGTH	WEIGHT
PIER 2				
P401	1	24	6'-8	106
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	12	7'-0	333
P904	Str.	12	17'-11	731
F507	Str.	8	11'-8	97
F508	Str.	12	7'-8	96
F703	Str.	12	7'-8	188
F704	Str.	8	11'-8	151
TOTAL WEIGHT				1886
PIER 3				
P401	1	46	6'-8	205
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	12	7'-0	333
P903	Str.	12	31'-5	1282
F510	Str.	5	7'-8	40
F511	Str.	9	11'-8	110
F512	Str.	4	8'-5	35
F513	Str.	8	13'-2	110
F903	Str.	5	7'-8	130
F904	Str.	9	11'-8	357
F1001	43	8	11'-3	387
F1002	43	16	16'-0	1002
W501	Str.	20	11'-8	243
W502	Str.	3	17'-9	54
W503	Str.	3	18'-3	56
W506	36	6	7'-1	44
W801	34	23	11'-9	722
W802	Str.	12	13'-2	416
H501	14	8	5'-9	48
H502	Str.	8	3'-8	——
TOTAL WEIGHT				5818
PIER 4				
P401	1	52	6'-8	232
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P901	Str.	12	35'-5	1445
P902	18	12	7'-0	333
F514	Str.	12	31'-8	396
F803	Str.	48	12'-8	1624
F804	Str.	32	8'-8	741
W504	Str.	26	31'-8	859
W505	Str.	11	22'-4	256
W506	36	16	7'-1	118
W901	34	38	12'-10	1658
W902	34	39	17'-10	2364
W903	Str.	20	12'-3	826

MARK	TYPE	NO.	LENGTH	WEIGHT
H501	14	22	5'-9	132
H503	Str.	4	31'-8	——
TOTAL WEIGHT				11142
PIER 5				
P401	1	42	6'-8	187
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P1102	18	16	8'-3	701
P1103	Str.	16	29'-2	2479
F501	Str.	12	9'-8	121
F502	Str.	10	11'-8	122
F901	Str.	12	9'-8	395
F902	Str.	10	11'-8	397
TOTAL WEIGHT				4492
COLUMN 1				
C401	1	64	4'-8	200
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	10	6'-5	171
C805	Str.	10	34'-0	908
C810	Str.	7	1'-3	23
TOTAL WEIGHT				1386
For footing steel see Pier 3				
COLUMN 2				
C401	1	54	4'-8	168
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	12	6'-5	206
C806	Str.	12	28'-11	934
C810	Str.	7	1'-3	23
F505	Str.	6	6'-8	42
F506	Str.	7	5'-8	41

MARK	TYPE	NO.	LENGTH	WEIGHT
F701	Str.	6	6'-8	82
F702	Str.	7	5'-8	81
TOTAL WEIGHT				1661
COLUMN 3				
C401	1	42	4'-8	131
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	10	6'-5	171
C807	Str.	10	22'-5	599
C810	Str.	7	1'-3	23
TOTAL WEIGHT				1008
For footing steel see Pier 2				
COLUMN 4				
C401	1	32	4'-8	100
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	8	6'-5	137
C808	Str.	8	17'-10	381
C810	Str.	7	1'-3	23
F702	Str.	7	5'-8	81
F705	Str.	8	4'-8	76
TOTAL WEIGHT				882
COLUMN 5				
C401	1	18	4'-8	56
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	8	6'-5	137
C809	Str.	8	10'-11	233
C810	Str.	7	1'-3	23
F603	Str.	4	4'-8	28
F604	Str.	5	3'-8	28
TOTAL WEIGHT				589
COLUMN 6				
C505	18	14	7'-7	111
C506	Str.	8	6'-2	51
C810	Str.	7	1'-3	23
F505	Str.	3	6'-2	19
TOTAL WEIGHT				204
COLUMN 7				
C401	1	58	4'-8	180
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C801	Str.	10	31'-1	920

MARK	TYPE	NO.	LENGTH	WEIGHT
C802	18	10	6'-5	171
C810	Str.	9	1'-3	30
TOTAL WEIGHT				1233
For footing steel see Pier 1				
COLUMN 8				
C401	1	32	4'-8	100
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C802	18	8	6'-5	137
C803	Str.	8	17'-11	383
C810	Str.	9	1'-3	30
F601	43	14	8'-0	168
TOTAL WEIGHT				930
COLUMN 9				
C401	1	16	4'-8	50
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C802	18	8	6'-5	137
C804	Str.	8	10'-5	223
C810	Str.	9	1'-3	30
F602	43	14	7'-6	158
TOTAL WEIGHT				710
COLUMN 10				
C406	35	1	3'-9	3
C407	35	1	4'-1	3
C408	35	1	4'-7	3
C409	35	1	4-11	3
C410	35	1	5'-5	4
C502	Str.	2	7'-0	15
C503	18	18	6'-3	117
C602	Str.	3	13'-8	62
C810	Str.	14	1'-3	47
F503	Str.	9	2'-8	25
F504	43	4	10'-10	45
TOTAL WEIGHT				327
RE401	Str.		5'-3	——
RE501	Str.		5'-7	——
RE601	Str.		5'-11	——
RE701	Str.		6'-3	——
RE801	Str.		6'-6	——
RE901	Str.		6'-10	——
RE1001	Str.		7'-3	——
RE1101	Str.		7'-7	——

BENDING DETAILS

PIERS AND COLUMNS

MARK	a	b	c	d	e	f	r
P401	1'-8	2'-6					
P402	1'-8	1'-11					
P403	1'-8	1'-9					
P404	1'-8	1'-7					
C401	1'-2	1'-9					
C402	1'-8	1'-3					
C403	1'-5	1'-3					
C404	1'-1	1'-3					
C405	0'-10	1'-3					
C406	0'-8	0'-10					
C407	0'-8	1'-0					
C408	0'-8	1'-3					
C409	0'-8	1'-5					
C410	0'-8	1'-8					
C411	1'-7	1'-3					
C412	1'-3	1'-3					
C413	0'-10	1'-3					
P501	1'-0	5'-1	2'-10	2'-7	2'-6		
C501	0'-7	5'-3	2'-1	2'-0	3'-3		
C503	1'-1	5'-2					
C504	0'-11	3'-11	2'-1	1'-10	2'-1		
C505	1'-2	6'-5					
F504	9'-8						
W506	1'-4	1'-5	1'-10	1'-8	0'-2		
H501	0'-8	2'-2					
F601	6'-8						
F602	6'-2						
C802	1'-8	4'-9					
F801	11'-0						
W801	1'-0	1'-3	1'-11	10'-2	8'-10	0'-5	1'-2
P902	1'-11	5'-1					
W901	1'-2	1'-5	2'-2	11'-0	9'-6	0'-6	1'-4
W902	1'-2	1'-5	2'-2	16'-0	14'-6	0'-9	1'-4
F1001	8'-5						
F1002	13'-2						
P1102	2'-5	5'-10					

Note; H bars listed without weights shall be included with Item 511-14 for payment.

Bar size is indicated in the bar mark. The first digit indicates the bar size number except when the first digit is one (1). In this case the first two digits indicate the bar size number.

Work this sheet with Sheet No. 341 and Standard Drawing No. S. Sh. No. 446

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

REINFORCING STEEL LIST

BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	J.D.A.		J.G.T.	W.W.	3-8-85	

MICROFILMED
FEB 20 1985

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

340
432

REINFORCING STEEL LIST

MARK	TYPE	NO.	LENGTH	WEIGHT
BRIDGE OVER EXPRESSWAY				
D401	58	120	9'-5	755
D402	Str.	120	5'-2	734
D403	"	112	35'-6	2657
D404	Str.	1	9'-6	6
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TOTAL WEIGHT				4439
GILBERT AVE. STEPS				
S501	Str.	4	7'-0	29
S502	"	8	6'-10	58
S503	"	8	6-9	58
S504	Str.	176	6'-8	1224
S601				
S602	20	1	10'-8	16
S603	20	1	10'-9	16
S604	20	1	10'-11	16
S605	20	1	11'-0	17
S606	20	1	11'-1	17
S607	20	1	11'-2	17
S608	20	1	11'-4	17
S609	20	1	11'-5	17
S610	20	1	11'-6	17
S611	20	1	11'-7	17
S612	20	1	11'-9	18
S613	20	1	11'-10	18
S614	20	1	11'-11	18
S615	20	1	12'-0	18
S616	20	1	11'-10	18
S617	20	1	11'-11	18
S618	20	1	12'-1	18
S619	20	1	12'-2	18
S620	20	1	12'-3	18
S621	20	1	12'-4	19
S622	20	1	12'-6	19
S623	20	1	12'-7	19
S624	20	1	12'-8	19
S625	20	1	12'-9	19
S626	20	1	12'-11	19
S627	20	1	13'-0	20
S628	20	1	13'-1	20
S629	20	1	13'-2	20
S630	52	42	13'-9	867
S631	*GG	14	19'-11	419
S632	51	14	8'-2	172
S633	52	14	15'-0	315
S634	*GG	14	24'-8	519
S635	51	14	11'-8	245
S636	*GG	14	17'-11	377
S637	51	28	6'-2	259
S638	52	14	16'-2	340
S639	*GG	14	20'-4	428
S640	52	14	19'-9	415
S641	20	14	9'-0	189
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D405	Str.	48	28'-10	925
D406	1	22	6'-9	99
TOTAL WEIGHT				1,545

MARK	TYPE	NO.	LENGTH	WEIGHT
E. COURT ST. STEPS				
S551	Str.	2	7'-7"	16
S552	"	2	6'-0"	13
S553	"	2	4'-5"	9
S554	"	2	2'-2"	5
S555	"	106	9'-2	1013
S556	Str.	16	14'-2	236
			13'-10"	
S651	20	1	7'-7"-0	11
S652	20	1	8'-5"-2	13 12
S653	20	1	8'-9"-2	14 12
S654	20	1	8'-7"-6	13
S655	20	1	9'-8"-7	15
S656	20	1	10'-4"-5"	16 14
S657	20	1	9'-7"-10"	14 12
S658	20	1	8'-3"-8"	14 12
S659	20	1	8'-1"-5"	13 11
S660	20	1	8'-0"-3"	13 11
S661	20	1	8'-0"-6"	13 11
S662	20	1	8'-0"-9"	12 10
S663	20	1	7'-8"-7"	11 10
S664	20	1	6'-7"-4	11 10
S665	20	1	7'-0"-6"	11 9
S666	20	1	6'-5"-11"	10 9
S667	20	1	6'-4"-3"	10 9
S668	20	1	6'-1"-5"	9 8
S669	20	1	5'-9"-3	9 8
S670	20	1	5'-5"-1	8 7
S671	20	1	5'-1"-10"	8 7
S672	20	1	4'-9"-6	7
S673	20	1	10'-8"-3"	16 14
S674	20	1	10'-5"-10"	16 14
S675	20	1	10'-1"-8"	15 13
S676	20	1	9'-10"-5"	15 13
S677	20	1	9'-6"-3"	14 13
S678	20	1	9'-2"-3"	14 12
S679	20	1	8'-10"-0	13 12
S680	20	1	8'-6"-9"	13 12
S681	20	1	8'-2"-7"	12 11
S682	20	1	7'-10"-4"	12 11
S683	20	1	7'-6"-2"	11
S684	20	1	7'-3"-8"	11 10
S685	20	1	6'-11"-9"	10
S686	20	1	6'-7"-4"	10
S687	20	1	6'-3	9
S688	20	1	5'-11"-6"	9
S689	52	19	16'-2	461
S690	*GG	19	20'-4	580
S691	51	38	6'-2	352
S692	52	38	17'-4	985
S693	*GG	19	21'-6	614
S694	52	19	24-4	694
S695	20	19	10'-0	285
S696	Str.	20	7'-8	230
TOTAL WEIGHT			5339	7398
PIER 1				
P401	1	38	6'-8	170
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	14	7'-0	333
P905	Str.	14	26'-8	1269
F801	43	28	13'-2	984
TOTAL WEIGHT				2900

MARK	TYPE	NO.	LENGTH	WEIGHT
PIER 2				
P401	1	24	6'-8	106
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	12	7'-0	333
P904	Str.	12	17'-11	731
F507	Str.	8	11'-8	97
F508	Str.	12	7'-8	96
F703	Str.	12	7'-8	188
F704	Str.	8	11'-8	151
TOTAL WEIGHT				1886
PIER 3				
P401	1	46	6'-8	205
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P902	18	12	7'-0	333
P903	Str.	12	31'-5	1282
F510	Str.	5	7'-8	40
F511	Str.	9	11'-8	110
F512	Str.	4	8'-5	35
F513	Str.	8	13'-2	110
F903	Str.	5	7'-8	130
F904	Str.	9	11'-8	357
F1001	43	8	11'-3	387
F1002	43	16	16'-0	1002
W501	Str.	20	11'-8	243
W502	Str.	3	17'-9	54
W503	Str.	3	18'-3	56
W506	36	6	7'-1	44
W801	34	23	11'-9	722
W802	Str.	12	13'-2	416
H501	14	8	5'-9	48
H502	Str.	8	3'-8	
TOTAL WEIGHT				5818
PIER 4				
P401	1	52	6'-8	232
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P901	Str.	12	35'-5	1445
P902	18	12	7'-0	333
F514	Str.	12	31'-8	396
F803	Str.	48	12'-8	1624
F804	Str.	32	8'-8	741
W504	Str.	26	31'-8	859
W505	Str.	11	22'-4	256
W506	36	16	7'-1	118
W901	34	38	12'-10	1658
W902	34	39	17'-10	2364
W903	Str.	20	12'-3	826

MARK	TYPE	NO.	LENGTH	WEIGHT
H501	14	22	5'-9	132
H503	Str.	4	31'-8	
TOTAL WEIGHT				11142
PIER 5				
P401	1	42	6'-8	187
P402	1	4	5'-6	15
P403	1	4	5'-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P1102	18	16	8'-3	701
P1103	Str.	16	25'-2	2479
F501	Str.	12	9'-8	121
F502	Str.	10	11'-8	122
F901	Str.	12	9'-8	395
F902	Str.	10	11'-8	397
TOTAL WEIGHT				4546
PIER 6				
P401	1	46	6'-8	205
P402	1	4	5'-6	15
P403	1	4	5-2	14
P404	1	4	4'-10	13
P501	20	6	5'-4	33
P801	Str.	3	8'-8	69
P1101	Str.	16	30'-8	2607
P1102	18	16	8'-3	701
F501	Str.	12	9'-8	121
F502	Str.	10	11'-8	122
F901	Str.	12	9'-8	395
F902	Str.	10	11'-8	397
TOTAL WEIGHT				4692
COLUMN 1				
C401	1	64	4'-8	200
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	10	6'-5	171
C805	Str.	10	34'-0	908
C810	Str.	7	1'-3	23
TOTAL WEIGHT				1386
For footing steel see Pier 3				
COLUMN 2				
C401	1	54	4'-8	168
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	12	6'-5	206
C806	Str.	12	28'-11	934
C810	Str.	7	1'-3	23
F505	Str.	6	6'-8	42
F506	Str.	7	5'-8	41

MARK	TYPE	NO.	LENGTH	WEIGHT
F701	Str.	6	6'-8	82
F702	Str.	7	5'-8	81
TOTAL WEIGHT				1661
COLUMN 3				
C401	1	42	4'-8	131
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	10	6'-5	171
C807	Str.	10	22'-5	559
C810	Str.	7	1'-3	23
TOTAL WEIGHT				1008
For footing steel see Pier 2				
COLUMN 4				
C401	1	32	4'-8	100
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	8	6'-5	137
C808	Str.	8	17'-10	381
C810	Str.	7	1'-3	23
F702	Str.	7	5'-8	81
F705	Str.	8	4'-8	76
TOTAL WEIGHT				882
COLUMN 5				
C401	1	18	4'-8	56
C411	1	4	4'-1	11
C412	1	4	3'-9	10
C413	1	4	3'-4	9
C504	20	6	4'-2	26
C603	Str.	3	6'-2	28
C802	18	8	6'-5	137
C809	Str.	8	10'-11	233
C810	Str.	7	1'-3	23
F603	Str.	4	4'-8	28
F604	Str.	5	3'-8	28
TOTAL WEIGHT				589
COLUMN 6				
C505	18	14	7'-7	111
C506	Str.	8	6'-2	51
C810	Str.	7	1'-3	23
F509	Str.	3	6'-2	19
TOTAL WEIGHT				204
COLUMN 7				
C401	1	58	4'-8	180
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C801	Str.	10	31'-1	920

MARK	TYPE	NO.	LENGTH	WEIGHT
C802	18	10	6'-5	171
C810	Str.	9	1'-3	30
TOTAL WEIGHT				1233
For footing steel see Pier 1				
COLUMN 8				
C401	1	32	4'-8	100
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C802	18	8	6'-5	137
C803	Str.	8	17'-11	383
C810	Str.	9	1'-3	30
F601	43	14	8'-0	168
TOTAL WEIGHT				930
COLUMN 9				
C401	1	16	4'-8	50
C402	1	4	4'-2	11
C403	1	4	3'-11	10
C404	1	4	3'-7	10
C405	1	4	3'-4	9
C501	20	6	5'-4	33
C601	Str.	3	8'-8	39
C802	18	8	6'-5	137
C804	Str.	8	10'-5	223
C810	Str.	9	1'-3	30
F602	43	14	7'-6	158
TOTAL WEIGHT				710
COLUMN 10				
C406	35	1	3'-9	3
C407	35	1	4'-1	3
C408	35	1	4'-7	3
C409	35	1	4-11	3
C410	35	1	5'-5	4
C502	Str.	2	7'-0	15
C503	18	18	6'-3	117
			13'-2"	
C602	Str.	3	13'-8	62 60
C810	Str.	14	1'-3	47
F503	Str.	9	2'-8	25
F504	43	4	10'-10	45
TOTAL WEIGHT			325	327
RE401	Str.		5'-3	
RE501	Str.		5'-7	
RE601	Str.		5'-11	
RE701	Str.		6'-3	
RE801	Str.		6'-6	
RE901	Str.		6'-10	
RE1001	Str.		7'-3	
RE1101	Str.		7'-7	

BENDING DETAILS

PIERS AND COLUMNS

MARK	a	b	c	d	e	f	r
P401	1'-8	2'-6					
P402	1'-8	1'-11					
P403	1'-8	1'-9					
P404	1'-8	1'-7					
C401	1'-2	1'-9					
C402	1'-8	1'-3					
C403	1'-5	1'-3					
C404	1'-1	1'-3					
C405	0'-10	1'-3					
C406	0'-8	0'-10					
C407	0'-8	1'-0					
C408	0'-8	1'-3					
C409	0'-8	1'-5					
C410	0'-8	1'-8					
C411	1'-7	1'-3					
C412	1'-3	1'-3					
C413	0'-10	1'-3					
P501	1'-0	2'-6	2'-10	2'-7			
C501	0'-7	3'-3	2'-1	2'-0			
C503	1'-1	5'-2					
C504	0'-11	2'-1	2'-1	1'-10			
C505	1'-2	6'-5					
F504	9'-8						
W506	1'-4	1'-5	1'-10	1'-8	0'-2		
H501	0'-8	2'-2					
FG01	6'-8						
FG02	6'-2						
C802	1'-8	4'-9					
F801	11'-0						
W801	1'-0	1'-3	1'-11	10'-2	8'-10	0'-5	1'-2
P902	1'-11	5'-1					
W901	1'-2	1'-5	2'-2	11'-0	9'-6	0'-6	1'-4
W902	1'-2	1'-5	2'-2	16'-0	14'-6	0'-9	1'-4
F1001	8'-5						
F1002	13'-2						
P1102	2'-5	5'-10					

MARK	a	b	c	d	e	f	r

Note: H bars listed without weights shall be included with Item S-14 for payment.

Bar size is indicated in the bar mark. The first digit indicates the bar size number except when the first digit is one (1). In this case the first two digits indicate the bar size number.

Work this sheet with Sheet No. 341 and Standard Drawing No. 5. Sh. No. 446

*-For Type GG bar bending detail see Sheet No. 341A

This sheet supersedes Sheet No. 340 4-21-66

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

REINFORCING STEEL LIST

BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.

CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	J.D.A.		J.G.T.	W.W.	3-8-65	5-27-66

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

341
492

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCT & STEPS	PIERS	GENERAL
E-2	Lump	Sum	Cofferdams cribs and sheeting.			
E-2	257.0	Sq. Ft.	Steel sheet piling left in place (minimum section modulus of 5.4 in.³ per foot of wall.)		257.0	
E-2	210.0	Cu. Yds.	Unclassified excavation.		210.0	
E-2	279.0	Cu. Yds.	Rock excavation.		279.0	
S-1	108	Cu. Yds.	Class "C" concrete, superstructure and steps.	108		
S-1	162	Cu. Yds.	Class "C" concrete, piers above footings & wall shafts		162	
S-1	122	Cu. Yds.	Class "E" concrete, footings.		122	
S-4	63,900.0	Lbs.	Reinforcing steel.	23,975.	39,925	
* S-7	70,900.0	Lbs.	Structural steel.	70,900.		
* S-8	70,900.0	Lbs.	Field painting of structural steel.	70,900.		
S-14	940.0	Lin. Ft.	Aluminum handrail, as per plan.	940.0		
S-14	32.0	Lin. Ft.	Railing "Type A" (Aluminum rail and supports, concrete parapet)		32.0	
S-16	Lump	Sum	First test pile.			
S-18	430.0	Lin. Ft.	Steel piles, 10BP42.		430.0	
S-22	1.1	Cu. Yds.	Removal of portions of existing structure.			1.1
S-25			Electrical lighting system, see Sheet No. 200.			
S-29	23.0	Cu. Yds.	Porous backfill.		23.0	
S-29	32.0	Lin. Ft.	8" bituminous coated helical perforated corrugated metal pipe Sec. M-6.4 (h-c), including specials and sand.		32.0	
S-29	Lump	Sum	Drain inlets, including supports.			
S-29	129.0	Lin. Ft.	6" standard pipe downspout, wrought iron or hot-dip galvanized steel, including specials.			129.0
S-101	108	Each	Water-reducing, set-retarding admixture.	108		
I-26	70.0	Lin. Ft.	Chain Link Fence, As Per Plan			70.0

*ESTIMATED QUANTITIES

Chargeable to Cincinnati Gas & Electric and C. & S. B. Telephone Companies

S-7	1951.0	Lbs.	Structural Steel.	1951.0

GENERAL NOTES

Design Specifications: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

Piles shall be 10BP42 driven with a hammer of not less than 11,000 ft lbs. per blow to firm contact with rock and shale. Firm contact shall be considered as attained when the capacity according to the formula Sec. 9-18.05 (Construction and Material Specifications) is not less than the following value for a pile hammer of the indicated energy rating:

50 tons per pile using a 11,000 ft. lb. hammer.
45 tons per pile using a 15,000 ft. lb. hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. (The design load= 30 tons per pile for Pier 1 and 35 tons per pile for E. Court St. Steps.)

Reference shall be made to Standard Construction Drawing F-1.

For additional references and notes see Notes 1 thru 8, General Notes, Sheet No. 443.

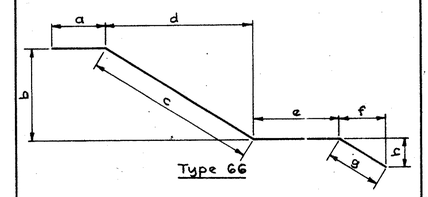
Chain Link Fence: Chain Link Fence shall meet the requirements of Item I-26, but shall be a nominal 10 feet in height. The first posts adjacent to the existing wall shall be set as close to the existing wall as possible and to line and grade with the existing posts on top of the wall. The remaining posts shall be set to the approximate elevation of the existing fence. The space between the first posts and the existing posts and the existing wall shall be properly closed with chain link fence.

BENDING DETAILS

STEPS

MARK	a	b	c	d	e	f	g	h
SG02	0'-6	10'-6	1'-0	0'-10	9'-8			
SG03	0'-6	10'-7	1'-0	0'-10	9'-9			
SG04	0'-6	10'-9	1'-0	0'-10	9'-11			
SG05	0'-6	10'-10	1'-0	0'-10	10'-0			
SG06	0'-6	10'-11	1'-0	0'-10	10'-1			
SG07	0'-6	11'-0	1'-0	0'-10	10'-2			
SG08	0'-6	11'-2	1'-0	0'-10	10'-4			
SG09	0'-6	11'-3	1'-0	0'-10	10'-5			
SG10	0'-6	11'-4	1'-0	0'-10	10'-6			
SG11	0'-6	11'-5	1'-0	0'-10	10'-7			
SG12	0'-6	11'-7	1'-0	0'-10	10'-9			
SG13	0'-6	11'-8	1'-0	0'-10	10'-10			
SG14	0'-6	11'-9	1'-0	0'-10	10'-11			
SG15	0'-6	11'-10	1'-0	0'-10	11'-0			
SG16	0'-8	11'-8	1'-3	1'-1	10'-7			
SG17	0'-8	11'-9	1'-3	1'-1	10'-8			
SG18	0'-8	11'-11	1'-3	1'-1	10'-10			
SG19	0'-8	12'-0	1'-3	1'-1	10'-11			
SG20	0'-8	12'-1	1'-3	1'-1	11'-0			
SG21	0'-8	12'-2	1'-3	1'-1	11'-1			
SG22	0'-8	12'-4	1'-3	1'-1	11'-3			
SG23	0'-8	12'-5	1'-3	1'-1	11'-4			
SG24	0'-8	12'-6	1'-3	1'-1	11'-5			
SG25	0'-8	12'-7	1'-3	1'-1	11'-6			
SG26	0'-8	12'-9	1'-3	1'-1	11'-8			
SG27	0'-8	12'-10	1'-3	1'-1	11'-9			
SG28	0'-8	12'-11	1'-3	1'-1	11'-10			
SG29	0'-8	13'-0	1'-3	1'-1	11'-11			
SG30	1'-0	9'-9	1'-3	11'-6	6'-1			
SG32	7'-10	0'-6	1'-0	0'-10	5'-11	0'-8	1'-1	1'-3
SG33	1'-0	10'-10	1'-3	12'-9	6'-9			
SG35	11'-4	0'-6	1'-0	0'-10	9'-5	0'-8	1'-1	1'-3
SG37	5'-10	0'-6	1'-0	0'-10	3'-11	0'-8	1'-1	1'-3
SG38	1'-0	11'-10	1'-3	13'-11	7'-5			
SG40	1'-3	9'-9	7'-0	11'-6	6'-1			
SG41	0'-8	9'-0	1'-3	1'-1	7'-9			
SG51	0'-6	7'-5	1'-0	0'-10	6'-7			
SG52	0'-6	8'-3	1'-0	0'-10	7'-5			
SG53	0'-6	9'-0	1'-0	0'-10	8'-2			
SG54	0'-8	8'-5	1'-3	1'-1	7'-4			
SG55	0'-8	9'-6	1'-3	1'-1	8'-5			
SG56	0'-8	9'-2	1'-3	1'-1	9'-1			
SG57	0'-6	8'-5	1'-0	0'-10	8'-7			
SG58	0'-6	9'-1	1'-0	0'-10	8'-3			
SG59	0'-6	8'-9	1'-0	0'-10	7'-11			
SG60	0'-6	8'-6	1'-0	0'-10	7'-8			
SG61	0'-6	8'-2	1'-0	0'-10	7'-4			
SG62	0'-6	7'-10	1'-0	0'-10	7'-0			
SG63	0'-6	7'-6	1'-0	0'-10	6'-8			
SG64	0'-6	7'-2	1'-0	0'-10	6'-4			
SG65	0'-6	6'-10	1'-0	0'-10	6'-0			
SG66	0'-6	6'-6	1'-0	0'-10	5'-8			
SG67	0'-6	6'-2	1'-0	0'-10	5'-4			
SG68	0'-6	5'-11	1'-0	0'-10	5'-1			
SG69	0'-6	5'-7	1'-0	0'-10	4'-9			
SG70	0'-6	5'-3	1'-0	0'-10	4'-5			
SG71	0'-6	4'-11	1'-0	0'-10	4'-1			
SG72	0'-6	4'-7	1'-0	0'-10	3'-9			
SG73	0'-8	10'-7	1'-3	1'-1	9'-6			
SG74	0'-8	10'-3	1'-3	1'-1	9'-2			
SG75	0'-8	9'-11	1'-3	1'-1	8'-10			
SG76	0'-8	9'-8	1'-3	1'-1	8'-7			
SG77	0'-8	9'-4	1'-3	1'-1	8'-3			
SG78	0'-8	9'-0	1'-3	1'-1	7'-11			
SG79	0'-8	8'-8	1'-3	1'-1	7'-7			
SG80	0'-8	8'-4	1'-3	1'-1	7'-3			

MARK	a	b	c	d	e	f	g	h
SG81	0'-8	8'-0	1'-3	1'-1	6'-11			
SG82	0'-8	7'-8	1'-3	1'-1	6'-7			
SG83	0'-8	7'-4	1'-3	1'-1	6'-3			
SG84	0'-8	7'-1	1'-3	1'-1	6'-0			
SG85	0'-8	6'-9	1'-3	1'-1	5'-8			
SG86	0'-8	6'-5	1'-3	1'-1	5'-4			
SG87	0'-8	6'-1	1'-3	1'-1	5'-0			
SG88	0'-8	5'-9	1'-3	1'-1	4'-8			
SG89	1'-0	11'-10	1'-3	13'-11	7'-5			
SG91	5'-10	0'-6	1'-0	0'-10	3'-11	0'-8	1'-1	1'-3
SG92	1'-0	12'-9	1'-3	15'-1	8'-0			
SG94	1'-3	12'-9	8'-0	15'-1	8'-0			
SG95	0'-8	9'-10	1'-3	1'-1	8'-9			



MARK	a	b	c	d	e	f	g	h
SG31	1'-3	6'-1	11'-6	9'-9	5'-11	1'-1	1'-3	0'-8
SG34	1'-3	6'-9	12'-9	10'-10	9'-5	1'-1	1'-3	0'-8
SG36	1'-3	6'-1	11'-6	9'-9	3'-11	1'-1	1'-3	0'-8
SG39	1'-3	7'-5	13'-11	11'-10	3'-11	1'-1	1'-3	0'-8
SG90	1'-3	7'-5	13'-11	11'-10	3'-11	1'-1	1'-3	0'-8
SG93	1'-3	7'-11	15'-1	12'-9	3'-11	1'-1	1'-3	0'-8

SUPERSTRUCTURES

MARK	a	b	c	d	e	f	g	h	j
D401	3'-0	0'-4	0'-5½	2'-9	0'-4	0'-4	2'-9	0'-5½	0'-4
D406	0'-9	3'-0							

Note: Work this sheet with Sheet No. 340 and Bar Banding Schedule Sheet No. 446.

MICROFILMED
FEB 20 1965

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

ESTIMATED QUANTITIES AND BAR BENDING DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REV
	J.D.A.		J.G.T.	W.W.	3-8-65	

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

341
402

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCT & STEPS	PIERS	GENERAL
E-2	Lump	Sum	Coffardams cribs and sheeting.			
E-2	257.0	Sq. Ft.	Steel sheet piling left in place (minimum section modulus of 5.4 in.³ per foot of wall.)		257.0	
E-2	210.0	Cu. Yds.	Unclassified excavation.		210.0	
E-2	279.0	Cu. Yds.	Rock excavation.		279.0	
				107		
S-1	~~107~~ 108	Cu. Yds.	Class "C" concrete, superstructure and steps.	~~107~~ 108		
S-1	162.	Cu. Yds.	Class "C" concrete, piers above footings & wall shafts		162	
S-1	122	Cu. Yds.	Class "E" concrete, footings.		122	
	62,382			22,459	39,923	
S-4	~~63,900.0~~	*Lbs.	Reinforcing steel.	~~23,975~~	~~39,925~~	
* S-7	70,900.0	Lbs.	Structural steel.	70,900.		
* S-8	70,900.0	Lbs.	Field painting of structural steel.	70,900.		
	936.5			936.5		
S-14	~~940.0~~	Lin. Ft.	Aluminum handrail, as per plan.	~~940.0~~		
S-14	32.0	Lin. Ft.	Railing Type A" (Aluminum rail and supports, concrete parapet)		32.0	
S-16	Lump	Sum	First test pile.			
S-18	430.0	Lin. Ft.	Steel piles, 12BP42.		430.0	
S-22	1.1	Cu. Yds.	Removal of portions of existing structure.			1.1
S-25			Electrical lighting system, see Sheet No. 200.			
S-29	23.0	Cu. Yds.	Porous backfill.		23.0	
S-29	32.0	Lin. Ft.	8" bituminous coated helical perforated corrugated metal pipe Sec. M-6.4 (h-c), including specials and sand.		32.0	
S-29	Lump	Sum	Drain inlets, including supports.			
S-29	129.0	Lin. Ft.	6" standard pipe downspout, wrought iron or hot-dip galvanized steel, including specials.			129.0
S-101	108	Each	Water-reducing, set-retarding admixture.	108		
I-26	70.0	Lin. Ft.	Chain Link Fence, As per plan			70.0

*ESTIMATED QUANTITIES

Chargeable to Cincinnati Gas & Electric and C. & S. B. Telephone Companies

S-7	1951.0	Lbs.	Structural Steel.	1951.0

GENERAL NOTES

Design Specifications: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

Piles shall be 10BP42 driven with a hammer of not less than 11,000 ft lbs. per blow to firm contact with rock and shale. Firm contact shall be considered as attained when the capacity according to the formula Sec. S-18.05 (Construction and Material Specifications) is not less than the following value for a pile hammer of the indicated energy rating:

50 tons per pile using a 11,000 ft. lb. hammer.
45 tons per pile using a 15,000 ft. lb. hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. (The design load = 30 tons per pile for Pier 1 and 35 tons per pile for E. Court St. Steps.)

Reference shall be made to Standard Construction Drawing F-1.

For additional references and notes see Notes 1 thru 8, General Notes, Sheet No. 443.

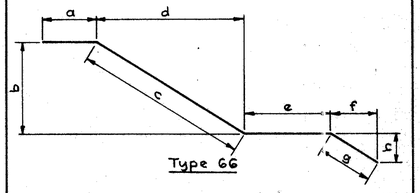
Chain Link Fence: Chain Link Fence shall meet the requirements of Item 1-26, but shall be a nominal 10 feet in height. The first poste adjacent to the existing wall shall be set as close to the existing wall as possible and to line and grade with the existing posts on top of the wall. The remaining posts shall be set to the approximate elevation of the existing fence. The space between the first posts and the existing posts and the existing wall shall be properly closed with chain link fence.

BENDING DETAILS

STEPS

MARK	a	b	c	d	e	f	g	h
SG02	0'-6	9'-8	1'-0	0'-10				
SG03	0'-6	9'-9	1'-0	0'-10				
SG04	0'-6	9'-11	1'-0	0'-10				
SG05	0'-6	10'-0	1'-0	0'-10				
SG06	0'-6	10'-1	1'-0	0'-10				
SG07	0'-6	10'-2	1'-0	0'-10				
SG08	0'-6	10'-4	1'-0	0'-10				
SG09	0'-6	10'-5	1'-0	0'-10				
SG10	0'-6	10'-6	1'-0	0'-10				
SG11	0'-6	10'-7	1'-0	0'-10				
SG12	0'-6	10'-9	1'-0	0'-10				
SG13	0'-6	10'-10	1'-0	0'-10				
SG14	0'-6	10'-11	1'-0	0'-10				
SG15	0'-6	11'-0	1'-0	0'-10				
SG16	0'-8	10'-7	1'-3	1'-1				
SG17	0'-8	10'-8	1'-3	1'-1				
SG18	0'-8	10'-10	1'-3	1'-1				
SG19	0'-8	10'-11	1'-3	1'-1				
SG20	0'-8	11'-0	1'-3	1'-1				
SG21	0'-8	11'-1	1'-3	1'-1				
SG22	0'-8	11'-3	1'-3	1'-1				
SG23	0'-8	11'-4	1'-3	1'-1				
SG24	0'-8	11'-5	1'-3	1'-1				
SG25	0'-8	11'-6	1'-3	1'-1				
SG26	0'-8	11'-8	1'-3	1'-1				
SG27	0'-8	11'-9	1'-3	1'-1				
SG28	0'-8	11'-10	1'-3	1'-1				
SG29	0'-8	11'-11	1'-3	1'-1				
SG30	1'-0	9'-9	1'-3	11'-6	6'-1			
SG32	1'-0	0'-6	0'-10	5'-11	1'-1	1'-3	0'-8	
SG33	1'-0	10'-10	1'-3	12'-9	6'-9			
SG35	1'-0	0'-6	0'-10	9'-5	1'-1	1'-3	0'-8	
SG37	1'-0	0'-6	0'-10	3'-11	1'-1	1'-3	0'-8	
SG38	1'-0	11'-10	1'-3	13'-11	7'-5			
SG40	1'-3	9'-9	7'-0	11'-6	6'-1			
SG41	0'-8	7'-9	1'-3	1'-1				
SG51	0'-6	6'-7 1/2"	1'-0	0'-10				
SG52	0'-6	7'-8 1/2"	1'-0	0'-10				
SG53	0'-6	8'-2 7/8"	1'-0	0'-10				
SG54	0'-8	7'-4 3/8"	1'-3	1'-1				
SG55	0'-8	8'-5 1/4"	1'-3	1'-1				
SG56	0'-8	9'-2 1/8"	1'-3	1'-1				
SG57	0'-6	8'-7 1/4"	1'-0	0'-10				
SG58	0'-6	8'-3 5/8"	1'-0	0'-10				
SG59	0'-6	7'-11 1/2"	1'-0	0'-10				
SG60	0'-6	7'-8 3/4"	1'-0	0'-10				
SG61	0'-6	7'-4 1/8"	1'-0	0'-10				
SG62	0'-6	7'-0 1/2"	1'-0	0'-10				
SG63	0'-6	6'-8 3/4"	1'-0	0'-10				
SG64	0'-6	6'-4"	1'-0	0'-10				
SG65	0'-6	6'-0 3/8"	1'-0	0'-10				
SG66	0'-6	5'-8 3/4"	1'-0	0'-10				
SG67	0'-6	5'-5 1/8"	1'-0	0'-10				
SG68	0'-6	5'-1 1/2"	1'-0	0'-10				
SG69	0'-6	4'-9 3/4"	1'-0	0'-10				
SG70	0'-6	4'-5 1/8"	1'-0	0'-10				
SG71	0'-6	4'-1 3/8"	1'-0	0'-10				
SG72	0'-6	3'-9 1/2"	1'-0	0'-10				
SG73	0'-8	6'-6 3/8"	1'-3	1'-1				
SG74	0'-8	6'-2 7/8"	1'-3	1'-1				
SG75	0'-8	5'-10 1/4"	1'-3	1'-1				
SG76	0'-8	5'-7 3/4"	1'-3	1'-1				
SG77	0'-8	5'-3 1/8"	1'-3	1'-1				
SG78	0'-8	7'-11 1/2"	1'-3	1'-1				
SG79	0'-8	7'-7 3/4"	1'-3	1'-1				
SG80	0'-8	7'-3 1/8"	1'-3	1'-1				

MARK	a	b	c	d	e	f	g	
SG81	0'-8	6'-11 1/2"	1'-3	1'-1				
SG82	0'-8	6'-7 1/4"	1'-3	1'-1				
SG83	0'-8	6'-3 5/8"	1'-3	1'-1				
SG84	0'-8	6'-0 3/8"	1'-3	1'-1				
SG85	0'-8	5'-8 1/4"	1'-3	1'-1				
SG86	0'-8	5'-4 3/8"	1'-3	1'-1				
SG87	0'-8	5'-0	1'-3	1'-1				
SG88	0'-8	4'-8 1/8"	1'-3	1'-1				
SG89	1'-0	11'-10	1'-3	13'-11	7'-5			
SG91	1'-0	0'-6	0'-10	3'-11	1'-1	1'-3	0'-8	
SG92	1'-0	12'-9	1'-3	15'-1	8'-0			
SG94	1'-3	12'-9	8'-0	15'-1	8'-0			
SG95	0'-8	8'-9	1'-3	1'-1				



MARK	a	b	c	d	e	f	g	h
SG31	1'-3	6'-1	11'-6	9'-9	5'-11	1'-1	1'-3	0'-8
SG34	1'-3	6'-9	12'-9	10'-10	9'-5	1'-1	1'-3	0'-8
SG36	1'-3	6'-1	11'-6	9'-9	3'-11	1'-1	1'-3	0'-8
SG39	1'-3	7'-5	13'-11	11'-10	3'-11	1'-1	1'-3	0'-8
SG90	1'-3	7'-5	13'-11	11'-10	3'-11	1'-1	1'-3	0'-8
SG93	1'-3	7'-11	15'-1	12'-9	3'-11	1'-1	1'-3	0'-8

SUPERSTRUCTURES

MARK	a	b	c	d	e	f	g	h	i
D401	3'-0	0'-4	0'-5 1/2	0'-4	2'-9	0'-4	0'-4	0'-5 1/2	2'-9
D406	0'-9	3'-0							

This sheet supersedes sheet No. 341 4-21-66

Note: Work this sheet with Sheet No. 340 and Bar Bending Schedule Sheet No. 446.

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FEB 20 1985

CITY OF CINCINNATI
DEPARTMENT OF PUBLIC WORKS
DIVISION OF ENGINEERING

ESTIMATED QUANTITIES AND BAR BENDING DETAILS
BRIDGE NO. HAM-71-0157
I-71 UNDER PEDESTRIAN CROSSING AT COURT ST.
CINCY BRIDGE NO. 7

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	J.D.A.		J.G.T.	W.W.	3-8-65	9-27-66

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

342 / 492

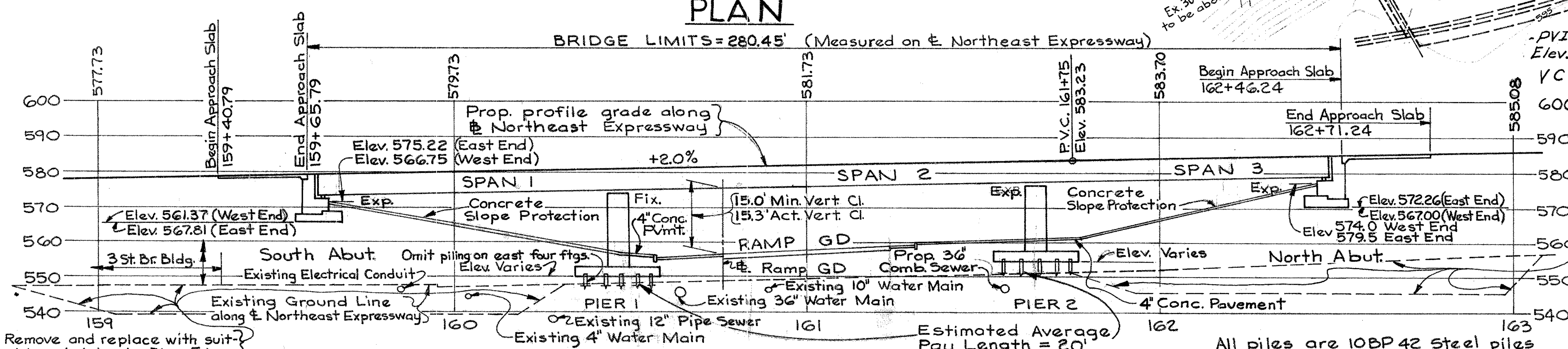
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

PROPOSED STRUCTURE

Type: Continuous steel plate girders with reinforced concrete deck and substructure.
Span: 77'-0", 118'-0", 77'-0" c. to c. bearings. (See Note)
Roadway: Southbound 51'-0" f/f curbs with 1'-0" Curbs and 6'-0" Median. Northbound varies see Plan.
Skew: Varies see Plan.
Loading Frequency: CF-2000 (57) adequate for AASHO alternate loading
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 (25'-0" Long)
Alignment: Compound Curves
Superelevation: Varies see Plan

Note: South Abutment for Future Bridge No. HAM-471-0072 to be built with this project.

PLAN



PROFILE

All piles are 10BP42 Steel piles

Traffic Count ADT = 39800 (NB) 25800 (SB)
DHV = 4610 (NB) 3450 (SB)

CURVE DATA

Curve No. 5A
P.I. = 159+33.66
Δ = 00°15'01"
D_c = 00°15'01"
R = 22,892.88'
L = 100.00'
T = 50.00'

Curve No. 5B
P.I. = 160+33.66
Δ = 01°14'59"
D_c = 01°14'59"
R = 4584.68'
L = 100.00'
T = 50.00'

Curve No. 5C
P.I. = 166+27.38
Δ = 16°12'10"
D_c = 01°30'00"
R = 3819.72'
L = 1080.19'
T = 543.72'

Curve No. 5 NPN
P.I. = Sta. 161+33.72 NPN
Δ = 9°13'59"
D_c = 01°20'00"
R = 4297.19'
L = 692.48'
T = 346.99'

P.C. Sta. 157+86.72 NPN
P.C.C. Sta. 164+79.20 NPN

GENERAL NOTES:

Span lengths are measured along Base Line
● Symbol denotes drill hole
For test boring data, see Sheet 1, 2 & 10 of 13
For Bench Marks, see Sheet 40

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CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN

BRIDGE No. HAM-71-0173

Sta. 159+40.79 to Sta. 162+46.24

H&E BRIDGE No. 8R & L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.K.K.	R.E.M.	N.A.Z.	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

343
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUC-TURE	NORTH ABUT-MENT	SOUTH ABUT-MENT	PIER 1	PIER 2	GENERAL
E-2	2547	Cu. Yds.	Unclassified Excavation, including Rock (or Shale)		574	554	928	491	
S-1	1085	Cu. Yds.	Class "C" Concrete, Superstructure	1085					
S-1	341	Cu. Yds.	Class "C" Concrete, Piers above Footings				185	156	
S-1	659	Cu. Yds.	Class "E" Concrete, Abutments above Footings		302.2	356.8			
S-1	630	Cu. Yds.	Class "E" Concrete, Footings		115.5	134.0	197.3	183.2	
S-3	81	Lin. Ft.	Waterproofing, Premolded Sealing Strip		34	47			
S-4	506 488	Lbs.	Reinforcing Steel	317,811	21,574	24,292	142 811		
S-7	1,250,000	Lbs.	Structural Steel	1,250,000					
S-8	1,250,000	Lbs.	Field Painting of Structural Steel	1,250,000					
S-9	317	Sq. Ft.	1" Preformed Expansion Joint Filler (M-10.02, Type I)		147	170			
S-14	586	Lin. Ft.	Railing Type "A" (Aluminum Rail & Supports, Concrete Parapet)	533	34	19			
S-14	281	Lin. Ft.	Railing (Type I-15.11 Galvanized with Galvanized Steel Posts, Base Plate & Bolts)	281					
S-16*	Lump	Sum	First Test Pile						Lump
S-18	4480	Lin. Ft.	Steel Piles, 10BP42				1920	2560	
S-25			Electric Lighting System (see Sh. No. 204)						
S-29	465	Lin. Ft.	6" Helical Perforated Corrugated Metal Pipe [Sec. M-6.4(h)] (Including Specials).		214	251			
S-29	475	Lin. Ft.	6" Helical Non-Perforated Corrugated Metal Pipe [Sec. M-6.4(h)]		203	272			
S-29	Lump	Sum	Drain Inlets, Including Supports and Horizontal Collector System	Lump					
S-29	145	Lin. Ft.	8" Standard Pipe Downspout, Wrought Iron or Hot-Dip Galvanized Steel, (Including Specials)			31	62	52	
S-29	293	Cu. Yds.	Porous Backfill		133	160			
I-10	2,250	Sq. Yds.	Concrete Slope Protection		1400	850			
S-101	1085	Each	Water-Reducing, Set-Retarding Admixture	1085					

*See note sheet no. 375.

GENERAL NOTES

REFERENCE shall be made to Standard Drawing I-15 No. 2-A.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the Abutments and Piers.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.6 tons per Sq. Ft. Pier footings I-N, I-P, I-R and I-S are designed for a maximum bearing pressure of 5.0 tons per sq. ft.

PILES Shall be driven with a hammer of not less than 11,000 ft. lbs per blow to firm contact with shale. If the length of penetration is approximately equal to the depth of shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating:

50 tons per pile using an 11,000 ft. lb. hammer.
45 tons per pile using a 15,000 ft. lb. hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 Tons per pile.

POROUS BACKFILL: 1'-6" thick, full length of abutments shall extend up to the underside of the approach slab or to the finished ground surface.

ADDITIONAL NOTES: For Additional Notes see Notes 1, 2, 3, 5, 6, 7, & 8, Sh. No. 443

Design Loading CF = 2000 (57)
Concrete Class C - Basic unit stress 1333 psi.
Concrete Class E - Basic unit stress 1133 psi.
Structural Steel - ASTM A36 - Basic unit stress 20,000 psi (Except for piles, ASTM A7 and A373 steel not permitted)
Reinforcing Steel - ASTM A15, A16, A160. Deformed Intermediate or Hard Grade. Basic unit stress 20,000 psi. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ESTIMATED QUANTITIES
AND GENERAL NOTES
BRIDGE No. HAM.-71-0173

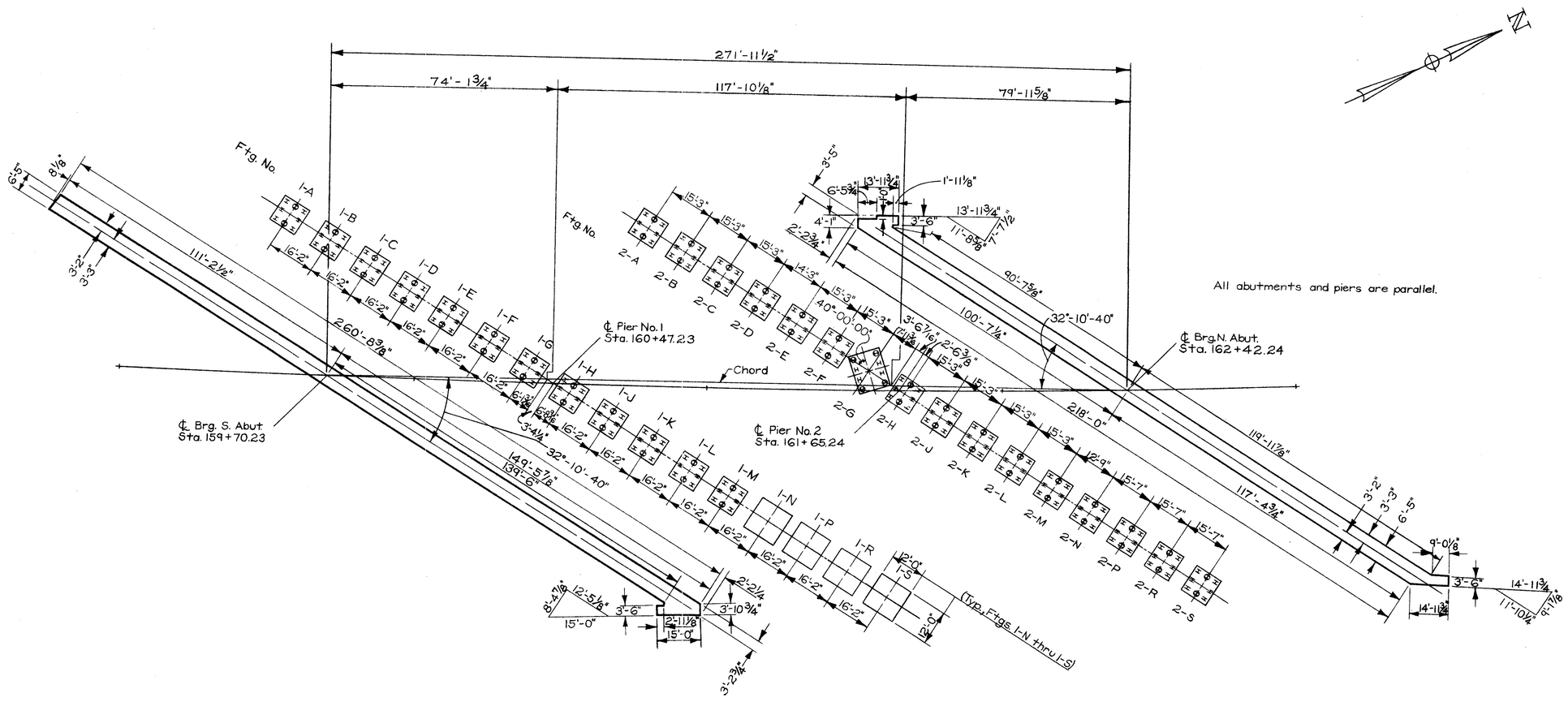
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHD 4/26/65	H.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

344
492

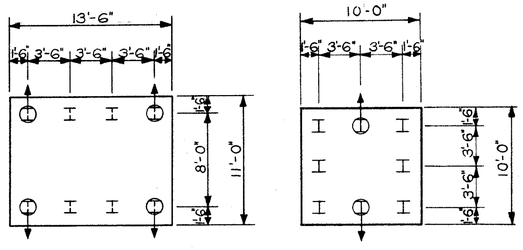
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



All piles are steel piles, 10BP42.

(1) Denotes battered piles (1 on 4).

PLAN



PLAN
FOOTING 2-G

PLAN
ALL FOOTINGS EXCEPT
2-G & 1-N THRU 1-S

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FEB 20 1965

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STAKE-OUT-DIAGRAM

BRIDGE No. HAM-71-0173

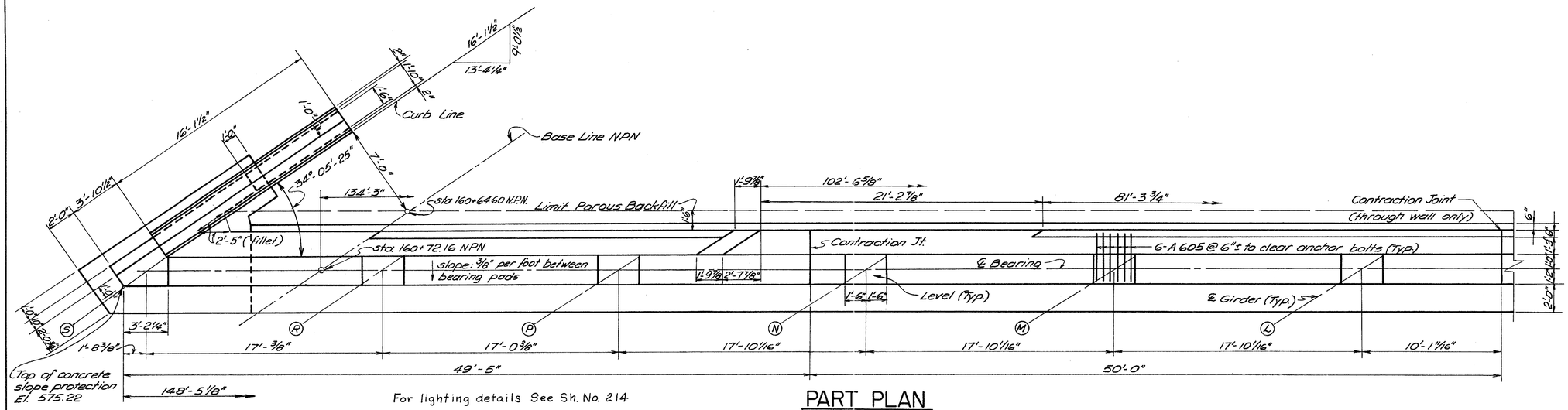
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHO 11/29/65	W.A.S. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

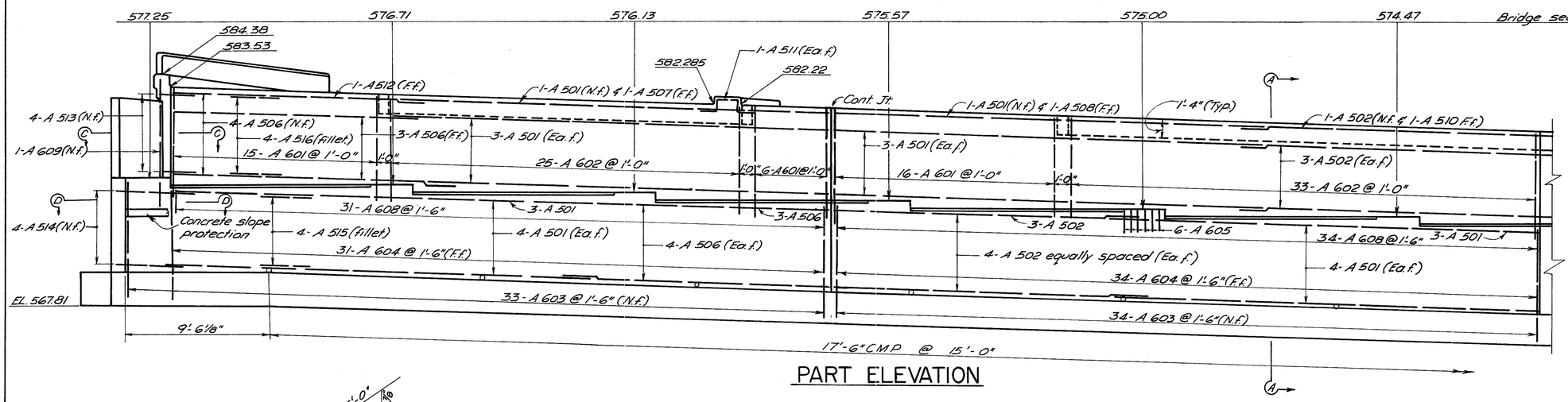
345
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)



For lighting details See Sh. No. 214

PART PLAN

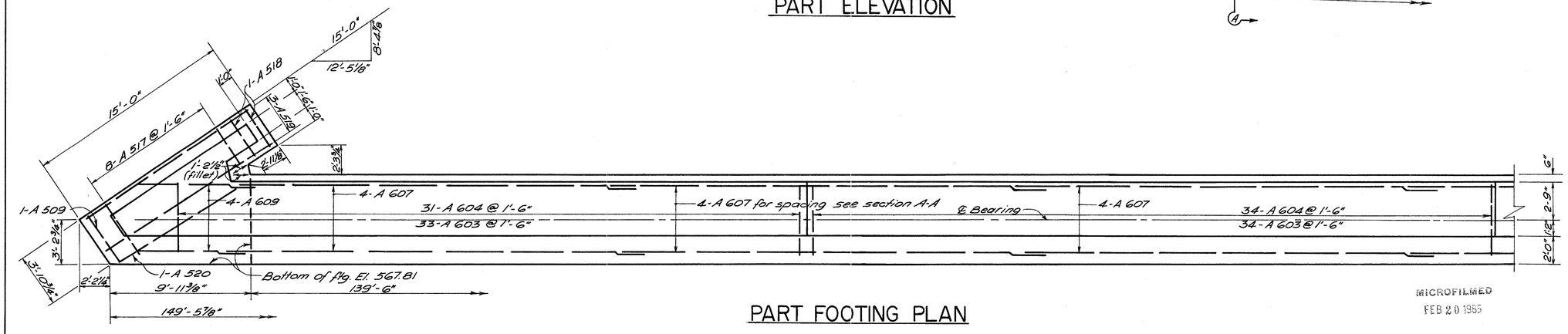


PART ELEVATION

Note: For top of backwall elevations along backwall see End Finish Detail sh. No. 363

Procedure: For procedure note see sh. No. 349

For additional notes see sh. No. 350



PART FOOTING PLAN

work this sheet with shts. 346 thru 348

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM.-71-0173

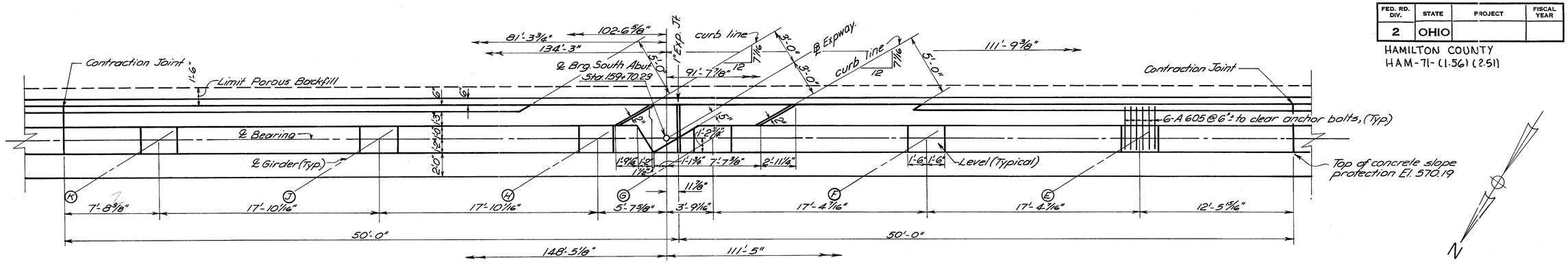
H&E BRIDGE NO. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	10-16-64 A.N.	B.Sch.	1-21-65 J.H.O.	H.A.S. 5-20-65	

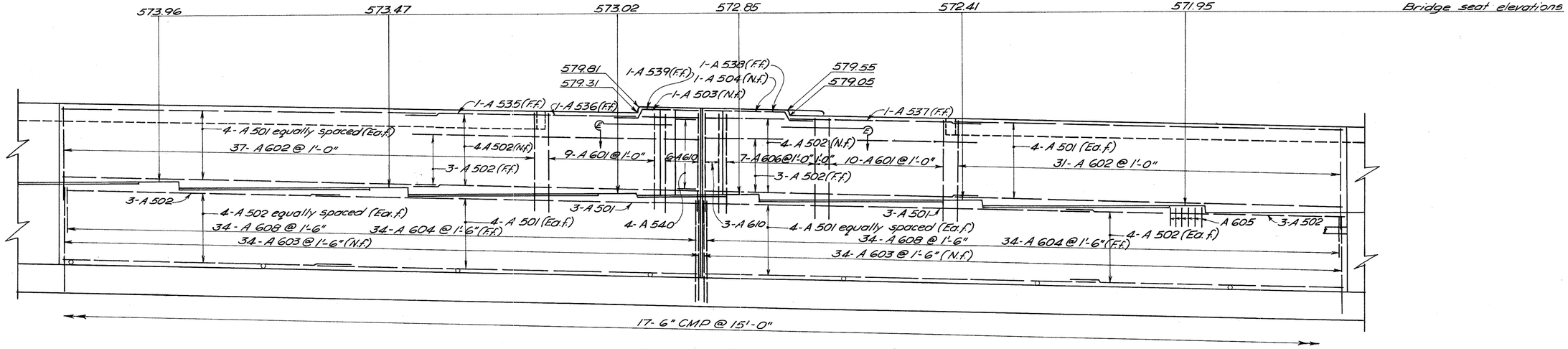
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

346
492

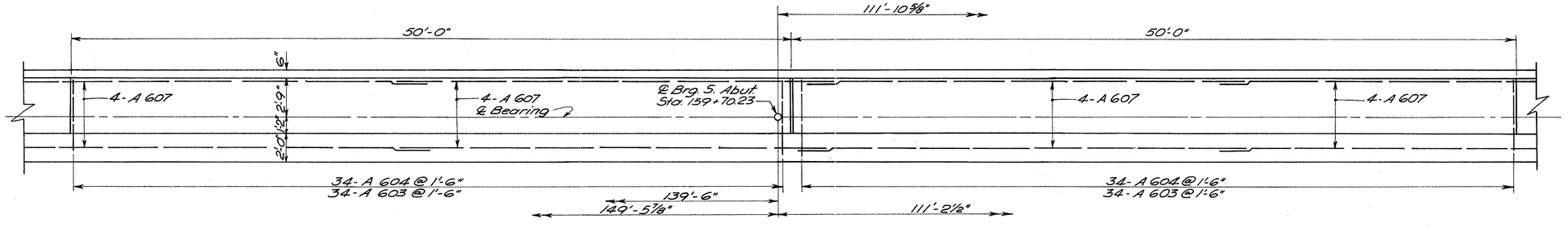
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PART PLAN



PART ELEVATION



PART FOOTING PLAN

MICROFILMED
FEB 26 1965

work this sheet with sheets 345, 347 & 348

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM.-71-0173

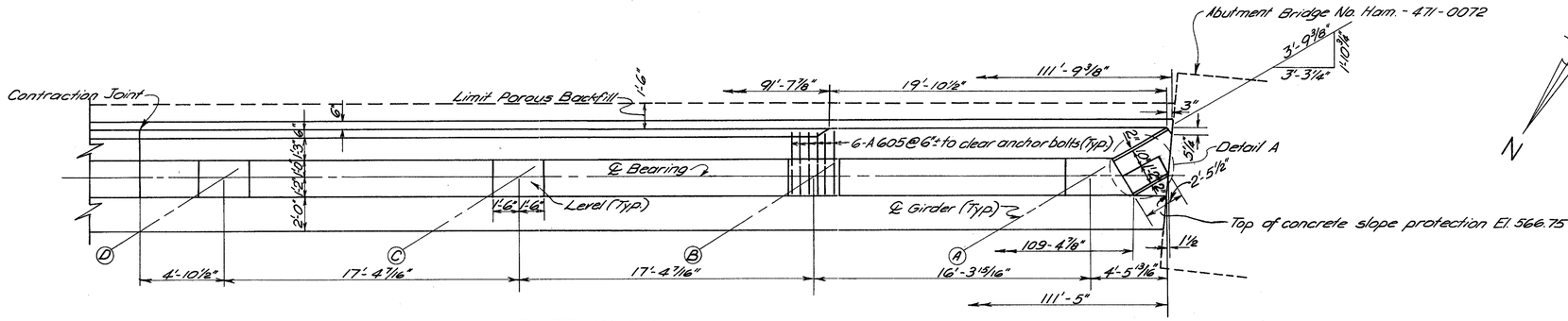
H & E BRIDGE NO. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	A.N.	B. Sch.	J.H.O. 1-21-65	H.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

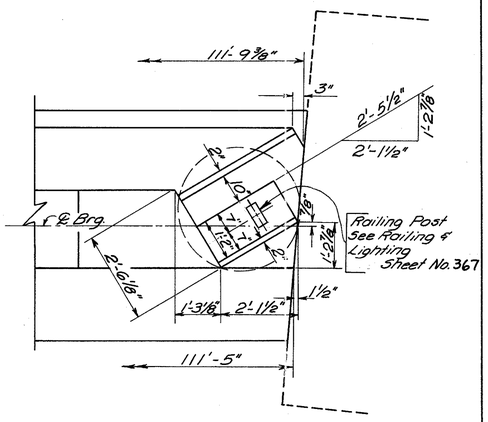
347
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

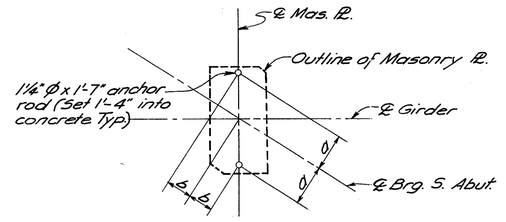


PART PLAN

For lighting details See Sh. No. 214.

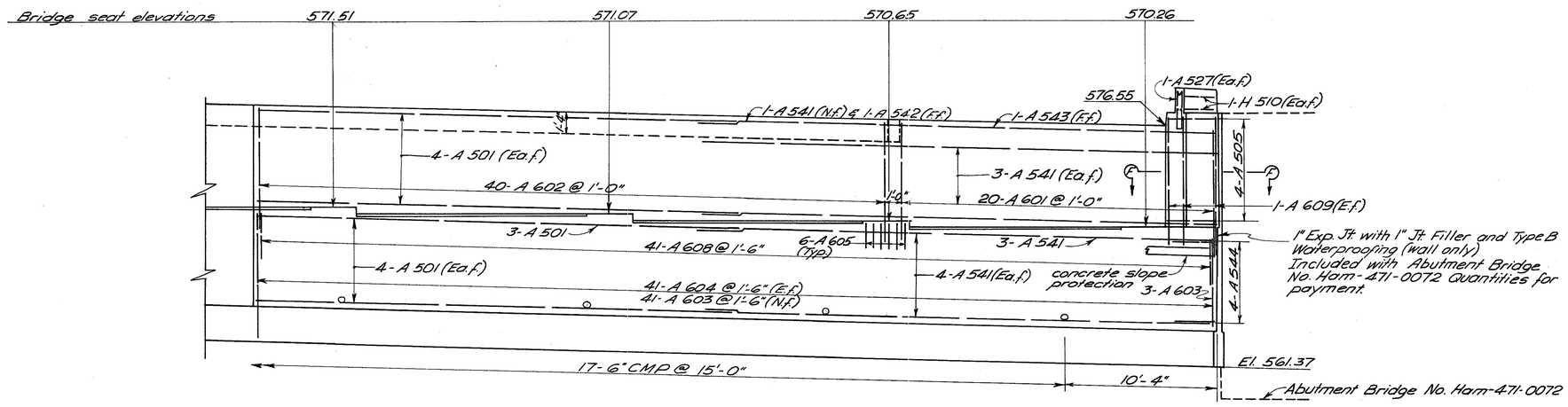


DETAIL A

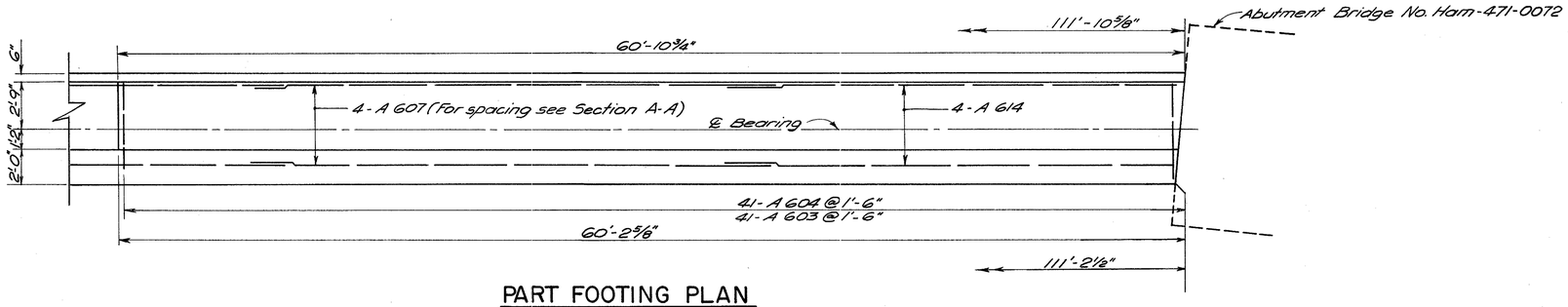


ANCHOR ROD LAYOUT

Girder	a	b
A	8 5/8"	5 1/16"
B thru P	8 7/16"	5 5/16"
R	8 3/16"	5 9/16"
S	8 1/8"	5 7/8"



PART ELEVATION



PART FOOTING PLAN

work this sheet with sheets 345, 346 & 348

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM.-71-0173

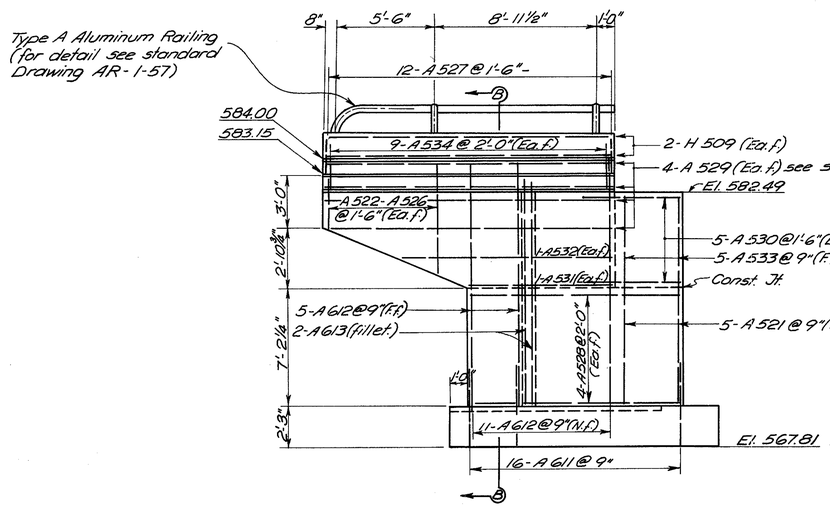
H&E BRIDGE NO. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	A.N.	B. Sch.	J.H.O. 1-21-65	11-1-83. 5-20-65	

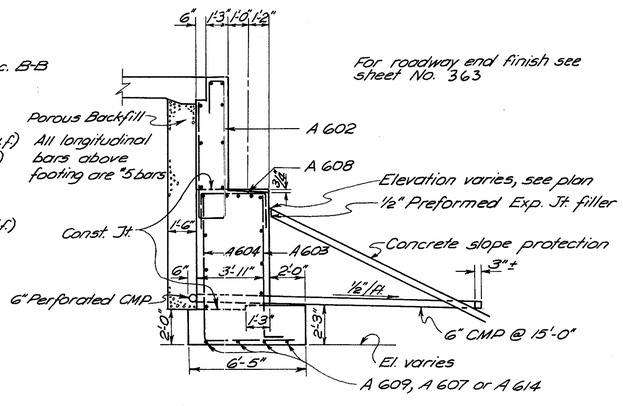
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

348
492

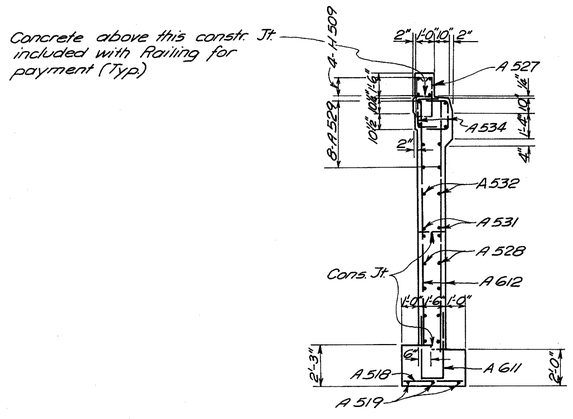
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



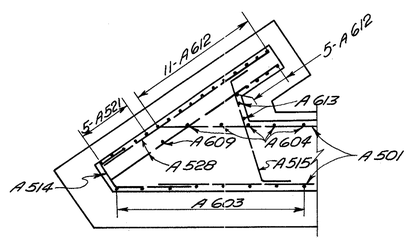
EAST WINGWALL ELEVATION



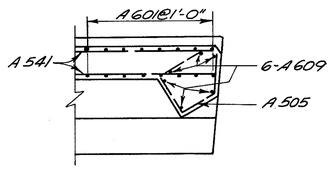
SECTION A-A



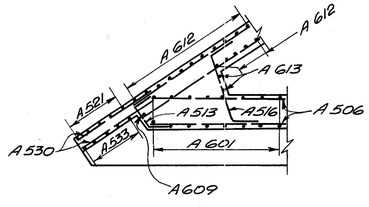
SECTION B-B



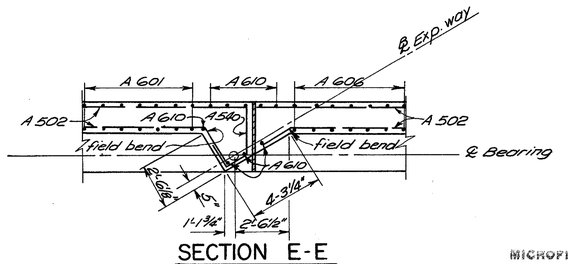
SECTION D-D



SECTION F-F



SECTION C-C



SECTION E-E

work this sheet with sheets 345 thru 347

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM.-71-0173

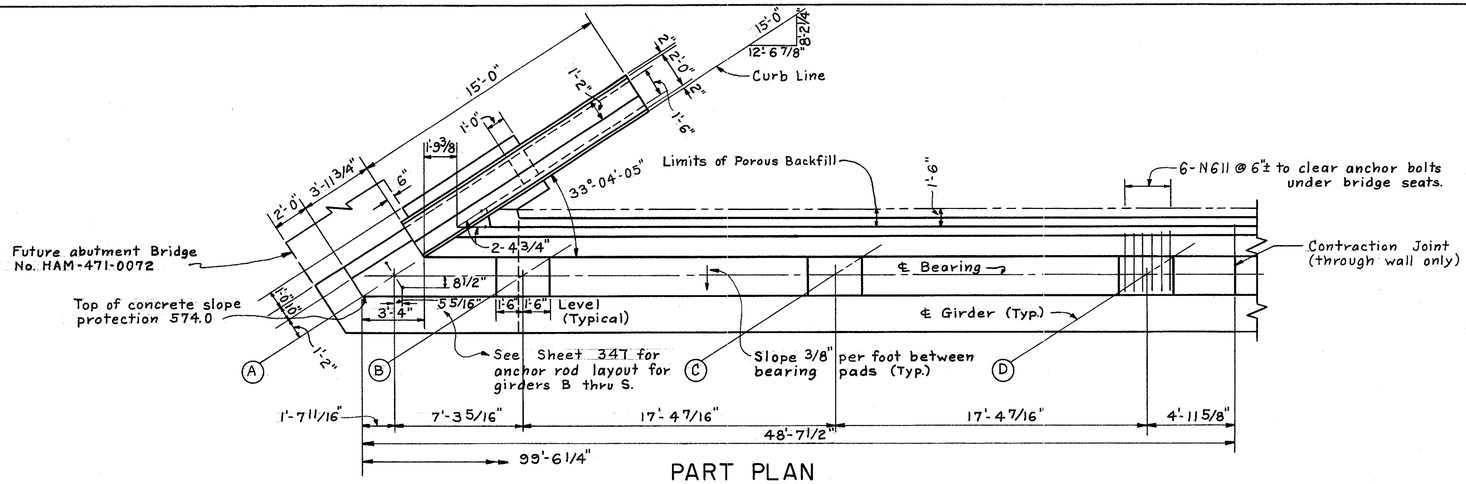
H & E BRIDGE NO. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	A.N.	B.Sch.	J.H.O.	N.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

349
492

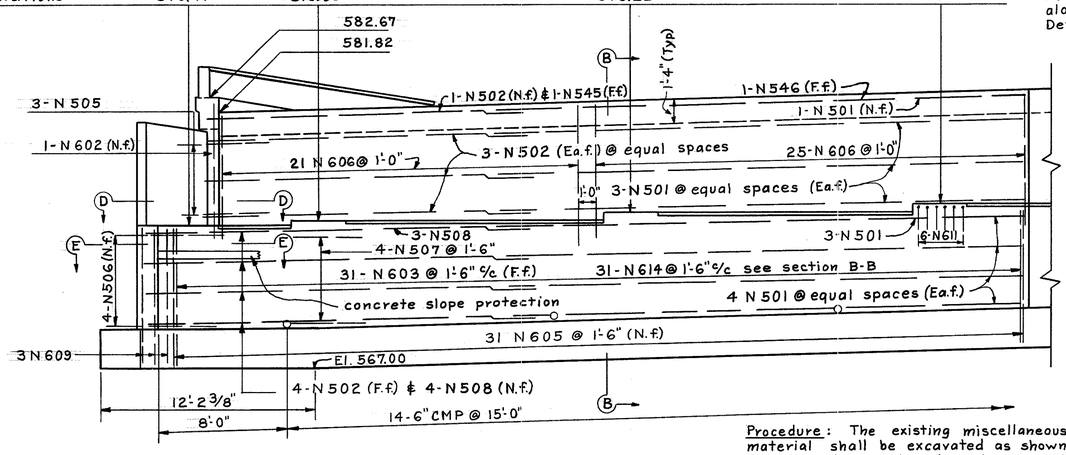
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PART PLAN

For lighting details See Sh. No. 214.

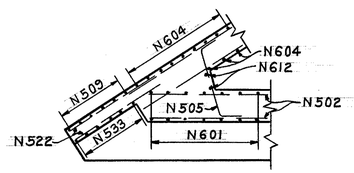
Bridge Seat Elevations: 575.47 575.69 576.22 576.74



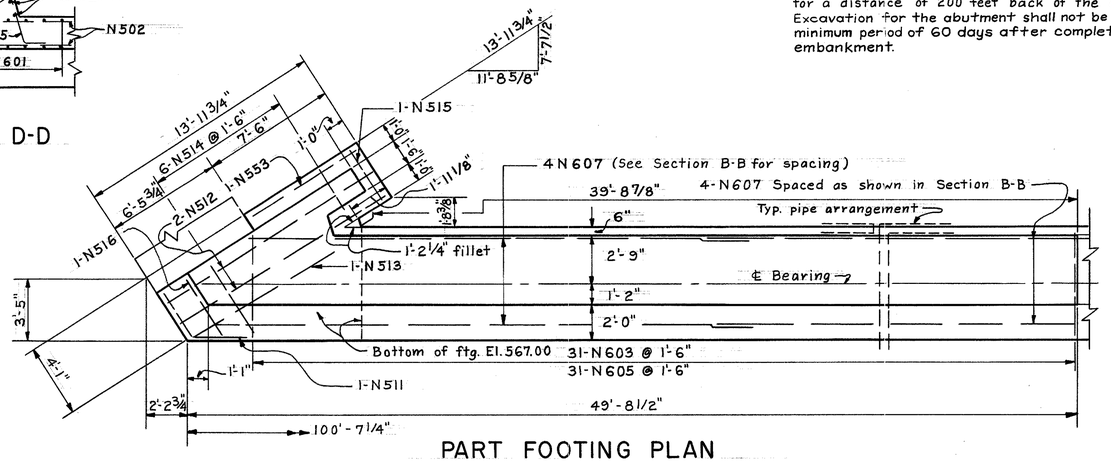
PART ELEVATION

Note: For top of backwall elevations along backwall see End Finish Details Sh. No. 363

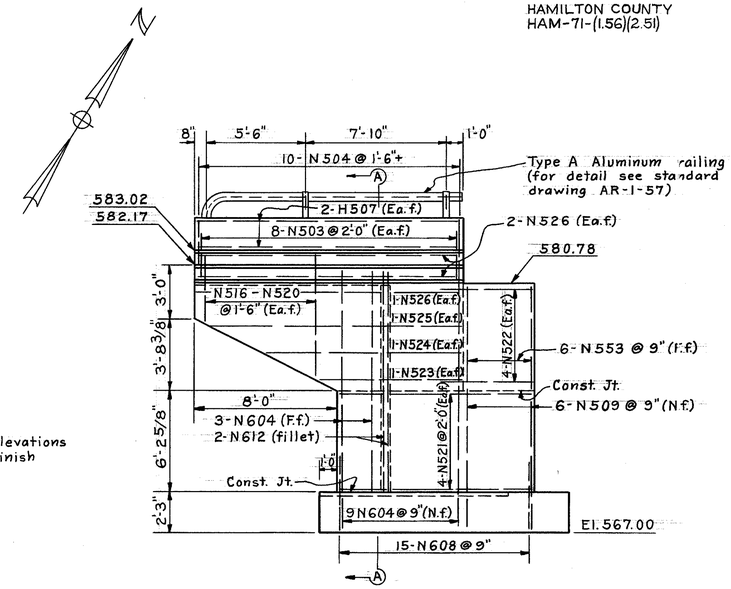
Procedure: The existing miscellaneous fill material shall be excavated as shown on sheet No. 342, then replaced and compacted with embankment material. The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutment. Excavation for the abutment shall not be done until a minimum period of 60 days after completion of the embankment.



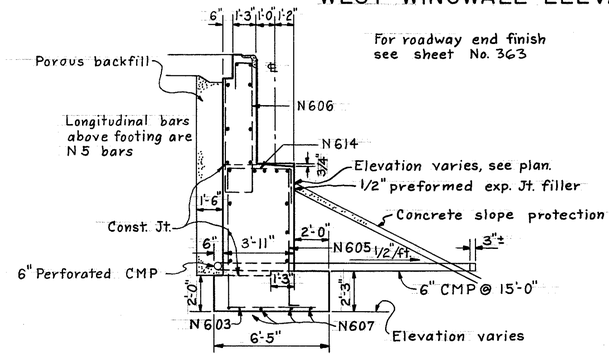
SECTION D-D



PART FOOTING PLAN

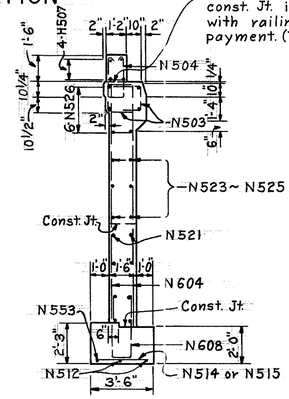


WEST WINGWALL ELEVATION

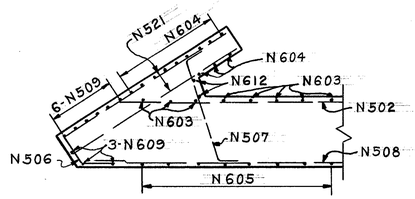


SECTION B-B

For roadway end finish see sheet No. 363



SECTION A-A



SECTION E-E

MICROFILMED
FEB 20 1985

Work this sheet with sheets 350 & 351

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

NORTH ABUTMENT

BRIDGE No. HAM.-71-0173

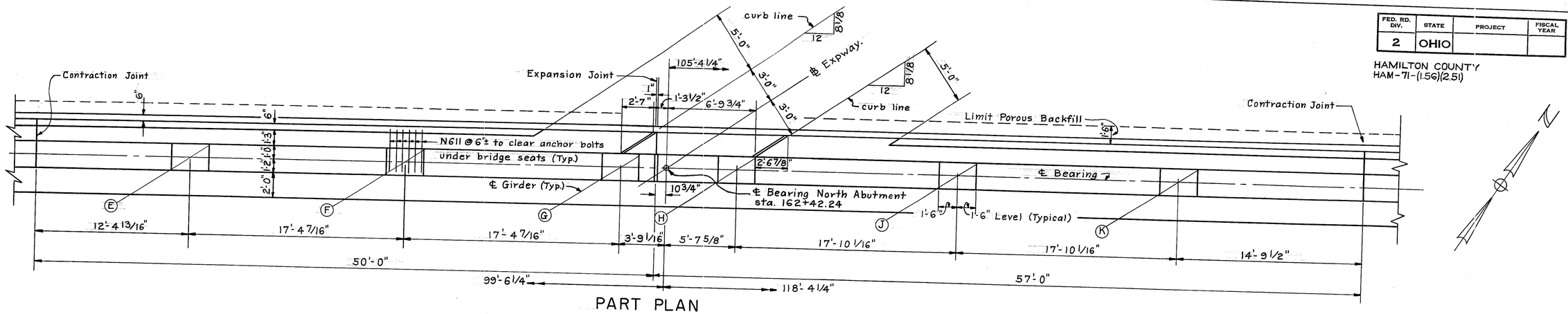
H & E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	AN	RS	JHO 11/21/65	N.A.B. 5-20-65	

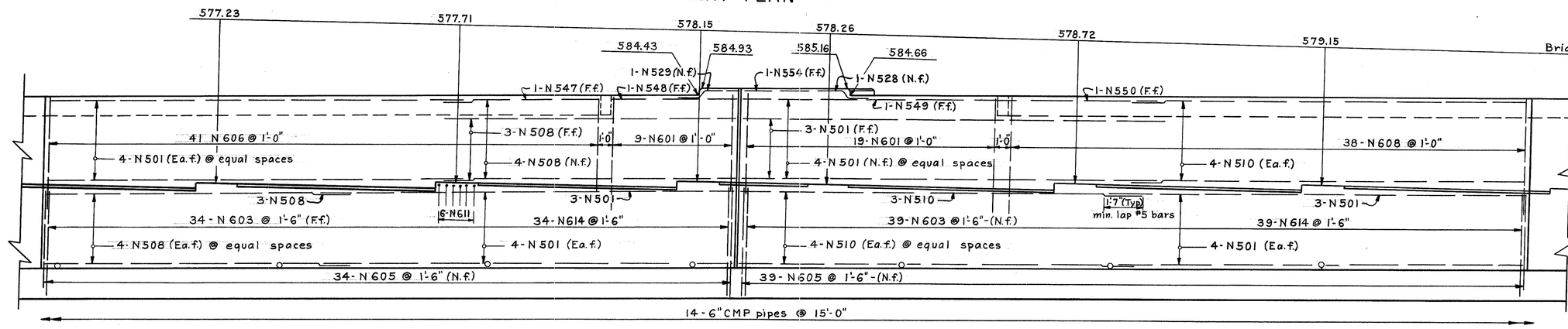
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

350
492

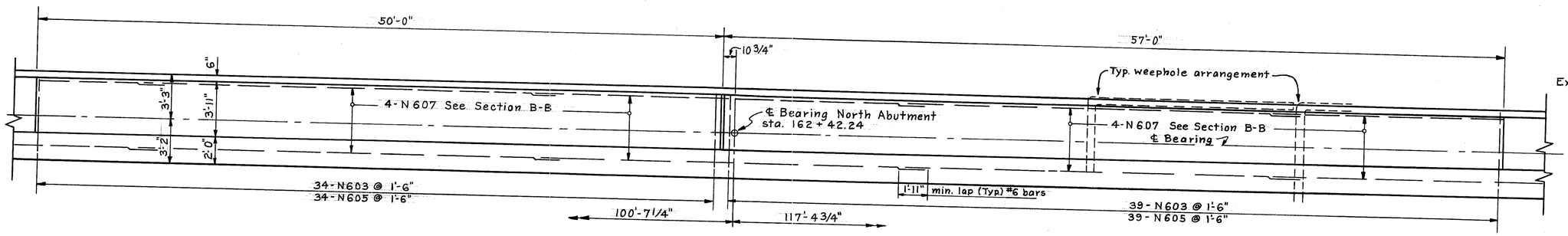
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



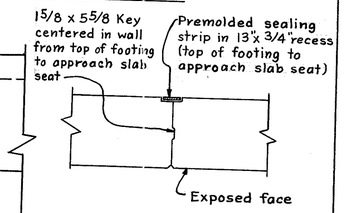
PART PLAN



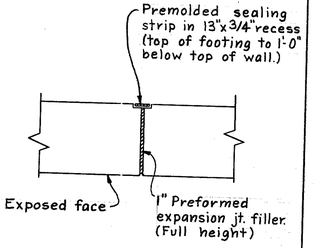
PART ELEVATION



PART FOOTING PLAN



CONTRACTION JOINT DETAIL



EXPANSION JOINT DETAIL

NOTES:
N.f. is near face; F.f. is far face ; Ea.f. is each face.
Provide 3" clearance to reinforcing steel in footing and 2" clearance in wall minimum.
Concrete above bridge seat const. jt. shall be placed after structural steel is in place.
All concrete Class "E"
Top of backwall elevations shown are at the near face of backwall.
Special care shall be taken in placing steel in the bridge seat, so that it will not interfere with the drilling of anchor rod holes.

Work this sheet with sheets 349 & 351

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

NORTH ABUTMENT

BRIDGE No. HAM.-71-0173

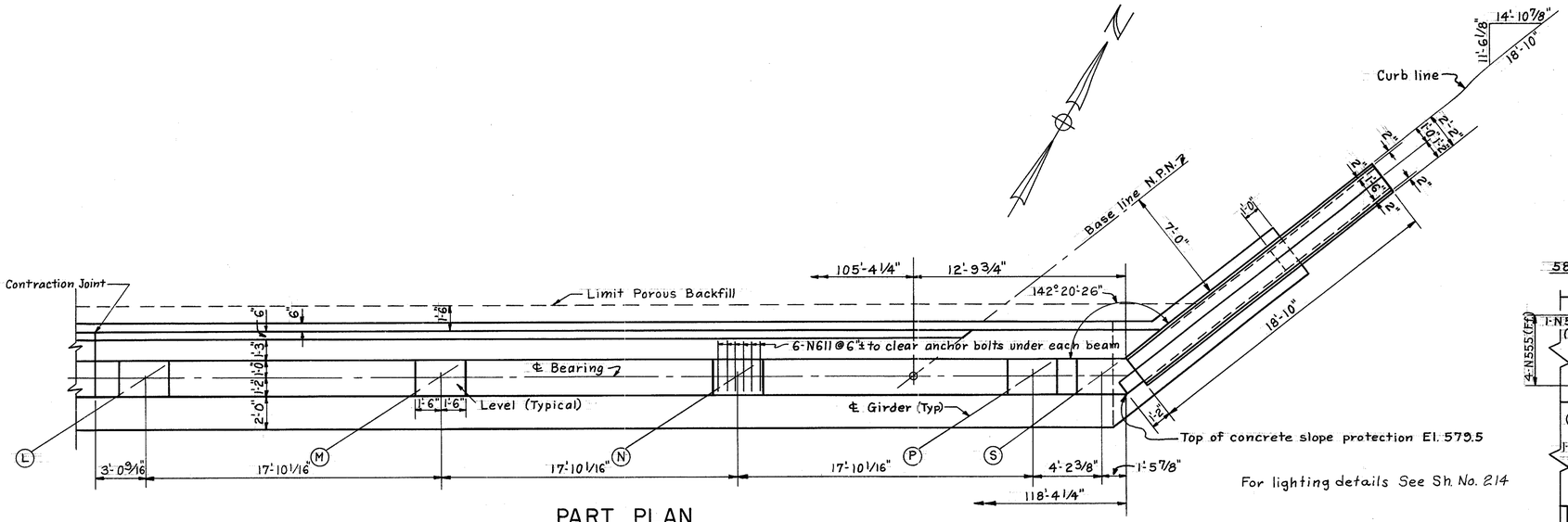
H & E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	AN	RS	JHC 11/21/65	W.B. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

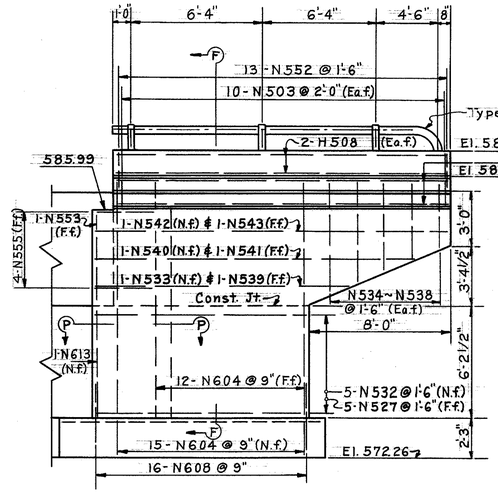
351
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

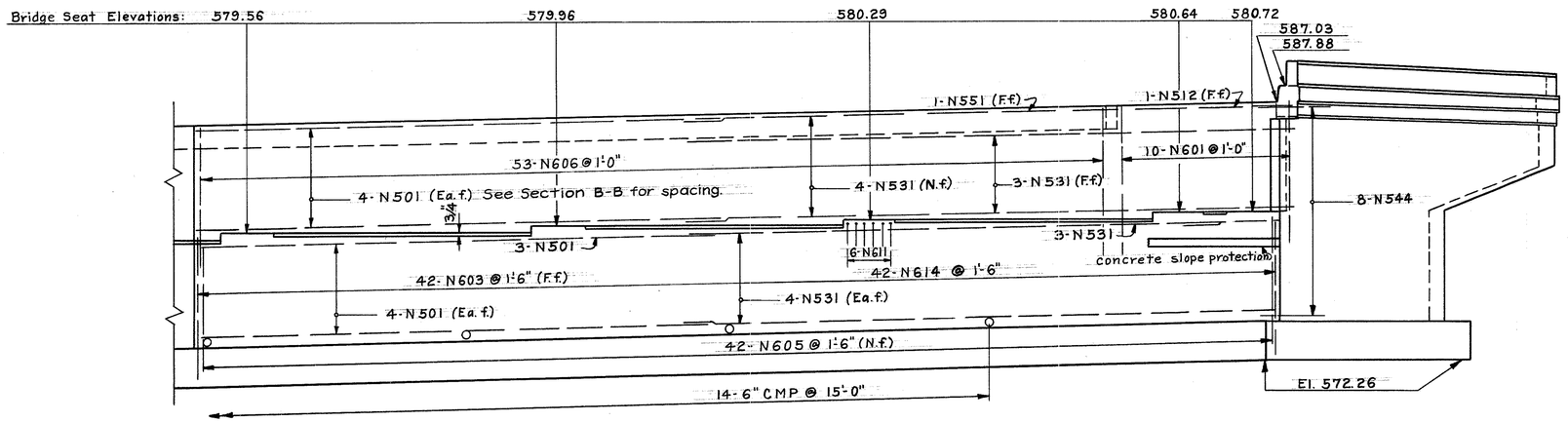


For lighting details See Sh. No. 214

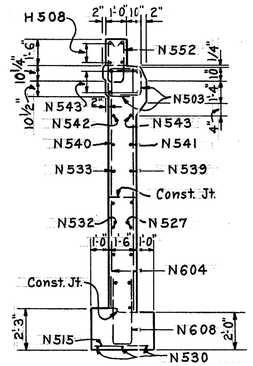
PART PLAN



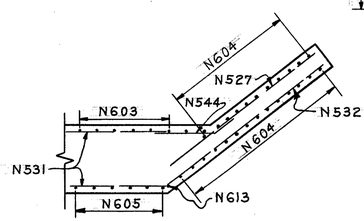
EAST WINGWALL ELEVATION



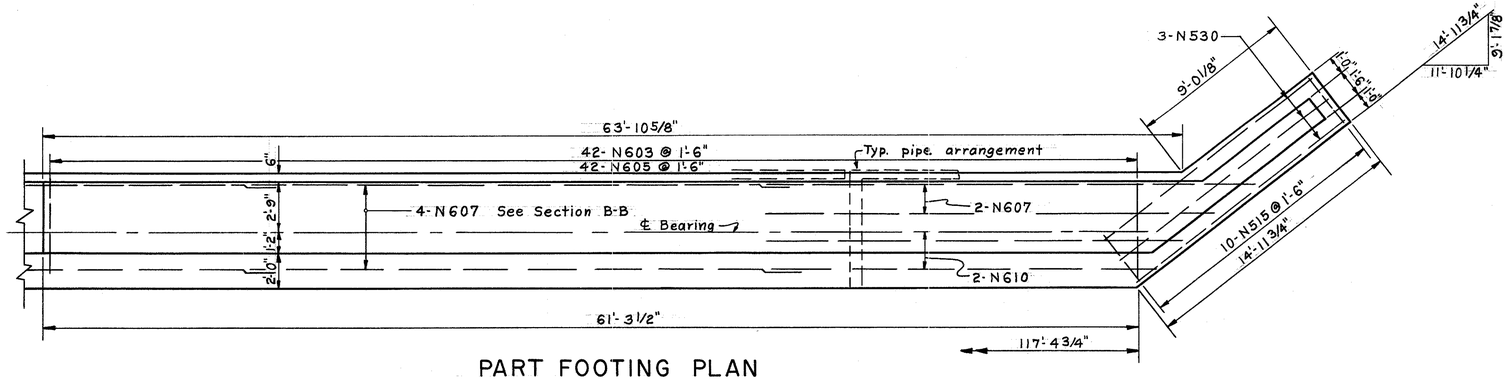
PART ELEVATION



SECTION F-F



SECTION P-P



PART FOOTING PLAN

Work this sheet with sheets 349 & 350

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

NORTH ABUTMENT

BRIDGE No. HAM.-71-0173

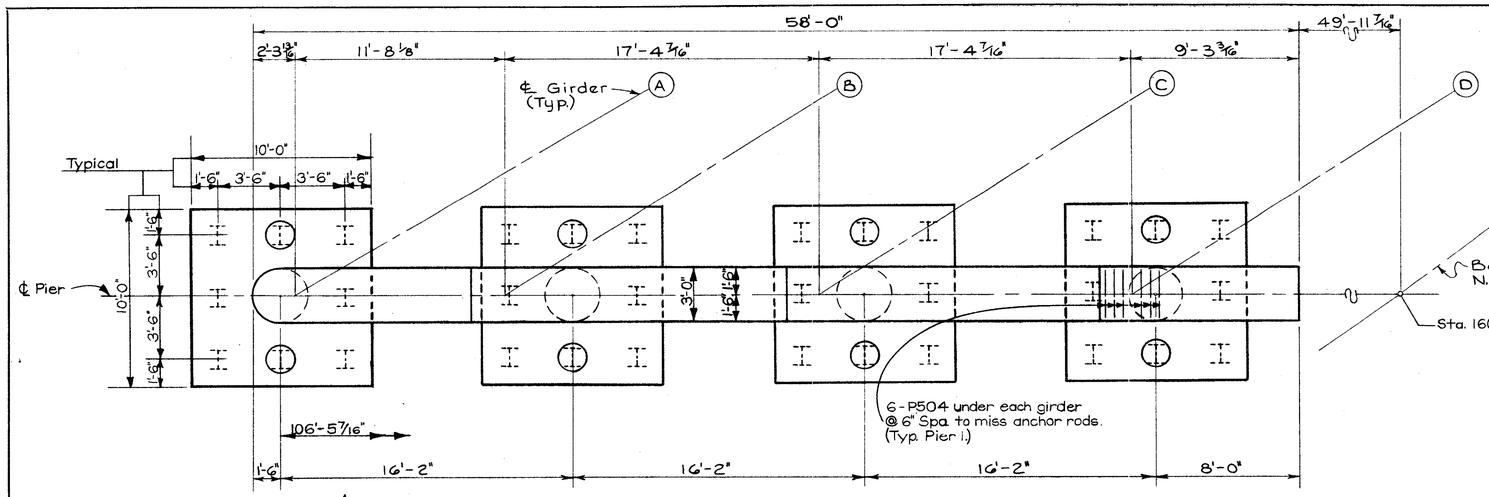
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	AN	RS	JHO 11/21/65	H.A.F. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

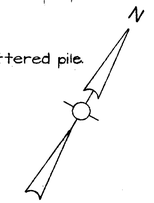
352
492

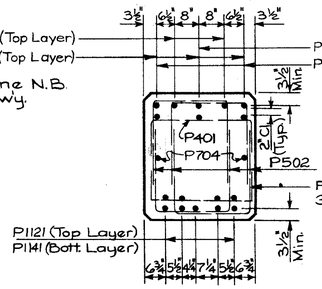
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



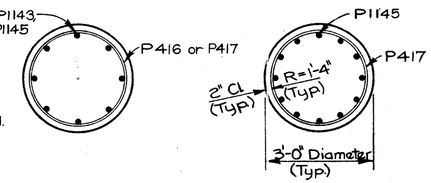
PLAN

Indicates battered pile.



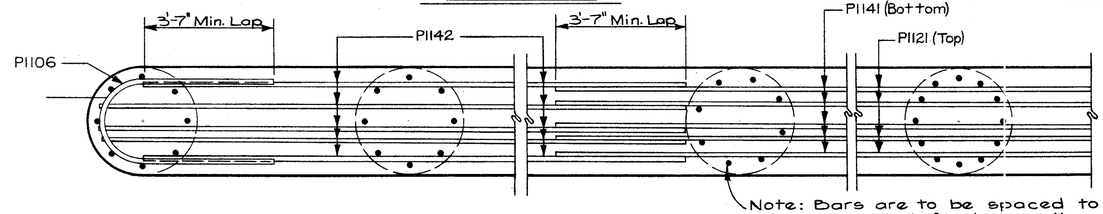


SECTION E-E

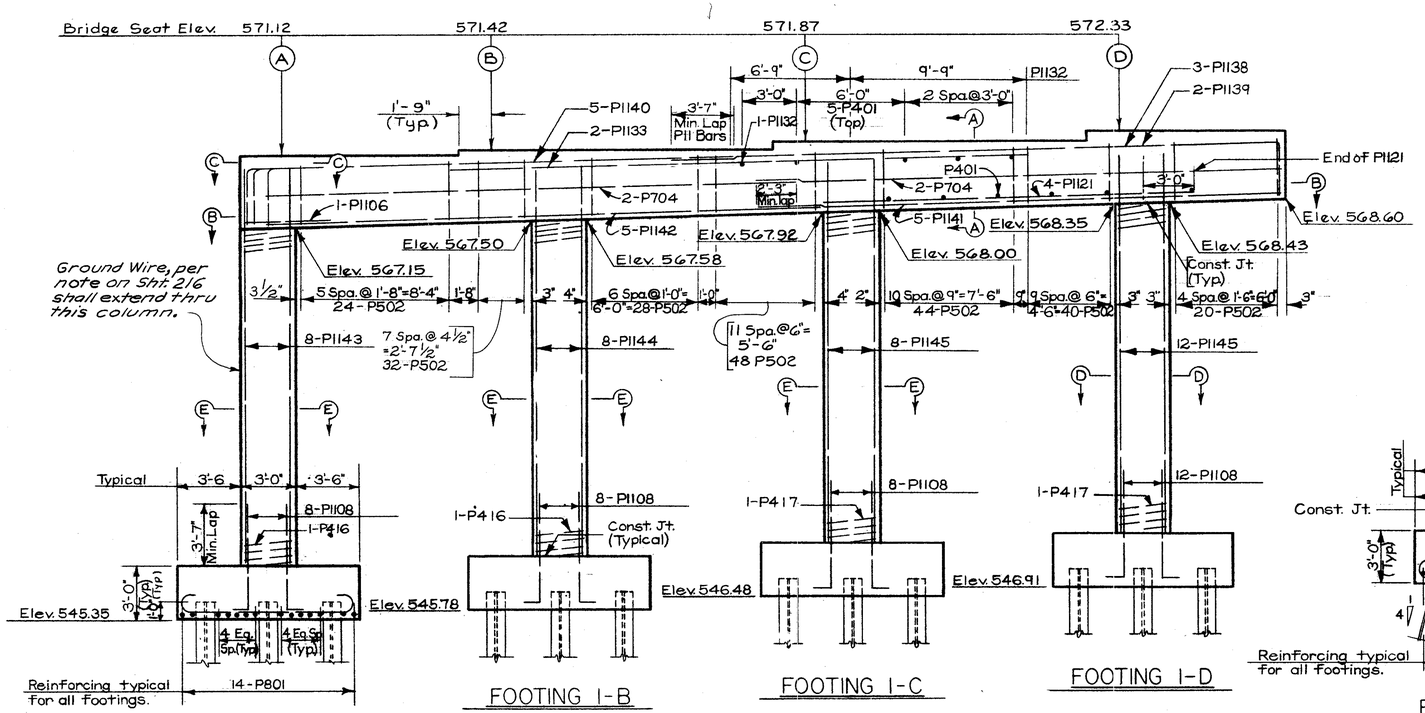


SECTION D-D

SECTION A-A



Note: Bars are to be spaced to match bottom cap reinforcing as dimensioned in Section A-A.



FOOTING I-A

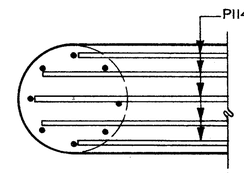
FOOTING I-B

FOOTING I-C

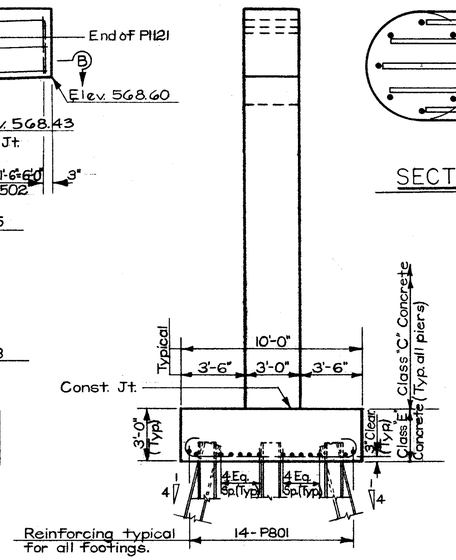
FOOTING I-D

ELEVATION

SECTION B-B



SECTION C-C



END ELEVATION

NOTES: (Applies to all piers.)

Special care shall be taken in placing steel in the pier cap so that it will not interfere with the drilling of anchor rod holes. Provide 3 clearance to reinforcing steel in footing and 2" clearance to reinforcing steel in cap and column.

All piles shall be 10" BP 42.

For location of 2" galv. metal conduit in Pier See Sh. No. 214

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 1

BRIDGE No. HAM-71-0173

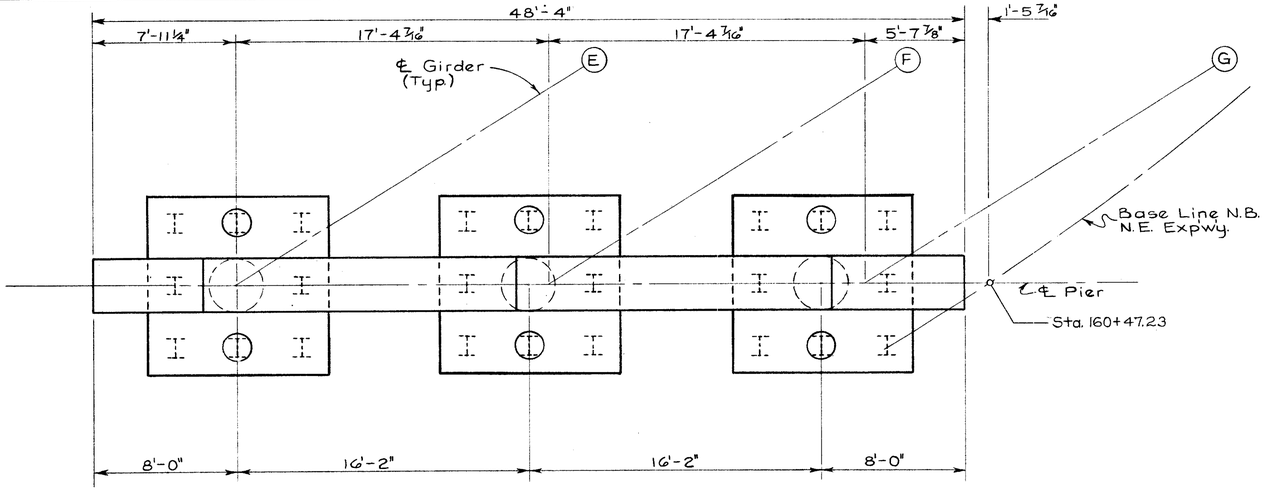
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		J.W.S. 2/5/65	N.A.Z. 5-20-65	

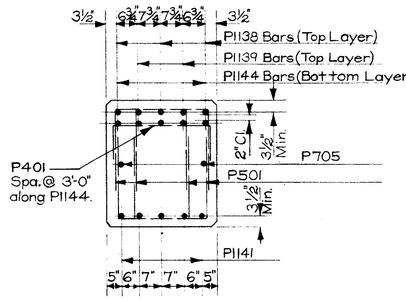
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

353
492

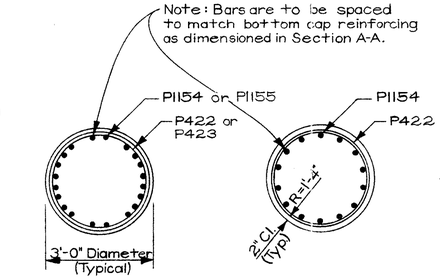
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PLAN

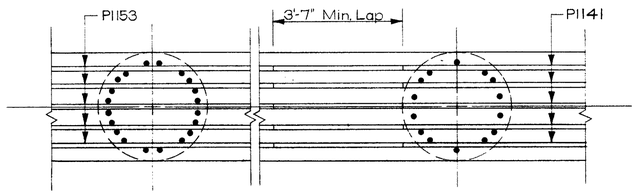


SECTION A-A

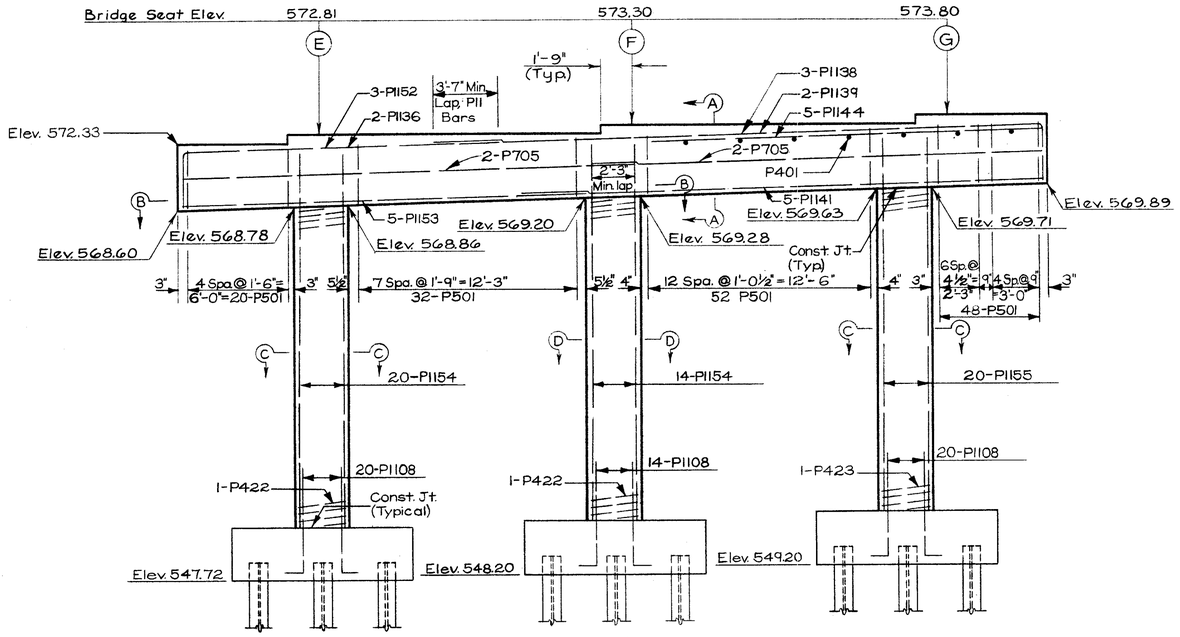


SECTION C-C

SECTION D-D



SECTION B-B

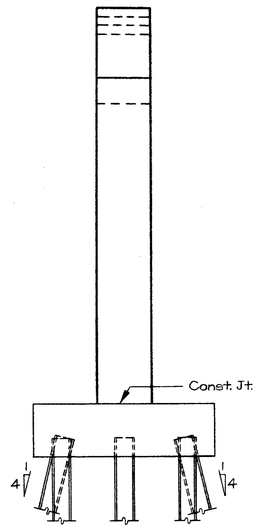


FOOTING I-E

FOOTING I-F

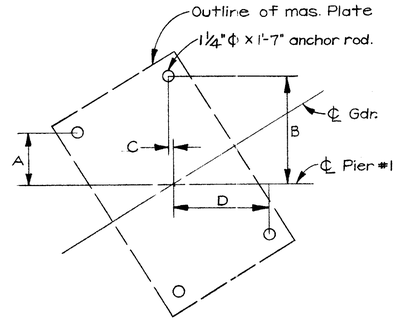
FOOTING I-G

ELEVATION



END ELEVATION

Girder	A	B	C	D
A	6"	1'-0⅛"	⅛"	10½"
B thru P	5 1/16"	1'-0 1/16"	½"	10 1/16"
R	5⅜"	1'-0 1/16"	⅞"	10 13/16"
S	5"	1'-0"	1 5/16"	11"



ANCHOR ROD LAYOUT

For footing details and reinforcing steel see Footing I-A, Sheet No. 352

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 1

BRIDGE No HAM-71-0173

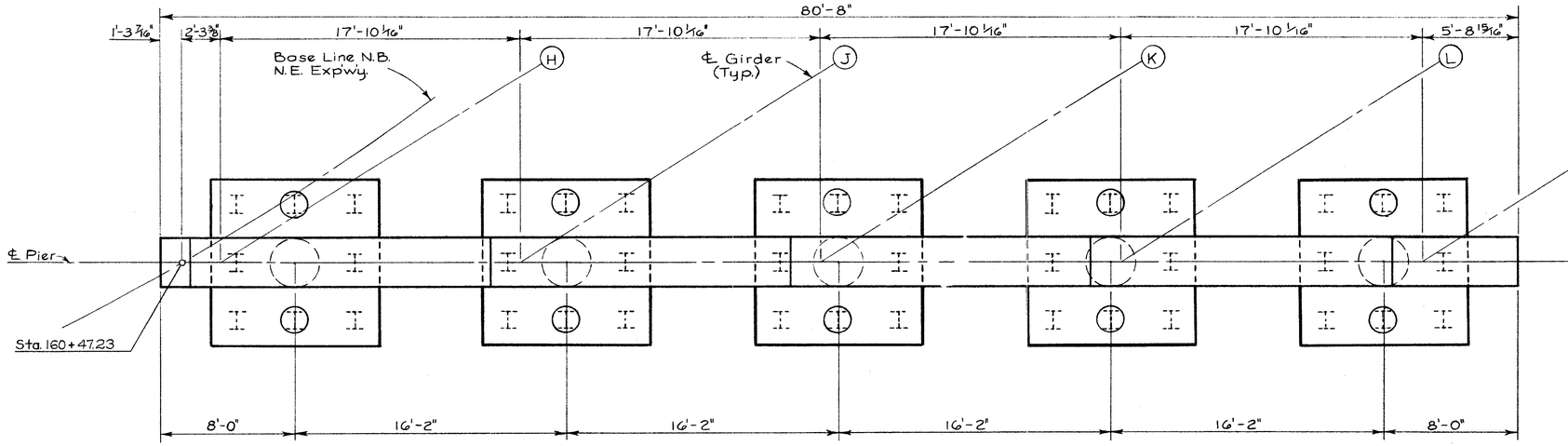
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		J.W.D. 2/15/65	H.A.E. 5-20-65	

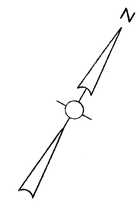
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

354
492

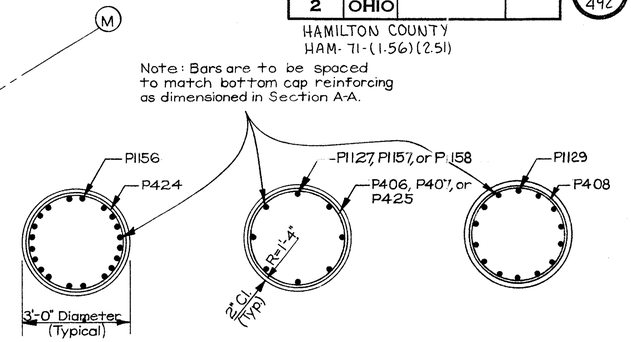
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



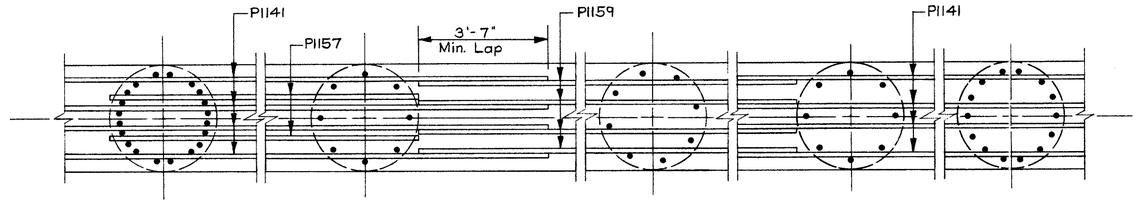
PLAN



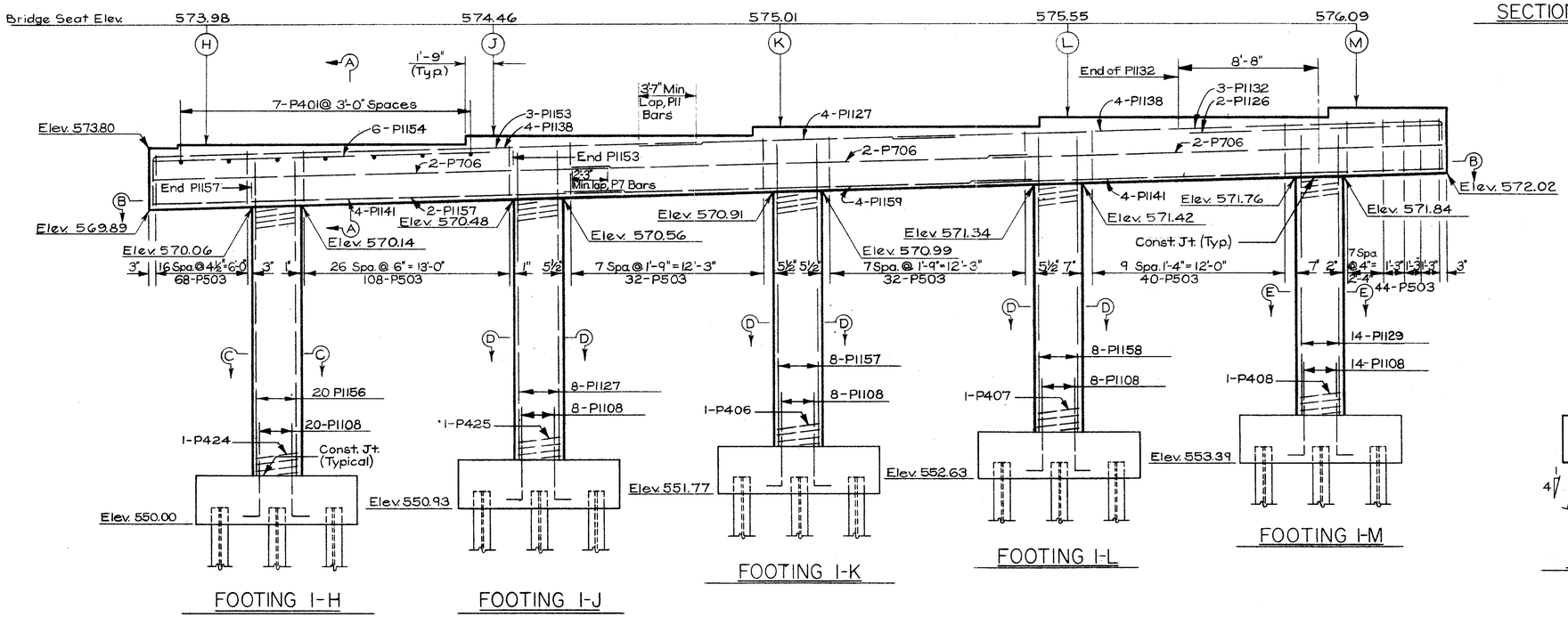
Note: Bars are to be spaced to match bottom cap reinforcing as dimensioned in Section A-A.



SECTION C-C | SECTION D-D | SECTION E-E

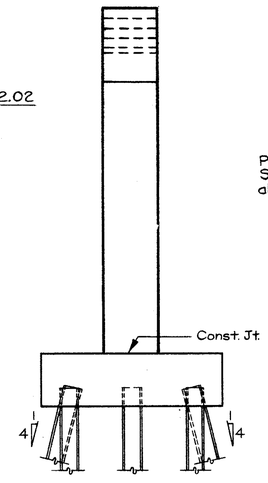


SECTION B-B

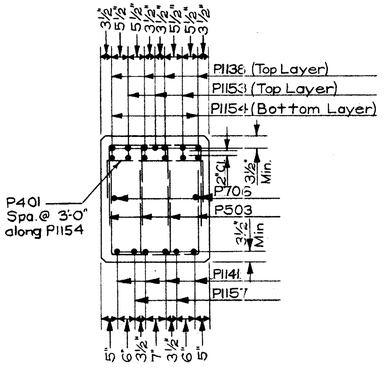


FOOTING I-H | FOOTING I-J | FOOTING I-K | FOOTING I-L | FOOTING I-M

ELEVATION



END ELEVATION



SECTION A-A

MICROFILMED
FEB 20 1985

For footing details and reinforcing steel see Footing I-A, Sh. No. 352

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 1

BRIDGE No. HAM-71-0173

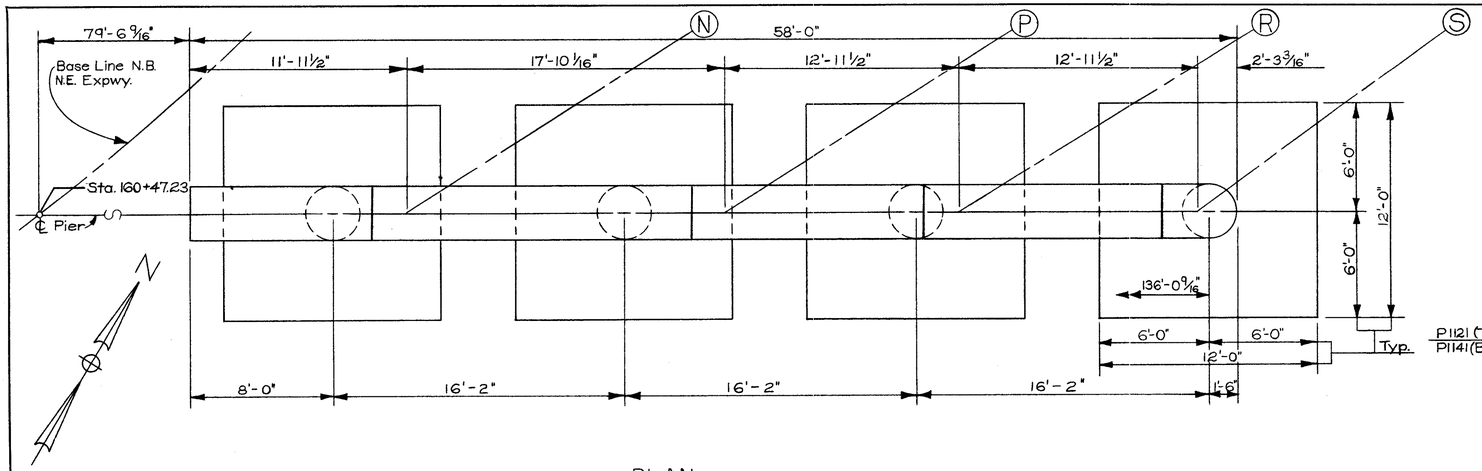
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		JHO 2/5/65	W.A.B. 5-20-65	

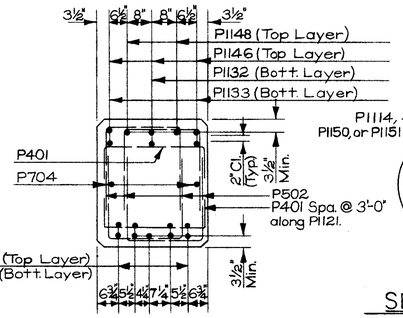
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

355
472

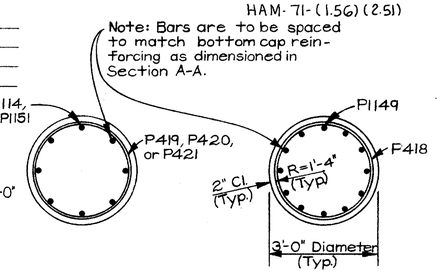
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PLAN

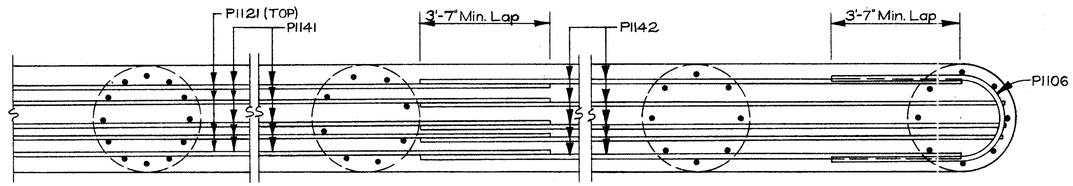


SECTION A-A

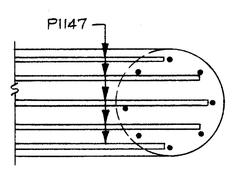


SECTION E E

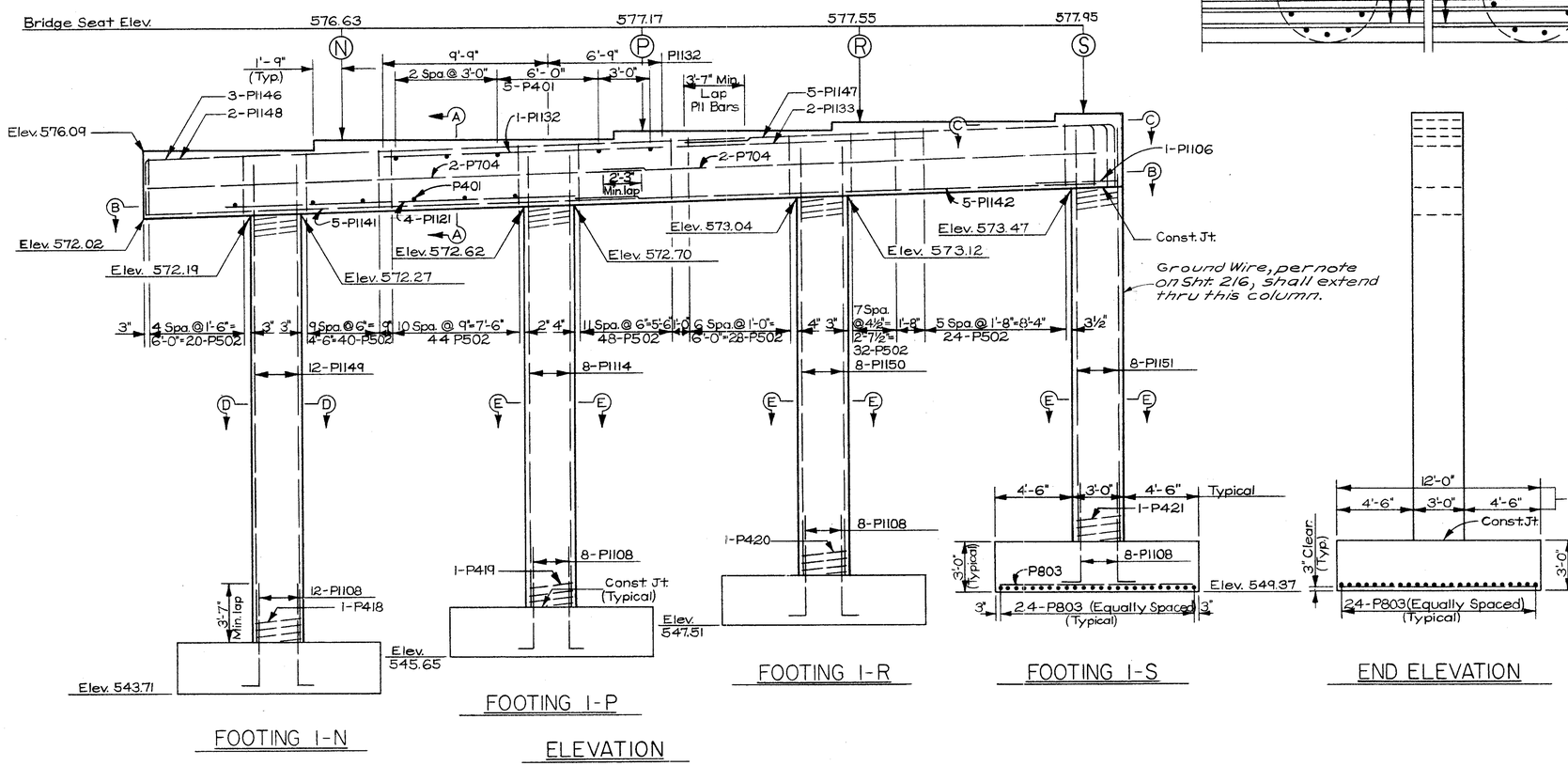
SECTION D D



SECTION B B



SECTION C-C



FOOTING I-N

FOOTING I-P

ELEVATION

FOOTING I-R

FOOTING I-S

END ELEVATION

FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 1

BRIDGE No. HAM-71-0173

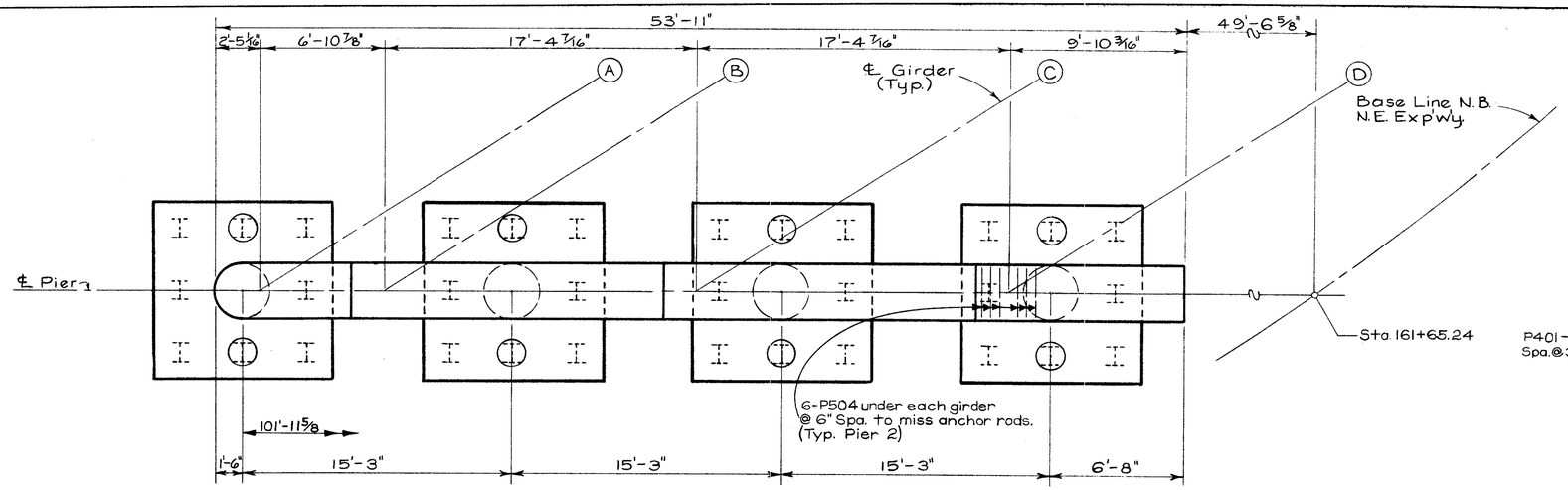
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	C/B		JHC 2/15/65	W.A.E. 5-20-65	

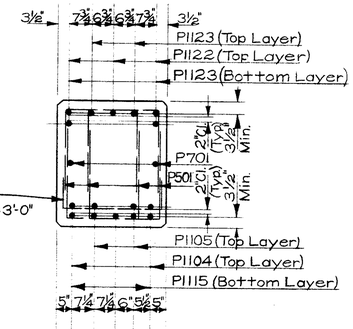
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

356
492

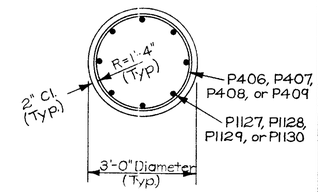
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



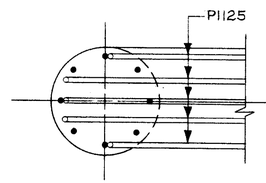
PLAN



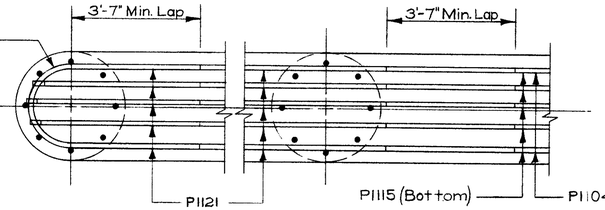
SECTION A-A



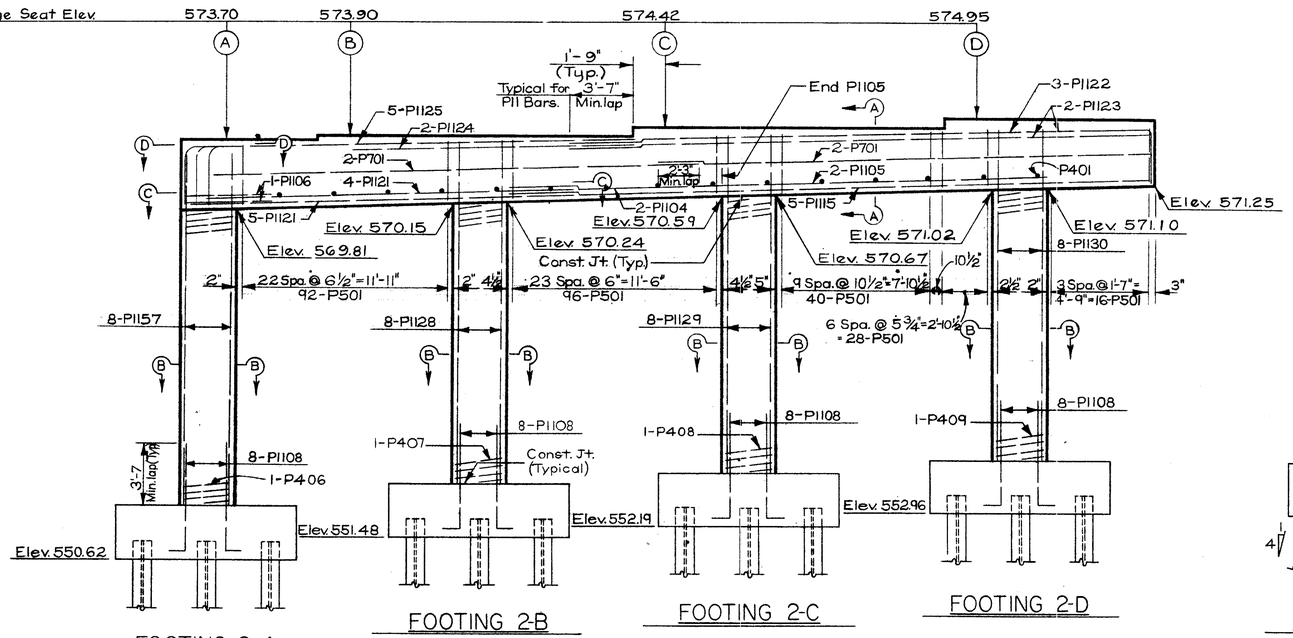
SECTION B-B



SECTION D-D



SECTION C-C



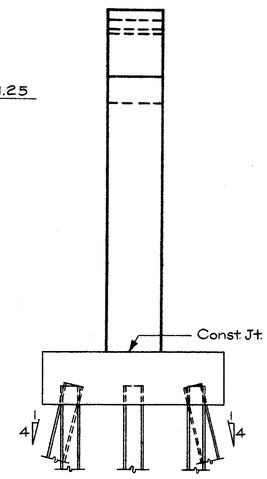
FOOTING 2-A

FOOTING 2-B

FOOTING 2-C

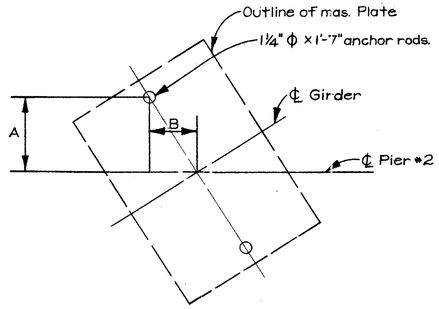
FOOTING 2-D

ELEVATION



END ELEVATION

Girder	A	B
A	8 7/16"	5 3/8"
B thru P	8 7/16"	5 5/16"
R	8 5/16"	5 9/16"
S	8 1/8"	5 7/8"



ANCHOR ROD LAYOUT

For Footing details and reinforcing steel see Footing 1-A, Sheet 352

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2

BRIDGE No. HAM-71-0173

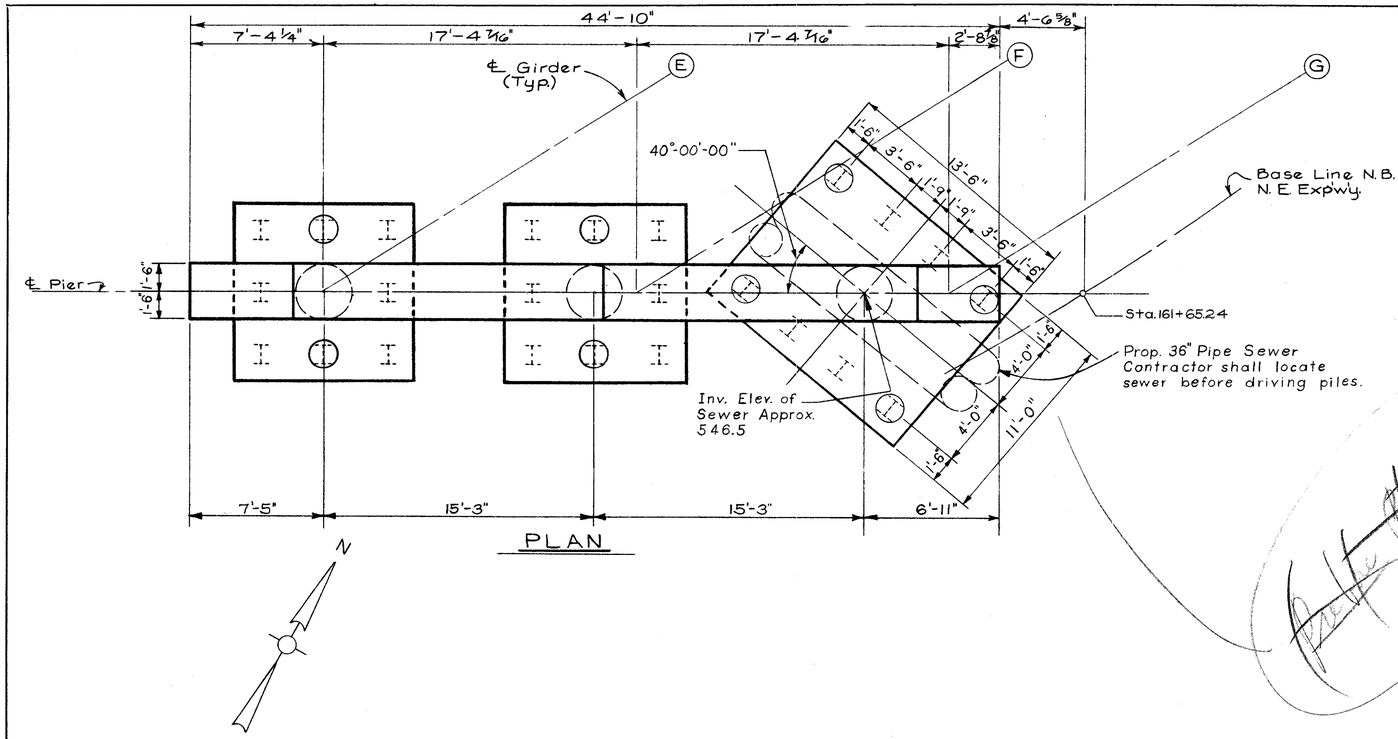
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		JWO 2/15/65	5-18-65 5-20-65	

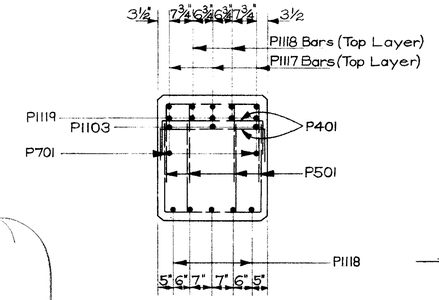
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

357
492

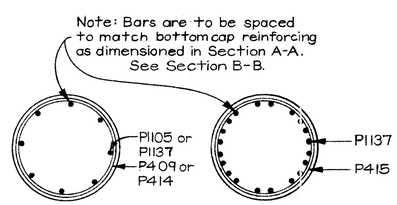
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



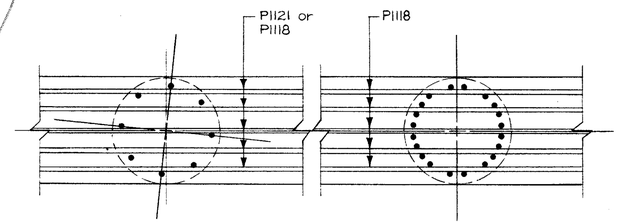
PLAN



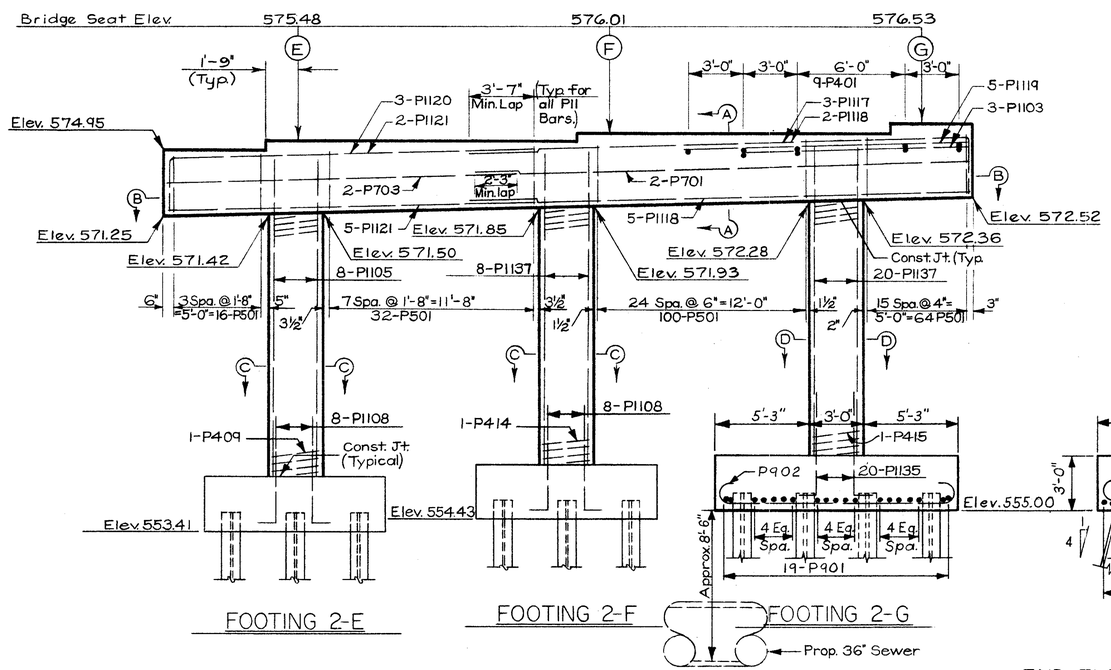
SECTION A-A



SECTION C-C SECTION D-D



SECTION B-B



FOOTING 2-E FOOTING 2-F FOOTING 2-G

ELEVATION

END ELEVATION, FOOTING 2-G

For footing details and reinforcing steel for footings 2-E & 2-F see Footing 1-A, Sh. No. 352

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2

BRIDGE No. HAM-71-0173

H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		JHO 2/5/65	W.A.B. 5-26-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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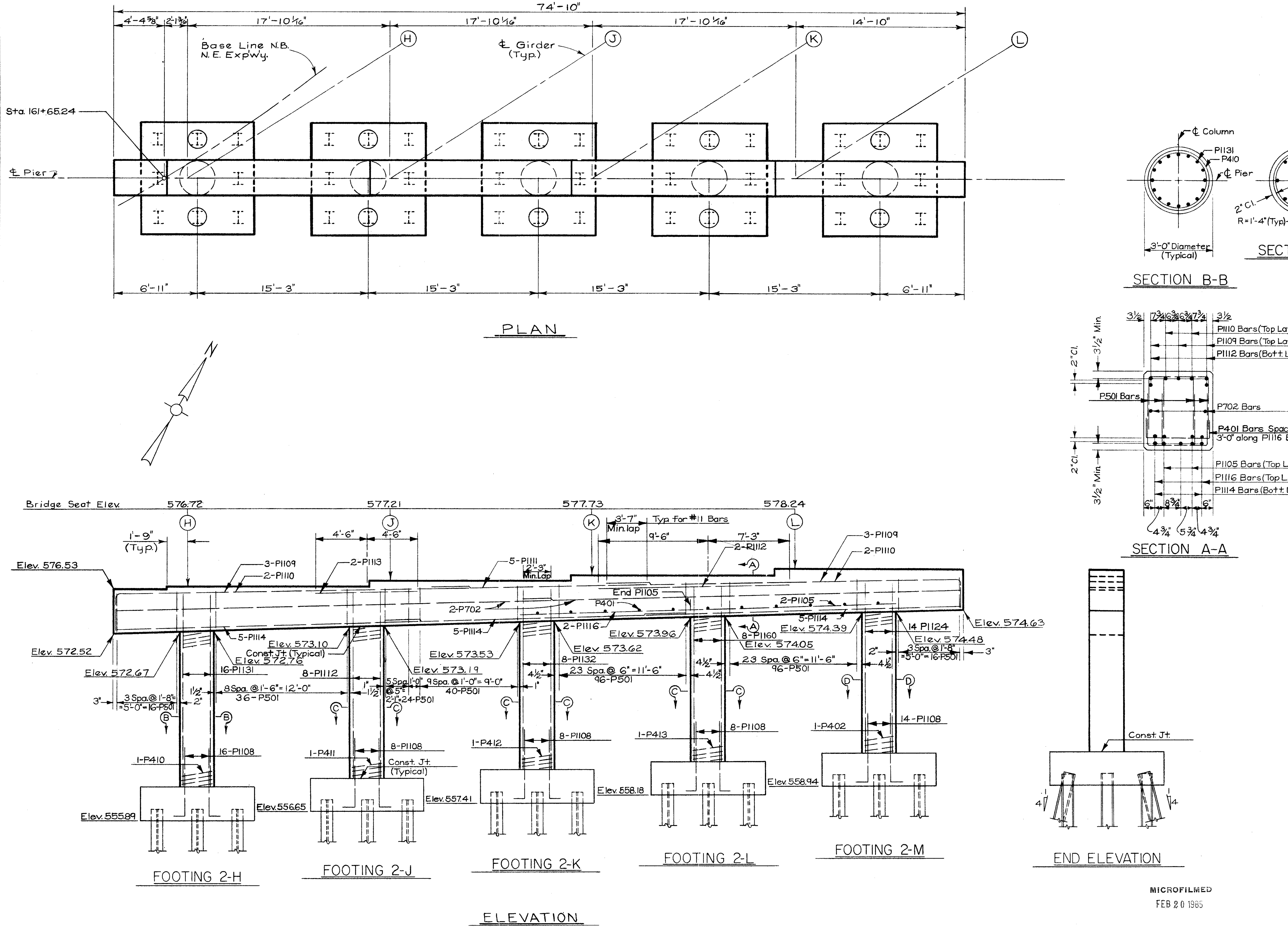
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



For footing details and reinforcing steel see footing 1-A, Sheet No. 352.

MICROFILMED FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2

BRIDGE No. HAM-71-0173

H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		JHo 2/5/65	H.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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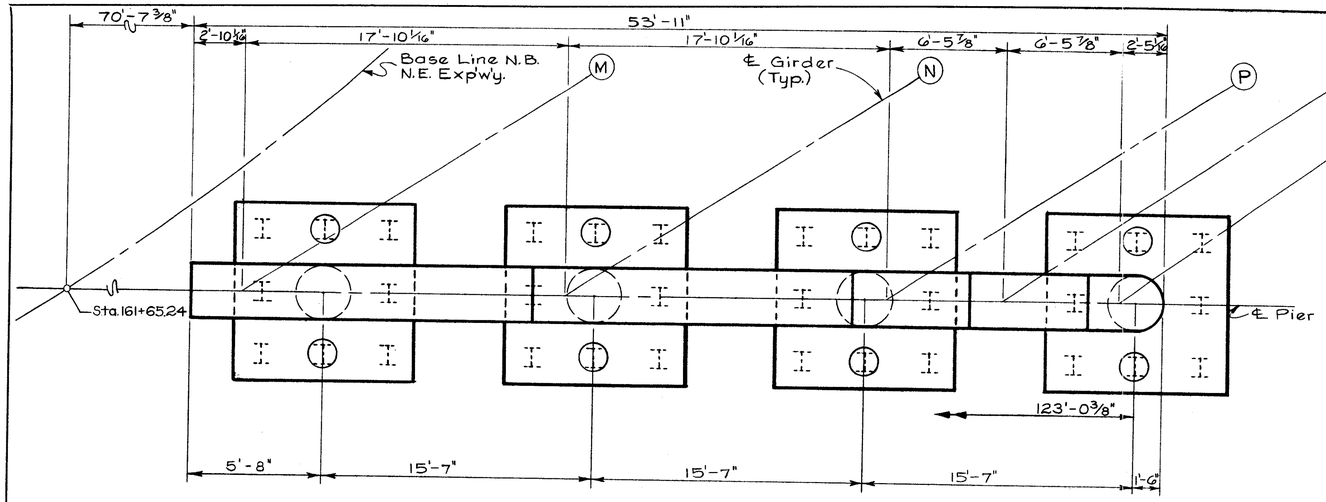
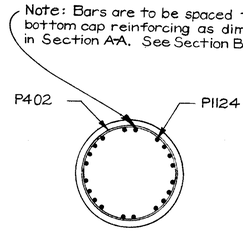
492

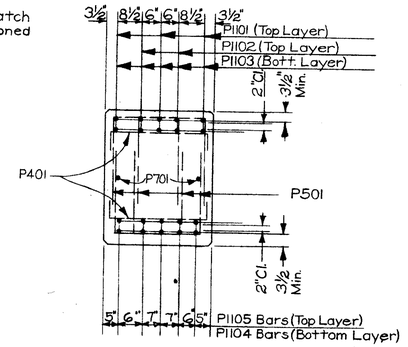
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



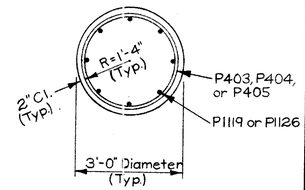
PLAN



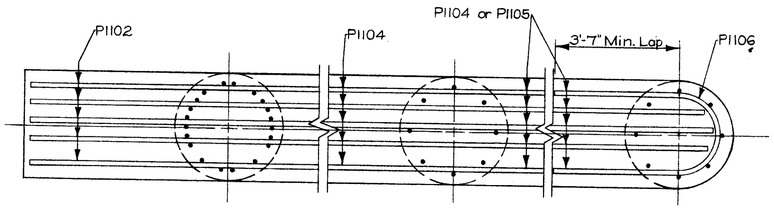
SECTION D-D



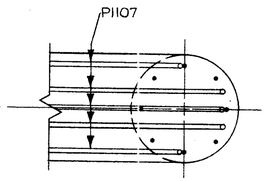
SECTION A-A



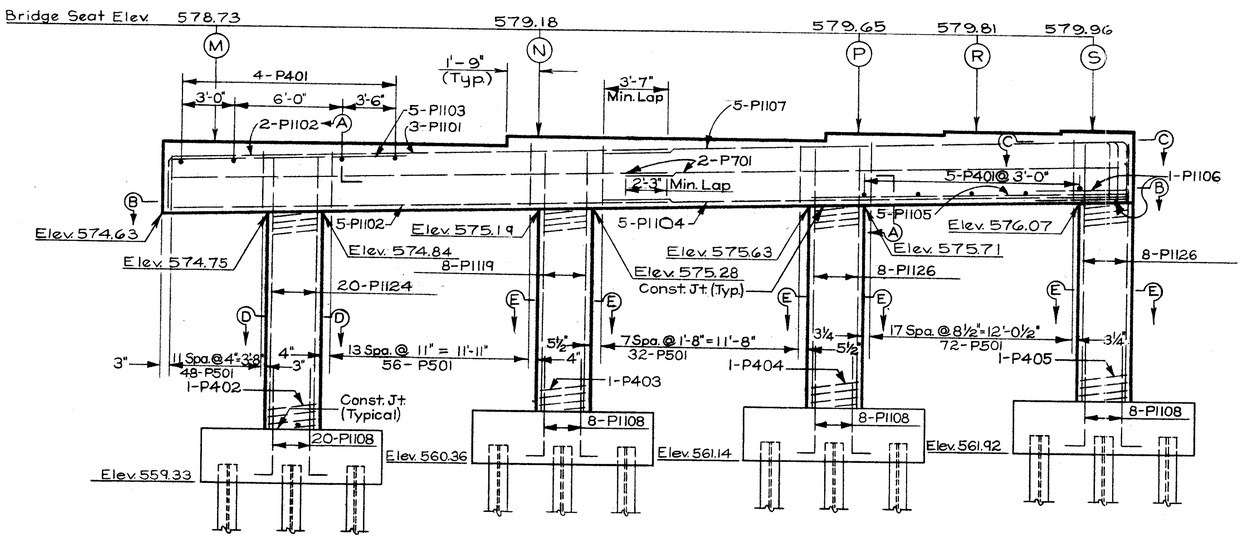
SECTION E-E



SECTION B-B



SECTION C-C



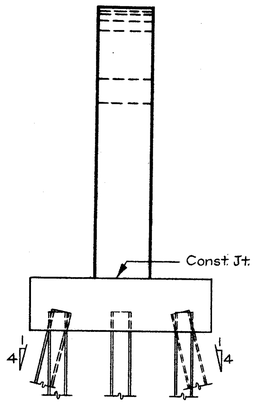
FOOTING 2-N

FOOTING 2-P

FOOTING 2-R

FOOTING 2-S

ELEVATION



END ELEVATION

For footing details and reinforcing steel see Footing I-A Sheet 352

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER NO. 2

BRIDGE No. HAM-71-0173

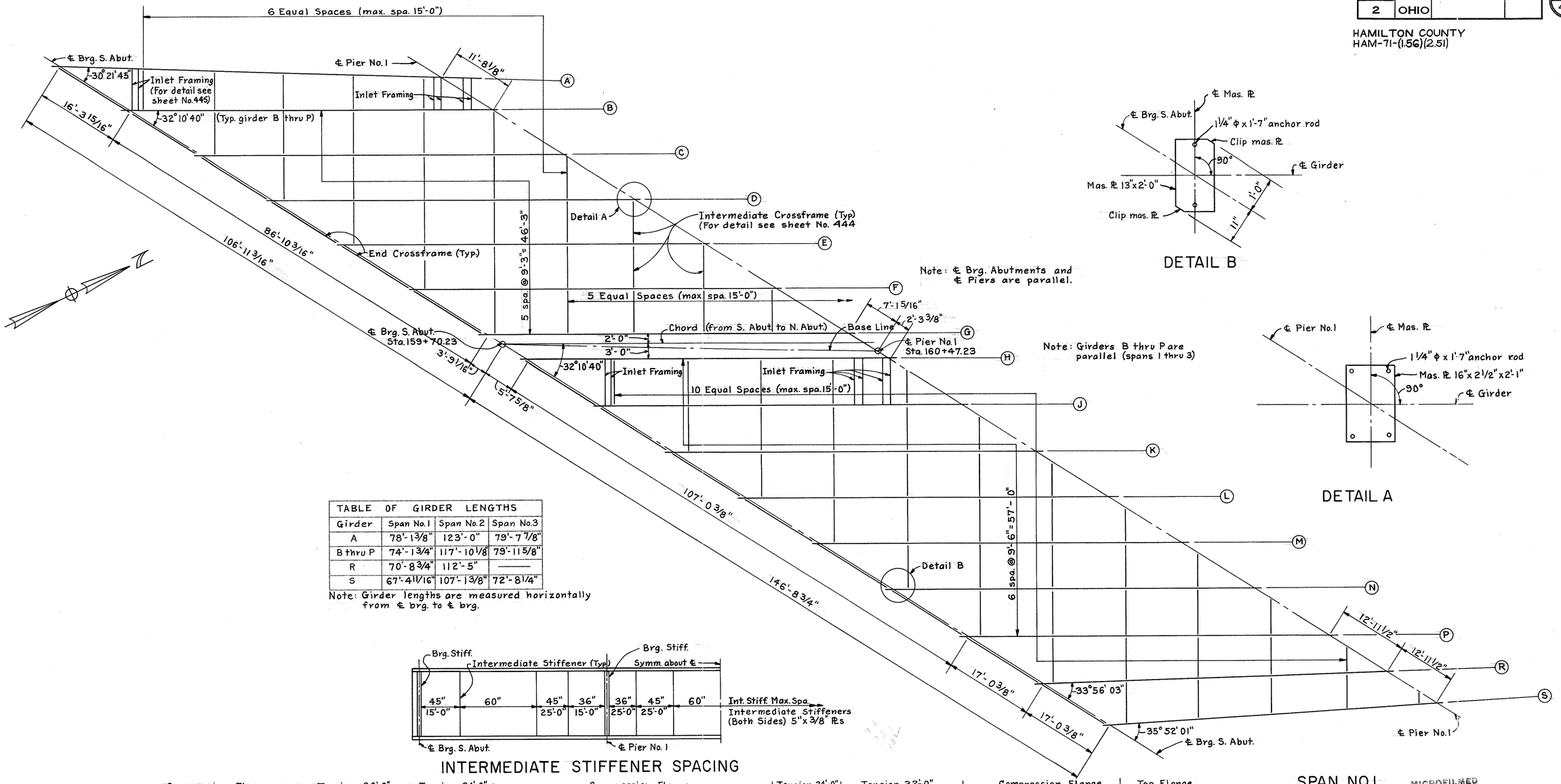
H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	J.D.C.		JHO 2/5/65	N.I.J. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

360
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



Note: ℄ Brg. Abutments and ℄ Piers are parallel.

Note: Girders B thru P are parallel (spans 1 thru 3)

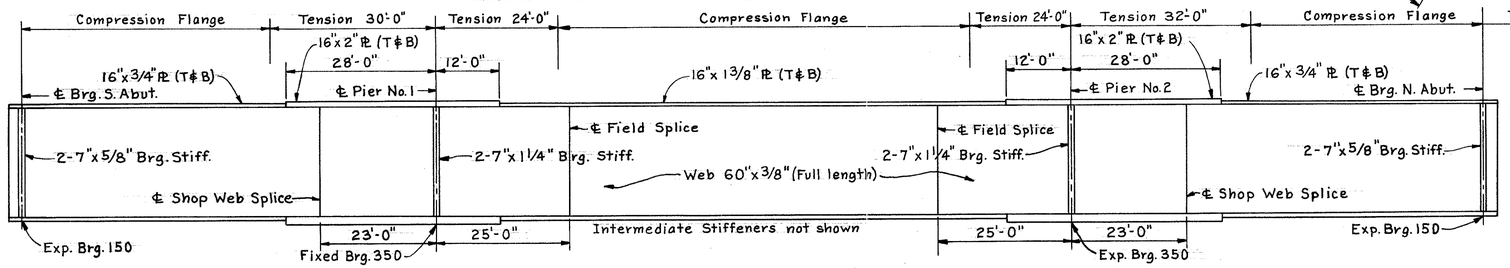
DETAIL B

DETAIL A

TABLE OF GIRDER LENGTHS			
Girder	Span No. 1	Span No. 2	Span No. 3
A	78'-1 3/8"	123'-0"	79'-7 7/8"
B thru P	74'-1 3/4"	117'-10 1/8"	73'-11 5/8"
R	70'-8 3/4"	112'-5"	———
S	67'-4 11/16"	107'-1 3/8"	72'-8 1/4"

Note: Girder lengths are measured horizontally from ℄ brg. to ℄ brg.

INTERMEDIATE STIFFENER SPACING



GIRDER ELEVATION

SPAN NO. 1

Notes:
For bearing details see drwg. No. FSB-1-62
For typical plate girder elevation see sheet No. 444
For detail of roadway and curb plate end dam details see Sh. 363
For treatment of ends of bridge see drwg. No. SD-1-63, sheet No. 2 "Longitudinal Section"

Work this sheet with sheet Nos. 361 & 362

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE No. HAM-71-0173

H&E BRIDGE No. 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE	RS	JHO 8/31/64	N.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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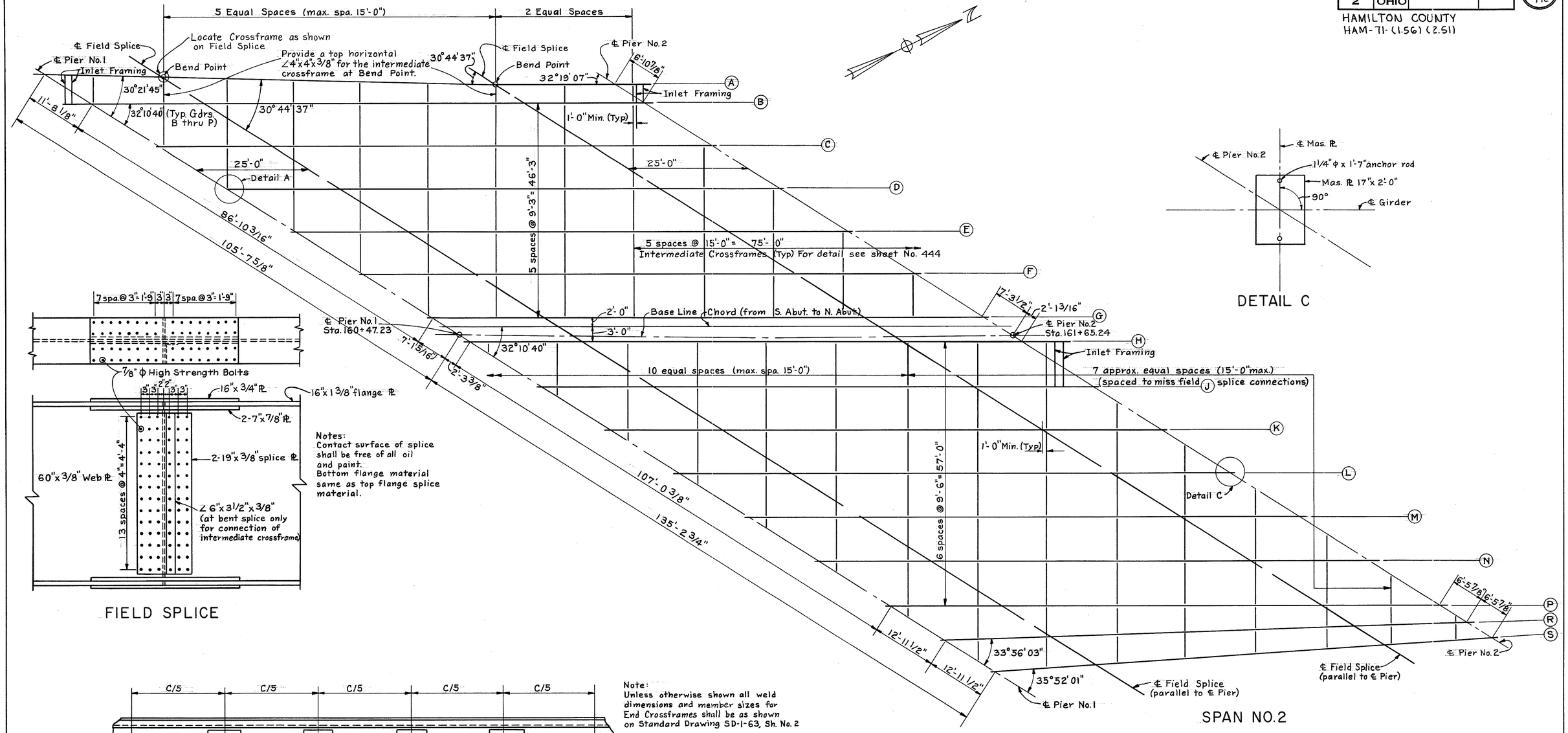
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

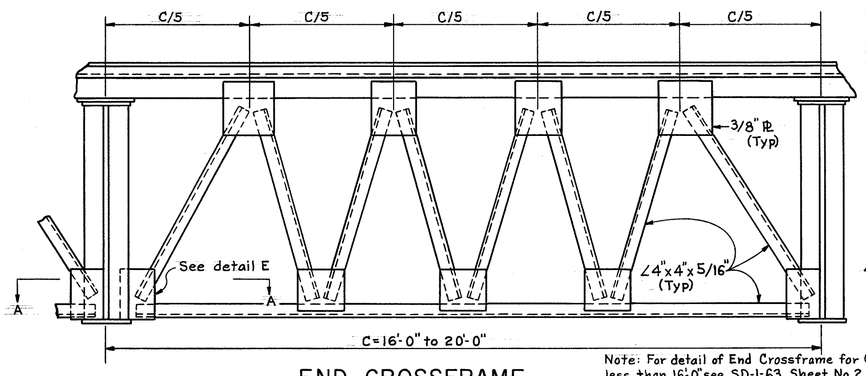


SPAN NO.2

DETAIL C

Notes:
Contact surface of splice shall be free of all oil and paint.
Bottom flange material same as top flange splice material.

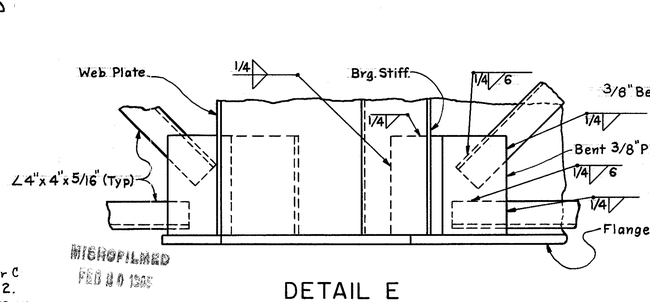
FIELD SPLICE



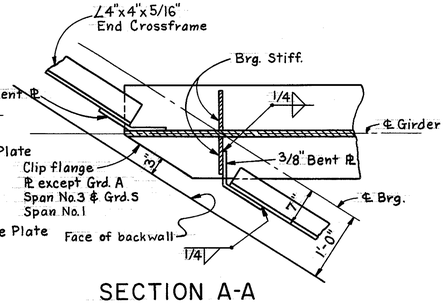
END CROSSFRAME

Note: For detail of End Crossframe for C less than 16'-0" see SD-1-63, Sheet No. 2. Connections to girders to be same as indicated above.

Note:
Unless otherwise shown all weld dimensions and member sizes for End Crossframes shall be as shown on Standard Drawing SD-1-63, Sh. No. 2



DETAIL E



SECTION A-A

Work this sheet with sheet Nos. 360 & 362

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE No. HAM.-71-0173

H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE	RS	JHO 8/31/64	11-7-64 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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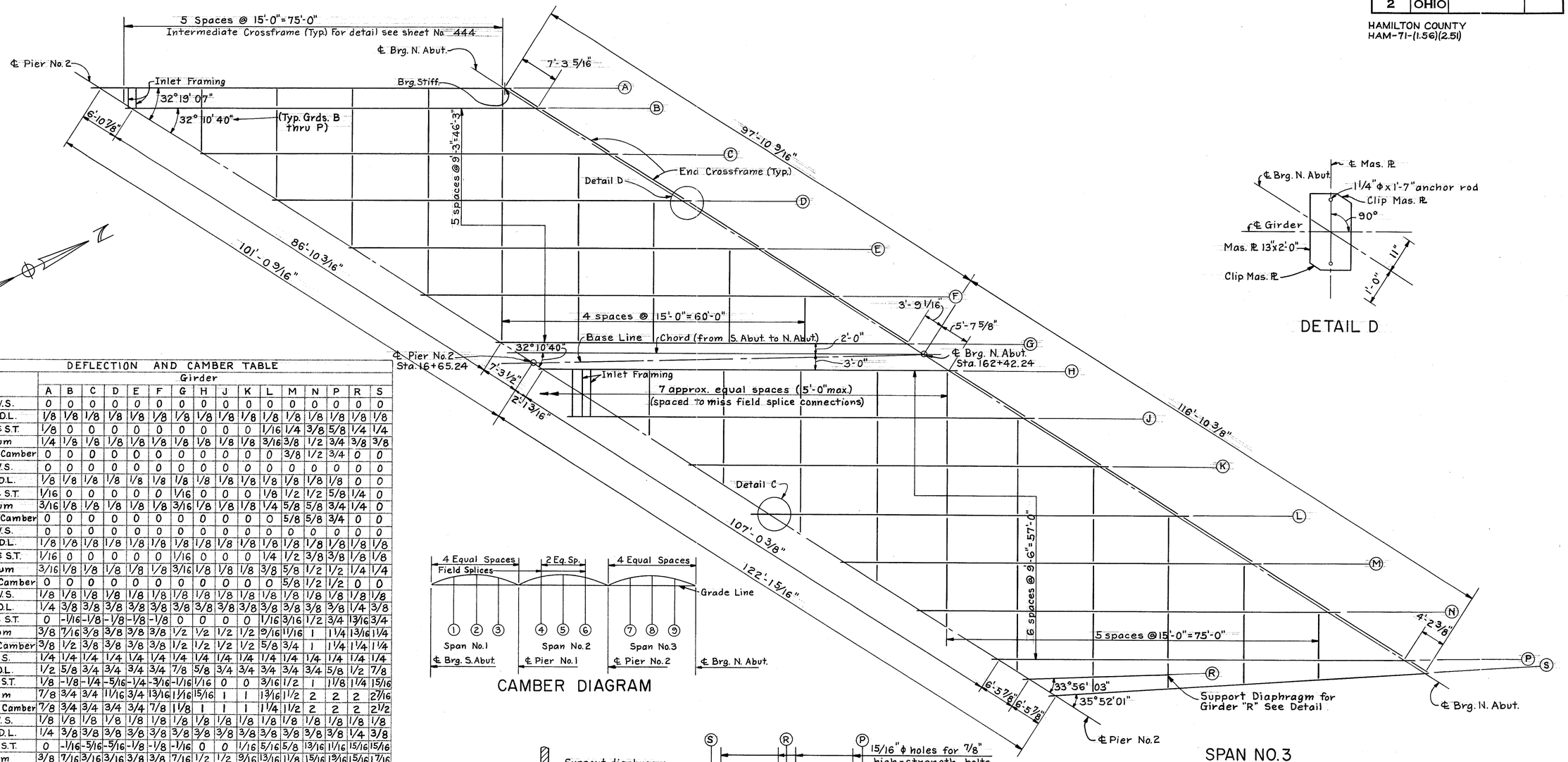
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



DETAIL D

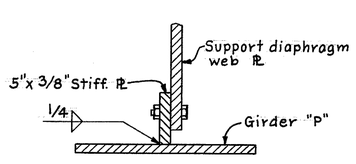
DEFLECTION AND CAMBER TABLE

Location		Girder A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S
1	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
	C.℄ S.T.	1/8	0	0	0	0	0	0	0	0	0	1/16	1/4	3/8	5/8	1/4	1/4
	Sum	1/4	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	3/16	3/8	1/2	3/4	3/8	3/8
	Req. Camber	0	0	0	0	0	0	0	0	0	0	0	3/8	1/2	3/4	0	0
2	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	0
	C.℄ S.T.	1/16	0	0	0	0	0	1/16	0	0	0	1/8	1/2	1/2	5/8	1/4	0
	Sum	3/16	1/8	1/8	1/8	1/8	1/8	3/16	1/8	1/8	1/8	1/4	5/8	5/8	3/4	1/4	0
	Req. Camber	0	0	0	0	0	0	0	0	0	0	0	5/8	5/8	3/4	0	0
3	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
	C.℄ S.T.	1/16	0	0	0	0	0	1/16	0	0	0	1/4	1/2	3/8	3/8	1/8	1/8
	Sum	3/16	1/8	1/8	1/8	1/8	1/8	3/16	1/8	1/8	1/8	3/8	5/8	1/2	1/2	1/4	1/4
	Req. Camber	0	0	0	0	0	0	0	0	0	0	0	5/8	1/2	1/2	0	0
4	W.S.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
	R.D.L.	1/4	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	1/4	3/8
	C.℄ S.T.	0	-1/16	-1/8	-1/8	-1/8	-1/8	0	0	0	0	1/16	3/16	1/2	3/4	13/16	3/4
	Sum	3/8	7/16	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	9/16	11/16	1	1 1/4	1 3/16	1 1/4
	Req. Camber	3/8	1/2	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	3/4	1	1 1/4	1 1/4	1 1/4
5	W.S.	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
	R.D.L.	1/2	5/8	3/4	3/4	3/4	3/4	7/8	5/8	3/4	3/4	3/4	3/4	3/4	5/8	1/2	7/8
	C.℄ S.T.	1/8	-1/8	-1/4	-5/16	-1/4	-3/16	-1/16	1/16	0	0	3/16	1/2	1	1 1/8	1 1/4	1 5/16
	Sum	7/8	3/4	3/4	11/16	3/4	13/16	1 1/16	15/16	1	1	1 3/16	1 1/2	2	2	2	2 7/16
	Req. Camber	7/8	3/4	3/4	3/4	3/4	7/8	1 1/8	1	1	1	1 1/4	1 1/2	2	2	2	2 1/2
6	W.S.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8
	R.D.L.	1/4	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	3/8	1/4	3/8
	C.℄ S.T.	0	-1/16	-5/16	-5/16	-1/8	-1/8	-1/16	0	0	1/16	5/16	5/8	13/16	1 1/16	15/16	15/16
	Sum	3/8	7/16	3/16	3/16	3/8	3/8	7/16	1/2	1/2	9/16	13/16	1 1/8	1 5/16	1 9/16	1 5/16	1 7/16
	Req. Camber	3/8	1/2	1/4	1/4	3/8	3/8	1/2	1/2	1/2	5/8	7/8	1 1/8	1 3/8	1 5/8	1 3/8	1 1/2
7	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8		1/8
	C.℄ S.T.	-1/16	-1/16	-1/16	0	1/8	1/4	1/2	9/16	9/16	9/16	9/16	9/16	5/8	3/4		5/8
	Sum	1/16	1/16	1/16	1/8	1/4	3/8	5/8	11/16	11/16	11/16	11/16	11/16	3/4	7/8		3/4
	Req. Camber	0	0	0	0	0	3/8	5/8	3/4	3/4	3/4	3/4	3/4	3/4	7/8		3/4
8	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8		1/8
	C.℄ S.T.	-1/16	-1/16	-1/16	1/16	1/4	1/2	13/16	3/4	3/4	3/4	3/4	3/4	1	7/8		5/8
	Sum	1/16	1/16	1/16	3/16	3/8	5/8	15/16	7/8	7/8	7/8	7/8	7/8	1 1/8	1		5/8
	Req. Camber	0	0	0	0	0	5/8	1	7/8	7/8	7/8	7/8	7/8	1 1/8	1		5/8
9	W.S.	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	R.D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8		1/8
	C.℄ S.T.	0	-1/16	0	1/8	5/16	7/16	5/8	9/16	9/16	9/16	9/16	9/16	7/8	5/8		7/16
	Sum	1/8	1/16	1/8	1/4	7/16	9/16	3/4	11/16	11/16	11/16	11/16	11/16	1	3/4		9/16
	Req. Camber	0	0	0	0	0	5/8	3/4	3/4	3/4	3/4	3/4	3/4	1	3/4		5/8

W.S. denotes Deflection due to weight of steel.
R.D.L. denotes Deflection due to remaining dead load.
C.℄S.T. denotes Convexity & Superelevation transition.
Sum denotes sum of Deflection and Convexity & Superelevation transition.

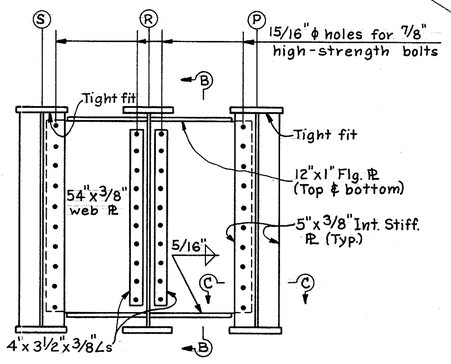
Note: Camber girders by cutting webs to a smooth curve.

CAMBER DIAGRAM

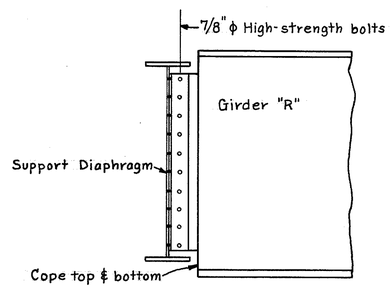


SECTION C-C

MICROFILMED
FEB 20 1985



DETAIL OF SUPPORT DIAPHRAGM FOR GIRDER "R"



SECTION B-B

MICROFILMED
FEB 20 1985

Work this sheet with sheet Nos. 360 & 361

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE No. HAM.-71-0173

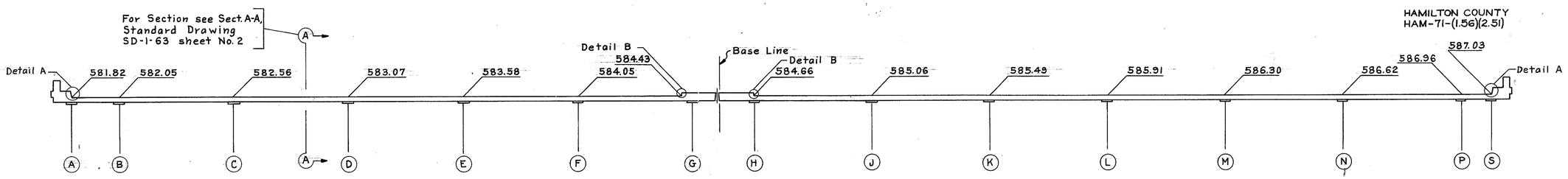
H&E BRIDGE No. 3

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE	RS	JHO 8/31/64	H.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

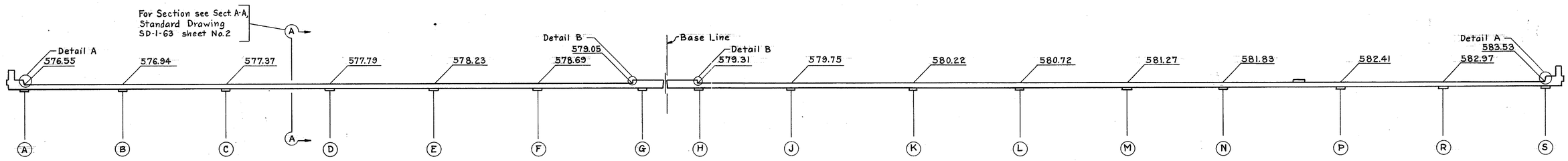
363
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

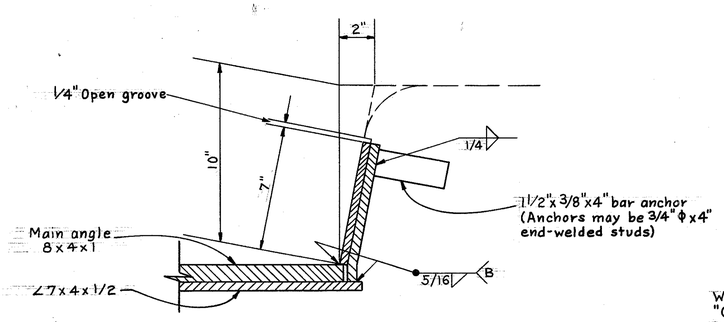


EXPANSION JOINT CROSS SECTION FOR NORTH ABUTMENT

Note:
Elevations given at front face of backwall. (Back of 7x4x1/2 ∠)

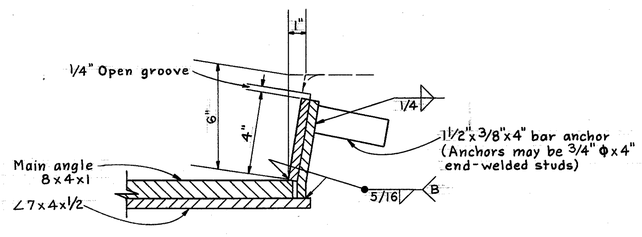


EXPANSION JOINT CROSS SECTION FOR SOUTH ABUTMENT



DETAIL A

Work Detail A & Detail B with "Curb Plate Details" Standard Drawing SD-1-63 sheet No. 4



DETAIL B

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE No. HAM.-71-0173

H&E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE	RS	JHO 2/5/65	N.A.B. 5-20-65	

Notes
For drainage details see Sh. No. 368 & 369
For lighting details see Sheet No. 214.
For railing details and spacing of bars in parapet see Sh. No. 367
For end finish detail see Sh. No. 363
For spacing of barrier guardrail posts see Sh. No. 367
Field bend longitudinal bars where necessary to miss inlets.
All longitudinal bars except those in the safety curb shall be placed parallel to girders B thru P
Transverse bars shall be placed perpendicular to girders B thru P

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the Construction and Material Specifications.

Work this sheet with Sh. 365

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE No. HAM-71-0173

H&E BRIDGE No. 8R&L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	G. L. W.	B. Sch.	W. L. 10-16-64	H. A. Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

365
492

S 501 & S 502 Bars
See Detail H
Fascia line
Curb line
℄ Girder B
S 6001 Bars
1 Each - S 6157 thru S 6186 @ 8" (Top)
1 Each S 7137 thru S 7166 @ 8" (Bot)
S 6156 @ 8" (Top)
S 7136 @ 8" (Bot)
8"
SPAN 3
S 6001 Bars
1'-3"
S 6002 Bar
Median Curb line
Drain Inlet
6'-11"
℄ Pier 2
Sta. 161 + 65.24
MATCH LINE
S 6156 @ 8" (Top)
S 7136 @ 8" (Bot)
1 Ea. - S 6187 thru S 6269 @ 8" (Top)
1 Ea. - S 7167 thru S 7249 @ 8" (Bot)
S 504 & S 505 Bars
S 6018 Bars
See Detail G
1-S 6025 Bar (Top)
1-S 7085 Bar (Bot)
Fan 5-S 6021 Bars (Top)
Fan 5-S 7001 Bars (Bot)
Sta. 162 + 42.24
1-S 6001 Bar (Top)
℄ Girder G
℄ Open joint
℄ Expway
1-S 6005 Bar (Bot)
1-S 6001 Bar (Bot)
1-S 6006 Bar (Top & Bot)
S 6432 @ 8" (Top)
S 7412 @ 8" (Bot)
1-S 6001 Bar (Bot)
1-S 6001 Bar (Top & Bot)
S 6019 Bars
℄ Girder J
Edge of slab
S 506 & S 507 Bars
℄ Brg. N. Abutment
2 Rows of 41-#8 S 6002 Bars Spaced as shown in Section A-A Staggered (Top)
S 6001 Bars (Top)
S 6001 Bars (Bot)
℄ Bearing Pier "2"
1 Ea. S 6460 thru S 6529 @ 8" (Top)
1 Ea. S 7439 thru S 7508 @ 8" (Bot)
70-S 6459 @ 8" (Top)
70-S 7438 @ 8" (Bot)
2 Rows of 4-#8 S 6002 Bars Staggered @ 1'-5" (Top)
S 6455 @ 8" (Top) S 7434 @ 8" (Bot)
28-S 6456 @ 8" (Top) 28-S 7435 @ 8" (Bot)
28-S 6457 @ 8" (Top) 28-S 7436 @ 8" (Bot)
28-S 6458 @ 8" (Top) 28-S 7437 @ 8" (Bot)
30-S 6459 @ 8" (Top) 30-S 7438 @ 8" (Bot)
8"
1'-3½"
7-S 6001 Bars @ 1'-5" (Top)
14-S 6001 Bars @ 8½" (Bot)
11-S 6001 Bars @ 8½" (Bot)
4-S 6001 Bars @ 1'-5" (Top)
8-S 6001 Bars @ 8½" (Bot)
4-S 6001 Bars @ 1'-5" (Top)
1'-4"
17-S 6001 Bars @ 8½"
9-S 6001 Bars @ 1'-5" (Top)
4-S 6001 Bars @ 8½" (Top)
1-S 6011 (Top & Bot)
5½"
℄ Girder P
@ NPN
Curb line
See Detail J
1-S 6001 (Top)
1-S 6005 Bar (Top & Bot)
1-S 6006 Bar (Top & Bot)
1-S 6007 Bar (Top & Bot)
S 6020 Bars
1-S 6003 Bar (Bot)
1-S 6008 Bar (Top & Bot)
1-S 6006 Bar (Top & Bot)
1-S 6009 Bar (Top & Bot)
1-S 6008 Bar (Top & Bot)
1-S 6001 Bar (Top)
Fascia
2 Rows of 2-#4 S 6002 Bars Staggered (Safety Curb)
1 Ea. S 7509 thru S 7577 @ 8" (Bot)
1 Ea. S 6113 thru S 6155 @ 8" (Top)
1 Ea. S 6530 thru S 6555 @ 8" (Top)
8" spc's
5-S 6001 Bars @ 8½" (Bot)
3-S 6001 Bars @ 1'-5" (Top)
1-S 6001 Bar (Top & Bot)
1-S 6001 Bar (Bot)
1-S 6270 (Top) & 1-S 7250 (Bot)
1-S 6271 (Top) & 1-S 7251 (Bot)
1-S 6273 (Top) & 1-S 7332 (Bot)
1-S 6353 (Top) & 1-S 7333 (Bot)
1-S 6354 (Top) & 1-S 7334 (Bot)
See Detail F
Fan 4-S 6021 Bars (Top)
Fan 4-S 7001 Bars (Bot)
1-S 6011 Bar (Top & Bot)
1-S 6004 Bar (Top & Bot)
1-S 6008 Bar (Bot)
2 Rows of 2-#4 S 6002 Bars Staggered (Safety Curb)
1-S 6014 Bar (Top & Bot)
1-S 6013 Bar (Bot)
1-S 6012 Bar (Top & Bot)
S 509 & S 510 Bars

PLAN

Edge of Fascia line
Face of abutment backwall
℄ Brg.
Curb line
Edge of slab
3½"
5'-1"
1'-0"

DETAIL H
DETAIL D (Opposite hand)

1'-0" Varies
½"
11"
½"
S 5 Bars
S 401 Bars @ 1'-6¾"
Const. jt.
N
P

SECTION B-B

S 504 & S 505 Bars
1'-0"
5'-1"
Edge of roadway slab
Median Curb line
5¼"
1-S 514 Bar
1-S 516 Bar
Edge of curb slab
2'-6"
℄ Open Joint
℄ Expway
3'-6"
Face of abut. backwall
℄ Bearing
1-S 517 Bar
1-S 518 Bar
Median Curb Line
Edge of roadway slab
S 506 & S 507 Bars

DETAIL G

6"
℄ open joint
℄ Expway
Type I-15.11 Guard rail
7"
1'-9"
6 WF 15.5 post galvanized as provided in Sec. M-7.4(d)
Galvanized 12 8"x1⅜"x10½"
2"
C
1"
6"
2" Radius
construction joint (level)
5'-0"
11"
3" 4" 4" 3"
2'-6"
3'-6"
1½" ℄ x 2'-6" bar, thread 4" length and provide one hex nut per bar. (Four per post). Bar and nut shall be galvanized.

DETAIL E

For detail of Guard Rail see standard drawing I-15 No. 2-A

S 7579
D
℄ Lamp Standard
Curb Line
S 7580
S 521
S 521
℄ Parapet
H 509
1'-0"
11¾"
Parapet
1'-4"
2"
½" Cl. (Typ)
11"
11"
3'-9"
D

DETAIL J

℄ Lamp Standard
℄ Parapet
2'-6"
11¾"
10½"
1'-0"
1'-4"
2"
H 501 or H 502
1-H 509 Bar
2-S 521 Bars
1-S 7580 Bar
2-S 7578 Bars
½" Cl. (Typ)
2-S 7579 Bars
1-S 7580 Bar

SECTION D-D

5 @ Expway
1½ ϕ holes for 1¼ ϕ bars
¼
6 WF 15.5 - 8"x1⅜"x10½" Post
3½"
4⅝"
2⅜"
2⅜"
9"
10½"
℄ Post

SECTION C-C

1'-11" Min. lap
℄ Pier
3'-0"
20'-5"
20'-5"
3'-0"

DIAGRAM SHOWING STAGGER OF S 6002 BARS OVER PIERS

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FEB 20 1985

Base line NPN
7'-0" Radially
2'-2"
1'-0" 1'-0" 2"
3" Galv. Metal Conduit
H 5 Bars
S 508 Bars @ 1'-6" % except where necessary to clear parapet joints
Class C concrete for parapets above this construction joint is included with railing for payment
2"
10½"
1'-6"
S 510 @ 1'-6" %
S 509 @ 1'-6" %
3"
9"
1" Dia. half round drip groove
2"
8-S 6020 Bars (Space as shown)
Varies
Varies
Varies
Slab thickness includes 1" for monolithic wearing surface
2" Radius
S 6002 Bars over piers
S 6 Bars @ 8" % (Top)
S 7 Bars @ 8" % (Bottom)
S 6 Bars (Top) (See plan for spacing)
S 6 Bars @ 8½" % (Bottom)
6"
1'-4"
Clearance = 2" which includes 1" for monolithic wearing surface
Min. lap
1'-11"
2'-3" Min. lap
9"
1" Cl.
Typ. Haunch
A typical haunch width of 9" shall be used for computing quantity of concrete however, the haunch width may vary between 6" and 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.
6 Spaces @ 9'-6" = 57'-0"
H
J
K
L
M
N
P
R
S

PART SECTION A-A

Work this sheet with sh. 364

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE No. HAM-71-0173

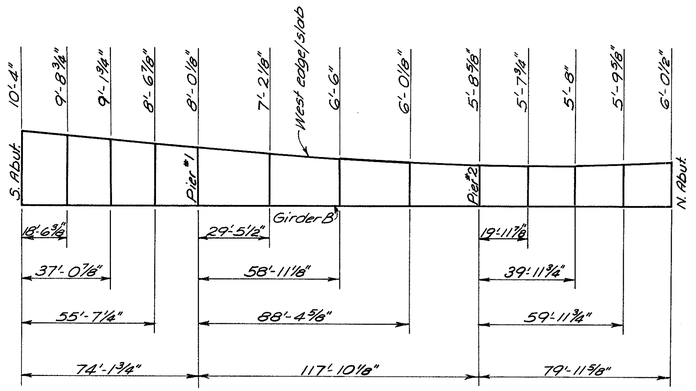
H & E BRIDGE No. 8R & L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	G.L.W.	B. Sch.	W.L. 10-16-64	11.17. 5-28-65	

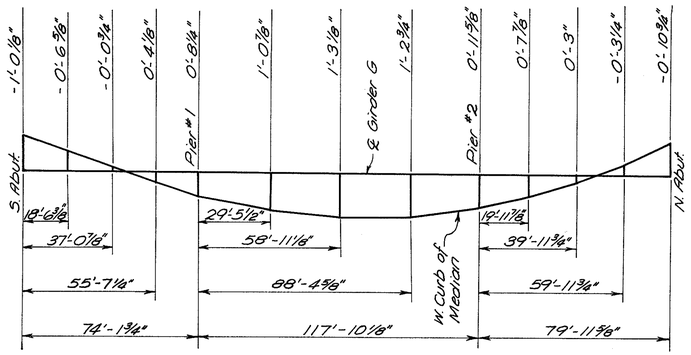
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

366
492

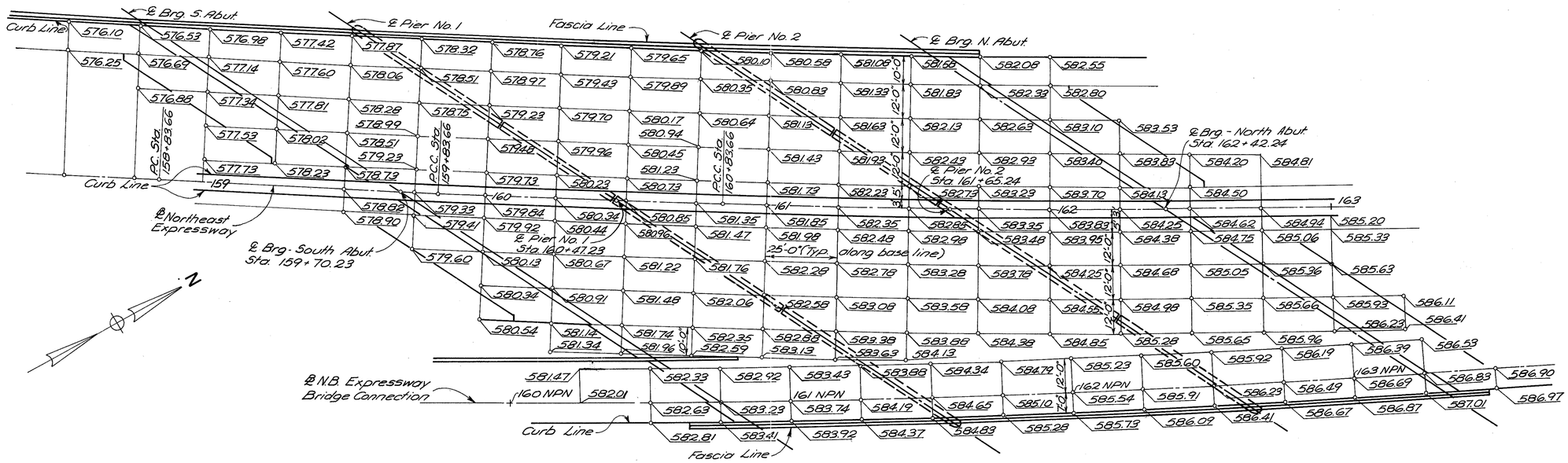
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



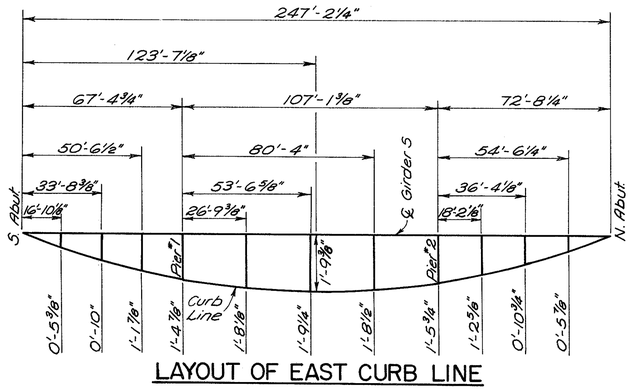
LAYOUT OF WEST EDGE OF ROADWAY SLAB



LAYOUT OF WEST CURB OF MEDIAN



ROADWAY SURFACE ELEVATIONS



LAYOUT OF EAST CURB LINE

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE NO. HAM.-71-0173

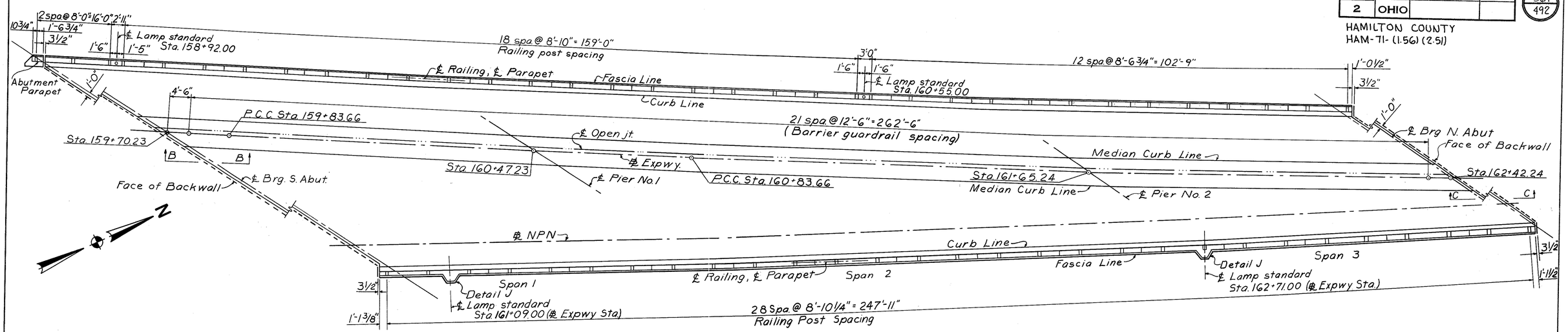
H & E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.J.E.	B. Sch.	J.H.O.	M.A.Z. 5-20-63	

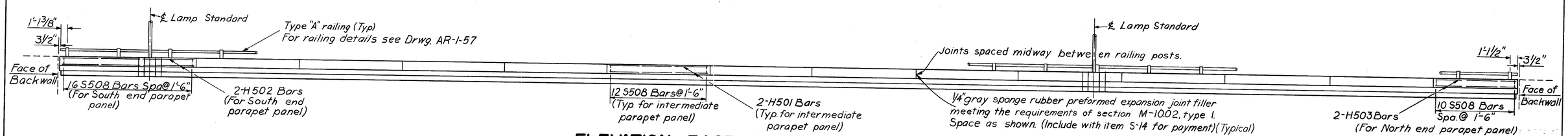
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

347
492

HAMILTON COUNTY
HAM-71- (1.56) (2.51)

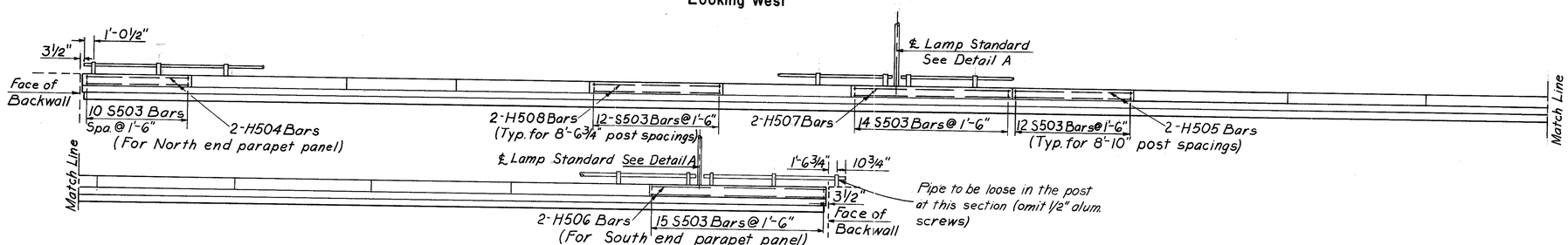


PLAN



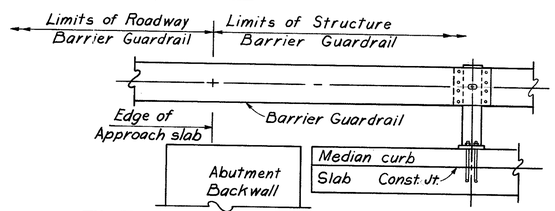
ELEVATION EAST RAILING

Looking West



ELEVATION WEST RAILING

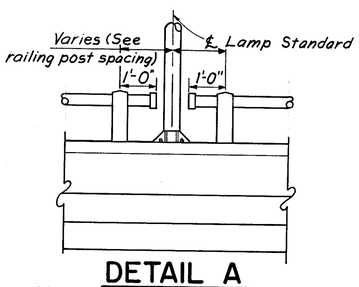
Looking East



ELEVATION B-B & ELEVATION C-C

Opposite Hand

(End finish not shown)



DETAIL A

NOTES:

The location of barrier guardrail posts is measured along ℄ Expwy..

The location of reinforcing steel, railing posts, and west lamp standards is measured along ℄ parapet.

For conduit expansion detail at abutments see sheet No. 214.

For typical lighting details see sheet No. 214.

Work this drawing with lighting plan sheet No. 205, which shows locations of conduits, hand holds, and lamp standards.

For detail J see sheet No. 365

For details of barrier guardrail see sheet No. 365

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING & LIGHTING

BRIDGE No. HAM-71-0173

H&E BRIDGE No. 8R&L

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE		WL	W.A.T. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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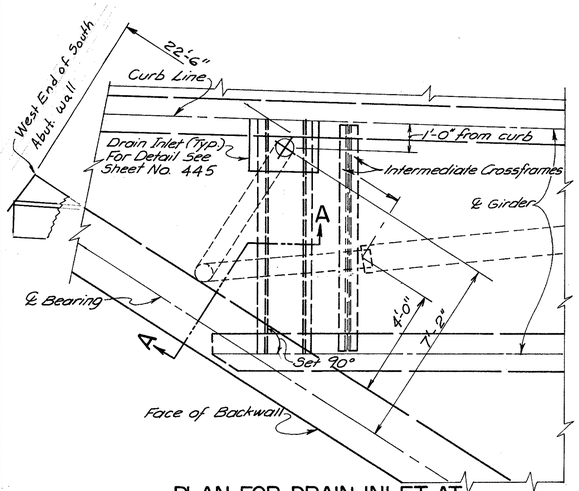
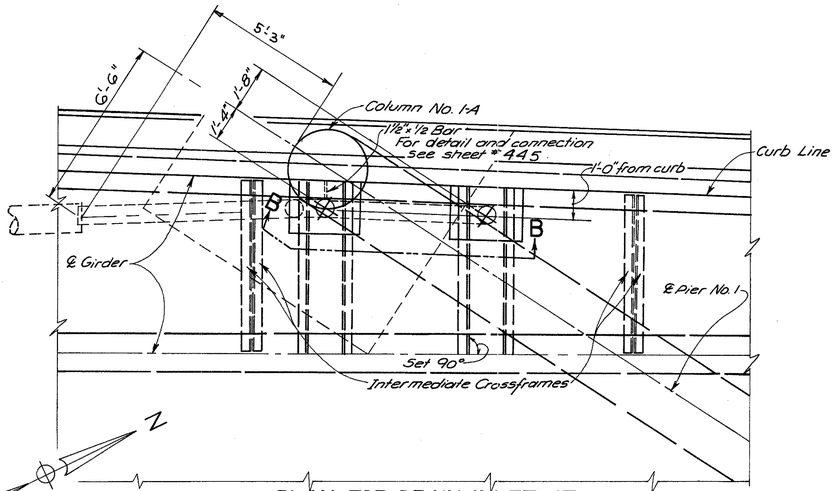
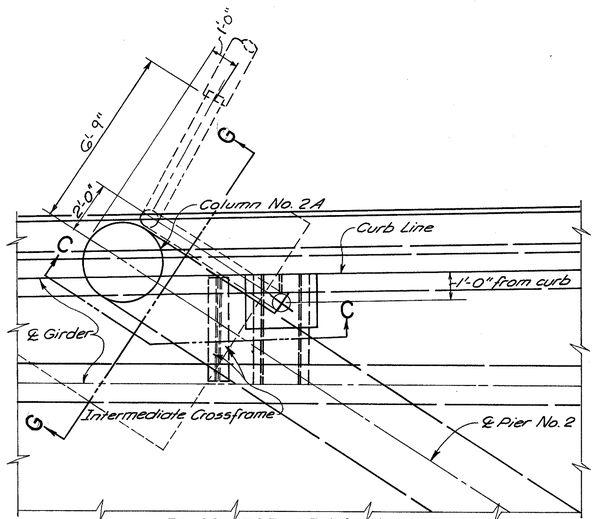
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



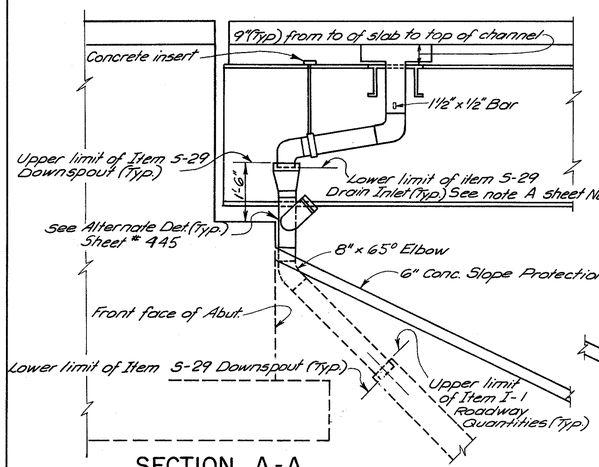
PLAN FOR DRAIN INLET AT
S. ABUT. OF SOUTH BOUND ROADWAY



PLAN FOR DRAIN INLET AT
PIER No. 1 OF SOUTH BOUND ROADWAY

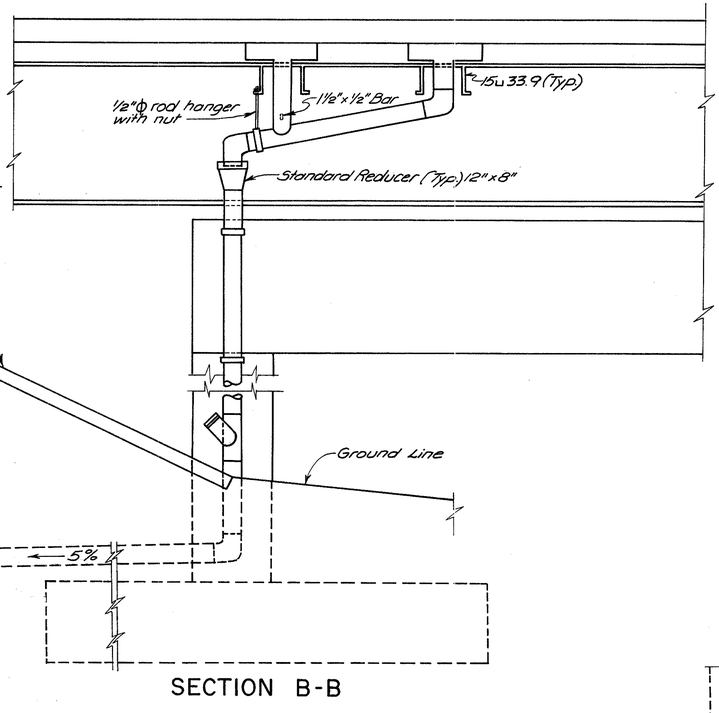


PLAN FOR DRAIN INLET AT
PIER No. 2 OF SOUTH BOUND ROADWAY



SECTION A-A

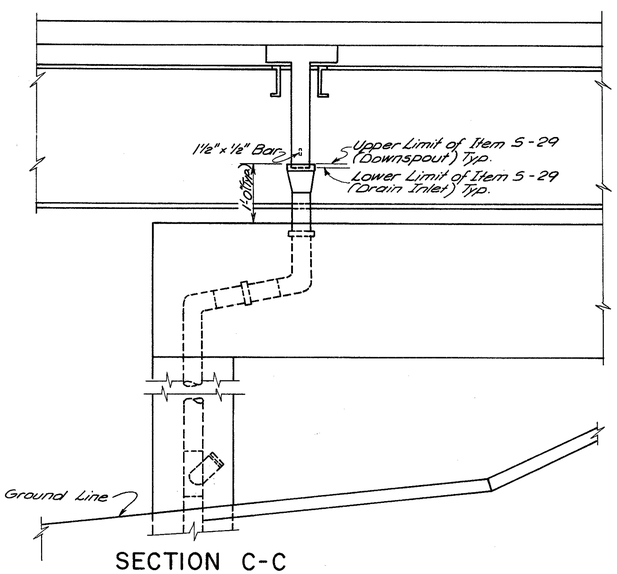
Note: Total depth of inlet frame box at S. Abut, Pier No. 1 and Pier No. 2 equals 7¾"



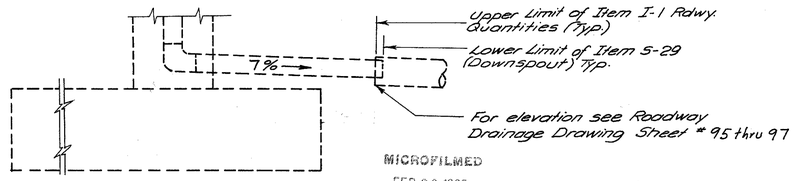
SECTION B-B

8" Pipe Throughout

Work this drawing with typical drawing sheet # 445



SECTION C-C



SECTION G-G

Work this sheet with sheet No. 369

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE No. HAM.-71-0173

H & E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.E.	B. Sch.	J.H.O. 2-15-65	H.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

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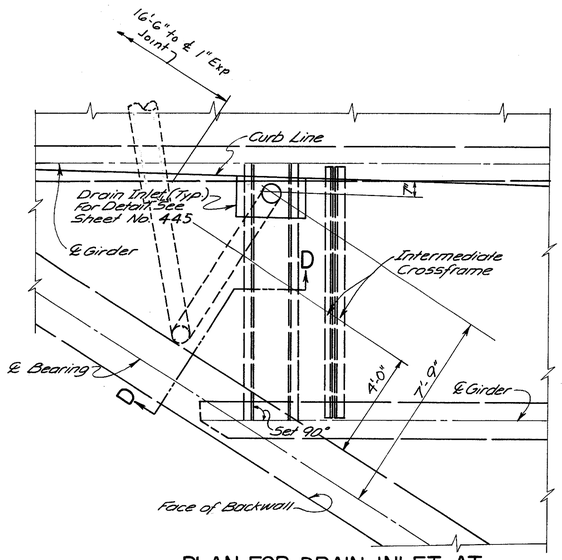
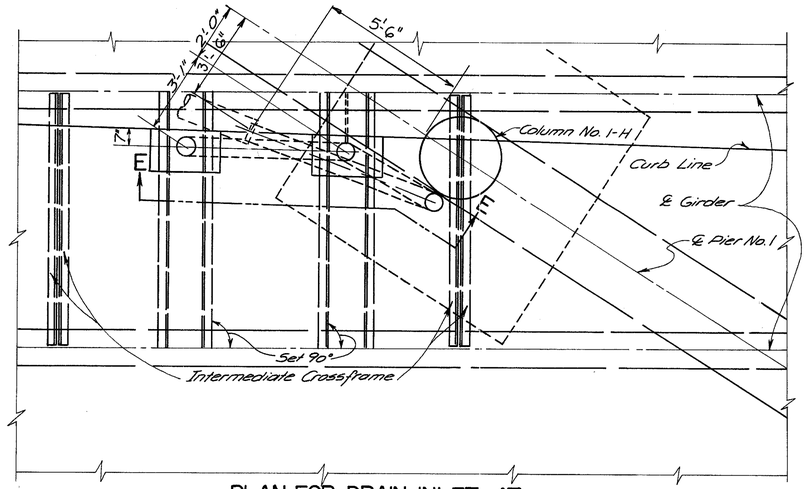
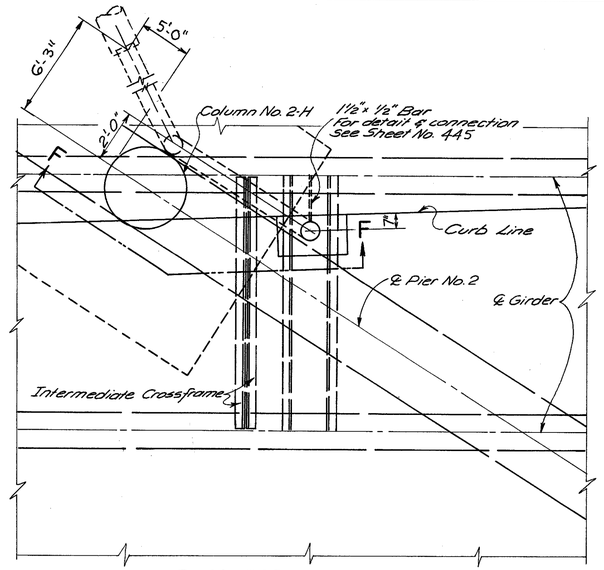


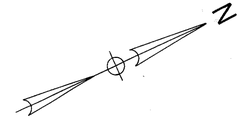
PLAN FOR DRAIN INLET AT
S. ABUT. OF NORTH BOUND ROADWAY

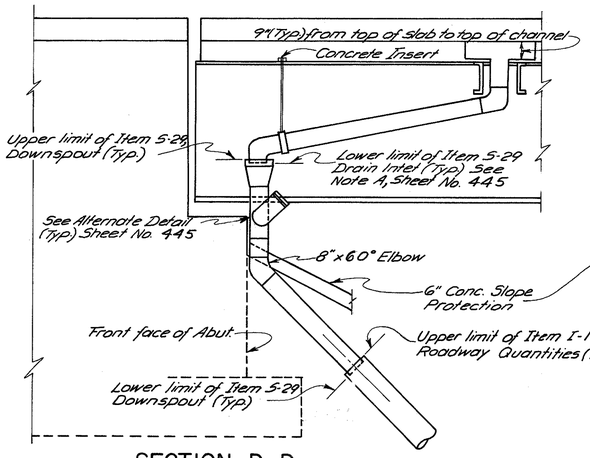


PLAN FOR DRAIN INLET AT
PIER NO. 1 OF NORTH BOUND ROADWAY

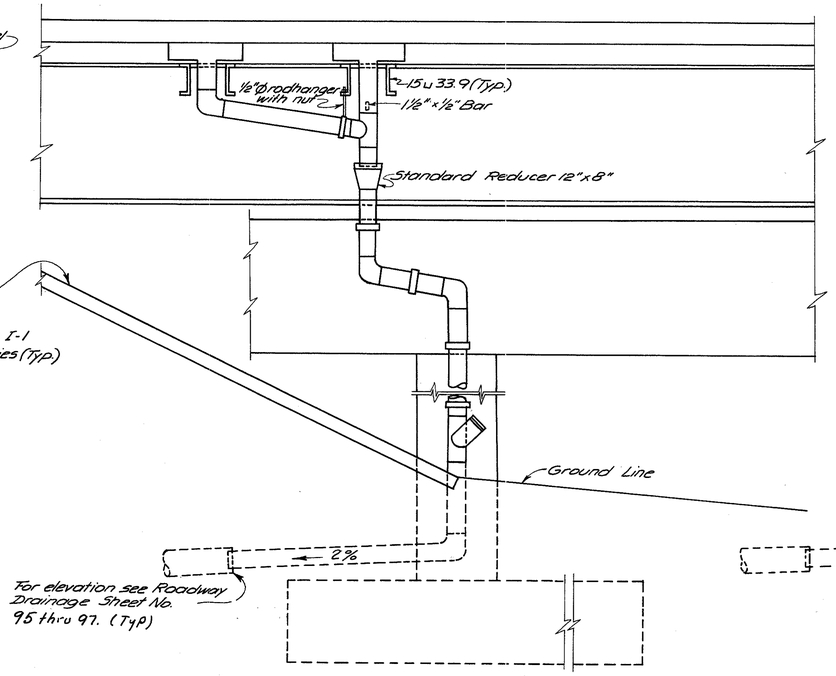


PLAN FOR DRAIN INLET AT
PIER NO. 2 OF NORTH BOUND ROADWAY

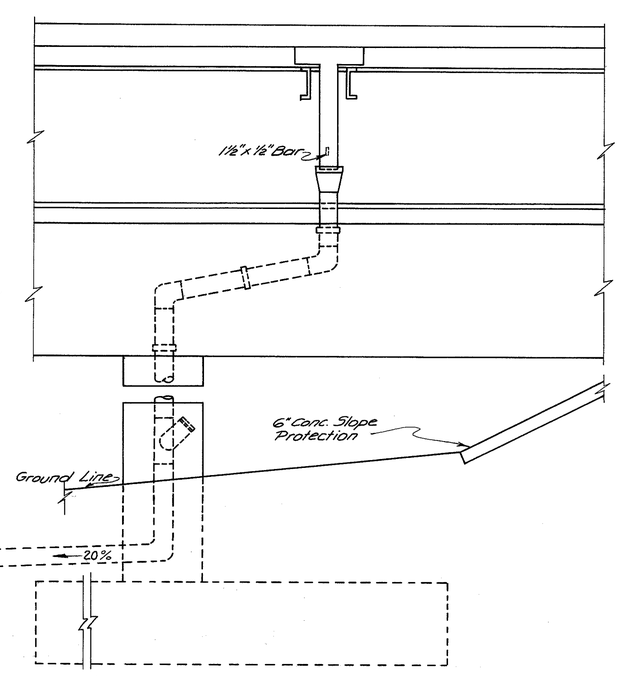




SECTION D-D



SECTION E-E



SECTION F-F

Work this sheet with sheet No. 368

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE No. HAM-71-0173

H & E BRIDGE No. 8

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M. J. E.	B. Sch.	J.H.O.	A.A.S. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-(1.56) (2.51)

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S401	40	21	3'-5"	48
S501	61	189	5'-1"	1002
S502	1	189	2'-8"	526
S503	14	195	5'-9"	1169
S504	21	181	4'-7"	865
S505	1	181	2'-4"	440
S506	21	180	5'-7"	1048
S507	1	180	3'-4"	626
S508	14	170	5'-7"	990
S509	61	167	4'-11"	856
S510	1	167	2'-6"	435
S511	Str.	1	30'-9"	32
S512	Str.	1	31'-6"	33
S513	21	1	6'-0"	6
S514	21	1	5'-8"	6
S515	1	1	3'-10"	4
S516	1	1	3'-6"	4
S517	21	1	7'-5"	8
S518	1	1	5'-3"	5
S519	21	1	4'-6"	5
S520	1	1	2'-3"	2
S521	4	4	9'-8"	10
S6001	Str.	1826	32'-2"	88222
S6002	↑	382	22'-11"	13,149
S6003		2	12'-3"	37
S6004		3	18'-3"	82
S6005		3	19'-0"	86
S6006		9	16'-6"	223
S6007		2	24'-3"	73
S6008		8	27'-6"	330
S6009		2	6'-6"	20
S6010		2	17'-6"	53
S6011		4	7'-6"	45
S6012		2	24'-9"	74
S6013		1	16'-0"	24
S6014		2	7'-0"	21
S6015		1	21'-3"	32
S6016		2	10'-0"	30
S6017		72	33'-3"	3596
S6018		72	32'-3"	3488
S6019		81	32'-1"	3903
S6020		72	29'-6"	3190
S6021		14	3'-0"	63
S6022		1	3'-8"	6
S6023		1	4'-1"	6
S6024		1	4'-6"	7
S6025		2	5'-0"	15
S6026		1	5'-5"	8
S6027		1	5'-9"	9
S6028		1	6'-2"	9
S6029		1	6'-7"	10
S6030		1	7'-0"	11
S6031		1	7'-5"	11
S6032		1	7'-9"	12
S6033		1	8'-2"	12
S6034		1	8'-7"	13
S6035		1	9'-0"	14
S6036		1	9'-5"	14
S6037		1	9'-9"	15
S6038		1	10'-2"	15
S6039		1	10'-7"	16
S6040		1	11'-0"	17
S6041		1	11'-5"	17
S6042		1	11'-9"	18
S6043		1	12'-2"	18
S6044		1	12'-7"	19
S6045		1	13'-0"	20
S6046		2	13'-5"	41
S6047		2	13'-9"	41
S6048		2	14'-2"	43
S6049	↓ Str.	2	14'-7"	44

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S6050	Str.	2	15'-0"	45
S6051	↑	2	15'-5"	47
S6052		2	15'-9"	47
S6053		2	16'-2"	49
S6054		2	16'-7"	50
S6055		2	16'-11"	51
S6056		2	17'-4"	52
S6057		2	17'-8"	53
S6058		2	18'-1"	54
S6059		2	18'-6"	56
S6060		2	18'-11"	57
S6061		2	19'-4"	58
S6062		2	19'-8"	59
S6063		2	20'-1"	60
S6064		2	20'-6"	62
S6065		2	20'-11"	63
S6066		2	21'-4"	64
S6067		2	21'-8"	65
S6068		2	22'-1"	66
S6069		2	22'-6"	68
S6070		2	22'-11"	69
S6071		2	23'-4"	70
S6072		2	23'-8"	71
S6073		2	24'-1"	72
S6074		2	24'-5"	73
S6075		2	24'-10"	75
S6076		2	25'-3"	76
S6077		2	25'-7"	77
S6078		2	26'-0"	78
S6079		2	26'-5"	79
S6080		2	26'-10"	81
S6081		2	27'-3"	82
S6082		2	27'-7"	83
S6083		2	28'-0"	84
S6084		2	28'-5"	85
S6085		2	28'-10"	87
S6086		2	29'-3"	88
S6087		2	29'-7"	89
S6088		79	30'-0"	3560
S6089		1	30'-5"	46
S6090		1	30'-10"	46
S6091		1	31'-2"	47
S6092		1	31'-7"	47
S6093		1	32'-0"	48
S6094		1	32'-5"	49
S6095		1	32'-10"	49
S6096		1	33'-2"	50
S6097		1	33'-7"	50
S6098		1	34'-0"	51
S6099		1	34'-5"	52
S6100		1	34'-9"	52
S6101		1	35'-2"	53
S6102		1	35'-7"	53
S6103		1	36'-0"	54
S6104		1	36'-4"	55
S6105		1	36'-9"	55
S6106		1	37'-2"	56
S6107		1	37'-7"	56
S6108		1	38'-0"	57
S6109		1	38'-4"	58
S6110		1	38'-8"	58
S6111		1	39'-2"	59
S6112		1	39'-7"	59
S6113		1	39'-4"	59
S6114		1	38'-10"	58
S6115		1	38'-4"	58
S6116		1	37'-10"	57
S6117		1	37'-4"	56
S6118		1	36'-10"	55
S6119		1	36'-5"	55
S6120		1	35'-11"	54
S6121		1	35'-5"	53
S6122		1	34'-11"	52
S6123		1	34'-6"	52
S6124		1	34'-0"	51
S6125		1	33'-6"	50
S6126		1	33'-0"	50
S6127		1	32'-7"	49
S6128		1	32'-1"	48
S6129		1	31'-7"	47
S6130		1	31'-1"	47
S6131	↓ Str.	1	30'-8"	46

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S6132	Str.	1	30'-2"	45
S6133	↑	1	29'-8"	45
S6134		1	29'-2"	44
S6135		1	28'-9"	43
S6136		1	28'-3"	42
S6137		1	27'-9"	42
S6138		1	27'-3"	41
S6139		1	26'-10"	40
S6140		1	26'-4"	40
S6141		1	25'-10"	39
S6142		1	25'-4"	38
S6143		1	24'-11"	37
S6144		1	24'-5"	37
S6145		1	23'-11"	36
S6146		1	23'-5"	35
S6147		1	23'-0"	35
S6148		1	22'-6"	34
S6149		1	22'-0"	33
S6150		1	21'-6"	32
S6151		1	21'-1"	32
S6152		1	20'-7"	31
S6153		1	20'-1"	30
S6154		1	19'-7"	29
S6155		1	19'-2"	29
S6156		645	28'-7"	27691
S6157		1	25'-11"	39
S6158		1	25'-5"	38
S6159		1	25'-0"	38
S6160		1	24'-7"	37
S6161		1	24'-1"	36
S6162		1	23'-8"	36
S6163		1	23'-3"	35
S6164		1	22'-10"	34
S6165		1	22'-5"	34
S6166		1	22'-0"	33
S6167		1	21'-7"	32
S6168		1	21'-2"	32
S6169		1	20'-8"	31
S6170		1	20'-3"	30
S6171		1	19'-9"	30
S6172		1	19'-4"	29
S6173		1	18'-11"	28
S6174		1	18'-5"	28
S6175		1	18'-0"	27
S6176		1	17'-7"	26
S6177		1	17'-2"	26
S6178		1	16'-8"	25
S6179		1	16'-2"	24
S6180		1	15'-9"	24
S6181		1	15'-4"	23
S6182		1	14'-11"	22
S6183		1	14'-6"	22
S6184		1	14'-1"	21
S6185		1	13'-8"	21
S6186		1	13'-3"	20
S6187		1	39'-6"	59
S6188		1	39'-1"	59
S6189		1	38'-8"	58
S6190		1	38'-3"	57
S6191		1	37'-9"	57
S6192		1	37'-4"	56
S6193		1	36'-11"	55
S6194		1	36'-6"	55
S6195		1	36'-1"	54
S6196		1	35'-7"	53
S6197		1	35'-2"	53
S6198		1	34'-9"	52
S6199		1	34'-4"	52
S6200		1	33'-10"	51
S6201		1	33'-5"	50
S6202		1	33'-0"	50
S6203		1	32'-7"	49
S6204		1	32'-1"	48
S6205		1	31'-8"	48
S6206		1	31'-3"	47
S6207		1	30'-10"	46
S6208		1	30'-5"	46
S6209		1	29'-11"	45
S6210		1	29'-6"	44
S6211		1	29'-1"	44
S6212		1	28'-8"	43
S6213	↓ Str.	1	28'-2"	42

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S6214	Str.	1	27'-9"	42
S6215	↑	1	27'-4"	41
S6216		1	26'-11"	40
S6217		1	26'-6"	40
S6218		1	26'-0"	39
S6219		1	25'-7"	38
S6220		1	25'-2"	38
S6221		1	24'-9"	37
S6222		1	24'-3"	36
S6223		1	23'-10"	36
S6224		1	23'-5"	35
S6225		1	23'-0"	35
S6226		1	22'-6"	34
S6227		1	22'-1"	33
S6228		1	21'-8"	33
S6229		1	21'-3"	32
S6230		1	20'-9"	31
S6231		1	20'-4"	31
S6232		1	19'-11"	30
S6233		1	19'-6"	29
S6234		1	19'-1"	29
S6235		1	18'-7"	28
S6236		1	18'-2"	27
S6237		1	17'-9"	27
S6238		1	17'-4"	26
S6239		1	16'-10"	25
S6240		1	16'-5"	25
S6241		1	16'-0"	24
S6242		1	15'-7"	23
S6243		1	15'-2"	23
S6244		1	14'-8"	22
S6245		1	14'-3"	21
S6246		1	13'-10"	21
S6247		1	13'-5"	20
S6248		1	12'-11"	19
S6249		1	12'-6"	19
S6250		1	12'-1"	18
S6251		1	11'-8"	18
S6252		1	11'-2"	17
S6253		1	10'-9"	16
S6254		1	10'-4"	16
S6255		1	9'-11"	15
S6256		1	9'-6"	14
S6257		1	9'-0"	14
S6258		1	8'-7"	13
S6259		1	8'-2"	12
S6260		1	7'-9"	12
S6261		1	7'-3"	11
S6262		1	6'-10"	10
S6263		1	6'-5"	10
S6264		1	6'-0"	9
S6265		1	5'-6"	8
S6266		1	5'-1"	8
S6267		1	4'-8"	7
S6268		1	4'-3"	6
S6269		1	3'-8"	6
S6270		1	6'-2"	9
S6271		1	5'-9"	9
S6272		5	4'-0"	30
S6273		1	5'-3"	8
S6274		1	4'-5"	7
S6275		1	4'-10"	7
S6276		1	5'-3"	8
S6277		1	5'-8"	9
S6278		1	6'-1"	9
S6279		1	6'-6"	10
S6280		1	6'-11"	10
S6281		1	7'-3"	11
S6282		1	7'-8"	12
S6283		1	8'-1"	12
S6284		1	8'-6"	13
S6285		1	8'-11"	13
S6286		1	9'-3"	14
S6287		1	9'-8"	15
S6288		1	10'-1"	15
S6289		1	10'-6"	16
S6290		1	10'-11"	16
S6291		1	11'-3"	17
S6292		1	11'-8"	18
S6293		1	12'-1"	18
S6294		1	12'-6"	19
S6295	↓ Str.	1	12'-11"	19

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S6296	Str.	1	13'-3"	20
S6297	↑	1	13'-8"	21
S6298		1	14'-1"	21
S6299		1	14'-6"	22
S6300		1	14'-11"	22
S6301		1	15'-4"	23
S6302		1	15'-9"	24
S6303		1	16'-2"	24
S6304		1	16'-7"	25
S6305		1	16'-11"	25
S6306		1	17'-4"	26
S6307		1	17'-9"	27
S6308		1	18'-2"	27
S6309		1	18'-7"	28
S6310		1	18'-11"	28
S6311		1	19'-4"	29
S6312		1	19'-9"	30
S6313		1	20'-2"	30
S6314		1	20'-7"	31
S6315		1	20'-11"	31
S6316		1	21'-4"	32
S6317		1	21'-9"	33
S6318		1	22'-2"	33
S6319		1	22'-7"	34
S6320		1	23'-1"	34
S6321		1	23'-4"	35
S6322		1	23'-9"	36
S6323		1	24'-2"	36
S6324		1	24'-7"	37
S6325		1	24'-11"	37
S6326		1	25'-4"	38
S6327		1	25'-9"	39
S6328		1	26'-2"	39
S6329		1	26'-7"	40
S6330		1	27'-0"	41
S6331		1	27'-5"	41
S6332		1	27'-10"	42
S6333		1	28'-3"	42
S6334		1	28'-8"	43
S6335		1	29'-0"	44
S6336		1	29'-5"	44
S6337		1	29'-10"	45
S6338		1	30'-3"	45
S6339		1	30'-8"	46
S6340		1	31'-0"	47
S6341		1	31'-5"	47
S6342		1	31'-10"	48
S6343		1	32'-3"	48
S6344		1	32'-8"	49
S6345		1	33'-0"	50
S6346		1	33'-5"	50
S6347		1	33'-10"	51
S6348		1	34'-3"	51
S6349		1	34'-8"	52
S6350		1	35'-0"	53
S6351		1	35'-5"	53
S6352		1	35'-10"	54
S6353		1	4'-9"	7
S6354		1	4'-3"	6
S6355		1	8'-2"	12
S6356		1	8'-7"	13
S6357		1	9'-0"	14
S6358		1	9'-5"	14
S6359		1	9'-10"	15
S6360		1	10'-3"	15
S6361		1	10'-8"	16
S6362		1	11'-1"	17
S6363		1	10'-6"	16
S6364		1	11'-11"	18
S6365		1	12'-4"	19
S6366		1	12'-9"	19
S6367		1	13'-2"	20
S6368		1	13'-7"	20
S6369		1	14'-0"	21
S6370		1	14'-4"	22
S6371		1	14'-9"	22
S6372		1	15'-2"	23
S6373		1	15'-7"	23
S6374		1	16'-0"	24
S6375		1	16'-5"	25
S6376	↓ Str.	1	16'-10"	25

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S6377	Str.	1	17'-3"	26
S6378	↑	1	17'-8"	27
S6379		1	18'-1"	27
S6380		1	18'-6"	28
S6381		1	18'-11"	28
S6382		1	19'-4"	29
S6383		1	19'-9"	30
S6384		1	20'-2"	30
S6385		1	20'-6"	31
S6386		1	20'-1"	30
S6387		1	21'-4"	32
S6388		1	21'-9"	33
S6389		1	22'-2"	33
S6390		1	22'-7"	34
S6391		1	23'-0"	35
S6392		1	23'-5"	35
S6393		1	23'-10"	36
S6394		1	23'-3"	35
S6395		1	24'-8"	37
S6396		1	25'-1"	38
S6397		1	25'-6"	38
S6398		1	25'-11"	39
S6399		1	26'-3"	39
S6400		1	26'-8"	40
S6401		1	27'-1"	41
S6402		1	27'-6"	41
S6403		1	27'-11"	42
S6404		1	28'-4"	43
S6405		1	28'-9"	43
S6406		1	29'-2"	44
S6407		1	29'-7"	44
S6408		1	30'-0"	45
S6409		1	30'-5"	46
S6410		1	30'-10"	46
S6411		1	31'-3"	47
S6412		1	31'-8"	48
S6413		1	32'-1"	48
S6414		1	32'-6"	49
S6415		1	32'-10"	49
S6416		1	33'-3"	50
S6417		1	33'-8"	51
S6418		1	34'-1"	51
S6419		1	34'-6"	52
S6420		1	34'-11"	52
S6421		1	35'-4"	53
S6422		1	35'-9"	54
S6423		1	36'-2"	54
S6424		1	36'-7"	55
S6425		1	37'-0"	56
S6426		1	37'-5"	56
S6427		1	37'-10"	57
S6428		1	38'-3"	57
S6429		1	38'-8"	58
S6430		1	39'-0"	59
S6431		1	39'-5"	59
S6432		245	40'-0"	14,720
S6433		1	29'-10"	45
S6434		1	30'-3"	45
S6435		1	30'-8"	46
S6436		1	31'-1"	47
S6437		1	31'-6"	47
S6438		1	31'-11"	48
S6439		1	32'-4"	49
S6440		1	32'-9"	49
S6441	↓ Str.	1	33'-2"	50

MICROFILMED
FEB 20 1965

NOTE:
Work this sheet with Typical Drawing No. 4, Sht. No. 446

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

REINFORCING STEEL LIST
BRIDGE NO. HAM-71-0173
(SHEET NO. 1 OF 4)

H&E BRIDGE NO. 8L&R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	TLZ		1-21-65 GLW	11-1-2. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

371
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
56442	Str.	1	33'-7"	50
56443	↑	1	34'-0"	51
56444		1	34'-5"	52
56445		1	34'-10"	52
56446		1	35'-3"	53
56447		1	35'-8"	54
56448		1	36'-1"	54
56449		1	36'-6"	55
56450		1	36'-11"	55
56451		1	37'-4"	56
56452		28	39'-11"	1679
56453		28	39'-4"	1654
56454		28	38'-9"	1630
56455		28	38'-2"	1605
56456		28	37'-7"	1581
56457		28	37'-0"	1556
56458		28	36'-5"	1532
56459		100	35'-10"	5382
56460		1	38'-11"	58
56461		1	38'-6"	58
56462		1	38'-0"	57
56463		1	37'-6"	56
56464		1	37'-0"	56
56465		1	36'-6"	55
56466		1	36'-0"	54
56467		1	35'-6"	53
56468		1	35'-0"	53
56469		1	34'-6"	52
56470		1	34'-2"	51
56471		1	33'-9"	51
56472		1	33'-3"	50
56473		1	32'-9"	49
56474		1	32'-3"	48
56475		1	31'-9"	48
56476		1	31'-4"	47
56477		1	30'-10"	46
56478		1	30'-4"	46
56479		1	29'-11"	45
56480		1	29'-5"	44
56481		1	29'-0"	44
56482		1	28'-6"	43
56483		1	28'-0"	42
56484		1	27'-6"	41
56485		1	27'-0"	41
56486		1	26'-7"	40
56487		1	26'-1"	39
56488		1	25'-8"	39
56489		1	25'-2"	38
56490		1	24'-8"	37
56491		1	24'-2"	36
56492		1	23'-8"	36
56493		1	23'-2"	35
56494		1	22'-9"	34
56495		1	22'-3"	33
56496		1	21'-10"	33
56497		1	21'-4"	32
56498		1	20'-10"	31
56499		1	20'-5"	31
56500		1	19'-11"	30
56501		1	19'-6"	29
56502		1	19'-0"	29
56503		1	18'-6"	28
56504		1	18'-1"	27
56505		1	17'-7"	26
56506		1	17'-2"	26
56507		1	16'-8"	25
56508		1	16'-2"	24
56509		1	15'-8"	24
56510		1	15'-2"	23
56511		1	14'-9"	22
56512		1	14'-3"	21
56513		1	13'-9"	21
56514		1	13'-4"	20
56515		1	12'-10"	19
56516		1	12'-5"	19
56517		1	11'-11"	18
56518		1	11'-5"	17
56519		1	10'-11"	16
56520		1	10'-5"	16
56521		1	10'-0"	15
56522		1	9'-6"	14
56523		1	9'-0"	14
56524	Str.	1	8'-7"	13

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
56525	Str.	1	8'-1"	12
56526	↑	1	7'-8"	12
56527		1	7'-2"	11
56528		1	6'-8"	10
56529		1	6'-2"	9
56530		1	18'-8"	28
56531		1	18'-2"	27
56532		1	17'-8"	27
56533		1	17'-3"	26
56534		1	16'-9"	25
56535		1	16'-3"	24
56536		1	15'-9"	24
56537		1	15'-4"	23
56538		1	14'-10"	22
56539		1	14'-4"	22
56540		1	13'-10"	21
56541		1	13'-5"	20
56542		1	12'-11"	19
56543		1	12'-5"	19
56544		1	11'-11"	18
56545		1	11'-6"	17
56546		1	11'-0"	17
56547		1	10'-6"	16
56548		1	10'-0"	15
56549		1	9'-7"	14
56550		1	9'-1"	14
56551		1	8'-7"	13
56552		1	8'-1"	12
56553		1	7'-8"	12
56554		1	7'-2"	11
56555	Str.	1	6'-8"	10
57001	Str.	14	3'-0"	86
57002		1	3'-8"	7
57003		1	4'-1"	8
57004		1	4'-6"	9
57005		2	5'-0"	20
57006		1	5'-5"	11
57007		1	5'-9"	12
57008		1	6'-2"	13
57009		1	6'-7"	13
57010		1	7'-0"	14
57011		1	7'-5"	15
57012		1	7'-9"	16
57013		1	8'-2"	17
57014		1	8'-7"	18
57015		1	9'-0"	18
57016		1	9'-5"	19
57017		1	9'-9"	20
57018		1	10'-2"	21
57019		1	10'-7"	22
57020		1	11'-0"	22
57021		1	11'-5"	23
57022		1	11'-9"	24
57023		1	12'-2"	25
57024		1	12'-7"	26
57025		1	13'-0"	27
57026		1	13'-5"	27
57027		1	13'-9"	28
57028		1	14'-2"	29
57029		1	14'-7"	30
57030		1	15'-0"	31
57031		1	15'-5"	32
57032		1	15'-9"	32
57033		1	16'-2"	33
57034		1	16'-7"	34
57035		1	16'-11"	35
57036		1	17'-4"	35
57037		1	17'-8"	36
57038		1	18'-1"	37
57039		1	18'-6"	38
57040		1	18'-11"	39
57041		1	19'-4"	40
57042	Str.	1	19'-8"	40

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
57043	Str.	1	20'-1"	41
57044	↑	1	20'-6"	42
57045		1	20'-11"	43
57046		1	21'-4"	44
57047		1	21'-8"	44
57048		1	22'-1"	45
57049		1	22'-6"	46
57050		1	22'-11"	47
57051		1	23'-4"	48
57052		1	23'-8"	48
57053		1	24'-1"	49
57054		1	24'-5"	50
57055		1	24'-10"	51
57056		1	25'-3"	52
57057		1	25'-7"	52
57058		1	26'-0"	53
57059		1	26'-5"	54
57060		1	26'-10"	55
57061		1	27'-3"	56
57062		1	27'-7"	56
57063		1	28'-0"	57
57064		1	28'-5"	58
57065		1	28'-10"	59
57066		1	29'-3"	60
57067		1	29'-7"	60
57068		78	30'-0"	4783
57069		1	30'-5"	62
57070		1	30'-10"	63
57071		1	31'-2"	64
57072		1	31'-7"	65
57073		1	32'-0"	65
57074		1	32'-5"	66
57075		1	32'-10"	67
57076		1	33'-2"	68
57077		1	33'-7"	69
57078		1	34'-0"	69
57079		1	34'-5"	70
57080		1	34'-9"	71
57081		1	35'-2"	72
57082		1	35'-7"	73
57083		1	36'-0"	74
57084		1	36'-4"	74
57085		1	36'-9"	75
57086		1	37'-2"	76
57087		1	37'-7"	77
57088		1	38'-0"	78
57089		1	38'-4"	78
57090		1	38'-8"	79
57091		1	39'-2"	80
57092		1	39'-7"	81
57093		1	13'-5"	27
57094		1	13'-10"	28
57095		1	14'-3"	29
57096		1	14'-8"	30
57097		1	15'-0"	31
57098		1	15'-5"	32
57099		1	15'-10"	32
57100		1	16'-3"	33
57101		1	16'-7"	34
57102		1	17'-0"	35
57103		1	17'-5"	36
57104		1	17'-10"	36
57105		1	18'-2"	37
57106		1	18'-7"	38
57107		1	19'-0"	39
57108		1	19'-5"	40
57109		1	19'-10"	41
57110		1	20'-2"	41
57111		1	20'-7"	42
57112		1	21'-0"	43
57113		1	21'-5"	44
57114		1	21'-9"	44
57115		1	22'-2"	45
57116		1	22'-7"	46
57117		1	23'-0"	47
57118		1	23'-4"	48
57119		1	23'-9"	49
57120		1	24'-2"	49
57121		1	24'-7"	50
57122		1	25'-0"	51
57123		1	25'-4"	52
57124		1	25'-9"	53
57125	Str.	1	26'-2"	53

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
57126	Str.	1	26'-7"	54
57127	↑	1	26'-11"	55
57128		1	27'-4"	56
57129		1	27'-9"	57
57130		1	28'-2"	58
57131		1	28'-7"	58
57132		1	28'-11"	59
57133		1	29'-4"	60
57134		1	29'-9"	61
57135		1	30'-2"	62
57136		645	28'-9"	37903
57137		1	26'-1"	53
57138		1	25'-7"	52
57139		1	25'-2"	51
57140		1	24'-9"	51
57141		1	24'-3"	50
57142		1	23'-10"	49
57143		1	23'-5"	48
57144		1	23'-0"	47
57145		1	22'-7"	46
57146		1	22'-2"	45
57147		1	21'-9"	44
57148		1	21'-4"	44
57149		1	20'-10"	43
57150		1	20'-5"	42
57151		1	19'-11"	41
57152		1	19'-6"	40
57153		1	19'-1"	39
57154		1	18'-7"	38
57155		1	18'-2"	37
57156		1	17'-9"	36
57157		1	17'-4"	35
57158		1	16'-10"	34
57159		1	16'-4"	33
57160		1	15'-11"	33
57161		1	15'-6"	32
57162		1	15'-1"	31
57163		1	14'-8"	30
57164		1	14'-3"	29
57165		1	13'-10"	28
57166		1	13'-5"	27
57167		1	39'-6"	81
57168		1	39'-1"	80
57169		1	38'-8"	79
57170		1	38'-3"	78
57171		1	37'-9"	77
57172		1	37'-4"	76
57173		1	36'-11"	75
57174		1	36'-6"	75
57175		1	36'-1"	74
57176		1	35'-7"	73
57177		1	35'-2"	72
57178		1	34'-9"	71
57179		1	34'-4"	70
57180		1	33'-10"	69
57181		1	33'-5"	68
57182		1	33'-0"	67
57183		1	32'-7"	67
57184		1	32'-1"	66
57185		1	31'-8"	65
57186		1	31'-3"	64
57187		1	30'-10"	63
57188		1	30'-5"	62
57189		1	29'-11"	61
57190		1	29'-6"	60
57191		1	29'-1"	59
57192		1	28'-8"	59
57193		1	28'-2"	58
57194		1	27'-9"	57
57195		1	27'-4"	56
57196		1	26'-11"	55
57197		1	26'-6"	54
57198		1	26'-0"	53
57199		1	25'-7"	52
57200		1	25'-2"	51
57201		1	24'-9"	51
57202		1	24'-3"	50
57203		1	23'-10"	49
57204		1	23'-5"	48
57205		1	23'-0"	47
57206		1	22'-6"	46
57207		1	22'-1"	45
57208	Str.	1	21'-8"	44

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
57209	Str.	1	21'-3"	43
57210	↑	1	20'-9"	42
57211		1	20'-4"	42
57212		1	19'-11"	41
57213		1	19'-6"	40
57214		1	19'-1"	39
57215		1	18'-7"	38
57216		1	18'-2"	37
57217		1	17'-9"	36
57218		1	17'-4"	35
57219		1	16'-10"	34
57220		1	16'-5"	34
57221		1	16'-0"	33
57222		1	15'-7"	32
57223		1	15'-2"	31
57224		1	14'-8"	30
57225		1	14'-3"	29
57226		1	13'-10"	28
57227		1	13'-5"	27
57228		1	12'-11"	26
57229		1	12'-6"	26
57230		1	12'-1"	25
57231		1	11'-8"	24
57232		1	11'-2"	23
57233		1	10'-9"	22
57234		1	10'-4"	21
57235		1	9'-11"	20
57236		1	9'-6"	19
57237		1	9'-0"	18
57238		1	8'-7"	18
57239		1	8'-2"	17
57240		1	7'-9"	16
57241		1	7'-3"	15
57242		1	6'-10"	14
57243		1	6'-5"	13
57244		1	6'-0"	12
57245		1	5'-6"	11
57246		1	5'-1"	10
57247		1	4'-8"	10
57248		1	4'-3"	9
57249		1	3'-8"	7
57250		1	6'-2"	13
57251		1	5'-9"	12
57252		5	4'-0"	41
57253		1	4'-5"	9
57254		1	4'-10"	10
57255		1	5'-3"	11
57256		1	5'-8"	12
57257		1	6'-1"	12
57258		1	6'-6"	13
57259		1	6'-11"	14
57260		1	7'-3"	15
57261		1	7'-8"	16
57262		1	8'-1"	17
57263		1	8'-6"	17
57264		1	8'-11"	18
57265		1	9'-3"	19
57266		1	9'-8"	20
57267		1	10'-1"	21
57268		1	10'-6"	21
57269		1	10'-11"	22
57270		1	11'-3"	23
57271		1	11'-8"	24
57272		1	12'-1"	25
57273		1	12'-6"	26
57274		1	12'-11"	26
57275		1	13'-3"	27
57276		1	13'-8"	28
57277		1	14'-1"	29
57278		1	14'-6"	30
57279		1	14'-11"	30
57280		1	15'-4"	31
57281		1	15'-9"	32
57282		1	16'-2"	33
57283		1	16'-7"	34
57284		1	16'-11"	35
57285		1	17'-4"	35
57286		1	17'-9"	36
57287		1	18'-2"	37
57288		1	18'-7"	38
57289		1	18'-11"	39
57290		1	19'-4"	40
57291	Str.	1	19'-9"	40

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
57292	Str.	1	20'-2"	41
57293	↑	1	20'-7"	42
57294		1	20'-11"	43
57295		1	21'-4"	44
57296		1	21'-9"	44
57297		1	22'-2"	45
57298		1	22'-7"	46
57299		1	22'-11"	47
57300		1	23'-4"	48
57301		1	23'-9"	49
57302		1	24'-2"	49
57303		1	24'-7"	50
57304		1	24'-11"	51
57305		1	25'-4"	52
57306		1	25'-9"	53
57307		1	26'-2"	53
57308		1	26'-7"	54
57309		1	27'-0"	55
57310		1	27'-5"	56
57311		1	27'-10"	57
57312		1	28'-3"	58
57313		1	28'-8"	59
57314		1	29'-0"	59
57315		1	29'-5"	60
57316		1	29'-10"	61
57317		1	30'-3"	62
57318		1	30'-8"	63
57319		1	31'-0"	63
57320		1	31'-5"	64
57321		1	31'-10"	65
57322		1	32'-3"	66
57323		1	32'-8"	67
57324		1	33'-0"	67
57325		1	33'-5"	68
57326		1	33'-10"	69
57327		1	34'-3"	70
57328		1	34'-8"	71
57329		1	35'-0"	72
57330		1	35'-5"	72
57331		1	35'-10"	73
57332		1	5'-3"	11
57333		1	4'-9"	10
57334		1	4'-3"	9
57335		1	8'-6"	17
57336		1	8'-11"	18
57337		1	9'-4"	19
57338		1	9'-9"	20
57339		1	10'-2"	21
57340		1	10'-7"	22
57341		1	11'-0"	22
57342		1	11'-5"	23
57343		1	11'-10"	24
57344		1	12'-3"	25
57345		1	12'-7"	26
57346		1	13'-1"	27
57347		1	13'-6"	28
57348		1	13'-11"	28
57349		1	14'-4"	29
57350		1	14'-8"	30
57351		1	15'-1"	31
57352		1	15'-6"	32
57353		1	15'-11"	33
57354		1	16'-4"	33
57355		1	16'-9"	34
57356	Str.	1	17'-2"	35

NOTE:
Work this sheet with Typical Drawing No. 4, Sht. No. 446

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

REINFORCING STEEL LIST
BRIDGE NO. HAM-71-0173
(SHEET NO. 2 OF 4)
H&E BRIDGE NO. 8L&R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	TLZ		1-27-65 GLW	W.A.S. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

372
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S7357	Str.	1	17'-7"	36
S7358		1	18'-0"	37
S7359		1	18'-5"	38
S7360		1	18'-10"	38
S7361		1	19'-3"	39
S7362		1	19'-7"	40
S7363		1	20'-1"	41
S7364		1	20'-6"	42
S7365		1	20'-10"	43
S7366		1	21'-3"	43
S7367		1	21'-7"	44
S7368		1	22'-1"	45
S7369		1	22'-6"	46
S7370		1	22'-11"	47
S7371		1	23'-4"	48
S7372		1	23'-9"	49
S7373		1	24'-2"	49
S7374		1	24'-7"	50
S7375		1	25'-0"	51
S7376		1	25'-5"	52
S7377		1	25'-10"	53
S7378		1	26'-3"	54
S7379		1	26'-7"	54
S7380		1	27'-0"	55
S7381		1	27'-5"	56
S7382		1	27'-10"	57
S7383		1	28'-3"	58
S7384		1	28'-7"	58
S7385		1	29'-1"	59
S7386		1	29'-6"	60
S7387		1	29'-11"	61
S7388		1	30'-4"	62
S7389		1	30'-9"	63
S7390		1	31'-2"	64
S7391		1	31'-7"	65
S7392		1	32'-0"	65
S7393		1	32'-5"	66
S7394		1	32'-10"	67
S7395		1	33'-2"	68
S7396		1	33'-7"	69
S7397		1	34'-0"	69
S7398		1	34'-5"	70
S7399		1	34'-10"	71
S7400		1	35'-3"	72
S7401		1	35'-8"	73
S7402		1	36'-1"	74
S7403		1	36'-6"	75
S7404		1	36'-11"	75
S7405		1	37'-4"	76
S7406		1	37'-9"	77
S7407		1	38'-2"	78
S7408		1	38'-7"	79
S7409		1	39'-0"	80
S7410		1	39'-4"	80
S7411		1	39'-9"	81
S7412		273	40'-0"	22,345
S7413		1	30'-2"	62
S7414		1	30'-7"	63
S7415		1	31'-0"	63
S7416		1	31'-5"	64
S7417		1	31'-10"	65
S7418		1	32'-3"	66
S7419		1	32'-8"	67
S7420		1	33'-1"	68
S7421		1	33'-6"	68
S7422		1	33'-11"	69
S7423		1	34'-4"	70
S7424		1	34'-9"	71
S7425		1	35'-2"	72
S7426		1	35'-7"	73
S7427		1	36'-0"	74
S7428		1	36'-5"	74
S7429		1	36'-10"	75
S7430		1	37'-3"	76
S7431		1	37'-7"	77
S7432		28	39'-9"	2275
S7433		28	39'-2"	2242
S7434		28	38'-7"	2208
S7435		28	38'-0"	2175
S7436		28	37'-5"	2141
S7437		28	36'-10"	2108
S7438		100	36'-3"	7410
S7439	Str.	1	38'-11"	80

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S7440	Str.	1	38'-6"	79
S7441		1	38'-0"	78
S7442		1	37'-6"	77
S7443		1	37'-0"	76
S7444		1	36'-6"	75
S7445		1	36'-0"	74
S7446		1	35'-6"	73
S7447		1	35'-0"	72
S7448		1	34'-6"	71
S7449		1	34'-2"	70
S7450		1	33'-9"	69
S7451		1	33'-3"	68
S7452		1	32'-9"	67
S7453		1	32'-3"	66
S7454		1	31'-9"	65
S7455		1	31'-4"	64
S7456		1	30'-10"	63
S7457		1	30'-4"	62
S7458		1	29'-11"	61
S7459		1	29'-5"	60
S7460		1	29'-0"	59
S7461		1	28'-6"	58
S7462		1	28'-0"	57
S7463		1	27'-6"	56
S7464		1	27'-0"	55
S7465		1	26'-7"	54
S7466		1	26'-1"	53
S7467		1	25'-8"	52
S7468		1	25'-2"	51
S7469		1	24'-8"	50
S7470		1	24'-2"	49
S7471		1	23'-8"	48
S7472		1	23'-2"	47
S7473		1	22'-9"	47
S7474		1	22'-3"	45
S7475		1	21'-10"	45
S7476		1	21'-4"	44
S7477		1	20'-10"	43
S7478		1	20'-5"	42
S7479		1	19'-11"	41
S7480		1	19'-6"	40
S7481		1	19'-0"	39
S7482		1	18'-6"	38
S7483		1	18'-1"	37
S7484		1	17'-7"	36
S7485		1	17'-2"	35
S7486		1	16'-8"	34
S7487		1	16'-2"	33
S7488		1	15'-8"	32
S7489		1	15'-2"	31
S7490		1	14'-9"	30
S7491		1	14'-3"	29
S7492		1	13'-9"	28
S7493		1	13'-4"	27
S7494		1	12'-10"	26
S7495		1	12'-5"	25
S7496		1	11'-11"	24
S7497		1	11'-5"	23
S7498		1	10'-11"	22
S7499		1	10'-5"	21
S7500		1	10'-0"	20
S7501		1	9'-6"	19
S7502		1	9'-0"	18
S7503		1	8'-7"	18
S7504		1	8'-1"	17
S7505		1	7'-8"	16
S7506		1	7'-2"	15
S7507		1	6'-8"	14
S7508		1	6'-2"	13
S7509		1	39'-4"	80
S7510		1	38'-10"	79
S7511		1	38'-4"	78
S7512		1	37'-10"	77
S7513		1	37'-4"	76
S7514		1	36'-10"	75
S7515		1	36'-3"	74
S7516		1	35'-11"	73
S7517		1	35'-5"	72
S7518		1	34'-11"	71
S7519		1	34'-6"	71
S7520		1	34'-0"	69
S7521		1	33'-6"	68
S7522	Str.	1	33'-0"	67

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S7523	Str.	1	32'-7"	67
S7524		1	32'-1"	66
S7525		1	31'-7"	65
S7526		1	31'-1"	65
S7527		1	30'-8"	63
S7528		1	30'-2"	62
S7529		1	29'-8"	61
S7530		1	29'-2"	60
S7531		1	28'-9"	59
S7532		1	28'-3"	58
S7533		1	27'-9"	57
S7534		1	27'-3"	56
S7535		1	26'-10"	55
S7536		1	26'-4"	54
S7537		1	25'-10"	53
S7538		1	25'-4"	52
S7539		1	24'-11"	51
S7540		1	24'-5"	50
S7541		1	23'-11"	49
S7542		1	23'-5"	48
S7543		1	23'-0"	47
S7544		1	22'-6"	46
S7545		1	22'-0"	45
S7546		1	21'-6"	44
S7547		1	21'-1"	43
S7548		1	20'-7"	42
S7549		1	20'-1"	41
S7550		1	19'-7"	40
S7551		1	19'-2"	39
S7552		1	18'-8"	38
S7553		1	18'-2"	37
S7554		1	17'-8"	36
S7555		1	17'-3"	35
S7556		1	16'-9"	34
S7557		1	16'-3"	33
S7558		1	15'-9"	32
S7559		1	15'-4"	31
S7560		1	14'-10"	30
S7561		1	14'-4"	29
S7562		1	13'-10"	28
S7563		1	13'-5"	27
S7564		1	12'-11"	26
S7565		1	12'-5"	25
S7566		1	11'-11"	24
S7567		1	11'-6"	24
S7568		1	11'-0"	22
S7569		1	10'-6"	21
S7570		1	10'-0"	20
S7571		1	9'-7"	20
S7572		1	9'-1"	19
S7573		1	8'-7"	18
S7574		1	8'-1"	17
S7575		1	7'-8"	16
S7576		1	7'-2"	15
S7577	Str.	1	6'-8"	14
S7578	61	4	5'-9"	47
S7579	49	4	6'-2"	50
S7580	58	4	10'-4"	84
H501	Str.	48	17'-5"	★
H502	Str.	4	23'-0"	★
H503	Str.	4	14'-2"	★
H504	Str.	4	13'-6"	★
H505	Str.	32	17'-4"	★
H506	Str.	4	21'-2"	★
H507	Str.	4	20'-3"	★
H508	Str.	20	16'-10"	★
H509	58	4	8'-1"	★

Total Super. = 317,811 Pounds

NORTH ABUTMENT

Mark	Type	No.	Length	Weight
N501	Str.	74	30'-0"	2315
N502	Str.	11	17'-9"	204
N503	1	36	4'-2"	156
N504	32	10	5'-9"	60
N505	62	3	6'-10"	21
N506	—	—	—	—
N507	62	4	9'-2"	38
N508	Str.	22	21'-0"	482
N509	Str.	6	11'-3"	70
N510	Str.	19	28'-6"	565
N511	20	1	7'-11"	8
N512	Str.	3	13'-6"	42
N513	Str.	1	11'-0"	11
N514	Str.	6	4'-6"	28
N515	Str.	11	3'-0"	34
N516	Str.	3	3'-6"	11
N517	Str.	2	4'-3"	9
N518	Str.	2	4'-9"	10
N519	Str.	2	5'-8"	12
N520	Str.	2	6'-5"	14
N521	Str.	8	10'-8"	89
N522	Str.	8	5'-3"	44
N523	Str.	2	7'-9"	16
N524	Str.	2	10'-9"	22
N525	Str.	2	13'-9"	29
N526	Str.	12	14'-8"	184
N527	Str.	5	10'-0"	52
N528	52	1	9'-4"	10
N529	52	1	4'-1"	4
N530	Str.	3	14'-6"	45
N531	Str.	18	33'-6"	629
N532	Str.	5	11'-8"	61
N533	Str.	1	14'-2"	15
N534	Str.	2	6'-3"	13
N535	Str.	2	5'-8"	12
N536	Str.	2	5'-1"	11
N537	Str.	2	4'-4"	9
N538	Str.	2	3'-8"	8
N539	Str.	1	11'-9"	12
N540	Str.	1	17'-11"	19
N541	Str.	1	16'-9"	17
N542	Str.	1	19'-8"	21
N543	Str.	5	18'-6"	96
N544	20	8	5'-6"	46
N545	Str.	1	21'-3"	22
N546	Str.	1	26'-0"	27

NORTH ABUTMENT

Mark	Type	No.	Length	Weight
N547	Str.	1	12'-6"	13
N548	Str.	1	8'-8"	9
N549	Str.	1	19'-0"	20
N550	Str.	1	13'-0"	14
N551	Str.	1	25'-6"	27
N552	32	13	5'-7"	76
N553	32	8	7'-0"	58
N554	52	1	11'-11"	12
N555	Str.	4	5'-0"	21
N601	4	38	20'-3"	1156
N602	Str.	1	8'-10"	13
N603	18	146	12'-10"	2814
N604	Str.	39	13'-0"	762
N605	18	146	8'-7"	1882
N606	7	178	17'-11"	4790
N607	Str.	30	29'-6"	1329
N608	1	31	8'-9"	407
N609	Str.	3	7'-9"	35
N610	Str.	2	25'-6"	77
N611	1	90	7'-3"	980
N612	Str.	2	11'-5"	34
N613	Str.	1	11'-2"	17
N614	1	146	6'-6"	1425
H507	Str.	4	14'-8"	★
H508	Str.	4	18'-6"	★

Total N.Abut. = 21,574 Pounds

★ Reinforcing bar mark "H" are included in Item 5-14 (Railing) for payment.

NORTH ABUTMENT

Mark	a	b	c	d	e	f	g
N503	1'-5"	1'-6"					
N504	0'-10"	2'-2"					
N505	1'-5¼"	0'-5¼"	3'-10"	1'-6"			
N506							
N507	1'-5¼"	0'-5¼"	6'-2"	1'-6"			
N511	4'-2½"	3'-11"	5'-0"				
N528	7'-3"	0'-2"	1'-7"	0'-6½"	0'-6"		
N529	2'-0"	0'-2"	1'-7"	0'-6½"	0'-6"		
N544	0'-11"	4'-0"	1'-6"	1'-2¼"			
N552	0'-8"	2'-2"					
N554	9'-10"	0'-2"	1'-7"	0'-6½"	0'-6"		
N601	1'-5"	8'-0"	2'-0"	1'-5"	8'-0"		
N603	5'-3"	7'-9"					
N605	1'-0"	7'-9"					
N606	0'-11"	8'-0"	1'-6"	1'-5"	6'-8"		
N608	1'-2"	3'-11"					
N611	3'-7"	2'-0"					
N614	3'-7"	1'-7"					

SUPERSTRUCTURE

Mark	a	b	c	d	e	f
S401	1'-0½"	0'-8"	0'-6"	0'-6"		
S501	0'-7½"	1'-4"	1'-8"			
S502	1'-8"	0'-7½"				
S503	0'-10"	2'-2"				
S504	1'-0¾"	1'-1"	0'-7½"	1'-0½"	1'-9"	0'-2"
S505	1'-11"	0'-4"				
S506	1'-0¾"	1'-1"	0'-7½"	1'-0½"	2'-9"	0'-2"
S507	2'-11"	0'-4"				
S508	0'-8"	2'-2"				
S509	0'-7½"	1'-4"	1'-6"			
S510	1'-6"	0'-7½"				
S513	1'-0¾"	1'-1"	0'-7½"	1'-0½"	3'-2"	0'-3"
S514	1'-0¾"	1'-1"	0'-7½"	1'-0½"	2'-10"	0'-3"
S515	3'-5"	0'-4"				
S516	3'-1"	0'-4"				
S517	1'-0¾"	1'-1"	0'-7½"	1'-0½"	4'-7"	0'-3"
S518	4'-10"	0'-4"				
S519	1'-0¾"	1'-1"	0'-7½"	1'-0½"	1'-8"	0'-2"
S520	1'-10"	0'-4"				
S521	2'-2"	1'-10"	2'-2"	2'-1"		

Mark	a	b	c	d	e	f	g	h	i
S7578	0'-5"	1'-4"	2'-11"						
S7579	2'-5"	1'-10½"	1'-3¾"	1'-4"	0'-6"	1'-9"			
S7580	1'-8"	2'-6"	3'-9"	2'-6"	0'-9"	2'-9"	2'-9"	3'-9"	0'-9"
H509	1'-8"	1'-9½"	2'-7½"	1'-9½"	0'-9"	1'-11"	1'-11"	2'-7½"	0'-9"

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

REINFORCING STEEL LIST
BRIDGE NO. HAM-71-0173
(SHEET NO 3 OF 4)

H&E BRIDGE NO. 8L&R

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
	TLZ		1-22-68 GLW	11-13-, 5-28-65	

NOTE:
Work this sheet with Typical Drawing No. 4 Sht No. 446

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

373
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

SOUTH ABUTMENT

Mark	Type	No.	Length	Weight
A501	Str.	93	30'-0"	2910
A502	Str.	54	21'-3"	1197
A503	52	1	6'-1"	6
A504	52	1	8'-1"	8
A505	17	4	7'-4"	31
A506	Str.	18	17'-6"	329
A507	Str.	1	33'-6"	35
A508	Str.	1	16'-6"	17
A509	20	1	7'-3"	8
*A510	Str.	1	35'-0"	37
A511	40	2	5'-9"	12
A512	Str.	1	15'-0"	16
A513	12	4	4'-11"	21
A514	12	4	7'-2"	30
A515	62	4	9'-7"	40
A516	62	4	7'-4"	31
A517	Str.	8	4'-6"	38
A518	Str.	2	3'-0"	6
A519	Str.	3	14'-6"	45
A520	Str.	1	11'-0"	11
A521	Str.	5	12'-0"	63
A522	Str.	2	3'-6"	7
A523	Str.	2	4'-0"	8
A524	Str.	2	4'-7"	10
A525	Str.	2	5'-2"	11
A526	Str.	2	5'-9"	12
A527	32	14	5'-7"	82
A528	Str.	8	11'-6"	96
A529	Str.	8	15'-7"	130
A530	Str.	10	5'-3"	55
A531	Str.	2	7'-6"	16
A532	Str.	2	11'-0"	23
A533	Str.	5	6'-3"	33
A534	1	18	4'-2"	78
A535	Str.	1	14'-0"	15
A536	Str.	1	11'-6"	12
A537	Str.	1	18'-9"	19
A538	52	1	10'-4"	11
A539	52	1	3'-7"	4
A540	17	4	5'-0"	21
A541	Str.	18	32'-4"	607
A542	Str.	1	14'-6"	15
A543	Str.	1	19'-9"	21
A544	2	4	6'-6"	27

SOUTH ABUTMENT

Mark	Type	No.	Length	Weight
A601	4	76	20'-3"	2312
A602	7	166	17'-11"	4467
A603	18	179	8'-7"	2330
A604	18	174	12'-10"	3354
A605	1	96	7'-3"	1045
A606	4	14	21'-3"	447
A607	Str.	32	30'-0"	1442
A608	1	174	6'-6"	1699
A609	Str.	11	9'-0"	149
A610	Str.	9	8'-6"	115
A611	1	16	8'-9"	210
A612	Str.	16	13'-6"	324
A613	Str.	2	12'-8"	38
A614	Str.	4	26'-0"	156
H509	Str.	4	15'-10"	*
H510	Str.	4	2'-1"	*

Total S. Abut. = 24,292 Pounds

SOUTH ABUTMENT

Mark	a	b	c	d	e
A503	4'-0"	0'-2"	1'-7"	0'-6½"	0'-6"
A504	6'-0"	0'-2"	1'-7"	0'-6½"	0'-6"
A505	2'-0"	1'-1½"	2'-0"	1'-8"	3'-6"
A509	3'-1¼"	3'-6"	3'-9"	2'-1¼"	
A511	0'-7"	1'-6"	1'-7"	1'-7"	
A513	1'-9"	1'-5"	0'-11½"	1'-5½"	1'-9"
A514	1'-9"	1'-5"	2'-3"	3'-3¾"	4'-0"
A515	1'-6"	0'-5½"	6'-5"	1'-7"	
A516	1'-6"	0'-5½"	4'-2"	1'-7"	
A527	0'-8"	2'-2"			
A534	1'-5"	1'-6"			
A538	8'-3"	0'-2"	1'-7"	0'-6½"	0'-6"
A539	1'-6"	0'-2"	1'-7"	0'-6½"	0'-6"
A540	1'-2"	1'-4½"	2'-6"	2'-1¾"	1'-6"
A544	3'-7"	0'-4½"	1'-7"	3'-7"	1'-7"
A601	1'-5"	8'-0"	2'-0"	1'-5"	8'-0"
A602	0'-11"	8'-0"	1'-6"	1'-5"	6'-8"
A603	1'-0"	7'-9"			
A604	5'-3"	7'-9"			
A605	3'-7"	2'-0"			
A606	1'-5"	8'-6"	2'-0"	1'-5"	8'-6"
A608	3'-7"	1'-7"			
A611	1'-2"	3'-11"			

REPLACEMENT BARS

Mark	Type	No	Length
RE401	Str.	1	5'-3"
RE501	Str.	2	5'-7"
RE601	Str.	12	5'-11"
RE701	Str.	6	6'-3"
RE801	Str.	2	6'-6"
RE901	Str	1	6'-10"
RE1101	Str.	5	7'-7"

*Reinforcing bar mark "H" are included in Item S-14 (Railing) for payment.

PIERS

Mark	Type	Bending a	Bending b	Bending c	No. Pier 1	No. Pier 2	No. Total	Length	Weight
P401	1	2'-8"	1'-0"		36	44	80	4'-5"	236
		a	Pitch	No. of Turns					
* P402	64	2'-7"	0'-4½"	36	-	2	2	12'-6"	466
* P403	64	2'-7"	0'-4½"	35	-	1	1	11'-11"	222
* P404	64	2'-7"	0'-4½"	34	-	1	1	11'-7"	216
* P405	64	2'-7"	0'-4½"	33	-	1	1	11'-2"	208
* P406	64	2'-7"	0'-4½"	46	-	1	2	16'-2"	603
* P407	64	2'-7"	0'-4½"	45	1	1	2	15'-9"	587
* P408	64	2'-7"	0'-4½"	44	1	1	2	15'-5"	575
* P409	64	2'-7"	0'-4½"	43	-	2	2	15'-1"	563
* P410	64	2'-7"	0'-4½"	40	-	1	1	13'-10"	258
* P411	64	2'-7"	0'-4½"	39	-	1	1	13'-6"	252
* P412	64	2'-7"	0'-4½"	38	-	1	1	13'-2"	246
* P413	64	2'-7"	0'-4½"	37	-	1	1	12'-10"	239
* P414	64	2'-7"	0'-4½"	42	-	1	1	14'-6"	270
* P415	64	2'-7"	0'-4½"	41	-	1	1	14'-4"	267
* P416	64	2'-7"	0'-4½"	53	2	-	2	18'-10"	702
* P417	64	2'-7"	0'-4½"	52	2	-	2	18'-6"	690
* P418	64	2'-7"	0'-4½"	71	1	-	1	25'-6"	476
* P419	64	2'-7"	0'-4½"	67	1	-	1	24'-0"	448
* P420	64	2'-7"	0'-4½"	63	1	-	1	22'-7"	421
* P421	64	2'-7"	0'-4½"	59	1	-	1	21'-1"	393
* P422	64	2'-7"	0'-4½"	51	2	-	2	18'-1"	675
* P423	64	2'-7"	0'-4½"	50	1	-	1	17'-6"	326
* P424	64	2'-7"	0'-4½"	49	1	-	1	17'-1"	319
* P425	64	2'-7"	0'-4½"	47	1	-	1	16'-7"	309
		a	b	c					
P501	1	2'-1"	2'-7"		152	1016	1168	7'-0"	8528
P502	1	2'-2"	2'-7"		472	-	472	7'-1"	3487
P503	1	1'-9"	2'-7"		324	-	324	6'-8"	2253
P504	1	2'-8"	1'-0"		96	96	192	4'-5"	884
P701	Str.				-	10	10	27'-3"	557
P702	Str.				-	4	4	38'-5"	314
P703	Str.				-	2	2	19'-6"	80
P704	Str.				8	-	8	29'-4"	480
P705	Str.				4	-	4	25'-2"	206
P706	Str.				6	-	6	28'-4"	347
P801	43	9'-6"			336	420	756	11'-8"	23549
P803	Str.				192	-	192	11'-6"	5895
P901	43	10'-6"			-	19	19	13'-0"	840
P902	43	13'-0"			-	15	15	15'-6"	791
		a	b	radius					
P1101	18	3'-5"	26'-7"		-	3	3	29'-8"	473
P1102	Str.				-	7	7	26'-7"	989
P1103	Str.				-	8	8	12'-9"	542
P1104	Str.				-	7	7	30'-6"	1134
P1105	Str.				-	17	17	18'-6"	1671
P1106	6	3'-6"	3'-7"	1'-0½"	2	4	6	10'-8"	340
P1107	18	3'-5"	30'-5"		-	5	5	33'-6"	890
P1108	18	1'-0"	6'-4"		184	146	330	7'-0"	12273
P1109	18	3'-3"	31'-6"		-	6	6	34'-5"	1097
P1110	Str.				-	4	4	31'-6"	669
P1111	Str.				-	5	5	19'-1"	507
P1112	Str.				-	10	10	16'-9"	890
P1113	Str.				-	2	2	9'-0"	96
P1114	Str.				8	15	23	27'-3"	3330
P1115	Str.				-	5	5	35'-4"	939
P1116	Str.				-	2	2	33'-6"	356
P1117	18	3'-0"	27'-6"		-	3	3	30'-2"	481
P1118	Str.				-	7	7	27'-6"	1023
P1119	Str.				-	13	13	15'-3"	1053

PIERS

Mark	Type	Bending a	Bending b	Bending radius	No. Pier 1	No. Pier 2	No. Total	Length	Weight
P1120	18	3'-0"	20'-7"		-	3	3	23'-3"	370
P1121	Str.				8	16	24	20'-7"	2625
P1122	18	3'-0"	32'-1"		-	3	3	34'-9"	554
P1123	Str.				-	4	4	32'-1"	682
P1124	Str.				-	36	36	16'-1"	3076
P1125	18	3'-7"	24'-11"		-	5	5	28'-2"	748
P1126	Str.				2	16	18	14'-9"	1411
P1127	Str.				12	-	12	20'-0"	1275
P1128	Str.				-	8	8	19'-3"	818
P1129	Str.				14	8	22	19'-0"	2221
P1130	Str.				-	8	8	18'-8"	793
P1131	Str.				-	16	16	17'-5"	1481
P1132	Str.				5	8	13	16'-6"	1140
P1133	Str.				4	-	4	32'-0"	680
P1135	18	1'-0"	6'-10"		-	20	20	7'-6"	797
P1136	Str.				2	-	2	18'-1"	192
P1137	Str.				-	28	28	17'-9"	2641
P1138	18	3'-0"	33'-10"		14	-	14	36'-6"	2715
P1139	Str.				4	-	4	33'-0"	719
P1140	18	3'-5"	27'-3"		5	-	5	30'-4"	806
P1141	Str.				23	-	23	29'-1"	3554
P1142	Str.				10	-	10	31'-5"	1669
P1143	Str.				8	-	8	22'-6"	956
P1144	Str.				13	-	13	22'-5"	1548
P1145	Str.				20	-	20	22'-1"	2347
P1146	18	3'-5"	35'-8"		3	-	3	38'-9"	618
P1147	18	3'-7"	25'-5"		5	-	5	28'-8"	762
P1148	Str.				2	-	2	35'-8"	379
P1149	Str.				12	-	12	29'-2"	1860
P1150	Str.				8	-	8	26'-2"	1112
P1151	Str.				8	-	8	24'-8"	1048
P1152	18	3'-2"	17'-9"		3	-	3	20'-7"	328
P1153	Str.				8	-	8	22'-7"	960
P1154	Str.				40	-	40	21'-3"	4516
P1155	Str.				20	-	20	21'-1"	2240
P1156	Str.				20	-	20	20'-10"	2214
P1157	Str.				10	8	18	19'-9"	1889
P1158	Str.				8	-	8	19'-4"	822
P1159	Str.				4	-	4	29'-4"	623
P1160	Str.				-	8	8	16'-3"	691

Total Weight Piers = 142,811 Lbs.

*Note: SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number.

Note: Work this sheet with Sht. No. 446

MICROFILMED
FEB 20 1965

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

REINFORCING STEEL LIST
BRIDGE NO. HAM-71-0173
(SHEET NO 4 OF 4)
H&E BRIDGE NO. 8L&R

Designed	Drawn	Traced	Checked	Reviewed Date	Revised
	TLZ		JHO 2/9/65	N.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-(1.56) (2.51)

PLAN

PROFILE ON BASE LINE NPS

NOTES

S. Abutment shall be constructed under this contract. The remaining portions of the bridge will be constructed under a future contract.

● Symbol denotes drill hole. For Test Boring Data, see sheets 1, 2 & 10 of 13

For Bench Marks, see sheet 40

CURVE DATA

CURVE No. 6NPS	CURVE No. 7NPS	CURVE No. 8NPS
PI Sta. 159+47.08 NPS	PI Sta. 160+46.05 NPS	PI Sta. 161+64.47 NPS
Δ=0°15'01"	Δ=1°14'59"	Δ=2°07'20"
D=0°15'04"	D=1°16'18"	D=1°31'54"
R=22,816.90'	R=4505.57'	R=3740.75'
L=99.67'	L=98.27'	L=138.56'
T=49.83'	T=49.14'	T=69.29'

CURVE No. 2GF
PI Sta. 35+83.76GF
Δ=73°20'14"
Δ_c=63°35'14"
θ_s=9°45'00"
D=13°00'00"
R=440.74'
L_c=489.13'
T=273.20'
L_s=150.00'

PROPOSED STRUCTURE

TYPE: Continuous Plate Girder (Span 1 & 2) and Simple Span Steel Girder (Span 3) with Reinforced Concrete Deck and Substructure.
SPANS: 117'-0", 118'-6", 84'-0", c/c Bearings measured along base line (NPS).
ROADWAY: Varies (See Plan) with 1'-0" Curb west Side and 3'-8" Safety Curb East Side
SKEW: Varies, (See Plan)
LOADING FREQUENCY: CF=2000 (57) Adequate AASHO alternate loading.
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLAB: AS-1-54 (25' long)
ALIGNMENT: Varies, See Plan
SUPERELEVATION: Varies, See Plan

1984 Traffic Count

	ADT	DHV
a) From IR-71	9300	1540
b) From Ramp GF	7900	1010
Total	17200	2550

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN
BRIDGE No. HAM-471-0072

SOUTHBOUND EXPRESSWAY BRIDGE CONNECTION AND RAMP GF OVER RAMP GD

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	ALT.		H.A.Z.	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SOUTH ABUTMENT
E-2	480	Sq. Ft.	Steel Sheet Piling Left in Place (Min. Sect. Modulus of 7in.^{3} per foot of wall.)	480
E-2	440	Cu. Yds.	Unclassified Excavation	440
S-1	144	Cu. Yds.	Class "E" Concrete, Abutments above Footings	144
S-1	96	Cu. Yds.	Class "E" Concrete, Footing	96
S-3	7	Sq. Yds.	Type "B" Waterproofing	7
S-3	20	Lin. Ft.	Waterproofing, Premolded Sealing Strip	20
S-4	20314	Lbs.	Reinforcing Steel	20314
S-9	20	Lin. Ft.	1" Preformed Expansion Joint Filler (M10.02, Type 1)	20
S-18	1420	Lin. Ft.	Steel Piles, 10BP42	1420
S-29	58	Cu. Yds.	Porous Backfill	58
S-29	18	Lin. Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials)	18
S-29	20	Lin. Ft.	8" Bituminous Coated Helical Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials)	20
S-29	87	Lin. Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)] (Including Specials and Sand)	87
S-29	8	Lin. Ft.	12" Reinforced Concrete Sewer Pipe [Sec. M-6.6 (a.)]	8
I-10	425	Sq. Yds.	Concrete Slope Protection	425
E-2	Lump	Sum	Cofferdams, Cribs and sheeting	Lump

GENERAL NOTES

PILES shall be driven with a hammer of not less than 11,000 ft. lbs per blow to firm contact with limestone. If the length of penetration is approximately equal to the depth of limestone according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.

50 Tons per pile for South Abutment using an 11,000 ft. lb. hammer.
45 Tons per pile for South Abutment using a 15,000 ft. lb. hammer.

If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 Tons per pile.

ADDITIONAL NOTES: For additional notes see Notes 2, 6, & 7 Sh. No. 4-4-3.

Design Loading - CF = 2000(57)
Concrete Class E - basic unit stress, 1,133 psi.
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate, or Hard Grade. Basic unit stress 20,000 psi.

FIRST TEST PILE: Item S-16 in the Estimated Quantities for Bridge No. HAM-71-0173 may be driven at either HAM-71-0173 or HAM-471-0072. Payment will be made for only one first test pile.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ESTIMATED QUANTITIES AND GENERAL NOTES
BRIDGE No. HAM-471-0072

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	⊕		W.L. 3-5-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

1" Expansion Jt. with 1" Jt. Filler and Type B Waterproofing included with this structure for payment

Detail A

Bridge No. HAM-71-0173 (S. ABUT.)

Top of concrete slope protection EL 566.75

77'-2 5/8"

1-A513 | 3" (Typ.) | 1" (Typ.) | Contr. Jt. (Wall Only) | Base Line NPS | 42°-16'-40" | 7-A513@1'-5" (Typ. between brg's.) | 6-A513@6" Under Each Girder (Typ.) | 1-A513 | 8"ϕ W.I. Drain Pipe with 12"x8" Reducer | 3" W.I. pipe (Typ.)

42°-51'-51" (Girder T thru Y) | ℄ Girder (Typ.) | 1'-6" Level (Typ.) | ℄ Brg. S. Abut. Sta. 158+63.09 NPS | Contr. Jt. (Wall Only) | ℄ Brg. | Slope 1/2"/ft. between brg. areas (Typ.) | Steel Sheet Piling | 1'-0" (Typ.)

Prepare end for future premolded sealing strip

Future Ret. Wall

Locate pipe so that it does not interfere with future mosonry plate.

X indicates battered piles

44°-03'-52"

2 Equal Spaces = 24'-3 1/16" | 5'-2 7/8" | 6'-10 11/16" | 9'-9 5/16" | 14'-2 11/16" | 2 Equal Spaces = 24'-3 1/16" | 4'-11 1/8" | 4'-10 1/2" | 24'-0"

23'-3 1/2" | 24'-0" | 28'-10 1/2" | 2'-1 13/16" | 1'-0 5/8" | 76'-2"

Top of concrete slope protection EL. = 548.67

PLAN

Bridge Seat EL. 568.28 | 567.99 | 567.70 | 567.42 | 567.13 | 566.84 | 566.72

EL. 577.50 | EL. 573.77 | EL. 569.20

Upper limits of Type B waterproofing EL. 576.65

1-A528 | 1-A507(NF) | 1-A504(FF) | 7-A503@3'-0"(EF) | Proposed Ground Line at Far Face of Wall | 28'-0" | Upper Limits of Premolded Sealing Strip EL. 571.20 | 25-A608@1'-0"± | Upper limits of Premolded Sealing Strip EL. 567.13 | 1'-11" Min. (Typ.)

EL. 571.20 | 2-A604 | 1-A510(NF) | 1-A533(FF) | 1-A501(EF) | 24-A602@1'-0"

3-A528 Concrete Slope Protection EL. 566.75 | 1-A523 (EF) | 3-A510@2'-0"(NF) | 3-A533@2'-0"(EF) | 3-A506@2'-11"(NF) | 1-A522(FF) | 3-A501@2'-0"(EF) | 2-A524@3'-0"(NF) | 23-A605@1'-0"

1-A606(FF) | 1-A502(EF) | 1-A511(EF)

2-A529@2'-11"(NF) | 4-A531@2'-11"(NF) | 4-A607@2'-11"(FF) | 3-A603@2'-11"(FF) | A526@3'-0"(NF) | 5-A525@3'-0"(NF) | 1-A536(FF) | 1-A508(NF)

El. 561.37 | 4-A522 @1'-6"(FF) | 8-A521@1'-6"(FF) | 4-A520 @1'-6"(FF) | 3-A519@2'-9"(NF) | 6-A518@3'-0"(NF)

6-A505@2'-0±(NF) | 6-A535@2'-0±(FF) | 3-A702 @2'-0"(FF) | 9-A703@2'-0"(FF) | 11-A501@2'-0"(NF) | 11-A527@2'-0"(FF)

Cap End | 1-A530 | 17-A701@1'-5 1/2"(FF) | 8"ϕ Pipe | 0.5% | 1-A802(FF) | 16-A802@1'-6"(FF) | 9-A501@2'-0" (EF)

EL. 555.50 | 1-A803 | 1-A534, 1-A535, 1-A501, & 1-A536 | 1-A803 | 5-A803 (Typ.) | 24-A901@1'-0"(FF) | 24-A1001@1'-0"(FF) | 23-A1002@1'-0"(FF)

Inv. Elevs. Front-547.00 Back-547.05

Inv. Elev. Front 547.00 Back 547.05

12" Reinforced Conc. Sewer Pipe Sec. M-6.6(a)

45-A1101@6"(FF)

Concrete Slope Protection EL. 548.67

Pile Spacing, row 1 | 4 Spaces @ 5'-1" = 20'-4"

Pile Spacing, row 2 and row 3 | 2 Spaces @ 10'-2" = 20'-4"

1-Ea.-A532 thru A535, 1-A501 & 1-A536

16-A530@1'-6"(Top)

EL. 548.00 | 1-A902 | 4-A501 | 7-A501 | 1-A902 | 6-A902 (Typ.)

Pile Spacing, row 1 | 6 Spaces @ 3'-6" = 21'-0"

Pile Spacing, row 2 and row 3 | 3 Spaces @ 7'-0" = 21'-0"

20-A601@1'-3" (Top)

1'-0" (Typ.) 3-A515, 1-A516, & 1-A517 | 6-1003 (7 Groups) | 1-A1009 | 1-A1010 EL. 543.50

1-A1003 | 1-Ea.-A1003 thru A1008 Pile Spacing, row 3

8 Spaces @ 3'-2" = 25'-4" | Pile Spacing, row 1 and 2

17-A801@1'-6"(Top) | 1-Ea.-A804 thru A806 (Top)

6-A515, 1-A516, & 1-A517

Steel Sheet Piling (27# per Sq. ft) Left in Place (Typ.)

Steel Sheet Piling left in place shall have a minimum section modulus of 7 in³ per foot of wall. *Mill test reports not required.*

ELEVATION

PROCEDURE

The existing miscellaneous fill material shall be excavated as shown on sheet 374, then replaced and compacted with embankment material. The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutment. Excavation for the abutment shall not be done until a minimum period of 60 days after completion of the embankment.

Future 8" Downspout | 8" Bituminous Coated Corrugated Metal Pipe (water-tight joints)

Pipe Clamp. | 8" BCCMP

12" Reinforced Concrete Sewer Pipe [Sec. M-6.6(a)]

SECTION H-H

Concrete above Constr. Jt. to be removed for future construction

3" W.I. pipe 5'-0" long located midway between brg. areas as shown on plan. Include with abutment concrete for payment (Typ.)

℄ Brg. | Constr. Jt. | A605 | A513 | A508 | A536 | 1'-9" (Min.) | 45° | Future 8" Pipe (6'-0" Length) | Proposed Ground Line | 8" Bit. Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4(h-c)]

A518 | A703 | A501(NF) | A527(FF) | Concrete Slope Protection | Elev. Varies 6" | A1002 | Porous Backfill A1101 | Constr. Jt. | A8 Bars @ | Sand meeting requirements of Sec. M-2.1. Payment included in price bid for 8" pipe (Typ.)

A515 | A516 | A517 | ℄ Row 1 | ℄ Row 2 | A1003 | ℄ Row 3

1'-6" | 3'-6" | 8'-6" | 15'-0"

SECTION A-A

For Notes see Sheet 377

Work this sheet with sheet 377

HAZELET & ERDAL CONSULTING ENGINEERS CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM-471-0072

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	FN		W.L. 3-5-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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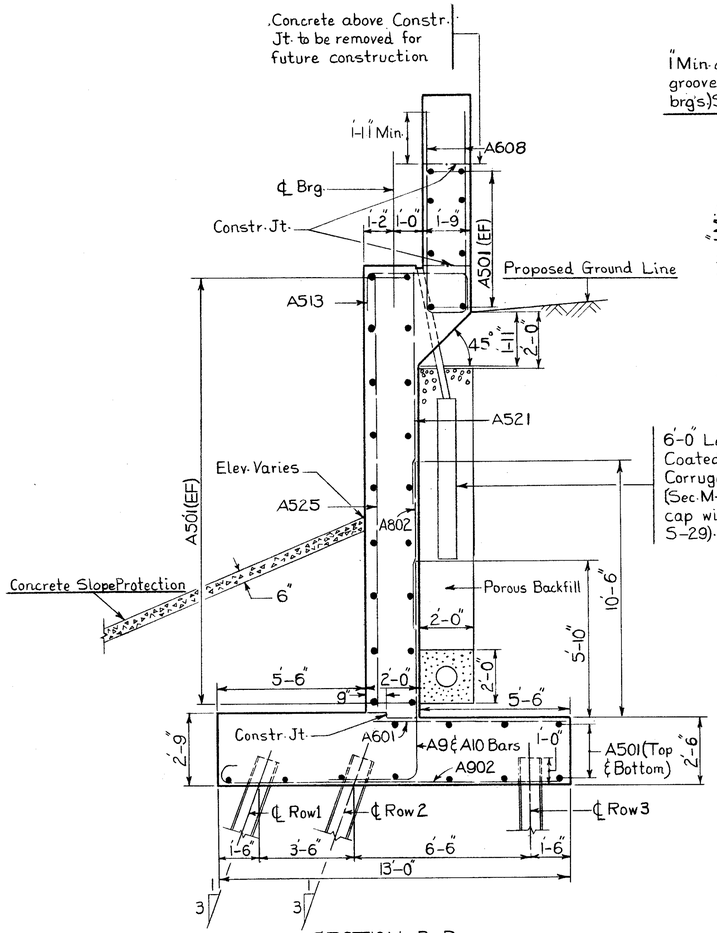
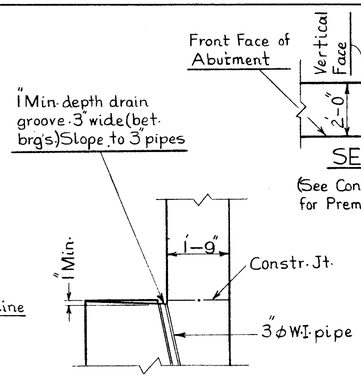
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

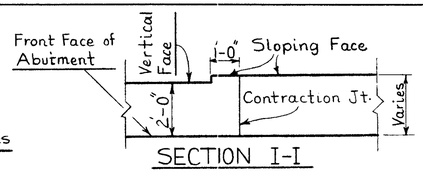


6'-0" Length of 8" Bit. Coated Helical Perforated Corrugated Metal Pipe (Sec. M-6.4(h-c)). Provide cap with 3½" ϕ hole (Item S-29). (Typ.)

SECTION B-B

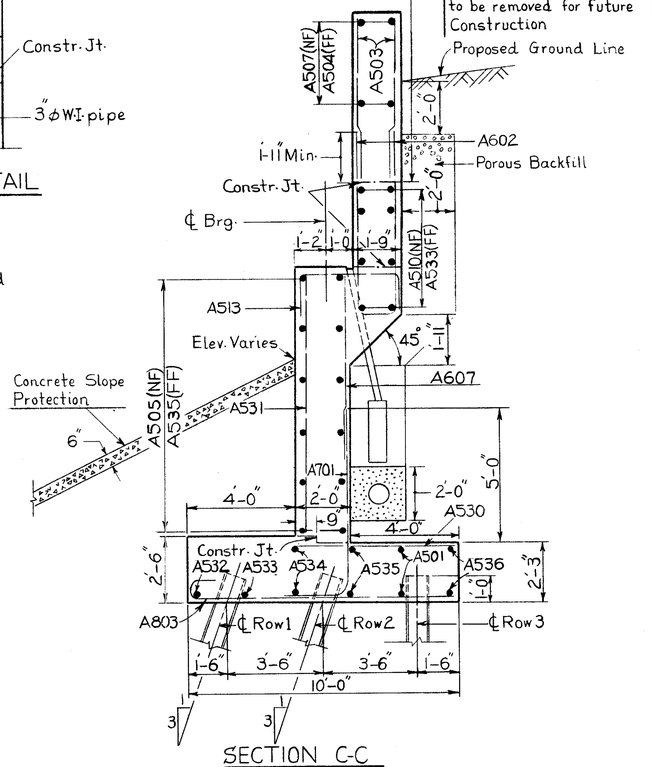


GUTTER DETAIL

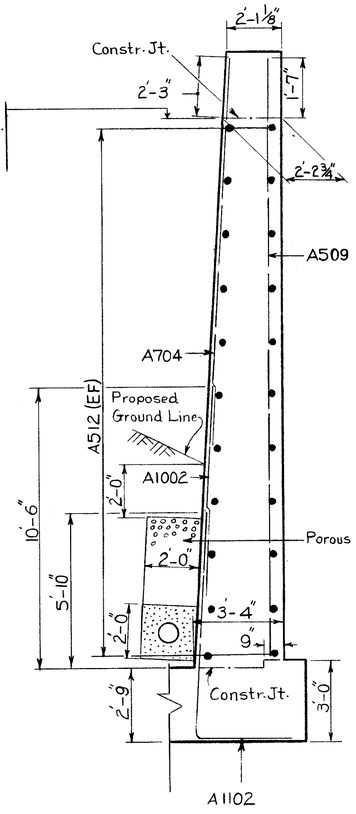


SECTION I-I

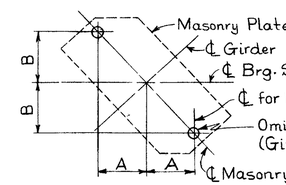
(See Contraction Joint Detail Sh. 406 for Premolded Sealing Strip Details)



SECTION C-C

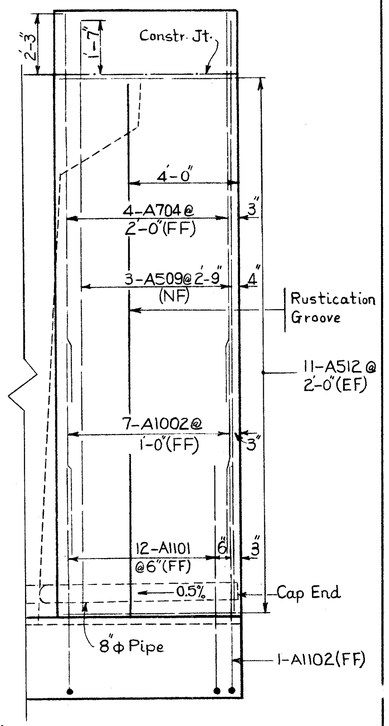


SEC. F-F

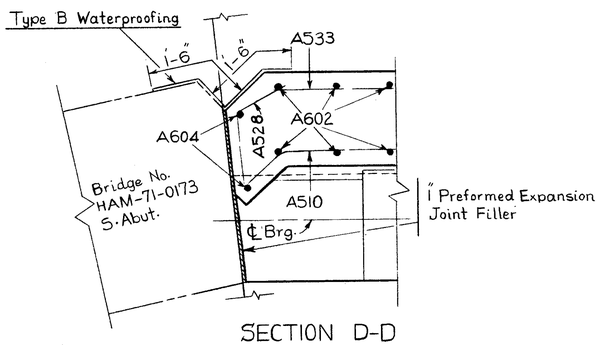


PROPOSED ANCHOR ROD DET.

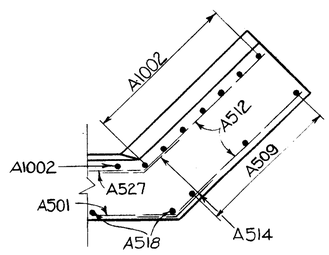
GIRDER	A	B
T thru Y	7 15/16"	8 7/16"
Z	8"	8 1/4"



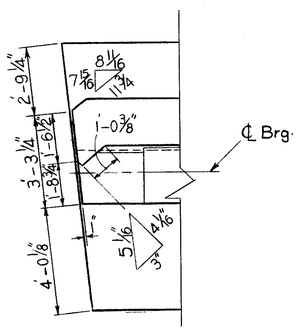
ELEV. GG



SECTION D-D



SEC. EE



DETAIL A

NOTES

EF denotes Each Face
NF denotes Near Face
FF denotes Far Face
Provide 3" clearance to reinforcing steel in footing and 2" clearance to reinforcing steel in wall, minimum.
Special care shall be taken in placing steel in the bridge seat so that it will not interfere with drilling of future anchor rod holes
For Contraction Joint Detail see sheet 406
For Rustication Groove Detail see sheet 393
All piles are 10 BP 42
All concrete shall be Class "E" Concrete
For Abutment Drainage Clamp Detail see sheet 393

Work this sheet with sheet 376

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CINCINNATI, OHIO

SOUTH ABUTMENT

BRIDGE NO. HAM-471-0072

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	FN		W.L. 3-5-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAM-71-(1.56)(2.51)

SOUTH ABUTMENT

MARK	TYPE	a	b	c	d	NO.	LENGTH	WEIGHT
A501	Str.					50	23'-8"	1234
A502	Str.					2	5'-8"	12
A503	Str.					14	6'-2"	90
A504	Str.					2	19'-1"	40
A505	Str.					6	23'-4"	146
A506	Str.					3	9'-6"	30
A507	20	0'-7⅛"	18'-10"	0'-11"	0'-8"	2	19'-9"	41
A508	Str.					1	22'-8"	23
A509	Str.					3	21'-9"	68
A510	20	0'-7⅛"	22'-10"	0'-11"	0'-8"	4	23'-9"	99
A511	Str.					2	5'-11"	12
A512	Str.					22	6'-3"	144
A513	1	3'-7"	1'-7"			81	6'-6"	549
A514	20	1'-2⅛"	1'-9"	1'-9"	1'-3"	22	3'-6"	81
A515	Str.					9	28'-5"	267
A516	Str.					2	26'-10"	56
A517	Str.					2	24'-10"	52
A518	Str.					6	20'-1"	126
A519	Str.					3	20'-6"	64
A520	Str.					4	7'-7"	32
A521	Str.					8	7'-10"	65
A522	Str.					5	8'-2"	43
A523	Str.					2	5'-1"	11
A524	Str.					2	16'-2"	34
A525	Str.					5	16'-6"	86
A526	Str.					2	16'-9"	35
A527	Str.					11	22'-9"	261
A528	20	0'-7"	1'-5"	0'-9"	0'-5¾"	5	2'-2"	11
A529	Str.					2	10'-1"	21
A530	Str.					17	5'-9"	102
A531	Str.					4	9'-10"	41
A532	Str.					1	22'-11"	24
A533	Str.					5	23'-1"	120
A534	Str.					2	23'-3"	48
A535	Str.					8	23'-6"	196
A536	Str.					3	23'-10"	75
A601	Str.					20	7'-3"	218
A602	1	1'-5"	7'-2"			24	15'-5"	556
A603	Str.					3	6'-9"	30
A604	Str.					2	10'-10"	33
A605	1	1'-5"	3'-9"			23	8'-7"	297
A606	Str.					2	7'-4"	22
A607	Str.					4	7'-0"	42
A608	1	1'-5"	7'-9"			25	16'-7"	623
A701	18	2'-3"	7'-0"			17	9'-1"	316
A702	Str.					3	12'-6"	77
A703	Str.					9	12'-1"	222
A704	Str.					4	14'-4"	117

SOUTH ABUTMENT

MARK	TYPE	a	b	c	d	NO.	LENGHT	WEIGHT
A801	Str.					17	8'-6"	386
A802	Str.					17	7'-2"	325
A803	44	9'-6"				24	10'-7"	678
A804	Str.					1	7'-7"	20
A805	Str.					1	6'-0"	16
A806	Str.					1	4'-7"	12
A901	18	2'-10"	8'-1"			24	10'-8"	870
A902	44	12'-6"				40	13'-9"	1870
A1001	18	3'-3"	8'-1"			24	11'-1"	1145
A1002	Str.					30	7'-11"	1022
A1003	44	14'-6"				45	15'-11"	3082
A1004	44	14'-5"				1	15'-10"	68
A1005	44	14'-0"				1	15'-5"	66
A1006	44	13'-7"				1	15'-0"	65
A1007	44	13'-2"				1	14'-7"	63
A1008	44	12'-9"				1	14'-2"	61
A1009	44	11'-8"				1	13'-1"	56
A1010	44	10'-8"				1	12'-1"	52
A1101	19	3'-6⅞"	3'-7"	0'-2⅞"	8'-4"	57	11'-7"	3508
A1102	19	2'-11⅞"	3'-0"	0'-2⅞"	8'-4"	1	11'-0"	38
TOTAL WEIGHT = 20314 LBS.								

REPLACEMENT BARS

MARK	TYPE	NO.	LENGTH
RE501	Str.	1	5'-7"
RE601	Str.	1	5'-11"
RE701	Str.	1	6'-3"
RE801	Str.	1	6'-6"
RE901	Str.	1	6'-10"
RE1001	Str.	1	7'-3"
RE1101	Str.	1	7'-7"

NOTE: Work this Sheet with Sheets No. 446.

NOTE: For Bar Bending Schedule see Typical Drawing, Sht. No. 446.

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REINFORCING STEEL LIST
BRIDGE NO. HAM-471-0072

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	TLZ.		W.L. 3-4-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-(1.56)(2.51)

PLAN

TABLE OF SPAN LENGTH			
Span	Length	Span	Length
1	67.00'	6	87.46'
2	67.28'	7	93.55'
3	62.58'	8	58.42'
4	66.73'	9	107.23'
5	66.73'	10	75.00'

PROFILE ON BASELINE

All piles are Steel Piles 10BP42

CURVE DATA
BASE LINE RAMP GG
P.I. Sta. 40+40.54 GG
P.C. Sta. 34+44.53 GG
P.T. Sta. 42+28.30 GG
Δ = 112°-15'-58"
D = 14°-19'-26"
R = 400.00'
L = 783.77'
T = 596.01'

NOTES
● Symbol denotes drill hole
For Test Boring Data, see sheet 5 & 10 of 13
For Bench Marks, see sheet 40
Piers 6, 7, 8, 9 and the footing only for Pier No. 3 shall be constructed under this contract. The remaining portions of the bridge will be constructed under a future contract.
W. Abutment and Pier 1 are parallel
Piers 2, 3, 4 and 5 are parallel

PROPOSED STRUCTURE
TYPE: Continuous Steel Plate Girders with reinforced concrete deck and substructure
SPANS: Lengths Vary, see tabulation
ROADWAY: 28'-0" ₵/₵ Parapets
CURBS: 1'-0"
LOAD FREQUENCY: CF = 2000(57) Adequate for AASHO alternate loading
SKEW: Varies, See Plan
WEARING SURFACE: 1" Monolithic concrete
APPROACH SLABS: AS-1-54 25' long
ALIGNMENT: Varies, See Plan
SUPERELEVATION: Varies, See Plan

1984 Traffic Count ATD = 6800 DHV = 730

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SITE PLAN
BRIDGE No. HAM-71-0184
FUTURE RAMP GG OVER GILBERT AVE. AND I-71

H & E BRIDGE NO. 10

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	A.L.T.	A.L.T.	H.A.S.	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
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ESTIMATED QUANTITIES

Item	Total	Unit	Description	Pier 3	Pier 6	Pier 7	Pier 8	Pier 9	General	
E-2	295	Cu.Yds.	Unclassified Excavation			40	150	105		
S-1	215	Cu.Yds.	Class "C" concrete, piers above footings		37.7	58.2	58.8	60.3		
S-1	266	Cu.Yds.	Class "E" concrete, footings	39	46.7	69.1	53.3	57.9		
S-4	113,544	Lbs.	Reinforcing steel	6,710	18,718	28,017	29,478	30,616		
S-16	Lump	Sum	First test pile							
S-18	3049	Lin. Ft.	Steel piles 10 BP 42	1539	750	760				
E-2	50	Cu Yds.	Rock (or Shale) Excavation				20	30		

GENERAL NOTES

DESIGN NOTES:
Design Loading CF = 2000 (57)
Concrete Class C - Basic unit stress = 1333 psi
Concrete Class E - Basic unit stress = 1133 psi

Reinforcing Steel - ASTM A15, A16, A160 Deformed Intermediate or Hard Grade. Basic unit stress = 20,000 psi. Except spiral reinforcement may be plain structural grade with basic unit stress = 18,000 psi.

STEEL PILES: shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock or shale. If the length of penetration is approximately equal to the depth of rock or shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Section S-18.05 is not less than the following value for a pile hammer of the indicated energy rating: 60 tons per pile using a 11,000 ft. lb hammer or 50 tons per pile using a 15,000 ft. lb hammer for Piers 3, 6 & 7.
If the energy rating of the hammer is between the rating shown above, the required formula capacity shall be determined by interpolation. The design of Piers 3, 6 & 7 is based on 35 Tons per pile.

ADDITIONAL NOTES: For additional notes see Notes 2, 6 & 7. General Notes, Typical Drawing No 443

FOUNDATION BEARING PRESSURE Piers 8 & 9 footings are designed for a maximum bearing pressure of 3 tons per sq. ft.

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ESTIMATED QUANTITIES & NOTES

BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.U.		R.L.K. 4-15-65	JHO 5/20/05	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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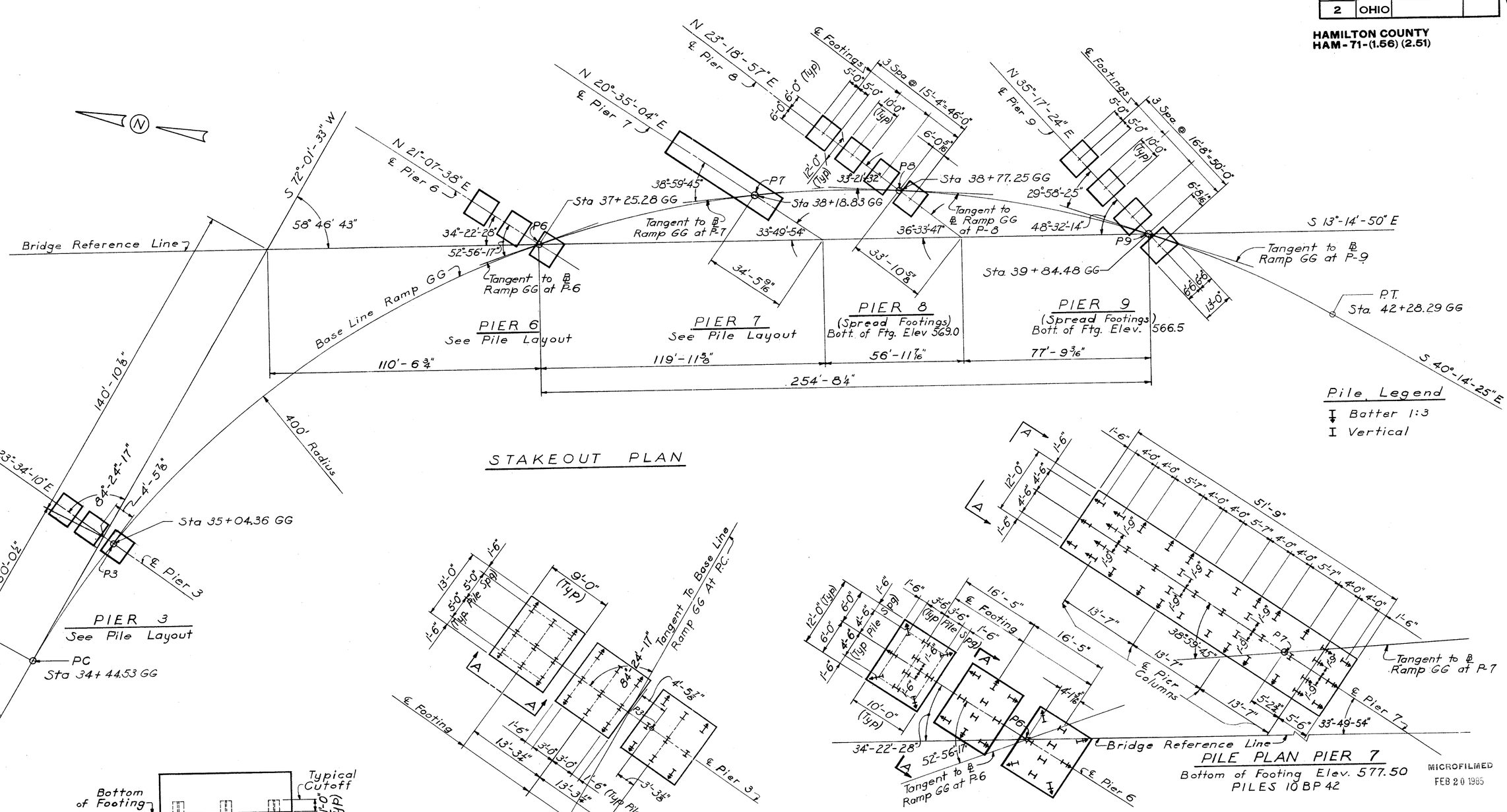
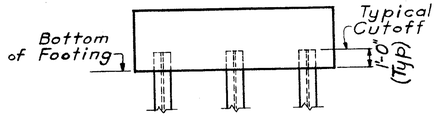
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



STAKEOUT PLAN

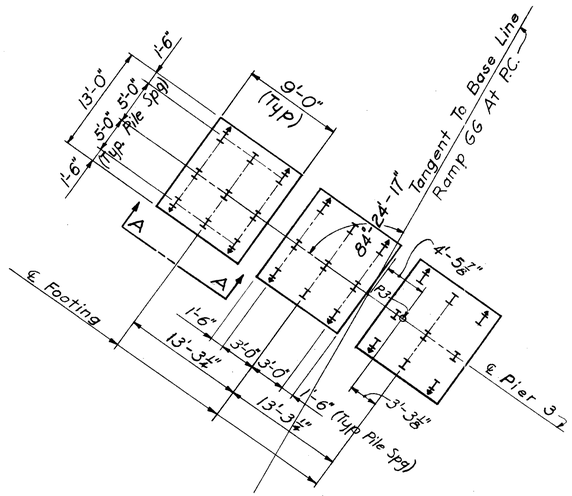
Pile Legend

I Batter 1:3
I Vertical



VIEW A-A

Typical Elevation of Pile Footing



PILE PLAN PIER 3

Bottom of Footing Elev. 576.80
PILES 10BP42

PILE PLAN PIER 7

Bottom of Footing Elev. 577.50
PILES 10BP42

PILE PLAN PIER 6

Bottom of Footing Elev. 579.90
PILES 10BP42

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STAKE OUT PLAN

BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JLO			JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
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HAMILTON COUNTY
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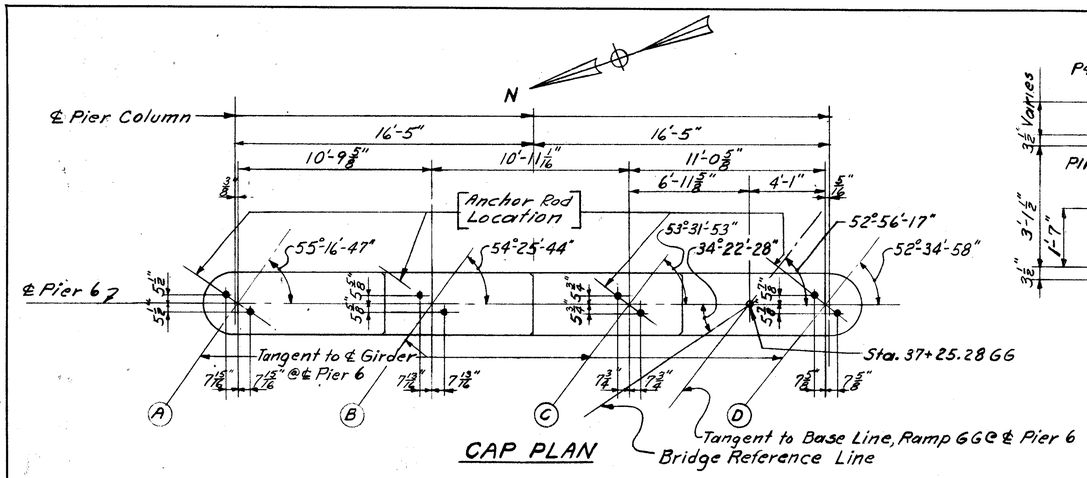
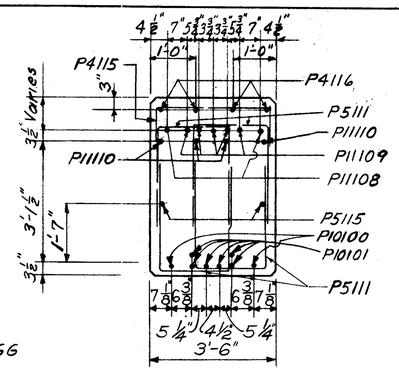
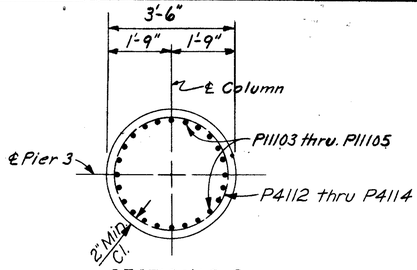


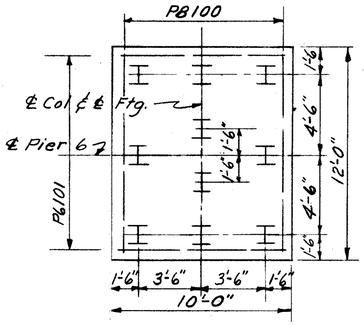
CAP PLAN



SECTION B-B

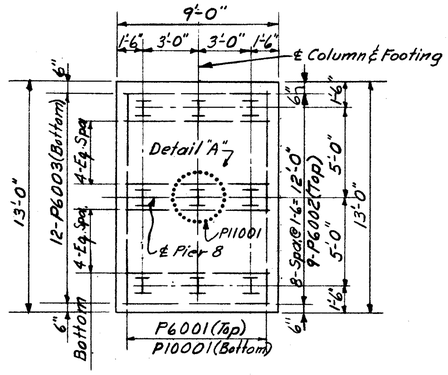


SECTION C-C
TYPICAL COLUMN SECTION



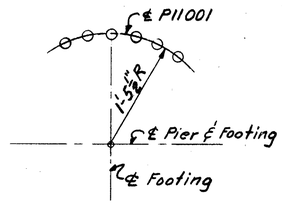
TYPICAL FOOTING PLAN
PIER 6

Note: Pile Batter not shown See Stake Out Plan.

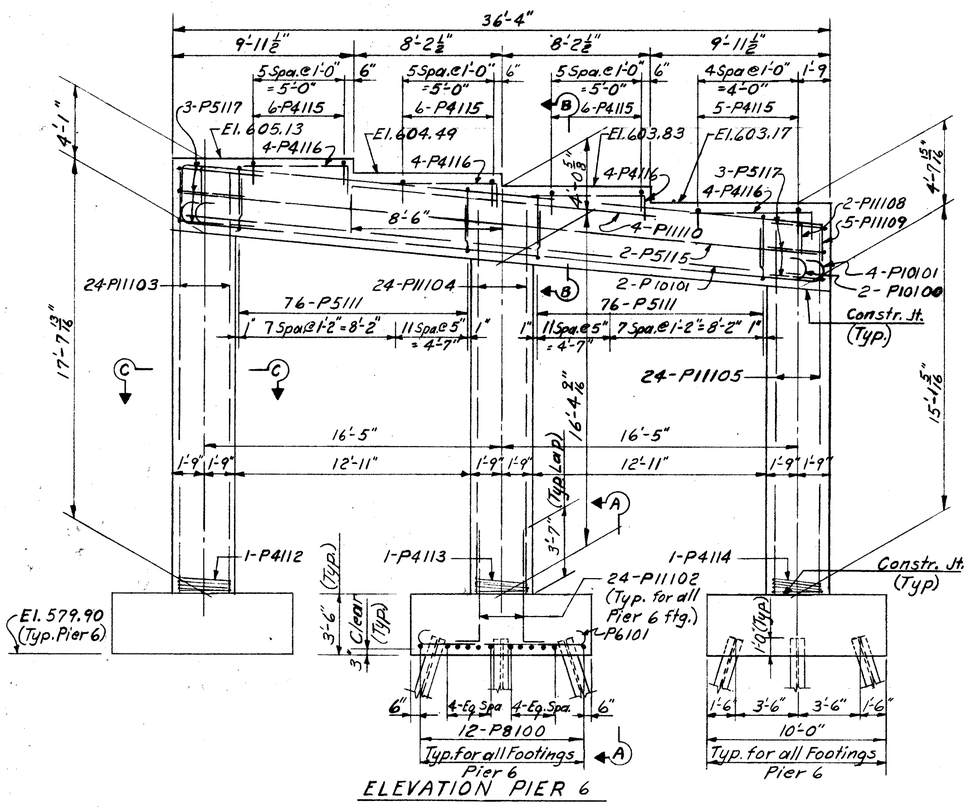


TYPICAL FOOTING PLAN
PIER 3

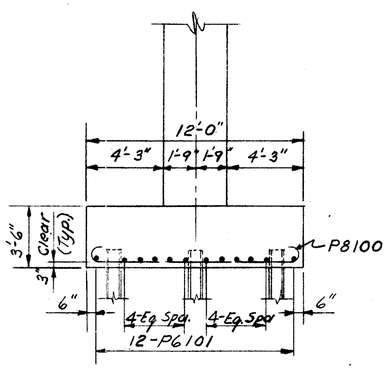
Note: Pile Batter not shown See Stake Out Plan



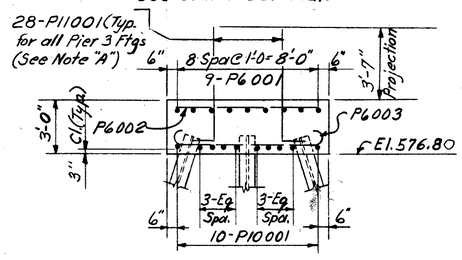
DETAIL "A"



ELEVATION PIER 6



VIEW A-A



ELEVATION FOOTING
PIER 3 (3 Req'd.)

Note "A": The exposed portion of bars P11001 shall be given an asphaltic coating and wrapped with two layers of plastic film after the footing concrete has been poured. The plastic film shall be securely bound to the bars. This work shall be incidental to the concrete work.

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of bridge seat so as to avoid interference with the drilling of anchor rod holes. Concrete in footing shall be Class "E" and concrete in columns and caps shall be Class "C"

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PIER 6 & PIER 3 FOOTING

BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		JHO 4-15-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
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HAMILTON COUNTY
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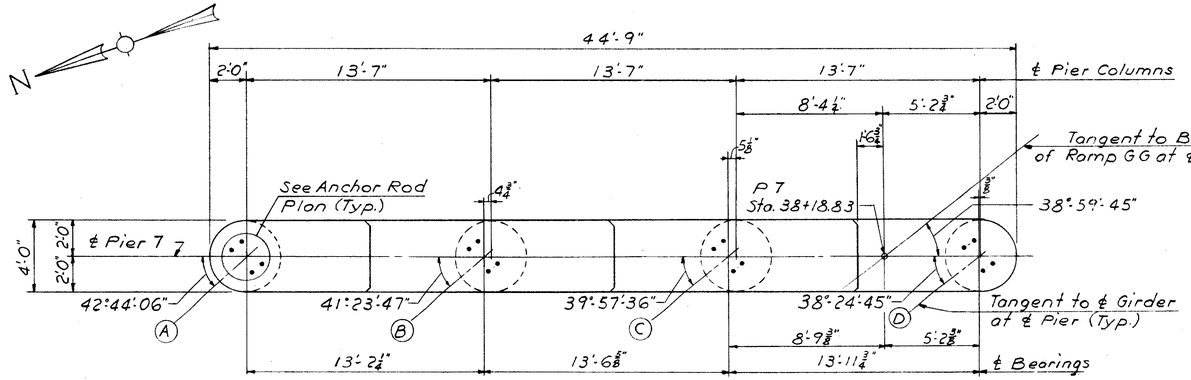
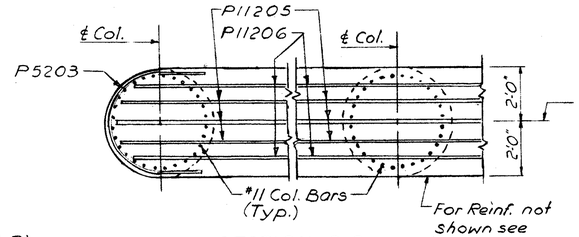
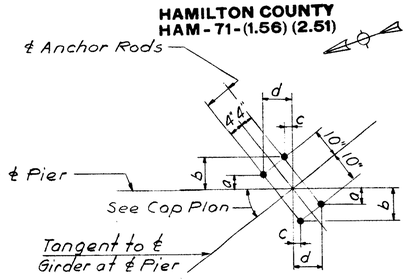


CAP PLAN

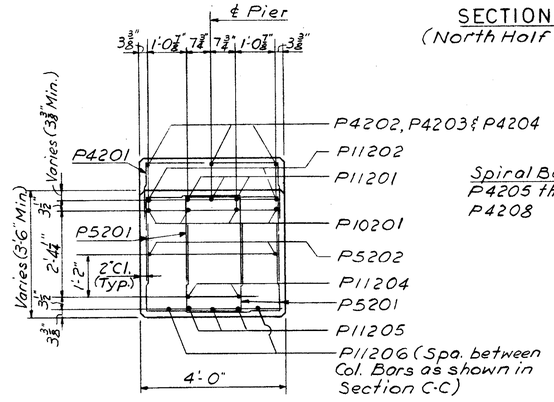


SECTION C-C
(North Half Shown)

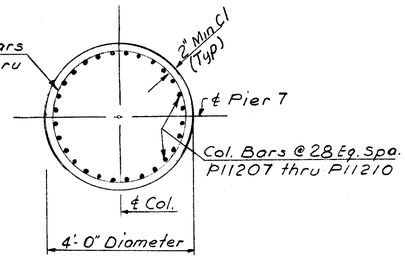


ANCHOR ROD PLAN
(See Table for Dim. a, b, c & d)

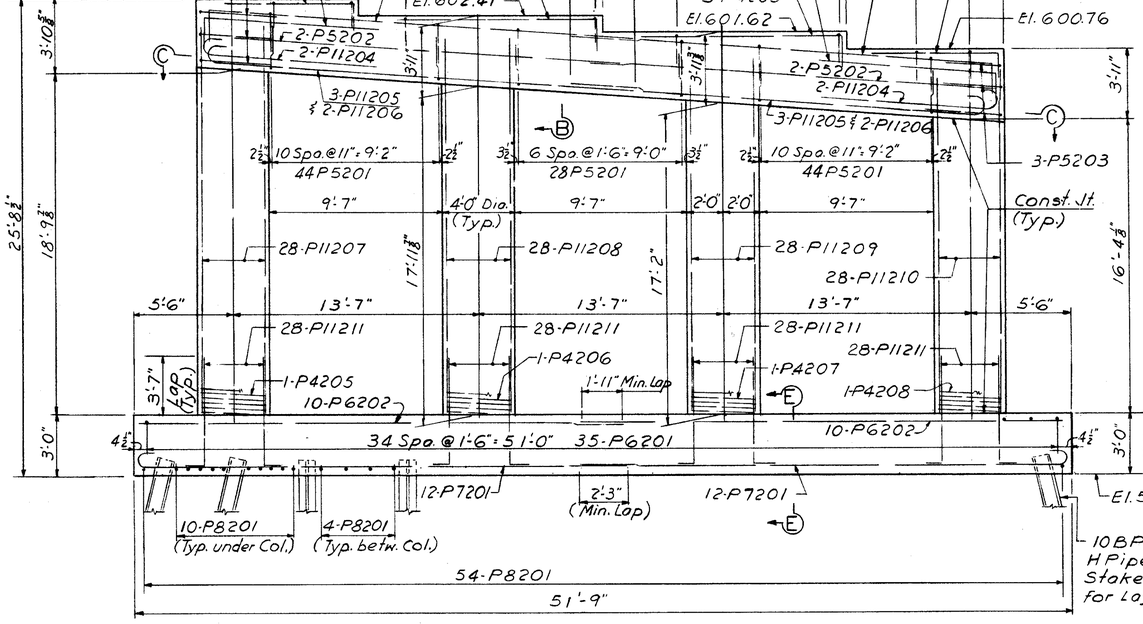
ANCHOR ROD PLAN DIMENSIONS				
Girder	a	b	c	d
A	4⅝"	10 1/16"	3⅜"	9 7/16"
B	4⅞"	10⅛"	3⅜"	9 5/16"
C	5⅛"	10 1/16"	3⅜"	9½"
D	5⅜"	10 5/16"	3 1/16"	9 3/16"



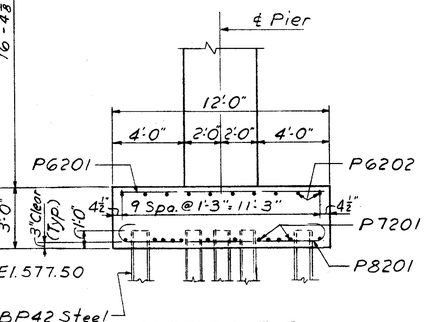
SECTION B-B



TYP. COLUMN SECTION



ELEVATION



SECTION E-E

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of bridge seat so as to avoid interference with the drilling of anchor rod holes.
Concrete in footing shall be Class "E" and concrete in columns and cap shall be Class "C".

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER 7

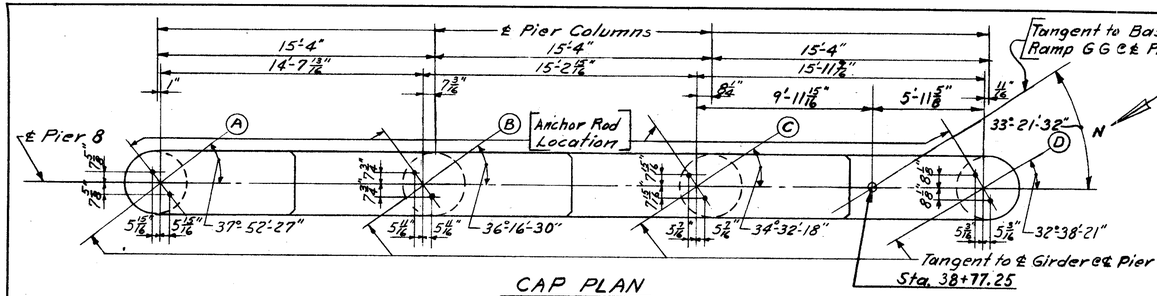
BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.U.		R.L.K 4-15-65	JHO 5/20/65	

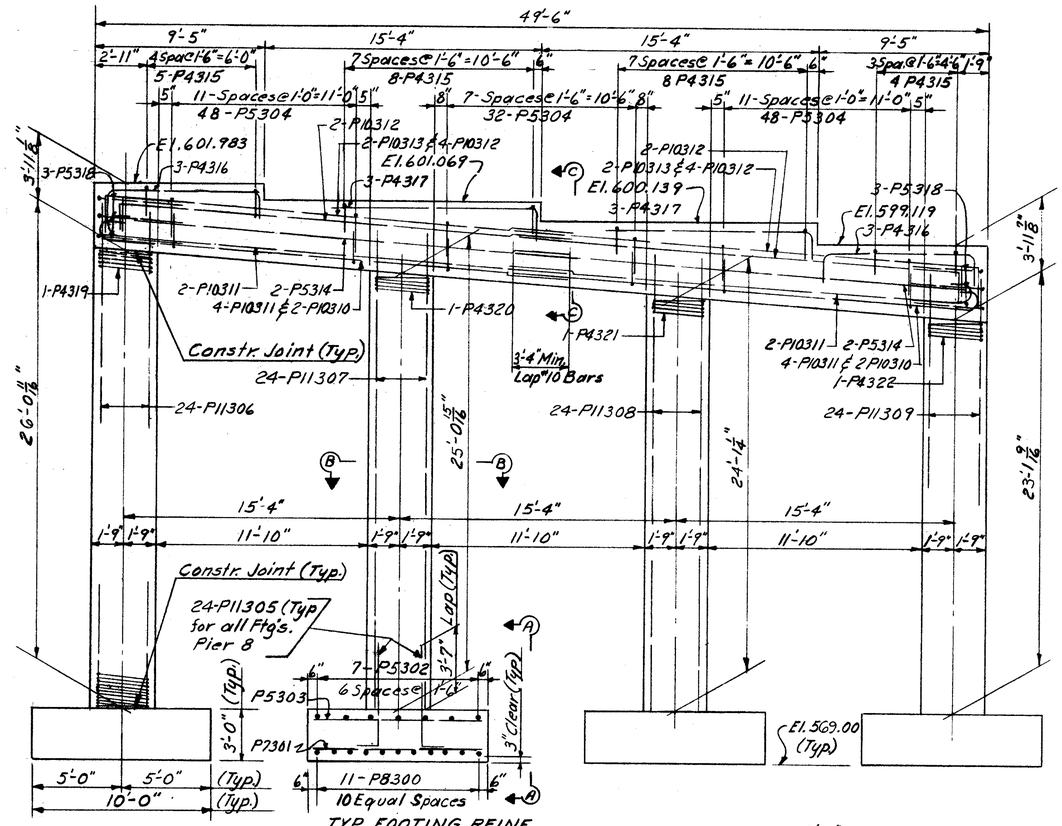
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

384
492

HAMILTON COUNTY
HAM-71-(1.56) (2.61)

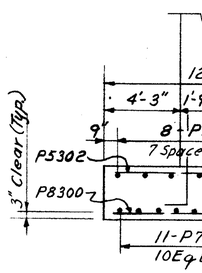


CAP PLAN

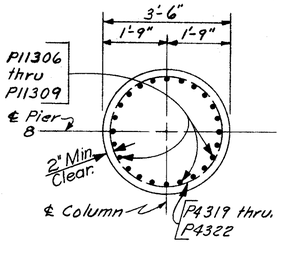


TYP. FOOTING REINF.

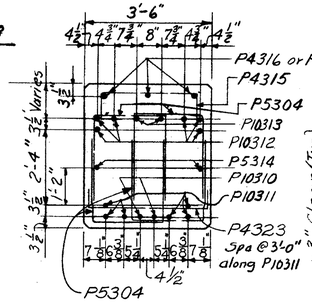
ELEVATION PIER 8



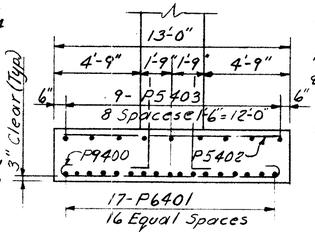
VIEW A-A
Typical all Footings @ Pier 8.



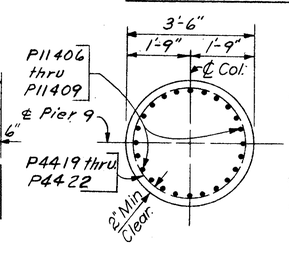
SECTION B-B
(Typical Column Section)



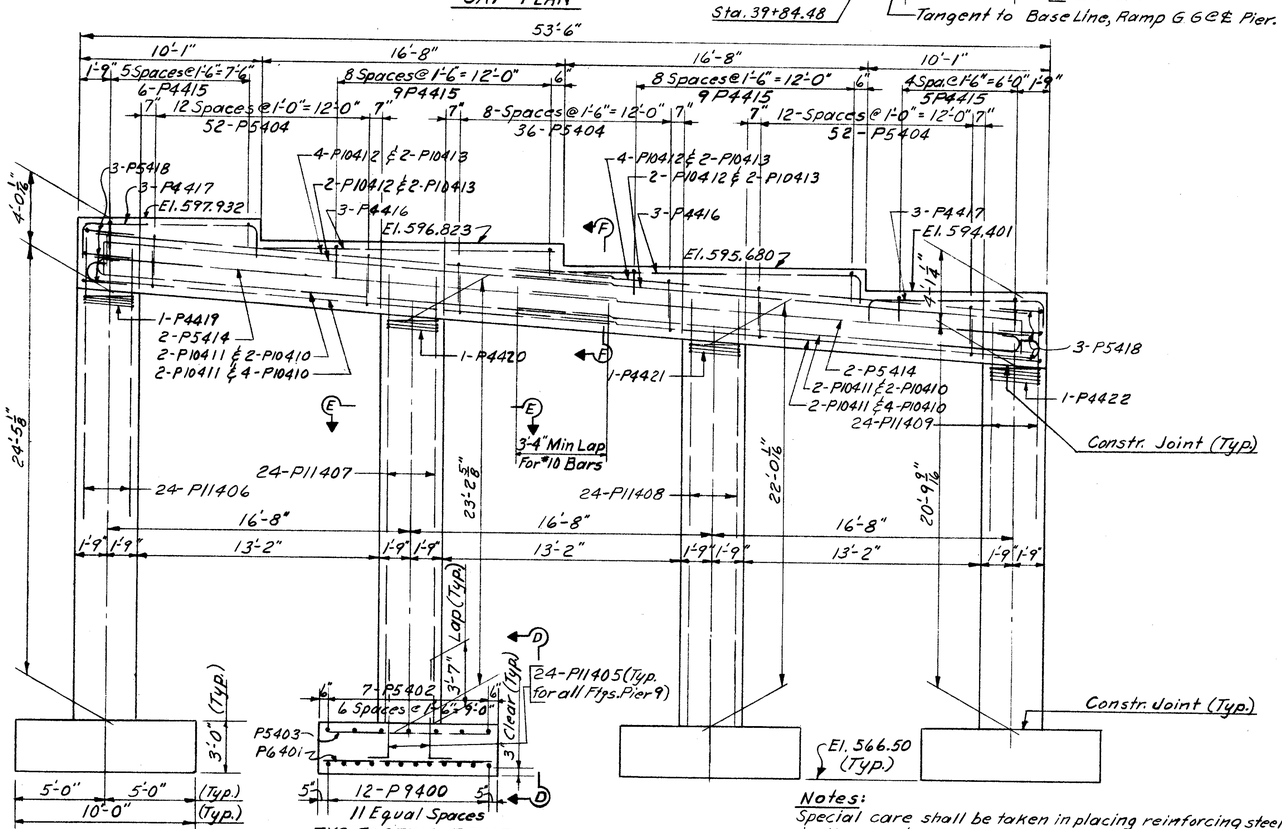
SECTION C-C



VIEW D-D

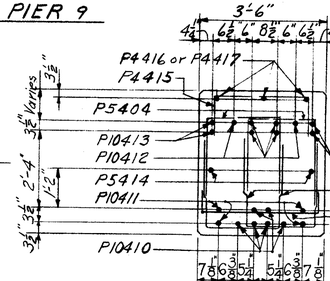


SECTION E-E
(Typical Column Section)



TYP. FOOTING REINF.

ELEVATION PIER 9



SECTION F-F

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of bridge seat so as to avoid interference with the drilling of anchor rod holes.
Concrete in footing shall be Class "E" and concrete in columns and caps shall be Class "C."

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CONSULTING ENGINEERS
CINCINNATI, OHIO

PIERS 8 & 9

BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.			JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

385
492

HAMILTON COUNTY
HAM-71-(1.56) (2.61)

PIER 3

Mark	Type	No. Reqd	Length	Weight
P6001	Str.	27	12'-6"	507
P6002	Str.	27	8'-6"	345
P6003	43	36	9'-10"	532
P10001	43	30	15'-4"	1979
P11001	18	84	7'-6"	3347

Mark	a	pitch	No. of Turns
P4112	3'-1"	2½"	88
P4113	3'-1"	2½"	82
P4114	3'-1"	2½"	75
P4205	3'-7"	2½"	94
P4206	3'-7"	2½"	90
P4207	3'-7"	2½"	86
P4208	3'-7"	2½"	82
P4319	3'-1"	2½"	128
P4320	3'-1"	2½"	123
P4321	3'-1"	2½"	118
P4322	3'-1"	2½"	114
P4419	3'-1"	2½"	120
P4420	3'-1"	2½"	114
P4421	3'-1"	2½"	108
P4422	3'-1"	2½"	103

Type 64 (Spiral Bars)

Mark	a	b	Rad
P5117	4'-9"	3'-0"	1'-5¾"
P5203	5'-8⅝"	1'-7"	1'-9⅞"
P5318	4'-10"	3'-0"	1'-6¼"
P5418	4'-10"	3'-0"	1'-6¼"

Type 6

PIER 6

Mark	Type	No. Reqd	Length	Weight
P4112	64	1	17'-7⅞"	625
P4113	64	1	16'-4⅜"	582
P4114	64	1	15'-1⅞"	533
P4115	1	23	5'-9"	88
P4116	18	16	8'-5"	90
P5111	1	152	7'-2"	1136
P5115	Str.	2	32'-10"	68
P5117	6	6	10'-9"	68
P6101	43	36	10'-10"	586
P8100	43	36	13'-8"	1314
P10100	43	2	37'-3"	321
P10101	43	6	38'-3"	988
P11102	18	72	7'-6"	2869
P11103	Str.	24	21'-1"	2688
P11104	Str.	24	19'-9"	2518
P11105	Str.	24	18'-6"	2359
P11108	1	2	40'-3"	428
P11109	1	5	41'-3"	1096
P11110	Str.	4	17'-0"	361

REPLACEMENT BARS			
Mark	Type	No.	Length
RE401	Str.	1	5'-3"
RE501	↓	1	5'-7"
RE601	↓	1	5'-11"
RE701	↓	1	6'-3"
RE801	↓	1	6'-6"
RE901	↓	1	6'-10"
RE1001	↓	1	7'-3"
RE1101	Str.	4	7'-7"

PIER 7

Mark	Type	No. Reqd	Length	Weight
P4201	1	25	6'-6"	109
P4202	18	3	8'-2"	16
P4203	18	6	12'-5"	50
P4204	18	3	7'-5"	15
P4205	64	1	18'-10"	668
P4206	↓	1	18'-0"	640
P4207	↓	1	17'-2"	610
P4208	64	1	16'-4"	582
P5201	1	116	7'-3"	877
P5202	Str.	4	21'-3"	89
P5203	6	6	8'-11"	56
P6201	Str.	35	11'-6"	605
P6202	Str.	20	26'-9"	804
P7201	44	24	27'-7"	1353
P8201	43	54	13'-8"	1970
P10201	18	8	12'-3"	422
P11201	18	6	26'-11"	858
P11202	18	4	25'-2"	535
P11204	44	4	11'-1"	236
P11205	44	6	25'-7"	816
P11206	44	4	24'-10"	528
P11207	Str.	28	21'-6"	3198
P11208	↓	28	20'-6"	3050
P11209	↓	28	19'-9"	2938
P11210	Str.	28	19'-0"	2827
P11211	18	112	7'-0"	4165

PIER 8

Mark	Type	No. Reqd	Length	Weight
P4315	1	25	5'-8"	95
P4316	1	6	12'-3"	49
P4317	18	6	8'-11"	36
P4319	64	1	26'-0⅜"	911
P4320	↓	1	25'-1"	875
P4321	↓	1	24'-1⅞"	839
P4322	64	1	23'-1⅜"	811
P4323	1	17	5'-0"	57
P5302	Str.	28	11'-6"	336
P5303	Str.	32	9'-6"	317
P5304	1	128	7'-5"	990
P5314	Str.	4	23'-10"	99
P5318	6	6	10'-10"	68
P7301	43	44	11'-2"	1004
P8300	43	44	13'-8"	1606
P10310	Str.	4	26'-1"	449
P10311	44	12	26'-10"	1386
P10312	18	12	29'-1"	1502
P10313	18	4	29'-3"	503
P11305	18	96	7'-0"	3570
P11306	Str.	24	28'-10"	3671
P11307	↓	24	27'-11"	3560
P11308	↓	24	26'-1"	3433
P11309	Str.	24	25'-1"	3305

PIER 9

Mark	Type	No. Reqd	Length	Weight
P4415	1	29	6'-2"	119
P4416	18	6	15'-8"	63
P4417	1	6	12'-11"	52
P4419	64	1	24'-5"	853
P4420	↓	1	23'-4"	810
P4421	↓	1	22'-0"	767
P4422	64	1	20'-10"	731
P4423	1	18	5'-0"	60
P5402	Str.	28	12'-6"	365
P5403	Str.	36	9'-6"	357
P5404	1	140	7'-5"	1084
P5414	Str.	4	26'-6"	111
P5418	6	6	10'-10"	68
P6401	43	68	10'-10"	1107
P9400	43	48	15'-0"	2448
P10410	Str.	12	28'-0"	1446
P10411	44	8	28'-9"	990
P10412	18	12	31'-0"	1601
P10413	18	8	30'-6"	1050
P11405	18	96	7'-0"	3570
P11406	Str.	24	27'-3"	3475
P11407	↓	24	26'-0"	3315
P11408	↓	24	24'-10"	3167
P11409	Str.	24	23'-7"	3007

Mark	a	b
P4116	7'-0"	1'-6"
P4202	6'-9"	1'-6"
P4203	11'-0"	1'-6"
P4204	6'-0"	1'-6"
P4317	7'-0"	2'-0"
P4416	1'-9"	14'-0"
P10201	9'-6"	3'-0"
P10312	3'-0"	26'-4"
P10313	3'-0"	26'-6"
P10412	3'-0"	28'-3"
P10413	3'-0"	27'-9"
P11001	1'-0"	6'-10"
P11102	1'-0"	6'-10"
P11201	24'-0"	3'-3"
P11202	22'-3"	3'-3"
P11211	1'-0"	6'-4"
P11305	1'-0"	6'-4"
P11405	1'-0"	6'-4"

Type 18

Mark	a	b
P4115	2'-11"	1'-6"
P4201	3'-8"	1'-6"
P4315	2'-10"	1'-6"
P4316	8'-5"	2'-0"
P4415	2'-10"	1'-9"
P4417	9'-1"	2'-0"
P5111	2'-1"	2'-8"
P5201	2'-7"	2'-5"
P5304	2'-2"	2'-9"
P5404	2'-2"	2'-9"
P11108	34'-5"	3'-3"
P11109	35'-5"	3'-3"
P4323	3'-2	1'-0"
P4423	3'-2"	1'-0"

Type 1

Mark	a
P6003	8'-6"
P6101	9'-6"
P6401	9'-6"
P7301	9'-6"
P8100	11'-6"
P8201	11'-6"
P8300	11'-6"
P9400	12'-6"
P10001	12'-6"
P10100	34'-5"
P10101	35'-5"

Type 43

Mark	a
P7201	26'-9"
P10311	25'-5"
P10411	27'-4"
P11204	9'-6"
P11205	24'-0"
P11206	23'-3"

Type 44

Total wgt of reinforcing steel = 113,544 lbs

Note:
For bar bending schedule see sheet No. 446

Note
The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.

The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils).

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CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

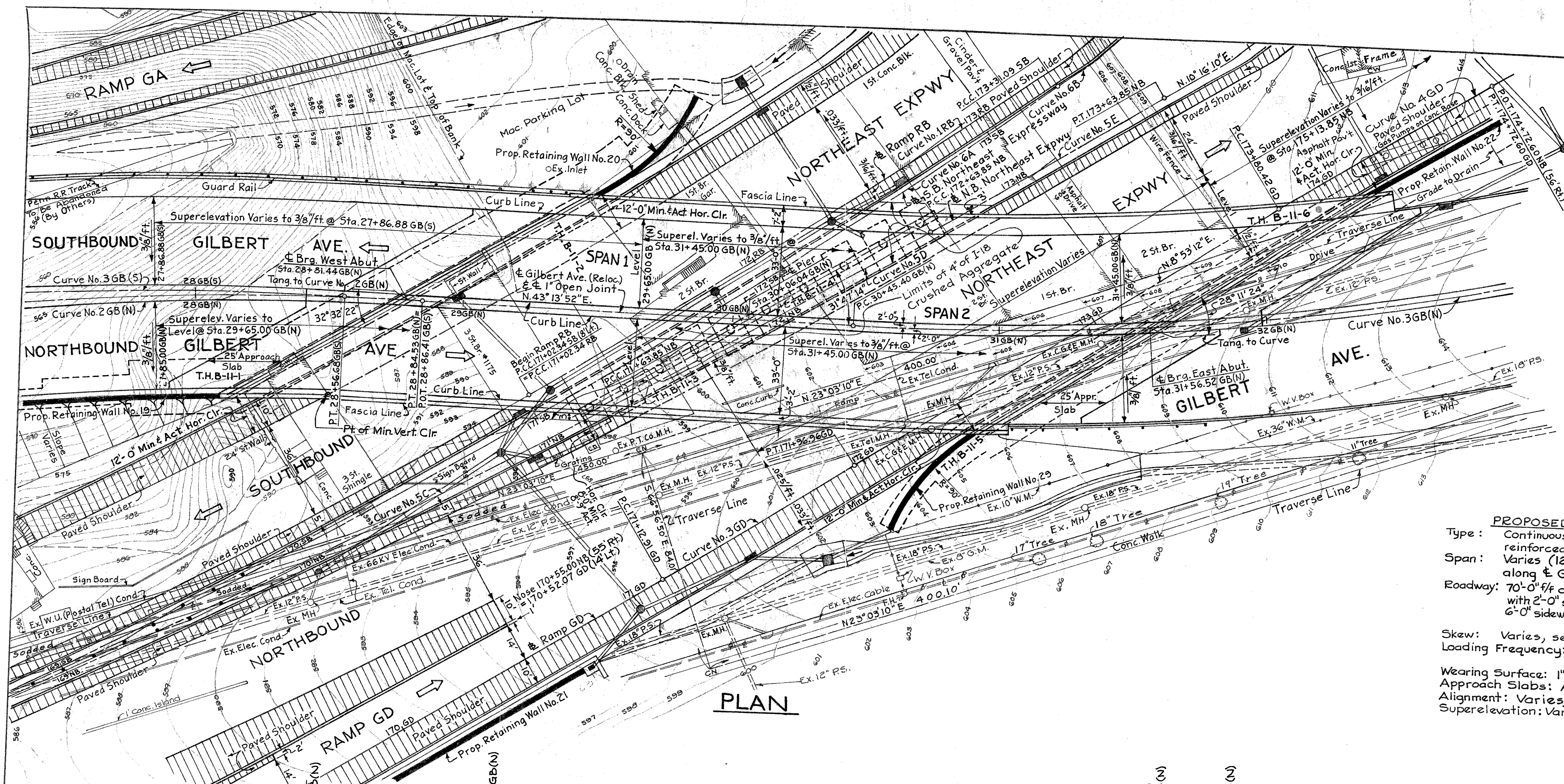
BRIDGE NO. HAM-71-0184

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	RAL		WFB 5-11-65	JHO 5/20/65	

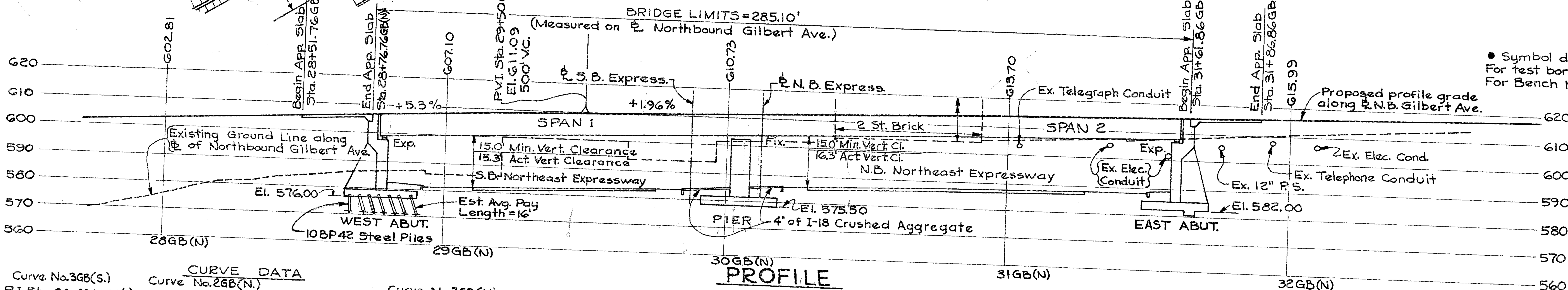
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

386/492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PLAN



PROFILE

PROPOSED STRUCTURE

Type: Continuous steel plate girders with reinforced concrete deck and substructure.
Span: Varies (124.60', 150.48' c/c brgs; measured along ℄ Gilbert Ave. (Relocated)
Roadway: 70'-0" f/f curbs including 4'-0" raised median with 2'-0" safety curb Northbound Rdwy. & 6'-0" sidewalk Southbound Rdwy.

Skew: Varies, see Plan
Loading Frequency: CF = 2000 (57)

Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 (25'-0" Long)
Alignment: Varies, see Plan
Superelevation: Varies, see Plan

GENERAL NOTES

● Symbol denotes drill hole
For test boring data, see Sheet 7 & 8 of 13
For Bench Marks, see Sheet 40

CURVE DATA

Curve No. 3GB(S.)	Curve No. 2GB(N.)	Curve No. 3GB(N.)
P.I. Sta. 26+40.39 GB(S)	P.I. Sta. 26+68.23 GB(N)	P.I. Sta. 32+32.38 GB(N)
Δ = 19° 39'42"	Δ = 19° 39'42"	Δ = 20° 21'02"
D_c = 4° 30'00"	D_c = 4° 30'00"	D_c = 5° 30'00"
R = 1,273.24'	R = 1,273.24'	R = 1,041.74'
L = 436.93'	L = 436.93'	L = 370.01'
T = 220.63'	T = 220.63'	T = 186.97'

Traffic Count: 1986 ADT = 8800
DHV = 880

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SITE PLAN
BRIDGE No. HAM-71-0196
GILBERT AVENUE

H & E BRIDGE No. 11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

387
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

ESTIMATED QUANTITIES

	Item	Total	Unit	Description	Super-structure	East Abutment	West Abutment	Pier	General
	E-2	Lump	Sum	Cofferdams, cribs & sheeting					Lump
	E-2	4775	Cu.Yds.	Unclassified excavation		2440	1650	685	
	E-2	400	Cu.Yds.	Rock (or shale) excavation		270		130	
	S-1	782	Cu.Yds.	Class "C" concrete, superstructure	782				
	S-1	187	Cu.Yds.	Class "C" concrete, piers above footings				187	
	S-1	1044	Cu.Yds.	Class "E" concrete, abutments above footings		584.4	459.6		
	S-1	1050	Cu.Yds.	Class "E" concrete, footings		435	419	196	
	S-3	56	Lin.Ft.	Waterproofing, premolded sealing strip		29	27		
	S-4	460791	Lbs.	Reinforcing Steel	200741	97844	86437	75769	
*	S-7	1243000	Lbs.	Structural Steel	1243000				
*	S-8	1243000	Lbs.	Field painting of structural steel	1243000				
	S-9	113	Sq.Ft.	1" preformed expansion joint filler (M10.02 Type 1)		59	54		
	S-14	595	Lin.Ft.	Railing type "C" (aluminum rail & supports, concrete parapet & end posts)	557	20	18		
	S-16	Lump	Sum	First test pile					Lump
	S-18	3392	Lin.Ft.	Steel piles, 10 BP 42			3392		
	S-25			Electric Lighting System (See Sh. No 204)					
	S-29	640	Cu.Yds.	Porous backfill		360	280		
	S-29	Lump	Sum	Drain inlet including supports and horizontal collector system	Lump				
	S-29	58	Lin.Ft.	8" standard pipe downspout, wrought iron or hot-dipped galvanized steel, including specials				58	
	S-29	108	Lin.Ft.	8" bituminous coated helical perforated corrugated metal pipe [Sec. M-6.4 (h-c)] (including specials)		60	48		
	S-29	348	Lin.Ft.	8" bituminous coated helical perforated corrugated metal pipe [Sec. M-6.4 (h-c)], (including specials and sand)		186	162		
	S-29	26	Lin.Ft.	12" reinforced concrete sewer pipe (Sec. M-6.6(a)]		10	16		
	S-29	48	Lin.Ft.	8" bituminous coated helical corrugated metal pipe [Sec. M-6.4 (h-c)], (including specials)			48		
	S-101	782	Each	Water-reducing set retarding admixture	782				

GENERAL NOTES

STEEL PILES: shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock or shale. If the length of penetration is approximately equal to the depth of rock and shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Section S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.

60 tons per pile for west abutment using a 11,000 ft. lb. hammer or 55 tons per pile using a 15,000 ft. lb. hammer.
If the energy rating of the hammer is between the rating as shown above, the required formula-capacity shall be determined by interpolation.
The design of the west abutment is based on 35 tons per pile.

DESIGN NOTES:
Design Loading CF = 2000(57)
Concrete Class C - Basic unit stress 1333 psi
Concrete Class E - Basic unit stress 1133 psi
Structural Steel - ASTM A36 - Basic unit stress 20,000 psi (ASTM A7 and A373 steel not permitted except for piling)
Reinforcing Steel - ASTM A15, A16, A160. Deformed Intermediate or Hard Grade, Basic unit stress 20,000 psi. Except spiral reinforcement may be plain Structural grade with basic unit stress of 18,000 psi.

FOUNDATION BEARING PRESSURE: the east abutment and pier footings are designed for a maximum bearing pressure of 3.0 tons per sq. ft.

FOOTINGS: for the east abutment and the pier shall extend a minimum of 3" into undisturbed rock or to the elevations shown on the plans, whichever is lower.

MACHINE FINISH OF CONCRETE: at the contractors option, the concrete deck may be finished by the use of a finishing machine.

ADDITIONAL NOTES: For additional notes see Notes 1 thru 8, General Notes, Typical Drawing No. 443

* ITEMS CHARGEABLE TO CINCINNATI AND SUBURBAN BELL TELEPHONE CO.

Item	Unit	Description	Amount
S-7	Lbs.	Structural Steel	3600
S-8	Lbs.	Field Painting of Structural Steel	3600

* ITEMS CHARGEABLE TO CINCINNATI GAS AND ELECTRIC CO.

Item	Unit	Description	Amount
S-7	Lbs.	Structural Steel	8550
S-8	Lbs.	Field Painting of Structural Steel	8550

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CINCINNATI, OHIO

ESTIMATED QUANTITIES & NOTES

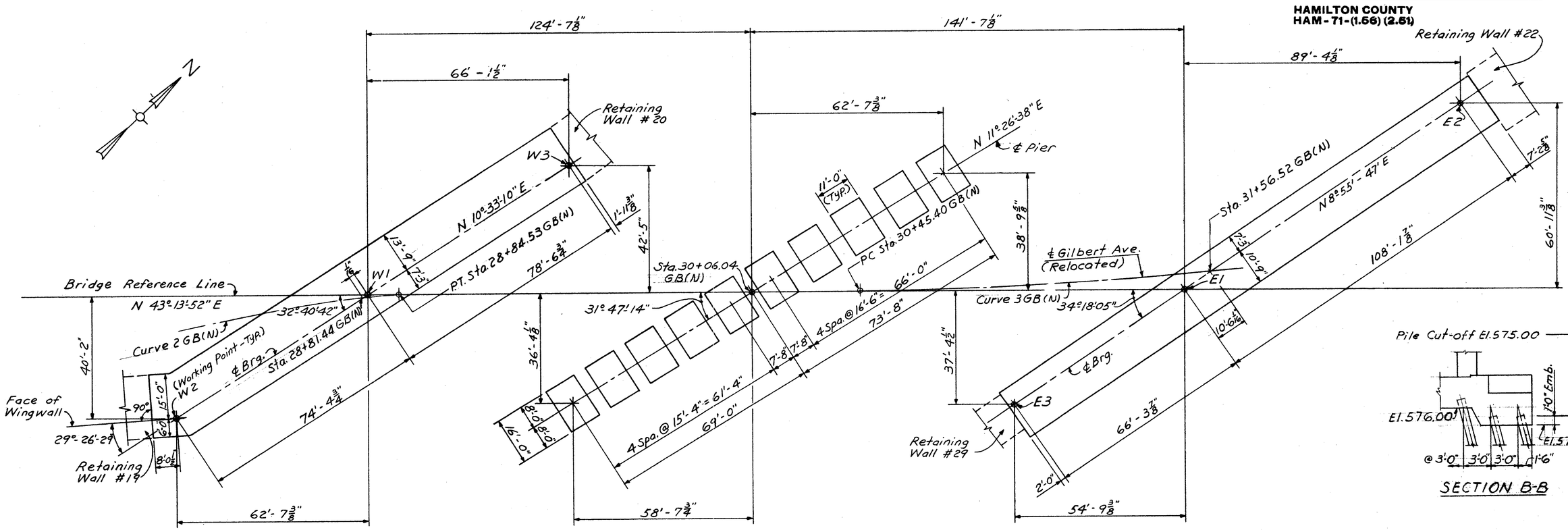
BRIDGE NO. HAM - 71 - 0196

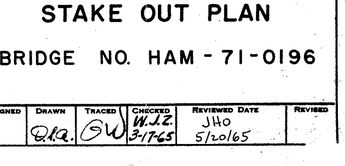
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.U.		DAG 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

388
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)





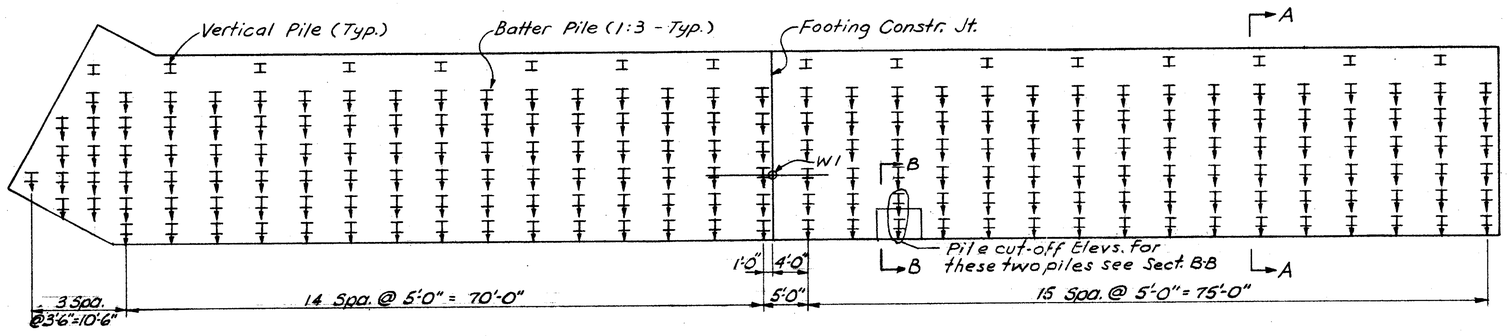
SECTION B-B

WEST ABUTMENT
Bottom of Footing Elev. 576.00
(For pile locations, see Plan below)

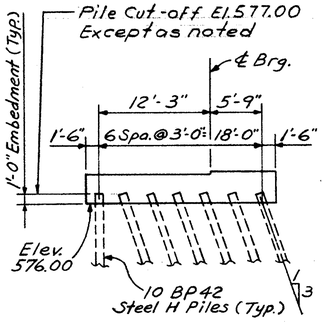
PIER
Bottom of Footing Elev. 575.50

EAST ABUTMENT
Bottom of Footing Elev. 582.00

STAKEOUT PLAN



PILE PLAN - WEST ABUTMENT



SECTION A-A

Pile Legend
Batter 1:3
Vertical

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CINCINNATI, OHIO

STAKE OUT PLAN

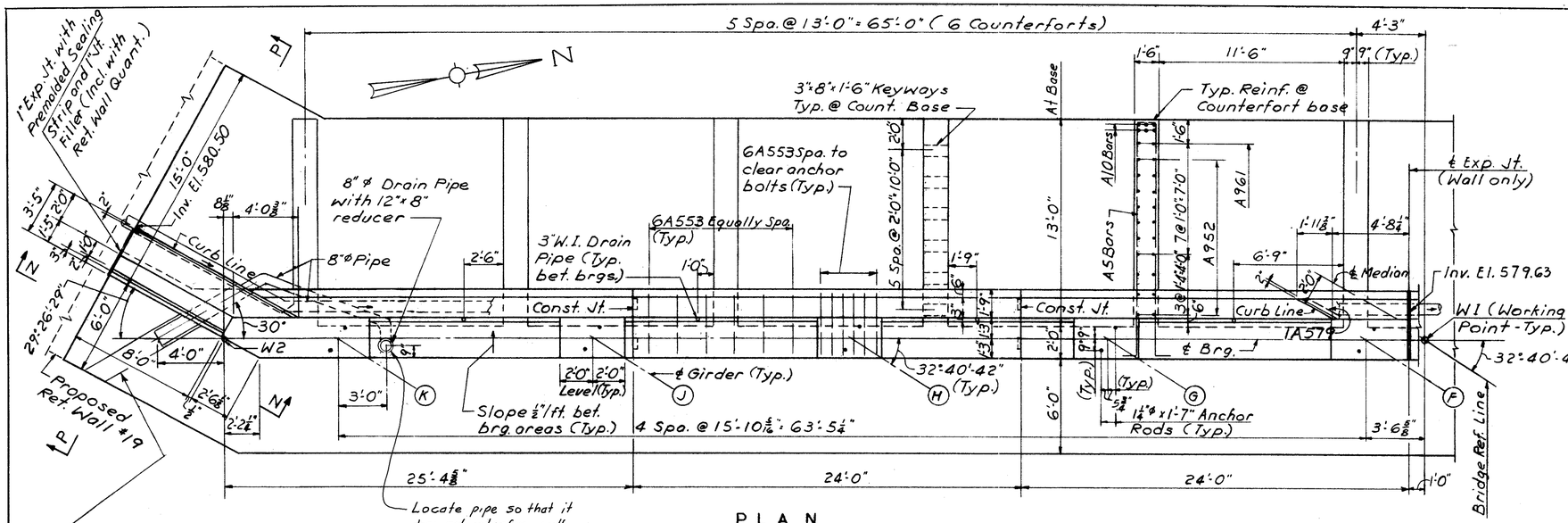
BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	DRG.	SW	W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

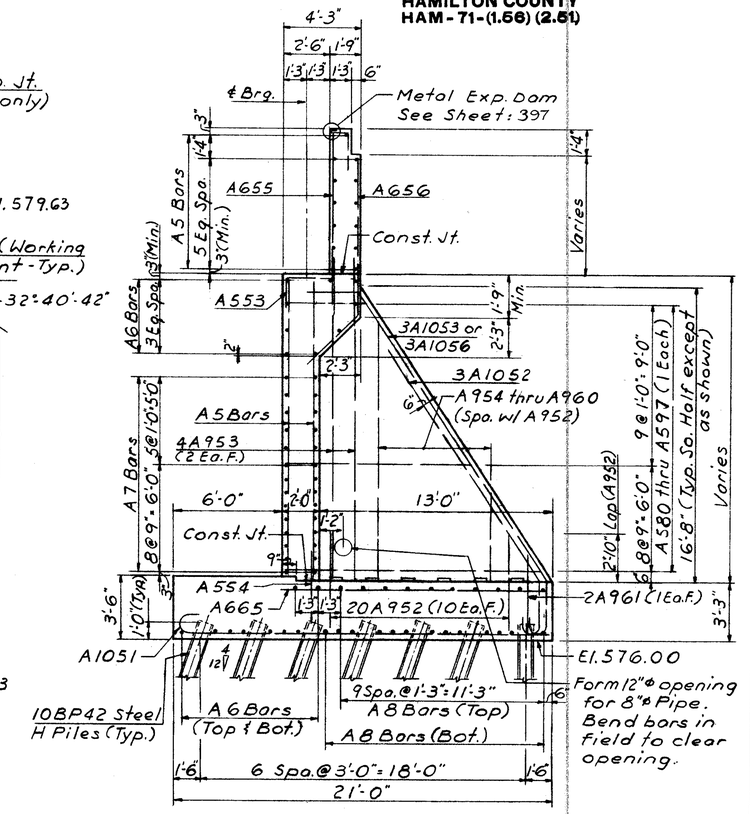
389
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

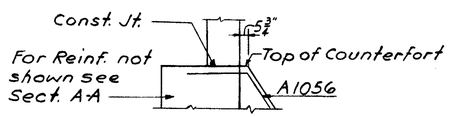


PLAN

ELEVATION



SECTION A-A



SECTION B-B
(Applies to the two Count. at South End only)

MICROFILMED
FEB 20 1985

Work this sheet with Sheet. 390

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

WEST ABUTMENT

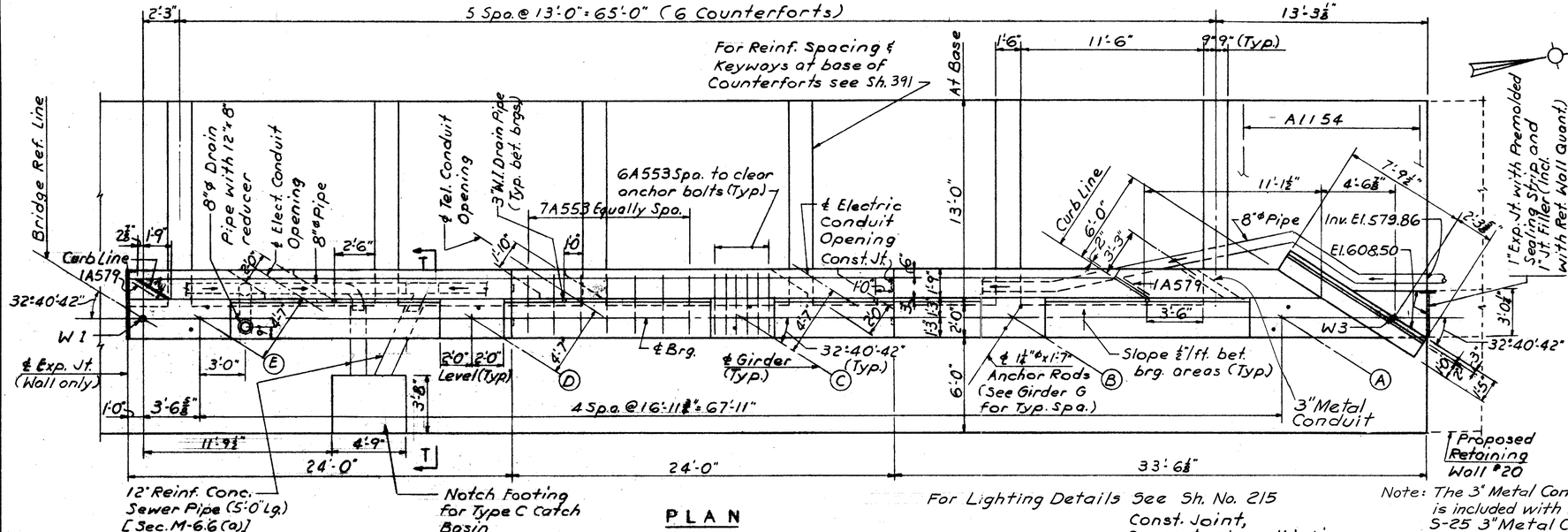
BRIDGE NO. HAM-71-0196

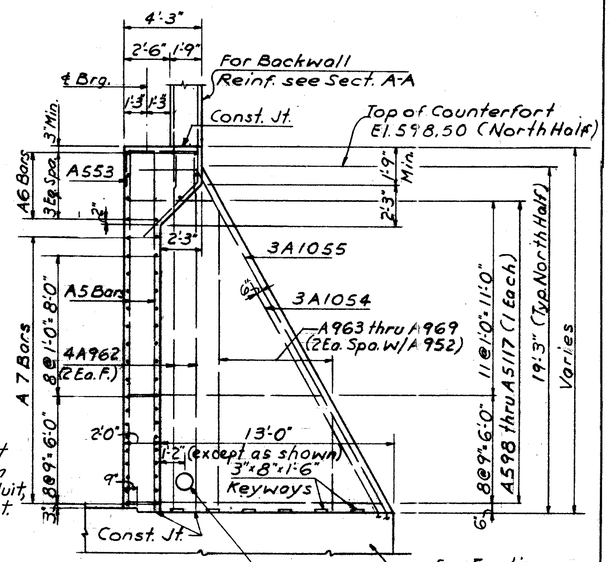
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		W.L.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

390
492

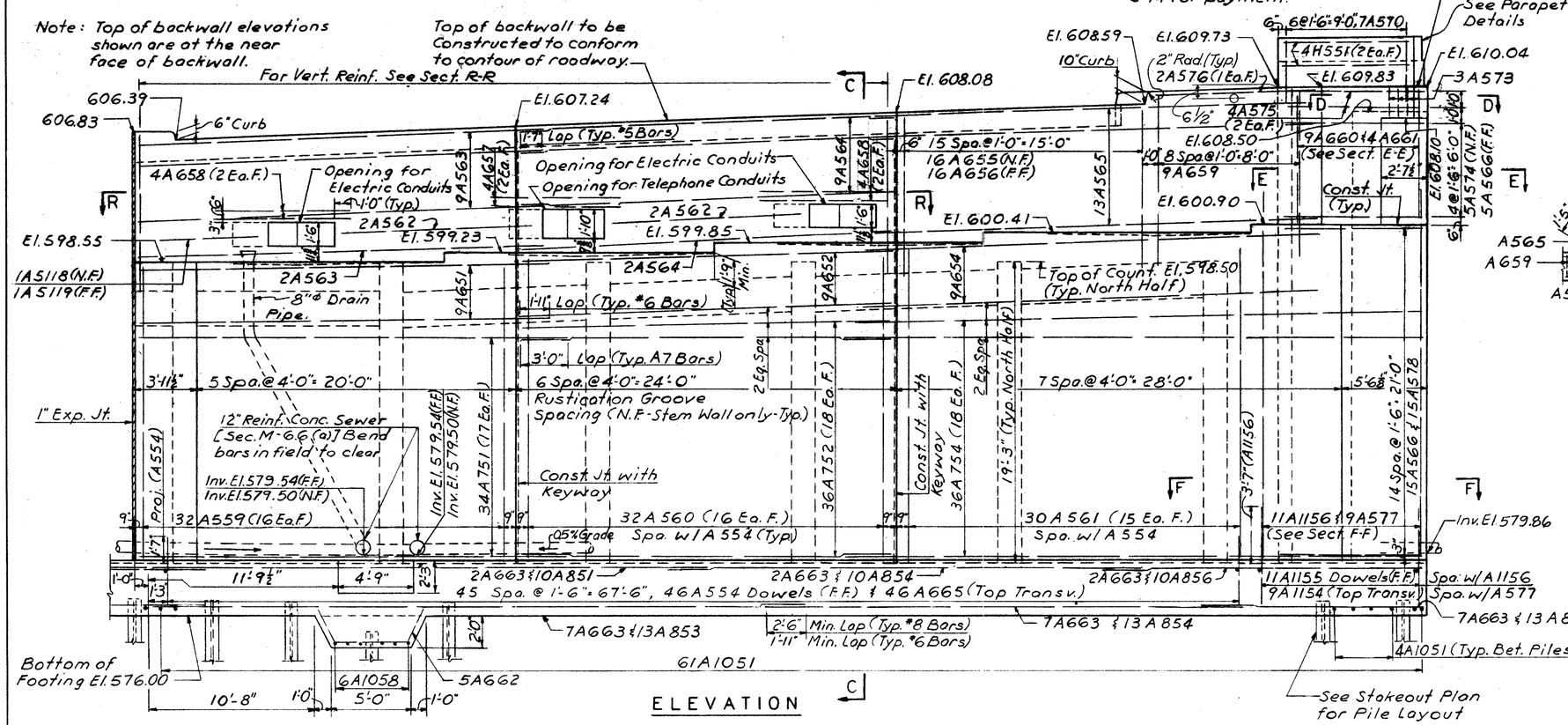
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

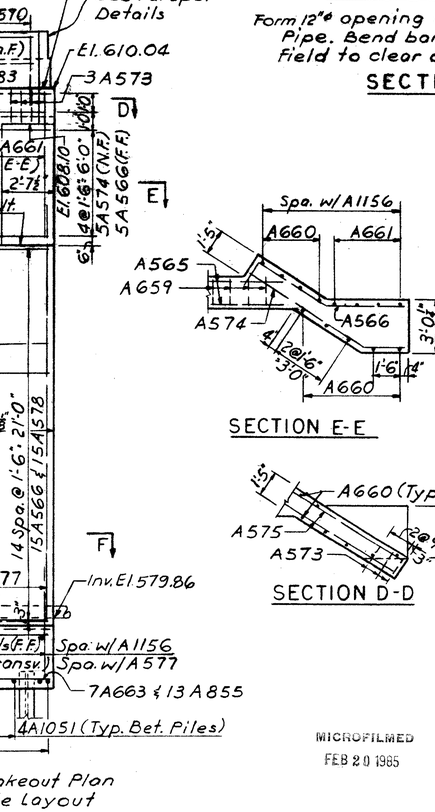


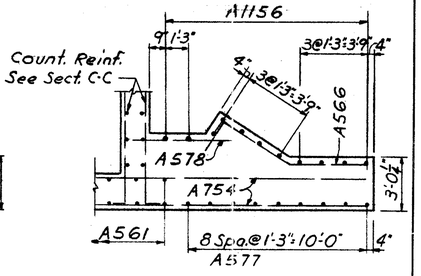


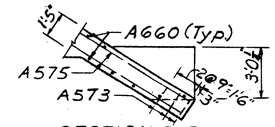
Note: Top of backwall elevations shown are at the near face of backwall.

Top of backwall to be Constructed to conform to contour of roadway.









Work this sheet with Sheet 391

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

WEST ABUTMENT

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

391
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HAMILTON COUNTY
HAM-71-(1.56) (2.51)

ANCHOR ROD LAYOUT DIM.		
Girder	a	b
A	4 3/8"	9 7/16"
B	5 1/16"	9 3/8"
C	5 5/16"	9 1/4"
D	5 3/8"	9 3/16"
E	5 1/2"	9 1/8"
F	5 11/16"	9"
G	5 11/16"	9"
H	5 3/8"	8 15/16"
J	5 3/8"	8 3/8"
K	5 3/8"	8 3/8"

PLAN

ELEVATION

ANCHOR ROD PLAN
(See Table for Dim. a & b)

SECTION G-G

Work this sheet with Sheets 392 & 393

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

EAST ABUTMENT

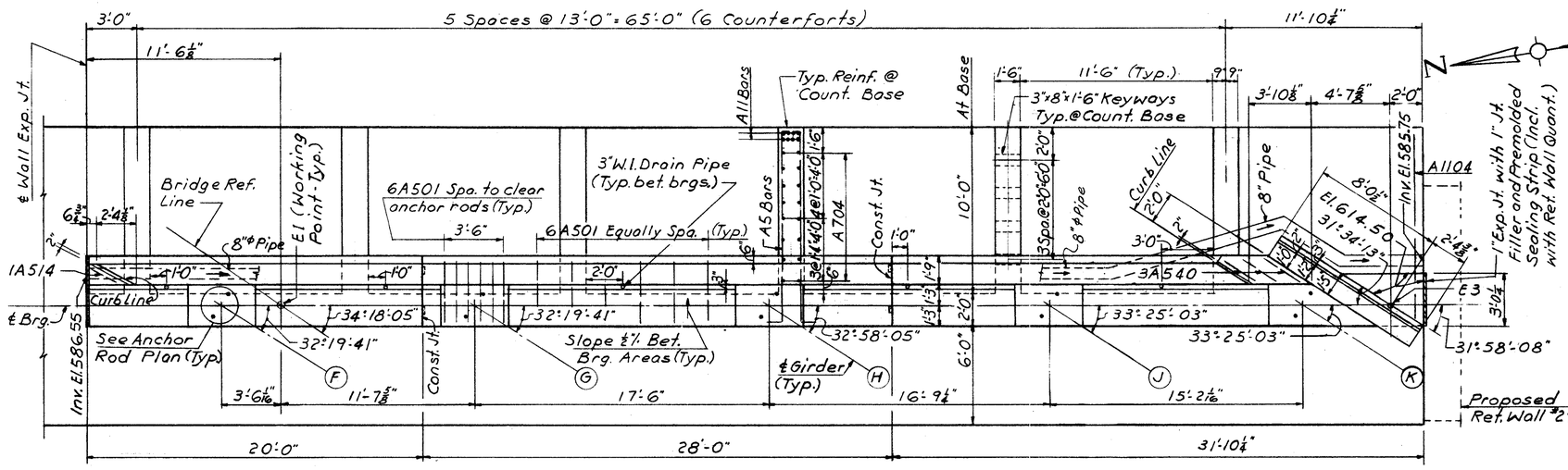
BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

392
492

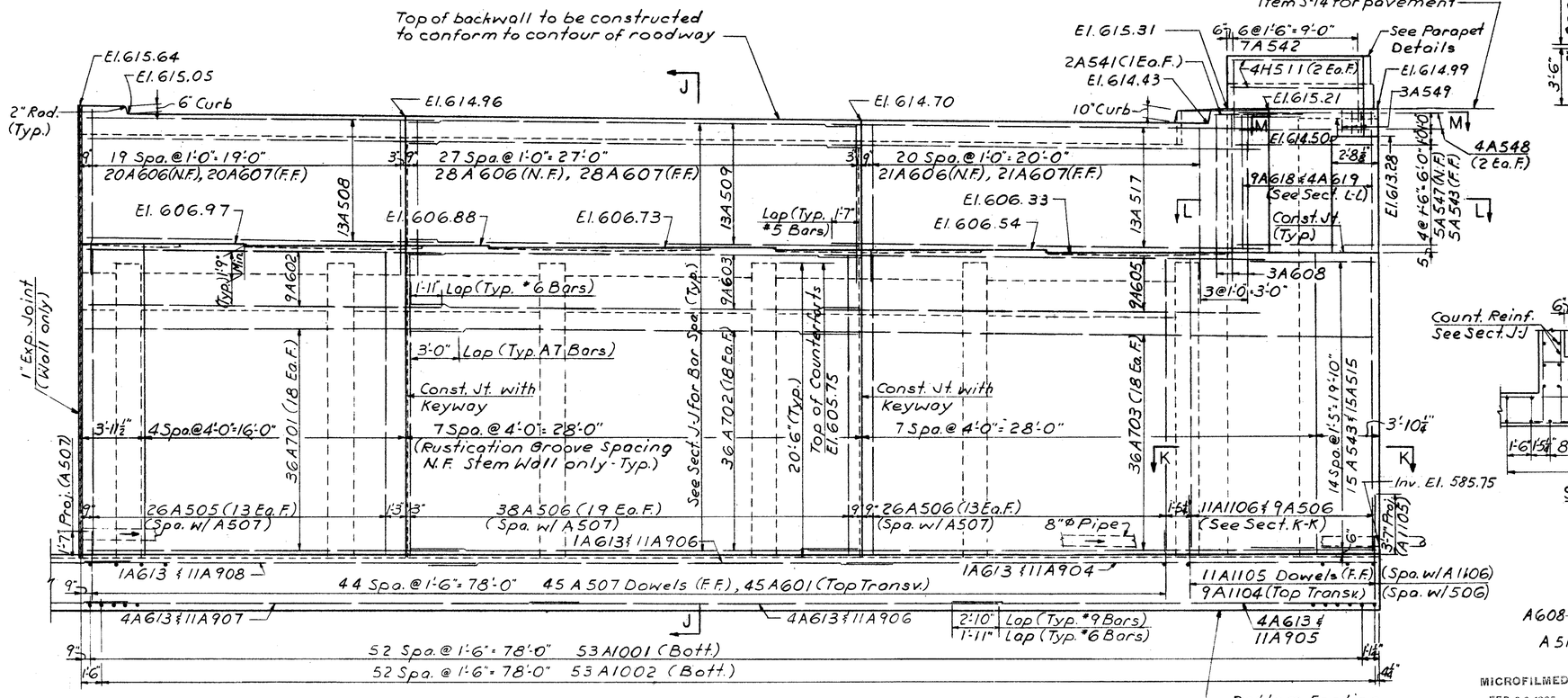
HAMILTON COUNTY
HAM-71-(1.66) (2.81)



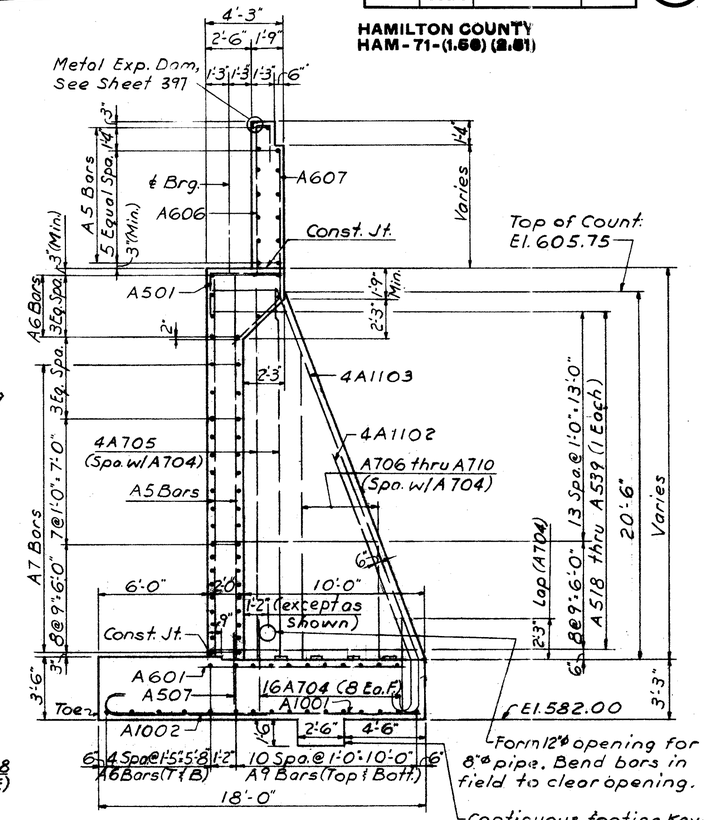
PLAN

For Lighting Details See Sh. No. 215.

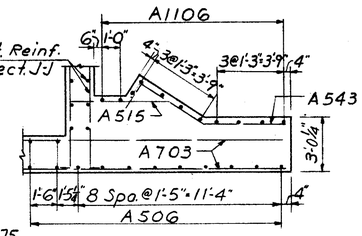
Note: Top of backwall elevations shown are at near face of backwall.



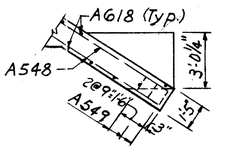
ELEVATION



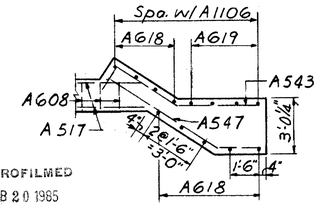
SECTION J-J



SECTION K-K



SECTION M-M



SECTION L-L

MICROFILMED
FEB 20 1985

Work this sheet with Sheets 391 & 393

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

EAST ABUTMENT

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

393
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HAMILTON COUNTY
HAM-71-(1.56) (2.51)

8"ϕ Bit'u. C.M.P. (Watertight Jts) with Std. 12'8" reducer for Superstructure Drainage provision. Downspouts at West Abutment only

See Gutter Detail

Porous Backfill

2'0" (Typ.) except as modified at N. End of W. Abut. & S. End of E. Abut.

3" W.I. Pipe 5'0" Long, Location as shown on Plan. Included with abutment concrete for Payment.

6'0" Length of 8" Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)] Provide cap with 3½"ϕ Hole (Item S-29).

See Detail C

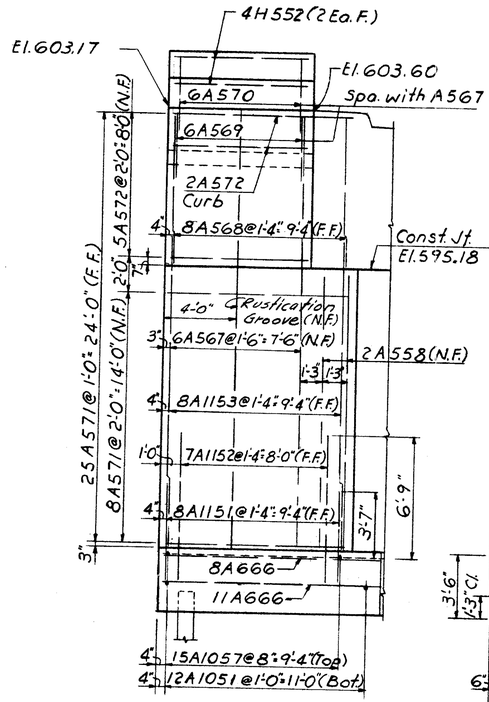
Sand meeting requirements of Sec. M 2.1. Payment included in price bid for 8" Pipe.

12" Reinf. Conc. Sewer [Sec. M-6.6 (a)]

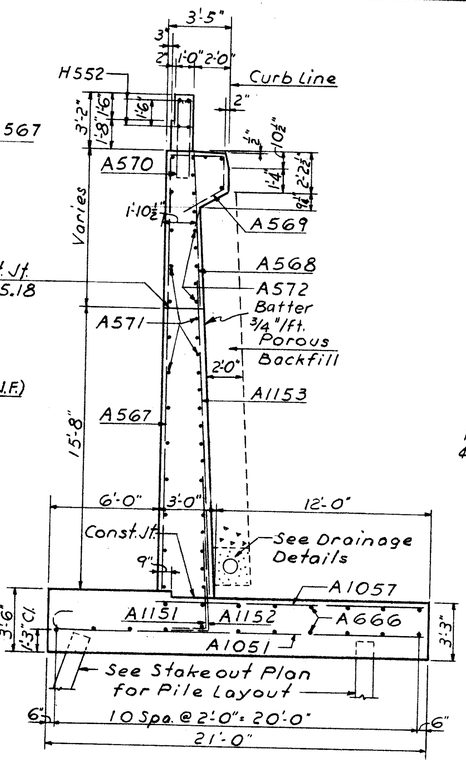
8"ϕ Bituminous Coated Helical Perforated Corrugated Metal Pipe [Sec. M-6.4 (h-c)].

Outlet shown is at South Fascia Curb. For outlets at Median Curb see Sect. T-T.

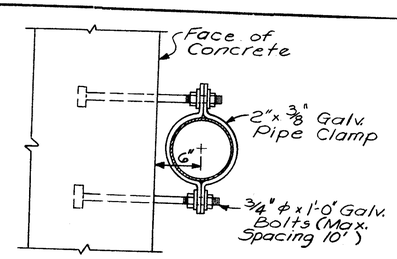
DRAINAGE DETAIL



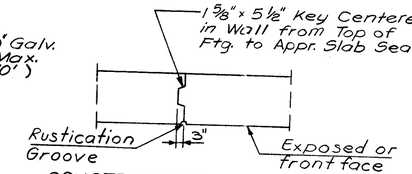
SECTION N-N



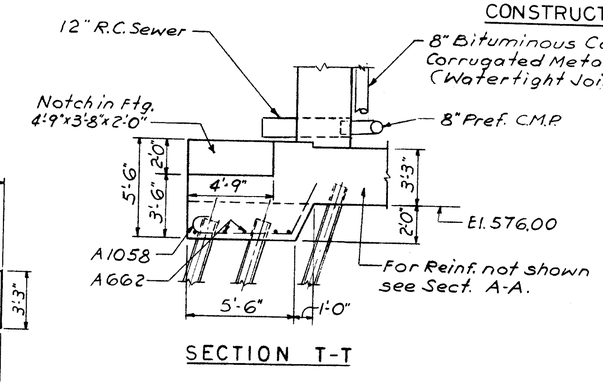
SECTION P-P



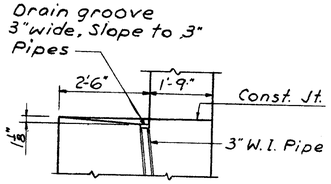
DETAIL C



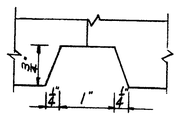
CONSTRUCTION JOINT DETAIL



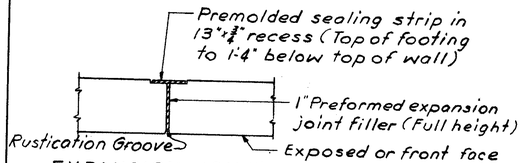
SECTION T-T



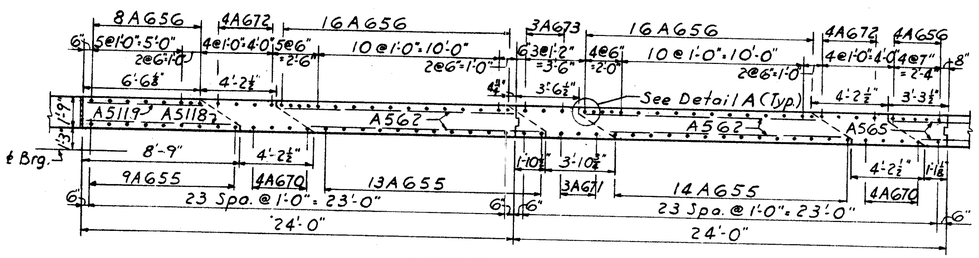
GUTTER DETAIL



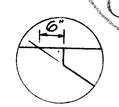
RUSTICATION GROOVE DETAIL



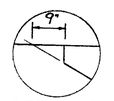
EXPANSION JOINT DETAIL



SECTION R-R



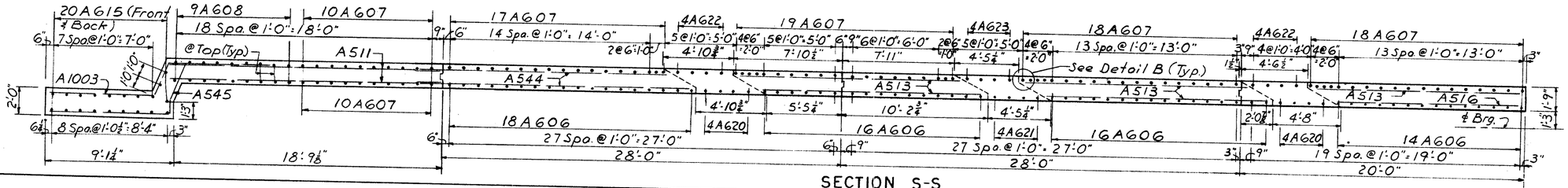
DETAIL A



DETAIL B

Procedure:
Before the backwall is constructed, the embankment shall be placed and compacted up to the level of the subgrade with a 1:1 slope from the bridge seat to the subgrade, for a distance of 200 ft. back of the West Abutment only.
Porous Backfill 2 ft. thick, full length of abutment and wings shall extend up to the under-side of the approach slab or to the finished ground surface.

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
Provide 3" clearance to reinforcing steel in footing and 2" in wall (Min.)
N.F. denotes near face, F.F. denotes far face, Ea. F. denotes each face.
Abutment concrete shall be Class "E".
Concrete above bridge seat construction joint shall not be placed until superstructure steel is in place.



SECTION S-S

Work this sheet with Sheets 391 & 392

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

ABUTMENT DETAILS

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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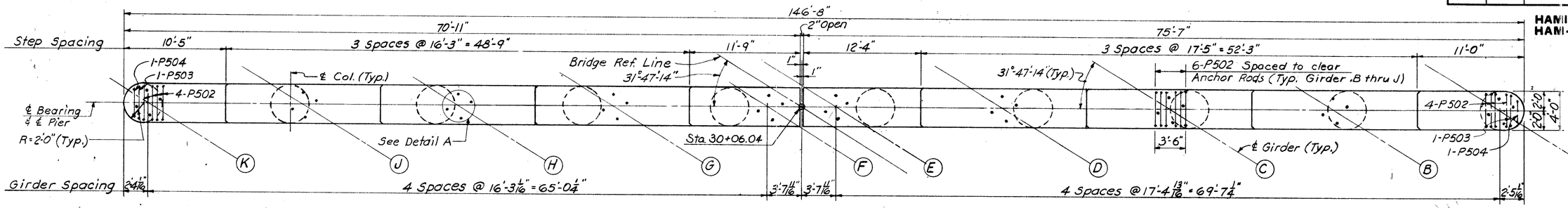
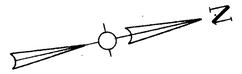
492

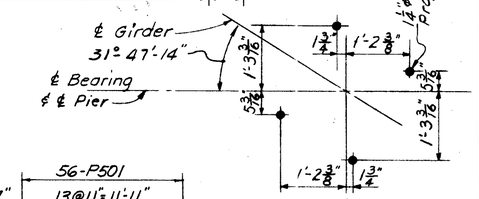
HAMILTON COUNTY
HAM-71-(1.56) (2.61)



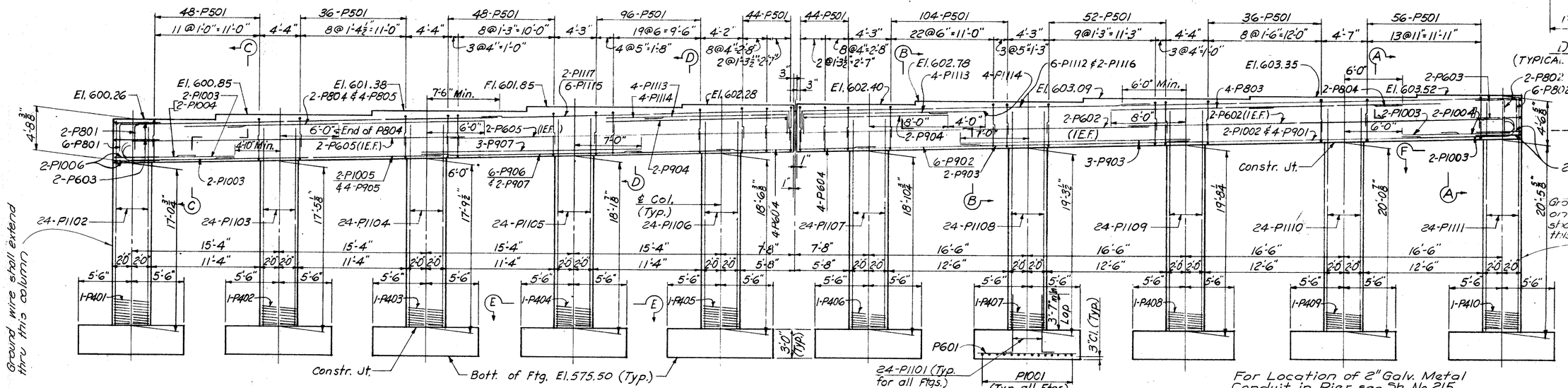
CAP PLAN

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
Concrete in footings shall be Class "E" and concrete in columns and caps shall be class "C".
E.F. denotes Each Face.



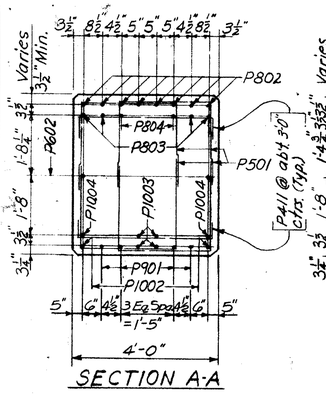


DETAIL A
(TYPICAL ANCHOR ROD PLAN)

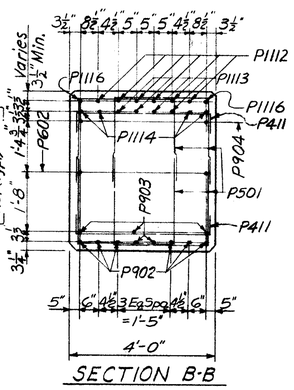


ELEVATION

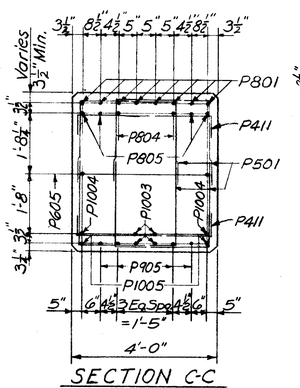
For Location of 2" Galv. Metal Conduit in Pier see Sh. No. 215



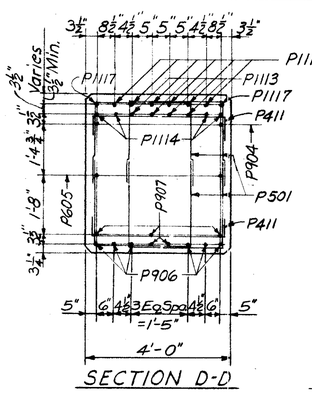
SECTION A-A



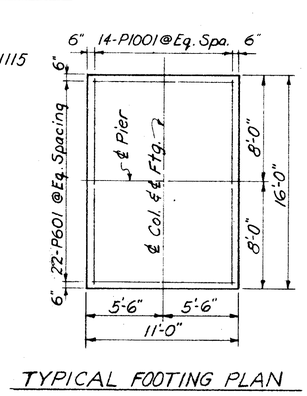
SECTION B-B



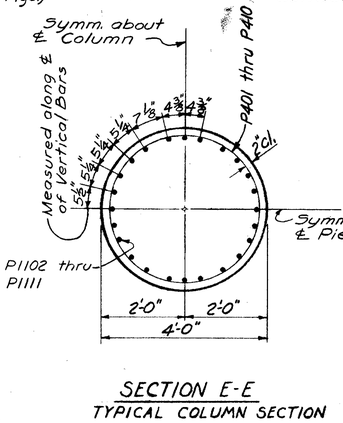
SECTION C-C



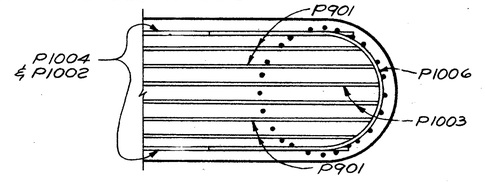
SECTION D-D



TYPICAL FOOTING PLAN



SECTION E-E
TYPICAL COLUMN SECTION



SECTION F-F

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER DETAILS

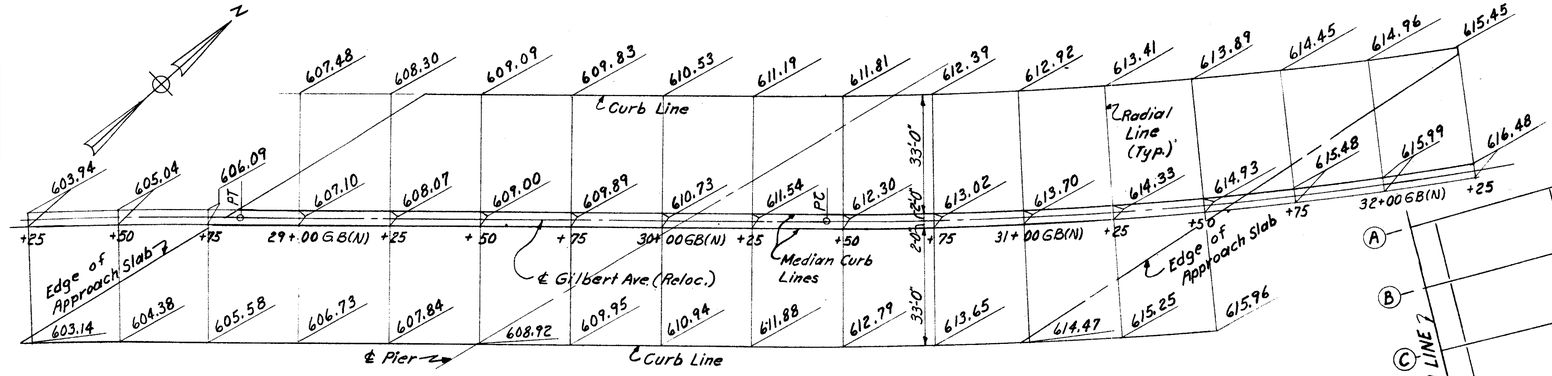
BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.W.	C.B.H		D.V. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

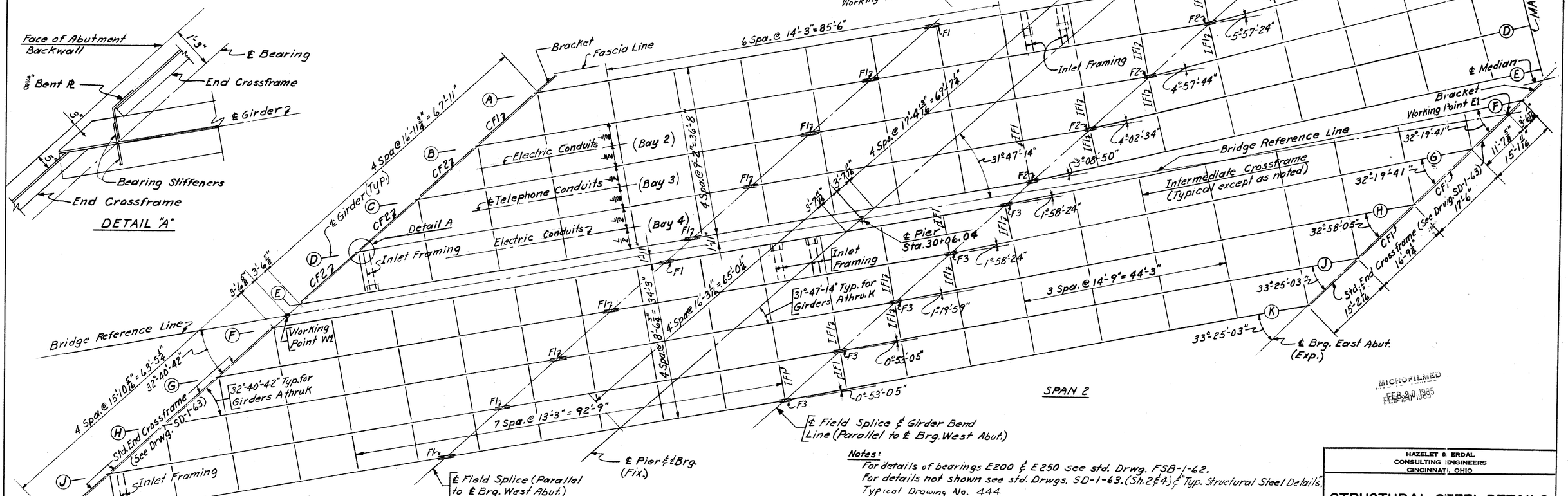
395
492

HAMILTON COUNTY
HAM - 71 - (1.56) (2.61)



ROADWAY ELEVATIONS

DETAIL "A"



Notes:

For details of bearings E200 & E250 see std. Drwg. FSB-1-62.
For details not shown see std. Drwgs. SD-1-63. (Sh. 2 & 4) & "Typ. Structural Steel Details", Typical Drawing No. 444

For Inlet framing details see Drainage Details.
Telephone & Electric conduit supports required at each intermediate stiffener location in addition to crossframe locations. See sheet 397 for details.
Expansion joint openings shown on details are for a normal temperature of 70°F.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

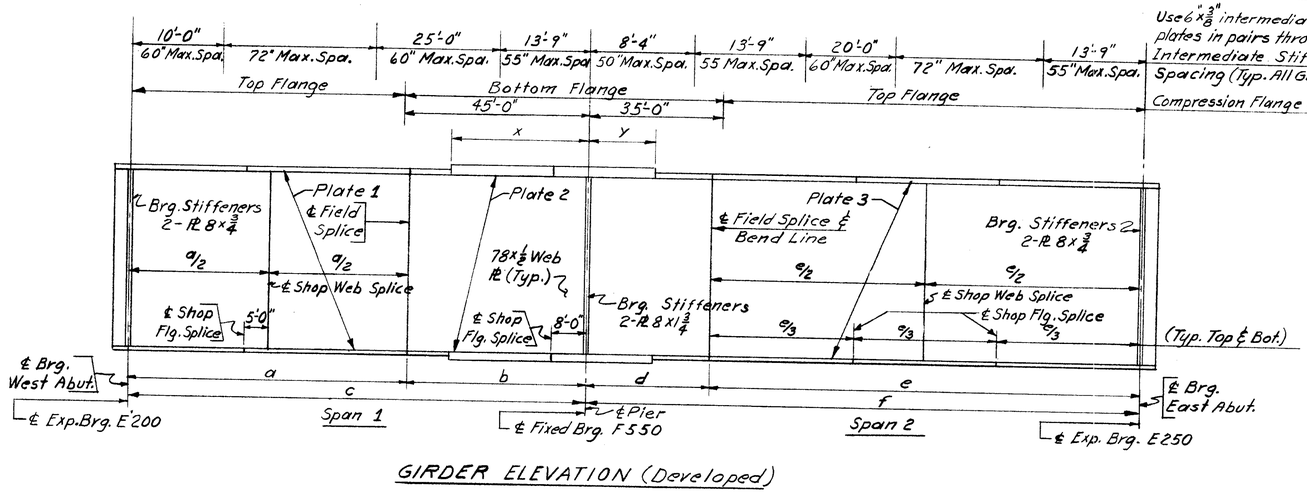
BRIDGE NO. HAM - 71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		W.J.Z. 3-17-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

396
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



GIRDER ELEVATION (Developed)

TABLE OF FLANGE PL LENGTHS		
Gir. / Lgth.	A thru. E	F thru. K
x	37'-0"	33'-0"
y	18'-0"	23'-0"

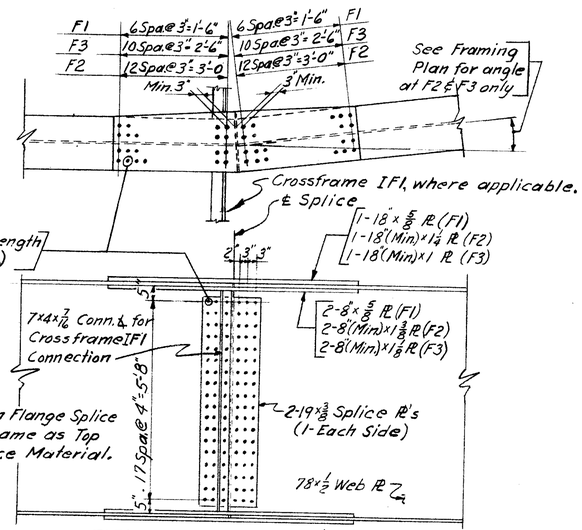
TABLE OF FLANGE PLATE SIZES			
PL No. / Girder	1	2	3
A, B, C, D, E,	18x1 1/8	18x3	18x2 3/4
F, G, H, J, K.	18x1 3/8	18x2 1/2	18x1 7/8

TABLE OF GIRDER LENGTH DATA

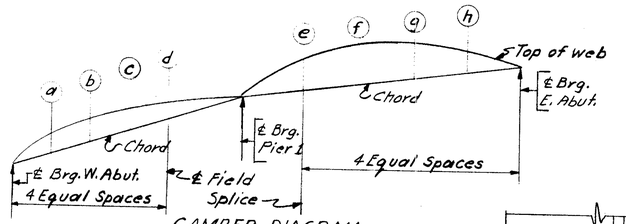
Dimension / Girder	A	B	C	D	E	F	G	H	J	K
a	85'-1 1/8"	85'-1 1/8"	85'-1 1/8"	85'-1 1/8"	85'-1 3/8"	85'-1 3/8"	85'-1 3/8"	85'-1 1/8"	85'-1 3/8"	85'-1 3/8"
b	41'-7 7/16"	41'-1 7/16"	40'-7 7/16"	40'-1 1/4"	39'-7 1/4"	39'-4 3/4"	38'-11 1/8"	38'-5 1/2"	37'-11 5/8"	37'-6 1/4"
c	126'-8 7/16"	126'-2 7/16"	125'-8 7/16"	125'-2 3/8"	124'-8 3/8"	124'-5 1/8"	124'-0 1/4"	123'-6 5/8"	123'-1"	122'-7 3/8"
d	32'-4 11/16"	32'-10 11/16"	33'-4 7/16"	33'-10 3/4"	34'-4 3/4"	34'-7 1/4"	35'-0 3/8"	35'-6 1/2"	36'-0 5/8"	36'-5 3/4"
e	127'-5 5/8"	123'-10 3/8"	121'-0 7/16"	118'-7 3/8"	116'-5 5/8"	113'-0 1/2"	113'-10 5/16"	112'-8 3/8"	112'-2 7/16"	113'-0 3/8"
f	159'-9 13/16"	156'-9 7/16"	154'-4 3/4"	152'-6 1/8"	150'-10 3/8"	147'-7 3/8"	148'-11 7/16"	148'-3 3/8"	148'-2 7/16"	149'-6 3/8"

DEFLECTION AND CAMBER TABLE

GIRDER	A								B								C								D								E								F				G				H				J				K			
SPAN	1				2				1				2				1				2				1				2				1				2				1				2				1				2				1			
LOCATION (See Diagram)	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d	e	f	g	h	a	b	c	d
Deflection due to Weight of Steel	1/8"	3/16"	1/8"	1/16"	1/4"	1/8"	5/8"	3/8"	1/8"	3/16"	1/8"	1/16"	1/4"	1/2"	9/16"	3/8"	1/8"	3/16"	1/8"	1/16"	1/4"	7/16"	1/2"	5/16"	1/8"	3/16"	1/8"	1/16"	3/16"	7/16"	1/2"	5/16"	1/8"	3/16"	1/8"	1/16"	1/4"	1/2"	9/16"	3/8"	1/8"	3/16"	1/8"	1/16"	1/4"	1/2"	9/16"	3/8"	1/8"	3/16"	1/8"	1/16"	1/4"	1/2"	9/16"	3/8"	1/8"	3/16	1/8"	1/16"
Deflection due to Remaining Dead Load	3/16"	9/16"	7/16"	1/8"	13/16"	1/16"	1/8"	1/4"	1/4"	3/8"	5/16"	1/8"	9/16"	1/8"	1/4"	13/16"	5/16"	7/16"	3/8"	1/8"	1/2"	1"	1 1/16"	9/16"	5/16"	3/8"	5/16"	1/8"	1/2"	1"	1 1/16"	9/16"	5/16"	3/8"	5/16"	1/8"	1/2"	1"	1 1/8"	3/4"	5/16"	1/2"	5/16"	1/8"	1/2"	1"	1 1/8"	3/4"	5/16"	1/2"	5/16"	1/8"	1/2"	1"	1 1/8"	3/4"	5/16"	1/2"	5/16"	1/8"
Convexity & Superelevation Transition	2"	1/16"	1/8"	1/16"	3/8"	1/16"	3/8"	3/8"	7/8"	1/16"	1/8"	1/16"	1/16"	3/16"	1/16"	1/8"	7/8"	1/16"	1/8"	1/8"	1/4"	1/4"	9/16"	5/16"	7/8"	1/16"	1/8"	1/8"	1/16"	1/16"	1/16"	1/16"	7/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1"	7/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1"	7/8"	1/16"	1/16"	1/8"	1/16"	1/16"	1/16"	1"	7/8"	1/16"	1/16"	1/8"	1/16"
Sum of Deflection, Convexity & Superelevation Transition	1 3/4"	2 3/16"	2 3/16"	1 5/8"	1 11/16"	2 1/4"	2 7/8"	2"	1 1/4"	2"	2 1/16"	1 5/8"	1 7/8"	2 3/16"	1 5/8"	1 5/8"	1 5/8"	2 1/16"	2 1/8"	1 9/16"	2 1/8"	3 3/8"	2 7/16"	1 9/16"	1 5/8"	2"	2 1/16"	1 7/16"	2 1/4"	3 3/8"	3"	1 11/16"	1 1/4"	2"	2"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"
Required Camber	1 3/8"	2 3/16"	2 3/16"	1 5/8"	1 11/16"	2 1/4"	2 7/8"	2"	1 1/4"	2"	2 1/16"	1 5/8"	1 7/8"	2 3/16"	1 5/8"	1 5/8"	1 5/8"	2 1/16"	2 1/8"	1 9/16"	2 1/8"	3 3/8"	2 7/16"	1 9/16"	1 5/8"	2"	2 1/16"	1 7/16"	2 1/4"	3 3/8"	3"	1 11/16"	1 1/4"	2"	2"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"	3 3/8"	3 1/4"	2 1/16"	1 5/8"	2"	2 1/16"	1 7/8"	2 1/4"

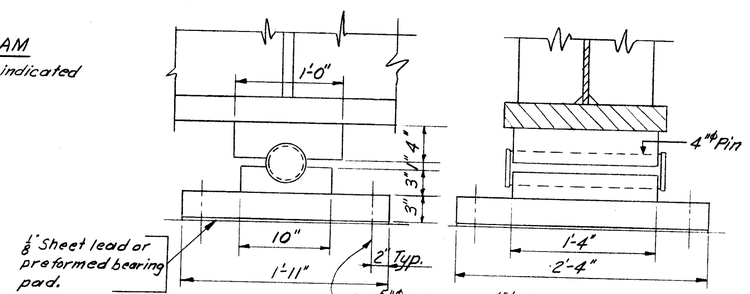


FIELD SPLICE (F1, F2 & F3)



CAMBER DIAGRAM

Note: Cut web to a smooth curve indicated by diagram.



FIXED BEARING F550

For details not shown see Std. Drwg. No. FSB-1-62.

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

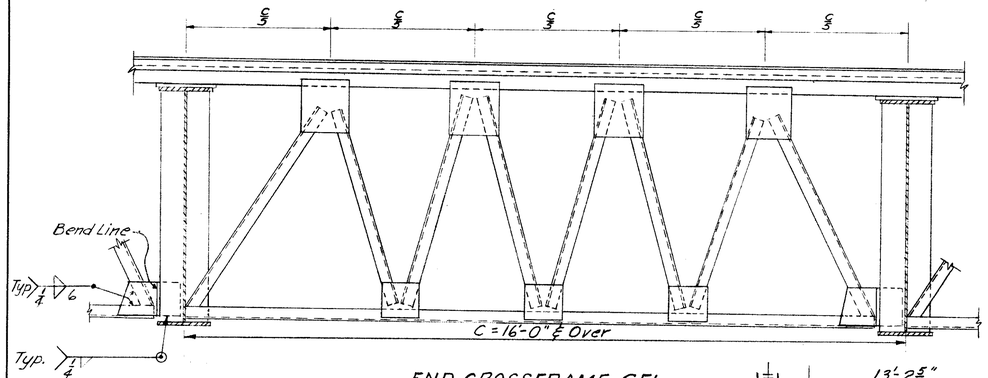
BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		W.J.E. 5-17-85	JHO 5/20/65	

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

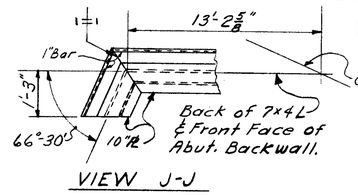
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

397
492

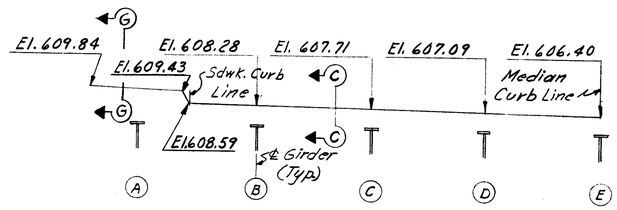


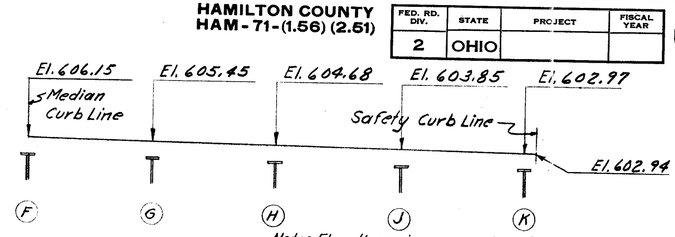
END CROSSFRAME CFI

Note: Unless otherwise shown all weld dimensions & member sizes for end crossframe CFI & CF2 shall be as shown on Standard Drawing SD-1-63, Sheet "2.



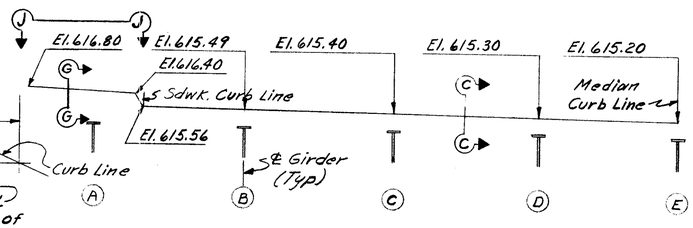
VIEW J-J

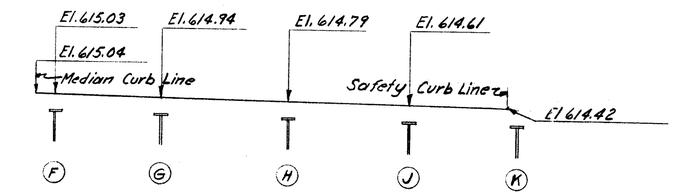




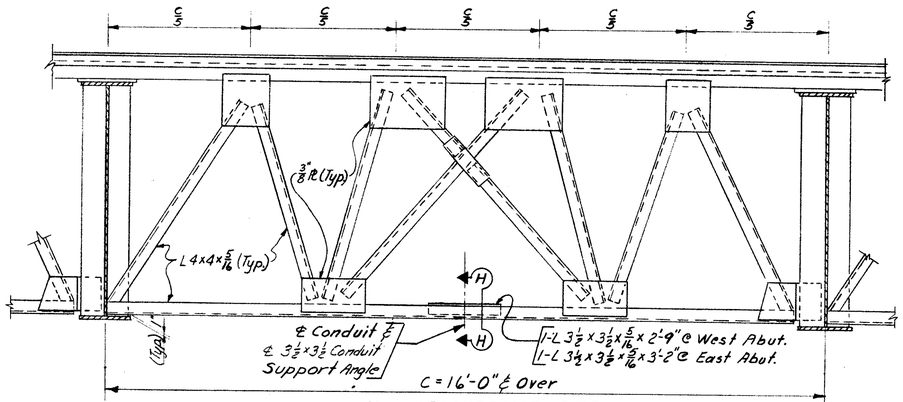
EXPANSION JOINT CROSS SECTION @ WEST ABUT.

Note: Elevations given are at the intersection of ℄ of girder or curb line and ℄ expansion joint (shown on Section C-C)
Roadway expansion joints are to be bent in shop to conform to contour of top of slab.



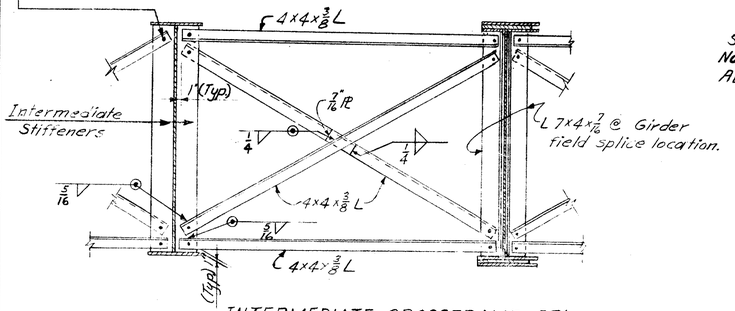


EXPANSION JOINT CROSS SECTION @ EAST ABUT.

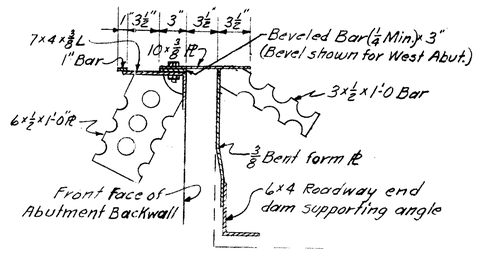


END CROSSFRAME CF2

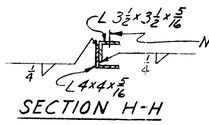
Provide 13/16" ϕ holes for 3/4" ϕ bolts in crossframe angles and stiffener plates, which are to be field connected before welding. If 3/4" ϕ bolts are to be left in place they shall be tack welded.



INTERMEDIATE CROSSFRAME IF1

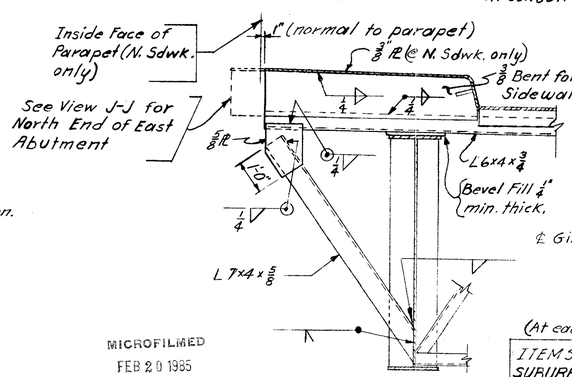


SECTION G-G

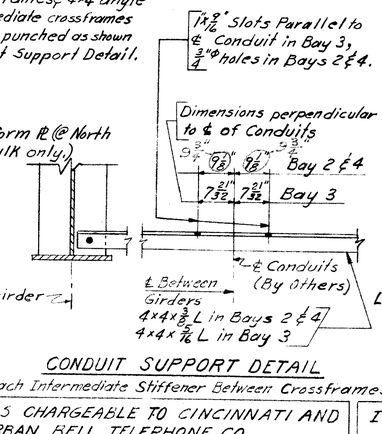


Note: 3 1/2 x 3 1/2 Angle on end Crossframes & 4x4 angle on intermediate crossframes to be shop punched as shown on Conduit Support Detail.

SECTION H-H



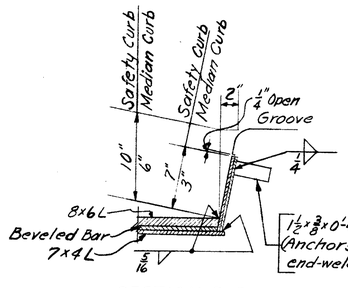
TYPICAL BRACKET DETAIL



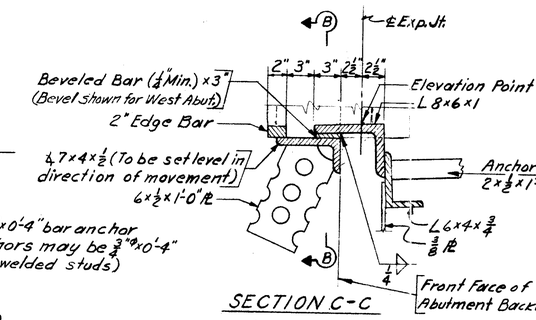
CONDUIT SUPPORT DETAIL
(At each Intermediate Stiffener Between Crossframes)

ITEMS CHARGEABLE TO CINCINNATI AND SUBURBAN BELL TELEPHONE CO.			
Item	Unit	Description	Amount
5-7	Lbs.	Structural Steel	3600

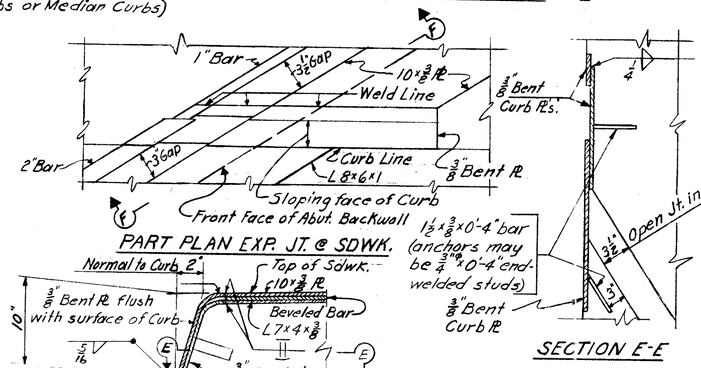
ITEMS CHARGEABLE TO CINCINNATI GAS & ELECTRIC CO.			
Item	Unit	Description	Amount
5-7	Lbs.	Structural Steel	8550



SECTION B-B
(Safety Curbs or Median Curbs)



SECTION C-C



PART PLAN EXP. JT. @ SDWK.

SECTION E-E

SECTION F-F

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		W.J.Z. 3-17-65	JHO 5/20/65	8-7-26


Concrete above this line to be included under Item S-14 for payment (Typ.)
80'-4"
7'-2"
33'-0"
2'-0" 2'-0"
33'-0"
3'-2"
S5001, S5002 or S5003 (Top of Sdwk-Typ.)
S6071 or S6091 (Top - Typ.)
S5001, S5002 or S5004 (Top of Median-Typ.)
S4003
Constr. Jt. (Level)-Typ.
S6040 or S6036 (Top-Typ.)
S5001 (Top of Curb - Typ.)
S4002
S6059 (Over Pier - Typ.)
Superelevation (Varies)
Profile Grade
6 Equal Spaces #6 Bars (Top) - Typ.
S6151 or S6152 (Typ.)
3" Galv. Metal conduit
5 Spa @ 8" = 3'-4"
Equal Spaces #6 Bars (Bott.)
S7071 or S7091 (Bott.-Typ.)
(Typ.)
Haunch (Typ.)
2"R (Typ.)
℄ Gilbert Ave.
S7040 or S7036 (Bott. - Typ.)
S4001
Varies (Typ.)
See Detail E & Note Sheet 399
(Including 1" for monolithic Wearing Surface)
Constr. Jt. (Level)
1" Dia. Halfround Drip Groove (Typ.)
A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" wide.
A B C D E F G H J K

TRANSVERSE SECTION
(Constant Width Portion of Bridge - Looking East)

3" Galv. Metal conduits to be located in sdwk and safety curb see Lighting Plan Sh No 206.


DETAIL A
Face of Backwall
Face of Parapet only
Edge of Safety Curb Slab
End of Rdwy. Slab
Abut. Wingwall
Parapet
Fascia
3½" @ 70°F
N
S4013 thru S4018 (Each 1 bar) (Fan - Sdwk)
See Detail B
Edge of Sdwk Slab
4-S4019 @ 1'-6" (Sdwk)
3" Galv. Metal conduit
Fascia
Match Line
185 - S4002 @ 1'-6" (Sdwk)
Curb Line
S6055 thru S6069 (Each 2 bars-Top)
S7055 thru S7069 (Each 2 bars-Bott.)
S6017 thru S6027 (Each 2 bars - Top)
S7017 thru S7027 (Each 2 bars-Bott.)
4-S6118 (Top)
4-S7118 (Bott.)
S6047, S6006 & S6050 thru S6054 (Each 2 bars-Top)
S7047, S7006 & S7050 thru S7054 (Each 2 bars-Bott.)
S6006 thru S6008 (Each 2 bars - Top)
S7006 thru S7008 (Each 2 bars - Bott.)
S4003 (Median)
S6041 thru S6047 (Each 2 bars-Top)
S7041 thru S7047 (Each 2 bars-Bott.)
S4010 & S4011 (Fan-Median)
4-S6043 (Top)
4-S7043 (Bott.)
Bridge Ref. Line
℄ Gilbert Ave.
32°40'42"
10-S6070 (Top)
10-S7070 (Bott.)
Note: All roadway slab transverse bars are placed perpendicular to and @ 8" c.c. along Bridge Ref. Line.
4 Sets of 29 = 116-S6151 (Top)
4 Sets of 45 = 180-S6151 (Bott.)
4 Sets of 6 = 24-S5001 (Top of Sdwk)
4 Sets of 2 = 8-S5001 (Top of Median)
℄ Drain Inlet
8" (Typ.)
182 - S4003 @ 1'-6" (Median)
147-S6071 Bars (Top)
147-S7071 Bars (Bott.)
6'-0" 11'-9"
℄ Gilbert Ave. & Bridge Ref. Line
31°47'14"
Sta. 30+06.04 GB(N)
3-S6001 (Top)
3-S6001 (Bott.)
Median Curb Lines
S6001 thru S6009 (Each 2 bars - Top)
S7001 thru S7009 (Each 2 bars - Bott.)
End of Rdwy. Slab
P.T. Sta. 28+84.53 GB(N)
8 Sets of 28 = 224-S6151 (Top)
8 Sets of 43 = 344-S6151 (Bott.)
4-S6117 (Top)
4-S7117 (Bott.)
1-S4010 & 1-S4011 (Fan-Median)
Sta. 28 + 81.44 GB(N)
℄ Brg. - West Abut.
Roadway End Dam for Monolithic Wearing Surface
182-S4003 @ 1'-6" (Median)
2-S6004 & 2-S6005 (Top)
2-S7004 & 2-S7005 (Bott.)
2 Sets of 27 = 54-S6059 (Top of Slab over Pier)
2 Sets of 2 = 4-S6059 (Top of Curb over Pier)
2 Sets of 1 = 2-S6059 (Top of Median over Pier)
3-S6007 (Top)
3-S6007 (Bott.)
8 Sets of 3 = 24-S5001 (Top of Curb)
8 Sets of 2 = 16-S5001 (Top of Median)
3-S6001 (Top)
3-S6001 (Bott.)
S6012 thru S6039 (Each 2 bars-Top)
S7012 thru S7039 (Each 2 bars-Bott.)
161 - S6040 @ 8" (Top)
161 - S7040 @ 8" (Bott.)
5-S6040 @ 8" (Top)
5-S7040 @ 8" (Bott.)
Edge of Safety Curb Slab
(Along Bridge Ref. Line)
43'-0" to P.T.
1'-11" min. lap for #6 bars
3'-0" 28'-6" 28'-6" 3'-0" (Typ.)
Curb Line
See Detail A
℄ Lamp Std.
℄ Drain Inlet
4-S6006 (Top)
4-S7006 (Bott.)
Fascia
℄ Pier
1'-7" min. lap for #5 bars
178 - S4001 @ 1'-6" (Safety Curb)
6-S6036 @ 8" (Top)
6-S7036 @ 8" (Bott.)
℄ Brg.- West Abut.
3-S6009 (Top)
3-S7009 (Bott.)
S4004 thru S4006 (Each 1 bar, Fan - Safety Curb)
Longitudinal bars bent or cut in field to clear Drain Inlet (Typ.)
S4001 (Safety Curb)
S6040 Bars (Top)
S7040 Bars (Bott.)
DETAIL B
Face of Backwall
3½" @ 70°F
Fascia
Abut. Wingwall
Parapet
@ 70°F
End of Rdwy Slab
Edge of Sdwk Slab

PLAN
(Parapet not shown)

Notes:
For Drainage Details, see Sheet 400
For Lighting Details, see Sheet 215.
For Railing Details and Spacing of bars in parapet see Sheet 400

Work this drawing with Lighting Plan Sh. No 206
For conduit expansion detail at abutments see Sh No. 214.

Work this sheet with Sheet 399

MICROFILMED FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

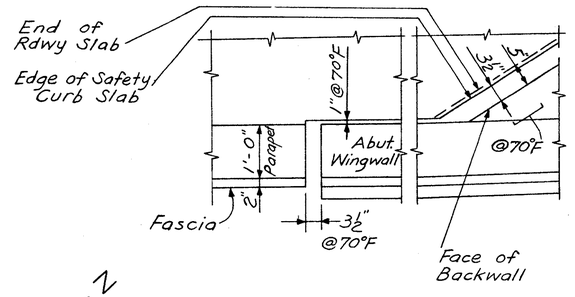
BRIDGE NO. HAM - 71 - 0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	GW		D.W. 3-17-65	JHO 5/20/65	

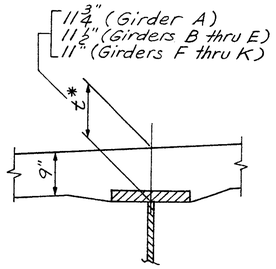
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

399
442



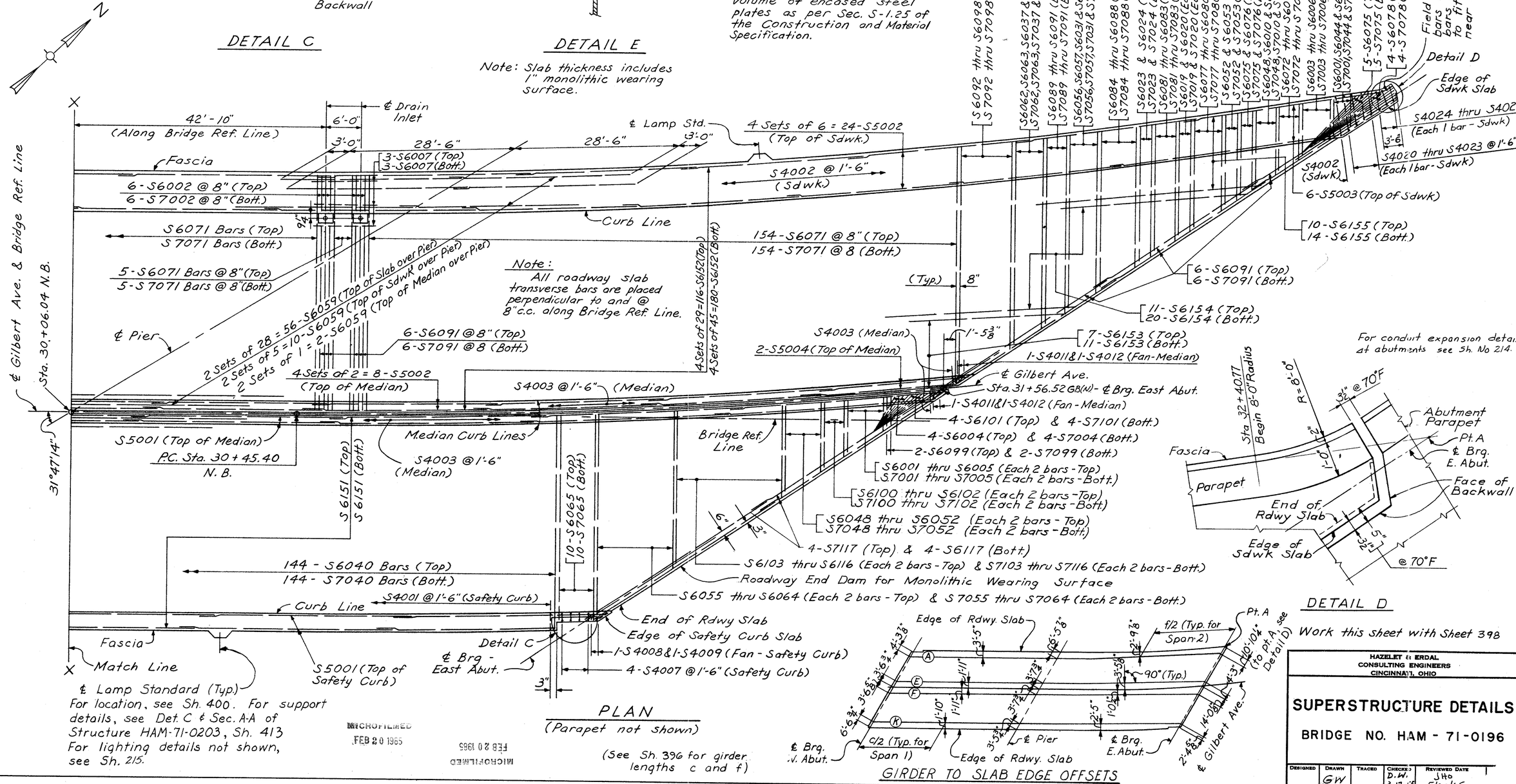
DETAIL C



DETAIL E

Note: Slab thickness includes 1" monolithic wearing surface.

* This is the nominal dimension. The quantity of deck concrete to be paid for, shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade.
Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the Construction and Material Specification.



PLAN
(Parapet not shown)

(See Sh. 396 for girder lengths c and f)

For conduit expansion detail at abutments see Sh. No 214.

DETAIL D

Work this sheet with Sheet 398

GIRDER TO SLAB EDGE OFFSETS

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

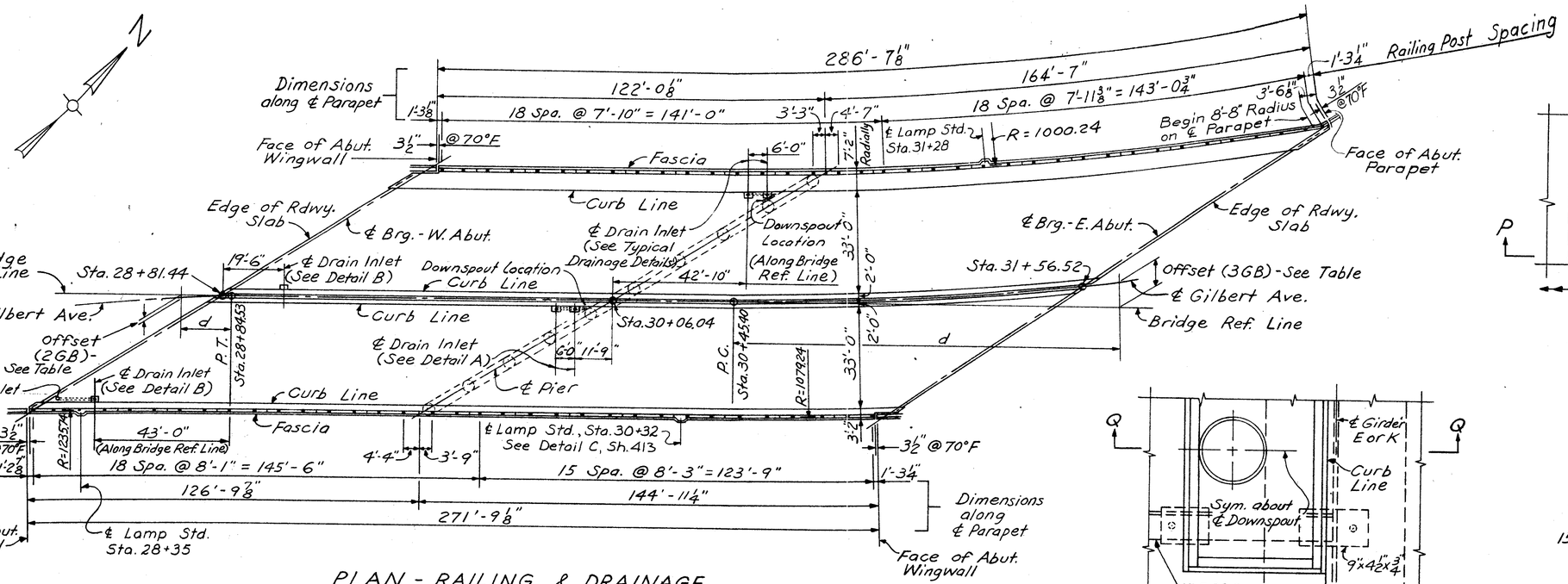
BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
	GW		D.W. 3-17-05	JHO 5/20/05

FED. RD. DIV.	STATE	PRO. ECT	FISCAL YEAR
2	OHIO		

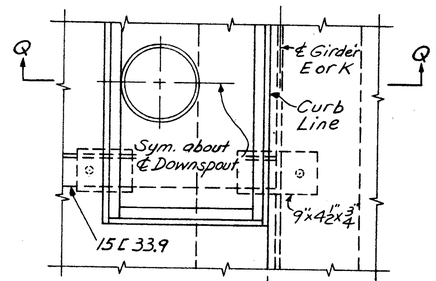
400
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

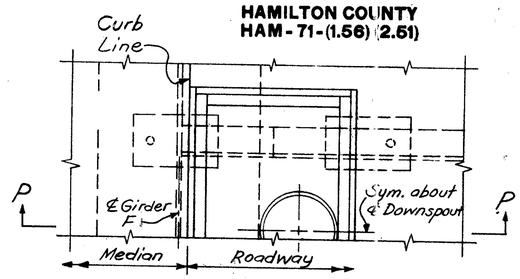


PLAN - RAILING & DRAINAGE

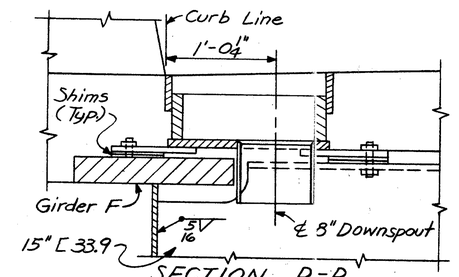
Work this plan with Lighting Plan Sh. No. 206.



DETAIL B

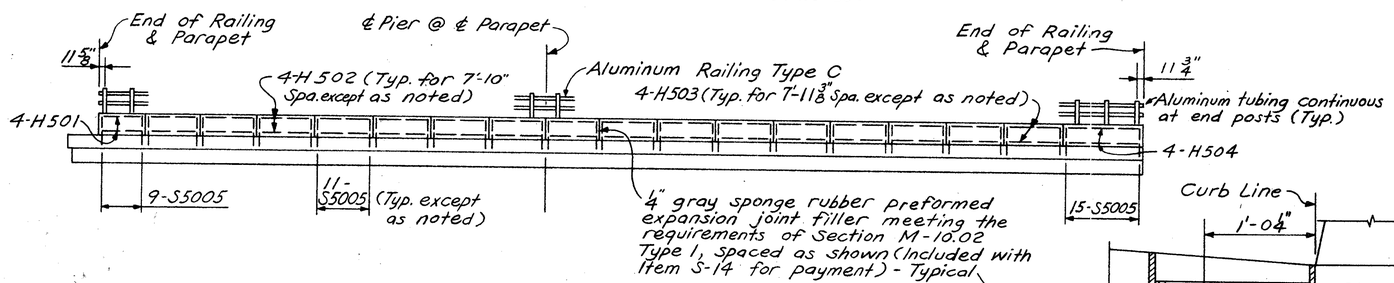


DETAIL A

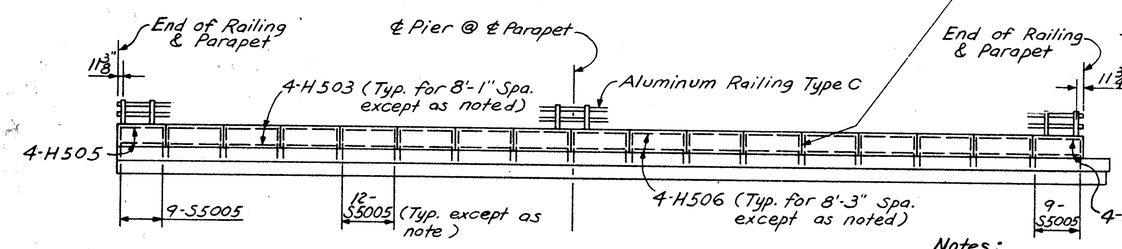


SECTION P-P

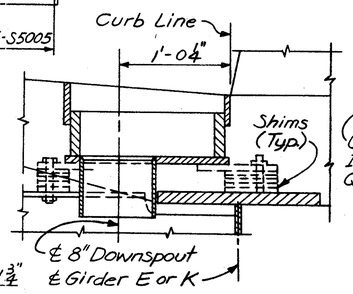
(For details not shown, see Typical Drainage Details)



ELEVATION - NORTH RAILING

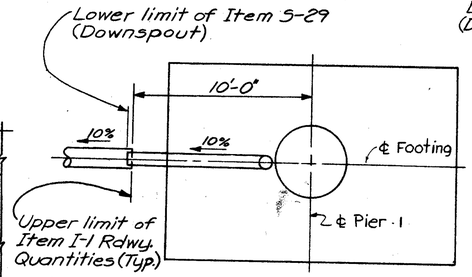


ELEVATION - SOUTH RAILING

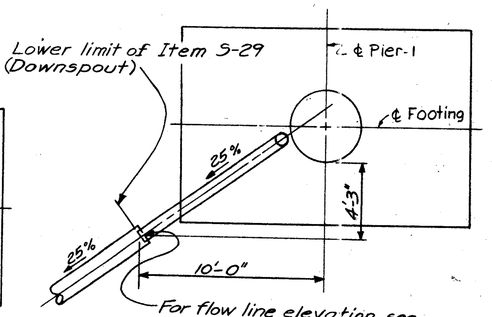


SECTION Q-Q

(For details not shown, see Typical Drainage Details)



PLAN OF LIMITS OF S-29 & I-1 AT PIER NO. 1 FOR SOUTHBOUND ROADWAY



PLAN OF LIMITS OF S-29 & I-1 AT PIER NO. 1 FOR NORTHBOUND ROADWAY

Notes:
For railing details not shown, see Standard Drawing No. AR-1-57
Aluminum tube railing shall be bent to the curvature of the ℄ of parapet.

Location		@ ℄ Brg. Abut.	@ Distance d from P.T. or P.C.							
			25'	50'	75'	100'	125'	150'	175'	200'
Offset	Curve 2GB(NB)	16"	3"	11¾"	2'-2⅞"	3'-11¾"	–	–	–	–
	Curve 3GB(NB)	5'-11"	3⅝"	1'-2⅜"	2'-8⅝"	4'-9¾"	7'-6⅜"	10'-10⅝"	14'-9⅝"	19'-4½"

TABLE OF OFFSETS

MICROFILMED
FEB 20 1985

Work this sheet with Sheets 398 & 399

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING DETAILS

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED
	GW		D.W. 3-17-65	

Black 204

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

401 / 492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

Black 204
401-492

WEST ABUTMENT

Mark	Type	No. Reqd	Length	Weight
A553	18	112	5'-7"	653
A554	Str.	94	3'-6"	343
A556	Str.	32	17'-0"	567
A557	↑	32	16'-3"	542
A558		32	15'-5"	515
A559		32	18'-9"	626
A560		32	19'-6"	651
A561		30	20'-0"	626
A562		4	12'-6"	52
A563		24	25'-7"	640
A564	↓	24	23'-6"	588
A565	Str.	26	28'-0"	759
A566	47	20	10'-1"	211
A567	Str.	6	24'-0"	150
A568	Str.	8	8'-6"	71
A569	17	6	7'-6"	47
A570	32	12	9-7"	120
A571	Str.	33	14'-0"	482
A572	Str.	7	7'-6"	55
A573	1	3	3'-6"	11
A574	20	5	9'-9"	51
A575	Str.	4	9'-6"	40
A576	↕	2	11'-6"	24
A577		9	21'-3"	199
A578	Str.	15	5'-6"	86
A579	1	3	3'-9"	12
A580	40	6	30'-3"	189
A581	↑	6	29'-5"	184
A582		6	28'-5"	177
A583		6	27'-5"	171
A584		6	26'-5"	165
A585		6	25'-5"	159
A586		6	24'-5"	152
A587		6	23'-5"	146
A588		6	22'-5"	140
A589		6	21'-3"	133
A590		6	19'-11"	124
A591		6	18'-7"	116
A592		6	17'-3"	108
A593		6	16'-1"	100
A594		6	14'-9"	92
A595		6	13'-5"	84
A596		6	12'-1"	75
A597		6	10'-9"	67
A598		6	30'-5"	190
A599		6	29'-7"	185
A5100		6	28'-7"	178
A5101		6	27'-9"	173
A5102		6	26'-11"	168
A5103		6	26'-3"	164
A5104		6	25'-3"	158
A5105		6	24'-5"	152
A5106		6	23'-7"	147
A5107		6	22'-7"	141
A5108		6	21'-5"	134
A5109		6	20'-3"	126
A5110		6	19'-3"	120
A5111		6	18'-1"	113
A5112		6	17'-1"	107
A5113		6	15'-11"	99
A5114		6	14'-11"	93
A5115		6	13'-9"	86
A5116		6	12'-7"	78
A5117	40	6	11'-7"	72
A5118	Str.	1	8'-3"	9
A5119	Str.	1	6'-0"	6
A651	Str.	18	26'-0"	703
A652	↕	18	23'-6"	635
A653		9	25'-0"	338
A654	Str.	9	28'-6"	385
A655	8	126	12'-4"	2334
A656	20	133	11'-9"	2347

Mark	Type	No. Reqd	Length	Weight
A657	Str.	4	3'-8"	22
A658	Str.	8	4'-0"	48
A659	1	9	22'-7"	305
A660	Str.	9	8'-9"	118
A661	Str.	4	7'-5"	45
A662	62	5	8'-8"	65
A663	Str.	27	28'-0"	1138
A664	↑	18	38'-9"	1048
A665	↓	94	14'-9"	2082
A666	Str.	19	11'-0"	314
A670	8	8	7'-10"	94
A671	8	3	7'-7"	34
A672	Str.	8	3'-9"	45
A673	Str.	3	3'-6"	16
A751	Str.	64	27'-0"	3532
A752	↑	64	23'-6"	3074
A753		28	24'-6"	1402
A754	Str.	36	36'-6"	2686
A851	Str.	23	35'-0"	2149
A852	↑	13	46'-0"	1597
A853		33	41'-0"	3613
A854		23	30'-0"	1842
A855	↓	13	14'-6"	504
A856	Str.	10	20'-6"	547
A952	44	240	7'-0"	5712
A953	Str.	24	18'-2"	1482
A954	↑	12	14'-9"	602
A955		12	12'-10"	524
A956		12	11'-3"	459
A957		12	9'-8"	394
A958		12	8'-1"	330
A959	↓	12	6'-6"	265
A960	Str.	12	4'-11"	201
A961	44	4	5'-9"	78
A962	Str.	24	21'-0"	1714
A963	↑	12	17'-3"	704
A964		12	14'-11"	609
A965		12	13'-1"	534
A966		12	11'-2"	456
A967		12	9'-5"	384
A968	↓	12	7'-8"	313
A969	Str.	12	5'-10"	238
A1051	44	130	21'-11"	12260
A1052	22	18	19'-10"	1537
A1053	45	12	26'-11"	1391
A1054	22	18	19'-10"	1537
A1055	45	18	29'-1"	2254
A1056	45	6	26'-5"	682
A1057	Str.	15	16'-3"	1049
A1058	22	6	9'-11"	256
A1151	18	8	8'-9"	372
A1152	18	7	11'-8"	434
A1153	Str.	8	17'-6"	744
A1154	Str.	9	16'-7"	793
A1155	44	11	8'-2"	477
A1156	Str.	11	23'-9"	1388
* H551	Str.	4	9'-7"	
* H552	Str.	4	7'-6"	
			Total	86437

EAST ABUTMENT

Mark	Type	No. Reqd	Length	Weight
A501	18	130	5'-7"	756
A502	20	22	5'-5"	124
A503	Str.	102	21'-3"	2261
A504	↑	38	21'-9"	863
A505		26	21'-2"	574
A506		73	20'-8"	1574
A507		116	3'-6"	424
A508		24	21'-7"	540
A509		24	27'-6"	688
A510		11	31'-8"	363
A511		13	19'-0"	258
A512	↓	1	8'-0"	8
A513	Str.	5	15'-0"	78
A514	1	5	3'-10"	20
A515	Str.	17	4'-6"	80
A516	Str.	2	13'-0"	28
A517	Str.	13	26'-9"	363
A518	40	14	24'-7"	359
A519	↑	14	24'-1"	352
A520		14	23'-5"	342
A521		14	22'-11"	335
A522		14	22'-3"	325
A523		14	21'-9"	318
A524		14	21'-1"	308
A525		14	20'-7"	301
A526		14	19'-11"	291
A527		14	19'-3"	281
A528		14	18'-5"	269
A529		14	17'-7"	257
A530		14	16'-9"	245
A531		14	16'-1"	235
A532		14	15'-3"	223
A533		14	14'-7"	213
A534		14	13'-9"	201
A535		14	12'-11"	189
A536		14	12'-1"	177
A537		14	11'-3"	164
A538	↓	14	11'-7"	169
A539	40	14	9'-11"	145
A540	1	3	5'-8"	18
A541	Str.	2	5'-9"	12
A542	32	7	11'-7"	84
A543	47	20	9'-10"	206
A544	Str.	2	19'-0"	40
A545	47	7	11'-8"	85
A546	18	7	9'-4"	68
A547	20	5	9'-6"	50
A548	Str.	4	10'-0"	43
A549	1	3	3'-6"	11
A550	32	7	7'-7"	55
A601	Str.	130	12'-3"	2392
A602	↑	18	22'-0"	595
A603		18	27'-6"	744
A604		9	32'-4"	437
A605	Str.	9	26'-9"	362
A606	8	143	12'-4"	2649
A607	20	151	11'-9"	2665
A608	1	12	22'-3"	401

Mark	Type	No. Reqd	Length	Weight
A612	Str.	15	36'-6"	821
A613	↑	20	28'-4"	854
A614		9	17'-9"	240
A615		20	11'-4"	340
A616		4	5'-11"	36
A617		2	5'-6"	17
A618	↓	9	10'-8"	144
A619	Str.	4	10'-2"	61
A620	8	8	7'-7"	91
A621	8	4	7'-5"	45
A622	Str.	8	3'-8"	44
A623	Str.	4	3'-6"	21
A701	Str.	72	23'-0"	3385
A702	Str.	72	27'-6"	4050
A703	Str.	72	34'-6"	5077
A704	44	224	5'-10"	2671
A705	Str.	28	20'-10"	1192
A706	↑	64	17'-9"	2323
A707		28	14'-3"	816
A708		28	11'-3"	644
A709	↓	28	9'-0"	515
A710	Str.	28	6'-3"	358
A901	Str.	11	36'-9"	1374
A902	↑	33	40'-0"	4488
A903		11	35'-6"	1327
A904		22	32'-3"	2410
A905		11	26'-9"	1000
A906		22	28'-6"	2132
A907	↓	11	30'-3"	1131
A908	Str.	11	24'-9"	926
A1001	44	122	18'-11"	9931
A1002	44	122	10'-5"	5468
A1003	52	7	15'-8"	472
A1004	Str.	22	15'-0"	1420
A1102	22	56	18'-1"	5380
A1103	45	56	29'-4"	8726
A1104	Str.	15	13'-7"	1083
A1106	Str.	11	20'-9"	1213
* H511	Str.	4	9'-11"	
* H512	Str.	4	8'-7"	
			Total	97844

PIER

Mark	Type	No. Reqd	Length	Weight
P401	64	1	17'-0 3/8"	692
P402	↑	1	17'-5 3/8"	708
P403		1	17'-9 1/2"	725
P404		1	18'-1 5/8"	733
P405		1	18'-6 3/8"	749
P406		1	18'-10 3/8"	766
P407		1	19'-3 1/8"	781
P408		1	19'-8 1/4"	798
P409	↓	1	20'-0 1/8"	814
P410	64	1	20'-5 5/8"	831
P411	1	58	5'-6"	212
P501	1	564	7'-7"	4461
P502	↕	56	6'-5"	374
P503		2	6'-0"	13
P504	1	2	5'-3"	11
P601	Str.	220	10'-6"	3470
P602	Str.	4	37'-4"	224
P603	6	4	11'-7"	70
P604	Str.	8	8'-6"	102
P605	Str.	4	35'-3"	212
P801	18	8	43'-3"	923
P802	18	8	44'-0"	939
P803	Str.	4	34'-0"	363
P804	Str.	4	16'-0"	171
P805	Str.	4	31'-4"	335
P901	44	4	38'-0"	517
P902	Str.	6	34'-9"	709
P903	Str.	5	24'-6"	417
P904	Str.	4	15'-3"	208
P905	44	4	35'-1"	477
P906	Str.	6	33'-6"	683
P907	Str.	5	23'-9"	404
P1001	Str.	140	15'-6"	9338
P1002	Str.	2	36'-0"	310
P1003	44	8	13'-8"	470
P1004	Str.	4	10'-3"	176
P1005	Str.	2	33'-4"	287
P1006	6	4	11'-7"	199
P1101	18	240	6'-11"	8820
P1102	Str.	24	21'-0"	2678
P1103	↑	24	21'-3"	2709
P1104		24	21'-6"	2741
P1105		24	22'-0"	2805
P1106		24	22'-3"	2837
P1107		24	22'-9"	2901
P1108		24	23'-0"	2933
P1109		24	23'-6"	2997
P1110	↓	24	24'-0"	3060
P1111	Str.	24	24'-6"	3124
P1112	18	6	37'-7"	1198
P1113	18	8	16'-1"	684
P1114	Str.	8	19'-3"	818
P1115	18	6	33'-7"	1070
P1116	18	2	35'-11"	382
P1117	18	2	32'-0"	340
			Total	75769

Type 40

Mark	a	b	c	d
A580	14'-3"	1'-2"	0'-6"	0'-6"
A581	13'-10"	↑	↑	↑
A582	13'-4"			
A583	12'-10"			
A584	12'-4"			
A585	11'-10"			
A586	11'-4"			
A587	10'-10"			
A588	10'-4"			
A589	9'-9"			
A590	9'-1"			
A591	8'-5"			
A592	7'-9"			
A593	7'-2"			
A594	6'-6"			
A595	5'-10"			
A596	5'-2"			
A597	4'-6"			
A598	14'-4"			
A599	13'-11"			
A5100	13'-5"			
A5101	13'-0"			
A5102	12'-7"			
A5103	12'-3"			
A5104	11'-9"			
A5105	11'-4"			
A5106	10'-11"			
A5107	10'-5"			
A5108	9'-10"			
A5109	9'-3"			
A5110	8'-9"			
A5111	8'-2"			
A5112	7'-8"			
A5113	7'-1"			
A5114	6'-7"			
A5115	6'-0"			
A5116	5'-5"			
A5117	4'-11"			
A5118	11'-5"			
A5119	11'-2"			
A5120	10'-10"			
A5121	10'-7"			
A5122	10'-3"			
A5123	10'-0"			
A5124	9'-8"			
A5125	9'-5"			
A5126	9'-1"			
A5127	8'-9"			
A5128	8'-4"			
A5129	7'-11"			
A5130	7'-6"			
A5131	7'-2"			
A5132	6'-9"			
A5133	6'-5"			
A5134	6'-0"			
A5135	5'-7"			
A5136	5'-2"			
A5137	4'-9"			
A5138	4'-5"	↓	↓	↓
A5139	4'-1"	1'-2"	0'-6"	0'-6"

Type 8

Mark	a	b	c	Mark	a	b	c
A655	2'-0"	0'-11"	9'-9"	A606	2'-0"	0'-11"	9'-9"
A670	2'-0"	0'-11"	5'-3"	A620	2'-0"	0'-11"	5'-0"
A671	2'-0"	0'-11"	5'-0"	A621	2'-0"	0'-11"	4'-10"

Type 44

Mark	a	Mark	a	Mark	a
A952	5'-9"	A704	5'-0"	P901	36'-9"
A961	4'-6"	A1001	17'-6"		
A1051	20'-6"	A1002	9'-0"	P905	33'-10"
A1053	20'-10"				
A1055	23'-2"			P1003	12'-3"
A1155	6'-7"				

Type 22

Type	Mark	a	b	c	d
22	A1052	2'-11"	15'-6"	13'-0"	8'-4"
	A1054	2'-11"	15'-6"	13'-1"	8'-5"
	A1058	5'-6"	3'-0"	1'-4"	2'-7"
	A1102	2'-11"	13'-7"	13'-4"	1'-3"

Type 6

Mark	a	b	Rad.
P603	5'-6 3/4"	3'-0"	3'-6 3/8"
P1006	5'-1 3/4"	3'-3"	1'-6 3/8"

Type 32

Mark	a	b
A570	0'-8"	4'-0"
A542	0'-8"	5'-0"
A550	0'-8"	3'-0"

Type 64 (Spiral Bars)

Mark	a	Pitch	No. of Turns
P401	3'-7"	2 1/2"	85
P402	3'-7"	2 1/2"	87
P403	3'-7"	2 1/2"	89
P404	3'-7"	2 1/2"	90
P405	3'-7"	2 1/2"	92
P406	3'-7"	2 1/2"	94
P407	3'-7"	2 1/2"	96
P408	3'-7"	2 1/2"	98
P409	3'-7"	2 1/2"	100
P410	3'-7"	2 1/2"	102

Note

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils).

Type 18

Mark	a	b
A553	2'-0"	3'-9"
A1151	3'-7"	5'-6"
A1152	3'-7"	8'-5"
A501	2'-0"	3'-9"
A546	2'-0"	7'-6"
P801	3'-6"	40'-0"
P802	3'-6"	40'-9"
P1101	1'-0"	6'-3"
P1112	1'-2"	36'-9"
P1113	1'-2"	15'-3"
P1115	1'-2"	32'-9"
P1116	1'-2"	35'-1"
P1117	1'-2"	31'-2"

Types 47, 17, 45 & 52

Type	Mark	a	b	c	d	e
47	A566	1'-6"	4'-6"	3'-7"	2'-2 5/8"	4'-3"
	A543	1'-6"	4'-0"	3'-10"	2'-3 5/8"	4'-6"
	A545	8'-7"	1'-3"	1'-10"	0'-9 5/8"	2'-0"
17	A569	1'-10"	1'-4"	3'-0"	2'-8"	2'-11"
45	A1053	2'-11"	19'-8"	3'-3"	16'-6"	10'-7"
	A1055	2'-11"	21'-10"	3'-3"	19'-8"	10'-7"
	A1056	2'-11"	18'-8"	3'-9"	15'-8"	10'-1"
	A1103	2'-11"	21'-7"	3'-7"	20'-3"	7'-8"
52	A1003	6'-0"	1'-0"	7'-6"	2'-6"	2'-3"

Type 1

Mark	a	b	Mark	a	b
A573	1'-7"	1'-1"	P501	2'-10"	2'-6"
A579	2'-0"	1'-0"	P502	3'-8"	1'-6"
A659	1'-5"	10'-9"	P503	3'-3"	1'-6"
A514	2'-0"	1'-0"	P504	2'-6"	1'-6"
A540	2'-9"	1'-7"	P411	3'-8"	1'-0"
A549	1'-7"	1'-1"			
A608	1'-5"	10'-7"			

Type 20 & 62

Type	Mark	a	b	c	d
20	A574	1'-2 5/8"	7'-6	2'-3"	1'-11"
	A656	2'-6"	8'-2	3'-6 5/8"	2'-6"
	A547	1'-3"	7'-0	2'-6"	2'-0"
	A607	2'-6"	8'-2	3'-6 5/8"	2'-6"
	A502	3'-5"	1'-10	3'-9"	1'-6"
62	A662	2'-0"	1'-0"	4'-6"	2'-2 3/8"

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISE
	GW		HEE 5-19-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

402
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

SUPERSTRUCTURE

Mark	Type	No. Reqd	Length	Weight
S4001	21	178	6'-9"	804
S4002	21	185	10'-9"	1329
S4003	63	364	5'-2"	1257
S4004	21	1	8'-7"	6
S4005	↑	1	7'-8"	5
S4006		1	6'-11"	5
S4007		4	3'-7"	15
S4008	↓	1	5'-11"	4
S4009	21	1	6'-9"	5
S4010	63	2	6'-8"	9
S4011	63	4	5'-8"	15
S4012	63	2	7'-0"	9
S4013	21	1	8'-1"	6
S4014	↑	1	7'-9"	6
S4015		1	7'-5"	5
S4016		1	7'-7"	5
S4017		1	8'-2"	6
S4018	↓	1	9'-1"	6
S4019	21	4	9'-6"	25
S4020	61	1	9'-9"	7
S4021	↑	1	9'-0"	6
S4022		1	8'-4"	6
S4023		1	7'-7"	5
S4024		1	6'-10"	5
S4025	↓	1	6'-3"	4
S4026	61	1	5'-11"	4
S5001	Str.	72	36'-6"	2741
S5002	↕	32	31'-0"	1035
S5003		6	38'-0"	238
S5004	Str.	2	24'-0"	50
S5005	14	398	5'-9"	2387
S6001	Str.	18	5'-9"	155
S6002	↑	10	6'-7"	99
S6003		6	7'-5"	67
S6004		12	8'-2"	147
S6005		8	8'-11"	107
S6006		12	9'-8"	174
S6007		16	10'-6"	252
S6008		4	11'-3"	68
S6009		5	12'-1"	91
S6010		2	12'-11"	39
S6011		2	13'-8"	41
S6012		2	14'-6"	44
S6013		2	15'-4"	46
S6014		2	16'-2"	49
S6015		2	16'-10"	51
S6016		2	17'-7"	53
S6017		4	18'-3"	110
S6018		4	19'-1"	115
S6019		6	19'-11"	179
S6020		6	20'-10"	188
S6021		4	21'-8"	130
S6022		4	22'-6"	135
S6023		6	23'-4"	210
S6024		6	24'-2"	218
S6025		4	25'-1"	151
S6026		4	25'-10"	155
S6027		4	26'-9"	161
S6028		2	27'-5"	82
S6029		2	28'-4"	85
S6030		2	29'-2"	88
S6031		4	30'-0"	180
S6032		4	30'-10"	185
S6033		2	31'-8"	95
S6034		2	32'-6"	98
S6035		2	33'-5"	100
S6036		8	34'-3"	412
S6037		4	35'-1"	211
S6038	↓	4	35'-11"	216
S6039	Str.	2	36'-10"	111
S6040	Str.	310	37'-4"	17383
S6041	↑	2	3'-8"	11
S6042		2	4'-6"	14
S6043		6	5'-4"	48
S6044		4	6'-3"	38
S6045		4	7'-1"	43
S6046		2	7'-11"	24
S6047		4	8'-10"	53
S6048		4	12'-3"	74
S6049		2	13'-1"	39
S6050		4	13'-11"	84
S6051		4	14'-10"	89
S6052		6	15'-7"	140
S6053		4	16'-5"	99
S6054		2	17'-3"	52
S6055		4	27'-6"	165
S6056		6	28'-5"	256
S6057		6	29'-2"	263
S6058		4	30'-2"	181
S6059		132	31'-0"	6146
S6060		4	31'-10"	191
S6061		4	32'-9"	197
S6062		6	33'-7"	303
S6063		6	34'-5"	310
S6064		4	35'-3"	212
S6065		12	36'-1"	650
S6066		2	37'-0"	111
S6067		2	37'-10"	114
S6068		2	38'-8"	116
S6069		2	39'-6"	119
S6070		10	40'-0"	601
S6071		306	41'-3"	18959
S6072		2	10'-4"	31
S6073		2	11'-0"	33
S6074		2	11'-8"	35
S6075		7	14'-4"	151
S6076		2	15'-0"	45
S6077		2	17'-2"	52
S6078		6	17'-11"	161
S6079		2	18'-7"	56
S6080		2	19'-4"	58
S6081		2	21'-3"	64
S6082		2	22'-0"	66
S6083		2	22'-10"	69
S6084		2	24'-11"	75
S6085		2	25'-7"	77
S6086		2	26'-4"	79
S6087		2	27'-2"	82
S6088		2	27'-10"	84
S6089		2	31'-6"	95
S6090		2	32'-2"	97
S6091		14	33'-0"	694
S6092		2	36'-8"	110
S6093		2	37'-4"	112
S6094		2	38'-2"	115
S6095		2	38'-11"	117
S6096		2	39'-8"	119
S6097		2	40'-5"	121
S6098		2	41'-1"	123
S6099		2	5'-1"	15
S6100		2	9'-10"	30
S6101		6	10'-9"	97
S6102		2	11'-6"	35
S6103		2	16'-4"	49
S6104		2	17'-2"	52
S6105		2	18'-0"	54
S6106		2	18'-9"	56
S6107		2	19'-7"	59
S6108		2	20'-6"	62
S6109		2	21'-3"	64
S6110		2	22'-0"	66
S6111		2	22'-10"	69
S6112		2	23'-7"	71
S6113	↓	2	24'-6"	74
S6114	Str.	2	25'-4"	76
S6115	Str.	2	26'-2"	79
S6116	↑	2	27'-0"	81
S6117	↕	8	37'-6"	451
S6118	Str.	4	38'-6"	231
S6151	Str.	864	36'-6"	47367
S6152	↑	296	31'-0"	13782
S6153		18	26'-6"	716
S6154		31	32'-6"	1513
S6155	Str.	24	38'-3"	1379
S7001	Str.	6	5'-8"	69
S7002	↑	10	6'-6"	133
S7003		6	7'-4"	90
S7004		12	8'-1"	198
S7005		8	8'-10"	144
S7006		12	9'-7"	235
S7007		4	10'-4"	84
S7008		4	11'-2"	91
S7009		5	12'-0"	123
S7010		2	12'-10"	52
S7011		2	13'-7"	56
S7012		2	14'-5"	59
S7013		2	15'-3"	62
S7014		2	16'-1"	66
S7015		2	16'-9"	68
S7016		2	17'-6"	72
S7017		4	18'-2"	149
S7018		4	19'-0"	155
S7019		6	19'-10"	243
S7020		6	20'-9"	254
S7021		4	21'-7"	176
S7022		4	22'-5"	183
S7023		6	23'-3"	285
S7024		6	24'-1"	295
S7025		4	25'-0"	204
S7026		4	25'-10"	211
S7027		4	26'-8"	218
S7028		2	27'-4"	112
S7029		2	28'-3"	115
S7030		2	29'-1"	119
S7031		4	29'-11"	245
S7032		4	30'-9"	251
S7033		2	31'-7"	129
S7034		2	32'-5"	133
S7035		2	33'-4"	136
S7036		8	34'-2"	559
S7037		4	35'-0"	286
S7038		4	35'-10"	293
S7039		2	36'-9"	150
S7040	↓	310	37'-3"	23603
S7041	↑	2	3'-7"	15
S7042		2	4'-5"	18
S7043		6	5'-3"	64
S7044		4	6'-2"	50
S7045		4	7'-0"	57
S7046		2	7'-10"	32
S7047		4	8'-9"	72
S7048		4	12'-2"	99
S7049		2	13'-0"	53
S7050		4	13'-10"	113
S7051		4	14'-9"	121
S7052		6	15'-6"	190
S7053		4	16'-4"	134
S7054		2	17'-2"	70
S7055		4	27'-6"	225
S7056		6	28'-4"	347
S7057		6	29'-2"	358
S7058		4	30'-1"	246
S7059		4	30'-11"	253
S7060		4	31'-9"	260
S7061		4	32'-8"	267
S7062	↓	6	33'-6"	411
S7063	Str.	6	34'-4"	421
S7064	Str.	4	35'-2"	288
S7065	↑	12	36'-0"	883
S7066		2	36'-11"	151
S7067		2	37'-9"	154
S7068		2	38'-7"	158
S7069		2	39'-5"	161
S7070		10	39'-11"	816
S7071		306	41'-2"	25748
S7072		2	10'-3"	42
S7073		2	10'-11"	45
S7074		2	11'-7"	47
S7075		7	14'-3"	204
S7076		2	14'-11"	61
S7077		2	17'-1"	70
S7078		6	17'-10"	219
S7079		2	18'-6"	76
S7080		2	19'-3"	79
S7081		2	21'-2"	87
S7082		2	21'-11"	90
S7083		2	22'-9"	93
S7084		2	24'-10"	101
S7085		2	25'-6"	104
S7086		2	26'-3"	107
S7087		2	27'-1"	111
S7088		2	27'-9"	113
S7089		2	31'-5"	128
S7090		2	32'-1"	131
S7091		14	32'-11"	942
S7092		2	36'-7"	150
S7093		2	37'-3"	152
S7094		2	38'-1"	156
S7095		2	38'-10"	159
S7096		2	39'-7"	162
S7097		2	40'-4"	165
S7098		2	41'-0"	168
S7099		2	5'-0"	20
S7100		2	9'-9"	40
S7101		6	10'-8"	131
S7102		2	11'-5"	47
S7103		2	16'-3"	66
S7104		2	17'-1"	70
S7105		2	17'-11"	72
S7106		2	18'-8"	76
S7107		2	19'-6"	80
S7108		2	20'-5"	83
S7109		2	21'-2"	87
S7110		2	21'-11"	90
S7111		2	22'-9"	93
S7112		2	23'-6"	96
S7113		2	24'-5"	100
S7114		2	25'-3"	103
S7115		2	26'-1"	107
S7116		2	26'-11"	110
S7117	↓	8	37'-5"	612
S7118	Str.	4	38'-5"	314
* H501	Str.	4	12'-4"	
H502	↑	32	15'-4"	
H503		64	15'-8"	
H504		4	20'-8"	
H505		4	12'-8"	
H506	↓	28	16'-2"	
H507	Str.	4	12'-11"	
* H510	58	6	8'-0"	
S5006	4	6	9'-9"	61
S7119	49	6	7'-1"	87
S7120	58	6	12'-6"	153
S7121	61	6	8'-0"	98
			Total	200791

Type 21

Mark	a	b	c	d	e	f
S4001	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	2'-7"	3"
S4002	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	6'-7"	3"
S4004	1'-3¼"	1'-4"	1'-0"	1'-3¼"	4'-5"	5"
S4005	1'-3¼"	1'-3⅜"	1'-0"	1'-3¼"	3'-6"	4"
S4006	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	2'-9"	3½"
S4007	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	1'-5"	3"
S4008	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	1'-9"	3½"
S4009	1'-3¼"	1'-4½"	1'-0"	1'-3¼"	2'-6"	6"
S4013	1'-3¼"	1'-4½"	1'-0"	1'-3¼"	3'-10"	6"
S4014	1'-3¼"	1'-4"	1'-0"	1'-3¼"	3'-7"	4½"
S4015	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	3'-3"	3½"
S4016	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	3'-5"	3"
S4017	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	4'-0"	3"
S4018	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	4'-11"	3"
S4019	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	5'-4"	3"

Type 63

Mark	a	b&f	c&g	d&h	e&j
S4003	1'-6"	4"	1'-0"	1'-04"	1'-0"
S4010	3'-0"	4"	1'-0"	1'-04"	1'-0"
S4011	2'-0"	4"	1'-0"	1'-04"	1'-0"
S4012	3'-4"	4"	1'-0"	1'-04"	1'-0"

Type 61

Mark	a	b	c
S4020	1'-0"	1'-3¼"	5'-7"
S4021	1'-0"	1'-3¼"	4'-10"
S4022	1'-0"	1'-3¼"	4'-2"
S4023	1'-0"	1'-3¼"	3'-5"
S4024	1'-0"	1'-3¼"	2'-8"
S4025	1'-0"	1'-3¼"	2'-1"
S4026	1'-0"	1'-3¼"	1'-9"
S7121	1'-0"	1'-4½"	3'-11"

Type 14

Mark	a	b	c
S5005	8"	2'-3"	

Type 4, 49 & 58

Type	Mark	a	b	c	d	e	f	g	h	i
4	S5006	2'-3¼"	1'-10"	1'-10"	2'-2¾"	2'-1"	–	–	–	–
49	S7119	3'-4"	1'-10½"	1'-4"	1'-4"	0'-6"	1'-6"	–	–	–
58	S7120	1'-9"	2'-8½"	4'-7½"	2'-8½"	0'-9"	3'-9"	3'-9"	4'-7½"	0'-9"
58	H510	1'-9"	1'-4½"	2'-4½"	1'-4½"	0'-9"	1'-11"	1'-11"	2'-4½"	0'-9"

REPLACEMENT BARS			
Mark	Type	No.	Length
RE401	Str.	1	5'-3"
RE501	"	2	5'-7"
RE601	"	8	5'-11"
RE701	"	6	6'-3"
RE801	"	1	6'-6"
RE901	"	2	6'-10"
RE1001	"	3	7'-3"
RE1101	"	5	7'-7"

* Reinforcing Bars marked H are included in Item S-14 (Railing) for payment.

Total wgt. reinf steel = 460,791 lbs.

For bar bending schedule see Sh No. 446

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM-71-0196

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	GW		HEE 5-8-65	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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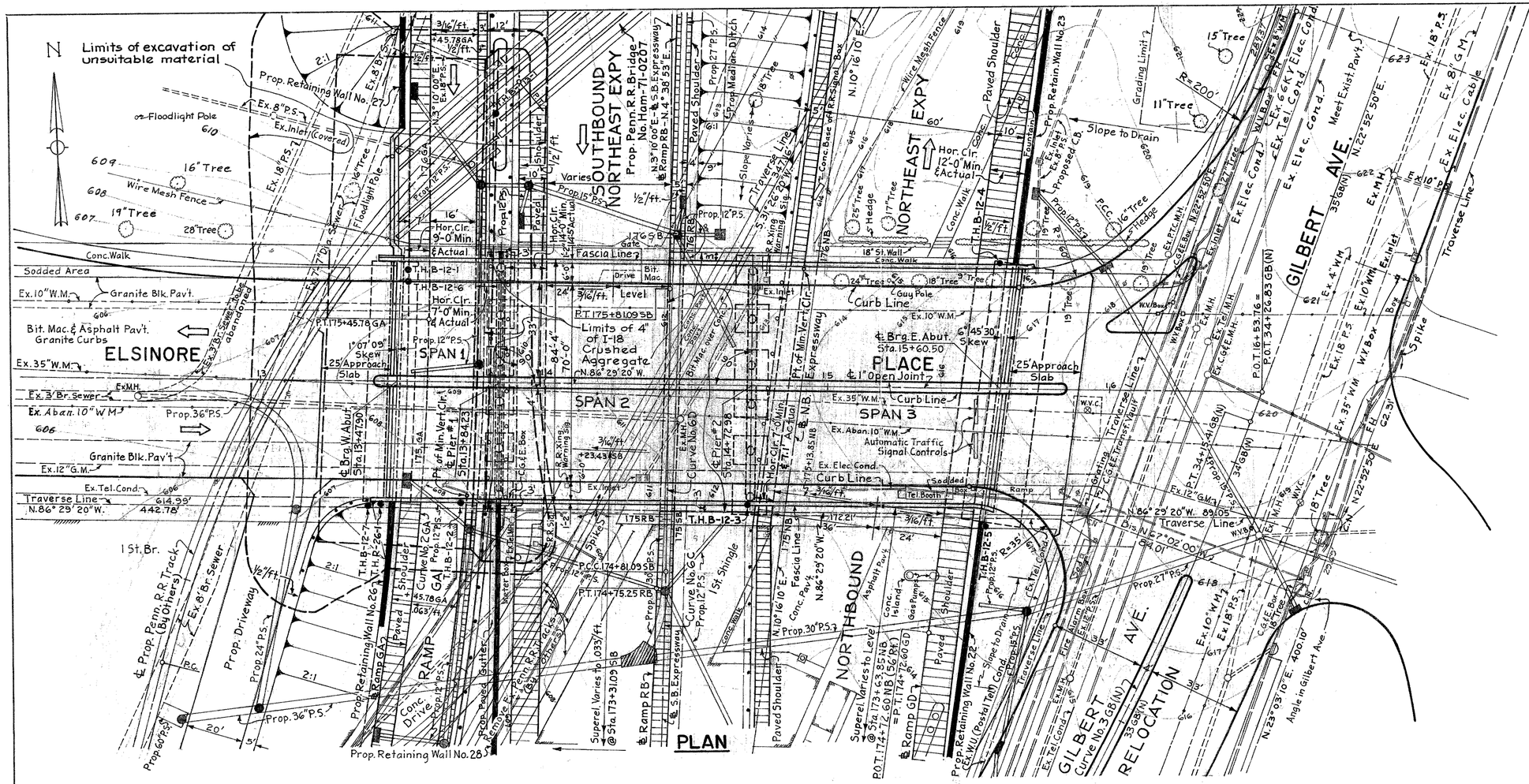
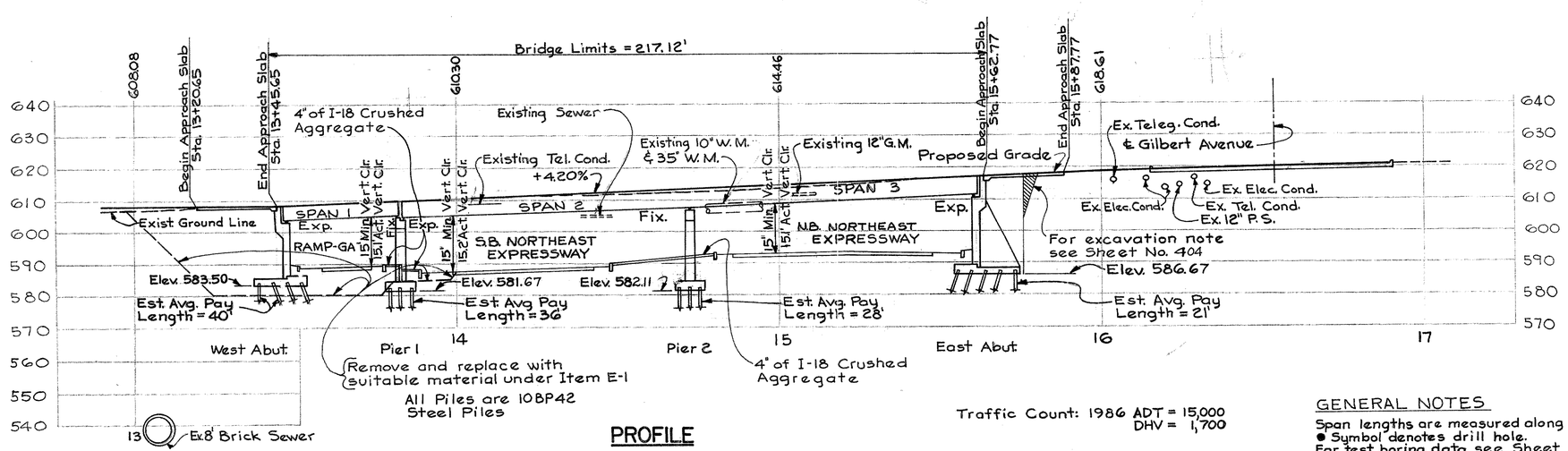
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



PLAN



PROFILE

Traffic Count: 1986 ADT = 15,000
DHV = 1,700

PROPOSED STRUCTURE

Type: Simple Span Steel Beam (Span 1) and Continuous Plate Girder (Spans 2 & 3) with Reinforced Concrete Deck & Substructure
Spans: 36'-4", 88'-9", 87'-6 1/4" C/C Bearings (See Note)
Roadway: 33'-0" f/f curbs with 4'-0" median and two 6'-0" sidewalks.
Skew: Varies, see Plan.
Load frequency: CF = 2000(57)

Wearing Surface: 1" Monolithic Concrete
Approach Slab: AS-1-54 (25'-0" long)
Alignment: Tangent
Superelevation: Varies, see Plan

GENERAL NOTES

Span lengths are measured along Base Line
● Symbol denotes drill hole.
For test boring data, see Sheet 8, 9 & 11 of 13
For Bench Marks see Sheet 40

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN

BRIDGE No. HAM-71-0203
ELSINORE PLACE

H&E BRIDGE No. 12

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	JDC		W.A.J.	JHD 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-(1.56) (2.61)

ESTIMATED QUANTITIES

Item	Total	Unit	Descriptions	Super-structure	West Abutment	East Abutment	Pier 1	Pier 2	General
E2	Lump	Sum	Cofferdams, cribs & sheeting						Lump
E2	2288	Cu. Yds.	Unclassified Excavation		40	1845	52	351	
S-1	630	Cu. Yds.	Class "C" concrete, superstructure	630					
S-1	142	Cu. Yds	Class "C" concrete, piers above footings				79.8	62.2	
S-1	399	Cu. Yds.	Class "E" concrete, abutments above footings		153.7	245.3			
S-1	541	Cu. Yds.	Class "E" concrete, footings		148.8	238.8	66.7	86.7	
S-3	42	Lin. Ft.	Waterproofing, premolded sealing strip		42				
S-3	8	Sq. Yds.	Type "B" waterproofing		8				
S-4	~~255,113~~ 255099	Lbs.	Reinforcing steel	120788	33532	49013	~~19981~~ 19967	31785	
S-7	565000	Lbs.	Structural Steel	565000					
S-8	565000	Lbs.	Field painting of structural steel	565000					
S-9	56	Sq. Ft.	1" Preformed expansion joint filler		51		5		
S-14	442	Lin. Ft.	Railing, type "C" (aluminum rail & supports, concrete parapet & end posts)	423	12	7			
S-16	Lump	Sum	First test pile						Lump
S-18	8307	Lin. Ft.	Steel piles 10 BP 42	2400	2667	1728	1512		
S-25			Electric Lighting System (See Sh. No 204)						
S-29	291	Cu. Yds.	Porous backfill		134	157			
S-29	Lump	Sum	Drain inlet including supports and horizontal collector system	Lump					
S-29	108	Lin. Ft.	6" standard pipe downspout, wrought iron or hot-dip galvanized steel, including specials.				49	59	
S-29	96	Lin. Ft.	8" bituminous coated helical perforated corrugated metal pipe [Sec. M-6.4 (h-c)] (Including Specials)		48	48			
S-29	178	Lin. Ft.	8" bituminous coated helical perforated corrugated metal pipe [Sec. M-6.4 (h-c)] (Including specials & sand)		86	92			
S-29	4	Lin. Ft.	12" reinforced concrete sewer pipe [Sec. M-6.6 (a)]		4				
S-29	31	Lin. Ft.	8" bituminous coated helical corrugated metal pipe [Sec. M-6.4 (h-c)] (Including specials)		31				
S-101	630	Each	Water-reducing set-retarding admixture	630					

GENERAL NOTES

STEEL PILES: shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with rock or shale. If the length of penetration is approximately equal to the depth of rock and shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Section S-18.05 is not less than 50 tons per pile using an 11,000 ft. lb. hammer or 45 tons per pile using a 15,000 ft. lb. hammer
If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be determined by interpolation. The design of abutments and piers is based on 35 tons per pile.

DESIGN NOTES:
Design Loading CF = 2000 (57)
Concrete Class C - Basic unit stress 1333 psi.
Concrete Class E - Basic unit stress 1133 psi.
Structural Steel - ASTM A36 - Basic unit stress 20,000 psi. (ASTM A7 and A373 steel not permitted except for piling)
Reinforcing Steel - ASTM A15, A16, A160. Deformed Intermediate or Hard Grade, Basic unit stress 20,000 psi. Except spiral reinforcement may be plain structural grade with basic unit stress of 18,000 psi.

MACHINE FINISH OF CONCRETE: The concrete bridge deck shall be finished by the use of a finishing machine.

ADDITIONAL NOTES: For additional notes see Notes 1 thru 8, General Notes, Typical Drawing No. 443

EXCAVATION for the purpose of driving battered piles at the East Abutment (Shown hatched on Sheet No. 403) shall be included with "Unclassified Excavation" for payment.

EXCAVATION OF UNSUITABLE MATERIALS: After the unsuitable materials have been removed to elevation 580.0, at the West Abutment as shown on the Site Plan, the Engineer shall make a careful inspection to ascertain that all unsuitable materials have been removed to a stable subsoil. If necessary, the excavation limits shall be extended to remove additional unstable materials and be replaced with materials meeting the requirements of Section E-1 of the Specifications.

Embankment to replace unsuitable material shall be compacted to a minimum of 8" above the bottom of footing elevations before proceeding with structure excavation, (Item E-2, unclassified excavation) at the West abutment and Pier 1.

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CINCINNATI, OHIO

ESTIMATED QUANTITIES & NOTES

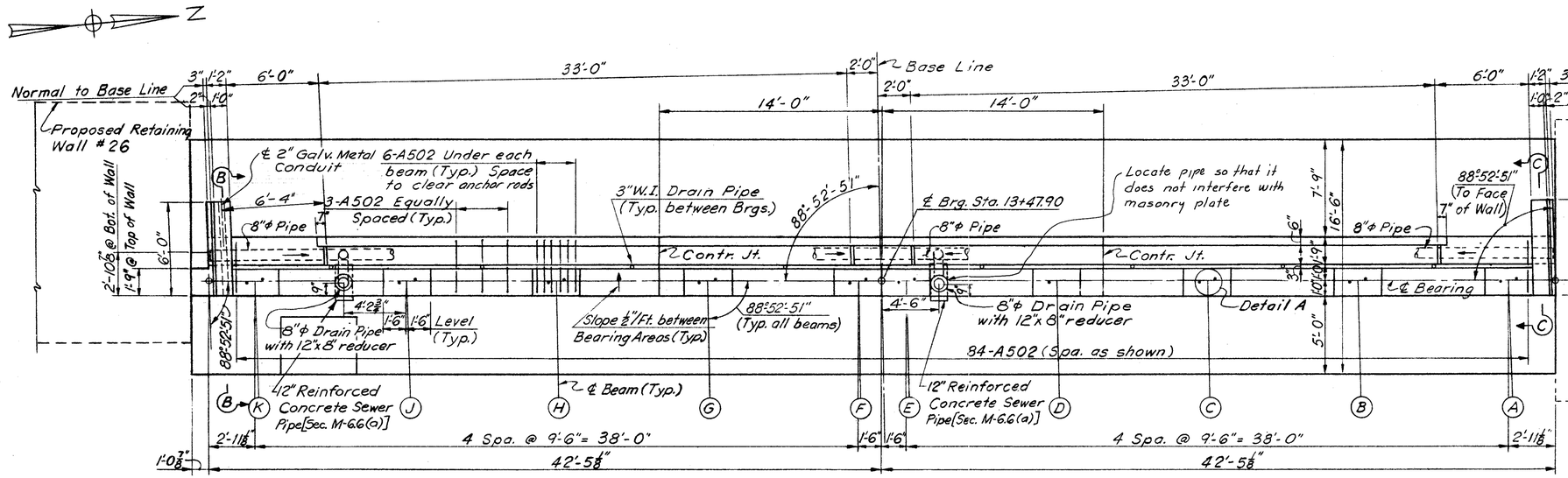
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.W.		W.J.E. 3-19-65	JHO 5/20/65	3-29

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

405/492

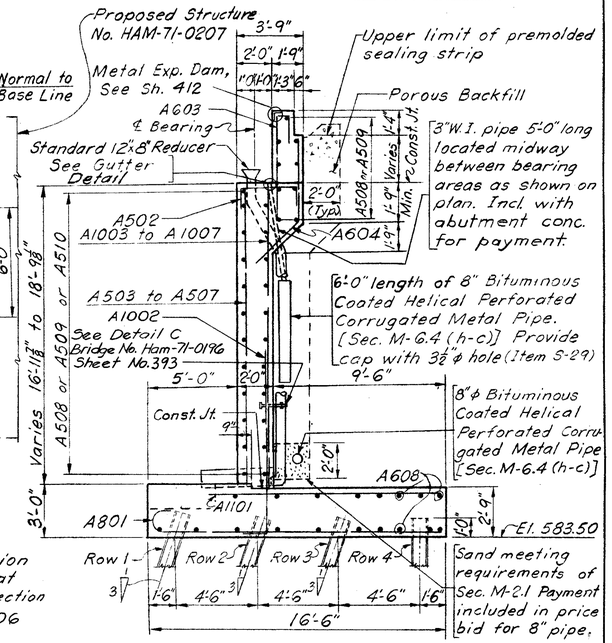


For lighting details see Sh. No. 216.

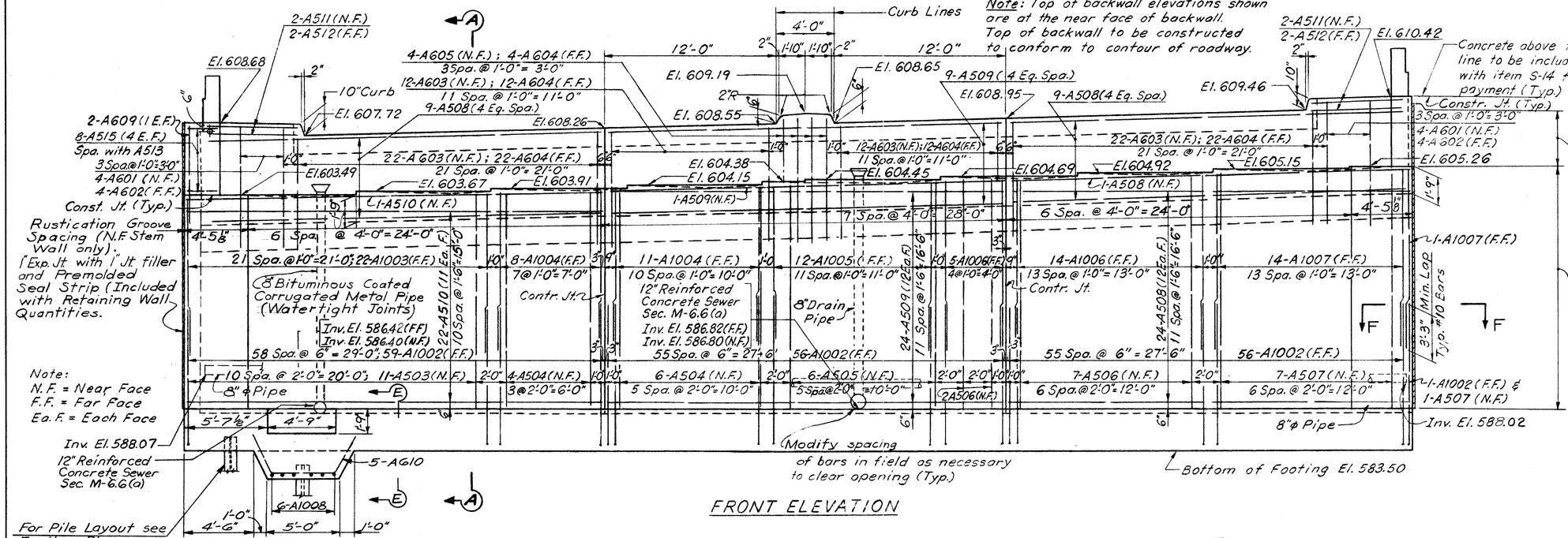
Note: The 2" Metal Conduit is included with Item 3-25 Metal Conduit, Sh. No. 220, for Payment.

ABUTMENT PLAN

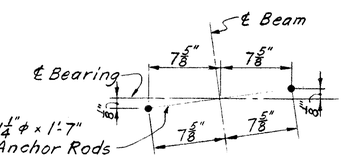
Note: Superstructure drainage provision shown on Section A-A applies at fascia curb. For drainage connection at median curb see Sheet 406



SECTION A-A



FRONT ELEVATION



DETAIL A
(Typical all beams)

1" Exp. Jt. with 1" Jt filler and Type B Waterproofing (Incl. with Quantities for Abutment of Structure No. HAM-71-0203) (See Sect. B-B Bridge No. HAM-71-0207)

1" Exp. Jt. with 1" Jt filler and Premolded Sealing Strip (Incl. with Quantities for Abutment of Structure No. HAM-71-0203)

Work this sheet with sheet 406

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CINCINNATI, OHIO

WEST ABUTMENT

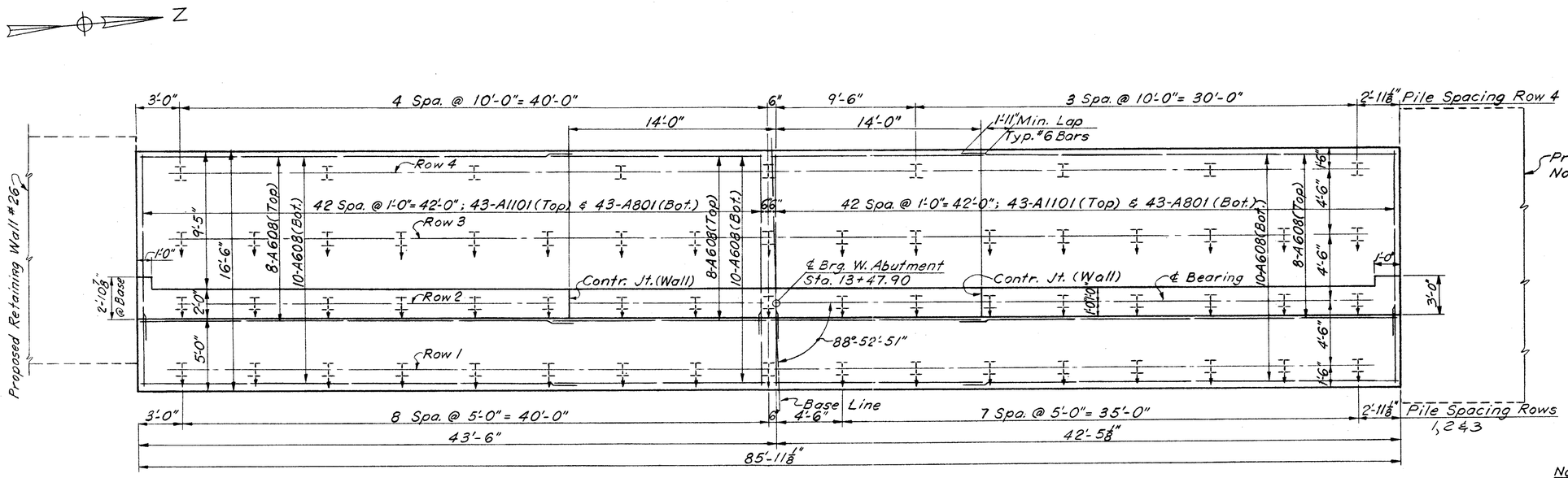
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
TFL	TFL		W.J.Z. 3-19-65	JHO 5/20/65	

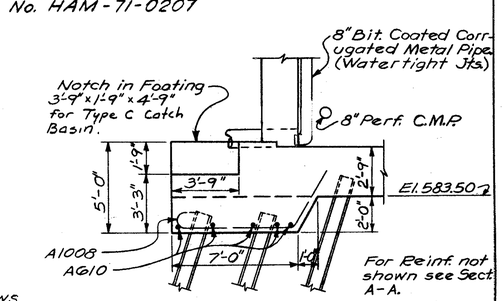
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

406
492

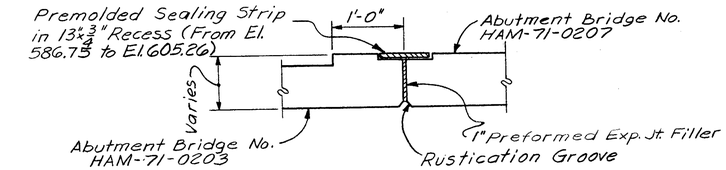
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



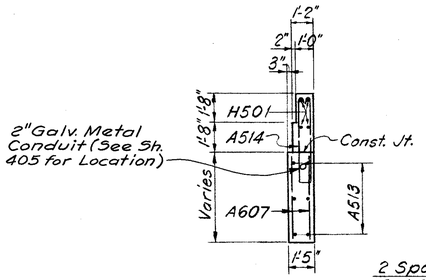
FOOTING PLAN



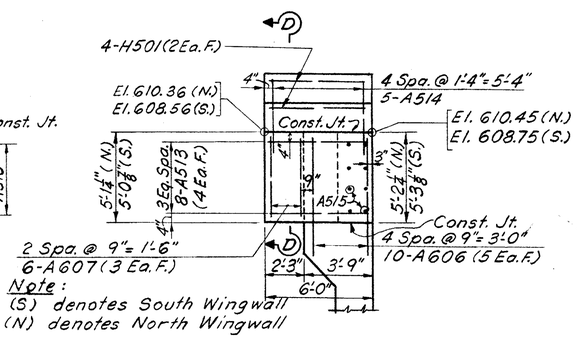
SECTION E-E



SECTION F-F



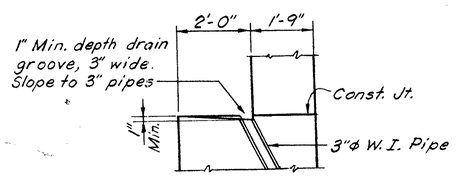
SECTION D-D



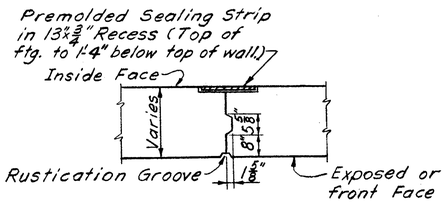
Note:
(S) denotes South Wingwall
(N) denotes North Wingwall

SECTION B-B

SECTION C-C (Similar, opposite hand except as noted)



GUTTER DETAIL

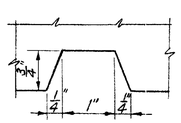


CONTRACTION JOINT DETAIL

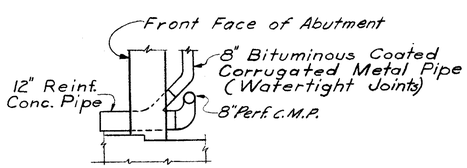
Notes:
Provide 3" clearance to reinforcing steel in footing.
All piles shall be 10BP42 Steel H piles.
Abutment concrete shall be Class "E"
Concrete above bridge seat construction joint shall not be placed until Superstructure Steel is in place.
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

PROCEDUCE: Before the backwall is constructed the embankment behind the West abutment shall be placed and compacted up to the level of the existing ground (with a 1:1 slope from the bridge seat to the existing ground) and extending to the limits for excavation of unsuitable material.

Note:
Porous Backfill 2 ft. thick, full length of abutment and wings shall extend up to the underside of the approach slab or to the finished ground surface.



RUSTICATION GROOVE DETAIL



At Median Curb of West Abut.

DRAINAGE CONNECTION DETAILS

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CINCINNATI, OHIO

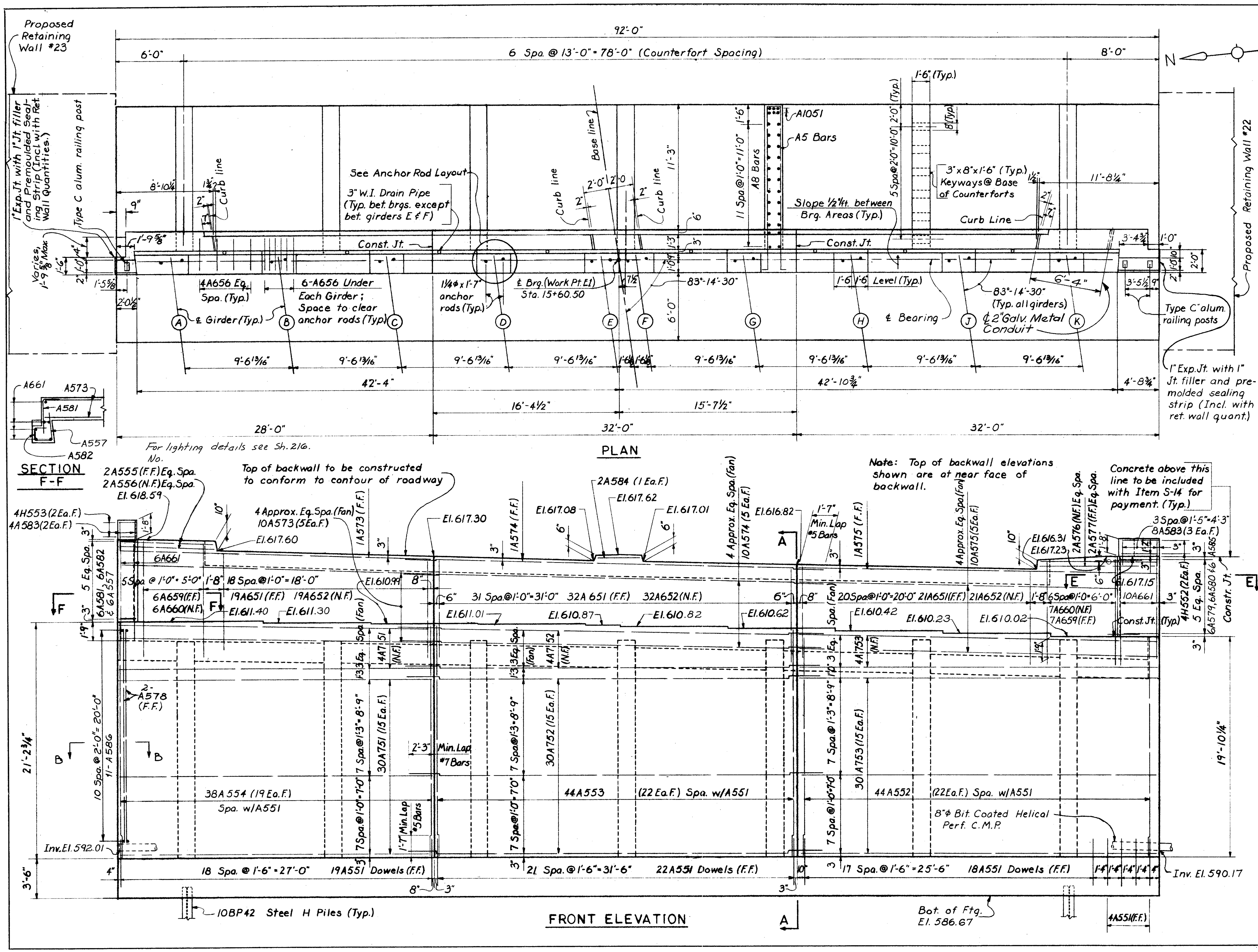
WEST ABUTMENT

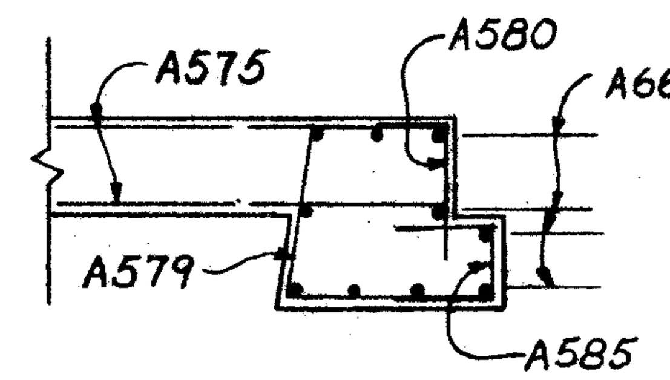
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIS
TFL	TFL		W.J.Z. 3-19-65	JHo 5/20/65	

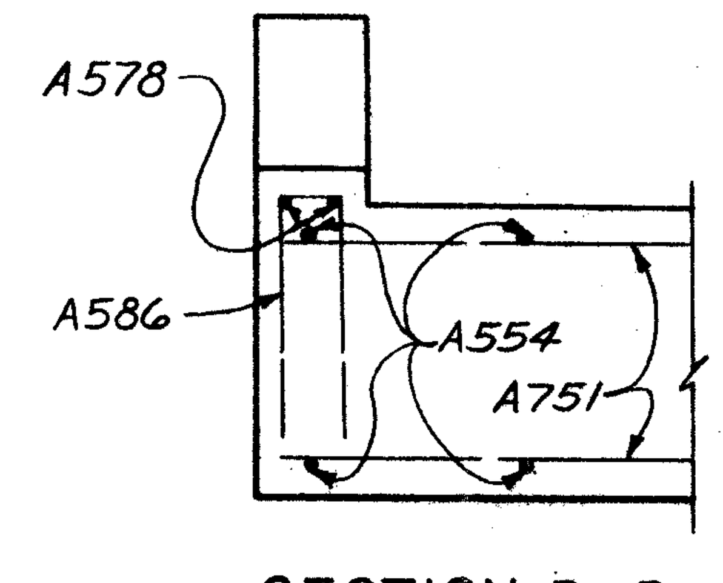
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAMILTON COUNTY
HAM-71-(1.56)(2.51)





SECTION E-E



SECTION B-B

Notes:

Provide 3" clearance to reinforcing steel in footing and 2" clearance in the wall.
All piles shall be 10BP42 Steel H Piles.
Abutment concrete shall be Class "E".
The 2" Metal Conduit is included with Item S-25 Metal Conduit, Sh. 220, for Payment.

⊢ denotes vertical pile.
⊢→ denotes batter pile (batter 1 on 3).
(N.F.) denotes near face.
(F.F.) denotes far face.
(Ea.F.) denotes each face.
For details of aluminum railing see Standard drawing AR-1-57.
Concrete above bridge seat construction joint shall not be placed until superstructure steel is in place.
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.

Note: Porous backfill 2 ft. thick, full length of abutment and wings, shall extend up to the underside of the approach slab or to the finished ground surface.

Work this sheet with Sheet 408

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CINCINNATI, OHIO

EAST ABUTMENT

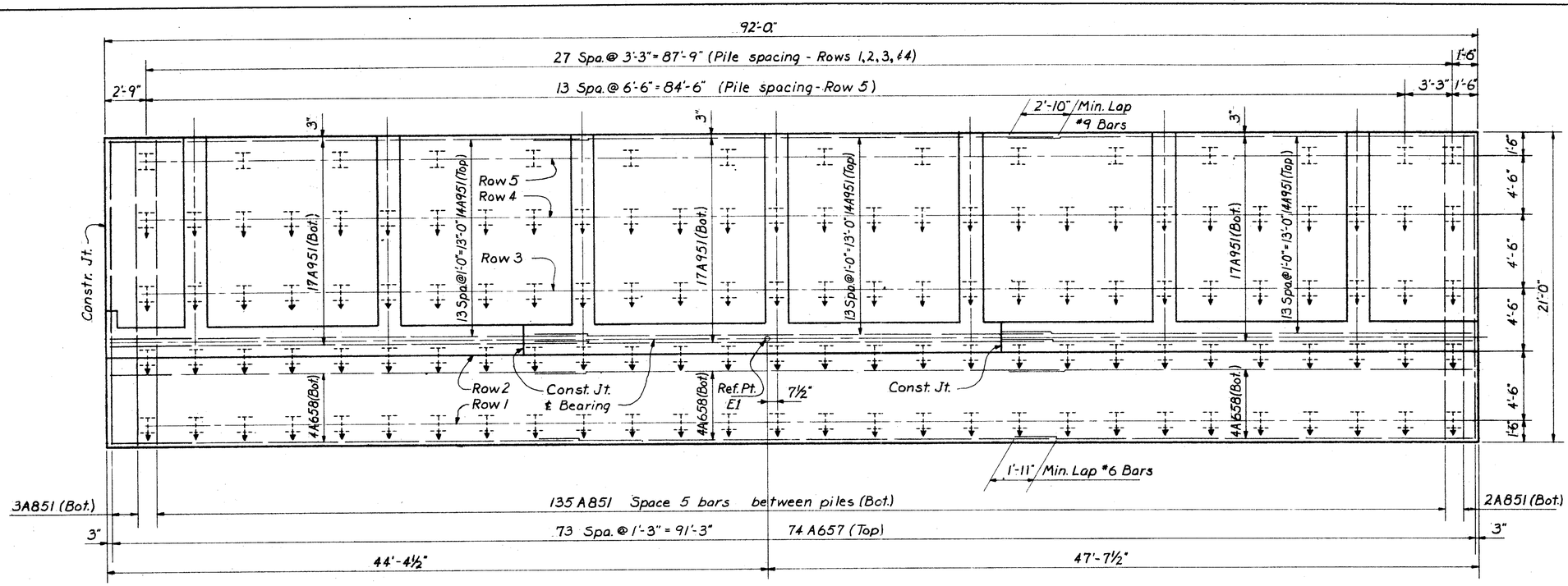
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	AFS		W.J.Z. 3-1965	JHO 5/20/65	

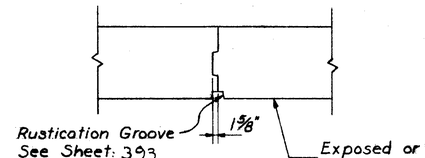
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

408
492

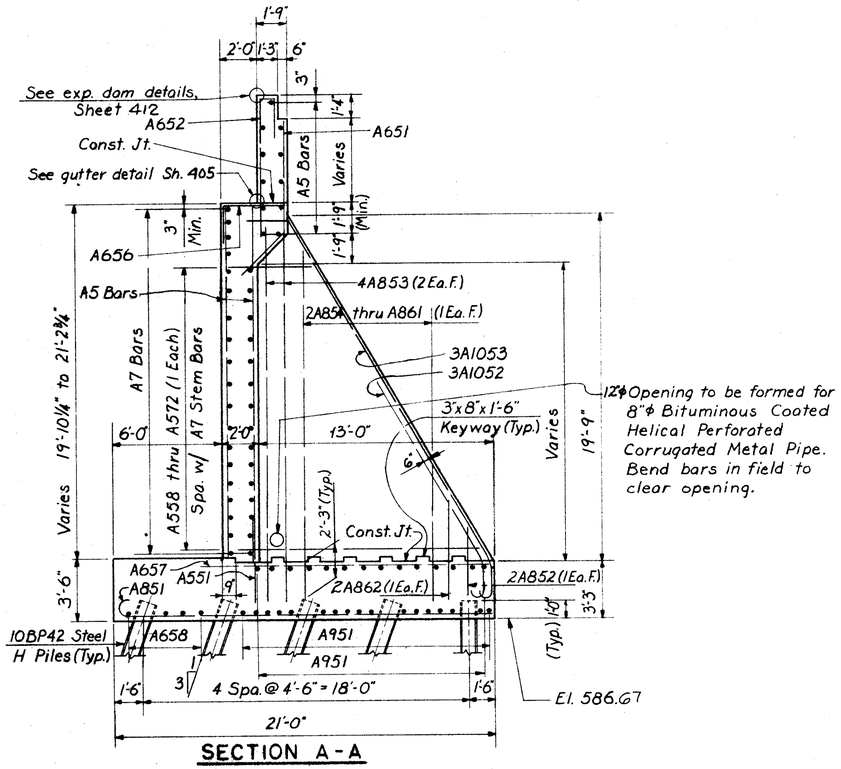
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



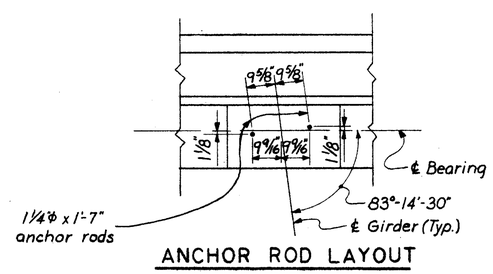
FOOTING PLAN



CONSTRUCTION JOINT DETAIL



SECTION A-A



ANCHOR ROD LAYOUT
(Typical all Girders)

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CINCINNATI, OHIO

EAST ABUTMENT

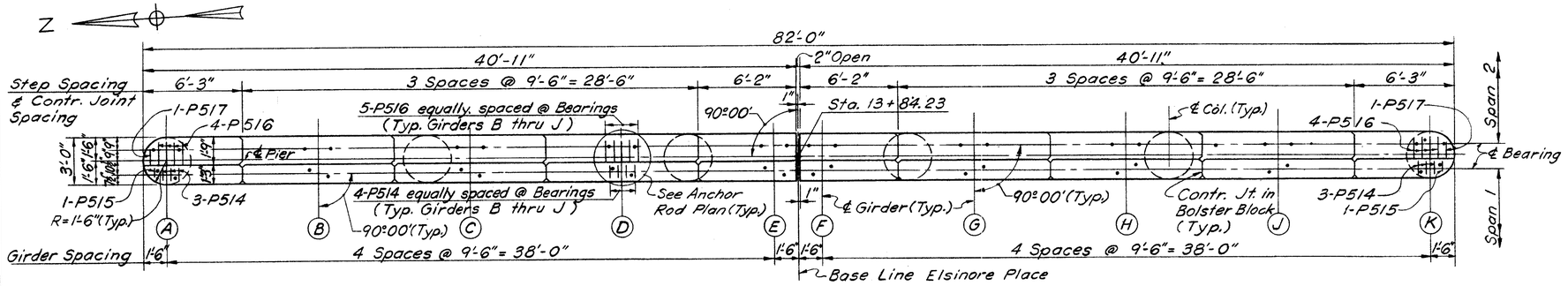
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	AFS		W.J.Z. 3-19-65	JHO 5/20/65	

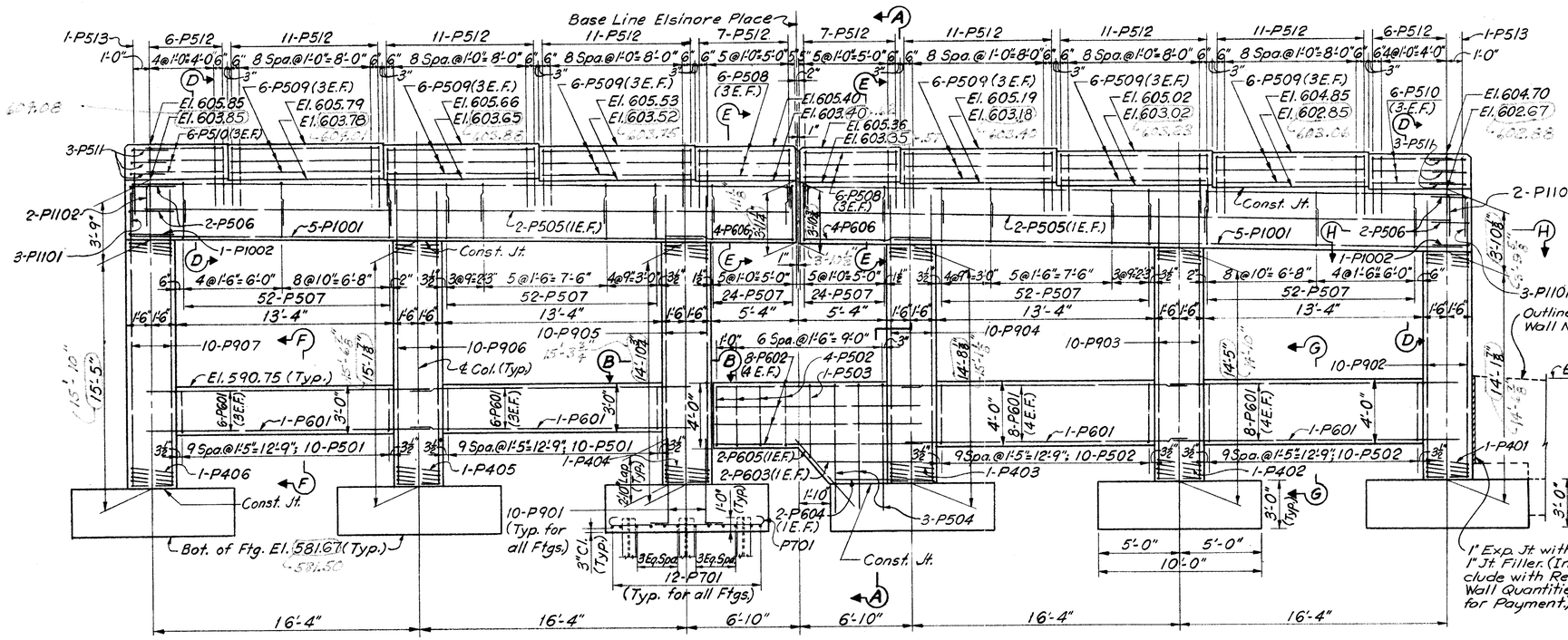
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

409
492

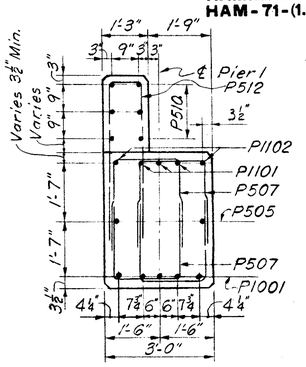
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



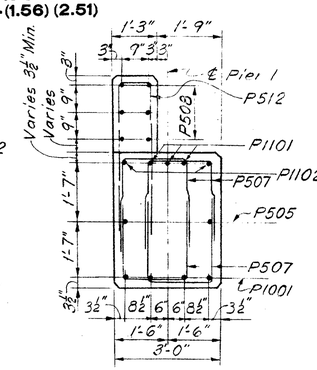
CAP PLAN



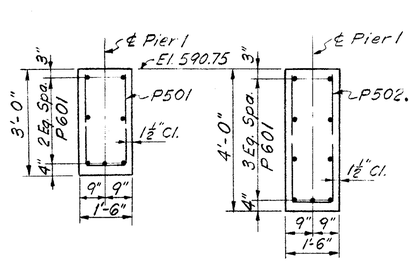
ELEVATION



SECTION D-D

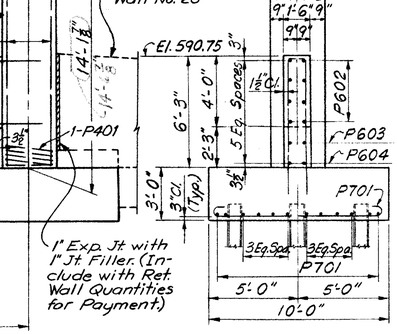


SECTION E-E



SECTION F-F

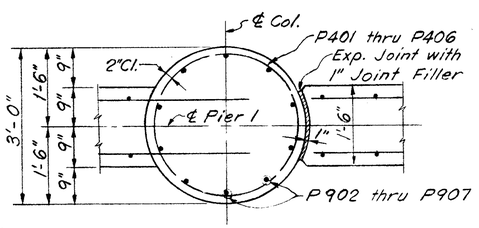
SECTION G-G



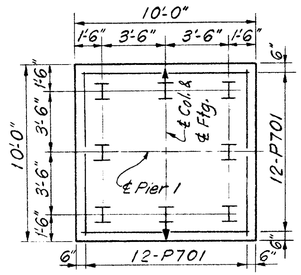
SECTION A-A

Notes

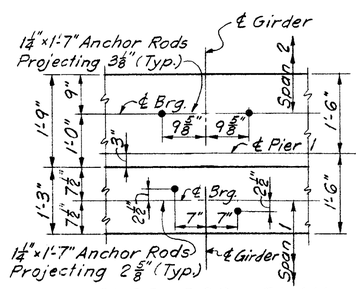
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
All piles shall be 10BP42 Steel H-Piles.
Concrete in footing shall be Class "E" and concrete in columns and caps shall be Class "C."
Concrete in walls between columns shall be Class "C" and shall be included with Pier 1 Quantities for payment.
E.F. denotes Each Face
⊣⊢ denotes batter pile 1:4



SECTION B-B
TYPICAL COLUMN SECTION

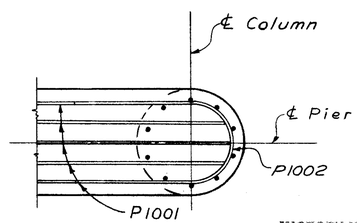


TYPICAL FOOTING PLAN



ANCHOR ROD PLAN
Girders A thru E shown
Girders F thru K opposite hand

For Location of 2" Galv. Metal Conduit See Sh. No. 216.



SECTION H-H

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CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER 1

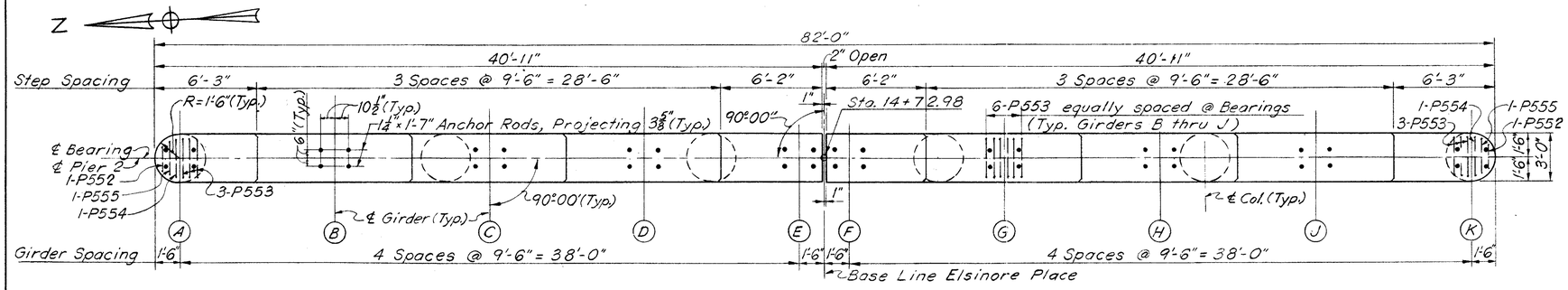
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JYH	TFL		D.W. 3-19-65	JHO 5/20/65	

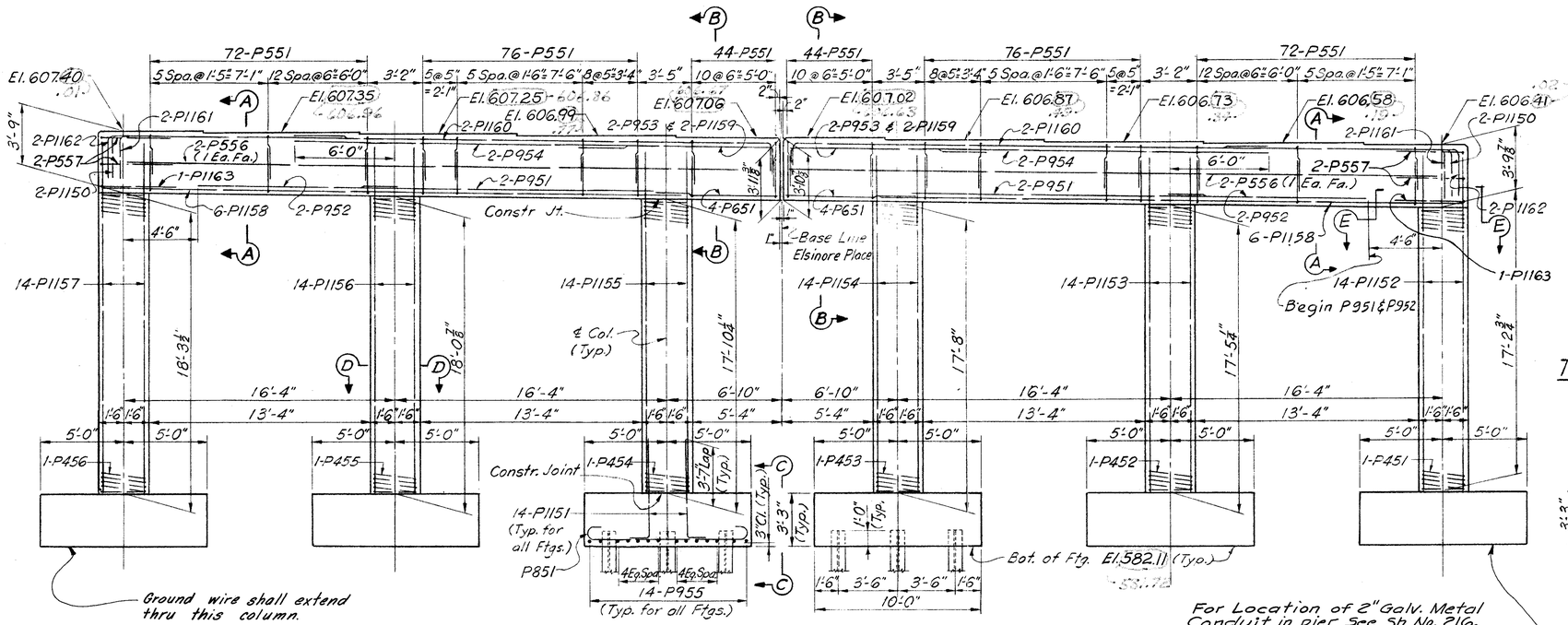
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

410
492

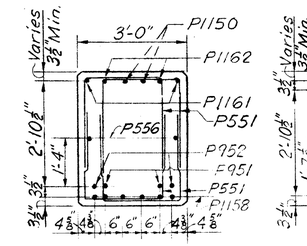
HAMILTON COUNTY
HAM - 71 - (1.56) (2.51)



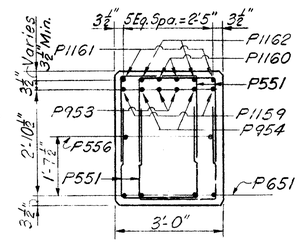
CAP PLAN



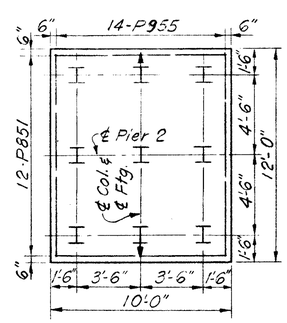
ELEVATION



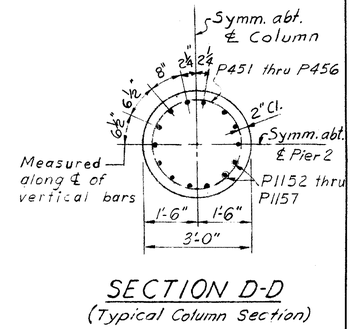
SECTION A-A



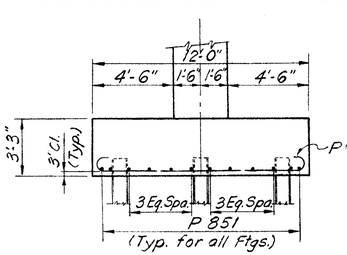
SECTION B-B



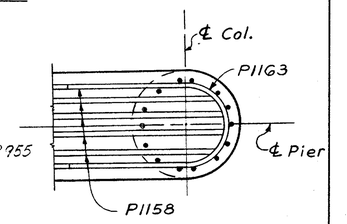
TYPICAL FOOTING PLAN



SECTION D-D
(Typical Column Section)



VIEW C-C



SECTION E-E

Notes:
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor rod holes.
Concrete in footing shall be Class "E" and concrete in columns and caps shall be Class "C".
All piles shall be 10BP42 Steel H-Piles.
E.F. denotes Each Face.
⟵| denotes batter pile 1:4

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CONSULTING ENGINEERS
CINCINNATI, OHIO

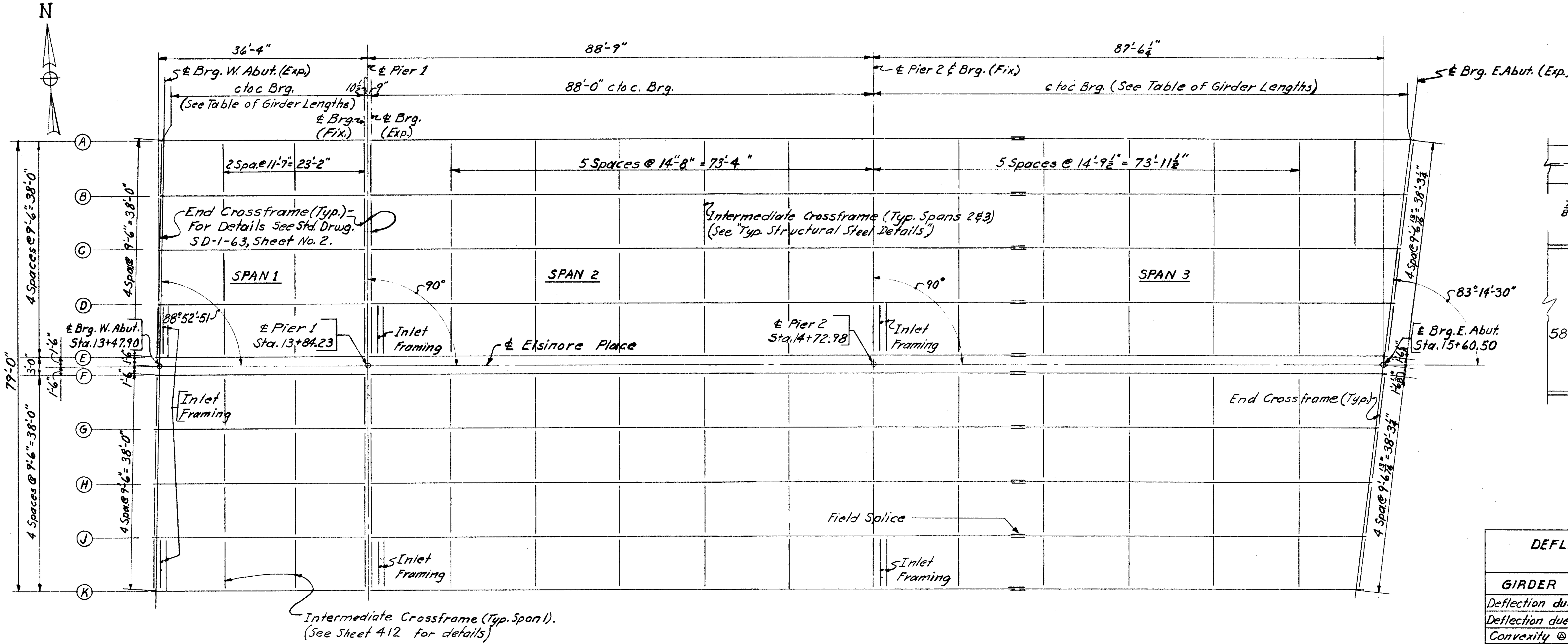
PIER 2

BRIDGE NO. HAM - 71-0203

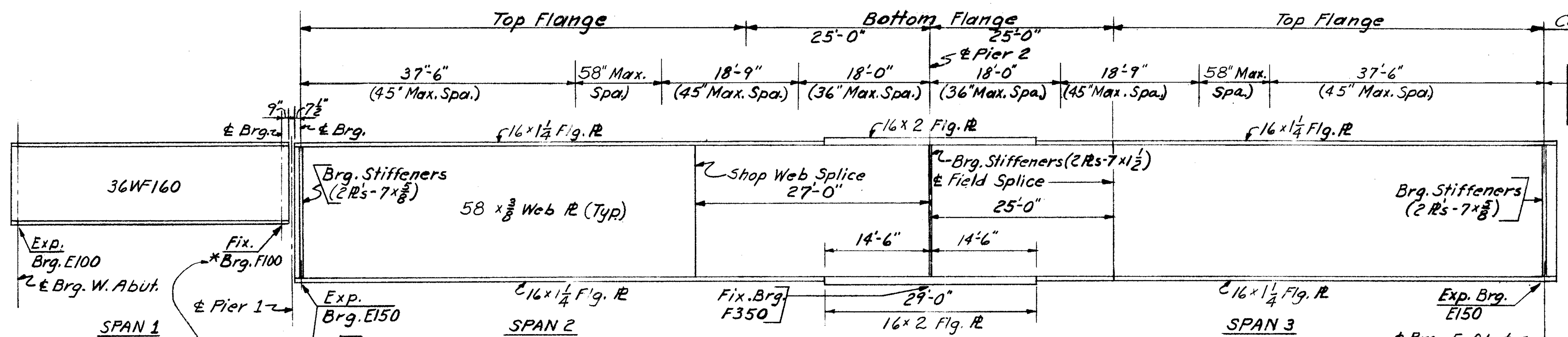
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
JYH	TFL		D.W. 3-19-65	JHO 5/20/65	

MICROFILMED
FEB 20 1965

HAMILTON COUNTY
HAM-71-(1.56) (2.51)



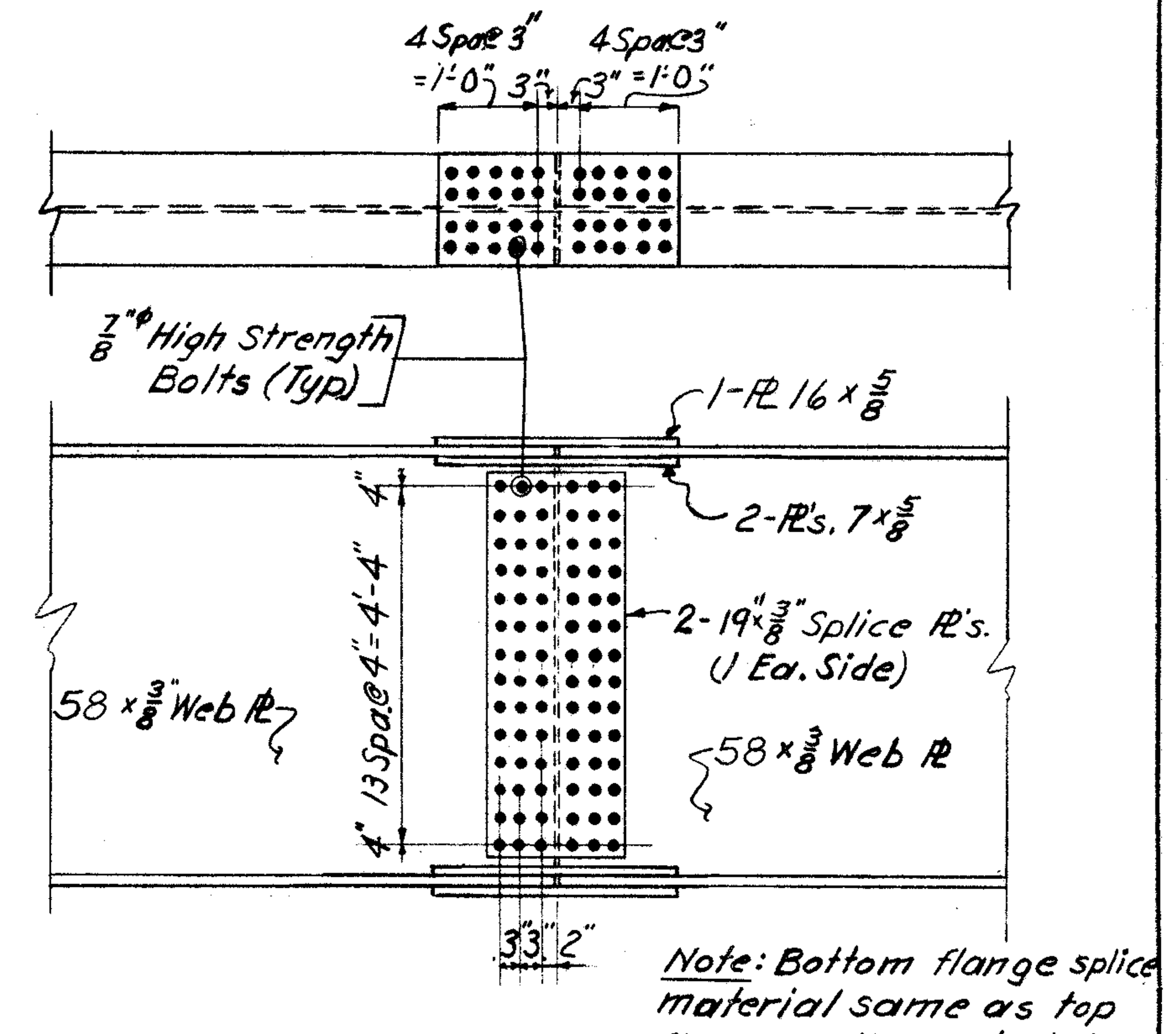
FRAMING PLAN



ELEVATION

*Note: See Pier 1 details for variation in location of anchor rods.

Note: Trim corner of masonry plate 4½"×4½" at the following locations:
N.E Corner Girder A
S.E. Corner Girder K.

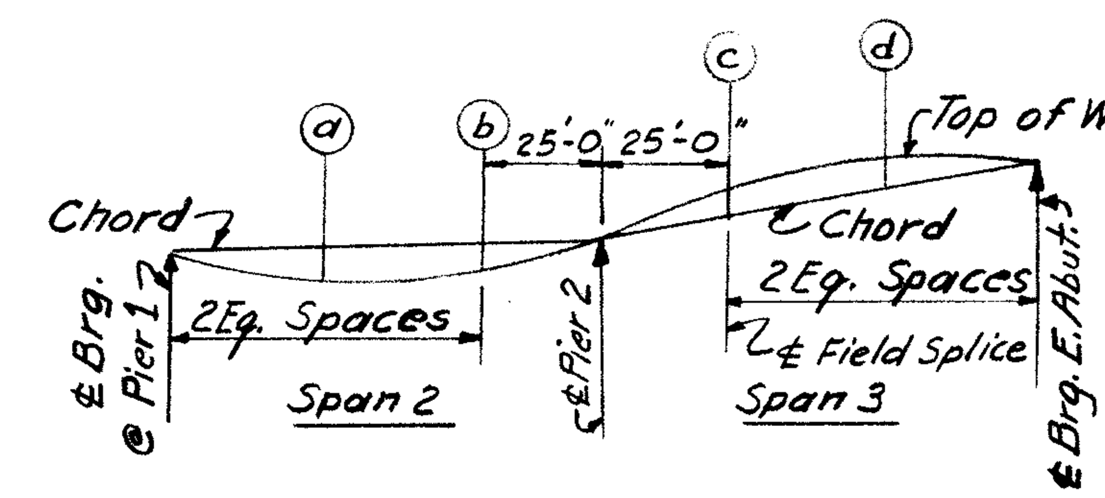


Note: Bottom flange splice material same as top flange splice material.

FIELD SPLICE

DEFLECTION AND CONVEXITY TABLE SPAN 1 @ ℄ OF SPAN										
GIRDER	A	B	C	D	E	F	G	H	J	K
Deflection due to Weight of Steel	0	0	0	0	0	0	0	0	0	0
Deflection due to Remaining D.L.	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/8	1/4
Convexity Ⓐ ℄ Superelevation Trans.	-1 1/8	-1	-7/8	-7/8	-3/4	-3/4	-5/8	-1/2	-3/8	-3/8
Defl., Convexity ℄ Superelevation Trans.	-1	-7/8	-3/4	-3/4	-5/8	-5/8	-1/2	-3/8	-1/4	-1/8

Note: Ⓐ - Sign denotes "Sag Vertical Curve Effect". No Camber required for beams in span 1.



CAMBER DIAGRAM

® Note: Minus sign in table indicates camber ordinates measured below chord. No sign indicates camber ordinates measured above chord.

GIRDER LENGTHS (c to c Brg.)										
Girder	A	B	C	D	E	F	G	H	J	K
Span 1	34'-8 3/16"	34'-10 7/16"	35'-0 11/16"	35'-2 7/8"	35'-5 1/8"	35'-5 13/16"	35'-8 1/16"	35'-10 1/4"	36'-0 1/2"	36'-2 3/4"
Span 3	92'-2 7/16"	91'-0 15/16"	89'-11 7/16"	88'-9 15/16"	87'-8 7/16"	87'-4 1/8"	86'-2 5/8	85'-1 1/8"	83'-11 5/8"	82'-10 1/8"

DEFLECTION AND CAMBER TABLE FOR SPANS 2 & 3

SPAN	2																			
GIRDER	A		B		C		D		E		F		G		H		J		K	
LOCATION (See Diagram)	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
Deflection due to Wt. of Steel	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0
Deflection due to Remaining D.L.	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"
Convexity & Super. elev. Trans.	-1 3/4"	-3/4"	-1 5/8"	-3/4"	-1 3/8"	-5/8"	-1 1/8"	-1/2"	-7/8"	-3/8"	-7/8"	-3/8"	-5/8"	-1/4"	-1/2"	-1/4"	-3/8"	-1/8"	-1/4"	-1/8"
Defl., Convexity & Superelev. Trans.	-1 1/8"	-1/2"	-1"	-1/2"	-3/4"	-3/8"	-5/8"	-1/4"	-3/8"	-1/8"	-3/8"	-1/8"	0	0	1/8"	0	1/4"	1/8"	3/8"	1/8"
Required Camber ®	-1 1/8"	-1/2"	-1"	-1/2"	-3/4"	-3/8"	-5/8"	-1/4"	-3/8"	-1/8"	-3/8"	-1/8"	0	0	1/8"	0	1/4"	1/8"	3/8"	1/8"

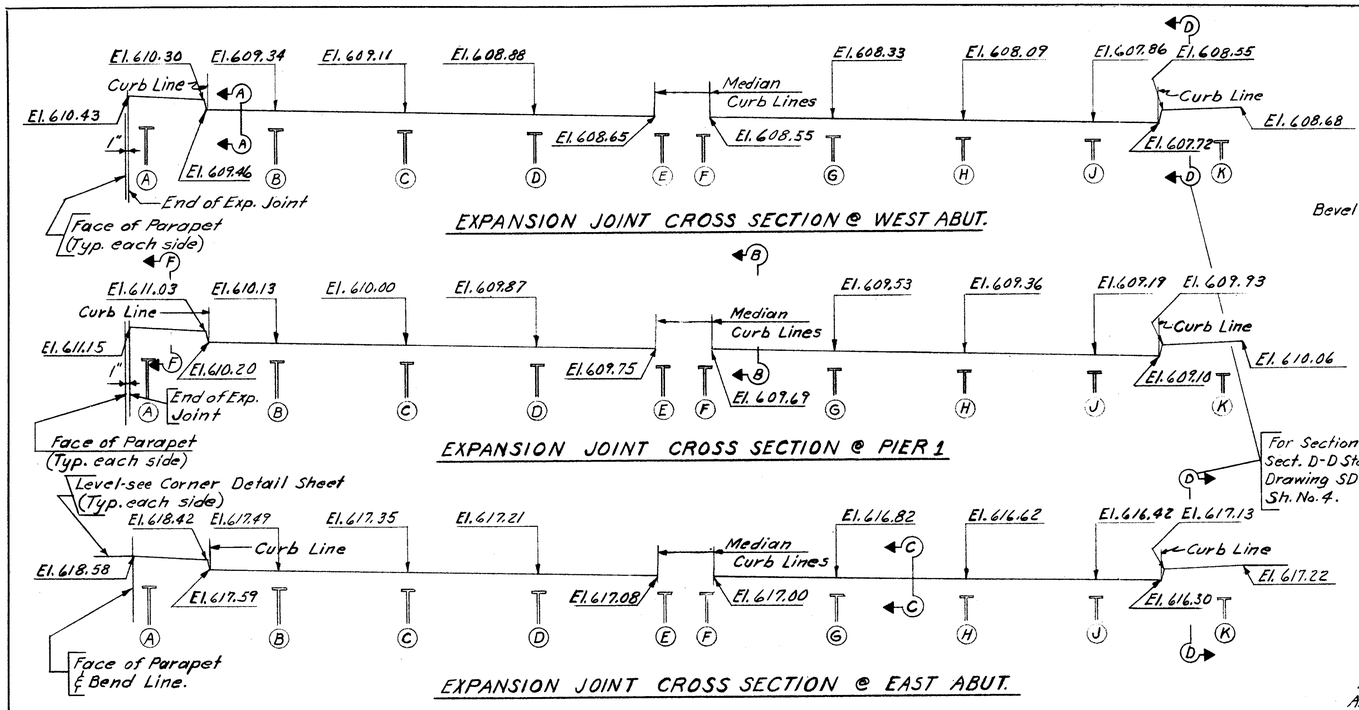
SPAN	3																			
GIRDER	A		B		C		D		E		F		G		H		J		K	
LOCATION (See Diagram)	c	d	c	d	c	d	c	d	c	d	c	d	c	d	c	d	c	d	c	d
Deflection due to Wt. of Steel	1/8"	1/8"	1/8"	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"	0	1/8"
Deflection due to Remaining D.L.	1/4"	5/8"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"	1/4"	3/8"
Convexity & Super. elev. Trans.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Defl., Convexity & Superelev. Trans.	3/8"	3/4"	3/8"	5/8"	1/4"	5/8"	1/4"	5/8"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"
Required Camber ®	3/8"	3/4"	3/8"	5/8"	1/4"	5/8"	1/4"	5/8"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"	1/4"	1/2"

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

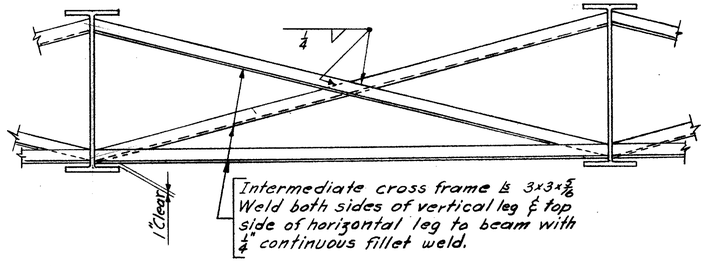
STRUCTURAL STEEL DETAILS

BRIDGE NO. HAM - 71 - 0203

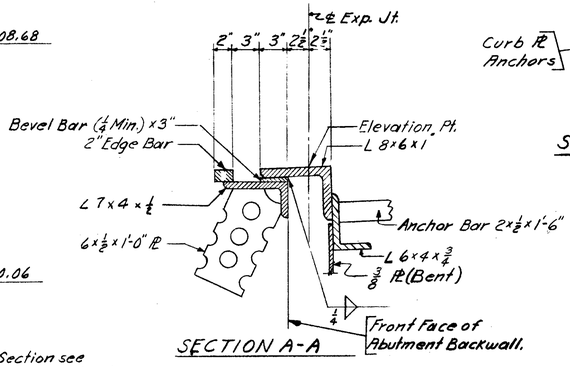
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		W.J.Z. 3-19-65	JHO 5/20/65	

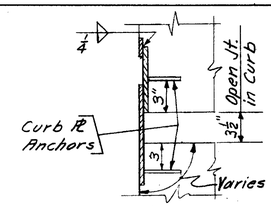


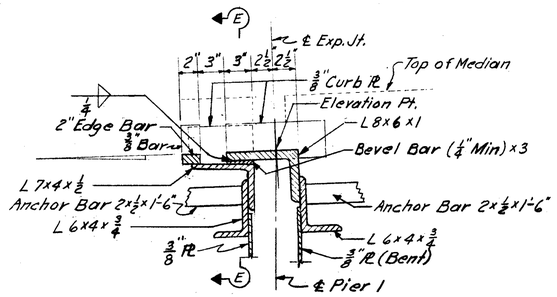
Note: Elevations given are at the intersection of ℄ Girder or Curb Line and ℄ expansion joint (Shown on Sections). Roadway expansion joints are to be bent in shop to conform to contour of top of slab.

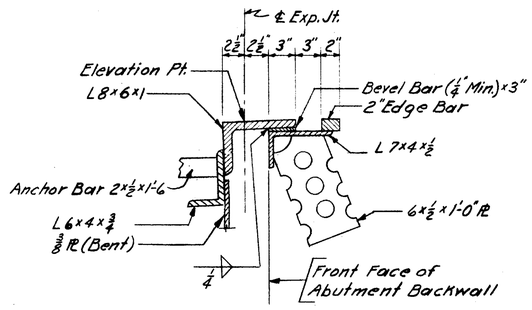


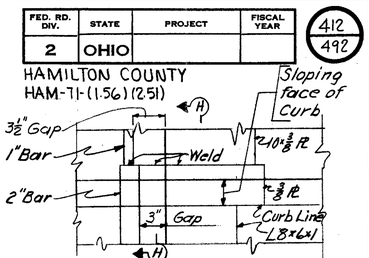
TYPICAL INTERMEDIATE CROSSFRAME SPAN 1

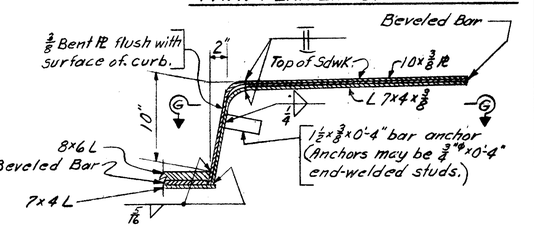


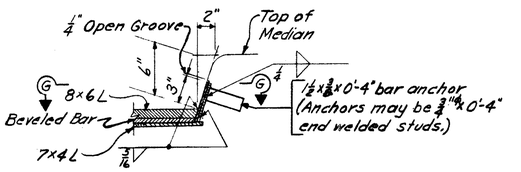












Notes: For details not shown see Std. Drwg. SD-1-63, Sheets 2 & 4 and "Typical Structural Steel Details." Sheet No. 444
For details of bearings see Std. Drwgs. FSB-1-62

For Inlet Framing details see drainage details.
Expansion joint openings shown on details are for a normal temperature of 70°F.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

BRIDGE NO. HAM - 71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	H.W.T.		W.J.L. 3-19-65	J.H.O. 5/20/65	

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

413
492

Concrete above this line to be included with Item S-14 for payment (Typ.)

84'-4"
7'-2" | 33'-0" | 2'-0" | 2'-0" | 33'-0" | 7'-2"
2" | 1'-0" | 5'-10" | 2" | 2" | 5'-10" | 1'-0" | 2"
Constr. Jt. (Level) | S4001 or S4003 | S5001 or S5002 (Typ.) | S6001 or S6019 (Top - Typ.) | 7 Equal Spaces (Typ.) | S5001 or S5004 (Top of Median - Typ.) | S4002 (Typ.) | Slope 1/4"/ft. | Slope varies - 1/2"/ft. min. | Constr. Jt. (Same slope as roadway - Typ.) | S6001 or S6020 (Top - Typ.) | S5001 or S5003 (Typ.) | Constr. Jt. (Level) | S4001 or S4003
.0100/ft. min. Superelevation (Varies) | .0156/ft. min. Superelevation (Varies)
t* (Span 2 & 3) | t* (Span 1)
S6051 or S6052 (Typ. in north slab) | S6054 (over Pier 2 - Typ.) | S7001 or S7019 (Bott. - Typ.) | Haunch (Typ.) | Profile Grade | Base Line Elsinore Place | S7001 or S7020 (Bott. - Typ.) | Monolithic Wearing Surface (Including 1")
S6051 or S6053 (Typ. in south slab) | 2" Galv. Metal Conduit South side only | 1" Dia. Halfround Drip Groove (Typ.)
2@1'-3¾" = 2'-7½" | 6 @ 8½" = 4'-3" (Typ.) | 2@1'-3¾" = 2'-7½" | 9'-6" (Typ.) | 1'-6" | 1'-6"
A | B | C | D | E | F | G | H | J | K

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" wide.

TRANSVERSE SECTION - Typical
(Looking east)

* See Detail B & Note (Sheet 414)

3" Galv. Steel Conduit to be located in sdwk see Lighting Plan Sh. No. 206.

4-S6002 (Top) | 4-S7002 (Bott.) | ℄ Lamp Std. | 4-S6019 @ 8" (Top) | 4-S7019 @ 8" (Bott.) | 2-S4003
23-S4001 @ 1'-6" | Detail A (See Sheet 414) | Fascia | 121-S4001 @ 1'-6" | Curb Line | S6003 thru S6008 (Top) | S7003 thru S7008 (Bott.) | Corner Detail (See Sheet 414) | ℄ Lamp Std. | 2-S4001

2 Sets of 2 = 4-S5001 (Top of Median) Sta. 13+47.90 (℄ Brg. W. Abut.)
2 Sets of 31=62-S6051 (Top) | 2 Sets of 40=80-S6055 (Bott.) | 2 Sets of 6=12-S5001 (Top of Sdwk)
3-S6001 @ 8" (Top) | 3-S7001 @ 8" (Bott.)
SPAN 1 | SPAN 2 | SPAN 3
5 Sets of 31=155-S6052 (Top) | 5 Sets of 40=200-S6052 (Bott.)
3'-0" | 19'-6" | 19'-6" | 3'-0"
5 Sets of 31=155-S6053 (Top) | 5 Sets of 40=200-S6053 (Bott.)
31-S6054 (Top of Slab over Pier) | 6-S6054 (Top of Sdwk, Median over Pier)
5 Sets of 6=30-S5002 (Top of Sdwk)
2-S6021 (Top) | 2-S7021 (Bott.)
5 Sets of 2=10-S5004 (Top of Median)
83°14'30"
Base Line Elsinore Place

℄ Drain Inlet (See Det. C-Sh. 415)
3-S6023 (Top) | 3-S6023 (Bott.)
47-S6001 @ 8" (Top) | 47-S7001 @ 8" (Bott.)
3'-6" | 24-S4002 @ 1'-6"
Detail A (See Sheet 414)
Metal Exp. Dam
3'-6"
℄ Drain Inlet (See Detail D - Sheet 415)
4-S6019 @ 8" (Top) | 4-S7019 @ 8" (Bott.)
3-S6023 (Top) | 3-S6023 (Bott.)
127-S6001 @ 8" (Top) | 127-S7001 @ 8" (Bott.)
Sta. 13+84.23 (℄ Pier 1)
Median Curb Lines
Sta. 14+72.98 (℄ Pier 2)
1'-10 5/16"
℄ Drain Inlet (See Typical Drainage Details & Detail G - Sheet 415)
4-S6019 @ 8" (Top) | 4-S7019 @ 8" (Bott.)
3-S6023 (Top) | 3-S6023 (Bott.)
127-S6001 @ 8" (Top) | 127-S7001 @ 8" (Bott.)
Sta. 15+60.50 (℄ Brg. E. Abut.)

24-S4002 @ 1'-6" | 118-S4002 @ 1'-6" | 118-S4002 @ 1'-6"
47-S6001 @ 8" (Top) | 47-S7001 @ 8" (Bott.)
127-S6001 @ 8" (Top) | 127-S7001 @ 8" (Bott.)
113-S6001 @ 8" (Top) | 113-S7001 @ 8" (Bott.)
2 Sets of 2 = 4-S5001 (Top of Median) 88°52'51"
4-S6020 @ 8" (Top) | 4-S7020 @ 8" (Bott.)
3-S6001 @ 8" (Top) | 3-S7001 @ 8" (Bott.)
4-S6020 @ 8" (Top) | 4-S7020 @ 8" (Bott.)
1'-10 5/16"
S6009 & S6010 (Each 2 bars - Top) | S7009 & S7010 (Each 2 bars - Bott.)
S6011 (Top) | S7011 (Bott.)
S6012 thru S6018 (Top) | S7012 thru S7018 (Bott.)
S6022 (Top) | S7022 (Bott.)
End of Rdwy. Slab
Edge of Sdwk. Slab (Typ.)
℄ Drain Inlet (See Detail E - Sheet 415)
2-S6001 (Top) | 2-S7001 (Bott.)
3'-6" | 3'-6"
℄ Drain Inlet (See Detail F - Sheet 415)
3-S6023 (Top) | 3-S6023 (Bott.)
℄ Downspout
Curb Line
9" (Typ.)
24-S4001 @ 1'-6" | 113-S4001 @ 1'-6"
15+21 ℄ Pole TCP 3-30
2" Galv. Metal Conduit
2-S4001

N

3-S6002 (Top) | 3-S7002 (Bott.)
℄ Brg. - West Abut.
End of Rdwy. Slab
2-S4003
6" | 4½" | 3½"
℄ Pier 1
3-S6023 (Top) | 3-S6023 (Bott.)
4-S6024 @ 8" (Top) | 4-S7024 @ 8" (Bott.)
℄ Lamp Standard (Typ.) See Det. C & Sec. A-A. For location, see Sh. 414
Fascia
℄ Pier 2
4-S6024 @ 8" (Top) | 4-S7024 @ 8" (Bott.)
1'-11" Min. Lap for #6 Bars
1'-7" Min. Lap for #5 Bars
℄ Brg. - East Abut.
Corner Detail (See Sheet 414)
R = 35'
Sta. 15+50.64

PLAN
(Parapet not shown)

℄ Girder K | ℄ Brg. - E. Abut. | Edge of rdwy. slab | 3-1/8"
SLAB OFFSET AT S.E. CORNER

Notes:
For Drainage Details, see Sheet 415
For Railing Details & Spacing of bars in parapet, see Sheet 414
For Lighting details not shown, see Sheets 216.

℄ Parapet | 11¾" | ℄ Lamp Std. | H510 | S7121 | S7119 | S5006 | 11" ℄ Bolt circle | 11" | 3'-9" | 1½" Cl. (Typ.) | 1'-0" | 1'-4" | 2" | S7120

DETAIL C

℄ Lamp Std. | 2'-6" | ℄ Parapet | 11¾" | 10¼" | 1'-0" | 1'-4" | 2" | 1½" Cl. (Typ.) | 2-S5006 | 2-H510 | 1-S7120 | 2-S7121 | 2-S7119 | 1-S7120

SECTION A-A

Work this sheet with Sheet 414

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

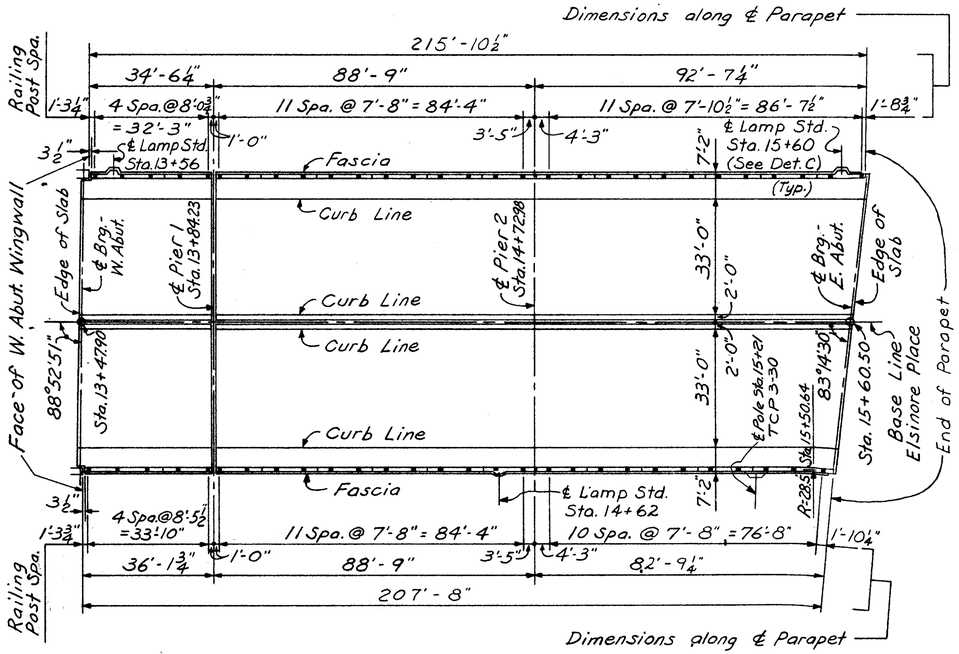
BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	GW		D.W. 3-19-65	JHo 5/20/65	

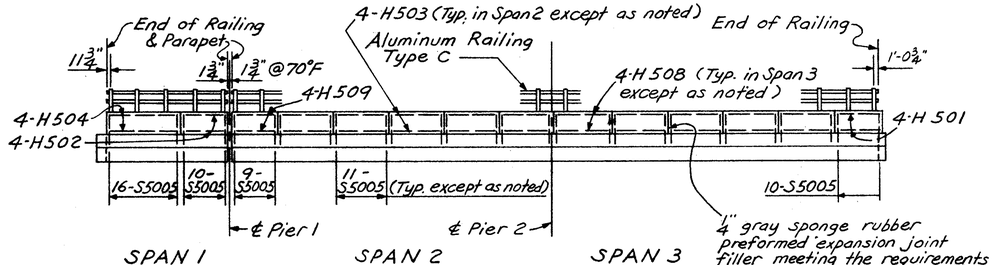
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

414
492

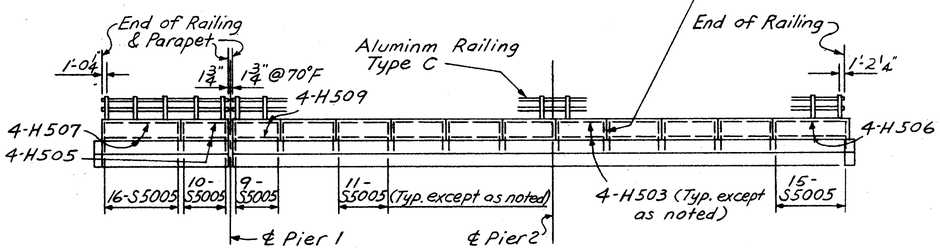
HAMILTON COUNTY
HAM-71-(1.66)(2.51)



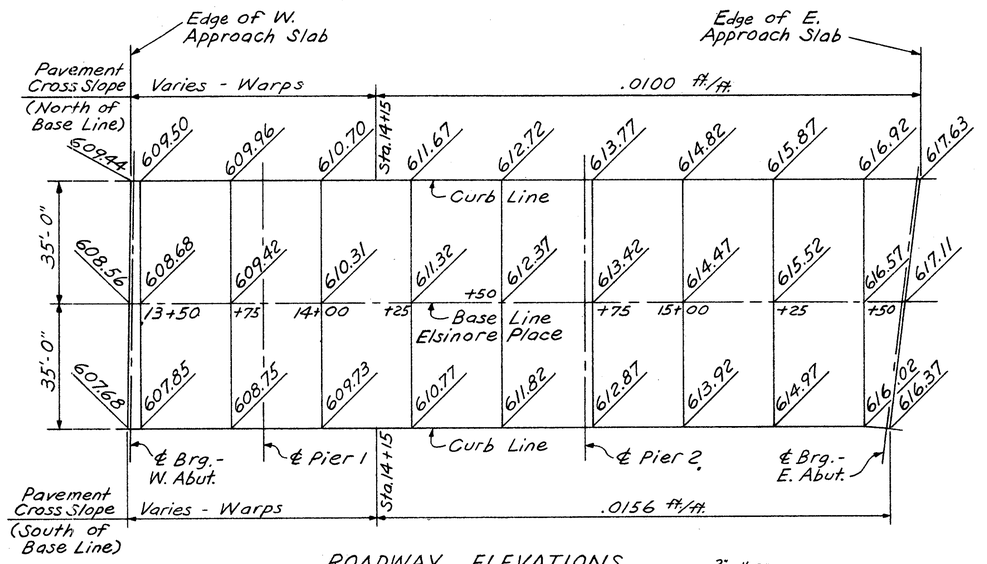
PLAN - RAILING



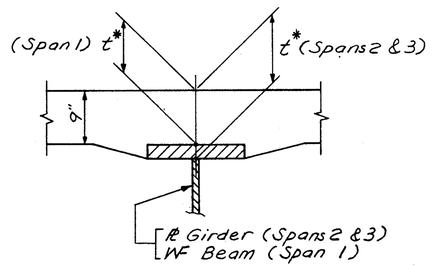
ELEVATION - NORTH RAILING



ELEVATION - SOUTH RAILING



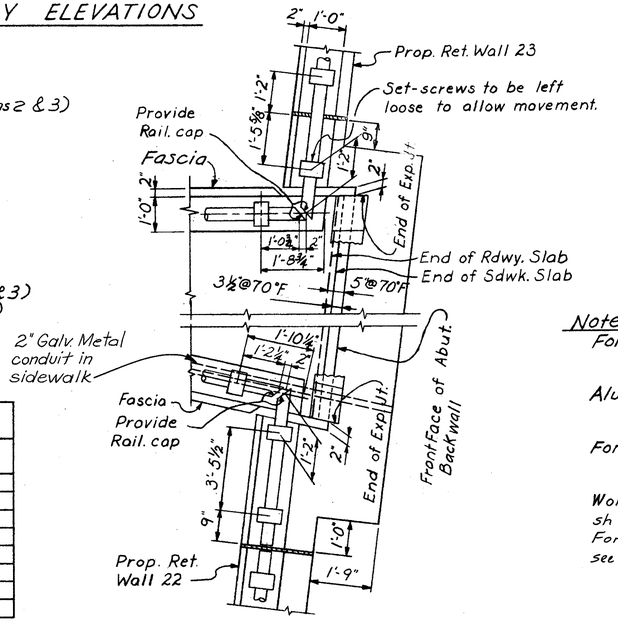
ROADWAY ELEVATIONS



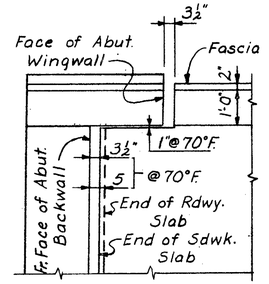
DETAIL B

SLAB THICKNESS t *			
Girder	Span 1 ℄ Brg.	Span 1 ℄ Span	Spans 2 & 3
A	10⅛"	9"	10 3/8"
B	10	9	10 3/8
C & D	10	9⅛	10 3/8
E & F	10	9¼	10 3/8
G	10	9 3/8	10 3/8
H	10	9½	10 3/8
J	10	9 5/8	10 3/8
K	10⅝	10¼	11 3/8

Note
Slab thickness includes 1" monolithic wearing surface.



CORNER DETAIL
(N.E. & S.E. Quadrants)



DETAIL A
N.W. Quadrant
(S.W. Quad. similar, opp. hand)

Notes
For railing details not shown, see Standard Drawing No. AR-1-57.
Aluminum tube railing should be bent to the curvature of the ℄ of Parapet.
For Bridge Lighting Details, see Sheet 216.

Work this drawing with Lighting Plan sh no. 206
For conduit expansion detail at abutments see Sh. no. 214.

Work this sheet with Sheet 413

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the Construction and Material Specification.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING DETAILS

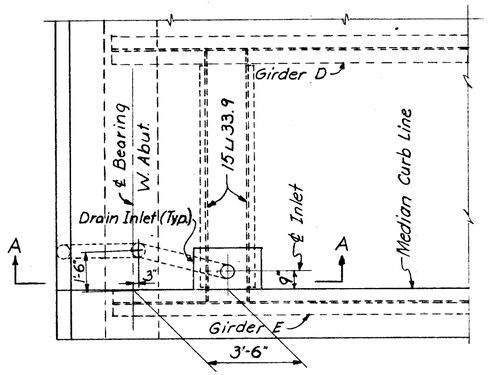
BRIDGE NO. HAM - 71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	GW		D.W. 3-1965	JHO 5/20/65	

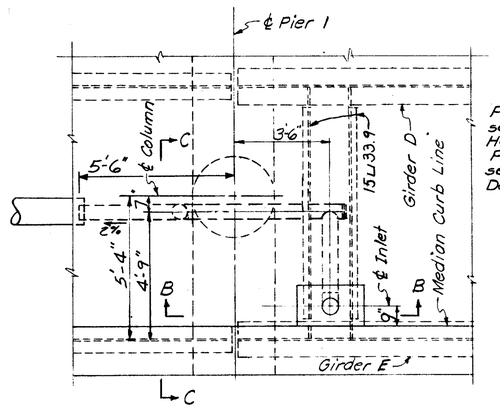
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

415
492

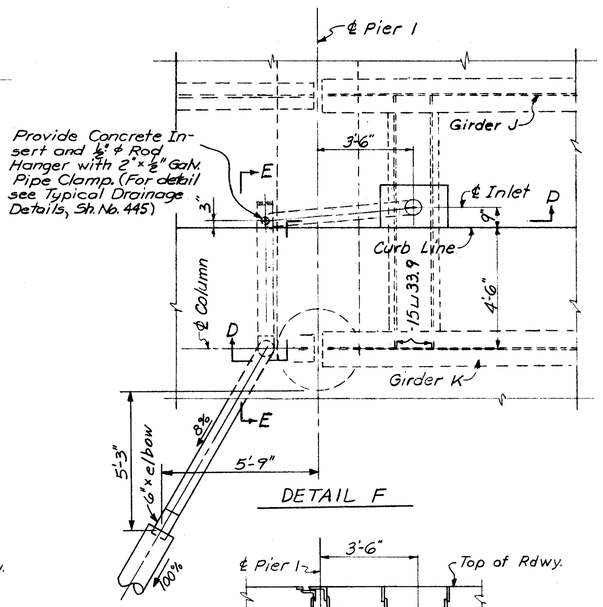
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



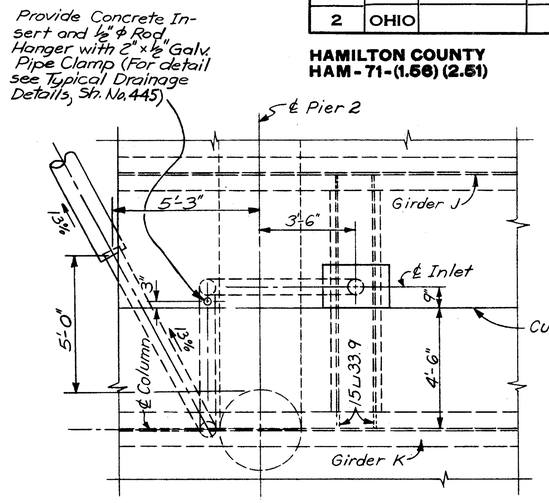
DETAIL C
DETAIL E SIMILAR



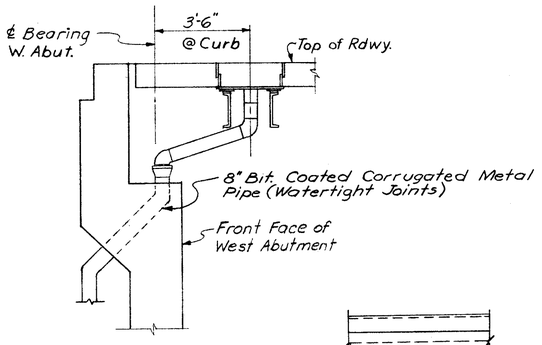
DETAIL D



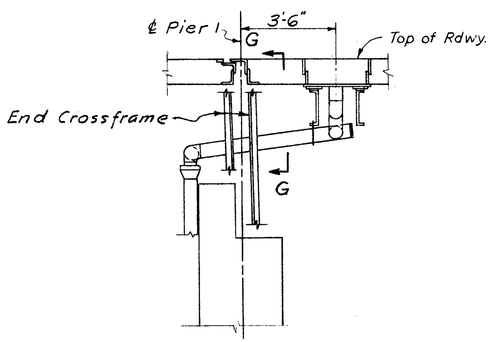
DETAIL F



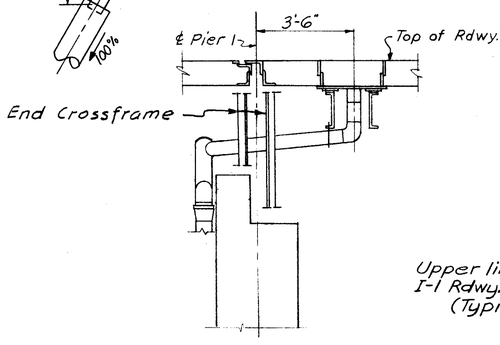
DETAIL H



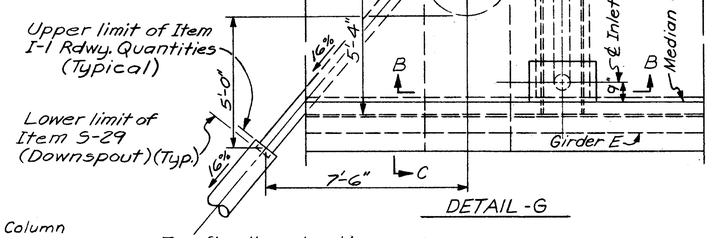
SECTION A-A



SECTION B-B

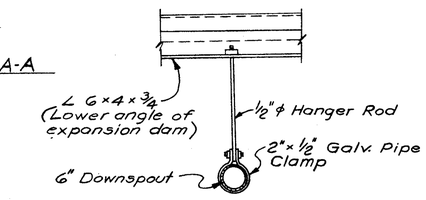


SECTION D-D

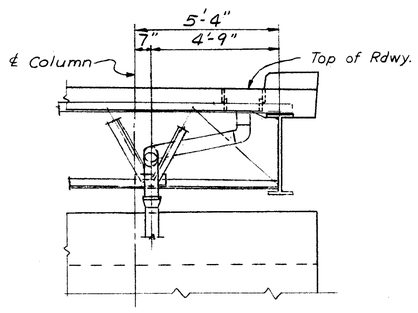


DETAIL -G

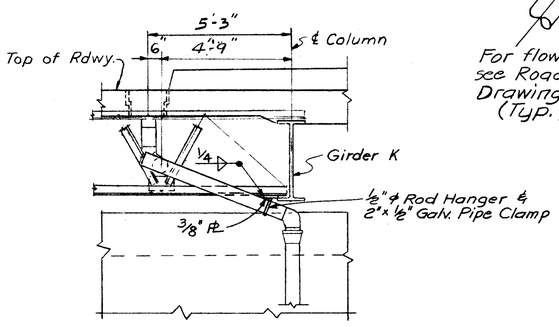
Note:
For details not shown, see Typical Drainage Details. Sh. No 445
6" Pipe shall be used for all downspouts.



SECTION G-G



SECTION C-C



SECTION E-E

MICROFILMED
FEB 20 1985

Work this Sheet with Sheet 413

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE NO. HAM-71-0203

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	C.B.H.		D.W. 3-17-65	JHo 5/20/65	

HAMILTON COUNTY
HAM - 71 - (1.56) (2.51)

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

416
492

SUPERSTRUCTURE

Mark	Type	No. Reqd	Length	Weight
S4001	21	285	10'-9"	2047
S4002	63	284	5'-2"	980
S4003	21	4	9'-7"	26
S5001	Str.	32	19'-6"	651
S5002	↑	30	37'-6"	1173
S5003	↓	30	35'-7"	1113
S5004	Str.	20	36'-6"	761
S5005	14	304	5'-9"	1823
S6001	Str.	596	41'-6"	37150
S6002	↑	7	40'-3"	423
S6003		1	37'-8"	57
S6004		1	31'-8"	48
S6005		1	25'-8"	39
S6006		1	20'-6"	31
S6007		1	13'-8"	21
S6008		1	7'-8"	12
S6009		2	41'-8"	125
S6010		2	41'-10"	126
S6011		2	41'-11"	126
S6012		1	42'-0"	63
S6013		1	37'-9"	57
S6014		1	31'-6"	47
S6015		1	25'-6"	38
S6016		1	19'-6"	29
S6017		1	13'-6"	20
S6018		1	7'-6"	11
S6019		12	38'-0"	685
S6020		12	33'-0"	595
S6021		2	41'-8"	125
S6022		2	42'-3"	127
S6023		36	5'-0"	270
S6024		12	6'-6"	117
S6051		142	19'-3"	4106
S6052		355	37'-9"	2013
S6053		355	36'-6"	1946
S6054	↓	74	42'-0"	4668
S6055	Str.	142	19'-8"	4195
S7001	Str.	596	41'-5"	50455
S7002	Str.	7	40'-2"	575
S7003	Str.	1	37'-7"	77
S7004	↑	1	31'-7"	65
S7005		1	25'-7"	52
S7006		1	20' 7"	42
S7007		1	13'-7"	28
S7008		1	7'-7"	16
S7009		2	41'-7"	170
S7010		2	41'-9"	171
S7011		2	41'-10"	171
S7012		1	41'-11"	86
S7013		1	37'-5"	76
S7014		1	31'-5"	64
S7015		1	25'-5"	52
S7016		1	19'-5"	40
S7017		1	13'-5"	27
S7018		1	7'-5"	15
S7019		12	38'-0"	932
S7020		12	32'-11"	807
S7021		2	41'-7"	170
S7022	↓	2	42'-2"	172
S7024	Str.	12	6'-6"	159
* H501	Str.	4	13'-4"	
H502	↑	4	12'-7"	
H503		56	14'-11"	
H504		4	20'-10"	
H505		4	13'-2"	
H506		4	20'-8"	
H507		4	22'-0"	
H508	↓	20	15'-4"	
H509	Str.	8	12'-0"	
* H510		58	8	8'-0"
S5006	4	8	9'-9"	81
S7119	49	8	7'-1"	116
S7120	58	8	12'-6"	204
S7121	61	8	8'-0"	131
			Total	120788

WEST ABUTMENT

Mark	Type	No. Reqd	Length	Weight
A502	8	84	6'-0"	526
A503	Str.	11	16'-9"	192
A504	↑	10	17'-2"	179
A505		6	17'-8"	111
A506		9	17'-11"	168
A507		8	18'-5"	154
A508		43	28'-0"	1256
A509		34	27'-6"	975
A510		23	29'-0"	696
A511		4	6'-9"	28
A512	↓	4	6'-0"	25
A513	Str.	16	5'-6"	92
A514	14	10	10'-7"	110
A515	18	8	3'-0"	25
A601	8	8	10'-11"	131
A602	20	8	9'-9"	117
A603	8	68	9'-5"	962
A604	20	76	7'-6"	856
A605	8	4	9'-11"	60
A606	Str.	20	6'-9"	203
A607	↑	12	4'-6"	81
A608	↓	54	30'-0"	2433
A609	Str.	2	7'-0"	21
A610	62	5	10'-8"	80
A801	44	86	17'-1"	3923
A1002	18	172	11'-2"	8264
A1003	↑	22	14'-5"	1364
A1004		19	14'-8"	1199
A1005		12	15'-2"	783
A1006		19	15'-5"	1261
A1007	18	15	15'-11"	1027
A1008	22	6	11'-3"	290
A1101	Str.	86	13'-0"	5940
* H511	Str.	8	7'-6"	
			Total	33532

EAST ABUTMENT

Mark	Type	No. Reqd	Length	Weight
A551	Str.	63	3'-6"	230
A552	↑	44	19'-6"	895
A553		44	20'-3"	929
A554		38	20'-9"	822
A555	↓	2	7'-8"	16
A556	Str.	2	8'-6"	18
A557	39	6	5'-1"	32
A558	40	7	30'-2"	220
A559	↑	7	29'-0"	211
A560		7	27'-10"	203
A561		7	26'-8"	194
A562		7	25'-6"	186
A563		7	24'-4"	177
A564		7	23'-4"	170
A565		7	22'-2"	161
A566		7	20'-8"	151
A567		7	19'-4"	141
A568		7	17'-10"	130
A569		7	16'-6"	120
A570		7	15'-0"	109
A571	↓	7	13'-8"	99
A572	40	7	12'-4"	90
A573	Str.	11	26'-4"	302
A574	↑	11	35'-2"	403
A575		11	28'-7"	328
A576	↓	2	6'-9"	19
A577	Str.	2	6'-1"	18
A578	Str.	2	20'-10"	43
A579	19	6	7'-8"	48
A580	18	6	4'-4"	27
A581	18	6	4'-4"	27
A582	18	6	2'-4"	15
A583	Str.	12	3'-1"	39
A584	Str.	2	3'-4"	7
A585	1	6	5'-5"	34
A586	1	11	3'-6"	40
A651	20	72	10'-0"	1081
A652	8	72	10'-0"	1081
A656	18	92	5'-1"	702
A657	Str.	74	16'-0"	1778
A658	Str.	12	32'-0"	577
A659	20	13	10'-10"	212
A660	8	13	10'-4"	202
A661	Str.	16	9'-1"	218
A662	Str.	20	7'-0"	210
A751	Str.	34	27'-9"	1929
A752	Str.	34	36'-6"	2537
A753	Str.	34	31'-9"	2206
A851	44	140	21'-7"	8068
A852	↑	14	8'-9"	327
A853		28	22'-4"	1670
A854		14	21'-9"	813
A855		14	20'-0"	748
A856		14	18'-4"	685
A857		14	16'-5"	614
A858		14	14'-7"	545
A859		14	12'-10"	480
A860		14	11'-1"	414
A861	↓	14	9'-4"	349
A862	44	14	7'-1"	265
A951	Str.	93	32'-7"	10303
* H552	Str.	4	4'-4"	
* H553	Str.	4	1'-7"	
			Total	49013

Mark	a	Mark	a
A801	16'-0"	A857	15'-4"
A851	20'-6"	A858	13'-6"
A852	7'-8"	A859	11'-9"
A853	21'-3"	A860	10'-0"
A854	20'-8"	A861	8'-3"
A855	18'-11"	A862	6'-0"
A856	17'-3"		

Type 44

PIER 1

Mark	Type	No. Reqd	Length	Weight
P401	64	1	14'-1 3/8"	429
P402	↑	1	14'-5"	436
P403		1	14'-8 1/8"	447
P404		1	14'-10 3/4"	453
P405		1	15'-1 3/8"	459
P406	64	1	15'-5"	466
P501	1	20	6'-0"	125
P502	1	24	8'-0"	201
P503	1	1	9'-8"	10
P504	1	3	16'-6"	52
P505	Str.	4	39'-3"	164
P506	6	4	10'-1"	42
P507	1	256	6'-9"	1802
P508	Str.	12	5'-9"	72
P509	Str.	36	9'-1"	341
P510	Str.	12	4'-6"	56
P511	59	6	5'-9"	36
P512	1	92	7'-10"	752
P513	Str.	2	3'-7"	7
P514	1	38	3'-8"	145
P515	1	2	3'-4"	7
P516	18	48	3'-10"	192
P517	18	2	3'-4"	7
P601	Str.	32	17'-4"	833
P602	↑	8	12'-5"	149
P603		2	6'-3"	19
P604		2	5'-3"	16
P605	↓	2	6'-0"	18
P606	Str.	8	7'-6"	90
P701	43	144	11'-2"	3287
P901	18	60	6'-3"	1275
P902	Str.	10	17'-7"	598
P903	↑	10	17'-8"	601
P904		10	18'-0"	612
P905		10	18'-2"	618
P906		10	18'-5"	626
P907	Str.	10	18'-9"	638
P1001	Str.	10	35'-0"	1506
P1002	6	2	10'-1"	87
P1101	8	6	43'-9"	1395
P1102	8	4	42'-11"	912
		Total		19981

PIER 2

Mark	Type	No. Reqd	Length	Weight
P451	64	1	17'-2 3/4"	520
P452	↑	1	17'-5 1/4"	526
P453		1	17'-8"	532
P454		1	17'-10 3/4"	539
P455	↓	1	18'-0 3/8"	545
P456	64	1	18'-3 1/2"	550
P551	1	384	7'-0"	2804
P552	↑	2	4'-6"	9
P553		54	5'-5"	305
P554	↓	2	5'-4"	11
P555	1	2	5'-2"	10
P556	Str.	4	39'-3"	164
P557	6	4	10'-1"	42
P651	Str.	8	7'-6"	90
P851	43	72	11'-8"	2243
P951	Str.	4	27'-3"	371
P952	Str.	4	12'-0"	163
P953	18	4	12'-7"	172
P954	18	4	29'-8"	404
P955	43	84	14'-0"	3998
P1150	18	4	10'-11"	232
P1151	18	84	7'-1"	3161
P1152	Str.	14	20'-8"	1537
P1153	↑	14	20'-5"	1519
P1154		14	20'-8"	1537
P1155		14	20'-9"	1543
P1156		14	21'-0"	1562
P1157	↓	14	21'-7"	1605
P1158	Str.	12	35'-0"	2231
P1159	18	4	12'-10"	273
P1160	18	4	29'-9"	632
P1161	8	4	42'-11"	912
P1162	8	4	43'-9"	930
P1163	6	2	10'-8"	113

REPLACEMENT BARS

Mark	Type	No. Reqd	Length
Re401	Str.	1	5'-3"
Re501		2	5'-7"
Re601		4	5'-11"
Re701		4	6'-3"
Re801		2	6'-6"
Re901		2	6-10"
Re1011	↓	2	7'-3"
Re1101	Str.	2	7'-6"

Pier #2 Total 31785

Total wgt of reinf steel = 255099 lbs

Type	Mark	a	b	c	d	e	f	g	h	i
21	S4001	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	6'-7"	3"	-	-	-
	S4003	1'-3¼"	1'-3½"	1'-0"	1'-3¼"	5'-5"	3"	-	-	-
63	S4002	1'-6"	4"	1'-0"	1'-0⅛"	1'-0"	4"	1'-0"	1'-0⅛"	1'-0"
58	S7120	1'-9"	2'-8⅛"	4'-7⅝"	2'-8⅛"	0'-9"	3'-9"	3'-9"	4'-7⅝"	0'-9"
	H510	1'-9"	1'-4½"	2'-4½"	1'-4½"	0'-9"	1'-1"	1'-11"	2'-4½"	0'-9"

Types 21, 63 & 58

Mark	a	b	c	d
A602	2'-1½"	6'-9"	3'-0"	2'-1½"
A604	2'-1½"	4'-6"	3'-0"	2'-1½"
A651	1'-2¾"	6'-6"	3'-6"	1'-2¾"
A659	1'-2¾"	7'-4"	3'-6"	1'-2¾"

Type 20

Mark	a	b	c	d
A558	14'-3"	1'-2"	0'-6"	0'-6"
A559	13'-8"	↑	↑	↑
A560	13'-1"			
A561	12'-6"			
A562	11'-11"			
A563	11'-4"			
A564	10'-10"			
A565	10'-3"			
A566	9'-6"			
A567	8'-10"			
A568	8'-1"			
A569	7'-5"			
A570	6'-8"			
A571	6'-0"	↓	↓	↓
A572	5'-4"	1'-2"	0'-6"	0'-6"

Type 40

Mark	a	b
A586	0'-5"	1'-8"
P501	1'-3"	2'-6"
P502	1'-3"	3'-6"
P503	1'-3"	4'-4"
P504	1'-3"	7'-9"
P507	1'-11½"	2'-6"
P512	0'-11"	3'-7"
P514	0'-11"	1'-6"
P515	0'-7"	1'-6"
P551	2'-3"	2'-6"
P552	1'-9"	1'-6"
P553	2'-8"	1'-6"
P554	2'-7"	1'-6"
P555	2'-5"	1'-6"

Type 1

Mark	a	Pitch	No. of Turns
P401	2'-7"	2½"	71
P402	2'-7"	2½"	72
P403	2'-7"	2½"	74
P404	2'-7"	2½"	75
P405	2'-7"	2½"	76
P406	2'-7"	2½"	77
P451	2'-7"	2⅝"	86
P452	2'-7"	2⅝"	87
P453	2'-7"	2⅝"	88
P454	2'-7"	2½"	89
P455	2'-7"	2½"	90
P456	2'-7"	2½"	91

Type 64 (Spiral Bars)

Type	Mark	a	b	Rad.
6	P506	4'-0¾"	3'-0"	1'-3¾"
	P557	4'-0¾"	3'-0"	1'-3¾"
	P1002	3'-7"	3'-3"	1'-1"
	P1163	3'-6"	3'-7"	1'-0⅜"
43	P701	9'-6"	-	-
	P851	9'-6"	-	-
	P955	11'-6"	-	-

Types 6 & 43

Type	Mark	a	b	c
14	S5005	8"	2'-3"	-
	A514	8"	4'-8"	-
8	A502	1'-5"	3'-5"	1'-5"
	A601	3'-0"	1'-3"	7'-0"
	A603	3'-0"	0'-9"	6'-0"
	A605	3'-0"	0'-9"	6'-6"
	A652	2'-0"	0'-11"	7'-5"
	A660	1'-0"	1'-5"	8'-3"
	P1101	1'-2"	40'-0"	3'-3"
	P1102	1'-2"	39'-2"	3'-3"
	P1161	1'-2"	39'-2"	3'-3"
	P1162	1'-2"	40'-0"	3'-3"
61	S7121	1'-0"	1'-4⅝"	3'-11"

Type	Mark	a	b
18	A515	1'-5"	1'-9"
	A580	1'-6"	3'-0"
	A1002	1'-6"	10'-0"
	A1003	1'-6"	13'-3"
	A1004	1'-6"	13'-6"
	A1005	1'-6"	14'-0"
	A1006	1'-6"	14'-3"
	A1007	1'-6"	14'-4"
	A656	2'-0"	3'-3"
	P516	1'-6"	2'-6"
	P517	1'-6"	2'-0"
	P901	1'-0"	5'-6"

Type	Mark	a	b
18	P953	1'-0"	11'-10"
	P954	1'-0"	28'-11"
	P1151	1'-0"	6'-5"
	P1159	1'-2"	12'-0"
	P1160	1'-2"	28'-11"
	A581	1'-7"	2'-10"
	A582	1'-2"	1'-3"
	P1150	8'-6"	3'-3"

Types 14, 8, 61 & 18

Type	Mark	a	b	c	d	e
19	A579	4'-4½"	4'-4½"	0'-5¼"	3'-5"	-
4	S5006	2'-3½"	1'-10"	1'-10"	2'-3½"	2'-1"
22	A1008	6'-5¾"	3'-8¼"	1'-7½"	3'-3½"	-
22	A1052	2'-3"	14'-9"	10'-0"	5'-8¼"	-
45	A1053	2'-3"	22'-8¾"	3'-3"	19'-9"	11'-3"
39	A557	1'-8"	1'-2"	0'-3½"	2'-5¾"	2'-6"

Types 19, 22, 39, 4 & 45

Type	Mark	a	b	c	d	e	f
49	S7119	3'-4"	1'-10½"	1'-4"	1'-4"	0'-6"	1'-6"
59	P511	2'-10"	2'-0"	0'-10"	1'-2"	0'-9½"	-
62	A610	2'-11"	1'-5½"	4'-6"	3'-3"	-	-

Types 49, 59 & 62

Note

The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap.
The "No. of Turns" shown is the "Length" divided by the pitch plus 3 turns (total number of closed coils).

* Reinforcing Bars marked H are included in Item S-14 (Railing) for payment.

For bar bending schedule see Sh No. 446

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

BRIDGE NO. HAM - 71-0203

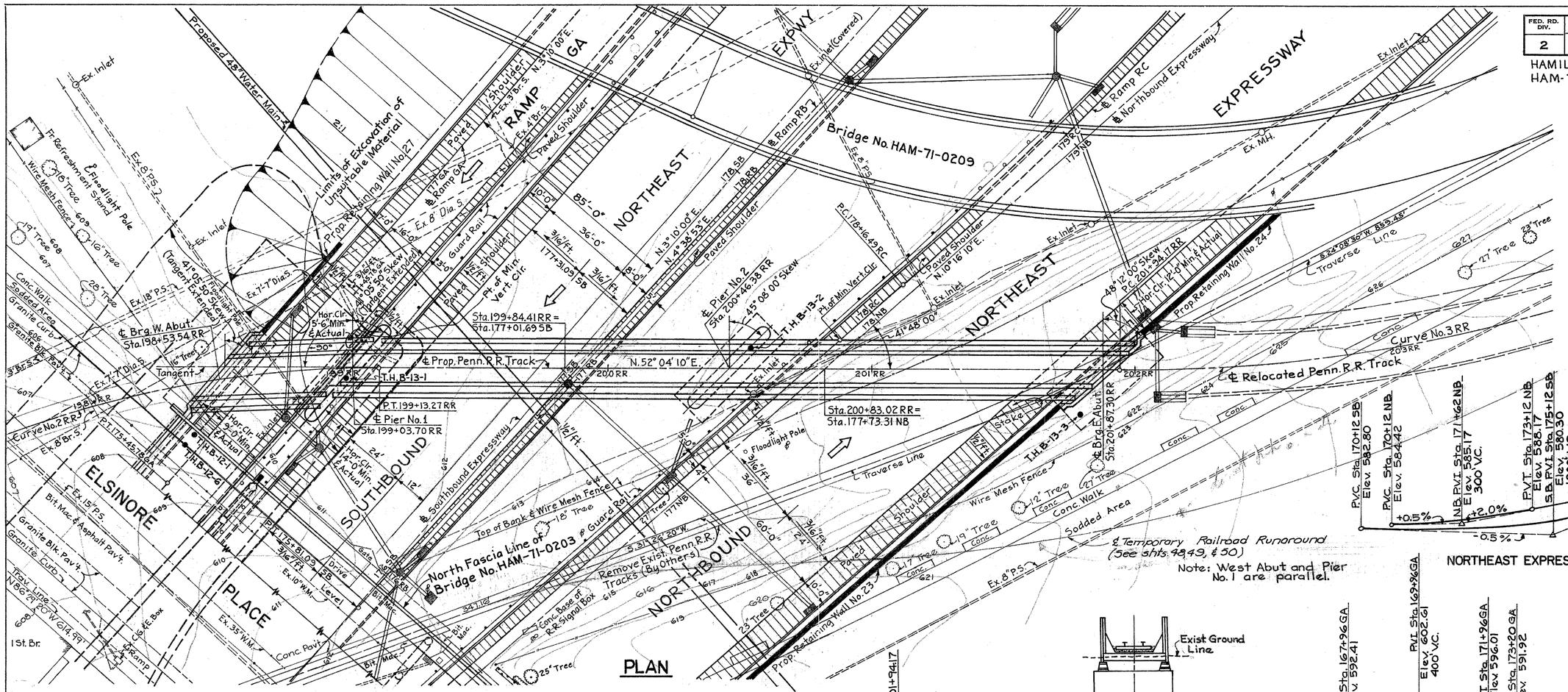
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	GW		HEE 5-7-65	JHo 5/20/65	

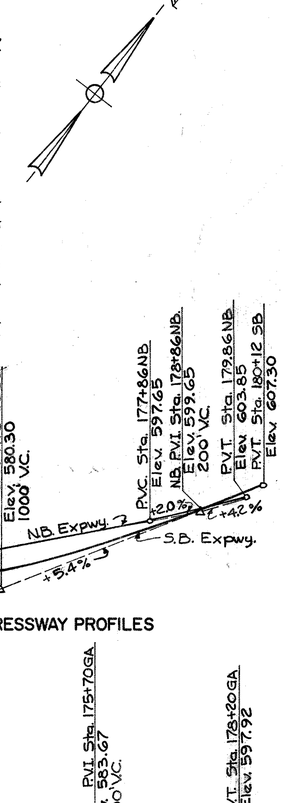
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

417
492

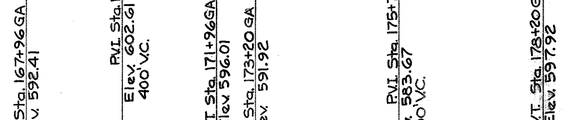
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

PLAN

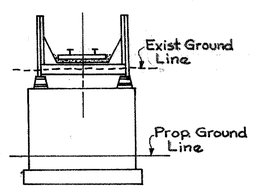




NORTHEAST EXPRESSWAY PROFILES



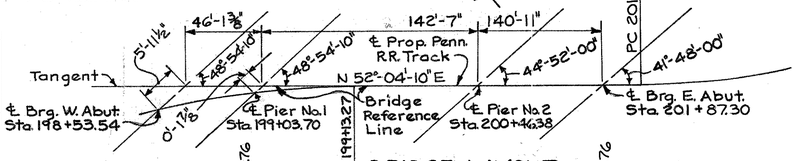
RAMP-GA PROFILE



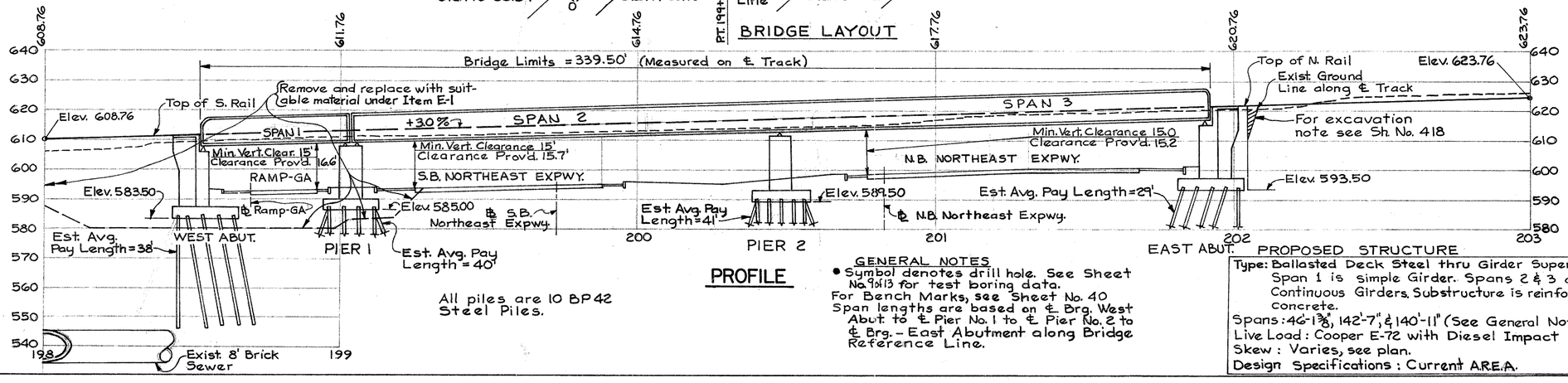
SECTION OF PROPOSED BRIDGE

CURVE № 2 RR DATA
P.I. Sta. 197+95.94
Δ = 35°-17'-00"
D = 14°-30'
R = 396.20'
L = 243.33'
T = 126.00'

CURVE № 3 RR DATA
P.I. Sta. 204+22.27
Δ = 41°-23'-26"
D = 9°-30'
R = 603.80'
L = 435.69'
T = 228.10'



BRIDGE LAYOUT



PROFILE

All piles are 10 BP 42 Steel Piles.

GENERAL NOTES

- Symbol denotes drill hole. See Sheet No. 9 of 13 for test boring data.

For Bench Marks, see Sheet No. 40
Span lengths are based on ℄ Brg. West Abut to ℄ Pier No. 1 to ℄ Pier No. 2 to ℄ Brg. - East Abutment along Bridge Reference Line.

PROPOSED STRUCTURE

Type: Ballasted Deck Steel thru Girder Superstructure
Span 1 is simple Girder. Spans 2 & 3 are Continuous Girders. Substructure is reinforced concrete.
Spans: 46'-1⅜", 142'-7", & 140'-11" (See General Notes)
Live Load: Cooper E-72 with Diesel Impact
Skew: Varies, see plan.
Design Specifications: Current A.R.E.A.

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CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN

BRIDGE No. HAM-71-0207
UNDER PENN. R.R.

H&E BRIDGE No. 13

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	C.T.M.		M.H.B.	JHD 5/22/65	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

418
492

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUCT-URE	WEST ABUT-MENT	EAST ABUT-MENT	PIER 1	PIER 2	GENERAL
E-2	Lump	Sum	Cofferdams, Cribs & Sheeting						Lump
E-2	902	Cu. Yds.	Unclassified Excavation		24	700	18	160	
S-1	287	Cu. Yds.	Class C Concrete, Piers above Footings				160.4	126.6	
S-1	205	Cu. Yds.	Class E Concrete, Abutments above Footings		106.0	99.0			
S-1	363	Cu. Yds.	Class E Concrete, Footings		103.6	98.7	74.7	86.0	
S-3	220	Sq. Yds.	Type A Waterproofing		112	108			
S-3	41	Lin. Ft.	Waterproofing, Premolded Sealing Strip		20	21			
S-4	61681	Lbs.	Reinforcing Steel		25323	22,174	6321	7863	
S-107	158,000	Lbs.	Structural Steel - Wrought Iron (Deck)	158,000					
S-107	995,000	Lbs.	Structural Steel	995,000					
S-8	1,153,000	Lbs.	Field Painting of Structural Steel	1,153,000					
S-14	13	Lin. Ft.	Railing, Type C (Aluminum Rail, Supports, Concrete Parapet & End Posts)		4	9			
S-16	Lump	Sum	First Test Pile						Lump
S-18	8239	Lin. Ft.	Steel Piles, 10BP42		1994	1,789	1,864	2592	
S-29	124	Cu. Yds.	Porous Backfill		65	59			
S-29	209	Lin. Ft.	6" Standard Pipe Downspout, Wrought Iron, or Hot-dipped Galvanized Steel, Including Specials		51		82	76	
S-29	24	Lin. Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe (Sec. M6.4(h-c) (Including Specials)		12	12			
S-29	86	Lin. Ft.	8" Bituminous Coated Helical Perforated Corrugated Metal Pipe (Sec. M6.4(h-c) (Including Specials & Sand)		44	42			
S-29	9	Lin. Ft.	12" Reinforced Concrete Sewer Pipe Sec. M-6.6(a) .		9				
S-29	677	Lin. Ft.	8" W. I. Half Round Deck Drain with Specials	677					
Special	36	Cu. Yds.	Asphalt Portland Cement Concrete	36					
Special	170	Lin. Ft.	Prebored Holes		170				

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

EXCAVATION OF UNSUITABLE MATERIAL: After the unsuitable materials have been removed to elevation 580.0, at the West Abutment as shown on the Site Plan, the Engineer shall make a careful inspection to ascertain that all unsuitable materials have been removed to a stable subsoil. If necessary, the excavation limits shall be extended to remove additional unstable materials and be replaced with materials meeting the requirements of Section E-1 of the Specifications.

Embankment to replace unsuitable material shall be compacted to a minimum of 8" above the bottom of footing elevations before proceeding with structure excavation, (Item E-2, unclassified excavation) at the West Abutment and Pier 1.

GENERAL NOTES

DESIGN SPECIFICATIONS: The design of this structure conforms to the requirements of the Specifications for Steel Railway Bridges of the American Railway Engineering Association, 1964 Edition, except that sections governed by a loaded length of live load of 60 feet or less shall be based on the unit stresses given in the 1961 Edition for ASTM A-7 steel.

Live Load - Cooper's E72.

Impact for diesels without hammer blow.

Concrete Class C - basic unit stress 1,333 psi
Concrete Class E - basic unit stress 1,133 psi
Structural Steel - ASTM A36 basic unit stress 20,000 psi except as noted above. (ASTM A7 or A373 steel not permitted except for piling.) Plates 3/4" to 1-1/2" in thickness that carry stresses shall be silicon killed fine grain practice.
Reinforcing Steel - ASTM A15, A16, A160. Deformed Intermediate or Hard Grade. Basic unit stress 20,000 psi.

CONSTRUCTION SPECIFICATIONS: State of Ohio, Department of Highways, Construction and Material Specifications, 1963, also Supplemental Specification No. S-107 revised February 16, 1965, Supplemental Specification No. S-307 revised 10-1-64 and Standard Drawing AR-1-57 revised 4-2-62, shall govern this project; except as otherwise noted on the plans.

WELDING to be in accordance with American Welding Society Specifications for Welded Highway and Railway Bridges D2.0-63. All welds to be continuous unless otherwise shown. All welders to be qualified in accordance with P. R. R. regulations or other regulations meeting with the approval of the Engineer.

All welds connecting flange plate to web plate must be made by automatic submerged arc welding.

All grinding shall be done in the direction of applied stresses. Transverse tack welds will not be permitted on the tension flange plates.

50% of web flange weld to be subjected to magnetic particle inspection.

Mill scale to be ground off flange plates at web to flange weld.

PILES shall be driven to firm contact with rock. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity, according to the formula in Sec. S-18.05, is not less than 45 tons per pile using a 15,000 ft. lb. hammer.

The design of abutments and piers is based on 35 tons per pile.

TIES, RAILS, FASTENINGS and other railroad equipment will be furnished and installed by the Railroad Company.

DOWNSPOUTS shall be 6" standard wrought iron pipe or hot-dipped galvanized steel pipe. Joints shall be made by welding or by the use of a clamp type coupling with a ring gasket. All welding shall be done before galvanizing. Straps or clamps for attaching downspouts shall be wrought iron or hot-dipped galvanized steel. On bolts, galvanizing as called for in Sec. M-10.30 will be considered sufficient.

EXCAVATION: For the purpose of driving battered piles at the East Abutment (shown hatched on Sheet No. 417) shall be included with "Unclassified Excavation" for payment.

DECK WATERTIGHTNESS: The deck shall be watertight.

TYPE A WATERPROOFING shall be applied to the back of the abutments from top of footings to top of backwall and to finished ground line.

ADDITIONAL NOTES: For additional notes see Notes 2, 6 & 8 General Notes, Typical Drawing No. 443.

ITEM SPECIAL - ASPHALT PORTLAND CEMENT CONCRETE

Use:
This concrete is to be used as a protection course over membrane waterproofing and as a protection course over metal decks of railroad bridges.

Materials:
1. Emulsified Asphalt shall be in accordance with Federal Specifications SS-A-674b.
2. Fine aggregate shall be as specified for concrete.
3. Coarse aggregate shall be as specified for concrete with the following gradation:

Sieve Size (Inches)	Percent Passing by Weight
3/4"	100
1/2"	90 - 100
3/8"	40 - 70
No. 4	0 - 15

Mix:
The asphalt concrete shall be proportioned by volume, 1 part portland cement, 2 parts fine aggregate, 3 parts coarse aggregate, 1-1/2 parts emulsified asphalt Type SS-1 and minimum amount of water required to make a workable mix. The dry materials shall first be thoroughly mixed then the water added to produce a uniform mixture after which the emulsified asphalt is added and mixing continued until of uniform color.

Application:
Work shall be done only when the temperature will be above 40°F. for a period of at least 24 hours after starting application.

Surface to be covered shall be thoroughly cleaned and given a uniform primer or bond coating of Emulsified Asphalt Type RS-1, using not less than 1 gallon per 80 sq. ft.

The asphalt concrete shall then be screeded over the primed area to the thickness indicated on the drawings. After the asphalt concrete has set sufficiently to allow a man to walk upon it without indentation but prior to final set, it shall be given a uniform coating of emulsified asphalt type RS-2 applied at the rate of one gallon per 50 sq. ft. This final coating shall be covered with clean sand.

METHOD OF MEASUREMENT:

The yardage to be paid for shall be the number of cubic yards as determined by calculations from plan dimension, in place, completed and accepted.

BASIS OF PAYMENT:

The yardage measured as provided above shall be paid for at the contract unit price per cubic yard bid for "Item Special Asphalt Portland Cement Concrete" which price and payment shall constitute full compensation for furnishing, placing, finishing and curing, and all labor, equipment, tools and incidentals necessary to complete the item.

PREBORED HOLES: *Where directed by the Engineer, piles of West Abutment as indicated on the footing plan Sheet No. 419 adjacent to the existing 8' Brick Sewer, shall be started in 12" minimum diameter prebored holes to a minimum depth of 1'-0" below the bottom of sewer. Payment shall include the preboring of the hole and also filling of the hole with materials conforming to Item M-2.1, in the contract unit price per linear foot bid for "Item Special."*
The Contractor shall verify the line and grade of the existing 8' Brick Sewer before starting any prebored holes.

HARRELL & HAMILTON
CONSULTING ENGINEERS
CINCINNATI, OHIO

ESTIMATED QUANTITIES AND GENERAL NOTES

BRIDGE NO. HAM.-71-0207

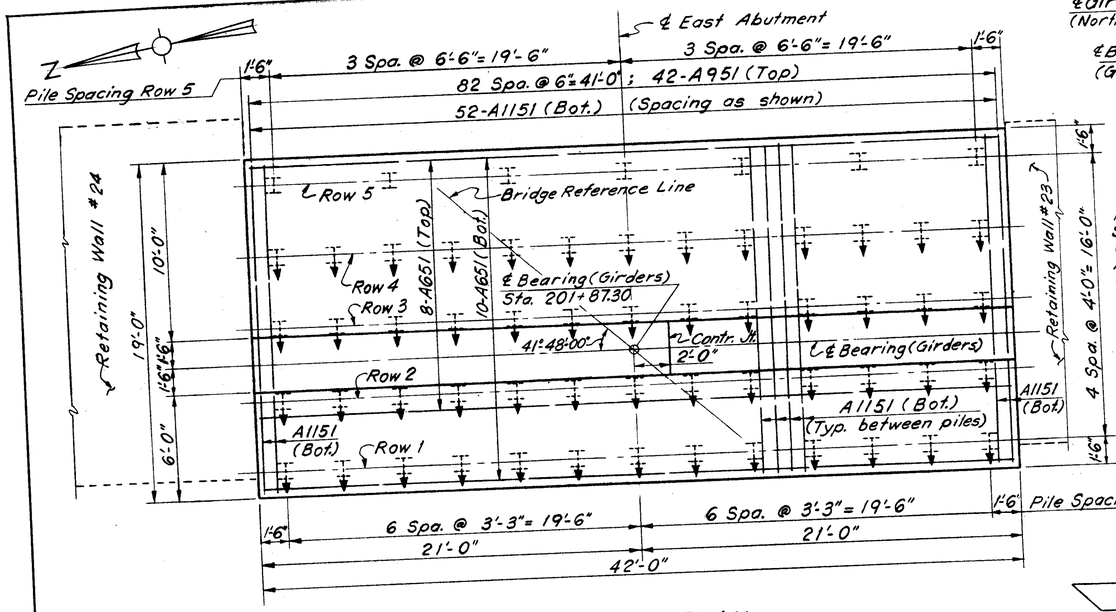
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	BJM		ME	JHO 5/22/65	

HAMILTON COUNTY
HAM-71-(1.56)(2.51)
FED. RD. DIV. 2 | STATE OHIO | PROJECT | FISCAL YEAR
419
492
FOOTING PLAN
Note:
Care shall be taken in driving piles in the vicinity of the existing brick sewer to avoid any damage to it.
These four piles to be located in prebored holes.
West Abutment Structure No. HAM-71-0203
DETAIL B
DETAIL C
(North & South Girders)
DETAIL A
GUTTER DETAIL
STEM PLAN
SECTION B-B
SECTION D-D
SECTION C-C
CONTRACTION JOINT DETAIL
RUSTICATION GROOVE DETAIL
VIEW F-F
FRONT ELEVATION
Note:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
SECTION A-A
Notes:
For Notes see Sheet: 420
MICROFILMED
FEB 20 1985
HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO
WEST ABUTMENT
BRIDGE NO. HAM-71-0207
DESIGNED TFL | DRAWN TFL | TRACED | CHECKED D.W. 12-18-64 | REVIEWED DATE JHO 5/22/65 | REVISED

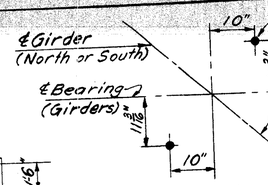
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

420
492

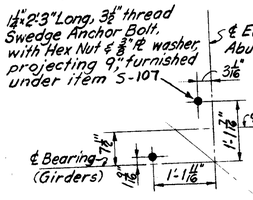
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



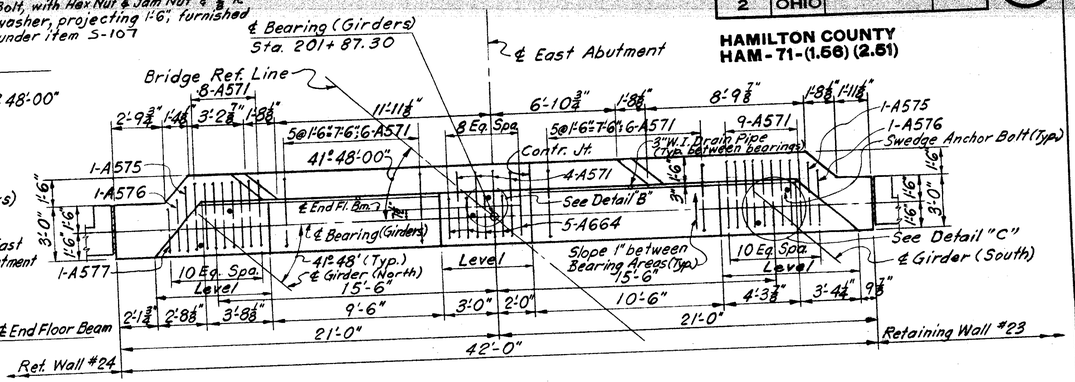
FOOTING PLAN



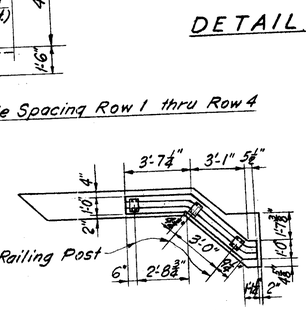
DETAIL C
(North & South Girders)



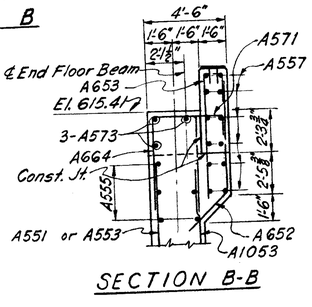
DETAIL B



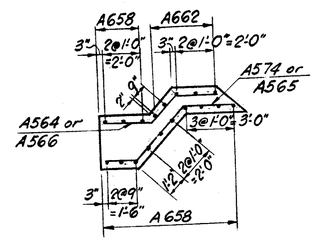
STEM PLAN



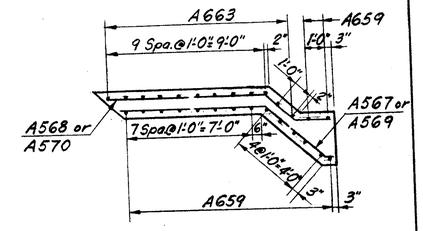
VIEW G-G



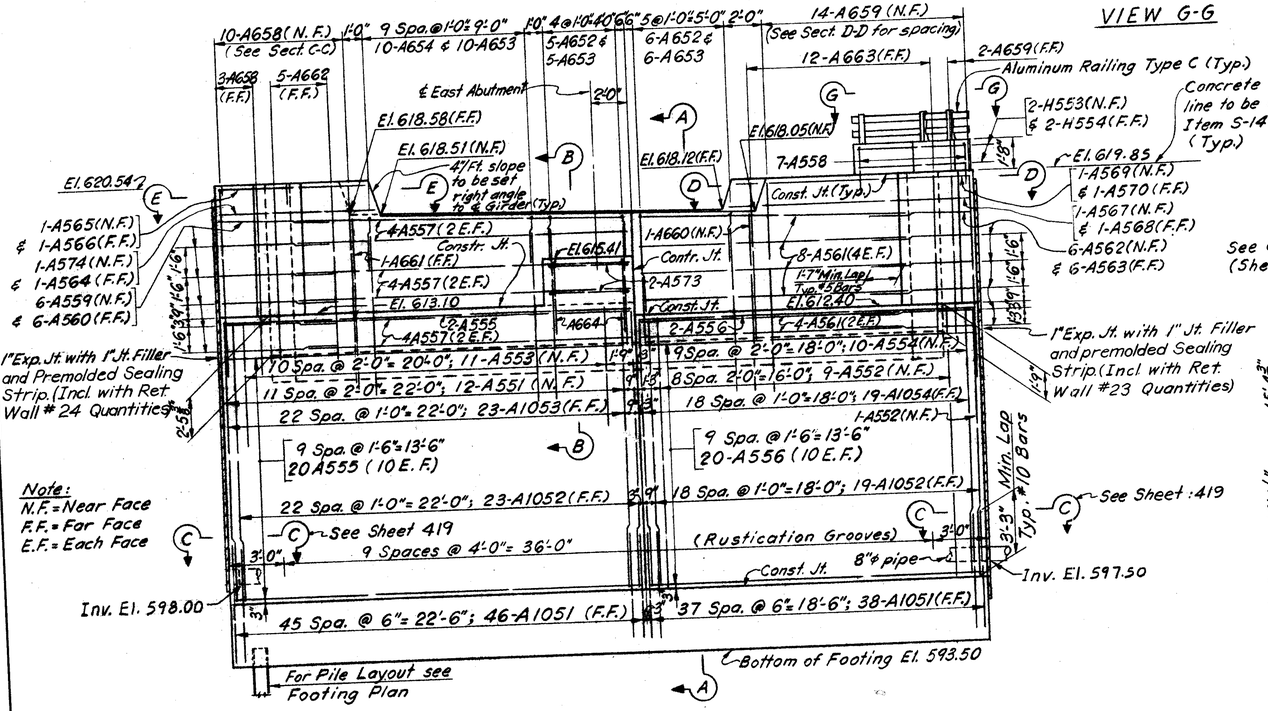
SECTION B-B



SECTION E-E

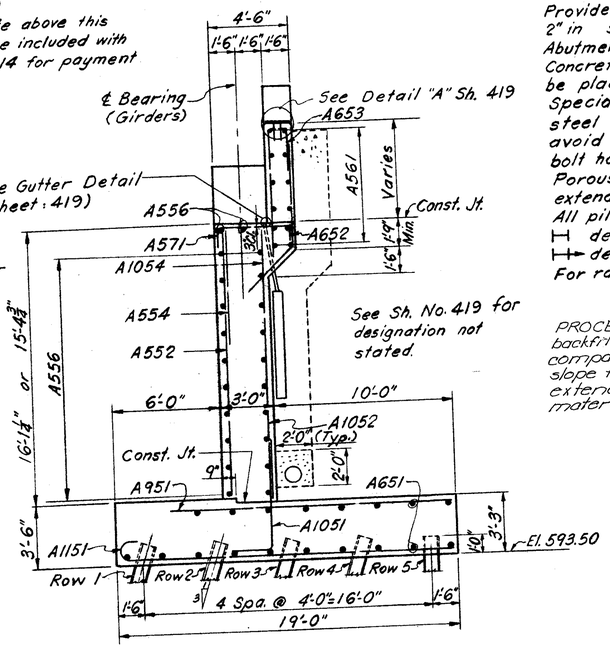


SECTION D-D



Note:
N.F. = Near Face
F.F. = For Face
E.F. = Each Face

FRONT ELEVATION



SECTION A-A

Notes:
Provide 3" clearance to reinforcing steel in footing and 2" in stem (Min).
Abutment concrete shall be Class "E".
Concrete above bridge seat construction joint shall not be placed until Superstructure Steel is in place.
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of swedge anchor bolt holes.
Porous Backfill 2 ft. thick, full length of abutment shall extend up to the bottom of ballast.
All piles shall be 10 BP42 Steel H piles.
⊢ denotes vertical piles
⊢ denotes batter piles (4:12 except as noted).
For railing details not shown, see Standard Drawing No. AR-1-57.

PROCEDURE: Before the backwall is constructed the backfill behind the West Abutment shall be placed and compacted up to the level of the existing ground (with a 1:1 slope from the bridge seat to the existing ground) and extending to the limits for excavation of unsuitable material.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

EAST ABUTMENT

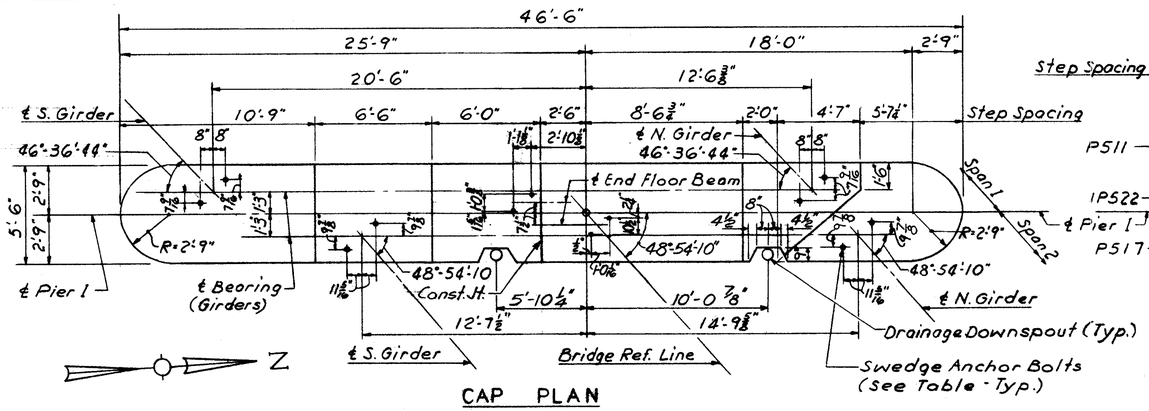
BRIDGE NO. HAM-71-0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISE
TFL	TFL		D.W. 1-5-65	JHO 5/22/65	

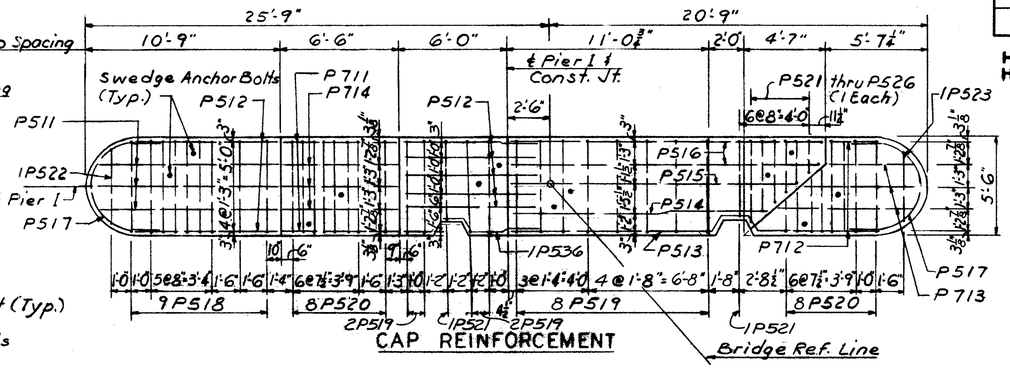
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

421
432

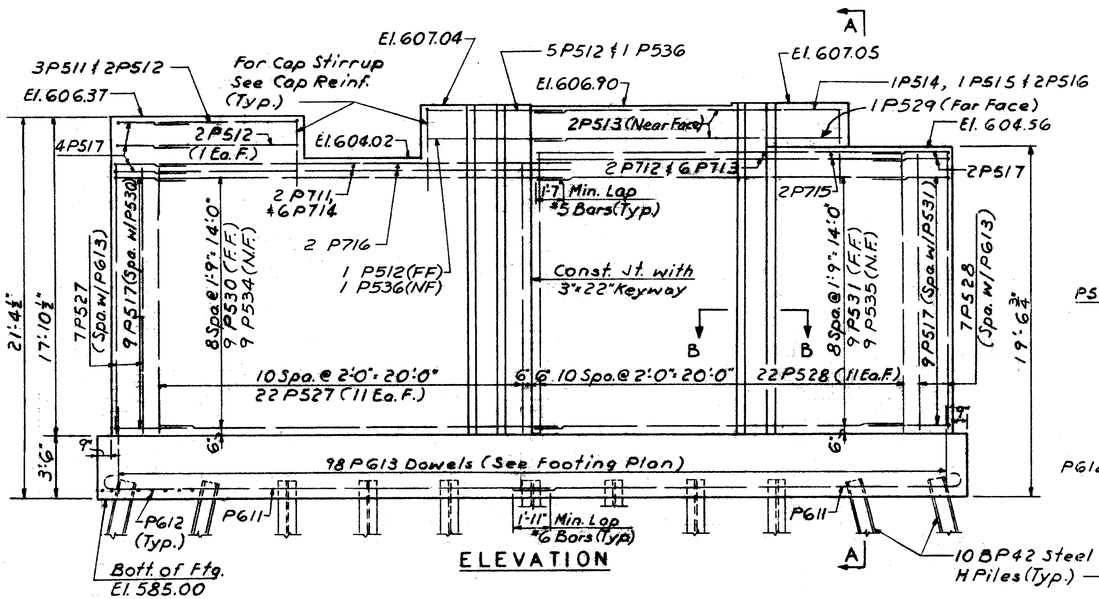
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



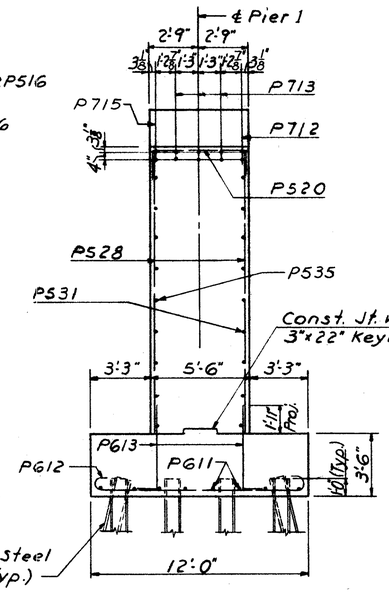
CAP PLAN



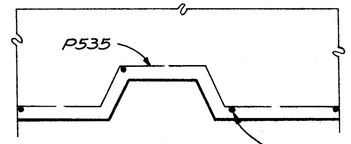
CAP REINFORCEMENT



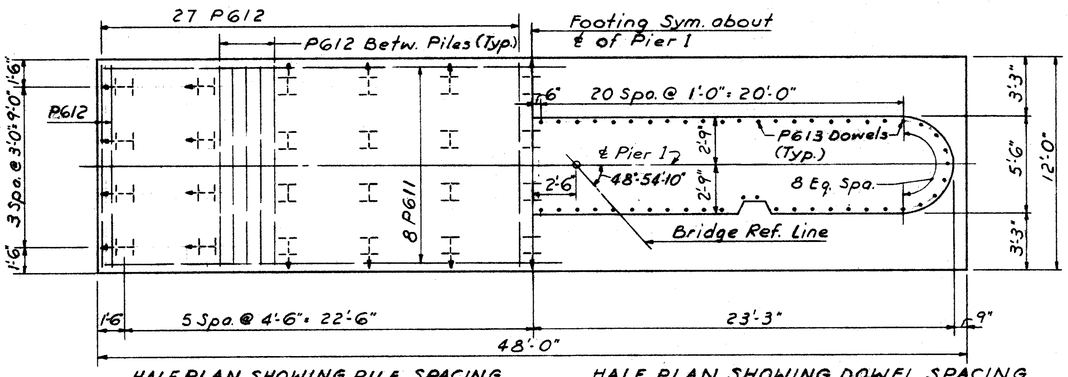
ELEVATION



SECTION A-A



SECTION B-B

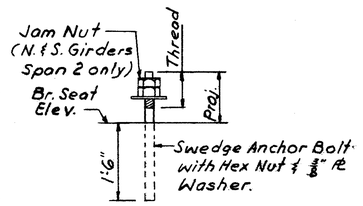


HALF PLAN SHOWING PILE SPACING AND FOOTING BOTTOM BARS

HALF PLAN SHOWING DOWEL SPACING

FOOTING PLAN

SWEDGE ANCHOR BOLT TABLE				
Location		Size ℄ Length	Thread	Proj.
Span 1	N ℄ S Girder	1 1/4" ø x 2'-0"	3 5/8"	6"
	End Floor Bm.	1 1/4" ø x 2'-0"	3 1/2"	6"
Span 2	N ℄ S Girder	2" ø x 3'-0"	6"	1'-6"
	End Floor Bm.	1 1/4" ø x 2'-3"	3 5/8"	9"



SWEDGE ANCHOR BOLT DETAIL
(See Table)
(Furnished under Item S-107)

Notes:
Provide 3" clearance to reinforcing steel in footing and 2" in wall (Min.)
Concrete in footing shall be class "E" and concrete in wall shall be class "C".
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of swedge anchor bolt holes.
Ea. F. denotes each face.
All Piles shall be 10 BP42 Steel H Piles.
⊢ denotes Vertical Piles.
⊢→ denotes Batter (4:12) Piles.
For Vertical Construction Joint Details see Sheet: 422

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CONSULTING ENGINEERS
CINCINNATI, OHIO

PIER 1

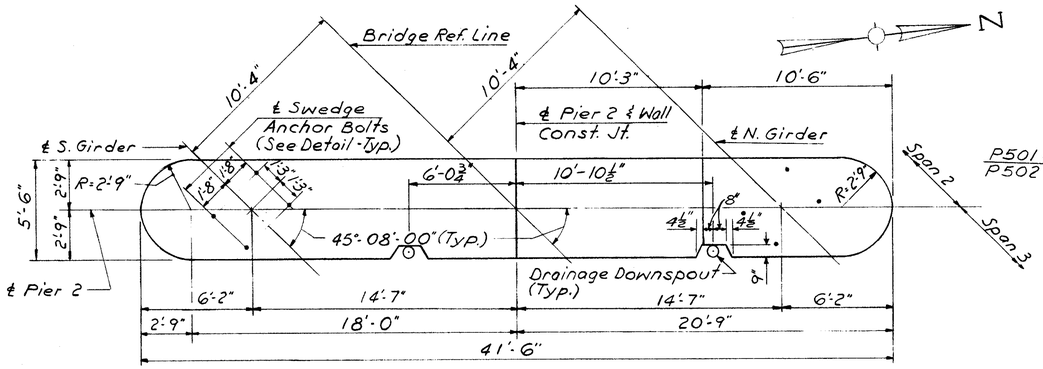
BRIDGE NO. HAM-71-0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.U.	S.U.		D.W. 1-5-65	JHO 5/22/65	

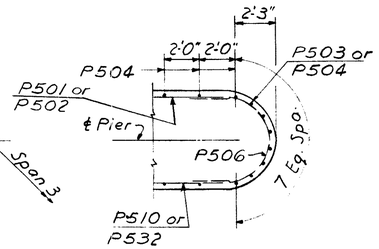
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

422
492

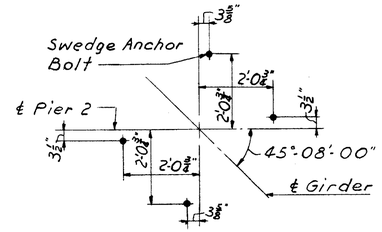
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



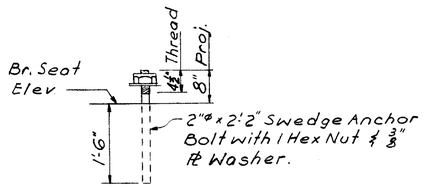
CAP PLAN



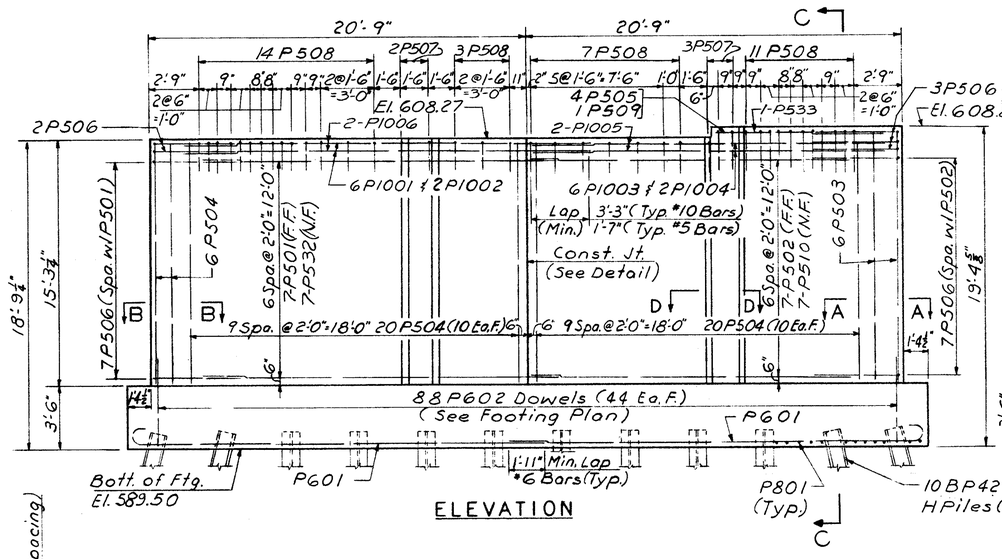
• SECTION A-A
(Sect. B-B Opposite Hand)



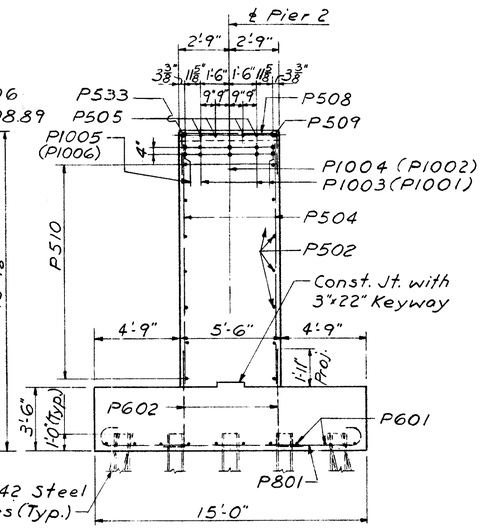
SWEDGE ANCHOR BOLT SPACING



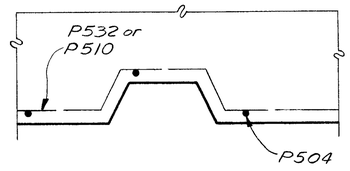
SWEDGE ANCHOR BOLT DETAIL
(Furnished under Item S-107)



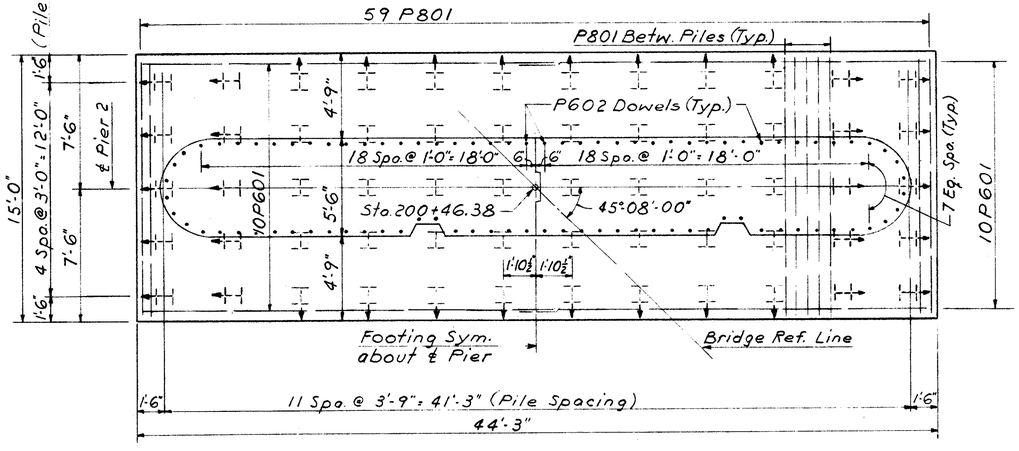
ELEVATION



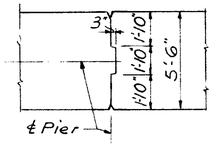
SECTION C-C



SECTION D-D



FOOTING PLAN



VERT. CONST. JOINT DETAIL

Notes:
Provide 3" clearance to reinforcing steel in footing and 2" in wall (Min.).
Concrete in footing shall be class "E" & Concrete in wall shall be class "C".
Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of swedge anchor bolt holes.
All Piles shall be 10 BP 42 Steel H Piles.
H denotes Vertical Piles
H→ denotes Batter (4:12) Piles
Ea. F. denotes Each Face.

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PIER 2

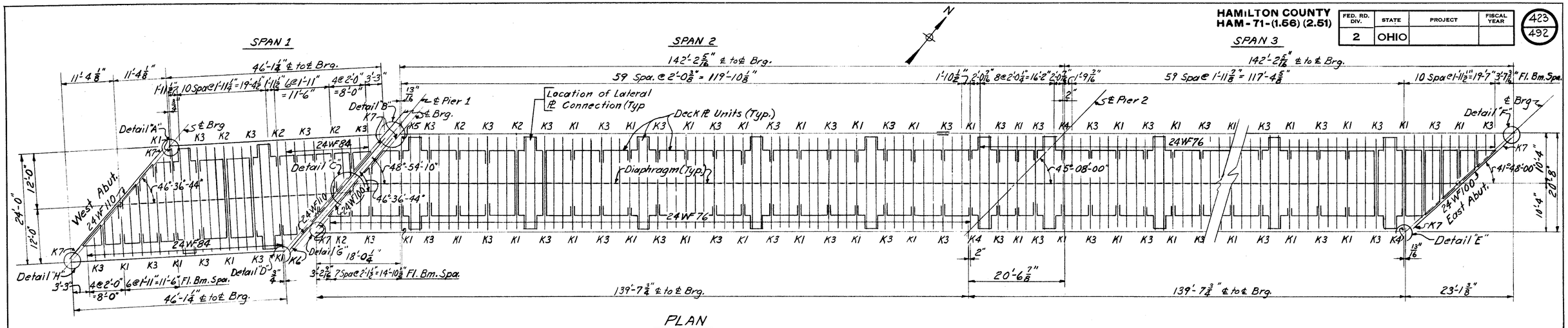
BRIDGE NO. HAM-71-0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.V.	S.V.		D.W. 1-5-65	JHD 5/12/65	

HAMILTON COUNTY
HAM-71-(1.66) (2.51)

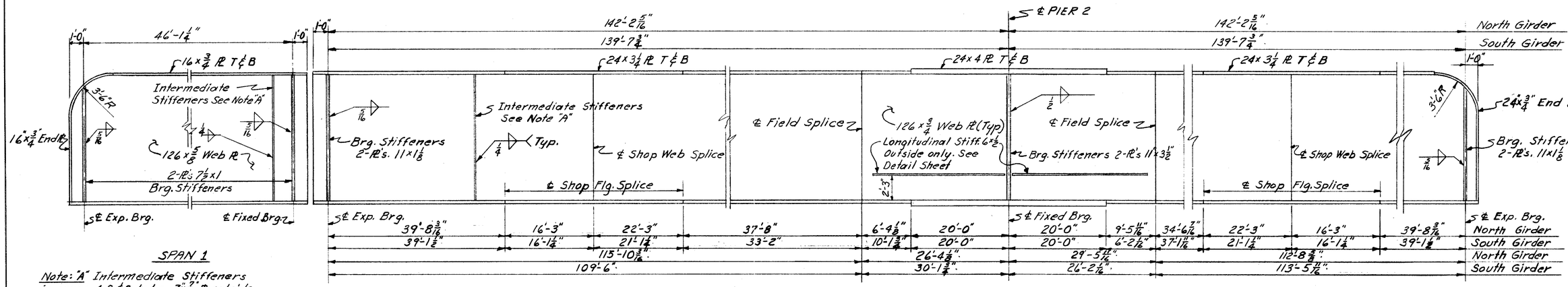
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

423
492



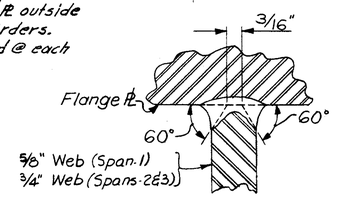
PLAN

Note: For Details of Deck Plates including lateral ℄ connections. See Deck Details.



SPAN 1

Note: "A" Intermediate Stiffeners in spans 1, 2 & 3 to be 7"x 7/16" ℝ outside ℄ 7 1/2" x 1/2" ℝ on inside of girders. Stiffeners shall be spaced @ each Bracket K1, K2, K3 & K4



DETAIL of GIRDER FLANGE WELDING
Full Size

LOADING DATA

DEAD LOAD (#/Lin. Ft Track)	SPAN 1	SPANS 2 & 3
Track & Fastening	200	200
Ballast	2820	2300
Asph. P.C. Concrete Deck Protection	540	440
Steel Weight	2990	3310
Total Dead Load	6550	6250

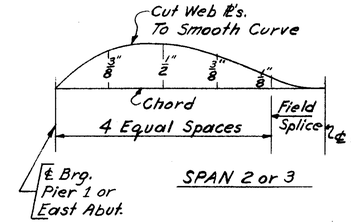
LIVE LOAD

Coopers E72 & Diesel Impact (Without Hammer Blow)

DESIGN DATA

ITEM	UNIT	GIRDERS SPAN 1	GIRDERS SPANS 2 & 3 POSITIVE	GIRDERS SPANS 2 & 3 NEGATIVE	INTERIOR FLOOR BEAMS SPAN 1	INTERIOR FLOOR BEAMS SPANS 2 & 3
Dead Load Moment	(Ft.-Kip.)	787	4020	8360	38	28
Live Load Moment	(Ft.-Kip.)	1550	8750	10800	157	127
Impact Moment	(Ft.-Kip.)	619	2290	2820	67	56
Misc. (Eccen. & Centrif. Force) Mom.	(Ft.-Kip.)	42	–	–	2	8
Total		2998	15,060	21,980	264	219
Dead Load Shear	(Kip)	72		250	5.6	4.5
Live Load Shear	(Kip)	165		400	17.5	16.2
Impact Shear	(Kip)	67		105	7.5	7.2
Misc. Shear	(Kip)	4		–	0.5	1.0
Total Shear	(Kip)	308		755	31.1	28.9
Net I of Section	(in⁴)	200,200	775,000	935,000	2111	1870
Flange Stress	(Ksi)	11.5	15.4*	18.9	18.1	16.9
Max Shear Stress	(Ksi)	3.9	–	8.0	2.8	2.8

*Section Governed by A.R.E.A. Allow. Live Load Deflection



SPAN 2 or 3

CAMBER FOR GIRDERS

No Camber for Span 1 Girders

Notes:
For Joint Preparation for Submerged Arc Weldments see "Typical Structural Steel Details" Sheet No. 444
Intermediate and bearing stiffeners, floorbeam connection plates, girder end plates and all field attached sections shall be set at right angles to the girder flanges.
The shop welded web and flange splices may be moved a maximum of 3'-0" to suit the material to be used by the fabricator.

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STRUCTURAL STEEL DETAILS

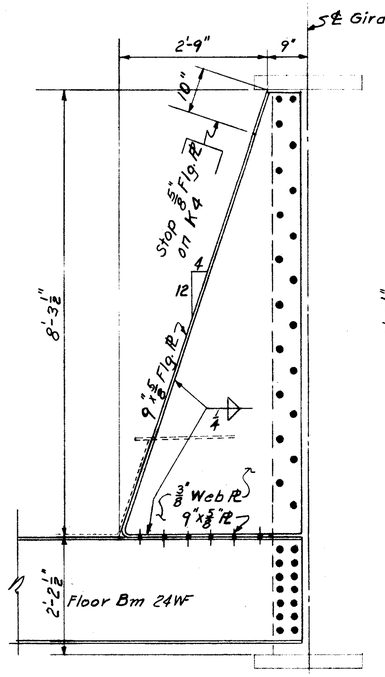
BRIDGE NO. HAM - 71 - 0207

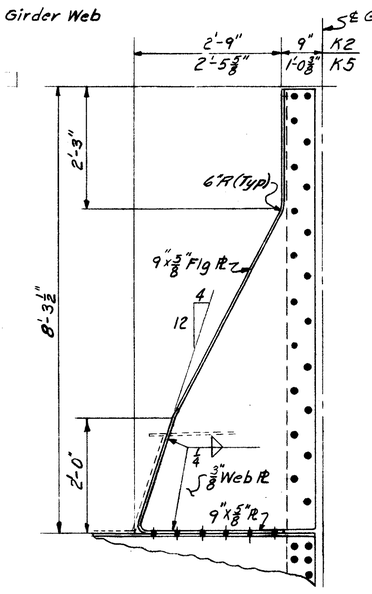
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WFB	H.W.T.		R.L.K. 1-7-65	JHO 5/22/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

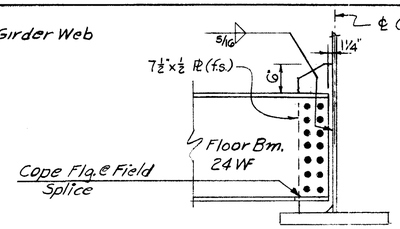
424
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

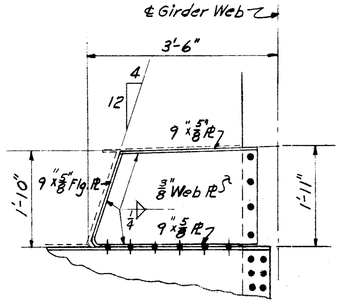




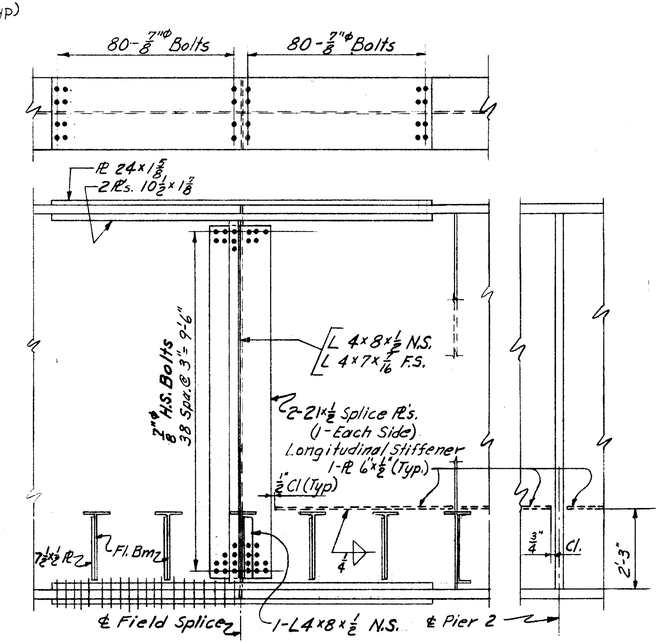
KNEE BRACKET - K2
do do - K5



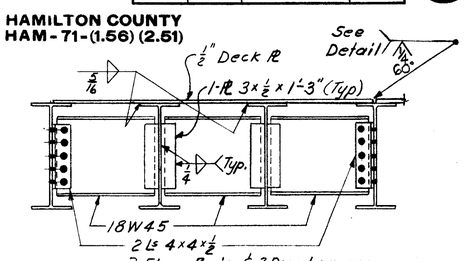
TYPICAL FLOOR BEAM CONNECTION BETWEEN STIFFENERS



BRACKET - K3

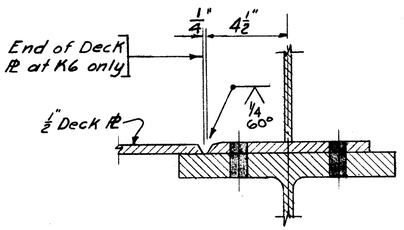


FIELD SPLICE (Span 2 ℄ 3)



DIAPHRAGMS ℄ FLOOR BEAM DETAILS

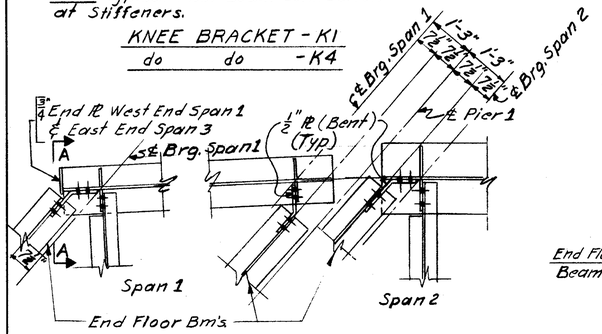
Normal unit shown. Special units can have different numbers of floor beams at option of fabricator.



DETAIL "J"

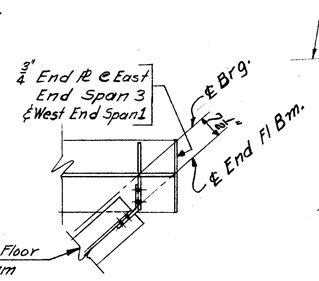
Note: Typical Floor Beam Connection at Stiffeners.

KNEE BRACKET - K1
do do - K4

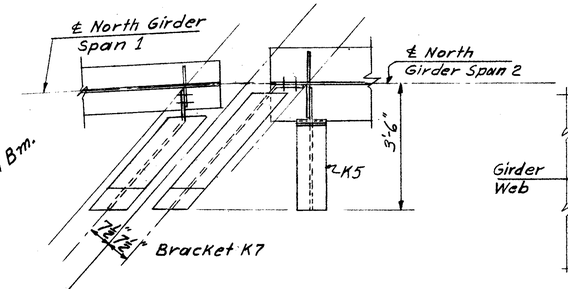


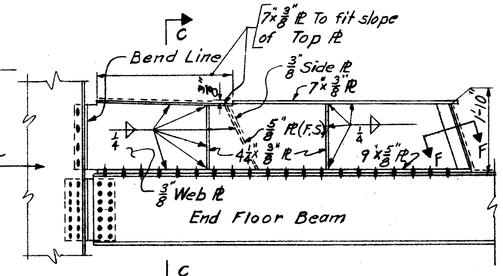
DETAIL "A"
DETAIL "D" Similar by Rotation
DETAIL "E"

DETAIL "B"

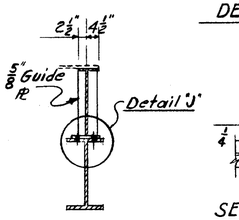


DETAIL "F"
DETAIL "G" ℄ "H"
(Similar by Rotation)



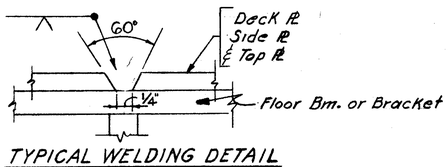


SECTION B-B
BRACKET K6

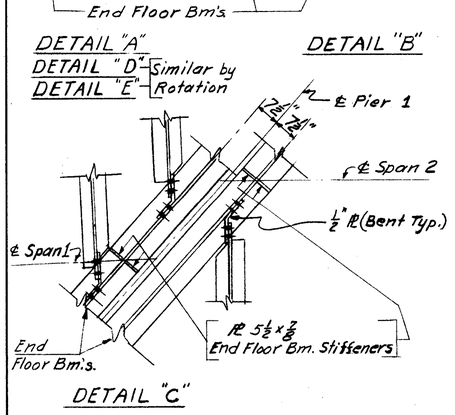


SECTION F-F

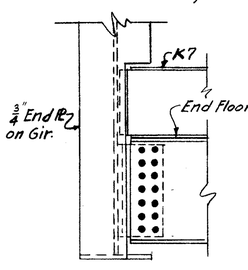
SECTION C-C



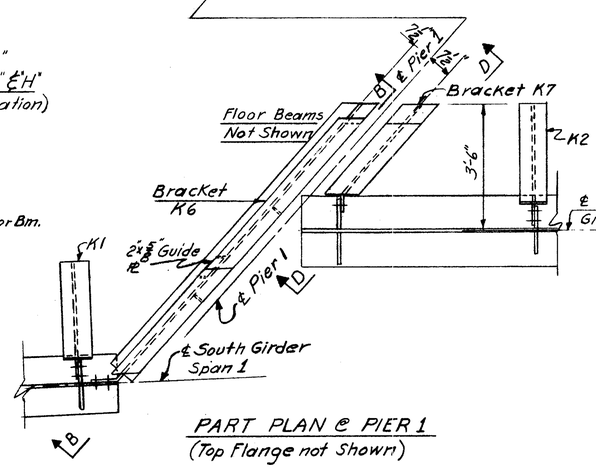
TYPICAL WELDING DETAIL
For Deck Pl's., Side Pl's. ℄ Top Pl's.



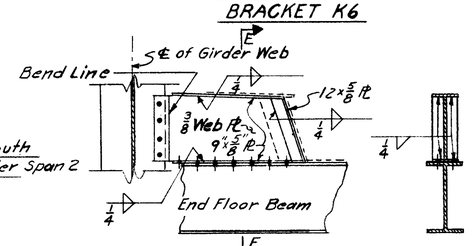
DETAIL "C"



SECTION A-A



PART PLAN @ PIER 1
(Top Flange not Shown)



SECTION D-D
BRACKET K7

SECTION E-E

Note:
Structural steel inaccesible for painting after erection shall be given final field coats prior to erection.

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STRUCTURAL STEEL DETAILS

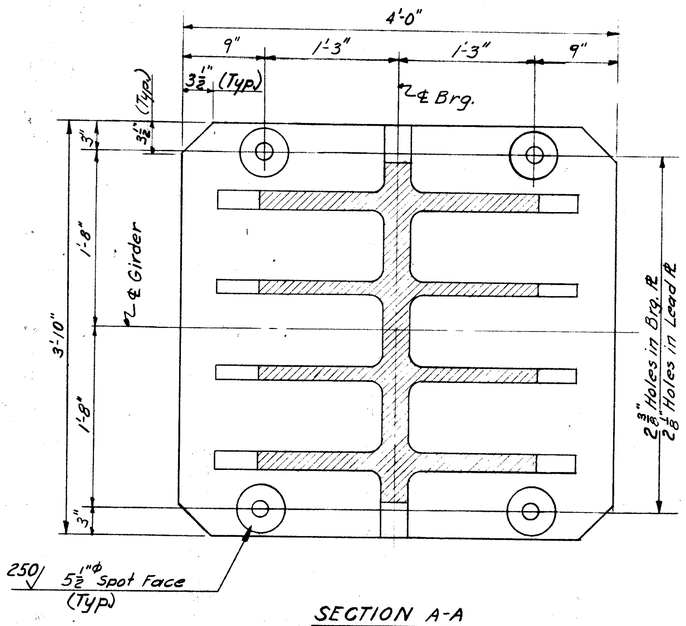
BRIDGE NO. HAM - 71- 0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WFB	H.W.T.		R.L.K. 1-11-65	JHO 5/22/65	

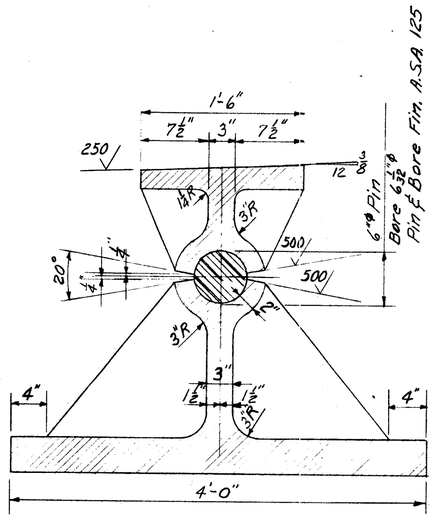
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

425
492

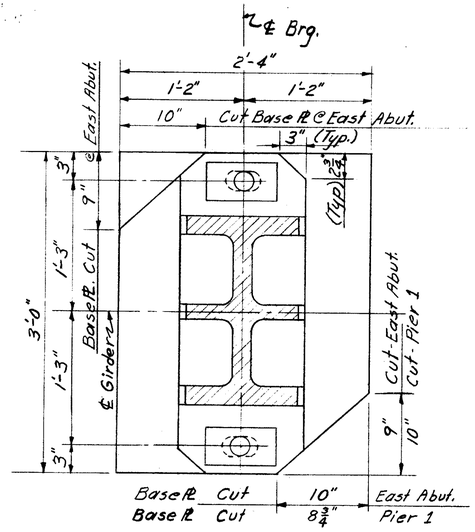
HAMILTON COUNTY
HAM-71-(1.56) (2.51)



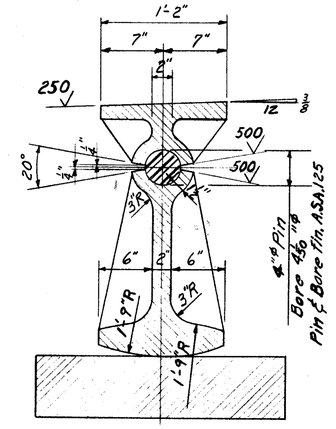
SECTION A-A



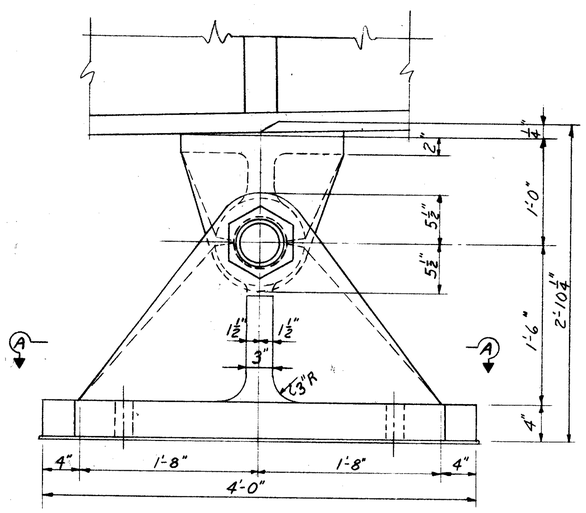
SECTION B-B

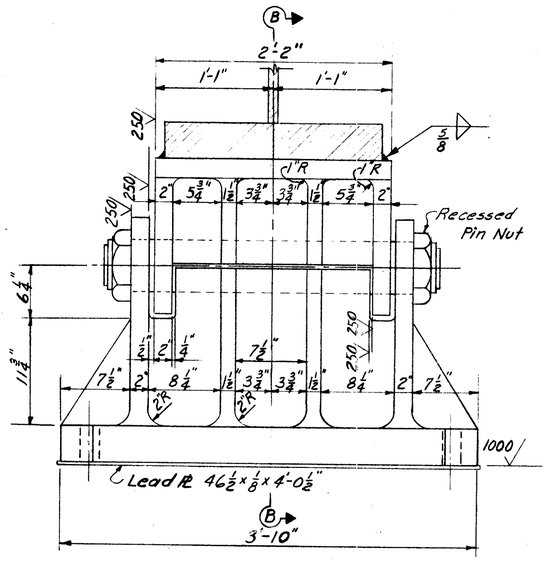


SECTION C-C

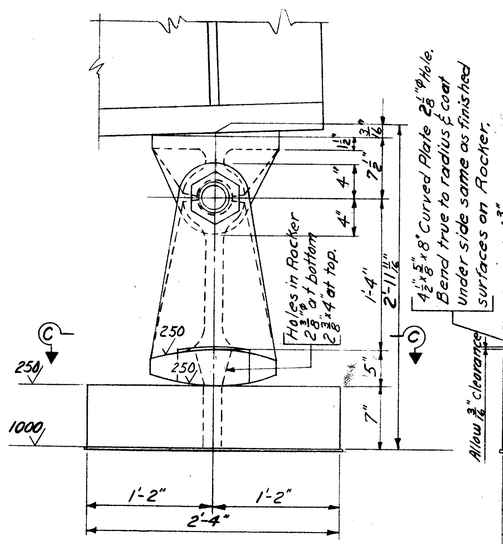


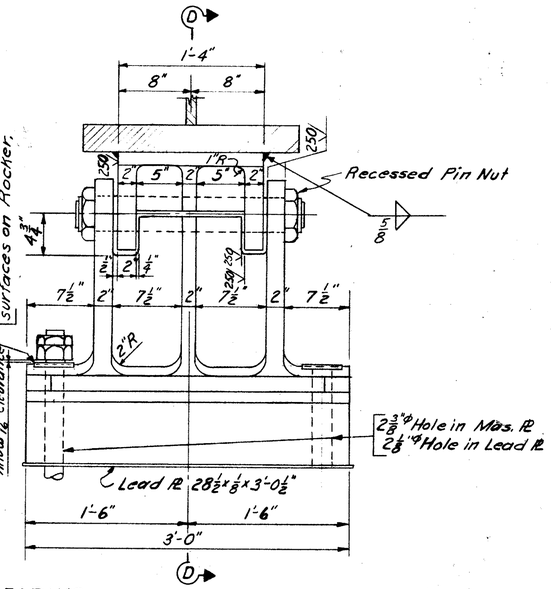
SECTION D-D





FIXED BEARING
(@ Pier 2)
(Cast Steel, 2 Req'd.)





EXPANSION BEARING
(@ Pier 1 & East Abut. Span 2 & 3)
(Cast Steel, 4 Req'd.)

Work Sheets: 425 & 426 Together

MICROFILMED
FEB 20 1985

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STRUCTURAL STEEL DETAILS

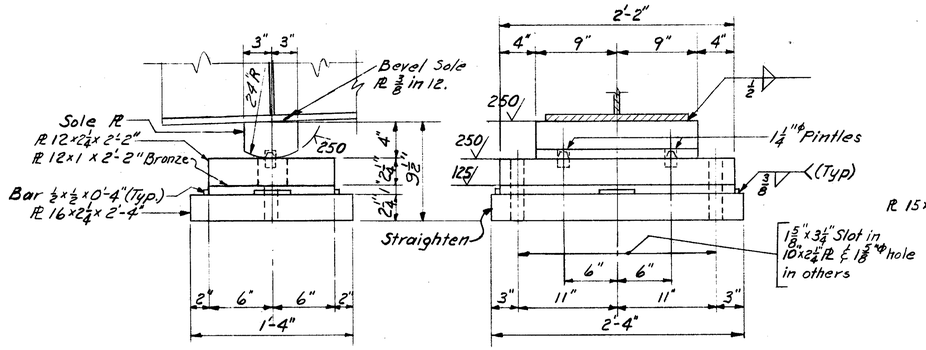
BRIDGE NO. HAM - 71 - 0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WFB			WFB 1-7-65	JHO 5/22/65	

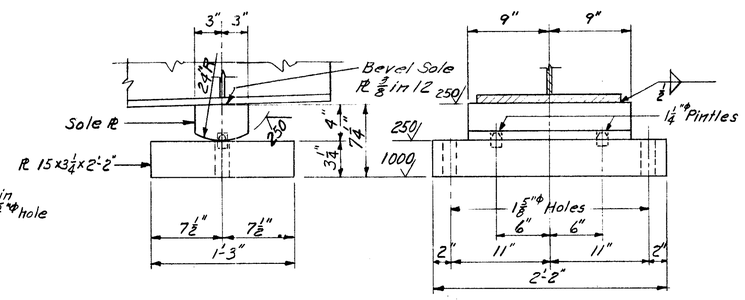
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

426
492

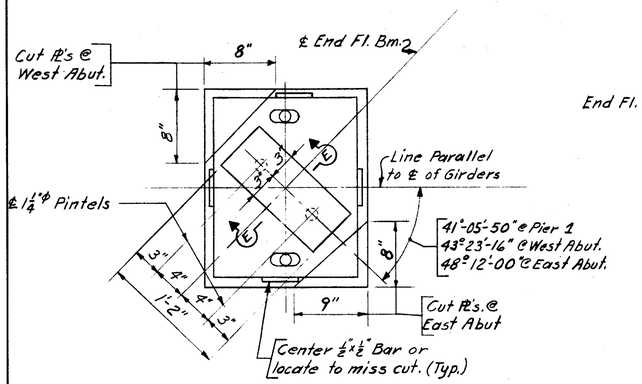
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

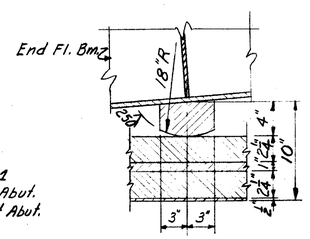


EXPANSION BEARING
(@ West Abut. Span 1)
(2- Req'd.)

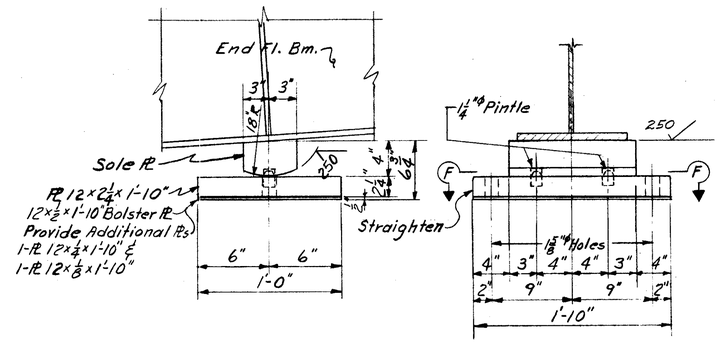


FIXED BEARING
(@ Pier 1 Span 1)
(2- Req'd)





SECTION E-E

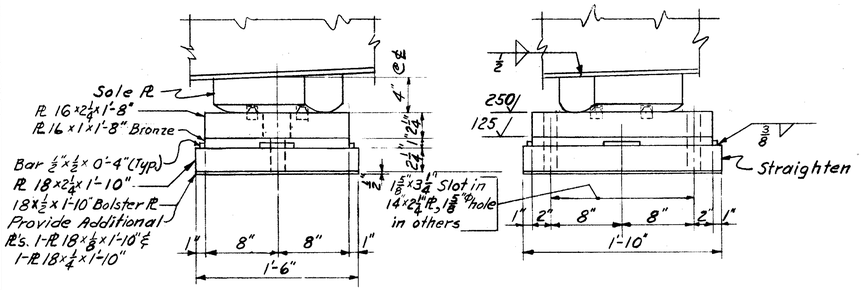


FIXED BEARING
(Under End Floor Bm. @ Pier 1 Span 1)
(1- Req'd.)

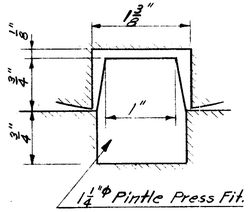
BEARING NOTES:

Material- Structural steel A36 or equal unless noted.
Steel castings A27 Grade 65-35, fully annealed
Bronze Plate as per A.S.T.M. Specifications B-22
Class-B with Trepanned Graphite Inserts.

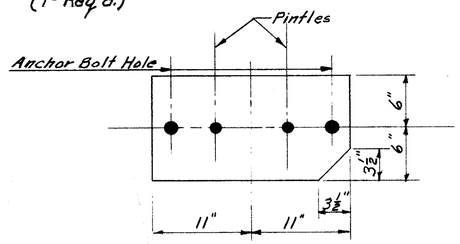
Pins may be either A235 Grade C1 annealed forgings or A108 Grade 1016 to 1030 cold finished shafting.
Recessed pin nuts may be either pressed or caststeel.
Sheet lead B29 common desilverized grade.
Finish designations indicated thus √ refer to A.S.A. standard B46.1-1955
See Abutment and Pier drawing for anchor bolt details.



EXPANSION BEARINGS
(Under End Floor Bm. @ Pier 1 Span 2, East Abut. Span 3 ℄ West Abut. Span 1)
(3- Req'd.)



PINTLE DETAIL



SECTION F-F

Work Sheets 425 & 426 together

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CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS

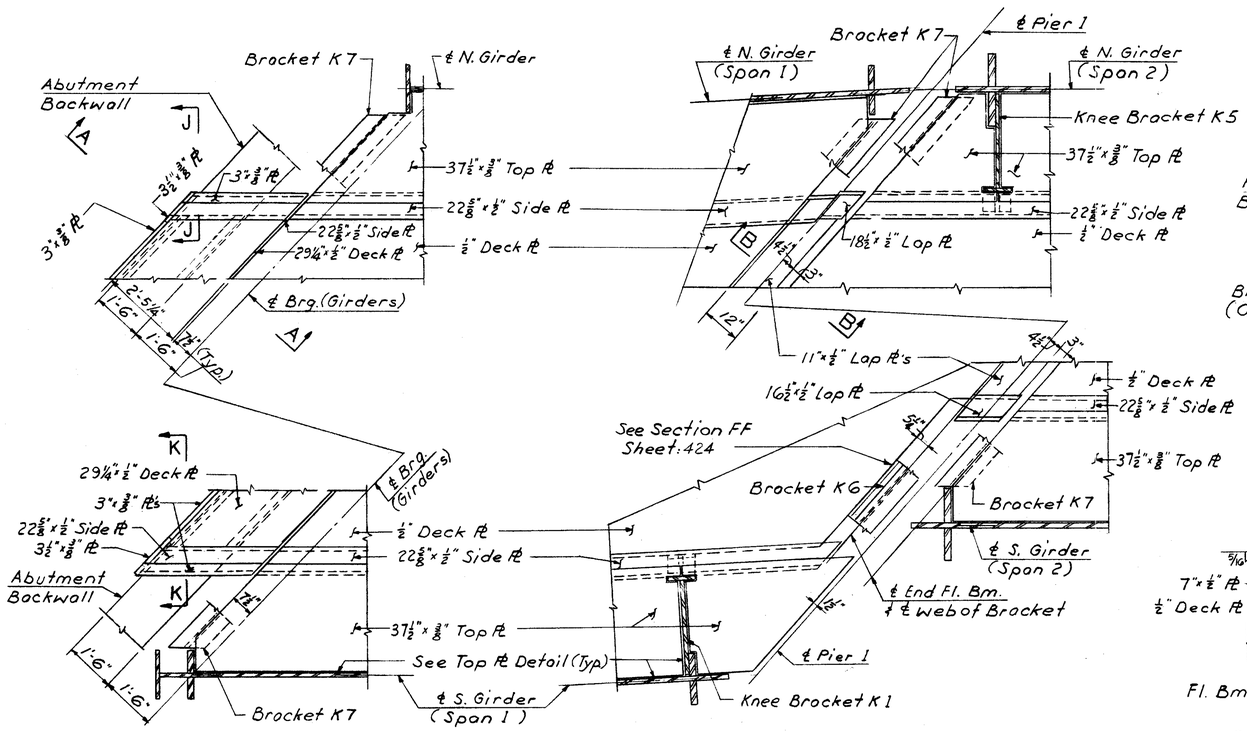
BRIDGE NO. HAM-71-0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
WFB	H.W.T.		WFB 1-7-65	JHD 5/22/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

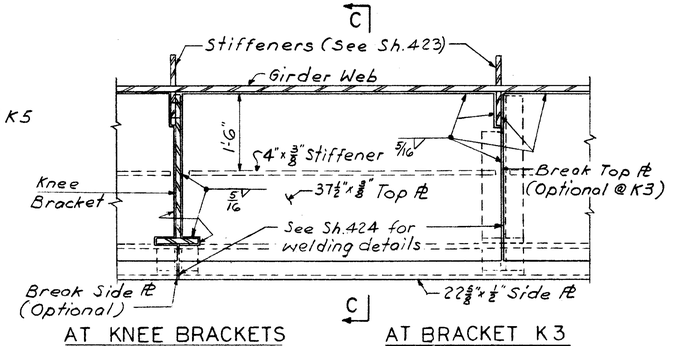
427
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)



PART DECK PLAN AT WEST ABUTMENT
(Deck Plan At East Abut. Similar By Rotation)

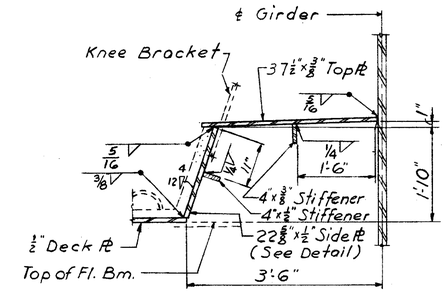
PART DECK PLAN AT PIER 1



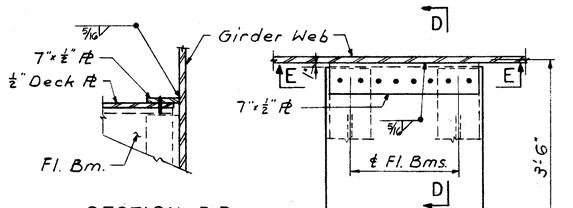
AT KNEE BRACKETS K1, K2, K4 OR K5

AT BRACKET K3

TOP PLATE DETAILS

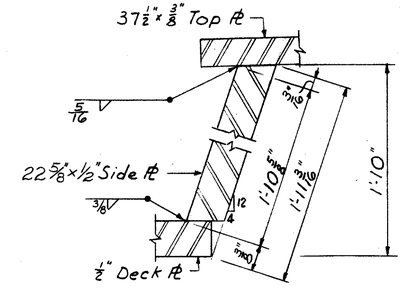


SECTION C-C

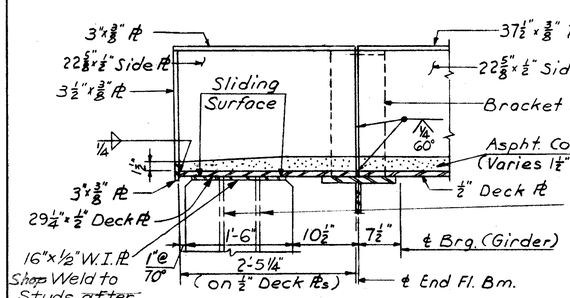


SECTION D-D

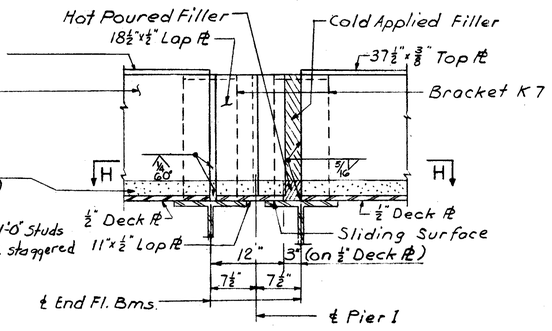
LATERAL PLATE CONN.
(For location See Sheet: 423)



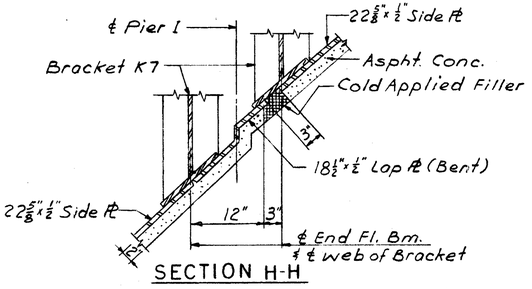
SIDE PLATE DETAIL



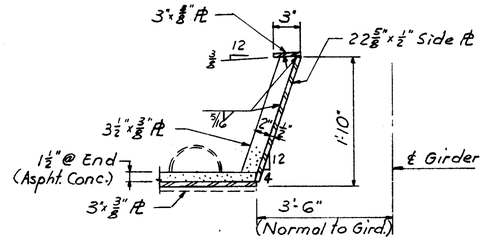
SECTION A-A



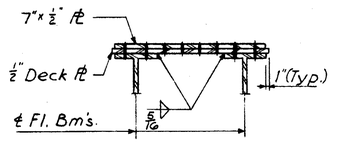
SECTION B-B



SECTION H-H



SECTION J-J
(SECTION K-K OPP. HAND)



SECTION E-E

Notes:
Deck plates, side plates and top plates shall be wrought iron.

Expansion Joint openings shown on details are for a normal temperature of 70° F.
Hot Poured Filler & Cold Applied Filler incidental to Asphalt Conc. Deck Protection.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DECK DETAILS

BRIDGE NO. HAM-71-0207

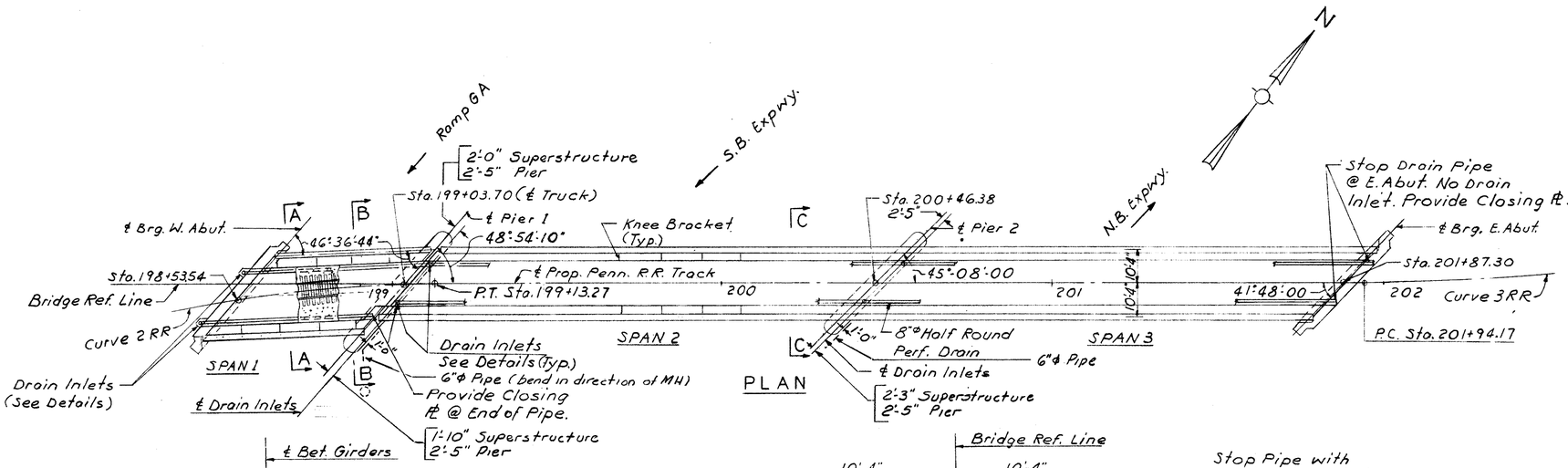
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.U.		R.L.K 1-11-65	JHO 5/12/65	11-23-65

MICROFILMED
FEB 20 1965

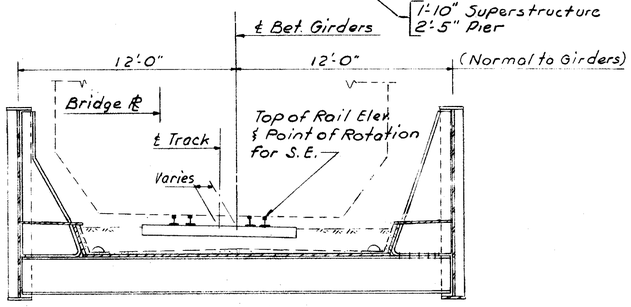
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

428
492

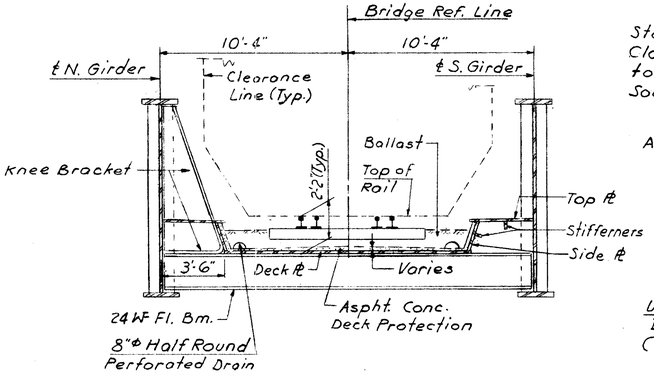
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



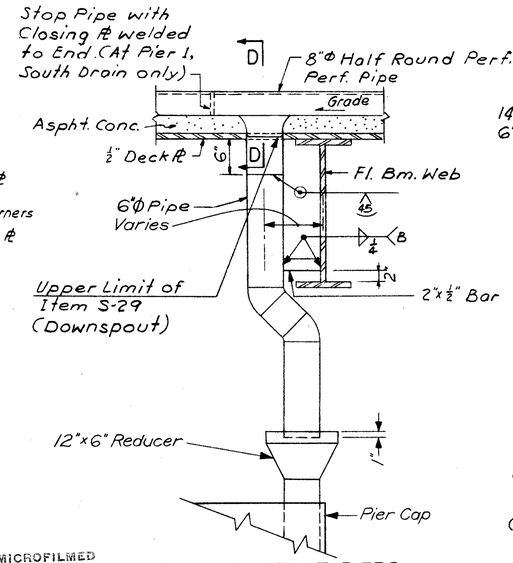
PLAN



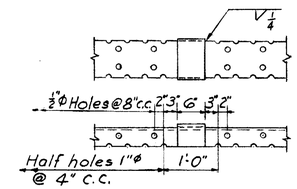
SECTION A-A
(For Details not shown see Sect. C-C)



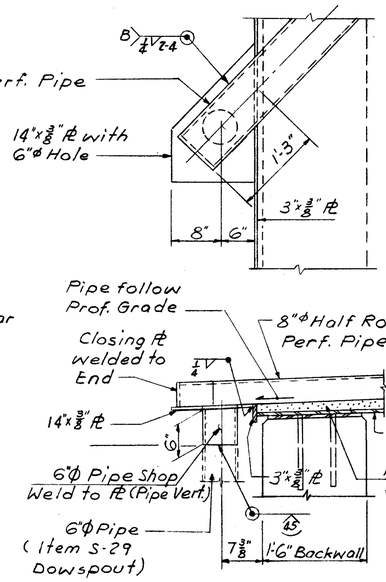
SECTION C-C



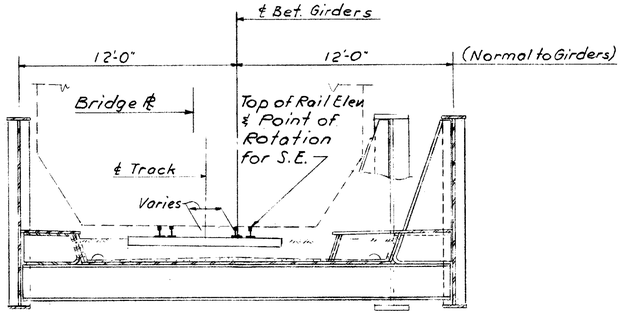
DRAIN INLET AT PIERS
(Downspout at Piers 1 & 2.)



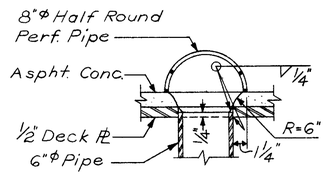
W.I. DRAINAGE PIPE DETAILS



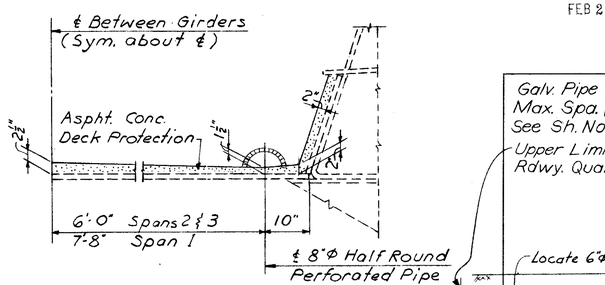
DRAIN INLET AT WEST ABUT.



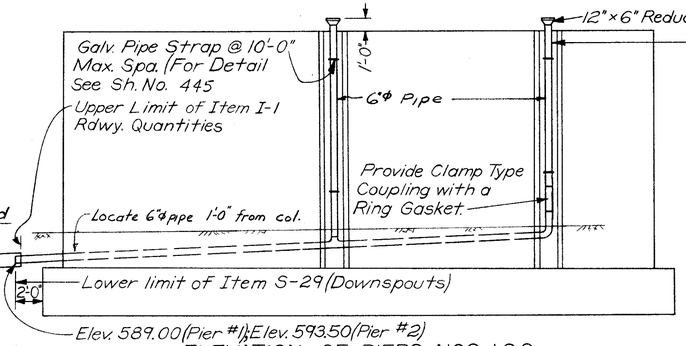
SECTION B-B
(For Details not shown see Sect. C-C)



SECTION D-D



ASPHALT CONC. DECK PROTECTION



ELEVATION OF PIERS NOS. 1 & 2
SHOWING LOCATION OF DOWNSPOUTS

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DECK DETAILS

BRIDGE NO. HAM-71-0207

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	S.U.		R.L.K. 1-11-65	Jlto 5/22/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

429
492

HAMILTON COUNTY
HAM-71-(1.56) (2.51)

WEST ABUTMENT

Mark	Type	No. Req'd.	Length	Weight
A501	Str.	10	17'-6"	183
A502	↓	12	18'-0"	225
A503		10	5'-6"	57
A504		12	6'-0"	75
A505		24	19'-3"	482
A506		26	23'-9"	644
A507	↓	10	14'-9"	154
A508	Str.	10	20'-3"	211
A509	52	5	7'-10"	41
A510	↑	5	7'-1"	37
A511		5	6'-8"	35
A512		5	6'-0"	31
A513		1	9'-2"	10
A514		1	7'-10"	8
A515		1	8'-2"	9
A516		1	6'-10"	7
A517		1	12'-6"	13
A518		1	12'-1"	13
A519	↓	1	11'-5"	12
A520	52	1	11'-4"	12
A521	1	40	6'-11"	289
A522	1	2	6'-6"	14
A523	1	2	6'-0"	13
A524	1	1	5'-6"	6
A525	20	1	4'-11"	5
A526	20	1	3'-8"	4
A527	14	3	5'-9"	18
A528	14	1	6'-0"	6
A601	Str.	36	22'-9"	1230
A602	20	12	7'-6"	135
A603	8	12	9'-1"	164
A604	20	13	8'-1"	158
A605	8	13	9'-7"	187
A606	20	1	8'-3"	12
A607	Str.	13	8'-3"	161
A608	20	4	9'-11"	60
A609	Str.	1	6'-9"	10
A610	Str.	15	8'-6"	192
A611	20	9	10'-9"	145
A901	Str.	86	15'-6"	4532
A1101	44	56	20'-1"	5975
A1102	18	87	7'-7"	3505
A1103	Str.	43	9'-0"	2056
A1104	Str.	20	17'-6"	1860
A1105	Str.	24	18'-3"	2327
H501*	Str.	2	3'-10"	
H502*	Str.	2	3'-2"	
			Total	25323

EAST ABUTMENT

Mark	Type	No. Req'd.	Length	Weight
A551	Str.	12	15'-9"	197
A552	↓	10	15'-0"	156
A553		11	5'-3"	60
A554		10	4'-6"	47
A555		22	22'-6"	516
A556	↓	22	18'-6"	425
A557	Str.	12	18'-3"	228
A558	14	7	5'-9"	42
A559	52	6	7'-7"	47
A560	52	6	7'-0"	44
A561	Str.	12	14'-9"	185
A562	52	6	6'-10"	43
A563	↓	6	6'-5"	40
A564		1	7'-10"	8
A565		1	8'-7"	9
A566		1	6'-11"	7
A567		1	13'-2"	14
A568		1	13'-6"	14
A569	↓	1	12'-7"	13
A570	52	1	12'-10"	13
A571	1	33	6'-11"	238
A573	Str.	3	4'-8"	15
A574	52	1	9'-1"	10
A575	1	2	6'-6"	14
A576	1	2	6'-0"	13
A577	1	1	5'-5"	6
A651	Str.	18	41'-6"	1122
A652	20	11	10'-3"	169
A653	8	21	10'-10"	342
A654	20	10	10'-4"	155
A658	Str.	13	10'-0"	195
A659	Str.	16	9'-6"	228
A660	Str.	1	8'-0"	12
A661	20	1	10'-9"	16
A662	20	5	12'-7"	95
A663	20	12	11'-10"	213
A664	1	5	11'-10"	89
A951	Str.	82	15'-6"	4322
A1051	18	84	7'-4"	2650
A1052	Str.	42	10'-0"	1807
A1053	Str.	23	15'-9"	1559
A1054	Str.	19	15'-3"	1247
A1151	44	52	20'-1"	5549
H553*	52	2	7'-8"	
H554*	52	2	7'-8"	
			Total	22174

PIER 1

Mark	Type	No. Req'd.	Length	Weight
P511	Str.	6	9'-9"	61
P512	Str.	10	7'-9"	81
P513	52	2	13'-10"	29
P514	Str.	1	14'-0"	15
P515	Str.	1	15'-9"	16
P516	18	2	21'-8" *	45
P517	6	24	11'-3"	282
P518	1	9	13'-5"	126
P519	↑	12	14'-1"	176
P520		16	7'-11"	132
P521		3	13'-4"	42
P522		2	13'-2"	27
P523		2	12'-7"	26
P524		1	12'-0"	13
P525	↓	1	11'-5"	12
P526	1	1	10'-10"	12
P527	Str.	29	15'-3"	461
P528	Str.	29	15'-9"	476
P529	Str.	1	17'-3"	18
P530	Str.	9	22'-4"	210
P531	Str.	9	20'-3"	190
P534	58	9	22'-9"	213
P535	58	9	20-8"	194
P536	58	2	8'-2"	17
P611	44	16	25'-5"	611
P612	43	54	12'-10"	1041
P613	18	98	5'-10"	859
P711	Str.	2	23'-0"	94
P712	Str.	2	20'-3"	83
P713	Str.	6	22'-3"	273
P714	Str.	6	25'-0"	307
P715	58	2	20-6"	84
P716	58	2	23'-3"	95
			Total	6321

PIER 2

Mark	Type	No. Req'd.	Length	Weight
P501	Str.	7	19'-10"	145
P502	Str.	7	17'-9"	130
P503	Str.	6	15'-8"	98
P504	Str.	46	15'-0"	720
P505	Str.	4	9'-3"	39
P506	6	19	11'-3"	223
P507	1	5	8'-6"	44
P508	1	35	9'-3"	338
P509	Str	1	7'-6"	8
P510	58	7	18'-2"	133
P532	58	7	20'-3"	148
P533	52	1	7'-9"	8
P601	44	20	23'-7"	708
P602	18	88	5'-10"	771
P801	43	59	16'-8"	2626
P1001	Str.	6	21'-3"	549
P1002	Str.	2	23'-9"	204
P1003	Str.	6	18'-0"	465
P1004	Str.	2	20'-0"	172
P1005	58	2	17'-9"	153
P1006	58	2	21'-0"	181
			Total	7863

REPLACEMENT BARS

Mark	Type	No. Req'd.	Length
Re 501	Str.	1	5'-7"
Re 601	↑	1	5'-11"
Re 701		1	6'-3"
Re 801		1	6'-6"
Re 901		1	6'-10"
Re 1001		1	7'-3"
Re 1101	Str.	2	7'-6"

TYPE 52

Type	Mark	a	b	c	d	e
52	A509	1'-8"	3'-1⅛"	2'-0"	4'-4"	3'-0⅜"
	A510	2'-10"	1'-5⅜"	2'-3"	2'-2⅝"	1'-6⅛"
	A511	0'-9"	2'-10⅜"	2'-0"	4'-2"	3'-0⅜"
	A512	1'-9"	1'-5⅜"	2'-5"	2'-1"	1'-6⅛"
	A513	1'-8"	3'-1⅛"	3'-4"	4'-4"	3'-0⅜"
	A514	2'-10"	1'-5⅜"	3'-0"	2'-2⅝"	1'-6⅛"
	A515	1'-8"	3'-1⅛"	2'-4"	4'-4"	3'-0⅜"
	A516	2'-10"	1'-5⅜"	2'-0"	2'-2⅝"	1'-6⅛"
	A517	0'-9"	2'-10⅜"	7'-10"	4'-2"	3'-0⅜"
	A518	1'-9"	1'-5⅜"	8'-6"	2'-1"	1'-6⅛"
	A519	0'-9"	2'-10⅜"	6'-9"	4'-2"	3'-0⅜"
	A520	1'-9"	1'-5⅜"	7'-9"	2'-1"	1'-6⅛"
	A559	1'-10"	2'-7"	2'-0"	3'-11⅝"	3'-0⅜"
	A560	2'-10"	1'-4"	2'-5"	2'-0"	1'-6⅜"
	A562	0'-6"	3'-4⅜"	2'-0"	4'-6"	3'-0⅜"
	A563	1'-11"	1'-8"	2'-5"	2'-3"	1'-6⅜"
	A564	2'-10"	1'-4"	3'-3"	2'-0"	1'-6⅜"
	A565	1'-10"	2'-7"	3'-0"	3'-11⅝"	3'-0⅜"
	A566	2'-10"	1'-4"	2'-4"	2'-0"	1'-6⅜"
	A567	0'-6"	3'-4⅜"	3'-4"	4'-6"	3'-0⅜"
	A568	1'-11"	1'-8"	9'-6"	2'-3"	1'-6⅜"
	A569	0'-6"	3'-4⅜"	7'-9"	4'-6"	3'-0⅜"
	A570	1'-11"	1'-8"	8'-10"	2'-3"	1'-6⅜"
	A574	1'-10"	2'-7"	3'-6"	3'-11⅝"	3'-0⅜"
	H553	3'-1¼"	3'-1⅜"	0'-6⅜"	4'-2"	2'-9⅛"
	H554	3'-4"	3'-1⅜"	0'-4"	4'-2"	2'-9⅛"
	P513	11'-1"	0'-4½"	2'-2"	0'-10"	0'-9"
	P533	1'-4"	0'-4½"	5'-10⅛"	0'-10"	0'-9"

TYPES 20, 8, 14 & 18

Type	Mark	a	b	c	d
20	A525	2'-4"	1'-6"	3'-5"	2'-5⅛"
	A526	0'-7⅛"	2'-7"	0'-10⅛"	0'-7⅛"
	A602	2'-3⅛"	4'-3"	3'-3"	2'-3⅛"
	A604	2'-3⅛"	4'-10"	3'-3"	2'-3⅛"
	A606	2'-3⅛"	5'-0"	3'-3"	2'-3⅛"
	A608	2'-3⅛"	6'-8"	3'-3"	2'-3⅛"
	A611	2'-3⅛"	7'-6"	3'-3"	2'-3⅛"
	A652	2'-3⅛"	7'-0"	3'-3"	2'-3⅛"
	A654	2'-3⅛"	7'-1"	3'-3"	2'-3⅛"
	A661	2'-3⅛"	7'-6"	3'-3"	2'-3⅛"
	A662	2'-3⅛"	9'-4"	3'-3"	2'-3⅛"
	A663	2'-3⅛"	8'-7"	3'-3"	2'-3⅛"
	H551	1'-4⅜"	2'-7⅜"	1'-10⅛"	1'-2⅜"
	H552	1'-2"	2'-4"	1'-6⅛"	1'-0⅜"
8	A603	2'-9"	1'-2"	5'-6"	—
	A605	2'-9"	1'-2"	6'-0"	—
	A653	2'-6"	1'-2"	7'-6"	—
14	A527	0'-8"	2'-3"	—	—
	A528	0'-11"	2'-3"	—	—
	A558	0'-8"	2'-3"	—	—
18	A1051	1'-6"	6'-2"	—	—
	A1102	1'-6"	6'-5"	—	—
	P516	17'-3"	4'-7"	—	—
	P602	5'-0"	1'-0"	-	—
	P613	5'-0"	1'-0"	—	—

TYPE 1

Type	Mark	a	b
1	A521	4'-2"	1'-6"
	A522	3'-9"	1'-6"
	A523	3'-3"	1'-6"
	A524	2'-9"	1'-6"
	A571	4'-2"	1'-6"
	A575	3'-9"	1'-6"
	A576	3'-3"	1'-6"
	A577	2'-8"	1'-6"
	A664	2'-8"	4'-9"
	P507	4'-5"	2'-2"
	P508	5'-2"	2'-2"
	P518	5'-2"	4'-3"
	P519	5'-2"	4'-7"
	P520	5'-2"	1'-6"
	P521	4'-5"	4'-7"
	P522	4'-3⅜"	4'-7"
	P523	3'-8⅝"	4'-7"
	P524	3'-1⅞"	4'-7"
	P525	2'-6⅜"	4'-7"
	P526	1'-1⅞"	4'-7"

TYPE 58

Type	Mark	a	b	c	d	e	f	g	h	i
58	P510	1'-8"	0'-4½"	0'-10"	0'-4½"	5'-11"	0'-9"	0'-9"	0'-10"	9'-5"
	P532	1'-8"	0'-4½"	0'-10"	0'-4½"	6'-8"	0'-9"	0'-9"	0'-10"	10'-9"
	P534	1'-8"	0'-4½"	0'-10"	0'-4½"	4'-0"	0'-9"	0'-9"	0'-10"	15'-11"
	P535	1'-8"	0'-4½"	0'-10"	0'-4½"	6'-8½"	0'-9"	0'-9"	0'-10"	11'-1½"
	P536	1'-8"	0'-4½"	0'-10"	0'-4½"	4'-1"	0'-9"	0'-9"	0'-10"	1'-3"
	P715	1'-8½"	0'-4½"	0'-10"	0'-4½"	6'-8½"	0'-9"	0'-9"	0'-10"	11'-1"
	P716	1'-8½"	0'-4½"	0'-10"	0'-4½"	4'-7½"	0'-9"	0'-9"	0'-10"	15'-11"
	P1005	1'-9"	0'-4½"	0'-10"	0'-4½"	5'-10⅛"	0'-9"	0'-9"	0'-10"	9'-7½"
	P1006	1'-9"	0'-4½"	0'-10"	0'-4½"	8'-1"	0'-9"	0'-9"	0'-10"	10'-8"

TYPE 43

Type	Mark	a
43	P612	11'-6"
	P801	14'-6"

TYPE 44

Type	Mark	a
44	A1101	18'-6"
	A1151	18'-6"
	P601	22'-11"
	P611	24'-9"

TYPE 6

Type	Mark	a	b	Radius
6	P506	8'-1"	1'-7"	2'-6 1/2"
	P517	8'-1"	1'-7"	2'-6 3/4"

MICROFILMED
FEB 20 1985

* Reinforcing bars marked H are included in Item S-14 (Railing) for payment.

Total wgt reinf steel = 61,681 lbs.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STEEL REINFORCEMENT LIST

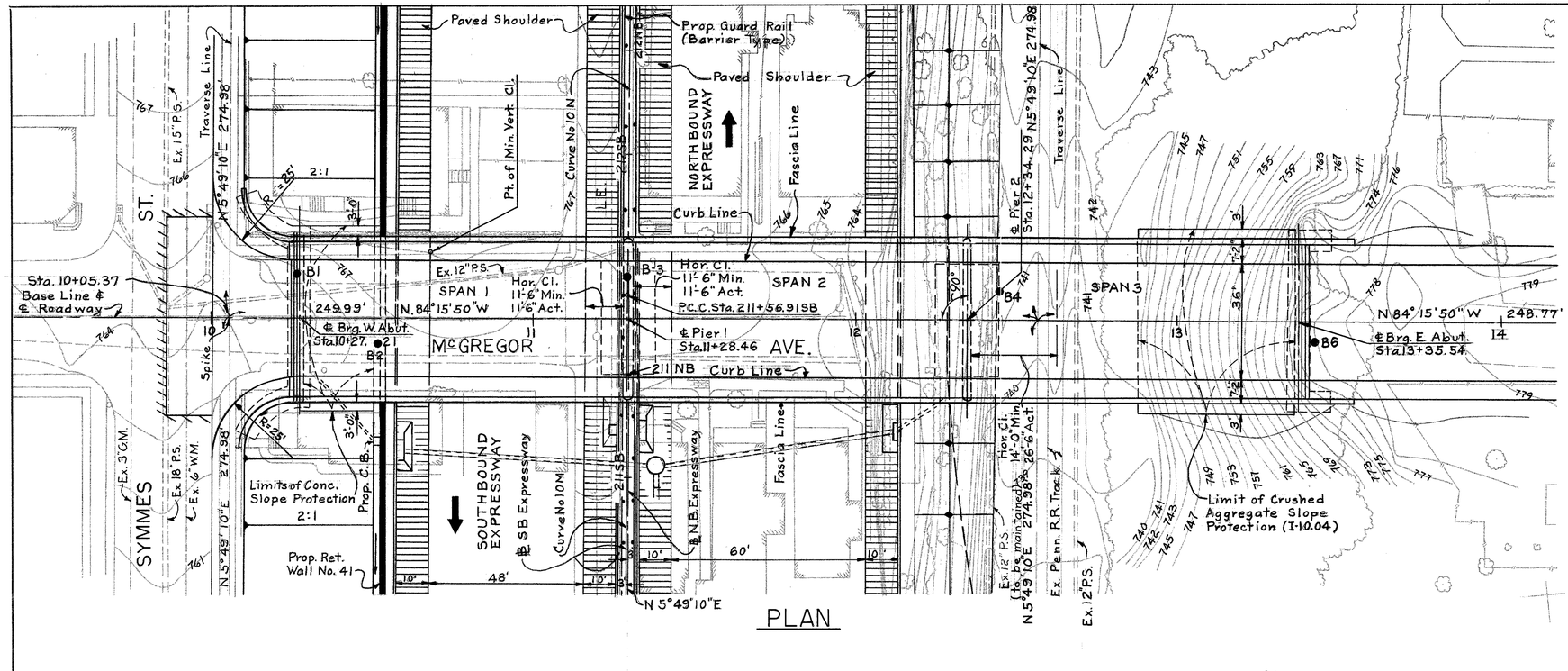
BRIDGE NO. HAM-71-0207

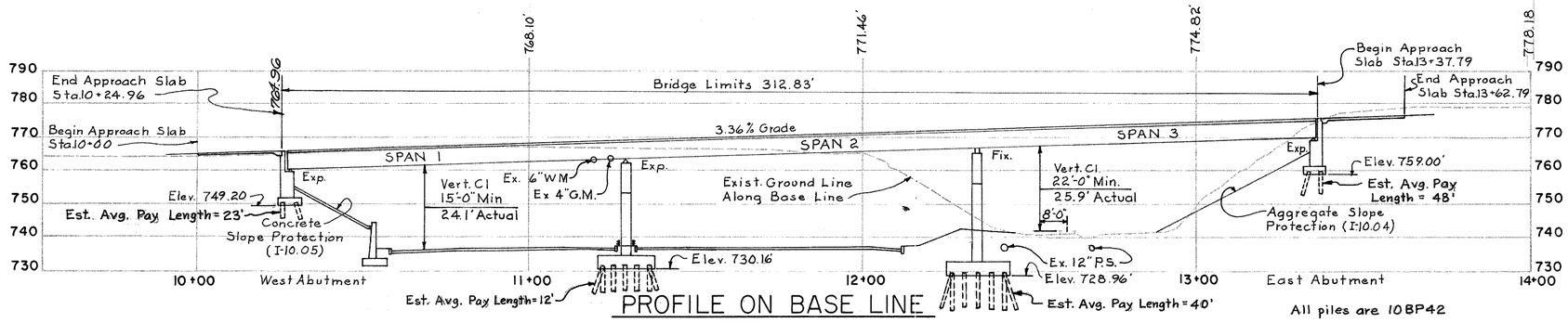
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	TFL		D.W. 1-12-65	JHO 5/22/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

430
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)





GENERAL NOTES

- Symbol denotes Test Boring
Abutments & Bearings ℄ of Piers are parallel
For Test Boring Data, see sheet 13 of 13
For Bench Marks, see sheet 40

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FEB 20 1965

PROPOSED STRUCTURE

TYPE: 3 Span Continuous Plate Girder with reinforced concrete deck and substructure
SPANS: 101.25', 105.83', 101.25', ℄ brg. measured along base line.
ROADWAY: 36'-00 ½ curbs
SIDEWALK: 6'-0 Both sides
LOAD FREQUENCY: CF-400(57)

SKEW: None
WEARING SURFACE: 1" Monolithic concrete
APPROACH SLABS: AS-1-54 (25' long)

ALIGNMENT: Tangent
SUPERELEVATION: As shown

1986 Traffic Count ADT = 5400
E. Bound DHV = 460
W. Bound DHV = 380

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SITE PLAN
BRIDGE No. HAM-71-0271
McGREGOR AVE. OVER I-71

H & E BRIDGE NO. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	A.L.T.	A.L.T.	W.A.Z.	JHO 5/20/65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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HAMILTON COUNTY
HAM-71-(1.56)(2.51)

ESTIMATED QUANTITIES

	ITEM	TOTAL	UNIT	DESCRIPTION	SUPER-STRUC-TURE	WEST ABUT-MENT	EAST ABUT-MENT	PIER 1	PIER 2	GENERAL
	E-2	Lump	Sum	Cofferdams, Cribs, & Sheeting						Lump
	E-2	1200	Cu. Yds.	Unclassified Excavation		400	380	130	290	
	S-1	570	Cu. Yds.	Class "C" Concrete, Superstructure	570					
	S-1	187	Cu. Yds.	Class "C" Concrete, Piers above Footings				88	99	
	S-1	185	Cu. Yds.	Class "E" Concrete, Abutments above Footings		98	87			
	S-1	307	Cu. Yds.	Class "E" Concrete, Footings		68.7	52.3	87.8	98	
	S-4	222,991	Lbs.	Reinforcing Steel						
*	S-7	560,000	Lbs.	Structural Steel	560000					
*	S-8	560,000	Lbs.	Field Painting of Structural Steel	560000					
	S-14	707	Lin. Ft.	Railing Type "C" (Aluminum Rail & Supports, Concrete Parapet)	619.2	54.8	33.0			
	S-16	Lump	Sum	First Test Pile						Lump
	S-18	4320	Lin. Ft.	Steel Piles, 10BP42		830	1150	540	1800	
	S-25			Electric Lighting System (See Sh. No. 204)						
	S-29	96	Cu. Yds.	Porous Backfill		63	33			
	S-29	130	Lin. Ft.	6" Helical Perforated Corrugated Metal Pipe [Sec. M-6.4(h)] (Including Specials).		86	44			
	S-29	107	Lin. Ft.	6" Helical Non-Perforated Corrugated Metal Pipe [Sec. M-6.4(h)]		47	60			
	S-29	Lump	Sum	Drain Inlets, Including supports and Horizontal Collector System	Lump					
	S-29	113	Lin. Ft.	8" Standard Pipe Downspout, Wrought Iron or Hot-dip Galvanized Steel, Including Specials.		14		44	55	
	I-10	157	Sq. Yds.	Concrete Slope Protection		157				
	I-10	325	Sq. Yds.	Crushed Aggregate Slope Protection			325			
	S-101	570	Each	Water-Reducing, Set-Retarding Admixture	570					

* ITEMS CHARGEABLE TO CINCINNATI GAS & ELECTRIC CO

ITEM	UNIT	DESCRIPTION	TOTAL
S-7	Lbs.	Structural Steel	4940
S-8	Lbs.	Field Painting of Structural Steel	4940

GENERAL NOTES

REFERENCE shall be made to Standard Drawing I-15, No. 6

POROUS BACKFILL: 1'-6" thick, full length of abutments and wings of West Abutment shall extend up to the underside of the approach slab or to the finished ground surface.

MACHINE FINISH: The Concrete bridge deck shall be finished by the use of a finishing machine.

RAILROAD AERIAL LINES will be relocated by the railroad. The contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

CONSTRUCTION CLEARANCE of 21'-0" vertically above the top of the railroad rails and 8'-0" horizontally from the center of tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started, eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

Piles shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with limestone. If the length of penetration is approximately equal to the depth of limestone according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is not less than the following value for a pile hammer of the indicated energy rating.

50 Tons per pile for West Abutment using an 11,000 ft. lb. hammer
45 Tons per pile for West Abutment using a 15,000 ft. lb. hammer
50 Tons per pile for Piers No. 1, 2 using an 11,000 ft. lb. hammer
45 Tons per pile for Piers No. 1, 2 using a 15,000 ft. lb. hammer
50 Tons per pile for East Abutment using an 11,000 ft. lb. hammer
45 Tons per pile for East Abutment using a 15,000 ft. lb. hammer

If the energy rating of the hammer is between the rating as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 Tons per pile.

ADDITIONAL NOTES: For additional notes see notes 1, 2, 3, 5, 6, 7, & 8, Sh. No. 443

Design Loading - CF 2000 (57)
Concrete Class C - basic unit stress 1,333 p.s.i.
Concrete Class E - basic unit stress 1,133 p.s.i.
Structural Steel - ASTM A 36 - basic unit stress 20,000 p.s.i.
(Except for Piles, ASTM A7 and A373 steel not permitted)
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

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CINCINNATI, OHIO

ESTIMATED QUANTITIES AND GENERAL NOTES
BRIDGE No. HAM.-71-0271

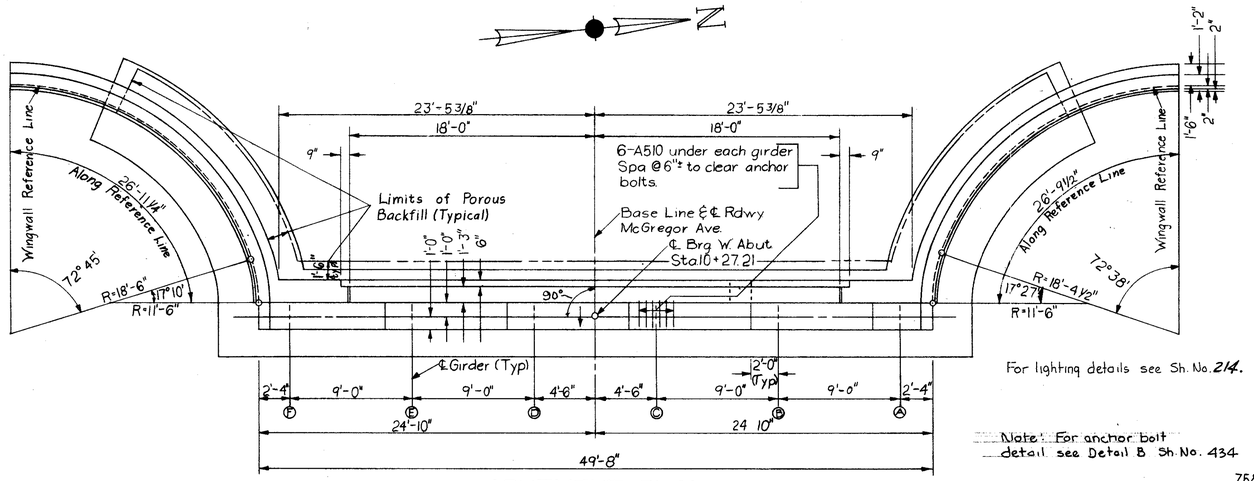
H&E BRIDGE No 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHO	N.A.B. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

432
492

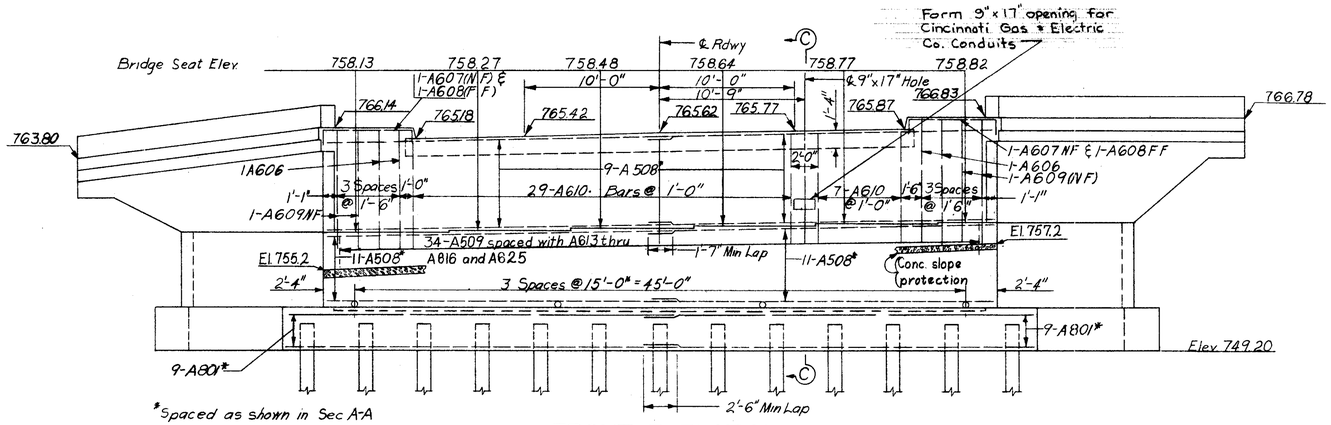
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



ABUTMENT PLAN

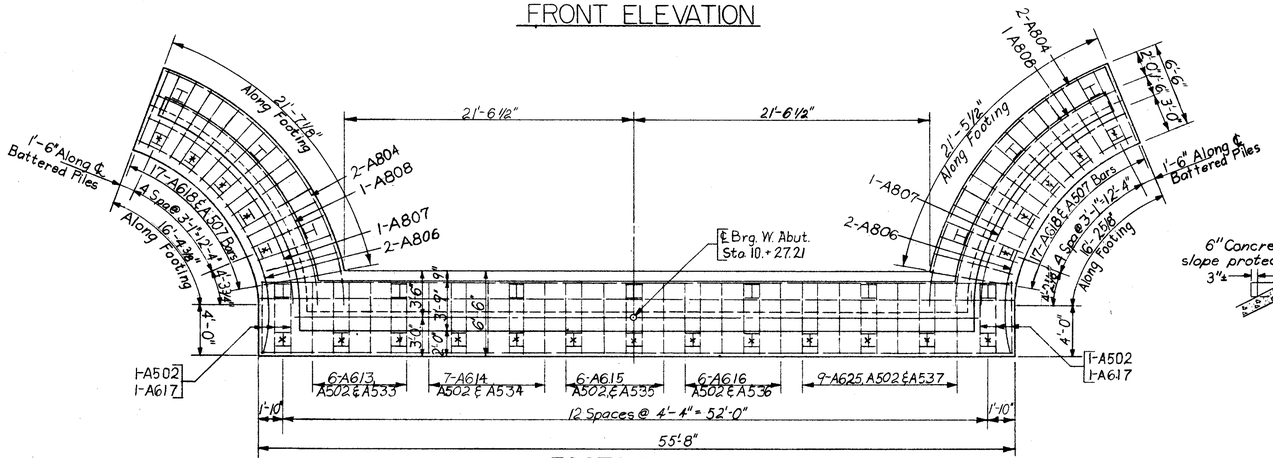
For lighting details see Sh. No. 214.

Note: For anchor bolt detail see Detail B Sh. No. 434



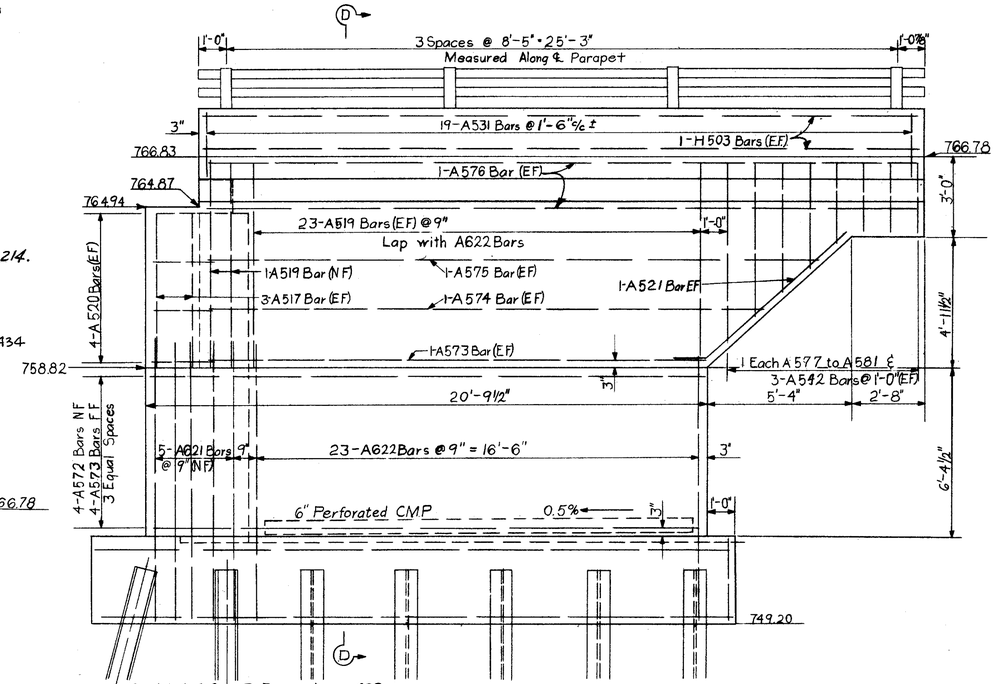
*Spaced as shown in Sec A-A

FRONT ELEVATION

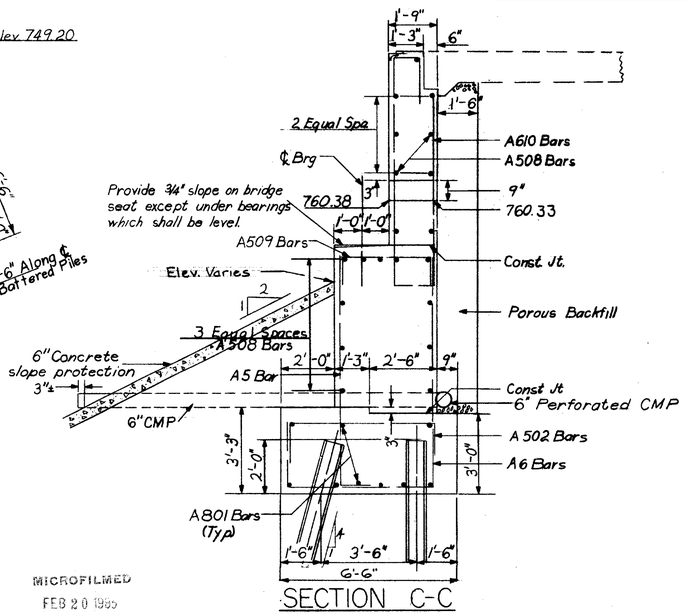


FOOTING PLAN

℄ Indicates battered piles



NORTH WINGWALL



SECTION C-C

Notes: Bars A538 thru A541, A572 thru A576 and H502, H503 will be bent in the field.
For general notes see sh No. 434

Work this sheet with sheet 433

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CONSULTING ENGINEERS
CINCINNATI, OHIO

WEST ABUTMENT

BRIDGE No. HAM.-71-0271

H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	ME		JHO	W. A. B. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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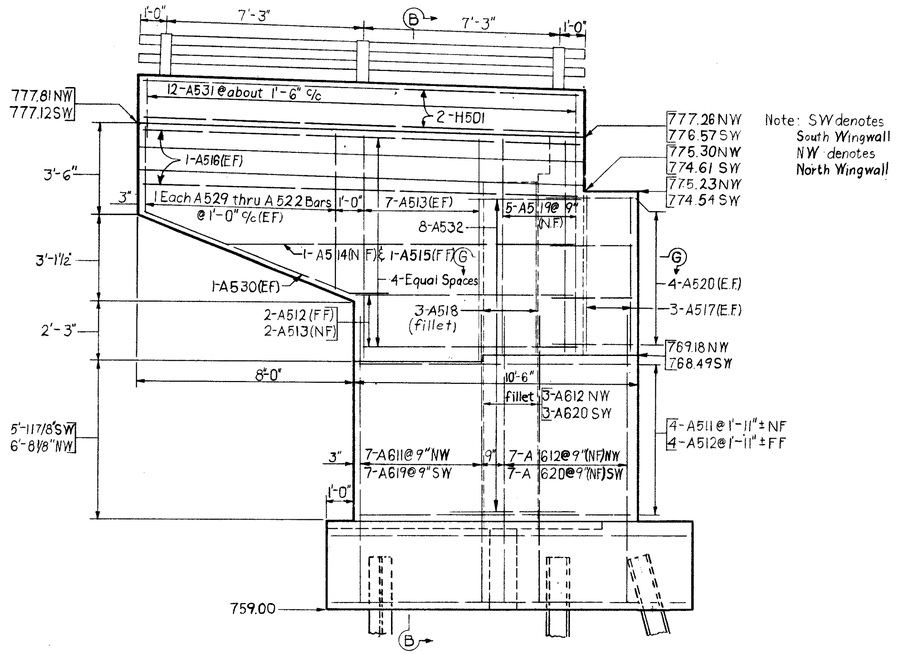
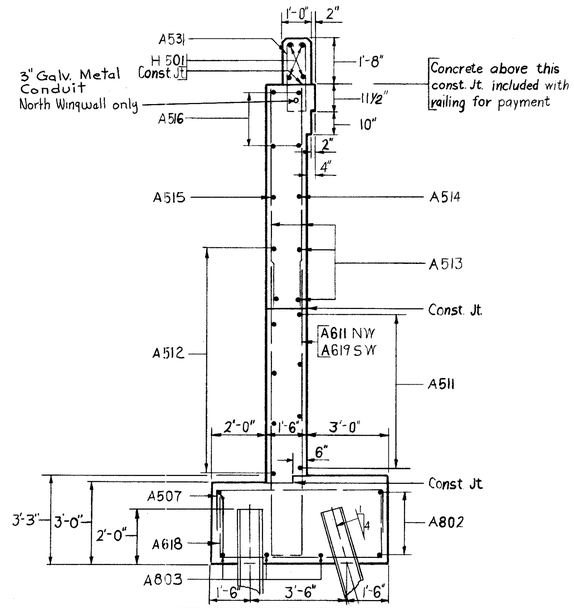
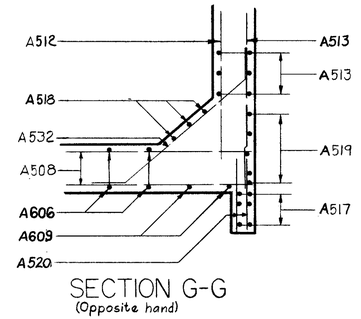
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



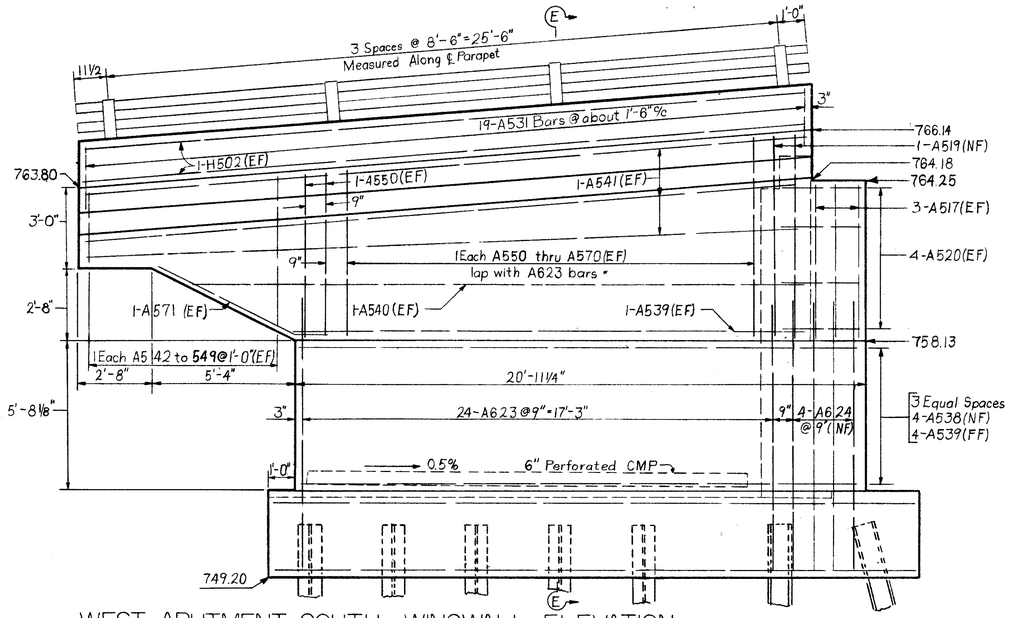
EAST ABUTMENT WINGWALL ELEVATIONS



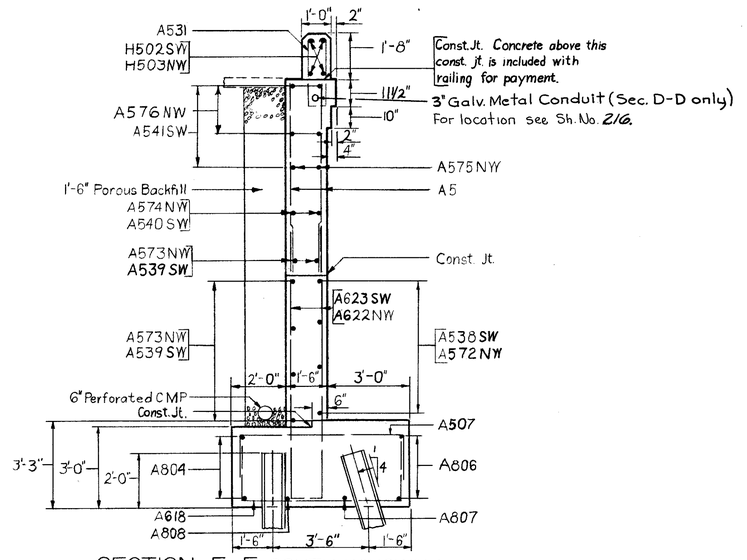
SECTION B-B



SECTION G-G
(Opposite hand)



WEST ABUTMENT SOUTH WINGWALL ELEVATION



SECTION E-E SOUTH WINGWALL
SECTION D-D NORTH WINGWALL
For location of Sect. D-D see sh. no. 432

MICROFILMED
FEB 20 1985

Work this sheet with Sheets 432 & 434

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CINCINNATI, OHIO

ABUTMENT WINGWALL DETAILS

BRIDGE No. HAM.-71-0271

H&E BRIDGE NO. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	ME		JHO	N.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

434
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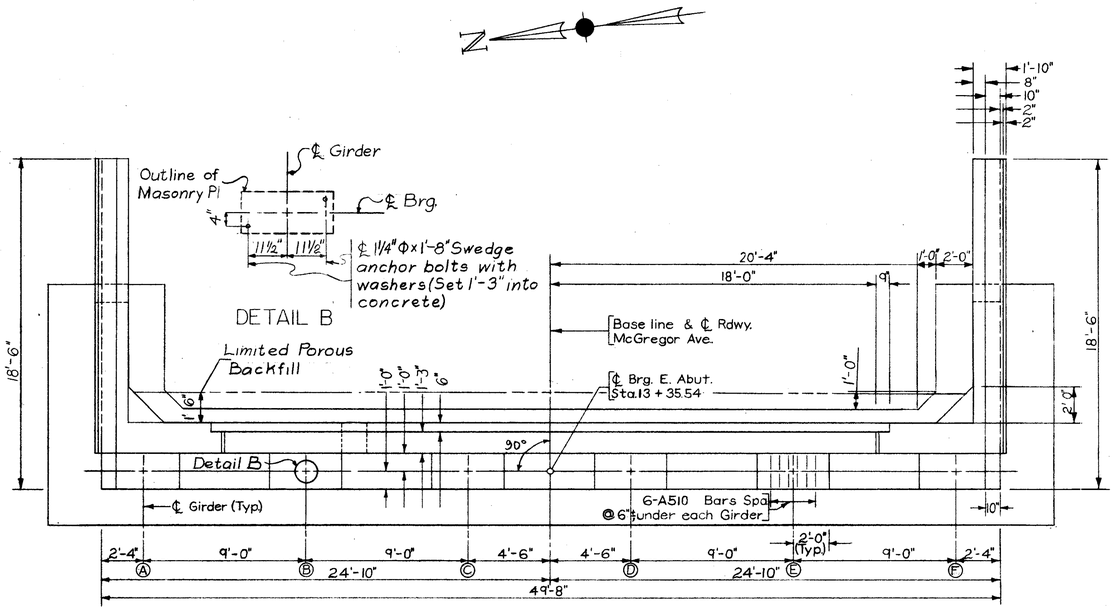
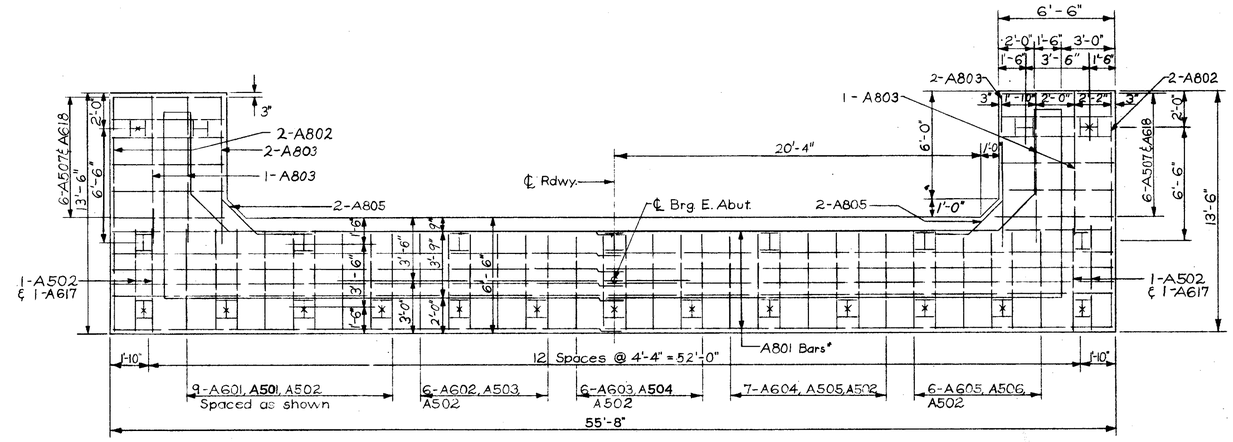
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



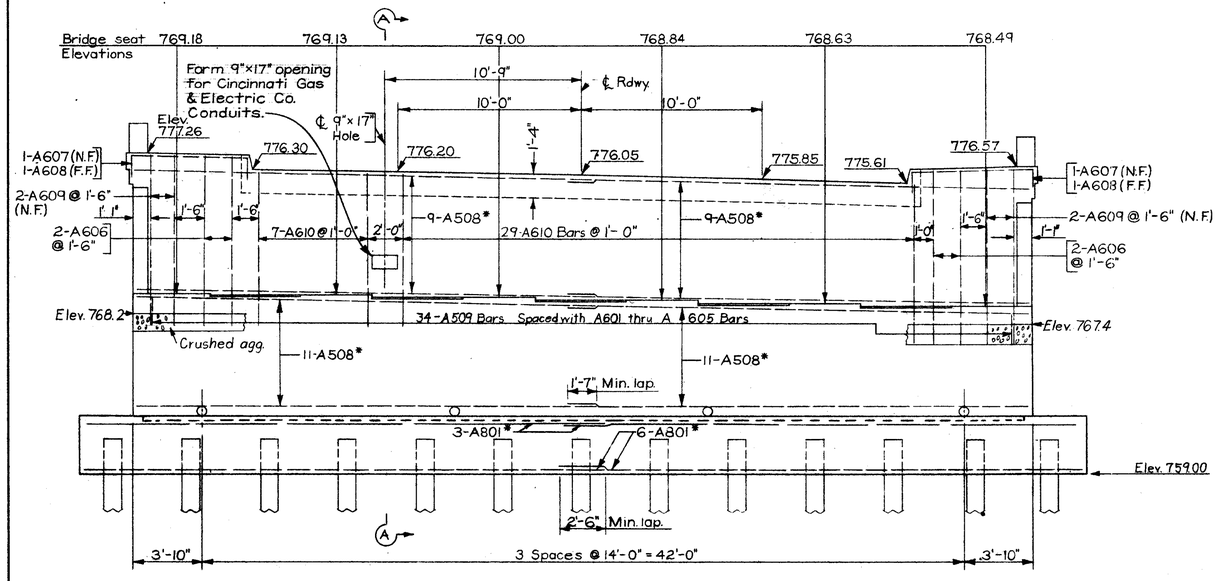
For lighting details see Sh. No. 214.

ABUTMENT PLAN



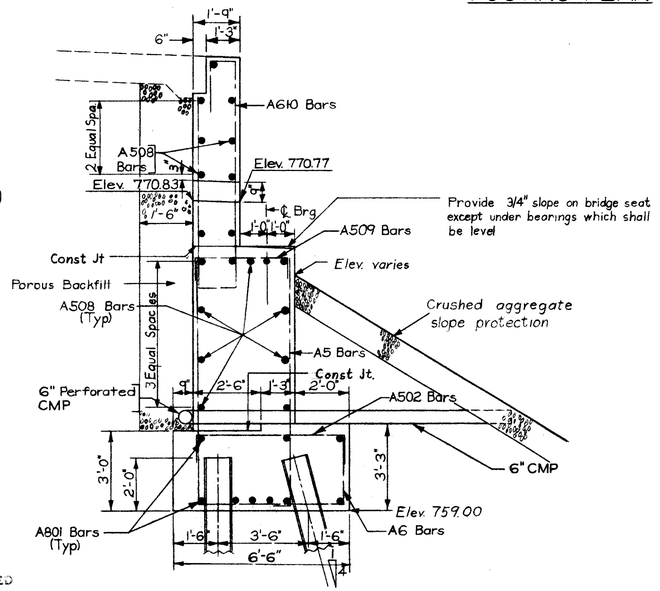
X Indicates battered piles

FOOTING PLAN



* Spaced as shown in Sec. A-A

FRONT ELEVATION



SECTION A-A

Notes:
N.F. denotes near face. F.F. denotes far face. E.F. denotes each face.
Provide 3" clearance to reinforcing steel in footing, and 2" clearance to reinforcing steel in wall, minimum.
Special care shall be taken in placing steel in the abutment seat, so that it will not interfere with the drilling of anchor bolt holes.
Top of backwall elevations shown are at the near face of backwall.
Concrete above bridge seat constr. Jt. shall be placed after superstructure steel is in place.
For roadway & sidewalk end finish details see Sh. 437
For railing details see Sh. 433
All piles are 10 BP42.

Work this sheet with Sh. No. 433

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CONSULTING ENGINEERS
CINCINNATI, OHIO

EAST ABUTMENT

BRIDGE No HAM.-71-0271

H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHO	4-18-65 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

435
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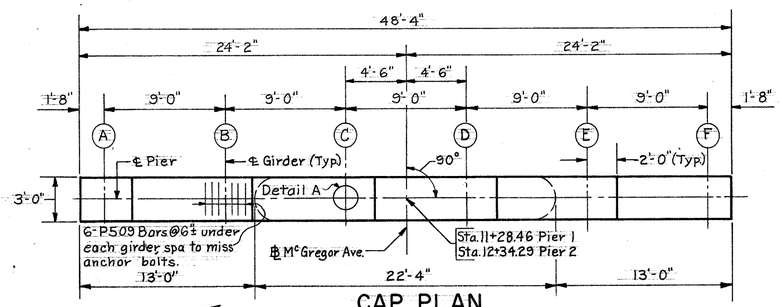
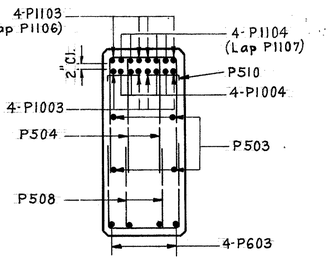
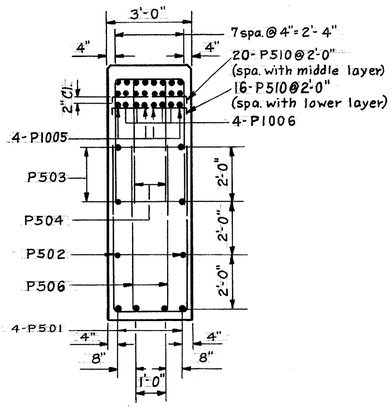
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



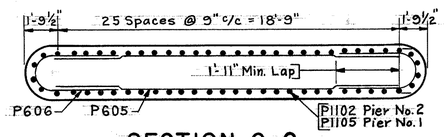
CAP PLAN



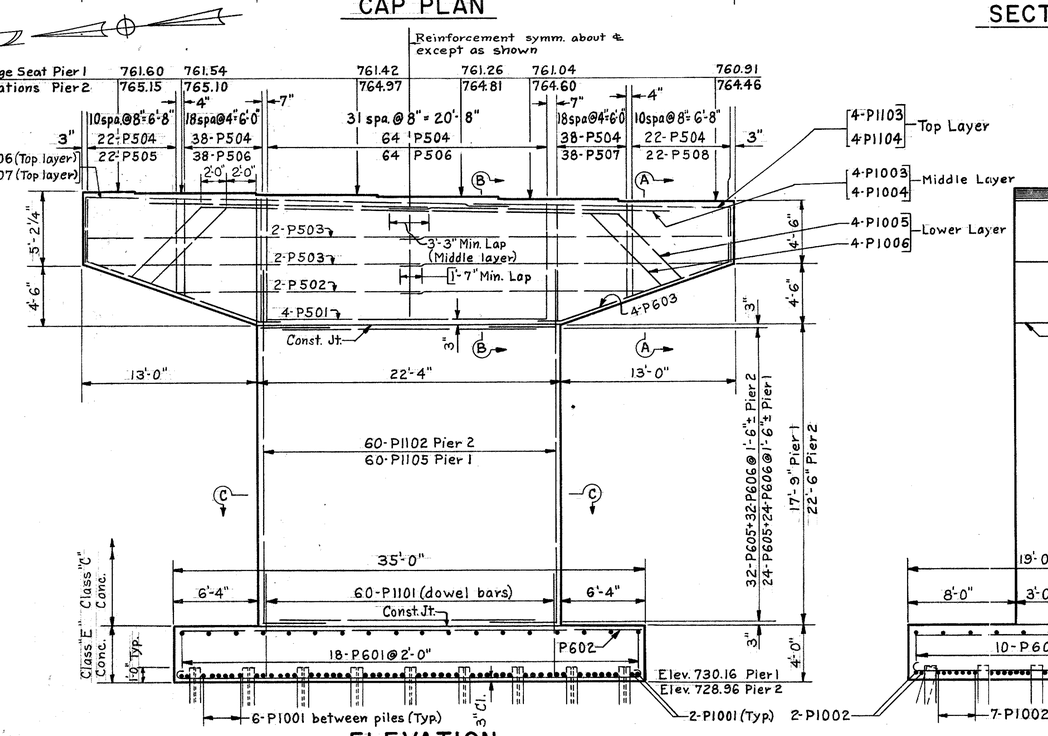
SECTION A-A



SECTION B-B



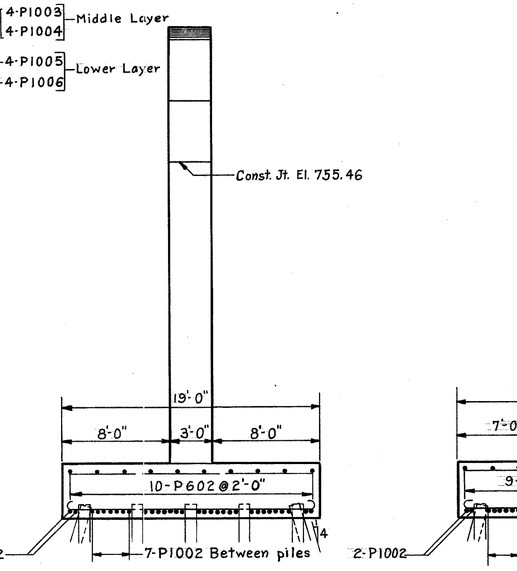
SECTION C-C



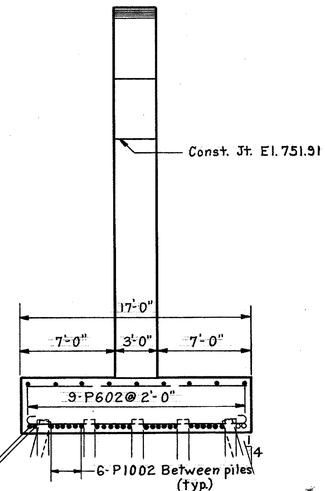
ELEVATION

Footing shown for Pier 2 only
for Pier 1 see Section D-D

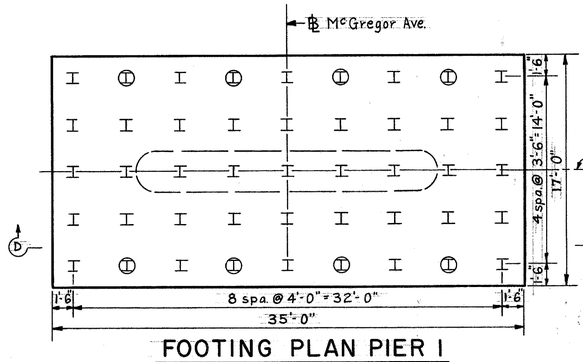
FOOTING PLAN PIER 2



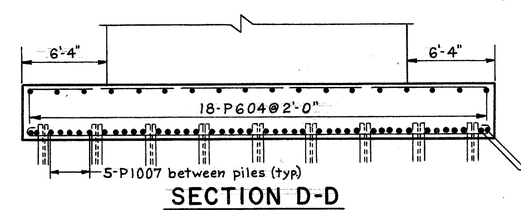
END ELEVATION PIER 2



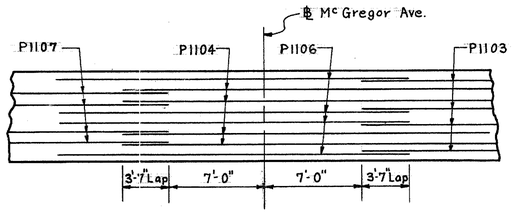
END ELEVATION PIER 1



FOOTING PLAN PIER 1



SECTION D-D

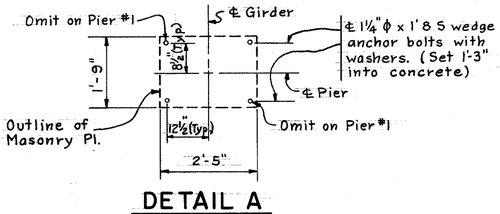


VIEW D-D

Showing Top Layer of Bars in Cap

For Ground Wire to be encased in North end of Pier 2 see note on sheet 216.

Notes: Ⓣ denotes battered piles.
All piles to be 10 BP 42
All reinforcing steel shall be 2" clear from face of concrete except as shown.
Special care shall be taken in placing reinforcing in cap so that it will not interfere with the masonry plate anchor bolts.
Special care shall be taken in placing reinforcing steel in top of footing of Pier No. 1 so as to avoid interference with the drilling of anchor bolt holes for anchoring guard rail posts to footing as shown on Standard Drawing I-15 No. 6.



DETAIL A

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

PIERS 1 & 2

BRIDGE NO. HAM.-71-0271

H & E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	ME	RS	JHO	H.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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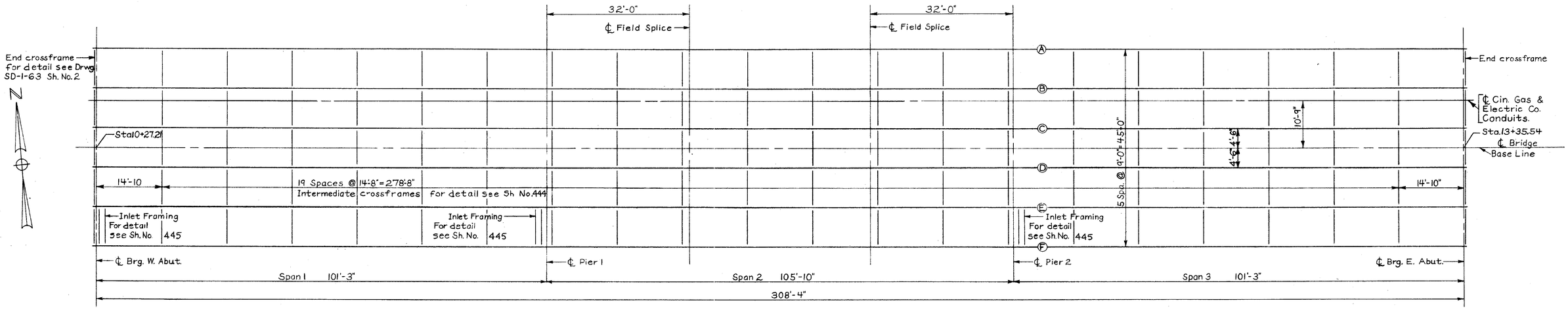
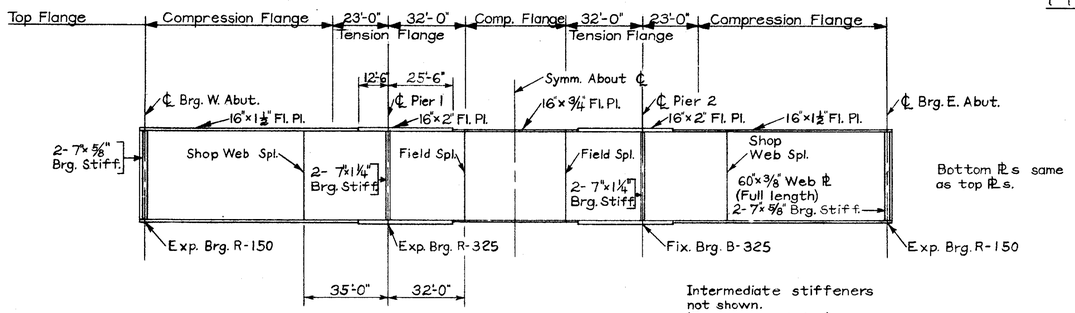
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



FRAMING PLAN



GIRDER ELEVATION

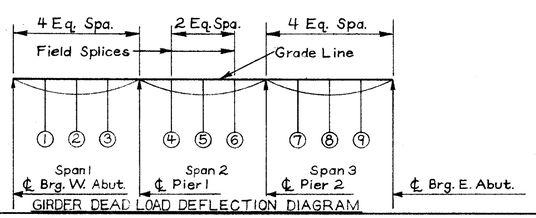
For bearing details see Sh. No. 438

For typical plate girder elevation see Sh. No. 444
For detail of roadway and sidewalk end dam details see Sh. No. 437

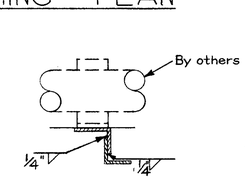
For treatment of ends of bridge see Drawing No. SD-1-63, Sh. No. 2, "Longitudinal Section."

INTERMEDIATE STIFFENER SPACING

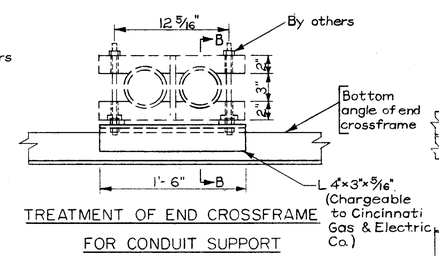
Girder	Deflection Due to:	①	②	③	④	⑤	⑥	⑦	⑧	⑨
A&F	Steel Wt.	3/16"	3/16"	1/8"	0	1/16"	0	1/8"	3/16"	3/16"
	Remaining DL	11/16"	13/16"	3/8"	0	3/16"	0	3/8"	13/16"	11/16"
	Total D.L.	7/8"	1"	1/2"	0	1/4"	0	1/2"	1"	7/8"
B thru E	Steel Wt.	1/8"	3/16"	1/8"	0	1/16"	0	1/8"	3/16"	1/8"
	Remaining DL	5/8"	11/16"	3/8"	0	3/16"	0	3/8"	11/16"	5/8"
	Total D.L.	3/4"	7/8"	1/2"	0	1/4"	0	1/2"	7/8"	3/4"



GIRDER DEAD LOAD DEFLECTION DIAGRAM

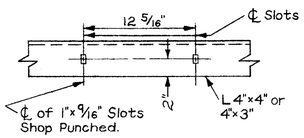


SECTION B-B



TREATMENT OF END CROSSFRAME FOR CONDUIT SUPPORT

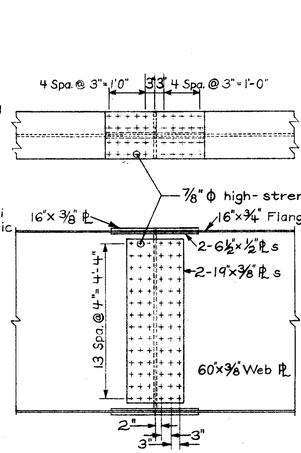
Note: Bottom angles of intermediate crossframes and end crossframes to be shop punched as shown on Sect. A-A for conduits.



SECTION A-A

ELECTRIC CONDUIT SUPPORT DETAIL

Note: Camber girders by cutting webs to a smooth curve. Camber shall be equal to the total dead load deflection ordinates shown in box.



FIELD SPLICE

Note: Contact surface of splice shall be free of all oil or paint.

Note: Bottom flange splice material same as top flange splice material.

MICROFILMED
FEB 20 1985

ITEMS CHARGEABLE TO CINCINNATI GAS & ELECTRIC CO.			
Item	Unit	Description	Amount
S-7	Lbs.	Structural Steel	4940

MICROFILMED
FEB 20 1985

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
BRIDGE No. HAM-71-0271

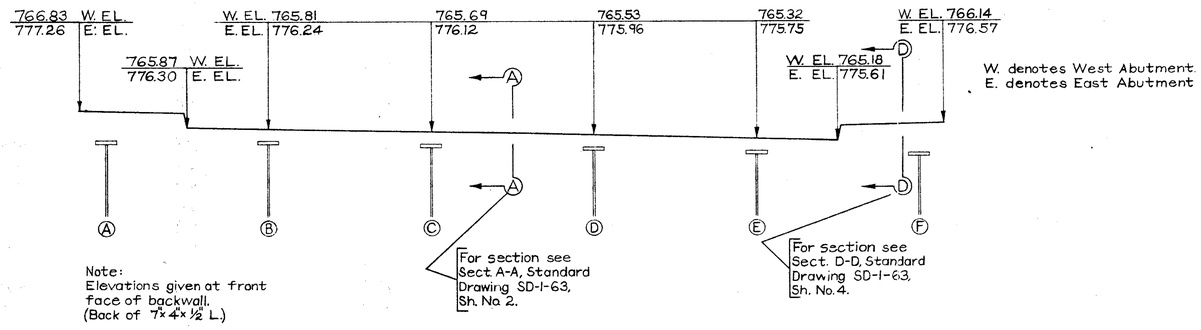
H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
	CIB		JHO 7/28/64	5-20-65

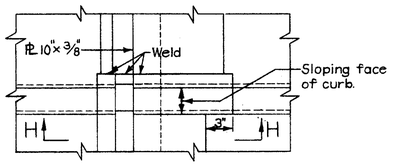
FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

437
492

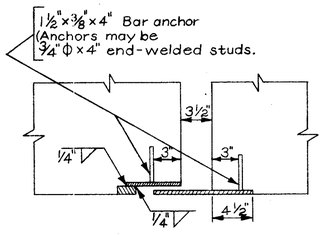
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



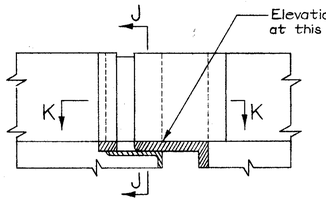
EXPANSION JOINT CROSS SECTION



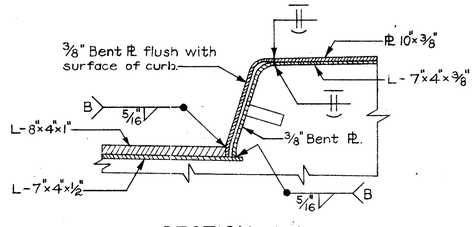
PART PLAN



SECTION K K



SECTION H-H



SECTION J J

CURB PLATE DETAILS

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

STRUCTURAL STEEL DETAILS
BRIDGE No. HAM.-71-0271

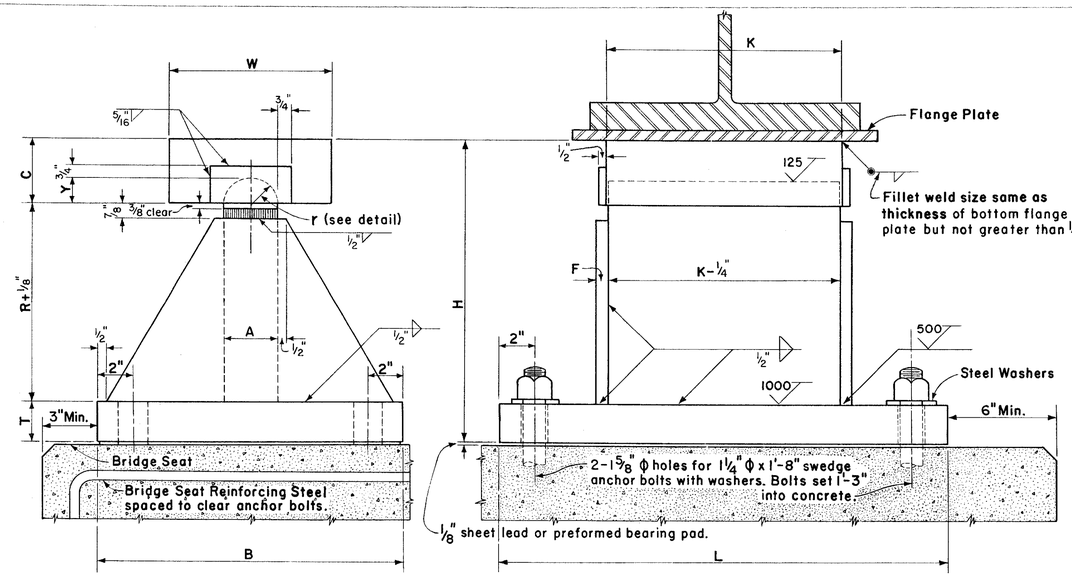
H&E BRIDGE No 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHQ	H.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

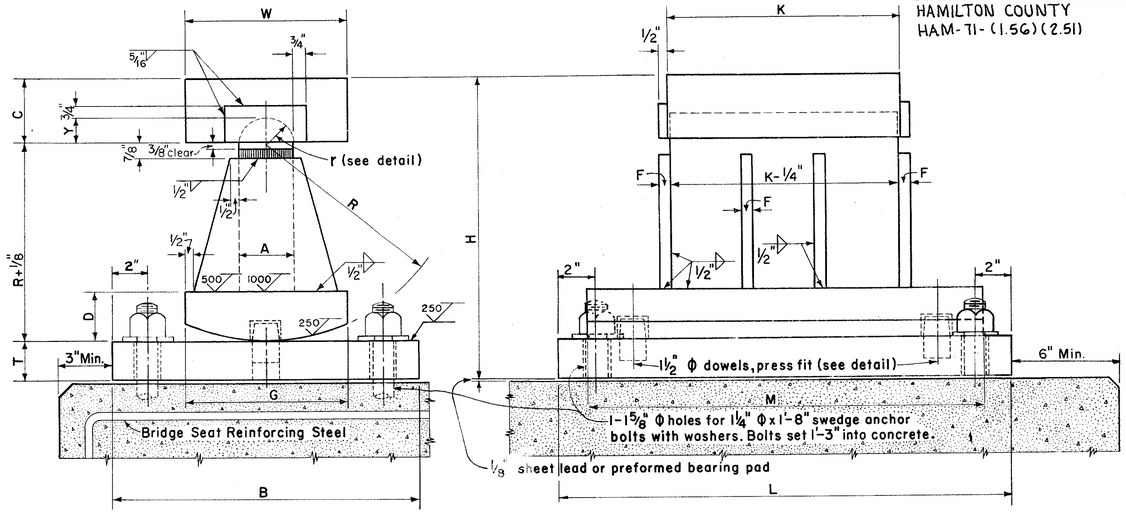
438
492

HAMILTON COUNTY
HAM-71-(1.56)(2.51)



STRUCTURAL STEEL BOLSTER

See Table below for additional dimensions.

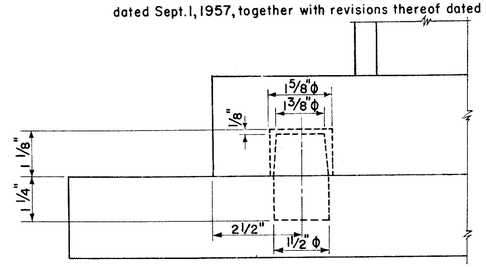


STRUCTURAL STEEL ROCKER

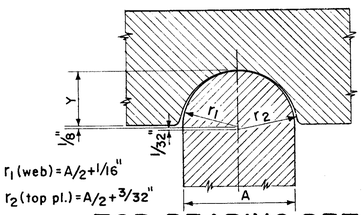
See Table below for additional dimensions.

Design Specifications: This drawing conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated Sept. 1, 1957, together with revisions thereof dated Feb. 21, 1958.

BOLSTER No.	ROCKER No.	A	B	C	D	F	G	H	K	L	M	R	T	W	Y
B-325	R-325	4	21	4	3 1/2	3/4	13	20 3/8	15	29	26	13	3 1/4	9	1 15/16
	R-150	3	12	3	2 1/4	1/2	8 1/2	13 3/8	11 1/2	27	19	8 1/2	1 3/4	9	1 7/16



DOWEL DETAIL



r_1 (web) = $A/2 + 1/16$"

r_2 (top pl.) = $A/2 + 3/32$"

TOP BEARING DETAIL

HAZELET & ERDAL
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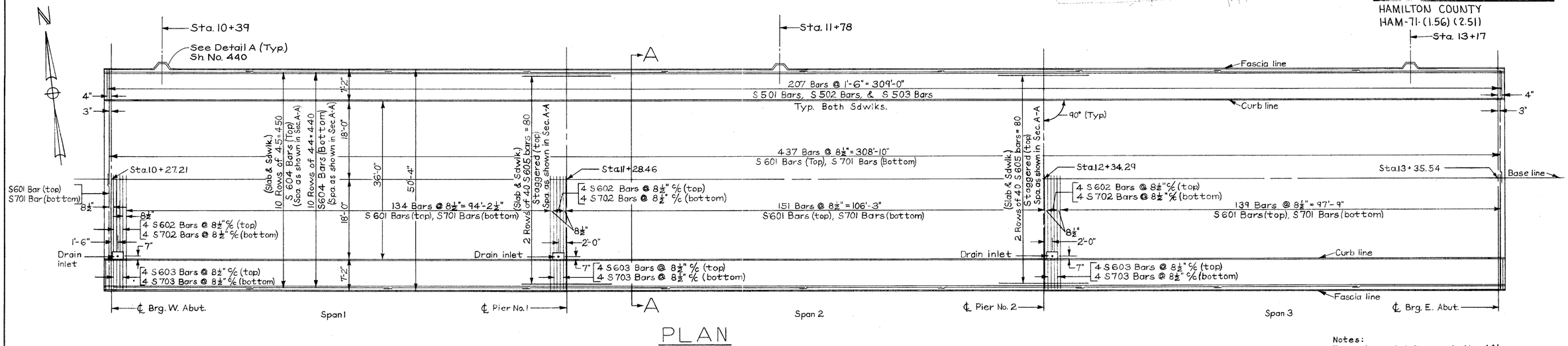
CINCINNATI, OHIO

ROCKERS AND BOLSTERS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
			JHO	H.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

HAMILTON COUNTY
HAM-71-(1.56)(2.51)

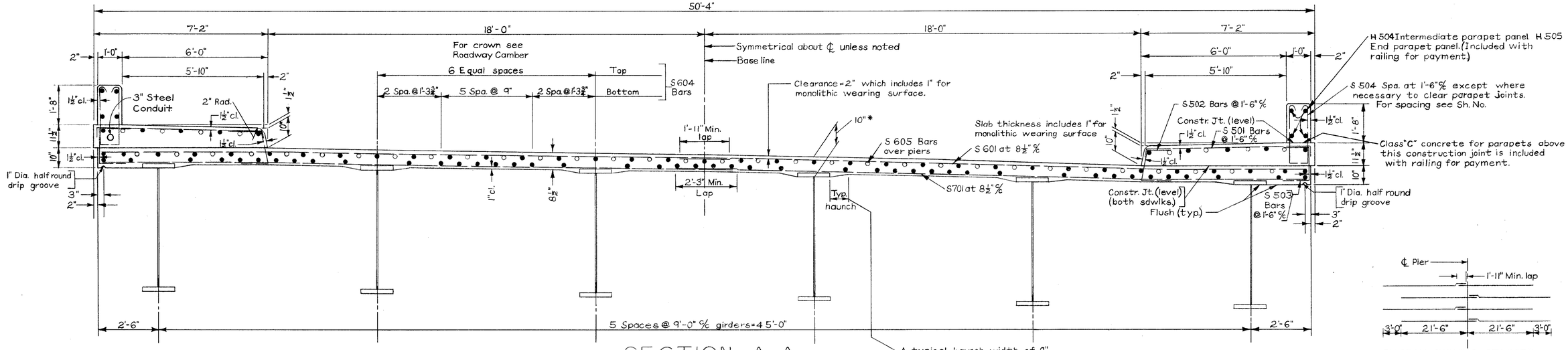


PLAN

Notes:
For drainage details see Sh. No. 441
For end finish details see Sh. No. 437

For lighting details see Sh. No. 216.
For railing details and spacing of bars in parapet, see Sh. No. 440
Field bend or cut longitudinal bars where necessary to miss inlets.

All longitudinal bars S 604 except as otherwise shown Lap S604 bars 1'-11" minimum.



SECTION A-A

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

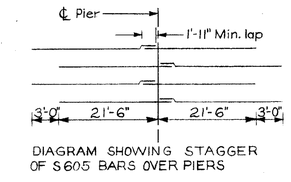
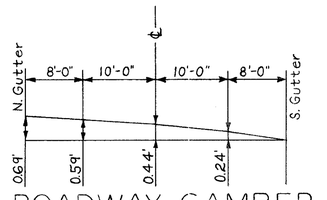


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS



ROADWAY CAMBER

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. S-1.25 of the Construction and Material Specifications.

REINFORCING STEEL: The S601 and S701 Bars may be furnished in pairs of equal lengths (as shown), lapped 30 diameters at the centerline of roadway, or they may be furnished in pairs of different length in order to place the lap beyond a longitudinal construction joint at the centerline of roadway, at the option of the contractor. Determination of the pay quantity will be according to the number and length of bars as shown on Reinforcing Steel List.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

SUPERSTRUCTURE DETAILS

BRIDGE No. HAM-71-0271

H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHC 7/28/64	A.A.B. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

440
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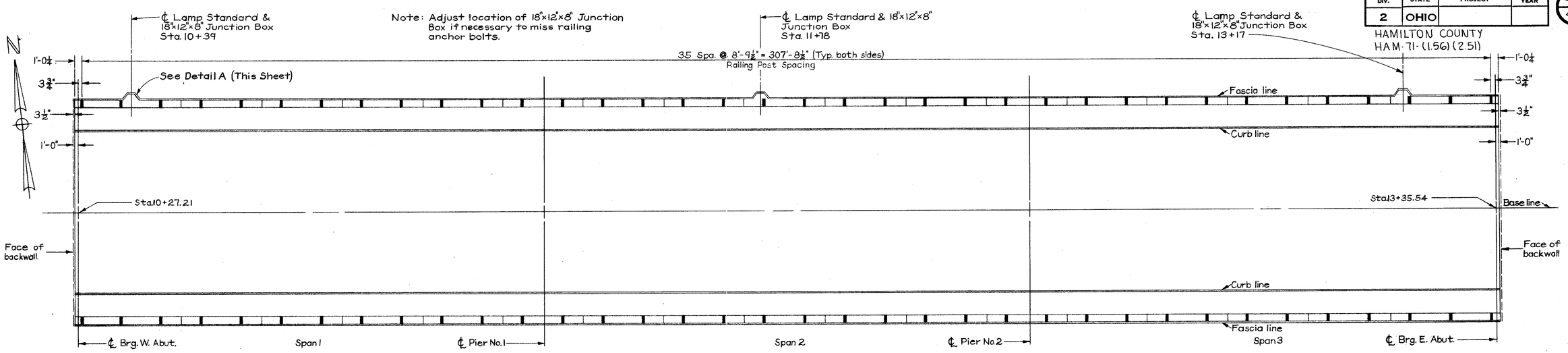
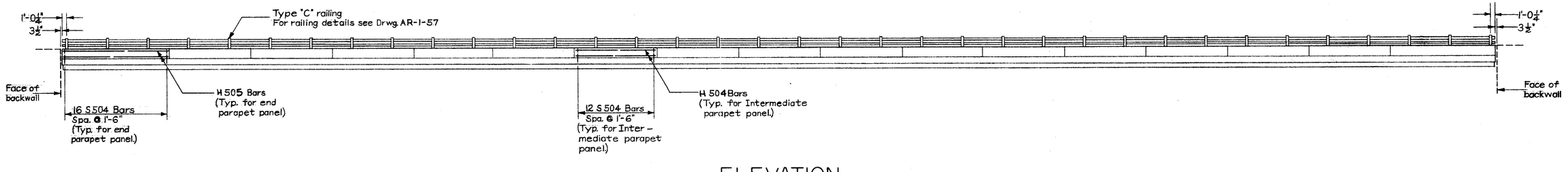
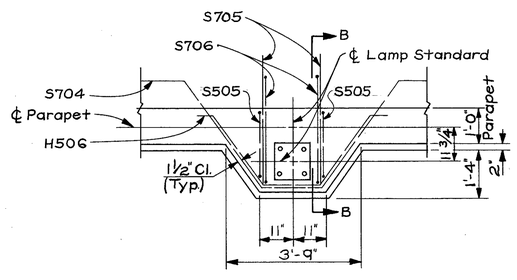
HAMILTON COUNTY
HAM-71-(1.56)(2.51)



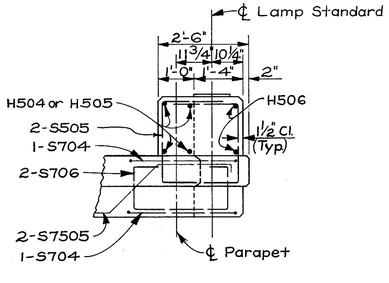
PLAN



ELEVATION



DETAIL A



SECTION B-B

Note: Work this drawing with Lighting Plan, Sheet No. 207.
For typical lighting details see Sh. No. 216

For conduit expansion at abutments see Sh. No. 214.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

RAILING & LIGHTING

BRIDGE No. HAM-71-0271

H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	CIB		JHO	N.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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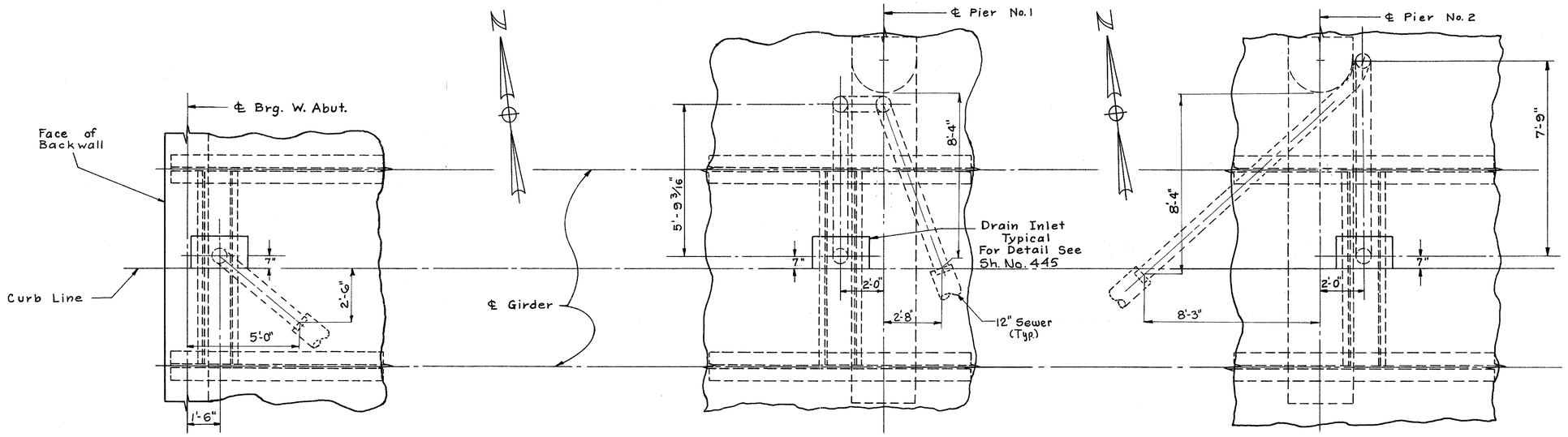
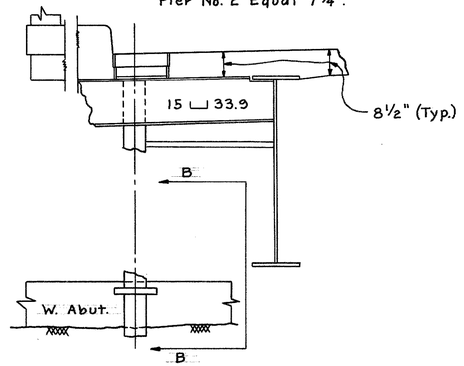
HAMILTON COUNTY
HAM-71-(1.56)(2.51)

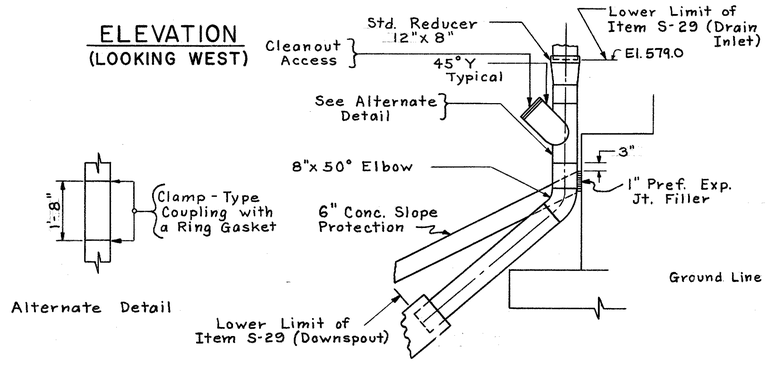


PLAN

Note: Total Depth of Inlet Frame Box at W. Abut., Pier No. 1, and Pier No. 2 Equal 7¼".



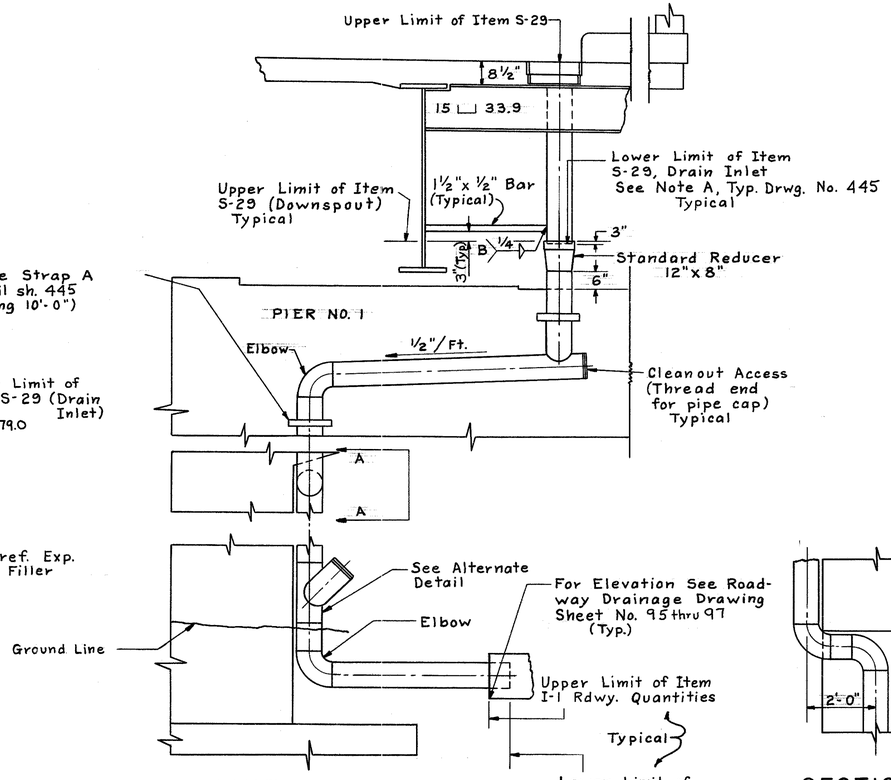
ELEVATION
(LOOKING WEST)



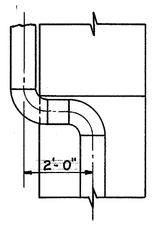
Alternate Detail

SECTION B-B

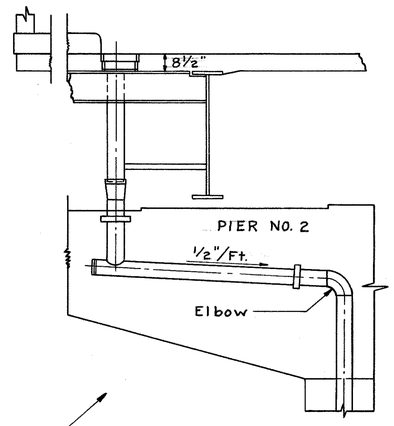
Galv. Pipe Strap A (See detail sh. 445 Max. spacing 10'-0")



ELEVATION
(LOOKING EAST)



SECTION A-A



All Notes and Dimensions on Pier No. 1 Elevation Apply to Pier No. 2 Elevation

ELEVATION
(LOOKING WEST)

8" Pipe Throughout

Work This Drawing With Typical Drawing Sheet No. 445 "Typical Drainage Details"

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

DRAINAGE DETAILS

BRIDGE No. HAM.-71-0271

H&E BRIDGE No. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	L.B.K.	R.S.	J.H.O. 8/20/64	H.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

442
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HAMILTON COUNTY
HAM-71-(1.56) (2.51)

SUPERSTRUCTURE

Mark	Type	No.	Length	Weight
S501	GO	414	7'-7"	3274
S502	2	414	3'-4"	1439
S503	1	414	3'-3"	1403
S504	14	360	6'-0"	2253
S505	4	6	10'-0"	63
S601	Str.	862	25'-10"	33447
S602	Str.	12	17'-5"	315
S603	Str.	12	6'-10"	123
S604	Str.	890	32'-9"	43779
S605	Str.	160	24'-0"	5768
S701	Str	862	26'-0"	45810
S702	Str.	12	17'-7"	431
S703	Str.	12	6'-10"	168
S704	58	6	10'-4"	127
S705	43	6	6'-2"	76
S706	61	6	5'-9"	71
H504	Str.	120	17'-3"	*
H505	Str.	16	22'-9"	*
H506	58	6	8'-1"	*

Total Super. = 138,547 Pounds

WEST ABUTMENT

Mark	Type	No.	Length	Weight	Mark	Type	No.	Length	Weight
A502	1	40	8'-3"	34	A576	Str.	4	26'-5"	110
A507	1	34	8'-11"	316	A577	Str.	2	6'-8"	14
A508	Str	40	25'-6"	1064	A578	Str.	2	5'-9"	12
A509	1	34	6'-4"	225	A579	Str.	2	4'-9"	10
A510	1	36	5'-2"	194	A580	Str.	2	3'-10"	8
A517	Str.	12	5'-10"	73	A581	Str.	2	3'-0"	6
A519	Str.	50	7'-11"	413					
A520	Str.	16	3'-7"	60					
A521	20	2	9'-5"	20					
A531	32	38	6'-4"	251					
A533	18	6	10'-0"	63					
A534	18	7	10'-2"	74	A606	1	4	19'-9"	119
A535	18	6	10'-4"	64	A607	1	2	8'-2"	25
A536	18	6	10'-6"	66	A608	1	2	7'-5"	22
A537	18	9	10'-8"	100	A609	Str.	4	9'-10"	60
A538	Str.	4	20'-7"	86	A610	7	36	19'-6"	1054
A539	Str.	6	18'-9"	117	A613	8	6	16'-1"	145
A540	Str.	2	22'-9"	47	A614	8	7	16'-3"	171
A541	Str.	6	26'-7"	166	A615	8	6	16'-5"	148
A542	Str.	8	2'-8"	22	A616	8	6	16'-7"	149
A543	Str.	2	2'-9"	6	A617	1	6	10'-2"	92
A544	Str.	2	2'-10"	6	A618	1	34	10'-10"	553
A545	Str.	2	3'-3"	7	A621	Str.	5	11'-3"	84
A546	Str.	2	3'-10"	8	A622	1	23	23'-4"	806
A547	Str.	2	4'-5"	9	A623	1	24	22'-0"	793
A548	Str.	2	5'-0"	10	A624	Str.	4	10'-7"	64
A549	Str.	2	5'-7"	12	A625	8	9	16'-9"	226
A550	Str.	6	6'-2"	39					
A551	Str.	2	6'-3"	13					
A552	Str.	2	6'-4"	13					
A553	Str.	2	6'-5"	13					
A554	Str.	2	6'-6"	14	A801	Str.	18	28'-10"	1386
A555	Str.	2	6'-7"	14	A804	46	4	23'-1"	247
A556	Str.	2	6'-8"	14	A806	46	4	20'-1"	214
A557	Str.	2	6'-9"	14	A807	46	2	17'-1"	91
A558	Str.	2	6'-10"	14	A808	46	2	20'-11"	112
A559	Str.	2	6'-11"	14					
A560	Str.	2	7'-0"	15					
A561	Str.	2	7'-1"	15					
A562	Str.	2	7'-2"	15					
A563	Str.	2	7'-3"	15	H502	Str.	4	26'-7"	*
A564	Str.	2	7'-4"	15	H503	Str.	4	26'-5"	*
A565	Str.	2	7'-5"	15					
A566	Str.	2	7'-6"	16					
A567	Str.	2	7'-7"	16					
A568	Str.	2	7'-8"	16					
A569	Str.	2	7'-9"	16					
A570	Str.	2	7'-10"	16					
A571	20	2	8'-1"	17					
A572	Str.	4	20'-5"	85					
A573	Str.	6	18'-7"	116					
A574	Str.	2	20'-10"	43					
A575	Str.	2	22'-11"	48					

Total W. Abut. = 10,875 Pounds

EAST ABUTMENT

Mark	Type	No.	Length	Weight	Mark	Type	No.	Length	Weight
A501	18	9	11'-1"	104					
A502	1	38	8'-3"	327					
A503	18	6	11'-0"	69					
A504	18	6	10'-10"	68					
A505	18	7	10'-8"	78					
A506	18	6	10'-6"	66					
A507	1	12	8'-11"	112					
A508	Str.	40	25'-6"	1064					
A509	1	34	6'-4"	225					
A510	1	36	5'-2"	194					
A511	Str.	8	10'-2"	85					
A512	Str.	12	6'-4"	79					
A513	Str.	32	8'-2"	273					
A514	Str.	2	13'-2"	27					
A515	Str.	2	11'-5"	24					
A516	Str.	8	16'-2"	135					
A517	Str.	12	5'-10"	73					
A518	Str.	6	5'-11"	37					
A519	Str.	10	7'-11"	83					
A520	Str.	16	3'-7"	60					
A522	Str.	4	5'-9"	24					
A523	Str.	4	5'-4"	22					
A524	Str.	4	5'-0"	21					
A525	Str.	4	4'-8"	19					
A526	Str.	4	4'-3"	18					
A527	Str.	4	3'-11"	16					
A528	Str.	4	3'-6"	15					
A529	Str.	4	3'-2"	13					
A530	20	4	10'-5"	43					
A531	32	2A	6'-4"	159					
A532	56	16	9'-5"	157					
					A601	8	9	17'-3"	233
					A602	8	6	17'-2"	155
					A603	8	6	17'-0"	153
					A604	8	7	16'-10"	177
					A605	8	6	16'-8"	150
					A606	1	4	19'-9"	119
					A607	1	2	8'-2"	25
					A608	1	2	7'-5"	22
					A609	Str.	4	9'-10"	59
					A610	7	36	19'-6"	1054
					A611	1	7	24'-0"	252
					A612	Str.	10	11'-10"	178
					A617	1	4	10'-2"	61
					A618	1	12	10'-10"	195
					A619	1	7	22'-8"	238
					A620	Str.	10	11'-2"	168
					A801	Str.	18	28'-10"	1386
					A802	Str.	4	13'-0"	139
					A803	Str.	8	9'-6"	203
					A805	56	4	7'-9"	83
					H501	Str.	8	16'-2"	*

Total E. Abut. = 8,740 Pounds

PIERS

Mark	Type	No. Pier 1	No. Pier 2	No. Total	Length	Weight
P501	Str.	4	4	8	22'-4"	186
P502	Str.	2	2	4	34'-0"	142
P503	Str.	8	8	16	24'-10"	414
P504	1	184	184	368	10'-0"	3838
P505	1	22	22	44	10'-8"	490
P506	1	102	102	204	15'-2"	3227
P507	1	38	38	76	14'-6"	1149
P508	1	22	22	44	9'-6"	436
P509	1	36	36	72	6'-5"	482
P510	1	36	36	72	5'-5"	407
P601	Str.	-	18	18	18'-6"	500
P602	Str.	9	10	19	34'-6"	985
P603	20	8	8	16	15'-9"	379
P604	Str.	-	18	18	16'-6"	446
P605	Str.	24	32	56	19'-4"	1626
P606	6	24	32	56	7'-10"	659
P1001	43	-	52	52	21'-4"	4773
P1002	43	28	32	60	37'-4"	9639
P1003	Str	8	8	16	23'-0"	1584
P1004	Str	8	8	16	20'-0"	1377
P1005	62	4	4	8	43'-10"	1509
P1006	62	4	4	8	41'-4"	1423
P1007	43	44	-	44	19'-4"	3660
P1101	44	60	60	120	8'-11"	5685
P1102	Str.	-	60	60	26'-1"	8315
P1103	18	4	4	8	20'-8"	878
P1104	Str	4	4	8	34'-7"	1470
P1105	Str.	60	-	60	21'-4"	6801
P1106	18	4	4	8	38'-3"	1626
P1107	Str	4	4	8	17'-0"	723

Total Piers = 64,829 Pounds

WEST ABUTMENT

Mark	a	b	c	d	e
A502	5'-4"	1'-7"			
A507	6'-0"	1'-7"			
A509	3'-5"	1'-7"			
A510	3'-5"	1'-0"			
A521	1'-4½"	7'-5"	2'-0"	1'-5½"	
A531	0'-8"	2'-6			
A533	1'-7"	8'-6"			
A534	1'-7"	8'-8"			
A535	1'-7"	8'-10"			
A536	1'-7"	9'-0"			
A537	1'-7"	9'-2"			
A571	0'-10½"	6'-1"	2'-0"	1'-9"	
A606	1'-5"	9'-4"			
A607	6'-6"	1'-0"			
A608	5'-9"	1'-0"			
A610	0'-11"	8'-7"	1'-11"	1'-5"	7'-3"
A613	2'-7"	5'-4"	8'-6"		
A614	2'-7"	5'-4"	8'-8"		
A615	2'-7"	5'-4"	8'-10"		
A616	2'-7"	5'-4"	9'-0"		
A617	5'-4"	2'-7"			
A618	6'-0"	2'-7"			
A622	1'-2"	11'-3"			
A623	1'-2"	10'-7"			
A625	2'-7"	5'-4"	9'-2"		

Mark	Radius
A804	22'-0"
A806	18'-9"
A807	16'-6"
A808	20'-0"
	21'-6"
	16'-0"
	17'-9"
	19'-9"

SUPERSTRUCTURE

Mark	a	b	c	d	e	f	g	h	i
S501	0'-6"	6'-9"	0'-1¾"	0'-6"	0'-6"				
S502	1'-4"	0'-3"	1'-0"	1'-3¾"	1'-0"				
S503	1'-6"	1'-0"							
S504	0'-9"	2'-4"							
S505	2'-4"	1'-10"	1'-10"	2'-4"	2'-1"	2'-9"	2'-9"	3'-9"	0'-9"
S704	1'-8"	2'-6"	3'-9"	2'-6"	0'-9"	1'-9"			
S705	2'-5"	1'-10½"	1'-3¾"	1'-4"	0'-6"				
S706	0'-5"	1'-4"	2'-11"						
H506	1'-8"	1'-9½"	2'-7½"	1'-9½"	0'-9"	1'-11"	1'-11"	2'-7½"	0'-9"

PIERS

Mark	a	b	c	d	e
P504	1'-10½"	4'-2"			
P505	1'-10½"	4'-6"			
P506	1'-10½"	6'-9"			
P507	1'-10½"	6'-5"			
P508	1'-10½"	3'-11"			
P509	2'-8"	2'-0"			
P510	2'-8"	1'-6'			
P603	0'-8"	13'-9"	2'-0"	1'-10½"	
P606	3'-10"	2'-0"	Radius = 1'-2		
P1001	18'-6"				
P1002	34'-6"				
P1005	4'-9"	4'-9"	30'-4"	6'-9"	
P1006	5'-3½"	5'-3½"	26'-4"	7'-6"	
P1007	16'-6"				
P1101	7'-4"				
P1103	4'-0"	17'-0"			
P1106	4'-0"	34'-7"			

★ Note Reinforcing bar mark "H" are included in Item 5-14 (Railing) for payment.

EAST ABUTMENT

Mark	a	b	c	d	e
A501	1'-7"	9'-8"			
A502	5'-4"	1'-7"			
A503	1'-7"	9'-7"			
A504	1'-7"	9'-5"			
A505	1'-7"	9'-3"			
A506	1'-7"	9'-1"			
A507	6'-0"	1'-7"			
A509	3'-5"	1'-7"			
A510	3'-5"	1'-0"			
A530	3'-0½"	2'-0"	8'-5"	7'-10"	
A531	0'-8"	2'-6"			
A532	4'-5"	1'-7"	6'-3"	1'-7"	4'-5"
A601	2'-7"	5'-4"	9'-8"		
A602	2'-7"	5'-4"	9'-7"		
A603	2'-7	5'-4"	9'-5"		
A604	2'-7"	5'-4"	9'-3"		
A605	2'-7"	5'-4"	9'-1"		
A606	1'-5"	9'-4"			
A607	6'-6"	1'-0"			
A608	5'-9"	1'-0"			
A610	0'-11"	8'-7"	1'-11"	1'-5"	7'-3"
A611	1'-2"	11'-7"			
A617	5'-4"	2'-7"			
A618	6'-0"	2'-7"			
A619	1'-2"	10'-11"			
A805	1'-11"	2'-6"	2'-9"	2'-6"	1'-11"

REPLACEMENT BARS

Mark	Type	No	Length
RE501	Str.	2	5'-7"
RE601	Str.	5	5'-11"
RE701	Str.	3	6'-3"
RE801	Str.	1	6'-6"
RE1001	Str	2	7'-3"
RE1101	Str	2	7'-7"

NOTE:
Work this sheet with Typical Drawing No. 446

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CINCINNATI, OHIO

REINFORCING STEEL LIST

BRIDGE NO. HAM-71-0271

H&E BRIDGE NO. 20

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	TLZ		JHO	W.A.Z. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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Note 1

REFERENCE shall be made to Standard Drawings AR-1-57 "Revised 4-2-62", FSB-1-62 "Revised 1-15-63", SD-1-63 dated 11-12-63 Sheet Nos. 2 and 4, Supplemental Specification No. S-307 "Rev. 10-1-64," Supplemental Specification No. I-129 "Revised 4-5-61", and Supplemental Specification No. S-101 dated 7-12-62.

Note 2

PILES: Since the structures of this project are to constructed in a metropolitan area where there are numerous areas in which buildings have been dismantled and the existing basements filled with boulders, gravel, bricks, and other random debris, the Contractor shall use augering, spudding or whatever means are necessary to permit the piles to be driven without damaging them whenever the above conditions are encountered.

Note 3

WELDING shall be Class "A" except as shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class "B" welds are shown thus: B

Note 4

POROUS BACKFILL (where called for in the plans) shall be 2ft. thick and shall extend up to the underside of the approach slab or sidewalk unless otherwise noted.

Note 5

DECK PLACING PROCEDURE: In placing the deck concrete, construction joints will be permitted parallel to the transverse reinforcing steel and near the middle of any span. Because of the flow of curing water from the surface of previously placed concrete, the sequence of pours shall be upgrade, starting at the lowest point or points in the grade line.

Note 6

UTILITY LINES: All labor and expense involved in relocating (installing) the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

Note 7

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

Note 8

HIGH-STRENGTH STEEL BOLTS: Item S-7.10, paragraph two (2), shall be completely revised and the last sentence of paragraph four (4) revised to read as follows:

"In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bridge the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner.

"Bolt lengths determined by the use of Table No. I shall be adjusted to the next 1/4 inch length increment."

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GENERAL NOTES

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	MJE 8-5-64		JHO 8-11-64	R.A.E. 5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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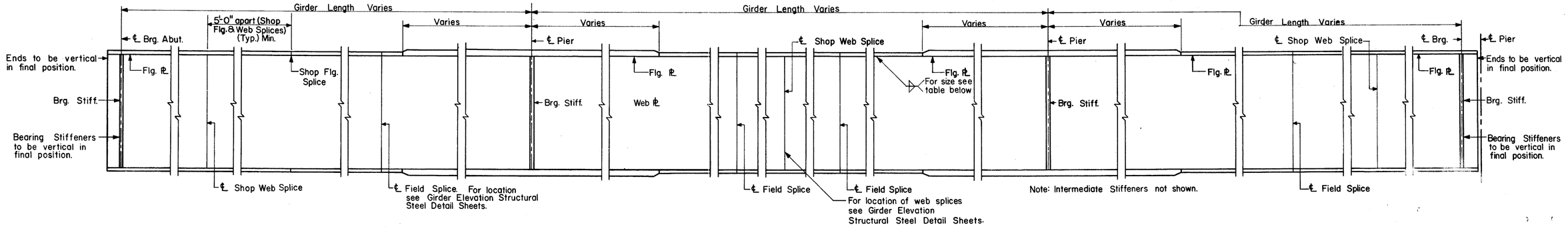
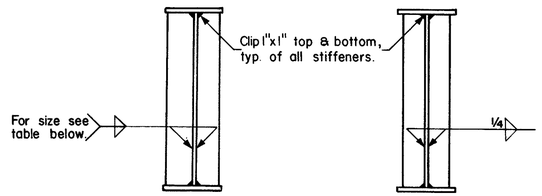
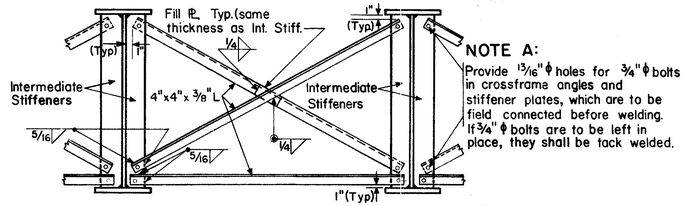


END SPAN BETWEEN ABUT. & PIER — INTERIOR SPAN — END SPAN BETWEEN PIERS

TYPICAL PLATE GIRDER ELEVATIONS

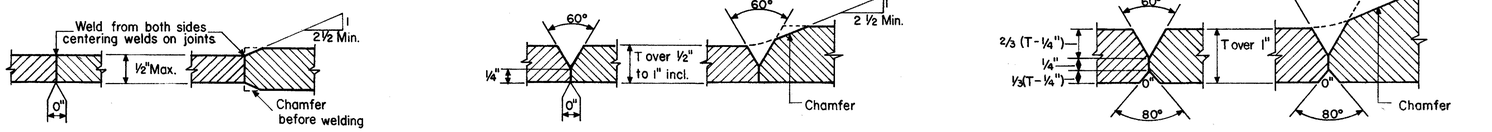


BEARING STIFFENERS — INTERMEDIATE STIFFENERS



TYPICAL INTERMEDIATE CROSSFRAME
(Unless otherwise noted)

NOTE A:
Provide $^{13}/_{16}$" ϕ holes for $^{3}/_{4}$" ϕ bolts in crossframe angles and stiffener plates, which are to be field connected before welding. If $^{3}/_{4}$" ϕ bolts are to be left in place, they shall be tack welded.



JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS

All of the above full penetration welds shall be back-gouged and welded after welding far side.

Butt welds on beam and girder flange plates shall be ground flush, the finish grinding being parallel to the direction of stress.

TABLE OF FILLET WELD SIZES

Plate Thickness	Fillet Weld Size
Up to 3/4"	1/4"
Over 3/4" to 1 1/2"	5/16"
Over 1 1/2" to 2 1/4"	3/8"
Over 2 1/4" to 6"	1/2"

Plate Thickness refers to the thickness of the thicker part joined.

NOTES:

Bearing Stiffeners over abutments and piers shall be grooved and fully butt-welded to the lower flange and fitted in close contact without welding to the upper flange.

Intermediate Stiffeners shall have contact bearing with the compression flange, but may have a clearance of not more than 1/8" from the tension flange. In shop painting care shall be taken to make certain that paint is forced through from one side to the other of the 1/8" opening.

For examination of welds for all plate girder spans see Supplemental Specification No. S-307.

The contractor shall submit to the Director, for approval, 3 prints showing erection procedure for the plate girders.

Structural Steel- ASTM A36 —basic unit stress 20,000psi

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TYPICAL STRUCTURAL STEEL DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.J.E.		J.H.O.	W.A.Z. 5-20-65	

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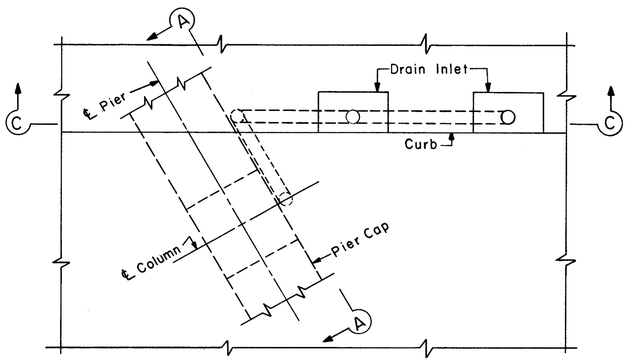
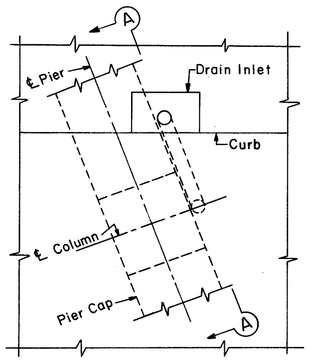
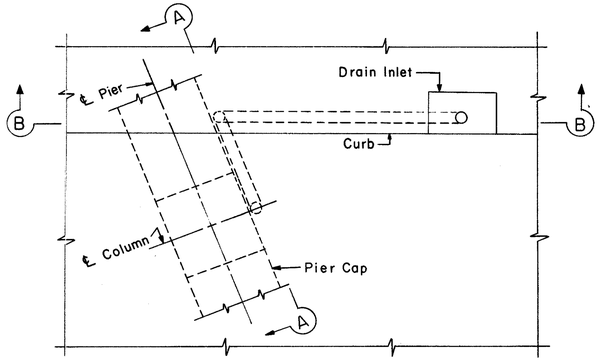
For location of drain inlets, see superstructure details.



PLAN

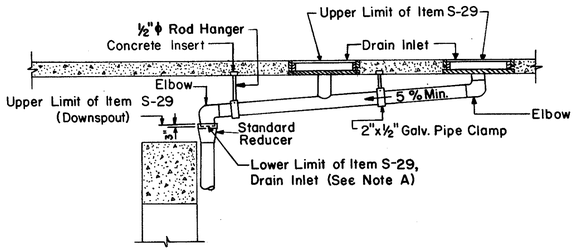


PLAN

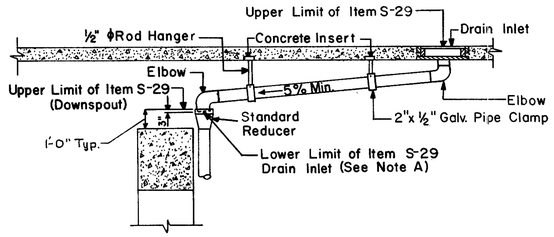


PLAN

Note: Type of Plan to be used depends upon location of inlet with respect to pier.

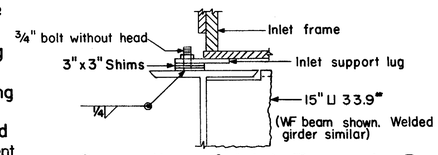


SECTION C-C

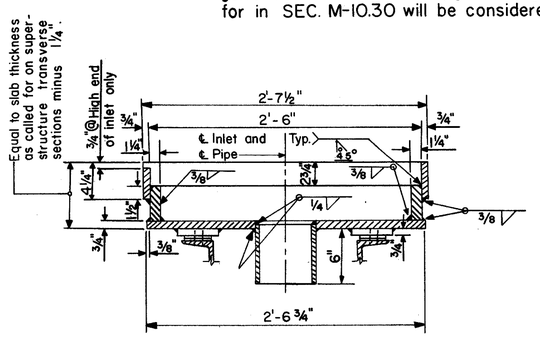


SECTION B-B

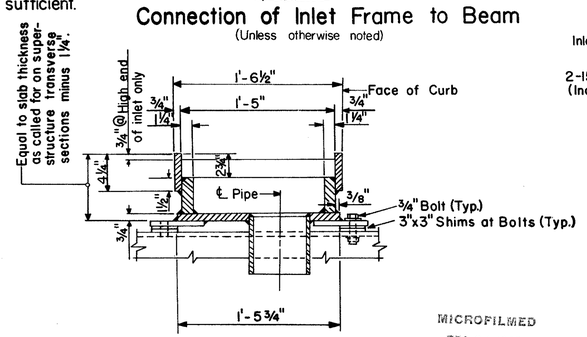
NOTE: Downspouts shall be 6"or 8" standard wrought iron pipe or hot-dipped galvanized steel pipe. (For size see superstructure) Joints shall be made by welding or by the use of a clamp type coupling with a ring gasket. All welding shall be done before galvanizing. Straps or clamps for attaching downspouts shall be wrought iron or hot-dipped galvanized steel. On bolts, galvanizing as called for in SEC. M-10.30 will be considered sufficient.



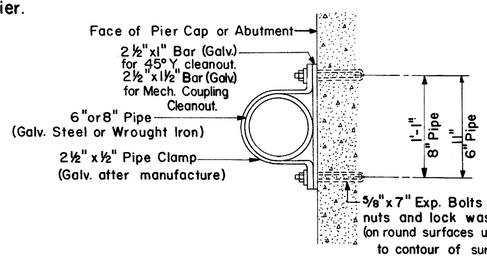
Connection of Inlet Frame to Beam
(Unless otherwise noted)



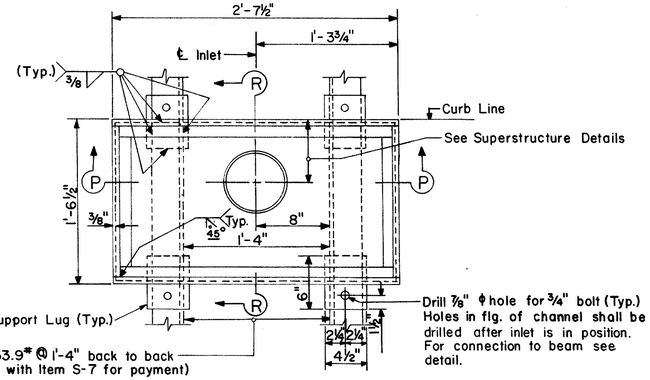
SECTION P-P



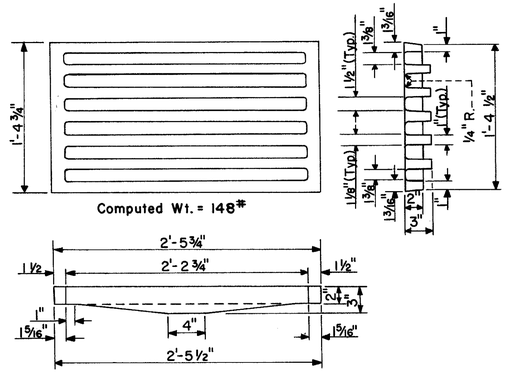
SECTION R-R



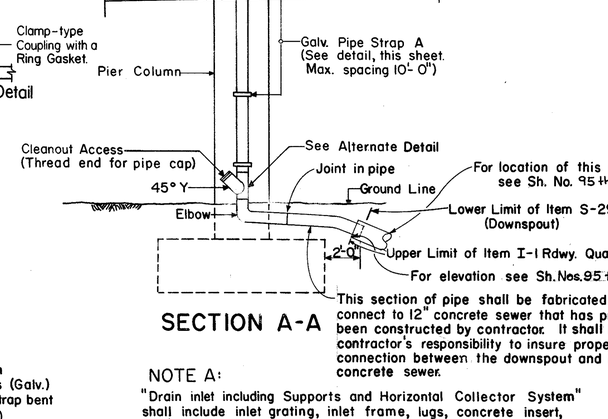
STRAP DETAIL "A"
For mounting on flat surface.



INLET FRAME



INLET GRATING
(City of Cincinnati Acc. No. 49012)



SECTION A-A

NOTE A:
"Drain inlet including Supports and Horizontal Collector System" shall include inlet grating, inlet frame, lugs, concrete insert, ½" ϕ rod hanger, 2"x½" galvanized pipe clamp, and standard pipe for payment, Item S-29.

NOTES:-

For location of inlets, see superstructure details.

Inlet grating castings shall meet the requirements of Sec. M-7.8 of the Material Specifications of the State of Ohio.

Gratings and Inlets shall be fitted to each other without rattling by grinding grating casting as necessary.

Inlet frame to be welded structural steel plates and standard steel pipe, galvanized after fabrication

Weld channels to beam with 5/16" continuous fillet weld. Weld to beam webs only.

Space lugs on inlets to permit bolting to supporting channels and beams.

Where drain inlet is located adjacent to beams without cover plates, cope channels so top of channel is flush with top of beams.

Where drain inlet is located adjacent to beams with cover plates, cope channels so that the distance top of channel to top of slab is equal to the minimum slab thickness as called for on the superstructure transverse sections.

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TYPICAL DRAINAGE DETAILS

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
		M.J.E.	J.H.O.	5-20-65	

FED. RD. DIV.	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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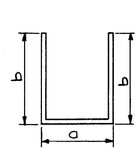
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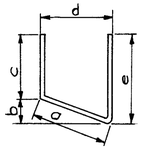
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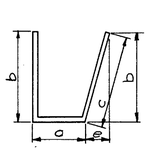
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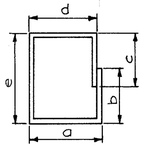
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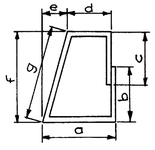
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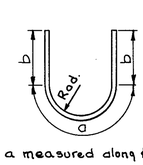
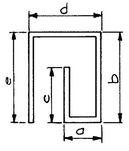

a measured along ℄ bar
Type 6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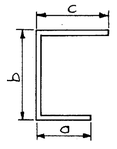
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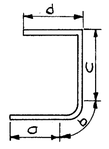
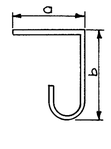

b measured along ℄ bar
Type 9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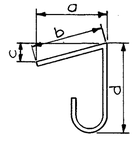
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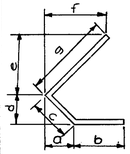
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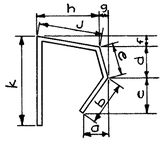
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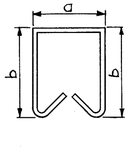
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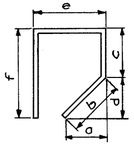
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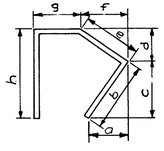
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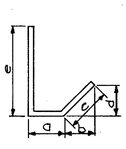
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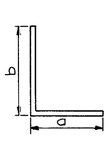
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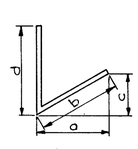
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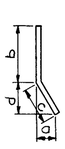
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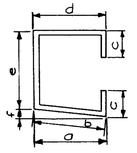
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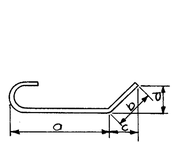
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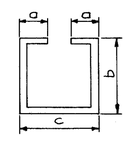
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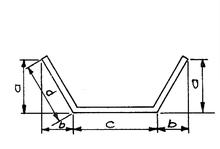
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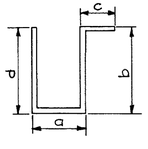
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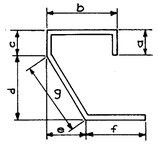
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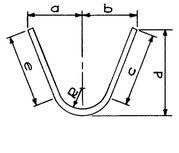
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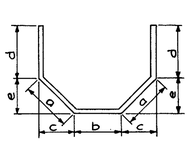
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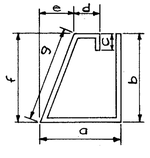
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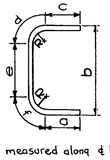
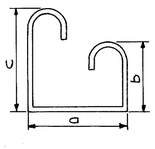

d & f measured along ℄ bar
Type 28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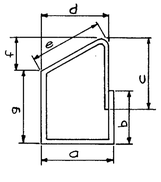
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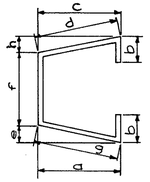
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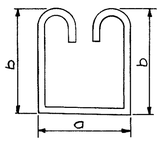
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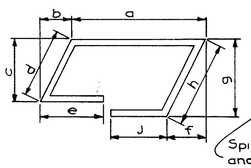
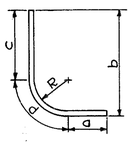
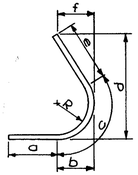
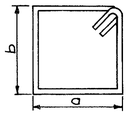

Spiral bar (For pitch and number of turns see Steel Reinf. List)
Type 63

Type 64


d measured along ℄ bar
Type 33


c measured along ℄ bar
Type 34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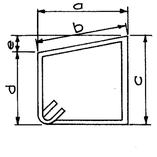
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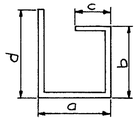
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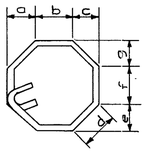
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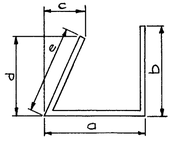
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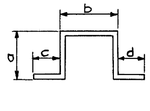
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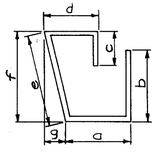
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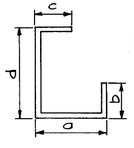
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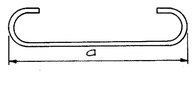
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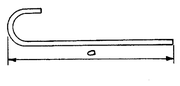
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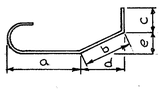
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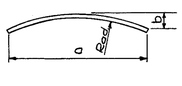
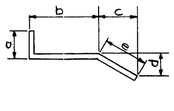

Base
Type 46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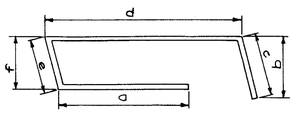
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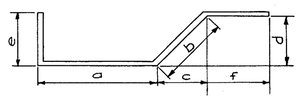
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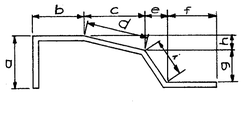
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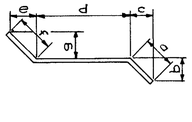
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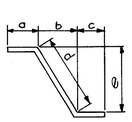
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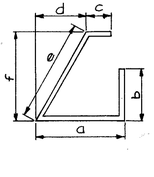
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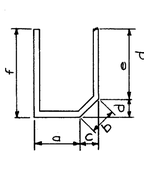
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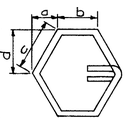
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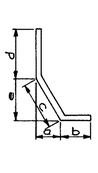
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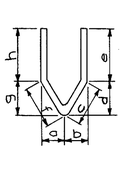
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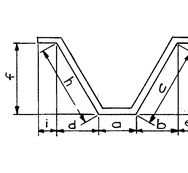
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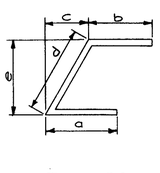
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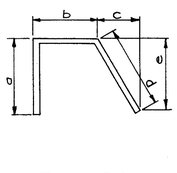
Type 60

NOTES

Bars shall be carefully shaped to the pertinent dimensions shown in table I Standard Bends Sheet 212 of the State of Ohio Construction and Material Specifications, unless otherwise indicated above.

Bar size is indicated in the bar mark. The first digit in bar mark beginning with numbers 4 thru 9 indicate the bar size. The first two digits in bar marks beginning with numbers 10 or 11 indicate the bar size.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 5-4.1½ closed coils shall be provided at the ends of each spiral unit.

Four (or three) steel channel tee or angle spacers, weighing approximately 0.68 lbs. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lbs. per lin. ft. will be paid for as reinforcing and is included in the tabulated quantity of spiral bars.

HAZELET & ERDAL
CONSULTING ENGINEERS
CINCINNATI, OHIO

BAR BENDING SCHEDULE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	M.C.P.		JHO 12/3/65	W.H.E. 5-28-65	