SUPERSTRUCTURE

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.
A201								#6	3'-0"	22	99
A202								6	3'-6"	12	63
A203								6	4'-0"	26	156
A204								6	4'-6"	18	122
A205								6	5'-0"	18	135
A206								6	5'-6"	22	180
A207								6	6'-0"	22	198
A208								6	6'-6"	22	215
A209								6	7'-0"	22	231
A210								6	7'-6"	20	225
A211								6	8'-0"	20	240
A212								6	8'-6"	18	230
A213								6	9'-0"	20	270
A214								6	9'-6"	26	371
A215								6	10'-0"	20	300
A216								6	10'-6"	20	315
A217								6	11'-0"	18	297
A218								6	11'-6"	18	311
A219								6	12'-0"	18	324
A220								6	12'-6"	22	413
A221								6	13'-0"	368	7186
A222								6	13'-6"	16	324
A223								6	14'-0"	12	252
A224								6	14'-6"	8	174
A225								6	15'-0"	8	180
A226								6	15'-6"	8	186
A227								6	16'-0"	6	144
A228								6	16'-6"	308	7633
A229								6	17'-0"	2	51
A230								6	17'-6"	6	158
A231								6	34'-6"	16	829
A232								5	37'-9"	6	236
A233								4	37'-9"	6	151
A234								5	39'-0"	36	1464
A235								4	38'-9"	27	699
A236								5	40'-0"	36	1502
A237								4	39'-9"	24	637
A238								5	34'-3"	6	214
A239								4	34'-3"	42	961
A240								6	34'-3"	8	412
A241								6	7'-0"	2	21
A242								6	10'-6"	2	32
A243								6	14'-0"	2	42
A244								6	19'-6"	2	59
A245								6	24'-6"	2	74
A246								6	30'-0"	2	90
A247								6	37'-0"	2	111
A248								6	23'-6"	4	141
A249								6	29'-0"	4	174
A250								4	17'-6"	1	12
A251								4	5'-6"	1	4
A252								4	4'-6"	1	3
A253								4	3'-6"	1	2
A254								4	3'-0"	3	6
A255								6	22'-9"	12	410
A256								6	29'-0"	8	348
A257								4	13'-0"	2	17
A258								6	14'-0"	18	379
A259								6	12'-0"	18	324
A260								6	24'-0"	8	288
A261								6	17'-9"	4	107
A262								4	38'-3"	15	383
A263								6	37'-9"	12	680
A264								5	21'-0"	52	1139
A265								4	21'-0"	56	786
A266								5	14'-9"	4	103
A267								4	24'-9"	14	231
A268								5	28'-0"	1	29
A269								5	20'-0"	1	21
A270								5	13'-0"	1	14
A271								5	8'-0"	1	8
A272								5	5'-0"	1	5
A273								4	28'-0"	1	19
A274								4	20'-0"	1	13
A275								4	13'-0"	1	9
A276								4	8'-0"	1	5
A277								4	5'-0"	1	3
A278								4	6'-6"	1	4

SUPERSTRUCTURE

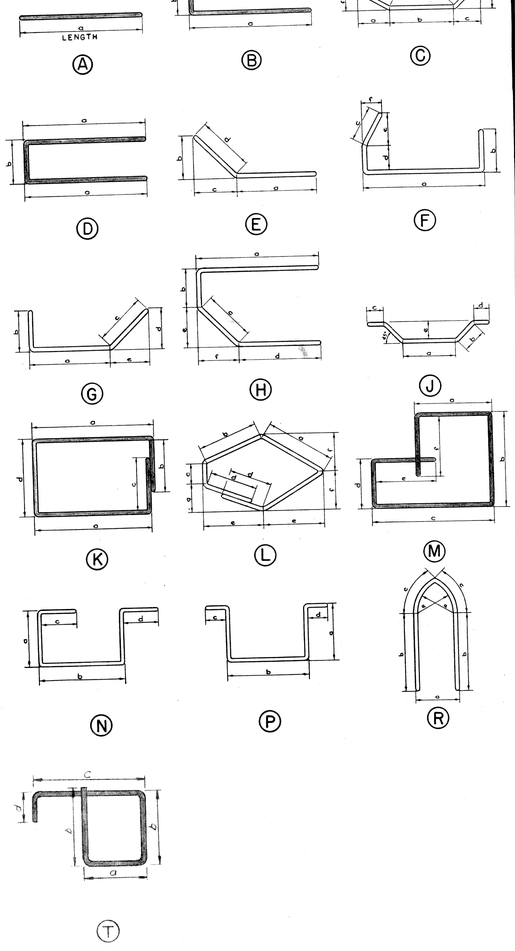
BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.
A279								4	5'-6"	1	4
A280								4	5'-0"	1	3
A281								4	4'-0"	1	3
A282								4	3'-0"	4	8
A283								4	10'-9"	16	115
A284								4	2'-9"	8	15
A285								4	16'-6"	4	44
A286								4	24'-3"	24	389
A287								4	9'-6"	16	102
A288								4	7'-6"	4	20
A289								4	29'-0"	16	310
B201	7'-2½"	3"						4	7'-5"	109	540
B202	7'-0"	3"						4	7'-2½"	1	5
B203	6'-6"	3"						4	6'-8½"	2	9
B204	6'-0"	3"						4	6'-2½"	2	8
B205	5'-6"	3"						4	5'-8½"	2	8
B206	5'-0"	3"						4	5'-2½"	2	7
B207	4'-6"	3"						4	4'-8½"	2	6
B208	4'-0"	3"						4	4'-2½"	2	6
B209	3'-6"	3"						4	3'-8½"	6	15
B210	13'-0"	3"						4	13'-2½"	1	9
C201	2'-10⅝"	7⅛"						6	6'-3"	108	1014
C202	2'-6⅝"	7⅛"						6	5'-7"	123	1031
D203	6"	11"						4	1'-10"	129	158
D204	10"	8"						4	2'-3"	124	186
K201	10¾"	6¼"	6"	8⅛"				4	3'-5"	446	1018
K202	4'-8¼"	1'-0"	1'-0"	1'-3½"				4	12'-7"	18	151
K203	4'-10"	1'-9"	1'-9"	2'-9⅛"				4	15'-10⅛"	1	11
K204	4'-8⅝"	1'-6"	1'-6"	2'-2½"				4	14'-7¼"	1	10
K205	4'-9½"	1'-10"	1'-10"	2'-10½"				4	15'-2½"	1	10
M201	10¼"	4'-5"	1'-3½"	4'-5"	11⅜"	1'-6"		4	11'-4"	48	363
T201	1'-3½"	1'-2"	1'-7½"	1"				4	5'-8"	121	458

SUPERSTRUCTURE TOTAL = 40,222#

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.

Total Steel Reinforcement Sheet 21	70,303 #
Total Steel Reinforcement Sheet 22	40,222 #
Grand Total Steel Reinforcement	110,525 #

BAR BENDING DIAGRAM



Note:—
All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.
All bar numbers shown on this sheet are to be prefixed S49.
Steel for reinforcement shall be intermediate or hard grade only.

Tolerances in cutting and bending bars are as established in Manual of Standard Practice of the Concrete Reinforcing Steel Institute and Detailing Manual of the American Concrete Institute.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW990121

MICHIGAN STATE HIGHWAY DEPARTMENT

STEEL REINFORCEMENT DETAILS

CITY OF DETROIT

REVISIONS NO	DESCRIPTION	DATE	BY

SQUAD BOSS	Watts	
DRAWN BY	R Nosik	9/68
TRACED BY		
CHECKED BY	R.O.H. J.M.	1/68

SHEET 22 OF 22

S49 of 82123K

ABUTMENT

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.
A 1	7'-0"							#6	7'-0"	311	3270
A 2	15'-6"							#6	15'-6	97	2258
A 3	12'-3"							#7	12'-3"	43	1077
A 4	8'-3"							#8	8'-3	42	925
A 5	23'-0"							#4	23'-0"	24	369
A 6	22'-0"							#4	22'-0"	64	941
A 7	29'-0"							#4	29'-0"	24	465
A 8	9'-9"							#7	9'-9"	44	877
A 9	17'-6"							#6	17'-6"	58	1525
A 10	11'-0"							#9	11'-0"	99	3703
A 11	9'-9"							#8	9'-9"	26	677
A 12	19'-6"							#7	19'-6"	15	598
A 13	13'-0"							#10	13'-0"	28	1566
A 14	14'-0"							#6	14'-0	40	841
A 15	9'-0"							#8	9'-0"	90	2163
A 16	8'-0							#8	8'-0"	13	278
A 17	21'-9"							#6	21'-9"	22	719
A 18	26'-0"							#6	26'-0"	15	586
A 19	27'-0							#6	27'-0"	42	1703
A 20	6'-6"							#6	6'-6"	74	722
A 21	18'-6							#9	18'-6"	35	2202
A 22	5'-0"							#6	5'-0"	250	1878
A 23	17'-3"							#6	17'-3"	36	933
A 24	23'-6"							#4	23'-6"	84	1319
A 25	25'-0"							#4	25'-0"	48	802
A 26	36'-3"							#6	36'-3"	8	436
A 27	12'-6"							#6	12'-6"	32	601
A 28	15'-0"							#8	15'-0"	16	641
A 29	8'-0"							#8	8'-0"	16	342
A 30	10'-0"							#9	10'-0"	79	2686
A 31	8'-6"							#6	8'-6"	32	409
A 32	6'-0"							#6	6'-0"	73	658
A 33	9'-3"							#6	9'-3"	33	458
A 34	4'-9							#6	4'-9"	32	228
A 35	7'-3							#8	7'-3"	32	619
A 36	11'-0"							#6	11'-0"	30	496
A 37	23'-6"							#6	23'-6"	30	1059
A 38	25'-6"							#6	25'-6"	31	1187
A 39	15'-6"							#6	15'-6"	24	559
A 40	9'-3"							#7	9'-3"	35	662
A 41	35'-0							#6	35'-0"	4	210
A 42	18'-3"							#6	18'-3"	50	1371
A 43	21'-0"							#4	21'-0"	32	449
A 44	15'-6"							#4	15'-6"	32	331
A 45	6'-6							#7	6'-6"	37	492
A 46	8'-6"							#6	8'-6"	71	906
A 47	33'-0"							#6	33'-0"	18	892
A 48	10'-3"							#6	10'-3"	38	585
A 49	11'-0"							#6	11'-0"	46	760
A 50	5'-6							#6	5'-6"	35	289
A 51	13'-0"							#4	13'-0"	4	35
A 52	17'-9							#4	17'-9	12	142
A 53	4'-6							#6	4'-6"	32	216
A 54	9'-0							#6	9'-0	34	460
A 55	23'-0							#6	23'-0	4	138
A 56	24'-6							#6	24'-6	8	294
A 57	7'-9							#6	7'-9"	34	396
A 58	17'-6							#9	17'-6	5	298
A 59	13'-0							#9	13'-0	6	265
A 60	9'-6							#6	9'-6	1	14

ABUTMENT (Cont.)

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.
B 1	2'-6"	2'-6"						#4	5'-0	6	20
C 1	0'-5"	3'-5"	1'-6"	1'-5 1/2"				#6	6'-5"	12	116
C 2	0'-6"	3'-2"	1'-6"	1'-5"				#6	6'-2"	7	65
D 1	2'-10 5/8"	0'-7 1/2"						#6	6'-3"	153	1436
E 1	2'-0"	0'-9"	1'-10"	2'-0"				#4	4'-0"	11	29
G 1	1'-2"	2'-0	3'-6"	3'-1	1'-8"			#4	6'-8"	12	53
G 2	1'-1"	2'-9"	1'-6"	1'-3"	0'-10"			#4	5'-4"	7	25
H 1	3'-0 1/16"	0'-6"	1'-8"	1'-6"	0'-5"	1'-7 1/2"		#4	6'-8"	4	18
K 1	0'-10 3/8"	0'-6 1/2"	0'-6"	0'-8 1/2"				#4	3'-5"	290	662

ABUTMENT TOTAL = 54,405#

PIER

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D.	TOTAL WT.
A 101	26'-6"							#8	26'-6"	26	1840
A 102	12'-6"							#9	12'-6"	45	1913
A 103	12'-6							#6	12'-6"	30	563
A 104	5'-9"							#10	5'-9"	64	1584
A 105	15'-6"							#10	15'-6"	64	4269
A 106	28'-3"							#9	28'-3"	6	576
A 107	24'-6"							#6	24'-6	2	74
A 108	8'-0"							#9	8'-0"	8	218
A 109	24'-6							#9	24'-6"	6	500
A 110	24'-6"							#4	24'-6"	3	49
A 111	20'-3"							#9	20'-3"	6	413
A 112	22'-3"							#6	22'-3"	2	67
A 113	20'-6"							#8	20'-6"	26	1423
A 114	21'-9"							#4	21'-9"	12	174
A 115	10'-0"							#4	10'-0	18	120
A 116	3'-9"							#6	3'-9"	50	282
A 117	24'-0"							#9	24'-0"	6	490
A 118	15'-6"							#4	15'-6	3	31
D 101	2'-0 5/8"	3'-1"						#5	7'-0"	2	15
D 102	2'-0 1/8"	3'-8"						#5	7'-7"	2	16
D 103	2'-0 3/8"	0'-6 1/2"						#4	4'-7"	12	37
D 104	7'-0 3/8"	0'-7 1/2"						#4	14'-8"	25	245
D 105	1'-5 3/8"	2'-5 1/4"						#4	5'-4"	27	96
K 101	3'-2 3/8"	1'-4"	1'-3 3/8"	1'-6 5/8"				#5	10'-5"	58	630
U 101	1'-1"	2'-4"	3'-6"	1'-1 3/8"				#5	5'-8"	7	41
V 101	2'-0 1/2"	0'-10"						#4	7'-3"	48	232

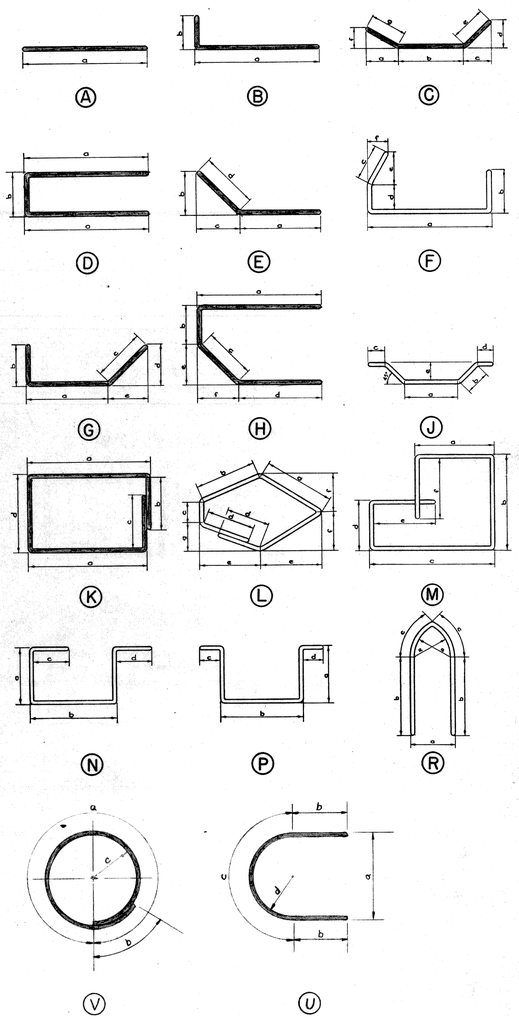
PIER TOTAL = 15,898#

Note:—
All right angle bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

See Sheet 22 for Notes and Grand Total Steel Reinforcement

TOTAL STEEL REINFORCEMENT THIS SHEET = 70,303 #

BAR BENDING DIAGRAM



PLANS PREPARED BY
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BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW99021

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

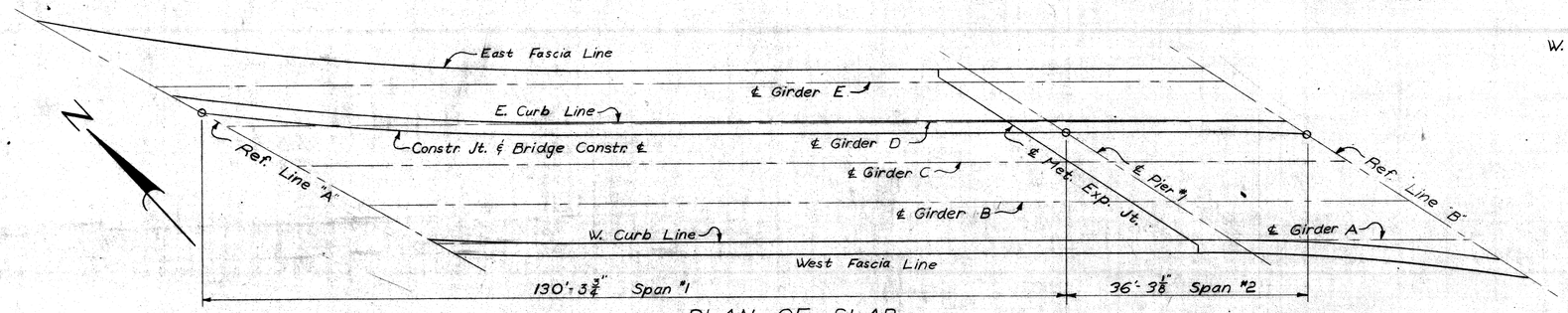
STEEL REINFORCEMENT DETAILS

CITY OF DETROIT

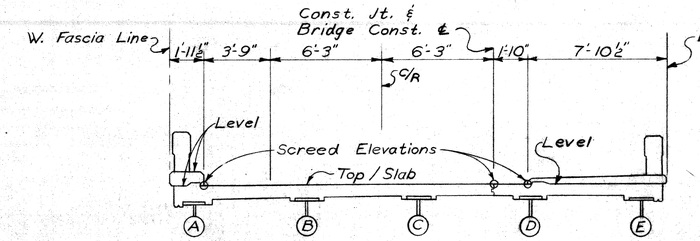
REVISIONS NO.	DESCRIPTION	DATE	BY

SQUAD BOSS Wolfe
DRAWN BY R Rosik 9/68
TRACED BY JM
CHECKED BY LBJ/RW 10-68
SHEET 21 OF 22

S49 of 82123K



PLAN OF SLAB



SCREED LOCATION

Ref. Line A — 12 Eq. Spaces Span #1 — ℄ Joint 6'-6" — ℄ Pier #1 — 4 Eq. Spaces Span #2 — Ref. Line B

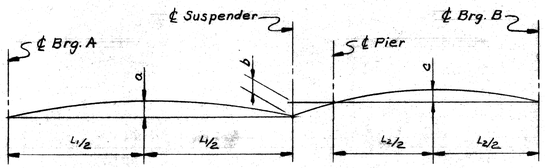
135.06	135.22	135.38	135.53	135.65	135.73	135.78	135.79	135.77	135.71	135.61	135.49	135.34	135.26	135.15	135.03	134.88	134.73	on E. Curb Line
135.20	135.36	135.52	135.65	135.76	135.83	135.86	135.85	135.81	135.73	135.62	135.48	135.32	135.23	135.11	134.97	134.82	134.65	on Const. Jt.
136.05	136.13	136.17	136.17	136.14	136.06	135.94	135.70	135.59	135.39	135.17	134.93	134.68	134.54	134.31	134.08	133.83	133.57	on W. Curb Line

SCREED ELEVATIONS

Ref. Line A — 12 Eq. Spaces Span #1 — ℄ Joint 6'-6" — ℄ Pier #1 — 4 Eq. Spaces Span #2 — Ref. Line B

134.41	134.57	134.75	134.92	135.06	135.17	135.23	135.25	135.22	135.16	135.07	134.94	134.79	134.73	134.64	134.53	134.40	134.27	on Girder E
134.66	134.77	134.89	135.00	135.10	135.17	135.21	135.21	135.17	135.10	135.00	134.87	134.71	134.64	134.53	134.40	134.26	134.10	on Girder D
134.99	135.10	135.20	135.28	135.34	135.37	135.37	135.32	135.23	135.11	134.96	134.80	134.61	134.51	134.37	134.21	134.04	133.86	on Girder C
135.25	135.34	135.42	135.46	135.48	135.46	135.41	135.30	135.15	134.99	134.80	134.60	134.38	134.26	134.09	133.91	133.73	133.54	on Girder B
135.43	135.51	135.55	135.56	135.53	135.46	135.34	135.18	134.99	134.78	134.55	134.31	134.06	133.92	133.72	133.53	133.34	133.15	on Girder A

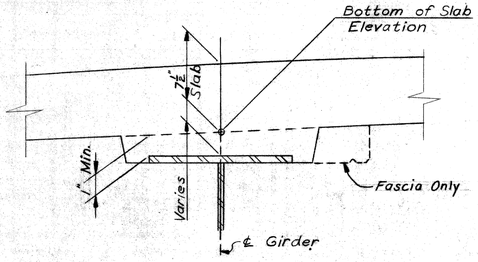
BOTTOM OF SLAB ELEV.
(For Loading Case I)



CAMBER DIAGRAM
For Loading Cases Shown in Table

CAMBER DIMENSION

SPAN		Span 1 a			℄ Suspender b			Span 2 c		
Loading Case		I	II	III	I	II	III	I	II	III
GIRDER	E	7"	6¼"	3"	0	0	-⅛"	0	0	0
	D	5½"	4¾"	2⅛"	0	0	-⅛"	0	0	0
	C	6⅜"	5½"	3⅜"	0	0	0	0	0	0
	B	6⅜"	5⅝"	3⅝"	0	0	0	0	0	0
	A	6¼"	5⅝"	3"	0	0	-⅛"	0	0	0



TYPICAL SECTION AT EACH GIRDER

GENERAL NOTES

Transverse strike-off finishing machine is to be used in placing deck concrete.

Screeds affected by loads in other spans are to be set to the elevations shown before casting any concrete. Concrete in the suspended span is to be cast before the concrete in the anchor span.

Bottom of slab elevations and cambers shown include allowances for deflection due to the weight of the structural steel, welding of shear developers, weight of forms, steel reinforcement, slab concrete, sidewalk, and railing as indicated in the following load cases:

Case I All structural steel erected and no other loads applied.

Case II Shear developers, forms, and steel reinforcement in place on structural Steel and no other loads applied.

Case III Slab, Shoulder, Brush Block and Parapet concrete in place on structural steel.

Screed elevations are based on the condition that no slab concrete has been cast and that formwork, steel reinforcement and shear developers are in place. The elevations are based on a slab thickness of 7½" and a variable haunch depth. After the screeds are set, if a check indicates that less than the minimum slab and haunch will be obtained, adjust the screeds accordingly.

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW990(2)

SUPERSTRUCTURE DETAILS

CITY OF DETROIT

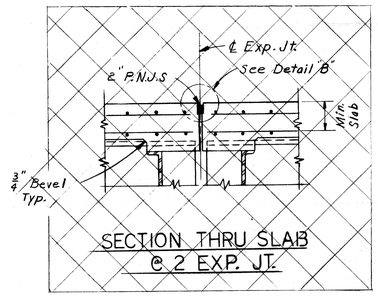
SQUAD BOSS	Watts	
DRAWN BY	Van Kerstbergen	4-10-68
TRACED BY		
CHECKED BY	JBW	10-18-68

SHEET 20 OF 22

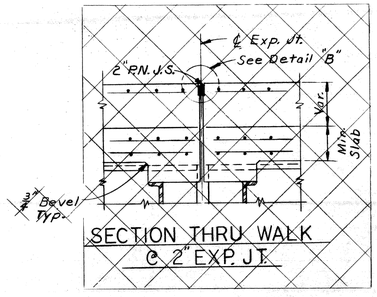
REVISIONS

NO.	DESCRIPTION	DATE	BY

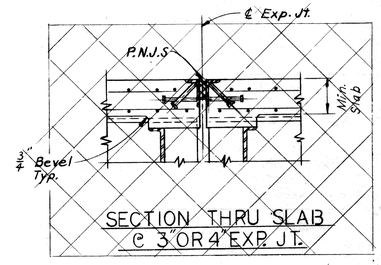
S49 of 82123K



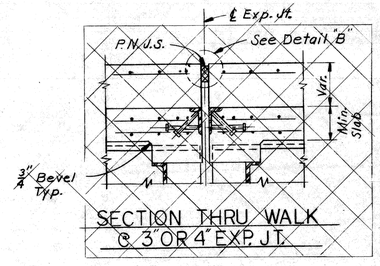
SECTION THRU SLAB
℄ 2" EXP. JT.



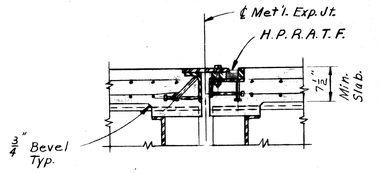
SECTION THRU WALK
℄ 2" EXP. JT.



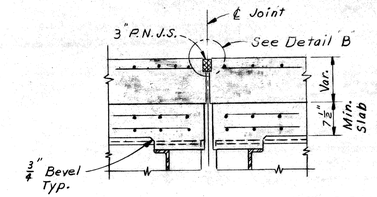
SECTION THRU SLAB
℄ 3" OR 4" EXP. JT.



SECTION THRU WALK
℄ 3" OR 4" EXP. JT.



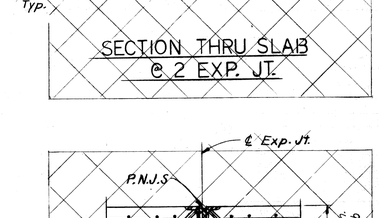
SECTION THRU SLAB
℄ METAL EXP. JT.



SECTION THRU BRUSH BLOCK
℄ METAL EXP. JT.

SECTION THRU SLAB
℄ CONSTR. JT.

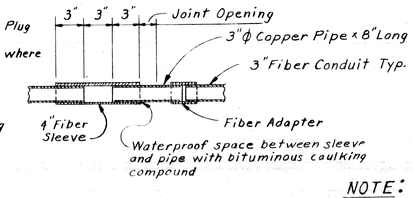
SECTION THRU WALK
℄ CONSTR. JT.



P.L.C. CONDUIT DETAIL
℄ EXP. JT.

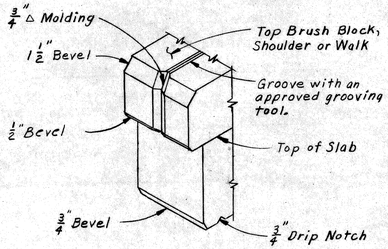
P.L.C. CONDUIT DETAIL
℄ BACKWALL

NOTE:
Use Plastic Plug for Future Installation where Applicable

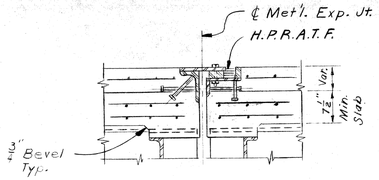


SLEEVE DETAIL

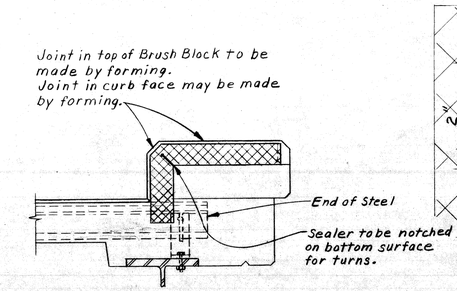
NOTE:
The contractor will furnish and place all the materials.
Sleeves, copper pipe, adapters, couplings, galvanized steel conduit, bushings, plug, and waterproofing are incidental to the item "3" Fiber conduit.



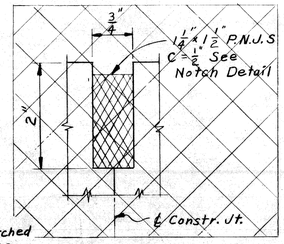
FASCIA MOLDING DETAIL



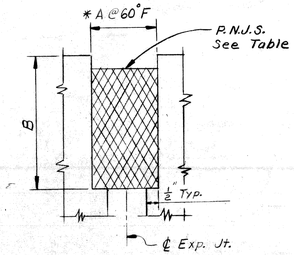
SECTION THRU SHOULDER
℄ METAL EXP. JT.



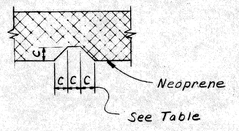
EXPAN. JT. ℄ CURBS
(SHOWN ℄ BRUSHBLOCK)



DETAIL A



DETAIL B



TYPICAL NOTCH

Joint Dimensions				
Sealer Size		Joint Size		Notch
Wd.	Dpth.	A	B	C
2"	2"	$1\frac{1}{4}" \pm \frac{1}{16}"$	$2\frac{3}{4}"$	1"
3"	$3\frac{13}{32}"$	$2" \pm \frac{1}{16}"$	$4\frac{3}{8}"$	$1\frac{1}{2}"$
4"	$4\frac{13}{32}"$	$2\frac{1}{2}" \pm \frac{1}{16}"$	$5\frac{3}{4}"$	$1\frac{1}{2}"$

* Increase by $\frac{1}{16}"$ for each 10° of beam temperature below 60°F. for each 70' of slab length or decrease by $\frac{1}{16}"$ for each 10° of beam temperature above 60°F. for each 70' of slab length (slab length is measured at right angles to joint.)

GENERAL NOTES

P.L.C. denotes Public Lighting Commission. J.W.P. denotes Joint Waterproofing.
N.F. denotes near face. E.F. denotes each face. F.F. denotes far face.
H.P.R.A.T.F. denotes Hot Poured Rubber Asphalt Type Filler.
For Bevel, Molding, and Railing details see M.D.S.H. Standard sheet R11 or R12.
Sidewalk pours shall not be cast until slab concrete has attained at least 50% of its design strength as determined in Section 5.01.05 of the Standard Specifications.
Edge and Groove denotes Edging and Grooving with an approved tool.
P.N.J.S denotes Preformed Neoprene Joint Sealer.
For location of name plate and mounting details, see General Plan of Structure Sheet and Sheets R11 or R12.
The contractor is to provide a sawed joint ½" deep by ⅛" wide (min.) in the top of slab over and parallel to the ℄ of piers. The sawed joint where called for on the plan is to be sawed before casting of shoulder or brush block and is to be filled with H.P.R.A.T.F. The sawing and H.P.R.A.T.F. are incidental to concrete.
Bridge Parapet shall conform to the details shown on Railing Standard R11 or R12 unless otherwise noted on plan. The metal railing posts and anchor bolts are to be omitted.

T denotes Top ℄ B or Bot. denotes Bottom of Slab.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEER'S OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. [illegible]

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

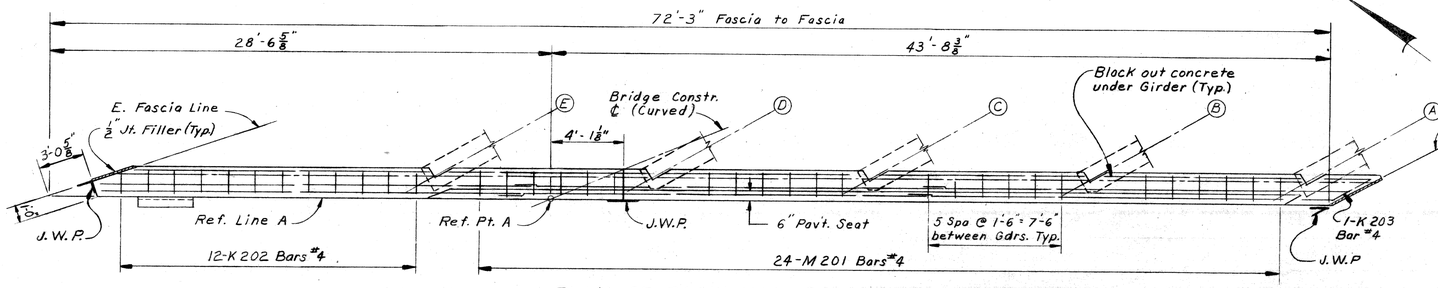
REVISIONS

NO	DESCRIPTION	DATE	BY

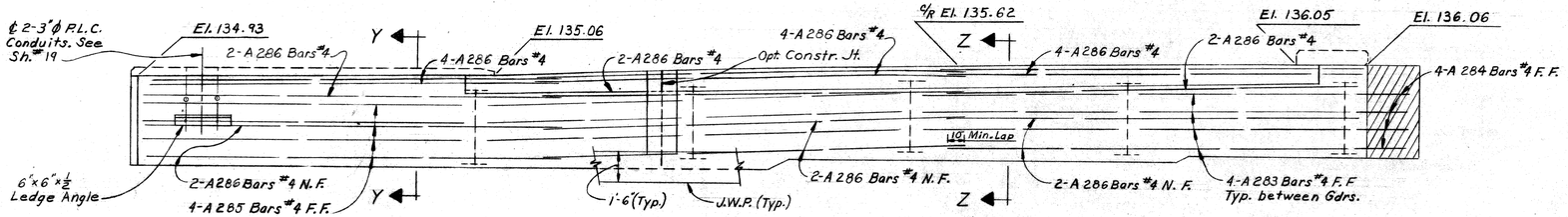
CITY OF DETROIT

SQUAD BOSS	Wolfe	3768
DRAWN BY	R. Rosik	
TRACED BY		
CHECKED BY	McGuire	4-68
SHEET 19 OF 22		

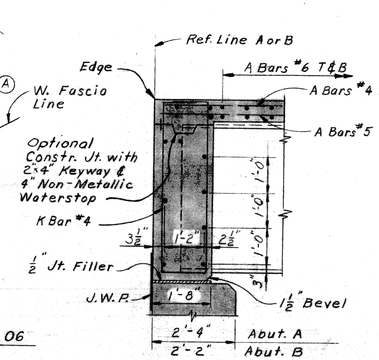
S49 of 82123K



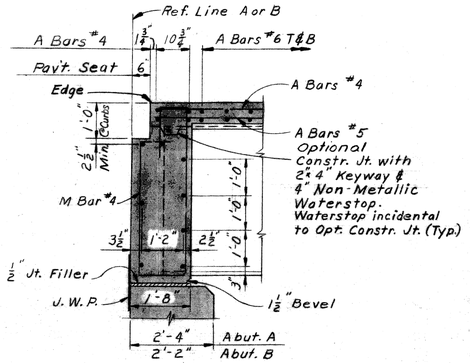
PLAN OF BACKWALL @ ABUT. A



ELEVATION OF BACKWALL @ ABUT. A

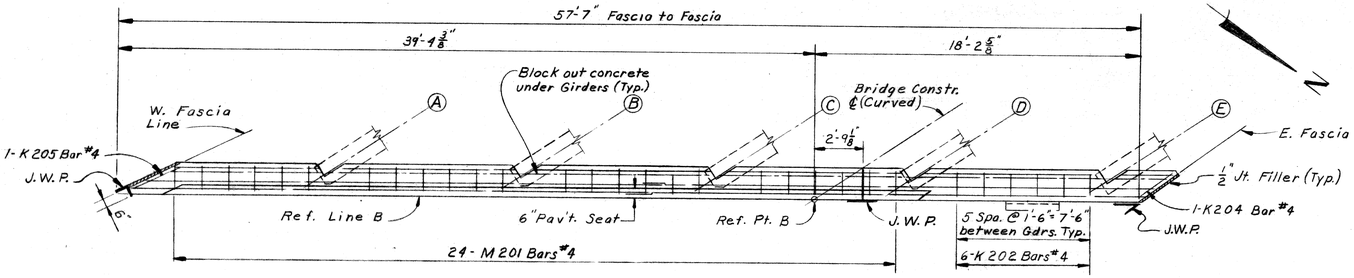


SECTION Y-Y

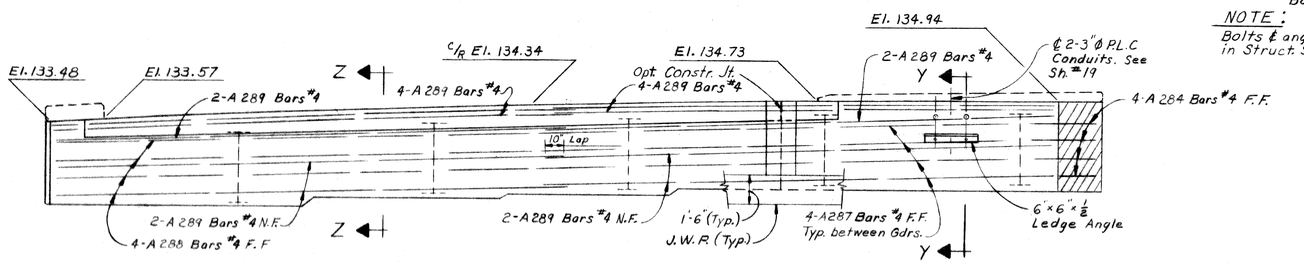


SECTION Z-Z

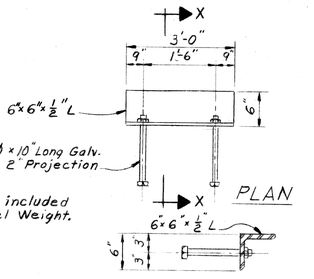
CONCRETE QUANTITIES			
Pour	Location	Suspended Span #1	Span #2 plus Cantilever
A	Slab	66.7	32.6
B	Slab	46.5	15.7
C	Brush Block	6.9	3.0
D	Shoulder	15.8	5.1
Total Cu. Yds. Gr. A 6AA = 192.3 Cu. Yds.			



PLAN OF BACKWALL @ ABUT. B



ELEVATION OF BACKWALL @ ABUT. B

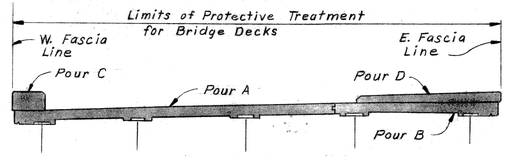


SECTION X-X

LEDGE ANGLE DETAILS

NOTE:
Bolts & angles included in Struct. Steel Weight.

NOTE:
Parapet Concrete Quantity = 18.1 Cu. Yds.
Incidental to Bridge Parapet.



POUR DIAGRAM

NOTE: Alphabetical designation of pours is not to be Construed as a pour sequence.

MISCELLANEOUS QUANTITIES		
Item	Amount	Unit
Handhole Frame & Cover	1	Each
Water Reducing - Retarding Admixture	28	Gals.
3" Preformed Neoprene Joint Sealer	4	Lin. Ft.
Hot Poured Rubber Asphalt Type Filler	46	Lin. Ft.
Joint Waterproofing	238	Sq. Ft.
Bridge Parapet	323.1	Lin. Ft.
3" ϕ Fiber Conduit	355	Lin. Ft
Protective Treatment for Bridge Decks	4630	Sq. Ft.
1/2" Joint Filler	76	Sq. Ft.

PLANS PREPARED BY
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APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 99012

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

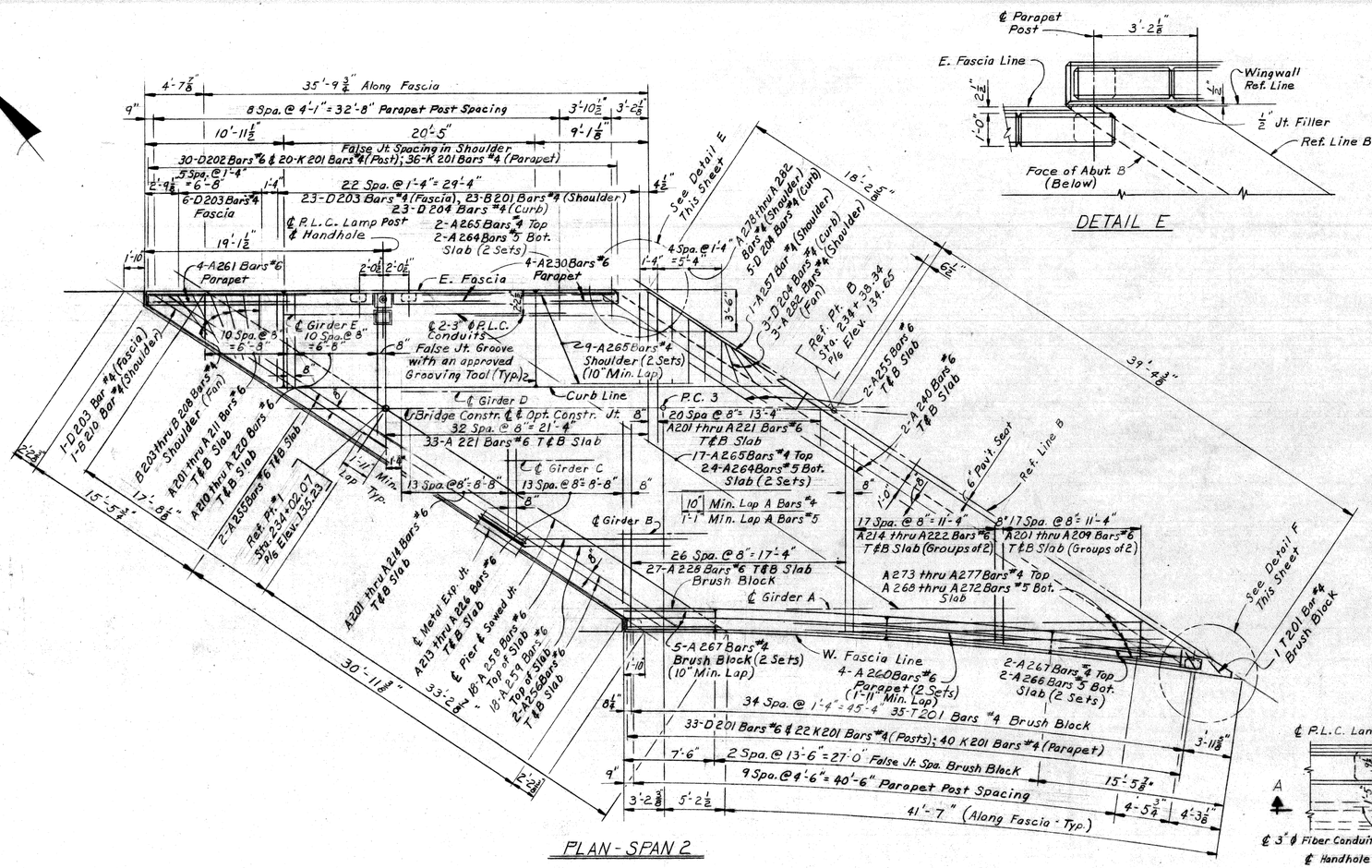
SUPERSTRUCTURE DETAILS

CITY OF DETROIT

REVISIONS			
NO.	DESCRIPTION	DATE	BY

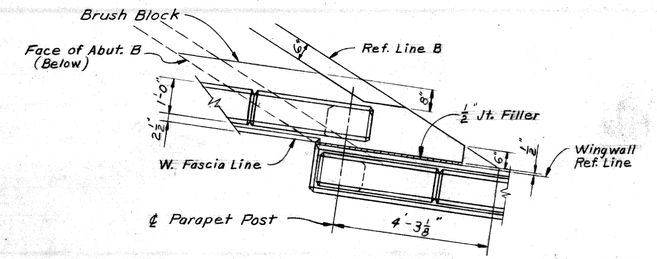
SQUAD BOSS	Watts		
DRAWN BY			
TRACED BY	A Rosik	5/68	
CHECKED BY	McGuire	5/68	
SHEET 18 OF 22			

S49 of 82123K

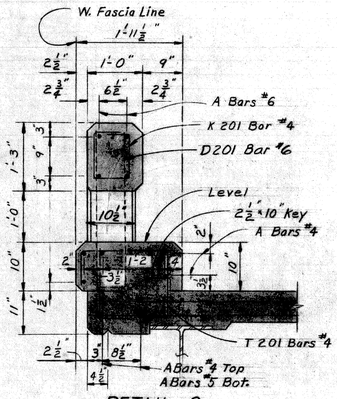


PLAN - SPAN 2

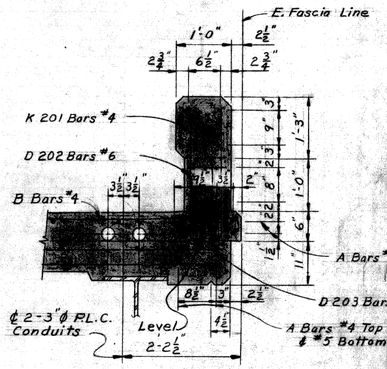
DETAIL E



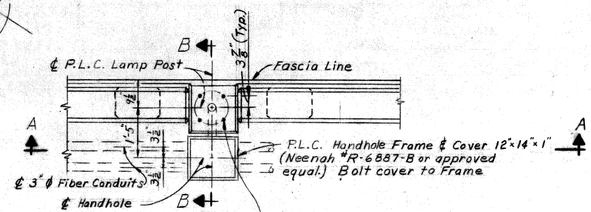
DETAIL F



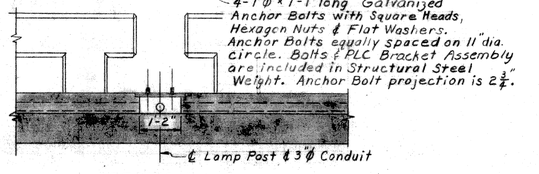
DETAIL - G



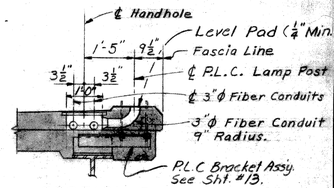
DETAIL - H



PLAN

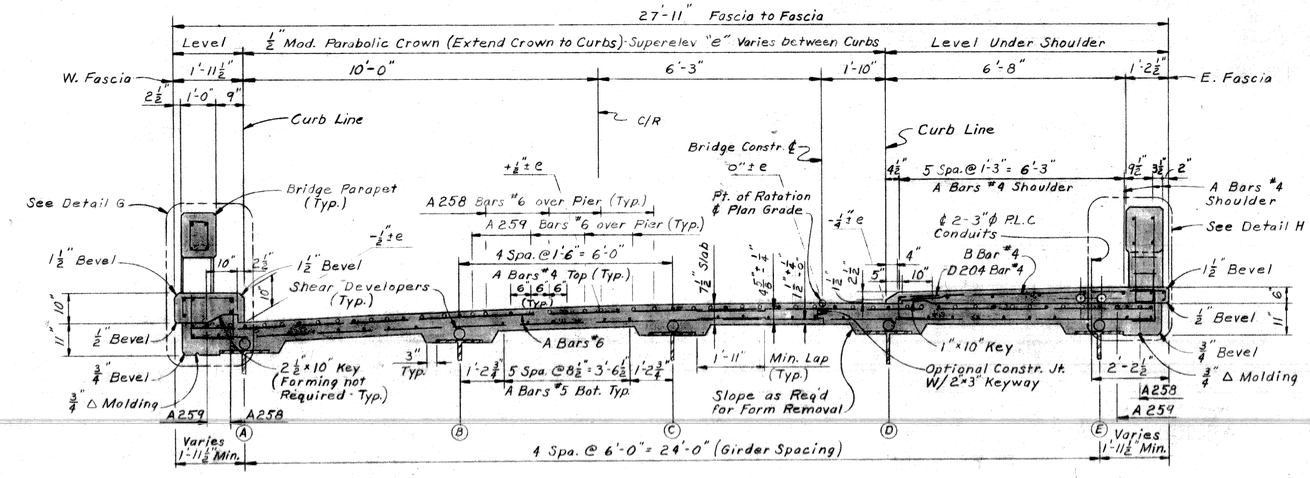


SECTION A-A



SECTION B-B

PL.C. LAMP POST BASE AND HANDHOLE DETAILS



CROSS SECTION

PLANS PREPARED BY
CITY OF DETROIT
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 9902I

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

SUPERSTRUCTURE DETAILS

REVISIONS

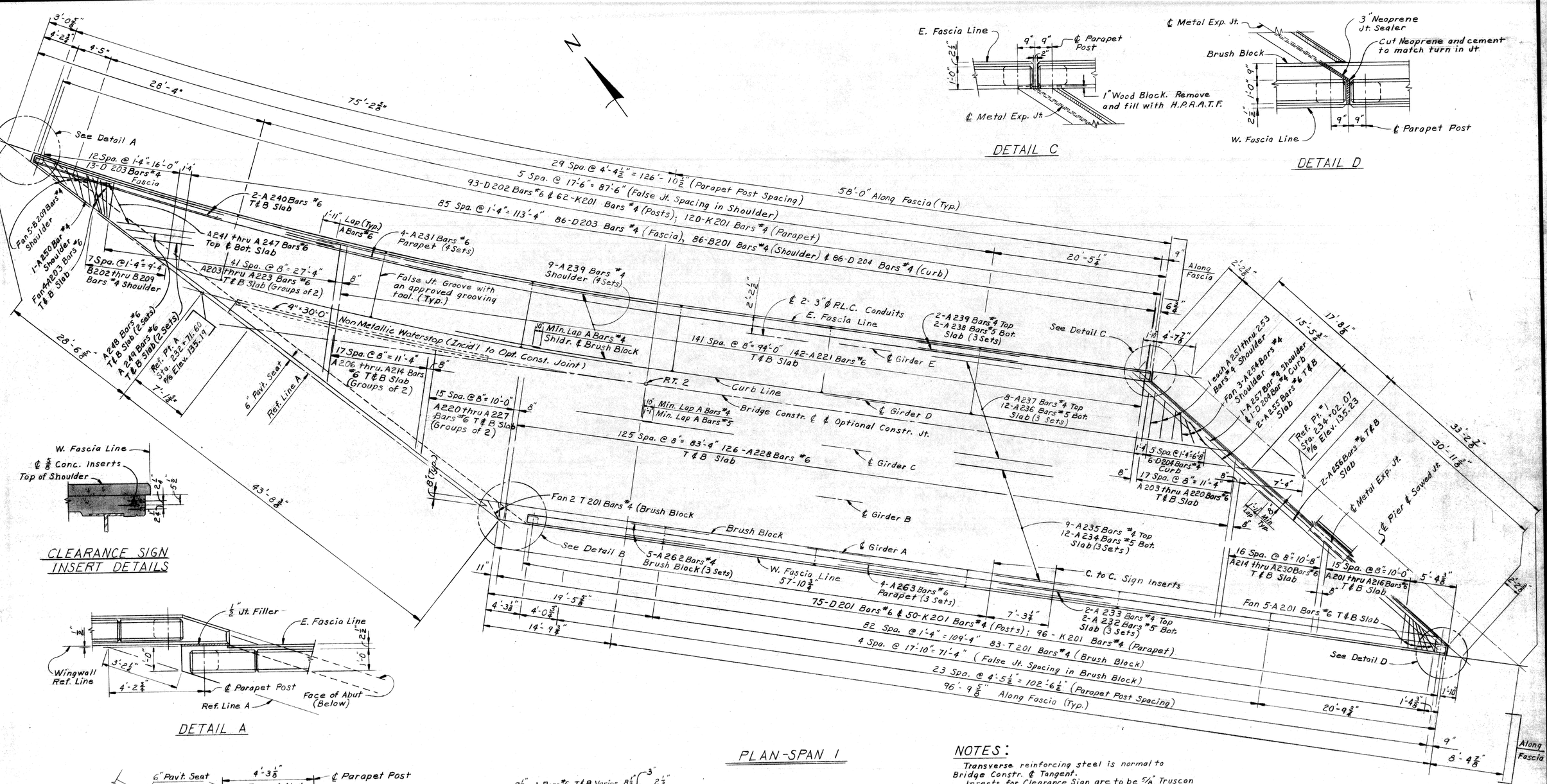
NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS	Watts	
DRAWN BY	R.Rosik	7/68
TRACED BY		
CHECKED BY	McGuire	7/68

SHEET 17 OF 22

S49 of 82123K



NOTES:

Transverse reinforcing steel is normal to Bridge Constr. ℄ Tangent.

Inserts for Clearance Sign are to be ⅝" Truscon threaded inserts or approved equal and are to be provided with a suitable setting plug.

Furnishing and placing concrete inserts is incidental to Superstructure Concrete.

Clearance Sign and Mounting Brackets are to be furnished and installed by others.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

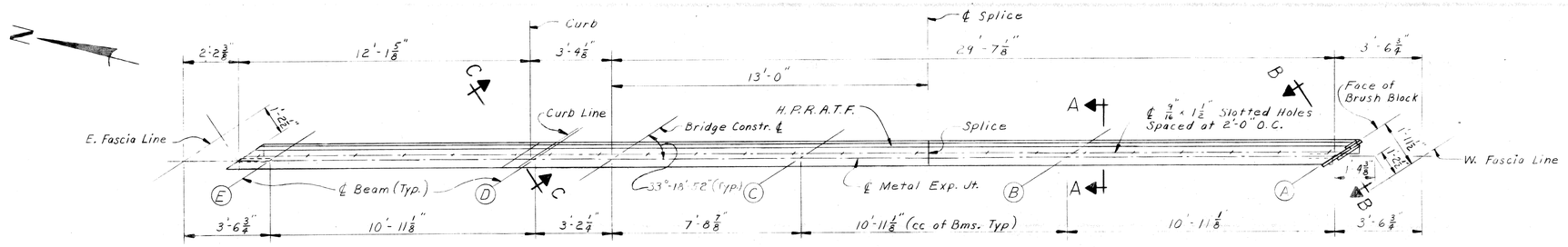
SUPERSTRUCTURE DETAILS

REVISIONS			
NO.	DESCRIPTION	DATE	BY

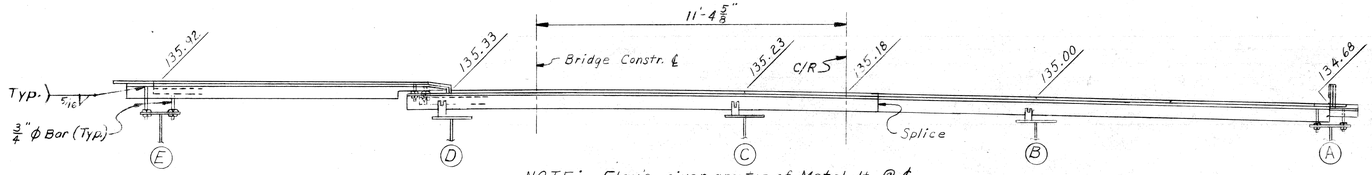
CITY OF DETROIT

ROAD BOSS	Watts
DRAWN BY	R Rosik 8/68
TRACED BY	
CHECKED BY	Mc Guire 9/68
SHEET	16 OF 22

S49 of 82123K

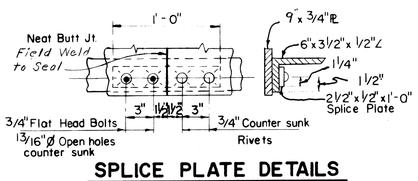


PLAN OF METAL EXP. JOINT

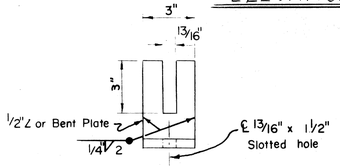


NOTE: Elev's. given are Top of Metal Jt. @ ℄ Metal Exp. Jt. before any concrete is poured.

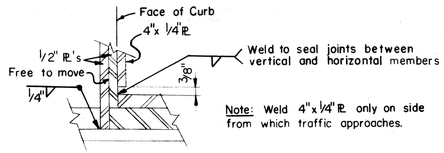
ELEVATION OF METAL EXP. JOINT



SPLICE PLATE DETAILS

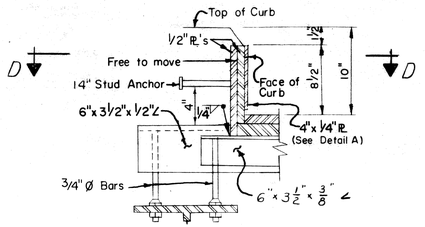


CLIP L DETAIL

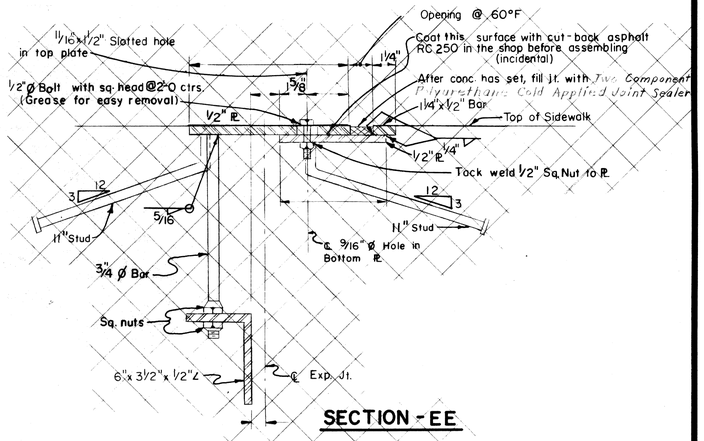


Note: Weld 4"x 1/4" PL only on side from which traffic approaches.

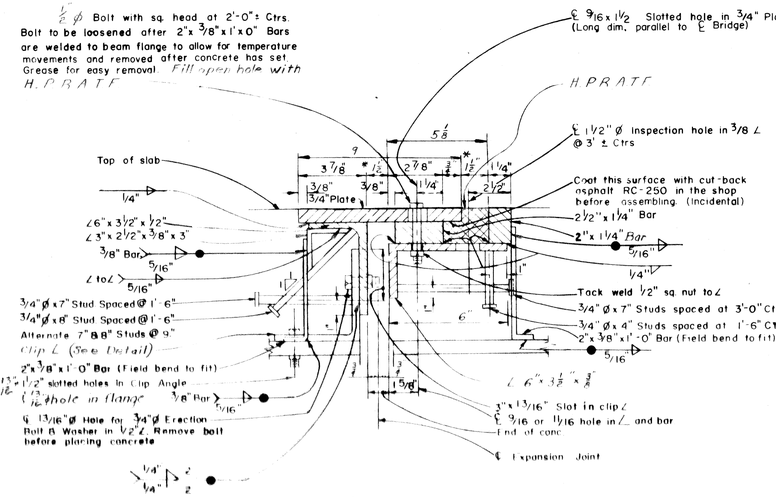
DETAIL A



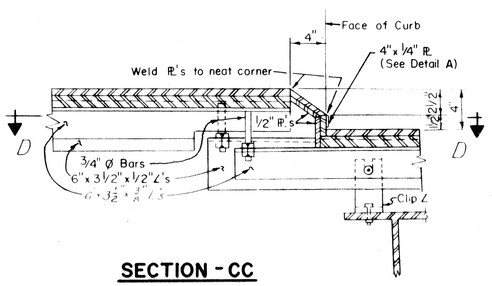
SECTION-BB



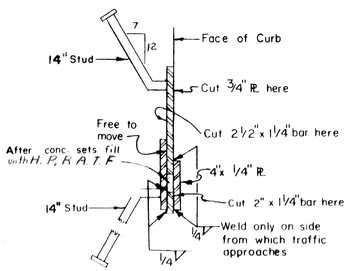
SECTION - EE



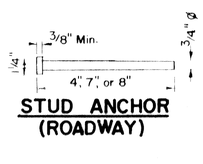
SECTION - AA



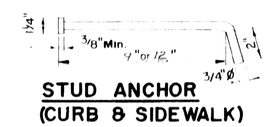
SECTION - CC



SECTION - DD



STUD ANCHOR (ROADWAY)



STUD ANCHOR (CURB & SIDEWALK)

NOTES:

The Metal Expansion Joint shall be bent in the shop to conform with the contour of the top of roadway slab.

H.P.R.A.T.F. is included in the Superstructure Quantities on sheet #18.

Weight of Metal Expansion Joints 3544 lbs.

Weight of Metal Expansion Joint is included in Structural Steel weight on sheet *13.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
STRUCTURAL ENGINEER

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

METAL EXPANSION JOINT DETAILS

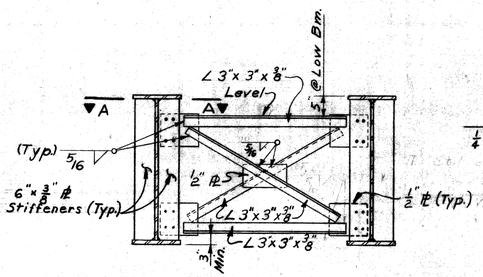
REVISIONS

NO	DESCRIPTION	DATE	BY

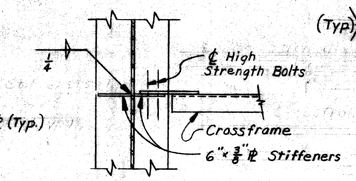
City of Detroit

SQUAD BOSS			
DRAWN BY	A Hopkins	1-6-68	
TRACED BY			
CHECKED BY			
SHEET	1/2	OF	2/2

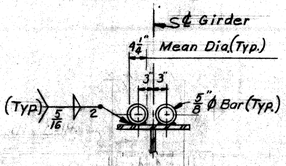
S49 of 82123K



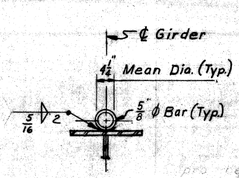
CF 1



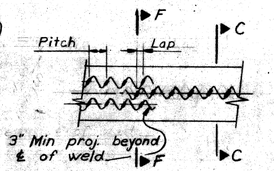
SECTION A-A
(CF 1)



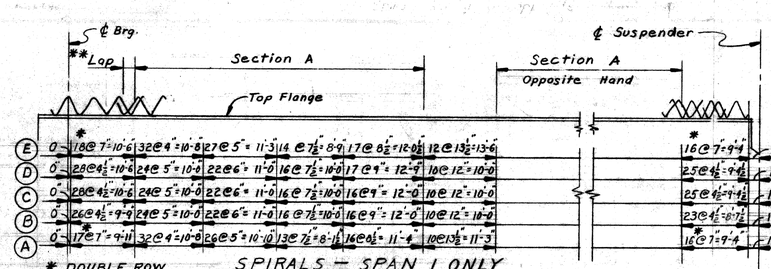
SECTION F-F



SECTION C-C



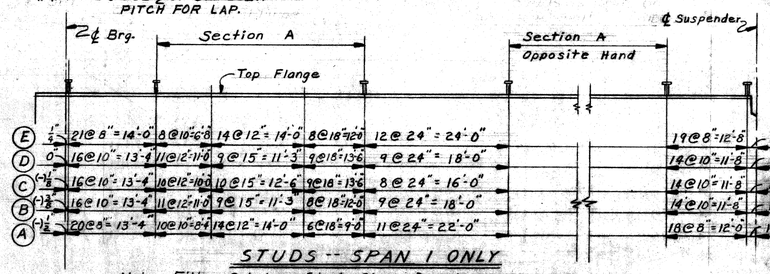
PLAN OF SPIRALS



* DOUBLE ROW

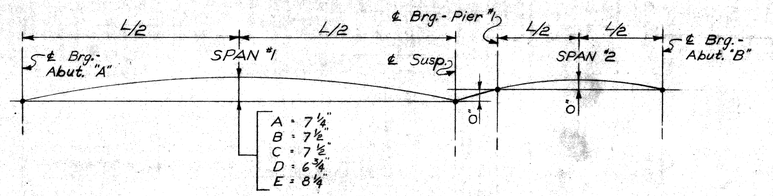
SPIRALS — SPAN 1 ONLY

** NOTE: USE ½ OF SMALLER PITCH FOR LAP.

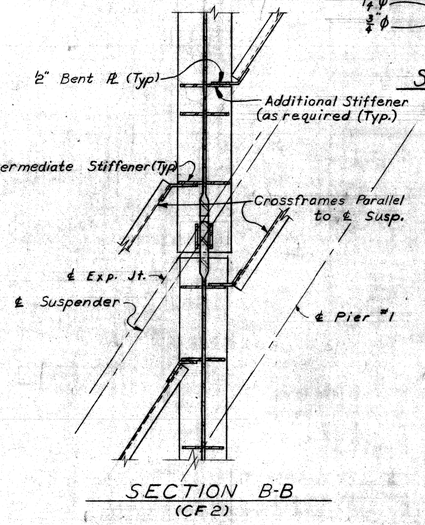


STUDS — SPAN 1 ONLY

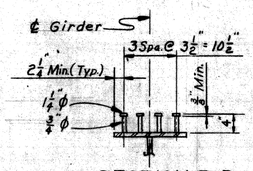
Note: Either Spiral or Stud Shear Developers may be used at the option of the Contractor. Welding of shear developers is incidental to "Shear Developers." The weight of Shear Developers is not included in the weight of Structural Steel.



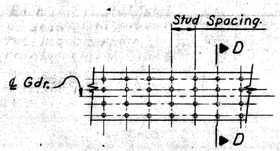
CAMBER DIAGRAM



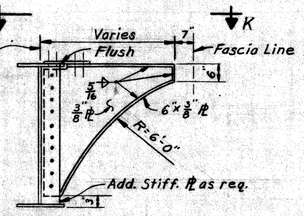
SECTION B-B
(CF 2)



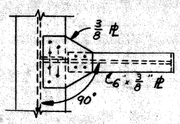
SECTION D-D



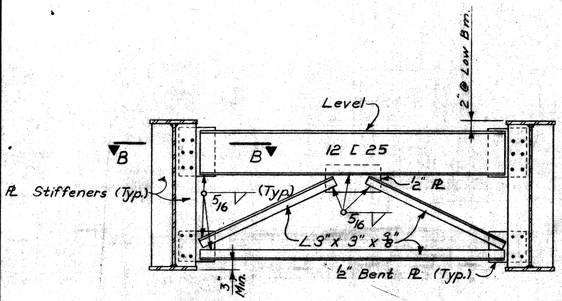
PLAN OF STUDS



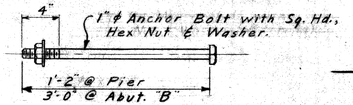
BRACKET DETAIL



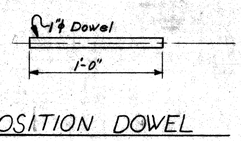
VIEW K-K



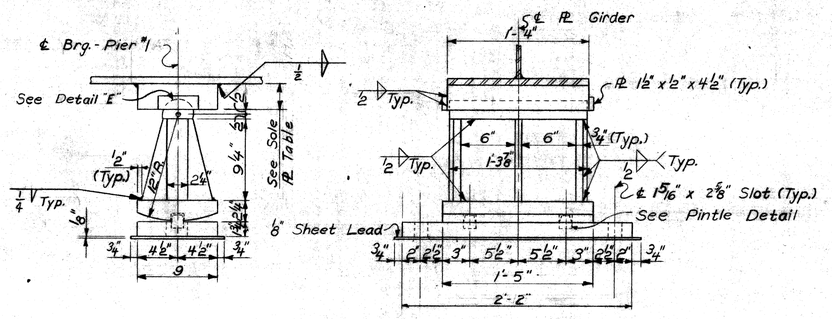
CF 2



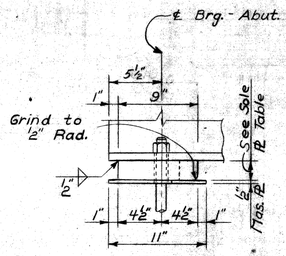
ANCHOR BOLT DETAIL



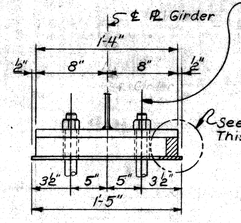
POSITION DOWEL DETAIL



PIER BEARING DETAILS



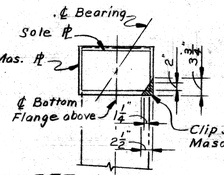
ABUT. B BEARING DETAILS



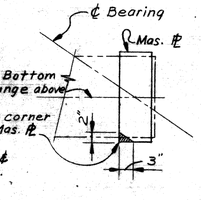
SOLE PLATE THICKNESS TABLE			
GDR.	ABUT. "A"	PIER	ABUT. "B"
A	2"	3½"	2¼"
B	6"	3"	2½"
C	3"	3"	2¾"
D	4¾"	4½"	2"
E	2¼"	5¾"	4¼"

DEAD LOAD DEFLECTION STEEL ONLY		
Mid-Span Span 1	℄ Susp.	Mid-Span Span 2
1¼"	0"	0"

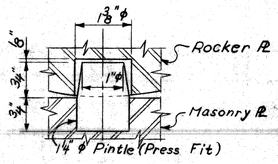
Note: Sole Pl thicknesses are given in inches at ℄ Bearings. Bevel sole Pl's as shown on the girder Elevation.



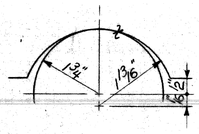
DETAIL A



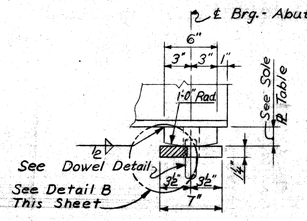
DETAIL B



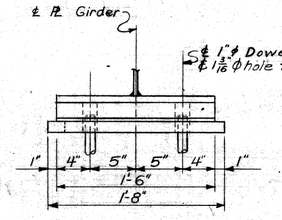
PINTLE DETAIL



DETAIL "E"



ABUT. A BEARING DETAILS



PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW9901(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT		
SQUAD BOSS	Wells	
DRAWN BY	J. B. W.	7-18-69
TRACED BY	Van Kerkhoff	7-18-68
CHECKED BY	W.C.M.	10-68
SHEET 14 OF 22		

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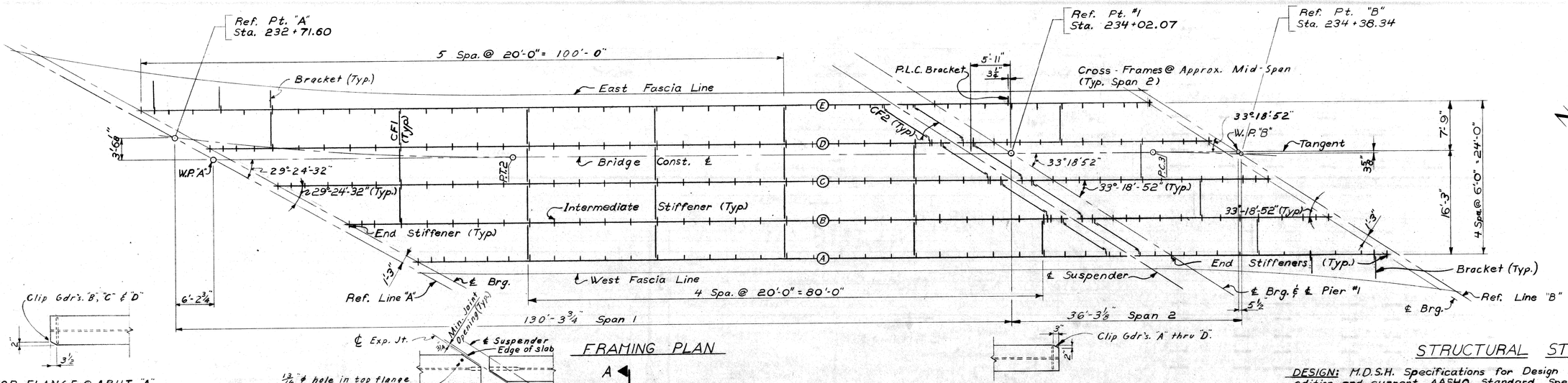
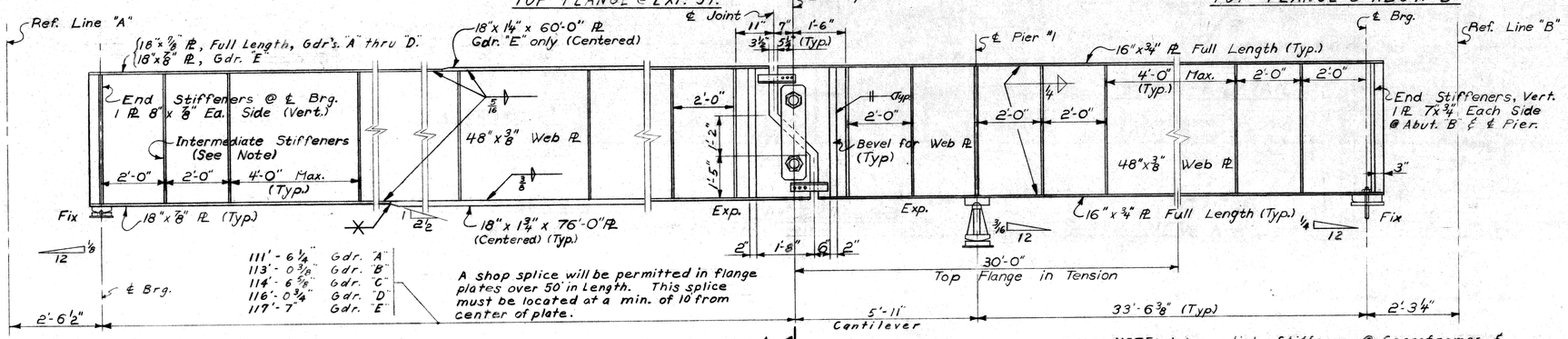


FRAMING PLAN

TOP FLANGE @ ABUT. "A"

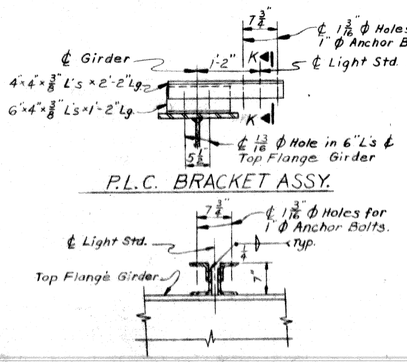
TOP FLANGE @ EXP. JT.

TOP FLANGE @ ABUT. "B"

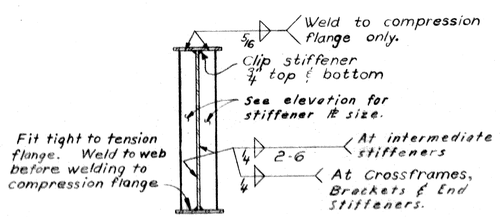


A ELEVATION

NOTE: Intermediate Stiffeners @ Crossframes & Brackets are 1 Pl. 6"x 3/8". All other intermediate stiffeners are 1 Pl. 4 1/2"x 3/8" equally spaced between Crossframes except as noted. One each side for Girders "B" thru "D", and inside only for Girders "A" & "E".

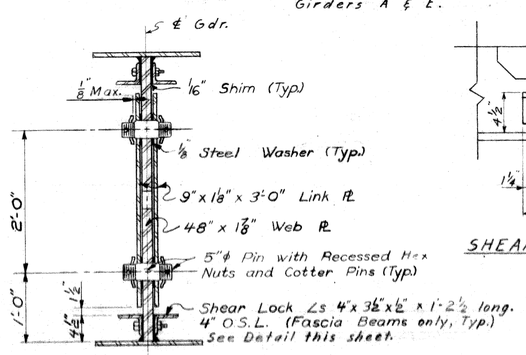


NOTE:
For Stiffener locations, See Framing Plan.

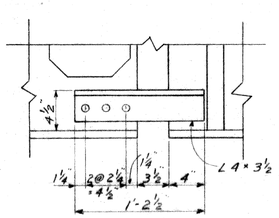


NOTE: Top flange is compression flange except as noted on Elevation. Ends milled or ground for even bearing @ tension flange of end stiffener.

TYPICAL STIFFENER DETAIL



SECTION A-A



SHEAR LOCK DETAIL

STRUCTURAL STEEL NOTES

DESIGN: M.D.S.H. Specifications for Design of Highway Bridges, 1958 edition and current AASHO Standard Specifications for Highway Bridges (HS20-44 Loading).

FABRICATION: M.D.S.H. Standard Specifications for Road and Bridge Construction - 1967 edition. The top and bottom edges of the web plates are to be cut simultaneously, to a parabolic camber, to minimize distortion.

SHOP CONNECTIONS: Shop connections shall be welded as shown on the Plans.

FIELD CONNECTIONS: Field connections shall be bolted with 3/4" ϕ high-strength bolts, except as noted.

CAMBER: The girders are to have a camber as shown on the camber diagram. This camber is to be measured with the girder lying on its side. Allowable camber tolerance for the girders is ±3/8". Heating is to be used, if necessary, to assure camber permanency within the above tolerance. For calculated dead load deflection of the girders alone, see table.

SOLE PLATES: Sole plates 3" or more in thickness may be built up by welding together plates not less than 1 1/2" in thickness. Edges must be beveled 1/4" and welded with a continuous weld for the full perimeter. Welds shall be ground flush with faces of plates.

SHOP PAINT: The top surfaces of masonry plates, bottom surfaces of sole plates, and curved bearing surfaces of rockers shall be coated in accordance with the requirements for machine finished surfaces.

WELDING: Welding on tension flanges of girders will not be permitted unless such welding is shown on plans or specified. Welding at other locations on the girders except where shown on plans, may be permitted by written authorization providing the welding is to be performed in strict accordance with all specification requirements for structural welding. Magnetic particle inspection of welds is required and shall consist of 100% inspection of not less than one fabricated section selected at random from each ten sections or fractions there of.

STEEL: All structural steel shall be unpainted A.S.T.M. Desig. A441 (Modified).

QUANTITIES: The quantity "Structural Steel - Furnishing and Fabricating" includes:

Lead	74	lbs.
Steel	178,426	lbs.
Total Structural Steel - Furn'g. and Fab'g.	178,500	lbs.
Total Structural Steel, Erection	178,500	lbs.
Shear Developers	Lump Sum	

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APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

STRUCTURAL STEEL DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS	Wolfe
DRAWN BY	J.B.W. 7-9-68
TRACED BY	Van Kirchhove 7-9-68
CHECKED BY	J.L.M 10/68

SHEET 13 OF 22

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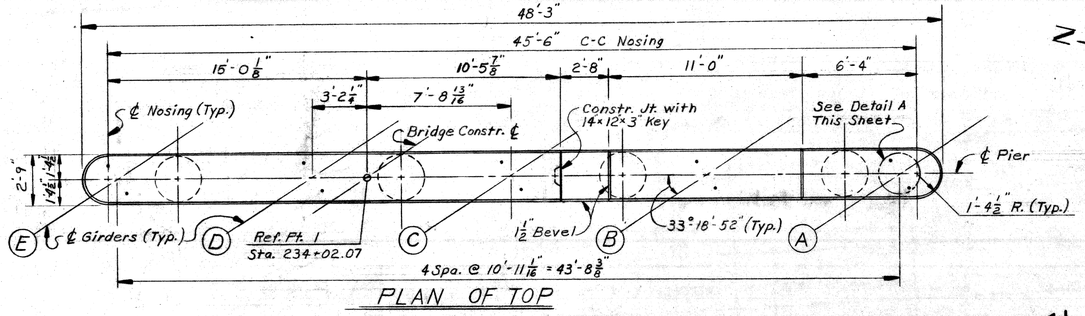
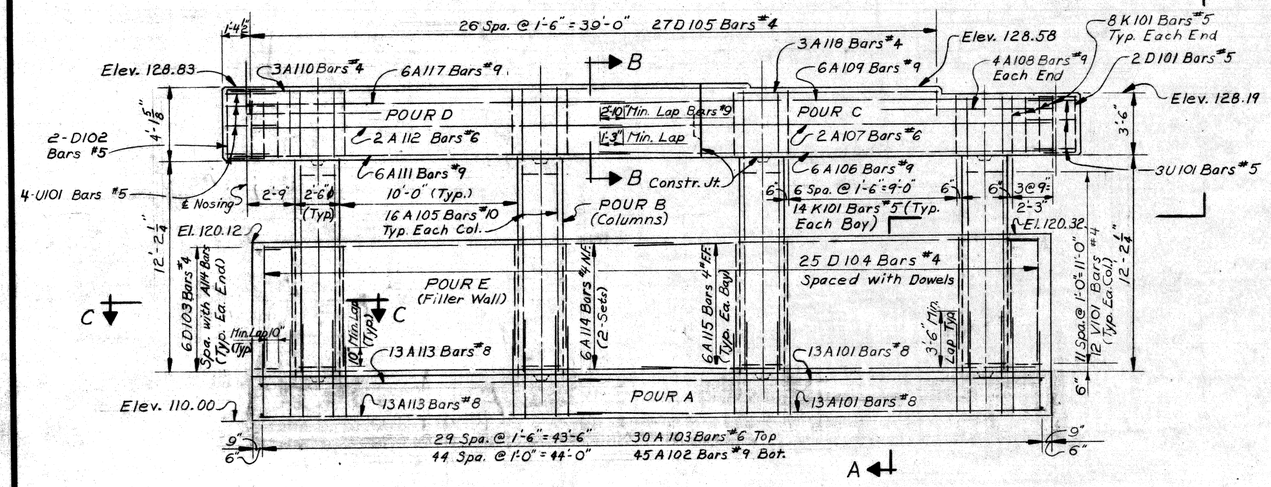
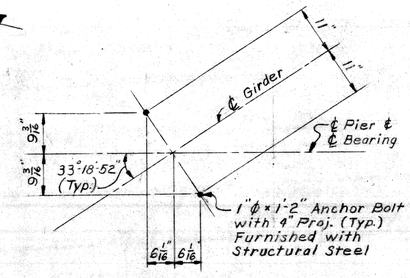


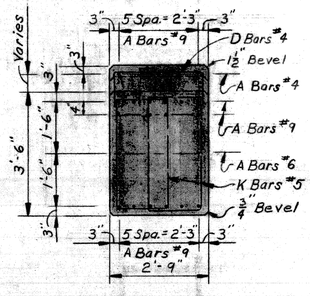
PLAN OF TOP



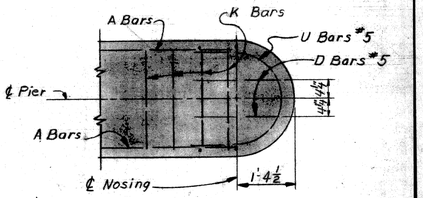
ELEVATION



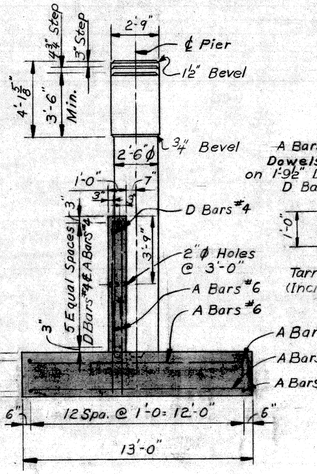
DETAIL A



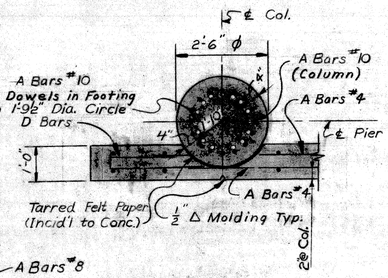
SECTION B-B



DETAIL AT NOSING



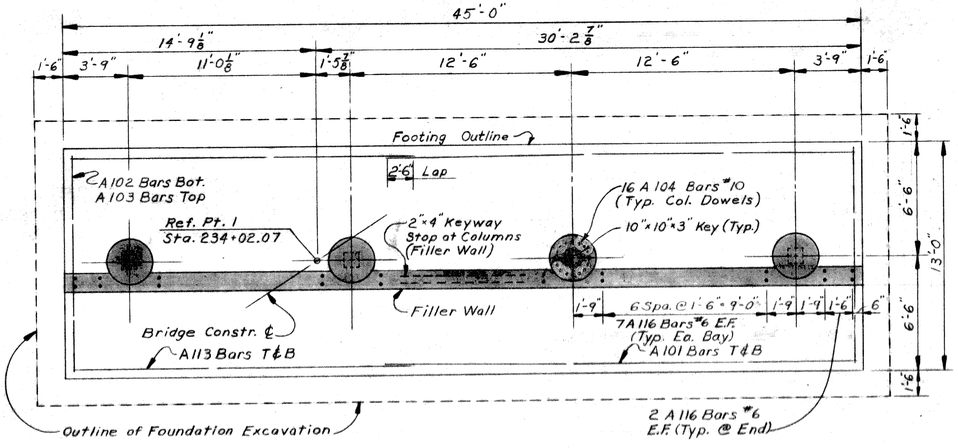
SECTION A-A



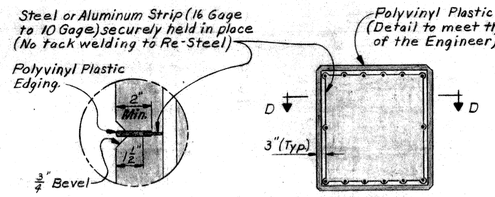
SECTION C-C

CONCRETE QUANTITIES (Cu.Yds.)			
POUR	LOCATION	Grade A6A	Grade A6AA
A	Footing	54.2	
B	Columns		8.9
C	Beam		11.4
D	Beam		8.2
E	Filler Wall		11.7
TOTAL		54.2	40.2

MISCELLANEOUS QUANTITIES		
ITEM	UNITS	AMT.
Unclassified Excavation	Cu. Yds.	190
Low Temperature Protection	Cu. Yds.	94.4

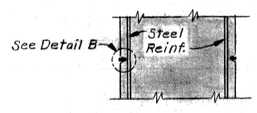


FOUNDATION PLAN



DETAIL B

SECTION THRU PIER CAP



SECTION D-D

PARTIAL METAL BULKHEAD DETAILS

NOTES:

Partial metal bulkhead may be used as alternate construction joint at contractor's expense.

Care is to be used in casting concrete around bulkhead to prevent dislocation or misalignment of the bulkhead.

Notch metal strip to fit around reinforcing steel.

GENERAL NOTES

For bevel and molding details see Std. Sht. R-11 or R12.

Anchor bolts shall be set accurately to a template.

The Project Engineer shall adjust the spacing of the reinforcing steel as required to permit placing of the anchor bolts.

Max. average foundation pressure D.L. only 2160 P.S.F.
Max. foundation pressure D.L. + L.L. 2470 P.S.F

PLANS PREPARED BY
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APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

PIER DETAILS

REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS	Watt	
DRAWN BY	R.Rosik	5/68
TRACED BY		
CHECKED BY	L.B.J.&W.	10/68

SHEET 12 OF 22

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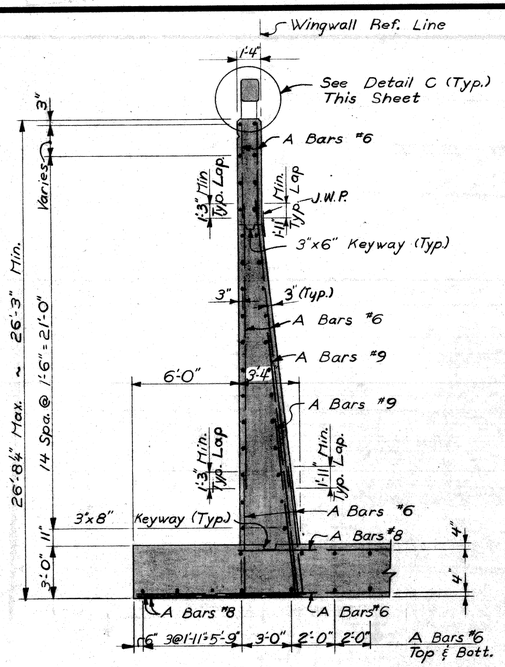
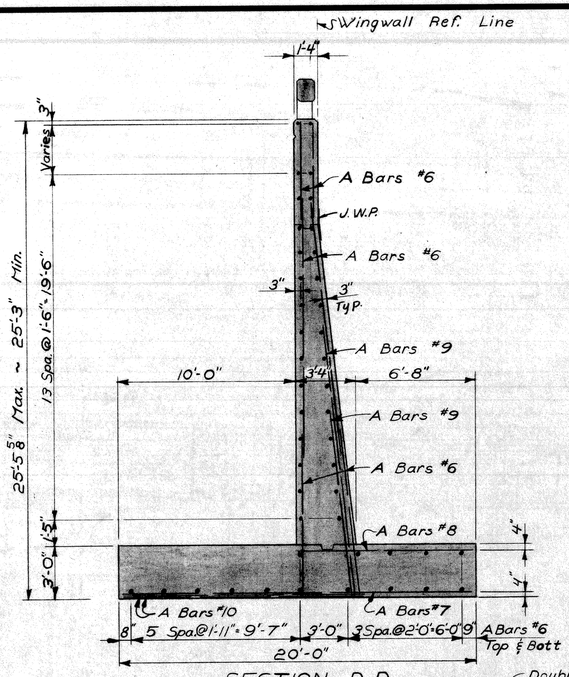
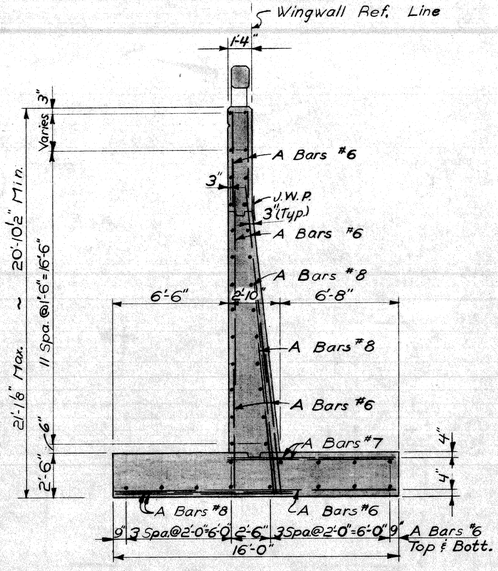


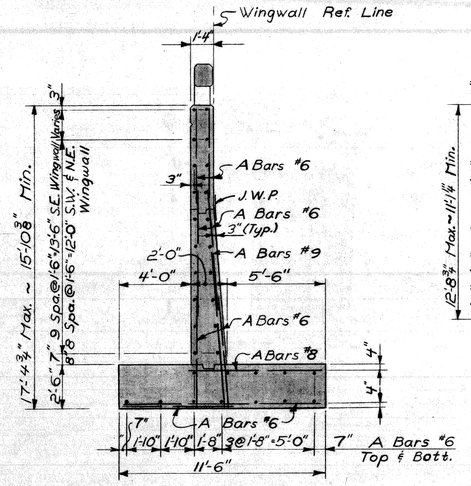
SECTION C-C



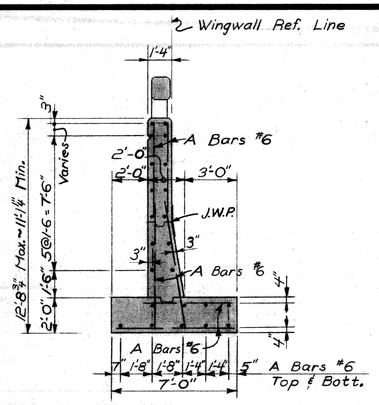
SECTION D-D



SECTION E-E

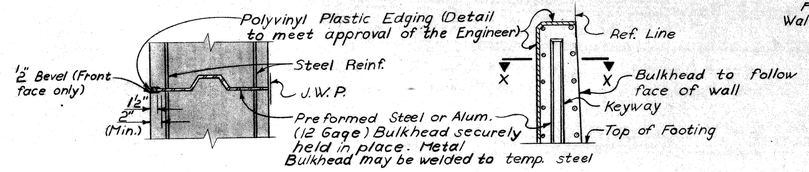


SECTION F-F



SECTION G-G

MISCELLANEOUS QUANTITIES				
ITEM	UNIT	ABUT. "A"	ABUT. "B"	TOTAL
Lightweight Fill (C.I.P.)	Cu. Yds.	1040	-	1040
Unclassified Excavation	Cu. Yds.	1300	580	1880
Steel Sheet Piling (L.I.P.)	Sq. Ft.	438	112	550
Low Temp. Protection - Substr.	Cu. Yds.	609	191	800
½" Joint Filler	Sq. Ft.	106	77	183
1" Joint Filler	Sq. Ft.	47	-	47
Joint Waterproofing.	Sq. Ft.	325	135	460
Expansion Joint Drain	Each	1	-	1
Bridge Parapet	Lin. Ft.	129.3	71.2	200.5
Foundation Drains	Lin. Ft.	225	140	365

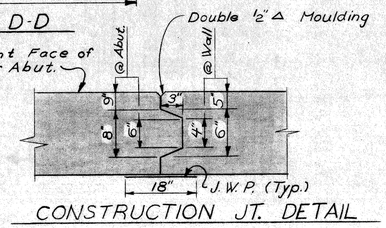


SECTION X-X

SECTION THRU CONST. JOINT

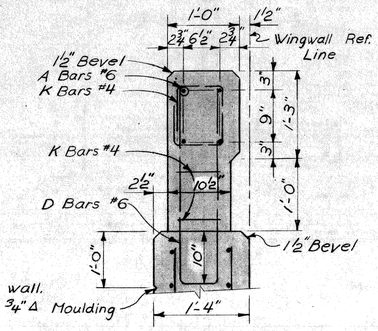
NOTES: The Metal Bulkhead may be used as alternate construction joint at Contractor's expense. Care is to be used in casting concrete around Bulkhead to prevent dislocation or misalignment. Cut holes in Metal Bulkhead for reinforcing steel.

ALTERNATE CONSTRUCTION JOINT DETAIL

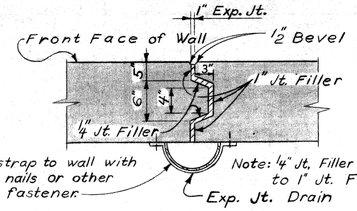


CONSTRUCTION JT. DETAIL

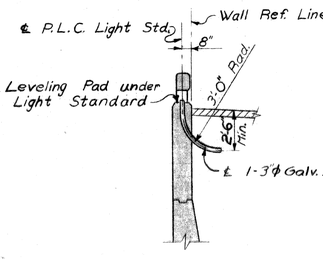
Note:
Stop Keyway & J. W. P. 1'-0" below top of wall.



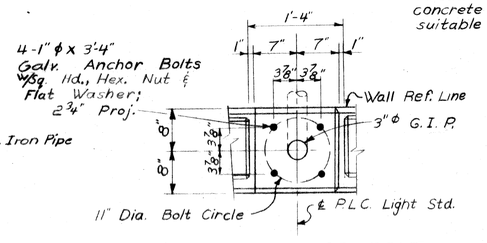
DETAIL C



EXPANSION JOINT DETAIL

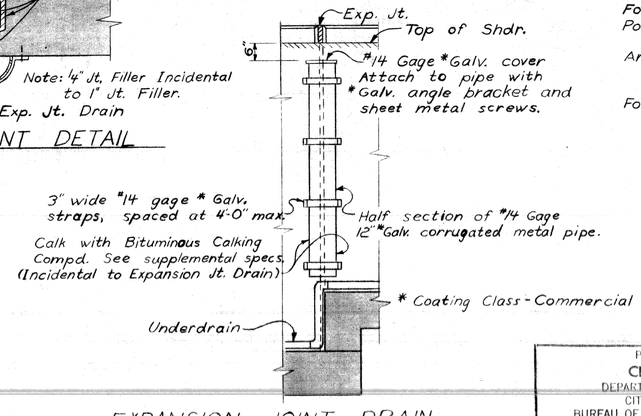


SECTION AT P.L.C. LIGHT STANDARD



P.L.C. ANCHOR BOLT SETTING DETAIL

3"ϕ G.I.P. & Anchor Bolts are incidental to Substructure Concrete



EXPANSION JOINT DRAIN

GENERAL NOTES

J.W.P. denotes Joint Waterproofing.
N. F. denotes Near Face: F. F. denotes Far Face: E.F. denotes Each Face.
For bevel and molding details, see standard sheet A11 or A12.
Pours F & G shall not be cast until superstructure is complete to tops of curb and shoulder.
Anchor Bolts & Position dowels shall be accurately set to a template. Adjust the spacing of the reinforcing steel as required to permit placing of anchor bolts & Position dowels.
Footing concrete quantities are computed on the basis of an outline 3¼" outside of the footing outline where the concrete is poured against Steel Sheet Piling Left in Place. No additional allowance will be made in concrete or excavation quantities regardless of the steel sheet piling used.

Work this sheet with Sheets #7 thru #10

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT DETAILS

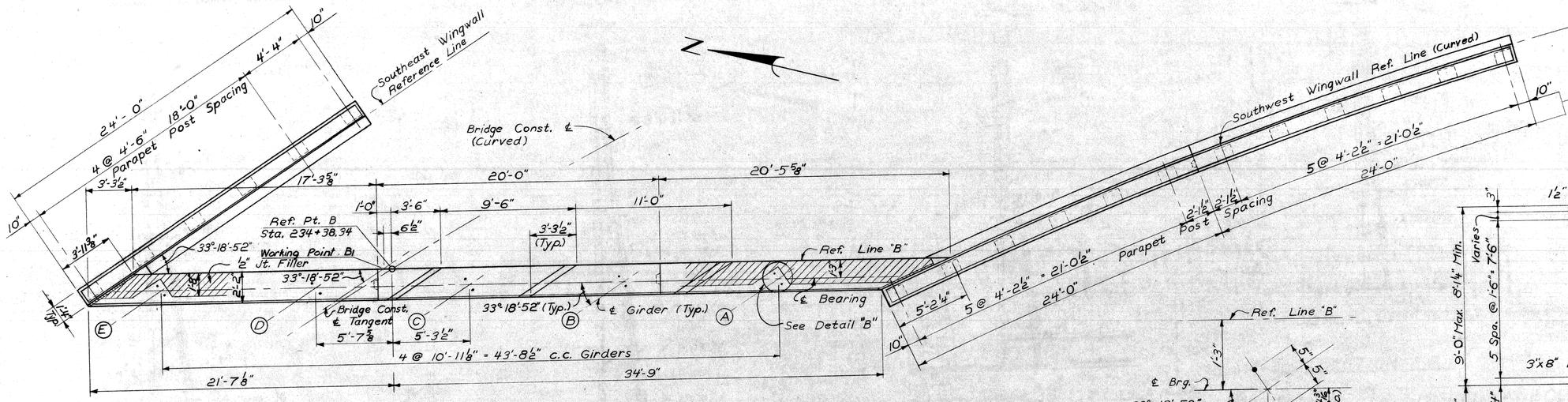
REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

ROAD BIDS	1967 FS	
DRAWN BY	VanRenthove	5-24-68
TRACED BY		
CHECKED BY	JMLBJ	10-68
SHEET	11 OF	22

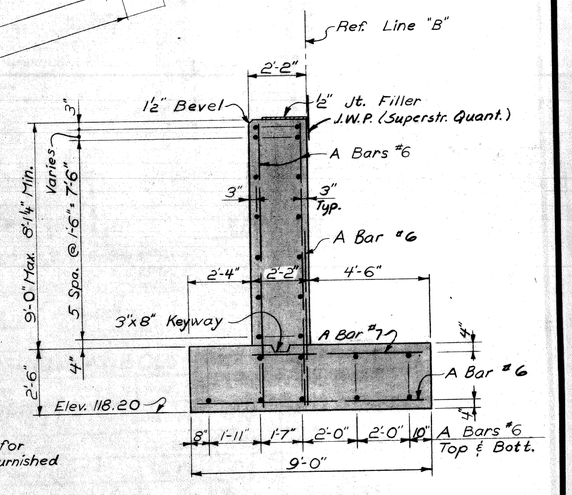
S49 of 82123K



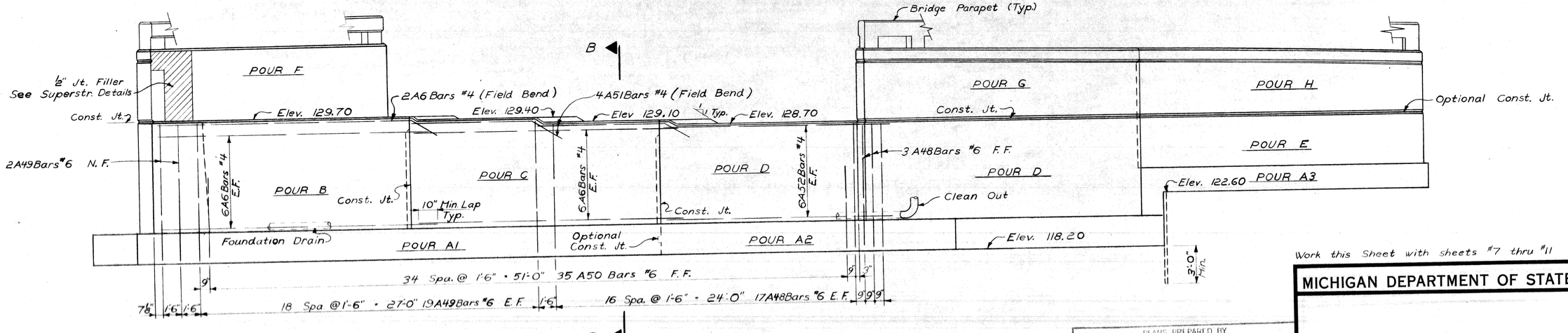
PLAN OF TOP

DETAIL "B"

Anchor Bolt Projection					
Girder	A	B	C	D	E
Projection	5"	5 1/4"	5 1/2"	4 3/4"	7"



SECTION B-B



ABUTMENT ELEVATION

Work this Sheet with sheets #7 thru #11

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 9902(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT B DETAILS

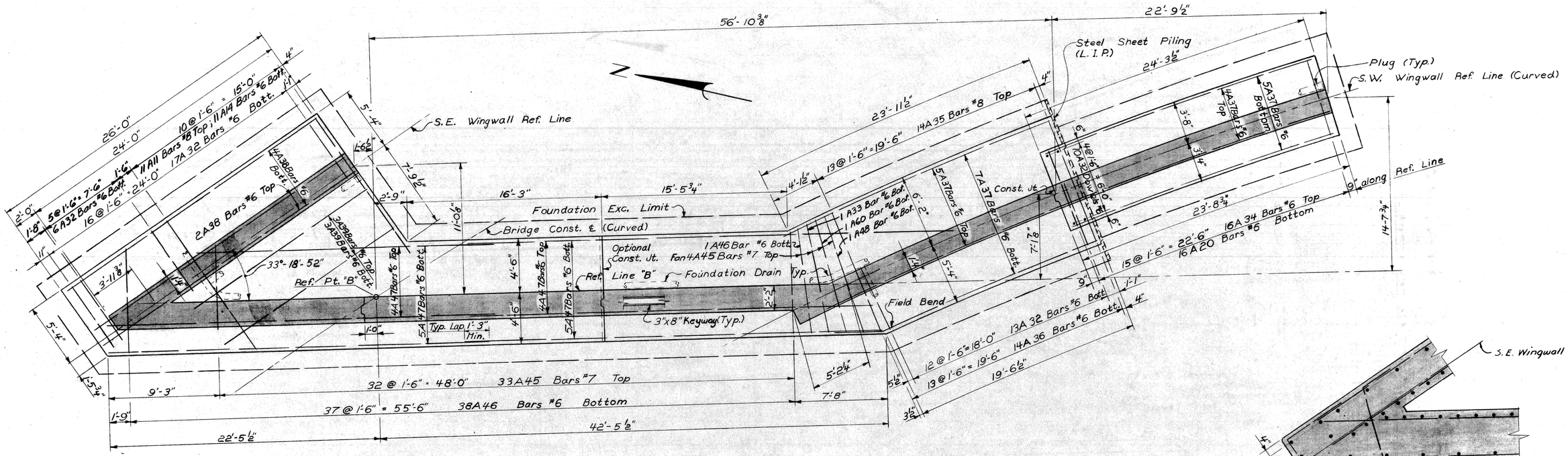
CITY OF DETROIT

SQUAD BOSS	Wolff	
DRAWN BY	Van Kershaw	5-31-68
TRACED BY		
CHECKED BY	JMK B.J.	10-68
SHEET 10 OF 22		

REVISIONS

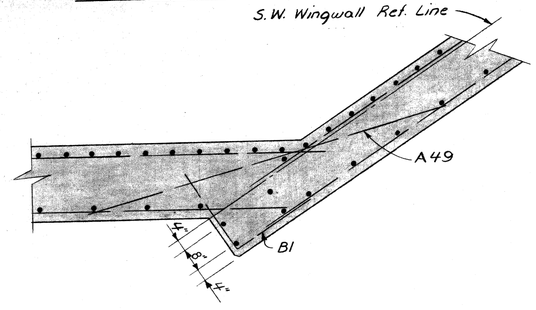
NO	DESCRIPTION	DATE	BY

S49 of 82123K

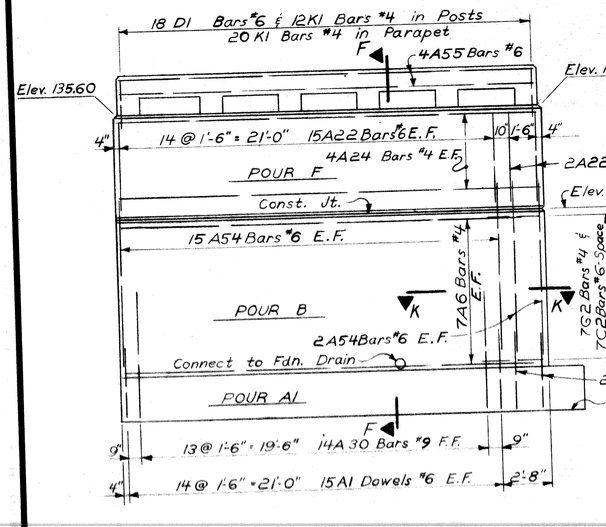


FOUNDATION PLAN

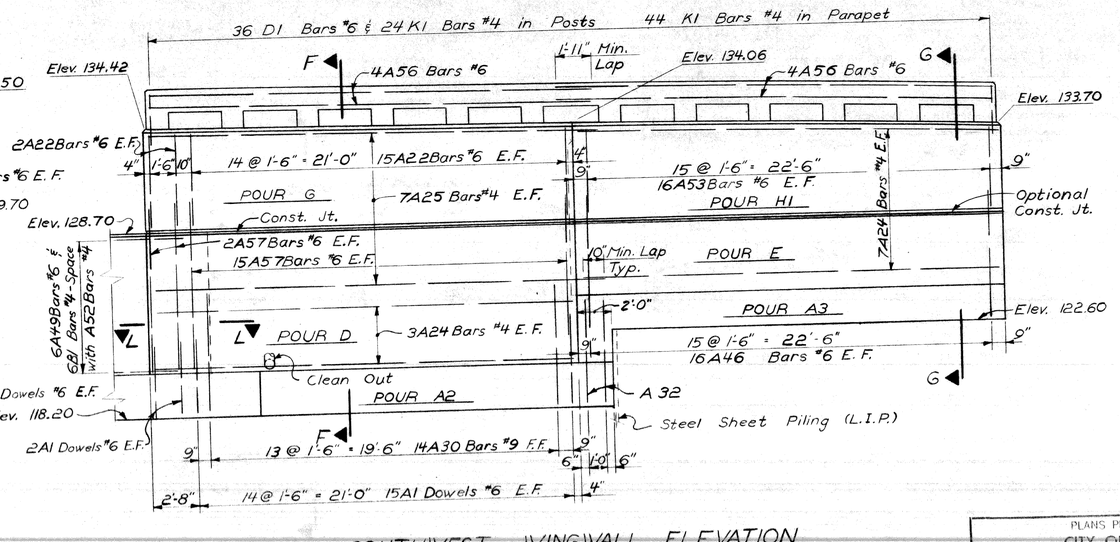
SECTION K-K



SECTION L-L



SOUTHEAST WINGWALL ELEVATION



SOUTHWEST WINGWALL ELEVATION

Maximum average foundation pressure D.L. only = 1750 p.s.f.
Maximum foundation pressure D.L. plus L.L. = 3150 p.s.f.

Work this Sheet with sheets #7 thru #11

PLANS PREPARED BY
CITY OF DETROIT
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 9901(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT B DETAILS

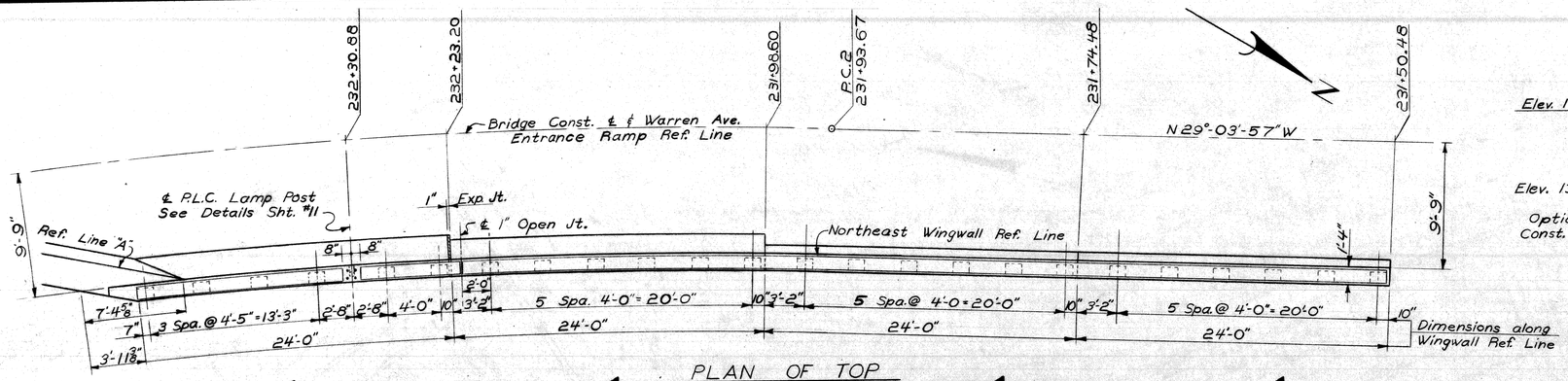
REVISIONS

NO.	DESCRIPTION	DATE	BY

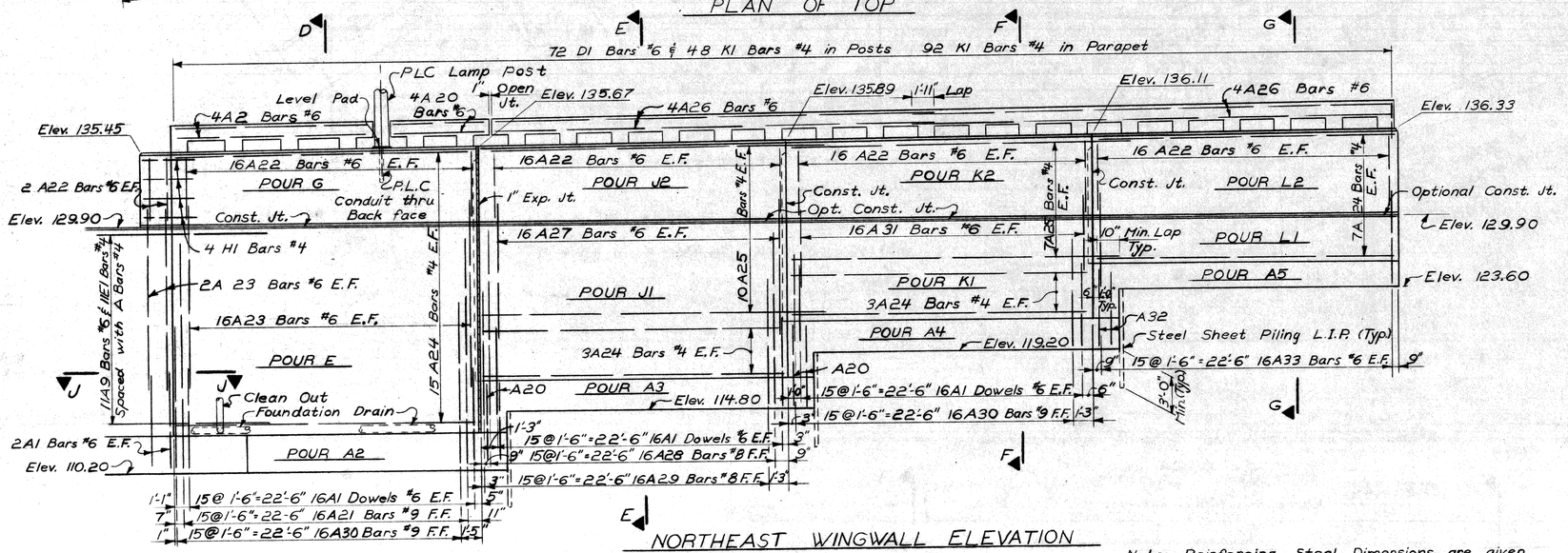
CITY OF DETROIT

SQUAD BOSS	Wolfe
DRAWN BY	Van Kershaw 6-6-68
TRACED BY	
CHECKED BY	J.M.L.B.J. 10-68
SHEET	9 OF 22

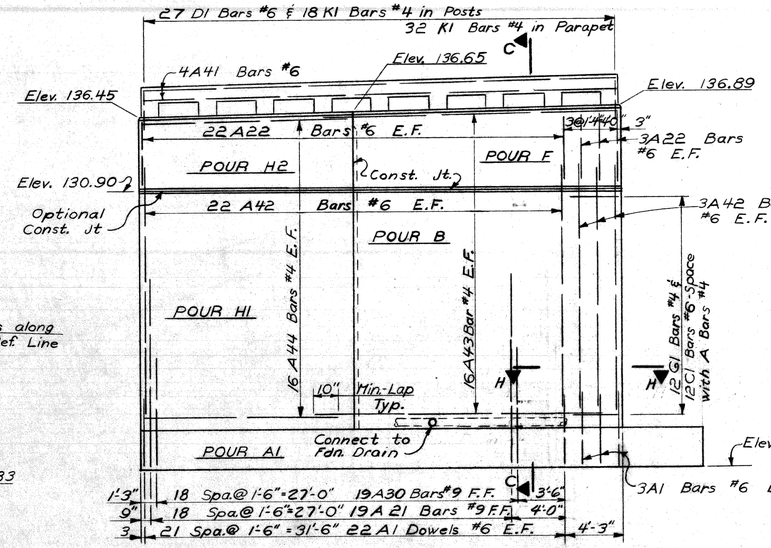
S49 of 82123K



PLAN OF TOP

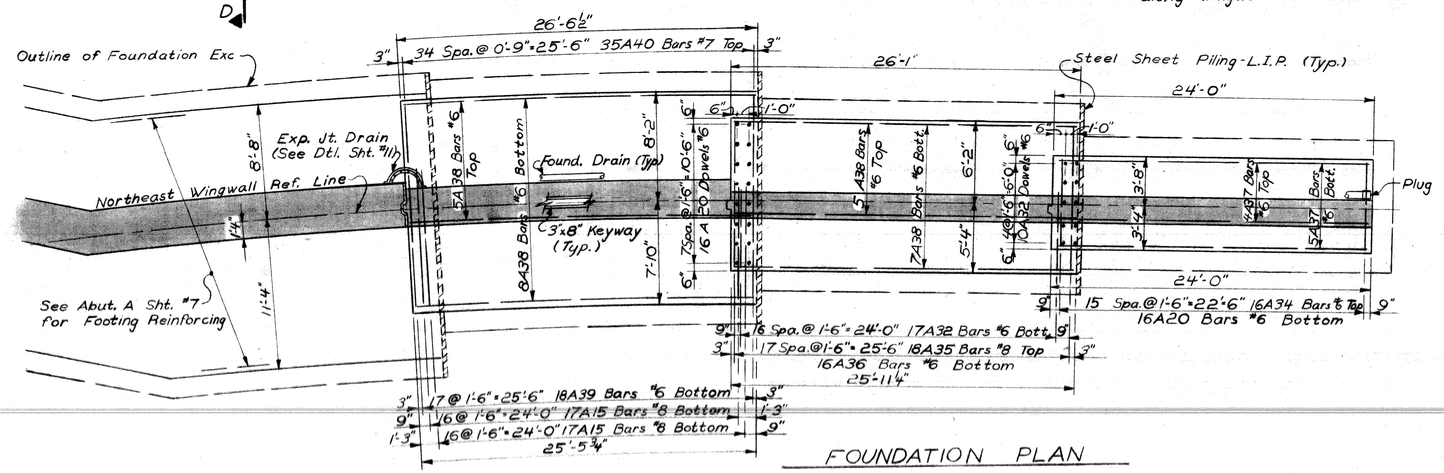


NORTHEAST WINGWALL ELEVATION



NORTHWEST WINGWALL ELEVATION

Note: Reinforcing Steel Dimensions are given along Wingwall Reference Line.



FOUNDATION PLAN

CONCRETE QUANTITIES (Cu. Yds.)

POUR	LOCATION	ABUT. A		ABUT. B	
		A6A	A6AA	A6A	A6AA
A1	Abutment Footing	119.8	-	48.0	-
A2	"	117.4	-	39.7	-
A3	Wingwall Footing	41.1	-	13.6	-
A4	"	29.8	-	-	-
A5	"	13.6	-	-	-
B	Wingwall Stem	-	62.3	-	26.9
C	Abutment Stem	-	34.8	-	13.9
D	"	-	34.0	-	23.0
E	Wingwall Stem	-	51.0	-	6.1
F	"	-	5.8	-	6.9
G	"	-	7.1	-	6.5
H1	"	-	24.4	-	6.1
H2	"	-	4.5	-	-
J1	"	-	23.3	-	-
J2	"	-	7.0	-	-
K1	"	-	12.1	-	-
K2	"	-	7.2	-	-
L1	"	-	6.4	-	-
L2	Wingwall Stem	-	7.5	-	-
Total	Substructure Concrete	321.7	287.4	101.3	89.4

Work this sheet with sheets #7 thru #11

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

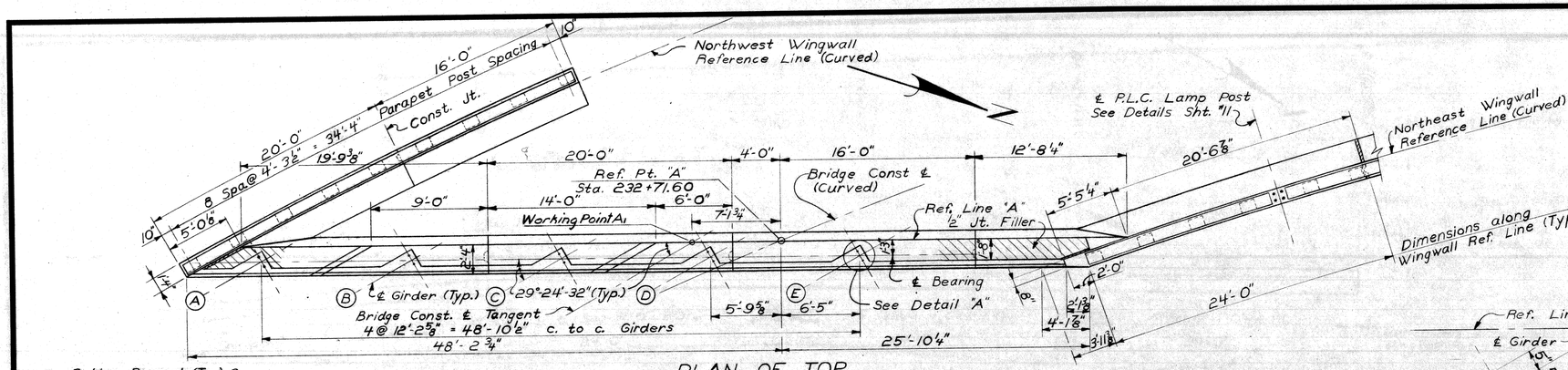
ABUTMENT A DETAILS

CITY OF DETROIT

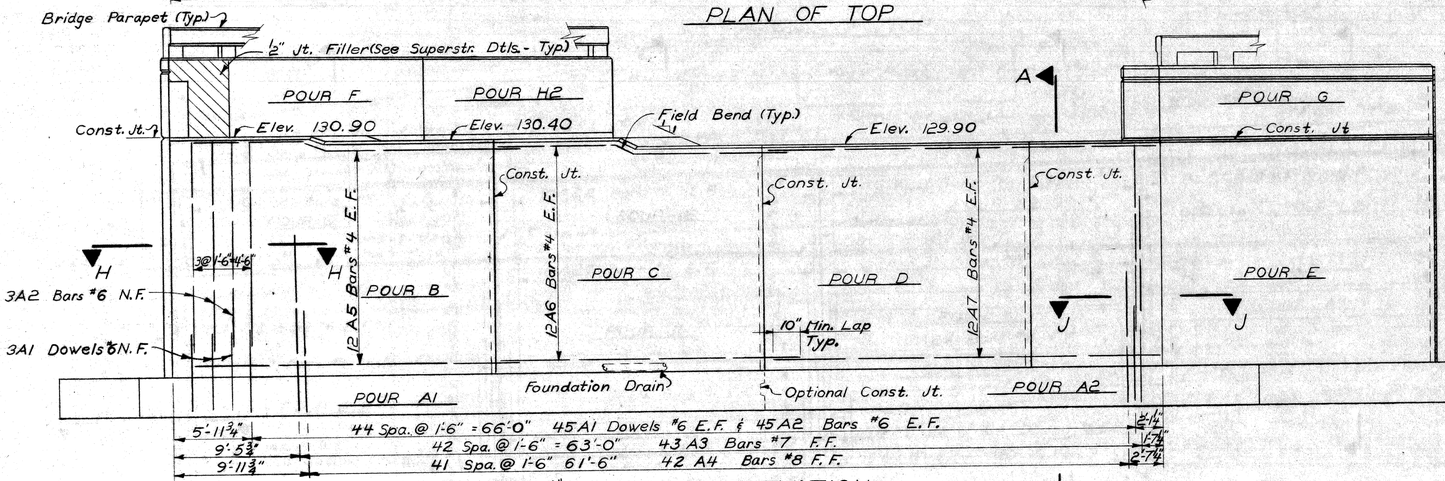
REVISIONS			
NO.	DESCRIPTION	DATE	BY

SQUAD BOSS	Wolfe
DRAWN BY	VanHercklom 6-20-68
TRACED BY	
CHECKED BY	JMJ 6-20-68
SHEET	8 OF 22

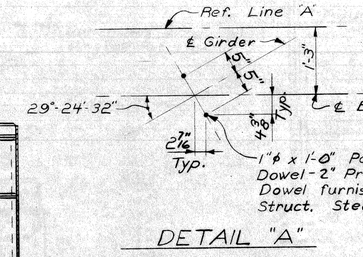
S49 of 82123K



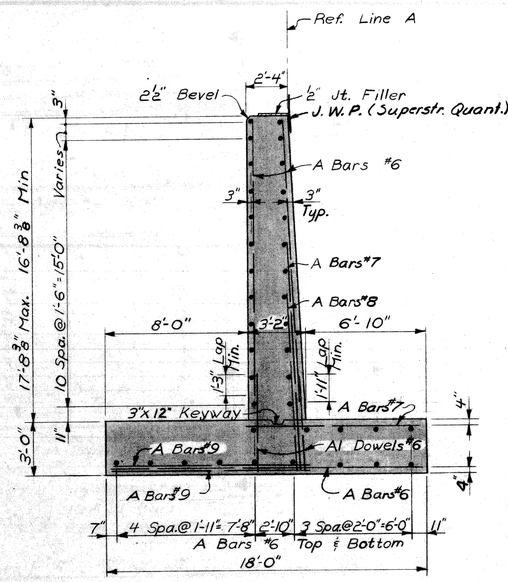
PLAN OF TOP



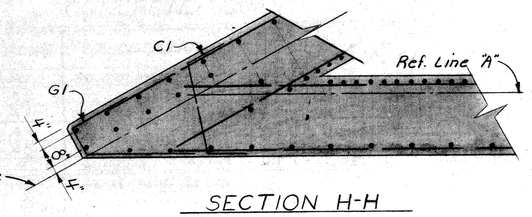
ELEVATION



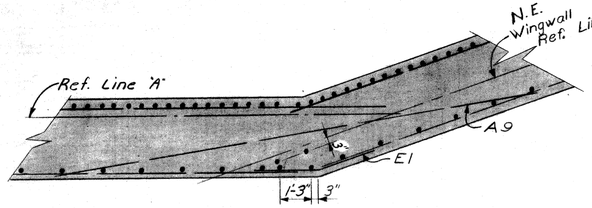
DETAIL "A"



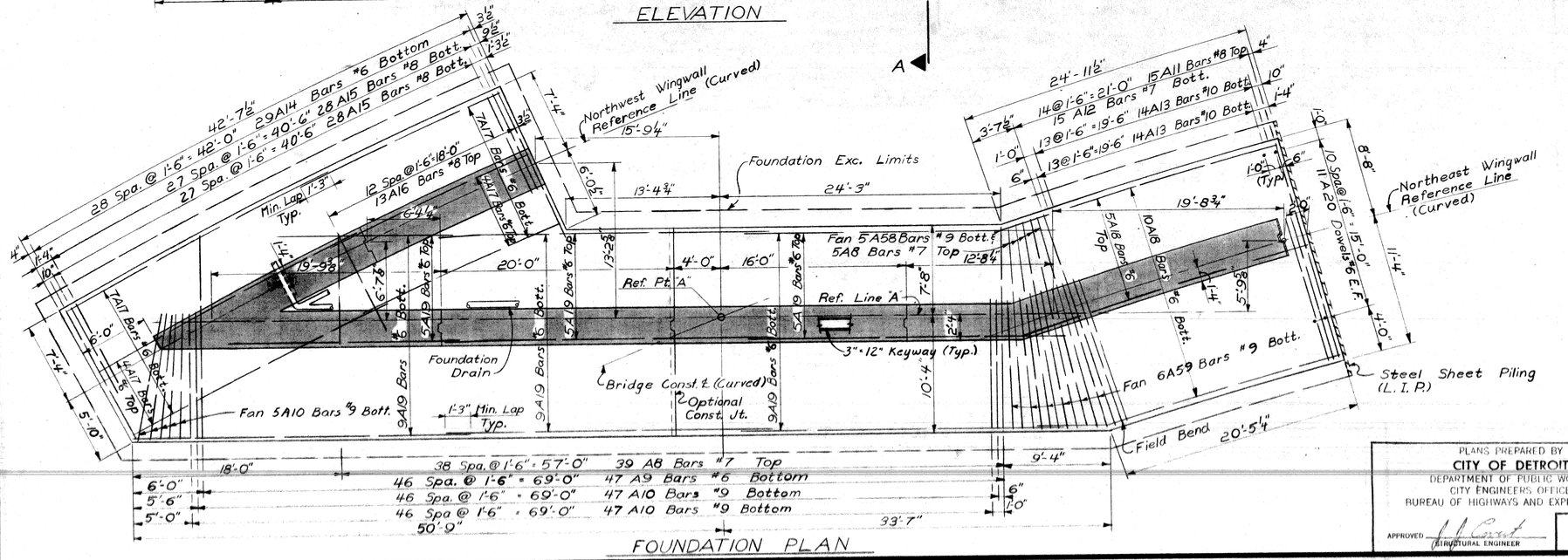
SECTION A-A



SECTION H-H



SECTION J-J



FOUNDATION PLAN

Maximum average foundation pressure D.L. only = 2000 p.s.f.
Maximum foundation pressure D.L. plus L.L. = 2,850 p.s.f.

Work this Sht. with Shts. "8 thru "11

PLANS PREPARED BY
CITY OF DETROIT
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CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 990(2)

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

ABUTMENT A DETAILS

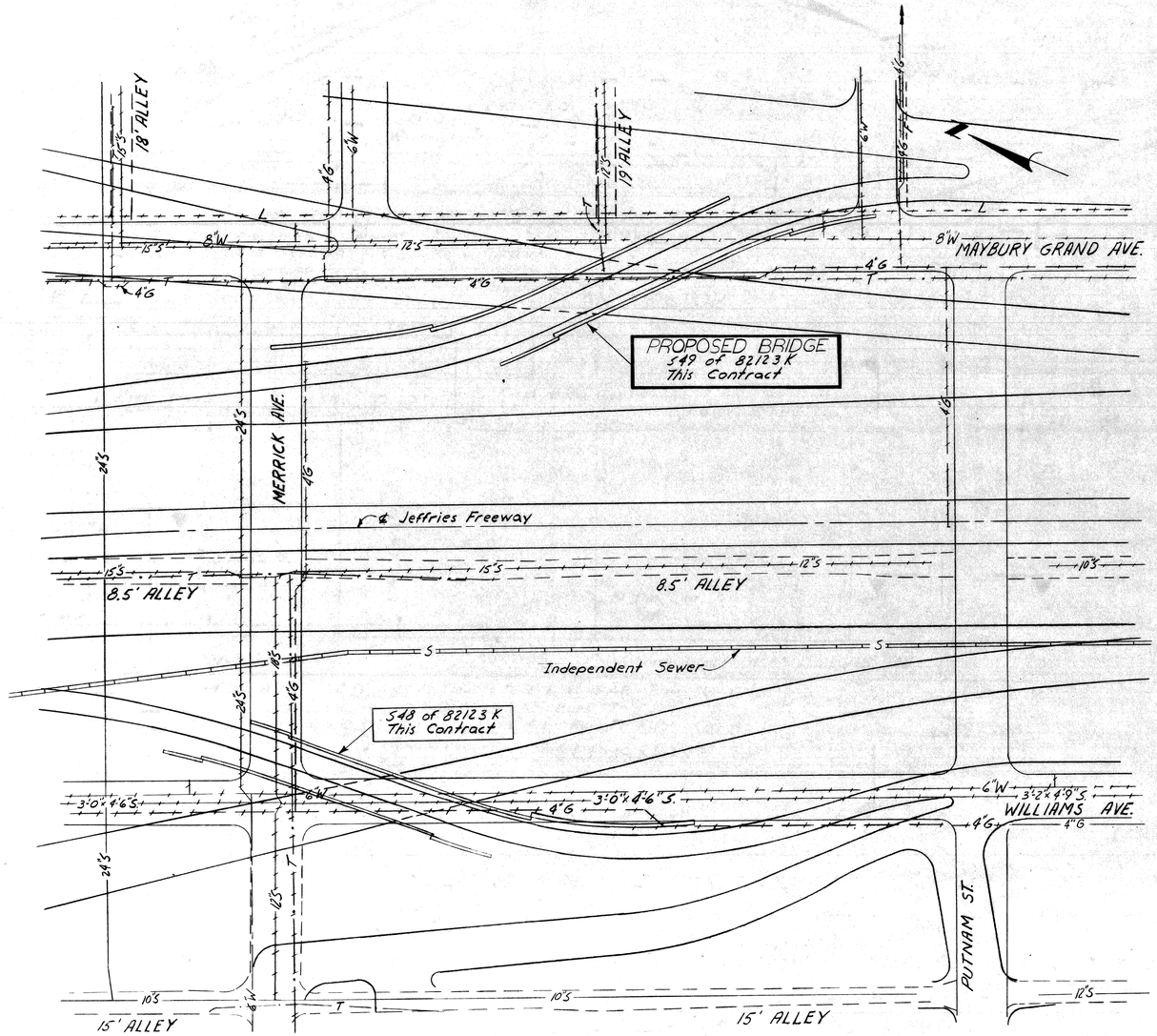
REVISIONS

NO.	DESCRIPTION	DATE	BY

CITY OF DETROIT

SQUAD BOSS	W.T.S.
DRAWN BY	VanKirkhove 6-13-68
TRACED BY	
CHECKED BY	J.M.L.B.J. 10-68
SHEET	7 OF 22

S49 of 82123K



SITUATION PLAN
Scale 1" = 40'

LEGEND

UTILITY	Existing	Deleted or Abandoned	New Work by Others
Michigan Consolidated Gas Co.	—G—	++G++	
Detroit Water Dept.	-W-	+W+	
City of Detroit Sewers	—S—	+S+	=S=
Michigan Bell Telephone Co.	-T-	+T+	
Public Lighting Commission	-L-	+L+	
Detroit Fire Dept.	-F-	+F+	

NOTE:
Bridge construction and utility alterations are included in package contract for control section 82123K.
The contractor shall locate all active underground utilities prior to starting work, and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No.
PW 9000

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES - FORD INTERCHANGE
WARREN AVE. ENTRANCE RAMP IN DETROIT

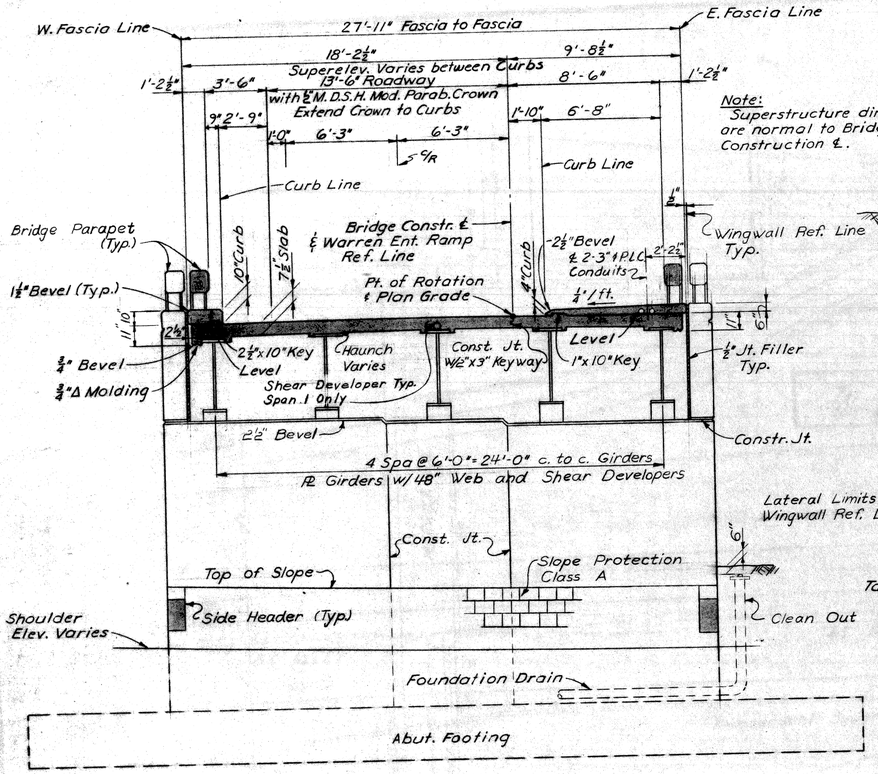
EXISTING UTILITIES AND PROPOSED ALTERATIONS

NO.	DESCRIPTION	DATE	BY

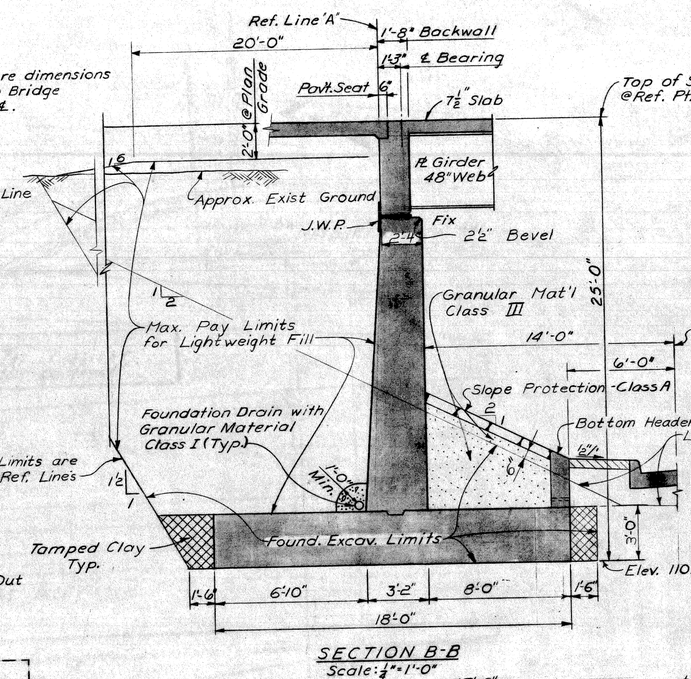
CITY OF DETROIT

SQUAD BOSS	WDTds	
DRAWN BY	RAG	12-67
TRACED BY		
CHECKED BY	KH JM	2-68
SHEET 6 OF 22		

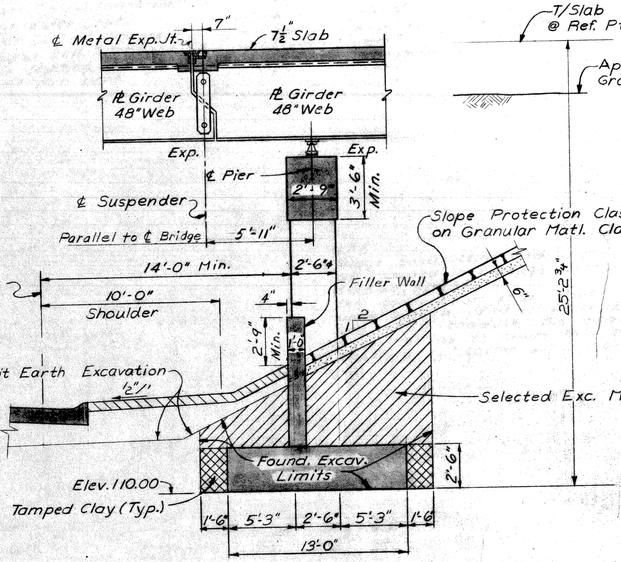
S49 of 82123K



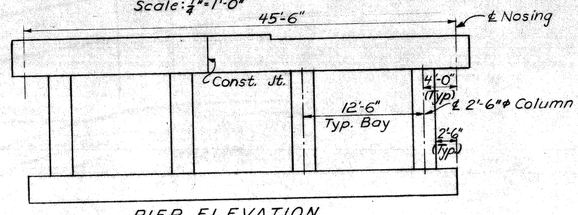
SECTION A-A
Scale: ¼" = 1'-0"



SECTION B-B
Scale: ¼" = 1'-0"



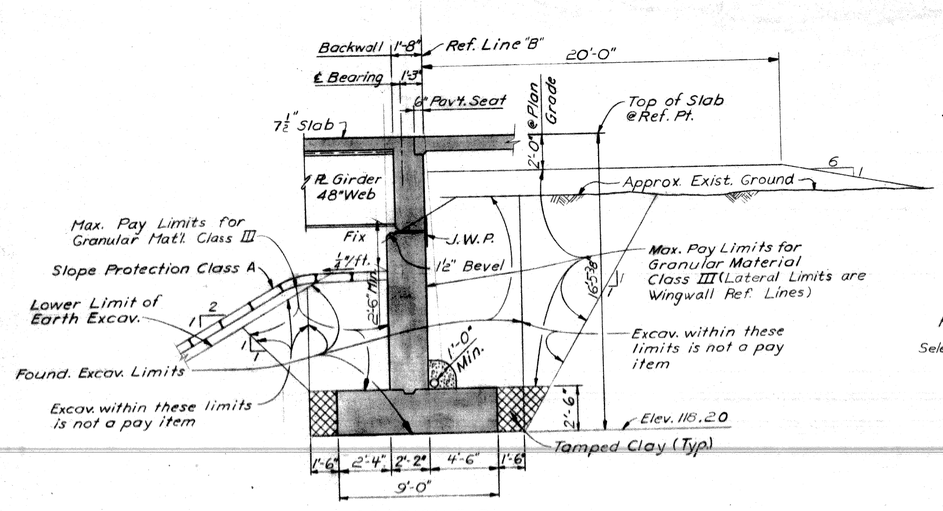
SECTION C-C
Scale: ¼" = 1'-0"



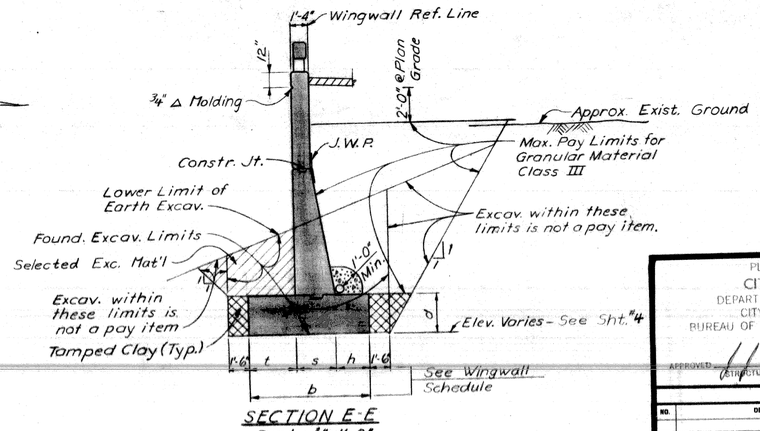
PIER ELEVATION
Scale: ⅛" = 1'-0"

See Plan

WINGWALL SCHEDULE					
Section	b	h	s	t	d
①	7'-0"	3'-0"	2'-0"	2'-0"	2'-0"
②	11'-6"	5'-6"	2'-0"	4'-0"	2'-6"
③	16'-0"	6'-8"	2'-10"	6'-6"	2'-6"
④	20'-0"	6'-8"	3'-4"	10'-0"	3'-0"
⑤	-	-	3'-4"	6'-0"	3'-0"



SECTION D-D
Scale: ¼" = 1'-0"



SECTION E-E
Scale: 1/16" = 1'-0"

GENERAL NOTES

The design of this structure is based on M.D.S.H. Specifications for the Design of Highway Bridges, 1958 edition and current AASHO Standard Specifications for Highway Bridges, HS20-44 loading. Live load plus impact deflection equals 1/1000 of span length and 1/350 of cantilever arm.

The top of roadway slab and tops of curbs are parallel to the vertical curve except as modified by superelevation transition.

This structure is partly on a horizontal curve. The fascia lines, curb lines and longitudinal construction joint are parallel to the curve and tangents except as shown.

Tamped Clay is incidental to Unclassified Excavation.

Granular Material Class I is incidental to Foundation Drain.

For details of Slope Protection, see M.D.S.H. Standard Sh. #SP2.

Selected Excavated Material is not a pay item - See Road Plans

Granular Material Class III Compacted in Place - See Road Plans

1230 Cu. Yds.

Work this Sht. with Sht. #4

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ (STRUCTURAL ENGINEER)

JOB No. PW 9901(2)

REVISIONS			
NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES - FORD INTERCHANGE
WARREN AVE. ENTRANCE RAMP IN DETROIT

GENERAL PLAN OF STRUCTURE

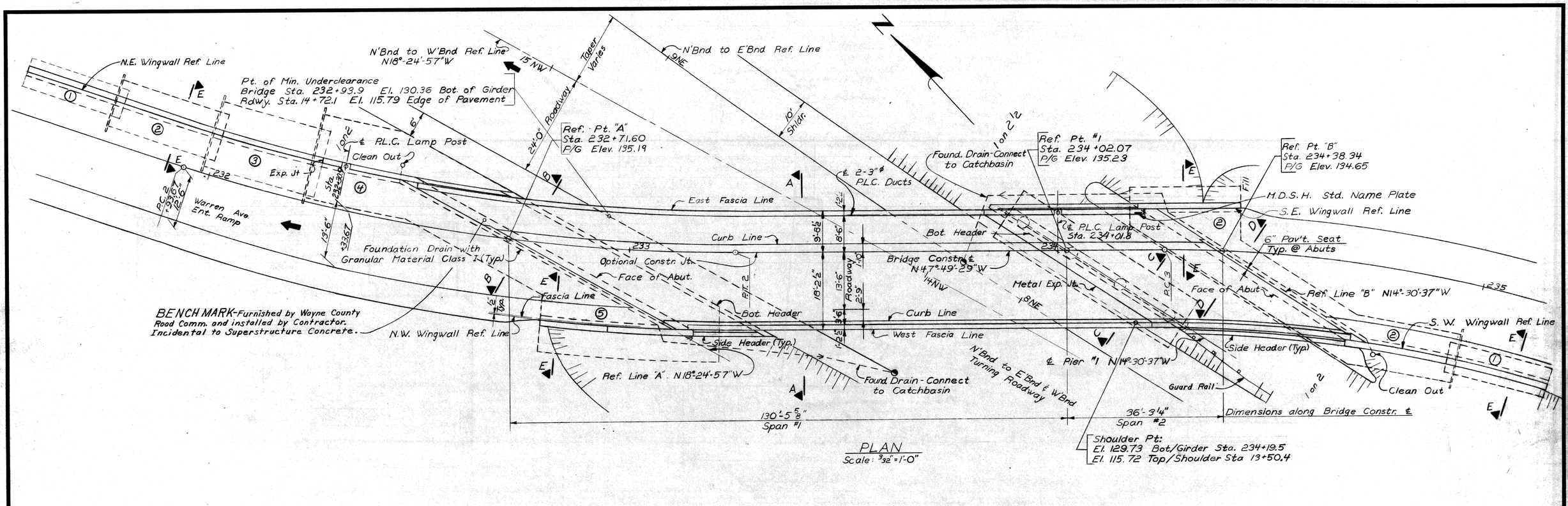
CITY OF DETROIT

SQUAD BOSS	Watts
DRAWN BY	R.H.
TRACED BY	Van Kerckhove 2-14-68
CHECKED BY	J.M. 2-69
SHEET	5 OF 22

APPROVED _____ DESIGN SUPERVISING ENGINEER

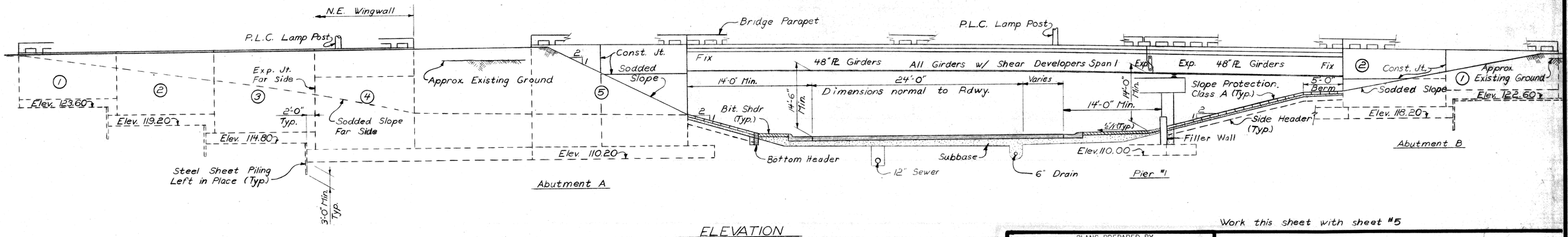
APPROVED _____ DESIGN ENGINEER

S49 of 82123K



BENCH MARK-Furnished by Wayne County Road Comm. and installed by Contractor. Incidental to Superstructure Concrete.

PLAN
Scale: 3/32"=1'-0"



ELEVATION
Scale: 3/32"=1'-0"

Work this sheet with sheet #5

MISCELLANEOUS QUANTITIES		
ITEM	UNIT	AMOUNT
Slope Protection - Class A	Sq. Yds.	175
Foundation Drain	Lin. Ft.	105
Slope Protection Header	Lin. Ft.	85

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED J. J. Covert STRUCTURAL ENGINEER

JOB No. PW 990(2)

REVISIONS

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
WARREN AVE. ENTRANCE RAMP IN DETROIT

CITY OF DETROIT

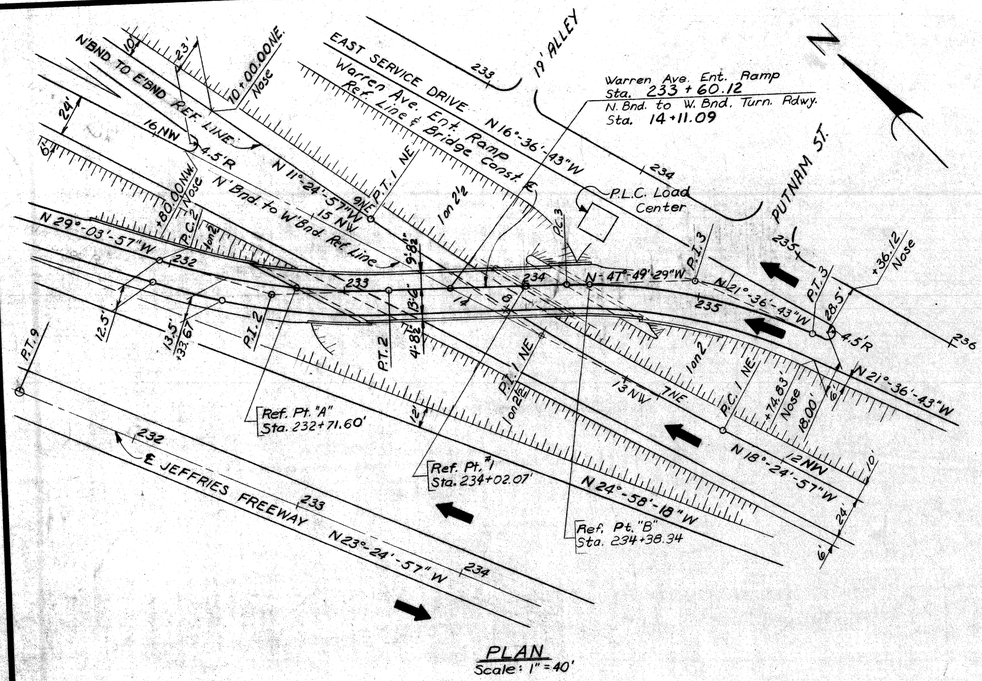
GENERAL PLAN OF STRUCTURE

SQUAD BOSS	Wolff	
DRAWN BY	Van Kirckhave	2-12-68
TRACED BY		
CHECKED BY	J. M.	2-68
SHEET 4 OF 22		

APPROVED _____ DESIGN SUPERVISING ENGINEER

APPROVED _____ DESIGN ENGINEER

S49 of 82123K



BENCH MARKS

C.B.M. 23 Arrow on Hydrant S.E. Corner Warren and Maybury Grand. Elev. 134.29
C.B.M. 24 Arrow on Hydrant N.E. Corner Putnam and Tillman. Elev. 133.32
C.B.M. 26 Arrow on Hydrant N.E. Corner Merrick and Tillman. Elev. 134.43
P.B.M. 20-252 A C. of D. Monument N.E. Corner of Hancock and Tillman. Elev. 129.12
C.B.M. denotes Construction Bench Mark.
P.B.M. denotes Permanent Bench Mark.
All elevations are based on City of Detroit Datum.

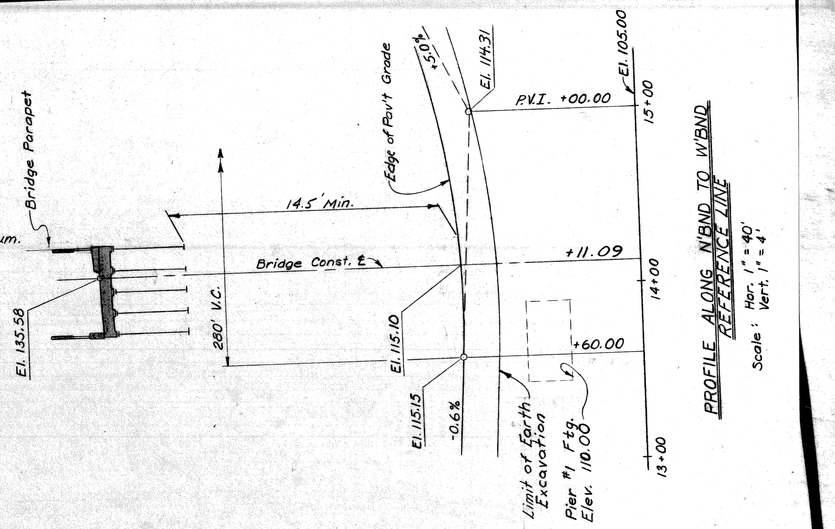
CURVE DATA FOR WARREN ENT. RAMP

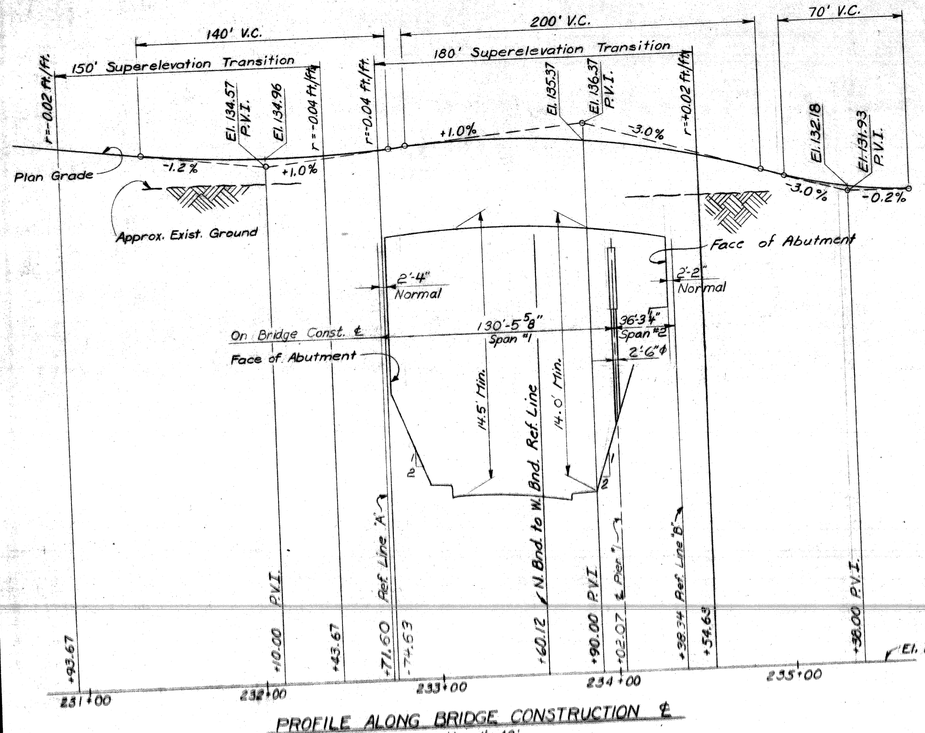
Curve #2		Curve #3	
Δ	18°-45'-32"	Δ	26°-12'-46"
D	14°-19'-26"	D	18°-20'-05"
R	400.00'	R	312.50'
T	66.07'	T	72.76'
L	130.96'	L	142.97'
E	5.42'	E	8.36'
P.C.	231 + 93.67	P.C.	234 + 24.63
P.I.	232 + 59.74	P.I.	234 + 97.39
P.T.	233 + 24.63	P.T.	235 + 67.60

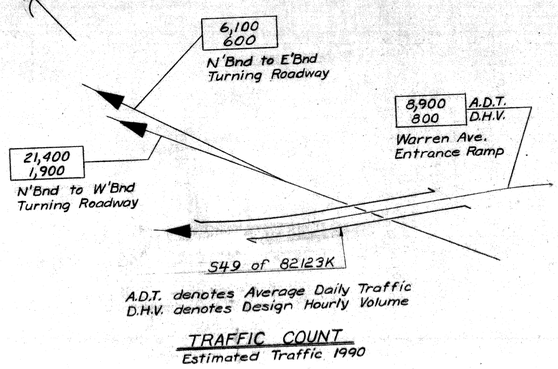
CURVE DATA FOR N'BND TO E'BND TURNING RD'WY

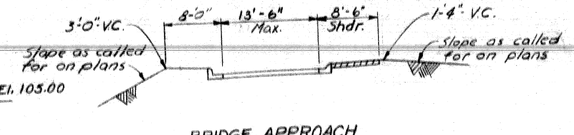
Curve #1 NE

Δ = 7°-00'-00"
D = 3°-00'-00"
R = 1909.86'
T = 116.81'
L = 233.33'
E = 3.57'
P.C. = 6 + 59.23
P.I. = 7 + 76.05
P.T. = 8 + 92.57









PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 9001

REVISIONS

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES - FORD INTERCHANGE
WARREN AVE. ENTRANCE RAMP IN DETROIT

GENERAL DRAWING

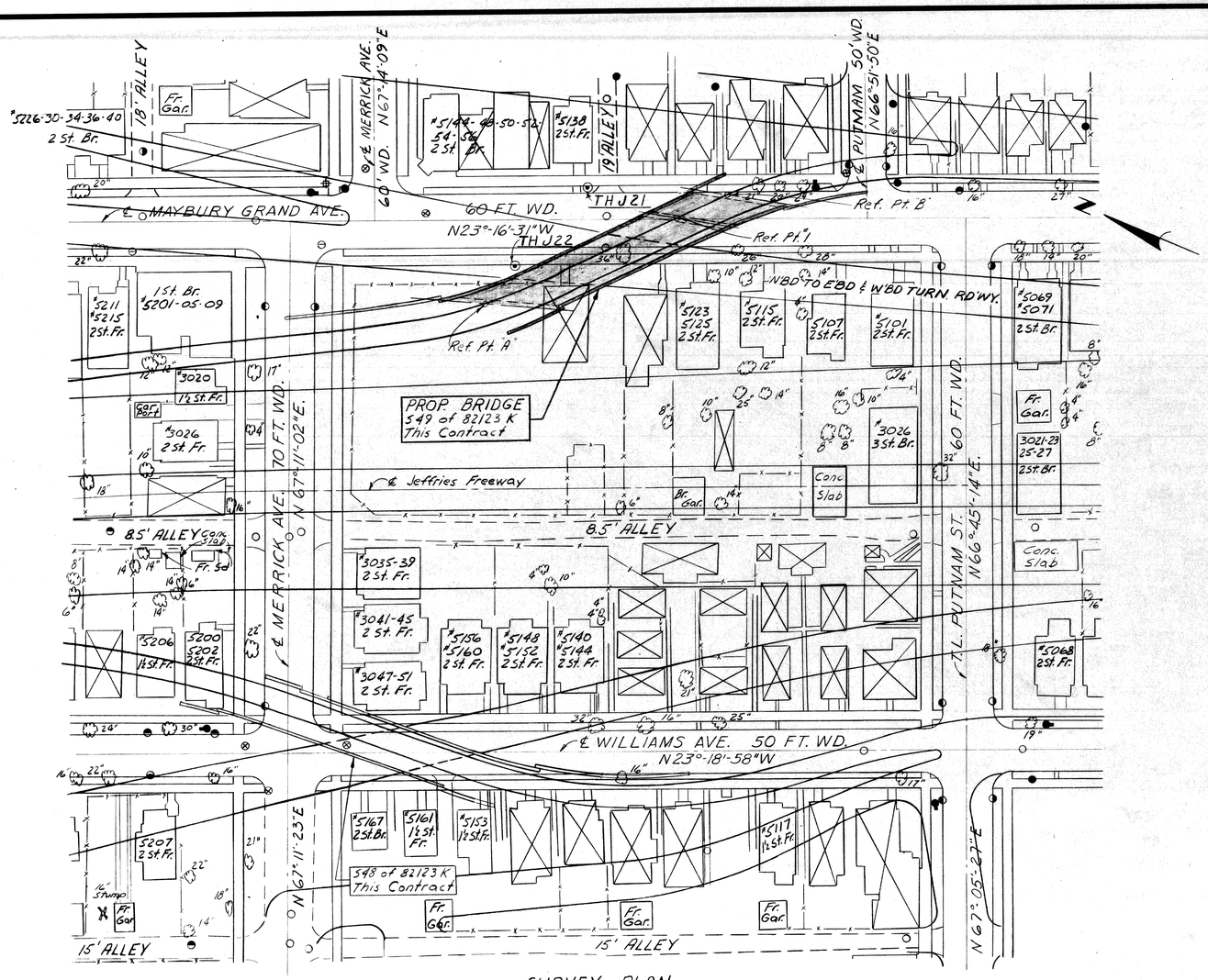
CITY OF DETROIT

SQUAD BOSS	Watts	
DRAWN BY	A. Morton	1-66
TRACED BY		
CHECKED BY	R.H.V.M.	2-66
SHEET	3 OF 22	

APPROVED _____ DESIGN SUPERVISING ENGINEER

APPROVED _____ DESIGN ENGINEER

S49 of 82123K



SURVEY PLAN
Scale 1" = 40'

LEGEND

- Tree
- Fence
- Sewer Manhole
- Sewer Inlet or Catch Basin
- Water Gatewell and Valve
- P.L.C. Cable Manhole
- Fire Hydrant
- D.F.D. Alarm Box
- Test Hole for Soil Profile
- M.B.T. Cable Manhole
- Removed

NOTES:

The topography shown represents conditions existing at the time the field survey was made. These conditions may have been altered by the operations of others before this work is started.

Bench Marks are referenced to the City of Detroit Datum.

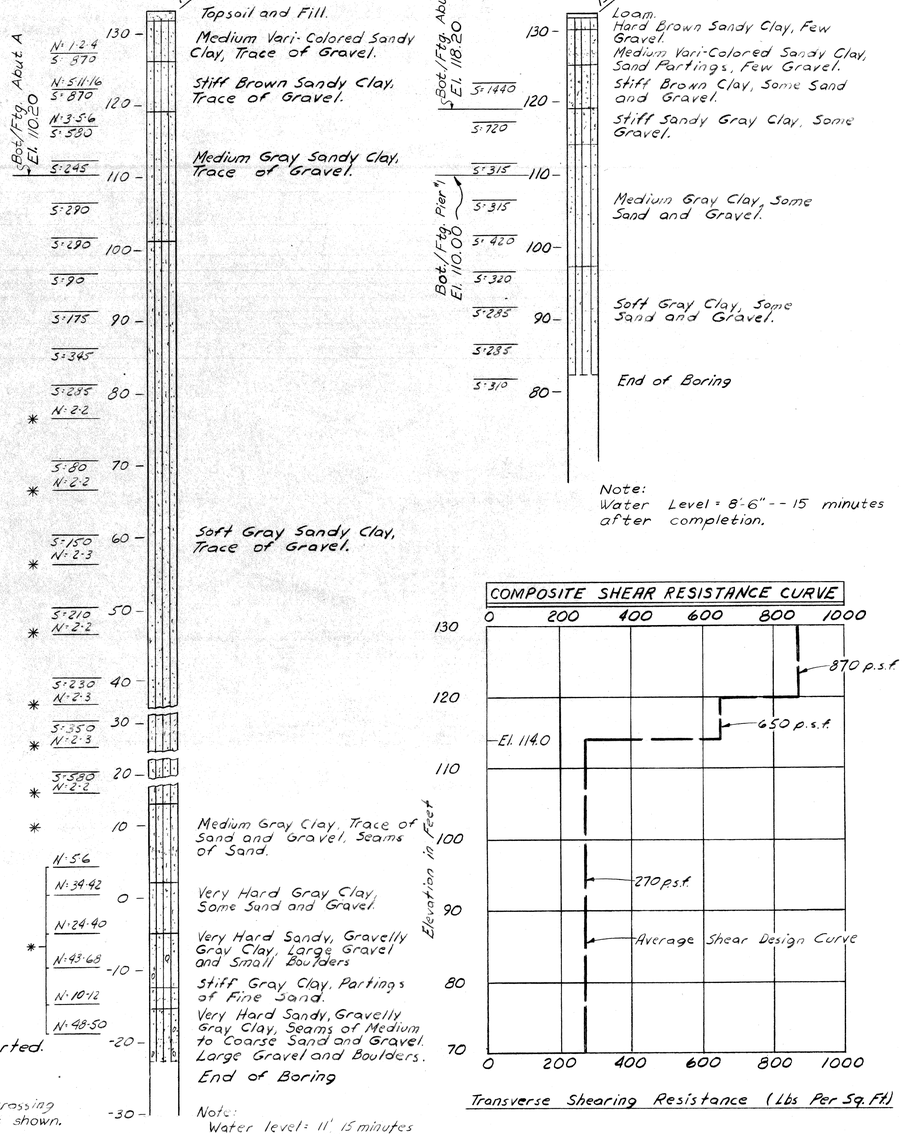
The work covered by these plans includes the construction of the Warren Ave. Entrance Ramp Bridge S49 crossing the N'bnd to E'bnd & W'bnd turning roadway, slope protection, and lightweight backfill to the limits shown. All other work is included in the road plans which are a part of this contract.

This Bridge is part of an Interchange and all area shown is within M.D.S.H. R.O.W.

Removal of fences and buildings is not a part of this contract.

N Indicates the number of blows required to drive the 2"ϕ Sampler 6" (or as noted) using a 140 lb. hammer falling 30". Where blow count is not shown, Sampler was levered, pushed or hand driven.
S Indicates Transverse Shearing Resistance in lbs. per sq. ft. as determined by M.D.S.H. Standard Test.
✱ Indicates no Sample, or No Test

LOG OF SOIL BORINGS



COMPOSITE SHEAR RESISTANCE CURVE

PLANS PREPARED BY
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERS OFFICE
BUREAU OF HIGHWAYS AND EXPRESSWAYS

APPROVED _____ STRUCTURAL ENGINEER

JOB No. PW 990(2)

REVISIONS

NO.	DESCRIPTION	DATE	BY

MICHIGAN DEPARTMENT OF STATE HIGHWAYS

JEFFRIES-FORD INTERCHANGE
WARREN AVE. ENTRANCE RAMP IN DETROIT

GENERAL PLAN OF SITE

CITY OF DETROIT

SQUAD BOSS	Wolff	
DRAWN BY	A.J.G.	12-67
TRACED BY		
CHECKED BY	R.H. J.M.	2-68
SHEET 2 OF 22		

APPROVED _____ DESIGN SUPERVISING ENGINEER

APPROVED _____ DESIGN ENGINEER

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