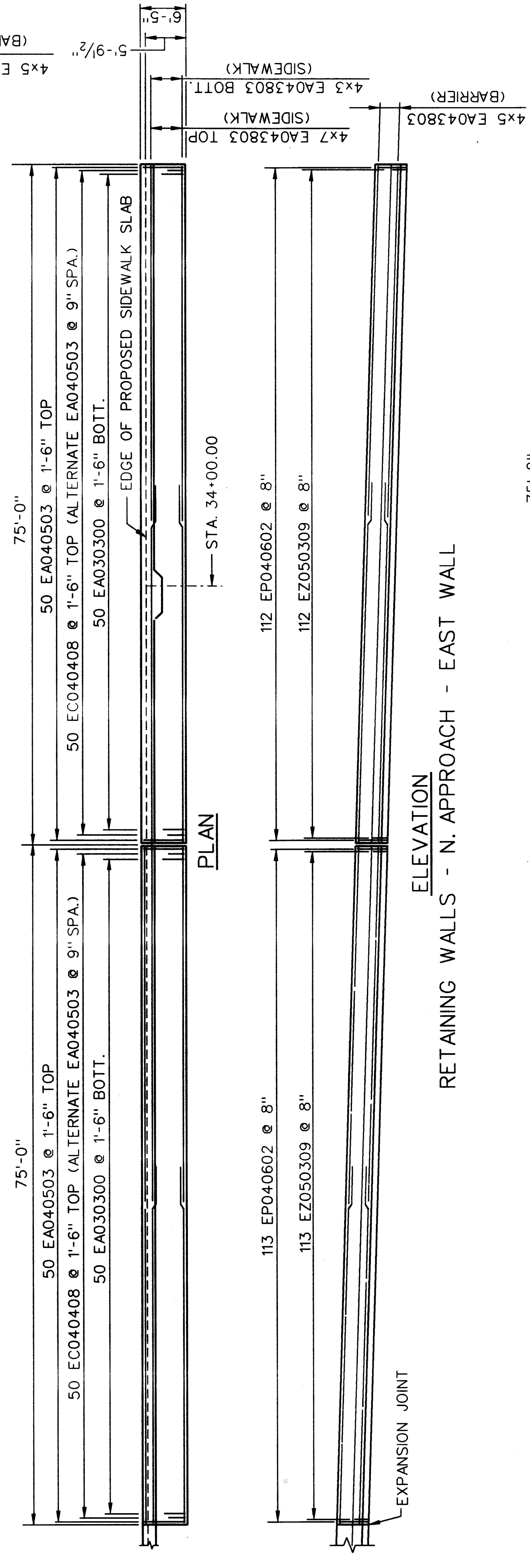
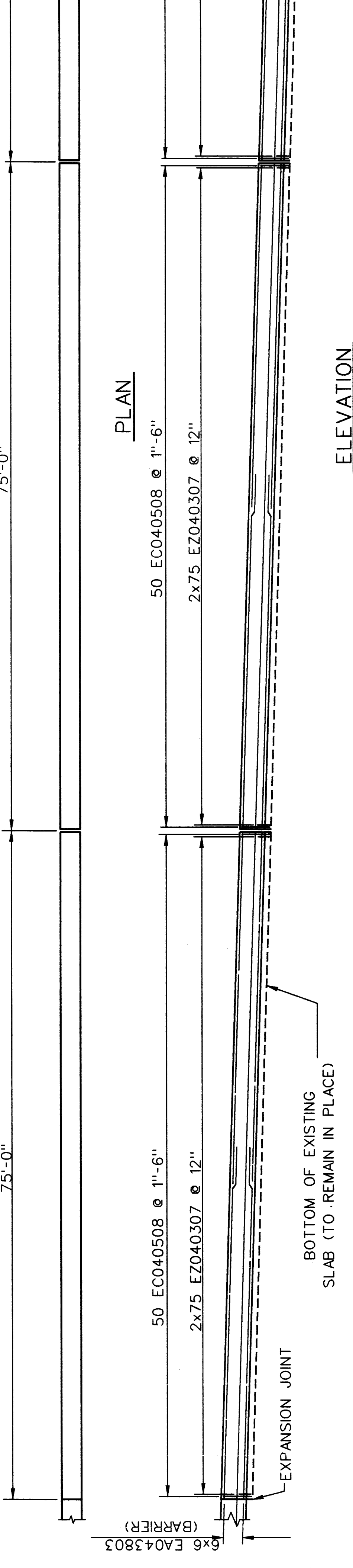


**RETAINING WALLS - N. APPROACH - WEST WALL**



**RETAINING WALLS - N. APPROACH - EAST WALL**



**RETAINING WALLS - N. APPROACH - MEDIAN WALL**

**Baker**  
**WTA**  
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 WALTER TEAMER AND ASSOCIATES, INC.  
 A JOINT ASSOCIATION  
 18431 JAMES COUZENS DETROIT, MI 48235

NOTES:  
 WORK THIS SHEET WITH SHEETS 21 AND 48.

THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
**RETAINING WALLS**  
 STA. 33+00 TO 34+50

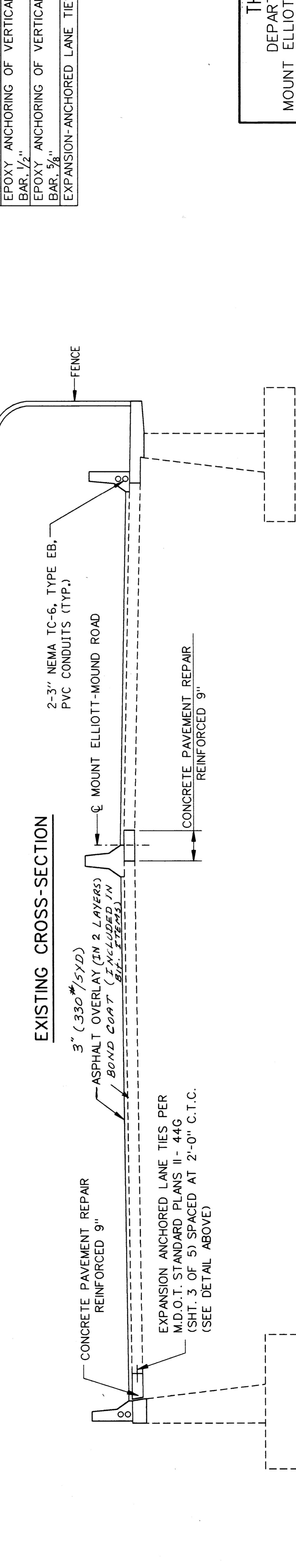
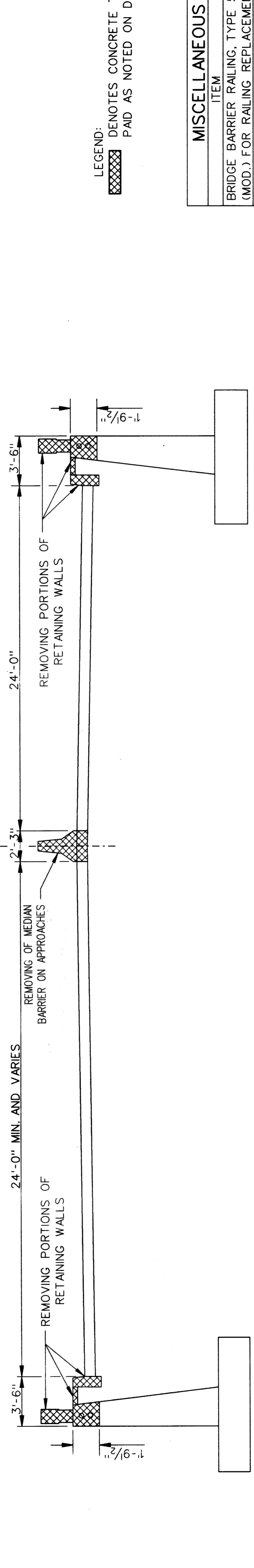
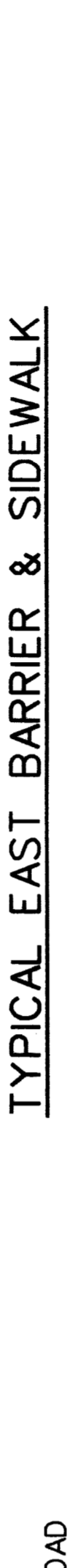
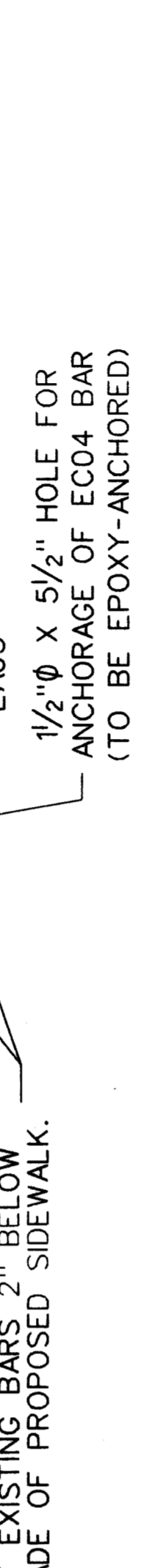
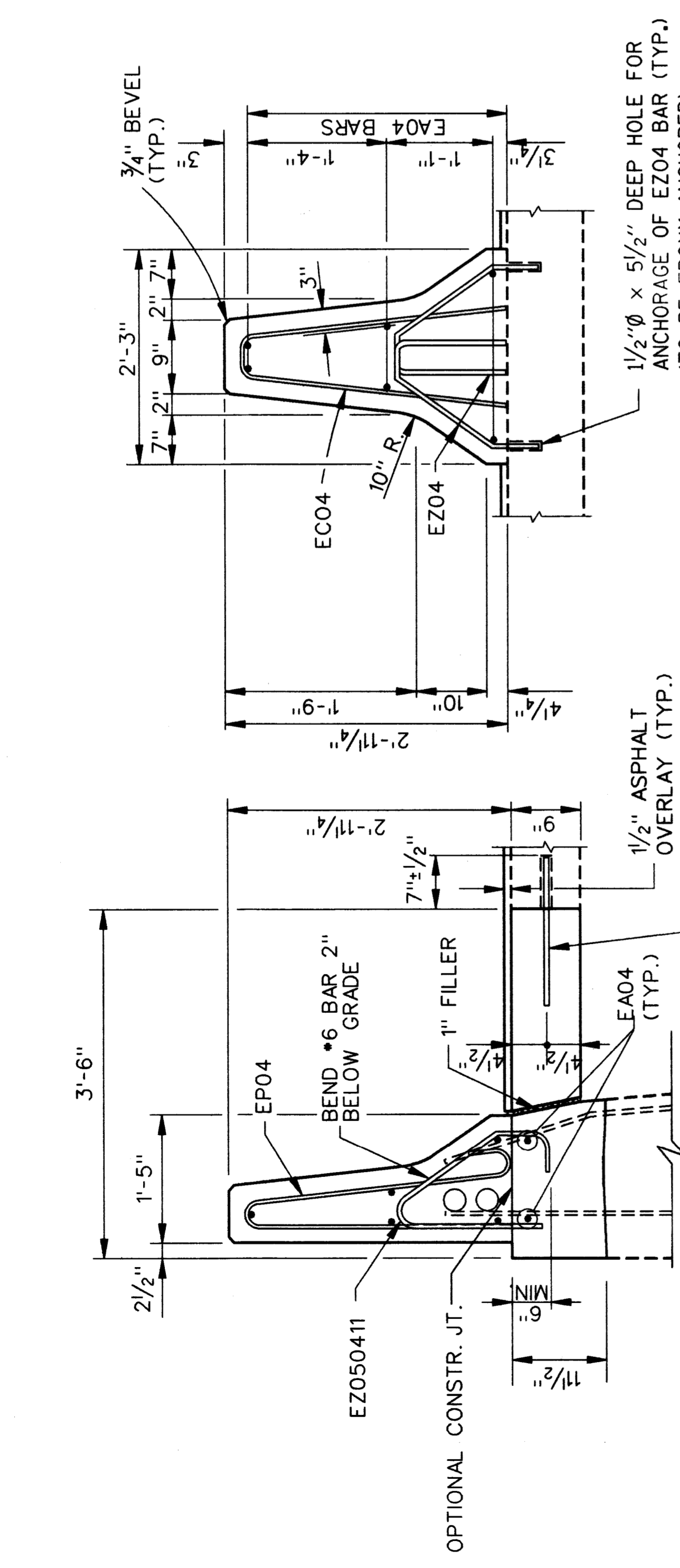
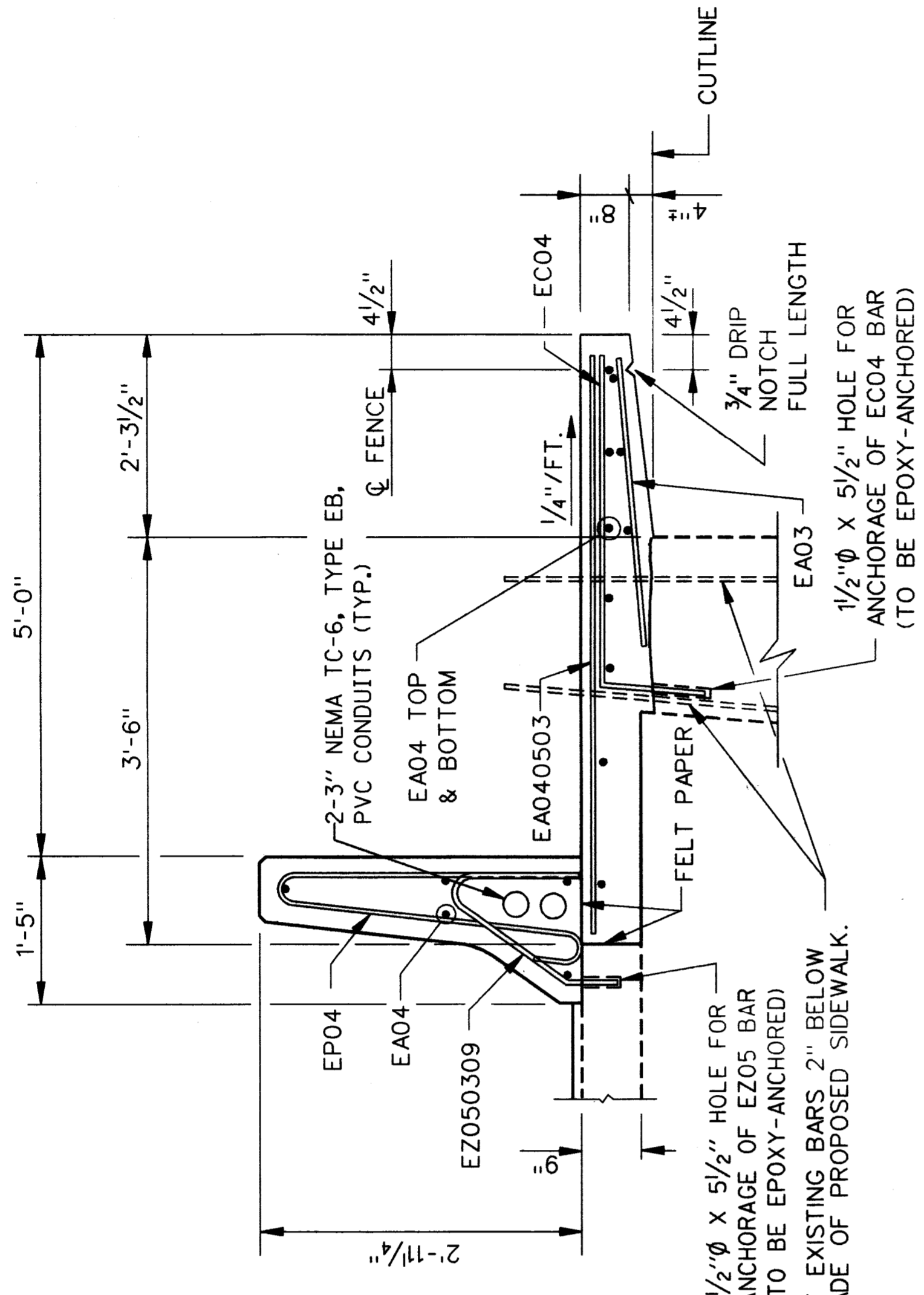
NO.	DESCRIPTION	DATE	BY

DRAWN BY	NAME	WTA	DATE	11/93

CHECKED BY	NAME	RAD	DATE	1/94

SHEET 20 OF 57

B01 of 82-22-48



**NOTES:**

- POUR SLAB AGAINST EXISTING PAVEMENT
- CUT EXISTING VERTICAL BARS 2" BELOW FINAL SLAB ELEVATION
- 3/4" BEVEL ALL EXTERIOR EDGES
- ALL REINFORCING 2" CLEAR
- THE 3" ASPHALT OVERLAY SHALL NOT BE APPLIED TO THE SIDEWALK.
- EZ04 BARS IN MEDIAN AND EZ05 BARS IN EAST BARRIER TO BE EPOXY ANCHORED.
- THE TYPICAL WEST, TYPICAL MEDIAN, AND TYPICAL EAST (AND SIDEWALK) BARRIER SECTIONS ARE APPLICABLE TO BOTH THE NORTH AND SOUTH ABUTMENTS.
- WORK THIS SHEET WITH SHEETS 18, 19, 20, & 48
- FOR WEST BARRIER PAVEMENT WIDENING, MATCH EXISTING CROSS SLOPE.
- BOND COAT OVER EXISTING CONCRETE INCLUDED IN BIT. ITEMS.
- LEGEND: DENOTES CONCRETE TO BE REMOVED, TO BE PAID AS NOTED ON DRAWING.

**MISCELLANEOUS QUANTITIES**

ITEM	UNIT	AMOUNT
BRIDGE BARRIER RAILING, TYPE 5 (MOD.) FOR RAILING REPLACEMENT	LFT	1075
CONCRETE MEDIAN BARRIER (SP)	LFT	550
EPOXY ANCHORING OF VERTICAL BAR, 1/2"	EACH	1467
EPOXY ANCHORING OF VERTICAL BAR, 5/8"	EACH	795
EXPANSION-ANCHORED LANE TIES	EACH	272

**THE CITY OF DETROIT**  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 NORTH/SOUTH APPROACH - DETAILS

NO.	DESCRIPTION	DATE	BY

REVISIONS	DATE	BY

SOULD BOSS NAME BAL  
 DRAWN BY NAME BE DATE 1/93  
 CHECKED BY NAME RAD DATE 1/94  
 SHEET 21 OF 57  
**B01 of 82-22-48**

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**WTA**  
 BAKER AND ASSOCIATES  
 WALTER TEAMER AND ASSOCIATES, INC.  
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 18431 JAMES COUZENS DETROIT, MI 48235





PLATE GIRDER DATA

SPAN	GIRDER NUMBER	GIRDER TYPE	Q PIER (A) LOCATIONS	Q PIER (B) LOCATIONS	GIRDER DIMENSIONS											FLANGE PLATE SIZE											BRG. STIFF (X) SIZE	BRG. STIFF (Y) SIZE	INTERMEDIATE STIFF. SIZE	HINGE NO.	4-3/4" Ø (6" LENGTH) STUD SHEAR CONNECTORS (SPACING)										
					C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W	a	b	c	d					e	f	g	h	i	j	k				
16	A	1 & 10	Q PIER 15	REF. LINE B	6"	26'-0"	1'-4 3/8"	5"	4 1/4"	26'-0"	0	12"x 3/4"	12"x 1 1/8"	16"x 1 3/8"	16"x 1 3/8"	---	2-7"x 3/4"	2-7"x 3/4"	2-4"x 3/8"	---	9'-4 3/4"	80 1/4"	70 1/8"	50 2/0"	0	0	270 2/4"	9'-4 1/8"	9'-4 1/8"	---											
	A	2 & 9	do	do	do	27'-0"	do	do	do	27'-0"	0	12"x 5/8"	12"x 3/4"	16"x 1 3/8"	16"x 1 3/8"	---	do	do	do	---	11'-2 1/8"	90 1/5"	60 1/7"	50 2/0"	0	0	260 2/4"	11'-2 1/4"	11'-2 1/4"	---											
	A	3, 4, 7 & 8	do	do	do	27'-0"	do	do	do	27'-0"	0	12"x 5/8"	12"x 3/4"	16"x 1 3/4"	16"x 1 1/4"	---	do	do	do	---	11'-2 1/8"	140 1/11"	140 1/11"	40 1/5"	0	0	90 2/4"	11'-2 3/4"	11'-2 3/4"	---											
	A	5 & 6	Q PIER 15	REF. LINE B	6"	24'-0"	1'-4 3/8"	5"	4 1/4"	24'-0"	0	12"x 5/8"	12"x 3/4"	16"x 1 1/2"	16"x 1 1/2"	---	2-7"x 3/4"	2-7"x 3/4"	2-4"x 3/8"	---	11'-10 1/8"	130 1/11"	70 1/4"	50 2/0"	0	0	150 2/4"	11'-10 3/4"	11'-10 3/4"	---											

NOTES:  
 GIRDER 1 THRU 10 OF SPAN 16 TO BE SHORTENED AS SHOWN IN "TABLE OF GIRDER LENGTH CUTOFFS".  
 GIRDERS TO BE CUT IN FIELD AND NEW HOLES TO BE CUT THROUGH WEB. PAID UNDER "REMOVAL OF PORTIONS OF STRUCTURES".  
 NEW BEARING STIFFENERS 2-LSX3/2X3/4X52" TO BE BOLTED AT NEW BEARING LOCATION.  
 STRUCTURAL STEEL WT.=1,960 LBS.

PLATE GIRDER DATA

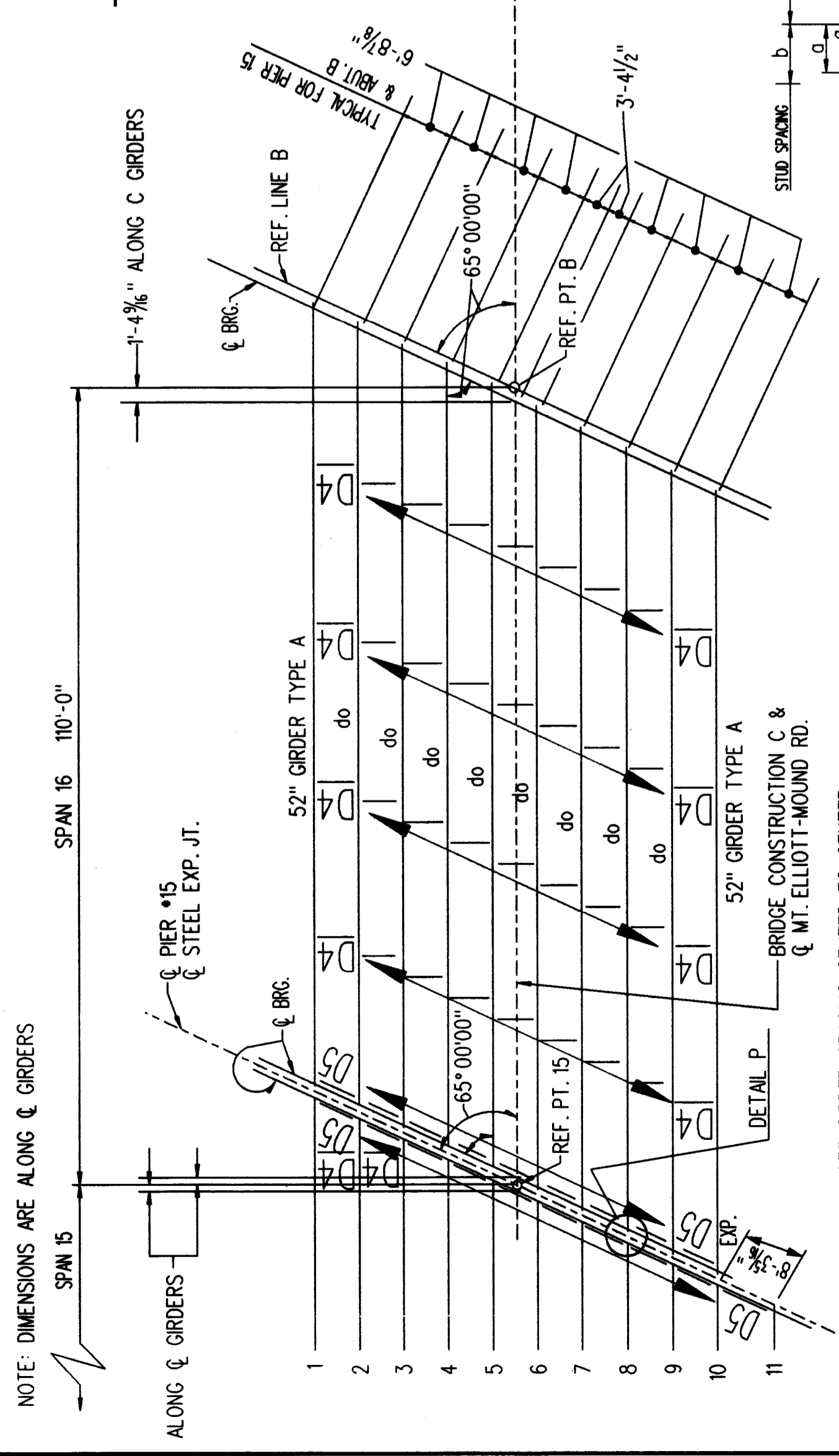
(6" MEAN DIM.) - 3/4" SPIRAL SHEAR DEVELOPERS, SPACING AND PITCH. (NOTE: \* INDICATES DOUBLE SPIRALS)

SPAN	GIRDER NUMBER	GIRDER TYPE	a	b	c	d	e	f	g	h	i	j	k	l	m	n	p	q	r	s	t	u	v	w
16	1 & 10	A	12'-2 5/8"	210 7/8"	3 1/2"	160 9/16"	4 3/4"	70 12"	6"	100 16"	0	0	8"	160 16"	0	0	12'-3"	12'-3"	---	---	---	---	---	---
	2 & 9	A	12'-5 5/8"	200 7/16"	3 3/4"	150 9/16"	4 1/2"	90 13"	5 1/2"	90 13"	6 1/2"	6 1/2"	80 16"	0	0	12'-6"	12'-6"	---	---	---	---	---	---	
	3, 4, 7 & 8	A	8'-8 1/8"	210 5/16"	2 1/2"	180 5/16"	3"	150 7/8"	3 1/2"	100 8"	4"	4"	5 1/2"	80 11"	4 1/2"	8'-8 3/4"	8'-8 3/4"	---	---	---	---	---	---	
	5 & 6	A	9'-7 3/8"	210 5/16"	2 3/4"	200 6/16"	3 1/4"	150 8"	4"	110 10"	5"	5"	6 1/2"	70 13"	0	0	9'-7 1/4"	9'-7 1/4"	---	---	---	---	---	

TABLE OF DEFLECTIONS DUE TO WEIGHT OF GIRDERS - INCHES

GIRDER	SPAN 16	
	A	B
1	7/8	7/8
2	7/8	7/8
3	7/8	7/8
4	7/8	7/8
5	7/8	7/8
6	7/8	7/8
7	7/8	7/8
8	7/8	7/8
9	7/8	7/8
10	7/8	7/8
11	7/8	7/8

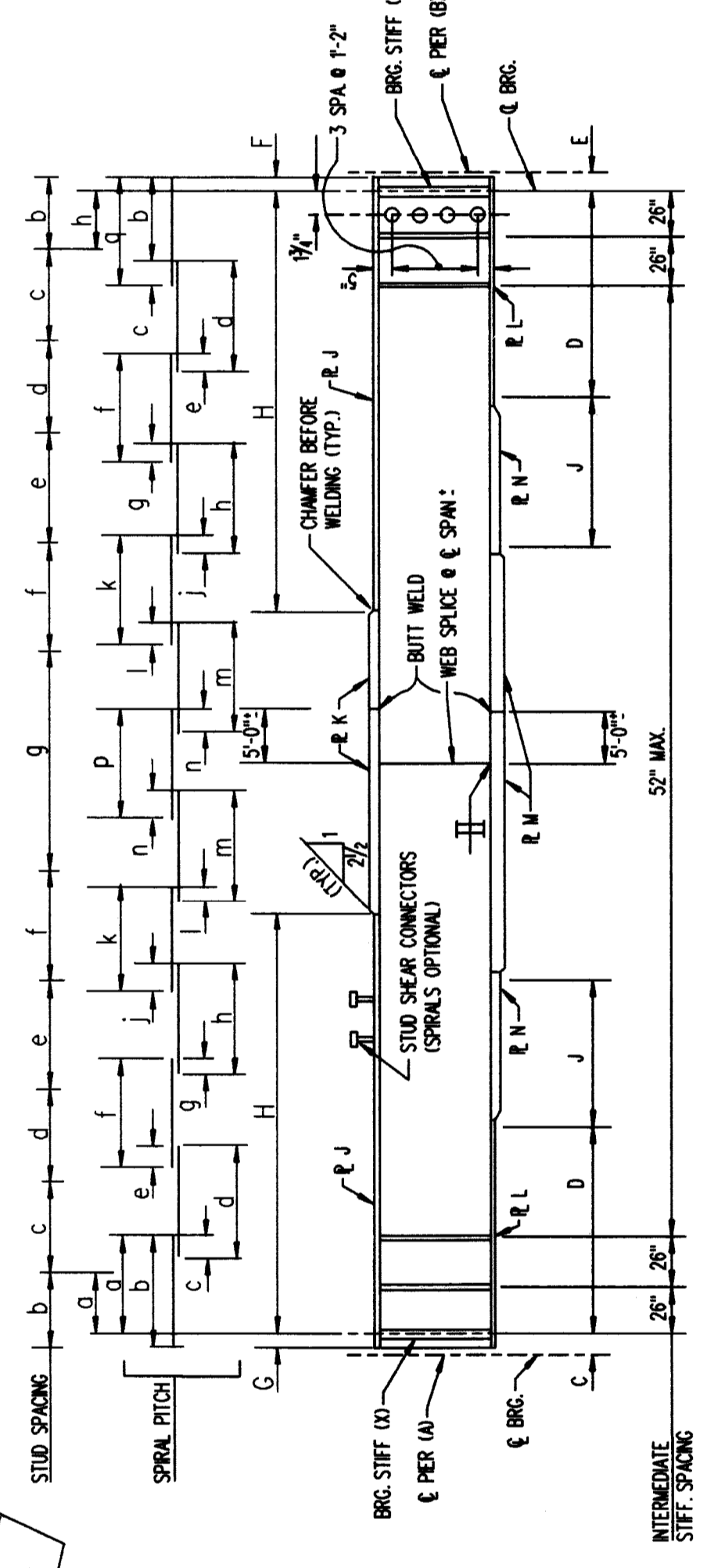
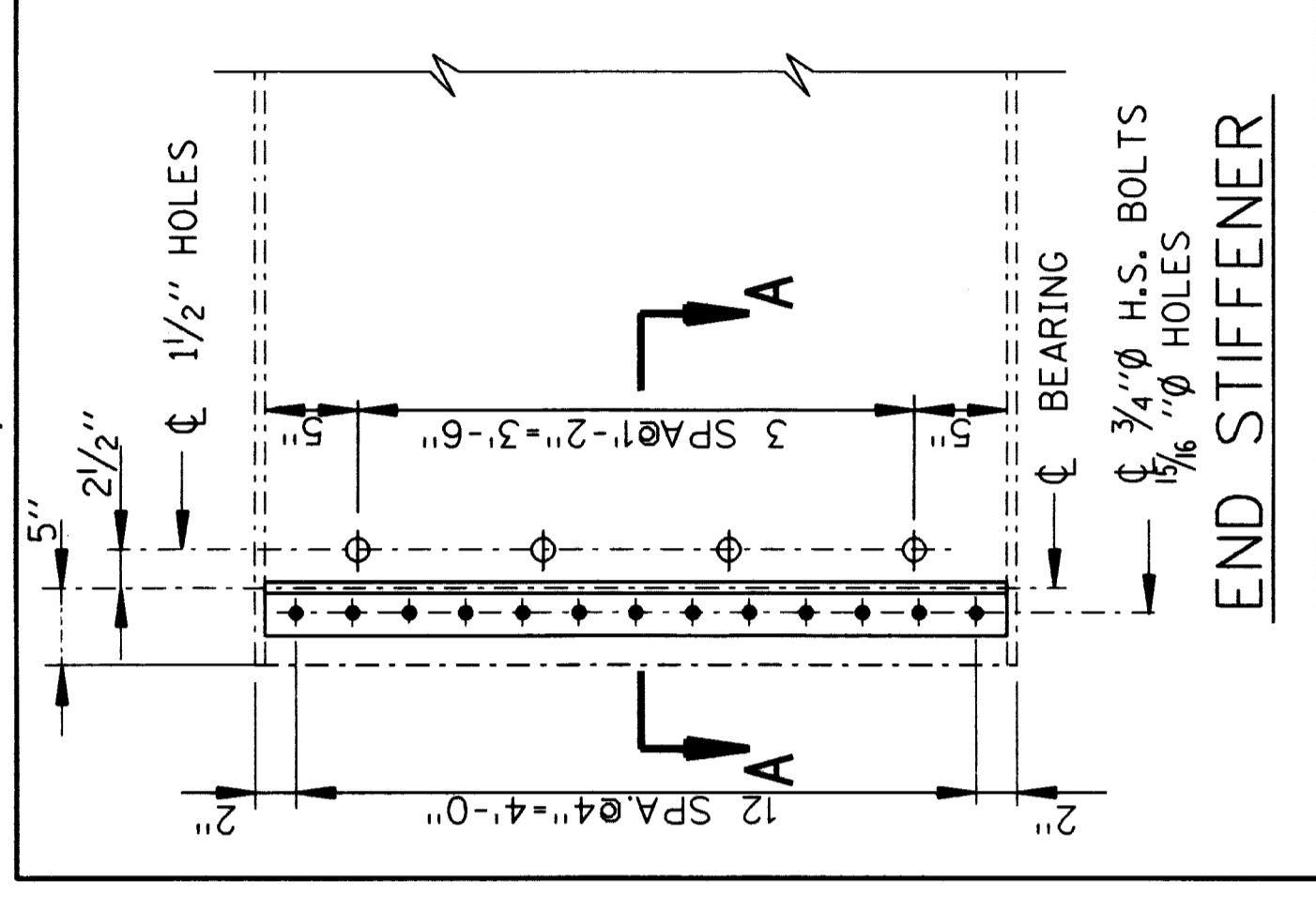
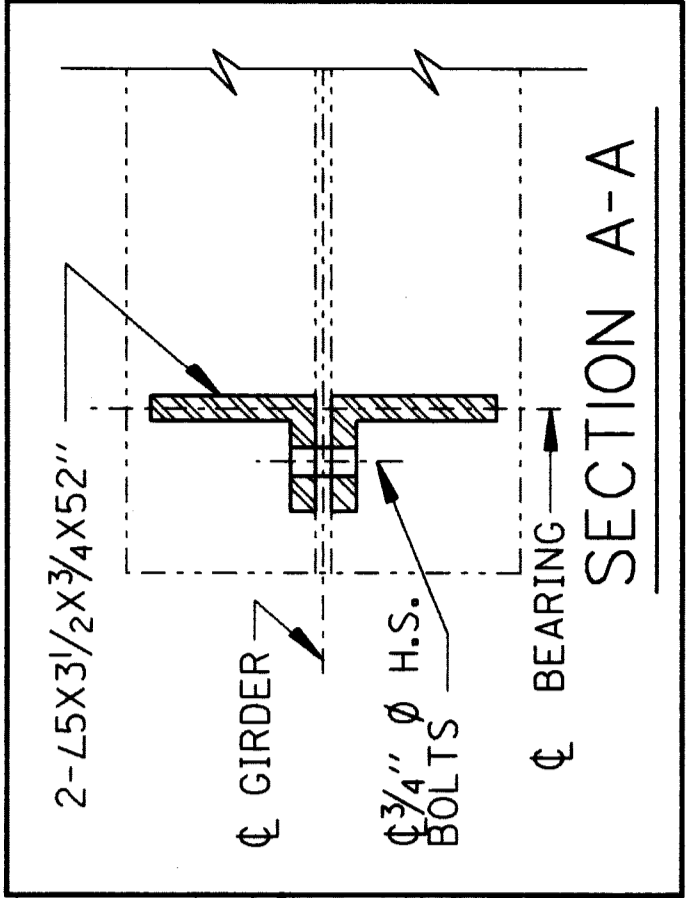
NOTE (-) DENOTES UPWARD DEFLECTION



PLAN - SPANS 16

TABLE OF GIRDER LENGTH CUTOFFS

GIRDER	SPAN 16 LENGTH
1	41'-0 1/4"
2	38'-1 1/4"
3	35'-3 3/4"
4	32'-5 1/8"
5	29'-7 1/4"
6	26'-9 1/8"
7	23'-10 1/8"
8	21'-0 1/4"
9	18'-2 1/4"
10	15'-4 3/8"



THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 STRUCTURAL STEEL DETAILS

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 WALTER TEAMER AND ASSOCIATES, INC.  
 A JOINT ASSOCIATION

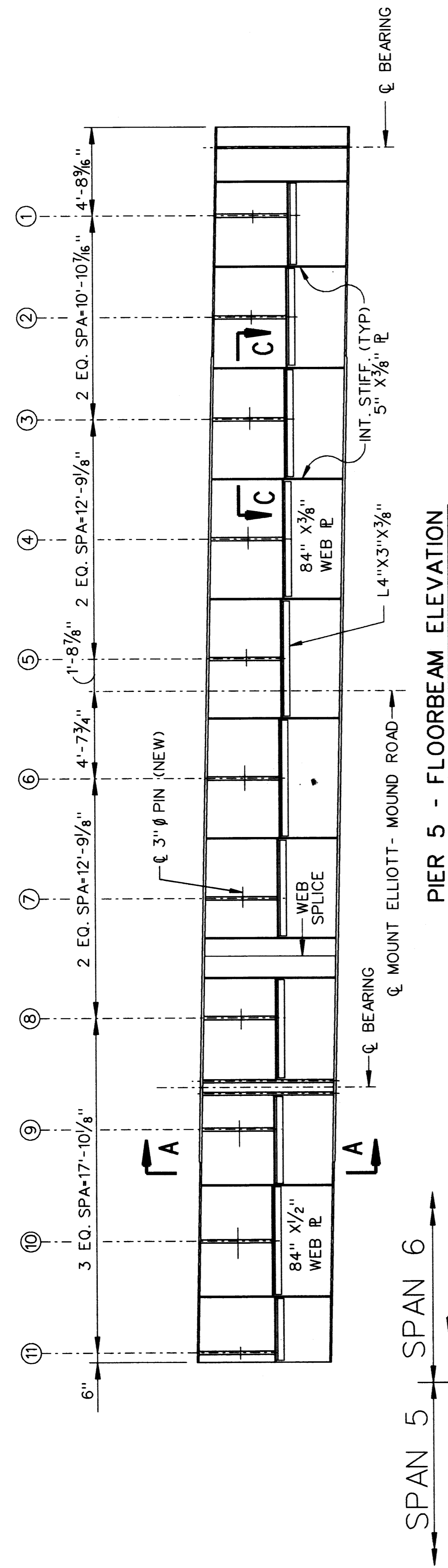
18431 JAMES COUZENS DETROIT, MI 48235

NO.	DESCRIPTION	REVISIONS	DATE	BY

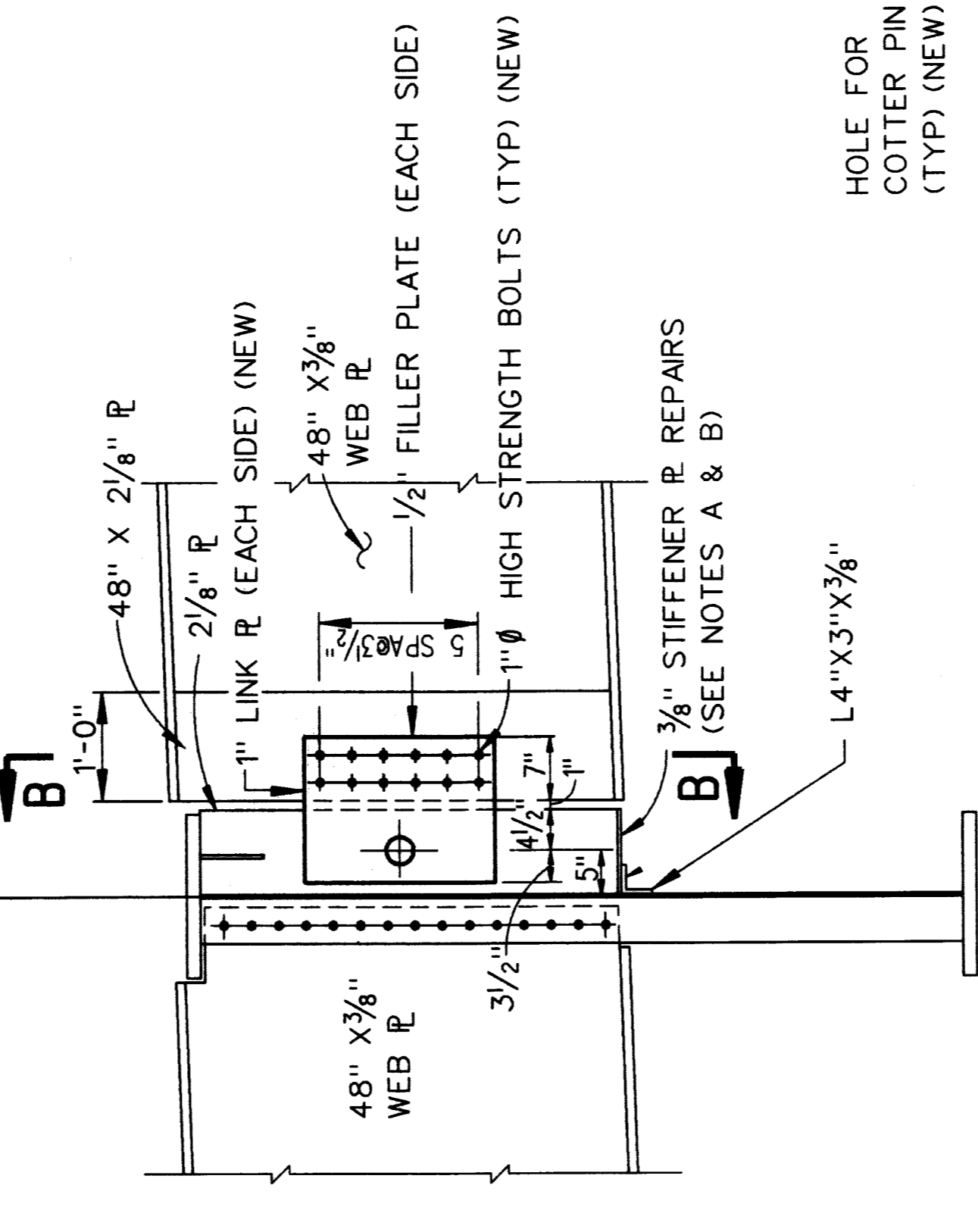
DESIGNED BY	NAME	DATE
CHECKED BY	NAME	DATE
SHEET	23	OF 57

B01 of 82-22-48

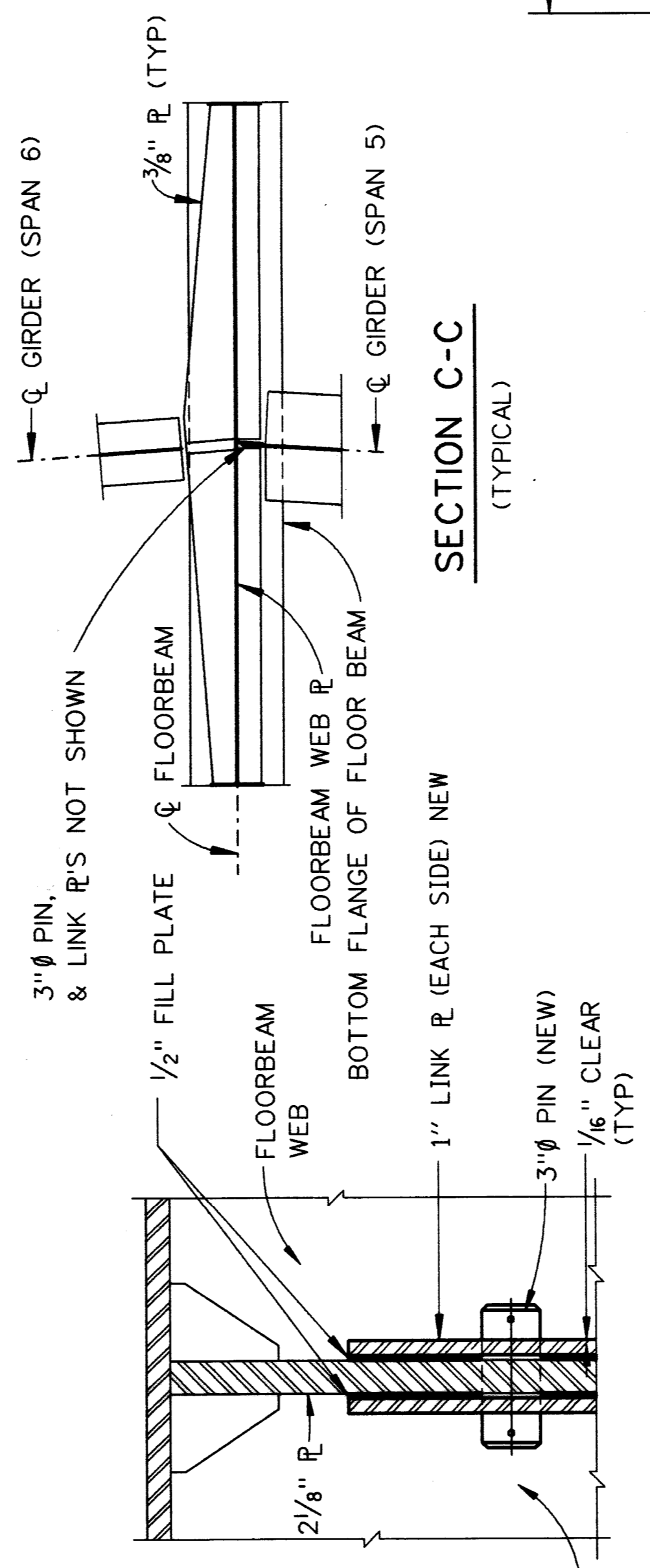




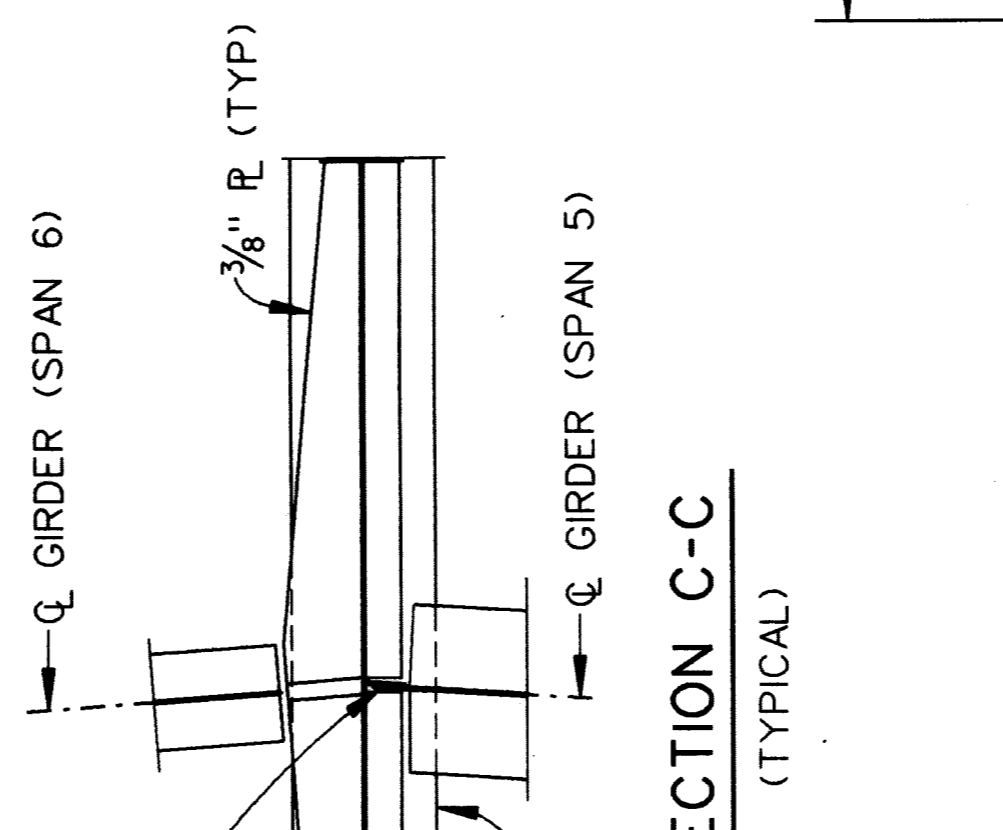
PIER 5 - FLOORBEAM ELEVATION



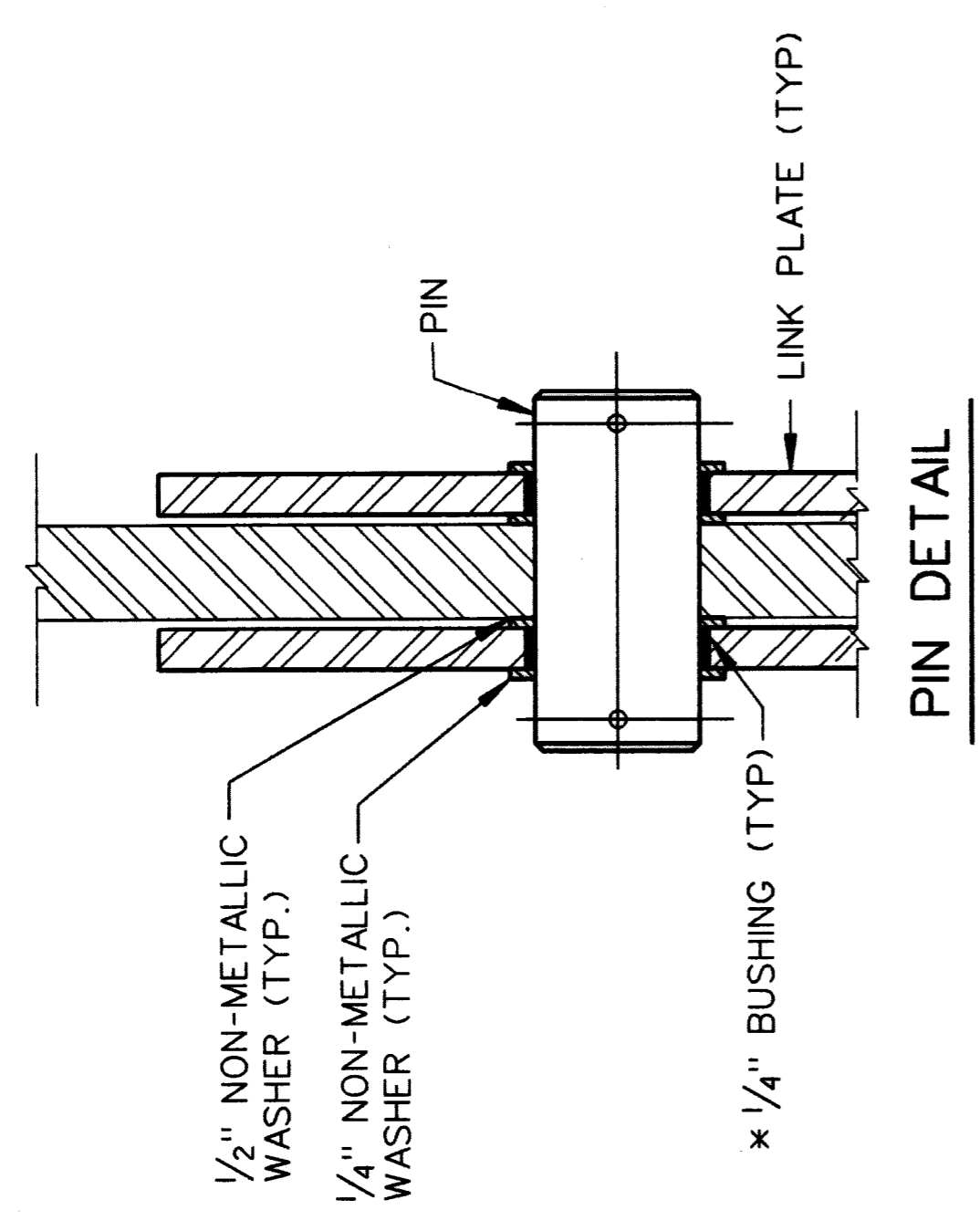
SECTION A-A



SECTION B-B

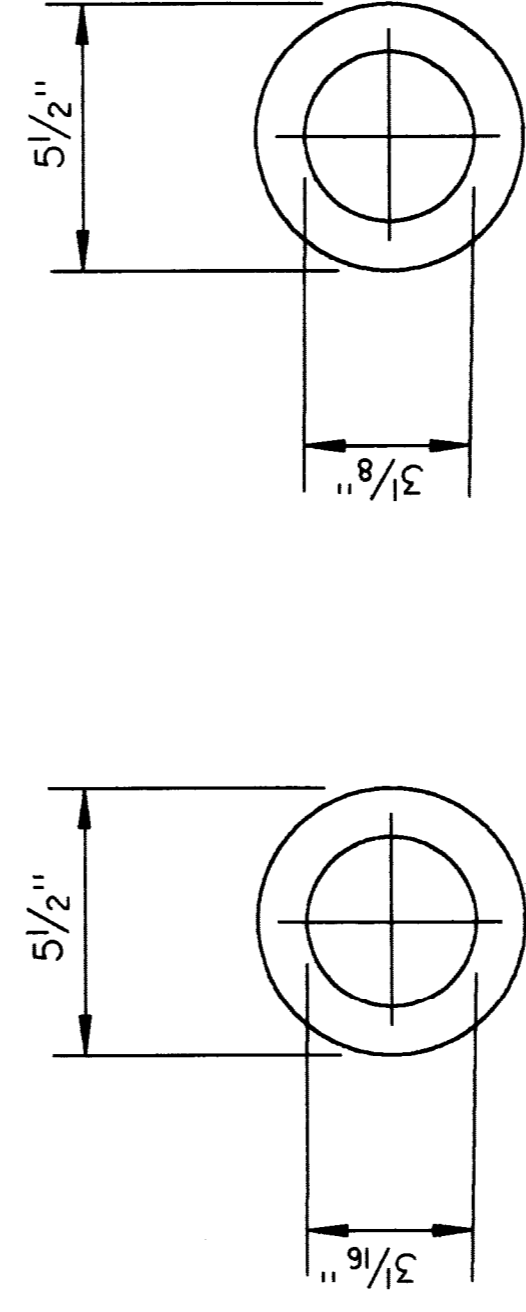


SECTION C-C (TYPICAL)



PIN DETAIL

MISCELLANEOUS QUANTITIES	
ITEM	UNIT AMOUNT
HANGER ASSEMBLY REMOVAL AND ERECTION	EACH 11
STRUCTURAL STEEL, FURNISHING AND FABRICATING (PIN & HANGER)	LBS 2300
BUSHING	EACH 22
FIELD MEASUREMENT OF HANGER ASSEMBLY	EACH 11
TEMPORARY SUPPORT, SUSPENSION TYPE	EACH 11
STRUCTURAL STEEL FABRICATION AND ERECTION (PLATES)	LBS 1200



1/4" NON-METALLIC WASHER

1/2" NON-METALLIC WASHER

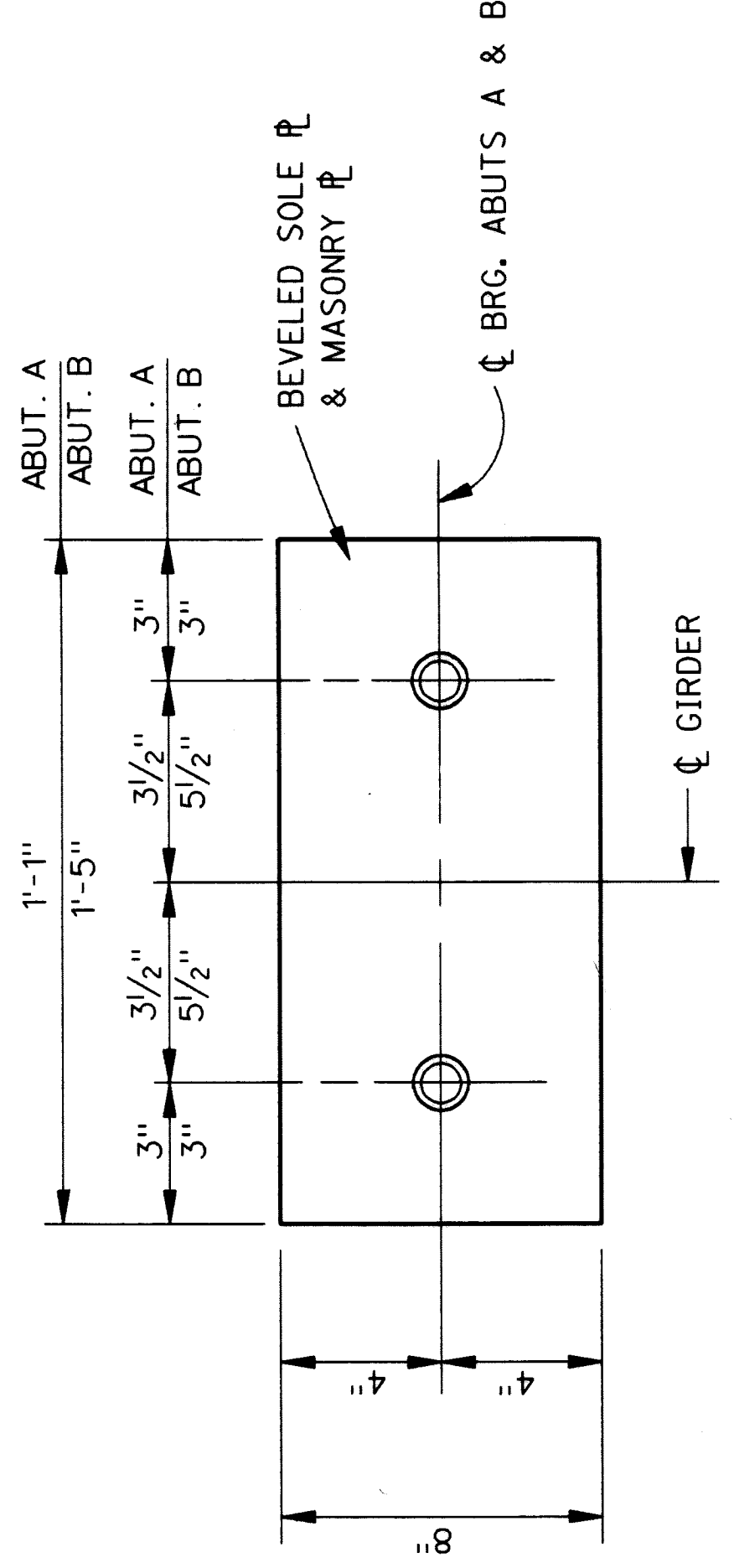
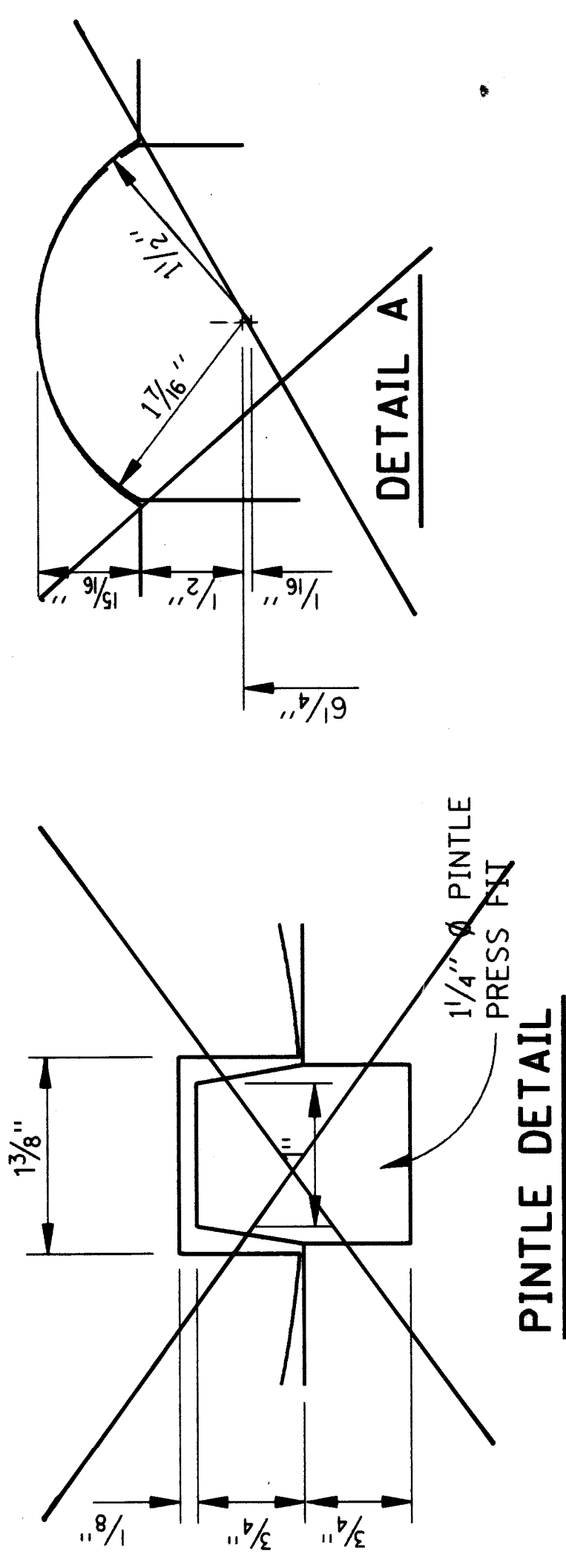
NOTES

- ALL STRUCTURAL STEEL SHALL BE FIELD PAINTED. THE AREA BEHIND AND AROUND THE HANGER SHALL BE PAINTED PRIOR TO INSTALLING THE NEW LINK PLATES AND PINS. PROPOSED LINK PLATES SHALL BE SHOP PAINTED. CLEANING, FIELD PAINTING, AND SHOP PAINTING SHALL BE DONE IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS.
- SEE SPECIAL PROVISIONS FOR PIN AND LINK PLATE MATERIAL, TEMPORARY SUPPORTS, AND REMOVAL AND ERECTION OF HANGER ASSEMBLY.
- THE CONTRACTOR SHALL TAKE FIELD MEASUREMENTS OF THE EXISTING HANGER ASSEMBLIES INDICATED ON THE PLANS PRIOR TO THE PREPARATION OF LINK PLATE AND PIN SHOP DRAWINGS. SEE SPECIAL PROVISION FOR PINS AND LINK PLATES.

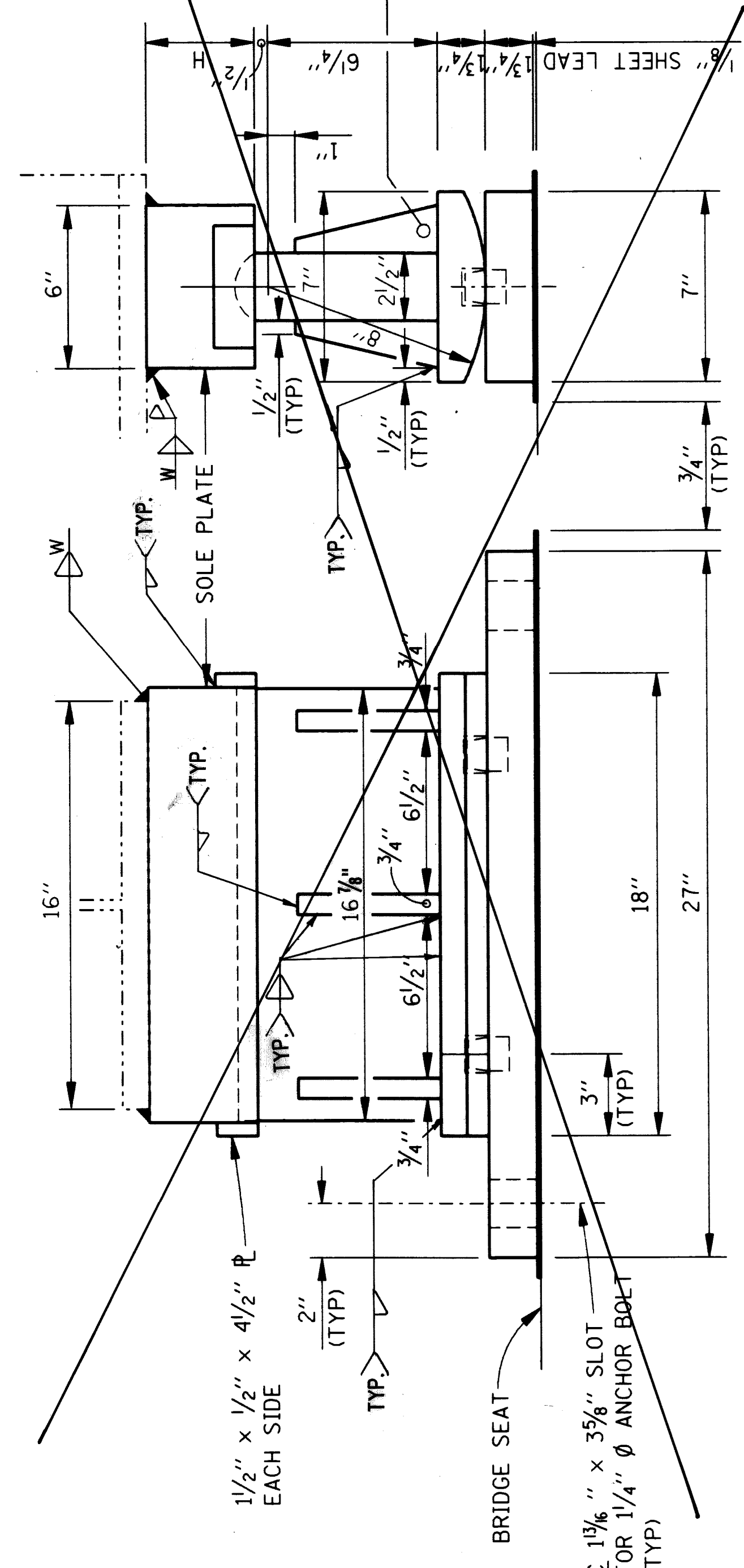
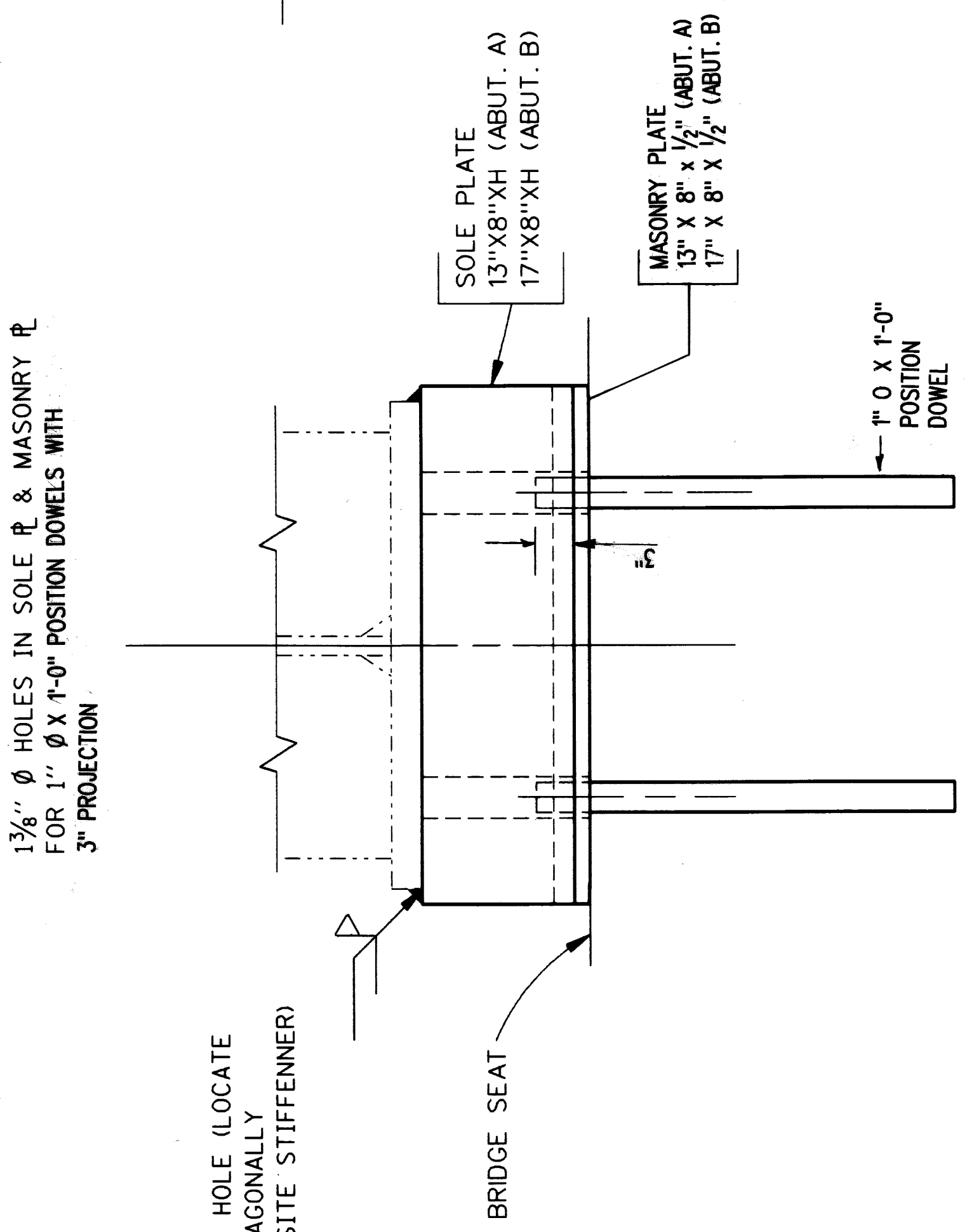
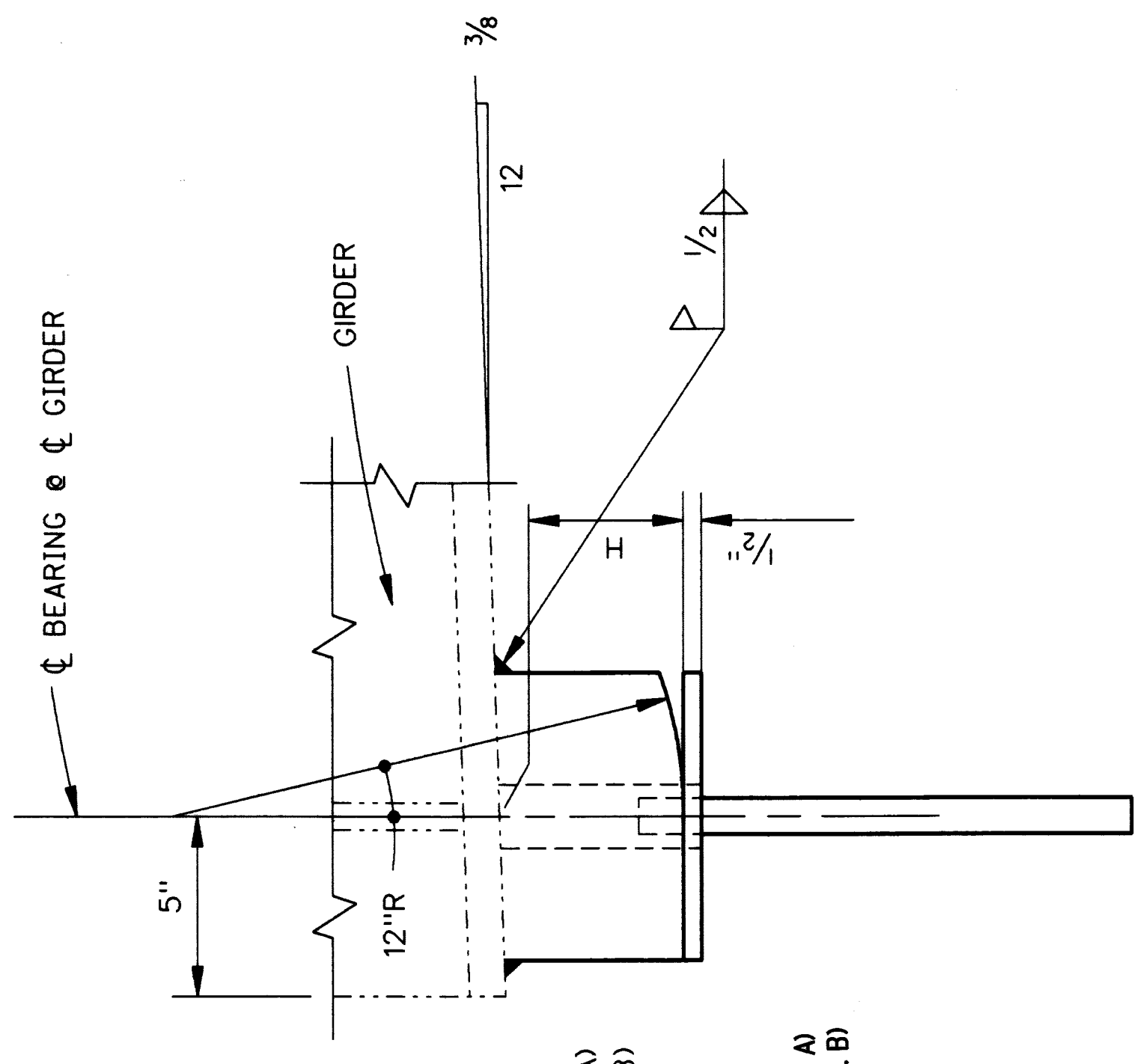
- A. CUT TO FIT 1/4" X 3" X 3/8" AND BOLT ON THE NORTH SIDE OF PIER 5 FLOOR BEAM BENEATH THE EXISTING STIFFENER. USE 3/4" Ø HIGH STRENGTH BOLTS. DRILL THROUGH WEB.
- B. LENGTH TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

WELDING ON EXISTING GIRDERS WILL NOT BE PERMITTED (EXCEPT AS NOTED).

REVISIONS	
NO.	DESCRIPTION



1 3/8" Ø HOLES IN SOLE PLATE & MASONRY FOR 1" Ø X 1'-0" POSITION DOWELS WITH 3" PROJECTION



**BEARINGS AT ABUTMENTS**  
20 REQUIRED

SOLE PLATE THICKNESS "H"		PIER 15	
GIRDER	ABUT A	ABUT B	
1	2"	2 1/2"	2 1/4"
2	2"	2 1/2"	3 1/2"
3	2"	2 1/2"	5"
4	2"	2 1/2"	2 1/4"
5	2 3/4"	3 1/4"	3 3/8"
6	2 3/4"	3 1/4"	5 7/8"
7	2"	2 1/2"	3 7/8"
8	2"	2 1/2"	2 1/4"
9	2"	2 1/2"	2 1/4"
10	2"	2 1/2"	2 1/4"

QUANTITY	UNIT	AMOUNT
20	LBS	2,000
10	EACH	10

NOTE:  
ALIGN ROCKER BEARING AT PIER 15-  
SPAN 16 AS PER SPECIAL PROVISION.

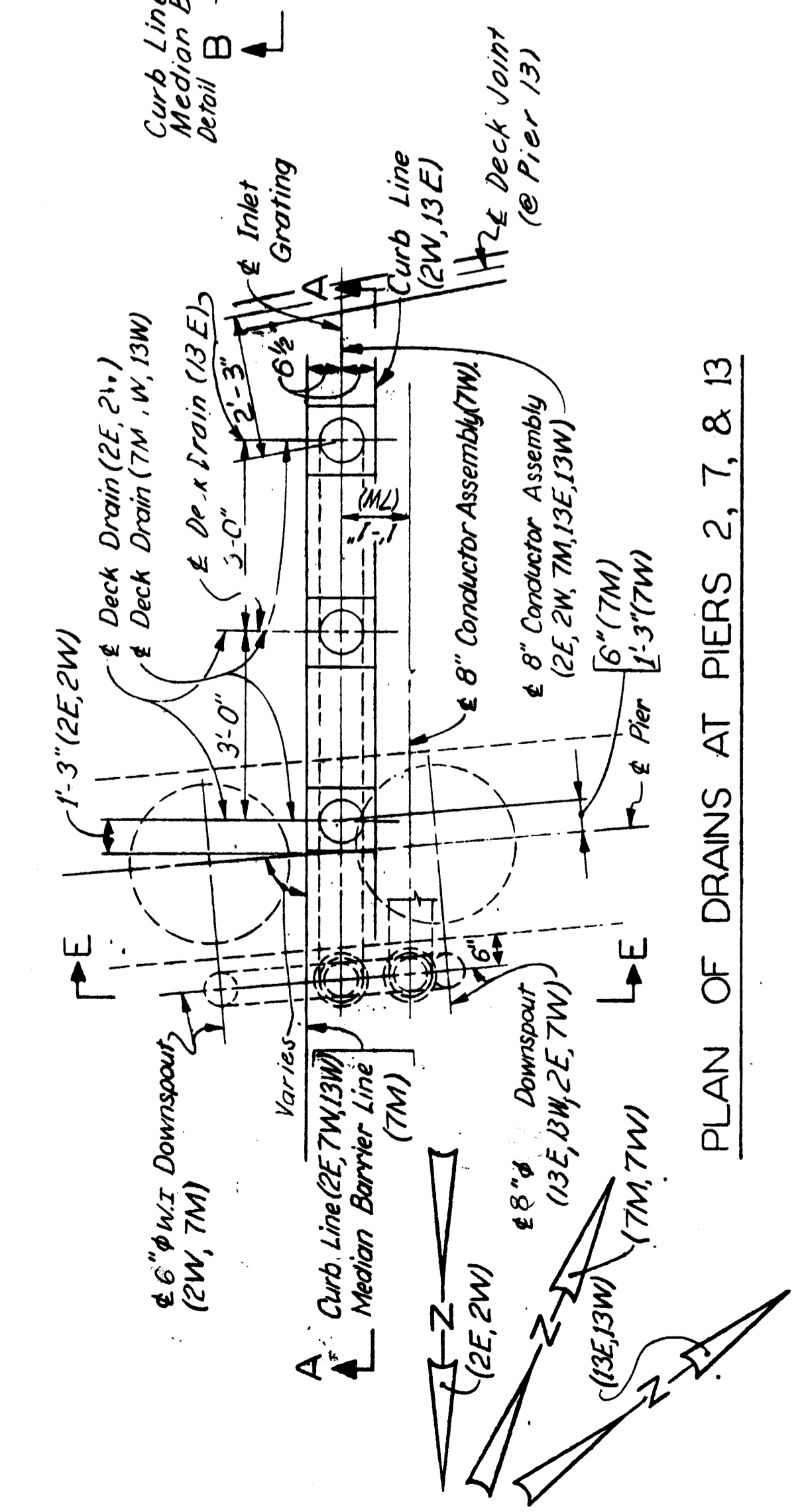
THE CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
BEARING DETAILS

DRAWN BY: [ ] DATE: 02/93  
 CHECKED BY: [ ] DATE: 6/94  
 SHEET: 25 OF 57

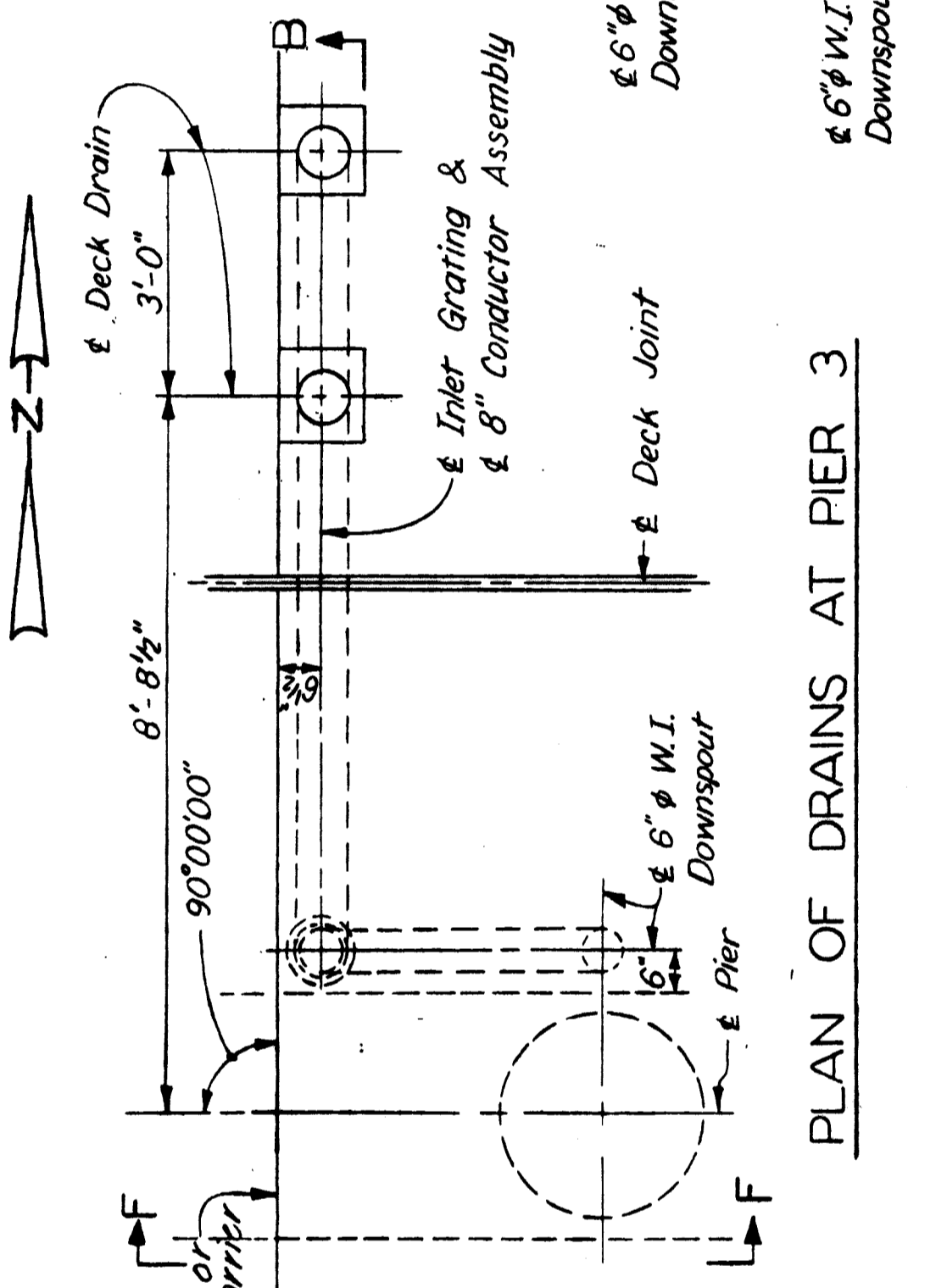
B01 of 82-22-48

**Baker**  
**WTA**  
BAKER AND ASSOCIATES  
WALTER TEAMER AND ASSOCIATES, INC.  
A JOINT ASSOCIATION  
18431 JAMES COUZENS DETROIT, MI 48235

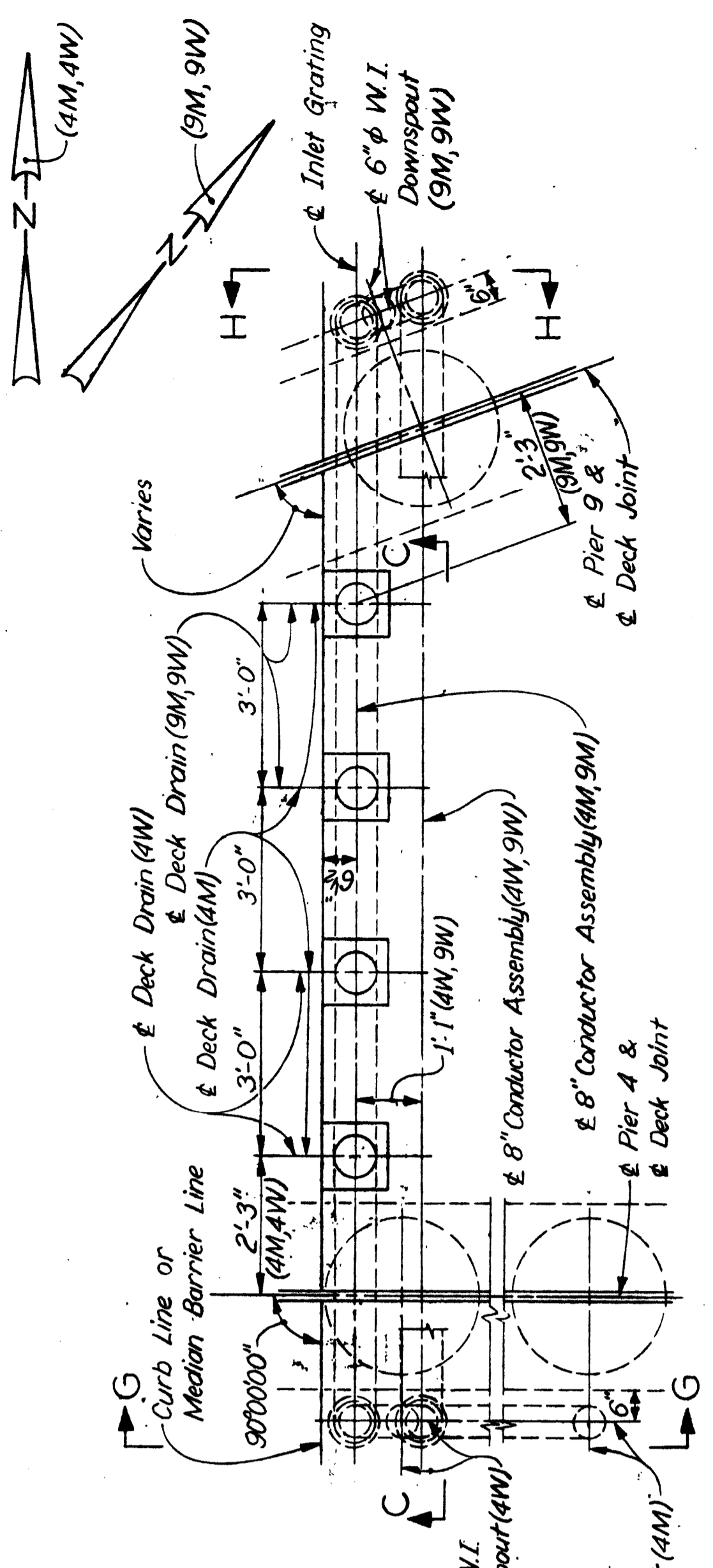




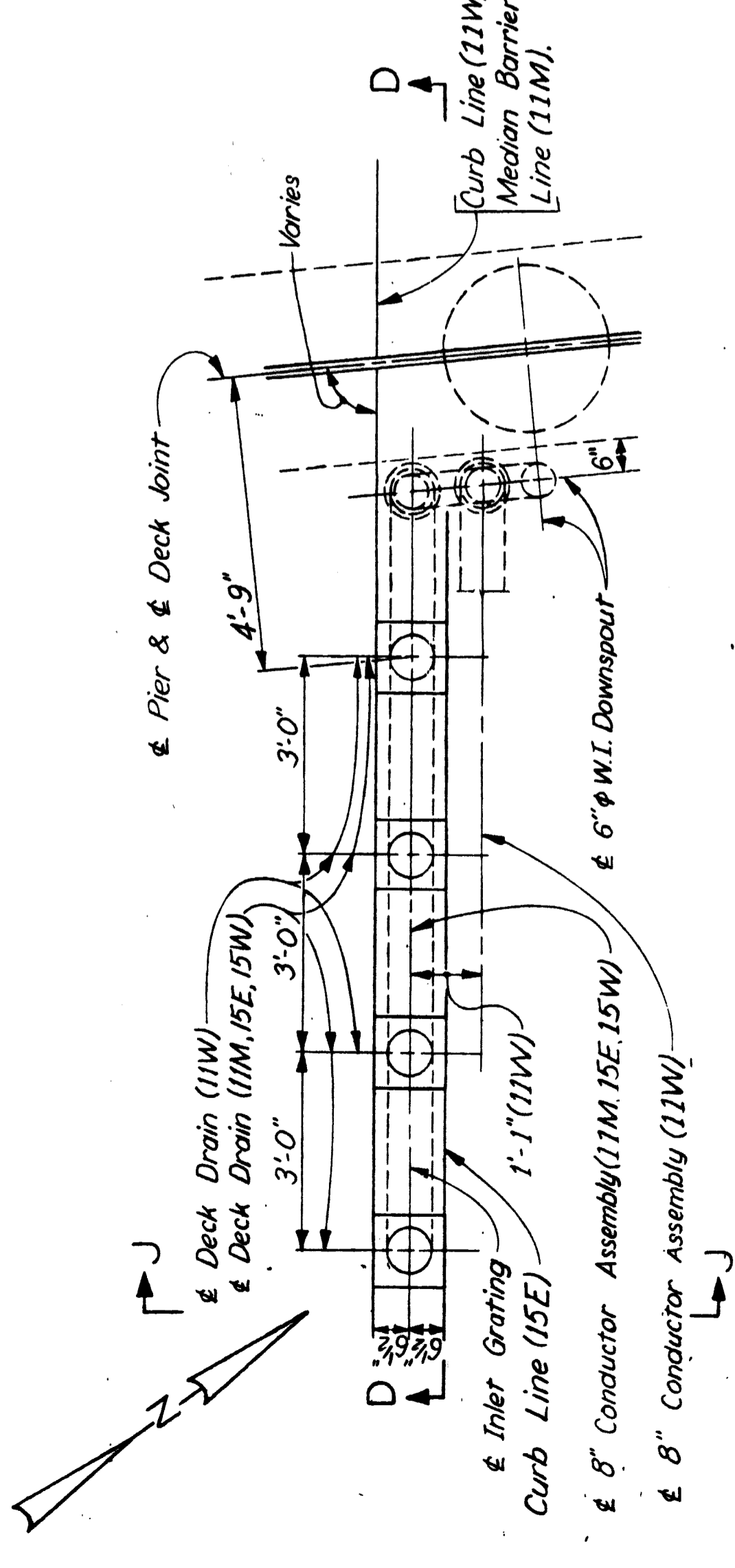
PLAN OF DRAINS AT PIERS 2, 7, & 13



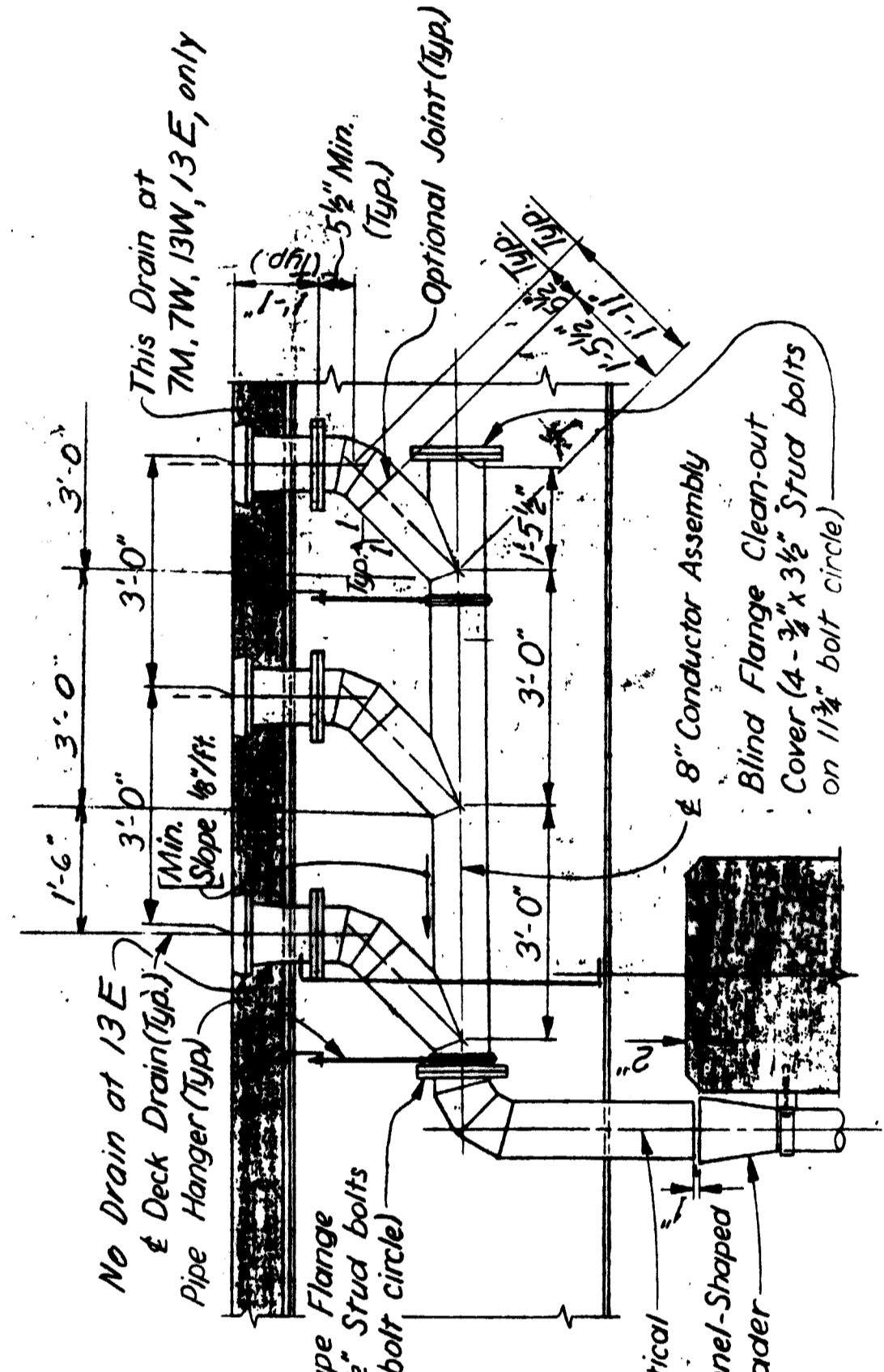
PLAN OF DRAINS AT PIER 3



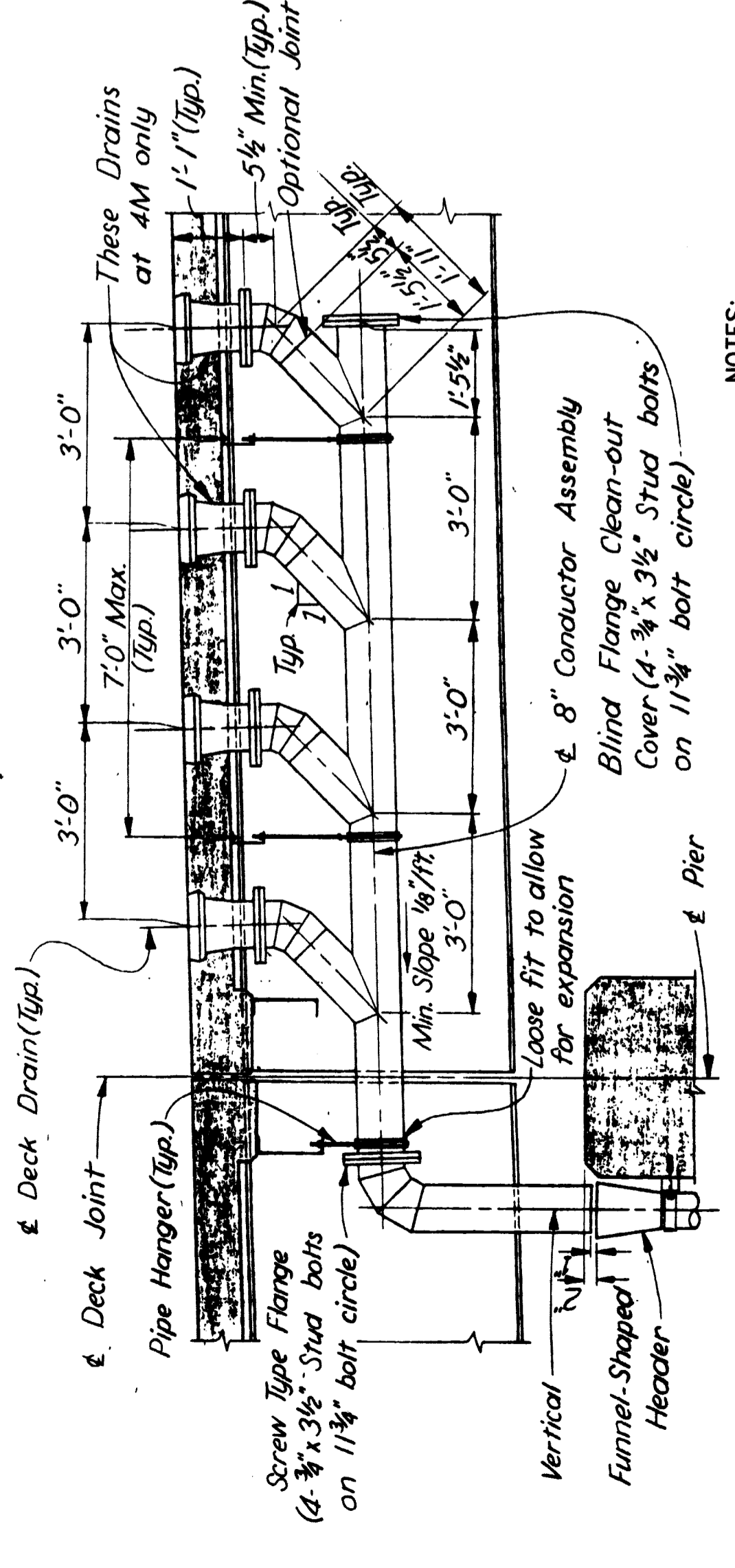
PLAN OF DRAINS AT PIERS 4 & 9



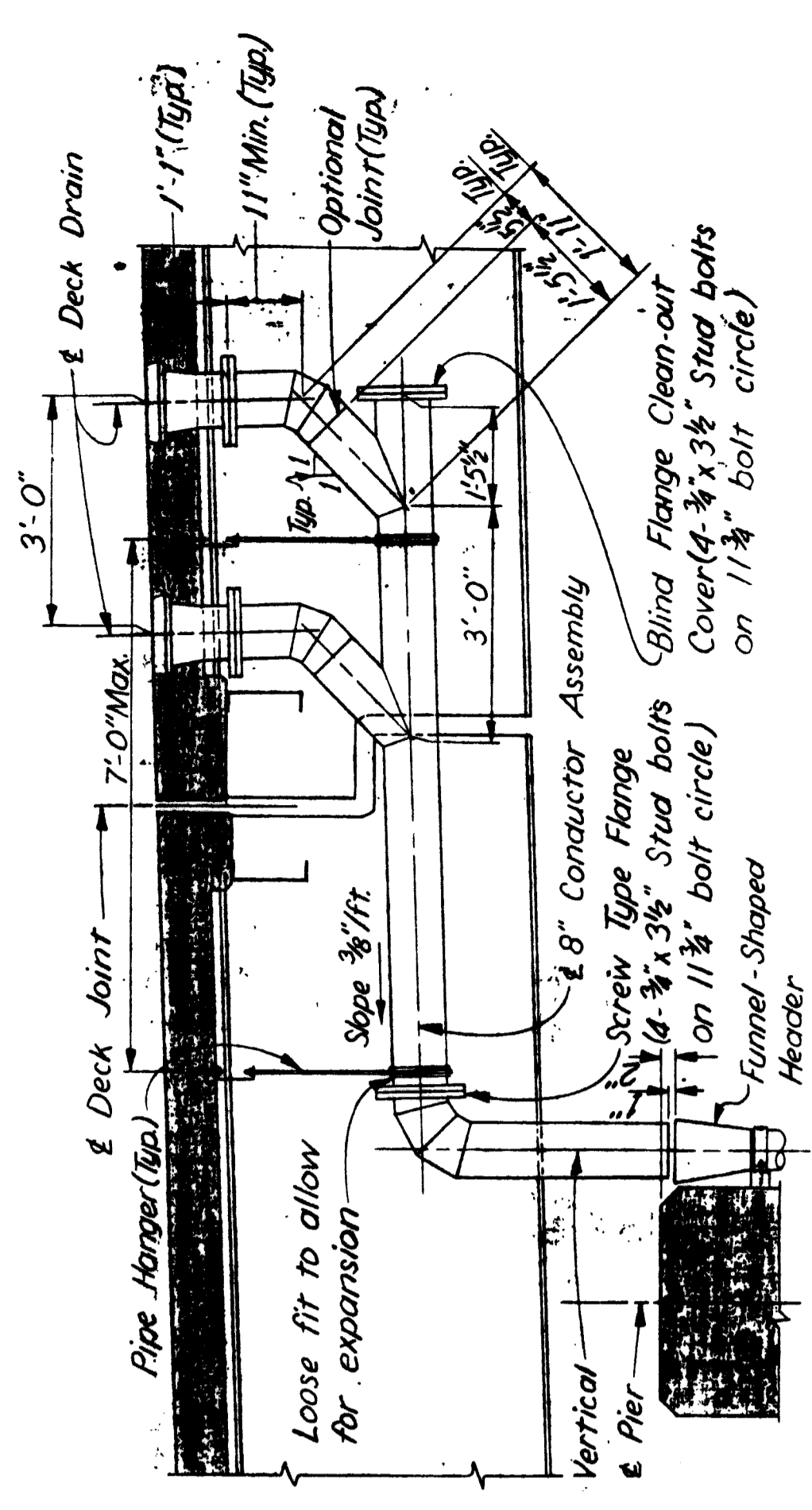
PLAN OF DRAINS AT PIERS 11 & 15



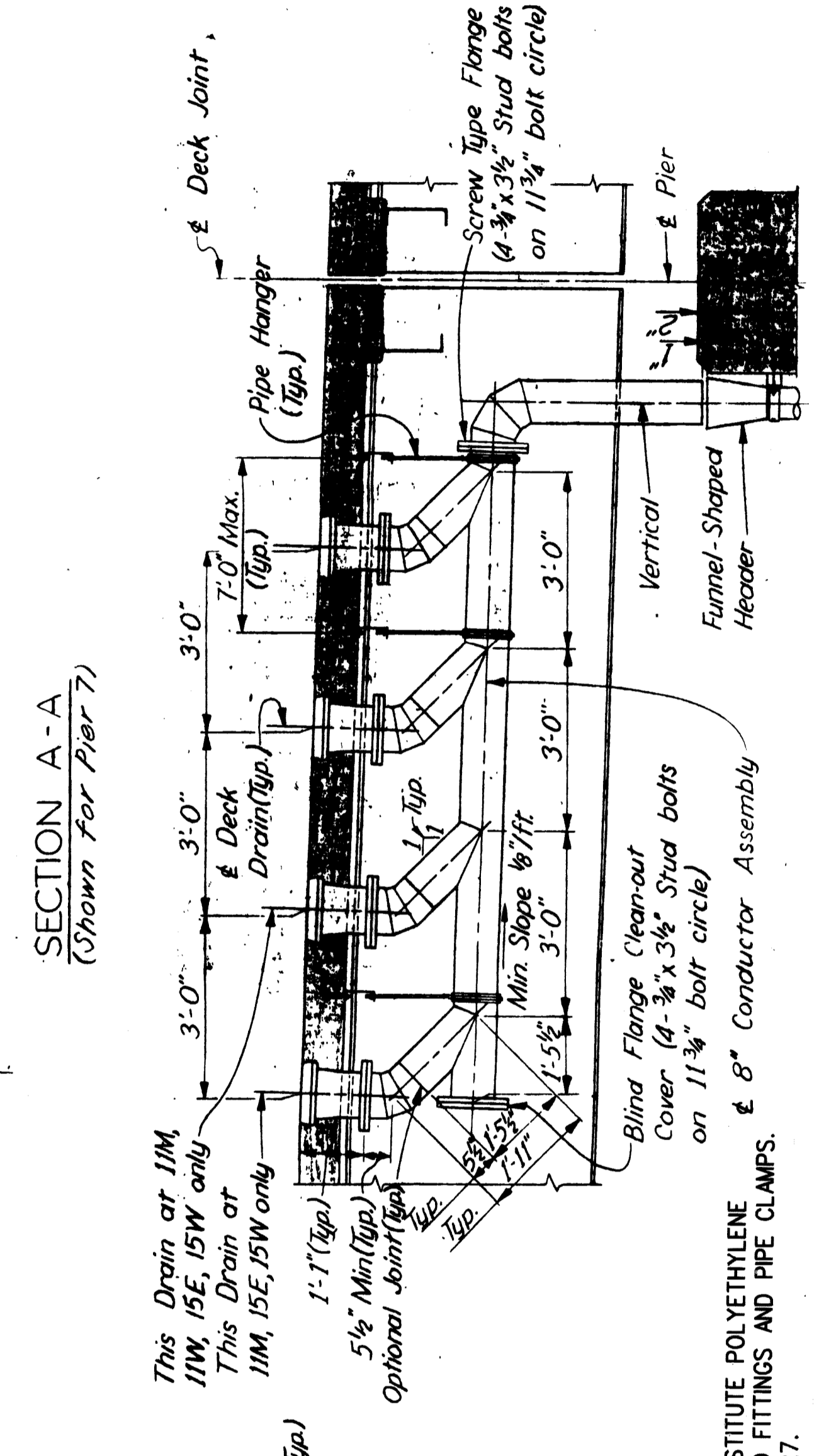
SECTION A-A  
 (Shown for Pier 7)



SECTION C-C  
 (Shown for Pier 4)



SECTION B-B



SECTION D-D

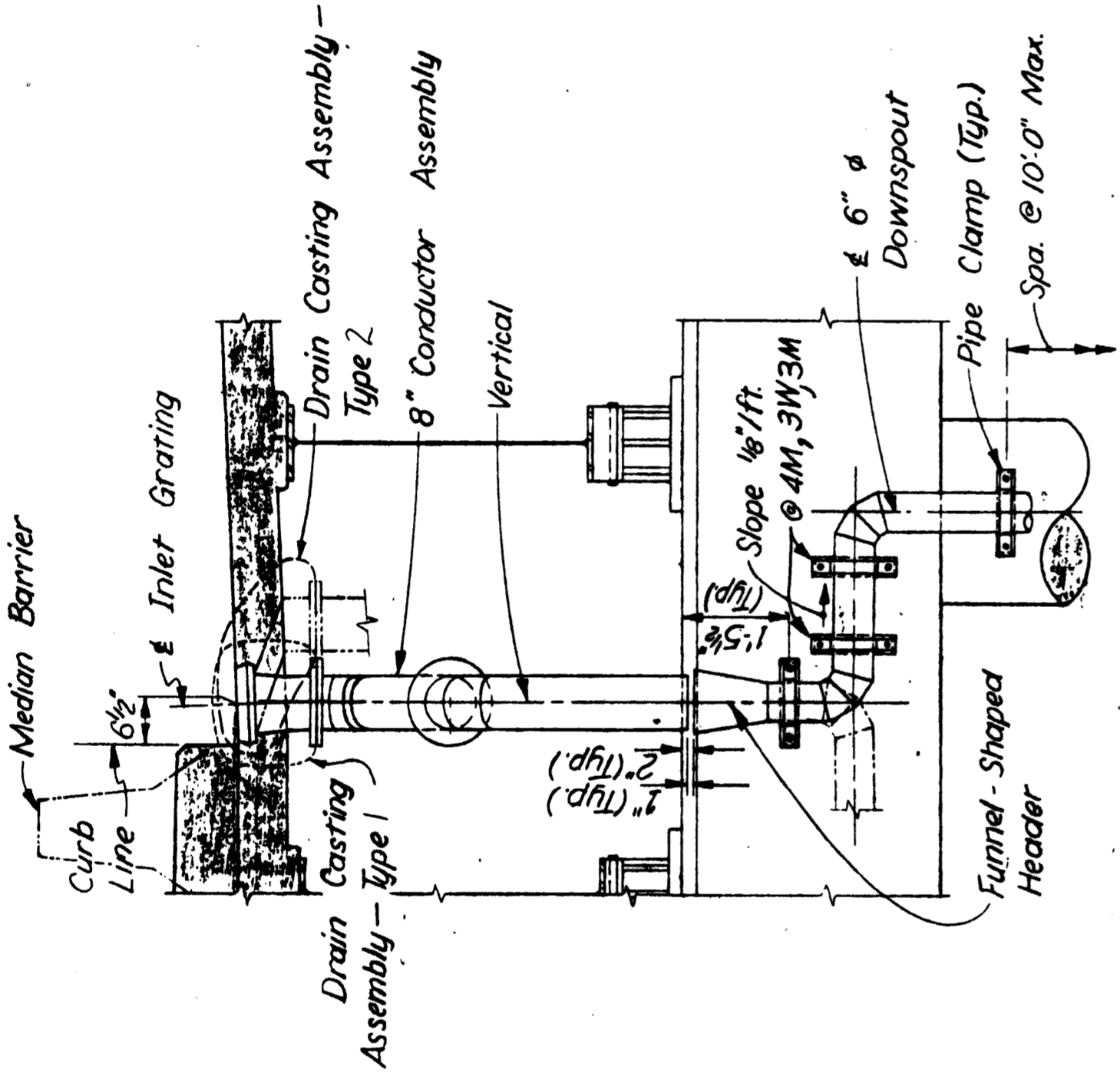
NOTES:  
 WROUGHT IRON PIPE SHOWN, SUBSTITUTE POLYETHYLENE (SCHEDULE 40) PLASTIC PIPE AND FITTINGS AND PIPE CLAMPS. WORK THIS SHEET WITH SHEET 27.

**Baker**  
**WTA**  
 BAKER AND ASSOCIATES  
 WALTER TEAMER AND ASSOCIATES, INC.  
 A JOINT ASSOCIATION  
 18431 JAMES COUZENS DETROIT, MI 48235

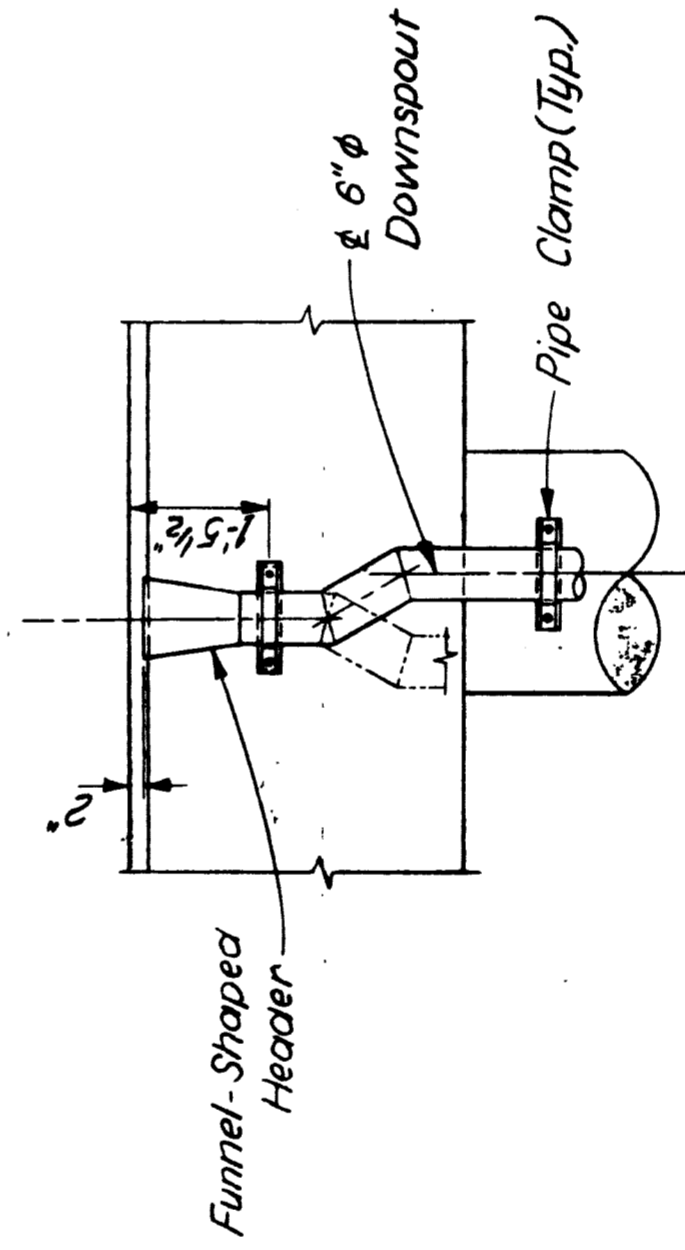
NO.	DESCRIPTION	DATE	BY

THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 DRAIN DETAILS

CONTRACT NO. B01 OF 822248  
 SHEET 26 OF 57  
 CHECKED BY: NAME: MW DATE: 4/24  
 DRAWN BY: NAME: MW DATE: 4/24  
 SCALE: AS SHOWN



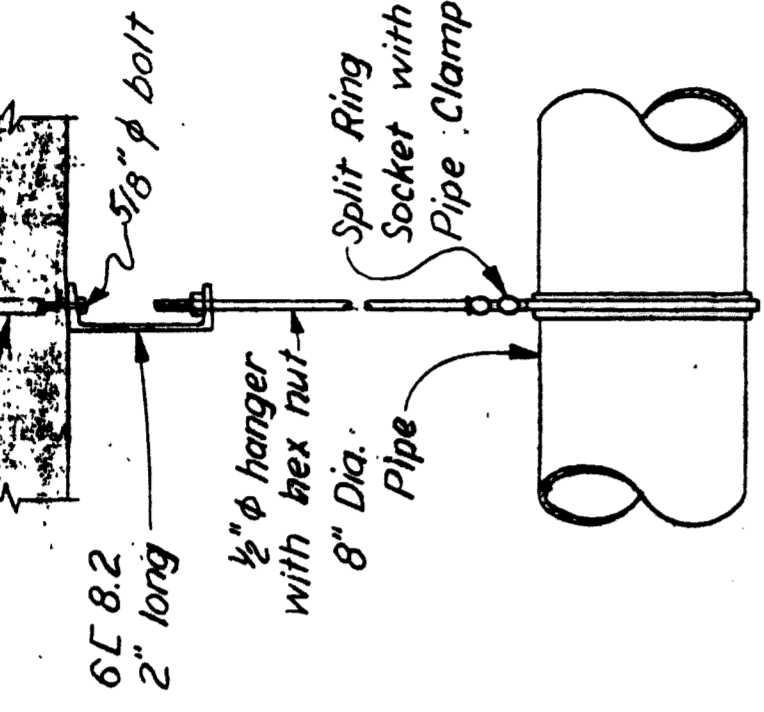
SECTION G-G  
 SECTIONS E-E, F-F, J-J, & K-K SIMILAR



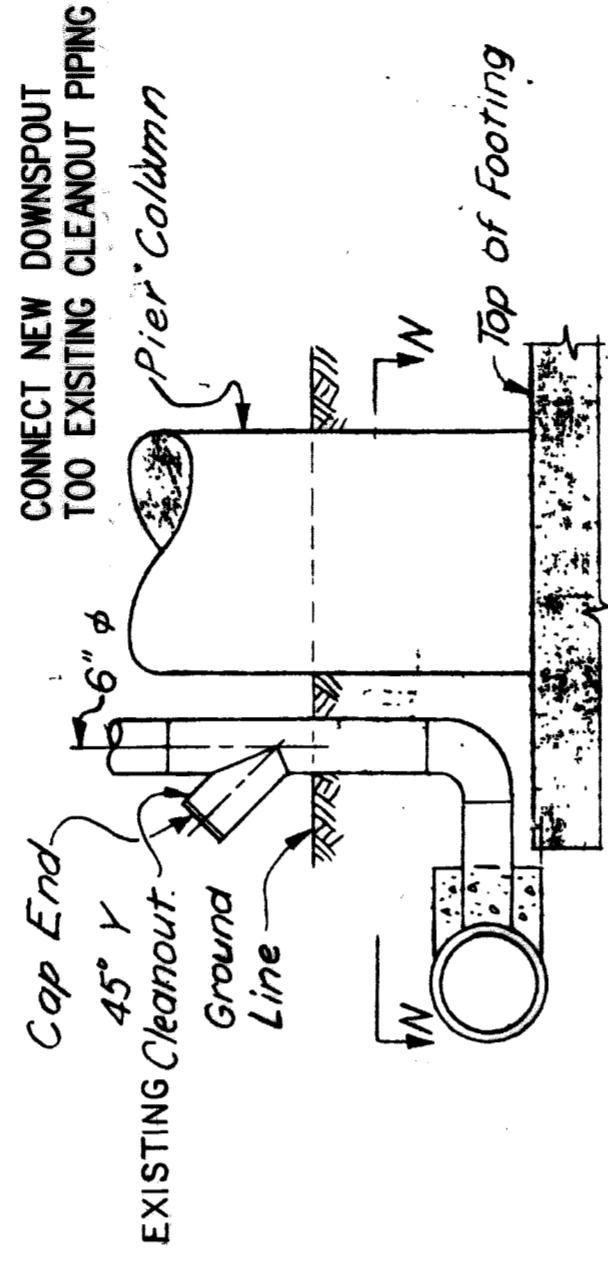
SECTION H-H  
 SECTIONS E-E, G-G, J-J, & K-K SIMILAR

NOTE:  
 WORK THIS SHEET WITH SHEET 26, WROUGHT IRON PIPE SHOWN.  
 SUBSTITUTE POLYETHYLENE (SCHEDULE 40) PLASTIC PIPE  
 AND FITTINGS & PIPE CLAMPS

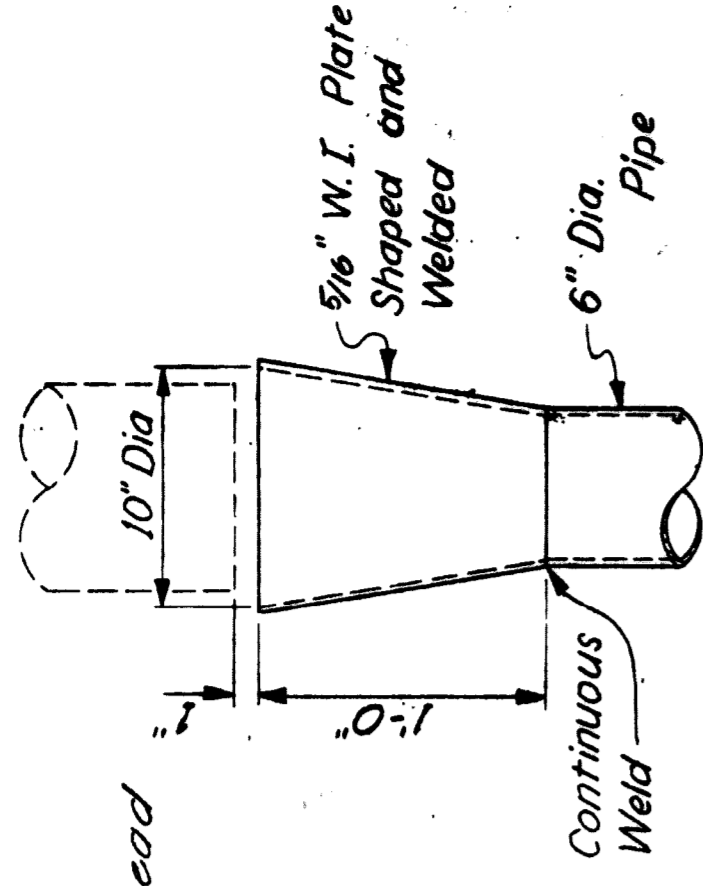
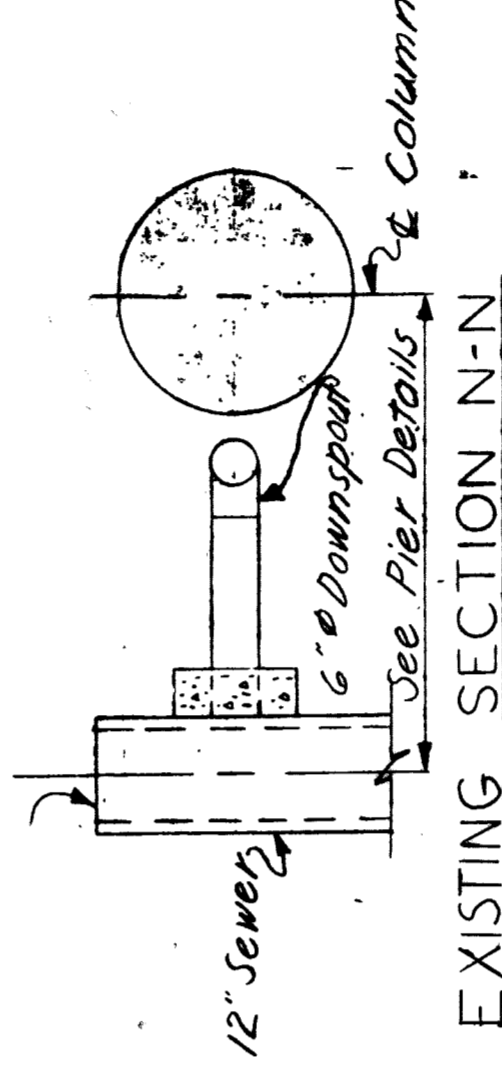
5/8" φ Screw Concrete Insert Fig. 152, as manufactured by Grinnell Co., Inc., Providence, R.I. or an approved equal. (Incidental to "Grade A (10B Gravel or 10B Slag) Concrete Superstructure")



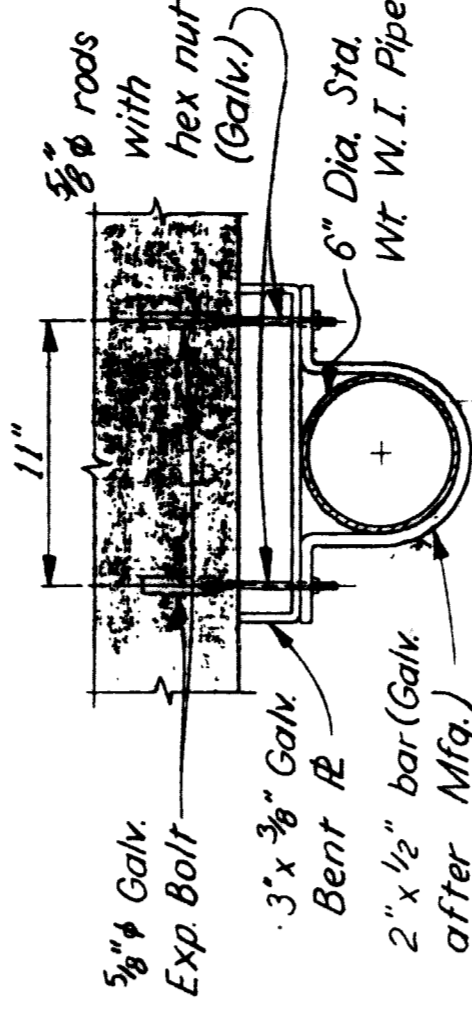
PIPE HANGER



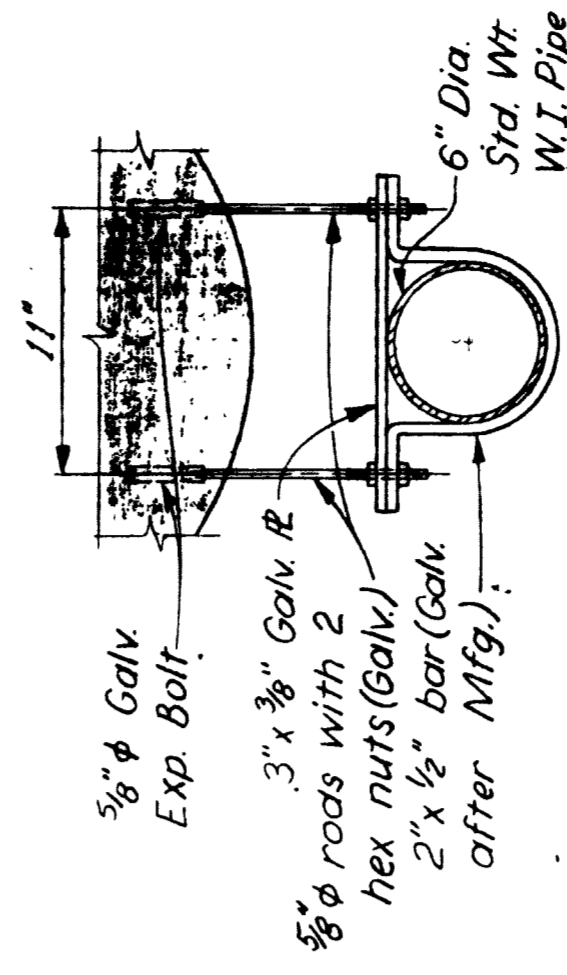
DOWNSPOUT AT FOOTING  
 (See Pier Detail Sheets)



FUNNEL-SHAPED HEADER



PIPE CLAMP ON PIER CAP



PIPE CLAMP ON PIER COLUMN

THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 DRAIN DETAILS

NO.	DESCRIPTION	DATE	BY

SOULD BOSS	NAME	DATE
DRAWN BY	NAME	DATE 4/74
CHECKED BY	NAME	DATE 5/74
SHEET	27	OF 37

B01 of 82-22-48



**NOTES:**

**JOINT TYPES**

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL	WATSON-BOWMAN & ACME, INC.
PRO-SPAN	FEL-PRO, INC.
STEELFLEX-SSA2	D.S. BROWN
STEELFLEX-SSCM	D.S. BROWN
STEELFLEX-RS	D.S. BROWN
ONFLEX 40-22	STRUCTURAL RUBBER PRODUCTS CO.
STRUPICO 400L	STRUCTURAL RUBBER PRODUCTS CO.
JEENE-W PROFILE	HYDROZO/JEENE

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.  
 COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 1.05.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN DIVISION.

**FABRICATION AND INSTALLATION**

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 5.04.22 OF THE STANDARD SPECIFICATIONS.

THE PRO-SPAN DEVICE MUST INCORPORATE A CAST-IN-PLACE STEEL SEAT.

THE JEENE DEVICE MUST INCORPORATE A POLYMERIC NOSING.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

WHERE THE SEALING GLAND IS LOCKED INTO A STEEL ANCHORAGE, A LUBRICANT-ADHESIVE CONFORMING TO STANDARD SPECIFICATION 8.16.04-e SHALL BE REQUIRED BETWEEN THE SEAL AND STEEL ANCHORAGE.

ALL BOLT WELLS CAVITIES SHALL BE FILLED WITH AN APPROVED FLEXIBLE EPOXY OR A SEALANT CONFORMING TO FEDERAL SPECIFICATION TT-S-00230C.

IN THE EVENT THAT THE CONSTRUCTION SEQUENCE REQUIRES SPLICING THE SEALING GLAND, IT SHALL BE SPLICED BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

WHERE INFLATABLE SEALS ARE USED, THE MANUFACTURER'S INSTALLATION PROCEDURE MUST BE STRICTLY ADHERED TO AND PERFORMED BY AN AUTHORIZED CONTRACTOR.

**DETAILS AT CURBS OR BARRIERS**

THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

**MATERIALS**

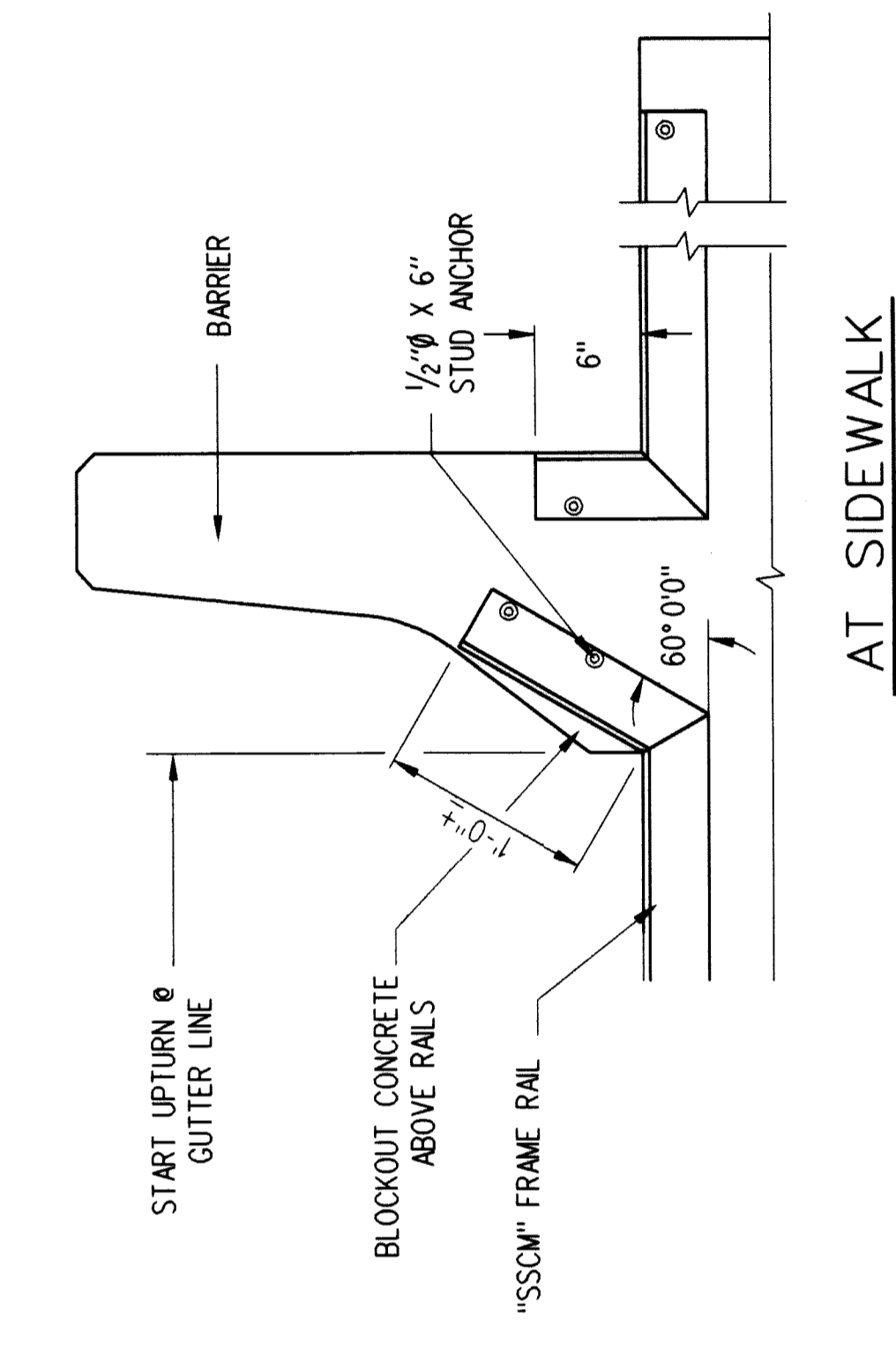
THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.

QUANTITY		
ITEM	UNIT	AMOUNT
EXPANSION JOINT DEVICE	LFT	1,033

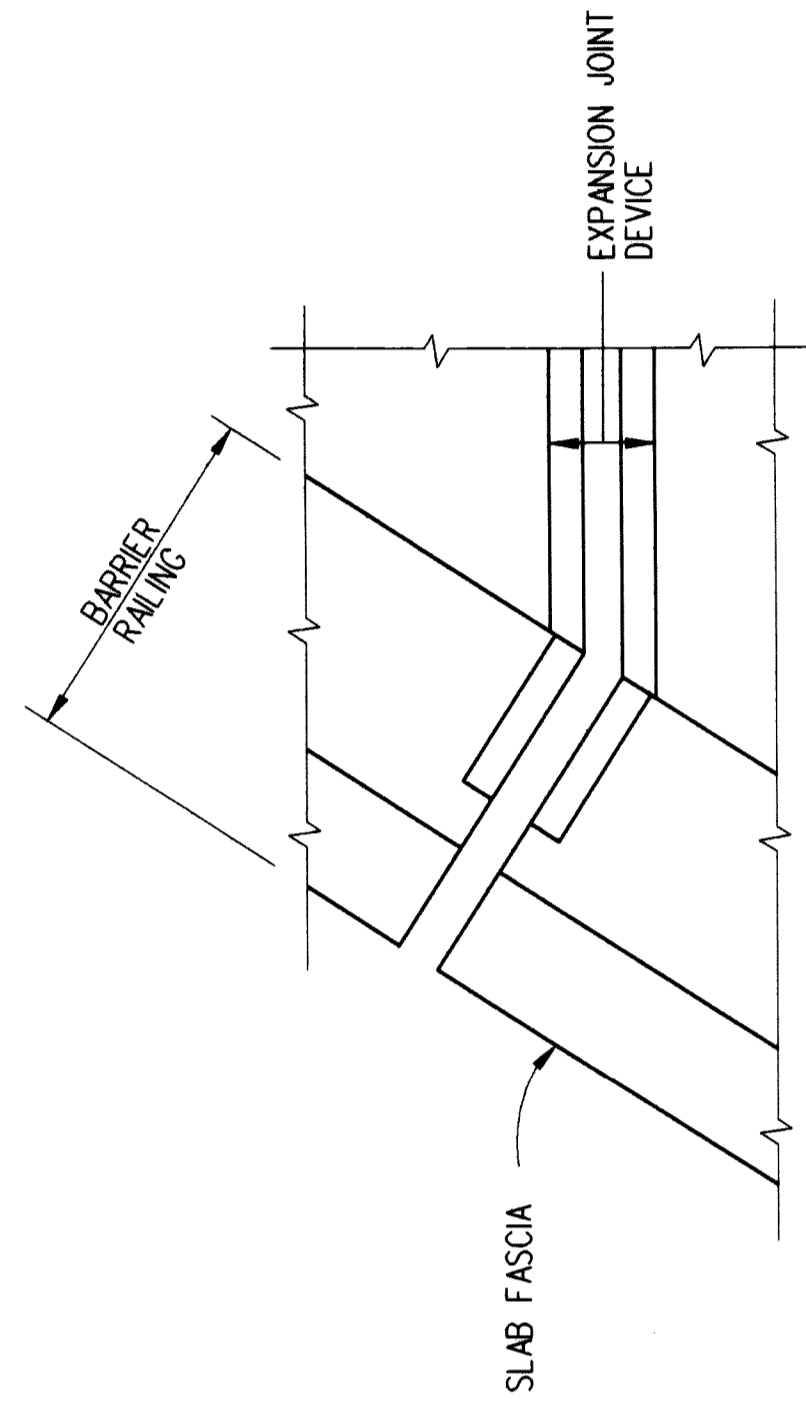
THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 EXPANSION JOINT DETAILS

DESIGNED BY	DATE	3/79
CHECKED BY	DATE	3/79
SHEET	28	OF 57

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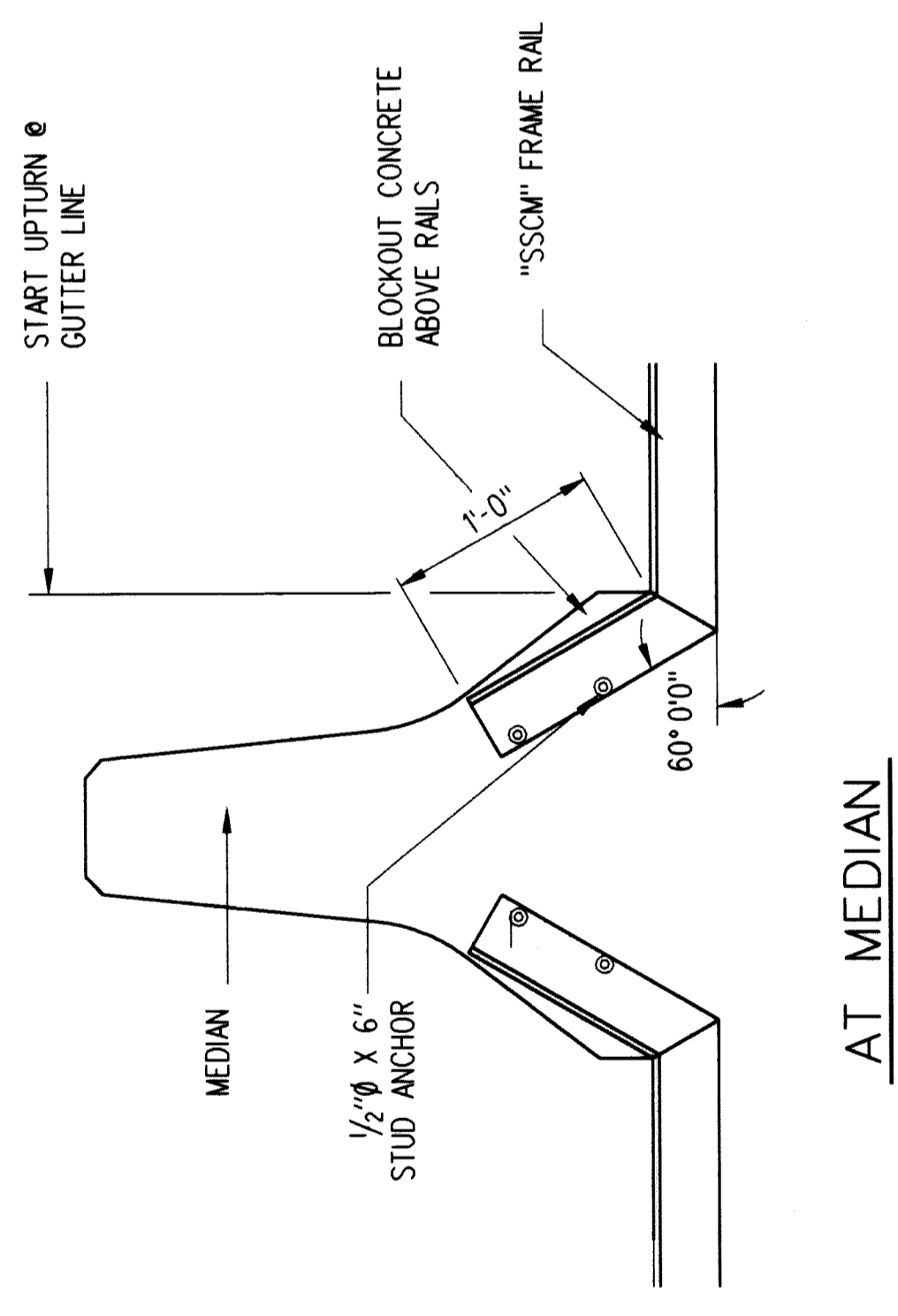


AT SIDEWALK

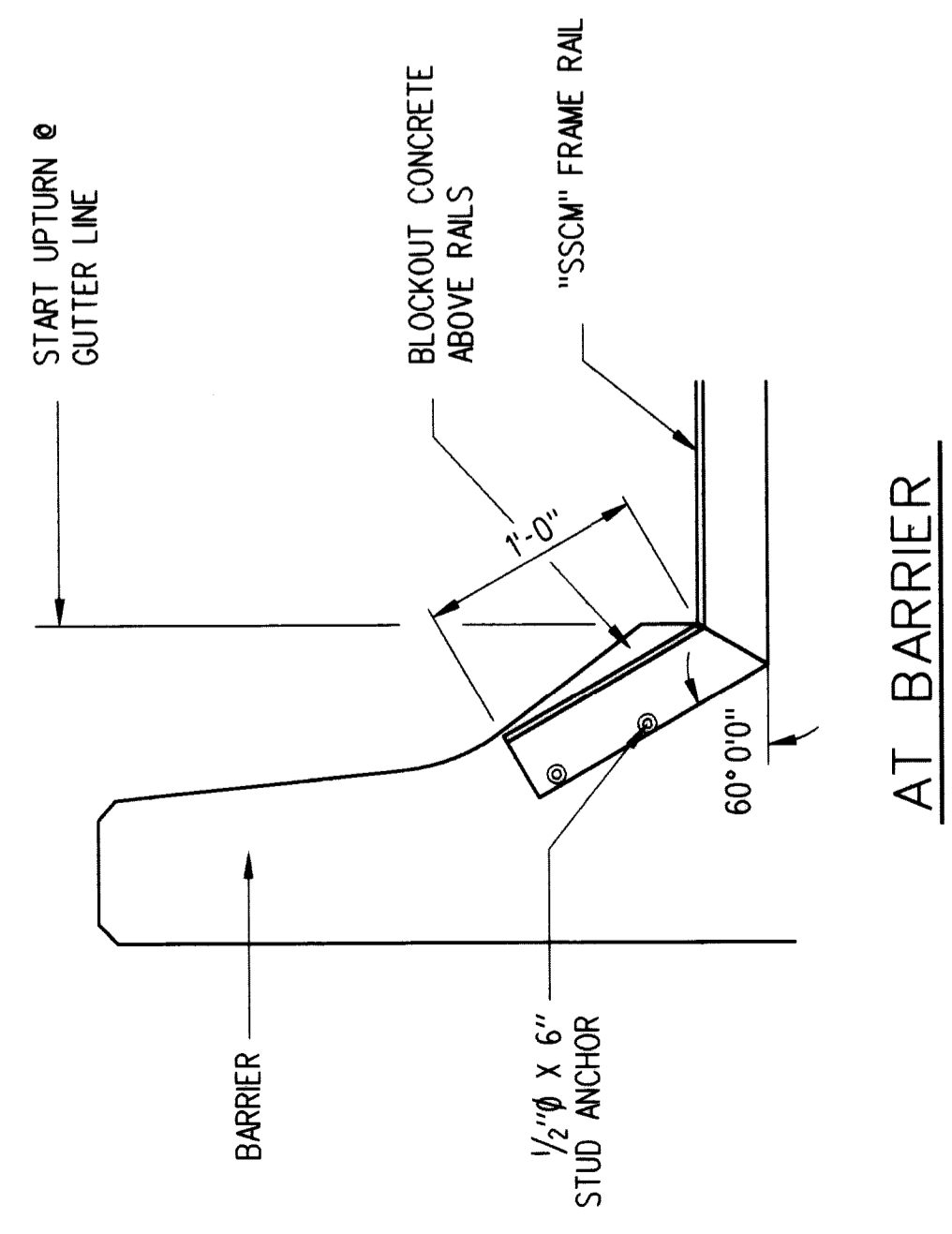


PLAN AT BARRIER RAILING

(DETAILS ARE SIMILAR AT END OF SIDEWALK)

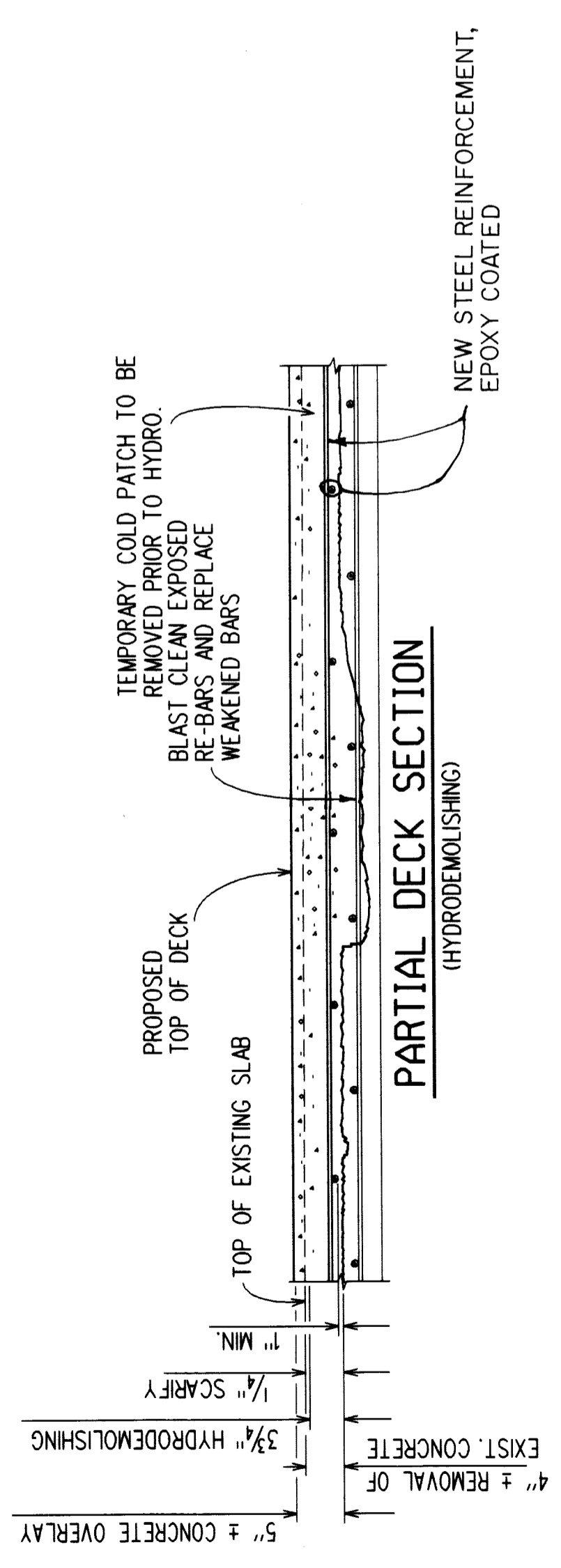


AT MEDIAN

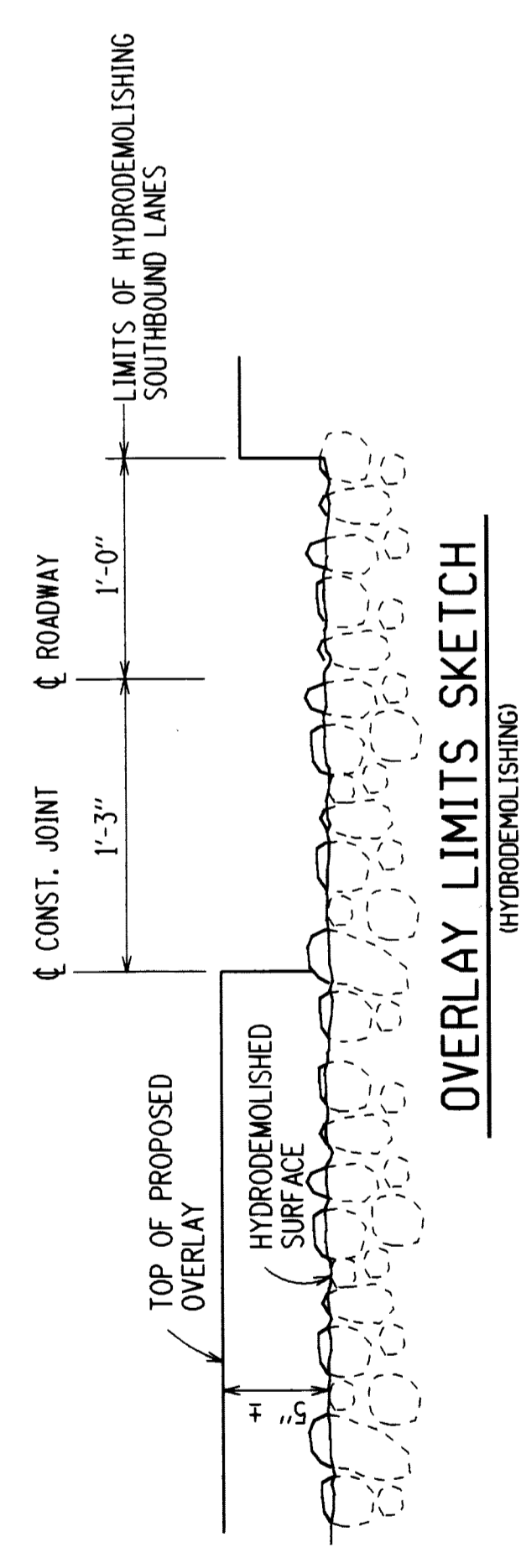


AT BARRIER

**TYPICAL END TREATMENT**



PARTIAL DECK SECTION (HYDRODEMOLISHING)

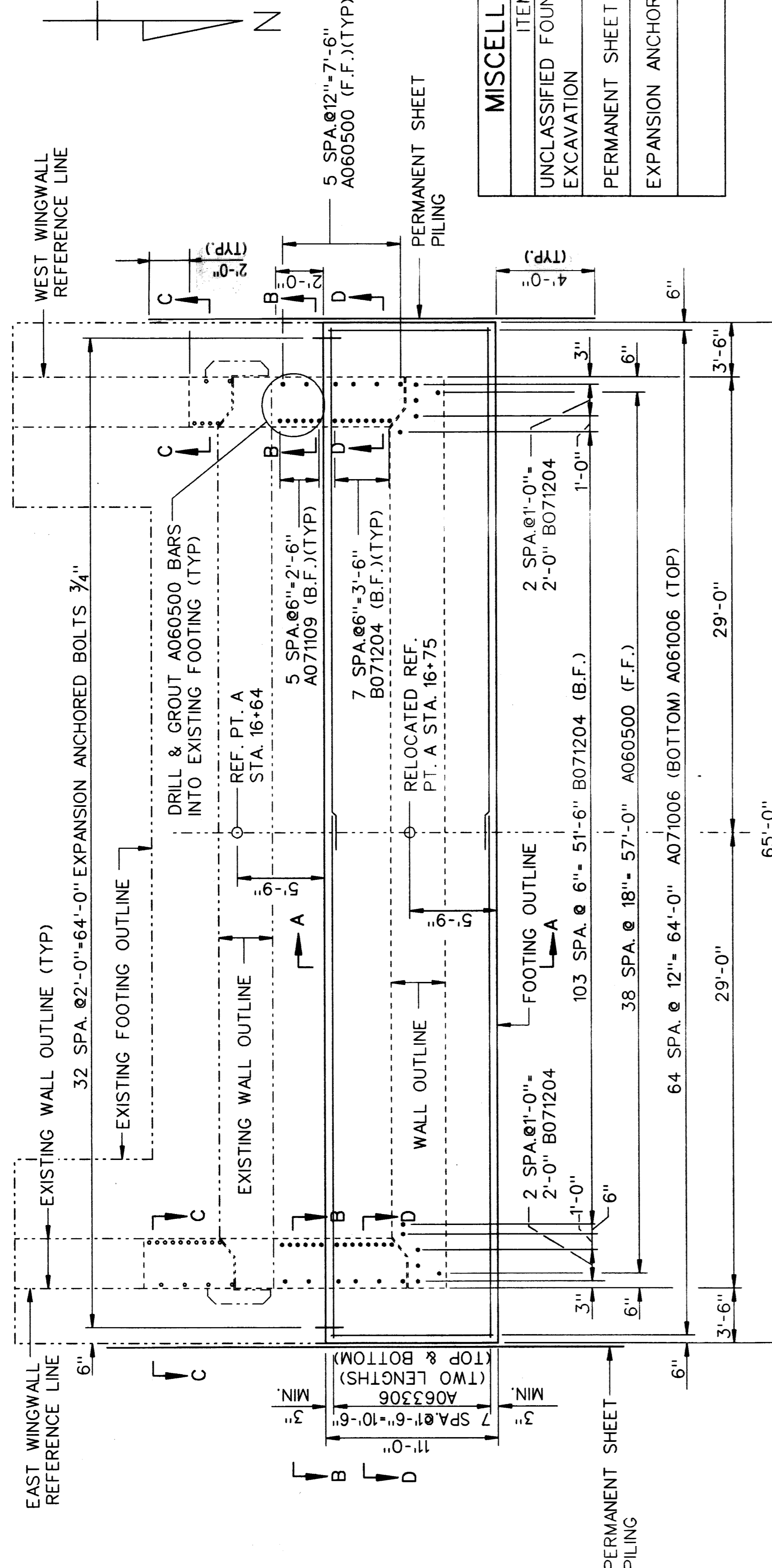


OVERLAY LIMITS SKETCH (HYDRODEMOLISHING)

ANGLE OF CROSSING TO NEAREST 5°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
90°	PIER 1	0	59.5'
90°	PIER 2	2 1/4"	59.5'
90°	PIER 3	0	59.5'
90°	PIER 4	2 3/8"	66.8'
90°	PIER 5	1 1/2"	66.2'
35°	PIER 6	2	110.5'
50°	PIER 7	1 1/8"	78.8'
60°	PIER 8	0	73.3'
70°	PIER 9	2 1/4"	68.2'
75°	PIER 10	0	66.4'
85°	PIER 11	2 3/8"	64.8'
85°	PIER 12	0	64.8'
85°	PIER 13	2 1/4"	64.8'
85°	PIER 14	0	64.8'
65°	PIER 15	2 1/4"	65.2'

NO.	DESCRIPTION	DATE	BY

**Baker**  
**WTA**  
 BAKER AND ASSOCIATES  
 WALTER TEAMER AND ASSOCIATES, INC.  
 A JOINT ASSOCIATION  
 18431 JAMES COUZENS DETROIT, MI 48235



**NOTES:**

ABUTMENT FOOTING IS DESIGNED FOR 2800 PSF AVERAGE DEAD LOAD PRESSURE AND 3200 PSF DEAD LOAD PLUS LIVE LOAD PRESSURE.

FOOTINGS ARE TO BE POURED AGAINST UNDISTURBED SOIL. NO ALLOWANCE WILL BE MADE IN CONCRETE QUANTITIES DUE TO EXCAVATION OUTSIDE OF THE FOOTING NEAT LINES.

CONSTRUCTION JOINTS IN FOOTINGS ARE OPTIONAL.

"EXPANSION ANCHORED BOLTS" OF THE SIZE INDICATED SHALL BE CHOSEN FROM THE LIST OF PREQUALIFIED MATERIALS IN THE CURRENT MDOT MATERIAL SAMPLING GUIDE.

THE 3/4" Ø INCH EXPANSION BOLTS SHALL PROVIDE A MINIMUM PULLOUT RESISTANCE OF 7,500 LBS. AT 1/2" SLIPPAGE.

B.F. DENOTES BACK FACE.

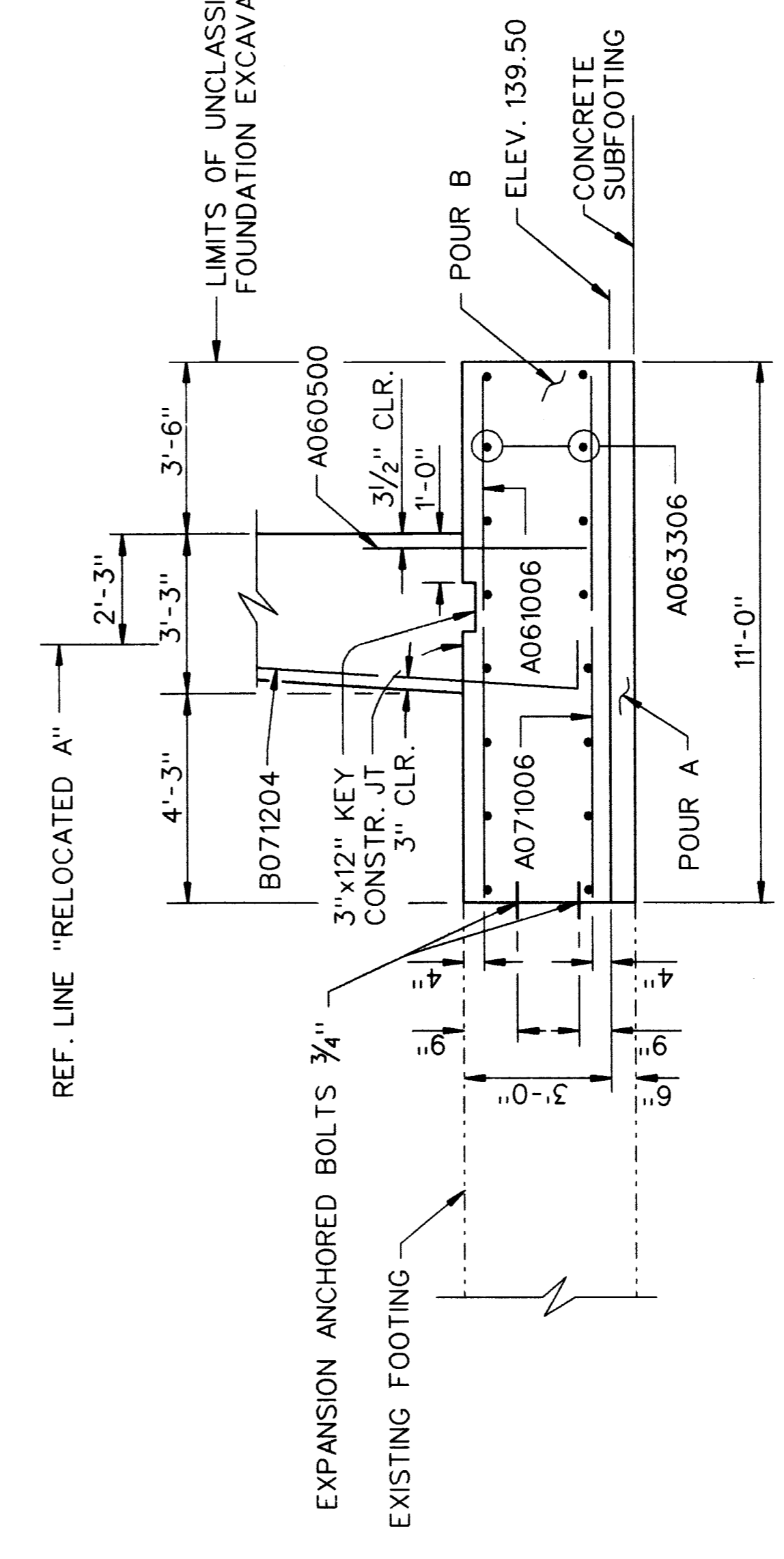
F.F. DENOTES FRONT FACE.

SUBFOOTING CONCRETE QUANTITY		
POUR	LOCATION	CYD
A	SUBFOOTING	13.2

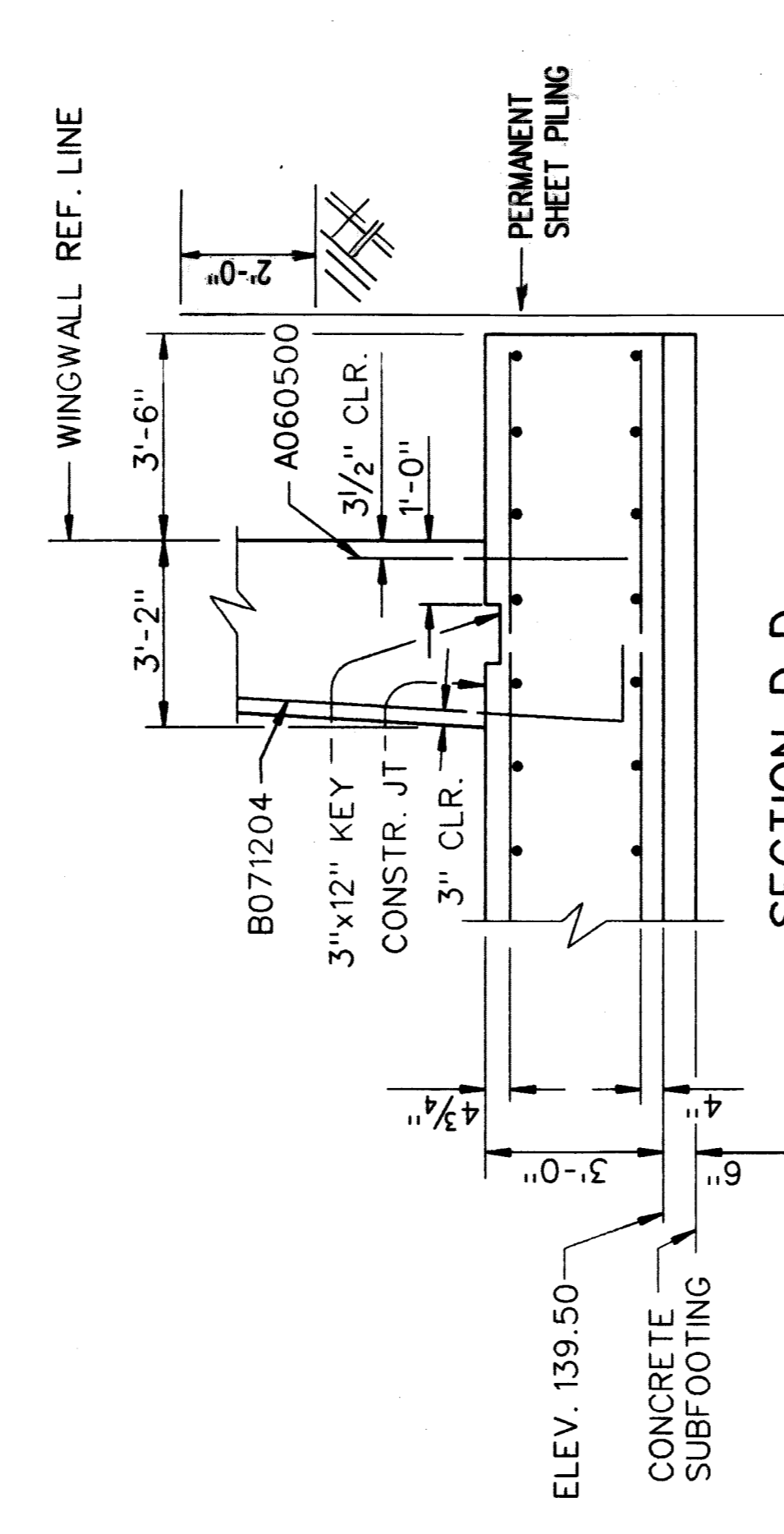
SUBSTRUCTURE CONCRETE QUANTITY		
POUR	LOCATION	CYD
B	FOOTING	79.4

MISCELLANEOUS QUANTITIES		
ITEM	UNIT	AMOUNT
UNCLASSIFIED FOUNDATION EXCAVATION	CYD	185.4
PERMANENT SHEET PILING	SFT	660
EXPANSION ANCHORED BOLTS, 3/4"	EACH	66

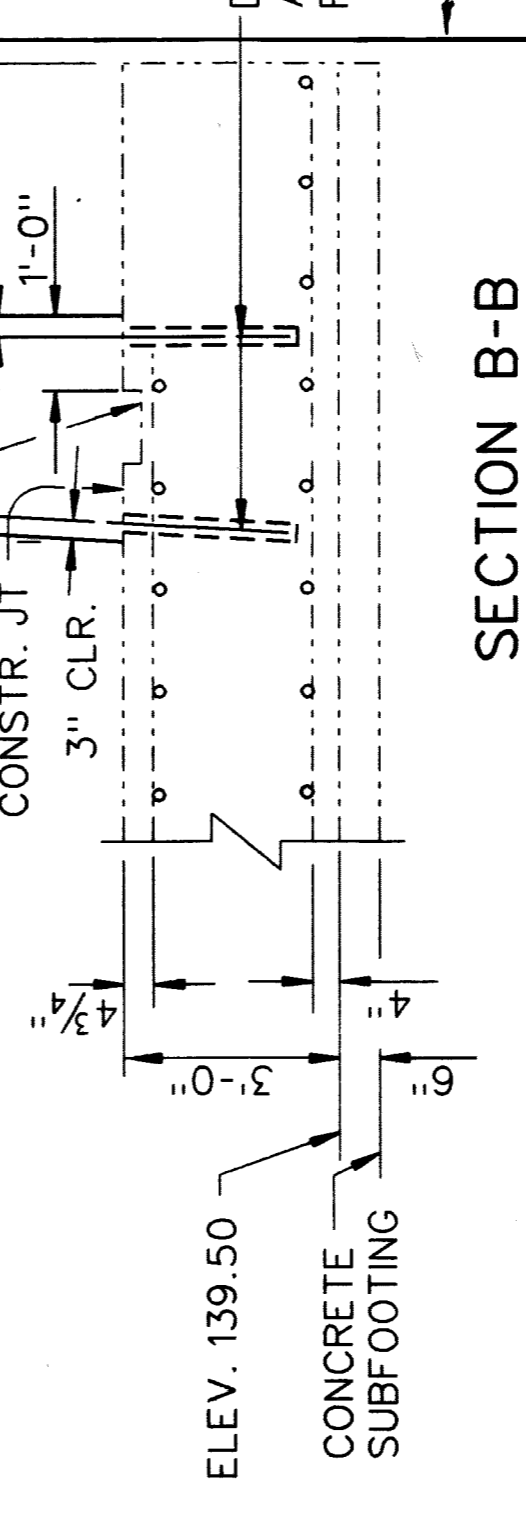
**FOOTING PLAN-ABUTMENT A**



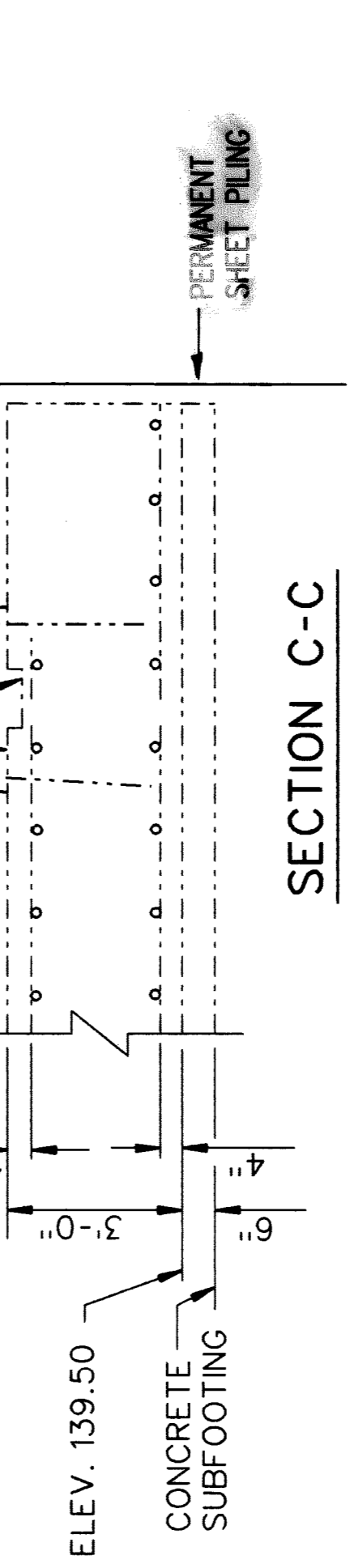
**SECTION A-A**



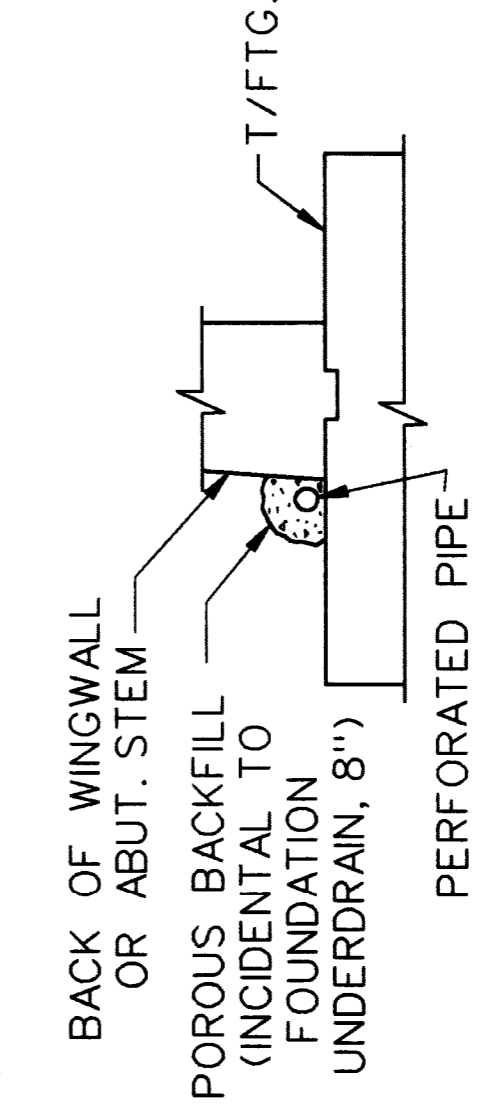
**SECTION D-D**



**SECTION B-B**



**SECTION C-C**



**DETAIL A**

(SEE PLANS OF WALL A AND B SHEETS 27 AND 29)

PERMANENT SHEET PILING TO BE CUT TO 6" BELOW GROUND ELEVATION, INCLUDED IN COST FOR "PERMANENT SHEET PILING."

THE CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
**ABUTMENT A - FOOTING DETAILS**

NO.	REVISIONS	DESCRIPTION	DATE	BY

DESIGNER	CHECKED BY	DATE

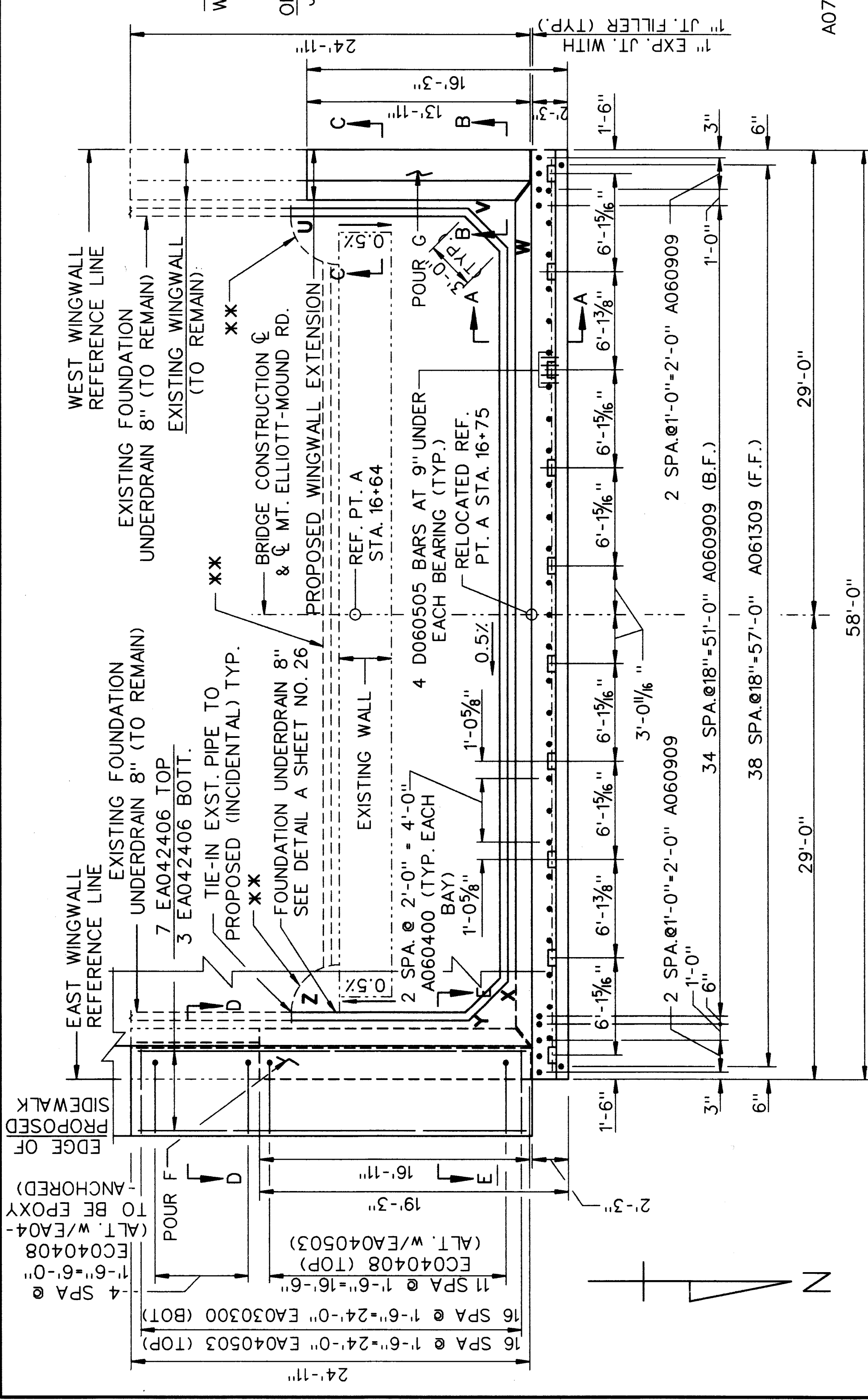
STATUS	NAME	DATE

18431 JAMES COUZENS DETROIT, MI 48235

**Baker**  
**WTA**

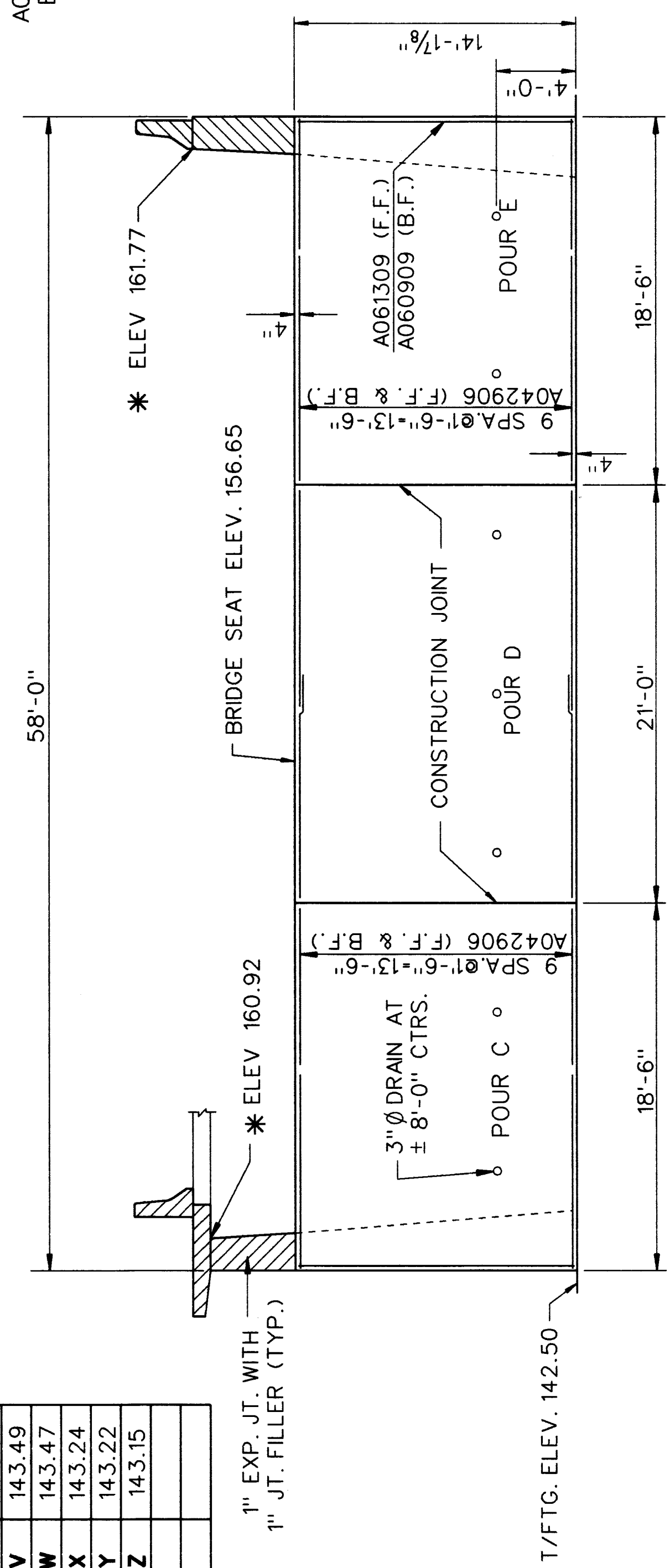
BAKER AND ASSOCIATES  
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A JOINT ASSOCIATION





PERFORATED PIPE INVERT	U	V	W	X	Y	Z
	143.56	143.49	143.47	143.24	143.22	143.15

PLAN OF WALL-ABUTMENT A

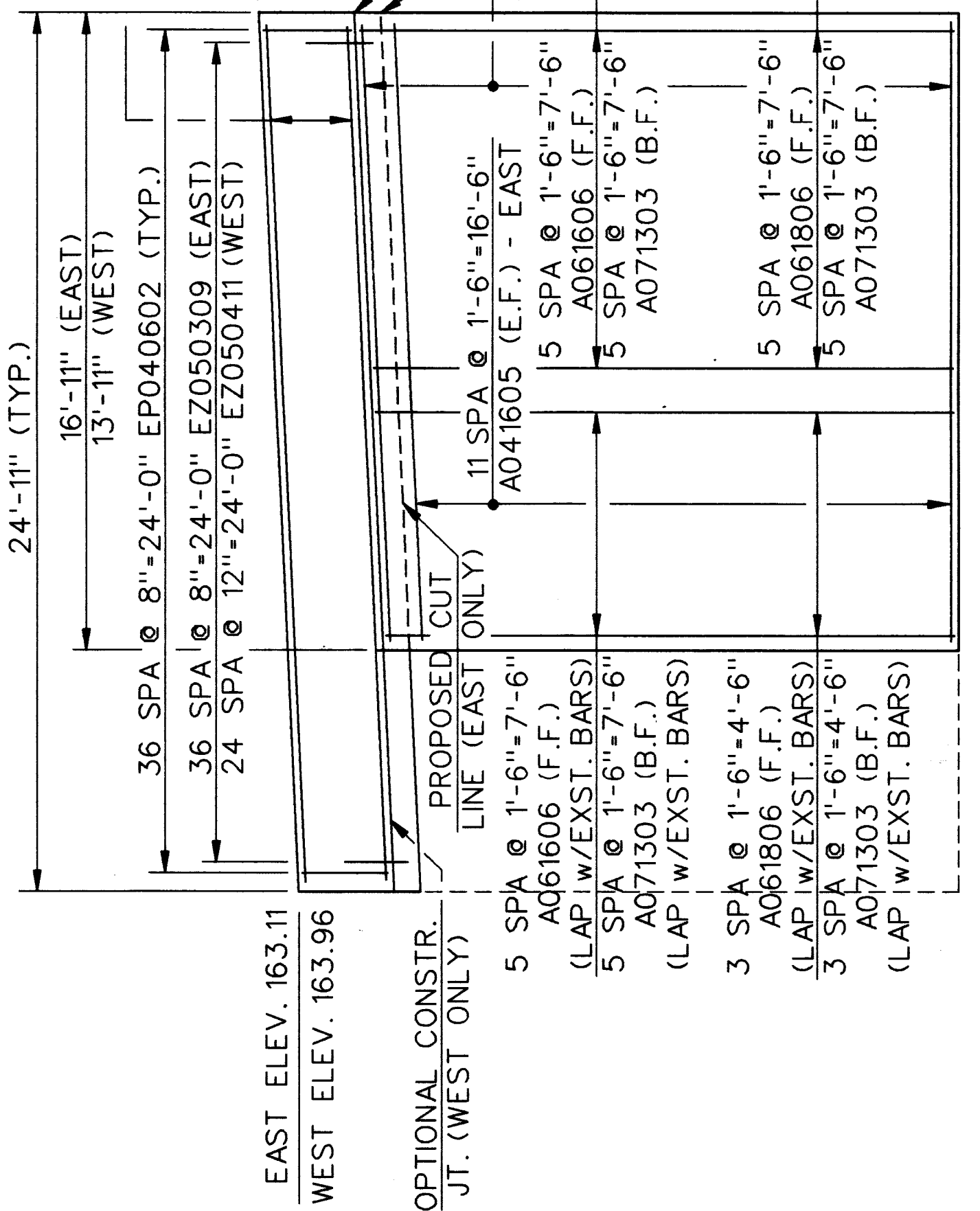


ELEVATION-ABUTMENT A

NOTE:  
BARRIER ON WEST WINGWALL TO BE PLACED AT THE TIME OF THE RETAINING WALL BARRIER.  
EAST WINGWALL BARRIER TO BE PLACED AT THE TIME OF THE RETAINING WALL SIDEWALK.  
\*X\* EXISTING MANHOLE NO. 1 AND 2 AND FOUNDATION UNDERDRAIN 8" TO BE REMOVED (COST INCIDENTAL TO REMOVAL OF EXISTING STRUCTURE).  
\*ELEVATIONS GIVEN ALONG RELOCATED REF. LINE A

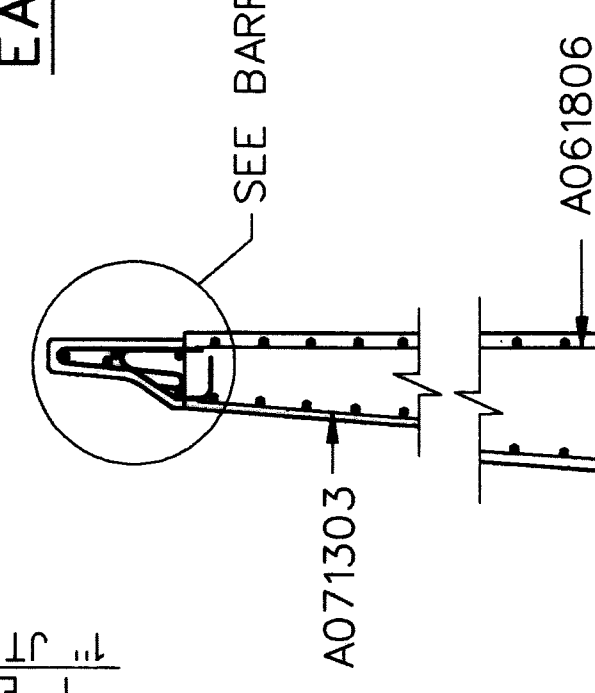
BAKER AND ASSOCIATES  
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A JOINT ASSOCIATION

18431 JAMES COUZENS DETROIT, MI 48235

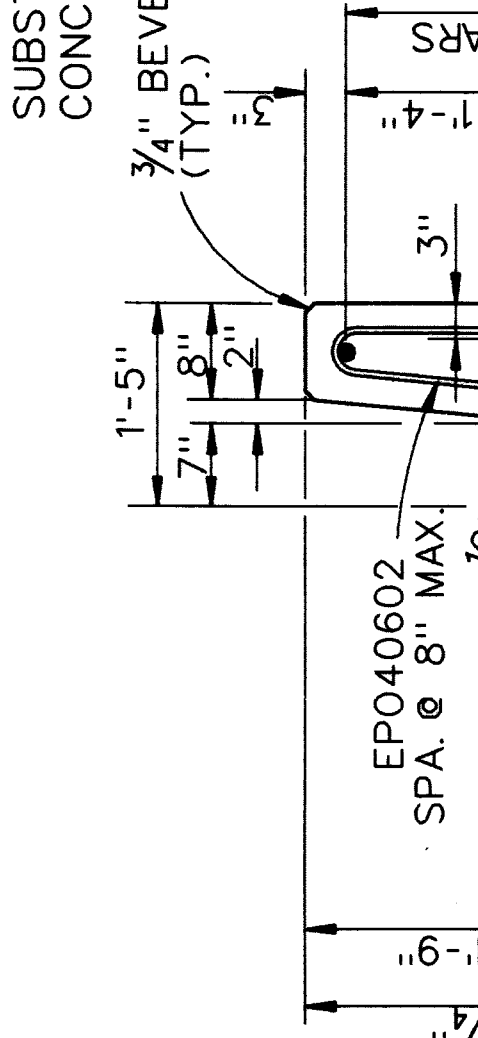


EAST & WEST WINGWALL ELEVATIONS

SECTION B-B

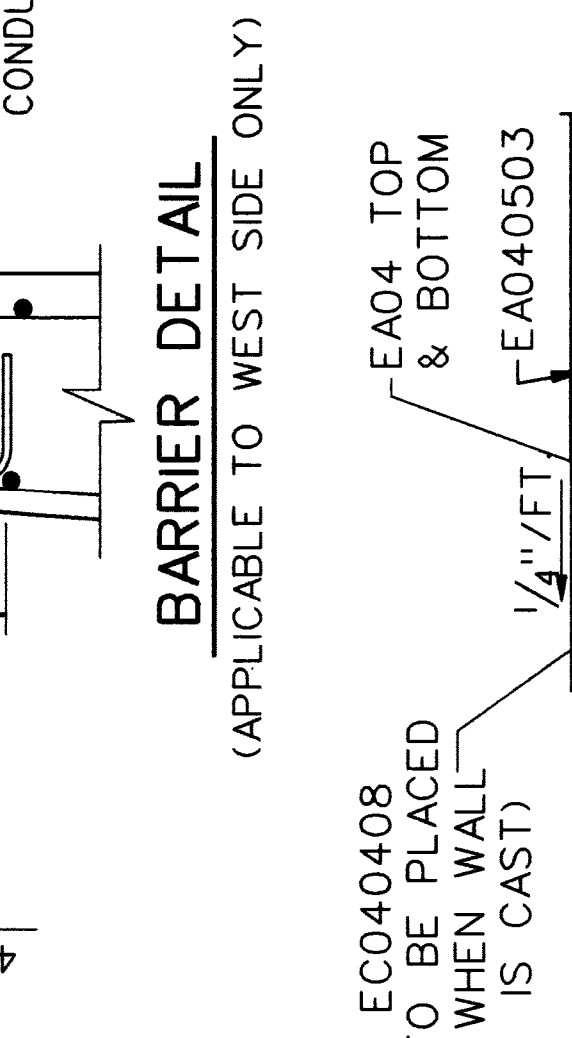


SECTION C-C

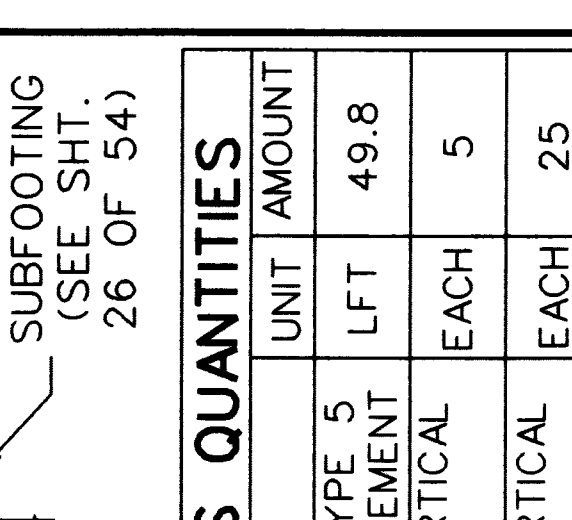


BARRIER DETAIL  
(APPLICABLE TO WEST SIDE ONLY)

SECTION A-A



SECTION E-E



MISCELLANEOUS QUANTITIES	
ITEM	UNIT AMOUNT
BRIDGE BARRIER RAILING, TYPE 5 (MOD.) FOR RAILING REPLACEMENT	LFT 49.8
EPOXY ANCHORING OF VERTICAL BAR, 1/2"	EACH 5
EPOXY ANCHORING OF VERTICAL BAR, 5/8"	EACH 25
FOUNDATION UNDERDRAIN, 8"	LFT 80

SUBSTRUCTURE CONCRETE QUANTITIES		
POUR	LOCATION	CYD
C	ABUT. STEM	26.9
D	ABUT. STEM	30.3
E	ABUT. STEM	26.9
F	WW. STEM & SW.	34.2
G	WW. STEM	25.1
TOTAL		143

NOTE:  
1/2" X 5/2" HOLE FOR ANCHORAGE OF EZ05 BAR (TO BE EPOXY-ANCHORED)  
1/2" X 5/2" HOLE FOR ANCHORAGE OF EC04 BAR (TO BE EPOXY-ANCHORED)  
3/4" DRIP NOTCH FULL LENGTH  
3" ELECT. CONDUIT  
CUT EXISTING BARS 2" BELOW GRADE OF PROPOSED SIDEWALK.

SECTION D-D

NO.	REVISIONS	DATE	BY

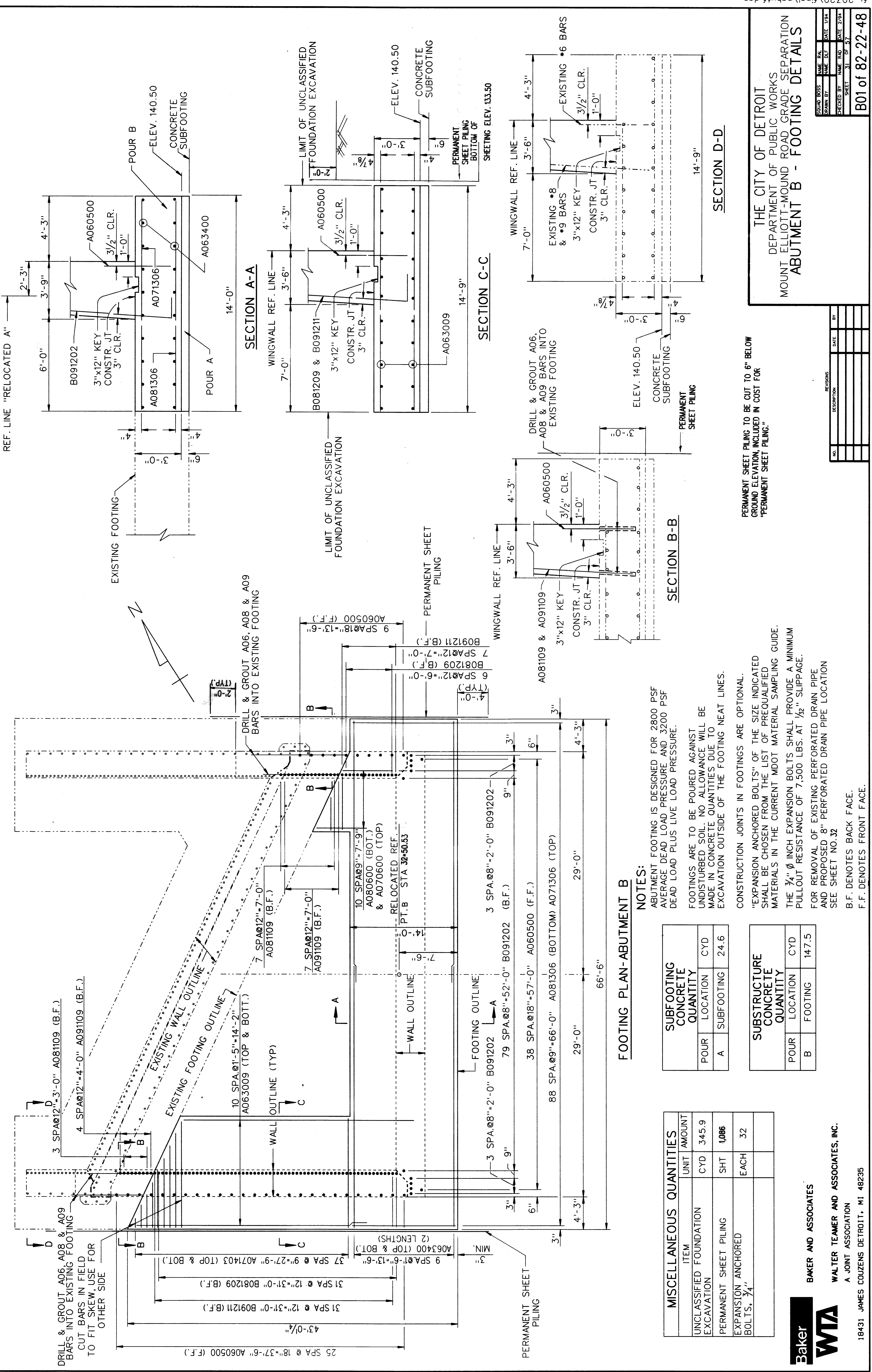
THE CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
ABUTMENT A - WALL DETAILS

SQUAD BOSS	NAME	DATE

CHECKED BY	NAME	DATE

B01 of 82-22-48





**FOOTING PLAN-ABUTMENT B**

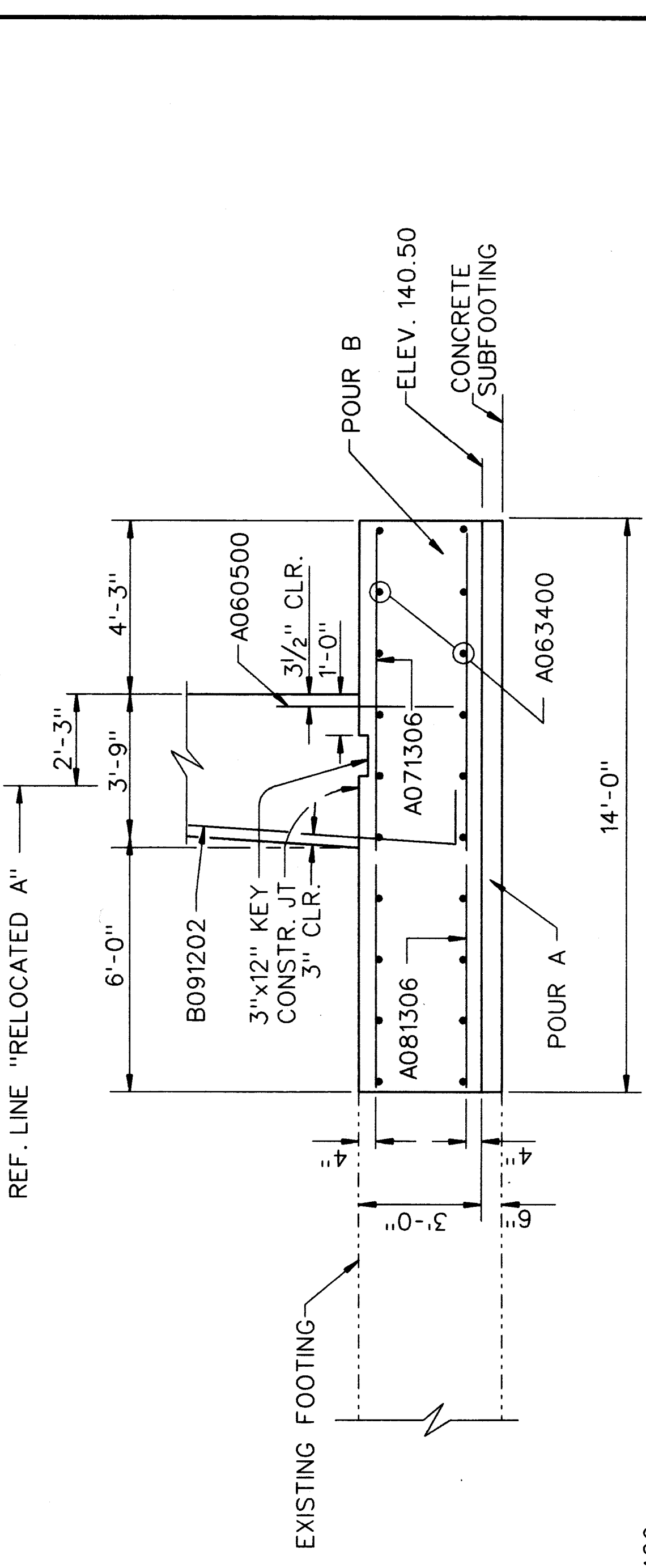
**NOTES:**

- ABUTMENT FOOTING IS DESIGNED FOR 2800 PSF AVERAGE DEAD LOAD PRESSURE AND 3200 PSF DEAD LOAD PLUS LIVE LOAD PRESSURE.
- FOOTINGS ARE TO BE POURED AGAINST UNDISTURBED SOIL. NO ALLOWANCE WILL BE MADE IN CONCRETE QUANTITIES DUE TO EXCAVATION OUTSIDE OF THE FOOTING NEAT LINES.
- CONSTRUCTION JOINTS IN FOOTINGS ARE OPTIONAL.
- "EXPANSION ANCHORED BOLTS" OF THE SIZE INDICATED SHALL BE CHOSEN FROM THE LIST OF PREQUALIFIED MATERIALS IN THE CURRENT MDOT MATERIAL SAMPLING GUIDE.
- THE 3/4" Ø INCH EXPANSION BOLTS SHALL PROVIDE A MINIMUM PULLOUT RESISTANCE OF 7,500 LBS. AT 1/2" SLIPPAGE.
- FOR REMOVAL OF EXISTING PERFORATED DRAIN PIPE AND PROPOSED 8" PERFORATED DRAIN PIPE LOCATION SEE SHEET NO. 32
- B.F. DENOTES BACK FACE.
- F.F. DENOTES FRONT FACE.

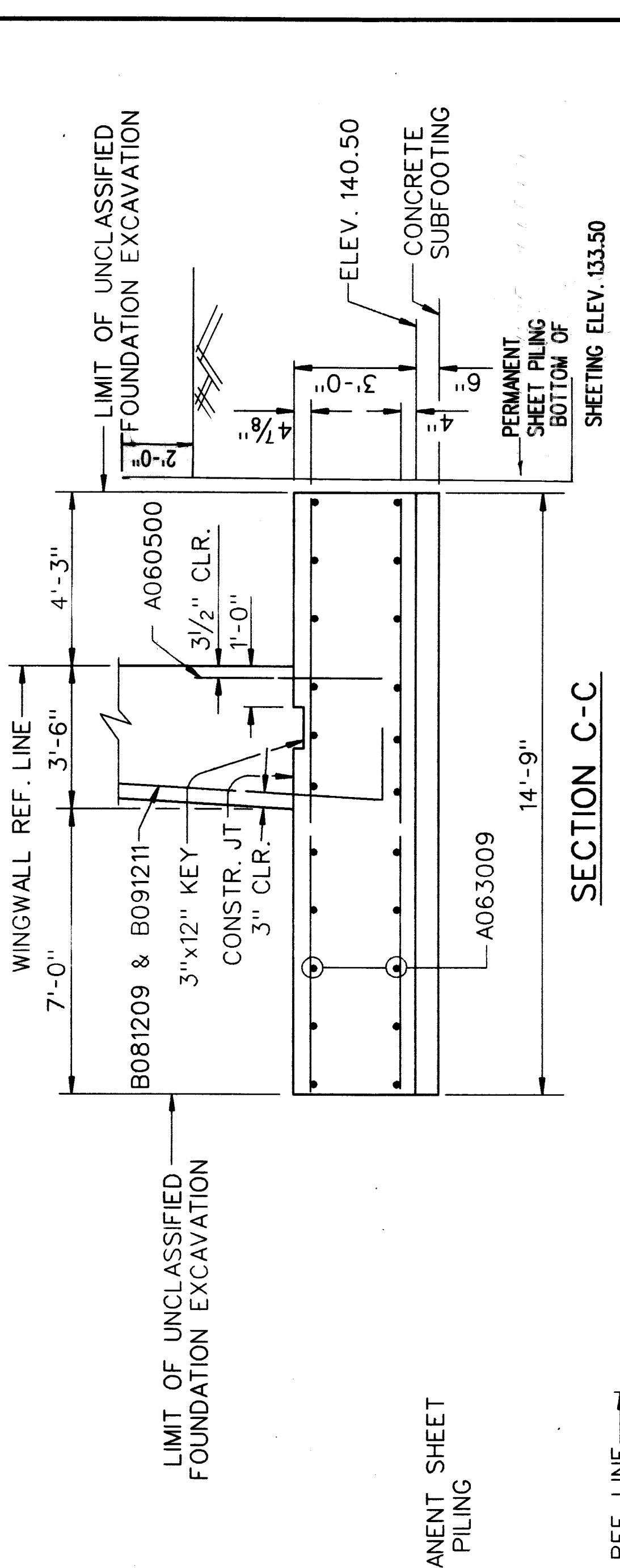
MISCELLANEOUS QUANTITIES	
ITEM	AMOUNT
UNCLASSIFIED FOUNDATION EXCAVATION	345.9
PERMANENT SHEET PILING	1,086
EXPANSION ANCHORED BOLTS, 3/4"	32

SUBFOOTING CONCRETE QUANTITY		
POUR	LOCATION	CYD
A	SUBFOOTING	24.6

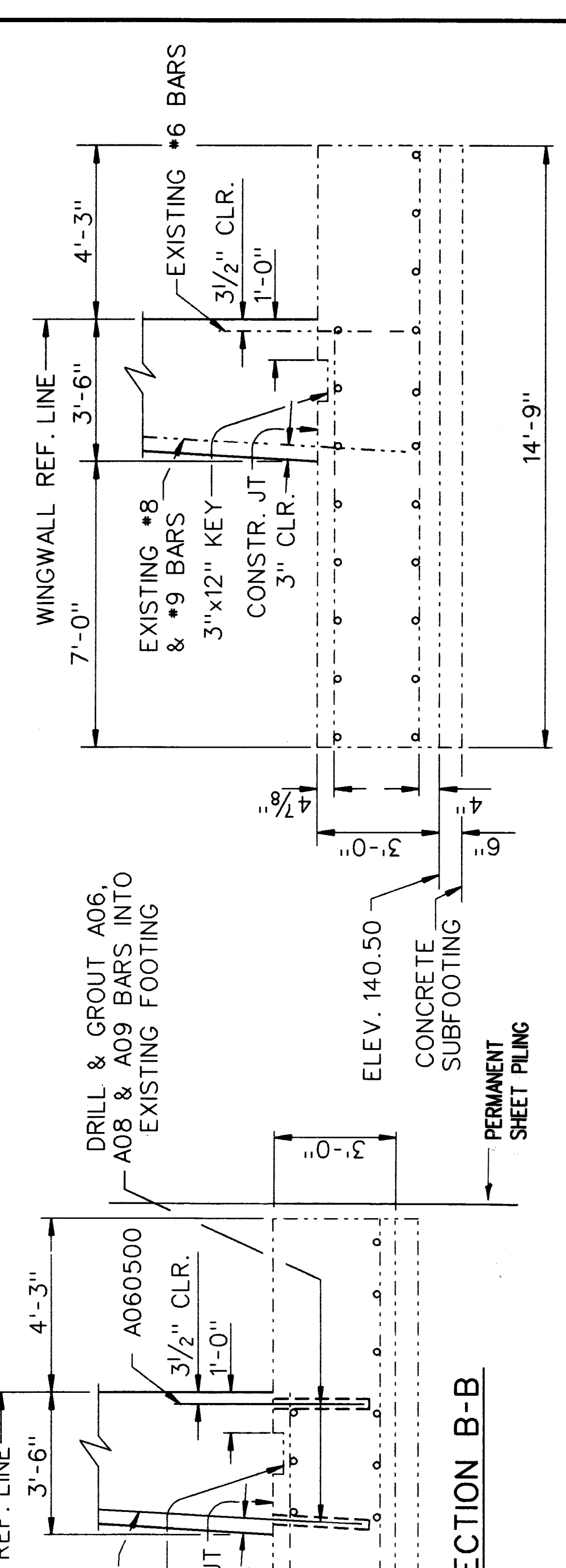
SUBSTRUCTURE CONCRETE QUANTITY		
POUR	LOCATION	CYD
B	FOOTING	147.5



**SECTION A-A**



**SECTION C-C**



**SECTION B-B**

**SECTION D-D**

PERMANENT SHEET PILING TO BE CUT TO 6" BELOW GROUND ELEVATION, INCLUDED IN COST FOR "PERMANENT SHEET PILING."

THE CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
ABUTMENT B - FOOTING DETAILS

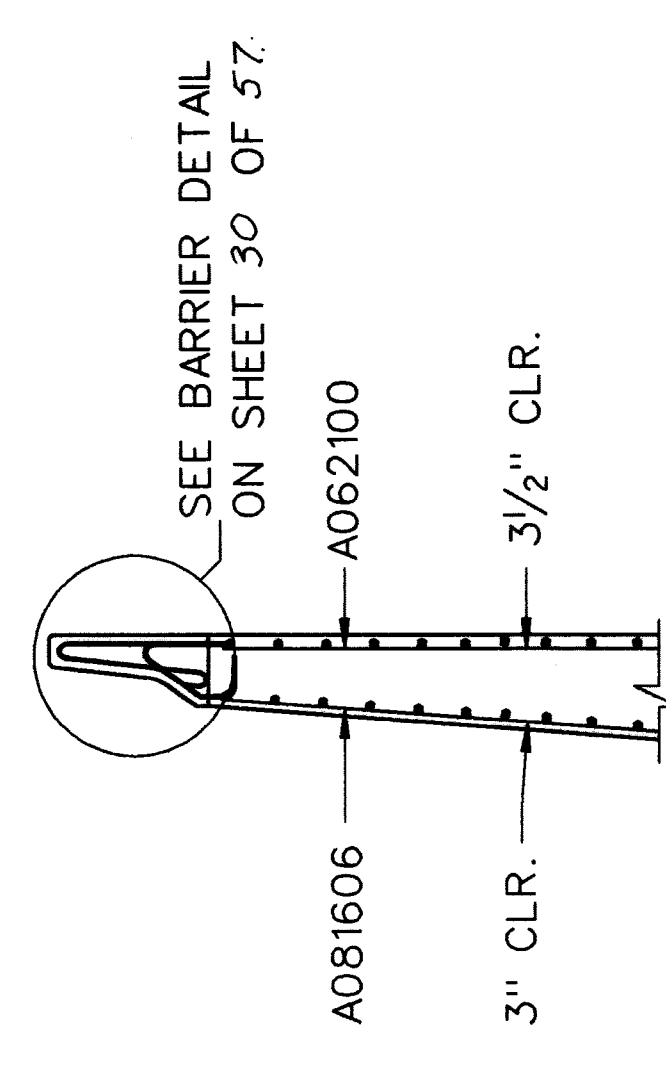
DESIGNED BY	NAME	DATE
DRAWN BY	NAME	DATE
CHECKED BY	NAME	DATE
SHEET	31	OF 57

**B01 of 82-22-48**

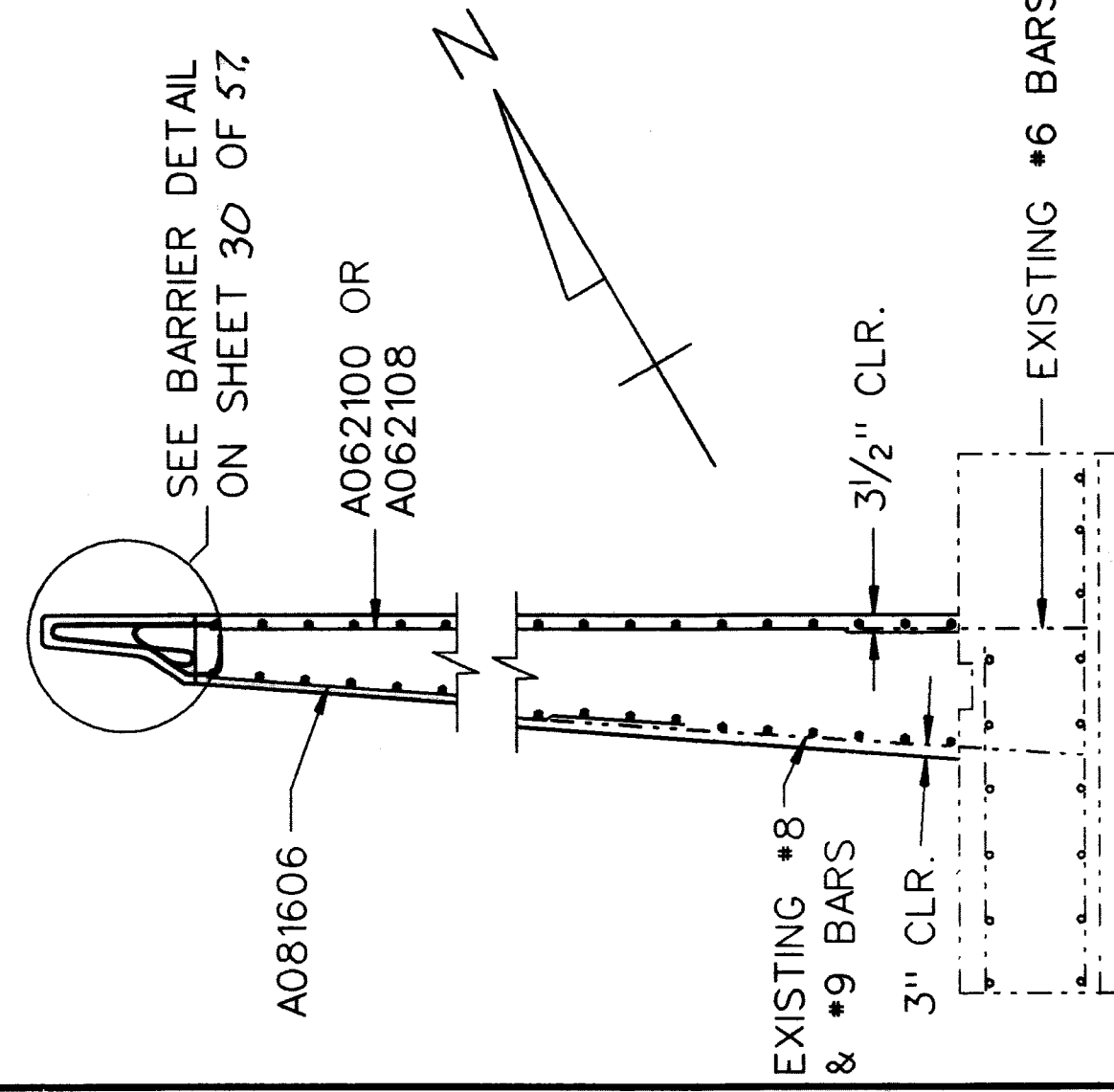
**Baker**  
**WTA**  
BAKER AND ASSOCIATES  
WALTER TEAMER AND ASSOCIATES, INC.  
A JOINT ASSOCIATION  
18431 JAMES COUZENS DETROIT, MI 48235

NO.	DESCRIPTION	DATE	BY

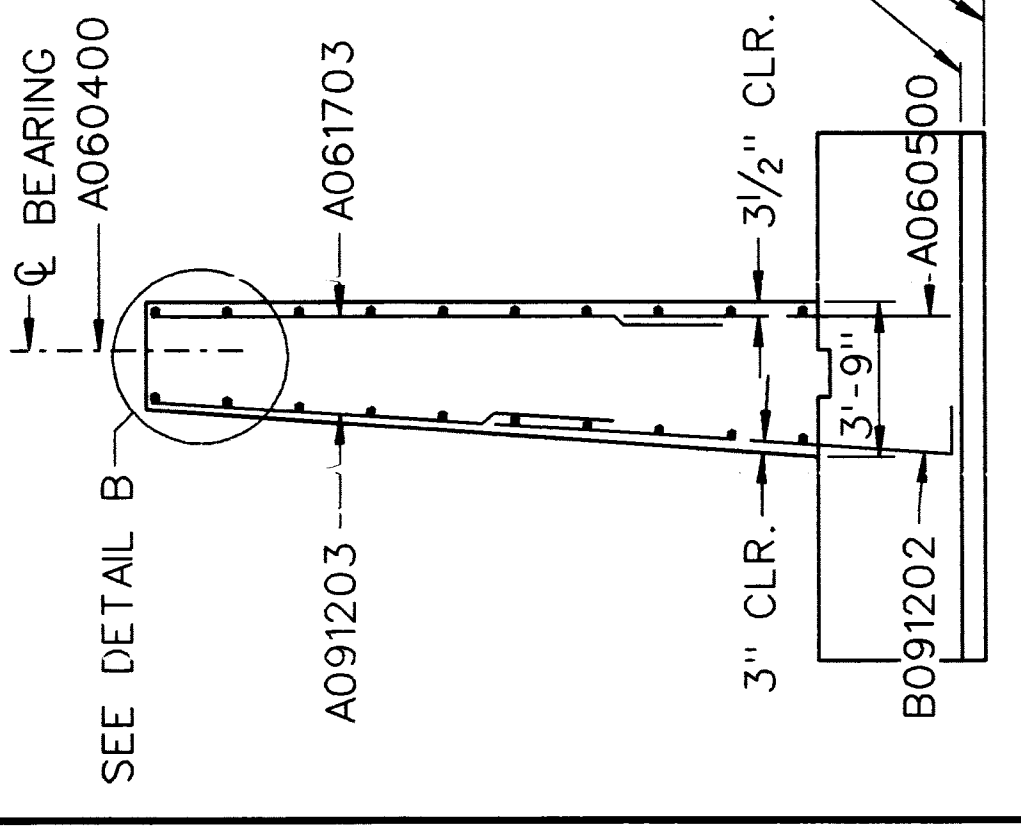




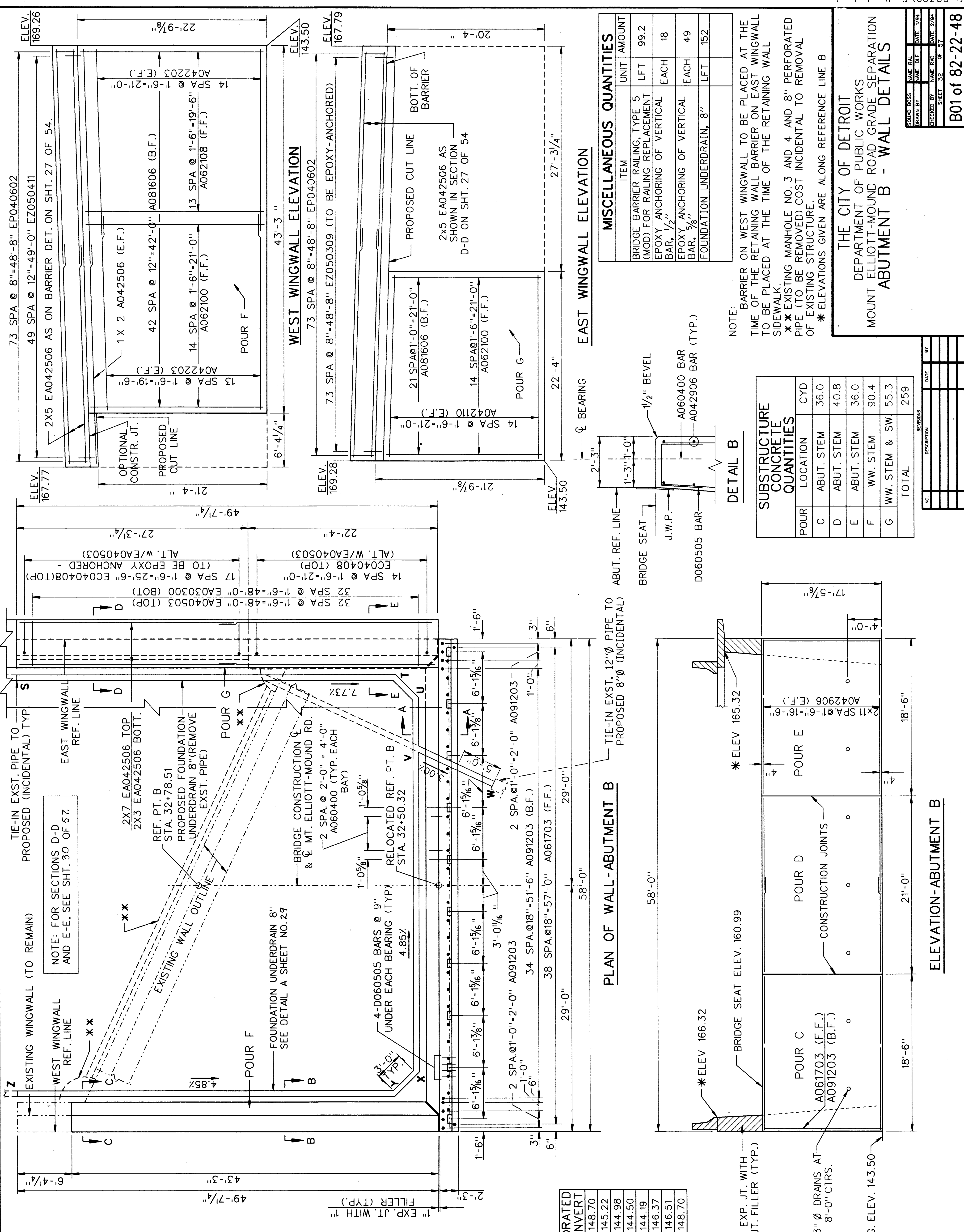
SECTION B-B



SECTION C-C



SECTION A-A



PERFORATED PIPE INVERT

S	148.70
T	145.22
U	144.98
V	144.50
W	144.19
X	146.37
Y	146.51
Z	148.70

SUBSTRUCTURE CONCRETE QUANTITIES

POUR	LOCATION	CYD
C	ABUT. STEM	36.0
D	ABUT. STEM	40.8
E	ABUT. STEM	36.0
F	WW. STEM	90.4
G	WW. STEM & SW	55.3
TOTAL		259

MISCELLANEOUS QUANTITIES

ITEM	UNIT	AMOUNT
BRIDGE BARRIER RAILING, TYPE 5 (MOD) FOR RAILING REPLACEMENT	LFT	99.2
EPOXY ANCHORING OF VERTICAL BAR, 1/2"	EACH	18
EPOXY ANCHORING OF VERTICAL BAR, 3/8"	EACH	49
FOUNDATION UNDERDRAIN, 8"	LFT	152

NOTE: BARRIER ON WEST WINGWALL TO BE PLACED AT THE TIME OF THE RETAINING WALL BARRIER ON EAST WINGWALL TO BE PLACED AT THE TIME OF THE RETAINING WALL SIDEWALK.  
 \*\* EXISTING MANHOLE NO. 3 AND 4 AND 8" PERFORATED PIPE (TO BE REMOVED) COST INCIDENTAL TO REMOVAL OF EXISTING STRUCTURE.  
 \* ELEVATIONS GIVEN ARE ALONG REFERENCE LINE B

THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 ABUTMENT B - WALL DETAILS

DESIGNED BY	NAME	DATE
DRAWN BY	NAME	DATE
CHECKED BY	NAME	DATE
SHEET	32	OF 37

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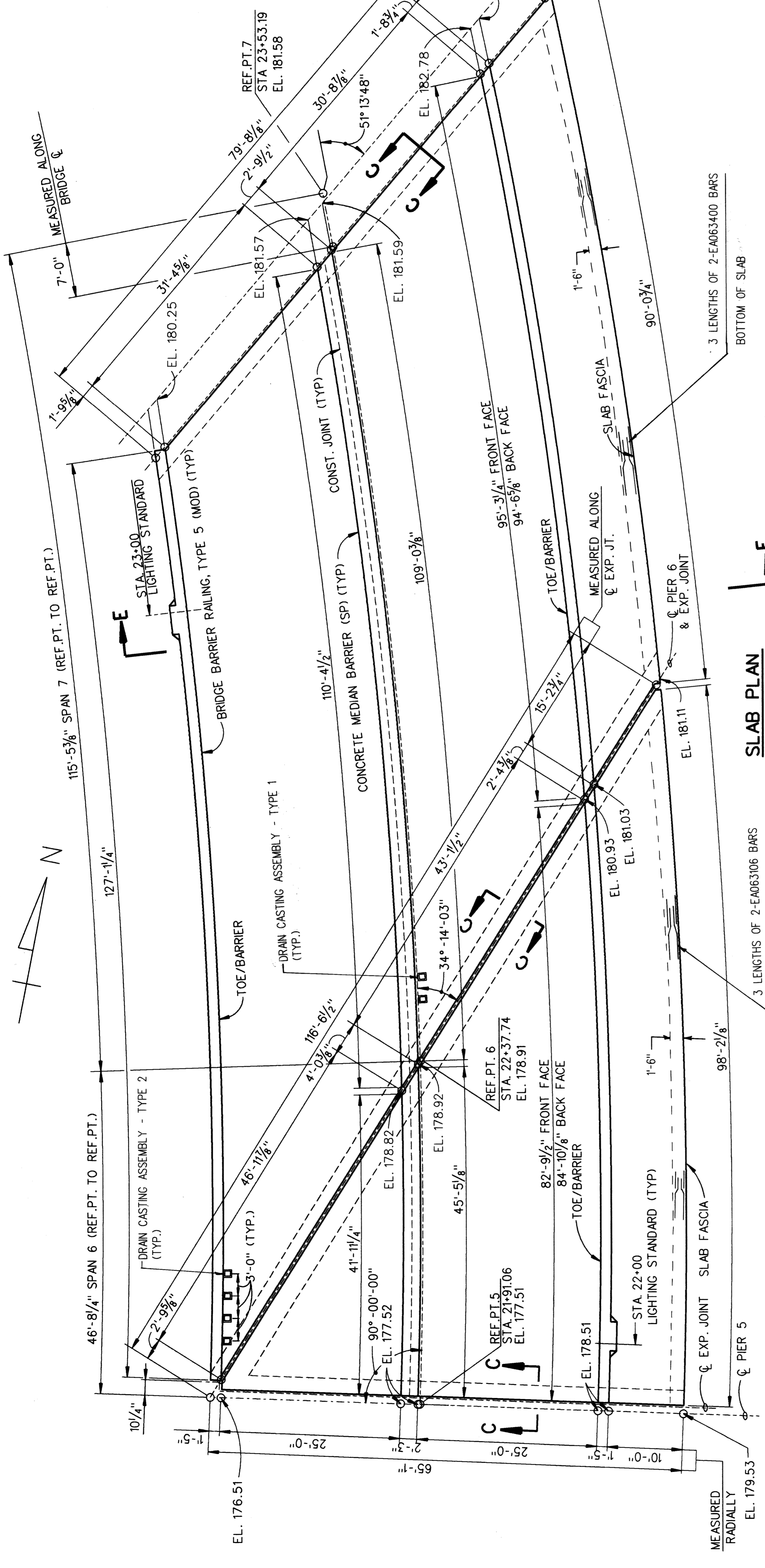






MISCELLANEOUS QUANTITIES		AMOUNT	
ITEM	UNIT	SPAN 6	SPAN 7
BRIDGE BARRIER RAILING, TYPE 5 (MOD) FOR RAILING REPLACEMENT	LFT	82.8	219.4
CONCRETE MEDIAN BARRIER (SP.)	LFT	45.4	110.4
SCARIFYING	SYD	367.8	776.0
HYDRODEMOLISHING - FIRST PASS	SYD	367.8	776.0
HYDRODEMOLISHING - SECOND PASS	SYD	16.9	8.9
DRAIN CASTING ASSEMBLY - TYPE 1	EACH	0	2
CONSTRUCTING BRIDGE DECK SURFACE	SYD	327.2	714.0
FALSE DECKING	SYD	368.0	776.0
DRAIN CASTING ASSEMBLY - TYPE 2	EACH	0	4

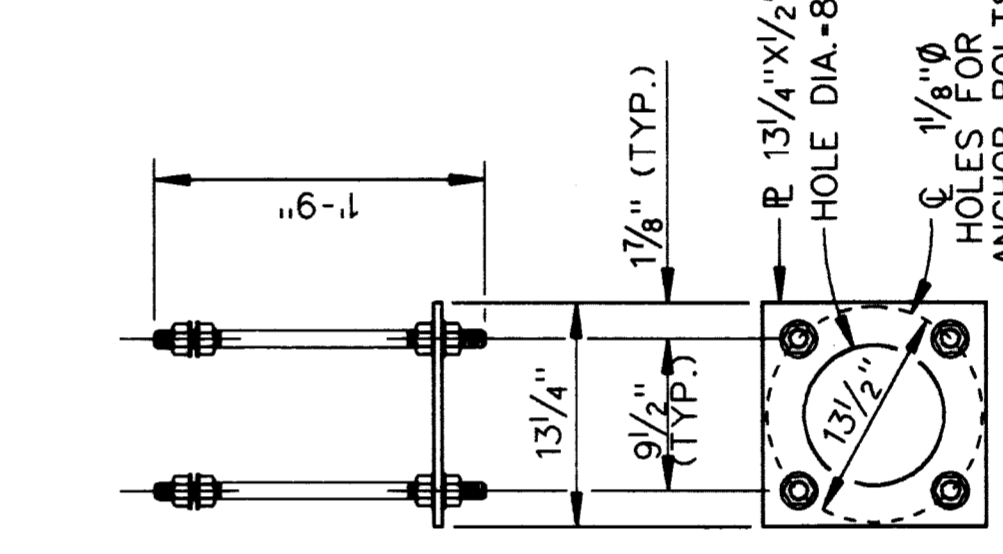
SUPERSTRUCTURE CONCRETE QUANTITIES	
POUR	AMT (CYDS)
A	12.6
B	52.3
C	44.8
D	60.5
TOTAL CONC.: 170.2	



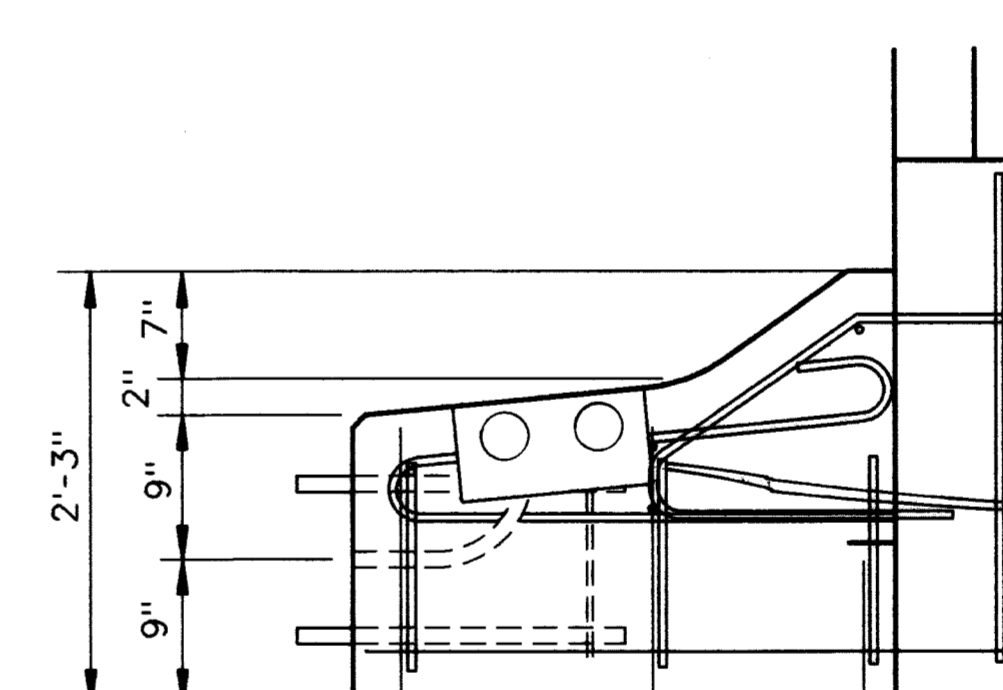
**NOTES:**

JUNCTION BOX: CAST-IRON OR WELDED STEEL PLATE JUNCTION BOX - HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM-A123 AFTER FABRICATION. PROVIDE A COVER AND WATERTIGHT CLOSED CELL NEOPRENE GASKET WITH BRASS OR STAINLESS STEEL SCREWS TO SECURE COVER. PROVIDE FACTORY INSTALLED GROUNDING STUD IN REAR OF BOX WITH HEX NUT, AS APPLICABLE.

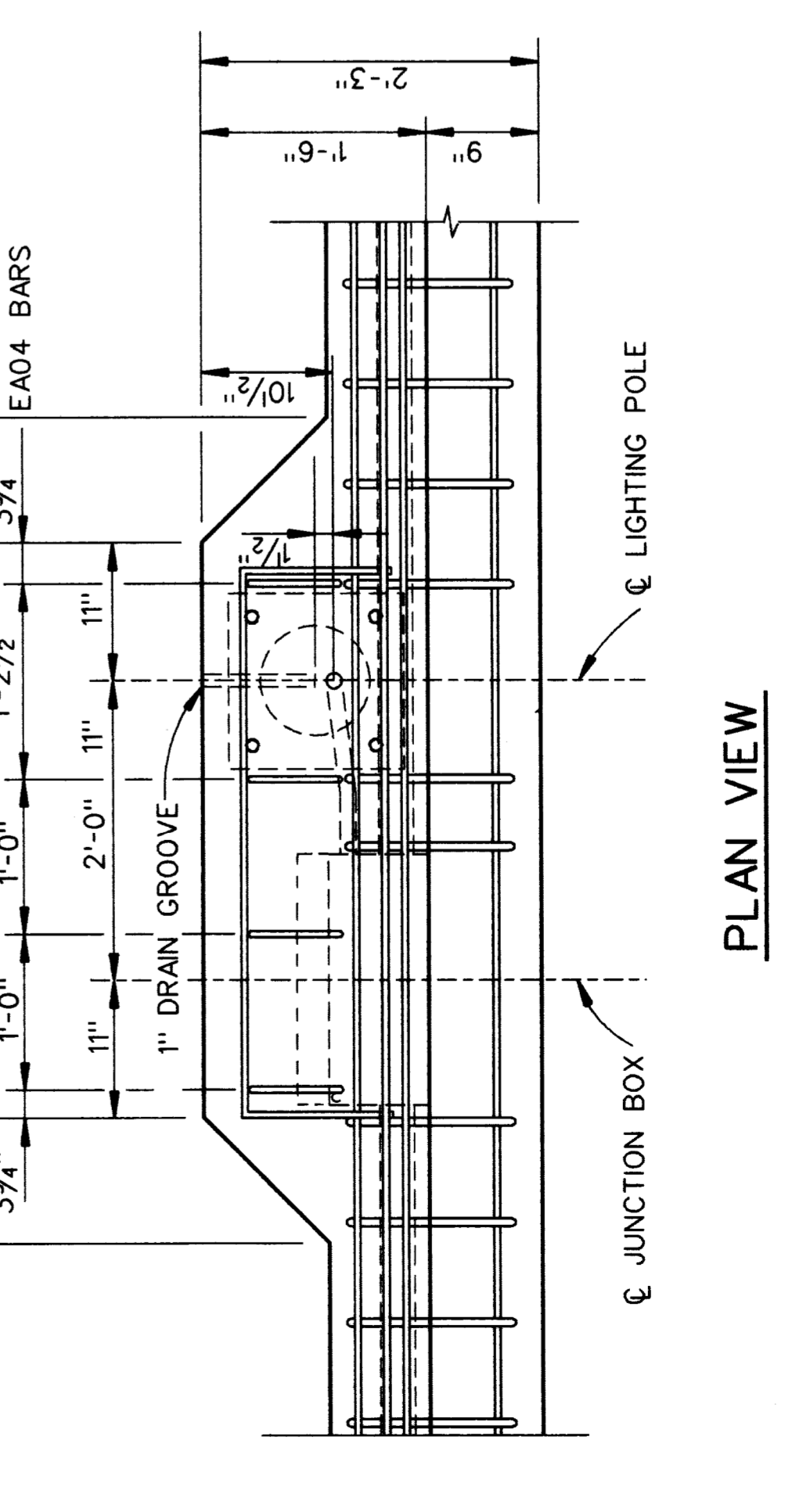
**ANCHOR BOLT ASSEMBLY**



**SECTION THRU LIGHT STANDARD**



**PLAN VIEW**



WORK THIS SHEET WITH SHEETS 26, 27, 33, THRU 35 AND 37 THRU 51. FOR PEDESTRIAN FENCING DETAILS, SEE SHEETS & ANCHOR BOLTS (4): 1" DIA. X 1'-9", 4" THREAD EACH END AND 4 HEX NUTS, 2" X 3/8" SPRING LOCK WASHER, TOP ONLY.

ANCHOR BOLT ASSEMBLY: THE ASSEMBLY SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153.

THE BID ITEM "LIGHT STANDARD ANCHOR ASSEMBLY FURNISHED AND PLACED" INCLUDES ALL WORK AND MATERIAL REQUIRED FOR INSTALLATION.

SET LIGHTING POLES TRULY VERTICAL WITH BASES LEVEL. PROVIDE A MINIMUM 2 1/2" CONCRETE COVER FOR CONDUIT.

THE CITY OF DETROIT  
DEPARTMENT OF PUBLIC WORKS  
MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
SUPERSTRUCTURE DETAILS

DESIGNED BY	DATE	BY
CHECKED BY	DATE	BY
DATE	DATE	DATE
SHEET 36	OF 57	

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**ANCHOR BOLT ASSEMBLY**

**SECTION THRU LIGHT STANDARD**

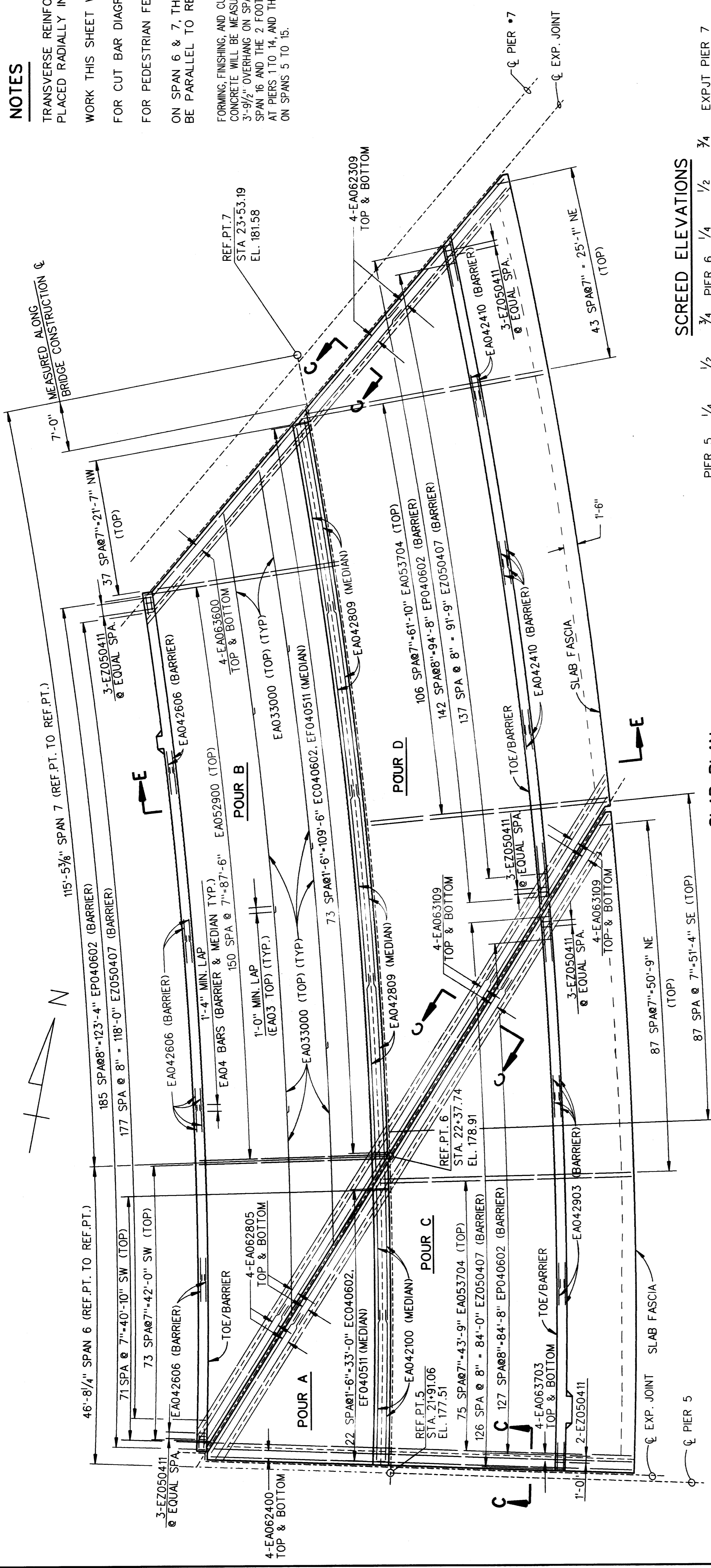
**PLAN VIEW**

Baker  
WTA  
BAKER AND ASSOCIATES  
WALTER TEAMER AND ASSOCIATES, INC.  
A JOINT ASSOCIATION  
18431 JAMES COUZENS DETROIT, MI 48235

**NOTES**

TRANSVERSE REINFORCING STEEL SHALL BE PLACED RADIALLY IN CURVED PORTION OF SLAB.  
 WORK THIS SHEET WITH SHEET 26, 27, 33 THRU 36 AND 38 THRU 51.  
 FOR CUT BAR DIAGRAM, SEE SHEET 39.  
 FOR PEDESTRIAN FENCING DETAILS, SEE SHEETS 52 & 53.

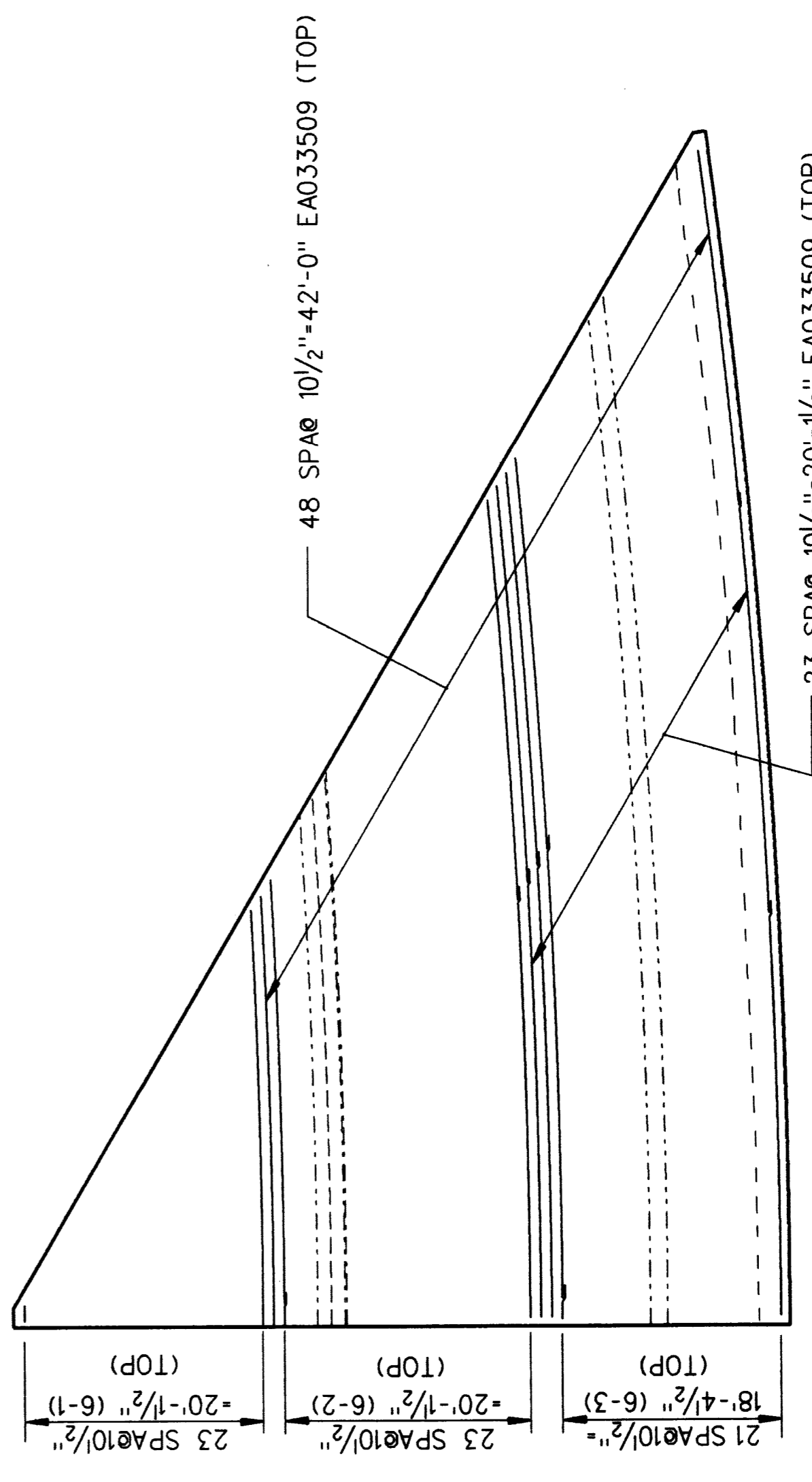
ON SPAN 6 & 7, THE TRANSVERSE FINISHING SHALL BE PARALLEL TO REFERENCE LINES.  
 FORMING, FINISHING, AND CURING SUPERSTRUCTURE CONCRETE WILL BE MEASURED AS A LUMP SUM UNIT FOR THE 3'-9 1/2" OVERHANG ON SPANS 1, 2, 3, & 4 FOR ALL OF SPAN 16 AND THE 2 FOOT DECK JOINT REPLACEMENT AT PIERS 1 TO 14, AND THE 1'-6" DECK REPLACEMENT ON SPANS 5 TO 15.



**SCREED ELEVATIONS**

	PIER 5	1/4	1/2	3/4	PIER 6	1/4	1/2	3/4	EXPJT PIER 7
WEST BARRIER	176.51	-	-	-	176.60	177.74	178.67	179.51	180.15
MEDIAN WEST	177.51	177.84	178.16	178.49	178.81	179.64	180.40	181.01	181.47
CONST. JT.	177.51	177.85	178.19	178.53	178.86	179.69	180.43	181.03	181.49
MEDIAN EAST	177.51	177.86	178.21	178.56	178.91	179.73	180.46	181.05	181.50
EAST BARRIER	178.51	179.11	179.71	180.31	180.93	181.53	182.04	182.44	182.73

**SLAB PLAN**



**SLAB PLAN**

**Baker**  
**WTA**  
 BAKER AND ASSOCIATES  
 WALTER TEAMER AND ASSOCIATES, INC.  
 A JOINT ASSOCIATION  
 18431 JAMES COUZENS DETROIT, MI 48235

THE CITY OF DETROIT  
 DEPARTMENT OF PUBLIC WORKS  
 MOUNT ELLIOTT-MOUND ROAD GRADE SEPARATION  
 SUPERSTRUCTURE DETAILS

DESIGNED BY	NAME: B.A.L.	DATE: 6/23
CHECKED BY	NAME: W.T.A.	DATE: 1/24
DRAWN BY	NAME: W.T.A.	DATE: 1/24
SHEET	37	OF 57

**B01 of 82-22-48**

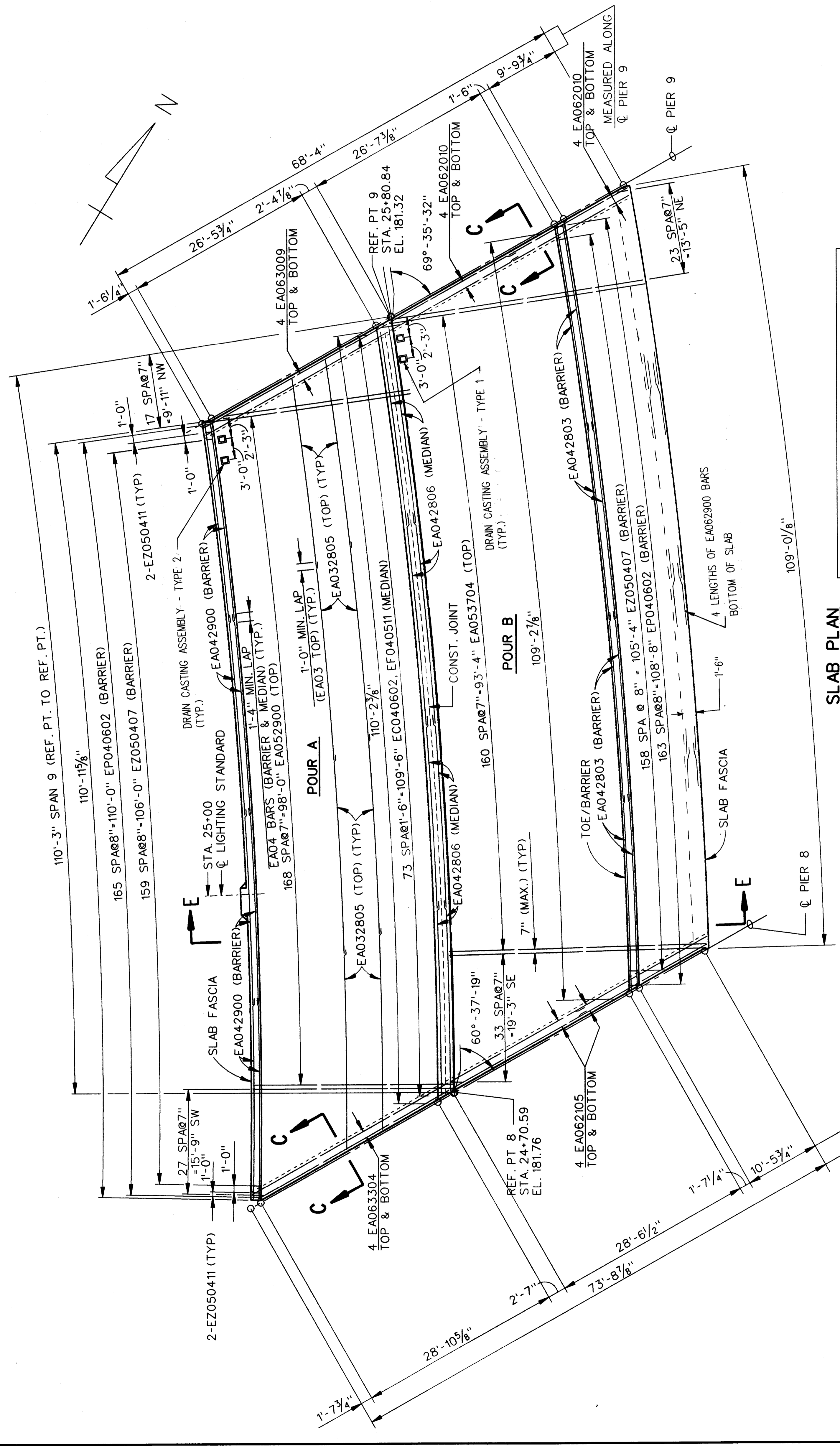
REVIEWS

NO.	DESCRIPTION	DATE	BY





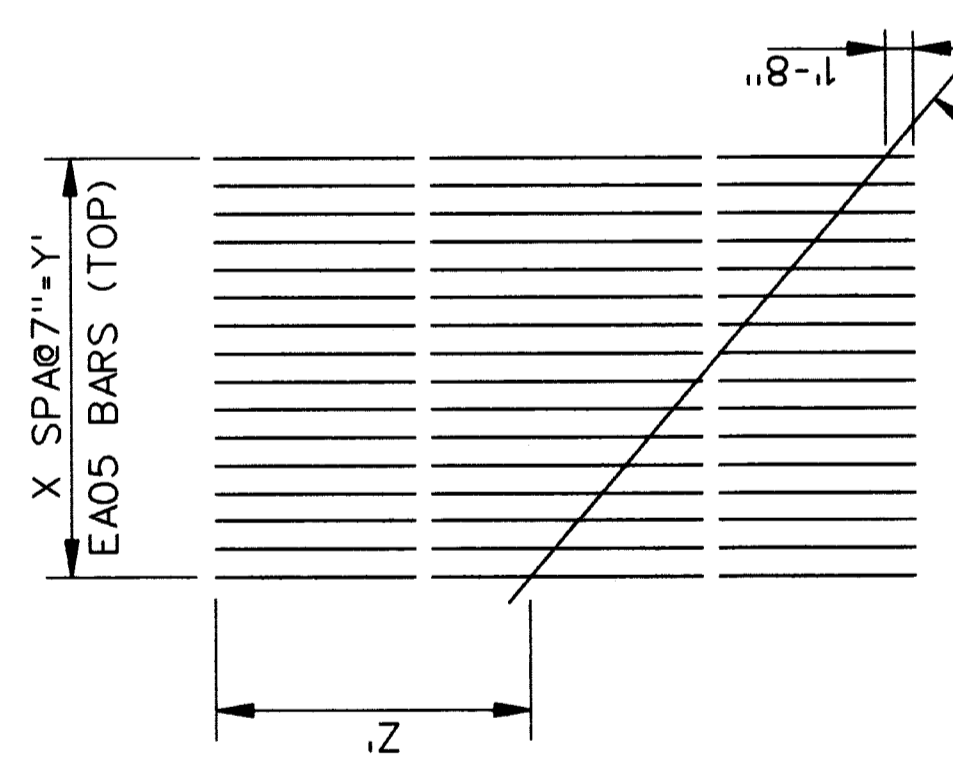




**REBAR CUT LIST**

LOCATION	BAR NO.	X	Y	Z'
SPAN 6 SECT. SW	EA053003	35	20'-5"	15'-3 5/8"
SPAN 6 SECT. NE	EA053807	43	25'-1"	19'-6"
SPAN 7 SECT. SW	EA053003	34	19'-10"	15'-3 5/8"
SPAN 7 SECT. NW	EA053000	18	10'-6"	15'-4 3/8"
SPAN 7 SECT. SE	EA053807	43	25'-1"	19'-6 1/8"
SPAN 7 SECT. NE	EA053803	23	13'-5"	19'-6 1/8"
SPAN 8 SECT. SW	EA053000	19	11'-1"	15'-4"
SPAN 8 SECT. NW	EA052908	12	7'-0"	15'-4 3/8"
SPAN 8 SECT. SE	EA053803	23	13'-5"	19'-6"
SPAN 8 SECT. NE	EA053800	16	9'-4"	19'-6 3/8"
SPAN 9 SECT. SW	EA052908	13	7'-7"	15'-3 1/8"
SPAN 9 SECT. NW	EA052901	8	4'-8"	15'-3 1/2"
SPAN 9 SECT. SE	EA053800	16	9'-4"	19'-6 3/8"
SPAN 9 SECT. NE	EA053705	11	6'-5"	19'-5 3/8"
SPAN 15 SECT. NW	EA052905	12	7'-0"	15'-2 1/4"
SPAN 15 SECT. NE	EA053709	16	9'-4"	19'-4 1/4"
SPAN 16 SECT. SE	EA063500	14	8'-2"	33'-6"
SPAN 16 SECT. SW	EA062706	10	5'-10"	26'-0"

**SLAB PLAN**



**CUTTING DIAGRAM**

NOTE: REINFORCEMENT IS TO BE SHOP CUT BEFORE EPOXY COATING IS APPLIED.

**MISCELLANEOUS QUANTITIES**

ITEM	UNIT	AMOUNT
BRIDGE BARRIER RAILING, TYPE 5 (MOD) FOR RAILING REPLACEMENT	LFT	220.2
CONCRETE MEDIAN BARRIER (SP.) SCARIFYING	LFT	111.0
HYDRODEMOLISHING - FIRST PASS	SYD	785.1
HYDRODEMOLISHING - SECOND PASS	SYD	81.3
DRAIN CASTING ASSEMBLY - TYPE 1	EACH	2
CONSTRUCTING BRIDGE DECK SURFACE	SYD	753.2
FALSE DECKING	SYD	786.0
DRAIN CASTING ASSEMBLY - TYPE 2	EACH	2

**SCREED ELEVATIONS**

	PIER 8	1/4	1/2	3/4	PIER 9
WEST BARRIER	180.83	181.71	180.59	180.48	180.37
MEDIAN WEST	181.77	181.66	181.55	181.44	181.33
CONST. JT.	181.77	181.66	181.55	181.44	181.33
MEDIAN EAST	181.77	181.66	181.55	181.44	181.33
EAST BARRIER	182.71	182.61	182.50	182.40	182.29

**SUPERSTRUCTURE CONCRETE QUANTITIES**

POUR	AMT. (CYDS)
A	48.9
B	66.0
TOTAL CONC.	114.9

**NOTES:**

TRANSVERSE STEEL SHALL BE PLACED RADIALLY.  
 LONGITUDINAL STEEL SHALL BE PLACED CONCENTRIC TO BRIDGE CENTER LINE.  
 WORK THIS SHEET WITH SHEETS 26, 27, 33 THRU 38 AND 40 THRU 51.  
 FOR PEDESTRIAN FENCING DETAILS, SEE SHEETS 52 & 53.  
 SCREDS AFFECTED BY LOADS IN OTHER SPANS ARE TO BE SET TO THE ELEVATIONS SHOWN BEFORE CASTING ANY CONCRETE. CONCRETE IN THE SUSPENDED SPANS IS TO BE CAST BEFORE THE CONCRETE IN THE ANCHOR SPANS.  
 FORMING, FINISHING, AND CURING SUPERSTRUCTURE CONCRETE WILL BE MEASURED AS A LUMP SUM UNIT FOR THE 3'-9 1/2" OVERHANG ON SPANS 1,2,3, & 4 FOR ALL OF SPAN 16 AND THE 2 FOOT DECK JOINT REPLACEMENT AT PIERS 1 TO 14, AND THE 1'-6" DECK REPLACEMENT ON SPANS 5 TO 15.  
 SCREED ELEVATIONS ARE BASED ON THE CONDITION THAT NO CONCRETE OVERLAY HAS BEEN CAST.  
 OUTER SCREED RAILS FOR FINISHING OF CONCRETE SHALL BE LOCATED OVER FASCIA BEAM AND OVER THE SLAB ADJACENT TO CONSTRUCTION JOINT.

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CHECKED BY	NAME	DATE
SHEET	39	OF 57

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