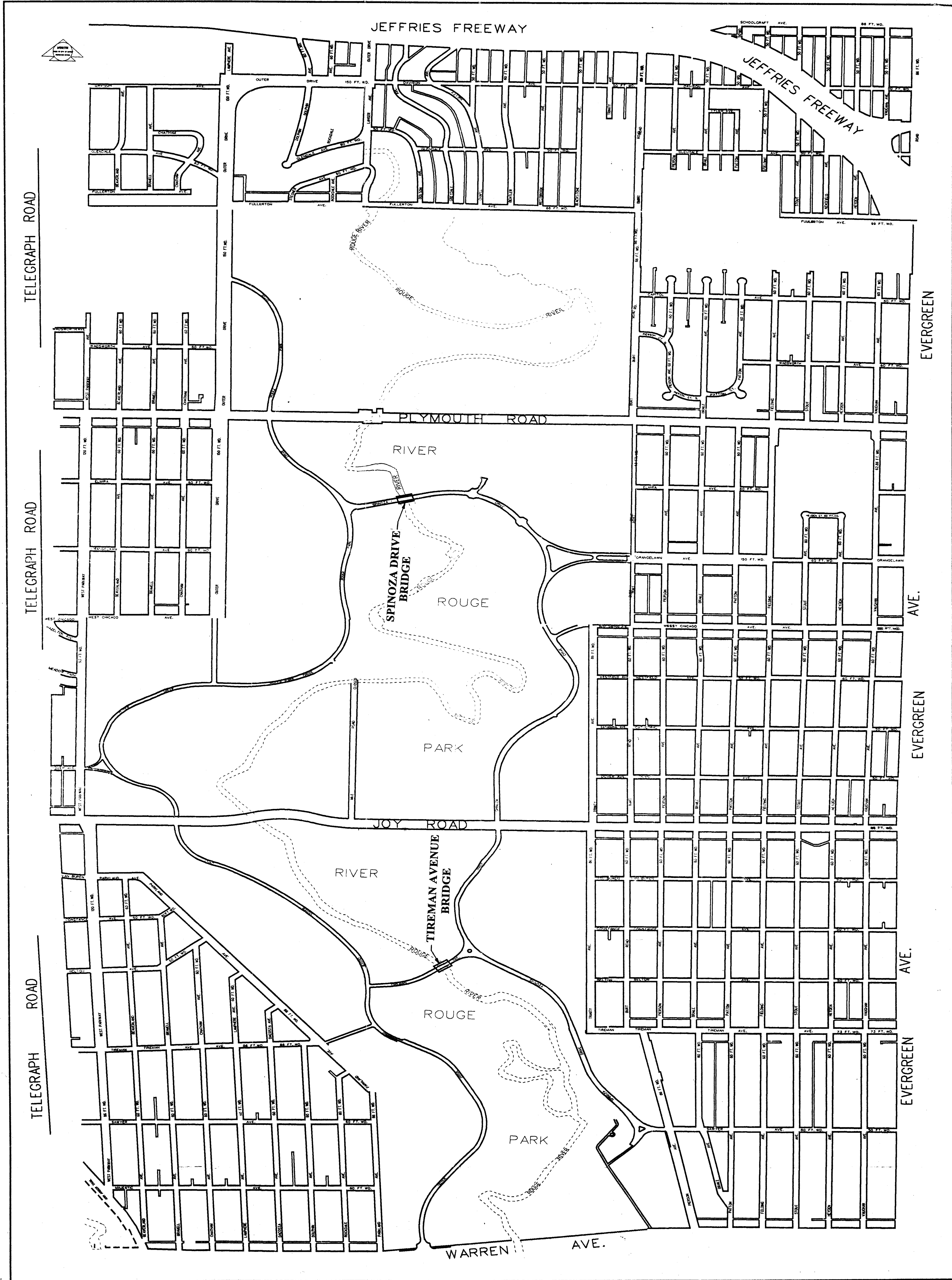


CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS
IN CO-OPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
AND
FEDERAL HIGHWAY ADMINISTRATION

NAME OF BRIDGE	(I) SPINOZA DRIVE BRIDGE Over Rouge River	(II) TIREMAN AVENUE BRIDGE Over Rouge River
FEDERAL AID URBAN PROJECT NO.	DSTP 9582 (019)	DSTP 9582 (020)
CONTROL SECTION NO.	02400 <small>Fed. Item HH 0390</small>	02400 <small>Fed. Item HH 391</small>
JOB NO.	36916A - B01 82-18-85	36917A - B01 82-18-84
CITY OF DETROIT BRIDGE NO.	BW - 270	BW - 265
FEDERAL STRUCTURE NO.	021800 B01	0153100 B01

FEDERAL AID URBAN PROJECT NO. DSTP 9582(019) BRIDGE NO. B01 82-18-85 SECTIONS 0001 & 0002
 FEDERAL AID URBAN PROJECT NO. DSTP 9582(020) BRIDGE NO. B01 82-18-84 SECTIONS 0001 & 0002
 JOB NO. 36916A
 JOB NO. 36917A



SHEET	ITEM
S-1	COVER SHEET & LOCATION PLAN
S-2 TO S-19	SPINOZA DRIVE BRIDGE DRAWINGS
S-20 TO S-36	TIREMAN AVENUE BRIDGE DRAWINGS
S-37 TO S-41	CITY OF DETROIT STANDARD PLANS

SHEET S-1 OF 41 SHEETS

CONTRACT FOR SUPERSTRUCTURE RECONSTRUCTION, APPROACH WORK AND MISCELLANEOUS CONSTRUCTION

LOCAL AUTHORITY APPROVAL
 CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

APPROVED BY *William R. Kelly* 6/10/85
CITY ENGINEER

APPROVED BY *Edward C. Howard* 6/10/85
CITY ENGINEER

PREPARED UNDER SUPERVISION OF *Edward C. Howard* 20929
REGISTERED PROFESSIONAL ENGINEER

CITY OF DETROIT
 DETROIT, MICHIGAN

(SEAL)

TRAFFIC DATA

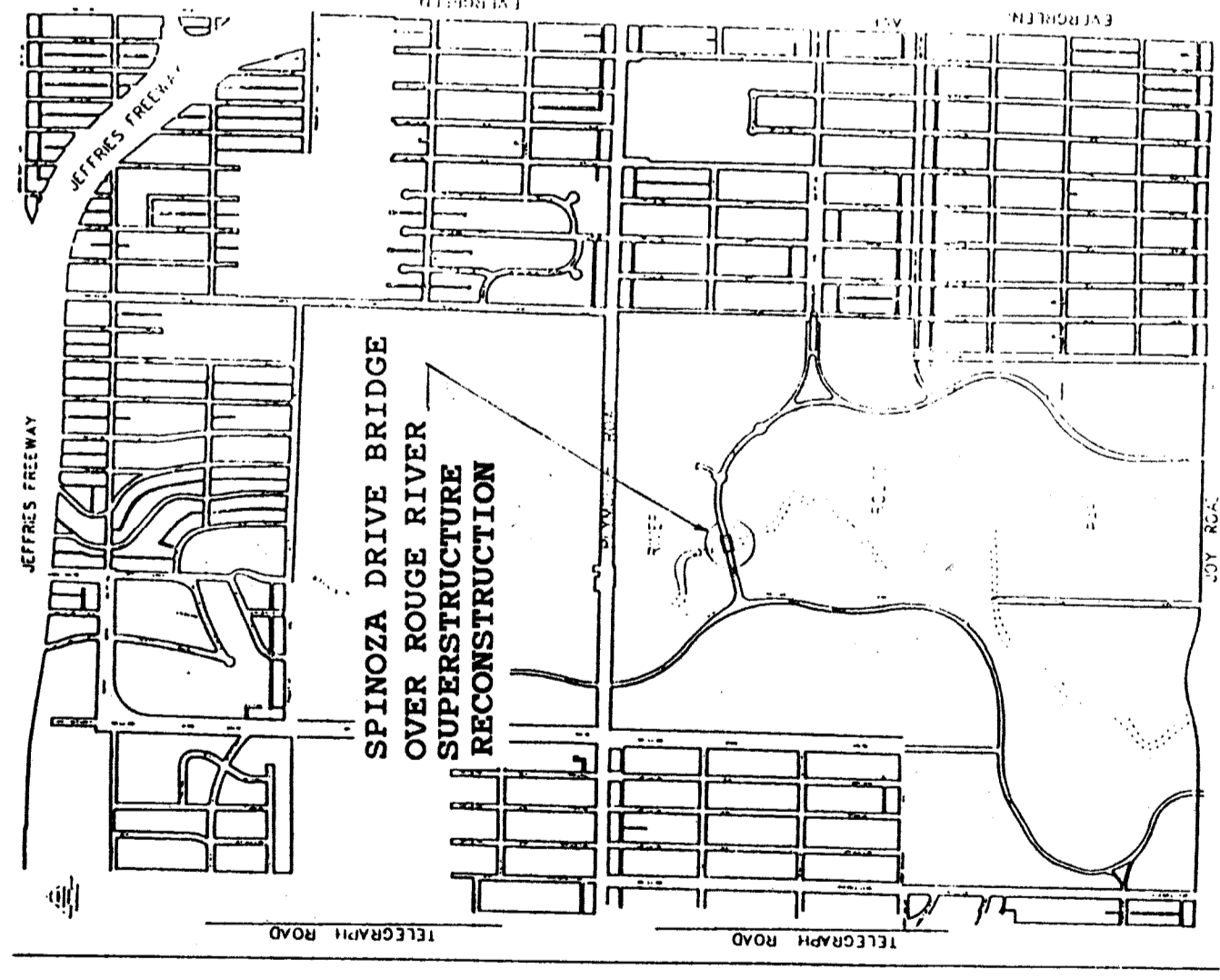
POSTED SPEED 25 MPH
 DESIGN SPEED 45 MPH
 PRESENT ADT (1994) 2218
 FUTURE ADT (2014) 4003
 DESIGN LOADING HS20

CITY OF DETROIT CITY ENGINEERING DIVISION DEPARTMENT OF PUBLIC WORKS

PLANS FOR PROPOSED BRIDGE RECONSTRUCTION IN COOPERATION WITH
 MICHIGAN DEPARTMENT OF TRANSPORTATION
 AND
 FEDERAL HIGHWAY ADMINISTRATION
 FEDERAL AID URBAN PROJECT NO. DSTP 9582(019)
 CONTROL SECTION 82400 JOB NO. 36916A - B01 82 - 18 - 85

INDEX OF SHEETS

- S-2 BRIDGE TITLE SHEET
- S-3 SITE PLAN
- S-4 GENERAL PLAN OF STRUCTURE
- S-5 REMOVAL PLAN
- S-6 REPAIRING STRUCTURAL CRACKS, PATCHING ABUTMENTS AND PIER
- S-7 PLAN OF DECK AND CROSS SECTION
- S-8 SUPERSTRUCTURE DETAILS
- S-9 SUPERSTRUCTURE DETAILS
- S-10 EXPANSION JOINT DETAILS
- S-11 STEEL REINFORCEMENT DETAILS
- S-12 EXISTING DECK AND SIDEWALK ELEVATIONS
- S-13 PROPOSED DECK AND SIDEWALK ELEVATIONS
- S-14 APPROACH REMOVAL PLAN, PROPOSED SECTIONS AND DETAILS
- S-15 APPROACH PAVING PLAN AND DETAILED GRADES
- S-16 DRAINAGE STRUCTURE DETAILS
- S-17 TRAFFIC CONTROL AND DETOUR PLAN
- S-18 DETAILS OF CONDUIT RECONSTRUCTION
- S-19 QUANTITY SHEET



COUNTY : WAYNE TOWN : 01S
 RANGE : 10E SECTION : 34

CITY OF DETROIT STANDARD PLANS LISTED ON SHEET S - 20

MDOT STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON THE PLANS THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE NOTED.

- II-30E CONCRETE CURB & CONCRETE CURB & GUTTER
- II-39L TRANSVERSE PAVEMENT JOINTS
- II-43E LOCATION OF TRANSVERSE JOINTS IN CONCRETE PAVEMENT
- II-44J CONCRETE PAVEMENT REPAIR
- II-45H CONVENTIONAL PAVEMENT REINFORCEMENT
- II-60H BEAM GUARDRAIL
- II-67D GUARDRAIL ANCHORAGE - BRIDGE, DETAILS
- IV-83H UTILITY TRENCHES
- V-100C SODDING & SEEDING
- VI-125H LIGHTED ARROWS & BARRICADES
- X-18D BRIDGE RAILING SOLID PARAPET TYPE
- XI-103D MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS

* Special Detail in Proposal.

CITY OF DETROIT

BRIDGE NO. BW 270

FEDERAL STRUCTURE

NO. 0121800 B01

GENERAL NOTES

1. THE DESIGN OF THIS STRUCTURE REHABILITATION IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS20 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/1000 OF SPAN LENGTH. THE WORKING STRESS METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.
2. EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 1990 EDITION.
3. PUBLIC LIGHTING DEPARTMENT WORK TO BE DONE IN ACCORDANCE WITH P.L.D. SPECIFICATIONS AND CITY OF DETROIT DIVISION 15 STANDARDS.
4. THE STATIONING AS SHOWN ON THESE PLANS IS BELIEVED TO BE CORRECT. IT SHALL, HOWEVER, BE CHECKED AT THE TIME OF STARTING CONSTRUCTION, AND IF THE STATIONING SHOWN ON THE PLANS IS INCORRECT, IT SHALL BE REPORTED TO THE ENGINEERING OFFICE IN DETROIT AND THE STRUCTURE SHALL BE STAKED OUT USING THE ACTUAL CENTERLINE AS THE CONTROL POINT.
5. THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:
 CONCRETE (SUPERSTRUCTURE) GRADE 45D: $f_c = 4,000$ PSI
 CONCRETE (RAILING AND BACKWALL) GRADE 45D : $f_c = 4,000$ PSI
 PRESTRESSED CONCRETE : $f_c = 5,000$ PSI
 STEEL REINFORCEMENT : $f_y = 60,000$ PSI
 STEEL REINFORCEMENT (PRESTRESSED BEAM STIRRUPS) :
 $f_y = 40,000$ PSI
 STRUCTURAL STEEL A36 : $F_y = 36,000$ PSI
 PRESTRESSING STRANDS : $f_{pu} = 270,000$ PSI
6. ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE 1/2" BEVELED EXCEPT AS OTHERWISE NOTED.
7. WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION.

8. THE CONTRACTOR SHALL LOCATE ALL UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.

9. FOR PROTECTION OF UNDER GROUND UTILITIES, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF 3 WORKING DAYS PRIOR TO EXCAVATION IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THIS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.

DETROIT EDISON 1-800-477-4747

MICHIGAN CONSOLIDATED GAS CO. 313-965-8080

AMERITECH 313-221-6100

DETROIT WATER & SEWERAGE DEPARTMENT 313-267-7401

CITY OF DETROIT PUBLIC LIGHTING DEPARTMENT 313-267-7340

COMCAST CABLE COMPANY 313-934-2800

REV	DATE	BY	DESCRIPTION

designed by **RP/RF**
 drawn by **JN**
 checked by **EH**
 approved by *[Signature]*

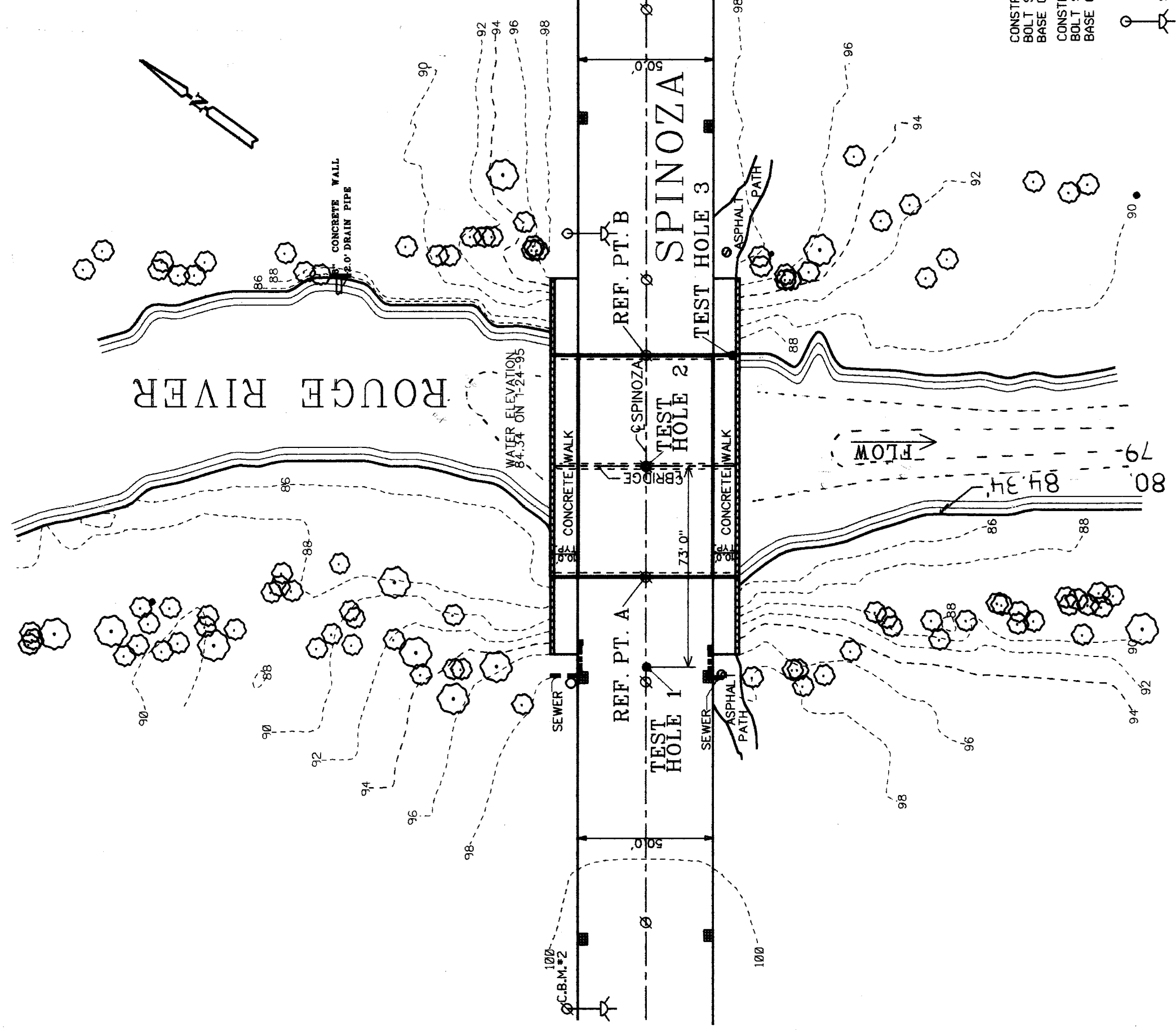
CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

SITE PLAN
 SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
 SUPERSTRUCTURE RECONSTRUCTION

contract no. **a.o. 93-22-16**
 sheet **S-3** of **S-41**
 drawing no.
 date **MAR. 1997**

EXISTING STRUCTURE
 TWO SPAN W/ 36 STEEL BEAMS BUILT IN 1930

TRAFFIC DATA
 POSTED SPEED 25 MPH
 DESIGN SPEED 45 MPH
 PRESENT ADT (1994) 2218
 FUTURE ADT (2014) 4003
 DESIGN LOADING HS20



SITUATION PLAN
 SCALE 1"=40'

ITEMS	QUANTITY	PAY UNIT
TOPSOIL SURFACE 3"	968	STD
FIELD OFFICE	6	MOS
MISC. MOBILIZATION	0.5	LSUM
MAX. \$66,000.00		
ROADSIDE SEEDING	20	LBS
CHEMICAL FERTILIZER	48	LBS
NUTRIENT		
MULCH	0.4	TON
ANCHORING MULCH	0.2	ACRE
MULCH BLANKETS	968	SYD
SWAMP BACKFILL	310	CYD
CHANNEL EXCAVATION	620	CYD
CLASS A SEWER 24"	30	LF
TRENCH DETAIL A		

NOTES:

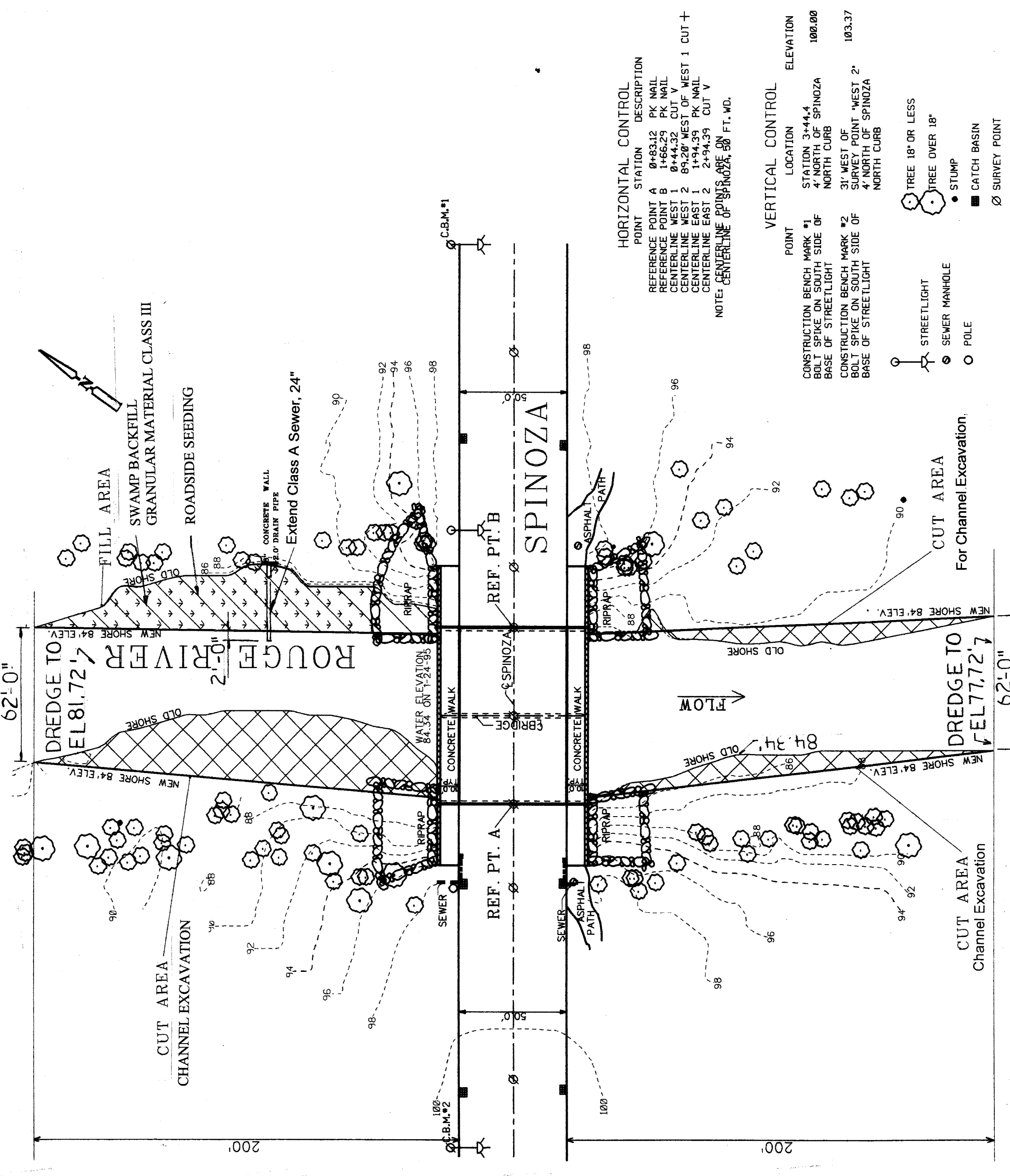
Traffic is to be maintained per Traffic Control and Detour Plan. Water level is subject to change. The Contractor is responsible for making his own determination of water levels that will exist during Construction.

Measures shall be taken to prevent debris from falling from the existing or proposed structure. If debris falls into the waterway, it shall be removed within 24 hours. Since disturbance of the waterway bottom may be as harmful as the debris itself, the preventive measures must be made as effective as possible.

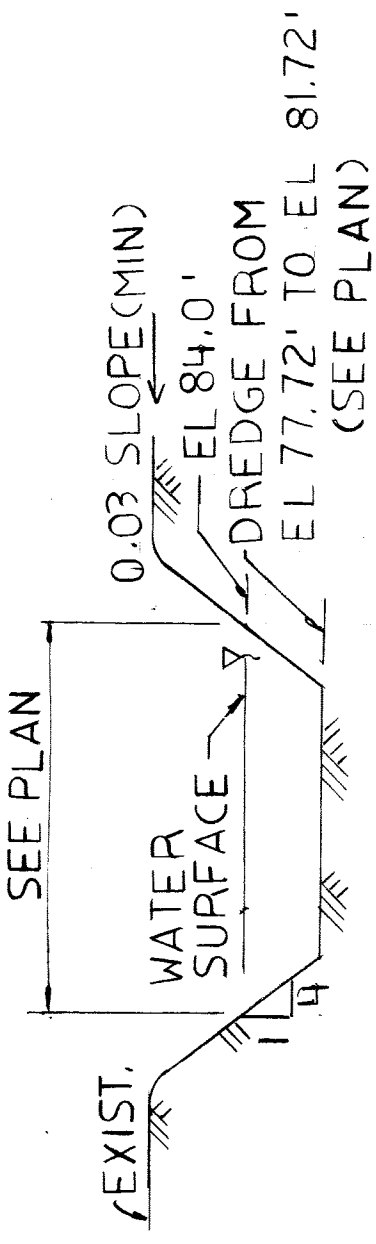
Immediately after the repair of an abutment is complete, seeding and slope protection shall be placed on the adjacent embankment slopes.

Channel Excavation and Swamp Backfill Bid items includes removal and disposal of all materials, of whatever nature encountered such as masonry, concrete, rock, tree and debris.

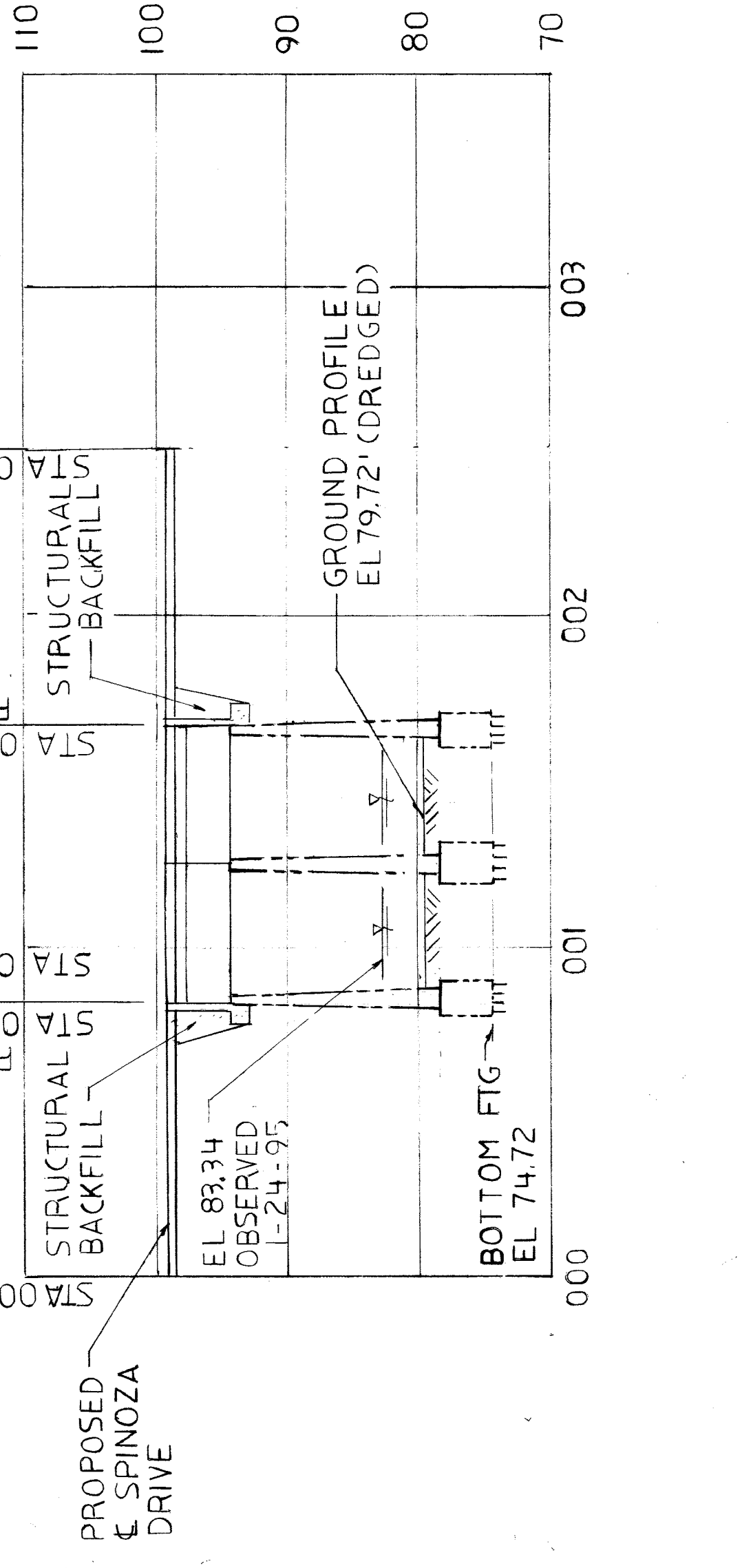
JOB NO. : 36916A



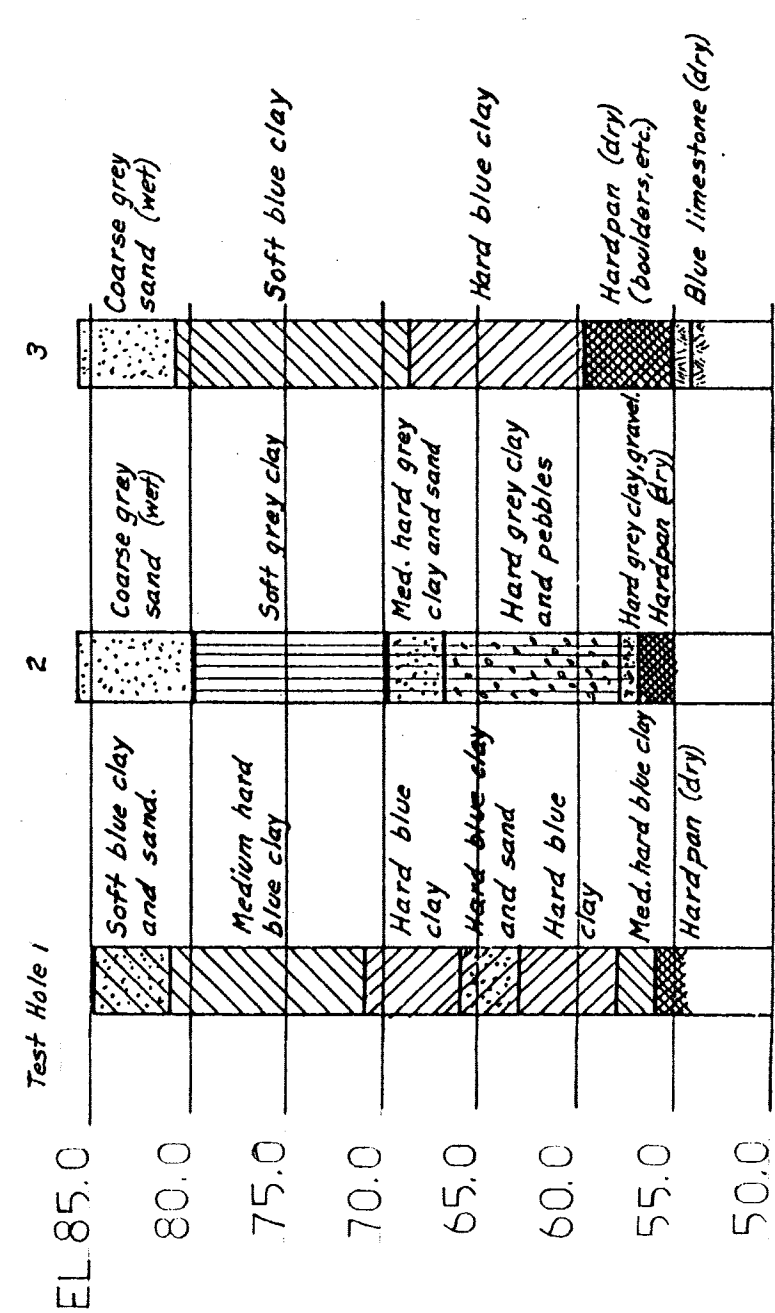
PROPOSED SITE PLAN
 SCALE 1"=40'



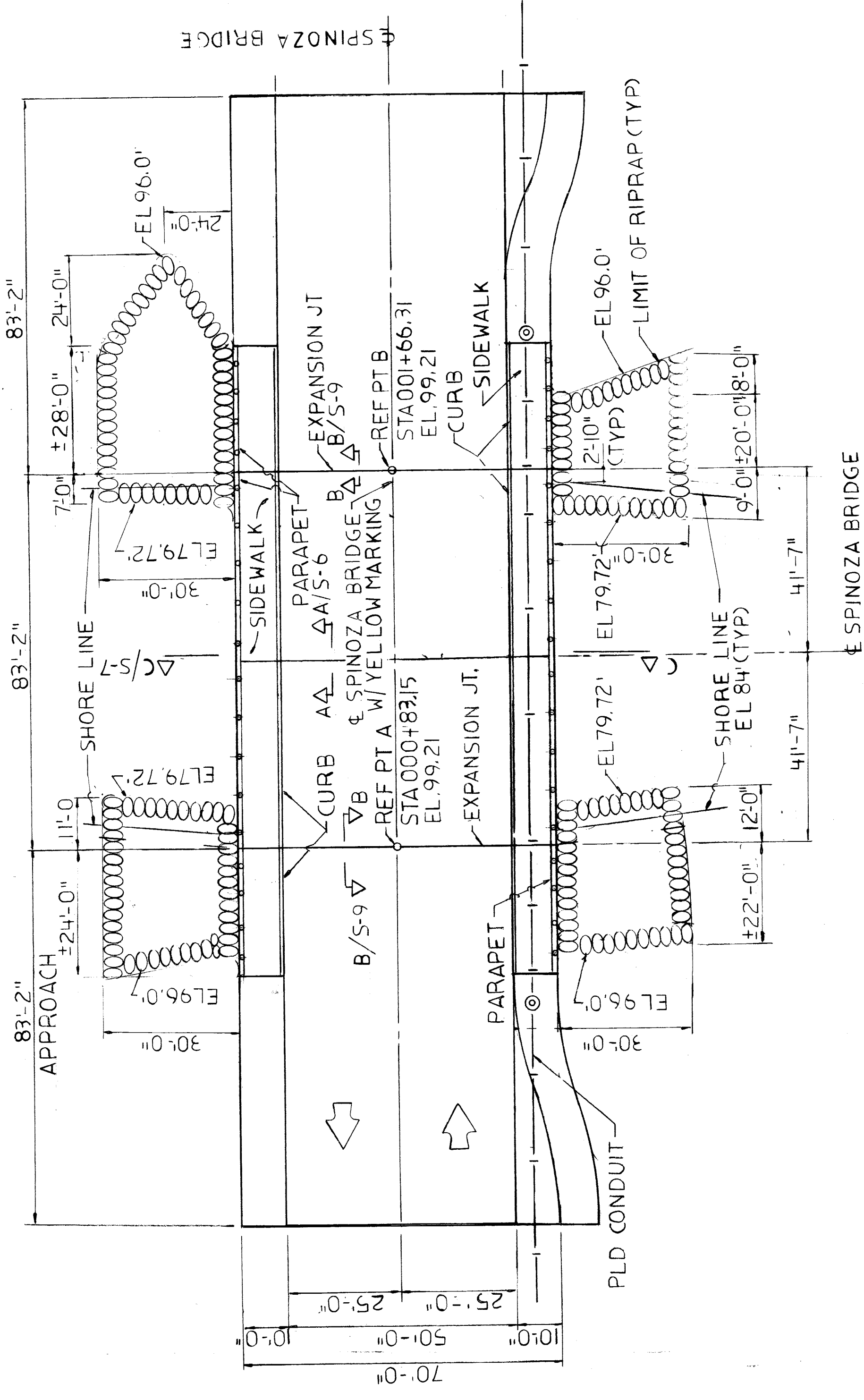
NEW RIVER CROSS SECTION
 SCALE VERT 1:10
 HOR 1:40



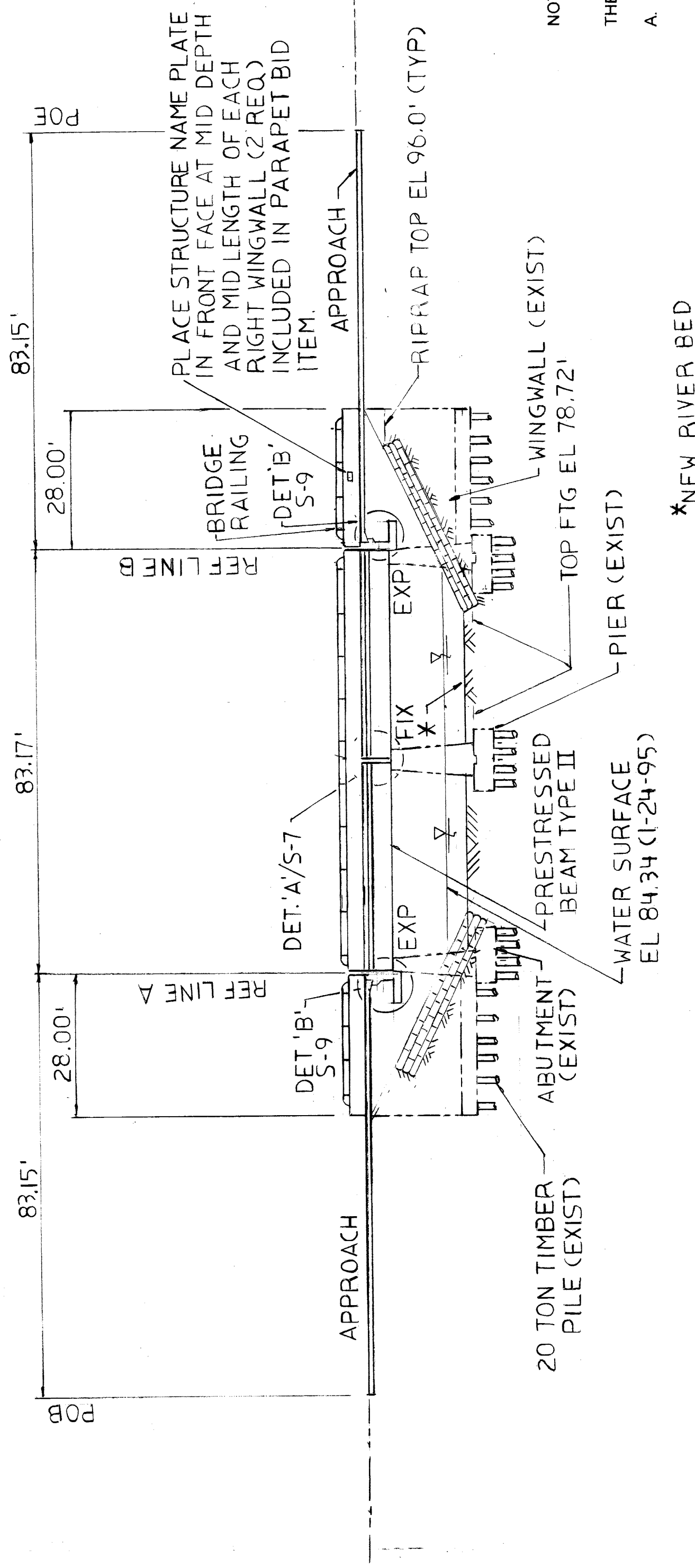
PROFILE ALONG CONSTRUCTION & SPINOZA DRIVE
 VERT SCALE 1"=10'
 HOR SCALE 1"=40'



Note - All the above sections are moist, except as noted.
 Record of Test Bores (6-3-30)



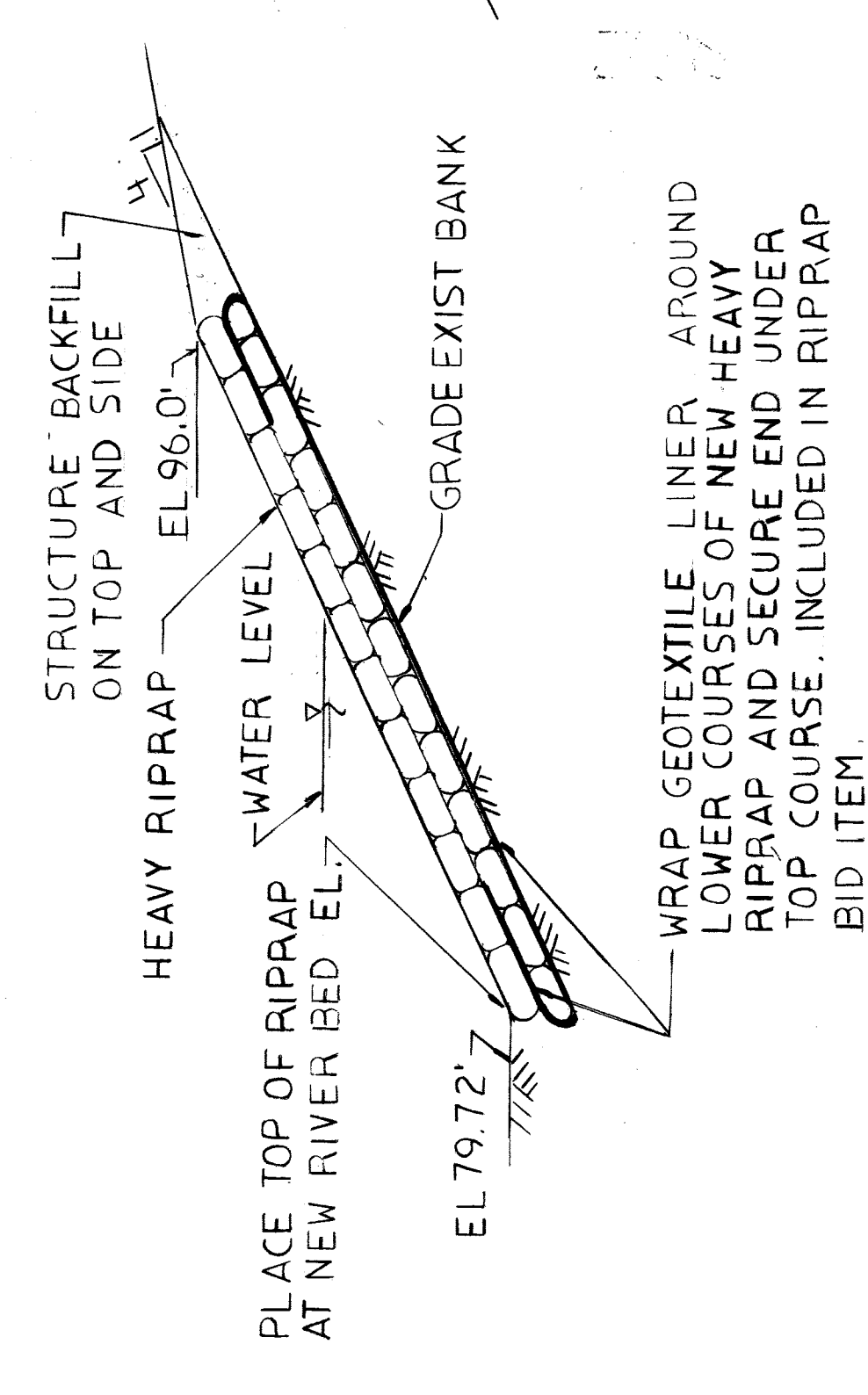
PLAN
1" = 20'-0"



ELEVATION
1" = 20'-0"
PARALLEL TO SPINOZA DRIVE

PAY QUANTITIES		
ITEMS	QUANTITY	PAY UNIT
RIPRAP, HEAVY	539	SYD
BRIDGE RAILING SOLID PARAPET TYPE	168	LFT
STRUCTURE BACKFILL (CIP)	138	CYD

Flood Data Frequency (Yrs)	Waterway Discharge (CFS)	Water Surface Elev. (FT)	Velocity Channel with or without Str. (FT./Sec.)	Waterway Area above W.S. (Sq. Ft.)	Backwater above W.S. (FT)	Final U.S. Elev. (FT)
Existing Structure Q Design (100 Yr.)	3292	85.56	4.5	732	0.10	85.46
*Existing Structure Q Overtopping (500 Yr.)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Proposed Structure Q Design (100 Yr.)	3292	85.56	4.5	732	0.10	85.46
*Proposed Structure Q Overtopping (500 Yr.)	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Natural Channel Q Design (50 Yr.)	2992	84.50	4.4	600	0.10	84.40
Witnessed Flood of Record (Year)		85.66				



RIPRAP DETAILS
1/8" = 1'-0"

- NOTES:
- GEOTEXTILE LINER SHALL BE PLACED ON ALL SLOPES PRIOR TO PLACING RIPRAP.
 - THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA TO BE PROTECTED, REGARDLESS OF NUMBER OF LAYERS REQUIRED.
 - VERIFY ALL ELEVATIONS BEFORE CONSTRUCTION.
 - THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
 - UNSUITABLE MATERIAL UNDER THE APPROACH SHALL BE REMOVED AND BACKFILLED WITH GRANULAR MATERIAL CLASS II.
 - THE GROUND ADJACENT TO THE APPROACH AND STRUCTURE SHALL BE GRADED BY THE CONTRACTOR TO PROVIDE DRAINAGE.
 - THIS BRIDGE IS PART OF A PARK AND ALL AREA SHOWN IS WITHIN CITY OF DETROIT RIGHT-OF-WAY.
 - PLACE RIPRAP FROM EL 79.72 FT. TO EL 96.0 FT.
 - TEMPORARILY STORED EXCAVATED MATERIAL SHALL NOT BE ALLOWED TO ERODE INTO THE WATERCOURSE.
 - FOR STRUCTURE NAME PLATE LOCATION, SEE THIS SHEET

- THE WORKS COVERED BY THESE PLANS INCLUDES THE FOLLOWING:
- REMOVAL AND RECONSTRUCTION OF BRIDGE SUPERSTRUCTURE AND APPROACHES.
 - REPAIR OF SUBSTRUCTURES
 - DREDGING, BACKFILLING AND PLACEMENT OF RIPRAP IN THE RIVERBED.

*NEW RIVER BED DREDGED TO EL 79.72' PLACE TOP OF RIPRAP AT BED ELEV.

NO.	DATE	REVISIONS

designed by RF
 drawn by RF
 checked by EH
 approved by *Scott Howard*

CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BM-270)
 SUPERSTRUCTURE RECONSTRUCTION
 GENERAL PLAN OF STRUCTURE

a.o. 93-22-16
 contract no.
 sheet S-4 of S-41
 drawing no.
 date MAR. 1997
 JOB NO. : 36916A

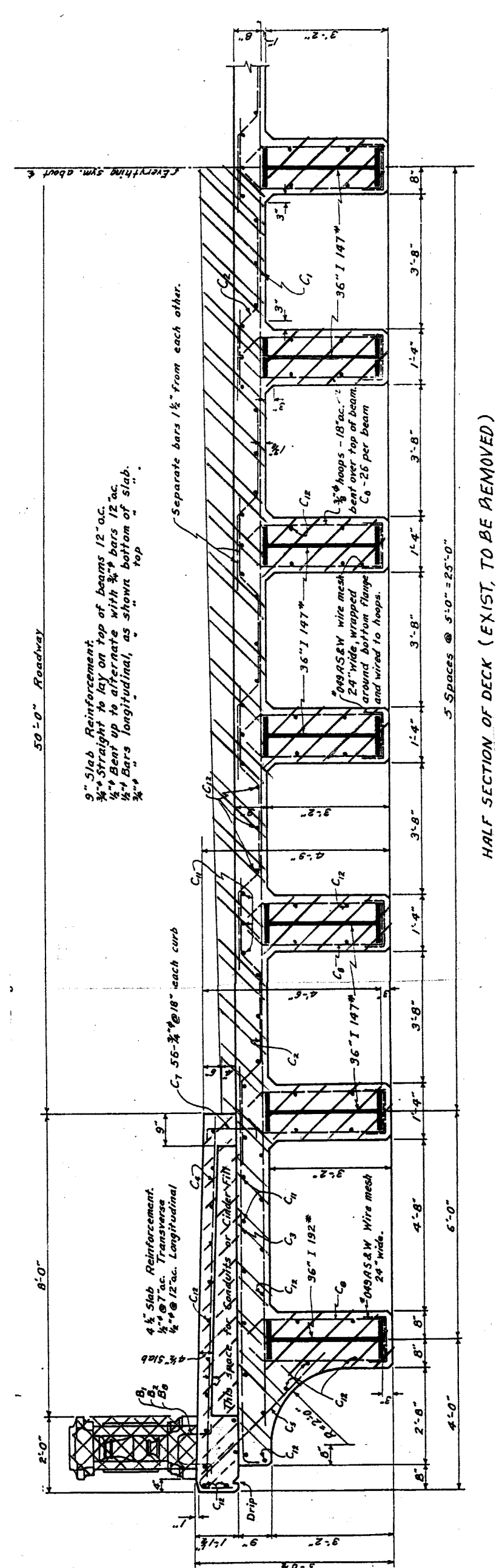
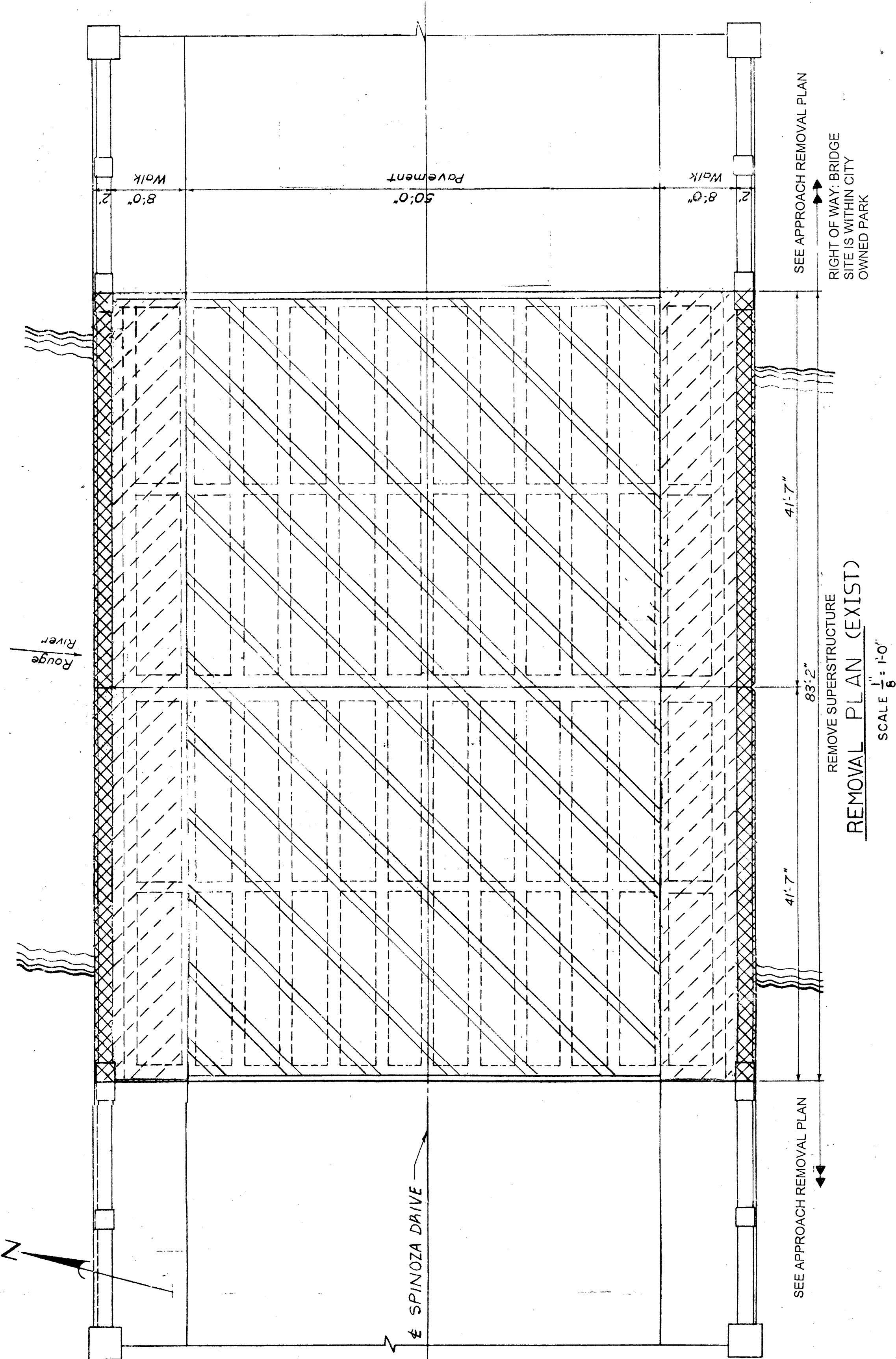
REVISIONS	
NO.	DESCRIPTION

designed by RF
 drawn by RF
 checked by EH
 approved by *Scott Howard*

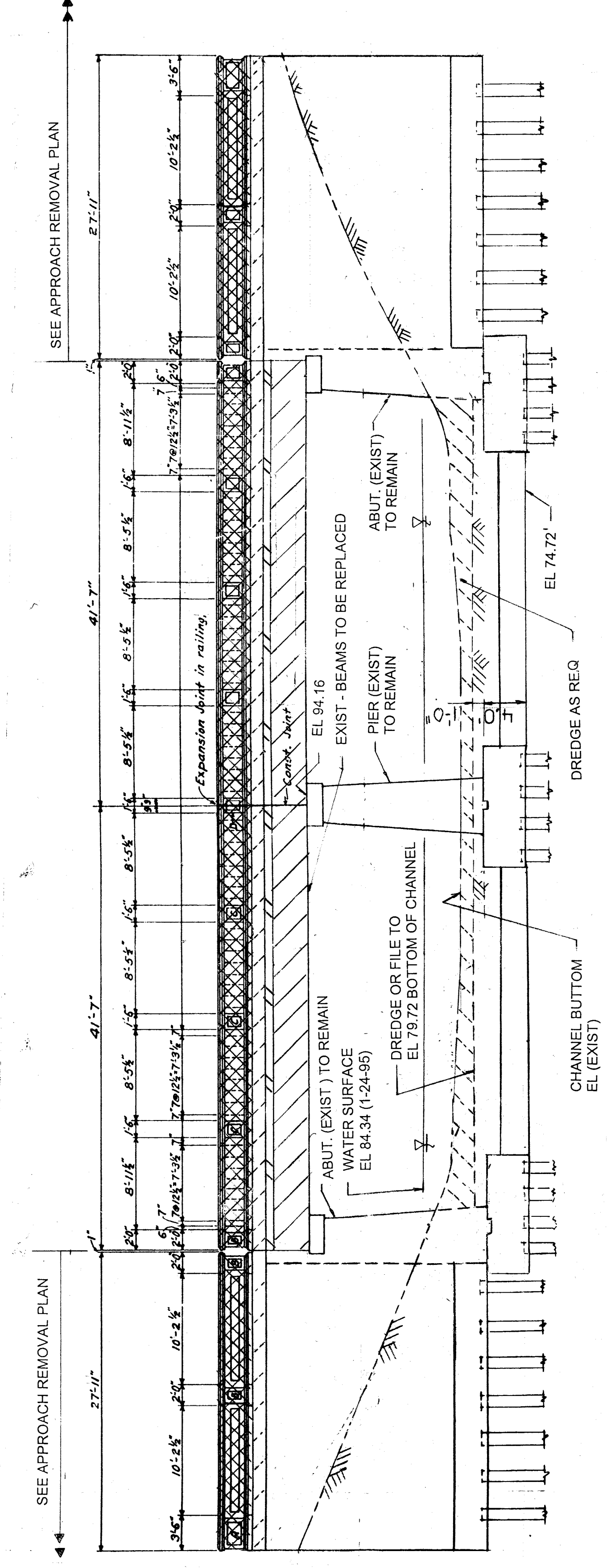
CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BM-270)
 SUPERSTRUCTURE RECONSTRUCTION
REMOVAL PLAN

a.o. 93-22-16
contract no.
sheet S-5
of S-41
drawing no.
date MAR. 1997



- LEGEND ***
- REMOVE PARAPET
 - REMOVE DECK
 - REMOVE SIDEWALK ON THE DECK
 - REMOVE BEAMS, BEARINGS, ANCHOR BOLTS AND GROUTS
- *: REFER TO THIS SHEET ONLY



PAY QUANTITIES

ITEMS	QUANTITY	PAY UNIT	LSUM
MISC. REMOVAL OF PORTIONS OF STRUCTURES, B01-S2-18-85	1		

- NOTES:
- REMOVAL OF PARAPET, DECK, SIDEWALK ON DECK, BEAMS, BEARINGS, ANCHOR BOLTS, GROUT AND ANY OTHER ITEMS ON THE BRIDGE DECK WILL BE PAID FOR AS "MISC. REMOVAL OF PORTIONS OF STRUCTURES, B01-S2-18-85" LSUM.
 - REMOVAL AND DISPOSAL OF THE MATERIALS SHALL BE IN ACCORDANCE WITH SECTION 2.06 OF 1990 STANDARD SPECIFICATIONS FOR CONSTRUCTION.

REMOVAL - ELEVATION (EXIST)
 SCALE 1/8" = 1'-0"

JOB NO. : 36916A
 date MAR. 1997

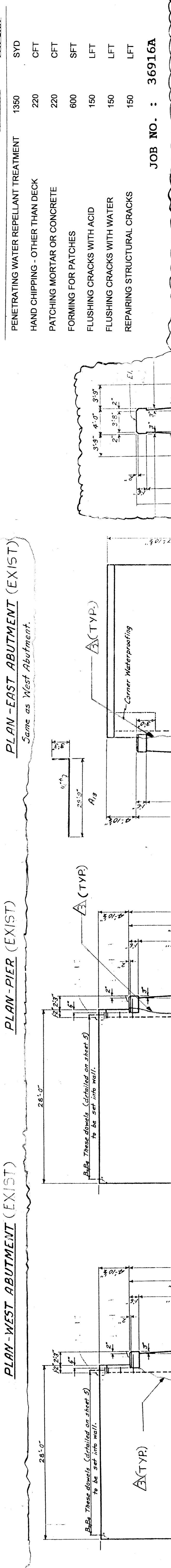
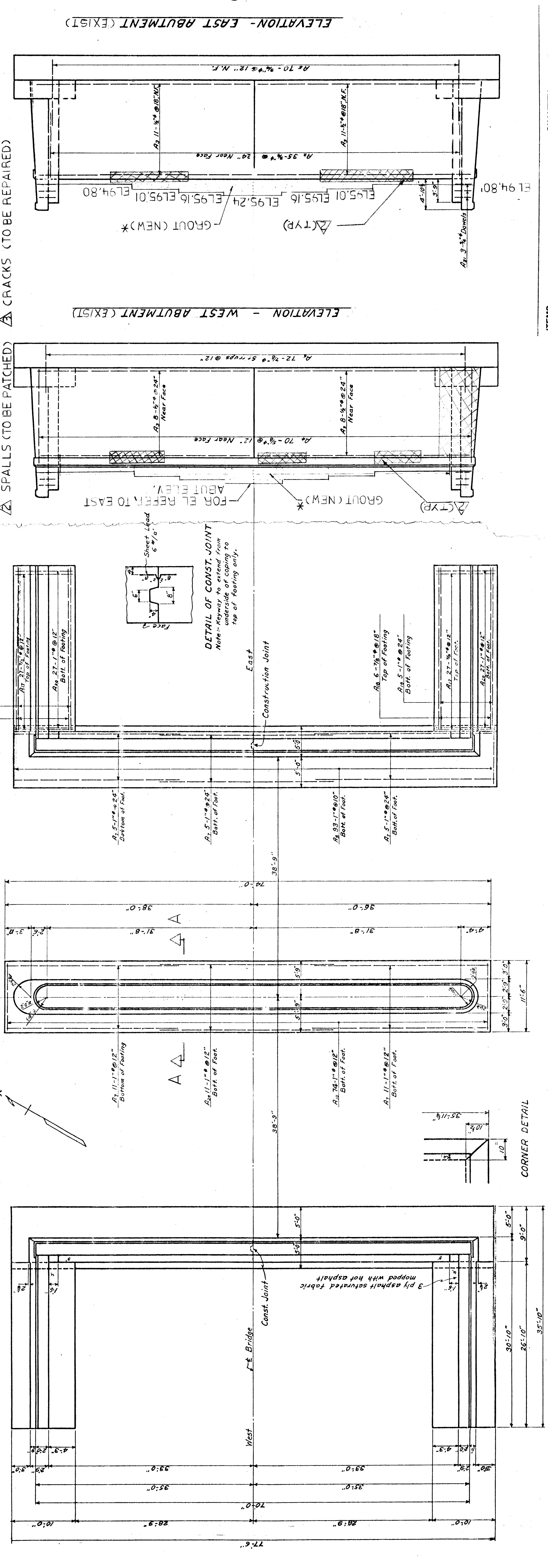
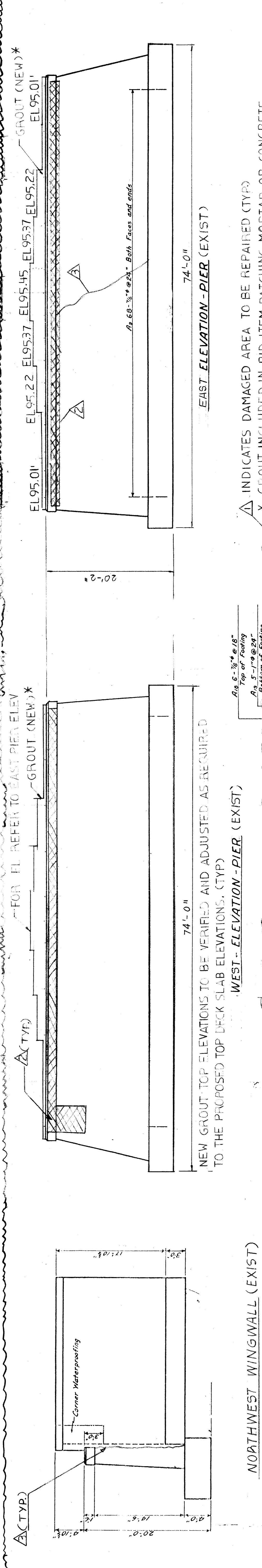
REVISIONS	DATE	BY	CHK'D	APV'D

designed by MH
 drawn by RF
 checked by EH
 approved: *Carl C. Howard*

CITY OF DETROIT
 CITY ENGINEERING
 DIVISION
 DEPARTMENT
 OF
 PUBLIC WORKS

REPAIRING ABUTMENTS AND PIER
 SUPERSTRUCTURE RECONSTRUCTION
 SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BM-270)

a.o. 93-22-16
 contract no.
 sheet S-6
 of S-41
 drawing no.
 date MAR. 1997



CITY OF DETROIT
 DEPARTMENT OF PARKS & BOULEVARDS
 OFFICE OF CITY ENGINEER
 BRIDGE OVER RIVER ROUGE
 (SOUTH OF PLYMOUTH ROAD)
 RIVER ROUGE PARK
 SUBSTRUCTURE DETAILS
 SCALE: 1/8"=1'-0"
 DESIGNED BY: P.T.H.
 DRAWN BY: P.T.H.
 CHECKED BY: R.S.G./30
 MAY 7, 1990
 Sheet No. 3

ITEMS QUANTITY PAY UNIT
 PENETRATING WATER REPELLANT TREATMENT 1380 SYD
 HAND CHIPPING - OTHER THAN DECK 220 CFT
 PATCHING MORTAR OR CONCRETE 220 CFT
 FORMING FOR PATCHES 600 SFT
 FLUSHING CRACKS WITH ACID 150 LFT
 FLUSHING CRACKS WITH WATER 150 LFT
 REPAIRING STRUCTURAL CRACKS 150 LFT

JOB NO. : 36916A

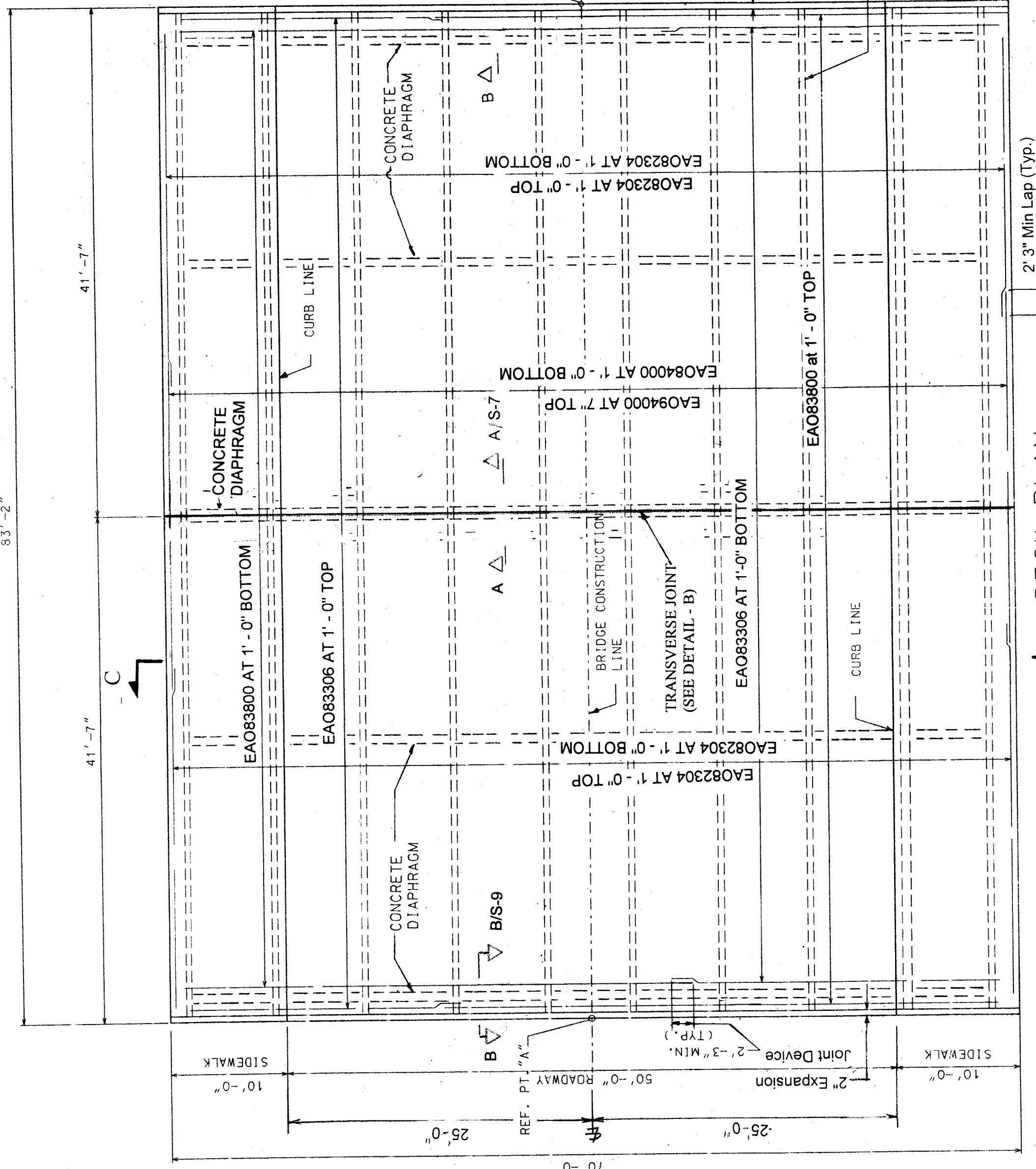
INDICATES DAMAGED AREA TO BE REPAIRED (TYP)
 GROUT INCLUDED IN BID ITEM PATCHING MORTAR OR CONCRETE SPALLS (TO BE PATCHED) (TYP)
 FOR EL REFER TO EAST ABUTMENT (EXIST)

NEW GROUT TOP ELEVATIONS TO BE VERIFIED AND ADJUSTED AS REQUIRED TO THE PROPOSED TOP DECK SLAB ELEVATIONS. (TYP)

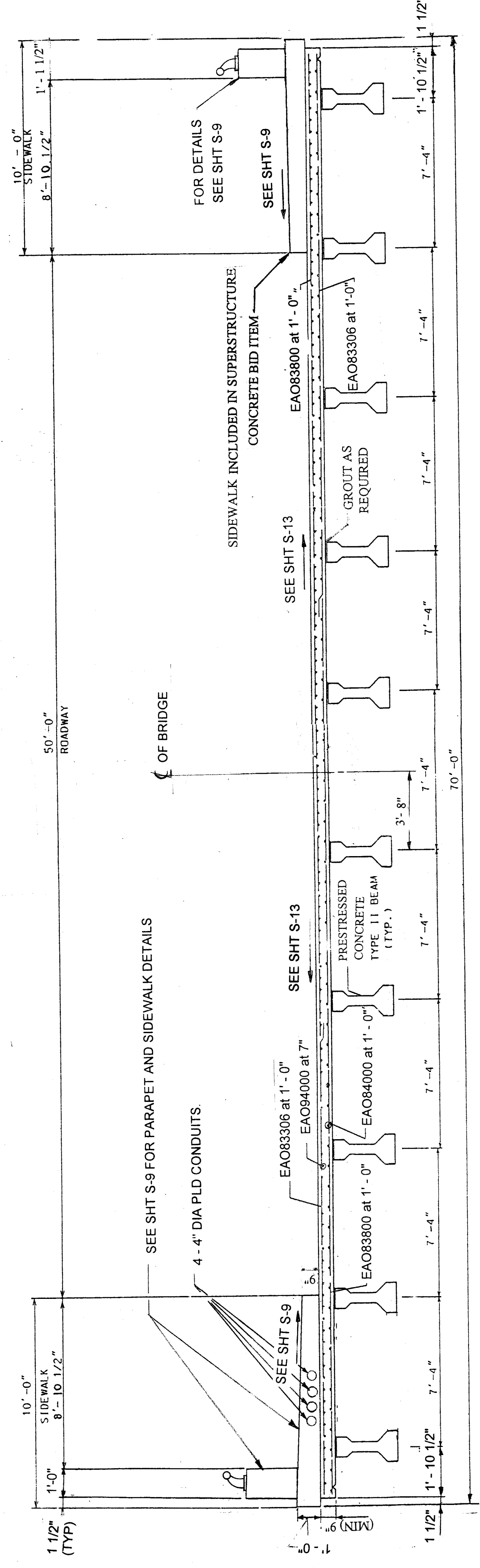
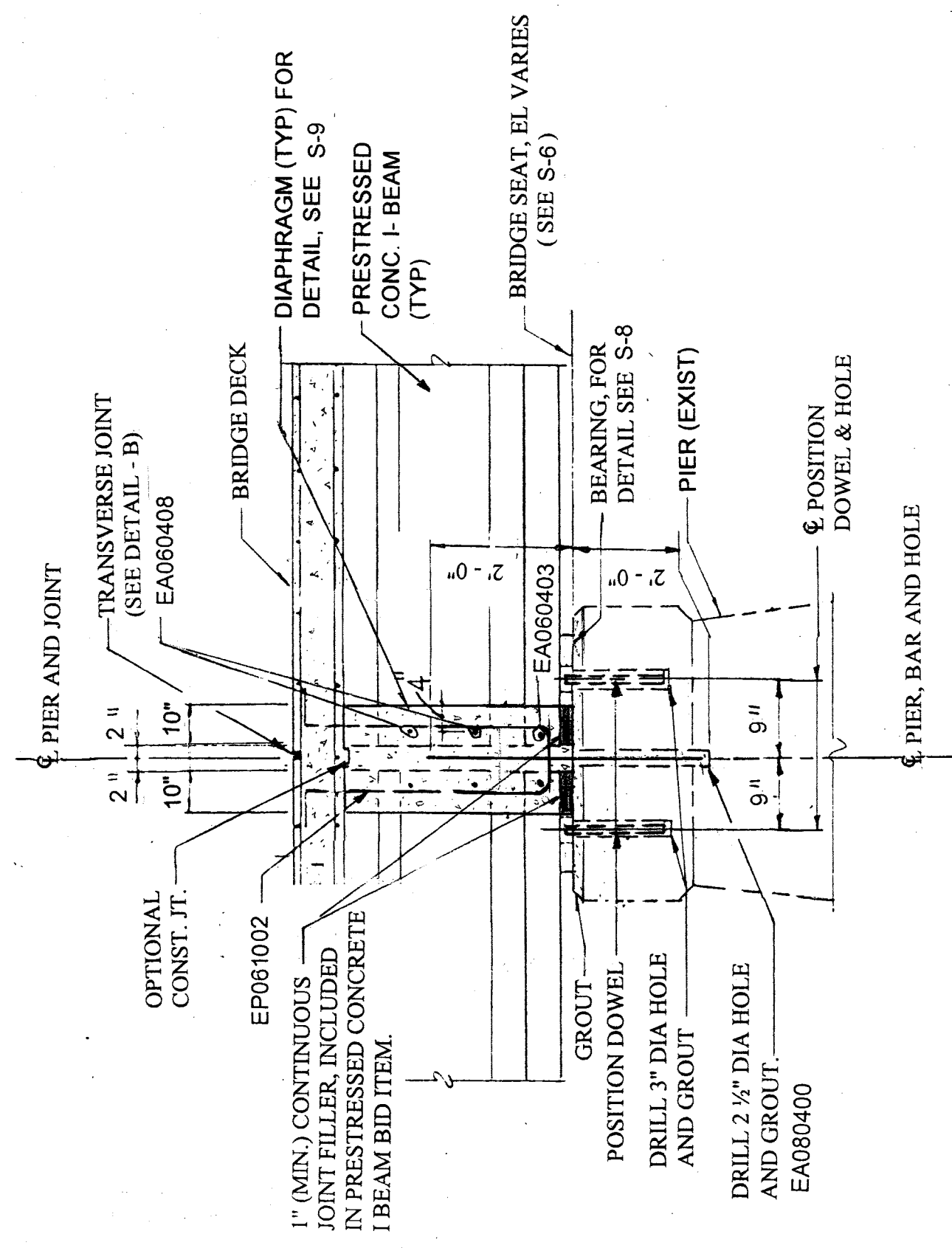
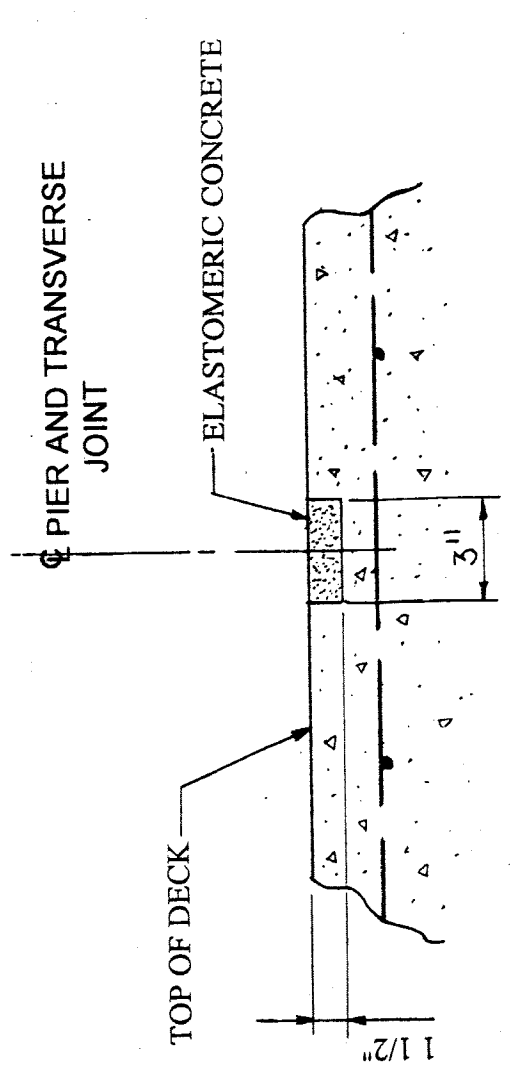
NOTE: SEE SHEETS S-9 FOR SUBSTRUCTURE REPAIR NOTES

SCALE: HORIZONTAL VERTICAL
 BOOK NO. PG. DATE
 ELEV. MARKS BENCH

CONTRACTOR MUST CHECK WITH LOCAL AGENCIES CONCERNING PERMITS AND REGULATIONS THAT MAY APPLY TO THIS PROJECT.



ITEMS	QUANTITY	PAY UNIT
MISC. ELASTOMERIC CONCRETE	3	CFT
SUPERSTRUCTURE CONCRETE	337	CYD
MISC. FORM, FINISH AND CORE SUPERSTRUCTURE CONCRETE, 801-821-18-83	1	LSUM
JOINT WATERPROOFING	210	SFT



SUPERSTRUCTURE MISCELLANEOUS NOTES

- A. FOR BRIDGE RAILING, MOLDING AND BEVEL DETAILS, SEE STANDARD X-180 AND X1-1030.
- B. A RUBBED SURFACE FINISH ON THE VERTICAL AND TOP CONCRETE SURFACES OF THE PARAPET RAILING, IS REQUIRED ON THIS STRUCTURE.
- C. WHERE CAST-IN-ANCHORAGE IS USED FOR EXPANSION JOINT DEVICES IT IS RECOMMENDED THAT THE PLACING OF DECK CONCRETE PROGRESS TOWARD THE JOINT SO THAT THE EFFECTS OF DEAD LOAD DEFLECTION WILL OCCUR BEFORE CONCRETE IS PLACED AT THE ANCHORAGE.
- D. DO NOT POUR DECK CONCRETE UNTIL DIAPHRAGM CONCRETE ATTAINS A COMPRESSIVE STRENGTH OF 3,000 PSI.
- E. SIDEWALK AND PARAPET POURS SHALL NOT BE CAST UNTIL SLAB CONCRETE ATTAINS AT LEAST 75% OF ITS DESIGN STRENGTH.

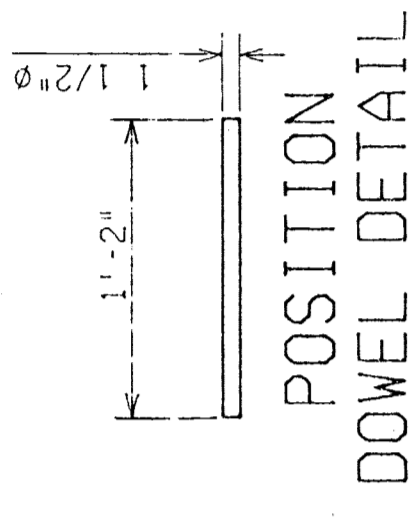
SHEET S-7 OF S-41 SHEETS
 CONTRACT NO. 93-22-16
 ASSIGNMENT NO. 93-22-16
 DATE MAR. 1997

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
 SUPERSTRUCTURE RECONSTRUCTION
 PLAN OF DECK AND CROSS SECTION

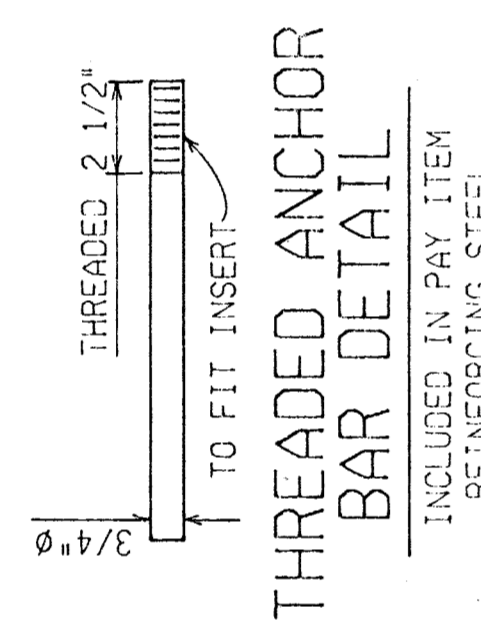
CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

NO.	DESCRIPTION	DATE

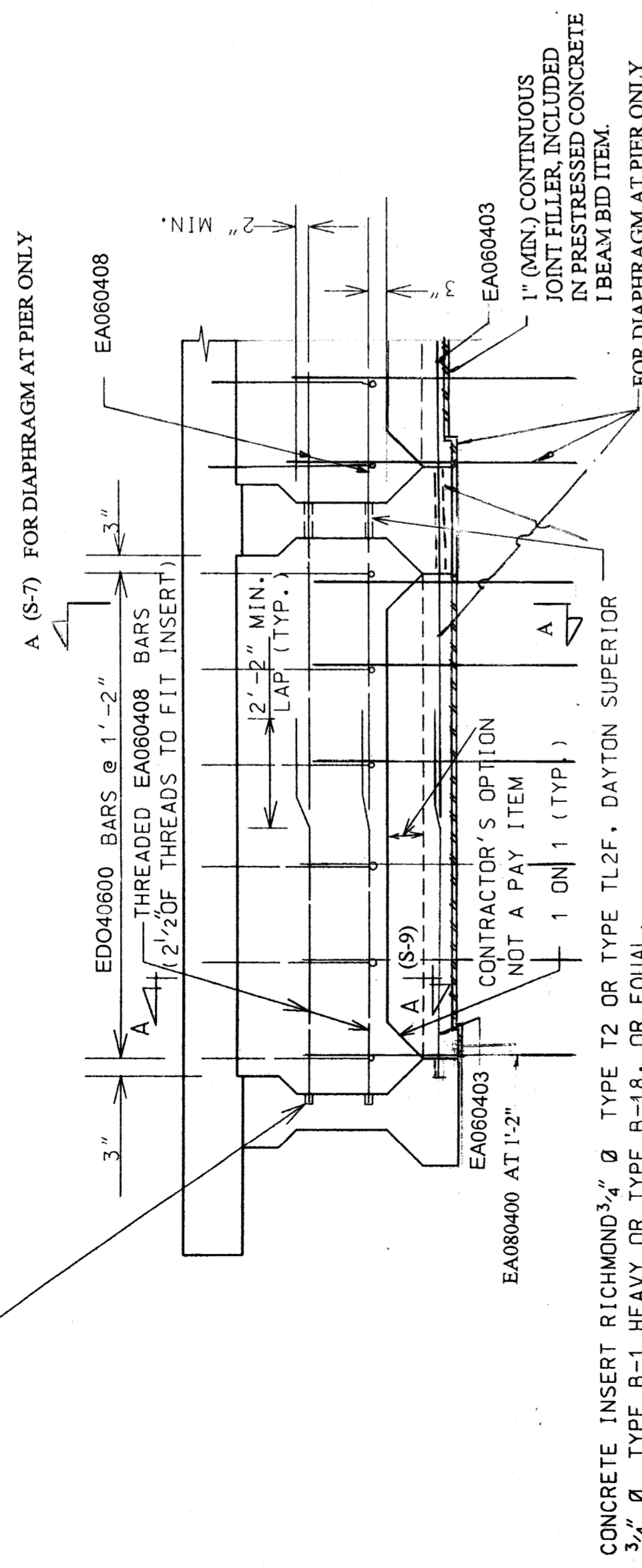
PAY QUANTITIES		
ITEMS	QUANTITY	PAY UNIT
UNCLASSIFIED FOUNDATION EXCAVATION	233	CYD



POSITION DOWEL DETAIL



THREADED ANCHOR BAR DETAIL
INCLUDED IN PAY ITEM REINFORCING STEEL



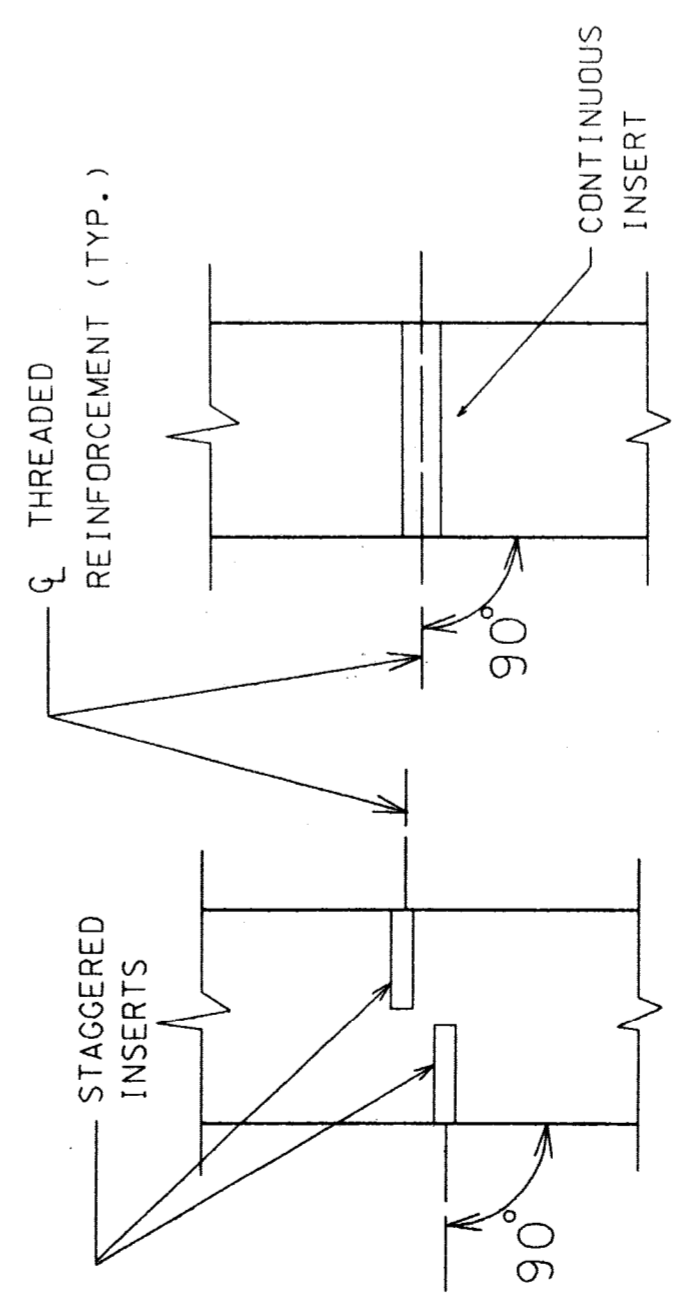
CONCRETE INSERT RICHMOND 3/4" Ø TYPE TL2F, DAYTON SUPERIOR 3/4" Ø TYPE B-18, OR EQUAL (TYP.)

CONCRETE INSERT RICHMOND 3/4" Ø TYPE T2 OR TYPE TL2F, DAYTON SUPERIOR 3/4" Ø TYPE B-1 HEAVY OR TYPE B-18, OR EQUAL.

USE DIAPHRAGM AT MID POINTS OF BEAMS, AND AT ENDS OF BEAMS. DIAPHRAGM QUANTITIES ARE INCLUDED WITH SUPERSTRUCTURE CONCRETE QUANTITIES.

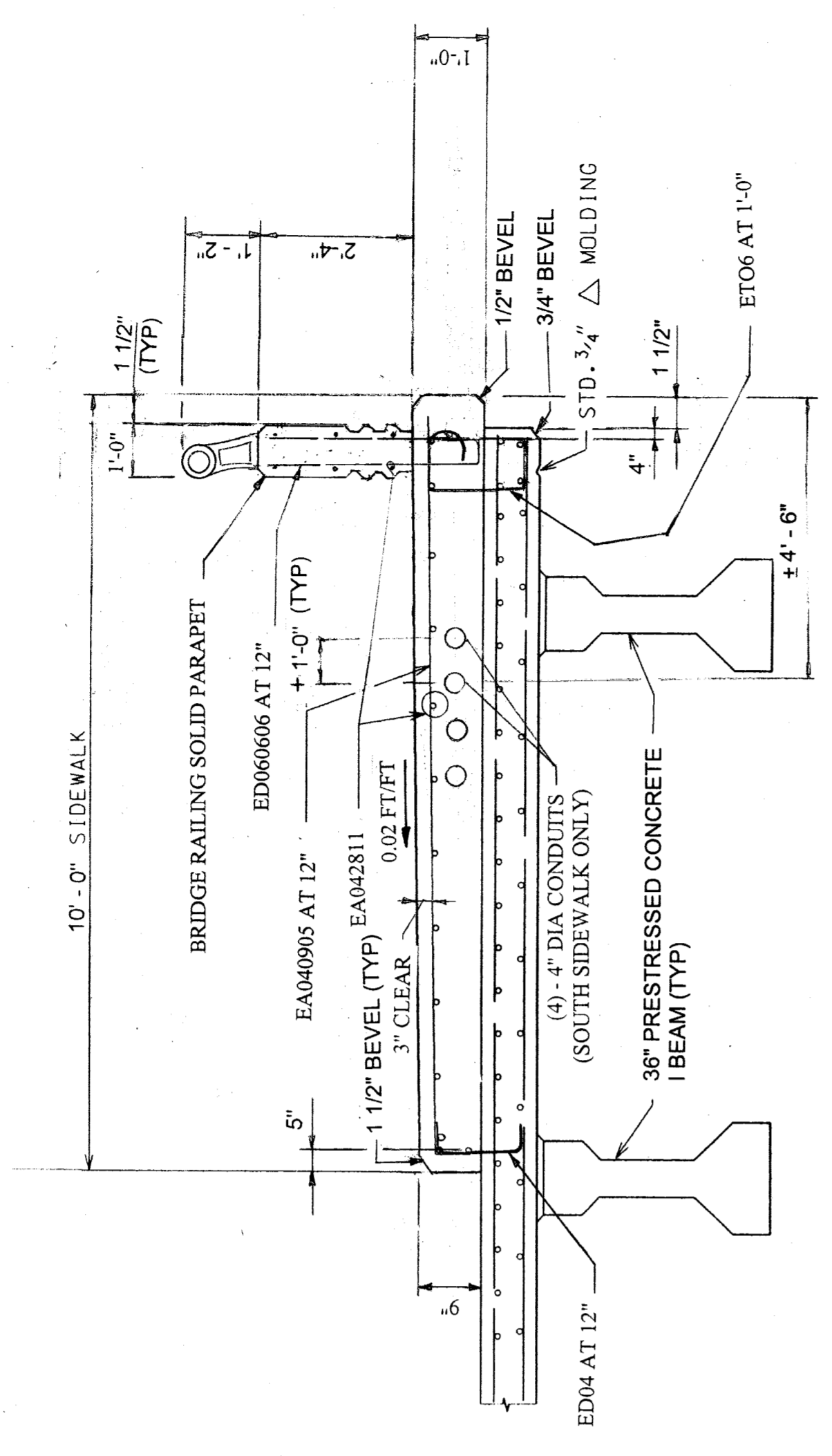
DIAPHRAGM ELEVATION

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



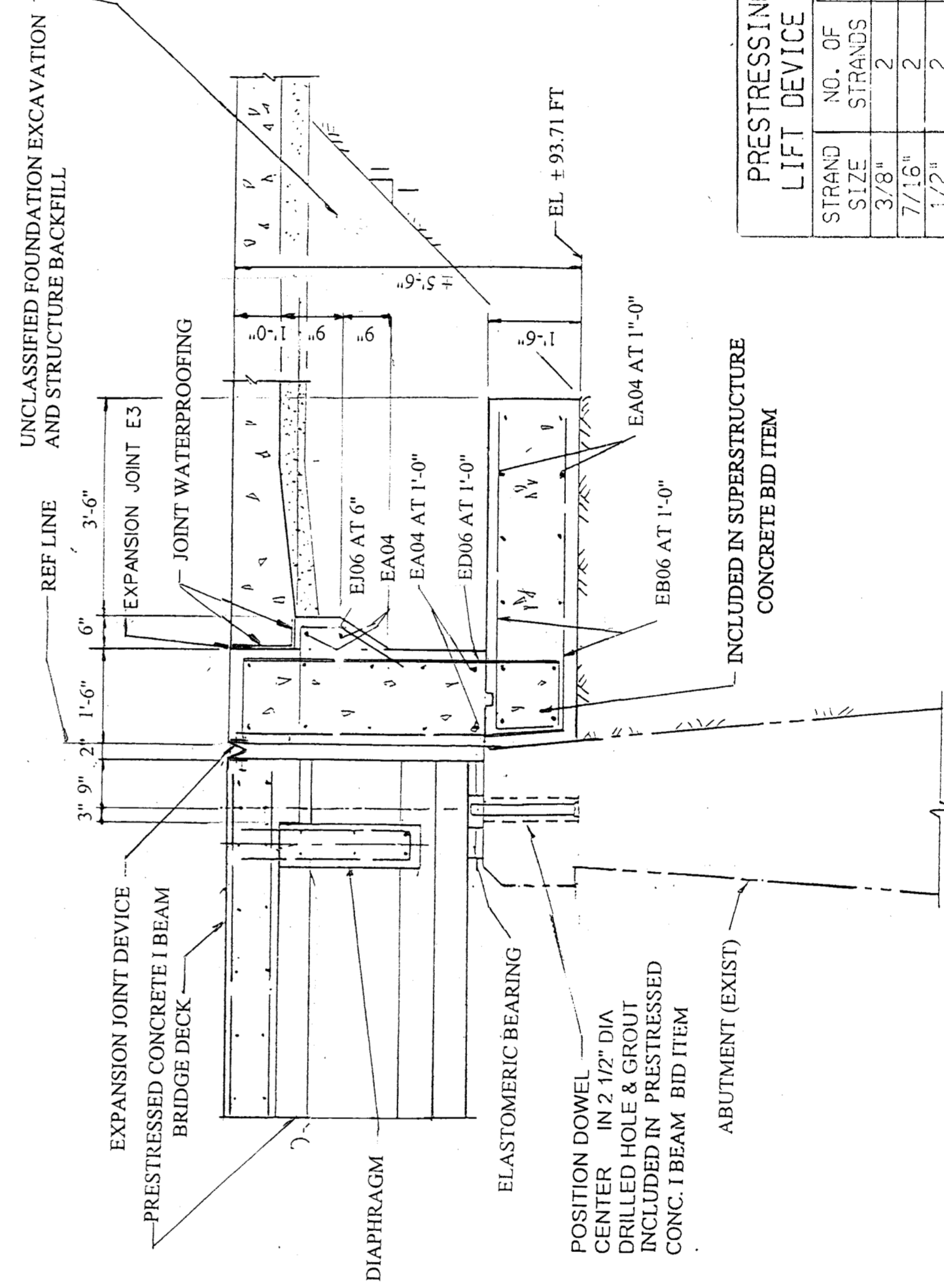
CONCRETE INSERT DETAILS

CONCRETE INSERTS AT ENDS OF BEAM SHALL BE STAGGERED AND AT MIDSPAN MAY BE CONTINUOUS OR STAGGERED. THREADED REINFORCEMENT FOR STAGGERED INSERTS SHALL BE BENT TO THE REQUIRED Ø ANGLE PRIOR TO INSTALLATION. BENT REINFORCEMENT MAY REQUIRE INSTALLATION BEFORE BEAM IS ERECTED.



TYPICAL SIDEWALK SECTION

NTS



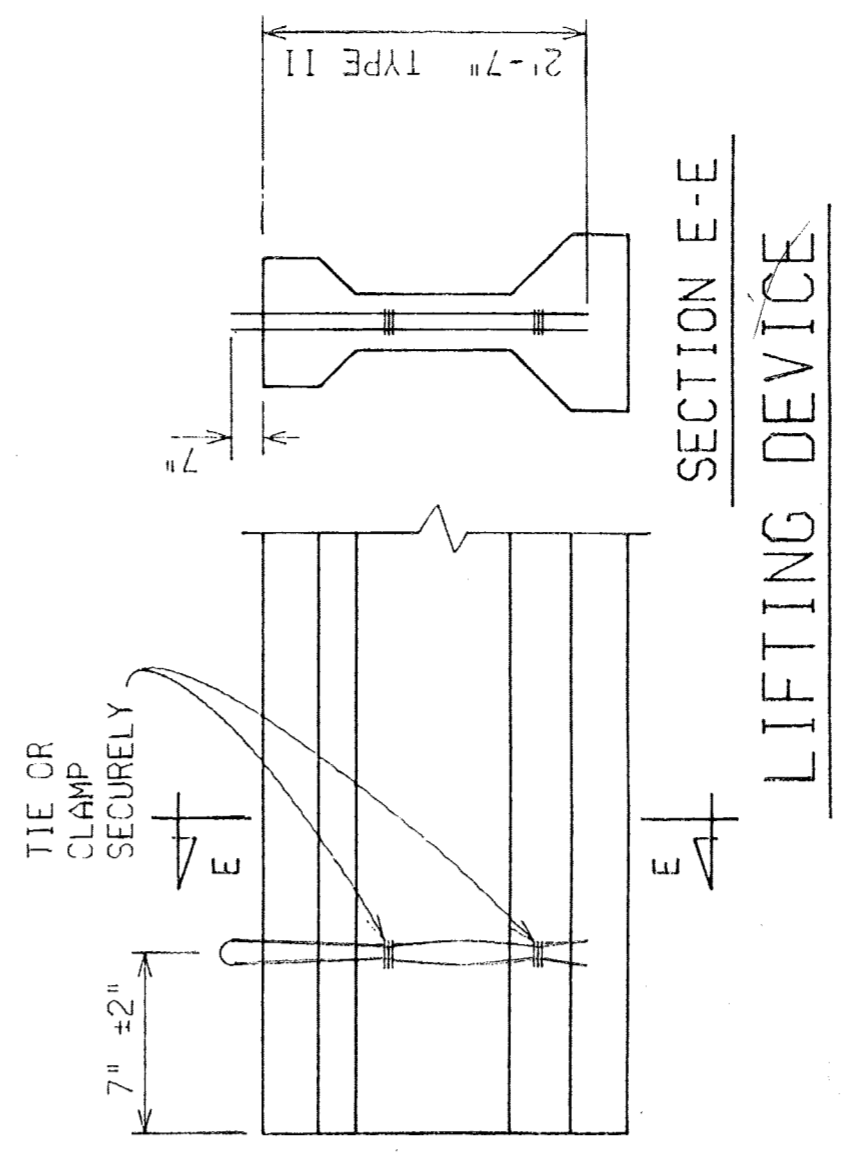
SECTION B-B AND DETAIL B

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

PRESTRESSING STRAND LIFT DEVICE CAPACITY		
STRAND SIZE	NO. OF STRANDS	ALL CHARGE WT. OF BEAM
3/8"	2	20 TONS
7/16"	2	27 TONS
1/2"	2	36 TONS
3/8"	3	30 TONS
7/16"	3	40.5 TONS
1/2"	3	54 TONS

SUBSTRUCTURE NOTES:

1. THE ENTIRE TOP, EXISTING AND REPAIRED, THE FRONT FACE OF INDEPENDENT BACKWALL, ALL OTHER SURFACES OF EXISTING ABUTMENTS AND PIER, SHALL BE GIVEN AN APPLICATION OF PENETRATING WATER REPELLENT TREATMENT AFTER THE NEW ELASTOMERIC BEARINGS HAVE BEEN PLACED IN FINAL POSITION ON THE STRUCTURE.
2. FORMS FOR LARGE PATCHES SHALL BE INSTALLED IN 2 TO 4 HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4" ABOVE THE LEVEL OF CONCRETE AS THE FOUR PROGRESSES.
3. LATEX MODIFIED HIGH-EARLY STRENGTH PATCHING MIXTURE IN ACCORDANCE WITH SUBSECTION 7.03.03 OF THE STANDARD SPECIFICATIONS SHALL BE USED FOR SUBSTRUCTURE REPAIRS.



SECTION E-E LIFTING DEVICE

SHEET S-9 OF S-41 SHEETS
CONTRACT NO.
ASSIGNMENT NO. 93-22-16
DATE MAR. 1997

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
SUPERSTRUCTURE RECONSTRUCTION

SUPERSTRUCTURE DETAILS

JOB NO. : 36916A

CITY OF DETROIT

CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

APPROVED: *Evel C. Howell*

BY	RF	EH
CHECKED BY		

PLAN	GRADE	ESTIMATE	FINAL
DESCRIPTION	REVISIONS		

REVISIONS	

designed by **MDOT**
 drawn by **RF**
 checked by **EH**
 approved: *[Signature]*

CITY OF DETROIT
 CITY ENGINEERING DIVISION
 DEPARTMENT OF PUBLIC WORKS

EXPANSION JOINT DETAILS
 SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BM-270)
 SUPERSTRUCTURE RECONSTRUCTION

a.o. 93-22-16
 contract no. _____
 sheet S-10 of S-41
 drawing no. _____
 date MAR. 1997

NOTES:
JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS 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
STEELFLEX-SSA2	D.S. BROWN
STEELFLEX-SSCM	D.S. BROWN
STEELFLEX-RS	D.S. BROWN
ONFLEX-40 SS	STRUCTURAL RUBBER PRODUCTS CO.
STRUFOCO 40UL	STRUCTURAL RUBBER PRODUCTS CO.

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 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 WELL CAVITIES SHALL BE FILLED WITH AN APPROVED FLEXIBLE EPOXY OR A SEALANT CONFORMING TO FEDERAL SPECIFICATION TT-S-002300C.

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.

DETAILS AT CURBS OR BARRIERS

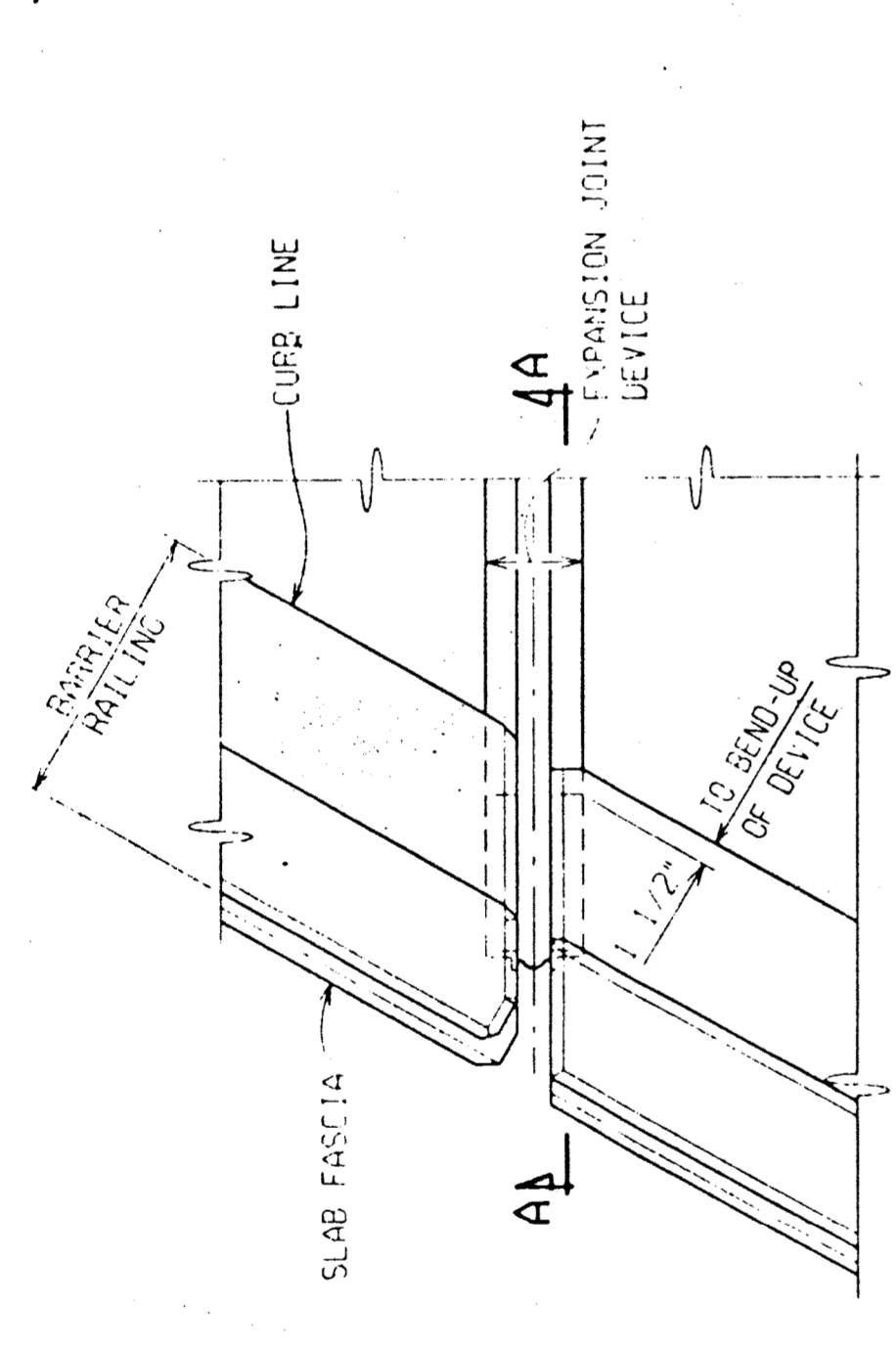
THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

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.

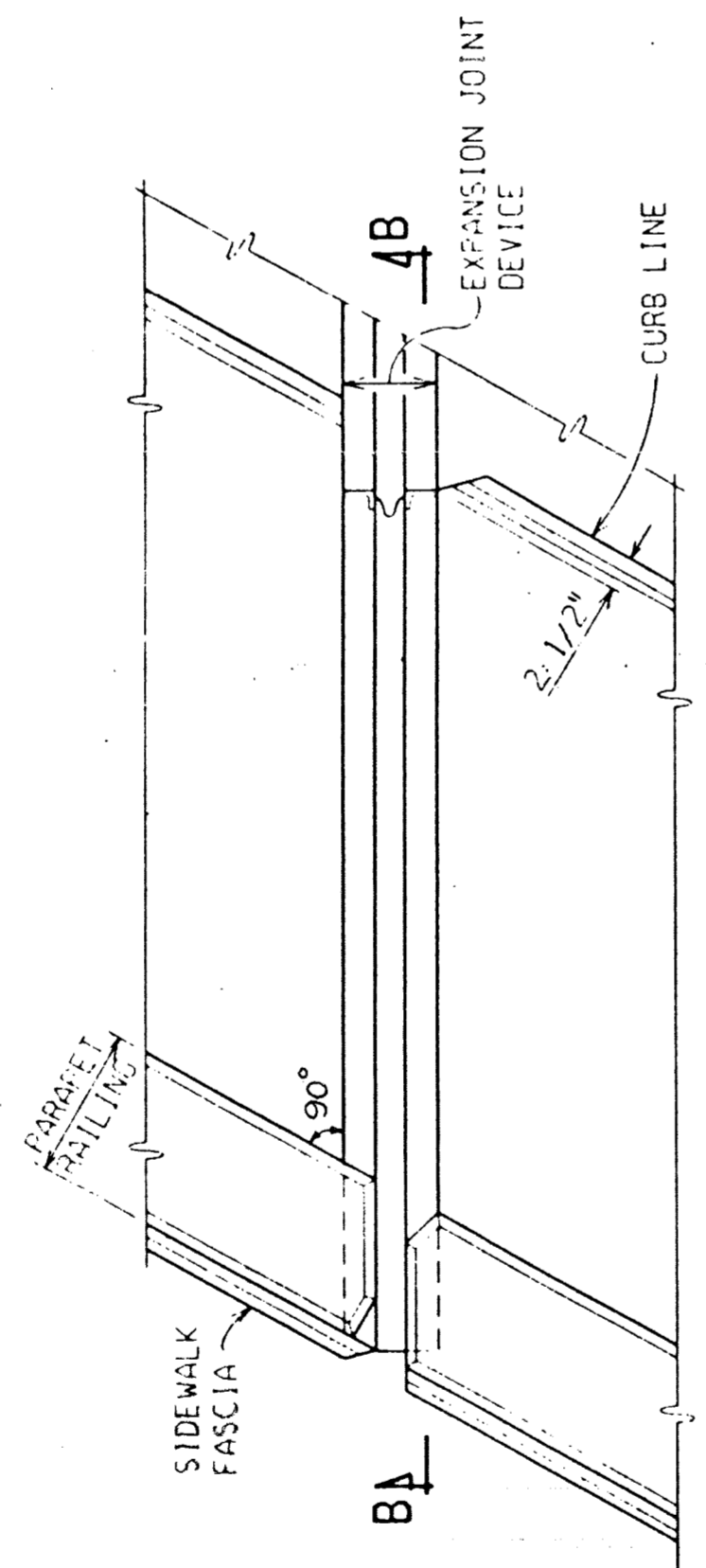
QUANTITY			
ITEM	UNIT	LINEAR FEET	AMOUNT
EXPANSION JOINT DEVICE			132

BARRIER TREATMENT



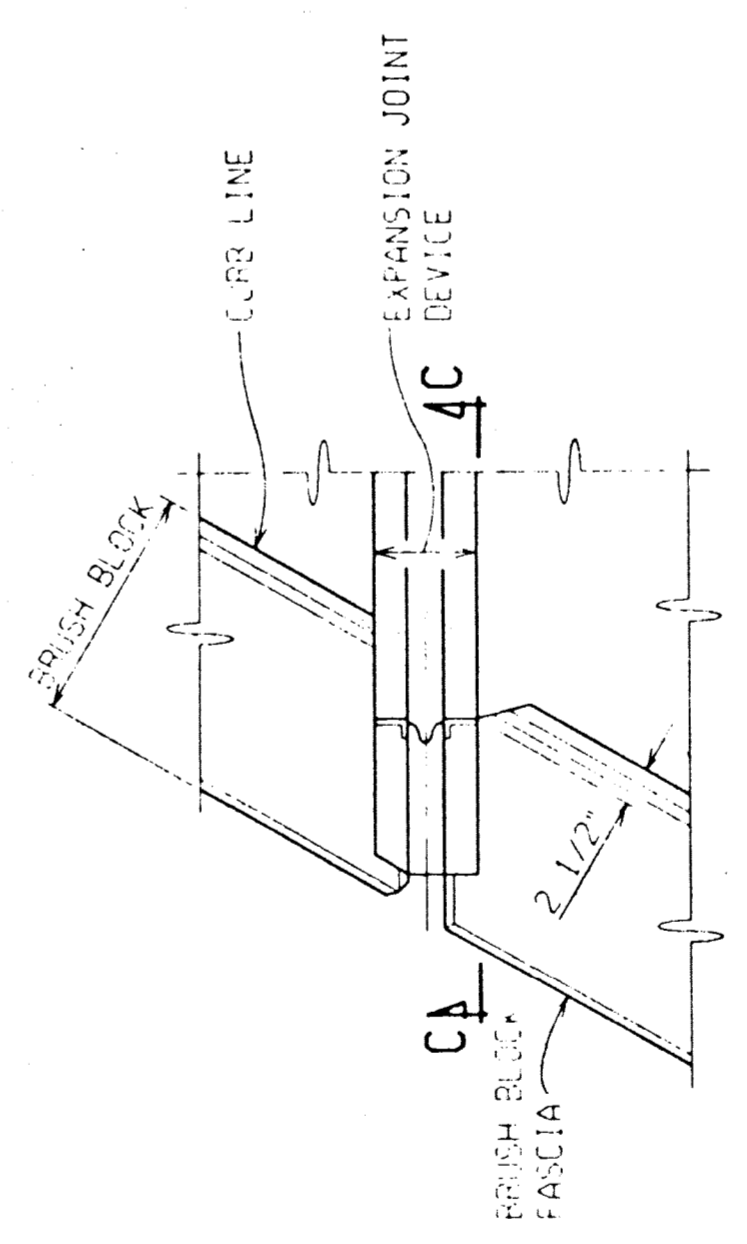
PLAN AT BARRIER RAILING

SIDEWALK TREATMENT

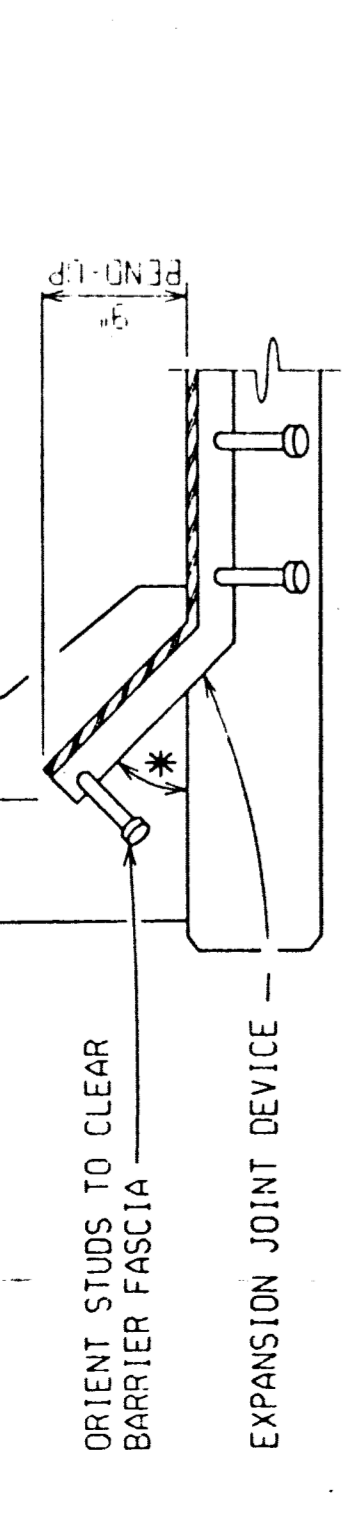


PLAN AT PARAPET RAILING
 (DETAILS ARE SIMILAR FOR BRIDGE RAILING,
 3-TUBE GALVANIZED STEEL)

BRUSH BLOCK TREATMENT

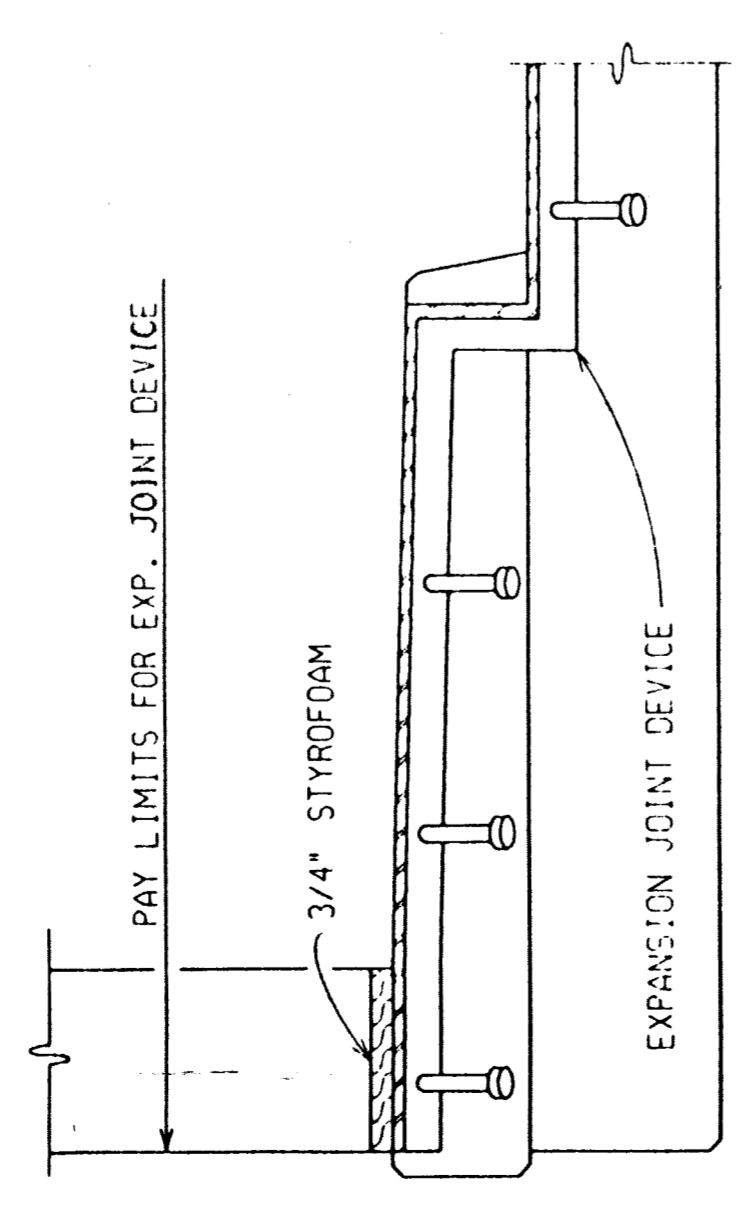


PLAN AT 2-TUBE GALVANIZED STEEL RAILING

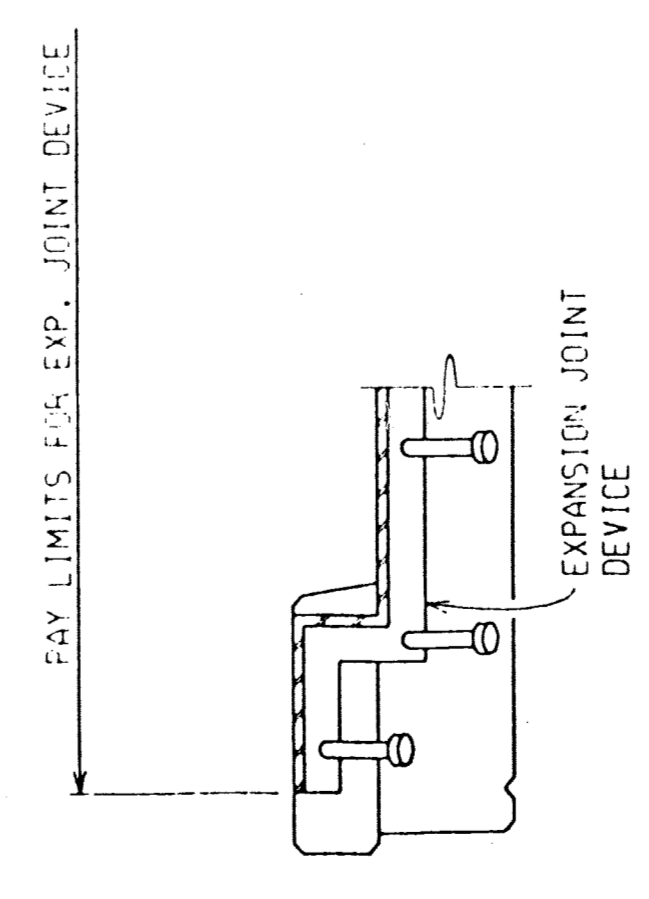


SECTION A-A

* - FOR ANGLES OF CROSSING FROM 90° TO 45° INCLUSIVE, BEND ANCHORAGE UP 45° ALONG EXPANSION JT. FOR ANGLES OF CROSSING LESS THAN 45°, A SPECIAL ENDING MAY BE REQUIRED.



SECTION B-B



SECTION C-C

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL ALONG CENTERLINE OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
—	90°	A	0.5"	70'-0"
—	90°	B	0.5"	70'-0"

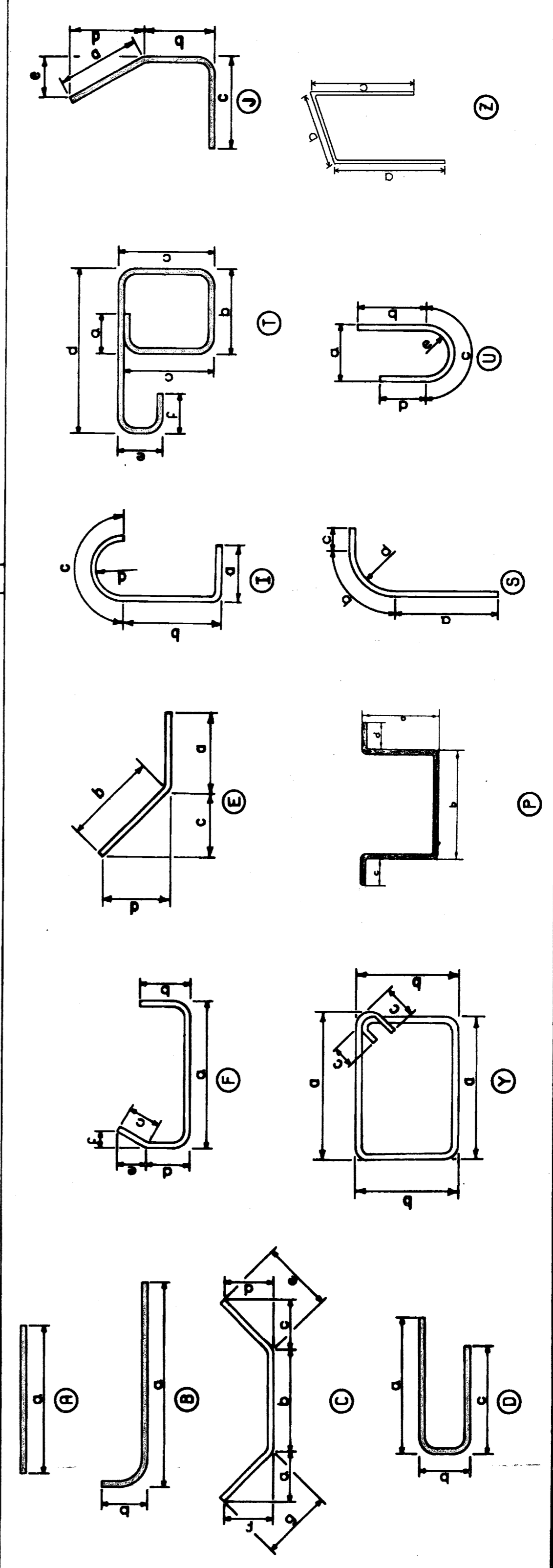
MICHIGAN DEPARTMENT OF TRANSPORTATION
EXPANSION JOINT DETAILS

JOB NO. : 36916A

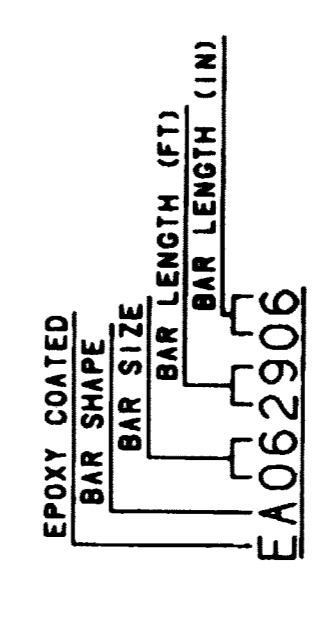
DESIGNED BY	SR	09-06-88
CHECKED BY	DMS-1	07-26-93
CHECKED BY	SPB/CHE	07-26-93
SHEET		

BAR	DIMENSIONS									NO. REQ'D	TOTAL WT. LBS.	
	a	b	c	d	e	f	g	h				
BRIDGE:												
(a) DECK:												
EA084000	40'-0"										168	17,942
EA081106	31'-6"										168	14,130
EA082204	23'-4"										284	7,691
EA084000	40'-0"										71	7,282
EA074000	40'-0"										121	16,456
(b) SIDEWALKS:												
EA040905	9'-5"										166	1,044
EA042811	28'-11"										78	1,507
ED040205	0'-8"	1'-1"	0'-8"								166	368
ET060611	1'-0"	1'-4"	1'-4"	1'-3"	0'-6"	0'-6"					166	1,725
(c) SOLID PARAPETS: (INCLUDES APPROACH WORK)												
EA042811	28'-11"										36	645
ED060606	5'-1"	0'-4"	3'-1"								166	1,621
EA042708	27'-8"										24	444
EA060402	4'-2"										84	526
(d) DIAPHRAGMS:												
ED040600	2'-10"	4"	2'-10"								216	866
EA060403	4'-3"										36	230
EA060408	4'-8"										360	2,570
EP061002	3'-4"	1'-6"	1'-0"	1'-0"							54	825
EA080400	4'-0"										54	577
(e) BACKWALLS:												
EB061006	5'-0"	5'-6"									132	2,082
EB060606	5'-0"	1'-0"									132	1,110
ED060706	1'-0"	5'-6"	1'-0"								132	1,487
EA052210	33'-10"										36	2,104
ET060509	1'-9"	0'-5"	1'-6"	1'-5"	1'-0"						264	1,454
TOTAL = 95,032												

TOTAL EPOXY COATED STEEL REINFORCEMENT 95,032 LBS



BAR NUMBERS:



NOTES
 ALL BENDS IN REINFORCING STEEL TO BE MADE ABOUT A PIN OF THE MINIMUM DIAMETER ALLOWED BY THE STANDARD SPECIFICATION.
 TOLERANCES IN CUTTING AND BENDING BARS ARE AS ESTABLISHED IN MANUAL OF PRACTICES FOR THE REINFORCING STEEL INSTITUTE AND DETAILING MANUAL OF THE AMERICAN CONCRETE INSTITUTE.
 WHERE FIELD CUTTING OF EPOXY BARS IS REQUIRED, THE CONTRACTOR SHALL REPAIR THE EPOXY COATING AT THE CUT END AS PROVIDED FOR IN STANDARD SPECIFICATION 8.05.03 (INCLUDED IN STEEL REINFORCEMENT EPOXY COATED).
 REINFORCEMENT SHALL BE BUNDLED AND TAGGED AS TO THE LOCATION AS SHOWN ON THIS SHEET.
 THE CONTRACTOR SHALL SUBMIT ORIGINAL SHOP DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT TO THE FIELD ENGINEER FOR APPROVAL. THE SHOP DRAWINGS SHALL COMPLY WITH THE FIELD MEASUREMENTS. THE SHOP DRAWINGS SHALL COMPLY WITH A13.80 "THE STANDARD DETAILING OF CONCRETE REINFORCEMENT" AND A13.80 "MANUAL OF ENGINEERING AND PLACING DRAWINGS FOR REINFORCED CONCRETE STRUCTURES" SHOWING BAR SCHEDULES, STRUT SPACING, DIAGRAMS OF BENT BARS, ARRANGEMENT, SPACING AND BAR MARKS OF CONCRETE REINFORCEMENT.

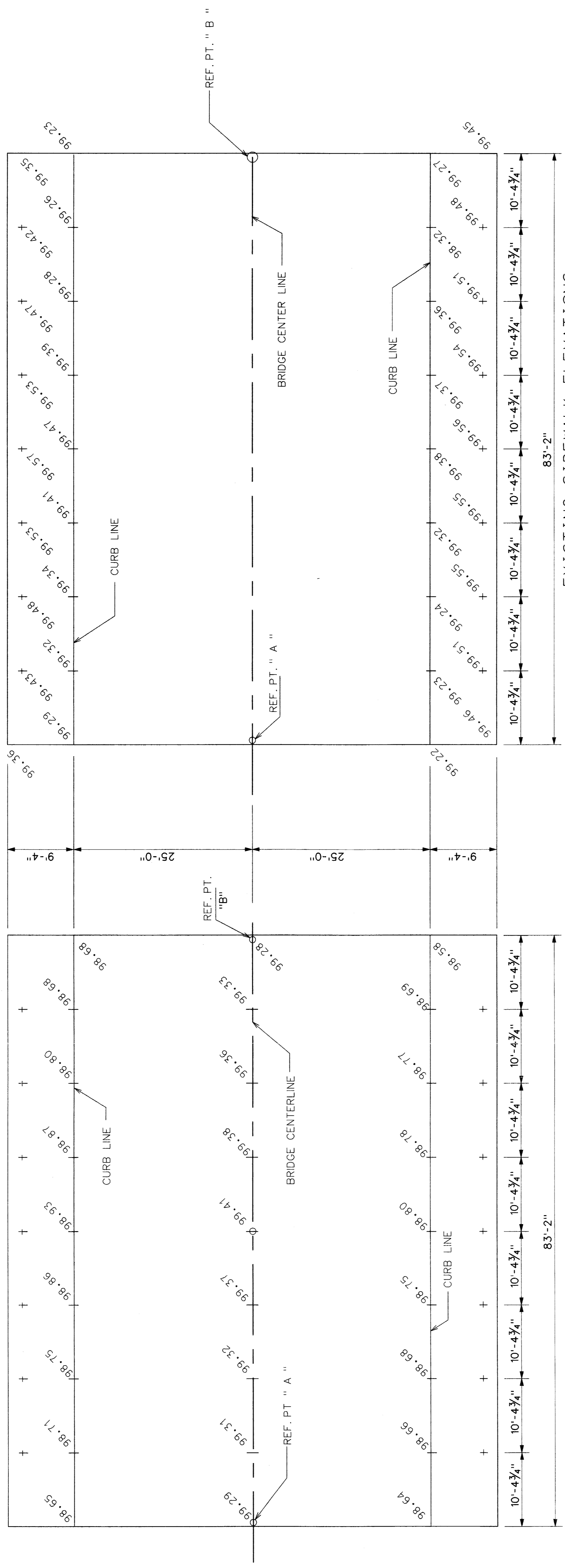
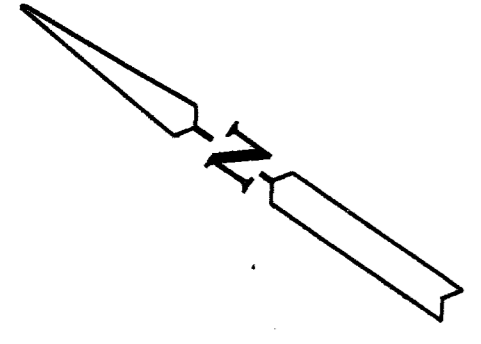
**SPINOZA DRIVE BRIDGE OVER ROUGE RIVER
 SUPERSTRUCTURE RECONSTRUCTION
 STEEL REINFORCEMENT DETAILS**

NO.	REVISIONS	DESCRIPTION	DATE BY

DESIGNED BY	
CHECKED BY	
DATE	
SHEET	S-114S-41
DATE MAR.	1997

SCALE: HORIZONTAL: VERTICAL: BOOK NO.: PG. NO.: LEVEL: DATE: BEFORE STARTING CONSTRUCTION CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF STRUCTURES SHOWN OR NOT INDICATED ON PLANS.

BENCH MARKS ELEVATION



EXISTING TOP OF DECK SLAB ELEVATIONS
1/8" = 1'-0"

EXISTING SIDEWALK ELEVATIONS
1/8" = 1'-0"

JOB NO. 36916A

CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

APPROVED BY: *Garth C. Howard*

CHECKED BY: N.W.K.M. P.S.N.W.

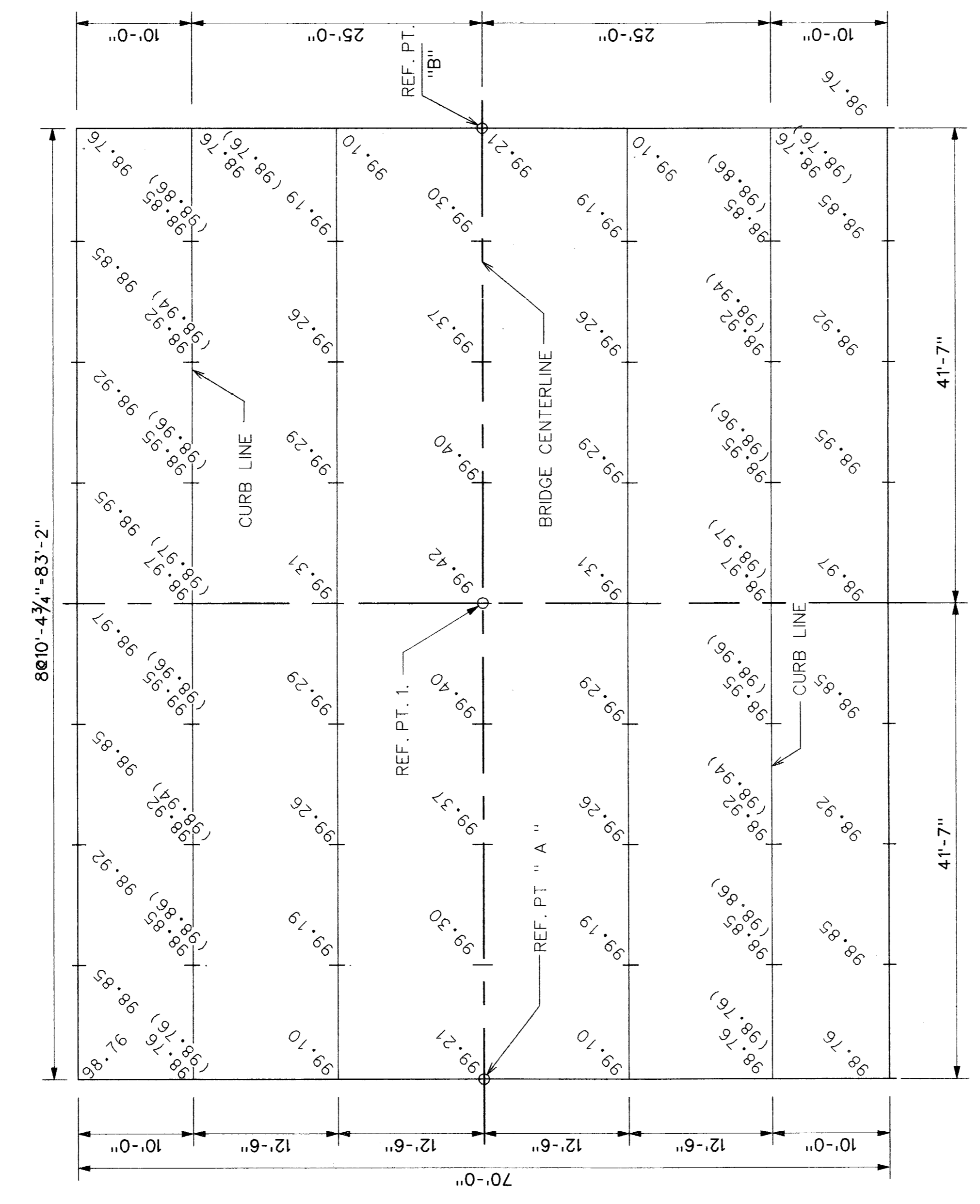
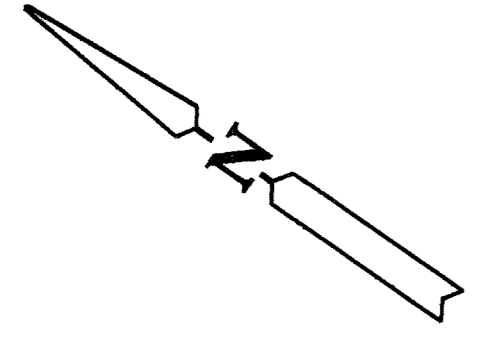
NO.	DATE	DESCRIPTION

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
EXISTING SLAB AND SIDEWALK ELEVATIONS

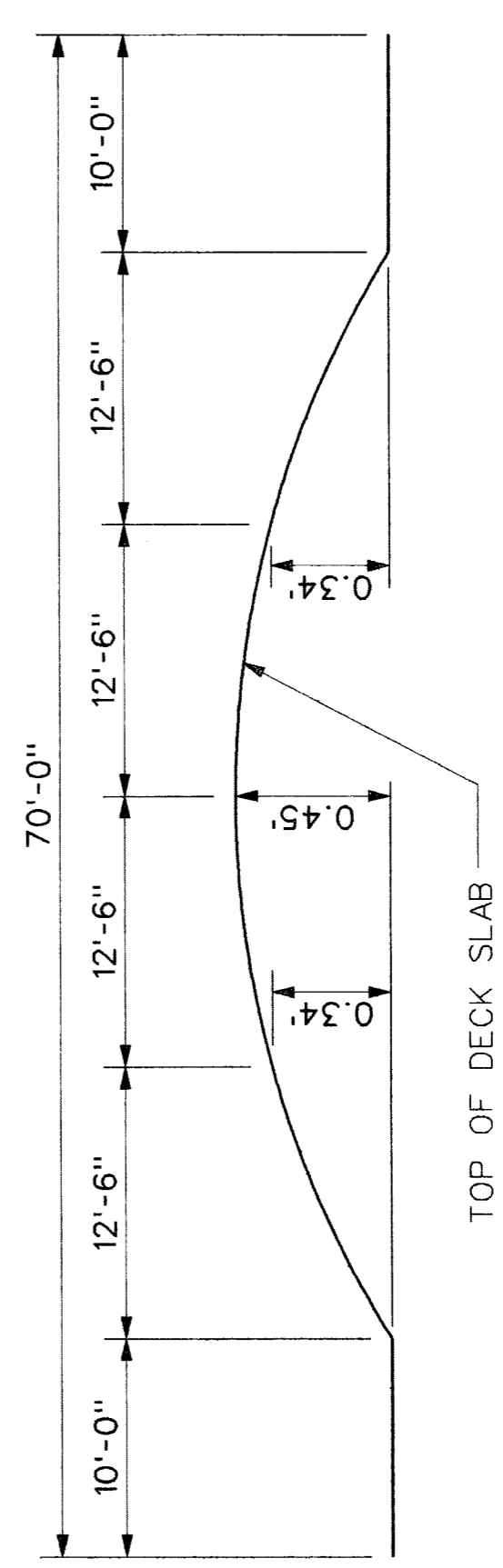
SHEET S-12 OF S-41 SHEETS
CONTRACT NO. 93-22-16
ASSIGNMENT NO. 93-22-16
DATE: MAR. 1997

SCALE	HORIZONTAL	VERTICAL
BOOK NO.	PG.	DATE
BEFORE STARTING CONSTRUCTION CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS SHOWN ON THIS DRAWING AND REPORT ANY DISCREPANCIES TO THE ENGINEER. DIMENSIONS AND ELEVATIONS NOT SHOWN ON THIS DRAWING SHALL BE AS SHOWN ON THE PREVIOUS EDITIONS OF THIS DRAWING.		

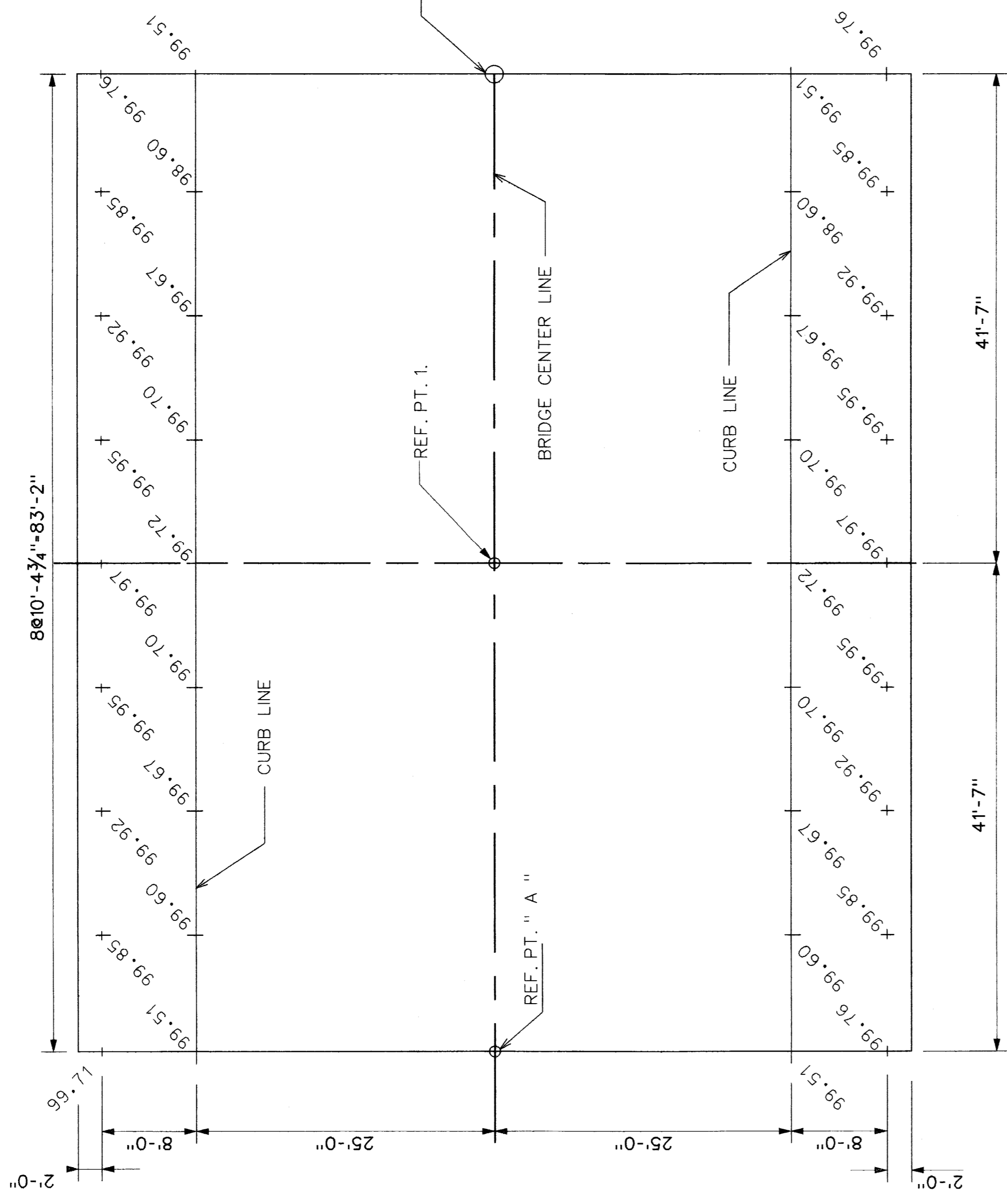
BENCH MARKS ELEVATION



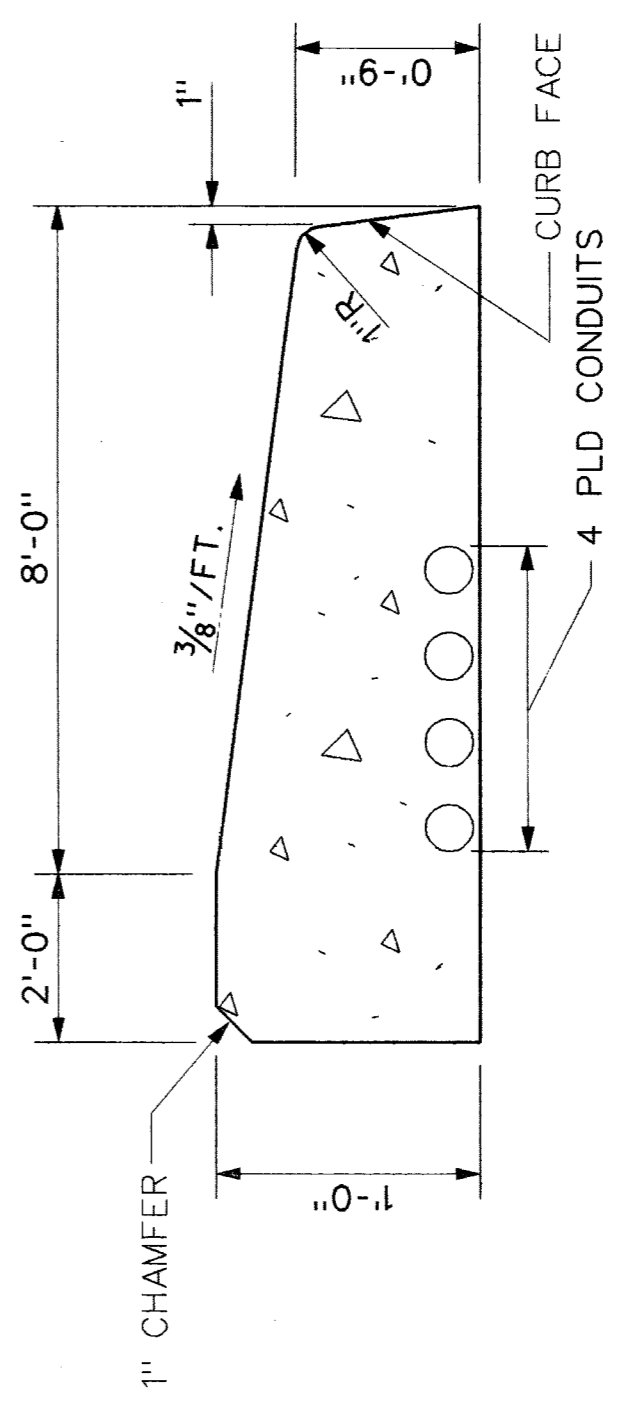
PROPOSED TOP OF DECK SLAB ELEVATIONS
1/8" = 1'-0"



TYPICAL SECTION FOR TOP OF DECK SLAB
NO SCALE



PROPOSED SIDEWALK ELEVATIONS
1/8" = 1'-0"



TYPICAL SIDEWALK SECTION
NO SCALE

NOTES :

1. ALL ELEVATIONS ARE BASED ON CITY OF DETROIT DATUM.
2. SIDEWALK POUR SHALL NOT BE CAST UNTIL SLAB CONCRETE HAS ATTAINED AT LEAST 75% OF ITS DESIGN STRENGTH.
3. FOR SURVEY BENCH MARK LOCATIONS & ELEVATIONS, SEE SHEET NO. S-3.
4. SLAB & SIDEWALK ELEVATIONS ARE BASED ON THE CONDITIONS THAT ALL CONCRETE BEAMS HAVE BEEN ERRECTED, BUT NO OTHER LOADS ARE APPLIED. THESE ELEVATIONS INCLUDE ALLOWANCES FOR DEFLECTION DUE TO FORMS AND STEEL REINFORCEMENT, DECK CONCRETE AND BARRIERS.
5. SCREED ELEVATIONS ARE BASED ON THE CONDITION THAT THAT NO SLAB CONCRETE HAS BEEN CAST AND THAT FORMWORK AND STEEL REINFORCEMENT ARE IN PLACE.
6. TRANSVERSE STRIKE OF FINISHING MACHINE IS TO USED IN PLACING DECK CONCRETE.
7. SCREED RAILS FOR FINISHING CONCRETE SHALL BE LOCATED OVER FASCIA BEAMS.
8. SCREED ELEVATIONS ARE IN PARENTHESIS THUS ().
9. TRANSVERSE SIDEWALK CONTRACTION JOINTS TO BE AT 8-FT. INTERVALS OR AS DIRECTED BY THE ENGINEER.

JOB NO. 36916A

SHEET S-13 OF S-41 SHEETS
CONTRACT NO.
ASSIGNMENT NO. 93-22-16
DATE MAR. 1997

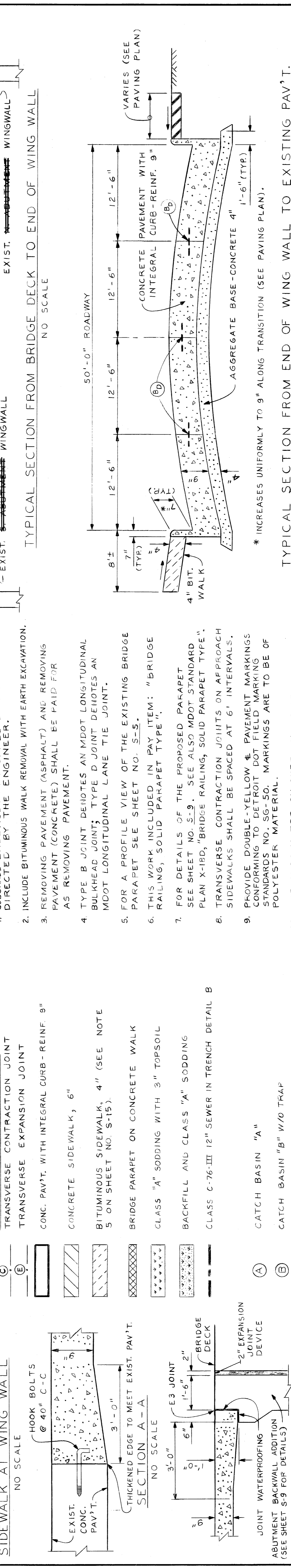
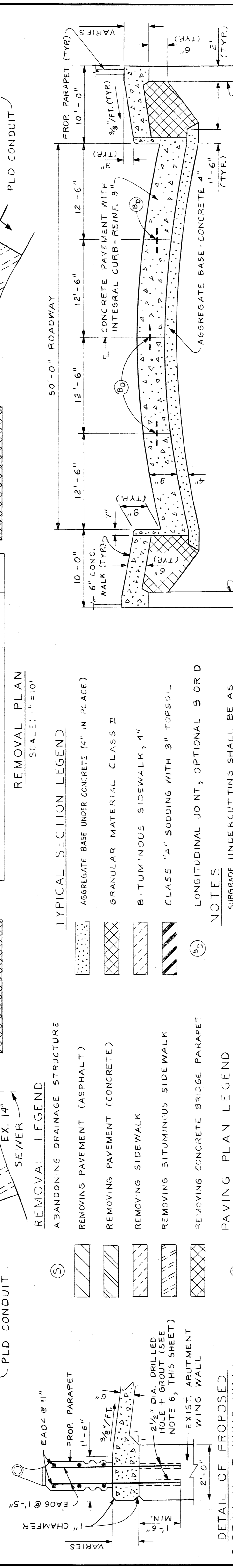
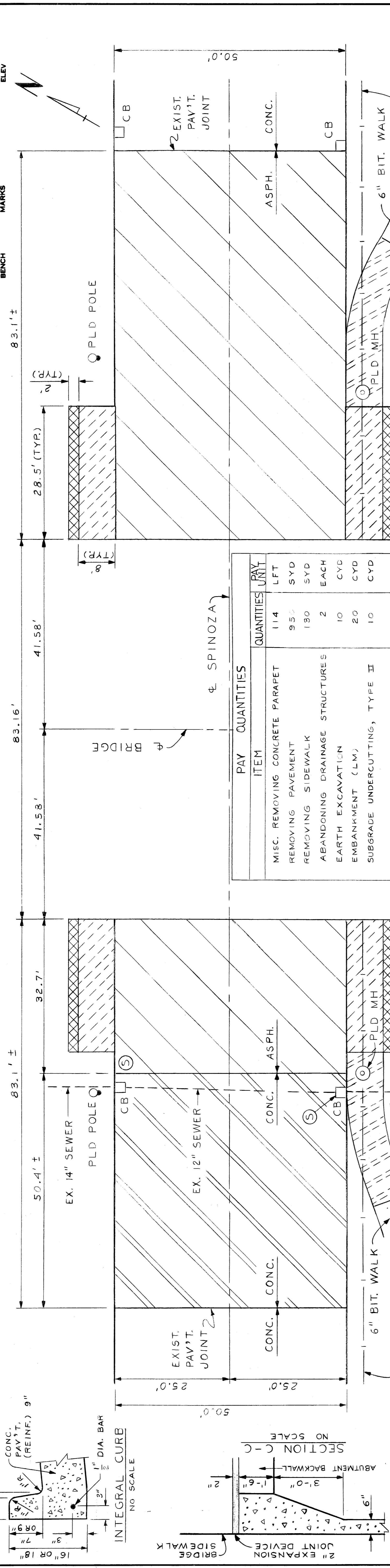
CITY OF DETROIT
CITY ENGINEERING DIVISION - D.P.W.
BUREAU OF STREETS AND HIGHWAYS

APPROVED BY
Earl C. Howard

BY
N.W.K.M.
P.S.N.W.

NO.	DESCRIPTION	DATE	BY

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
PROPOSED DECK AND SIDEWALK ELEVATIONS



PAY QUANTITIES	
ITEM	QUANTITIES
MISC. REMOVING CONCRETE PARAPET	114 LFT
REMOVING PAVEMENT	950 SYD
REMOVING SIDEWALK	130 SYD
ABANDONING DRAINAGE STRUCTURES	2 EACH
EARTH EXCAVATION	10 CYD
EMBANKMENT (L.M.)	20 CYD
SUBGRADE UNDERCUTTING, TYPE II	10 CYD

REMOVAL PLAN
SCALE: 1" = 10'

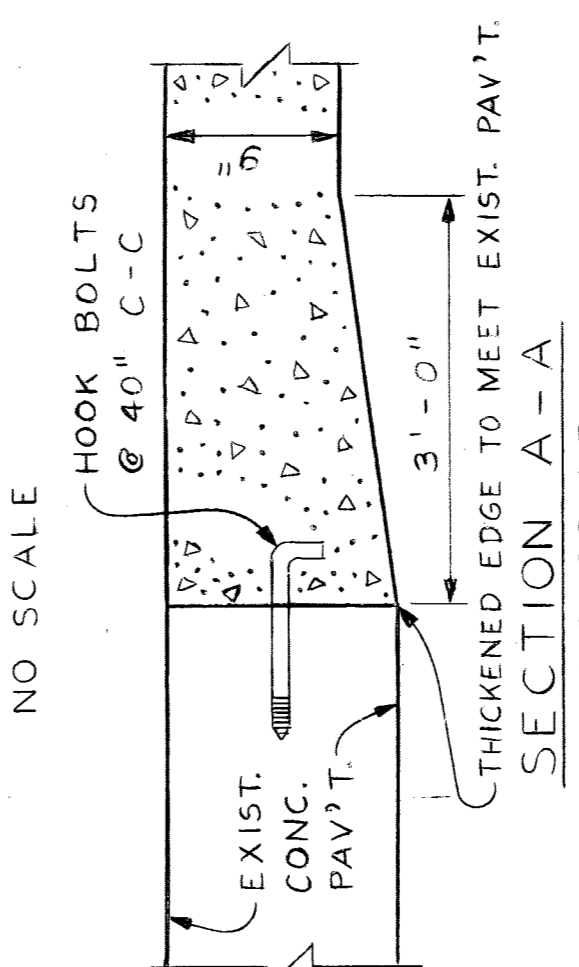
TYPICAL SECTION LEGEND

- ABANDONING DRAINAGE STRUCTURE
- REMOVING PAVEMENT (ASPHALT)
- REMOVING PAVEMENT (CONCRETE)
- REMOVING SIDEWALK
- REMOVING BITUMINOUS SIDEWALK
- REMOVING CONCRETE BRIDGE PARAPET

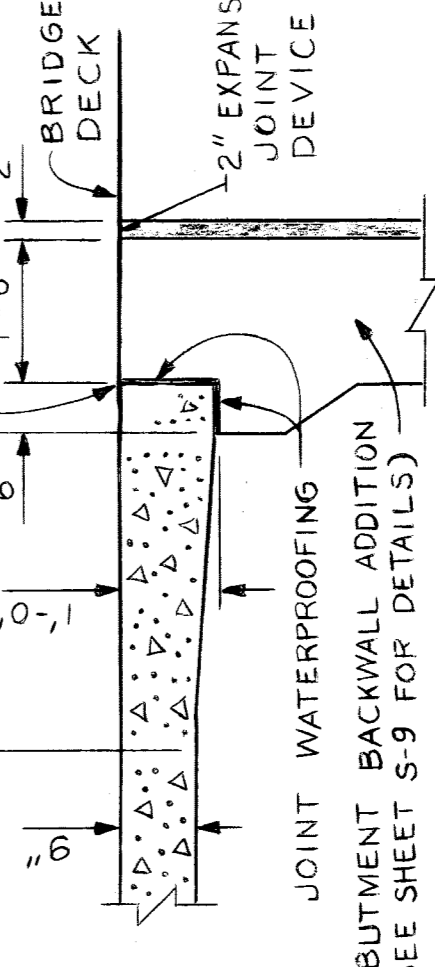
REMOVAL PLAN LEGEND

- TRANSVERSE CONTRACTION JOINT
- TRANSVERSE EXPANSION JOINT
- CONC. PAV'T. WITH INTEGRAL CURB-REINF. 9"
- CONCRETE SIDEWALK, 6"
- BITUMINOUS SIDEWALK, 4" (SEE NOTE 5 ON SHEET NO. S-15)
- BRIDGE PARAPET ON CONCRETE WALK
- CLASS "A" SODDING WITH 3" TOPSOIL
- BACKFILL AND CLASS "A" SODDING
- CLASS C-76-III 12" SEWER IN TRENCH DETAIL B
- CATCH BASIN "A"
- CATCH BASIN "B" W/O TRAP
- ADJUSTING DRAINAGE STRUCTURE COVER, CASE 2

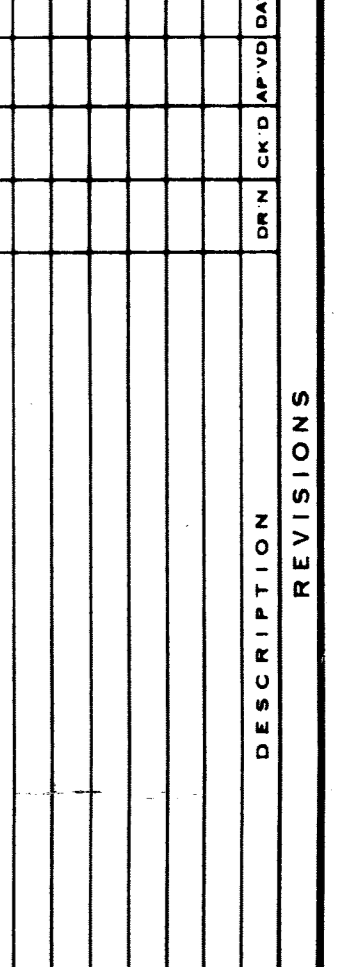
DETAIL OF PROPOSED SIDEWALK AT WING WALL



SECTION A-A



SECTION B-B



REMOVAL LEGEND

- ABANDONING DRAINAGE STRUCTURE
- REMOVING PAVEMENT (ASPHALT)
- REMOVING PAVEMENT (CONCRETE)
- REMOVING SIDEWALK
- REMOVING BITUMINOUS SIDEWALK
- REMOVING CONCRETE BRIDGE PARAPET

NOTES

1. SUBGRADE UNDERCUTTING SHALL BE AS DIRECTED BY THE ENGINEER.
2. INCLUDE BITUMINOUS WALK REMOVAL WITH EARTH EXCAVATION.
3. REMOVING PAVEMENT (ASPHALT) AND REMOVING PAVEMENT (CONCRETE) SHALL BE PAID FOR AS REMOVING PAVEMENT.
4. TYPE B JOINT DENOTES AN MDOT LONGITUDINAL BULKHEAD JOINT; TYPE D JOINT DENOTES AN MDOT LONGITUDINAL LANE TIE JOINT.
5. FOR A PROFILE VIEW OF THE EXISTING BRIDGE PARAPET SEE SHEET NO. S-5.
6. THIS WORK INCLUDED IN PAY ITEM: "BRIDGE RAILING, SOLID PARAPET TYPE".
7. FOR DETAILS OF THE PROPOSED PARAPET SEE SHEET NO. S-9. SEE ALSO MDOT STANDARD PLAN X-18D, "BRIDGE RAILING, SOLID PARAPET TYPE".
8. TRANSVERSE CONTRACTION JOINTS ON APPROACH SIDEWALKS SHALL BE SPACED AT 6' INTERVALS.
9. PROVIDE DOUBLE-YELLOW & PAVEMENT MARKINGS CONFORMING TO DETROIT DOT FIELD MARKING STANDARDS NO. SG-50. MARKINGS ARE TO BE OF POLYESTER MATERIAL.
10. SEE ALSO NOTES ON SHEET NO. S-15.

NO SCALE

NO SCALE

NO SCALE

NO SCALE

NO SCALE

NO SCALE

NO SCALE

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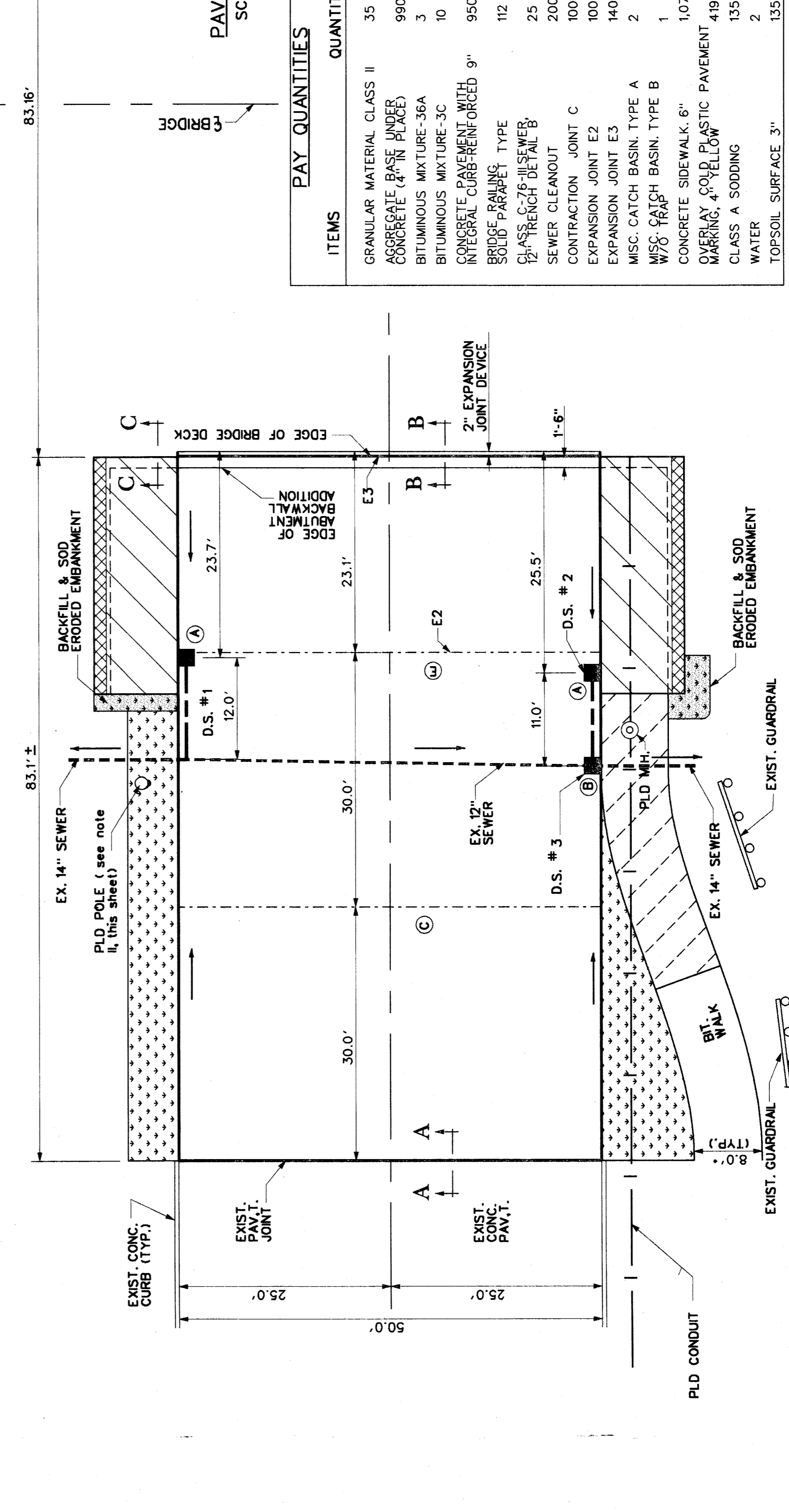
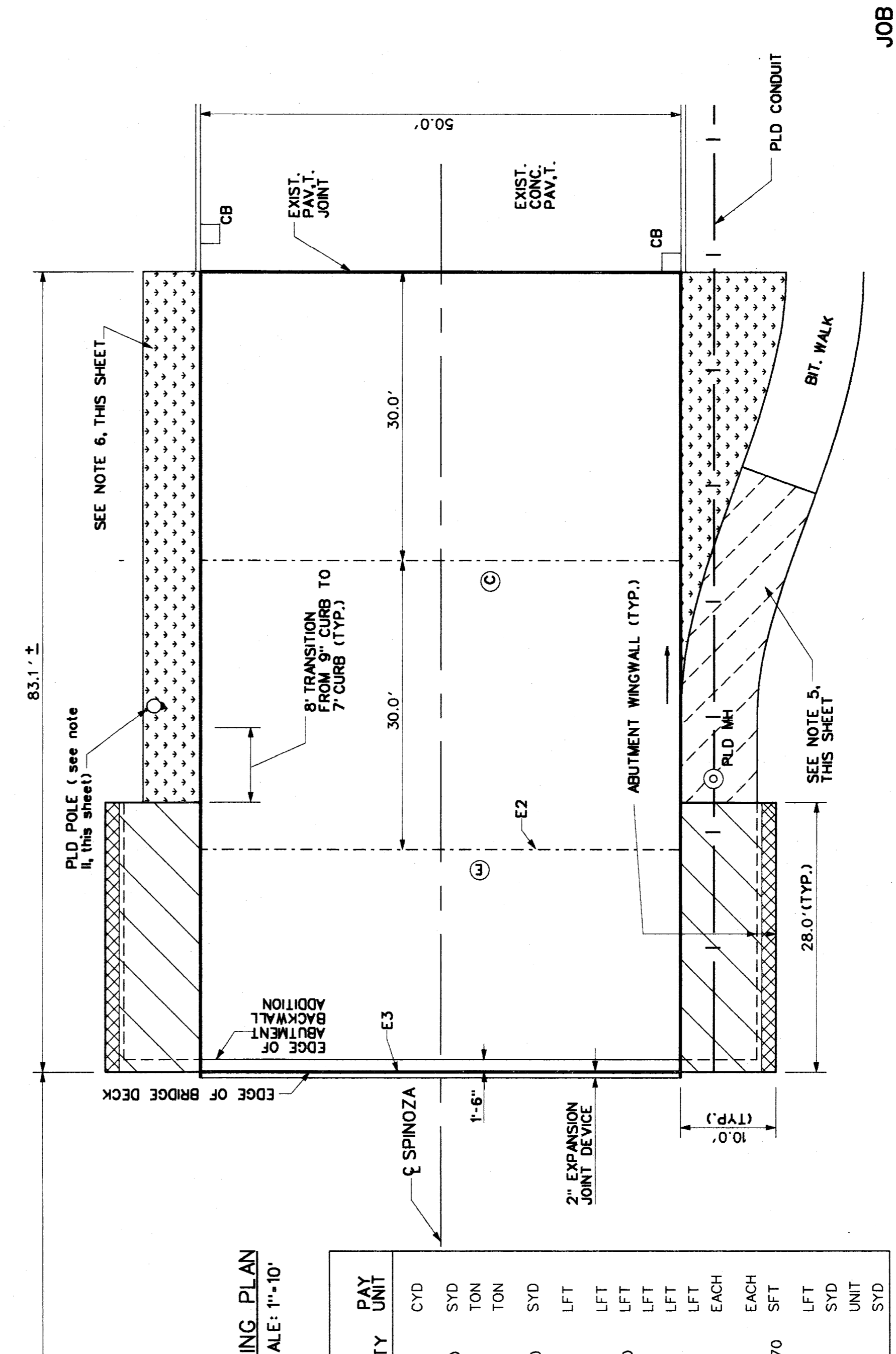
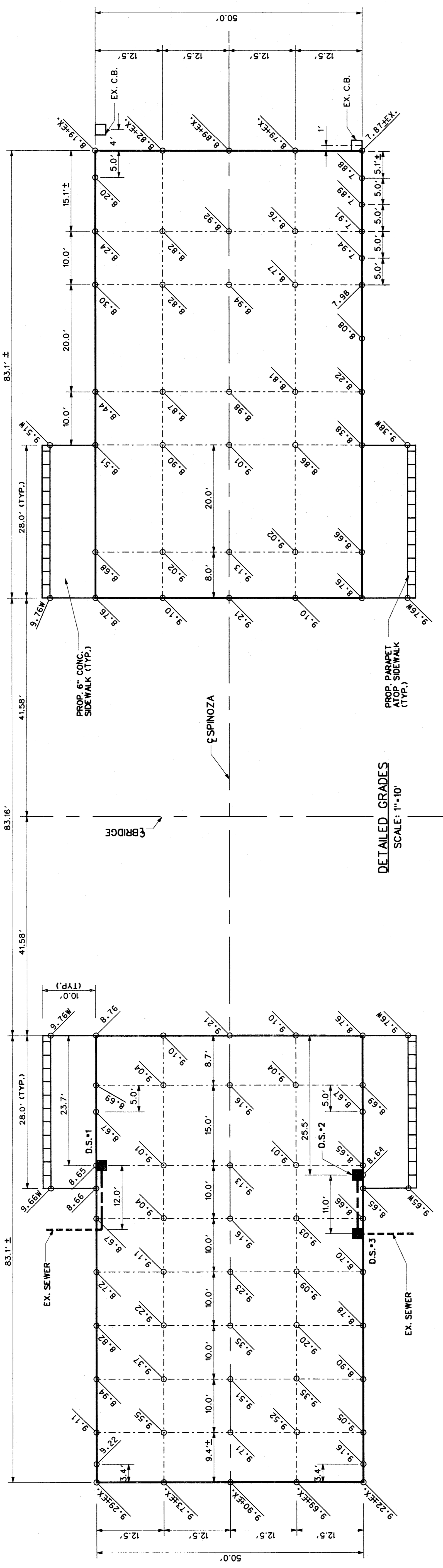
NO SCALE

DRAINAGE STRUCTURE NOTES

1. INSTALL 12" DIA. C-76 SEWERS IN TRENCH DETAIL B. (SEE M.D.O.T. STANDARD DETAIL IV-B3H)
2. VERIFY DIAMETERS, INV. ELEVATIONS & DIRECTION OF FLOW OF EXISTING SEWERS IN THE FIELD.
3. ENCASE CONNECTIONS OF PROPOSED & EXISTING SEWERS IN CONCRETE.
4. FOR DRAINAGE STRUCTURE DETAILS SEE SHEET NO. S-16.

NOTES:

1. FOR SURVEY BENCH MARK LOCATIONS AND ELEVATIONS SEE SHEET NO. S-3.
2. ADD 90.00' TO ELEVATIONS SHOWN.
3. FOR ELEVATIONS SHOWN, "W" DENOTES TOP OF WALK ELEVATIONS.
4. ALL OTHER ELEVATIONS SHOWN ARE PAVEMENT SURFACE ELEVATIONS.
5. FOR PAVING PLAN LEGEND, CROSS SECTIONS AND DETAILS, SEE SHEET NO. S-14.
6. REPLACE DISTURBED BITUMINOUS WALK WITH 1" MDOT BIT-MIX 36A OVER 3" MDOT BIT-MIX 3C OR OTHER APPROVED MIXTURES AS DIRECTED BY THE ENGINEER.
7. RESTORE DISTURBED GROUND AREAS WITH CLASS "A" SODDING ON 3" TOPSOIL AS DIRECTED BY THE ENGINEER.
8. LOCATIONS OF PLD CONDUIT ARE BASED UPON AVAILABLE RECORDS & ARE NOT GUARANTEED FOR ACCURACY.
9. FOR PLD CONDUIT RELOCATIONS, AND MANHOLE RECONSTRUCTION, SEE SHEET NO. S-16.
10. BACKFILL ERODED EMBANKMENT WITH SELECTED EXCAVATED MATERIAL (INCLUDED WITH CONSTRUCTION).
11. SEE ALSO NOTES ON SHEET NO. S-14.
12. PLD OVERHEAD LINE TO BE DEACTIVATED BY PLD DURING CONSTRUCTION.



PAY QUANTITIES

ITEMS	QUANTITY	PAY UNIT
GRANULAR MATERIAL CLASS II	35	CYD
AGGREGATE BASE UNDER CONCRETE (2 1/4\"/>		

JOB NO. 36916A

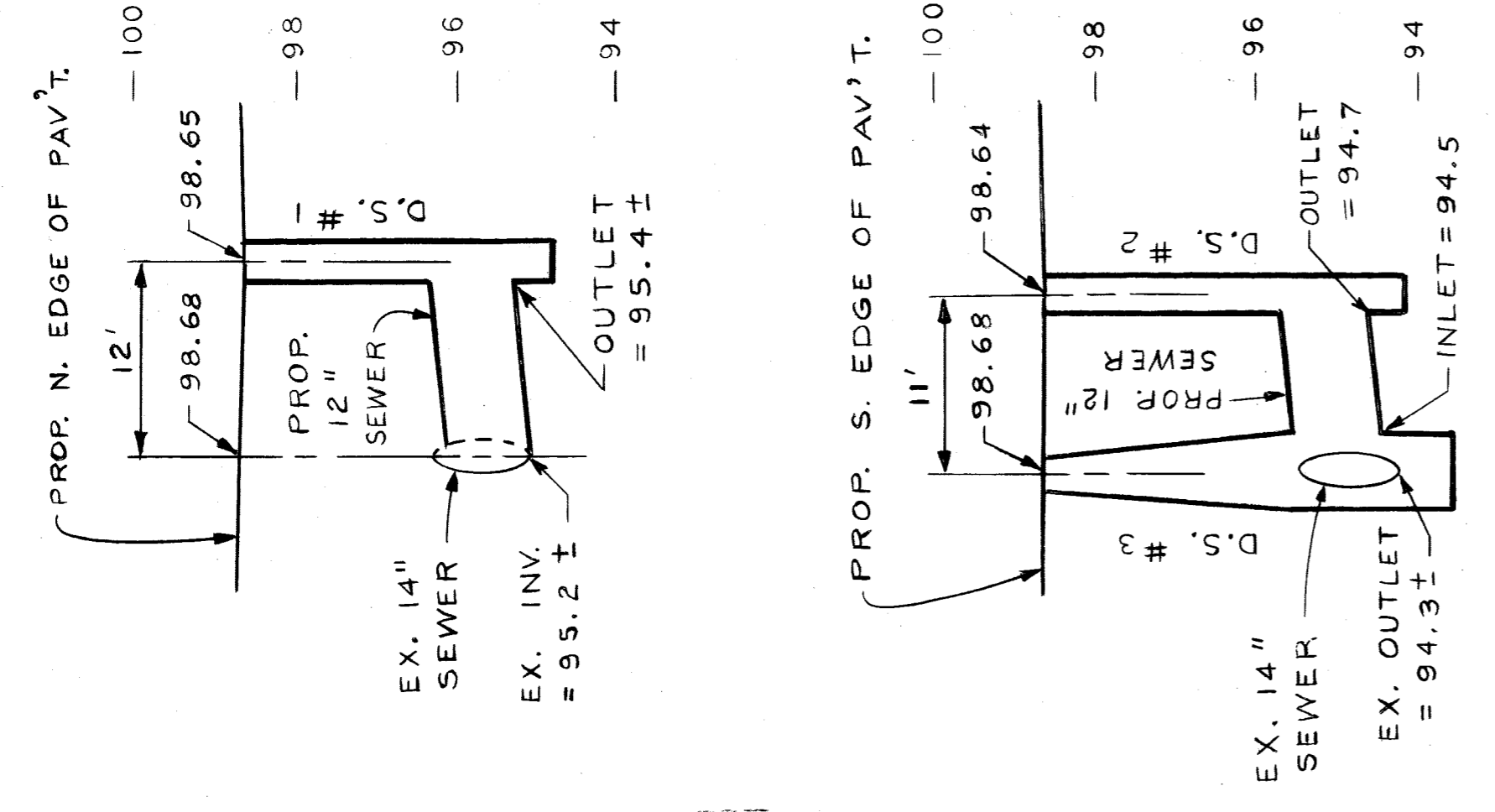
CITY OF DETROIT
 CITY ENGINEERING DIVISION - D.P.W.
 BUREAU OF STREETS AND HIGHWAYS

SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (BW-270)
APPROACH PAVING PLAN AND DETAILED GRADES

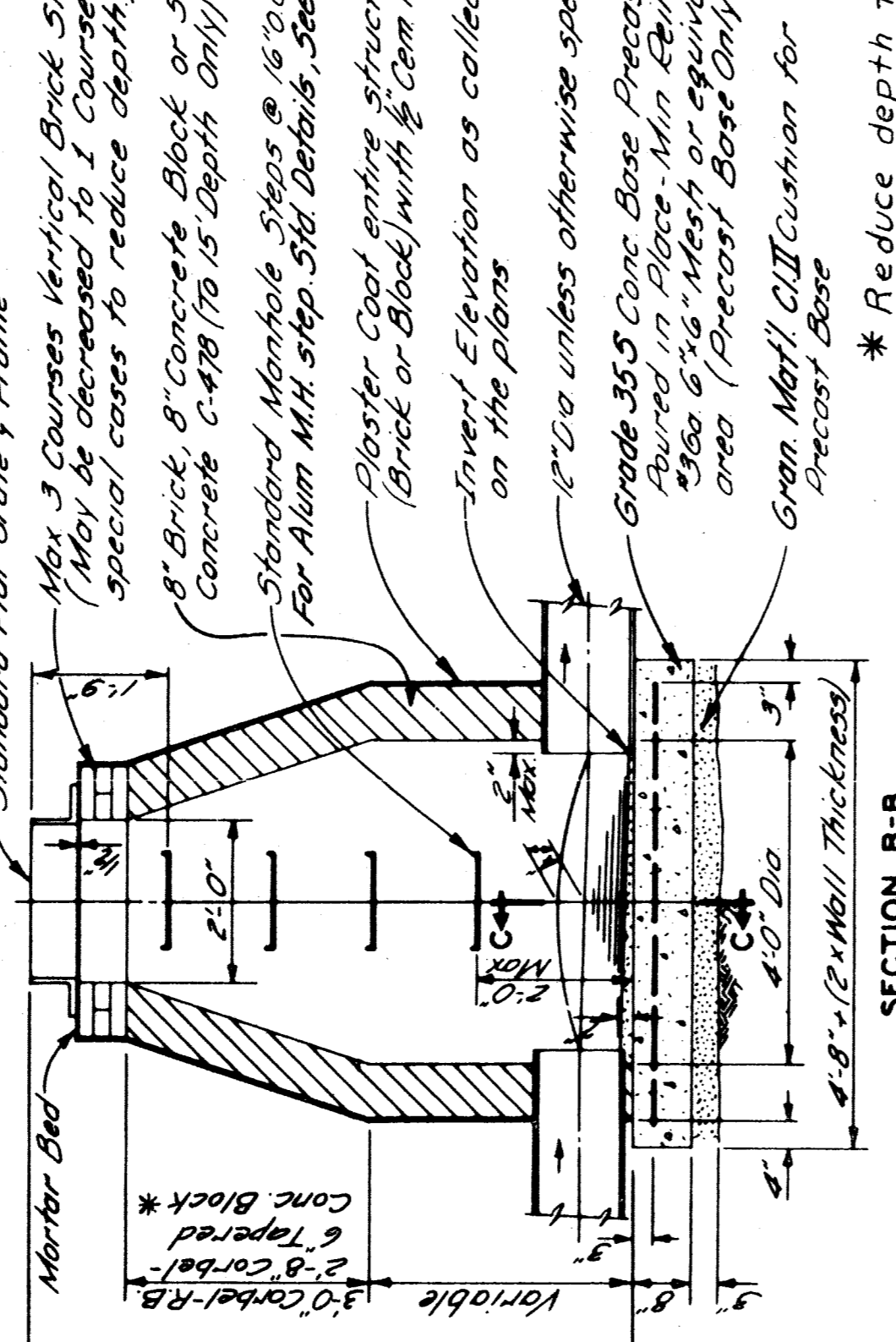
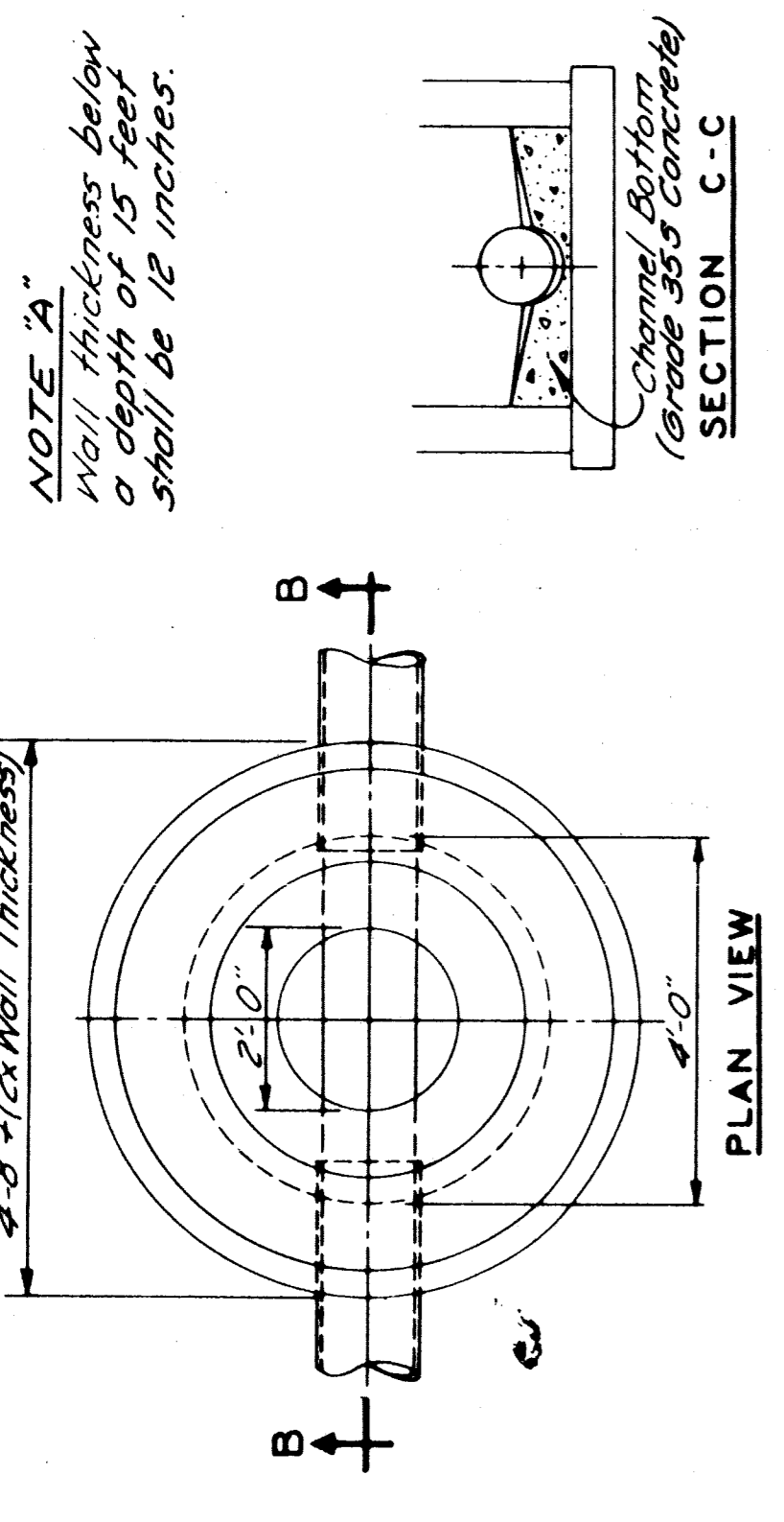
CHECKED BY: APPROVED: N.W., K.M. PLAN GRADE ESTIMATE FINAL

DATE: MAR. 1997

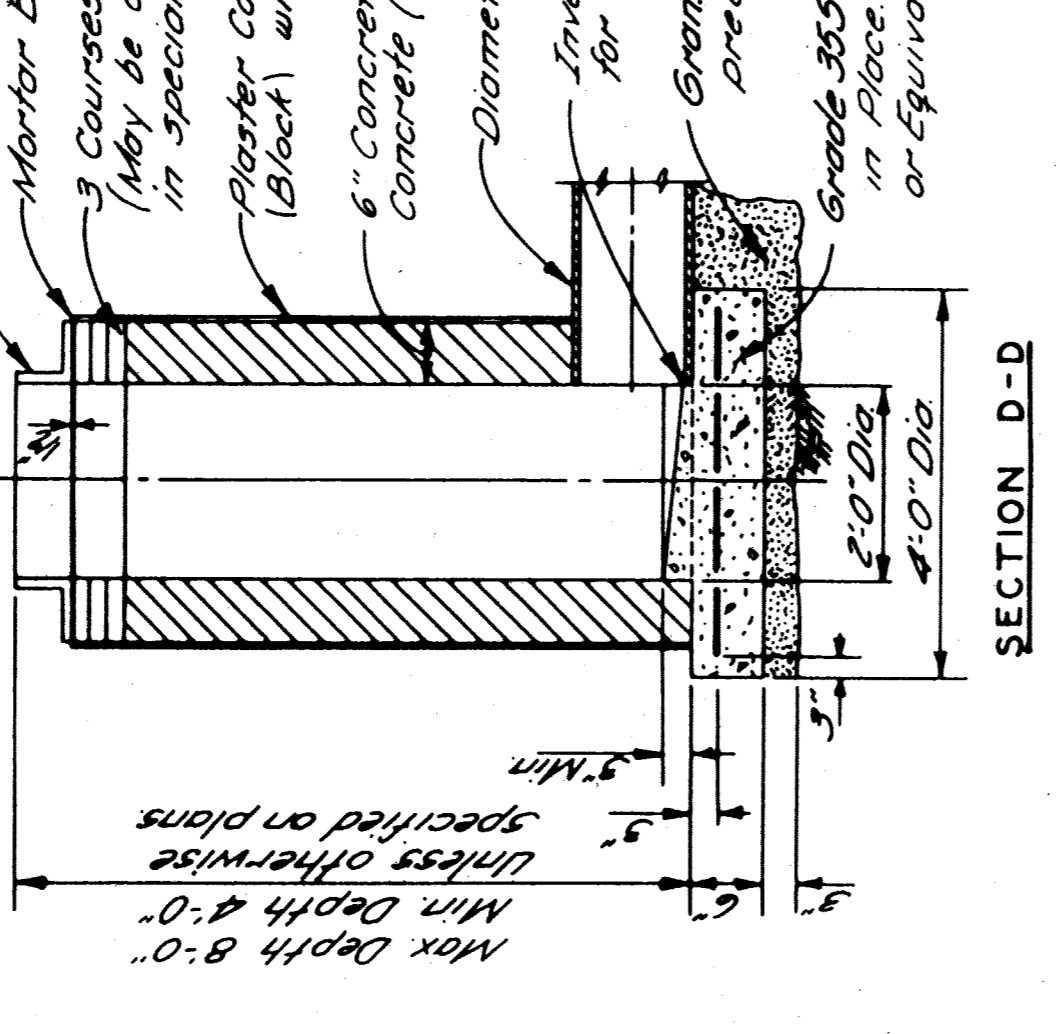
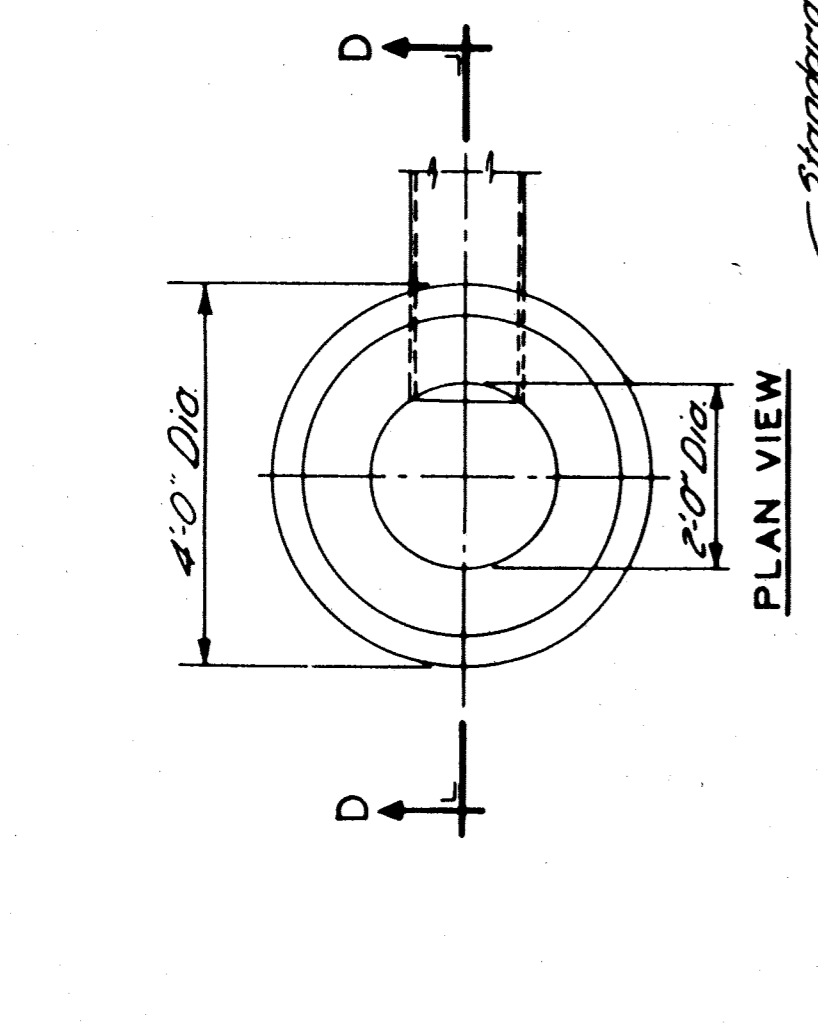
BOOK NO.	LEVEL	DATE	CONTRACTOR
NO.	NO.	NO.	NO.
DATE	DATE	DATE	DATE
SCALE	SCALE	SCALE	SCALE
SCALE	SCALE	SCALE	SCALE



DRAINAGE STRUCTURE PROFILES
SCALE: 1" = 10' HORIZ.
1" = 2' VERT.



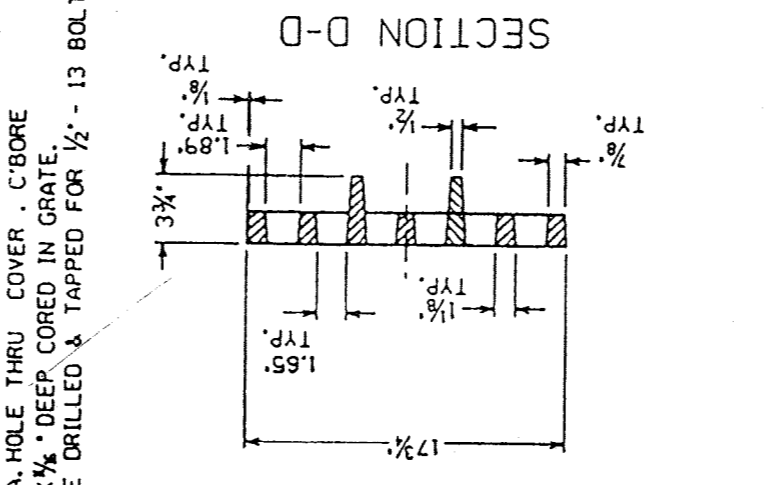
CATCH BASIN "B"
NO SCALE
* Reduce depth to a minimum to keep sewers out of corbel.



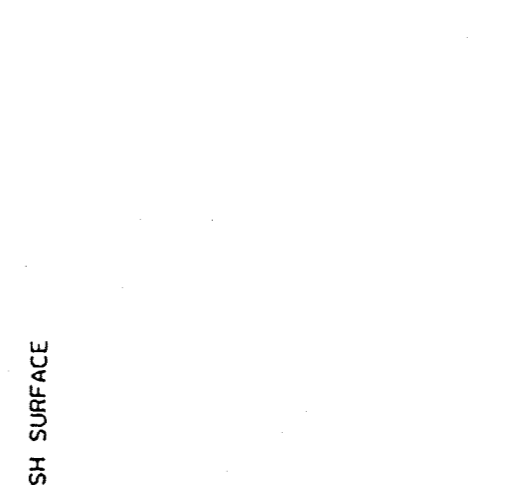
CATCH BASIN "A"
NO SCALE

GENERAL NOTES

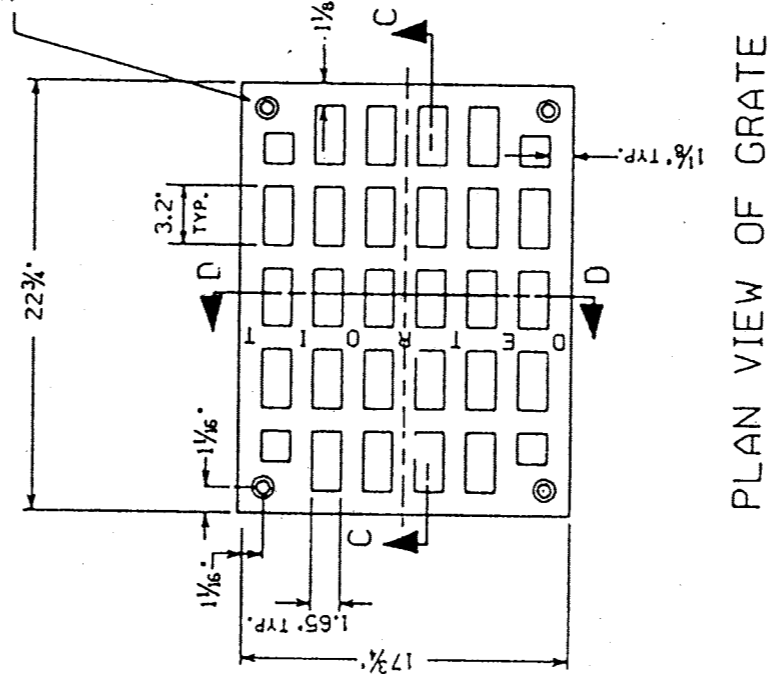
- The materials of workmanship shall be in accordance with the current Standard Specifications.
- Center of Catch Basin shall be 20 inches from back of curb.
- All sizes of flow lines of pipe, and elevations for top of bottom of structures shall be determined from the plans or construction requirements. The bell shall be removed from the first length of outlet pipe projecting through the wall of the structure. After any structure is constructed of precast concrete or concrete block, the top of the masonry shall be left sufficiently low to permit proper adjustment of cover to grade by the use of mortar or bricks as directed by the Engineer.
- A plaster coat of mortar 1/2 inch in thickness shall be applied to the outer surface of the structure as shown. A 1/2 inch cement plaster coat shall be placed on the inside of all sumps.
- Contractor shall verify elevations of existing utilities to enable construction to indicated elevations shown on drawings. If necessary, invert elevations shown on the drawings may be altered in the field to clear existing utilities. Such alterations, upward or downward, shall be at no charge in contract price.
- When precast concrete pipe sections are used for catch basins, either a section of the inlet and outlet pipes or an opening or eye for the inlet or outlet pipes shall be cast into the wall of the catch basin pipe when it is being manufactured. Eyes in precast pipe sections shall be furnished to accommodate a flexible joint connection such as Press-Wedge by Press-Seal Gasket Corp or Res-Seal by Sealed, Mfg. Corp.



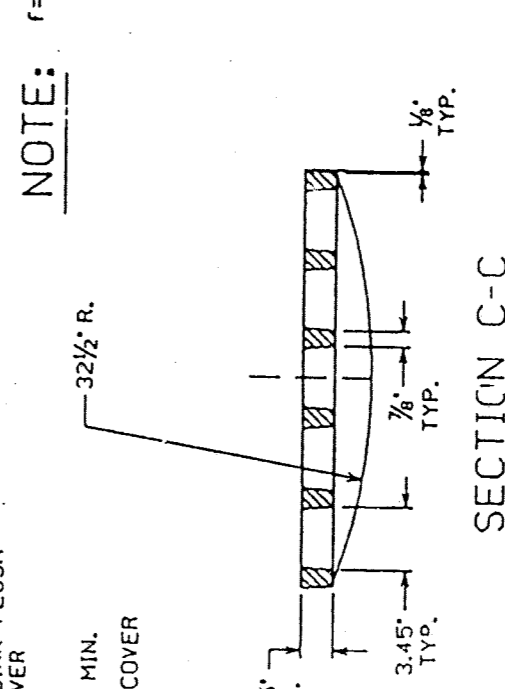
PLAN VIEW OF GRATE
MATERIAL: GRAY IRON A.S.T.M. STD. SPEC. A-18, CLASS 30. BEARING SURFACES OF COVER AND FRAME SHALL BE GRIND TO PREVENT ROCKING. CASTING SHALL NOT BE CORDED.



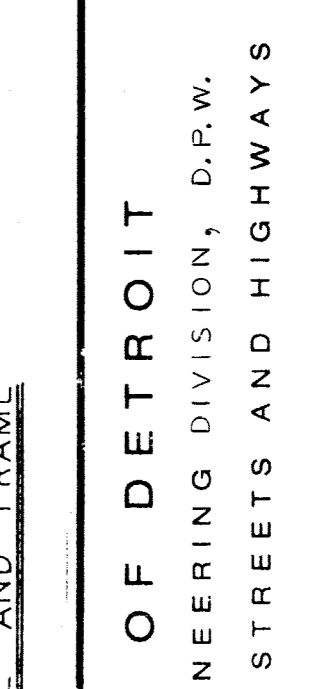
SECTION C-C
COVER BOLT DETAIL



SECTION E-E



SECTION F-F



SECTION G-G

STANDARD FLAT GRATE AND FRAME
NO SCALE

CITY OF DETROIT
CITY ENGINEERING DIVISION, D.P.W.
BUREAU OF STREETS AND HIGHWAYS

APPROVED
Samuel J. Howard
ENGINEER IN CHARGE

CHECKED BY	BY	PLAN	GRADE	ESTIMATE	FINAL
NW	NW				

NO.	DATE	DESCRIPTION	REVISIONS

REVISED	DATE	BY	REVISIONS

designed by JA, RW
 drawn by JF
 checked by RW, JA, EH
 approved by Earl Howard
 EARL HOWARD

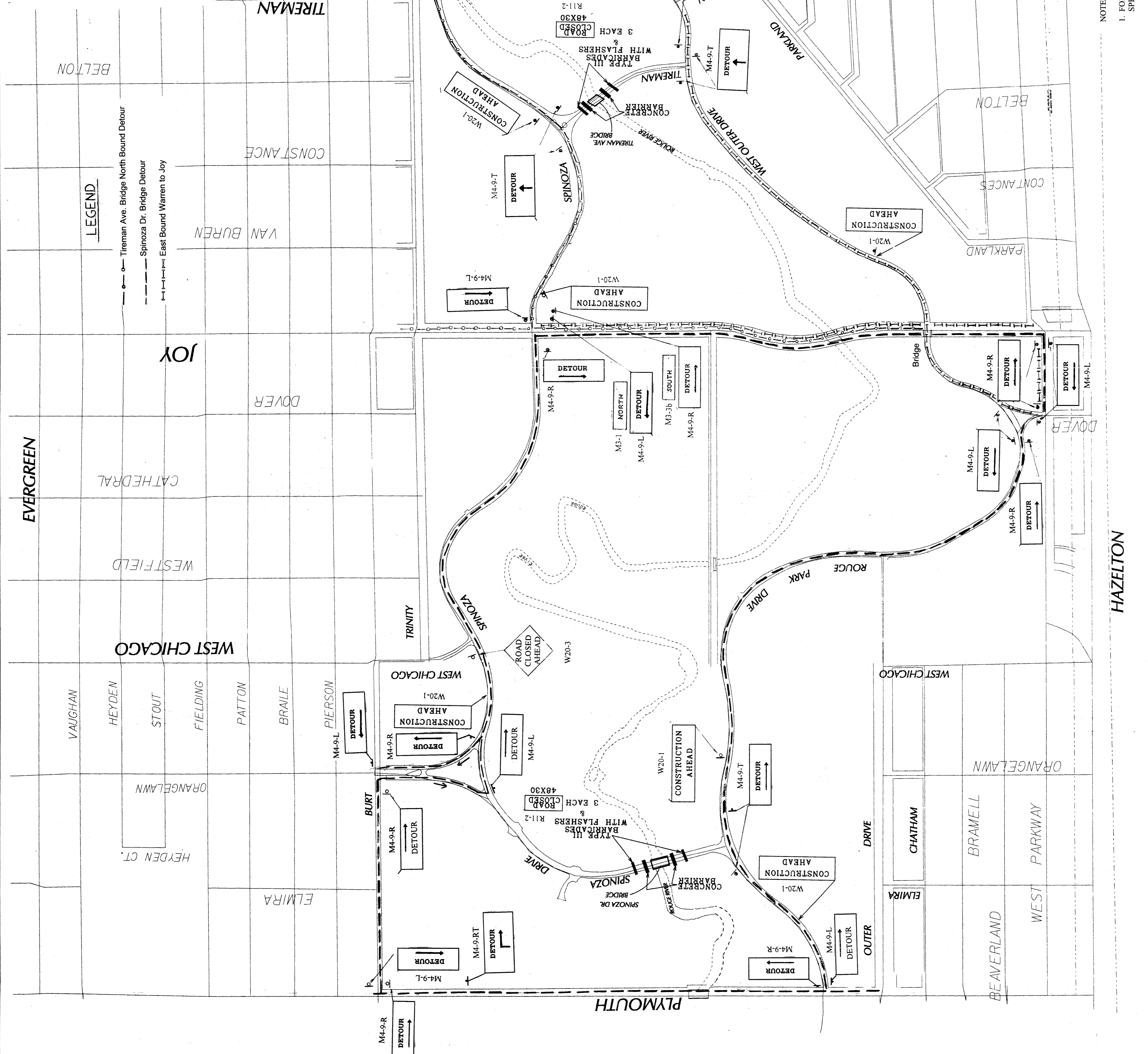
CITY OF DETROIT
 CITY ENGINEERING
 DIVISION
 DEPARTMENT OF PUBLIC WORKS

TRAFFIC CONTROL AND DETOUR PLAN
 SPINOZA DRIVE BRIDGE OVER ROUGE RIVER (B-270)
 SUPERSTRUCTURE RECONSTRUCTION

a.o. 93-22-16
 contract no.
 sheet S-17
 of S-41
 drawing no.
 date MAR., 1997



PAY QUANTITIES		
ITEM	Quantity	PAY UNIT
Barricade, Type III, Lighted-Furnished	6	EACH
Barricade, Type III, Lighted-Operated	6	EACH
Minor Traffic Devices	0.5	LSUM
Sign, Type B Temporary-Furnished	210	SFT
Sign, Type B Temporary-Operated	210	SFT
Temporary Concrete Barrier-Furnished	100	LFT
Temporary Concrete Barrier-Operated	100	LFT

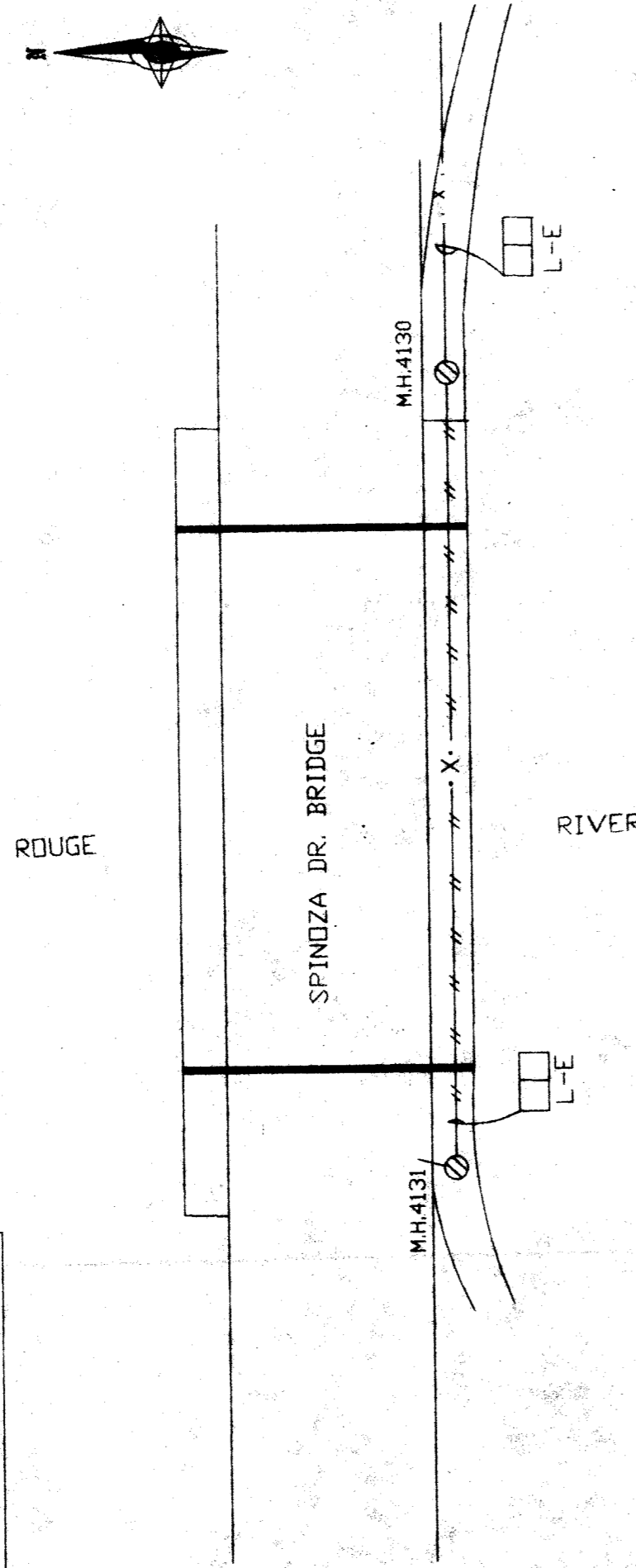
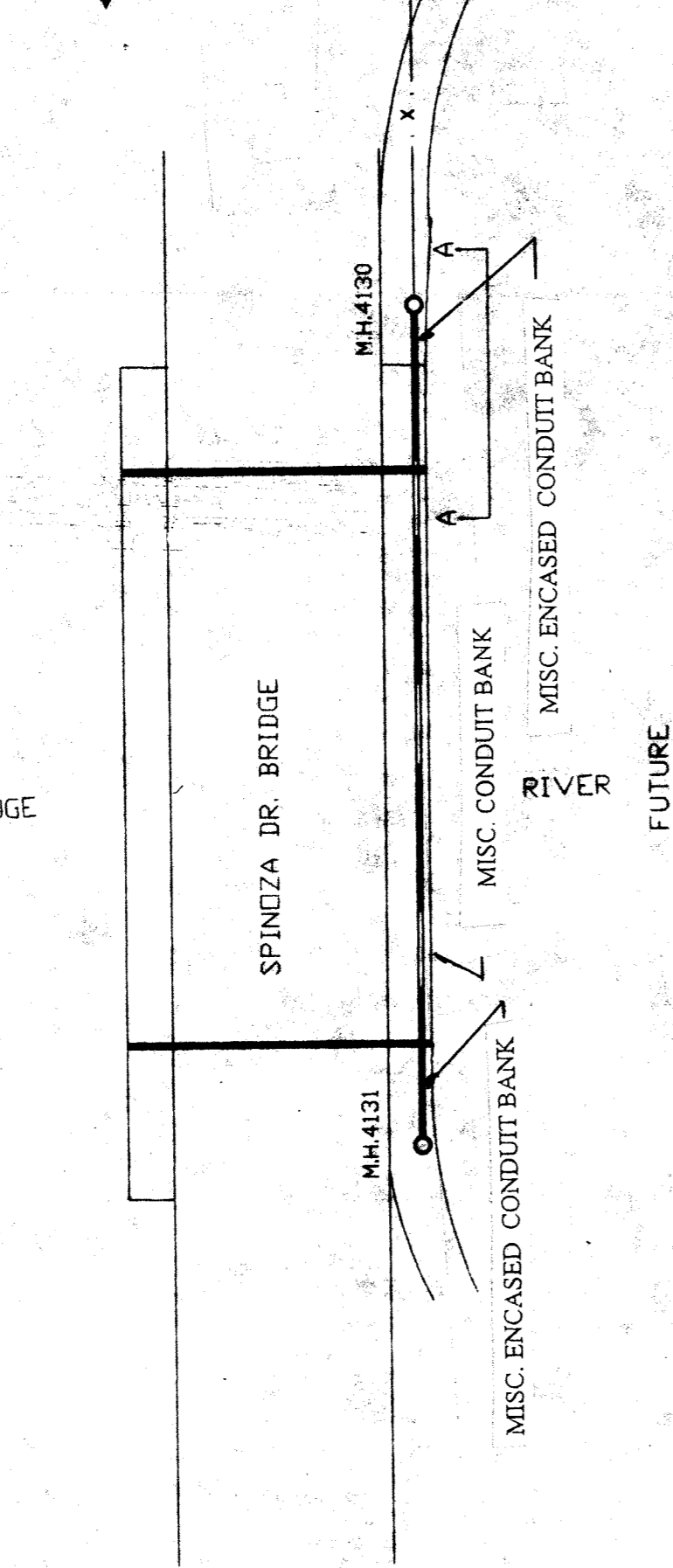


NOTE:
 1. FOR TRAFFIC MAINTENANCE AND CONTROL REFER TO MDT 1990 STANDARD SPECIFICATION FOR CONSTRUCTION SECTION 6.31.

JOB NO. : 36916A
 HAZELTON

T-109 &
110

CALL MISS DIG
BEFORE YOU DIG

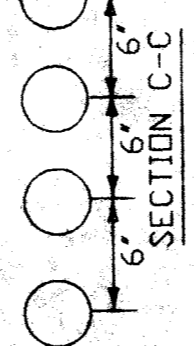


ITEM	QUANTITY	PAY UNIT
(A) BRIDGE:		
MISC. CONDUIT BANK	83	LFT
(B) APPROACH WORK:		
MISC. MANHOLE	2	EACH
MISC. ENCASED CONDUIT BANK	62	LFT
MANHOLE - REMOVE	2	EACH
MISC. DUCT BANK - REMOVE, B01-82-18-85	1	LSUM

4'-4" P.V.C. SCHEDULE 40 CONDUITS IN CONCRETE ENCASEMENT.
MAKE THE TRANSITION FROM HORIZONTAL CONFIGURATION TO
STACK CONFIGURATION (IE. 2 ROW X 2 COLUMN).
PITCH THE DUCT BANK TO THE MANHOLE. USE SPACERS AT
10' INTERVALS TO POSITION THE DUCTS.

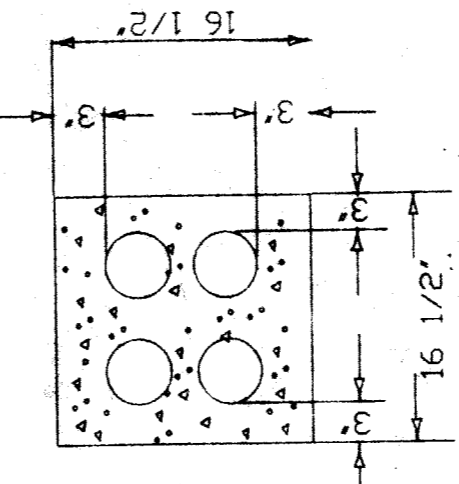
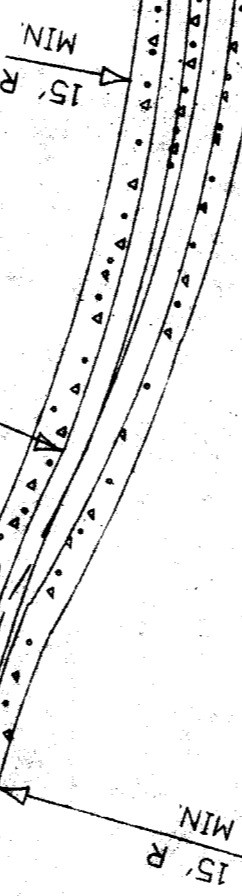
THE THICKNESS OF CONCRETE OVER
DUCT BANK SHOULD BE 4" MINIMUM

4' CONDUITS (SCH-40)
USE SPACERS AT 10'
INTERVALS TO POSITION
THE DUCTS.



TYPICAL SPACING OF CONDUIT
IN THE SIDE WALK SECTION

EXPANSION COUPLING



SECTION B-B

SECTION A-A

TYPICAL SECTIONAL VIEW

NOTE

- REFER TO P.L.D. DRAWING NO. 101 FOR ENCASED CONDUIT BANK.
- REFER TO P.L.D. DRAWING NO. 104 FOR MANHOLE CONSTRUCTION.
- ALL THE DEBRIS OF THE DISMANTLED DUCTS AND MANHOLES SHOULD BE REMOVED BEFORE NEW MANHOLES AND DUCTS ARE INSTALLED.
- NEW MANHOLES SHOULD ACCOMMODATE THE EXISTING DUCT BANK ON ONE SIDE AND THE NEW DUCT BANK ON THE OTHER SIDE. PRECAST MANHOLES MAY BE USED PER P.L.D. APPROVAL.
- THE DUCT BANKS SHOULD BE TERMINATED IN THE DUCT POCKETS OF THE MANHOLES PER P.L.D. SPECIFICATIONS.
- P.L.D. APPROVED MANHOLE FRAME AND COVER SHOULD BE INSTALLED.

- PLEASE CONTACT P.L.D. INSPECTORS BEFORE STARTING ANY WORK.
MR. SIDNEY BASS (313)267-7340
MR. KEN HARDAWAY (313)267-6043
- THE CONTRACTOR SHOULD NOTIFY P.L.D. SYSTEM OPERATOR (313) 224-0500 48 HRS. PRIOR TO PERFORMING ANY WORK.
- REFER TO THE FOLLOWING SPECIFICATIONS:
CITY ENGINEERING DEPARTMENT STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION DIVISION 15 WITH SPECIAL PROVISIONS FOR P.L.D. ELECTRICAL WORK.

- LEGEND
- X --- EXISTING DUCT BANK
 - --- EXISTING DUCT
 - X --- DISMANTLE THE EXISTING DUCT BANK
 - ⊗ --- DISMANTLE THE MANHOLE
 - --- BUILD DUCT BANK
 - --- BUILD NEW MANHOLE

NOT TO SCALE

REVISION	DESCRIPTION	DATE
1	CONDUIT CHANGED FROM SCHEDULE B6 TO SCHEDULE 40	3/25/1996
2	NEW MANHOLE PROPOSED	4/27/1996

SPINDZA DRIVE BRIDGE IN ROUGE PARK
DETAILS OF CONDUIT RECONSTRUCTION
SPINDZA DRIVE AND ROUGE RIVER

DRAWN BY
CHECKED BY *Egg*
APPROVED BY *Carol C. Howard*

FILE NO. 44-0414
SHEET NO. S-18 of S-41
DATE MAR. 1997

PUBLIC LIGHTING
DEPARTMENT
CITY OF DETROIT

