

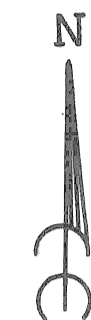
CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS

THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION CURRENT STANDARD SPECIFICATIONS AND SUPPLEMENTAL SPECIFICATIONS.

IN CO-OPERATION WITH MICHIGAN DEPARTMENT OF TRANSPORTATION AND

FEDERAL HIGHWAY ADMINISTRATION FEDERAL AID URBAN PROJECT NO. MICHIGAN M 2000 () CONTROL SECTION JOB NO.

FHWA REGION	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MICH.				
STREET	CITY	COUNTY	TWP	SHEET NO.	TOTAL SHEETS



CITY OF DETROIT
BRIDGE NO. BW-246

MDOT STRUCTURE
NO. 0108300 B02

INDEX OF SHEETS

STANDARD PLANS



BRIDGE RECONSTRUCTION
RIVERSIDE OVER FOX CREEK

LAKE ST. CLAIR
BOUNDARY

BRIDGE
RECONSTRUCTION

ITEM NO.	
CONTRACT FOR <u>BRIDGE RECONSTRUCTION</u>	
LOCAL AUTHORITY APPROVAL CITY OF DETROIT CITY ENGINEERING DEPARTMENT	
APPROVED BY _____	DATE _____
DEPUTY DIRECTOR	
APPROVED BY _____	DATE _____
DIRECTOR	
PREPARED UNDER SUPERVISION OF	
_____	REGISTRATION NO. _____
REGISTERED PROFESSIONAL ENGINEER	
CITY OF DETROIT ORGANIZATION	
DETROIT, MICHIGAN ADDRESS	
(SEAL)	
PRELIMINARY PLAN A JULY 8, 1987	

FILE NO.	STATE PROJECT	FEDERAL PROJECT	SHEET NO.

CURVE DATA

CURVE #1	CURVE #2	CURVE #3
$\Delta = 91^{\circ} 59' 24''$	$\Delta = 30^{\circ} 13' 39''$	$\Delta = 61^{\circ} 45' 53''$
$D = 38^{\circ} 11' 50''$	$D = 58^{\circ} 45' 10''$	$D = 42^{\circ} 57' 30''$
$R = 150.00'$	$R = 97.52'$	$R = 133.38'$
$T = 155.30'$	$T = 26.34'$	$T = 79.77'$
$L = 240.83'$	$L = 51.45'$	$L = 143.78'$
$E = 65.91'$	$E = 3.49'$	$E = 22.03'$
$PC = 9+24.42$	$PC = 9+45.35 (-20.24)$	$PCC = 10+03.55 (-16.63)$
$PT = 11+65.25$	$PCC = 10+03.55 (-16.63)$	$PT = 11+65.25 (-16.63)$

CURVE #4	CURVE #5
$\Delta = 48^{\circ} 50' 06''$	$\Delta = 15^{\circ} 40' 48''$
$D = 33^{\circ} 17' 14''$	$D = 17^{\circ} 21' 44''$
$R = 172.13'$	$R = 330.0'$
$T = 78.14'$	$T = 45.44'$
$L = 146.71'$	$L = 90.31'$
$E = 16.91'$	$E = 3.11'$
$PC = 9+96.35 (22.13)$	$PCC = 11+24.20 (22.13)$
$PCC = 11+24.20 (22.13)$	$PT = 12+07.91 (28.00)$

BENCH MARKS

- C.B.M. ARROW ON HYDRANT N.E. COR. WINDMILL POINTE & ALTER ROAD EL. 101.09
- C.B.M. ARROW ON HYDRANT AT TOMMY'S MARINA EL. 101.69
- R.B.M. MONUMENT AT LIGHTHOUSE EL. 100.24
- R.B.M. TOP OF CONC. BRIDGE RAILING N.E. COR. FRONT OF TOMMY'S MARINA EL. 104.187
- D-2 EL. 104.187
- C.B.M. ARROW ON HYDRANT N. SIDE OF RIVERSIDE STA. B+12 E. EL. 101.46
- R.B.M. DENOTES PERMANENT BENCH MARK
- C.B.M. DENOTES CONSTRUCTION BENCH MARK

GENERAL NOTES

THE DESIGN OF THIS STRUCTURE IS BASED ON THE MICHIGAN DEPARTMENT OF STATE HIGHWAYS SPECIFICATIONS FOR THE DESIGN OF HIGHWAY BRIDGES, 1958 EDITION, AND CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS-20 AND ALTERNATE MILITARY 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.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE BASE ELEVATION FOR A 100 YEAR FLOOD IS 98.3 (578.0 N.G.V.D) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) ON JULY 2, 1981. THE RECORDED HIGH WATER ELEVATION IS 98.55 ON OCTOBER 4, 1986.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE: GRADES 35S, 45D	$f_c = 3,000$ PSI
STEEL REINFORCEMENT:	$f_y = 60,000$ PSI
STRUCTURAL STEEL: A36	$f_y = 36,000$ PSI

THE WORK COVERED BY THESE PLANS INCLUDES CLEARING, GRUBBING, TREE REMOVAL, CHANNEL EXCAVATION, EARTH EXCAVATION, MAINTAINING TRAFFIC, CONSTRUCTION AND REMOVAL OF THE TEMPORARY ROAD, CONSTRUCTION AND REMOVAL OF TEMPORARY BRIDGE, REMOVAL AND CONSTRUCTION OF APPROACH PAVEMENT, DRIVING OF STEEL SHEET PILING, CONSTRUCTION OF THE PROPOSED BRIDGE AND RETAINING WALLS AND PLACING GRANULAR MATERIAL, SODDING AND SLOPE RIPRAP TO THE LIMITS SHOWN AS WELL AS ALL OTHER ITEMS REQUIRED TO FULLY COMPLETE THE WORK IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.

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 RETAINING WALLS SHALL BE REMOVED AND BACKFILLED WITH STRUCTURE EMBANKMENT AS DIRECTED BY THE ENGINEER.

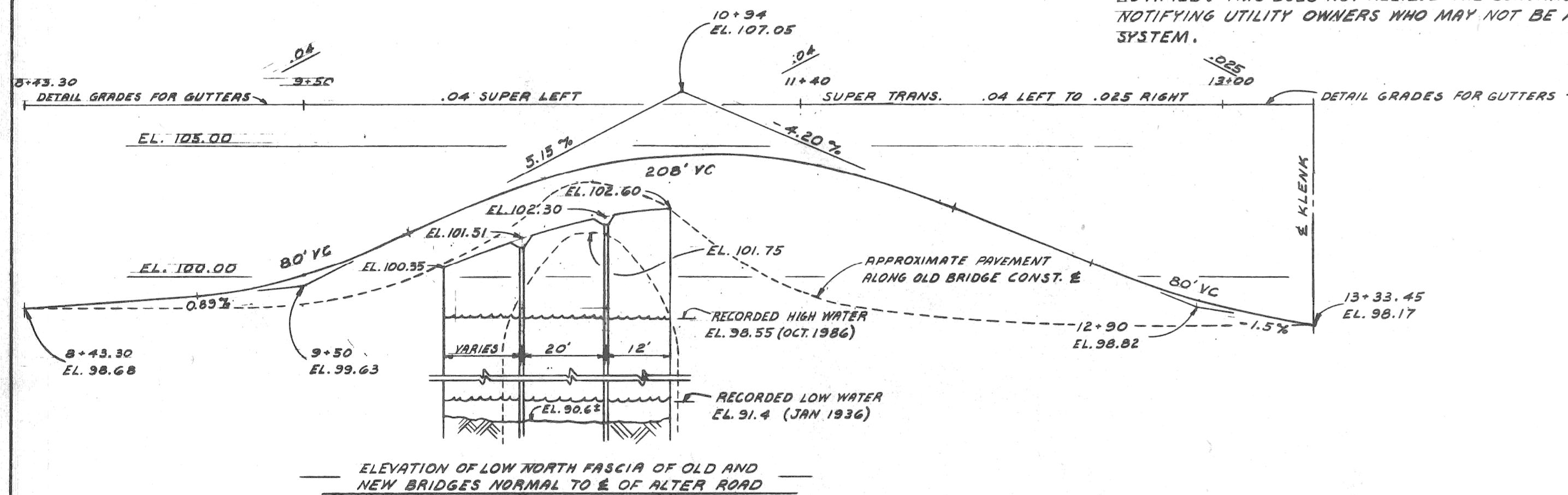
TRAFFIC IS TO BE MAINTAINED OVER THE TEMPORARY ROAD AND BRIDGE.

DATUM REFERS TO CITY DATUM. ADD 478.465 TO CONVERT TO I.G.L.D. DATUM AND 479.755 TO CONVERT TO N.G.V.D. DATUM.

TOPOGRAPHY SHOWN HEREON REPRESENTS CONDITIONS EXISTING AT THE TIME THE FIELD SURVEY WAS MADE. HOWEVER, THESE CONDITIONS MAY HAVE BEEN MATERIALLY ALTERED BY THE OPERATIONS OF OTHERS PRIOR TO THIS CONTRACT.

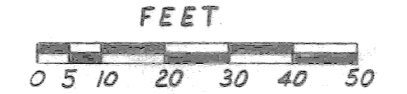
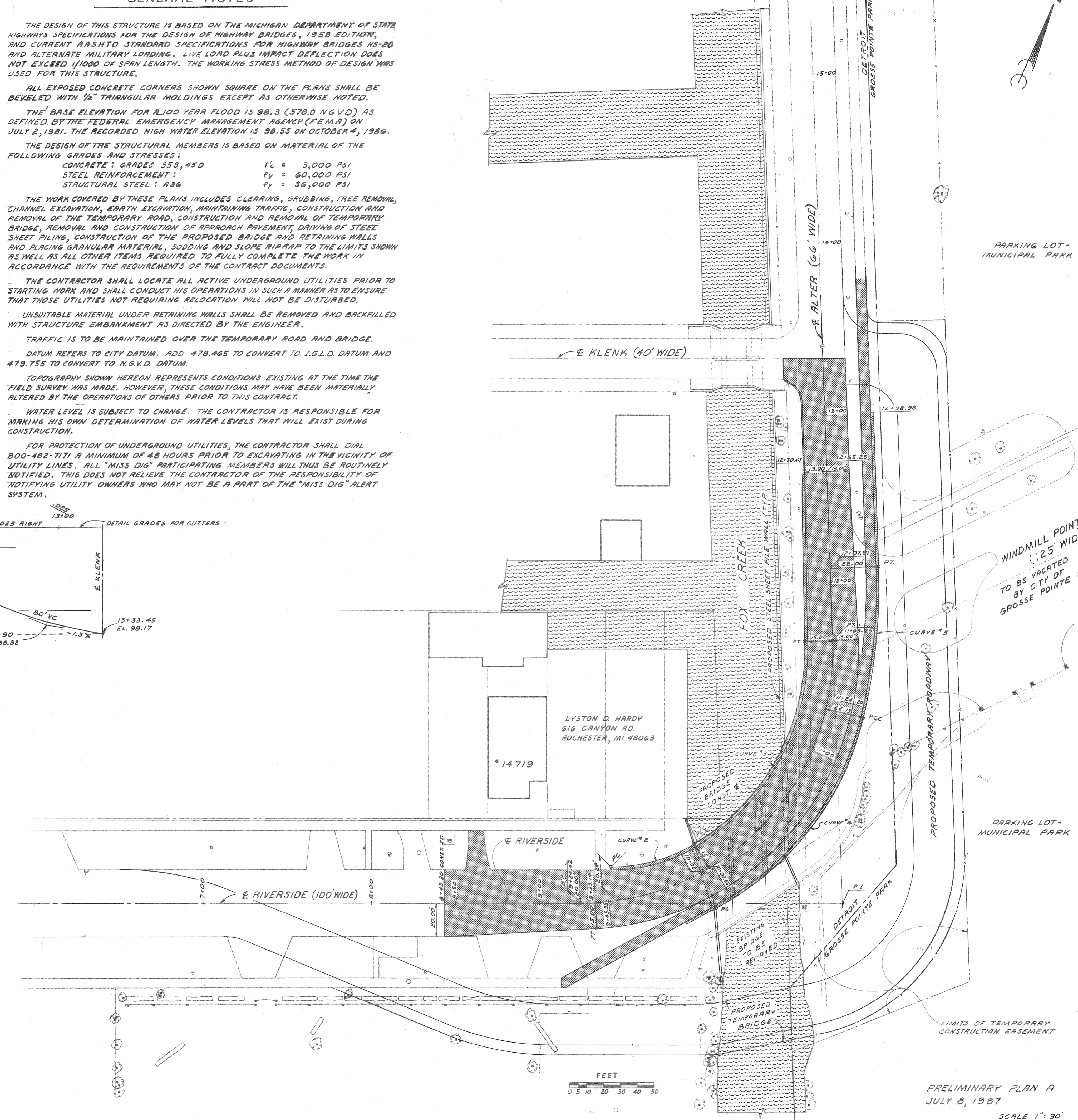
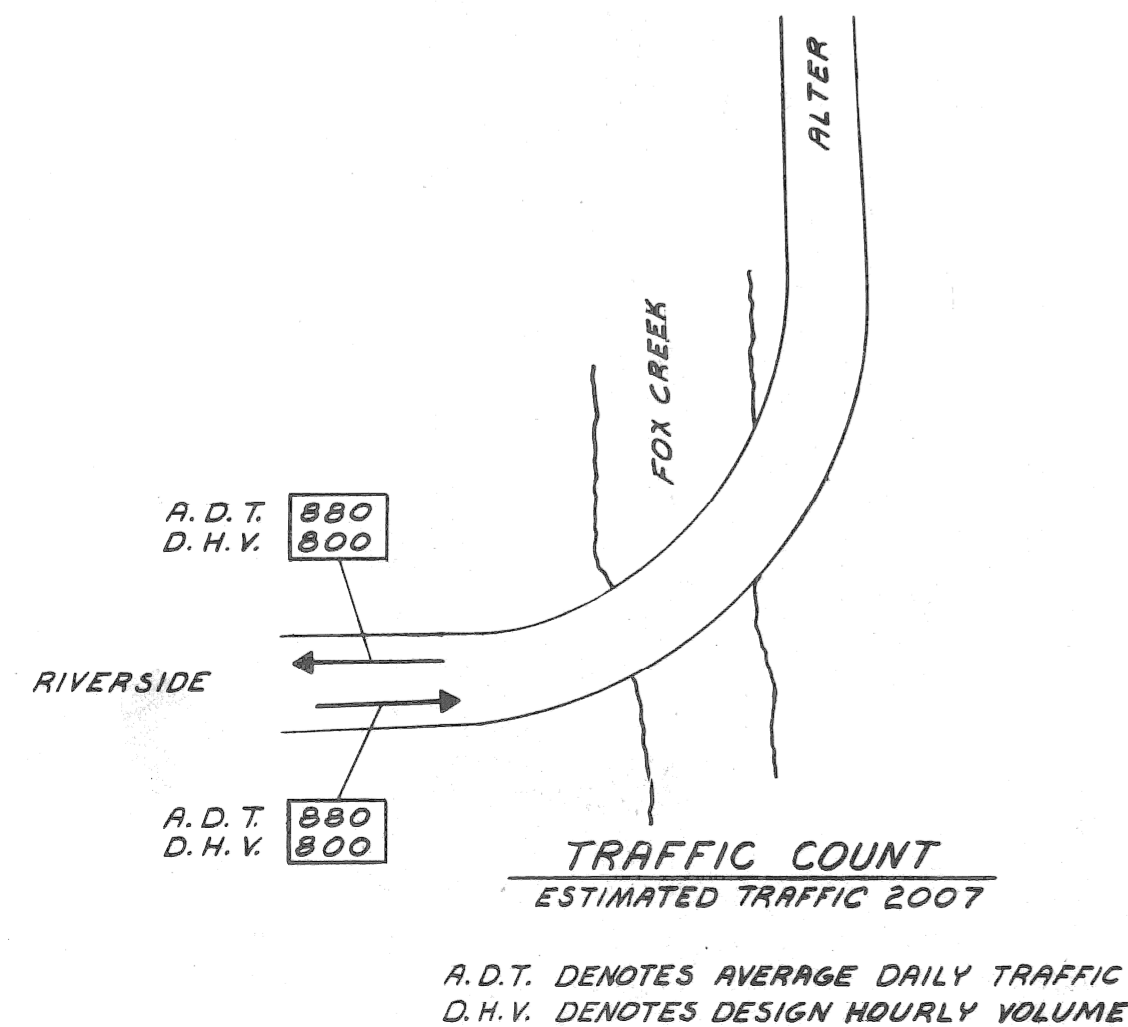
WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION.

FOR PROTECTION OF UNDERGROUND UTILITIES, THE CONTRACTOR SHALL DIAL 800-482-7171 A MINIMUM OF 48 HOURS PRIOR TO EXCAVATING IN THE VICINITY OF UTILITY LINES. ALL "MISS DIG" PARTICIPATING MEMBERS WILL THUS BE ROUTINELY NOTIFIED. THIS DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF NOTIFYING UTILITY OWNERS WHO MAY NOT BE A PART OF THE "MISS DIG" ALERT SYSTEM.



PROFILE ALONG BRIDGE CONSTR. &

SCALE: HORIZ. 1" = 40'
VERT. 1" = 4'



PRELIMINARY PLAN A
JULY 8, 1987
SCALE 1" = 30'

designed by	ALC
drawn by	D.L.N.
checked by	J.K.
approved:	<i>[Signature]</i>
	STRUCTURAL ENGINEER

CITY OF DETROIT
City engineering department
for DEPARTMENT OF PUBLIC WORKS

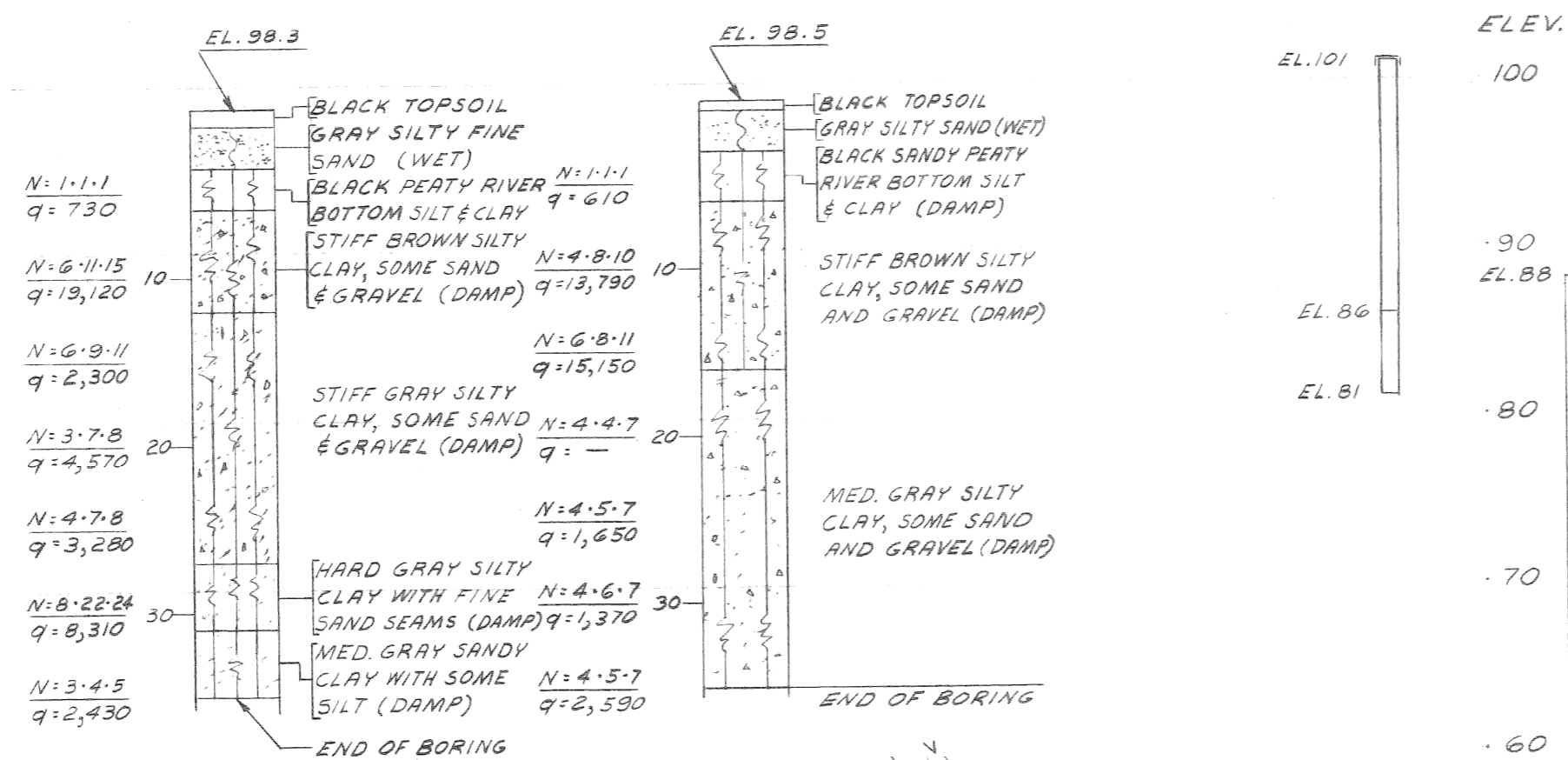
BRIDGE RECONSTRUCTION

RIVERSIDE AVENUE OVER FOX CREEK BW-246

GENERAL PLAN OF SITE

a.o. 87-22-12 contract no.
sheet of drawing no. S-1 date

TEST HOLE NO. 1 TEST HOLE NO. 2



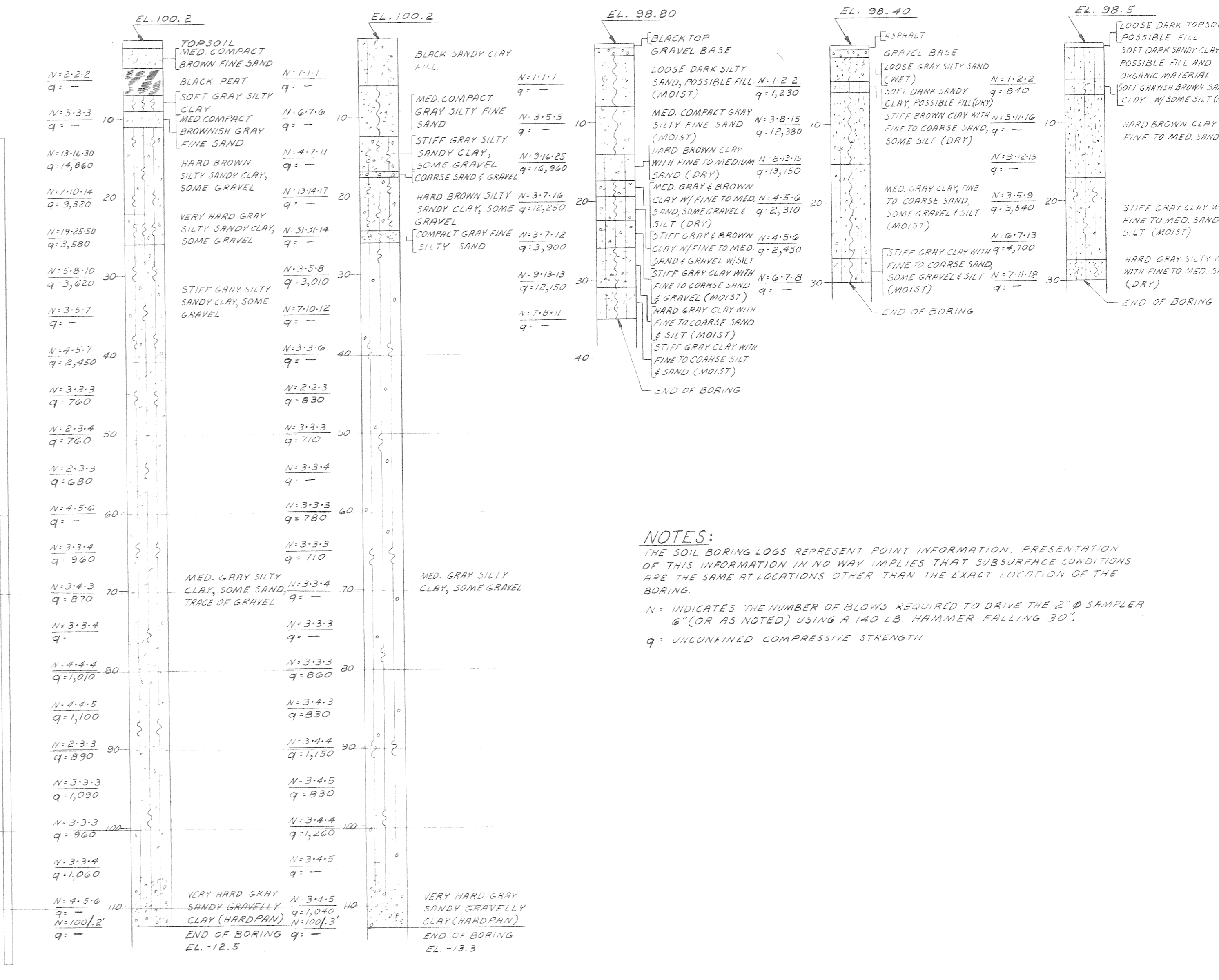
TEST HOLE NO. 3

TEST HOLE NO. 4

TEST HOLE NO. 5

TEST HOLE NO. 6

TEST HOLE NO. 7



NOTES:

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

N: INDICATES THE NUMBER OF BLOWS REQUIRED TO DRIVE THE 2" Ø SAMPLER 6" (OR AS NOTED) USING A 140 LB. HAMMER FALLING 30".
q: UNCONFINED COMPRESSIVE STRENGTH

UTILITY PLAN
SCALE 1" = 40'

UTILITY LEGEND

Table with columns for UTILITY, EXISTING, ABANDONED, and PROPOSED. Lists utilities such as Michigan Consolidated Gas Co., Detroit Edison Co., and Sewers.

SYMBOL LEGEND

Table with columns for SYMBOL and DESCRIPTION. Lists symbols for Sewer Manhole, Water Manhole, Utility Pole, Gas, Fire Dept. Hydrant, Catch Basin, Sign on Pole, R.L.D. Light on Pole, Tree, Test Boring, and Fence.

Revisions table with columns for date, description, and initials.

designed by
drawn by D.L.N.
checked by J.K.
approved: [Signature] STRUCTURAL ENGINEER

CITY OF DETROIT

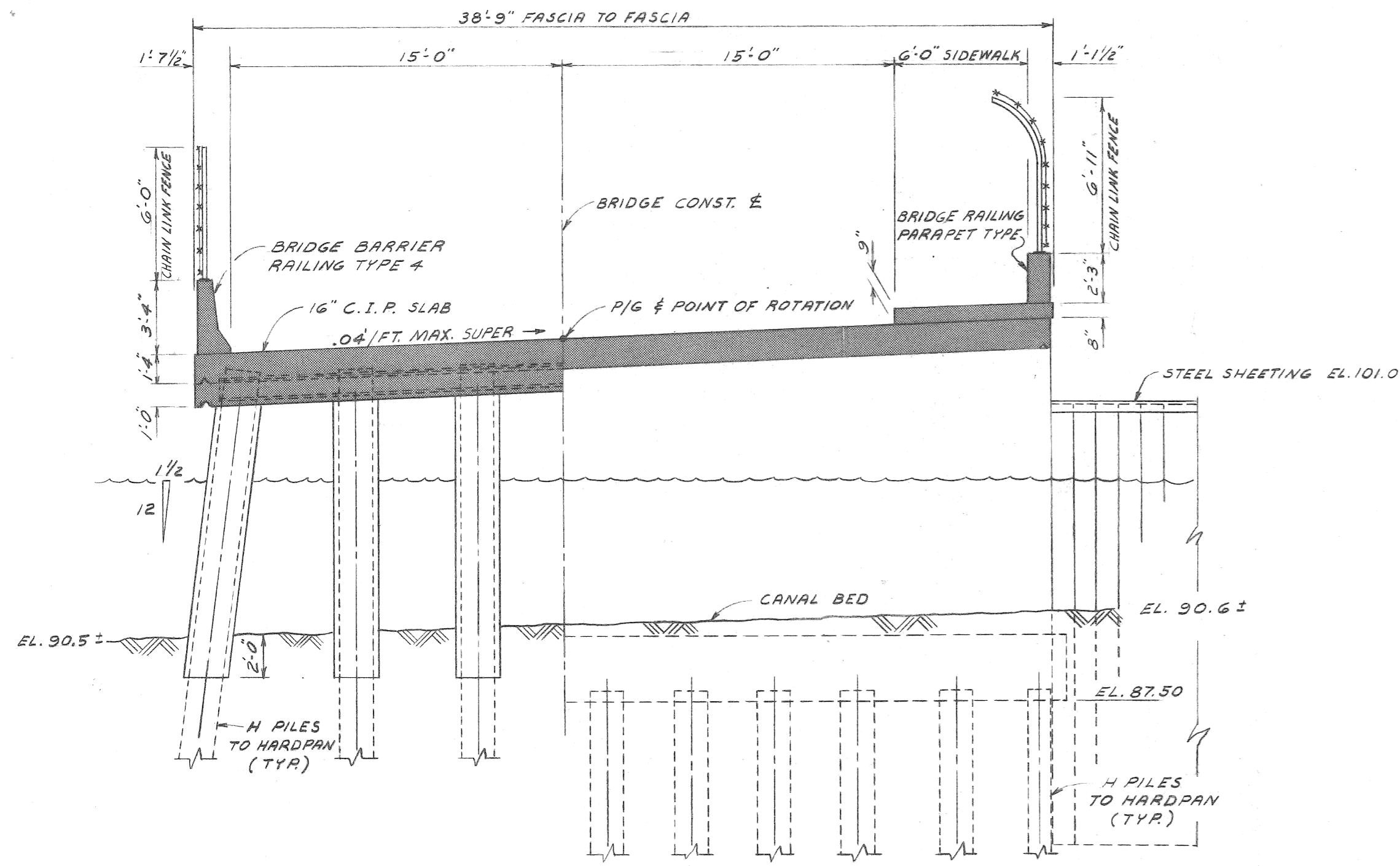
city engineering department
for DEPARTMENT OF PUBLIC WORKS

BRIDGE RECONSTRUCTION

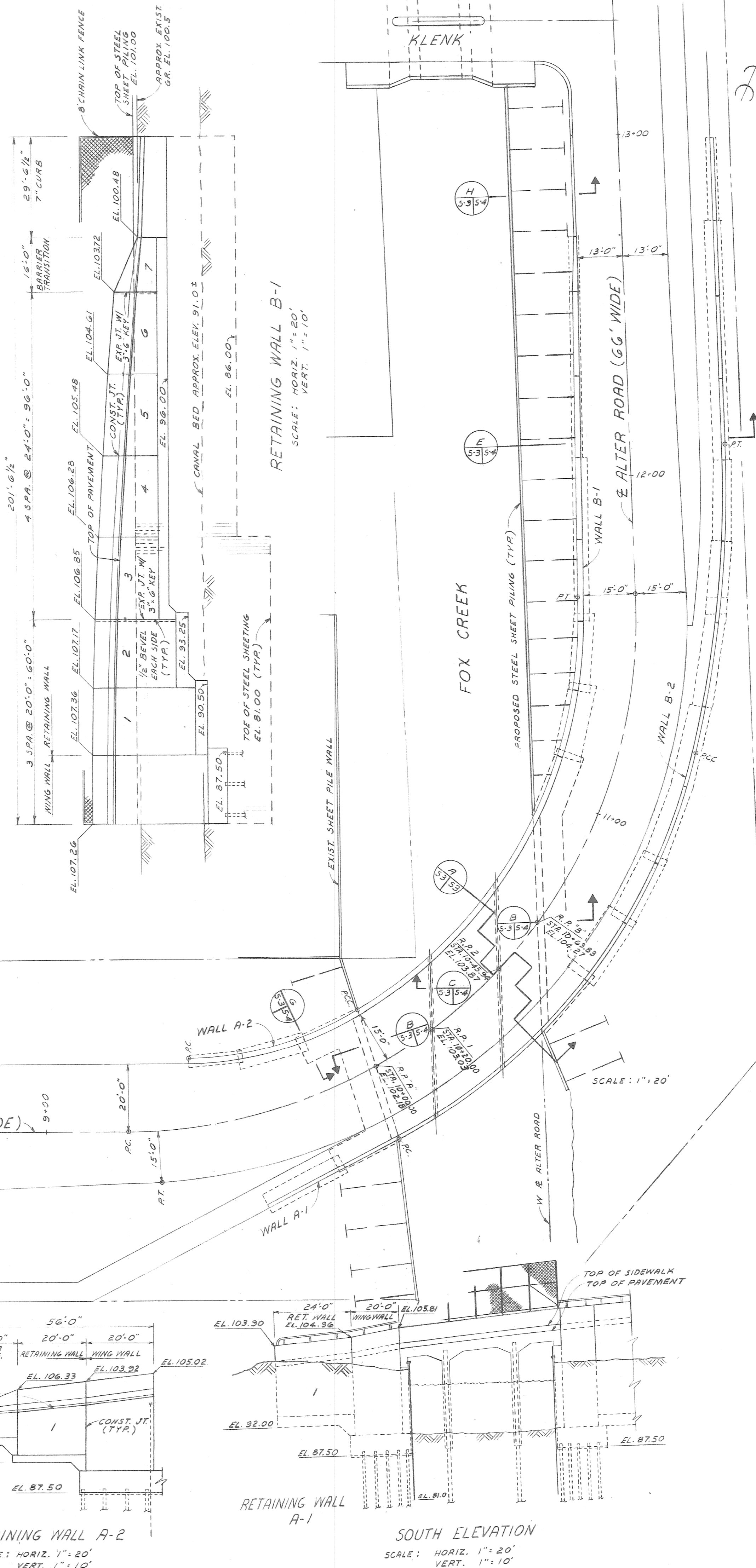
RIVERSIDE AVENUE OVER FOX CREEK BW-246

UTILITY DRAWING AND SOIL BORINGS

a.o. 87-22-12
contract no.
sheet of
drawing no. S-2
date

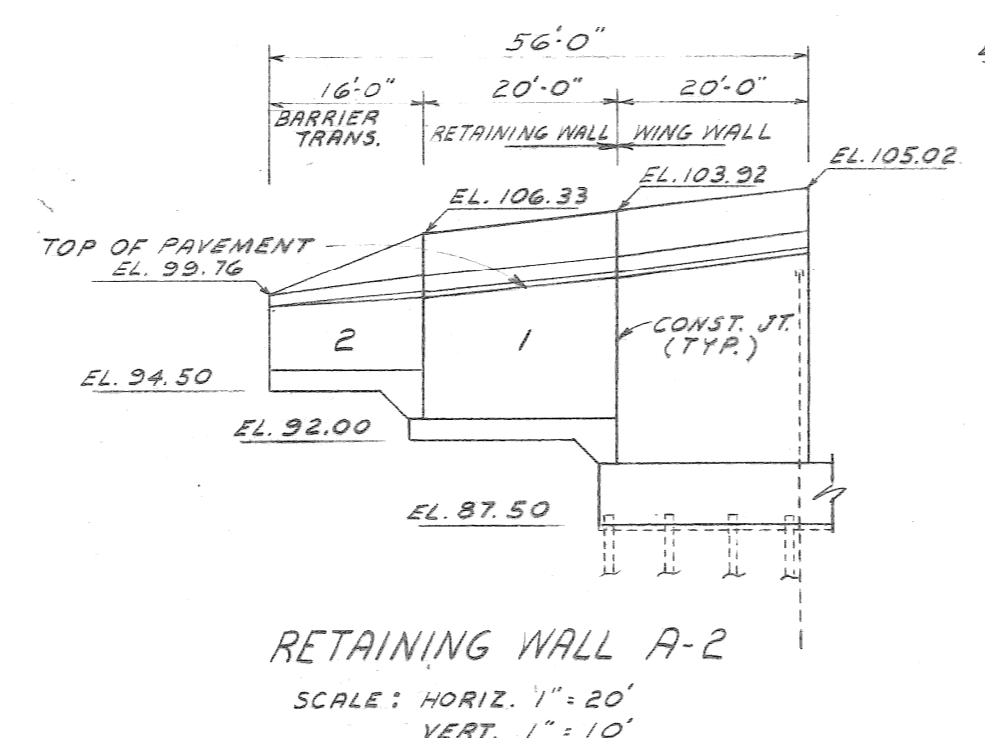
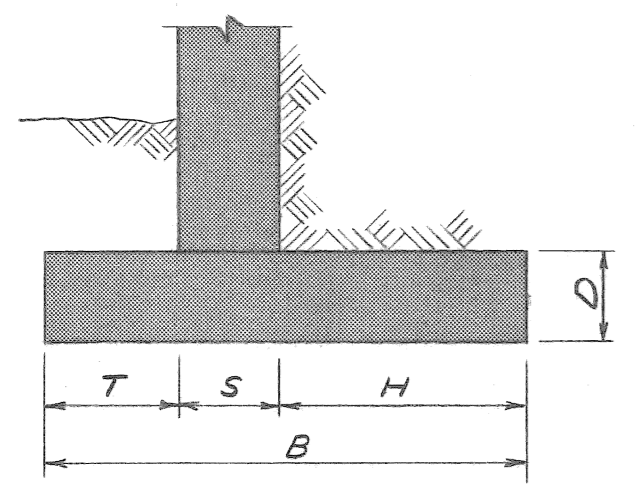


SECTION A
SCALE 3/16" = 1'-0"

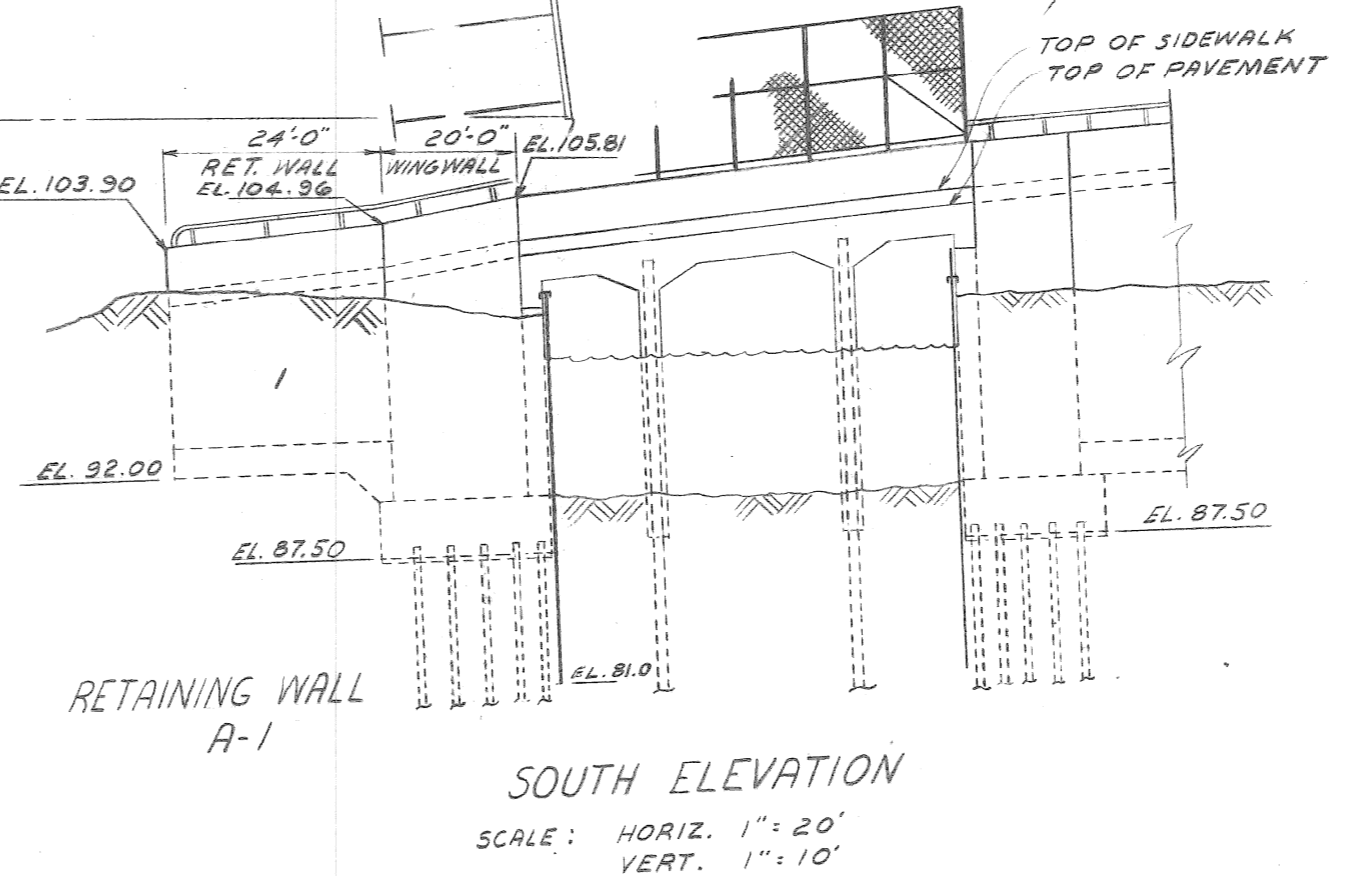


RETAINING WALL DIMENSIONS

		B	T	S	H	D
A-2 A1	1	6'-0"	1'-6"	1'-1 1/2"	3'-4 1/2"	1'-6"
	2	5'-6"	1'-6"	1'-7 1/2"	2'-4 1/2"	1'-0"
B-1	1	8'-0"	2'-0"	1'-7 1/2"	4'-4 1/2"	1'-6"
	2	6'-0"	1'-6"	1'-7 1/2"	2'-10 1/2"	1'-6"
	3, 4, 5, 6, 7	4'-6"	1'-0"	1'-7 1/2"	1'-10 1/2"	1'-0"
B-2	1	9'-9"	2'-9"	1'-1 1/2"	5'-10 1/2"	1'-6"
	2	7'-6"	1'-10 1/2"	1'-1 1/2"	4'-6"	1'-6"
	3, 4	6'-9"	1'-9 1/2"	1'-1 1/2"	3'-10"	1'-6"
	5, 6	6'-0"	1'-8"	1'-1 1/2"	3'-2 1/2"	1'-6"
	7	5'-6"	1'-6"	1'-1 1/2"	2'-10 1/2"	1'-0"
	8, 9, 10, 11	5'-0"	1'-3"	1'-1 1/2"	2'-7 1/2"	1'-0"



RETAINING WALL A-2
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'



RETAINING WALL A-1
SOUTH ELEVATION
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

GENERAL NOTES

EXCEPT WHERE OTHERWISE INDICATED ON THIS STRUCTURE SHEET 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, 1984 EDITION.

THE TOP OF ROADWAY SLAB AND TOPS OF CURBS AND SIDEWALKS ARE PARALLEL TO THE VERTICAL CURVE AND TANGENTS EXCEPT AS MODIFIED BY SUPERELEVATION TRANSITION.

THIS STRUCTURE IS ON A HORIZONTAL CURVE. THE FASCIA LINES AND CURB LINES ARE CONCENTRIC WITH THE CONSTRUCTION CENTERLINE.

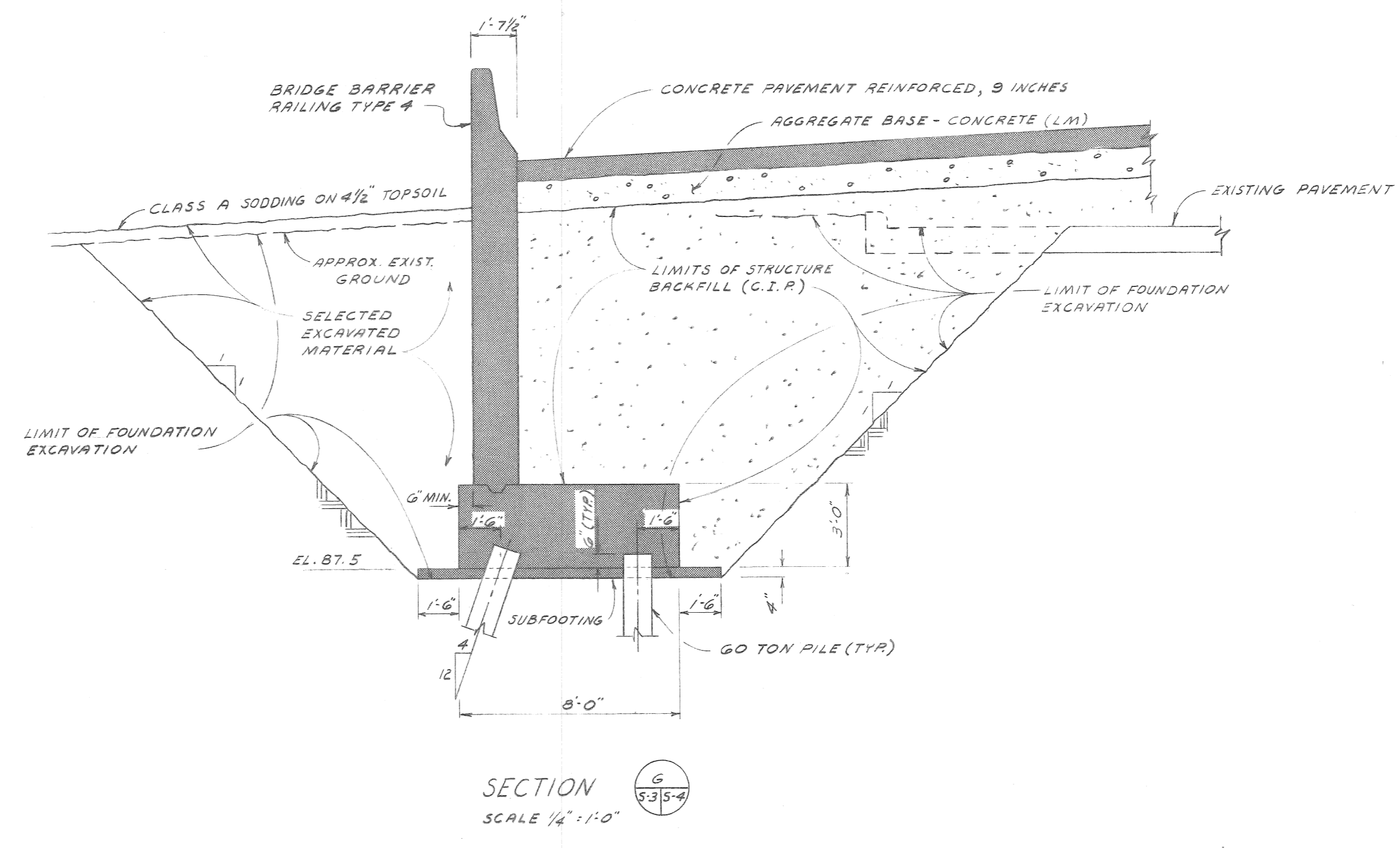
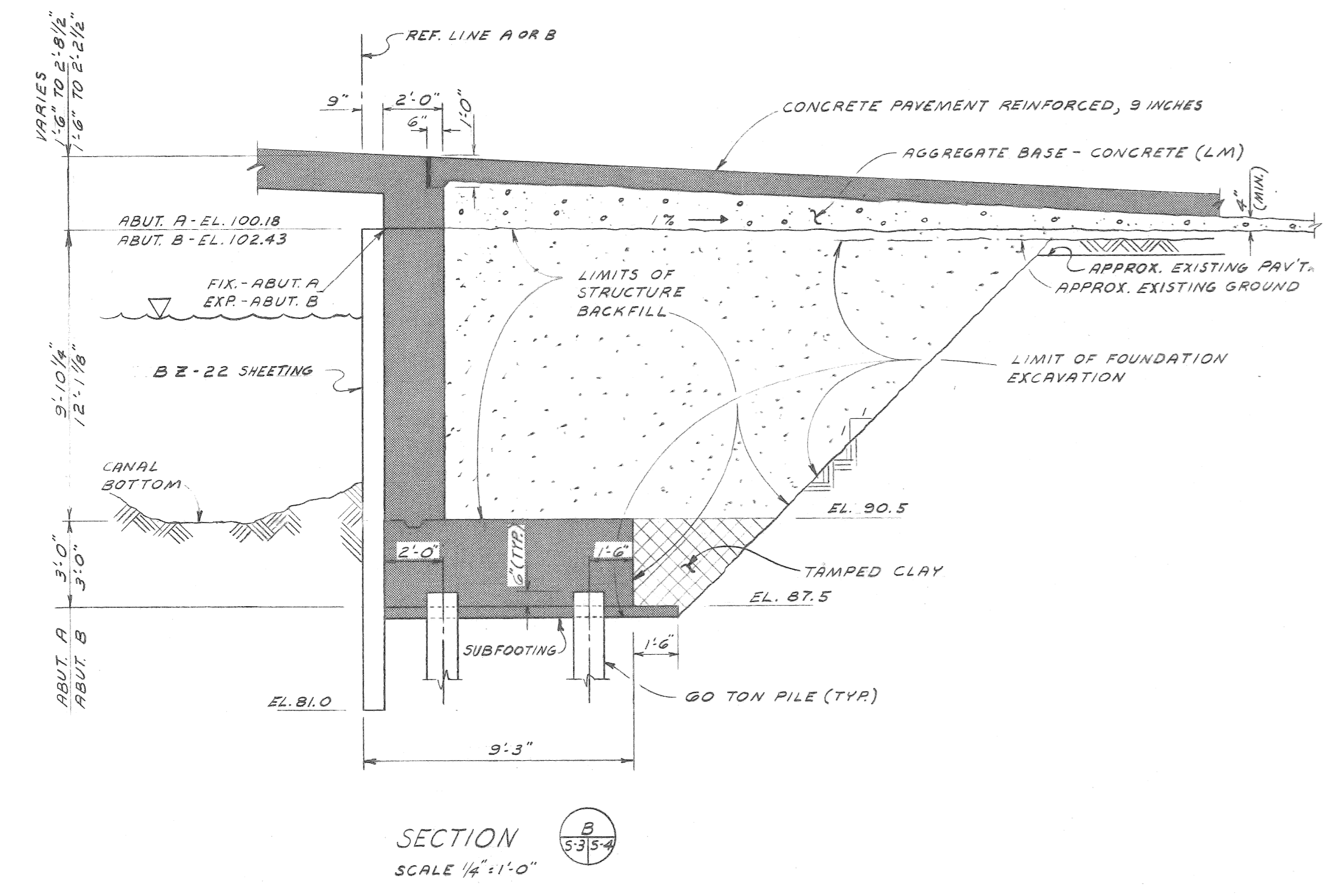
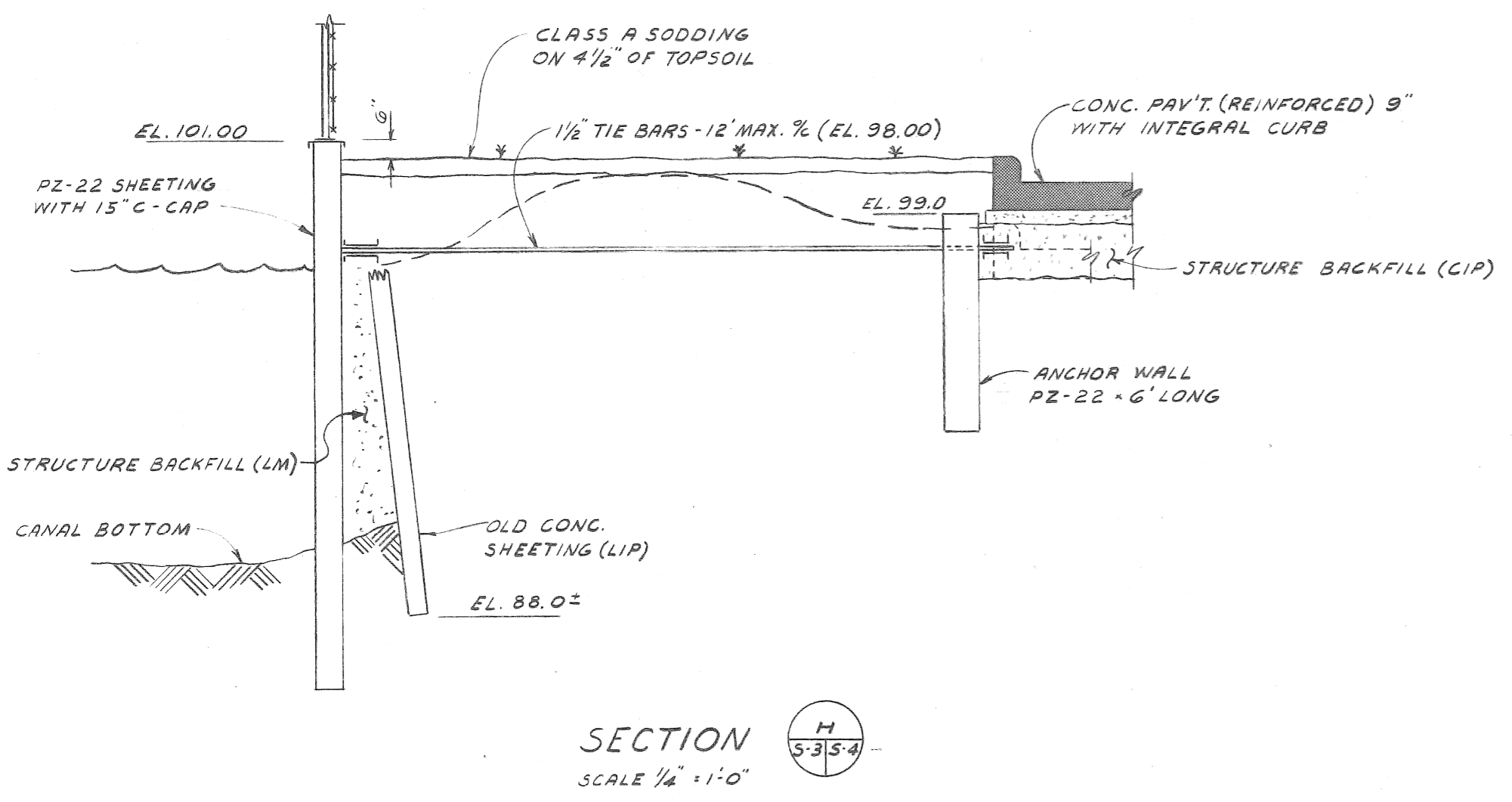
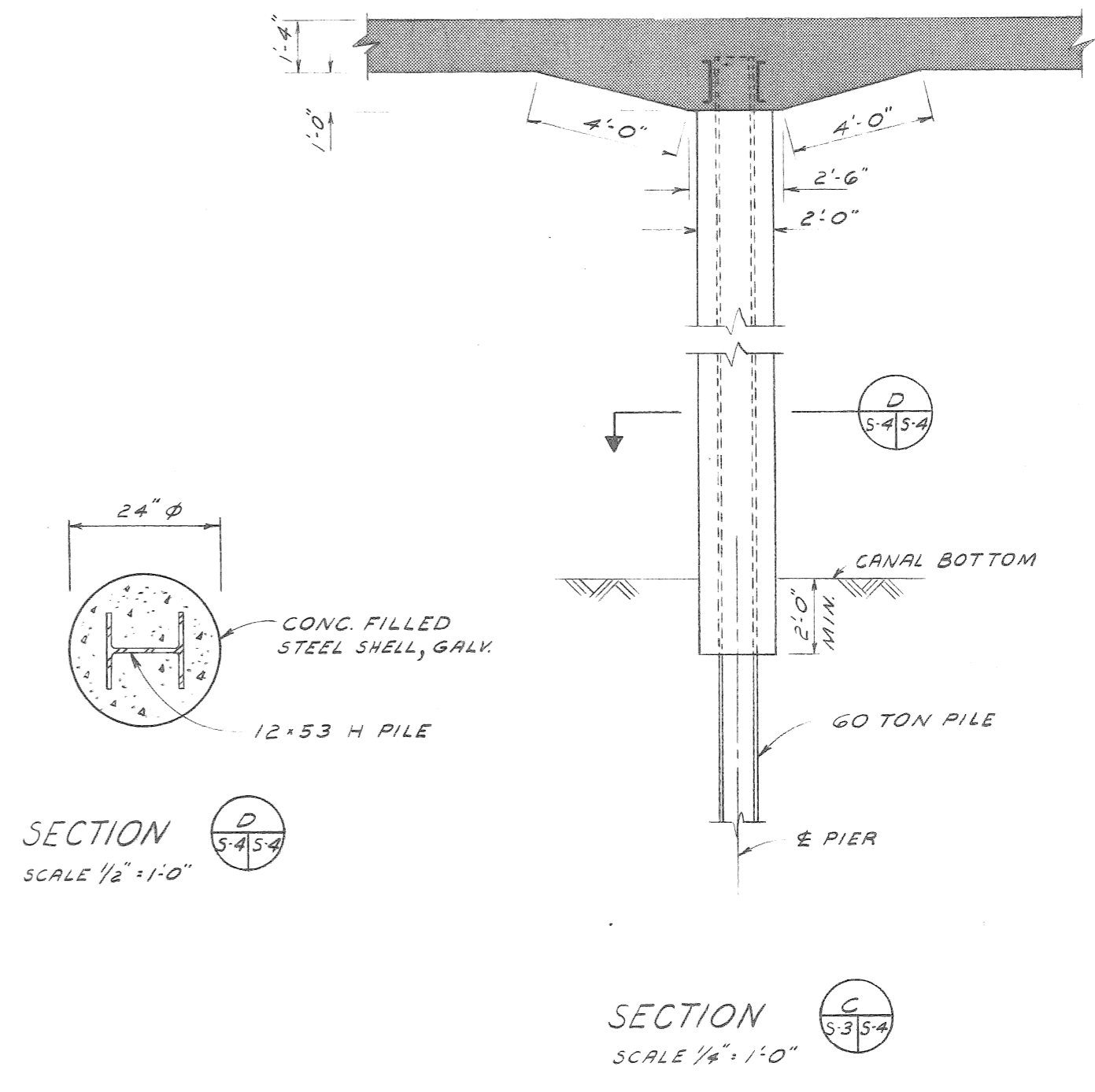
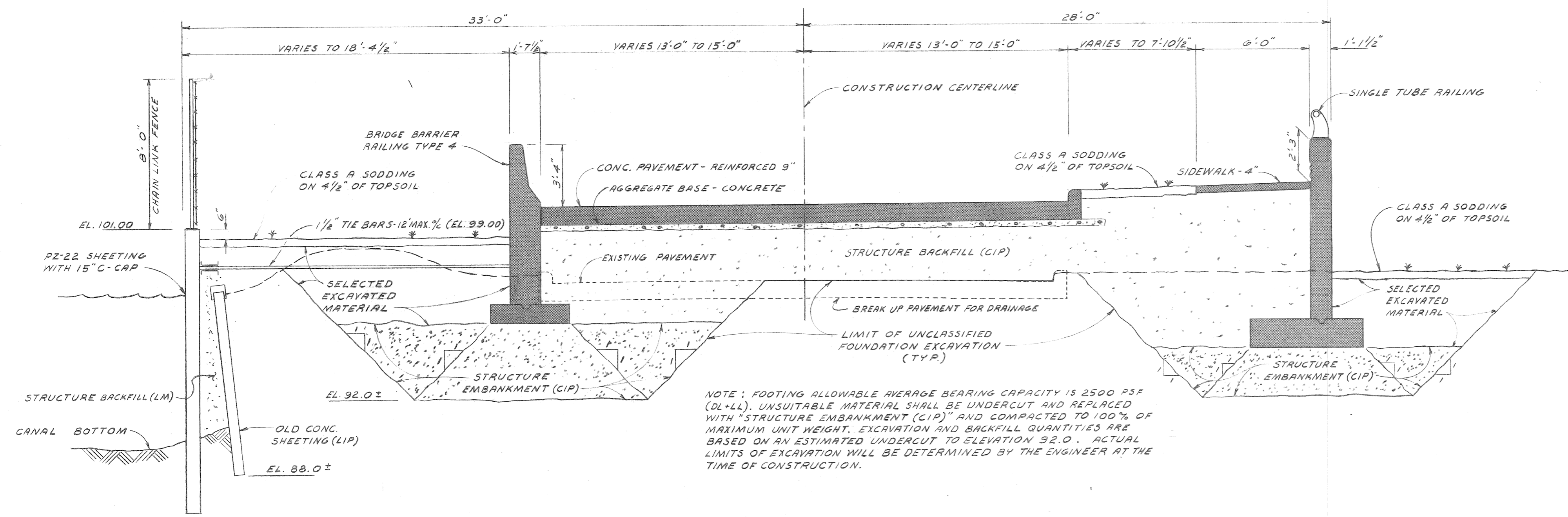
THE DESIGN IS BASED ON THE FOLLOWING MAXIMUM FOUNDATION PRESSURES:
AVG. D.L. + L.L. 2500 psf.
RETAINING WALL

MWP DENOTES MEMBRANE WATERPROOFING
JWP DENOTES JOINT WATERPROOFING
NS DENOTES NEAR SIDE
FS DENOTES FAR SIDE
ES DENOTES EACH SIDE

FOR BEVEL AND MOLDING DETAILS, SEE STANDARD SHEET R18A.
FIELD-BEND REINFORCEMENT TO CLEAR DRAIN HOLES.

PRELIMINARY PLAN A
JULY 8, 1987

designed by <i>M.C.</i>	checked by <i>J.K.</i>
drawn by <i>D.L.M.</i>	approved: <i>[Signature]</i>
STRUCTURAL ENGINEER	
CITY OF DETROIT	
city engineering department	
for DEPARTMENT OF PUBLIC WORKS	
BRIDGE RECONSTRUCTION	
RIVERSIDE AVENUE OVER FOX CREEK BW-246	
GENERAL PLAN OF STRUCTURE	
a.o. 87-22-12	contract no.
sheet of drawing no. S-3	date



no.	date	revision

designed by M.C.
 drawn by O.L.N.
 checked by J.K.
 approved by [Signature]
 STRUCTURAL ENGINEER

CITY OF DETROIT

city engineering department
 for DEPARTMENT OF PUBLIC WORKS

BRIDGE RECONSTRUCTION

RIVERSIDE AVENUE OVER FOX CREEK BW-246

GENERAL PLAN OF STRUCTURE DETAILS

a.o. 87-22-12 contract no.

sheet of drawing no. S-4 date

PRELIMINARY PLAN A JULY 8, 1987