

CURVE DATA

CURVE #1	CURVE #2	CURVE #3
Δ = 91°-59'-24"	Δ = 30°-13'-39"	Δ = 60°-41'-11"
D = 38°-11'-50"	D = 59°-18'-45"	D = 42°-57'-30"
R = 150.00'	R = 96.60'	R = 133.38'
T = 155.30'	T = 26.09'	T = 78.07'
L = 240.83'	L = 50.96'	L = 141.27'
E = 65.91'	E = 3.46'	E = 21.17'
PC = 9+24.42	PC = 9+45.90 (-20.30)	PCC = 10+03.55 (-16.63)
PT = 11+65.25	PCC = 10+03.55 (-16.63)	PT = 11+62.43 (-16.63)
CURVE #4	CURVE #5	
Δ = 48°-49'-58"	Δ = 15°-40'-48"	
D = 33°-17'-14"	D = 17°-21'-44"	
R = 172.13'	R = 330.0'	
T = 78.14'	T = 45.44'	
L = 146.70'	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. 101.63
- P.B.M. MONUMENT AT LIGHTHOUSE EL. 100.24
- P.B.M. TOP OF CONC. BRIDGE RAILING N.E. COR. FRONT OF TOMMY'S MARINA D-2 EL. 104.187
- C.B.M. ARROW ON HYDRANT N. SIDE OF RIVERSIDE STA. B+12 E. EL. 101.46
- P.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 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 353; 45D f_c = 3,000 PSI; 4000 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.

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

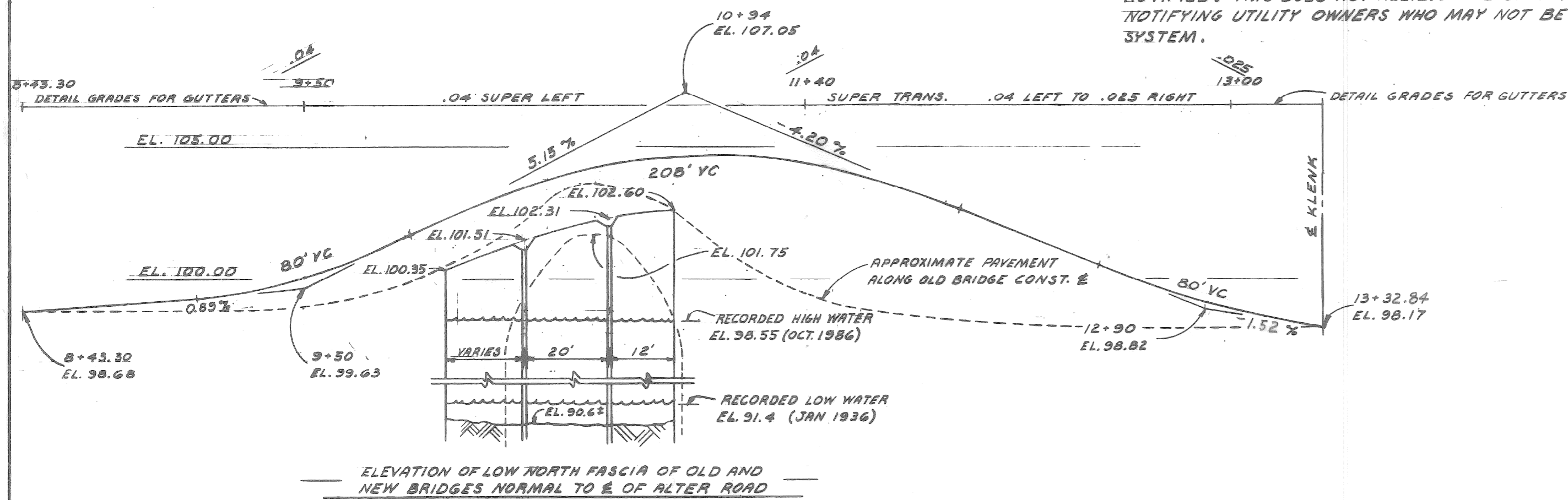
TRAFFIC IS TO BE MAINTAINED OVER THE TEMPORARY ROAD AND BRIDGE.

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.

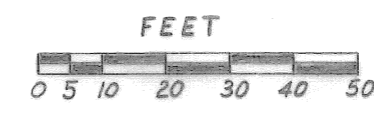
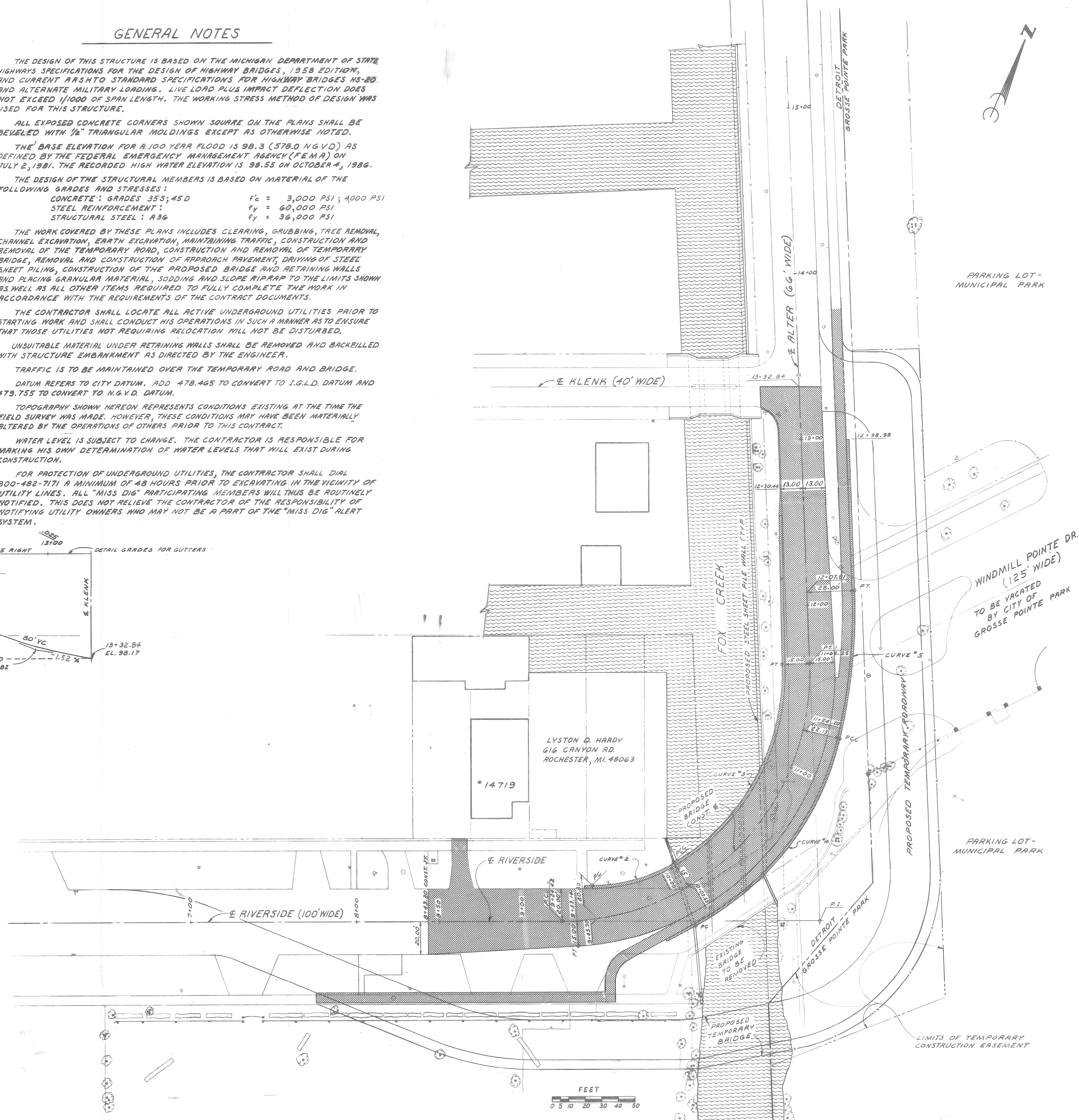
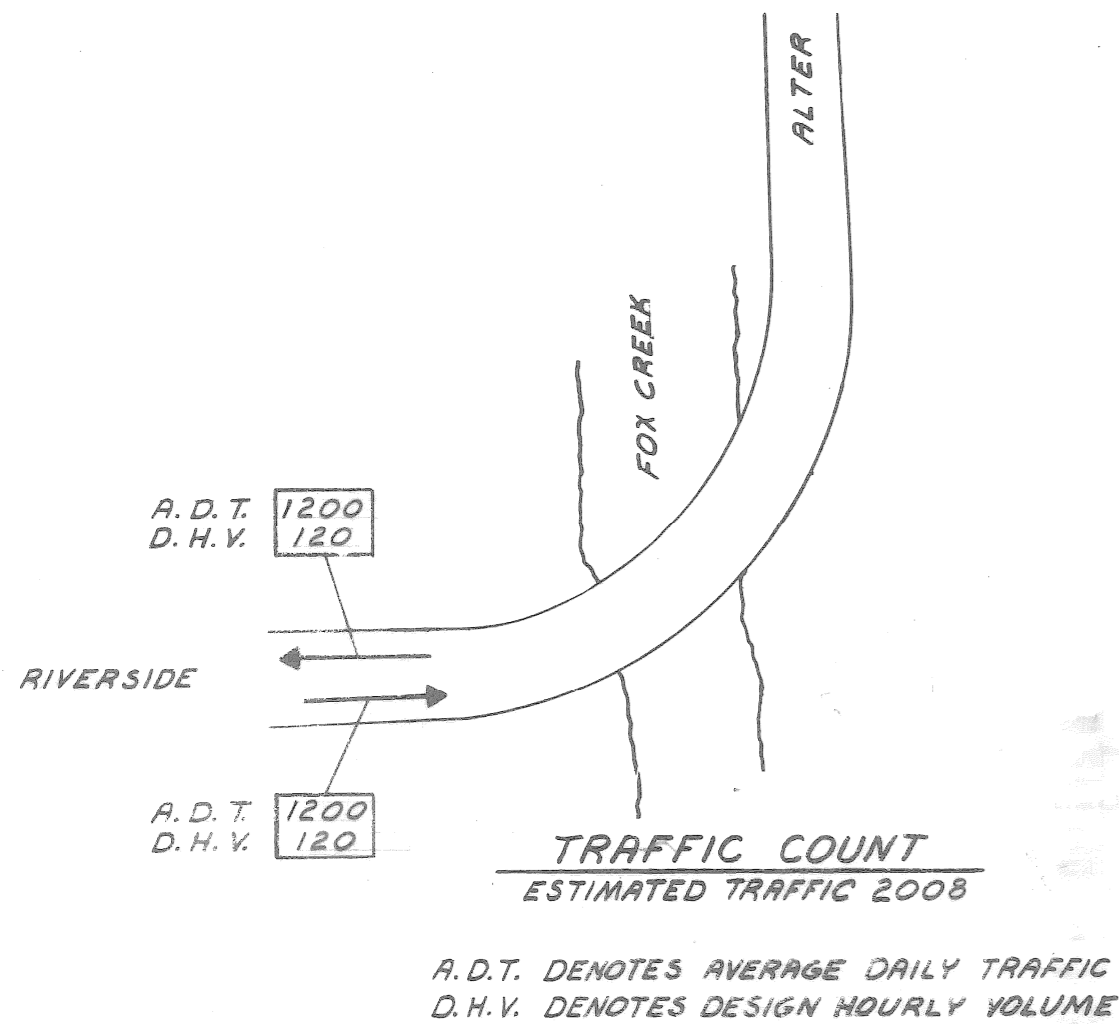
WATER LEVEL IS SUBJECT TO CHANGE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION.

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'



SCALE 1" = 30'

no.	date	revisions

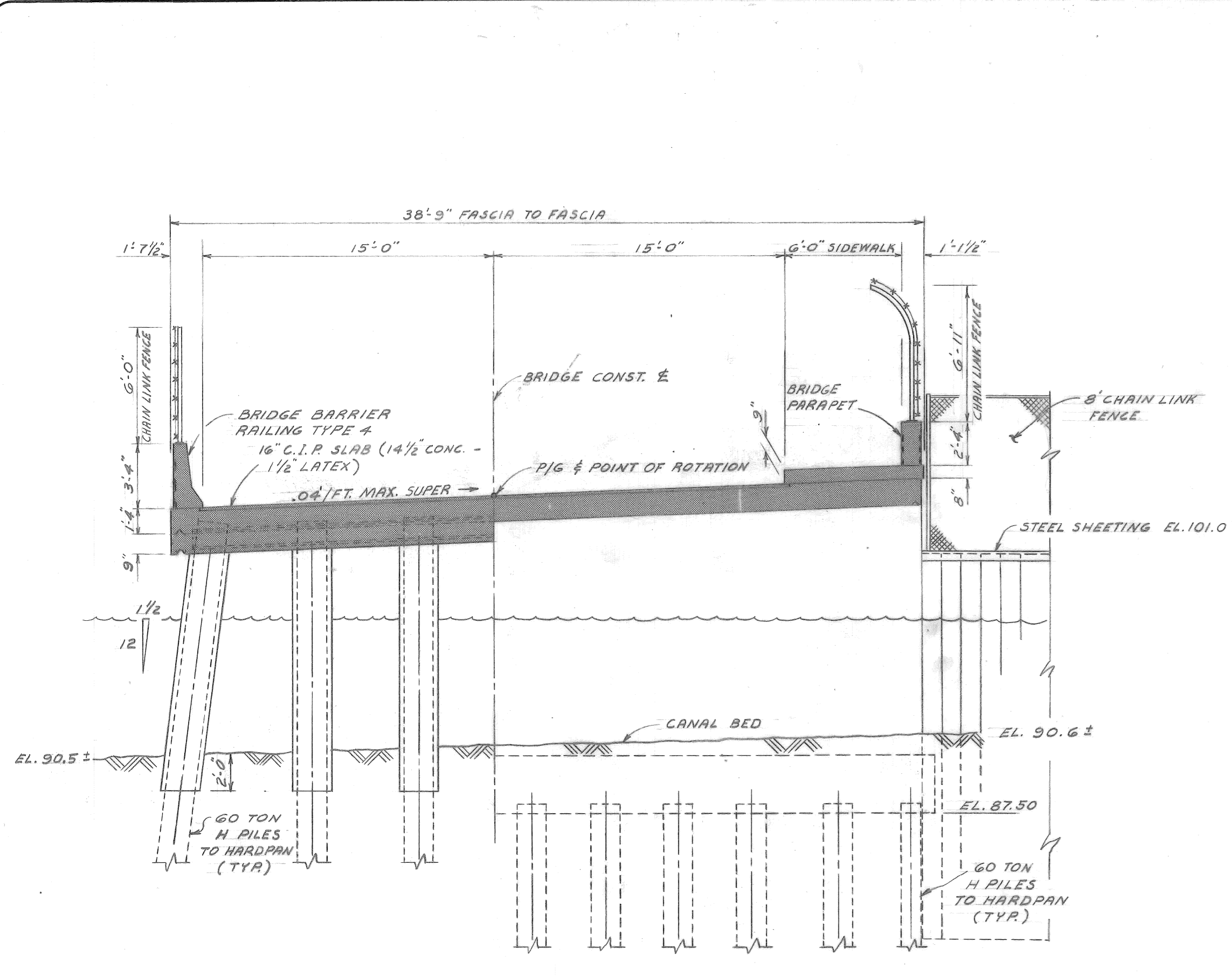
designed by: A1
 drawn by: D.L.N.
 checked by: J.K.
 approved: [Signature]
 STRUCTURAL ENGINEER

CITY OF DETROIT
 city engineering department
 for DEPARTMENT OF PUBLIC WORKS

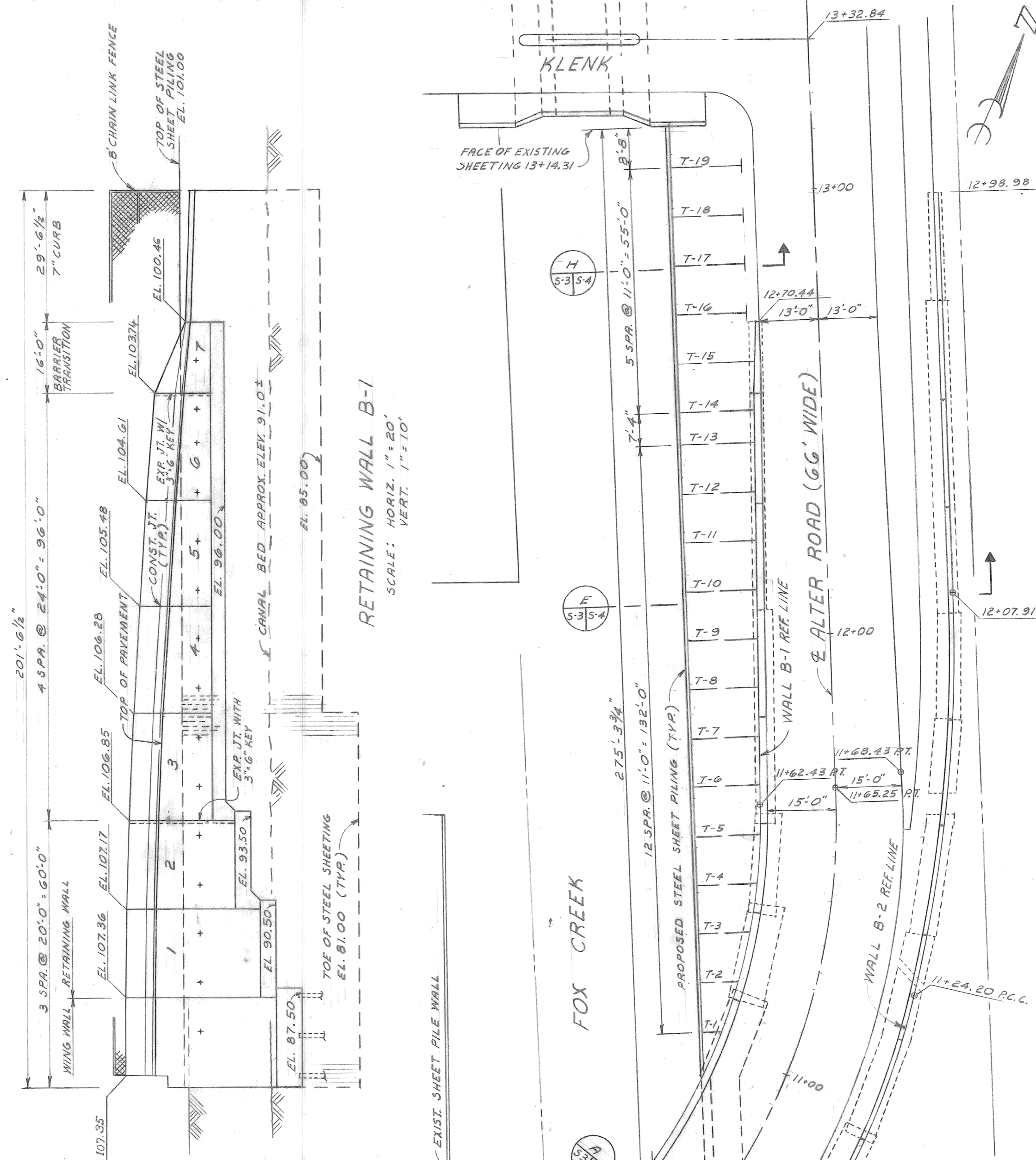
BRIDGE RECONSTRUCTION
 RIVERSIDE AVENUE OVER FOX CREEK BW-246

GENERAL PLAN OF SITE

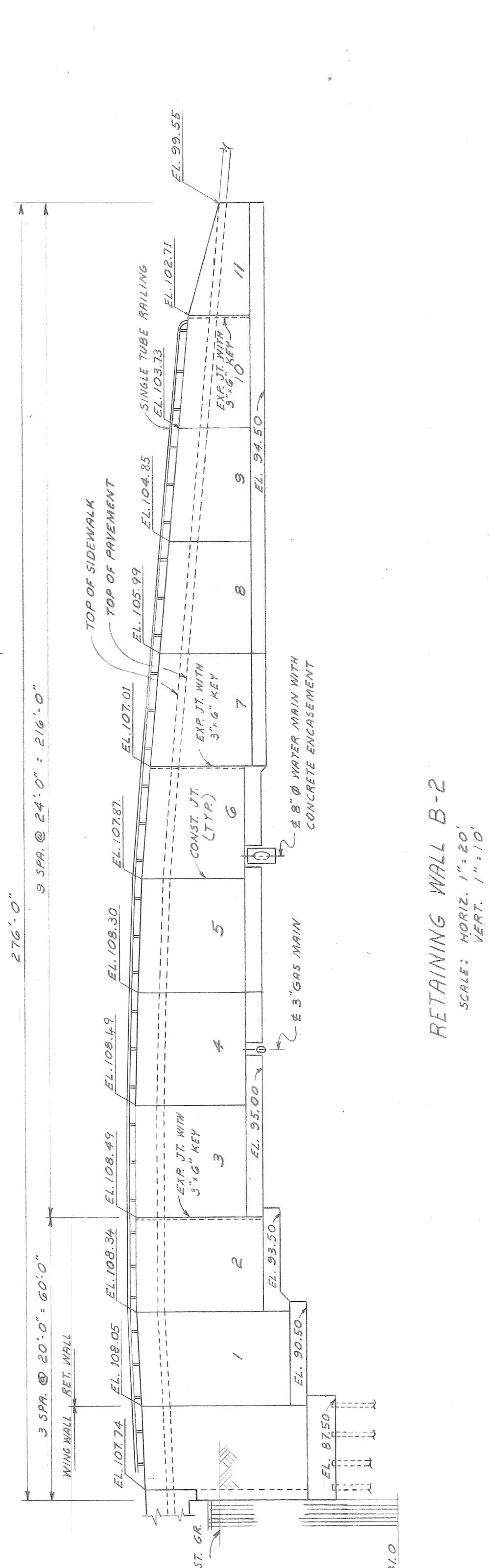
a.o. 87-22-12 contract no.
 sheet of drawing no. S-1
 date NOV. 89



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



REINFORCING WALL B-1
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

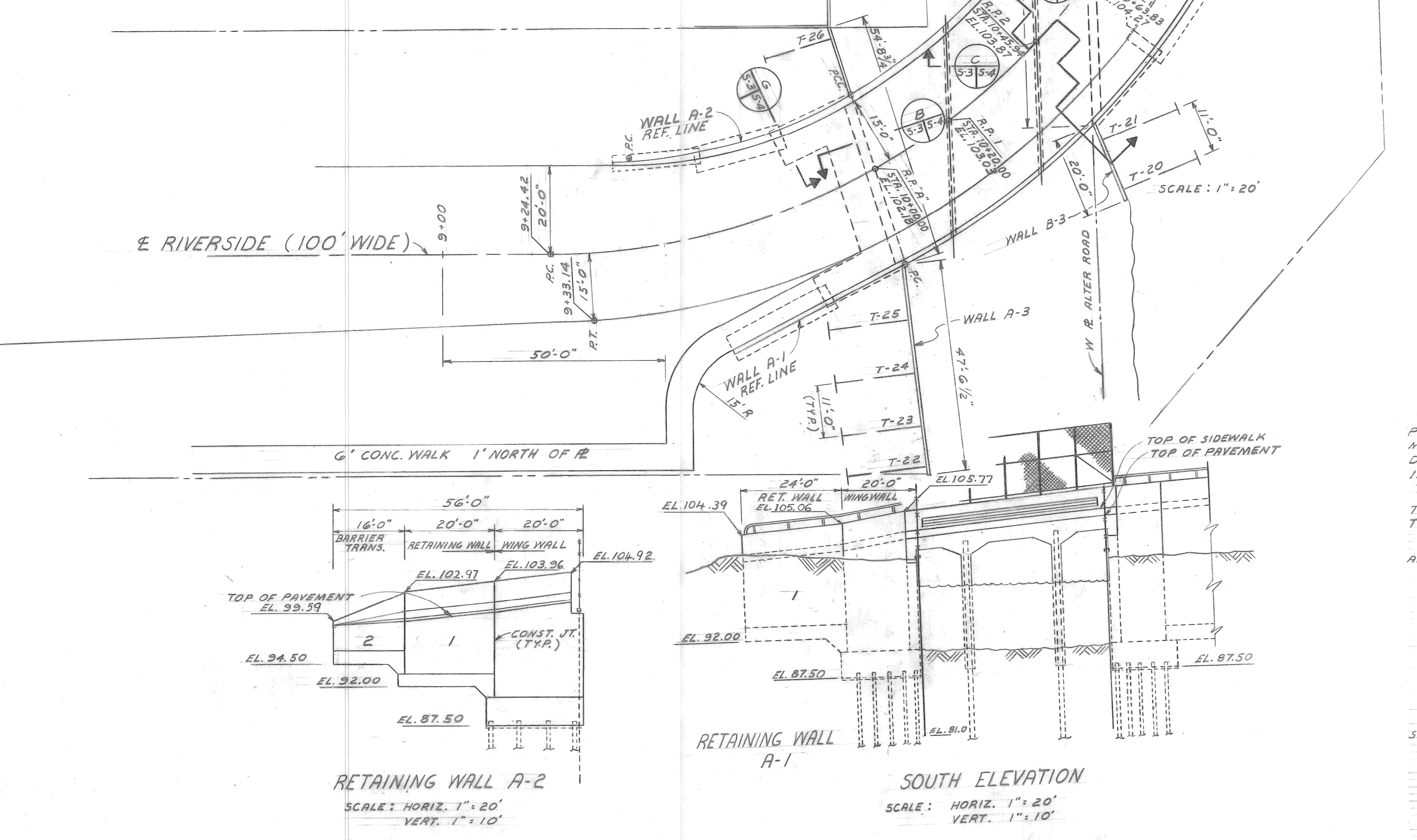
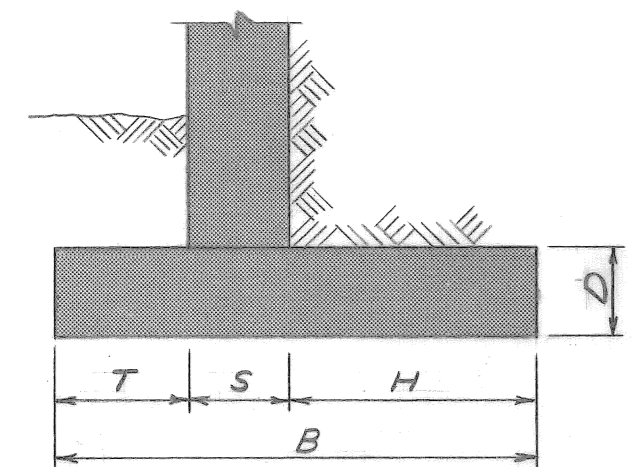


REINFORCING WALL B-2
SCALE: HORIZ. 1" = 20'
VERT. 1" = 10'

RETAINING WALL DIMENSIONS

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

* NOTE: RETAINING WALLS A-2 & B-1-7 DIMENSIONS "T" & "S" VARIES, SEE DETAIL SHEET



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

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 AND DETAIL GRADE REGIONS.

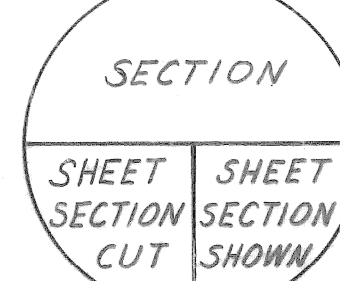
THIS STRUCTURE IS ON A HORIZONTAL CURVE. THE FASCIA LINES AND CURB LINES ARE CONCENTRIC WITH THE CONSTRUCTION CENTERLINE.

THE DESIGN IS BASED ON THE FOLLOWING MAXIMUM FOUNDATION PRESSURES:

RETAINING WALL
AVG. D.L. + L.L. 2500 P.S.F.

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

FOR RAILING POST, BEVEL AND MOLDING DETAILS, SEE STANDARD PLANS X 18c AND X 103c.



designed by	M.C.
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

GENERAL PLAN OF STRUCTURE

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

sheet of drawing no. S-3 date NOV. 89

SECTION SHEET SECTION CUT

revisions

dr'n c.k.d ap'vd date