

STATE DEPARTMENT OF HIGHWAYS DIVISION OF HIGHWAYS—STATE OF COLORADO

P.E., R.O.W. & UTILITIES
UNDER IR 25-2(174)

FEDERAL AID PROJECT NO.	STATE	PROJECT NO.	SHEET NO.
—	COLORADO	IR 25-2(191)	1

AS CONSTRUCTED	
NO REVISIONS	REVISED <u>7-21-87</u> VOID

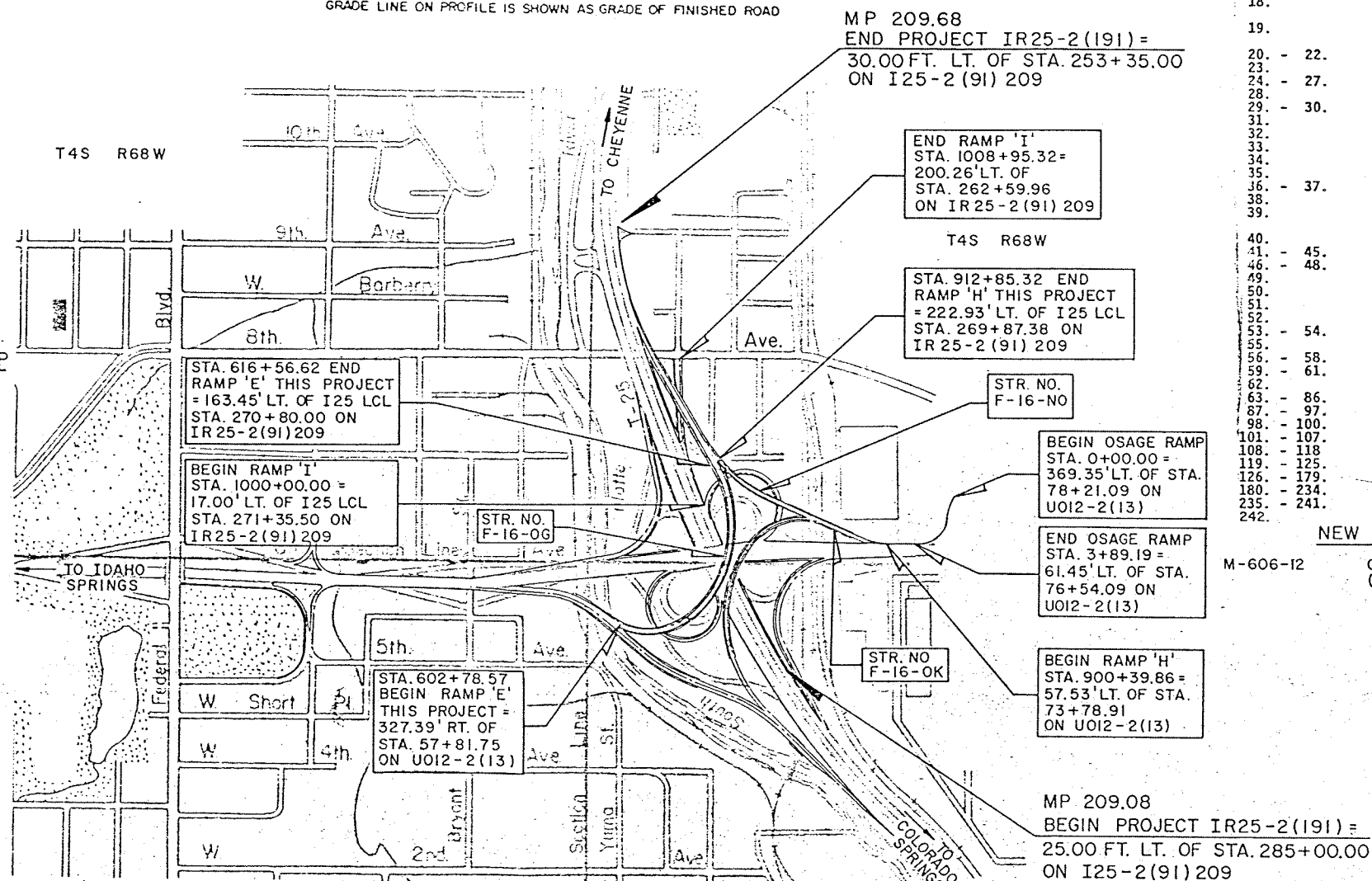
REVISIONS			
R-1	8-25-87	1, 11, 12, 15, 16, 25, 63, 119, 121, 127, 130, 175, 189	J.K.K.

PLAN AND PROFILE OF PROPOSED AS CONSTRUCTED FEDERAL AID PROJECT NO. IR 25-2(191) STATE HIGHWAY NOS. 6 & 25 DENVER COUNTY

PROJECT NO. IR 25-2(191)				
TABULATION OF LENGTH AND DESIGN DATA				
STATION	STRUCTURE		ROADWAY	
	LIN. FT.	MILE	LIN. FT.	MILE
RAMP 'E' STR. NO. F-16-OG 602+78.57 TO 616+56.62	1,378.05	0.2610		
RAMP 'H' 900+39.86 TO 903+07.50 STR. NO. F-16-OK 903+07.50 TO 906+18.00 STR. NO. F-16-NO 906+18.00 TO 912+85.32	310.50	0.0588	267.64	0.0507
RAMP 'I' 1000+00.00 TO 1008+95.32	667.32	0.1264	895.32	0.1696
OSAGE RAMP 0+00.00 TO 3+89.19			389.19	0.0737
SUMMARY	LIN. FT.	MILES		
STRUCTURE F-16-OG	1,378.05	0.2610		
STRUCTURE F-16-OK	310.50	0.0588		
STRUCTURE F-16-NO	667.32	0.1264		
ROADWAY	1,552.15	0.2940		
PROJECT GROSS LENGTH	3,908.02	0.7402		

DESIGN DATA	RAMP 'E'	RAMP 'H'	RAMP 'I'	OSAGE RAMP
MAXIMUM DEGREE OF CURVATURE	14°19'26"	10°52'51"	8°00'00"	38°11'50"
MAXIMUM GRADE	4.176 %	5.640 %	-3.430 %	-1.580 %
MINIMUM S.S.D. HORIZONTAL	227	258	300	180
MINIMUM S.S.D. VERTICAL	340	248	284	910
MAXIMUM DESIGN SPEED	35 MPH	35 MPH	35 MPH	20 MPH

SCALES OF ORIGINAL DRAWINGS
ON PLAN, 1 IN. = 50 FT.
ON PROFILE { 1 IN. = 50 FT. HORIZONTAL
 1 IN. = 10 FT. VERTICAL
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD



SHEET NO.	INDEX OF SHEETS
1.	TITLE SHEET
2.	STANDARD PLANS LIST
3.	I-25/6TH AVENUE INTERCHANGE CONTROL POINTS
4.	I-25/6TH AVENUE INTERCHANGE CONTROL POINT DIAGRAM
5.	I-25/6TH AVENUE IMPROVEMENTS
6.	2000 TRAFFIC DIAGRAM & GENERAL NOTES
7. - 10.	TYPICAL SECTIONS
11. - 163X	SUMMARY OF APPROXIMATE QUANTITIES
17.	SUMMARY OF EARTHWORK, TABULATION OF GUARDRAIL AND FENCE
18.	TABULATION OF SIDEWALK, DRIVEWAY, CURB RAMP, CURB AND GUTTER
19.	TABULATION OF SURFACING AND MEDIAN COVER MATERIAL QUANTITIES
20. - 22.	TABULATION OF REMOVE, ADJUST, AND RESET ITEMS
23.	TABULATION OF STORM AND SANITARY SEWER SYSTEM
24. - 27.	CONSTRUCTION STAGING PLANS
28.	GEOMETRIC LAYOUT SHEET
29. - 30.	GEOMETRIC PLAN W 6TH AVENUE
31.	PLAN & PROFILE OSAGE ON RAMP
32.	PLAN & PROFILE RAMP 'E'
33.	PLAN & PROFILE RAMP 'H'
34.	PLAN RAMP 'E'/I-25 NORTHBOUND
35.	PLAN & PROFILE RAMP 'I'
36. - 37.	PLAN & PROFILE DETOURS
38.	8TH AVENUE AND WYANDOT STREET INTERSECTION PLAN
39.	TRAFFIC ISLAND, CURB RAMP, AND MEDIAN COVER MATERIAL DETAILS
40.	GUARDRAIL TRANSITION AND SIGN PEDESTAL DETAILS
41. - 45.	DRAINAGE AND UTILITY PLANS
46. - 48.	DRAINAGE AND SEWER CROSS SECTIONS
49.	DRAINAGE AND BARRIER DETAILS
50.	INLET TYPE 13 DETAILS
51.	CONCRETE COLLAR, MODIFY INLET AND JACKING DETAILS
52.	IMPACT ATTENUATORS
53. - 54.	SURVEY MONUMENTS
55.	GRADING PLAN
56. - 58.	LANDSCAPE PLANS
59. - 61.	IRRIGATION PLANS
62.	UNDERPASS LIGHTING PLAN
63. - 86.	SIGNAL, SIGNING, AND PAVEMENT MARKING PLANS
87. - 97.	CONSTRUCTION DETOUR PLANS
98. - 100.	SIGN STRUCTURE CROSS SECTIONS
101. - 107.	TRAFFIC SIGNAL STANDARDS
108. - 118.	SIGNAL, SIGNING, AND PAVEMENT MARKING DETAILS
119. - 125.	RETAINING WALLS
126. - 179.	STRUCTURE NOS. F-16-OK, F-16-NO
180. - 234.	STRUCTURE NO. F-16-OG
235. - 241.	SANITARY SEWER DETAILS
242.	LIGHTING WIRING DESIGN
NEW AND REVISED STANDARDS	
M-606-12	GUARD RAIL, TYPE 4, CONCRETE BARRIER (9 SHEETS) 2-18-83

T4S R68W

T4S R68W

CITY OF DENVER
ORIGINAL SCALE IN FEET



1" = 500'

De LEUW CATHER & COMPANY
DENVER, CO.



7-20-87
PROJECT MANAGER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ADMINISTRATOR

DIVISION OF HIGHWAYS

APPROVED:
[Signature] 8-4-87
S/CHIEF ENGINEER DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR CENTRIC-JONES
Resident ENGINEER G.R. SELF
(Project or Resident)
PROJECT STARTED OCTOBER 5, 1987
PROJECT COMPLETED JULY 21, 1989
[Signature] 3-22-90
TITLE DATE

ADMINISTRATED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTAL
NO. REVISIONS	REVISED 7-21-87			IR 25-2 (191)	119	242

REVISIONS	
#-1	8-21-87 Revised Fig. 11a

GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE DIVISION OF HIGHWAYS, STATE OF COLORADO, APPLICABLE TO THE PROJECT.

STRUCTURE EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH STANDARD M-206-1.

EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.

ALL STRUCTURAL STEEL SHALL BE AASHTO M-183 (ASTM A-36) UNLESS OTHERWISE NOTED.

CLASS 1 FINISH, FOLLOWED BY APPLICATION OF A COLORED ACRYLIC COATING WILL BE REQUIRED ON ALL EXPOSED CONCRETE AND DOWN TO 1'-0" BELOW GROUND LINE. REQUIREMENTS FOR COATING ARE GIVEN IN REVISION OF SECTION 601, STRUCTURAL CONCRETE (COATING).

ALL EXTERIOR CONCRETE CORNERS SHALL BE CONSTRUCTED WITH 3/4" CHAMFERS, UNLESS OTHERWISE NOTED.

GRADE 60 REINFORCING STEEL IS REQUIRED FOR #4 BARS AND LARGER. ALL REINFORCING STEEL SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE.

THE FOLLOWING TABLE GIVES THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS:

BAR SIZE	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH FOR CLASS A CONCRETE	1'-0"	1'-3"	1'-8"	2'-3"	3'-0"	3'-10"	4'-10"	5'-11"

ANY SPLICES NOT SHOWN SHALL BE APPROVED BY THE ENGINEER.

APPLIED WIND LOADS AND EARTHQUAKE LOADS WERE NOT CONSIDERED IN ANALYZING THE STRUCTURE FOR STABILITY DURING THE CONSTRUCTION STAGES.

E.F. = EACH FACE
F.F. = FAR FACE
N.F. = NEAR FACE
T.F. = TOP FACE
B.F. = BOTTOM FACE

THE INFORMATION SHOWN ON THESE PLANS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE TO THEM.

DESIGN DATA

CURRENT AASHTO SPECIFICATIONS, EXCEPT AS NOTED:

LIVE LOAD: AASHTO HS-20-44 AND INTERSTATE ALTERNATE
DEAD LOAD: EARTH - 120 LBS. PER CU. FT., 2' SURCHARGE (LIVE LOAD)
EQUIVALENT FLUID PRESSURE (DESIGN): SEE DETAILS

REINFORCED CONCRETE:

CLASS A CONCRETE: FC = 1,200 PSI, N = 9

REINFORCING STEEL: #4 BARS AND LARGER: FS = 24,000 PSI

SUMMARY OF QUANTITIES

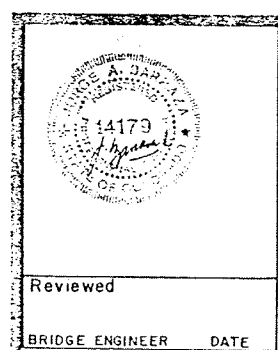
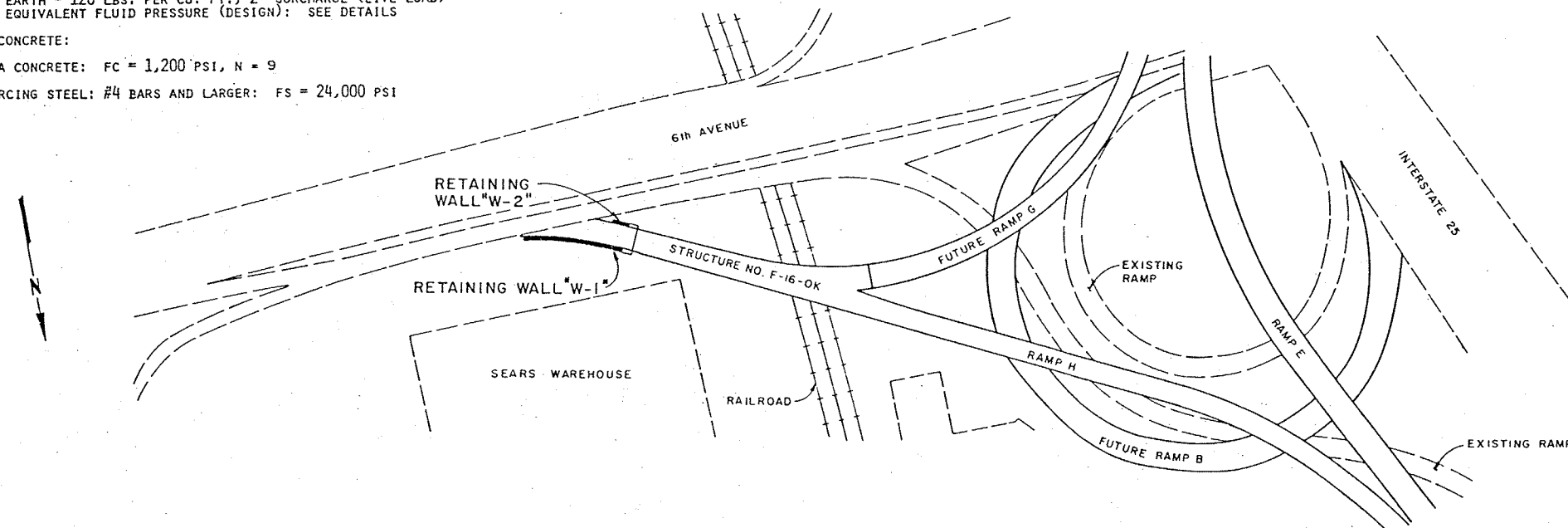
ITEM	DESCRIPTION	UNIT	WALL "W-1"	WALL "W-2"	TOTALS
206	Structure Excavation	Cu. Yd.	453	-	453
206	Structure Backfill (Class 1)	Cu. Yd.	924	24	948
206	Filter Material (Class B)	Cu. Yd.	40	1	41
502	Steel Piling (HP10x42)	Lin. Ft.	860 7/4		7-4 860
502	Drive Steel Piling	Lin. Ft.	120 0		120 0
513	Drain Pipe (3 Inch)	Lin. Ft.	9	45	73 4
518	Water Stop (6 Inch)	Lin. Ft.	9	45	73 4
601	Concrete Class A (Wall)	Cu. Yd.	164 15 65	9	173
602	Reinforcing Steel (Epoxy Coated)	Lb.	26,015	950	26,965
606	Bridge Rail Type 4	Lin. Ft.	130	20	150

1 Furnished by the State and Available at the project site. (Size HP 14x89)

INDEX OF DRAWINGS

- B-1 General Information - Summary of Quantities
- B-2 Engineering Geology
- B-3 General Layout - Retaining Wall W-1
- B-4 General Layout - Retaining Wall W-2
- B-5 Retaining Wall Details
- B-6 Retaining Wall Details - Type 2
- B-7 Retaining Wall Details - Miscellaneous

DESIGNED BY	DATE	CHECKED BY	DATE
BAA	11-86	RAB	6-87
JAB	5-87	BAA	6-87
RSP	11-86	JAB	6-87



De Leuw, Cather & Company Denver, CO

DIVISION OF HIGHWAYS

GENERAL INFORMATION

SUMMARY OF QUANTITIES

RETAINING WALLS

Near Denver Sec. 27 T4S R68W

Designer B. Arrighi Structure Numbers

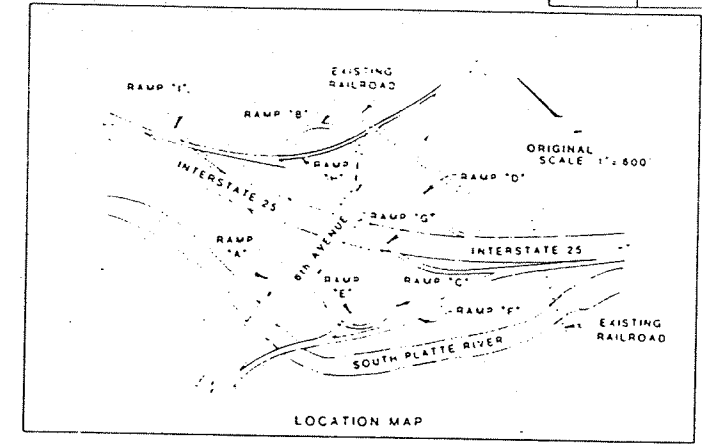
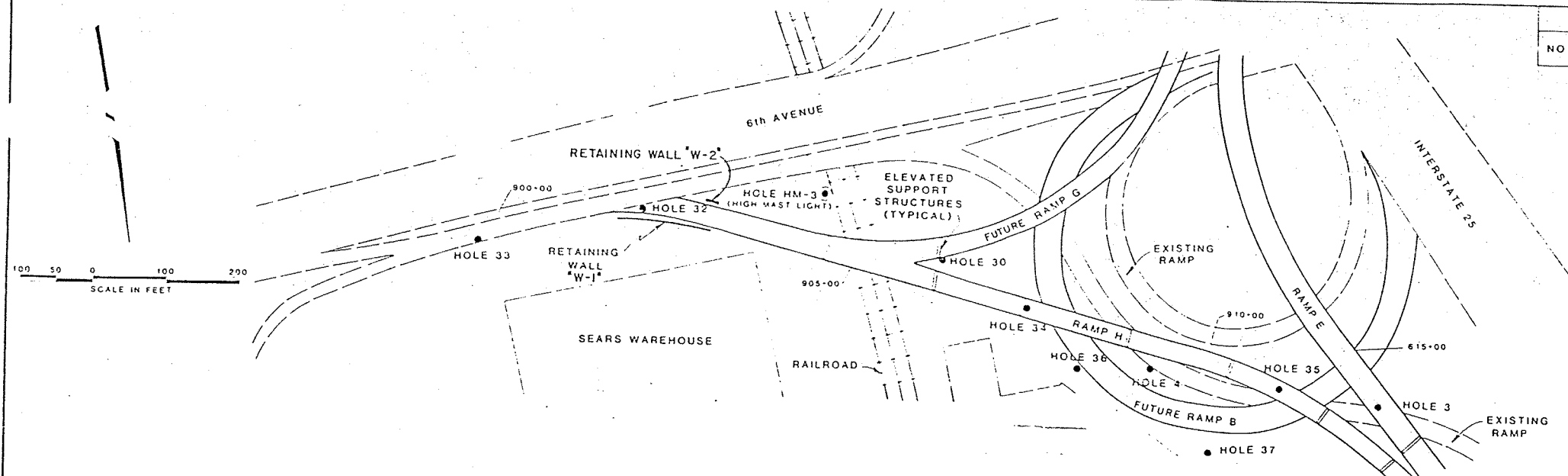
Detailer R. Panning

Drawing Number B-1 of 7 Drawings

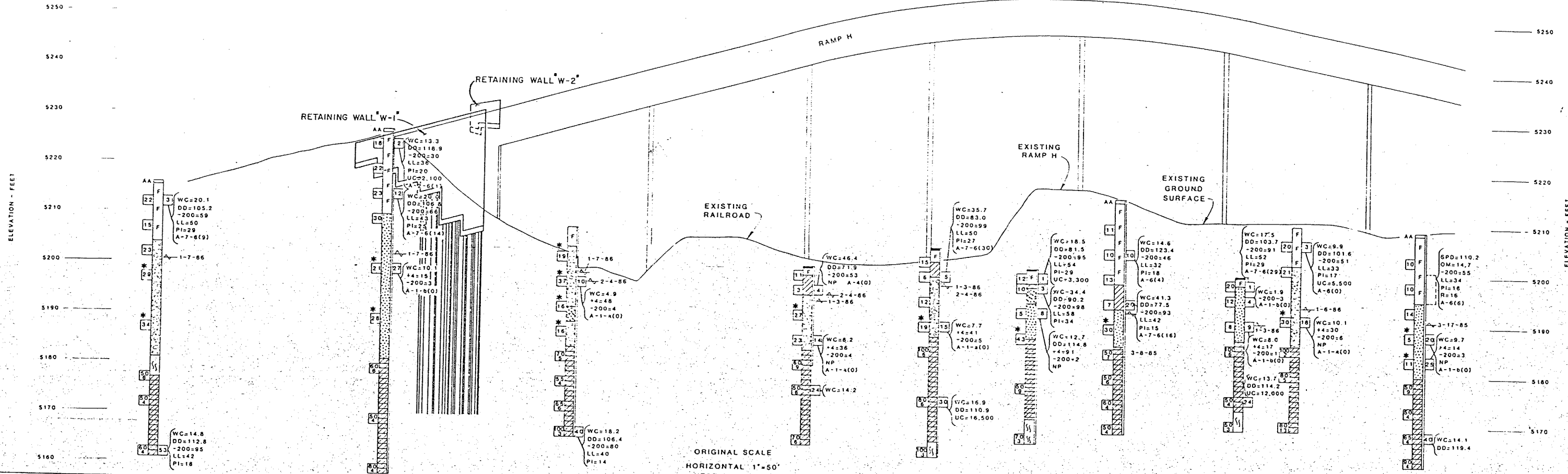
Reviewed

BRIDGE ENGINEER DATE

REVISIONS				
NO.	DATE	DESCRIPTION	BY	CHKD.



HOLE 33 ELEV.=5216' STA. 899+70	HOLE 32 ELEV.=5227' STA. 902+00	HOLE HM-3 ELEV.=5208' STA. 904+40	HOLE 30 ELEV.=5201' 906+20	HOLE 34 ELEV.=5205' STA. 907+50	HOLE 36 ELEV.=5201' STA. 908+30	HOLE 4 ELEV.=5215' STA. 909+30	HOLE 37 ELEV.=5200' STA. 910+50	HOLE 35 ELEV.=5210' STA. 911+10	HOLE 3 ELEV.=5209' STA. 616+00
---------------------------------------	---------------------------------------	---	----------------------------------	---------------------------------------	---------------------------------------	--------------------------------------	---------------------------------------	---------------------------------------	--------------------------------------



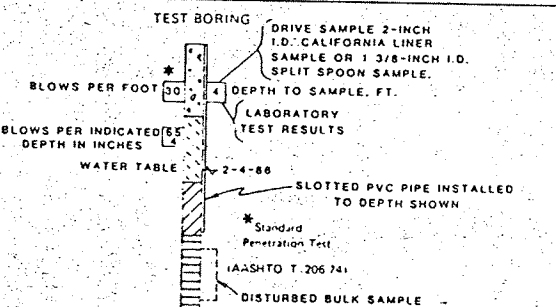
SUMMARY OF TEST RESULTS

Depth	Classification		Grating Analysis				Atterberg Limits			Water Content (%)	Dry Density (pcf)	Liquid Limit (%)	Plasticity Index (%)	Tremal Shear Strength (psi)	C	PSI
	Crust of Edge	Value	AASHTO	Grain	Clay	Sand	Sh	LL	PI							

TYPE OF MATERIAL

- TOPSOIL
- ASPHALT
- FILL, GRAVELLY SAND TO SANDY CLAY, MOIST, BROWN, SCATTERED WOOD AND BRICK IN HOLES 33 AND 35.
- SAND (SP) CLEAN TO SLIGHTLY SILTY, LOOSE TO MEDIUM DENSE, MOIST TO WET, BROWN.
- SAND (SC-SM) CLAYEY TO SILTY, MEDIUM DENSE, MOIST, BROWN.
- SAND AND GRAVEL (SP-GP) CLEAN TO SILTY, MEDIUM DENSE TO DENSE, MOIST TO WET, BROWN.
- CLAY (CL) SLIGHTLY SILTY TO SILTY, MEDIUM TO STIFF, MOIST, BROWN.
- CLAYSTONE BEDROCK, HARD TO VERY HARD, MOIST, BROWN TO BLUE-GRAY.
- SANDSTONE BEDROCK, VERY HARD, MOIST, BROWN TO BLUE-GRAY.

LEGEND



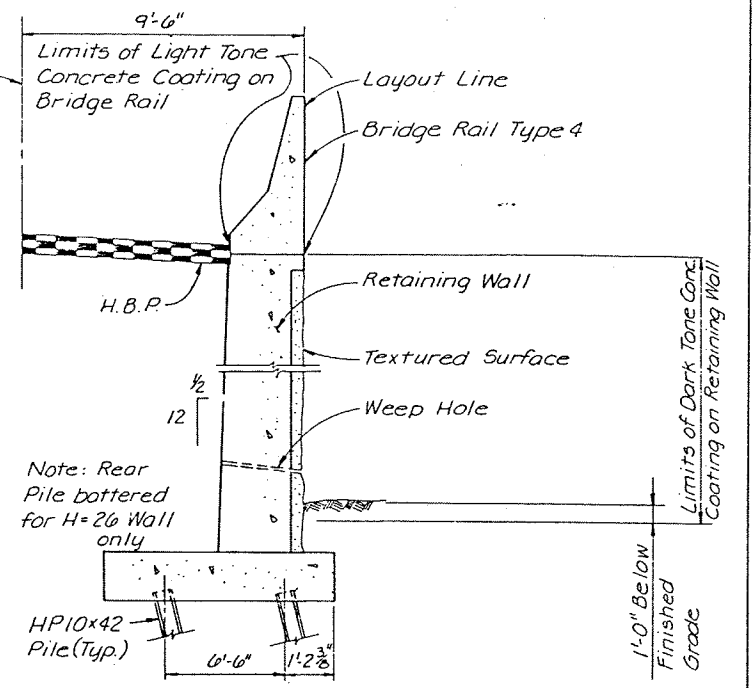
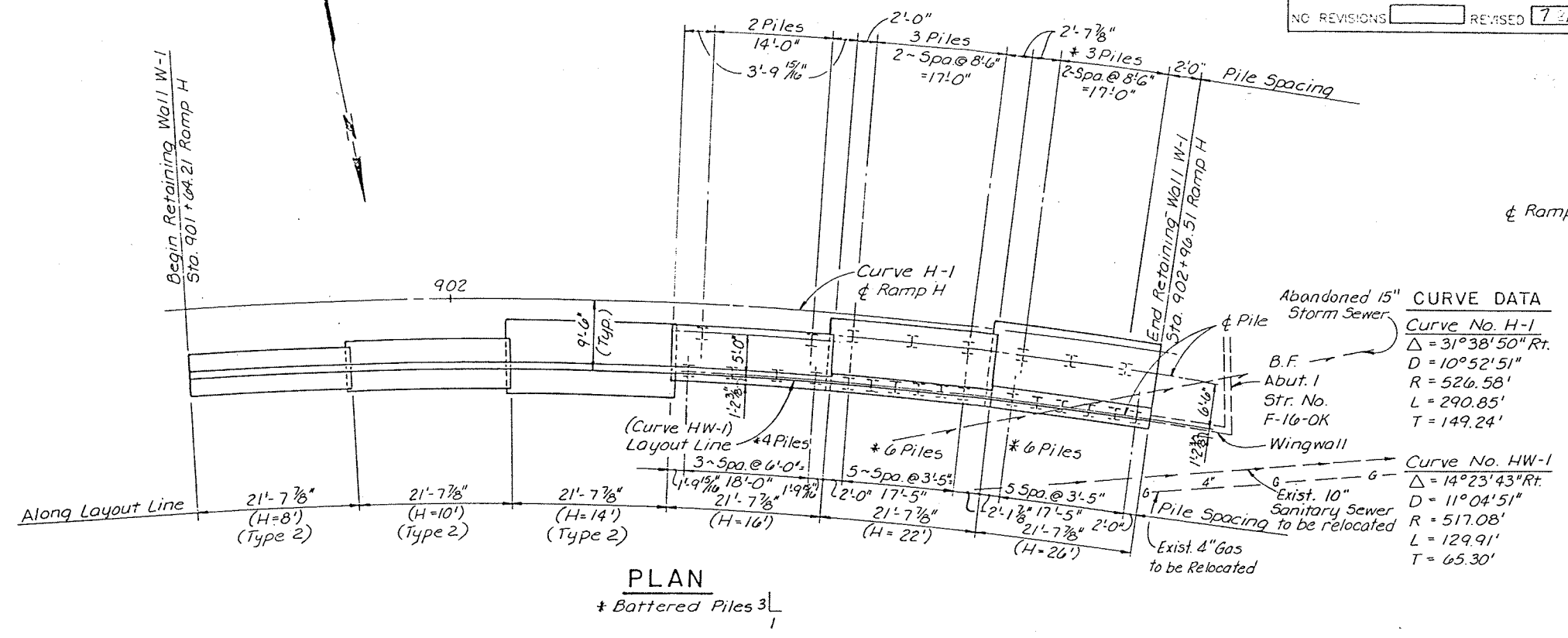
- LABORATORY TEST RESULTS:
- WC=MOISTURE CONTENT, %
 - DD=DRY DENSITY, pcf
 - LL=PERCENTAGE RETAINED ON NO. 4 SIEVE
 - 200=PASSING NO. 200 SIEVE
 - LL=Liquid Limit, %
 - PI=PLASTICITY INDEX, %
 - NP=NON-PLASTIC
 - UC=UNCONFINED COMPRESSIVE STRENGTH, psi
 - SPD=MAXIMUM STANDARD PROCTOR DENSITY, pcf
 - OM=OPTIMUM MOISTURE CONTENT, %
 - R=HYEEM STABILOMETER RESISTANCE VALUE
 - A-1-b(0)=AASHTO CLASSIFICATION (GROUP INDEX)
- HIGH MAST LIGHTING

DIVISION OF HIGHWAYS
 CHEN & ASSOCIATES, INC.
 ENGINEERING GEOLOGY
 RAMP H
 6th AVENUE/INTERSTATE 25 INTERCHANGE
 Geologist
 Drawn by A.S.
 Checked by R.J.T. Date February, 1986

STRUCTURE NO. 2

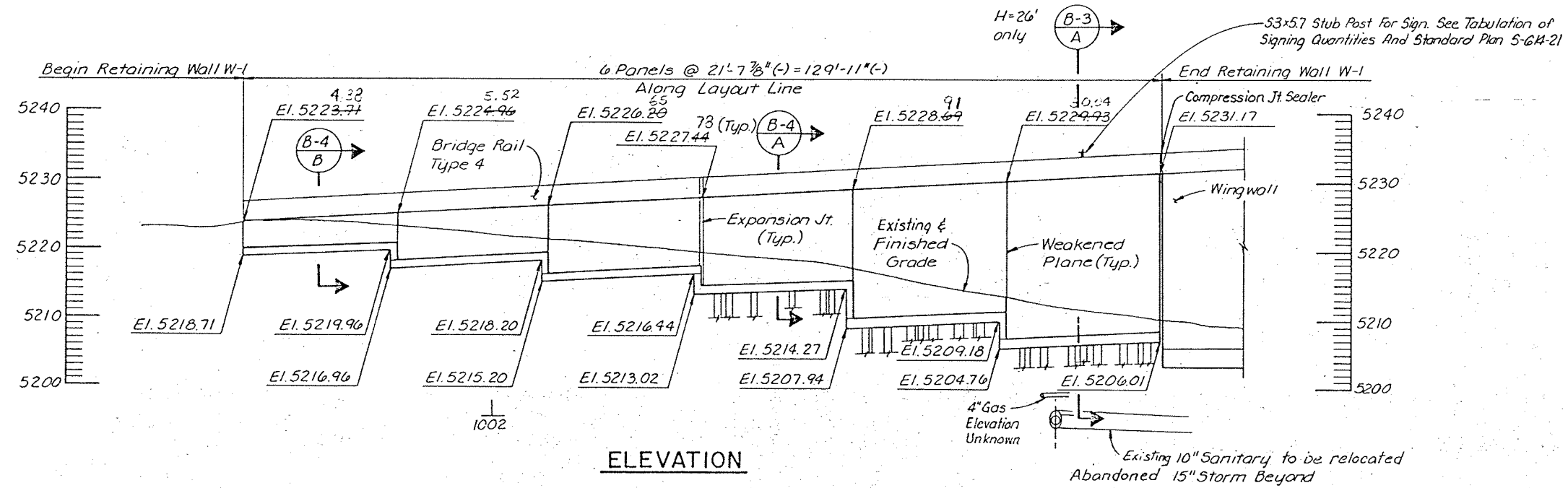
AS CONSTRUCTED		FED. ROAD REGION	DIVISION	PROJ. NO.	SHEET NO.	SHEET TOTAL
NO REVISIONS	REVISED 7/2/74	VII	COLO.	IR25-2(191)	121	242

REVISIONS	



SECTION B-3 A

- NOTES:**
1. For Bridge Rail Type 4 Details, See Dwg. No. B-50.
 2. See Dwg. No. B-7 For Additional Details.
 3. Utility Locations are Approximate. See Utility Plans and Sections for Location and Elevation.
 4. See Dwg. No. B-5 for Size and Reinforcing for Retaining Walls on Piles.
 5. All piles are end bearing, size HP 10x42, estimated tip elevation 5170.00.
 6. See Dwg. No. B-6 for Size and Reinforcing for H=8', 10', & 14' Retaining Walls.



DESIGNED BY	DATE	CHECKED BY	DATE
B.A.A.	11/86	P.M.	6-87
CHECKED BY	DATE	DESIGNED BY	DATE
P.S.P.	11/86	B.A.A.	11/86

De Leuw, Cather & Company Denver, CO

DIVISION OF HIGHWAYS

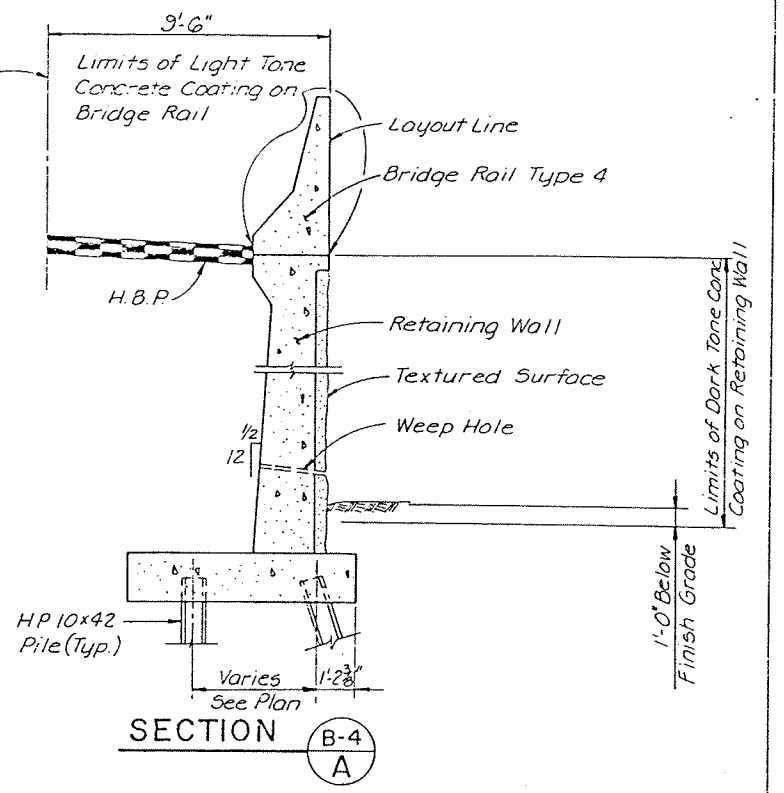
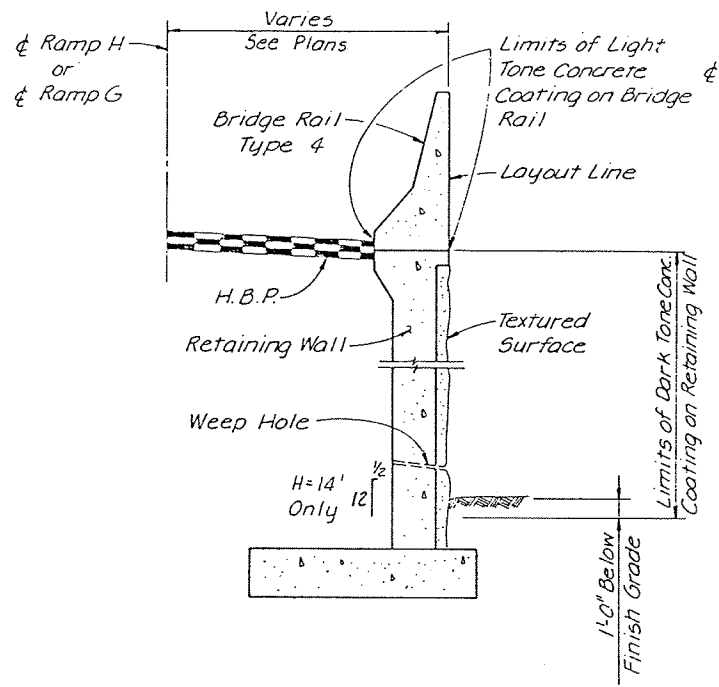
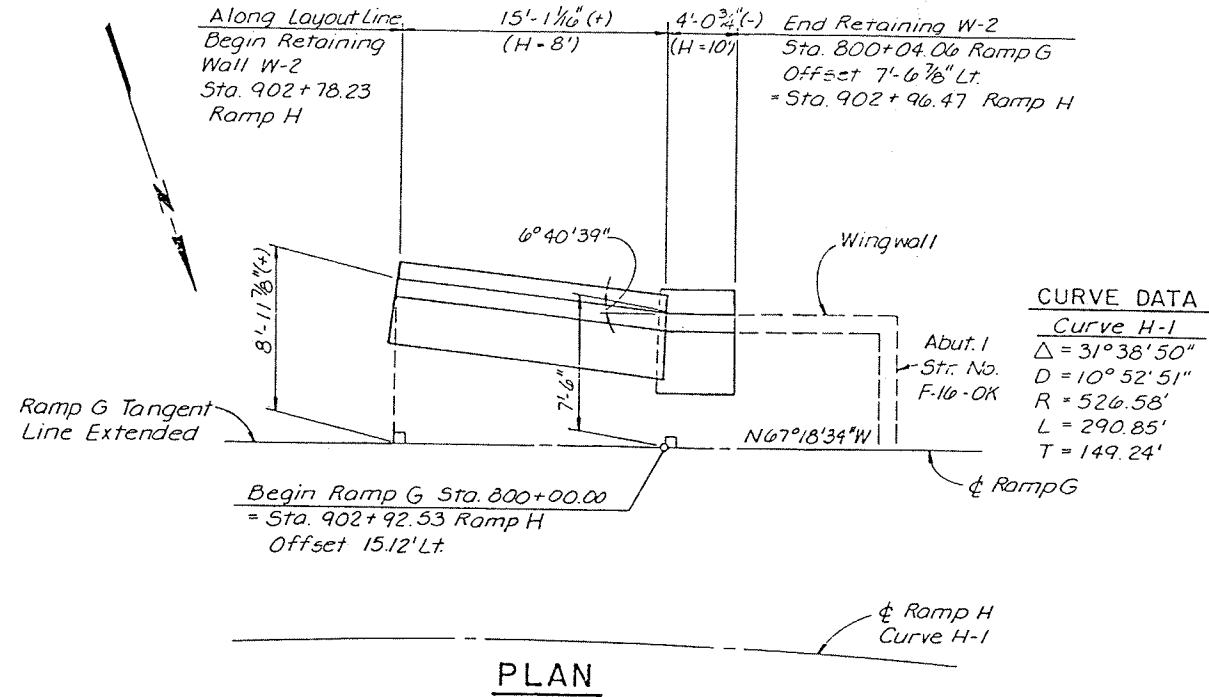
**GENERAL LAYOUT
RETAINING WALL "W-1"**
STA. 901+64.21 TO STA. 902+96.51 RAMP H

Designer B. Arrighi	Structure Numbers
Detailer R. Panning	
Drawing Number B-3	of 7 Drawings

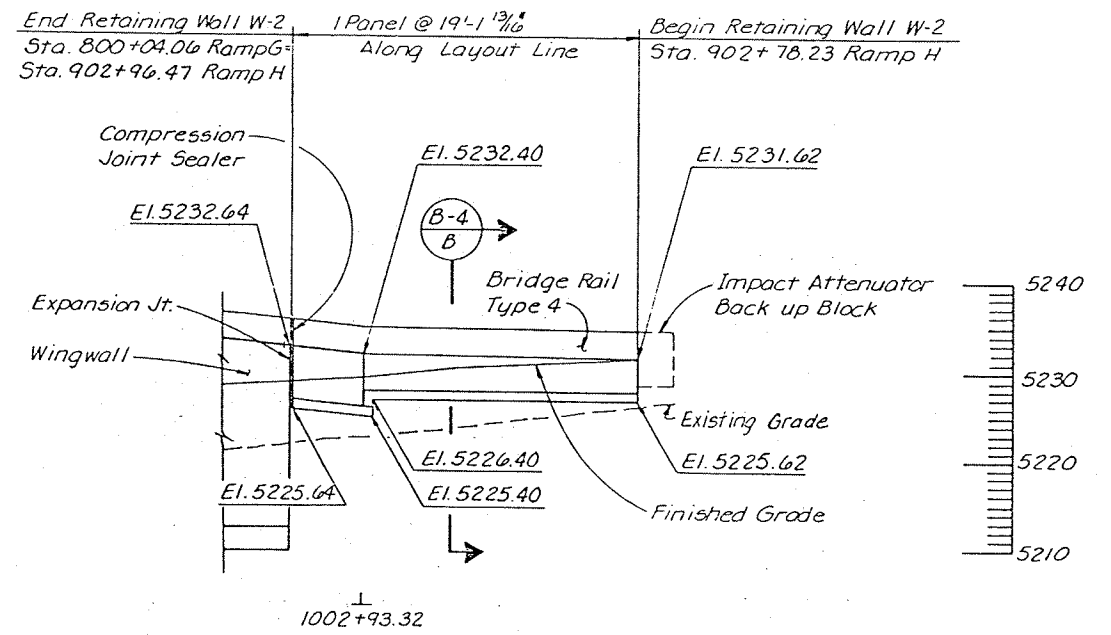
Revision Dates (Preliminary Stage Only)

AS INDICATED		PROJECT NO.	SHEET NO.	SHEET TOTALS
NO. REVISIONS	7-7-84	IR 25-2(191)	122	242

REVISIONS	



- NOTES:**
1. For Bridge Rail Type 4 Details, See Dwg. No. B-50
 2. See Dwg. No. B-7 For Additional Details.
 3. Utility Locations are Approximate. See Utility Plans and Sections for Location and Elevation.
 4. See Dwg. No. B-6 for Size and Reinforcing.



DESIGNED BY	U.A.A.	1/86
CHECKED BY	J.A.B.	5/87
DETAILER BY	R.S.P.	1/86
CHECKED BY	R.A.A.	6/87

De Leuw, Cather & Company Denver, CO

DIVISION OF HIGHWAYS

GENERAL LAYOUT
RETAINING WALL W-2
 STA. 902+78.23 RAMP H TO
 STA. 902+96.47 = STA. 800+04.06
 RAMP H RAMP G

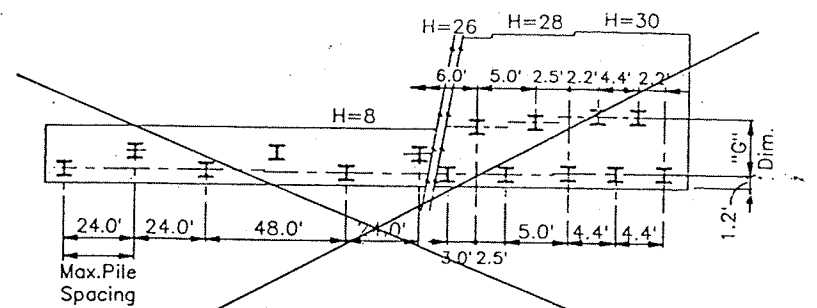
Designer	B. Arrighi	Structure	
Detailer	R. Panning	Numbers	
Drawing Number B-4		of 7 Drawings	

Revision Dates (Preliminary Stage Only)

DESIGN H (ft.)	8	10	12	14	16	18	20	22	24	26	28	30
W	4'-9"	5'-6"	6'-2"	6'-10"	7'-7"	8'-4"	9'-2"	9'-10"	10'-9"	11'-5"	12'-5"	13'-2"
T	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-2"	1'-2"	1'-6"	1'-6"	1'-10"	2'-0"
X	1'-0"	2'-2"	2'-4"	2'-6"	2'-10"	3'-2"	3'-4"	3'-6"	3'-8"	3'-10"	4'-0"	4'-1"
Y			3'-8"	6'-3"	7'-1"	4'-5"	5'-4"	9'-6"	5'-4"	11'-1"	7'-3"	7'-9"
Z			8'-0"	10'-3"	6'-3"	5'-5"	6'-2"	8'-7"	7'-11"	9'-11"	9'-7"	10'-5"
A & C BARS	#4 @ 5 1/2"	#4 @ 5 1/2"		#4 @ 7"	#5 @ 7 1/2"			#6 @ 6 1/2"		#7 @ 7"		
B BARS	#4 @ 1'-6"	#4 @ 1'-6"	#4 @ 7"	#6 @ 7"	#7 @ 7 1/2"	#6 @ 7 1/2"	#6 @ 7 1/2"	#9 @ 6 1/2"	#7 @ 8"	#11 @ 7"	#7 @ 6"	#8 @ 7"
D BARS	#4 @ 5 1/2"			#5 @ 7"	#7 @ 7 1/2"			#9 @ 6 1/2"		#10 @ 7"		
G	1.80'	2.50'	1.95'	4.00'	5.00'	2.76'	3.13'	6.50'	6.74'	6.50'	4.48'	4.72'
MAXIMUM PILE SPACING *	24.00'	16.80'	12.60'	9.70'	7.70'	6.20'	5.00'	4.10'	3.50'	3.00'	2.50'	2.20'
MAX. PILE LOAD (TONS)	43.0	43.0	1.30	44.0	47.0	2.30	2.60	43.0	3.40	57.0	1.10	4.60
CONCRETE Cu.Yds./Lin.Ft.	0.472	0.574	0.673	0.771	1.188	0.980	1.194	1.962	1.709	2.882	2.310	2.642
WEIGHT OF REIN. Lbs./Lin.Ft.	46.2	53.0	66.3	81.9	105	146	163	197	232	278	337	395
S					1'-5"			1'-9"		2'-2"		
V					1'-6 1/2"			1'-11 1/2"		2'-5 1/2"		
R					5'-0 1/2"			6'-10 1/2"		7'-11 1/2"		

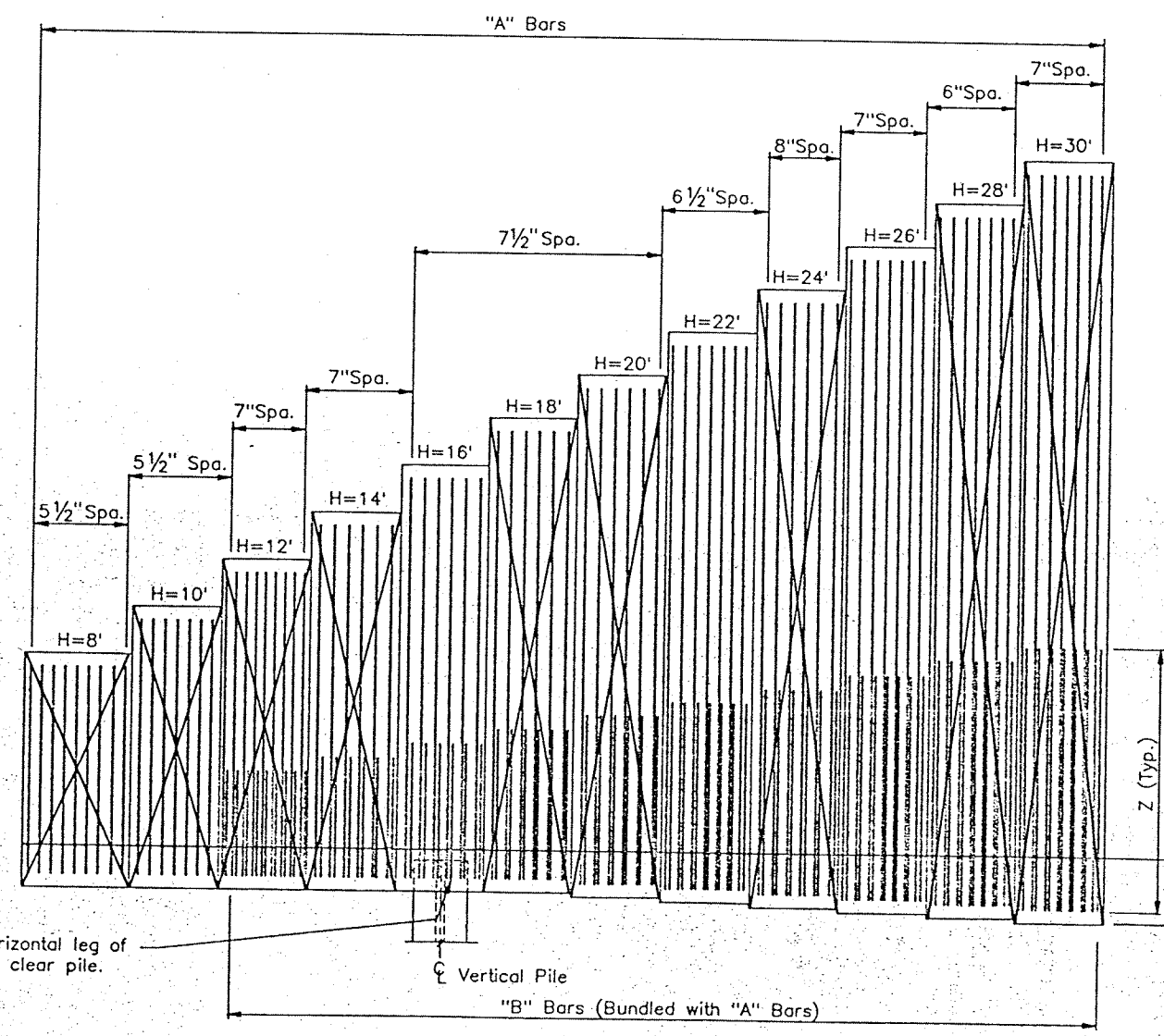
As req'd. on general layout

*SEE RETAINING WALL PLANS FOR ACTUAL PILE SPACING

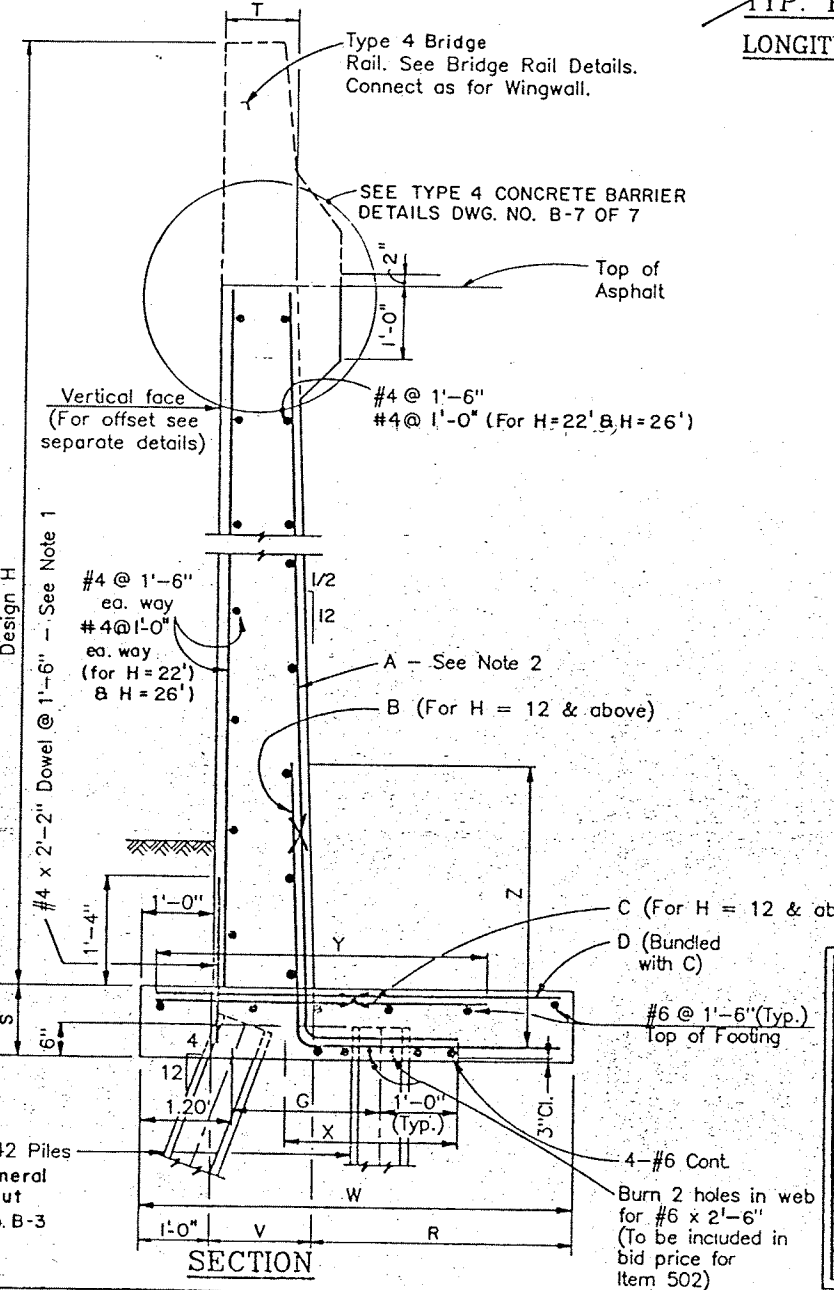


TYP. PLAN OF FOOTING & PILES
LONGITUDINAL DIMENSIONS ARE MAX.

DESIGNED BY	BA	6-87
CHECKED BY	JAB	5-87
DETAILED BY	RSP	11-86



ELEVATION



SECTION

- DESIGN DATA**
Current AASHTO Specification.
Working Stress Design
Reinforcing Steel: $f_s = 24,000$ psi
Reinforced Concrete: $f_c = 1200$ psi
Loadings:
Live Load = 10 Kips on Rail or 2' Surcharge
Earth = 36 pcf fluid equiv.
120 pcf dry weight.
Coeff. of friction = 0.70
2.7:1 allowed for $U=1'-0"$ min.
2.0:1 allowed for $U=2'-0"$ min.
1.7:1 allowed for 2' Live Load surcharge or Bridge Rail mounted on wall for $U=3'-0"$ min.
HP 10x42 Steel Piles: 12,000 psi allowable load at tip
7 Kips allowable horizontal resistance

- NOTES**
- #4 x 2'-2" Dowels may be placed after footing is poured but before initial set.
 - Bar "A" may be spliced once each bar (optional). Any increased quantity of reinforcing will be at the contractor's expense.
 - Design H is actual wall height plus three feet of barrier height rounded up to nearest even foot.
 - Backface wall batter is calculated for actual wall height (Dimension "V").

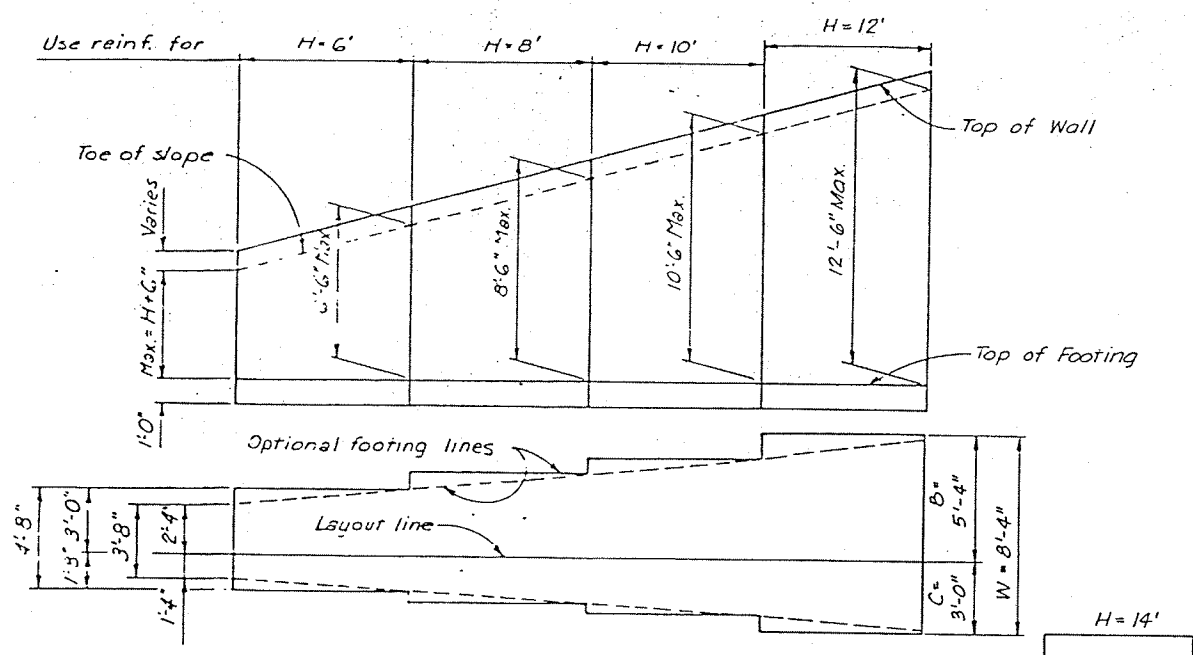
DIVISION OF HIGHWAYS
RETAINING WALL DETAILS

DESIGNER *B. Arrighi* STRUCTURE NUMBERS
DETAILER *R. Panning*
DRAWING NUMBER B-5 OF 7 DRAWINGS

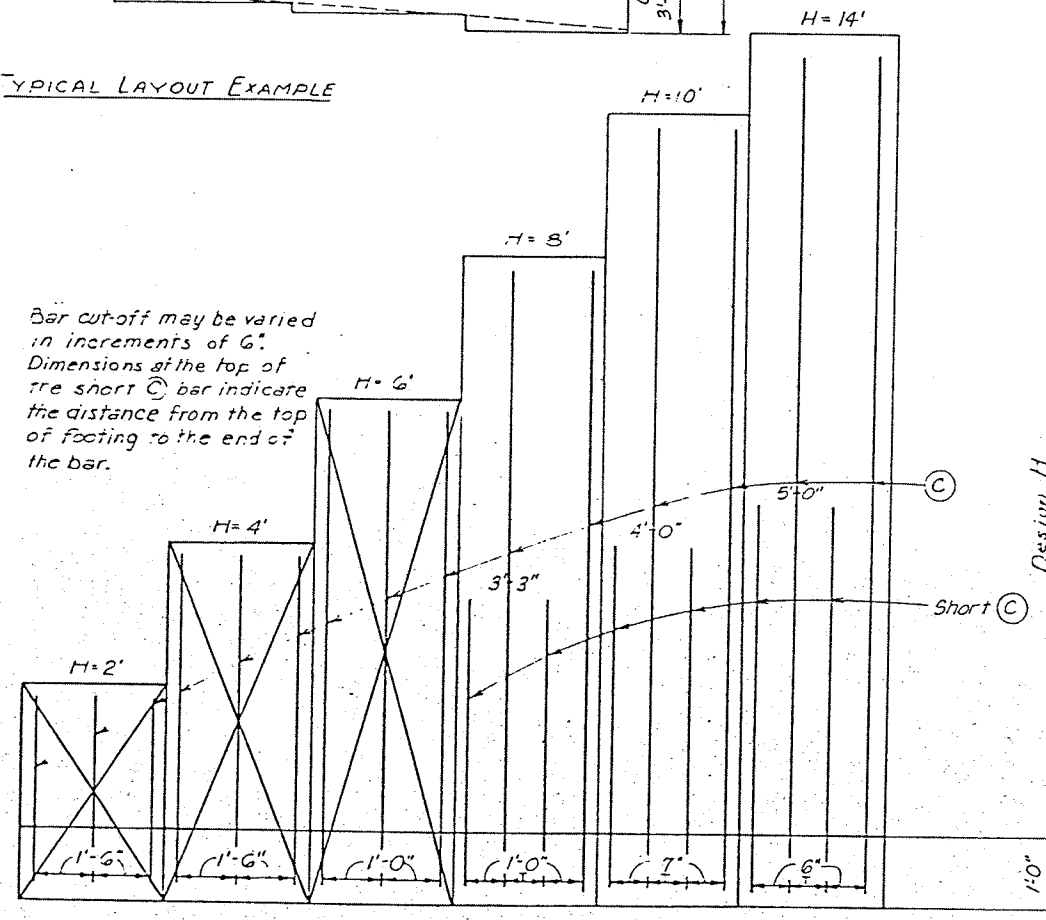
AS CONSTRUCTED
 NO REVISIONS REVISED VOID

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	IR25-2(191)	124	242

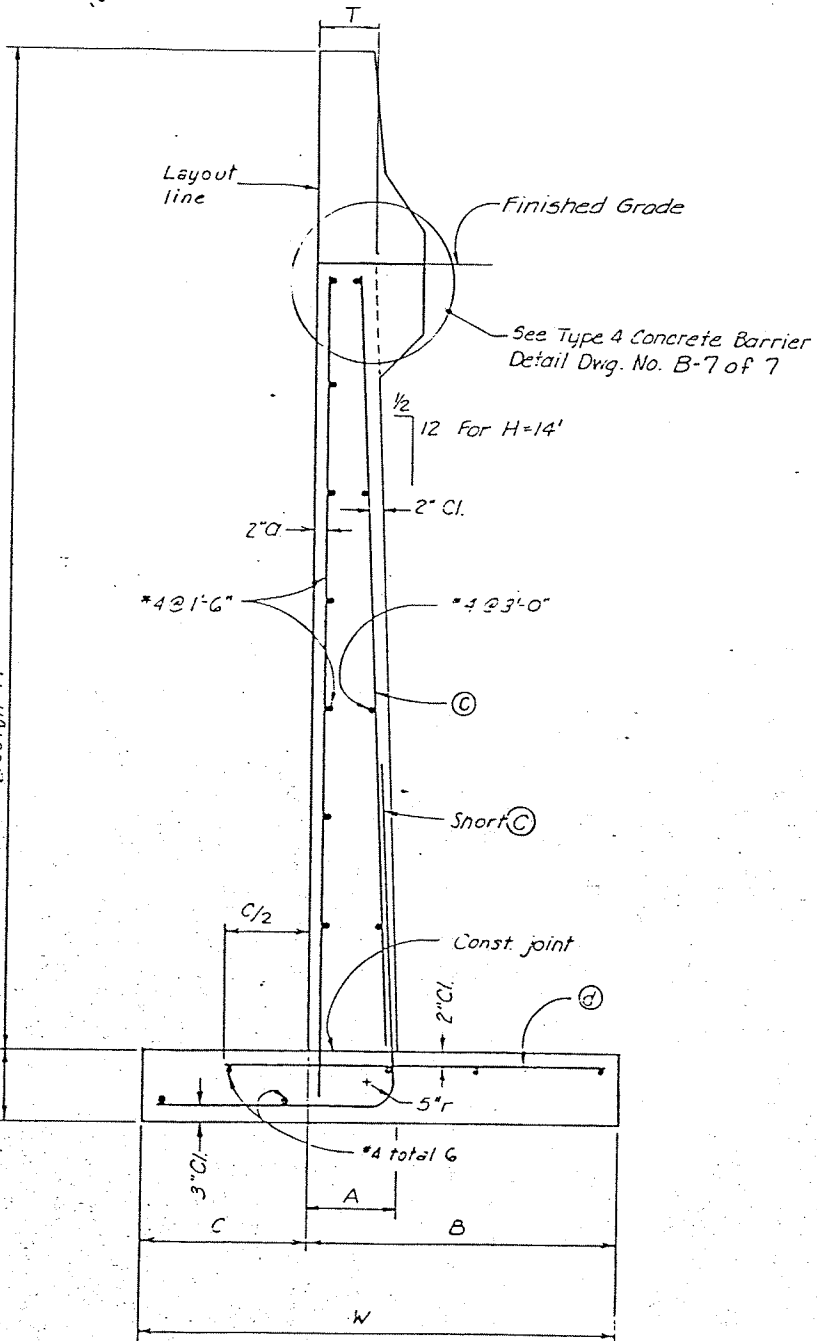
REVISIONS	



TYPICAL LAYOUT EXAMPLE



ELEVATION



TYPICAL SECTION

DESIGN DATA - REINFORCING STEEL - DIMENSIONS - Type 2 Retaining Walls							
H	2'	4'	6'	8'	10'	12'	14'
C	1'-0"	1'-4"	1'-8"	2'-4"	2'-8"	3'-0"	3'-4"
B	1'-8"	2'-4"	3'-0"	3'-4"	4'-0"	5'-4"	6'-9"
W	2'-8"	3'-8"	4'-8"	5'-8"	6'-8"	8'-8"	10'-1"
⊙ ⊕ bars	#5 @ 1'-0"	#5 @ 1'-0"	#5 @ 1'-0"	#6 @ 1'-0"	#6 @ 7"	#7 @ 8"	#6 @ 6"
Reinf. Lbs./LF	—	20	26	35	65	162	162
Conc. Cu Xl./LF	—	0.259	0.358	0.457	0.554	0.679	1.04
T	—	—	—	10"	10"	—	1'-0"
A	—	—	—	10"	10"	—	1'-5"

NOTES:
 BACKFACE WALL BATTER IS CALCULATED FOR ACTUAL WALL HEIGHT (DIMENSION 'A')
 DESIGN H IS ACTUAL WALL HEIGHT PLUS THREE FEET OF BARRIER HEIGHT ROUNDED UP TO NEAREST EVEN FOOT.
 DESIGN H MAY BE EXCEEDED BY 6" BEFORE GOING TO THE NEXT SIZE.
 SPECIAL FOOTING DESIGN IS REQUIRED WHEN FOUNDATION MATERIAL IS INCAPABLE OF SUPPORTING TOE PRESSURE LOAD.
 FOR DESIGN AND DETAILS NOT SHOWN, SEE BRIDGE STANDARD - 102.
 DESIGN DATA
 $f_c = 1200$ psi
 $f_s = 24,000$ psi
 $n = 9$
 EQUIVALENT FLUID PRESSURE = 36 pcf
 MAXIMUM TOE PRESSURE = 1 TON/SQ. FT.

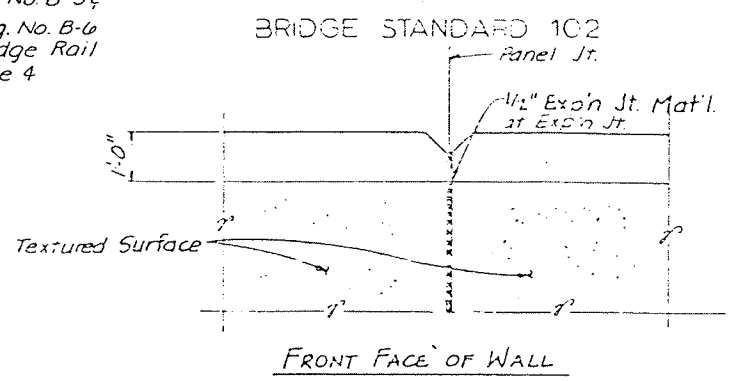
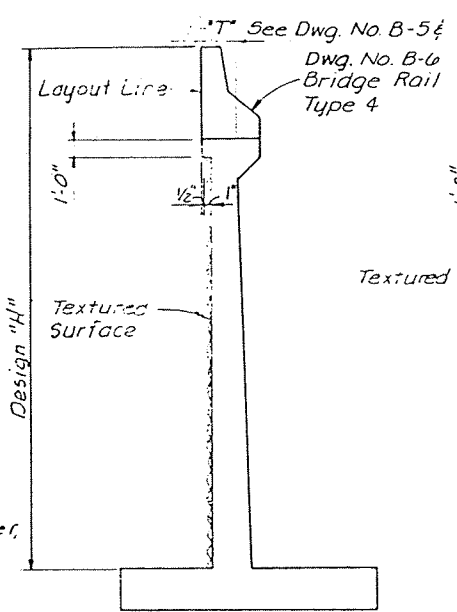
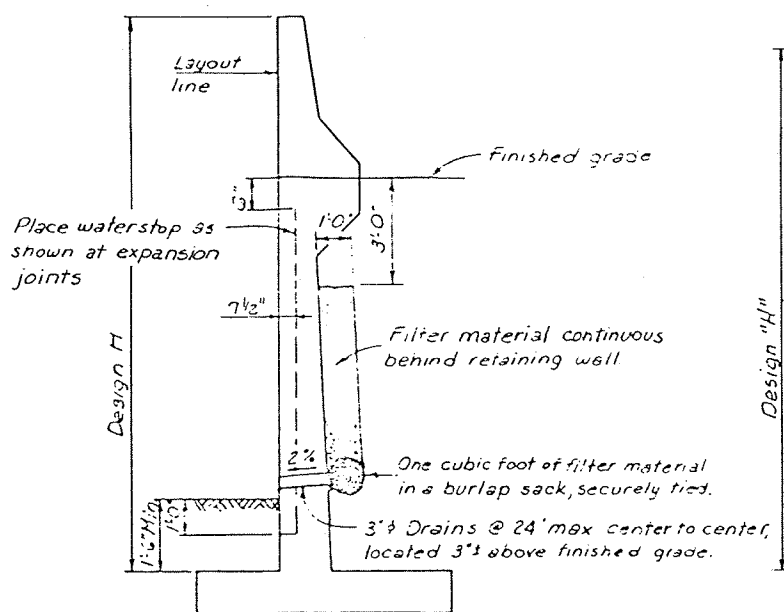
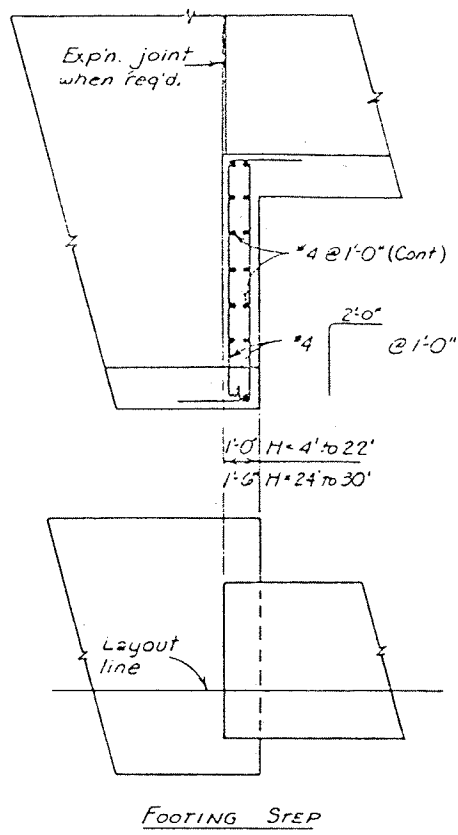
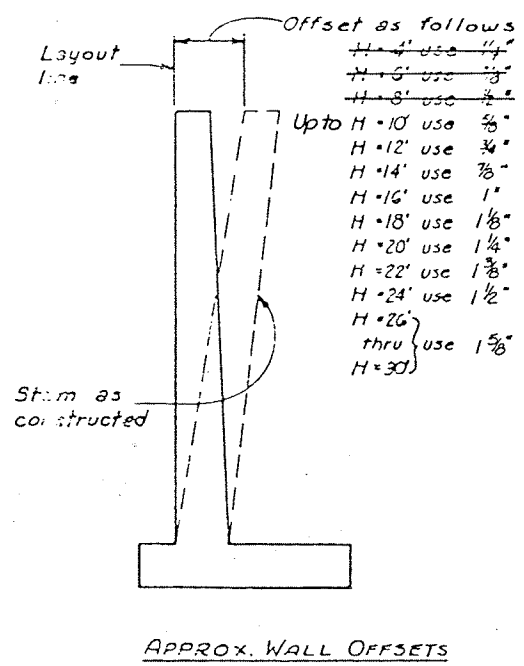
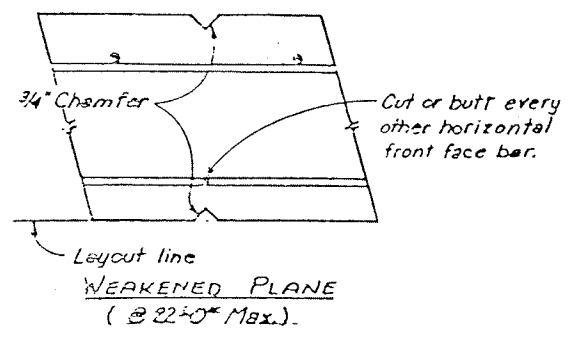
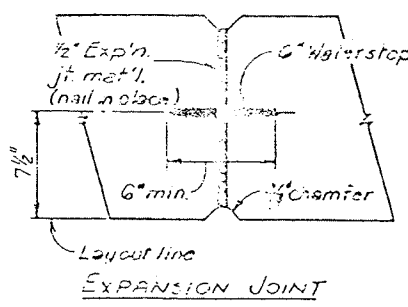
DIVISION OF HIGHWAYS

RETAINING WALL DETAILS

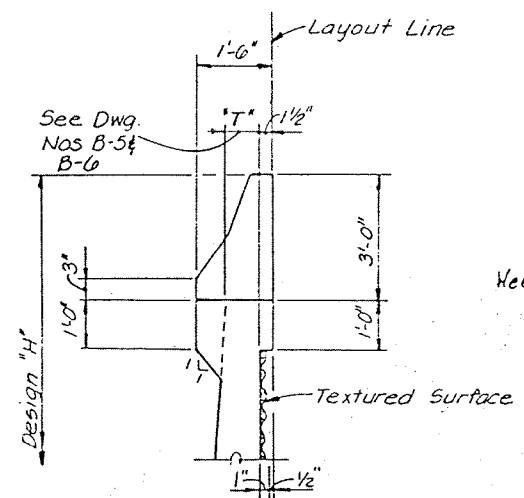
TYPE 2

Designer <i>B. Arrighi</i>	Structure
Detailer <i>R. Panning</i>	Numbers
Drawing Number B- 6 of 7 Drawings	

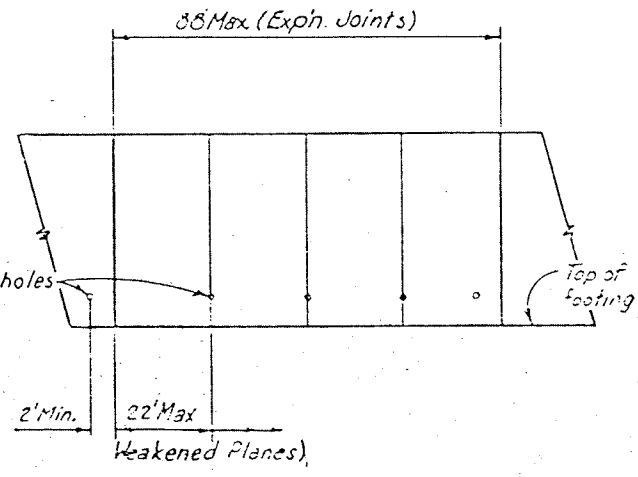
REVISIONS	



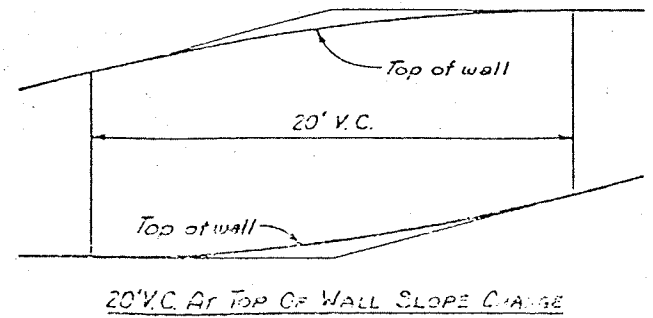
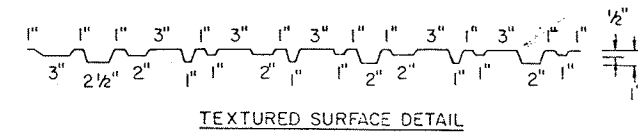
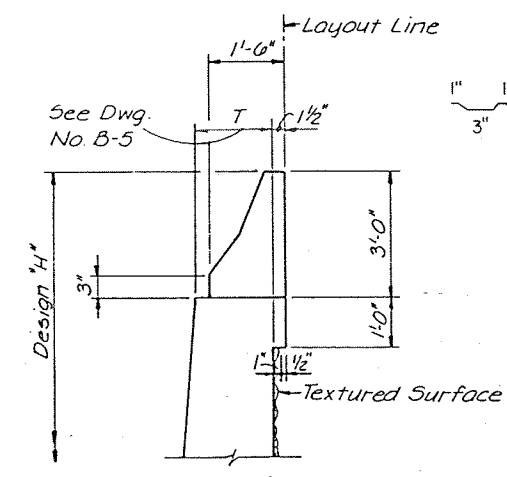
Note: Textured Surface shall conform to the surface as Detailed Below, or As Approved By The Engineer.



Type 4 Concrete Barrier
 H = 8, 10, 14 Type 2
 H = 16, 22



WALL EXPANSION JOINTS AND WEAKENED PLANES



DIVISION OF HIGHWAYS

RETAINING WALL DETAILS
 MISCELLANEOUS

Designer	Structural
Checker	Number
Drawing	7 of 7 Drawings