

APR 27 1966
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STATE OF OHIO
 DEPARTMENT OF HIGHWAYS
LOR-90-17.21
 LORAIN COUNTY
 VILLAGE OF SHEFFIELD
 CITY OF AVON

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-90-1(42)04	1 309

LORAIN COUNTY
 LOR-90-17.21

I-IG-90-1(42)04

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02, REVISED CODE OF OHIO.

1965 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT-OF-WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THESE PLANS AND ESTIMATES.

APPROVED: *D.H. Cameron*
 DATE: _____ DIVISION DEPUTY DIRECTOR

APPROVED: *C.H. A. Horatio*
 DATE: 10-20-66 ENGINEER OF BRIDGES

APPROVED: *R.D. Ricketts*
 DATE: 10-20-66 ENGINEER OF LOCATION & DESIGN

APPROVED: *W.E. Shultz*
 DATE: 10-21-66 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED: *T.H. Board*
 DATE: 11-1-66 DEPUTY DIRECTOR OF RIGHT-OF-WAY

APPROVED: *E.W. Wilson*
 DATE: 11-1-66 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED: _____ FIRST ASSISTANT DIRECTOR
 DATE: _____

APPROVED: *D.E. Martin*
 DATE: 11/1/66 DIRECTOR OF HIGHWAYS

CONVENTIONAL SIGNS

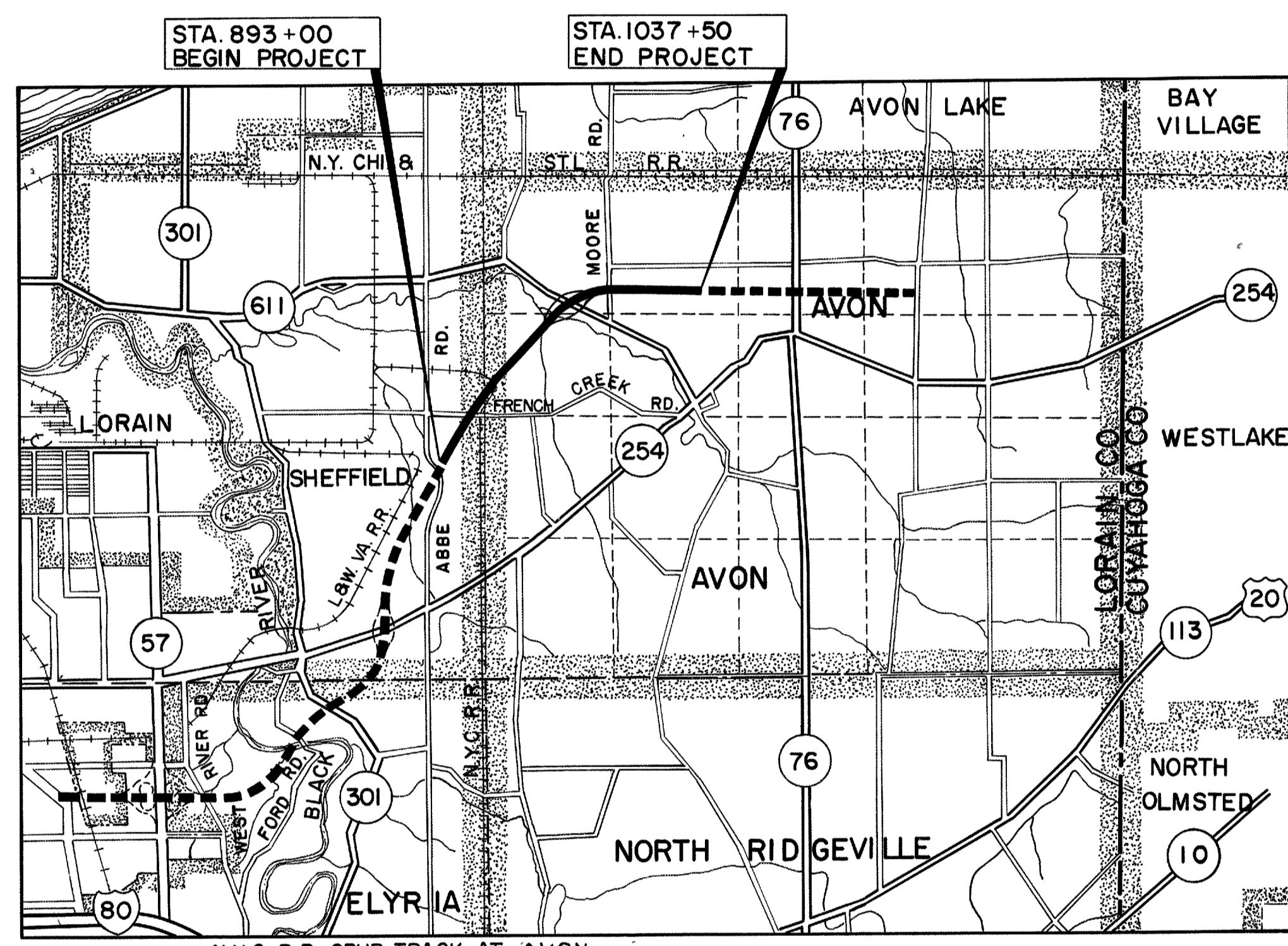
PROPERTY LINE	---
COUNTY LINE	---
TOWNSHIP LINE	---
LOT LINE	---
CORPORATION LINE	---
CENTER LINE	---
FENCE LINE	---
POLE LINE	---
EXISTING RIGHT OF WAY	⊕ ⊕ ⊕ ⊕ ⊕
PROPOSED RIGHT OF WAY	R/W
PROPOSED LIMITED ACCESS	LA
PROPOSED LIMITED ACCESS RIGHT OF WAY	LA & R/W
RAILROAD	---
GUARD RAIL	---
DRAIN PIPE	---
TREES & STUMPS	⊙
WORK LIMITS	---

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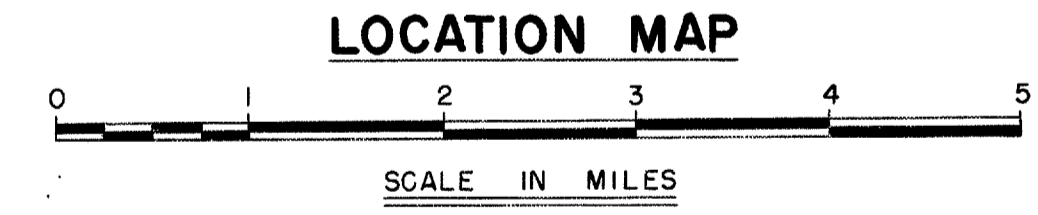
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 Revised As-Built 3-12-70 G.F.J.

GRADE SEPARATION WITH THE NEW YORK CENTRAL R.R. CO.



DELIVERY POINT N.Y.C. R.R. SPUR TRACK AT AVON
 AVERAGE HAUL FROM SIDING 1.0 MILE



PORTION TO BE IMPROVED
 STATE HIGHWAYS
 OTHER ROADS

PORTION TO BE IMPROVED UNDER SEPARATE CONTRACT

SCALES

PLAN	1" = 50'	1" = 50'
PROFILE - HORIZONTAL	1" = 50'	1" = 50'
PROFILE - VERTICAL	1" = 5'	1" = 5'
CROSS SECTIONS	1" = 10'	1" = 10'

Sheet Nos. 273 & 275 revised 12-27-65
 Sheet No. 276 revised 1-13-67
 Sheet No. 17, 19, 22, 24, 27, 28, 292, 302 & 307 rev. 2-14-67 C.E.H.
 Sheet No. 292S, 302S, 307S & 307AS added 2-14-67 C.E.H.

LINE DATA					
PROJECT	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT. MILES
I-90-1(42)04	893+00	913+00	943+00	1037+50	11,450.00 2.168
IG-90-1(42)04	913+00			943+00	3,000.00 0.568
TOTAL LENGTH OF PROJECT					14,450.00 2.736

WORK					
WORK	BEGIN STATION	SUSPEND STATION	RESUME STATION	END STATION	LENGTH LIN. FT. MILES
I.R.-90, I-90-1(42)04	891+88	913+00	943+00	1038+62	11,674.00
I.R.-90, IG-90-1(42)04	913+00			943+00	3,000.00 0.568
FRENCH CREEK ROAD	100+00			120+78.49	2,078.49
S.R.611	203+00			238+00	3,500.00
AVON-CHESTER ROAD EXTENSION	0+32			30+30	2,998.00
TOTAL WORK I-90-1(42)04					20,250.49 3.835
TOTAL LENGTH OF WORK					23,250.49 4.403

STANDARD DRAWINGS

BP-1	6-1-65	MC-1	6-1-65	L-1	6-1-65	CB-2-2-A&B	6-1-65	GR-1	6-1-65
BP-2	6-1-65	MC-3	5-1-66	F-2	6-1-65	CB-4	6-1-65	GR-2A	9-1-65
BP-3	6-1-65	MC-4	6-1-65	F-3	6-1-65	CB-5	6-1-65		
BP-4	6-1-65	MC-6	6-1-65	MH-1A	8-1-66	CB-6	6-1-65	GR-5A	6-1-65
BP-5	6-1-65	MC-7	3-1-66	HW-1	6-1-65	CB-2-3 & 2-4	6-1-65	GR-5B	6-1-65
BP-6	6-1-65	FACI-1	6-1-65	HW-2	6-1-65	CB-8	6-1-65	GR-6	6-1-65
BP-7	1-1-66	FACI-2	6-1-65	HW-3	6-1-65	MH-2	6-1-65		
				HW-E	6-1-65	I-2	6-1-65		

STD. DRWG'S. (CON'T.)	SUPPLEMENTAL SPECIFICATIONS
AS-1-54	8-10-65
BR-1-65 Sh. 11	11-24-65
SD-1-65 Sh. 1, 2, 3	11-8-65
RB-1-55	2-2-59
SP-53	6-30-61
FSB-1-62	1-15-63
CS-2-65 Sh. 1 & 2	6-1-65
	825
	828
	806
	1001
	9-2-65
	2-7-66
	3-29-65
	3-16-66
	8-6-65
	8-6-65
	4-22-65
	3-21-66
	3-3-66
	3-21-66

DEPARTMENT OF COMMERCE
 BUREAU OF PUBLIC ROADS

APPROVED _____
 DIVISION ENGINEER DATE _____

FILE NO. _____
 LORAIN COUNTY LOR-90-17.21
 DATE OF LETTING _____
 CONTRACT NO. _____

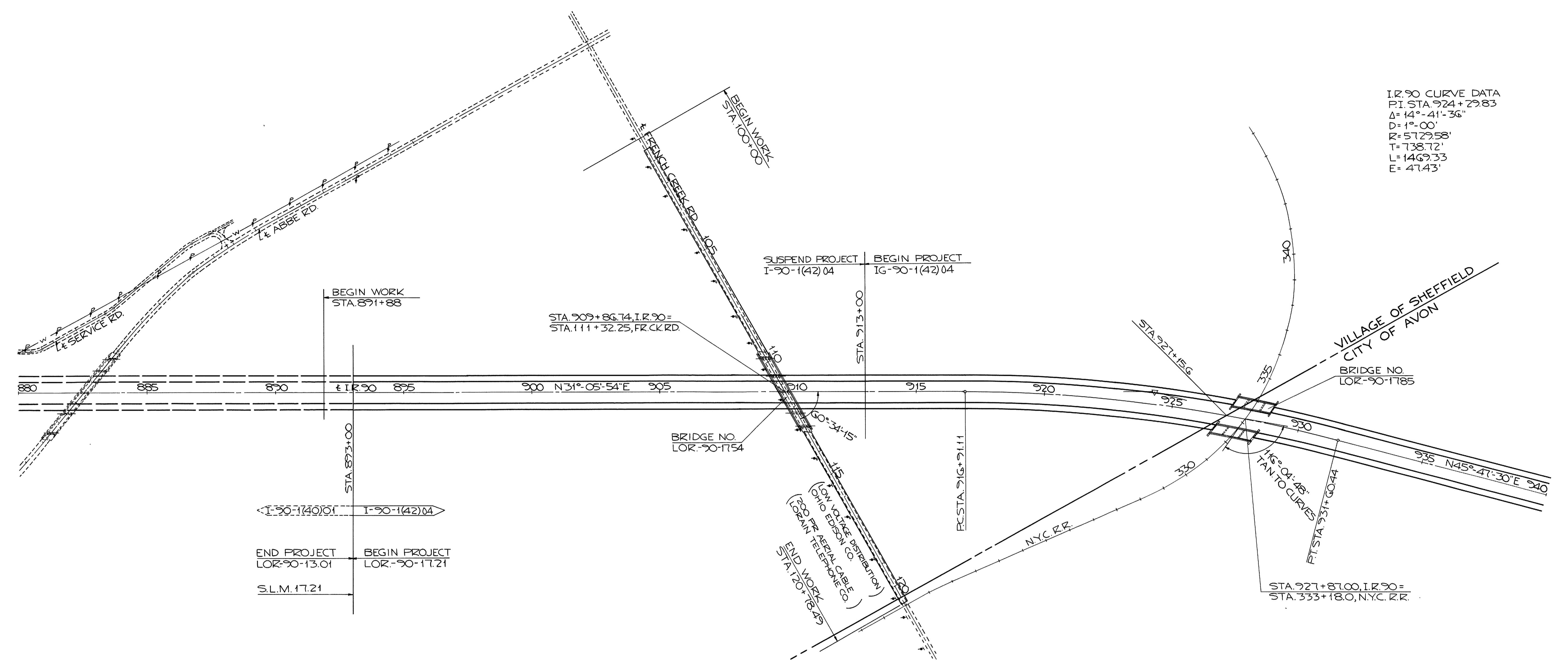
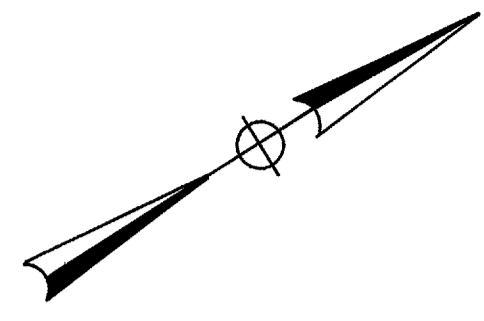
PREPARED AND RECOMMENDED BY
 SHAFER, PARRETT AND ASSOCIATES
 CONSULTING ENGINEERS
 MANSFIELD OHIO WOOSTER

MO...
APR 20 1971

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2

LOR.-90-17.21



I.R. 90 CURVE DATA
 P.I. STA. 924 + 29.83
 $\Delta = 14^\circ - 41' - 36''$
 $D = 1^\circ - 00'$
 $R = 5729.58'$
 $T = 738.72'$
 $L = 1469.33'$
 $E = 47.43'$

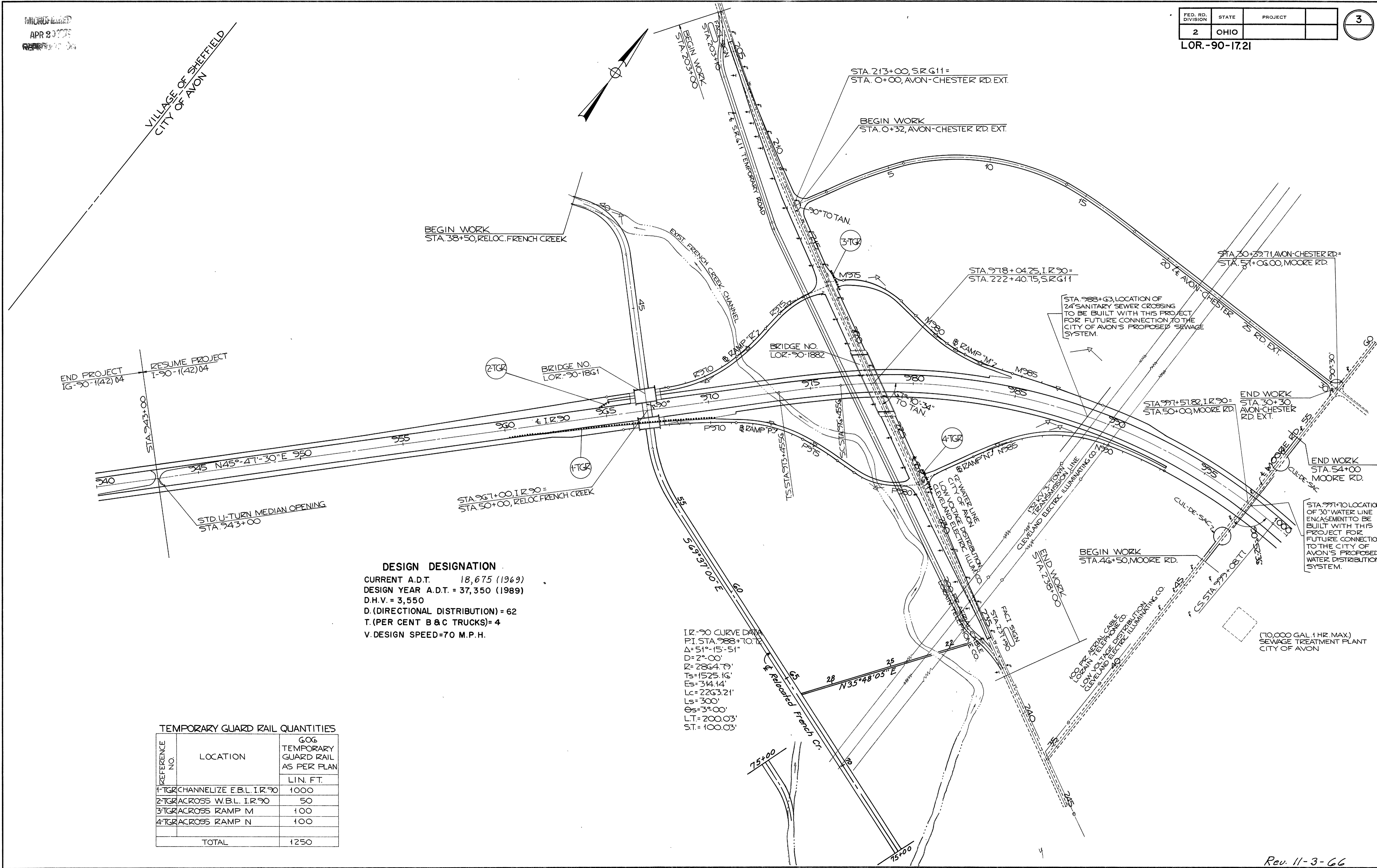
END PROJECT LOR-90-13.01
 BEGIN PROJECT LOR-90-17.21
 S.L.M. 17.21

BRIDGE NO. LOR-90-1754

END WORK STA. 170+78.49
 (OH. VOLTAGE DISTRIBUTION)
 (OHIO EDISON CO.)
 (200 FT. AERIAL CABLE)
 (LORAIN TELEPHONE CO.)

UTILITY OWNERS
 OHIO EDISON CO. 47 N. MAIN ST. AKRON, OHIO
 LORAIN TELEPHONE CO. 203 9TH ST. LORAIN, OHIO
 CLEVELAND ELECTRIC ILLUMINATING CO. PUBLIC SQUARE CLEVELAND, OHIO
 CITY OF AVON, 36774 DETROIT RD. AVON, OHIO

UNCORRECTED
APR 20 1977
REVISION 10 1977



DESIGN DESIGNATION
 CURRENT A.D.T. 18,675 (1969)
 DESIGN YEAR A.D.T. = 37,350 (1989)
 D.H.V. = 3,550
 D. (DIRECTIONAL DISTRIBUTION) = 62
 T. (PER CENT B & C TRUCKS) = 4
 V. DESIGN SPEED = 70 M.P.H.

I.R.-90 CURVE DATA
 P.I. STA. 988+70.70
 $\Delta = 51^{\circ}15'51''$
 $D = 2^{\circ}00'$
 $R = 2864.79'$
 $T_s = 1525.16'$
 $E_s = 344.14'$
 $L_c = 2263.21'$
 $L_s = 300'$
 $\Theta_s = 3^{\circ}00'$
 $L.T. = 200.03'$
 $S.T. = 100.03'$

TEMPORARY GUARD RAIL QUANTITIES

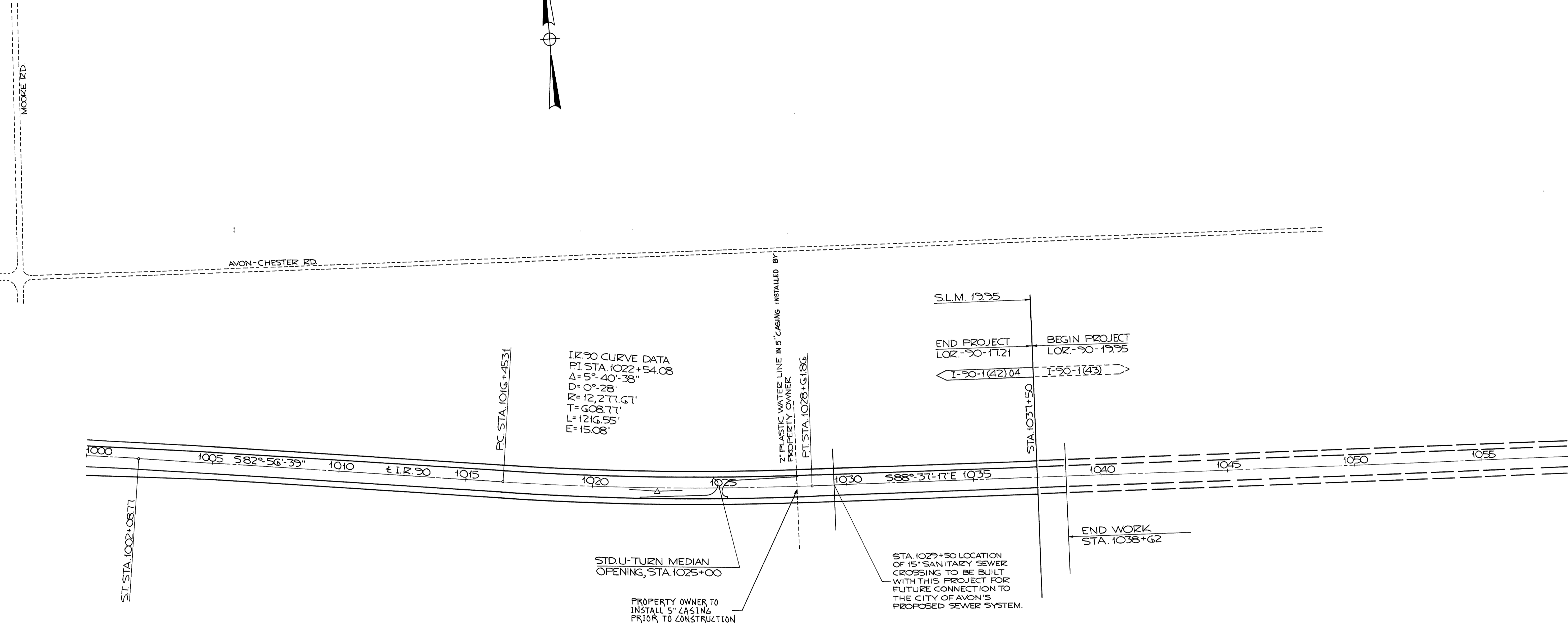
REFERENCE NO.	LOCATION	GOG TEMPORARY GUARD RAIL AS PER PLAN
		LIN. FT.
1-TGR	CHANNELIZE E.B.L. I.R.-90	1000
2-TGR	ACROSS W.B.L. I.R.-90	50
3-TGR	ACROSS RAMP M	100
4-TGR	ACROSS RAMP N	100
TOTAL		1250

Rev. 11-3-66

APR 20 1995

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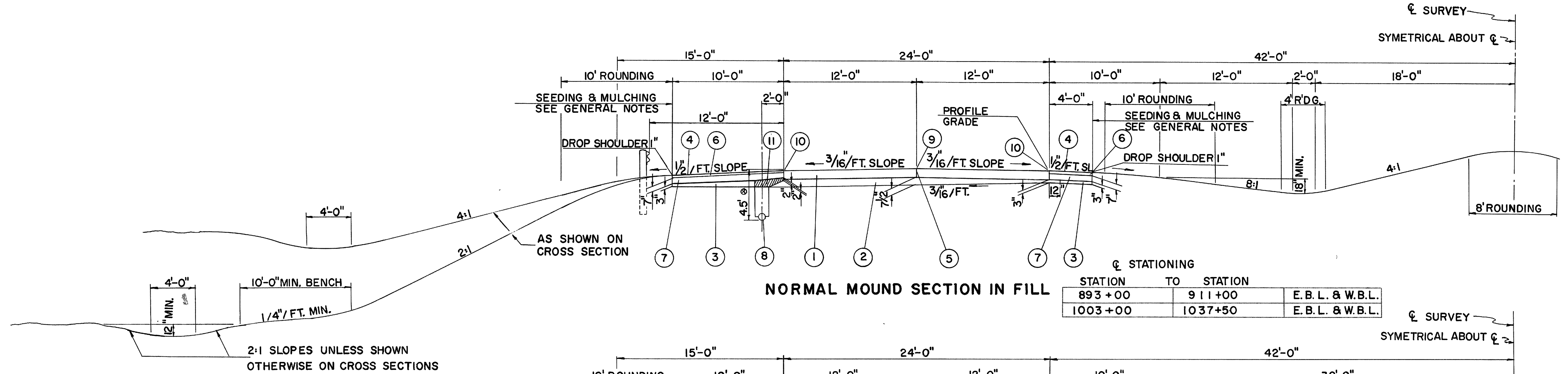
FOR DETAILS NOT SHOWN
SEE STD. DRWG. MC-1

TYPICAL SECTIONS - I.R. 90

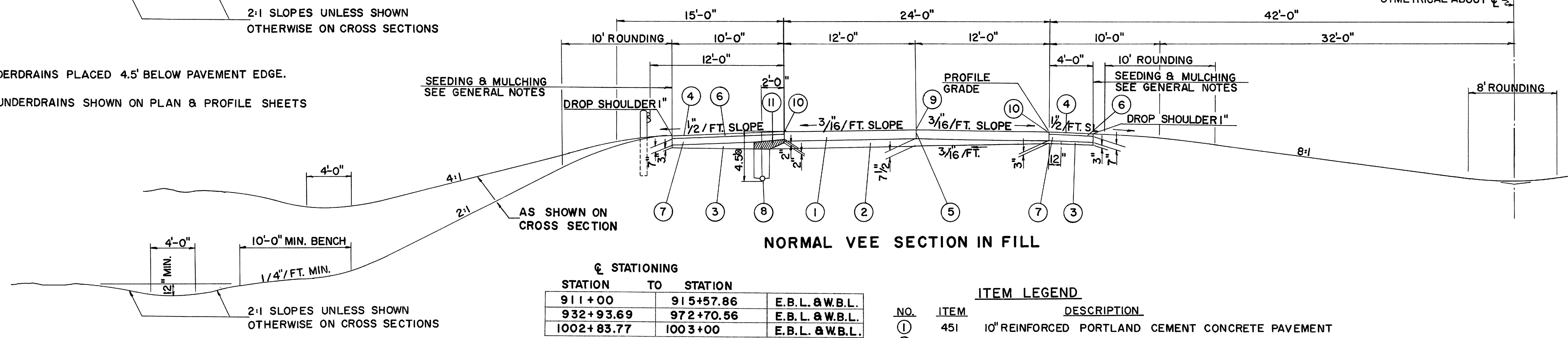
TYPE 451

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR-90-17.21



NOTE:
NORMAL SHALLOW PIPE UNDERDRAINS PLACED 4.5' BELOW PAVEMENT EDGE.
ALL PIPE UNDERDRAINS SHOWN ON PLAN & PROFILE SHEETS



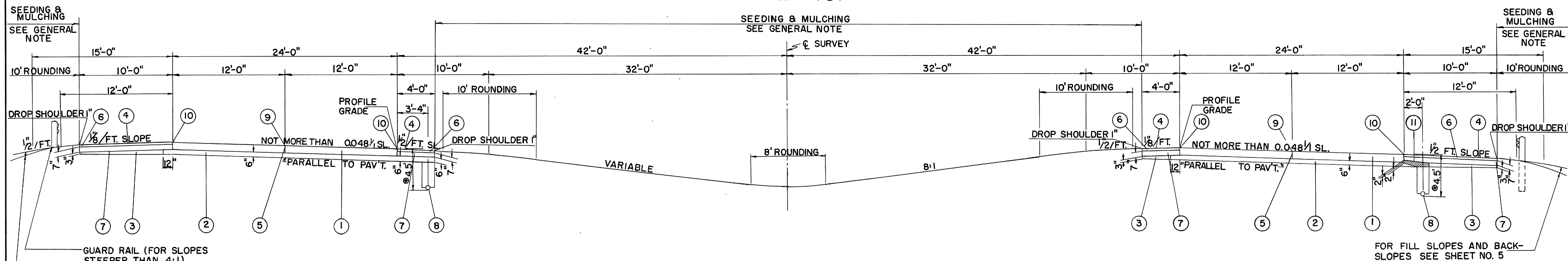
ITEM LEGEND

NO.	ITEM	DESCRIPTION
①	451	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
②	310	SUBBASE—GRADING A OR B, AS PER PLAN
③	310	SUBBASE
④	409	SEAL COAT; COVER AGGREGATE USING 0.008 CU.YD. NO.8 AGGREGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ.YD. (SEE NOTE IN PROPOSAL.)
⑤		STANDARD LONGITUDINAL JOINT.
⑥	301	3" BITUMINOUS AGGREGATE BASE: 702.01, (85-100); OR 702.09, RT-12 (SEE NOTE IN PROPOSAL)
⑦	304	AGGREGATE BASE
⑧	605	6" PIPE UNDERDRAIN
⑨	621	6" LANE LINES AND CENTER LINES
⑩	621	4" EDGE LINES.
⑪		SPECIAL DRAINAGE CONNECTION USING NO. 8 AGGREGATE. (SEE NOTE IN PROPOSAL)

TYPICAL SECTIONS - I.R. 90

SUPERELEVATED PAVEMENT

TYPE 45I



SUPERELEVATED SECTION IN FILL

⊗ NOTE:
 NORMAL SHALLOW PIPE UNDERDRAINS PLACED 4.5' BELOW PAVEMENT EDGE
 ALL PIPE UNDERDRAINS SHOW ON PLAN & PROFILE SHEETS

FOR ITEM LEGEND SEE SHEET NO. 5

⊕ STATIONING

STATION	TO	STATION	
915+57.86		932+93.69	E.B.L. & W.B.L.

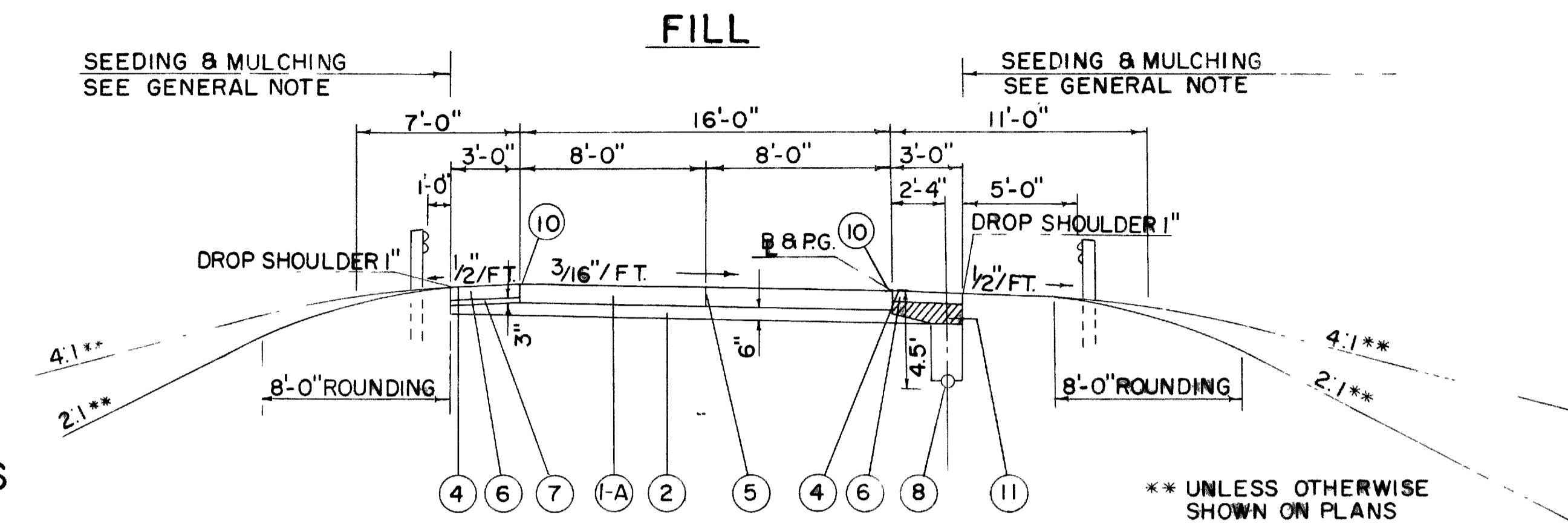
RAMP TYPICAL SECTIONS - S.R. 611 INTERCHANGE

TYPE 451

FOR DETAILS NOT SHOWN
SEE STD. DRWG. MC-1

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

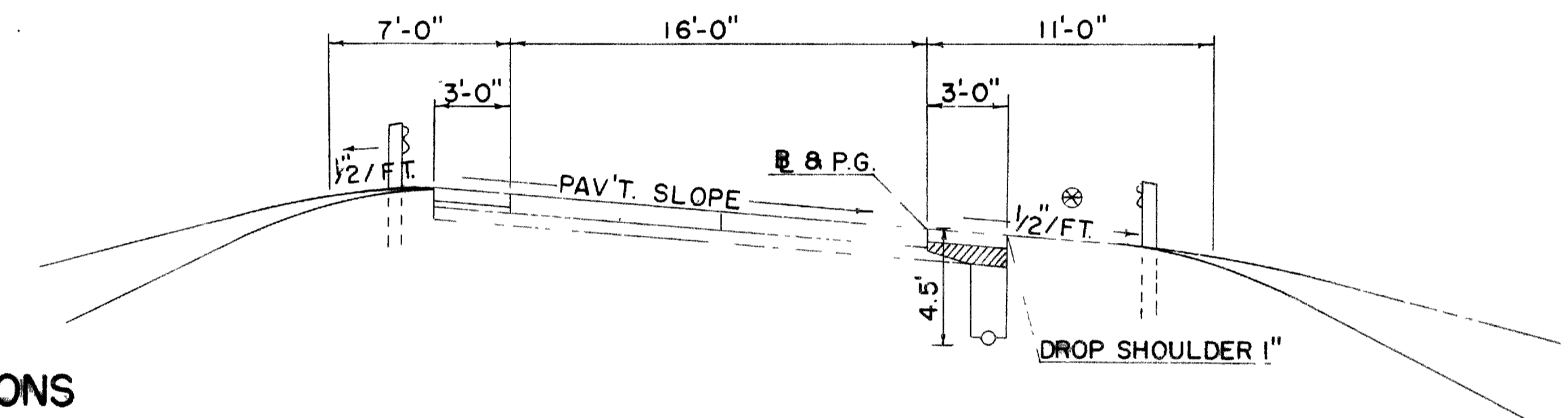
LOR. 90-17.21



NORMAL SECTIONS

STATIONING

STATION	TO STATION	RAMP "N"
N981+79.47	N983+47.10	

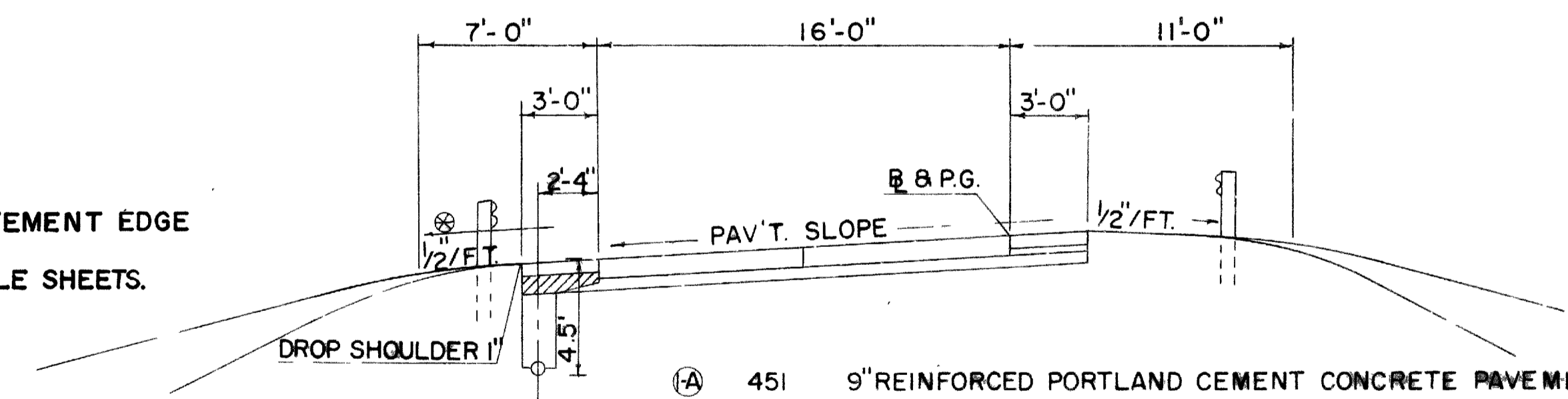


SUPERELEVATED SECTIONS

STATIONING

STATION	TO STATION	RAMP "M"
M978+47.07	M983+50.88	
N983+47.10	N989+21.89	
P971+22.89	P977+04.48	
R969+14.43	R974+36.92	

NOTE:
NORMAL SHALLOW PIPE UNDERDRAINS PLACED 4.5' BELOW PAVEMENT EDGE
ALL PIPE UNDERDRAINS SHOWN ON PLAN & PROFILE SHEETS.

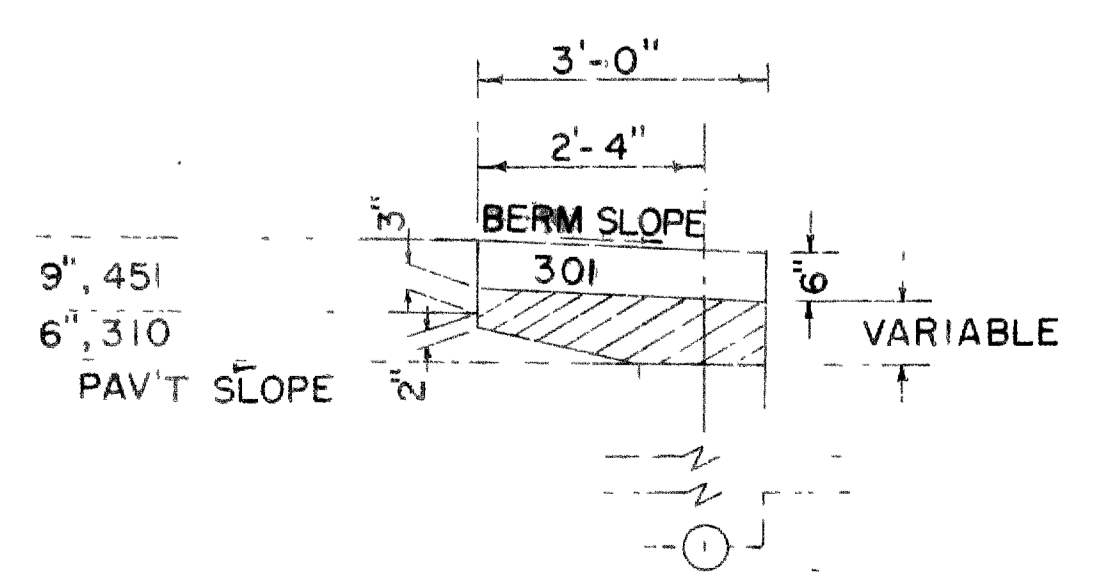


REVERSED SUPERELEVATED SECTIONS

STATIONING

STATION	TO STATION	RAMP "M"
M977+40.83	M978+47.07	
P977+04.48	P980+01.19	
R974+36.92	R976+26.56	

- (A) 451 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- (2) 310 SUBBASE, GRADING A OR B, AS PER PLAN
- (4) 409 SEAL COAT COVER AGGREGATE USING 0.008 CU. YD. NO. 8 AGGREGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL)
- (5) STD. LONGITUDINAL JOINT
- (6) 301 6" BITUMINOUS AGGREGATE BASE, 702.01 (88-100) OR 702.09, R.T. 12 SEE NOTE IN PROPOSAL
- (7) 304 AGGREGATE BASE
- (8) 605 6" PIPE UNDERDRAIN
- (10) 621 4" WIDE EDGE LINE
- (11) SPEC. DRAINAGE CONNECTION USING NO. 8 AGGREGATE (SEE NOTE IN PROPOSAL)



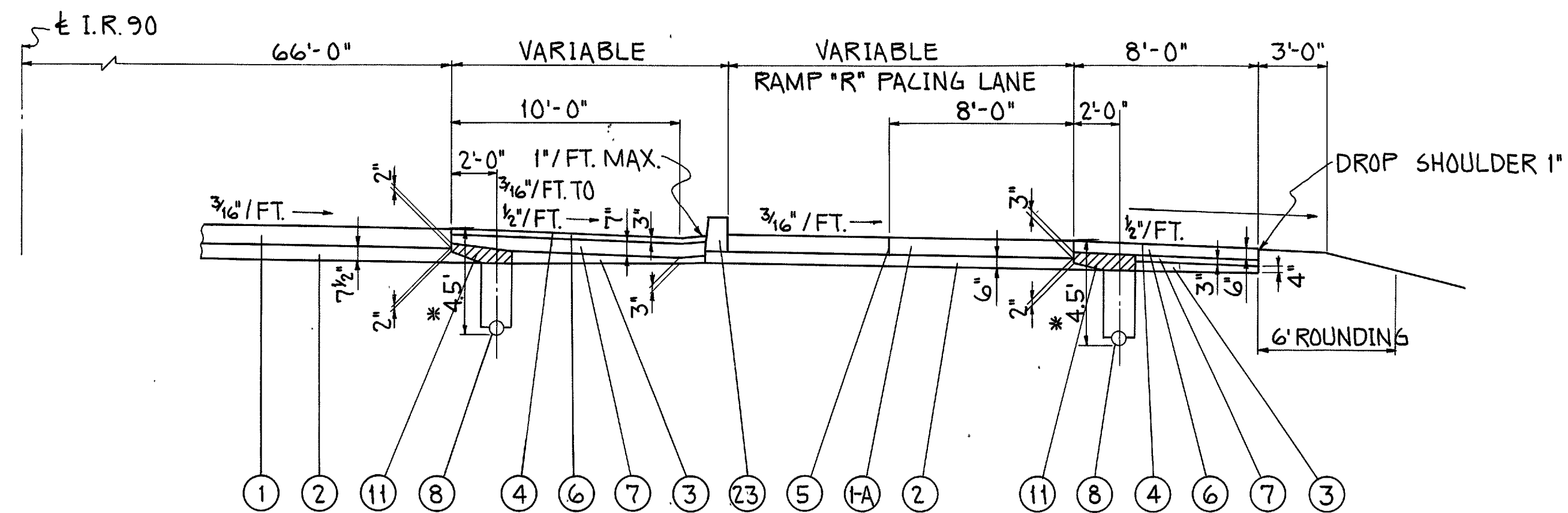
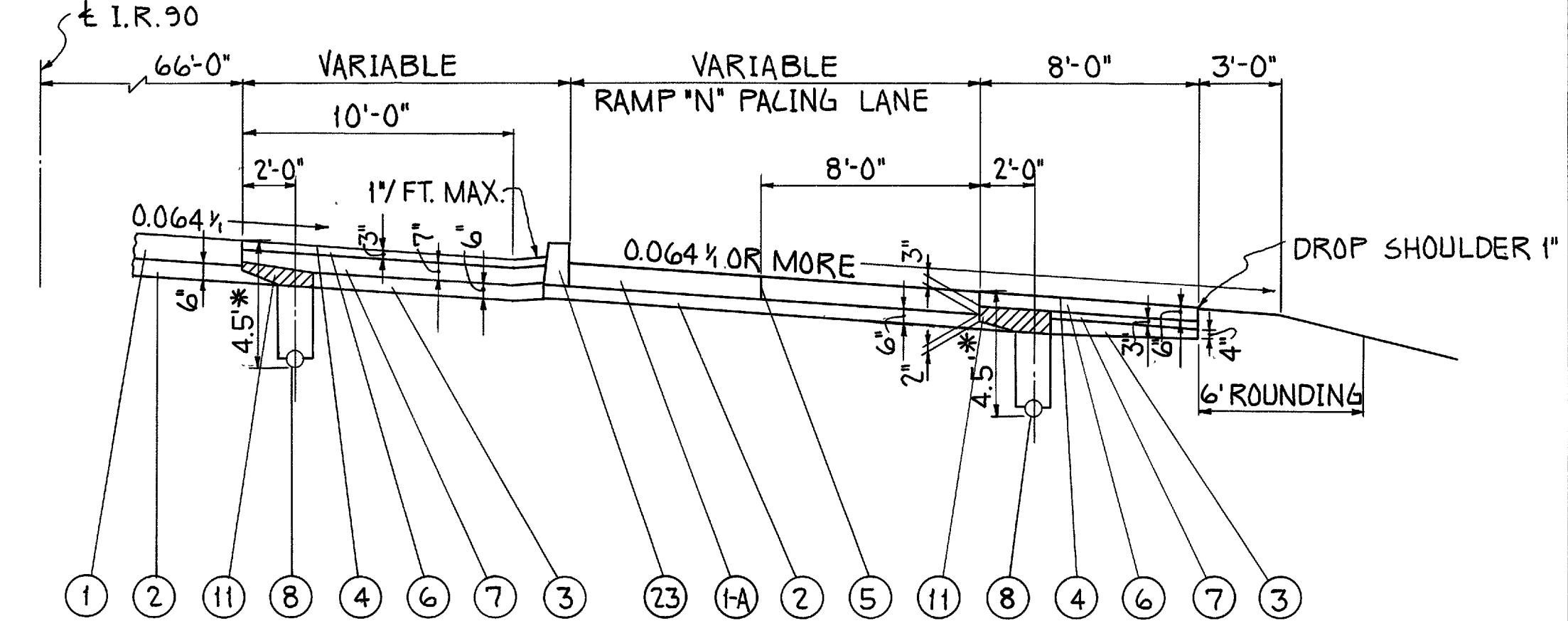
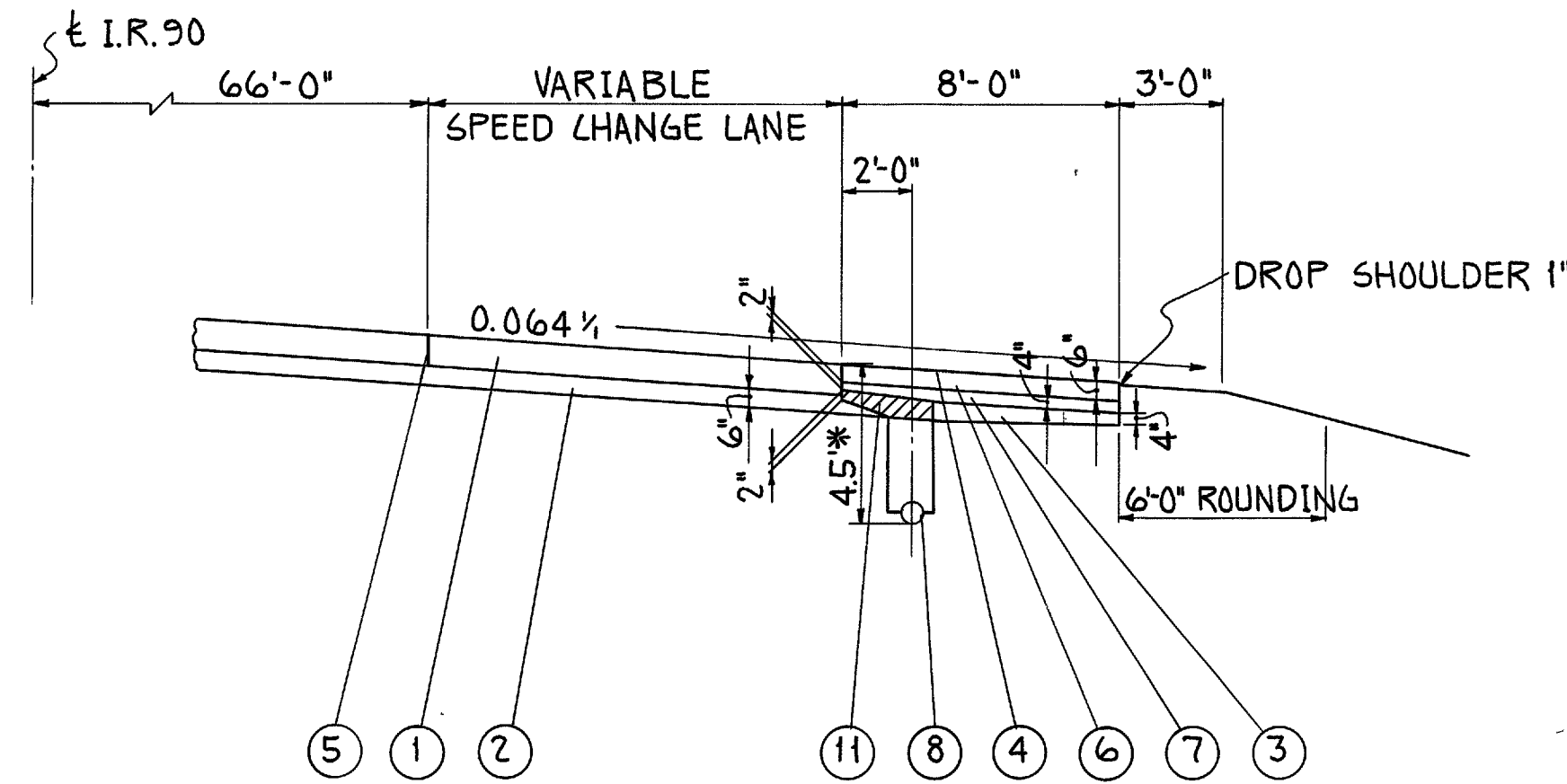
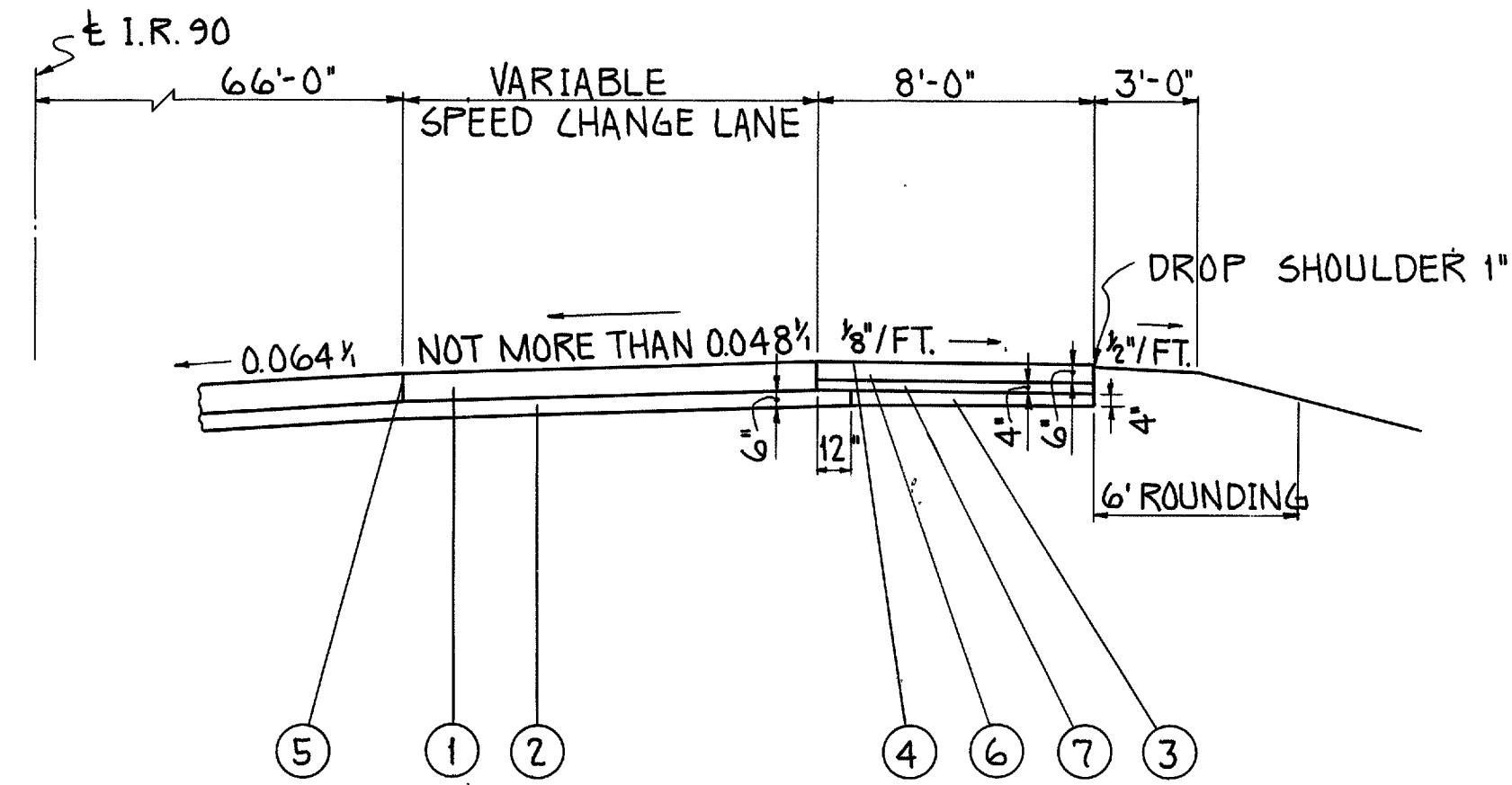
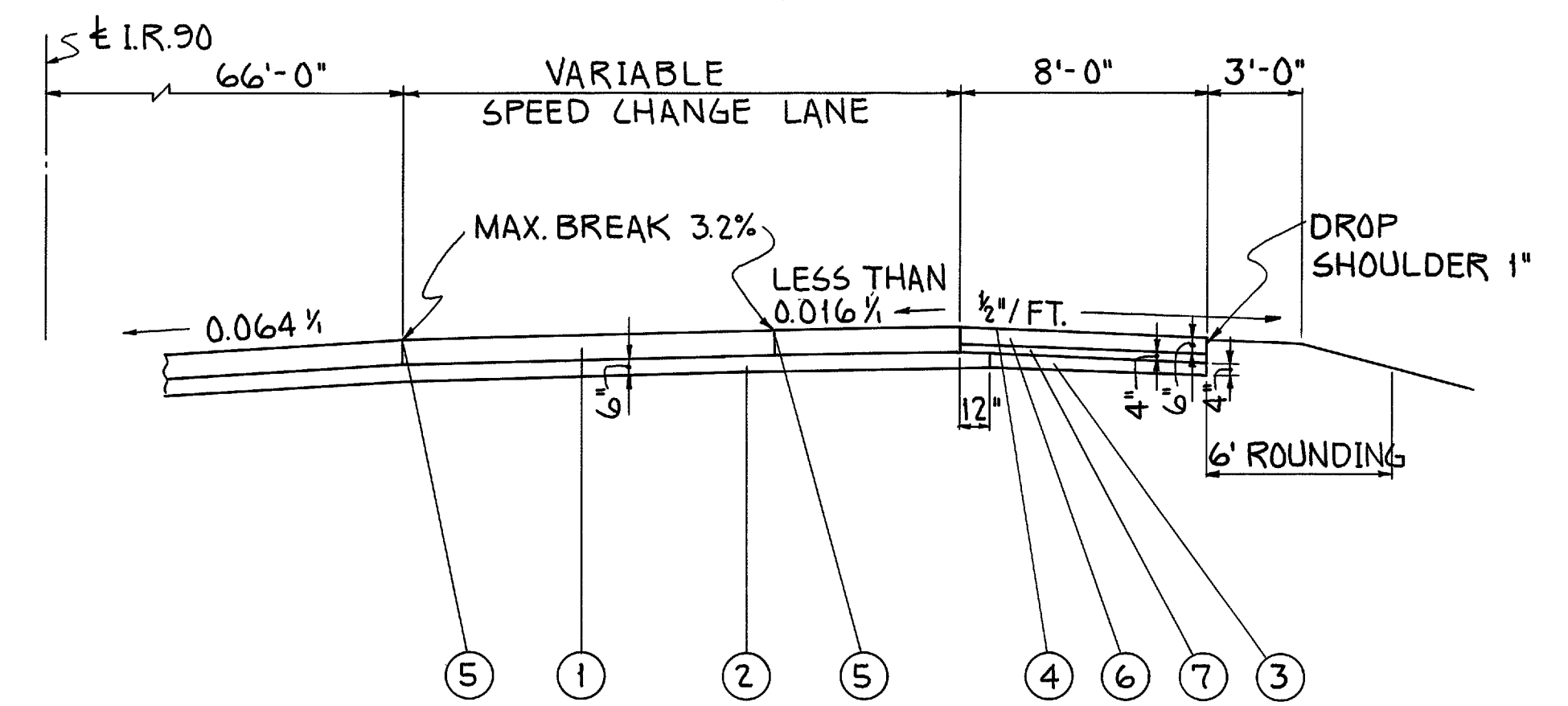
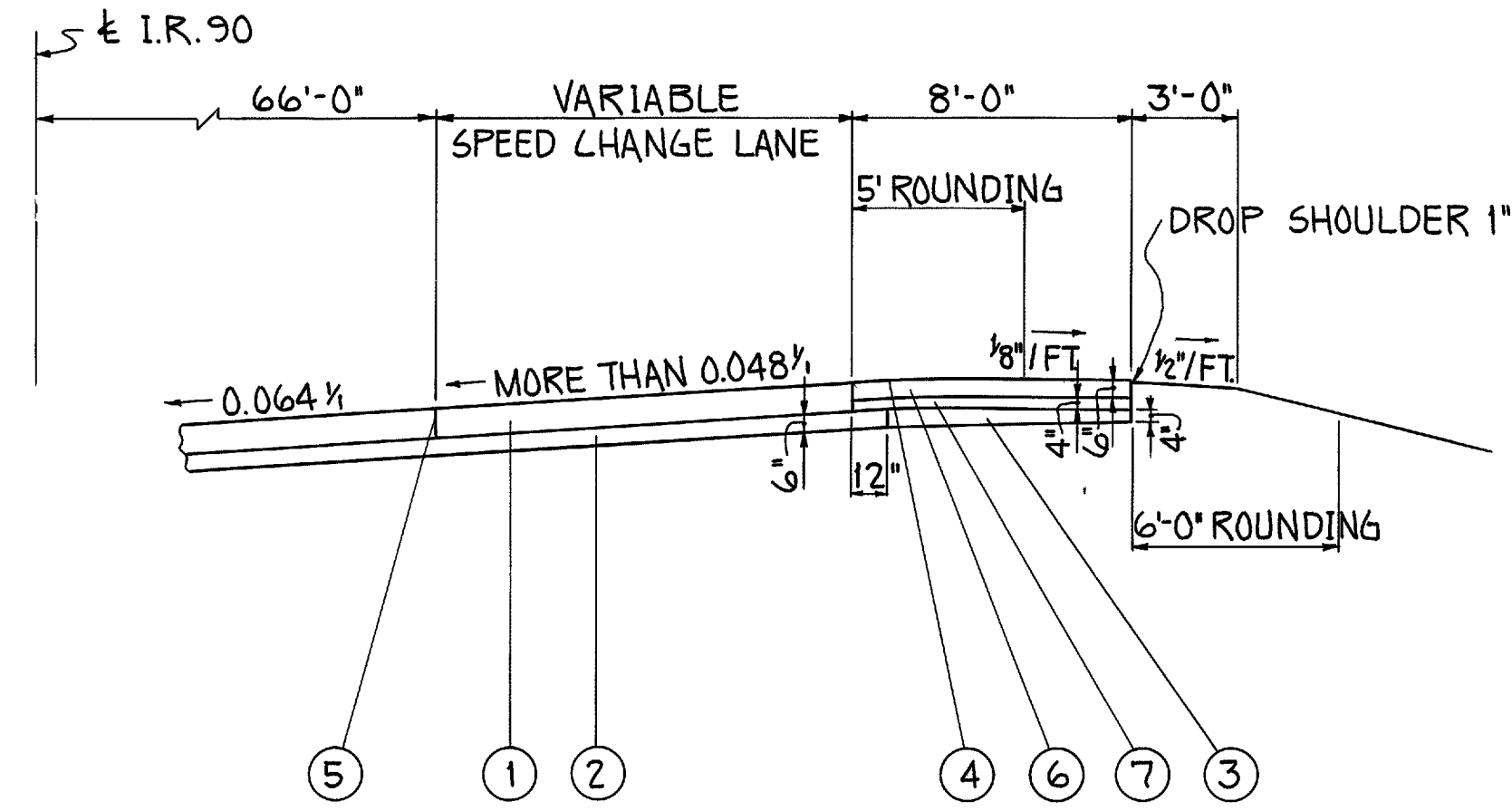
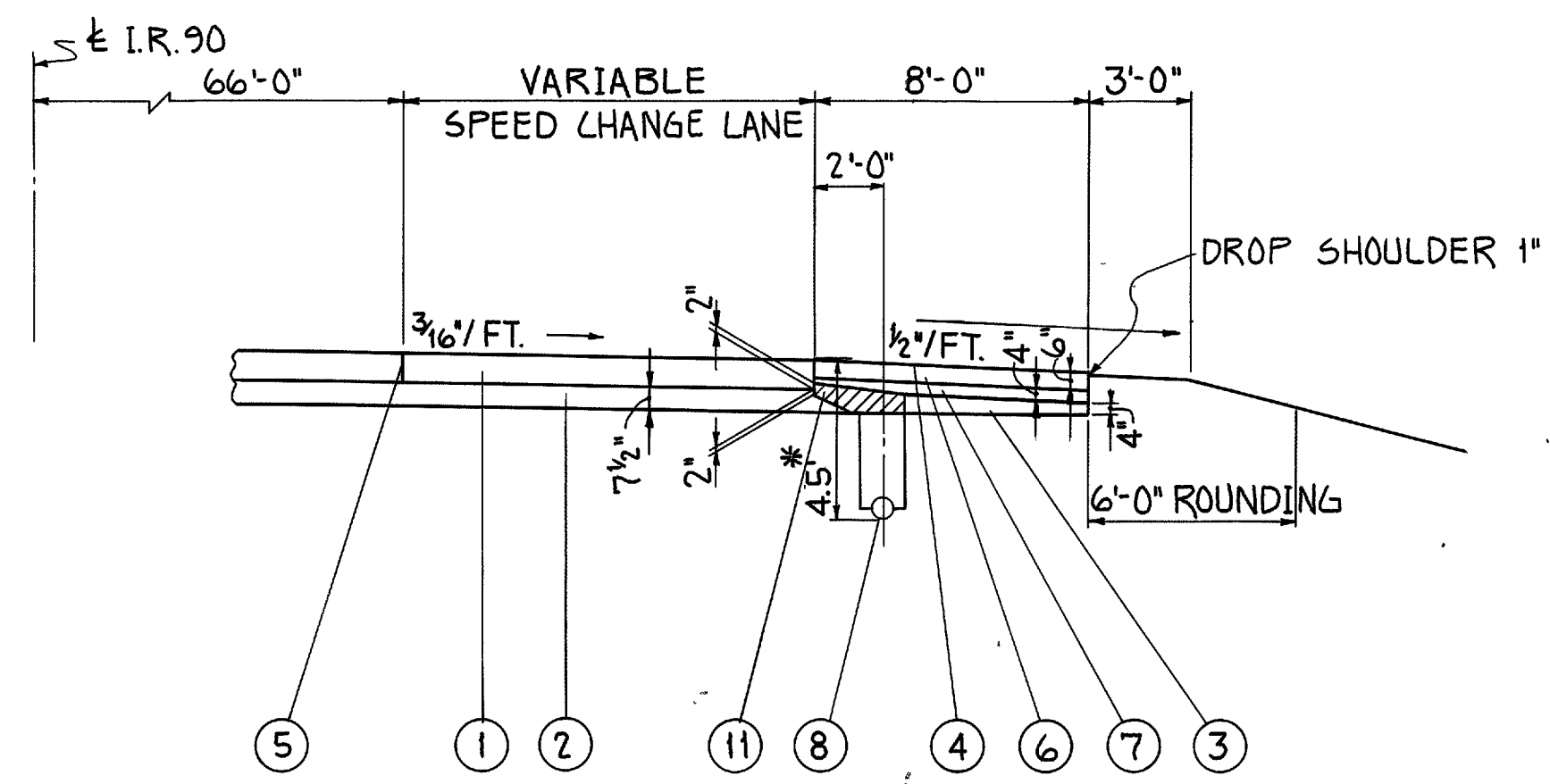
DETAIL OF SPECIAL DRAINAGE CONNECTION

⊗ PAV'T. SLOPE IF GREATER THAN 1/2"/FT.

TYPICAL SECTIONS SPEED CHANGE AND PACING LANES TYPE - 451

FED. RD. DIVISION	STATE	PROJECT	9
2	OHIO		

LOR - 90 - 17.21



NO.	ITEM	DESCRIPTION
1	451	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
1-A	451	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
2	310	SUBBASE, GRADING A OR B AS PER PLAN
3	310	SUBBASE
4	409	SEAL COAT; COVER A66REGATE USING 0.008 CU. YD. NO. 8 A66REGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL). STANDARD LONGITUDINAL JOINT
5	301	BITUMINOUS A66REGATE BASE 702.01, (85-100) OR 702.09 RT. 12 (SEE NOTE IN PROPOSAL)
6	304	A66REGATE BASE
7	304	A66REGATE BASE
8	605	6" PIPE UNDERDRAIN
11	SPECIAL	DRAINAGE CONNECTION, USING NO. 8 A66REGATE (SEE NOTE IN PROPOSAL)
23	609	CONCRETE CURB STANDARD TYPE 8

*** NOTE:**
 NORMAL SHALLOW PIPE UNDERDRAINS PLACED 4.5' BELOW PAVEMENT EDGE
 ALL PIPE UNDERDRAINS SHOWN ON PLAN & PROFILE SHEETS

FOR DETAILS NOT SHOWN
SEE STD. DRAWING MC-1

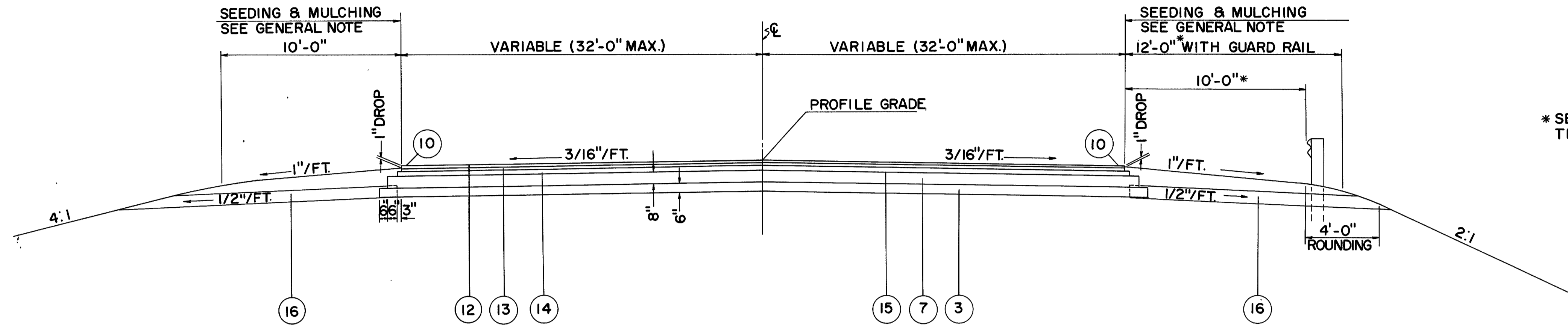
TYPICAL SECTIONS - S.R. 611

TYPE 404 ON 304

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

10

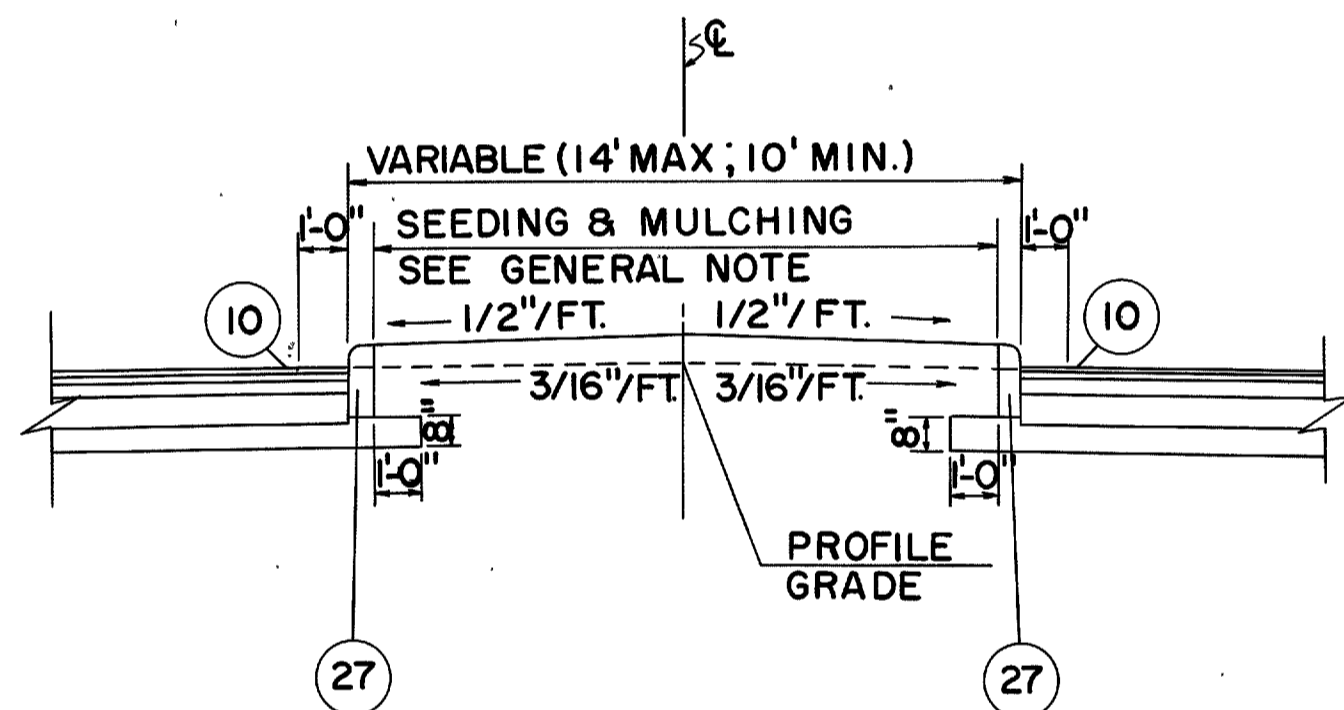
LOR.-90-17.21



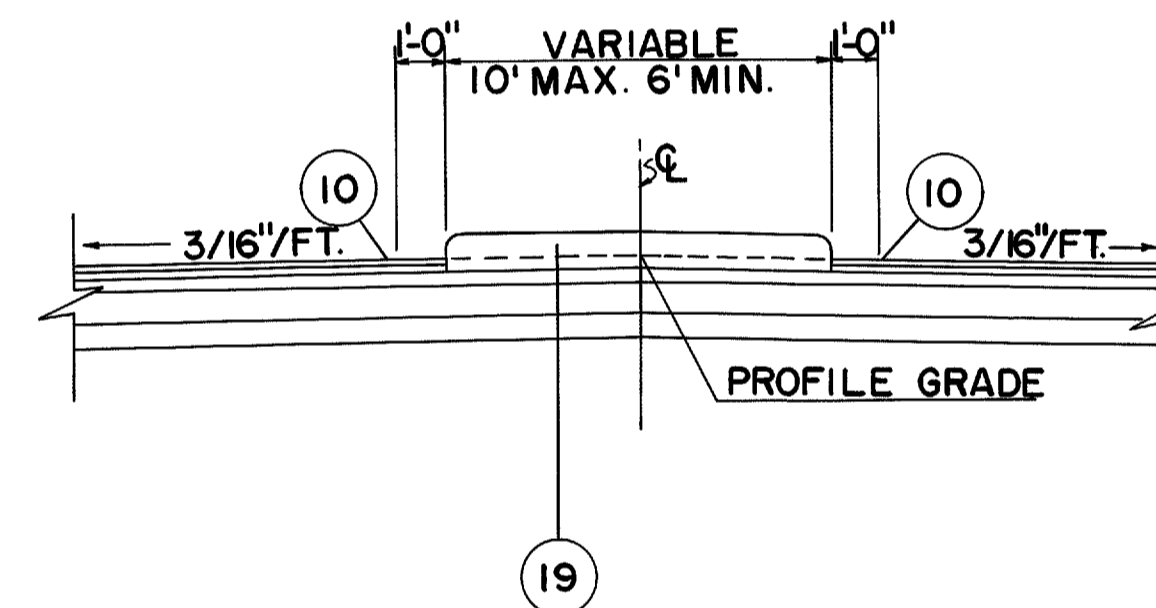
* SEE SHEET NO.92 FOR SHOULDER & GUARD RAIL TRANSITIONS

NORMAL SECTION

STA. 228+69.38 TO STA. 236+00 = 730.62 LIN. FT.

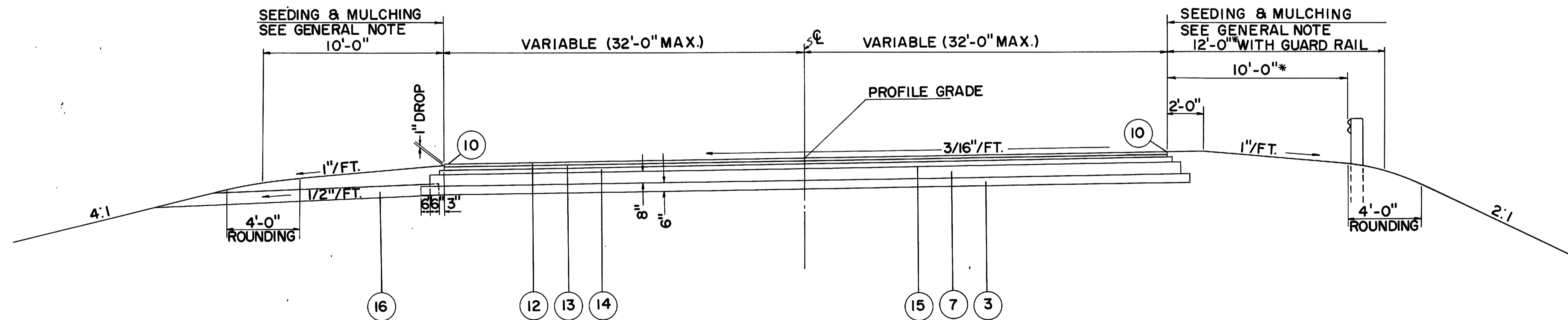


NORMAL SECTION WITH RAISED GRASS MEDIAN



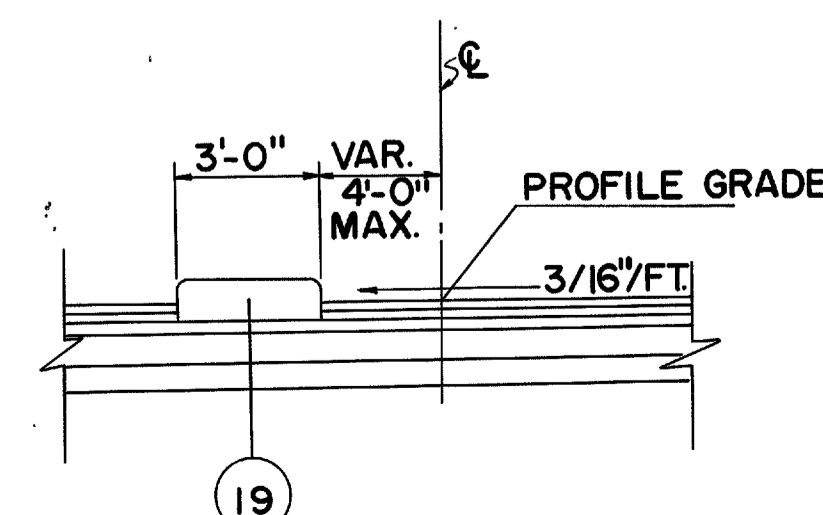
NORMAL SECTION WITH CONCRETE MEDIAN

- ③ 310 SUBBASE
- ⑦ 304 AGGREGATE BASE
- ⑩ 621 4" EDGE LINES, SEE DETAIL SHEET NO.
- ⑫ 404 1 1/4" ASPHALT CONCRETE (70-85)
- ⑬ 402 1 3/4" ASPHALT CONCRETE (70-85)
- ⑭ 302 3" ASPHALT CONCRETE (70-85)
- ⑮ 408 BITUMINOUS PRIME COAT; 702.09, RT-2 OR RT-3 APPLIED AT THE RATE OF 0.4 GAL. PER SQ. YD.
- ⑯ 605 AGGREGATE DRAINS
- ⑰ 612 CONCRETE MEDIAN
- ⑳ 609 CONCRETE CURB STD. TYPE 6



SUPERELEVATED SECTION

STA. 204+50 TO STA. 212+39.57 = 789.57 LIN. FT.



SUPERELEVATED SECTION WITH CONC. MEDIAN

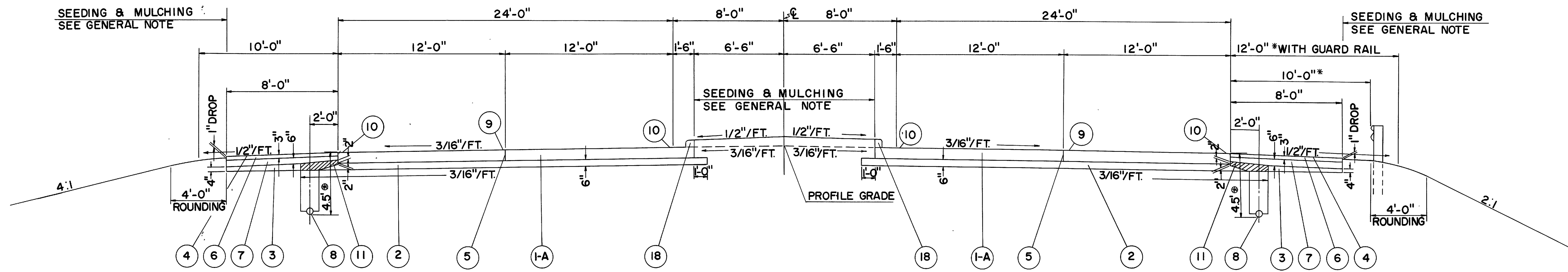
FOR DETAILS NOT SHOWN
SEE STD. DRAWING MC-1

TYPICAL SECTIONS - S.R. 611

TYPE 451

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LOR. 90-17.21

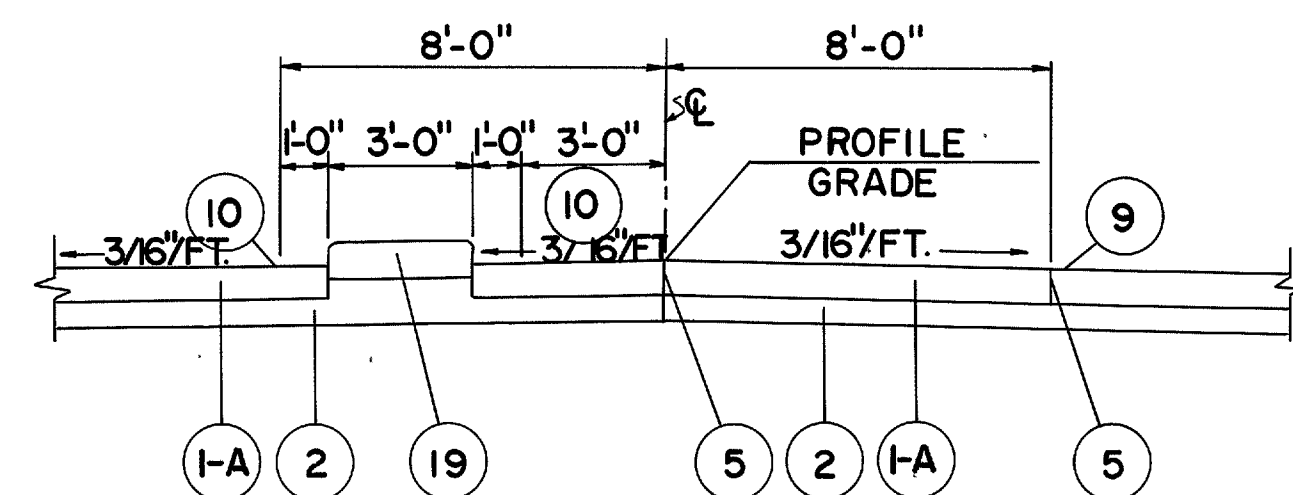


NORMAL SECTION

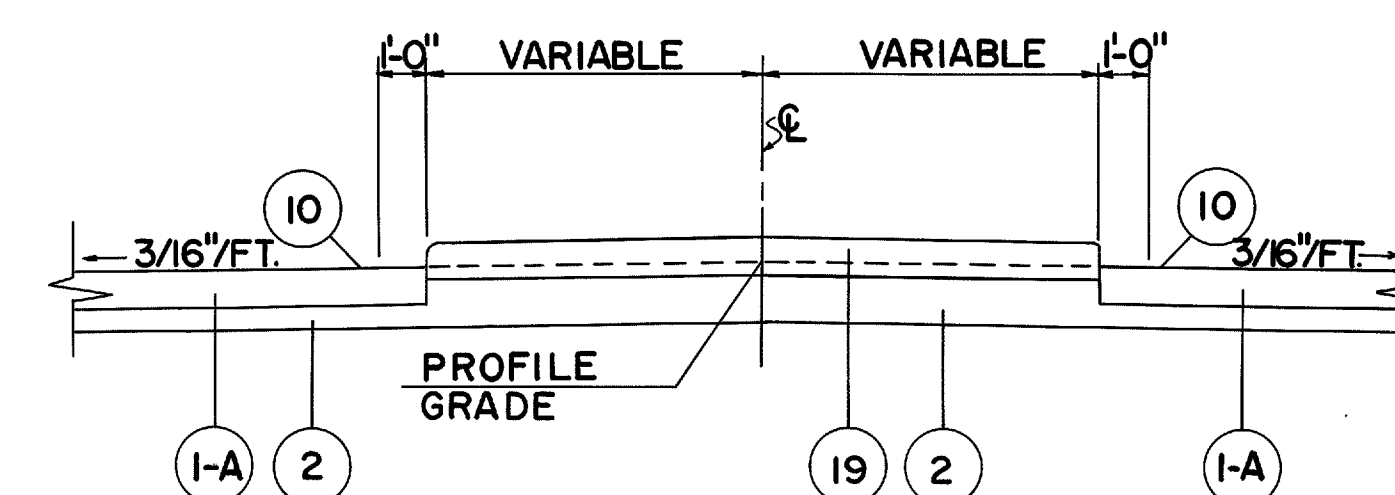
STA. 217+16.16 TO STA. 228+69.38 = 1153.22 LIN. FT.

NOTE:
NORMAL SHALLOW PIPE UNDERDRAINS ARE PLACED 4.5' BELOW PAVEMENT EDGE.
ALL PIPE UNDERDRAINS ARE SHOWN ON PLAN AND PROFILE SHEETS.

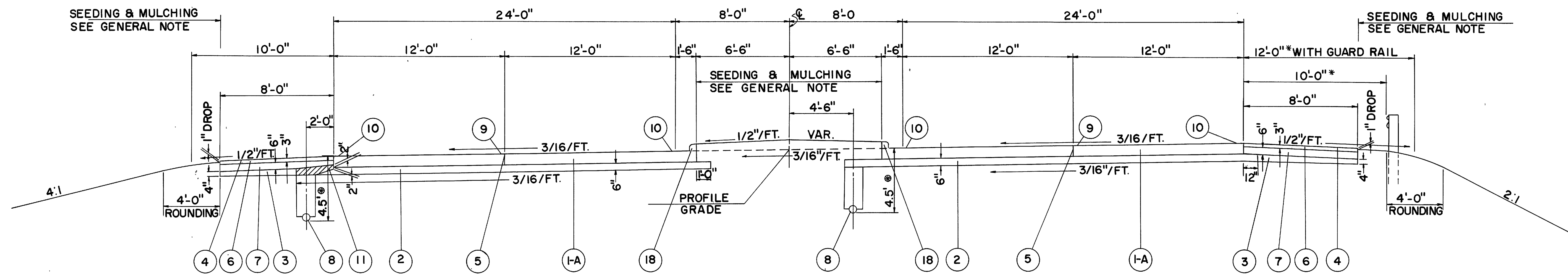
*SEE SHEET NO. 92 FOR SHOULDER AND GUARD RAIL TRANSITIONS



NORMAL SECTION WITH TURNING & STORAGE LANE



NORMAL SECTION WITH CONCRETE MEDIAN



SUPERELEVATED SECTION

STA. 212+39.57 TO STA. 217+16.16 = 476.59 LIN. FT.

- (1-A) 451 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
- (2) 310 SUBBASE, GRADING A OR B, AS PER PLAN
- (3) 310 SUBBASE,
- (4) 409 SEAL COAT, COVER AGGREGATE USING 0.008 CU. YD. NO. 8 AGGREGATE PER SQ. YD. AND 0.30 GAL. BITUMINOUS MATERIAL PER SQ. YD. (SEE NOTE IN PROPOSAL)
- (5) STANDARD LONGITUDINAL JOINT
- (6) 301 3" BITUMINOUS AGGREGATE BASE 702.01 (85-100) OR 702.09 R. T.-12 (SEE NOTE IN PROPOSAL)
- (7) 304 AGGREGATE BASE

- (8) 605 6" PIPE UNDERDRAIN
- (9) 621 6" LANE LINES AND CENTER LINES.
- (10) 621 4" EDGE LINES.
- (11) SPECIAL DRAINAGE CONNECTION USING NO. 8 AGGREGATE. (SEE NOTE IN PROPOSAL)
- (18) 609 CONCRETE CURB STD. TYPE 2-A

- (19) 612 CONCRETE MEDIAN

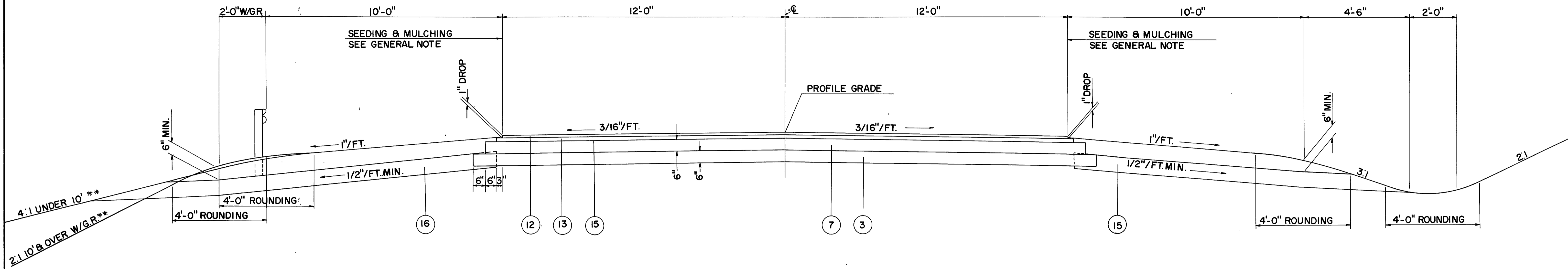
FOR DETAILS NOT SHOWN
SEE STD. DRAWING MC-1

TYPICAL SECTION - FRENCH CREEK RD.

TYPE 404 ON 304

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR.-90-17.21



** UNLESS OTHERWISE SHOWN ON PLANS

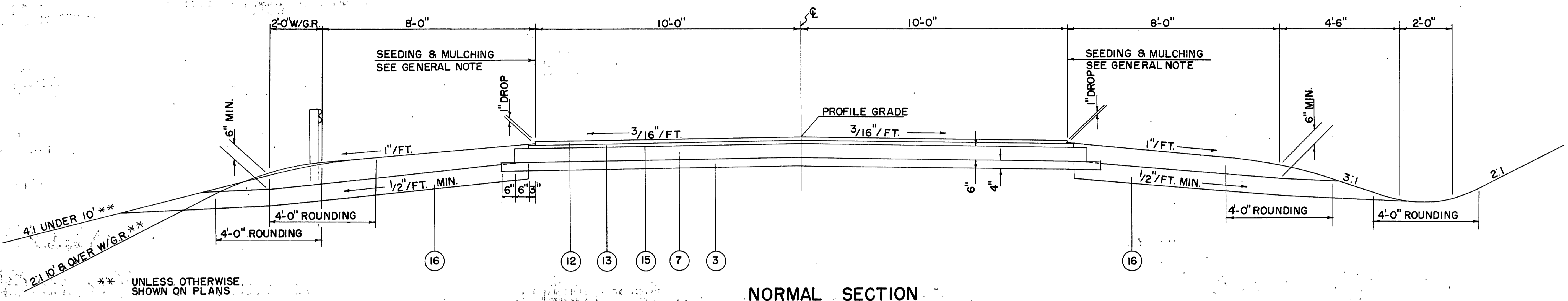
NORMAL SECTION

STA. 100+50 TO STA. 120+75 = 2025.00 LIN. FT.

- ③ 310 SUBBASE
- ⑦ 304 AGGREGATE BASE
- ⑫ 404 1/4" ASPHALT CONCRETE (70-85)
- ⑬ 402 1/2" ASPHALT CONCRETE (70-85)
- ⑮ 408 BITUMINOUS PRIME COAT 702.09 RT-2 OR RT-3 APPLIED AT THE RATE OF 0.4 GAL. PER SQ. YD.
- ⑯ 605 AGGREGATE DRAINS

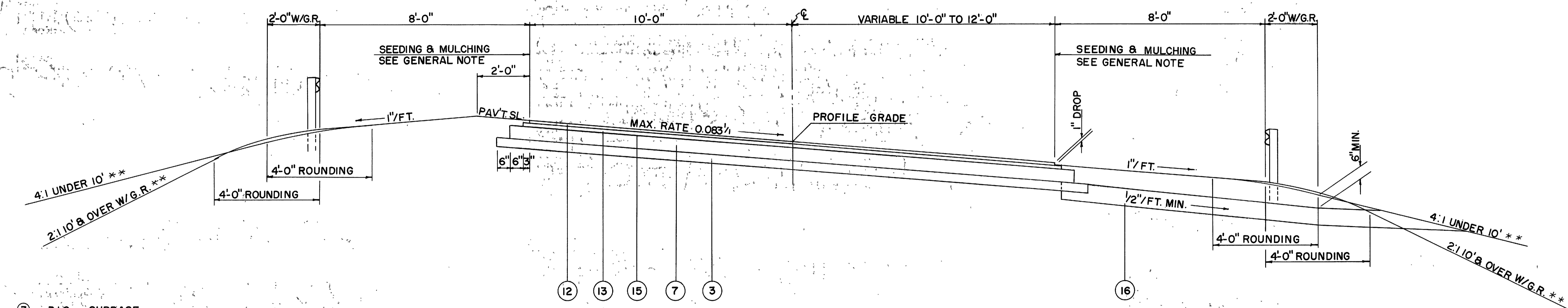
TYPICAL SECTIONS - AVON-CHESTER ROAD

TYPE 404 ON 304



NORMAL SECTION

STA. 0+82.16 TO STA. 1+14.21 = 32.05 LIN. FT.
STA. 18+51.71 TO STA. 30+30.00 = 1178.29 LIN. FT.
TOTAL = 1210.34 LIN. FT.



SUPERELEVATED SECTION

STA. 1+14.21 TO STA. 18+51.71 = 1737.50 LIN. FT.

- ③ 3-10 SUBBASE
- ⑦ 304 AGGREGATE BASE
- ⑫ 404 1/4" ASPHALT CONCRETE (70-85)
- ⑬ 402 1/2" ASPHALT CONCRETE (70-85)
- ⑮ 408 BITUMINOUS PRIME COAT ; 702.09 ; RT-2 OR RT-3 APPLIED AT THE RATE OF 0.4 GAL. PER SQ. YD.
- ⑯ 6.05 AGGREGATE DRAINS

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR. - 90-17.21

FIELD OFFICE
THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE SYSTEM MAINTAINED IN THE FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. FIELD OFFICE SHALL BE MAINTAINED SO THAT IT WILL REMAIN DURING THE LIFE OF THE CONTRACT, UNLESS OTHERWISE ORDERED BY THE ENGINEER. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

UNDERGROUND UTILITIES
ALL UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD SURVEY AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS.

ESTIMATED QUANTITIES
SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL GRADE ORDER GOVERNING COMPLETION OF THIS PROJECT.

WORK INCLUDED IN THIS LUMP SUM PAY ITEM.
SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

ROADWAY CURVES
ROADWAY CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE ROADWAY IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE CROWN.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGN
THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AT EACH OF THE FOLLOWING APPROXIMATE LOCATIONS:

STATE ROUTE 611, S.R. 611
STATE ROUTE 142, S.R. 142

TOTAL OF TWO (2) SIGNS. SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE N-100-100A." THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

REMOVAL OF EXISTING PIPE
FOR REMOVAL OF ALL EXISTING PIPE DRAINS WHICH WOULD NORMALLY BE REMOVED IN VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

REMOVAL OF TREES AND STUMPS
ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 - CLEARING AND GRUBBING. THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED IN THESE PLANS SHALL NOT BE REMOVED. ALL ELM TREES, DEAD OR ALIVE, SHALL BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

PROJECT NO.	TREES				STUMPS			
	18"	30"	48"	60"	18"	30"	48"	60"
I-90-1(42)	1280	48	24	1	5	1	1	
90-90-1(42)	121	44	-	-	13	7	-	-
TOTAL	1401	92	24	1	18	8	1	

THE ABOVE QUANTITIES ARE APPROXIMATE AND THE STATE OF OHIO RESERVED THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY OR EASEMENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR "ITEM 201 - CLEARING AND GRUBBING."

CONSTRUCTION MONUMENTS, AS PER PLAN
MONUMENTS SHALL BE CONSTRUCTED OF CLASS C CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE 12 INCHES IN DIAMETER AND FORTY-FOUR INCHES (44") IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO INCHES (2") BELOW GROUND LEVEL AND THE UPPER SIX INCH (6") PORTION OF THE CONCRETE SHALL BE FORMED. ONE-HALF (1/2") INCH STEEL ROD SIX INCHES (6") LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND SWATH.

FOR LOCATIONS, SEE SHEET NO. 281

ROADWAY CURVES ON CROSS SECTIONS
THE ROADWAY CURVES, SHOWN ON STANDARD DRAWING MC-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS EVEN THOUGH OTHERWISE SHOWN IN THESE PLANS.

SEEDING
QUANTITIES FOR SEEDING ON THE MAINLINE, RAMPS AND S.R. 611 ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE RIGHT-OF-WAY FENCE LINES, BETWEEN THE RIGHT-OF-WAY LINES IN UNFENCED AREAS AND WHERE THE ROAD LIES OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR EASEMENT. QUANTITIES FOR SEEDING THE REMAINING INTERESTING ROADS ARE CALCULATED FOR THE SOIL AREAS BETWEEN LINES TEN FEET (10') OUTSIDE THE WORK LIMITS, AS SHOWN ON THE CROSS SECTIONS, OR TO THE RIGHT-OF-WAY LINE IF SUCH LINE IS LESS THAN TEN FEET (10') FROM THE WORK LIMITS.

SEEDING FORMULA

THE FOLLOWING SEED MIXTURE SHALL, IN LIEU OF THE MIXTURES LISTED IN 659.09, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT:

- 45% KENTUCKY 31 FESCUE
- 27% KENTUCKY BLUEGRASS
- 5% ALSIKE CLOVER
- 3% REDTOP

COMMERCIAL FERTILIZER

ALL AREAS TO BE SEEDED UNDER 659, SODDED UNDER 660, OR JUTE MATTED UNDER 667, SHALL HAVE COMMERCIAL FERTILIZER 12-12-12 APPLIED.

DRILLED WELL ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF. THE CASING SHALL BE CUT OFF AT LEAST TWO FEET (2') BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST TWO FEET (2') BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS AND CAPPED WITH CLASS E CONCRETE OR A STANDARD THREADED PIPE CAP.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM. THE FOLLOWING ADDITIONAL ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY:

SPECIAL, DRILLED WELL ABANDONED 2 EACH

SPECIAL, CLEANING AND DISPOSAL OF SEPTIC TANKS

THIS ITEM SHALL INCLUDE CLEANING, BACKFILLING AND REMOVAL OF ALL OR ANY PORTION OF EXISTING SEPTIC TANKS.

ALL SEPTIC TANKS LYING WITHIN THE PROPOSED RIGHT-OF-WAY LIMITS SHALL BE CLEANED AND EMPTIED. MATERIAL REMOVED FROM THESE TANKS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE RIGHT-OF-WAY OR EASEMENT LINES.

WHEN THE SEPTIC TANKS ARE LOCATED ABOVE THE FINISHED PAVEMENT OR GROUND LINES, THEY SHALL BE ENTIRELY REMOVED AND DISPOSED OF IN ACCORDANCE WITH SEC. 203.05.

WHEN THE TANKS ARE LOCATED BELOW THE FINISHED PAVEMENT OR GROUND LINES, THE TOPS OF THE TANKS SHALL BE REMOVED, AND THE WALLS SHALL BE REMOVED TO A DEPTH OF THREE FEET (3') BELOW THE FINISHED SUBGRADE OR GROUND LINES. THE REMOVED MATERIAL SHALL BE DISPOSED OF AS EXPLAINED ABOVE. THE TANKS SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL IN ACCORDANCE WITH 203.08.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR "ITEM SPECIAL - CLEANING AND DISPOSAL OF SEPTIC TANKS," WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CLEANING, REMOVING AND DISPOSING OF EXCESS MATERIALS, BACKFILLING AND FOR ALL LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM, INCLUDING INCIDENTAL EXCAVATION. THE FOLLOWING ADDITIONAL ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY:

SPECIAL, CLEANING AND DISPOSAL OF SEPTIC TANKS 2 EACH

CLEANING PRIVY VAULTS

PRIVY VAULTS SHALL BE CLEANED AND FILLED WITH SUITABLE MATERIAL AS DIRECTED BY THE ENGINEER. MATERIAL REMOVED FROM THESE VAULTS SHALL BE CLASSIFIED AS UNSUITABLE AND DISPOSED OF OUTSIDE THE LIMITS OF RIGHT-OF-WAY OR EASEMENT LINES. THE CLEANING OF PRIVY VAULTS SHALL BE PAID FOR UNDER "SPECIAL, CLEANING OF PRIVY VAULTS."

THE BACKFILLING OF PRIVY VAULTS SHALL BE PAID FOR UNDER 203 - EMBANKMENT. THE PRICE BID FOR THIS ITEM SHALL CONSTITUTE FULL COMPENSATION FOR PERFORMING ALL THE REQUIREMENTS OF THE ITEM AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

AN ESTIMATED AMOUNT OF EMBANKMENT FOR BACKFILLING PRIVY VAULTS HAS BEEN CARRIED TO CROSS SECTIONS. THE FOLLOWING ADDITIONAL ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY:

SPECIAL, CLEANING PRIVY VAULTS 2 EACH

PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE FOR THE MAINLINE AND RAMP PAVEMENTS, AND FOR PAVED SHOULDERS IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 801.

GUARD RAIL DETAILS

DETAILS OF GUARD RAIL ON THE PLANS DO NOT SHOW FLARED LEAD PANELS IN ALL CASES. STANDARD CONSTRUCTION DRAWING GR-5A, GR-5B and GR-6 APPLY TO ALL GUARD RAIL CONSTRUCTION.

INACTIVE GAS WELL

INACTIVE GAS WELLS, IF ENCOUNTERED ON THIS PROJECT, SHALL BE VENTED IN THE MANNER SHOWN ON SHEET NO. 16. THE QUANTITIES SHOWN ON SHEET NO. 16 HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE ABOVE WORK.

ACTIVE GAS WELL

SPECIAL, PLUGGING GAS WELLS (SEE NOTE IN PROPOSAL)

CONNECTIONS TO EXISTING PIPE

AT PLACES WHERE THE PLANS PROVIDE FOR THE PROPOSED PIPE TO BE CONNECTED TO EXISTING PIPE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEM.

LOCATION AND SIZE OF PIPE

THE LOCATION, TYPE, DEPTH AND SIZE OF ALL EXISTING PIPES ARE SHOWN AS NEARLY EXACT AS THE AVAILABLE INFORMATION WILL PERMIT. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATIONS FOUND DURING CONSTRUCTION.

FARM DRAINS

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY LIMITS BY 603 CONDUIT, TYPE B WITH CLASS B BEDDING, OF THE SAME COMMERCIAL SIZE AS THE EXISTING CONDUIT.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED ABOVE THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH BY 603 TYPE F CONDUIT. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOW-LINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603 TYPE E CONDUIT AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

603	6" CONDUIT, TYPE B WITH CLASS B BEDDING	300 LIN. FT.
603	8" CONDUIT, TYPE B WITH CLASS B BEDDING	300 LIN. FT.
603	12" CONDUIT, TYPE B WITH CLASS B BEDDING	300 LIN. FT.
603	8" CONDUIT, TYPE E	300 LIN. FT.
603	18" CONDUIT, TYPE E	300 LIN. FT.
603	6" CONDUIT, TYPE F	300 LIN. FT.
603	8" CONDUIT, TYPE F	300 LIN. FT.
603	12" CONDUIT, TYPE F	300 LIN. FT.
601	DUMPED ROCK CHANNEL PROTECTION	100 CU. YDS.

ALL NECESSARY PIPE SPECIALS WHICH SHALL BE INCLUDED FOR PAYMENT IN THE PERTINENT CONDUIT ITEM.

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNTIL REQUESTED BY THE ENGINEER.

FIELD TILE CONNECTION

WHEN FIELD TILE IS TO BE CONNECTED AT THE RIGHT-OF-WAY LINE, TILE LOCATION SHALL BE MARKED AND THE TILE PLUGGED UNTIL SAID TIME AS THE CONNECTION CAN BE MADE.

605 AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT FIFTY FOOT (50') INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TWENTY-FIVE FOOT (25') INTERVALS ON THE LOW SIDE ONLY OF SUPER-ELEVATED SECTIONS, EXCEPT WHERE ITEM 605 - PIPE UNDERDRAINS HAVE BEEN PROVIDED.

AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON SHEET NO. 17 SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLAN OR ENCOUNTERED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

605	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, AS PER PLAN	250 LIN. FT.
605	AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN	15 LIN. FT.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

CATCH BASIN GRATE ELEVATION

FOR CATCH BASINS WITH INCLUDED GRATES, THE GIVEN ELEVATION IS LOCATED ON THE UPSTREAM END OF THE GRATE IN THE CENTER LINE OF THE DITCH.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS

THIS PLAN MAKES NO PROVISION FOR CONNECTING, NOR SHALL THE ENGINEER OR CONTRACTOR CONNECT, ANY EXISTING OR NEW DRAINAGE INTO THE HIGHWAY DRAINAGE SYSTEM WHEN SUCH DRAINS

GENERAL NOTES

SEWER FLOW INTO HIGHWAY DRAINAGE SYSTEMS (Continued)

CARRY FLOW FROM ANY PLUMBING FIXTURES INCLUDING FLOOR DRAINS AND SINK DRAINS OR DRAINS FROM LIVESTOCK LOTS OR BARNY OR POLLUTED WATER OF ANY KIND.

EXISTING PIPE CARRYING FLOW WHICH COMES WITHIN THE CATEGORY OUTLINED ABOVE SHALL BE PLUGGED WITH CLASS E CONCRETE AT THE RIGHT-OF-WAY LINE. PAYMENT FOR SAID PLUGGING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 - EXCAVATION.

BENDS AND BRANCHES

WHERE CALLED FOR ON THE PLANS, TWO (2) 30° BENDS MAY BE USED IN LIEU OF ONE (1) 60° BEND AT NO ADDITIONAL COST TO THE STATE.

DUMPED ROCK CHANNEL PROTECTION

DUMPED ROCK CHANNEL PROTECTION AT THE OUTLET OF PIPES, AS SHOWN ON THE PLANS, SHALL BE PLACED IMMEDIATELY AFTER THE PIPE HAS BEEN PLACED AND THE OUTLET CHANNEL IS CUT.

SOD AT HEADWALLS

AN 18" STRIP OF SOD SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF EACH HEADWALL AND ALONG BOTH SIDES OF PAVED GUTTER TO PREVENT EROSION. THE ABOVE ITEM HAS BEEN INCLUDED IN QUANTITIES OF 660 SODDING.

SCALE PROTECTION

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR ADDITIONAL EROSION CONTROL:

601	DUMPED ROCK CHANNEL PROTECTION	100 CU. YDS.
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MATERIAL WILL NOT BE DELIVERED UNLESS REQUESTED BY THE ENGINEER.

CONTRACTION AND EXPANSION JOINTS

CERTAIN LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS HAVE BEEN DETAILED ON THE PLANS. NO WAIVER OF THE SPECIFICATIONS IS INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS AND THE SPECIFICATIONS.

MAINTENANCE OF SEWER FLOWS

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND THROUGH EXISTING FACILITIES TO BE REPLACED WHEN NEW FACILITIES ARE COMPLETED AND PLACED INTO USE.

EXPENSE FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE ITEMS OF 603 - CONDUIT.

NO CURBING, GRADING A OR B AS PER PLAN

GENERAL FOR THIS ITEM SHALL MEET THE REQUIREMENTS OF GRADING A OR B OF 310.02 EXCEPT THAT FOR CURBING GRADING, NO MORE THAN 10% OF THE MATERIAL SHALL PASS A NO. 200 SIEVE AFTER ALL OPERATIONS OF PLACING AND COMPACTING HAVE BEEN COMPLETED.

NO UNDER APPROACH SLABS

THE AREA BETWEEN THE SURFACE OF THE SUBGRADE AND THE BOTTOM OF THE APPROACH SLAB SHALL BE FILLED WITH 310 SUBBASE.

SEQUENCE OF CONSTRUCTION (PAVING)

- (1) INSTALL PIPE UNDERDRAIN ON OUTSIDE SHOULDER. INSTALLATION OF SHALLOW UNDERDRAIN IN MICHIGAN MAY BE DEFERRED UNTIL 451 IS IN PLACE.
- (2) PLACE SUBBASE OUT TO OUTSIDE EDGE OF UNDERDRAIN OR TO ONE FOOT (1') BEYOND EDGE OF PAVEMENT WHERE NO UNDERDRAIN IS PRESENT.
- (3) CONSTRUCT 451
- (4) REMOVE SUBBASE AND ANY CONTAMINATED BACKFILL OVER DRAIN AND REPLACE WITH NO. 8 ADEQUATE AS SHOWN ON TYPICAL SECTION.
- (5) COMPLETE SHOULDER CONSTRUCTION

DUST CONTROL

AN ESTIMATED AMOUNT OF 616 CALCIUM CHLORIDE AND 616 WATER HAS BEEN PROVIDED FOR DUST CONTROL, AS DIRECTED BY THE ENGINEER, AS SHOWN BELOW:

616	WATER	100 M. GAL.
616	CALCIUM CHLORIDE	10 TONS

MAINTENANCE OF TRAFFIC

FRENCH CREEK ROAD SHALL BE CLOSED TO TRAFFIC FOR A PERIOD NOT TO EXCEED SEVEN (7) MONTHS.

S. R. 611

A TEMPORARY ROADWAY WITH CLASS B PAVEMENT SHALL BE CONSTRUCTED AS PER PLAN SHOWN ON SHEET NOS. 89 & 90 FOR THE MAINTENANCE OF TWO-WAY TRAFFIC ON S. R. 611. THE TEMPORARY ROADWAY SHALL NOT BE IN USE FOR A PERIOD OF TIME EXCEEDING EIGHT (8) MONTHS.

MOORE ROAD

MOORE ROAD SHALL BE KEPT OPEN TO TRAFFIC UNTIL SUCH TIME AS THE CONSTRUCTION ON S. R. 611 AND AVON-CHESTER ROAD EXTENSION IS COMPLETED AND TRAFFIC PLACED THEREON.

LIGHTS, SIGNS AND BARRICADES AT ADJACENT ROAD INTERSECTIONS

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF 614 (MAINTAINING TRAFFIC) ON THIS PROJECT, PERFORM THE FOLLOWING: ERECT AND MAINTAIN STANDARD 48" x 30" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS AND LIGHTS AT THE FOLLOWING LOCATIONS DURING THE PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

FRENCH CREEK ROAD	AT THE INTERSECTION OF FRENCH CREEK ROAD WITH MOON ROAD AND ABBE ROAD
MOORE ROAD	AT THE INTERSECTION OF MOORE ROAD WITH S. R. 611 AND AVON-CHESTER ROAD

SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES."

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING LIGHTS, SIGNS AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC."

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

614 MAINTAINING TRAFFIC

AN ESTIMATED AMOUNT OF 410 - TRAFFIC COMPACTED SURFACE TYPE A OR B FOR MAINTAINING TRAFFIC AND 616 - CALCIUM CHLORIDE HAS BEEN PROVIDED FOR MAINTAINING TRAFFIC AS SHOWN BELOW:

	410	616
FRENCH CREEK ROAD	25 CU. YD.	0.5 TON
S. R. 611	25 CU. YD.	0.5 TON
MOORE ROAD	10 CU. YD.	0.2 TON
TOTAL	60 CU. YD.	1.2 TON

PAYMENT FOR ALL OF THE ABOVE MAINTENANCE OF TRAFFIC, INCLUDING BARRELL BARRICADES, EXCEPT FOR 615 - TEMPORARY ROADS AND CLASS B TEMPORARY PAVEMENT, AND 410 - TRAFFIC COMPACTED SURFACE TYPE A OR B AND 616 - CALCIUM CHLORIDE SHALL BE INCLUDED IN THE LUMP SUM BID FOR 614 - MAINTAINING TRAFFIC.

MEDIUM PAVEMENT ON APPROACH SLABS:-

The width and type of median pavement on approach slabs shall be transitioned from the standard section used on the approach pavement to the section used on the bridge within the limits of the approach slab.

CHANNEL EMBANKMENTS

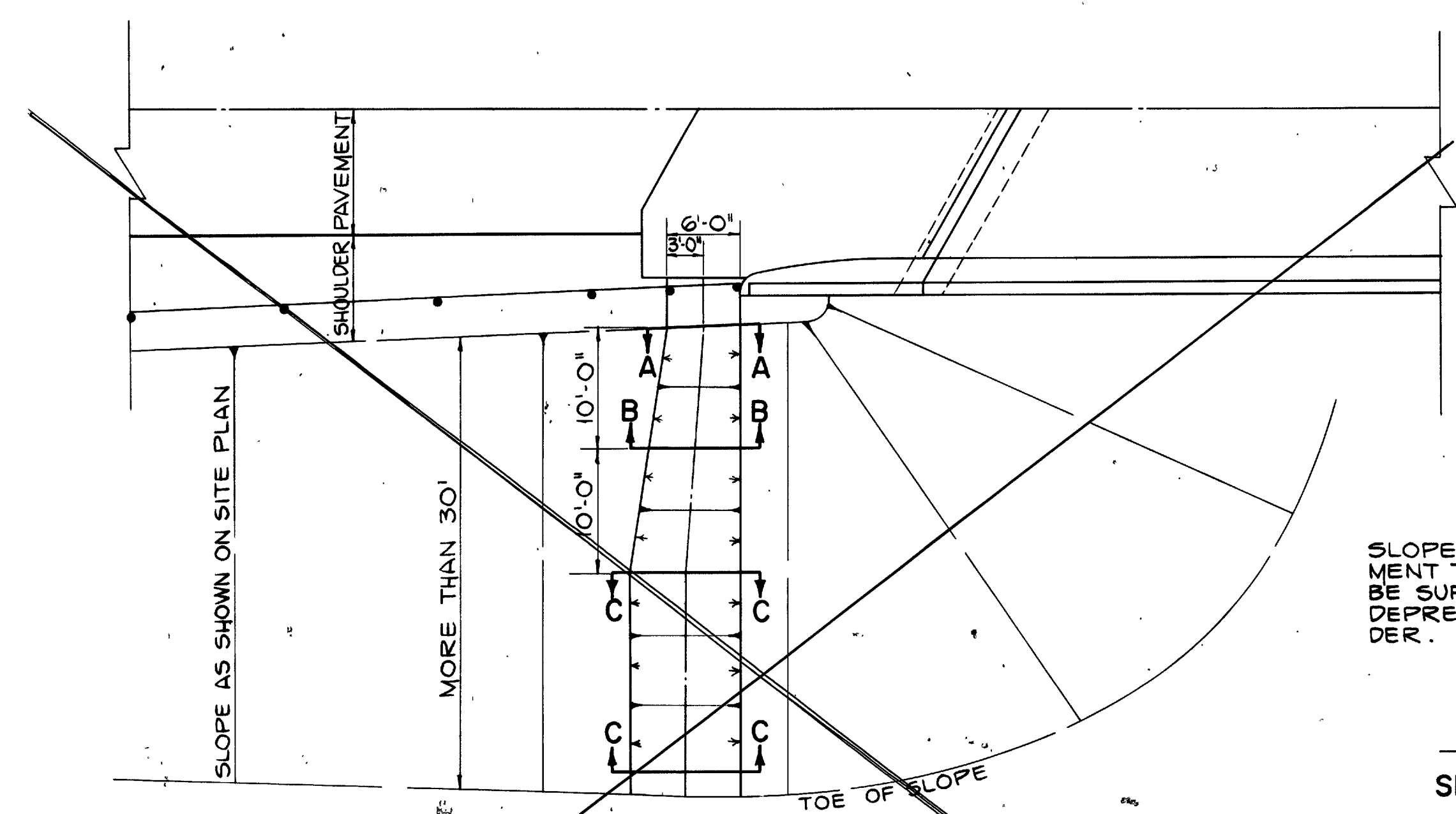
Portions of the existing channel shall be filled and sloped to drain as called for on the plans.

Areas where channel embankments are to be placed shall be cleared of weeds and brush but need not be scalped.

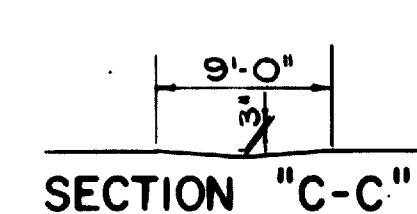
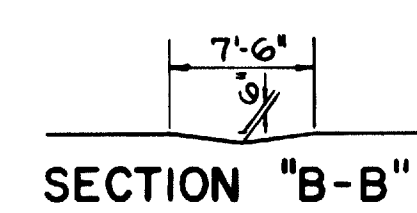
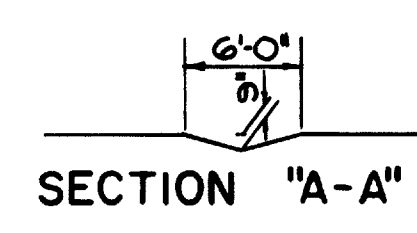
The requirements for moisture, density control, benching, and suitable materials shall be waived.

The depth of layers in which the embankments are placed and their compaction shall, in lieu of the requirements of item 203, conform with acceptable construction practices as determined by the Engineer.

No provision of the specifications shall be waived for embankments which support any portion of the new pavement, berms or structural members.



SLOPE FROM EDGE OF PAVEMENT TO SECTION "A-A" SHALL BE SUFFICIENT TO PROVIDE A 9" DEPRESSION AT EDGE OF SHOULDER.



1965 SPECIFICATIONS

SPECIAL BERM AND SLOPE PROTECTION

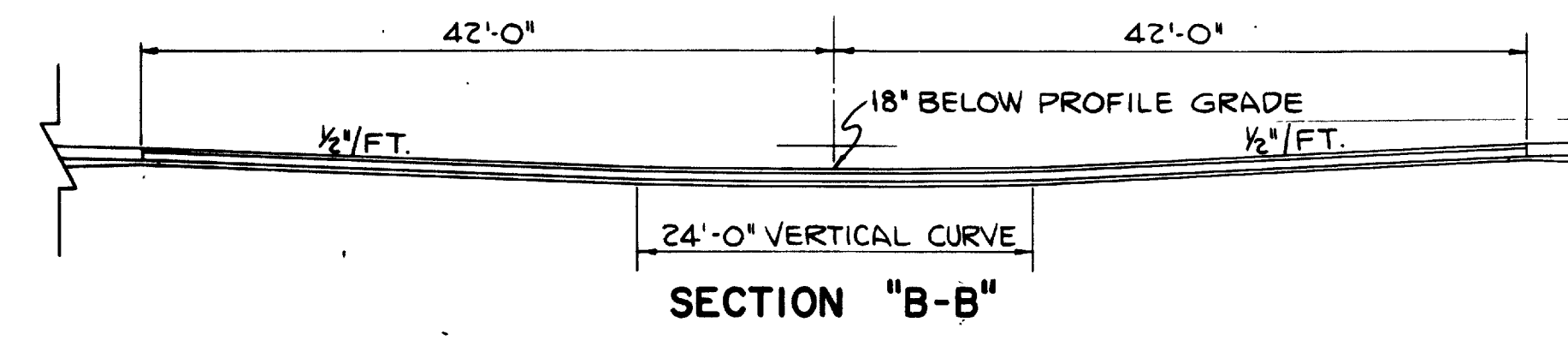
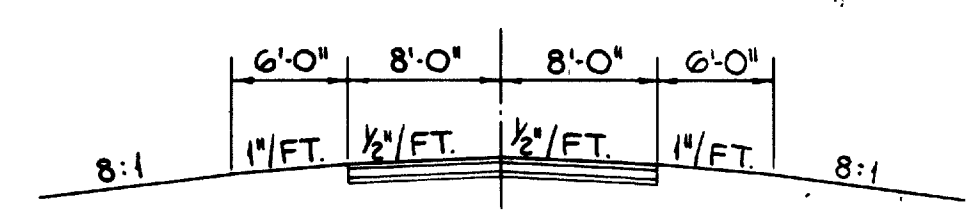
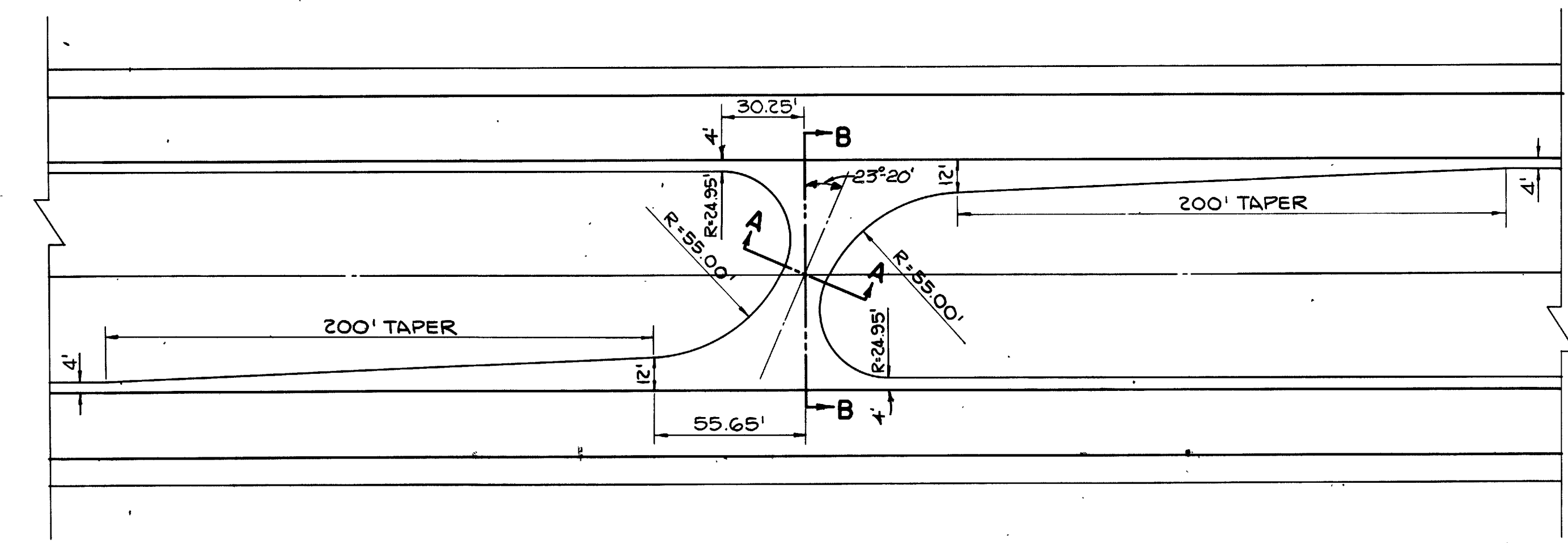
PRIOR TO PLACEMENT OF SOD ON THE BERM AND SLOPE, GALVANIZED POULTRY FENCE SHALL BE PLACED ON THE FINISHED GRADE IN STRANDS WHICH SHALL BE AT RIGHT ANGLES TO THE DIRECTION OF FLOW. EACH STRAND SHALL BE STAKED SECURELY ON TOP AND BOTTOM WITH STAKES AT FOUR FOOT INTERVALS, AND ALTERNATED IN ROWS FOUR FOOT APART. STAKES SHALL BE 1"x1"x8" WOOD STAKES AND SHALL BE PERPENDICULAR TO THE GROUND AND FLUSH WITH THE TOP OF THE SOD. THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLES. THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET HAVING A TWO INCH MESH AND ALL WIRE NO. 20 GAUGE. THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS. SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION AND MATERIALS SPECIFICATIONS, SECTION 660.06. THIS ITEM IS REQUIRED ONLY WHERE RATE OF SIDE SLOPE IS GREATER THAN SIX TO ONE. PAYMENT FOR ALL THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 660, SODDING, FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN.

TYPICAL APPROACH SLAB EROSION CONTROL

SPECIAL BERM AND SLOPE PROTECTION SOD TABLE

LOCATION	STATION	QUANTITY
FRENCH CRK. RT.	109+45.5	59 SQ. YDS. SOD
FRENCH CRK. RT.	109+66	55 SQ. YDS. SOD
FRENCH CRK. RT.	112+99	53 SQ. YDS. SOD
FRENCH CRK. RT.	113+20	54 SQ. YDS. SOD
S.R.G. 11	223+97	57 SQ. YDS. SOD
S.R.G. 11	224+27	51 SQ. YDS. SOD
TOTAL		329 SQ. YDS. SOD

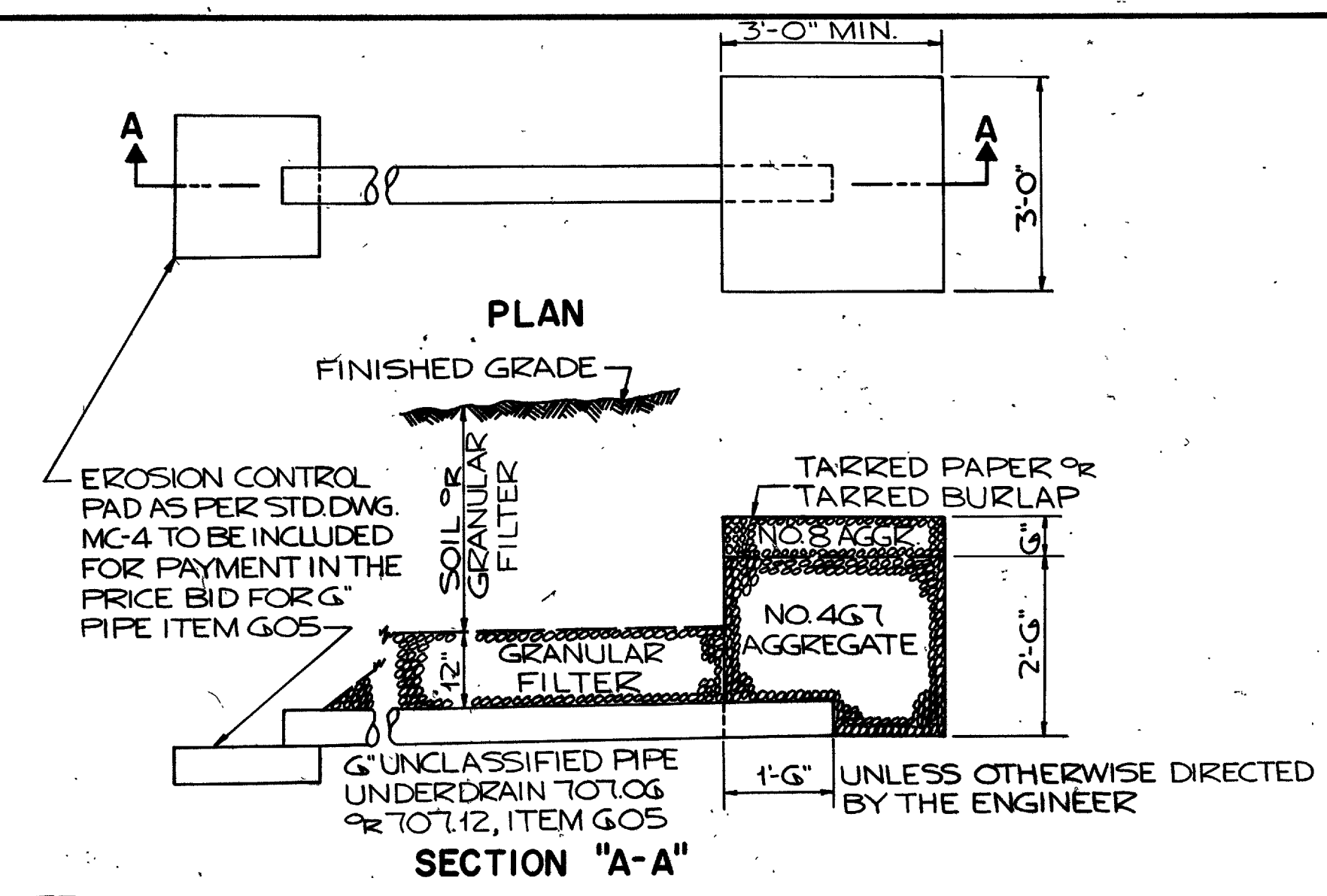
NOTE: Sodding for special berm and slope protection shall be built in accordance with Std. Drawing MC-7.



STATION	ESTIMATED QUANTITIES FOR U-TURN MEDIAN OPENINGS					
	203 SUBGRADE PREPARATION	405 SEAL COAT	301 BITUMINOUS AGGREGATE BASE	304 AGGREGATE BASE	310 SUBBASE	605 AGGREGATE DZAINS
543+00	254.5	254.5	21.3	42.5	21.5	20
1025+00	509.0	509.0	43.0	85.0	43.0	40
TOTAL	763.5	763.5	64.3	127.5	64.5	60

* 405 SEAL COAT TAKEN TO CALCULATIONS AND BROKEN DOWN BETWEEN BITUM. MATERIAL & COVER AGGREGATE.
1018 1018 85.6 170 86 80

STANDARD U-TURN MEDIAN OPENINGS



NOTE: AGGREGATES, TARRED PAPER OR TARRED BURLAP, AND NECESSARY EXCAVATION FOR SPRING DRAINS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICE BID PER LIN. FT. FOR ITEM G05, AGGREGATE DRAINS FOR SPRINGS, AS PER PLAN. THE 6" PIPE TO T.O.G. OR TO T.12 SHALL BE COVERED WITH GRANULAR FILTER MATERIAL (G05.03(1)) TO A HEIGHT OF (1) FOOT ABOVE THE TOP OF THE PIPE. THE REMAINDER OF THE BACKFILL FOR THIS ITEM SHALL BE SOIL OR GRANULAR FILTER BACKFILL PLACED IN ACCORDANCE WITH G03.08. SPRING DRAINS SHALL BE BUILT IN REASONABLY CLOSE CONFORMITY WITH THE DETAIL SHOWN ABOVE. THE LENGTHS AND EXACT LOCATIONS OF THE DRAINS SHALL BE DETERMINED BY THE ENGINEER. SEE NOTE ON SHEET NO. 14

AGGREGATE SPRING DRAIN DETAIL

Rev. 2-14-67 C.E.H.

CALCULATIONS

LINE	DESCRIPTION	QUANTITY	UNIT
451 10' REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT			
PROJECT I-90-1(42)			
1	STA. 873+00 TO STA. 913+00 =	2,000.00	LIN. FT.
2	STA. 943+00 TO STA. 1037+50 =	9,450.00	LIN. FT.
3	SUM LINES 1 & 2 = 11,450		LIN. FT.
4	DEDUCT FOR STRUCTURE NO. LOR-90-1861 AND APPROACH SLABS =	155.50	LIN. FT.
5	LINE 3 MINUS LINE 4 = 11,294.50		LIN. FT.
6	11,294.50 LIN. FT. x 24 ÷ 9 = 60,237.33		SQ. YDS.
	PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	60,237.33 SQ. YDS.
PROJECT IG-90-1(42)			
7	STA. 913+00 TO STA. 943+00 =	3,000.00	
8	DEDUCT FOR STRUCTURE NO. LOR-90-1785 =	208.03	
9	LINE 7 MINUS LINE 8 = 2,791.97		LIN. FT.
10	2,791.97 LIN. FT. x 24 ÷ 9 = 14,890.51		SQ. YDS.
	TOTAL PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	14,890.51 SQ. YDS.
409 SEAL COAT			
PROJECT I-90-1(42)			
INSIDE 4' WIDE PAVED SHOULDER			
11	LINE 3 =	11,450.00	LIN. FT.
12	LESS LINE 4 MINUS APPROACH SLABS =	-105.50	LIN. FT.
13	LINE 11 MINUS LINE 12 = 11,344.50		LIN. FT.
14	11,344.50 LIN. FT. x 2 x 4 =	90,756.00	SQ. FT.
OUTSIDE 10' WIDE PAVED SHOULDER			
15	STA. 873+00 TO STA. 913+00 (LT. & RT.) = 2,000 LIN. FT. x 2 =	4,000.00	LIN. FT.
16	STA. 943+00 TO STA. 953+14.43 (LT. & RT.) = 1,014.43 LIN. FT. x 2 =	2,028.86	LIN. FT.
17	STA. 967+04.50 TO STA. 971+24.55 (LT.) =	220.05	LIN. FT.
18	STA. 971+24.55 TO STA. 983+62.92 (LT. & RT.) = 1,238.37 LIN. FT. x 2 =	2,476.74	LIN. FT.
19	STA. 992+50.88 TO STA. 999+08.77 (LT.) = 657.89 x 2 =	1,315.78	LIN. FT.
20	STA. 999+08.77 TO STA. 1002+08.77 (LT.) = 300.00 x 2 =	600.00	LIN. FT.
21	STA. 1002+08.77 TO STA. 1005+21.89 (LT.) =	313.12	LIN. FT.
22	STA. 1005+21.89 TO STA. 1037+50.00 (LT. & RT.) = 3,278.11 LIN. FT. x 2 =	6,556.22	LIN. FT.
23	STA. 953+14.43 TO STA. 962+22.89 (RT.) =	908.46	LIN. FT.
24	STA. 983+62.92 TO STA. 988+93.00 (RT.) = 530.08 x 2 =	1,060.16	LIN. FT.
25	SUM LINES 15 THRU 24 = 17,898.30		LIN. FT.
26	17,898.30 LIN. FT. x 10 =	178,983.00	SQ. FT.
27	SUM LINES 14 & 26, 269,739.00 SQ. FT. ÷ 9 = 29,971.00		SQ. YDS.
PROJECT IG-90-1(42)			
INSIDE 4' WIDE PAVED SHOULDER			
28	STA. 913+00 TO STA. 943+00 =	3,000.00	LIN. FT.
29	LESS LINE 8 MINUS (APPROACH SLABS - 6") =	-159.03	LIN. FT.
30	LINE 28 MINUS LINE 29 = 2,840.97		LIN. FT.
31	2,840.97 x 2 x 4 =	22,727.76	SQ. FT.
OUTSIDE 10' WIDE PAVED SHOULDER			
32	LINE 30, 2840.97 x 2 x 10 =	56,819.40	SQ. FT.
33	SUM LINES 31 & 32, 79,547.16 SQ. FT. ÷ 9 = 8,838.57		SQ. YDS.
409 SEAL COAT BITUMINOUS MATERIAL (SEE NOTE IN PROPOSAL)			
PROJECT I-90-1(42)			
34	FROM LINE 27 =	29,971.00	SQ. YDS.
35	FROM SHEET NO. 17, (STD. U-TURN MEDIAN OPENING) =	1018.00	SQ. YDS.
36	FROM SHEET NO. 195, (S.R. 611 INTERCHANGE QUANTITIES) =	12,126.5	SQ. YDS.
37	SUM LINES 34 THRU 36 = 40,115.50 SQ. YDS. x 0.30 GALLONS / SQ. YD. = 12,034.65		GALLONS
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	42,051.0 GALLONS
PROJECT IG-90-1(42)			
38	FROM LINE 33 =	8,838.57	SQ. YDS.
39	FROM SHEET NO. 17, (STD. U-TURN MEDIAN OPENING) =	2,651.57	SQ. YDS.
40	SUM LINES 38 & 39 = 11,490.14 SQ. YDS. x 0.30 GALLONS / SQ. YD. = 3,447.04		GALLONS
	TOTAL PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	14,937.18 GALLONS
409 SEAL COAT COVER AGGREGATE			
PROJECT I-90-1(42)			
41	FROM LINE 37 = 40,115.50 SQ. YDS. x 0.008 CU. YDS. / SQ. YD. = 320.92		CU. YDS.
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	320.92 CU. YDS.
PROJECT IG-90-1(42)			
42	FROM LINE 40 = 11,490.14 SQ. YDS. x 0.008 CU. YDS. / SQ. YD. = 91.92		CU. YDS.
	TOTAL PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	91.92 CU. YDS.

LINE	DESCRIPTION	QUANTITY	UNIT
301 BITUMINOUS AGGREGATE BASE			
PROJECT I-90-1(42)			
43	FROM LINE 27; 269,739.00 SQ. FT. x 0.25 FT. THICKNESS ÷ 27 = 2,497.58		CU. YDS.
	PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	2,497.6 CU. YDS.
PROJECT IG-90-1(42)			
44	FROM LINE 33; 79,547.16 SQ. FT. x 0.25 FT. THICKNESS ÷ 27 = 736.55		CU. YDS.
	PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	736.6 CU. YDS.
304 AGGREGATE BASE			
PROJECT I-90-1(42)			
45	FROM LINE 14; 90,756.00 SQ. FT. x 0.5833 FT. THICKNESS =	52,940.97	CU. FT.
46	FROM LINE 25; 17,898.30 LIN. FT. x 5.61111 CU. FT. / FT. =	100,429.33	CU. FT.
OUTSIDE PAVED SHOULDER WITHOUT UNDERDRAIN			
47	STA. 973+45.56 TO STA. 976+45.56 (LT.) = 300 x 317.54 = 303.50		LIN. FT.
48	STA. 976+45.56 TO STA. 983+62.92 (LT.) = 717.36 x 317.54 = 734.11		LIN. FT.
49	STA. 992+50.88 TO STA. 999+08.77 (LT.) = 657.89 x 317.54 = 673.25		LIN. FT.
50	STA. 999+08.77 TO STA. 1002+08.77 (LT.) = 300 x 317.54 = 303.50		LIN. FT.
51	SUM LINES 47 THRU 50 = 2,014.36		LIN. FT.
52	SUM LINES 45, 46 & 51 = 153,817.73 CU. FT. ÷ 27 = 5,696.96		CU. YDS.
	PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	5,697.0 CU. YDS.
PROJECT IG-90-1(42)			
53	FROM LINE 31; 22,727.76 SQ. FT. x 0.583333 FT. THICKNESS =	13,257.85	CU. FT.
54	FROM LINE 32; 2,840.97 LIN. FT. x 2 x 5.61111 CU. FT. / FT. =	31,881.97	CU. FT.
OUTSIDE PAVED SHOULDER WITHOUT UNDERDRAIN			
55	STA. 916+00 TO STA. 916+91.11 (LT.) =	91.11	LIN. FT.
56	STA. 916+91.11 TO STA. 931+60.44 (LT.) = 1,469.33 x 317.54 = 1,486.48		LIN. FT.
57	SUM LINES 55 & 56; 1,577.59		LIN. FT.
58	LESS LT. BRIDGE = 154.41 x 317.54 =	-156.21	LIN. FT.
59	LINE 57 MINUS LINE 58 = 1,421.38		LIN. FT.
60	SUM LINES 53, 54 & 59 = 45,455.70 CU. FT. ÷ 27 = 1,683.54		CU. YDS.
	PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	1,684.0 CU. YDS.
304 WATER			
PROJECT I-90-1(42)			
61	FROM SHEET NO. 22 = 10,749.6 CU. YDS. (304) x 5 GAL. / CU. YD. ÷ 1000 GAL. / M. GAL. = 53.75		M. GAL.
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	54 M. GAL.
PROJECT IG-90-1(42)			
62	FROM SHEET NO. 22 = 1,726.5 CU. YDS. (304) x 5 GAL. / CU. YD. ÷ 1000 GAL. / M. GAL. = 8.63		M. GAL.
	TOTAL PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	9 M. GAL.
203 SUBGRADE PREPARATION			
PROJECT I-90-1(42)			
UNDER SIDE ROAD PAVEMENT			
	FRENCH CREEK RD =	4,416.2	SQ. YDS.
	S.R. 611 UNDER 404 PAVEMENT =	6,523.5	SQ. YDS.
	MOORE RD. =	1,640.2	SQ. YDS.
	RELOCATED AVON-CHESTER RD. =	7,066.2	SQ. YDS.
63	TOTAL SIDEROAD AREA =	19,646.1	SQ. YDS.
64	FROM SHEET NO. 22 AREA UNDER 9" 451 PAVEMENT =	16,793.0	SQ. YDS.
65	FROM SHEET NO. 22 AREA UNDER 10" 451 PAVEMENT =	66,503.4	SQ. YDS.
66	LINE 37 MINUS LINE 35 AREA UNDER PAVED SHOULDERS =	39,407.0	SQ. YDS.
67	FROM SHEET NO. 25 AREA UNDER APPROACH SLABS =	1,084.5	SQ. YDS.
68	FROM SHEET NO. 25 AREA UNDER CONCRETE MEDIAN =	406.2	SQ. YDS.
69	FROM SHEET NO. 25 AREA UNDER STD. NO. 6 CURB = 370.0 LIN. FT. x 0.50 FT. WIDE ÷ 9 =	21.7	SQ. YDS.
70	FROM SHEET NO. 25 AREA UNDER STD. NO. 7 CURB = 158.0 LIN. FT. x 0.67 FT. WIDE ÷ 9 =	11.8	SQ. YDS.
71	FROM SHEET NO. 25 AREA UNDER STD. NO. 8 CURB = 670.5 LIN. FT. x 1.00 FT. WIDE ÷ 9 =	74.5	SQ. YDS.
72	DELETED		
73	SUM LINES 63 THRU 72 = 143,948.2		SQ. YDS.
	PROJECT I-90-1(42) TO SHEET NO. 22	→ USE	143,948.2 SQ. YDS.
PROJECT IG-90-1(42)			
74	FROM LINE 10 AREA UNDER 10" 451 PAVEMENT	14,890.51	SQ. YDS.
75	FROM LINE 33 AREA UNDER PAVED BERMS	8,838.57	SQ. YDS.
76	FROM SHEET NO. 25 AREA UNDER APPROACH SLABS	2,666.80	SQ. YDS.
77	SUM LINES 74 THRU 76 = 23,995.88		SQ. YDS.
	TOTAL PROJECT IG-90-1(42) TO SHEET NO. 22	→ USE	23,996.0 SQ. YDS.

CALCULATIONS

LINE	DESCRIPTION	QUANTITY	UNIT
203 PROOF ROLLING			
PROJECT I-90-1(42)			
78	FROM LINE 73 =	143,948.2	SQ.YDS.
79	FROM LINE 75 =	763.5	SQ.YDS.
80	SUM LINES 78 & 79 = 144,711.70		SQ.YDS.
81	DEDUCT LINE 63 =	-19,646.1	SQ.YDS.
82	DEDUCT AREA CONCRETE MEDIAN ON S.R. 611 NEXT TO 404 PAVEMENT =	-110.3	SQ.YDS.
83	DEDUCT AREA STD. NO. 6 CURB ON S.R. 611 NEXT TO 404 PAVEMENT =	-6.7	SQ.YDS.
84	SUM LINES 81 THRU 83 = 17,763.1		SQ.YDS.
85	LINE 80 MINUS LINE 84 = 124,948.6 SQ.YDS. ÷ 2000 SQ.YDS./HOUR = 62.47 HOURS		
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 22 → USE	63.0	HOURS
PROJECT I4-90-1(42)			
86	FROM LINE 77 =	23,995.88	
87	FROM LINE 39 =	254.50	
88	SUM LINES 86 & 87 = 24,250.38 SQ.YDS. ÷ 2000 SQ.YDS./HOUR = 12.13 HOURS		
	TOTAL PROJECT I4-90-1(42) TO SHEET NO. 22 → USE	13.0	HOURS
203 WATER			
PROJECT I-90-1(42)			
89	FROM SHEET NO. 22 EMBANKMENT =	882,077	CU.YDS.
90	FROM SHEET NO. 22 SUBBASE GRADING A OR B =	15,765	CU.YDS.
91	FROM SHEET NO. 22 SUBBASE =	6,387	CU.YDS.
92	FROM SHEET NO. 22 STABILIZED CRUSHED AGGREGATE =	354	CU.YDS.
93	FROM SHEET NO. 22 STABILIZED CRUSHED AGGREGATE (CRUSHED LIMESTONE) =	18	CU.YDS.
94	FROM SHEET NO. 26 DRAINAGE CONNECTION USING NO. 8 AGGREGATE =	1,421	CU.YDS.
95	SUM LINES 89 THRU 94 = 906,022 CU.YDS. × 5 GALLONS/CU.YD. ÷ 1000 GALLONS/M.GAL. = 4530.11 M.GAL.		
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 22 → USE	4530.0	M.GAL.
PROJECT I4-90-1(42)			
96	FROM SHEET NO. 22 EMBANKMENT =	520,591	CU.YDS.
97	FROM SHEET NO. 22 SUBBASE GRADING A OR B =	2,831	CU.YDS.
98	FROM SHEET NO. 22 SUBBASE =	775	CU.YDS.
99	FROM SHEET NO. 26 DRAINAGE CONNECTION USING NO. 8 AGGREGATE =	224	CU.YDS.
100	SUM LINES 96 THRU 99 = 524,421 CU.YDS. × 5 GALLONS/CU.YD. ÷ 1000 GALLONS/M.GAL. = 2622.11 M.GAL.		
	TOTAL PROJECT I4-90-1(42) TO SHEET NO. 22 → USE	2623.0	M.GAL.
659 COMMERCIAL FERTILIZER (12-12-12)			
PROJECT I-90-1(42)			
101	FROM SHEET NO. 25 SEEDING & MULCHING =	508,820	SQ.YDS.
102	FROM SHEET NO. 26 SODDING =	2,686	SQ.YDS.
103	FROM SHEET NO. 26 SODDING FOR SPECIAL BERM & SLOPE PROTECTION =	329	SQ.YDS.
104	FROM SHEET NO. 26 JUTE MATTING =	3,618	SQ.YDS.
105	SUM LINES 101 THRU 104 = 515,453 SQ.YDS. × 0.00009 TONS / SQ.YD. = 46.39 TONS		
	TOTAL PROJECT I-90-1(42) TO SHEET NO. 25 → USE	46.39	TONS
PROJECT I4-90-1(42)			
106	FROM SHEET NO. 25 SEEDING & MULCHING =	90,700	SQ.YDS.
107	FROM SHEET NO. 26 SODDING =	32	SQ.YDS.
108	FROM SHEET NO. 26 JUTE MATTING =	140	SQ.YDS.
109	SUM LINES 106 THRU 108 = 90,872 SQ.YDS. × 0.00009 TONS / SQ.YD. = 8.179 TON		
	TOTAL PROJECT I4-90-1(42) TO SHEET NO. 25 → USE	8.18	TONS

LINE	DESCRIPTION										QUANTITY	UNIT	
PROJECT I-90-1(42)													
310 SUBBASE GRADING A OR B ; 310 SUBBASE ; SPECIAL DRAINAGE CONNECTION W/NO. 8 AGG.													
WEST BOUND LANE													
	STATION TO STATION	¢	CURVE	ADJUSTED									
		LENGTH	CORR.	LENGTH	310 SUBBASE A OR B	310 SUBBASE	NO. 8 AGGREGATE						
		FEET		FEET	CUYD./FT.	CUYD.	CUYD./FT.	CUYD.	CUYD./FT.	CUYD.			
112	893+00	913+00	2,000.00	2,000.00	0.49280	985.60	0.13717	274.34	0.05521	110.42			
113	943+00	953+14.43	1,014.43	1,014.43	0.49280	499.91	0.13717	139.15	0.05521	56.01			
114	953+14.43	966+22.25	1,307.82	1,307.82	0.48148	629.69	0.02778	36.33					
115	966+22.25	966+47.25	25.00	25.00	1.11821	27.96	0.02778	0.69					
116	966+47.25	967+77.75	25.00	25.00	1.18115	29.53	0.02778	0.69					
117	967+77.75	969+04.50	126.75	126.75	0.48148	61.03	0.02778	3.52					
118	969+04.50	972+70.56	366.06	366.06	0.49280	180.39	0.13717	50.21	0.05521	20.21			
119	972+70.56	973+45.56	75.00	75.00	0.48560	36.42	0.14091	10.57	0.05217	3.91			
120	973+45.56	973+83.06	37.50	1.001178	0.53580	20.11	0.12487	4.69					
121	973+83.06	976+45.56	262.50	1.010603	265.28	0.53657	142.34	0.12083	32.05				
123	976+45.56	983+67.92	717.36	1.018850	730.88	0.53657	392.17	0.12083	88.31				
124	983+67.92	992+50.88	887.96	1.018850	904.70	0.51852	469.11						
125	992+50.88	999+08.77	657.89	1.018850	670.29	0.53657	359.66	0.12083	80.99				
126	999+08.77	1001+71.27	262.50	1.010603	265.28	0.53657	142.34	0.12083	32.05				
127	1001+71.27	1002+08.77	37.50	1.001178	37.54	0.53580	20.11	0.12487	4.69				
128	1002+08.77	1002+83.77	75.00	75.00	0.48560	36.42	0.14091	10.57	0.05217	3.91			
129	1002+83.77	1016+45.31	1,361.54	1.001178	1,361.54	0.49280	670.97	0.13717	186.76	0.05521	75.17		
130	1016+45.31	1028+61.86	1,216.55	0.975602	1,211.20	0.49280	596.88	0.13717	166.14	0.05521	66.81		
131	1028+61.86	1037+50.00	888.14	888.14	0.49280	437.68	0.13717	121.83	0.05521	47.03			
EAST BOUND LANE													
132	893+00	913+00	2,000.00	2,000.00	0.49280	985.60	0.13717	274.34	0.05521	110.42			
133	943+00	962+22.89	1,922.89	1,922.89	0.49280	947.60	0.13717	263.76	0.05521	106.16			
134	962+22.89	966+22.25	399.36	399.36	0.48148	192.28	0.02778	11.09					
135	966+22.25	966+47.25	25.00	25.00	0.77251	19.31	0.02778	0.69					
136	966+47.25	967+77.75	25.00	25.00	0.87555	21.89	0.02778	0.69					
137	967+77.75	971+24.55	346.80	346.80	0.48148	166.98	0.02778	9.63					
138	971+24.55	972+70.56	146.01	146.01	0.49280	71.95	0.13717	20.03	0.05521	8.06			
139	972+70.56	973+45.56	75.00	75.00	0.48522	36.39	0.13499	10.12	0.05213	3.91			
140	973+45.56	973+83.06	37.50	0.998822	37.46	0.47384	17.75	0.13171	4.93	0.04750	1.78		
141	973+83.06	975+08.06	125.00	0.993717	124.21	0.47004	58.38	0.13534	16.81	0.04767	5.92		
142	975+08.06	976+45.56	137.50	0.985470	135.50	0.47004	63.69	0.14005	18.98	0.04938	6.69		
143	976+45.56	988+93.00	1,247.44	0.981150	1,223.93	0.47004	575.30	0.14005	17.14	0.04938	6.044		
144	988+93.00	999+08.77	1,015.77	0.981150	996.62	0.46181	460.25	0.03819	38.06				
145	999+08.77	1001+71.27	262.50	0.989397	259.72	0.46181	119.94	0.03819	9.92				
146	1001+71.27	1002+08.77	37.50	0.998822	37.46	0.46509	17.42	0.03646	1.37				
147	1002+08.77	1002+83.77	75.00	75.00	0.47473	35.62	0.03125	2.34					
148	1002+83.77	1005+21.89	238.12	238.12	0.48148	114.65	0.02778	6.61					
149	1005+21.89	1016+45.31	1,123.42	1,123.42	0.49280	553.62	0.13717	154.10	0.05521	62.02			
150	1016+45.31	1028+61.86	1,216.55	1.004398	1,221.90	0.49280	602.15	0.13717	167.61	0.05521	67.46		
151	1028+61.86	1037+50.00	888.14	888.14	0.49280	437.68	0.13717	121.83	0.05521	47.03			
152	SUM OF LINES 112 THRU 151										11,236.77	2,547.90	867.42
153	310 SUBBASE GRADING A OR B PROJECT I-90-1(42) TO SHEET NO. 22										→ USE	11,236.8	CU.YDS.
154	310 SUBBASE PROJECT I-90-1(42) TO SHEET NO. 22										→ USE	2,547.9	CU.YDS.
155	SPECIAL DRAINAGE CONNECTION USING NO. 8 AGGREGATE, PROJECT I-90-1(42) TO SHEET NO. 26										→ USE	867.4	CU.YDS.

SUMMARY OF TABLES

FROM SHEET NO.	201		202								203				301	302	304		310		402	404	407	408	409		410	411	451		FROM SHEET NO.
	CLEARING & GRUBBING	PIPE REMOVED 24" AND UNDER	PIPE REMOVED OVER 24"	EXIST. SIDEWALK REMOVED AND DISPOSED OF	EXIST. PAVEMENT REMOVED AND DISPOSED OF	EXIST. WEARING COURSE REMOVED AND DISPOSED OF	EXIST. STRUCTURES REMOVED	PORTIONS OF EXIST. STRUCTURES REMOVED	MANHOLES REMOVED	CATCH BASINS REMOVED	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION	EMBANKMENT	SUBGRADE PREPARATION	PROOF ROLLING	WATER	BITUMINOUS AGGREGATE BASE 702.01(85)00 OR 702.09 RT.-12	ASPHALT CONCRETE (70-85)	AGGREGATE BASE	WATER	SUBBASE, GRADING A OR B AS PER PLAN	SUBBASE	ASPHALT CONCRETE (70-85)	ASPHALT CONCRETE (70-85)	TACK COAT 702.04 MS2 OR RS-1 OR 702.02 RL-70 OR RL-250	BITUMINOUS PRIME COAT, 702.09 RT.-2 OR RT.-3	SEAL COAT BITUMINOUS MATERIAL, AS PER PLAN	SEAL COAT NO. 80 COVER AGGREGATE	TRAFFIC COMPACTED SURFACE TYPE A OR B FOR MAINTAINING TRAFFIC	STABILIZED CRUSHED AGGREGATE	REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	
	LUMP	LIN. FT.		S.F.	SQ. YD.	LUMP	EACH			CU. YD.	SQ. YD.	HOUR	M. GAL.		CU. YD.	M. GAL.	CU. YD.		CU. YD.		CU. YD.		GAL.		CU. YD.		CU. YD.	SQ. YD.			
PROJECT 1-90-1(42)																															
SCHEMATIC PLAN																															
GENERAL NOTES	LUMP																														
SPECIAL CONSTR. DETAILS																															
CALCULATIONS																															
IR-90 PLAN & PROFILE																															
STA. 882+00 TO 893+00																															
STA. 893+00 TO 904+00										4068	32316																				
STA. 904+00 TO 915+00										1641	26366																				
STA. 937+00 TO 948+00										2715	25126																				
STA. 948+00 TO 959+00										2631	23676																				
STA. 959+00 TO 970+00										2707	36083																				
STA. 970+00 TO 981+00							LUMP			661	64234																				
STA. 981+00 TO 992+00										885	43290																				
STA. 992+00 TO 1003+00										4336	44886																				
STA. 1003+00 TO 1014+00										1459	29001																				
STA. 1014+00 TO 1025+00										1002	28397																				
STA. 1025+00 TO 1036+00										971	22096																				
STA. 1036+00 TO 1047+00										527	8115																				
INTERCHANGE SUMMARY		2562	26	368	2079	50	LUMP	LUMP	2	4																					
INTERCHANGE SUMMARY																															
INTERCHANGE SUMMARY																															
CULVERT SUMMARY																															
DELINEATOR SUMMARY																															
SIGNING SUMMARY																															
S.R. 611 WATER LINE																															
S.R. 611 WATER LINE																															
S.R. 611 WATER LINE																															
RIGHT OF WAY																															
RIGHT OF WAY																															
TOTAL PROJECT 1-90-1(42)	LUMP	2562	26	368	2079	50	LUMP	LUMP	2	4	150,291	882,077	63	4549	3921.4	559.9	10,792.1	54	15,764.9	6408.1	753.8	868.9	739.9	4.8	8318.5	12,127	324	60	371.5	16,793	66,503.4
PROJECT 16-90-1(42)																															
GENERAL NOTES	LUMP																														
SPECIAL CONSTR. DETAILS																															
CALCULATIONS																															
IR-90 PLAN & PROFILE																															
STA. 913+00 TO 915+00																															
STA. 915+00 TO 926+00																															
STA. 926+00 TO 937+00																															
STA. 937+00 TO 943+00																															
CULVERT SUMMARY																															
DELINEATOR SUMMARY																															
SIGNING SUMMARY																															
RIGHT OF WAY																															
RIGHT OF WAY																															
TOTAL PROJECT 16-90-1(42)	LUMP																														
100% STATE																															
CULVERT SUMMARY																															
MOORE RD. WATER MAIN																															
TOTAL 100% STATE																															
100% CITY OF AVON																															
CULVERT SUMMARY																															
MOORE RD. WATER MAIN																															
TOTAL 100% CITY OF AVON																															
TOTAL THIS SHEET	LUMP	2562	26	368	2079	50	LUMP	LUMP	2	4	159,919	1,402,648	76	7172	4658.0	559.9	12,476.1	63	18,593.3	7161.9	753.8	868.9	739.9	4.8	8318.5	14,779	395	60	371.5	16,793	81,393.9

GENERAL SUMMARY

CODE TYPE 7221 UNLESS OTHERWISE NOTED

* DENOTES CODE TYPE Y 060
 ⊗ DENOTES CODE TYPE Y 005

ITEM	I-90- (42)04	IG-90- (42)04	100% STATE	100% CITY OF AVON	QUANTITY	UNIT	DESCRIPTION
ROADWAY							
201	LUMP	LUMP			LUMP	LUMP	CLEARING & GRUBBING
202	2562				2562	LIN.FT.	PIPE REMOVED, 24" & UNDER
202	26				26	LIN.FT.	PIPE REMOVED, OVER 24"
202	50				50	SQ.YD.	EXISTING WEARING COURSE REMOVED & DISPOSED OF
202	368				368	SQ.FT.	EXISTING SIDEWALK REMOVED & DISPOSED OF
202	2079				2079	SQ.YD.	EXISTING PAVEMENT REMOVED & DISPOSED OF
202	LUMP				LUMP	LUMP	EXISTING STRUCTURES REMOVED
202	LUMP				LUMP	LUMP	PORTIONS OF EXISTING STRUCTURES REMOVED
202	2				2	EACH	MANHOLE REMOVED
202	4				4	EACH	CATCH BASIN REMOVED
203	144,267						
203	150,291	9628			159,919	CU.YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION, AS PER PLAN.
203	882,077	520,591			1,402,668	CU.YD.	EMBANKMENT
203	144,742	84,851	23,996		168,963	SQ.YD.	SUBGRADE PREPARATION
203	63	13			76	HOUR	PROOF ROLLING
203	4530	2623			7153	M.GAL.	WATER
410	60				60	CU.YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B FOR MAINTAINING TRAFFIC
411	372				372	CU.YD.	STABILIZED CRUSHED AGGREGATE
604	15				15	EACH	STANDARD MONUMENT ASSEMBLY
604	18	4			22	EACH	CENTER LINE REFERENCE MONUMENT, AS PER PLAN
606	12,231	5681.5			17,912.5	LIN.FT.	GUARD RAIL, TYPE 4
606	300	300			600	LIN.FT.	GUARD RAIL, TYPE 4 BARRIER DESIGN
606	10				10	EACH	GUARD POST
606	1,250				1,250	LIN.FT.	TEMPORARY GUARD RAIL, AS PER PLAN
607	24,490	6033			30,523	LIN.FT.	FENCE, TYPE 47
615	LUMP				LUMP	LUMP	TEMPORARY ROAD
615	8904				8904	SQ.YD.	CLASS B TEMPORARY PAVEMENT
616	100				100	M.GAL.	WATER
616	12				12	TON	CALCIUM CHLORIDE
659	508,820	90,700			599,520	SQ.YDS.	SEEDING & MULCHING, AS PER PLAN
659	46,39	8.18			54.57	TON	COMMERCIAL FERTILIZER (12-12-12)
657	2				2	SQ.YD.	RIPRAP FOR TREE PROTECTION
SPECIAL	LUMP				LUMP	LUMP	REMOVAL & DISPOSAL OF EXISTING UNDERGROUND TANK
SPECIAL		37			37	LIN.FT.	FILL & PLUG EXISTING PIPE CULVERT
SPECIAL	2				2	EACH	PLUGGING GAS WELL
SPECIAL	6				6	EACH	DRILLED WELLS ABANDONED
SPECIAL	11				11	EACH	CLEANING & DISPOSING OF SEPTIC TANK
SPECIAL	3				3	EACH	CLEANING PRIVY VAULT
603	78				78	LIN.FT.	2" CONDUIT TYPE F, 707.08, STD. WT. & GALV., AS PER PLAN
WATER MAINS CODE TYPE Y 060							
814	44				44	LIN.FT.	6" NEW WATERMAINS, ASBESTOS CEMENT, CLASS 150, AS PER PLAN
814	3061				3061	LIN.FT.	12" NEW WATERMAINS, ASBESTOS CEMENT, CLASS 150, AS PER PLAN
814	52				52	LIN.FT.	3/4" NEW SERVICE BRANCHES (COPPER), AS PER PLAN
814	5				5	EACH	6" GATE VALVE & BOX, AS PER PLAN
814	4				4	EACH	12" GATE VALVE & BOX, AS PER PLAN
814	800	267	20		1087	LIN.FT.	30" ENCASMENT CONDUIT, 707.08, ASTM. A-135 OR A-139 WITH 0.500" MIN. WALL THICKNESS, AS PER PLAN
814	5				5	EACH	12" x 12" x 6" FITTING, CAST IRON TEE, AS PER PLAN
814	1				1	EACH	3/4" COPROKATION STOP WITH 70° ELL & GASKET
814	5				5	EACH	6" FIRE HYDRANT REMOVED & RESET, AS PER PLAN
814	1				1	EACH	VALVE BOX ADJUSTED TO GRADE
814		335			335	LIN.FT.	8" New Water Mains Cast Iron Class 250
PAVEMENT							
301	3921	1737			4658	CU.YD.	BITUMINOUS AGGREGATE BASE, 702.01 (85-100) OR 702.07, RT-12, AS PER PLAN
302	560	10793			560	CU.YD.	ASPHALT CONCRETE (70-85)
304	10,750	1727	1684		12,477	CU.YD.	AGGREGATE BASE
304	54	9			63	M.GAL.	WATER
310	15,765	2831			18,596	CU.YD.	SUBBASE GRADING A OR B, AS PER PLAN
310	6887	776			7663	CU.YD.	SUBBASE
402	869				869	CU.YD.	ASPHALT CONCRETE (70-85)
404	740				740	CU.YD.	ASPHALT CONCRETE (70-85)

ITEM	I-90- (42)04	IG-90- (42)04	100% STATE	100% CITY OF AVON	QUANTITY	UNIT	DESCRIPTION
407	5				5	GAL.	TACK COAT, 702.04, MS-2 OR RS-1 OR 702.02, RC-70 OR RC-250
408	8319	12,127			8319	GAL.	BITUMINOUS PRIME COAT, 702.07, RT-2 OR RT-3
409	12,051	2728	2652		14,779	GAL.	SEAL COAT BITUMINOUS MATERIAL, AS PER PLAN
409	322	75			397	CU.YD.	SEAL COAT COVER AGGREGATE, NO. 8
451	16,793				16,793	SQ.YD.	9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
451	66,504	14,891			81,395	SQ.YD.	10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
609	944				944	LIN.FT.	CONCRETE CURB, STANDARD TYPE 2-A
609	390				390	LIN.FT.	CONCRETE CURB, STANDARD TYPE 6
609	158				158	LIN.FT.	CONCRETE CURB, STANDARD TYPE 7
609	671				671	LIN.FT.	CONCRETE CURB, STANDARD TYPE 8
611	1085	267			1352	SQ.YD.	REINFORCED CONCRETE APPROACH SLABS (T=13")
612	403				403	SQ.YD.	CONCRETE MEDIAN, STANDARD
613	51				51	EACH	TRAFFIC DIVIDERS, STANDARD
SPECIAL	1421	224			1645	CU.YD.	DRAINAGE CONNECTION USING NO. 8 AGGREGATE
DRAINAGE							
601	556	56			612	CU.YD.	DUMPED ROCK CHANNEL PROTECTION
602	185.5	51.8			237.3	CU.YD.	CONCRETE MASONRY
603	158				158	LIN.FT.	48" CONDUIT TYPE A 706.02 WITH CLASS B BEDDING
603	82				82	LIN.FT.	54" CONDUIT TYPE A 706.02 WITH CLASS B BEDDING
603	82				82	LIN.FT.	21" CONDUIT TYPE A 706.02 OR 706.08 WITH CLASS B BEDDING
603	236				236	LIN.FT.	42" CONDUIT TYPE A 706.02 CLASS III WITH CLASS B BEDDING
603	260				260	LIN.FT.	24" CONDUIT TYPE A 706.02 CLASS IV WITH CLASS B BEDDING
603		302			302	LIN.FT.	33" CONDUIT TYPE A 706.02 CLASS IV WITH CLASS B BEDDING
603	114				114	LIN.FT.	36" CONDUIT TYPE A 706.02 CLASS IV WITH CLASS B BEDDING
603	126				126	LIN.FT.	24" CONDUIT TYPE A 706.02 CLASS V WITH CLASS B BEDDING
603		100			100	LIN.FT.	42" CONDUIT TYPE A 706.02 CLASS V WITH CLASS B BEDDING UNDER RAILROAD
603	284				284	LIN.FT.	48" CONDUIT TYPE A 706.02 CLASS V WITH CLASS B BEDDING
603	178				178	LIN.FT.	68" x 43" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603	554				554	LIN.FT.	91" x 58" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603	270				270	LIN.FT.	106" x 68" CONDUIT TYPE A 706.04 CL. HE II W/CL. B BEDDING
603		294			294	LIN.FT.	84" CONDUIT TYPE A 707.03 10-8 GAGE WITH CLASS B BEDDING
603		230			230	LIN.FT.	144" CONDUIT TYPE A 707.03 7-5 GAGE WITH CLASS B BEDDING
603	317	185			502	LIN.FT.	6" CONDUIT TYPE B WITH CLASS B BEDDING
603	300	100			400	LIN.FT.	8" CONDUIT TYPE B WITH CLASS B BEDDING
603	440	100			540	LIN.FT.	12" CONDUIT TYPE B WITH CLASS B BEDDING
603	1279	259			1538	LIN.FT.	15" CONDUIT TYPE B WITH CLASS B BEDDING
603	120				120	LIN.FT.	18" CONDUIT TYPE B WITH CLASS B BEDDING
603	139				139	LIN.FT.	21" CONDUIT TYPE B WITH CLASS B BEDDING
603	82				82	LIN.FT.	27" CONDUIT TYPE B WITH CLASS B BEDDING
603	10				10	LIN.FT.	10" CONDUIT TYPE B 706.02 CLASS V WITH CLASS B BEDDING
603	10				10	LIN.FT.	15" CONDUIT TYPE B 706.02 CLASS III WITH CLASS B BEDDING
603	54				54	LIN.FT.	18" CONDUIT TYPE B 706.01, 706.02 CLASS III OR 706.08 WITH CLASS B BEDDING
603	439				439	LIN.FT.	24" CONDUIT TYPE B 706.02, CLASS III OR 706.08 WITH CLASS B BEDDING
* 603		255	20		275	LIN.FT.	15" CONDUIT TYPE B, 706.08, ENCASED AS PER PLAN
* 603		412	22		434	LIN.FT.	24" CONDUIT TYPE B, 706.08, ENCASED AS PER PLAN
603	240				240	LIN.FT.	12" CONDUIT TYPE C, 706.01 ES., 706.02 OR 706.08 ES. W/CL. B BEDDING
603	766				766	LIN.FT.	12" CONDUIT TYPE C WITH CLASS B BEDDING
603	100				100	LIN.FT.	18" CONDUIT TYPE C WITH CLASS B BEDDING

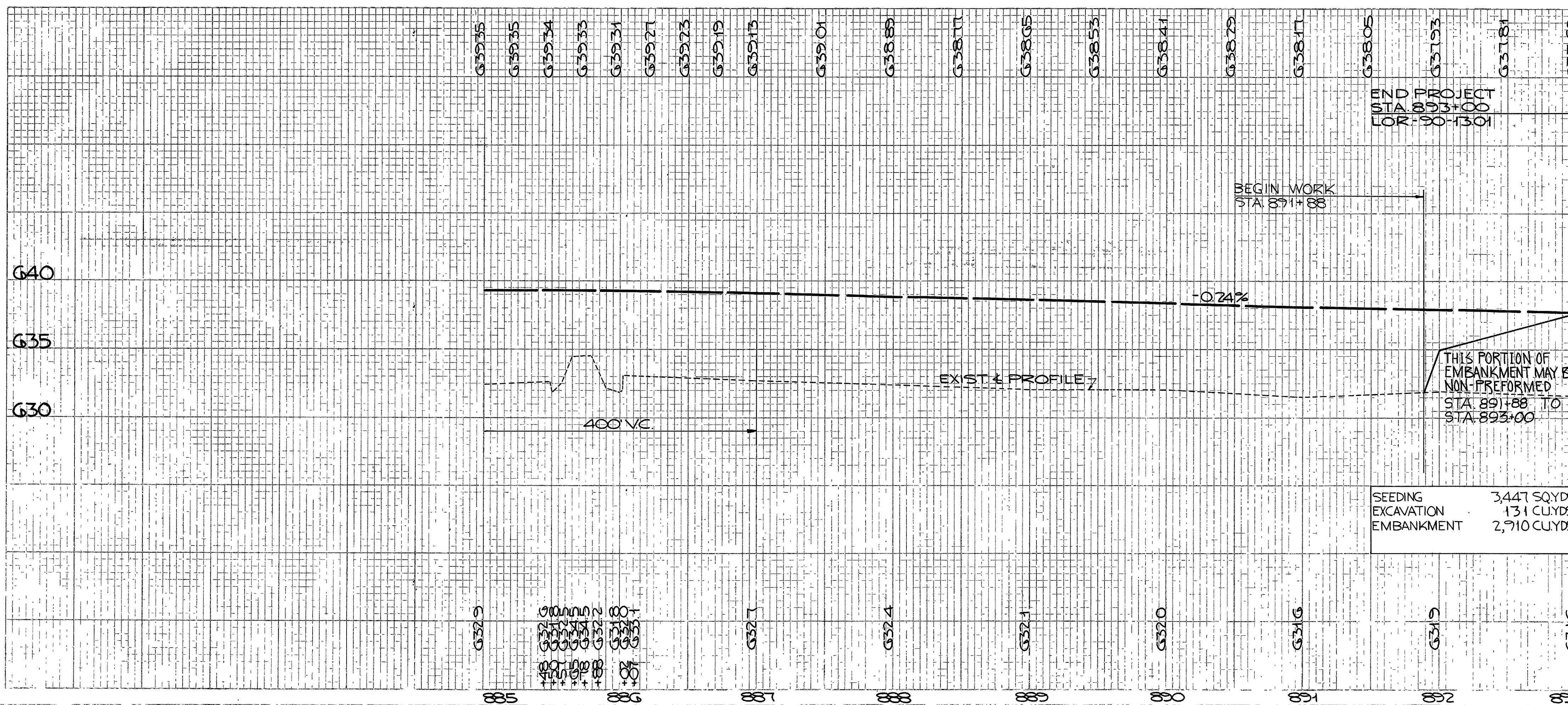
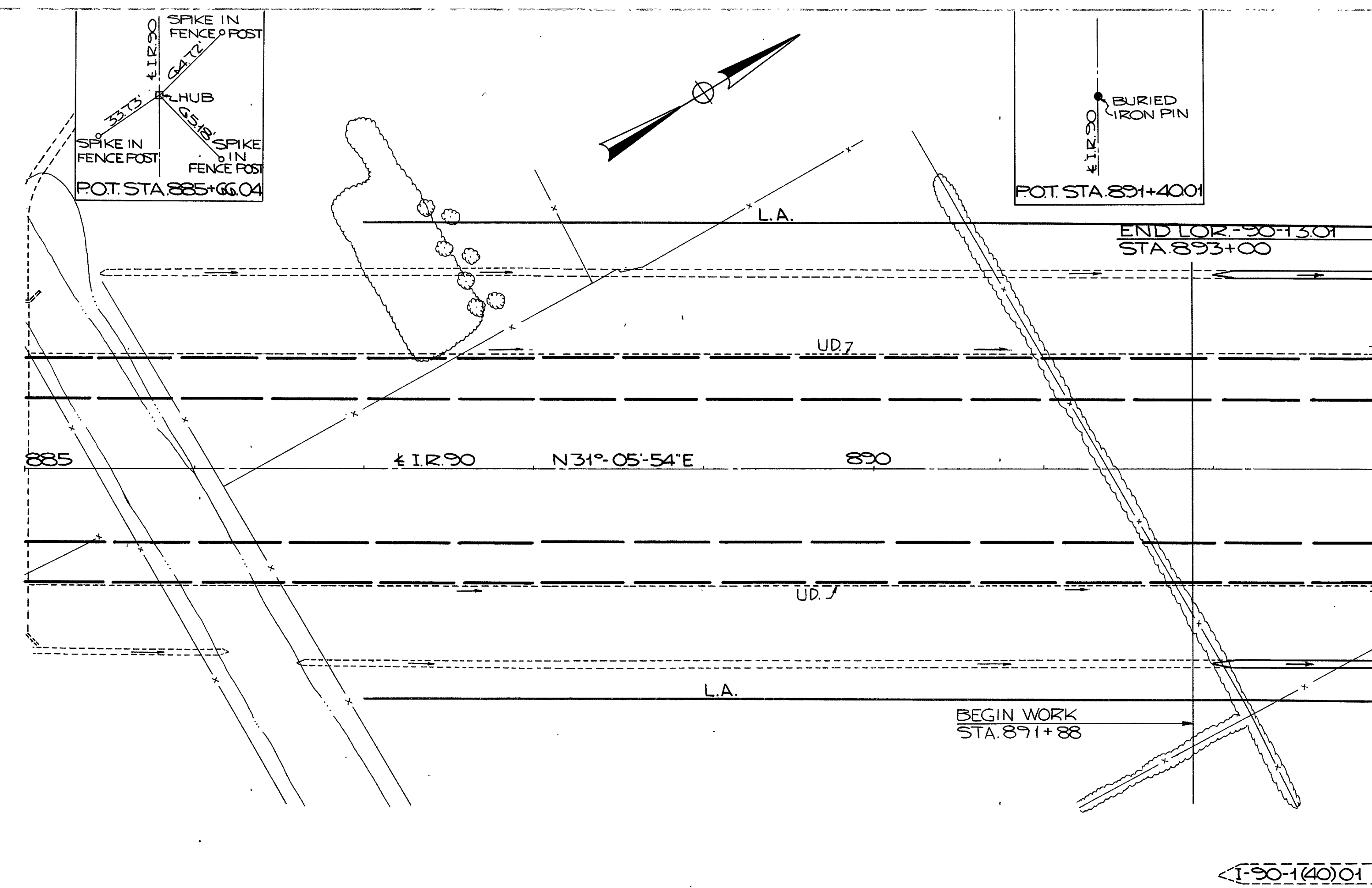
GENERAL SUMMARY

CODE TYPE 7221 UNLESS OTHERWISE NOTED

*DENOTES CODE TYPE Y060
 @DENOTES CODE TYPE Y 005

ITEM	I-90- (42)04	IG-90- (42)04	100% STATE	100% CITY OF AVON	QUANTITY	UNIT	DESCRIPTION
DRAINAGE (CON'T)							
603	34				34	LIN.FT.	12" CONDUIT TYPE D
603	182				182	LIN.FT.	15" CONDUIT TYPE D
603	140				140	LIN.FT.	18" CONDUIT TYPE D
603	68				68	LIN.FT.	24" CONDUIT TYPE D
603	102				102	LIN.FT.	42" CONDUIT TYPE D, 706.02
603	200	100			300	LIN.FT.	8" CONDUIT TYPE E
603	200	100			300	LIN.FT.	12" CONDUIT TYPE E
603	44				44	Lin.Ft.	27" Conduit Type C
603	776	240			1016	LIN.FT.	6" CONDUIT TYPE F
603	200	110			310	LIN.FT.	8" CONDUIT TYPE F
603	363	100			463	LIN.FT.	12" CONDUIT TYPE F
603		160			160	LIN.FT.	15" CONDUIT TYPE F
604	6	2			8	EACH	STANDARD NO. 2-2B CATCH BASIN
604	1				1	EACH	STANDARD NO. 2-3 CATCH BASIN
604	7				7	EACH	STANDARD NO. 4 CATCH BASIN
604	1	1			2	EACH	STANDARD NO. 5 CATCH BASIN
604	4				4	EACH	STANDARD NO. 6 CATCH BASIN
604	16				16	EACH	STANDARD NO. 8 CATCH BASIN
604	1				1	EACH	STANDARD NO. 2-8 MEDIAN INLET
604	1				1	EACH	STANDARD NO. 2-12 MEDIAN INLET
604	2				2	EACH	24" FLAP GATE, ARMCO MODEL 10C, NEENAH TYPE R-5050 SF OR APPROVED EQUAL, AS PER PLAN
605	22172	5015			27187	LIN.FT.	6" SHALLOW PIPE UNDERDRAIN
605	7536	576			8112	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN
605	250	3980			250	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, AS PER PLAN
605	3960	20			3980	LIN.FT.	AGGREGATE DRAIN
605	15				15	LIN.FT.	AGGREGATE DRAIN FOR SPRING, AS PER PLAN
@ 660	2686	32			2718	SQ.YDS.	SODDING
@ 660	329				329	SQ.YDS.	SODDING FOR SPECIAL BERM & SLOPE PROTECTION, AS PER PLAN
@ 667	3618	140			3758	SQ.YDS.	JUTE MATTING
TRAFFIC CONTROL							
620		2			2	EACH	MONO-DIRECTIONAL DELINEATOR, TYPE A-1 BRACKET MOUNTED
620	2				2	EACH	MONO-DIRECTIONAL DELINEATOR, TYPE C-2 BRACKET MOUNTED
620	90	28			118	EACH	MONO-DIRECTIONAL DELINEATOR, TYPE A-1 POST MOUNTED
620	120				120	EACH	MONO-DIRECTIONAL DELINEATOR, TYPE C-2 POST MOUNTED
620	2				2	EACH	MONO-DIRECTIONAL DELINEATOR, TYPE C-3 POST MOUNTED
621	12.34	2.27			14.61	MILE	4" EDGE LINE
621	0.07				0.07	MILE	4" LANE LINE & CENTER LINE
621	1.86	0.43			2.29	MILE	6" LANE LINE & CENTER LINE
621	0.27				0.27	MILE	4" BARRIER LINE
621	2143				2143	LIN.FT.	8" CHANNELIZING LINE
621	LUMP				LUMP	LUMP	24" STOP LINE
621	LUMP				LUMP	LUMP	24" BROAD TRANSVERSE STRIPE
621	LUMP				LUMP	LUMP	CURB & ISLAND MARKING
815	550	90			640	SQ.FT.	SIGN ERECTION, GROUND MOUNTED, AS PER PLAN
816	65				65	LIN.FT.	STRUCTURAL SUPPORT, 8 LB. BEAM
816	44				44	LIN.FT.	STRUCTURAL SUPPORT, STEEL BEAM 10 B11.5
816		48			48	LIN.FT.	STRUCTURAL SUPPORT, STEEL BEAM 10 B17
816	104				104	LIN.FT.	STRUCTURAL SUPPORT, STEEL BEAM 12 B22
816	56				56	LIN.FT.	STRUCTURAL SUPPORT, STEEL BEAM 12 WF 27
816	10.2	2.2			12.4	CUYD.	CONCRETE FOUNDATION FOR GROUND MOUNTED SIGN SUPPORT, AS PER PLAN

ITEM	I-90- (42)04	IG-90- (42)04	100% STATE	100% CITY OF AVON	QUANTITY	UNIT	DESCRIPTION
EXISTING BUILDINGS REMOVED							
202	LUMP				LUMP	LUMP	Parcel No 101-WL Removal of 2 STORY FRAME RESIDENCE, TWO FRAME SHEDS
202	LUMP				LUMP	LUMP	Parcel No 102-WL Removal of 2 STORY FRAME RESIDENCE, 1 FRAME GARAGE, 1 FRAME BARN THREE FRAME SHEDS, 1 FRAME PRIVY
202	LUMP				LUMP	LUMP	Parcel No 103-WL Removal of 2 STORY FRAME RESIDENCE
202	LUMP				LUMP	LUMP	Parcel No 107-WL Removal of 1 FRAME SHED, 1 1/2 STORY FRAME RESIDENCE, 1 CAR FRAME GARAGE
202	LUMP				LUMP	LUMP	Parcel No 109-WL Removal of 1 1/2 STORY BRICK RESIDENCE
202	LUMP				LUMP	LUMP	Parcel No 111-WL Removal of 1 STORY BRICK RESIDENCE WITH ATTACHED GARAGE
202	LUMP				LUMP	LUMP	Parcel No 111-WL Removal of 1 CONCRETE BLOCK BUILDING, 1 BARN, 2 STORY FRAME RESIDENCE, 1 FRAME GARAGE, 3 FRAME SHEDS, 2 CORN CRIBS.
202	LUMP				LUMP	LUMP	Parcel No 112-WL Removal of 1 1/2 STORY FRAME RESIDENCE, 1 FRAME GARAGE, TWO FRAME SHEDS
202	LUMP				LUMP	LUMP	Parcel No 113-WL Removal of 1 FRAME SHED
202	LUMP				LUMP	LUMP	Parcel No 117-WL Removal of 1 FRAME BARN, 1 FRAME GARAGE
202	LUMP				LUMP	LUMP	Parcel No 125-WL Removal of 1 STORY FRAME RESIDENCE
614	LUMP				LUMP	LUMP	MAINTAINING TRAFFIC
	LUMP	LUMP			LUMP	LUMP	FIELD OFFICE
	LUMP	LUMP			LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
STRUCTURES OVER 20 FEET							
FOR ESTIMATED QUANTITIES							
STRUCTURES LOR-90-1754 SEE SHEET NO. 235							
STRUCTURES LOR-90-1785L# SEE SHEET NO. 246							
STRUCTURES LOR-90-1861L# SEE SHEET NO. 259							
STRUCTURES LOR-90-1882 SEE SHEET NO. 272							



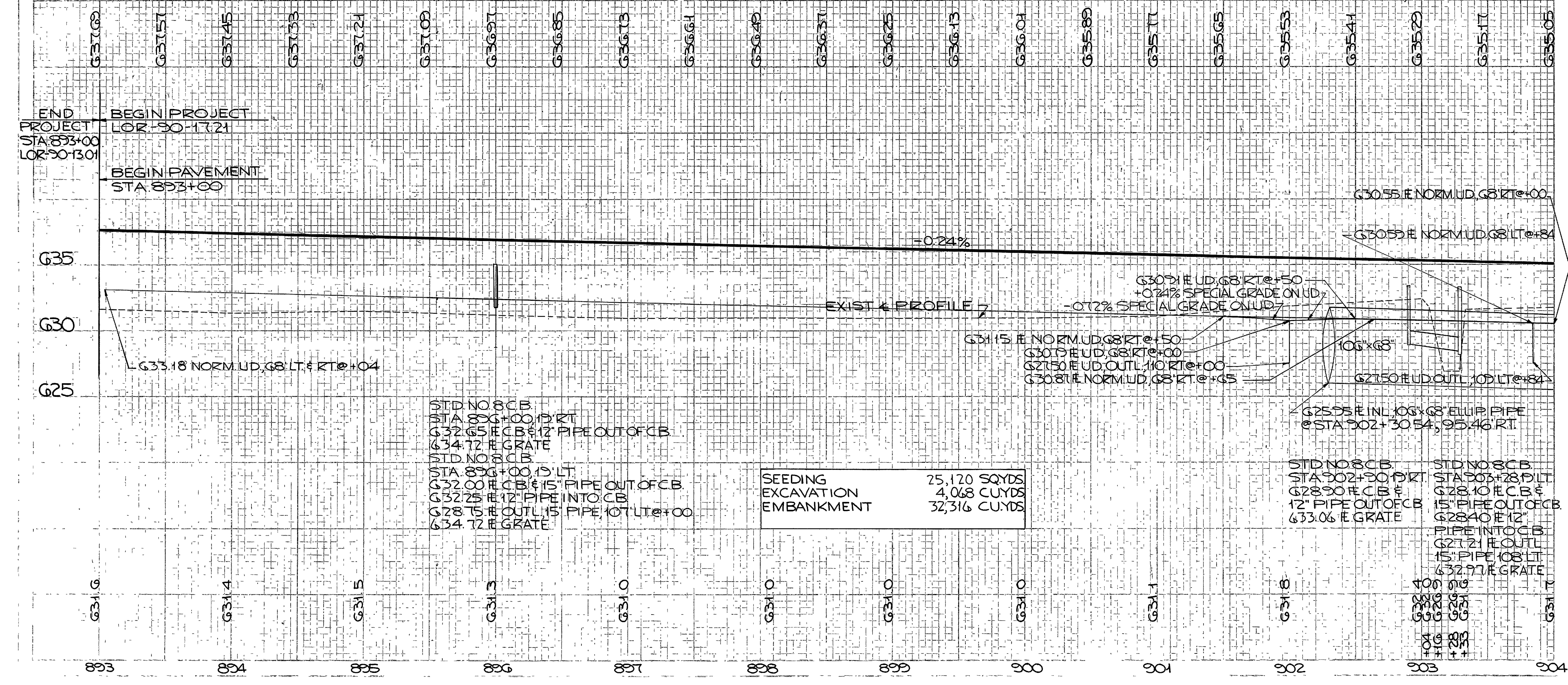
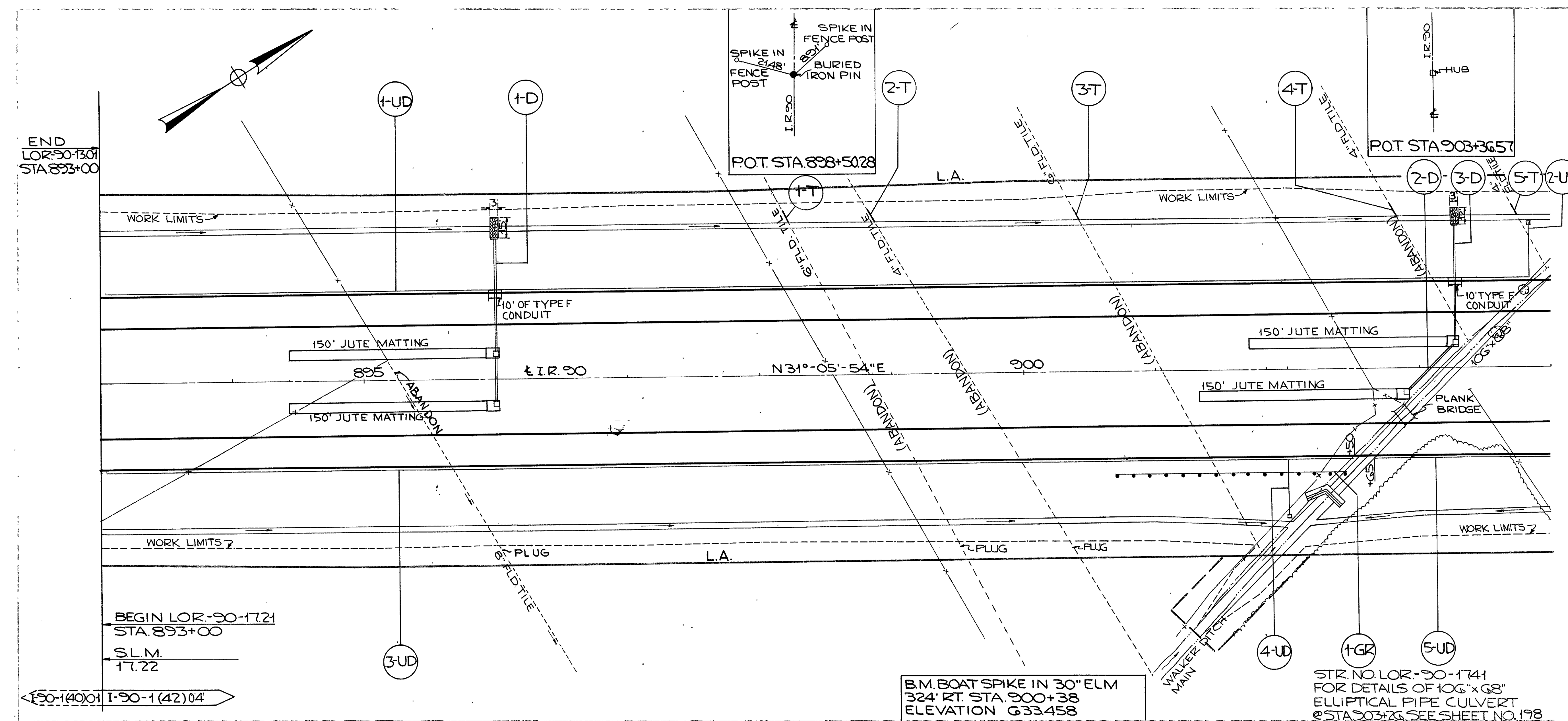
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17.21

I-90-1(40)01 I-90-1(42)04

FOR TYPICAL SECTION OF ADJOINING PAVEMENT, SEE SHEET NO.5
FOR PAVEMENT MARKING DETAILS SEE SHEETS 94 & 220
FOR S.R.611 PAVEMENT MARKING QUANTITIES, SEE SHEET NO.94
FOR RAMP PAVEMENT MARKING QUANTITIES, SEE SHEET NO.153

I.R.90 PAVEMENT MARKING QUANTITIES

STATION		LOCATION	G21		
FROM	TO		LANE LINE AND CENTER LINE	EDGE LINE	
			4"	6"	4"
			MILES	MILES	MILES
893+00	913+00	INSIDE EDGE & E.B.L.&W.B.L.		0.284	0.758
943+00	1037+50	INSIDE EDGE & E.B.L.&W.B.L.		1.342	3.580
893+00	913+00	OUTSIDE EDGE E.B.L.&W.B.L.			0.758
943+00	953+1443	OUTSIDE EDGE W.B.L.			0.192
960+043	983+272	OUTSIDE EDGE W.B.L.			0.446
987+03	989+21	OUTSIDE EDGE W.B.L.	0.016		
992+508	1037+50	OUTSIDE EDGE W.B.L.			0.852
943+00	962+228	OUTSIDE EDGE E.B.L.			0.364
965+50	967+78	OUTSIDE EDGE E.B.L.	0.016		
971+245	998+288	OUTSIDE EDGE E.B.L.			0.512
1005+218	1037+50	OUTSIDE EDGE E.B.L.			0.611
TOTAL PROJECT I-90-1(42)04			0.032	1.626	8.073
913+00	943+00	INSIDE & OUTSIDE EDGE & E.B.L. & W.B.L.		0.426	2.273
TOTAL PROJECT IG-90-1(42)04				0.426	2.273



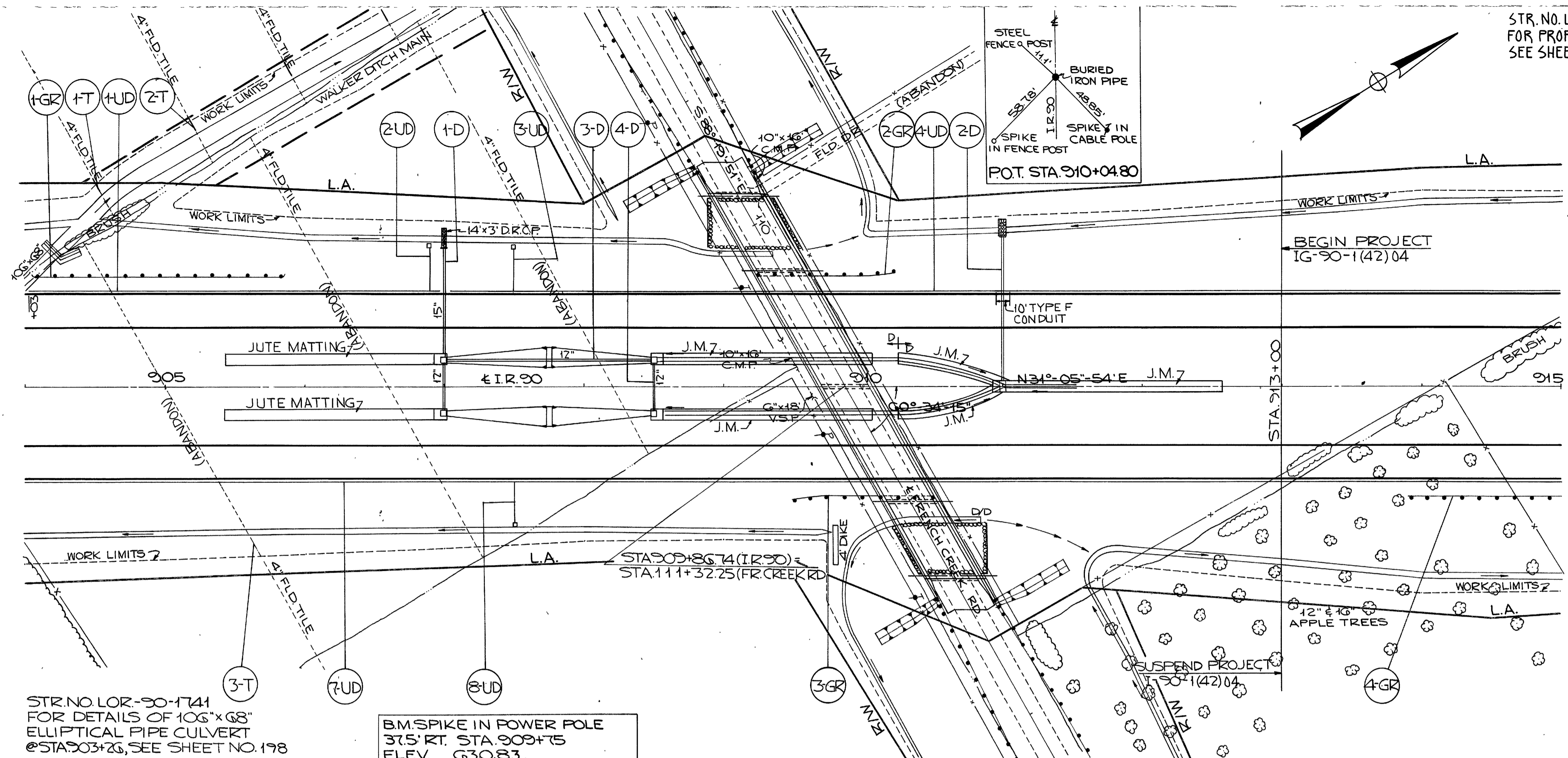
REFERENCE NO.	SIDE	STATION		GO5	GO5	GO3	BENDS AND BRANCHES	GO3	GO3	GO2	GO4	GO1	GO7	
		FROM	TO	SHALLOW PIPE UNDER DRAINS	UNCLASSIFIED PIPE UNDER DRAINS	CONDUIT TYPE F		CONDUIT TYPE B-B	CONDUIT TYPE C-B	MASON CLASS C STD HW-E ENDWL	CATCH BASINS STD NO. 8	DUMPED ROCK CHANN PROT. 18" THICK	JUTE MATTING	
				UN.FT.	UN.FT.	UN.FT.			UN.FT.	UN.FT.	CUYDS	EACH	CUYDS	SQYDS
1-UD	LT.	893+04	903+84	1060		20								
2-UD	LT.	903+84			31	10	1							
3-UD	RT.	893+04	902+50	846	100									
4-UD	RT.	902+00			32	10	1							
5-UD	RT.	902+65	904+00	135										
1-D	LT.&RT.	896+00						88	38	0.26	2	3	250	
2-D	LT.&RT.	902+90	903+28						54		1		125	
3-D	LT.	903+28						89		0.26	1	2	125	
4-T	LT.	898+20				10								
2-T	LT.	898+95				10								
3-T	LT.	900+40				10								
4-T	LT.	902+80				10								
5-T	LT.	903+15				10								
TOTALS				2,041	163	90		177	92	0.52	4	5	500	

REFERENCE NO.	SIDE	STATION		GO6
		FROM	TO	GUARD RAIL TYPE 4
				UN.FT.
1-GR	RT.	900+68	902+43	175
TOTALS				175

STR. NO. LOR-90-1754
FOR PROPOSED STR. DATA
SEE SHEET NO. 171

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR-90-17.21

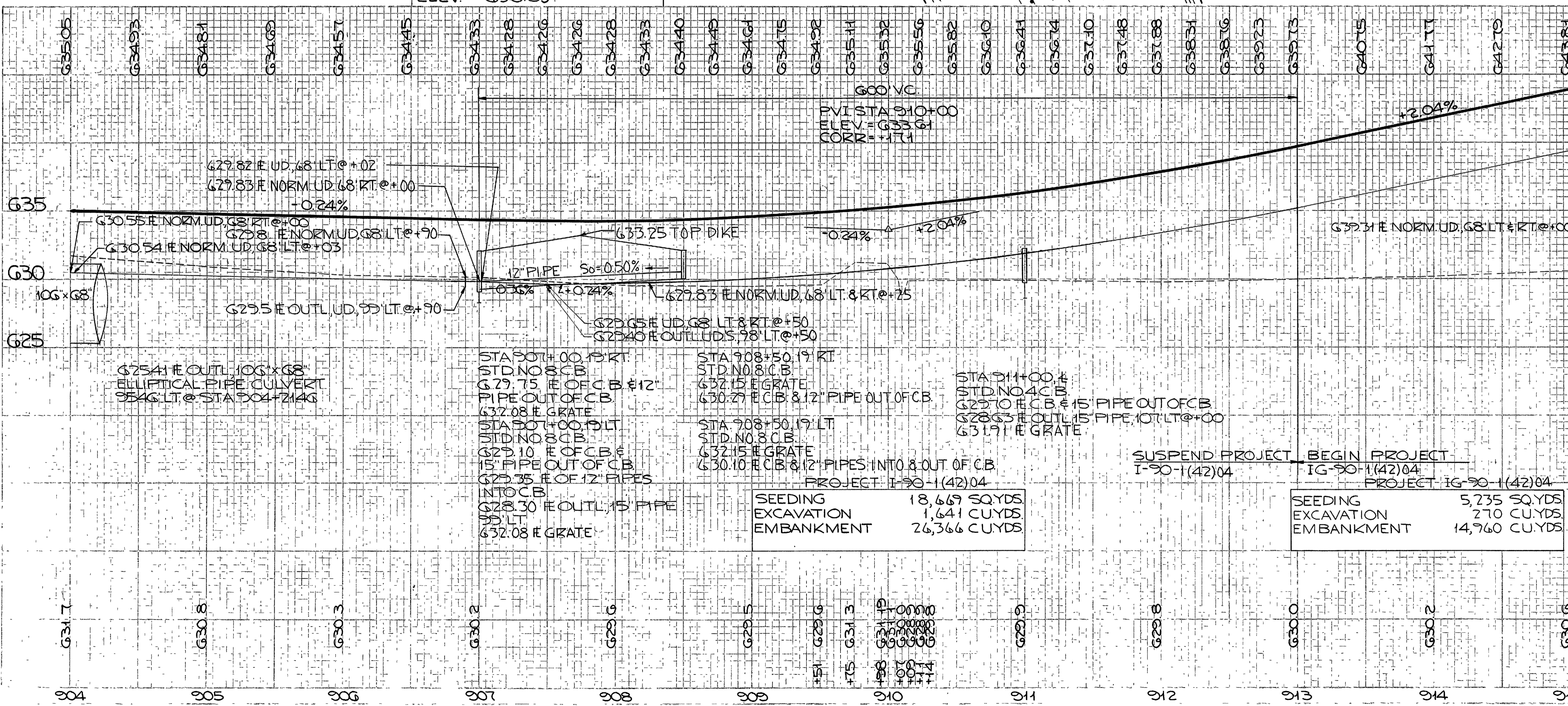


STR. NO. LOR-90-1741
FOR DETAILS OF 106"x68"
ELLIPTICAL PIPE CULVERT
@ STA 903+26, SEE SHEET NO. 198

B.M. SPIKE IN POWER POLE
37.5' RT. STA. 909+75
ELEV. G30.83

QUANTITIES FOR PROJECT I-90-1(42)04

REFERENCE NO.	SIDE	STATION FROM TO	G05	G05	G03	BENDS TYPE AND BRANCHES	G02	G03	G03	G01	G04	G07
			SHALLOW PIPE UNDER DRAINS	UNCLASS PIPE UNDER DRAINS	CONDUIT TYPE F		MASON CLASS C HW-E ENDWL	CONDUIT TYPE B-B	CONDUIT TYPE C-B	DUMPED ROCK CHANN PROT. T=18"	CATCH BASIN STD. NO.	JUTE MATTING
			UN.FT.	LN.FT.	LN.FT.	G" TEE	CU.YDS	LN.FT.	LN.FT.	CU.YDS	EACH	SQ.YDS
1-UD	LT.	904+03 906+98	275									
2-UD	LT.	906+90		21	10	1						
3-UD	LT.	907+50		20	10	1						
4-UD	LT.	907+02 913+00	465	123	10							
5-UD		DELETED										
7-UD	RT.	904+00 913+00	775	125								
8-UD	RT.	907+50		20	10	1						
1-D	LT.&RT.	907+00					0.26	80	38	3	2	250
2-D	LT.&RT.	911+00					0.26	107		2	1	240
3-D	LT.	907+00							150			
4-D	LT.&RT.	908+50							38			250
1-T	LT.	904+50			10							
2-T	LT.	905+20			10							
3-T	RT.	905+60			10							
TOTALS			1535	309	70		0.52	187	226	5	1	4740



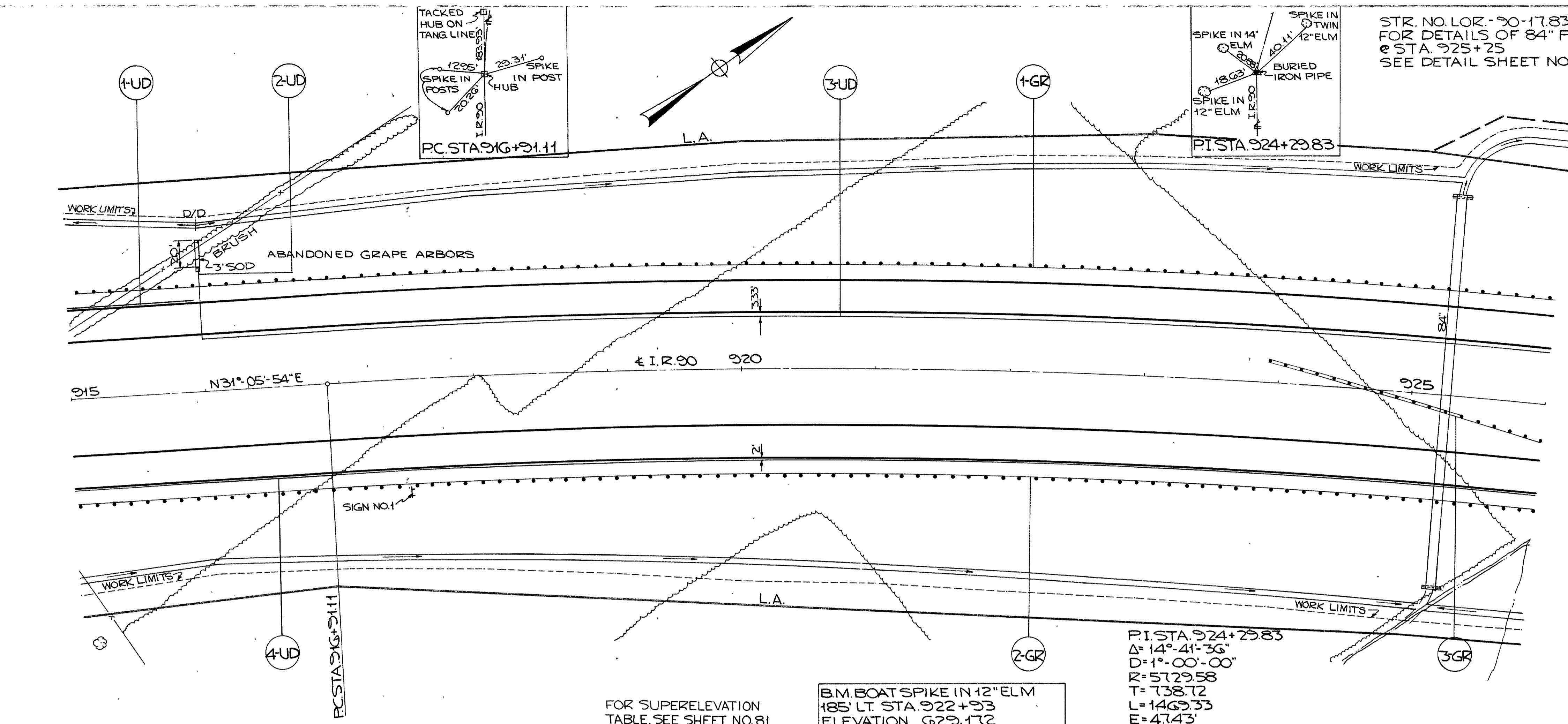
REFERENCE NO.	SIDE	STATION FROM TO	G06
			GUARD RAIL TYPE 4
			LN.FT.
1-GR	LT.	904+09 905+84	175
2-GR	LT.	909+23 910+23	100
3-GR	RT.	909+50 910+50	100
TOTALS			375

QUANTITIES FOR PROJECT IG-90-1(42)04

REFERENCE NO.	SIDE	STATION FROM TO	G05	G06
			SHALLOW PIPE UNDER DRAINS	GUARD RAIL TYPE 4
			LN.FT.	LN.FT.
4-UD	LT.	913+00 915+00	200	
1-UD	RT.	913+00 915+00	200	
4-GR	RT.	913+00 915+00		109.5
TOTALS			400	109.5

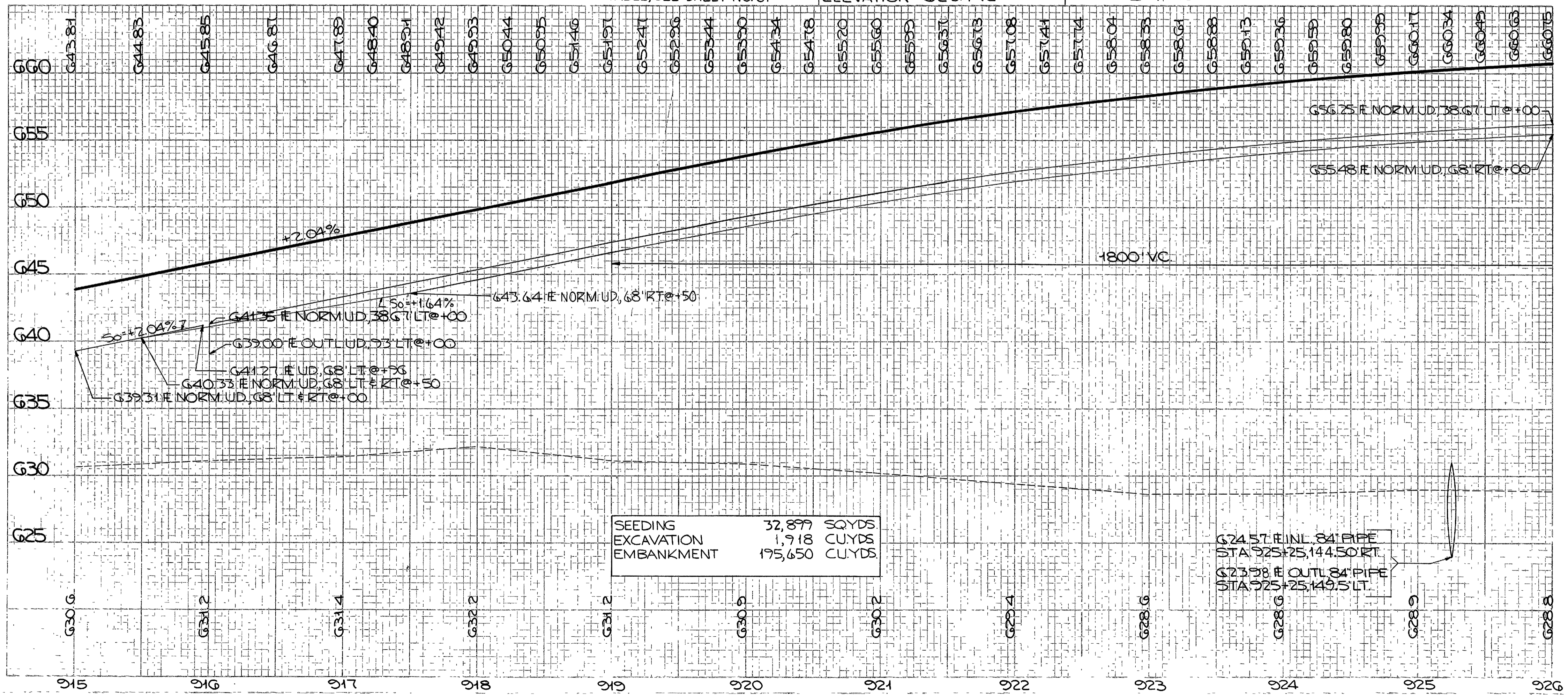
LOR.-90-1721

STR. NO. LOR.-90-1783
 FOR DETAILS OF 84" PIPE
 @ STA. 925+25
 SEE DETAIL SHEET NO. 201



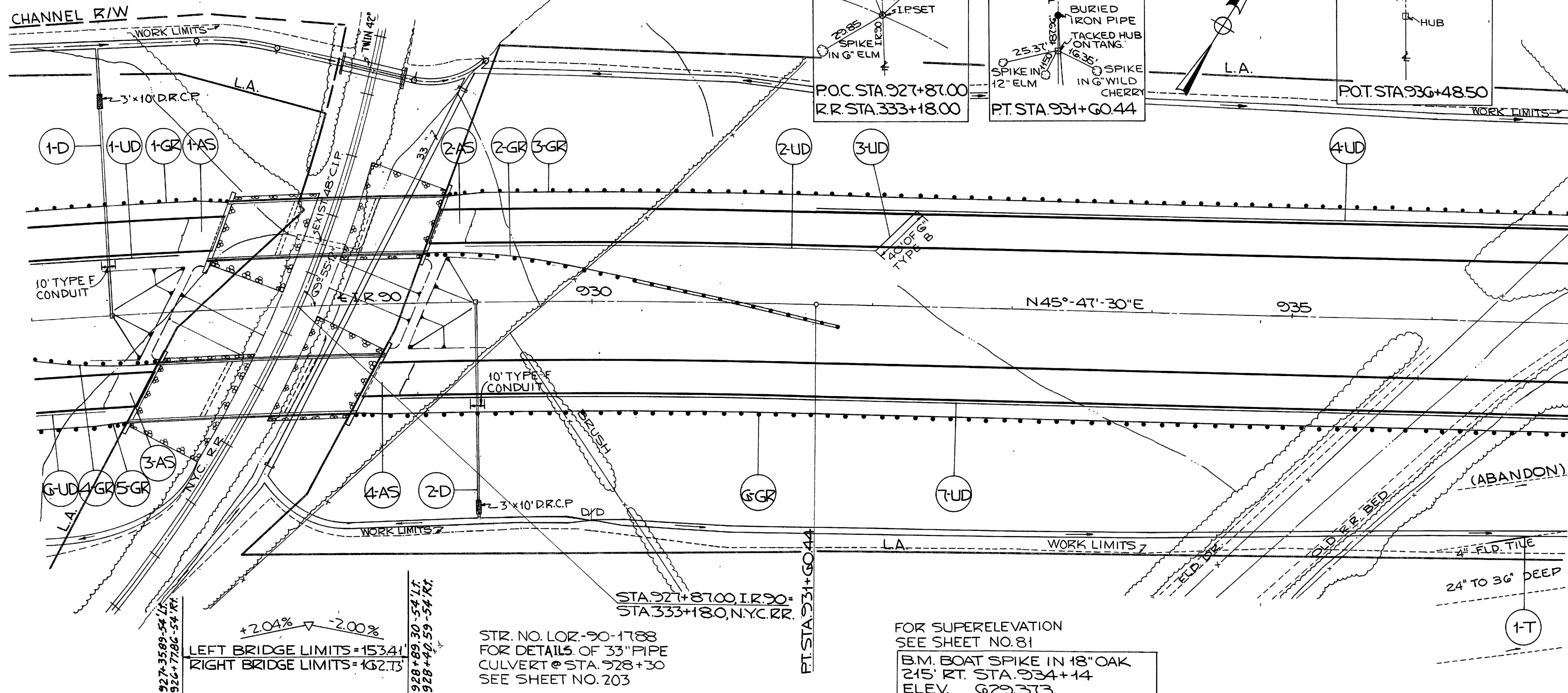
ALL QUANTITIES ON THIS SHEET ARE FOR PROJECT IG-90-1(42) 041.

REFERENCE NO.	SIDE	STATION		G03	G03	G05	G05	BENDS AND BRANCHES Gx50' BEND	G06	G06	SODDING
		FROM	TO	CONDUIT TYPE B	CONDUIT TYPE F	SHALLOW UNDERDRAINS	UNCLASSIFIED UNDERDRAINS		RAIL TYPE 4	GUARD RAIL TYPE 4 BARRIER DESIGN	
				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		LIN. FT.	LIN. FT.	SQ. YDS.
1-UD	LT.	919+00	915+56			50	46				
2-UD	LT.	916+00		45	10			1			7
3-UD	LT.	916+00	926+00			1000					
4-UD	RT.	915+00	926+00			900	200				
1-GR	LT.	915+01.5	926+00						1092.5		
2-GR	RT.	915+00	926+00						1100		
3-GR	LT.&RT.	923+92	926+00						62.5	150	
TOTALS				45	10	1950	246		2255.0	150	7



STA. 915+00 TO STA. 926+00

FOR DETAILS OF TWIN 42" PIPES
CULVERT @ STA. 335+00, N.Y.C. R.R.
SEE SHEET NO. 702



ALL QUANTITIES ON THIS SHEET ARE FOR PROJECT IG-90-1(42)04

REFERENCE NO	SIDE	STATION		G01 DUMPED ROCK CHANN. PROT. T=18'	G02 MASON CLASS C STD. HW-E ENDWL	G03 CONDUIT TYPE F	G03 CONDUIT TYPE B-B	BENDS AND BRANCHES 15'-25' BEND	G04 CATCH BASINS NO. 22B	G05 SHALLOW PIPE STD UNDER DRAINS	G05 CLASS PIPE UNDER DRAINS	BENDS AND BRANCHES 15'-25' BEND
		FROM	TO									
1-UD	LT.	926+00	927+05									
2-UD	LT.	929+10	932+00									
3-UD	LT.	932+00	932+29									
4-UD	LT.	931+60	937+00									
5-UD	DELETE											
6-UD	RT.	926+00	926+50									
7-UD	RT.	928+60	937+00									
1-T	RT.	936+63	936+83									
1-D	LT.	926+51		2	0.26	65	89	2	1			
2-D	RT.	929+17		2	0.26	63	86	2	1			
TOTALS				4	0.52	50	128	40	15	2	1,475	330

REFERENCE NO	SIDE	STATION		G06 GUARD RAIL TYPE 4	G06 GUARD RAIL TYPE 4	G11 REINF CONC. APPR. SLABS T=13' DESIGN
		FROM	TO			
1-GR	LT.	926+00	927+44			145
2-GR	LT & RT	928+84	931+75			150
3-GR	LT.	928+99	937+00			804
4-GR	RT.	926+00	926+88			88
5-GR	RT.	926+00	926+63			65
6-GR	RT.	928+305	937+00			865
1-AS	LT.	927+112	927+358			GG.7
2-AS	LT.	928+830	929+407			GG.7
3-AS	RT.	926+524	926+718			GG.7
4-AS	RT.	928+405	928+683			GG.7
TOTALS				2,117	150	266.8

PROPOSED STRUCTURE - BRIDGE NO. LOR.-90-1785

TYPE- CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS - 46'-0"; 58'-0"; 46'-0" % BEARINGS - LT. BRIDGE
48'-0"; 60'-0"; 48'-0" % BEARINGS - RT. BRIDGE

ROADWAY - 40'-0" F/F PARAPETS - BOTH BRIDGES

LOAD FREQUENCY - CF 2000 (57)

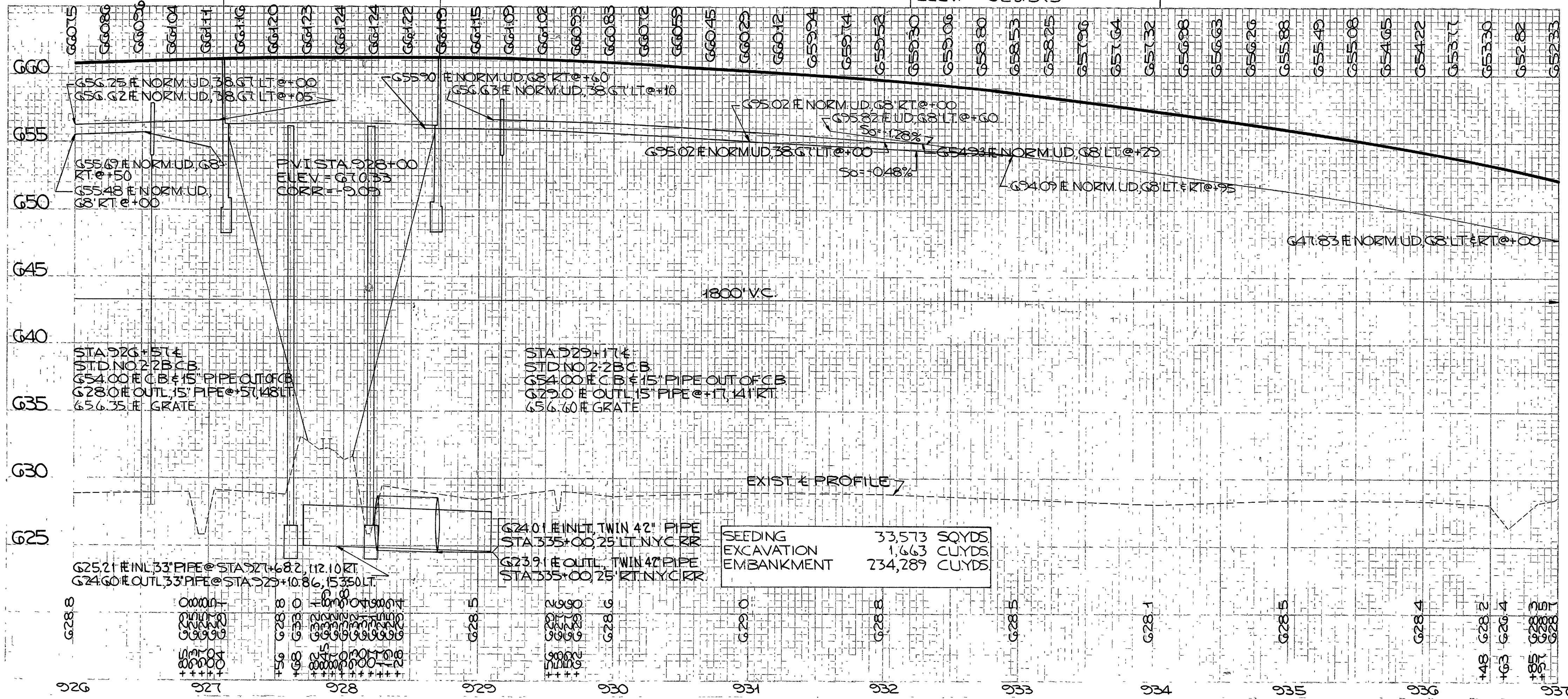
SKEW - 22°-00' L.F. - LEFT BRIDGE
30°-00' L.F. - RIGHT BRIDGE

WEARING SURFACE - 1" MONOLITHIC CONCRETE

APPROACH SLABS - AS-1-54 (25' LONG)

ALIGNMENT - 1°-00' CURVE RIGHT

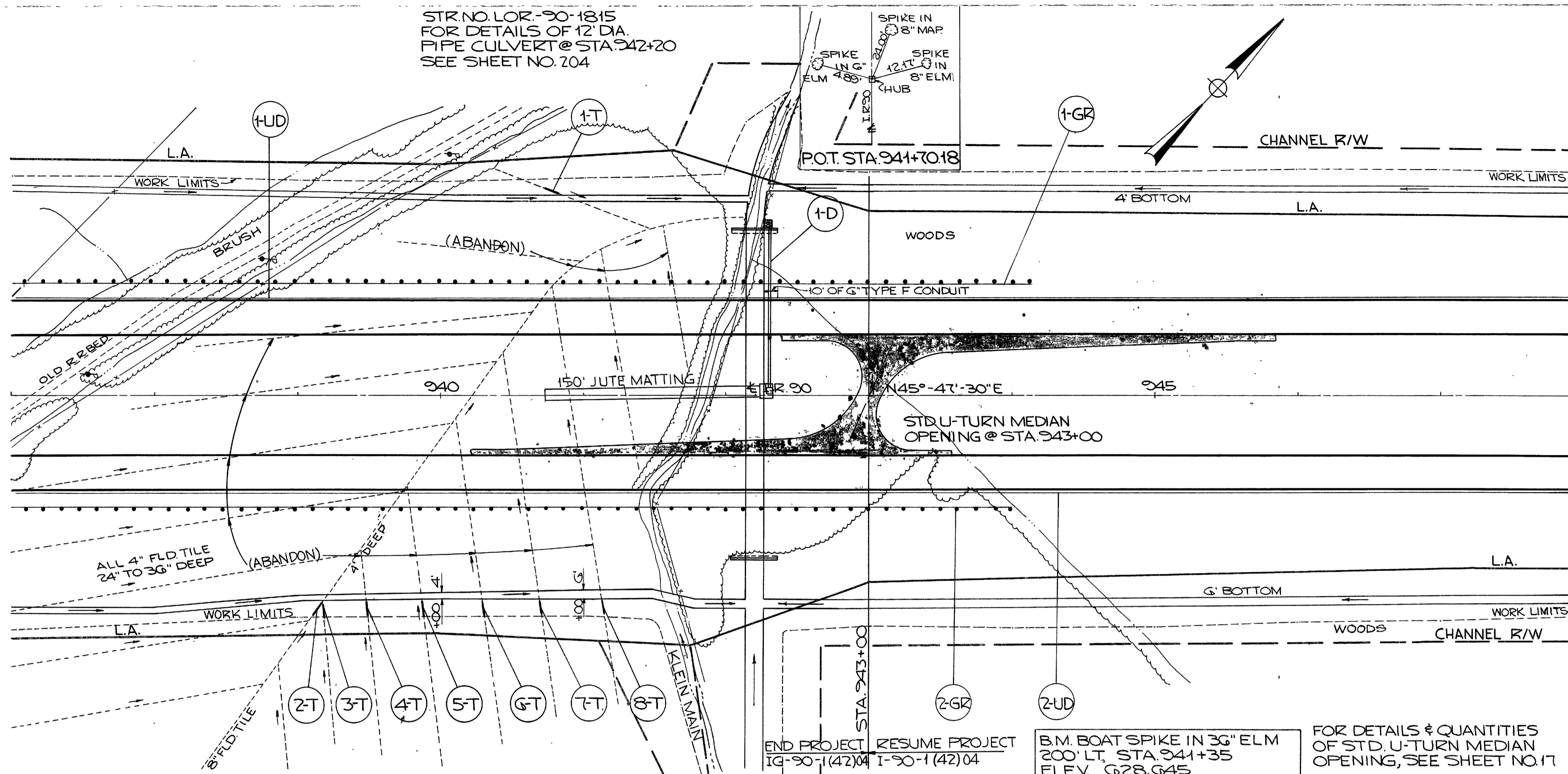
SUPERELEVATION - .032 FT/FT



STR. NO. LOR.-90-1815
 FOR DETAILS OF 12" DIA.
 PIPE CULVERT @ STA. 942+20
 SEE SHEET NO. 204

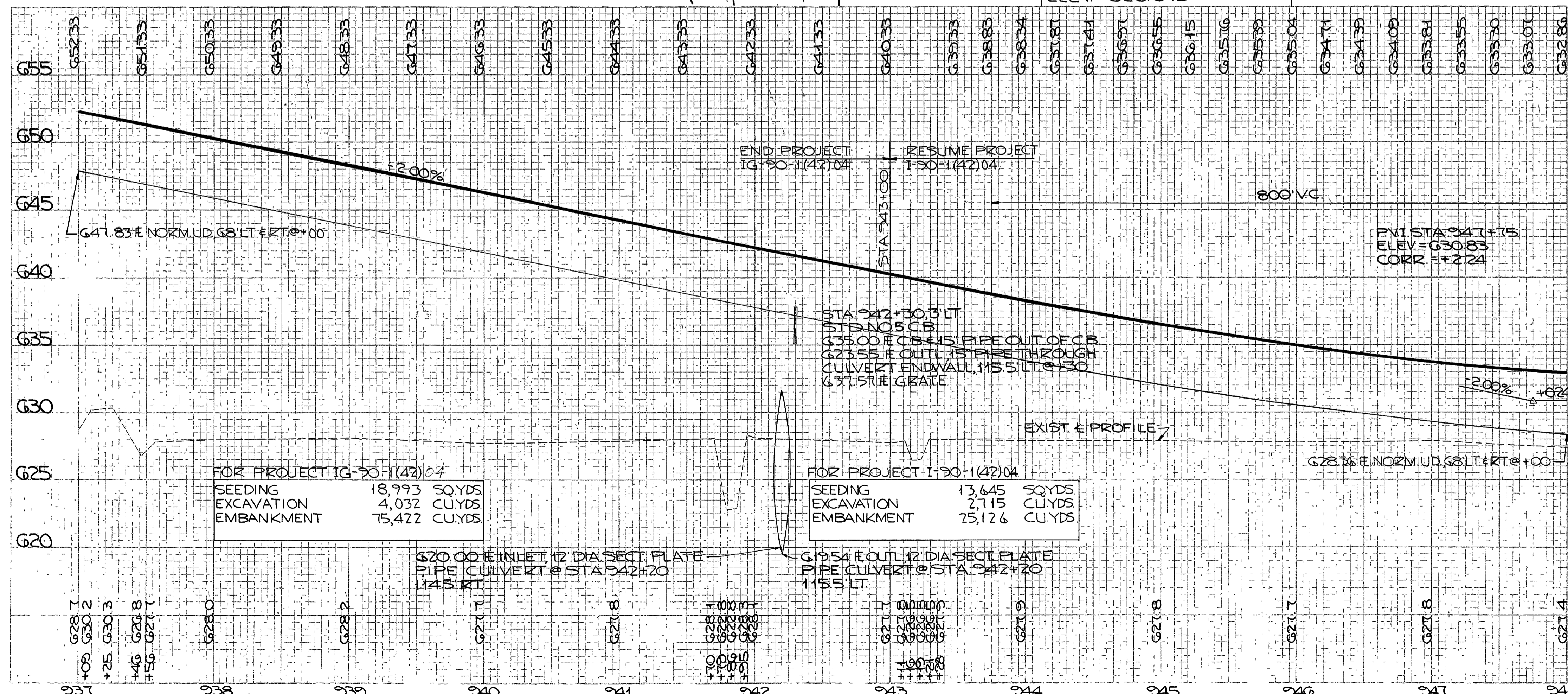
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LOR.-90-17.21



QUANTITIES FOR PROJECT IG-90-1(42) 04

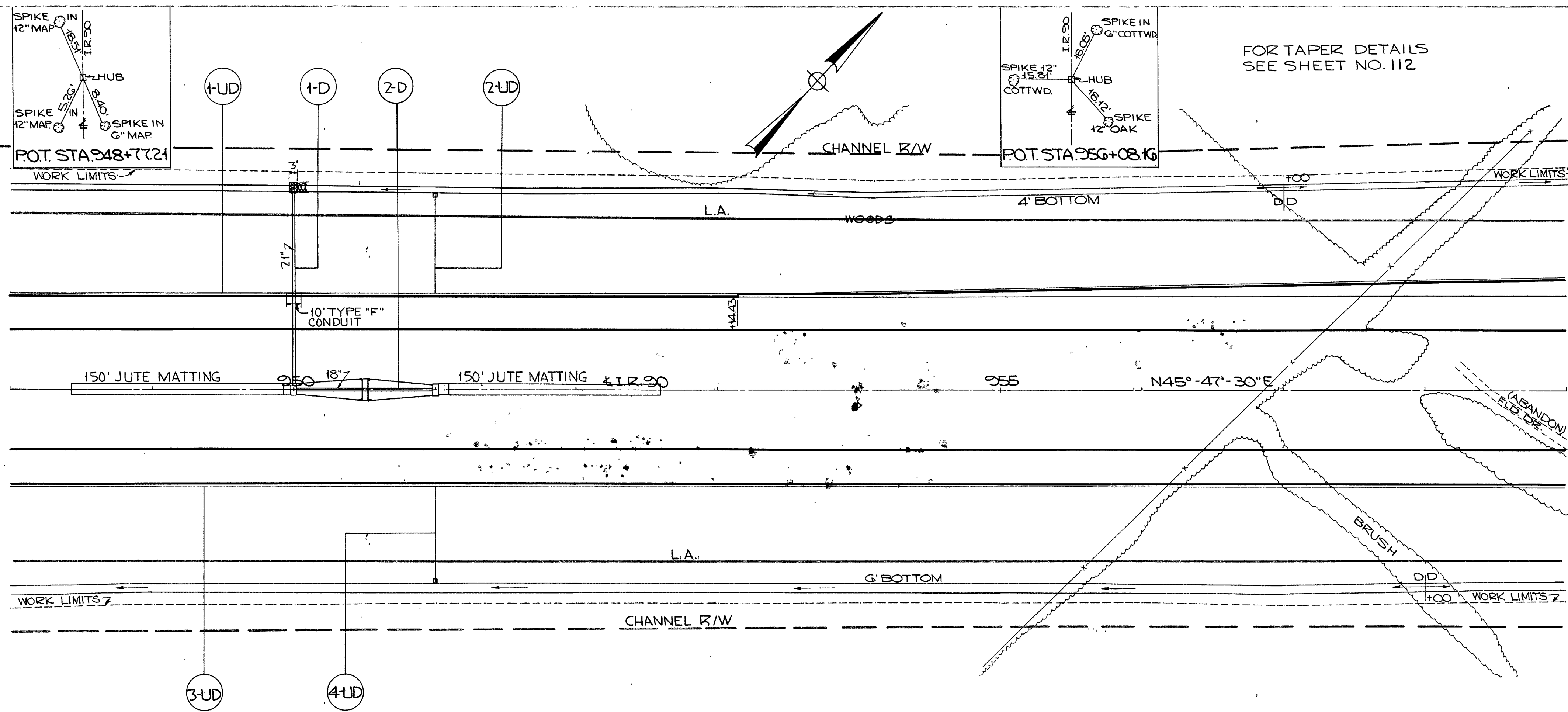
REFERENCE NO.	SIDE	STATION		GO3	GO3	GO3	BENDS AND BRANCHES	GO4	GO5	GO6	GUARD RAIL TYPE 4	G07 JUTE MATTING
		FROM	TO	CONDUIT TYPE BB	CONDUIT TYPE F	CONDUIT TYPE F		CATCH BASINS STD. NO.5	SHALLOW PIPE UNDER DRAINS			
				15'	6" 8"	15'		15x25" BENDS	6"			
1-UD	LT.	937+0	943+00		10			590				
2-UD	RT.	937+0	943+00					600				
1-D	LT.	942+30		84		32	2	1				140
1-GR	LT.	937+00	943+00							600		
2-GR	RT.	937+00	943+00							600		
1-T	LT.	940+78			10							
2-T	RT.	939+13			10							
3-T	RT.	939+17			10							
4-T	RT.	939+48			10							
5-T	RT.	939+87			10							
6-T	RT.	940+29			10							
7-T	RT.	940+70			10							
8-T	RT.	941+14			10							
TOTALS				84	80	10	32	1	1,190	1,200		140



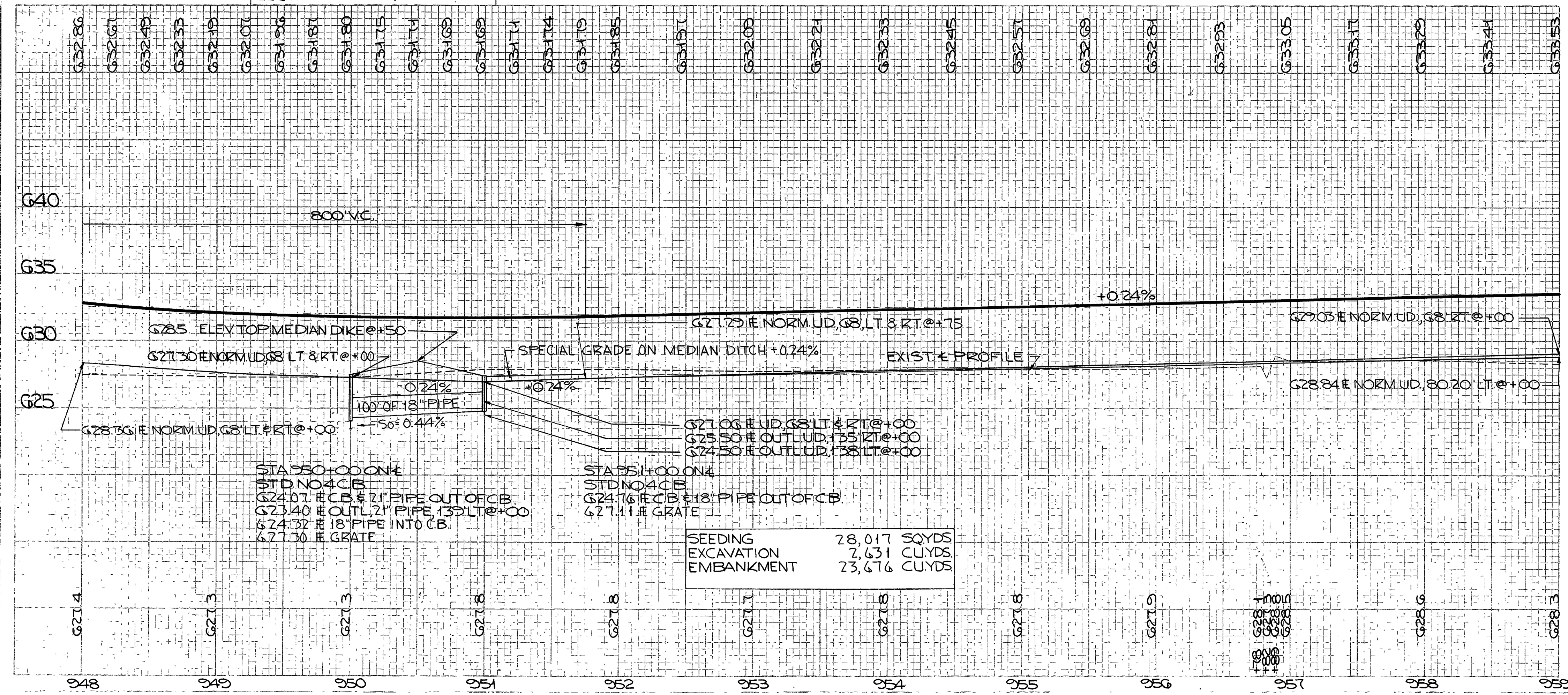
QUANTITIES FOR PROJECT I-90-1(42) 04

REFERENCE NO.	SIDE	STATION		GO5	GO6
		FROM	TO	SHALLOW PIPE UNDER DRAINS	GUARD RAIL TYPE 4
				6"	
1-UD	LT.	943+00	948+00	500	
2-UD	RT.	943+00	948+00	500	
1-GR	LT.	943+00	944+08.5		108.5
2-GR	RT.	943+00	943+97.5		97.5
TOTALS				1,000	206.0

FOR TAPER DETAILS
SEE SHEET NO. 112



B.M. BOAT SPIKE IN 24" ELM
150' RT. STA 949+84
ELEV. 628.821



STA 950+00 ON 4
STD NO 4 CB
G24.07 # CB # 21" PIPE OUT OF CB
G23.40 # OUTL 21" PIPE 13' LT @ +00
G24.32 # 18" PIPE INTO CB
G27.30 # GRATE

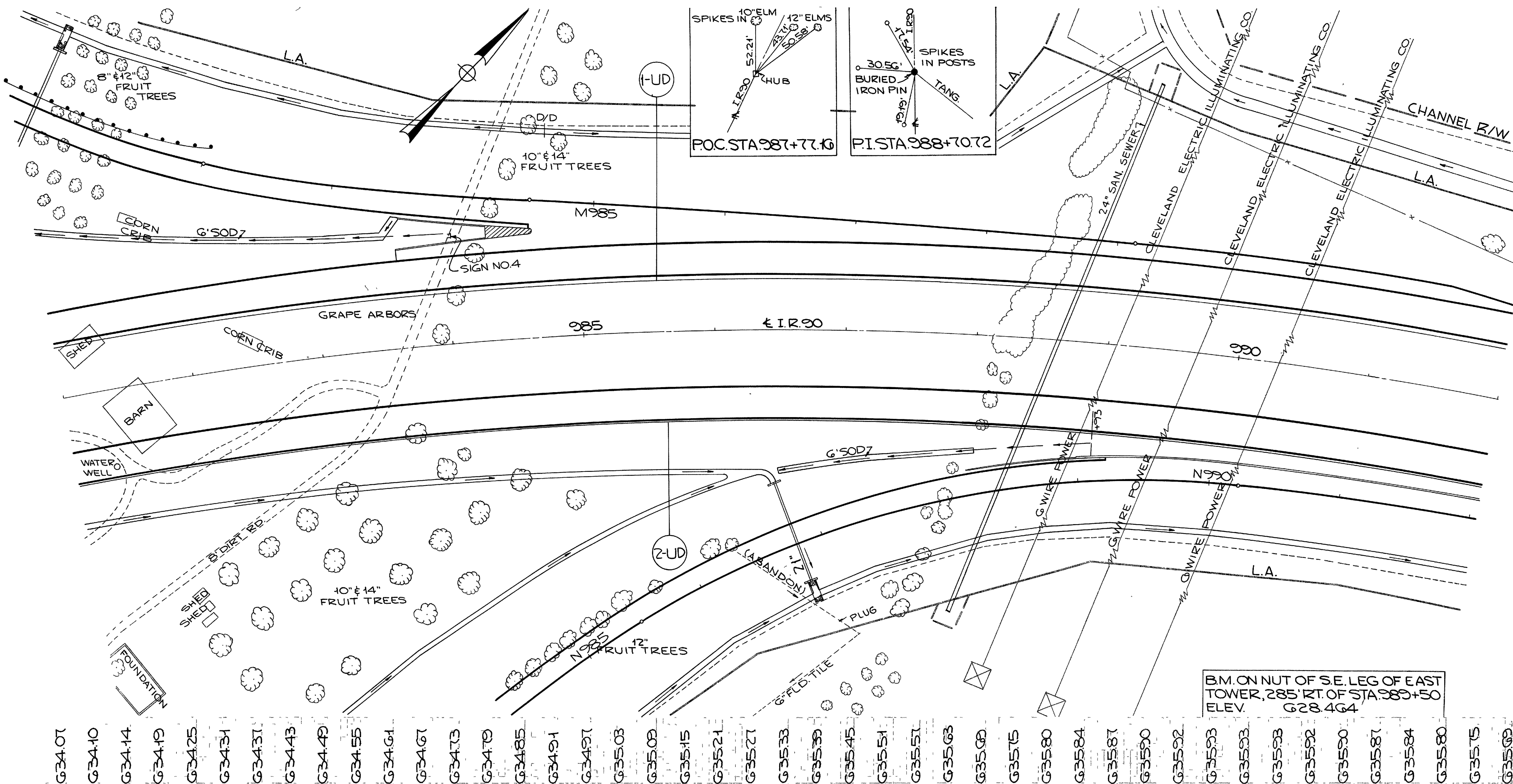
STA 951+00 ON 4
STD NO 4 CB
G24.76 # CB # 18" PIPE OUT OF CB
G27.11 # GRATE

SEEDING	28,017 SQYDS
EXCAVATION	7,631 CUYDS
EMBANKMENT	23,676 CUYDS

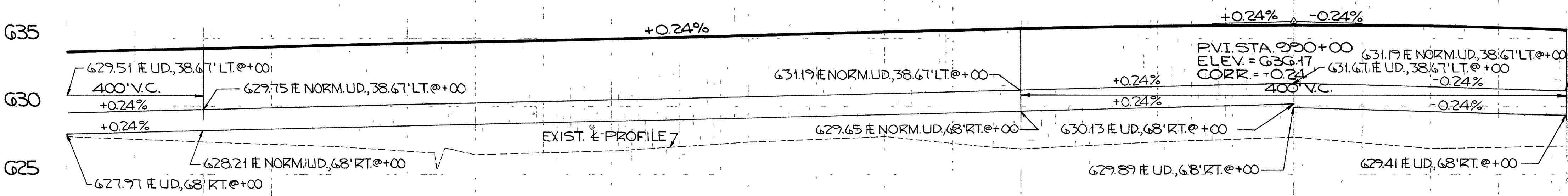
REFERENCE NO.	SIDE	STATION		G02	G03	G03	G04	G05	G05	G01	GG7	
		FROM	TO	MASON CLASS C STD. HWE ENDWL	CONDUIT TYPE C-B B-B	CONDUIT TYPE F	CATCH BASINS STD. NO. 4	SHALLOW UNDERDRAINS	UNCLASSIFIED UNDERDRAINS			BENDS AND BRANCHES
				CUYDS	LIN. FT.	LIN. FT.	EACH	LIN. FT.	LIN. FT.	G' TEE	CUYDS	SQYDS
1-UD	LT.	948+00				10		915	175			
2-UD	LT.	951+00				10		60		1		
3-UD	RT.	948+00	959+00					925	175			
4-UD	RT.	951+00				10			57	1		
1-D	LT.	950+00		0.26	139		1				2	140
2-D	LT.	950+00	951+00	100			1					140
TOTALS				0.26	100	139	30	2	1,840	467	2	280

LOR. - 90-1721

REFERENCE SHEETS	SHT. NO.
RAMP "M" DETAILS	118 TO 124
RAMP "N" DETAILS	125 TO 130
SUPERELEVATION	82
DECELERATION LANE DETAILS	111
GRADING PLANS	147 & 152
24" SAN. SEWER	212



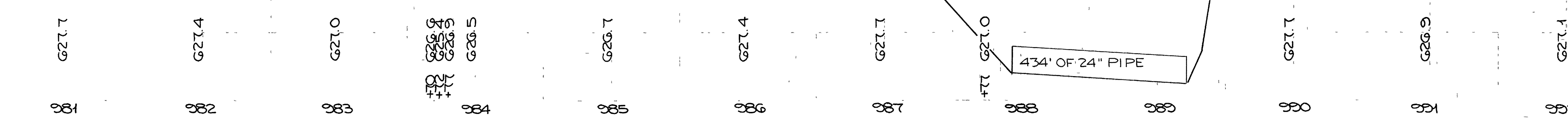
REFERENCE NO.	SIDE	STATION		605		605	
		FROM	TO	SHALLOW PIPE UNDER-DRAINS	PIPE UNDER-DRAINS	SHALLOW PIPE UNDER-DRAINS	PIPE UNDER-DRAINS
				6"	6"	6"	6"
				LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.
1-UD	LT.	981+00	992+00	600	500		
2-UD	RT.	981+00	992+00	600	500		
TOTALS				1,200	1,000		



SEEDING	17,975	SQ. YDS.
EXCAVATION	885	CU. YDS.
EMBANKMENT	43,290	CU. YDS.

STA. 981+91, 212' RT., I.R. 90
607.00 ft 24" PIPE

STA. 989+24, 201' LT., I.R. 90
606.13 ft 24" PIPE

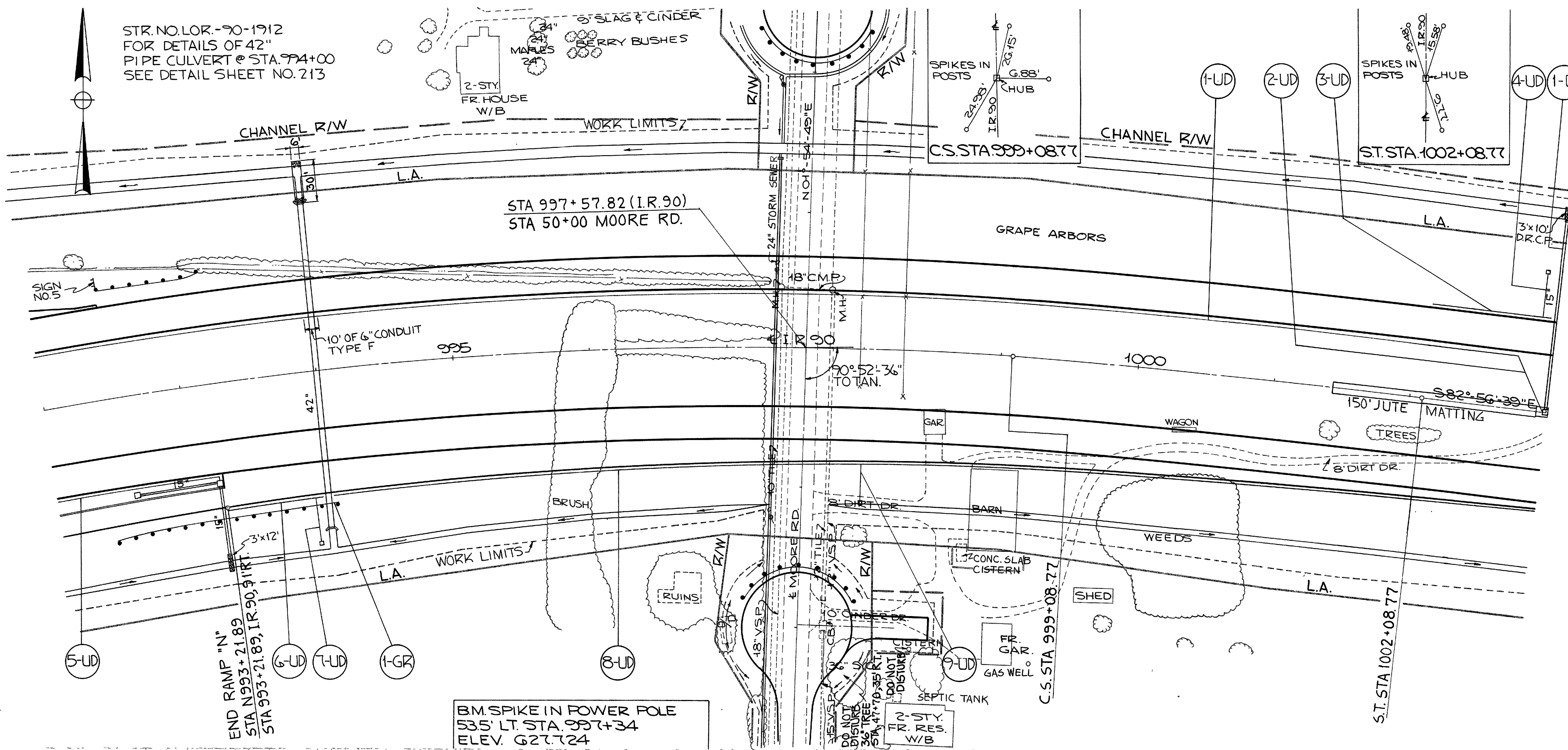


STA. 984+00 TO STA. 992+00

Rev. 11-3-66

REFERENCE SHEETS	SHT. NO.
RAMP "N" DETAILS	1258,130
SUPERELEVATION	82
ACCELERATION LANE DETAILS	112
MOORE RD.	180 & 184

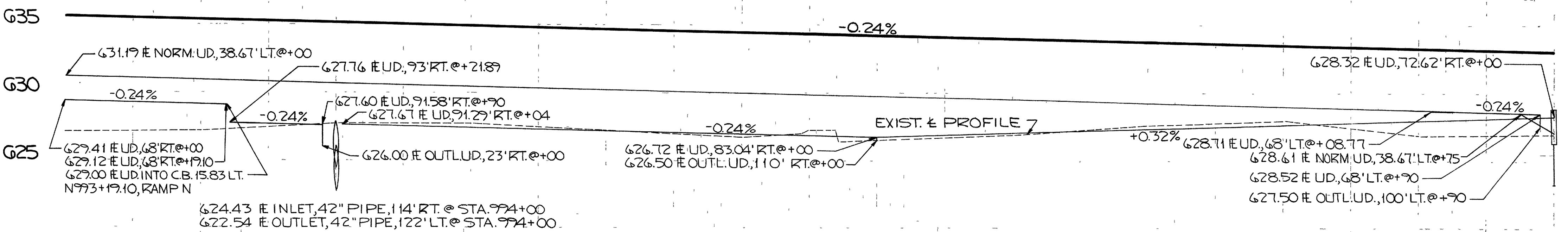
LOR.-90-17.21



REFERENCE NO.	SIDE	STATION		CONDUIT TYPE F	G03 LIN.FT.	G05 SHALLOW PIPE UNDER DRAINS LIN.FT.	G05 UNCLASS PIPE UNDER DRAINS LIN.FT.	BENDS AND BRANCHES	
		FROM	TO					TEE	90° BEND
1-UD	LT.	992+00	1002+75	6"	10	1065			
2-UD	LT.	1002+75	1003+00	6"	10				
3-UD	LT.	1002+08.77	1002+98	6"				1	
4-UD	LT.	1002+90		6"					
5-UD	RT.	992+00	993+19.10	6"					
6-UD	RT.	993+21.89	993+96	6"					
7-UD	RT.	993+90		6"					
8-UD	RT.	994+04	1003+00	6"					
9-UD	RT.	998+00		6"					
TOTALS					56	1065	1273		

- G35.69
- G35.63
- G35.57
- G35.51
- G35.45
- G35.39
- G35.33
- G35.27
- G35.21
- G35.15
- G35.09
- G35.03
- G34.97
- G34.91
- G34.85
- G34.79
- G34.73
- G34.67
- G34.61
- G34.55
- G34.49
- G34.43
- G34.37
- G34.31
- G34.25
- G34.19
- G34.13
- G34.07
- G34.01
- G33.95
- G33.89
- G33.83
- G33.77
- G33.71
- G33.65
- G33.59
- G33.53
- G33.47
- G33.41
- G33.35
- G33.29
- G33.23
- G33.17
- G33.11
- G33.05

STA. 1003+00 ON & STD. NO. 4 C.B.
 G28.55 # GRATE
 G26.30 # C.B. 8.15" PIPE OUT OF C.B.
 G23.35 # OUTL. 15" PIPE, 140' LT. @ +00
 G27.00 # OUTL. UD. INTO C.B. @ +00

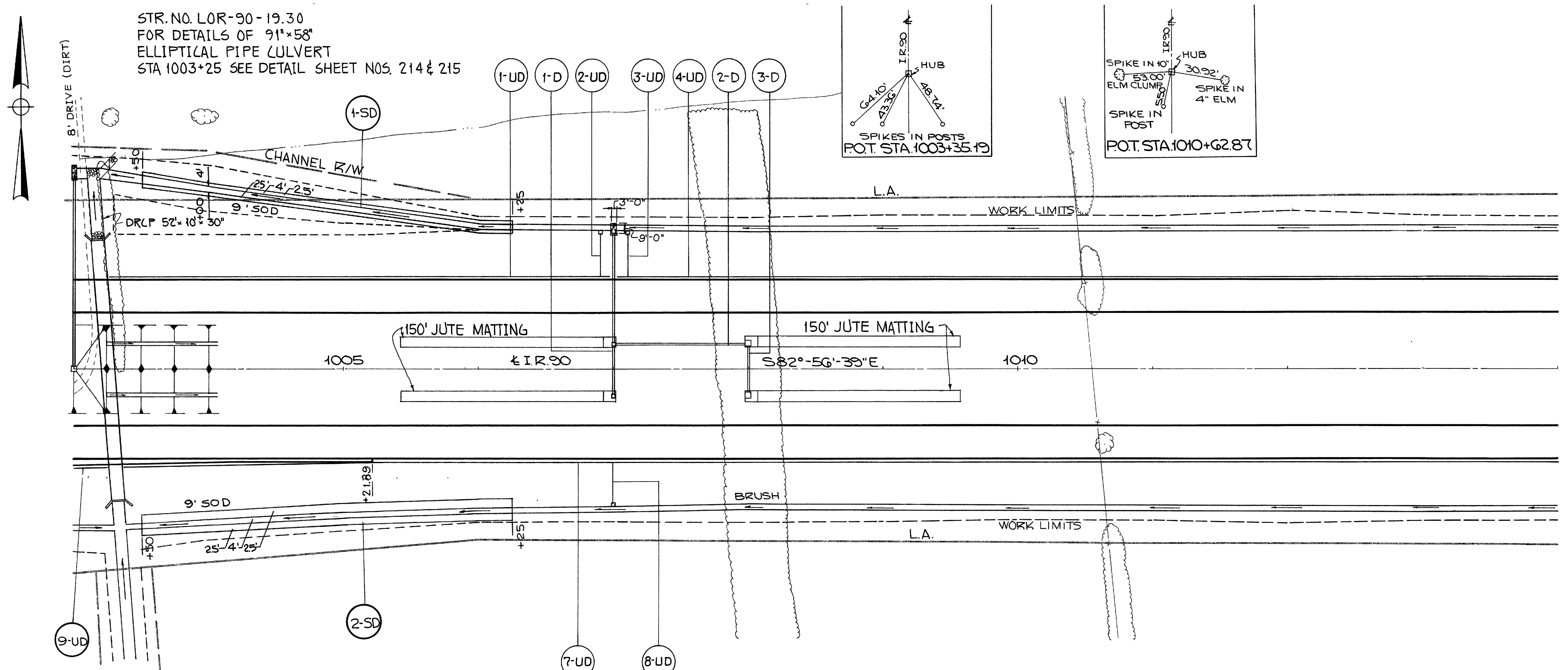


SEEDING	26,447	SQ.YDS.
EXCAVATION	4,336	CU.YDS.
EMBANKMENT	44,886	CU.YDS.

REFERENCE NO.	SIDE	STATION		G01 DUMPED CONCRETE ROCK MASONRY CHANNEL STD. PROTECT. HW-E T-18" ENDWALL CLASS C	G02 CU.YDS.	G03 CONDUIT TYPE B-B LIN.FT.	G04 CATCH BASINS STD. NO. 4 EACH	G06 GUARD RAIL TYPE 4 LIN.FT.	G07 JUTE MATTING SQ.YDS.
		FROM	TO						
1-D	LT.	1003+00		15"	2	0.26	140	1	125
1-GR	RT.	993+21.89	994+06.5	15"				81.72	
TOTALS					2	0.26	140	1	125

- G27.1
- G27.2
- G27.7
- G27.7
- G27.3
- G26.7
- G27.0
- G27.3
- G26.5
- G26.5
- G26.8
- G27.6
- G27.8
- G26.9
- G27.0

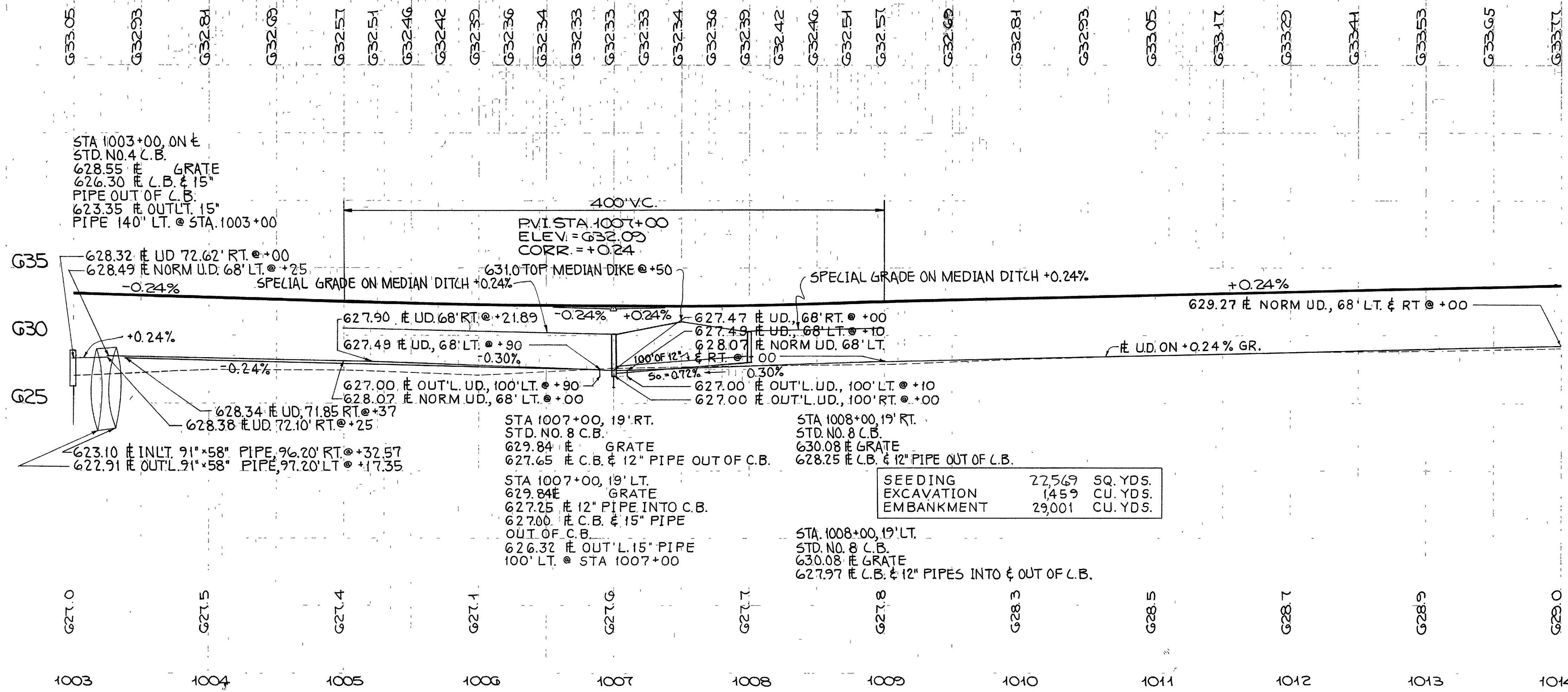
STA. 992+00 TO STA. 1003+00



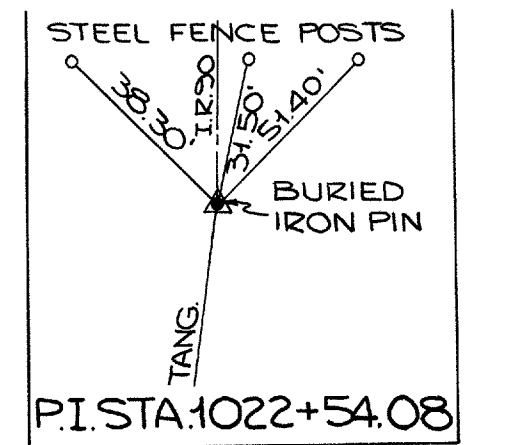
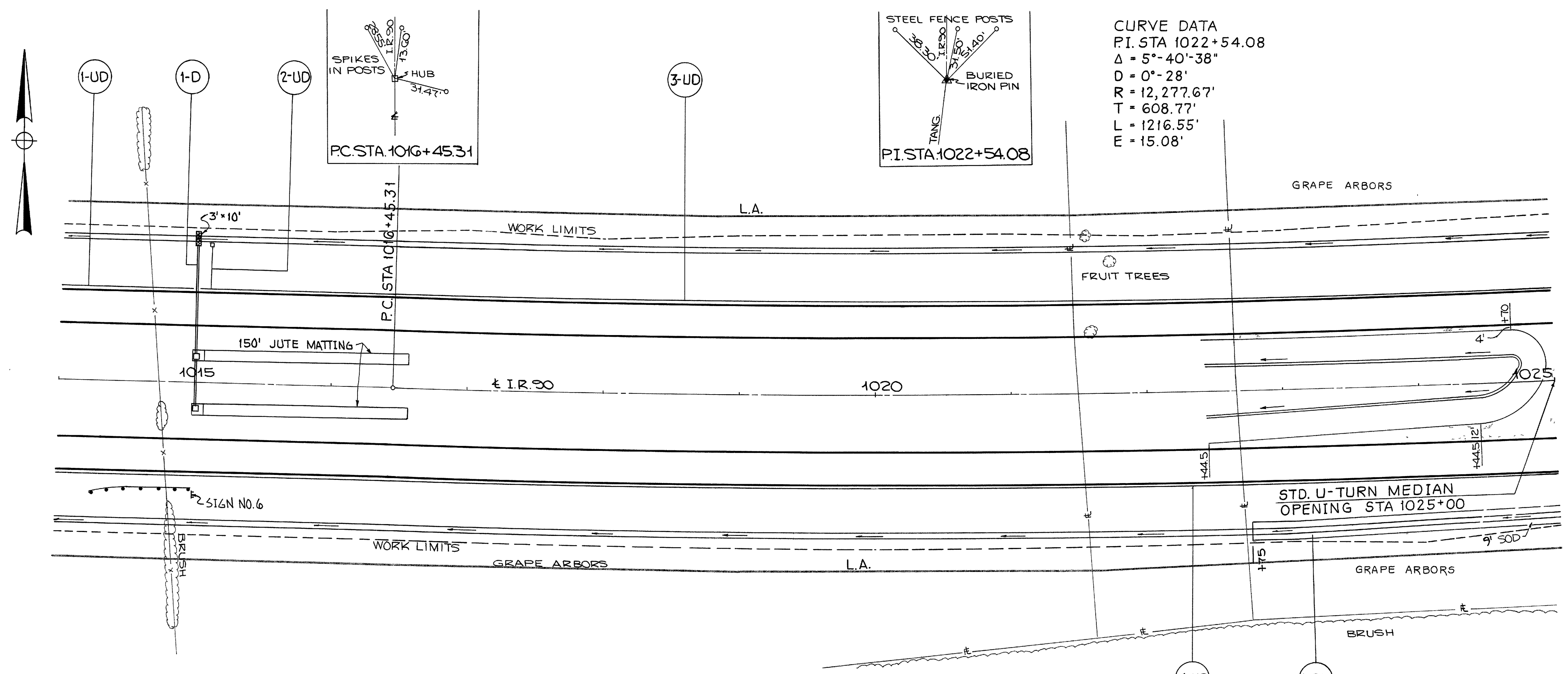
REFERENCE NO.	SIDE	STATION		601	602	603	603	604	605	660	BENDS AND BRANCHES	667	
		FROM	TO	DUMPED ROCK CHANNEL PROTECT	MASONRY CLASS < STD. HW-E ENDWALL	CONDUIT TYPE F	CONDUIT TYPE C-B	CATCH BASINS STD. NO. 8	UNDER DRAINS	SODDING UNCLASSIFIED			
				T=18" CU. YDS.	6" CU. YDS.	6" LIN. FT.	12" LIN. FT.	15" EACH	SHALLOW 6" LIN. FT.	UNCLASSIFIED 60 YDS.	6" TEE	SQ. YDS.	
1-UD	LT.	1003+25	1006+96										
2-UD	LT.	1006+90				10							
3-UD	LT.	1007+10				10							
4-UD	LT.	1007+04	1014+00						500	196			
5-UD													
6-UD													
7-UD	RT.	1003+37	1014+00						500	563			
8-UD	RT.	1007+00				10							
9-UD	RT.	1003+00	1003+25							22	1		
1-D	LT & RT	1007+00		2	0.26		38	81	2			250	
2-D	LT.	1007+00	1008+00				100						
3-D	LT & RT	1008+00					38	2				250	
1-6R	LT	1003+12.5	1004+62.5										
2-6R	RT	1003+00	1003+50										
1-SD	LT.	1003+50	1006+25							275			
2-SD	RT.	1003+50	1006+25							275			
TOTALS				2	0.26	30	176	81	4	1,175	1,046	550	500

NOTE:
STA 1003+00 TO STA 1003+50
TRANSITION VEE MEDIAN TO
A MOUND MEDIAN.

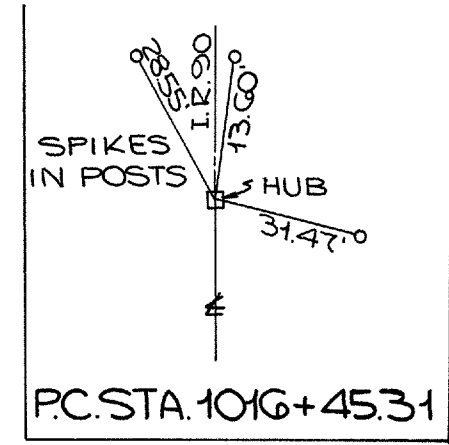
B.M. BOAT SPIKE IN 15" DEAD
ELM. 19' LT. STA 1005+64
ELEV. 628.026



SEEDING	27,569	SQ. YDS.
EXCAVATION	1,459	CU. YDS.
EMBANKMENT	29,001	CU. YDS.



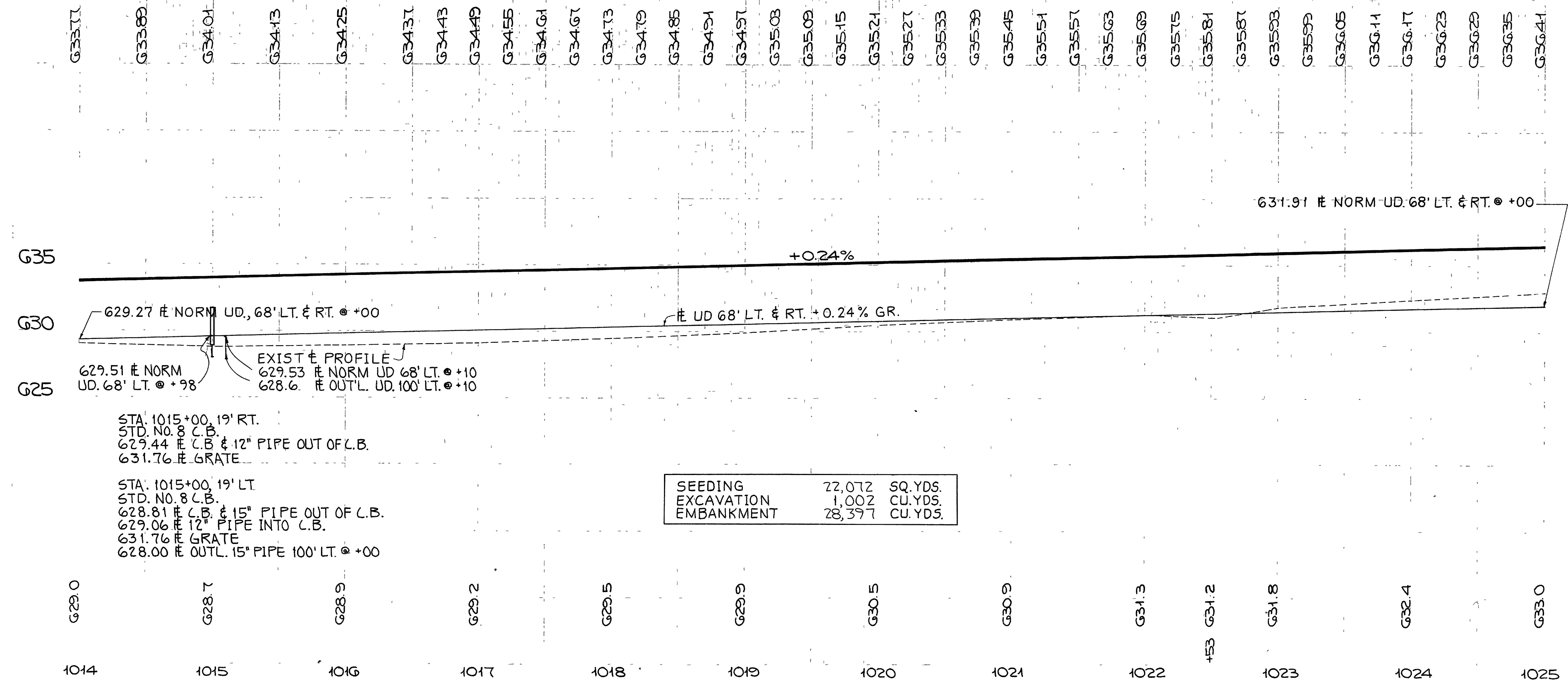
CURVE DATA
 P.I. STA 1022+54.08
 $\Delta = 5^{\circ}-40'-38''$
 $D = 0^{\circ}-28'$
 $R = 12,277.67'$
 $T = 608.77'$
 $L = 1216.55'$
 $E = 15.08'$



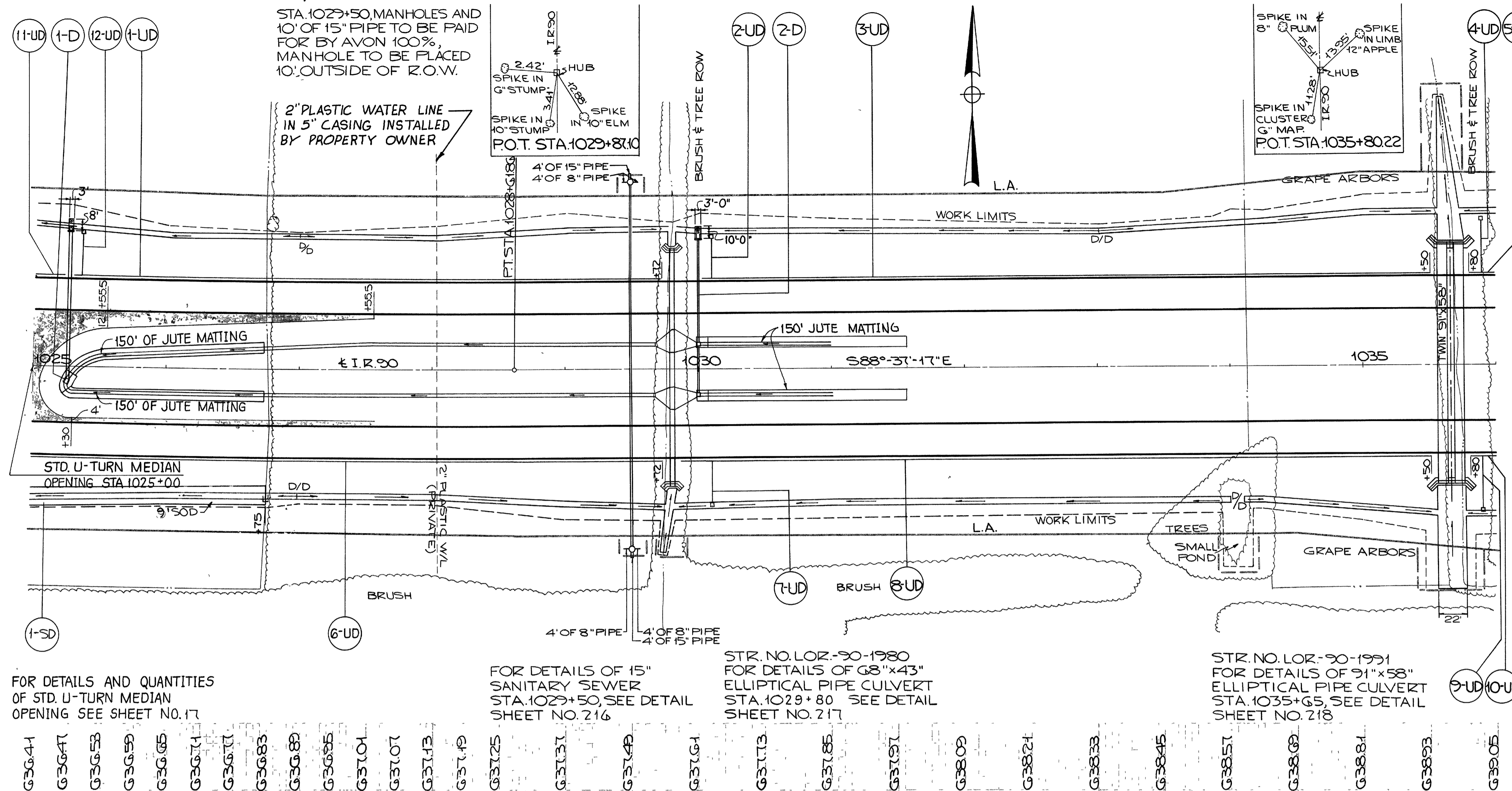
B.M. BOAT SPIKE IN 12" OAK
 17' RT. STA. 1022+38
 ELEV. G32.534

FOR DETAILS AND QUANTITIES
 OF STD. U-TURN MEDIAN
 OPENING SEE SHEET NO.17

REFERENCE NO.	SIDE	STATION		601	602	603	603	604	605	BEND AND BRANCHES	JUTE MATTING	SODDING
		FROM	TO	DUMPED ROCK CHANNEL PROTECT. T=18"	MASONRY CLASS STD. HW-E ENDWALL	CONDUIT TYPE F	CONDUIT TYPE C-B	CATCH BASIN STD. NO. 8	UNDER-DRAINS SHALLOW UNCLASSIFIED			
1-UD	LT.	1014+00	1014+98						98			
2-UD	LT.	1015+10			10				22	1		
3-UD	LT.	1015+02	1025+00						998			
4-UD	RT.	1014+00	1025+00						1100			
1-SD	RT.	1022+75	1025+00									225
1-D	LT.&RT.	1015+00		2	0.26		38 81	2			250	
TOTALS				2	0.26	10	38 81	2	2,174 22		250	225



SEEDING	22,072	SQ.YDS.
EXCAVATION	1,002	CU.YDS.
EMBANKMENT	28,397	CU.YDS.



REFERENCE NO.	SIDE	STATION		DUMPED ROCK CHANNEL PROTECT.	601 MASONRY CLASS STD. HW-E ENDWALL	602 CONDUIT TYPE F	603 CONDUIT TYPE C-B	603 CONDUIT TYPE B-B	604 CATCH BASINS STD.		605 UNDERDRAINS	BENDS AND BRANCHES	GGO SODDING	667 JUTE MATTING
		FROM	TO						NO. 5	NO. 8				
1-UD	LT.	1025+00	1029+72							472				
2-UD	LT.	1030+10				10				19	1			
3-UD	LT.	1030+04	1035+50							546				
4-UD	LT.	1035+90				10				30	1			
5-UD	LT.	1035+80	1036+00							20				
6-UD	RT.	1025+00	1029+72							472				
7-UD	RT.	1030+10				10				19	1			
8-UD	RT.	1029+88	1035+50							562				
9-UD	RT.	1035+90				10				30	1			
10-UD	RT.	1035+80	1036+00							20				
1-D	LT.	1025+25		2	0.26			113	1				250	
2-D	LT&RT	1030+00		2	0.26		38	78	2				250	
11-UD	LT.	1025+00	1025+21							21				
12-UD	LT.	1025+35				10				22	1			
1-SD	RT.	1025+00	1026+75										175	
TOTALS				4	0.52	50	38	191	1	2	2113	120	175	500

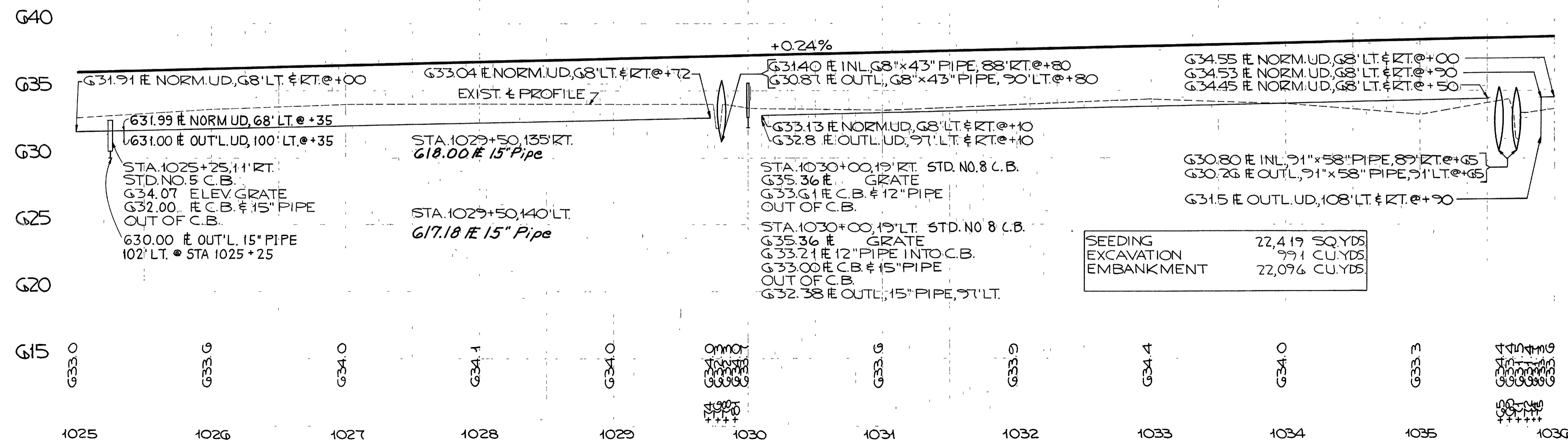
FOR DETAILS AND QUANTITIES OF STD. U-TURN MEDIAN OPENING SEE SHEET NO. 17

FOR DETAILS OF 15\"/>

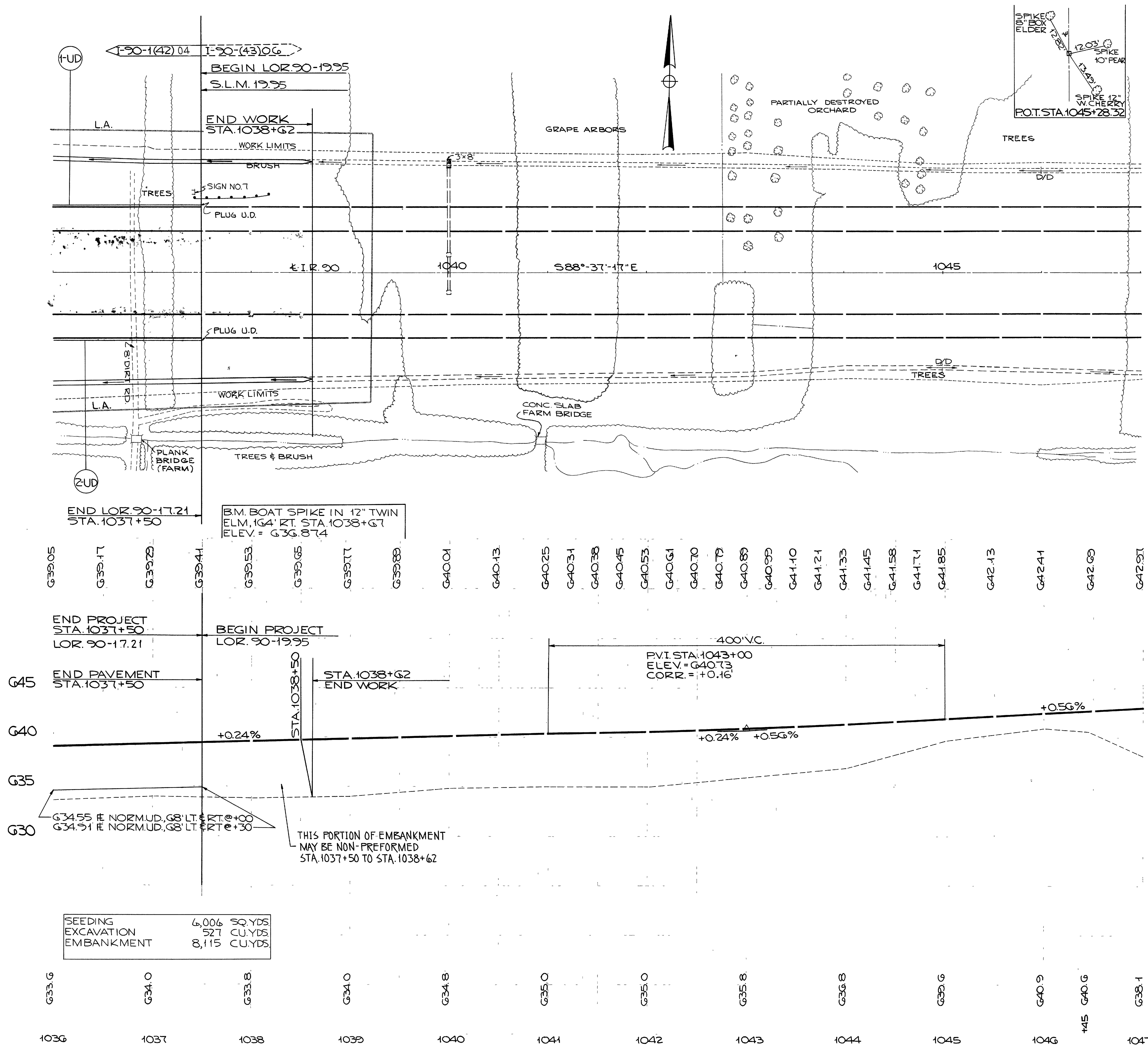
STR. NO. LOR.-90-1980 FOR DETAILS OF 68\"/>

STR. NO. LOR.-90-1991 FOR DETAILS OF 91\"/>

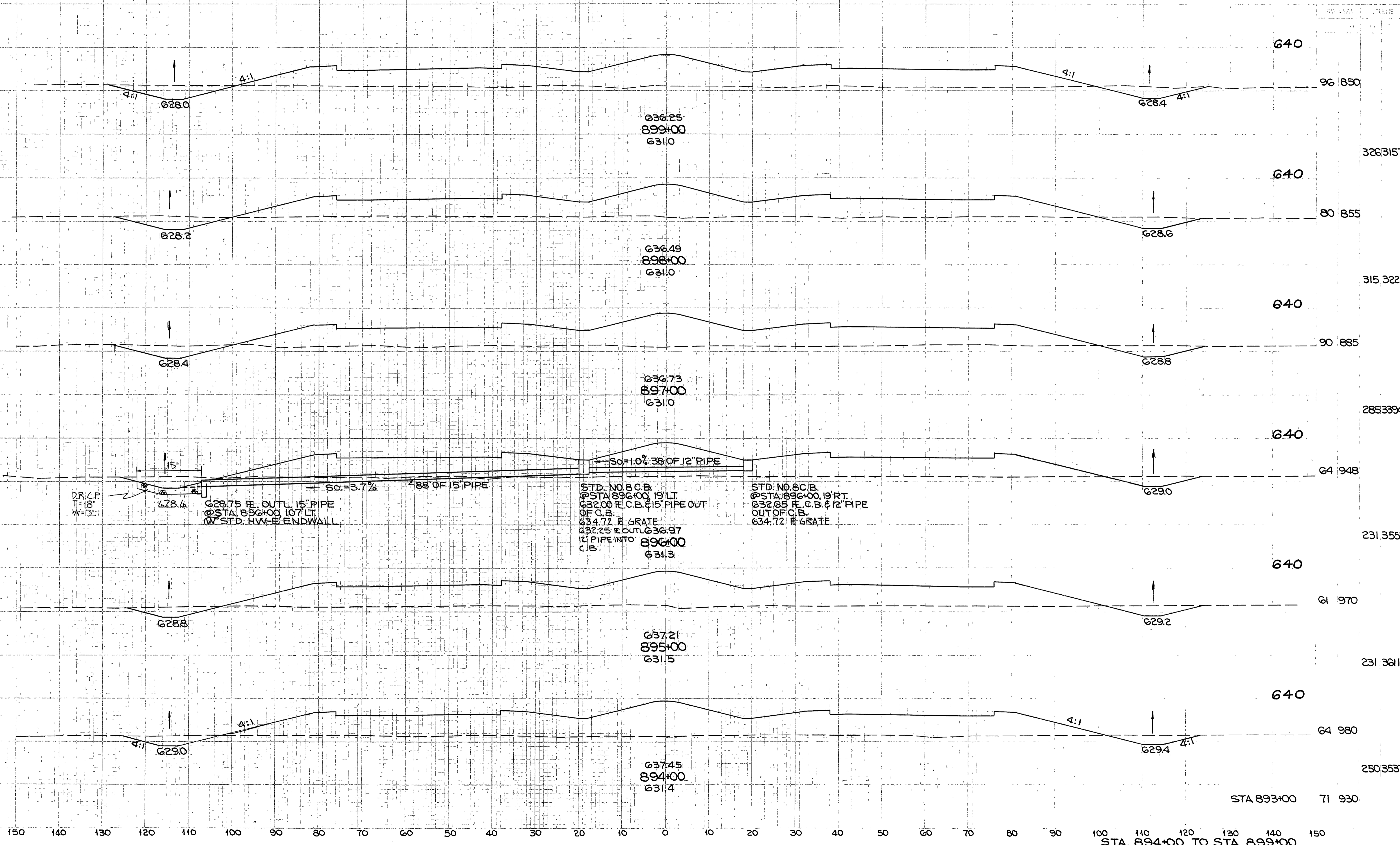
- G36.41
- G36.47
- G36.53
- G36.59
- G36.65
- G36.71
- G36.77
- G36.83
- G36.89
- G36.95
- G37.01
- G37.07
- G37.13
- G37.19
- G37.25
- G37.31
- G37.49
- G37.61
- G37.73
- G37.85
- G37.97
- G38.09
- G38.24
- G38.33
- G38.45
- G38.57
- G38.69
- G38.84
- G38.93
- G39.05



SEEDING	22,419 SQ.YDS
EXCAVATION	991 CU.YDS
EMBANKMENT	22,096 CU.YDS



REFERENCE NO.	SIDE	STATION		605 UNDER-DRAINS	SHALLOW 6" LIN. FT.
		FROM	TO		
1-UD	LT.	1036+00	1037+50	150	
2-UD	RT.	1036+00	1037+50	150	
TOTALS				300	



DR/C.P.
T=18"
W=31"

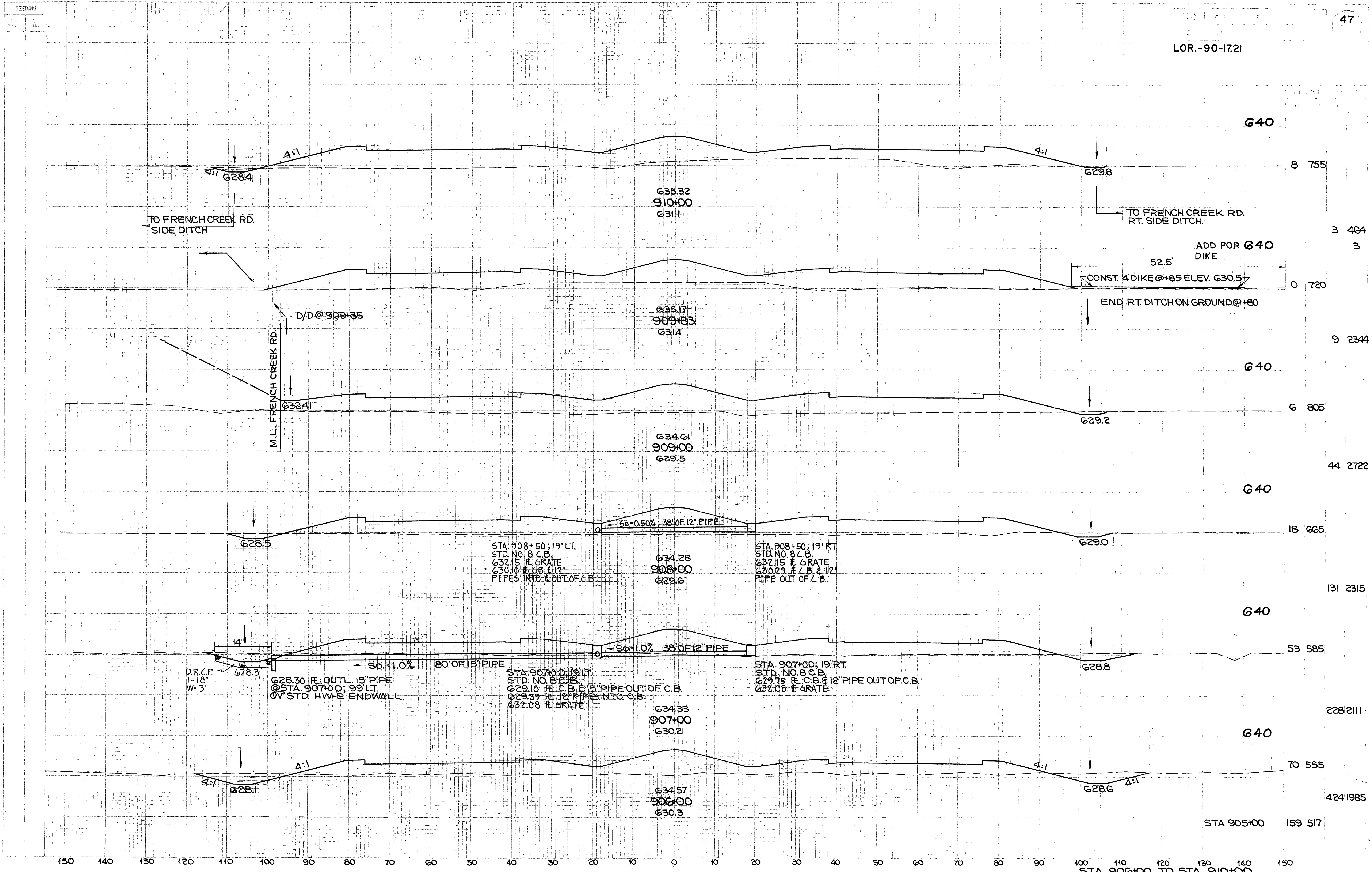
628.75 E. OUTL. 15" PIPE
@ STA. 896+00, 107' LT.
@ STD. HWY. ENDWALL

So=1.0% 38' OF 12" PIPE
STD. NO. 8 C.B.
@ STA. 896+00, 19' LT.
632.00 E. C.B. & 15" PIPE OUT
OF C.B.
634.72 E. GRATE
632.25 E. OUTL. 12" PIPE INTO
C.B. 896+00
631.3

STD. NO. 8 C.B.
@ STA. 896+00, 19' RT.
632.65 E. C.B. & 12" PIPE
OUT OF C.B.
634.72 E. GRATE

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 894+00 TO STA. 899+00

STA 893+00 71 930



TO FRENCH CREEK RD. SIDE DITCH

TO FRENCH CREEK RD. RT. SIDE DITCH.

ADD FOR 640 DIKE

52.5' CONST. 4' DIKE @ +85 ELEV. 630.5

END RT. DITCH ON GROUND @ +80

M.L. FRENCH CREEK RD.

D/D @ 909+35

50:0.50% 38' OF 12" PIPE

STA. 908+50; 19' LT. STD. NO. 8 C.B. 632.15 E. GRATE 630.10 E. C.B. & 12" PIPES INTO & OUT OF C.B.

STA. 908+50; 19' RT. STD. NO. 8 C.B. 632.15 E. GRATE 630.29 E. C.B. & 12" PIPE OUT OF C.B.

DR. C.P. T=18' W=3'

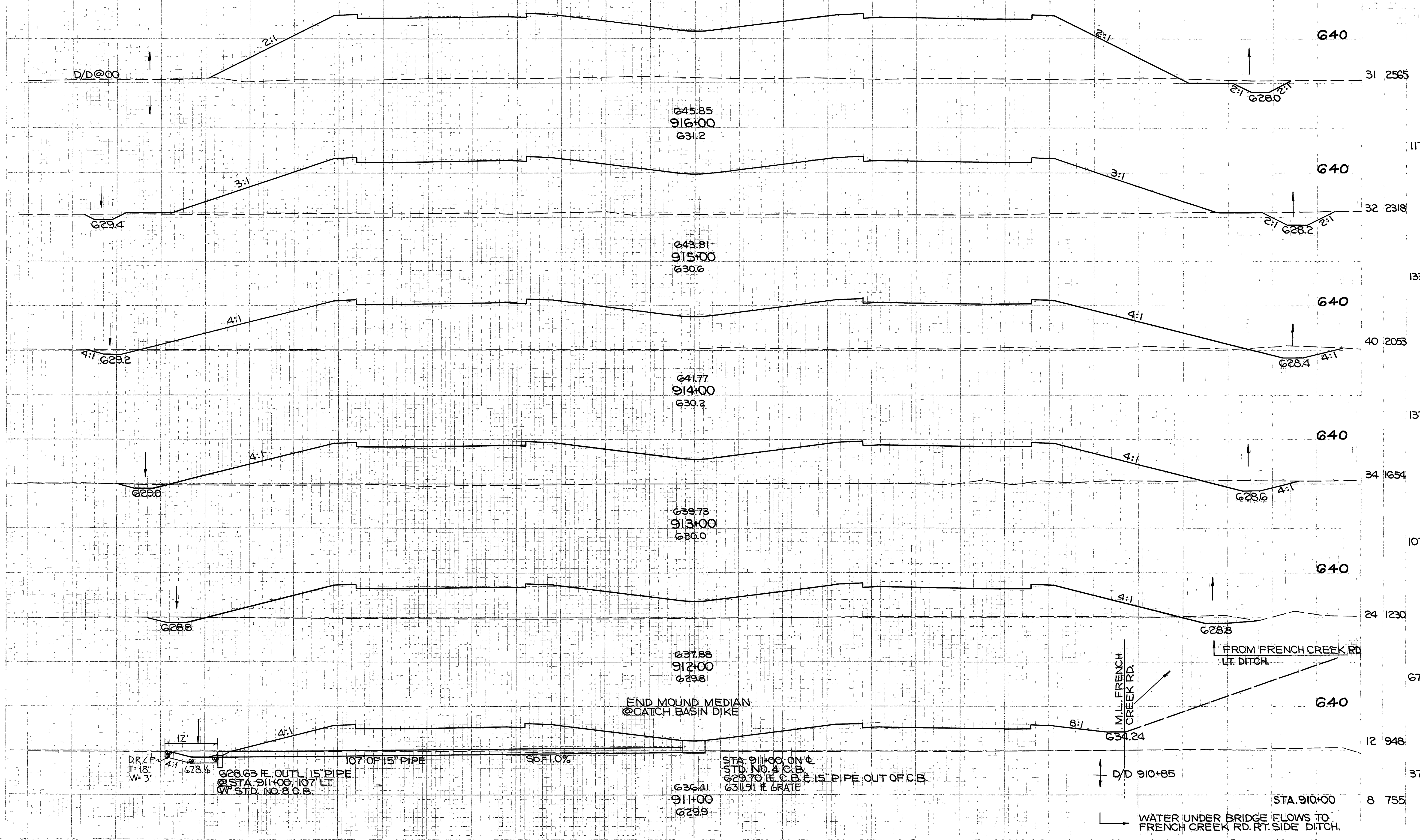
628.30 E. OUTL. 15" PIPE @ STA. 907+00; 99' LT. STD. HW E. ENDWALL.

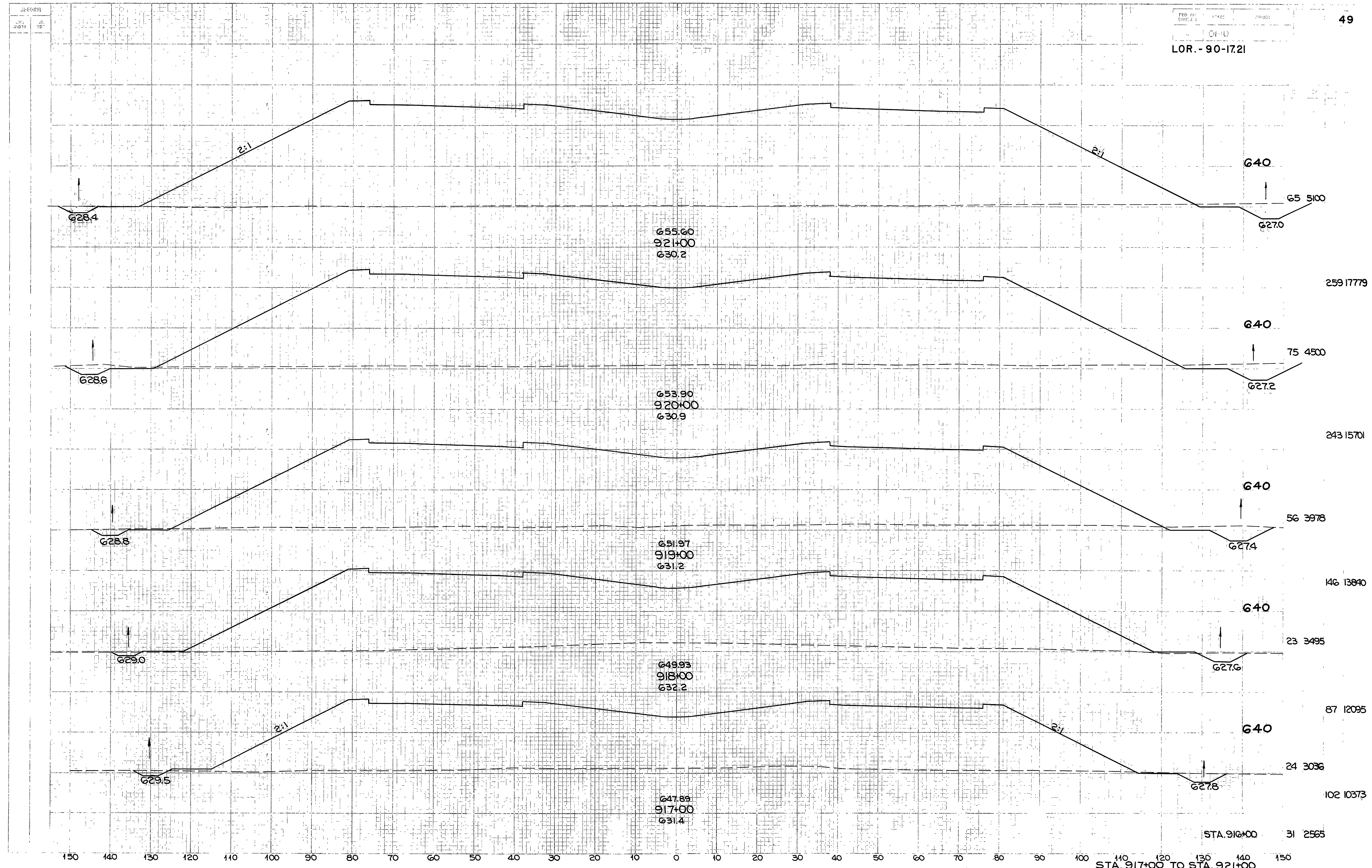
STA. 907+00; 19' LT. STD. NO. 8 C.B. 629.10 E. C.B. & 15" PIPE OUT OF C.B. 629.39 E. 12" PIPES INTO C.B. 632.08 E. GRATE

STA. 907+00; 19' RT. STD. NO. 8 C.B. 629.75 E. C.B. & 12" PIPE OUT OF C.B. 632.08 E. GRATE

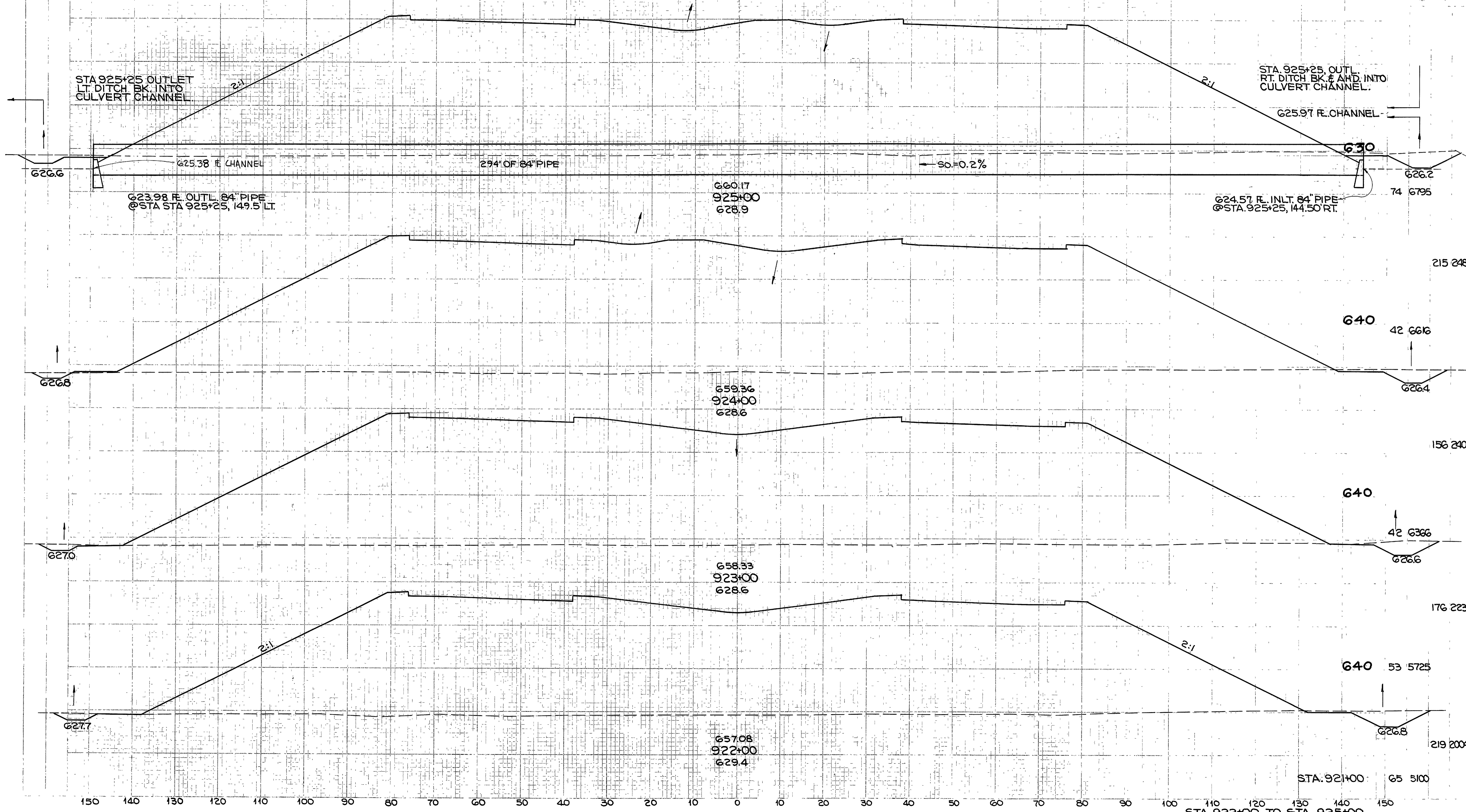
STA 905+00 159 517

STA. 906+00 TO STA. 910+00





SEWING
AND
WATER



SEEDING
END
W/CH

AREA	VOLUME

"O" SECTION
STA. 927+67 BK.

STA 927+67 BK. 0 0

0 8788

FOR EARTH WORK ONLY

G40

0 7082

661.11
927+00
627.5

FROM N.Y.C. RT. DITCH

G1 28030

CONCRETE COLLAR

89' OF 15" PIPE TYPE B-B - S₀+1.0%

STA 926+57 ON &
STD. NO. 2-2 B.C.B.
654.00 F. C.B. & 15" PIPE
OUT OF C.B.
656.35 F. GRATE

G40

33 6973

65' OF 15" PIPE TYPE F
WITH 2-25' BENDS

628.00 F. OUTL. 15" PIPE
@ STA 926+57.148 LT.
@ STD. HW-E ENDWALL.

660.75
926+00
628.8

628.5
198 25498

STA. 925+00 74 6795

STA. 926+00 TO STA. 927+67

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

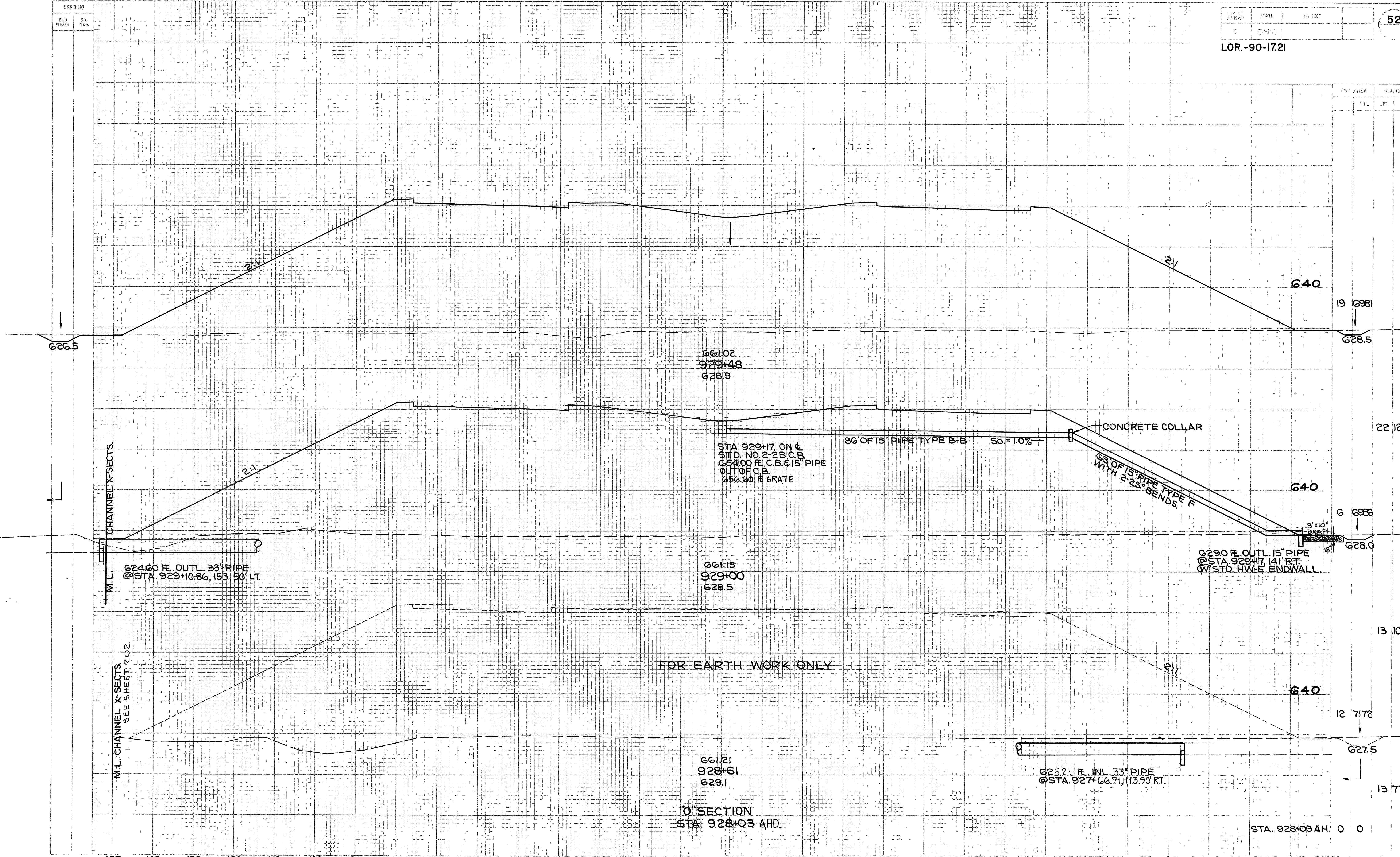
M.L. CHANNEL 'X' SECTS.

M.L. CHANNEL 'X' SECTS.
P. SEE SHEET NO. 202
18'
10'

SEEDING
SID WIDTH
SO YDS

LOR.-90-1721

NO. SHEET	MULTIPLE
19	1



626.5

2:1

2:1

640

19 6981

628.5

661.02
929+48
628.9

STA 929+17 ON C
STD. NO. 2-2B.C.B.
654.00 R.C.B. 6" 15" PIPE
OUT OF C.B.
656.60 E GRATE

86' OF 15" PIPE TYPE B-B 50% 1.0%

CONCRETE COLLAR

63' OF 15" PIPE TYPE F
WITH 2-23° BENDS.

640

22 1246

6 6988

628.0

629.0 R. OUTL. 15" PIPE
@ STA. 929+17, 141' RT.
W/ STD. HW-E ENDWALL.

CHANNEL X-SECTS

624.60 R. OUTL. 33" PIPE
@ STA. 929+10.86, 153, 50' LT.

2:1

M.L.

M.L. CHANNEL X-SECTS.
SEE SHEET 202

FOR EARTH WORK ONLY

2:1

640

13 10286

12 7172

627.5

625.21 R. INL. 33" PIPE
@ STA. 927+66.71, 113.90' RT.

661.21
928+61
629.1

'O' SECTION
STA. 928+03 AHD.

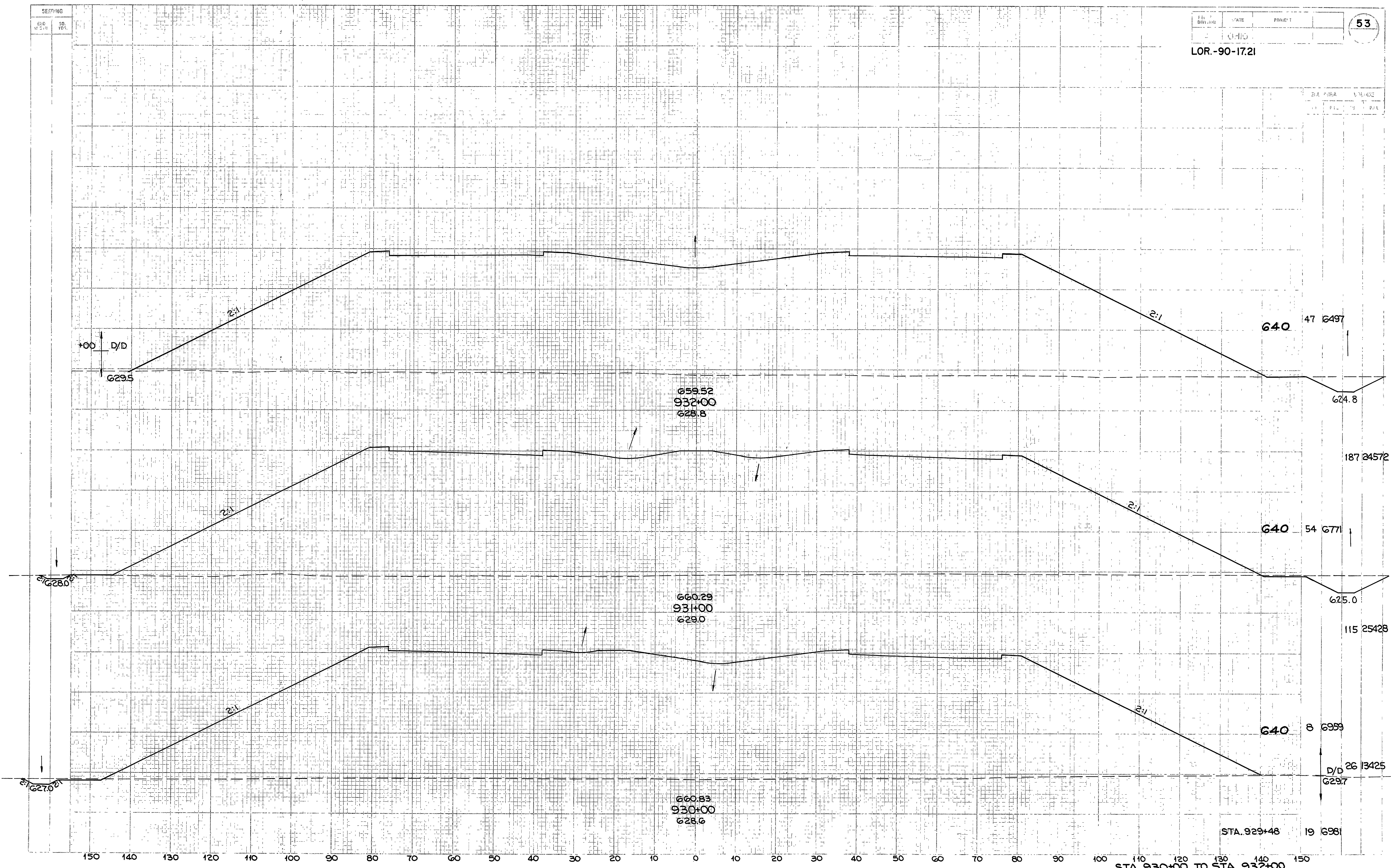
STA. 928+03 AHD. 0 0

STA. 928+03 TO STA. 929+48

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

SECTION
S.D. 2.14
S.D. 105

BLK. AREA
VOLUME
11 12 13



+00 D/D
629.5

659.52
932+00
628.8

640 47 6497

624.8

187 24572

640 54 6771

625.0

115 25428

640 8 6959

D/D 26 13425
629.7

STA. 929+48 19 6981

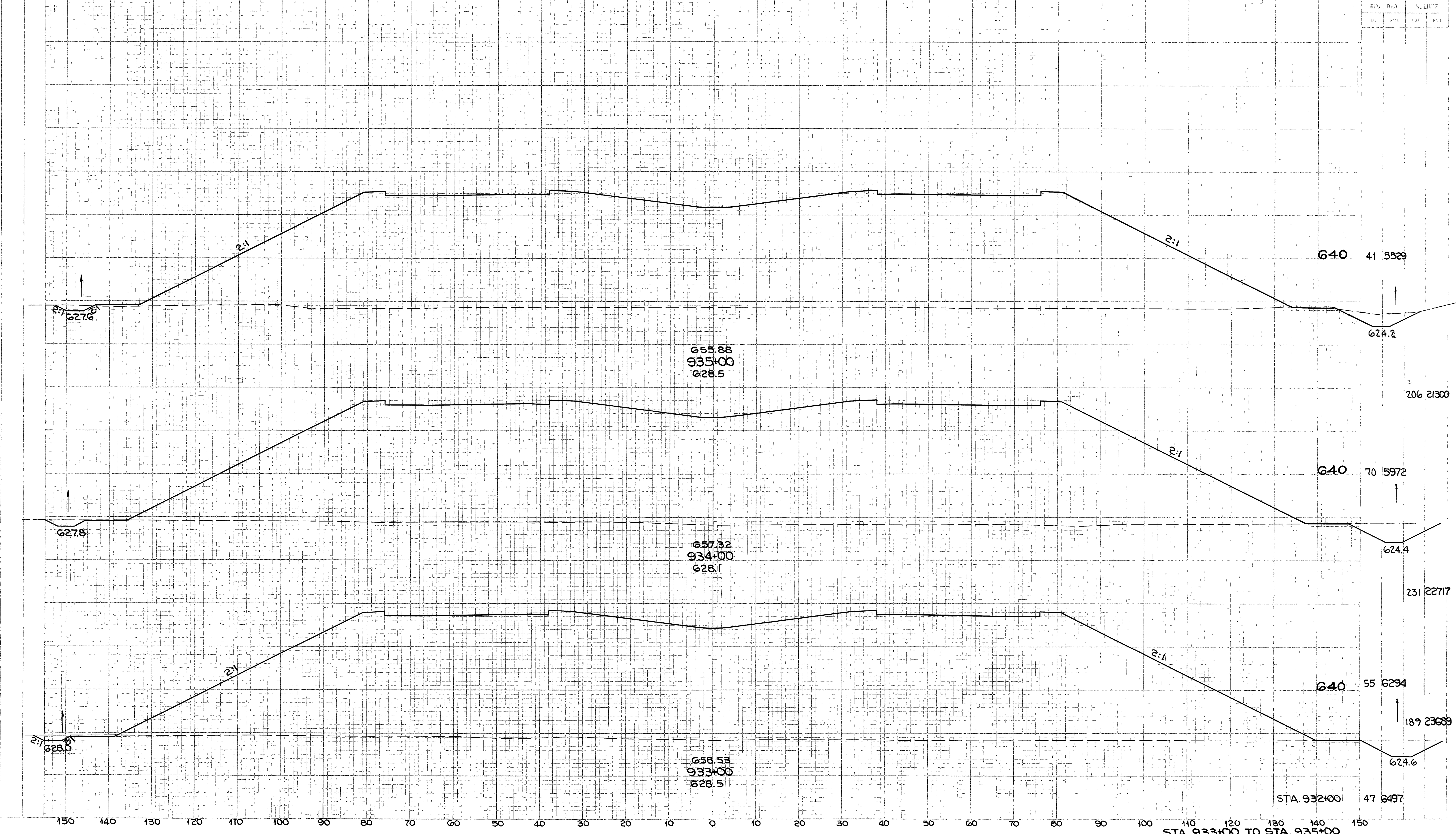
STA. 930+00 TO STA. 932+00

SEEDING
FWD WIDTH 50 YDS

REG NO	DATE	PROJECT	54
2	3-10		

LOR. - 90-17.21

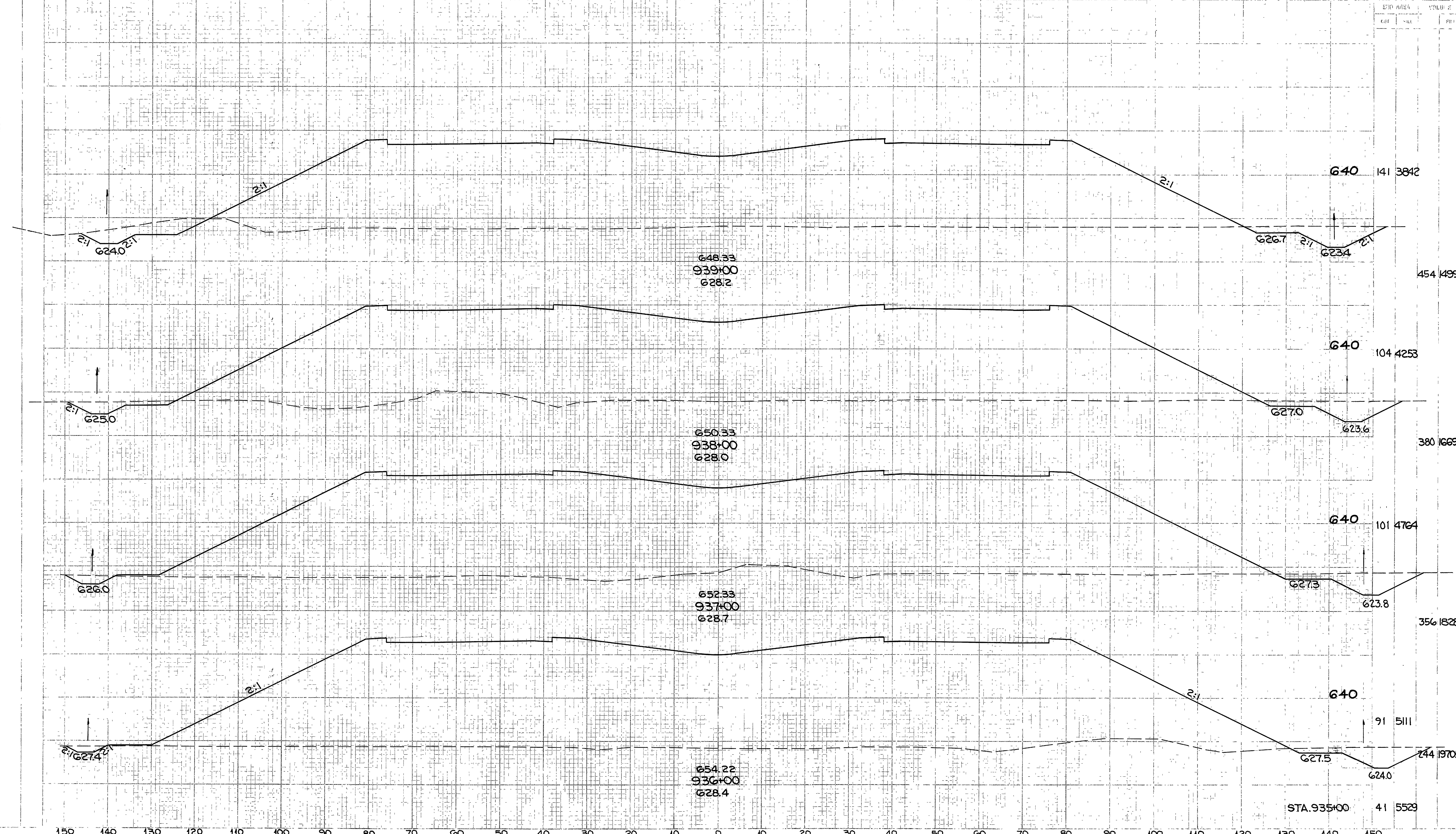
ELEVATION		VOLUME	
CU	YDS	CU	YDS



STA. 933+00 TO STA. 935+00

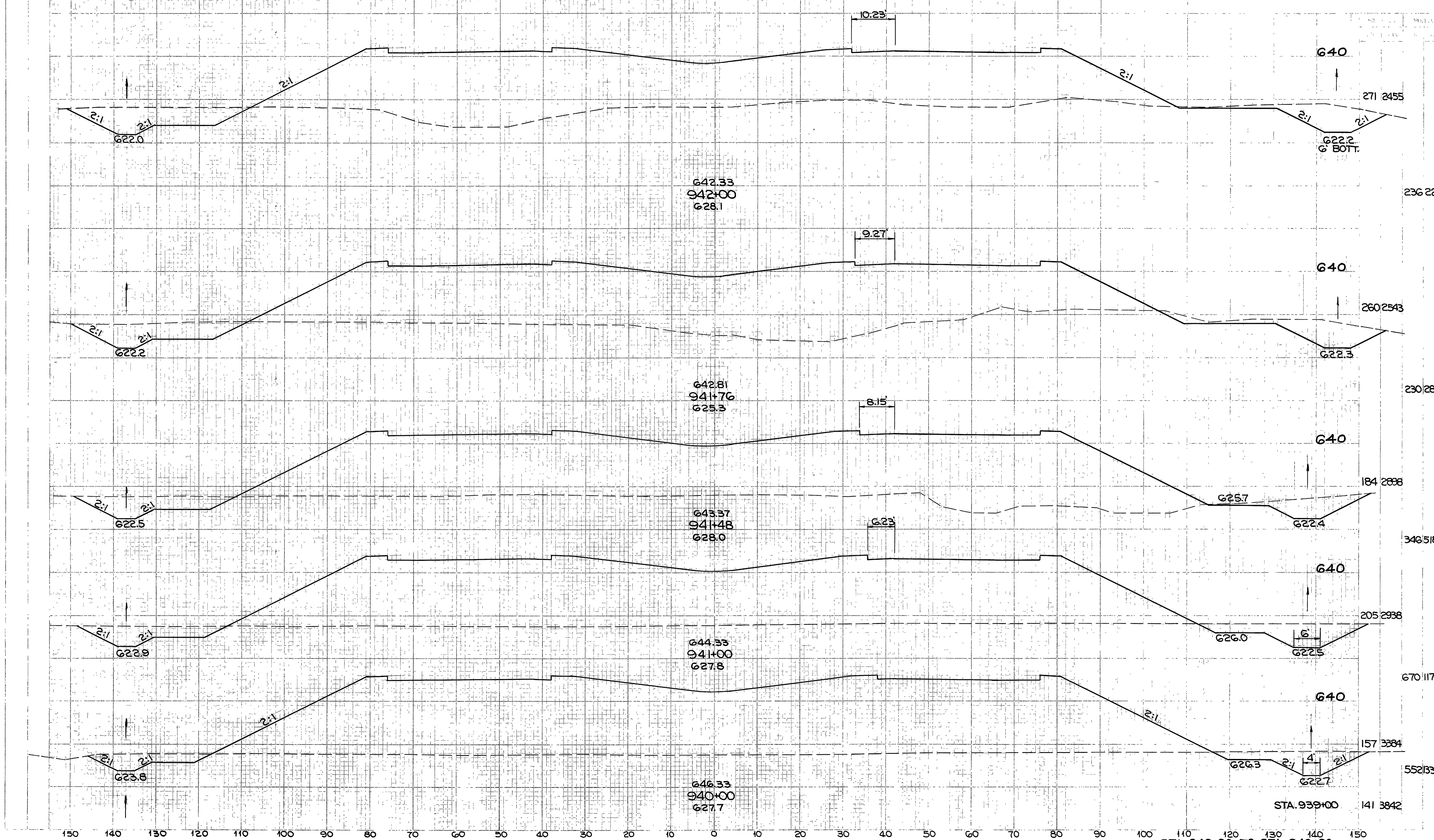
SEEDING
FT. W. 0.75
FT. L. 0.5

END AREA
CUT FILL
VOLUME
CU YD

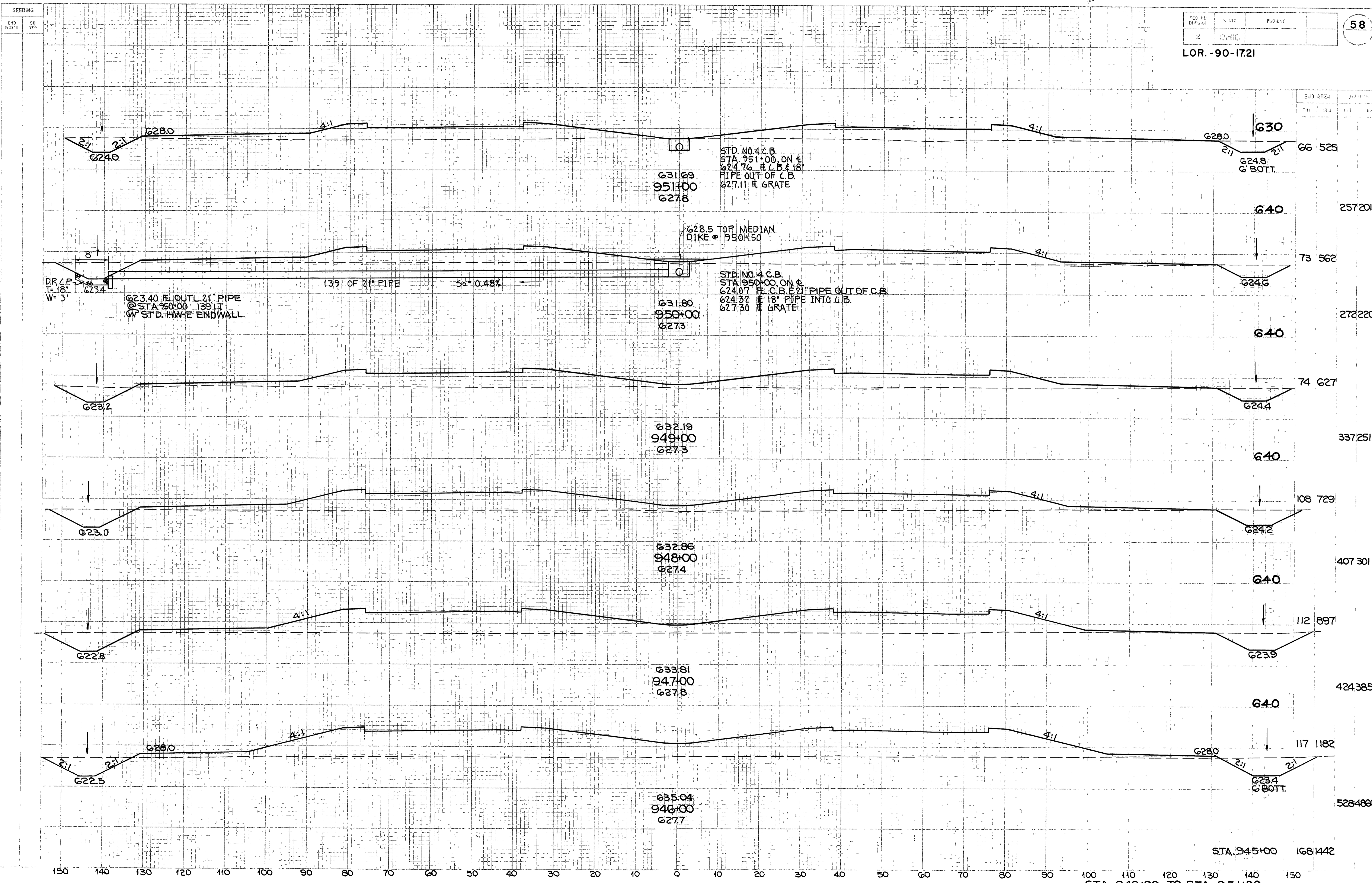


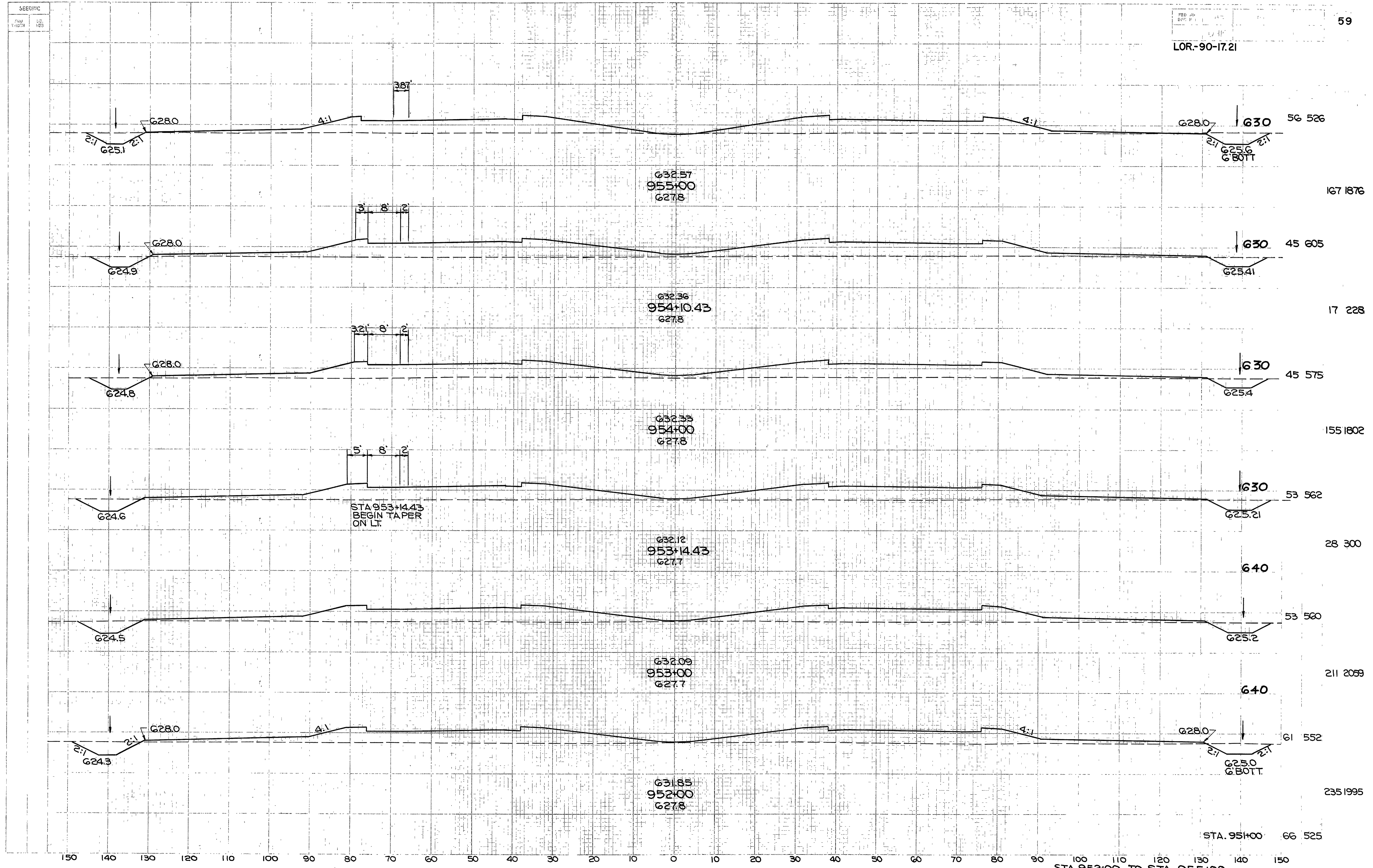
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 936+00 TO STA. 939+00

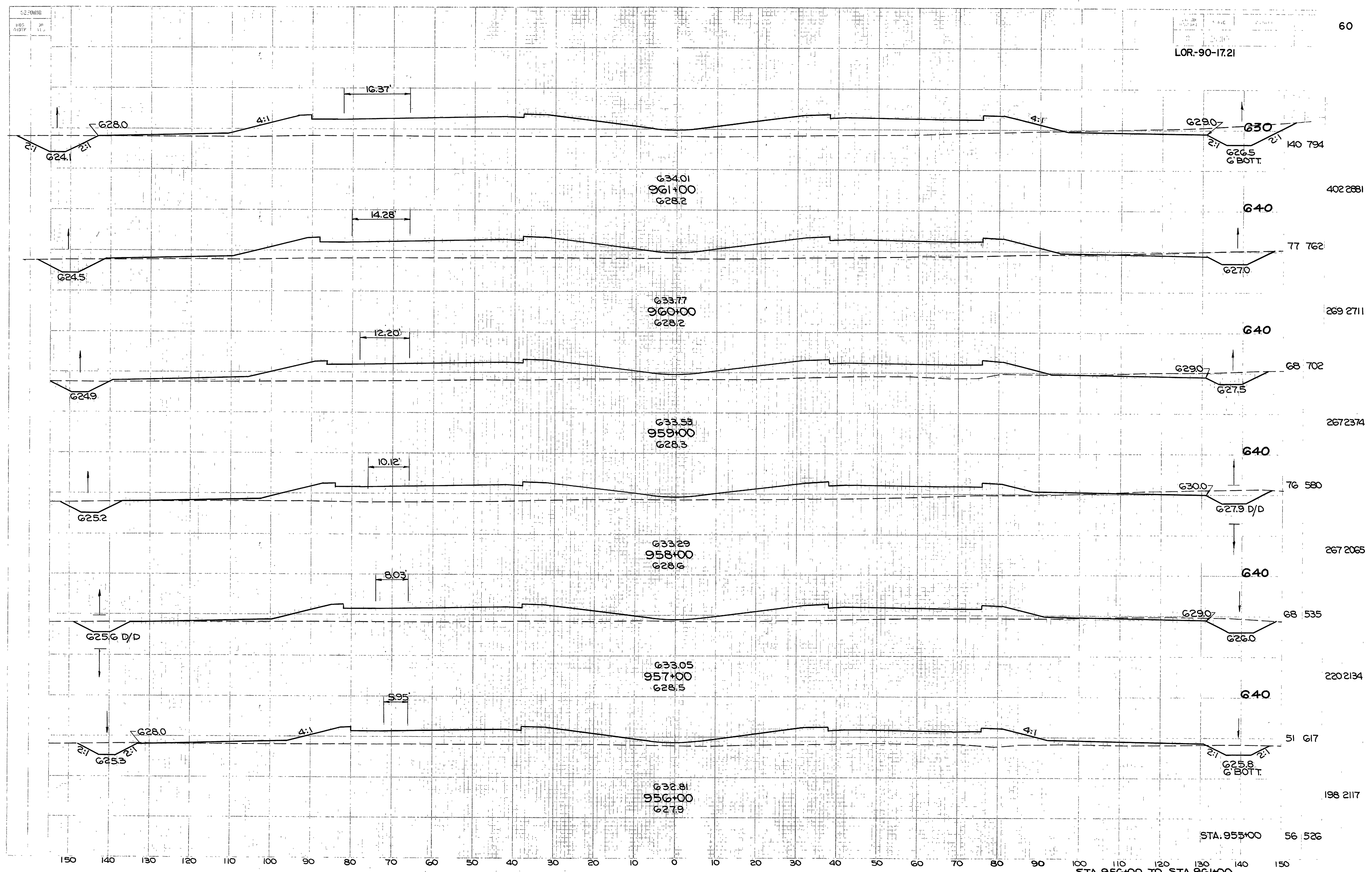
SEEDING
END
WIDTH
30
VOL.



STA. 940+00 TO STA. 942+00



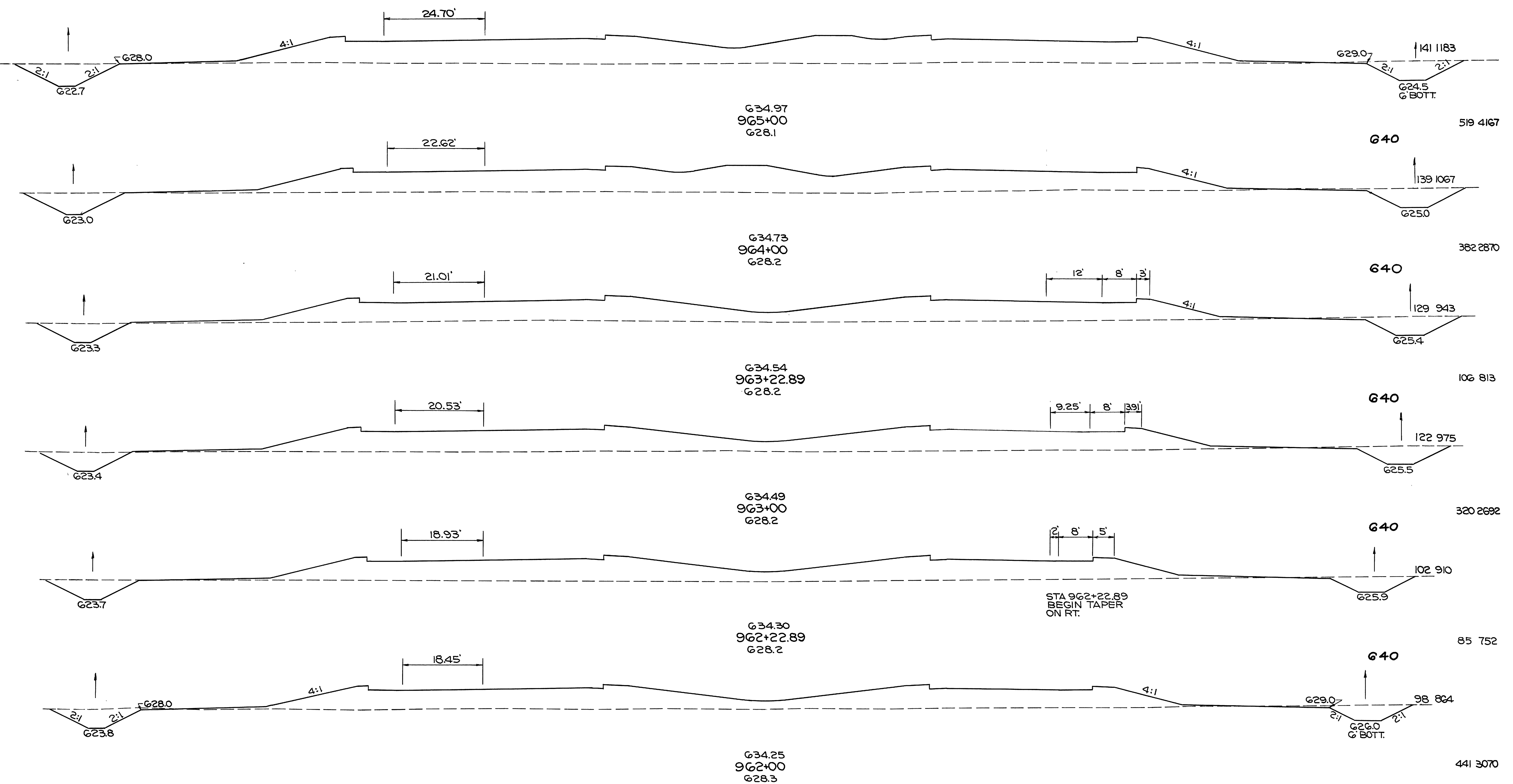




STA. 955+00 56 526

STA 956+00 TO STA 961+00

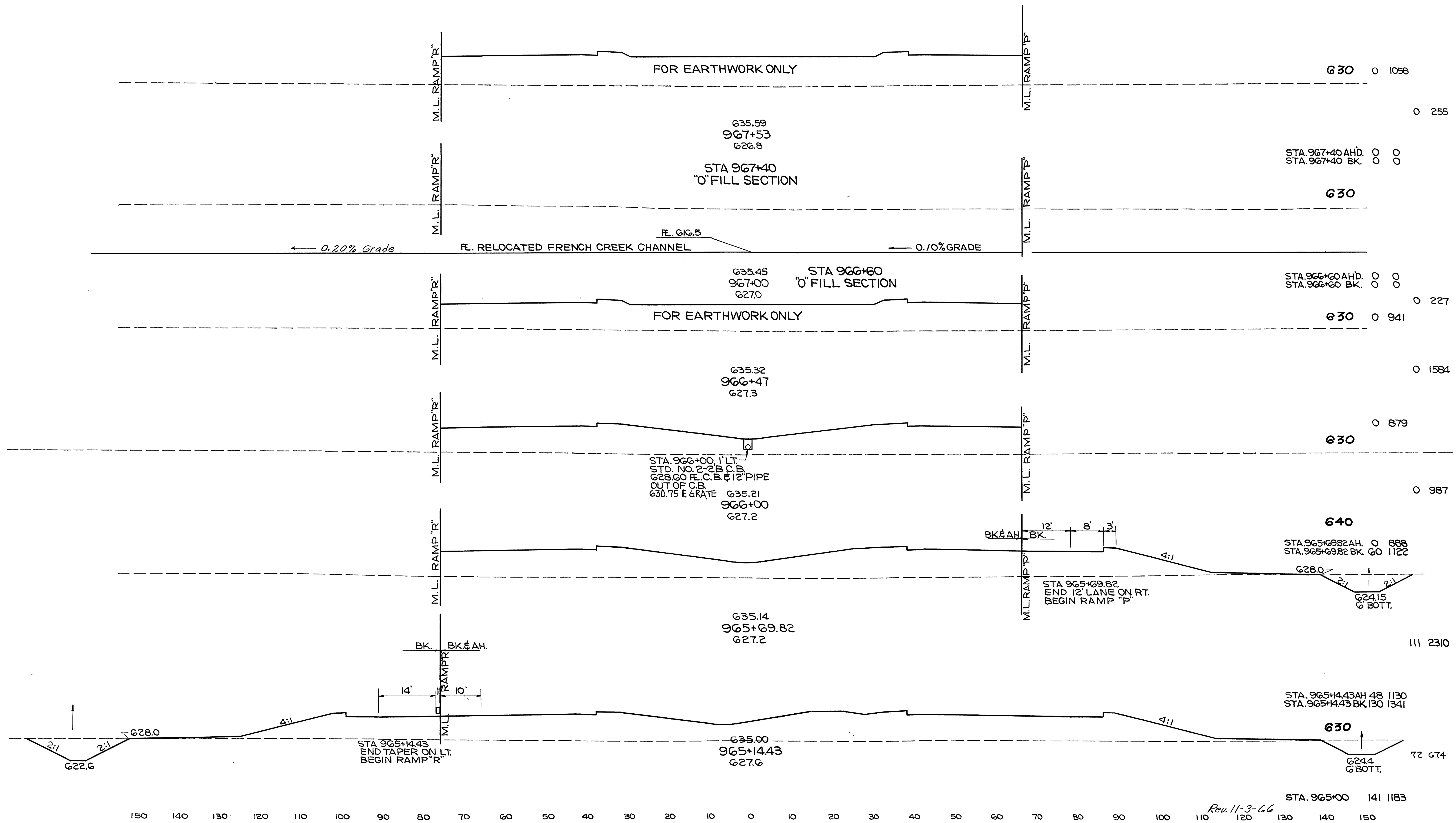
LOR-90-17.21



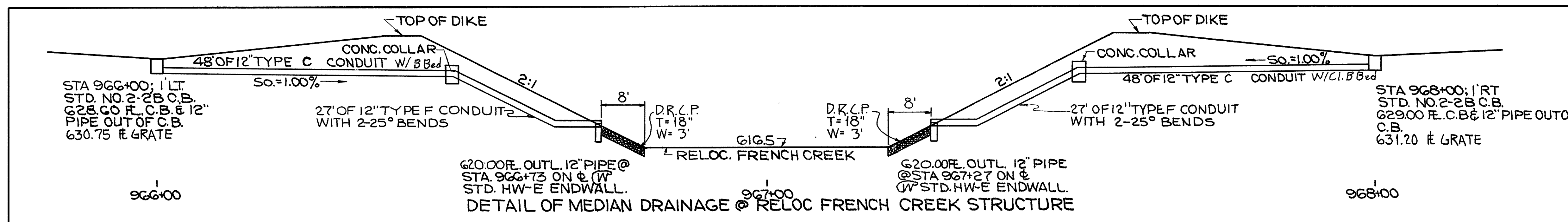
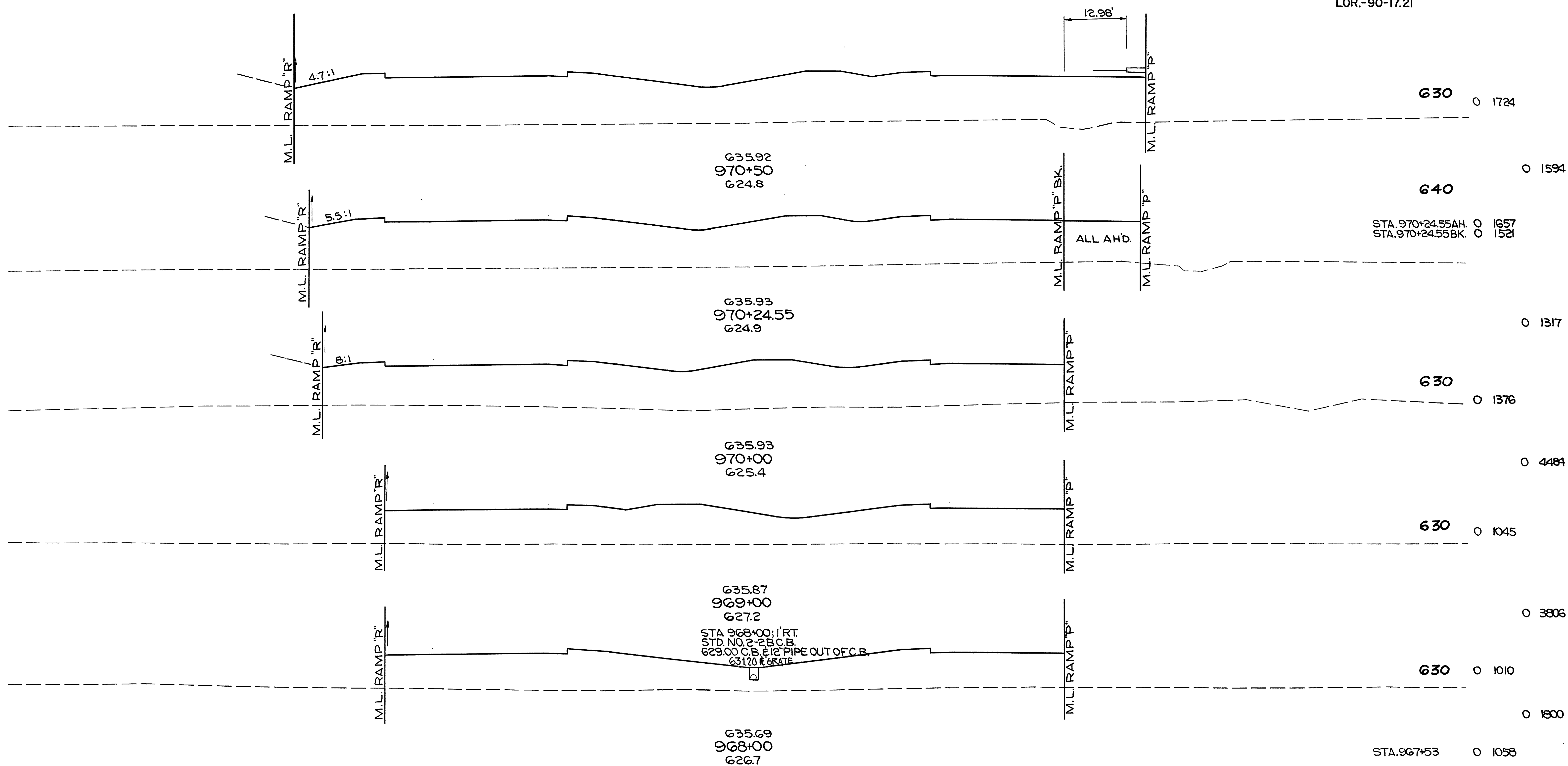
STA 962+22.89
BEGIN TAPER
ON RT.

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA 962+00 TO STA 965+00

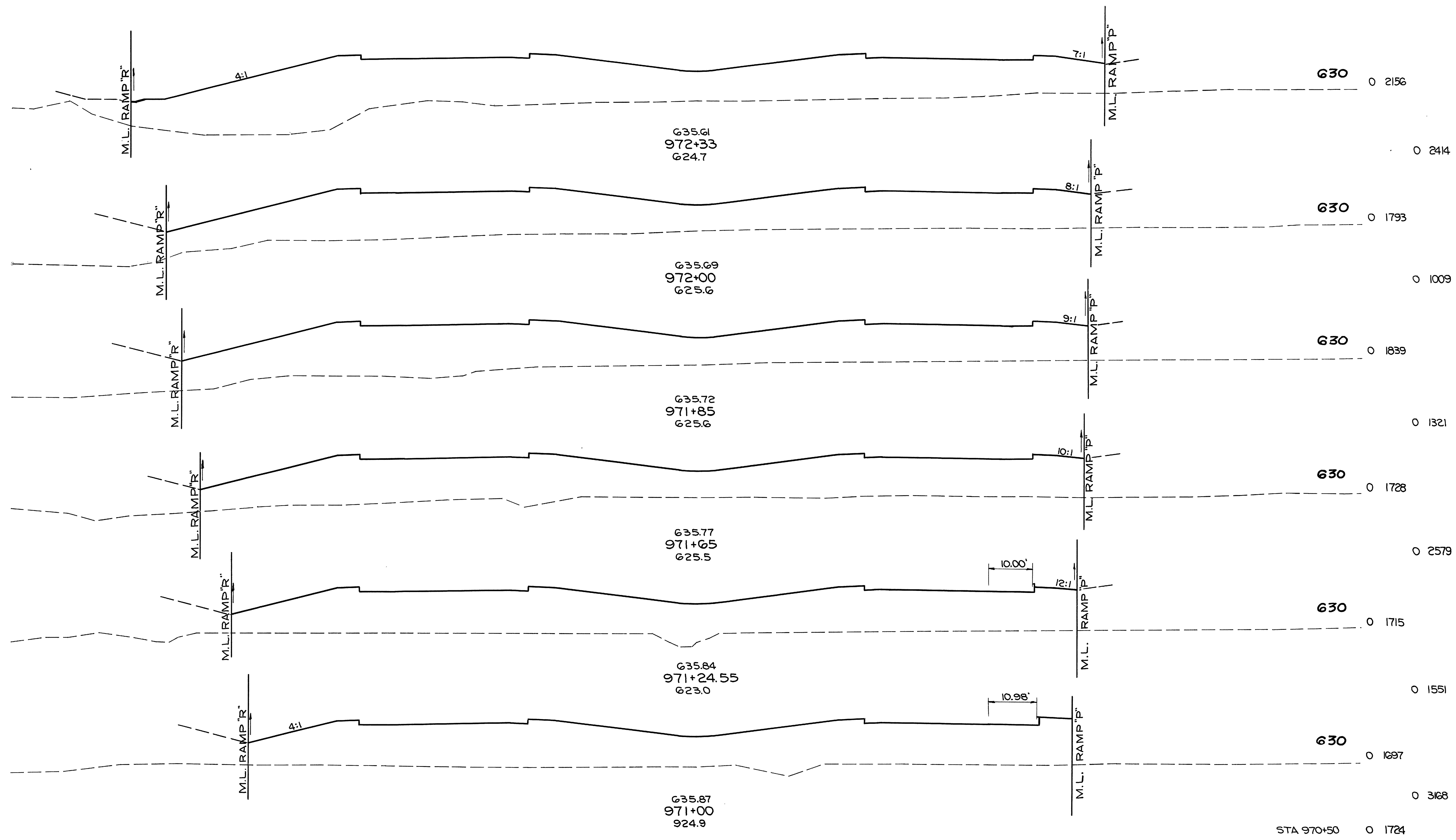
STA. 96+00 140 794



LOR.-90-17.21



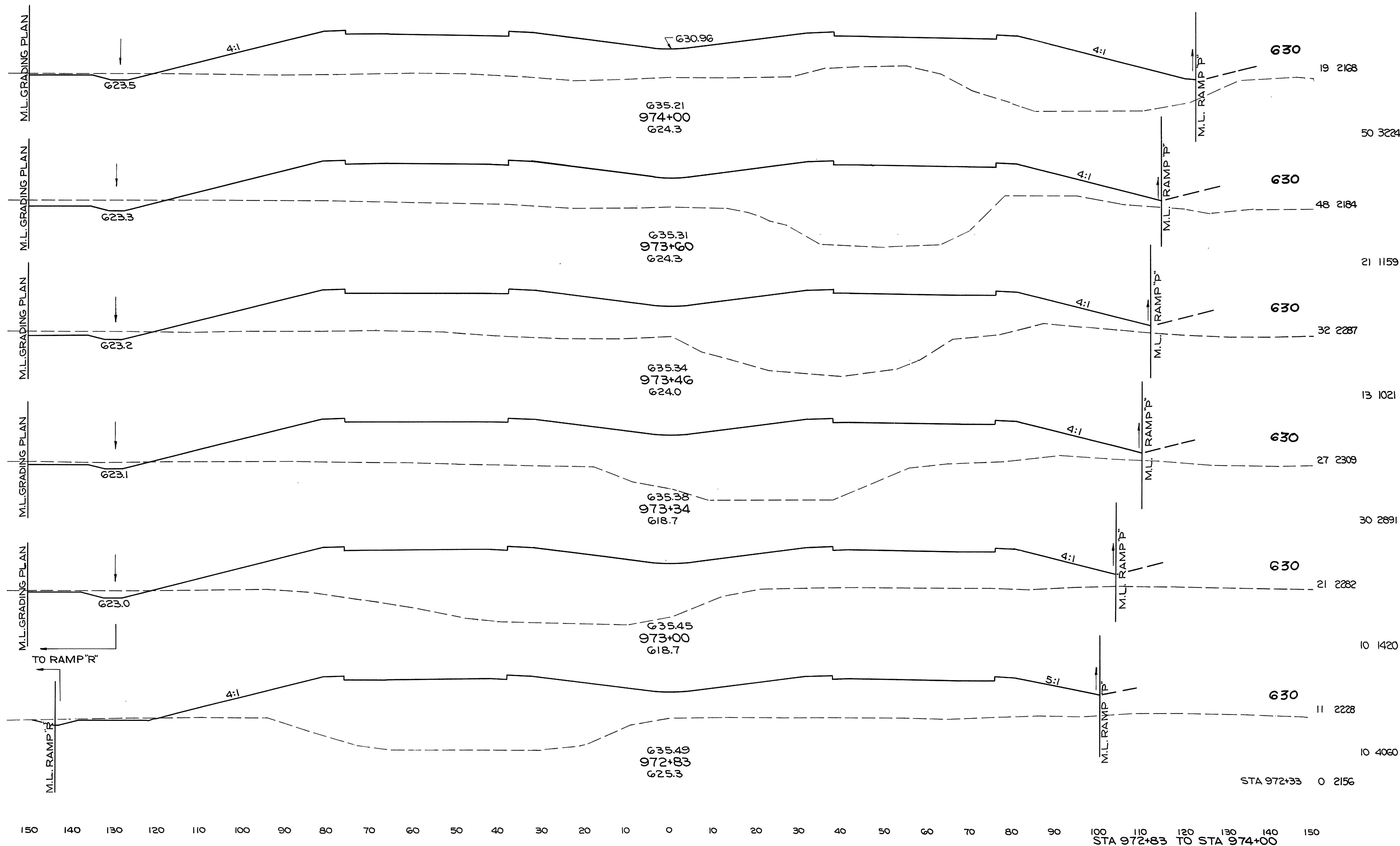
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 STA 968+00 TO STA 970+50



150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 STA 971+00 TO STA 972+33

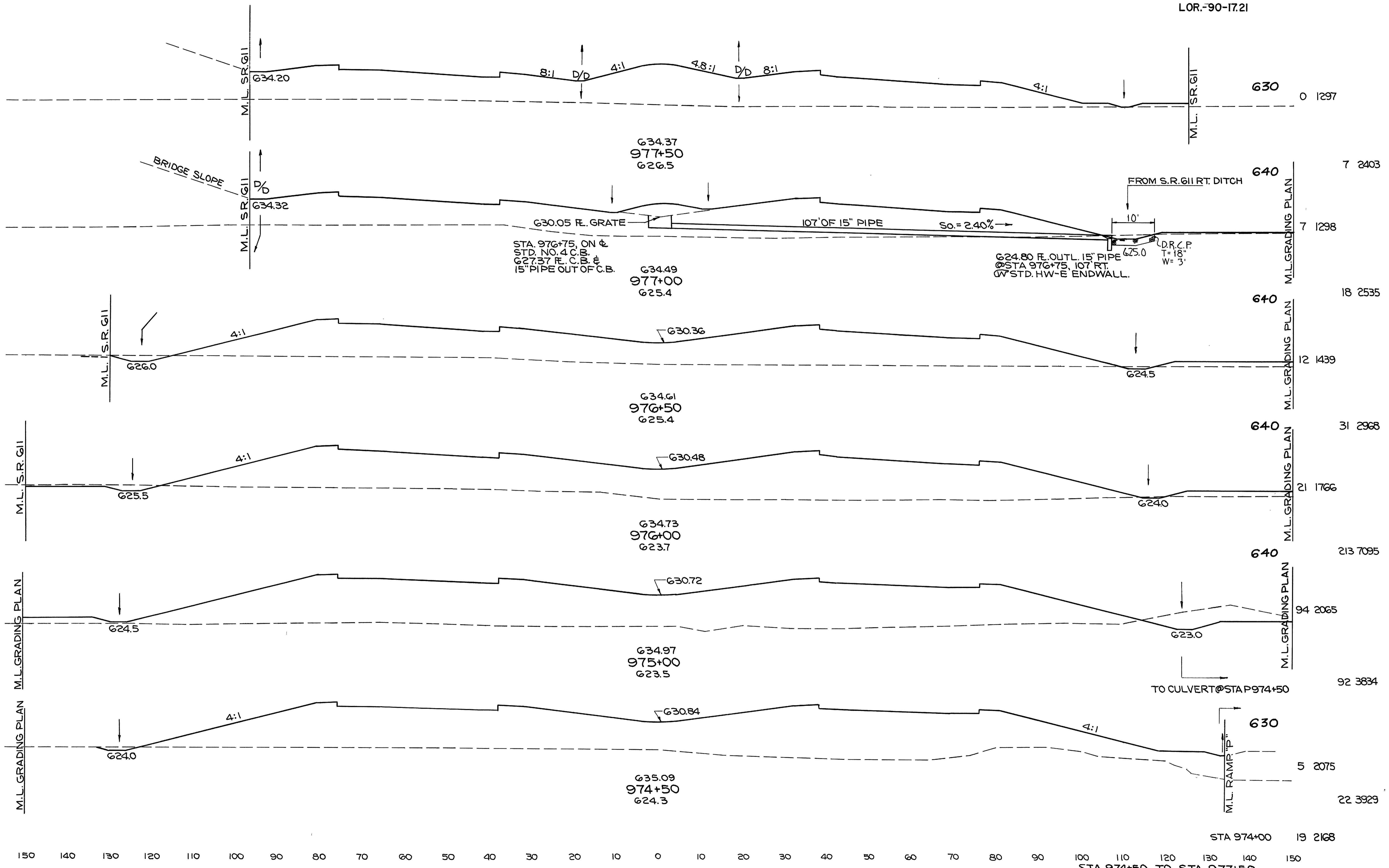
STA 970+50 0 1724

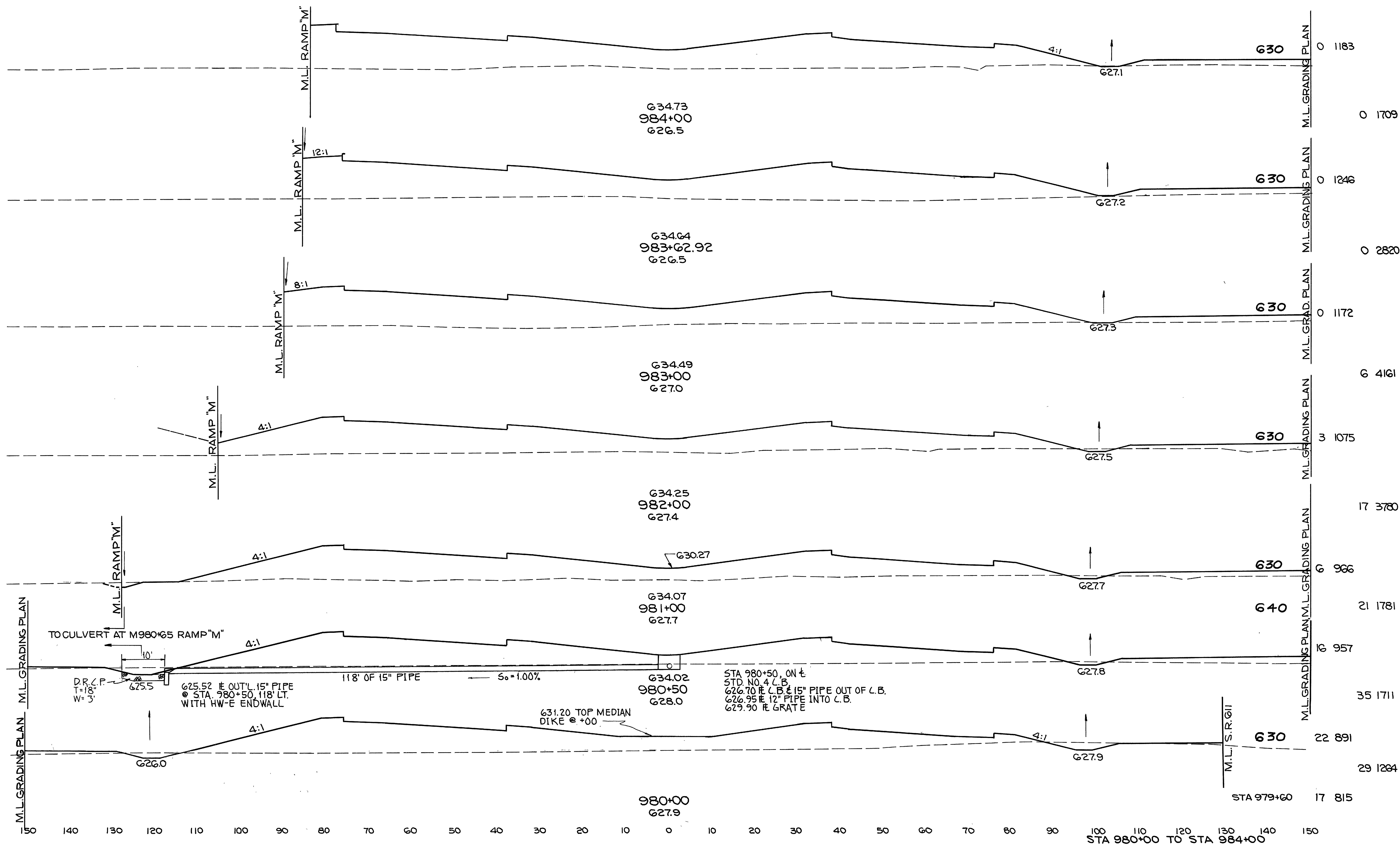
LOR.-90-17.21

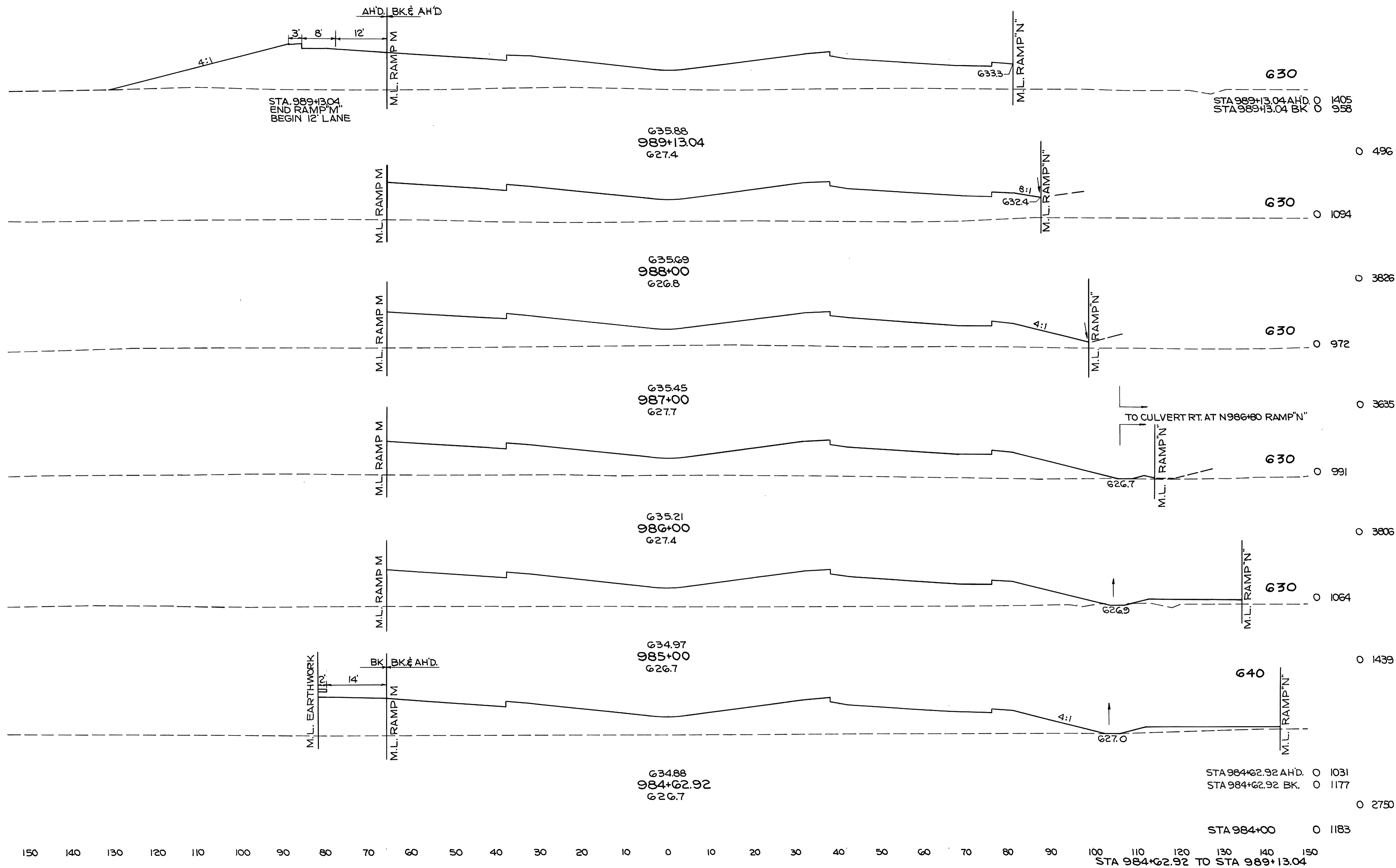


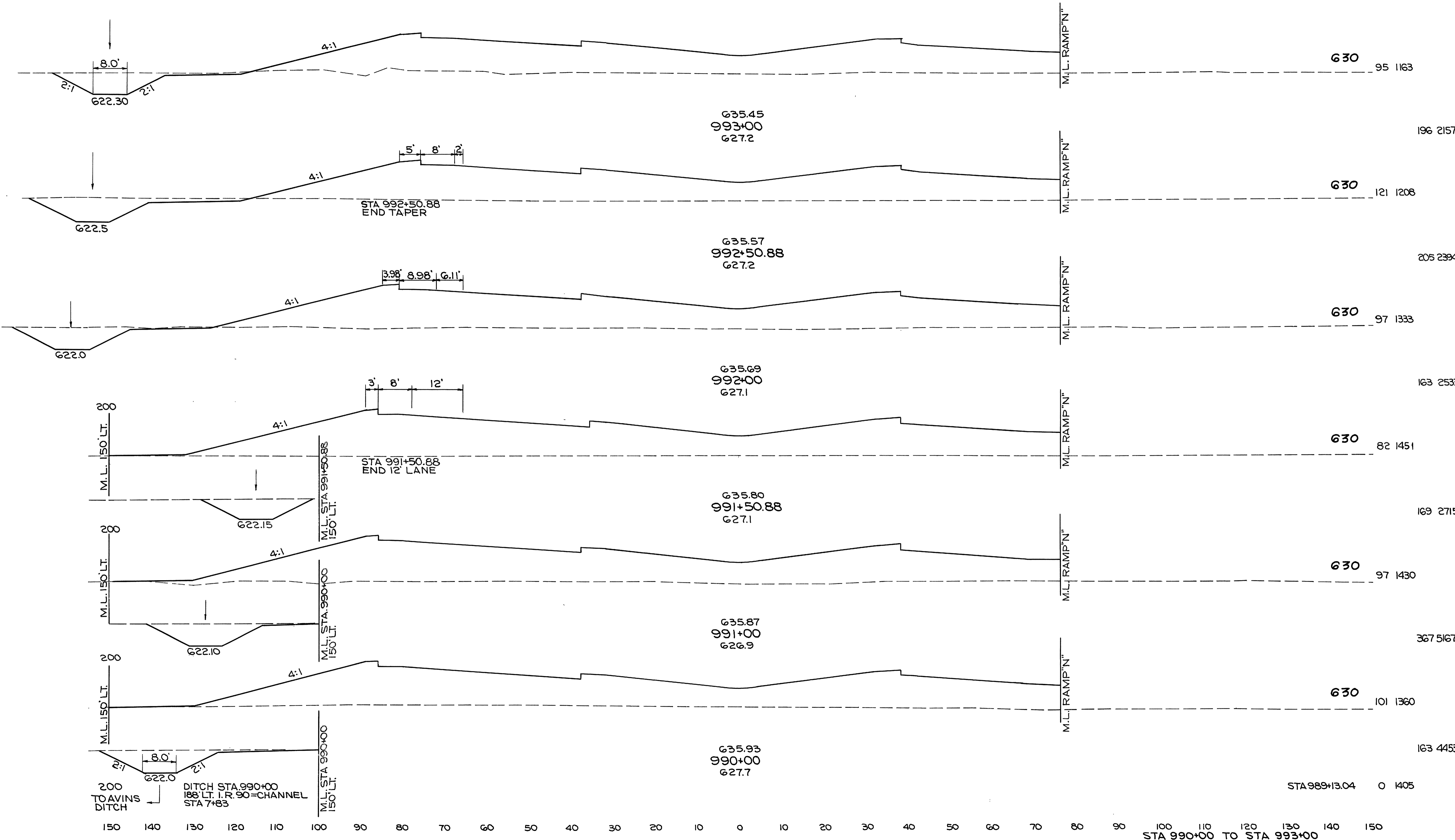
STA 972+33 0 2156

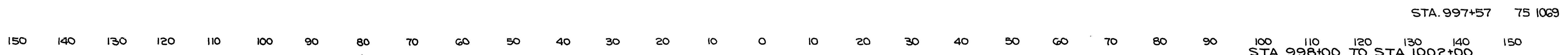
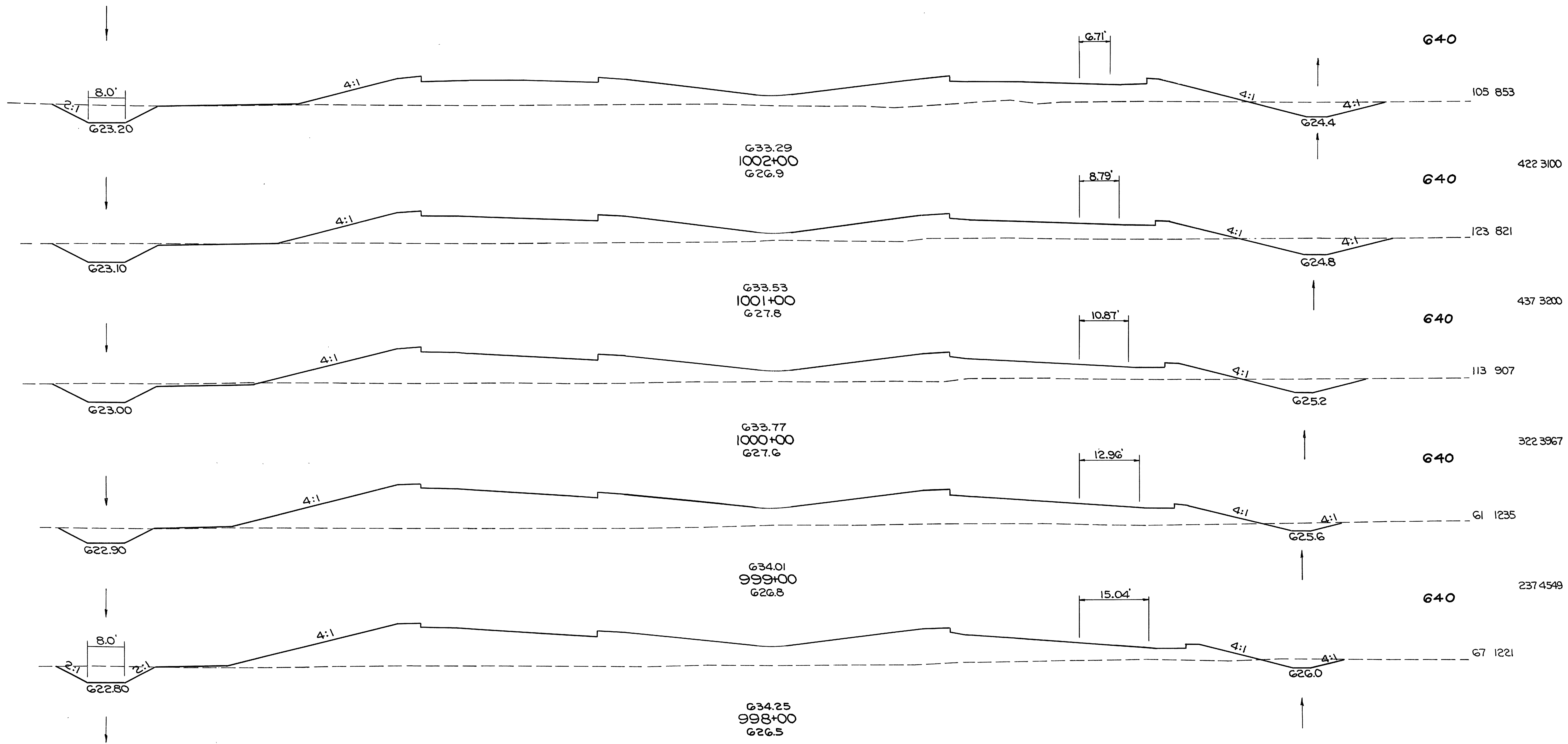
LOR.-90-17.21



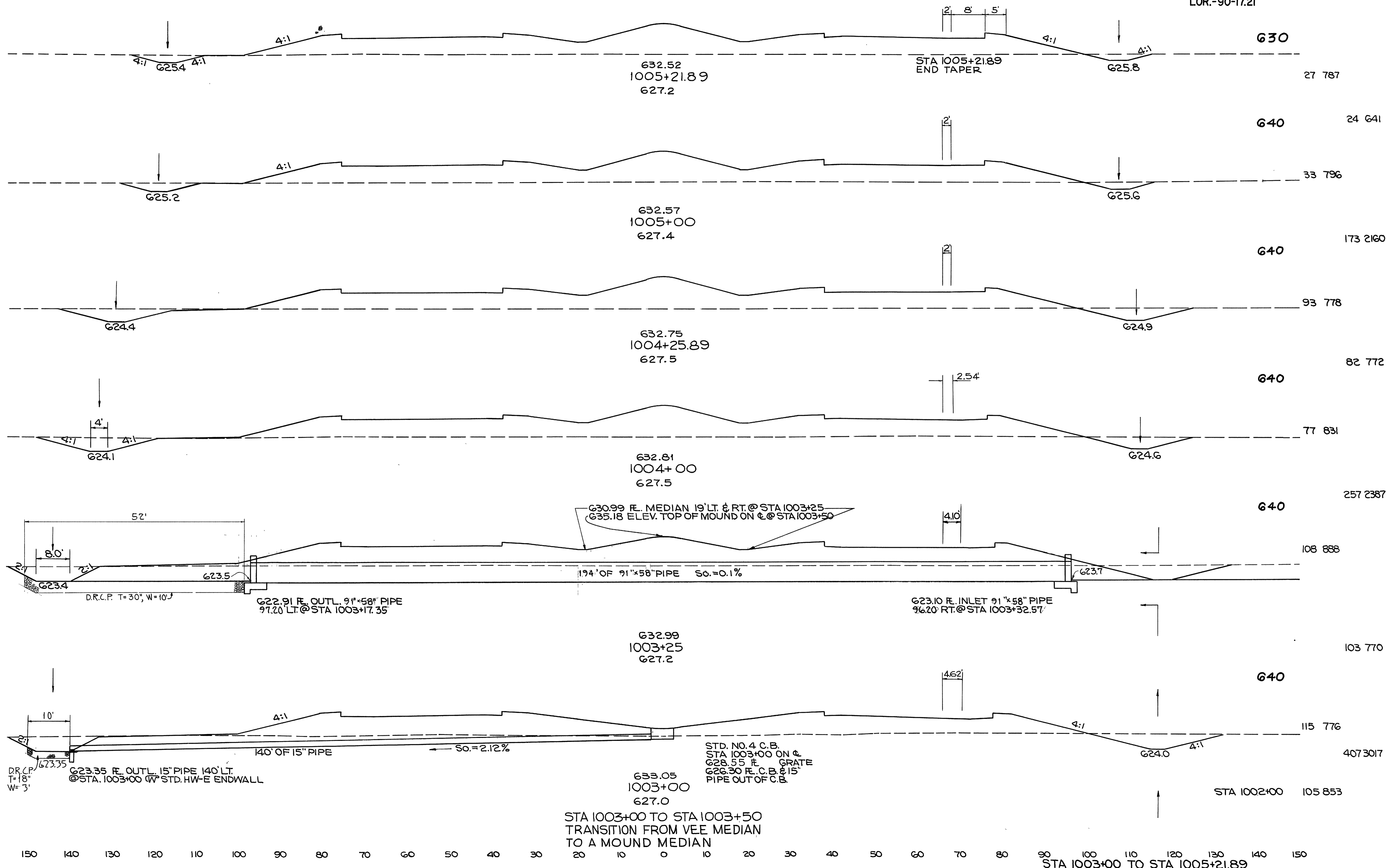


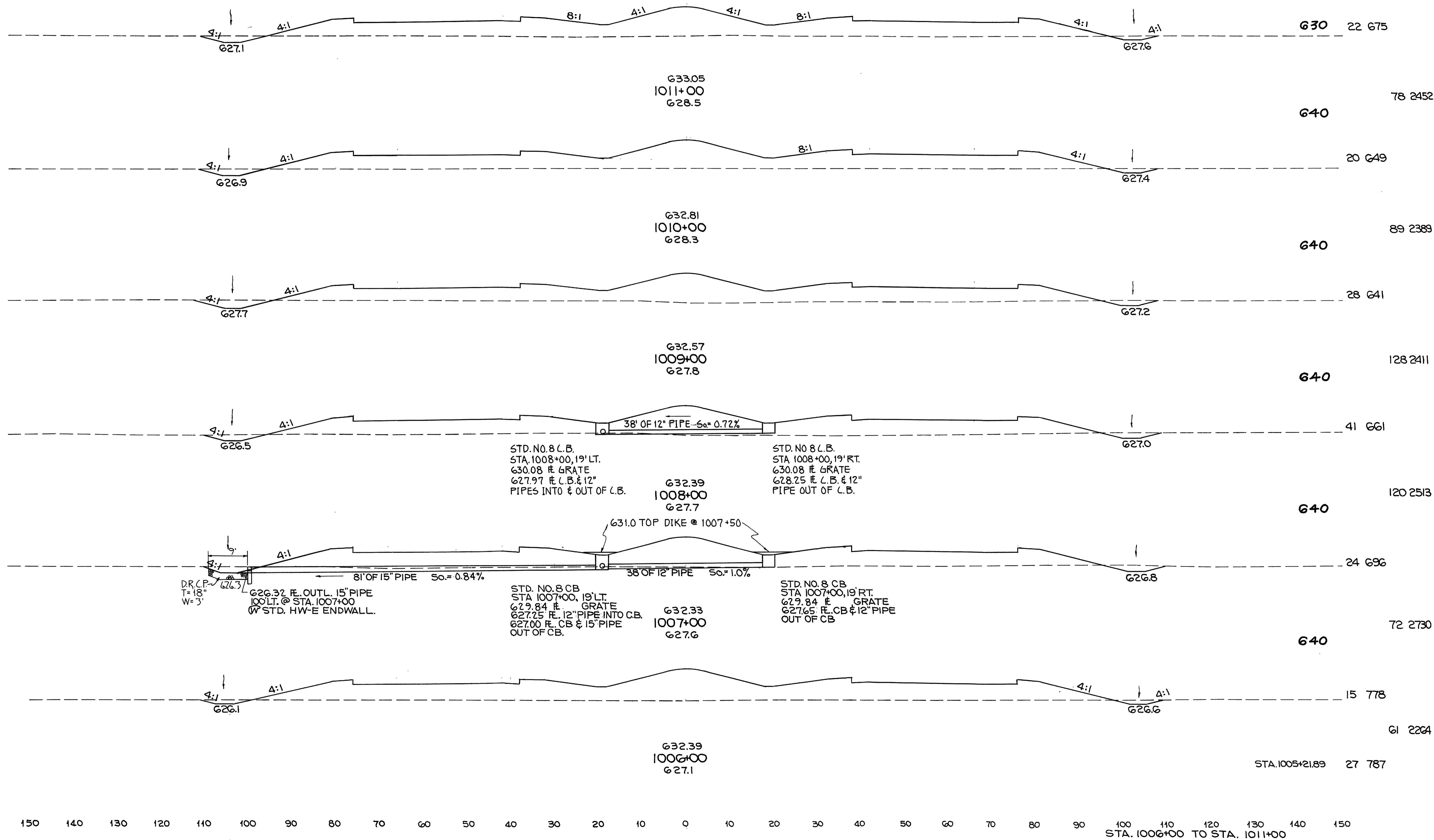


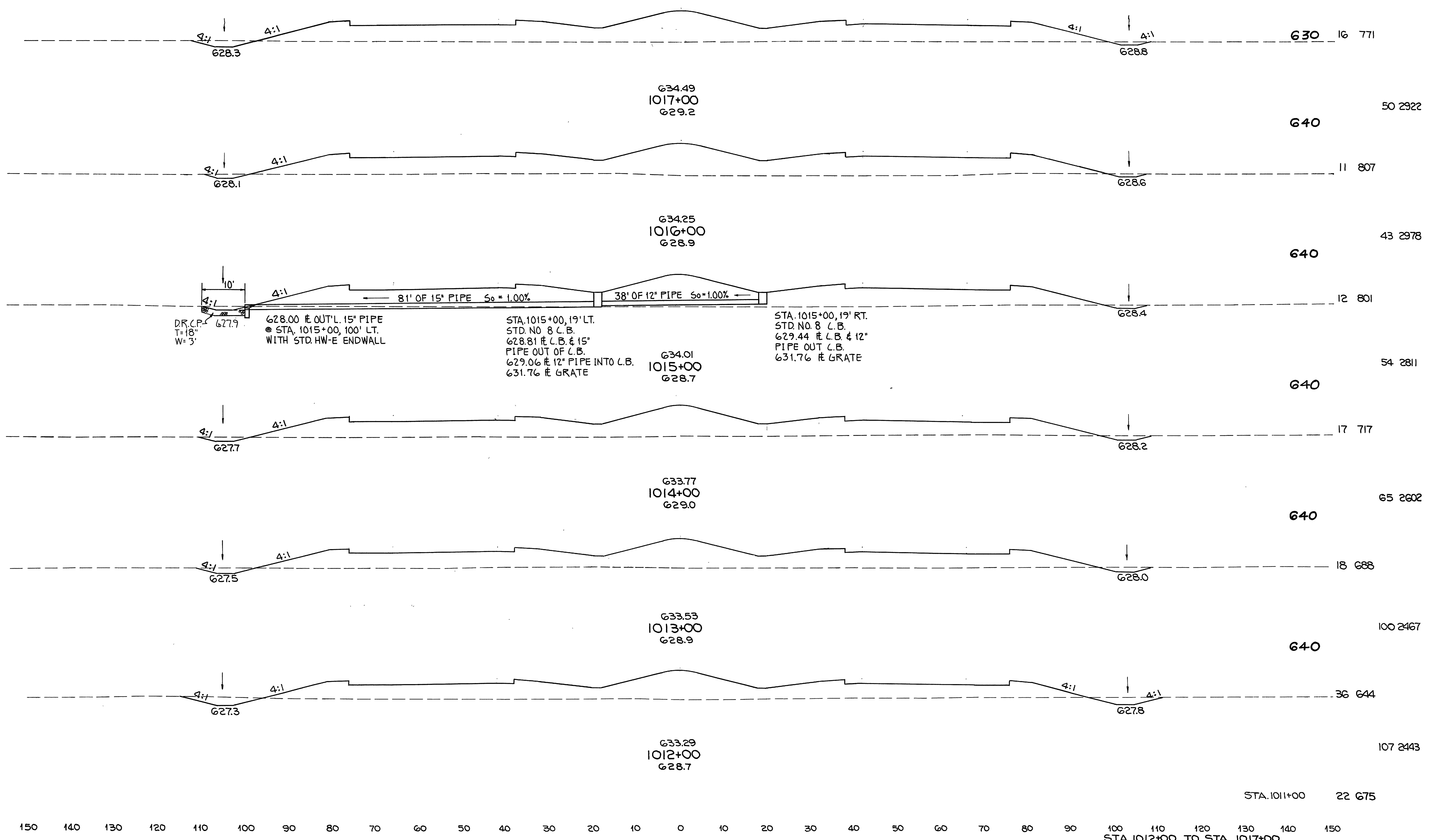


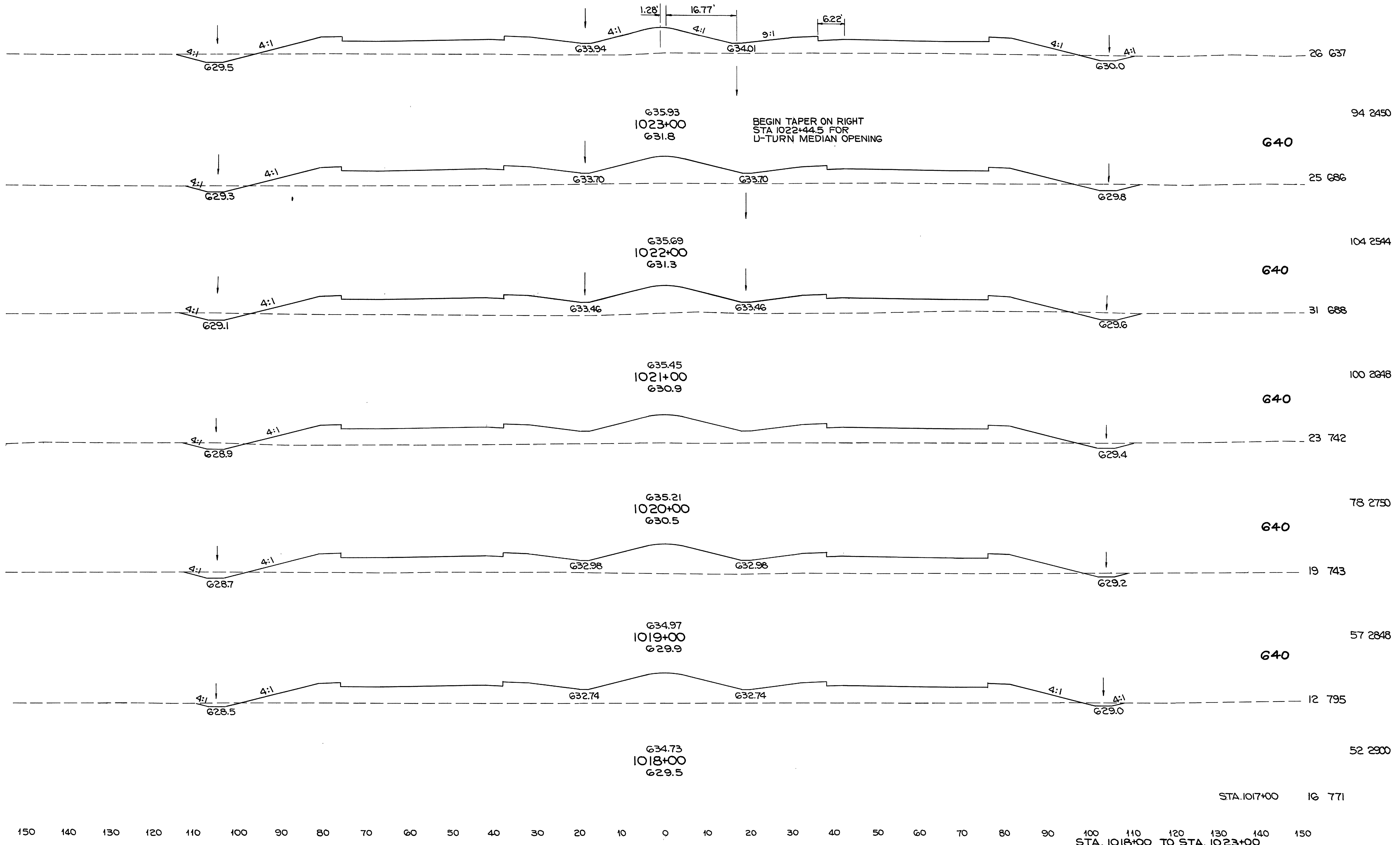


LOR.-90-17.21

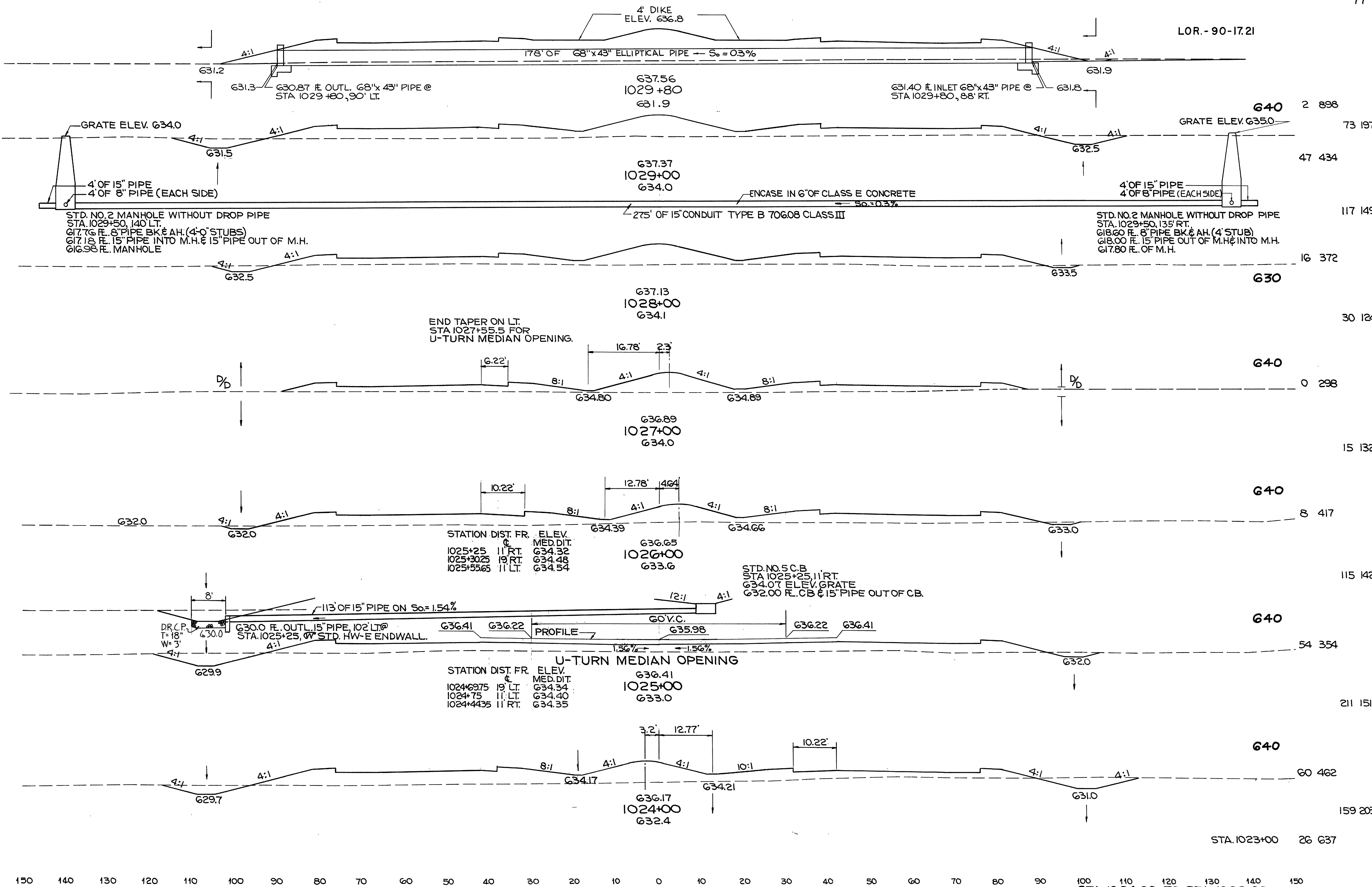








150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 1018+00 TO STA. 1023+00



LOR. - 90-17.21

4' DIKE
ELEV. 636.8

178' OF 68"x43" ELLIPTICAL PIPE - $S_o = 0.3\%$

631.2 631.3 630.87 ft OUTL. 68"x43" PIPE @ STA 1029+80, 90' LT. 637.56 1029+80 631.9 631.40 ft INLET 68"x43" PIPE @ STA 1029+80, 88' RT. 631.8 631.9

GRATE ELEV. 634.0 4:1 4:1 4:1 4:1 4:1 4:1 GRATE ELEV. 635.0

631.5 637.37 1029+00 634.0 632.5 633.5

4' OF 15" PIPE
4' OF 8" PIPE (EACH SIDE)

ENCASE IN 6" OF CLASS E CONCRETE

4' OF 15" PIPE
4' OF 8" PIPE (EACH SIDE)

STD. NO. 2 MANHOLE WITHOUT DROP PIPE
STA. 1029+50, 140' LT.
617.76 ft. 8" PIPE BK. & AH. (4'-0" STUBS)
617.18 ft. 15" PIPE INTO M.H. & 15" PIPE OUT OF M.H.
616.98 ft. MANHOLE

275' OF 15" CONDUIT TYPE B 70608 CLASS III

STD. NO. 2 MANHOLE WITHOUT DROP PIPE
STA. 1029+50, 135' RT.
618.60 ft. 8" PIPE BK. & AH. (4' STUB)
618.00 ft. 15" PIPE OUT OF M.H. INTO M.H.
617.80 ft. OF M.H.

END TAPER ON LT.
STA 1027+55.5 FOR
U-TURN MEDIAN OPENING.

16.78' 2.3' 8:1 4:1 4:1 8:1

6.22' 634.80 634.89

637.13 1028+00 634.1

636.89 1027+00 634.0

10.22' 12.78' 4.64' 8:1 4:1 4:1 8:1

632.0 632.0 634.39 636.65 634.66 633.0

STATION	DIST. FR. C.	FR.	ELEV.
1025+25	11' RT.		634.32
1025+30.25	19' RT.		634.48
1025+55.65	11' LT.		634.54

636.65 1026+00 633.6

STD. NO. 5 C.B.
STA 1025+25, 11' RT.
634.07 ELEV. GRATE
632.00 ft. CB & 15" PIPE OUT OF CB.

8' 113' OF 15" PIPE ON $S_o = 1.54\%$ 12:1 4:1

DR. C.P. 630.0 630.0 ft. OUTL. 15" PIPE, 102' LT. @ STA. 1025+25, 07' STD. HW-E ENDWALL. 636.41 636.22 PROFILE 60' V.C. 635.98 636.22 636.41

629.9 629.9 632.0

U-TURN MEDIAN OPENING

STATION	DIST. FR. C.	FR.	ELEV.
1024+69.75	19' LT.		634.34
1024+75	11' LT.		634.40
1024+44.35	11' RT.		634.35

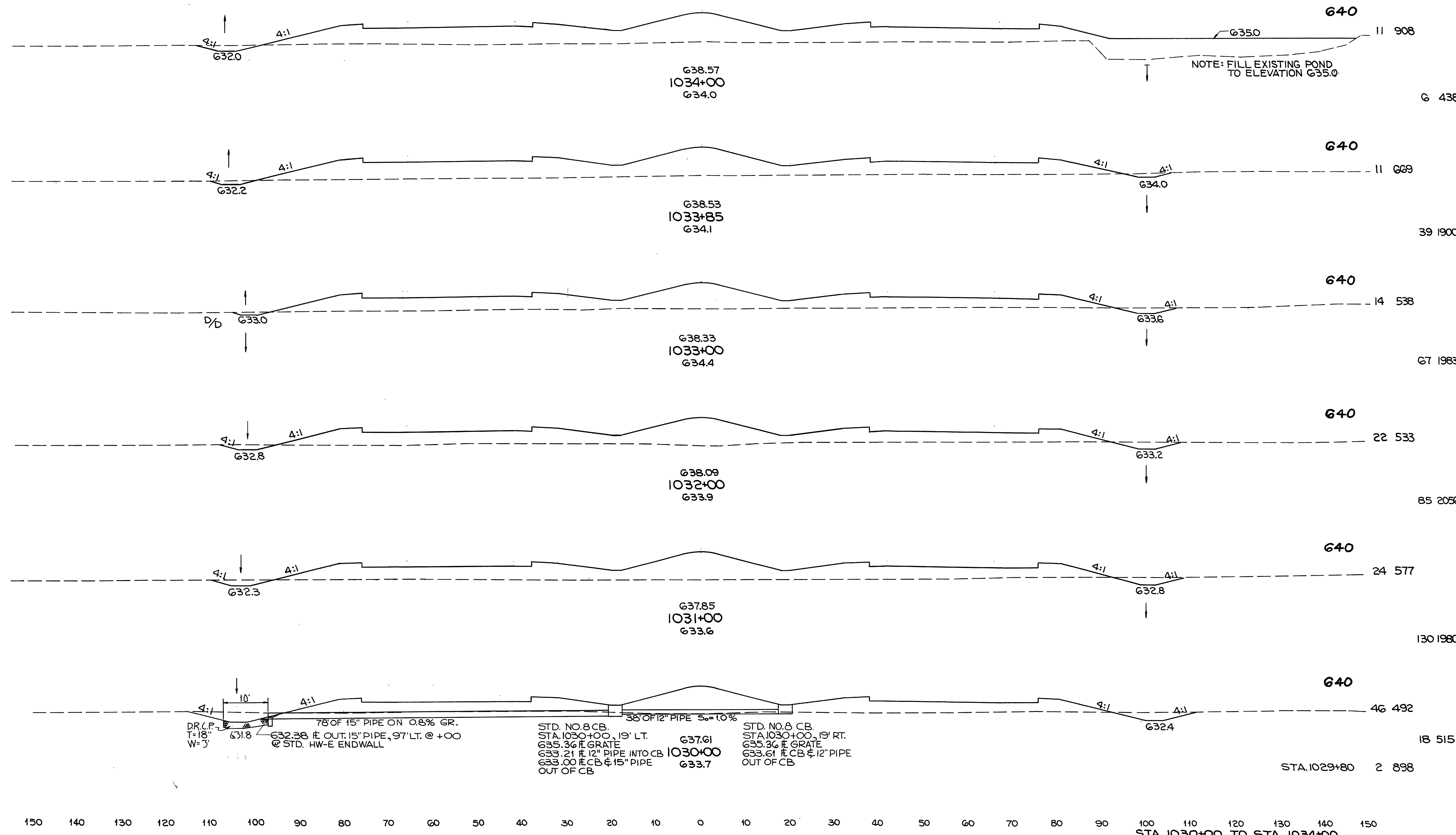
636.41 1025+00 633.0

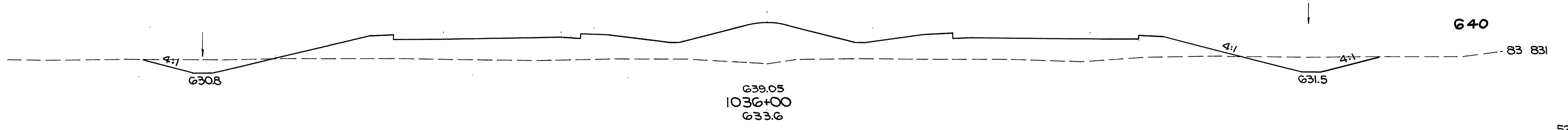
3.2' 12.77' 10.22' 8:1 4:1 4:1 10:1 4:1 4:1

629.7 634.17 636.17 1024+00 632.4 634.21 631.0

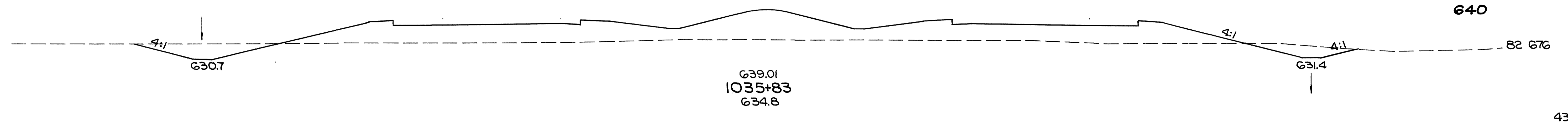
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STA. 1024+00 TO STA. 1029+00

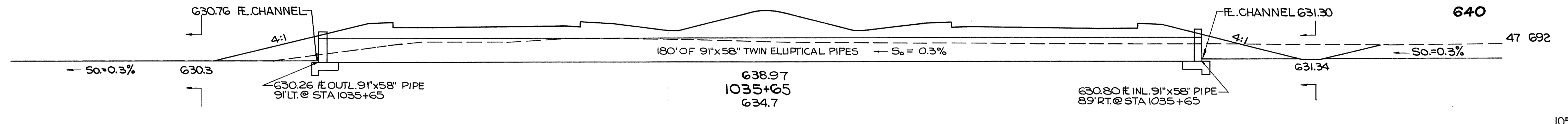




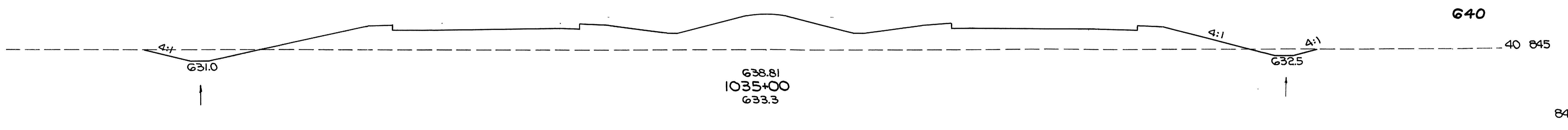
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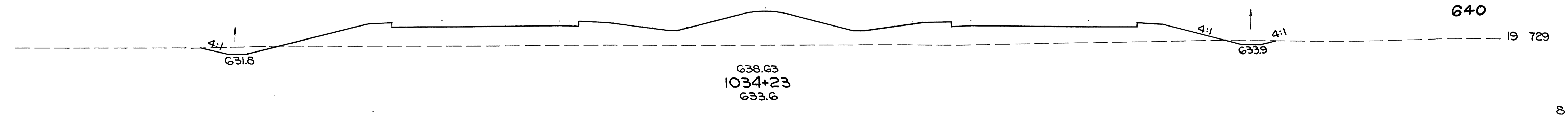
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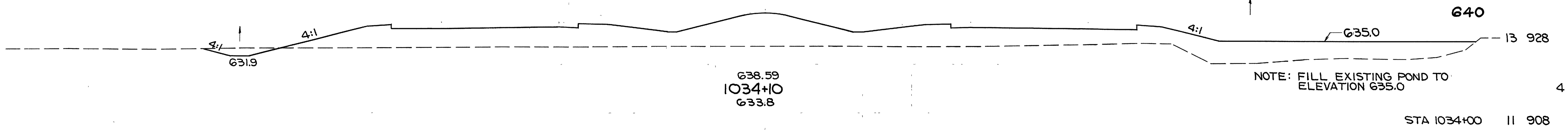
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84 2245



8 399



4 340

STA 1034+00 11 908



LOR.-90-17.21

STA 1038+62
END WORK

640
STA 1038+62

9 198
40 890

639.65
1038+50
633.90

STA 1037+50
END PROJECT LOR-90-17.21
END PAVEMENT
BEGIN PROJECT LOR-90-19.94

150 3383

640

41 937

639.41
1037+50
633.8

91 1590

640

57 780

639.29
1037+00
634.0

12 142

640

69 757

639.28
1036+95
634.1

26 283

640

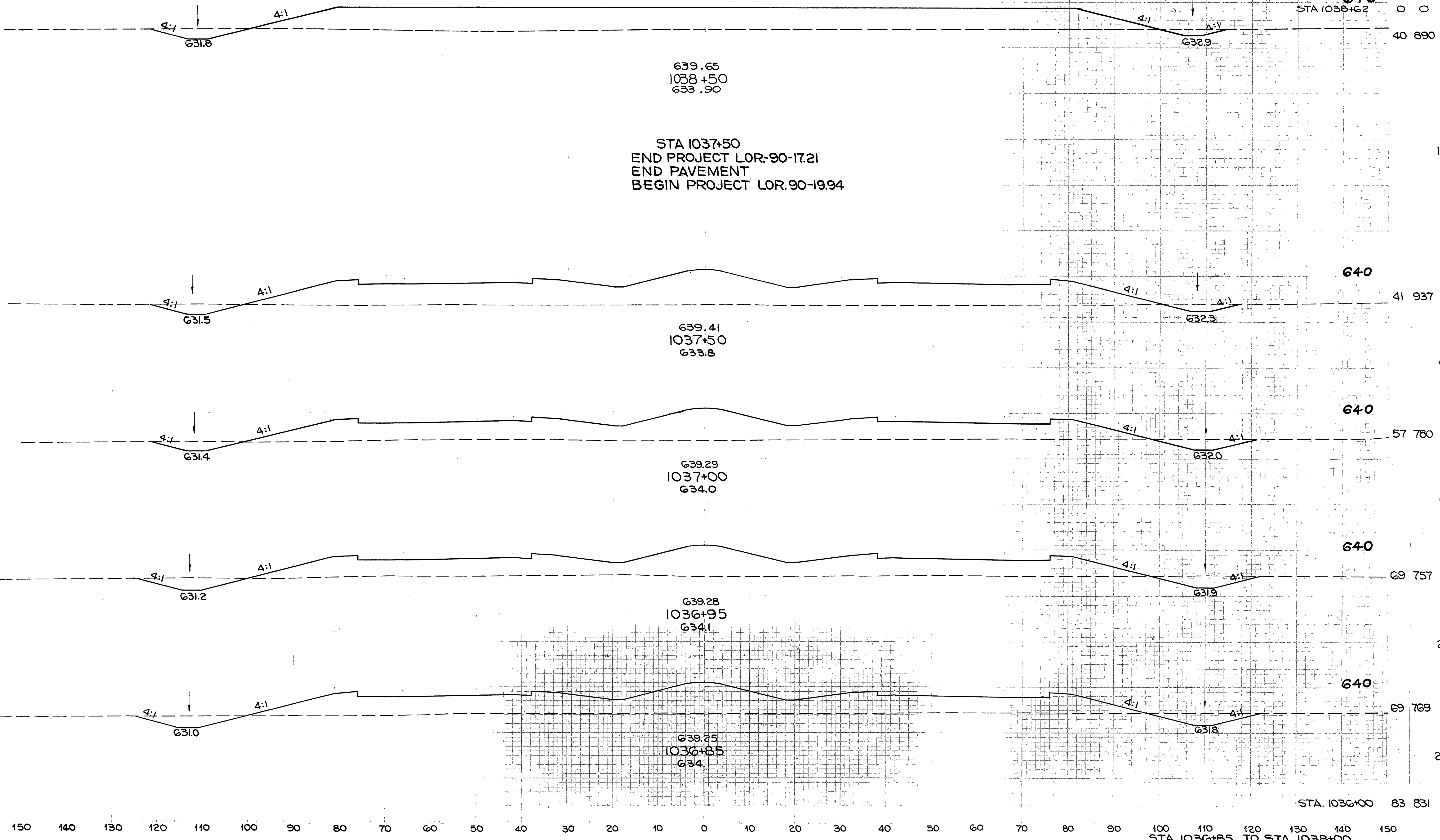
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1036+85
634.1

239 2519

STA. 1036+00 83 831

STA. 1036+85 TO STA. 1038+00



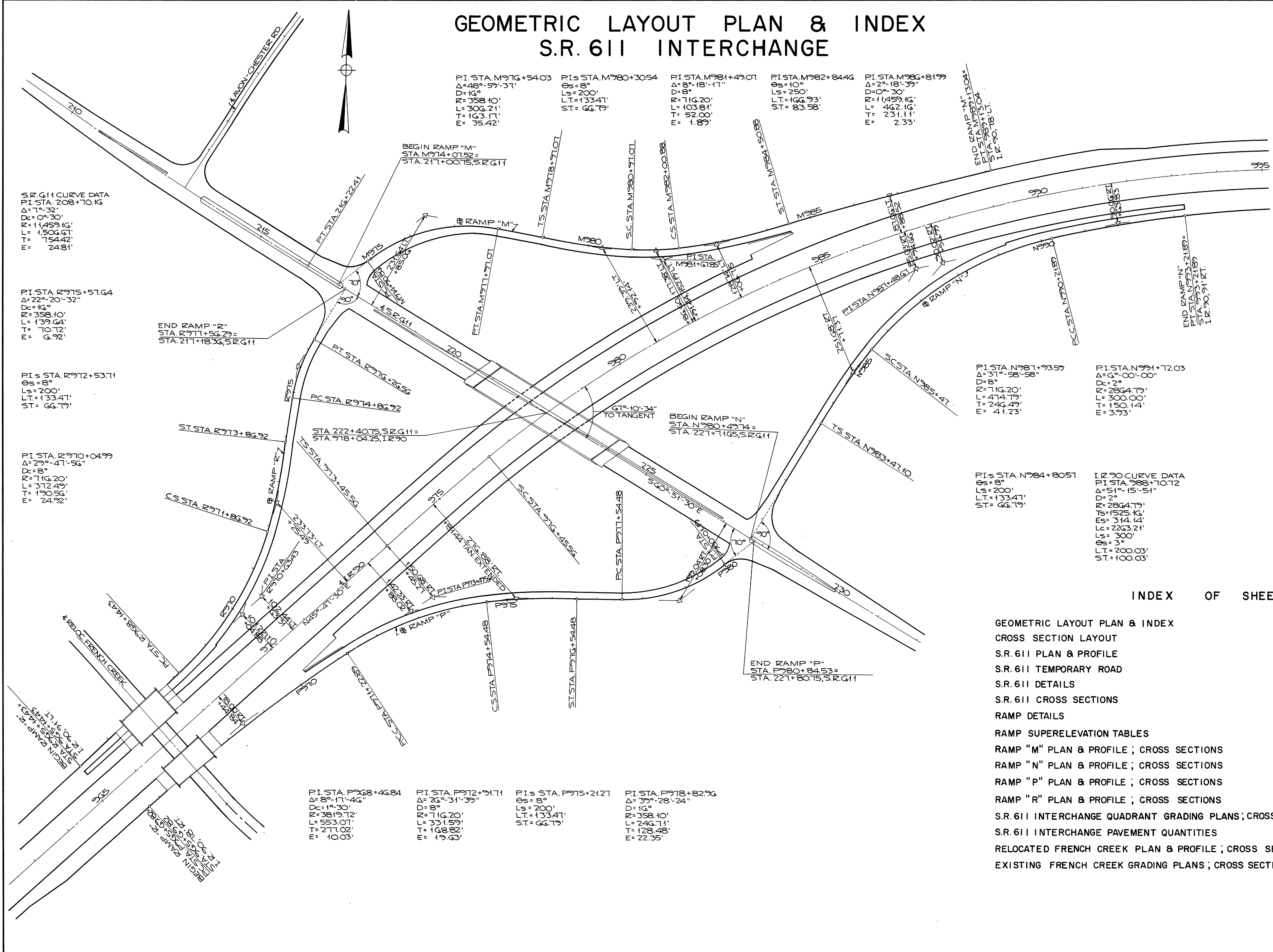
SUPERELEVATION TABLES

FED. RD. DIVISION	STATE	PROJECT	81
2	OHIO		
LOR-90-17.21			

W.B.L. STA. 915+57.86 TO STA. 932+93.69 (CON'T.) E.B.L.

℄ PAV'T. ELEV.	LEFT EDGE ELEV.	ADD TO RT. EDGE	RIGHT EDGE ELEV.	STATION	LEFT EDGE ELEV.	DEDUCT FR.LT. EDGE	RIGHT EDGE ELEV.	℄ PAV'T. ELEV.
	G49.05	+0.77	G48.40	917+25	G48.40	-0.65	G47.75	
	G49.07	+0.77	G48.90	917+30	G48.90	-0.77	G48.13	
	G49.08		G48.91	+50	G48.91		G48.14	
	G50.10		G49.33	+70.30	G49.33		G48.56	
	G50.19		G49.42	+75	G49.42		G48.65	
	G50.70		G49.93	918+00	G49.93		G49.16	
	G51.21		G50.44	+25	G50.44		G49.67	
	G51.72		G50.95	+50	G50.95		G50.18	
	G52.23		G51.46	+75	G51.46		G50.69	
	G52.74		G51.97	919+00	G51.97		G51.20	
	G53.24		G52.47	+25	G52.47		G51.70	
	G53.73		G52.96	+50	G52.96		G52.19	
	G54.21		G53.44	+75	G53.44		G52.67	
	G54.67		G53.90	920+00	G53.90		G53.13	
	G55.11		G54.34	+25	G54.34		G53.57	
	G55.55		G54.78	+50	G54.78		G54.01	
	G55.97		G55.20	+75	G55.20		G54.43	
	G56.37		G55.60	921+00	G55.60		G54.83	
	G56.76		G55.99	+25	G55.99		G55.22	
	G57.14		G56.37	+50	G56.37		G55.60	
	G57.50		G56.73	+75	G56.73		G55.96	
	G57.85		G57.08	922+00	G57.08		G56.31	
	G58.18		G57.41	+25	G57.41		G56.64	
	G58.51		G57.74	+50	G57.74		G56.97	
	G58.81		G58.04	+75	G58.04		G57.27	
	G59.10		G58.33	923+00	G58.33		G57.56	
	G59.38		G58.61	+25	G58.61		G57.84	
	G59.65		G58.88	+50	G58.88		G58.11	
	G59.90		G59.13	+75	G59.13		G58.36	
	G60.13		G59.36	924+00	G59.36		G58.59	
	G60.36		G59.59	+25	G59.59		G58.82	
	G60.57		G59.80	+50	G59.80		G59.03	
	G60.76		G59.99	+75	G59.99		G59.22	
	G60.94		G60.17	925+00	G60.17		G59.40	
	G61.11		G60.34	+25	G60.34		G59.57	
	G61.26		G60.49	+50	G60.49		G59.72	
	G61.40		G60.63	+75	G60.63		G59.86	
	G61.52		G60.75	926+00	G60.75		G59.98	
	G61.63		G60.86	+25	G60.86		G60.09	
	G61.73		G60.96	+50	G60.96		G60.19	
	G61.81		G61.04	+75	G61.04		G60.27	
	G61.88		G61.11	927+00	G61.11		G60.34	
	G61.93		G61.16	+25	G61.16		G60.39	
	G61.97		G61.20	+50	G61.20		G60.43	
	G62.00		G61.23	+75	G61.23		G60.46	
	G62.01		G61.24	928+00	G61.24		G60.47	
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	G62.01		G61.24	+75	G61.24		G60.47	
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	G62.01		G61.24	952+00	G61.24		G60.47	
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	G62.01		G61.24	+50	G61.24		G60.47	
	G62.01		G61.24	+75	G61.24		G60.47	
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	G62.01		G61.24	+75	G61.24		G60.47	
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GEOMETRIC LAYOUT PLAN & INDEX S.R. 611 INTERCHANGE



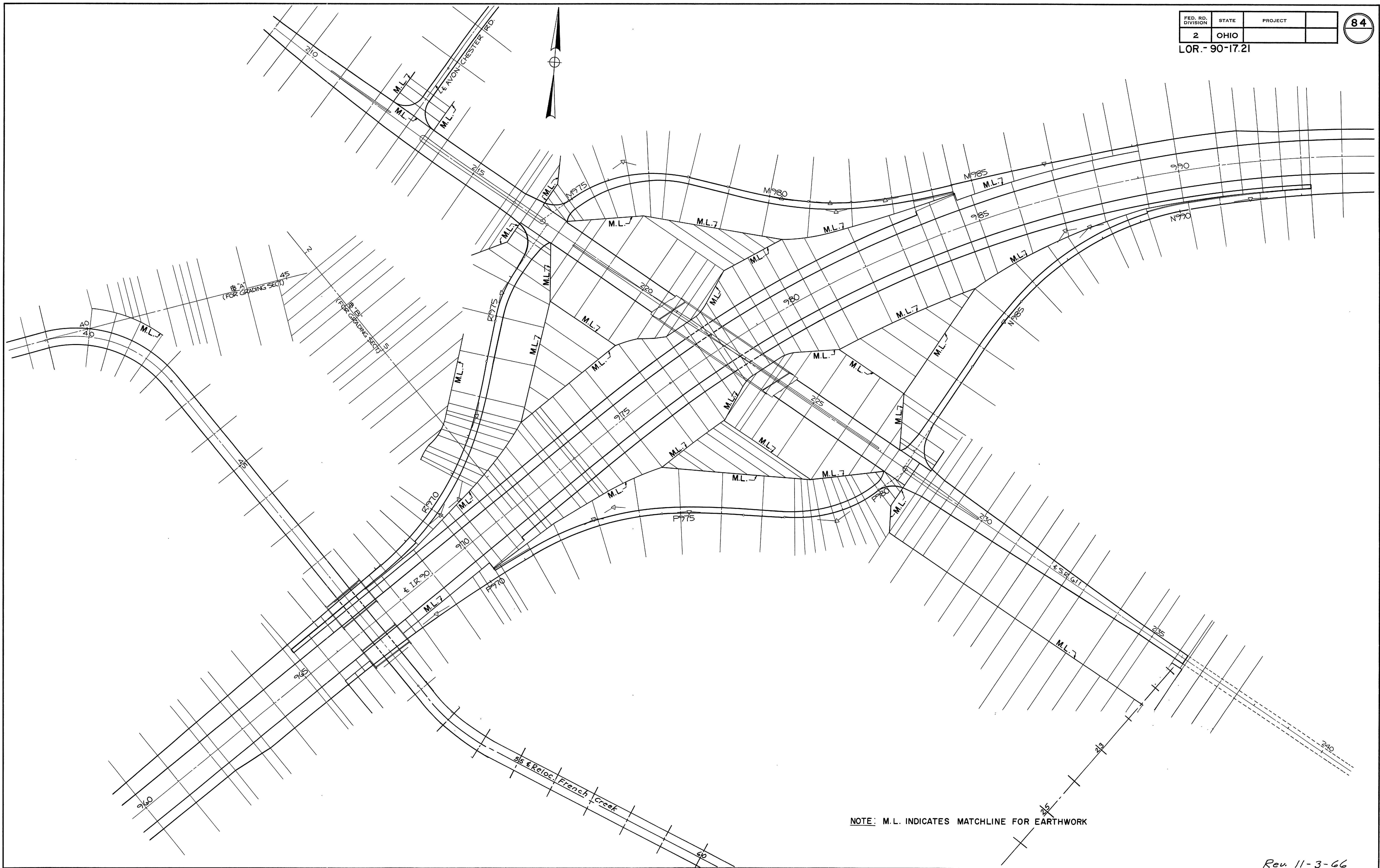
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

84

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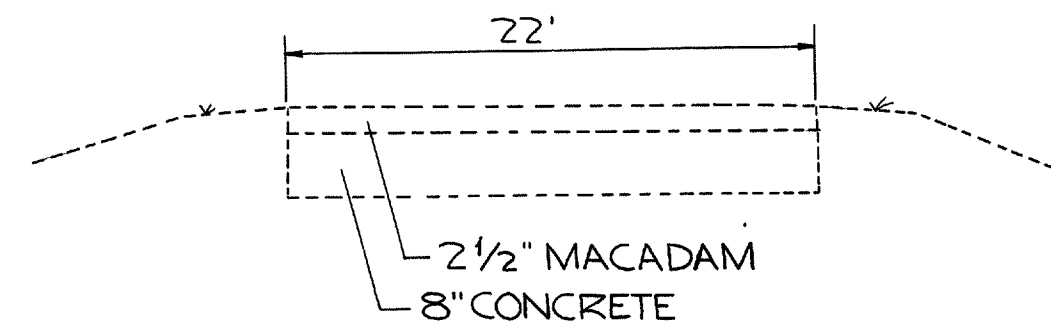


NOTE: M.L. INDICATES MATCHLINE FOR EARTHWORK

Rev. 11-3-66

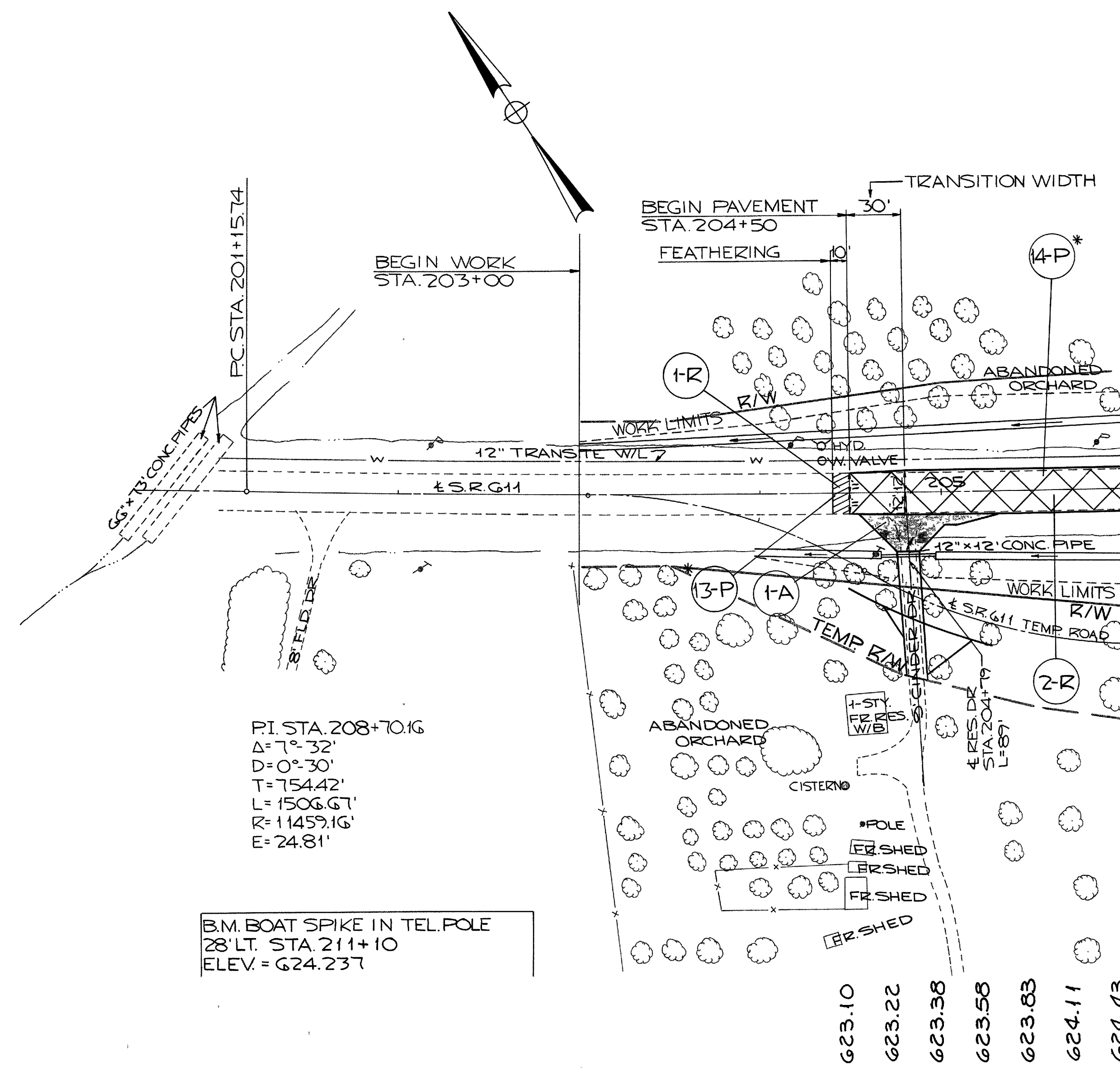
X-SECTION LAYOUT PLAN, S.R. 611 INTERCHANGE

EXIST. TYPICAL SECTION



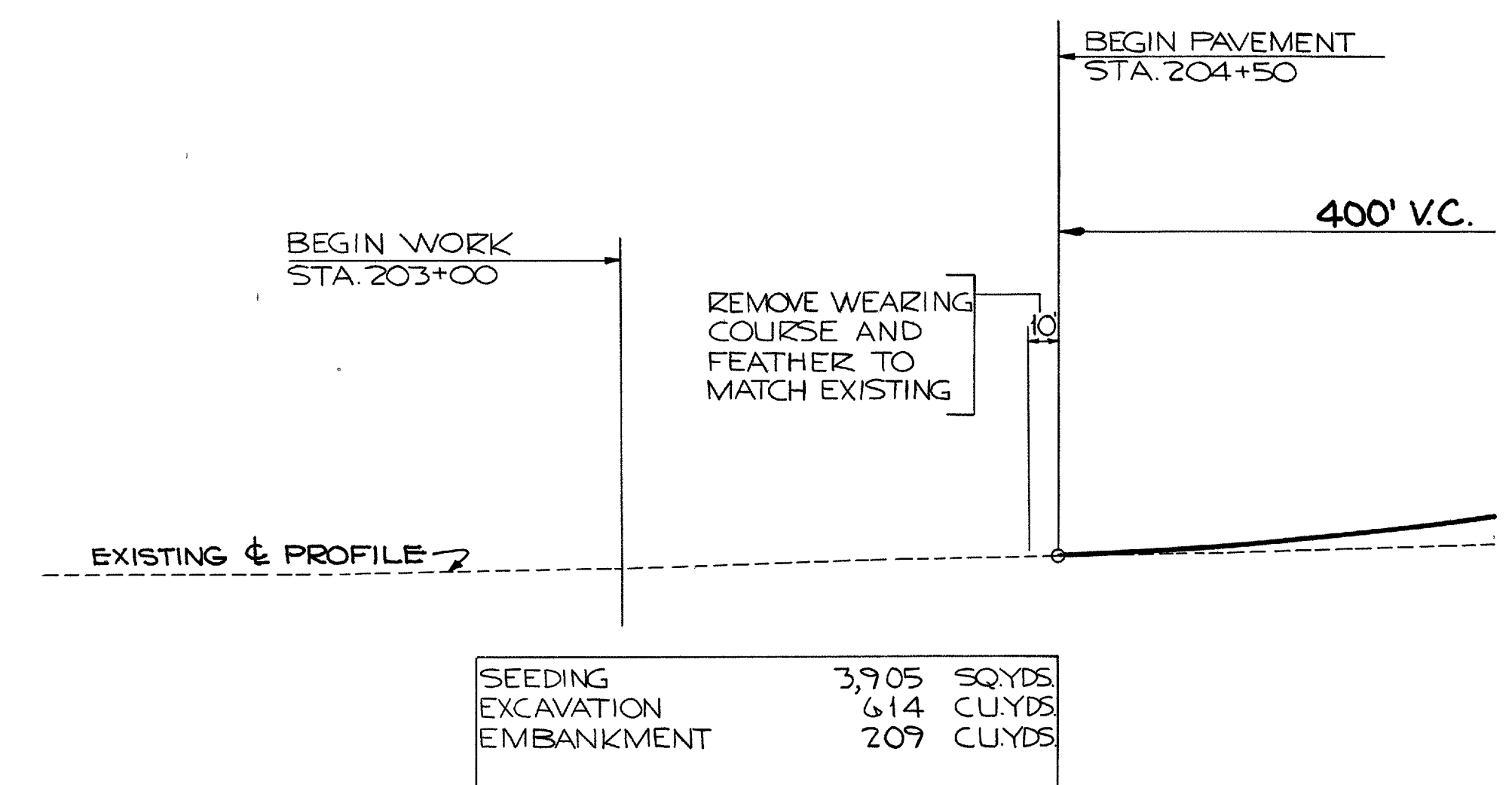
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LOR. - 90-17.21



REFERENCE NO.	SIDE	STATION		202	202	304	404	408	411	GO'S	202		
		FROM	TO	EXISTING WEARING COURSE REMOVED AND DISPOSED OF	EXISTING PAVEMENT COURSE REMOVED AND DISPOSED OF (RIGID)	AGGR. BASE	ASPHALT CONCRETE (10-85)	BITUM. PRIME COAT	STABIL. CRUSHED AGGR.	CONDUIT TYPE D	PIPE REMOVED 24" & UNDER		
				SQ.YD.	SQ.YDS	CU.YDS	CU.YDS	GAL.	CU.YDS	LIN. FT.	LIN. FT.		
1-R	±	204+40	204+50	25									
2-R	±	204+50	206+00		367								
1-A	RT.	204+79				11.5	4.6	332	20.4	30	12		
TOTALS				25	367	11.5	4.6	332	20.4	30	12		

630
625
620



622.47
622.43
622.65
622.95
623.03
623.24
623.47

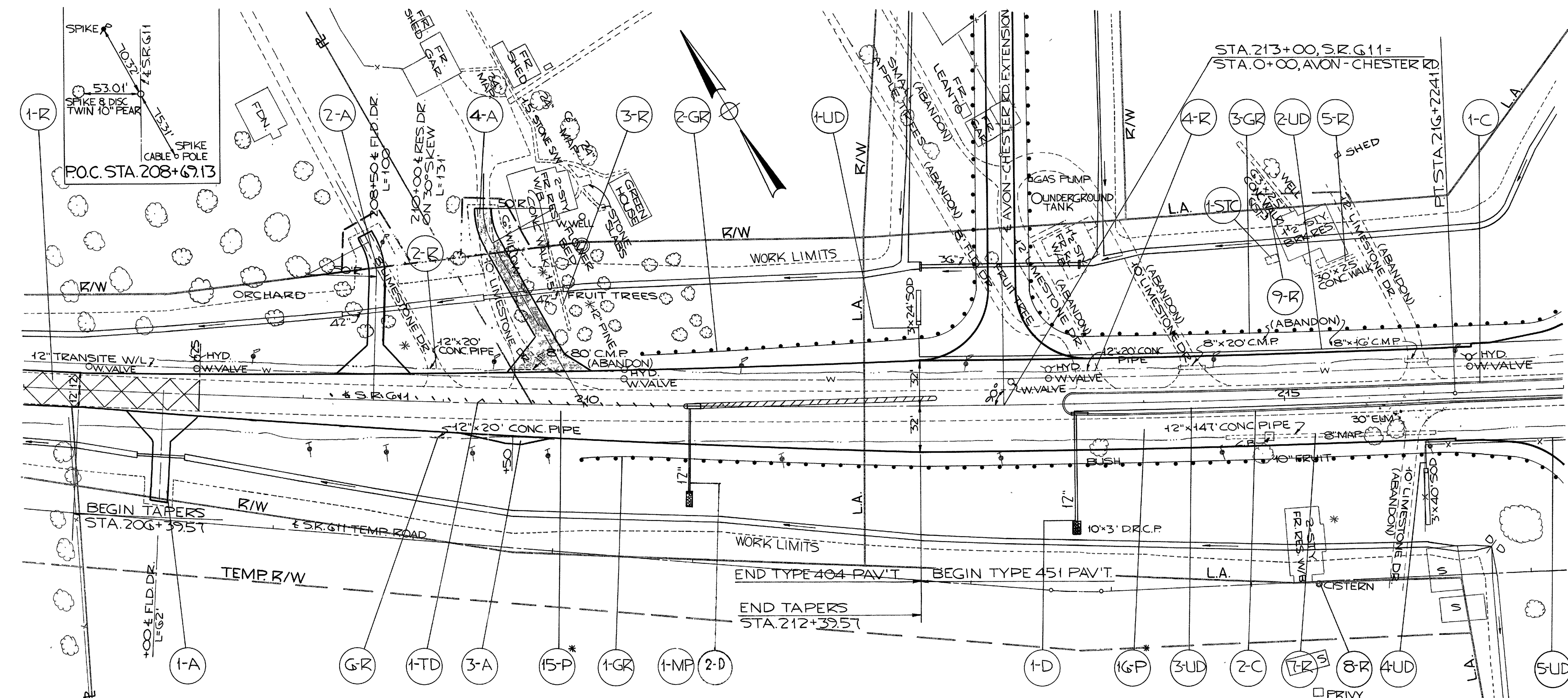
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LOR.-90-1721

REFERENCE NO.	SIDE	STATION FROM TO	202		202		202		202		304		404		408		411		G03		G03	
			EXISTING PAV'T. REMOVED AND DISPOSED OF (RIGID)	EXISTING SIDEWALK REMOVED AND DISPOSED OF	PIPE REMOVED (24" AND UNDER)	PIPE REMOVED (24" AND UNDER)	CATCH BASINS REMOVED	PORTIONS OF EXISTING STRUCTURES REMOVED	AGGR. BASE	ASPHALT CONC. (70-85)	BITUM. PRIME COAT	STABIL. CRUSHED AGGR.	CONDUIT TYPE D	CONDUIT TYPE D	5"	2"	G"	18"	42"	CONDUIT TYPE D	CONDUIT TYPE D	
			SQ.YDS.	SQ.FT.	LIN.FT.	EACH	LUMP	CU.YDS.	CU.YDS.	GAL.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	
1-R	RT	206+00	207+25	306																		
2-R	LT	208+93			20																	
3-R	LT	209+85		83																		
4-R	LT	213+60			20																	
5-R	LT	215+35			200																	
6-R	RT	209+00			20																	
7-R	RT	214+60	216+07		147	1																
8-R	RT	215+20					LUMP															
9-R	LT	214+93					LUMP															
1-A	RT	207+00															212	34				
2-A	LT	208+50															27.6					46
3-A	RT	209+50									4.3	1.7	12.3									
4-A	LT	210+00									32.7	13.1	94.0									56
TOTALS					306	283	207	1	LUMP	37.0	14.8	106.3	50.8	34								102

REFERENCE NO.	SIDE	STATION FROM TO	G01		G02		G03		G03		G03		G04		G05		G05		G05		G00	
			DUMPED ROCK CHANNEL PROTECT T=18"	CONCRETE MASONRY STD. HW-E ENDWALL CLASS C	CONDUIT TYPE B-B	CONDUIT TYPE F	CONDUIT TYPE F	CONDUIT TYPE F	MEDIANS INLET STD. NO.	SHALLOW PIPE UNDER DRAINS	PIPE UNDER DRAINS	CLASS AND UNDER DRAINS	BENDS AND BRANCHES	SODDING	4" 90° BENDS	12" 75° BENDS	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.
			CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.	CU.YDS.
1-UD	LT	212+40						10										12	1			9
2-UD	LT	212+40	217+00															460				
3-UD	RT	213+50	217+00					4										350				1
4-UD	RT	216+00						10														15
5-UD	RT	216+00	217+00															100				
1-D	RT	213+50		2	0.23	42		39		1												2
2-D	LT&RT	210+75.74		7	0.23	38		76		1												2
TOTALS				4	0.46	80	24	65	1	1	910	21										24

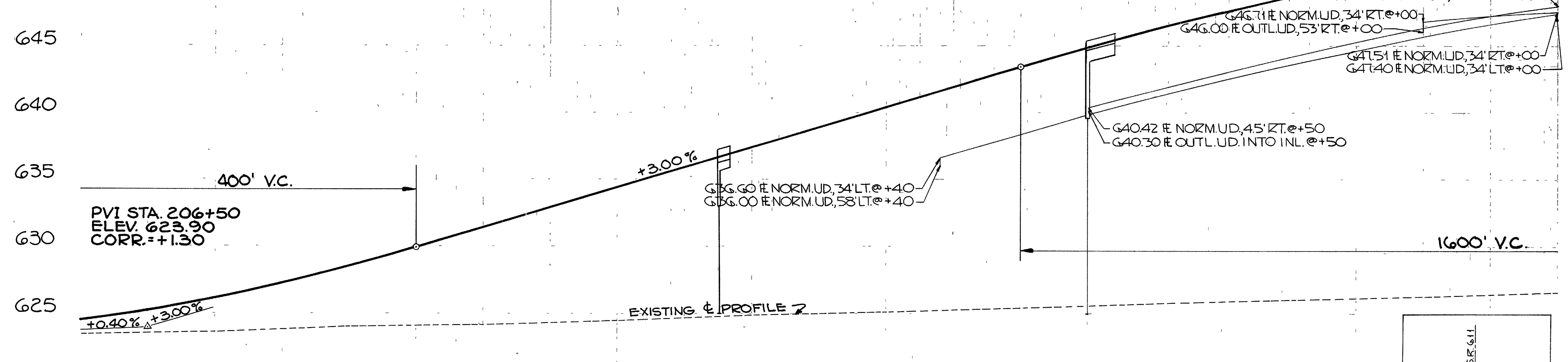
REFERENCE NO.	SIDE	STATION FROM TO	G06		G09		G12		G13		SPECIAL	
			GUARD RAIL TYPE 4	CONCRETE CURB STD. TYPE 2-A	CONCRETE MEDIAN DIVIDERS	CONCRETE TRAFFIC MEDIAN DIVIDERS	CLEANING AND DISPOSAL OF SEPTIC TANK					
			CU.YDS.	CU.YDS.	SQ.YDS.	EACH	EACH	EACH	EACH	EACH	EACH	
1-GR	RT	207+98.5	216+58.0	662.5								
2-GR	LT	210+41.0	212+41.5	200.0								
3-GR	LT	213+58.4	216+72	312.5								
1-C	LT	213+43	217+00		361							
2-C	RT	213+43	217+00		341							
1-MP	LT&RT	210+73.0	212+51.5			56.1						
1-TD	LT&RT	208+95.5	210+61				21					
1-STC	LT	214+94						1				
TOTALS				1175	702	56.1	21	1				



STATION	ELEVATION
624.43	
624.80	
625.20	
625.65	
626.13	
626.66	
627.23	
627.83	
628.48	
629.17	
629.90	
630.65	
631.40	
632.15	
632.90	
633.65	
634.40	
635.15	
635.90	
636.65	
637.40	
638.15	
638.90	
639.65	
640.40	
641.15	
641.90	
642.65	
643.40	
644.14	
644.85	
645.54	
646.21	
646.86	
647.48	
648.08	
648.65	
649.20	
649.73	
650.23	
650.71	
651.17	
651.60	
652.01	
652.40	

B.M. BOAT SPIKE IN TEL. POLE
28' LT. STA. 211+10
ELEV. = 624.237

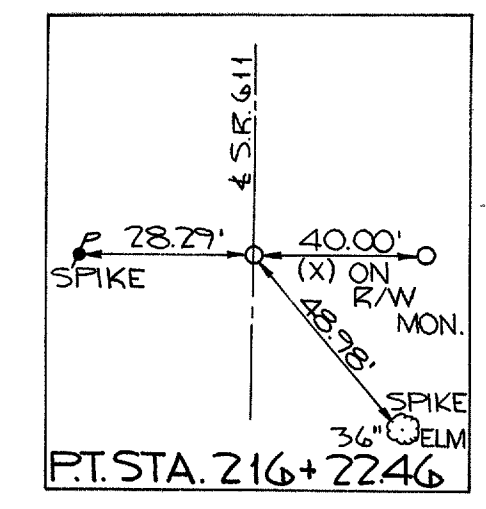
FOR DETAILS OF 36" PIPE CULVERT
@ STA. 1+00, AVON-CHESTER RD.
SEE SHEET NO. 209



STA. 210+75.74 &
STD. NO. 2-8 MEDIAN INLET
633.0 # INL. 12" PIPE
625.0 # OUTL. 12" PIPE, 61' RT.
@ STA. 210+75.74 &
636.52 # GUTTER @ +75.74, 3' RT.

SEEDING 75,004 SQ.YDS.
EXCAVATION 2,818 CU.YDS.
EMBANKMENT 66,239 CU.YDS.

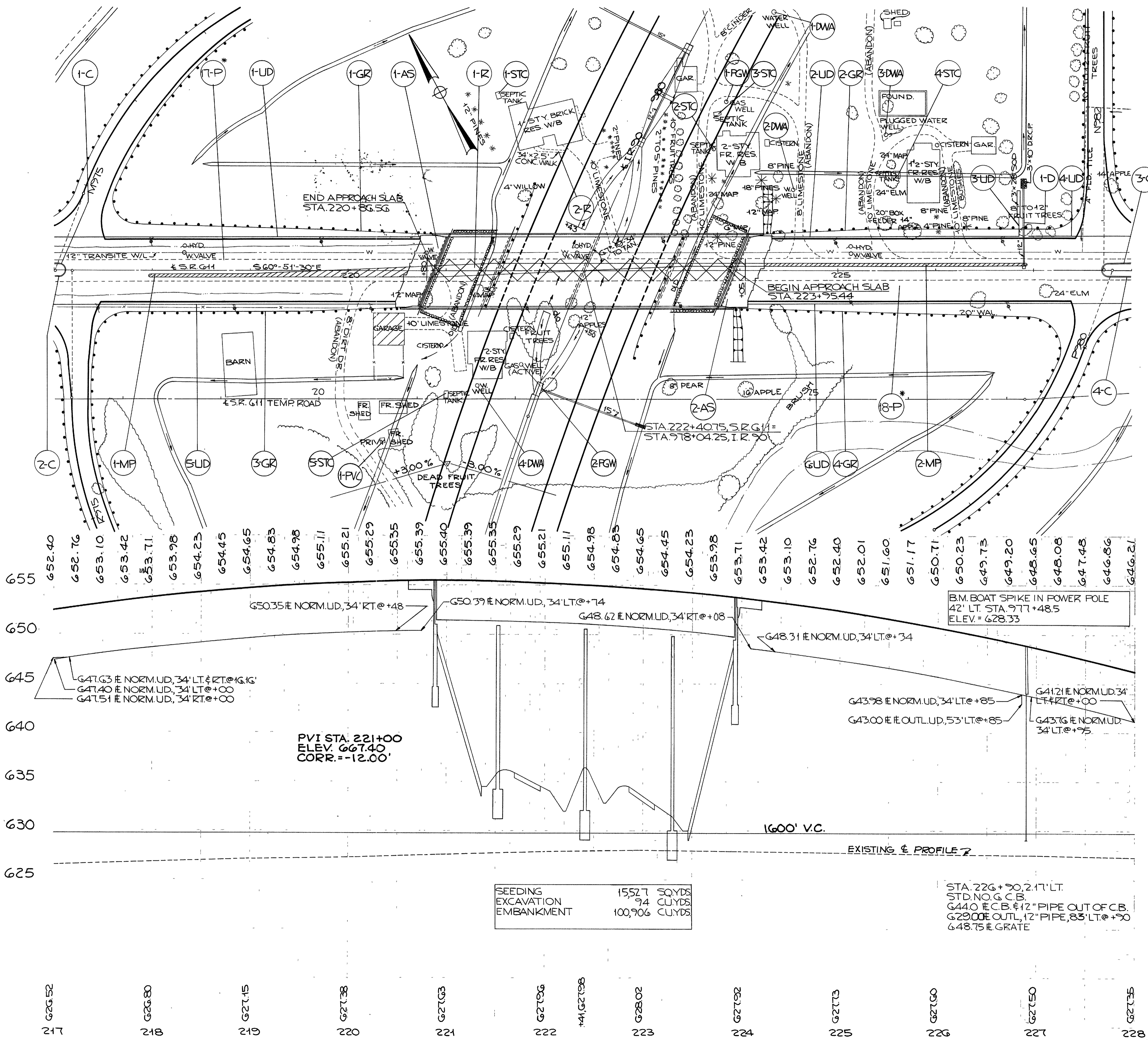
STA. 213+50.55' RT.
STD. NO. 2-72 MEDIAN INLET
639.55 # INL. 12" PIPE
625.00 # OUTL. 12" PIPE
83' RT. @ STA. 213+50
644.80 # GUTTER @ +50, 7' RT.



STATION	ELEVATION
623.47	
623.08	
624.02	
624.28	
624.56	
624.91	
625.19	
625.49	
625.72	
626.04	
626.35	
626.52	

REFERENCE SHEETS		SHT. NO.
RAMP INTERSECTIONS		115&116
GUARD RAIL SHOULDERS & MEDIAN		97&93
GRADING PLANS		147&152
* PAVEMENT QUANTITIES		153
S.R.G11 TEMPORARY ROAD		87&90

LOR. - 90-1721



REFERENCE NO.	SIDE	STATION		EXISTING PAVEMENT REMOVED OF (RIGID)	EXISTING SIDEWALK AND DISPOSED OF	EXISTING SUBGRADE	GUARD RAIL TYPE	CONCRETE CURB STD. TYPE	REINFORCED CONCRETE APPROACH SLAB T=13"	CONCRETE MEDIAN	CLEANING AND DISPOSAL OF SEPTIC TANK	SPECIAL WELL	SPECIAL DRILLED BAND	SPECIAL PLUGGING	
		FROM	TO	SQ.YDS	SQ.FT.	CU.YDS	4	2-A	SQ.YDS	SQ.YDS	EACH	EACH	EACH		
1-C	LT.	217+00	217+1240					16.4							
2-C	RT.	217+00	217+1240					16.4							
3-C	LT.	227+69.10	228+00					34.9							
4-C	RT.	227+69.10	228+00					34.9							
1-GR	LT.	217+84.76	220+84.56				300.0								
2-GR	LT.	224+79.33	227+15.30					287.5							
3-GR	RT.	217+74.90	220+49.77					275.0							
4-GR	RT.	223+95.13	226+94.94					300.0							
1-AS	±	220+57.74	220+86.56						201.2						
2-AS	±	223+95.44	224+24.26						200.6						
1-MP	LT.&RT.	217+96.56	220+57.74							149.3					
2-MP	LT.	224+24.26	226+94.94							87.6					
1-STC	LT.	222+55										1			
2-STC	LT.	223+73										1			
3-STC	LT.	223+78										1			
4-STC	LT.	225+62										1			
5-STC	RT.	222+01										1			
1-DWA	LT.	224+36											1		
2-DWA	LT.	224+55											1		
3-DWA	LT.	225+50											1		
4-DWA	RT.	222+30											1		
1-FGW	LT.	223+88												1	
2-FGW	RT.	222+76												1	
1-R	±	220+80	224+05	795											
2-R	LT.	222+05			85										
TOTALS				795	85	66.2	1162.5	102.6	401.8	238.9	5	4	2		

REFERENCE NO.	SIDE	STATION		G01	G02	G03	G03	G04	G05	G05	G00	SPECIAL	
		FROM	TO	DUMPED ROCK CHANNEL PROT. T=18"	CONCRETE MASONRY TYPE	CONDUIT TYPE	CONDUIT TYPE	CATCH BASIN STD. NO. G	SHALLOW UNDERDRAINS	UNCLASSIFIED UNDERDRAINS	BENDS & BRANCHES	SODDING & CLEANING PRIVY VAULT	
				CU.YDS	CU.YDS	12" G	12" G	EACH	EACH	EACH		SQ.YDS EACH	
1-UD	LT.	217+00	220+74						374				
2-UD	LT.	224+34	226+85						251				
3-UD	LT.	226+85				10				9	1	11	
4-UD	LT.	226+95	228+00					105					
5-UD	RT.	217+00	220+48					348					
6-UD	RT.	224+08	228+00					392					
1-D	LT.	226+90		2	0.23	40	44	1			2		
1-PV	RT.	220+30										1	
TOTALS				2	0.23	40	1044	1	1470	9		11	1

PROPOSED STRUCTURE - BRIDGE NO. LOR. - 90-1882

TYPE - CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS - 63'-0"; 89'-0"; 89'-0"; 63'-0" ½ BEARINGS

ROADWAY - 70'-0" F/F OF 2'-0" SAFETY CURBS WITH RAISED MEDIAN (VARIABLE WIDTH)

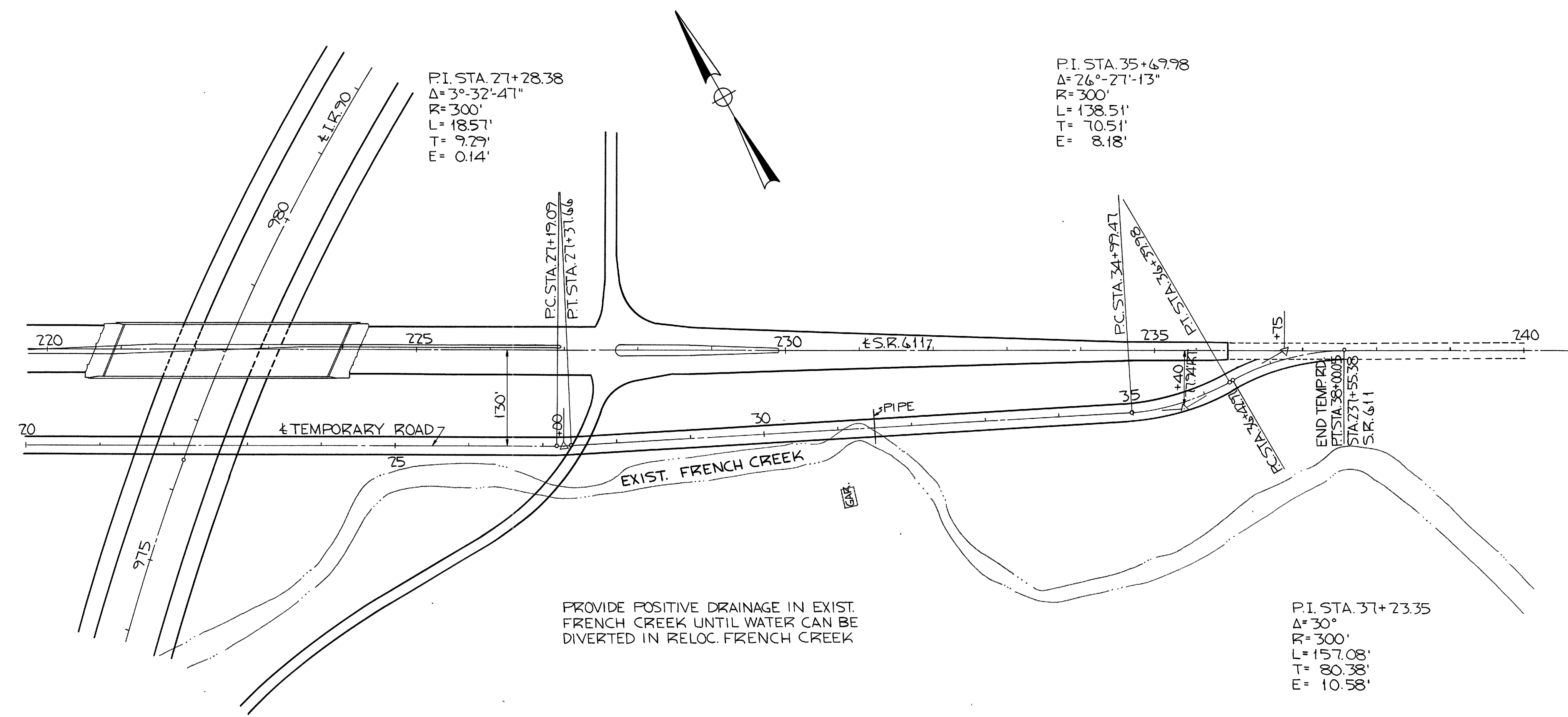
LOAD FREQUENCY - CF 400 (57)

SKEW - 23°-00' L.F.

APPROACH SLABS - AS-1-54 (25' LONG, MODIFIED)

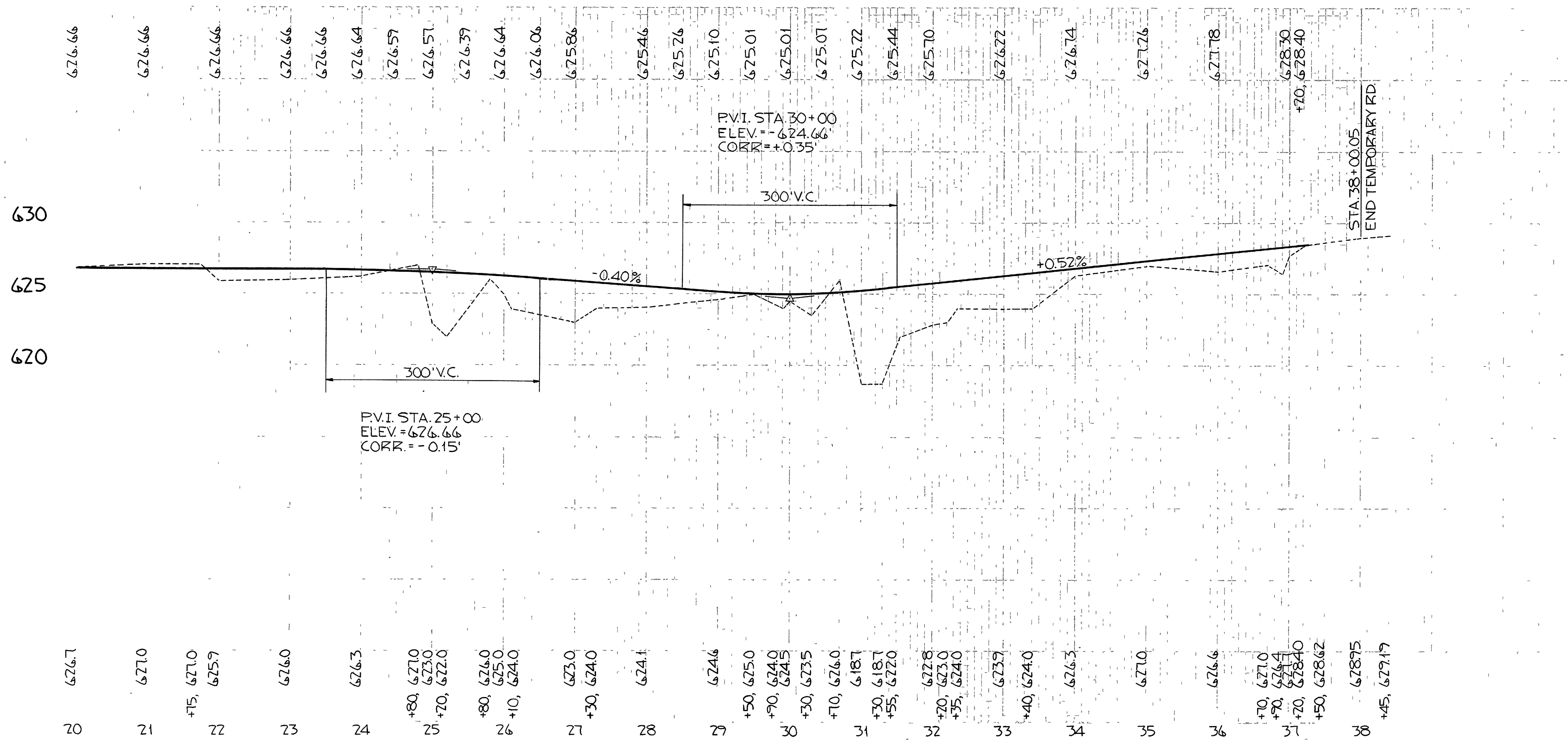
WEARING SURFACE - 1" MONOLITHIC CONCRETE

ALIGNMENT - TANGENT



ESTIMATED QUANTITIES

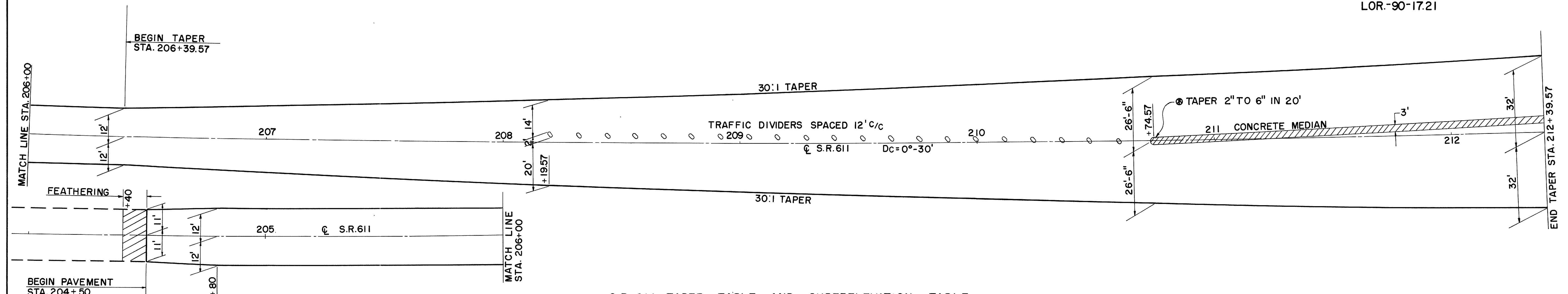
615, CLASS "B" TEMPORARY PAVEMENT 8,904 SQ.YDS.
 615, TEMPORARY ROADS LUMP SUM



SEE SHEET NO. III FOR DETAILS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

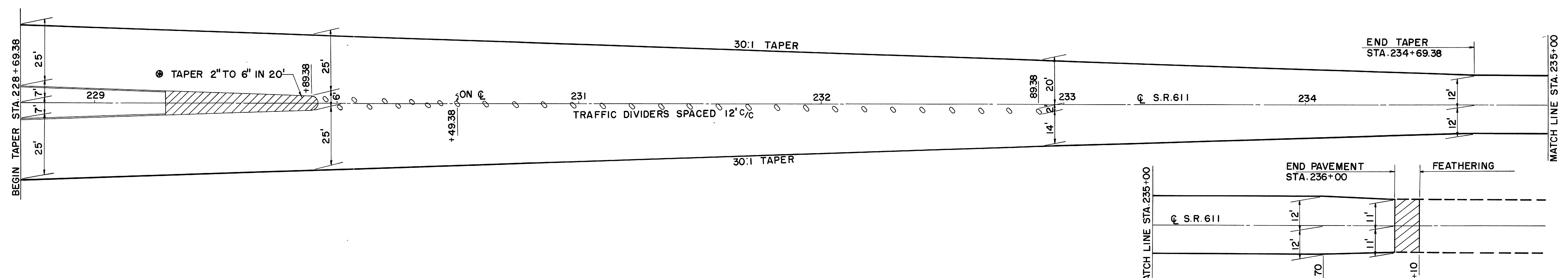
LOR-90-17.21



S.R. 611 TAPER TABLE AND SUPERELEVATION TABLE

STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION	STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION	STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION	STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION	STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION	STATION	OFFSET	LT. EDGE ELEVATION	RT. EDGE ELEVATION
204+50	11.00	622.93	623.27	+25	12.00	624.61	624.99	208+00	17.35	628.21	628.75	210+00	24.01	634.02	634.78	212+00	30.68	639.92	640.88	216+00	32.00	650.21	651.21
+75	11.83	623.04	623.40	+39.57	12.00	624.84	625.22	+25	18.18	628.89	629.45	+25	24.85	634.76	635.54	+25	31.51	640.66	641.64	+03.66		650.28	651.28
+80	12.00	623.06	623.44	+50	12.35	625.01	625.39	+50	19.01	629.60	630.20	+50	25.68	635.50	636.30	+39.57	32.00	641.09	642.09	+22.41		650.62	651.37
205+00		623.19	623.57	+75	13.18	625.44	625.86	+75	19.85	630.34	630.96	+75	26.51	636.24	637.06	+50		641.40	642.40	+25		650.67	651.39
+25		623.39	623.77	207+00	14.01	625.91	626.35	209+00	20.68	631.08	631.72	211+00	27.35	636.97	637.83	+75		642.15	643.15	+41.16		650.95	651.45
+50		623.64	624.02	+25	14.85	626.43	626.89	+25	21.51	631.81	632.49	+25	28.18	637.71	638.59	213+00		642.90	643.90	+50		651.10	651.54
+75		623.92	624.30	+50	15.68	626.99	627.47	+50	22.35	632.55	633.25	+50	29.01	638.45	639.35	+25		643.64	644.64	+75		651.51	651.78
206+00	12.00	624.24	624.62	+75	16.51	627.57	628.09	+75	23.18	633.29	634.01	+75	29.85	639.18	640.12	+50		644.35	645.35	217+00		651.90	652.01
																				+16.16	32.00	652.13	652.13

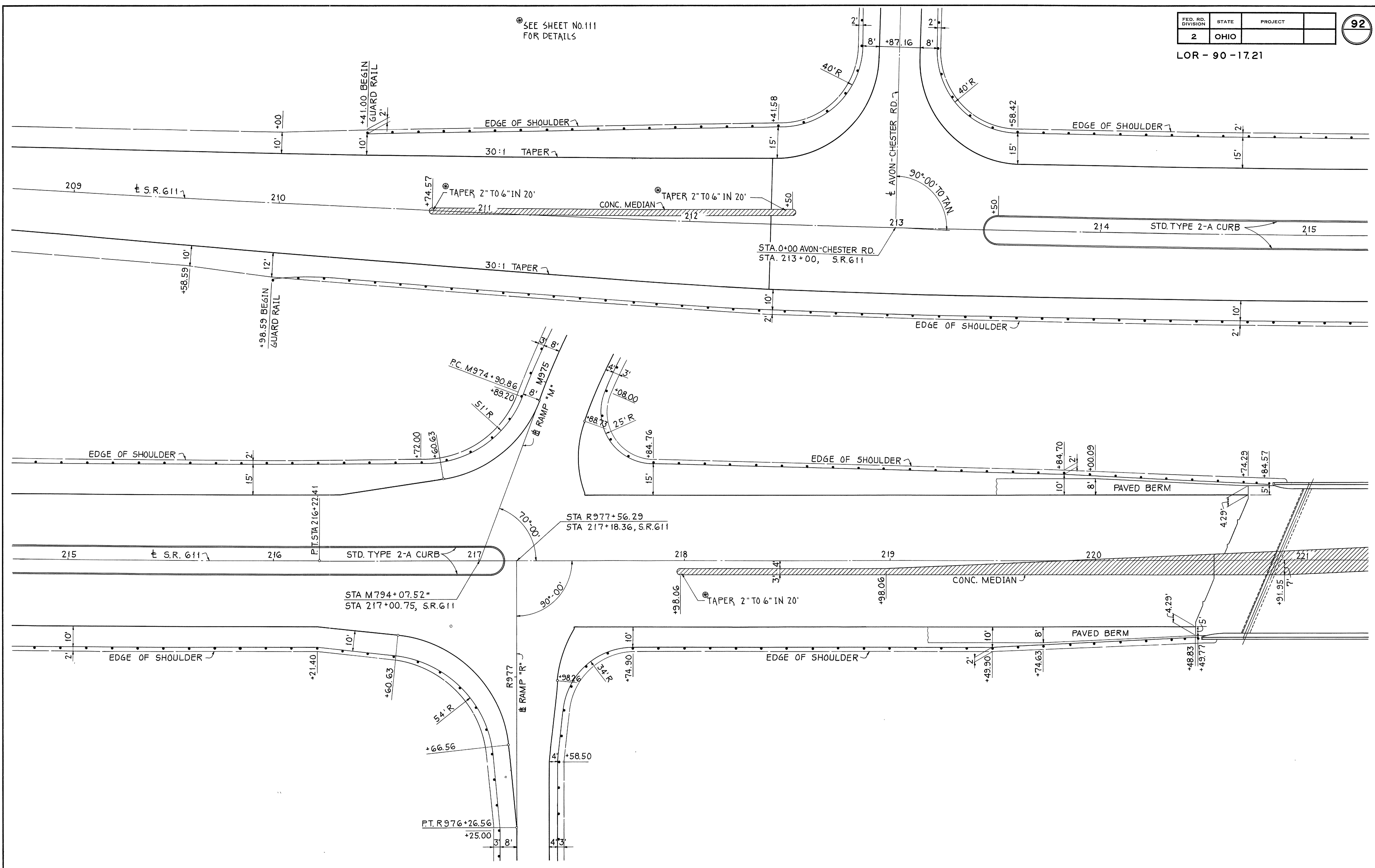
SEE SHEET NO. III FOR DETAILS



S.R. 611 TAPER TABLE

STATION	OFFSET	LT. & RT. EDGE ELEVATION	STATION	OFFSET	LT. & RT. EDGE ELEVATION	STATION	OFFSET	LT. & RT. EDGE ELEVATION	STATION	OFFSET	LT. & RT. EDGE ELEVATION	STATION	OFFSET	LT. & RT. EDGE ELEVATION	STATION	OFFSET	LT. & RT. EDGE ELEVATION
228+69.38	32.00	643.80	+75	28.48	640.71	231+00	24.31	637.02	+25	20.15	633.36	234+00	14.31	629.68	236+00	11.00	628.23
+75	31.81	643.64	230+00	27.65	639.97	+25	23.48	636.28	+50	15.98	630.49	+75	12.00	628.59	+70	12.00	628.24
229+00	30.98	642.92	+25	26.81	639.23	+50	22.65	635.55	+75	15.15	630.06	+75	11.83	628.24	+75	11.83	628.24
+25	30.15	642.18	+50	25.98	638.49	+75	21.81	634.81	233+00	17.65	631.50	+25	12.00	628.42	+25	12.00	628.42
+50	29.31	641.44	+75	25.15	637.76	232+00	20.98	634.07	+25	16.81	630.98	+50	12.00	628.30	+50	12.00	628.30

SEE SHEET NO.111 FOR DETAILS

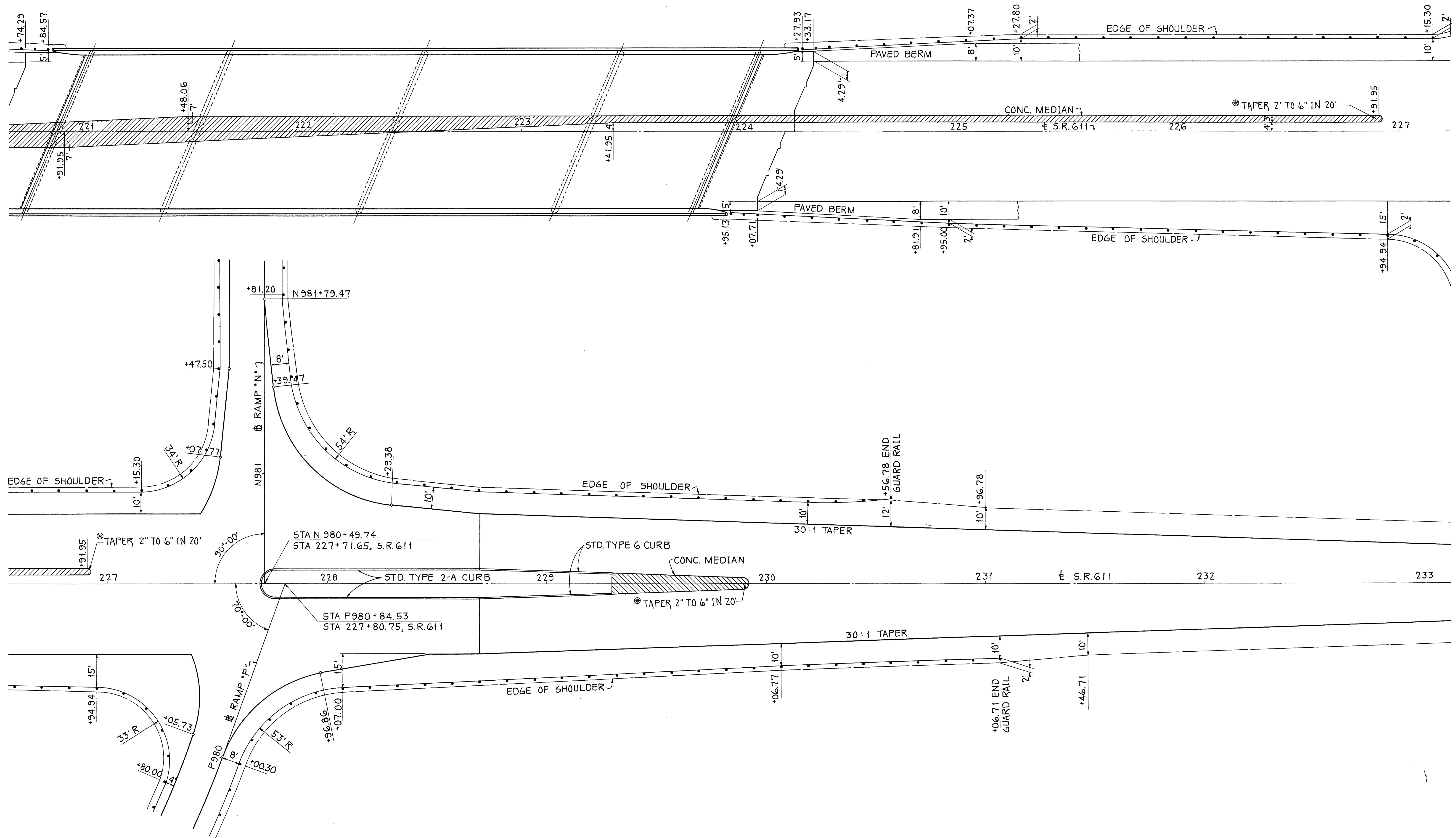


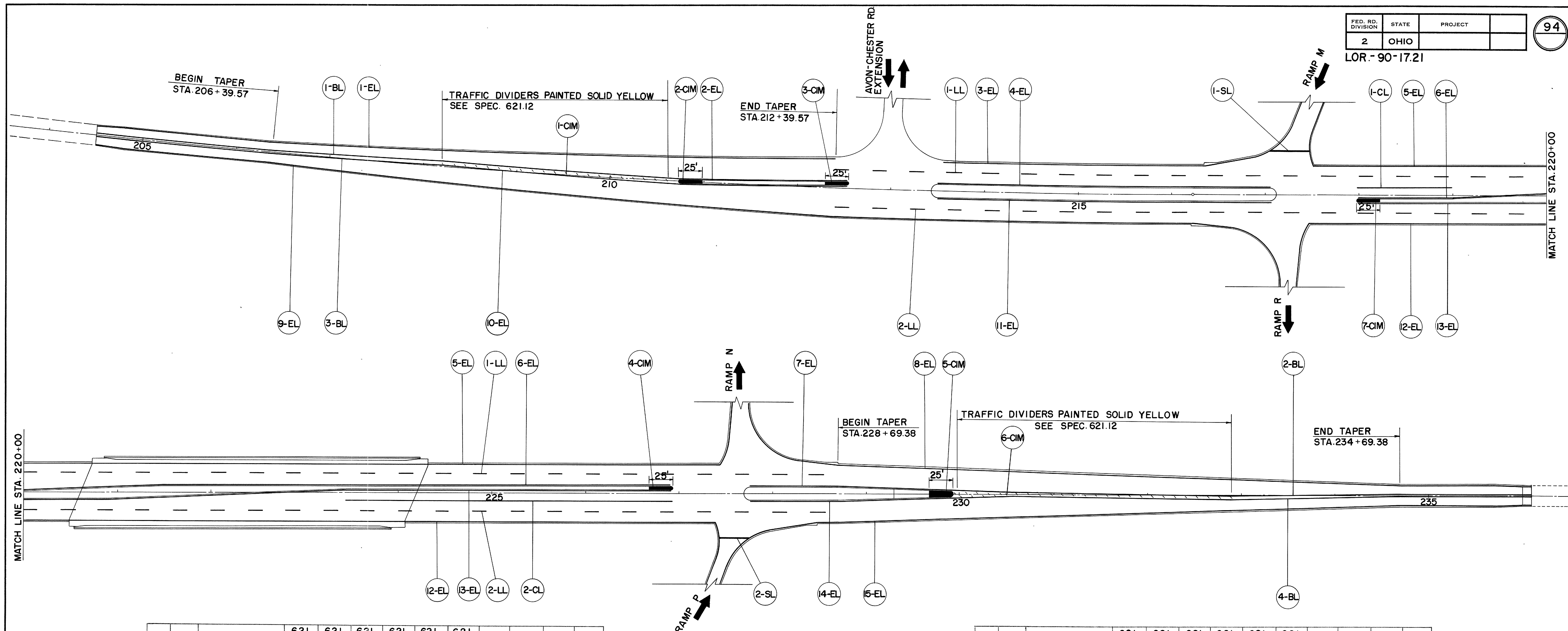
SHOULDER & MEDIAN DETAILS S.R. 611

SEE SHEET NO.111
FOR DETAILS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LOR - 90 - 17.21





REFERENCE NO.	SIDE	STATION		621	621	621	621	621	621				
		FROM	TO	EDGE LINE	BARRIER LINES	LANE LINES AND CENTER LINES	CHANN. LINES	STOP LINES	CURB AND ISLAND MARKING				
				4"	4"	6"	8"	24"					
				MILES	MILES	MILES	FEET	LUMP	LUMP				
1-BL	LT.	204+40	208+19.57		0.072								
1-EL	LT.	204+40	212+39.57	0.151									
2-EL	LT.	208+19.57	212+50	0.082									
1-CIM	LT.	208+19.57	210+62.57						LUMP				
2-CIM	LT.&RT.	210+73.07	210+98.07						LUMP				
3-CIM	LT.	212+26.50	212+51.50						LUMP				
1-LL	LT.	212+39.57	228+54.57		0.116								
3-EL	LT.	213+60.43	216+32.50	0.052									
4-EL	LT.	213+50	217+05.40	0.067									
1-SL	LT.	RAMP M							LUMP				
1-CL	LT.	217+98.06	218+98.06			100							
5-EL	LT.	217+52	227+43	0.188									
6-EL	LT.&RT.	217+98.06	226+91.95	0.169									
4-CIM	LT.	226+68.45	226+93.45						LUMP				
7-EL	LT.	227+76.10	232+89.38	0.097									
8-EL	LT.	228+69.38	236+10	0.140									
5-CIM	LT.&RT.	229+67.38	229+92.38						LUMP				
TOTALS				0.946	0.072	0.116	100	LUMP	LUMP				

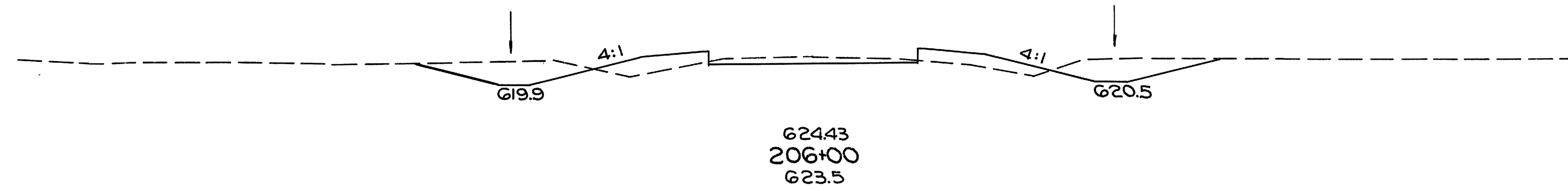
FOR RAMP PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 153

FOR I.R. 90 PAVEMENT MARKING QUANTITIES, SEE SHEET NO. 29

FOR ADDITIONAL PAVEMENT MARKING DETAILS, SEE SHEET NO. 220

REFERENCE NO.	SIDE	STATION		621	621	621	621	621	621				
		FROM	TO	EDGE LINES	BARRIER LINES	LANE LINES AND CENTER LINES	CHANN. LINES	STOP LINES	CURB AND ISLAND MARKING				
				4"	4"	6"	8"	24"					
				MILES	MILES	MILES	FEET	LUMP	LUMP				
6-CIM	LT.&RT.	229+98.38	232+89.38						LUMP				
2-BL	LT.&RT.	232+89.38	236+10		0.061								
9-EL	RT.	204+40	216+20.63	0.224									
3-BL	RT.	204+40	208+19.57	0.072									
10-EL	RT.	208+19.57	212+50	0.082			0.116						
2-LL	RT.	212+39.57	228+54.57										
11-EL	RT.	213+50	217+05.40	0.067									
7-CIM	RT.	217+96.56	218+21.56						LUMP				
12-EL	RT.	217+47	227+38	0.188									
13-EL	LT.&RT.	217+98.06	226+91.95	0.169									
2-CL	RT.	223+41.95	226+91.95				350						
2-SL	RT.	RAMP P							LUMP				
14-EL	RT.	227+76.10	232+89.38	0.097									
15-EL	RT.	228+46.86	236+10	0.145									
4-BL	RT.	232+89.38	236+10		0.061								
TOTALS				0.972	0.194	0.116	350	LUMP	LUMP				

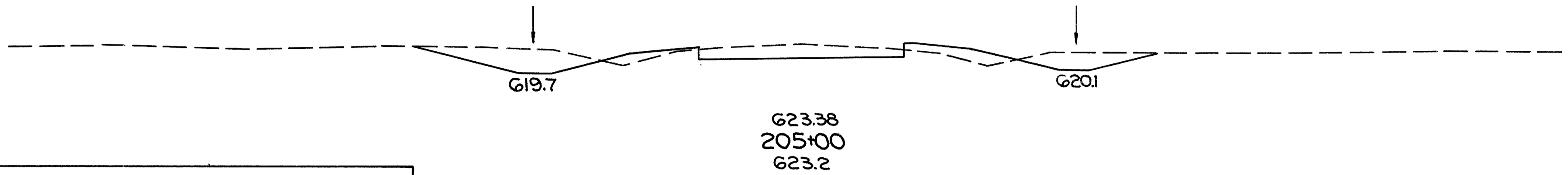
LOR-90-17.21



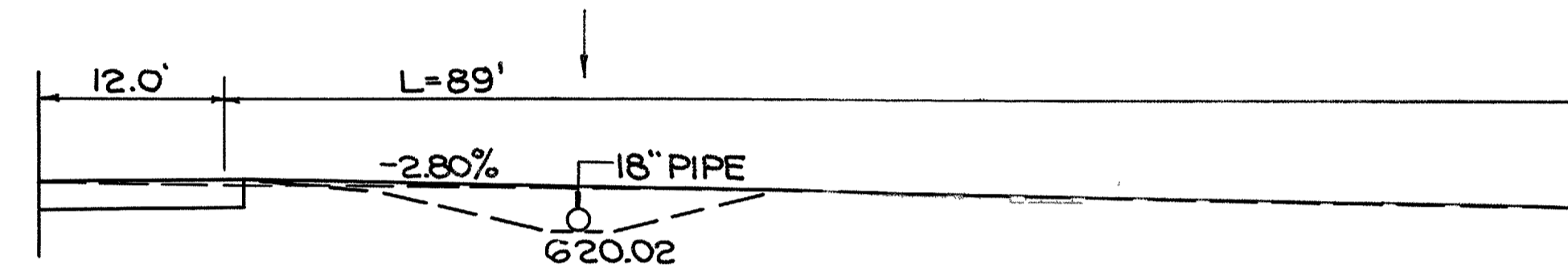
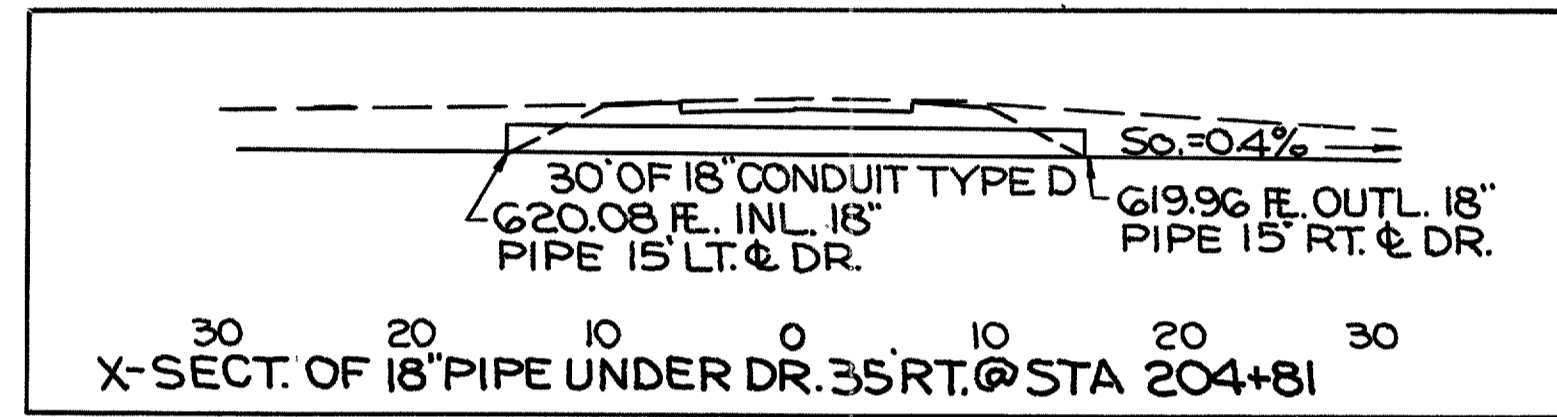
101 49

396 141

630



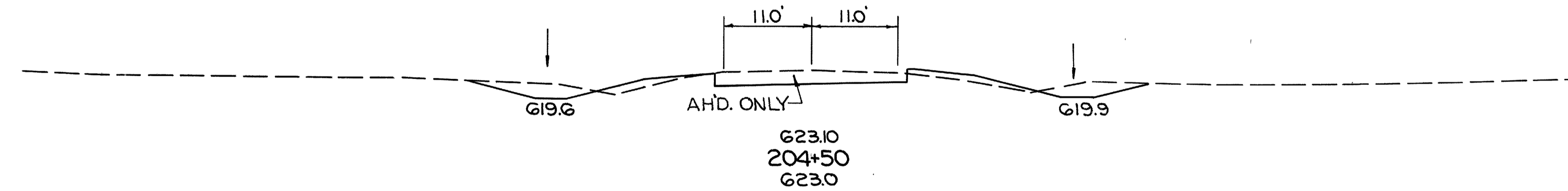
113 27



630

ADDFOR DRIVE 0 5

623.25
204+79 PROFILE RES. DRIVE RT.
623.1



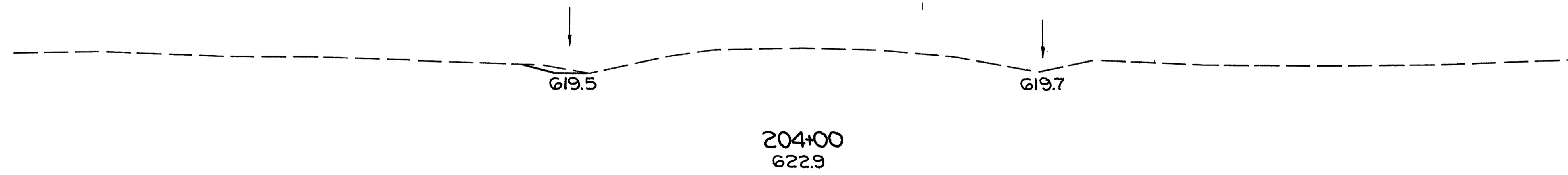
630

174 44

STA 204+50 AH'D. 75 20
STA 204+50 BK. 36 20

BEGIN PAVEMENT
STA. 204+50

630



37 19

4 0

204+00
622.9

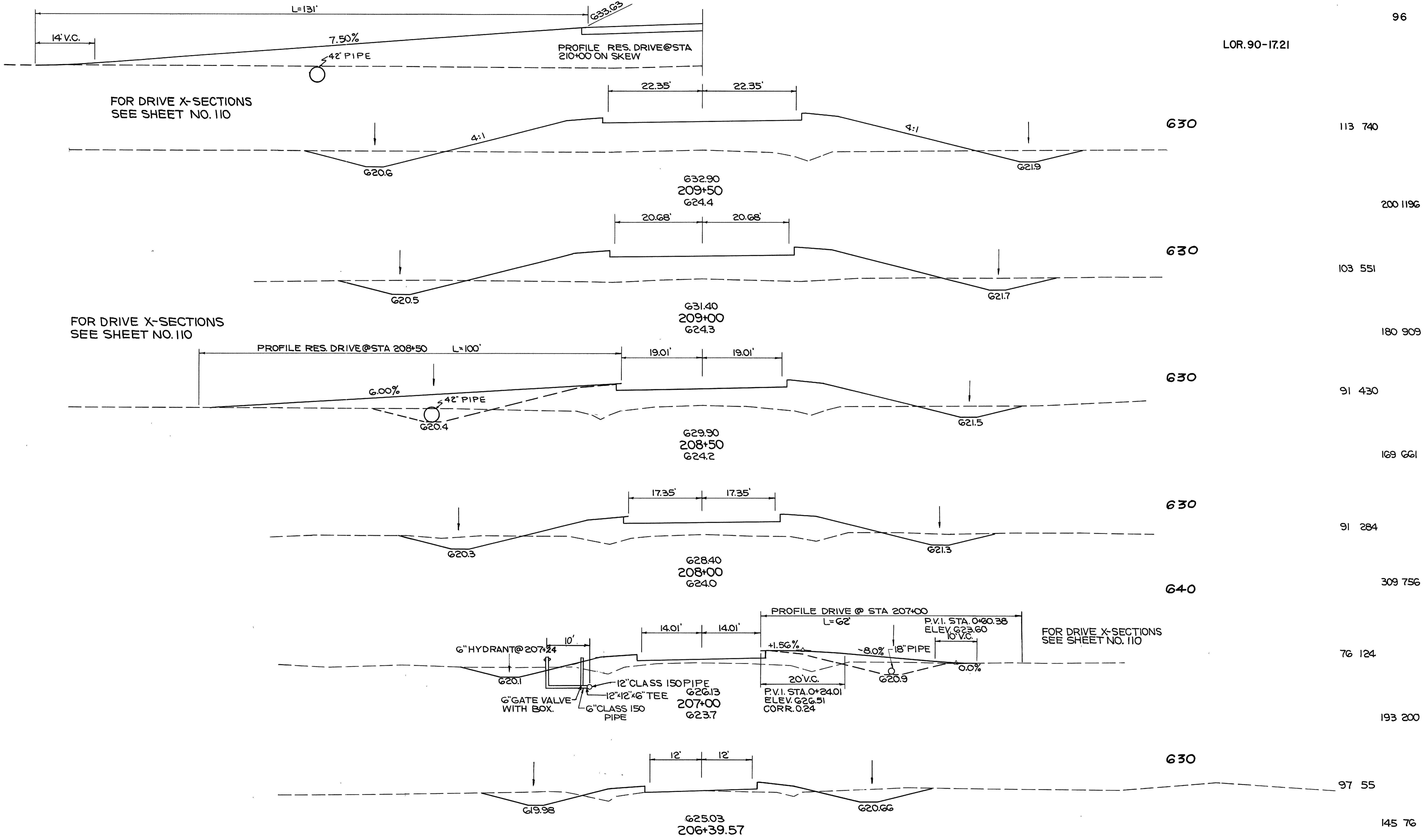
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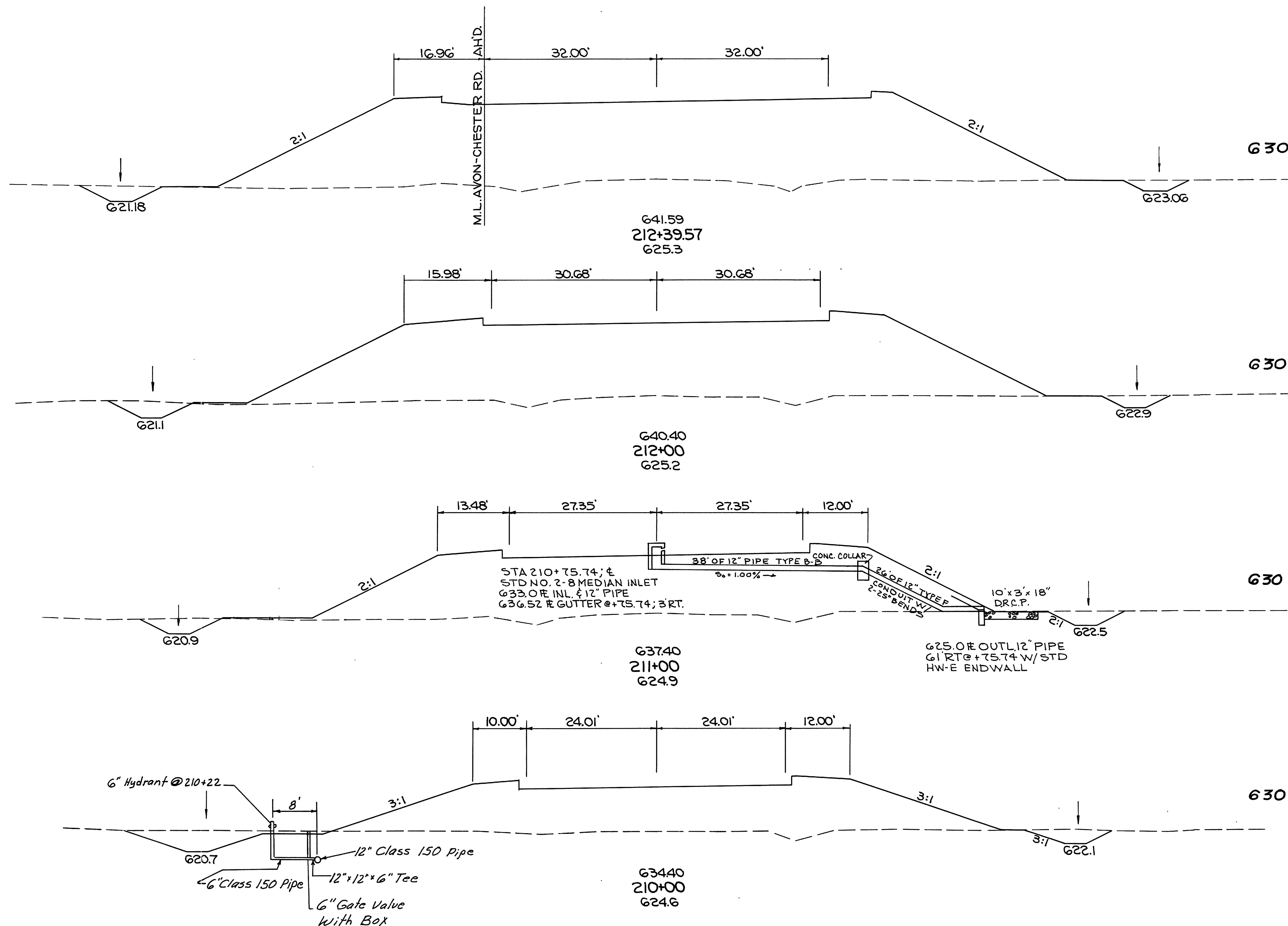
7 0

STA. 203+00 AH'D. 0 0
STA 203+00 BK. 0 0

203+00
622.6
BEGIN WORK
STA 203+00

LOR.90-17.21





STA 212+39.57 AHD. 17 1432
STA 212+39.57 BK. 45 1972

69 2715

49 1732

187 5463

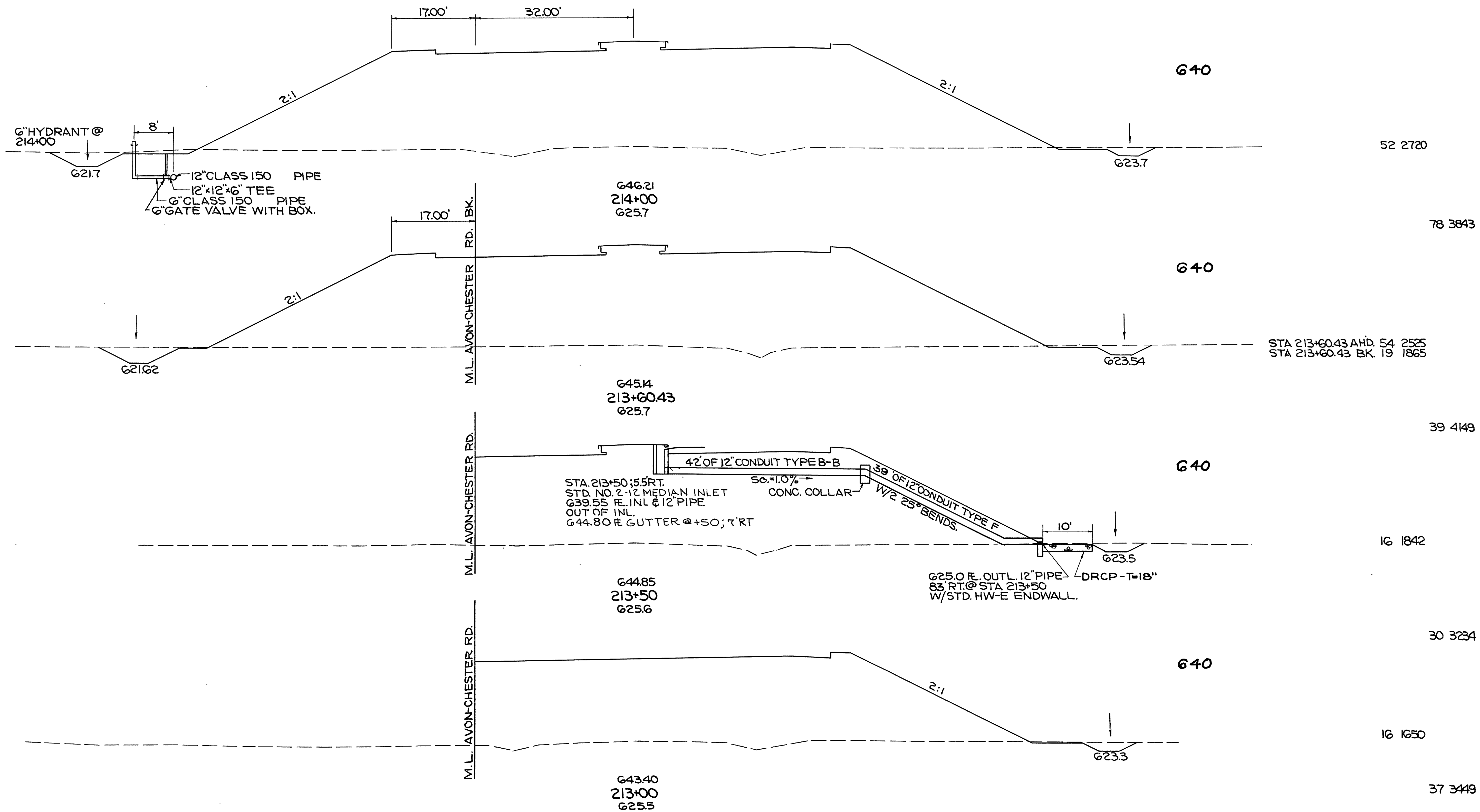
52 1218

2703861

94 867

192 1488

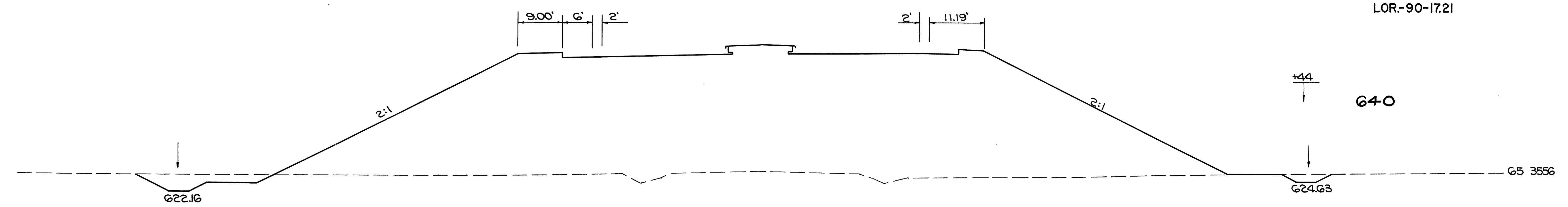
STA 209+50 113 740



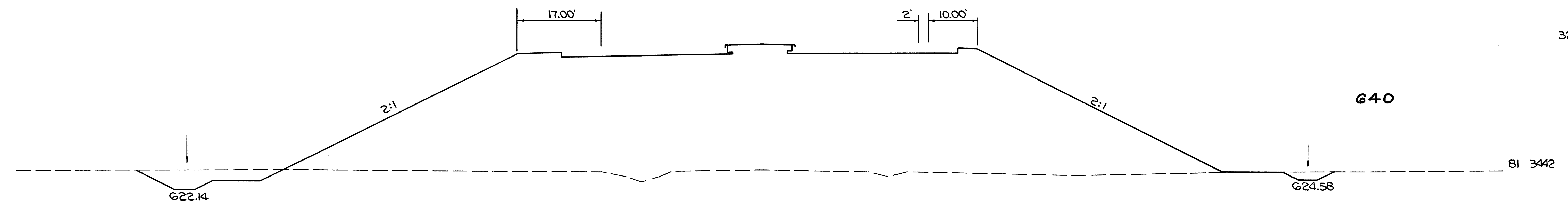
STA 212+39.57AH, 17 1432

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 STA 213+00 TO STA 214+00 SR-611

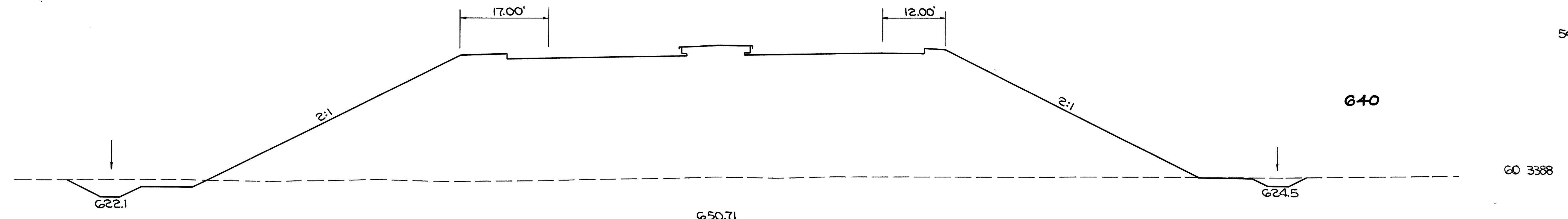
LOR-90-17.21



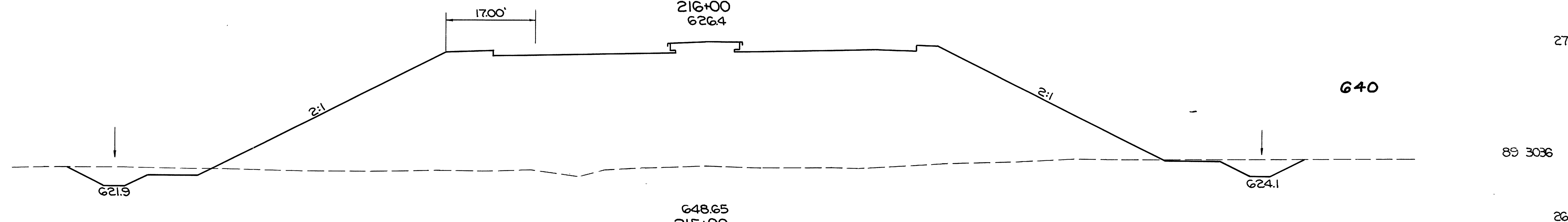
651.30
216+32.50
626.5



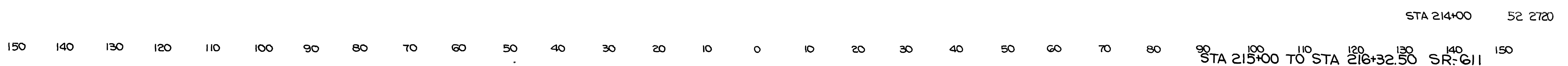
651.09
216+20.63
626.4



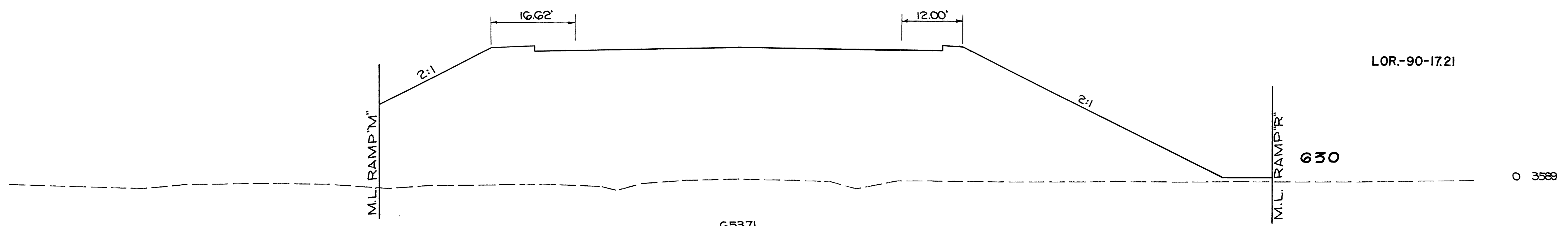
650.71
216+00
626.4



648.65
215+00
626.0



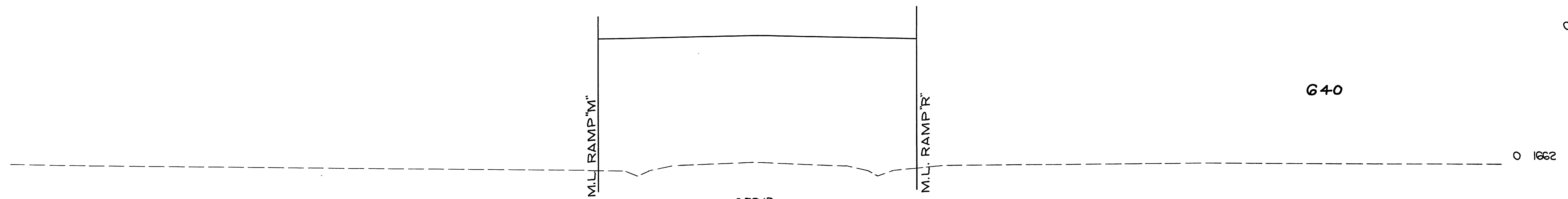
LOR.-90-17.21



653.71
218+00
626.8

630

3589

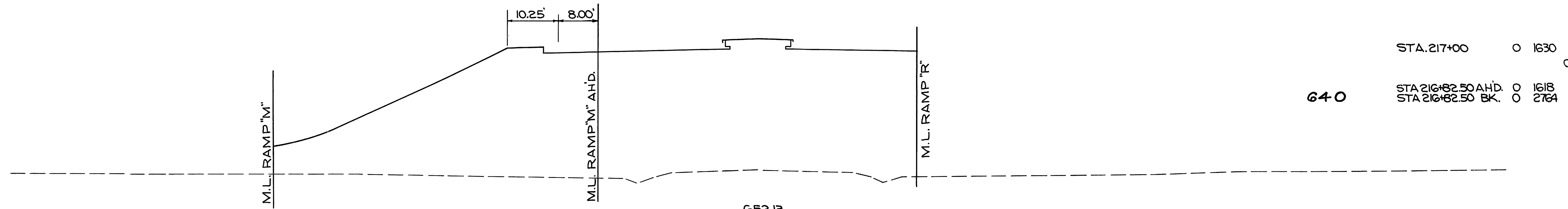


653.13
217+52
626.7

640

4668

1662



652.13
216+82.50
626.5

640

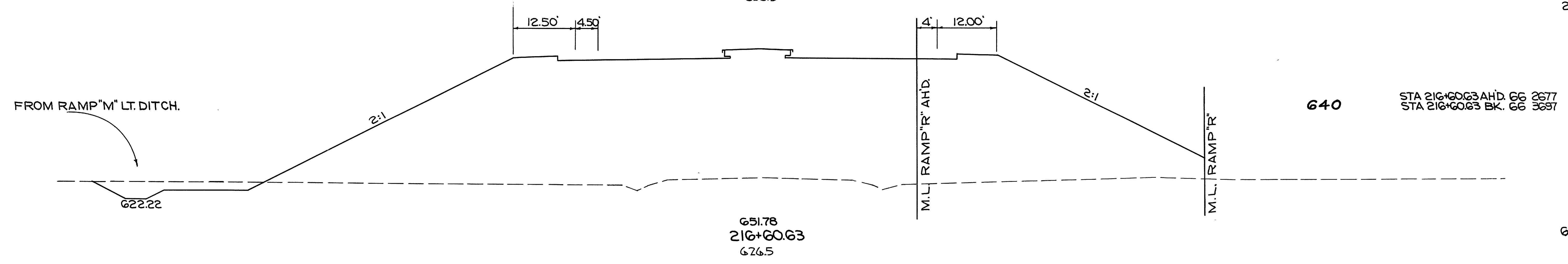
STA. 217+00
STA 216+82.50 AHD.
STA 216+82.50 BK.

1630

1053

1618

2764



651.78
216+60.63
626.5

640

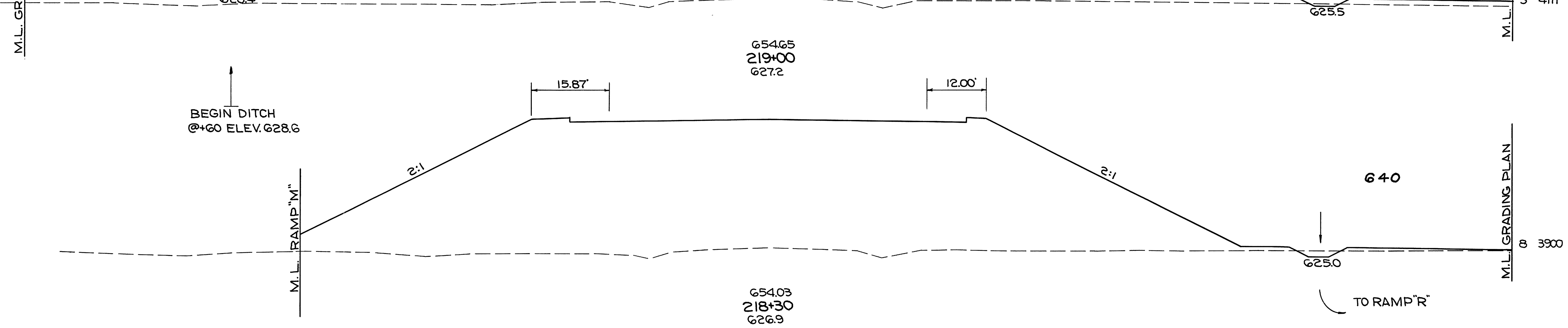
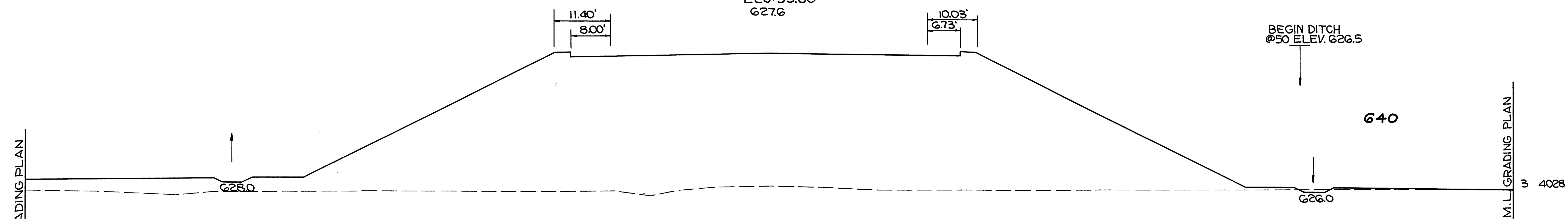
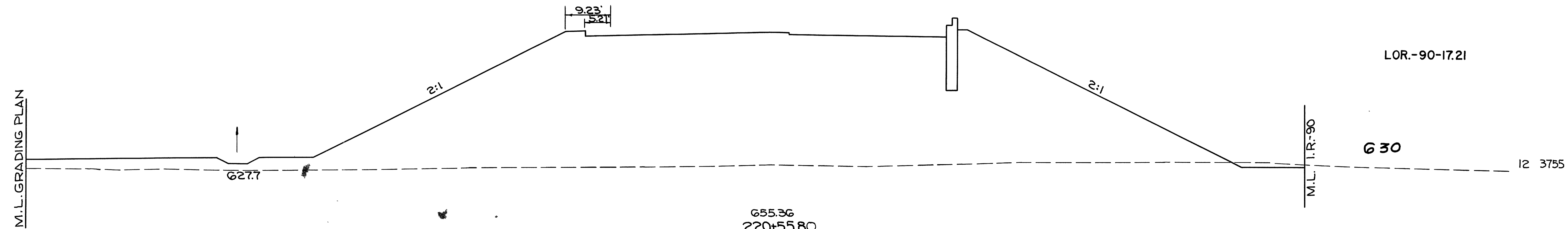
STA 216+60.63 AHD.
STA 216+60.63 BK.

27 2204

65 3778

STA 216+32.50 65 3556

LOR.-90-17.21

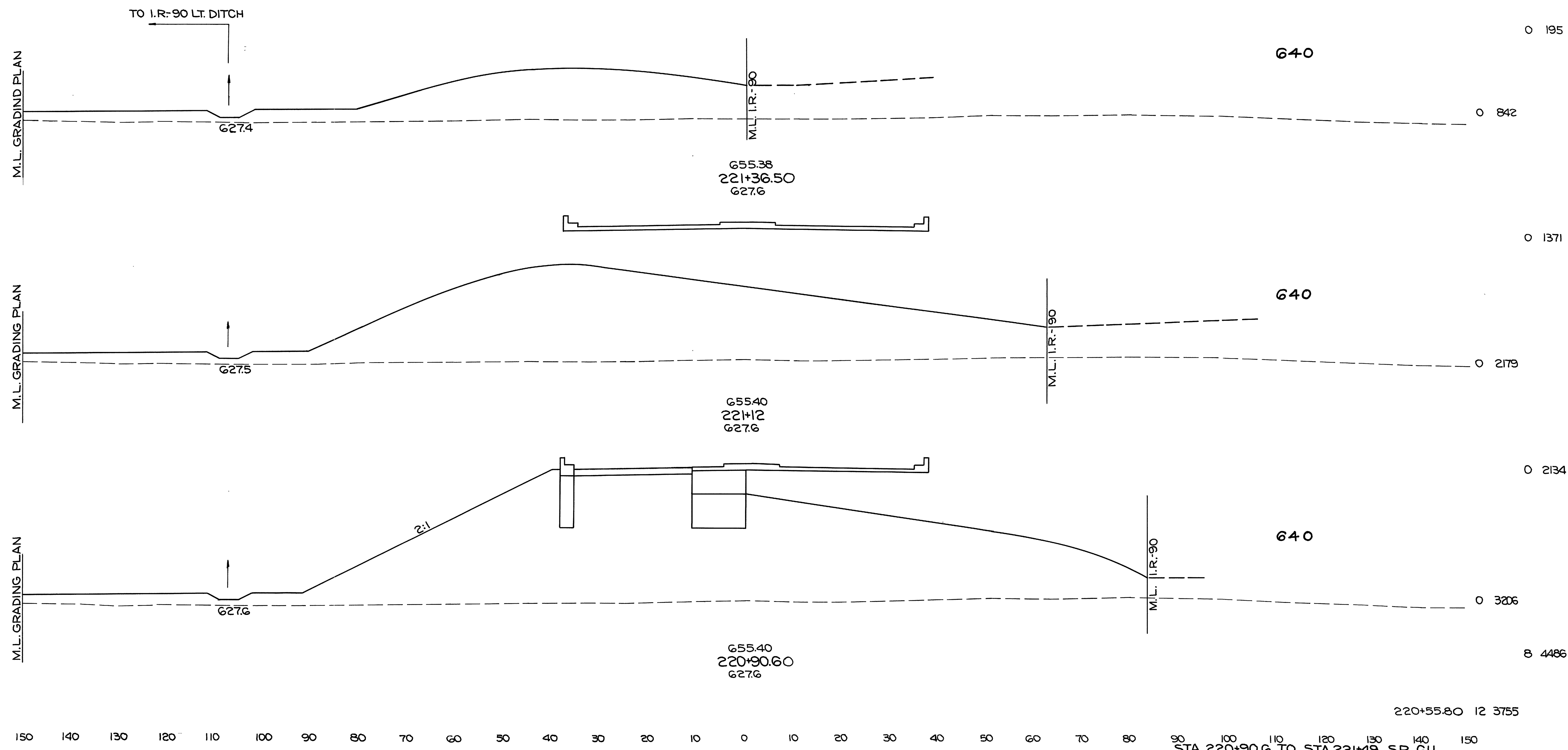


STA 218+00 0 3589

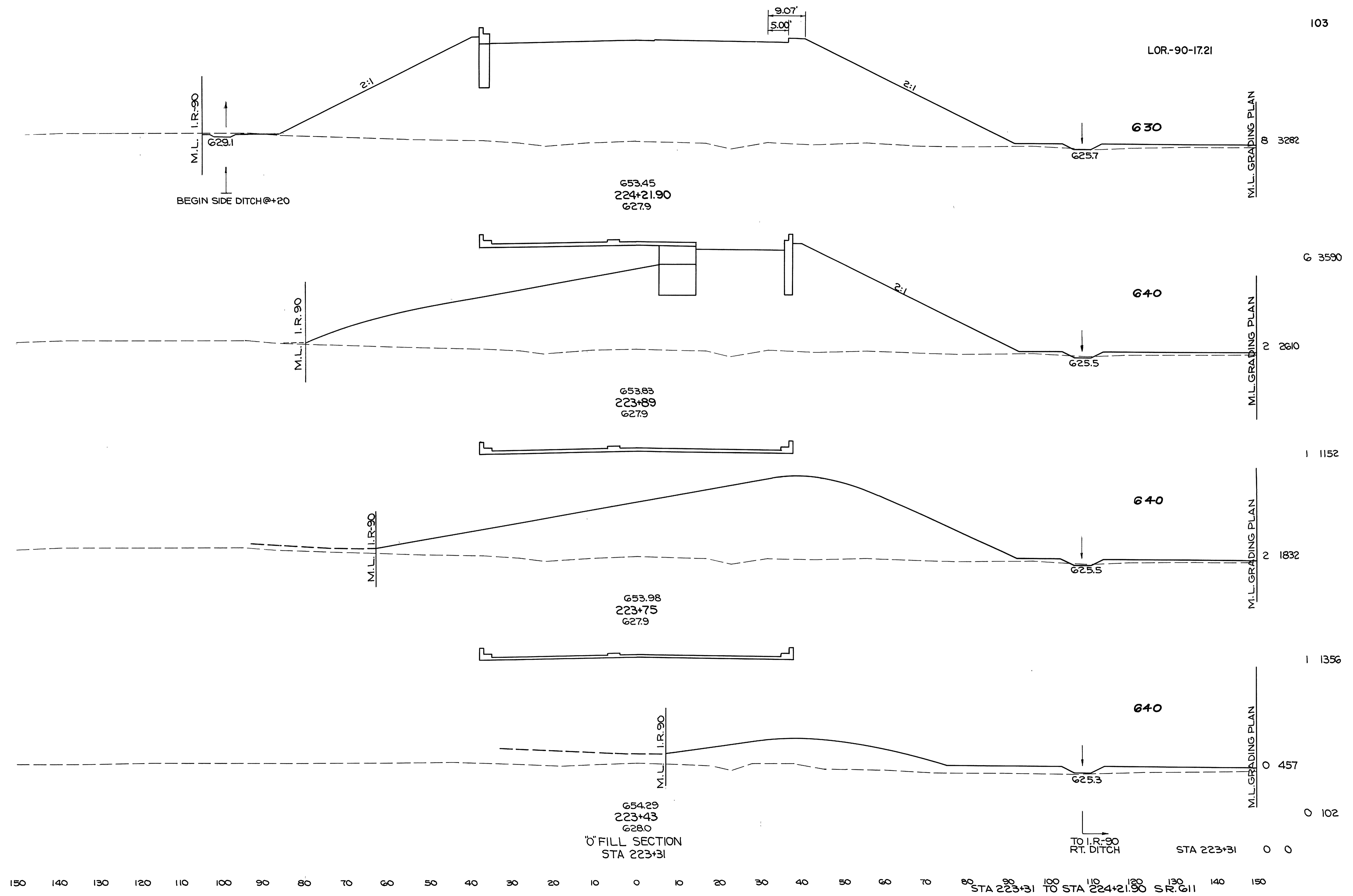
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA 218+30 TO STA 220+55.8 S.R. G11

STA 221+49 0 0

"O" FILL SECTION
STA 221+49



LOR.-90-17.21



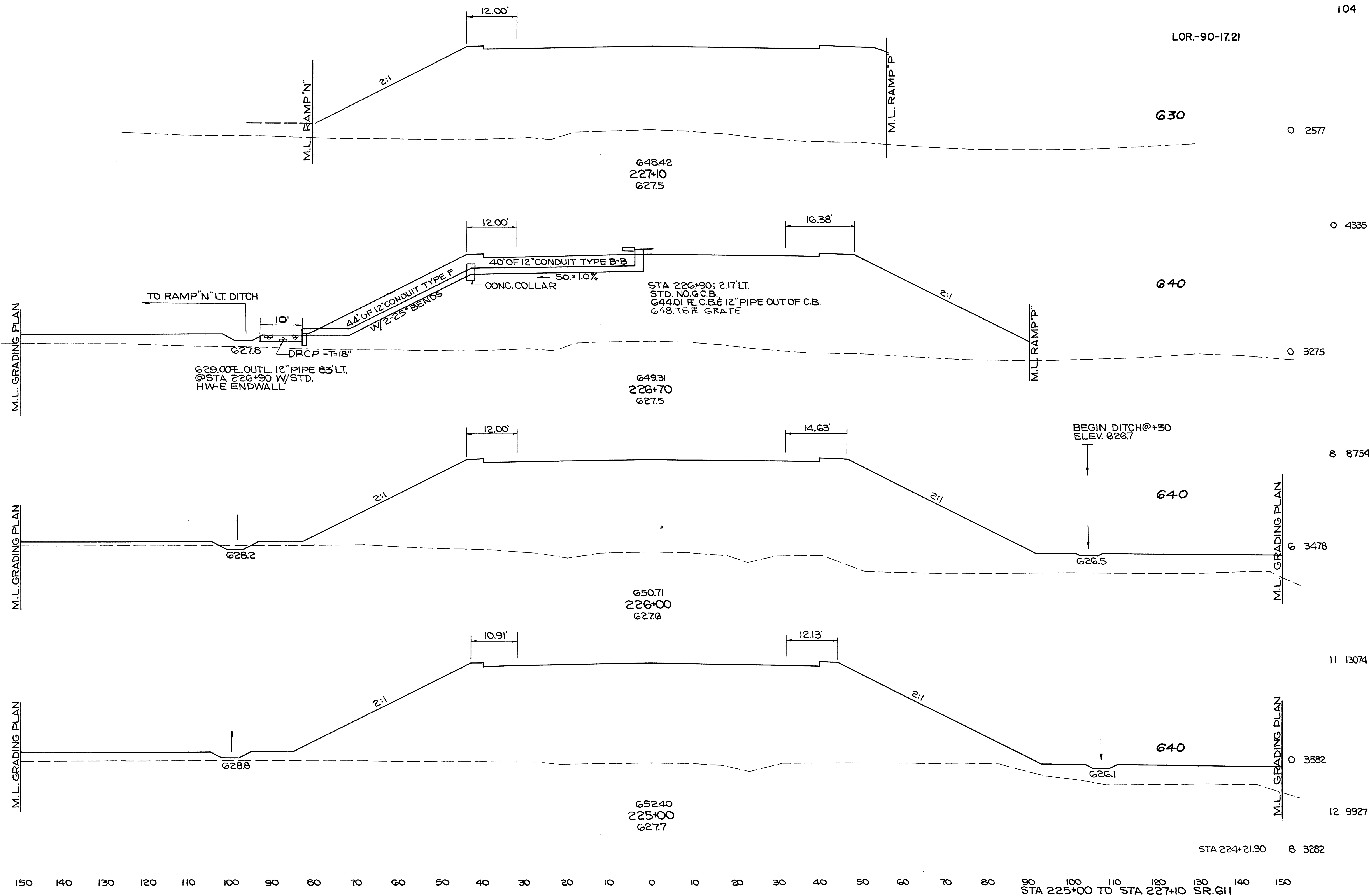
'O' FILL SECTION
STA 223+31

TO I.R.-90
RT. DITCH

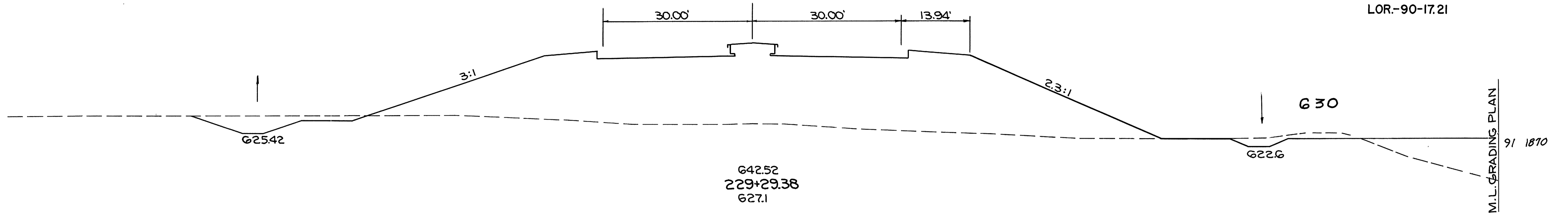
STA 223+31

STA 223+31 TO STA 224+21.90 SR. 611

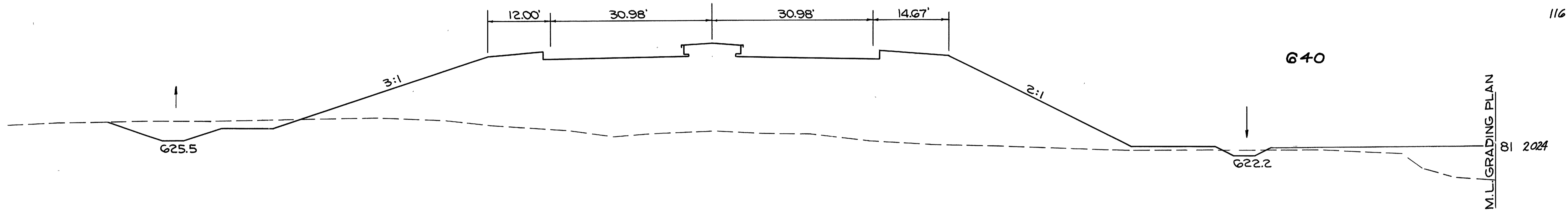
LOR.-90-17.21



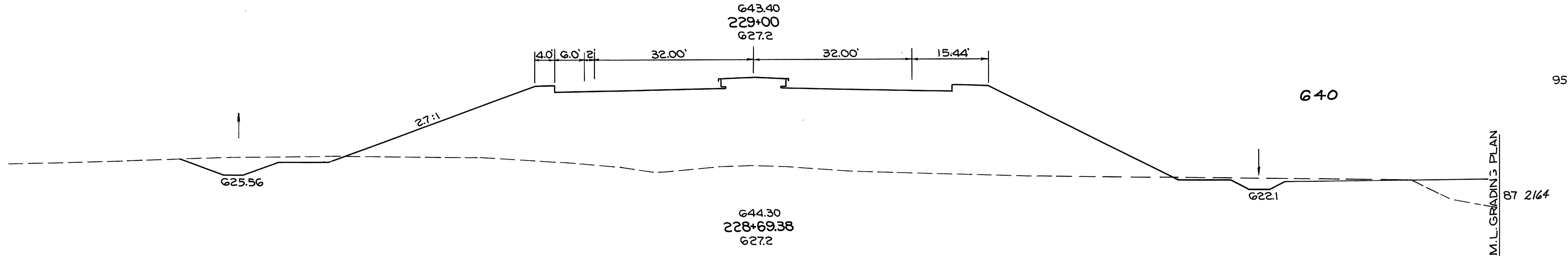
LOR.-90-17.21



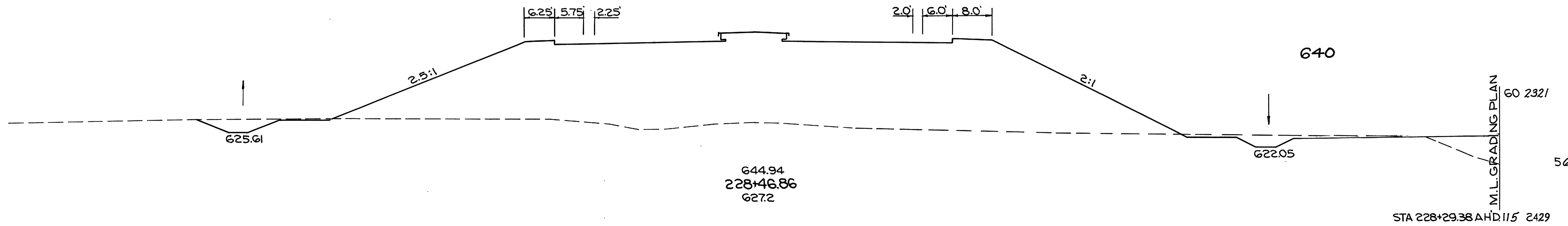
91 1870



81 2024



87 2164

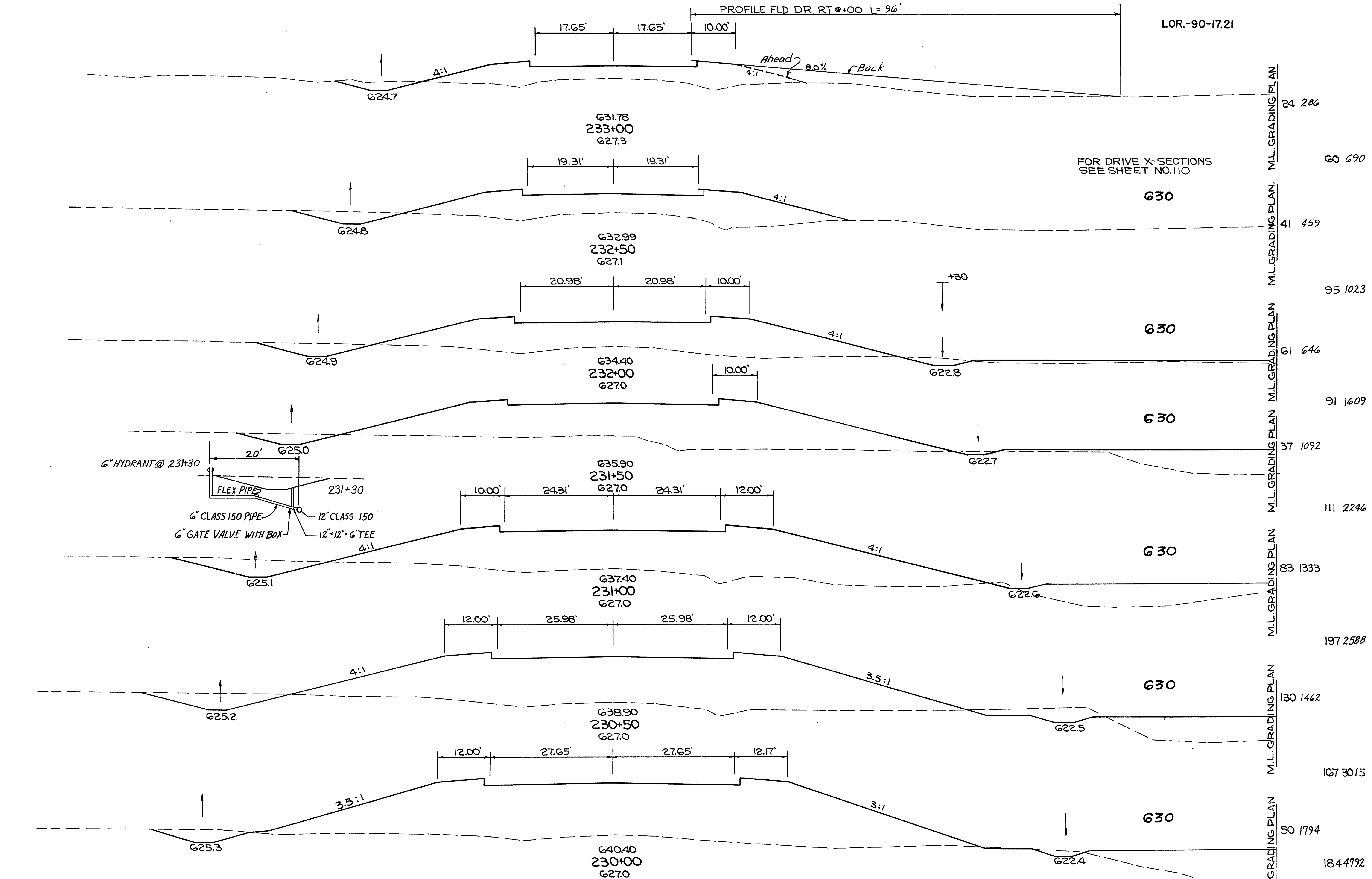


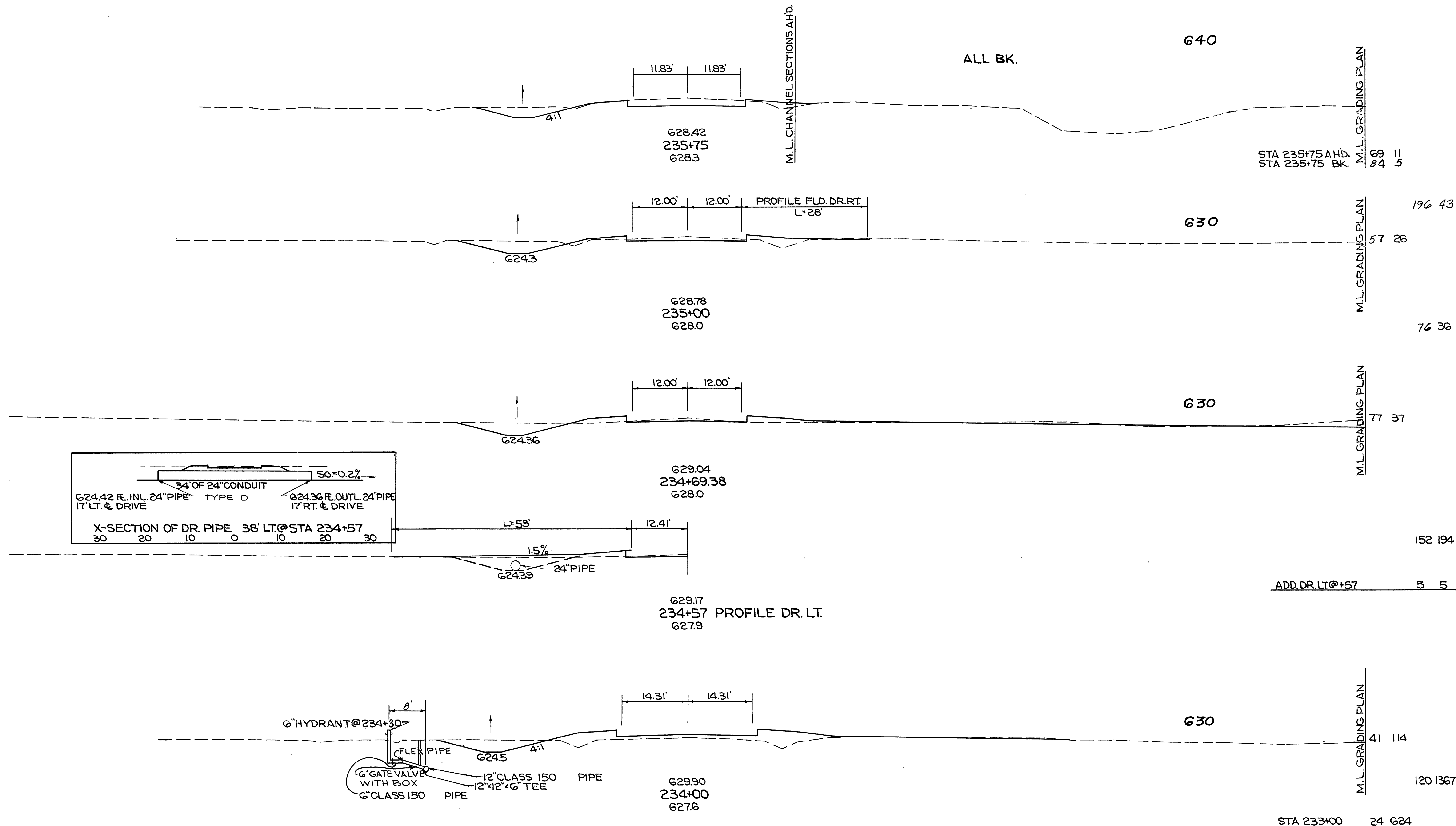
60 2321

STA 228+29.38 AHD 115 2429

LOR-90-17.21

PROFILE FLD DR. RT. @ +00 L= 96'





END WORK
STA 238+00

"O" SECTION @ STA 238+00

STA 238+00 AHD. 0 0
STA 238+00 BK. 0 0

0 0

0 0

0 8

0 8

10 10

11 2

37 4

6 2

63 10

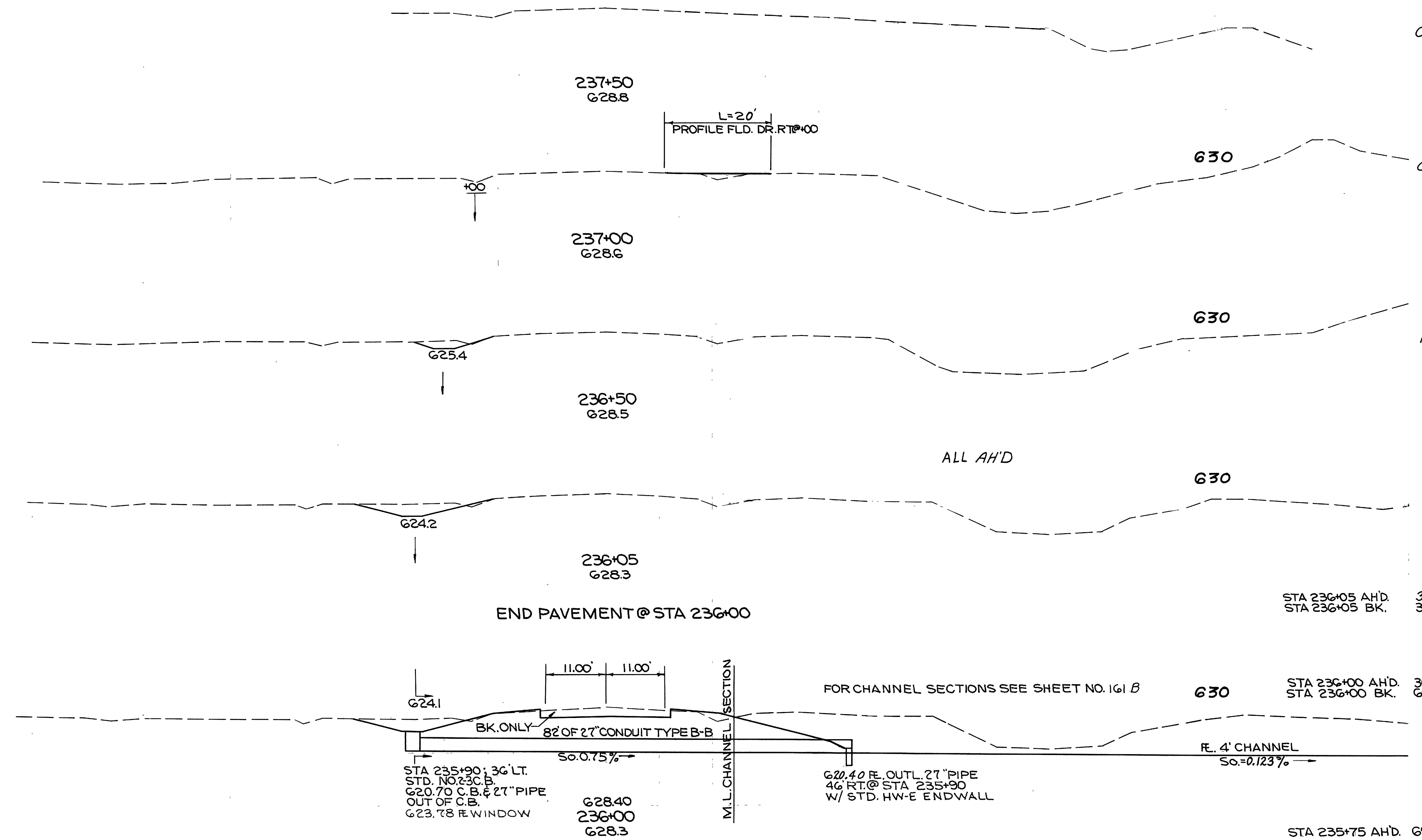
STA 236+05 AHD. 34 3
STA 236+05 BK. 30 8

STA 236+00 AHD. 30 10
STA 236+00 BK. 66 10

STA 235+75 AHD. 69 11

Rev. 11-3-66

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA 236+00 TO STA 238+00 S.R. 611



L=20'
PROFILE FLD. DR. RT @ +00

ALL AHD

FOR CHANNEL SECTIONS SEE SHEET NO. 161 B

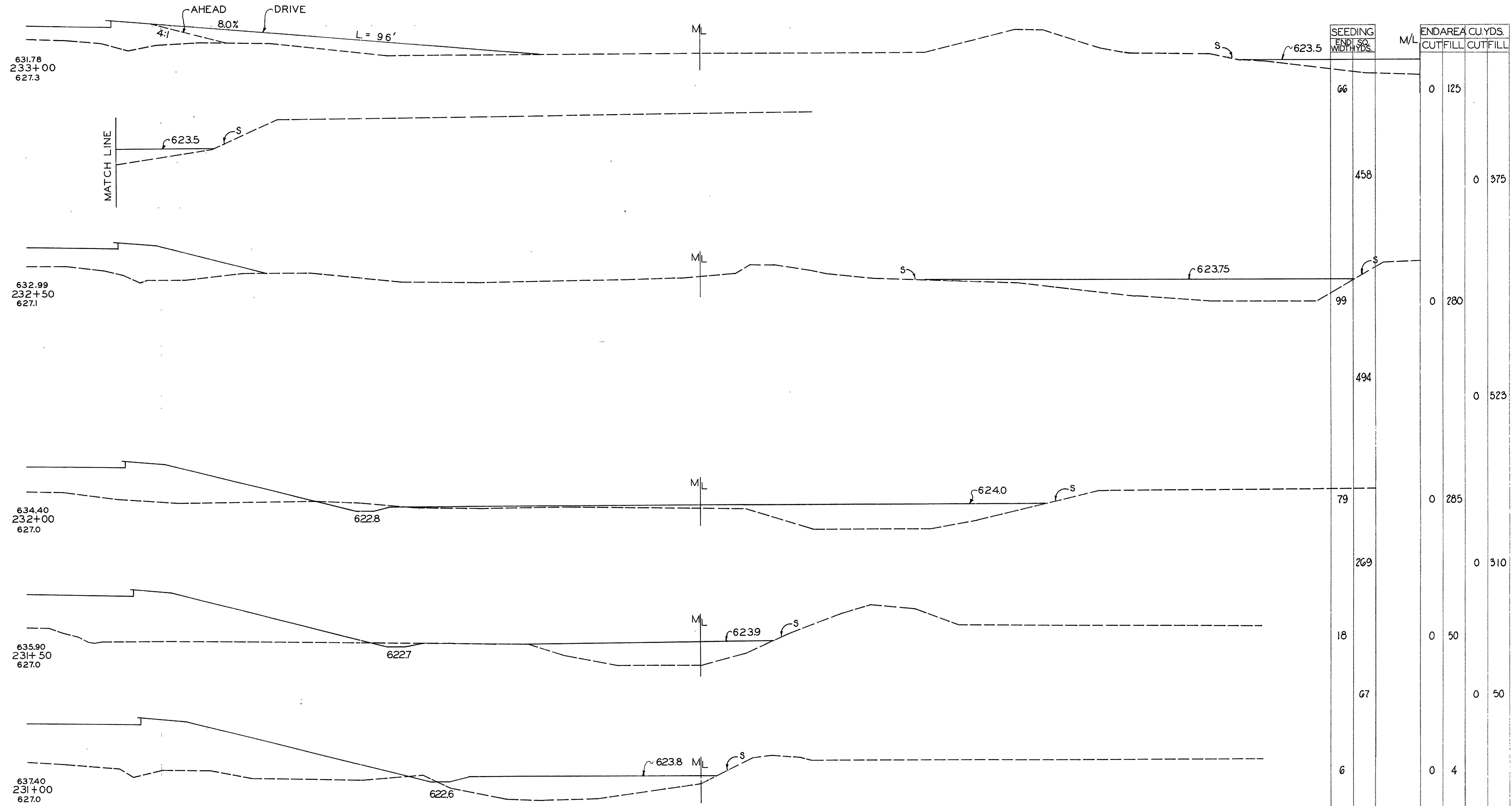
END PAVEMENT @ STA 236+00

STA 235+90: 36' LT.
 STD. NO. 23C.B.
 G20.70 C.B. & 27" PIPE
 OUT OF C.B.
 G23.78 R. WINDOW
 G28.40
 236+00
 G28.3

G20.40 R. OUTL. 27" PIPE
 46' RT. @ STA 235+90
 W/ STD. HW-E ENDWALL

R. 4' CHANNEL
 So=0.123%

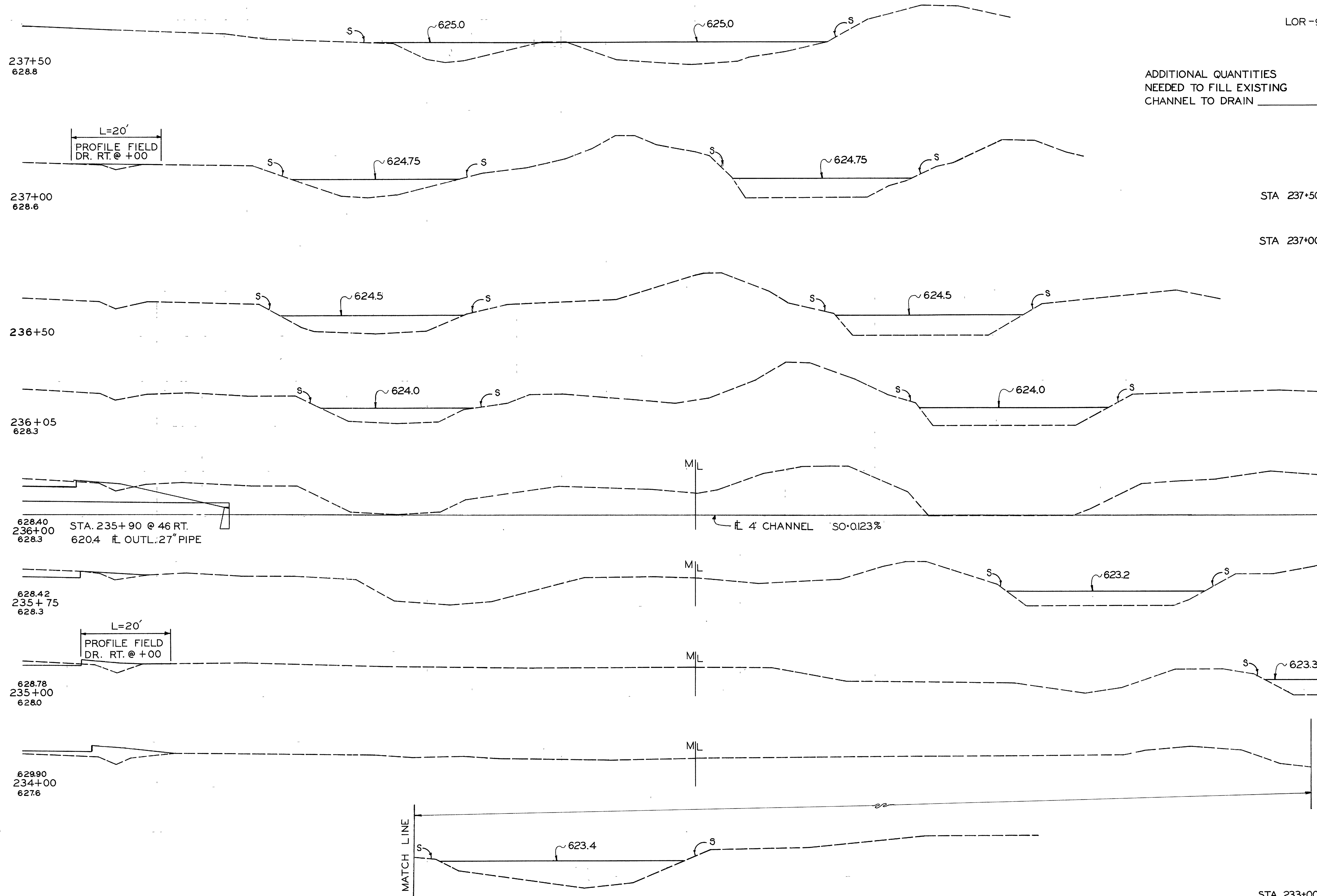
LOR - 90 - 17.21



Rev. 11-3-66
S.R. 611 - STA 231+00 TO STA 233+00

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330

LOR-90-17.21



STATION	ADDITIONAL QUANTITIES NEEDED TO FILL EXISTING CHANNEL TO DRAIN	SEEDING		END AREA CU. YDS.	
		END SQ. WIDTH YDS.	WIDTH YDS.	CUT	FILL
	4222				565
STA 237+50	150			0	370
	653				574
STA 237+00	85			0	250
	489				500
236+50	91			0	290
	437				441
236+05	84			0	240
	218				206
628.40 236+00 628.3					
628.42 235+75 628.3	47			0	130
	367				333
628.78 235+00 628.0	41			0	110
	555				593
628.90 234+00 627.6	59			0	210
	694				620
STA. 233+00	66			0	125

Rev. 11-3-66
S.R. 611 - STA 234+00 TO STA 237+50

TYPICAL 800' DECELERATION LANE FOR RAMPS "M" & "P" I.R. 90 & S.R. 611 INTERCHANGE

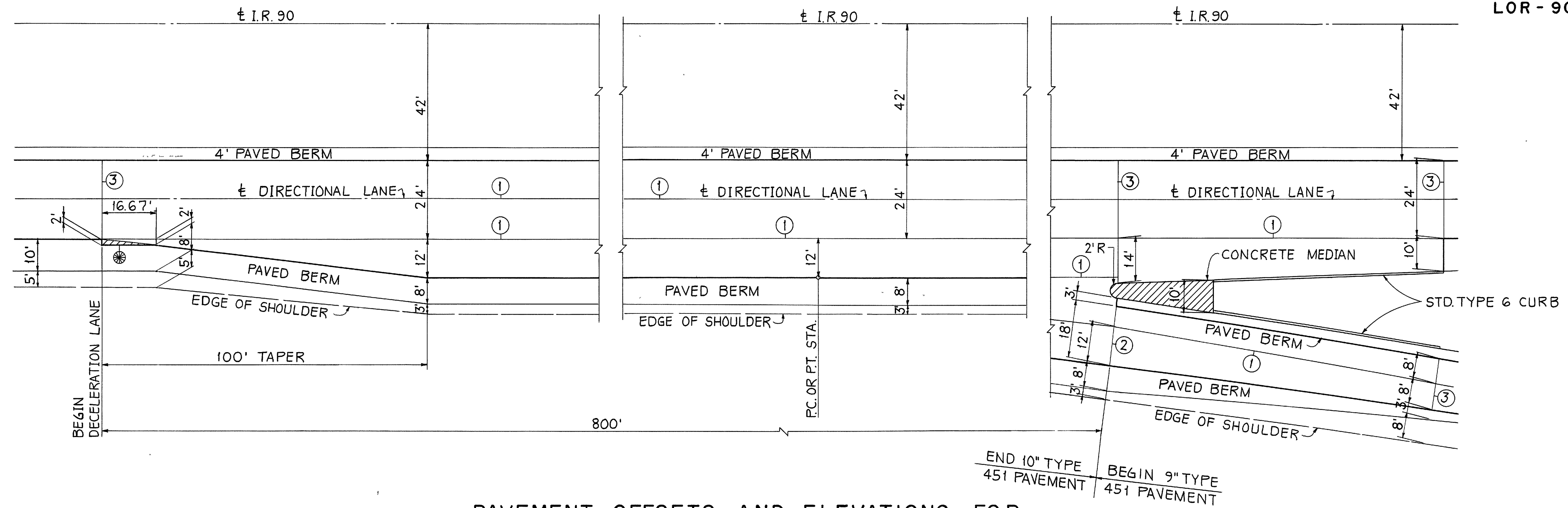
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



LOR - 90 - 17.21

CROSSHATCHED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION 1/2" LOWER THAN THE ADJACENT PAVEMENT AND SURFACE WITH 409 USING NO.8 AGGREGATE AS THE MAXIMUM SIZE. CONCRETE SHALL BE PAID FOR UNDER FULL DEPTH 451

- JOINT LEGEND**
- ① STANDARD LONGITUDINAL JOINT
 - ② STANDARD EXPANSION JOINT
 - ③ STANDARD CONTRACTION JOINT



PAVEMENT OFFSETS AND ELEVATIONS FOR

RAMPS "M" DECELERATION LANE

RAMPS "P" DECELERATION LANE

NOTE:
SEE PLAN & PROFILE SHEETS FOR LOCATION

STATION	OFFSET	ELEVATION
989+13.04	12.00	638.19
+25	12.00	638.21
+50	12.00	638.23
+75	12.00	638.24
990+00	12.00	638.24
+25	12.00	638.24

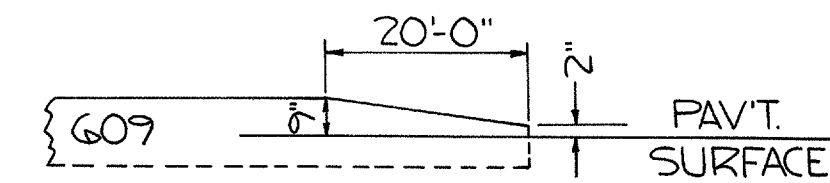
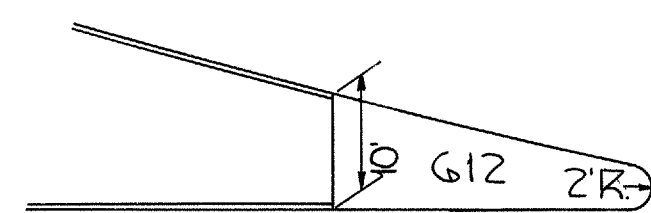
STATION	OFFSET	ELEVATION
990+50	12.00	638.23
+75	12.00	638.21
991+00	12.00	638.18
+25	12.00	638.15
+50	12.00	638.11
+50.88	12.00	638.11

STATION	OFFSET	ELEVATION
991+75	9.11	637.87
992+00	6.11	637.62
+25	3.11	637.37
+34.21	2.00	637.28
+50	2.00	637.24
+50.88	2.00	637.24

STATION	OFFSET	ELEVATION
962+22.89	2.00	634.27
+25	2.00	634.28
+39.56	2.00	634.31
+50	3.25	634.32
+75	6.25	634.33
963+00	9.25	634.35

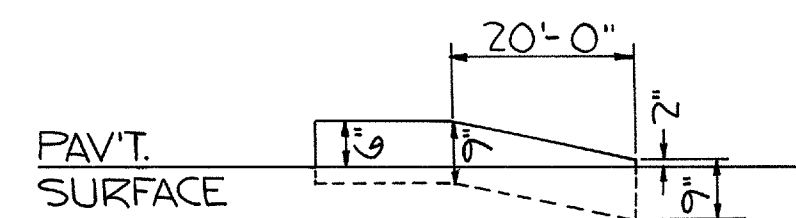
STATION	OFFSET	ELEVATION
963+22.89	12.00	634.35
+25	12.00	634.36
+50	12.00	634.42
+75	12.00	634.48
964+00	12.00	634.54
+25	12.00	634.60

STATION	OFFSET	ELEVATION
964+50	12.00	634.66
+75	12.00	634.72
965+00	12.00	634.78
+25	12.00	634.84
+50	12.00	634.90
+69.82	12.00	634.95



NO. 7 CURB END TREATMENT

(APPLIES AT THE APPROACH ENDS OF CURBS
SEE SHEETS 113 & 114)

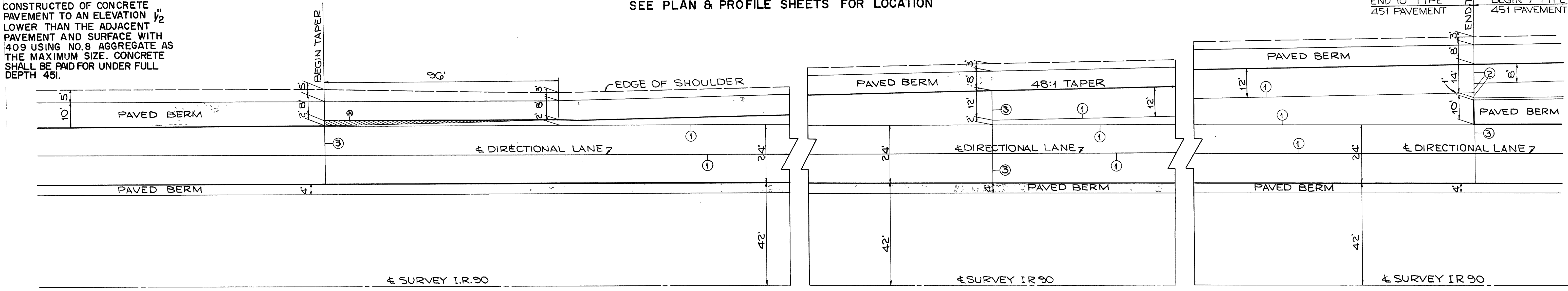


EXIT NOSE DETAIL

TYPICAL 1200' ACCELERATION LANE FOR RAMPS "N" & "R" I.R. 90 & S.R. 611 INTERCHANGE

SEE PLAN & PROFILE SHEETS FOR LOCATION

⊗ CROSSHATCHED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION 1/2 LOWER THAN THE ADJACENT PAVEMENT AND SURFACE WITH 409 USING NO. 8 AGGREGATE AS THE MAXIMUM SIZE. CONCRETE SHALL BE PAID FOR UNDER FULL DEPTH 451.



- JOINT LEGEND**
- ① STANDARD LONGITUDINAL JOINT
 - ② STANDARD EXPANSION JOINT
 - ③ STANDARD CONTRACTION JOINT
 - ④ KEY JOINT WITHOUT TIE BARS

PAVEMENT OFFSETS AND ELEVATIONS FOR

RAMP "N" ACCELERATION LANE

STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
993+2189	25.00	G32.26	+50	16.08	G31.80	1002+00	6.71	G32.96
+25	24.94	G32.25	+75	15.56	G31.77	+25	6.19	G32.98
+50	24.41	G32.23	+998+00	15.04	G31.75	+50	5.66	G33.00
+75	23.89	G32.20	+25	14.52	G31.72	+75	5.14	G33.01
994+00	23.37	G32.17	+50	14.00	G31.69	1003+00	4.62	G32.98
+25	22.85	G32.15	+75	13.48	G31.67	+25	4.10	G32.93
+50	22.33	G32.12	999+00	12.96	G31.64	+50	3.58	G32.87
+75	21.81	G32.09	+25	12.44	G31.61	+75	3.06	G32.82
995+00	21.29	G32.07	+50	11.91	G31.67	1004+00	2.54	G32.77
+25	20.77	G32.04	+75	11.39	G31.82	+25	2.02	G32.72
+50	20.25	G32.01	1000+00	10.87	G31.98	+2589	2.00	G32.72
+75	19.73	G31.99	+25	10.35	G32.12	+50		G32.66
996+00	19.21	G31.96	+50	9.83	G32.27	+75		G32.60
+25	18.69	G31.93	+75	9.31	G32.40	1005+00		G32.54
+50	18.16	G31.91	1001+00	8.79	G32.53	+2189	2.00	G32.49
+75	17.64	G31.88	+25	8.27	G32.65			
997+00	17.12	G31.85	+50	7.75	G32.77			
+25	16.60	G31.83	+75	7.23	G32.88			

RAMP "R" ACCELERATION LANE

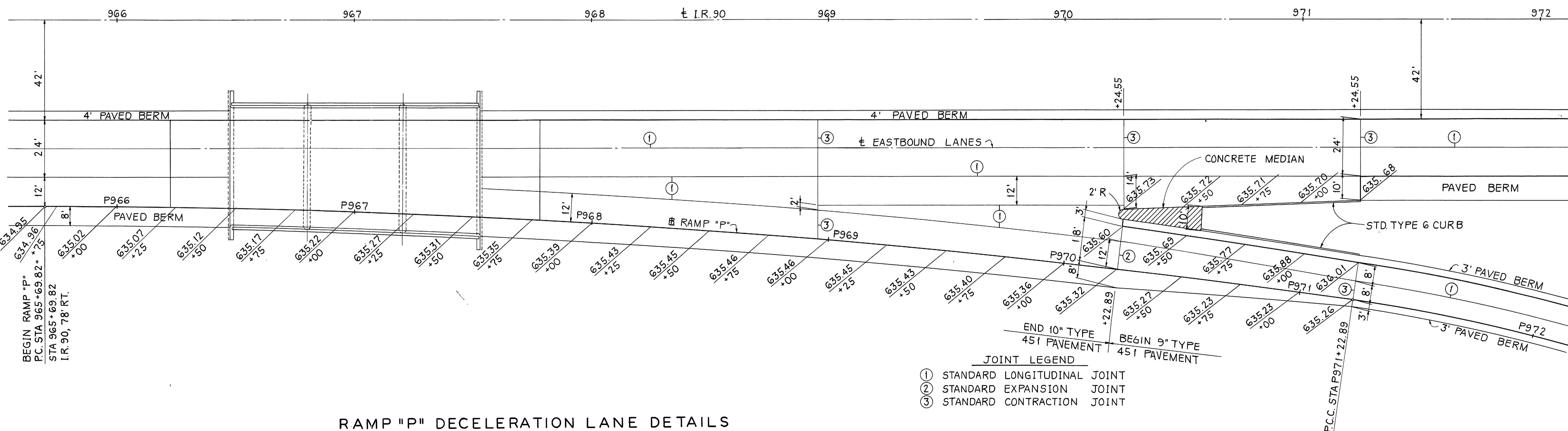
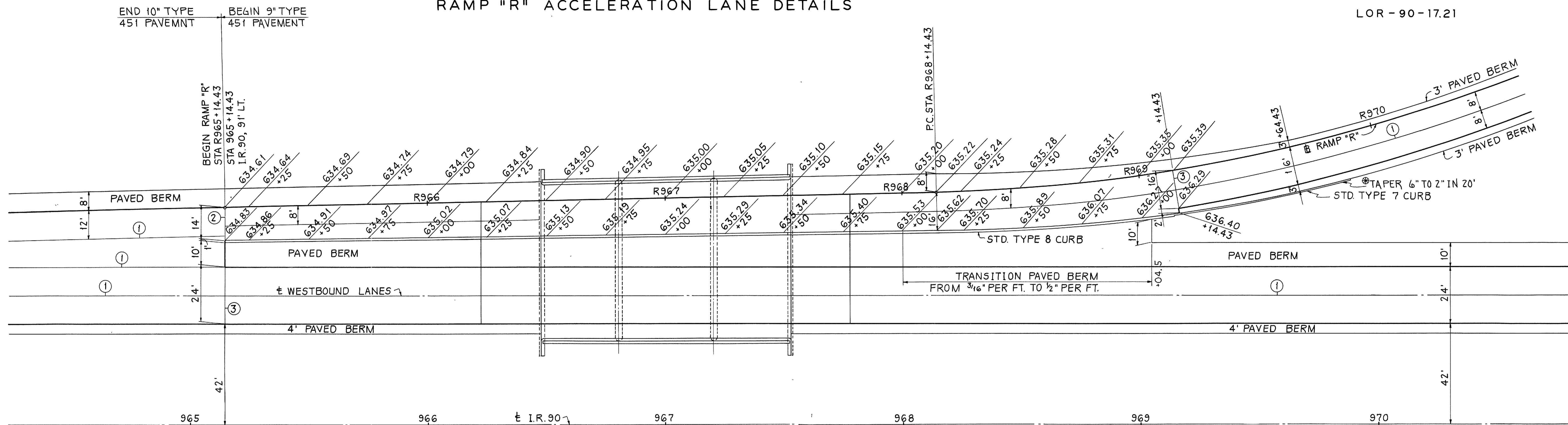
STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION	STATION	OFFSET	ELEVATION
953+14.43	2.00	G32.09	+25	8.55	G32.98	+75	17.93	G33.91
+25		G32.12	+50	9.07	G33.03	962+00	18.45	G33.96
+50		G32.18	+75	9.60	G33.08	+25	18.97	G34.01
+75		G32.24	958+00	10.12	G33.13	+50	19.49	G34.07
954+00		G32.30	+25	10.64	G33.18	+75	20.01	G34.12
+10.43	2.00	G32.33	+50	11.16	G33.24	963+00	20.53	G34.17
+25	2.30	G32.35	+75	11.68	G33.29	+25	21.05	G34.22
+50	2.82	G32.41	959+00	12.20	G33.34	+50	21.57	G34.27
+75	3.35	G32.46	+25	12.72	G33.39	+75	22.10	G34.32
955+00	3.87	G32.51	+50	13.24	G33.44	964+00	22.62	G34.38
+25	4.39	G32.56	+75	13.76	G33.50	+25	23.14	G34.43
+50	4.91	G32.61	960+00	14.28	G33.55	+50	23.66	G34.48
+75	5.43	G32.67	+25	14.80	G33.60	+75	24.18	G34.53
956+00	5.95	G32.72	+50	15.32	G33.65	965+00	24.70	G34.58
+25	6.47	G32.77	+75	15.84	G33.70	+14.43	25.00	G34.61
+50	6.99	G32.82	961+00	16.37	G33.75			
+75	7.51	G32.87	+25	16.88	G33.81			
957+00	8.03	G32.93	+50	17.41	G33.86			

SEE SHEET NO. 111 FOR DETAILS

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LOR - 90 - 17.21

RAMP "R" ACCELERATION LANE DETAILS



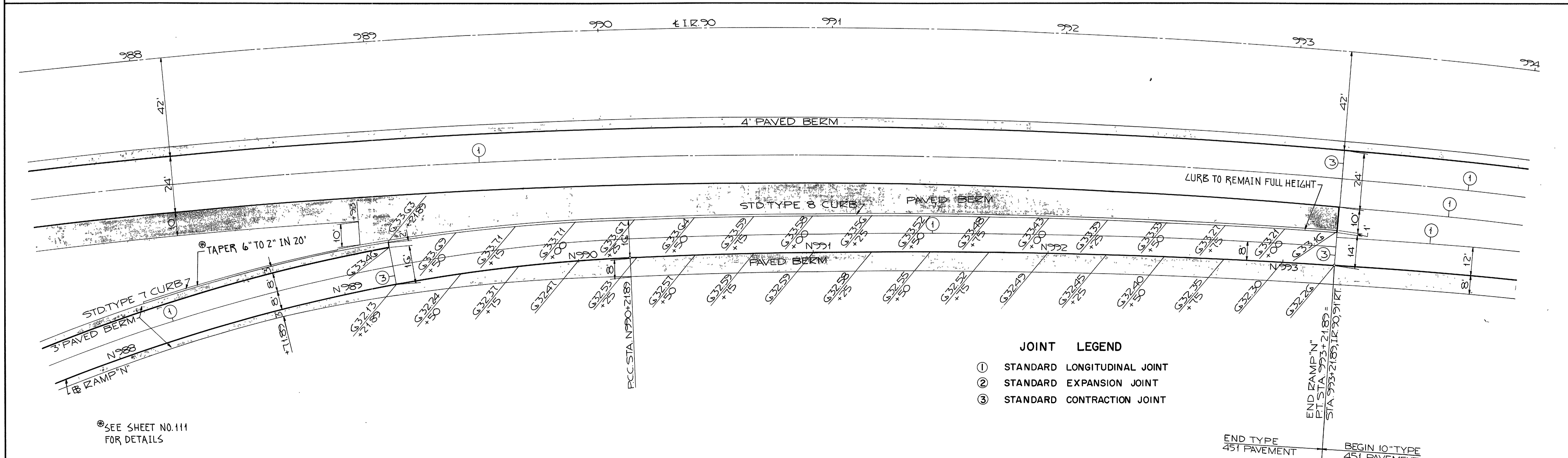
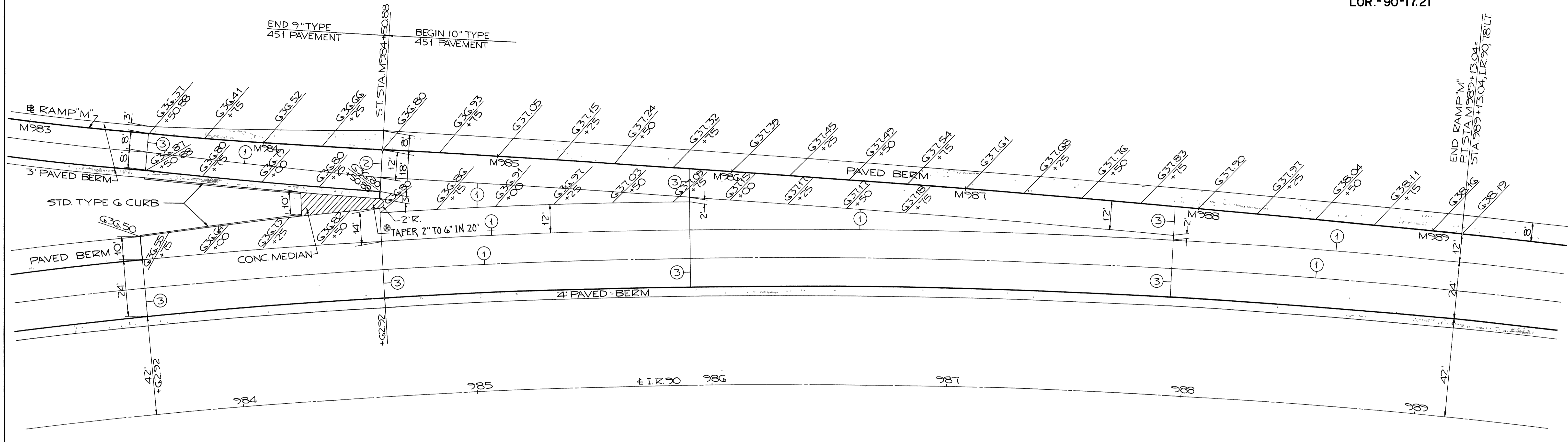
- JOINT LEGEND
- ① STANDARD LONGITUDINAL JOINT
 - ② STANDARD EXPANSION JOINT
 - ③ STANDARD CONTRACTION JOINT

RAMP "P" DECELERATION LANE DETAILS

RAMP "M" DECELERATION LANE DETAIL

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

LOR-90-17.21



- JOINT LEGEND**
- ① STANDARD LONGITUDINAL JOINT
 - ② STANDARD EXPANSION JOINT
 - ③ STANDARD CONTRACTION JOINT

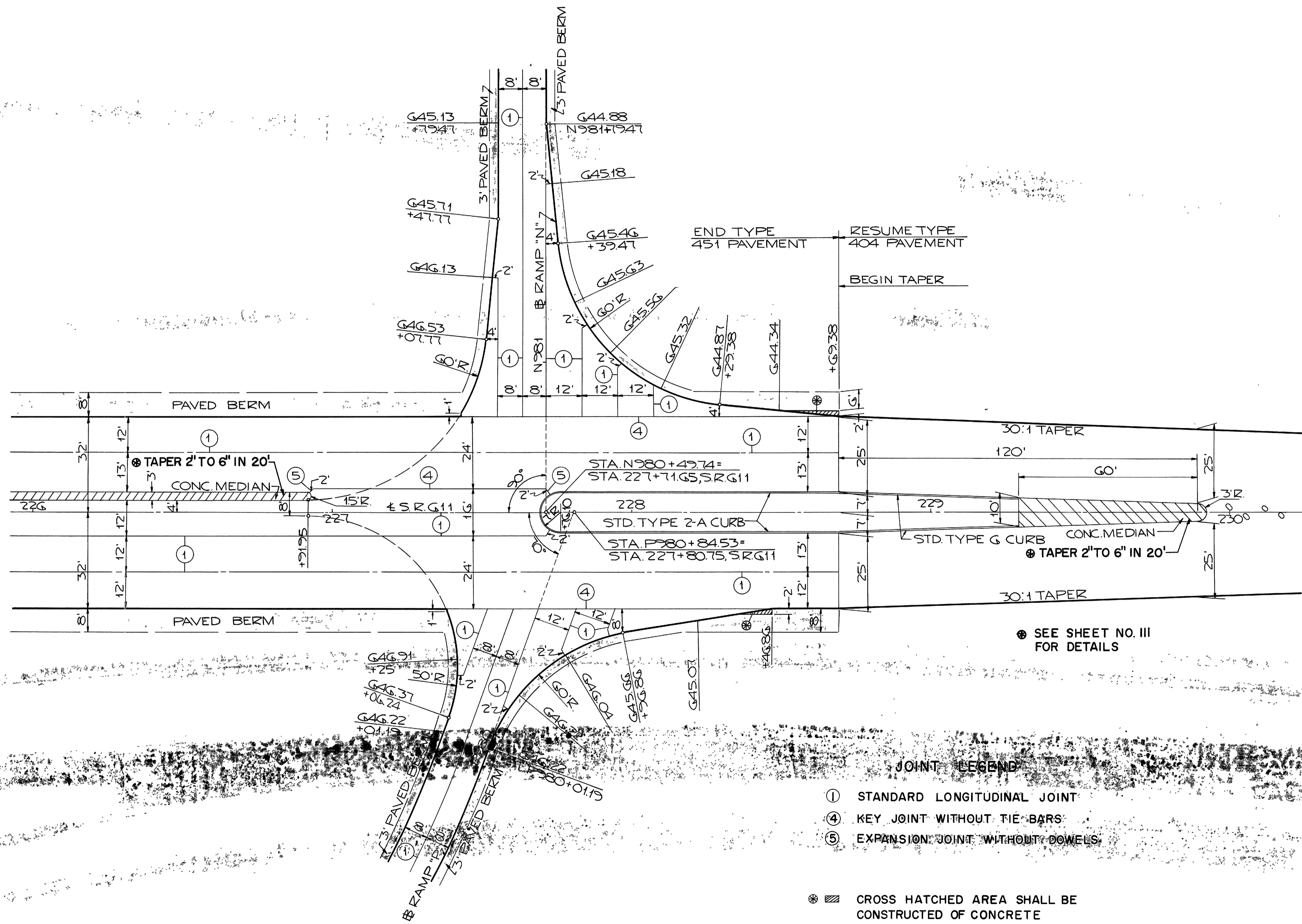
SEE SHEET NO. 111 FOR DETAILS

RAMP "N" ACCELERATION LANE DETAIL

RAMPS "N" & "P" INTERSECTION DETAIL S.R. 611 INTERCHANGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR.-90-17.21



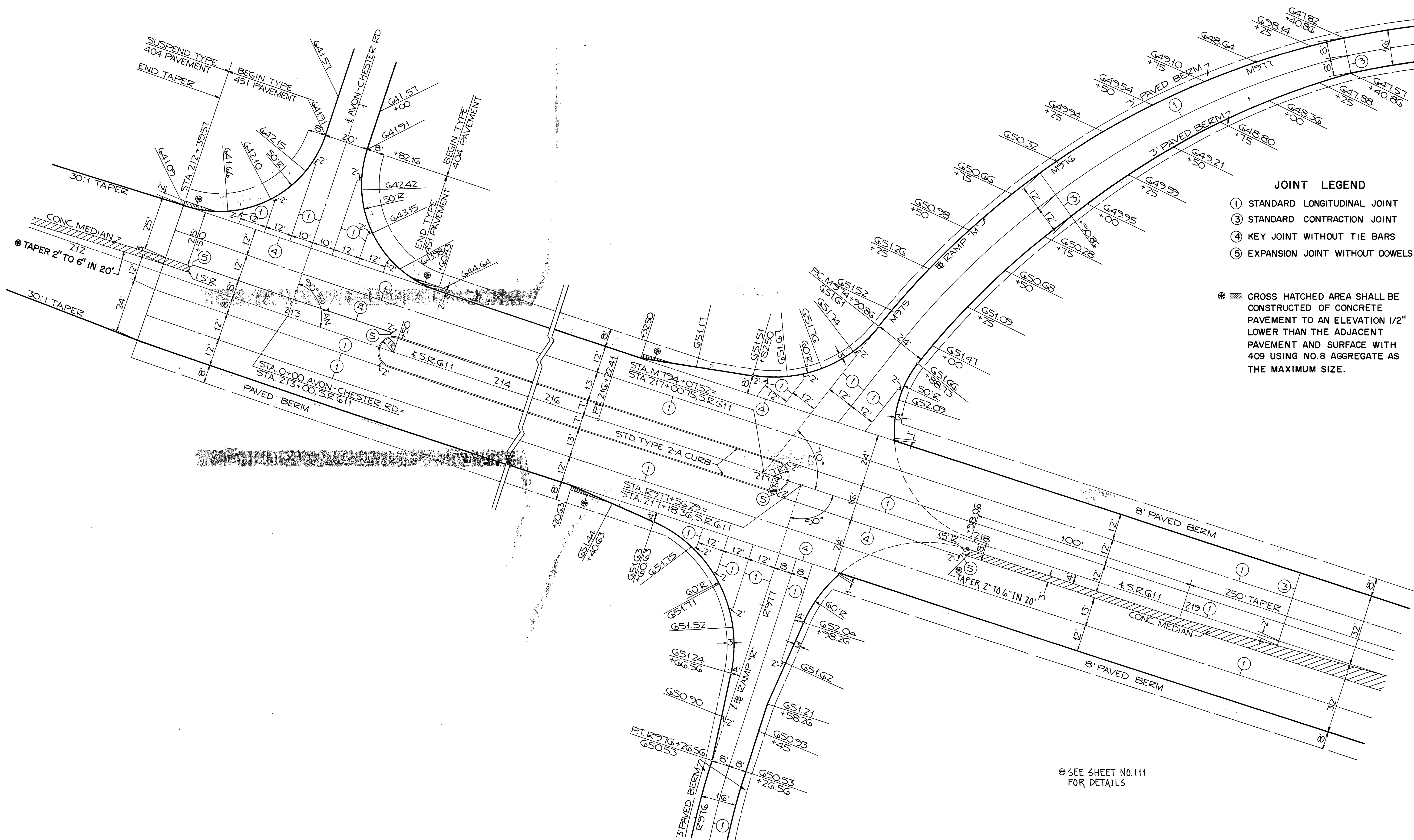
SEE SHEET NO. III FOR DETAILS

JOINT LEGEND

- ① STANDARD LONGITUDINAL JOINT
- ④ KEY JOINT WITHOUT TIE BARS
- ⑤ EXPANSION JOINT WITHOUT DOWELS

⊗ CROSS HATCHED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION 1/2" LOWER THAN THE ADJACENT PAVEMENT AND SURFACE WITH 409 USING NO. 8 AGGREGATE AS THE MAXIMUM SIZE.

RAMPS "M" & "R" INTERSECTION DETAIL S.R. 611 INTERCHANGE



- JOINT LEGEND**
- ① STANDARD LONGITUDINAL JOINT
 - ③ STANDARD CONTRACTION JOINT
 - ④ KEY JOINT WITHOUT TIE BARS
 - ⑤ EXPANSION JOINT WITHOUT DOWELS
- CROSS HATCHED AREA SHALL BE CONSTRUCTED OF CONCRETE PAVEMENT TO AN ELEVATION 1/2" LOWER THAN THE ADJACENT PAVEMENT AND SURFACE WITH 409 USING NO. 8 AGGREGATE AS THE MAXIMUM SIZE.

SEE SHEET NO. 111 FOR DETAILS

RAMP "M"

STATION	LEFT EDGE	RIGHT EDGE
M977+40.8	647.82	647.57
+50	647.62	647.37
+75	647.06	646.81
+97.07	646.55	646.30
M978+00	646.48	646.24
+25	645.88	645.77
+47.07	645.35	645.35
+50	645.28	645.29
+75	644.68	644.82
+97.07	644.15	644.40
M979+00	644.08	644.34
+25	643.48	643.87
+50	642.88	643.39
+75	642.28	642.92
M980+00	641.68	642.44
+25	641.08	641.97
+50	640.48	641.49
+75	639.88	641.02
M981+00	639.28	640.54
+13.07	638.98	640.31
+25	638.71	640.04
+50	638.20	639.53
+75	637.76	639.09
+84.88	637.60	638.93
M982+00	637.31	638.62
+25	637.05	638.18
+50	636.79	637.79
+75	636.59	637.47
M983+00	636.45	637.20
+25	636.38	637.01
+50.88	636.37	636.87

RAMP "N"

STATION	RIGHT EDGE	LEFT EDGE
N983+47.10	641.72	641.97
+50	641.65	641.91
+75	641.12	641.51
N984+00	640.57	641.08
+25	640.01	640.65
+50	639.44	640.20
+75	638.87	639.76
N985+00	638.30	639.31
+25	637.73	638.87
+50	637.16	638.42
+63.10	636.86	638.19
+75	636.59	637.92
N986+00	636.02	637.35
+25	635.45	636.78
+50	634.88	636.21
+75	634.34	635.67
N987+00	633.86	635.19
+25	633.43	634.76
+50	633.07	634.40
+75	632.76	634.09
N988+00	632.51	633.84
+25	632.32	633.65
+50	632.19	633.52
+75	632.11	633.44
N989+00	632.10	633.43
+21.88	632.13	633.46

RAMP "P"

STATION	LEFT EDGE	RIGHT EDGE
P971+22.88	636.01	635.26
+25	636.02	635.26
+50	636.23	635.34
+75	636.46	635.45
P972+00	636.74	635.60
+25	637.05	635.79
+38.88	637.24	635.91
+50	637.35	635.02
+75	637.61	636.28
P973+00	637.92	636.59
+25	638.26	636.93
+50	638.64	637.31
+75	639.04	637.71
P974+00	639.44	638.11
+25	639.84	638.51
+38.48	640.06	638.73
+50	640.18	638.97
+75	640.46	639.31
P975+00	640.73	639.71
+25	641.01	640.11
+50	641.28	640.51
+75	641.56	640.91
P976+00	641.83	641.31
+25	642.11	641.71
+50	642.38	642.11
+54.48	642.43	642.18
+75	642.66	642.51
P977+00	642.93	642.91
+04.48	642.98	642.98
+25	643.20	643.30
+50	643.44	643.67
+54.48	643.48	643.73
+75	643.77	644.02
P978+00	644.09	644.34
+25	644.40	644.65
+50	644.68	644.93
+75	644.95	645.20
P979+00	645.19	645.44
+25	645.42	645.67
+50	645.62	645.87
+51.19	645.63	645.88
+75	645.92	646.05
P980+00	646.20	646.21
+01.19	646.22	646.22

RAMP "R"

STATION	LEFT EDGE	RIGHT EDGE
R969+44.43	635.39	636.29
+25	635.43	636.39
+50	635.56	636.64
+75	635.74	636.95
R970+00	635.98	637.31
+25	636.27	637.60
+50	636.61	637.94
+75	637.01	638.34
R971+00	637.46	638.79
+25	637.96	639.29
+50	638.52	639.85
+70.92	639.03	640.36
+75	639.13	640.44
R972+00	639.79	640.97
+25	640.48	641.54
+50	641.17	642.10
+75	641.86	642.67
R973+00	642.55	643.23
+25	643.24	643.80
+50	643.93	644.36
+75	644.62	644.93
+86.92	644.95	645.20
R974+00	645.31	645.49
+25	645.99	646.05
+36.92	646.30	646.30
+50	646.64	646.57
+75	647.27	647.08
+86.92	647.56	647.31
R975+00	647.87	647.62
+25	648.45	648.20
+50	649.00	648.75
+75	649.53	649.28
+16.54	649.56	649.31
R976+00	650.43	649.90
+25	650.51	650.50
+26.54	650.53	650.53

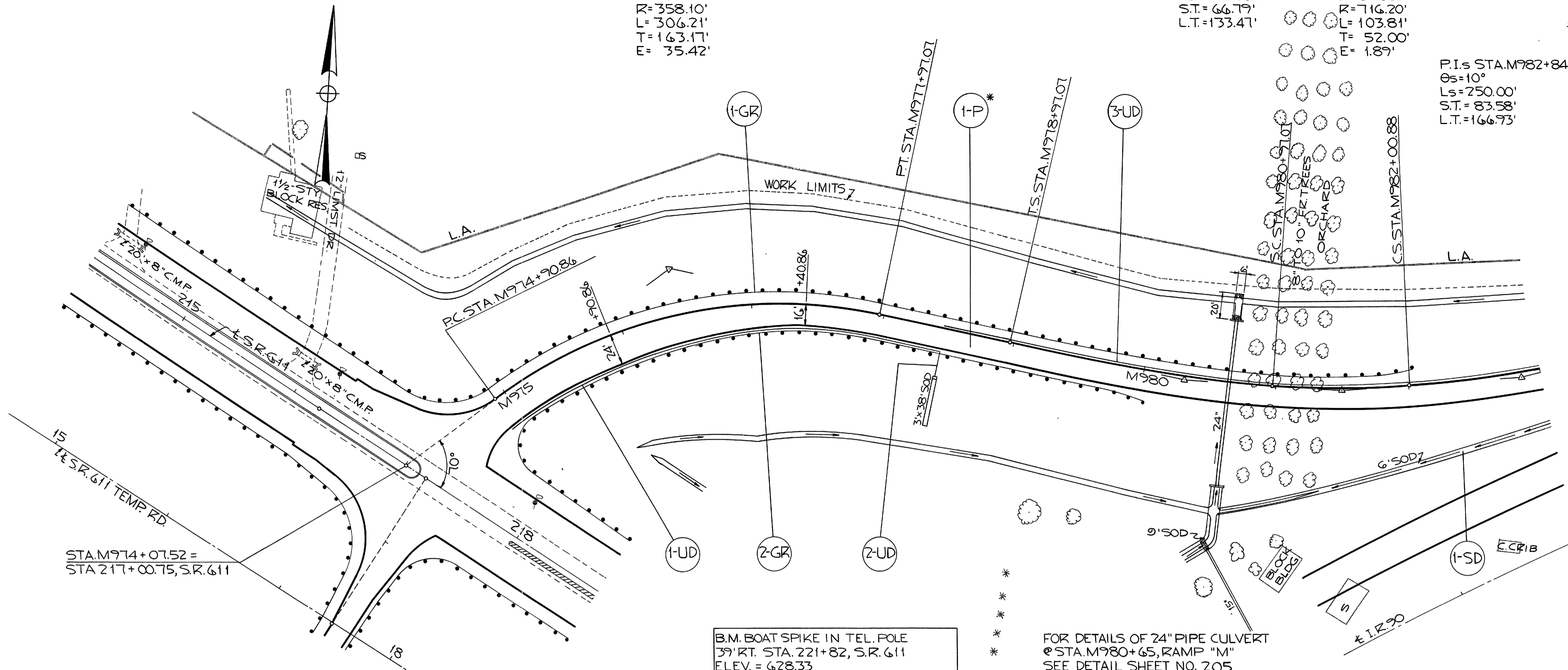
REFERENCE SHEETS	SHT. NO.
RAMP "M" DETAILS	114 & 116
SUPERELEVATION	111
GRADING PLANS	147, 10152
* PAV'T. QUANTITIES	153

LOR-90-17.21

PI. STA. M976+54.03
 $\Delta = 48^\circ 59' 37''$
 $D = 16'$
 $R = 358.10'$
 $L = 306.21'$
 $T = 163.17'$
 $E = 35.42'$

PI. STA. M980+3054 PI. STA. M981+49.07
 $\theta_s = 8^\circ$ $\Delta = 8^\circ 18' 11''$
 $L_s = 200.00'$ $D = 8^\circ 00'$
 $S.T. = 66.79'$ $R = 716.20'$
 $L.T. = 133.41'$ $L = 103.81'$
 $T = 52.00'$
 $E = 1.89'$

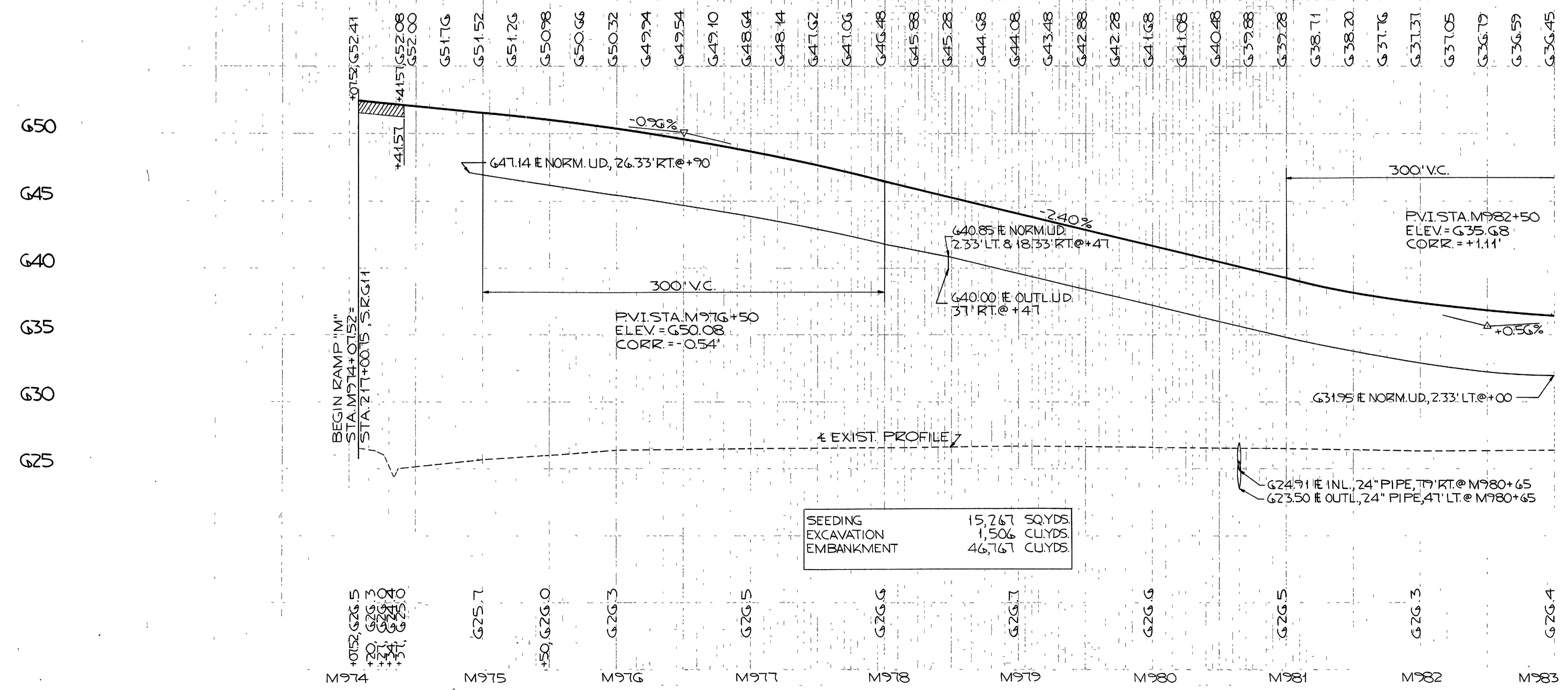
PI. STA. M982+84.46
 $\theta_s = 10^\circ$
 $L_s = 250.00'$
 $S.T. = 83.58'$
 $L.T. = 166.93'$



REFERENCE NO.	SIDE	STATION		G03	G05	G05	G06		660	
		FROM	TO	CONDUIT	SHALLOW	PIPE	BENDS	GUARD		
				TYPE	PIPE	PIPE	AND	RAIL		
1-UD	RT.	M974+90	M978+47		357				50YDS.	
2-UD	RT.	M978+47		10		9	1		13	
3-UD	LT.	M978+47	M983+00		453					
1-GR	LT.	M974+42	M981+97					775		
2-GR	RT.	M974+80	M980+00					525		
1-SD	RT.	M980+69	M983+00						176	
TOTALS				10	810	9		1300		189

B.M. BOAT SPIKE IN TEL. POLE
 @ STA. M980+65, RAMP "M"
 ELEV. = 628.33

FOR DETAILS OF 24" PIPE CULVERT
 @ STA. M980+65, RAMP "M"
 SEE DETAIL SHEET NO. 205

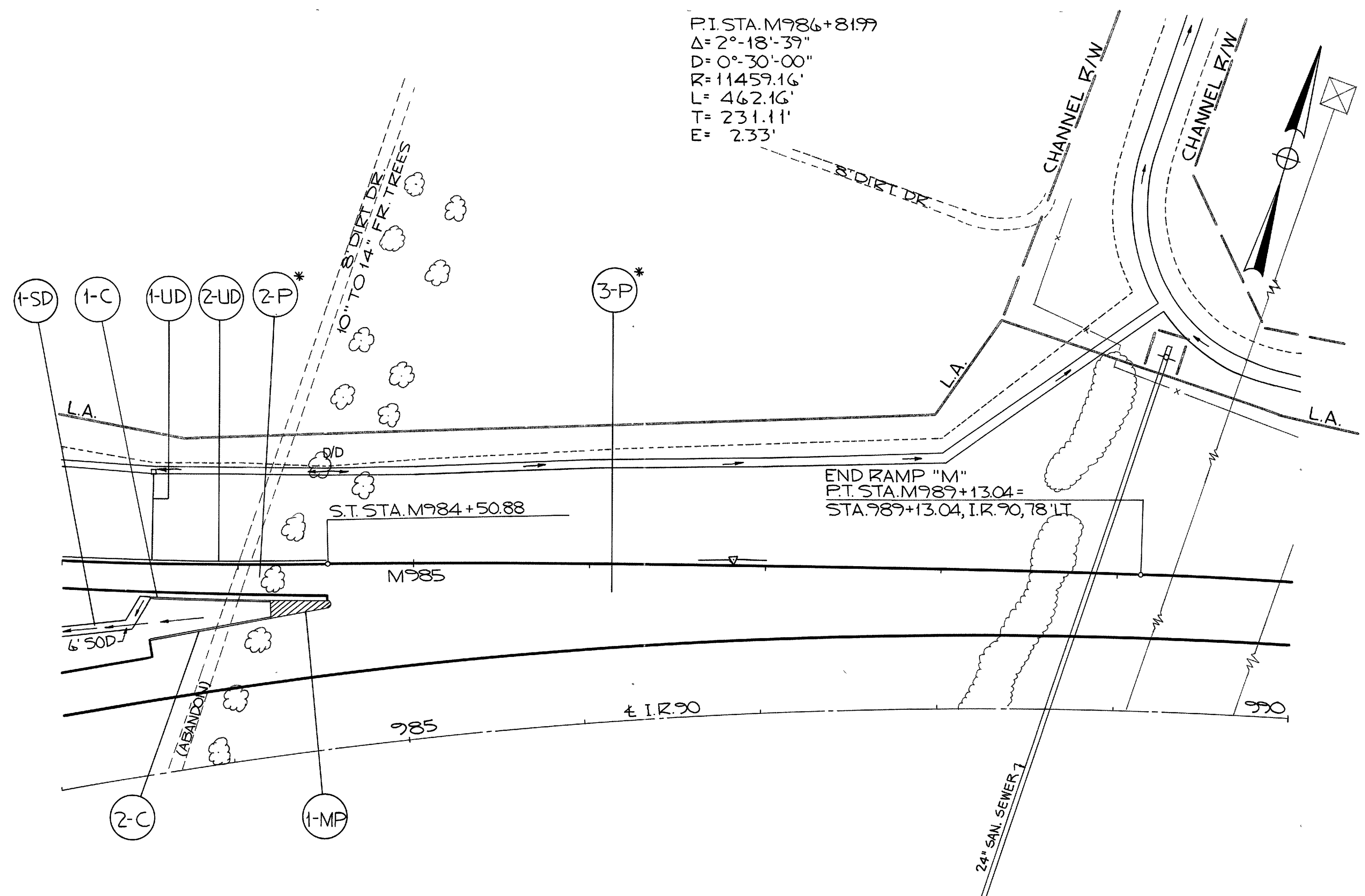


SEEDING	15,267	SQ.YDS.
EXCAVATION	1,506	CU.YDS.
EMBANKMENT	46,767	CU.YDS.

RAMP "M" STA. M974+07.52 TO STA. M983+00

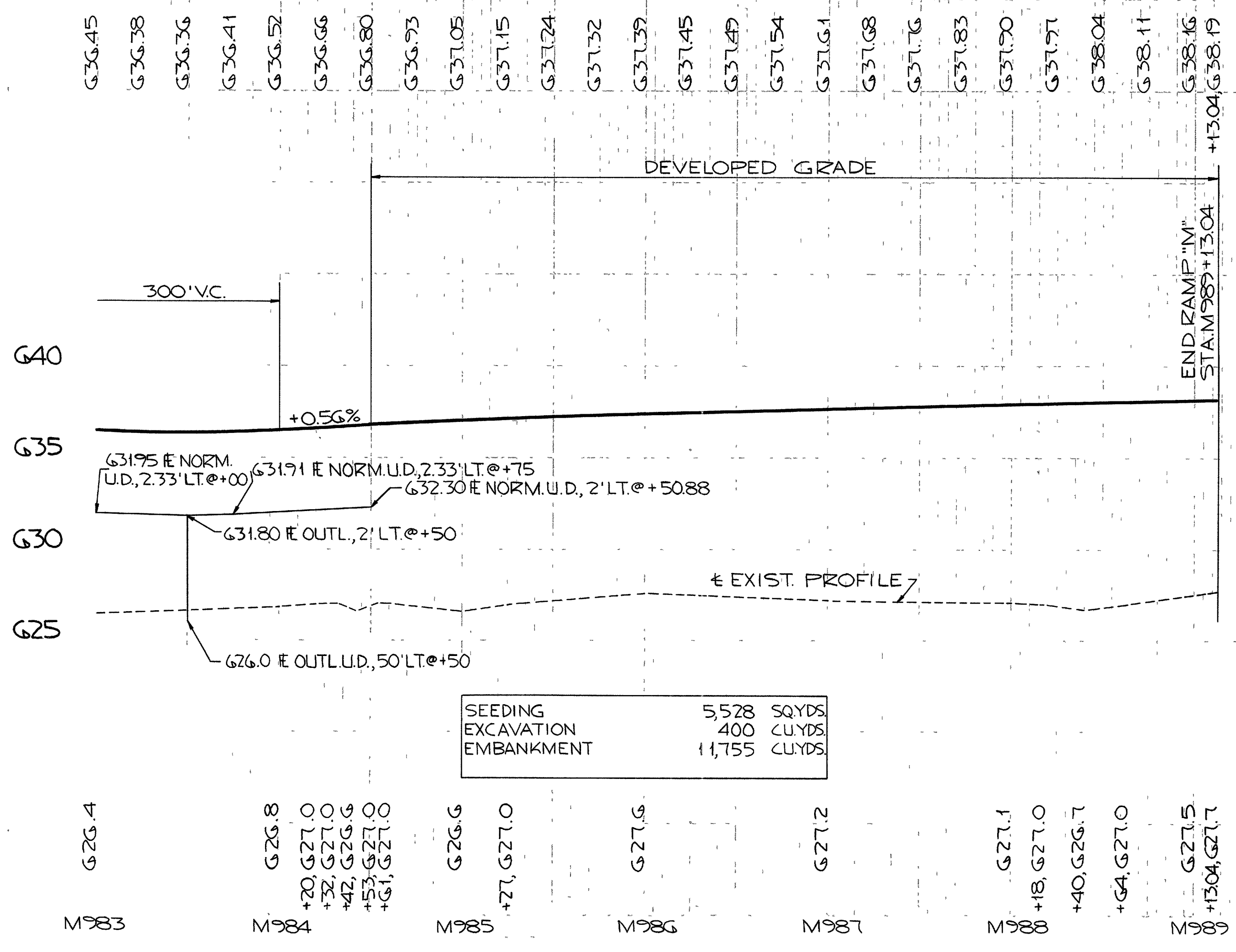
REFERENCE SHEETS	SHT. NO.
RAMP "M" DETAILS	114 & 116
SUPERELEVATION	111
GRADING PLANS	141 TO 152
* PAV'T. QUANTITIES	153
24" SAN. SEWER	212

LOR-90-17.21

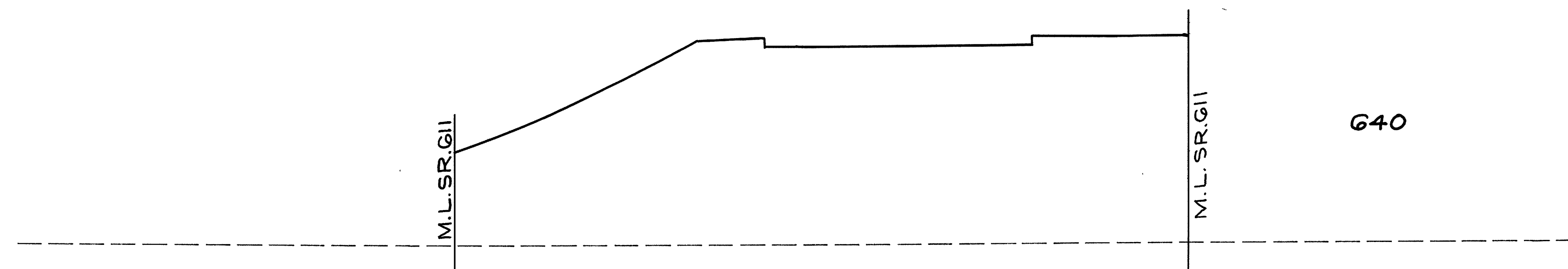


REFERENCE NO.	STATION		G03	G05	G05	BENDS AND BRANCHES	G09	G12	G60		
	FROM	TO	CONDUIT TYPE F	SHALLOW UNDER-DRAINS	UNCLASS. PIPE UNDER-DRAINS	TEE	CONCRETE CURB STD. TYPE 6	CONCRETE MEDIAN	SODDING		
			6"	6"	6"	6"	6"	6"	6"	6"	6"
HUD	LT.	M983+50	10		38	1					
Z-UD	LT.	M983+00		76	75						
I-C	RT.	M983+50.88					67				
Z-C	RT.	M983+50.88					69				
I-MP	RT.	M984+11.4						26.7	38		
I-SD	RT.	M983+00									
TOTALS			10	76	113		136	26.7	38		

B.M. ON NUT OF S.E. LEG OF EAST TOWER, 285' FT. OF STA. 989+50 ELEV. = 628.46



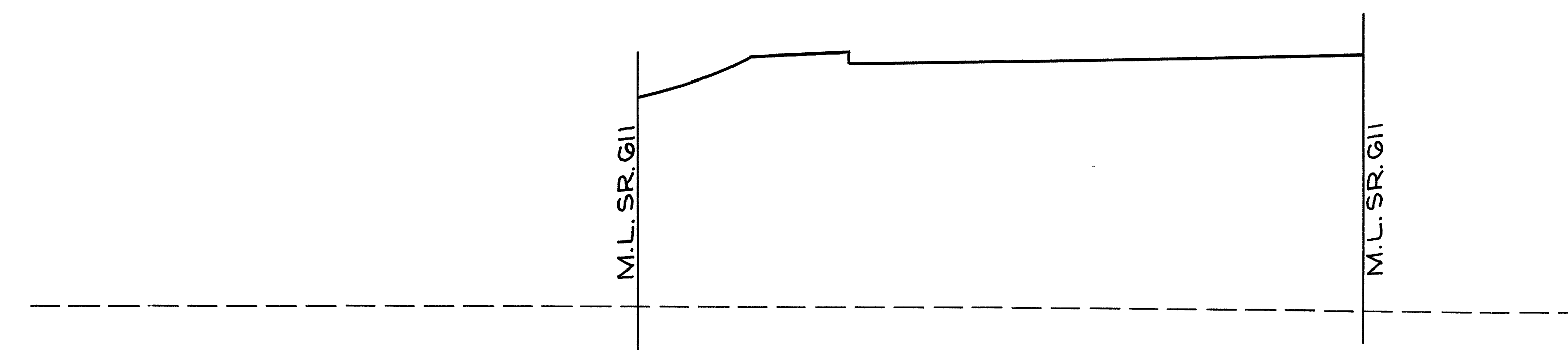
RAMP "M" STA. M983+00 TO STA. M989+13.04



651.76
M974+75
625.5

0 2176

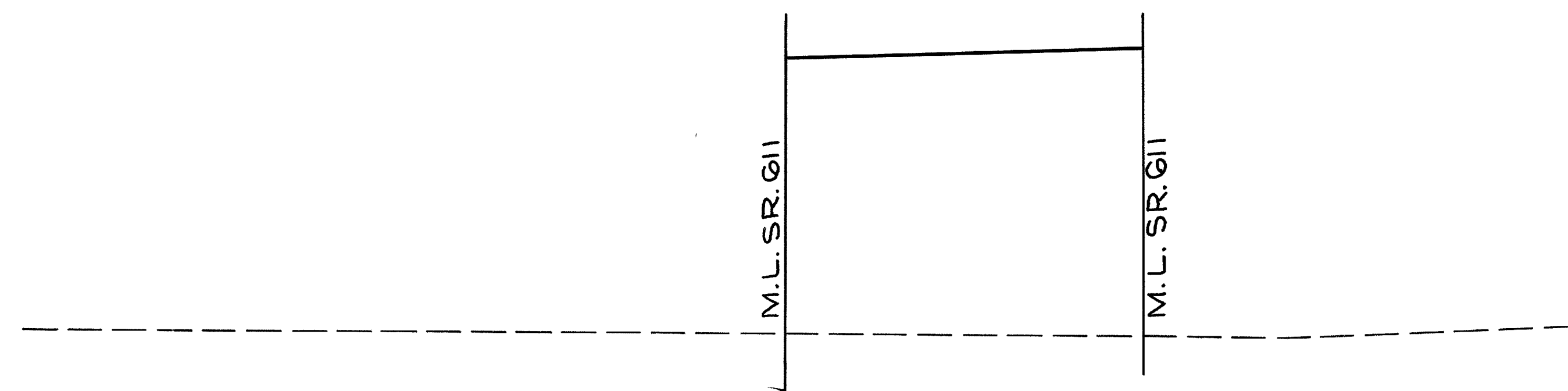
0 1459



651.95
M974+55.50
625.4

0 1864

0 689



652.08
M974+41.57
625.2

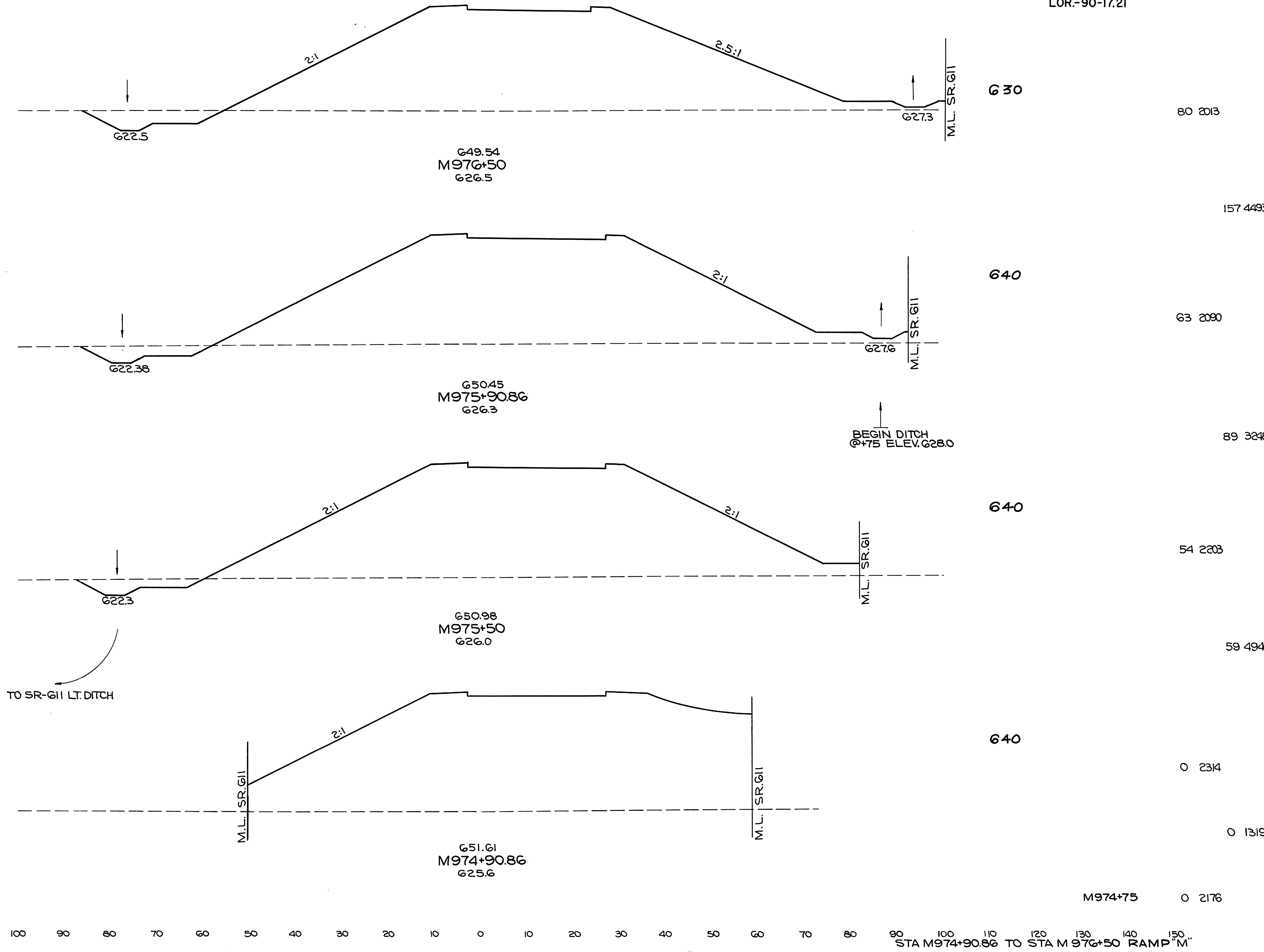
0 807

0 152

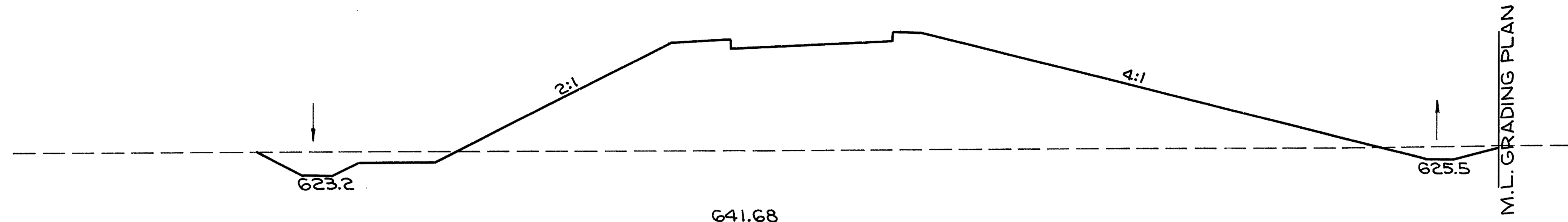
"O" SECTION
M974+31.4

M974+31.4 0 0

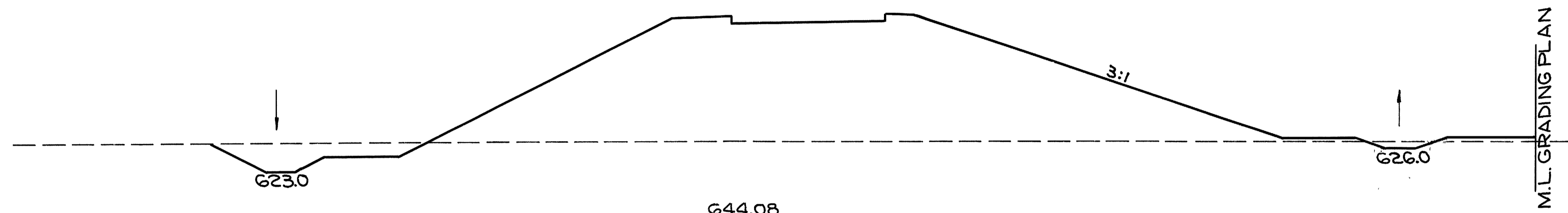
LOR.-90-17.21



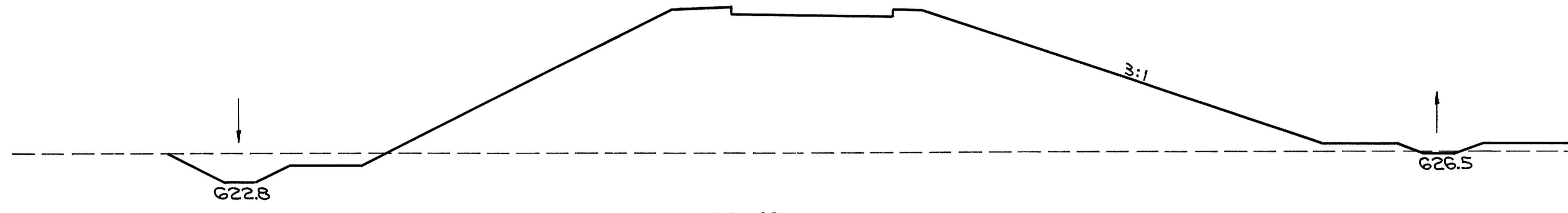
LOR-90-17.21



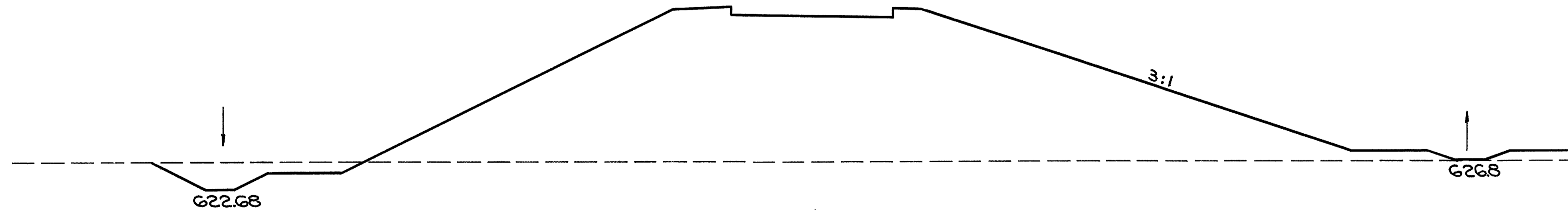
66 1196



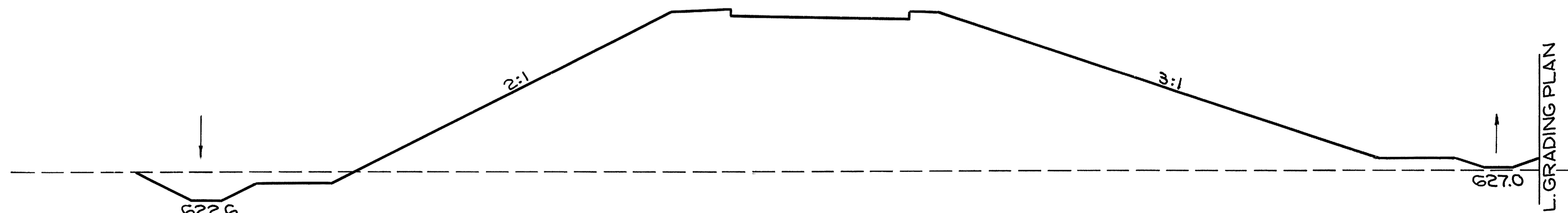
68 1259



63 1598



58 1789



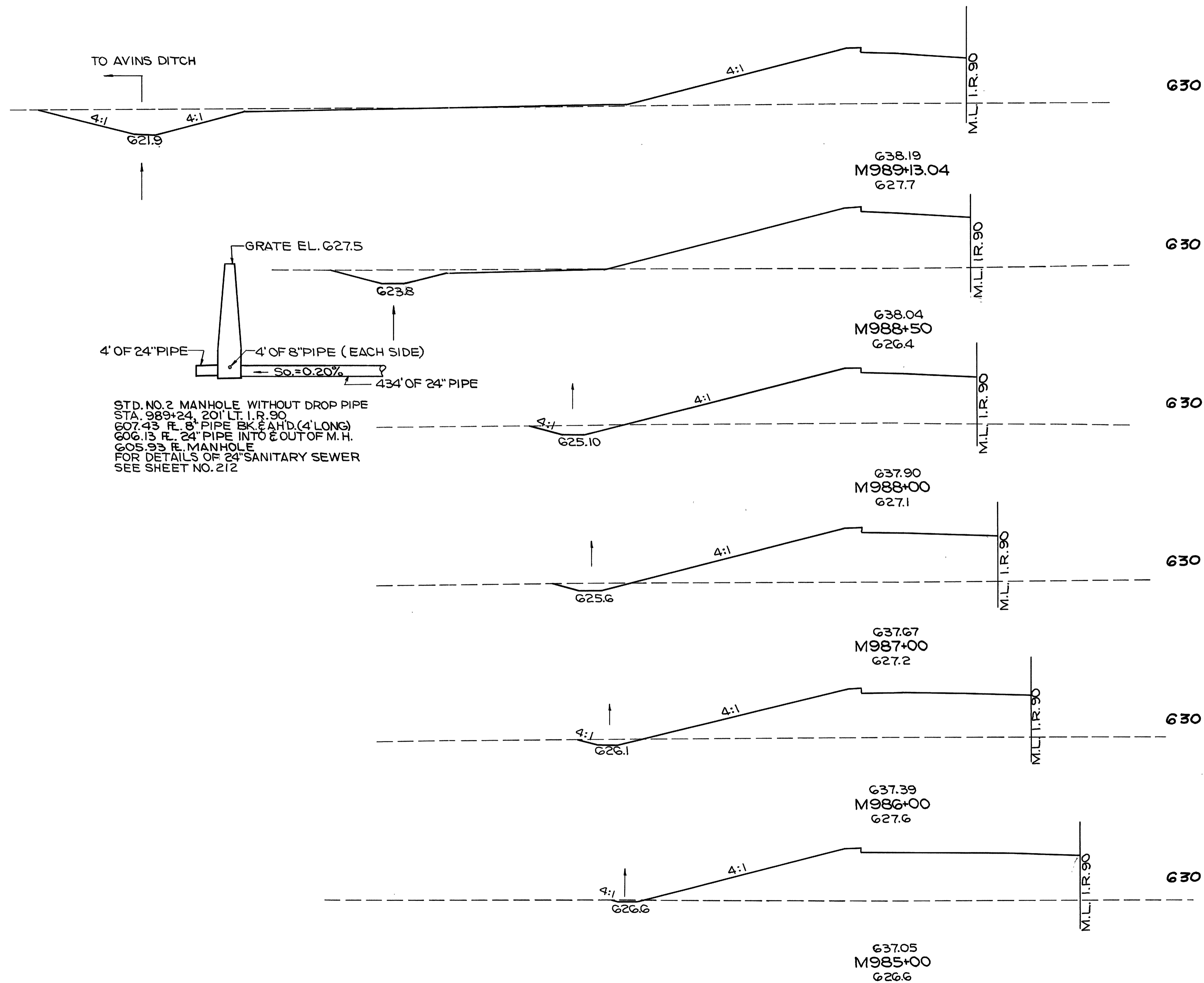
60 1953

130 3673

M976+50

80 2013

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA M977+00 TO STA M980+00 RAMP "M"



M989+13.04 AHD. 0 0
M989+13.04 BK. 122 447

199 1114

48 507

62 889

19 453

61 1719

14 475

41 1757

8 474

19 1974

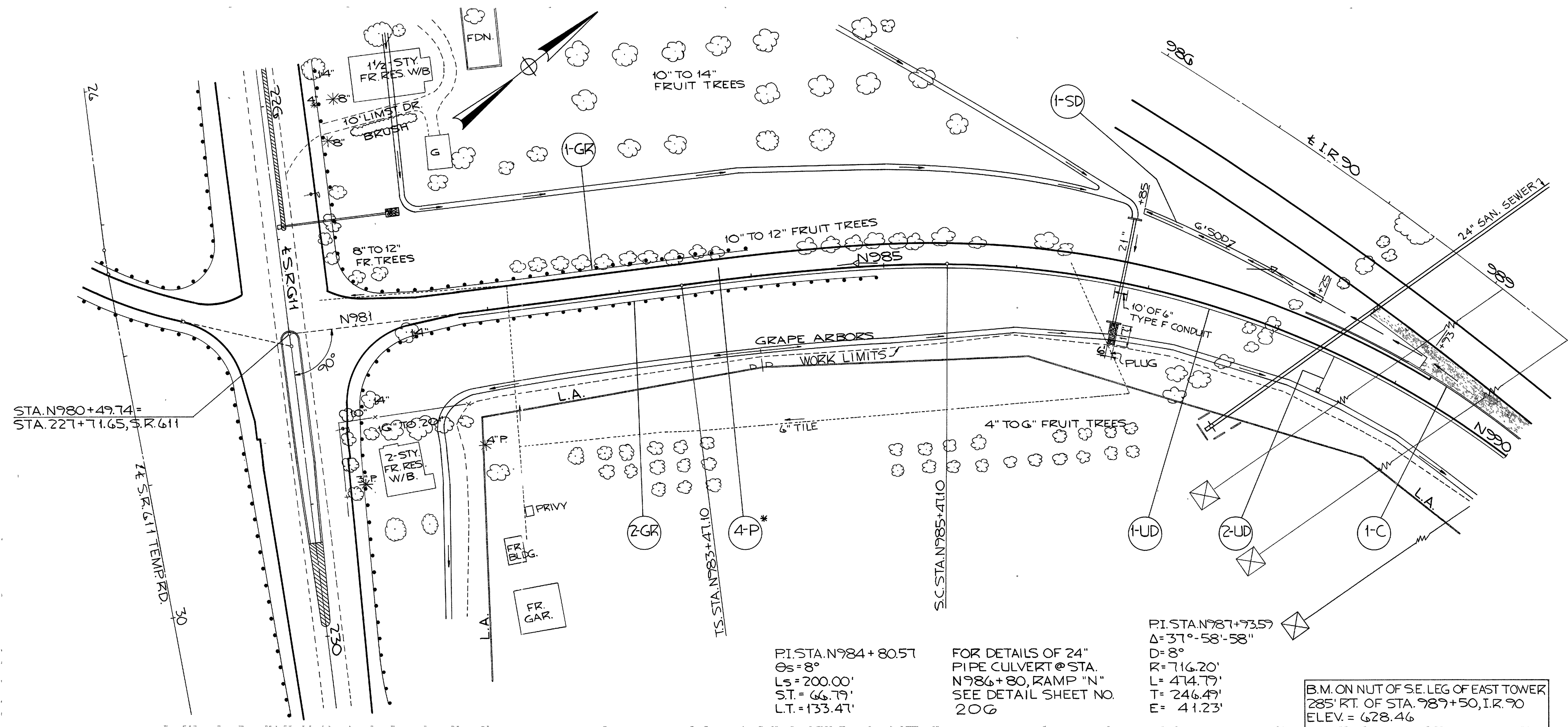
2 592

2 1095

M984+50.88 AH. 0 612

REFERENCE SHEETS	SHT. NO.
RAMP "N" DETAILS	114 & 115
SUPERELEVATION	117
GRADING PLANS	147 TO 152
PAV'T. QUANTITIES	153
24" SAN. SEWER	212

LOR.-90-17.21

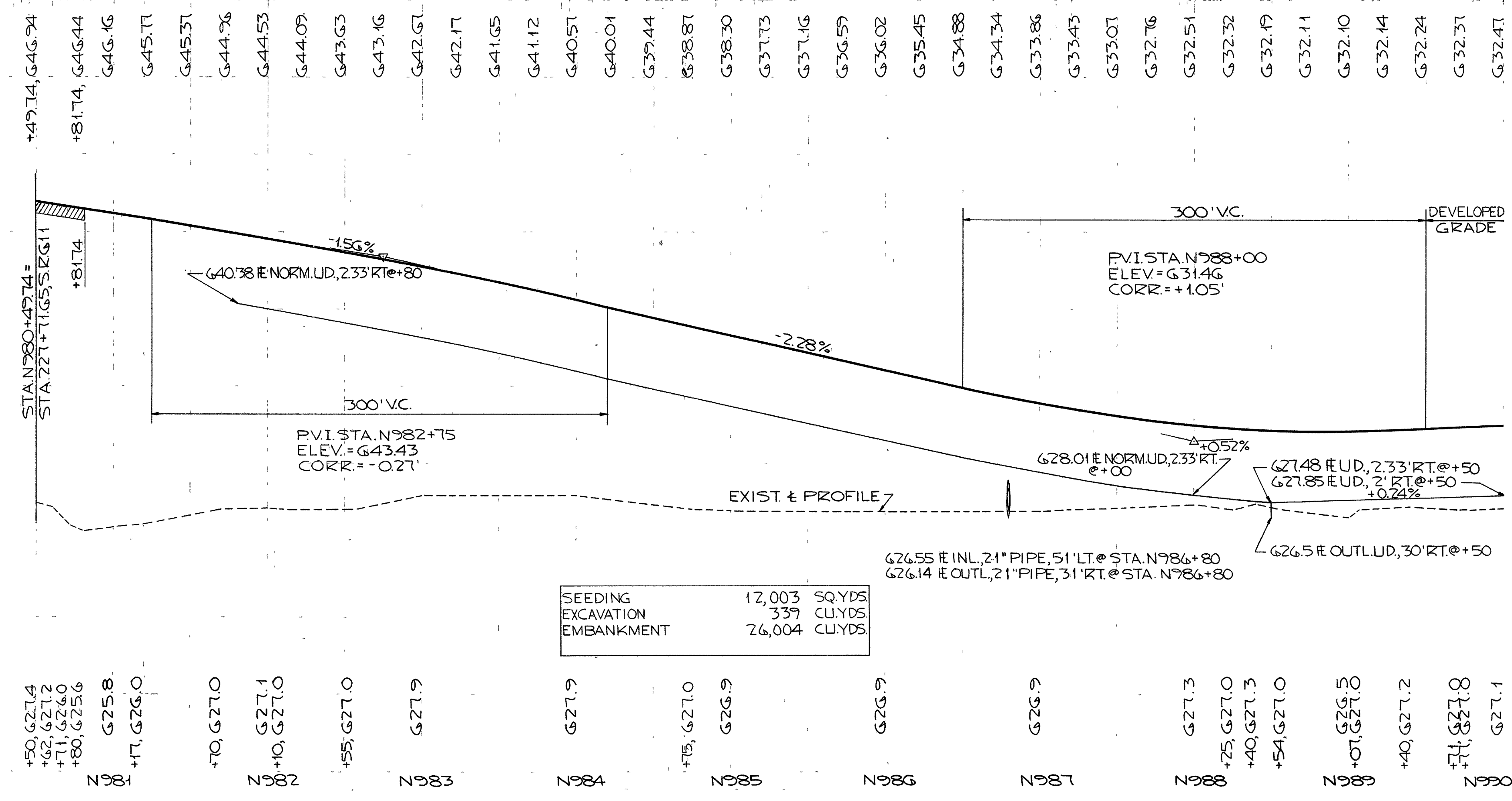


REFERENCE NO.	SIDE	STATION		G03	G05	G05	BENDS AND BRANCHES	G06	G09	CONCRETE CURB STD. TYPE	SODDING	
		FROM	TO	CONDUIT TYPE	SHALLOW UNDER-DRAINS	CLASS. PIPE DRAINS		GUARD RAIL TYPE 4	CONCRETE CURB STD. TYPE			
				6"	6"	6"	6" TEE	7	8			
				LIN.FT.	LIN.FT.	LIN.FT.		LIN.FT.	LIN.FT.	SQ.YDS.		
1-UD	RT.	N981+80	N990+00	10	610	200						
2-UD	RT.	N988+50		10		18	1					
1-C	LT.	N988+20	N990+00						82	103		
1-GR	LT.	N980+91.7	N983+91.3					325				
2-GR	RT.	N980+95.5	N984+94.3					425				
1-SD	LT.	N986+85	N988+25								101	
TOTALS					20	610	218		750	82	103	101

FOR DETAILS OF 24" PIPE CULVERT @ STA. N986+80, RAMP "N" SEE DETAIL SHEET NO. 200

P.I. STA. N987+73.57
 $\Delta = 37^{\circ} - 58' - 58''$
 $D = 8'$
 $R = 716.20'$
 $L = 474.79'$
 $T = 246.47'$
 $E = 41.23'$

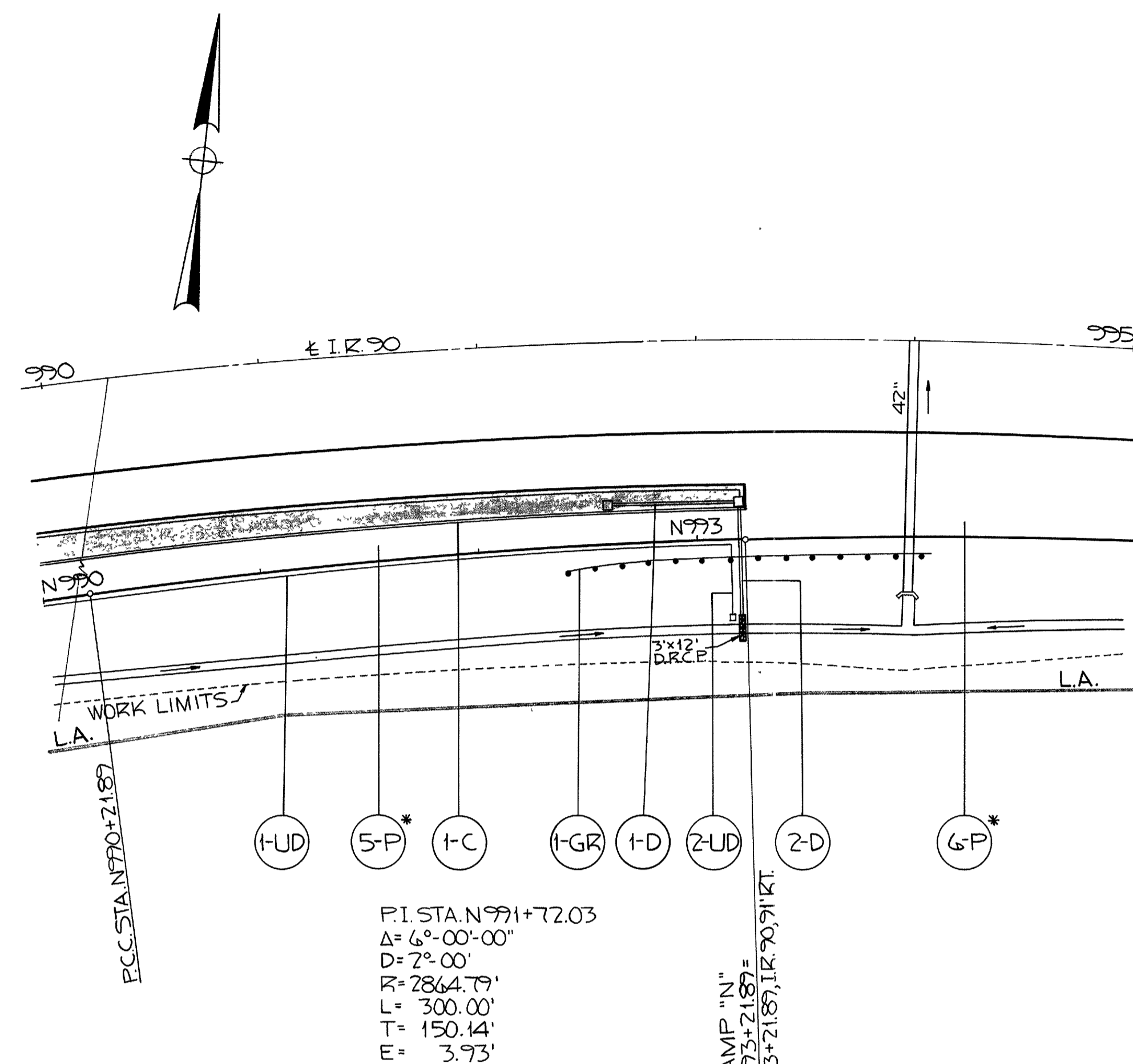
B.M. ON NUT OF S.E. LEG OF EAST TOWER
 285' RT. OF STA. 989+50, I.R. 90
 ELEV. = 628.46



SEEDING	12,003 SQ.YDS
EXCAVATION	339 CU.YDS
EMBANKMENT	26,004 CU.YDS

REFERENCE SHEETS	SHT. NO.
RAMP "N" DETAILS	114 & 115
SUPERELEVATION	117
GRADING PLANS	147 TO 152
* PAV'T. QUANTITIES	153

LOR-90-17.21

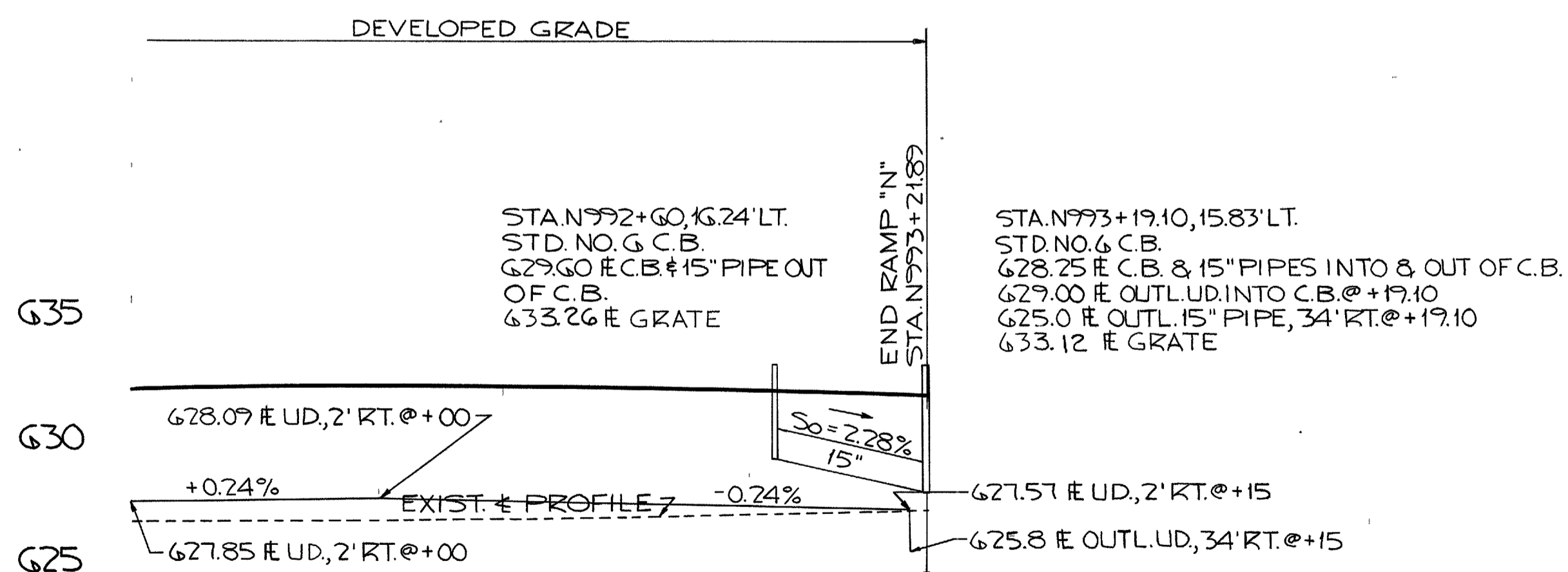


P.I. STA. N991+72.03
 $\Delta = 6^{\circ}00'00''$
 $D = 7^{\circ}00'$
 $R = 2864.79'$
 $L = 300.00'$
 $T = 150.14'$
 $E = 3.93'$

B.M. ON NUT OF S.E. LEG OF EAST TOWER
 285' RT. OF STA. 989+50, I.R. 90
 ELEV. = 628.46

END RAMP "N"
 STA. N993+21.89
 I.R. 90, 91 RT.

- G32.47
- G32.53
- G32.57
- G32.59
- G32.59
- G32.58
- G32.55
- G32.52
- G32.49
- G32.45
- G32.40
- G32.35
- G32.30
- G32.26

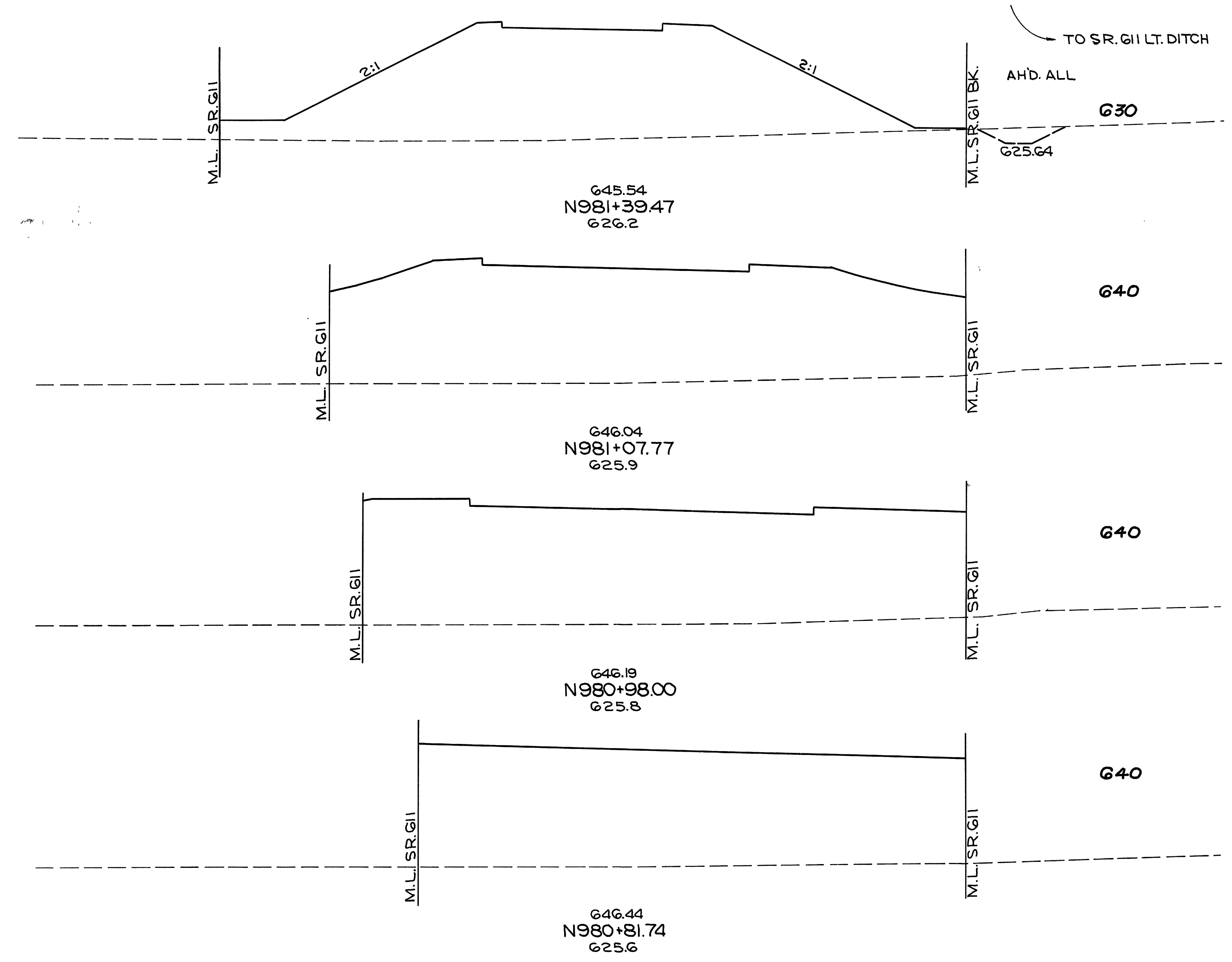


SEEDING	2,104	SQ. YDS.
EXCAVATION	335	CU. YDS.
EMBANKMENT	2,023	CU. YDS.

- G27.1
 - G27.2
 - G27.3
 - G27.5
 - G27.5
 - G27.5
- N990 N991 N992 N993 +21.89

REFERENCE NO.	SIDE	STATION		G01	G02	G03	G03	G04	G05	BENDS AND BRANCHES	G06	G07
		FROM	TO	DUMPED ROCK CHANNEL PROTECT. T=18"	CONCRETE MASONRY STD. HW-E ENDWALL CLASS C	CONDUIT TYPE B-B	CONDUIT TYPE F	CATCH BASINS STD. NO. 6	UNCLASS. PIPE UNDER-DRAINS		GUARD RAIL TYPE 4	CONCRETE CURB STD. TYPE 8
				CU.YD.	CU.YD.	15" LIN.FT.	6" LIN.FT.	EACH	6" LIN.FT.	6" 90° BEND	LIN.FT.	LIN.FT.
1-UD	RT.	N990+00	N993+15									
2-UD	RT.	N993+15					10		315	1		
1-D	LT.	N992+60	N993+19.10			59		1				
2-D	LT. & RT.	N993+19.10		2	0.26	50		1				
1-C	LT.	N990+00	N993+21.89									323.5
1-GR	RT.	N992+40	N993+21.89								80.78	
TOTALS				2	0.26	109	10	2	337		80.78	323.5

LOR.-90-17.21



N981+39.47 AHD. 26 1451
 N981+39.47 BK. 0 1451

0 1978

0 1918

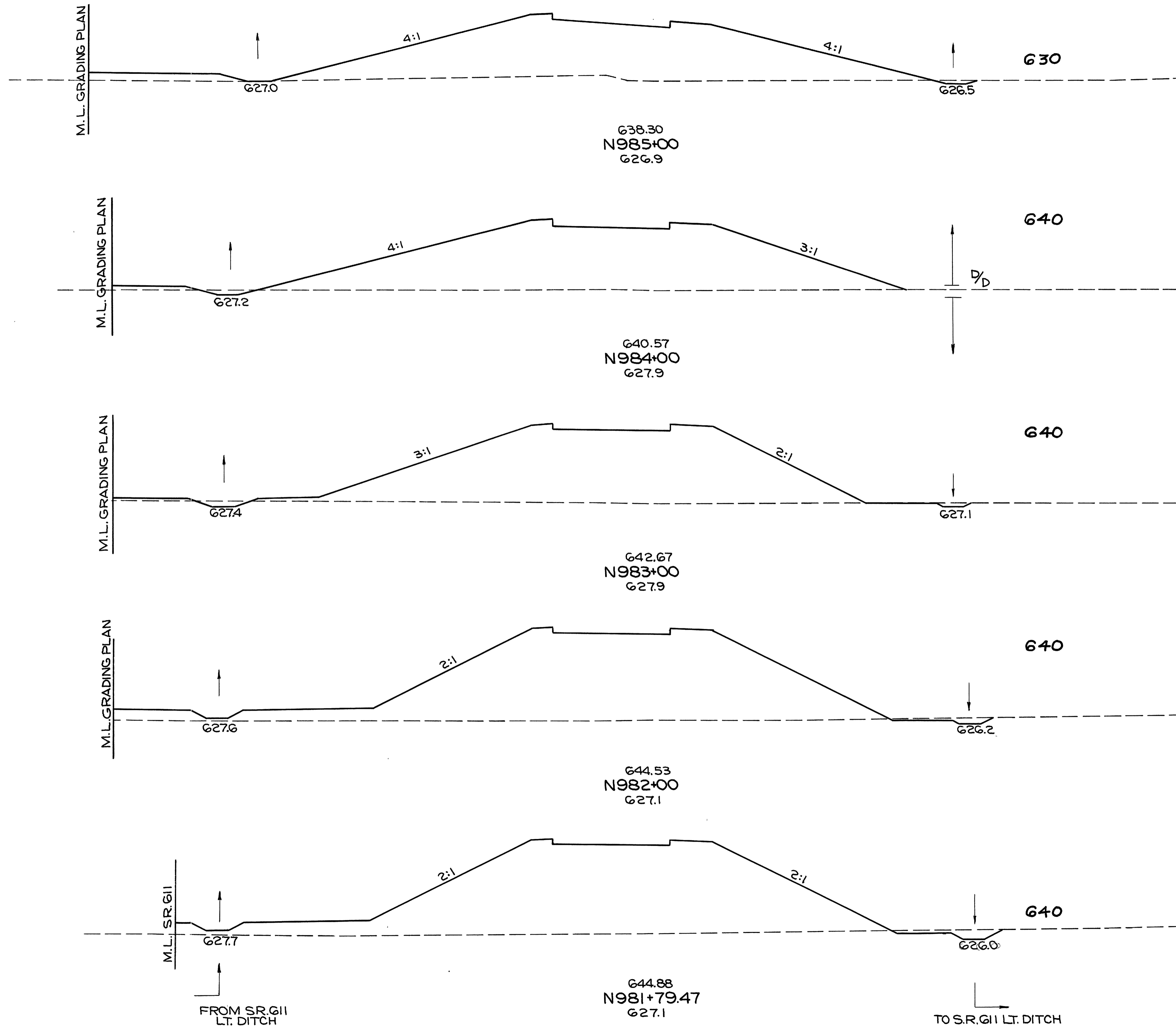
0 698

0 1938

0 1108

N980+81.74 AHD. 0 1742
 N980+81.74 BK. 0 0

LOR-90-17.21



4 890

20 3459

7 978

35 3663

12 1000

44 4143

12 1237

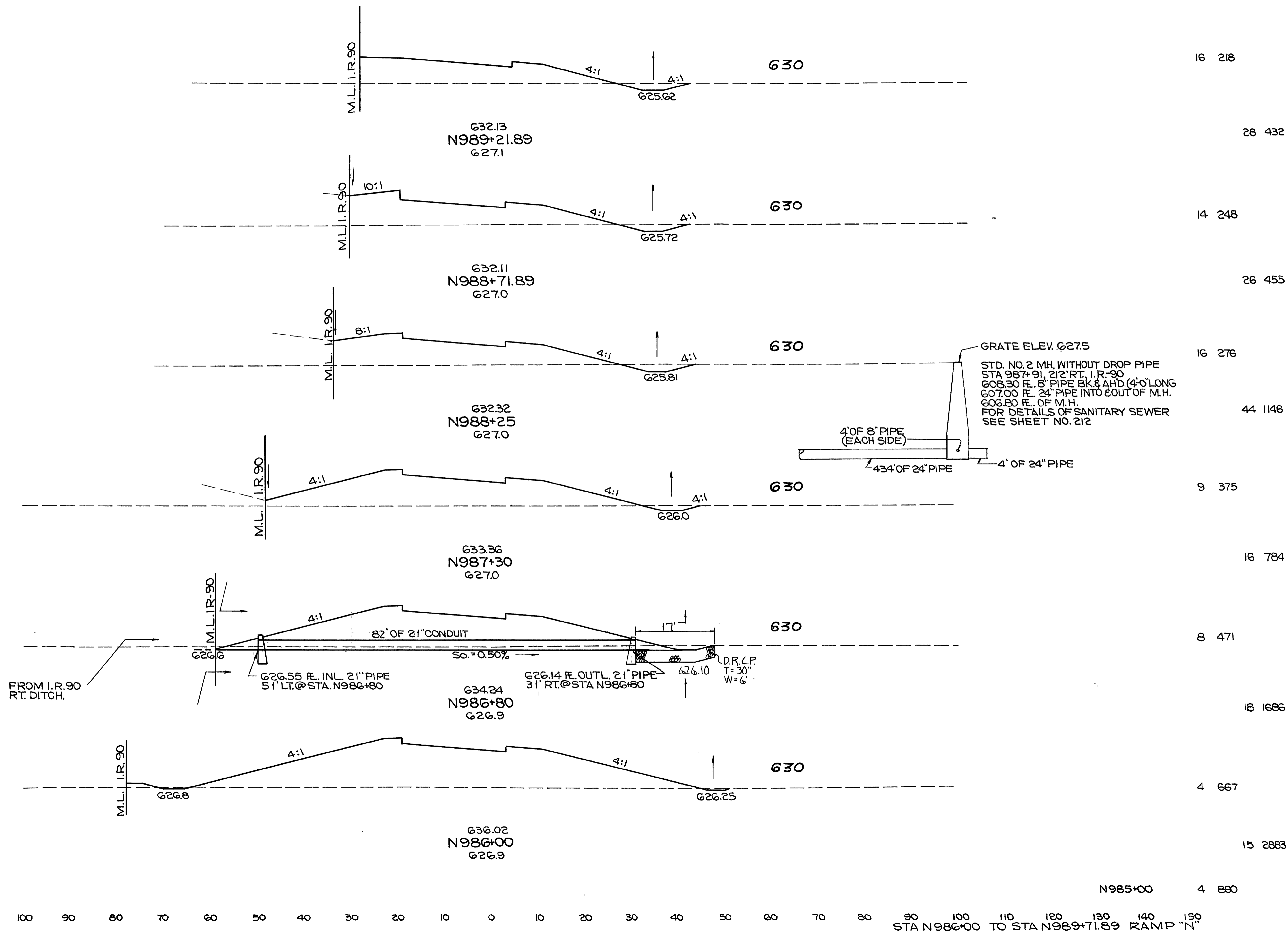
12 954

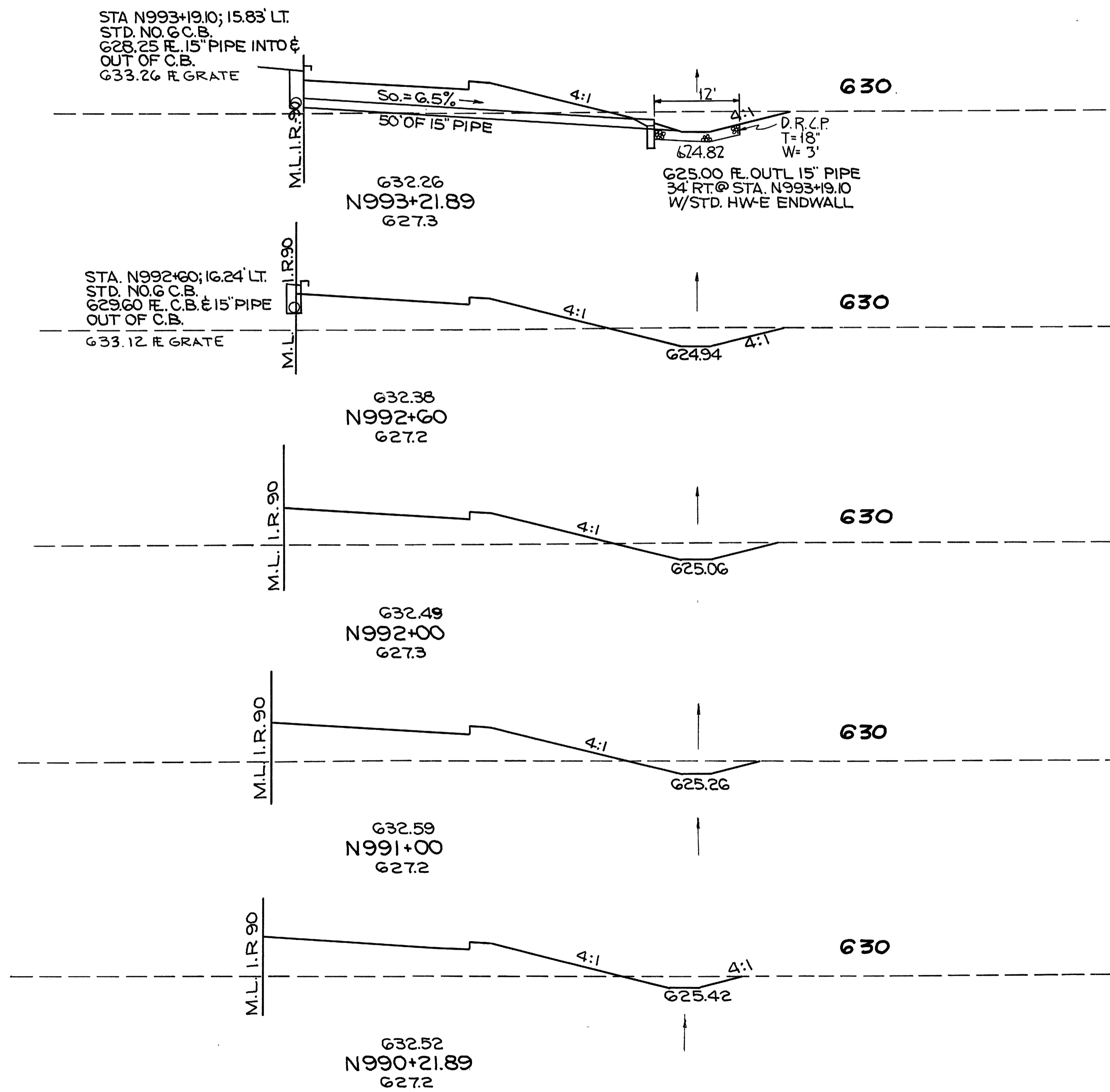
19 1274

33 2019

N981+39.47 AHD 26 1451

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA N981+79.47 TO STA N985+00 RAMP "N"





N993+21.89 AHD. 0 0
 N993+21.89 BK. 41 140

90 337

38 154

78 353

32 164

98 643

21 183

55 535

17 187

14 155

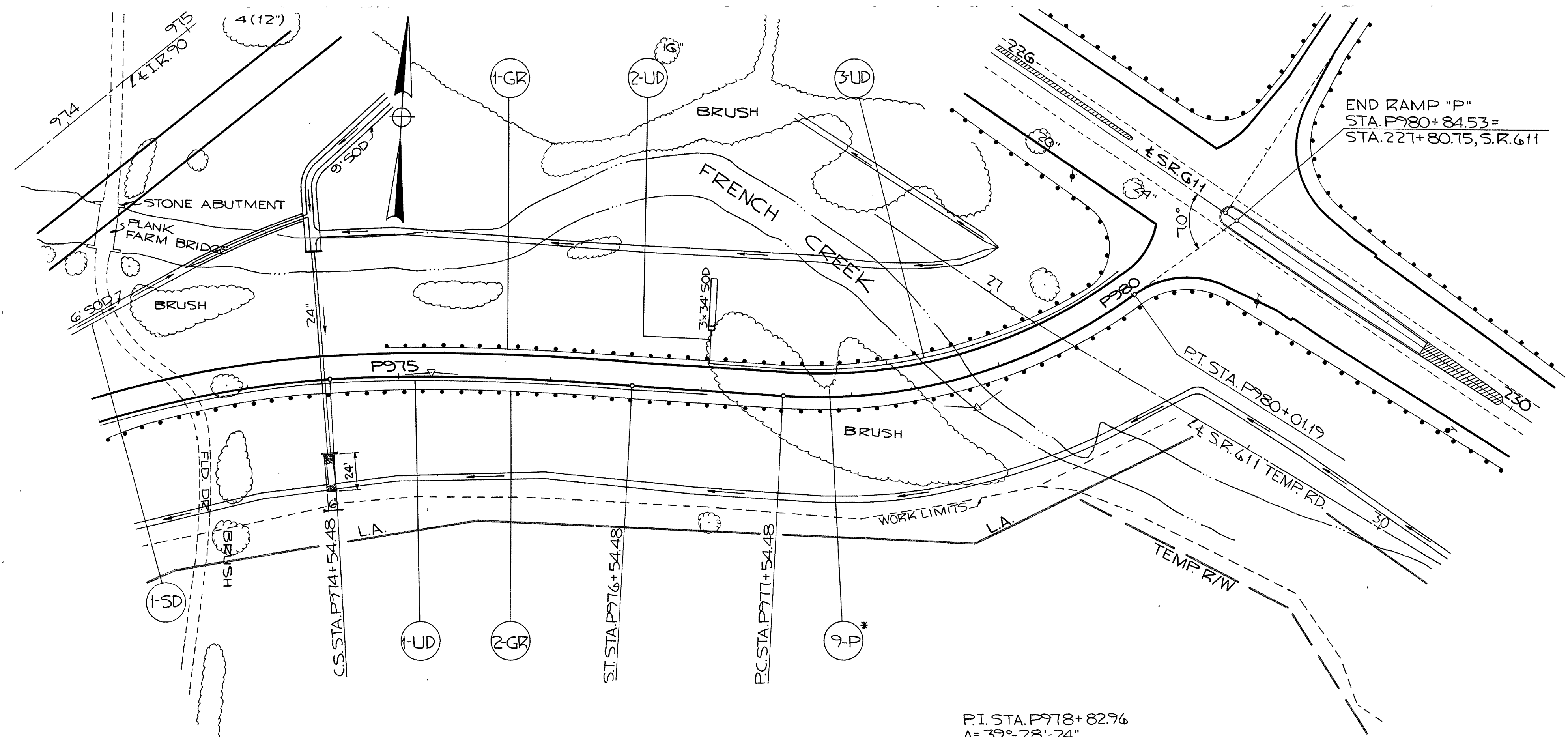
N990+00 17 194

48 596

N989+21.89 16 218

REFERENCE SHEETS	
RAMP "P" DETAILS	113&115
SUPERELEVATION	117
GRADING PLANS	147 TO 152
PAV'T. QUANTITIES	153

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END RAMP "P"
STA. P980+84.53=
STA. 227+80.75, S.R. 611

FOR DETAILS OF 24" PIPE
CULVERT @ STA. P974+50
SEE DETAIL SHEET NO. 207

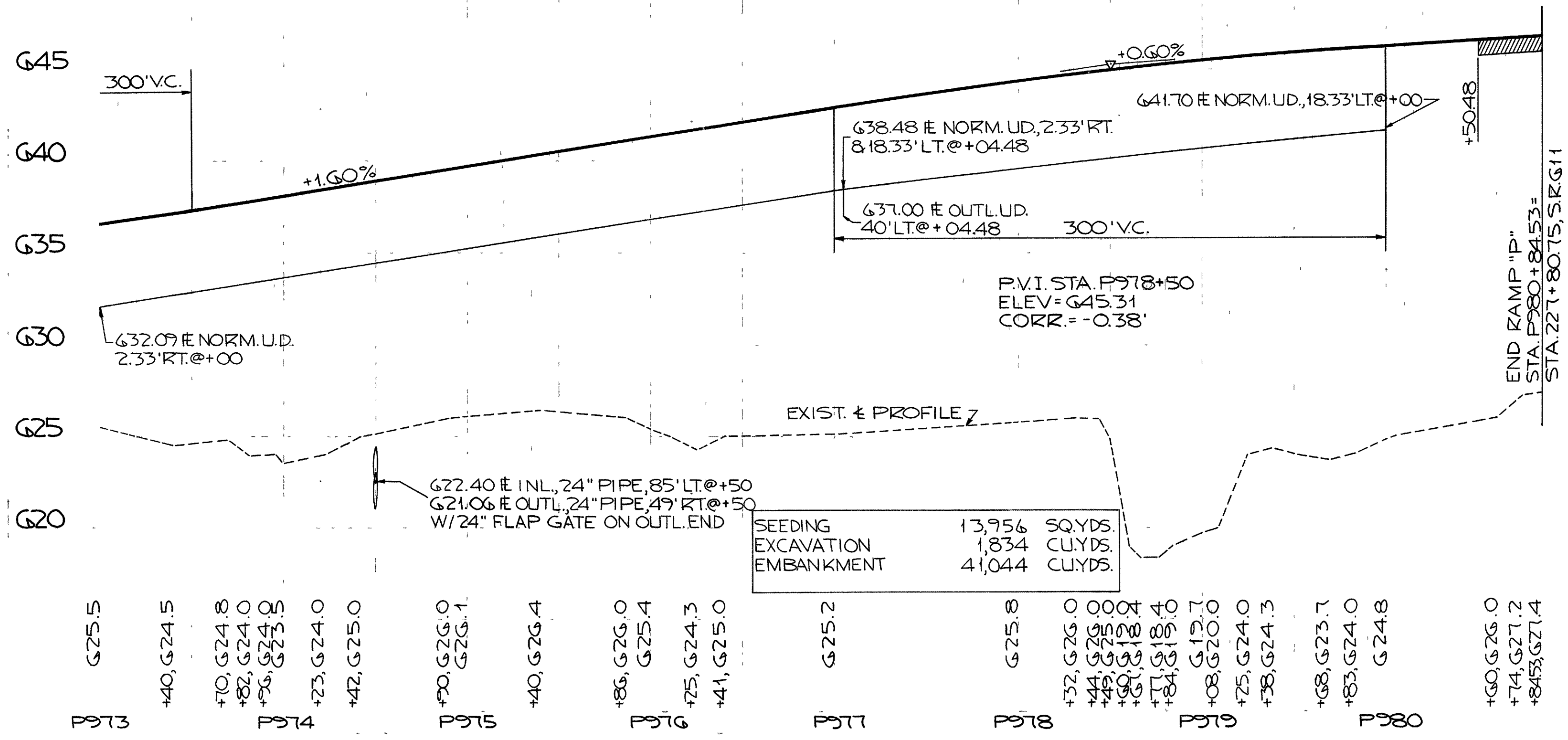
P.I. STA. P975+21.27
θs = 8°
Ls = 200.00'
S.T. = 66.79'
L.T. = 133.47'

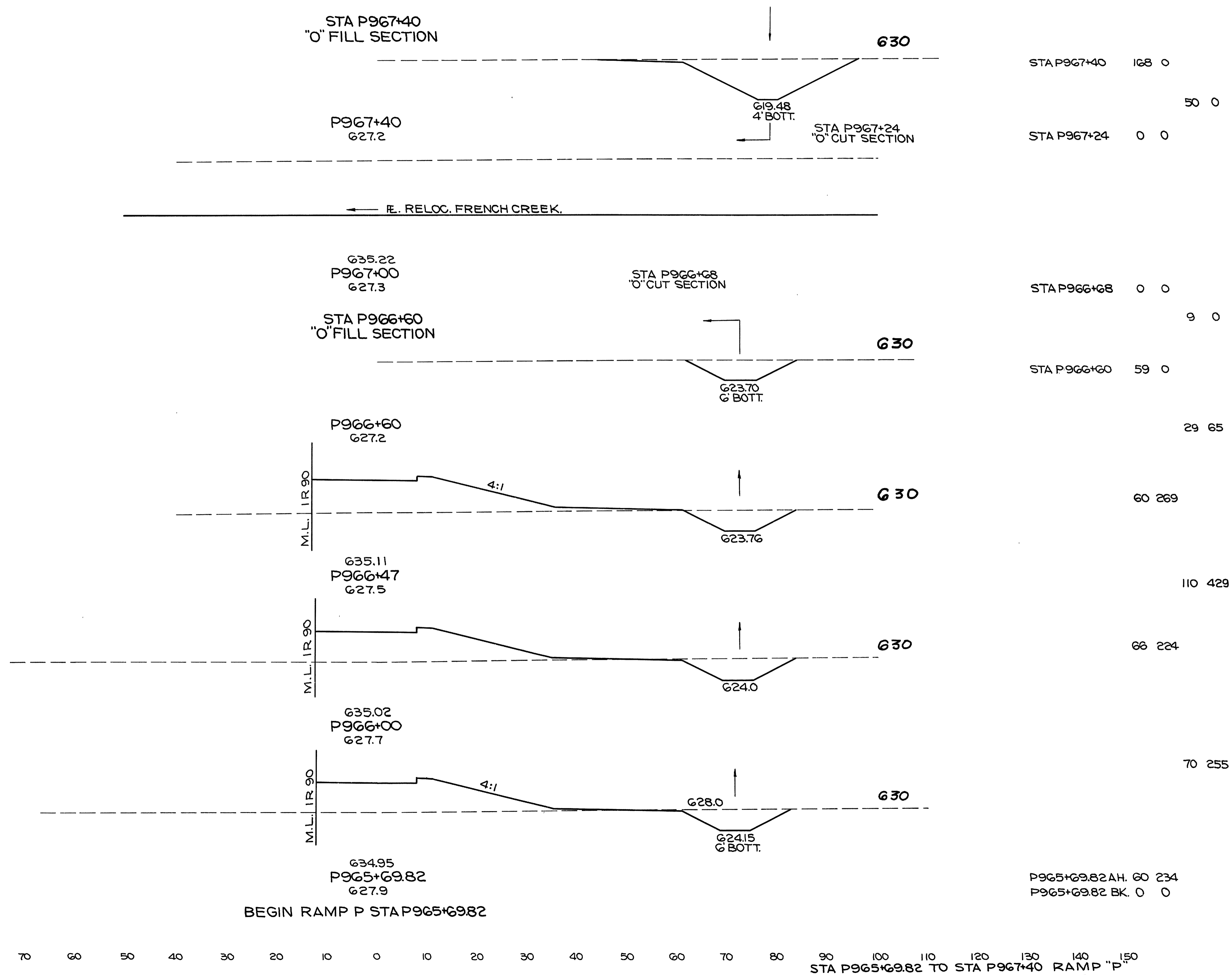
P.I. STA. P978+82.96
Δ = 39° 28' - 24"
D = 16° 00'
R = 358.10'
L = 246.71'
T = 128.48'
E = 22.35'

B.M. BOAT SPIKE IN TEL. POLE
39' RT. STA. 221+82, S.R. 611
ELEV. = 628.33

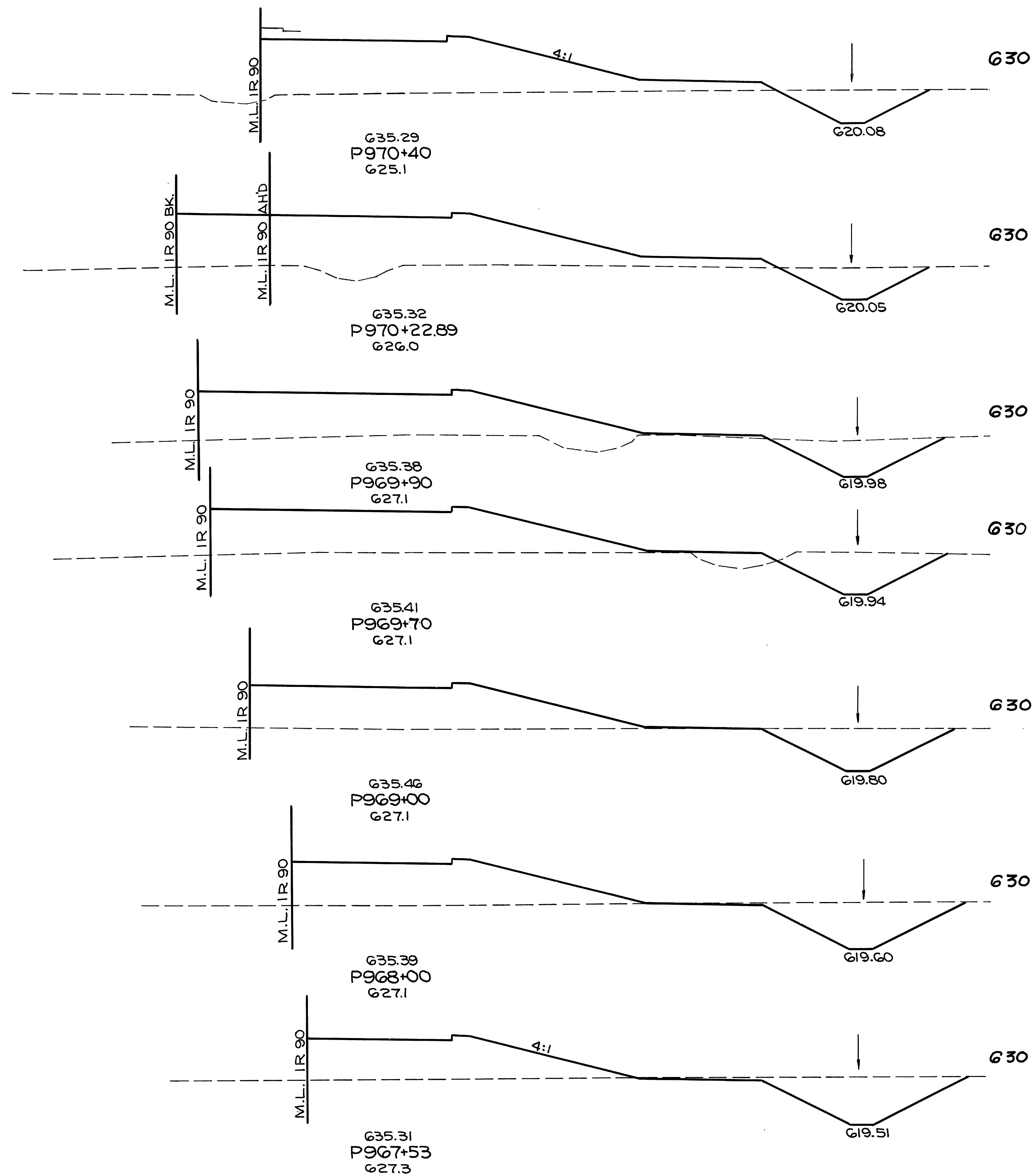
REFERENCE NO.	SIDE	STATION		G03	G05	G05	G06	GUARD RAIL TYPE 4	SQ.YDS.	
		FROM	TO	CONDUIT TYPE F	SHALLOW PIPE UNDER-DRAINS	UNCLASS PIPE UNDER-DRAINS	BENDS AND BRANCHES 90° BEND			
		6"	6"	6"	6"	6"	6"			
1-UD	RT.	P973+00	P977+04.48		405					
2-UD	LT.	P977+04.48		10		12	1		12	
3-UD	LT.	P977+04.48	P980+00		295					
1-GR	LT.	P974+94.2	P980+13					537.5		
2-GR	RT.	P973+03.0	P980+49					762.5		
1-SD	LT.	P973+00	P974+46						117	
TOTALS				10	700	12		1300.0		129

- G36.59
- G36.93
- G37.31
- G37.71
- G38.11
- G38.51
- G38.91
- G39.31
- G39.71
- G40.11
- G40.51
- G40.91
- G41.31
- G41.71
- G42.11
- G42.51
- G42.91
- G43.30
- G43.67
- G44.02
- G44.34
- G44.65
- G44.93
- G45.20
- G45.44
- G45.67
- G45.87
- G46.05
- G46.21
- G46.36
- G46.51
- G46.71





LOR.-90-1721



86 531

54 327

P970+22.89 AHD. 83 500
P970+22.89 BK. 83 639

115 700

106 510

86 365

126 476

342 1133

138 398

552 1374

160 344

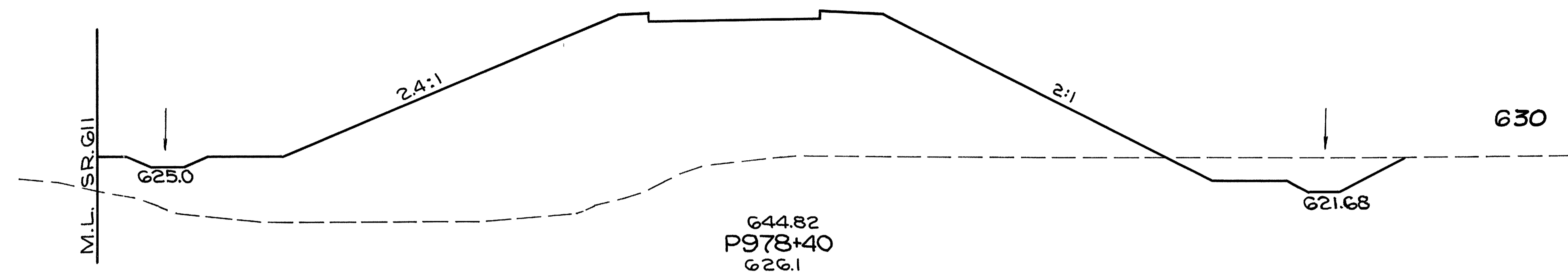
291 561

174 300

82 72

P967+40 168 0

LOR-90-17.21



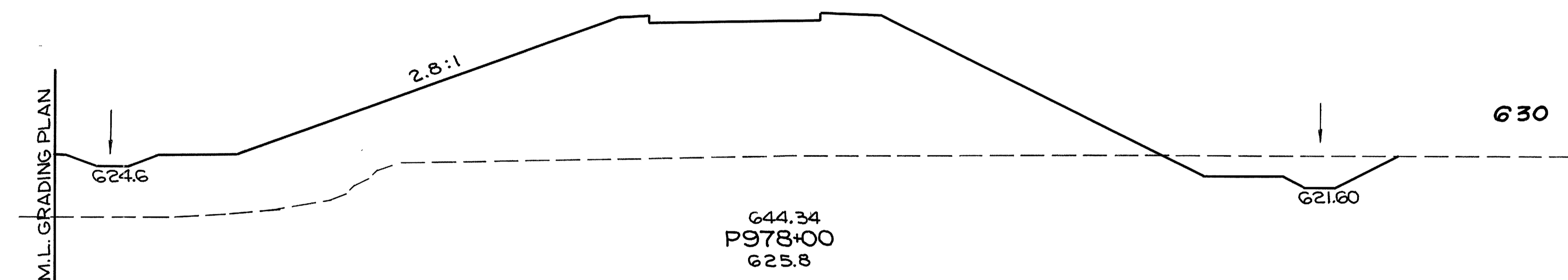
84 1872

63 1352



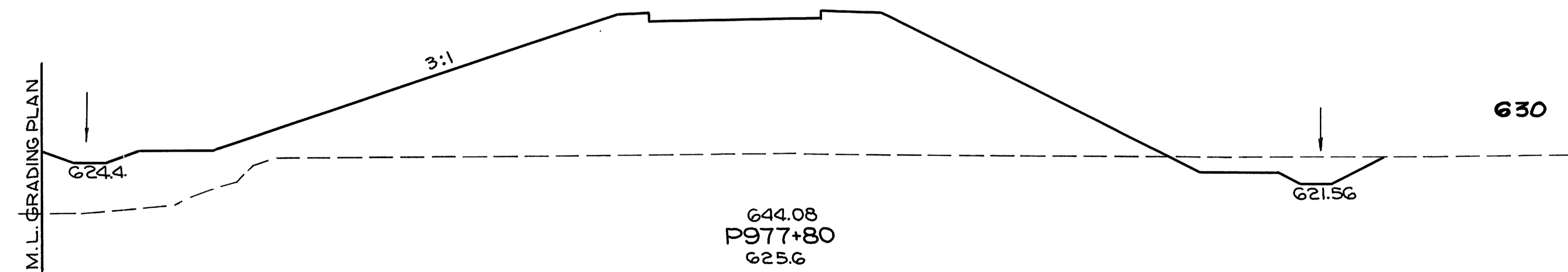
85 1778

60 1279



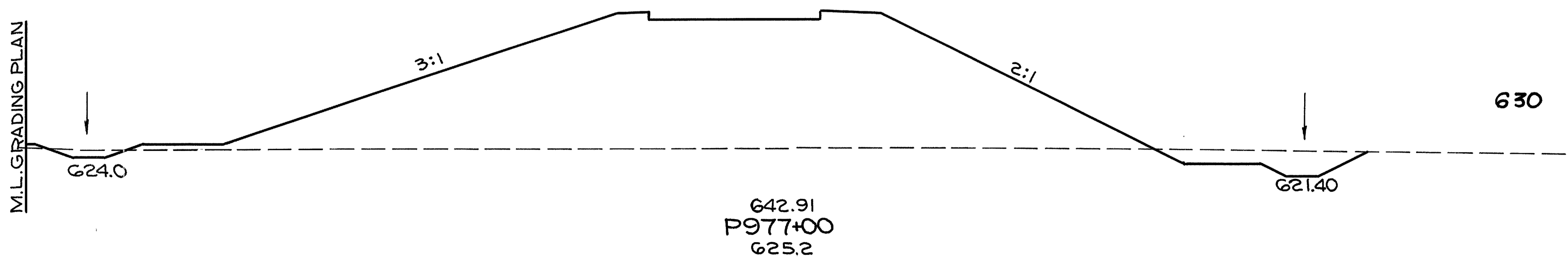
78 1674

50 1212



58 1598

178 4378



62 1357

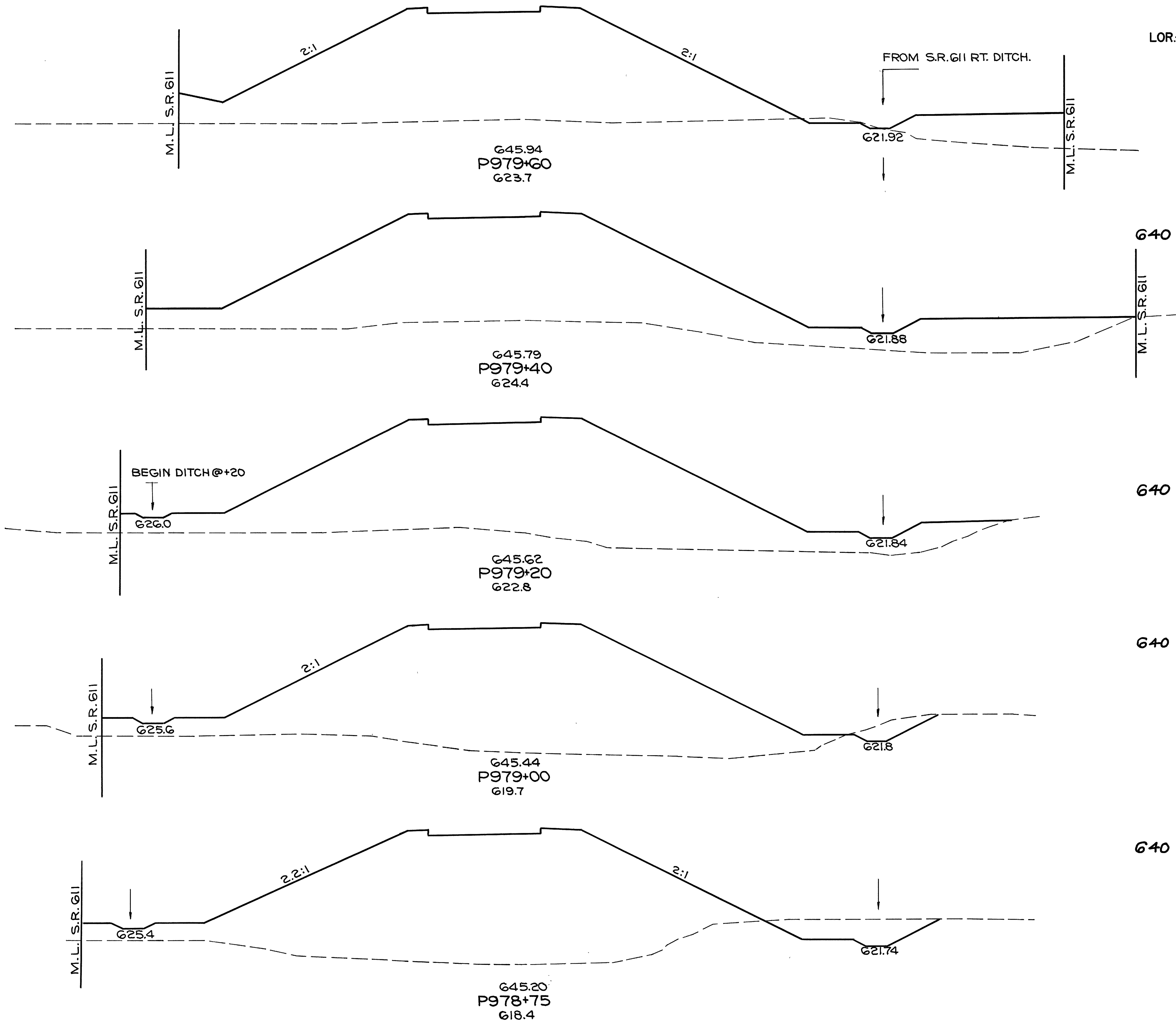
2694867

P976+00

83 1271

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 STA P977+00 TO STA P978+40 RAMP "P"

LOR-90-17.21



10 1930

4 1458

0 2005

0 1505

0 2058

14 1514

37 2031

71 1884

117 2038

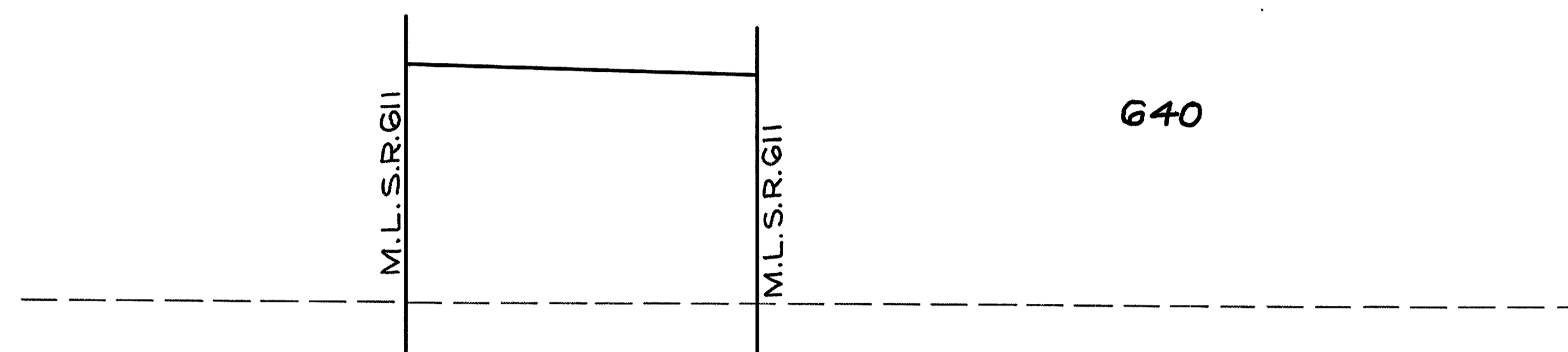
130 2534

P978+40 84 1872

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA P978+75 TO STA P979+60 RAMP "P"

P980+60 0 0

"O" SECTION
P980+60

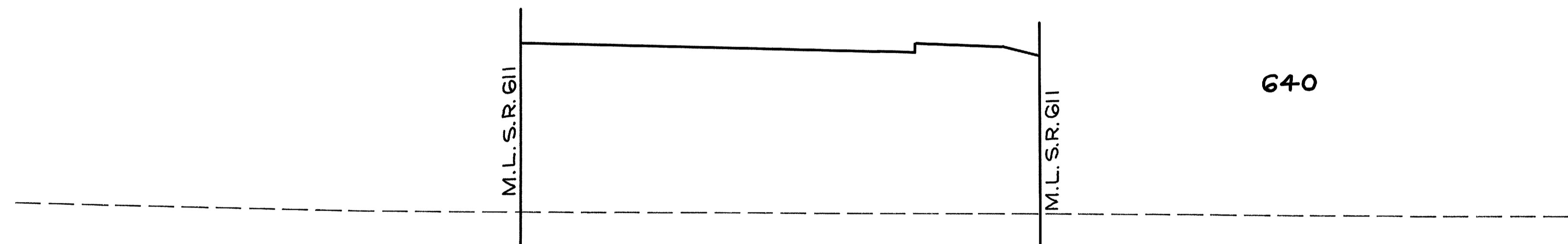


0 101

0 570

646.57
P980+50.48
625.6

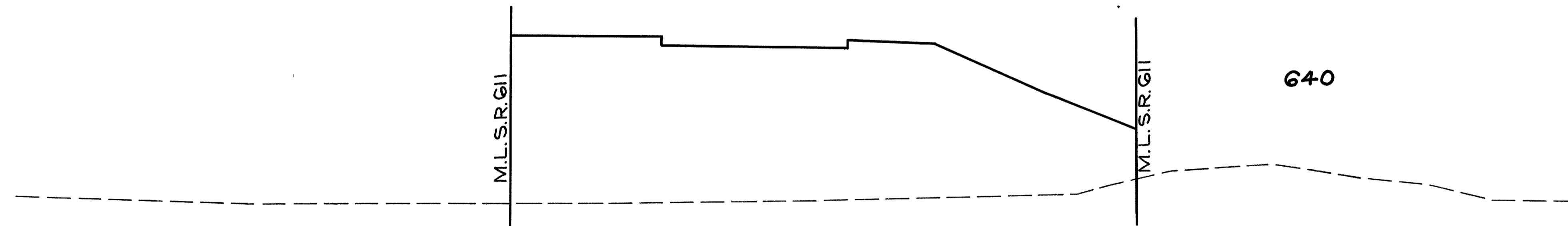
0 354



0 1252

646.45
P980+40
625.4

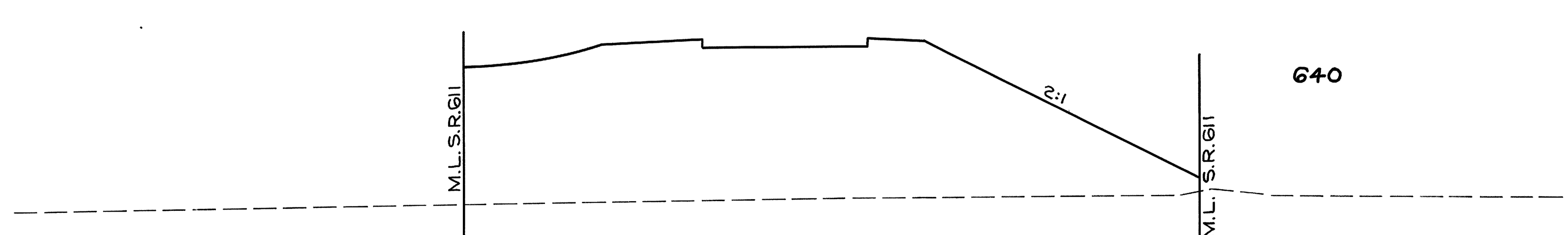
0 1023



0 1509

646.33
P980+20
625.3

0 1113



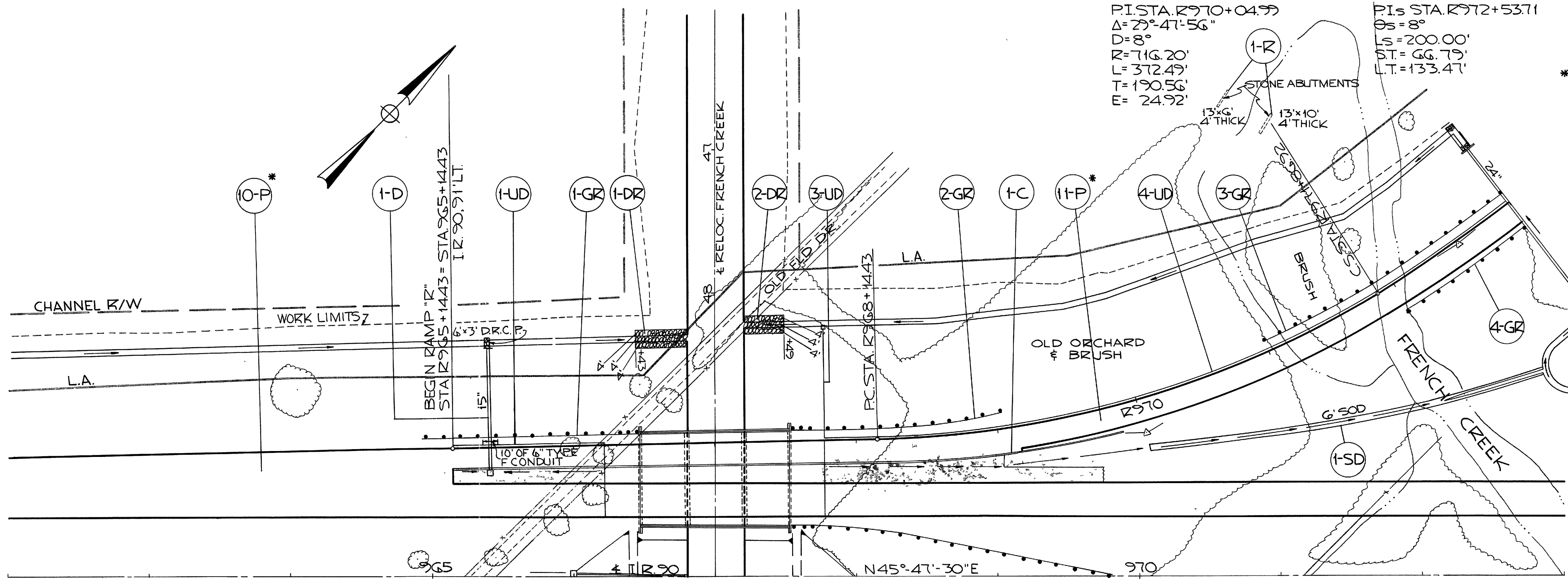
0 1687

646.22
P980+01.19
624.8

8 2759

P979+60 10 1930

LOR-90-1721

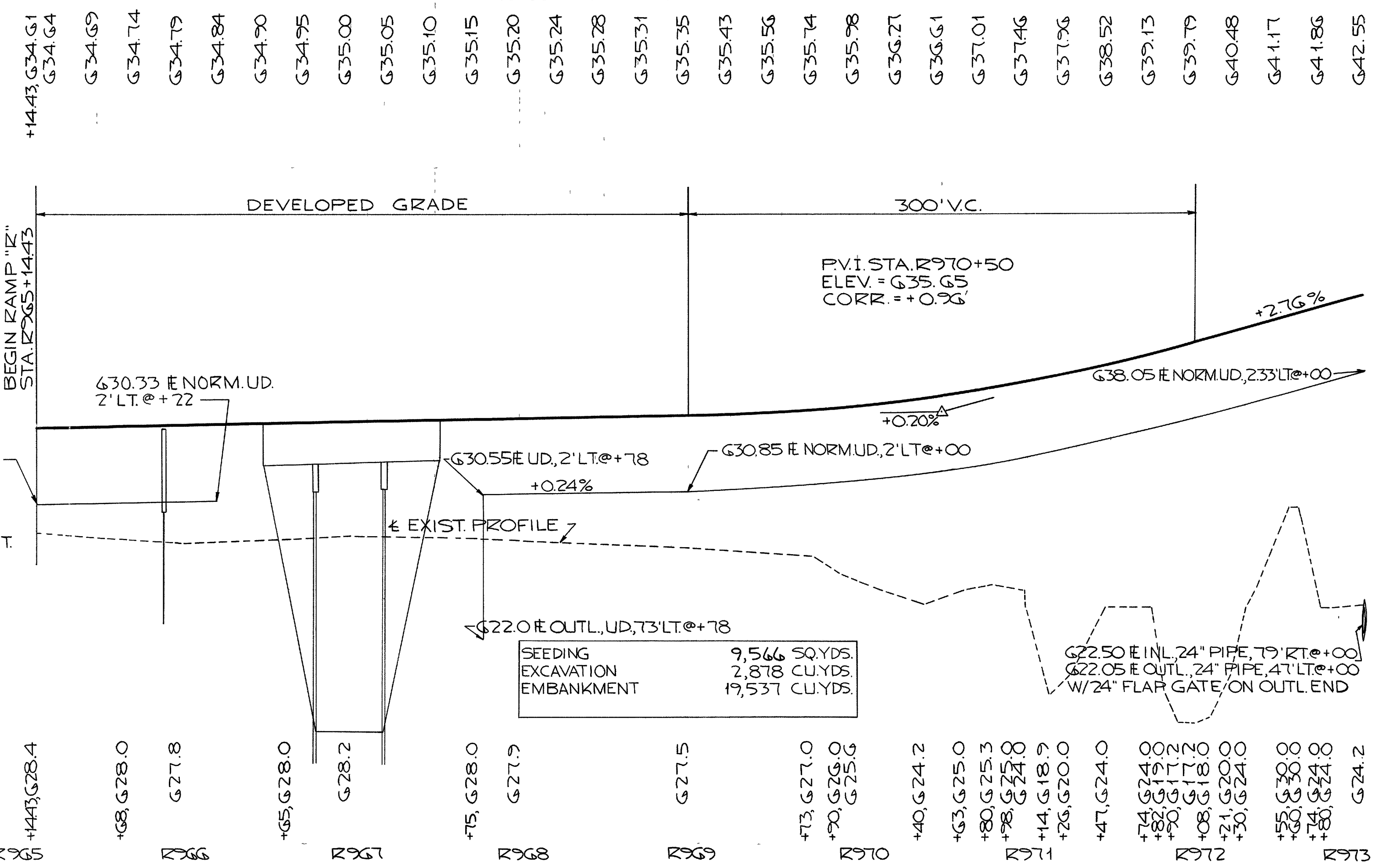


REFERENCE SHEETS	SHT. NO.
RAMP "R" DETAILS	113 & 116
SUPERELEVATION	117
GRADING PLANS	147 TO 152
* PAVEMENT QUANTITIES	153
RELOCATED FRENCH CREEK	154 TO 161

REFERENCE NO.	SIDE	STATION		202 EXISTING STRUCT. REMOVED	G01 DUMPED CHANNEL PROT. T=18" ENDWALL CLASS C	G02 CONCRETE MASONRY STD. HW-E	G03 CONDUIT TYPE B-B	G03 CONDUIT TYPE F	G04 CATCH BASIN STD. NO. G	G05 SHALLOW UNDERDRAINS	G05 UNCLASSIFIED PIPE UNDERDRAINS	BENDS AND BRANCHES 90°	G06 GUARD RAIL TYPE 4
		FROM	TO										
1-R	LT.	R971+65		LUMP									
1-UD	LT.	R965+74	R966+22							108			
2-UD		DELETED											
3-UD	LT.	R967+78						10			G1	1	
4-UD	LT.	R967+78	R973+00							400	122		
1-GR	LT.	R965+1443	R966+47										132.51
2-GR	LT.	R967+53	R969+03										150.00
3-GR	LT.	R971+01	R973+00										200.00
4-GR	RT.	R972+03	R973+00										100.00
1-DR	LT.	R966+43	R966+80		36								
2-DR	LT.	R967+20	R967+49		28								
1-D	LT.&RT.	R965+40			1	0.26	88		1				
TOTALS					LUMP	G5	0.26	88	10	1	508	183	582.51

B.M. BOAT SPIKE IN 12" DEAD ELM
174' RT. STA. 961+31, I.R. 90
ELEV. = 632.19

FOR DETAILS OF 24" PIPE CULVERT
@ STA. R973+00, SEE SHEET NO. 208



REFERENCE NO.	SIDE	STATION		G09 CONCRETE CURB STD. TYPE	G09 CONCRETE CURB STD. TYPE	G00 SODDING
		FROM	TO			
1-C	RT.	R965+1443	R969+86	76	244	
1-SD	RT.	R970+51	R972+51			189
TOTALS				76	244	189

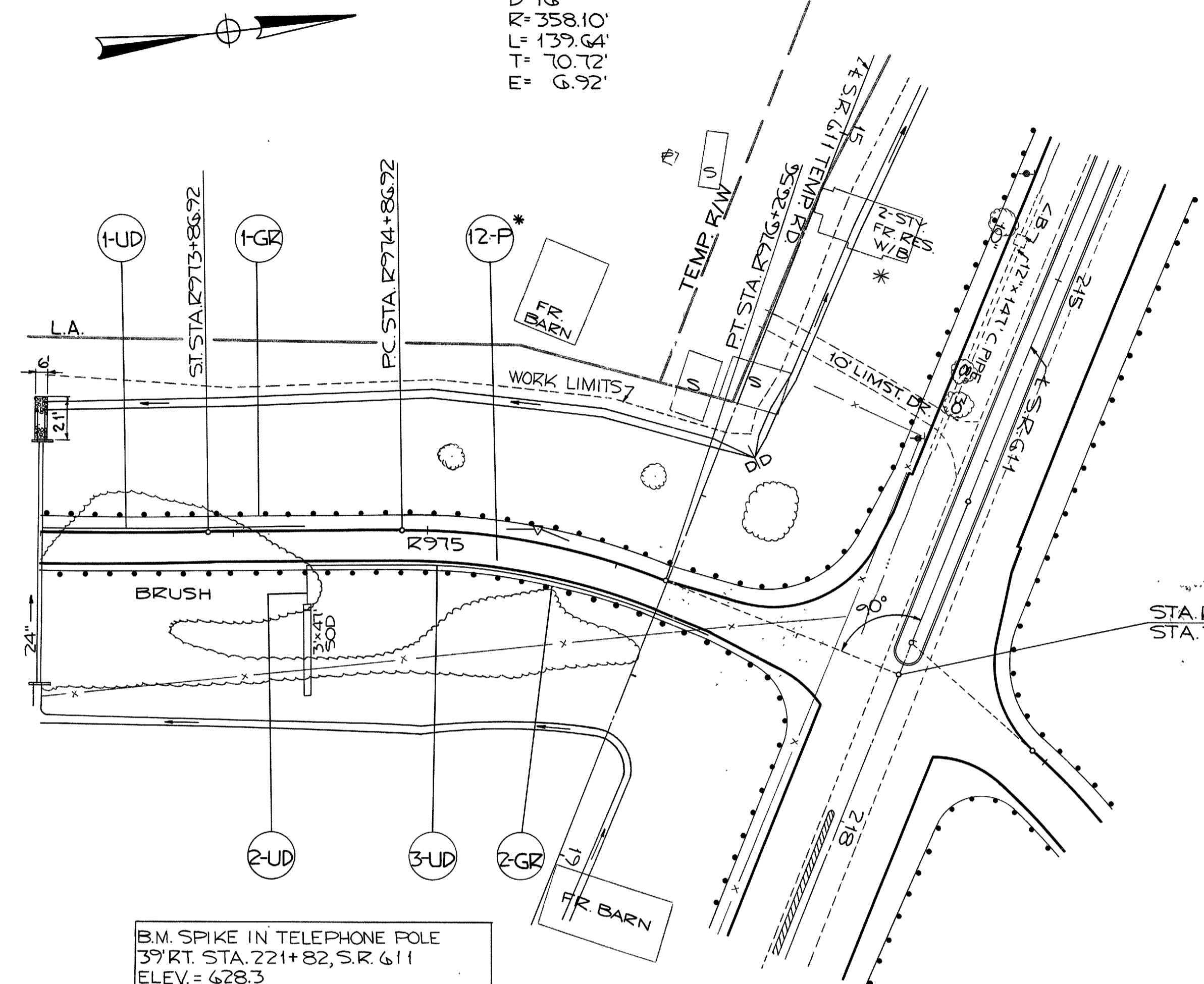
G40
G35
G30
G25
G20

RAMP "R" STA. R965+14.43 TO STA. R973+00

LOR-90-17.21

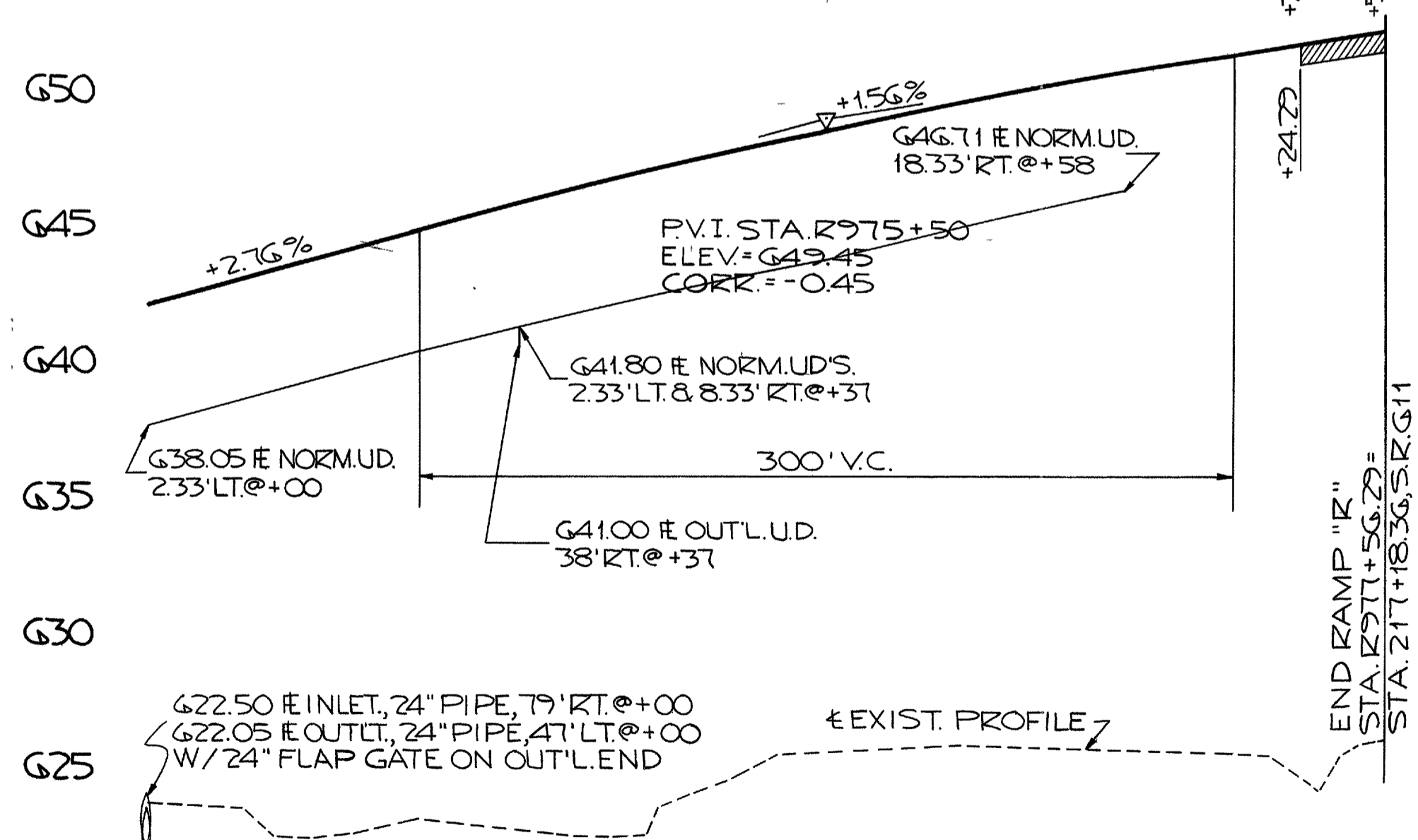
PI STA R975+57.64
 Δ=22°-20'-32"
 D=16°
 R=358.10'
 L=139.64'
 T=70.72'
 E=6.92'

REFERENCE SHEETS	SHT. NO.
RAMP "R" DETAILS	113 & 116
SUPERELEVATION	117
GRADING PLANS	147 TO 152
* PAVEMENT QUANTITIES	153



B.M. SPIKE IN TELEPHONE POLE
 39' RT. STA. 221+82, S.R. G11
 ELEV.= 628.3

- G42.55
- G43.74
- G43.93
- G44.62
- G45.31
- G45.99
- G46.64
- G47.27
- G47.87
- G48.45
- G49.00
- G49.53
- G50.03
- G50.51
- G50.96
- G51.79
- G51.79
- +74.79, G52.17
- +56.29, G52.67

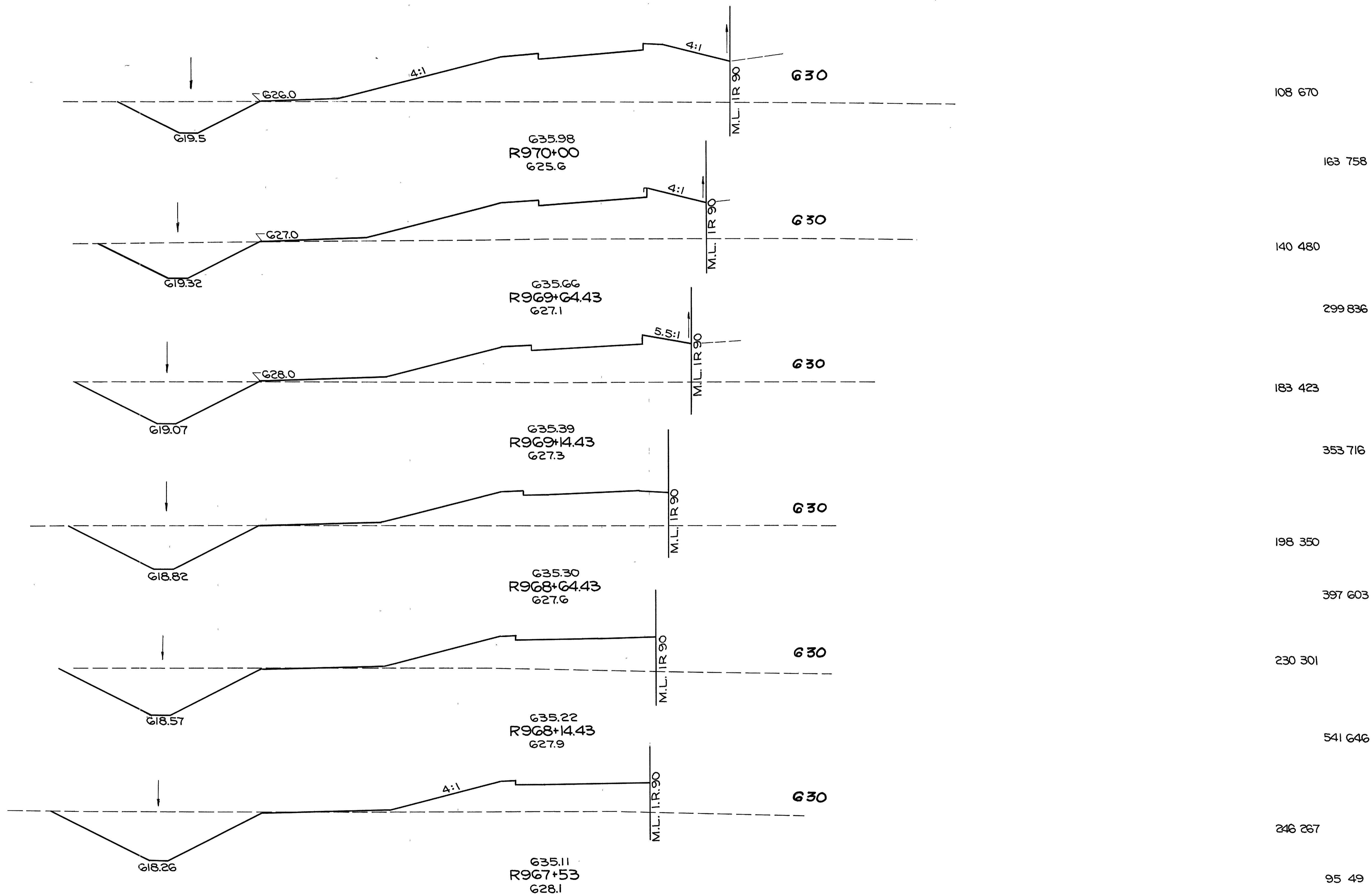


SEEDING 8,500 SQ.YDS.
 EXCAVATION 397 CU.YDS.
 EMBANKMENT 31,146 CU.YDS.

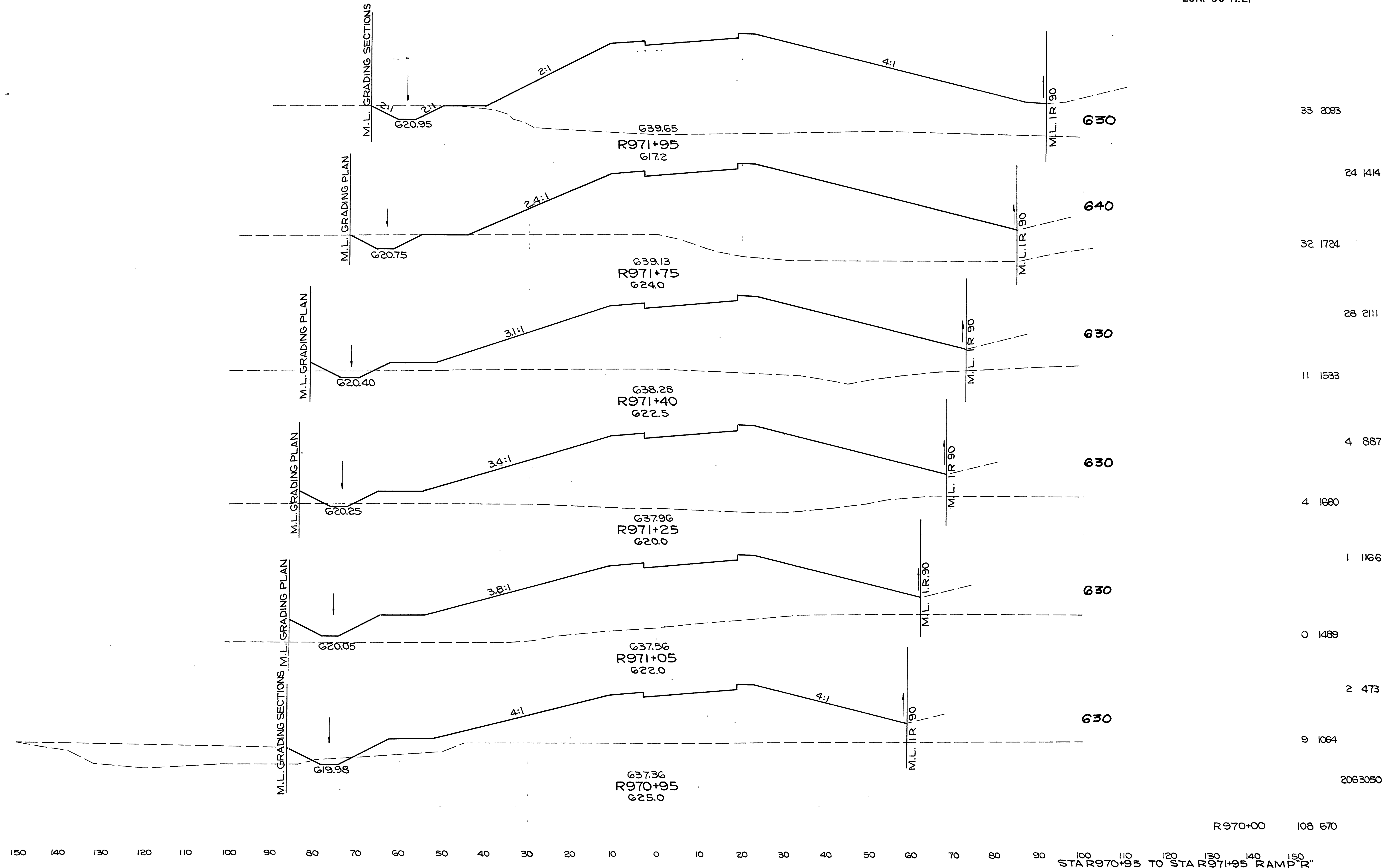
- G24.2
- +35, G24.0
- +41, G23.0
- +60, G22.8
- +75, G23.0
- G23.6
- +70, G22.8
- +83, G23.0
- +88, G24.0
- +13, G25.0
- +32, G26.0
- G26.4
- G26.1
- +13, G26.0
- +31, G24.7
- +37, G26.0
- +46, G26.4
- +56.29, G26.6

REFERENCE NO.	SIDE	STATION		G03	G05	G05	BENDS AND BRANCHES	G06	GUARD RAIL TYPE 4	G60
		FROM	TO	CONDUIT TYPE F	SHALLOW UNDER-DRAINS	UNCLASSIFIED UNDER-DRAINS				
		IN. FT.	IN. FT.	IN. FT.	IN. FT.	IN. FT.	IN. FT.	SQ. YD.		
1-UD	LT.	R973+00	R974+37		137					
2-UD	RT.	R974+37		10		10	1			17
3-UD	RT.	R974+37	R976+58		221					
1-GR	LT.	R973+00	R977+10					437.5		
2-GR	RT.	R973+00	R977+14.3					425.0		
TOTALS				10	358	10		862.5		17

RAMP "R" STA. R973+00 TO STA. R977+56.29

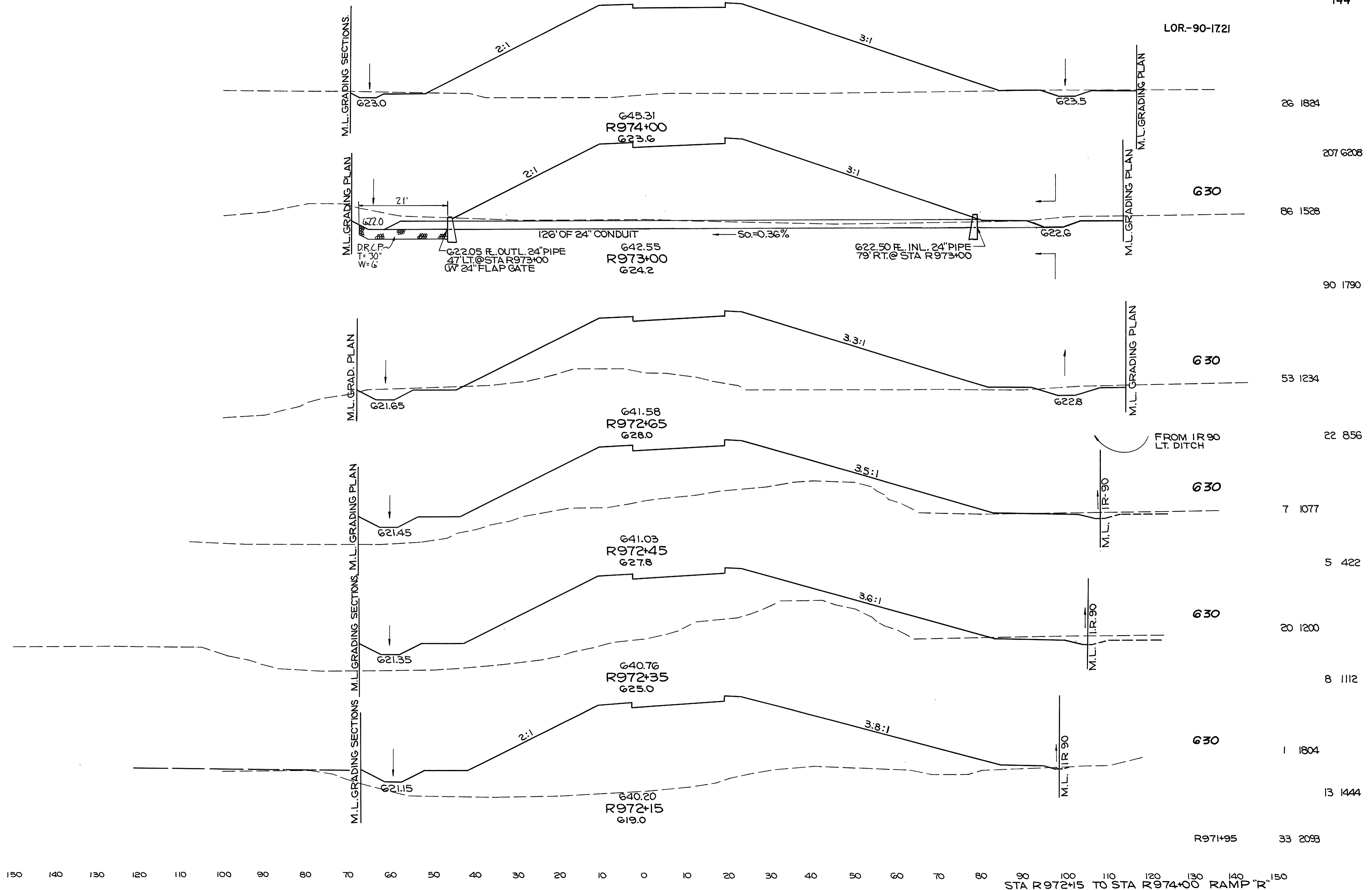


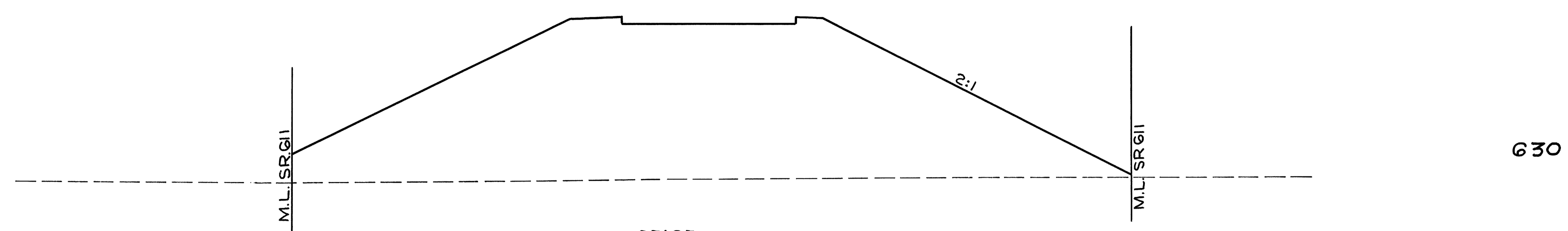
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
 STA R967+53 TO STA R970+00 RAMP "R"



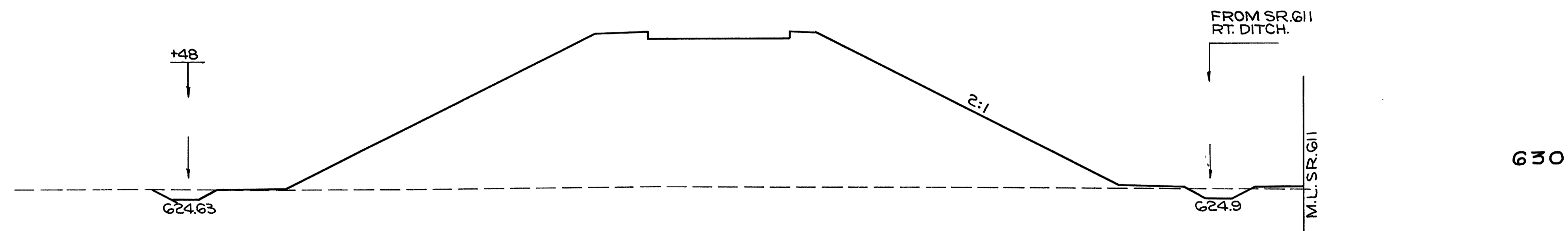
33 2093
 24 1414
 32 1724
 28 2111
 11 1533
 4 887
 4 1660
 1 1166
 0 1489
 2 473
 9 1064
 2063050

LOR-90-1721

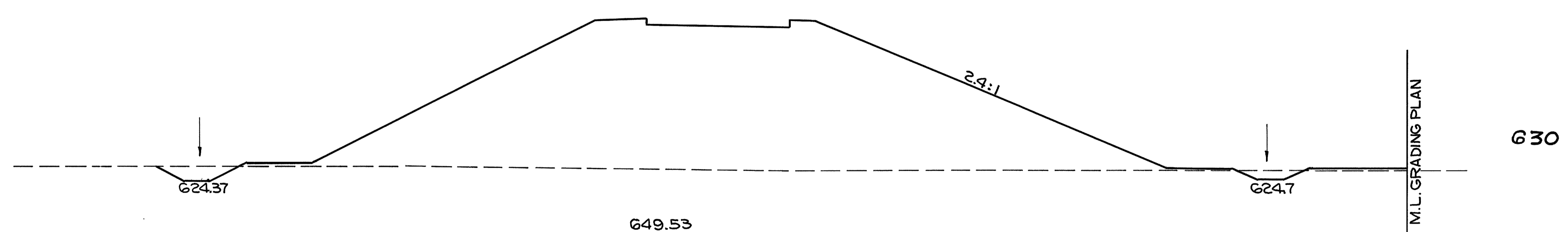




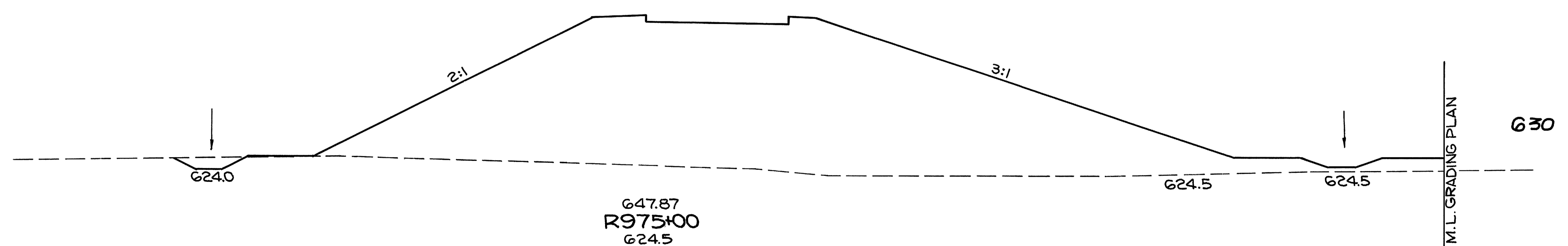
0 2136



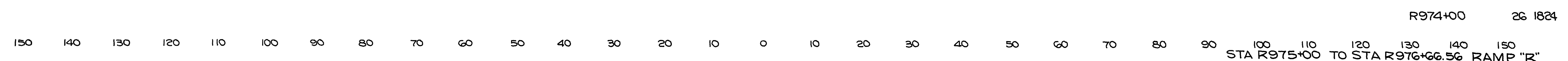
20 1923



28 1900



13 2193

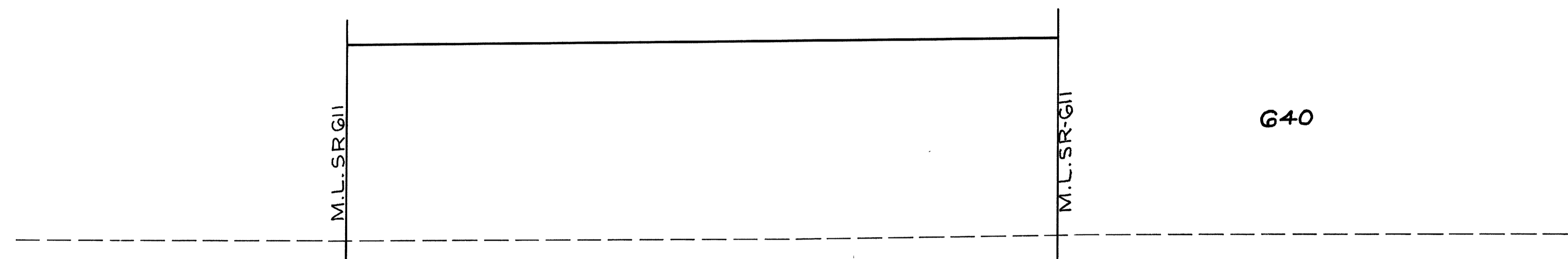


72 7438

57 5684

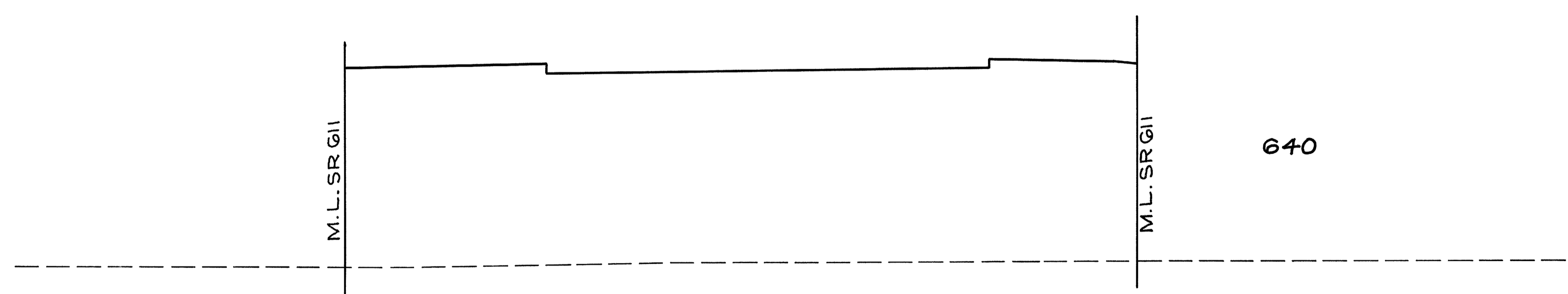
46 3629

15 3006



652.17
R977+24.29 BK.
625.4

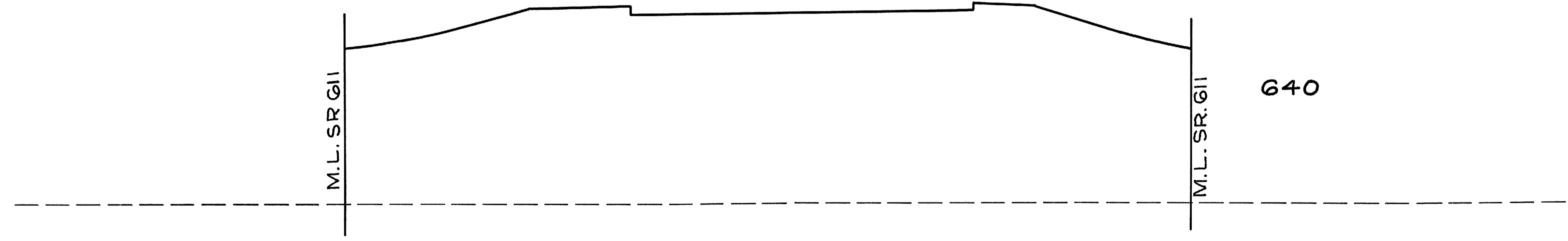
R977+24.29AHD 0 0
R977+24.29 BK. 0 2315



651.91
R977+08
626.0

0 1473

0 2569



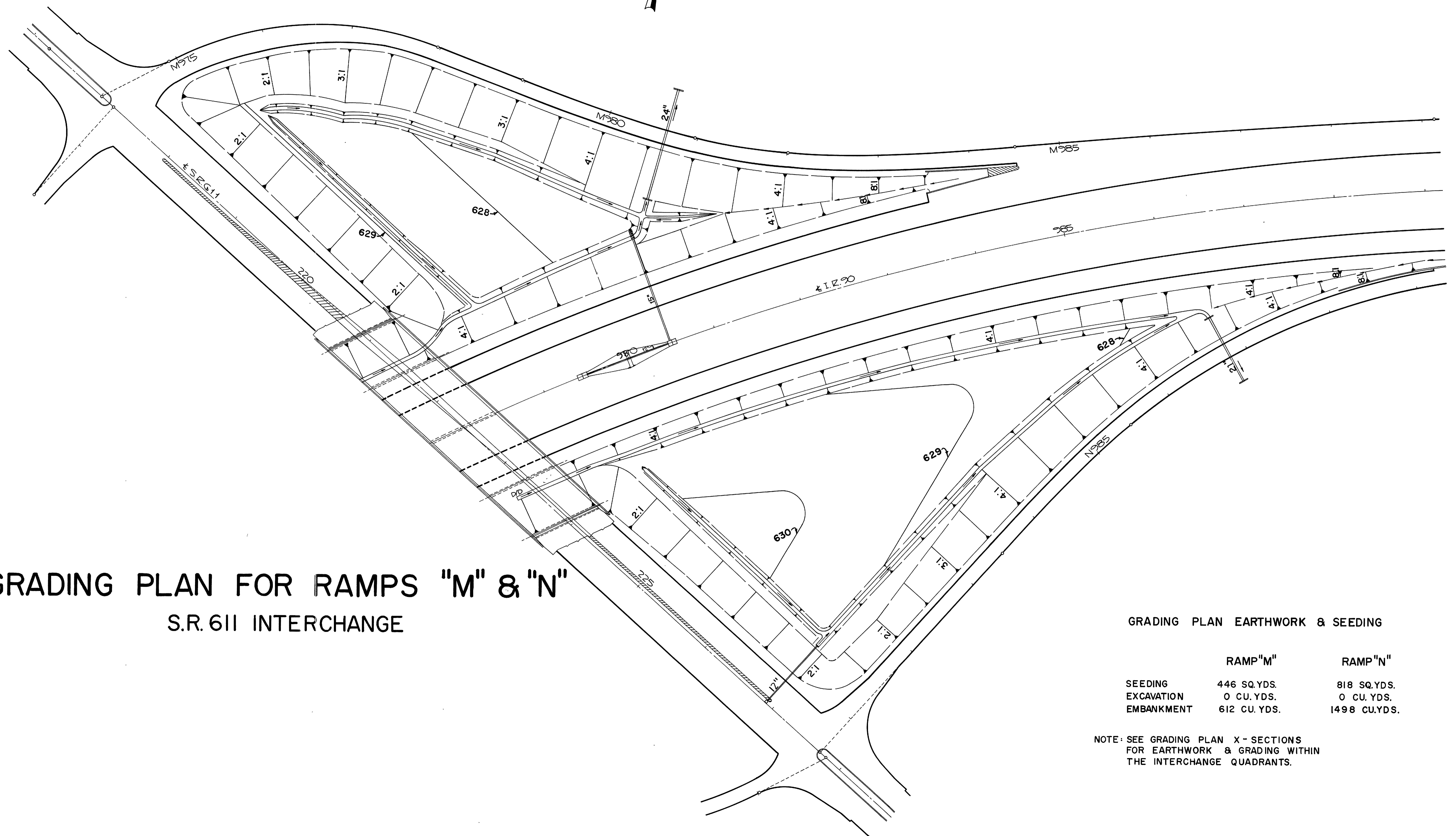
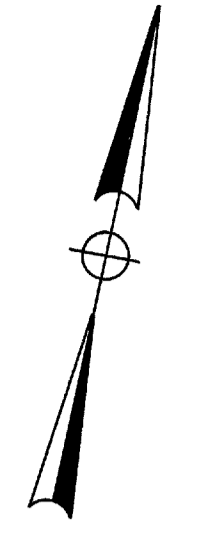
651.76
R976+98.26
626.2

0 931

0 2595

0 2777

R976+66.56 0 2136



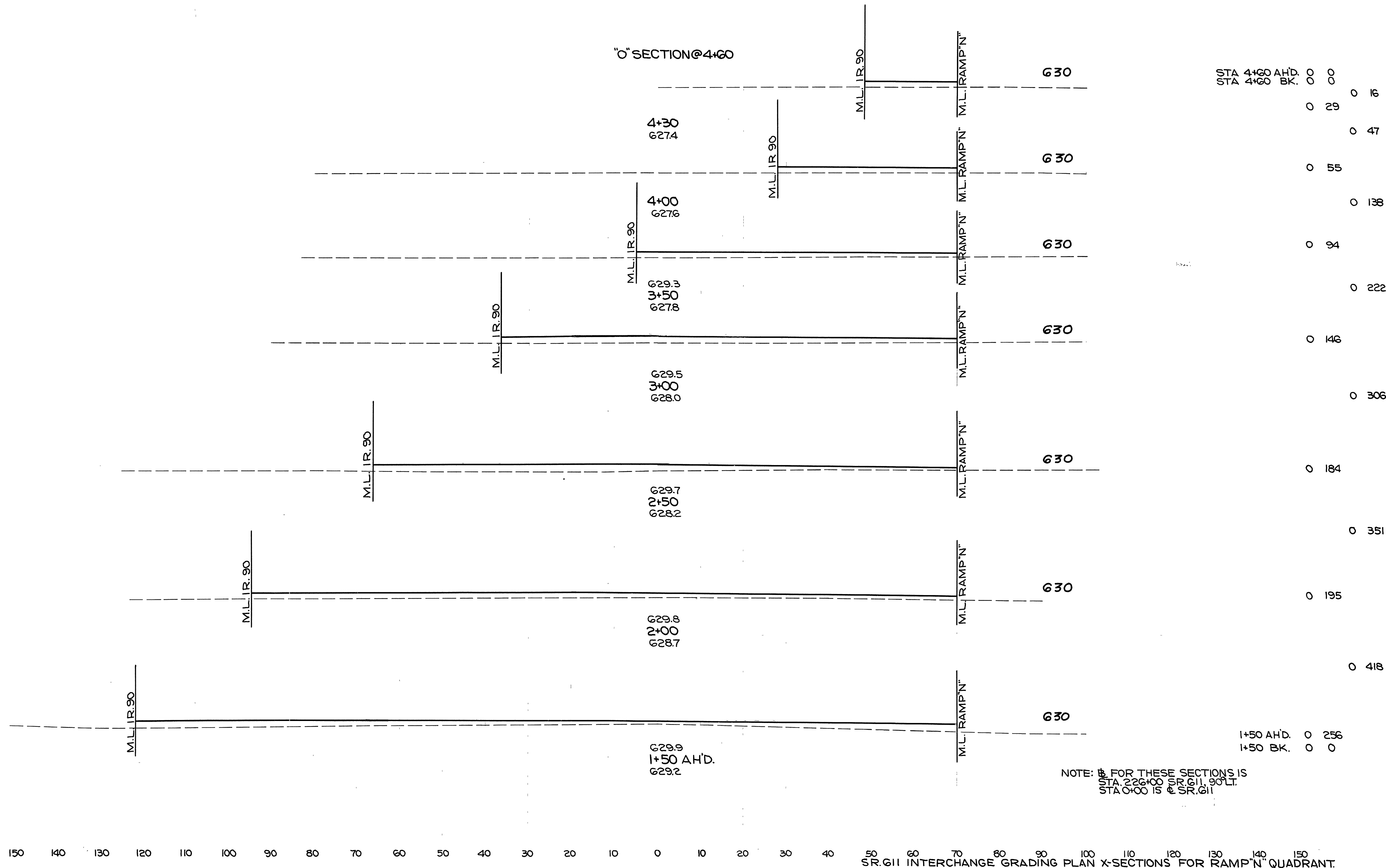
GRADING PLAN FOR RAMPS "M" & "N"

S.R. 611 INTERCHANGE

GRADING PLAN EARTHWORK & SEEDING

	RAMP "M"	RAMP "N"
SEEDING	446 SQ. YDS.	818 SQ. YDS.
EXCAVATION	0 CU. YDS.	0 CU. YDS.
EMBANKMENT	612 CU. YDS.	1498 CU. YDS.

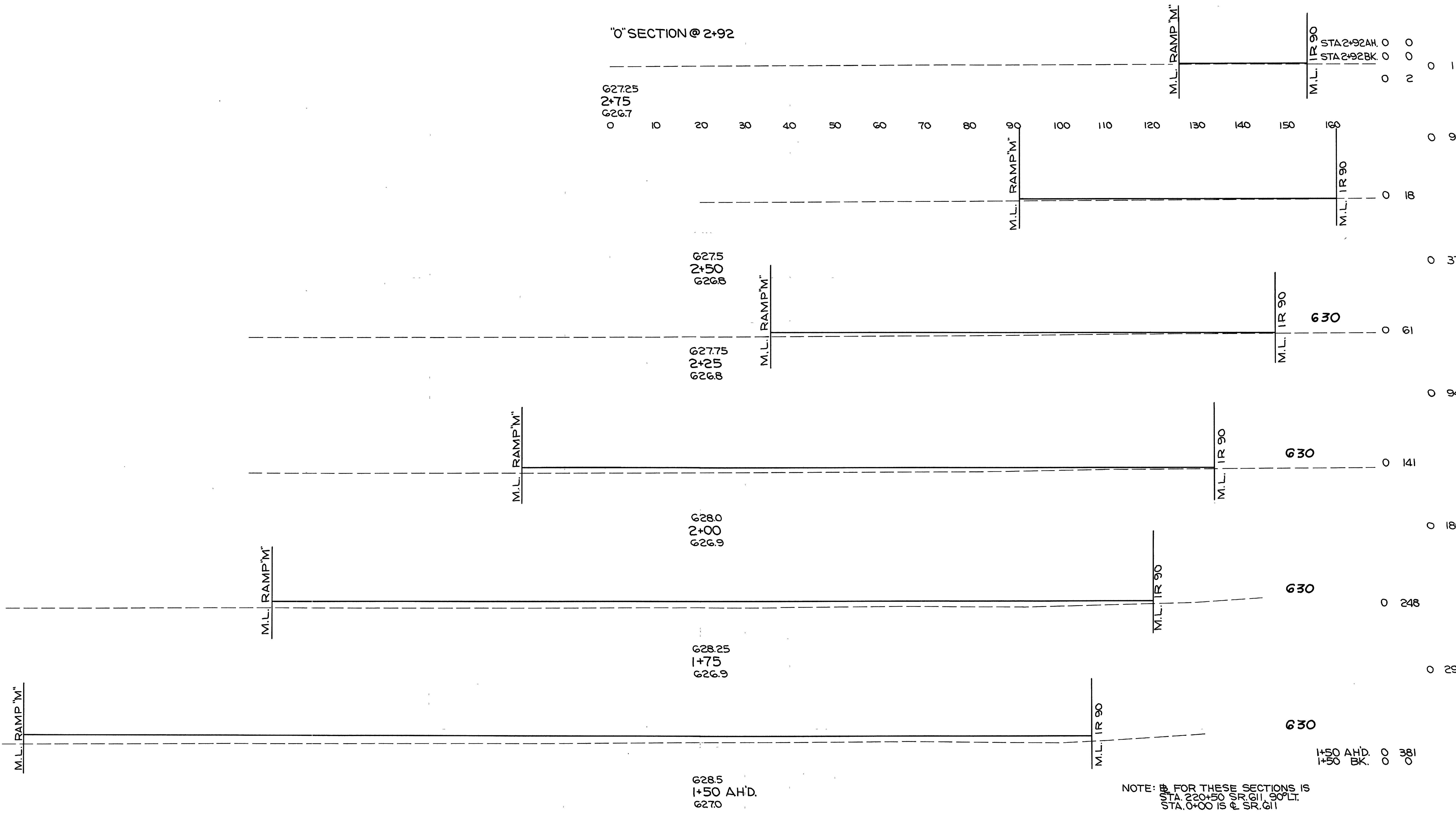
NOTE: SEE GRADING PLAN X-SECTIONS FOR EARTHWORK & GRADING WITHIN THE INTERCHANGE QUADRANTS.



Station	Offset	Value
STA 4+60 AH'D.	0	0
STA 4+60 BK.	0	0
	0	16
	0	29
	0	47
	0	55
	0	138
	0	94
	0	222
	0	146
	0	306
	0	184
	0	351
	0	195
	0	418
1+50 AH'D.	0	256
1+50 BK.	0	0

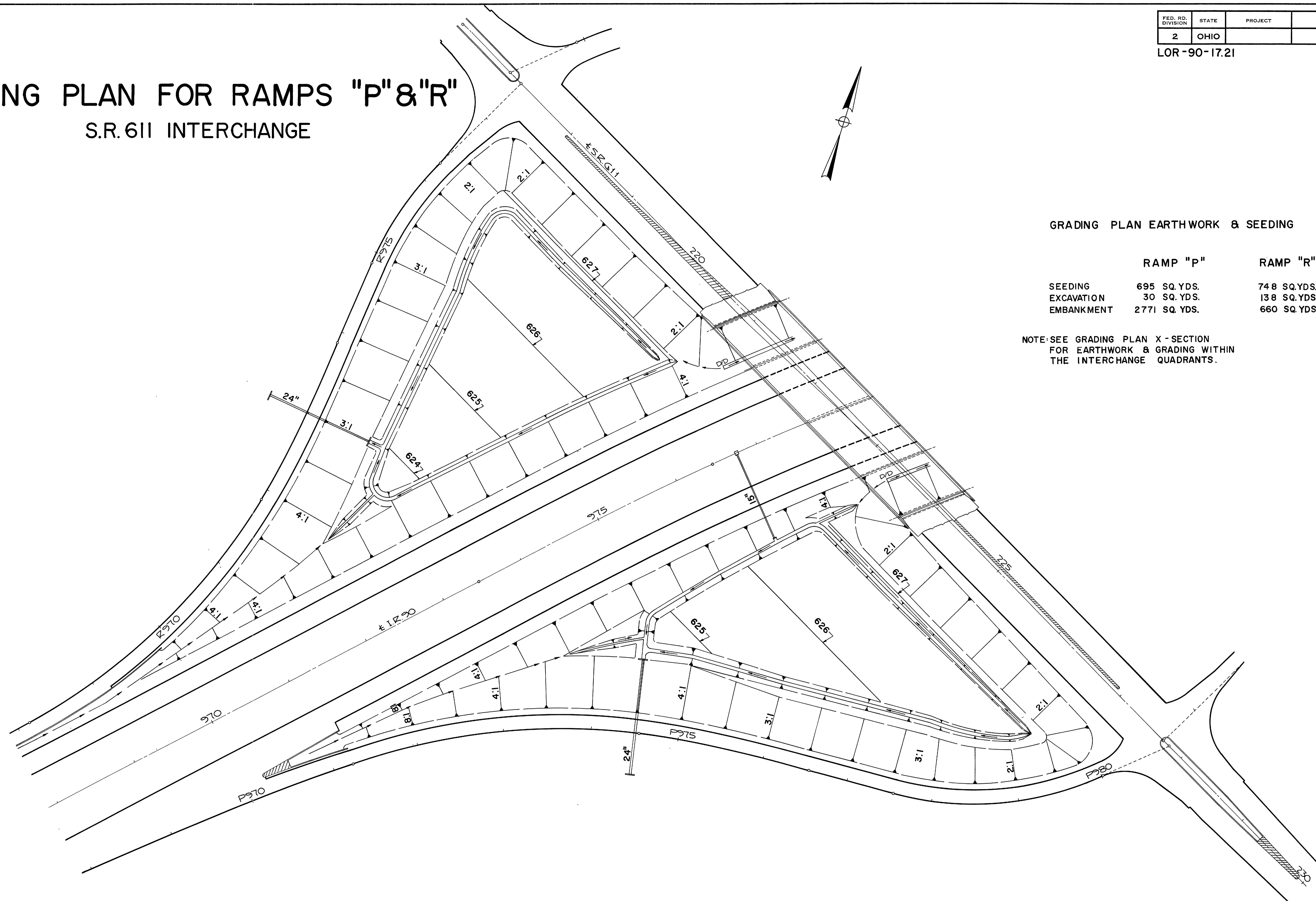
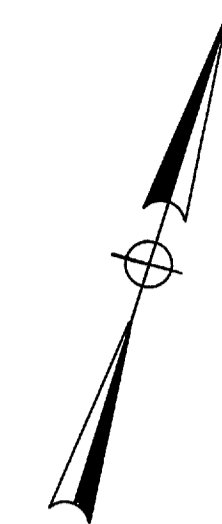
NOTE: # FOR THESE SECTIONS IS
 STA. 226+00 SR. 611, 90' LT.
 STA 0+00 IS @ SR. 611

"O" SECTION @ 2+92



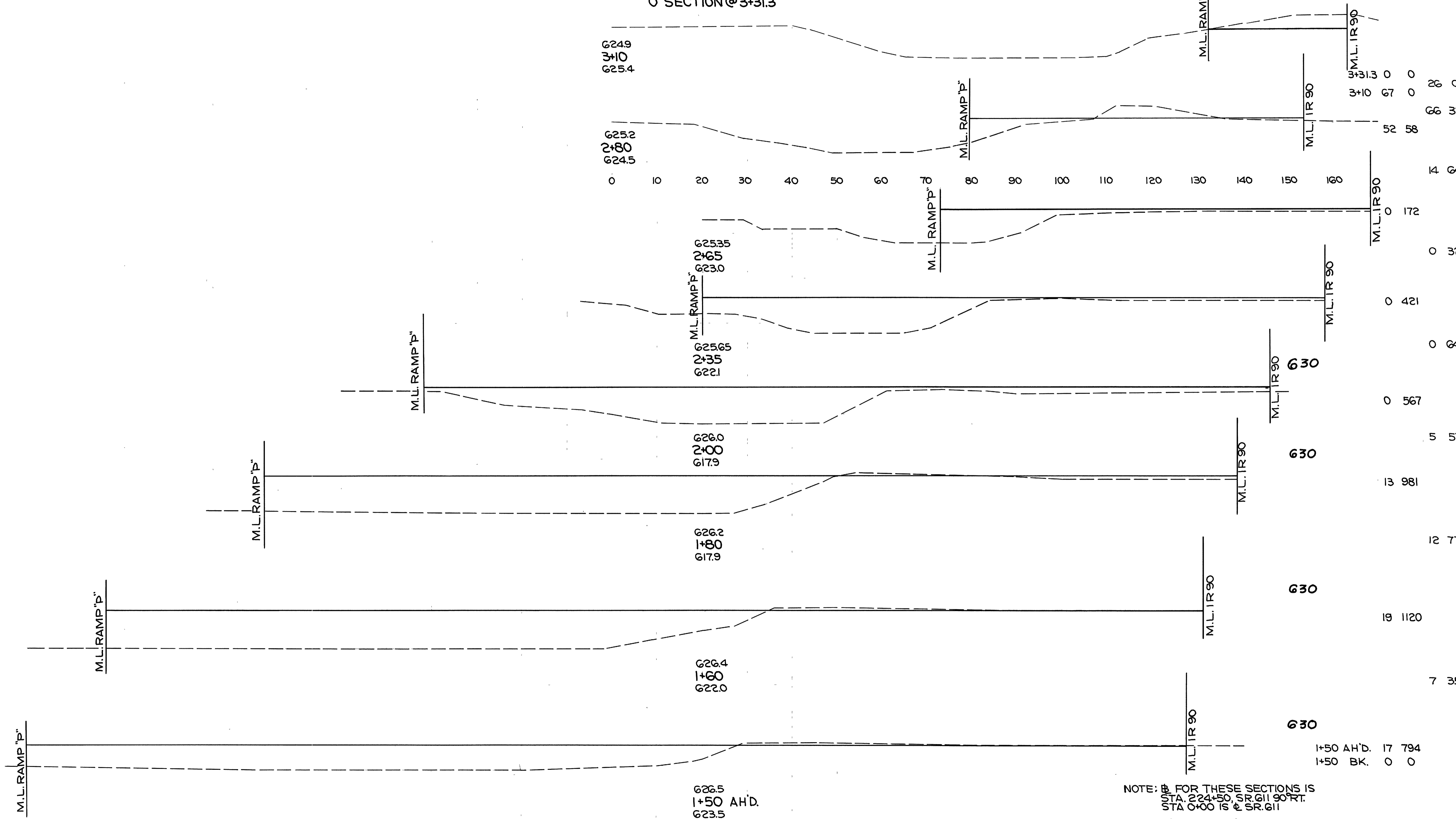
GRADING PLAN FOR RAMPS "P" & "R"

S.R. 611 INTERCHANGE

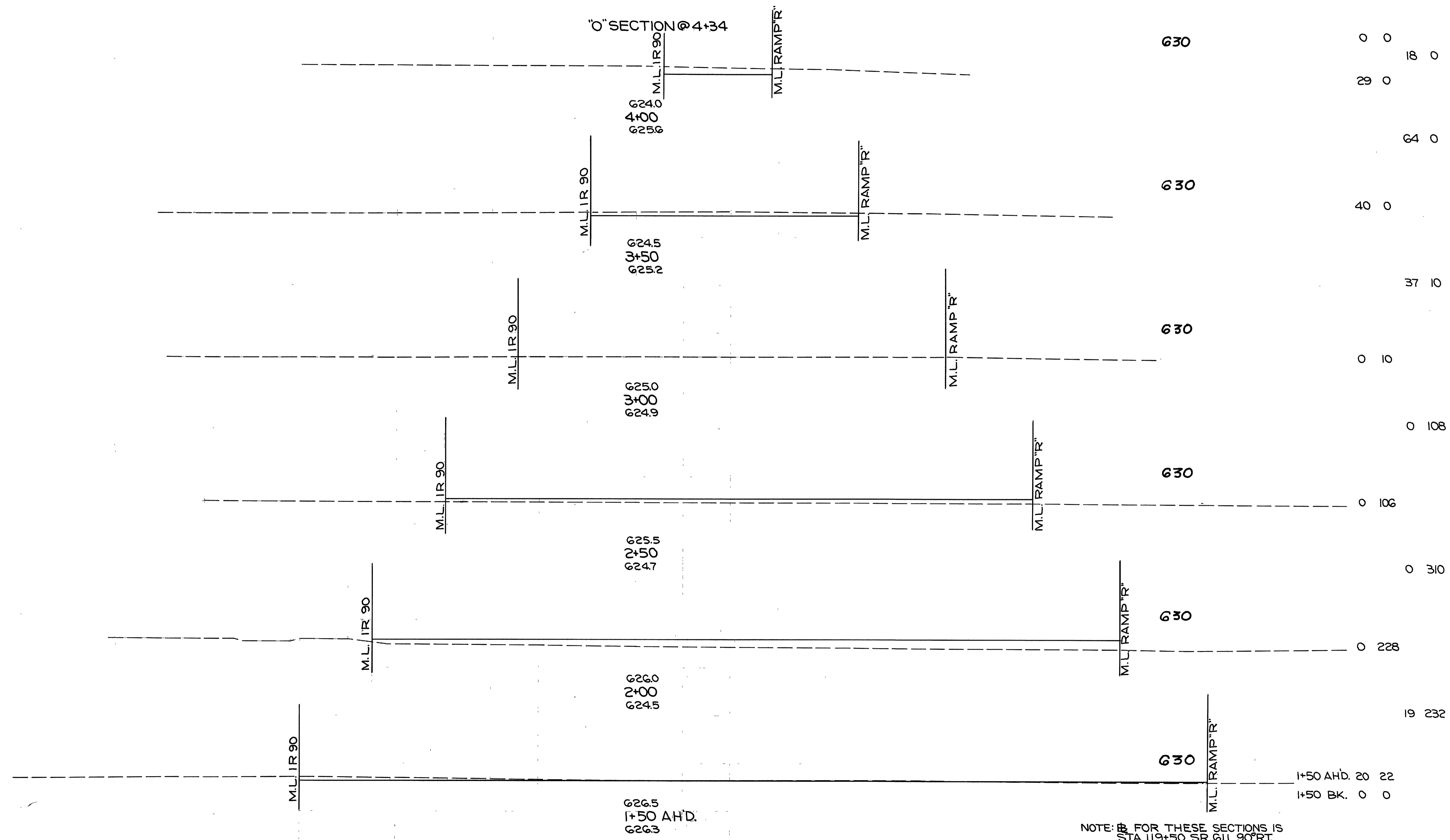


LOR.-90-17.21

"0" SECTION @ 3+31.3



"O" SECTION @ 4+34



NOTE: # FOR THESE SECTIONS IS
 STA 1+50 SR.G11, 90° RT.
 STA. 0+00 IS @ SR.G11

SR - 611 INTERCHANGE PAVEMENT QUANTITIES

REFERENCE NO.	FROM SHEET NO.	DESIGNATION	FROM	TO	SIDE	301	302	304	310		402	404	407	408	409	451		605	SPECIAL	REMARKS	
						BITUM. AGGR. BASE	ASPHALT CONCRETE (70-85)	AGGR. BASE	SUBBASE		ASPHALT CONCRETE (70-85)	ASPHALT CONCRETE (70-85)	TACK COAT	BITUM. PRIME COAT	SEAL COAT	REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT	AGGR. DRAINS	DRAINAGE CONNECT. USING NO. 8 AGGR			
									GRADING A OR B							9"	10"				
						CU. YD.				GAL.		SQ. YD.		LIN. FT.	CU. YD.						
1-P	118	RAMP M	M974+4157	M983+00	▬	98.6		27.3	357.9						592.7	1801.9			55.6	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
2-P	119	RAMP M	M983+00	M984+5088	▬	21.4		6.8	67.4	4.0					128.7	280.1			9.9	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
3-P	119	RAMP M	M984+5088	M989+1304	▬	119.9		80.0	284.0	85.0					721.6		1608.3			INCLUDES ALL PAVEMENT, PAVED BERM, AND DECELERATION LANE QUANTITIES	
4-P	125	RAMP N	N980+8174	N990+00	▬	122.0		63.5	373.0	28.2					818.2	1836.1			62.6	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES INCLUDING OUTSIDE PAVED BERM RT. OF I.R. 90 STA. 988+93 TO STA. 989+88	
5-P	126	RAMP N	N990+00	N993+2189	▬	84.0		98.4	101.5	83.3					723.4	541.2			37.3	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES INCLUDING OUTSIDE PAVED BERM RT. OF I.R. 90 STA. 989+88 TO STA. 993+2189	
6-P	126	RAMP N	N993+2189	N1005+2189	▬	174.5		106.6	289.1	97.8					1057.4		1640.8			59.6	INCLUDES ALL ACCELERATION LANE AND PAVED BERM QUANTITIES
7-P	131	RAMP P	P965+6982	P970+2289	▬	102.8		62.8	288.7	60.9					618.8		1339.7			38.3	INCLUDES ALL PAVEMENT, PAVED BERM AND DECELERATION LANE QUANTITIES
8-P	131	RAMP P	P970+2289	P973+00	▬	35.7		10.5	114.8	4.1					214.0	507.7			19.3	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
9-P	132	RAMP P	P973+00	P980+5048	▬	86.9		24.4	288.3						522.9	1423.8			48.4	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
10-P	139	RAMP R	R953+1443	R965+1443	▬	177.8		108.6	363.0	105.3					1077.3		1677.3			66.3	INCLUDES ALL ACCELERATION LANE AND PAVED BERM QUANTITIES
11-P	139	RAMP R	R965+1443	R973+00	▬	113.1		90.1	224.2	66.0					853.0	1120.6			59.3	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES INCLUDING OUTSIDE PAVED BERM LT. OF I.R. 90 STA. 965+1443 TO STA. 969+0450	
12-P	140	RAMP R	R973+00	R977+2429	▬	52.1		16.3	187.0						314.6	930.9			24.1	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
13-P	85	S.R. 611	204+40	204+50	±							2.0	2.4								INCLUDES ALL PAVEMENT QUANTITIES
14-P	85	S.R. 611	204+50	206+00	±		33.8	93.7		73.1	19.3	13.8		162.0				128			INCLUDES ALL PAVEMENT QUANTITIES
15-P	86	S.R. 611	206+00	212+3957	±		256.2	699.0		536.1	145.0	103.6		1229.8				400			INCLUDES ALL PAVEMENT QUANTITIES
16-P	86	S.R. 611	212+3957	217+00	±	48.4		94.7	493.7	60.0					580.9	2757.4			13.5	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
17-P	87	S.R. 611	217+00	220+5774	±	43.7		82.3	455.9	44.2					524.5	2402.9			28.7	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
18-P	87	S.R. 611	224+2426	228+00	±	44.9		84.5	463.6	45.4					538.9	2565.4			29.4	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
19-P	88	S.R. 611	228+00	228+6938	±	1.7		3.2	68.3	1.7					20.2	393.2			1.0	INCLUDES ALL PAVEMENT AND PAVED BERM QUANTITIES	
20-P	88	S.R. 611	228+6938	236+00	±		269.9	737.8		571.3	152.8	109.2		1295.6				472.5			INCLUDES ALL PAVEMENT QUANTITIES
21-P	88	S.R. 611	236+00	236+10	±							2.0	2.4								INCLUDES ALL PAVEMENT QUANTITIES
TOTALS						1327.5	559.9	2490.5	4420.4	1866.4	317.1	230.6	4.8	2687.4	9307.1	16561.2	6266.1	1000.5	553.3		

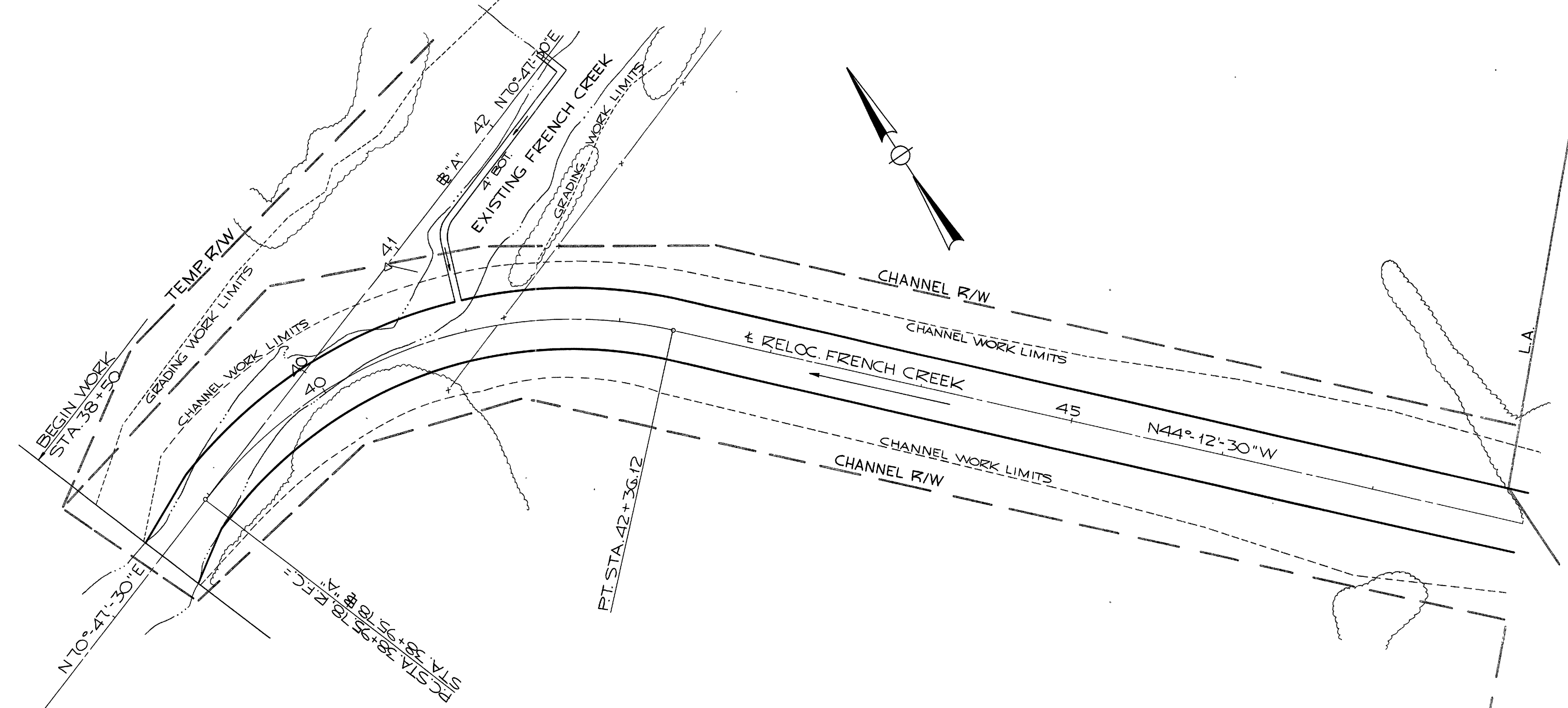
SR - 611 INTERCHANGE PAVEMENT MARKING QUANTITIES

REFERENCE NO.	FROM SHEET NO.	DESIGNATION	FROM	TO	SIDE	621					
						EDGE LINE	LANE LINE AND CENTER LINE	CHANNELIZING LINE	BROAD TRANSVERSE STRIPE	CURB AND ISLAND MARKING	
						4"	4"	8"	24"		
						MILES	MILES	FEET	LUMP	LUMP	
1-P	118	RAMP M	M974+4157	M983+00	▬	0.334					
2-P	119	RAMP M	M983+00	M984+5088	▬	0.057				LUMP	
3-P	119	RAMP M	M984+5088	M989+1304	▬	0.153		595	LUMP		
4-P	125	RAMP N	N980+8174	N990+00	▬	0.348				LUMP	
5-P	126	RAMP N	N990+00	N993+2189	▬	0.061				LUMP	
6-P	126	RAMP N	N993+2189	N1005+2189	▬	0.223	0.017	250			
7-P	131	RAMP P	P965+6982	P970+2289	▬	0.152		592	LUMP		
8-P	131	RAMP P	P970+2289	P973+00	▬	0.106				LUMP	
9-P	132	RAMP P	P973+00	P980+5048	▬	0.294					
10-P	139	RAMP R	R953+1443	R965+1443	▬	0.227	0.018	256			
11-P	139	RAMP R	R965+1443	R973+00	▬	0.223				LUMP	
12-P	140	RAMP R	R973+00	R977+2429	▬	0.172					
TOTALS						2.350	0.035	1693	LUMP	LUMP	

FOR PAVEMENT MARKING DETAILS SEE SHEETS 24 & 220.

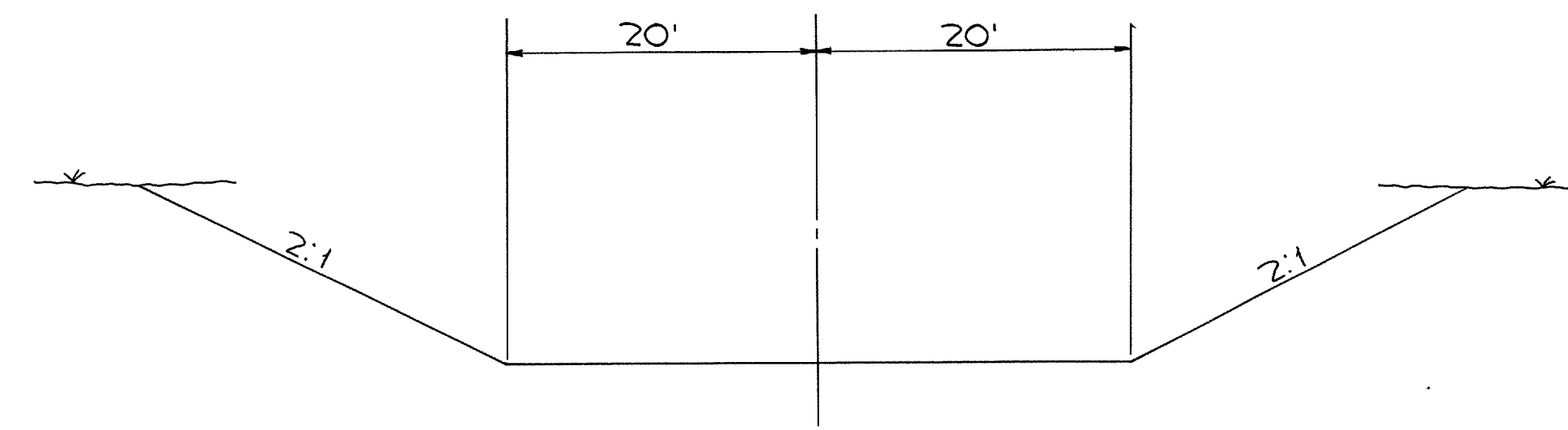
FOR SR - 611 PAVEMENT MARKING QUANTITIES SEE SHEET NO. 24.

FOR I.R. - 90 PAVEMENT MARKING QUANTITIES SEE SHEET NO. 22.

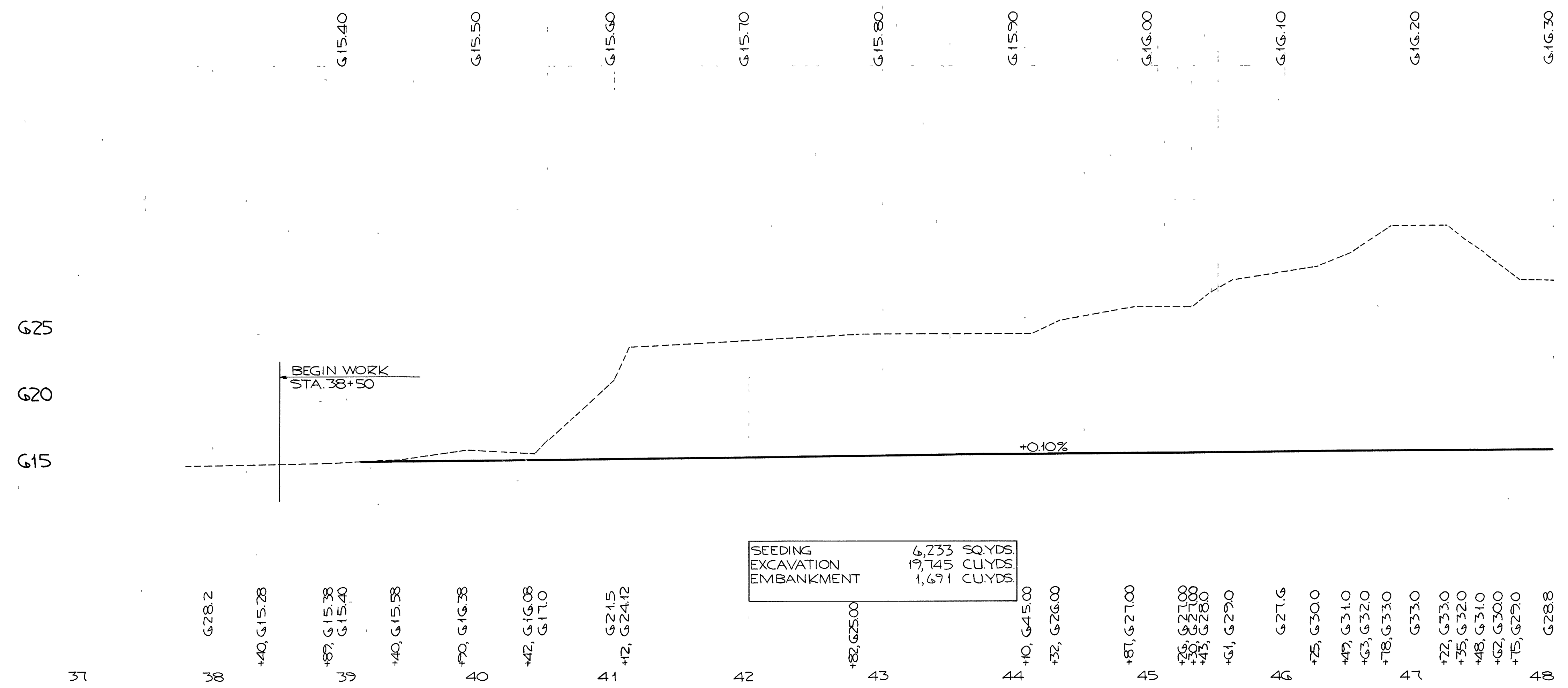


P.I. STA 40+86.90
 $\Delta = 65^{\circ}00'$
 $R = 300.00'$
 $T = 191.12'$
 $L = 340.34'$
 $E = 55.11'$

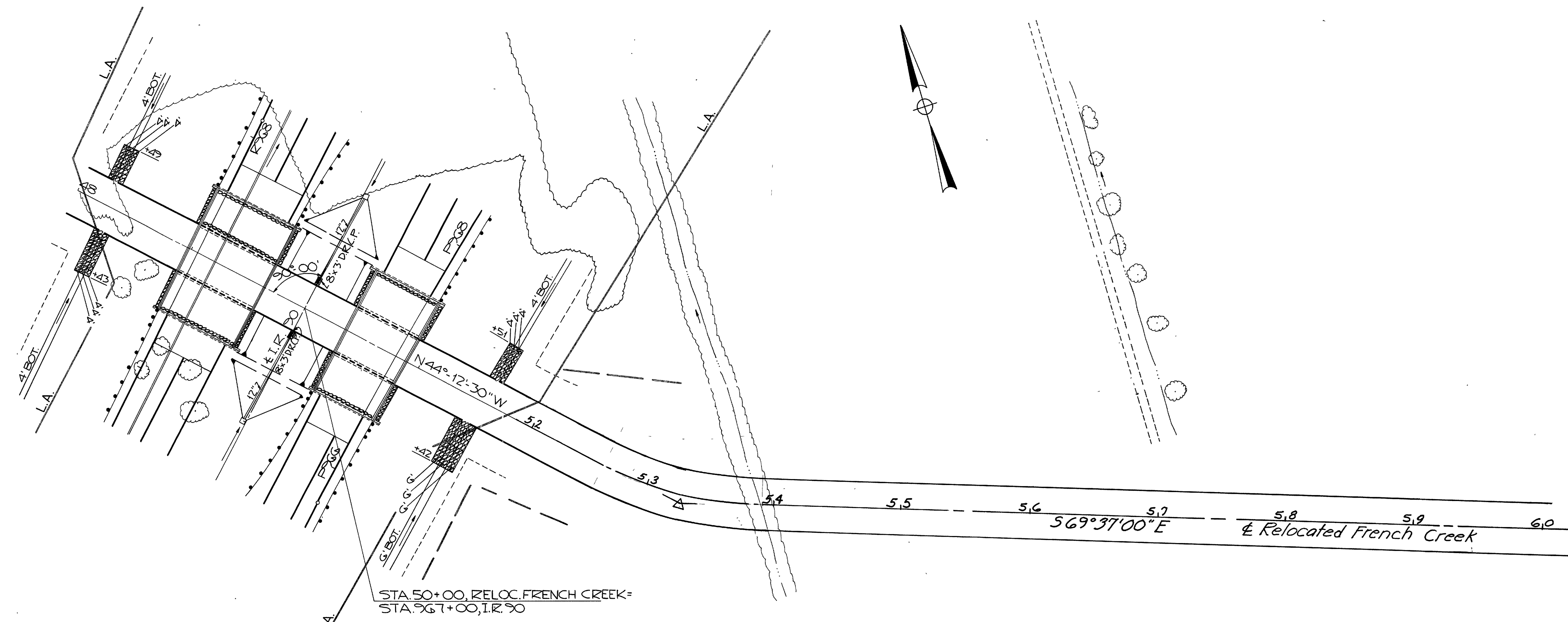
B.M. BOAT SPIKE IN 12" DEAD ELM
 174' RT. STA. 961+31
 ELEV. = 632.19



TYPICAL SECTION RELOC. FRENCH CREEK



STA. 37+00 TO STA. 48+00, RELOCATED FRENCH CREEK

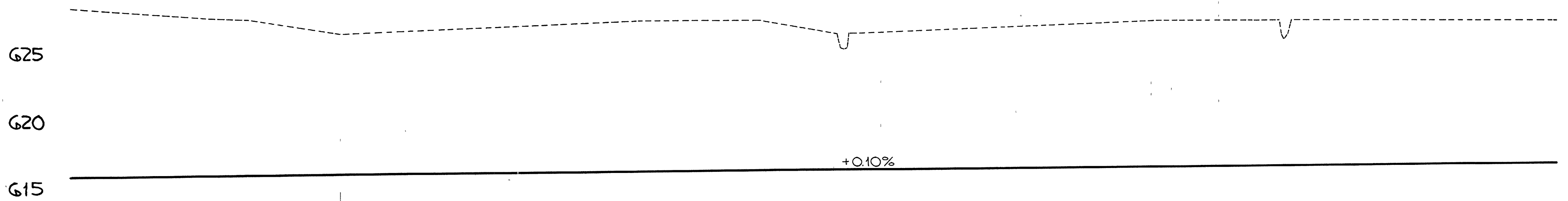


STA. 50+00, RELOC. FRENCH CREEK =
STA. 967+00, I.R. 90

See Sh. No. 156
For Details

B.M. BOAT SPIKE IN POWER POLE
28' LT. STA. 232+27, S.R. 611
ELEV. = 627.1

G 16.30 G 16.40 G 16.50 G 16.60 G 16.70 G 16.80 G 16.90 G 17.00 G 17.10 G 17.20 G 17.30 G 17.40



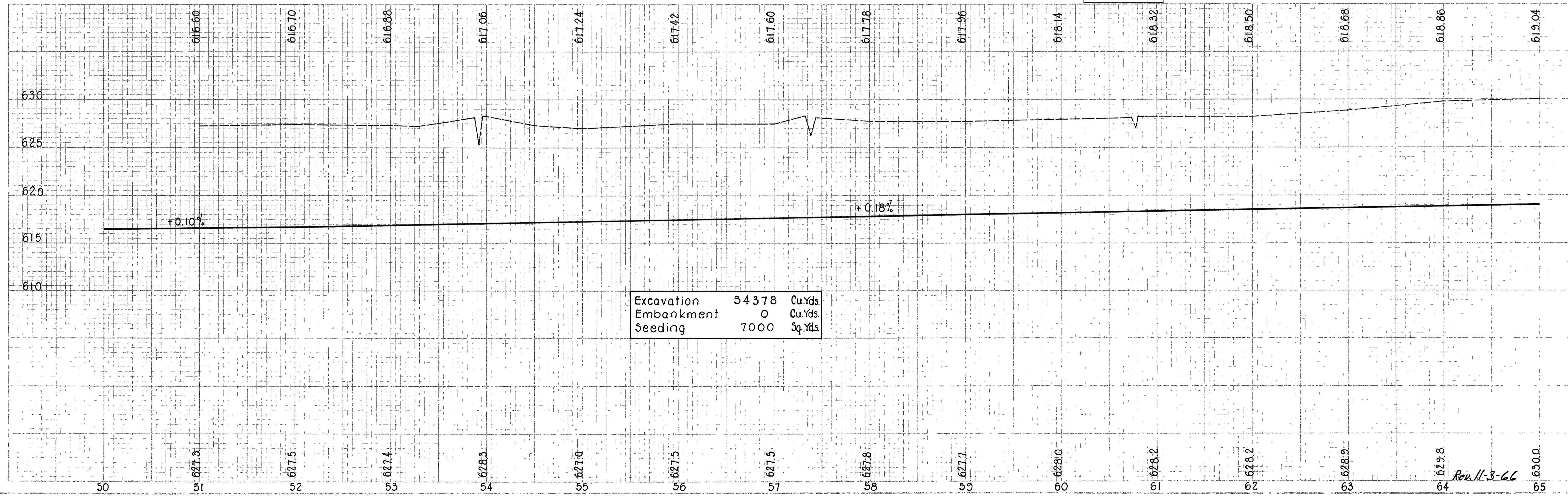
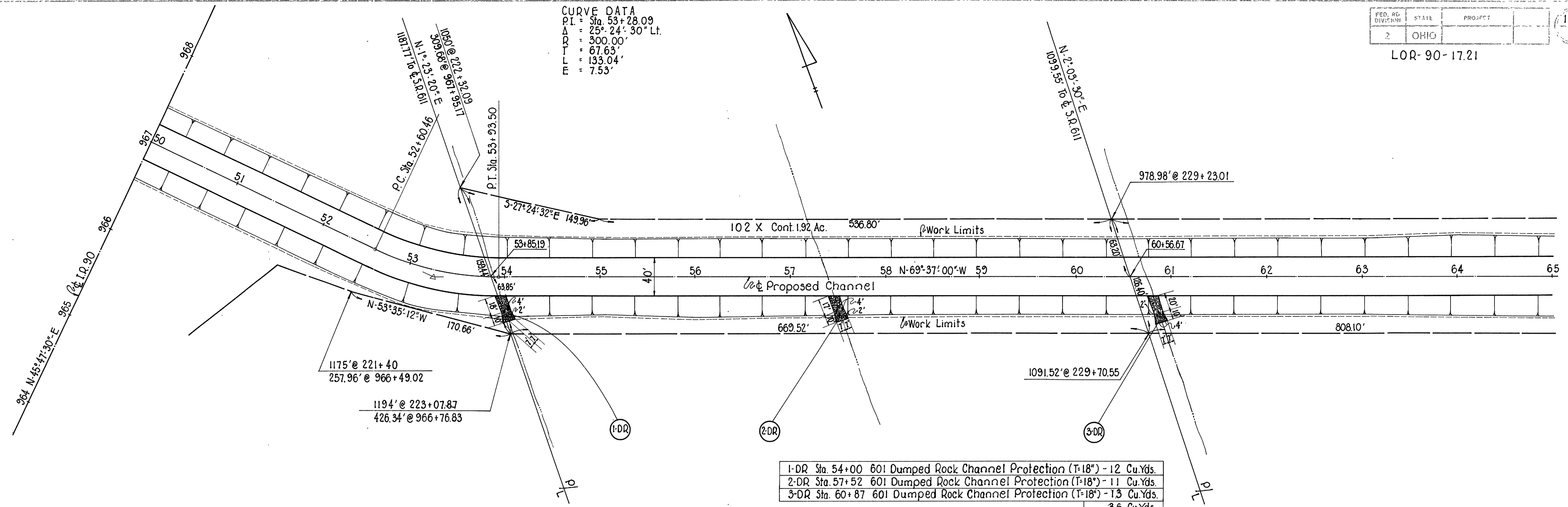
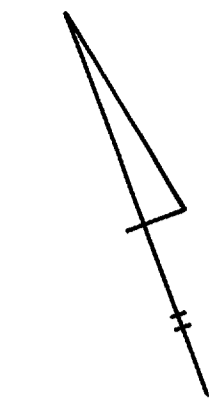
Seeding	* 59.1%
Excavation	54.22 Cu. Yd.
Embankment	0 Cu. Yd.

* Seeding carried with
I R 90 Mainline quantities

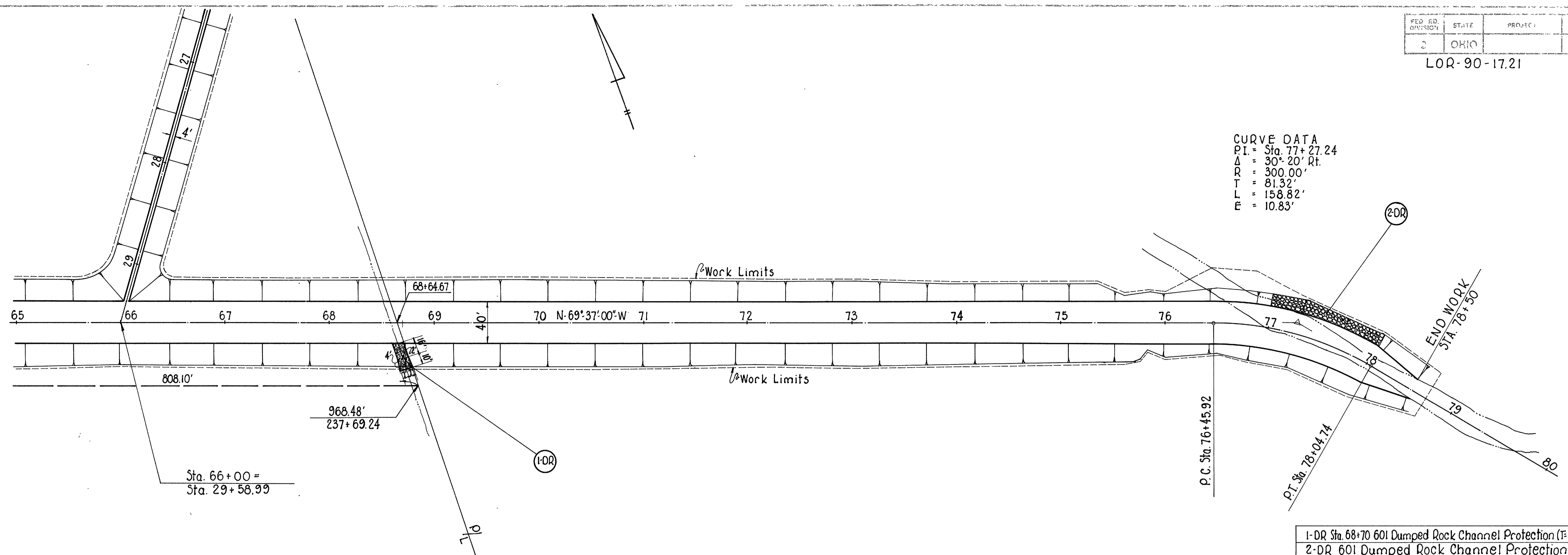
SEEDING	For quantities
EXCAVATION	Sta. 50+00 to Sta.
EMBANKMENT	65+00 see Sh. 156

G 28.8 48
G 28.2 49
+32, G 28.0
G 27.0 50
G 27.3 51
G 27.6 52
+73, G 28.0
G 28.0 53
+12, G 28.0
+68, G 27.0
+10, G 26.0
+11, G 27.0
+11, G 27.1
44
G 27.5 55
G 28.0 56
+75, G 28.0
+75, G 28.0
+77, G 27.0
+02, G 27.0
+04, G 28.0
G 28.0 58
G 28.0 59

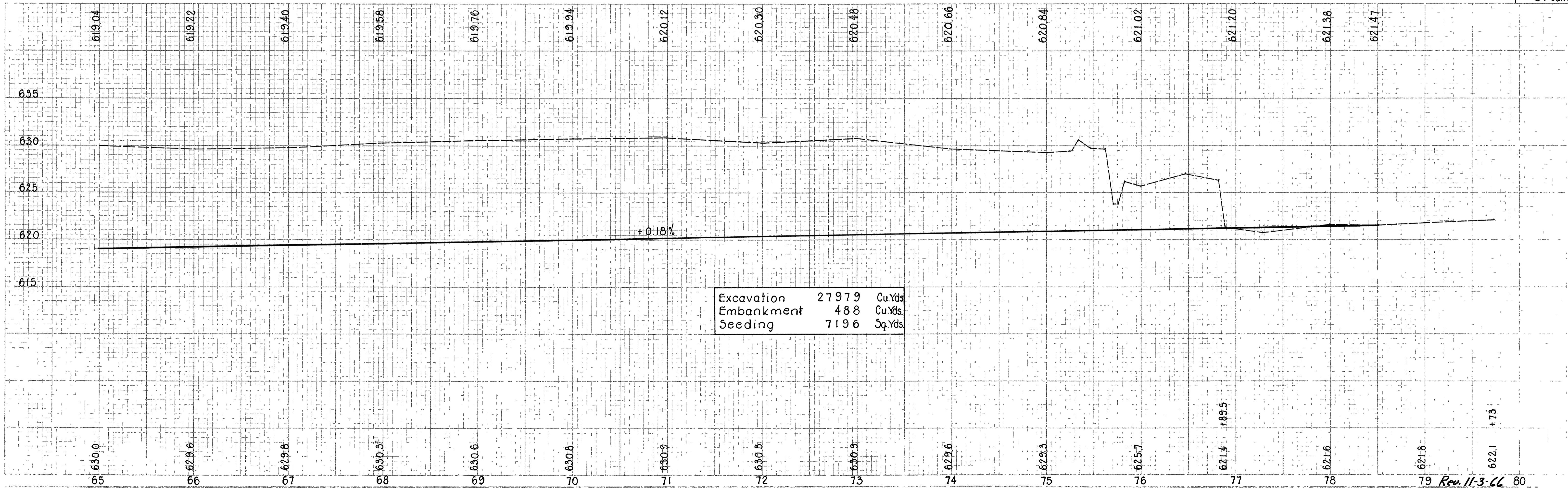
CURVE DATA
 P.I. = Sta. 53+28.09
 Δ = 25° 24' 30" Lt.
 R = 300.00'
 T = 67.63'
 L = 133.04'
 E = 7.53'



CURVE DATA
 PI = Sta. 77+27.24
 Δ = 30° 20' Rt.
 R = 300.00'
 T = 81.32'
 L = 158.82'
 E = 10.83'



1-DR Sta. 68+70 601 Dumped Rock Channel Protection (T=18") - 11 Cu.Yds.
 2-DR 601 Dumped Rock Channel Protection (T=18")-70 Cu.Yds.
 81 Cu.Yds.

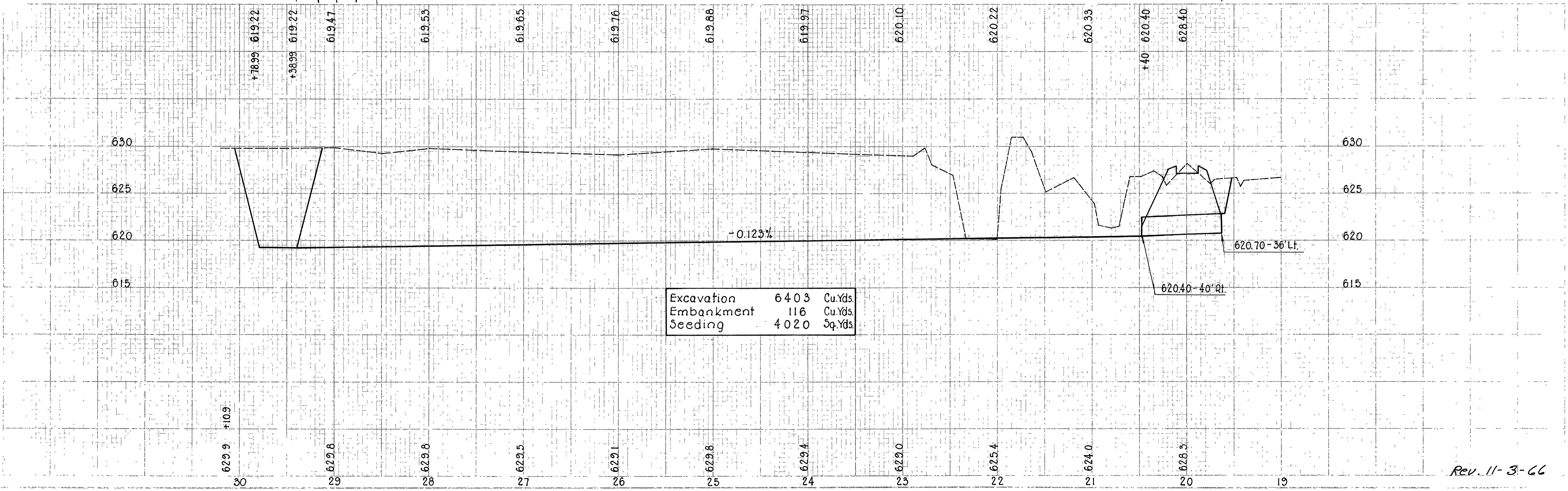
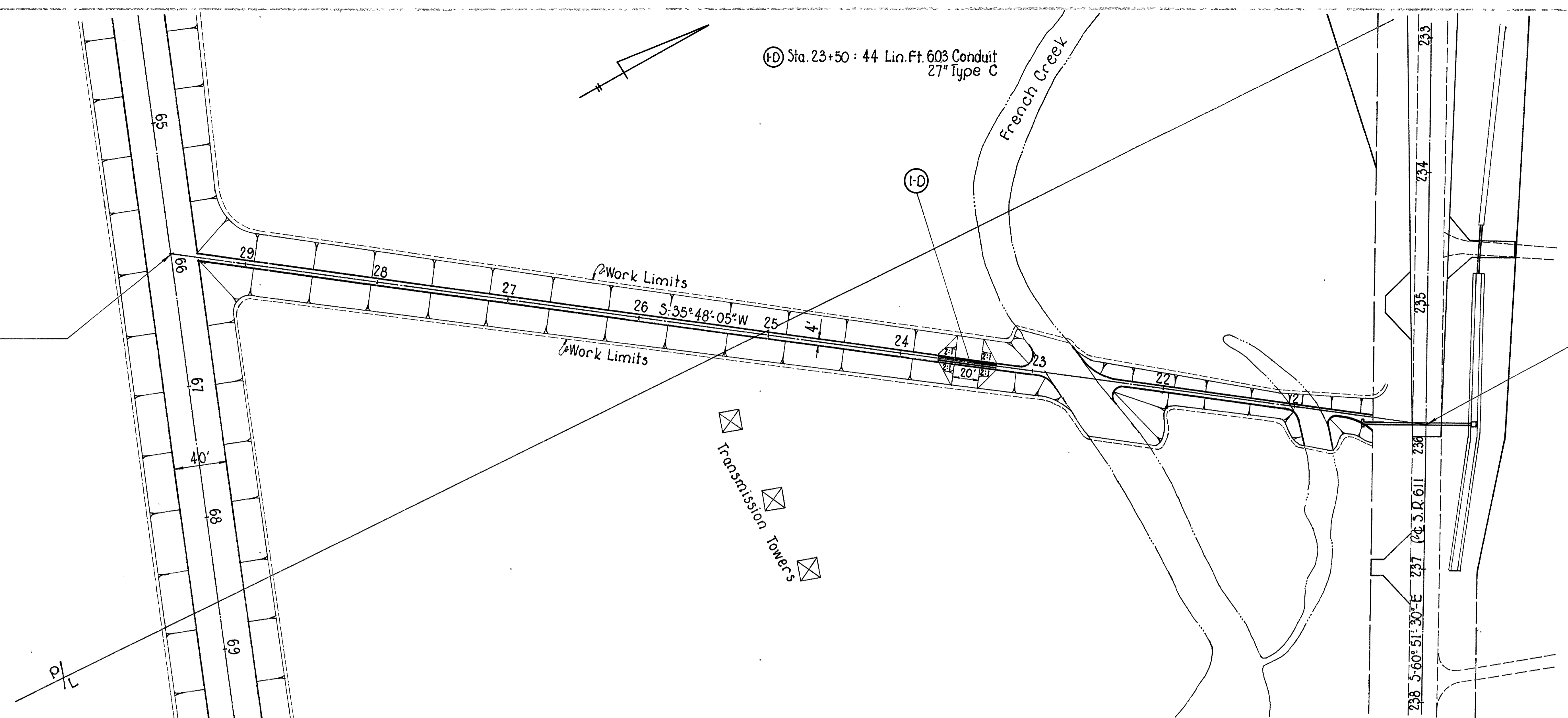
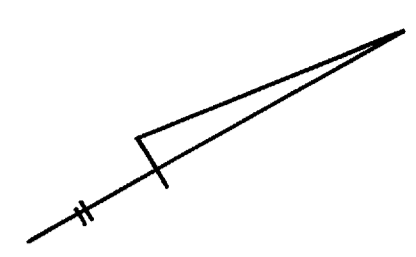


Sta. 66+00 =
Sta. 29+58.99

Sta. 235+90 @ S.R. 611 =
Sta. 20+00 @ Channel

(I-D) Sta. 23+50 : 44 Lin. Ft. 603 Conduit
27" Type C

French Creek



LOR.-90-17.21

M.L. GRADING SECTIONS.

M.L. GRADING SECTS.

M.L. GRADING SECTS.

M.L. GRADING SECTIONS

M.L. GRADING SECTIONS

M.L. GRADING SECTIONS

M.L. GRADING SECTIONS

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
434	117		
655	433		
273	350		
397	505		
155	195		
325	335		
196	167		
520	309		
85	0		
79	0		
0	0		
0	0		

G15.50
41+50
G24.3

G15.60
41+00
G21.5

G15.55
40+50
G17.0

G15.50
40+00
G16.4

G15.40
39+00
G15.4

38+50
G15.3
BEGIN WORK
STA 38+50

620

620

620

620

630

STA 38+50 AHD.
STA 38+50 BK.

620

620

1226 0

3943 0

620 903 0

2915 0

620 671 0

2307 0

620 575 0

2131 0

620 576 0

1904 0

620 452 0

821 109

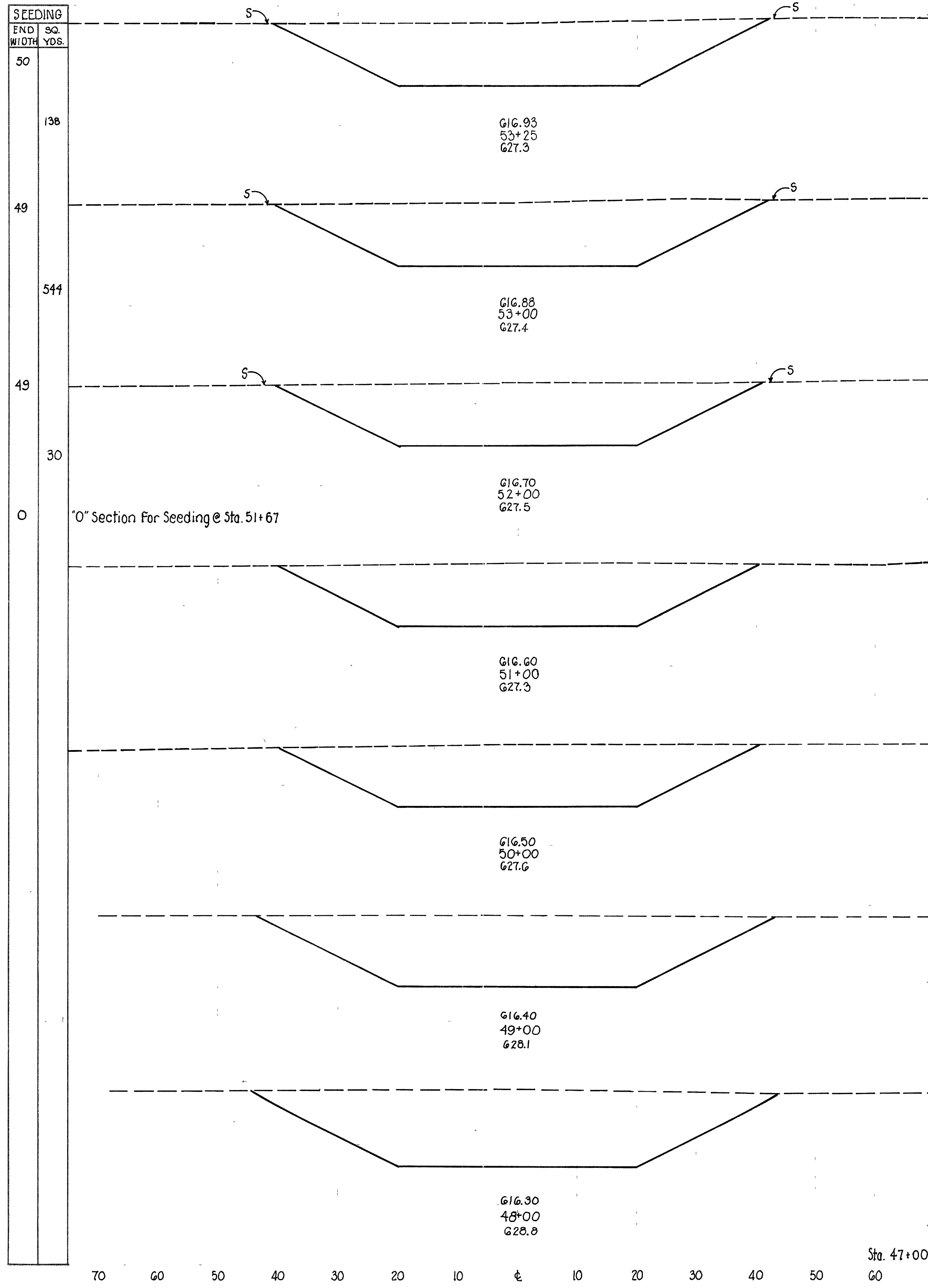
STA. 41+50 434 117

60 50 40 30 20 10 0 10 20 30 40 50 60

60 50 40 30 20 10 0 10 20 30 40 50 60
STA 38+50 TO STA 47+00 RELOC. FRENCH CREEK.

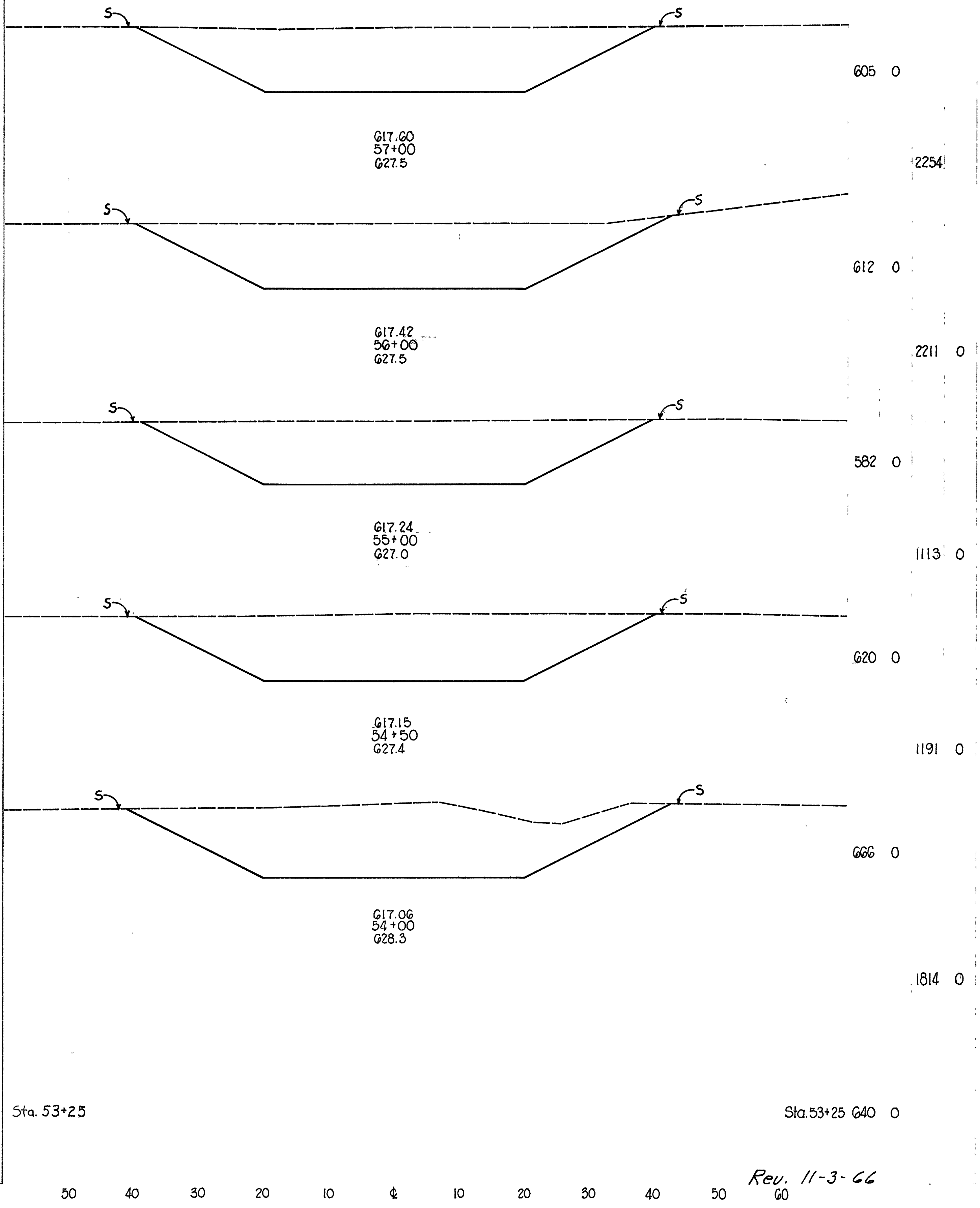
LOR-90-17.21

END AREA CU. YDS.
CUT FILL CUT FILL

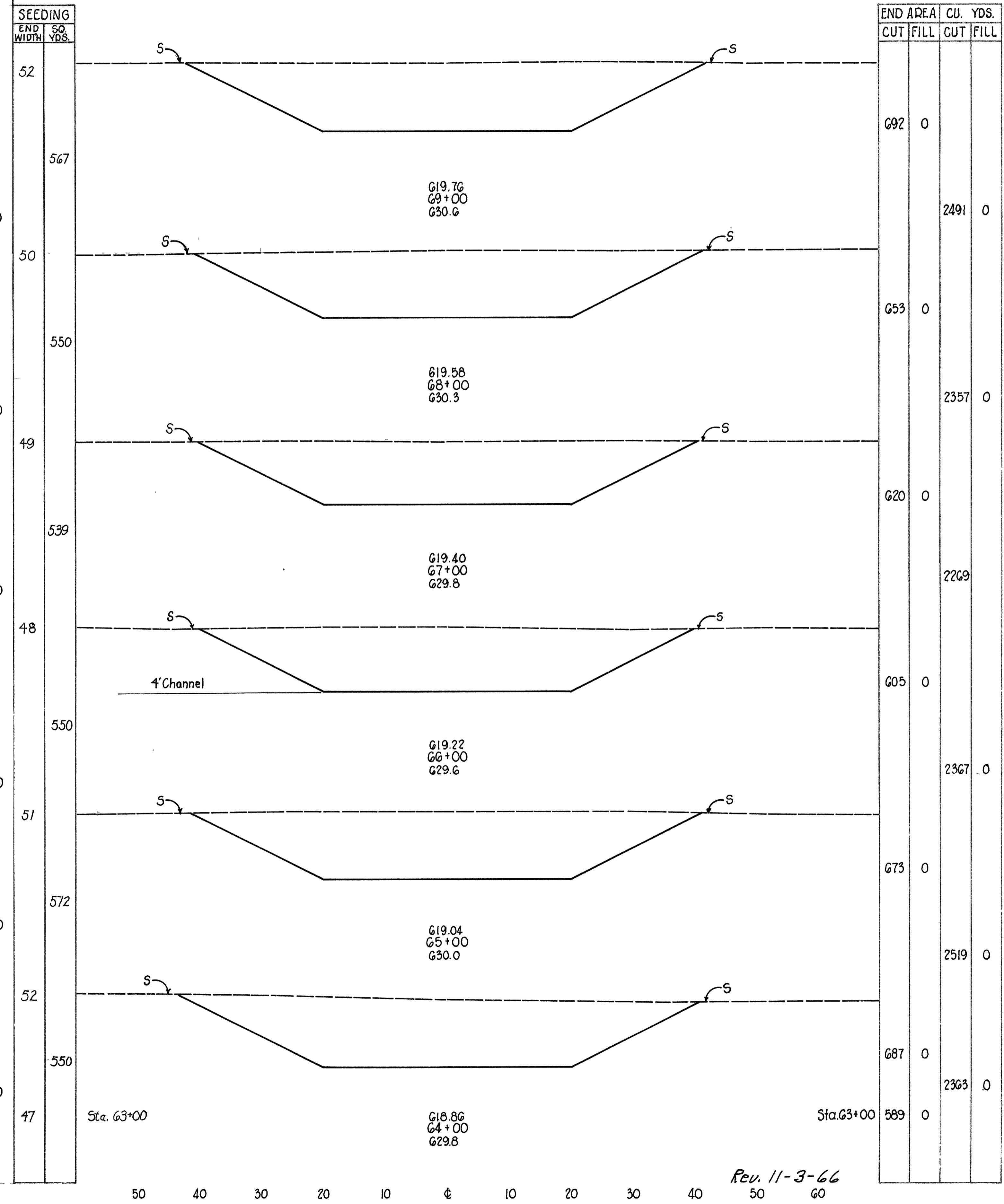
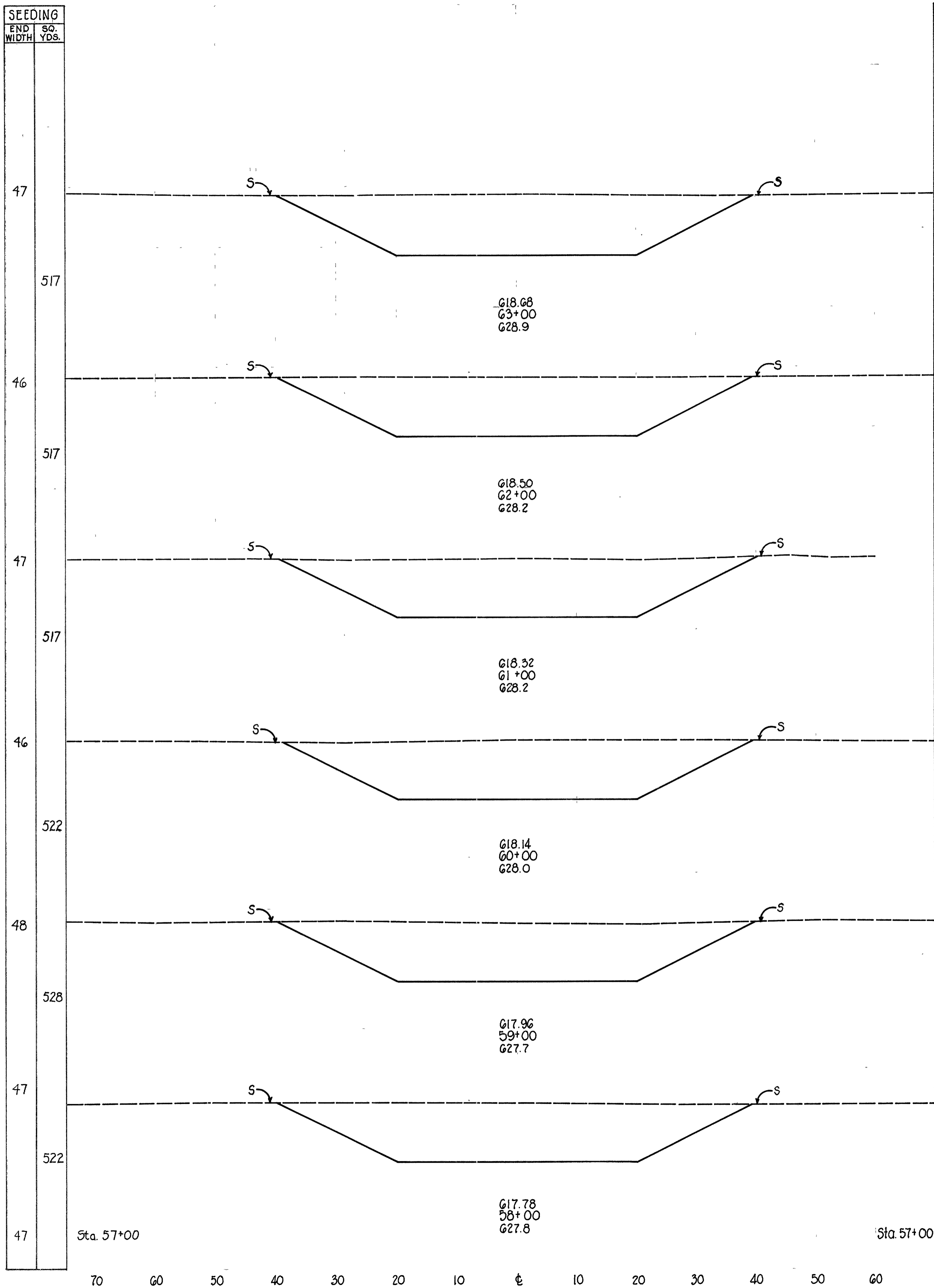


END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
640	0		
601	0		
658	0		
2433	0		
656	0		
2433	0		
658	0		
2396	0		
636	0		
2561	0		
747	0		
2861	0		
798	0		
3748	0		
1226	0		

SEEDING	
END SQ. WIDTH YDS.	SEEDING
47	
539	
50	
533	
46	
261	
48	
281	
53	
429	
50	

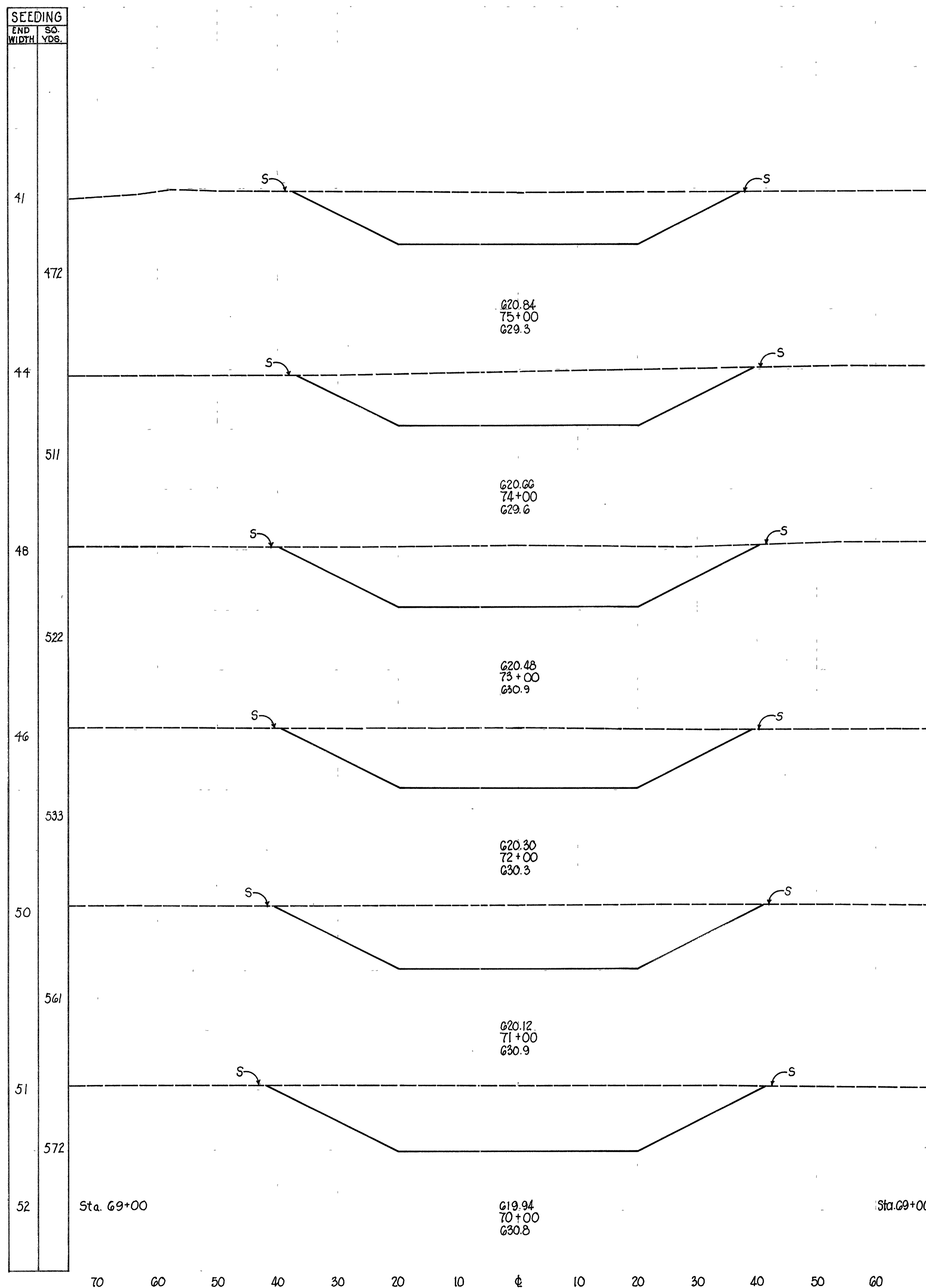


LOR-90-17.21



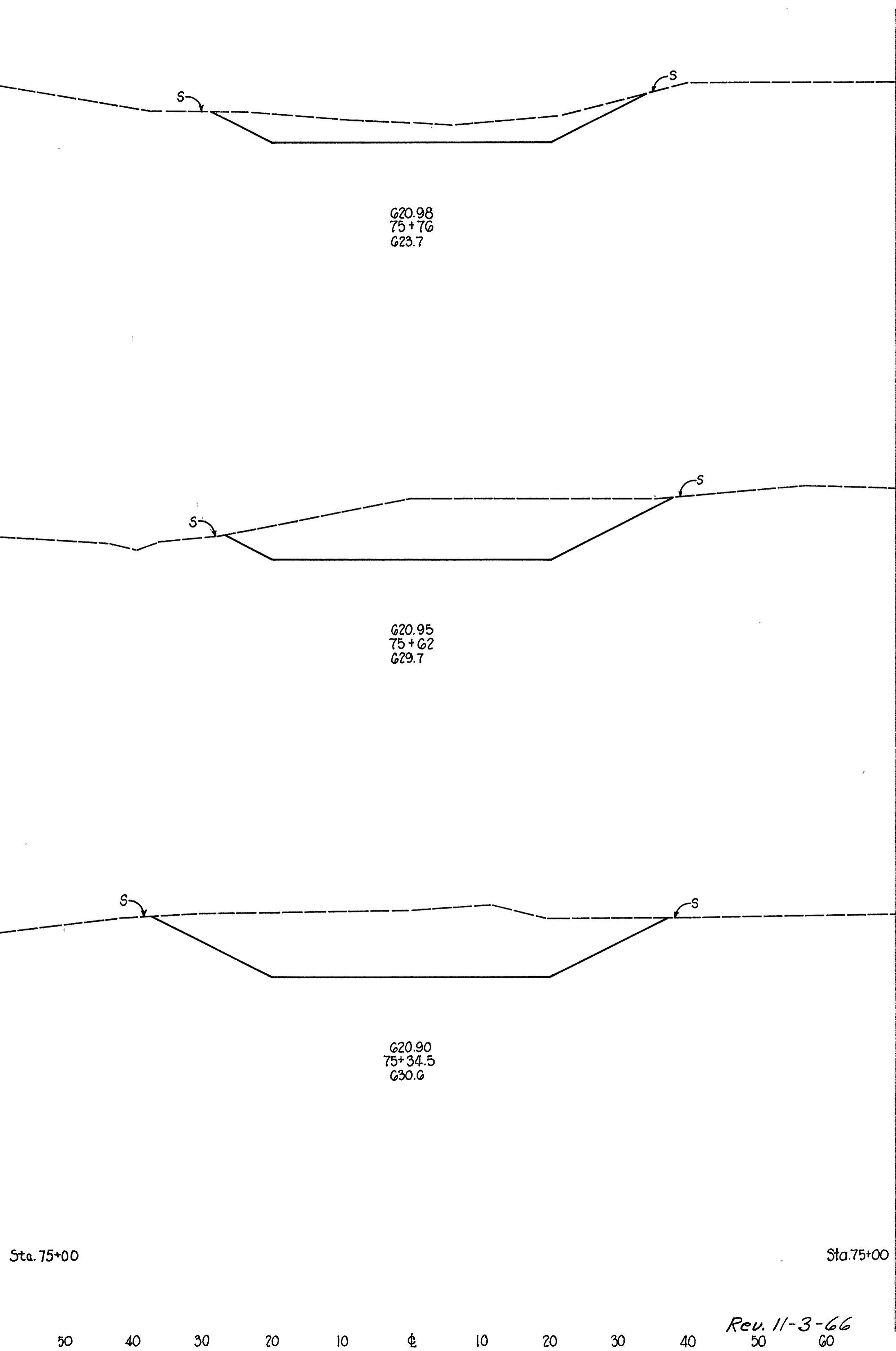
Rev. 11-3-66

LOR-90-17.21



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
596	0	2276	0
633	0	2307	0
613	0	2374	0
669	0	2422	0
639	0	2441	0
680	0	2541	0
692	0		

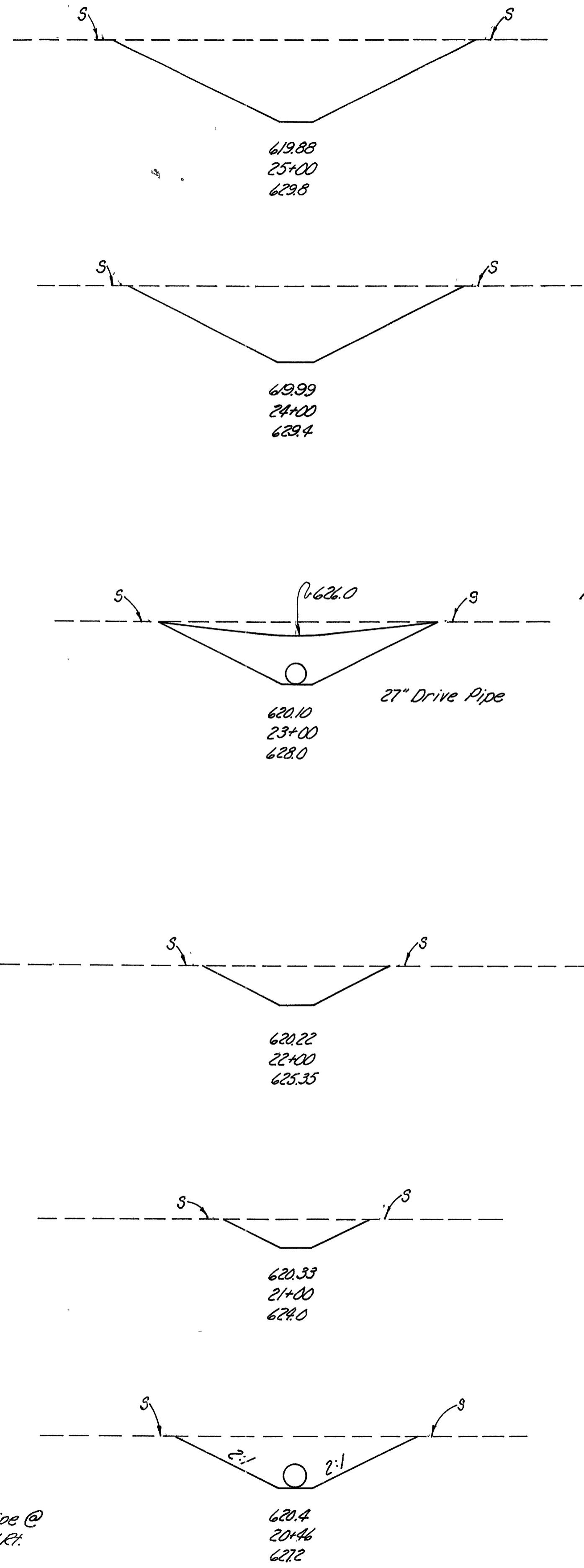
SEEDING		END WIDTH	SQ. YDS.
29	47		



END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
173	0		
		1227	0
408	0		
		486	0
546	0		
		730	0
596	0		

LOR-90-17.21

SEEDING	
END WIDTH	Sta. Yds.
50	
533	
46	
467	
38	
356	
26	
256	
20	
159	
33	
0	



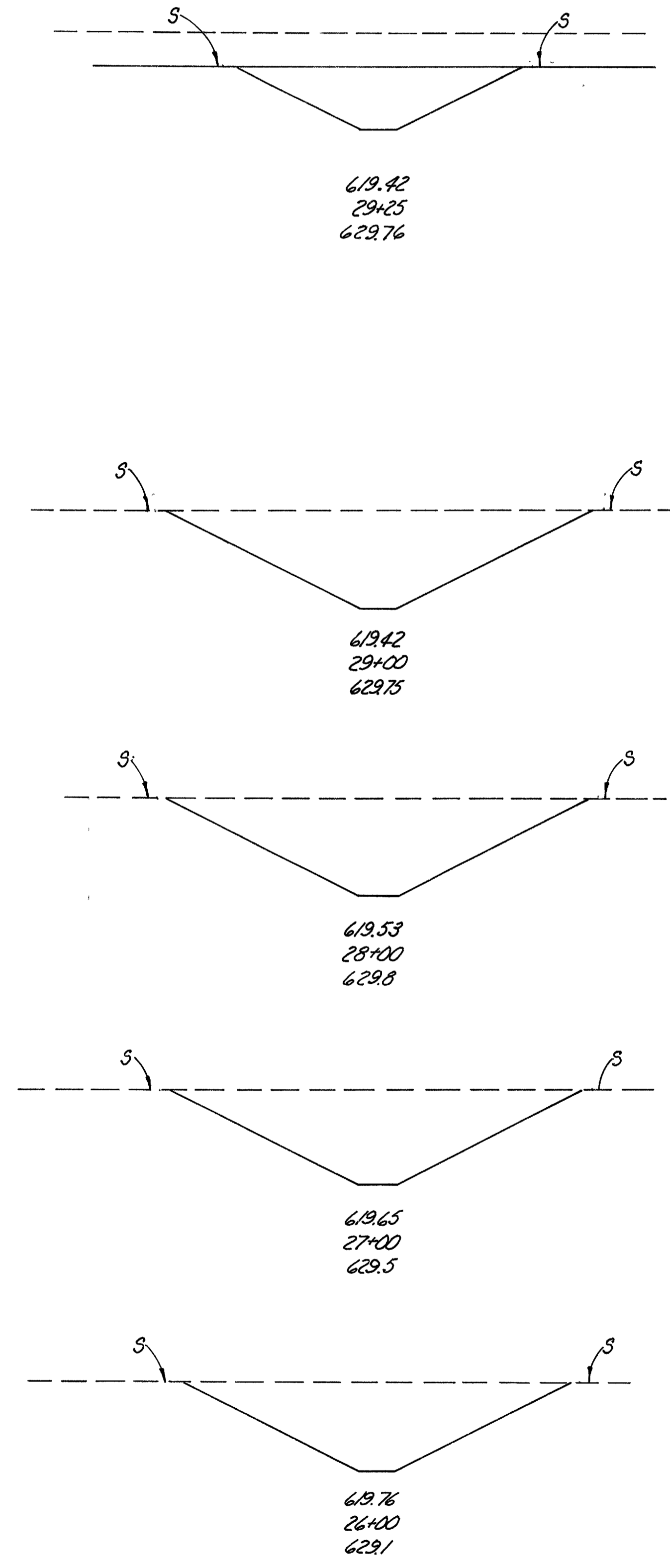
Add for Drive Sta. 23+00

620.4 ft Outline 27" Pipe @ Sta. 235+90, SR 611, 46' R/L

END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
344	0		
		1046	0
221	0		
		694	0
			116
154	0		
		419	0
72	0		
		207	0
40	0		
		156	0
116	0		

SEEDING	
END WIDTH	Sta. Yds.
0	
33	
115	
50	
550	
49	
339	
48	
517	
45	
528	

Ahead Back



Sta. 29+38.99

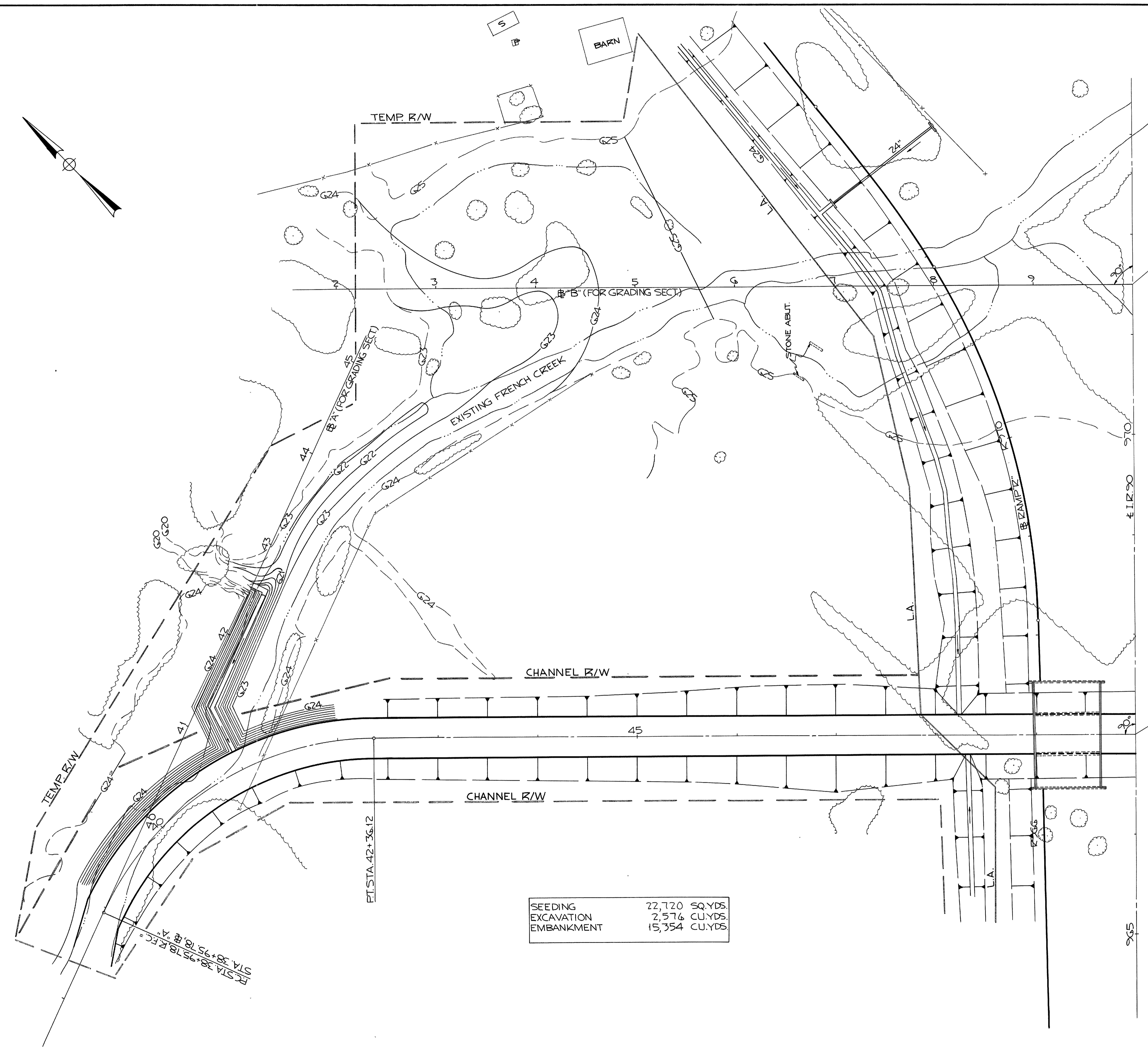
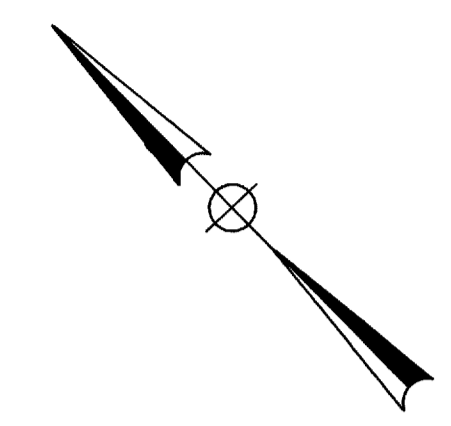
Sta. 25+00
Rev. 11-3-66

END AREA		Cu. Yds.	
CUT	FILL	CUT	FILL
0	0		
		29	0
112	0		
		169	0
			116
253	0		
		335	0
252	0		
		904	0
236	0		
		822	0
208	0		
		1022	0
344	0		

20 40 30 20 10 0 10 20 30 40 50

50 40 30 20 10 0 10 20 30

40 50



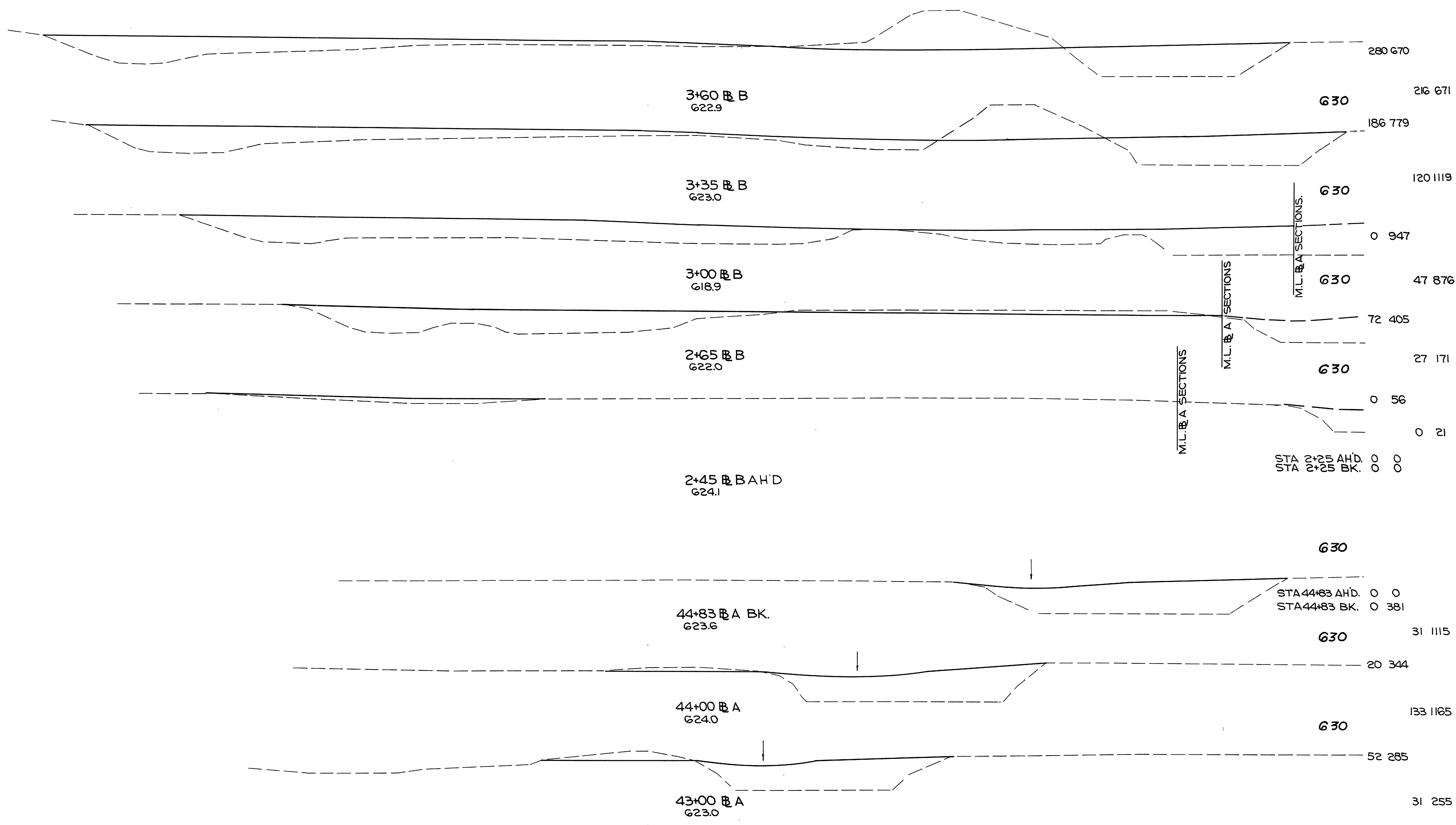
STA. 71+50, I.R. 90 =
STA. 10+00, B "B"

STA. 76+00, I.R. 90 =
STA. 50+00, RELOC. FRENCH CREEK

SEEDING	22,720 SQ.YDS.
EXCAVATION	2,576 CU.YDS.
EMBANKMENT	15,354 CU.YDS.

RC STA. 38+95.78, R.C. FC =
STA. 38+95.78, B "A"

LOR.-90-17.21



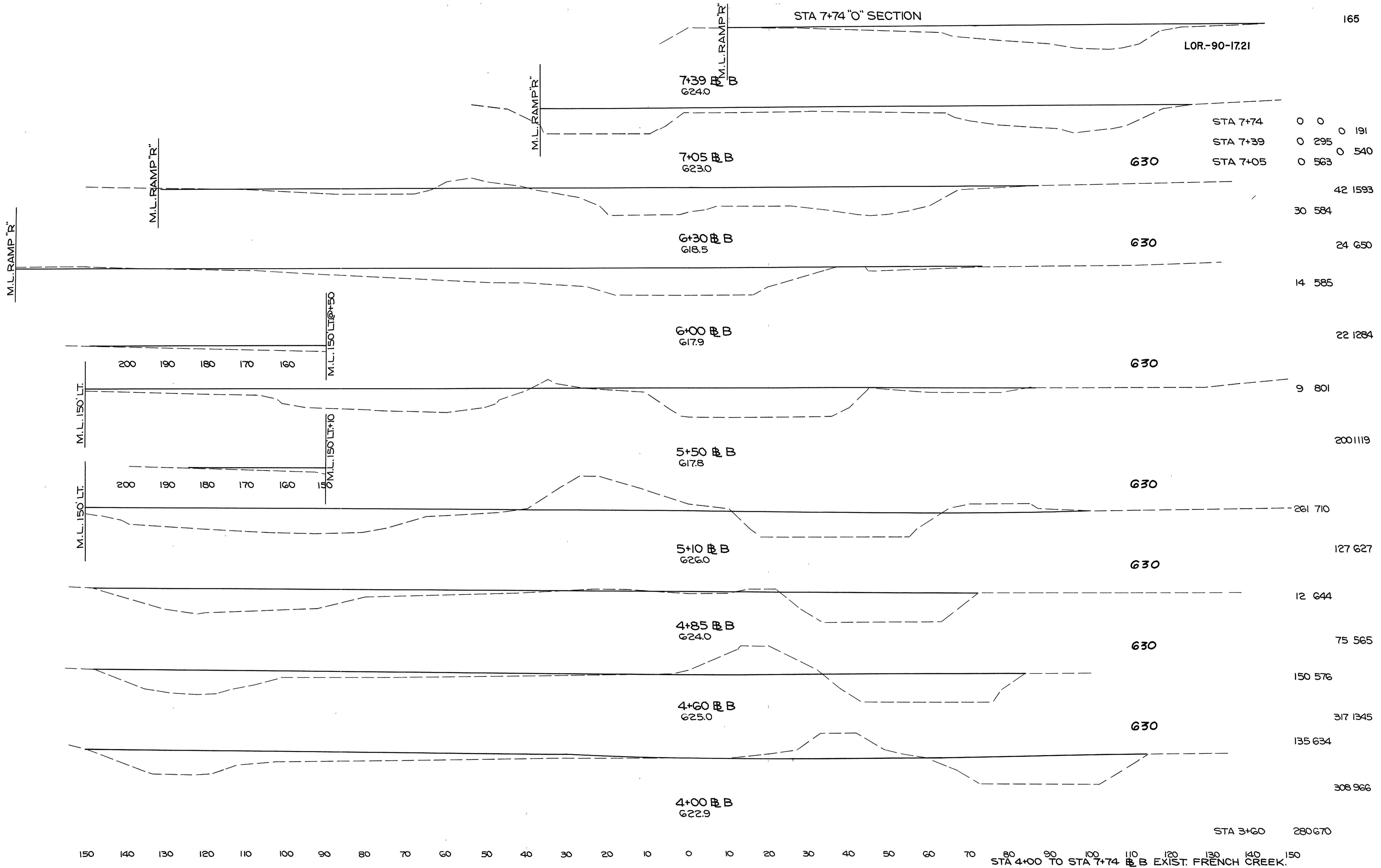
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

STA 42+75 14 265

STA 43+00 TO STA 44+83 B A EXIST. FRENCH CREEK
 STA 2+25 TO STA 3+00 B B EXIST. FRENCH CREEK

STA 7+74 "O" SECTION

LOR.-90-1721



7+39 B B
624.0

7+05 B B
623.0

6+30 B B
618.5

6+00 B B
617.9

5+50 B B
617.8

5+10 B B
626.0

4+85 B B
624.0

4+60 B B
625.0

4+00 B B
622.9

0 0
0 191
0 295
0 540
0 563

42 1593
30 584

24 650

14 585

22 1284

9 801

200 119

261 710

127 627

12 644

75 565

150 576

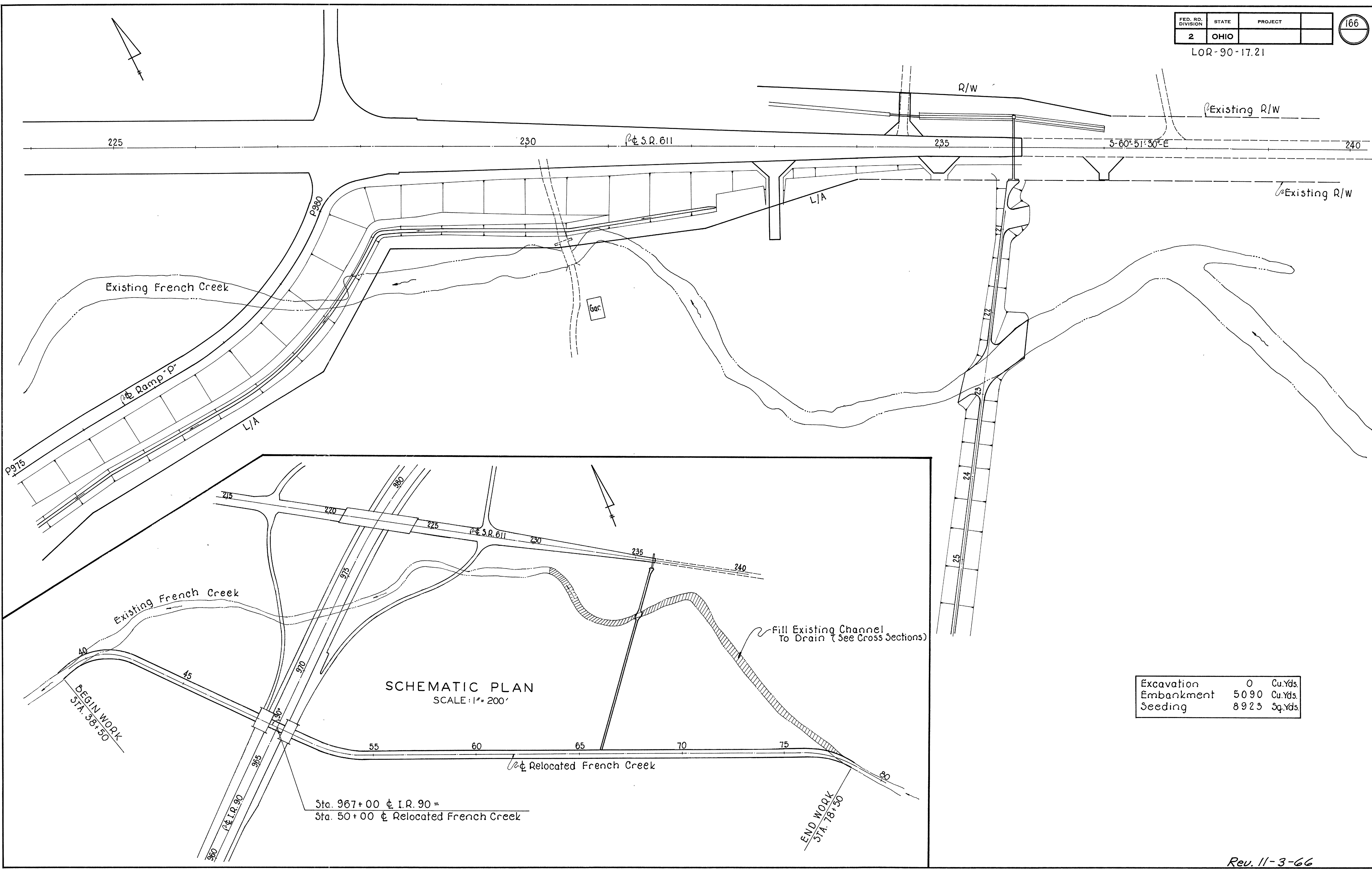
317 1345

135 634

308 966

STA 3+60 280 670

STA 4+00 TO STA 7+74 B.B. EXIST. FRENCH CREEK.

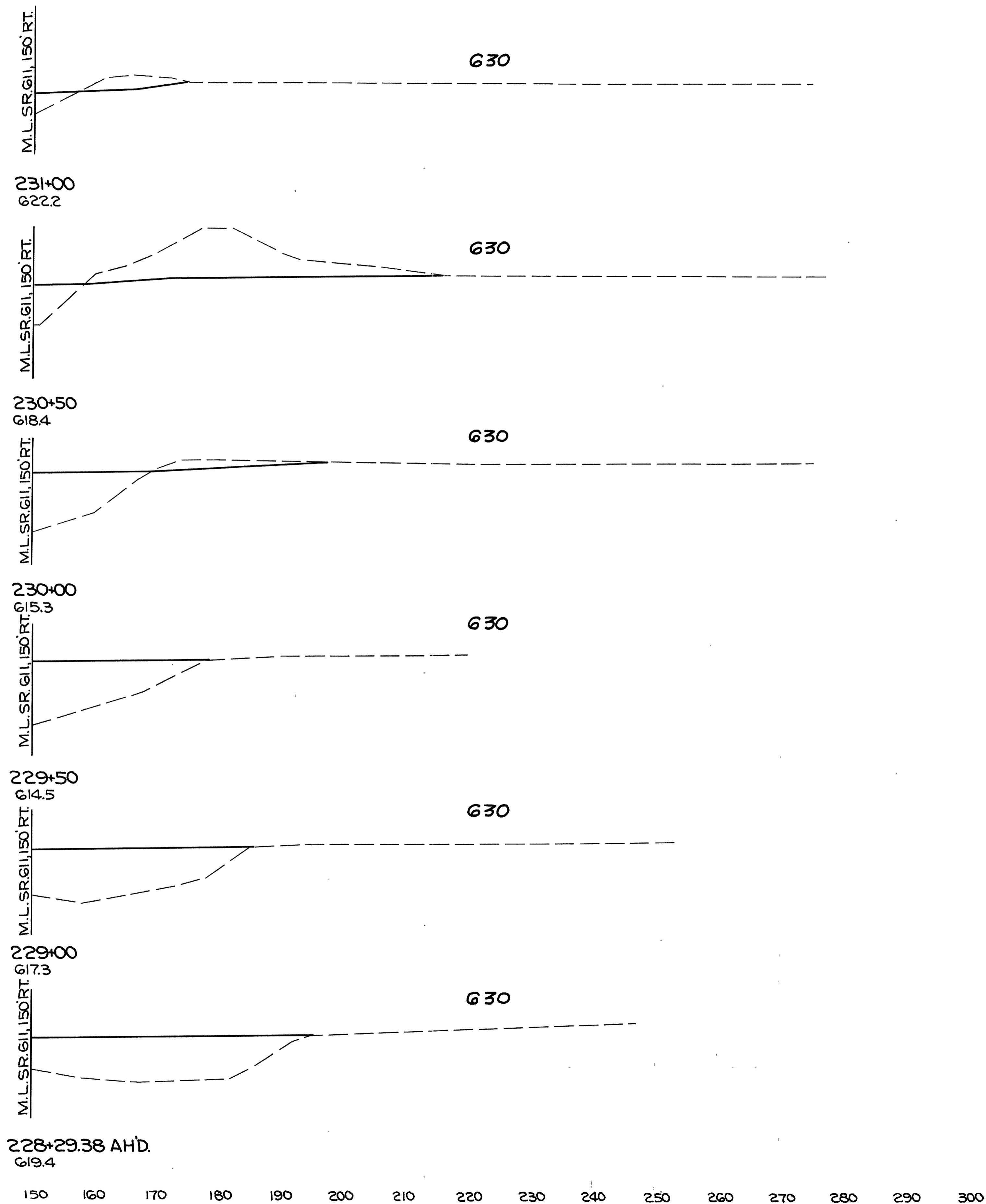


SCHEMATIC PLAN
SCALE: 1" = 200'

Excavation	0	Cu.Yds.
Embankment	5090	Cu.Yds.
Seeding	8923	Sq.Yds.

Sta. 967+00 ϕ I.R. 90 =
Sta. 50+00 ϕ Relocated French Creek

Rev. 11-3-66



24 11

208 37

200 29

206 127

22 108

21 252

0 164

0 359

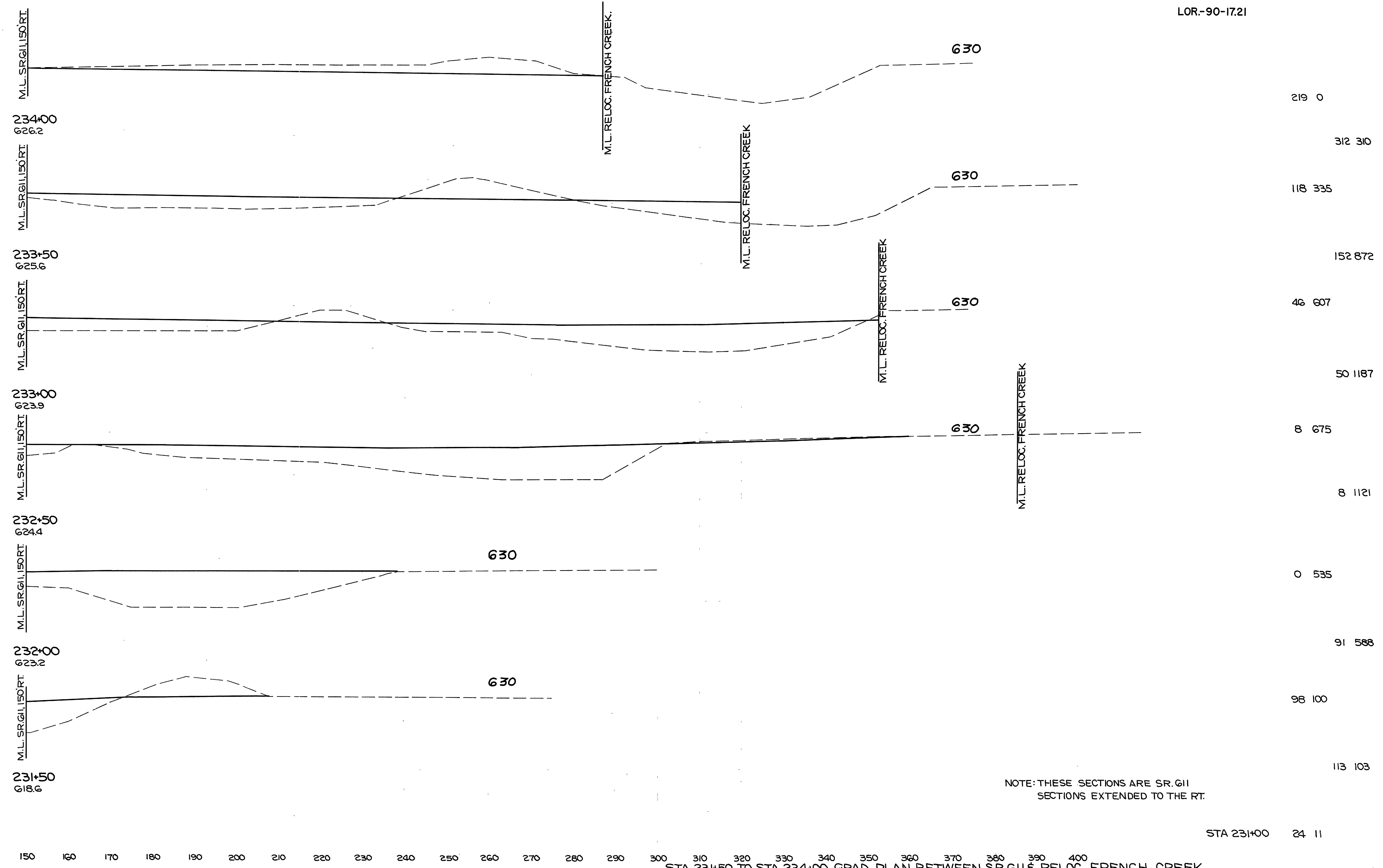
0 223

0 633

STA 228+29.38 AH. 0 281
 STA 228+29.38 BK. 0 0

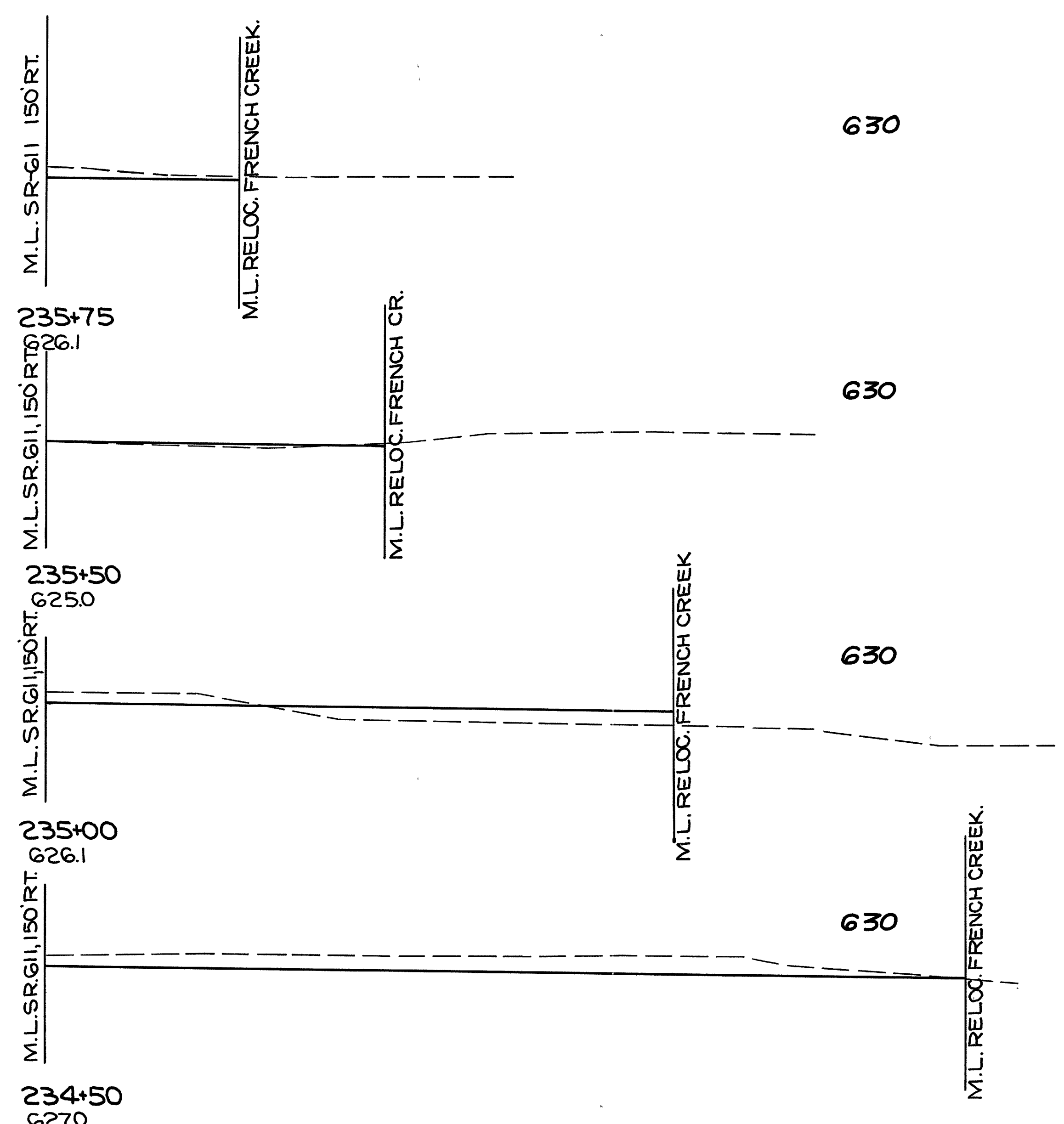
NOTE: THESE SECTIONS ARE SR.G11
 SECTIONS EXTENDED TO THE RT.

LOR-90-17.21



NOTE: THESE SECTIONS ARE SR.G11 SECTIONS EXTENDED TO THE RT.

"O" SECTION @ 235+83



STA 235+83	0	0
		2 0
	15	0
		8 3
		1 6
		28 64
	29	63
		175 59
	160	0
		351 0

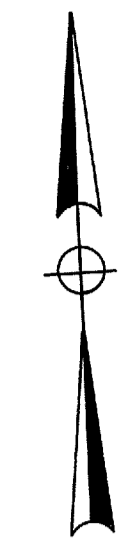
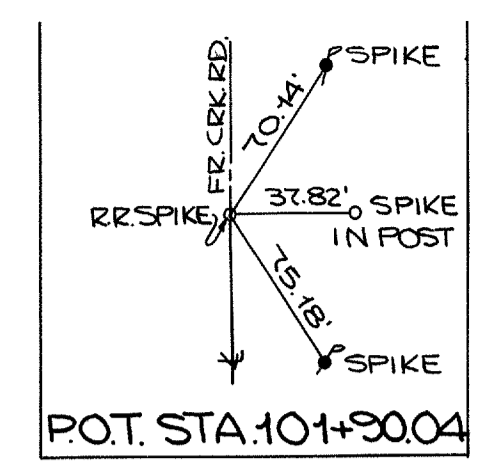
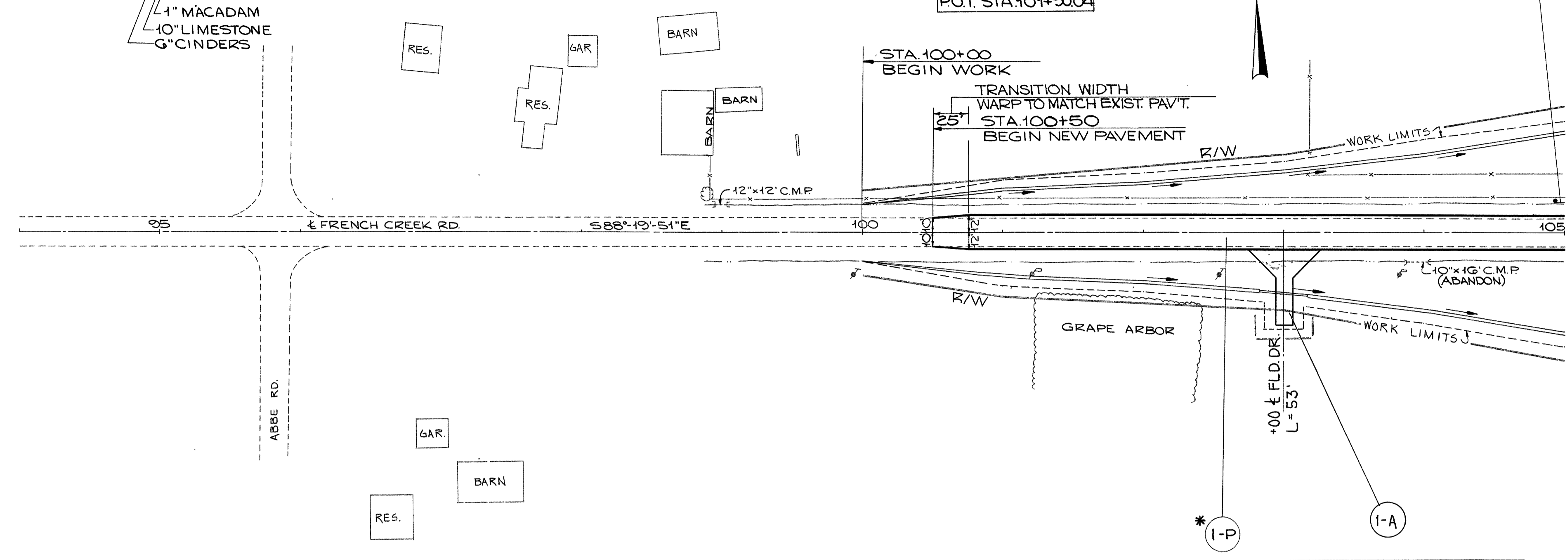
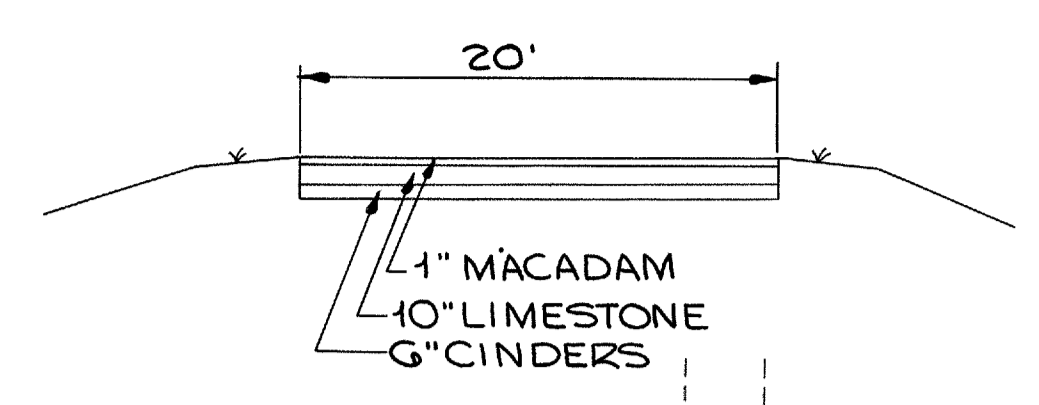
NOTE: THESE SECTIONS ARE SR.G11
SECTIONS EXTENDED TO THE RT.

STA 234+00 219 0

150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300

STA 234+50 TO STA 253+83 GRAD. PLAN BETWEEN SR.G11 & RELOC. FRENCH CREEK.

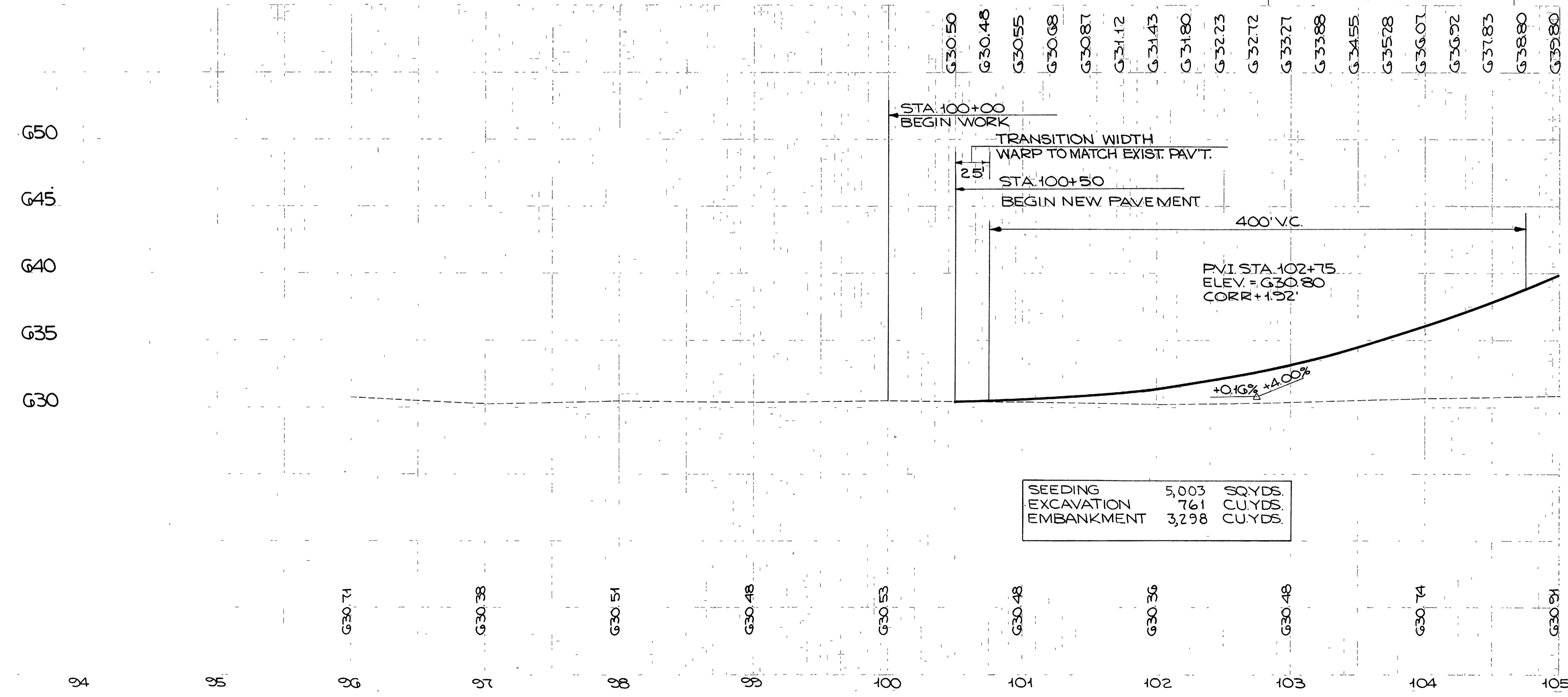
TYPICAL SECTION ADJOINING PAVEMENT



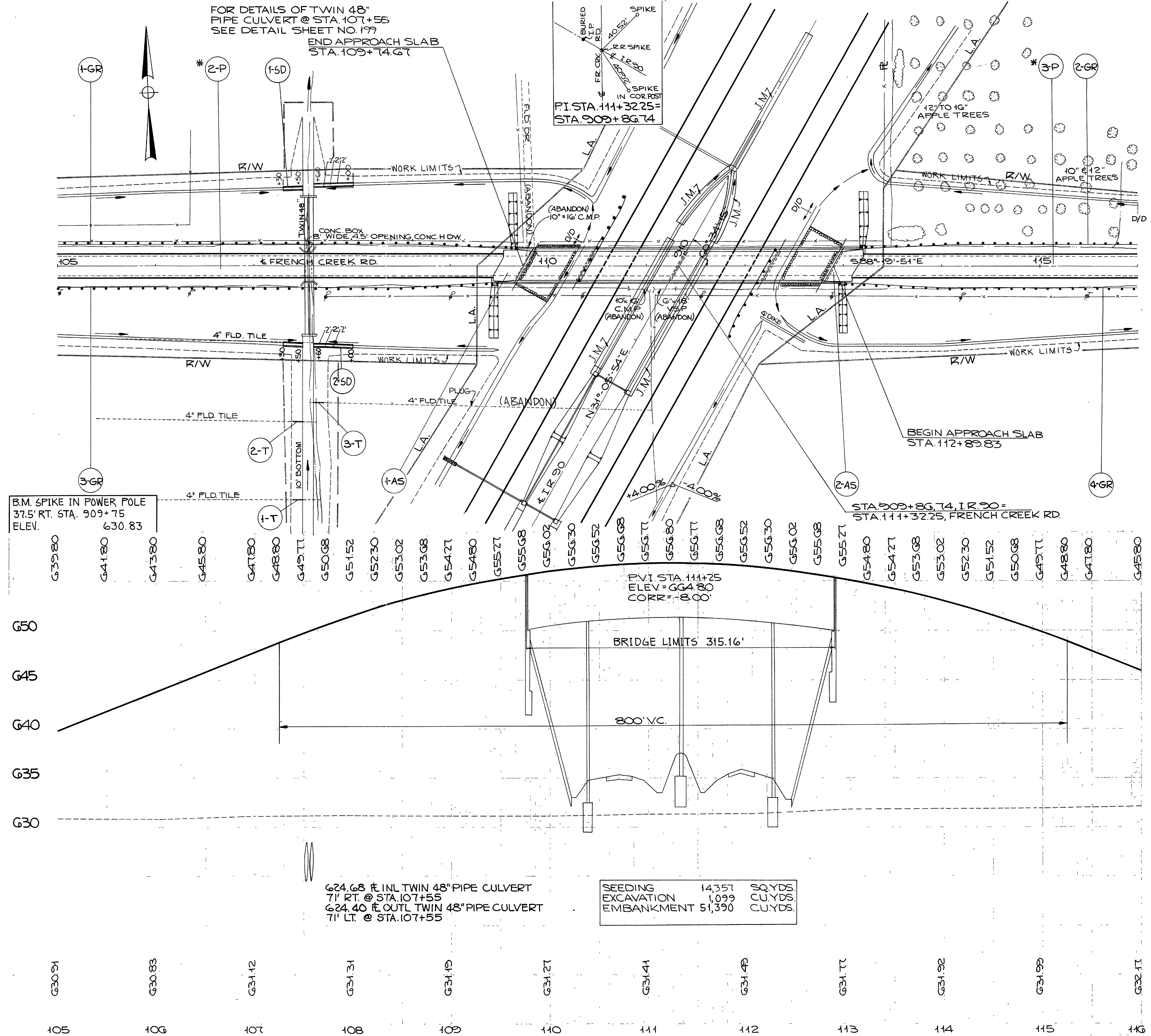
REFERENCE NO	SIDE	STATION		411	603	GOG	GUARD RAIL TYPE 4	LIN.FT.
		FROM	TO	STABIL CRUSHED AGGR.	CONDUIT TYPE D			
1-A	RT.	103+00		6" CU.YDS	12" LIN.FT.			
1-GR	LT.	104+74.5	105+00	19.2	34			5.5
TOTALS						19.2	34	5.5

* FOR PAVT. QUANTITIES SEE SHEET NO.172

B.M. RR SPIKE IN TELEPHONE POLE, 29' RT. STA. 103+81 ELEV = 630.742



SEEDING	5,003	SQ.YDS.
EXCAVATION	761	CU.YDS.
EMBANKMENT	3,298	CU.YDS.



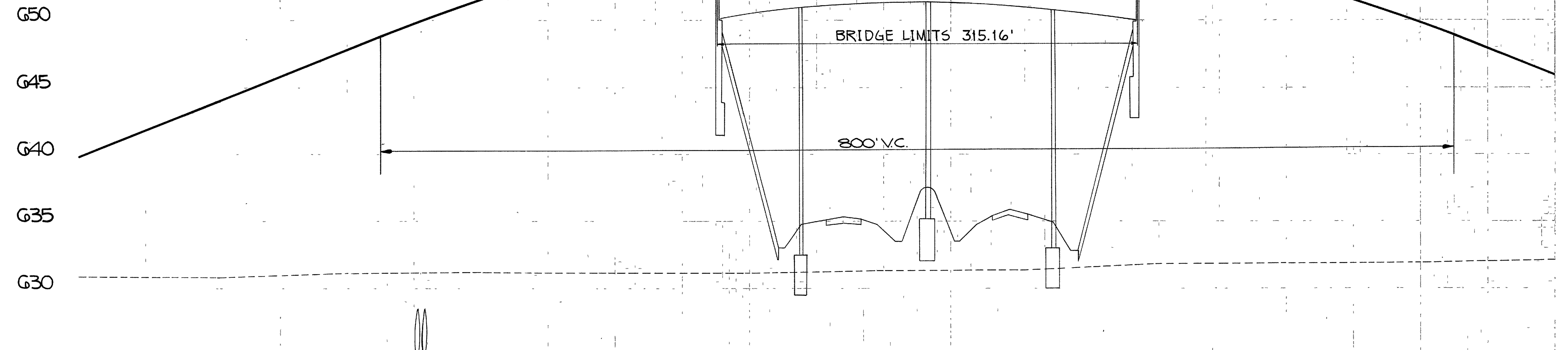
FOR DETAILS OF TWIN 48" PIPE CULVERT @ STA. 107+55 SEE DETAIL SHEET NO. 177

END APPROACH SLAB STA. 109+74.67

P.I. STA. 111+32.25 = STA. 909+86.74

B.M. SPIKE IN POWER POLE 37.5' RT. STA. 909+75 ELEV. 630.83

G3980 G4180 G4380 G4580 G4780 G4880 G4977 G5008 G5152 G5230 G5302 G5308 G5427 G5480 G5527 G5508 G5602 G5630 G5652 G5608 G5677 G5680 G5677 G5608 G5652 G5630 G5602 G5508 G5527 G5480 G5427 G5308 G5302 G5230 G5152 G5008 G4977 G4880 G4780 G4580 G4380 G4180 G3980



624.68 ft INL TWIN 48" PIPE CULVERT 7' RT. @ STA. 107+55
624.40 ft OUTL TWIN 48" PIPE CULVERT 7' LT. @ STA. 107+55

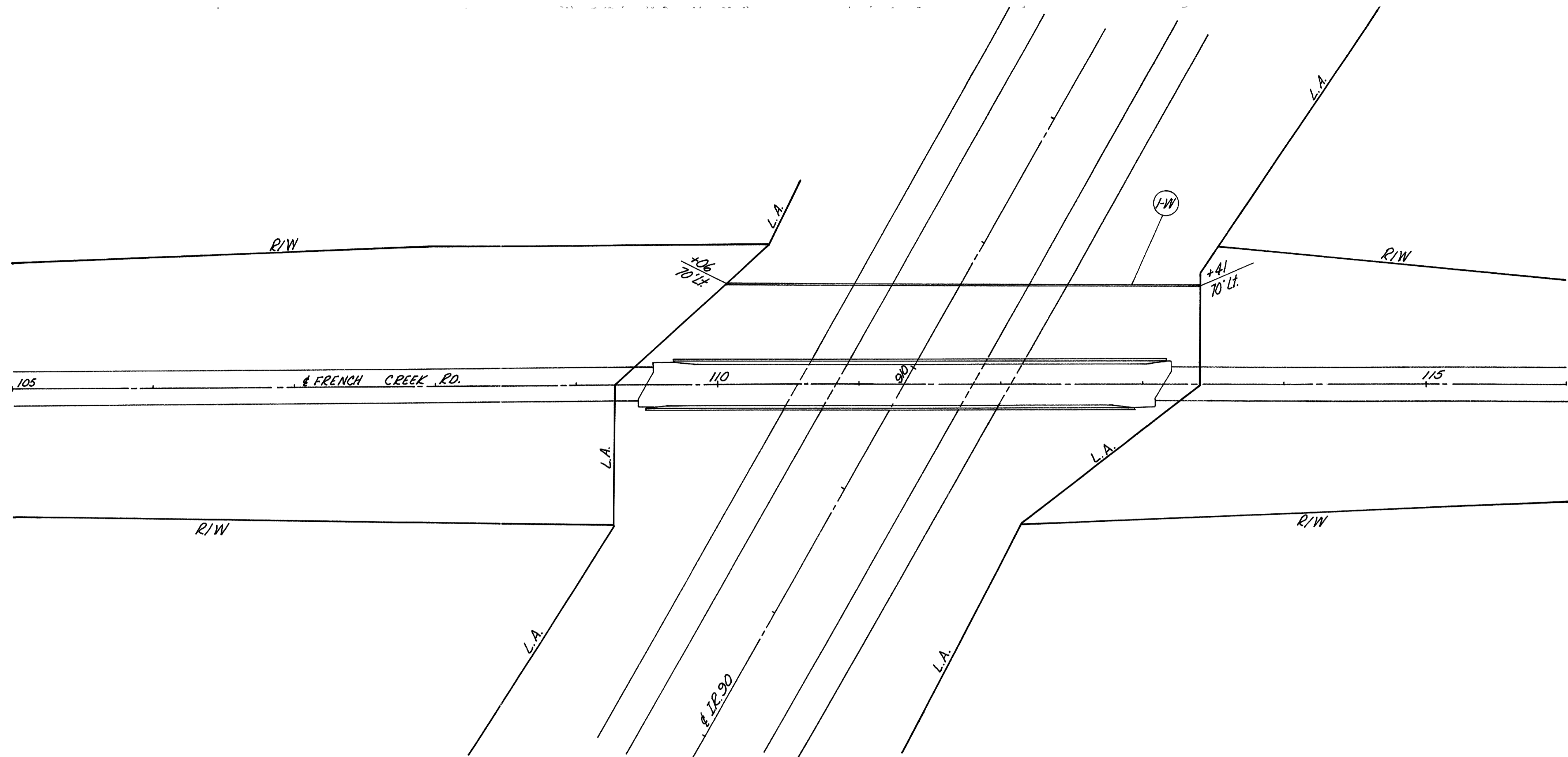
SEEDING	14,357	SQ. YDS.
EXCAVATION	1,099	CU. YDS.
EMBANKMENT	51,390	CU. YDS.

REFERENCE NO.	SIDE	STATION		310	603	606	611	660
		FROM	TO	SUBBASE	CONDUIT TYPE F	GUARD RAIL TYPE	REINF CONC. APPROACH SLABS 25' LONG T=13"	
				6"	6"	LIN. FT. SQ. YDS.		SQ. YDS.
1-GR	LT.	105+00	109+95					469.5
2-GR	LT.	113+17	116+00					283
3-GR	RT.	104+99	109+49					450
4-GR	RT.	113+95	116+00					204.5
1-SD	LT.	107+30	108+00					40
2-SD	RT.	107+30	108+00					40
1-AS	CL	109+49.67	109+74.67	15.1			86.9	
2-AS	CL	112+89.83	113+14.83	15.1			86.5	
1-T	RT.	107+40	107+50		10			
2-T	RT.	107+40	107+50		10			
3-T	RT.	107+60	107+70		10			
TOTALS				30.2	30	1407.0	173.4	80

* FOR PAVT. QUANTITIES SEE SHEET NO. 172

PROPOSED STRUCTURE - BRIDGE NO. LOR-90-17.54
 TYPE - CONTINUOUS STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
 SPANS - 61'; 94'; 94'; 61' % BEARINGS
 ROADWAY - 30'-0" F/F OF 2'-0" SAFETY CURBS
 LOAD FREQUENCY - CF 130(57)
 SKEW - 29°-25'-45" L.F.
 WEARING SURFACE - 1" MONOLITHIC CONCRETE
 APPROACH SLABS - AS-1-54 (25' LONG, MODIFIED)
 ALIGNMENT - TANGENT

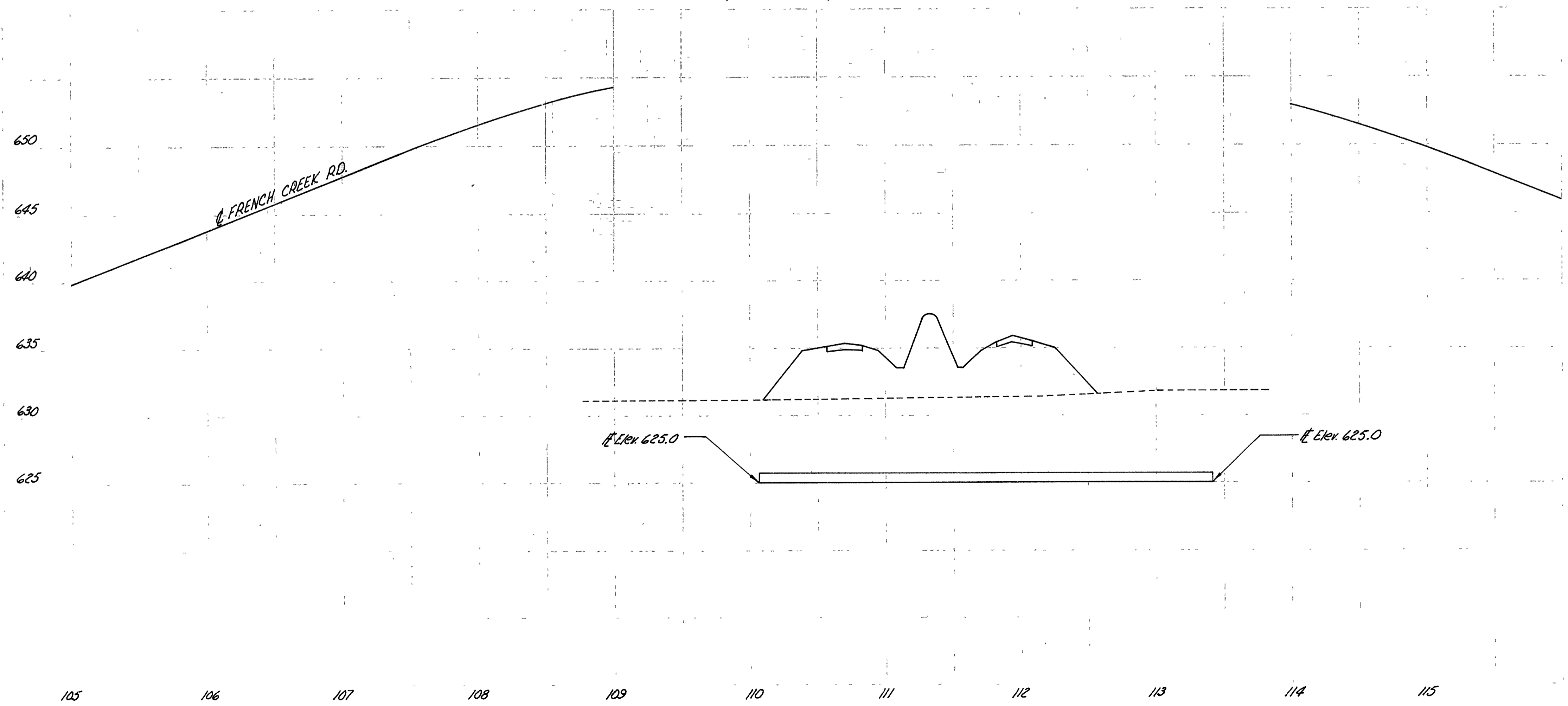
A



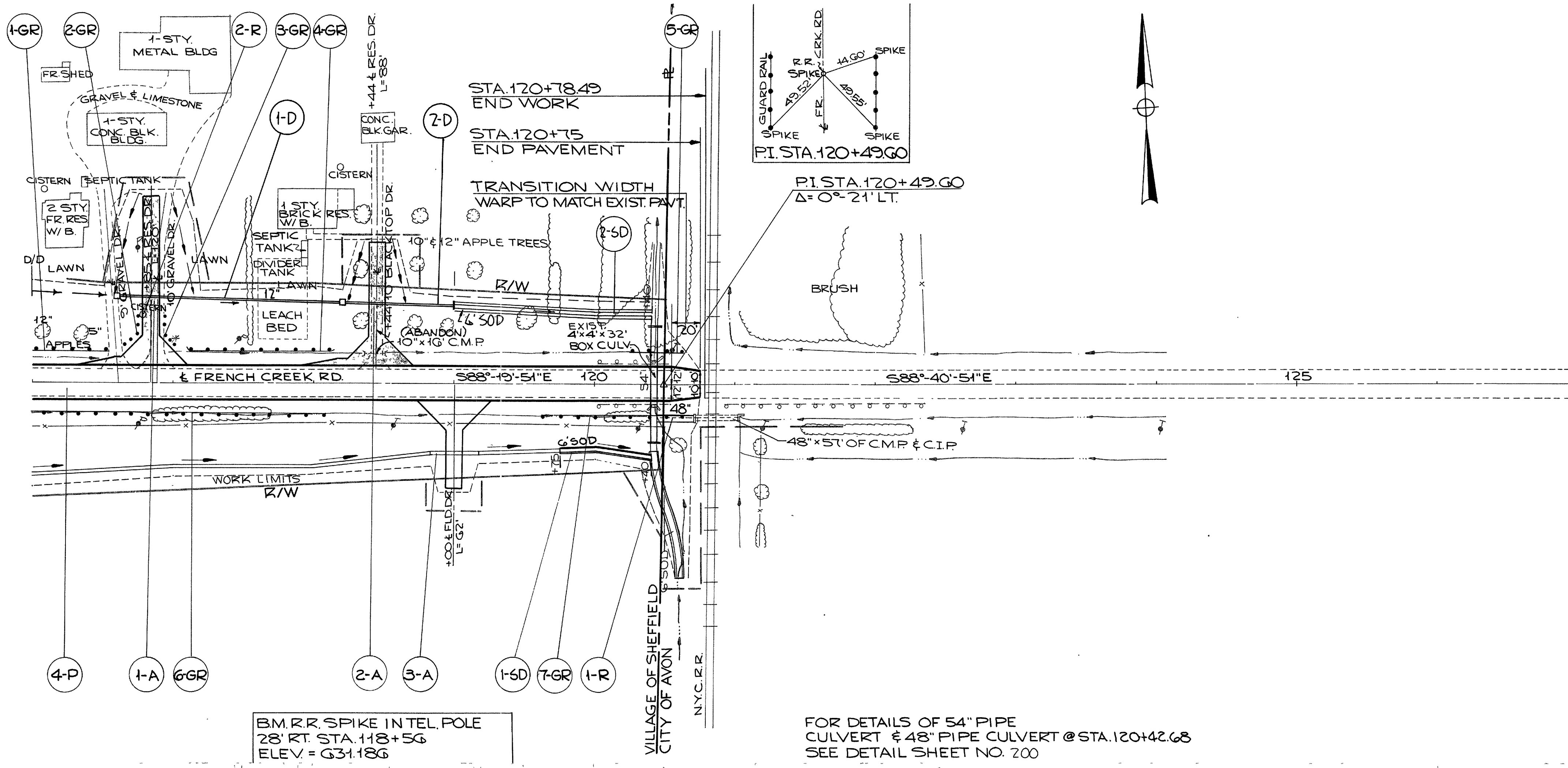
100% State

REFERENCE NO.	SIDE	STATION		814
		FROM	TO	NEW WATER MAIN CAST IRON PIPE CLASS 250 8" LIN FT
I-W	LT.	110+06	113+41	335

NOTE:
 The ends of the 8" Cast Iron Water pipe shall be plugged at the right of way line in accordance with Supplemental Specification 814. The cost of this plugging shall be included in the price bid per lineal foot of 814 New Water Main 8" Cast Iron Pipe.



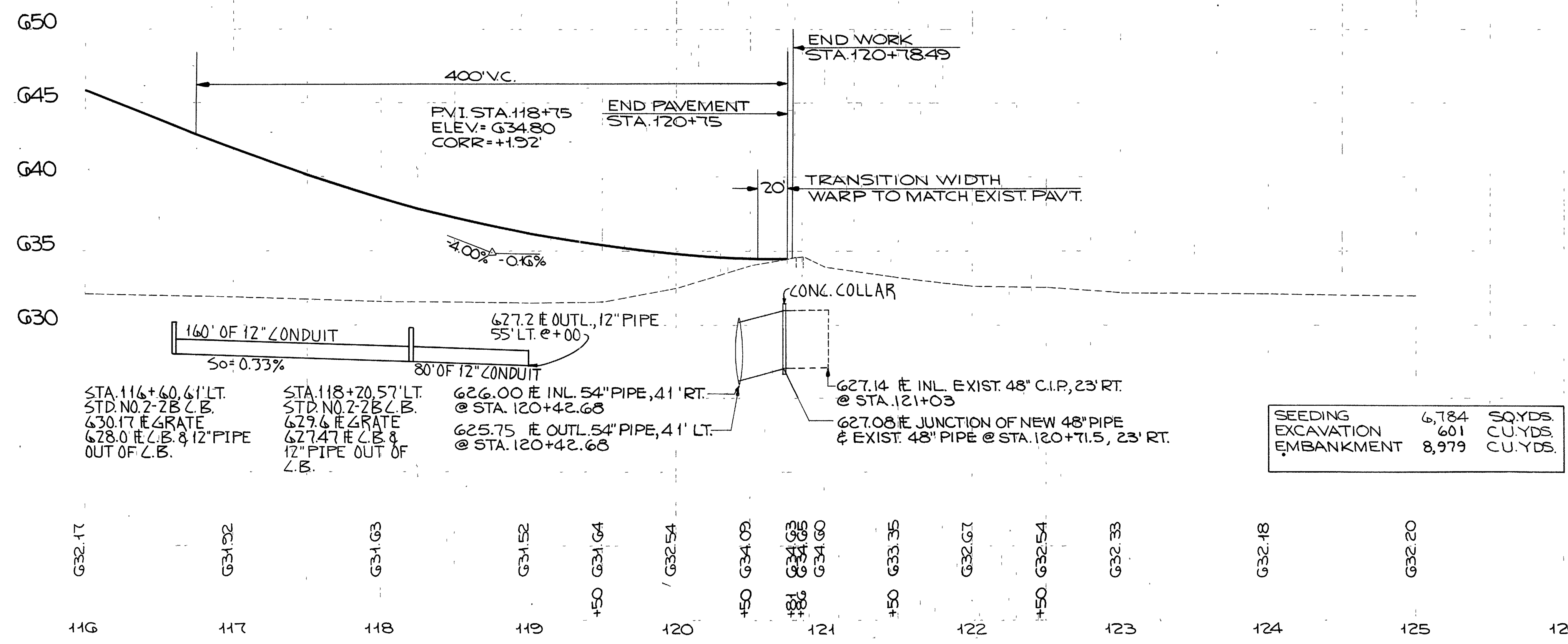
LOR. - 90-17.21



FOR DETAILS OF 54" PIPE CULVERT & 48" PIPE CULVERT @ STA. 120+42.68 SEE DETAIL SHEET NO. 200

BM. R.R. SPIKE IN TEL. POLE 28' RT. STA. 118+56 ELEV. = 631.186

- G4580
- G4380
- G4280
- G4183
- G4052
- G4007
- G3928
- G3855
- G3788
- G3727
- G3672
- G3623
- G3580
- G3543
- G3512
- G3481
- G3468
- G3455
- G3448

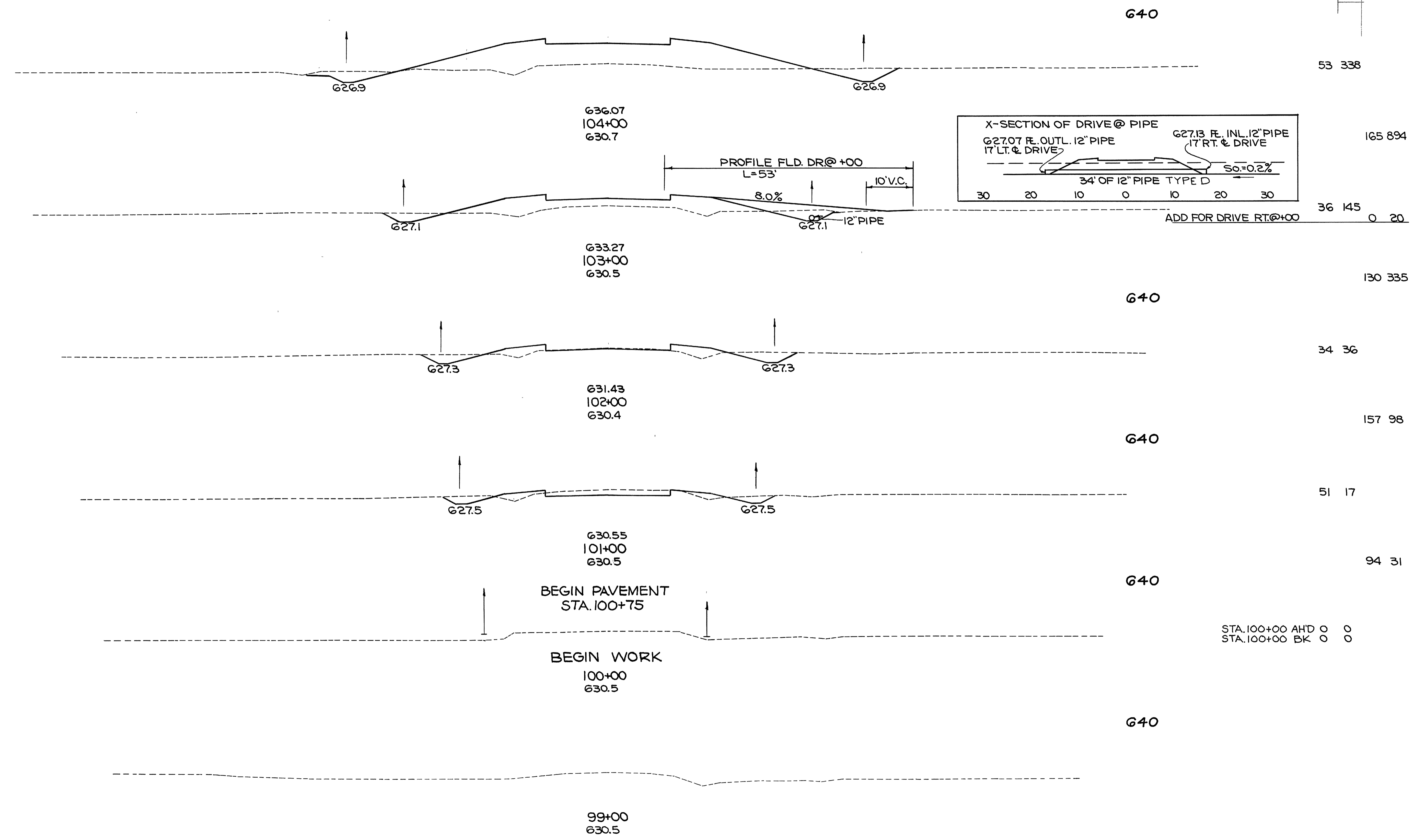
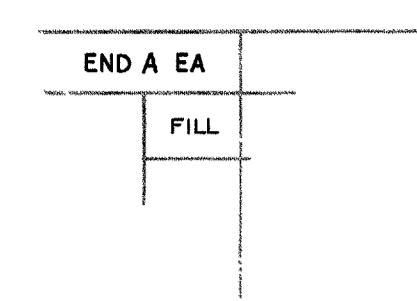


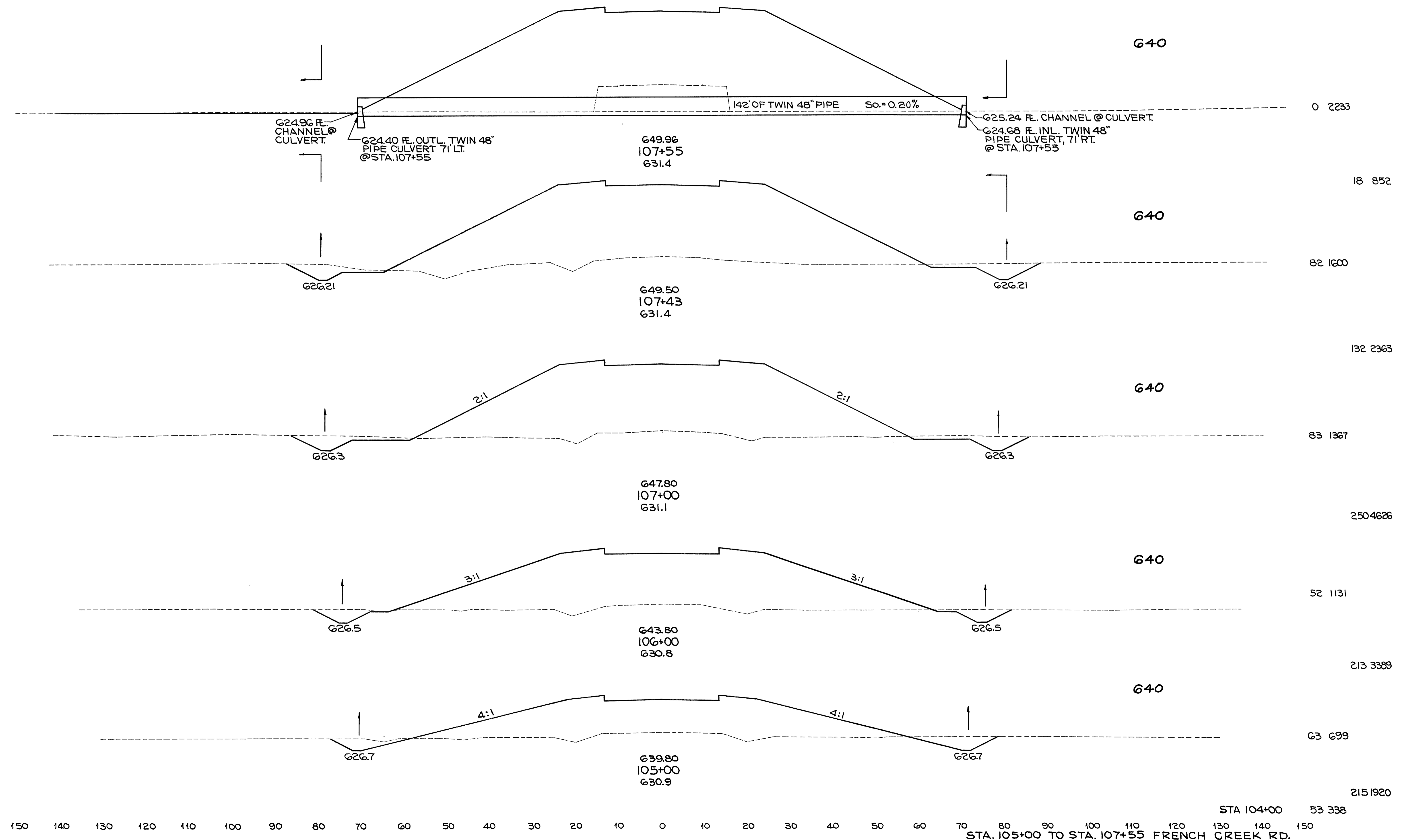
SEEDING 6,784 SQ.YDS.
EXCAVATION 601 CU.YDS.
EMBANKMENT 8,979 CU.YDS.

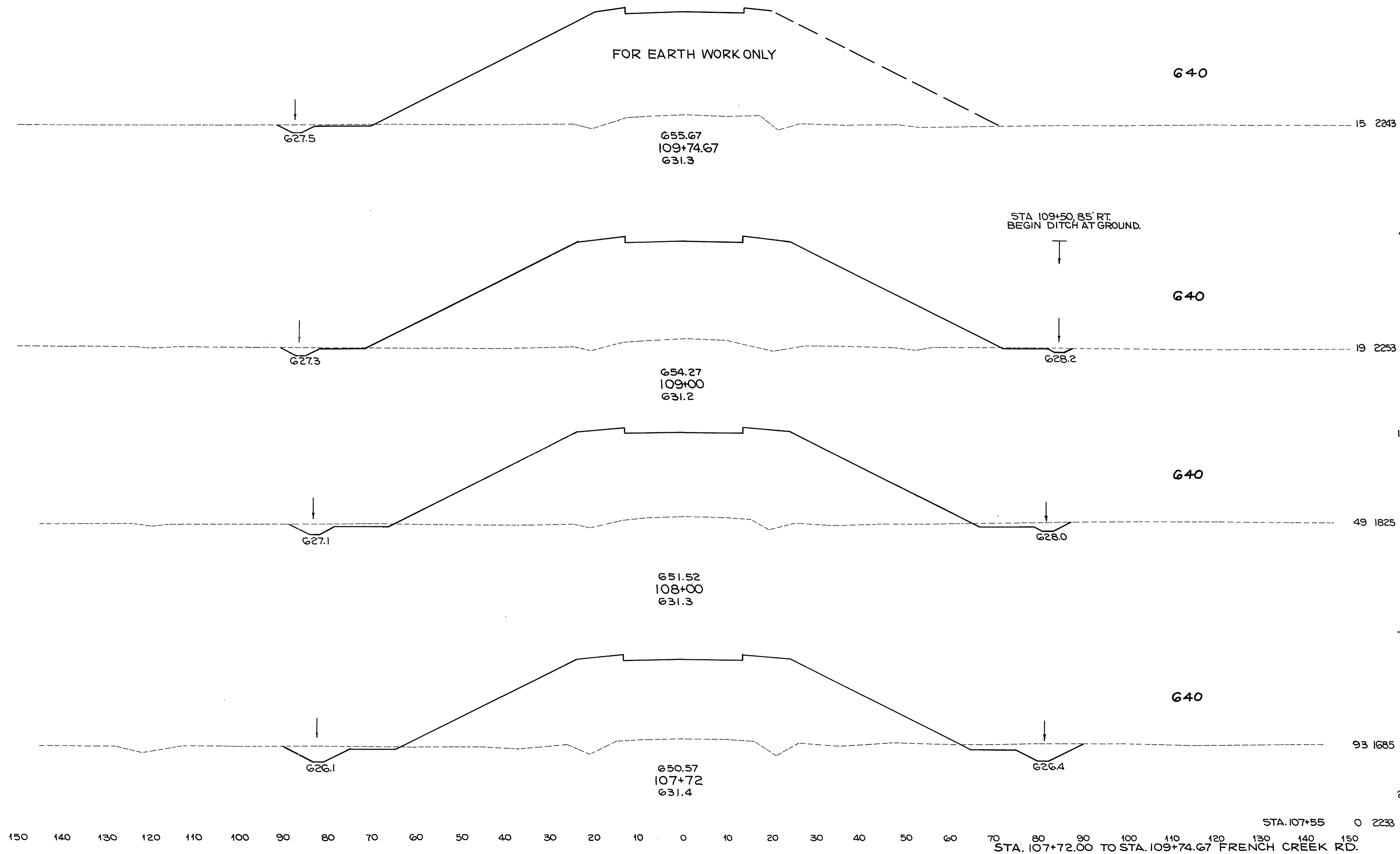
- G32.17
- G31.92
- G31.63
- G31.52
- G31.64
- G32.54
- G34.09
- G34.08
- G34.06
- G33.35
- G32.67
- G32.54
- G32.33
- G32.18
- G32.20

REFERENCE NO.	SIDE	STATION		202	202	606	606	602	603	604	660
		FROM	TO	PIPE REMOVED OVER 24"	PORTIONS OF EXIST. STRUCT. REMOVED	GUARD RAIL TYPE 4	GUARD POSTS	CONCRETE MASONRY CLASS C STD. ENDWALL	CONDUIT TYPE 706.01 E.S. OR 706.08 E.S. 12"	CATCH BASINS STD. NO. 2-2B	SODDING
				LIN. FT.	LUMP	LIN. FT.	EACH	CU. YDS.	LIN. FT.	EACH	SQ. YDS.
1-GR	LT.	116+00	116+54.50								
2-GR	LT.	116+85	LT. OF DR			54.5	5				
3-GR	LT.	116+85	RT. OF DR				5				
4-GR	LT.	117+12.5	118+12.5			100					
5-GR	LT.	120+25	120+62.50			37.5					
6-GR	RT.	116+00	118+08			208					
7-GR	RT.	119+62.50	120+62.50			100					
1-R	RT.	120+46	120+72	26							
2-R	LT.	116+79			LUMP						
1-S	RT.	119+75	120+40								47
2-S	LT.	119+75	120+40								94
1-D	LT.	116+60	118+20					160	1		
2-D	LT.	118+20	119+00					0.23	80	1	
TOTALS				26	LUMP	500.0	10	0.23	740	2	141

REFERENCE NO.	SIDE	STATION		304	310	402	404	408	411	603	605	
		FROM	TO	AGGR. SUBBASE	AGGR. SUBBASE	ASPHAL. CONC. (70-85)	ASPHAL. CONC. (70-85)	BITUM. PRIME COAT	STABIL. CRUSHED AGGR.	CONDUIT TYPE D	AGGR. DRAIN	
				5" 6"	6"	1 1/2"	1 1/4"	2"	6"	24"		
				CU. YDS.	CU. YDS.	CU. YDS.	CU. YDS.	GAL.	CU. YDS.	LIN. FT.	LIN. FT.	
1-P	℄	101+50	105+00	216	219.9	50.8	41.5	487.8			350	
2-P	℄	105+00	109+49.61	223	220.7	51.0	41.7	489.6			272.5	
3-P	℄	113+14.83	116+00	134.7	139.9	32.4	26.4	310.5			210	
4-P	℄	116+00	120+75	273.6	232.4	53.7	43.8	515.4			302.5	
1-A	LT.	116+85		30.1			120	86.6				
2-A	LT.	118+44		24.1			9.7	69.5				
3-A	RT.	119+00							21.2	34		
TOTALS				54.7	82.2	812.9	187.9	1534	217	1959.4	21.2	34







LOR. - 90-17.21

640

FOR EARTHWORK ONLY

G29.4

7 2120

G55.44
112+89.83
G31.8

7 2045

640

FOR EARTHWORK ONLY

AHD. ONLY

"O" FILL BK.

G29.5

STA 112+44 AHD. 1 290

STA 112+44 BK. 1 0

1 0

STA 112+35 0 0

G56.09
112+44
G31.6

STA 112+35 BEGIN
DITCH 50' RT. AT GROUND

0 0

FROM I.R. 90 SIDE DITCH
STA 910+00

"O" CUT AHD.

G28.4

STA 110+45 BK.
G7 LT.

STA. 110+45 AHD. 0 0
STA 110+45 BK. 8 0

7 0

640

"O" FILL AHD.
BK. ONLY

FOR EARTHWORK ONLY

G28.0

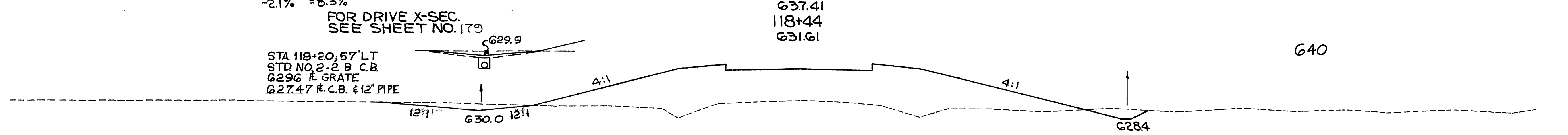
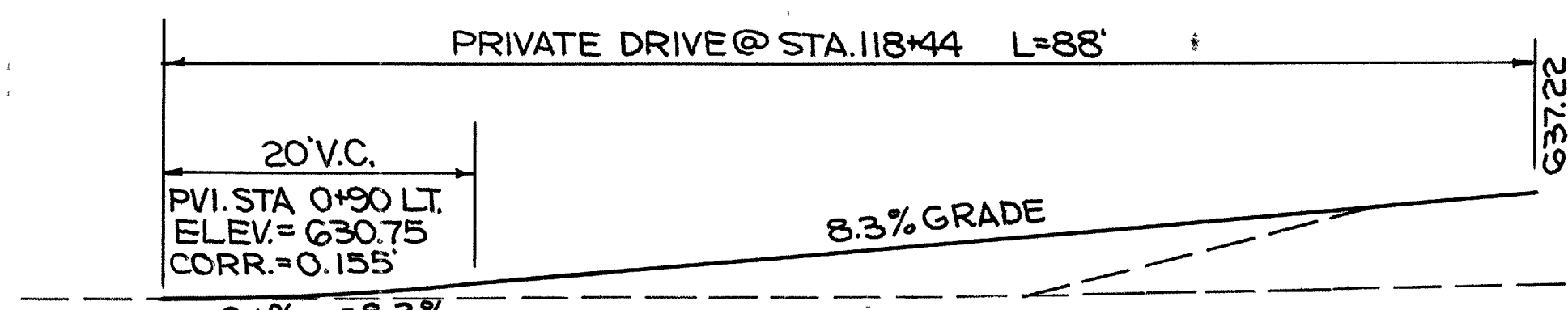
STA. 110+22 AHD. 8 0
STA 110+22 BK. 8 292

20 2222

G56.20
110+22
G31.3

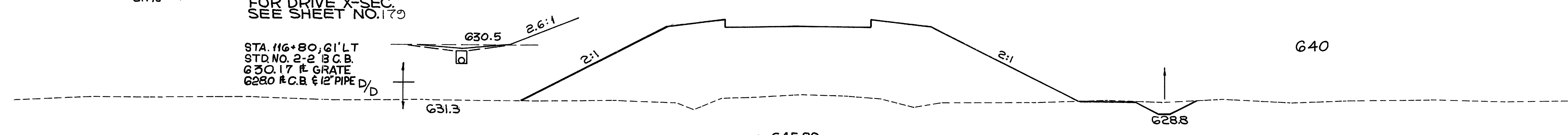
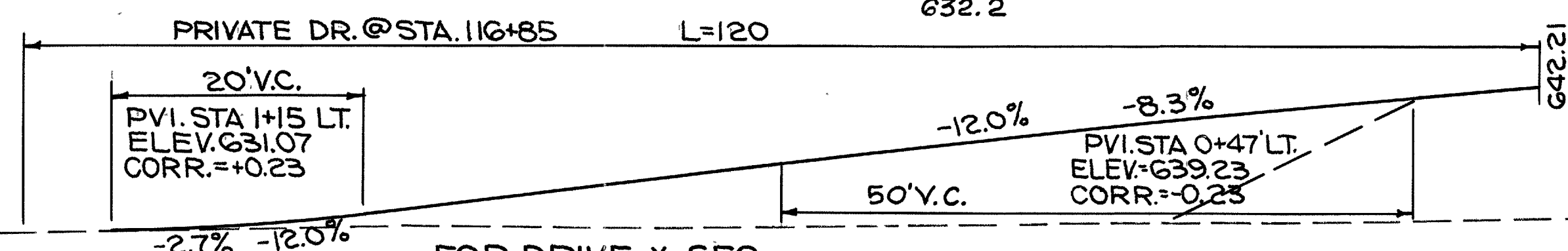
STA. 109+74.67 15 2243

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 110+22 TO STA. 112+89.83 FRENCH CREEK RD.



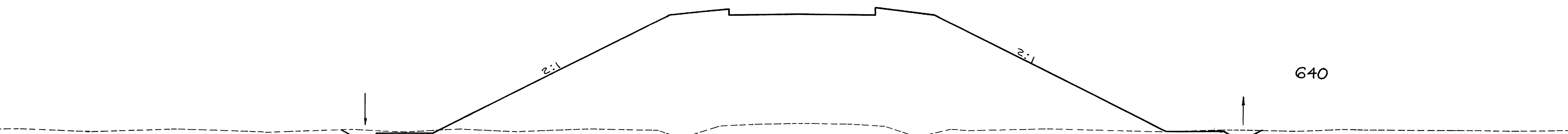
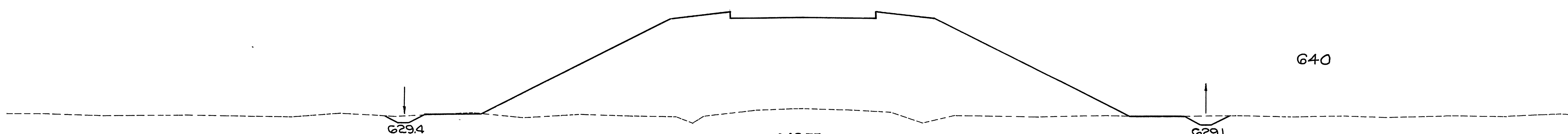
FOR DRIVE X-SEC.
SEE SHEET NO. 179

STA 118+20, 57' LT
STD. NO. 2-2 B.C.B.
6296 # GRATE
627.47 # C.B. & 12" PIPE

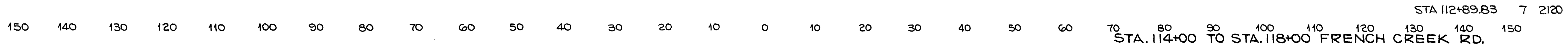


FOR DRIVE X-SEC.
SEE SHEET NO. 179

STA. 116+80, 61' LT
STD. NO. 2-2 B.C.B.
630.17 # GRATE
6280 # C.B. & 12" PIPE

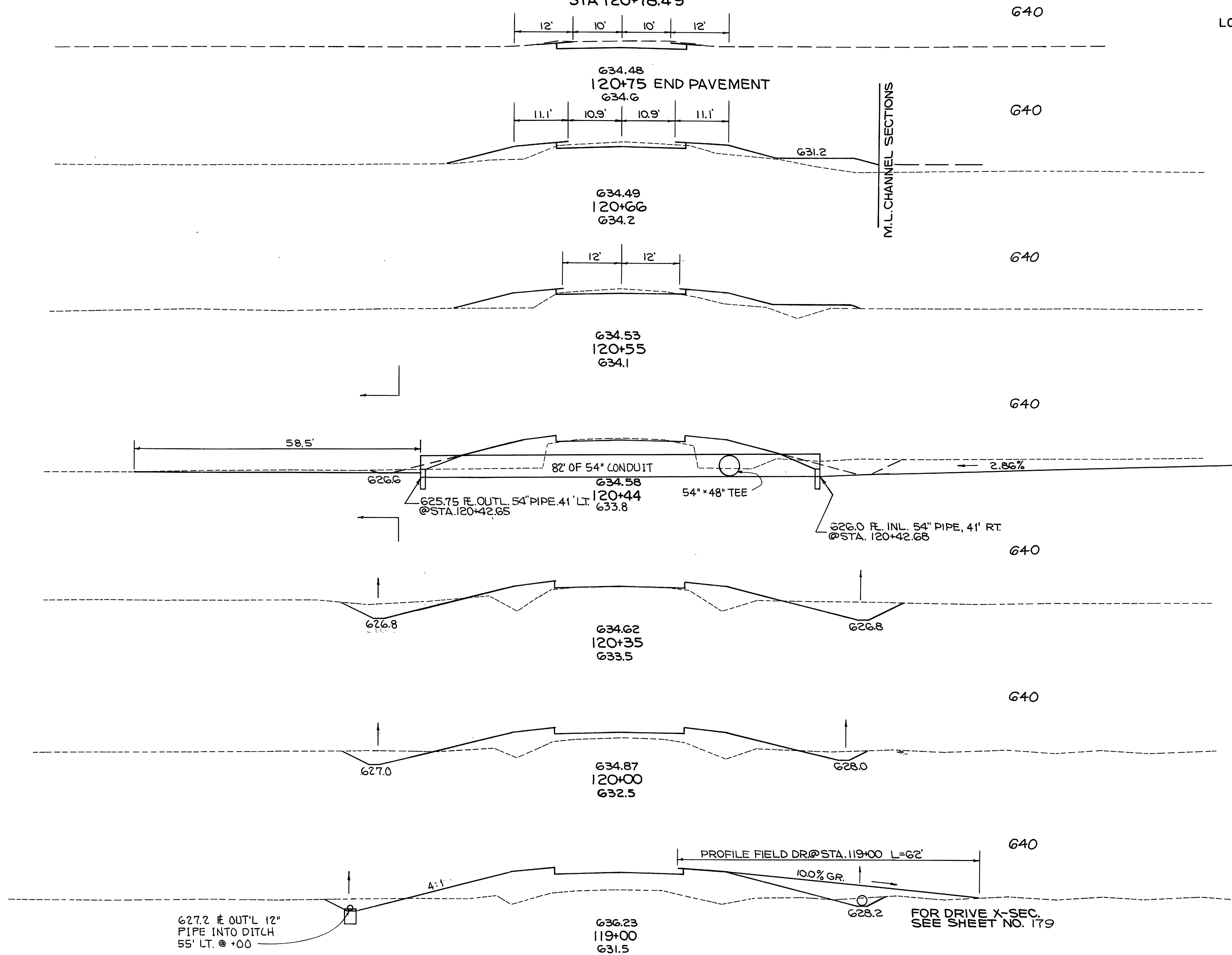


TO I.R. 90 SIDE DITCH
STA 113+25

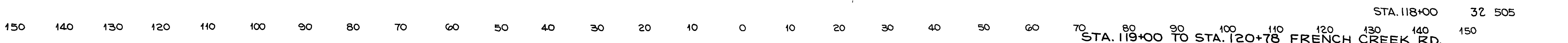


END WORK
STA 120+78.49

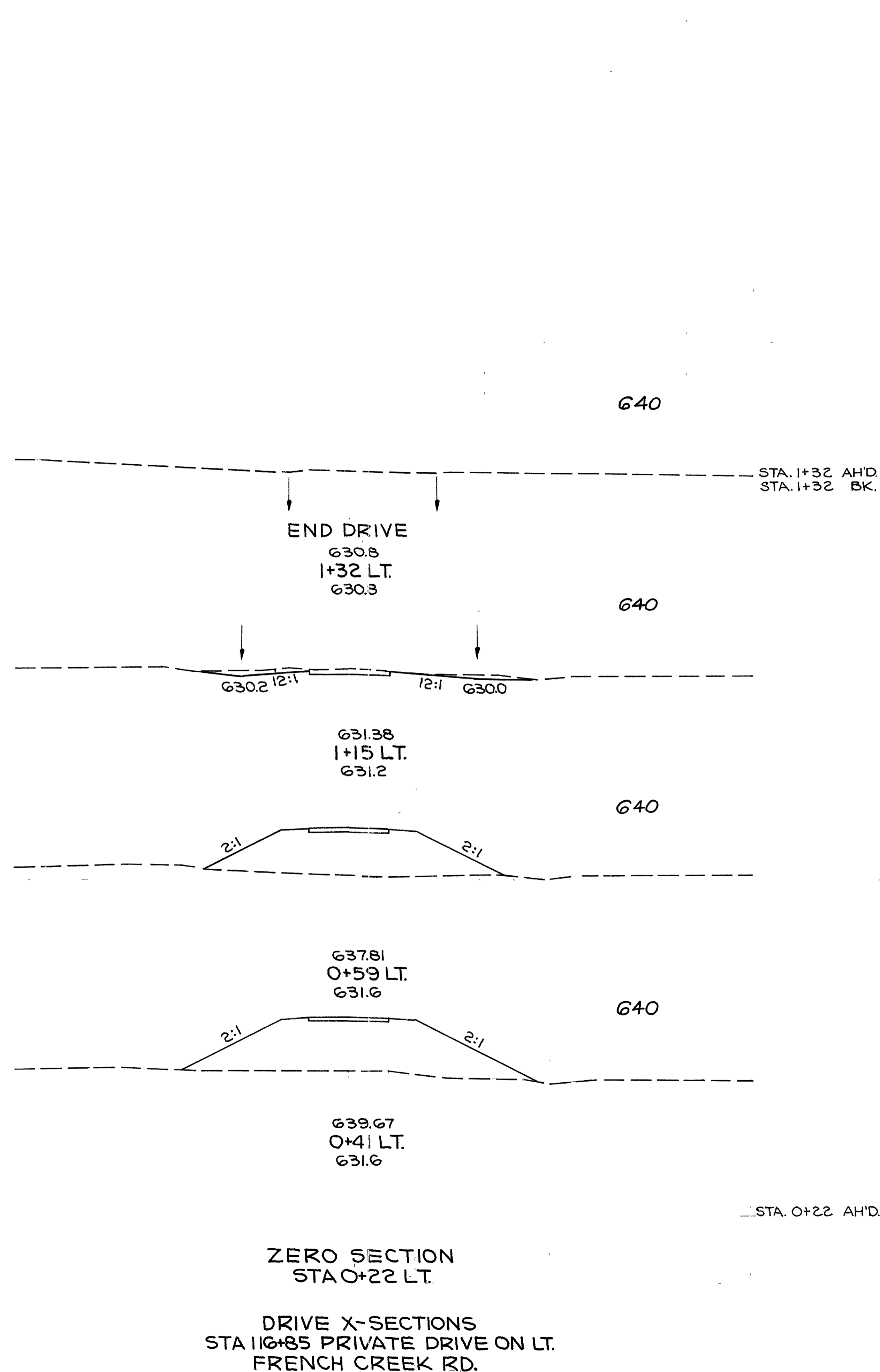
LOR. - 90-1721



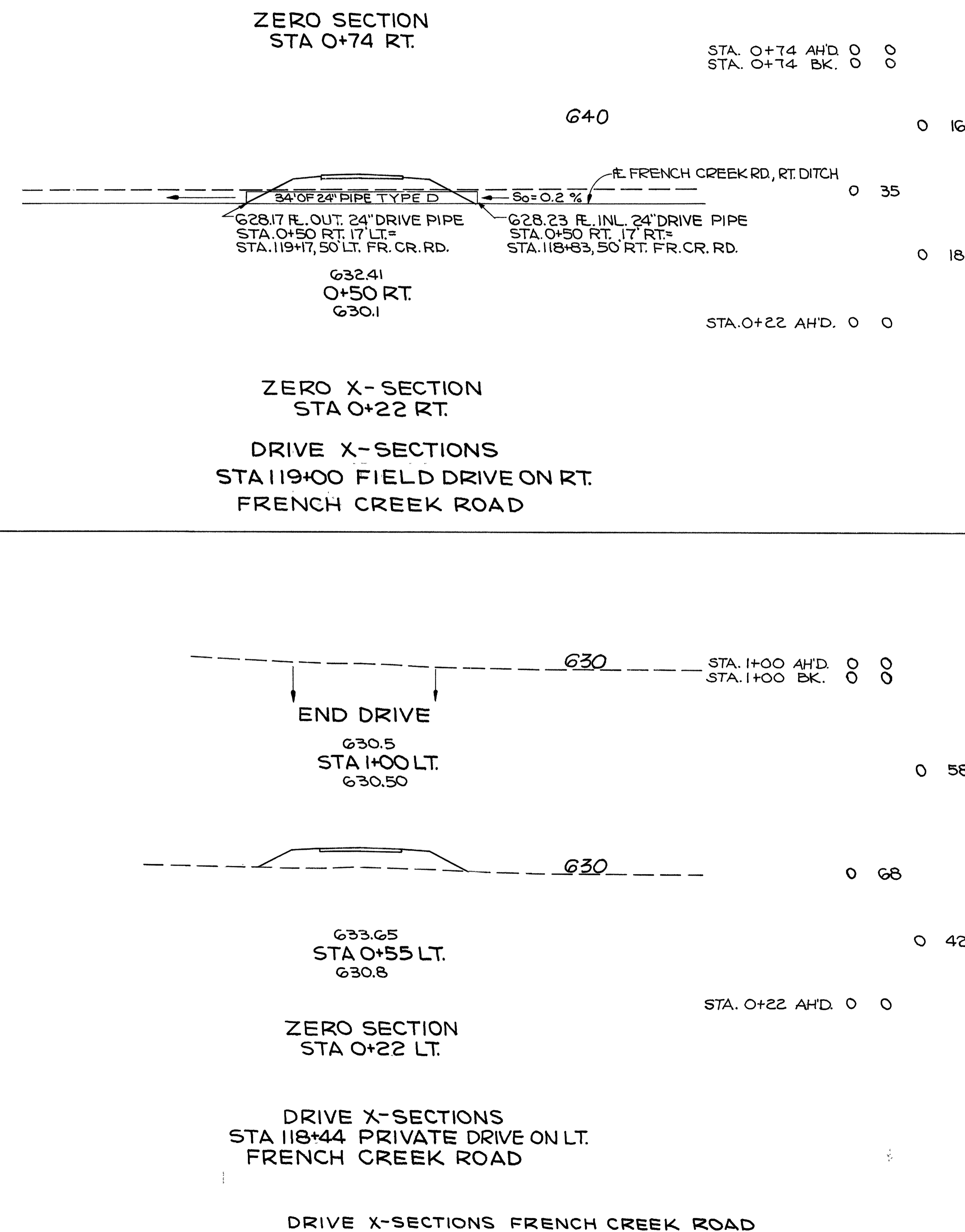
STA 120+78.49 AHD.	0	0		
STA 120+78.49 BK.	0	0	1	0
STA. 120+75 AHD.	4	0		
STA. 120+75 BK.	41	0	11	16
			22	96

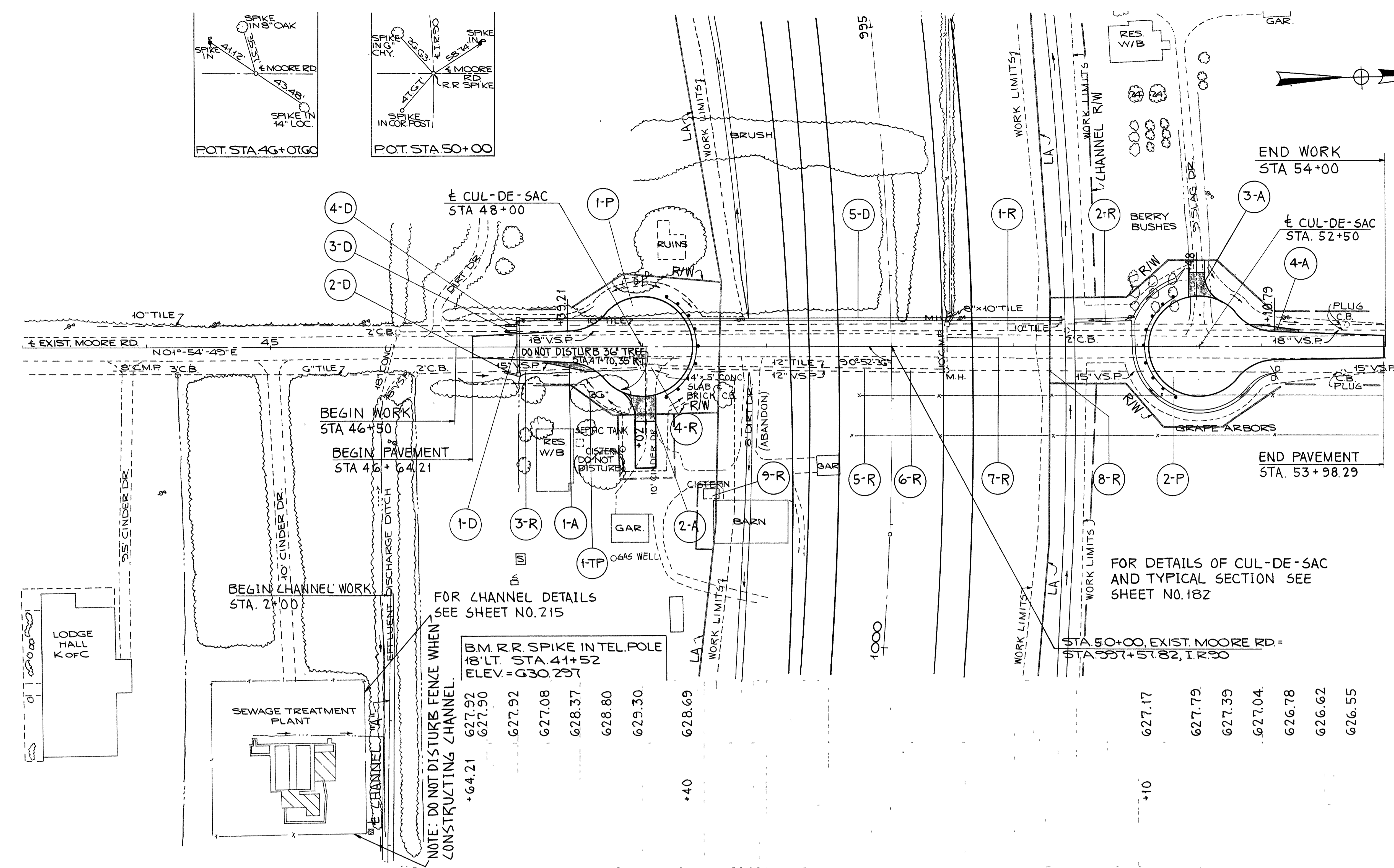


FOR DRIVE X-SEC.
SEE SHEET NO. 179



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	0	0
0	0	8	0
24	0	25	221
0	213	0	166
0	285	0	100
0	0	0	0





REFERENCE NO.	SIDE	STATION		PIPE REMOVED 24" AND UNDER LIN FT.	202 MANHOLES REMOVED CATCH BASINS REMOVED EACH	202 EXISTING STRUCTURES REMOVED LUMP	304 AGGREGATE BASE CU.YDS.	310 SUBBASE CU.YDS.	402 ASPHALT CONCRETE (70-85) CU.YDS.	404 ASPHALT CONCRETE (70-85) CU.YDS.	408 BITUMINOUS PRIME COAT GAL.	411 STABILIZED CRUSHED AGGREGATE CU.YDS.		
		FROM	TO											
1-P	€	46+64.21	48+40				138.1	94.6	33.6	33.6	322.2			
2-P	€	52+10	53+98.29				143.2	98.2	34.8	34.8	333.9			
1-A	RT.	47+61					1.7			0.7	5.0			
2-A	RT.	48+02					5.7			2.3	16.5	14.6		
3-A	LT.	52+48					4.5			1.8	12.9	3.0		
4-A	LT.	52+90					1.7			0.7	5.0			
1-R	LT.	46+90	53+68	678										
2-R	LT.	46+90	53+68	678										
3-R	RT.	46+90	48+00	110										
4-R	RT.	48+07			1									
5-R	RT.	48+14	50+44	230										
6-R	RT.	48+14	50+44	230										
7-R	LT&RT	50+44		37	2									
8-R	RT.	50+44	53+65	321										
9-R	RT.	48+50				LUMP								
TOTALS					2284	2	1	LUMP	294.9	192.8	68.4	73.9	695.5	17.6

B.M. RR SPIKE IN TEL. POLE
18" LT. STA 41+52
ELEV. = 630.297

FOR DETAILS OF CUL-DE-SAC
AND TYPICAL SECTION SEE
SHEET NO. 182

STA 50+00, EXIST. MOORE RD. =
STA 50+00, I.R. 90

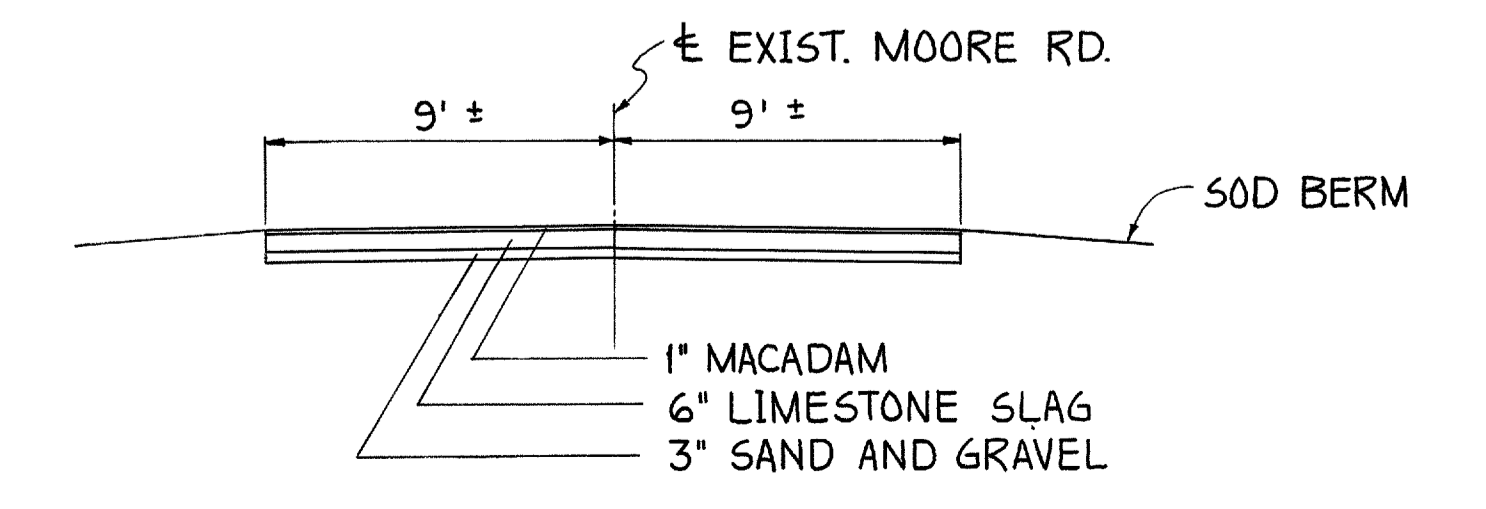
FOR CHANNEL DETAILS
SEE SHEET NO. 215

627.92	627.92	627.92	627.92	628.80	629.30	628.69	627.17	627.79	627.39	627.04	626.78	626.62	626.55
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------

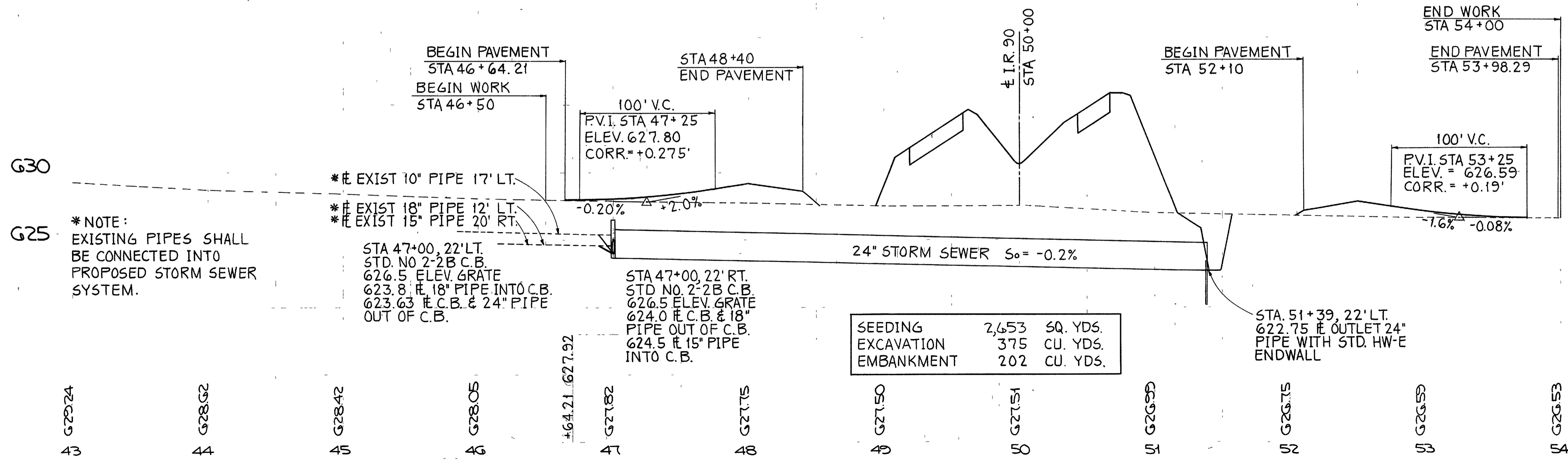
NOTE: DO NOT DISTURB FENCE WHEN
CONSTRUCTING CHANNEL.

REFERENCE	SIDE	STATION		MASONRY CU.YDS.	602		603		604		603	657	
		FROM	TO		CONDUIT TYPE B-B	BENDS AND BRANCHES	CATCH BASIN STD. NO.	CONDUIT TYPE B-B	RIPRAP FOR TREE PROTECTION				
1-D	LT&RT	47+00					44		2				
2-D	RT.	46+90	47+00				10						
3-D	LT.	46+90	47+00				10		1				
4-D	LT.	46+90	47+00				10		1				
5-D	LT.	47+00	51+39	0.41							439		
1-TP	RT.	47+63										2	
TOTALS				0.41			10	10	54		2	439	2

EXISTING TYPICAL SECTION MOORE RD.



STA. 43+00 TO STA. 54+00, EXIST. MOORE RD.



SEEDING	2,653	SQ. YDS.
EXCAVATION	375	CU. YDS.
EMBANKMENT	202	CU. YDS.

* NOTE:
EXISTING PIPES SHALL
BE CONNECTED INTO
PROPOSED STORM SEWER
SYSTEM.

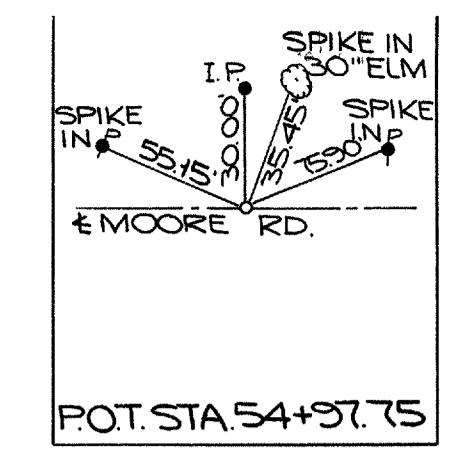
* # EXIST 10" PIPE 17' LT.
* # EXIST 18" PIPE 12' LT.
* # EXIST 15" PIPE 20' RT.

STA 47+00, 22' LT.
STD. NO. 2-2B C.B.
626.5 ELEV. GRATE
623.8 # 18" PIPE INTO C.B.
623.63 # C.B. & 24" PIPE
OUT OF C.B.

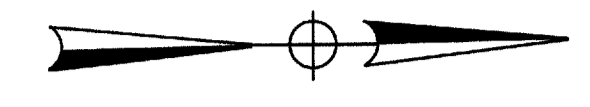
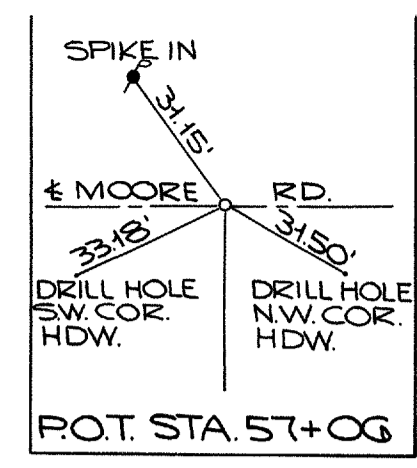
STA. 51+39, 22' LT.
622.75 # OUTLET 24"
PIPE WITH STD. HW-E
ENDWALL

43 G2324
44 G28G2
45 G2842
46 G2805
47 G2782
48 G2775
49 G2750
50 G2751
51 G2699
52 G2675
53 G2659
54 G2653

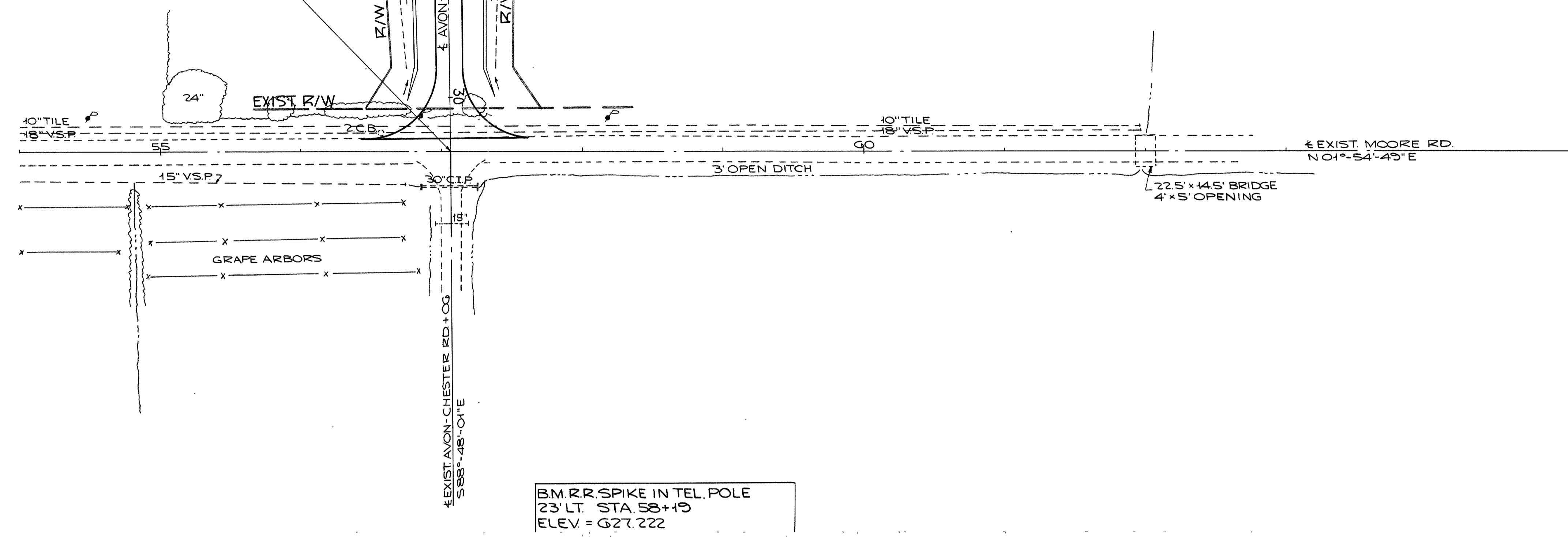
LOR.-90-17.21



FOR DETAILS OF AVON-CHESTER RD. SEE SHEET NOS. 185-193



STA. 30+39.71 AVON-CHESTER RD. = STA. 57+06.00, MOORE RD.



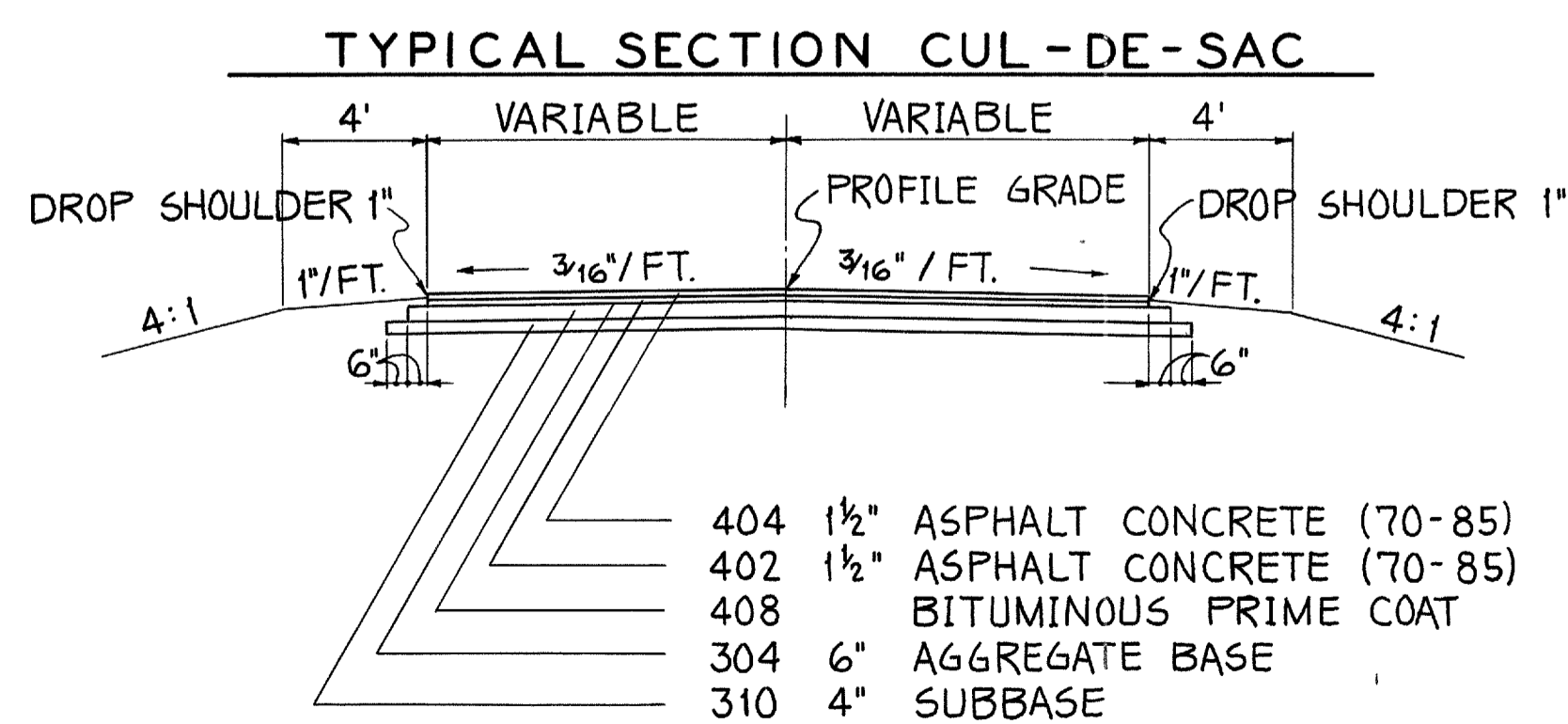
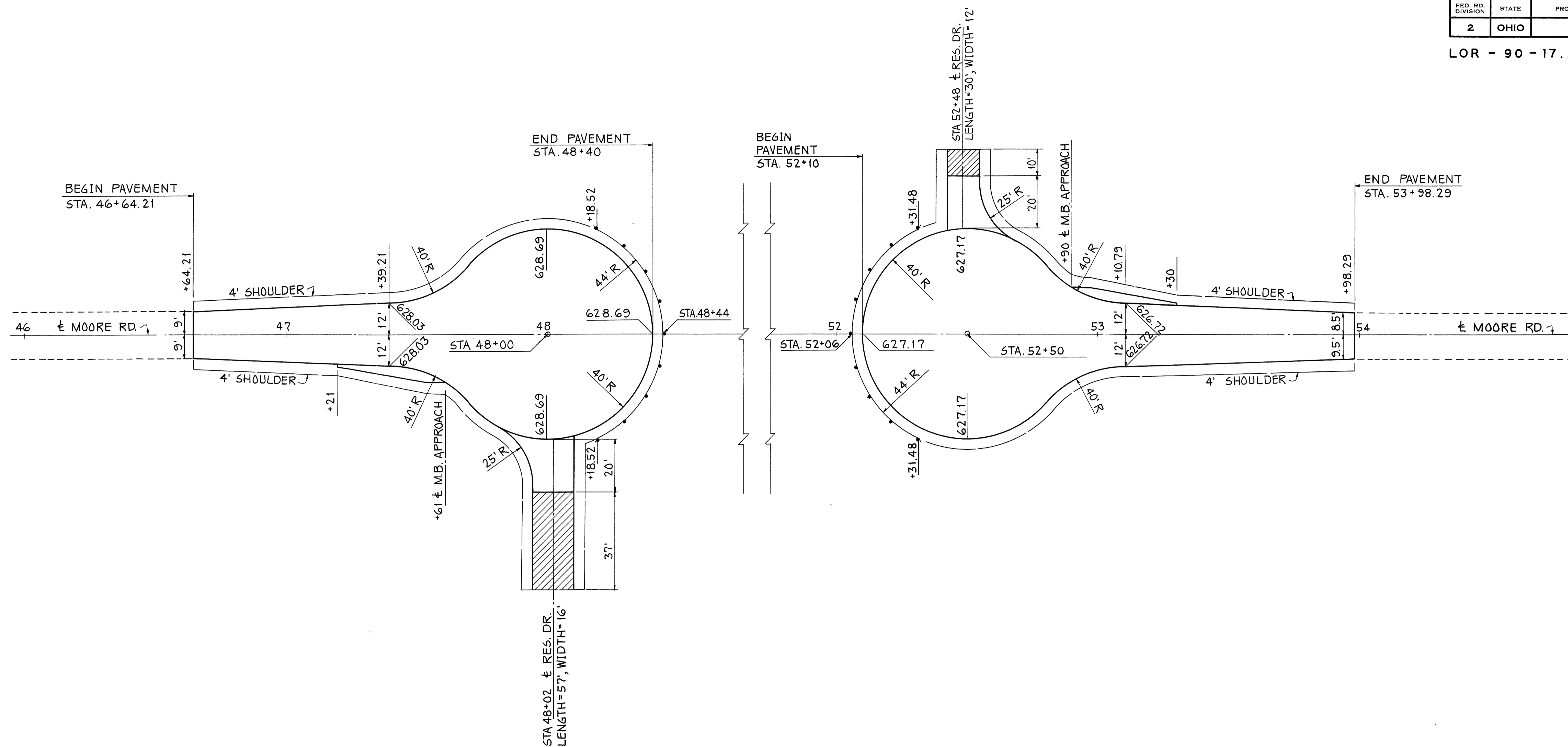
B.M. RR SPIKE IN TEL. POLE
23' LT. STA. 58+19
ELEV. = 627.222

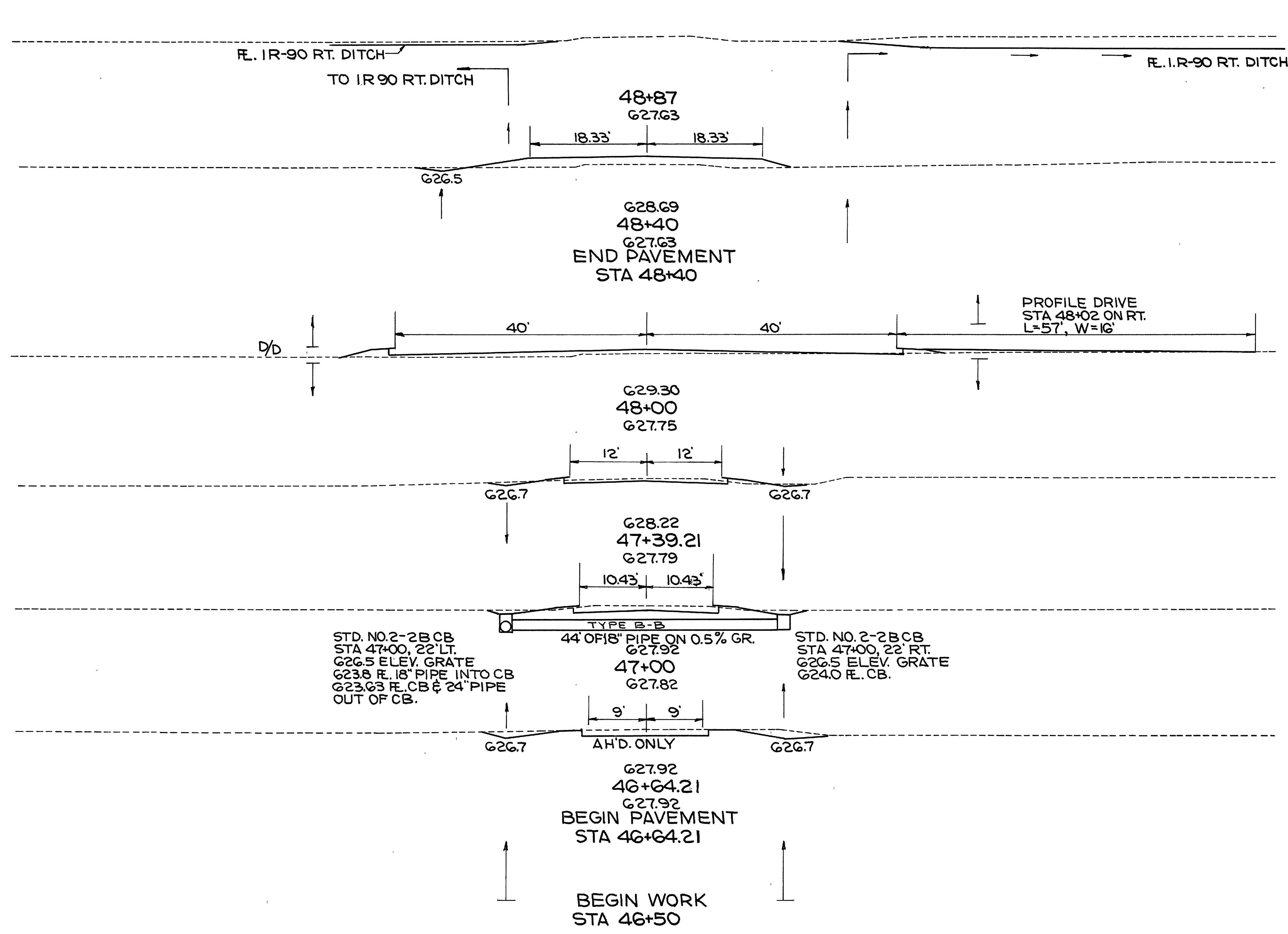
STA. 57+06
RELOCATED
AVON-CHESTER RD.

G30
G25

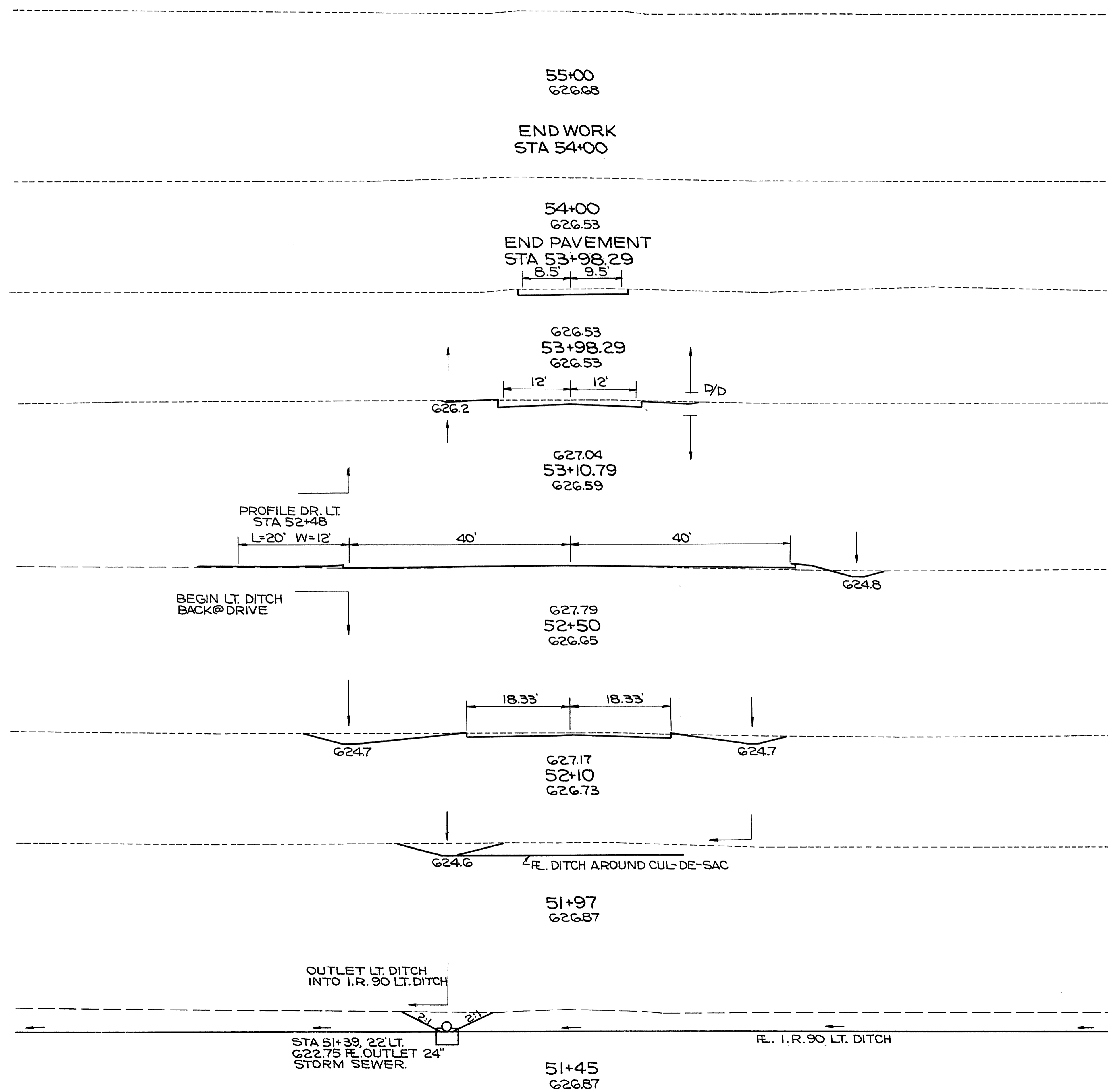
- G26.53
- G26.08
- G26.75
- G27.18
- G26.53
- G26.51
- G26.44
- G26.42
- G27.41
- G26.50
- G26.17
- G26.27

STA. 54+00 TO STA. 65+00, EXIST. MOORE RD.

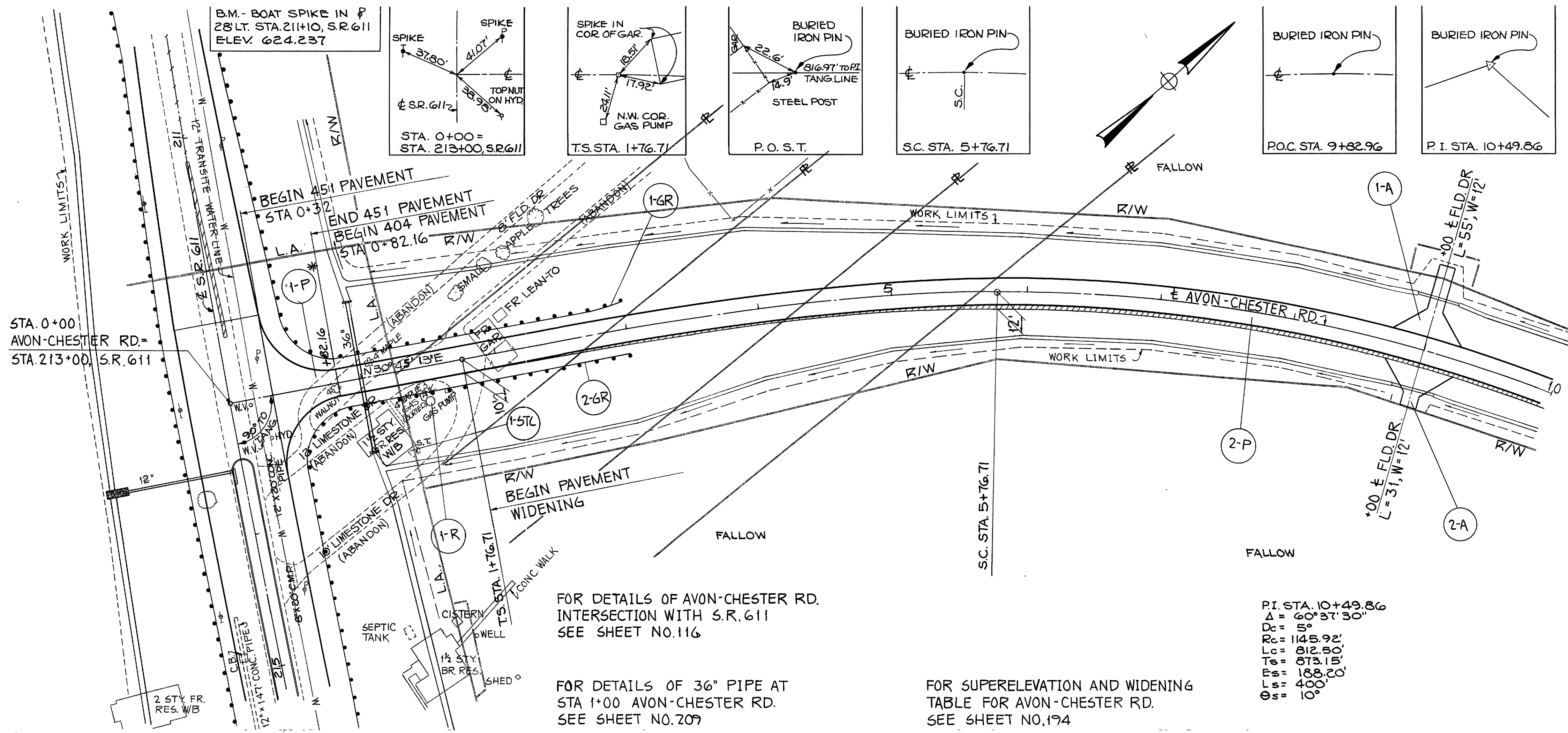




630	STA 48+87 AHD.	0	0
	STA 48+87 BK.	1	0
			2 0
630	STA 48+50	2	0
			1 13
	STA 48+40	2	70
			2 86
630		1	46
	ADD FOR DRIVE	0	10
			21 57
630			18 4
			33 5
630			28 3
			43 2
630	STA 46+64.21 AHD.	37	0
	STA 46+64.21 BK.	18	0
			5 0
	STA 46+50 AHD.	0	0
	STA 46+50 BK.	0	0



630	STA 54+00 AHD.	0	0
	STA 54+00 BK.	0	0
630	STA 53+98.29 AHD.	1	0
	STA 53+98.29 BK	22	0
630			84 0
630			30 0
630			44 16
630			9 14
	ADD FOR DRIVE		0 3
630			58 10
630			70 0
630			23 0
630			26 0
630			58 0
630	STA 51+45 AHD.	34	0
	STA 51+45 BK.	0	0

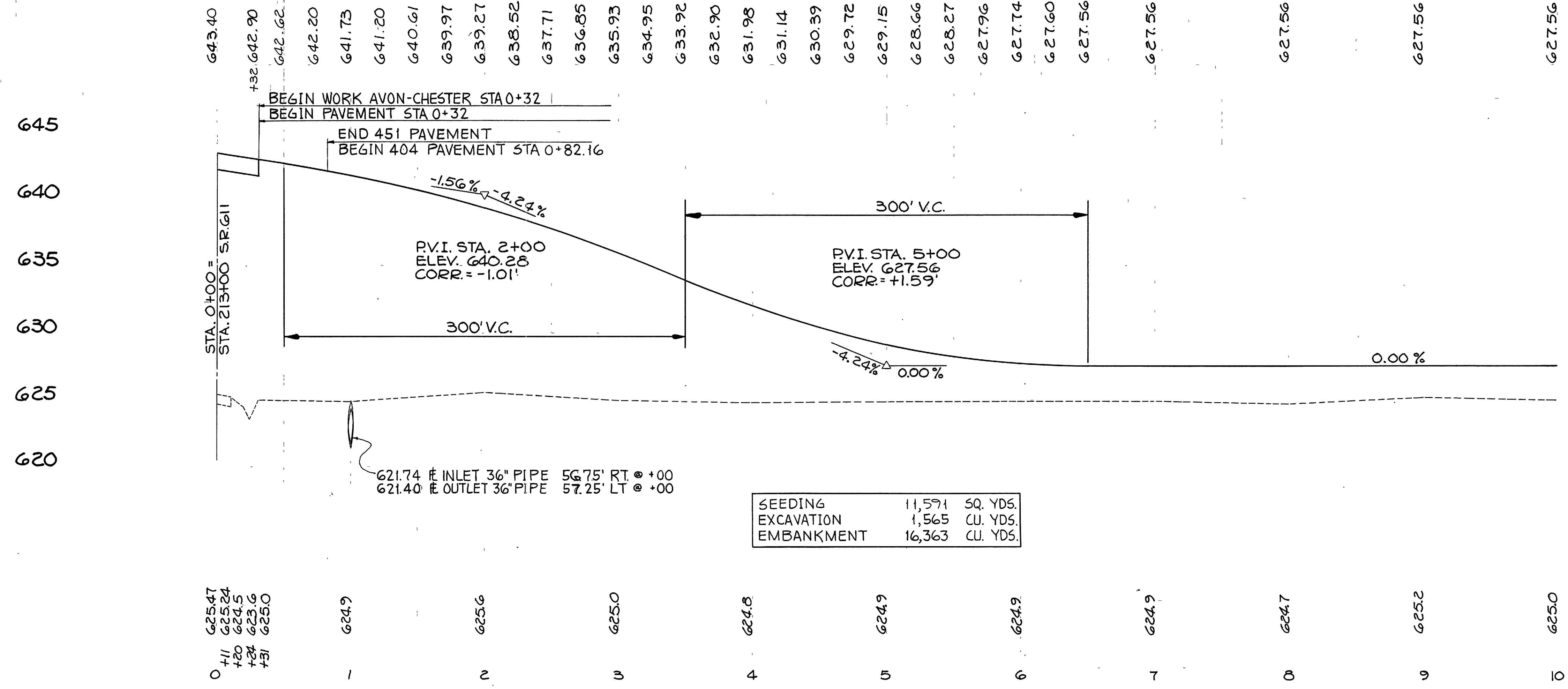


REFERENCE NO.	SIDE	STATION		301	304	310	402	404	408	409	451	605	SPECIAL		
		FROM	TO	BITUMINOUS AGGREGATE BASE CU. YDS.	AGGREGATE BASE CU. YDS.	GRADING A OR B SUBBASE CU. YDS.	ASPHALT CONCRETE (70-85) CU. YDS.	ASPHALT CONCRETE (70-85) CU. YDS.	BITUMINOUS PRIME COAT GAL.	SEAL COAT SQ. YDS.	5" REINFORCED PORTLAND CEMENT CONCRETE PAV'T. SQ. YDS.	AGGREGATE DRAINS LIN. FT.		CLEANING & DISPOSAL OF SEPTIC TANK EACH	
1-P	L	0+32	0+82.16	10.7	21.5	15.5	41.5								
2-P	R	0+82.16	10+00		385.6	261.1	92.6	75.6	889.0	128.9	231.8	562			
3-P	L	10+00	21+00		456.8	316.9	109.6	89.4	1052.0			640			
4-P	R	21+00	30+30		390.9	272.4	93.3	75.9	895.7			562			
1-5TL	RT.	1+20											1		
TOTALS					10.7	1254.8	811.9	415.2	295.5	2409.7	2836.7	1288.9	2318.8	1764	1

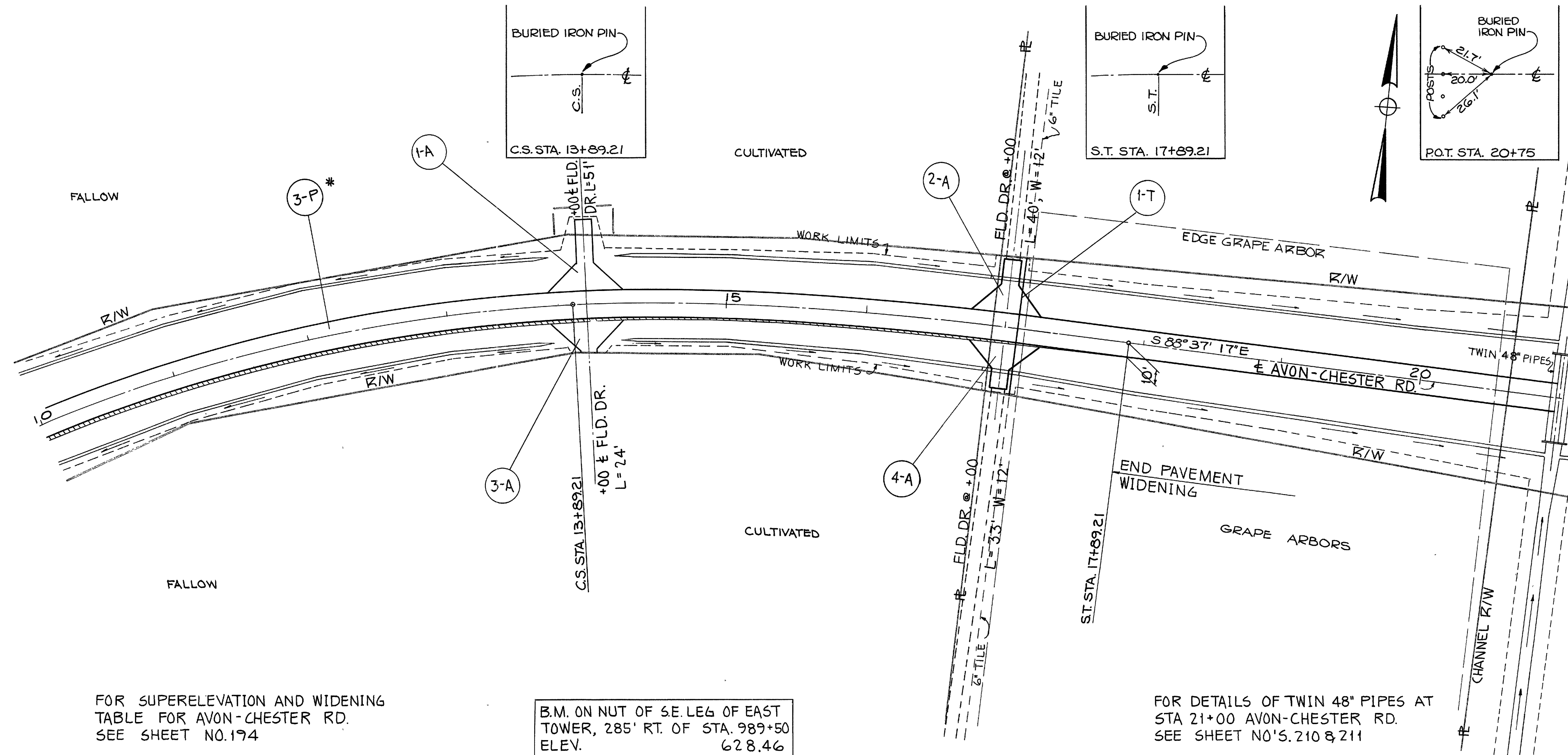
* PAVEMENT BUILD UP SAME AS FOR S.R. 611 TYPE 451

REFERENCE NO.	SIDE	STATION		606	SPECIAL	603	411
		FROM	TO	GUARD RAIL TYPE 4 LIN. FT.	REMOVAL & DISPOSAL OF EXISTING UNDERGROUND TANK LUMP#	CONDUIT TYPED LIN. FT.	STABILIZED CRUSHED AGGREGATE CU. YDS.
1-6R	LT.	5+32	2+99.66	275			
2-6R	RT.	5+32	2+99.66	275			
1-R	RT.	1+48			LUMP#		
1-A	LT.	9+00				32	19.6
2-A	RT.	9+00				32	14.3
TOTAL				550	LUMP#	64	33.9

See note in proposal



SEEDING	11,591	SQ. YDS.
EXCAVATION	1,565	CU. YDS.
EMBANKMENT	16,363	CU. YDS.



REFERENCE NO.	SIDE	STATION		603	603	411				
		FROM	TO	CONDUIT WITH 8 Bed	CONDUIT TYPE D					
1-A	LT.	14+00		8"	15"					
2-A	RT.	17+00			28					18.8
3-A	LT.	14+00								12.7
4-A	RT.	17+00			26					14.8
1-T	LT&RT	17+09		100						
TOTALS						100	54			62.6

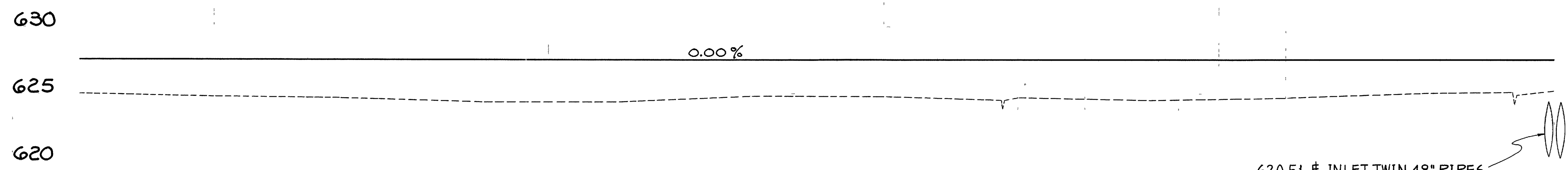
* PAVEMENT QUANTITIES CARRIED ON SHEET NO.185

FOR SUPERELEVATION AND WIDENING TABLE FOR AVON-CHESTER RD. SEE SHEET NO.174

B.M. ON NUT OF SE. LEG OF EAST TOWER, 285' RT. OF STA. 989+50 ELEV. 628.46

FOR DETAILS OF TWIN 48" PIPES AT STA 21+00 AVON-CHESTER RD. SEE SHEET NO'S. 210 & 211

627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56 627.56



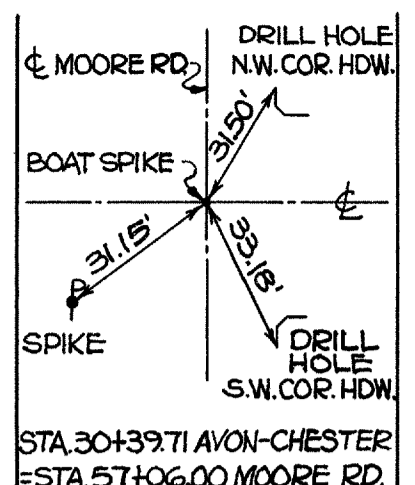
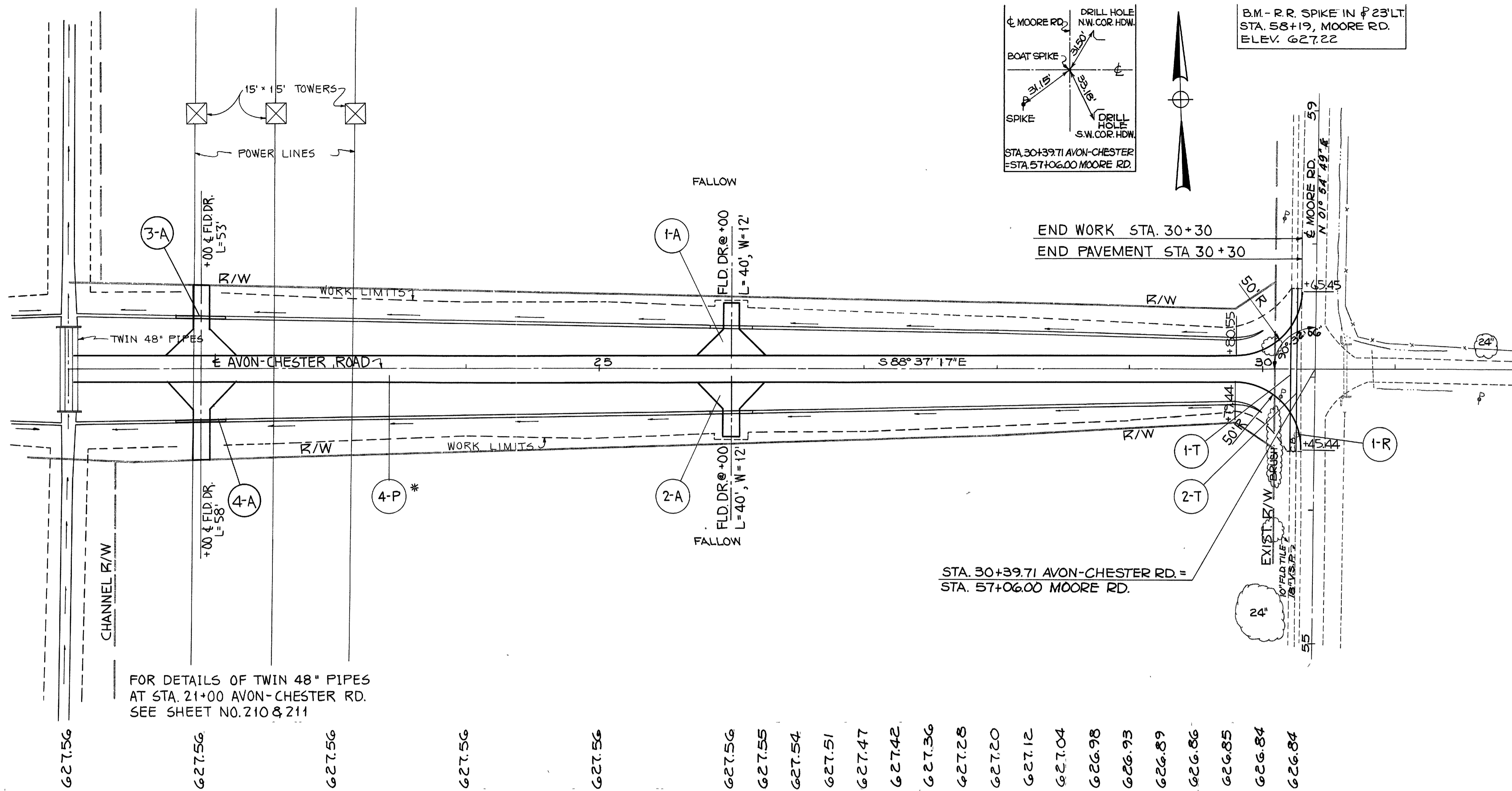
620.51 # INLET TWIN 48" PIPES
32' RT. @ STA 21+00
620.45 # OUTLET TWIN 48" PIPES
32' LT. @ STA 21+00

SEEDING	9,715	SQ. YDS.
EXCAVATION	1,101	CU. YDS.
EMBANKMENT	3,982	CU. YDS.

625.0 624.8 624.7 624.4 624.4 624.8 624.8 624.5 624.7 625.0 625.2

10 11 12 13 14 15 16 17 18 19 20 21

+68 624.5
+70 624.2
+72 624.9

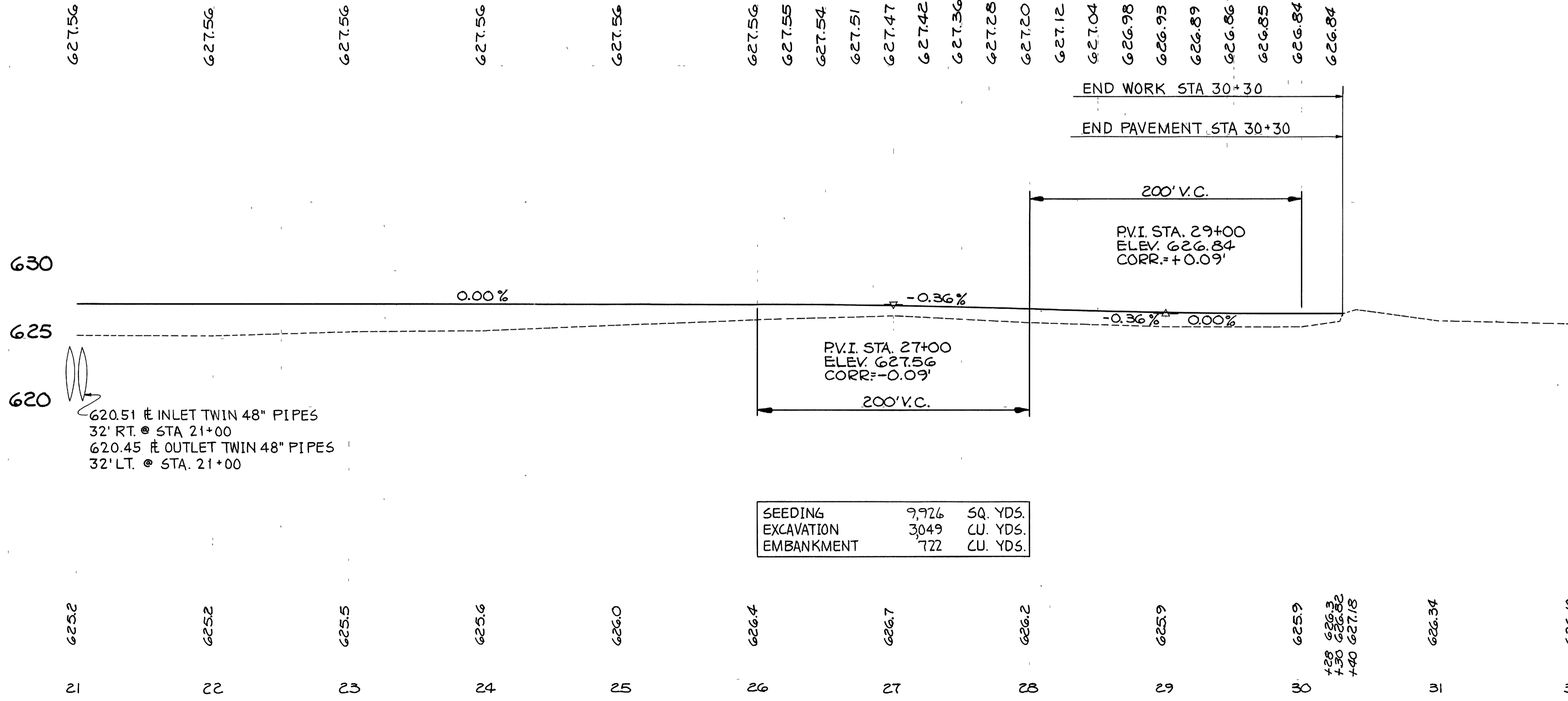


B.M. - R.R. SPIKE IN #23' LT.
STA. 58+19, MOORE RD.
ELEV. 627.22

FOR DETAILS OF TWIN 48" PIPES
AT STA. 21+00 AVON-CHESTER RD.
SEE SHEET NO. 210 & 211

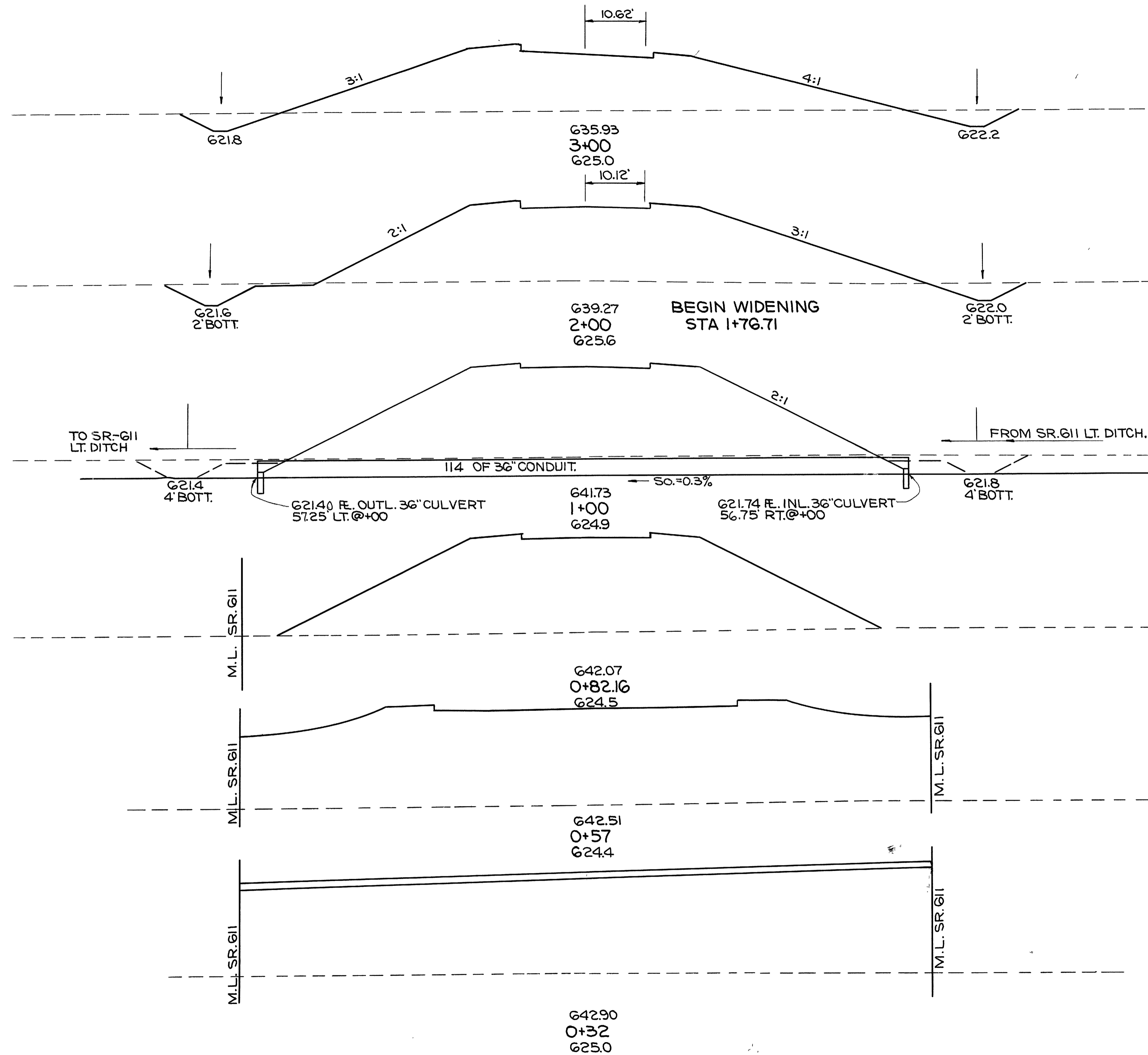
REFERENCE NO.	SIDE	STATION		CATCH BASIN REMOVED	STABILIZED CRUSHED AGGREGATE	CONDUIT TYPE		
		FROM	TO			B-B	D	D
1-A	LT.	26+00			16.3	12"	18"	
2-A	RT.	26+00			16.3		15"	
3-A	LT.	22+00			19.2			18"
1-R	LT.	MOORE RD.		1				38
4-A	RT.	22+00			20.3			38
1-T	LT.	56+45	MOORE RD.			120		
2-T	LT.	56+45	MOORE RD.			120		
TOTALS				1	72.1	120	120	64 76

* PAVEMENT QUANTITIES CARRIED ON SHEET NO. 185



SEEDING	9,926	SQ. YDS.
EXCAVATION	3,049	CU. YDS.
EMBANKMENT	722	CU. YDS.

LOR-90-17.21



630

61 758

630

2433202

70 971

630

2853883

STA. 1+00 AH'D. 84 1126
STA. 1+00 BK. 0 1126

630

0 774

0 1216

630

0 1470

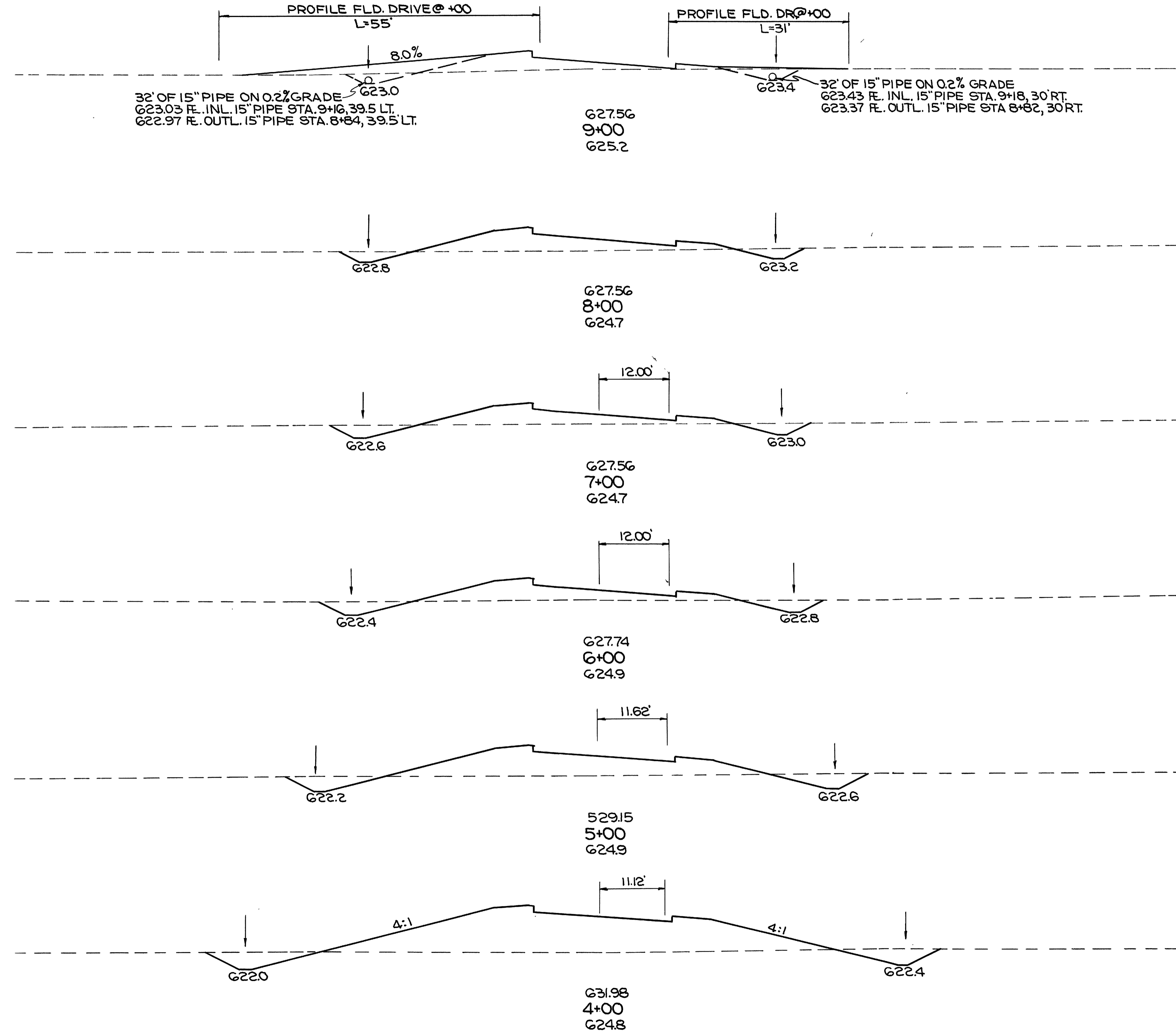
0 1940

630

0 1844

BEGIN PAVEMENT STA 0+32
BEGIN WORK STA 0+32

STA 0+32 AH'D. 0 2043
STA 0+32 BK. 0 0



630

	27	75
ADD DRIVE RT.	4	2
ADD DRIVE LT.	0	19

96 330

630

25 103

109 357

630

34 90

135 352

630

39 100

165 539

630

50 191

206 1126

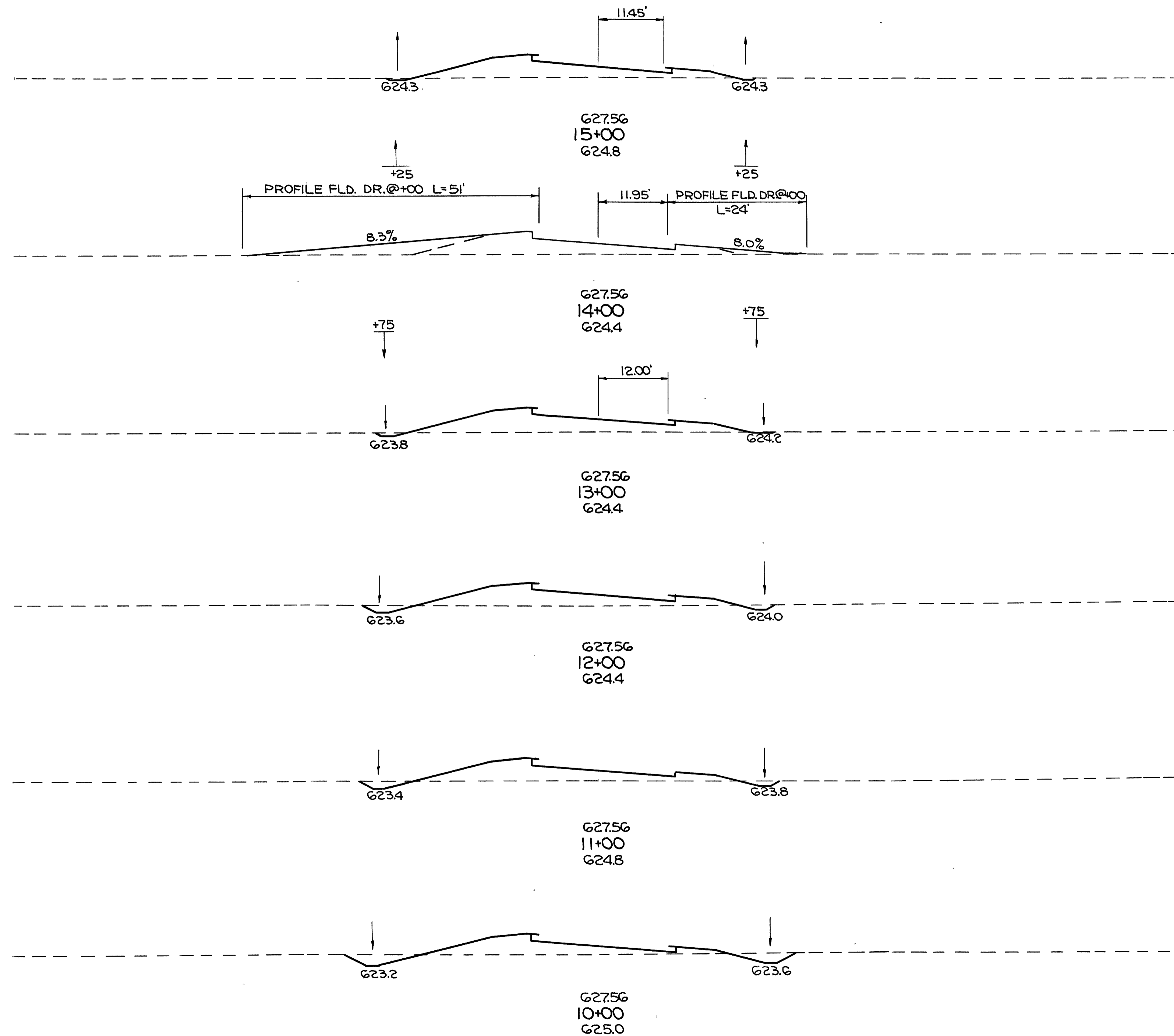
630

61 417

226 2176

STA. 3+00 61 758

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA 4+00 TO STA 9+00 AVON-CHESTER RD. EXTENSION



630

2 103

4 391

630

ADD DRIVE LT.	0	30
ADD DRIVE RT.	0	5

0 108

4 426

630

2 122

20 415

630

9 102

37 372

630

11 99

67 333

630

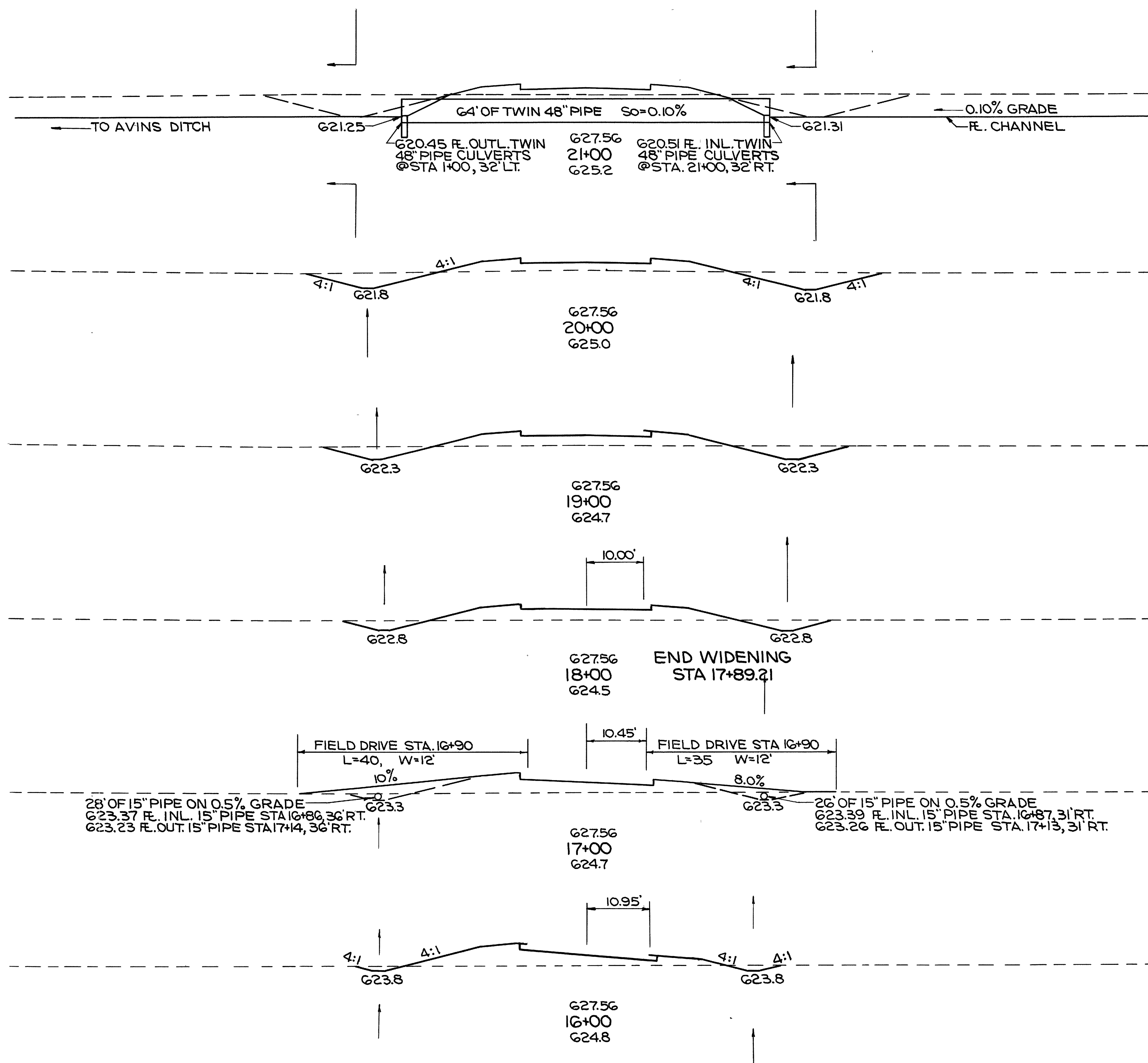
25 81

96 289

STA. 9+00 27 75

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

STA 10+00 TO STA 15+00 AVON-CHESTER RD. EXT.



G 30

145 51

415 230

G 30

79 73

239 294

G 30

50 86

150 337

G 30

31 96

93 367

G 30

19 102

ADD DRIVE LT.	0	10
ADD DRIVE RT.	0	8

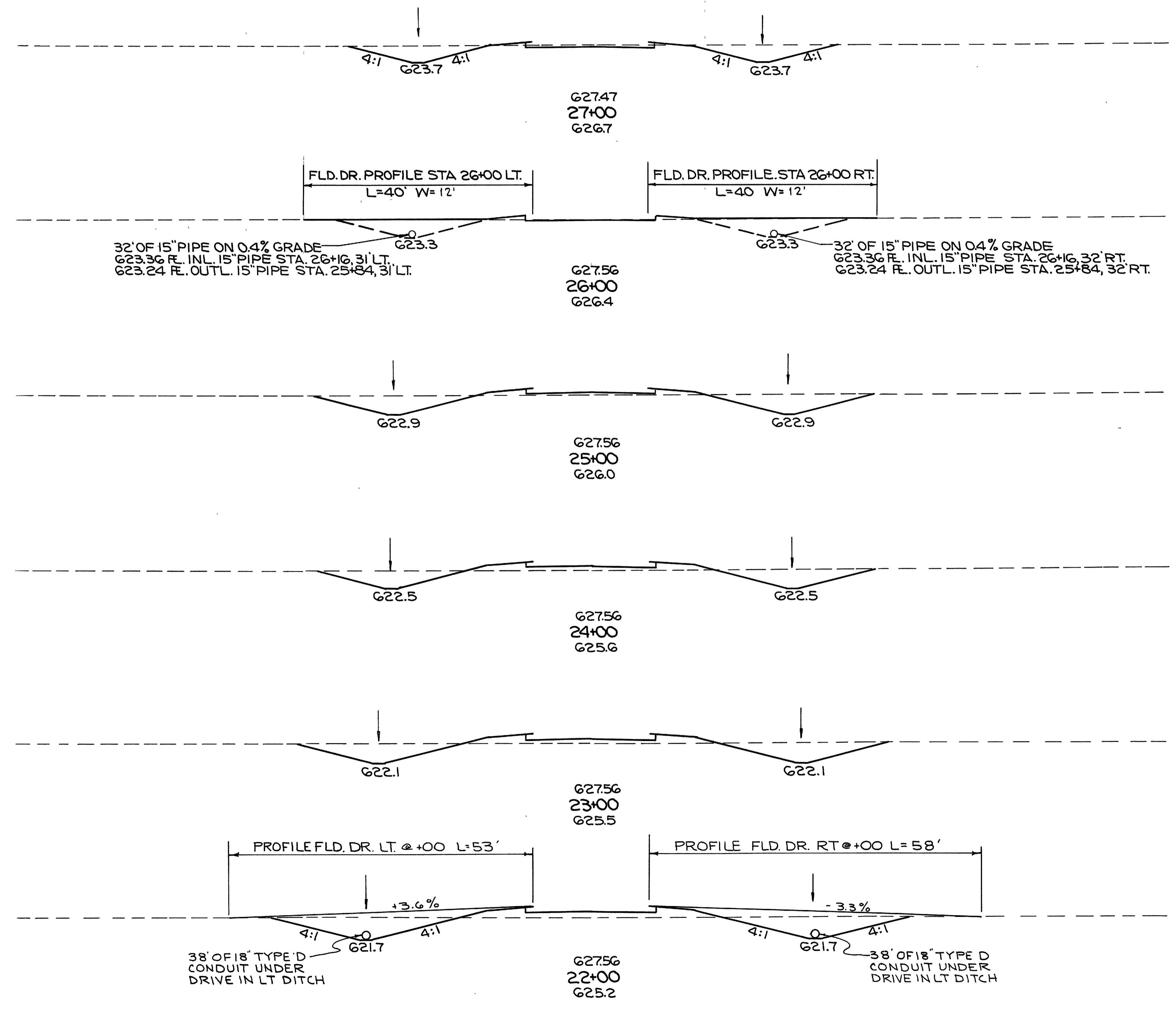
52 381

G 30

9 104

20 383

STA. 15+00 2 103



630	88	2	335	15
630	93	6	365	50
630	104	21	363	104
630	92	34	369	135
630	107	39	446	159
630	134	47	517	181
				15
				13
				517
				181
				51

STA 30+30 AHD. 0 0
STA 30+30 BK. 110 0

END WORK STA. 30+30
END PAVEMENT STA 30+30

M.L. MOORE RD.

M.L. MOORE RD.

630

G26.82
30+30
G26.8

127 4

STA 30+00, 31' LT.
BEGIN LT. DITCH BK.

STA 30+00, 31' RT.
BEGIN RT. DITCH BK.

630

4:1 4:1
G24.6

4:1 4:1
G24.6

27 4

G26.84
29+80
G25.9

95 12

630

G24.3

G24.3

37 4

G26.93
29+00
G25.9

169 19

630

4:1 4:1
G24.0

4:1 4:1
G24.0

54 6

G27.20
28+00
G26.2

263 15

STA 27+00 88 2

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
STA. 28+00 TO STA 30+30 AVON-CHESTER RD. EXTENSION.

RELOCATED AVON-CHESTER ROAD SUPERELEVATION TABLES

STATION	LEFT EDGE ELEVATION	CORRECT.	PROFILE GRADE	WIDENING	PAVEMENT WIDTH	CORRECT.	RIGHT EDGE ELEVATION
1+14.21	641.28	-0.16	641.44	0.00	10.00	-0.16	641.28
+25	641.07	-0.13	641.20				641.04
+50	640.54	-0.07	640.61				640.45
+75	639.97	-0.00	639.97				639.81
+76.71	639.92	0.00	639.92	0.00	10.00	-0.16	639.76
2+00	639.39	+0.12	639.27	0.12	10.12	-0.16	639.11
+07.96	639.20	+0.16	639.04	0.16	10.16	-0.16	638.88
+25	638.76	+0.24	638.52	0.24	10.24	-0.25	638.28
+50	638.08	+0.37	637.71	0.37	10.37	-0.38	637.33
+75	637.34	+0.49	636.85	0.49	10.49	-0.52	636.33
3+00	636.55	+0.62	635.93	0.62	10.62	-0.65	635.28
+25	635.69	+0.74	634.95	0.74	10.74	-0.80	634.15
+43.38	635.03	+0.83	634.20	0.83	10.83	-0.90	633.30
+50	634.75		633.92	0.87	10.87	-0.91	633.01
+75	633.73		632.90	0.99	10.99	-0.92	631.98
4+00	632.81		631.98	1.12	11.12	-0.93	631.05
+25	631.97		631.14	1.24	11.24	-0.94	630.20
+50	631.22		630.39	1.37	11.37	-0.95	629.44
+75	630.55		629.72	1.49	11.49	-0.96	628.76
5+00	629.98		629.15	1.62	11.62	-0.97	628.18
+25	629.49		628.66	1.74	11.74	-0.98	627.68
+50	629.10		628.27	1.87	11.87	-0.99	627.28
+75	628.79		627.96	1.99	11.99	-1.00	626.96
+76.71	628.77		627.94	2.00	12.00	-1.00	626.94
6+00	628.57		627.74				626.74
+25	628.43		627.60				626.60
+50	628.39		627.56				626.56
+75							
7+00							
+25							
+50							
+75							
8+00							
+25							
+50							
+75							
9+00							
+25							
+50							
+75							
10+00							
+25							
+50							
+75							
11+00							
+25							
+50							
+75							
12+00							
+25							
+50							
+75							
13+00							
+25							
+50							
+75							
+89.21				2.00	12.00	-1.00	626.56
14+00	628.39	+0.83	627.56	1.95	11.95	-1.00	626.56

STATION	LEFT EDGE ELEVATION	CORRECT.	PROFILE GRADE	WIDENING	PAVEMENT WIDTH	CORRECT.	RIGHT EDGE ELEVATION
14+25	629.39	+0.83	627.56	1.82	11.82	-0.98	626.58
+50				1.70	11.70	-0.97	626.59
+75				1.57	11.57	-0.96	626.60
15+00				1.45	11.45	-0.95	626.61
+25				1.32	11.32	-0.94	626.62
+50				1.20	11.20	-0.93	626.63
+75				1.07	11.07	-0.92	626.64
16+00				0.95	10.95	-0.91	626.65
+22.54	629.39	+0.83		0.83	10.83	-0.90	626.66
+25	628.38	+0.82		0.82	10.82	-0.89	626.67
+50	628.26	+0.70		0.70	10.70	-0.74	626.82
+75	628.13	+0.57		0.57	10.57	-0.60	626.96
17+00	628.01	+0.45		0.45	10.45	-0.47	627.09
+25	627.88	+0.32		0.32	10.32	-0.33	627.23
+50	627.76	+0.20		0.20	10.20	-0.20	627.36
+57.96	627.72	+0.16		0.16	10.16	-0.16	627.40
+75	627.63	+0.07		0.07	10.07	-0.16	627.40
+89.21	627.56	0.00		0.00	10.00	-0.16	627.40
18+00	627.53	-0.02					
+25	627.47	-0.09					
+50	627.41	-0.15					
+51.71	627.40	-0.16	627.56	0.00	10.00	-0.16	627.40

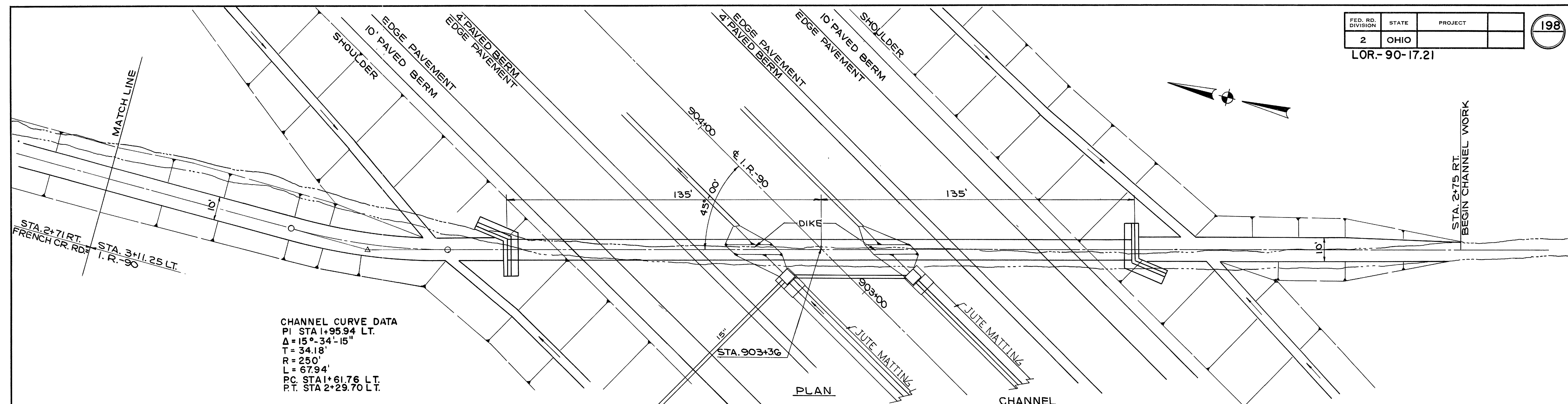
S.R. 611 INTERCHANGE & SIDEROAD SUMMARY OF TABLES

FROM SHEET NO.	202										203		301	302	304	310	402	404	407	408	409	411	451		601	602	FROM SHEET NO.
	LIN. FT.	SQ. FT.	SQ. YD.	LUMP	EACH																						
PROJECT I-90-1(42)																											
S.R. 611 PLAN & PROFILE																											
STA. 201+00 TO 206+00	85	12	367	25				614	209								4.6		33.2		20.4					85	
STA. 206+00 TO 217+00	86	207	283	306		LUMP		2818	66239								14.8		106.3		50.8		4	0.46		86	
STA. 217+00 TO 228+00	87		85	795				94	100706														2	0.23		87	
STA. 228+00 TO 239+00	88	59	611	25	LUMP			1949	27774												73.7			0.47		88	
S.R. 611 TEMP. ROAD	90																									90	
S.R. 611 PAV'T MARKING	94																									94	
RAMP M	118							1506	46767																	118	
RAMP M	119							400	11755																	119	
RAMP N	125							339	26004																	125	
RAMP N	126							335	2023														2	0.26		126	
RAMP P	131							2854	11237																	131	
RAMP P	132							1834	41044															73		132	
RAMP R	139					LUMP		2878	19537																	139	
RAMP R	140							397	31146															65	0.26	140	
RAMP M&N GRADING PLAN	147								2110																	147	
RAMP P&R GRADING PLAN	150							168	3431																	150	
INTERCHANGE PAV'T. QUANT.	153											1327.5	559.9	2490.5	4420.4	1866.4	317.1	230.6	4.8	2687.4	9307.1			1656.12	6266.1	153	
RELOCATED FRENCH CREEK	154							19745	1691																	154	
RELOCATED FRENCH CREEK	155							5422																		155	
RELOCATED FRENCH CREEK	156							34318																		156	
RELOCATED FRENCH CREEK	157							27979	488																	157	
FRENCH CREEK GRADING PLAN (WEST)	162							6403	116																	157A	
FRENCH CREEK GRADING PLAN (EAST)	166							2576	15354																	162	
FRENCH CREEK ROAD	170							761	3298																	170	
FRENCH CREEK ROAD	171							1099	51390																	171	
FRENCH CREEK ROAD	172		26			LUMP		601	8979																0.23	172	
EXIST. MOORE ROAD	180	2284				LUMP		375	202																	0.41	180
AVON-CHESTER ROAD (EXT.)	185							1565	16363																	185	
AVON-CHESTER ROAD (EXT.)	186							1101	3982																	186	
AVON-CHESTER ROAD (EXT.)	187							3049	722																	187	
TOTAL THIS SHEET		2562	26	368	2079	50	LUMP	LUMP	2	5		121,240	497,857														

*NOTE: 409 SEAL COAT IS TAKEN TO CALCULATIONS AND CONVERTED TO COVER AGGREGATE AND BITUMINOUS MATERIAL

S.R. 611 INTERCHANGE & SIDEROAD SUMMARY OF TABLES (CON'T)

FROM SHEET NO.	609				611	612	613	615		621						657	659	660	667	SPECIAL						FROM SHEET NO.				
	CONCRETE CURB STD. TYPE				REINFORCED CONCRETE APPROACH SLABS T=13"	CONCRETE MEDIAN STANDARD	TRAFFIC DIVIDERS STANDARD	TEMPORARY ROADS	CLASS B TEMPORARY PAVEMENT	EDGE LINES	LANE LINES AND CENTER LINES	LANE LINES AND CENTER LINES	BARRIER LINES	CHANNELIZING LINE	STOP LINES	BROAD TRANSVERSE STRIPES	CURB AND ISLAND MARKING	RIP-RAP FOR TREE PROTECTION	SEEDING AND MULCHING AS PER PLAN	SODDING	JUTE MATTING	PLUGGING GAS WELL	DRILLED WELLS ABANDONED	CLEANING AND DISPOSAL OF SEPTIC TANK	REMOVAL AND REPAIR OF EXISTING UNDERGROUND TANK		DRAINAGE CONNECTION USING NO. 8 AGGREGATE	CLEANING PRIVY VAULTS		
	2-A	6	7	8	SQ. YD.	EACH		LUMP	SQ.YD.	MILES			FEET	LUMP			SQ.YDS.	SQ. YD.				EACH	LUMP	CU.YD.	EACH					
85																		3905										85		
86	702.0																	25004	24									86		
87	102.6				401.8	56.1	21										15,527	11			2	4	5			1	87			
88	138.8	120				54.9	30										20,848	23	188				2				88			
90								LUMP	8904																			90		
94										1918	0.232	0.266	450	LUMP	LUMP													94		
118																		15,267	189									118		
119	136					26.7											5,528	38										119		
125			82	103.0													12,003	101										125		
126				323.5													2,104											126		
131		134				26.4											8,344	133										131		
132																	13,956	129										132		
139			76	244.0													9,566	189										139		
140																	8,500	17										140		
147																	1264											147		
150																	1443											150		
153										2350	0.035		1693	LUMP	LUMP											5533		153		
154																	6233											154		
155																												155		
156																	7000											156		
157																	7196											157		
157A																	4020											157A		
162																	22,720											162		
166																	8923											166		
170																	5003											170		
171					173.4												14,357	80										171		
172																	6784	141										172		
180																	2	2653										180		
185																	11591						1	LUMP				185		
186																	9715											186		
187																	9926											187		
TOTAL THIS SHEET																														
	943.4	390	158	670.5	575.2	403.0	51	LUMP	8904	4.268	0.035	0.232	0.266	2143	LUMP	LUMP	LUMP	2	259,380	1075	188				2	4	9	LUMP	5533	1



CHANNEL CURVE DATA
 PI STA 1+95.94 LT.
 $\Delta = 15^\circ - 34' - 15''$
 $T = 34.18'$
 $R = 250'$
 $L = 67.94'$
 P.C. STA 1+61.76 LT.
 P.T. STA 2+29.70 LT.

HW NO.3 HEADWALL TYPE "B"
 FOR
106" x 68" ELLIPTICAL PIPE
 $\theta = 45^\circ - 00'$, $H = 7' - 7''$, $a = 4' - 6''$, $b = 1' - 7''$, $c = 5' - 2''$
 $L_1 = 16' - 0''$, $L_2 = 14' - 10''$, $h_1 = 4' - 3''$, $h_2 = 4' - 8''$
 NOTE: FOR DETAILS NOT SHOWN SEE
 STANDARD CONSTRUCTION
 DRAWING HW NO.3

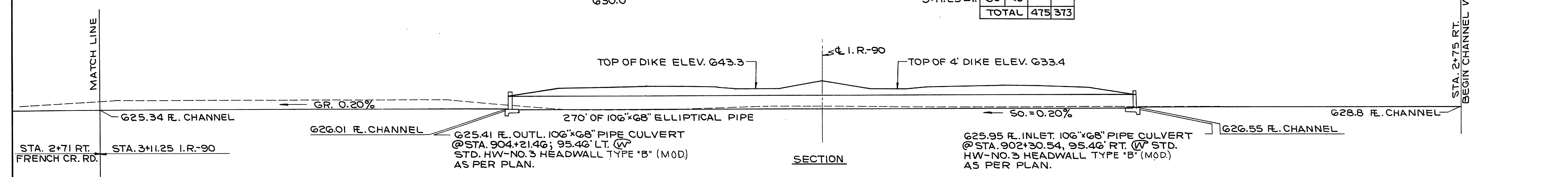
CHANNEL EARTHWORK

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
2+75 RT.	0	0	21	9
2+25 RT.	22	9	84	40
1+35 RT.	28	15	186	181
1+35 LT.	59	50	100	92
2+29 LT.	48	54	84	51
2+79 LT.	60	45		
3+11.25 LT.	80	40		
TOTAL			475	373

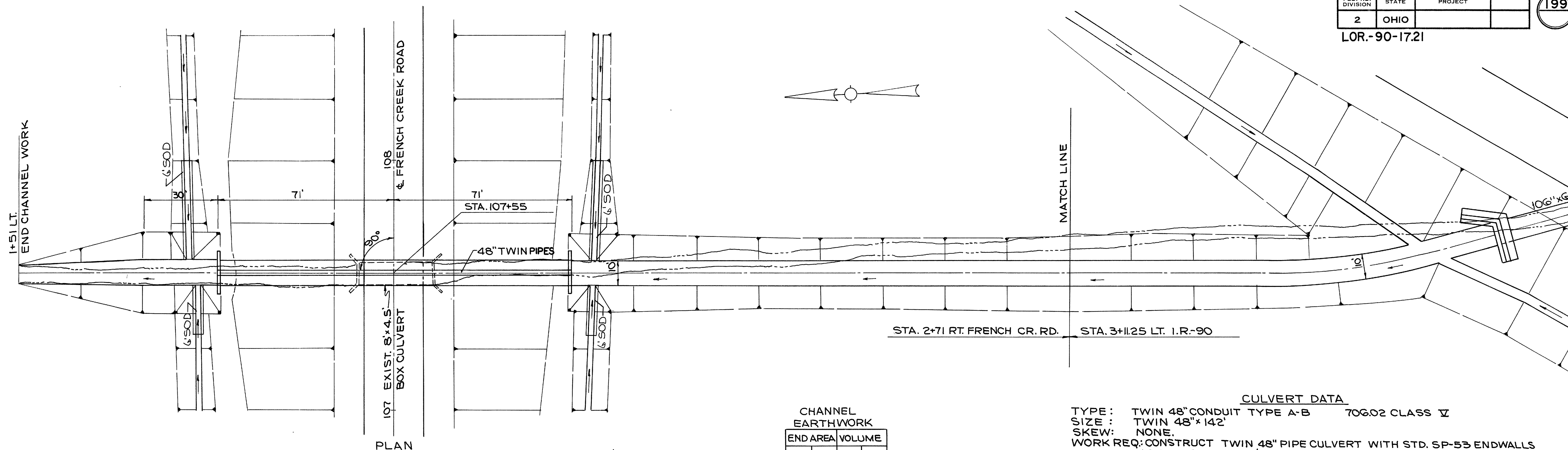
CULVERT DATA
 TYPE: 106"x68" CONDUIT TYPE A-B 706.04 CL. HE II
 SIZE: 106"x68"x270'
 SKEW: 45° L.F.
 WORK REQ: CONSTRUCT 106"x68" ELLIPTICAL PIPE CULVERT WITH STD. HW-NO.3 HEADWALL TYPE "B" (MOD) RT. & LT. AS PER PLAN. THIS PIPE BURIED FOR FUTURE DITCH CLEAN OUT.

ESTIMATED QUANTITIES

603:	106"x68" CONDUIT TYPE A-B	706.04 CL. HE II	270 LIN. FT.
602:	CONCRETE MASONRY-HEADWALLS.		42.8 CU. YDS.
203:	EMBANKMENT		373 CU. YDS.
203:	CHANNEL EXCAVATION		475 CU. YDS.
660:	SODDING HEADWALLS		11 SQ. YDS.



106" x 68" PIPE CULVERT
 CULVERT STA 903+26 I.R.-90
 AREA = 425 ACS
 $Q_{50} = 194$ C.F.S.
 STRUC. NO. LOR-90-1741



PLAN

CULVERT DATA

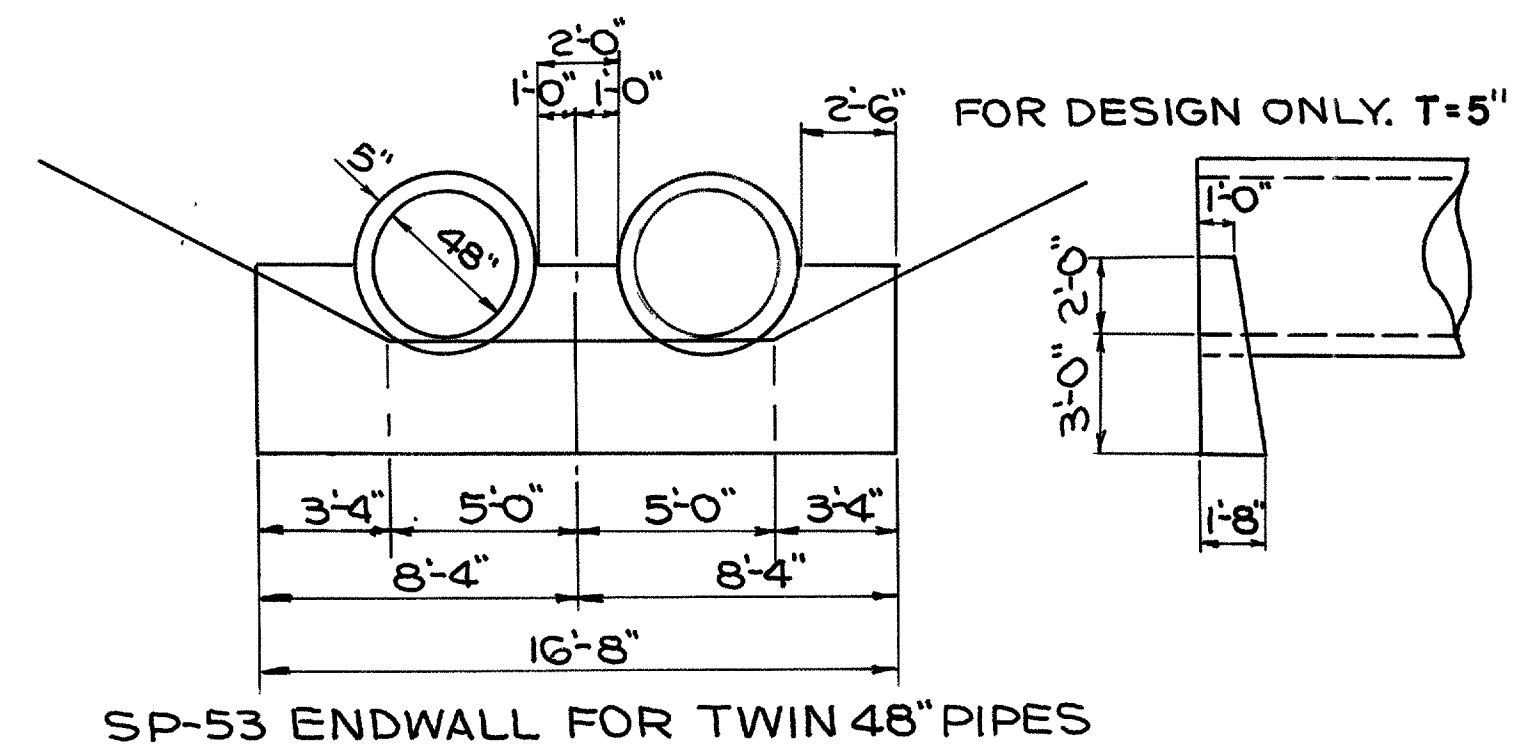
TYPE: TWIN 48" CONDUIT TYPE A-B 706.02 CLASS V
 SIZE: TWIN 48"x142"
 SKEW: NONE
 WORK REQ: CONSTRUCT TWIN 48" PIPE CULVERT WITH STD. SP-53 ENDWALLS AS PER PLAN. RT. & LT. THIS PIPE BURIED FOR FUTURE DITCH CLEANOUT.

ESTIMATED QUANTITIES

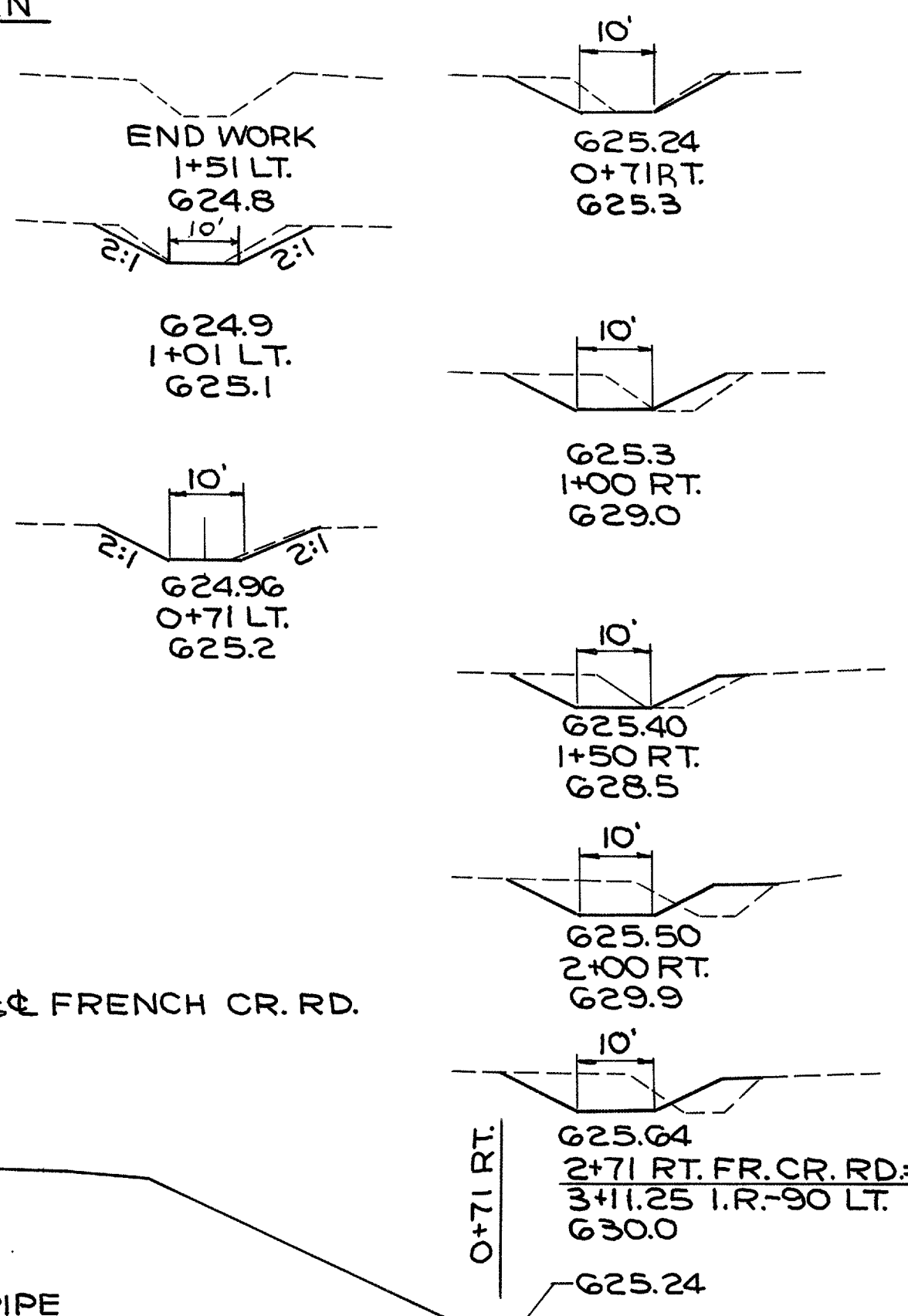
603:	48" CONDUIT TYPE A-B	706.02 CLASS V	284	LIN. FT.
602:	CONCRETE MASONRY		6.7	CU. YDS.
203:	EMBANKMENT		211	CU. YDS.
203:	CHANNEL EXCAVATION		456	CU. YDS.
660:	SODDING HEADWALLS		7	SQ. YDS.

CHANNEL EARTHWORK

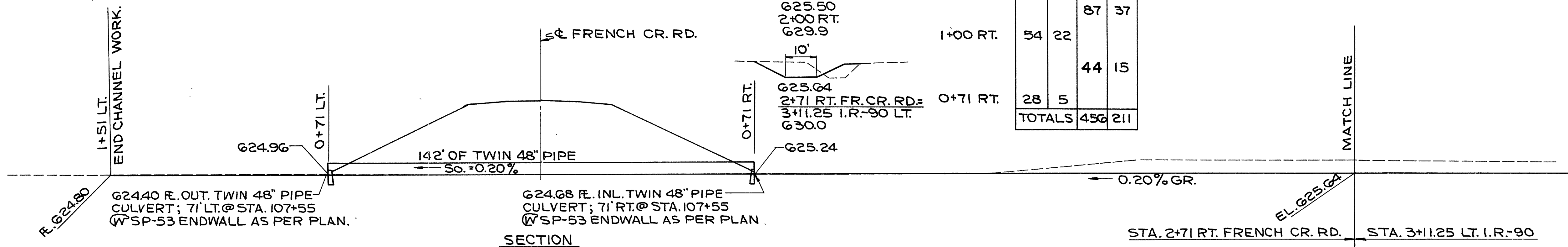
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
1+51 LT.	0	0	22	0
1+01 LT.	24	0	16	0
0+71 LT.	4	0		
2+71 RT.	80	40	190	105
2+00 RT.	64	40	97	54
1+50 RT.	40	18	87	37
1+00 RT.	54	22	44	15
0+71 RT.	28	5		
TOTALS	456	211		



SP-53 ENDWALL FOR TWIN 48" PIPES

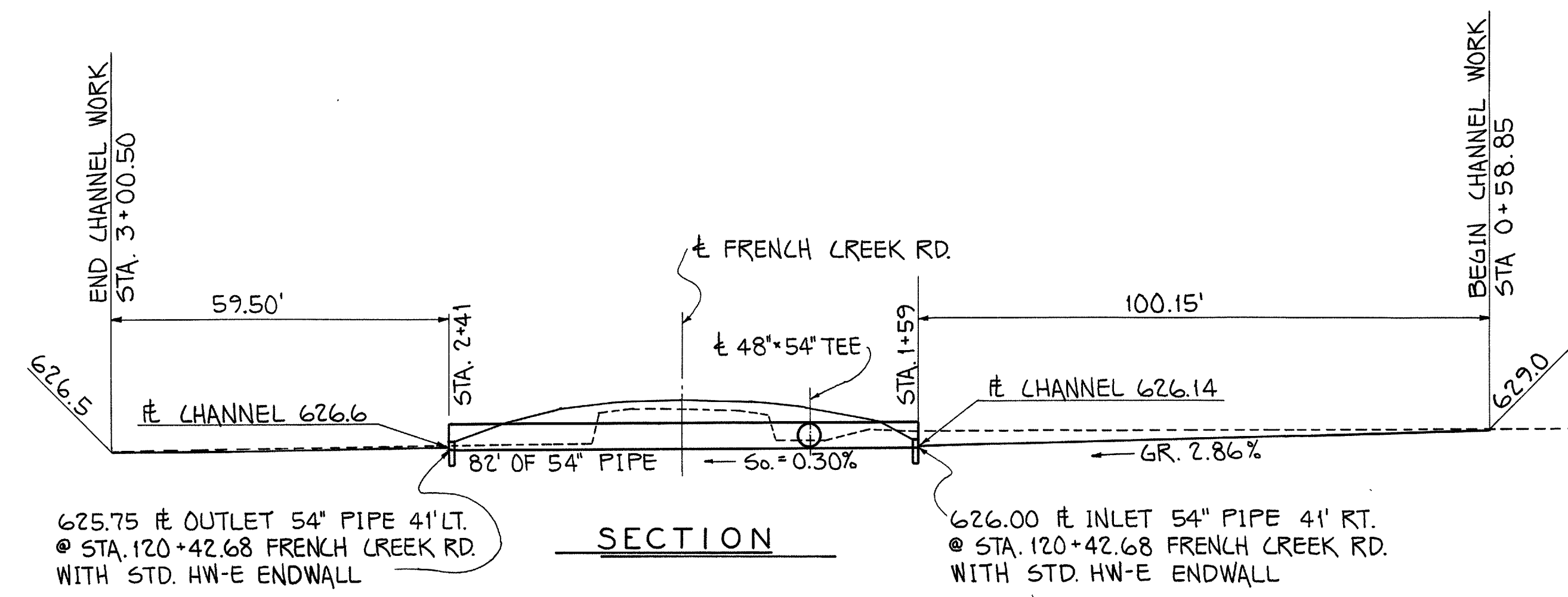
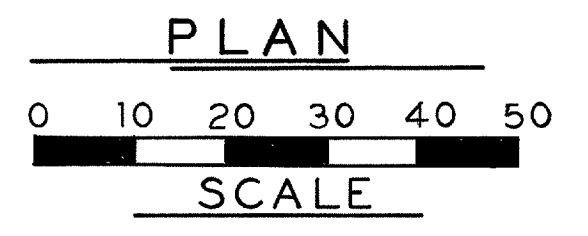
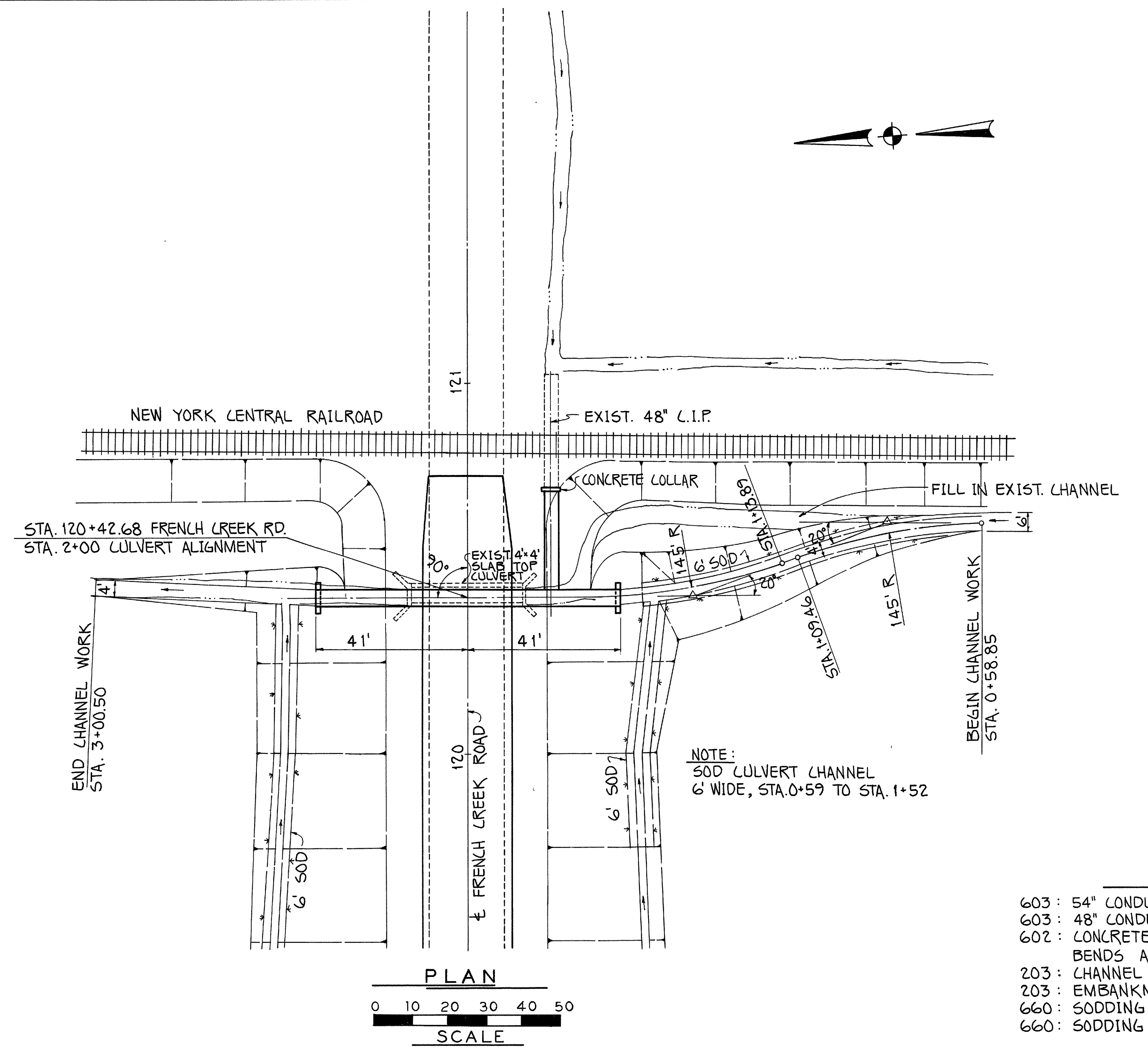
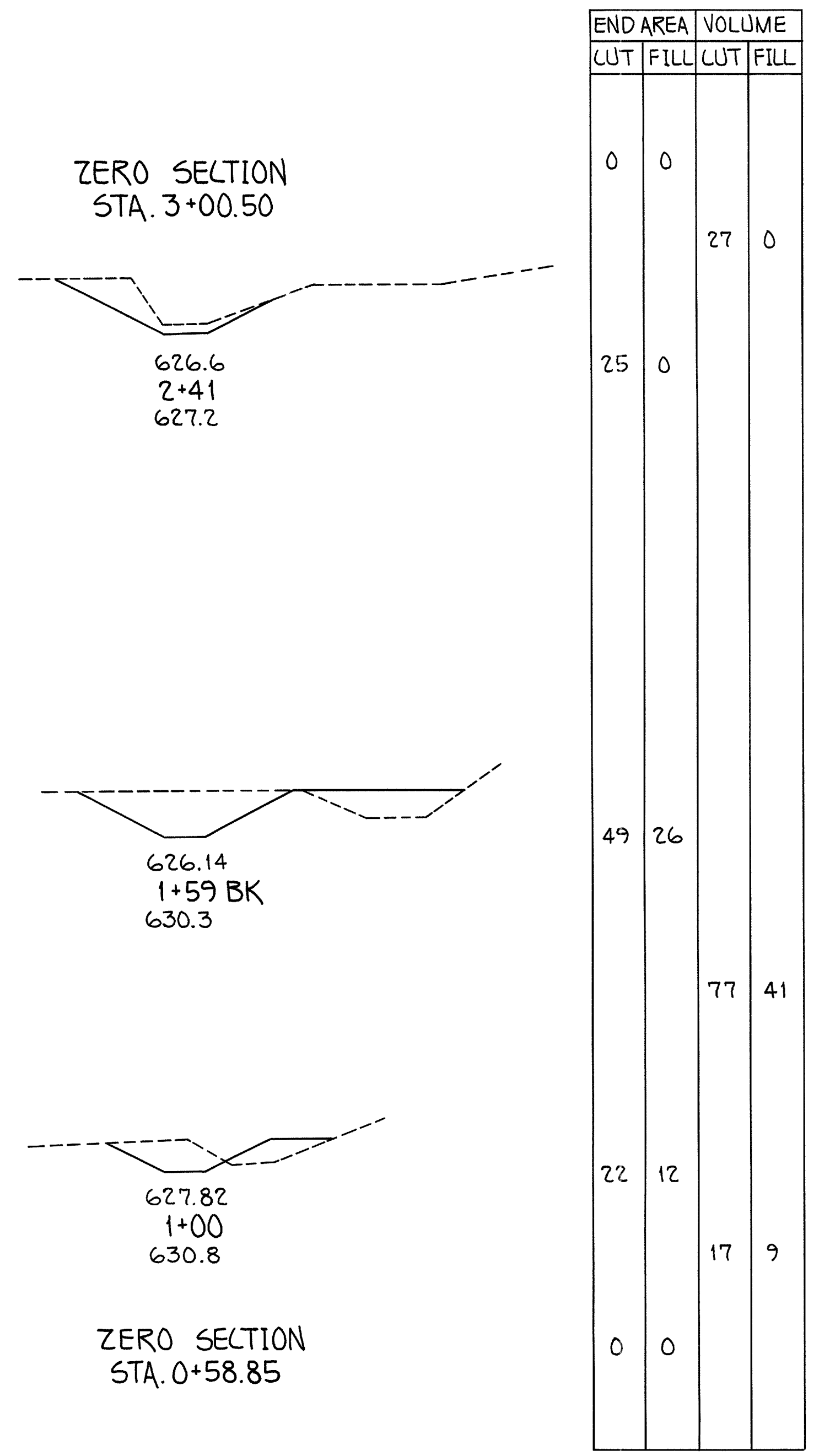


SECTION



STA. 2+71 RT. FRENCH CR. RD. STA. 3+11.25 LT. I.R.-90

**FRENCH CREEK ROAD
 CULVERT STA. 107+55
 AREA = 466 ACS
 Q10 = 143 C.F.S.
 TWIN 48" PIPES**



ESTIMATED QUANTITIES

603 : 54" CONDUIT TYPE A-B	706.02	82	LIN. FT.
603 : 48" CONDUIT TYPE A-B	706.02	30	LIN. FT.
602 : CONCRETE MASONRY		1.92	CU. YDS.
BENDS AND BRANCHES	48" x 54" TEE	1	EACH
203 : CHANNEL EXCAVATION		121	CU. YDS.
203 : EMBANKMENT		50	CU. YDS.
660 : SODDING (ENDWALLS)		5	SQ. YDS.
660 : SODDING (CULVERT CHANNEL)		65	SQ. YDS.

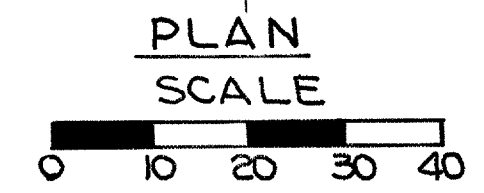
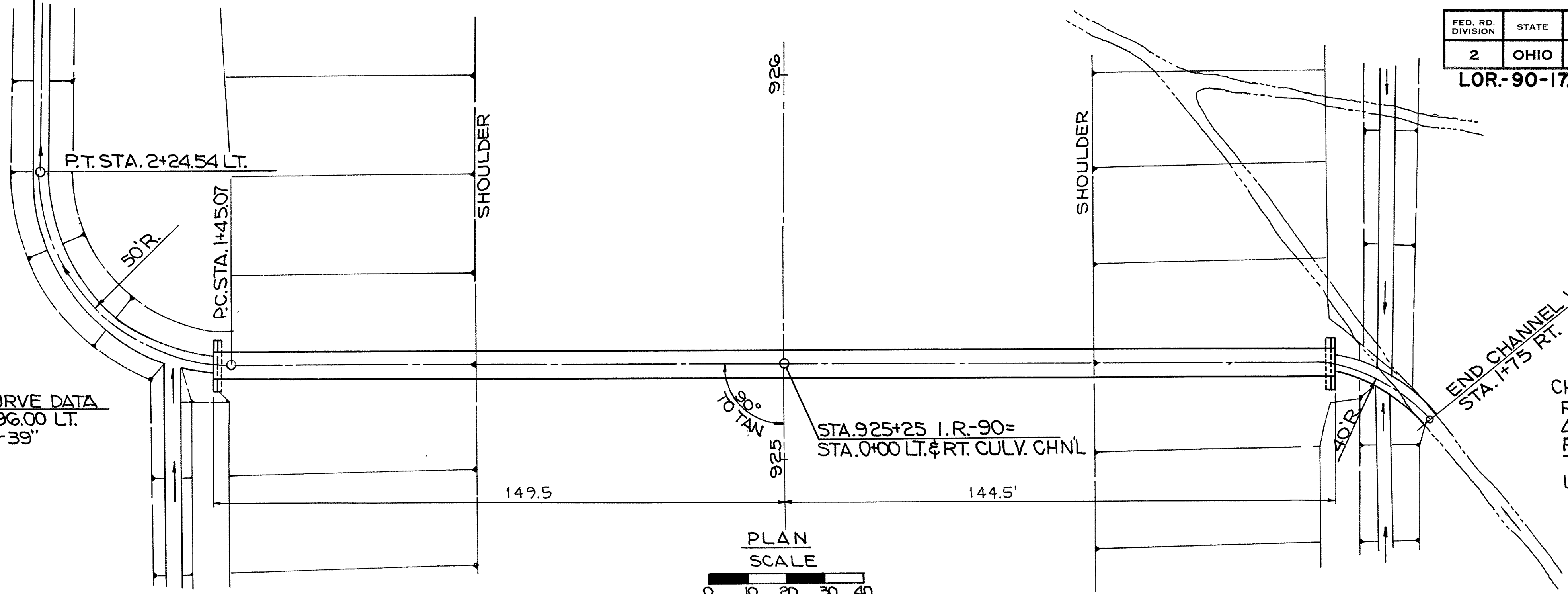
48" & 54" PIPE CULVERTS
 FRENCH CREEK ROAD
 CULVERT STA. 120+42.68
 AREA 157 ACS.
 Q₁₀ 69 CFS.

LOR-90-17.21

CHANNEL SECTIONS

CHANNEL CURVE DATA
P.I. STA. 1+96.00 LT.
 $\Delta = 91^{\circ}03'39''$
 $R = 50'$
 $T = 50.93'$
 $L = 79.47'$

CHANNEL CURVE DATA
P.I. STA. 1+58 RT.
 $\Delta = 51^{\circ}30'$
 $R = 40'$
 $T = 19.29'$
 $L = 35.95'$



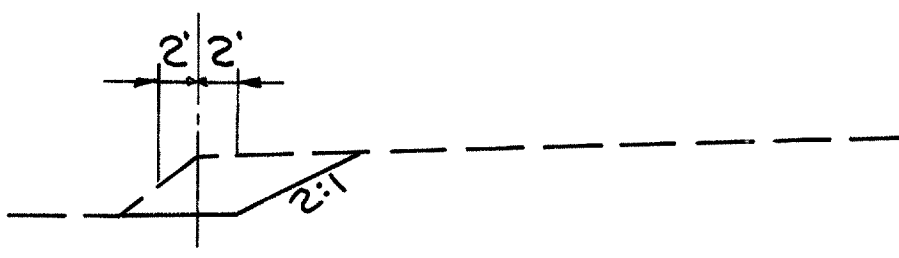
ESTIMATED QUANTITIES

- G03: 84" CONDUIT TYPE A-B 707.03(10-8) GAGE 294 LIN. FT.
- G02: CONCRETE MASONRY CLASS "E" 92 CU. YDS
- Z03: CHANNEL EXCAVATION 18 CU. YDS
- G60: SODDING (18" STRIP PLACED AROUND HDWL.) 9 SQ. YDS

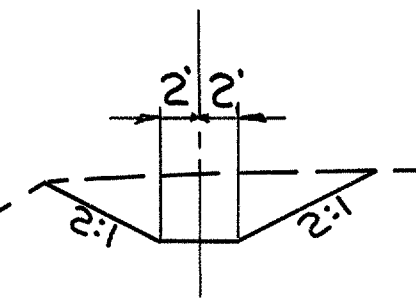
END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	10	0
24	0	8	0
31	0		
TOTAL		18	0

ZERO SECTION

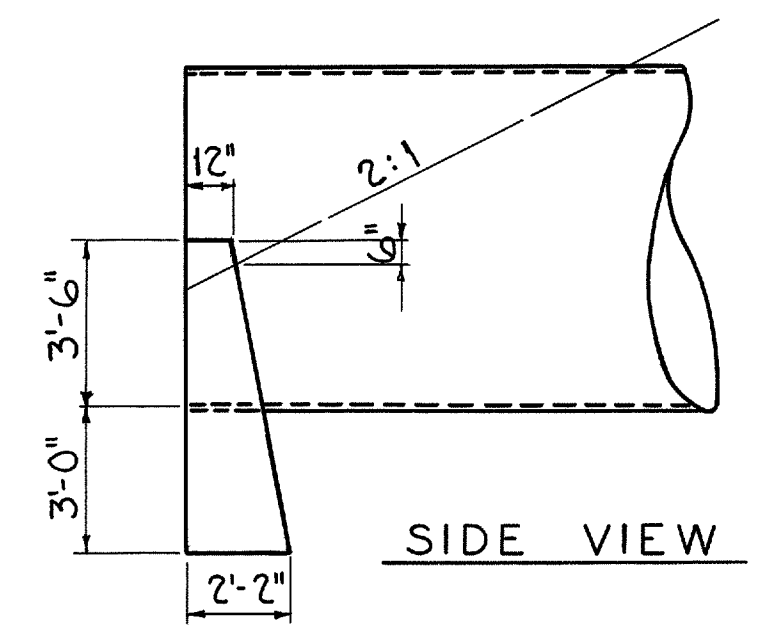
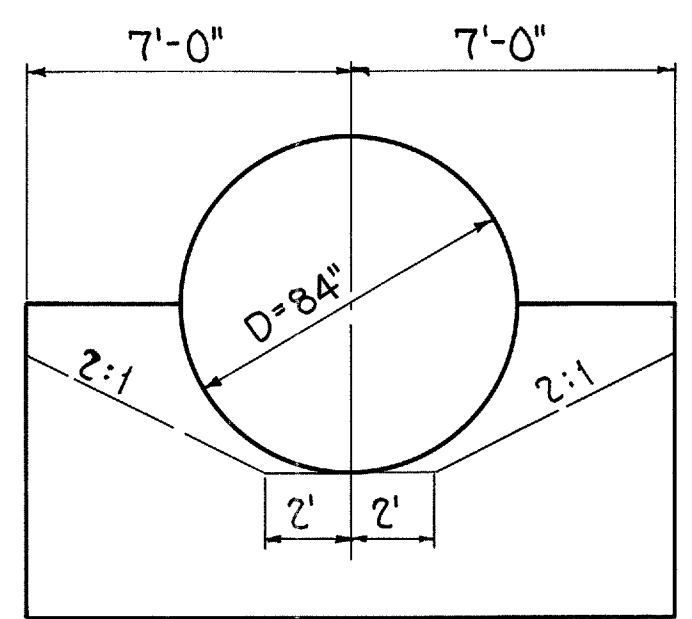
STA 1+75 RT. G26.0
STA 1+52 RT. G26.0
STA 1+44.5 RT. G29.4



G25.98
STA 1+52 RT.
G29.0

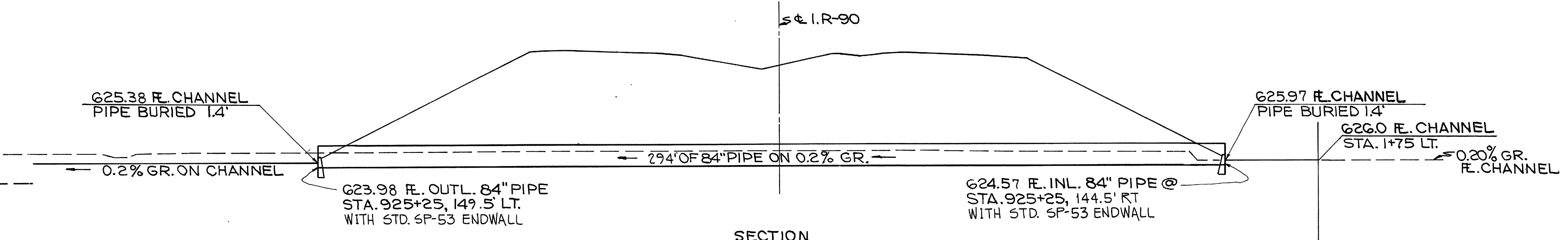


G25.97
STA 1+44.5 RT.
G29.4



SP-53 ENDWALL FOR 84" PIPE

SECTION



84" PIPE CULVERT
STA. 925+25 I.R.-90
AREA 170 ACS
Q50 108 CFS
STRUC. NO. LOR-90-1783

CHANNEL SECTIONS

ZERO SECTION

G244
STA 5+98.61 LT.

G244
STA 5+98.61 LT.
G244 STA 5+75 LT.

G24.57
STA 5+75 LT.
G24.53 STA 5+36.65 LT.

G24.57
STA 5+55 LT.
G29.0 STA 4+00 LT.

G24.61
STA 5+36.65 LT.
G27.2 STA 2+50 LT.

G24.70
STA 4+86.65 LT.
G28.0 STA 1+49.5 LT.

G24.87
STA 4+00 LT.
G28.4

G25.07
STA 3+00 LT.
G28.4

G25.17
STA 2+50 LT.
G28.4

G25.27
STA 2+00 LT.
G28.4

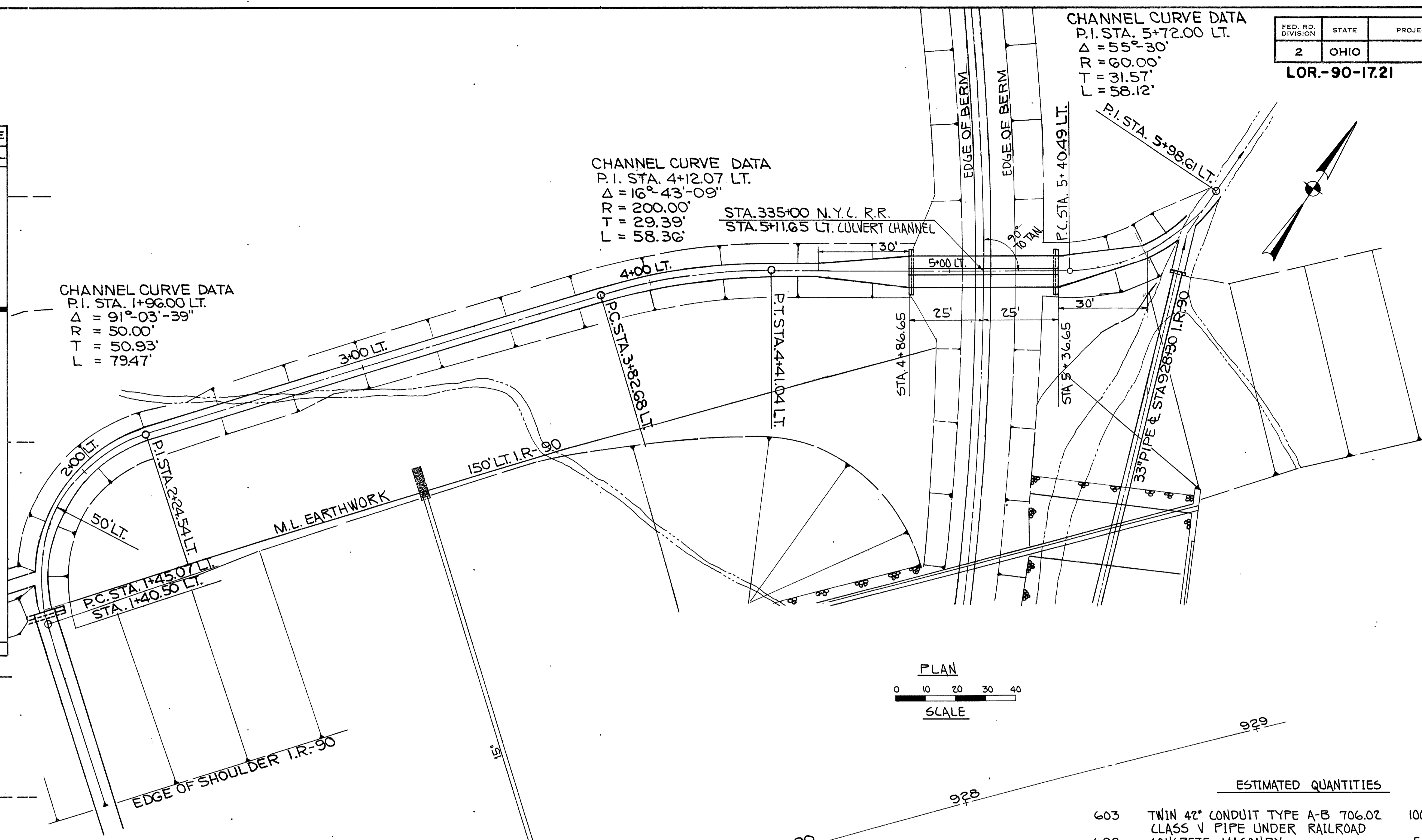
G25.38
STA 1+49.5 LT.
G28.5

END AREA	VOLUME	
	CUT	FILL
0	0	16
36	0	15
58	0	54
40	0	0
53	0	52
4	0	88
44	0	135
29	0	54
29	0	55
30	0	75
50	0	0
TOTAL	544	0

CHANNEL CURVE DATA
P.I. STA. 1+96.00 LT.
 $\Delta = 91^{\circ}03'39''$
R = 50.00'
T = 50.93'
L = 79.47'

CHANNEL CURVE DATA
P.I. STA. 4+2.07 LT.
 $\Delta = 16^{\circ}43'09''$
R = 200.00'
T = 29.39'
L = 58.36'

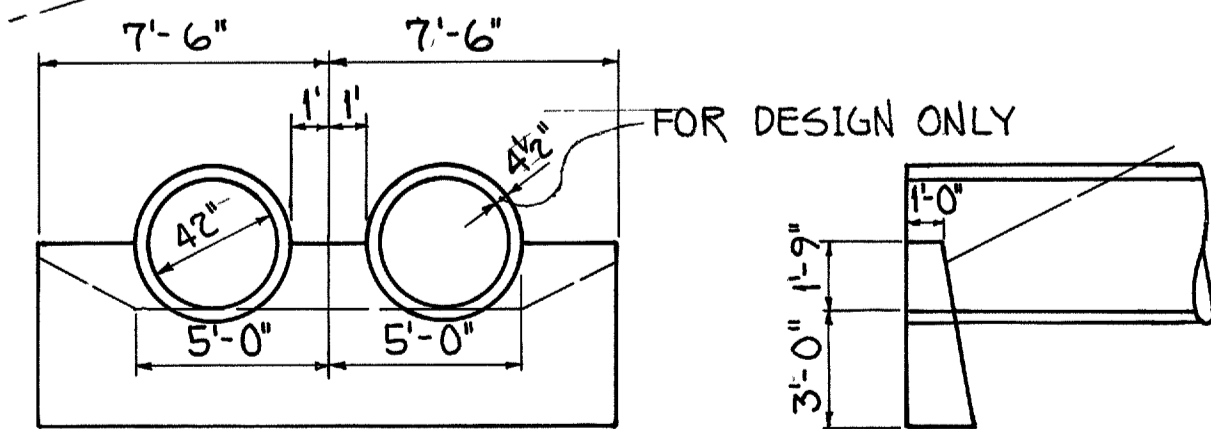
CHANNEL CURVE DATA
P.I. STA. 5+72.00 LT.
 $\Delta = 55^{\circ}30'$
R = 60.00'
T = 31.57'
L = 58.12'



ESTIMATED QUANTITIES

603	TWIN 42" CONDUIT TYPE A-B 706.02 CLASS V PIPE UNDER RAILROAD	100 LIN. FT.
602	CONCRETE MASONRY	57 CU. YDS.
203	CHANNEL EXCAVATION	544 CU. YDS.

SECTION
624.71 @ CHANNEL
624.61 @ CHANNEL
50" OF TWIN 42" PIPES
S_o = 0.2%
624.01 @ INLT. TWIN 42" PIPE CULVERT STA. 335+00 N.Y.C. R.R. 25' LT WITH STD. SP-53 ENDWALL AS PER PLAN
623.91 @ OUT'L TWIN 42" PIPE CULVERT STA. 335+00 N.Y.C. R.R., 25' RT. WITH STD. SP-53 ENDWALL AS PER PLAN



SP-53 ENDWALL FOR TWIN 42" PIPES
0 1 2 3 4 5 6 7 8 9 10
SCALE

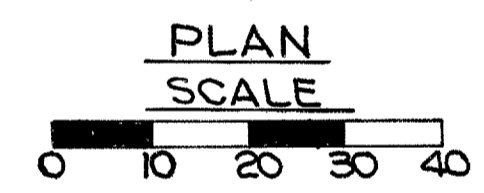
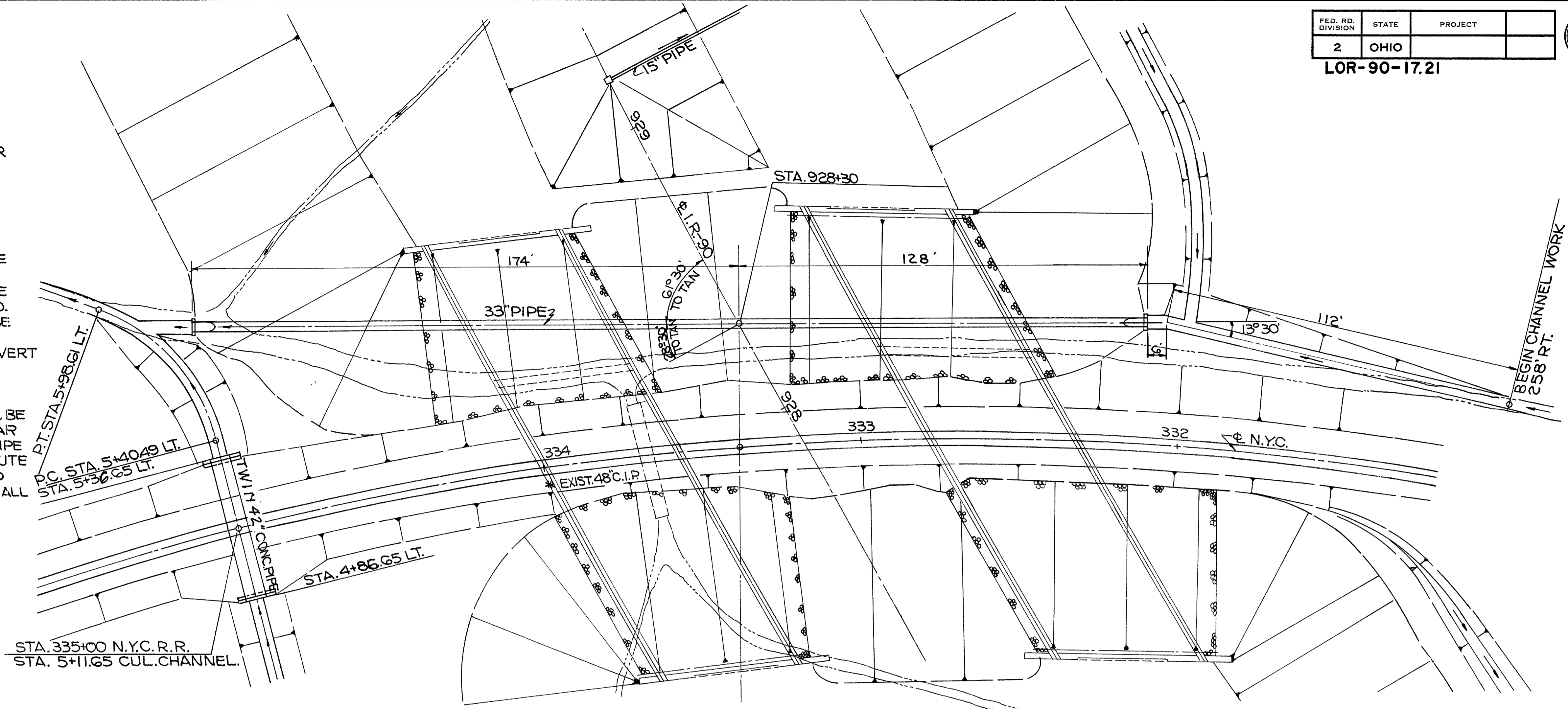
TWIN 42" PIPE CULVERTS
STA. 335+00 N.Y.C. R.R.

AREA	180 ACS
Q50	110 CFS
Q25	91 CFS

*NOTE: THE EXISTING 48" CIP AT STA 336+63 N.Y.C. RAILROAD SHALL BE FILLED WITH SAND OR OTHER GRANULAR MATERIAL. BULKHEADS SHALL BE LOCATED AT BOTH ENDS OF THE EXISTING 48" CIP. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE OR PLACED BY SOME OTHER MEANS APPROVED BY THE ENGINEER, SO THAT AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CULVERT FOR ITS ENTIRE LENGTH SHALL BE FILLED. THE FOOTAGE OF FILLED AND PLUGGED CULVERT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET (MEASURED ALONG THE CENTERLINE OF THE CULVERT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

THE FOOTAGE MEASURED AS PROVIDED ABOVE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID PER LINEAR FOOT FOR ITEM SPECIAL, FILL AND PLUG EXISTING PIPE CULVERT, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING AND PLACING ALL THE NECESSARY MATERIALS AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

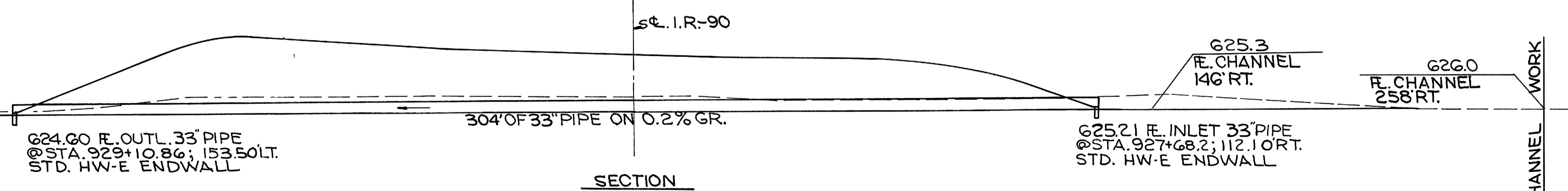


ESTIMATED QUANTITIES

603 - 33' CONDUIT TYPE A-B 706.02 CLASS IV	302 LIN. FT.
602 - CONCRETE MASONRY	1.1 CU. YDS.
660 - SODDING	5 SQ. YDS.
203 - EXCAVATION (CHANNEL)	37 CU. YDS.
SPECIAL-FILL & PLUG EXIST. PIPE CULVERT	37 LIN. FT.

CHANNEL SECTIONS

SECTION	STA	END AREA		VOLUME	
		CUT	FILL	CUT	FILL
ZERO SECTION	STA 2+58 RT.	0	0		
	626.0			10	0
	STA 1+46 RT.	42	0		
	626.0				
	625.3			27	0
	STA 1+28 RT.	48	0		
	629.0				
TOTAL				37	0



33" PIPE CULVERT
 STA. 928+30 I.R.-90
 AREA 36 ACS
 Q50 37 CFS
 STRUC. LOR-90-1789

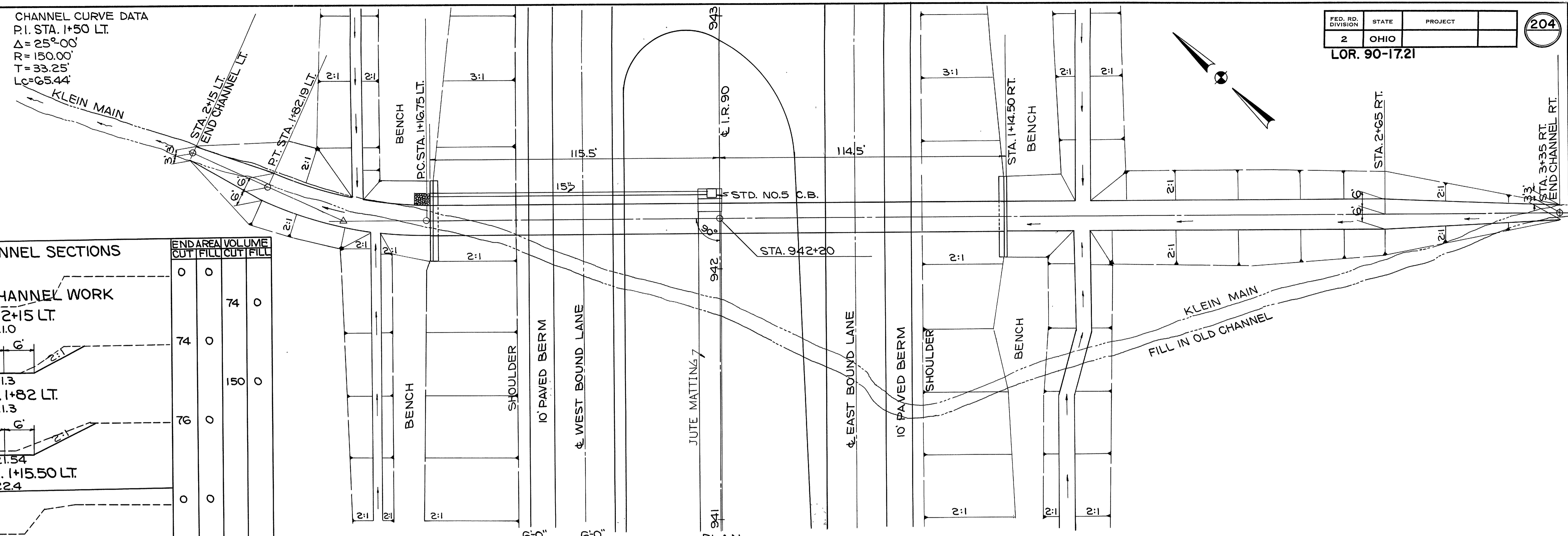
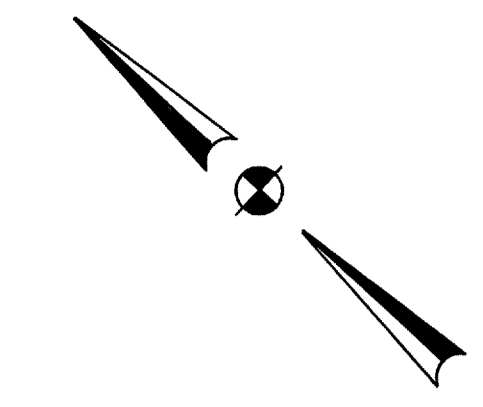
MICRO
APR 20 1978
REVISION

CHANNEL CURVE DATA
P.I. STA. 1+50 LT.
 $\Delta = 25^\circ 00'$
 $R = 150.00'$
 $T = 33.25'$
 $Lc = 65.44'$

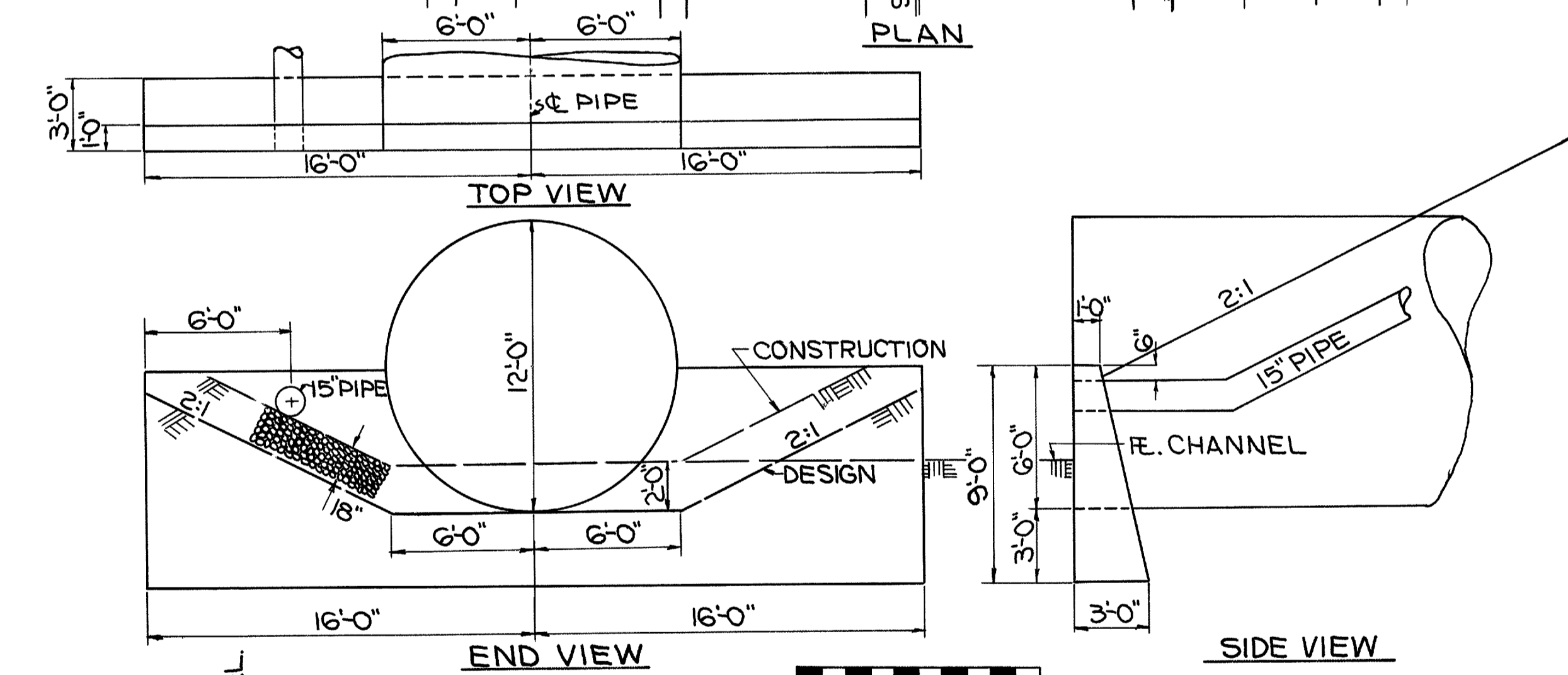
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

204

LOR. 90-17.21



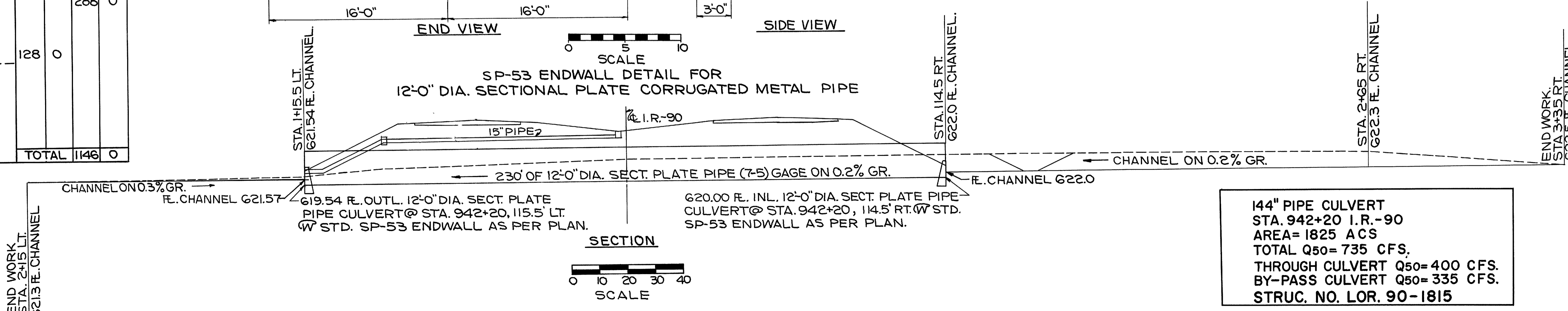
CHANNEL SECTIONS	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
END CHANNEL WORK STA. 2+15 LT. 621.0	0	0	74	0
621.3 STA. 1+82 LT. 621.3	74	0	150	0
621.54 STA. 1+15.50 LT. 622.4	76	0	0	0
END CHANNEL WORK STA. 3+35 RT. 622.5	0	0	104	0
622.30 STA. 2+65 RT. 628.0	104	0	264	0
622.20 STA. 2+15 RT. 628.70	160	0	288	0
622.00 STA. 1+14.50 RT. 628.40	128	0	0	0
TOTAL	1146	0	0	0



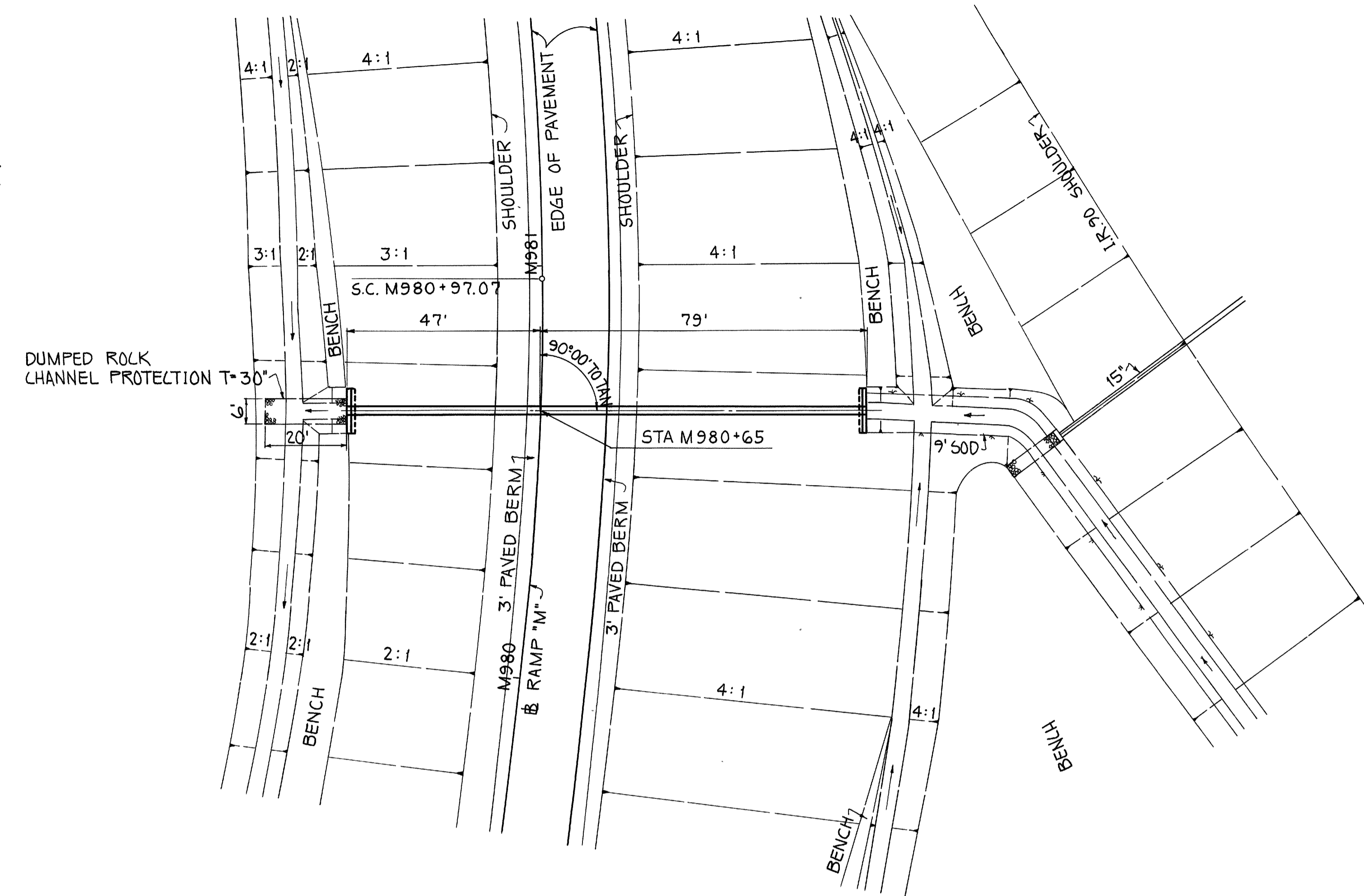
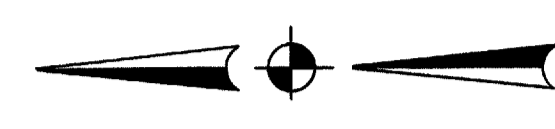
SP-53 ENDWALL DETAIL FOR 12" DIA. SECTIONAL PLATE CORRUGATED METAL PIPE

ESTIMATED QUANTITIES

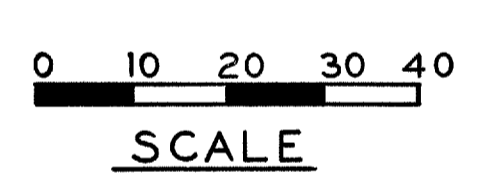
603:	144" CONDUIT TYPE A-B 707.03 (7-5) GAGE	230 LIN. FT.
602:	CONCRETE MASONRY	35.25 CU. YDS.
203:	CHANNEL EXCAVATION	1146 CU. YDS.
660:	SODDING	11 SQ. YDS.
203:	EMBANKMENT (FILL IN OLD CHANNEL)	270 CU. YDS.
601:	DUMPED ROCK CHANNEL PROTECTION	2 CU. YDS.



144" PIPE CULVERT
STA. 942+20 I.R.-90
AREA= 1825 ACS
TOTAL Q50= 735 CFS.
THROUGH CULVERT Q50= 400 CFS.
BY-PASS CULVERT Q50= 335 CFS.
STRUC. NO. LOR. 90-1815

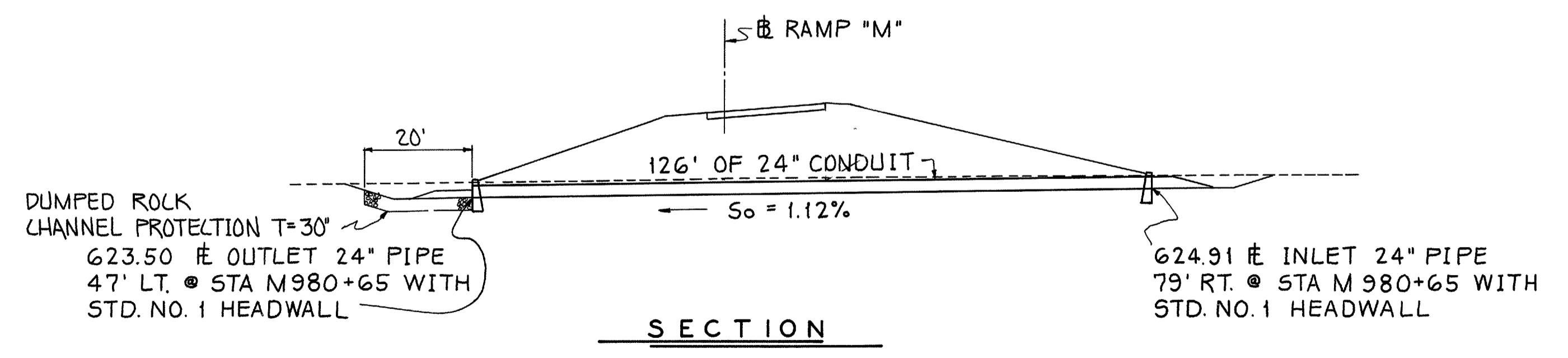


PLAN



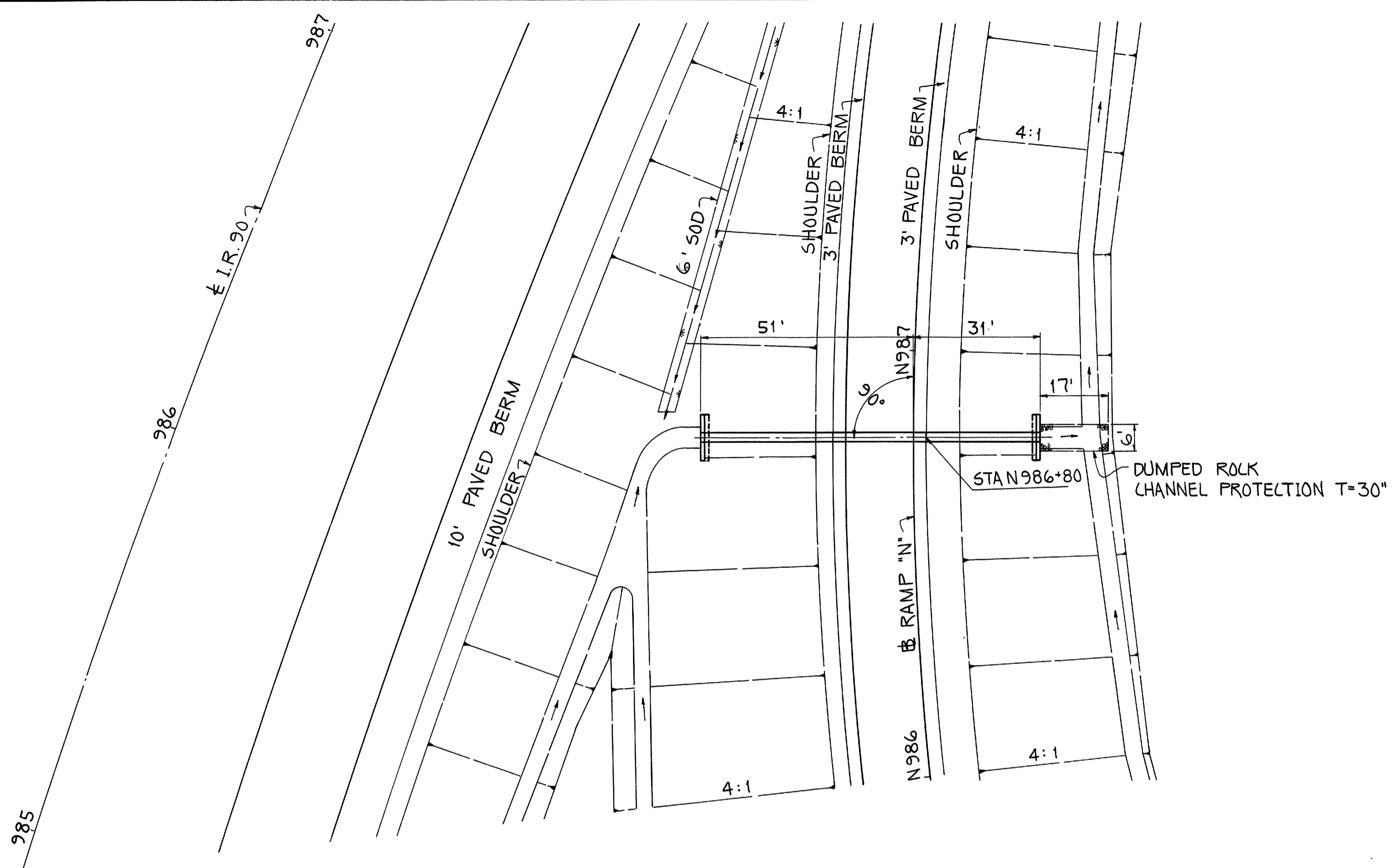
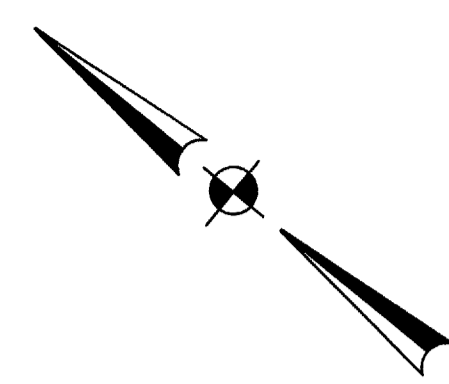
ESTIMATED QUANTITIES

603	24" CONDUIT TYPE A-B 706.02 CLASS IV	126	LIN. FT.
602	CONCRETE MASONRY	6.6	CU. YDS.
660	SODDING	4	SQ. YDS.
601	DUMPED ROCK CHANNEL PROTECTION	12	CU. YDS.

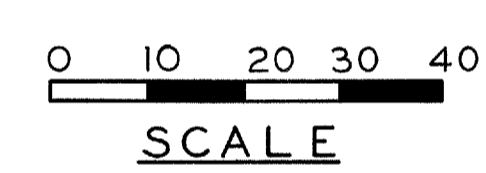


SECTION

24" PIPE CULVERT
RAMP "M"
CULVERT STAM980+65
AREA 7 ACS.
Q50 26 CFS.

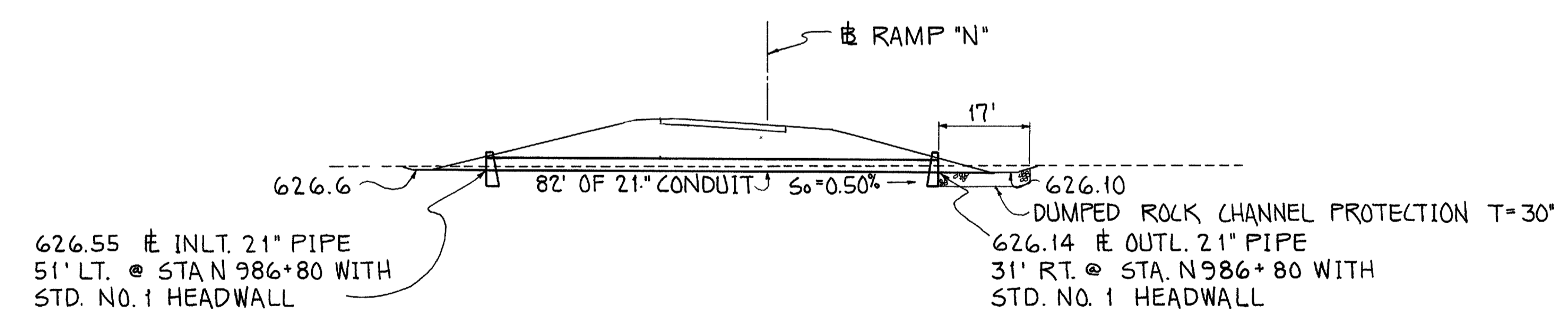


PLAN



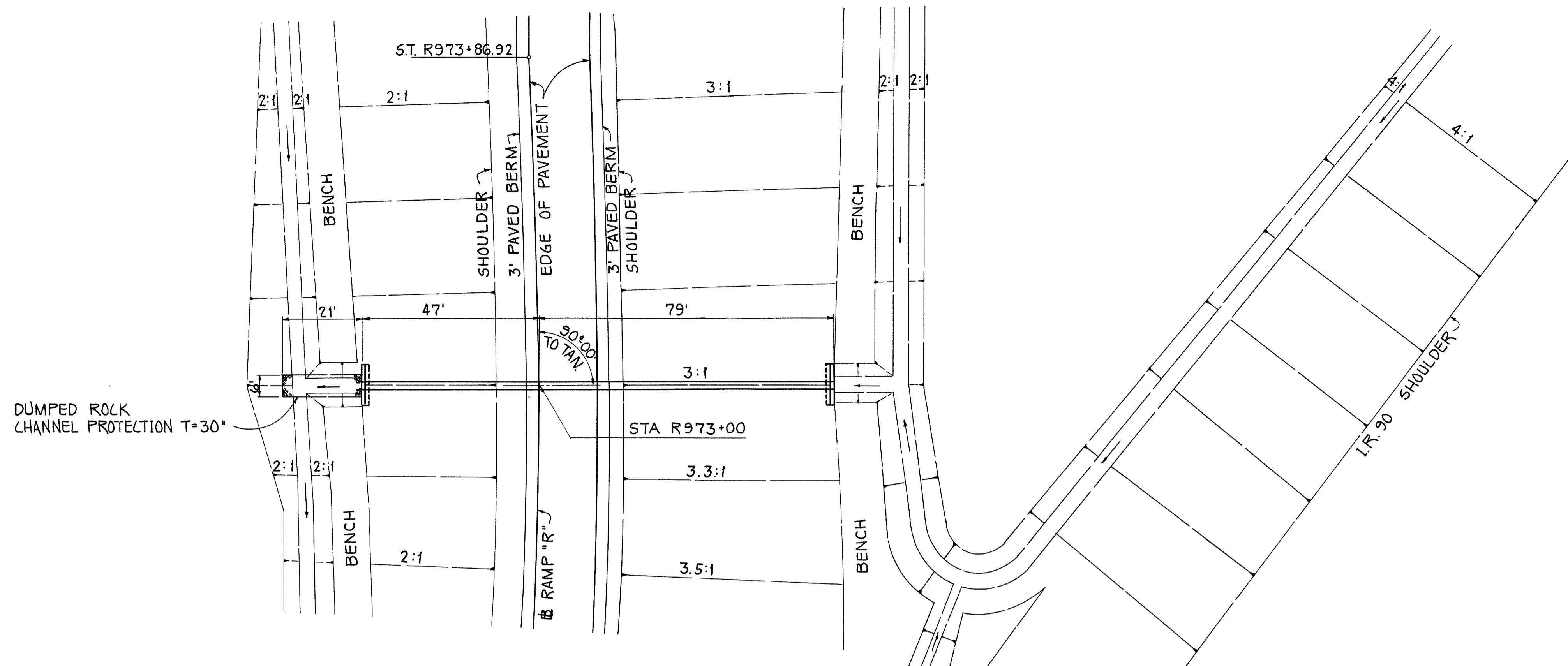
ESTIMATED QUANTITIES

603	21" CONDUIT TYPE A-B	82	LIN. FT.
	706.02 OR 706.08		
602	CONCRETE MASONRY	5.6	CU. YDS.
600	SODDING	4	SQ. YDS.
601	DUMPED ROCK CHANNEL PROTECTION	10	CU. YDS.

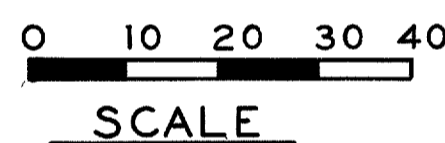


SECTION

21" PIPE CULVERT	
RAMP "N"	
CULVERT STA N986+80	
AREA	4.3 ACS.
Q ₅₀	17.8 CFS.



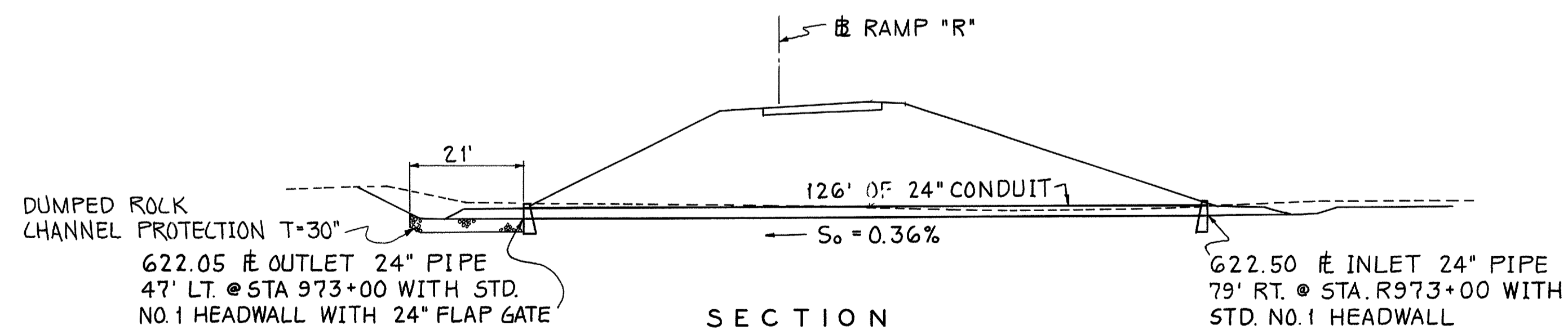
PLAN



NOTE:
FOR DETAILS OF 24" FLAP
GATE SEE SHEET NO.16

ESTIMATED QUANTITIES

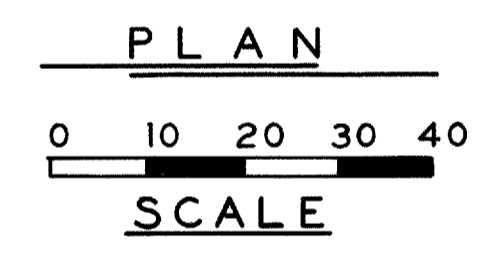
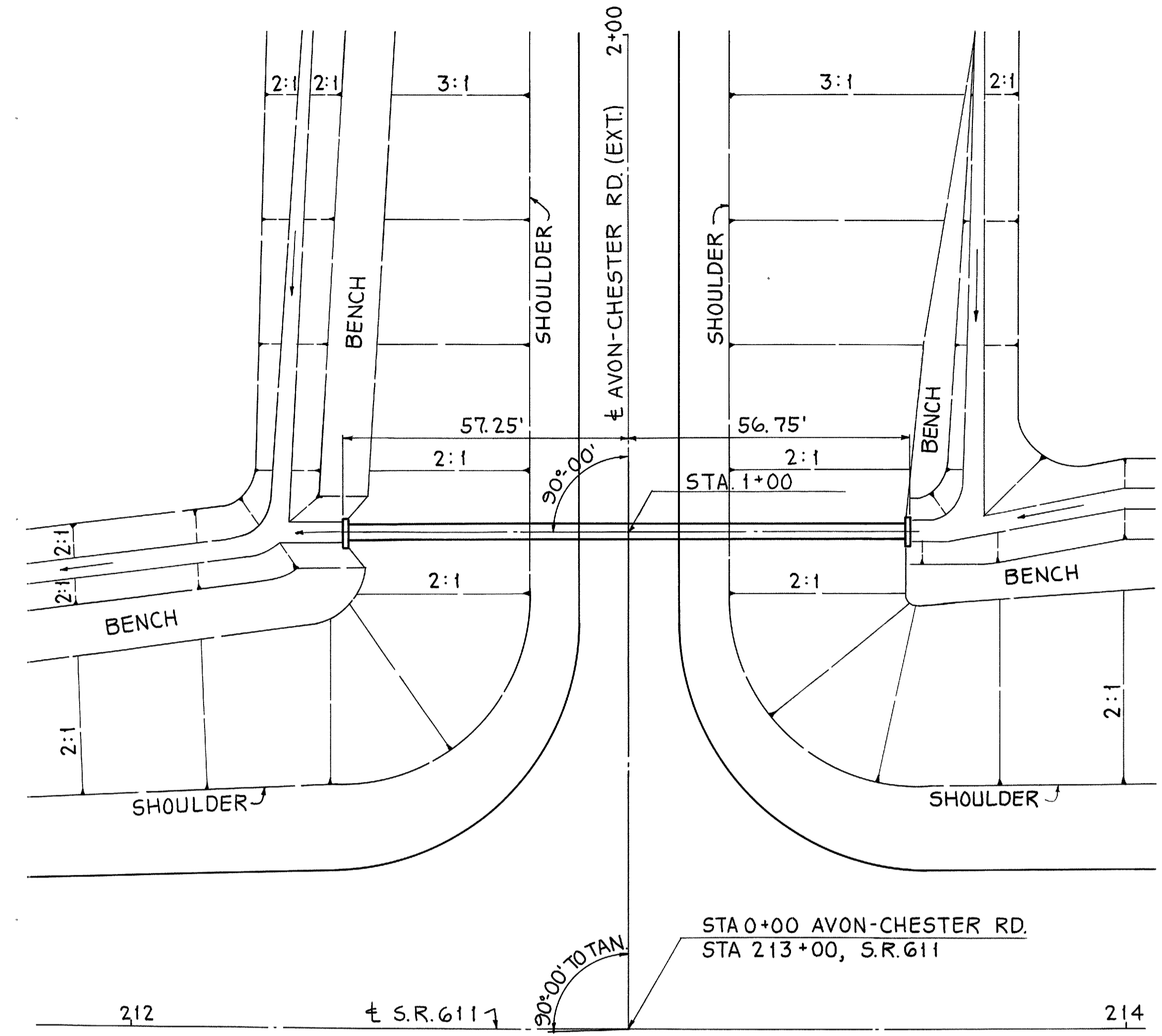
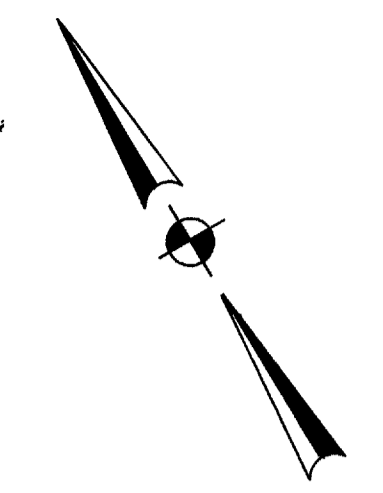
603	24" CONDUIT TYPE A-B	126 LIN. FT.
	706.02 CLASS V	
602	CONCRETE MASONRY	6.6 CU. YDS.
660	SODDING	4 SQ. YDS.
604	24" FLAP GATE, AS PER PLAN	1 EACH
601	DUMPED ROCK CHANNEL PROTECTION	12.0 CU. YDS.



SECTION

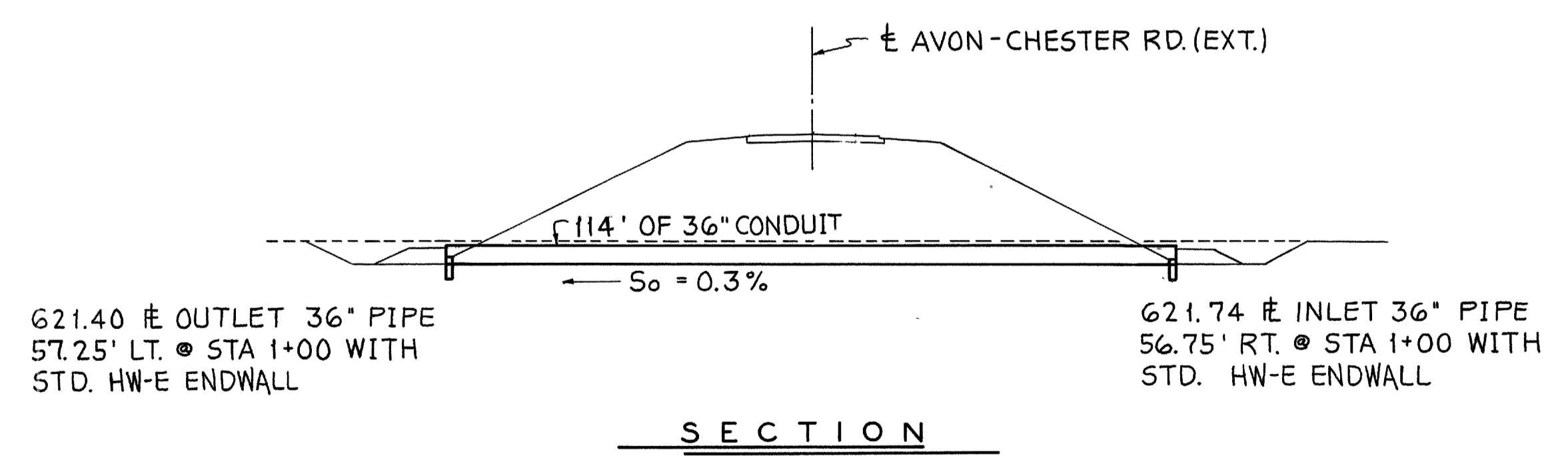
24" PIPE CULVERT	
RAMP "R"	
CULVERT STA R 973 + 00	
AREA	4.2 ACS.
Q ₅₀	17.1 CFS.

LOR - 90 - 17.21



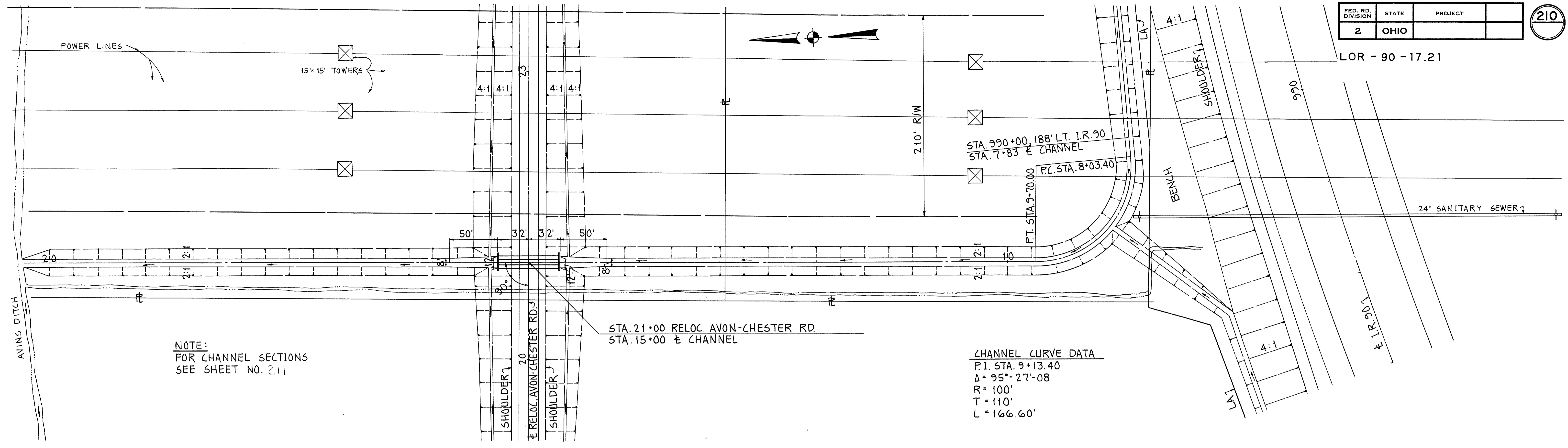
ESTIMATED QUANTITIES

603	36" CONDUIT TYPE A-B	114 LIN.FT.
	706.02 CLASS IV	
602	CONCRETE MASONRY	1.18 CU. YDS.
660	SODDING	2 SQ. YDS.



36" PIPE CULVERT	
AVON - CHESTER RD. EXTENSION	
CULVERT STA. 1+00	
AREA	32 ACS.
Q ₁₀	44 CFS.

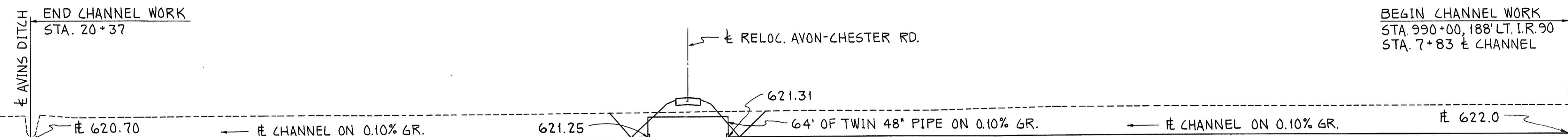
LOR - 90 - 17.21



NOTE:
FOR CHANNEL SECTIONS
SEE SHEET NO. 211

CHANNEL CURVE DATA
P.I. STA. 9+13.40
Δ = 95°-27'-08"
R = 100'
T = 110'
L = 166.60'

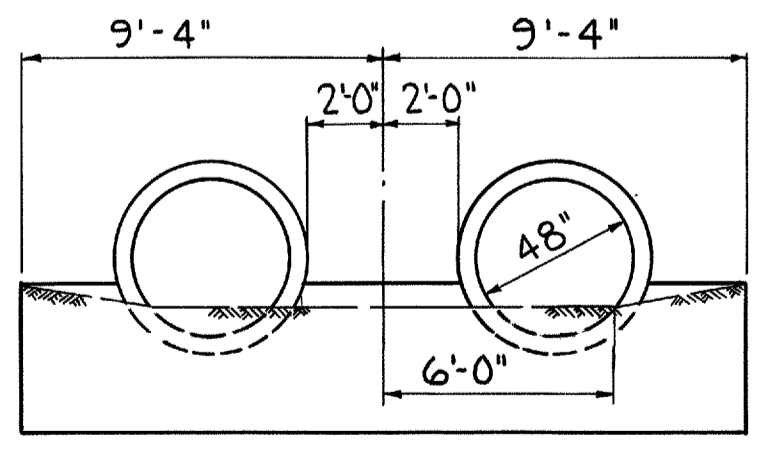
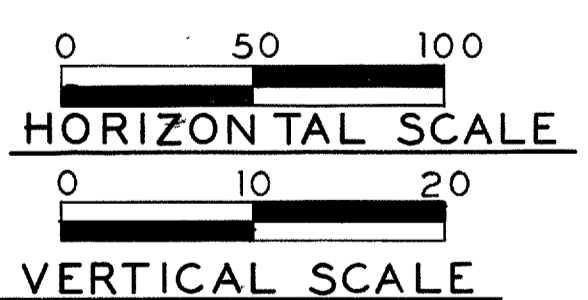
PLAN



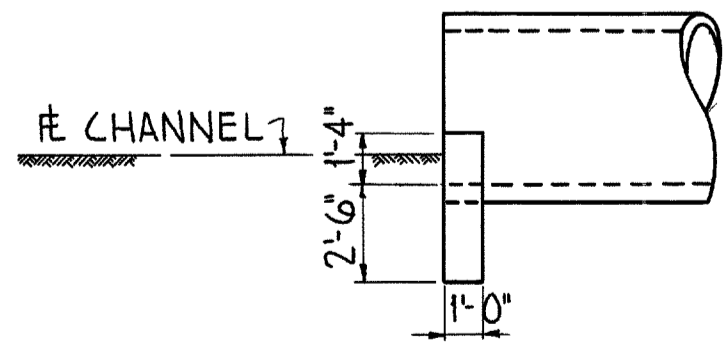
620.45 ± OUT'L. TWIN 48" PIPE CULVERTS @ STA. 21+00, 32' LT. WITH STD. HW-E ENDWALL (MODIFIED)

620.51 ± INLT. TWIN 48" PIPE CULVERTS @ STA. 21+00, 32' RT. WITH STD. HW-E ENDWALL (MODIFIED)

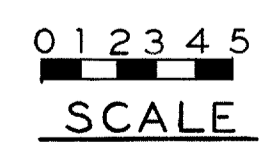
SECTION



END VIEW



SIDE VIEW



STANDARD HW-E ENDWALL (MODIFIED) FOR
TWIN 48" CONCRETE PIPES

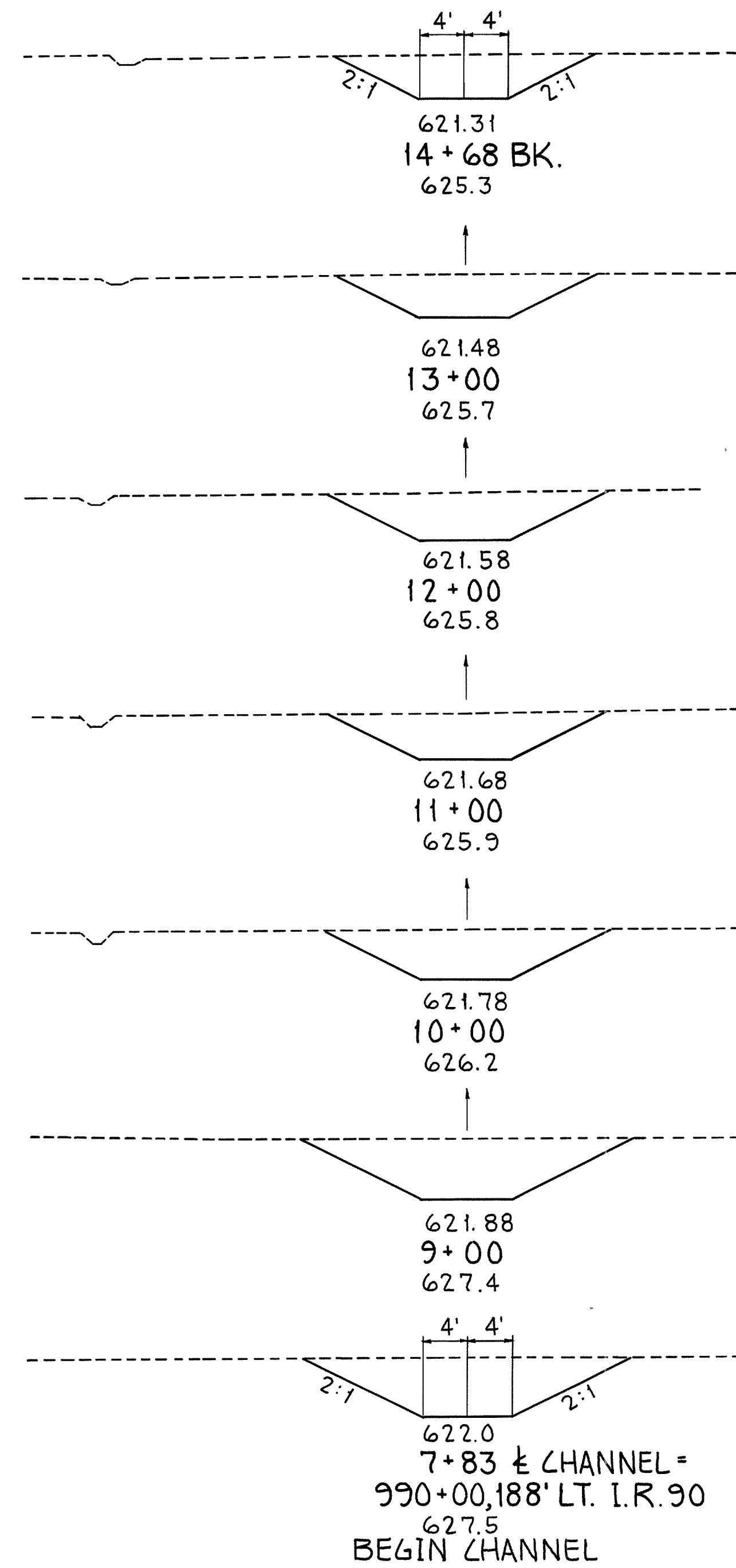
ESTIMATED QUANTITIES		
603	48" CONDUIT TYPE A-B	706.02
602	CONCRETE MASONRY	128 LIN. FT. 3.90 CU. YDS.
660	SODDING	7 SQ. YDS.
203	CHANNEL EXCAVATION	3093 CU. YDS.
659	SEEDING AND MULCHING	3370 SQ. YDS.

TWIN 48" PIPES
RELOC. AVON-CHESTER RD.
CULVERT STA. 21+00
AREA = 176 ACS.
Q₁₀ = 130 CFS.

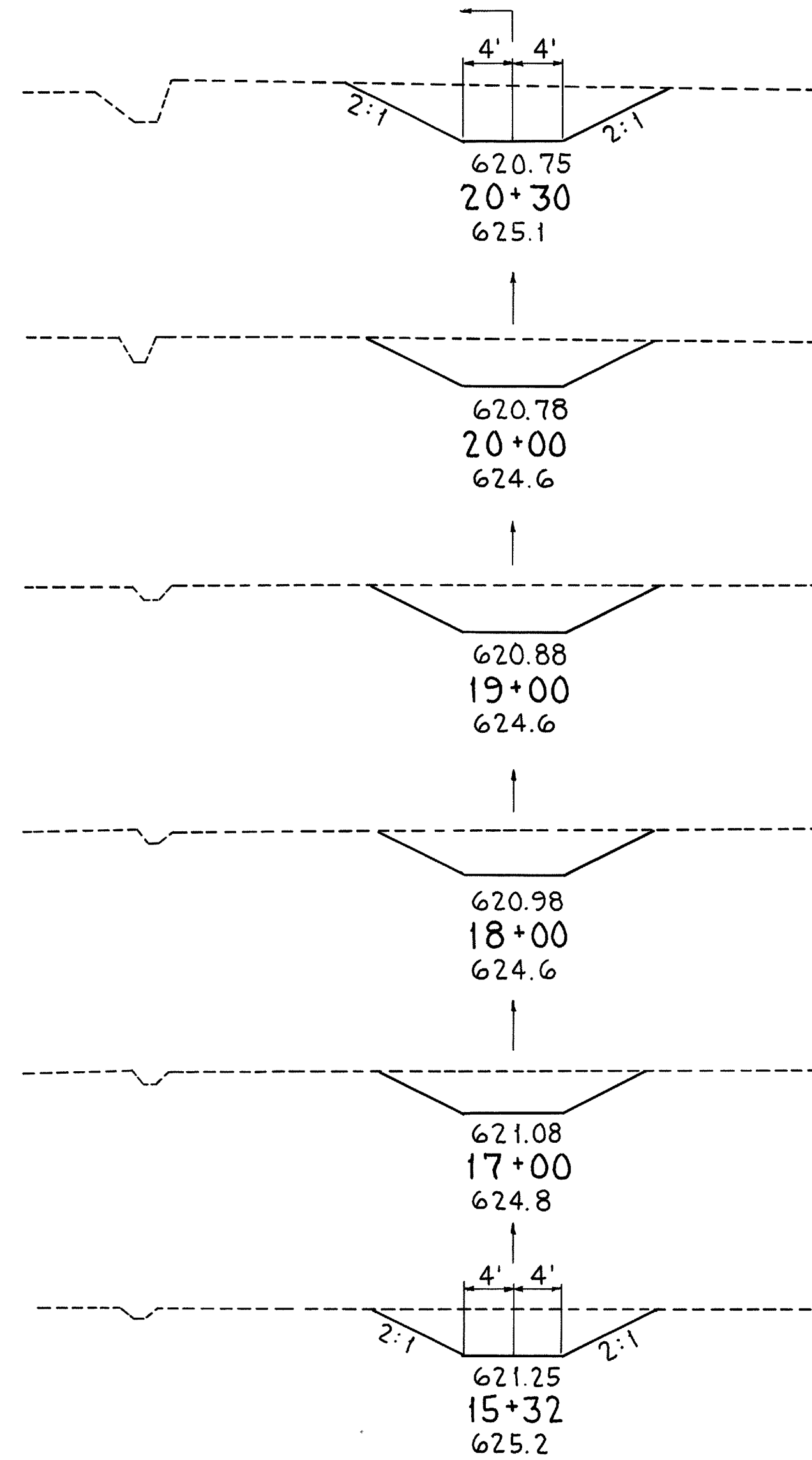
CHANNEL SECTIONS FOR CULVERT
 STA 21+00 RELOC. AVON-CHESTER RD.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

LOR - 90 - 17.21

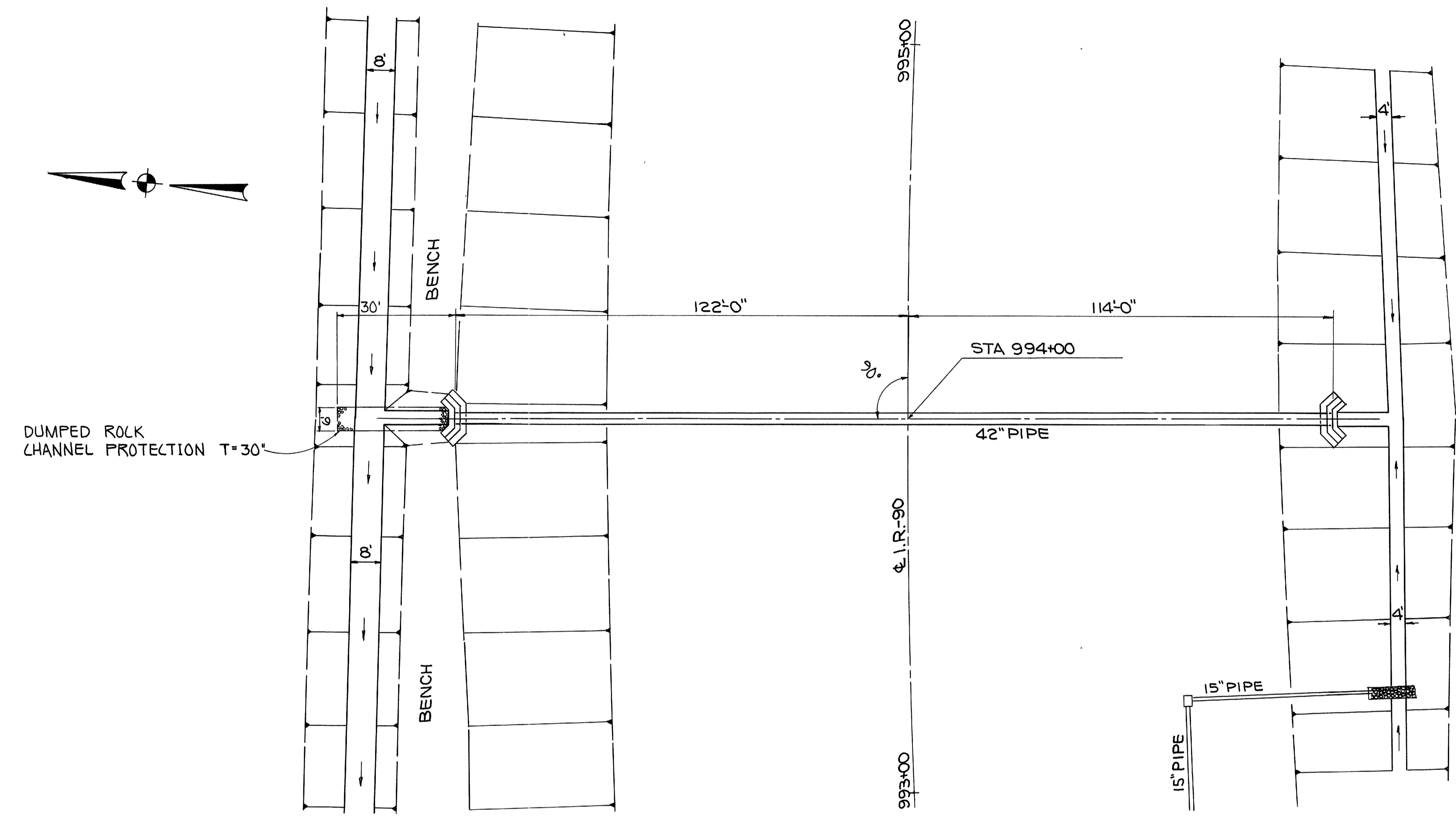


END CHANNEL
 STA. 20+37

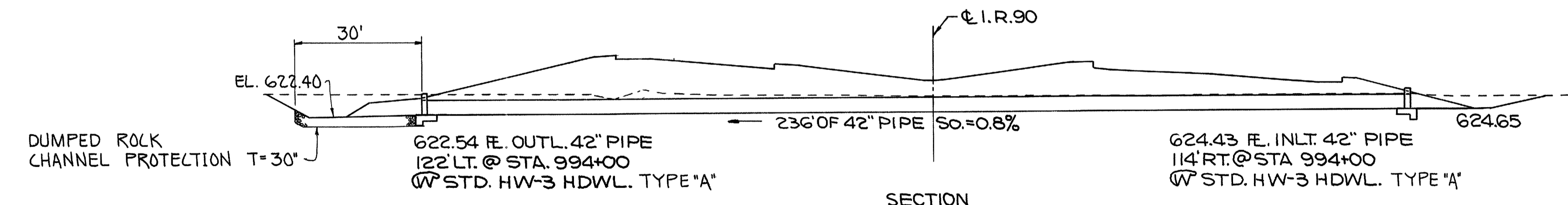


NOTE:
 FOR CHANNEL DETAILS AND QUANTITIES
 SEE SHEET NO. 210

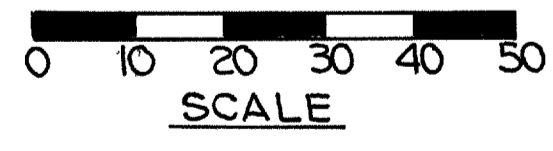
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
20+37	0	0		
			10	0
20+30	74	0		
			74	0
20+00	59	0		
			220	0
19+00	60	0		
			215	0
18+00	56	0		
			209	0
17+00	57	0		
			376	0
15+32 AHD.	64	0		
14+68 BK.	64	0		
			410	0
13+00	68	0		
			259	0
12+00	72	0		
			263	0
11+00	70	0		
			269	0
10+00	75	0		
			333	0
9+00	105	0		
			455	0
7+83	105	0		
TOTAL			3093	0



PLAN



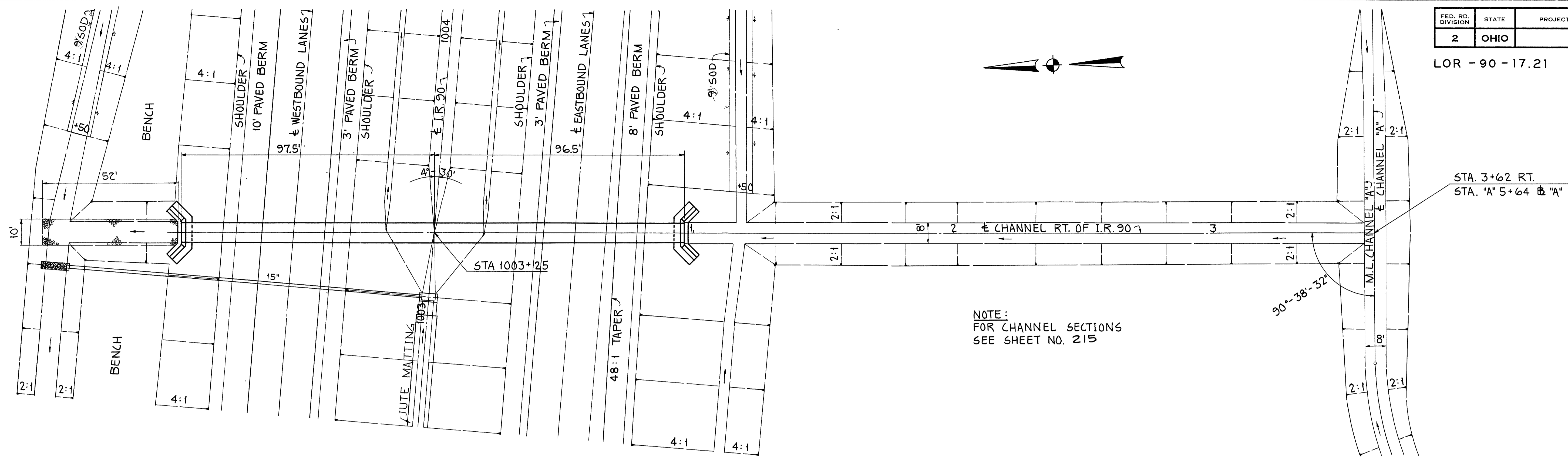
SECTION



ESTIMATED QUANTITIES		
603 :	42" CONDUIT TYPE A-B 706.02 CLASS III	236 LIN. FT.
602 :	CONCRETE MASONRY	13.4 CU. YDS.
660 :	SODDING	5.0 SQ. YDS.
601 :	DUMPED ROCK CHANNEL PROTECTION	16.0 CU. YDS.

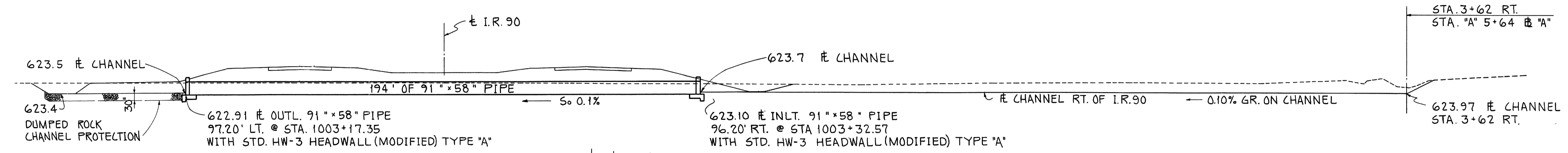
42" PIPE CULVERT
 STA 994+00
 AREA = 28 ACS
 Q50 = 54 C.F.S.
 STRUC. NO. LOR-90-1912

LOR - 90 - 17.21

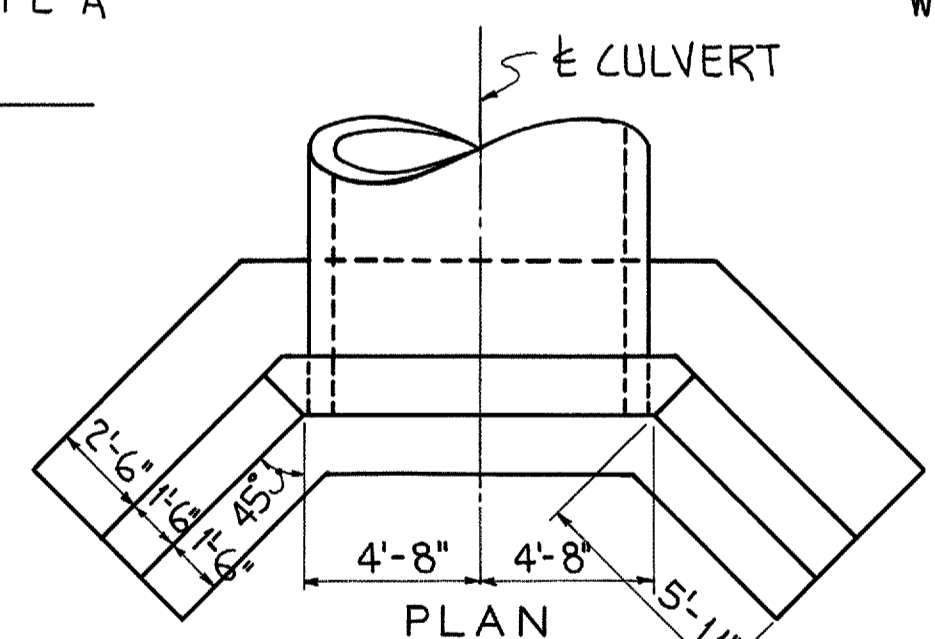


NOTE:
FOR CHANNEL SECTIONS
SEE SHEET NO. 215

PLAN

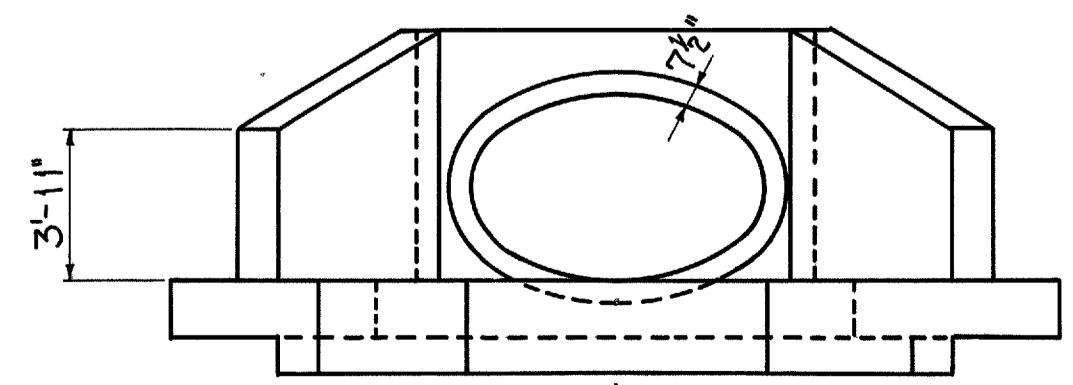


SECTION

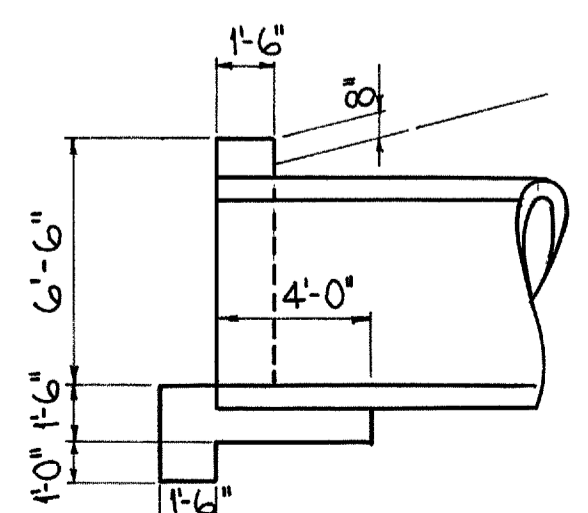


PLAN

0 1 2 3 4 5
SCALE



ELEVATION



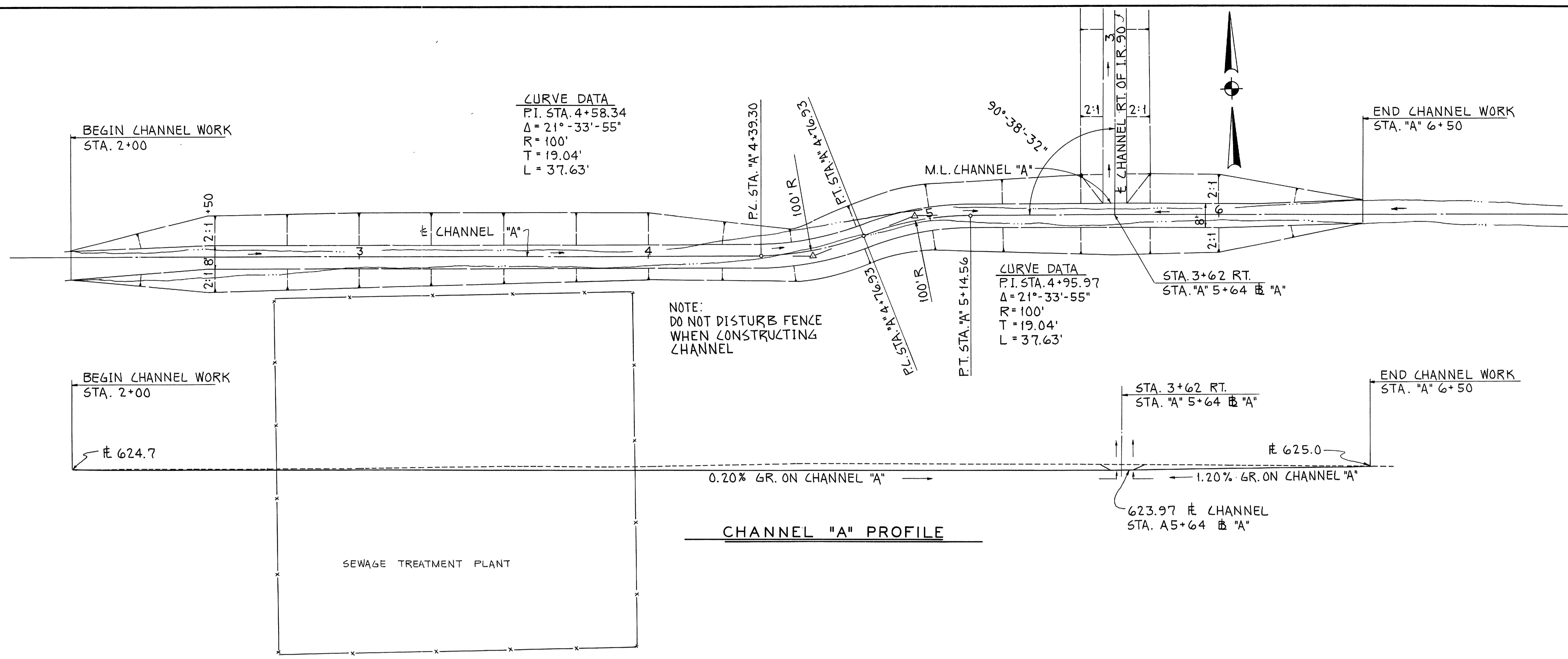
SECTION A-A

ESTIMATED QUANTITIES			
603	91" x 58" CONDUIT TYPE A-B	194	LIN. FT.
	706.04 CL. HE II		
602	CONCRETE MASONRY	258	CU. YDS.
660	SODDING	9	SQ. YDS.
203	CHANNEL EXCAVATION	1,104	CU. YDS.
659	SEEDING AND MULCHING	1,920	SQ. YDS.
601	DUMPED ROCK CHANNEL PROTECTION	49	CU. YDS.

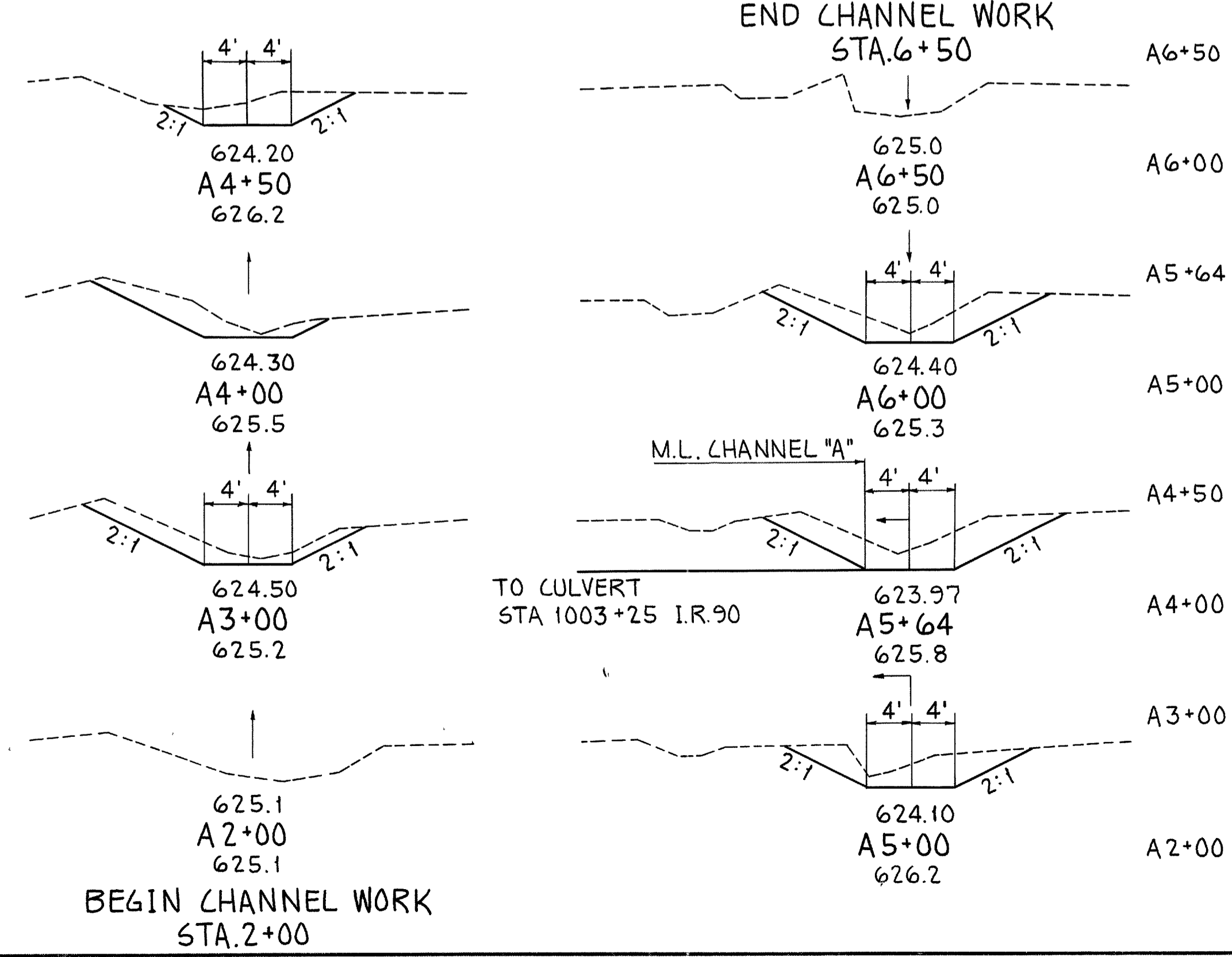
CULVERT STA 1003+25
91" x 58" PIPE CULVERT
AREA = 120 ACS.
Q₅₀ = 143 CFS.
STRUC. NO. LOR - 90 - 1930

STANDARD HW-3 HEADWALL FOR 91" x 58" ELLIPTICAL CONCRETE PIPE (MODIFIED) TYPE "A"

LOR - 90 - 17.21

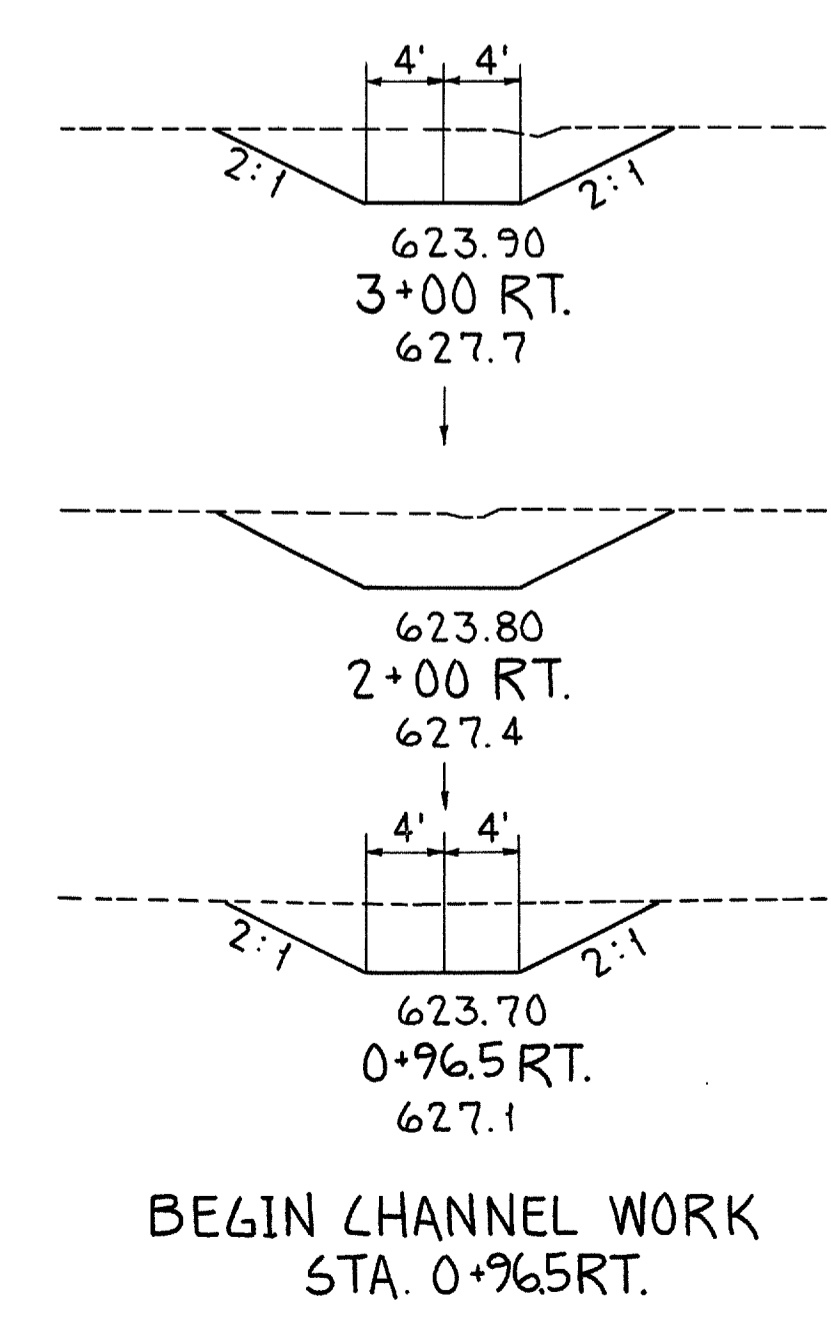


CHANNEL "A" X-SECTIONS

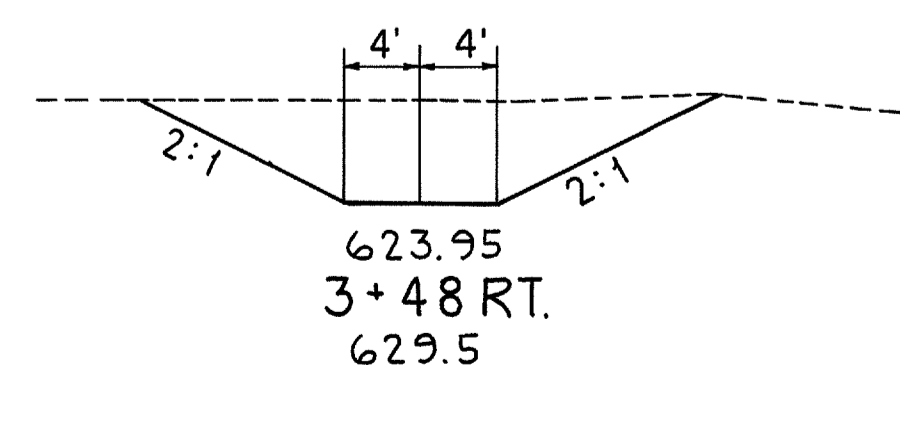


STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
A6+50	0	0		
A6+00	40	0	37	0
A5+64	46	0	58	0
A5+00	41	0	103	0
A4+50	26	0	63	0
A4+00	32	0	54	0
A3+00	31	0	115	0
A2+00	0	0	58	0
TOTAL			488	0

CHANNEL SECTIONS FOR CHANNEL FROM I.R. 90 RT. TO CHANNEL "A"



MATCH LINE CHANNEL "A" STA. 3+58 RT.



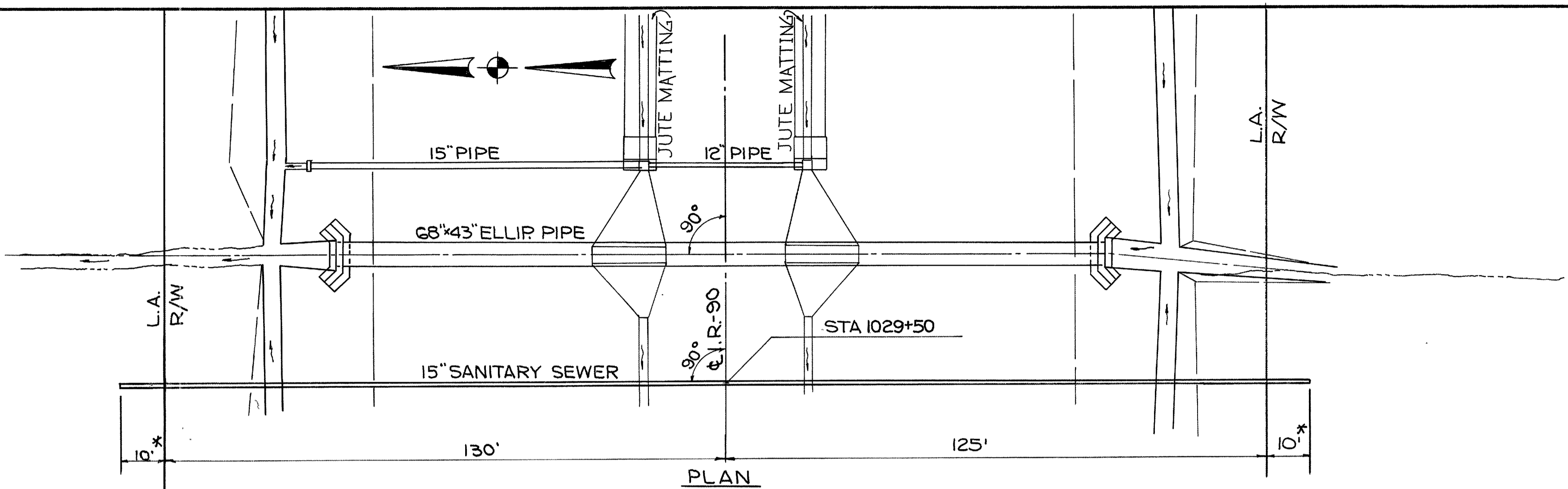
STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
3+58 RT.	0	0		
3+48 RT.	99	0	19	0
3+00 RT.	64	0	145	0
2+00 RT.	61	0	232	0
0+96.5 RT.	54	0	220	0
TOTAL			616	0

NOTE: FOR CHANNEL DETAILS AND QUANTITIES SEE SHEET NO. 214.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

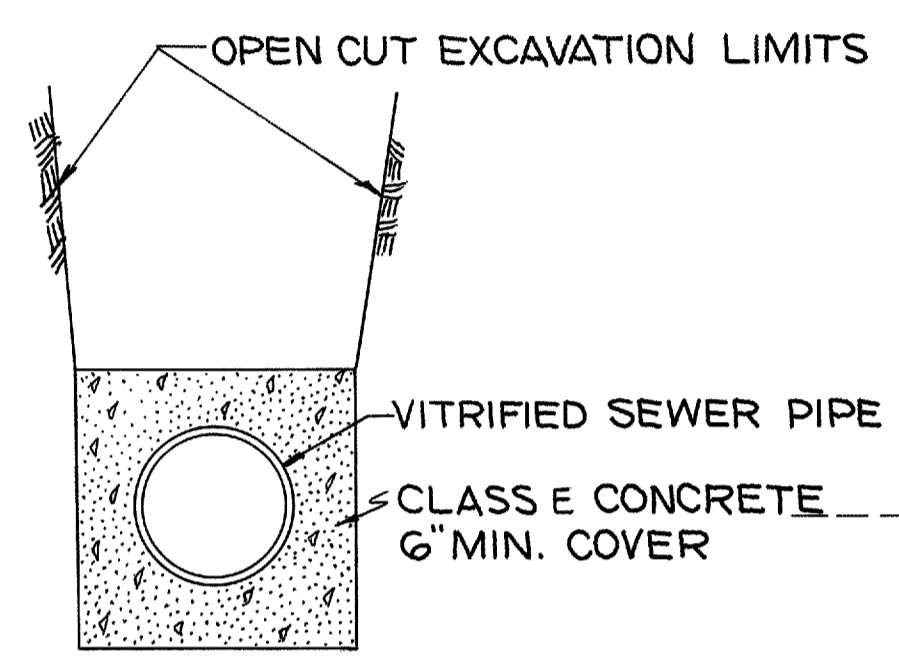
LOR.-90-17.21

BULKHEADING SANITARY SEWER
The ends of the sanitary sewer shall be effectively blocked with a precast clay or concrete stopper or a wooden bulkhead approved by the Engineer. Payment for the above work shall be included in the unit price bid for the pertinent conduit.

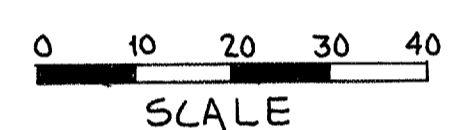
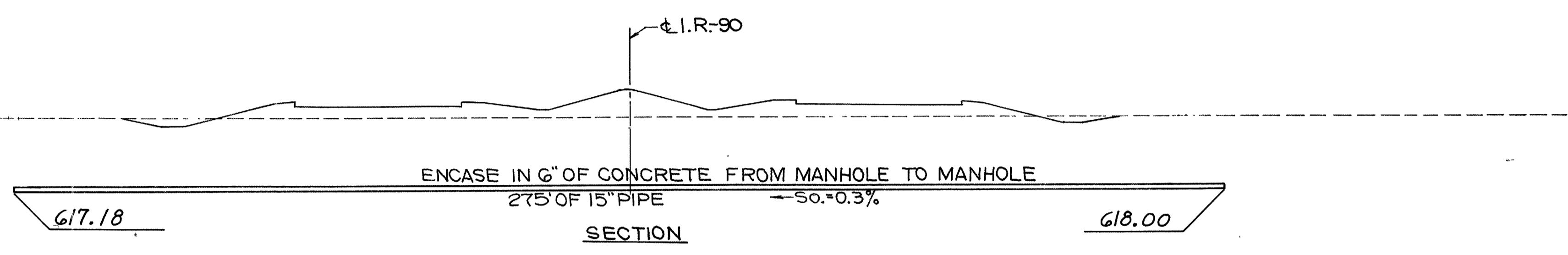


QUANTITIES FOR PARTICIPATION UNDER PROJECT
 100% STATE
 G03: 15" CONDUIT TYPE B 706.08
 ENCASED IN 6" OF CLASS E CONCRETE 255 LIN. FT.

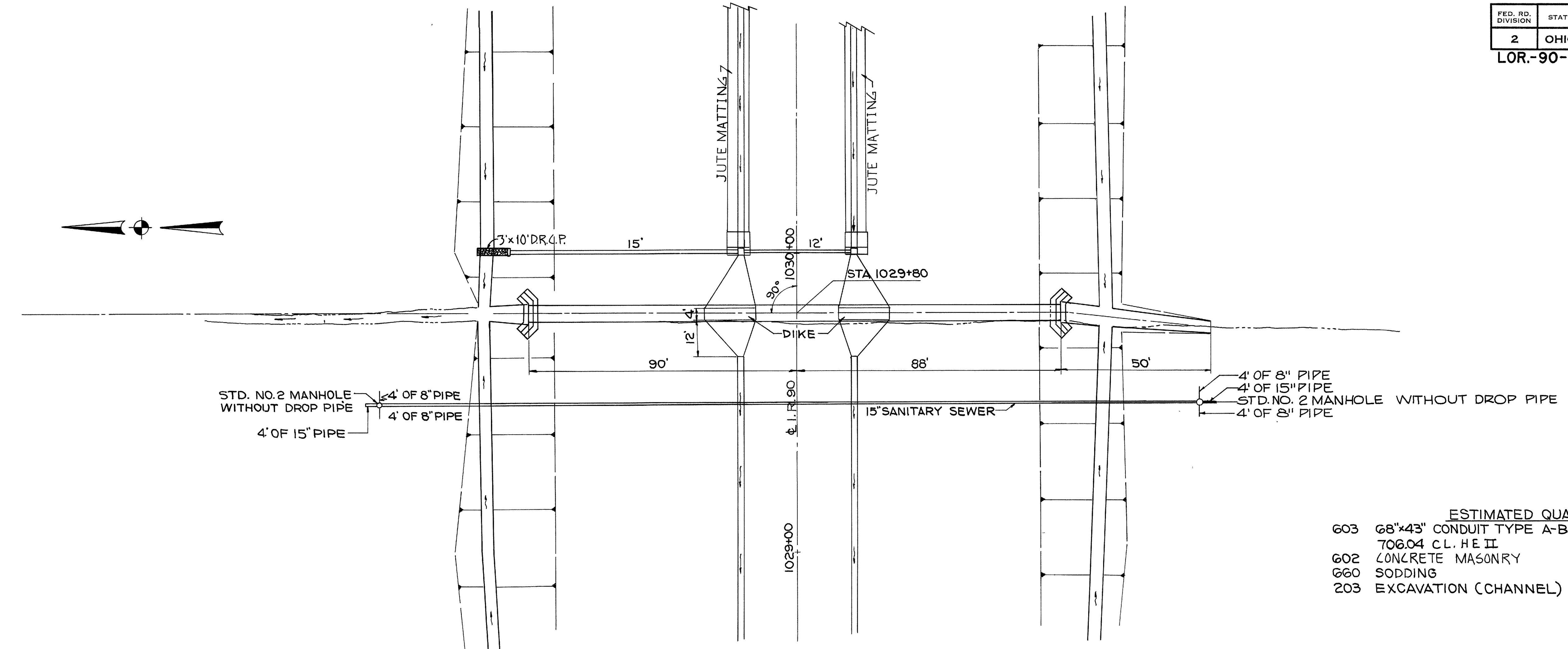
QUANTITIES FOR 100% CITY OF AVON PARTICIPATION
 * G03: 15" CONDUIT TYPE B 706.08 WITH
 ENCASED IN 6" OF CLASS E CONCRETE 20 LIN. FT.



SEWER ENCASEMENT DETAIL



CITY OF AVON
 15" SANITARY SEWER
 STA 1029+50

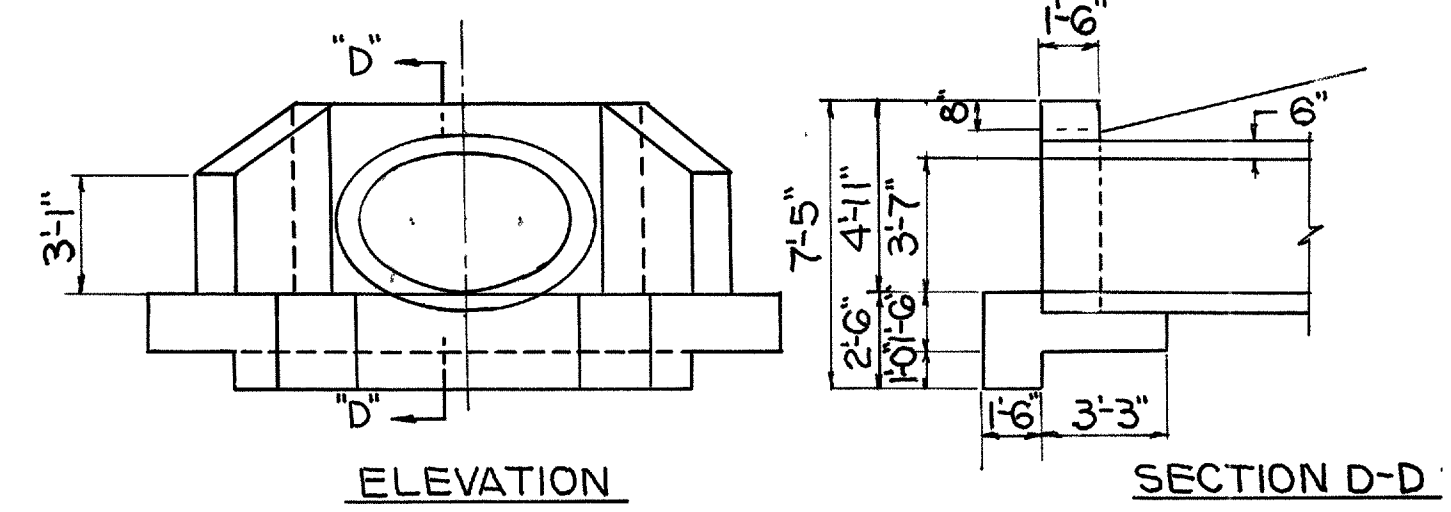


ESTIMATED QUANTITIES

603	68"x43" CONDUIT TYPE A-B	178 LIN. FT.
	70604 C.L. HE II	17.2 CU. YDS.
602	CONCRETE MASONRY	5 SQ. YDS.
660	SODDING	12 CU. YDS.
203	EXCAVATION (CHANNEL)	

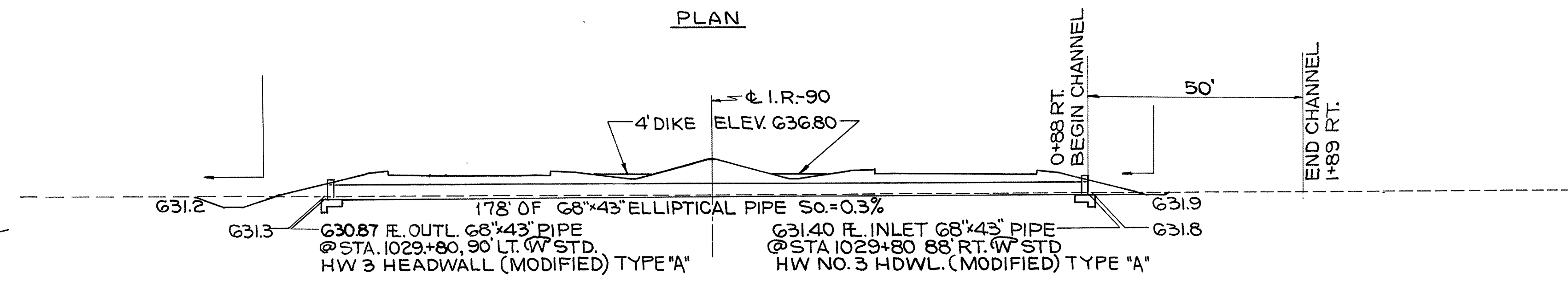
PLAN

STD. HW NO.3 HEADWALL (MODIFIED) TYPE "A"
FOR 68"x43" ELLIPTICAL CONCRETE PIPE

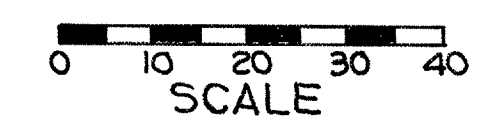


ELEVATION

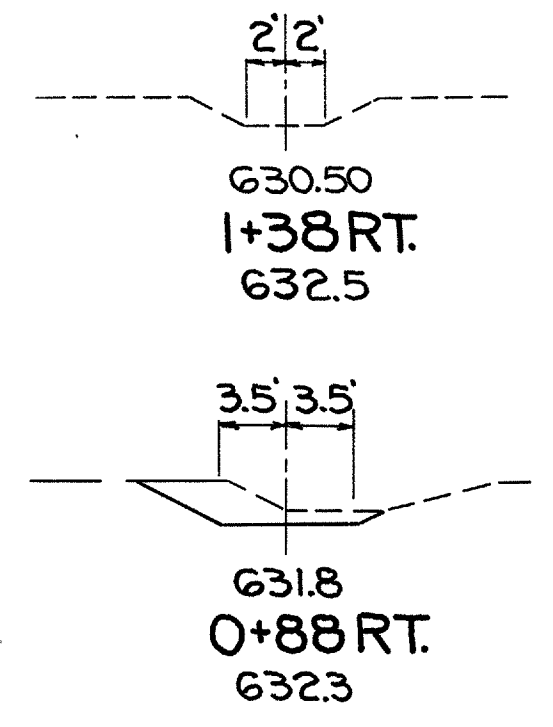
SECTION D-D



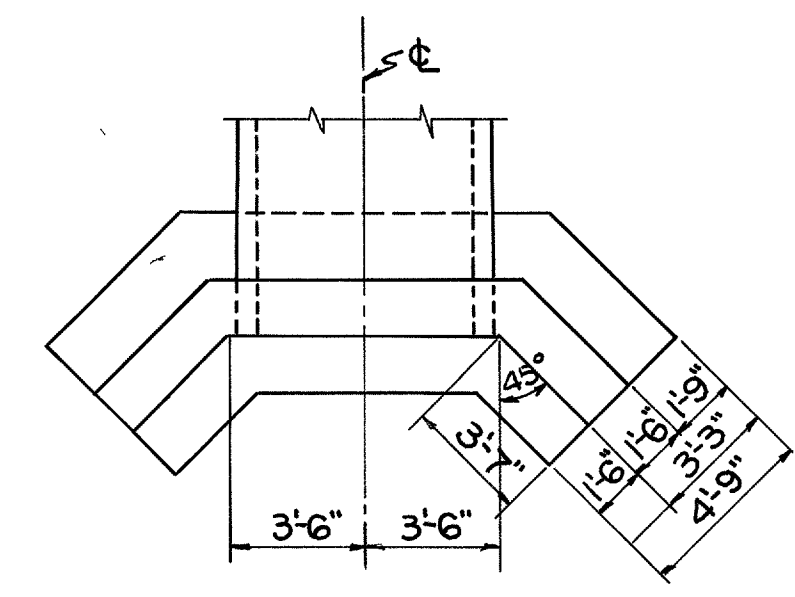
SECTION



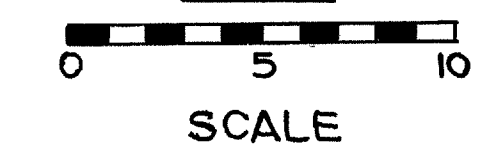
CHANNEL SECTIONS



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	0	12	0
13	0		



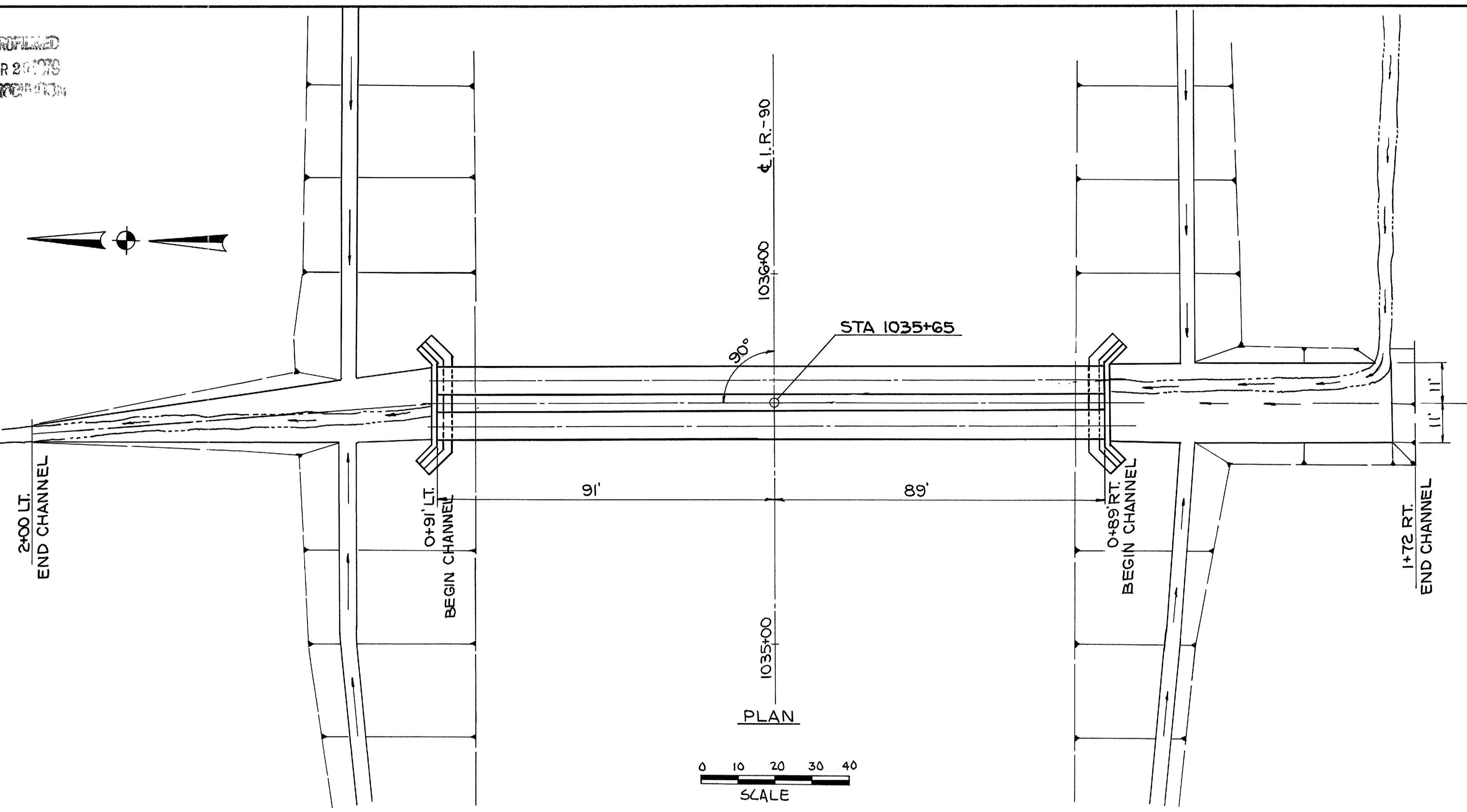
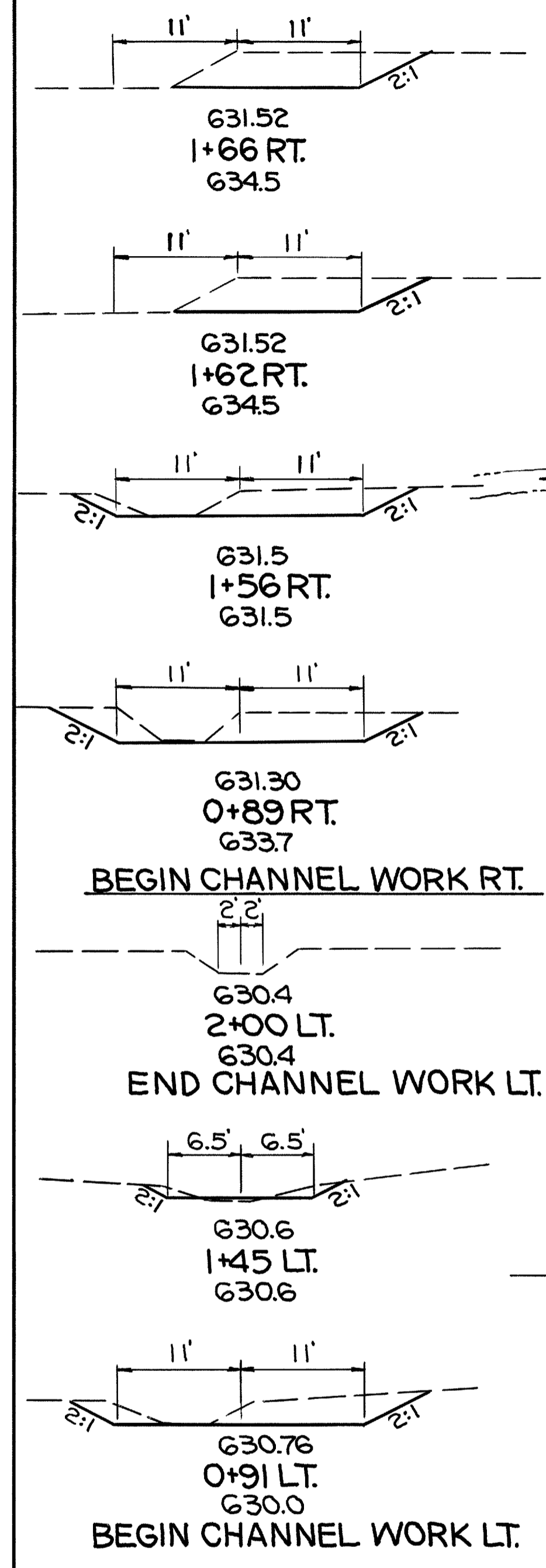
PLAN



68"x 43" ELLIPTICAL PIPE
STA 1029+80
AREA = 56 ACS
Q50 = 85 CFS
STRUC. NO. LOR.-90-1980

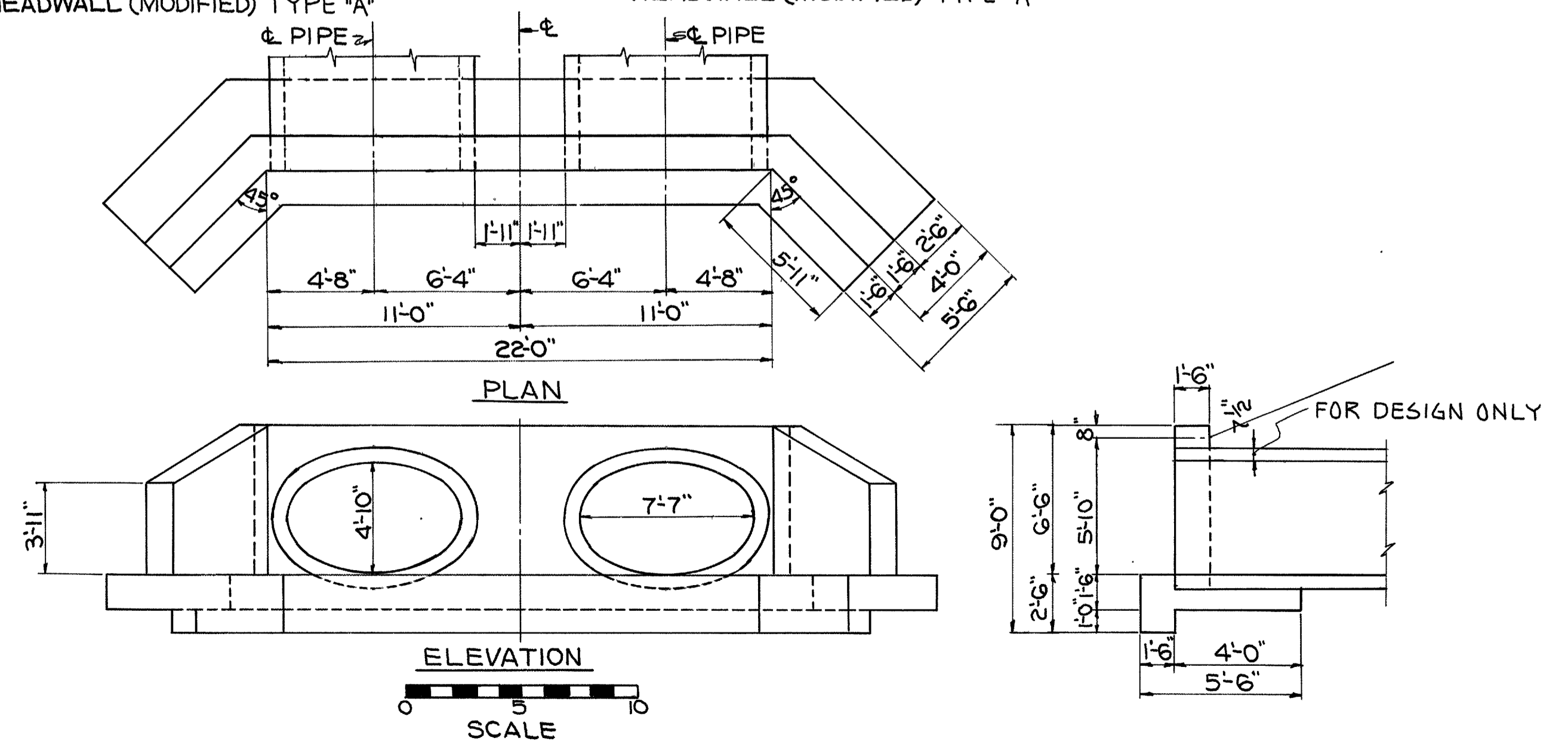
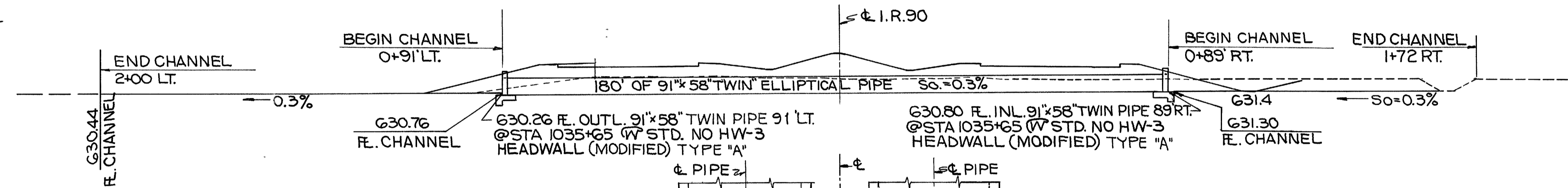
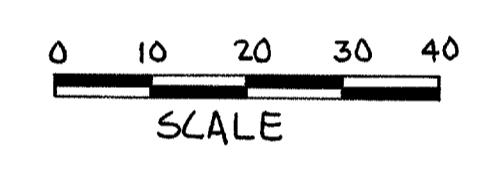
ZERO SECTION
I+72
END CHANNEL WORK RT.

MICROFILMED
APR 21 1979
RESERVED



ESTIMATED QUANTITIES
CL. H.E. II

603- 91"x58" CONDUIT TYPE A-B 70604 360 LIN. FT.	
602- CONCRETE MASONRY	396 CU. YDS.
660- SODDING	12.0 SQ. YDS.
203- EXCAVATION (CHANNEL)	167 CU. YDS.



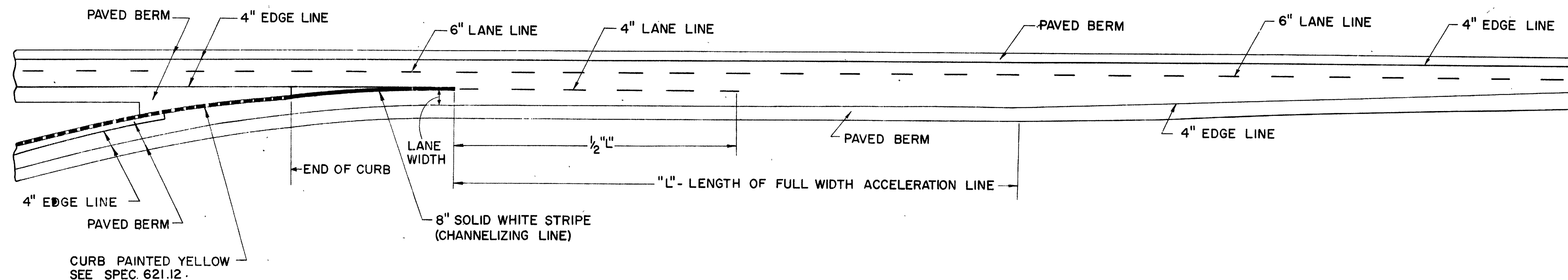
ELEVATION
SCALE

STD. HW NO.3 HEADWALL (MODIFIED) FOR TWIN 91"x58" ELLIPTICAL CONCRETE PIPES

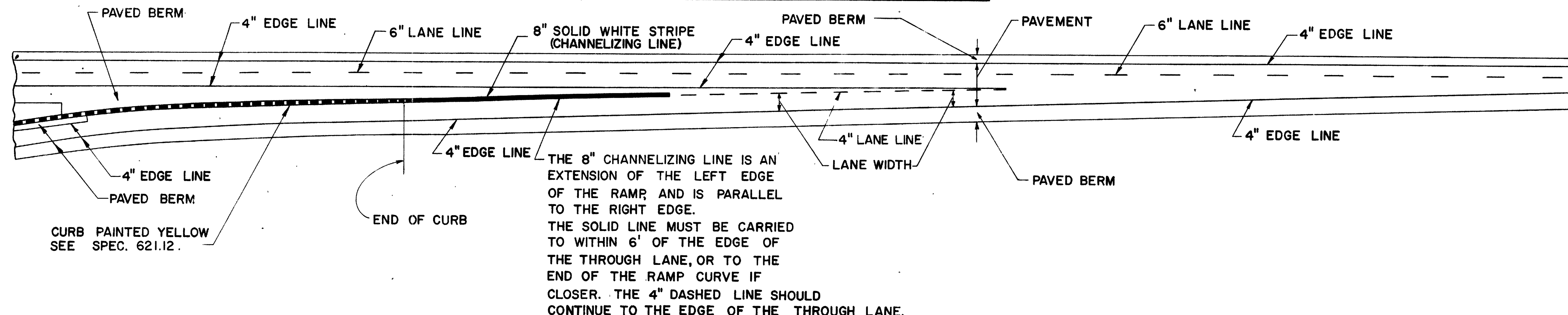
	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
I+72 RT.	0	0	5	0
I+66 RT.	48	0	7	0
I+62 RT.	48	0	9	0
I+56 RT.	34	0	96	0
0+89 RT.	44	0		
2+00 LT.	0	0	5	0
I+45 LT.	5	0	45	0
0+91 LT.	40	0		
TOTALS	167	0		

91"x58" TWIN ELLIPT PIPE CULVERT
STA 1035+65 I.R.-90
AREA 348 ACS
Q50 285 CFS
STRUC. NO. LOR. 90-1991

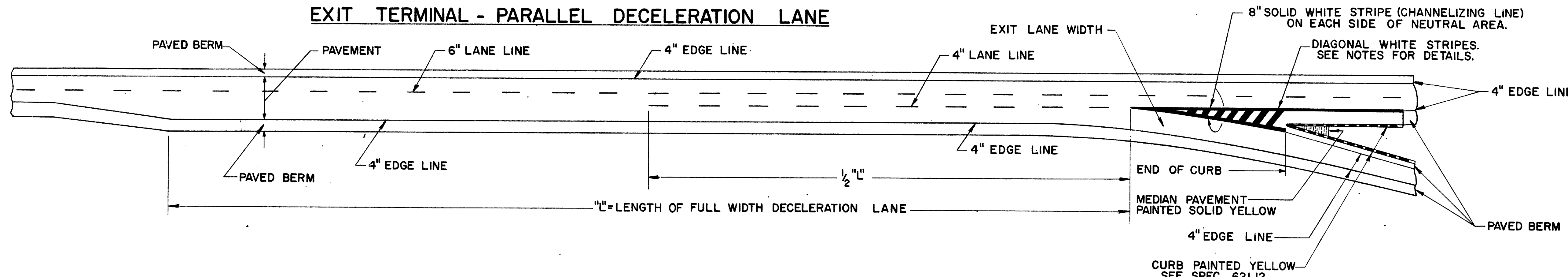
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



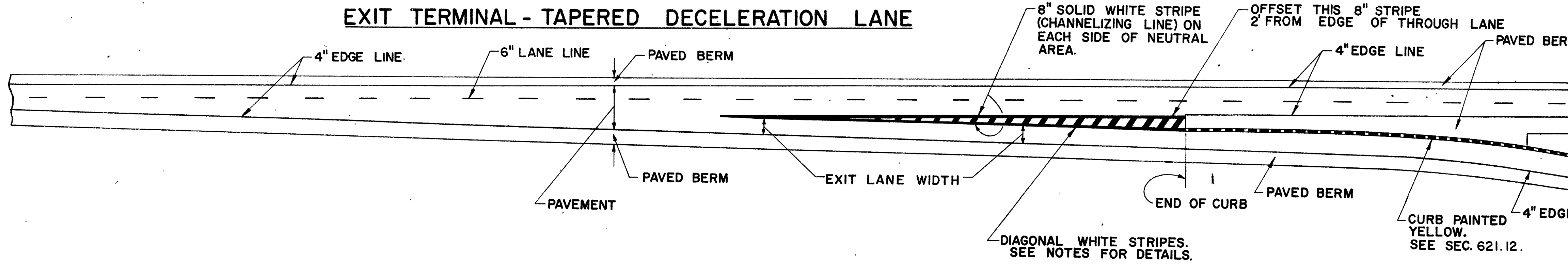
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

EDGE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ITEM No. 621 AND DEFINED IN SECTION 621.06.

LANE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ITEM No. 621 AND DEFINED IN SECTION 621.07.

CHANNELIZING LINES SHALL BE CONTINUOUS WHITE BEADED STRIPES 8" IN WIDTH PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ITEM No. 621 AND DEFINED IN SECTION 621.09.

DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF THE THROUGH PAVEMENT. PAINT ON THE DIAGONAL STRIPES SHALL BE APPLIED AT THE RATE OF ONE GALLON TO EACH 100 SQUARE FEET AND GLASS BEADS SHALL BE APPLIED AT THE RATE OF SIX POUNDS PER GALLON OF PAINT. DIAGONAL WHITE STRIPES SHALL BE PLACED BETWEEN THE TWO 8" WHITE CHANNELIZING LINES AT EXIT RAMP AS SHOWN TO CONFORM TO ITEM No. 621 AND DEFINED IN SECTION 621.11.

SEE SHEET NO. 94 FOR ADDITIONAL PAVEMENT MARKING DETAILS.

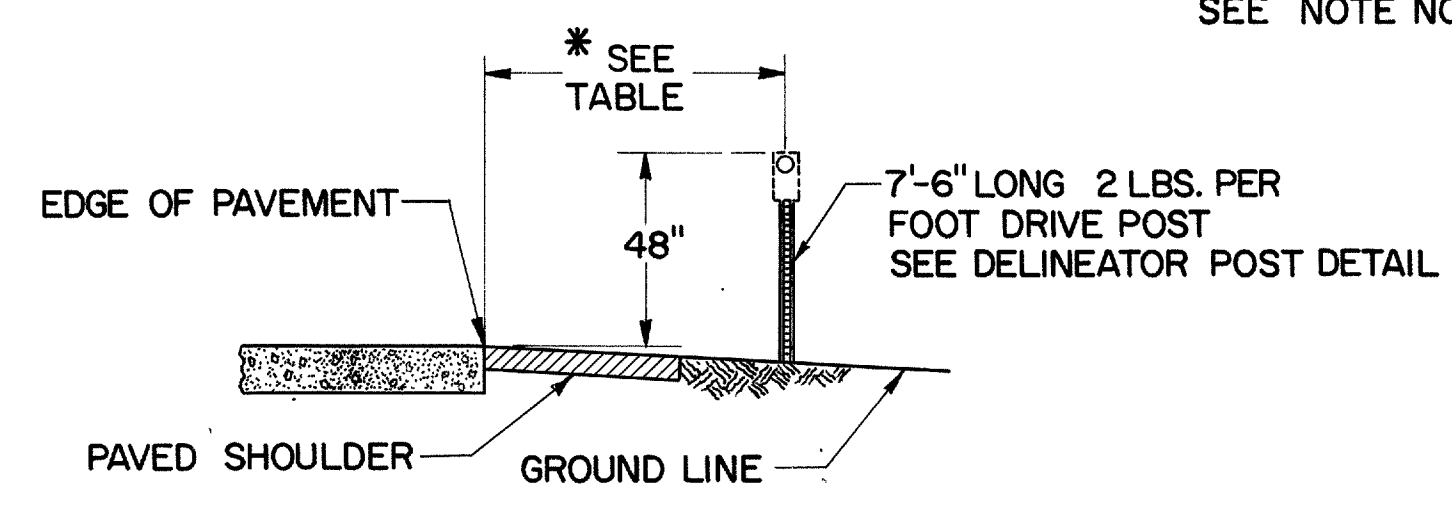
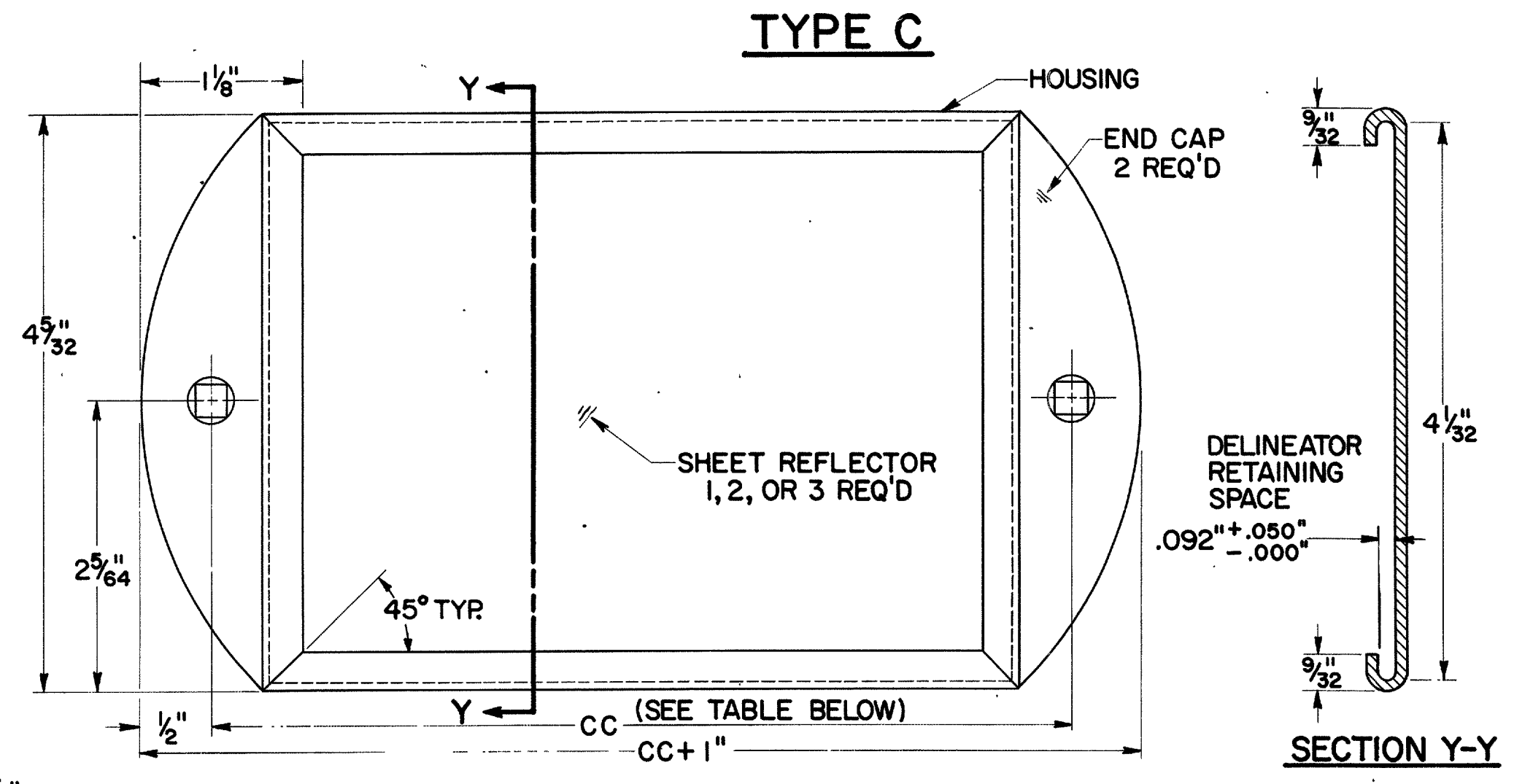
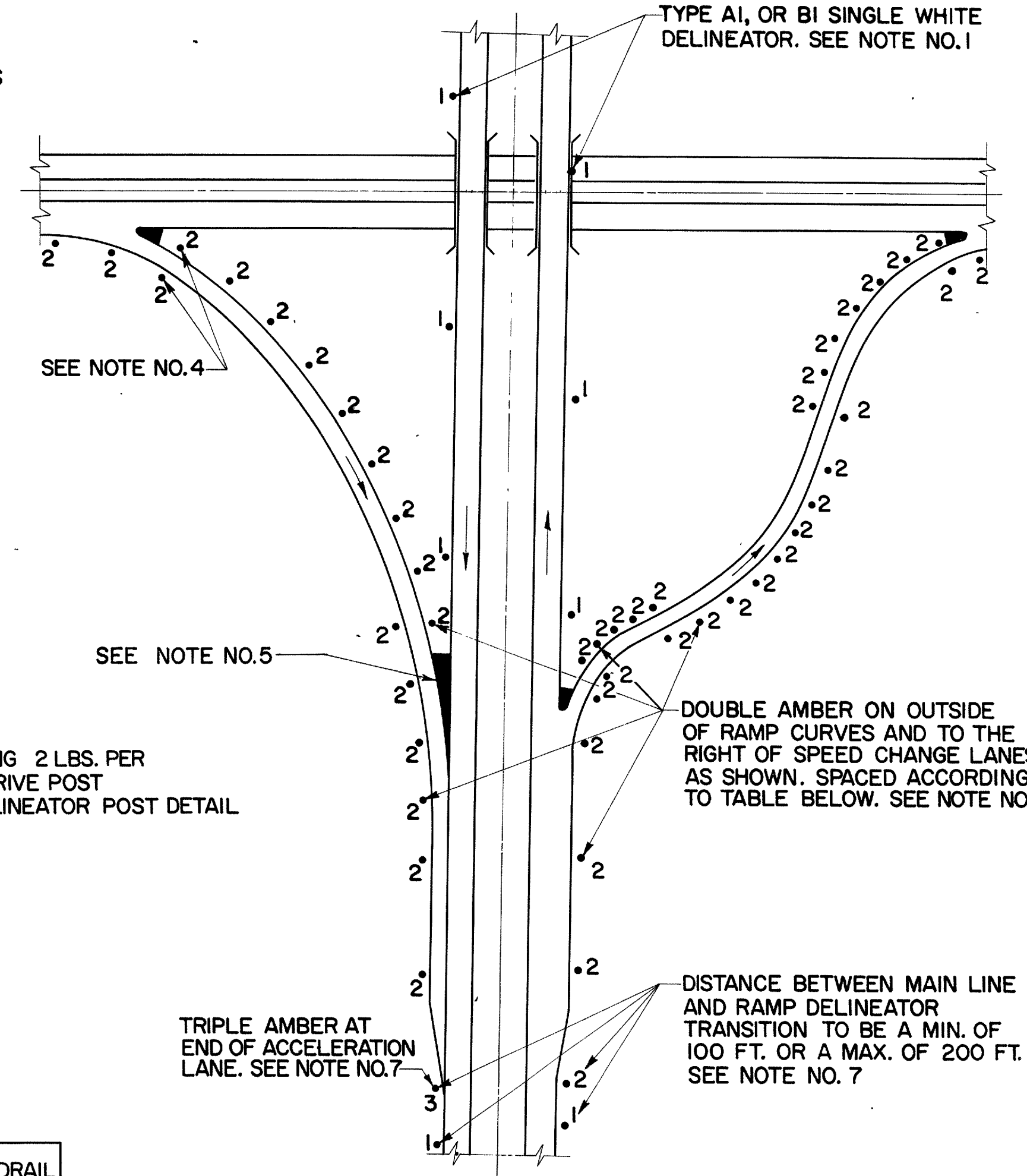
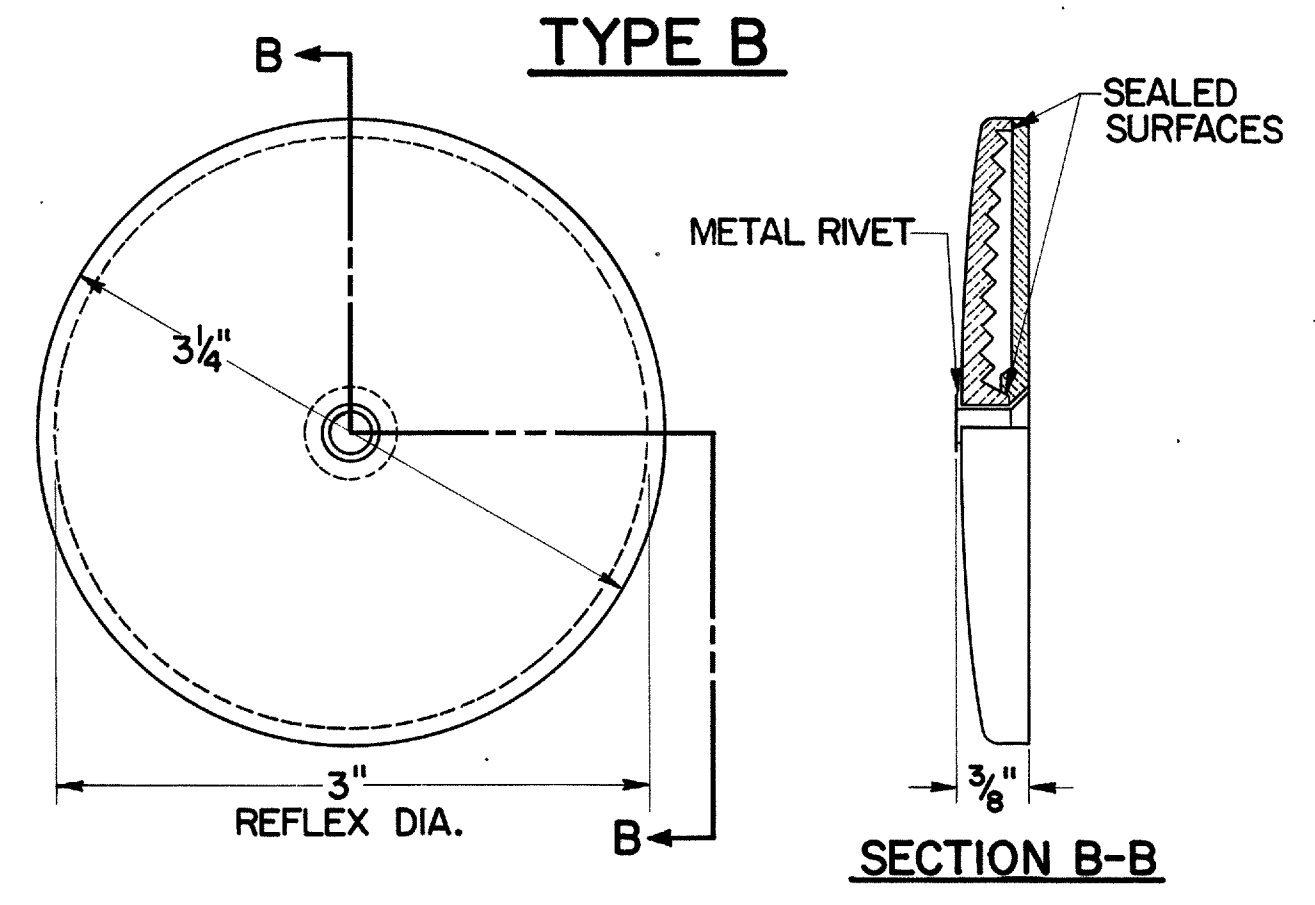
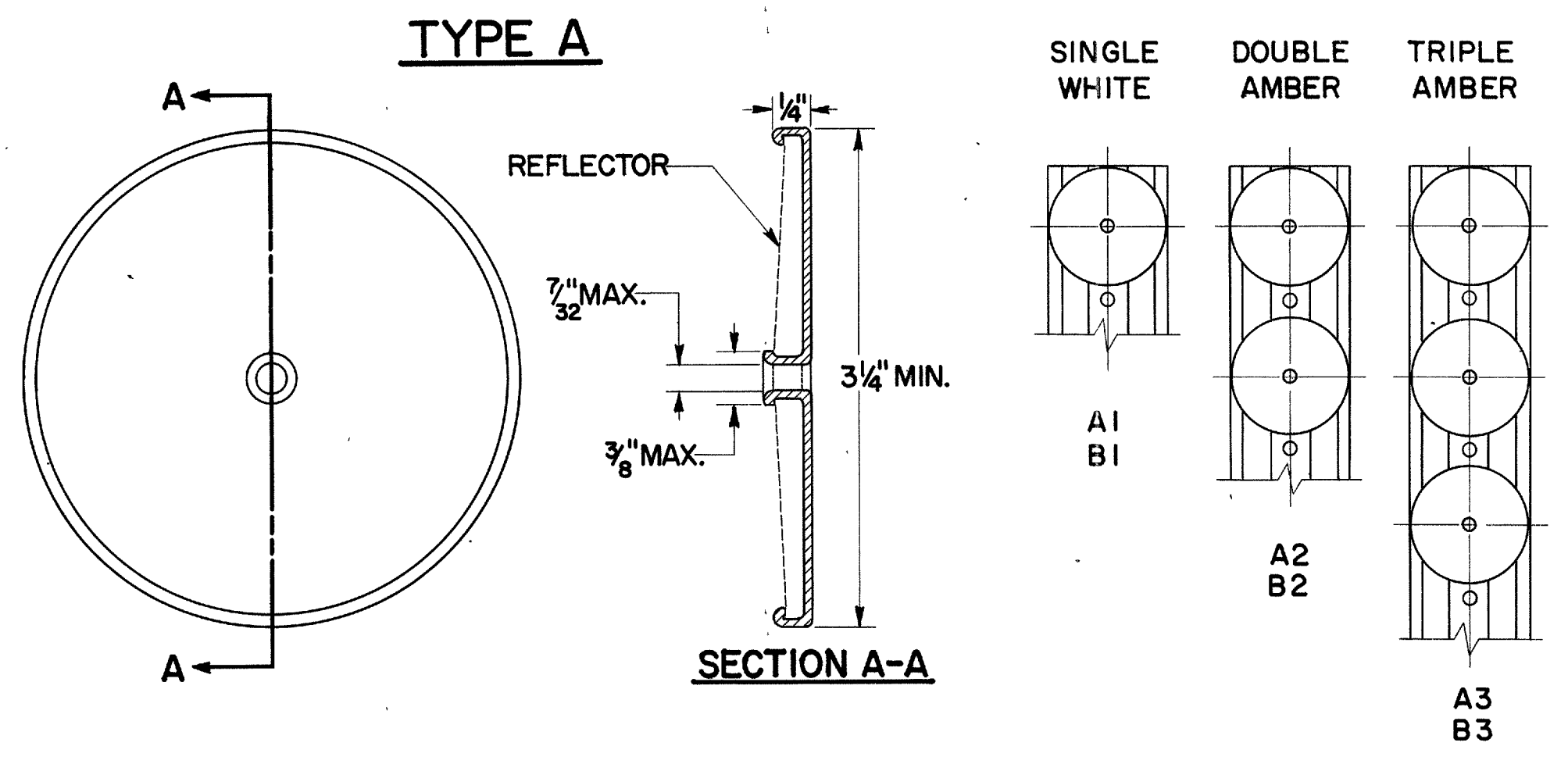
FOR PAVEMENT MARKING QUANTITIES SEE SHEETS 29, 94 & 153.

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
PAVEMENT MARKING	621
DATE	7-17-61 4-6-62 5-24-65
APPROVED <i>Robert E. Lower</i> ENGINEER OF TRAFFIC	

LOR. - 90-17.21

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH ITEM NO. 620, (6-1-65).
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMP THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM.
6. WHEN RADII OF CURVE ON RAMP REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.



LATERAL PLACEMENT OF DELINEATORS

* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.

TYPICAL DELINEATOR PLACEMENT

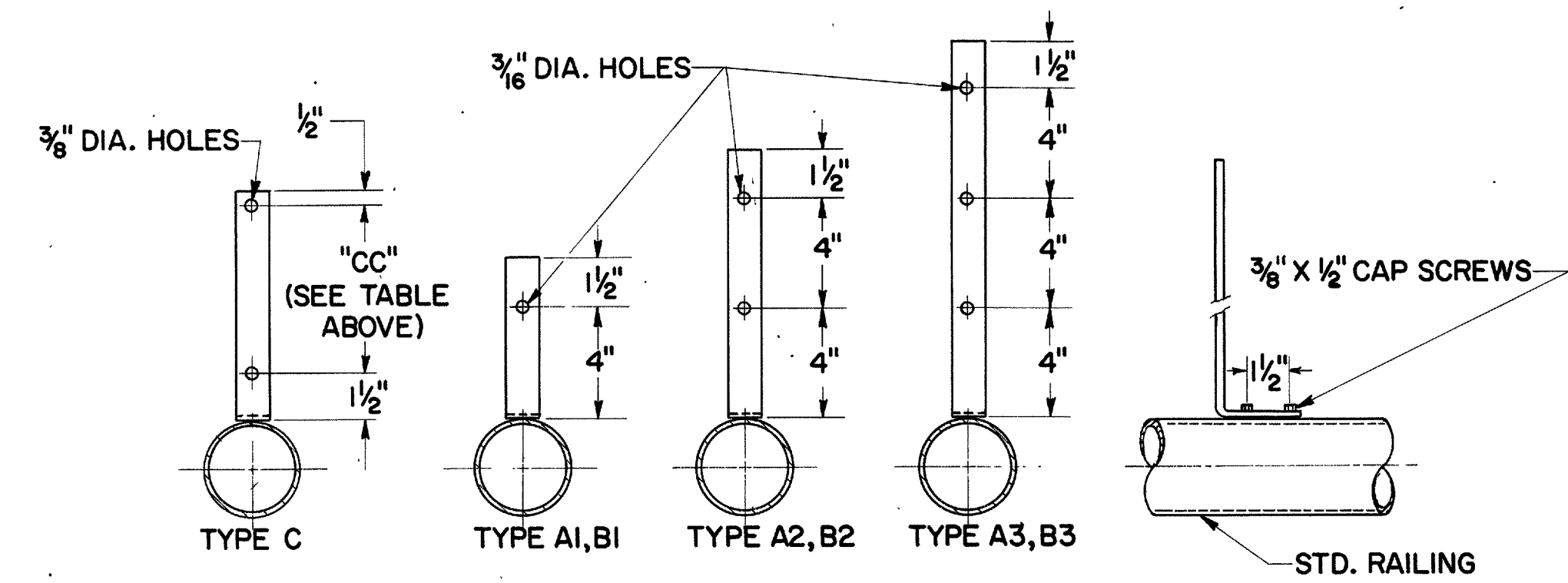
DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADI, FT.		SPACING ON CURVE	* TRANSITION SPACING	
FROM	TO			
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325		30'	60'	100'

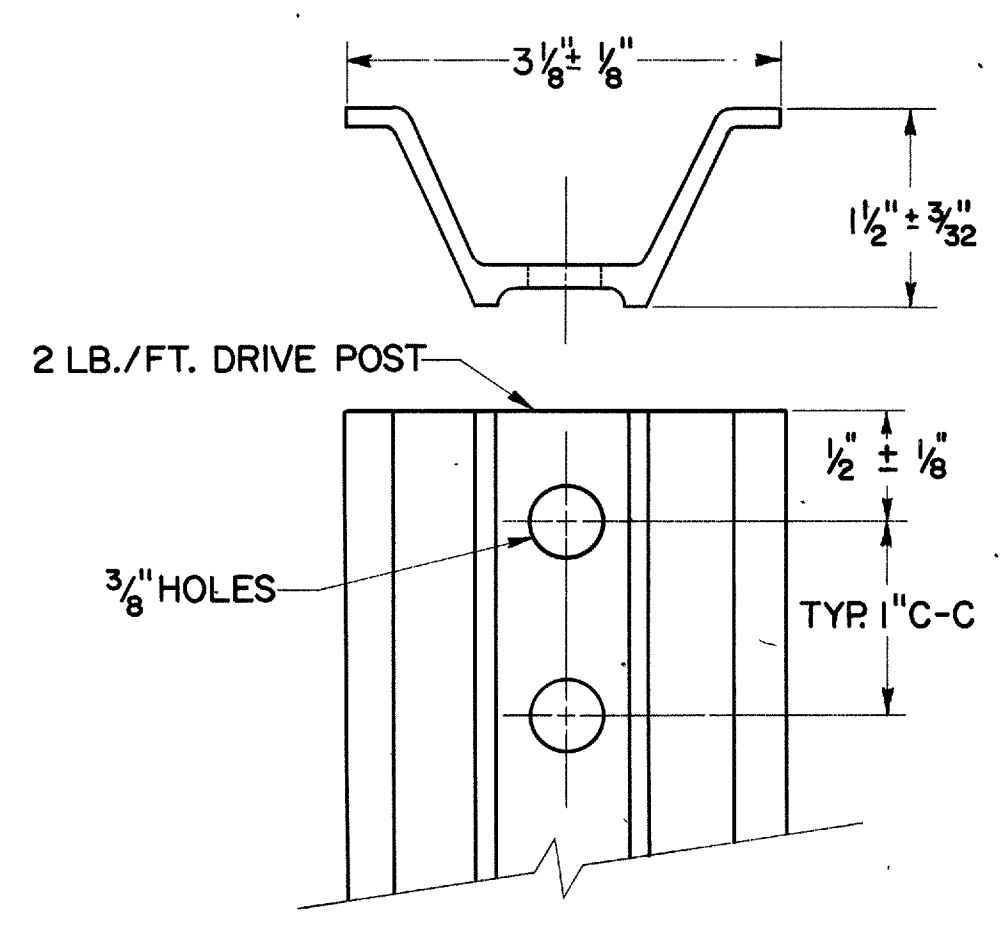
* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

TYPE	DIM. CC
C1-SINGLE WHITE	6"
C2-DOUBLE AMBER	11"
C3-TRIPLE AMBER	16"

ALL BRACKETS 1/4" X 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET



DELINEATOR POST

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR
DETAILS

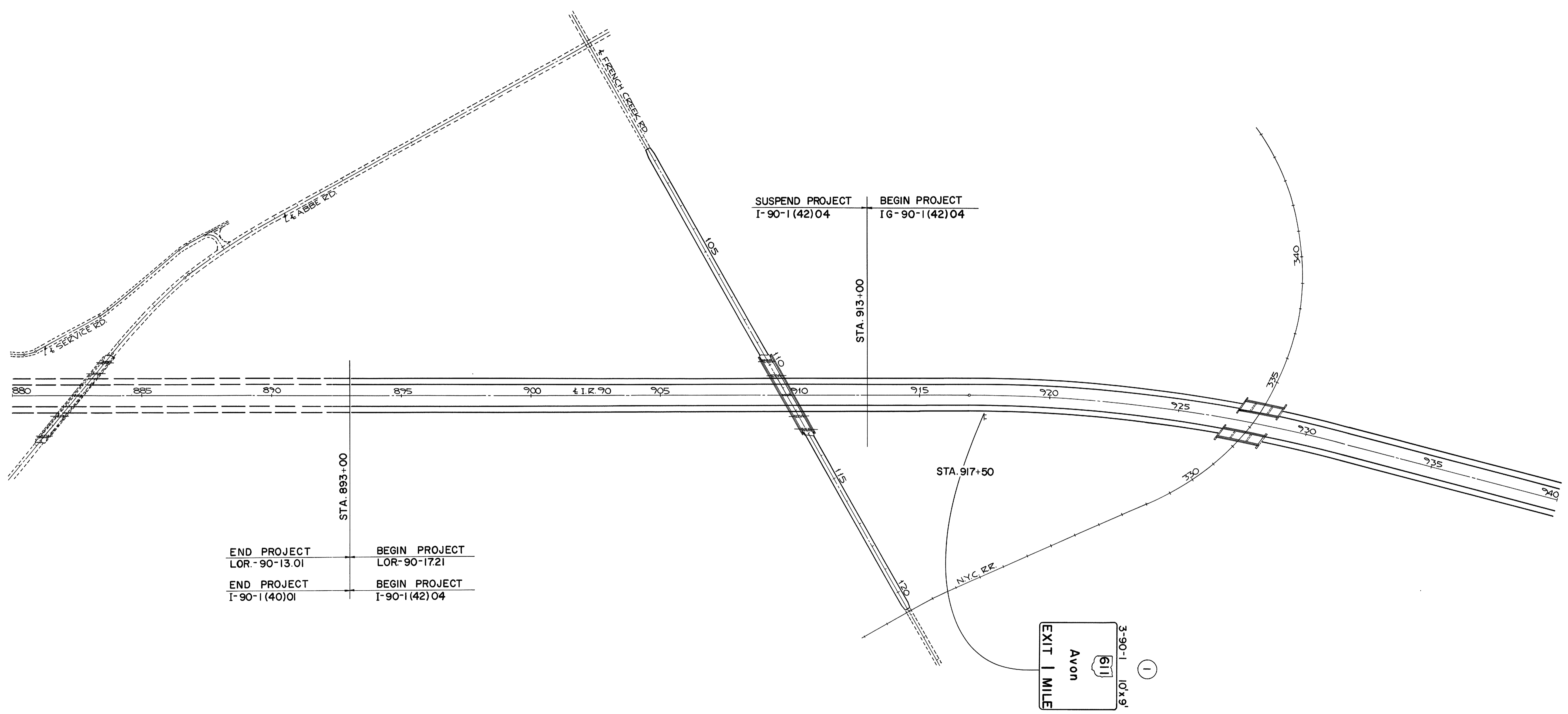
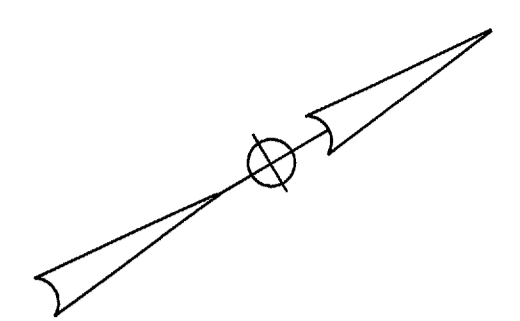
620
DATE
9-25-62
5-24-65

APPROVED *Robert Calmer*
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

223

LOR-90-17.21



END PROJECT LOR-90-13.01	BEGIN PROJECT LOR-90-17.21
END PROJECT I-90-1(40)01	BEGIN PROJECT I-90-1(42)04

SUSPEND PROJECT I-90-1(42)04	BEGIN PROJECT I-90-1(42)04
---------------------------------	-------------------------------

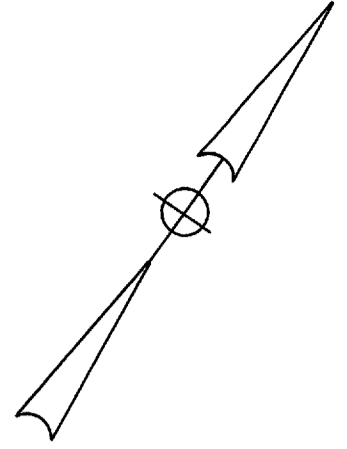
3-90-1 10'x9'
 611
 Avon
 EXIT 1 MILE

NOTE: ALL SIGNS ON THIS PROJECT WILL BE FURNISHED BY OTHERS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

224

LOR-90-17.21



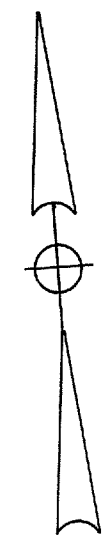
END PROJECT 16-90-1(42)04
RESUME PROJECT 1-90-1(42)04



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

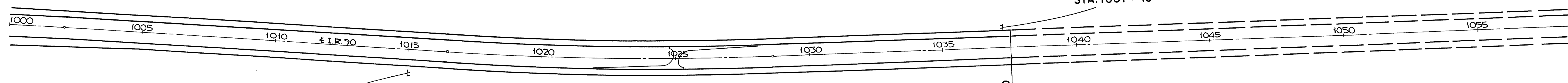
225

LOR.-90-17.21



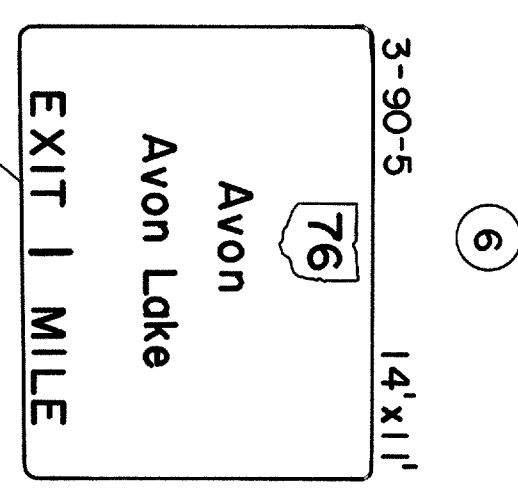
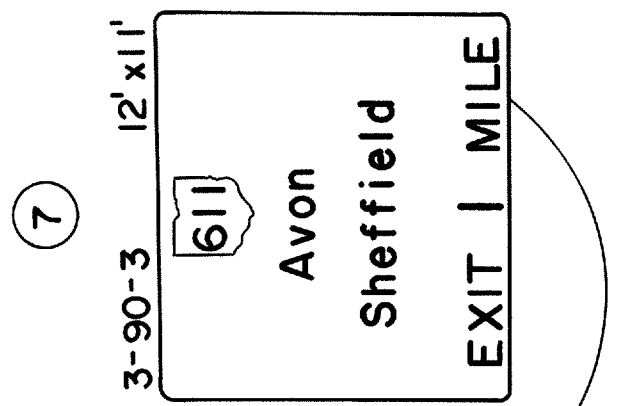
MOORE RD.

AVON-CHESTER RD.

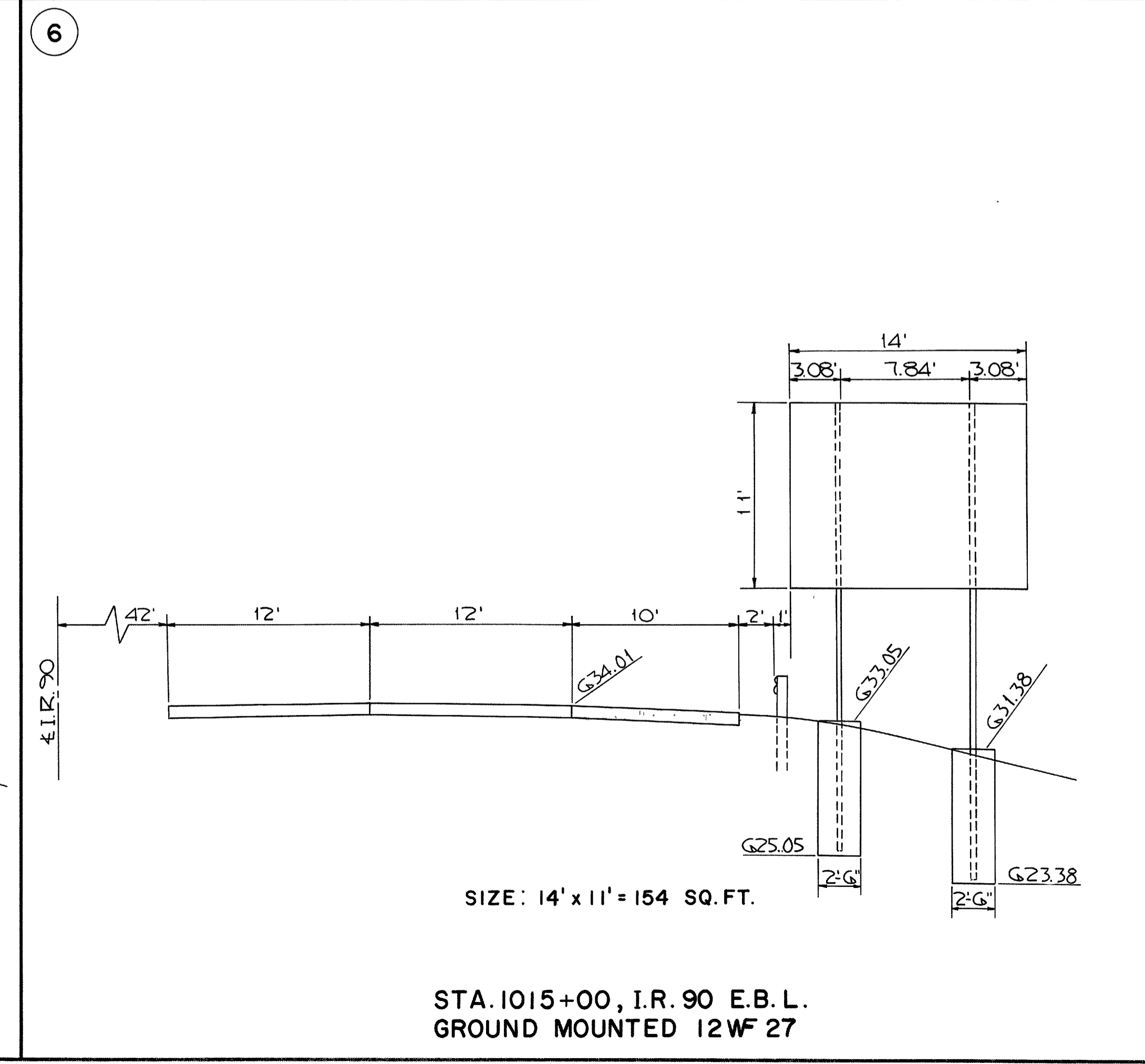
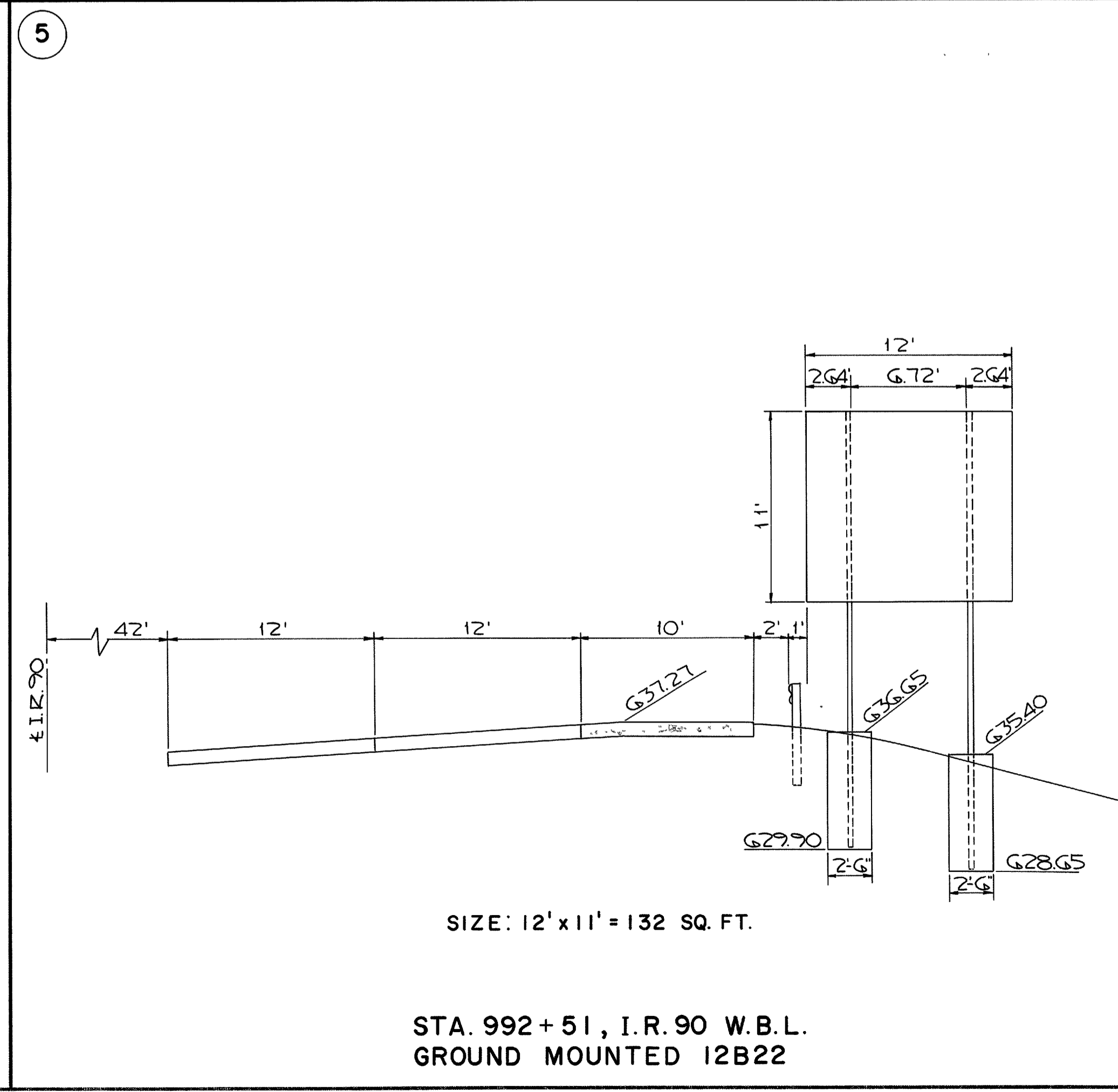
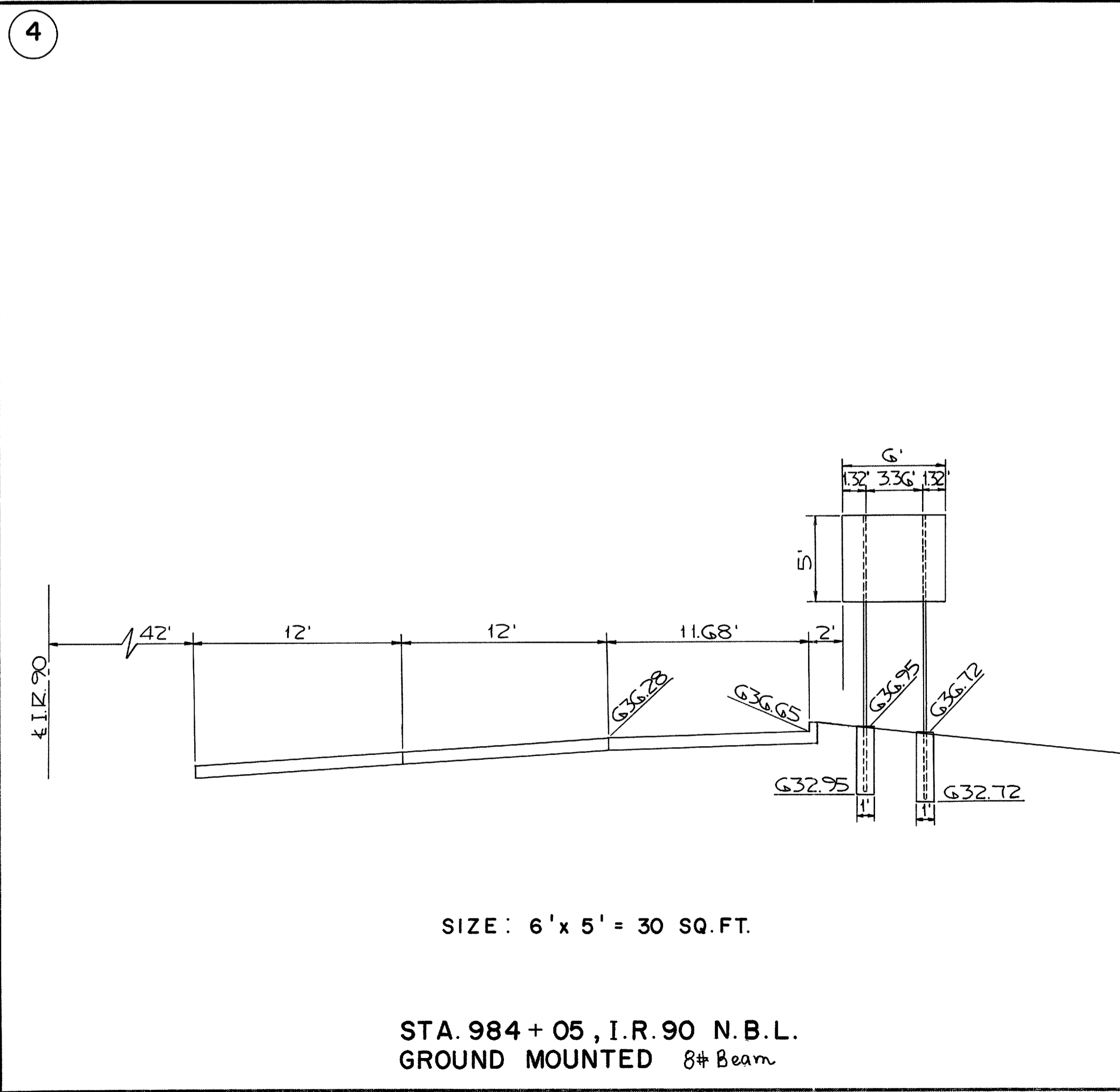
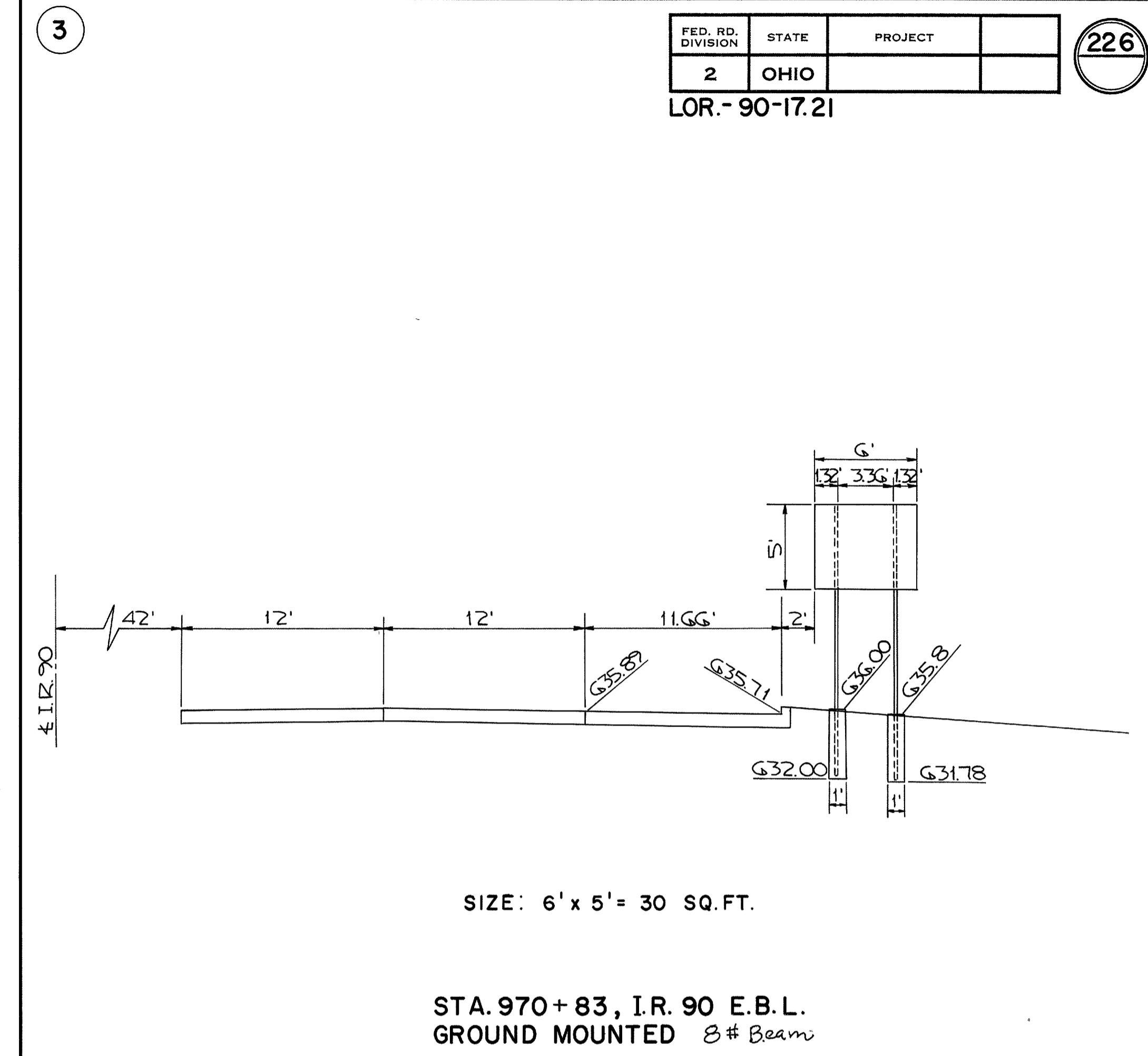
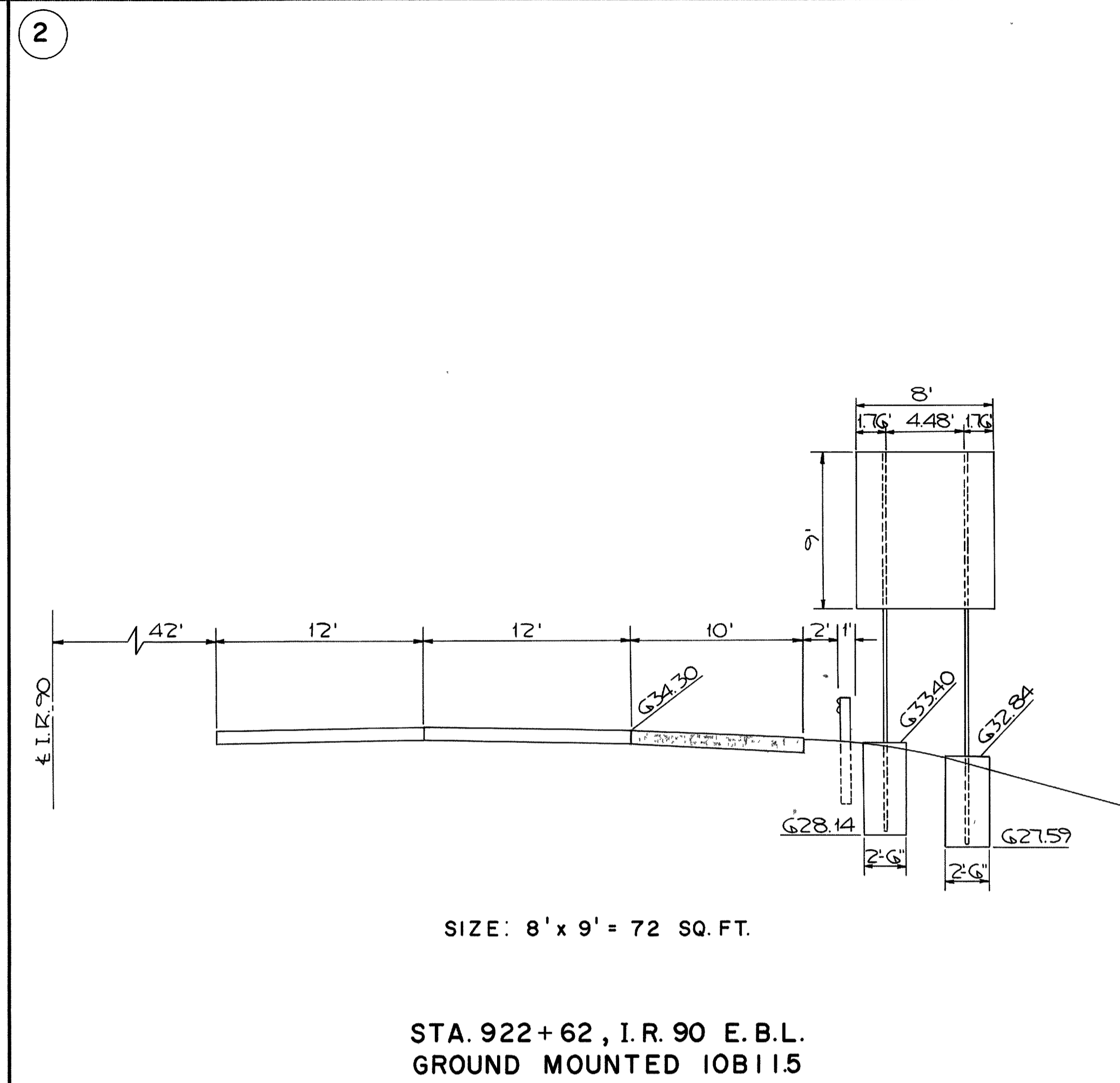
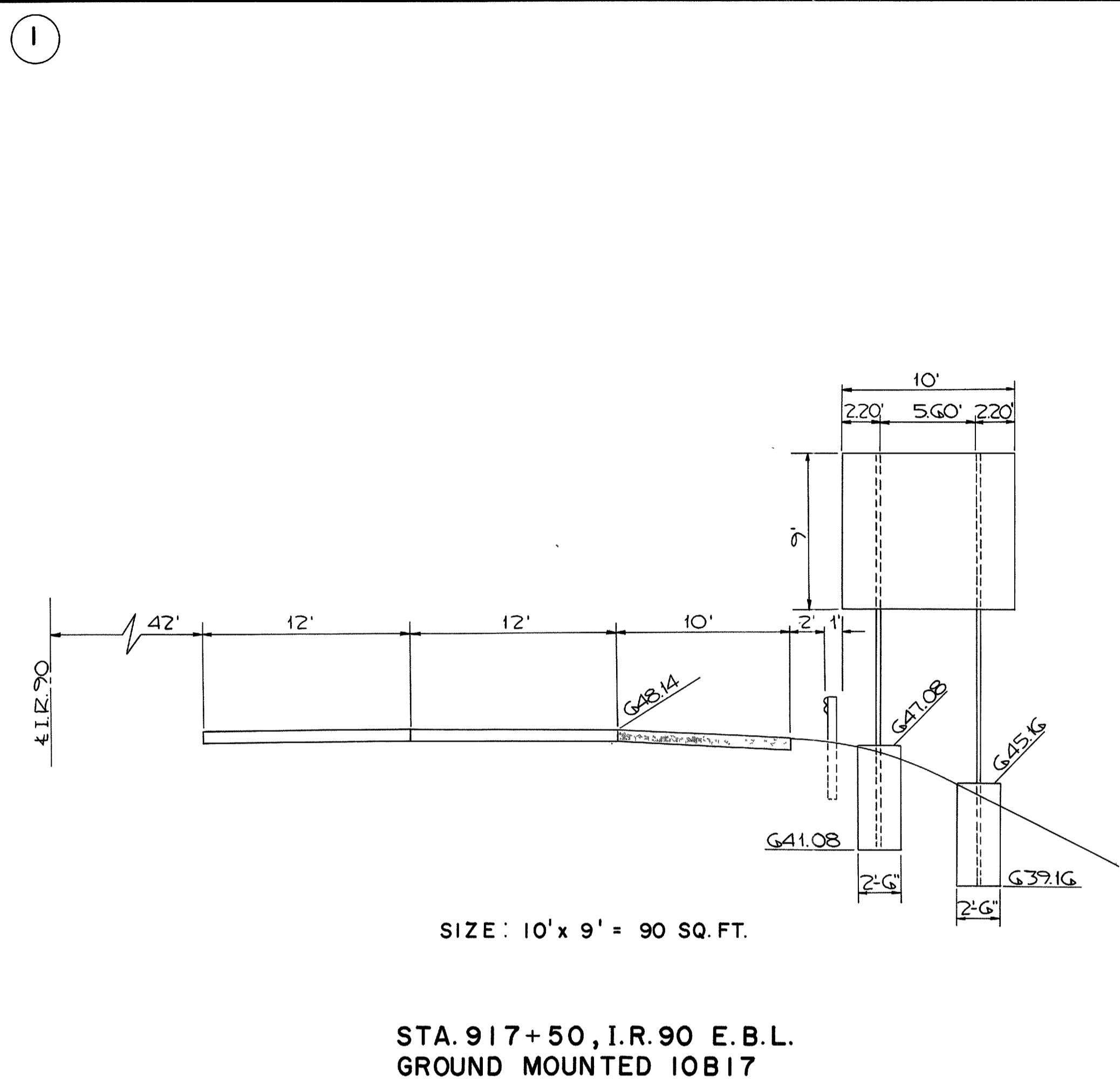


STA. 1015+00

STA. 1037+43

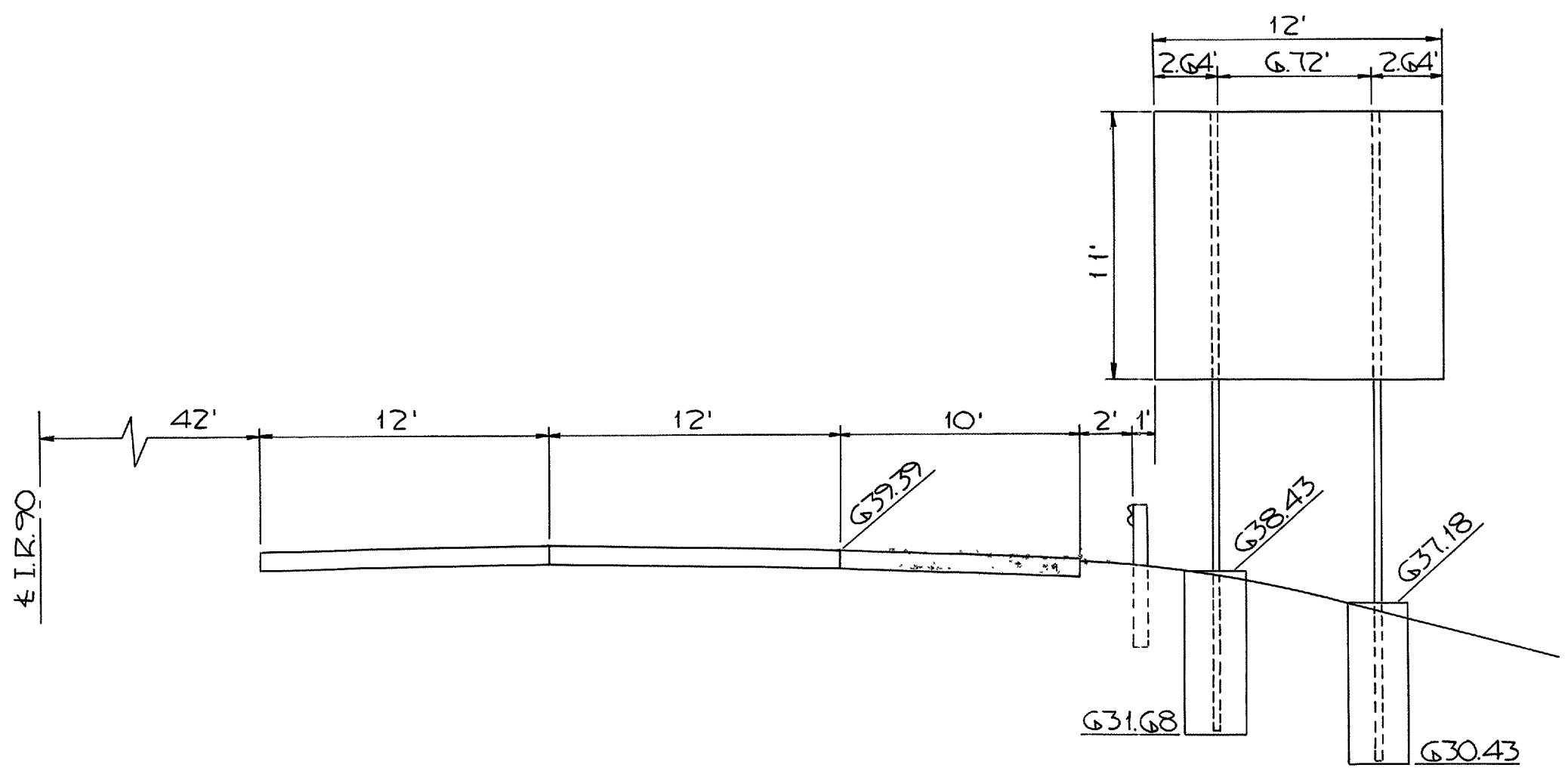


END PROJECT LOR.-90-17.21
 END PROJECT I-90-1(42)04
 BEGIN PROJECT LOR.-90-19.95
 BEGIN PROJECT I-90-1(43)06



SIGNING SUMMARY

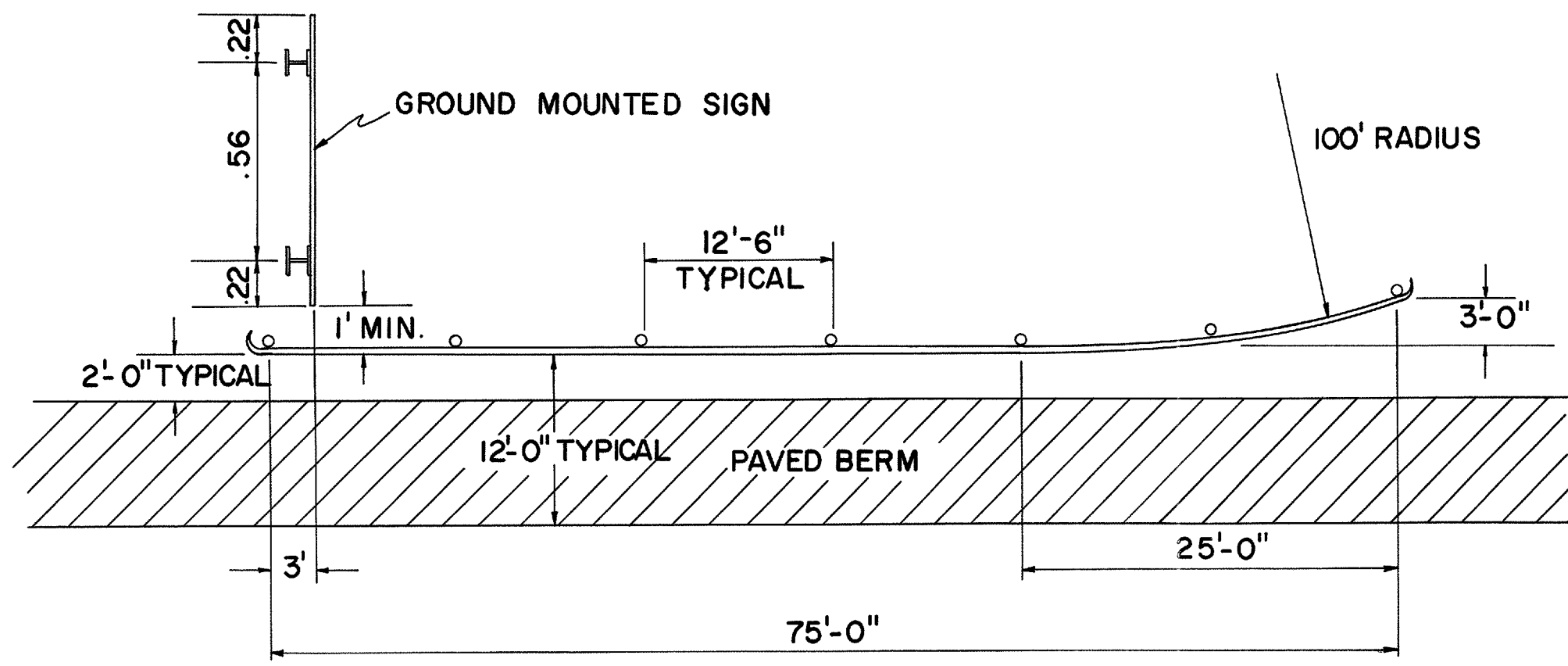
SIGN NUMBER	STATION	LOCATION	606	815	816					
			GUARD RAIL TYPE 4	SIGN ERECTION TYPE	CONCRETE FOUNDATION	STRUCTURAL SUPPORTS STEEL BEAM TYPE				
				GROUND MOUNTED		8#	10B11.5	10B17	12B22	12WF27
			LIN.FT	SQ.FT.	CU.YDS.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.
2	962+22	IR90	75	72	1.9		43.37			
3	970+83	IR-90		30	0.2	32.14				
4	984+05	IR-90		30	0.2	32.13				
5	992+51	IR-90	75	132	2.5				51.49	
6	1015+00	IR-90	75	154	2.9					55.09
7	1037+43	IR-90	75	132	2.5				52.17	
TOTAL PROJ. I-90-1(42)			300	550	10.2	64.27	43.37		103.66	55.09
1	917+50	IR-90		90	2.2				47.54	
TOTAL PROJ. IG-90-1(42)				90	2.2				47.54	



SIZE: 12' x 11' = 132 SQ. FT.

STA. 1037+43, I.R. 90 W.B.L.
GROUND MOUNTED 12B22

THE BOTTOM EDGE OF ALL GROUND MOUNTED SIGNS SHALL BE A MINIMUM DISTANCE OF 7' ABOVE THE NEAR EDGE OF PAVEMENT.



TRAFFIC FLOW ←
GUARD RAIL PROTECTION FOR GROUND MOUNTED SIGN

TRAFFIC CONTROL NOTES (SIGNING)

816 STRUCTURAL SUPPORTS STEEL BEAM(TYPE) AS PER PLAN

THE STRUCTURAL STEEL BEAM SUPPORTS SHALL BE GALVANIZED (AFTER PUNCHING) IN ACCORDANCE WITH ASTM A123. ALL BOLTS, NUTS, PLAIN AND LOCK WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153.

QUANTITIES FOR 816 STRUCTURAL SUPPORTS STEEL BEAM (TYPE), AS PER PLAN, APPEARING IN THE QUANTITY TABLE ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVANIZING OF SUPPORTS. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER LINEAL FOOT, WHICH PRICE AND PAYMENT SHALL INCLUDE ALL COSTS IN CONNECTION WITH THE EMBEDMENT OF THE SUPPORTS.

THE COST OF THE CONCRETE USED FOR EMBEDMENT SHALL BE A SEPARATE PAY ITEM.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS, AS PER PLAN

PAYMENT FOR THIS ITEM SHALL BE PER CUBIC YARD BASED ON APPROVED PLAN DIMENSIONS OR DIMENSIONS AS MODIFIED BY THE ENGINEER IN LIEU OF PLAN QUANTITIES AS SPECIFIED IN THE SUPPLEMENTAL SPECIFICATION 816.

FOUNDATION SHALL BE CONSTRUCTED IN THE MANNER CALLED FOR UNDER SUPPLEMENTAL SPECIFICATION 816. CONCRETE SHALL BE CLASS C.

SIGN ERECTION GUIDE TYPE, AS PER PLAN

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED ON THE SCHEMATIC SIGNING LAYOUT SHEETS 223 THRU 225 THE PANELS SHALL BE MOUNTED ON THE BEAM SUPPORTS PROVIDED IN THE PLANS.

A SCHEDULE FOR SIGN ERECTION SHALL BE SUBMITTED TO THE DIVISION TRAFFIC ENGINEER AND THE BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, SIXTY(60) CALENDAR DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE SHALL INCLUDE PROPOSED DATES, TIME, SIGN NUMBERS AND DELIVERY POINT.

THE PRICE BID PER SQUARE FOOT FOR 815 SIGN ERECTION, BY TYPE, AS PER PLAN, SHALL INCLUDE ALL NECESSARY EQUIPMENT, MANPOWER AND TOOLS TO ERECT THE SIGNS NOTED. ALL SIGN MATERIAL AND ACCESSORIES WILL BE FURNISHED AND TRANSPORTED TO A DESIGNATED DELIVERY POINT, ON OR NEAR THE SUBJECT PROJECT, BY OTHERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF THE SIGN PANELS AND ACCESSORIES FROM THE TIME OF ARRIVAL AT THE DELIVERY POINT.

COOPERATION - TRAFFIC CONTROL DEVICES

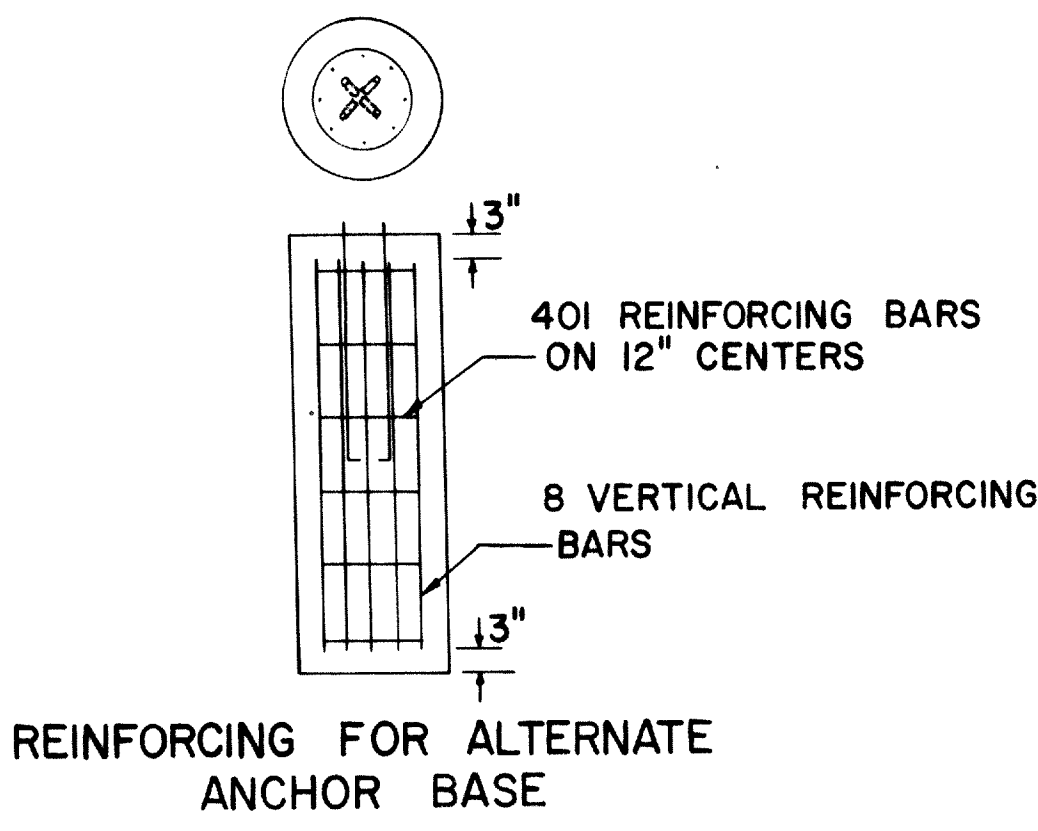
SEE SPECIFICATION 105.07

PROTECTIVE GUARD RAIL FOR GROUND MOUNTED SIGNS

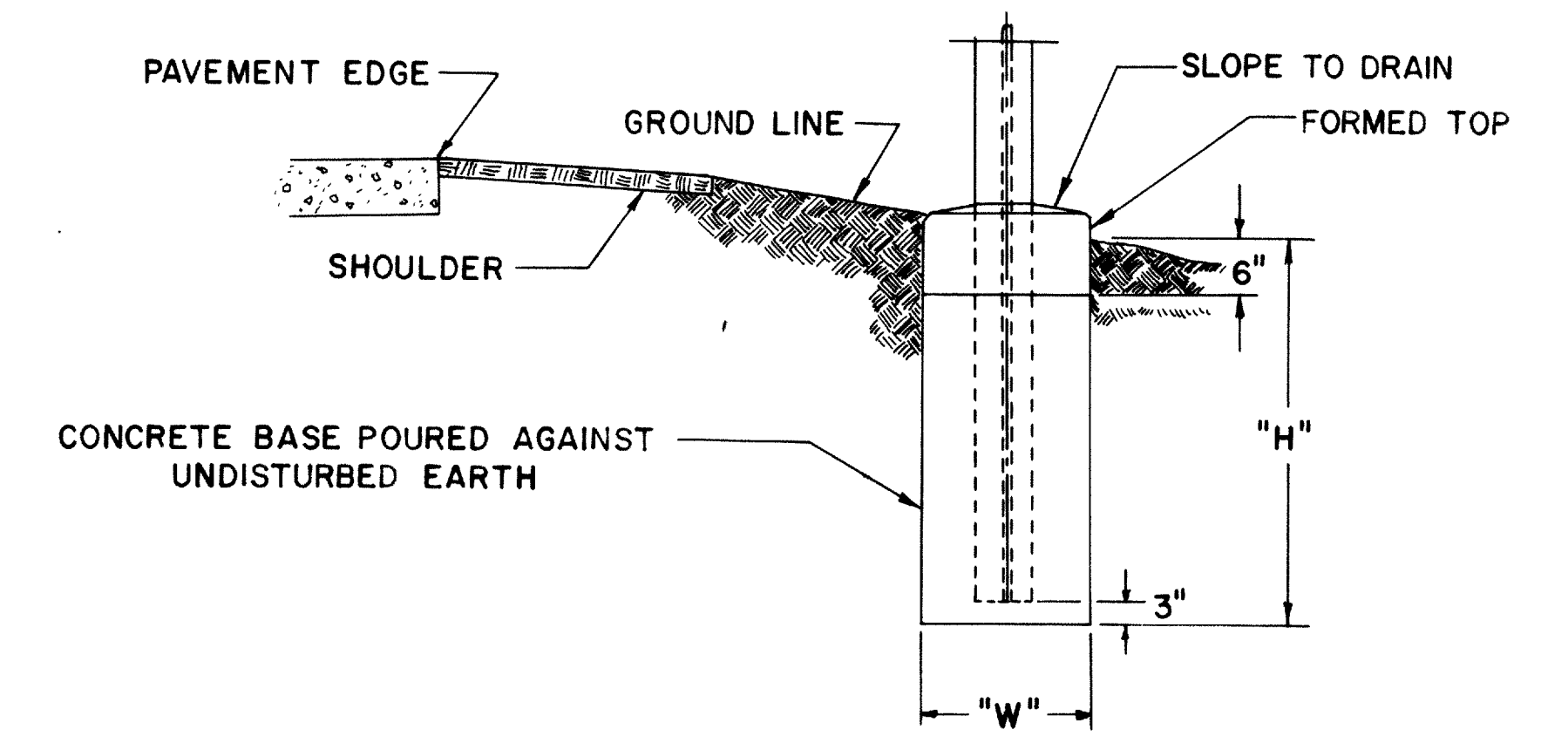
WHERE REQUIRED, AS INDICATED IN THE PLAN, SHALL CONFORM TO 606 GUARD RAIL TYPE 4. WHERE PROPOSED GUARD RAIL FLARES ARE CONSTRUCTED OF RAIL ELEMENTS WHICH HAVE NOT BEEN FABRICATED EXACTLY TO FIT

THE CURVATURE SHOWN ON THE PLANS. THE TWO END POSTS OF EACH FLARED SECTION SHALL BE ENCASED IN A MINIMUM OF 4" THICKNESS OF CLASS E CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND. PAYMENT FOR ENCASEMENT, IF REQUIRED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR 606 GUARD RAIL TYPE 4.

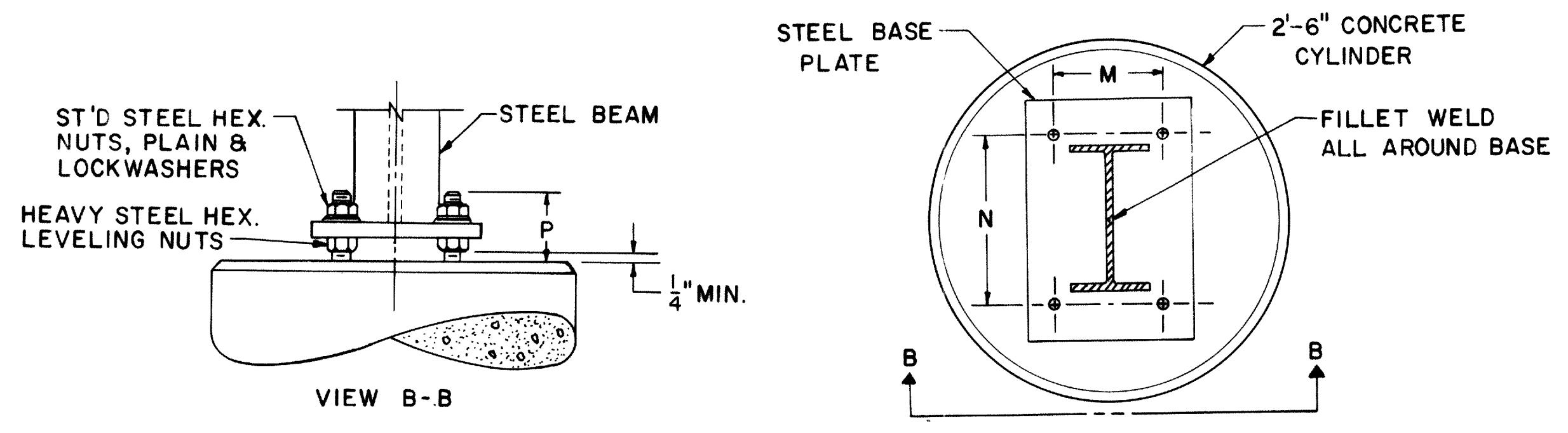
BEAM SIZE	ANCHOR BOLTS		BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST	MARK	TYPE	NO.	LENGTH	WEIGHT FOR 1 POST
	DIA.	LENGTH														
10 B11.5	3/4"	3'-0"	7/8" x 6" x 18"	7/8"	3 1/2"	14"	3 1/2"	1/4"	5.25'	2'-6"	1.9	401	101	6	7'-6"	45
												402	STR.	8	5'-0"	
10 B17	1"	3'-6"	7/8" x 6" x 18"	1 1/8"	3 3/4"	14"	4 1/4"	1/4"	6.0'	2'-6"	2.2	401	101	7	7'-6"	52
												403	STR.	8	5'-9"	
12 B22	1"	4'-0"	1" x 9" x 19"	1 1/8"	5 1/2"	15"	4 1/4"	1/4"	6.75'	2'-6"	2.5	401	101	8	7'-6"	61
												404	STR.	8	7'-0"	
12 WF27	1 1/4"	4'-0"	1" x 9" x 19"	1 3/8"	5 1/2"	15"	5 1/4"	1/4"	8.0'	2'-6"	2.9	401	101	9	7'-6"	94
												501	STR.	8	8'-0"	
14 WF30	1 1/4"	4'-0"	1" x 11" x 20"	1 3/8"	7 1/2"	16"	5 1/4"	5/16"	8.25'	2'-6"	3.0	401	101	10	7'-6"	101
												502	STR.	8	8'-6"	
14 WF34	1 1/4"	4'-0"	1" x 12" x 22"	1 3/8"	9"	18"	5 1/4"	5/16"	9.0'	2'-6"	3.3	401	101	10	7'-6"	103
												503	STR.	8	9'-9"	
16 WF36	1 1/2"	5'-0"	1 1/4" x 14" x 23"	1 5/8"	10"	19"	6"	5/16"	9.75'	2'-6"	3.5	401	101	11	7'-6"	145
												601	STR.	8	9'-3"	
16 WF40	1 1/2"	5'-6"	1 1/4" x 14" x 24"	1 5/8"	10"	20"	6"	5/16"	10.0'	2'-6"	3.6	401	101	11	7'-6"	148
												602	STR.	8	9'-6"	
16 WF45	1 1/2"	6'-0"	1 1/4" x 14" x 24"	1 5/8"	10"	20"	6"	5/16"	10.5'	2'-6"	3.8	401	101	11	7'-6"	155
												603	STR.	8	10'-0"	
18 WF50	1 3/4"	7'-6"	1 1/2" x 14" x 26"	1 7/8"	10"	22"	6 3/4"	5/16"	11.5'	2'-6"	4.2	401	101	12	7'-6"	164
												604	STR.	8	10'-6"	



BEAM SIZE	DIM. W	DIM. H	CU. YDS. CONC. 2 POST
4# POST	1'-0"	4.0'	0.2
4# BEAM	1'-0"	4.0'	0.2
6# BEAM	1'-0"	4.0'	0.2
8# BEAM	1'-0"	4.0'	0.2
10 B11.5	2'-6"	5.25'	1.9
10 B17	2'-6"	6.0'	2.2
12 B22	2'-6"	6.75'	2.5
12 WF27	2'-6"	8.0'	2.9
14 WF30	2'-6"	8.25'	3.0
14 WF34	2'-6"	9.0'	3.3
16 WF36	2'-6"	9.75'	3.5
16 WF40	2'-6"	10.0'	3.6
16 WF45	2'-6"	10.5'	3.8
18 WF50	2'-6"	11.5'	4.2



FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS



ALTERNATE ANCHOR BASE DETAILS

NOTES

PLAN QUANTITIES FOR POSTS AND STRUCTURAL SUPPORTS ARE BASED UPON THE "FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS".

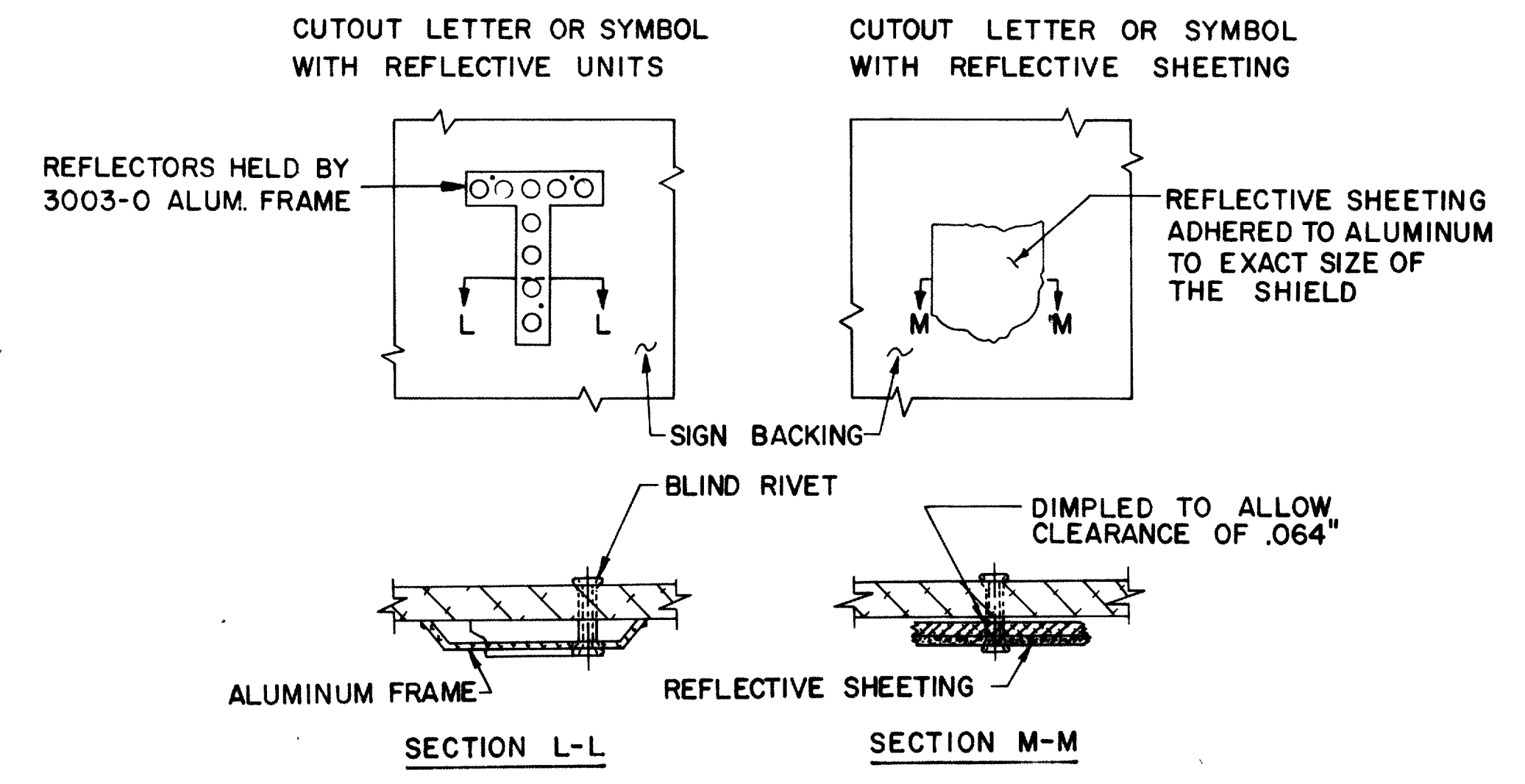
IF THE CONTRACTOR ELECTS TO USE THE METHOD SHOWN FOR "ALTERNATE ANCHOR BASE DETAILS", THE PLAN QUANTITY OF EMBEDDED BEAM ONLY WILL BE ALLOWED IN EXCHANGE AND FULL PAYMENT FOR THE BASE PLATE, ANCHOR BOLTS AND REINFORCING STEEL.

WHERE ANCHOR BASES ARE USED, THE BEAM SIZE SHALL DETERMINE THE ANCHOR BOLT AND BASE PLATE SIZE.

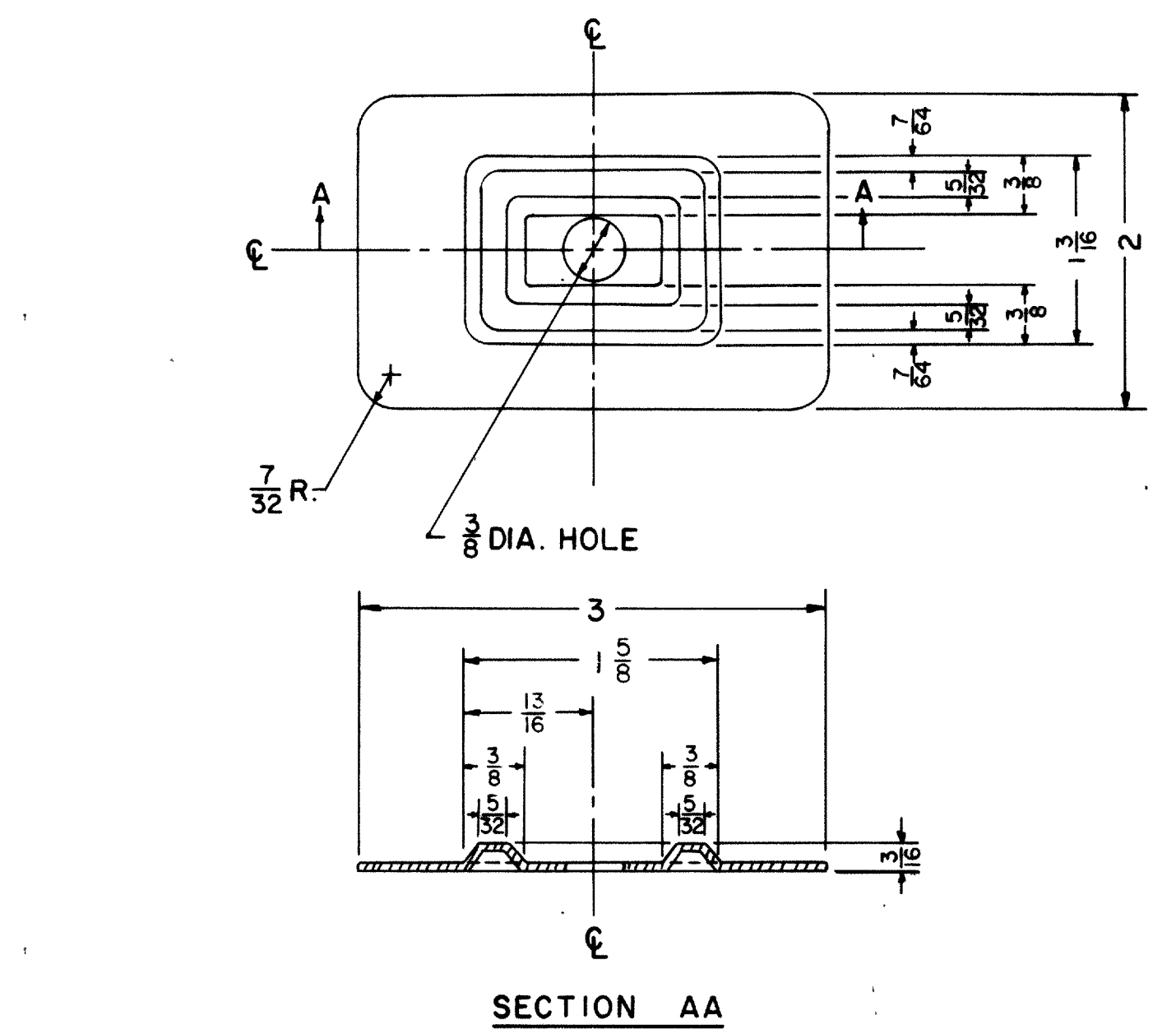
DEMOUNTABLE UNITS SHALL BE ATTACHED TO THE ALUMINUM PANELS WITH ALUMINUM BLIND RIVETS. CARE SHALL BE TAKEN TO INSURE THAT ALL SEGMENTS OF EACH LETTER OR SYMBOL ARE SECURELY AFFIXED TO THE BACKING. LETTERS CONTAINING REFLECTIVE UNITS SHALL BE FASTENED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

DEMOUNTABLE SHEILDS SHALL BE AFFIXED TO THE BACKING UTILIZING 5/16" TRUSS HEAD BOLTS, PLAIN AND LOCKWASHERS FOR HOLE LOCATION DETAILS SEE SHEET NO. _____

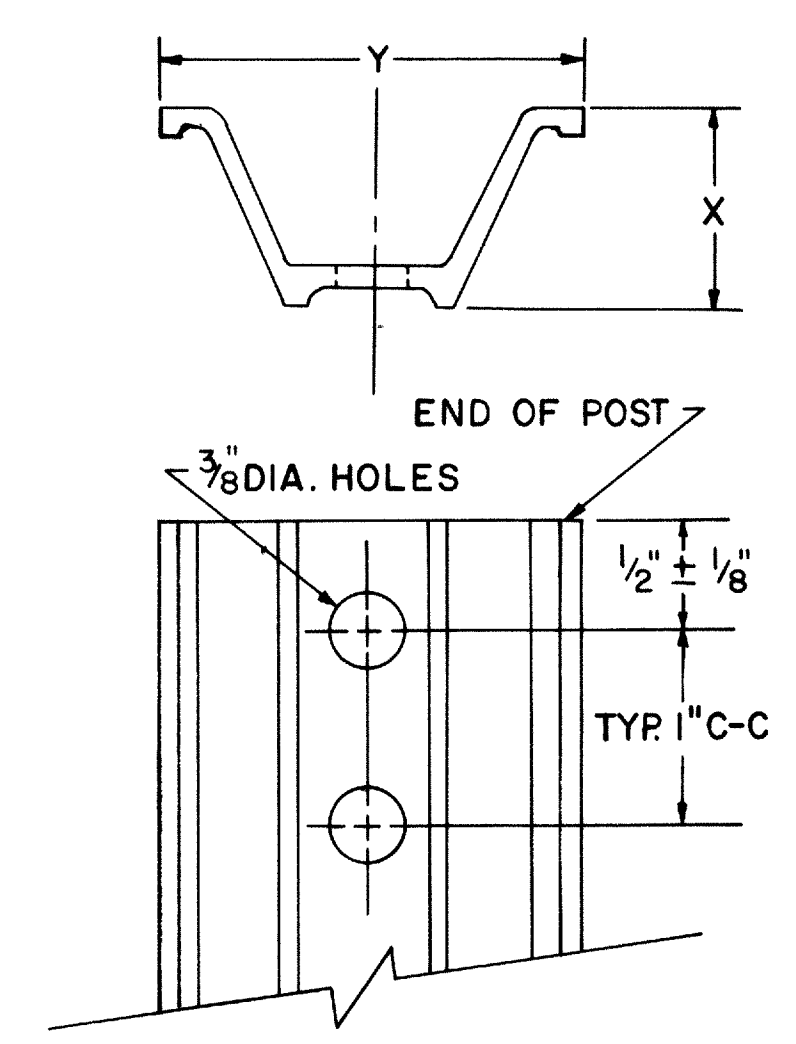
IN LIEU OF THE .040" THICK FRAME SPECIFIED IN SUPPLEMENTAL SPECIFICATION 815.08, THE FRAMES FOR THE REFLECTIVE UNITS IN THE SIGN OUTLINES ONLY, MAY BE .032" THICK ALUMINUM. (A.S.T.M. B209G311A-T6)



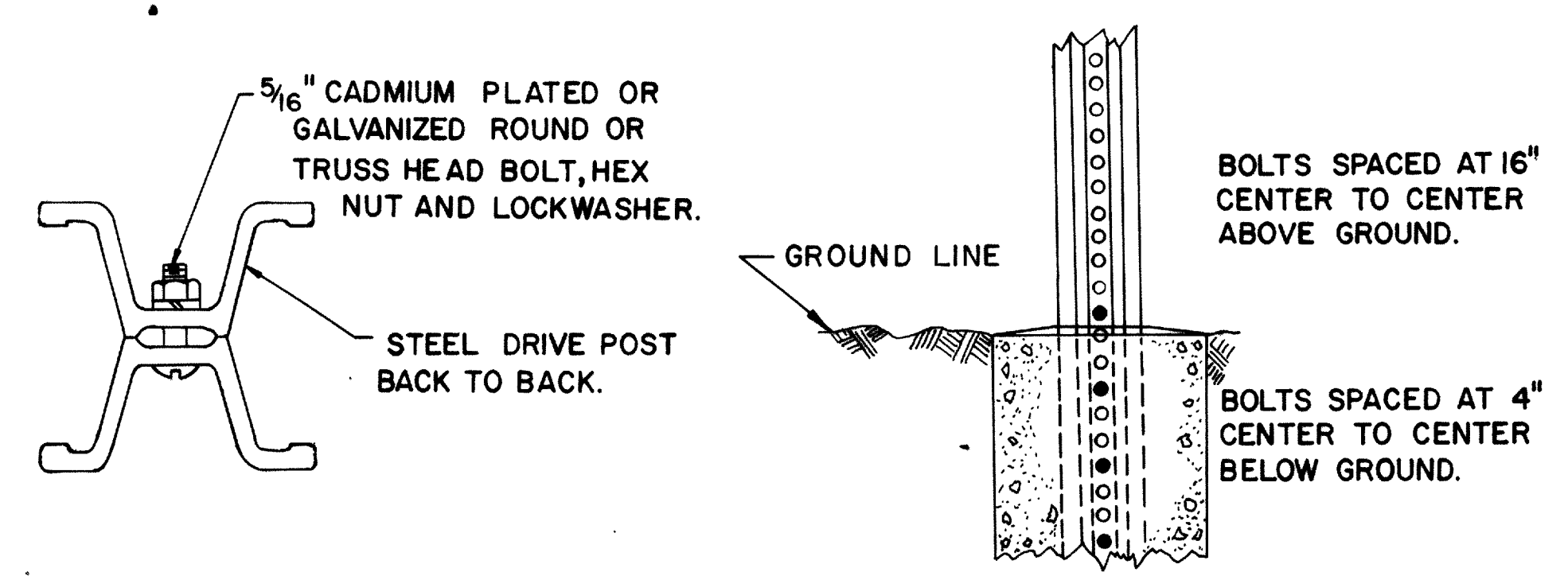
DEMOUNTABLE LETTERS & SYMBOLS



NOTE: THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE. METAL SHALL BE 16 GAUGE STEEL. ALL DIMENSIONS ARE IN INCHES.



WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 1/32"	3 1/16"
3.00 #	1 1/8"	3 1/2"
4.00 #	2"	3 5/8"



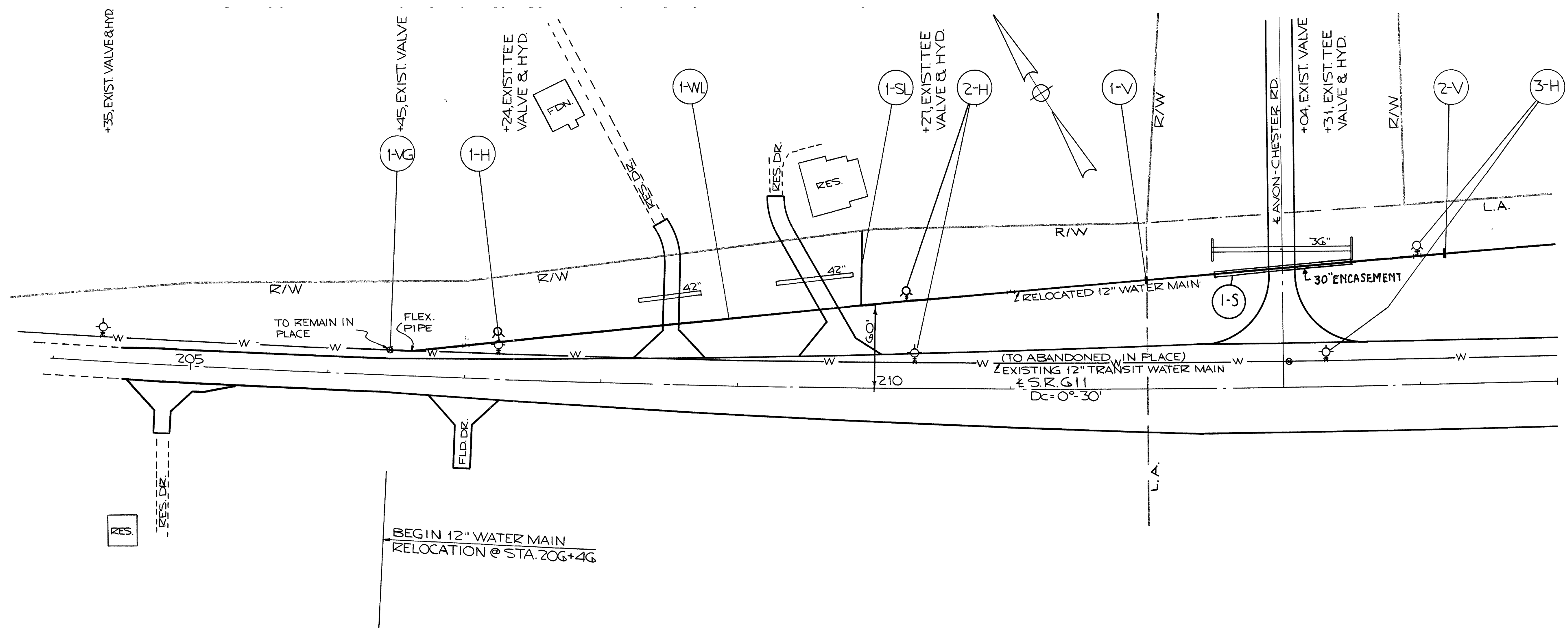
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

MISCELLANEOUS SIGNING ITEMS

MSI

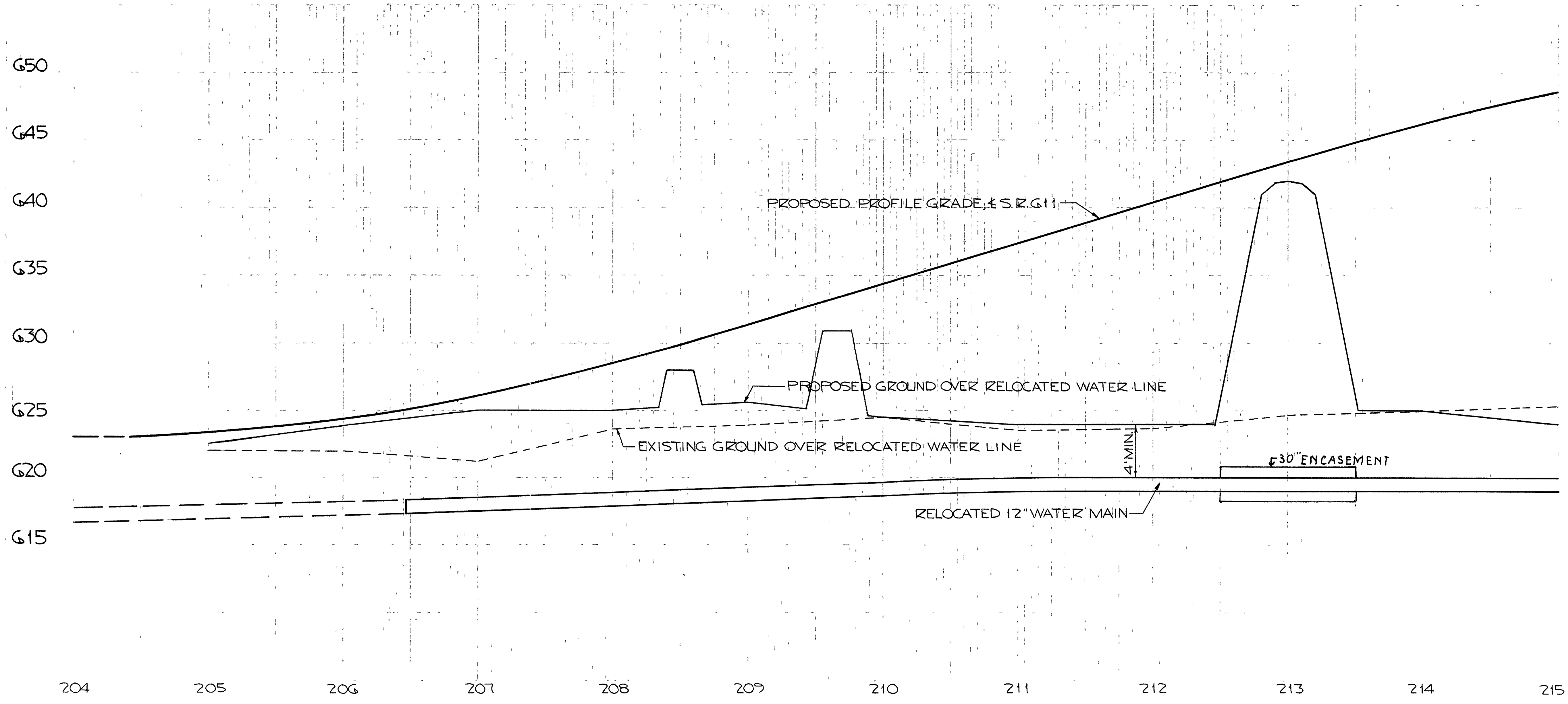
DATE 10-29-63
8-19-64
10-13-65

APPROVED *Fred C. Taylor*
ENGINEER OF TRAFFIC

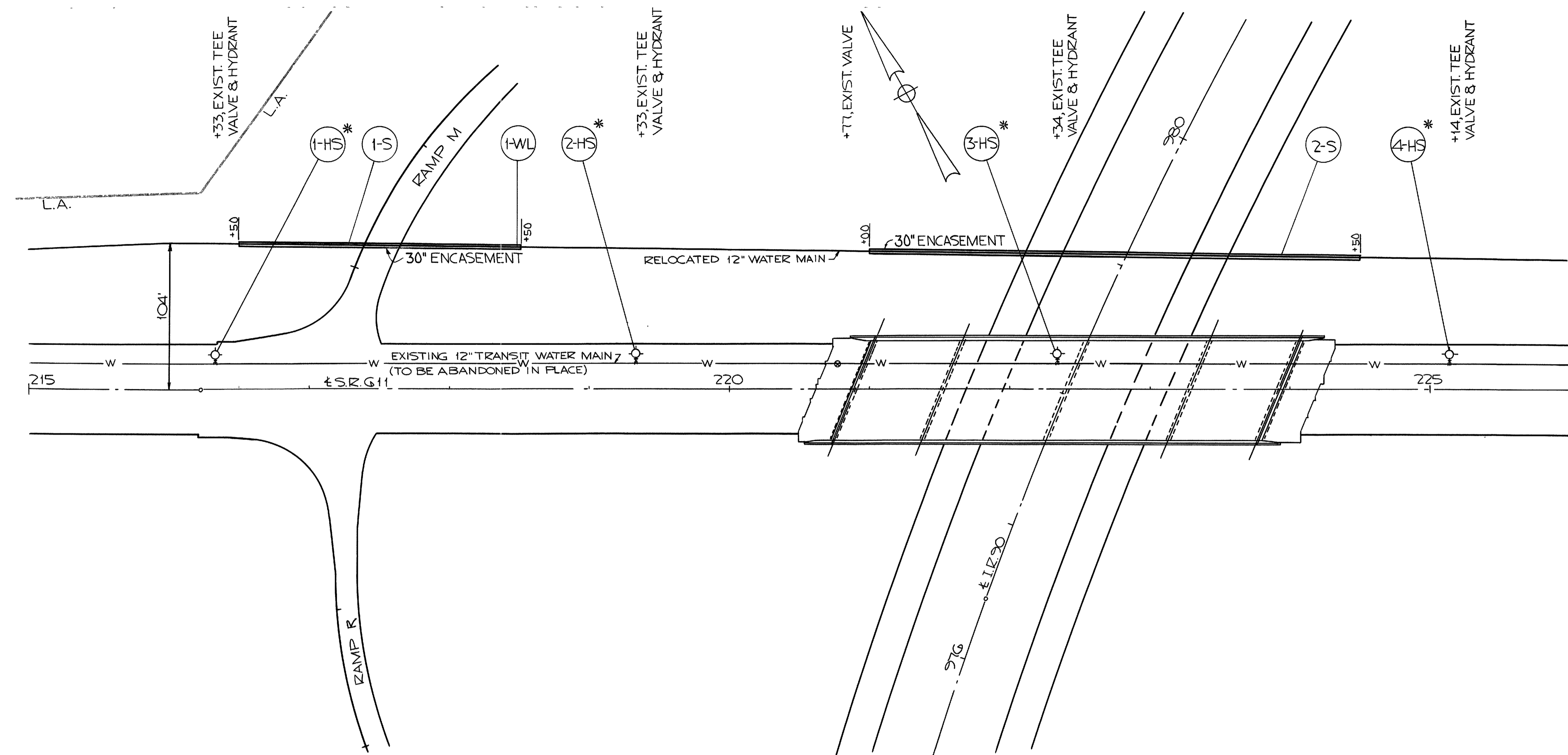


REFERENCE NO.	SIDE	STATION		814	814	814	814	814	814	814	814	814	814	
		FROM	TO	NEW WATER MAIN ASBESTOS CEMENT	NEW WATER MAIN ASBESTOS CEMENT	NEW SERVICE MAIN BRANCHES (COPPER)	FIRE HYDRANTS	GATE VALVES REMOVED AND RESET	GATE VALVES AND BOXES	GATE VALVES AND BOXES	ENCASEMENT FOR WATER MAINS	FITTINGS CAST I.P.	VALVE BOX TO ADJUSTED STOP WITH 90° ELL AND GASKET	CORPORATION
1-VG	LT.	206+45												
1-S	LT.	212+50	213+50								100			
1-H	LT.	207+24		8			1	1						
1-WL	LT.	206+46	215+00		848									
1-SL	LT.	209+90				52								
2-H	LT.	210+22		6			1	1						
1-V	LT.	212+00							1					
2-V	LT.	214+20							1					
3-H	LT.	214+00		6			1	1						
TOTALS					20	848	52	3	3	2	100	3	1	1

SEE S.R.G. 11 CROSS SECTIONS FOR FIRE HYDRANT DETAILS

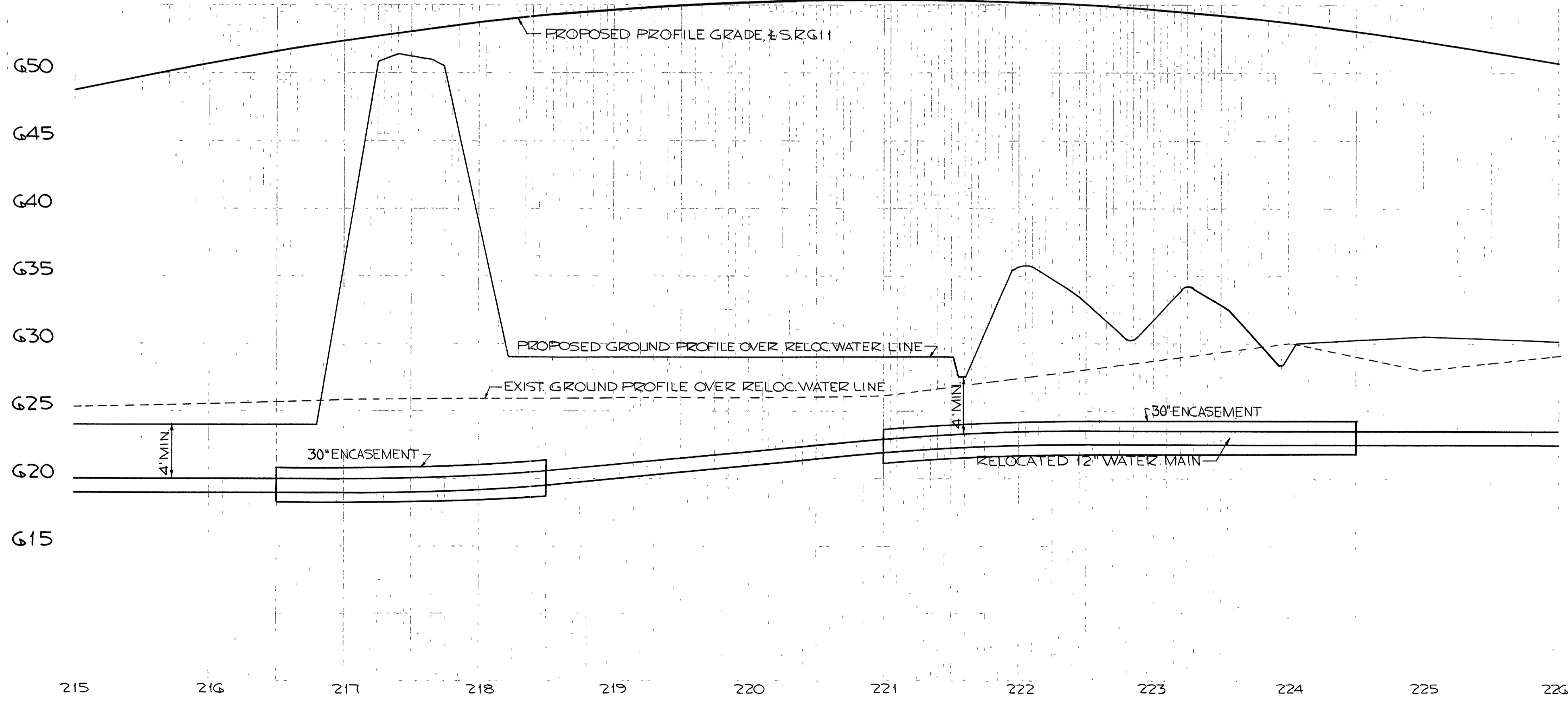


LOR-90-17.21

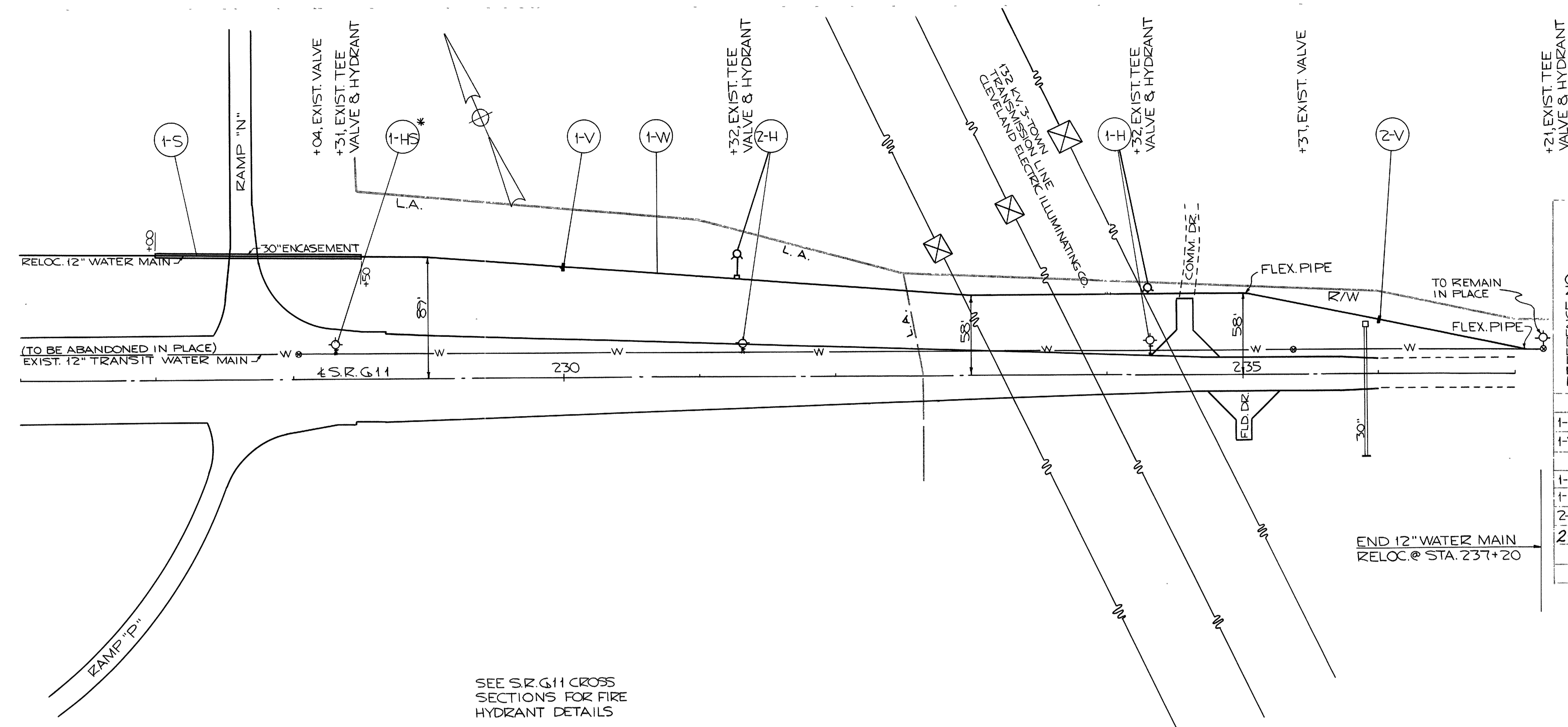


REFERENCE NO.	SIDE	STATION		814 NEW WATER MAIN ASBESTOS LEMENT PIPE CLASS 150 12" LIN.FT.	814 ENCASE- MENT FOR WATER MAINS AS PER PLAN CONDUIT 707.08 30" LIN.FT.
		FROM	TO		
1-WL	LT.	215+00	226+00	1099	
1-S	LT.	216+50	218+50		200
2-S	LT.	221+00	224+50		350
TOTALS				1099	550

* 1,2,3 & 4-HS ARE EXISTING FIRE HYDRANTS TO BE REMOVED BY THE CITY OF AVON PRIOR TO CONSTRUCTION.



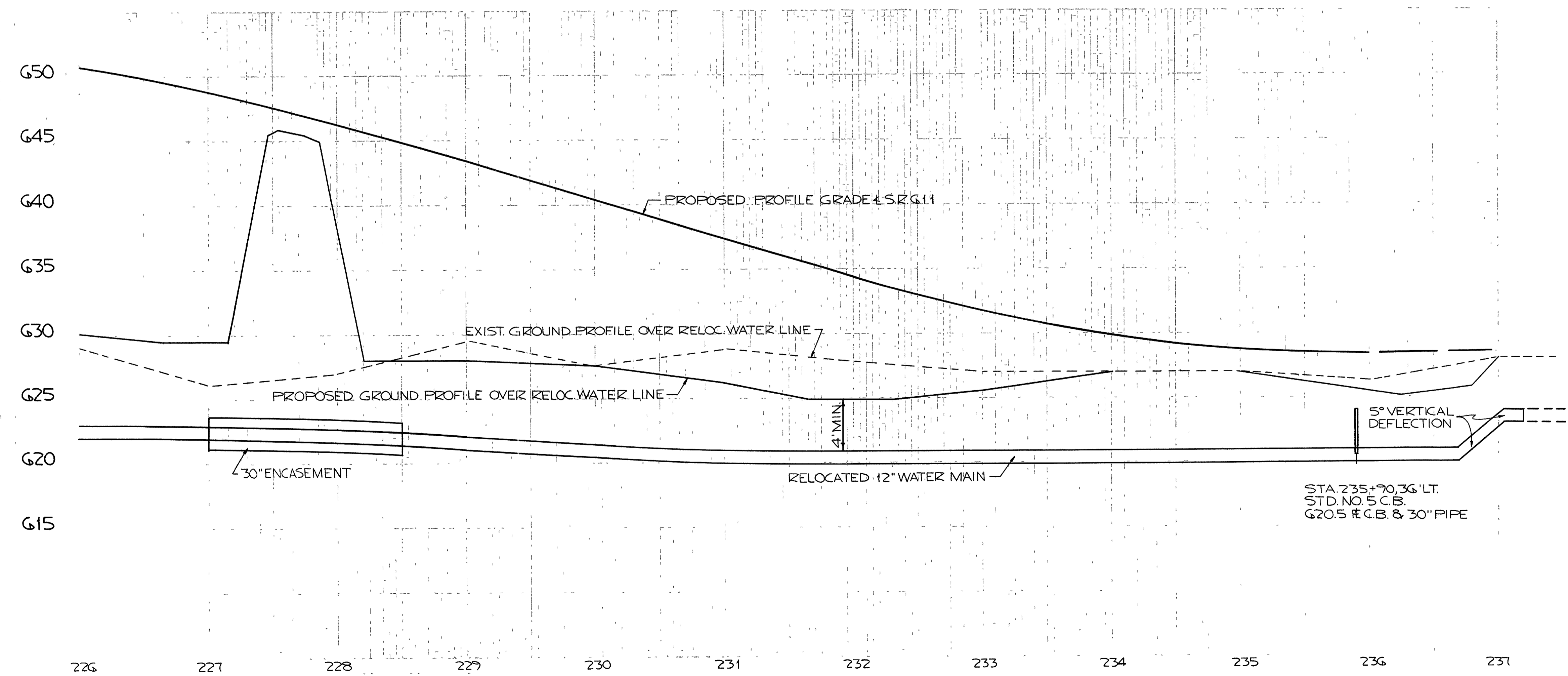
LOR-90-17.21



REFERENCE NO.	SIDE	STATION		NEW WATER MAINS ASBESTOS CEMENT LIN. FT.	NEW WATER MAINS ASBESTOS CEMENT LIN. FT. EACH	GATE VALVES AND BOXES AS PER PLAN	GATE VALVES AND BOXES AS PER PLAN	ENCASEMENT FOR WATER MAINS AS PER PLAN	FITTINGS AND CAST I. RESET AS PER PLAN	FIRE HYDRANTS TO BE REMOVED AND RESET AS PER PLAN	
		FROM	TO								
1-V	LT.	230+00									
1-W	LT.	226+00	237+20		1114						
1-H	LT.	234+30		6		1			1	1	
1-S	LT.	227+00	228+50					150			
2-V	LT.	236+00				1					
2-H	LT.	231+30		18		1			1	1	
TOTALS					24	1114	2	2	150	2	2

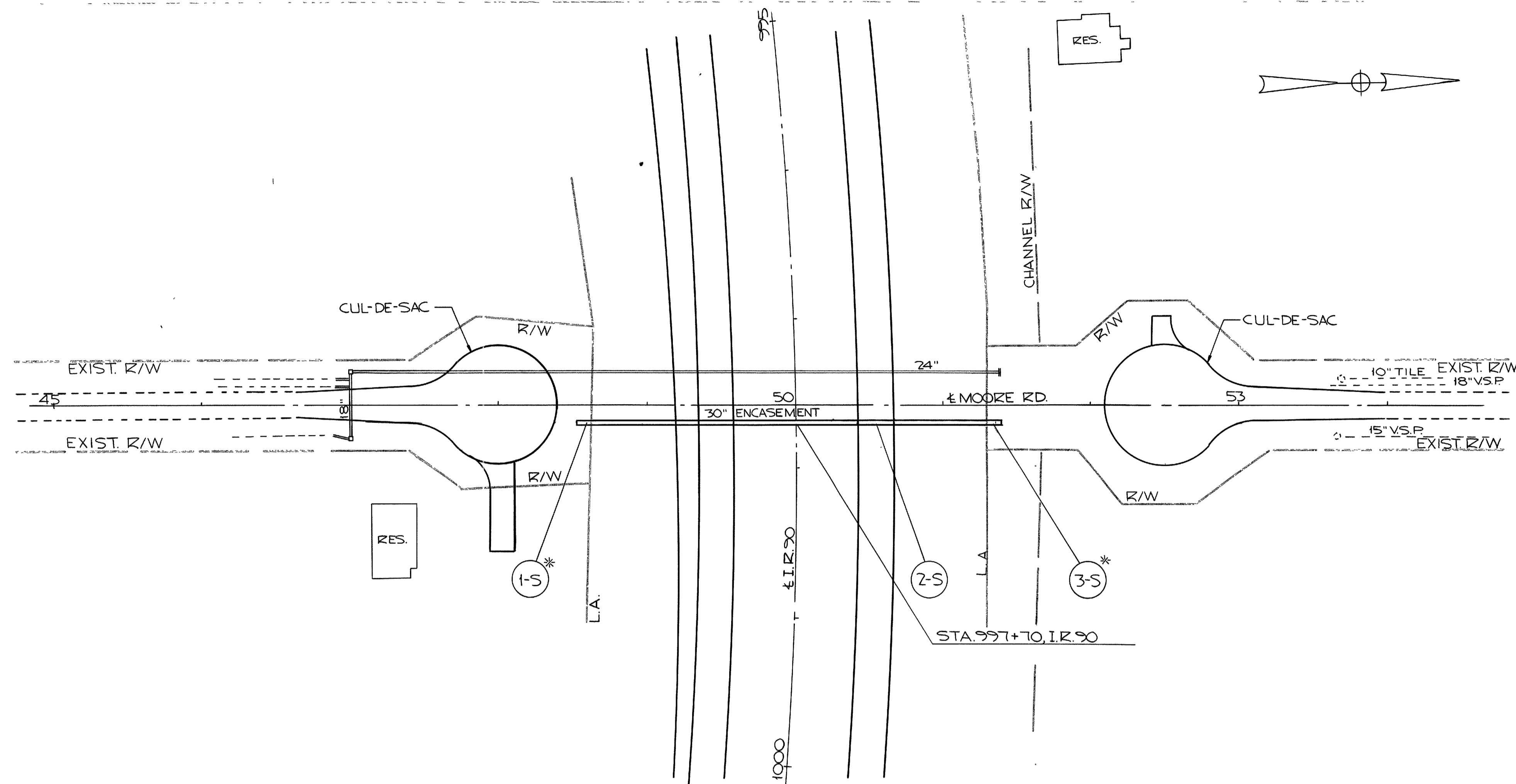
* EXISTING FIRE HYDRANT TO BE REMOVED BY THE CITY OF AVON PRIOR TO CONSTRUCTION.

SEE S.R.G.11 CROSS SECTIONS FOR FIRE HYDRANT DETAILS



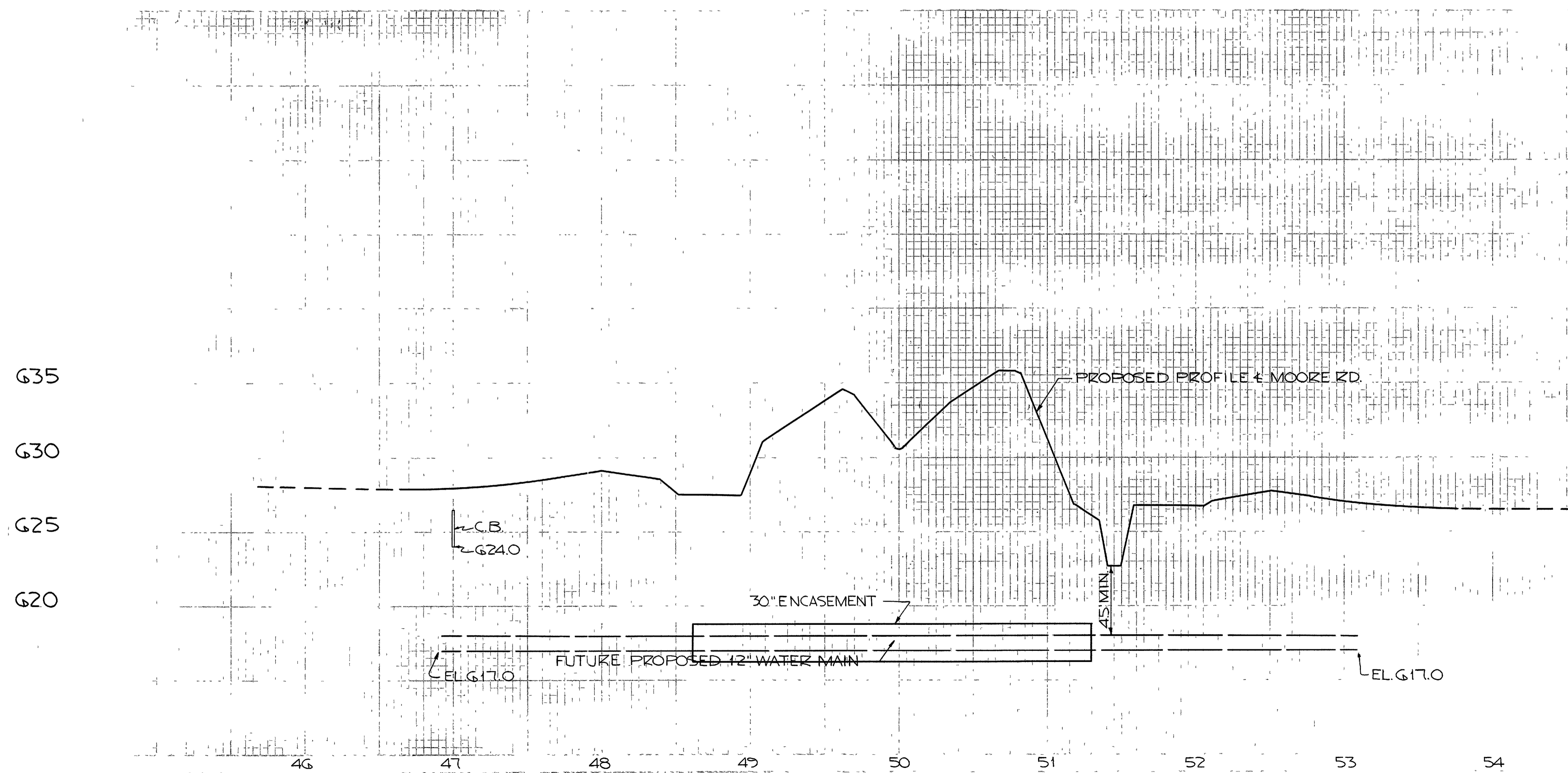
STA. 235+90, 36" LT. STD. NO. 5 C.B. G20.5 R.C.B. & 30" PIPE

Rev. 11-3-66

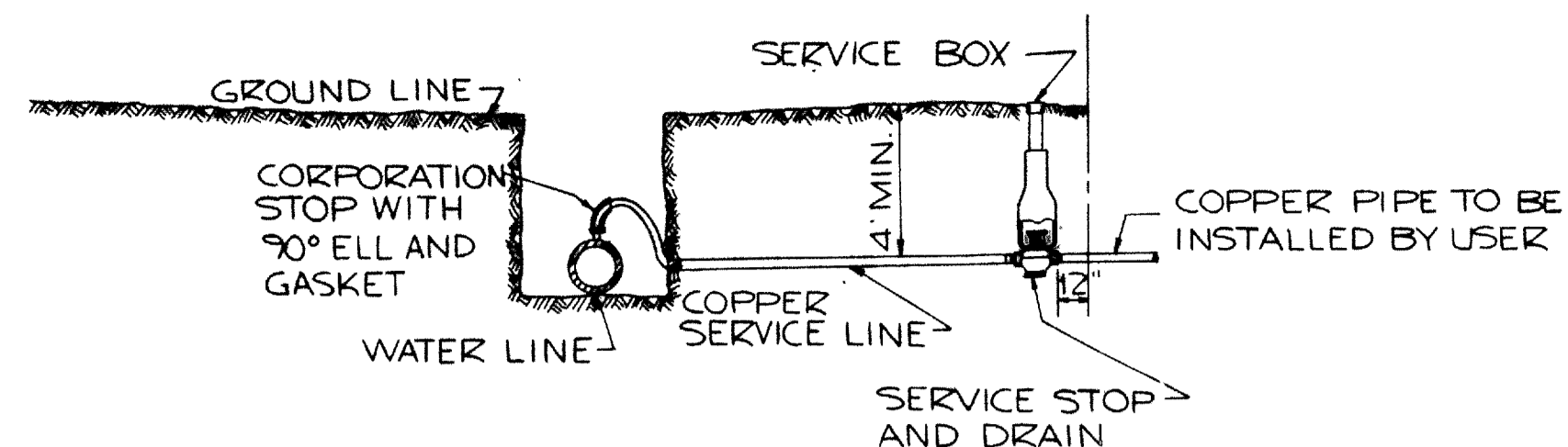


REFERENCE NO.	SIDE	STATION		100% STATE	100% CITY OF AVON
		FROM	TO	ENCASEMENT FOR WATER MAIN AS PER PLAN CONDUIT 70708 30" LIN. FT.	ENCASEMENT FOR WATER MAIN AS PER PLAN CONDUIT 70708 30" LIN. FT.
1-S	RT.	48+52	48+62		10
3-S	RT.	51+29	51+39		10
TOTALS				267	20

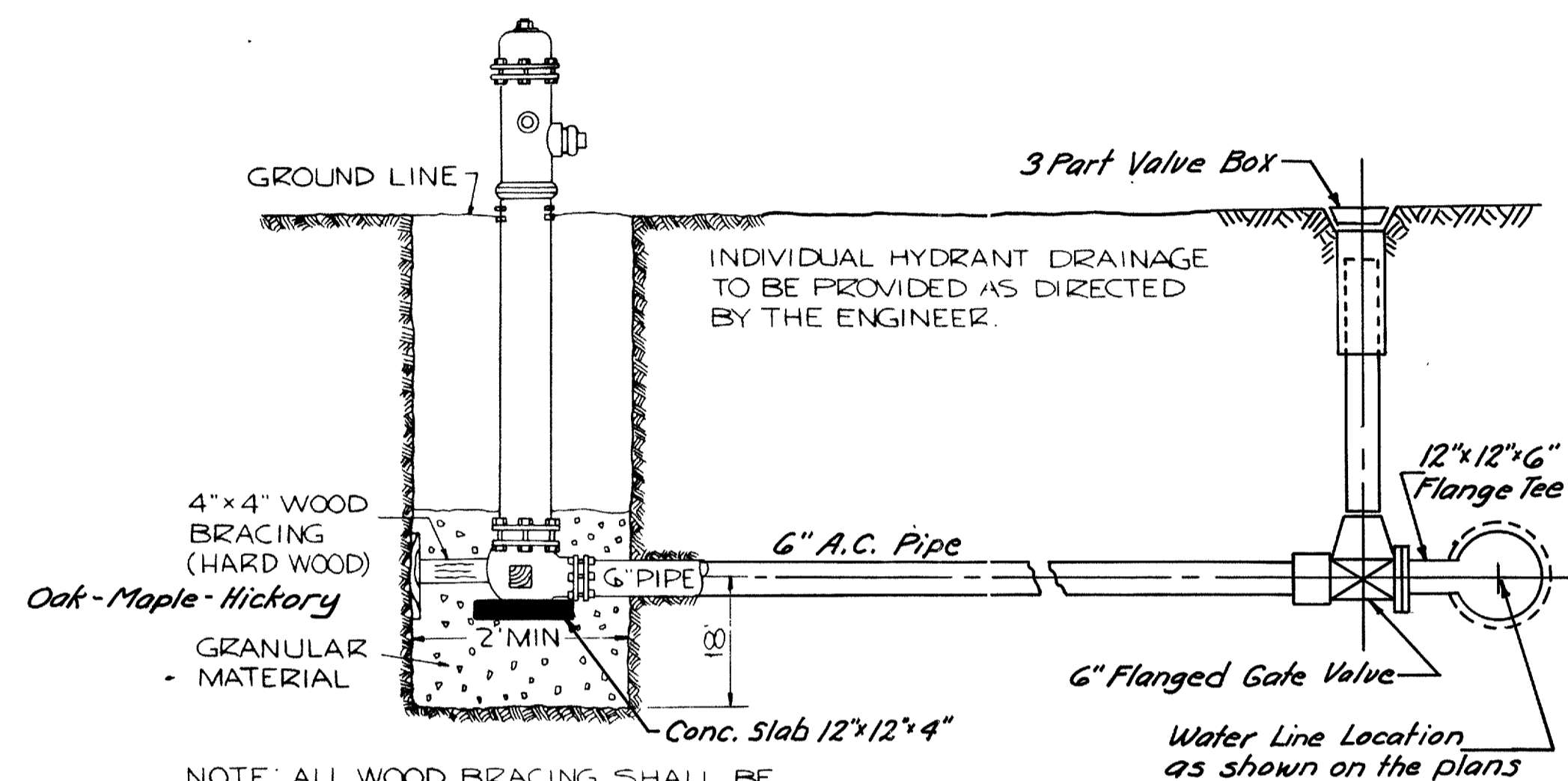
*NOTE: THE OPEN ENDS OF THE 30" ENCASEMENT ARE TO BE PROVIDED WITH A WATER TIGHT BULKHEAD. COST OF BULKHEADING TO BE INCLUDED IN THE UNIT PRICE BID FOR ENCASEMENT FOR WATER MAIN AS PER PLAN.



WATER MAIN NOTES



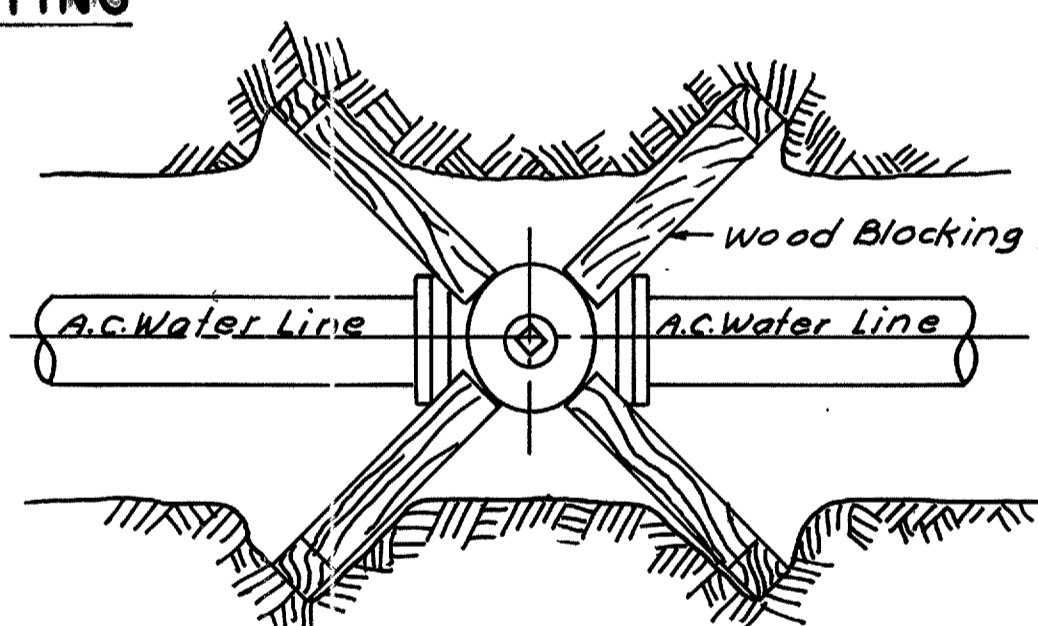
TYPICAL SERVICE LINE INSTALLATION



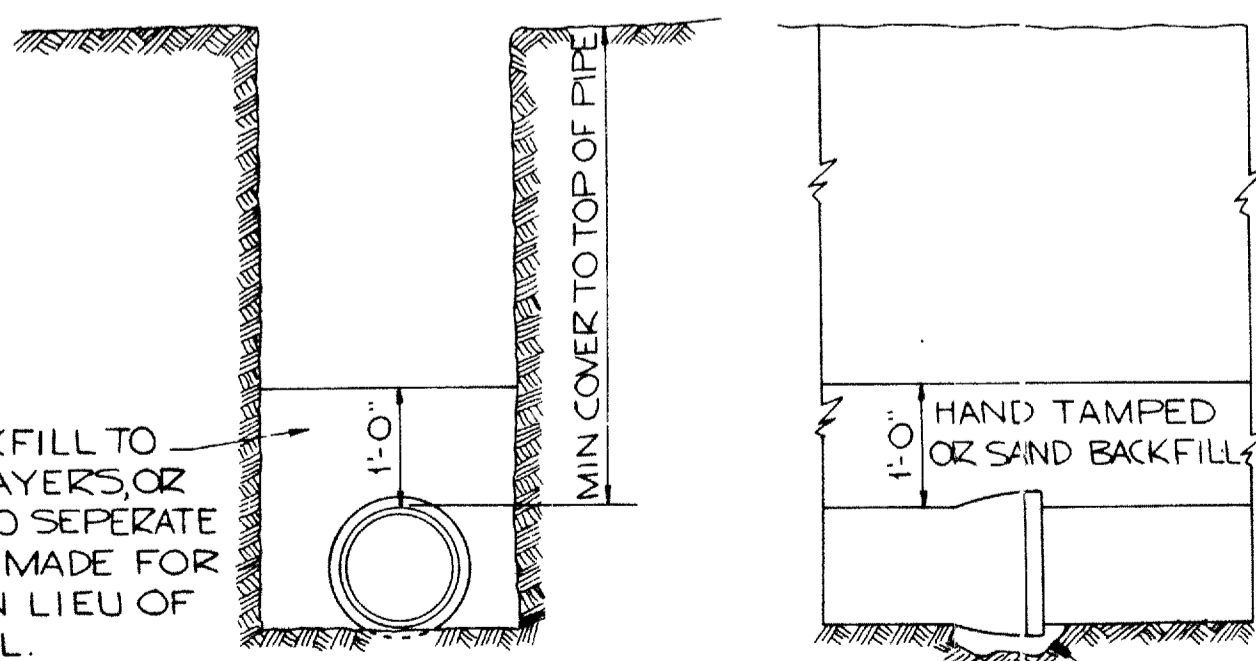
NOTE: ALL WOOD BRACING SHALL BE CREOSOTED BEFORE INSTALLATION

DETAIL OF HYDRANT SETTING

PIPE DIAM.	TRENCH WIDTH
6"	1'-6"
12"	2'-6"



TYPICAL "V" BLOCKING
No Scale



HAND TAMPED BACKFILL TO BE PLACED IN 6" LAYERS OF SAND BACKFILL NO SEPERATE PAYMENT WILL BE MADE FOR SAND BACKFILL IN LIEU OF TAMPED BACKFILL. TRENCH TO BE HAND FORMED TO RECEIVE PIPE BARREL.

NOTE: WATER LINES SHALL HAVE A MINIMUM OF 4' COVER FROM FINISHED GROUND TO TOP OF PIPE.

NOTE: THE CONTRACTOR MAY BED THE PIPE ON 6" OF SAND IN LIEU OF BELL HOLES, HOWEVER NO SPECIFIC PAYMENT FOR SUCH BEDDING SHALL BE MADE.

PIPE INSTALLATION DETAIL

VALVES

DESCRIPTION. UNDER THIS ITEM THE CONTRACTOR SHALL FURNISH AND INSTALL ALL VALVES AND VALVE BOXES CALLED FOR ON THE PLANS. INCLUDED SHALL BE GATE VALVES AND CORPORATION STOPS.

GATE VALVES. VALVES SHALL CONFORM IN ALL RESPECTS WITH AMERICAN WATER WORKS ASSOCIATION SPECIFICATION C-500 FOR GATE VALVES FOR ORDINARY WATER WORKS SERVICE.

VALVES SHALL BE FURNISHED WITH DOUBLE-DISC GATES, AND WITH NON-RISING STEMS. ALL VALVES SHALL OPEN BY TURNING THE STEM IN A COUNTER-CLOCKWISE DIRECTION. 12" VALVES SHALL BE FURNISHED WITH ENDS OF THE SAME MANUFACTURE AS THE CEMENT ASBESTOS WATER MAIN. 6" VALVES SHALL BE FLANGED ON ONE END SO THAT THEY MAY BE BOLTED DIRECTLY TO THE TEES. VALVES SHALL BE FURNISHED WITH 2 INCH SQUARE OPERATING NUTS. NUTS SHALL HAVE AN ARROW AND THE WORD "OPEN" CAST THEREON TO INDICATE THE DIRECTION OF TURNING TO OPEN THE VALVE.

ALL VALVES SHALL BE INSTALLED WITH VALVE BOXES OF APPROPRIATE LENGTH. Line Valves shall be thrust blocked. THE MANUFACTURER OF THE VALVES FURNISHED UNDER THIS ITEM SHALL FURNISH A SWORN STATEMENT THAT THE INSPECTIONS AND TESTS REQUIRED BY AWWA SPECIFICATION C-500 HAVE BEEN MADE AND PERFORMED AND THAT THE VALVES FURNISHED COMPLY WITH THE SPECIFICATIONS IN ALL RESPECTS.

VALVE BOXES FOR VALVES 12" IN SIZE AND UNDER SHALL BE BUFFALO TYPE, THREE PIECE VALVE BOX WITH #160 BASE, CAST IRON, 5-1/4" SCREW TYPE SHAFT. EACH BOX SHALL BE COMPLETE WITH LID, WITH THE WORD "WATER" CAST THEREON.

SPECIAL CARE SHALL BE EXERCISED IN BACKFILLING AROUND EACH VALVE BOX TO PREVENT DISPLACEMENT OF THE BOX. WHEN THE BACKFILLING OPERATION HAS BEEN COMPLETED, THE BOX SHAFT SHALL BE PLUMB AND CENTERED OVER THE VALVE OPERATING NUT, WITH THE TOP AT THE ELEVATION CALLED FOR IN THE FIELD BY THE ENGINEER. THE BOX SHALL BE CLEANED OF ALL STONES AND DEBRIS WHICH MAY INTERFERE WITH THE OPERATION OF THE VALVE.

ALL WORKMANSHIP EMPLOYED IN THE FABRICATION AND ASSEMBLY OF VALVES COVERED BY THESE SPECIFICATIONS SHALL BE FIRST-CLASS IN EVERY RESPECT. VALVE PARTS SHALL BE DESIGNED, AND MANUFACTURING TOLERANCES SET, TO PROVIDE INTERCHANGEABILITY IN THE PRODUCTS OF ANY ONE MANUFACTURER BETWEEN UNITS OF THE SAME SIZE AND TYPE. WHEN ASSEMBLED, VALVES MANUFACTURED IN ACCORDANCE WITH THESE SPECIFICATIONS SHALL BE WELL-FITTED, SMOOTH OPERATING AND WATERTIGHT.

VALVES SHALL BE OF THE IRON BODY, BRONZE MOUNTED, PARALLEL DISC EXPANDING OUTWARD TO SEAT TYPE WITH BRONZE DISC RING AND SEAT AND SHALL HAVE O-RING STEM SEALS. ALL PARTS OF THE VALVE SHALL BE DESIGNED TO WITHSTAND SAFELY, WITHOUT PERMANENT DISTORTION AND WITHOUT STRUCTURAL DAMAGE, THE STRESSES RESULTING FROM THE WORKING WATER PRESSURE. WITH THE VALVE OPEN, AN UNOBSTRUCTED WATERWAY SHALL BE AFFORDED, THE DIAMETER OF WHICH IS NOT LESS THAN THE FULL NOMINAL DIAMETER OF THE VALVE.

MATERIALS SHALL BE OF THE FOLLOWING GRADES AND QUALITIES:

- CAST IRON - ASTM A126
- BRONZE, GRADE I - ASTM B62
- BODY BOLTS AND NUTS, CADMIUM-PLATED - ASTM A307, GRADE B, ASTM A123

CORPORATION STOPS. CORPORATION STOPS SHALL BE FURNISHED WITH A 90 DEGREE ELL AND GASKET. THE COST OF THE ELL AND GASKET SHALL BE INCLUDED IN THE COST BID FOR CORPORATION STOPS.

FIRE HYDRANTS

FIRE HYDRANTS REMOVED AND RESET. FIRE HYDRANTS SHALL BE RESET WITH GRANULAR MATERIAL FOR HYDRANT DRAINAGE AND WITH HARD WOOD THRUST BLOCKINGS AS SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER. *of set on a conc. slab 12"x12"x4"*

GRANULAR MATERIAL SHALL BE WASHED GRAVEL OF THE SIZE SHOWN IN SUPPLEMENT SPECIFICATION #14. MATERIAL SHALL BE FREE FROM DUST, CLAY OR LOAM IN AMOUNTS SUFFICIENT TO RENDER IT UNSUITABLE.

FIRE HYDRANTS REMOVED BY THE CITY OF AVON. EXISTING FIRE HYDRANTS NOT LISTED TO BE REMOVED AND RESET WILL BE REMOVED BY THE CITY OF AVON AT THEIR OWN EXPENSE PRIOR TO CONSTRUCTION.

SERVICE LINES. All Fittings shall be flare type

DESCRIPTION. UNDER THIS ITEM THE CONTRACTOR SHALL FURNISH AND INSTALL 3/4" SERVICE LINES TOGETHER WITH SERVICE STOPS, SERVICE BOXES AND OTHER FITTINGS NECESSARY TO COMPLETE THIS ITEM. ALL SERVICE LINES SHALL BE INSTALLED IN ACCORDANCE WITH TYPICAL DETAILS SHOWN ON THE PLANS OR AS ORDERED BY THE ENGINEER.

PIPE. ALL SERVICE LINES INSTALLED UNDER THIS ITEM SHALL BE COPPER WATER TUBE, TYPE K, SOFT TEMPER. COPPER SERVICE PIPE SHALL BE JOINED TOGETHER BY USING A THREE PART UNION. PAYMENT FOR UNIONS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID FOR COPPER SERVICE LINES.

SERVICE STOPS. SERVICE STOPS SHALL BE FURNISHED WITH DRAIN.

SERVICE BOXES. CAST IRON SERVICE BOXES SHALL BE PLACED OVER EACH SERVICE STOP AND SHALL BE BUFFALO TYPE WITH 2-1/2" SHAFT, 3'-6" TO 5' EXTENSION. BOXES SHALL BE FURNISHED IN THE PROPER LENGTHS AND SHALL BE COMPLETE WITH COVER AND BRASS BOLT. COVERS SHALL HAVE THE WORD "WATER" CAST THEREON. *with 17/32" Pentagon head*

ASBESTOS-CEMENT PIPE AND CAST IRON FITTINGS

DESCRIPTION. UNDER THIS ITEM, THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ASBESTOS-CEMENT PIPE AND CAST IRON FITTINGS SHOWN ON THE PLANS OR ORDERED BY THE ENGINEER. *Johns-Manville, Flintkote, or approved equal.*

MATERIALS. PIPE AND FITTINGS SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:

- The asbestos cement pipe shall have a Max. of two solid rubber rings where the pipe is joined together.
- C400-64T AMERICAN WATER WORKS ASSOCIATION
- A21.10 AMERICAN STANDARDS SPECIFICATIONS FOR SHORT-BODY CAST IRON FITTING

CLASS. PIPE AND FITTINGS FURNISHED UNDER THIS ITEM SHALL BE DESIGNED FOR THE WORKING PRESSURE CALLED FOR ON THE PLANS OR IN THE PROPOSAL.

JOINTS. ALL CAST IRON TEES FOR HYDRANTS SHALL BE SUPPLIED WITH ENDS OF THE SAME MANUFACTURE AS THE CEMENT ASBESTOS WATER MAINS ON THE 12" ENDS AND FLANGED JOINTS ON THE 6" END SO THAT THE 6" GATE VALVES MAY BE BOLTED DIRECTLY TO THE TEE.

ADAPTORS. ADAPTORS MAY BE USED BETWEEN FLANGED AND CEMENT ASBESTOS PIPE ENDS IN LIEU OF SPECIAL FITTINGS; HOWEVER, THE 6" TEE END AND 6" GATE VALVES SHALL BE DIRECTLY CONNECTED BY USING FLANGED JOINTS.

CHANGE IN GRADE AND ALIGNMENT. WHENEVER CHANGES IN GRADE AND ALIGNMENT SHOWN ON THE PLANS ARE NOT STANDARD FITTING DEFLECTIONS, THE CONTRACTOR WILL BE PERMITTED TO USE A COMBINATION OF STANDARD FITTINGS AND DEFLECTIONS IN THE ADJOINING LENGTHS OF PIPE.

TESTS. THE MANUFACTURER OF THE PIPE AND FITTINGS FURNISHED UNDER THESE ITEMS SHALL FURNISH A SWORN STATEMENT THAT THE TESTS AND INSPECTIONS REQUIRED BY THE SPECIFICATIONS HAVE BEEN MADE AND PERFORMED AND THAT THE PIPE AND FITTINGS FURNISHED COMPLY WITH THE SPECIFICATIONS IN ALL RESPECTS.

FIELD INSPECTION. PIPE AND FITTINGS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE ENGINEER AFTER DELIVERY TO THE JOB SITE. NO BROKEN, CRACKED, IMPERFECTLY COATED OR LINED, OR OTHERWISE UNSATISFACTORY PIPE SHALL BE USED IN THE WORK. PIPE AND FITTINGS REJECTED BY THE ENGINEER SHALL BE PROMPTLY REMOVED FROM THE SITE OF THE WORK AND NOT AGAIN OFFERED FOR USE.

PIPE HANDLING. CARE SHALL BE EXERCISED IN UNLOADING PIPE FROM CARS TO TRUCKS AND IN LOWERING PIPE INTO THE TRENCH. PIPE SHALL NOT BE PERMITTED TO DROP FROM TRUCKS OR INTO THE TRENCH. THE DROPPING OF PIPE SHALL BE SUFFICIENT CAUSE FOR ITS REJECTION BY THE ENGINEER. DURING UNLOADING AND HANDLING, PIPE SHALL NOT BE PERMITTED TO ROLL AGAINST OTHER PIPE. ALL PIPE 12" AND OVER IN SIZE SHALL BE UNLOADED AND LOWERED INTO THE TRENCH BY MEANS OF POWER EQUIPMENT.

PIPE CUTTING. WHENEVER IT BECOMES NECESSARY TO CUT A LENGTH OF PIPE, IT SHALL BE DONE IN A MANNER TO LEAVE A SMOOTH END AT RIGHT ANGLES TO THE AXIS OF THE PIPE. NO PAYMENT WILL BE MADE FOR THE UNUSED PORTIONS OF A CUT LENGTH OF PIPE.

EXTRA FITTINGS. DURING THE PROGRESS OF THE WORK, IT MAY BE FOUND NECESSARY OR DESIRABLE TO INSTALL ADDITIONAL FITTINGS. WHEN SO ORDERED BY THE ENGINEER, THE CONTRACTOR SHALL FURNISH AND INSTALL SUCH EXTRA FITTINGS.

EXTRA FITTINGS SHALL COMPLY IN ALL RESPECTS WITH THE SPECIFICATIONS FOR FITTINGS CALLED FOR UNDER MATERIALS AND JOINTS IN THESE SPECIFICATIONS.

MEASUREMENTS. THE FOOTAGE OF PIPE TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF LINEAL FEET OF PIPE INSTALLED, MEASURED ALONG THE AXIS OF THE PIPE, INCLUDING FITTINGS AND VALVES CONNECTED IN PLACE, BUT NOT INCLUDING THE LATERAL DIMENSION ON FITTINGS.

THE NUMBER OF EXTRA FITTINGS TO BE PAID FOR SHALL INCLUDE ALL EXTRA FITTINGS ORDERED BY THE ENGINEER AND NOT INCLUDED ON THE PLANS AT THE TIME OF OPENING OF BIDS.

INSTALLATION PROCEDURES. INSTALLATION PROCEDURES SHALL CONFORM TO AWWA C400-64T AND O. S. H. D. 603.04 CLASS B AND 603.08. AT FIRE HYDRANT LOCATIONS THE 6" GATE VALVE SHALL BE CONNECTED DIRECTLY TO THE TEE. THE TIME FOR HYDROSTATIC TESTING, STERILIZING AND CONNECTING TO THE EXISTING WATER MAIN SHALL BE DETERMINED BY THE SUPERINTENDENT OF UTILITIES FOR THE CITY OF AVON, OHIO. HE SHALL BE NOTIFIED AT LEAST 48 HOURS PRIOR TO THE ANTICIPATED TIME OF PERFORMANCE. All pipe, valves, fittings & hydrants will be installed between the hours of 8:00 am & 4:00 pm Mon. thru Fri. unless written permission is received from the Util. Super. of Avon, O. HYDROSTATIC TESTING. THE LINE SHALL BE TESTED AT 175 p. s. i. FOR ONE HOUR WITH NO DROP IN PRESSURE. THE CITY OF AVON SHALL FURNISH ALL WATER NEEDED FOR TESTING AND STERILIZING PURPOSES.

ABANDONMENT. ALL EXISTING WATER MAINS, VALVES AND FITTINGS LISTED TO BE ABANDONED IN PLACE SHALL BECOME THE PROPERTY OF CONTRACTOR

ENCASEMENT FOR WATER LINES

DESCRIPTION. UNDER THIS ITEM THE CONTRACTOR SHALL FURNISH AND INSTALL WELDED STEEL ENCASEMENT FOR WATER MAINS WHERE SHOWN ON THE PLANS.

WELDED STEEL PIPE. THE WELDED STEEL PIPE FURNISHED UNDER THIS ITEM SHALL BE OF THE SIZE AND MINIMUM WALL THICKNESS CALLED FOR ON THE PLANS.

MEASUREMENT. THE LINEAL FEET OF ENCASEMENT PIPE TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET OF PIPE INSTALLED.

PAYMENT. PAYMENT UNDER THIS ITEM SHALL BE AT THE CONTRACT UNIT PRICE BID FOR ENCASEMENT CONDUIT, 707.08. WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, INSTALLING AND BULKHEADING PIPE CALLED FOR AND FOR FURNISHING ALL LABOR, TOOLS AND EQUIPMENT NECESSARY TO COMPLETE THIS ITEM. THE COST OF FURNISHING AND LAYING WATER MAINS THROUGH THE ENCASEMENT PIPE IS NOT PART OF THIS ITEM.

CONNECTION TO EXISTING WATERMAIN

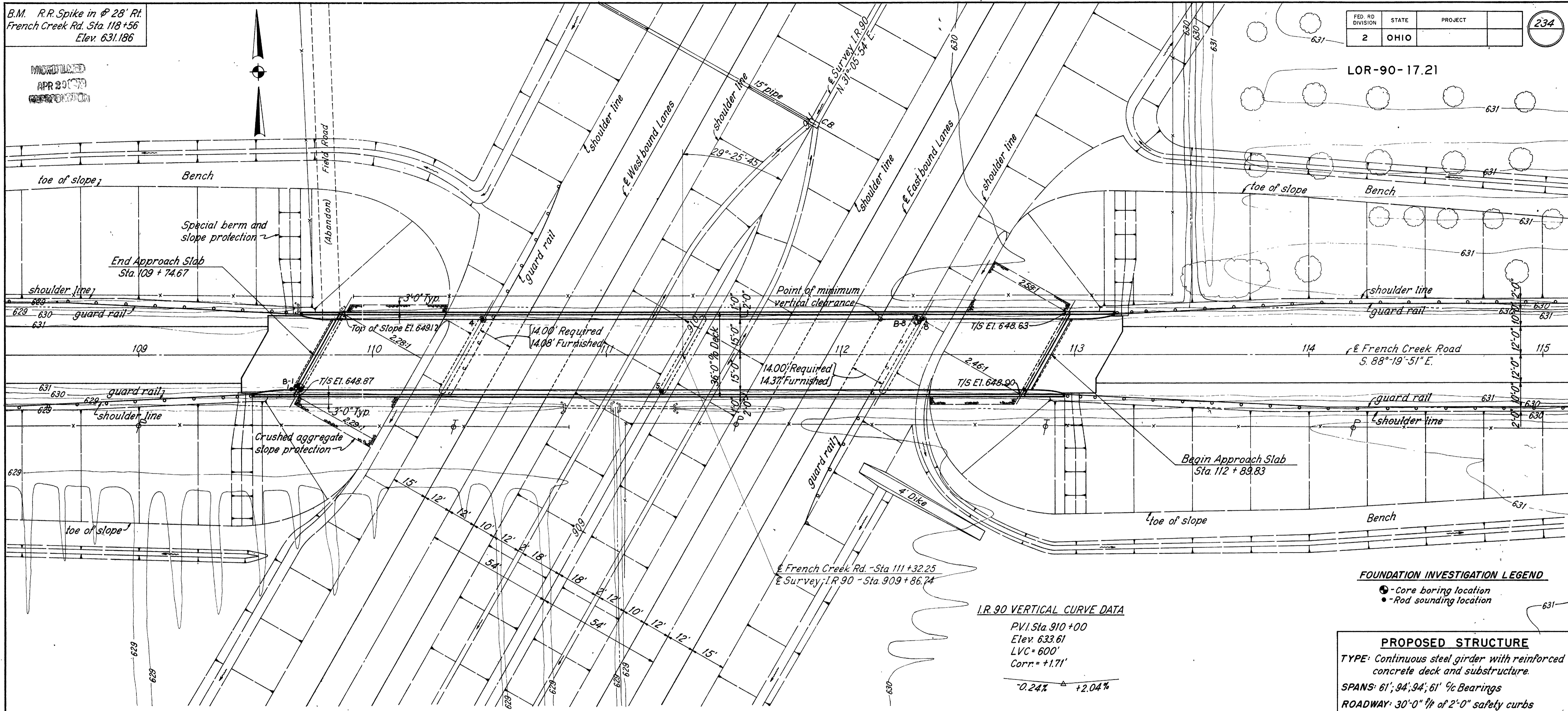
SHUT DOWN TIME. THE RELOCATED WATER MAIN SHALL BE CONNECTED TO THE EXISTING WATER MAIN IN A MANNER PRESCRIBED BY THE SUPERINTENDENT OF UTILITIES FOR THE CITY OF AVON OHIO SO AS TO MINIMIZE THE SHUT DOWN TIME ON THE MAIN. The connection will be made between the hours of 11:00 pm & 6:00 am or earlier, if written permission from the superintendent of utilities of the City of Avon, Ohio is obtained.

B.M. R.R. Spike in ϕ 28" Rt.
French Creek Rd. Sta. 118+56
Elev. 631.186

MICROFILMED
APR 20 1979

FED. RD. DIVISION	STATE	PROJECT	234
2	OHIO		

LOR-90-17.21



FOUNDATION INVESTIGATION LEGEND

- - Core boring location
- - Rod sounding location

PROPOSED STRUCTURE

TYPE: Continuous steel girder with reinforced concrete deck and substructure.
 SPANS: 61', 94', 94', 61' %c Bearings
 ROADWAY: 30'-0" fl of 2'-0" safety curbs
 LOAD FREQUENCY: CF130 (57)
 SKEW: 29°-25'-45" L.F.
 WEARING SURFACE: 1" monolithic concrete
 APPROACH SLABS: AS-1-54 (25' long, modified)
 ALIGNMENT: Tangent
 AVERAGE DAILY TRAFFIC: 1610 (1959), 4025 (1989) French Creek Road; 24,660 (1989) I.R. 90

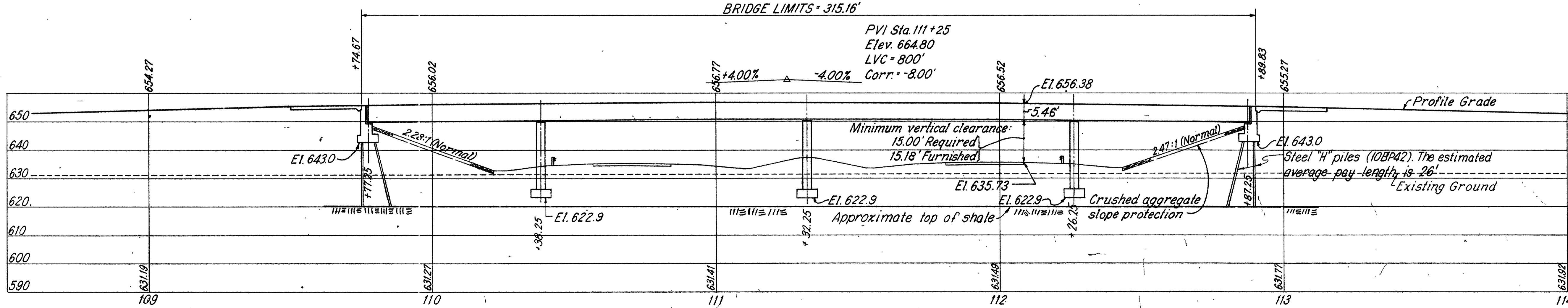
SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SITE PLAN

BRIDGE NO. LOR-90-1754
 UNDER FRENCH CREEK ROAD
 LORAIN COUNTY I.R. 90

STA. 909 + 96.54

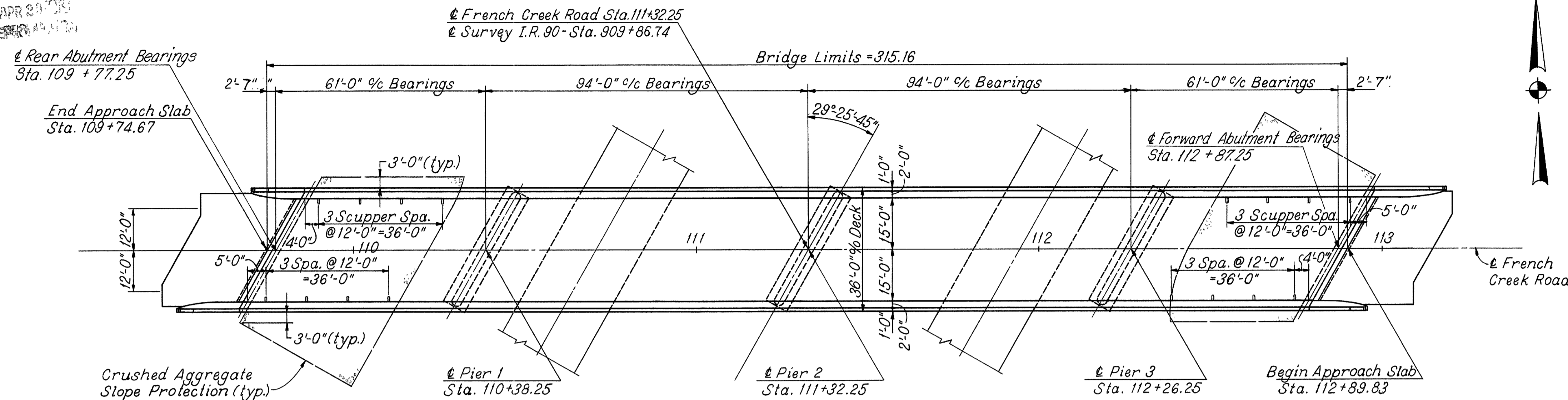
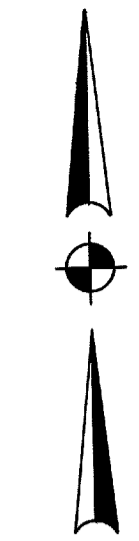
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	UL	RAK			



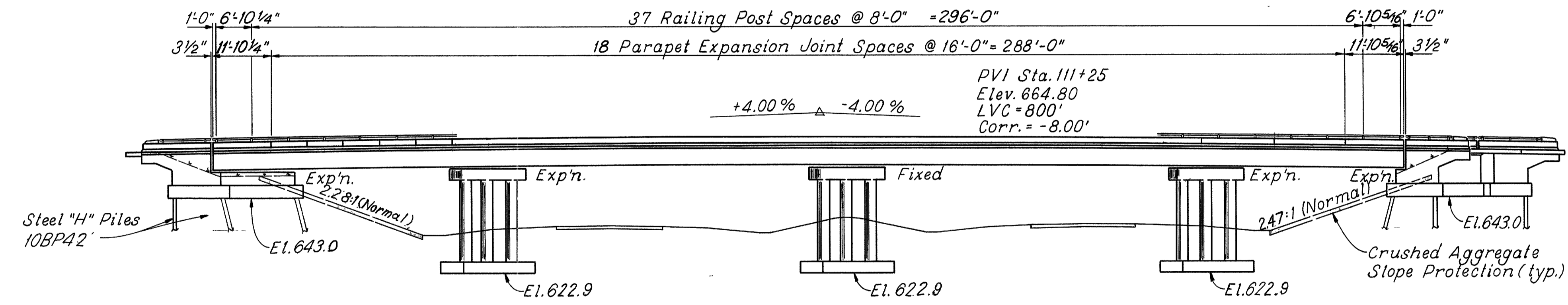
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FED. RD. DIVISION	STATE	PROJECT	235
2	OHIO		

LOR-90-17.21



GENERAL PLAN



GENERAL ELEVATION

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-65 Sheets 1, 2 and 3 of 3. (dated 11-8-65), BR-1-65 Sheet 1 of 2 (revised 11-24-65), FSB-1-62 (revised 1-15-63), AS-1-54 (revised 8-10-65), to Supplemental Specifications 808 (revised 2-7-66), 811 (dated 3-29-65), 825 (dated 4-22-65) and 828 (revised 3-21-66).
DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

UNIT STRESSES: Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.
 Design Loading: CF 130 (57)
 Concrete, Class "C" - basic unit stress 1333 p.s.i.
 Concrete, Class "E" - basic unit stress 1,133 p.s.i.
 Reinforcing Steel - ASTM A15, A16, A160 deformed intermediate or hard grade - basic unit stress 20,000 p.s.i. Except spiral reinforcement may be plain structural grade - basic unit stress 18,000 p.s.i.

ABUTMENT PILES shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in 507.05 is not less than the following value for a pile hammer of the indicated energy rating:
 45 tons per pile using an 11,000 ft. lb. hammer.
 40 tons per pile using a 15,000 ft. lb. or greater hammer.

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 34 tons per pile.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.2 tons per sq. ft. for Piers 1 & 3 and 2.8 tons per sq. ft. for Pier 2.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments and piers.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owner. The Contractor and Owner are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

PROCEDURE: The embankment for French Creek Road shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and piles driven. The I.R. 90 embankment shall be placed and compacted to the level of the subgrade after which excavation shall be made for the piers.

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L
503	720	Cu.Yds.	Unclassified excavation		227	493	
503	Lump	Sum	Cofferdams, cribs and sheeting				Lump
505	Lump	Sum	First test pile				Lump
507	572	Lin.Ft.	Steel piles, 10BP42		572		
509	129,194	Lbs.	Reinforcing steel	88,912	12,618	27,664	
511	331	Cu.Yds.	Class "C" concrete, superstructure	331			
511	90	Cu.Yds.	Class "C" concrete, piers above footings			90	
511	89	Cu.Yds.	Class "E" concrete, pier footings			89	
511	183	Cu.Yds.	Class "E" concrete, abutments		183		
513	248,170	Lbs.	Structural steel	248,170			
514	248,170	Lbs.	Field painting of structural steel	248,170			
517	693.91	Lin.Ft.	Bridge Railing (type 1)	623.43	70.48		
518	16	Each	Scuppers, including supports	16			
518	49	Cu.Yds.	Porous backfill		49		
518	68.5	Lin.Ft.	6" Helical perforated CMP, 707.06, including specials		68.5		
518	53	Lin.Ft.	6" Helical CMP, 707.06, non-perforated		21		
601	538	Sq.Yds.	Crushed aggregate slope protection				538
808	331	Units	Water-reducing, set-retarding admixture	331			
825	1510	Sq.Yds.	Concrete surface treatment				1510
828	69	lin. ft.	Joint Sealer (end dam)				

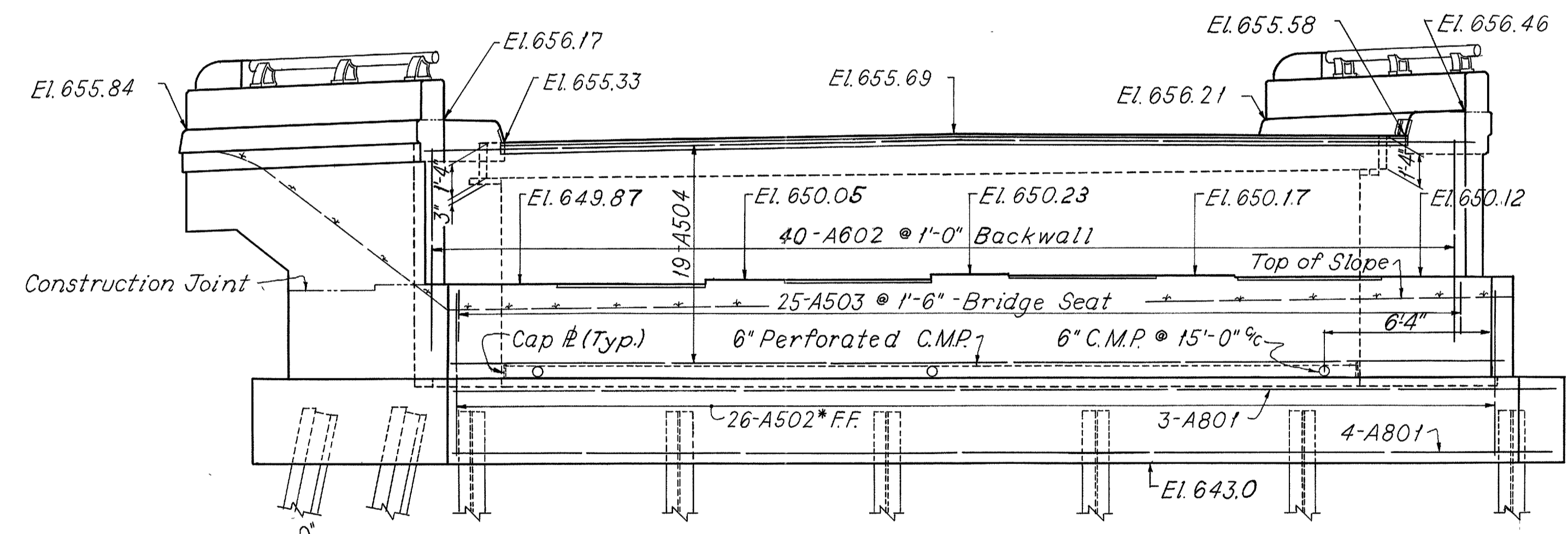
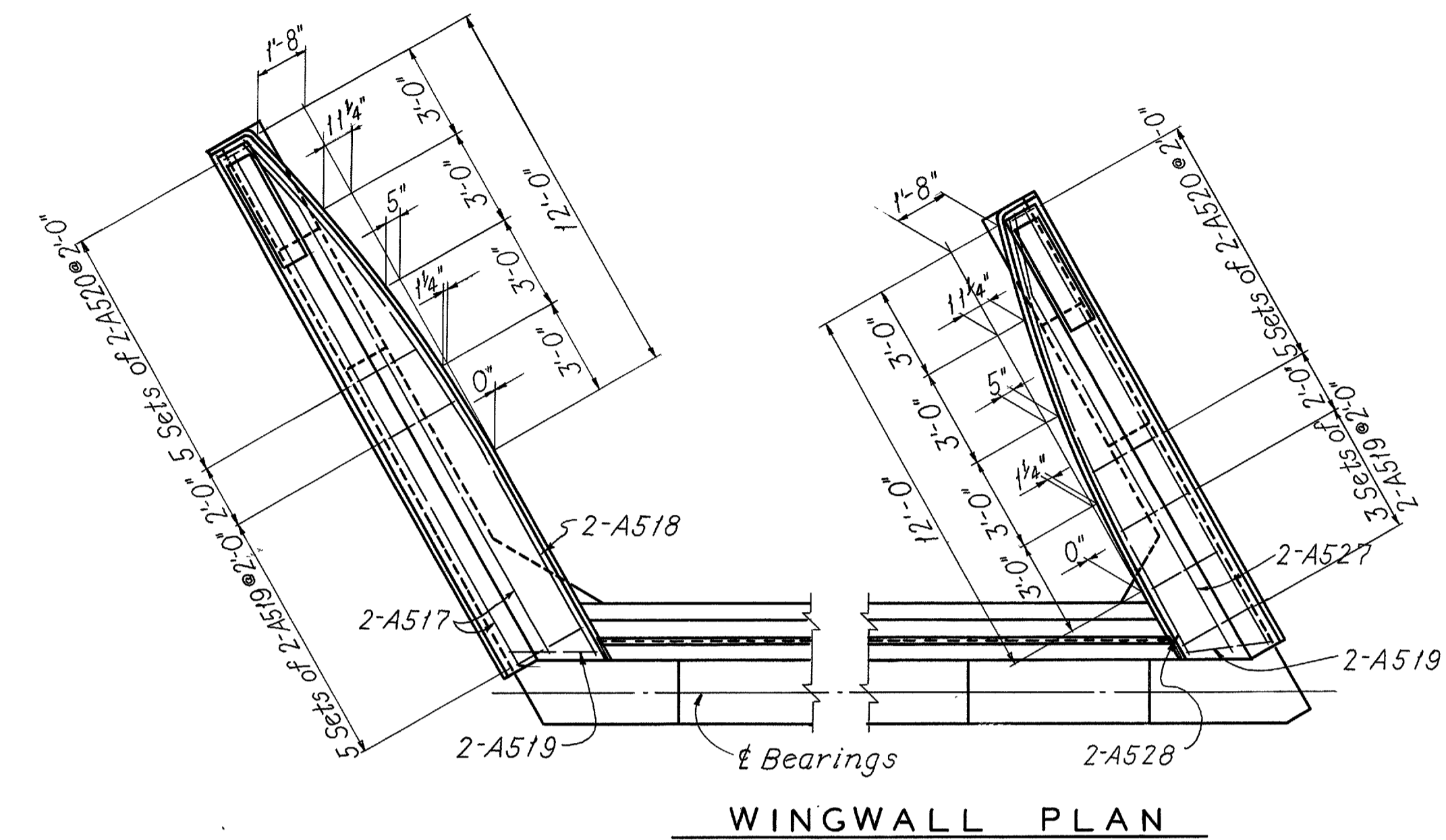
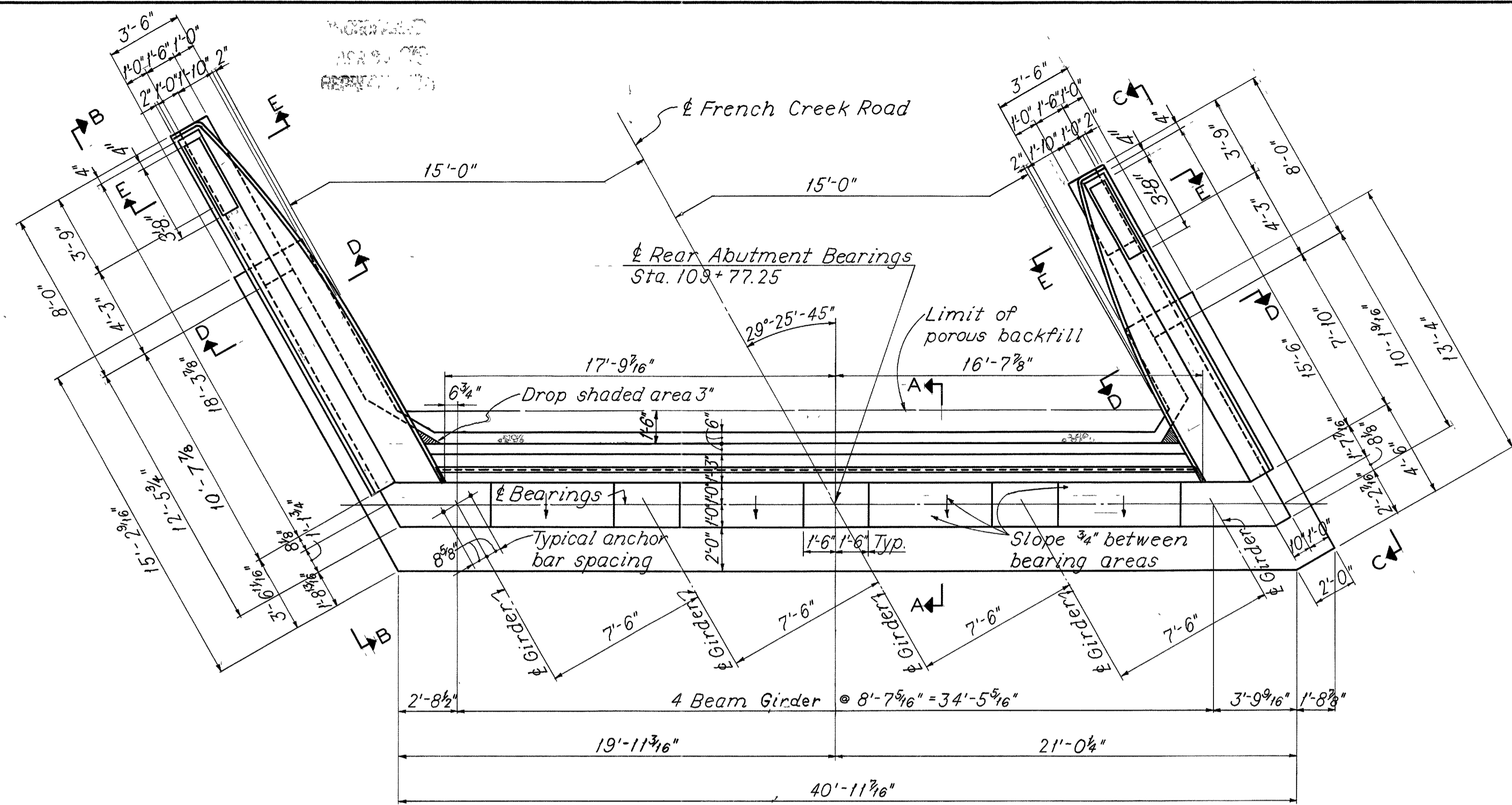
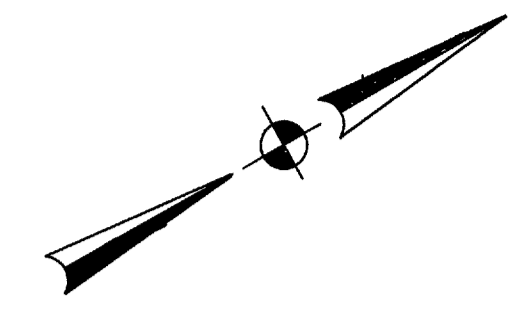
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 MANSFIELD, OHIO.

GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES
 BRIDGE NO. LOR-90-1754
 UNDER FRENCH CREEK ROAD
 LORAIN COUNTY I.R. 90
 STA. 909 + 96.54

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RWH	RWH	JPG			

3-12-70

LOR - 90-17.21



*Bars shall be equally spaced between piles at approximately 1'-6" c/c.

NOTES:

CONCRETE: All abutment concrete shall be Class "E" except parapets, which shall be Class "C".

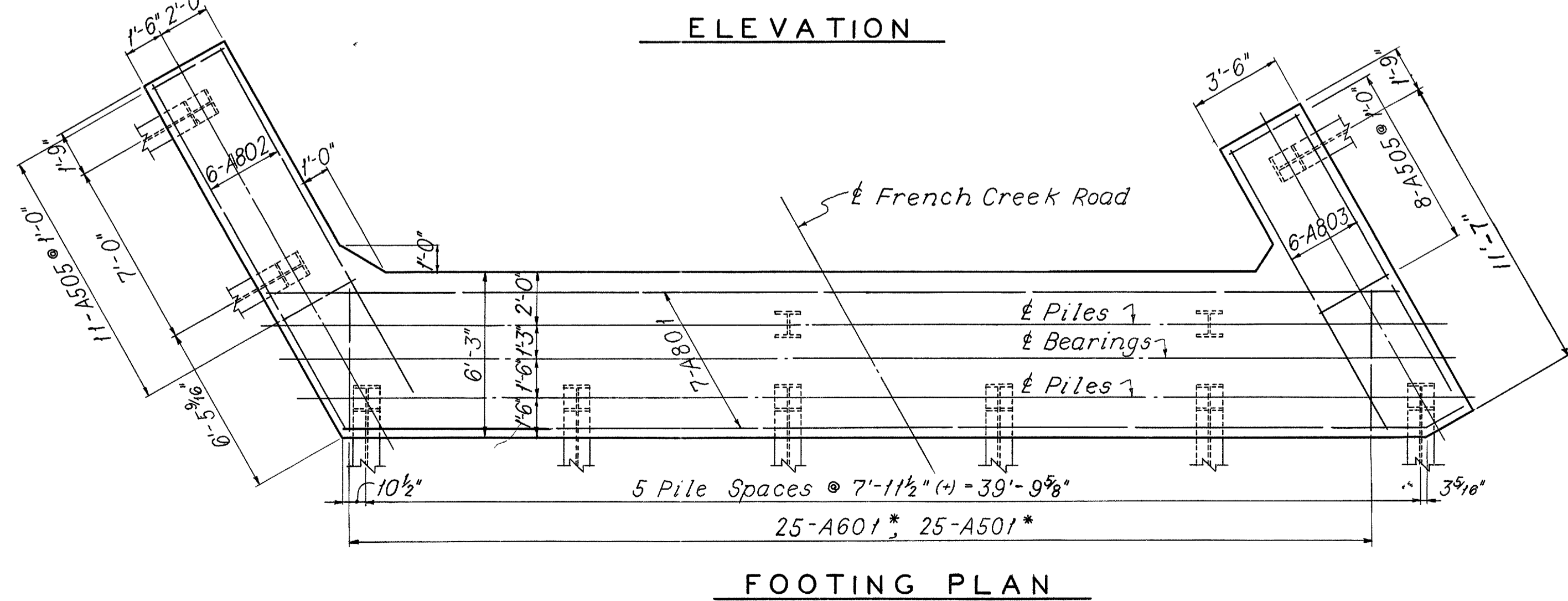
BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

POROUS BACKFILL, 1'-6" thick, shall extend upward to the approach slab for the full length of the abutment. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

NOTATION: F.F. - Front Face; R.F. - Rear Face; E.F. - Each Face

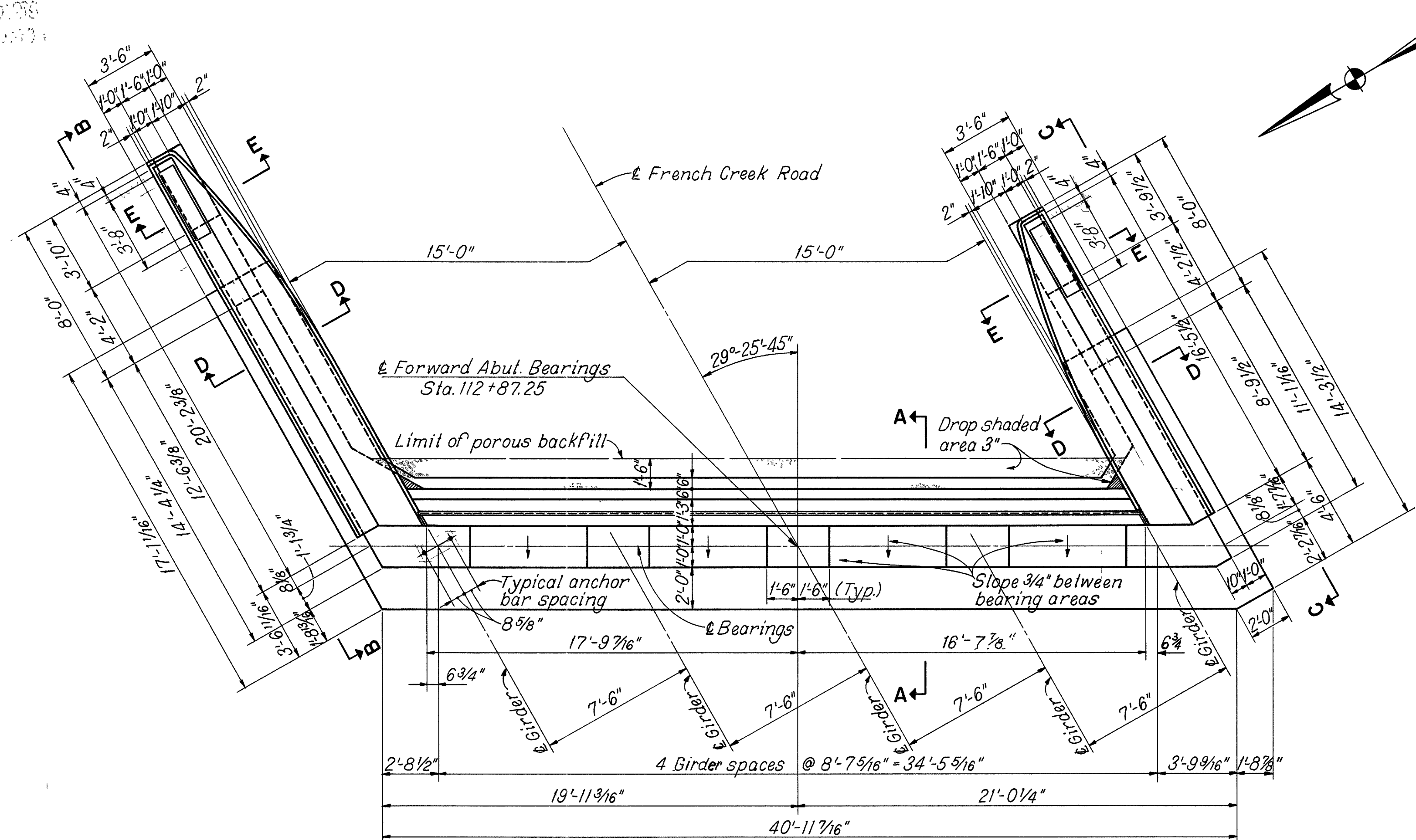
SECTIONS A-A, B-B, C-C, D-D and E-E: See Sheet 4

GENERAL NOTES: See Sheet 2

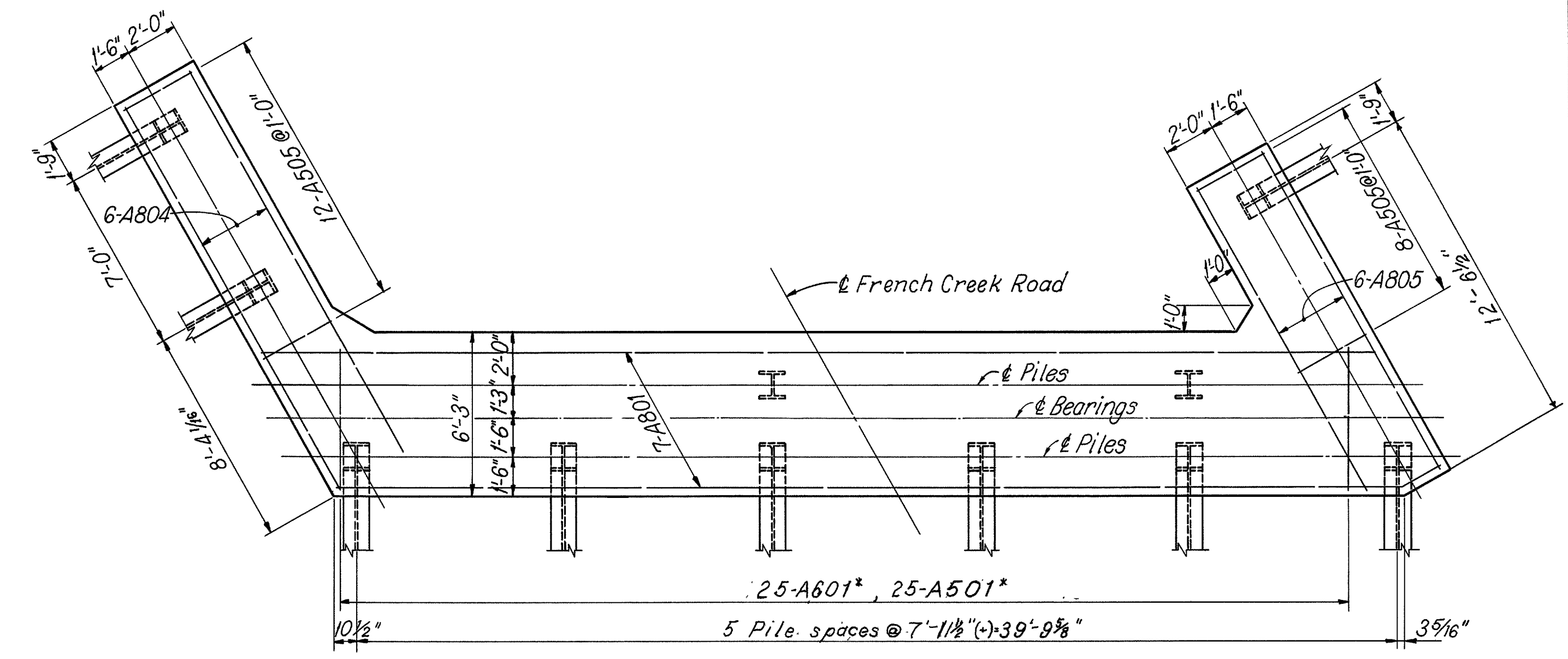


SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
REAR ABUTMENT-1						
BRIDGE NO. LOR-90-1754						
UNDER FRENCH CREEK ROAD						
LORAIN COUNTY				I.R. 90		
STA. 909 + 96.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	J.P.G.			

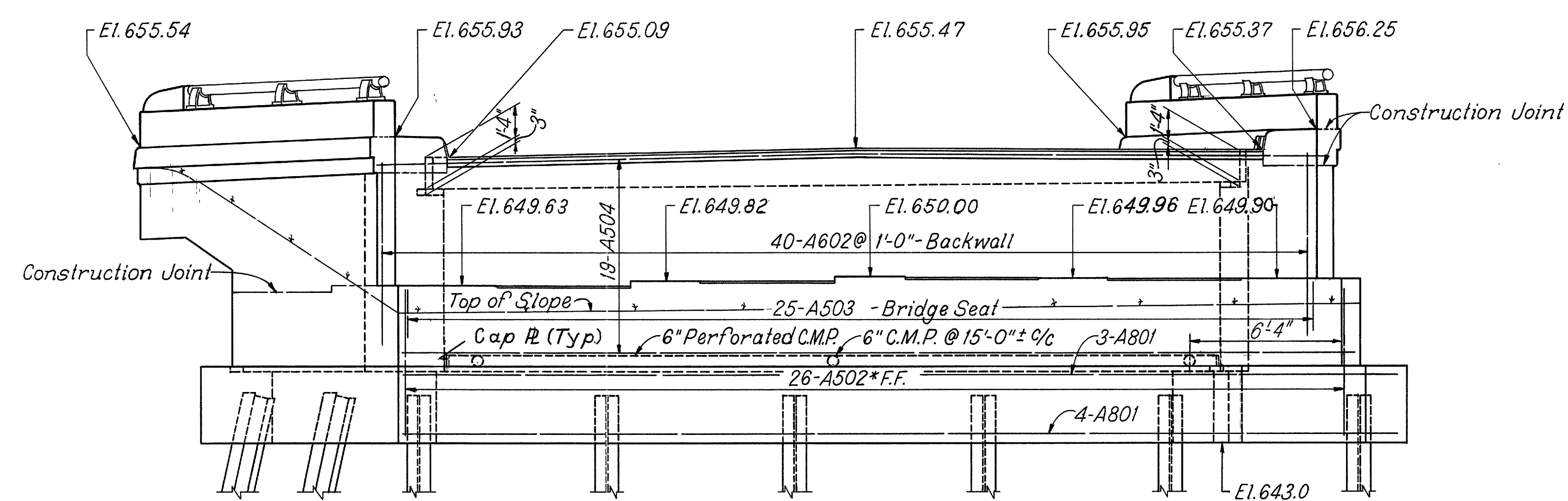
LOR-90-17.21



PLAN

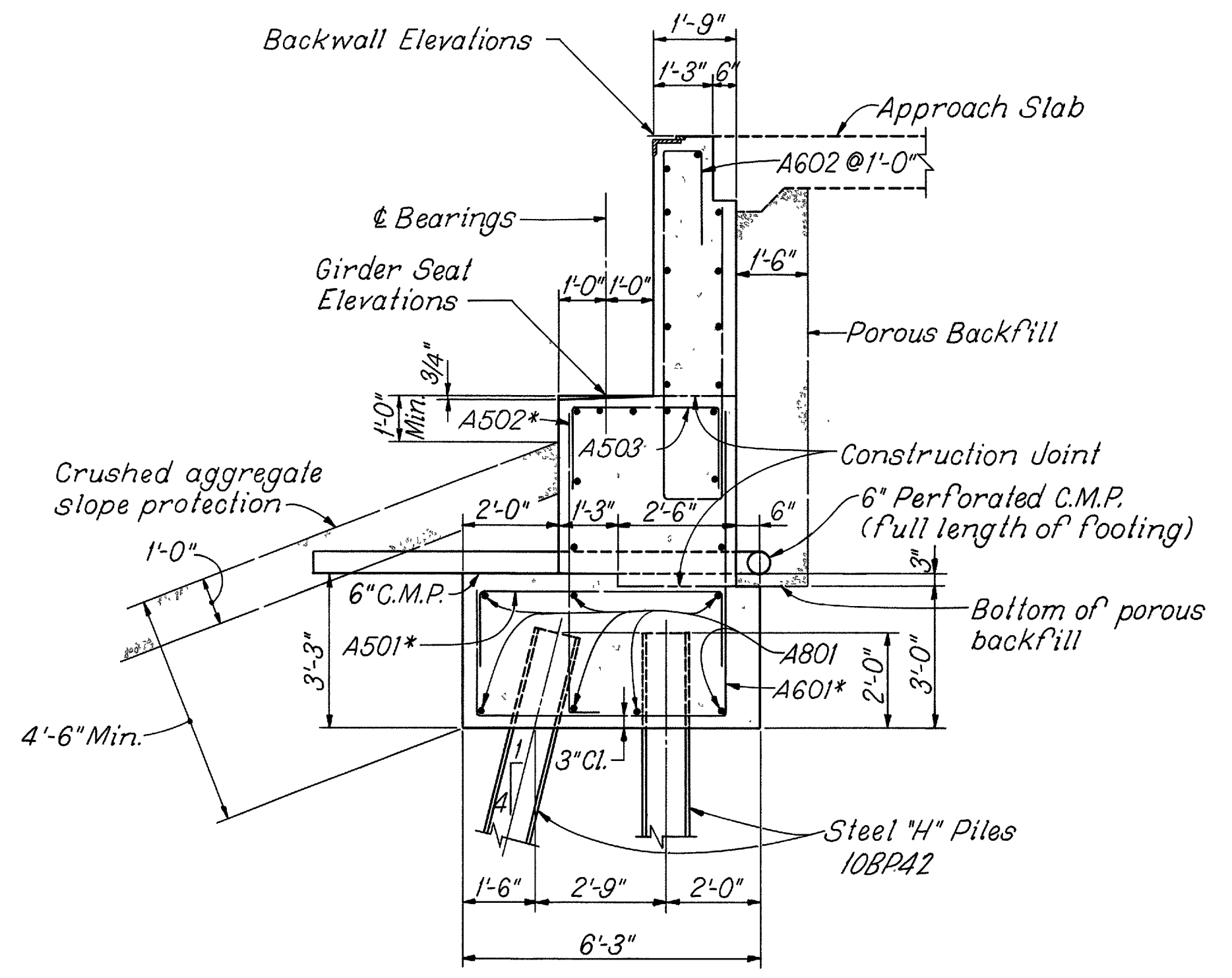


FOOTING PLAN



ELEVATION

*Bars shall be equally spaced between piles at approximately 1'-6" c/c.
See sheet 6 for views B-B, C-C and sections D-D, E-E.



SECTION A-A

All longitudinal bars above footing are A504 bars.

ABUTMENT NOTES: See sheet 3

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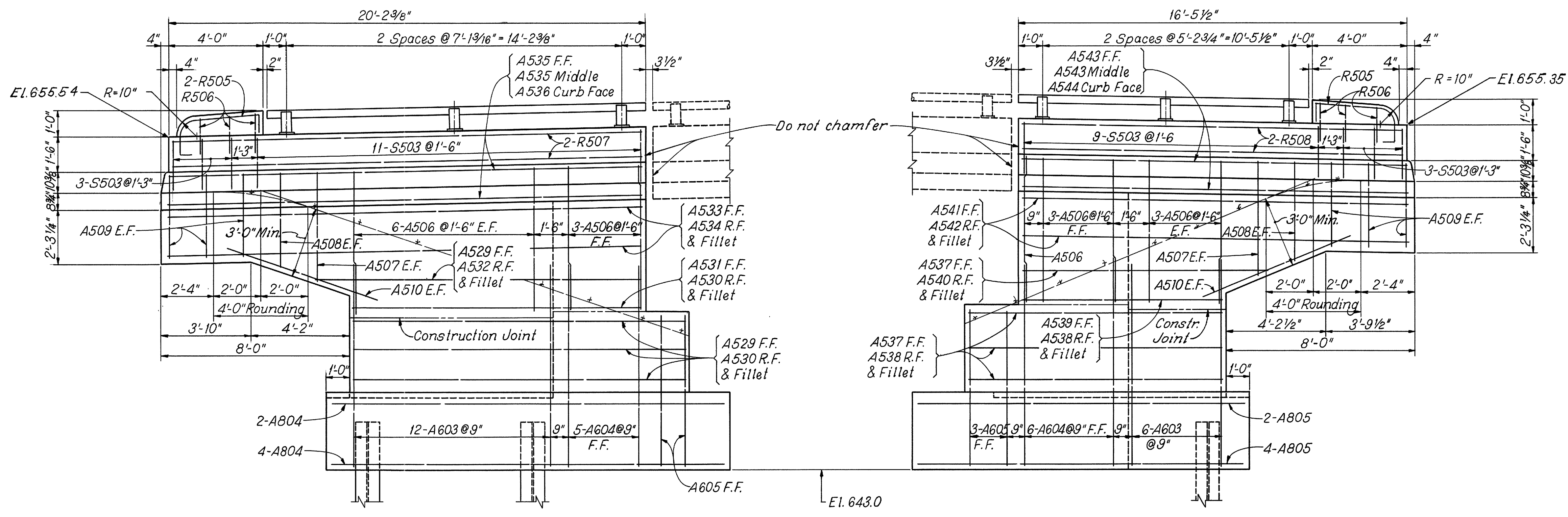
FORWARD ABUTMENT-1
BRIDGE NO. LOR-90-1754
UNDER FRENCH CREEK ROAD
LORAIN COUNTY I.R. 90

STA. 909 + 96.54

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH	J.P.G.			

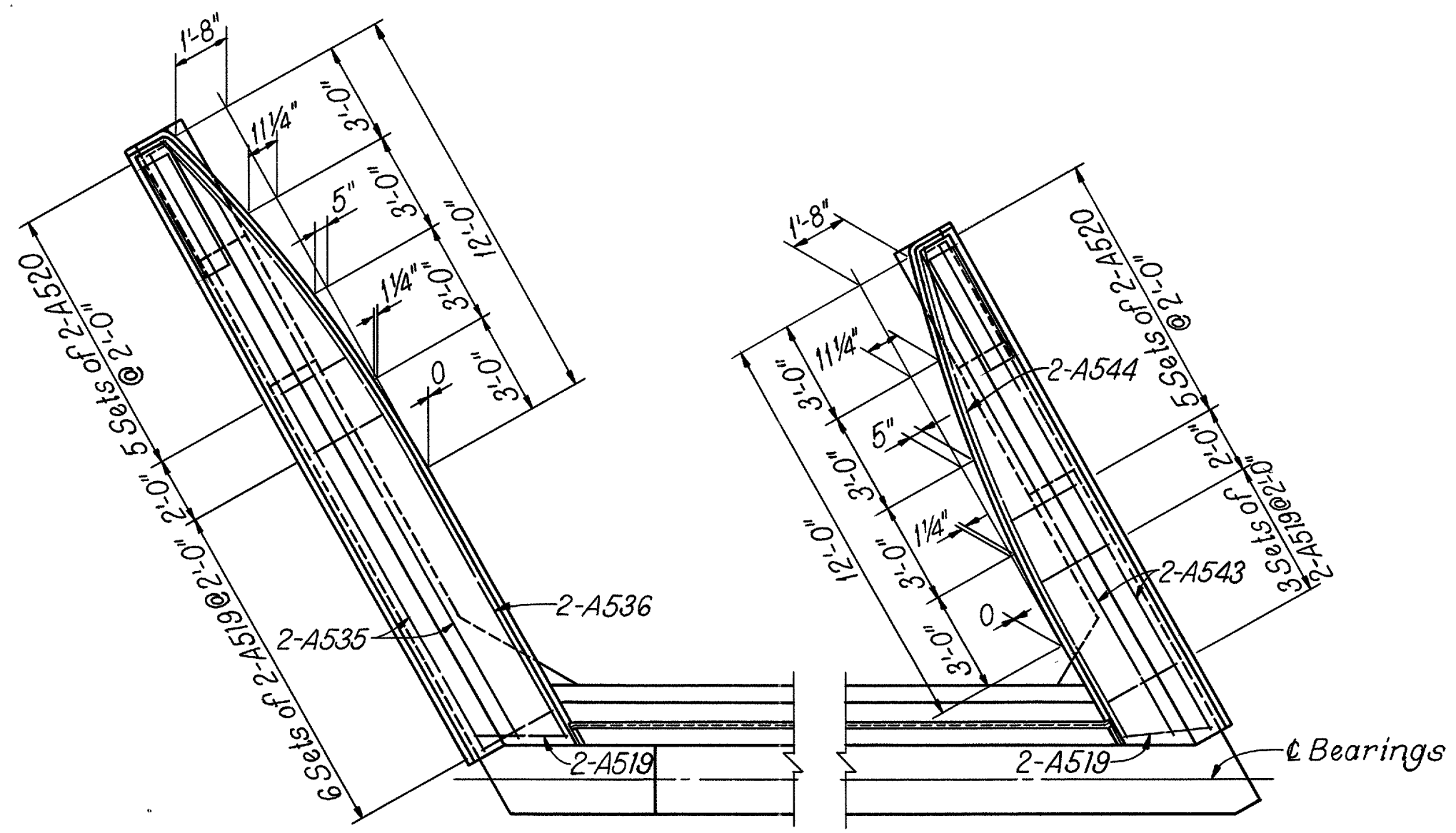
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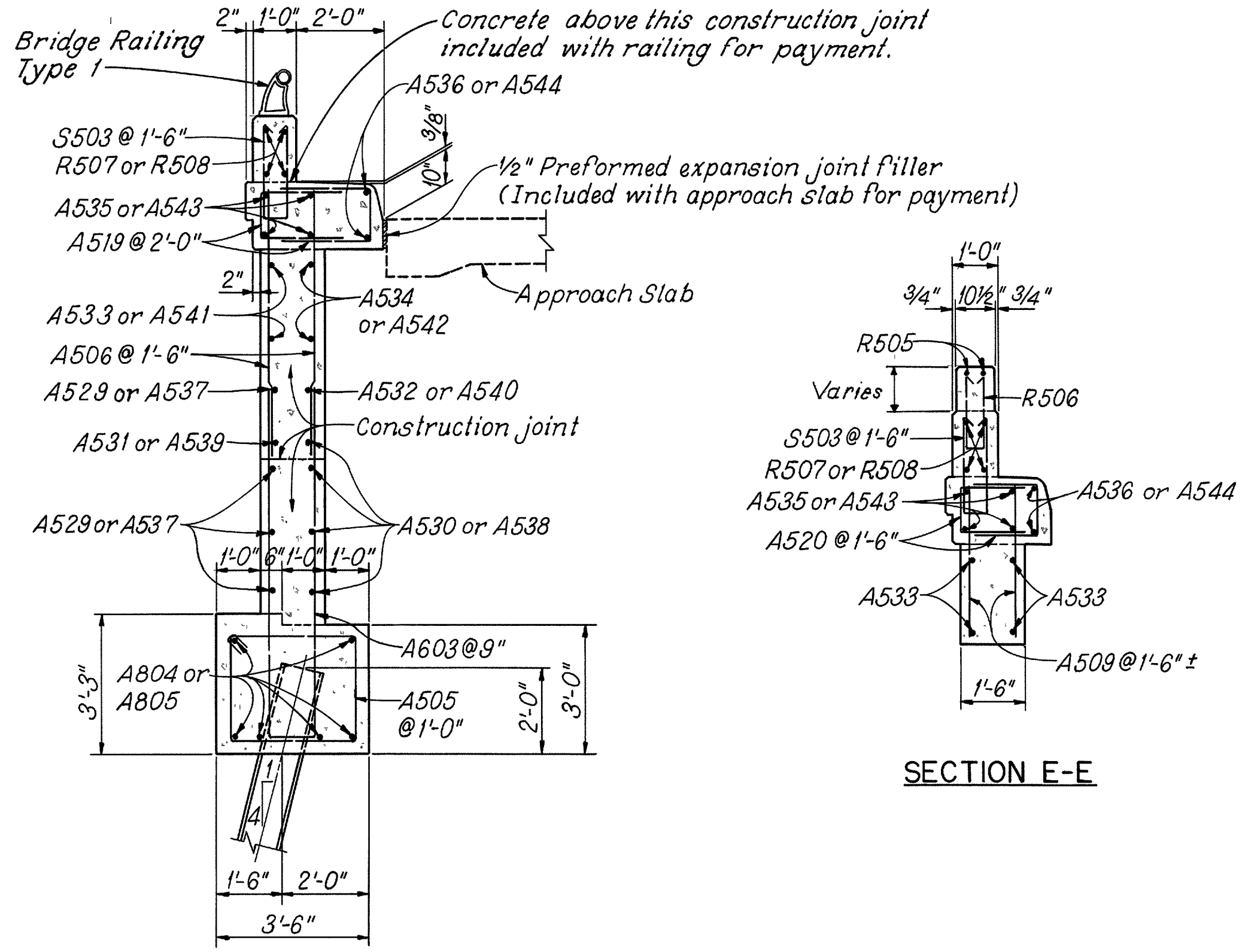


VIEW B-B

VIEW C-C



WINGWALL PLAN



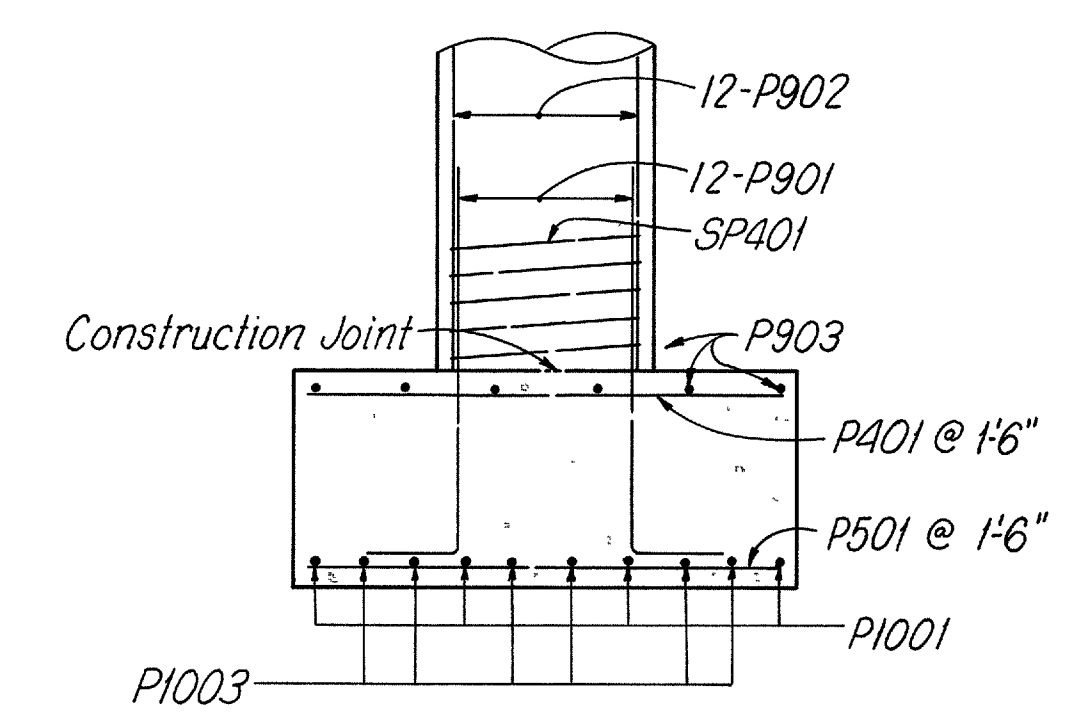
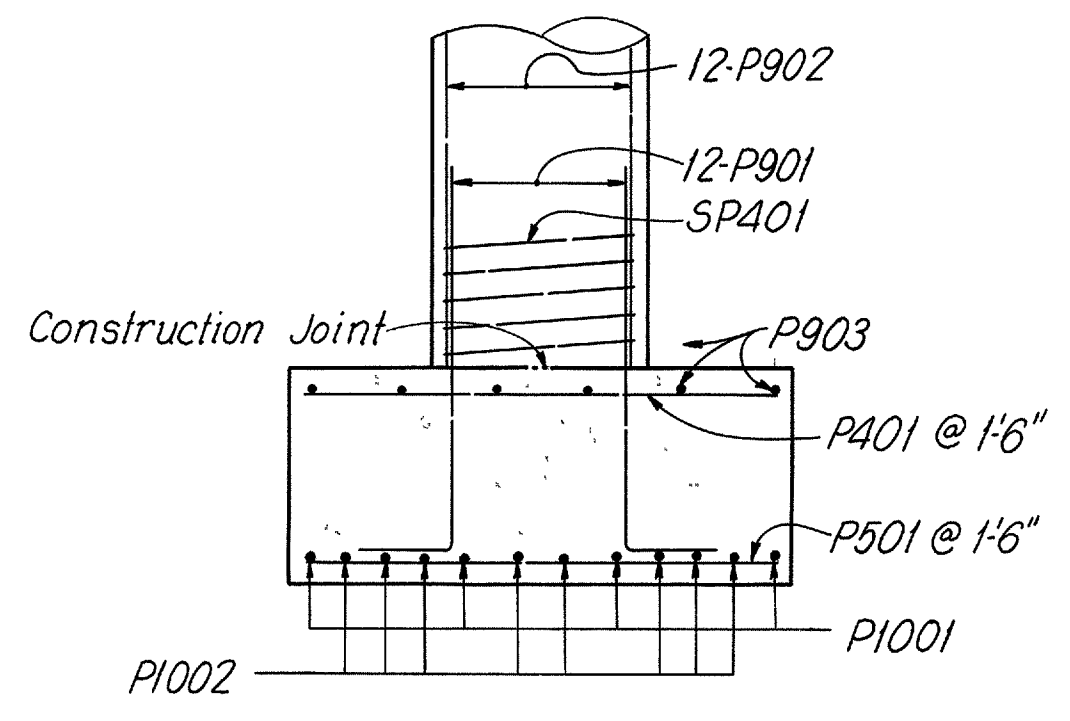
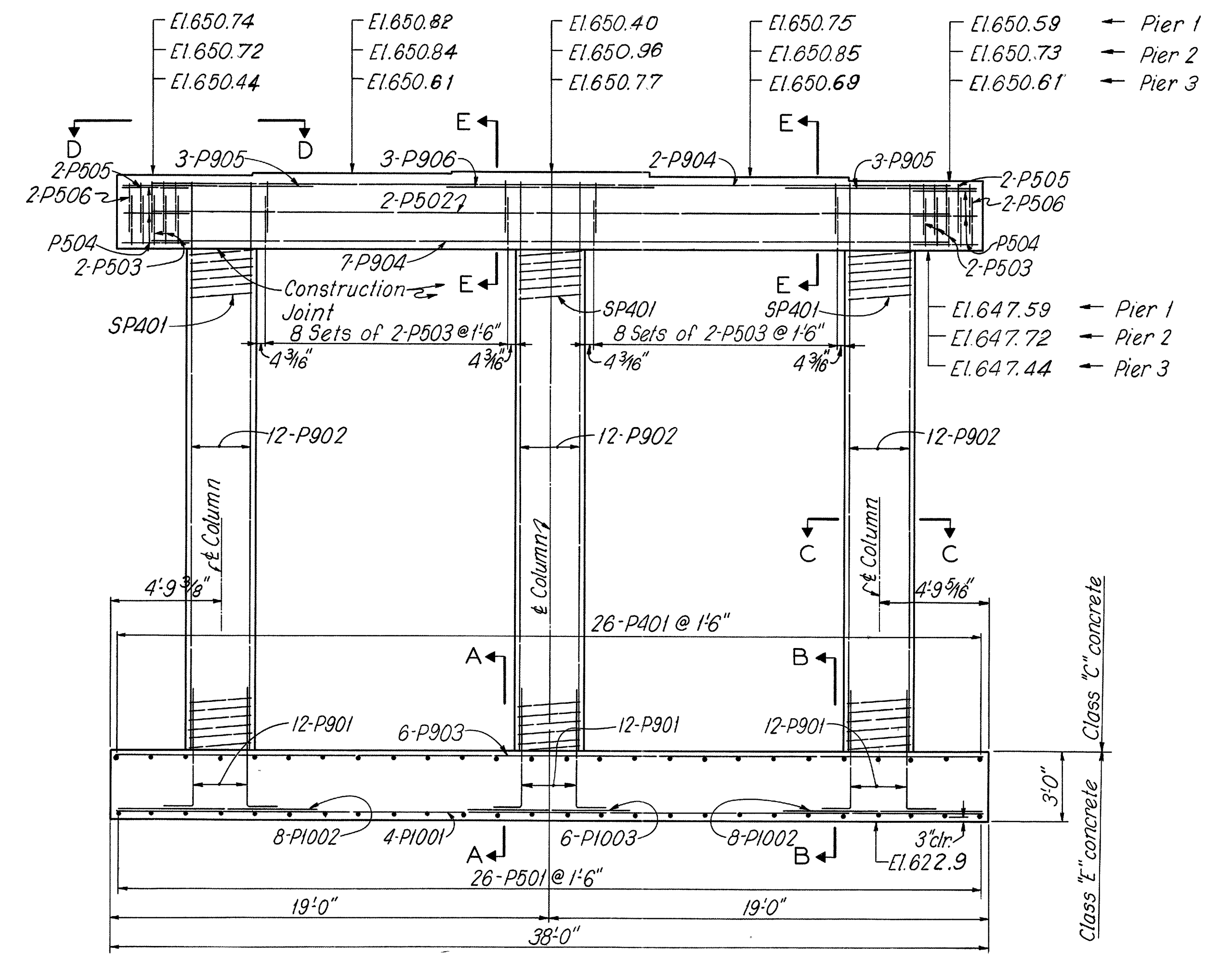
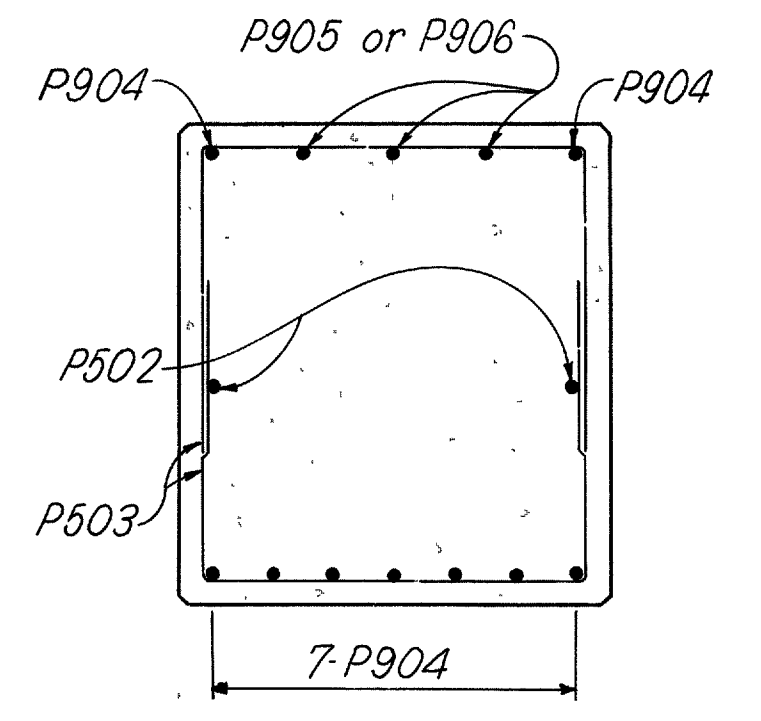
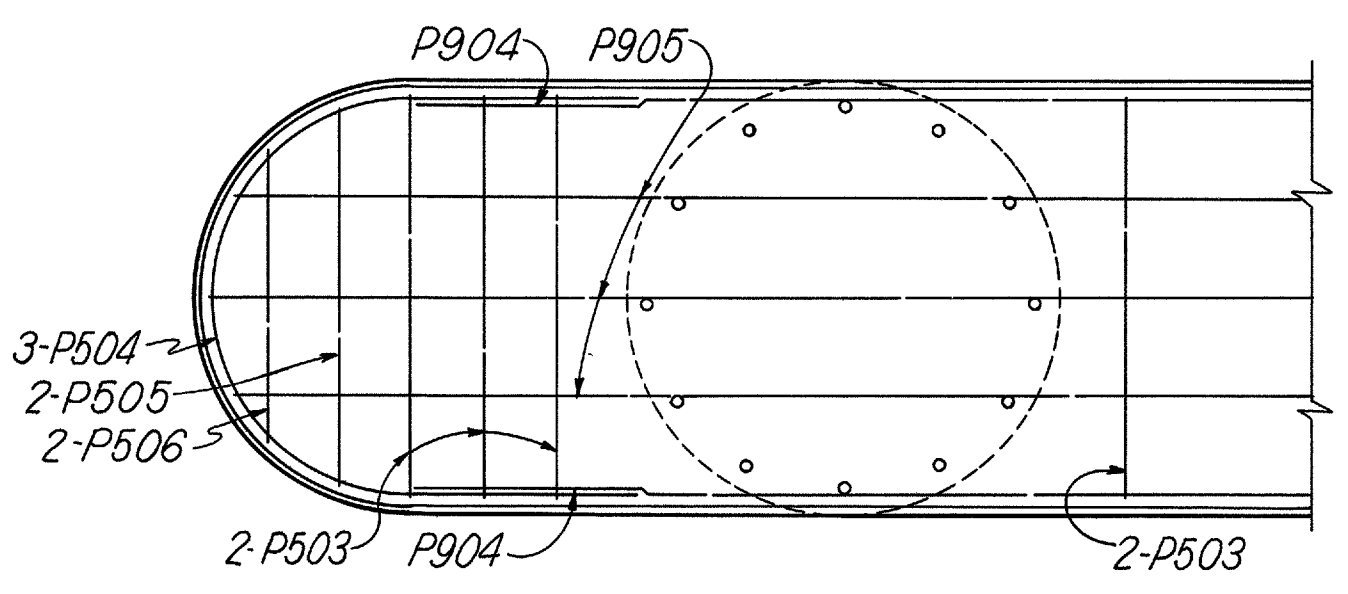
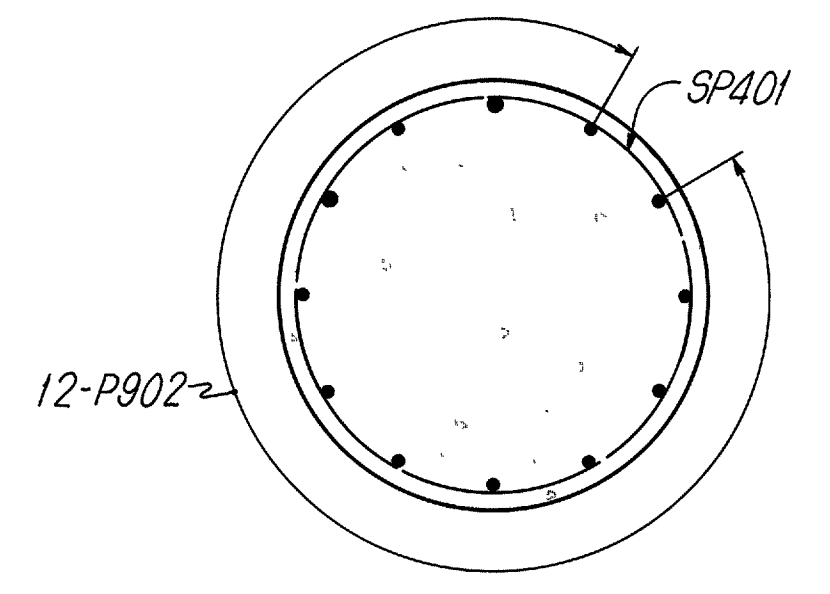
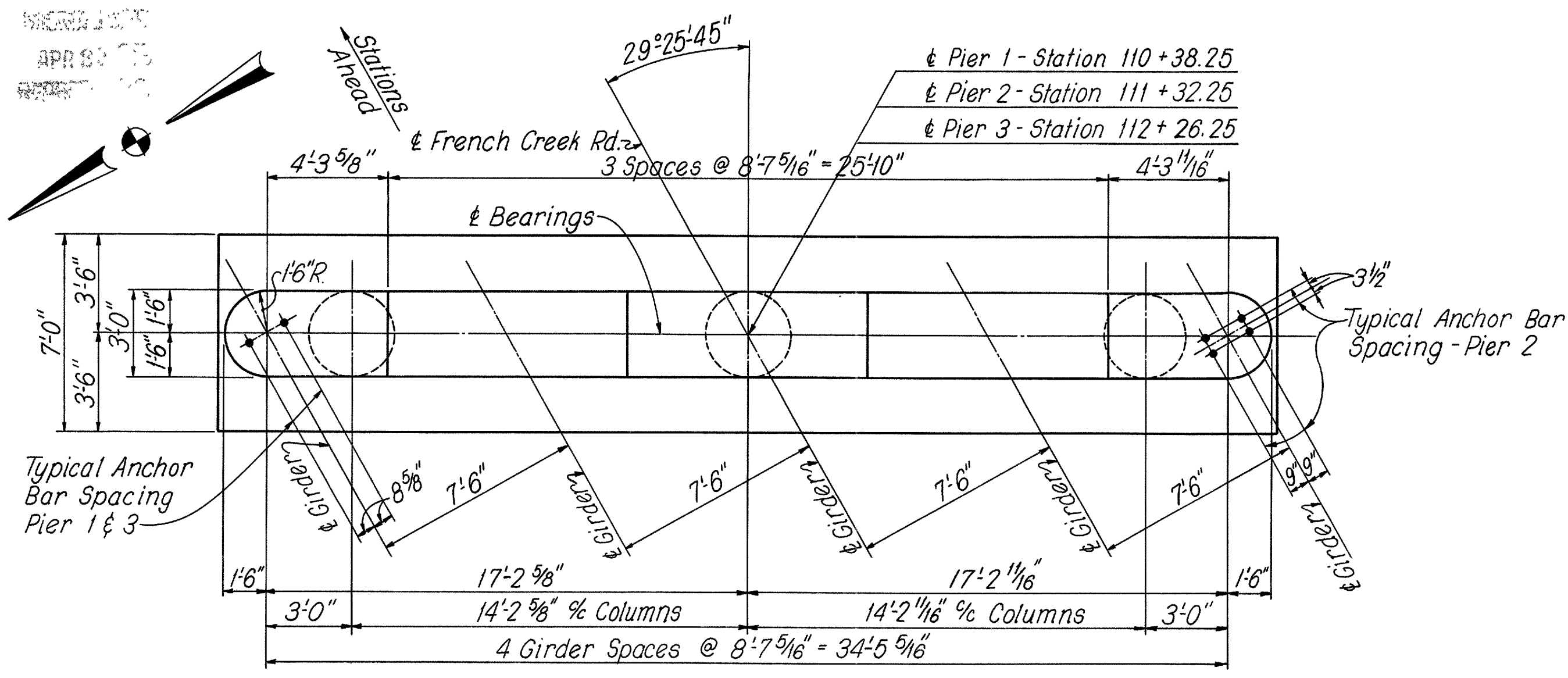
SECTION D-D

SECTION E-E

ABUTMENT NOTES: See Sheet 3

SHAFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
FORWARD ABUTMENT-2						
BRIDGE NO. LOR-90-1754						
UNDER FRENCH CREEK ROAD						
LORAIN COUNTY				I.R. 90		
STA. 909 + 96.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH	J.P.G.			

APR 83



NOTES:

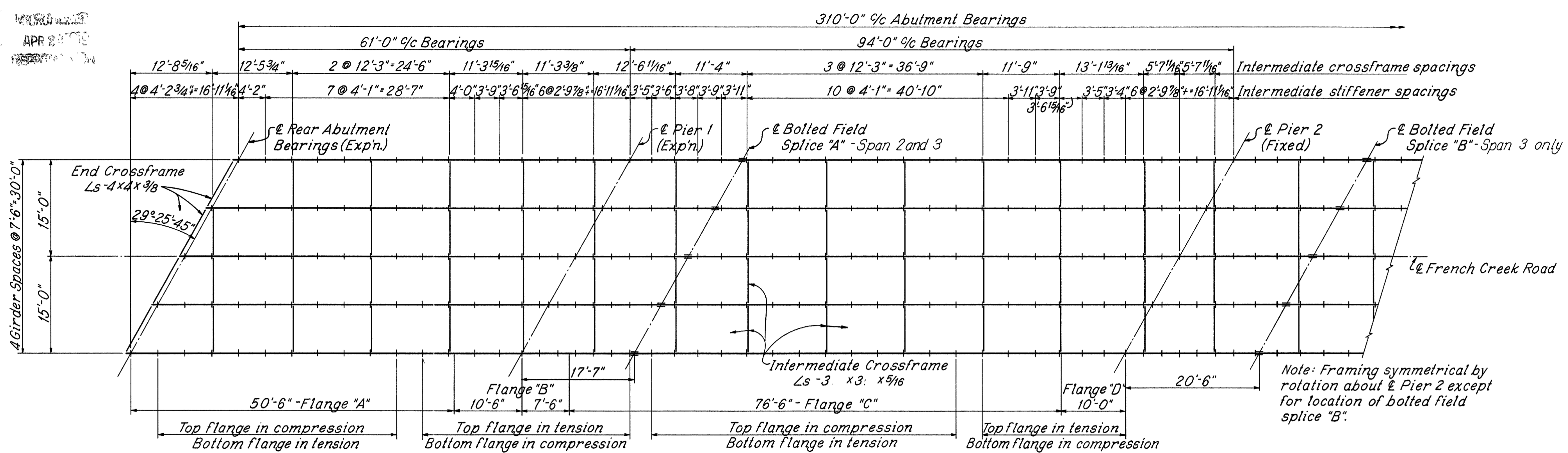
CONCRETE: All concrete for pier footings shall be Class "E". All concrete for piers above footings shall be Class "C".

BRIDGE SEAT REINFORCING: Special care shall be taken in the placing of reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

GENERAL NOTES: See Sheet 2

SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
PIERS						
BRIDGE NO. LOR-90-1754						
UNDER FRENCH CREEK ROAD						
LORAIN COUNTY					IR. 90	
STA. 909 + 96.54						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	JS	J.P.G.			

LOR-90-17.21



GIRDER MATERIALS	
Web	52 x 5/16
Flange "A"	14 x 1/2
Flange "B"	14 x 1
Flange "C"	14 x 3/4
Flange "D"	14 x 1 1/4
Intermediate stiffeners	6 x 3/8
End Stiffeners	6 x 5/8
Piers 1 & 3 Stiffeners	6 x 9/16
Pier 2 Stiffeners	6 x 1 1/16

FRAMING PLAN

NOTES:

END CROSSFRAMES, END DAMS, SCUPPERS AND CURB PLATE DETAILS: See Std. Dwg. SD-1-65, Sheets 1 and 2 of 3. Use 4x4x3/8 angles in place of 4x4x5/16 angles in place of end crossframes.

BEARINGS: See Std. Dwg. FSB-1-62 for the following: E-100 for Abutments; E-200 for Piers 1 and 3; F-200 for Pier 2.

RAILING: See Std. Dwg. BR-1-65, Sheet 1 of 2.

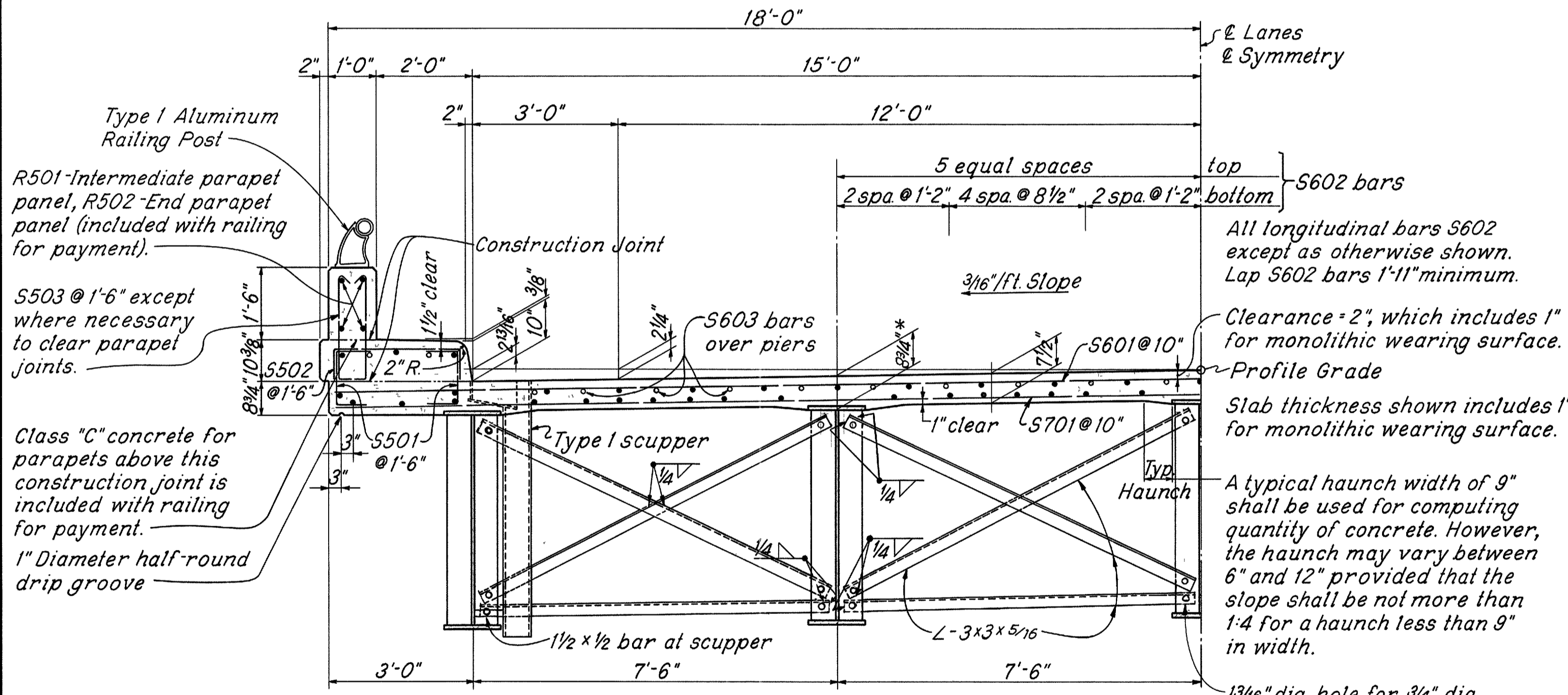
CONCRETE: All superstructure concrete shall be Class "C".

BOLTED FIELD SPLICE NOTES: See Std. Dwg. SD-1-65, Sheet 3 of 3.

RAILING POST, PARAPET EXPANSION JOINT AND SCUPPER SPACING: See Sheet 2

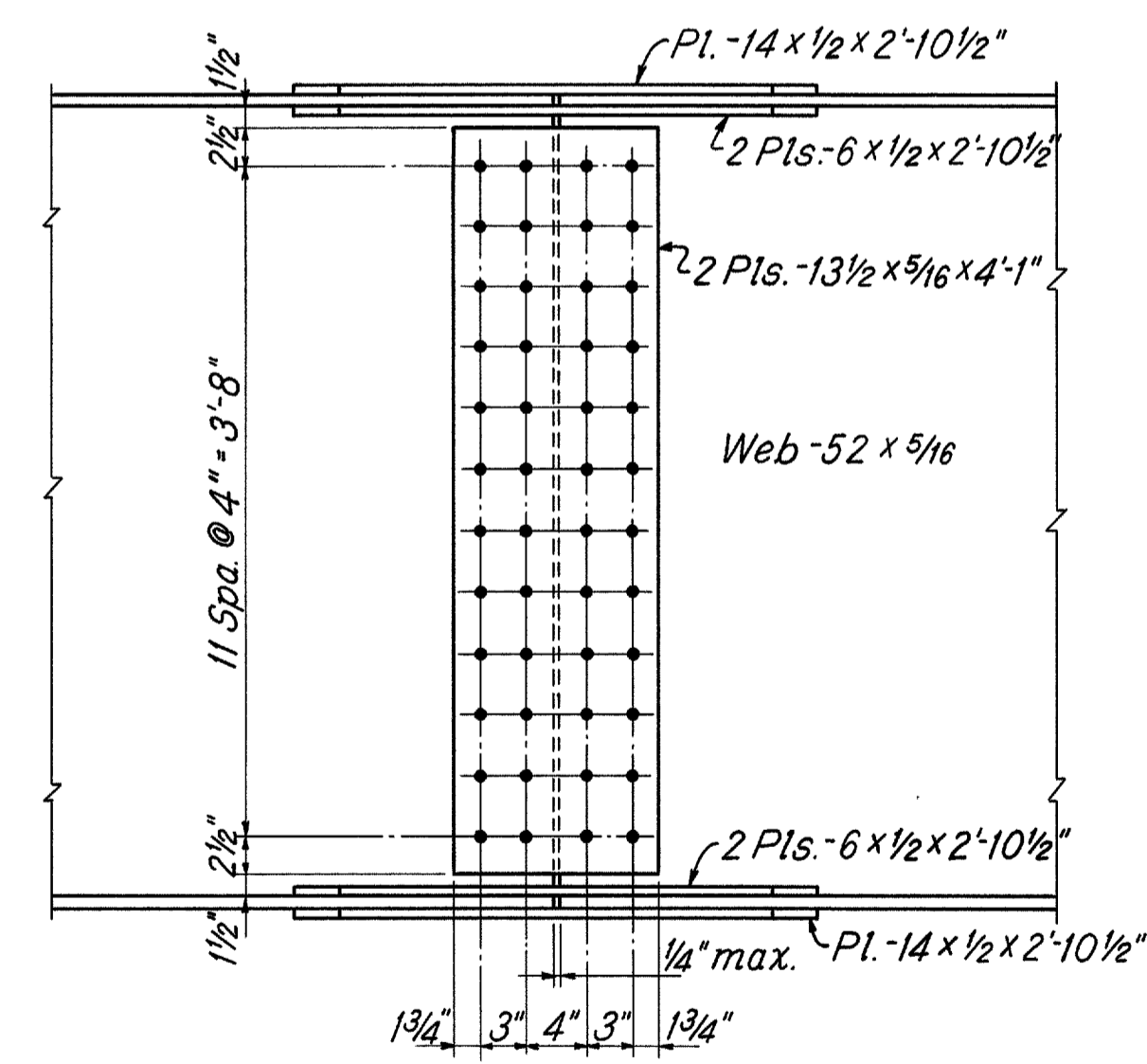
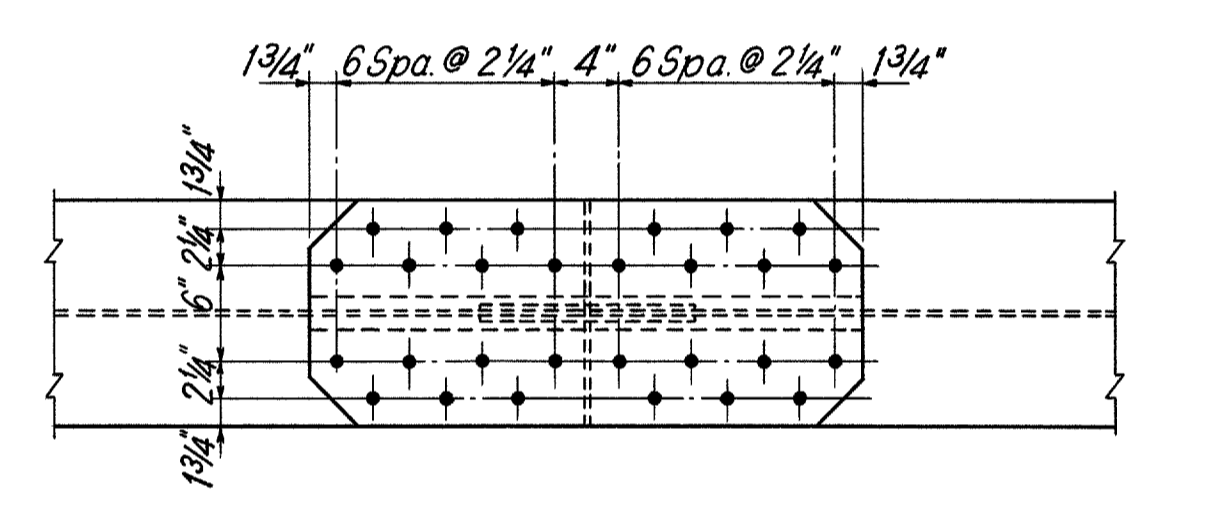
ERECTION PROCEDURE: The Contractor shall submit to the Director, for approval, three (3) prints showing his proposed erection procedure for the plate girders.

GENERAL NOTES: See Sheet 2



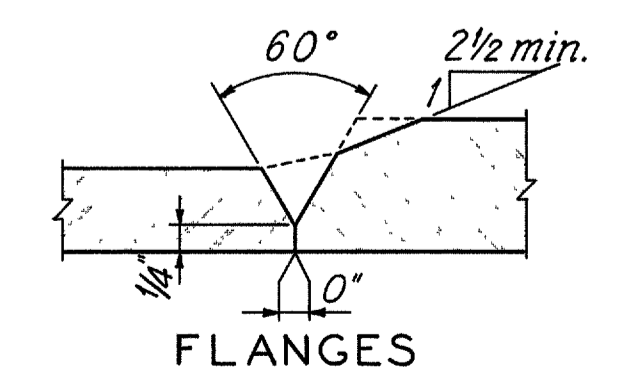
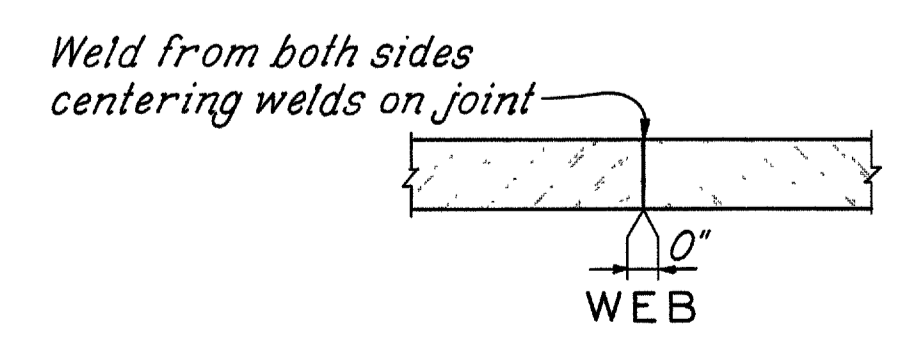
* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for the volume of encased steel plates as per 511.19 of the Construction and Material Specifications.

HALF TRANSVERSE SECTION



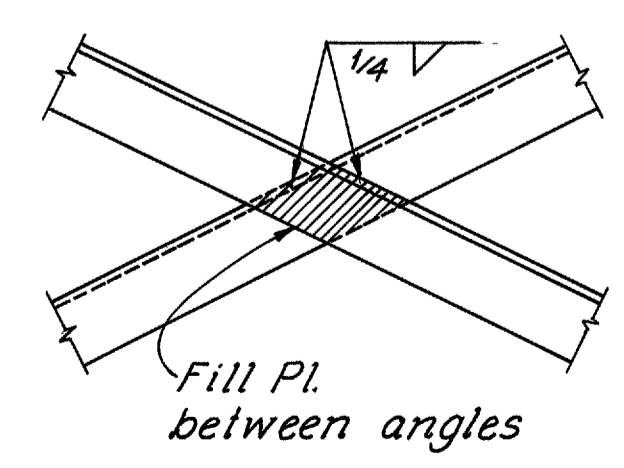
All bolts 1" dia. high-strength

TYPICAL BOLTED FIELD SPLICE



JOINT PREPARATION FOR SHOP WELDS

All full penetration welds shall be back-gouged and welded after welding far side. Grind welds flush parallel to length of plate.



CROSSFRAME DETAIL

CAMBERING of girders is required in accordance with the following table:

	END SPANS			MIDDLE SPANS					
	SPAN POINT	1/4	1/2	3/4	FIELD SPL. "A"	1/4	1/2	3/4	FIELD SPL. "B" #
Deflection due to weight of steel	0	1/16	0	0	1/16	1/8	1/16	1/16	1/16
Deflection due to remaining dead load	1/16	1/16	0	1/4	5/16	1/2	1/4	3/16	3/16
Adjustment required for vertical curve	1/16	9/16	7/16	13/16	1	1 1/16	1	7/8	7/8
Required shop camber	1/2	1 1/16	7/16	1 1/16	1 3/8	1 5/16	1 5/16	1 1/8	1 1/8

- Span 3 only. Deflection and camber symmetrical about Pier 2 except Field Splice "B".

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SUPERSTRUCTURE-1
BRIDGE NO. LOR-90-1754
UNDER FRENCH CREEK ROAD
LORAIN COUNTY I. R. 90

STA. 909 + 96.54

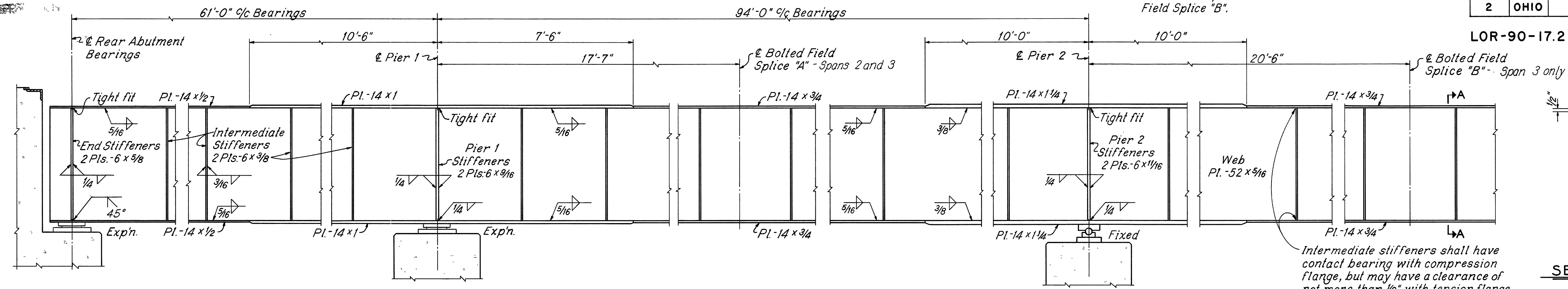
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	UL	J.P.G.			

APR 21

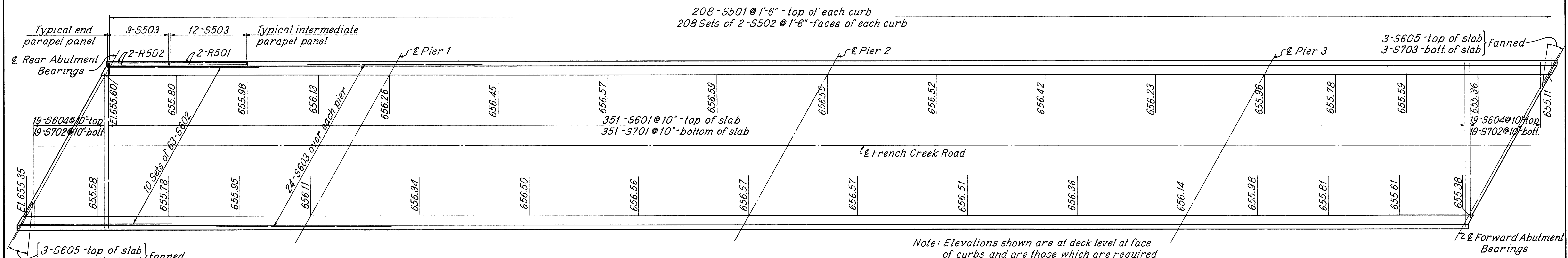
Note: Girder symmetrical by rotation about
 & Pier 2 except for location of Bolted
 Field Splice "B".

FED. RD. DIVISION	STATE	PROJECT	242
2	OHIO		

LOR-90-17.21

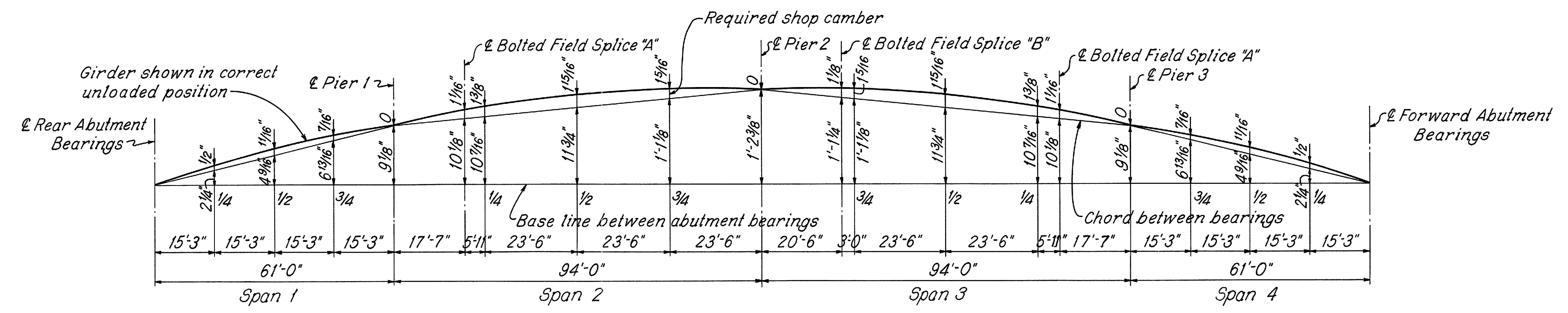


GIRDER ELEVATION



SLAB PLAN

Note: Elevations shown are at deck level at face of curbs and are those which are required before the deck concrete is placed. These points are located at ends, midpoints and quarter points of each span.



GIRDER LAYOUT DIAGRAM

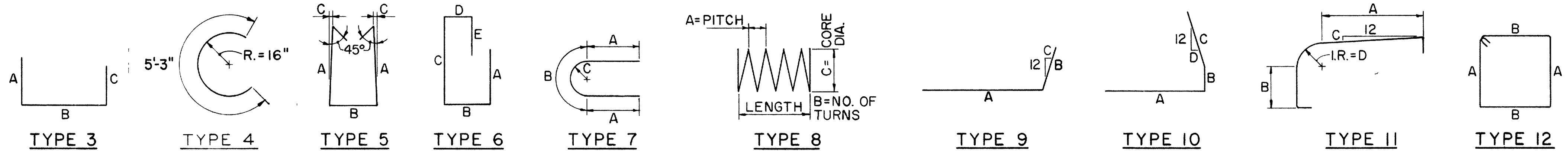
SHAFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SUPERSTRUCTURE-2
 BRIDGE NO. LOR-90-1754
 UNDER FRENCH CREEK ROAD
 LORAIN COUNTY I.R. 90

STA. 909 + 96.54

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	UL	J.P.G.			

LOR-90-17.21



ABUTMENTS									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R503	4	17'-11"	Str.						*
R504	4	15'-2"	Str.						*
R505	8	5'-4"	11	2'-8 1/2"	3"	3/4"	7 3/8"		*
R506	12	4'-2"	5	1'-6"	8"	3/4"			*
R507	4	19'-10"	Str.						*
R508	4	16'-1"	Str.						*
S503	49	5'-7"	5	2'-2"	8"				285
A501	50	8'-2"	3	1'-7"	5'-3"	1'-7"			426
A502	52	6'-10"	3	6'-3"	7 1/2"	0			371
A503	50	7'-2"	3	2'-0"	3'-5"	2'-0"			374
A504	38	40'-6"	Str.						1605
A505	40	11'-8"	12	2'-7"	3'-0"				487
A506	47	6'-0"	Str.						294
A507	8	4'-7"	Str.						38
A508	8	4'-0"	Str.						33
A509	24	3'-6"	Str.						88
A510	8	6'-9"	Str.						56
A511	4	13'-7"	9	12'-1"	1'-7"	6 3/4"			57
A512	4	12'-3"	9	6'-8"	5'-8"	20 9/16"			51
A513	1	11'-3"	9	9'-9"	1'-7"	6 3/4"			12
A514	1	14'-5"	9	8'-10"	5'-8"	20 9/16"			15
A515	2	19'-4"	9	17'-10"	1'-7"	6 3/4"			40
A516	2	20'-3"	9	14'-8"	5'-8"	20 9/16"			42
A517	4	18'-1"	Str.	Bend 2 in field					75
A518	2	19'-3"	Str.	Bend in field					40
A519	42	5'-3"	3	2'-1"	1'-4"	2'-1"			230
A520	40	(2)	3	(1)	1'-4"	(1)			149
A521	4	11'-1"	10	9'-8"	6"	1'-1"	6 3/4"		46
A522	4	7'-2"	9	3'-1"	4'-2"	7"			30
A523	1	8'-10"	10	7'-5"	6"	1'-1"	6 3/4"		9
A524	1	9'-4"	9	5'-3"	4'-2"	7"			10
A525	2	16'-8"	10	15'-3"	6"	1'-1"	6 3/4"		35
A526	2	15'-1"	9	11'-0"	4'-2"	7"			31
A527	4	15'-3"	Str.	Bend 2 in field					64
A528	2	14'-6"	Str.	Bend in field					30
A529	4	15'-7"	9	14'-1"	1'-7"	6 3/4"			65
A530	4	14'-2"	9	8'-7"	5'-8"	20 9/16"			59
A531	1	13'-3"	9	11'-9"	1'-7"	6 3/4"			14
A532	1	16'-5"	9	10'-10"	5'-8"	20 9/16"			17
A533	2	21'-2"	9	19'-8"	1'-7"	6 3/4"			44
A534	2	22'-1"	9	16'-6"	5'-8"	20 9/16"			46
A535	4	20'-1"	Str.	Bend 2 in field					84
A536	2	21'-0"	Str.	Bend in field					44
A537	4	12'-1"	10	10'-8"	6"	1'-1"	6 3/4"		50
A538	4	8'-2"	9	4'-1"	4'-2"	7"			34
A539	1	9'-9"	10	8'-4"	6"	1'-1"	6 3/4"		10
A540	1	10'-2"	9	6'-1"	4'-2"	7"			11
A541	2	17'-9"	10	16'-4"	6"	1'-1"	6 3/4"		37
A542	2	15'-2"	9	11'-1"	4'-2"	7"			33
A543	4	16'-2"	Str.	Bend 2 in field					67
A544	2	15'-6"	Str.	Bend in field					32
A601	5	13'-10"	3	2'-8"	5'-3"	6'-3"			1039
A602	80	17'-5"	6	6'-1"	1'-5"	7'-8"	11"	2'-0"	2093
A603	31	17'-8"	3	8'-5"	1'-2"	8'-5"			823
A604	23	8'-5"	Str.						291
A605	11	6'-3"	Str.						103
A801	14	42'-8"	Str.						1595
A802	6	14'-10"	Str.						238
A803	6	12'-0"	Str.						192
A804	6	16'-7"	Str.						266
A805	6	13'-0"	Str.						208
TOTAL WEIGHT									12,618

PIERS									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P401	78	6'-6"	Str.						339
P501	78	6'-6"	Str.						529
P502	6	34'-5"	Str.						215
P503	132	6'-7"	3	2'-1"	2'-8"	2'-1"			906
P504	18	7'-4"	7	1'-7"	4'-2"				138
P505	12	6'-5"	3	2'-1"	2'-6"	2'-1"			80
P506	12	5'-10"	3	2'-1"	1'-11"	2'-1"			73
P901	108	6'-6"	3	5'-6"	1'-3"	0			2387
P902	108	24'-4"	Str.						8935
P903	18	37'-8"	Str.						2305
P904	27	34'-5"	Str.						3159
P905	18	8'-3"	Str.						505
P906	9	9'-0"	Str.						275
P1001	12	37'-6"	Str.						1936
P1002	48	8'-8"	Str.						1790
P1003	18	7'-0"	Str.						542
SP401	9	21'-6"	8	4 1/2"	60	32"			3550
TOTAL WEIGHT									27,664

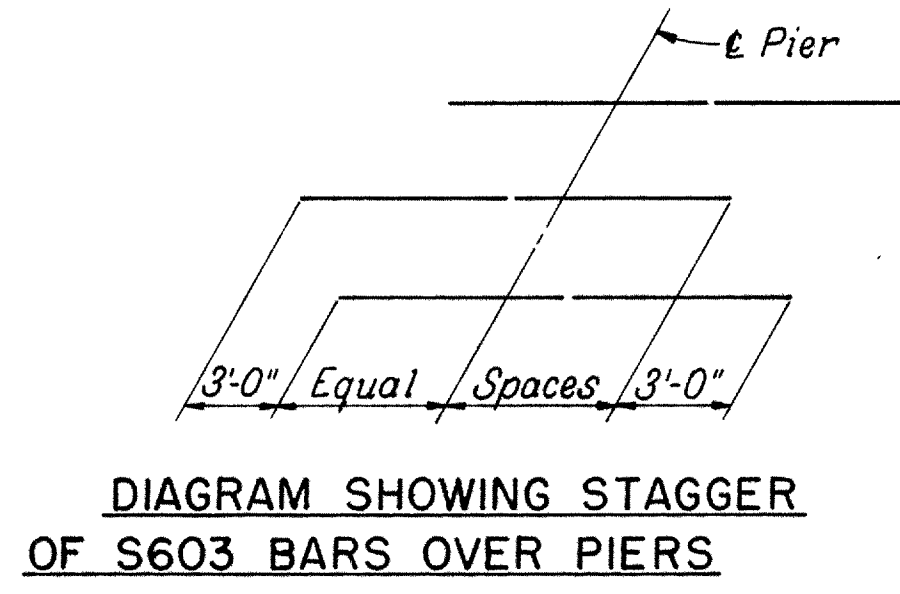
SUPERSTRUCTURE									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R501	144	15'-8"	Str.						*
R502	16	11'-6"	Str.						*
S501	416	3'-6"	3	7 1/2"	2'-6"	7 1/2"			1519
S502	932	2'-3"	3	7 1/2"	1'-3"	7 1/2"			2187
S503	468	5'-7"	5	2'-2"	8"				2725
S601	351	35'-8"	Str.						18,804
S602	630	32'-11"	Str.						31,148
S603	72	37'-6"	Str.						4055
S604	38	Varies	Str.	33'-9" to 7'-2"	Vary 2 each by 1'-5 3/4"				1168
S605	6	6'-0"	Str.						54
S701	351	35'-8"	Str.						25,589
S702	38	Varies	Str.	33'-9" to 7'-2"	Vary 2 each by 1'-5 3/4"				1589
S703	6	6'-0"	Str.						74
TOTAL WEIGHT									88,912

* - These railing bars included with Item 517 for payment.

NOTES:

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No. 5 size bar and P1002 is a No. 10 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.



REPLACEMENT BARS			
MARK	NO.	LENGTH	TYPE
RE400	1	5'-3"	4
RE500	1	5'-7"	Str.
RE600	3	5'-11"	Str.
RE700	2	6'-2"	Str.
RE800	1	6'-6"	Str.
RE900	1	6'-10"	Str.
RE1000	1	7'-2"	Str.

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MANSFIELD, OHIO.

REINFORCING STEEL
BRIDGE NO. LOR-90-1754
UNDER FRENCH CREEK ROAD

LORAIN COUNTY STA. 909 + 96.54 I.R. 90

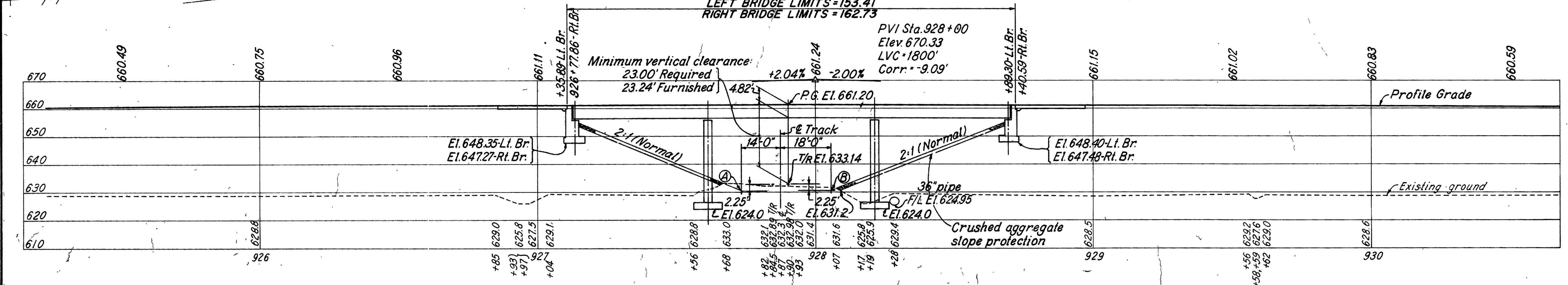
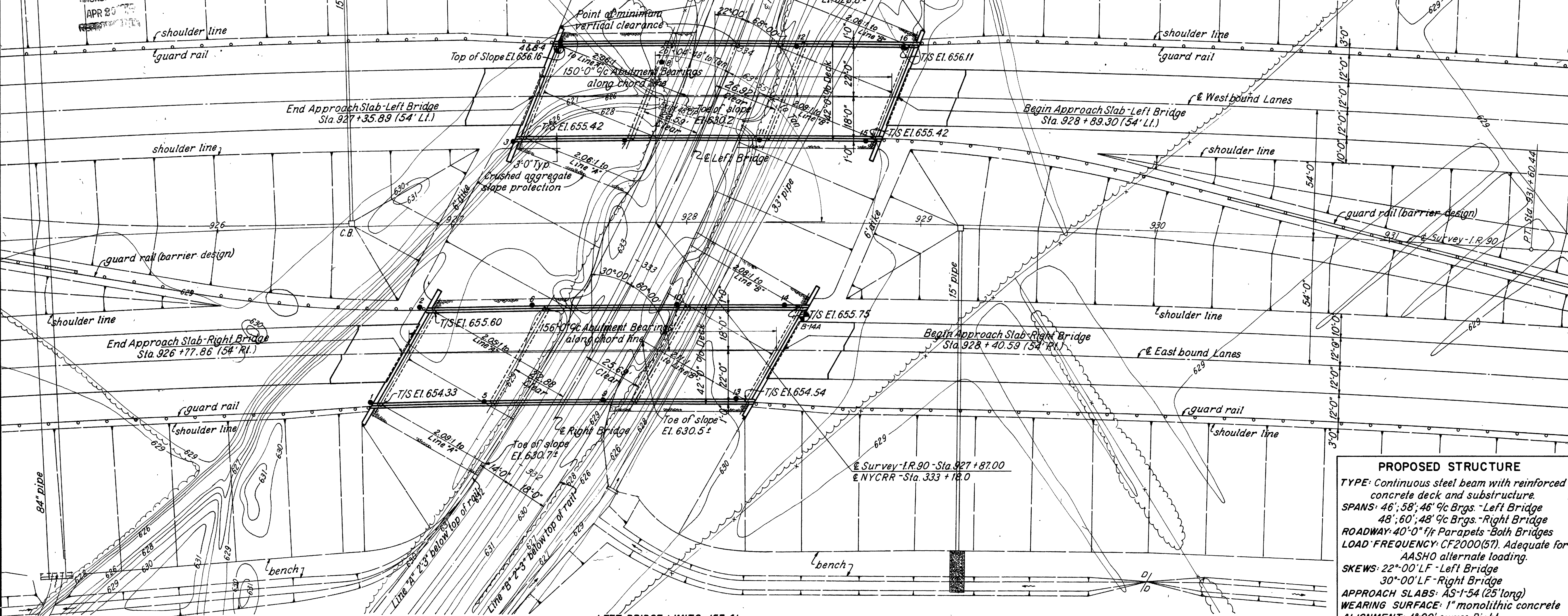
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RWH	RWH	J.P.G.			

① 1'-9" to 9" Vary each by 4"
② 4'-7" to 2'-7" Vary each by 4"

LOR-90-17.21

CURVE DATA - I.R. 90
 P.I. Sta. 924 + 29.83
 $\Delta = 14^\circ 41' 36''$
 $D = 1^\circ 00'$
 $R = 5729.58'$
 $T = 738.72'$
 $L = 1469.33'$
 $E = 47.43'$

CURVE DATA - NYCRR
 P.I. Sta. 338 + 90.76
 $\Delta = 96^\circ 00'$
 $D = 6^\circ 00'$
 $R = 955.37'$
 $T = 1060.56'$
 $L = 1600.00'$
 $E = 472.19'$



PROPOSED STRUCTURE
 TYPE: Continuous steel beam with reinforced concrete deck and substructure.
 SPANS: 46'; 58'; 46' 9c Brgs. - Left Bridge
 48'; 60'; 48' 9c Brgs. - Right Bridge
 ROADWAY: 40'-0" flt Parapets - Both Bridges
 LOAD FREQUENCY: CF2000(57). Adequate for AASHO alternate loading.
 SKEWS: 22°-00' LF - Left Bridge
 30°-00' LF - Right Bridge
 APPROACH SLABS: AS-1-54 (25' long)
 WEARING SURFACE: 1" monolithic concrete
 ALIGNMENT: 1°-00' curve Right
 SUPERELEVATION: .032'/ft.
 AVERAGE DAILY TRAFFIC: 24,660 (1989)

FOUNDATION INVESTIGATION LEGEND
 ⊕ Indicates core boring location
 • Indicates rod sounding location

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SITE PLAN
 BRIDGE NO. LOR-90-1785 L & R
 OVER NEW YORK CENTRAL R.R.

LORAIN COUNTY I.R. 90
 STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE
 STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RHU	UL	PCB			

APR 30 1975

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

245

LOR-90-17.21

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-65 Sheets 1, 2 and 3 (dated 11-8-65), BR-1-65 Sheet 1 of 2 (revised 11-24-65), RB-1-55 (revised 2-2-59), AS-1-54 (revised 8-10-65), to Supplemental Specifications 808 (revised 2-7-66), 811 (dated 3-29-65), 825 (dated 4-22-65), and 828 (revised 3-21-66).

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

UNIT STRESSES:

- Design Loading - CF 2000(57)
- Concrete Class "C" - basic unit stress 1,333 p.s.i.
- Concrete Class "E" - basic unit stress 1,133 p.s.i.
- Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.
- Reinforcing Steel - ASTM A15, A16, A160 deformed intermediate or hard grade - basic unit stress 20,000 p.s.i.

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.5 tons per sq. ft. Pier footings are designed for a maximum bearing pressure of 2.8 tons per sq. ft.

EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments and piers.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

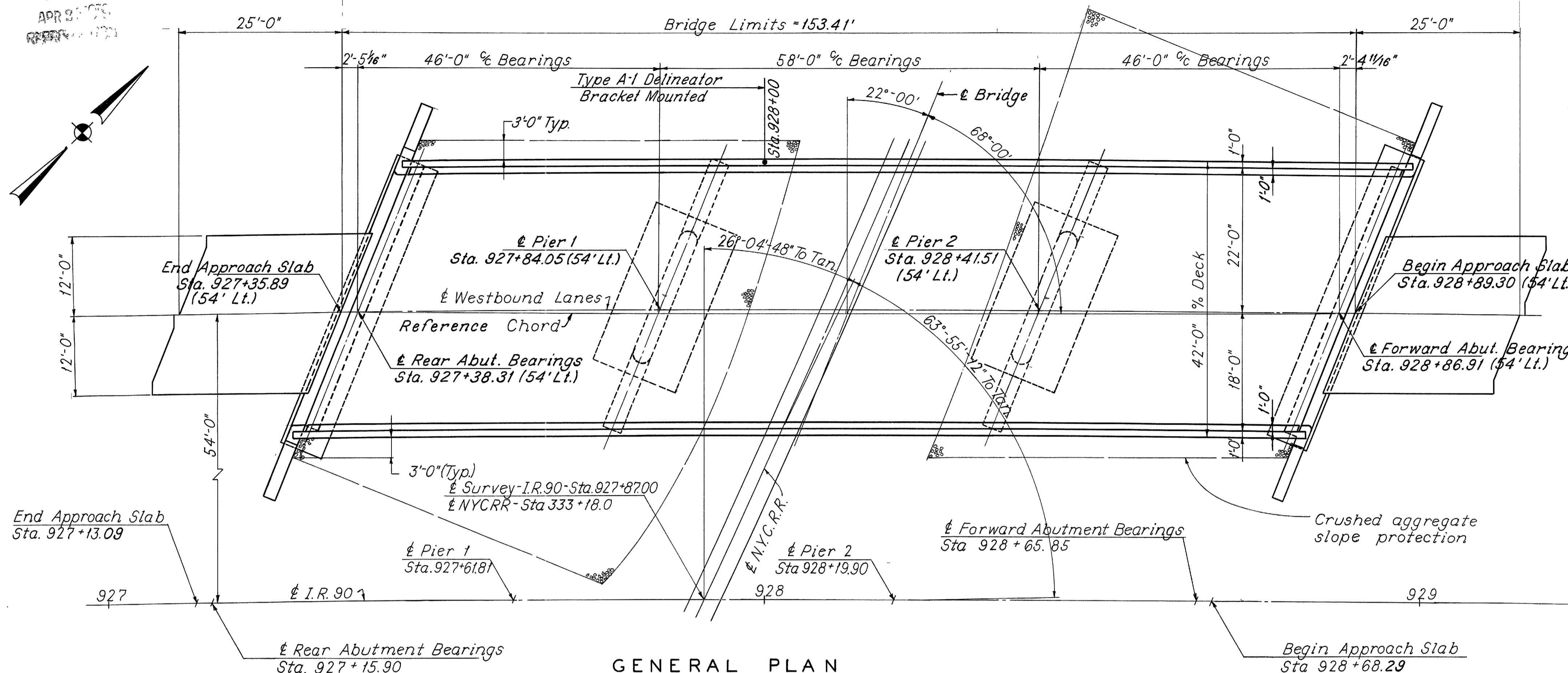
PROCEDURE: The embankments shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments for a period of 30 days, after which excavation shall be made for the abutments.

RAILROAD AERIAL LINES will be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

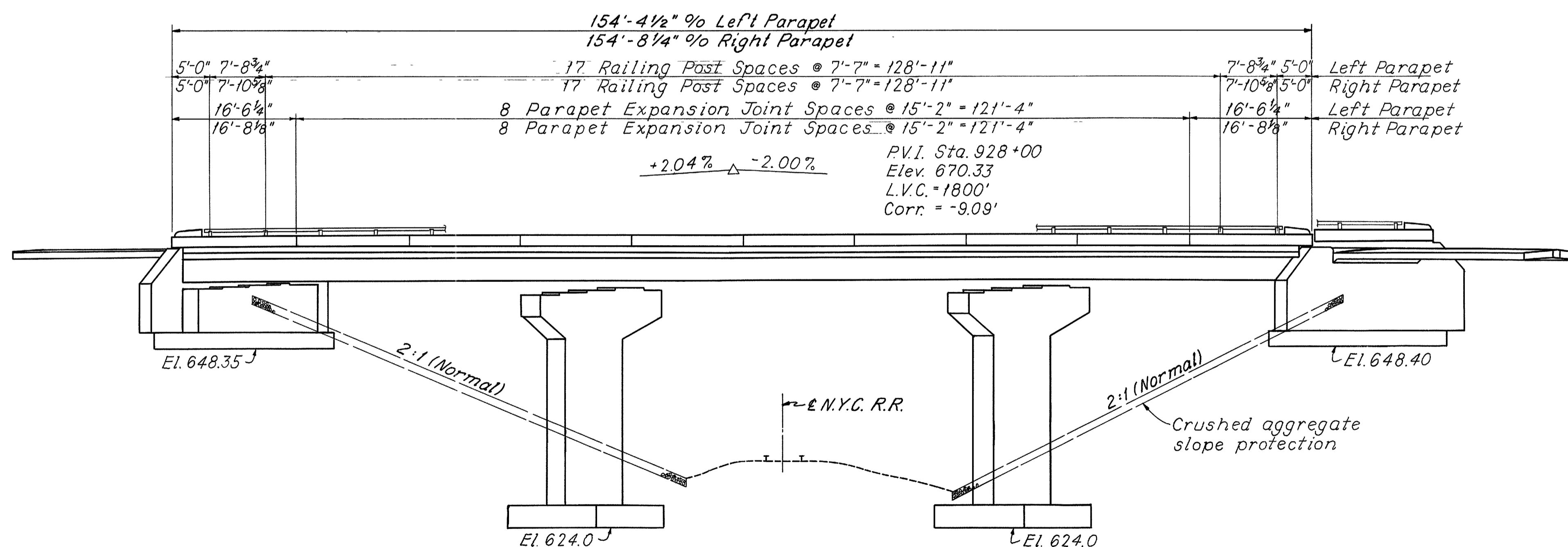
CONSTRUCTION CLEARANCE of 20' vertically above the top of the railroad rails and 8' horizontally from the center of tracks shall be maintained at all times.

SHEETING AND BRACING: Before construction is started eight sets of prints showing details of the sheeting and bracing to be used for excavation adjacent to the railroad tracks shall be submitted to the Director for approval by the Department of Highways and by the Railroad Company.

ALIGNING RAILROAD TRACKS: After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with 503.04 and 503.09 of the Construction and Material Specifications, subject to the Supervision of the Railroad Company, nothing in 503.04, 503.09 or 108.04 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.



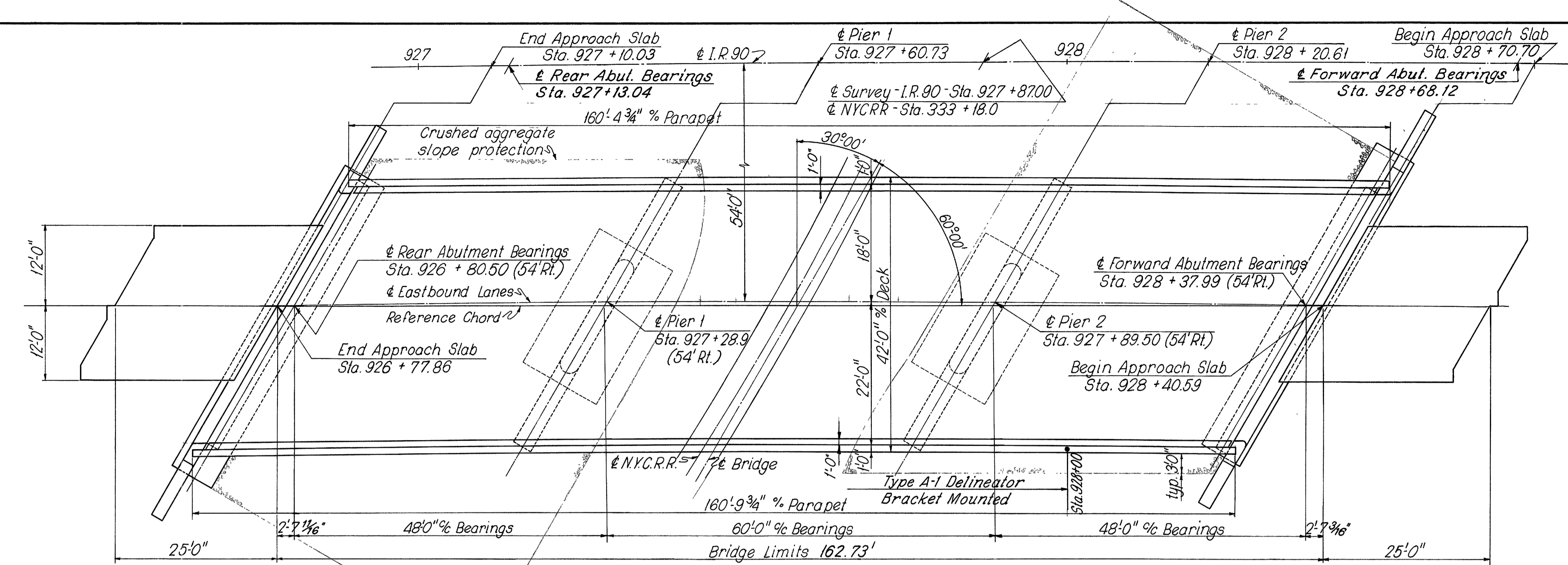
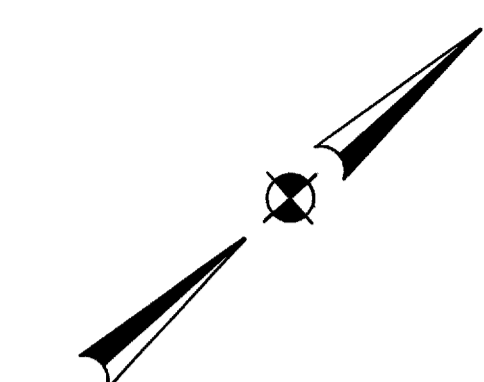
GENERAL PLAN



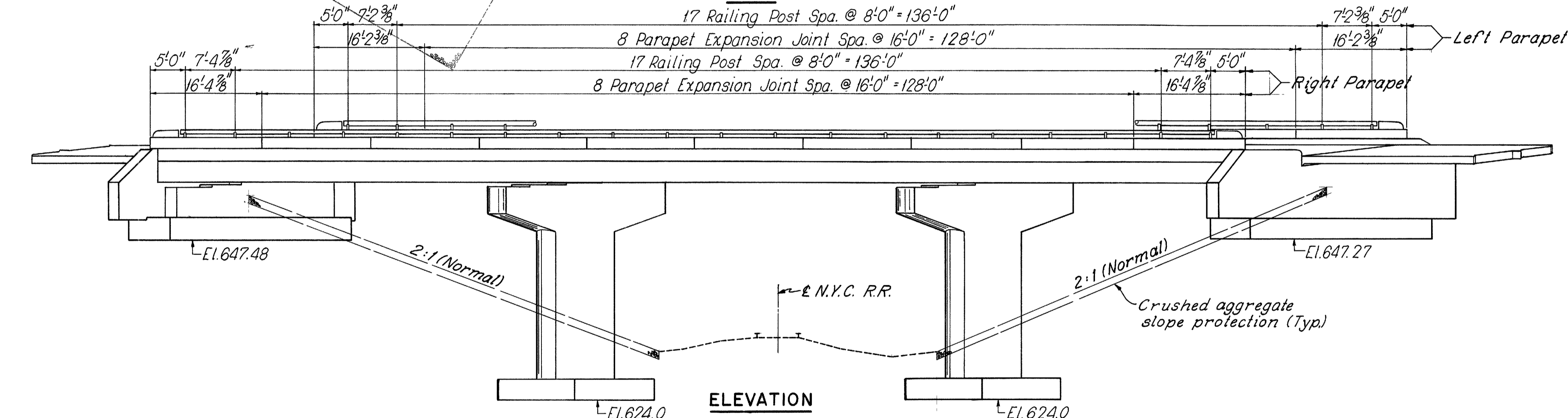
GENERAL ELEVATION

SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
GENERAL PLAN - LEFT BRIDGE AND GENERAL NOTES						
BRIDGE NO. LOR-90-1785 L & R OVER NEW YORK CENTRAL R.R.						
LORAIN COUNTY						I.R. 90
STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE						
STA. 92 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	LK	LK	PCB			

LOR-90-17.21



PLAN



ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE			RIGHT BRIDGE					
				SUPER	ABUTS.	PIERS	GEN'L	SUPER	ABUTS.	PIERS	GEN'L	
503	731	Cu.Yds.	Unclassified Excavation		238	119			255	119		
503	Lump	Sum	Coffdams, Cribbs & Sheeting				Lump					Lump
509	164,776	Lbs.	Reinforcing Steel	57,373	8,130	14,690		60,049	8,712	15,852		
511	397	Cu.Yds.	Class "C" Concrete, Superstructure	189				208				
511	280	Cu.Yds.	Class "C" Concrete, Piers above Footing			141				139		
511	138	Cu.Yds.	Class "E" Concrete, Pier Footings			69				69		
511	366	Cu.Yds.	Class "E" Concrete, Abutments		179				187			
513	293,685	Lbs.	Structural Steel	134,248				159,437				
514	293,685	Lbs.	Field Painting Structure Steel	134,248				159,437				
517	630.27	Lin.Ft.	Bridge Railing - type 1	309.06				321.21				
518	20	Each	Scuppers, including supports	12				8				
518	125	Cu.Yds.	Porous Backfill		64				61			
518	203.47	Lin.Ft.	6" Helical Perforated C.M.P., 707.06, including specials		98.3				105.17			
518	216	Lin.Ft.	6" Helical C.M.P., 707.06, Non-perforated		108				108			
601	15.87	Sq.Yds.	Crushed Aggregate Slope Protection				746				841	
808	3.97	Units	Water-reducing, Set-retarding Admixture				189				208	
825	1757	Sq.Yds.	Concrete Surface Treatment				869				888	
828	172	Lin.Ft.	Joint Sealer (end dam)				84				88	

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 MANSFIELD, OHIO.

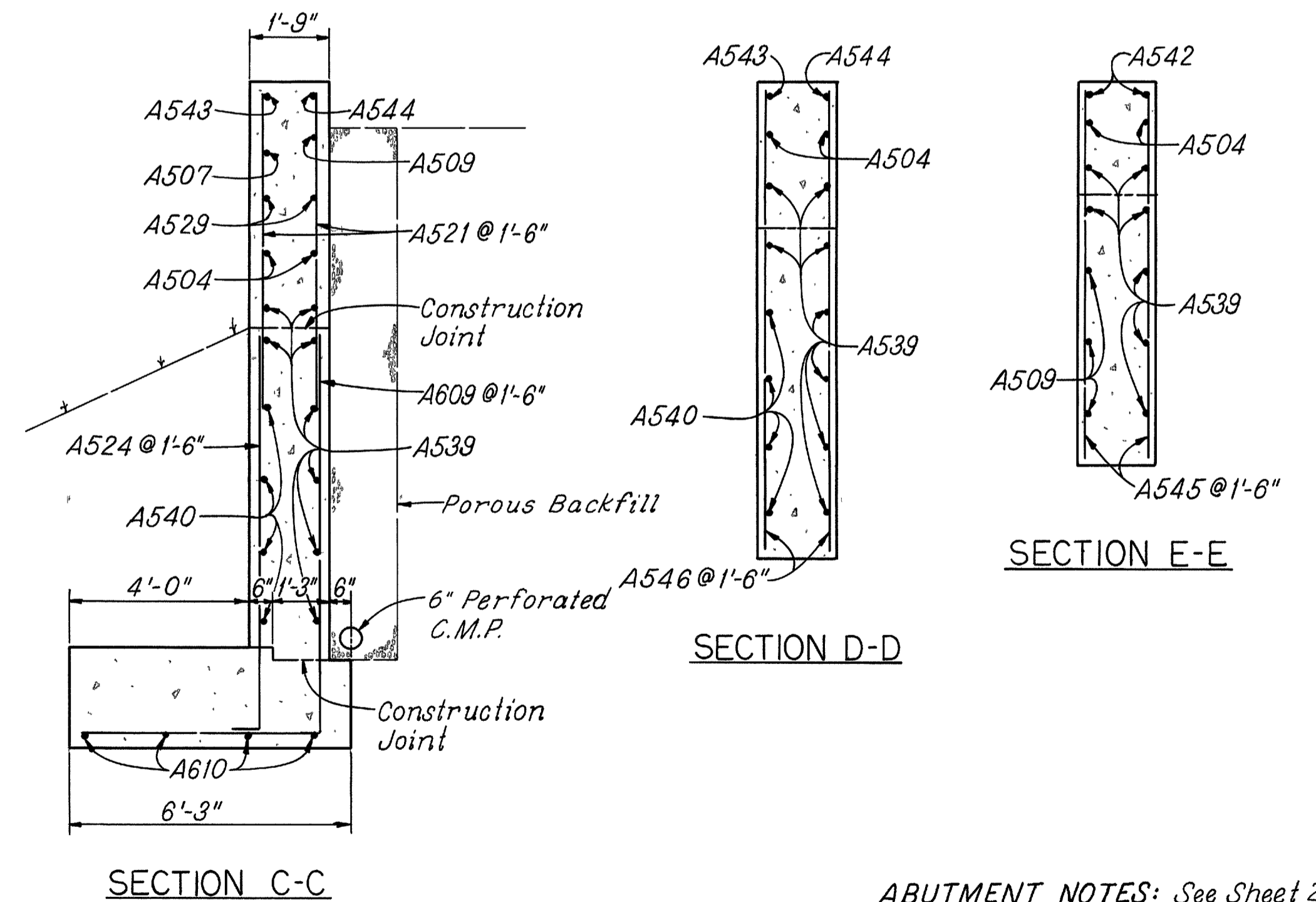
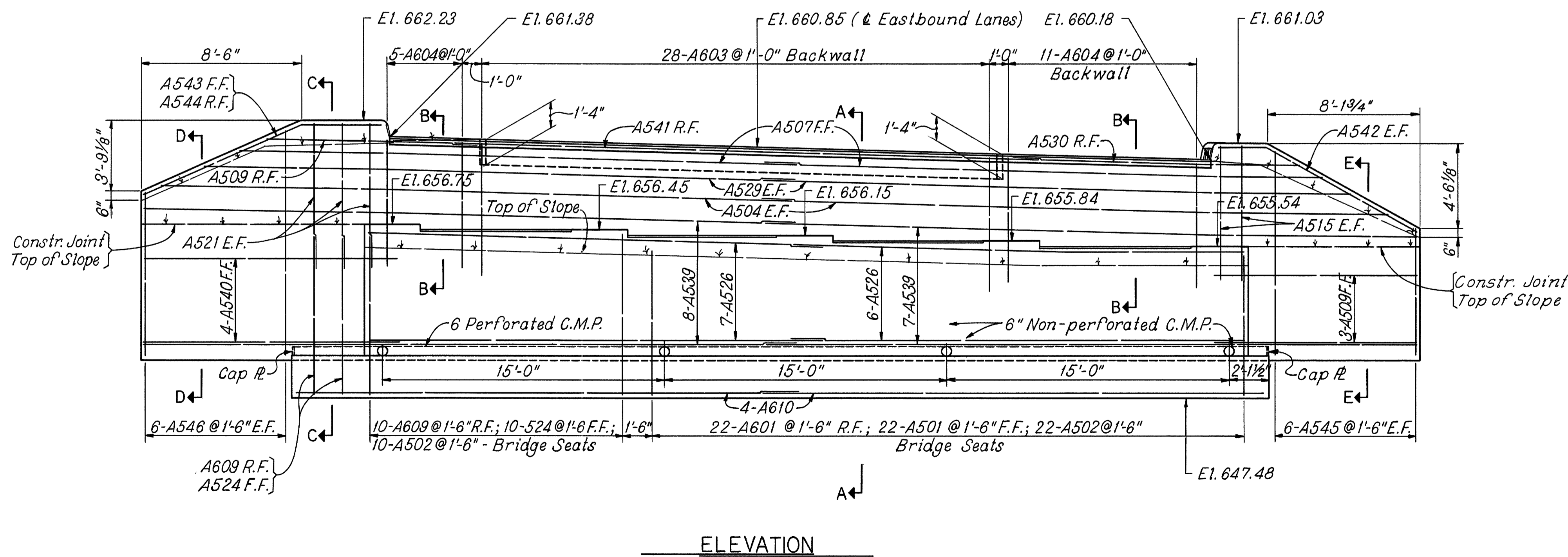
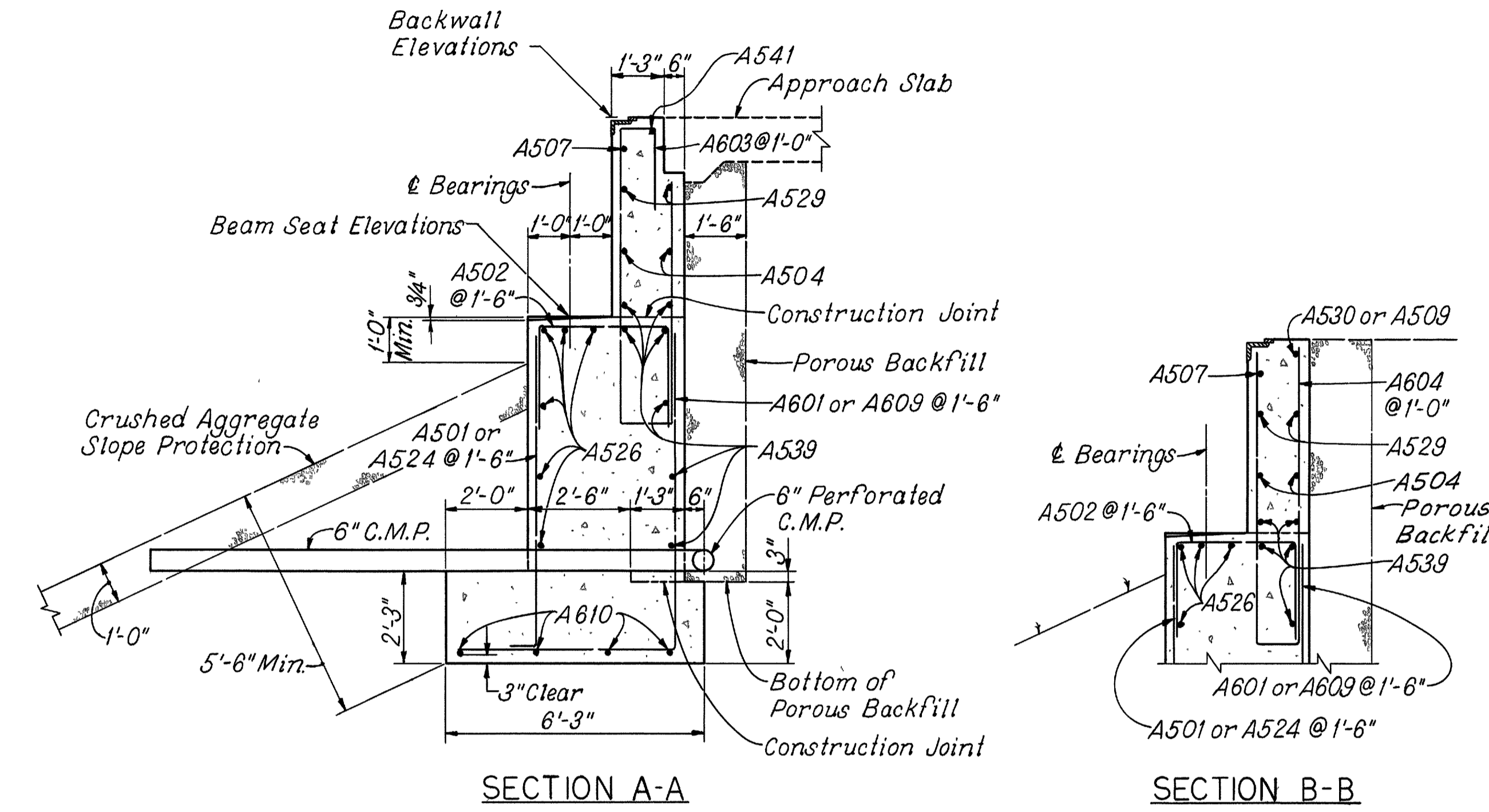
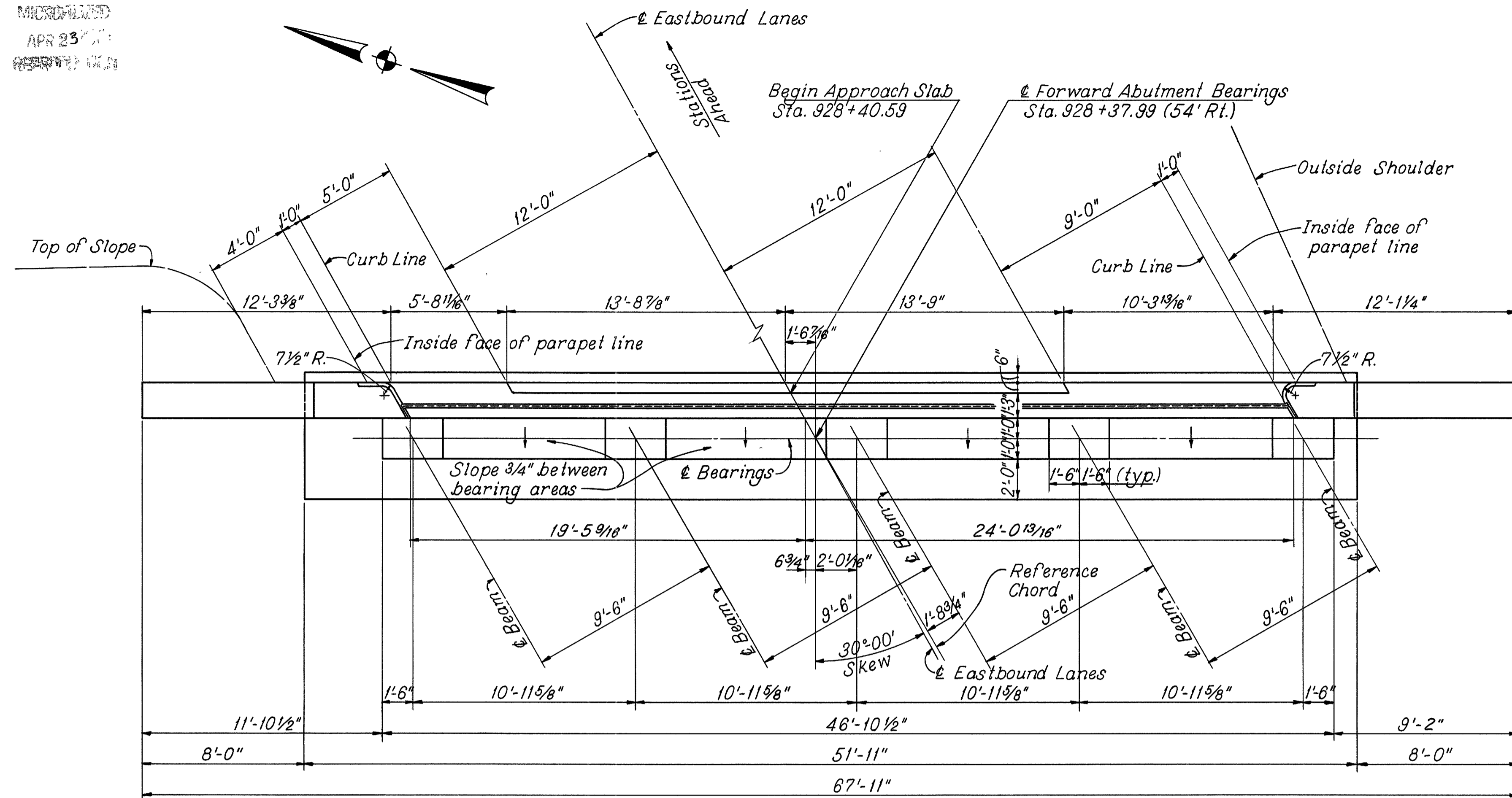
GENERAL PLAN - RIGHT BRIDGE AND ESTIMATED QUANTITIES
 BRIDGE NO. LOR-90-1785 L & R
 OVER NEW YORK CENTRAL R.R.
 LORAIN COUNTY I.R. 90
 STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE
 STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	JS	JS	PCB			

MICROFILMED
APR 23 1971
SERIALS ACQUISITION

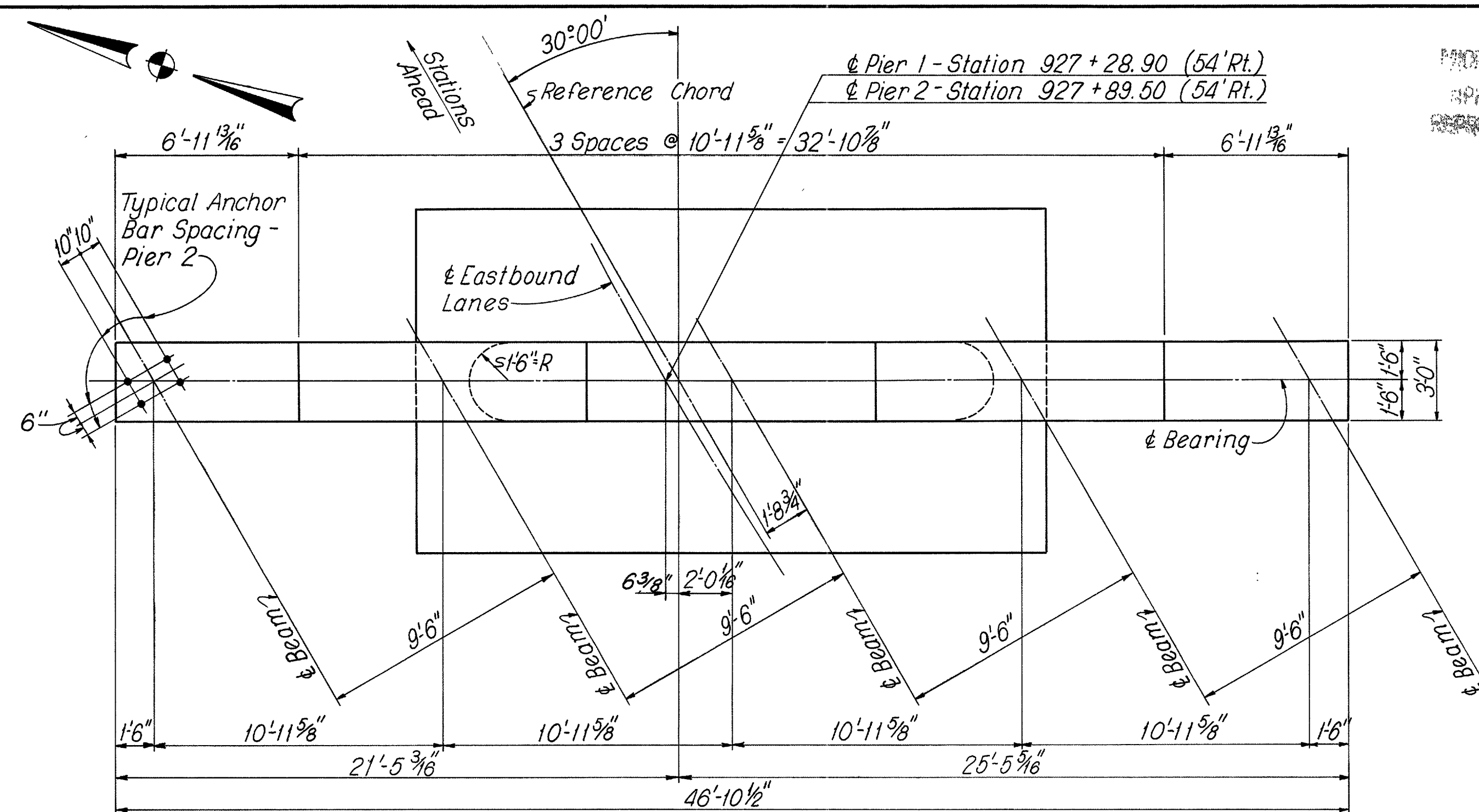
FED. RD. DIVISION	STATE	PROJECT	250
2	OHIO		

LOR-90-17.21

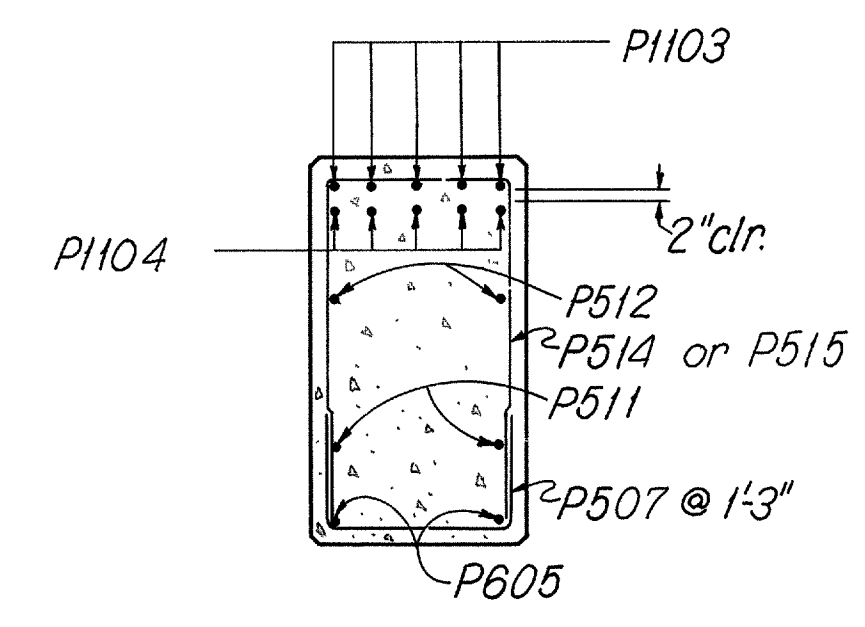


ABUTMENT NOTES: See Sheet 247

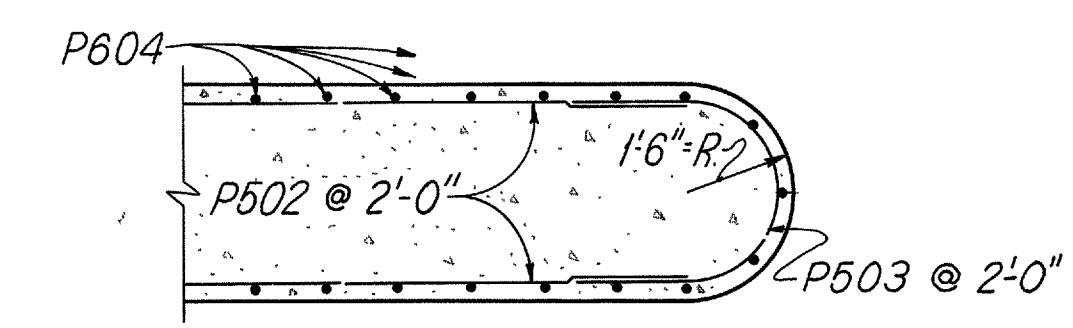
SHAFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
FORWARD ABUTMENT RIGHT BRIDGE						
BRIDGE NO. LOR-90-1785 L & R OVER NEW YORK CENTRAL R.R.						
LORAIN COUNTY I.R. 90						
STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE						
STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH	PCB			



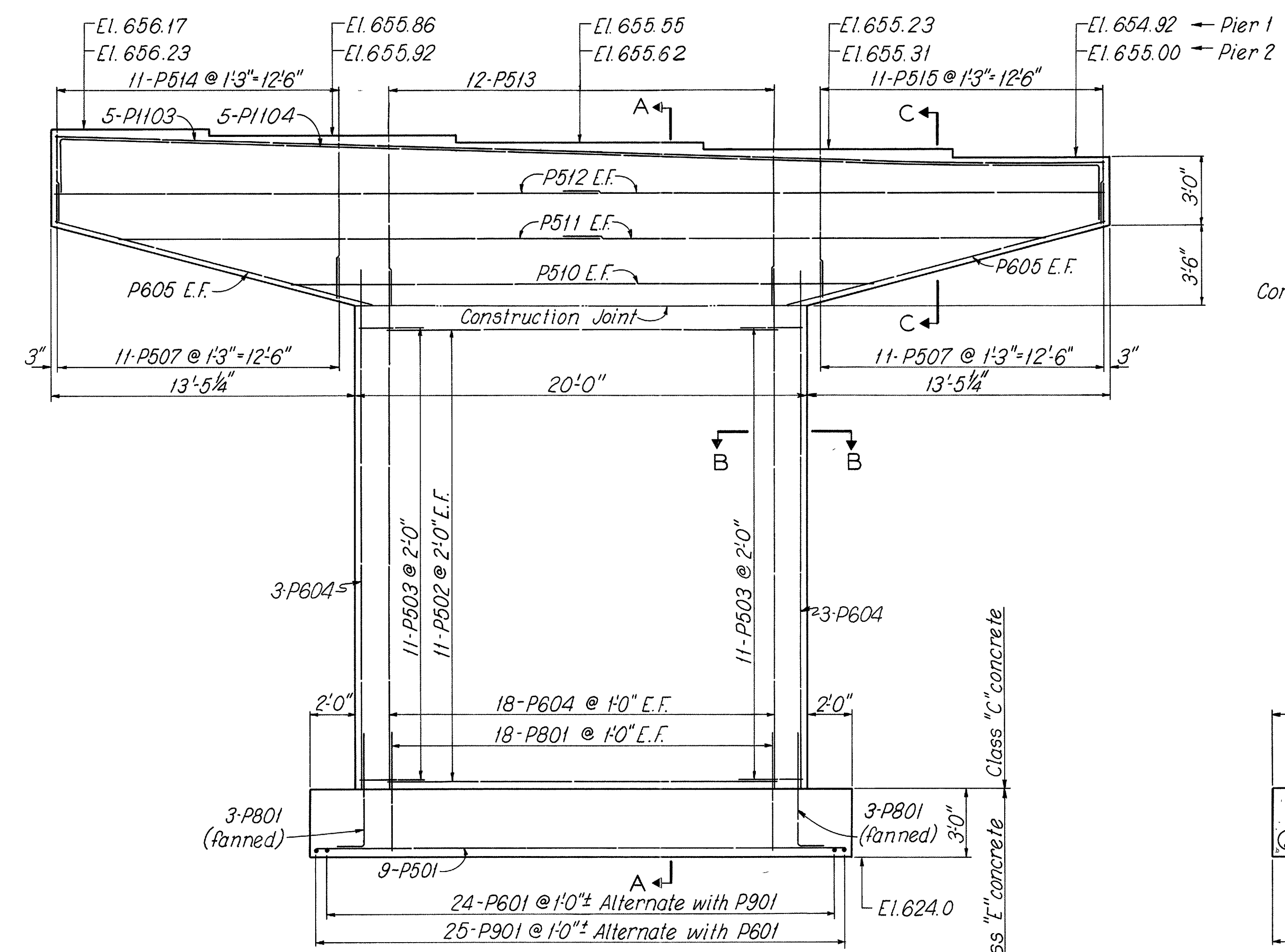
PLAN



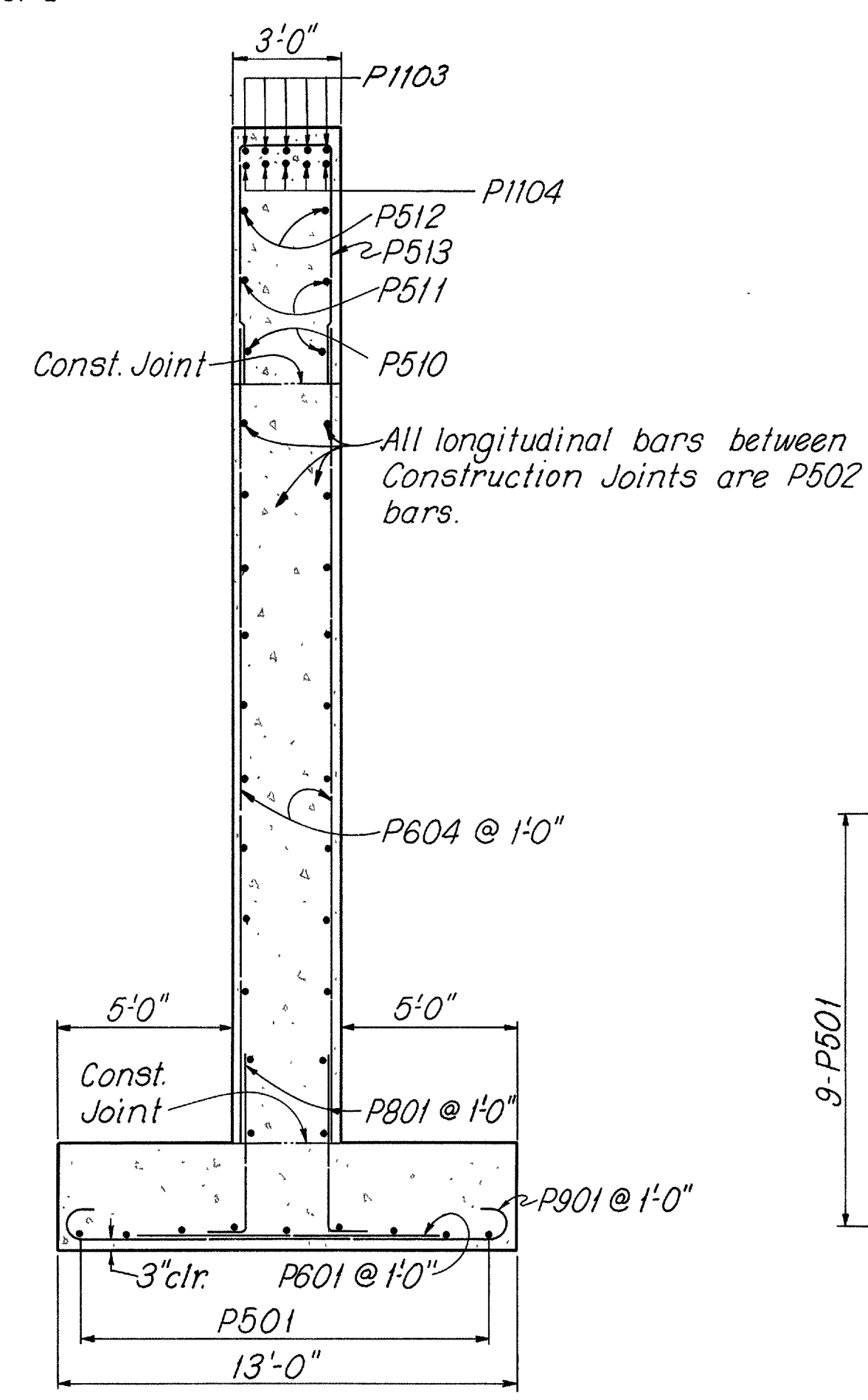
SECTION C-C



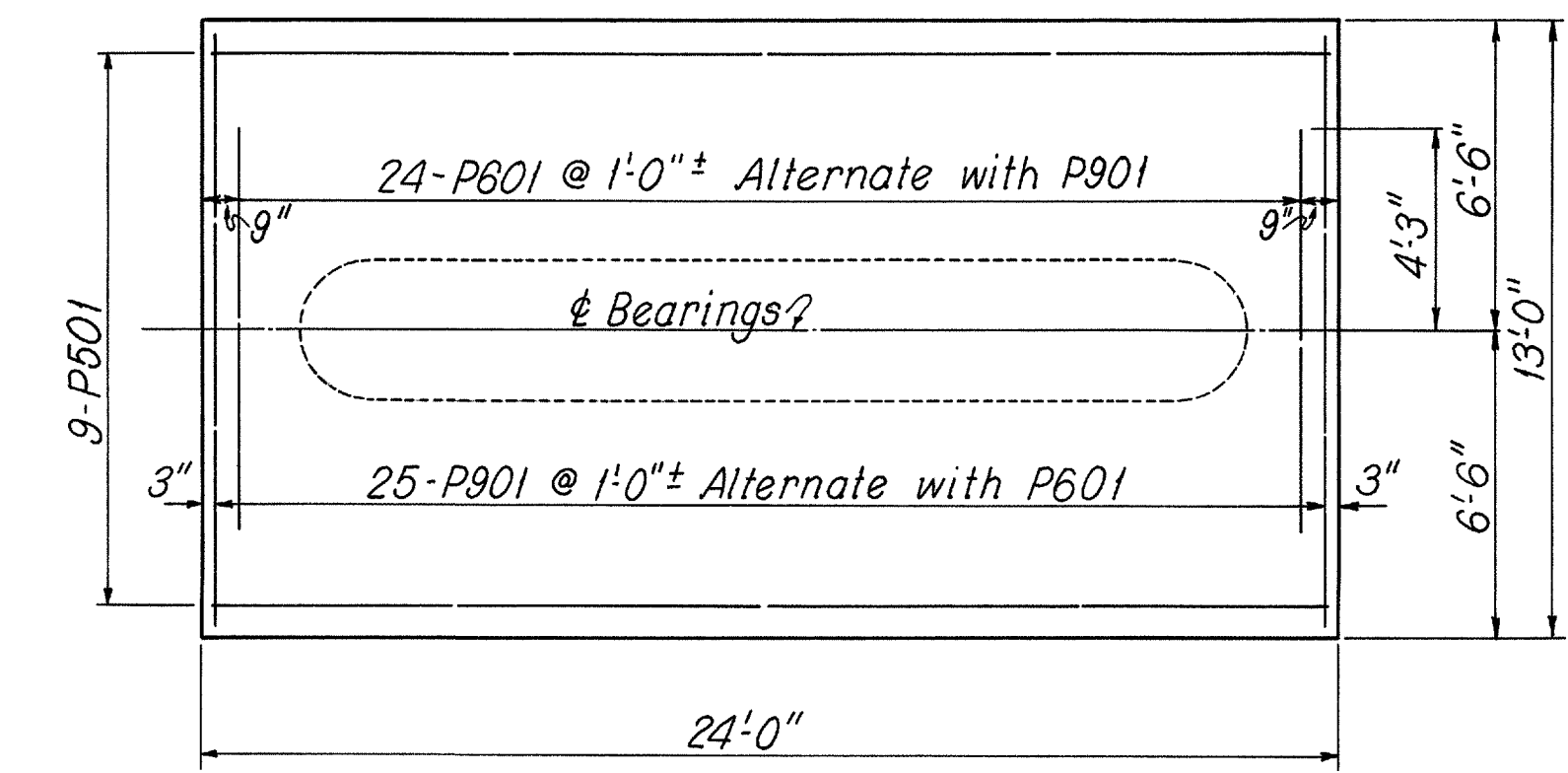
SECTION B-B



ELEVATION



SECTION A-A



FOOTING PLAN

PIER NOTES: See Sheet 251
GENERAL NOTES: See Sheet 245

SHAFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

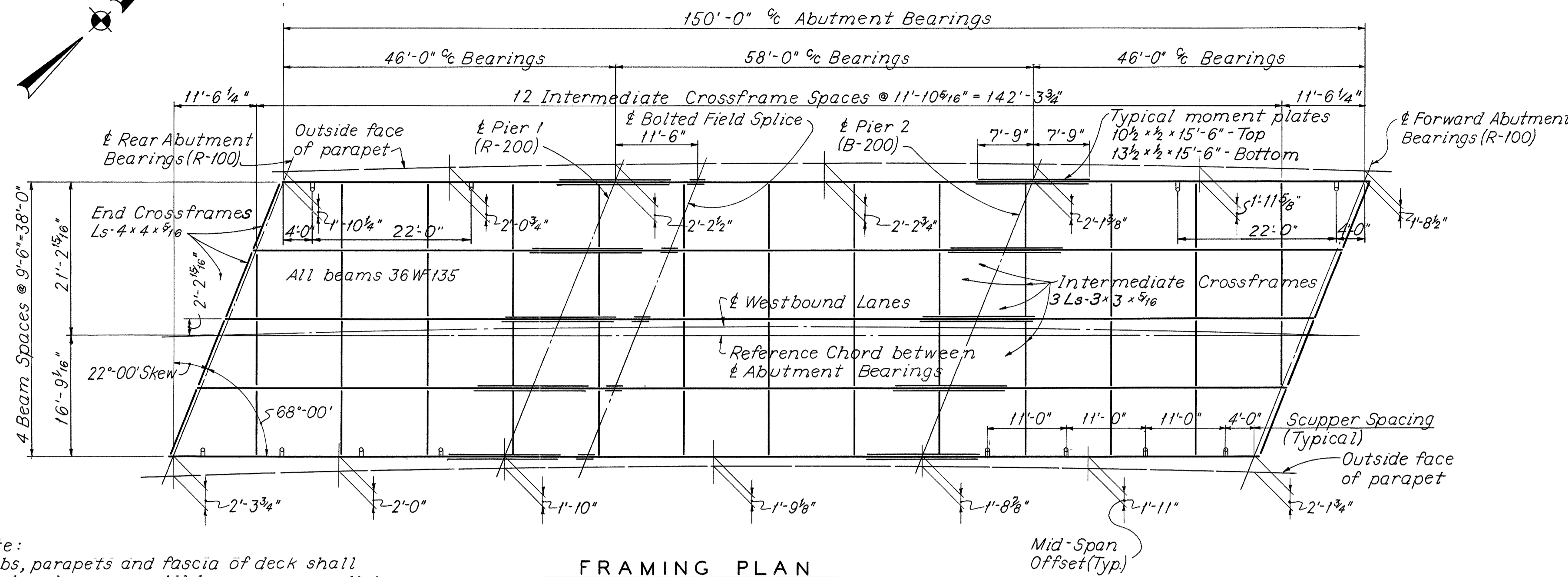
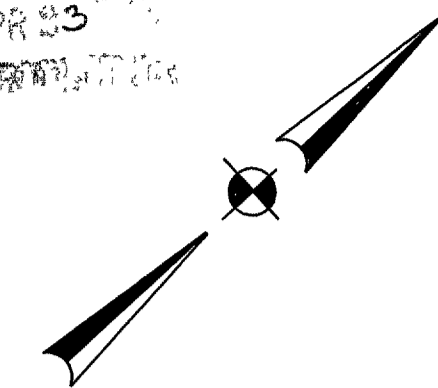
PIERS-RIGHT BRIDGE
BRIDGE NO. LOR-90-1785 L & R
OVER NEW YORK CENTRAL R.R.

LORAIN COUNTY I.R. 90
STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE
STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	JS	PCB			

MODIFIED
APR 93
REVISIONS

LOR - 90-17.21



Note:
Curbs, parapets and fascia of deck shall be placed on curve. All beams are parallel to each other and to reference chord. All intermediate crossframes are perpendicular to beams.

FRAMING PLAN

CAMBERING of beams is required in accordance with the following table:

DEFLECTION AND CAMBER - ALL BEAMS	END SPANS			MIDDLE SPANS		
	SPAN POINT	1/4	1/2	3/4	Splice	1/2
Deflection due to weight of steel	0	0	0	0	0	0
Deflection due to remaining dead load	3/16"	1/4"	1/8"	1/8"	1/8"	1/4"
Adjustment required for vertical curve	1/16"	1/16"	1/16"	1/16"	1/16"	1/8"
Required shop camber	1/4"	5/16"	3/16"	3/16"	3/16"	3/8"

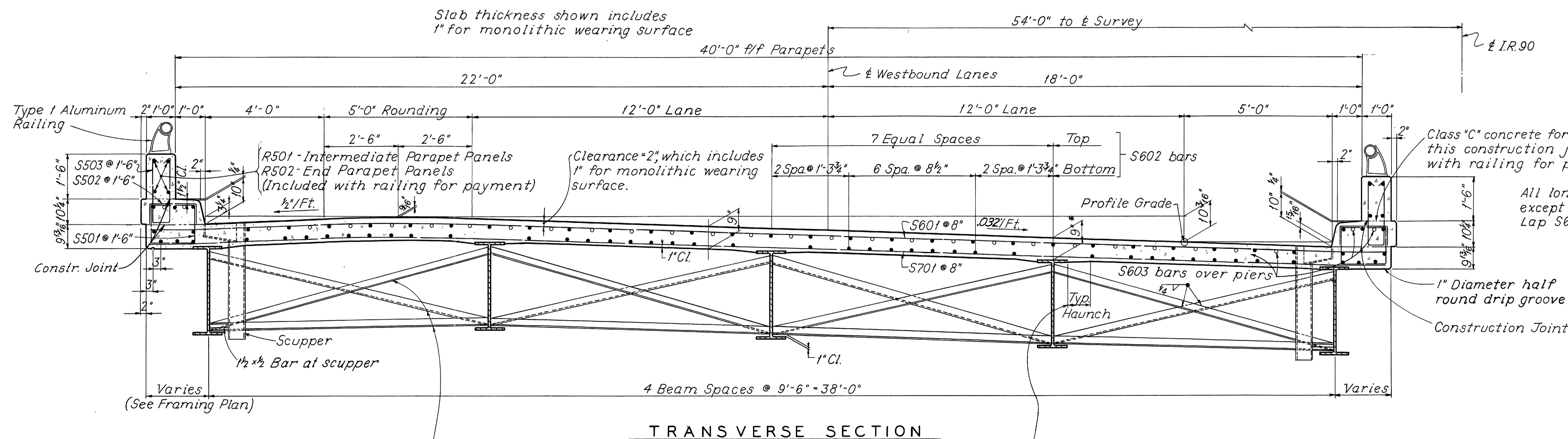
END DAMS, END CROSSFRAMES, SCUPPERS, CURB PLATES, AND MOMENT PLATES, WELDING AND BOLTED BEAM SPLICES: See Std. Dwg. SD-1-65, Sheets 1, 2 & 3 of 3.

BEARINGS: See Std. Dwg. RB-1-55 for the following: Abutments R-100; Pier 1 R-200; Pier 2 B-200.

CONCRETE: All superstructure concrete shall be Class "C".

RAILING: See Std. Dwg. BR-1-65, Type 1

RAILING POST AND PARAPET EXPANSION JOINT SPACING AND GENERAL NOTES: See Sheet 245



Class "C" concrete for parapets above this construction joint is included with railing for payment.
All longitudinal bars S602 except as otherwise shown. Lap S602 bars 1'-11" minimum.

Intermediate crossframe angles 3x3 x 3/16. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

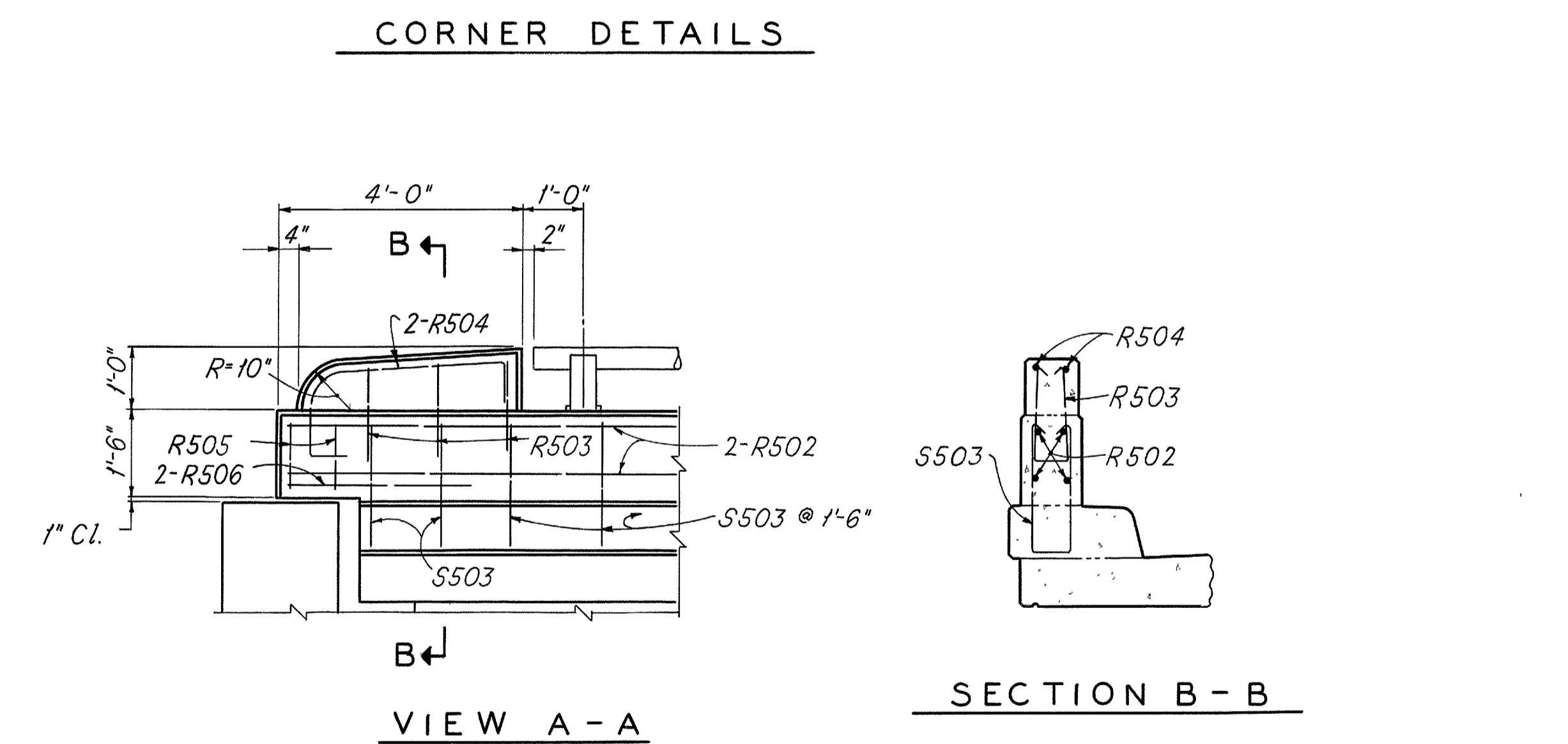
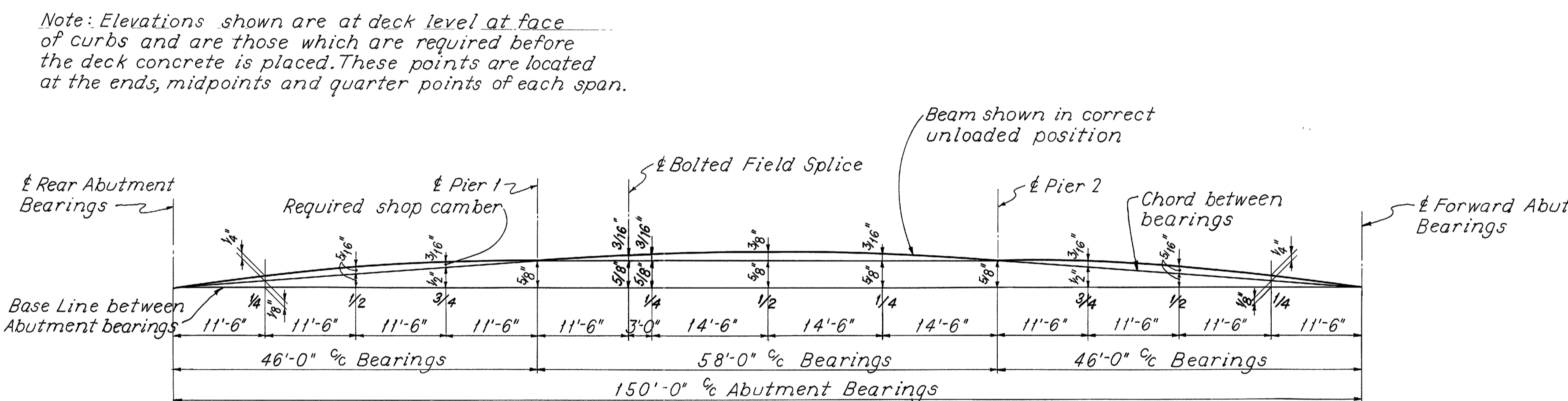
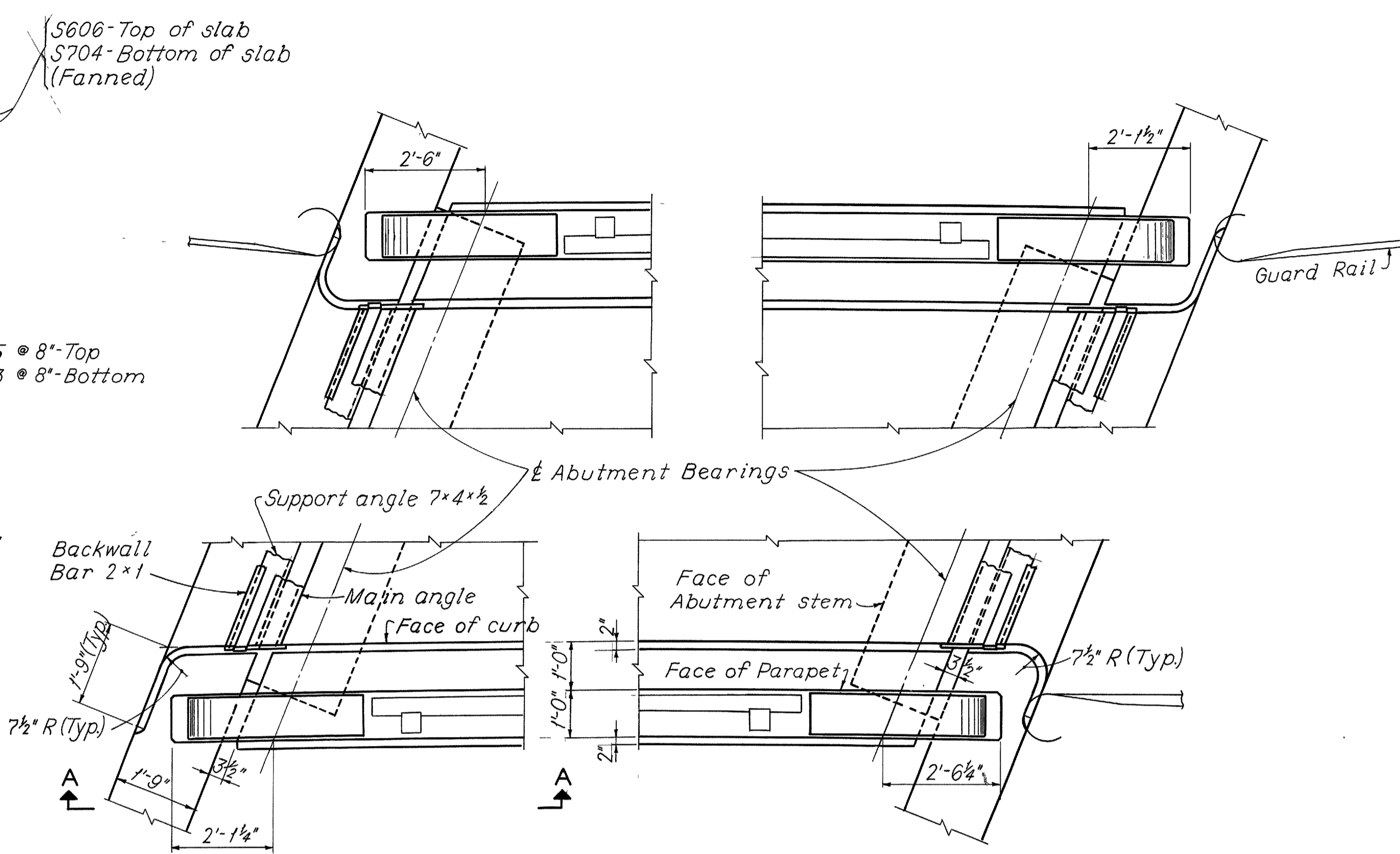
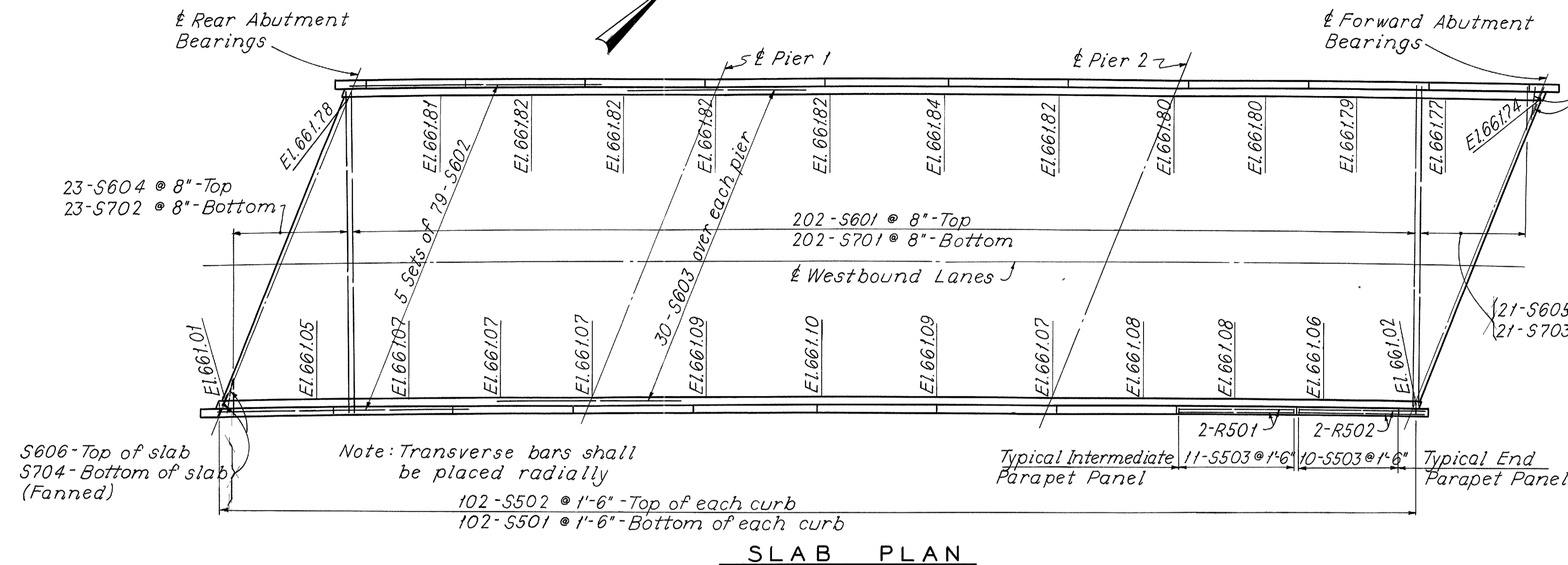
* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for the volume of encased steel plates as per 511.19 of the Construction and Material Specifications.

TRANSVERSE SECTION

SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
SUPERSTRUCTURE - 1						
LEFT BRIDGE						
BRIDGE NO. LOR-90-1785 L&R						
OVER NEW YORK CENTRAL R.R.						
LORAIN COUNTY			I.R. 90			
STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE			STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE			
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	PCB			

MICROFILMED
APR 83
REPRODUCTION

LOR - 90-17.21



Note: Elevations shown are at deck level at face of curbs and are those which are required before the deck concrete is placed. These points are located at the ends, midpoints and quarter points of each span.

SUPERSTRUCTURE NOTES: See Sheet 253

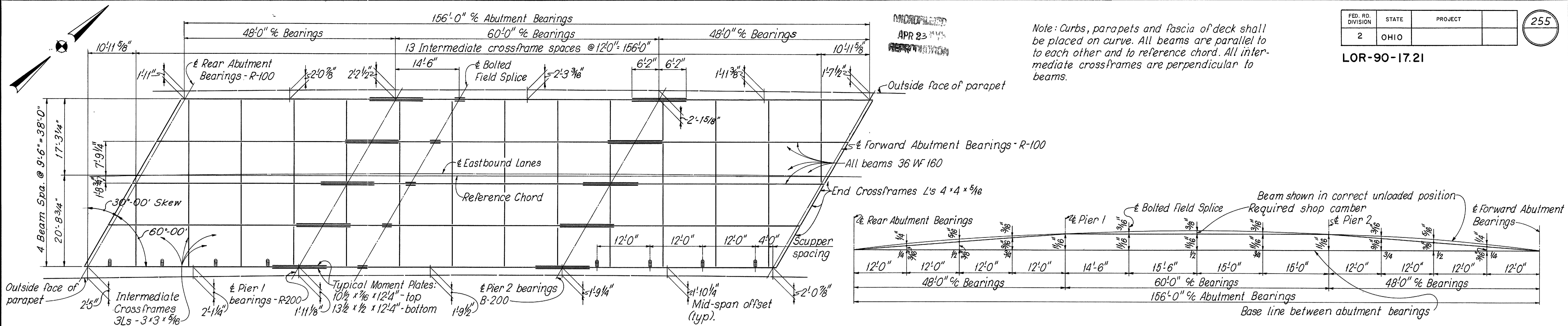
SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SUPERSTRUCTURE - 2
LEFT BRIDGE
 BRIDGE NO. LOR-90-1785 L&R
 OVER NEW YORK CENTRAL R.R.
 LORAIN COUNTY I.R. 90
 STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE
 STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	PCB			

LOR-90-17.21

Note: Curbs, parapets and fascia of deck shall be placed on curve. All beams are parallel to to each other and to reference chord. All intermediate crossframes are perpendicular to beams.

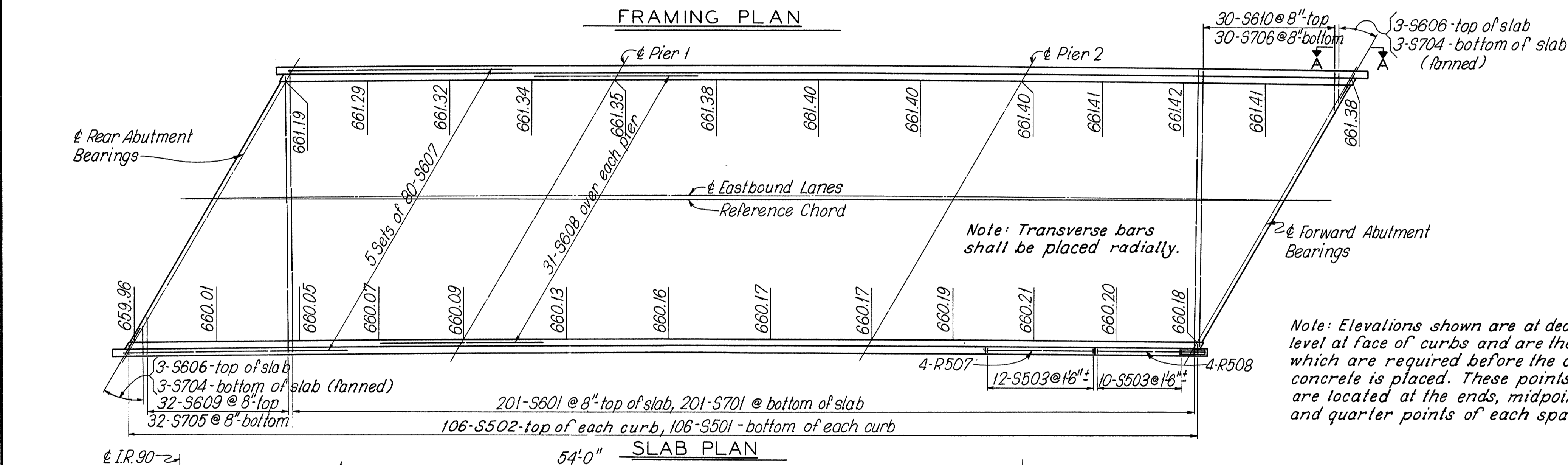


FRAMING PLAN

BEAM LAYOUT DIAGRAM

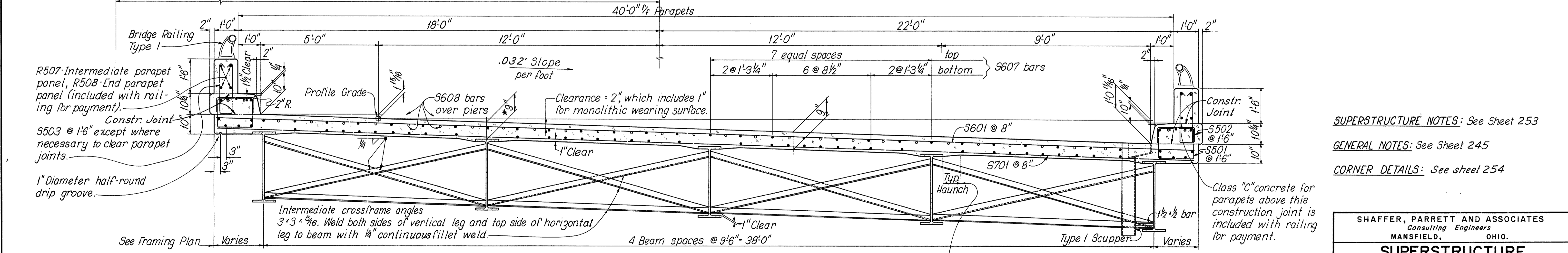
CAMBERING of beams is required in accordance with the following table:

	DEFLECTION AND CAMBER - ALL BEAMS							
	SPAN POINT	END SPANS			MIDDLE SPANS			
		1/4	1/2	3/4	SPLICE	1/4	1/2	3/4
Deflection due to weight of steel	0	0	0	0	0	0	0	0
Deflection due to remaining dead load	3/16"	1/4"	1/8"	1/8"	1/8"	1/4"	1/8"	1/8"
Adjustment required for vertical curve	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"	1/16"
Required shop camber	1/4"	5/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"



SLAB PLAN

Note: Elevations shown are at deck level at face of curbs and are those which are required before the deck concrete is placed. These points are located at the ends, midpoints and quarter points of each span.



TRANSVERSE SECTION

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based on this dimension, even though deviation from it may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deductions shall be made for the volume of encased steel plates as per 511.19 of the Construction and Material Specifications.

All longitudinal bars S607 except as otherwise shown. Lap S607 bars 1'11" minimum.

Slab thickness shown includes 1" for monolithic wearing surface.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch may vary between 6" and 12" provided that the slope be not more than 1:4 for a haunch less than 9" in width.

SUPERSTRUCTURE NOTES: See Sheet 253

GENERAL NOTES: See Sheet 245

CORNER DETAILS: See sheet 254

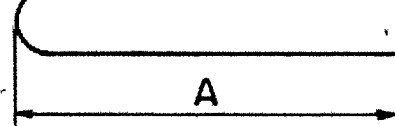
SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SUPERSTRUCTURE
RIGHT BRIDGE
BRIDGE NO. LOR-90-1785 L & R
OVER NEW YORK CENTRAL R.R.

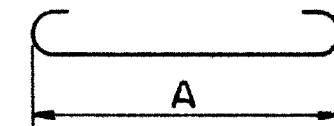
LORAIN COUNTY I.R. 90
 STA. 927 + 35.89 TO STA. 928 + 89.30 LEFT BRIDGE
 STA. 926 + 77.86 TO STA. 928 + 40.59 RIGHT BRIDGE

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	JS	PCB			

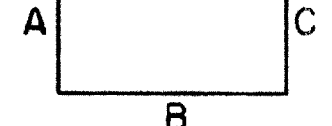
MICROFILMED
APR 23 1979
REPRODUCTION



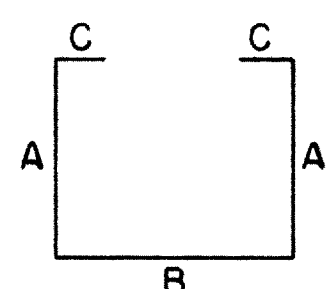
TYPE 1



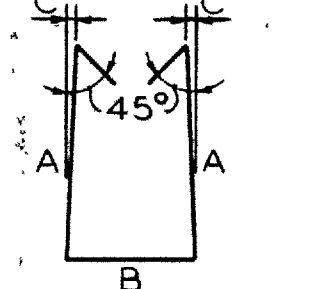
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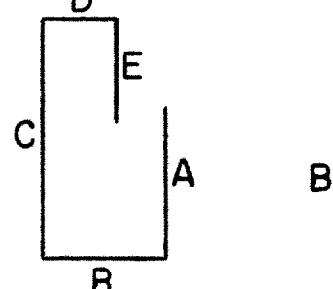
TYPE 3



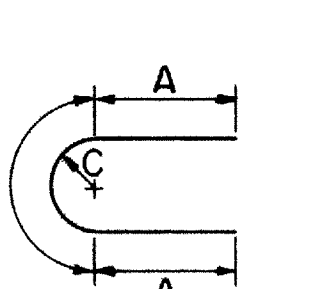
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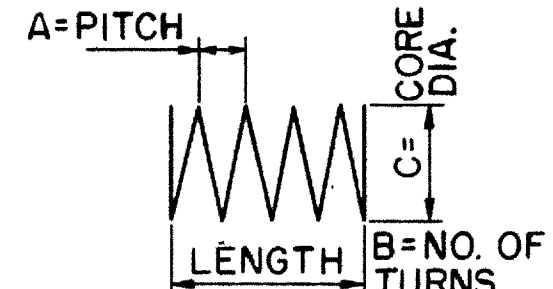
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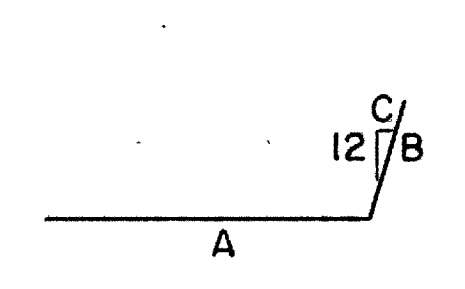
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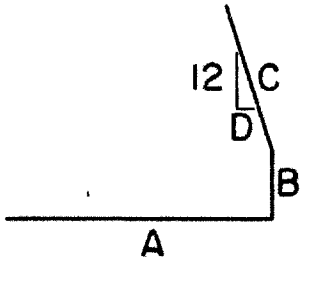
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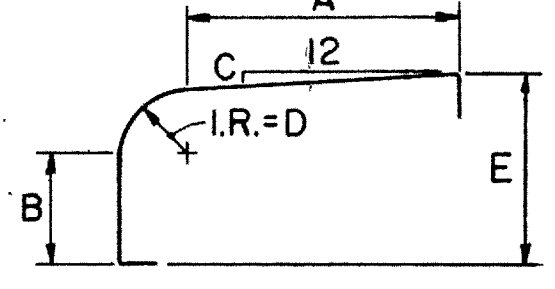
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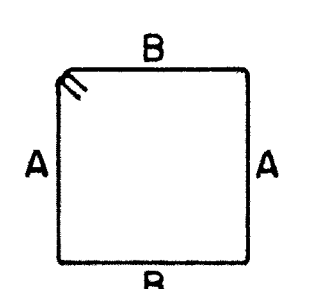
TYPE 9



TYPE 10



TYPE 11



TYPE 12

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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LOR-90-17.21

ABUTMENTS

MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
A501	65	48	113	8'-1"	3	7'-7"	7 1/2"	0			548	404	952
A502	60	64	124	7'-10"	3	2'-4"	3'-5"	2'-4"			490	522	1012
A503	24		24	22'-8"	Str.						568		568
A504	14	4	18	33'-5"	Str.						488	139	627
A505	8		8	32'-4"	Str.						270		270
A506	8		8	29'-11"	Str.						250		250
A507	2	4	6	29'-7"	Str.						62	124	186
A508	4		4	27'-10"	Str.						116		116
A509	2	5	7	11'-0"	Str.						22	57	79
A510	2		2	14'-9"	Str.						30		30
A511	3	3	6	15'-2"	Str.						47	47	94
A512	3		3	9'-7"	Str.						30		30
A513	24		24	Varies	Str.	6'-9"	to 10'-9"	Vary 2 each by 8 3/8"			212		212
A514	10		10	Varies	Str.	7'-11"	to 11'-3"	Vary 2 each by 10"			100		100
A515	8	10	18	7'-1"	Str.						59	74	133
A516	2		2	13'-11"	9	10'-4"	3'-8"	5 9/16"			29		29
A517	2		2	10'-6"	9	8'-1"	2'-6"	6 3/4"			22		22
A518	14		14	33'-0"	Str.						482		482
A519	6		6	12'-0"	Str.						75		75
A520	12		12	Varies	Str.	7'-11"	to 11'-6"	Vary 2 each by 8 5/8"			122		122
A521	2	6	8	7'-9"	Str.						16	48	64
A522	2		2	11'-8"	9	9'-1"	2'-8"	5 1/16"			24		24
A523	2		2	12'-6"	9	9'-7"	3'-0"	6"			26		26
A524		22	22	9'-0"	3	8'-6"	7 1/2"	0				207	207
A525		15	15	35'-3"	Str.						551		551
A526		26	26	24'-1"	Str.						654		654
A527		4	4	33'-10"	Str.						141		141
A528		4	4	31'-8"	Str.						132		132
A529		5	5	31'-4"	Str.						164		164
A530		2	2	15'-6"	Str.						32		32
A531		1	1	14'-4"	9	10'-9"	3'-8"	5 9/16"			15		15
A532		1	1	13'-6"	9	10'-9"	2'-10"	5 9/16"			14		14
A533		2	2	11'-1"	9	8'-5"	2'-5"	6"			23		23
A534		4	4	10'-3"	Str.						43		43
A535		10	10	Varies	Str.	6'-7"	to 9'-7"	Vary 2 each by 9"			84		84
A536		12	12	Varies	Str.	8'-7"	to 12'-4"	Vary 2 each by 9"			131		131
A537		2	2	6'-5"	Str.						13		13
A538		2	2	7'-5"	Str.						15		15
A539		15	15	34'-7"	Str.						541		541
A540		4	4	13'-4"	Str.						56		56
A541		1	1	30'-9"	Str.						32		32
A542		2	2	11'-7"	9	9'-1"	2'-7"	6 1/16"			24		24
A543		1	1	13'-3"	9	9'-1"	4'-3"	5 1/4"			14		14
A544		1	1	12'-6"	9	9'-1"	3'-6"	5 1/4"			13		13
A545		12	12	Varies	Str.	6'-7"	to 10'-9"	Vary 2 each by 10"			108		108
A546		12	12	Varies	Str.	8'-8"	to 12'-0"	Vary 2 each by 8"			129		129
A601	65	48	113	12'-8"	3	5'-3"	7'-7"	0			1237	914	2151
A602	8		8	25'-6"	Str.						306		306
A603	52	56	108	17'-1"	6	6'-1"	1'-5"	7'-4"	11"	2'-0"	1334	1436	2770
A604	12	33	45	14'-5"	3	6'-8"	1'-5"	6'-8"			260	714	974
A605	22		22	15'-11"	3	7'-5"	1'-5"	7'-5"			526		526
A606	3		3	17'-3"	3	8'-1"	1'-5"	8'-1"			78		78
A607	8		8	25'-1"	Str.						301		301
A608		8	8	27'-4"	Str.						328		328
A609	22		22	13'-7"	3	5'-3"	8'-6"	0			449		449
A610		8	8	26'-8"	Str.						320		320
TOTAL WEIGHT											8130	8712	16,842

PIERS

MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
P501	18	18	36	23'-6"	Str.						441	441	882
P502	48	44	92	17'-0"	Str.						851	780	1631
P503	48	44	92	7'-4"	7	1'-7"	4'-2"	1'-7"			367	337	704
P504	4		4	30'-6"	Str.						127		127
P505	12		12	22'-8"	Str.						284		284
P506	24		24	14'-5"	3	6'-0"	2'-8"	6'-0"			381		381
P507	40	44	84	5'-7"	3	1'-7"	2'-8"	1'-7"			233	256	489
P508	20		20	2	3	2'-8"	1				289		289
P509	20		20	4	3	2'-8"	3				221		221
P510		4	4	25'-10"	Str.						108		108
P511		8	8	21'-6"	Str.						179		179
P512		8	8	24'-0"	Str.						200		200
P513		24	24	6	3	2'-8"	5				401		401
P514		22	22	8	3	2'-8"	7				296		296
P515		22	22	10	3	2'-8"	9				254		254
P601	48	48	96	8'-6"	Str.						613	613	1226
P602	84		84	25'-1"	Str.						3165		3165
P603	8		8	13'-2"	Str.						158		158
P604		84	84	23'-1"	Str.						2912		2912
P605		8	8	14'-5"	Str.						173		173
P801	84	84	168	6'-2"	3	5'-3"	1'-1"	0			1383	1383	2766
P901	50	50	100	13'-10"	2	12'-6"					2352	2352	4704
P1101	8		8	43'-7"	Str.						1852		1852
P1102	8		8	47'-10"	3	2'-5"	43'-7"	2'-5"			2033		2033
P1103		10	10	46'-6"	Str.						2470		2470
P1104		10	10	50'-9"	3	2'-5"	46'-6"	2'-5"			2696		2696
TOTAL WEIGHT											14,690	15,851	30,541

- ① 3'-4" to 6'-2". Vary 2 each by 3 3/4".
- ② 9'-1" to 14'-9". Vary 2 each by 7 5/8".
- ③ 2'-7" to 5'-7". Vary 2 each by 4".
- ④ 7'-7" to 13'-7". Vary 2 each by 8".
- ⑤ 8'-6" to 7'-1". Vary 2 each by 5/8".
- ⑥ 15'-5" to 16'-7". Vary 2 each by 1 1/4".
- ⑦ 3'-9" to 6'-9". Vary 2 each by 3 5/8".
- ⑧ 9'-11" to 15'-11". Vary 2 each by 7 1/4".
- ⑨ 2'-7" to 6'-1". Vary 2 each by 4 1/4".
- ⑩ 7'-7" to 14'-7". Vary 2 each by 8 5/8".

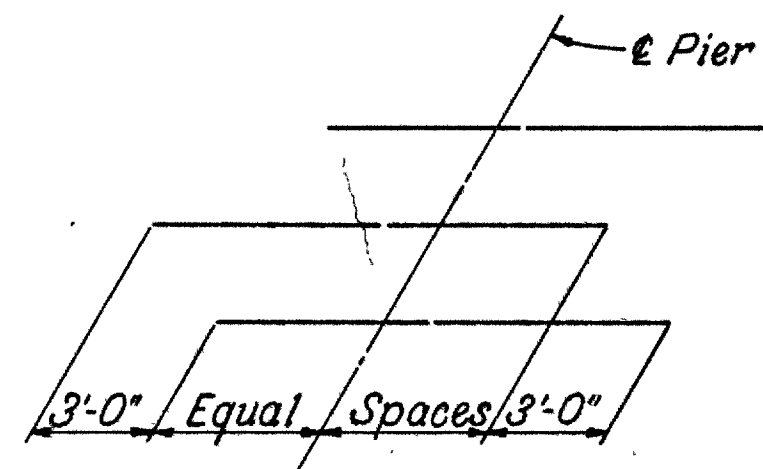
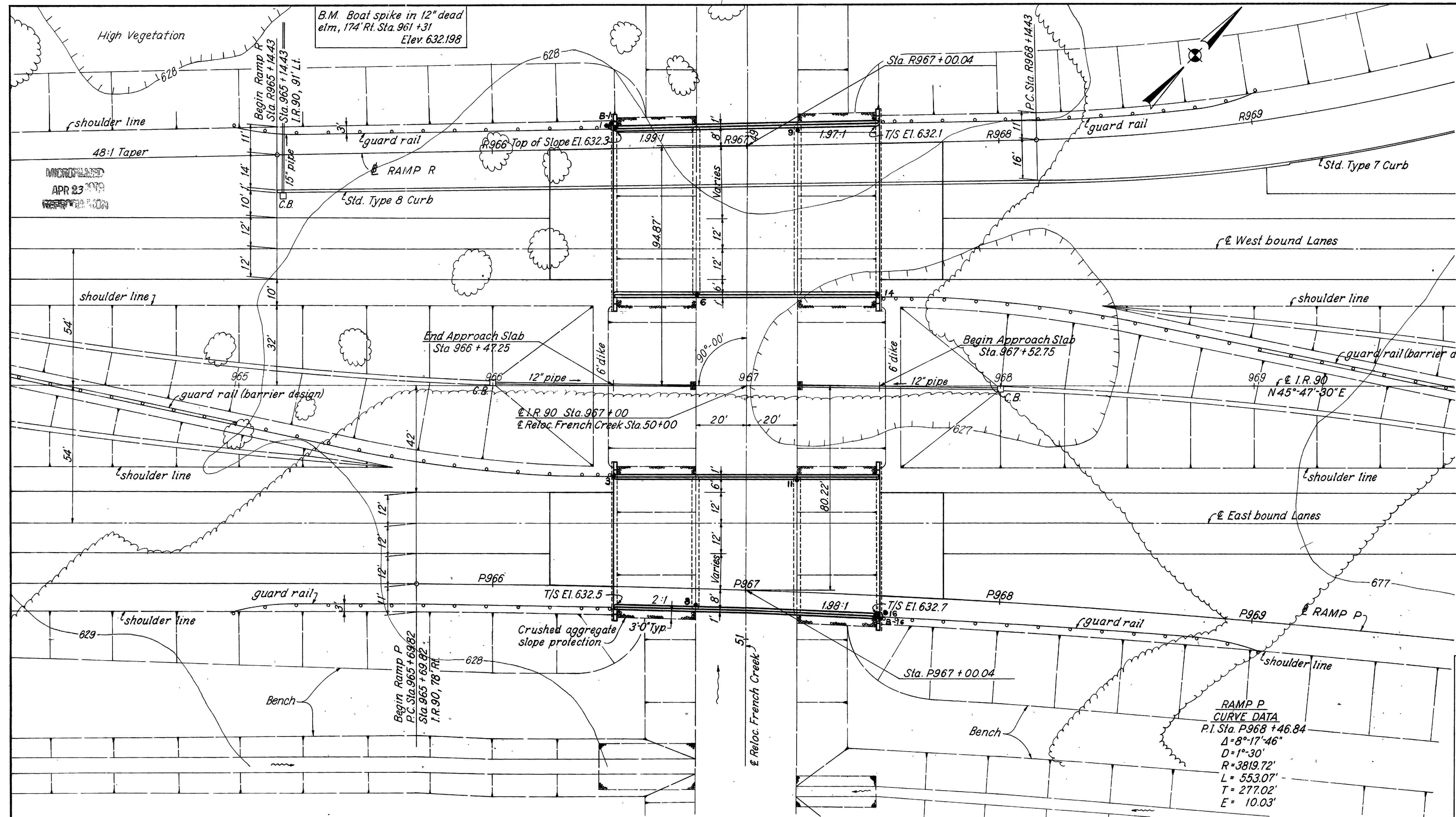


DIAGRAM SHOWING STAGGER OF S603 AND S608 BARS OVER PIERS

SUPERSTRUCTURE

MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
R501	64		64	14'-10"	Str.								*
R502	16		16	16'-2"	Str.								*
R503	12	12	24	4'-2"	5	1'-6"	8"	3/4"					*
R504	8	8	16	5'-4"	11	2'-8 1/2"	8"	3/4"	7 3/8"	1'-7"			*
R505	8	8	16	3'-5"	5	1'-1"	8"	0					*
R506	8	8	16	3'-0"	Str.								*
R507		64	64	15'-8"	Str.								*
R508		16	16	15'-10"	Str.								*
S501	204	212	416	4'-11"	4	1'-4"	1'-6"	7 1/2"			1046	1087	2133
S502	204	212	416	2'-6"	3	7 1/2"	1'-8"	7 1/2"			532	553	1085
S503	224	240	464	5'-7"	5	2'-2"	8"	0			1304	1398	2702
S601	202	201	403	41'-8"	Str.						12,841	12,579	25,220
S602	395		395	31'-10"	Str.						18,886		18,886
S603	60		60	23'-0"	Str.						2073		2073
S604	23		23	Varies	Str.	40'-3"	to 5'-5"	Vary each by 1'-7"			789		789
S605	21		21	Varies	Str.	40'-4"	to 6'-2"	Vary each by 1'-8 1/2"			733		733
S606	4	6	10	4'-6"	Str.						27	41	68
S607		400	400	33'-1"	Str.						19,876		19,876
S608		62	62	24'-0"	Str.						2235		2235
S609		32	32	Varies	Str.	40'-7"	to 5'-9"	Vary each by 1'-1 1/2"			1113		1113
S610		30	30	Varies	Str.	40'-6"	to 6'-1"	Vary each by 1'-2 1/4"			1050		1050
S701	202	201	403	41'-									

LOR-90-17.21



RAMP P CURVE DATA
 P.I. Sta. P968 + 46.84
 $\Delta = 8^{\circ}17'46''$
 $D = 1^{\circ}30'$
 $R = 3819.72'$
 $L = 553.07'$
 $T = 277.02'$
 $E = 10.03'$

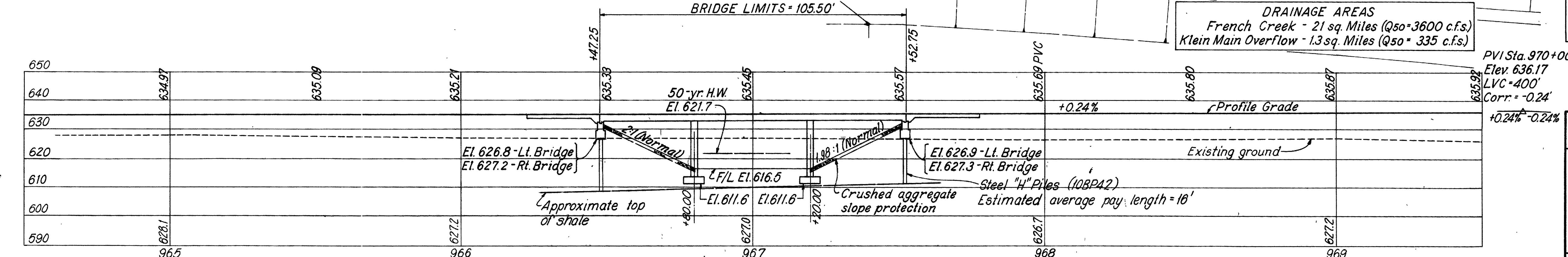
DRAINAGE AREAS
 French Creek - 21 sq. Miles (Q₅₀ = 3600 c.f.s.)
 Klein Main Overflow - 1.3 sq. Miles (Q₅₀ = 335 c.f.s.)

PROPOSED STRUCTURE
 TYPE: Continuous reinforced concrete slab on reinforced concrete substructure
 SPANS: 32'-40'-32' %
 ROADWAY: Varies. Left Bridge - 65.8' ± to 68.0' ± f/f Parapets. Right Bridge - 50.8 to 54.4' ± f/f Parapets.
 LOAD FREQUENCY: CF 2000 (57). Adequate for AASHTO alternate loading.
 SKEW: 0°
 WEARING SURFACE: 1" monolithic concrete.
 APPROACH SLABS: 45'-1-54' (25' long)
 ALIGNMENT: Tangent
 AVERAGE DAILY TRAFFIC: 24,660 (1989)

FOUNDATION INVESTIGATION LEGEND
 ● - Indicates core boring location
 ○ - Indicates rod sounding location

SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SITE PLAN
 BRIDGE NO. LOR-90-1861 L&R
 OVER FRENCH CREEK
 LORAIN COUNTY I.R. 90
 STA. 966 + 47.25 TO STA. 967 + 52.75



DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	Bob	UL	DGC			

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-2-65, Sheets 1 and 2 (dated 6-1-65), AS-1-54 (revised 8-10-65), BR-1-65 sheet 1 of 2 (revised 11-24-65), and to Supplemental Specifications 808 (revised 2-7-66) and 825 (dated 4-22-65).

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

DESIGN DATA: Design Loading - CF2000 (57)
 Concrete Class "C" - basic unit stress = 1,333 p.s.i.
 Concrete Class "E" - basic unit stress = 1,133 p.s.i.
 Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade.
 Basic unit stress = 20,000 p.s.i.

EXCAVATION QUANTITY includes the removal of fill material required for construction of the abutments.

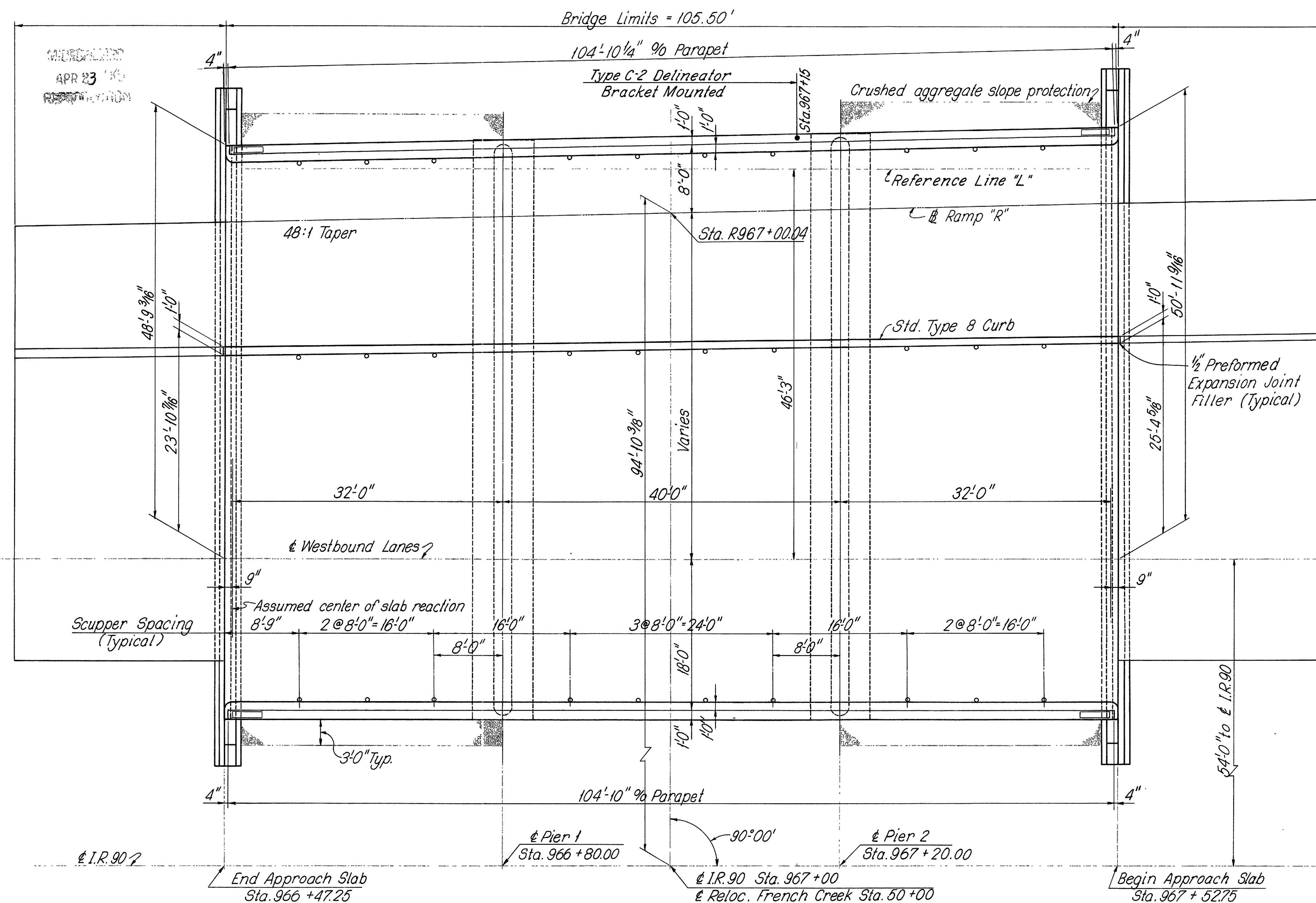
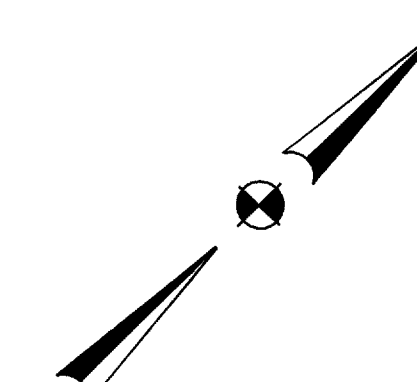
FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 3.0 tons per sq. ft.

PILES shall be driven with a hammer of not less than 11,000 ft. lbs. per blow to firm contact with shale. If the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report, the firm contact shall be considered as obtained when the capacity according to the formula in Sec. 507.05 is not less than 26 tons per pile using either an 11,000 ft. lb. or 15,000 ft. lb. or greater hammer. The design load is 26 tons per pile for the abutment piles.

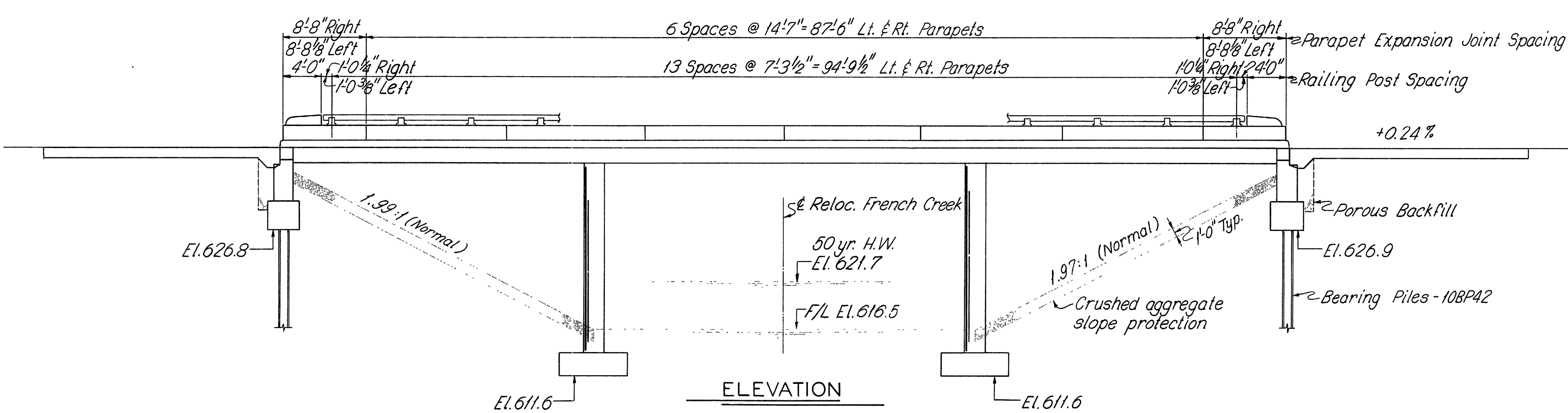
PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade after which excavation shall be made for the abutment and piles driven.

MACHINE FINISH: The concrete bridge deck may be finished by the use of a finishing machine, at the option of the contractor.

FIRST TEST PILE: Payment will be made for only one first test pile. It may be driven for either the Right or Left bridge.



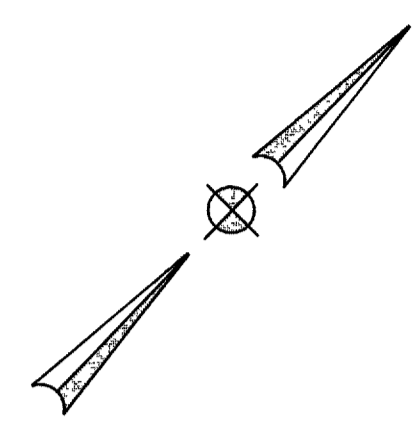
PLAN



ELEVATION

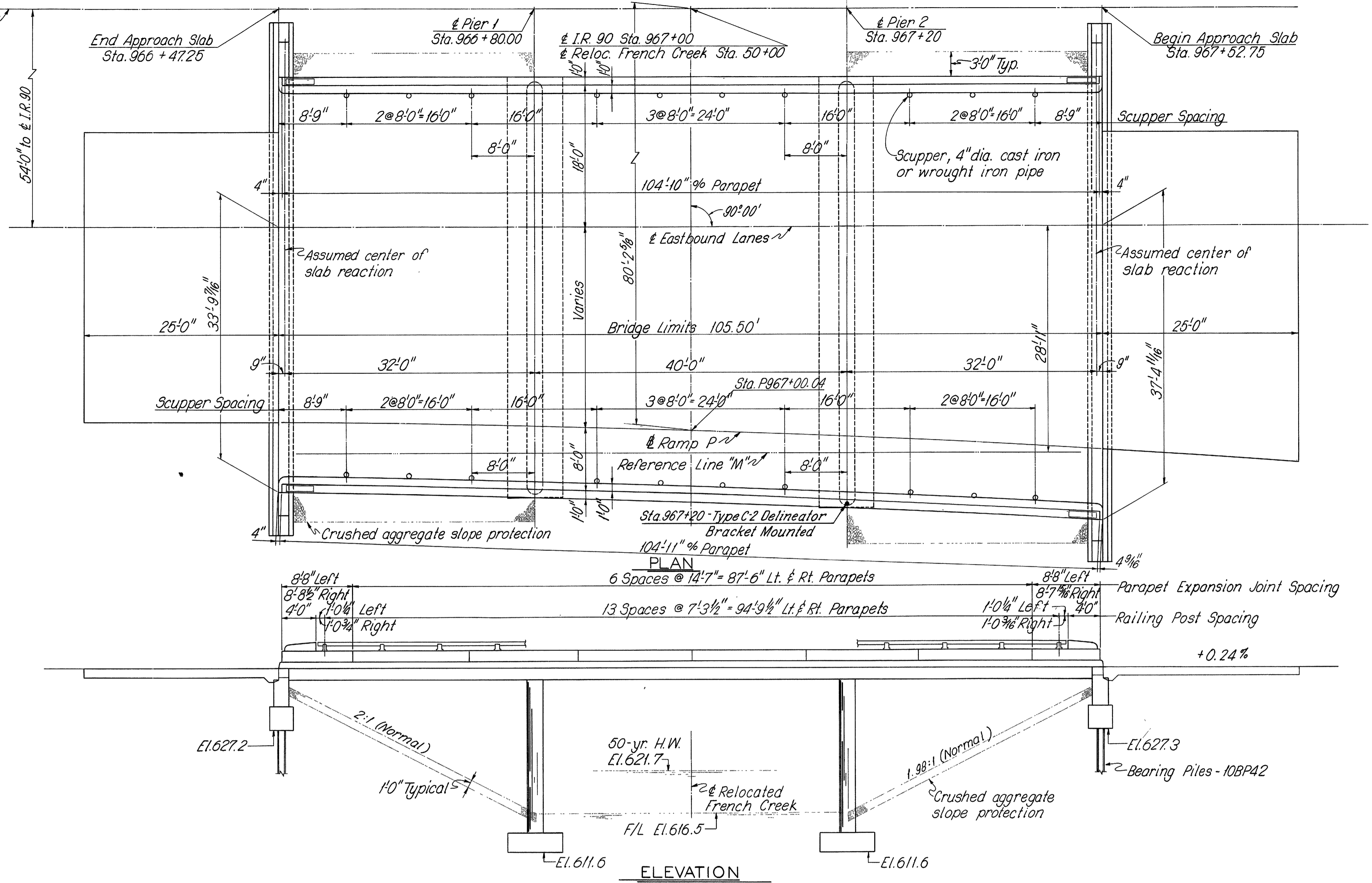
SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
GENERAL PLAN - LEFT BRIDGE AND GENERAL NOTES						
BRIDGE NO. LOR-90-1861 L&R OVER FRENCH CREEK						
LORAIN COUNTY I.R. 90						
STA. 966 + 47.25 TO STA. 967 + 52.75						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	JS	JS	JPG			

MODIFIED
APR 23
1990



FED. RD. DIVISION	STATE	PROJECT	259
2	OHIO		

LOR-90-17.21



ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	LEFT BRIDGE			RIGHT BRIDGE						
				SUPER	ABUTS.	PIERS	GEN'L	SUPER	ABUTS.	PIERS	GEN'L		
503	739	Cu. Yds.	Unclassified excavation			188	230			137	184		
503	Lump	Sum	Cofferdams, cribs and sheeting					Lump				Lump	
505	Lump	Sum	First test pile					Lump				Lump	
507	864	Lin. Ft.	Steel piles (10BP42)			468				396			
509	221,238	Lbs.	Reinforcing Steel	98,263	9002	14,214			79,918	8693	11,148		
511	755	Cu. Yds.	Class "C" Concrete, superstructure	429					326				
511	350	Cu. Yds.	Class "E" Concrete, piers above footings			194					156		
511	159	Cu. Yds.	Class "E" Concrete, pier footings			89					70		
511	180	Cu. Yds.	Class "E" Concrete, abutment		100					80			
516	16	Sq. Ft.	1/2" Preformed Exp'n Joint Filler (AASHTO Spec. M-153)				8				8		
517	419.44	Lin. Ft.	Bridge Railing, Type 1			209.69			209.75				
518	50	Each	Scuppers, 4" dia. cast or wrought iron pipe	30					20				
518	82	Cu. Yds.	Porous Backfill		45					37			
601	1103	Sq. Yds.	Crushed Aggregate Slope Protection			594					509		
808	765	Units	Water-reducing, set-retarding admixture	429					326				
825	1581	Sq. Yds.	Concrete surface treatment			864					717		

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Consulting Engineers
MANSFIELD, OHIO.

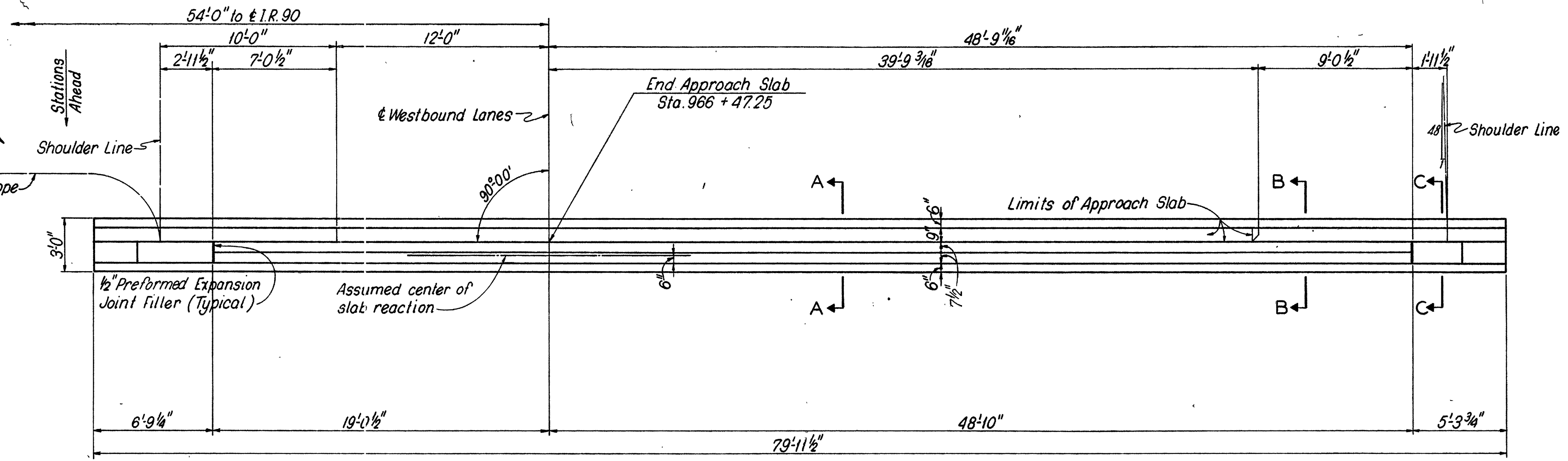
**GENERAL PLAN-RIGHT BRIDGE
AND ESTIMATED QUANTITIES**
BRIDGE NO. LOR-90-1861 L & R
OVER FRENCH CREEK

LORAIN COUNTY I.R. 90
STA. 966 + 47.25 TO STA. 967 + 52.75

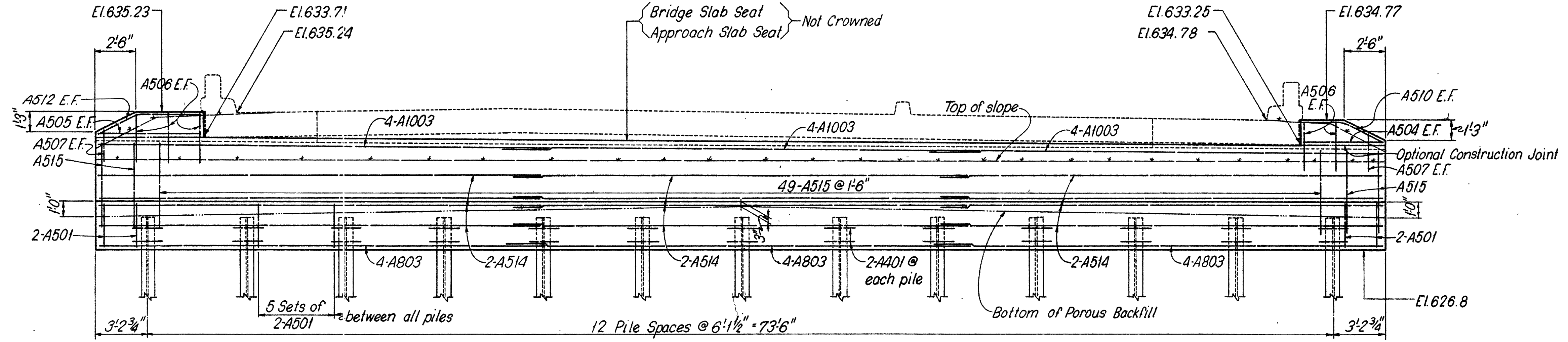
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DGC	JS	JS	JPG			

3-12-90 Revised As-Quoted C.F.

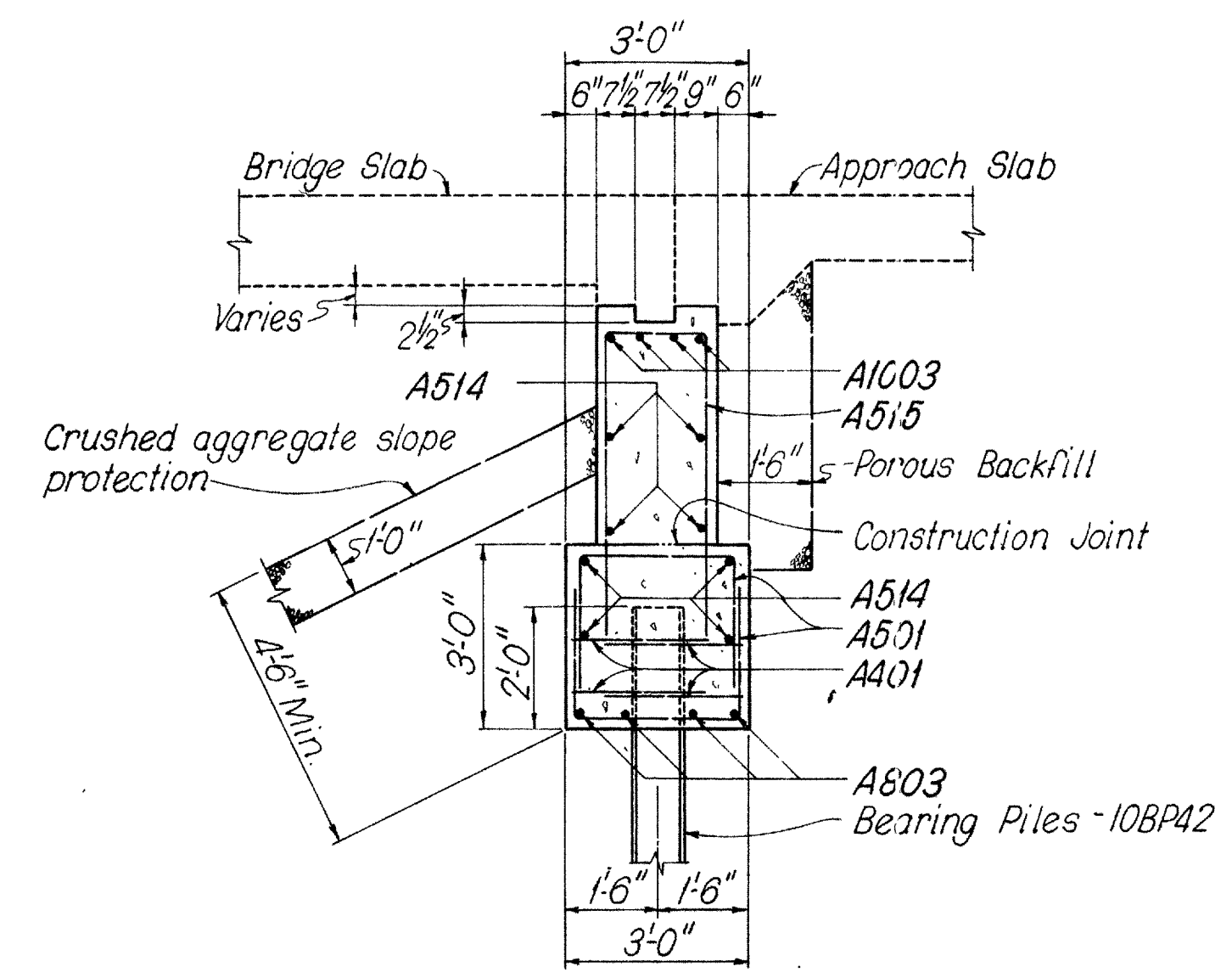
MICROFILMED
APR 23 1979
REPRODUCTION



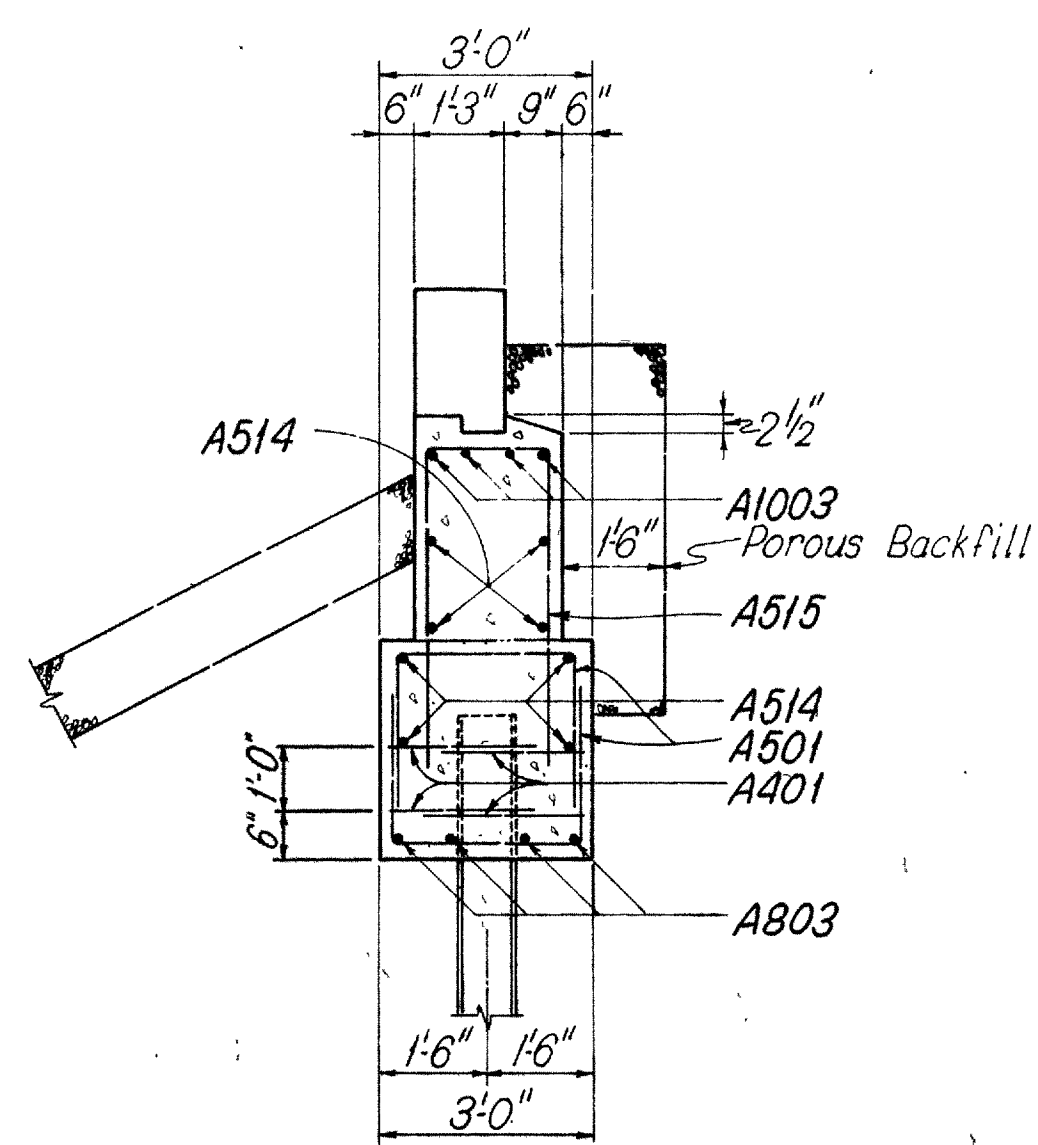
PLAN



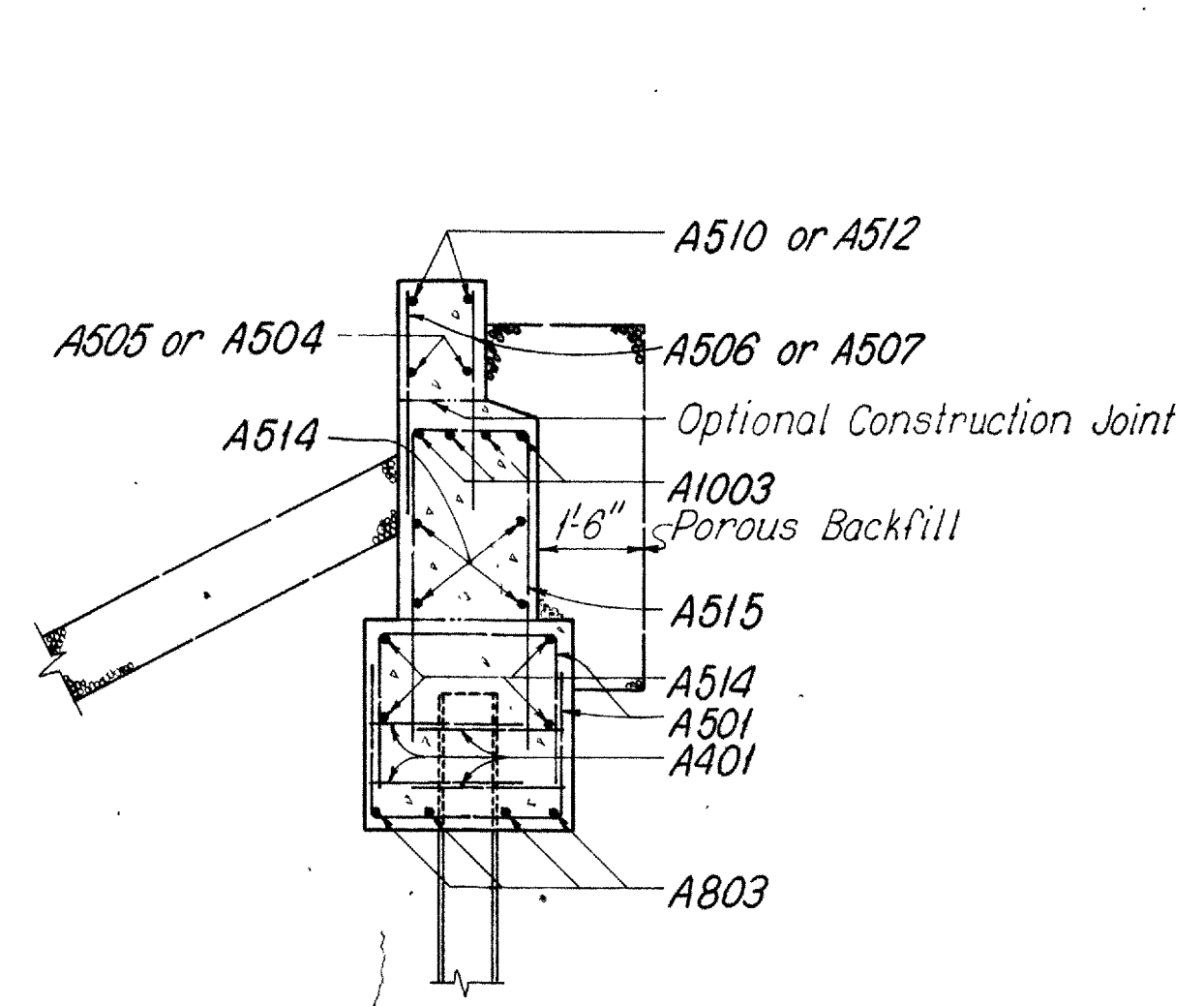
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

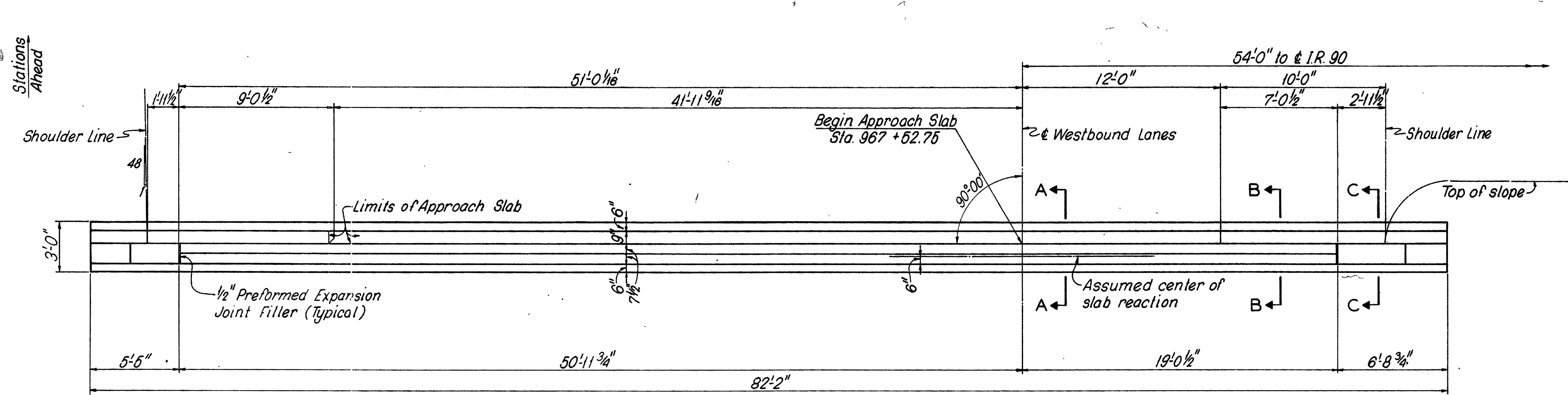
NOTES

- CONCRETE: All abutment concrete shall be Class "E".
- NOTATION: E.F. denotes Each Face
- POROUS BACKFILL shall extend upward to the approach slab and paved shoulders and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefore, in excess of that required for construction of the footing, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.
- GENERAL NOTES: See Sheet 25B.

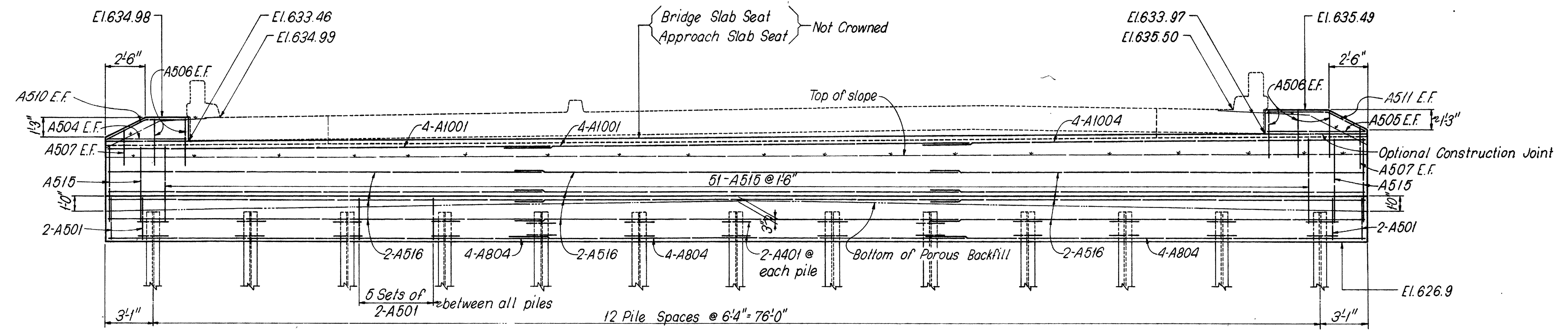
SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

REAR ABUTMENT - LEFT BRIDGE
BRIDGE NO. LOR-90-1861 L&R
OVER FRENCH CREEK
LORAIN COUNTY I.R. 90
STA. 966 + 47.25 TO STA. 967 + 52.75

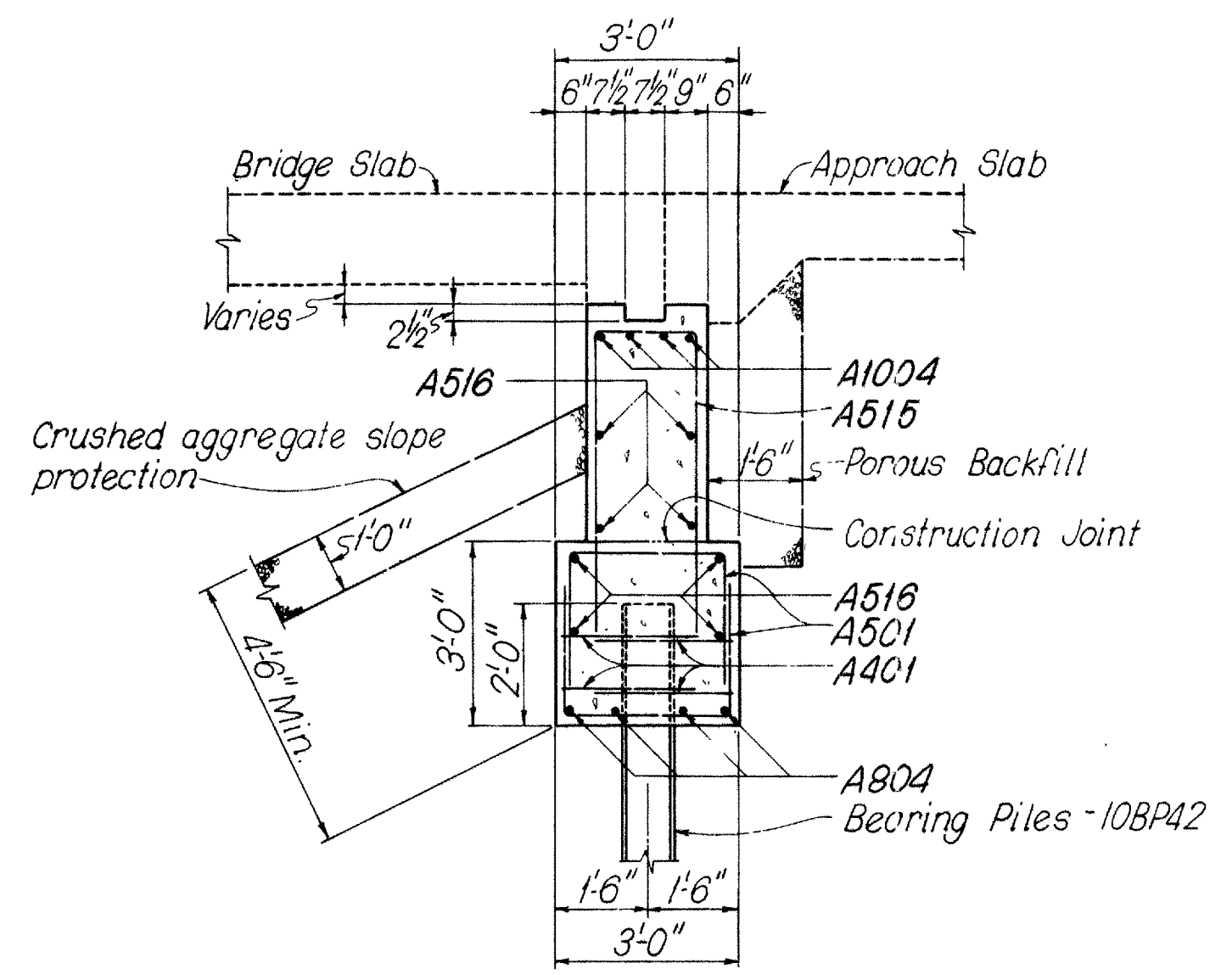
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DGC	DGC	JS	JPG			



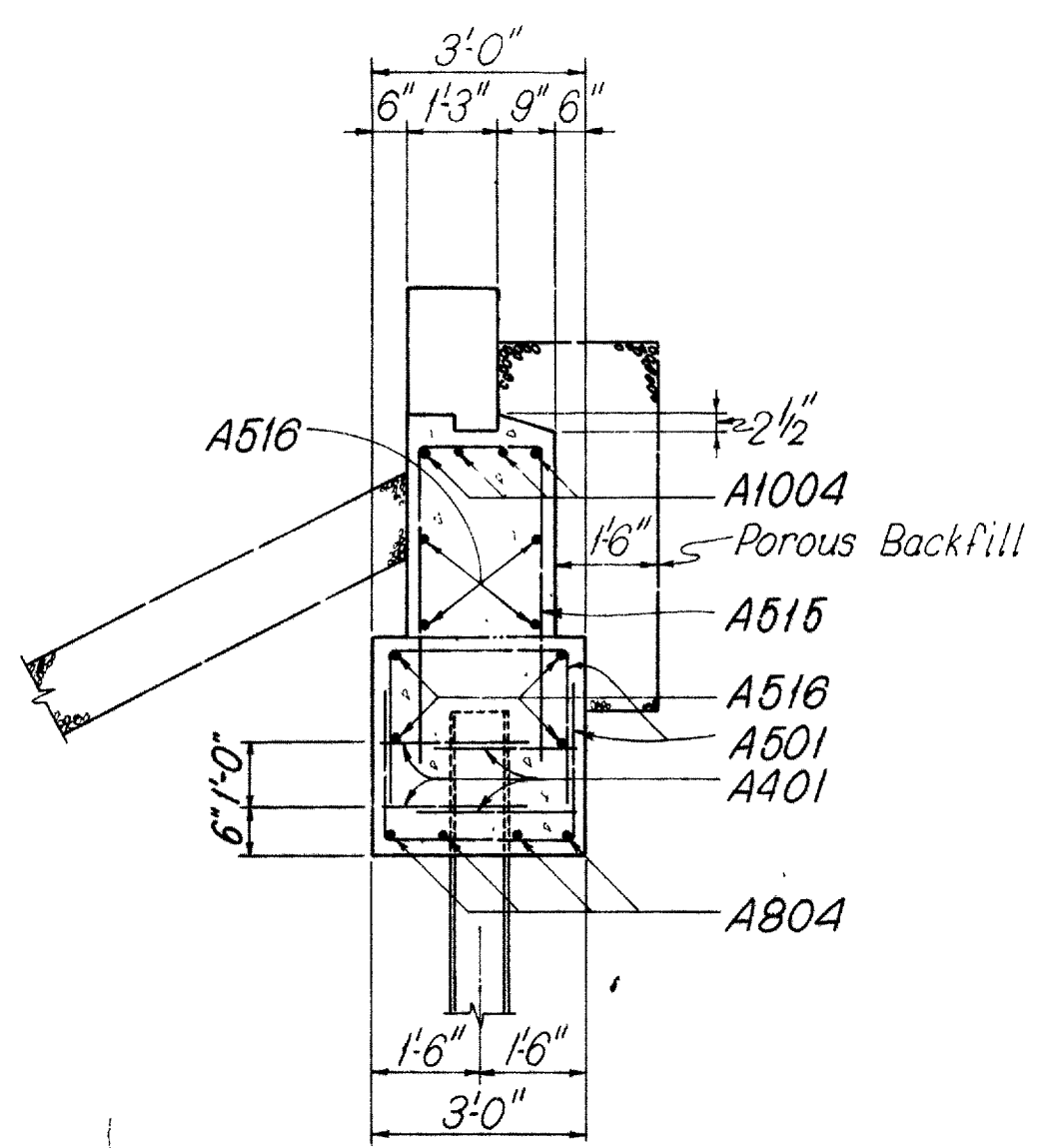
PLAN



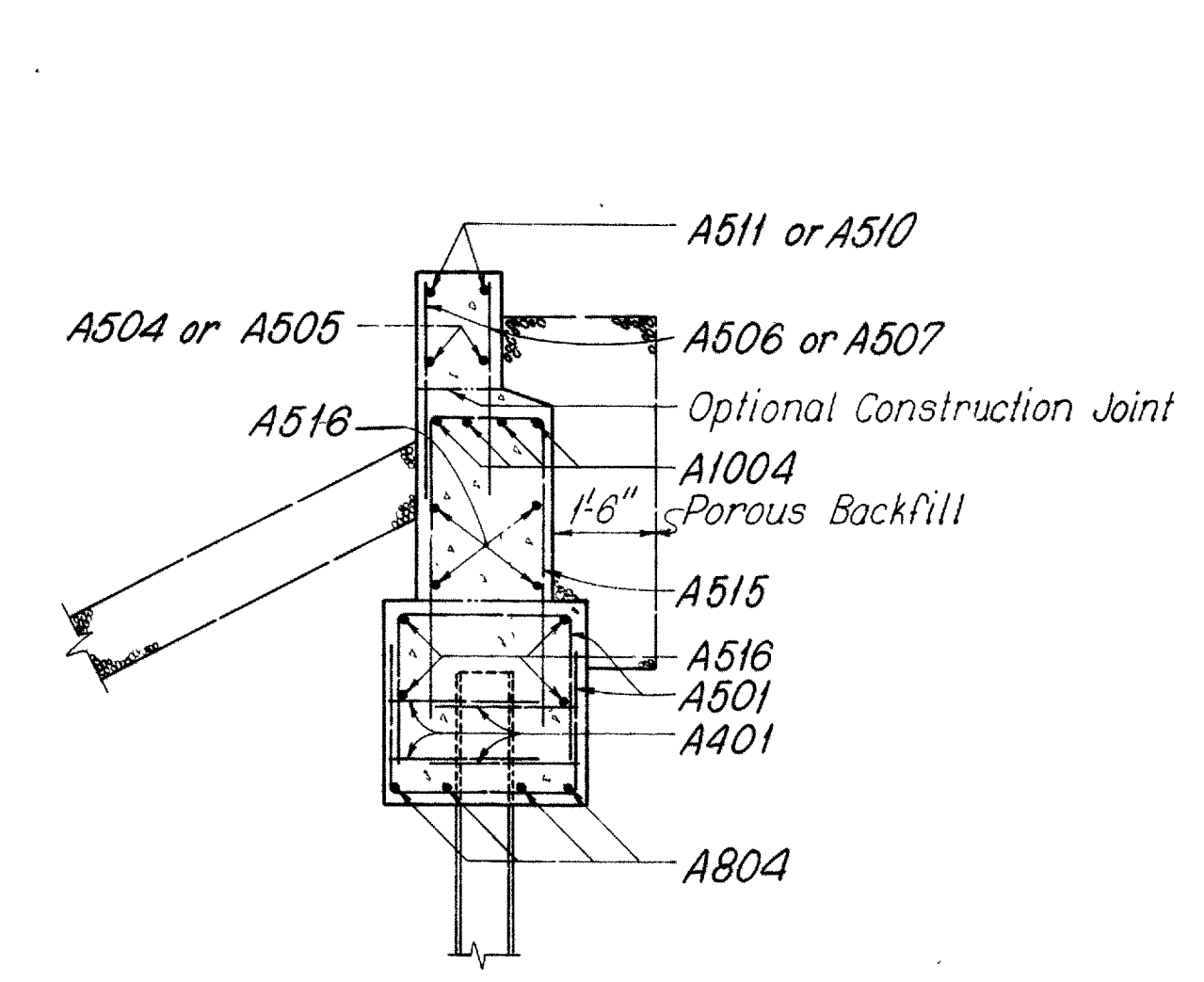
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

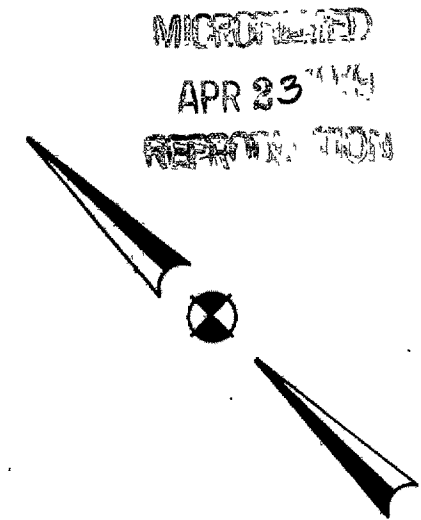
ABUTMENT NOTES: See Sheet 260.
GENERAL NOTES: See Sheet 258.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

FORWARD ABUTMENT-LEFT BRIDGE
BRIDGE NO. LOR-90-1861 L&R
OVER FRENCH CREEK
LORAIN COUNTY I.R. 90

STA. 966 + 47.25 TO STA. 967 + 52.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	JS	PG			



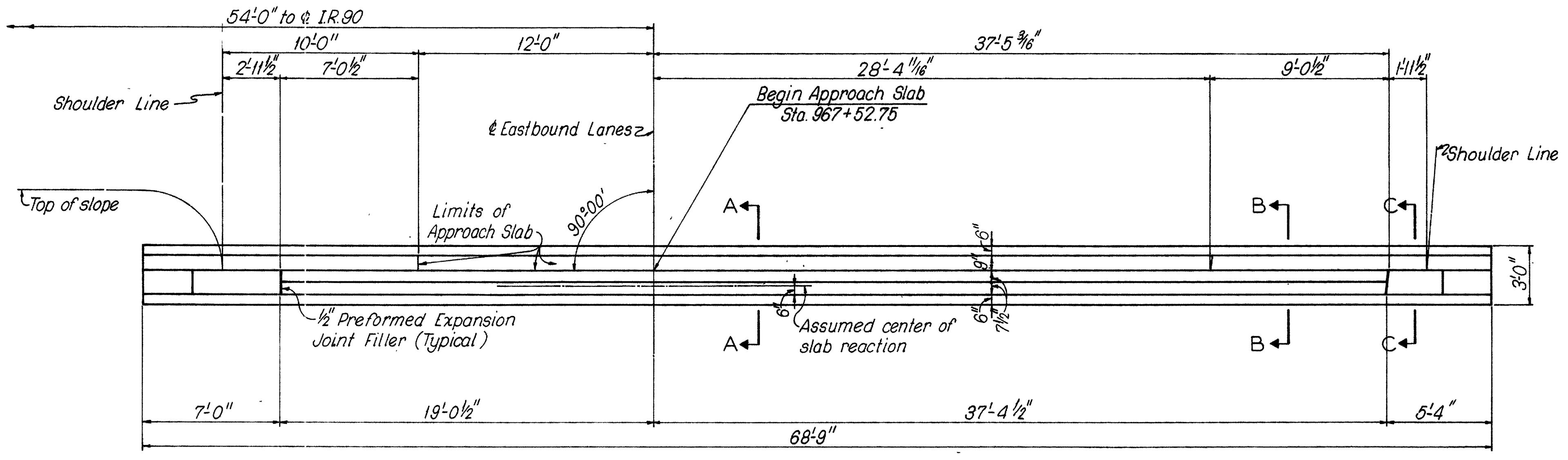
MICROFILMED
APR 33 1994
FEDERAL ARCHIVES

Stations
Ahead

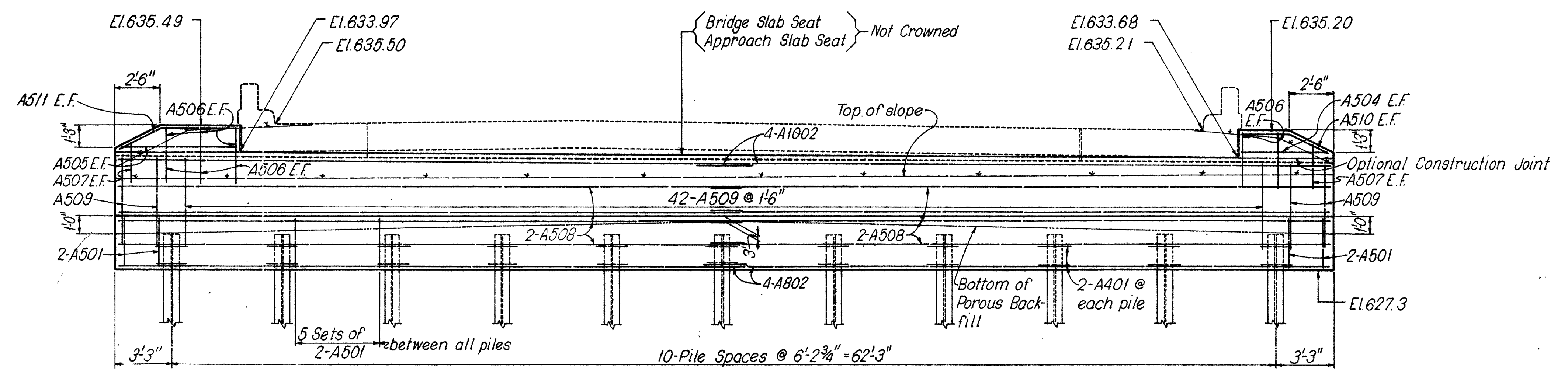
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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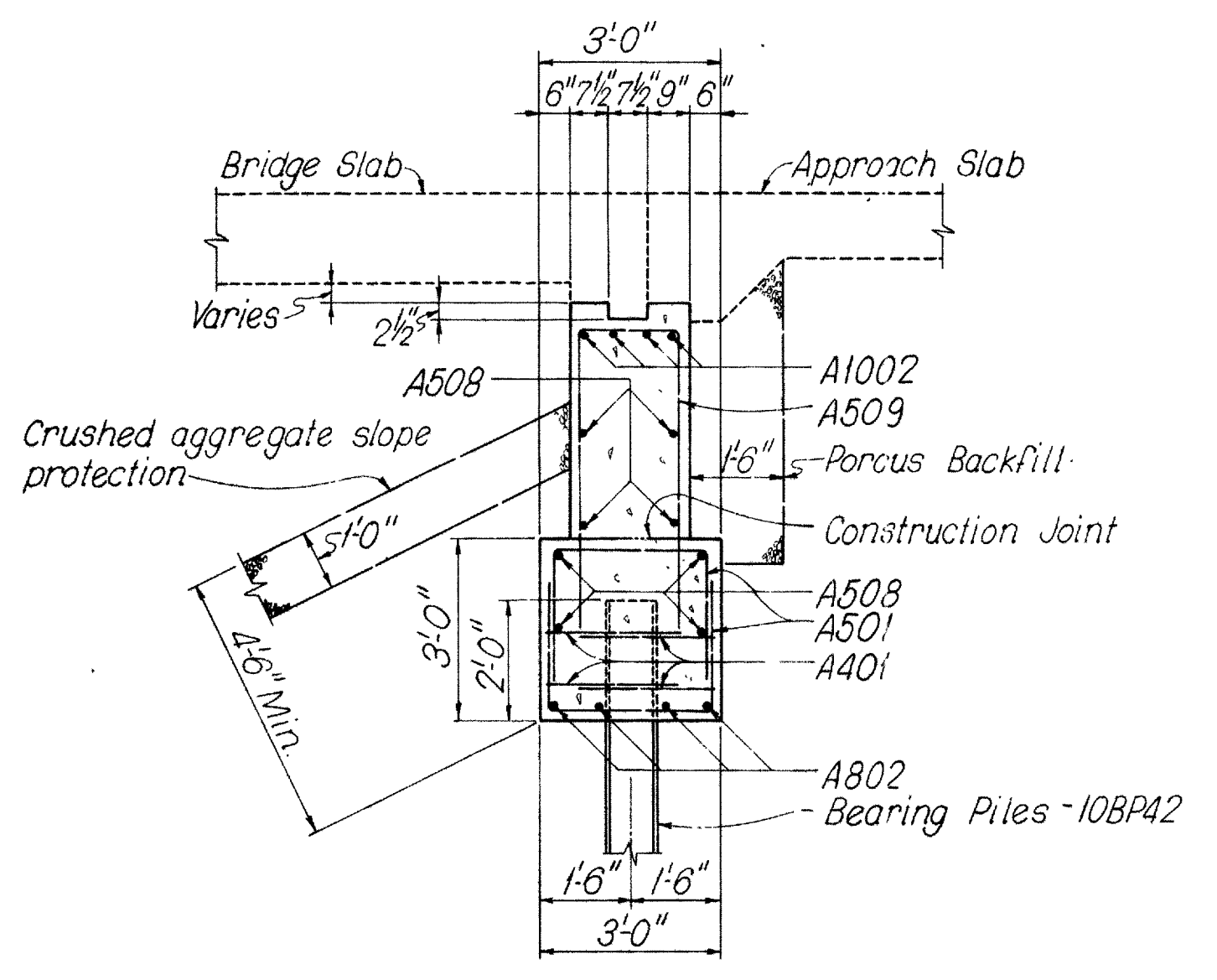
LOR-90-17.21



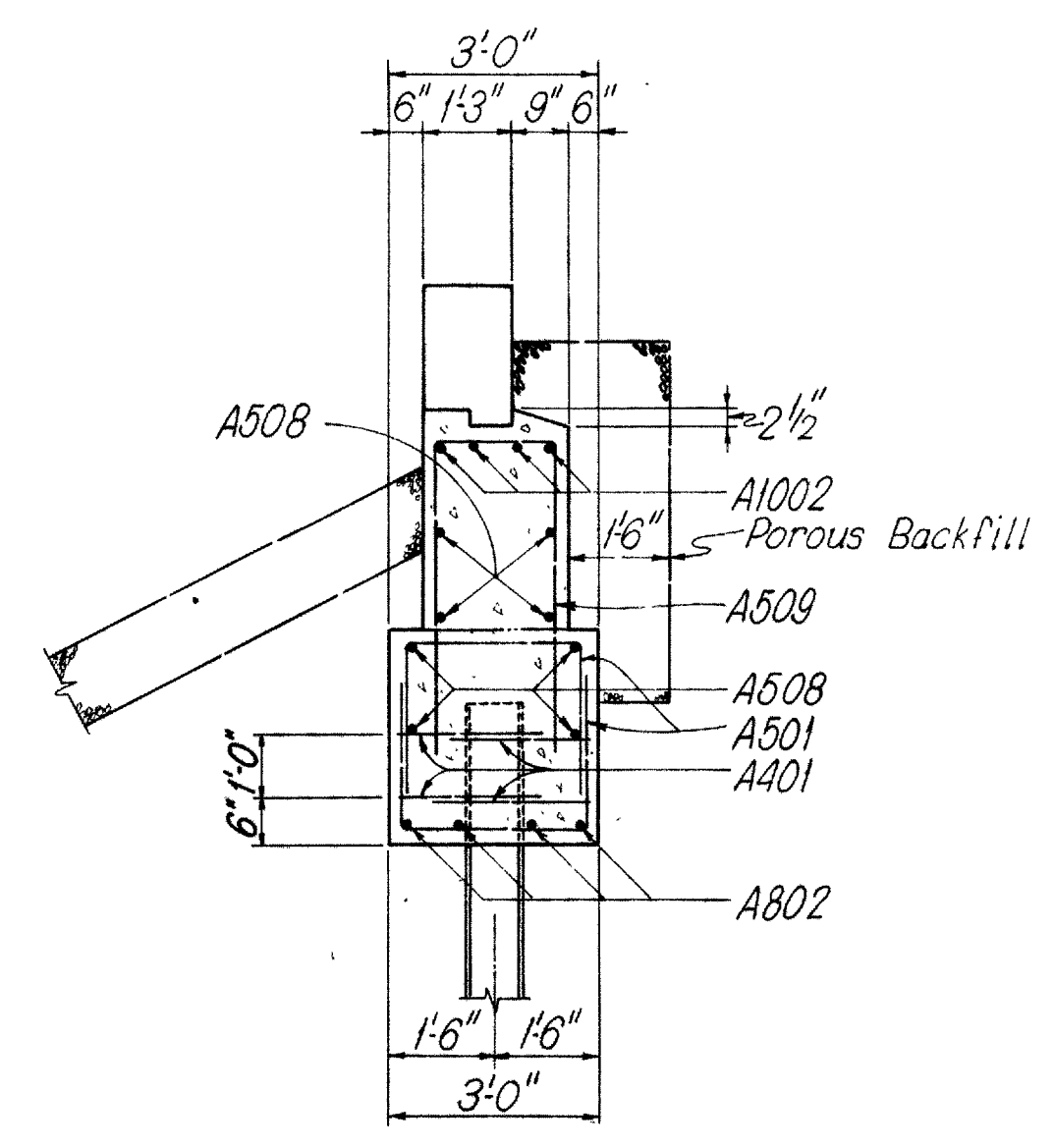
PLAN



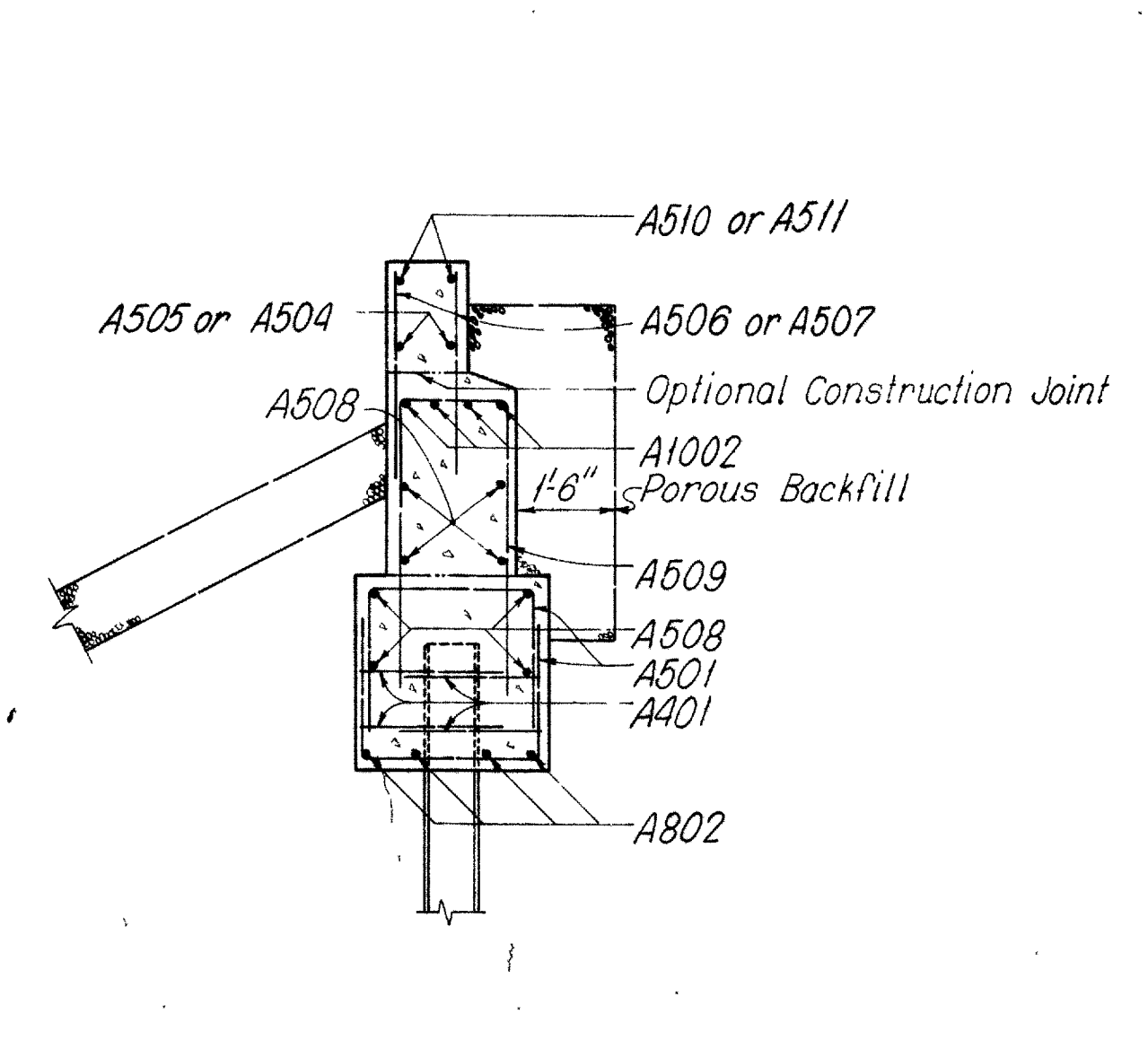
ELEVATION



SECTION A-A



SECTION B-B



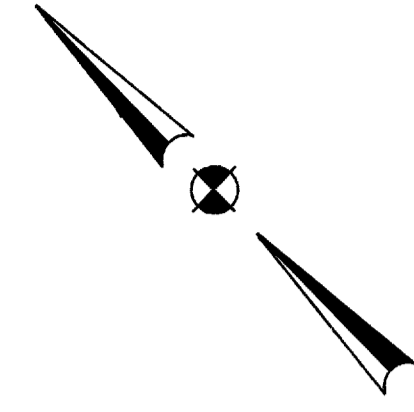
SECTION C-C

ABUTMENT NOTES: See Sheet 260

GENERAL NOTES: See Sheet 258

SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
FORWARD ABUTMENT-RIGHT BRIDGE						
BRIDGE NO. LOR-90-1861 L&R OVER FRENCH CREEK						
LORAIN COUNTY I.R. 90						
STA. 966 + 47.25 TO STA. 967 + 52.75						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	JS	JP			

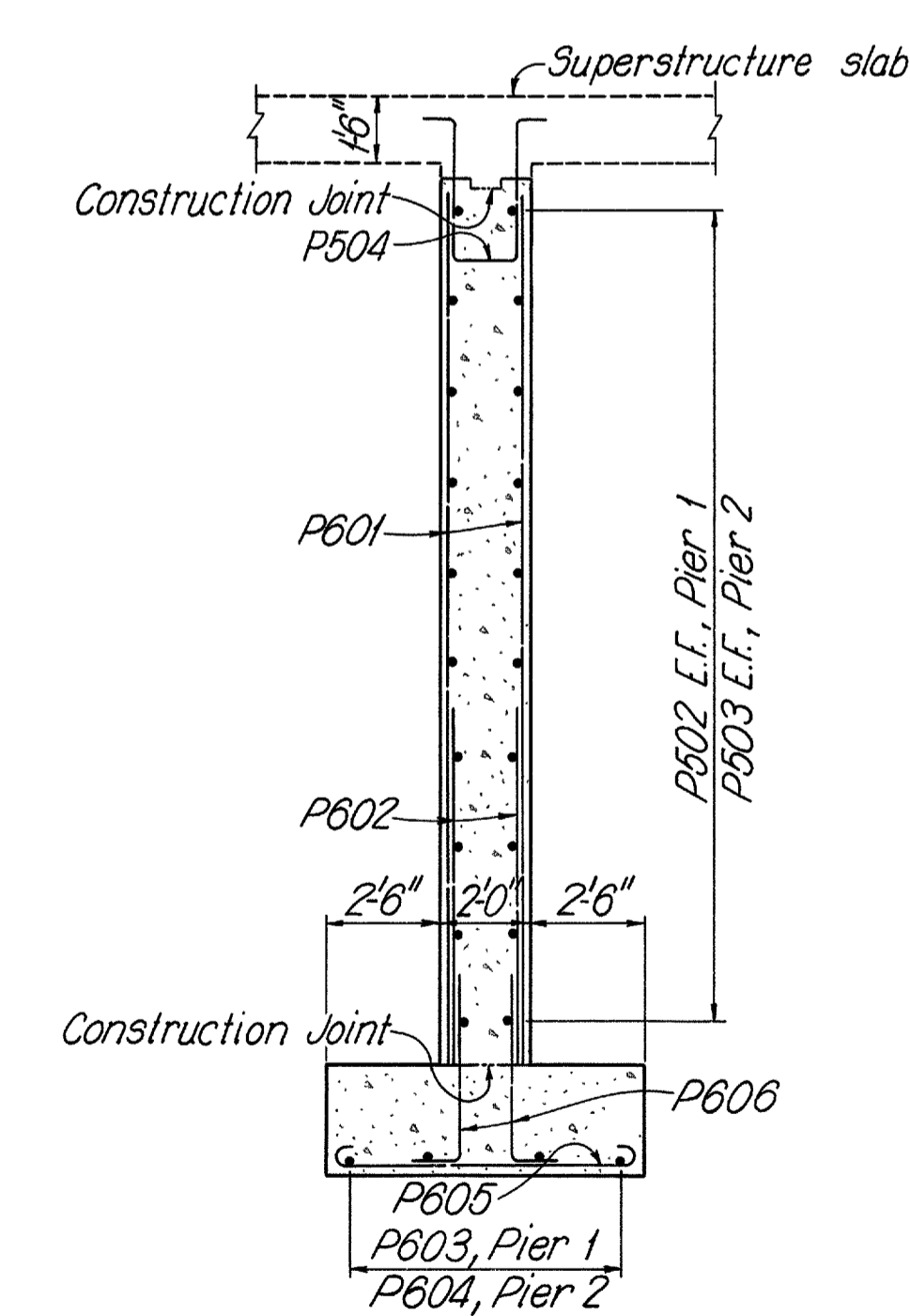
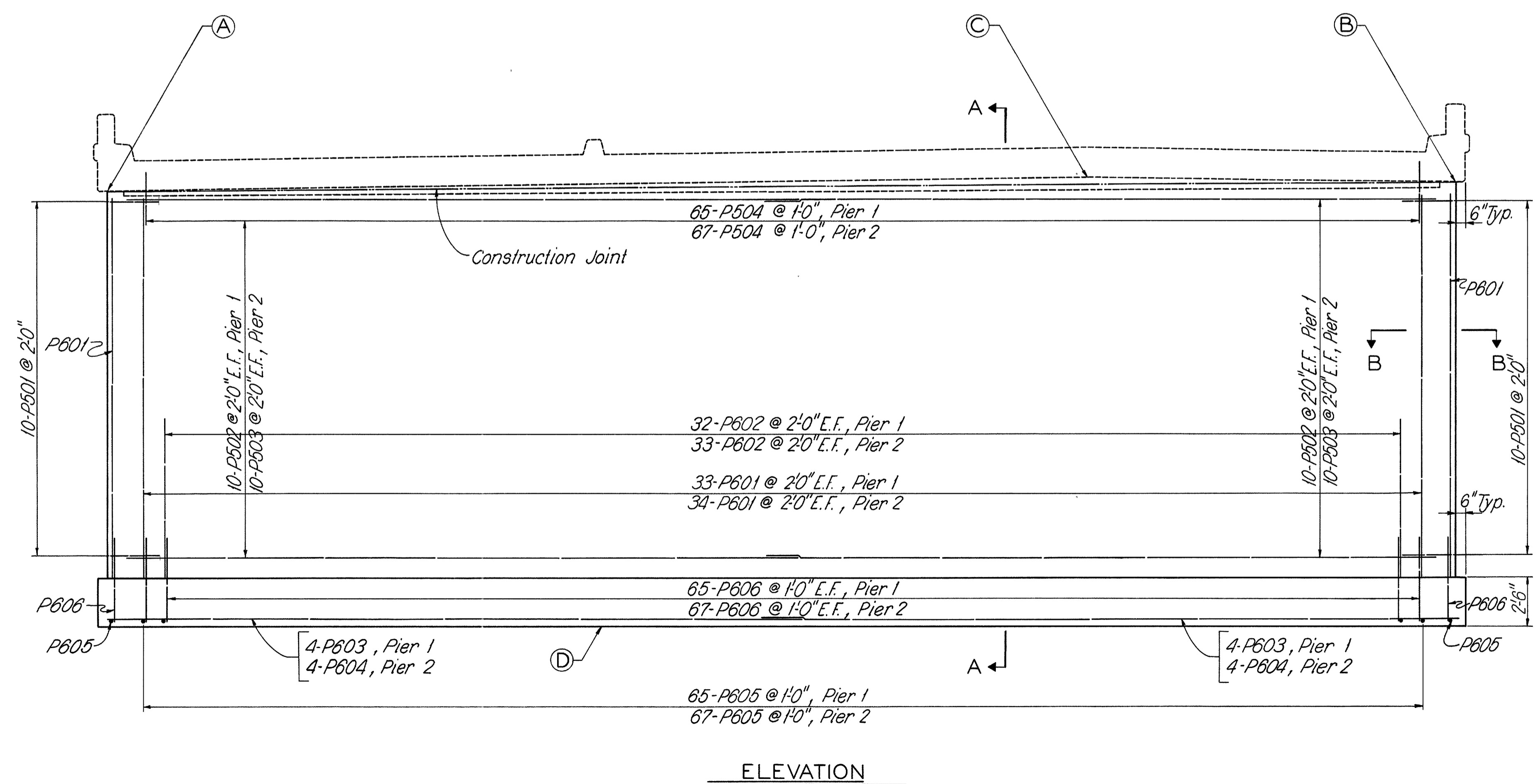
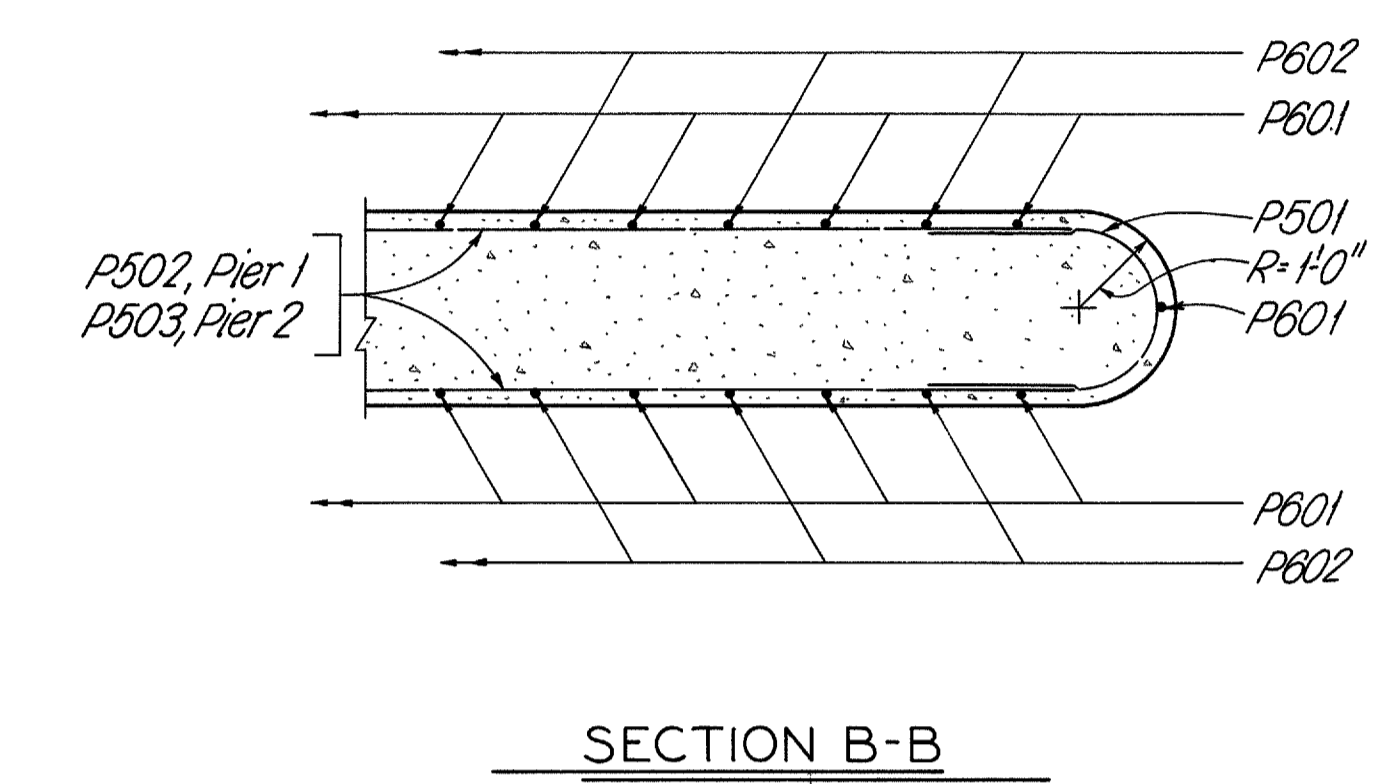
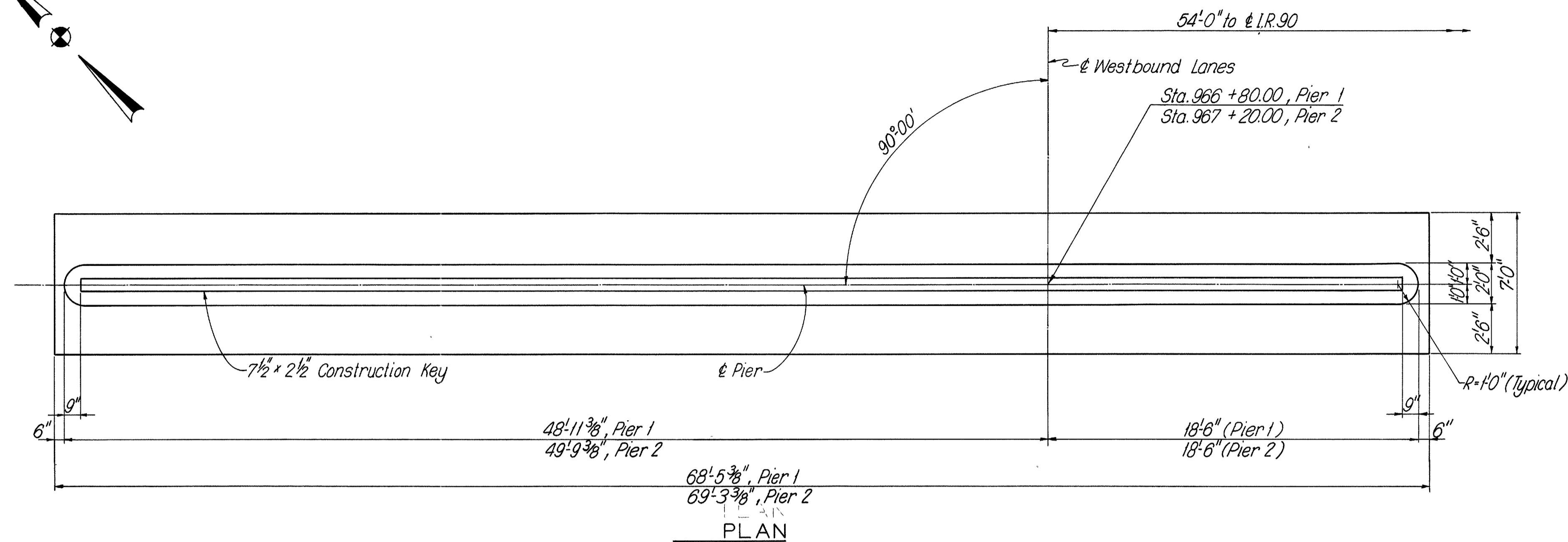
MICROFILMED
APR 23 1971



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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LOR-90-17.21



NOTES:
CONCRETE: All pier concrete shall be Class "E."
NOTATION: E.F. - Denotes Each Face
GENERAL NOTES: See Sheet 258.

TABLE OF ELEVATIONS

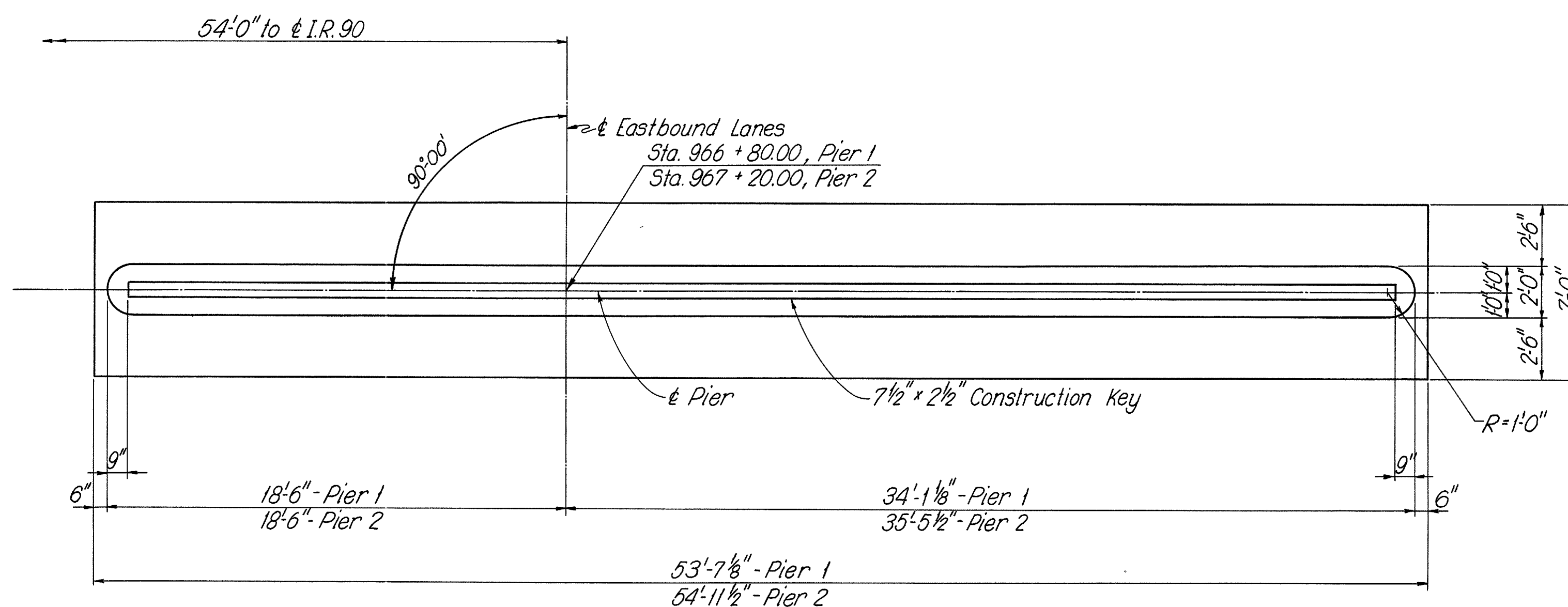
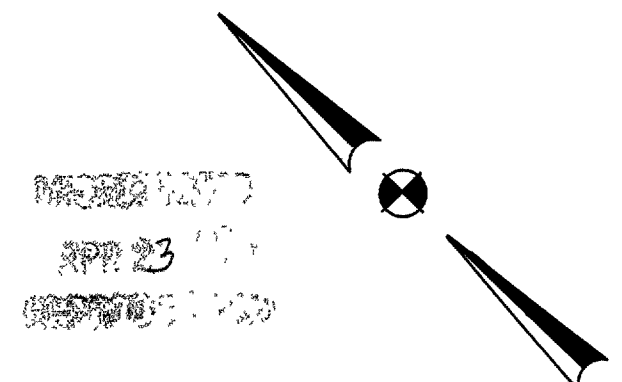
LOCATION	A	B	C	D
PIER 1	633.33	633.80	634.09	611.6
PIER 2	633.41	633.90	634.19	611.6

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
 MANSFIELD, OHIO.

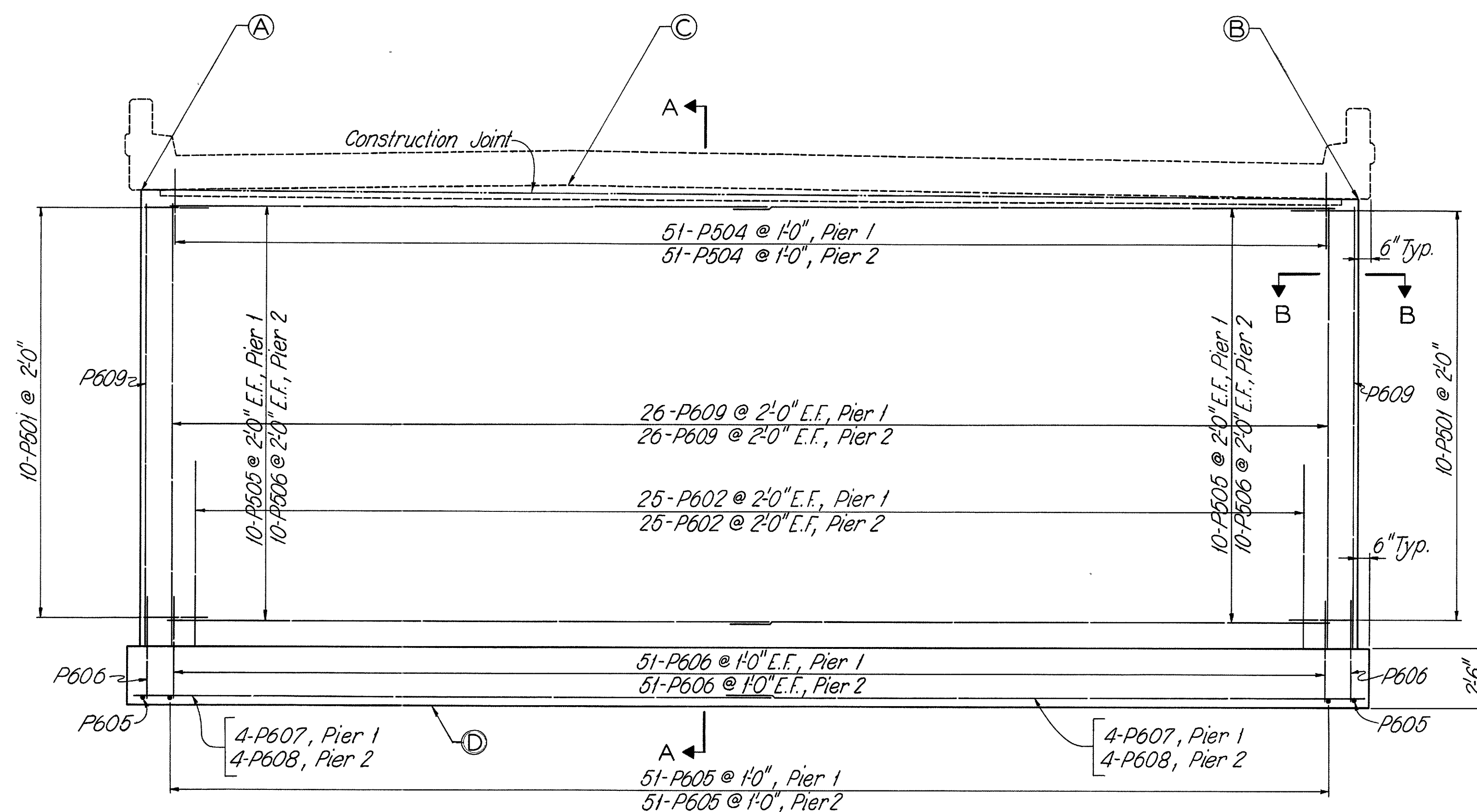
PIERS - LEFT BRIDGE
 BRIDGE NO. LOR-90-1861 L & R
 OVER FRENCH CREEK

LORAIN COUNTY I.R. 90
 STA. 966 + 47.25 TO STA. 967 + 52.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	JS	JG			

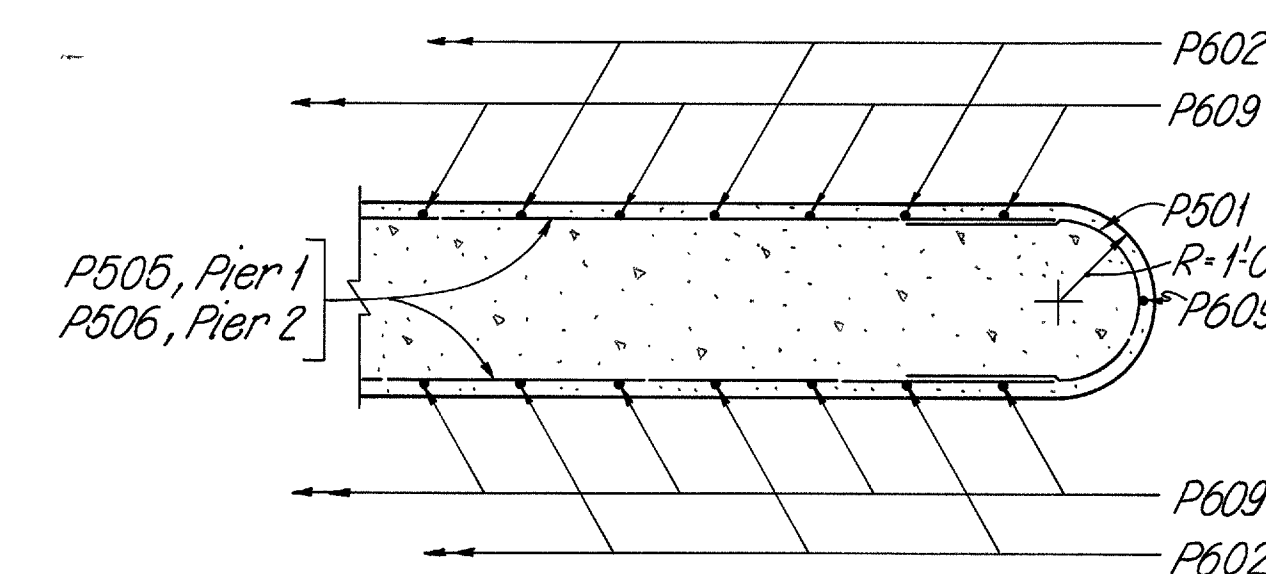


PLAN

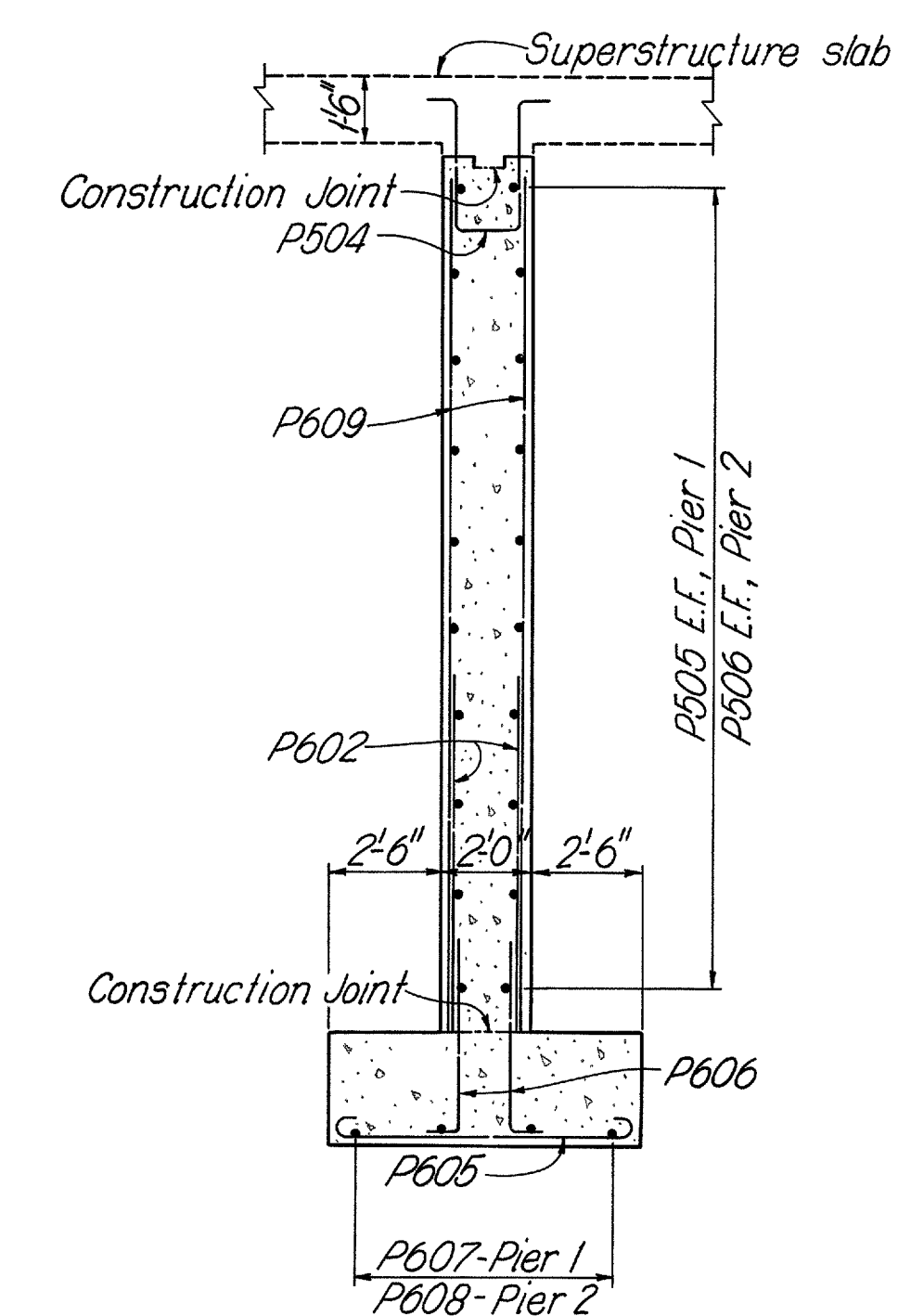


ELEVATION

TABLE OF ELEVATIONS				
LOCATION	A	B	C	D
PIER 1	633.80	633.56	634.09	611.6
PIER 2	633.90	633.63	634.19	611.6



SECTION B-B



SECTION A-A

PIER NOTES: See Sheet 264.

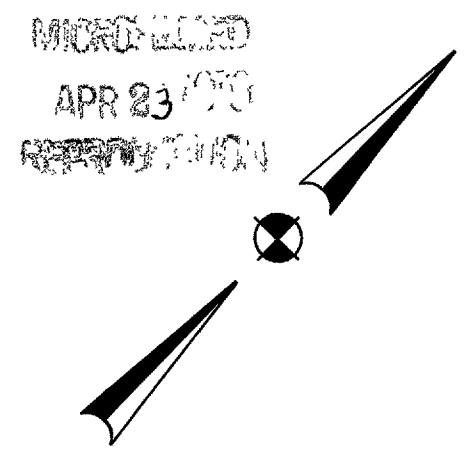
SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

PIERS - RIGHT BRIDGE
BRIDGE NO. LOR-90-1861 L & R
OVER FRENCH CREEK

LORAIN COUNTY I.R.90

STA. 966 + 47.25 TO STA. 967 + 52.75

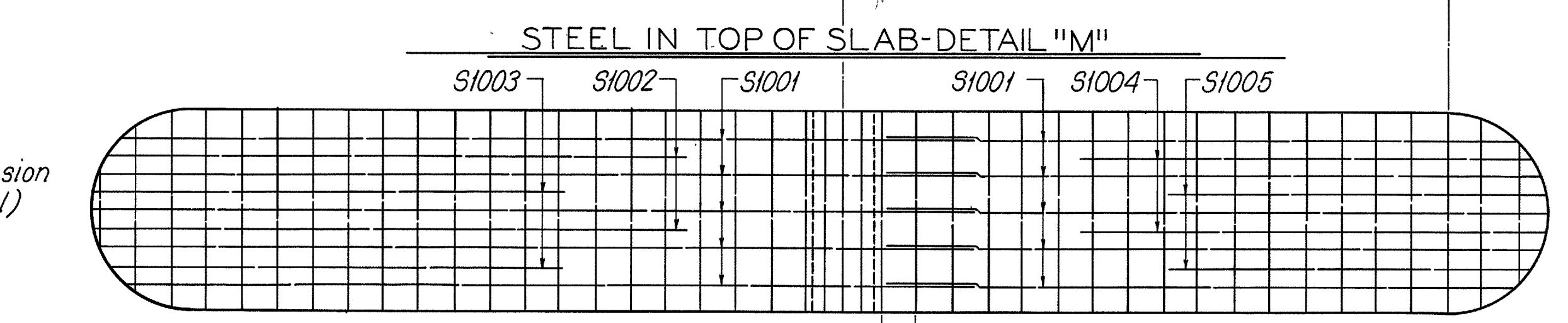
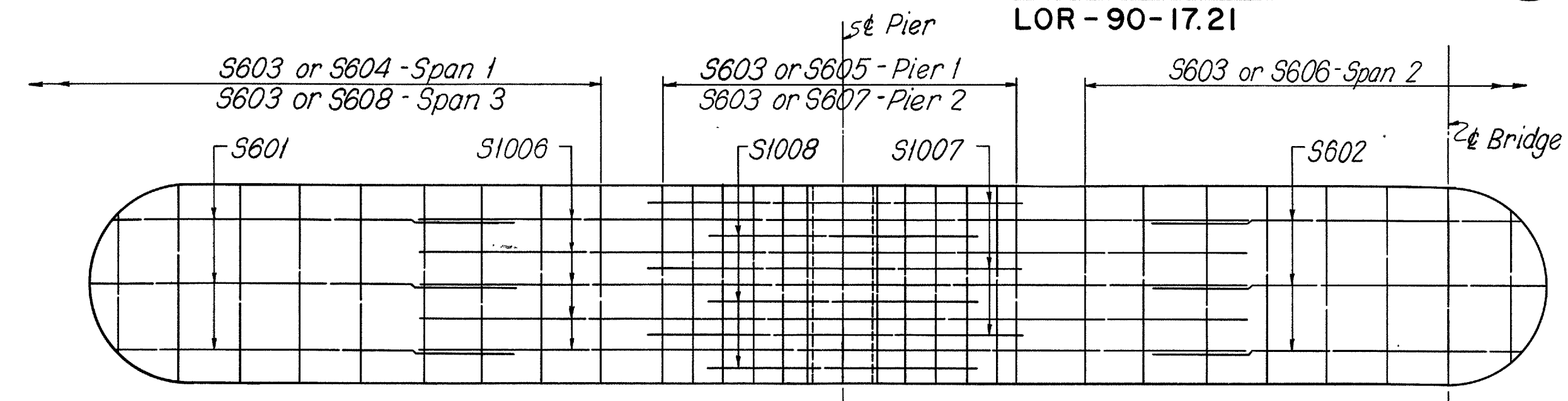
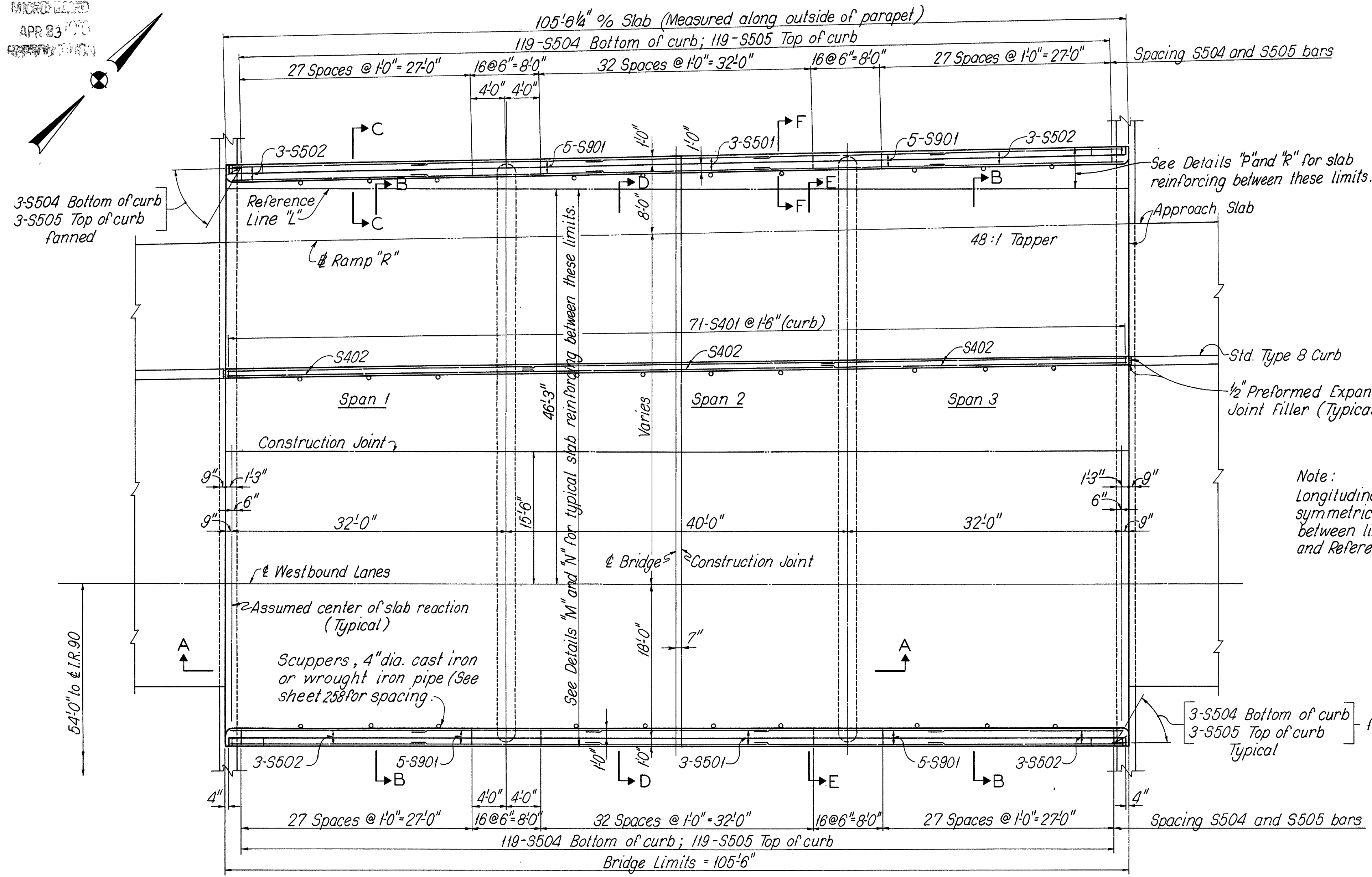
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	JS	JG			



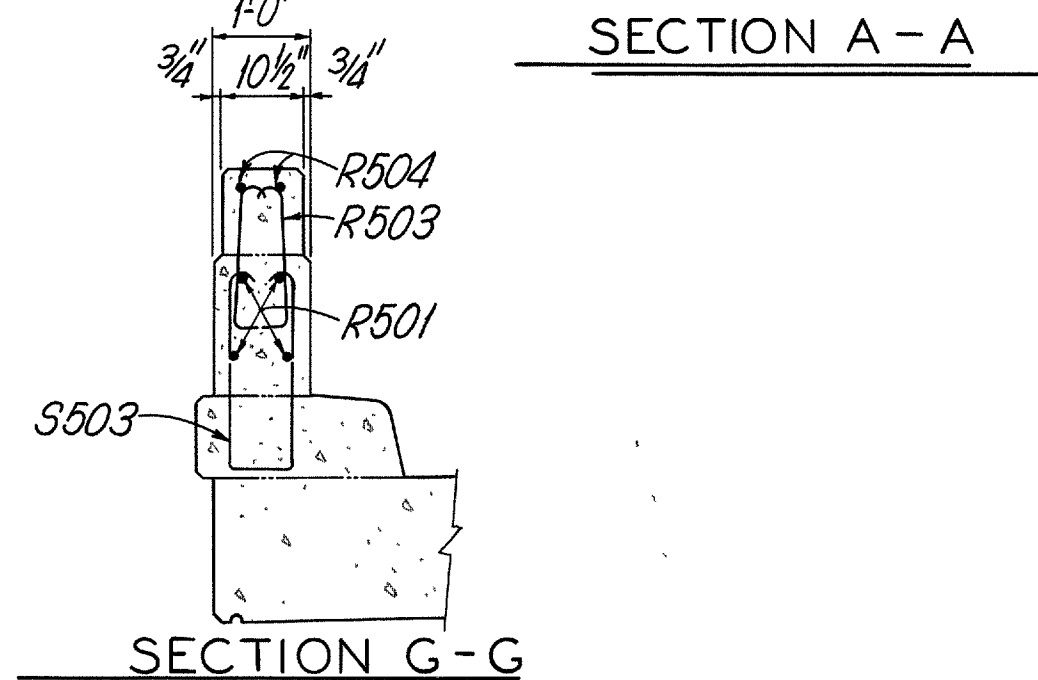
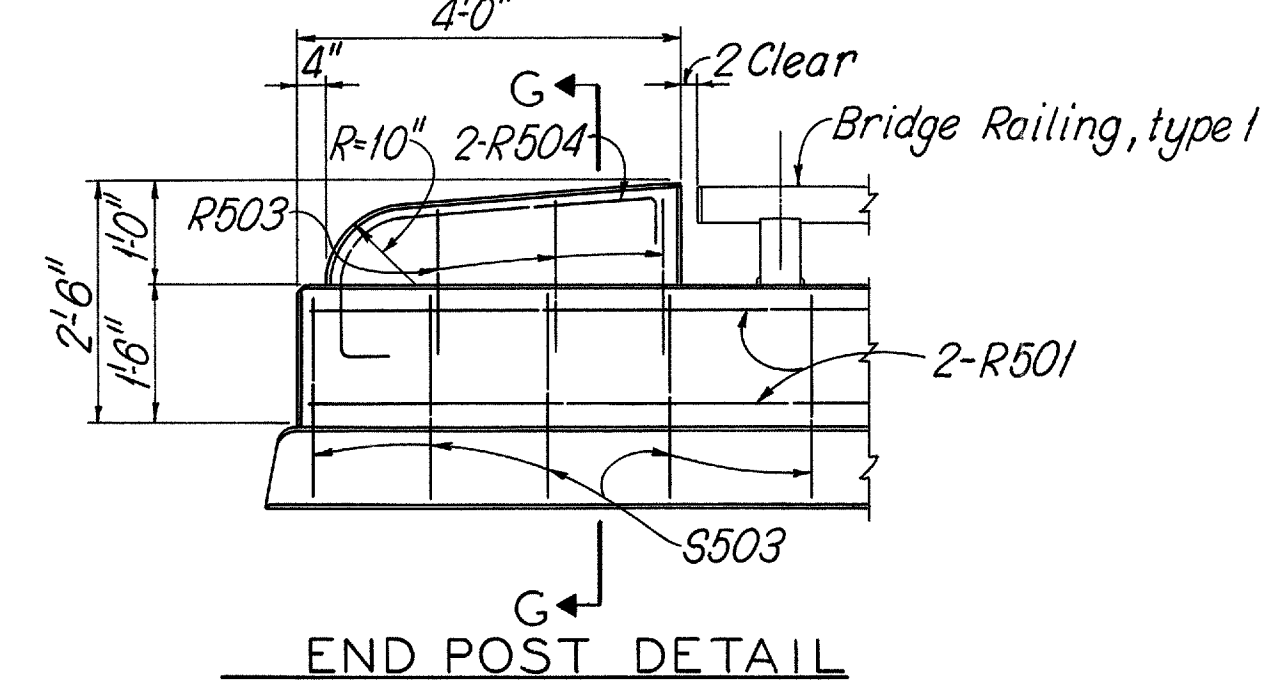
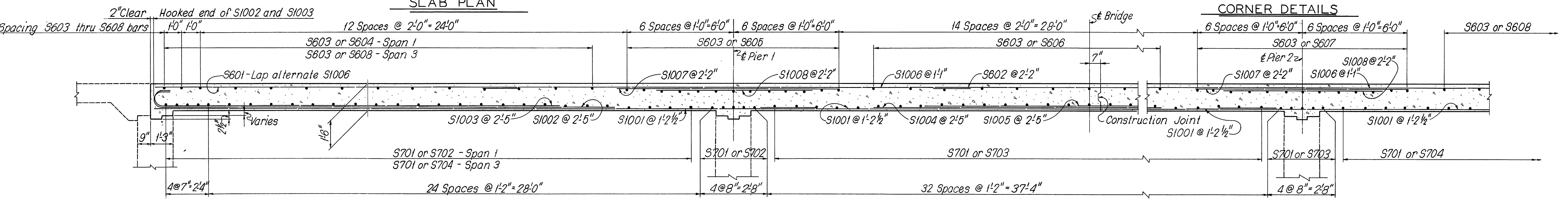
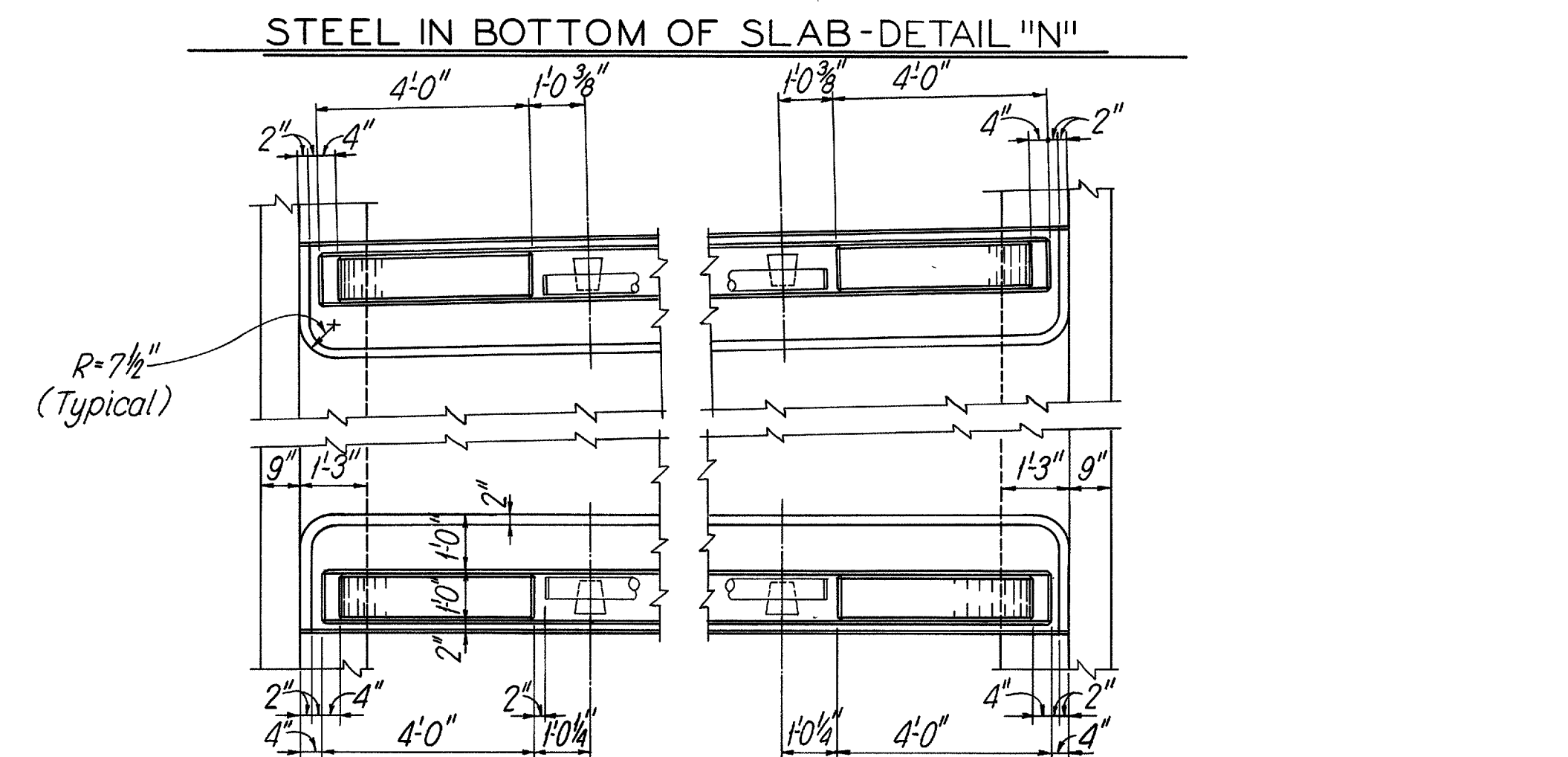
APR 23 1990

FED. RD. DIVISION	STATE	PROJECT	266
2	OHIO		

LOR-90-17.21



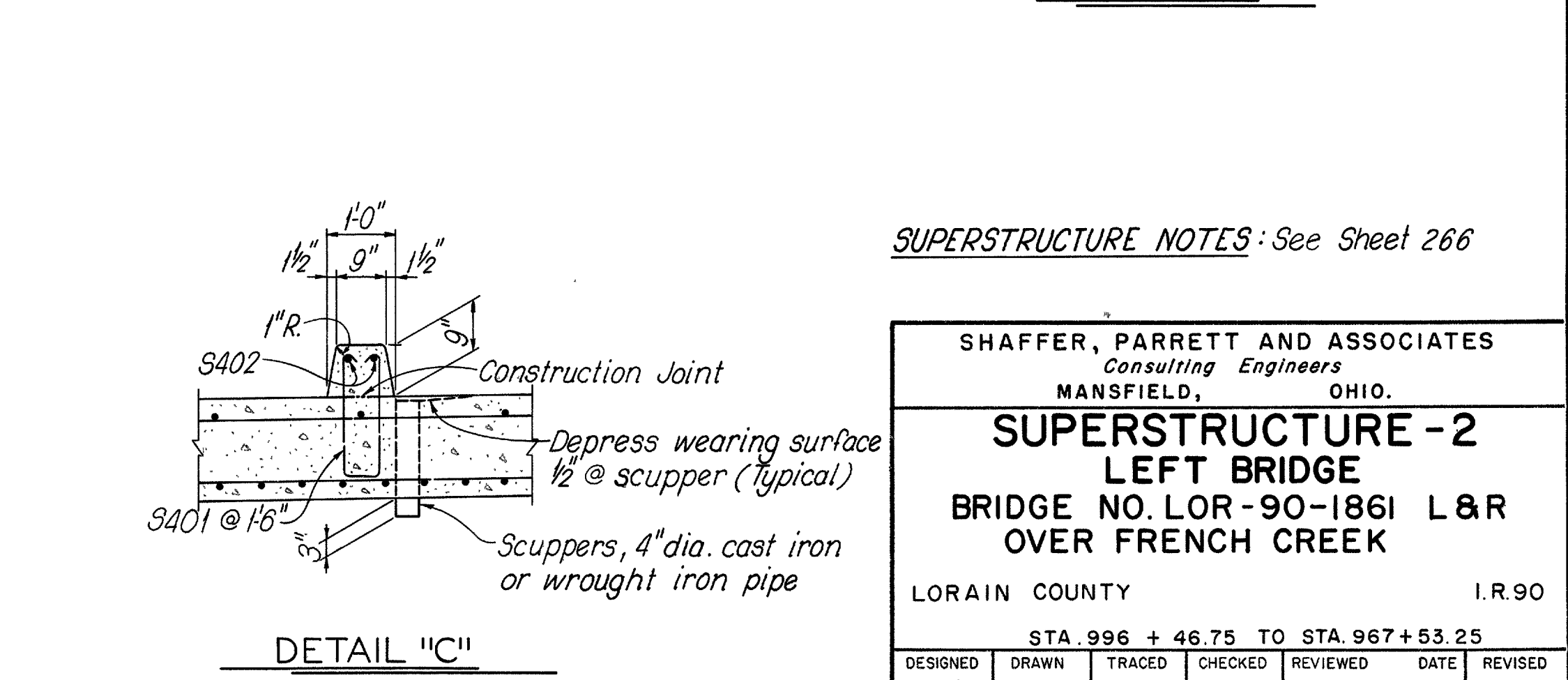
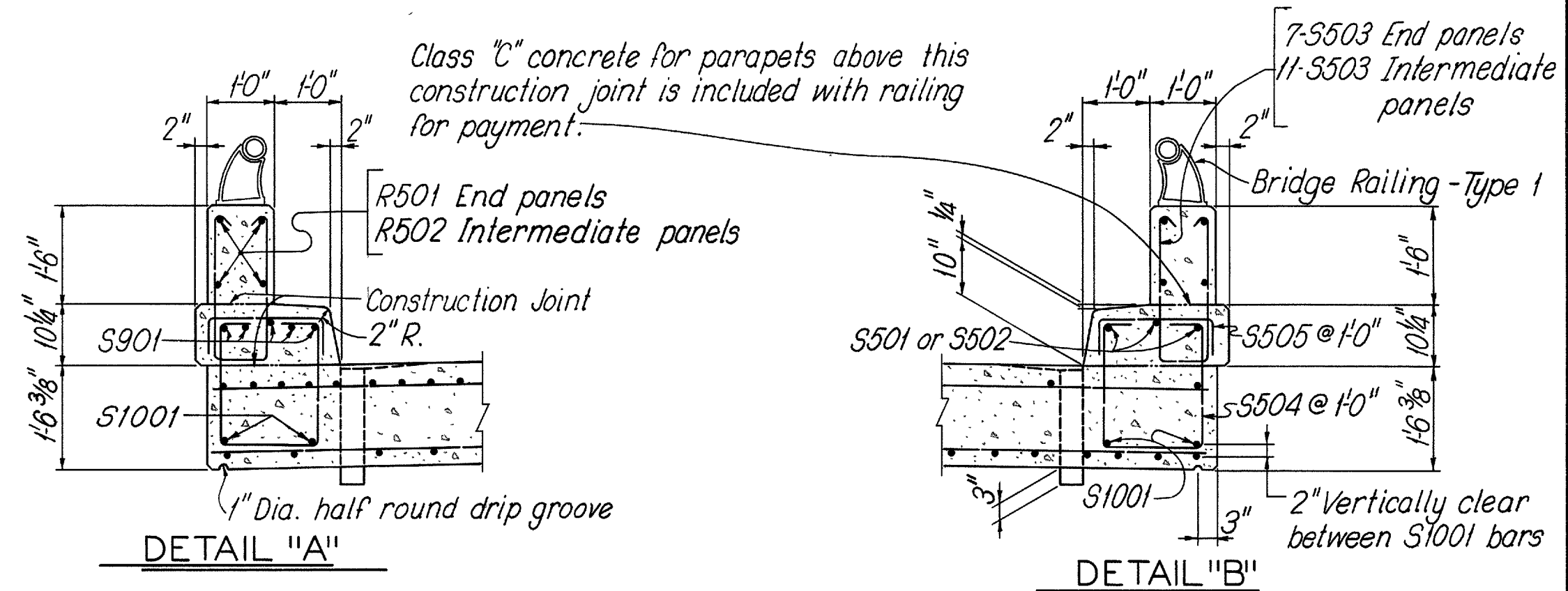
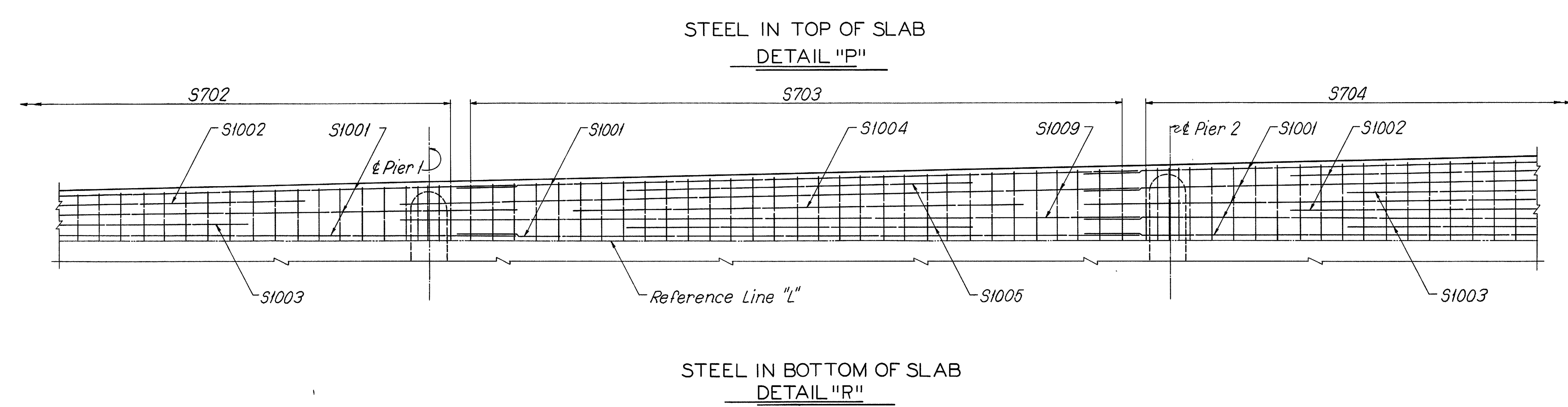
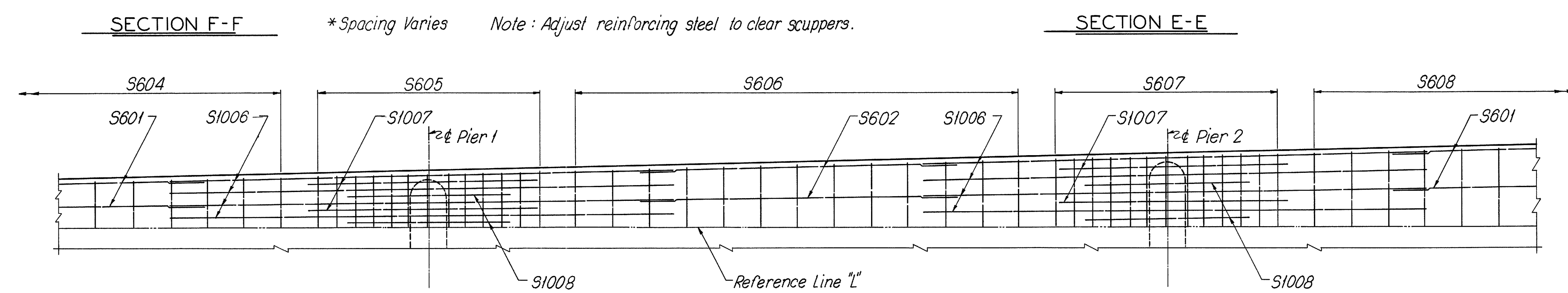
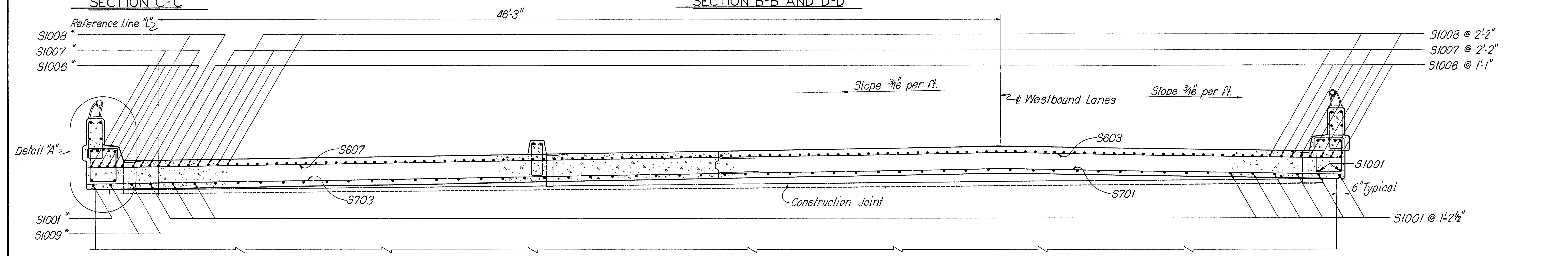
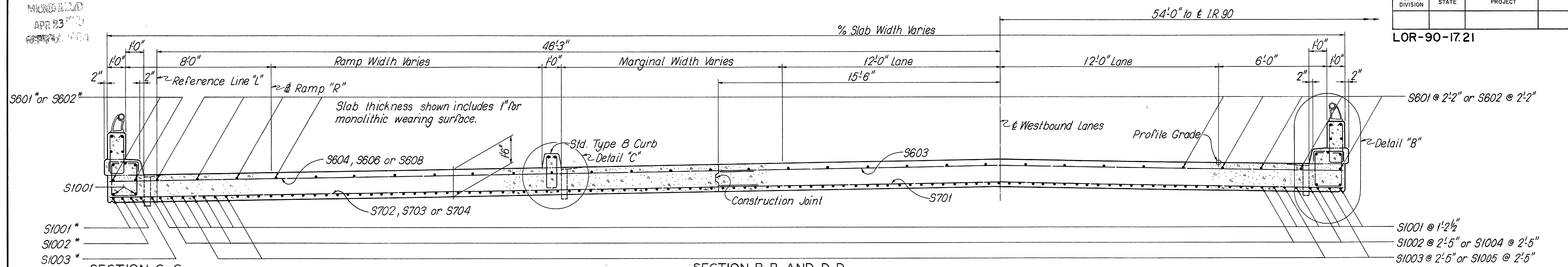
Note:
Longitudinal slab reinforcing symmetrical about ϵ Bridge between limits of right fascia and Reference Line "L".



NOTES:
RAILING: See Std. Dwg. BR-1-65, Type 1
CONSTRUCTION JOINTS, REINFORCING STEEL CLEARANCE, CURBS AND CAMBER: See Std. Dwg. CS-2-65, Sheets 1 and 2.
SECTIONS B-B, C-C, D-D, E-E AND F-F: See Sheet 267
DETAILS "P" AND "R": See Sheet 267
CONCRETE: All superstructure concrete shall be Class "C".
GENERAL NOTES: See Sheet 258

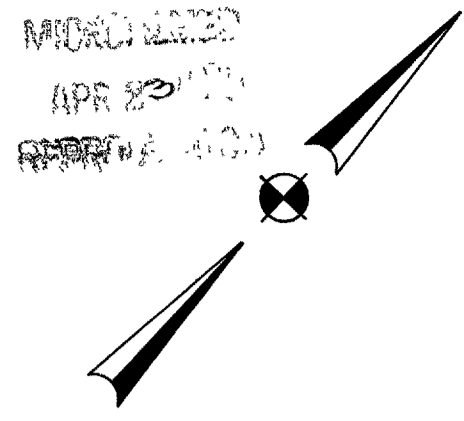
SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
SUPERSTRUCTURE - I						
LEFT BRIDGE						
BRIDGE NO. LOR-90-1861 L & R						
OVER FRENCH CREEK						
LORAIN COUNTY					I.R. 90	
STA. 966 + 46.75 TO STA. 967 + 53.25						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	JS	JP			

APPROVED
APR 23 1990

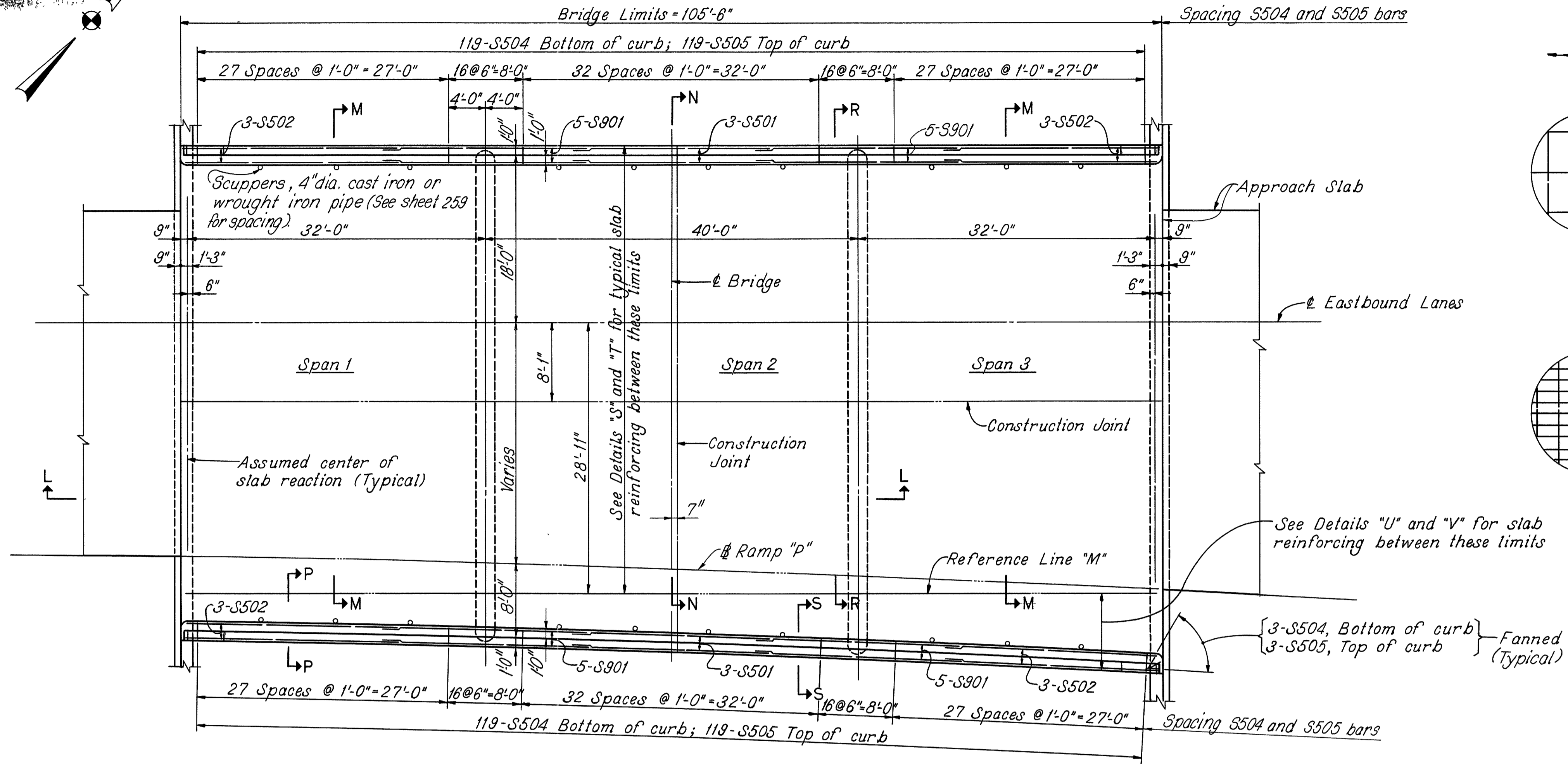


SUPERSTRUCTURE NOTES: See Sheet 266

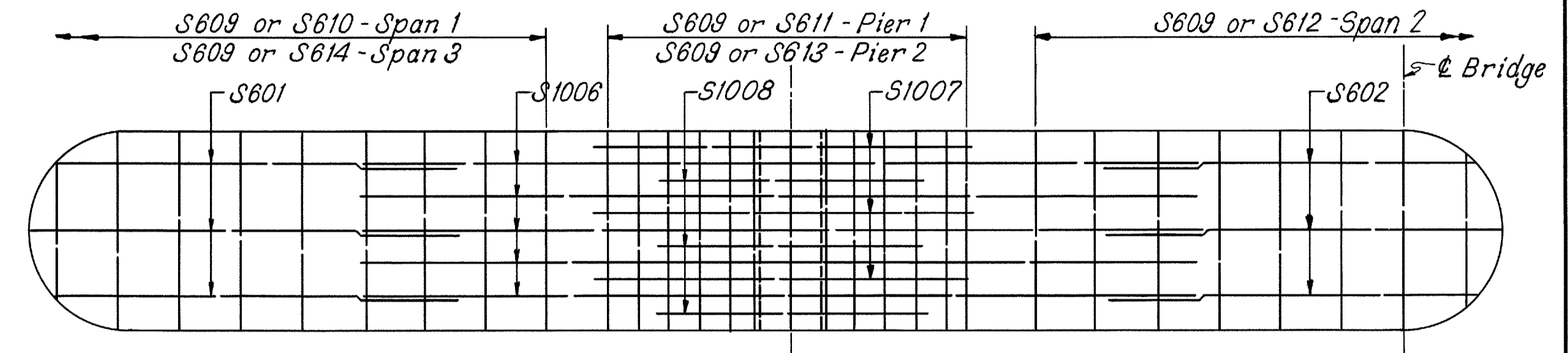
SHAFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
SUPERSTRUCTURE - 2						
LEFT BRIDGE						
BRIDGE NO. LOR-90-1861 L & R						
OVER FRENCH CREEK						
LORAIN COUNTY						I.R.90
STA. 996 + 46.75 TO STA. 967 + 53.25						
DESIGNED DGC	DRAWN DGC	TRACED JS	CHECKED JPG	REVIEWED	DATE	REVISED



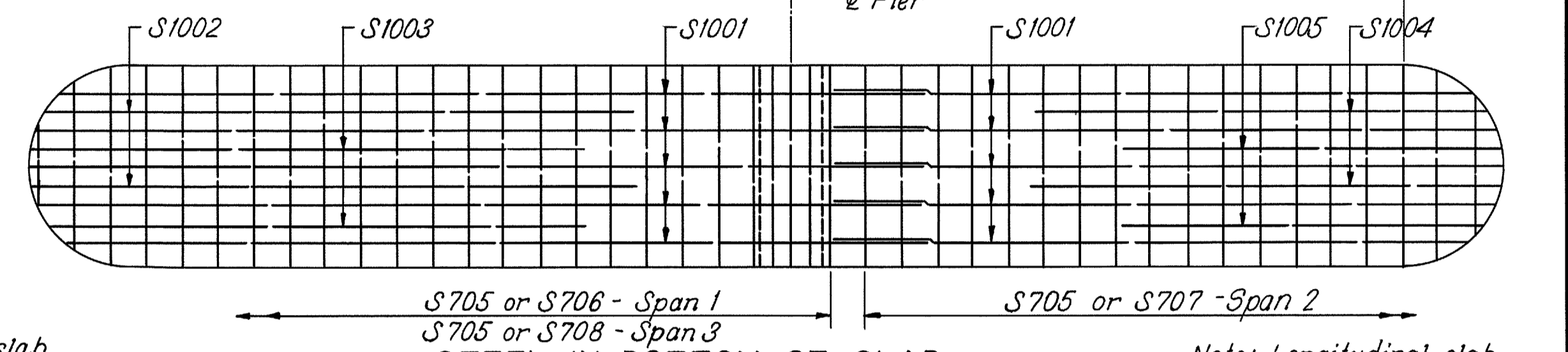
LOR-90-17.21



SLAB PLAN

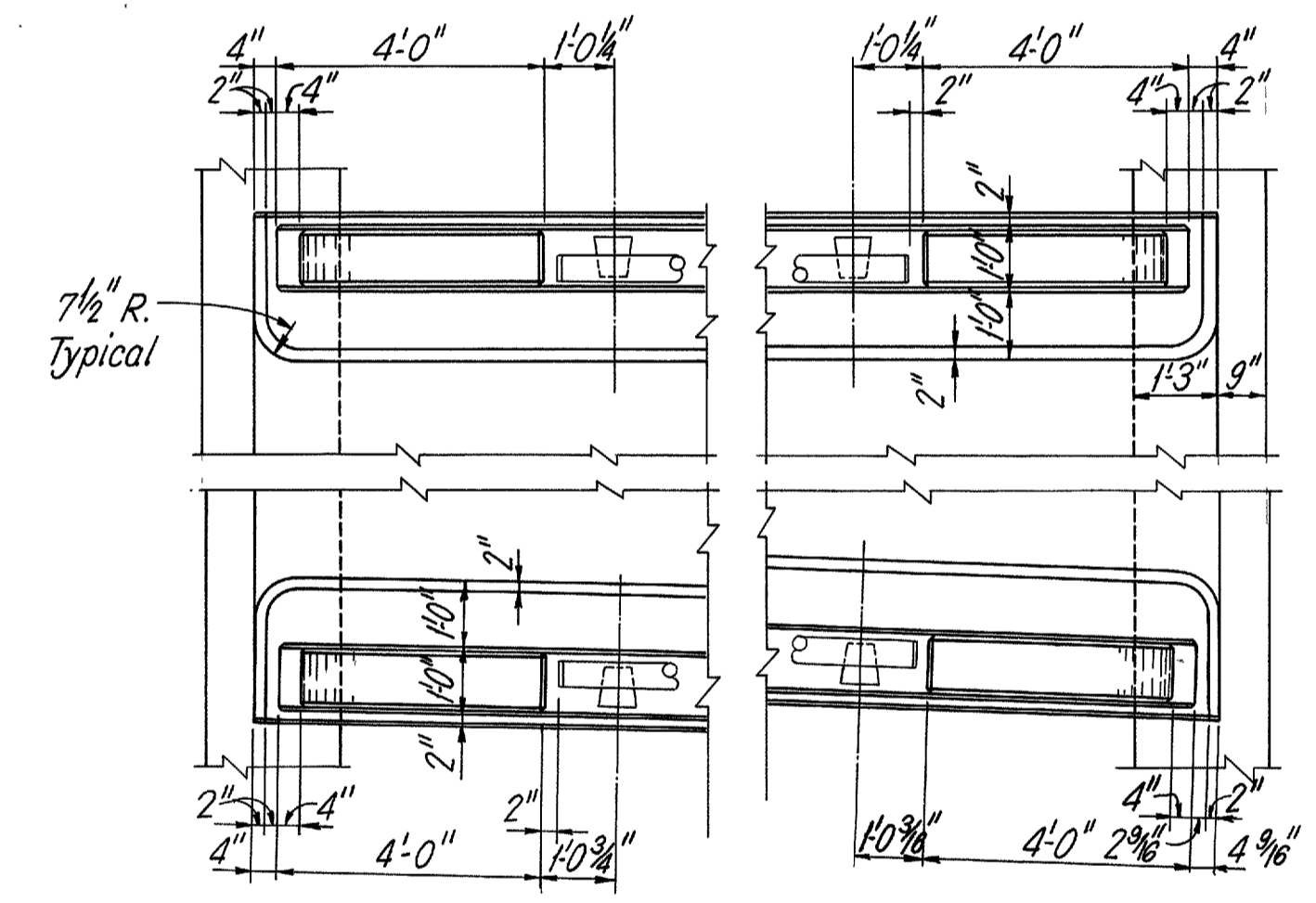


STEEL IN TOP OF SLAB - DETAIL "S"

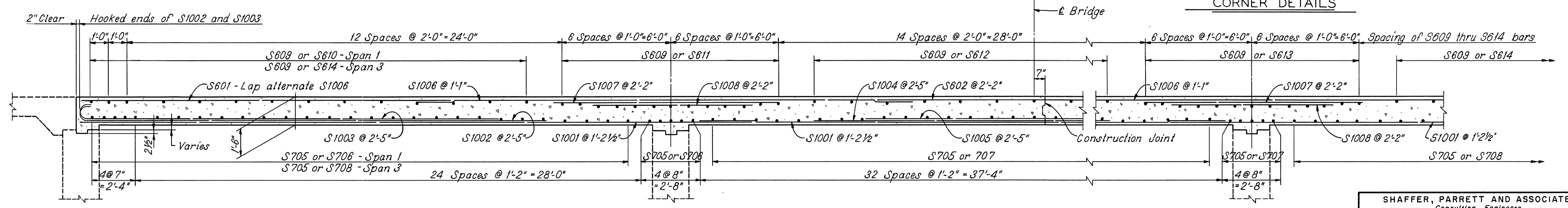


STEEL IN BOTTOM OF SLAB - DETAIL "T"

Note: Longitudinal slab reinforcing symmetrical about ℓ Bridge between limits of left fascia and Reference Line "M".



CORNER DETAILS



SECTION L-L

SUPERSTRUCTURE NOTES: See sheet 266

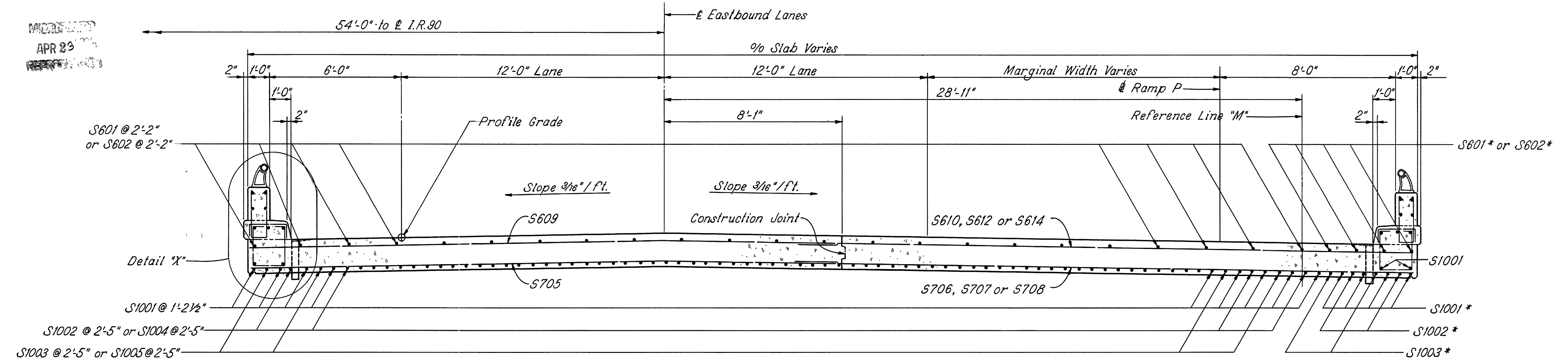
END POST DETAIL: See sheet 266

SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
SUPERSTRUCTURE-I RIGHT BRIDGE						
BRIDGE NO. LOR-90-1861 L&R OVER FRENCH CREEK						
LORAIN COUNTY I.R. 90						
STA. 966 + 47.25 TO STA. 967 + 52.75						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	RWH	JG			

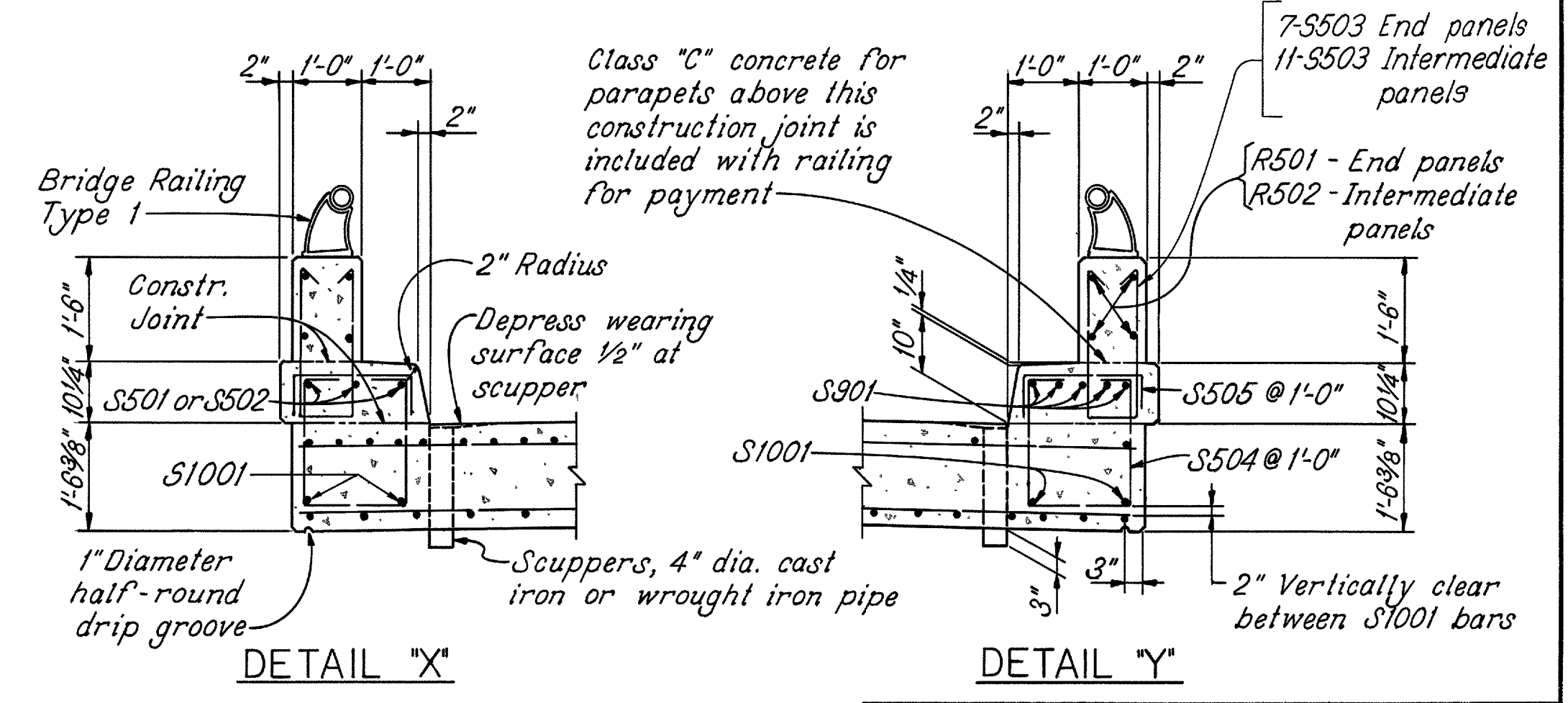
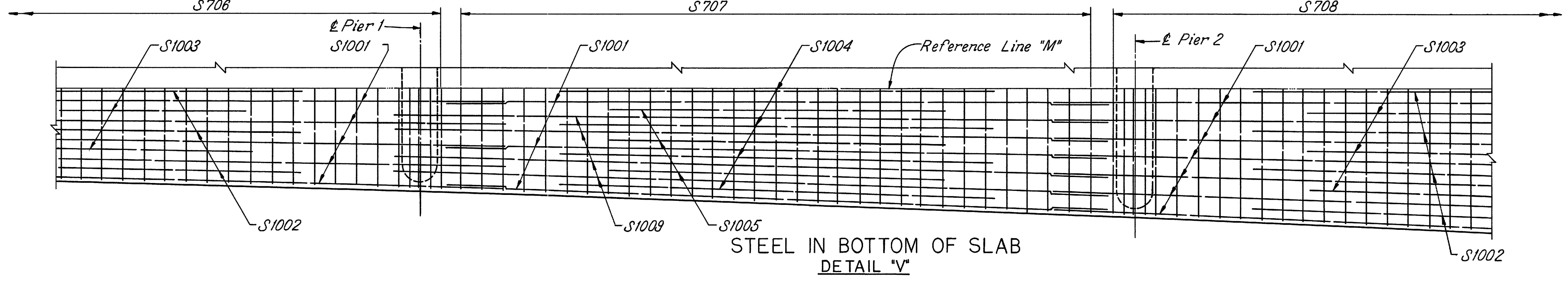
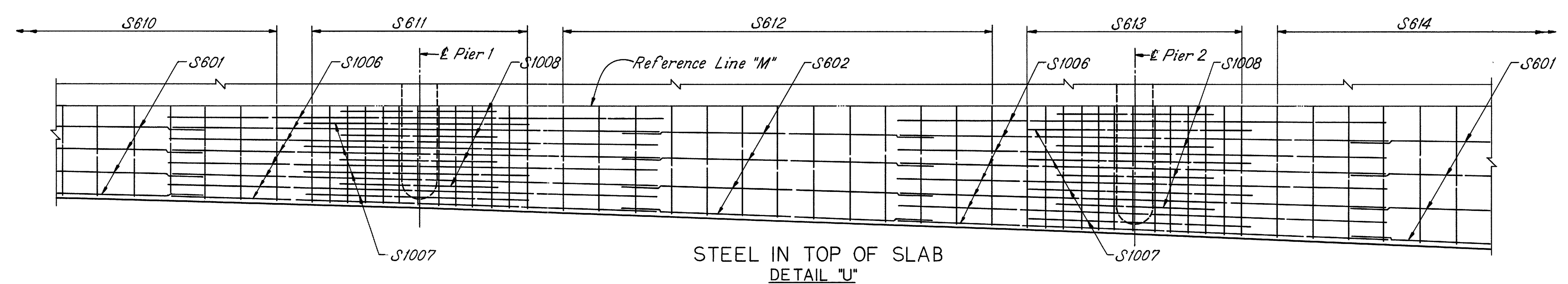
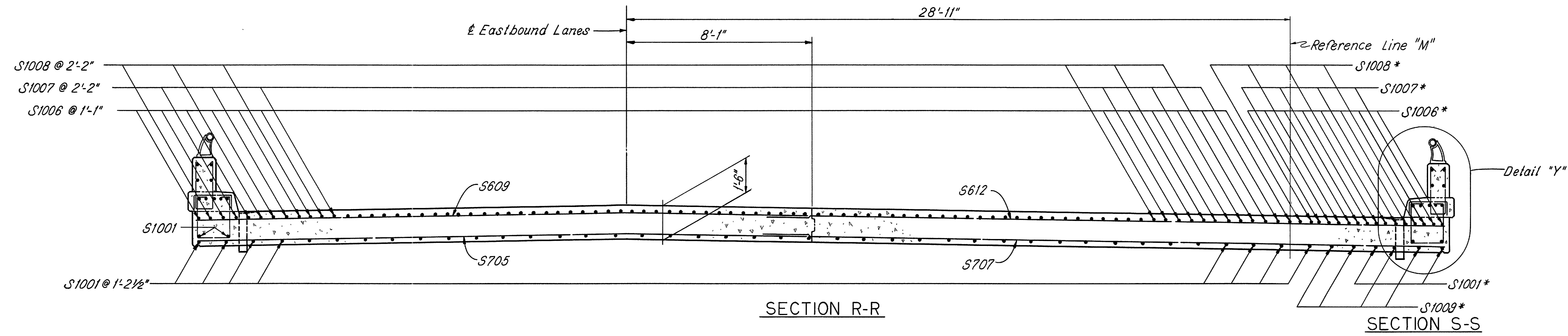
MODIFIED
APR 29
1990

FED. RD. DIVISION	STATE	PROJECT	269
2	OHIO		

LOR-90-17.21



Note: Adjust reinforcing steel to clear scuppers.
* - Spacing varies



SUPERSTRUCTURE NOTES: See sheet 266.

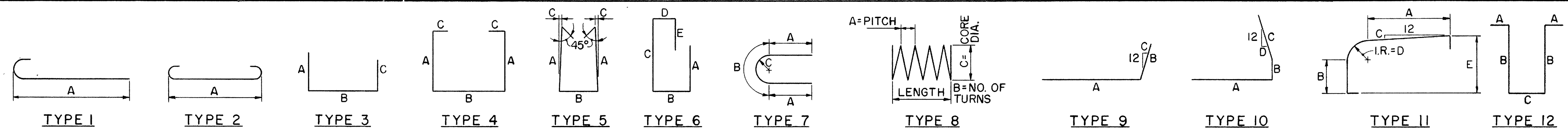
SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

**SUPERSTRUCTURE-2
RIGHT BRIDGE**
BRIDGE NO. LOR-90-1861 L&R
OVER FRENCH CREEK

LORAIN COUNTY I.R. 90
STA. 966 + 47.25 TO STA. 967 + 52.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	DGC	RWH	JPG			

LOR-90-17.21



ABUTMENTS													
MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
A401	104	88	192	5'-4"	3	1'-11"	1'-9"	1'-11"			371	314	685
A501	256	216	472	6'-7"	3	2'-1"	2'-8"	2'-1"			1758	1483	3241
A502		43	43	10'-9"	3	4'-8"	1'-8"	4'-8"				482	482
A503		16	16	33'-1"	Str.							552	552
A504	4	4	8	4'-9"	Str.						20	20	40
A505	4	4	8	6'-4"	Str.						26	26	52
A506	20	20	40	2'-8"	Str.						56	56	112
A507	8	8	16	2'-1"	Str.						17	17	34
A508		16	16	35'-0"	Str.							584	584
A509		46	46	11'-3"	3"	4'-11"	1'-8"	4'-11"				540	540
A510	4	2	6	5'-0"	9"	2'-7"	2'-6"	6"			21	10	31
A511	2	2	4	6'-6"	9"	4'-1"	2'-6"	6"			14	14	28
A512	2	2	4	6'-4"	9"	3'-11"	2'-6"	6"			13	13	26
A513		2	2	4'-8"	9"	2'-3"	2'-6"	6"				10	10
A514	24		24	27'-4"	Str.						684		684
A515	106		106	11'-7"	3	5'-1"	1'-8"	5'-1"			1281		1281
A516	24		24	28'-1"	Str.							703	703
A801		8	8	33'-6"	Str.							716	716
A802		8	8	35'-5"	Str.							757	757
A803	12		12	27'-9"	Str.						889		889
A804	12		12	28'-6"	Str.						913		913
A1001		8	8	33'-10"	Str.							1165	1165
A1002		8	8	35'-9"	Str.							1231	1231
A1003	12		12	28'-1"	Str.						1450		1450
A1004	12		12	28'-10"	Str.						1489		1489
TOTAL WEIGHT											9002	8693	17,695

PIERS													
MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
P501	40	40	80	5'-7"	7	1'-7"	2'-5"	9"			233	233	466
P502	40		40	33'-7"	Str.						1401		1401
P503	40		40	34'-0"	Str.						1418		1418
P504	132	102	234	9'-1"	12	7 1/2"	3'-4"	1'-8"			1251	988	2217
P505		40	40	26'-0"	Str.							1085	1085
P506		40	40	26'-8"	Str.							1113	1113
P601	138		138	19'-1"	Str.						3956		3956
P602	130	100	230	8'-0"	Str.						1562	1202	2764
P603	8		8	35'-0"	Str.						421		421
P604	8		8	35'-5"	Str.						426		426
P605	136	106	242	7'-10"	2	6'-6"					1600	1247	2847
P606	268	208	476	4'-10"	3	4'-2"	10"	0			1946	1510	3456
P607		8	8	27'-6"	Str.							330	330
P608		8	8	28'-3"	Str.							339	339
P609		108	108	19'-3"	Str.							3123	3123
TOTAL WEIGHT											14,214	11,148	25,362

SUPERSTRUCTURE													
MARK	NUMBER			LENGTH	TYPE	A	B	C	D	E	WEIGHT		
	L. BRIDGE	R. BRIDGE	TOTAL								L. BRIDGE	R. BRIDGE	TOTAL
R501	16	16	32	8'-4"	Str.								*
R502	48	48	96	14'-3"	Str.								*
R503	12	12	24	4'-2"	5	1'-6"	8"	34"					*
R504	8	8	16	5'-4"	11	2'-8 1/2"	9"	34"	7 3/8"	1'-7"			*
S401	71		71	4'-4"	5	1'-8"	6"	0			206		206
S402	6		6	35'-8"	Str.						143		143
S501	6	6	12	21'-2"	Str.						132	132	264
S502	12	12	24	23'-2"	Str.						290	290	580
S503	160	160	320	5'-7"	5	2'-2"	8"	0			932	932	1864
S504	250	250	500	2'-5"	4	7 1/2"	1'-5"	7 1/2"			630	630	1260
S505	250	250	500	5'-9"	3	1'-11 1/2"	1'-5"	6"			1499	1499	2998
S601	66	54	120	20'-5"	Str.						2024	1656	3680
S602	33	27	60	17'-2"	Str.						851	696	1547
S603	67		67	34'-4"	Str.						3455		3455
S604	14		14	35'-6"	Str.						746		746
S605	13		13	35'-10"	Str.						700		700
S606	13		13	36'-4"	Str.						709		709
S607	13		13	36'-8"	Str.						716		716
S608	14		14	37'-2"	Str.						782		782
S609		67	67	26'-11"	Str.							2709	2709
S610		14	14	28'-1"	Str.							591	591
S611		13	13	28'-6"	Str.							556	556
S612		13	13	29'-5"	Str.							574	574
S613		13	13	29'-11"	Str.							584	584
S614		14	14	31'-0"	Str.							652	652
S701	97		97	34'-4"	Str.						6807		6807
S702	33		33	36'-0"	Str.						2428		2428
S703	31		31	36'-10"	Str.						2334		2334
S704	33		33	37'-5"	Str.						2524		2524
S705		97	97	26'-11"	Str.							5337	5337
S706		33	33	28'-6"	Str.							1922	1922
S707		31	31	29'-9"	Str.							1885	1885
S708		33	33	31'-3"	Str.							2108	2108
S901	20	20	40	22'-0"	Str.						1496	1496	2992
S1001	184	147	331	37'-2"	Str.						29,427	23,509	52,936
S1002	57	45	102	27'-3"	1	25'-10"					6684	5277	11,961
S1003	57	45	102	24'-2"	1	22'-9"					5927	4680	10,607
S1004	28	23	51	24'-4"	Str.						2932	2408	5340
S1005	29	23	52	18'-8"	Str.						2329	1847	4176
S1006	130	106	236	27'-5"	Str.						15,337	12,505	27,842
S1007	64	52	116	12'-5"	Str.						3419	2778	6197
S1008	64	52	116	8'-10"	Str.						2433	1977	4410
S1009	2	4	6	40'-0"	Str.						344	688	1032
TOTAL WEIGHT											98,236	79,918	178,154

* - These railing bars are included in Item 517 for payment.

MICROFILMED
APR 23 1979
REPRODUCTION

NOTES:

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used indicate the bar size number. For example: A506 is a No. 5 size bar and A1002 is a No. 10 size bar.

REPLACEMENT BARS		
MARK	NO.	LENGTH
RE400	1	5'-3"
RE500	1	5'-7"
RE600	2	5'-11"
RE700	1	6'-2"
RE800	1	6'-6"
RE900	1	6'-10"
RE1000	6	7'-2"

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

REINFORCING STEEL
BRIDGE NO. LOR-90-1861 L&R
OVER FRENCH CREEK
LORAIN COUNTY I.R. 90

STA. 966 + 47.25 TO STA. 967 + 52.75

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
DGC	RWH	RWH	JPG			

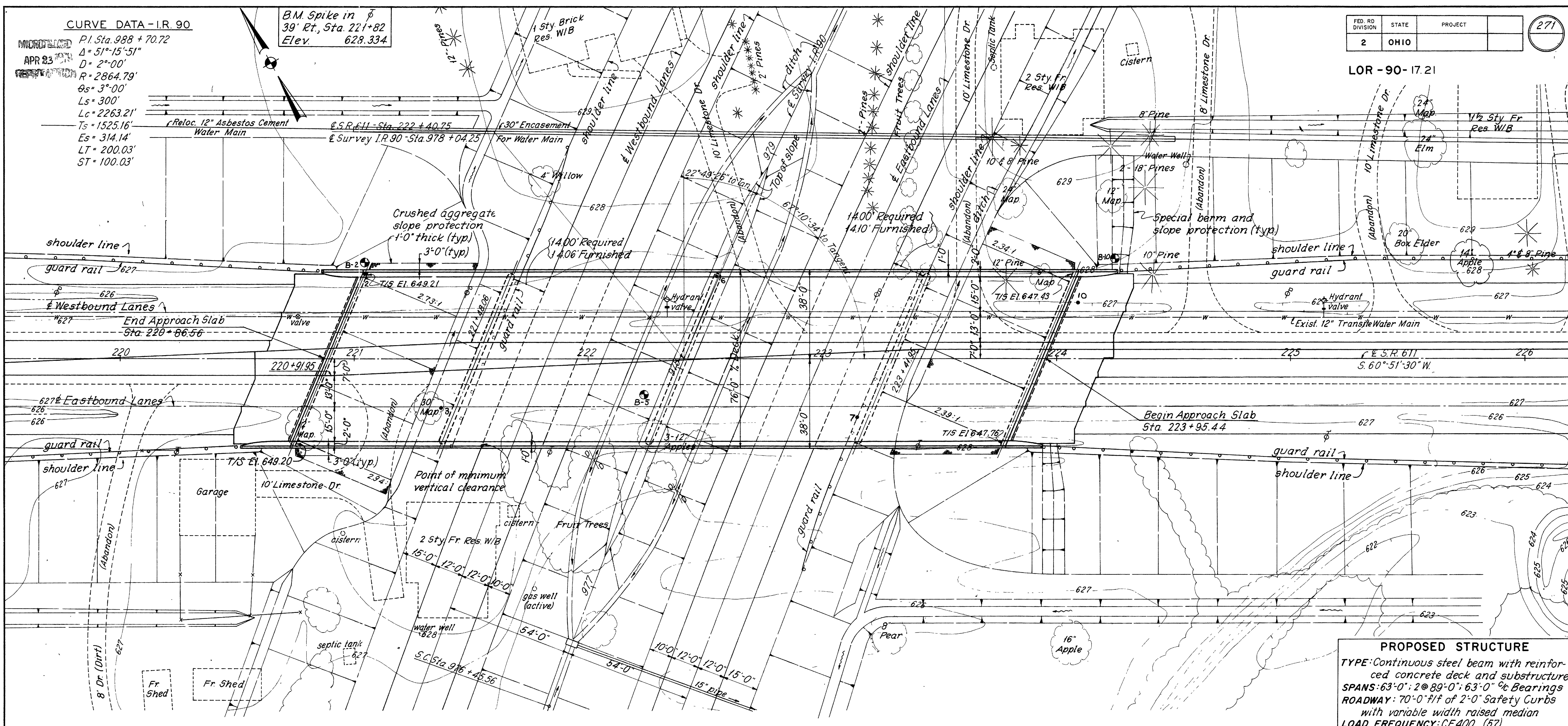
CURVE DATA - I.R. 90

P.I. Sta. 988 + 70.72
 Δ = 51°-15'-51"
 D = 2°-00'
 R = 2864.79'
 θs = 3°-00'
 Ls = 300'
 Lc = 2263.21'
 Ts = 1525.16'
 Es = 314.14'
 LT = 200.03'
 ST = 100.03'

B.M. Spike in
 39' Rt., Sta. 221 + 82
 Elev. 628.334

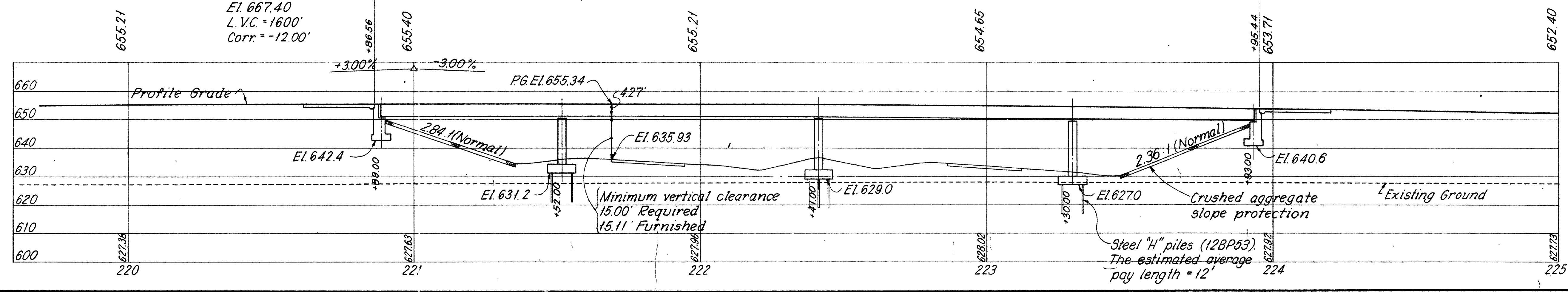
FED. RD. DIVISION	STATE	PROJECT	271
2	OHIO		

LOR - 90 - 17.21



P.V.I. Sta. 221+00
 El. 667.40
 L.V.C. = 1600'
 Corr. = -12.00'

Bridge Limits 308.88'



PROPOSED STRUCTURE

TYPE: Continuous steel beam with reinforced concrete deck and substructure
 SPANS: 63'-0" : 2 @ 89'-0" : 63'-0" c Bearings
 ROADWAY: 70'-0" f/f of 2'-0" Safety Curbs with variable width raised median
 LOAD FREQUENCY: CF400 (57)
 SKEW: 23°-00' L.F.
 APPROACH SLABS: AS-1-54 (25' long modified)
 WEARING SURFACE: 1" monolithic concrete
 ALIGNMENT: Tangent
 AVERAGE DAILY TRAFFIC: 10,400 (1989)
 S.R. 611: 23,800 (1989) - I.R. 90

FOUNDATION INVESTIGATION LEGEND

- - Core boring location
- - Rod sounding location

SHAFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

SITE PLAN
 BRIDGE NO. LOR-90-1882
 UNDER S.R. 611
 LORAIN COUNTY I.R. 90
 STA. 977 + 85.42

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK.	RAK.	L.K.	J.P.G.			

LOR - 90 - 17.21

GENERAL NOTES

REFERENCE shall be made to Standard Drawings SD-1-65 Sheets 1, 2 and 3 (dated 11-8-65), BR-1-65 Sheet 1 of 2 (revised 11-24-65), RB-1-55 (revised 2-2-59), AS-1-54 (revised 8-10-65), to Supplemental Specifications 808 (revised 2-7-66), 811 (dated 3-29-65), 825 (dated 4-22-65), and 828 (revised 3-21-66).

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 together with current revisions thereof.

UNIT STRESSES:

Design Loading - CF 400 (57)
 Concrete Class "C" - basic unit stress 1,333 p.s.i.
 Concrete Class "E" - basic unit stress 1,133 p.s.i.
 Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.
 Reinforcing Steel - ASTM A15, A16, A160 deformed intermediate or hard grade - basic unit stress 20,000 p.s.i. except spiral reinforcement may be plain structural grade with basic unit stress of 18,000 p.s.i.

EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments and piers.

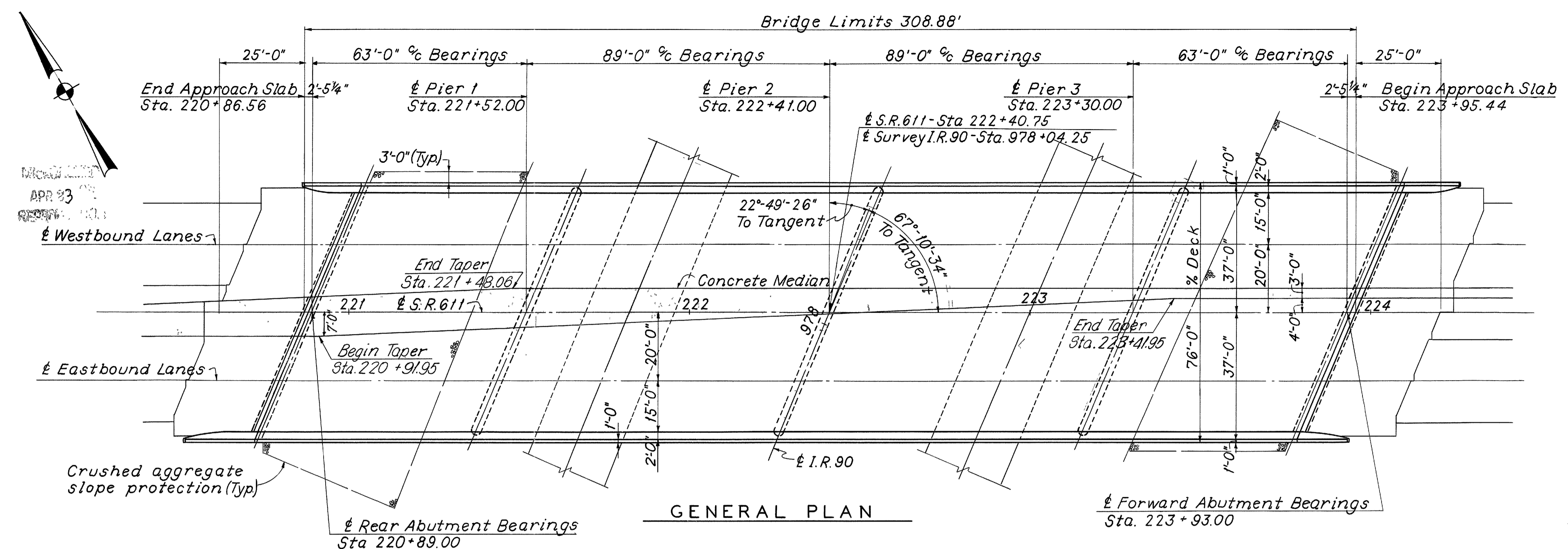
FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 1.5 tons per sq. ft.

PILES shall be driven to a minimum bearing capacity of 44 tons per pile for Piers 1 and 3 and 47 tons per pile for Pier 2.

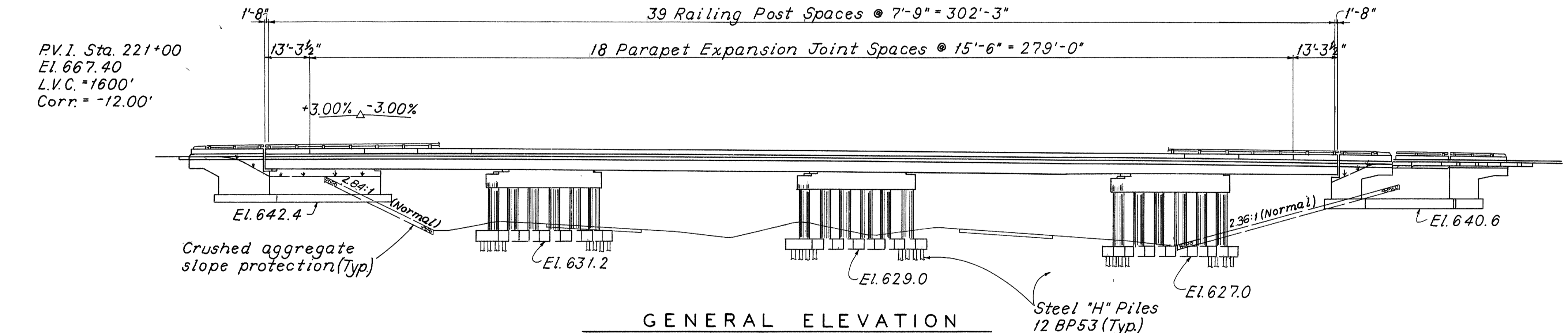
UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owners. The Contractor and Owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

PROCEDURE: The embankments shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and piers.

MACHINE FINISH: The concrete bridge deck may be finished by the use of a finishing machine, at the option of the Contractor.



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUTS	PIERS	GEN'L
503	742	Cu. Yds.	Unclassified excavation		427	315	
505	Lump	Sum	First test pile				Lump
507	936	Lin. Ft.	Steel piles, 12 BP53			936	
509	258,812	Lbs.	Reinforcing steel	193,758	15,466	49,588	
511	739	Cu. Yds.	Class "C" Concrete, superstructure	739			
511	153	Cu. Yds.	Class "C" Concrete, piers above footings			153	
511	108	Cu. Yds.	Class "E" Concrete, pier footings			108	
511	313	Cu. Yds.	Class "E" Concrete, abutments		313		
512	19	Lin. Ft.	Premolded sealing strip		19		
513	677,403	Lbs.	Structural steel	677,403	758,100		
514	677,403	Lbs.	Field painting of structural steel	677,403	758,100		
517	680.60	Lin. Ft.	Bridge railing, Type 1	612.17	68.26		
518	20	Each	Scuppers, including supports	20			
518	91	Cu. Yds.	Porous backfill		91		
518	149	Lin. Ft.	6" Helical perforated C.M.P., 707.06, including specials		149		
518	177	Lin. Ft.	6" Helical C.M.P., 707.06, non-perforated		177		
601	965	Sq. Yds.	Crushed aggregate slope protection			965	
808	739	Units	Water-reducing, set-retarding admixture	739			
825	3022	Sq. Yds.	Concrete surface treatment			3022	
828	140	Lin. Ft.	Joint sealer (end dam)	140			

* The tabulated quantity includes the weight of material required for the optional field splices.

SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES
 BRIDGE NO. LOR - 90 - 1882
 UNDER S.R. 611
 LORAIN COUNTY I.R. 90
 STA. 977 + 85.42

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	LK	LK	J.P.G.			1-13-67

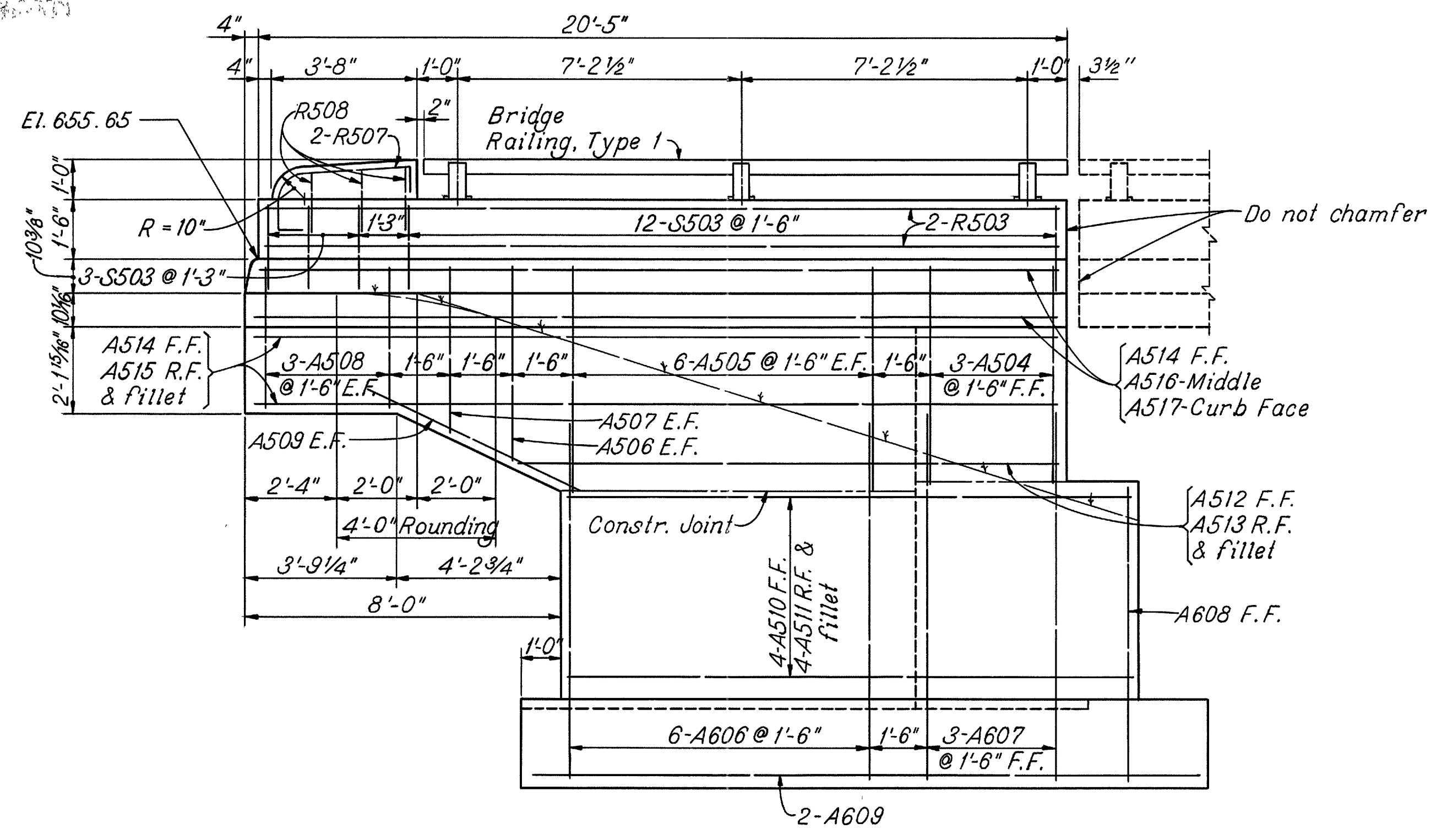
3-12-71 Revised As-Unit

MICROFILMED
APP. 23
SERIALIZED

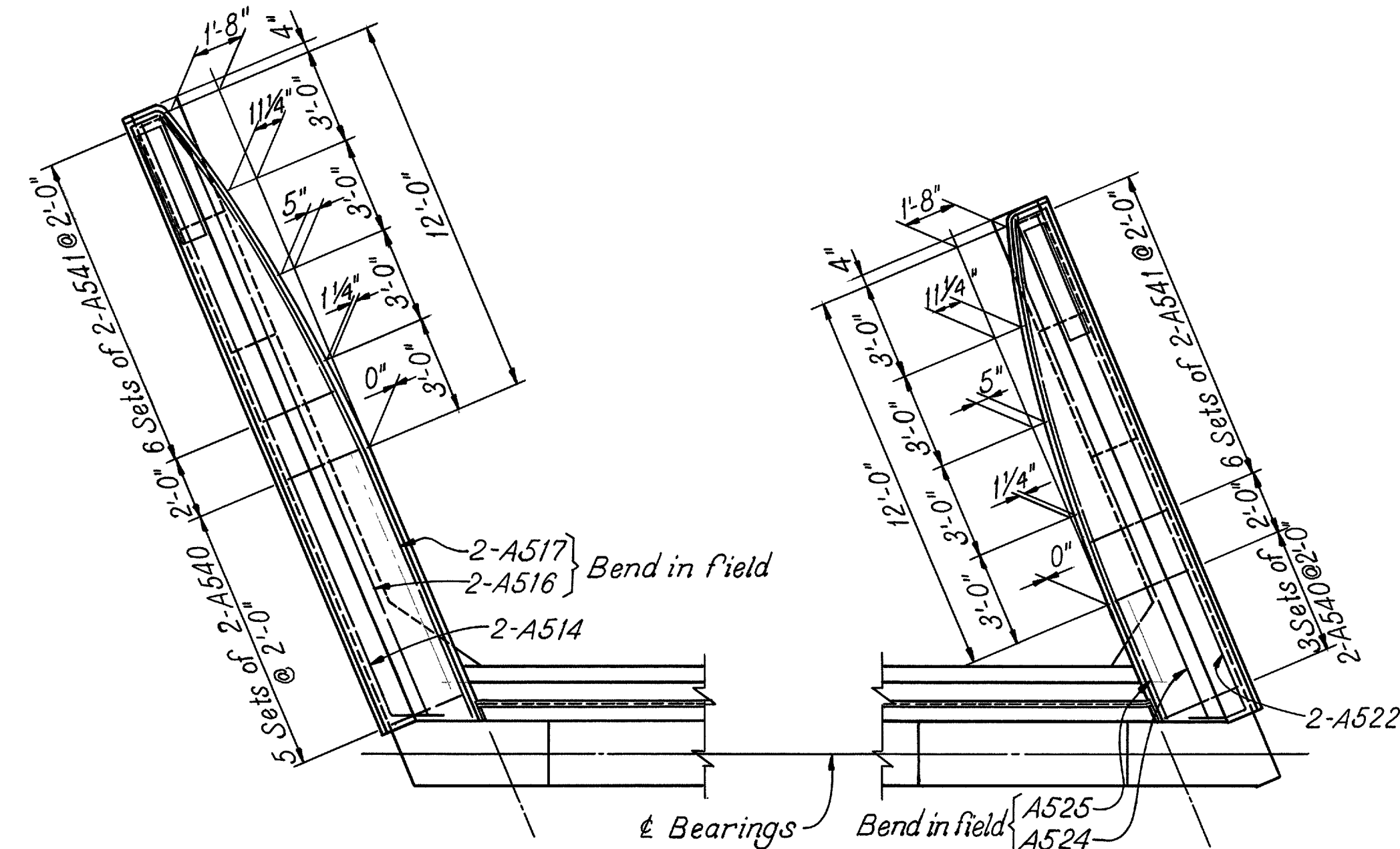
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

274

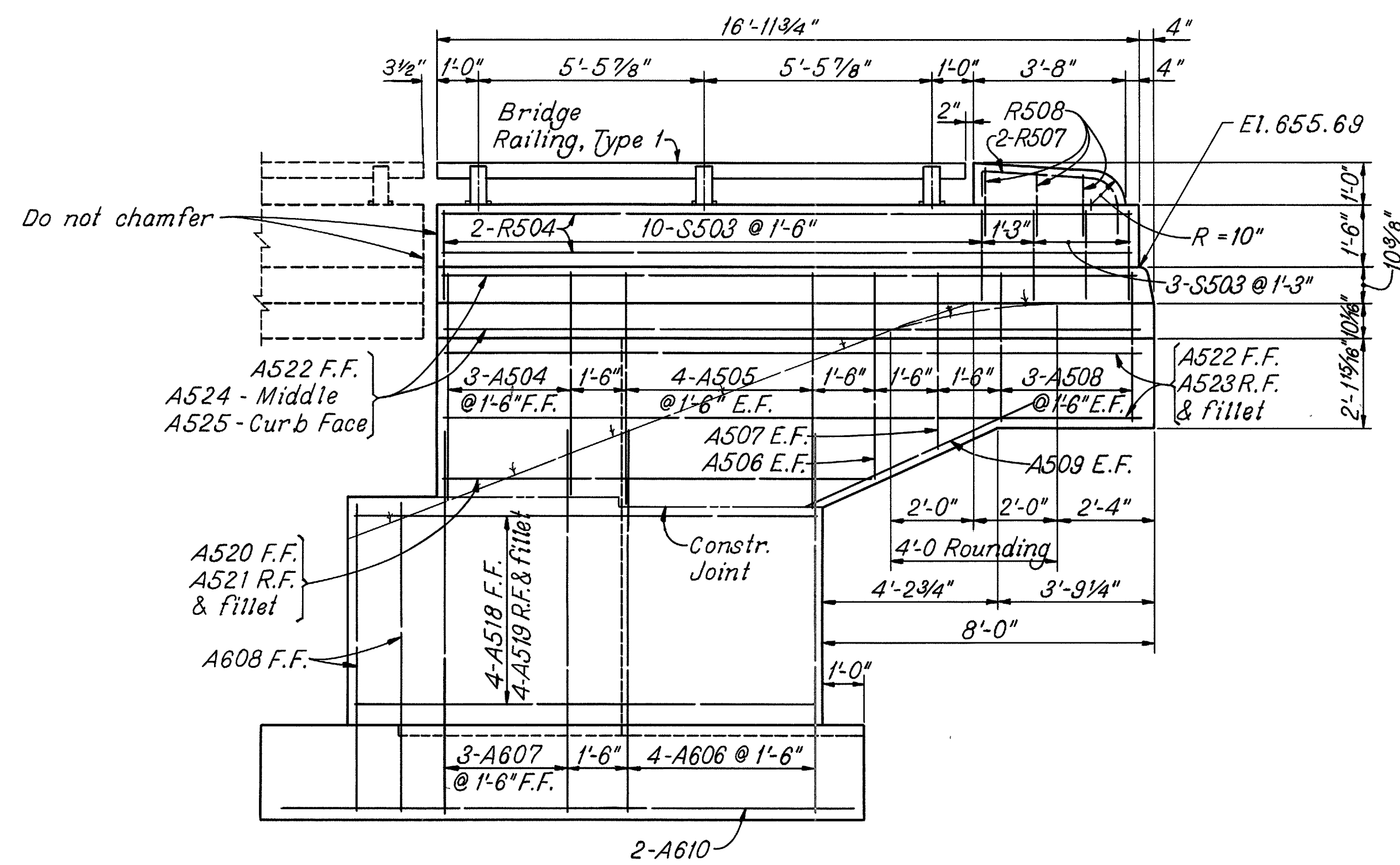
LOR-90-17.21



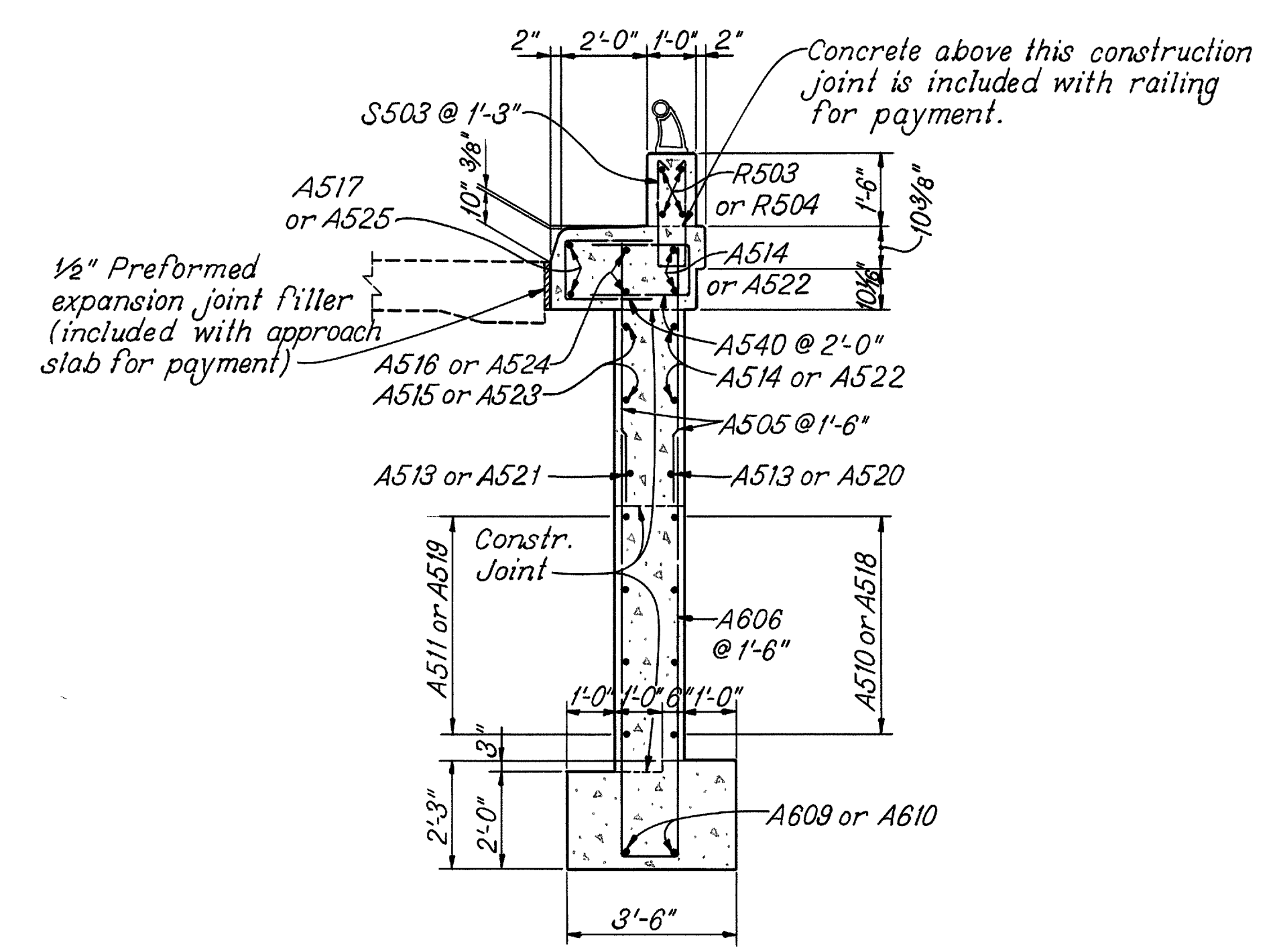
VIEW D-D



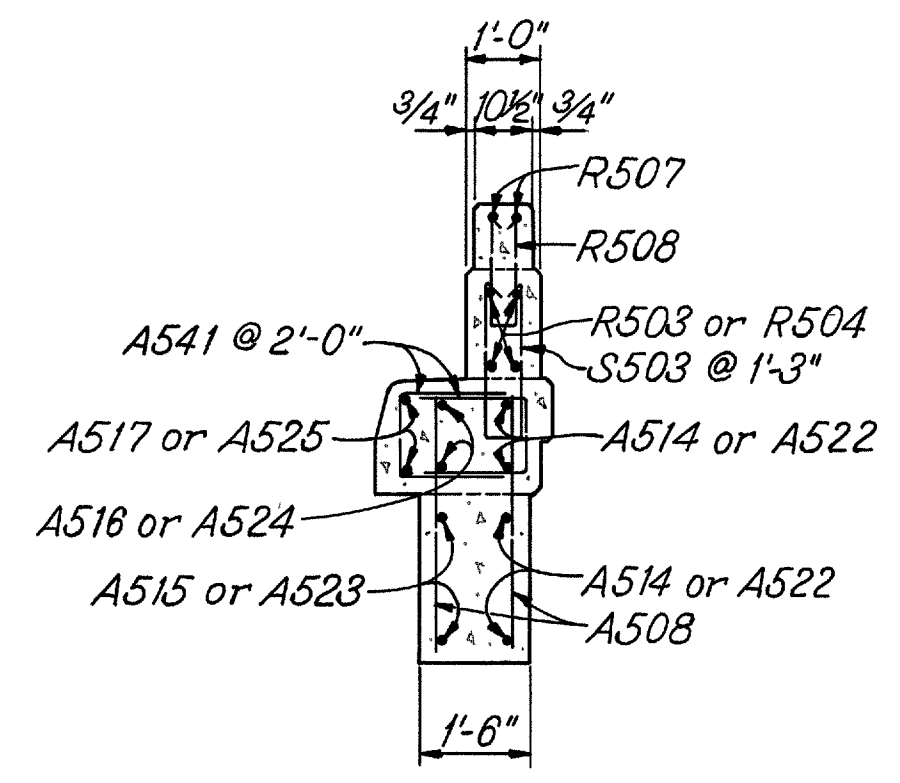
WINGWALL PLAN



VIEW E-E



SECTION B-B

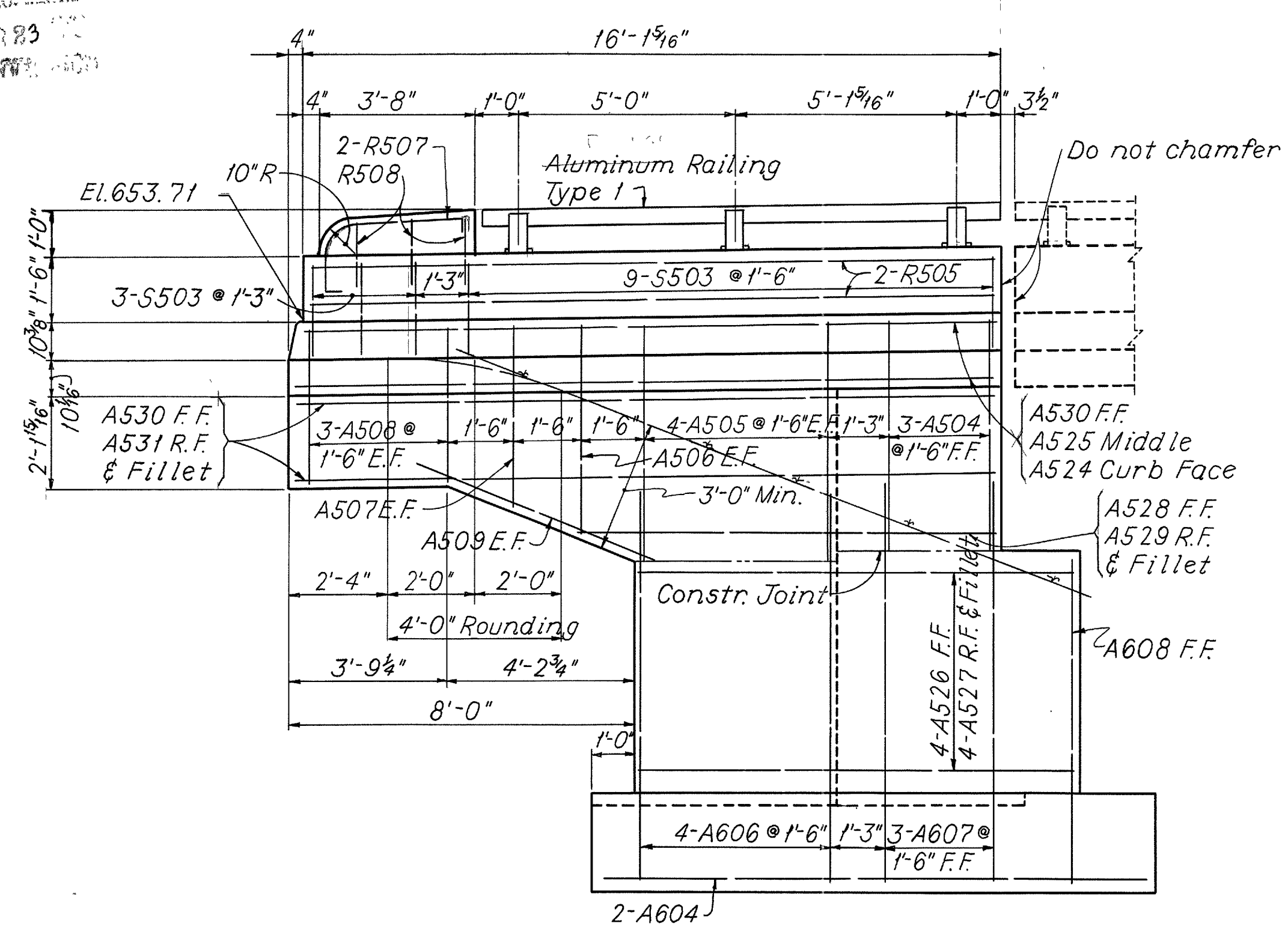


SECTION C-C

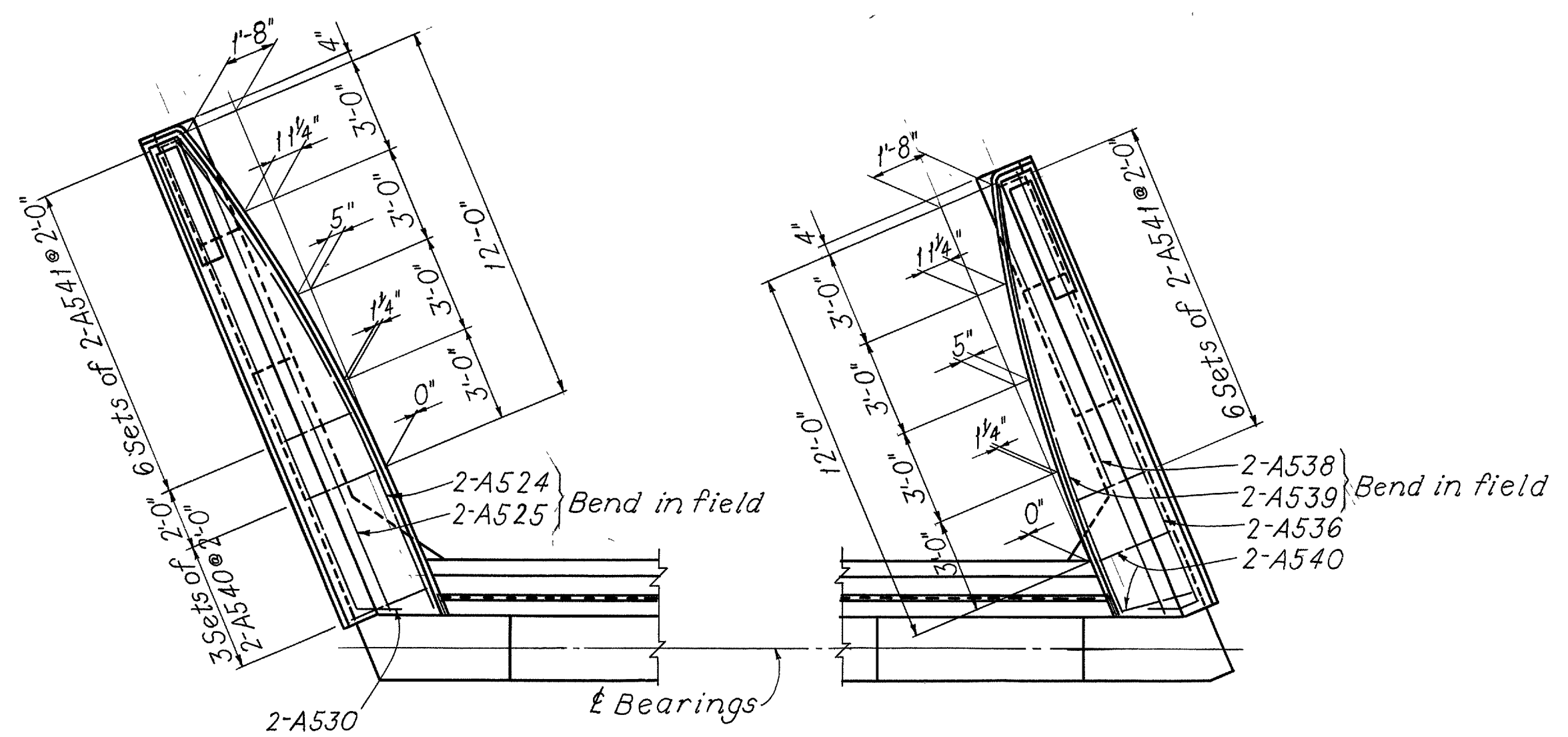
SHAFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
REAR ABUTMENT-2						
BRIDGE NO. LOR-90-1882 UNDER S.R. 611						
LORAIN COUNTY				I. R. 90		
STA. 977 + 85.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH	J.P.G.			

APR 23 1990

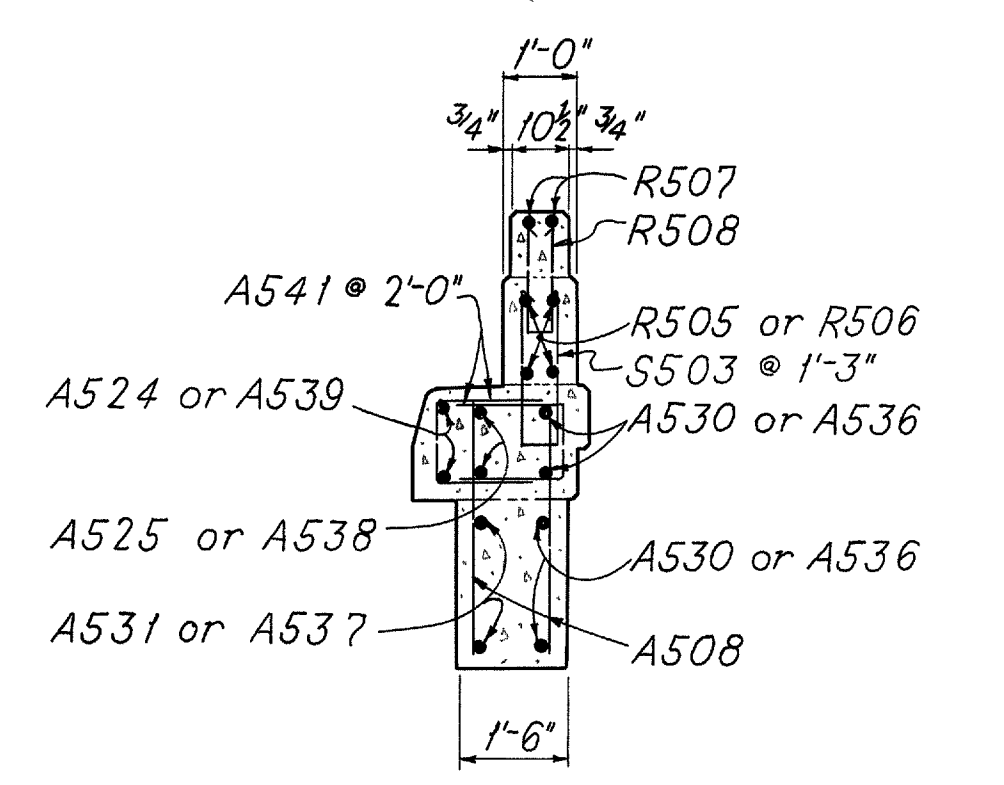
LOR - 90 - 17.21



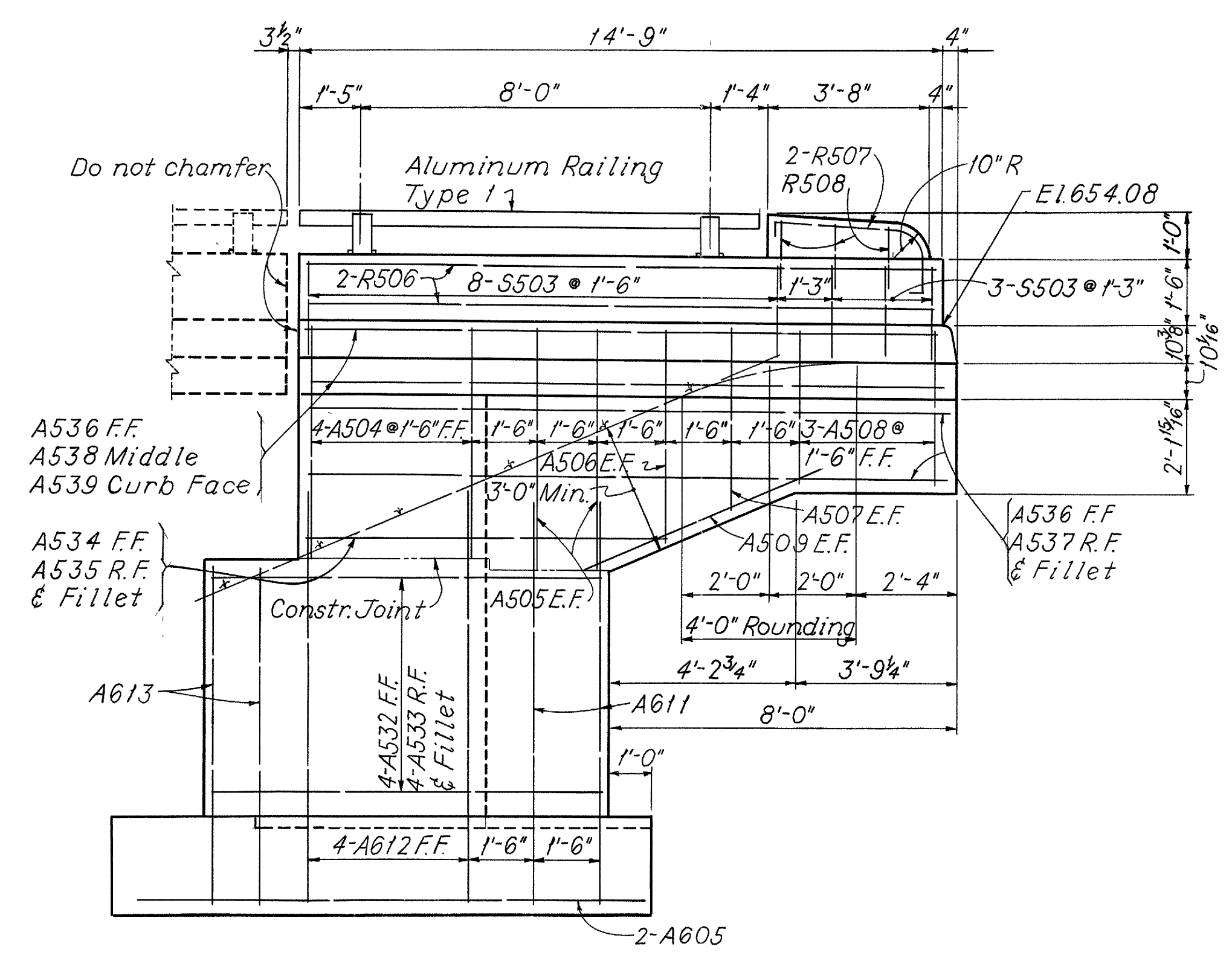
VIEW D - D



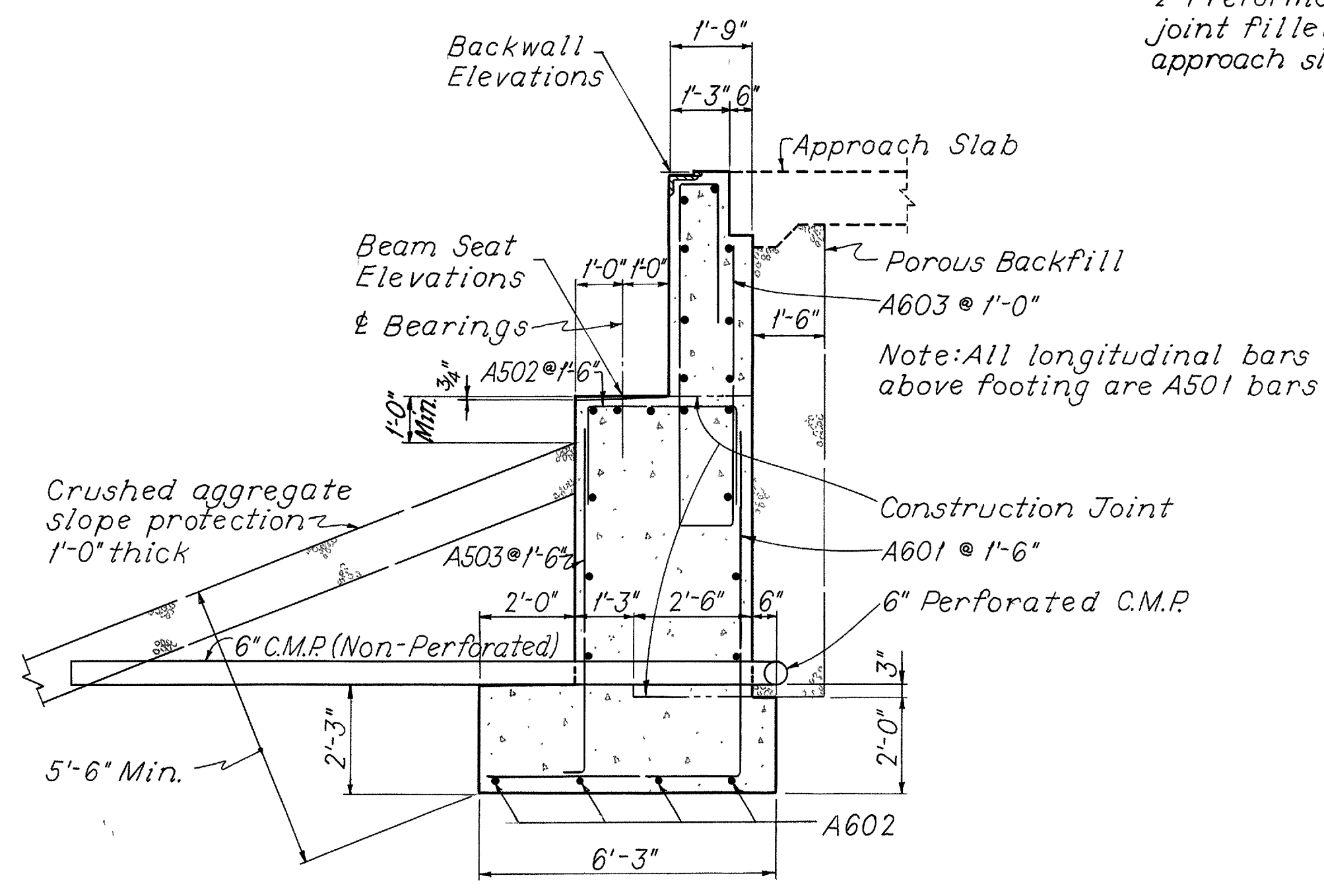
WINGWALL PLAN



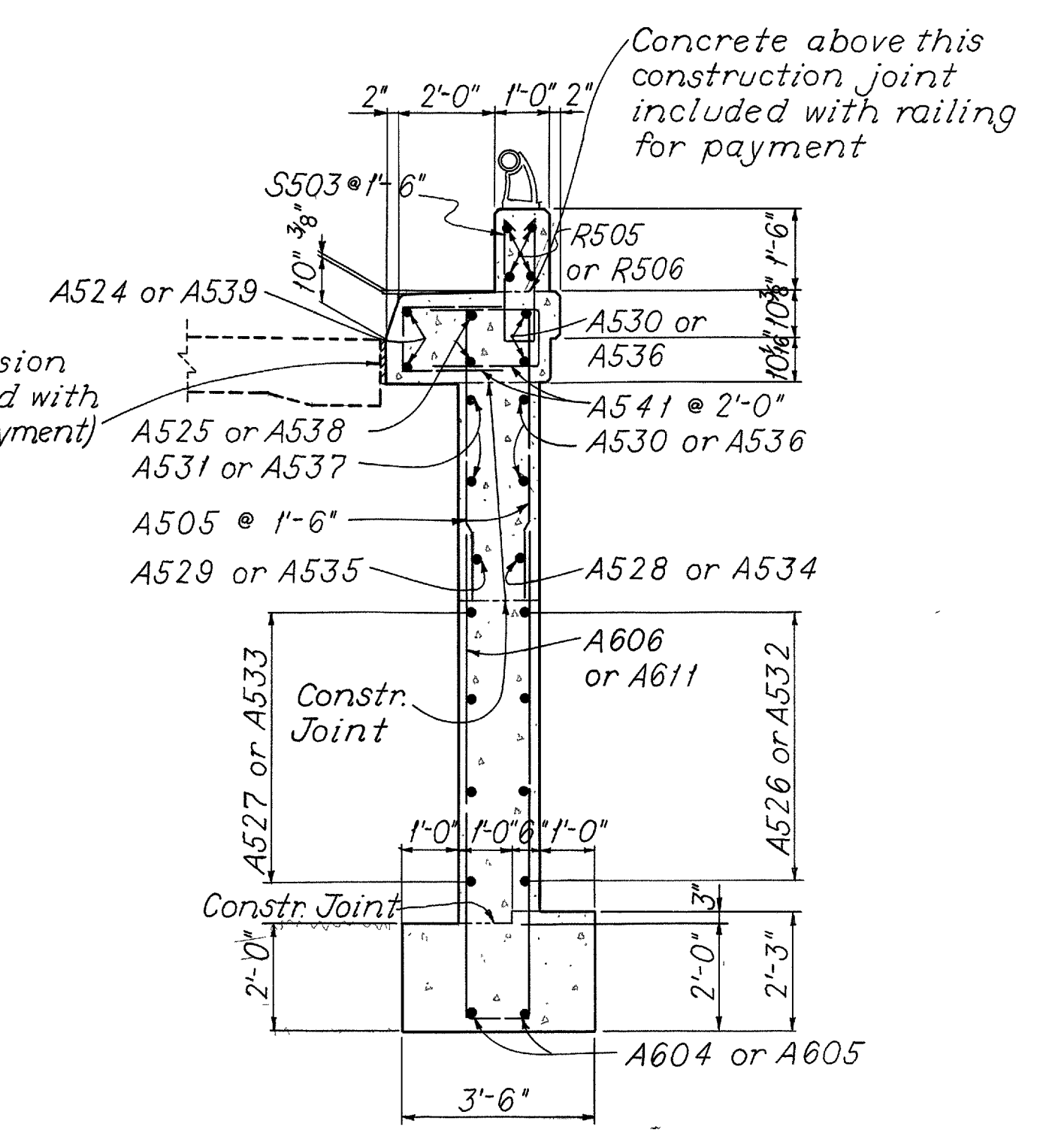
SECTION C - C



VIEW E - E



SECTION A - A



SECTION B - B

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 MANSFIELD, OHIO.

FORWARD ABUTMENT-2
 BRIDGE NO. LOR-90-1882
 UNDER S.R. 611

LORAIN COUNTY I.R. 90

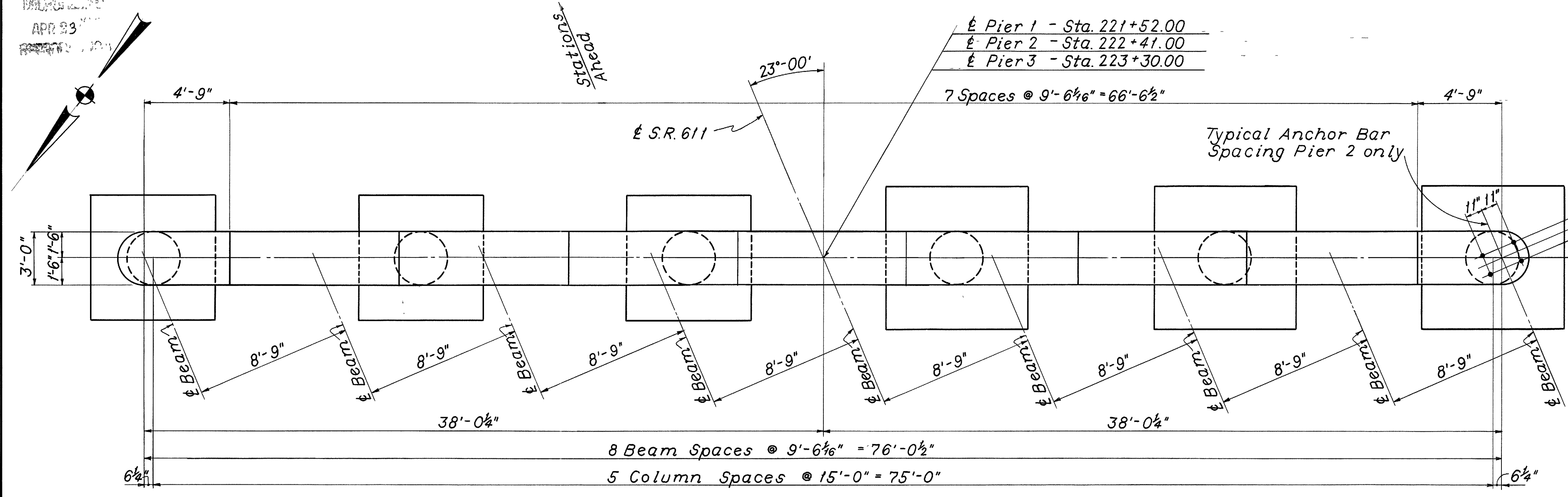
STA. 977 + 85.42

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	JPG			

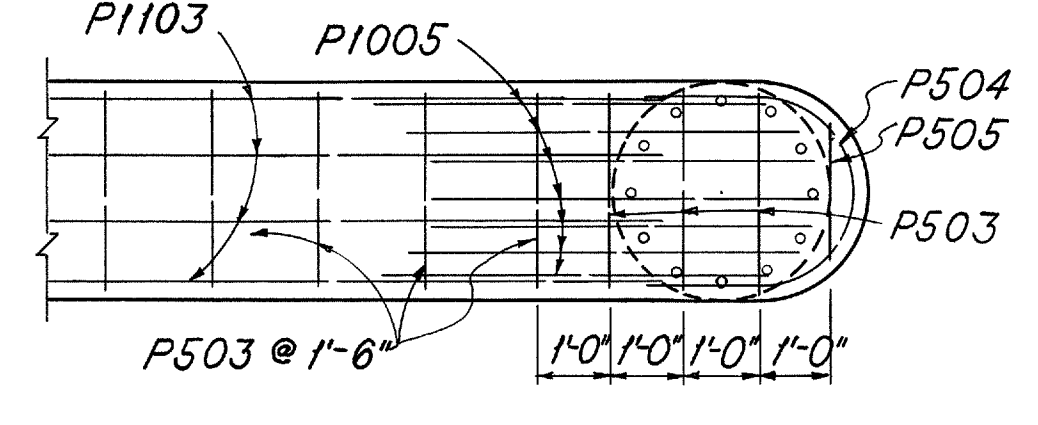
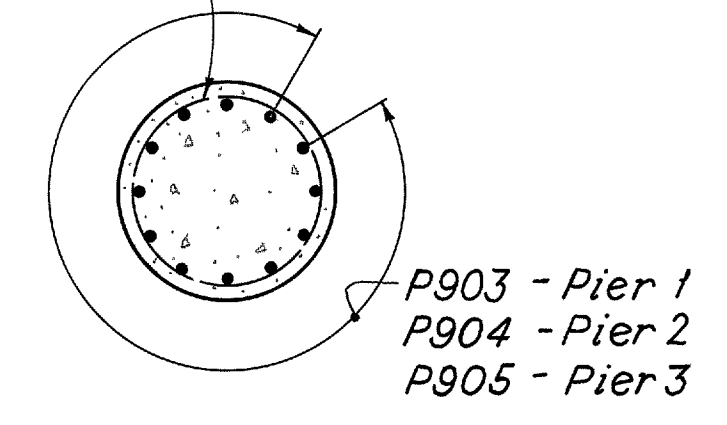
APR 93

FED. RD. DIVISION	STATE	PROJECT	(277)
2	OHIO		

LOR - 90 - 17.21

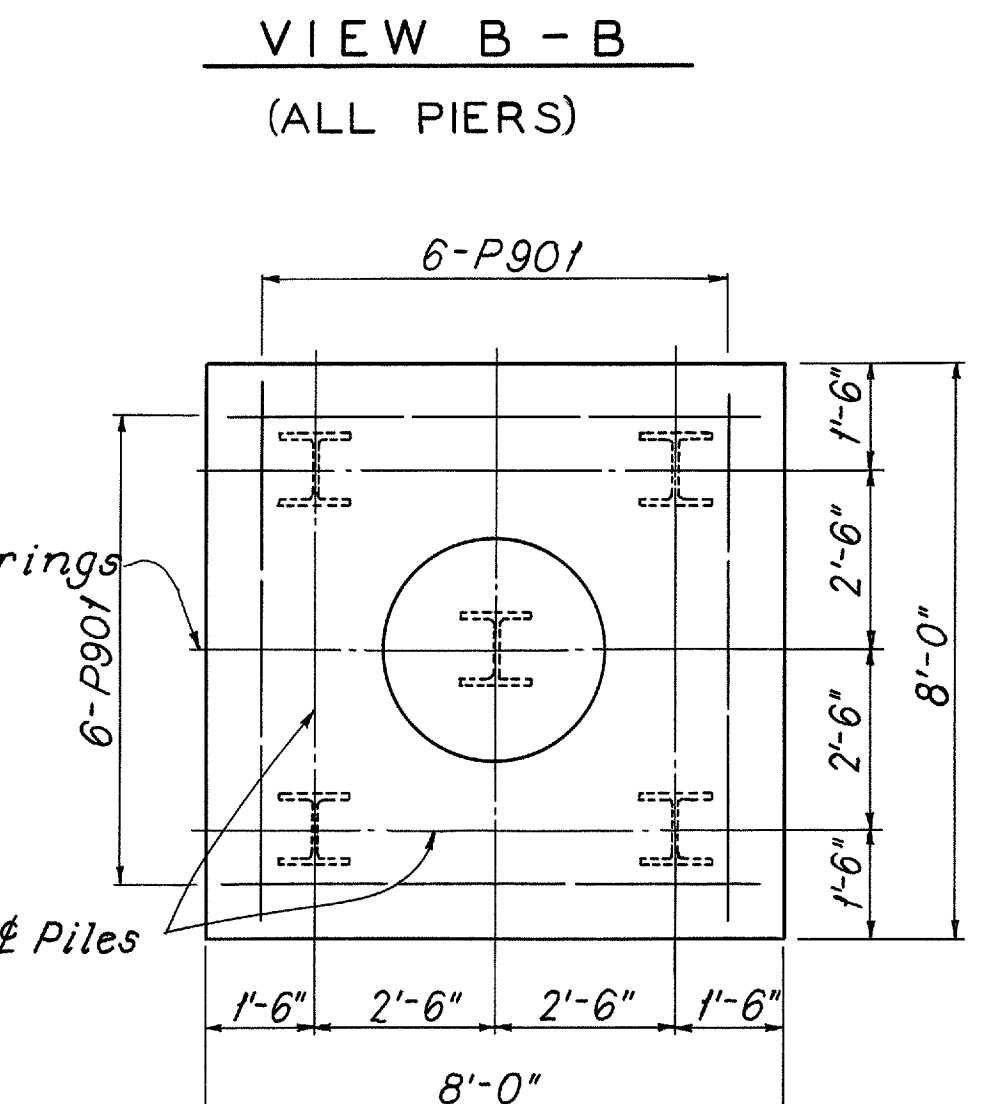
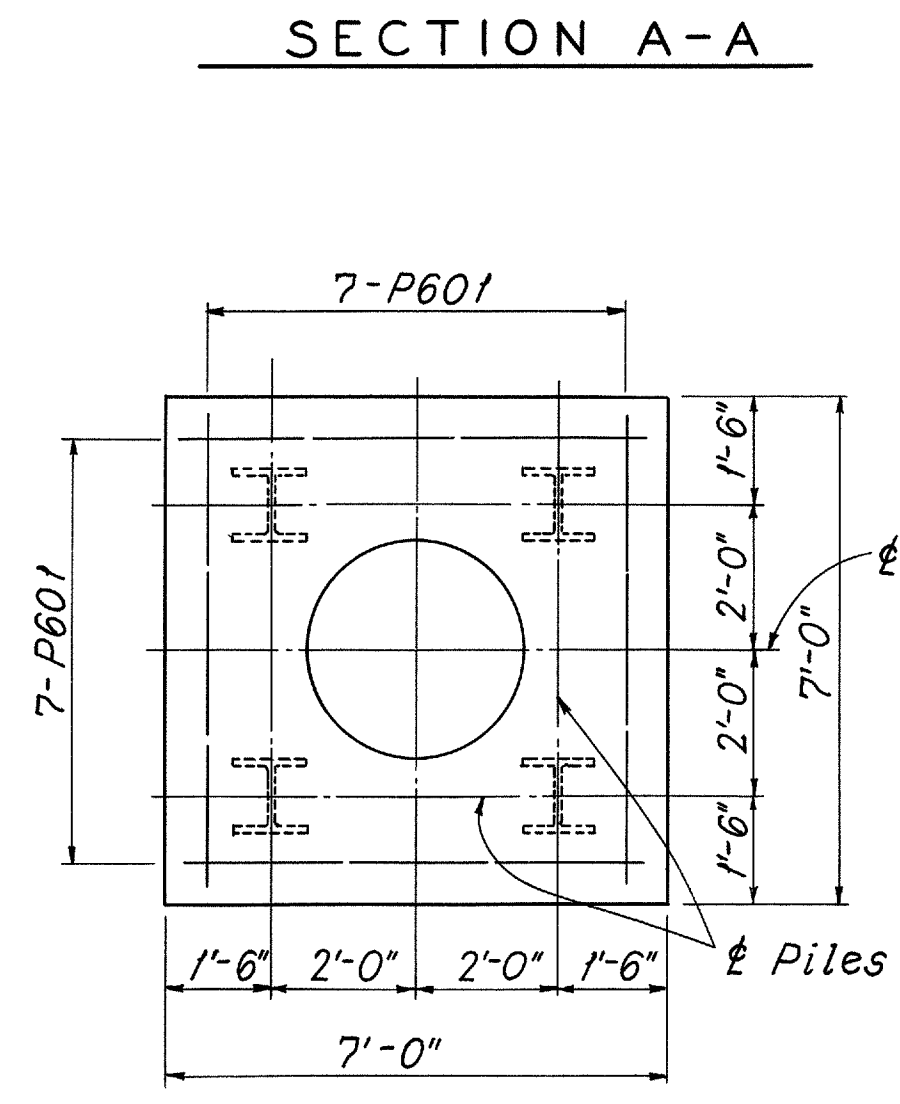


SP401 - Pier 1
SP402 - Pier 2
SP403 - Pier 3



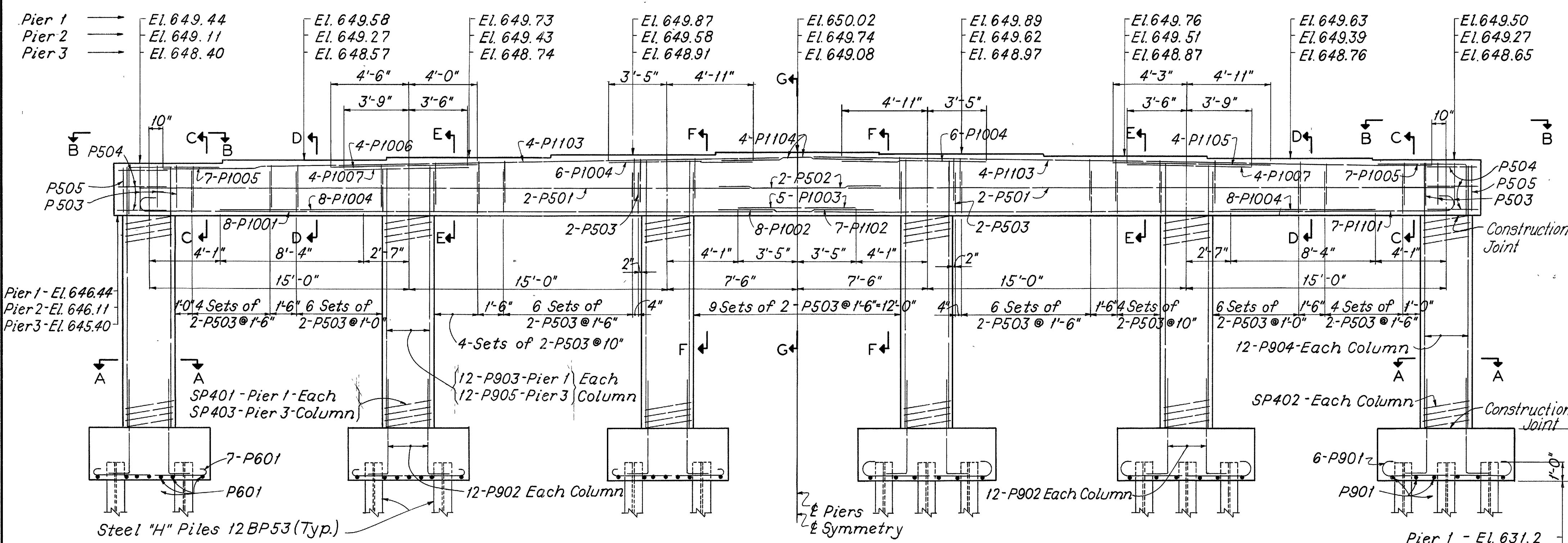
HALF PLAN PIERS 1 & 3

HALF PLAN PIER 2



PLAN OF TYPICAL FOOTING PIERS 1 & 3

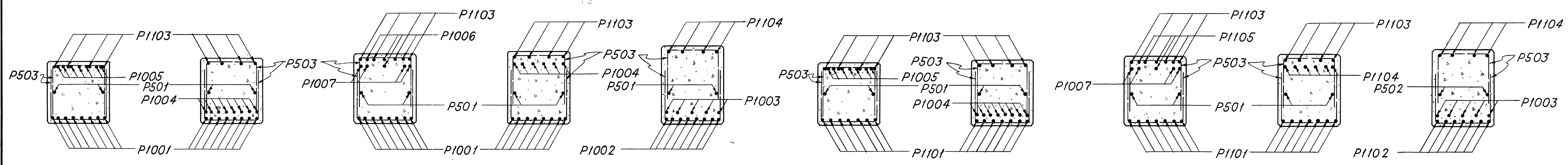
PLAN OF TYPICAL FOOTING PIER 2



HALF ELEVATION-PIERS 1 & 3

HALF ELEVATION - PIER 2

NOTES:
CONCRETE: All concrete for pier footings shall be Class "E" and all concrete above pier footings shall be Class "C".
BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seats of Pier 2 so as to avoid interference with the drilling of anchor bar holes.
GENERAL NOTES: See Sheet 272



PIERS 1 & 3

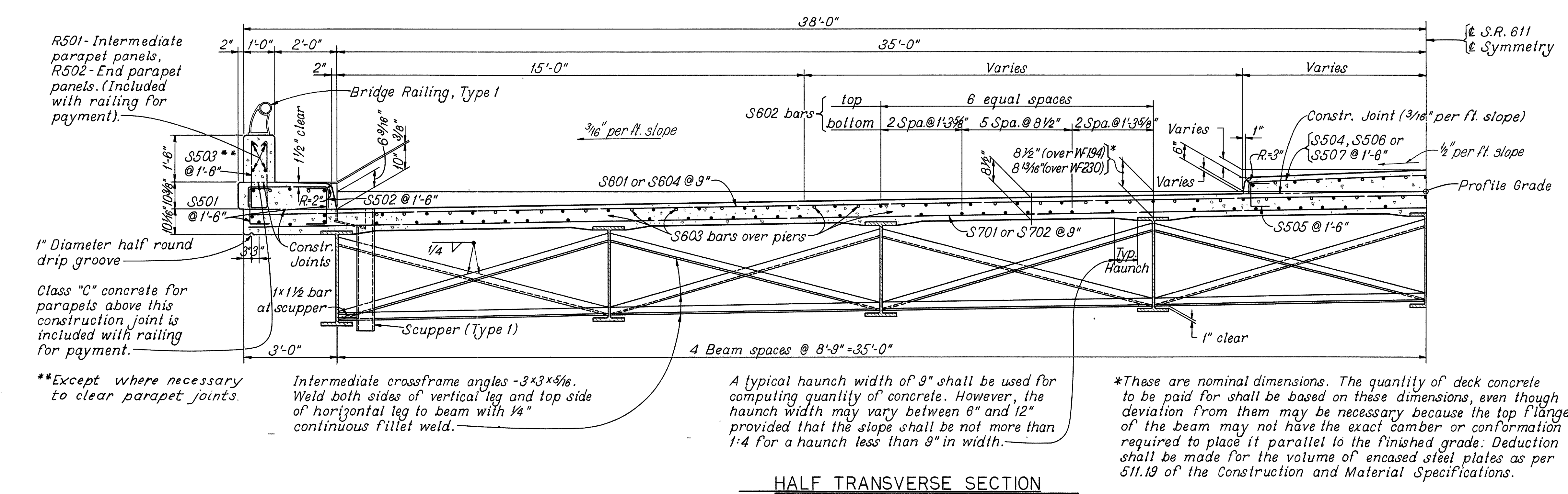
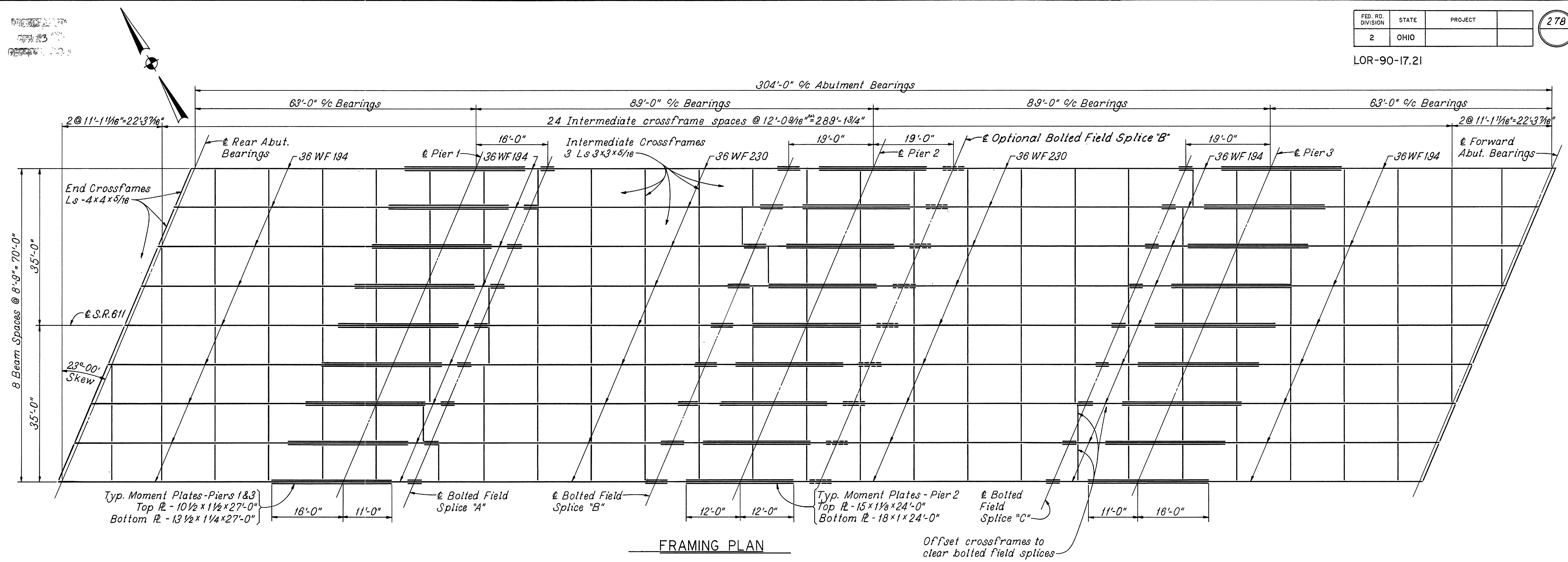
PIER 2

SHAFFER, PARRETT AND ASSOCIATES
 Consulting Engineers
 MANSFIELD, OHIO.

PIERS
 BRIDGE NO. LOR-90-1882
 UNDER S.R. 611
 LORAIN COUNTY I.R. 90

STA. 977 + 85.42

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	LK	J.P.G.			



R501- Intermediate parapet panels, R502- End parapet panels. (Included with railing for payment).

1" Diameter half round drip groove

Class "C" concrete for parapets above this construction joint is included with railing for payment.

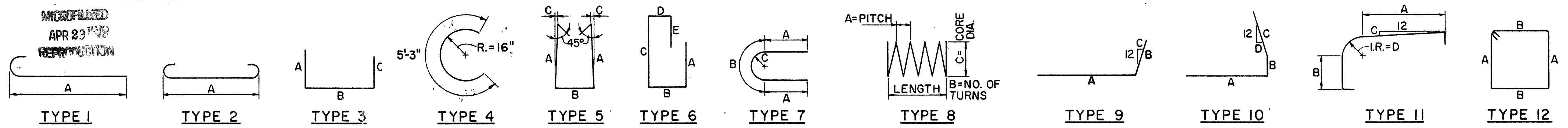
Intermediate crossframe angles - 3x3x5/16. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

*These are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions, even though deviation from them may be necessary because the top flange of the beam may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for the volume of encased steel plates as per 511.19 of the Construction and Material Specifications.

SUPERSTRUCTURE NOTES: See Sheet 279

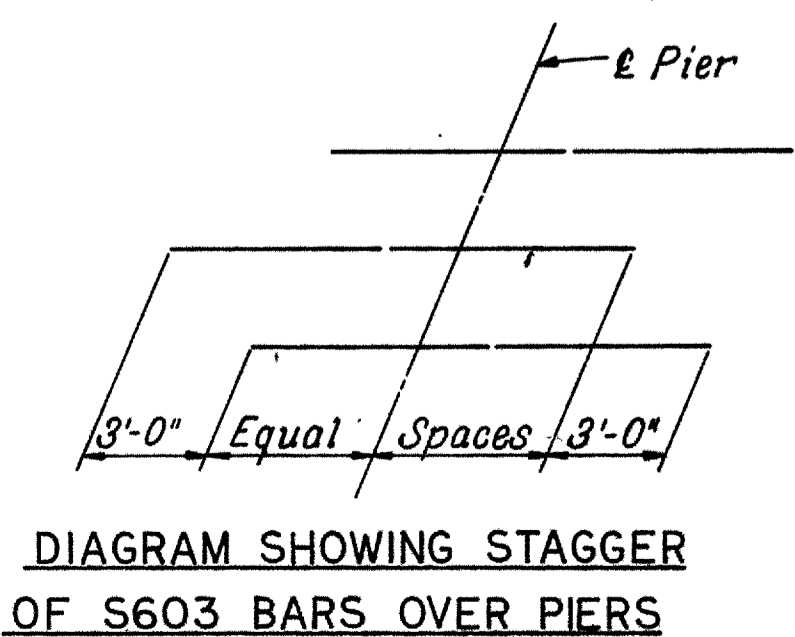
SHAFFER, PARRETT AND ASSOCIATES Consulting Engineers MANSFIELD, OHIO.						
SUPERSTRUCTURE						
BRIDGE NO. LOR-90-1882						
UNDER S.R. 611						
LORAIN COUNTY			I.R. 90			
STA. 977 + 85.42						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RAK	RWH	J.P.G.			



ABUTMENTS									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R503	4	20'-1"	Str.						**
R504	4	16'-7"	Str.						**
R505	4	15'-9"	Str.						**
R506	4	14'-5"	Str.						**
R507	8	5'-4"	11	2'-8 1/2"	9"	3/4"	7 3/8"		**
R508	12	4'-2"	5	1'-6"	8"	3/4"			**
S503	51	5'-7"	5	2'-2"	8"	0			297
A501	114	27'-2"	Str.						3230
A502	110	7'-4"	3	2'-1"	3'-5"	2'-1"			841
A503	110	7'-10"	3	7'-4"	7 1/2"	0			889
A504	19	5'-3"	Str.						104
A505	32	5'-6"	Str.						184
A506	8	4'-9"	Str.						40
A507	8	4'-1"	Str.						34
A508	24	3'-6"	Str.						88
A509	8	6'-0"	Str.						50
A510	4	15'-9"	9	14'-3"	1'-7"	5 1/8"			66
A511	4	13'-11"	9	8'-10"	5'-2"	19"			58
A512	1	14'-10"	9	13'-4"	1'-7"	5 1/8"			15
A513	1	15'-1"	9	10'-0"	5'-2"	19"			16
A514	4	21'-6"	9	20'-0"	1'-7"	5 1/8"			90
A515	2	21'-11"	9	16'-10"	5'-2"	19"			46
A516	2	20'-4"	Str.						42
A517	2	21'-0"	Str.						44
A518	4	13'-9"	10	11'-1"	6"	2'-4"	5 1/8"		57
A519	4	8'-9"	9	4'-10"	4'-0"	8"			37
A520	1	12'-1"	10	10'-2"	6"	1'-7"	5 1/8"		13
A521	1	10'-1"	9	6'-2"	4'-0"	8"			11
A522	4	18'-8"	10	16'-9"	6"	1'-7"	5 1/8"		78
A523	2	16'-8"	9	12'-10"	4'-0"	8"			35
A524	4	16'-6"	Str.						69
A525	4	16'-0"	Str.						67
A526	4	11'-5"	9	8'-11"	1'-7"	5 1/8"			48
A527	4	9'-7"	9	4'-6"	5'-2"	19"			40
A528	1	10'-7"	9	9'-1"	1'-7"	5 1/8"			11
A529	1	10'-11"	9	5'-10"	5'-2"	19"			11
A530	4	17'-0"	9	15'-6"	1'-7"	5 1/8"			71
A531	2	17'-8"	9	12'-7"	5'-2"	19"			37
A532	4	11'-7"	10	8'-11"	6"	2'-4"	5 1/8"		48
A533	4	6'-5"	9	2'-6"	4'-0"	8"			27
A534	1	10'-2"	10	8'-3"	6"	1'-7"	5 1/8"		11
A535	1	8'-0"	9	4'-1"	4'-0"	8"			8
A536	4	16'-3"	10	14'-4"	6"	1'-7"	5 1/8"		68
A537	2	16'-6"	9	10'-7"	4'-0"	8"			34
A538	2	14'-4"	Str.						30
A539	2	13'-10"	Str.						29
A540	26	5'-1"	3	2'-0"	1'-4"	2'-0"			138
A541	48	②	3	①	1'-4"	①			184
A542	2	4'-10"	3	1'-4"	2'-5"	1'-4"			10
A543	2	13'-11"	3	1'-4"	11'-5"	1'-4"			29
A601	110	12'-5"	3	7'-4"	5'-3"	0			2051
A602	24	29'-3"	Str.						1054
A603	160	16'-8"	6	5'-10"	1'-5"	7'-2"	11"	2'-0"	4005
A604	2	13'-0"	Str.						39
A605	2	11'-8"	Str.						35
A606	14	18'-8"	3	8'-11"	1'-2"	8'-11"			393
A607	9	9'-2"	Str.						124
A608	4	7'-4"	Str.						44
A609	2	17'-3"	Str.						52
A610	2	13'-10"	Str.						42
A611	2	19'-2"	3	9'-2"	1'-2"	9'-2"			58
A612	4	9'-5"	Str.						57
A613	2	7'-9"	Str.						23
TOTAL									15,466

① 1'-11" to 8" Vary 8 each by 3"
② 4'-11" to 2'-5" Vary 8 each by 6"

PIERS									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
P501	6	35'-1"	Str.						220
P502	6	42'-7"	Str.						266
P503	324	7'-3"	3	2'-5"	2'-8"	2'-5"			2450
P504	12	7'-4"	7	1'-7"	4'-2"	1'-4"			138
P505	6	7'-0"	3	2'-8"	1'-11"	2'-8"			44
P601	168	7'-10"	2	6'-6"					1977
P901	72	10'-0"	2	7'-6"					2448
P902	216	6'-6"	3	5'-6"	1'-3"	0			4774
P903	72	15'-1"	Str.						3692
P904	72	16'-11"	Str.						4141
P905	72	18'-3"	Str.						4468
P1001	16	38'-1"	1	36'-8"					2622
P1002	16	44'-0"	1	42'-7"					3029
P1003	15	6'-10"	Str.						441
P1004	84	8'-4"	Str.						3012
P1005	42	7'-10"	3	2'-10"	5'-4"	0			1416
P1006	16	8'-6"	Str.						585
P1007	24	7'-3"	Str.						749
P1101	7	38'-7"	1	37'-0"					1435
P1102	7	44'-2"	1	42'-7"					1643
P1103	12	35'-8"	Str.						2274
P1104	12	41'-1"	Str.						2619
P1105	8	9'-2"	Str.						390
SP401	6	12'-3"	8	4 1/2"	36	2'-8"			1412
SP402	6	14'-1"	8	4 1/2"	41	2'-8"			1610
SP403	6	15'-5"	8	4 1/2"	44	2'-8"			1733
TOTAL									49,588



SUPERSTRUCTURE									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
R501	144	15'-2"	Str.						**
R502	16	13'-0"	Str.						**
S501	816	2'-4"	3	7 1/2"	1'-4"	7 1/2"			1986
S502	408	3'-6"	3	7 1/2"	2'-6"	7 1/2"			1489
S503	432	5'-7"	5	2'-2"	8"	0			2493
S504	37	2'-11"	3	4**	2'-6"	4**			113
S505	410	1'-11"	3	7 1/2"	11"	7 1/2"			820
S506	128	②	3	4**	①	4**			964
S507	38	11'-5"	3	4**	11'-0"	4**			452
S508	1	8'-6"	3	4**	8'-3"	0			9
S509	1	4'-9"	3	4**	4'-6"	0			5
S601	386	37'-1"	Str.						21,500
S602	1199	35'-8"	Str.						64,232
S603	170	35'-8"	Str.						9065
S604	385	40'-6"	Str.						23,420
S605	19	Varies	Str.	39'-2" to 7'-4"	Varies each by 1'-9 3/8"				664
S606	19	Varies	Str.	35'-10" to 4'-0"	Varies each by 1'-9 3/8"				568
S607	18	Varies	Str.	36'-11" to 6'-11"	Varies each by 1'-9 3/8"				593
S608	21	Varies	Str.	38'-8" to 3'-4"	Varies each by 1'-9 3/8"				662
S609	4	5'-0"	Str.						30
S701	386	37'-3"	Str.						29,390
S702	385	40'-6"	Str.						31,871
S703	19	Varies	Str.	39'-2" to 7'-4"	Varies each by 1'-9 3/8"				903
S704	19	Varies	Str.	35'-10" to 4'-0"	Varies each by 1'-9 3/8"				773
S705	18	Varies	Str.	36'-11" to 6'-11"	Varies each by 1'-9 3/8"				806
S706	21	Varies	Str.	38'-10" to 3'-6"	Varies each by 1'-9 3/8"				909
S707	4	5'-0"	Str.						41
TOTAL									193,758

① 11'-0" to 2'-6" Vary each by 3/4" (+)
② 11'-5" to 2'-11" Vary each by 3/4" (+)

NOTES:

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used indicate the bar size number. For example: A506 is a No.5 size bar and P1102 is a No.11 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils) expressed as nearest whole number. Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item 509. 1 1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft. will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

* - Non-standard bend

** - These railing bars are included with Item 517 for payment.

REPLACEMENT BARS			
MARK	NO.	LENGTH	TYPE
RE400	1	5'-3"	4
RE500	1	5'-7"	Str.
RE600	7	5'-11"	Str.
RE700	3	6'-2"	Str.
RE800	1	6'-10"	Str.
RE1000	1	7'-2"	Str.
RE1100	1	7'-6"	Str.

SHAFFER, PARRETT AND ASSOCIATES
Consulting Engineers
MANSFIELD, OHIO.

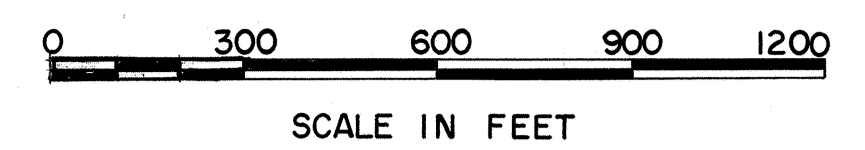
REINFORCING STEEL
BRIDGE NO. LOR-90-1882
UNDER S.R. 611

LORAIN COUNTY STA. 977 + 85.42 I.R. 90

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAK	RWH	RWH	JPG			

699011
699011

CENTER LINE SURVEY PLAT
LOR-90-17.21
SHEFFIED VILLAGE
SHEFFIED TOWNSHIP LOTS 5 & 6
CITY OF AVON
AVON TOWNSHIP SECTS. 3, 4, 9 & 10



699011
699011

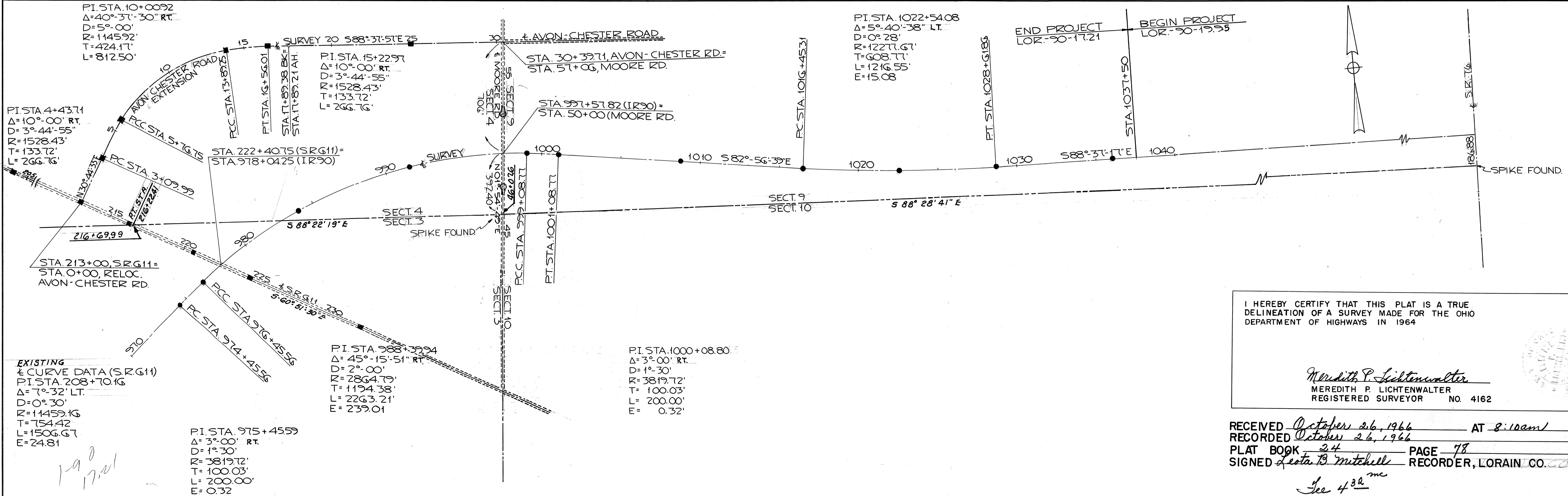
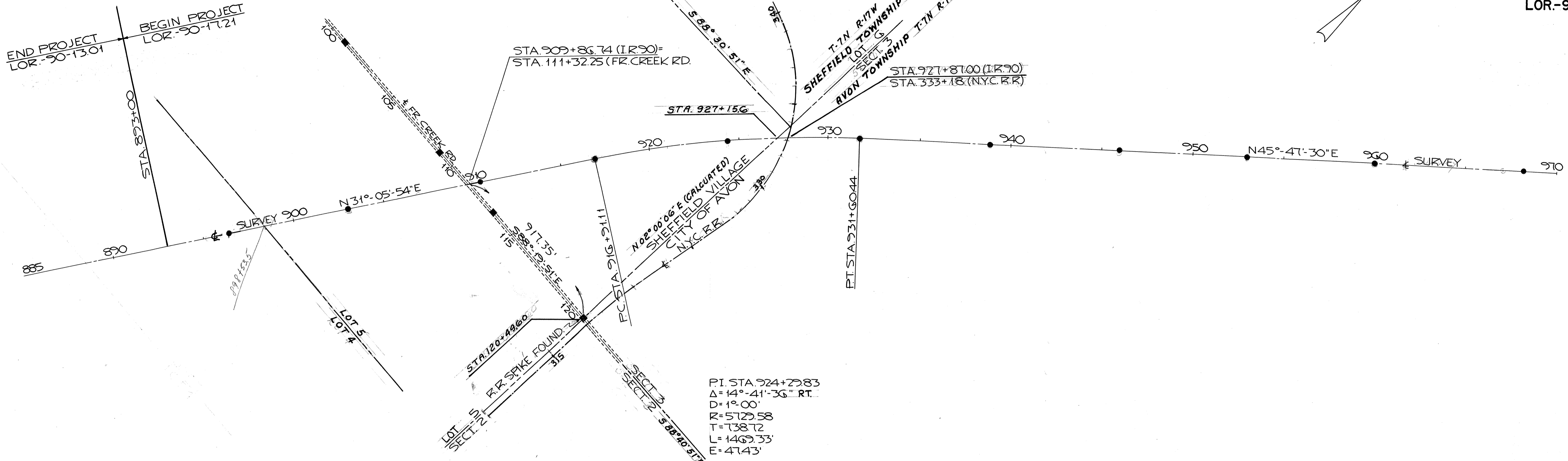
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

282
309

LOR-90-17.21
LIMITED ACCESS
I-IG-90-1(66)
LOR-90-13.01 R/W ONLY

2
2

END PROJECT
LOR-90-13.01
BEGIN PROJECT
LOR-90-17.21



I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN 1964

Meredith P. Lichtenwalter
 MEREDITH P. LICHTENWALTER
 REGISTERED SURVEYOR NO. 4162

RECEIVED *October 26, 1966* AT *8:10am*
 RECORDED *October 26, 1966*
 PLAT BOOK *24* PAGE *78*
 SIGNED *Leota B. Mitchell* RECORDER, LORAIN CO.
See 432

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

NO. OF OWNERS 45

NO. OF OWNERS WITH STRUCTURES 11

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

283
309
1
27

LOR. - 90-17.21
LIMITED ACCESS
SCALE 1"= 50'
LOR.-90-13.01 R/W ONLY
I-IG-90-1(66)

PARCEL NO.	OWNER	RECORDED BOOK PAGE	DEED AREA	TO BE ACQ'D. LAND BLDG	NET RESIDUE LEFT RIGHT	TOTAL PRO	SHEET NO.	REMARKS	TYPE FUNDS
91-WL	ALLAN A. & AGNES H. JUNGBLUTH	768 604	53.50	7.01	— 20.49 22.21	2.00	6,16		I
91-WD				0.90			6,16,17		I
91-WD1				0.89			6, 7, 17		I
91-X				0.32			6,16	CHANNEL	I
91-T				0.08			6	CHANNEL	I
91-T1				0.02			17	DRIVEWAY	I
91-T2				0.02			16	DRIVEWAY	I
91-T3				0.02			17	CHANNEL	I
92-WL	CYRIL P. KELLING	293 14	80.65	2.67	— 74.61 —	2.26	6,7,17		I & IG
92-WD		309 491		1.03			6,7,16,17		I
92-WL1		460 512		0.08			8		IG
92-X				0.16			8	CHANNEL	IG
92-T				0.08			6,16	DRIVEWAY	I
92-A	CYRIL P. & LORETTA KELLING	426 257	0.92	0			16	NO R/W NEEDED	
93-WL	MARY SHARICK	608 132	19.00	9.74	— 5.31(L) 2.83(L)	0.28	7 & 8		I & IG
93-WD		257 280		0.47			7,17		I
93-T				0.10			17	DRIVEWAY	I
93-X				0.15			8	CHANNEL	IG
93A-WL	DANIEL & ELIZABETH R. SCHARICK	309 416	6.00	0.12	— 5.42 —	0.21	8		IG
93A-WD		927 988		0.25			17		I
93A-T				0.05			17	DRIVEWAY	I
93A-T1				0.02			17	CHANNEL	I
94-LA	THE NEW YORK CENTRAL RAILROAD COMPANY			10019			8 & 24		IG
94A-LA				31363			8 & 24		IG
94-SL				10500			8 & 24	SLOPE EASEMENT	IG
94SL-1				16552			8 & 24	SLOPE EASEMENT	IG
94-A				390			8 & 24	OCCUPATIONAL	IG
94-B				390			8 & 24	" "	IG
94-C				216			8 & 24	" "	IG
94-D				236			8 & 24	" "	IG
94-E				390			8 & 24	" "	IG
94-F				203			8 & 24	" "	IG
94				231			8 & 24	" "	IG
94-AERIAL				25121			8 & 24	AERIAL	IG
94-S				5430			8 & 24	SEWER	IG
94-S1				1044			8 & 24	SEWER	IG
94-T				3041			17 & 23	CHANNEL CLEAN OUT	IG
94-X				1200			8 & 24	CHANNEL	IG
94-T1				1244			24	TEMPORARY	IG
95-WL	AGNES C. DECHANT	293 150	30.07	5.43	— 7.02(L) 17.17	0.45	8		IG
96-WL	THE CEICO COMPANY	293 382	8.63*	1.05	— 4.83* 2.69*	0.04	8	* IN SEC. 3	IG
97-WL	JOHN BARAN JR.	366 287	23.30	3.75	— 0.08(L) 12.24	0.23	8 & 9		I & IG
97-T				0.03			9	CHANNEL	IG
98-WL	HERBERT J. & ELLA M. BURKHART &	263 572	47.74	3.03	— 44.26 0.41(L)	0.04	9		I & IG
98-X	MARY BURKHART HILL L.E.			0.24			9	CHANNEL	I
98-Y				0.92			9	CHANNEL	I & IG
99-WL	MARIA MRVATZ	670 15	21.44	2.32	— 16.41 2.30(L)	0.32	9		I
99-X				0.48			9	CHANNEL	I
99-Y				0.43			9	CHANNEL	I
99-WD				0.09			18		I
99-T				0.30			18	TEMP. RUNAROUND	I
100-WL	SYLVESTER DECHANT	745 209	55.00	0.37	— — 54.00	0.63	9		I & IG
100-X				0.52			9	CHANNEL	I & IG
100-T				0.10			9	CHANNEL	I
101-WL	THE STANDARD OIL COMPANY	906 576	87.59	15.12	YES 37.06 33.72(L)	0.97	9,10,11,18,19,25,26		I
101-X				2.09			9,10 & 25	CHANNEL	I
101-Y				4.04			9,10 & 26	CHANNEL	I
101-T				7.80			10,11,18,19,25,26	SLOPES	I
101-WD				0.72			18		I
101-T1				1.03			18,19	TEMP. RUNAROUND	I

PARCEL NO.	OWNER	RECORDED BOOK PAGE	DEED AREA	TO BE ACQ'D. LAND BLDG	NET RESIDUE LEFT RIGHT	TOTAL PRO	SHEET NO.	REMARKS	TYPE FUNDS
102-WL	VERONICA B. SHUMAKER	781 427	51.21	9.33	YES — 41.21(L)	0.67	9,10,11,25,26	ORIGINALLY Parcel 61-5A UNDER LOR-90-660	I
102-X		379 209		1.92			10 & 25	CHANNEL	I
103-WL	GEORGE RAYMOND & MAY BACHMAN	291 392	32.58	4.24	YES — 2.83(L) 24.37	1.11	11,12,19,20,25		I
103-WD				0.03			20		I
103-T				1.87			19, 20 & 25	SLOPES & TEMP. RUNAROUND	I
103-X				2.95			20 & 25	CHANNEL	I
104-WD	FRANK B. & JUNE M. WARNER	906 645	30.00	0.04	— — 29.05	0.91	20		I
104-T				0.43			20	TEMP. RUNAROUND & SLOPES	I
104-X				0.86			20	CHANNEL	I
104-T1				1.27			20	TEMP. RUNAROUND	I
104-Y				2.79			25A	CHANNEL	I
105-WD	VIRGINIA HOLDING CORPORATION	811 172	78.11	0.40	— 77.06 —	0.65	18,21		I
105-T		860 634		0.03			18,21	DRIVEWAY	I
106-WL	FRANK B. & JUNE M. WARNER	871 421	12.88	0.24	— 11.62 —	0.37	18 & 21		I
106-WD				0.48			18 & 21		I
106-T				0.04			18,21	DRIVEWAY	I
106-WO1				0.17			18,21		I
107-WL	FRANK B. & JUNE M. WARNER	918 784	1.85	0.19	YES 1.13 —	0.08	18-21		I
107-WD				0.45	YES		18,21		I
108-WL	WILFORD & CUMMINGS REALTY	819 647	1.68	0.18	— 0.73 0.14	0.08	18-21		I
108-WD				0.55			18,21		I
109-WL	WILLIAM L. & ANTOINETTE R. KANE	836 190	1.86	0.19	YES 0.70 0.46	0.08	18-21		I
109-WD				0.43	—		18,21		I
109-T				0.02			18,21	DRIVEWAY	I
110-WL	AUGUST F. KOLYNO	826 374	35.54	3.28	— 22.97 7.29	0.54	11-18-19,21		I
110-WD				1.46			21		I
110-T				0.02			21	DRIVEWAY	I
110-T1				0.02			21	DRIVEWAY	I
111-WL	BERNARD A. KLINGSHIRN & GENEVIEVE D. SCHNEIDER	653 238	31.14	3.85	YES 17.18 9.00	0.15	11,19		I
111-WD		582 211		0.96			21,22		I
111-T				0.02			22	DRIVEWAY	I
111A-WL	BERNARD A. & AGNES KLINGSHIRN	776 732	0.86	0.77	YES 0 0	0.09	11, 19	TOTAL TAKE	I
112-WL	GEORGE & EILEEN VASU		4.82	1.26	NO 3.33 —	0	11,12		I
112-WD				0.23			22		I
112A-WL	VICTOR E. VASU DBA VICTOR E. VASU, TRUCKING	411 108	1.97	1.80	YES 0 0	0.17	11,19	TOTAL TAKE	I
112-B	SEE END OF SUMMARY								
113-WL	CLARENCE V. HORWEDEL et al.	917 381	9.25	5.50	YES — 3.39	0.30	12	ORIGINALLY PARCEL 675A & 675A1 UNDER LOR-90-660	I
113-WD		798 320		0.06			12		I
113-S				0.01			12	SEWER	CITY
114-WL	RICHARD & ROSALIA HOEGLER	447 358	10.00	0.82	— 8.76 —	0.33	12		I
114-WD				0.09			12 & 22		I
114-X				1.68			12 & 22		I
114-S				0.01			12	SEWER	CITY
115	MARGARET C. SMITH	551 447	38.23	2.46	— 31.28 3.37	1.12	22 & 23		I
115-X		604 361		0.66			22	CHANNEL	I
115-Y				0.23			22	CHANNEL	I
116	EATON CONSTRUCTION CO.	634 241		NONE			13	NO R/W NEEDED	
116A	BESSIE KIRSCHENBAUM ETAL	650 525		NONE			13	NO R/W NEEDED	

(L) LANDLOCKED

J.R.Y.-2/10/69 Rev. Area Pat. 112-WL.

REV. 2/7/67 6/19/67

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

284
309

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
LOR-90-13.01 R/W ONLY
I-IG-90-1(66)

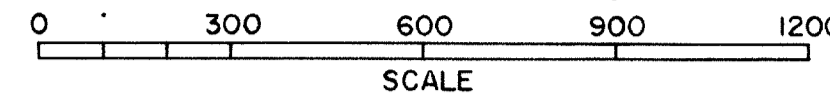
2
27

PARCEL NO.	OWNER	RECORDED BOOK PAGE	DEED AREA	TO BE ACQ'D.		NET RESIDUE		TOTAL PRO	SHEET NO.	REMARKS	TYPE FUNDS
				LAND	BLDG.	LEFT	RIGHT				
											I
117-WL	CLARENCE V. HORWEDEL ETAL	798 320	4000	10.13	YES	20.99	7.33	1.42	12 & 13	ORIGINALLY PARCELS 67.5A & 67.5B1 UNDER LOR-90-660	I
117-WD		917 381		0.07					12		I
117-WD1				0.06					12		I
117-T				0.05					12	DRIVEWAY	I
117-X				0.60					12 & 13	CHANNEL	I
117-Y				0.30					13	CHANNEL	I
117-T1				0.02					12	REMOVAL OF BLDG.	I
118-X	WILLIAM T. CUMMINGS, TRUSTEE	735 72	3.04	0.28	—	—	2.90	0.14	13	CHANNEL	I
119-WL	ALBERTA S. HORWEDEL	561 338	10.00	2.48	—	6.35	0.89(L)	0.28	13,14	ORIGINALLY PARCEL 70-5A UNDER LOR-90-660	I
		561 334									
		525 402									
120-WL	ALFRED J. & ANNA M. PETSCH	335 18	5.90	1.58	—	3.78	0.40(L)	0.14	14	ORIGINALLY PARCEL 71-5A UNDER LOR-90-660	I
121-WL	REYNOLD H. TADDEO	338 258	66.08	3.07	—	6.41	0.65(L)	0.95	14	ORIGINALLY PARCEL 72-5A UNDER LOR-90-660	I
122-WL	EDWARD & MILDRED HEJNAL	511 40	5.69	1.72	—	3.51	0.82(L)	0.14	14		I
122-5				0.01					14	SEWER	CITY
122-51				0.01					14	SEWER	CITY
123	REASSIGNED AS PARCEL 202WL & 202WD (LOR-90-1995)										
124-WL	HERBERT L. BRANDT & SHIRLEY A. RUSSELL	721 580	56.69	5.80	—	14.94	35.49	0.46	14 & 15		I
124-T				0.02					15	SLOPE	I
124-T1				0.05					15	CHANNEL	I
124-T2				0.04					15	CHANNEL	I
124-T3				0.01					14	CHANNEL	I
125-WL	CARL F. & MARGARET E. BRAMHALL	570 397	2.01	0.28	YES	1.54(L)	—	0.19	19 & 20		I
125-T				0.09					19 & 20	REMOVAL OF BLDG.	I
126-WD	SUN OIL COMPANY	320 321	13.19	0.25	—	11.98	—	0.96	20		I
		321 204									
				3.17		2.77					
112B-WL	VICTOR E. & DELORIS A. VASU	932 336	6.27	3.17	NO	2.77	0	0.08	11,12,19		I
112B-WD				0.25					22		I
112C-WD	ROY N. & JEAN VASU		3.59	0.12	NO	3.47	0	0	22		I
112D-WD	ELLIS VASU		3.58	0.13	NO	3.45	0	0	22		I
112E-WD	GEORGE VASU, TRUSTEE		6.15	0.24	NO	5.91	0	0	22		I

(L) = LANDLOCKED

PROPERTY MAP

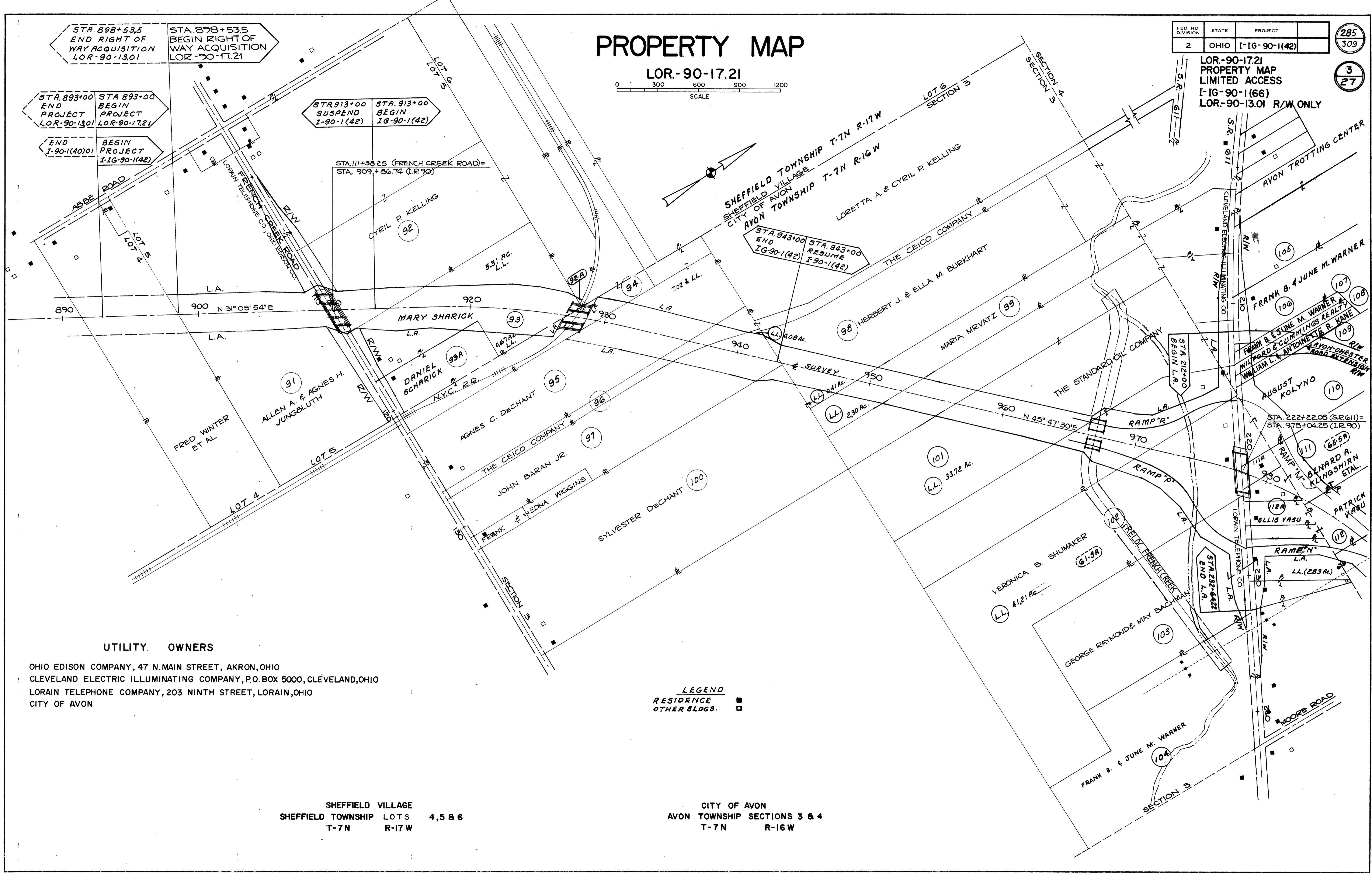
LOR-90-17.21



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

285
309
3
27

LOR-90-17.21
PROPERTY MAP
LIMITED ACCESS
I-IG-90-1(66)
LOR-90-13.01 R/W ONLY



UTILITY OWNERS

- OHIO EDISON COMPANY, 47 N. MAIN STREET, AKRON, OHIO
- CLEVELAND ELECTRIC ILLUMINATING COMPANY, P.O. BOX 5000, CLEVELAND, OHIO
- LORAIN TELEPHONE COMPANY, 203 NINTH STREET, LORAIN, OHIO
- CITY OF AVON

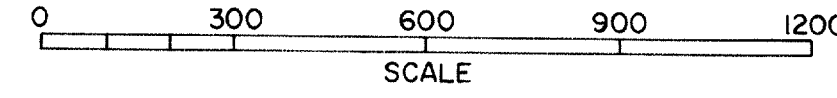
LEGEND
RESIDENCE ■
OTHER BLDGS. □

SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP LOTS 4, 5 & 6
T-7N R-17W

CITY OF AVON
AVON TOWNSHIP SECTIONS 3 & 4
T-7N R-16W

PROPERTY MAP

LOR-90-17.21

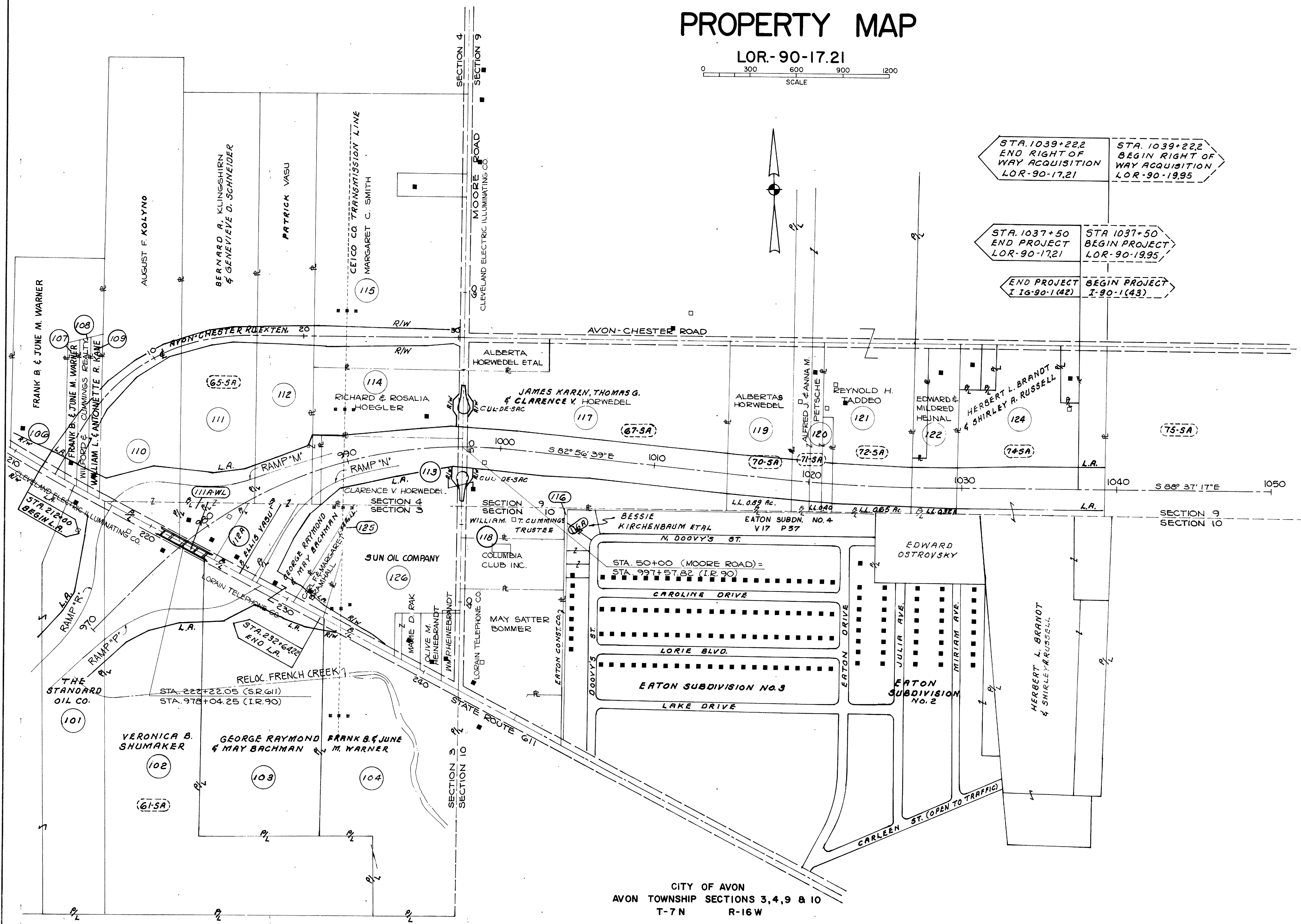


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

286
309

LOR-90-17.21
PROPERTY MAP
LIMITED ACCESS
I-IG-90-1(66)
LOR-90-13.01 R/W ONLY

4
27



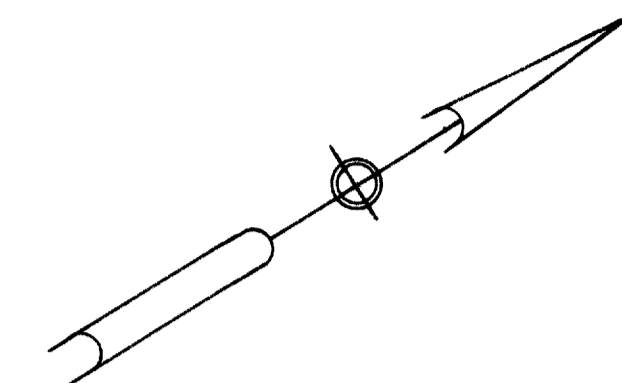
CITY OF AVON
AVON TOWNSHIP SECTIONS 3, 4, 9 & 10
T-7N R-16W

FED RD DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

287
309

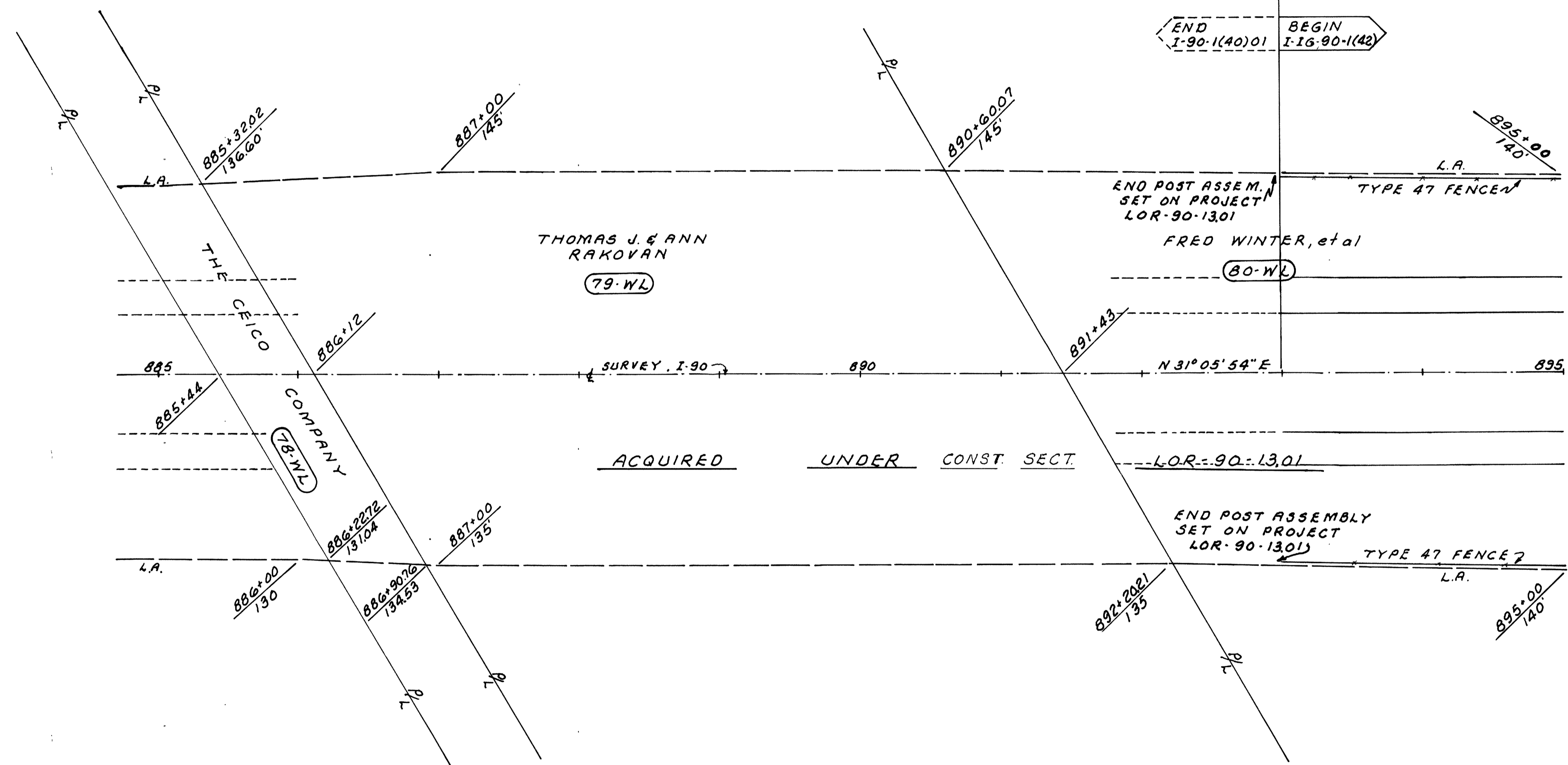
LOR.-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG90-1(66)
LOR.-90-13.01 R/W ONLY

5
27



CONST. SECTIONS
END PROJECT LOR-90-13.01
STA. 893+00
BEGIN PROJECT LOR-90-17.21

END I-90-1(40)01
BEGIN I-IG-90-1(42)



END POST ASSEM. SET ON PROJECT LOR-90-13.01
TYPE 47 FENCE
FRED WINTER, et al
79-WL

END POST ASSEMBLY SET ON PROJECT LOR-90-13.01
TYPE 47 FENCE
L.A.

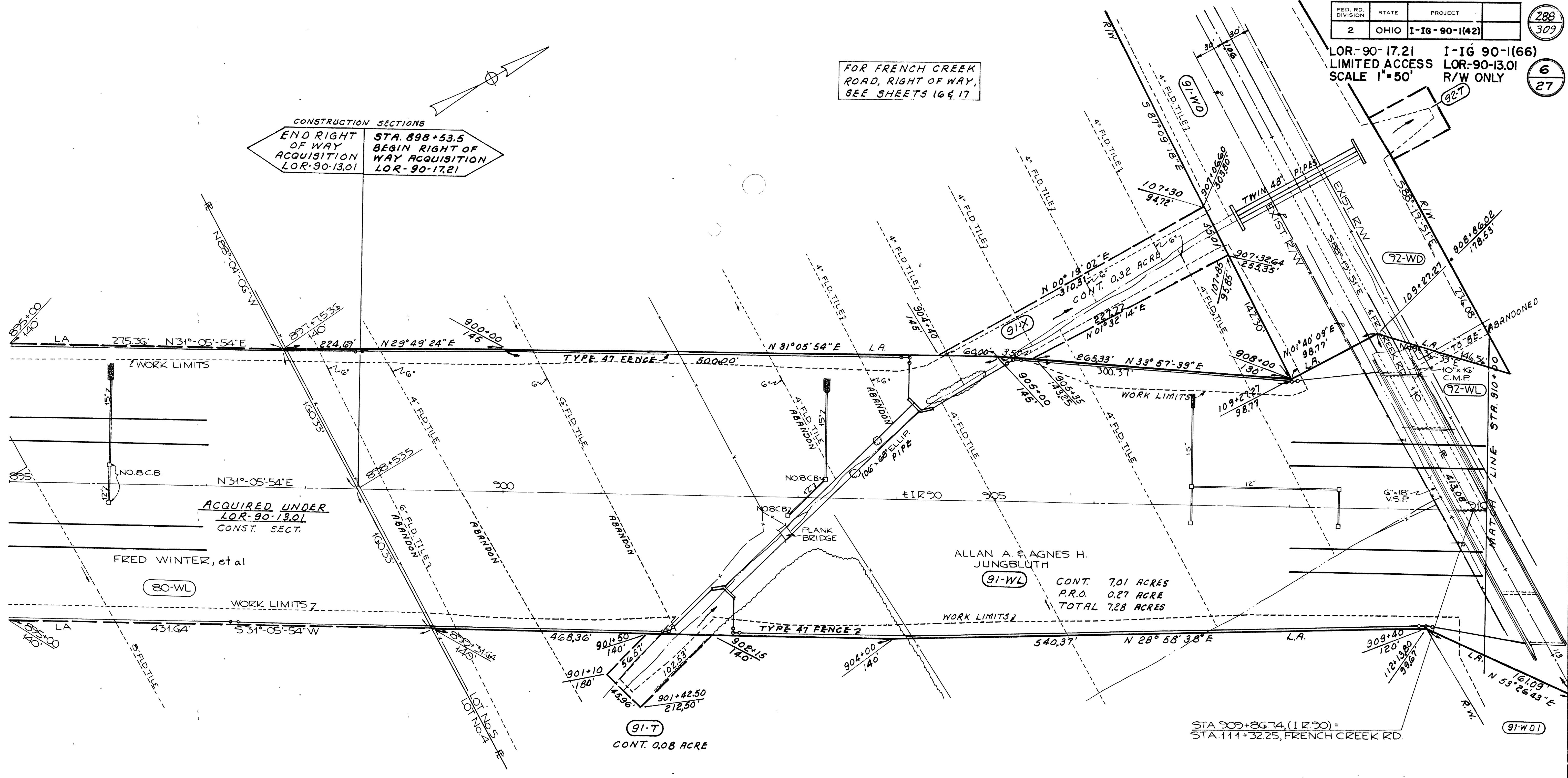
SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP
LOT 4
T-7N R-17W

STA. 893+00 TO STA. 895+00
TYPE 47 FENCE 400 LIN. FT.

RIGHT OF WAY, STA. 886+12 TO STA. 895+00

FOR FRENCH CREEK ROAD, RIGHT OF WAY, SEE SHEETS 16 & 17

CONSTRUCTION SECTIONS
 END RIGHT OF WAY ACQUISITION LOR-90-13.01
 STA. 898+53.5 BEGIN RIGHT OF WAY ACQUISITION LOR-90-17.21



ACQUIRED UNDER LOR-90-13.01 CONST. SECT.

FRED WINTER, et al

ALLAN A. & AGNES H. JUNGBLUTH
 CONT. 7.01 ACRES
 P.R.O. 0.27 ACRE
 TOTAL 7.28 ACRES

91-T CONT. 0.08 ACRE

STA. 909+86.74 (I.R. 30) = STA. 111+32.25, FRENCH CREEK RD.

STA. 895+00 TO STA. 908+90 LT.
 STA. 895+00 TO STA. 910+42 RT.
 TYPE 47 FENCE 2997 LIN. FT.

SHEFFIELD VILLAGE
 SHEFFIELD TOWNSHIP LOTS
 4 & 5
 T-7N R-17W

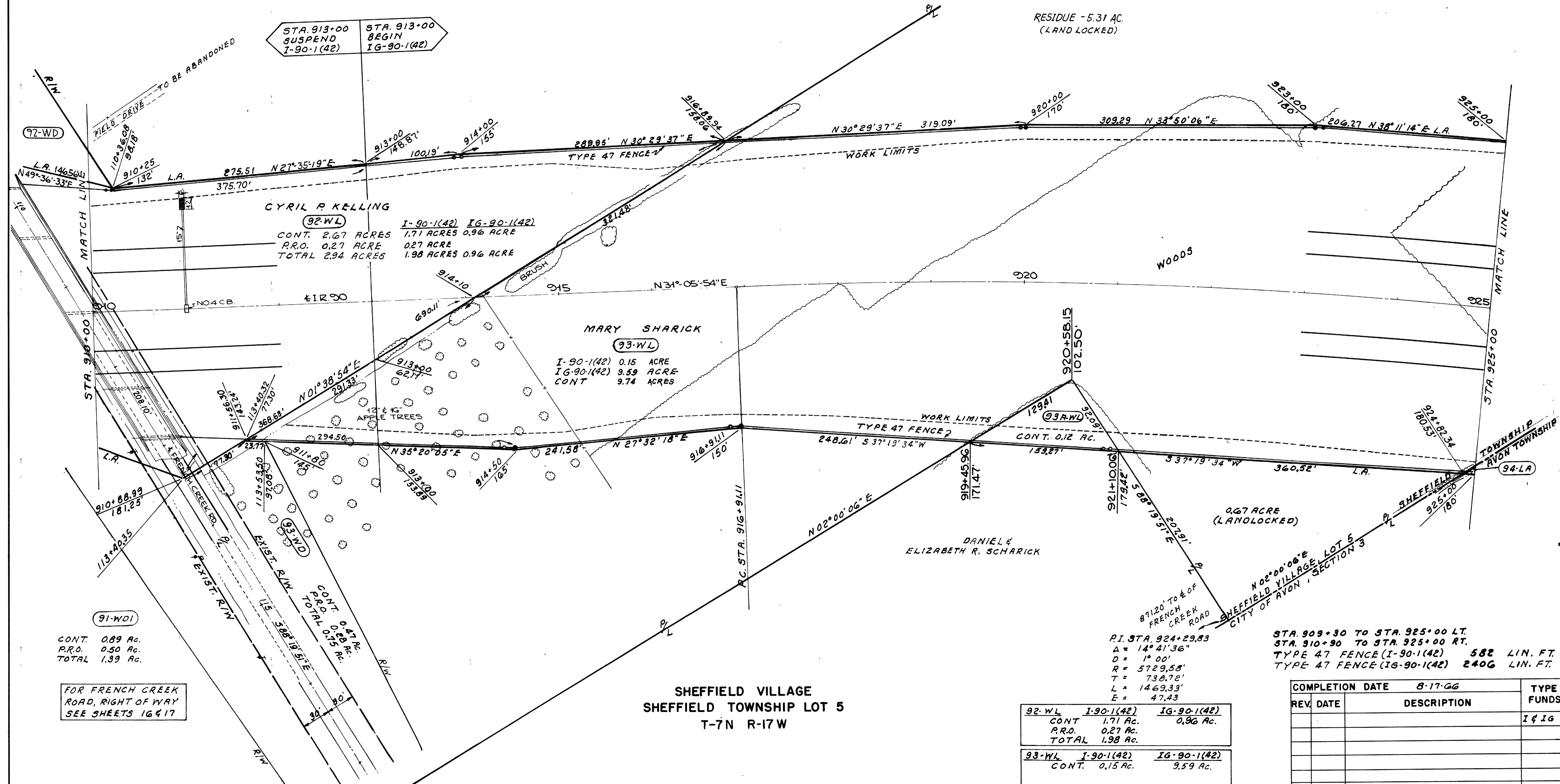
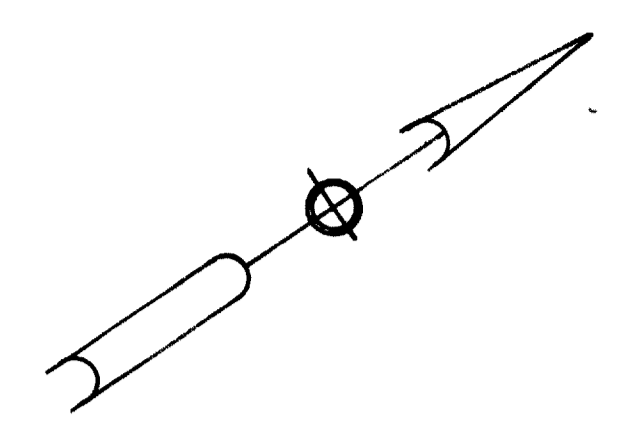
REV.	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	I

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-IG-90-1(42)	

289
309

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY

7
27



STA. 913+00 SUSPEND I-90-1(42)
STA. 913+00 BEGIN IG-90-1(42)

CYRIL R. KELLING
(92-WL)
CONT. 2.67 ACRES
P.R.O. 0.27 ACRE
TOTAL 2.94 ACRES
I-90-1(42) 1.71 ACRES
IG-90-1(42) 0.96 ACRE
P.R.O. 0.27 ACRE
TOTAL 1.98 ACRES 0.96 ACRE

MARY SHARICK
(93-WL)
I-90-1(42) 0.15 ACRE
IG-90-1(42) 9.59 ACRES
CONT. 9.74 ACRES

DANIEL & ELIZABETH R. SCHARICK

(91-WD)
CONT. 0.89 Ac.
P.R.O. 0.50 Ac.
TOTAL 1.39 Ac.

FOR FRENCH CREEK ROAD, RIGHT OF WAY SEE SHEETS 16 & 17

SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP LOT 5
T-7N R-17W

92-WL	I-90-1(42)	IG-90-1(42)
CONT.	1.71 Ac.	0.96 Ac.
P.R.O.	0.27 Ac.	
TOTAL	1.98 Ac.	
93-WL	I-90-1(42)	IG-90-1(42)
CONT.	0.15 Ac.	9.59 Ac.

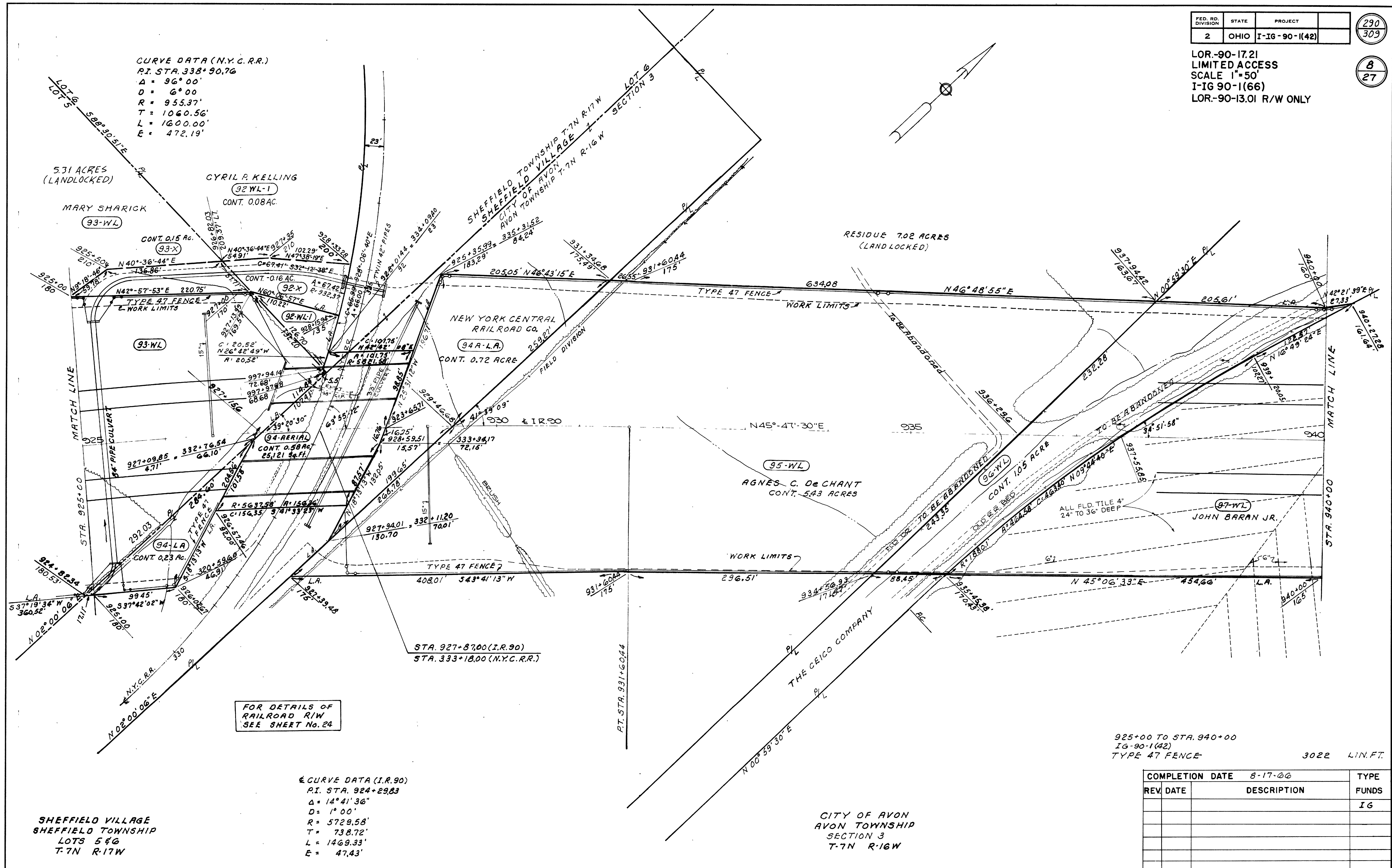
P.I. STA. 924+29.83
Δ = 14° 41' 36"
D = 1° 00'
R = 5729.58'
T = 738.72'
L = 1469.33'
E = 47.43

STA. 909+30 TO STA. 925+00 LT.
STA. 910+90 TO STA. 925+00 RT.
TYPE 47 FENCE (I-90-1(42)) 582 LIN. FT.
TYPE 47 FENCE (IG-90-1(42)) 2406 LIN. FT.

REV.	DATE	DESCRIPTION	TYPE FUNDS
			I & IG

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY

CURVE DATA (N.Y.C.R.R.)
P.I. STA. 338+90.76
Δ = 96° 00'
D = 6° 00'
R = 955.37'
T = 1060.56'
L = 1600.00'
E = 472.19'



FOR DETAILS OF RAILROAD R/W SEE SHEET NO. 24

CURVE DATA (I.R. 90)
P.I. STA. 924+29.83
Δ = 14° 41' 36"
D = 1° 00'
R = 5729.58'
T = 738.72'
L = 1469.33'
E = 47.43'

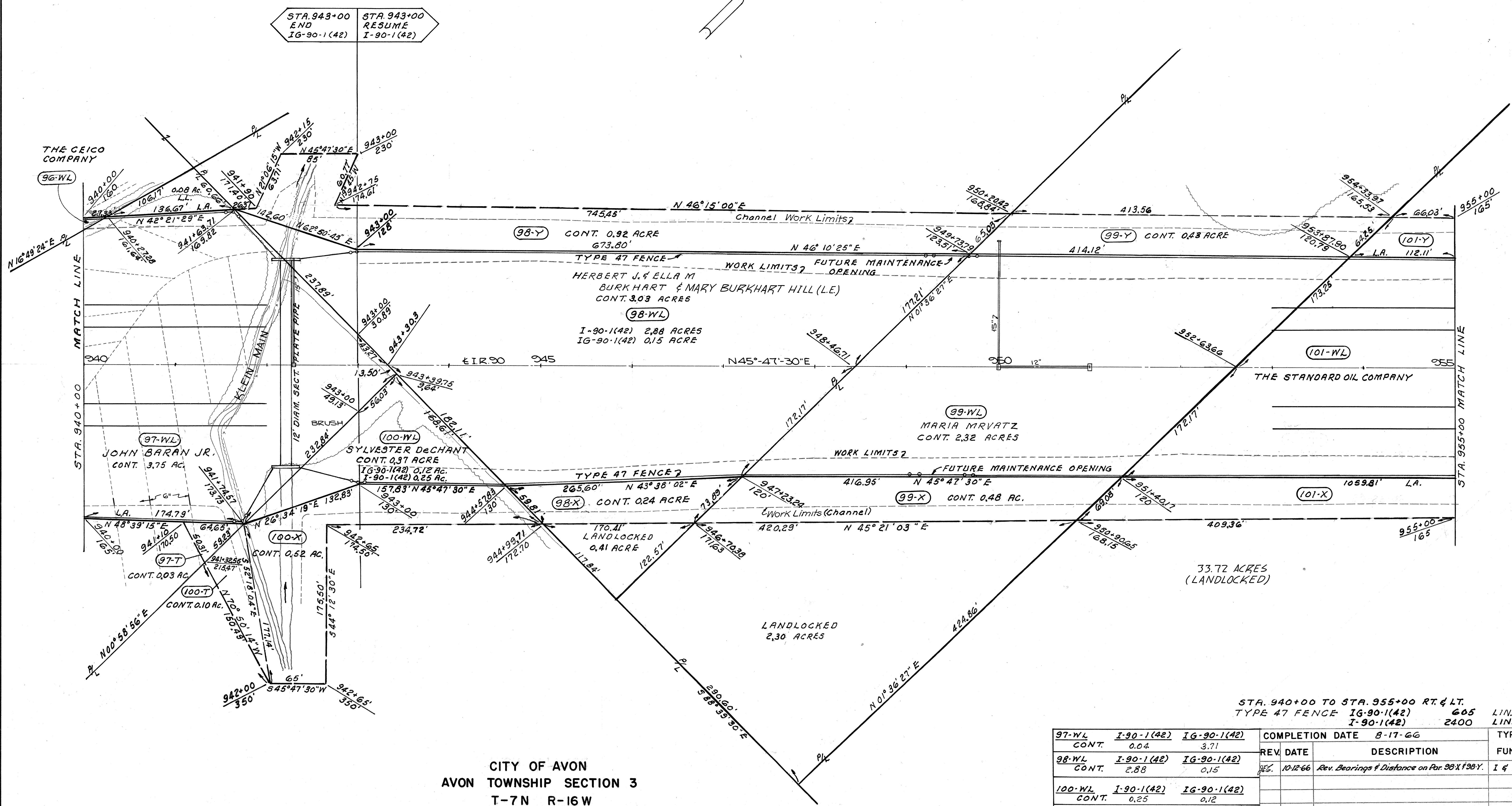
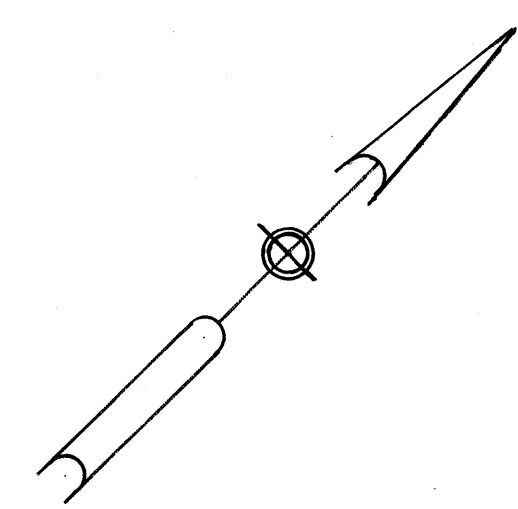
SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP
LOTS 5 & 6
T-7N R-17W

CITY OF AVON
AVON TOWNSHIP
SECTION 3
T-7N R-16W

925+00 TO STA. 940+00
IG-90-1(42)
TYPE 47 FENCE 3022 LIN. FT.

REV.	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	IG

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG-90-1(66)
LOR-90-13.01 R/W ONLY



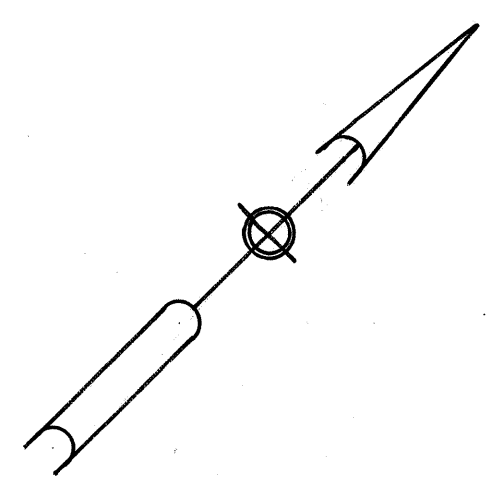
CITY OF AVON
AVON TOWNSHIP SECTION 3
T-7N R-16W

STA. 940+00 TO STA. 955+00 RT. & LT.
TYPE 47 FENCE IG-90-1(42) 605 LIN. FT.
I-90-1(42) 2400 LIN. FT.

ASSET	IG-90-1(42)	IG-90-1(42)	COMPLETION DATE	8-17-66	TYPE
97-WL	I-90-1(42)	IG-90-1(42)			
CONT.	0.04	3.71			
98-WL	I-90-1(42)	IG-90-1(42)			
CONT.	2.88	0.15	10-12-66	Rev. Bearings & Distance on Par. 98-X & 98-Y.	I & IG
100-WL	I-90-1(42)	IG-90-1(42)			
CONT.	0.25	0.12			
100-X	I-90-1(42)	IG-90-1(42)			
CONT.	0.18	0.34			
98-Y	I-90-1(42)	IG-90-1(42)			
CONT.	0.74	0.18			

LOR.-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR.-90-13.01 R/W ONLY

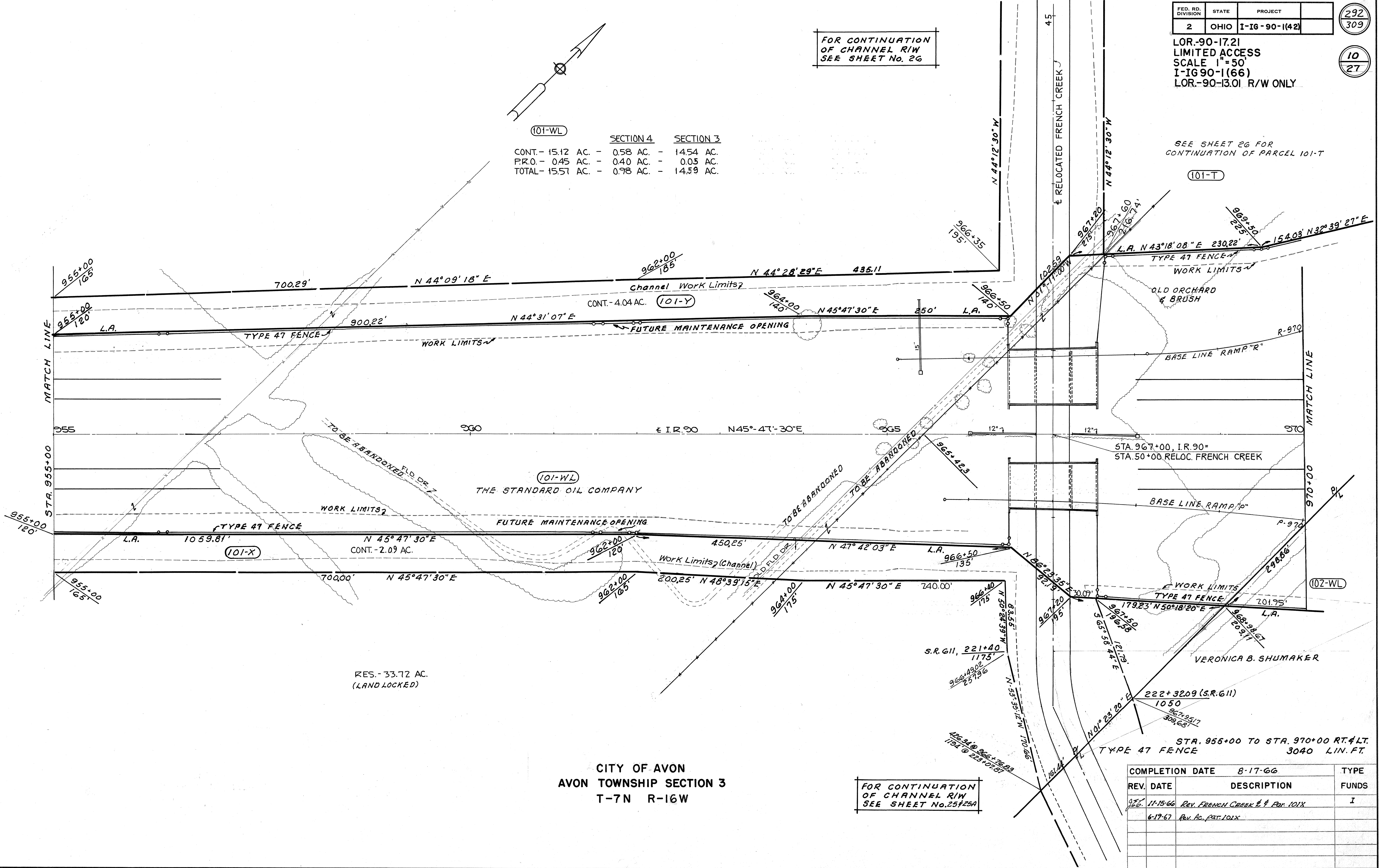
FOR CONTINUATION
OF CHANNEL R/W
SEE SHEET No. 26



(101-WL)	SECTION 4	SECTION 3
CONT. - 15.12 AC.	0.58 AC.	14.54 AC.
P.R.O. - 0.45 AC.	0.40 AC.	0.05 AC.
TOTAL - 15.57 AC.	0.98 AC.	14.59 AC.

SEE SHEET 26 FOR
CONTINUATION OF PARCEL 101-T

(101-T)



RES. - 33.72 AC.
(LAND LOCKED)

(101-WL)
THE STANDARD OIL COMPANY

VERONICA B. SHUMAKER

CITY OF AVON
AVON TOWNSHIP SECTION 3
T-7N R-16W

FOR CONTINUATION
OF CHANNEL R/W
SEE SHEET No. 25 & 25A

REV. DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
8-17-66		8-17-66	
11-15-66	REV. FRENCH CREEK & PAR. 101X		I
6-19-67	REV. AC. PAR. 101X		

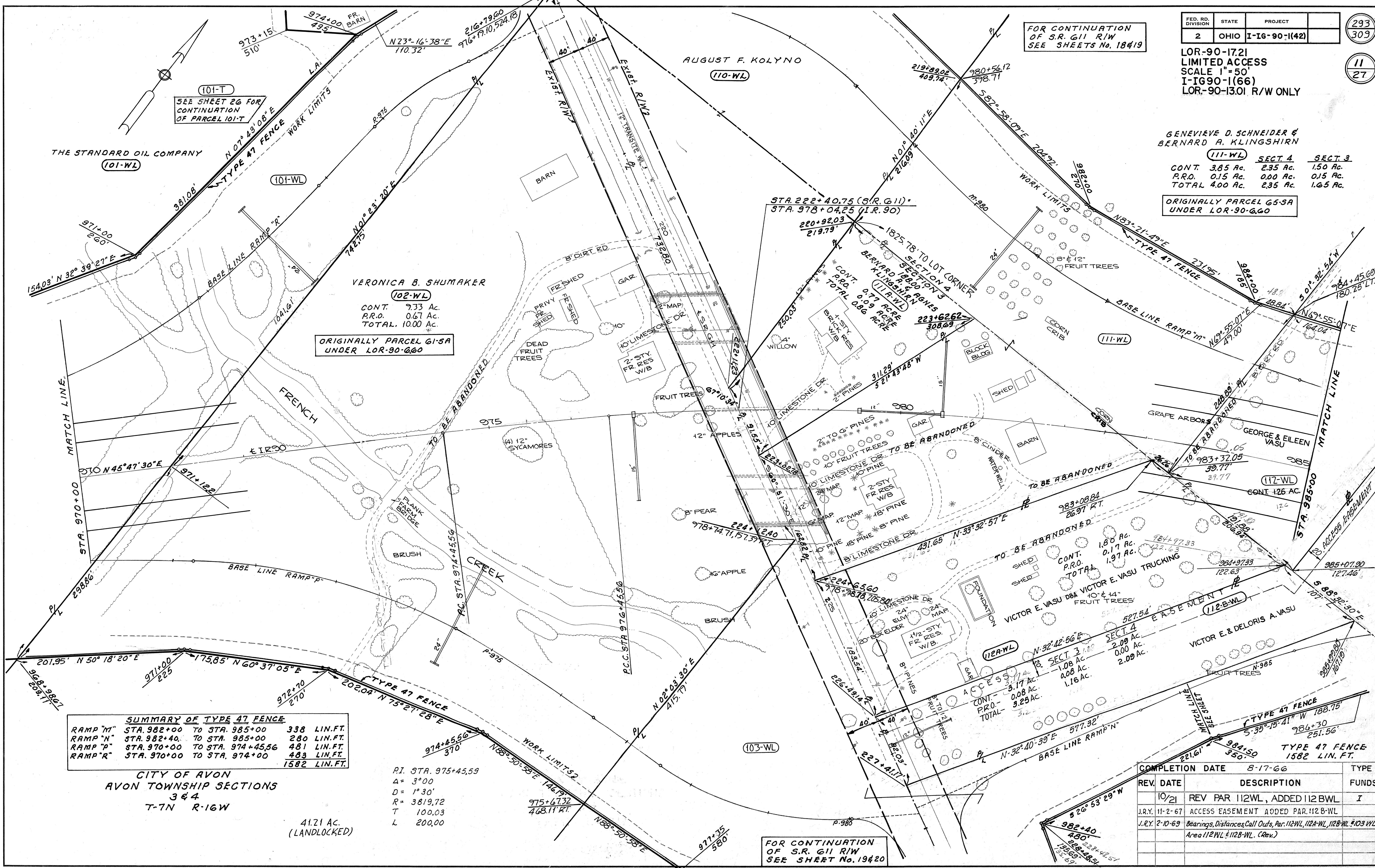
FOR CONTINUATION
OF S.R. G11 R/W
SEE SHEETS No. 18419

LOR-90-1721
LIMITED ACCESS
SCALE 1"=50'
I-1690-1(66)
LOR-90-13.01 R/W ONLY

GENEVIEVE D. SCHNEIDER &
BERNARD A. KLINGSHIRN

(111-WL)	SECT. 4	SECT. 3
CONT. 3.85 Ac.	2.35 Ac.	1.50 Ac.
P.R.O. 0.15 Ac.	0.00 Ac.	0.15 Ac.
TOTAL 4.00 Ac.	2.35 Ac.	1.65 Ac.

ORIGINALLY PARCEL G5-3A
UNDER LOR-90-660



SUMMARY OF TYPE 47 FENCE

RAMP "M"	STA. 982+00 TO STA. 985+00	338 LIN. FT.
RAMP "N"	STA. 982+40 TO STA. 985+00	280 LIN. FT.
RAMP "P"	STA. 970+00 TO STA. 974+45.56	481 LIN. FT.
RAMP "R"	STA. 970+00 TO STA. 974+00	483 LIN. FT.
		1582 LIN. FT.

CITY OF AVON
AVON TOWNSHIP SECTIONS
3 & 4
T-7N R-16W

41.21 AC.
(LANDLOCKED)

RI. STA. 975+45.59
A= 3'00"
D= 1'30"
R= 3819.72
T= 100.03
L= 200.00

FOR CONTINUATION
OF S.R. G11 R/W
SEE SHEET No. 19420

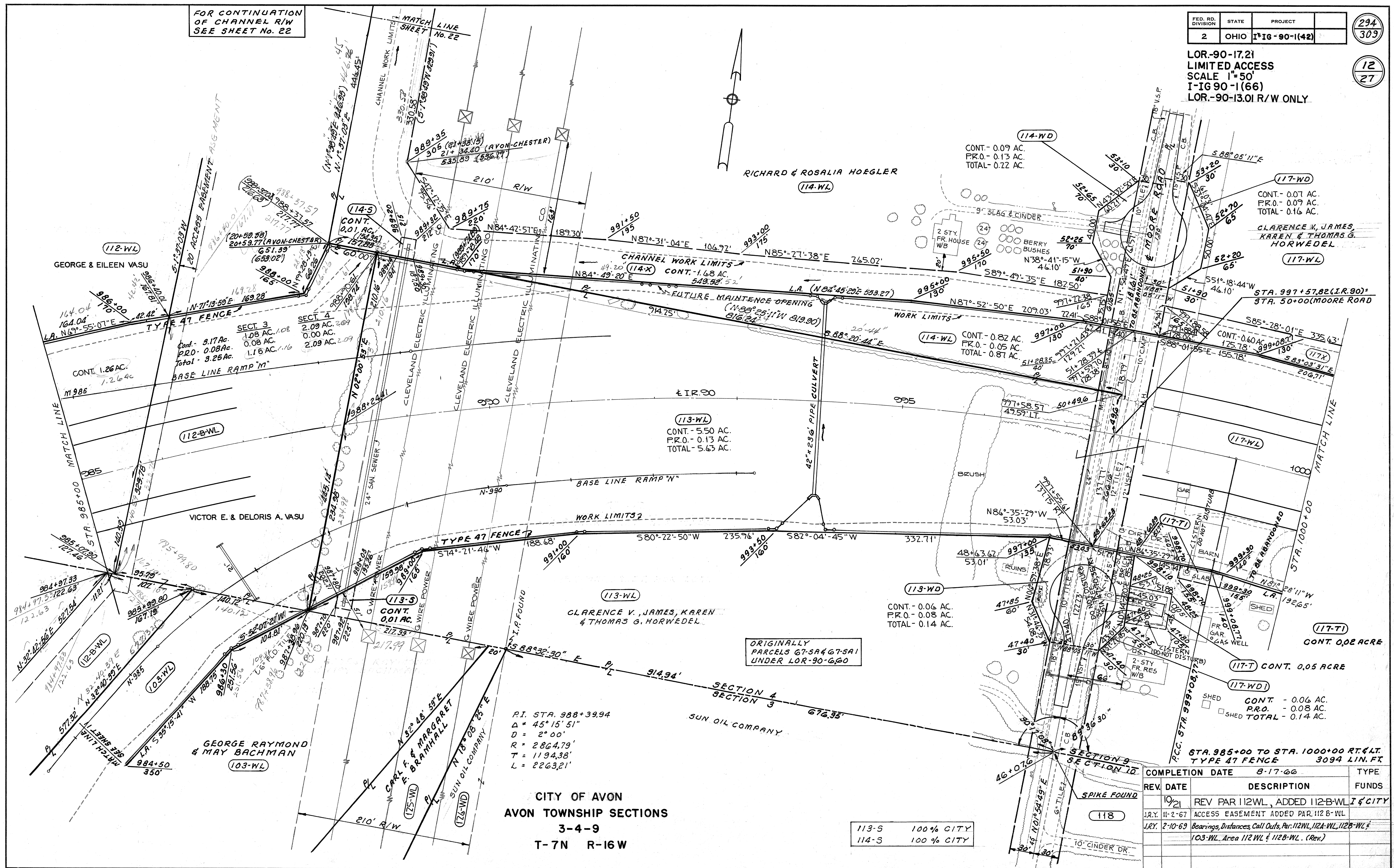
REV.	DATE	DESCRIPTION	FUNDS
		COMPLETION DATE 8-17-66	TYPE
10/21		REV PAR 112WL, ADDED 112 BWL	I
J.R.Y.	11-2-67	ACCESS EASEMENT ADDED PAR. 112 B-WL	
J.R.Y.	2-10-69	Bearings, Distances, Call Outs, Par. 112WL, 112A-WL, 112B-WL, 112C-WL, 112D-WL, 112E-WL, 112F-WL, 112G-WL, 112H-WL, 112I-WL, 112J-WL, 112K-WL, 112L-WL, 112M-WL, 112N-WL, 112O-WL, 112P-WL, 112Q-WL, 112R-WL, 112S-WL, 112T-WL, 112U-WL, 112V-WL, 112W-WL, 112X-WL, 112Y-WL, 112Z-WL	

FOR CONTINUATION
OF CHANNEL R/W
SEE SHEET No. 22

FED. RD. DIVISION	STATE	PROJECT	294
2	OHIO	I-16-90-1(42)	309

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-16 90-1(66)
LOR-90-13.01 R/W ONLY

12
27



SECT. 3
CONT. - 3.17 AC.
P.R.O. - 0.08 AC.
Total - 3.25 AC.

SECT. 4
2.09 AC. 2.09
0.00 AC. 0.00
2.09 AC. 2.09

R.I. STA. 988+39.94
Δ = 45° 15' 51"
D = 2° 00'
R = 2864.79'
T = 1194.38'
L = 2263.21'

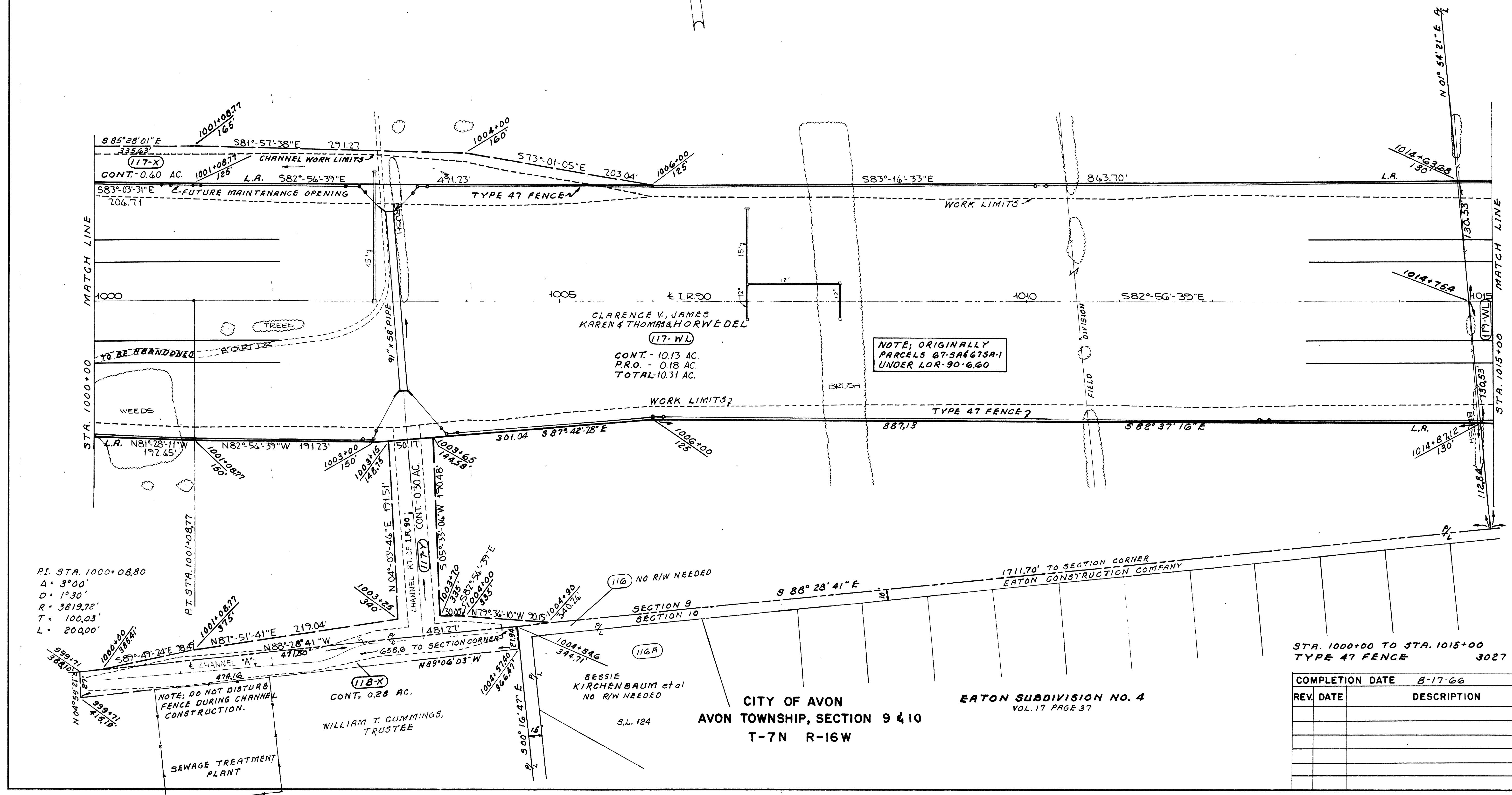
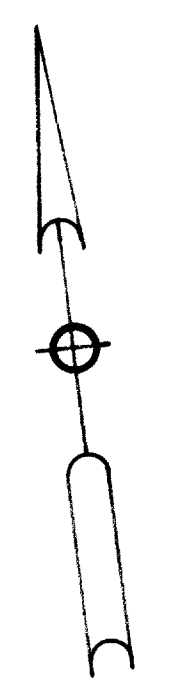
CITY OF AVON
AVON TOWNSHIP SECTIONS
3-4-9
T-7N R-16W

113-S	100% CITY
114-S	100% CITY

COMPLETION DATE	8-17-66	TYPE
REV. DATE	DESCRIPTION	FUNDS
10-21	REV PAR 112WL, ADDED 112-B-WL	I & CITY
J.R.Y. 11-2-67	ACCESS EASEMENT ADDED PAR. 112 B-WL	
J.R.Y. 2-10-69	Bearings, Distances, Call Outs, Par. 112WL, 112A-WL, 112B-WL & 103-WL, Area 112WL & 112B-WL. (Rev.)	

RIGHT OF WAY STA. 985+00 TO STA. 1000+00

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY



NOTE; ORIGINALLY
PARCELS 67-3A&675A-1
UNDER LOR-90-6.60

NOTE: DO NOT DISTURB
FENCE DURING CHANNEL
CONSTRUCTION.

STA. 1000+00 TO STA. 1015+00
TYPE 47 FENCE 3027 LIN. FT.

REV. DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
		8-17-66	I

CITY OF AVON
AVON TOWNSHIP, SECTION 9 & 10
T-7N R-16W

EATON SUBDIVISION NO. 4
VOL. 17 PAGE 37

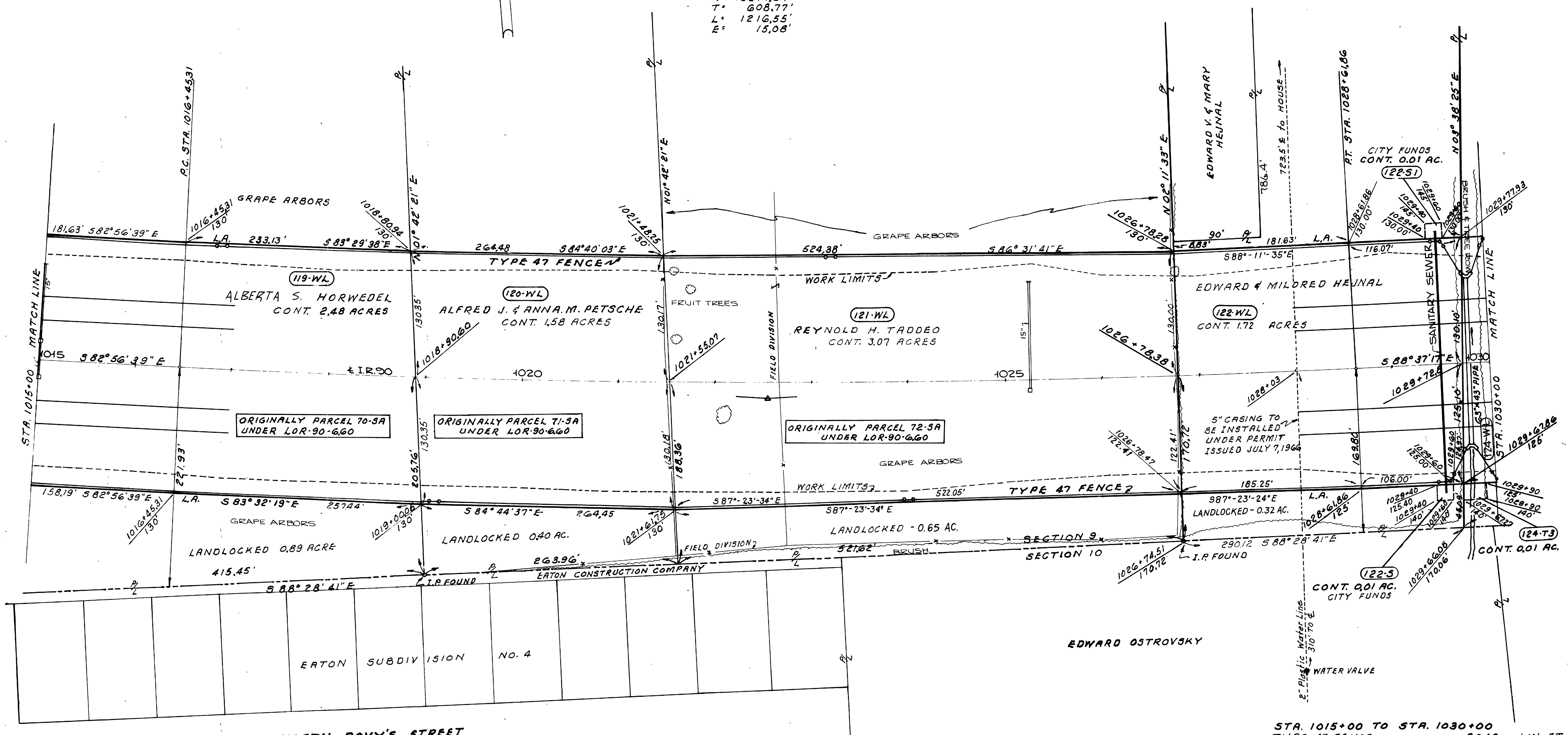
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-16-90-1(42)

296
309

14
27

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-1690-1(66)
LOR-90-13.01 R/W ONLY

CENTERLINE CURVE DATA
P.I. STA. 1022+54.08
Δ = 05° 40' 38"
D = 00° 28'
R = 12277.67'
T = 608.77'
L = 1216.55'
E = 15.08'



NORTH DOVY'S STREET

CITY OF AVON
AVON TOWNSHIP, SECTION 9
T-7N R-16W

STA. 1015+00 TO STA. 1030+00		3043	LIN. FT.
TYPE 47 FENCE			
COMPLETION DATE	8-17-66		TYPE
REV. DATE	DESCRIPTION		FUNDS
			I & CITY

112-5 CITY FUNDS
112-51 CITY FUNDS

Rev. 11-3-66

RIGHT OF WAY STA. 1015+00 TO STA. 1030+00

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

297
309

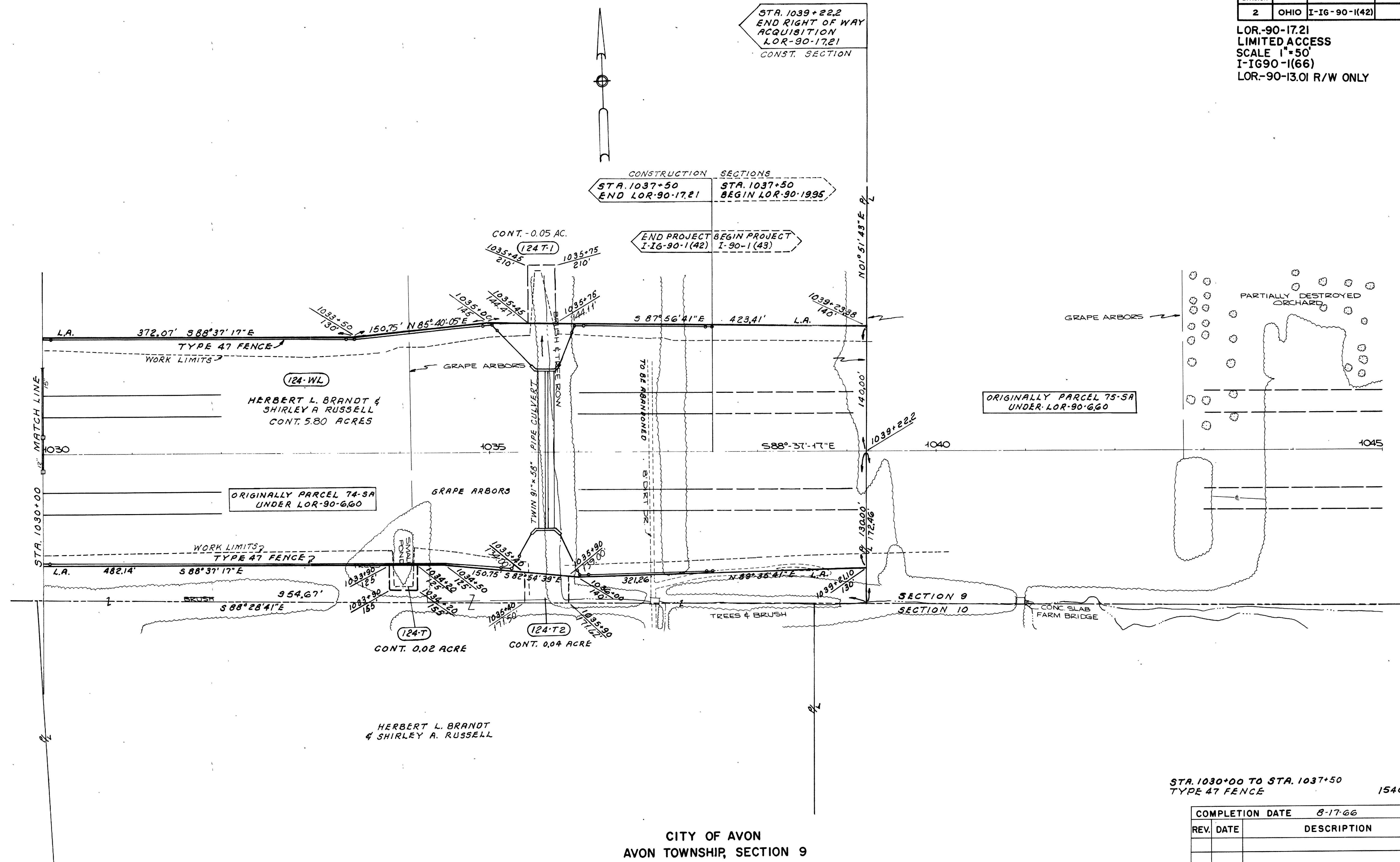
LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG90-1(66)
LOR-90-13.01 R/W ONLY

15
27

STA. 1039+22.2
END RIGHT OF WAY
ACQUISITION
LOR-90-17.21
CONST. SECTION

CONSTRUCTION SECTIONS
STA. 1037+50
END LOR-90-17.21
STA. 1037+50
BEGIN LOR-90-1995

END PROJECT BEGIN PROJECT
I-IG-90-1(42) I-90-1(43)



STA. 1030+00 TO STA. 1037+50
TYPE 47 FENCE 1540 LIN. FT.

CITY OF AVON
AVON TOWNSHIP, SECTION 9
T-7N R-16W

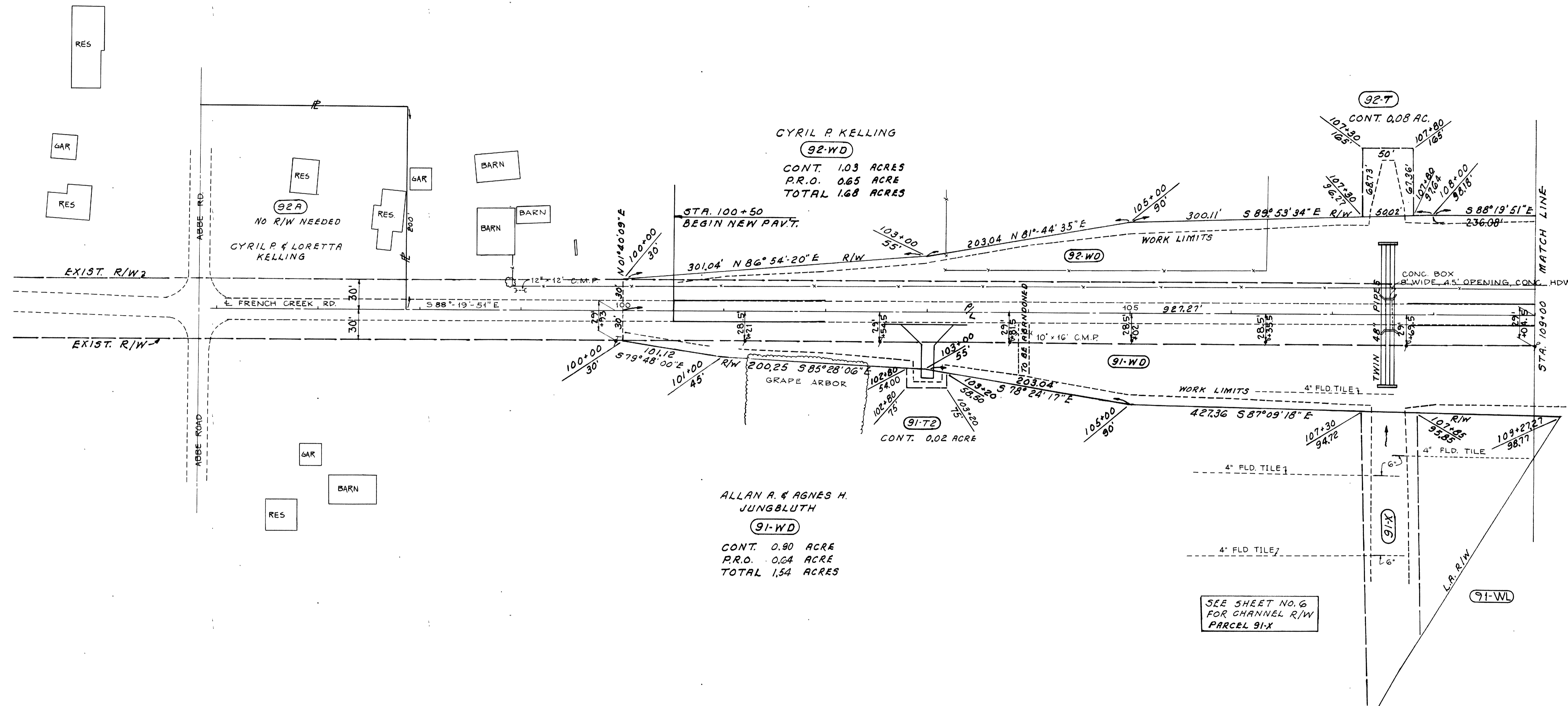
REV.	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	I

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

298
309

LOR.-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY

16
27

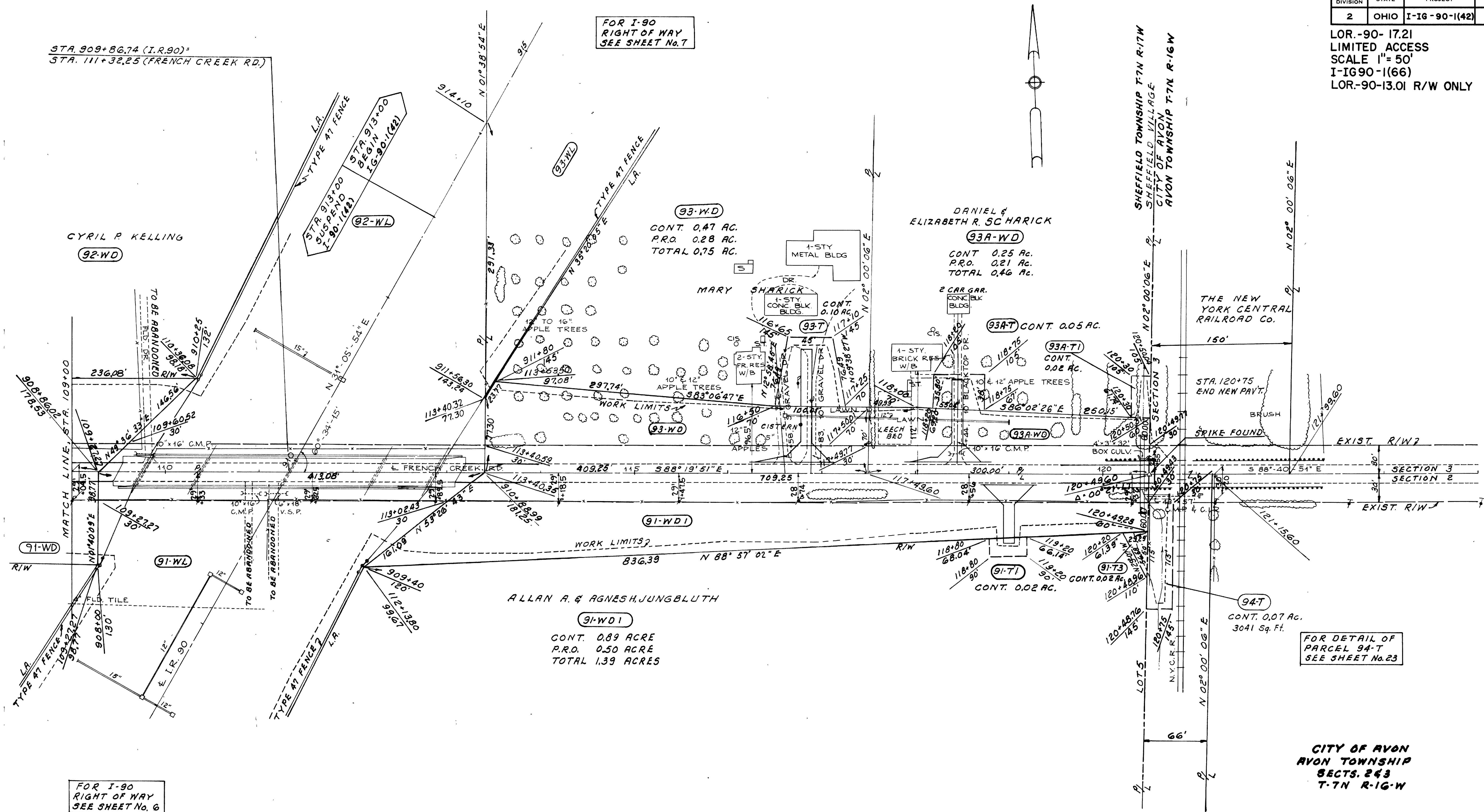


SEE SHEET NO. 6
FOR CHANNEL R/W
PARCEL 91-X

SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP
LOT 5
T-7N R-17W

REV.	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	I

LOR.-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG90-1(66)
LOR.-90-13.01 R/W ONLY



FOR I-90
RIGHT OF WAY
SEE SHEET No. 7

STA. 909+86.74 (I.R.90)
STA. 111+32.25 (FRENCH CREEK RD.)

ALLAN A. & AGNES JUNGBLUTH

91-WD1
CONT. 0.89 ACRE
P.R.O. 0.50 ACRE
TOTAL 1.39 ACRES

SHEFFIELD VILLAGE
SHEFFIELD TOWNSHIP
LOT 5
T-7N R-17W

FOR I-90
RIGHT OF WAY
SEE SHEET No. 6

FOR DETAIL OF
PARCEL 94-T
SEE SHEET No. 23

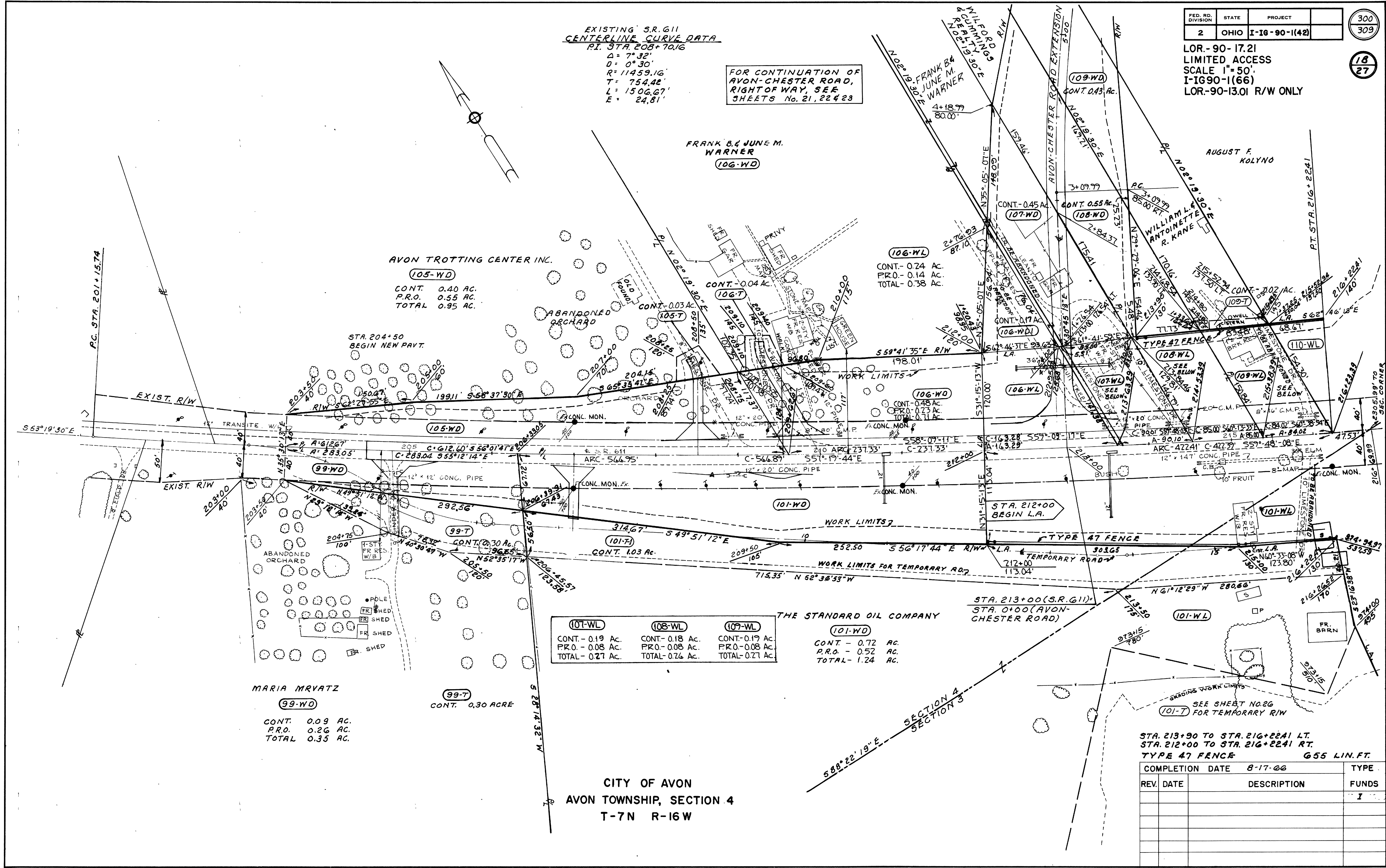
CITY OF AVON
AVON TOWNSHIP
SECTS. 2&3
T-7N R-16W

COMPLETION DATE	8-17-66	TYPES FUNDS
REV. DATE	DESCRIPTION	
		I

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-1690-1(66)
LOR-90-13.01 R/W ONLY

EXISTING S.R. 611
CENTERLINE CURVE DATA
P.I. STA. 208+70.16
 $\Delta = 7^{\circ}32'$
 $D = 0^{\circ}30'$
 $R = 11459.16'$
 $T = 754.42'$
 $L = 1506.67'$
 $E = 24.81'$

FOR CONTINUATION OF
AVON-CHESTER ROAD,
RIGHT OF WAY, SEE
SHEETS No. 21, 22 & 23



(107-WL)	(108-WL)	(109-WL)
CONT. - 0.19 AC.	CONT. - 0.18 AC.	CONT. - 0.19 AC.
P.R.O. - 0.08 AC.	P.R.O. - 0.08 AC.	P.R.O. - 0.08 AC.
TOTAL - 0.27 AC.	TOTAL - 0.26 AC.	TOTAL - 0.27 AC.

(101-WD)
CONT. - 0.72 AC.
P.R.O. - 0.52 AC.
TOTAL - 1.24 AC.

MARIA MRVATZ

(99-WD)

CONT. 0.09 AC.
P.R.O. 0.26 AC.
TOTAL 0.35 AC.

(99-7)

CONT. 0.30 ACRE

CITY OF AVON
AVON TOWNSHIP, SECTION 4
T-7N R-16W

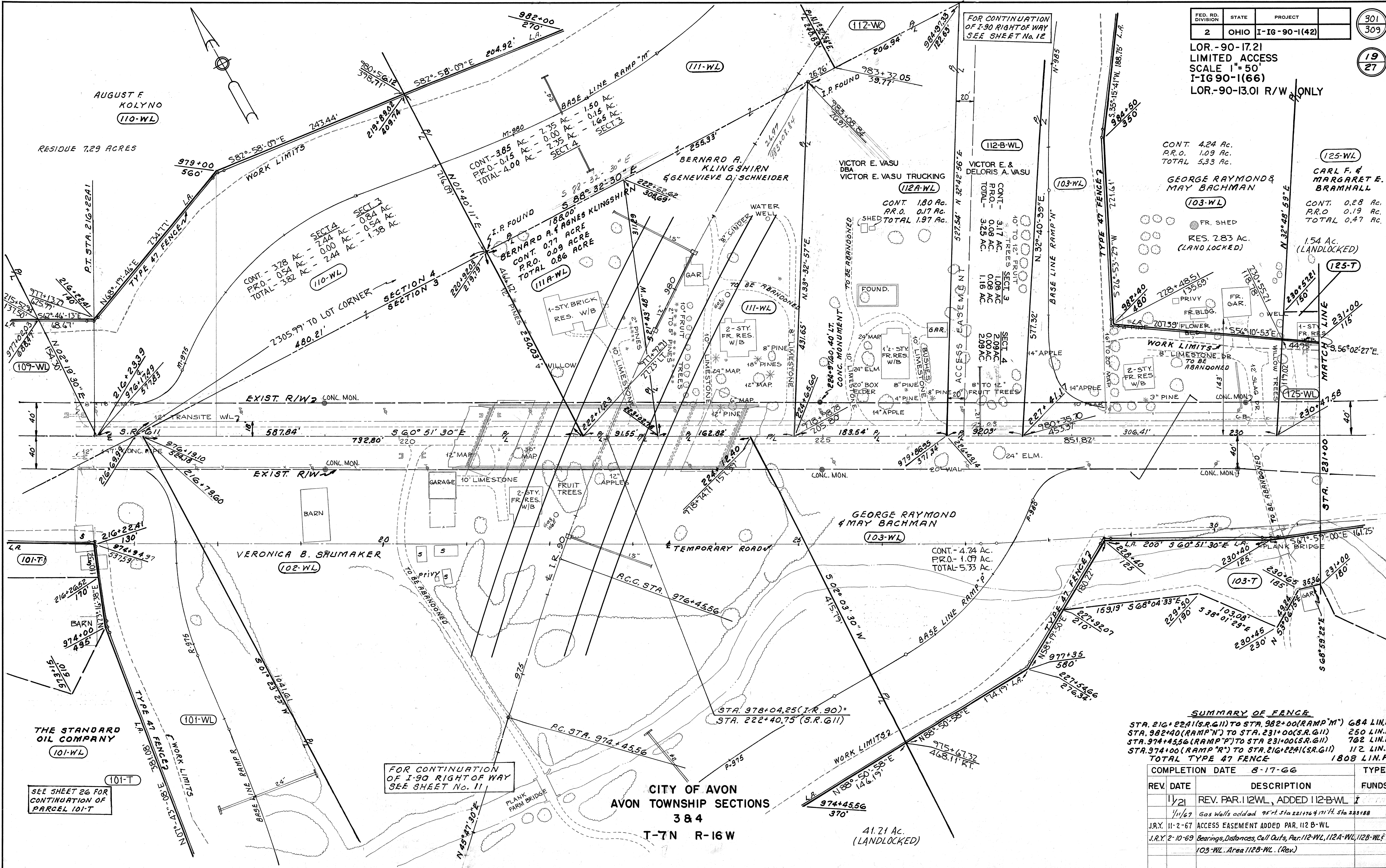
STA. 213+90 TO STA. 216+2241 LT.
STA. 212+00 TO STA. 216+2241 RT.
TYPE 47 FENCE 655 LIN. FT.

REV.	DATE	DESCRIPTION	FUNDS

301
309

19
27

LOR. -90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR.-90-13.01 R/W ONLY



CONT. 4.24 Ac.
P.R.O. 1.09 Ac.
TOTAL 5.33 Ac.

GEORGE RAYMOND & MAY BACHMAN
(103-WL)

FR. SHED
RES. 2.83 AC.
(LAND LOCKED)

1.54 AC.
(LANDLOCKED)

CONT. 0.28 Ac.
P.R.O. 0.19 Ac.
TOTAL 0.47 Ac.

CARL F. & MARGARET E. BRAMHALL
(125-WL)

CONT. 1.80 Ac.
P.R.O. 0.17 Ac.
TOTAL 1.97 Ac.

VICTOR E. VASU
DBA VICTOR E. VASU TRUCKING
(112A-WL)

CONT. 3.17 AC.
P.R.O. 0.08 AC.
TOTAL 3.25 AC.

VICTOR E. & DELORIS A. VASU
(112-B-WL)

FR. BLDG.
FR. GAR.
FR. RES. W/B

CONT. - 4.24 Ac.
P.R.O. - 1.09 Ac.
TOTAL - 5.33 Ac.

GEORGE RAYMOND & MAY BACHMAN
(103-WL)

FR. BLDG.
FR. GAR.
FR. RES. W/B

CONT. - 3.28 AC.
P.R.O. - 0.54 AC.
TOTAL - 3.82 AC.

AGNES KLINGSHIRN
(110-WL)

CONT. 0.77 ACRE
P.R.O. 0.09 ACRE
TOTAL 0.86 ACRE

BERNARD A. KLINGSHIRN
(111-WL)

CONT. 3.85 AC. - 2.35 AC. - 1.50 AC. - SECT. 3
P.R.O. 0.15 AC. - 2.35 AC. - 0.15 AC. - SECT. 4
TOTAL - 4.00 AC. - 2.35 AC. - 1.65 AC. - SECT. 3

BERNARD A. KLINGSHIRN & GENEVIEVE D. SCHNEIDER
(111-WL)

SUMMARY OF FENCE

STA. 216+224 (S.R.G.11) TO STA. 982+00 (RAMP 'M') 684 LIN. FT.
STA. 982+00 (RAMP 'N') TO STA. 231+00 (S.R.G.11) 250 LIN. FT.
STA. 974+45.56 (RAMP 'P') TO STA. 231+00 (S.R.G.11) 762 LIN. FT.
STA. 974+00 (RAMP 'R') TO STA. 216+224 (S.R.G.11) 112 LIN. FT.
TOTAL TYPE 47 FENCE 1808 LIN. FT.

REV. DATE	DESCRIPTION	FUNDS
11/21	REV. PAR. 112WL, ADDED 112-B-WL	
1/1/67	Gas Wells added 95' at Sta 221+76 & 171' at Sta 223+88	
J.R.Y. 11-2-67	ACCESS EASEMENT ADDED PAR. 112 B-WL	
J.R.Y. 2-10-69	Bearings, Distances, Call Outs, PAR. 112-WL, 112A-WL, 112B-WL & 103-WL. Area 112B-WL. (Rev.)	

CITY OF AVON
AVON TOWNSHIP SECTIONS 3 & 4
T-7N R-16W

FOR CONTINUATION OF I-90 RIGHT OF WAY SEE SHEET No. 11

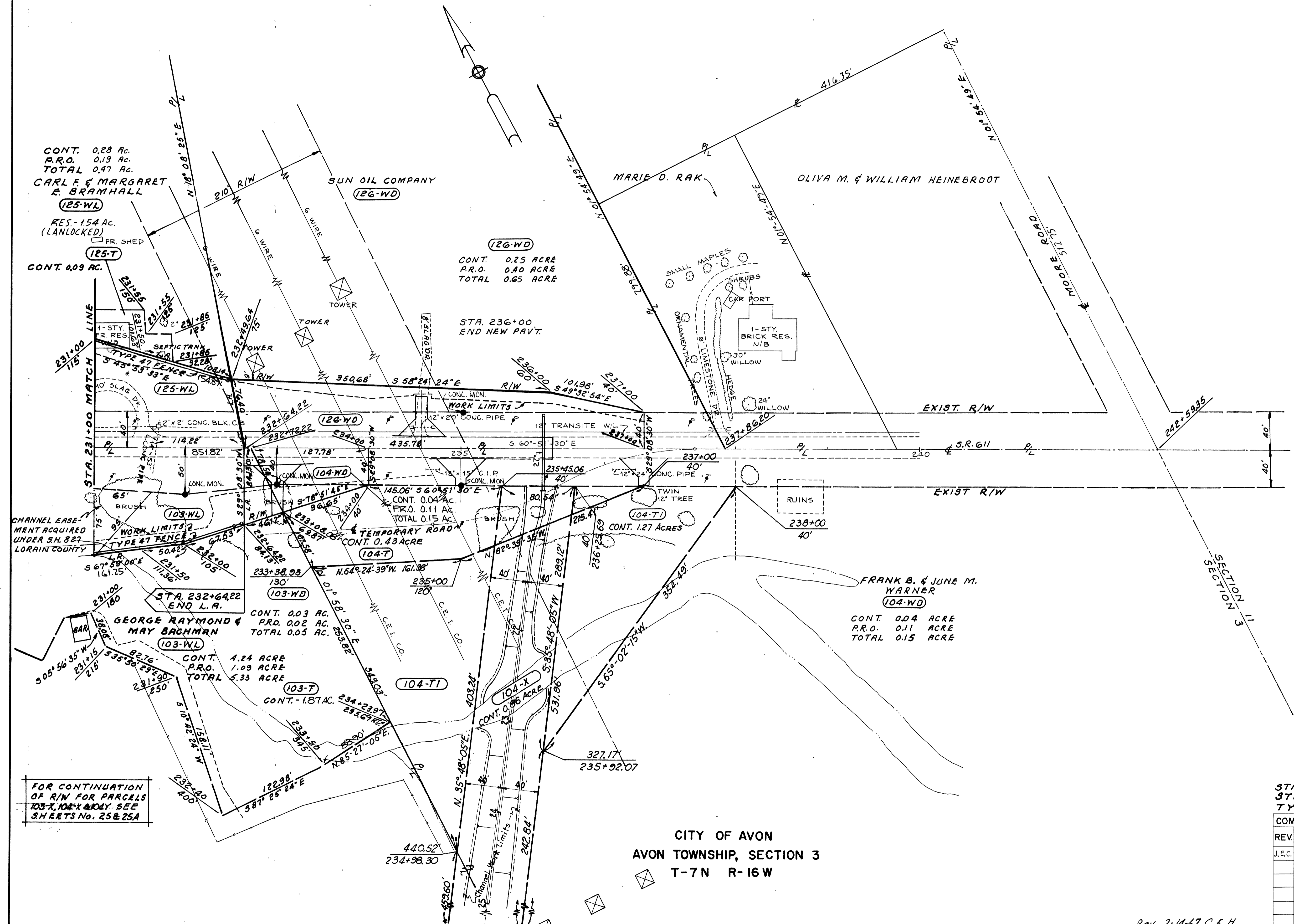
SEE SHEET 26 FOR CONTINUATION OF PARCEL 101-T

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

3025
309

20
27

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY
Supersedes sheet no. 302



FOR CONTINUATION
OF R/W FOR PARCELS
103-X, 104-X & 104-Y SEE
SHEETS No. 25 & 25A

CITY OF AVON
AVON TOWNSHIP, SECTION 3
T-7N R-16W

STA. 231+00 TO STA. 232+49.64 LT.
STA. 231+00 TO STA. 232+64.22 RT.
TYPE 47 FENCE 322 L.I.N. FT.

COMPLETION DATE	8-17-66	TYPE
REV. DATE	DESCRIPTION	FUNDS
J.E.C. 11-15-66	Rev. Par. 104-T, 104-T1, 104-X & 104-Y	I & STATE

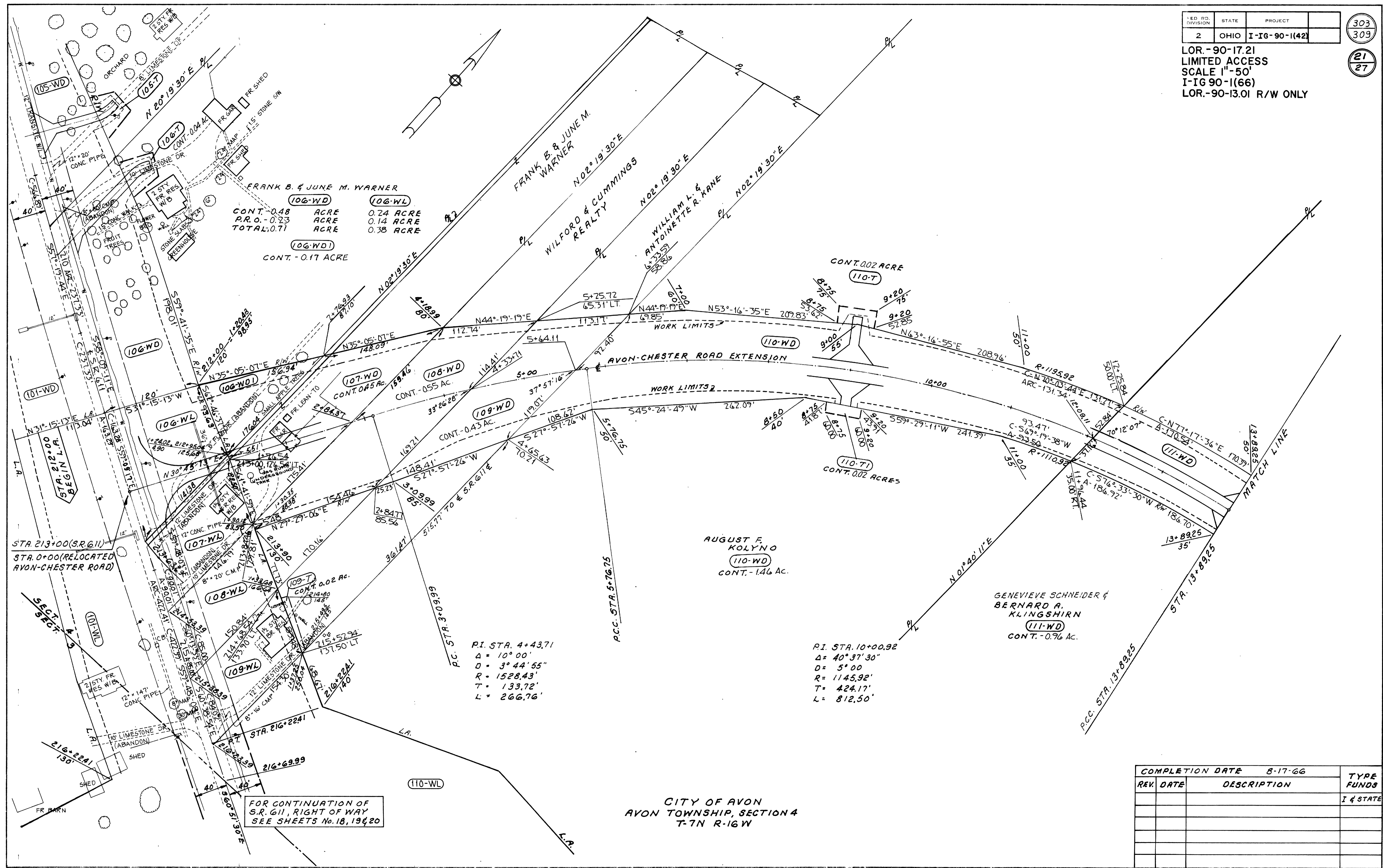
Rev. 2-14-67 C.E.H.

S.R. 611, STA. 231+00 TO STA. 240+00, RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-IG-90-1(42)

303
309
21
27

LOR.-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR.-90-13.01 R/W ONLY



FRANK B. & JUNE M. WARNER
 (106-WD) CONT.-0.48 ACRE
 P.R.O.-0.23 ACRE
 TOTAL:0.71 ACRE
 (106-WL) CONT.-0.17 ACRE
 (106-WL) CONT.-0.24 ACRE
 (106-WL) CONT.-0.14 ACRE
 (106-WL) CONT.-0.38 ACRE

P.I. STA. 4+43.71
 Δ = 10° 00'
 D = 3° 44' 55"
 R = 1528.43'
 T = 133.72'
 L = 266.76'

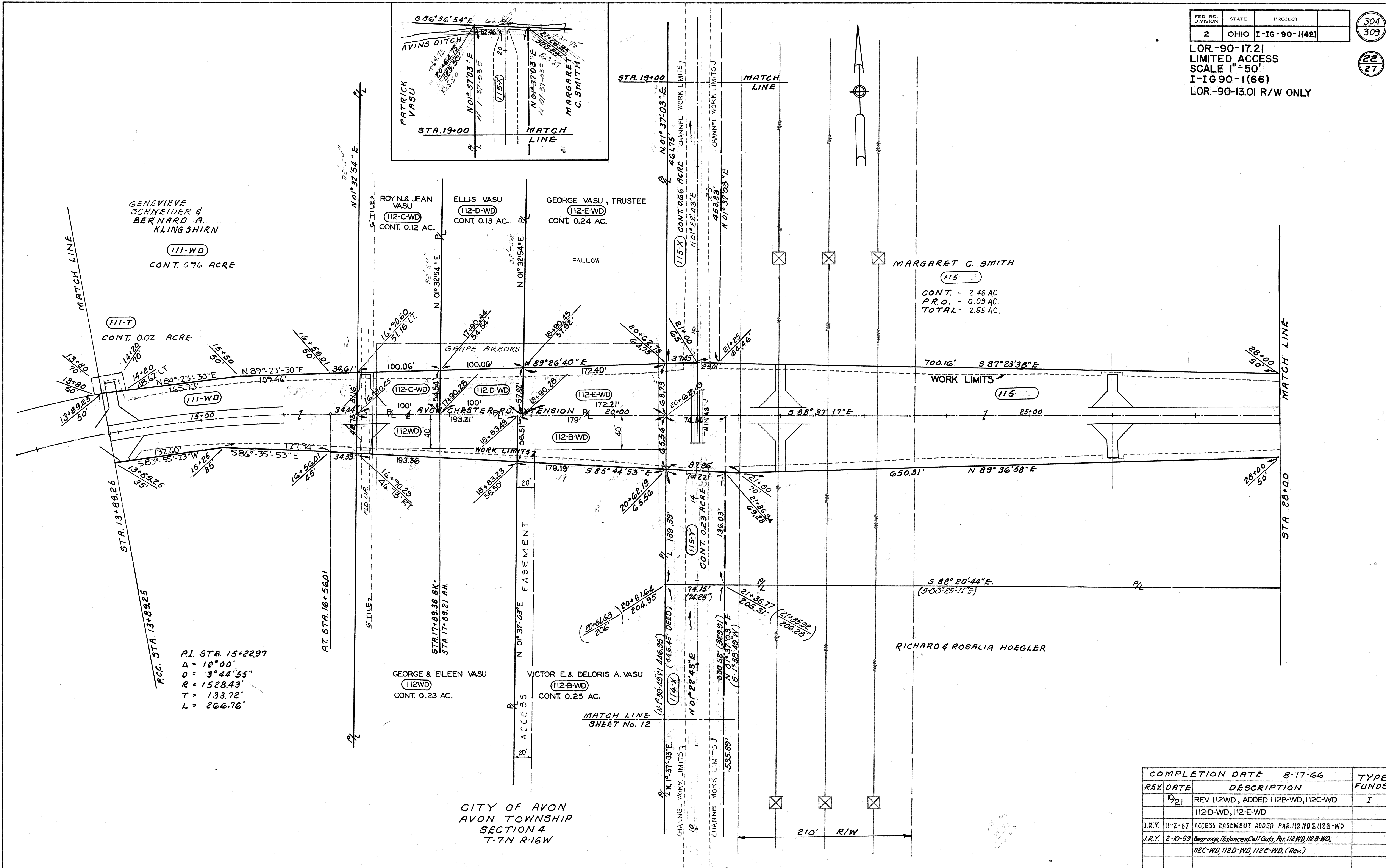
P.I. STA. 10+00.92
 Δ = 40° 37' 30"
 D = 5° 00'
 R = 1145.92'
 T = 424.17'
 L = 812.50'

FOR CONTINUATION OF
 S.R. G11, RIGHT OF WAY
 SEE SHEETS No. 18, 19 & 20

CITY OF AVON
 AVON TOWNSHIP, SECTION 4
 T-7N R-16W

REV	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	I & STATE

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-16-90-1(66)
LOR-90-13.01 R/W ONLY



GENEVIEVE SCHNEIDER & BERNARD A. KLINGSHIRN
(111-WD)
CONT. 0.96 ACRE

(111-T)
CONT. 0.02 ACRE

R.I. STA. 15+22.97
Δ = 10° 00'
D = 3° 44' 55"
R = 1528.43'
T = 133.72'
L = 266.76'

ROY N. & JEAN VASU (112-C-WD) CONT. 0.12 AC.
ELLIS VASU (112-D-WD) CONT. 0.13 AC.
GEORGE VASU, TRUSTEE (112-E-WD) CONT. 0.24 AC.

MARGARET C. SMITH (115)
CONT. - 2.46 AC.
P.R.O. - 0.09 AC.
TOTAL - 2.55 AC.

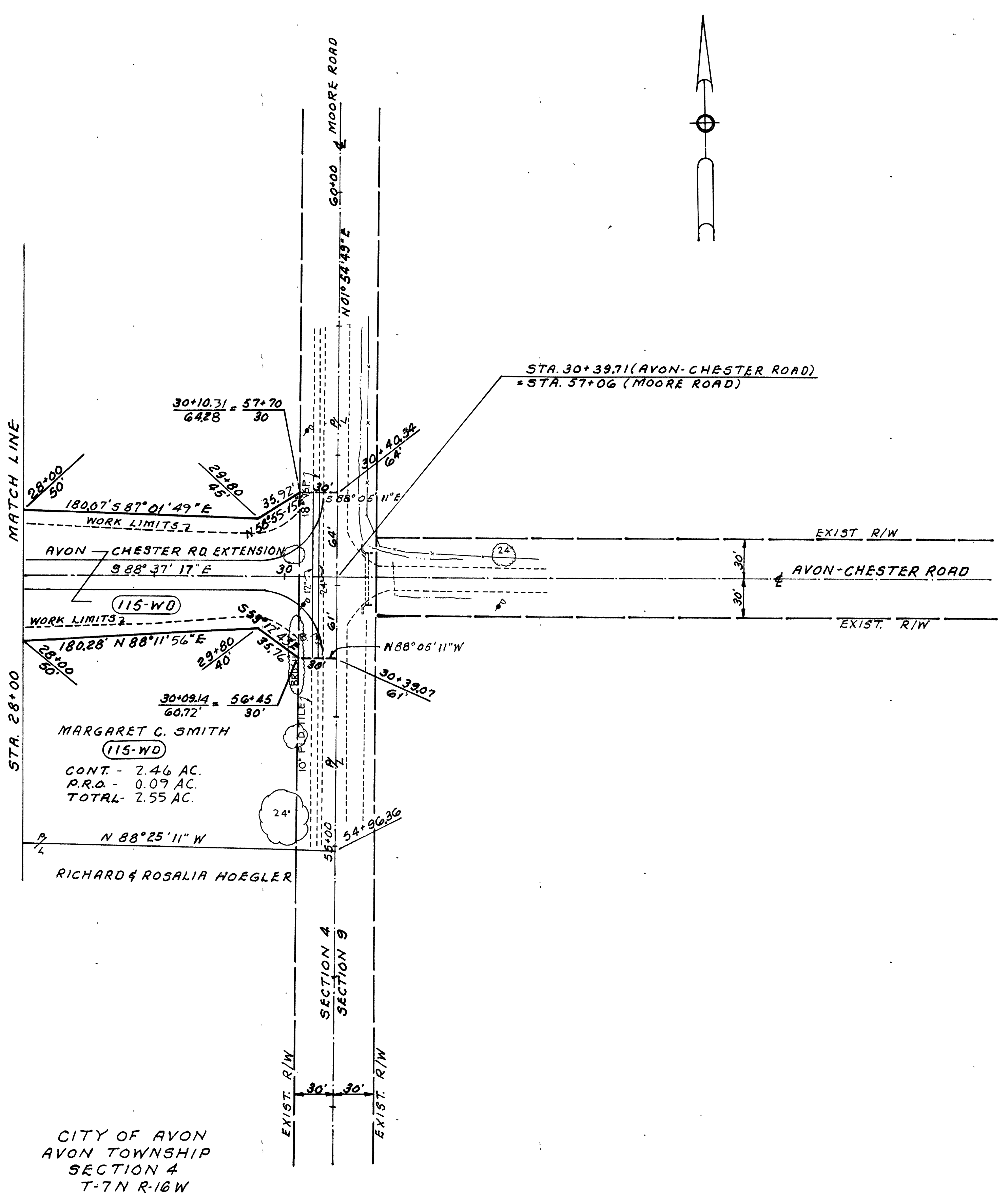
GEORGE & EILEEN VASU (112-WD) CONT. 0.23 AC.
VICTOR E. & DELORIS A. VASU (112-B-WD) CONT. 0.25 AC.

RICHARD & ROSALIA HOEGLER

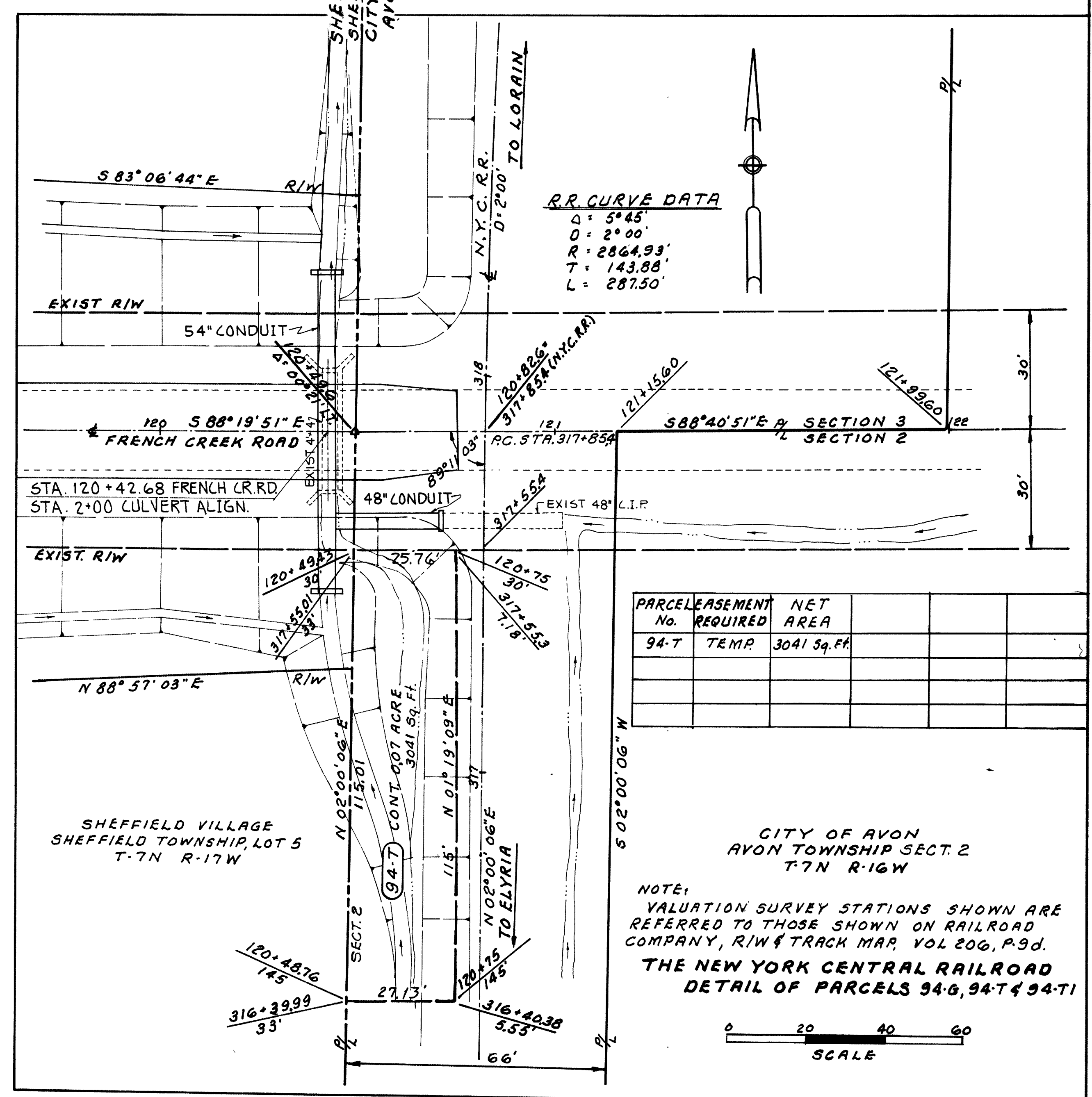
CITY OF AVON
AVON TOWNSHIP
SECTION 4
T.7N R.16W

REV.	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
	10/21	REV 112WD, ADDED 112B-WD, 112C-WD, 112D-WD, 112E-WD	8-17-66	I
J.R.Y.	11-2-67	ACCESS EASEMENT ADDED PAR. 112WD & 112B-WD		
J.R.Y.	2-10-69	Bearings, Distances, Call Outs, Par. 112WD, 112B-WD, 112C-WD, 112D-WD, 112E-WD. (Rev.)		

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY



CITY OF AVON
AVON TOWNSHIP
SECTION 4
T-7N R-16W



R.R. CURVE DATA
 $\Delta = 5^{\circ}45'$
 $D = 2^{\circ}00'$
 $R = 2864.93'$
 $T = 143.88'$
 $L = 287.50'$

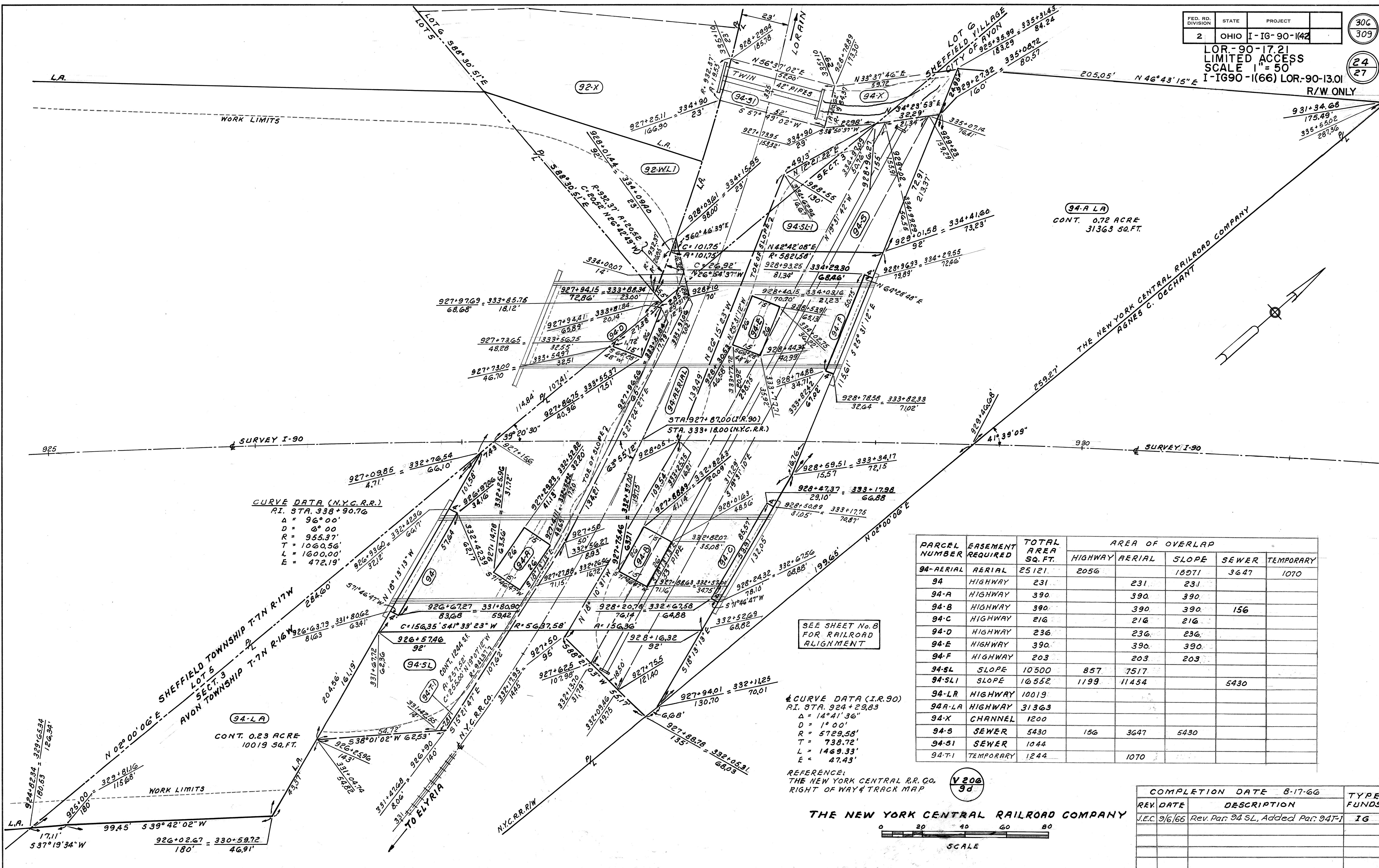
PARCELEMENT No.	REQUIREMENT	NET AREA
94-T	TEMP.	3041 Sq. Ft.

CITY OF AVON
AVON TOWNSHIP SECT. 2
T-7N R-16W

NOTE:
VALUATION SURVEY STATIONS SHOWN ARE REFERRED TO THOSE SHOWN ON RAILROAD COMPANY, R/W & TRACK MAP, VOL 206, P.9d.
THE NEW YORK CENTRAL RAILROAD
DETAIL OF PARCELS 94-6, 94-T & 94-T1



REV	DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
			8-17-66	I



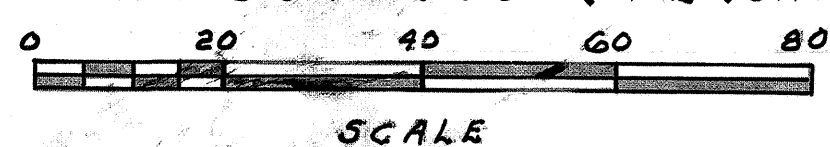
CURVE DATA (N.Y.C.R.R.)
 R.I. STA. 338+90.76
 Δ = 96° 00'
 D = 8' 00"
 R = 955.37'
 T = 1060.56'
 L = 1600.00'
 E = 472.19'

SEE SHEET No. 8
FOR RAILROAD
ALIGNMENT

CURVE DATA (I.R.90)
 R.I. STA. 924+29.83
 Δ = 14° 41' 36"
 D = 1' 00"
 R = 5729.58'
 T = 738.72'
 L = 1469.33'
 E = 47.43'

REFERENCE:
THE NEW YORK CENTRAL RR. CO.
RIGHT OF WAY & TRACK MAP

PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA SQ. FT.	AREA OF OVERLAP				
			HIGHWAY	AERIAL	SLOPE	SEWER	TEMPORARY
94-AERIAL	AERIAL	25121	2056		18071	3647	1070
94	HIGHWAY	231		231	231		
94-A	HIGHWAY	390		390	390		
94-B	HIGHWAY	390		390	390	156	
94-C	HIGHWAY	216		216	216		
94-D	HIGHWAY	236		236	236		
94-E	HIGHWAY	390		390	390		
94-F	HIGHWAY	203		203	203		
94-SL	SLOPE	10500		857	7517		
94-SL1	SLOPE	16552		1199	11454		5430
94-LR	HIGHWAY	10019					
94A-LA	HIGHWAY	31363					
94-X	CHANNEL	1200					
94-S	SEWER	5430	156		3647	5430	
94-S1	SEWER	1044					
94-T1	TEMPORARY	1244			1070		



COMPLETION DATE	8-17-66	TYPE FUNDS	IG
REV. DATE	9/6/66	DESCRIPTION	Rev. Par. 94 SL, Added Par. 94-T1
J.E.C.			

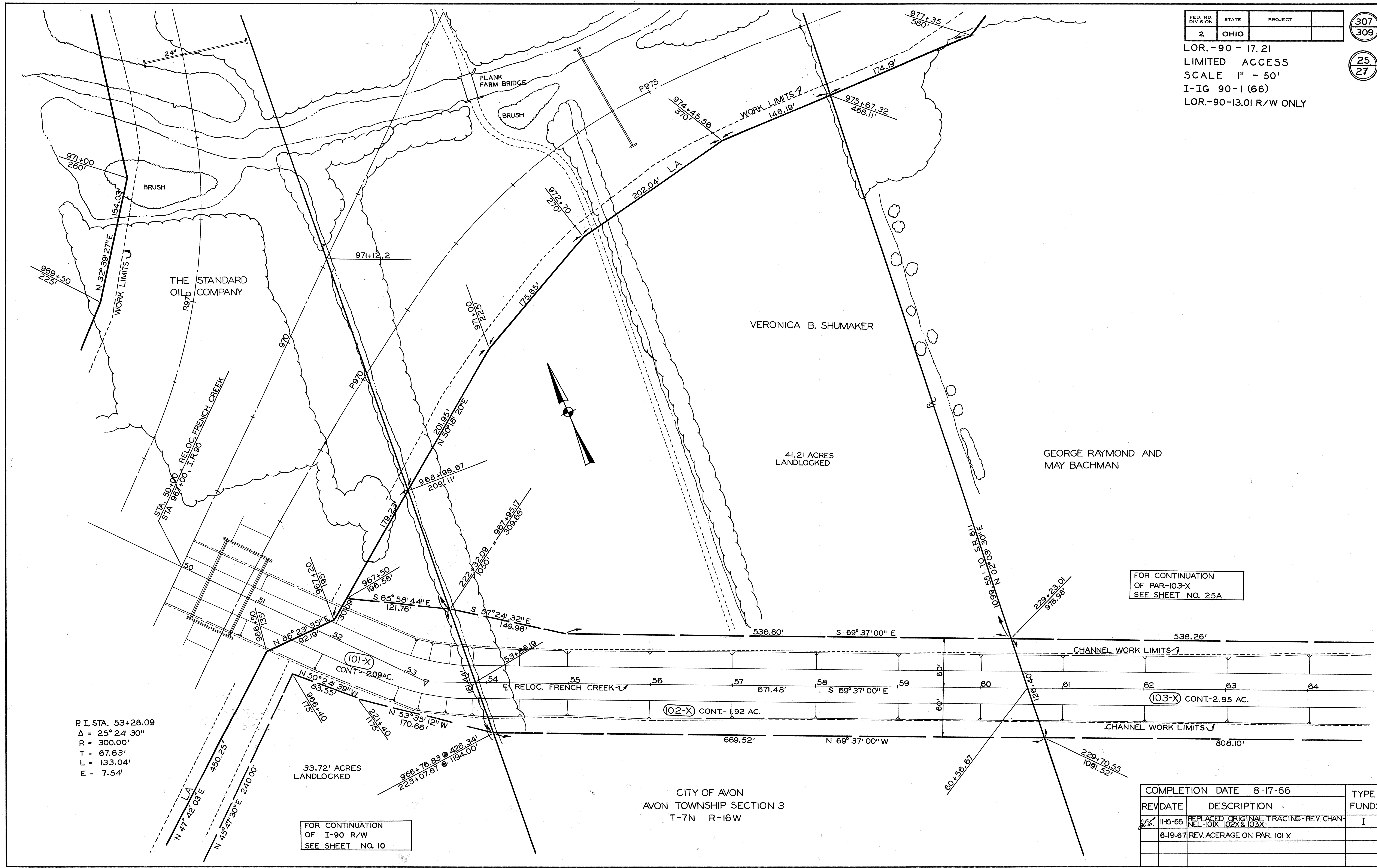
THE NEW YORK CENTRAL RAILROAD COMPANY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

307
309

25
27

LOR.-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG 90-1 (66)
LOR.-90-13.01 R/W ONLY



P.I. STA. 53+28.09
Δ = 25° 24' 30"
R = 300.00'
T = 67.63'
L = 133.04'
E = 7.54'

FOR CONTINUATION
OF I-90 R/W
SEE SHEET NO. 10

FOR CONTINUATION
OF PAR-103-X
SEE SHEET NO. 25A

CITY OF AVON
AVON TOWNSHIP SECTION 3
T-7N R-16W

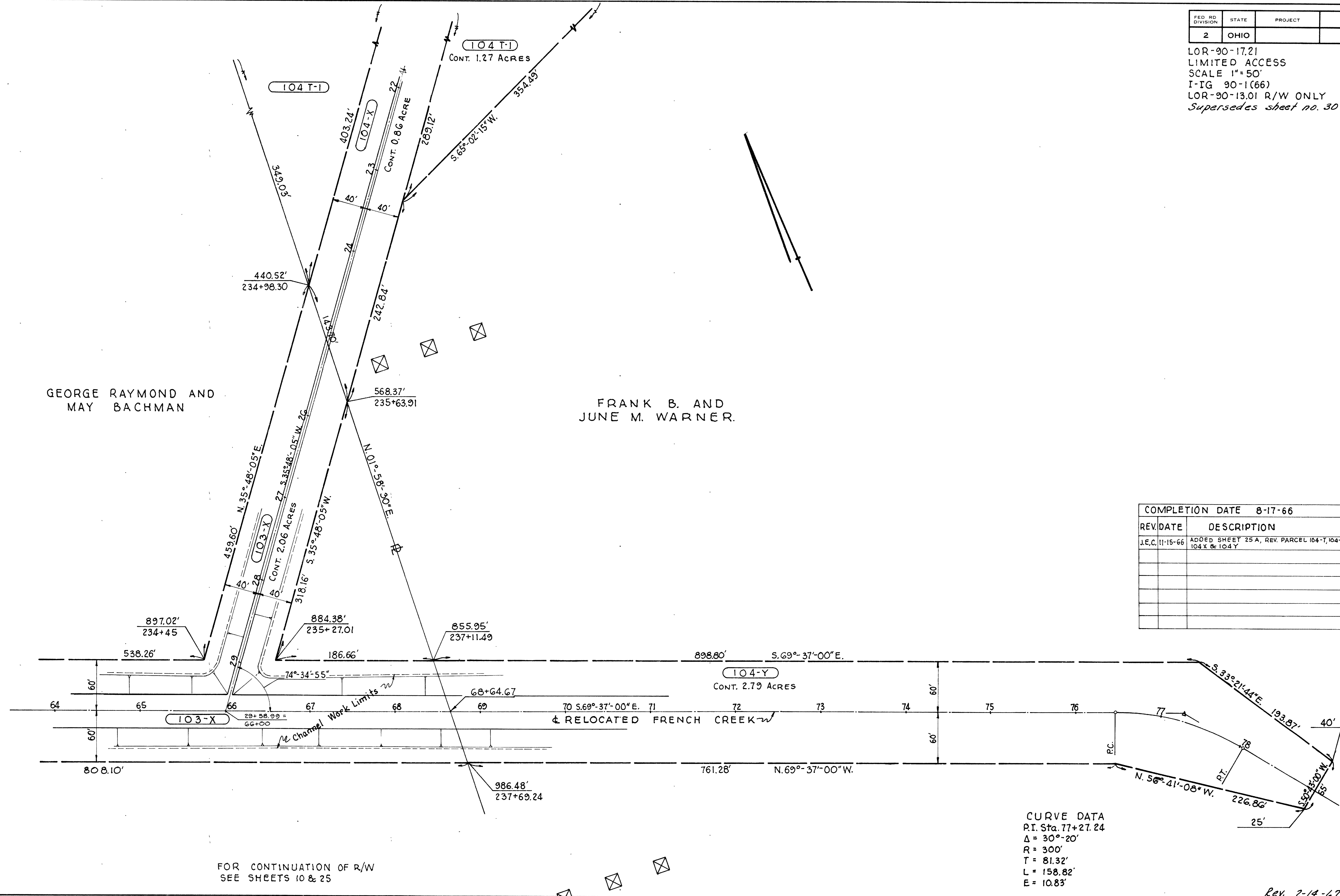
COMPLETION DATE	8-17-66	TYPE FUNDS
REV DATE	DESCRIPTION	
11-15-66	REPLACED ORIGINAL TRACING-REV. CHAN-NEL-101X, 102X & 103X	I
6-19-67	REV. ACERAGE ON PAR. 101 X	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

307A3
309

25A
27

LOR-90-17.21
LIMITED ACCESS
SCALE 1"=50'
I-IG 90-1(66)
LOR-90-13.01 R/W ONLY
Supersedes sheet no. 307



GEORGE RAYMOND AND
MAY BACHMAN

FRANK B. AND
JUNE M. WARNER.

REV. DATE	DESCRIPTION	COMPLETION DATE	TYPE FUNDS
J.E.C. 11-15-66	ADDED SHEET 25 A, REV. PARCEL 104-T, 104-Y, 104-X & 104-Y	8-17-66	I

CURVE DATA
P.I. Sta. 77+27.24
Δ = 30°-20'
R = 300'
T = 81.32'
L = 158.82'
E = 10.83'

FOR CONTINUATION OF R/W
SEE SHEETS 10 & 25

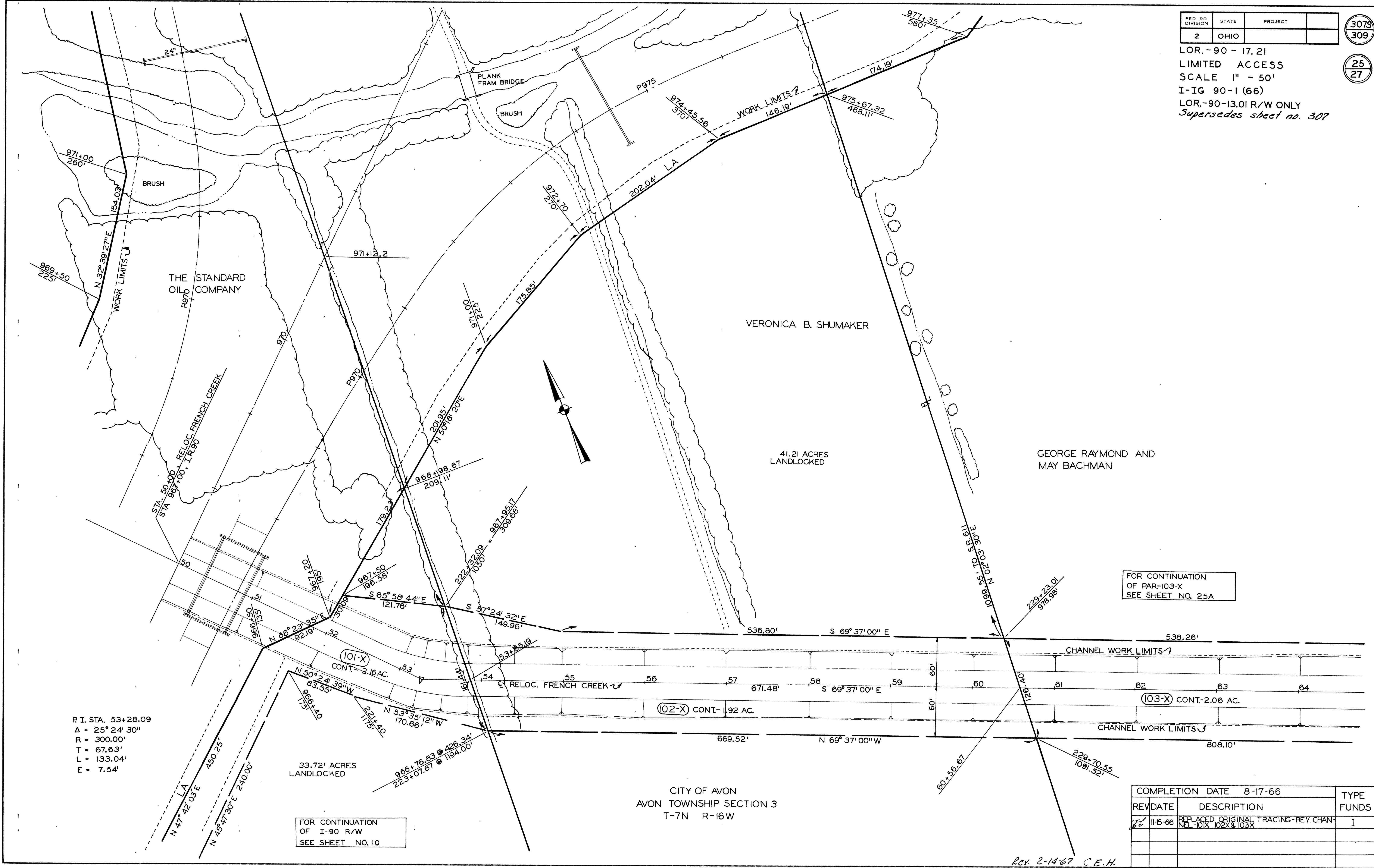
Rev. 2-14-67 C.E.H.

FED RD DIVISION	STATE	PROJECT
2	OHIO	

307S
309

25
27

LOR.-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG 90-1 (66)
LOR.-90-13.01 R/W ONLY
Supersedes sheet no. 307



FOR CONTINUATION
OF PAR-103-X
SEE SHEET NO. 25A

P.I. STA. 53+28.09
Δ = 25° 24' 30"
R = 300.00'
T = 67.63'
L = 133.04'
E = 7.54'

FOR CONTINUATION
OF I-90 R/W
SEE SHEET NO. 10

CITY OF AVON
AVON TOWNSHIP SECTION 3
T-7N R-16W

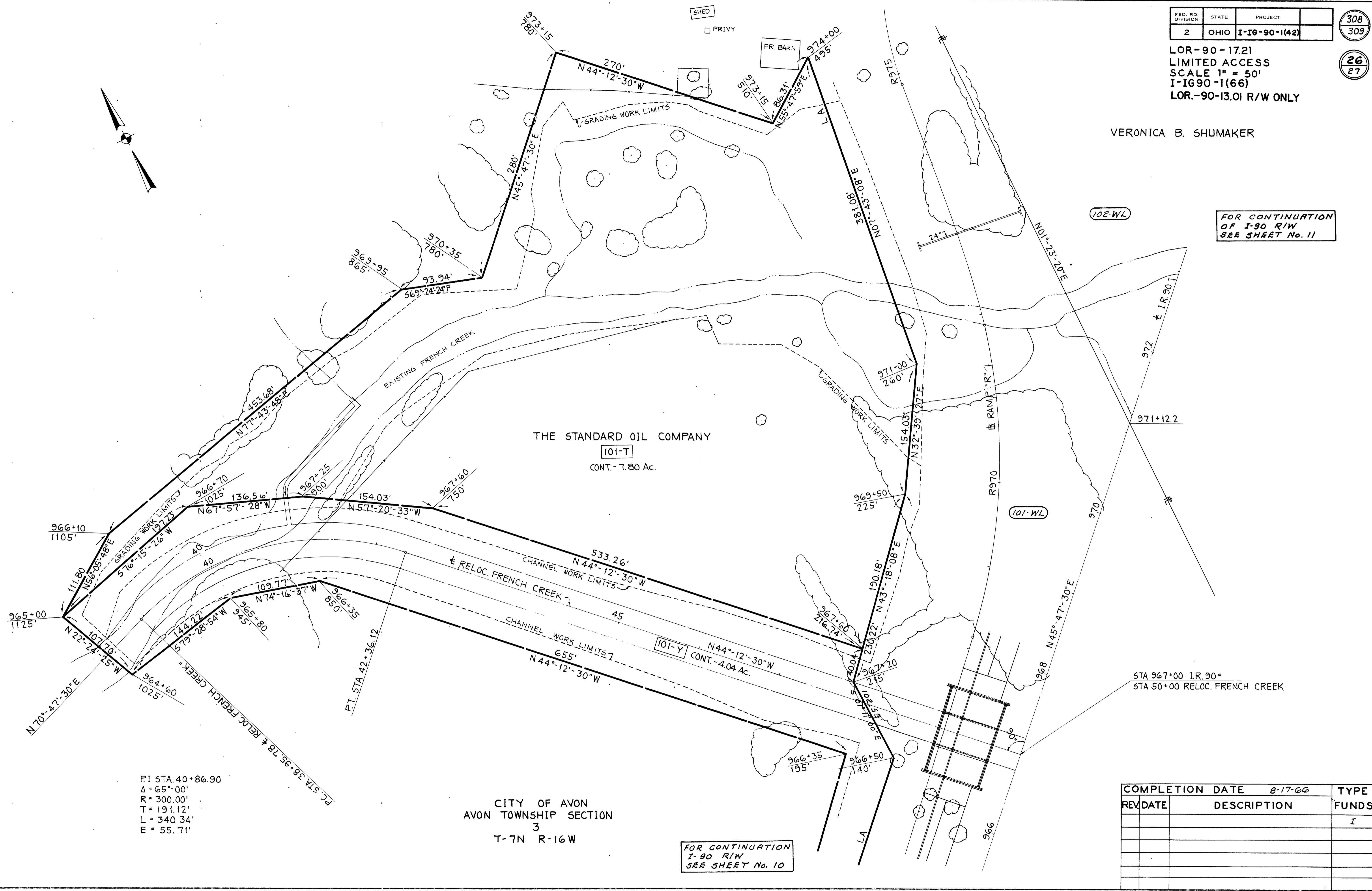
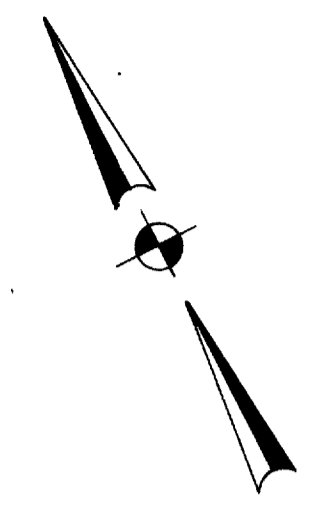
COMPLETION DATE	8-17-66	TYPE FUNDS
REV DATE	DESCRIPTION	
11-5-66	REPLACED ORIGINAL TRACING-REV. CHANNEL-101X, 102X & 103X	I

Rev. 2-14-67 C.E.H.

LOR-90-17.21
LIMITED ACCESS
SCALE 1" = 50'
I-IG90-1(66)
LOR.-90-13.01 R/W ONLY

VERONICA B. SHUMAKER

FOR CONTINUATION
OF I-90 R/W
SEE SHEET No. 11



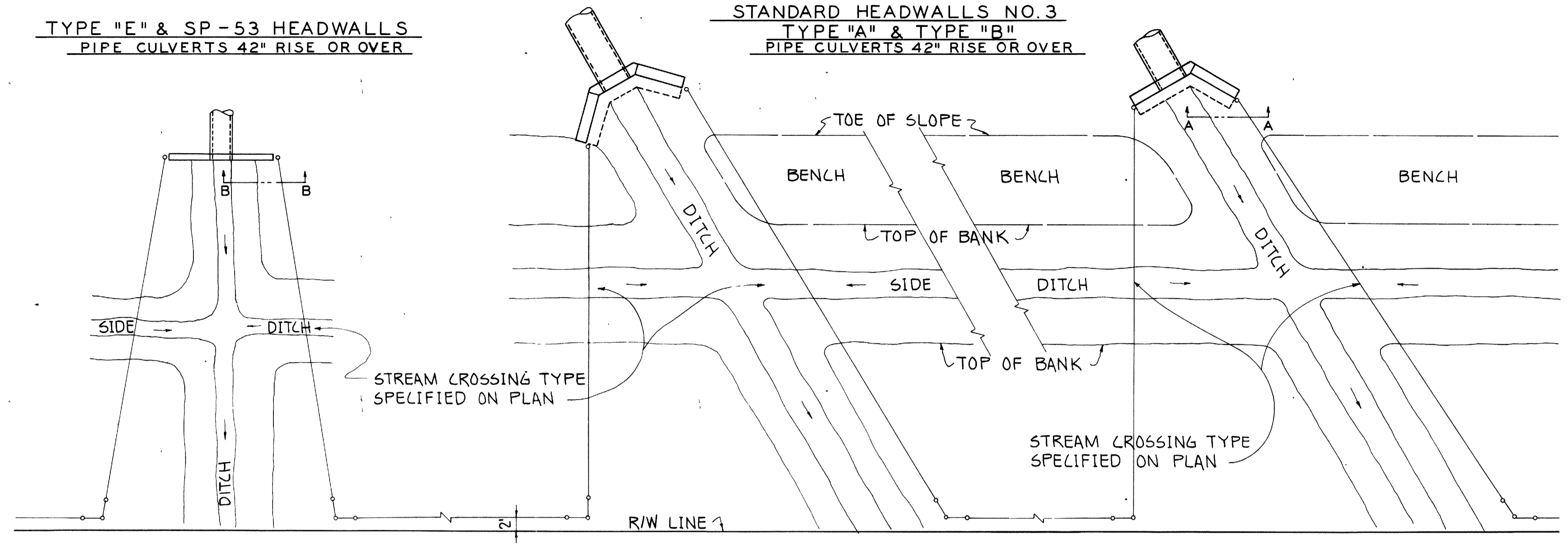
PI STA. 40+86.90
Δ = 65°-00'
R = 300.00'
T = 191.12'
L = 340.34'
E = 55.71'

CITY OF AVON
AVON TOWNSHIP SECTION
3
T-7N R-16W

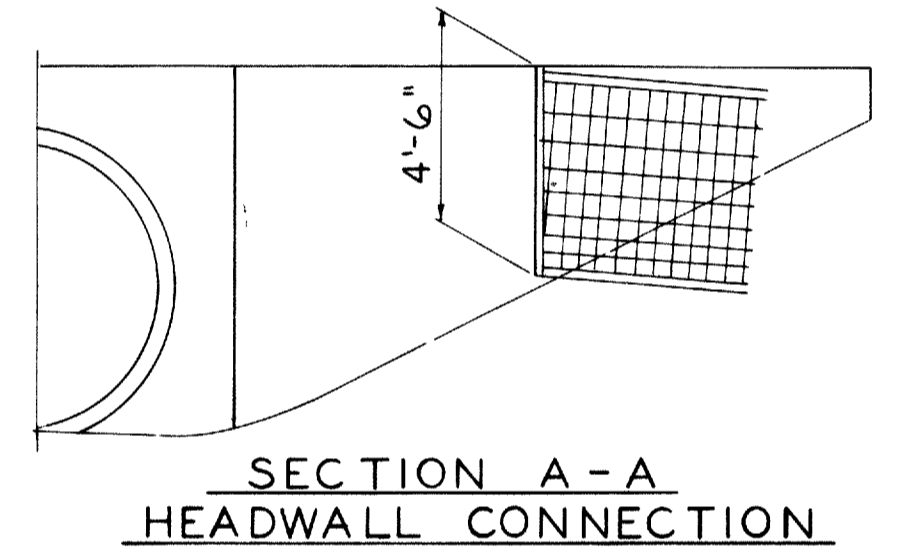
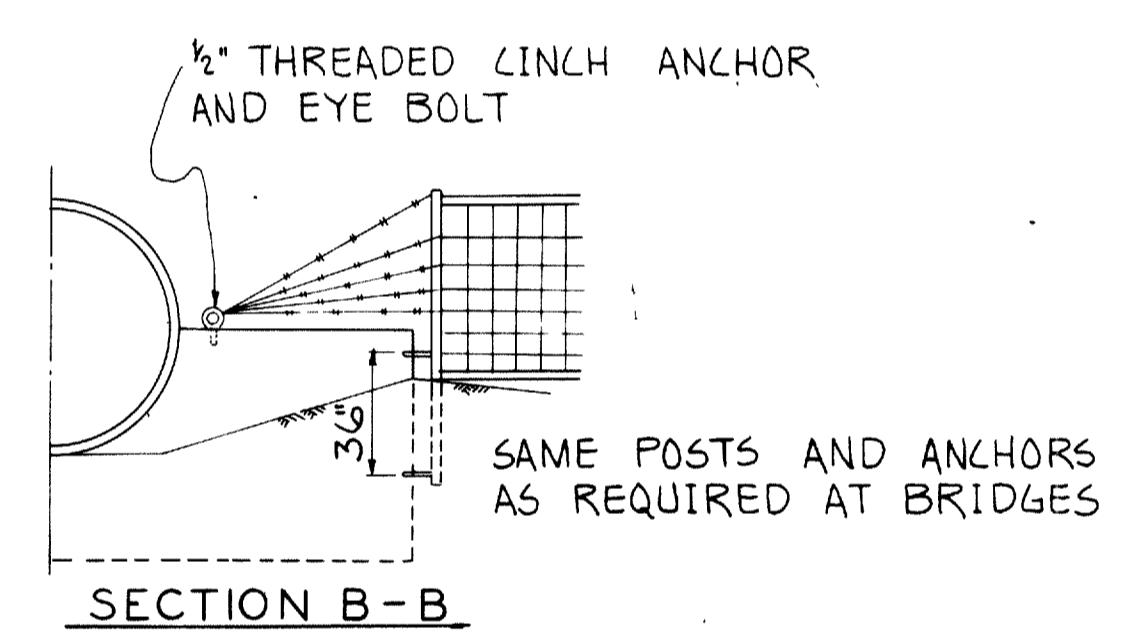
FOR CONTINUATION
I-90 R/W
SEE SHEET No. 10

REV	DATE	DESCRIPTION	COMPLETION DATE	TYPE	FUNDS
			8-17-66	I	

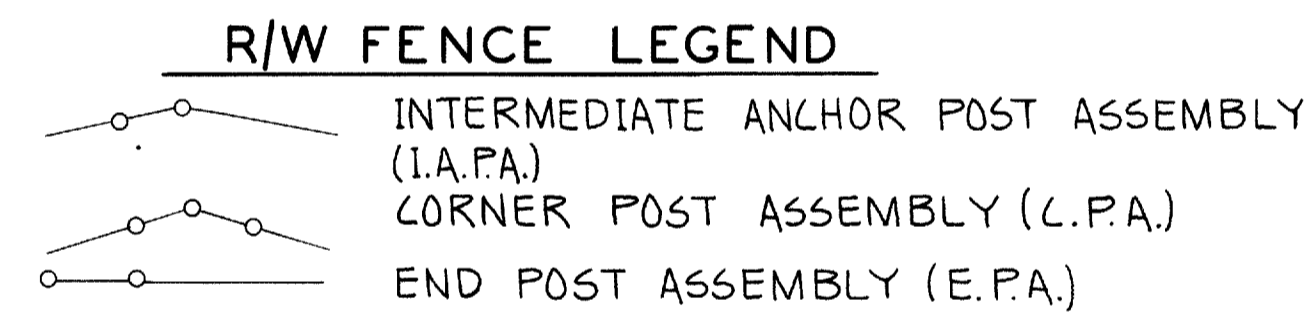
FENCE ARRANGEMENT AT PIPE CULVERTS



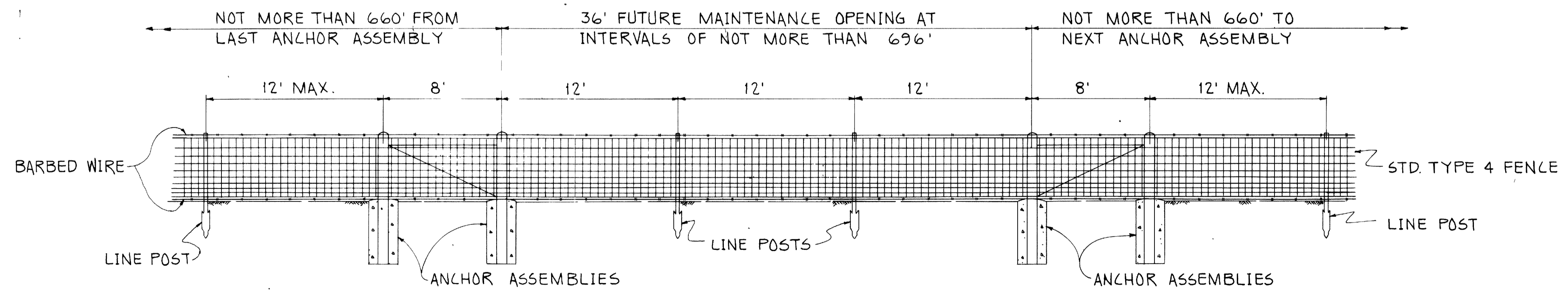
RIGHT OF WAY FENCE SUMMARY									
STATION	SIDE	LIN. FT.	TYPE	END POST ASSEMBLY	CORNER POST ASSEMBLY	INTERMED. ANCHOR POST	DUMPED ROCK CU YDS.	SHEET NO.	
PROJECT I-90-1(42)									
893+00 TO 895+00	LT.&RT.	400	47						5
895+00 TO 910+00	LT.&RT.	2997	47		5	3			6
910+00 TO 913+00	LT.&RT.	582	47			1			7
943+00 TO 955+00	LT.&RT.	2400	47			4			9
955+00 TO 970+00	LT.&RT.	3040	47		5	6			10
970+00 TO 985+00	LT.&RT.	1582	47		8	1			11
985+00 TO 1000+00	LT.&RT.	3094	47		7	6			12
1000+00 TO 1015+00	LT.&RT.	3027	47		4	5			13
1015+00 TO 1030+00	LT.&RT.	3043	47		4	4			14
1030+00 TO 1037+50	LT.&RT.	1540	47	2	4	1			15
S.R. 611									
212+00 TO 216+00	LT.&RT.	655	47	2		1			18
216+00 TO 231+00	LT.&RT.	1808	47		6				19
231+00 TO 232+64	LT.&RT.	322	47	2	1				20
TOTAL I-90-1(42)		24,490		6	44	32			
PROJECT I6-90-1(42)									
913+00 TO 925+00	LT.&RT.	2406	47			6			7
925+00 TO 940+00	LT.&RT.	3022	47		9	2			8
940+00 TO 943+00	LT.&RT.	605	47		3	1			9
TOTAL I6-90-1(42)		6033			12	9			
TOTAL THIS SHEET		30,523		6	56	41			



PROVIDE SAME POSTS AND ANCHORS AS FOR CONNECTION TO ABUTMENTS LOCATE AT POINT OF 54" CLEARANCE



FOR ADDITIONAL DETAILS STANDARD DRAWINGS



FUTURE MAINTENANCE OPENING

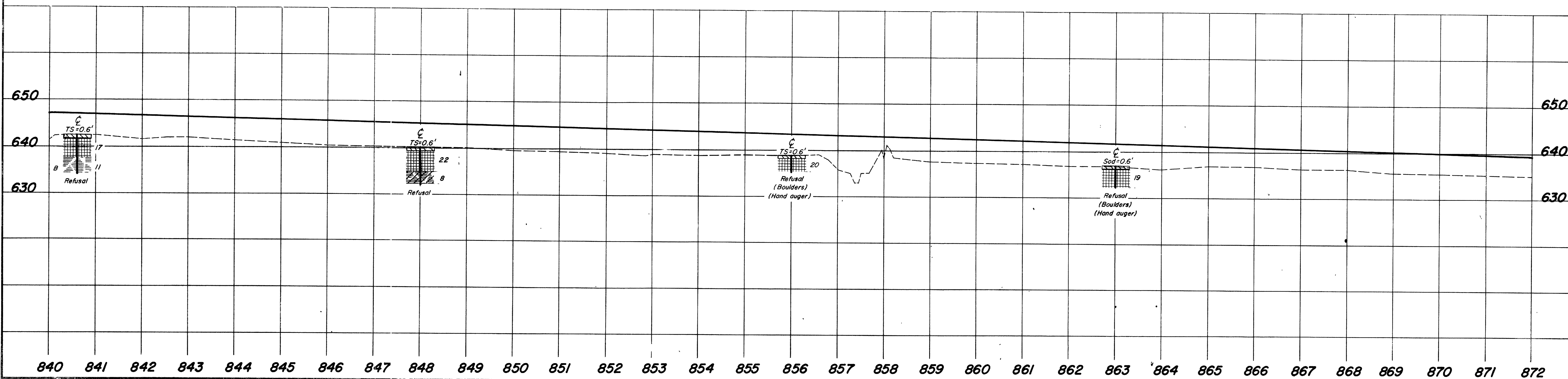
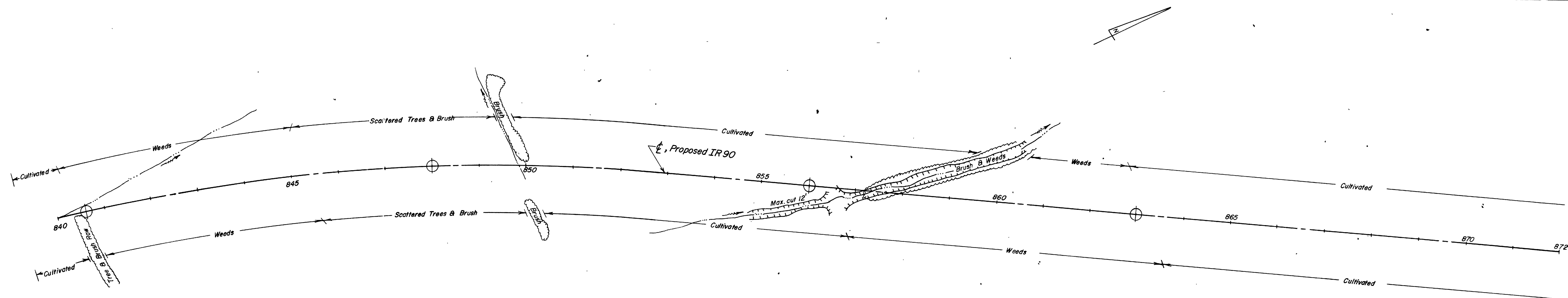
AT LOCATIONS WHERE CHANNELS ARE LOCATED IN CHANNEL EASEMENTS AND FENCING IS PROVIDED BETWEEN THE CHANNEL AND A FREEWAY, AT LEAST ONE MAINTENANCE OPENING SHALL BE PROVIDED AS INDICATED ABOVE, AND OTHERS AT INTERVALS OF 696 FEET IN THE LENGTH OF THE PARALLEL CHANNEL EXCEEDS 1800 FEET.

SEE STANDARD CONSTRUCTION DRAWING NO. F-4 FOR DETAILS OF ANCHOR ASSEMBLIES

SOIL PROFILE
 LORAIN COUNTY
 LOR-IR90-17.21

2
 21

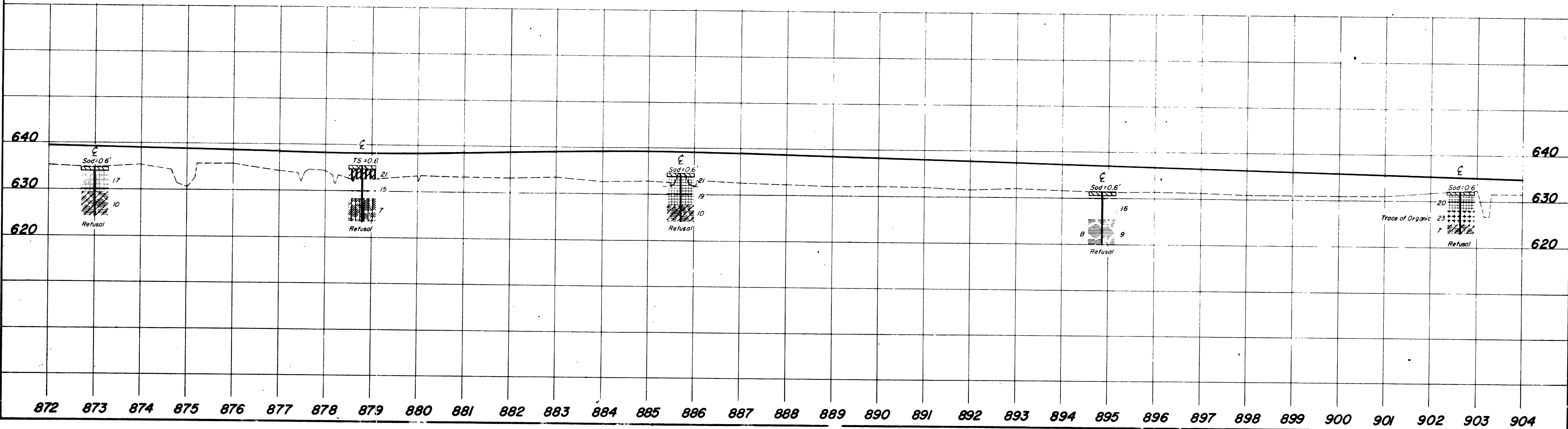
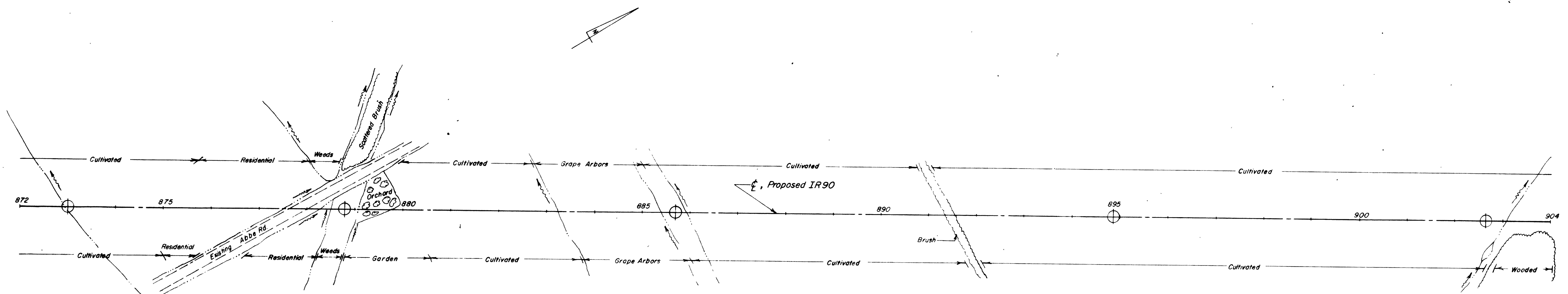
OHIO STATE HIGHWAY TESTING LABORATORY
 1620 W BROAD ST COLUMBUS 23 OHIO



SOIL PROFILE
LORAIN COUNTY
LOR-IR90-17.21

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21

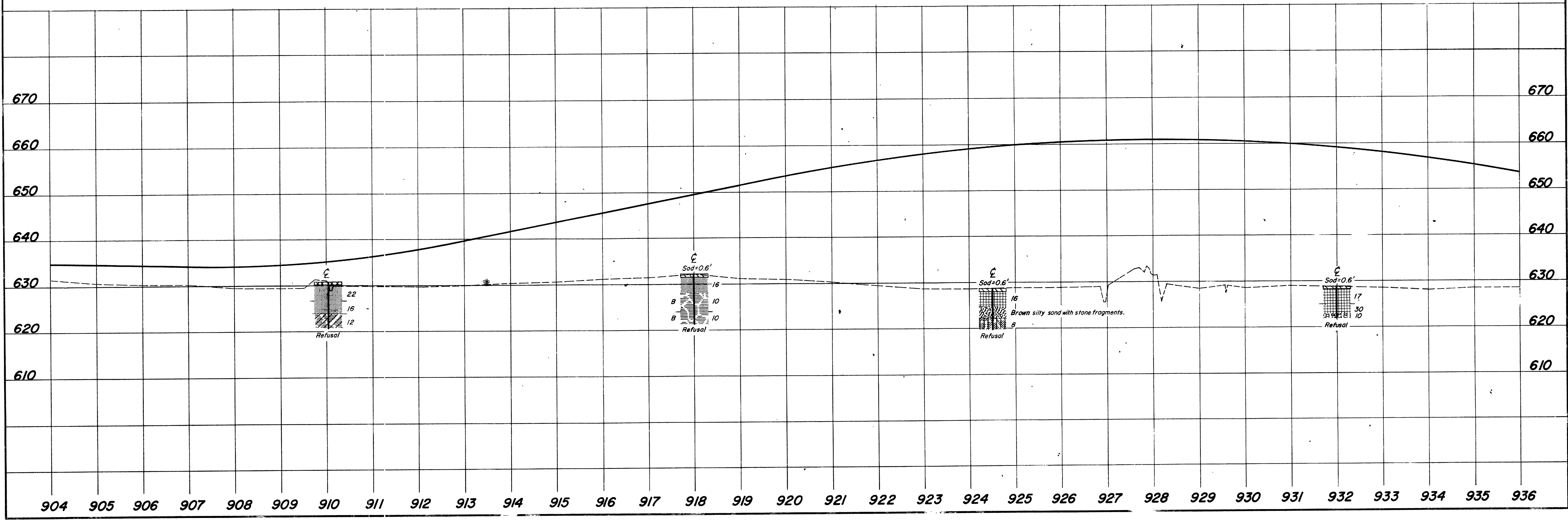
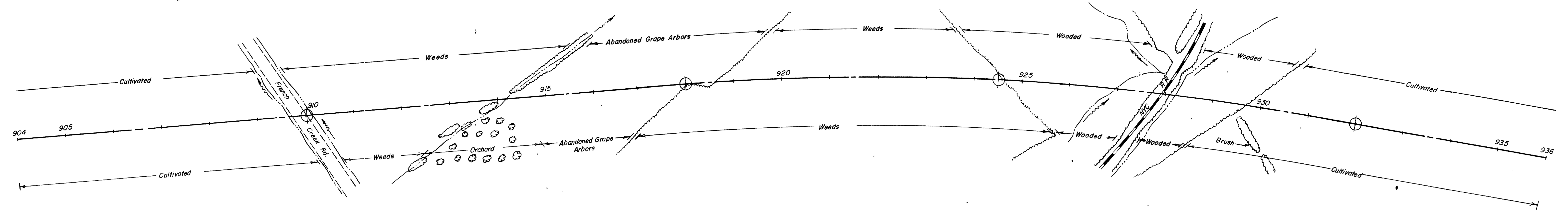
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BRAD ST. COLUMBUS, 23 OHIO



SOIL PROFILE
LORAIN COUNTY
LOR-IR90-17.21

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21

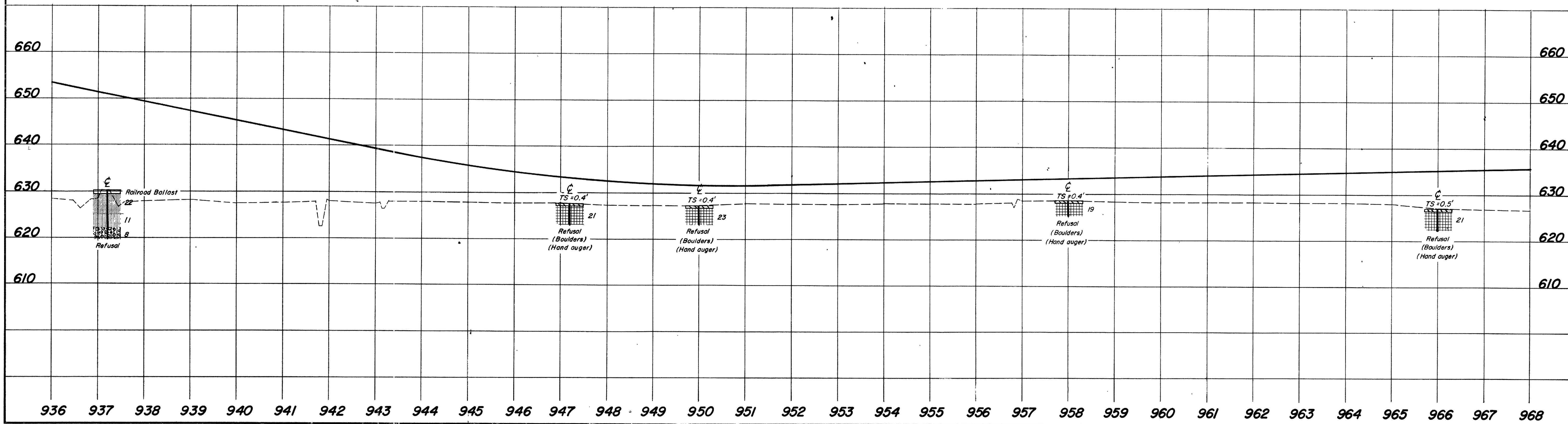
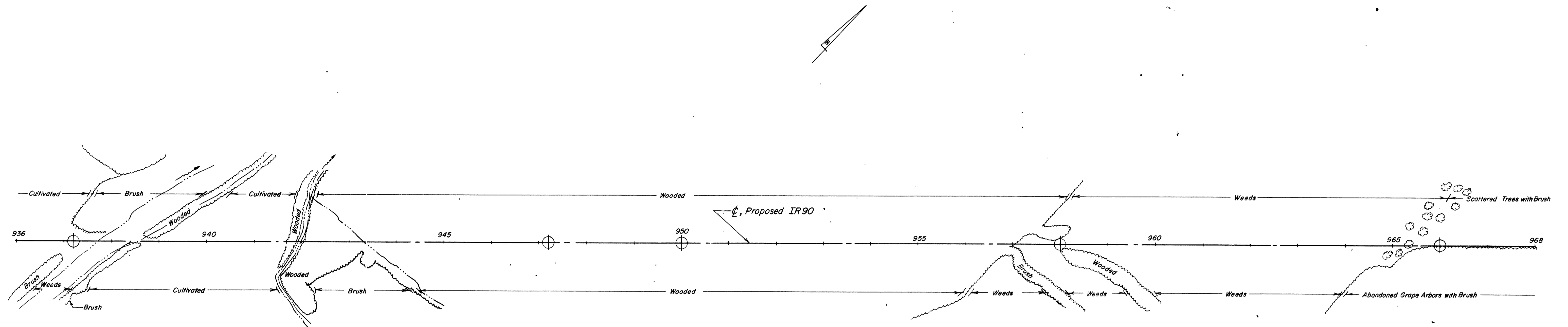
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23 OHIO

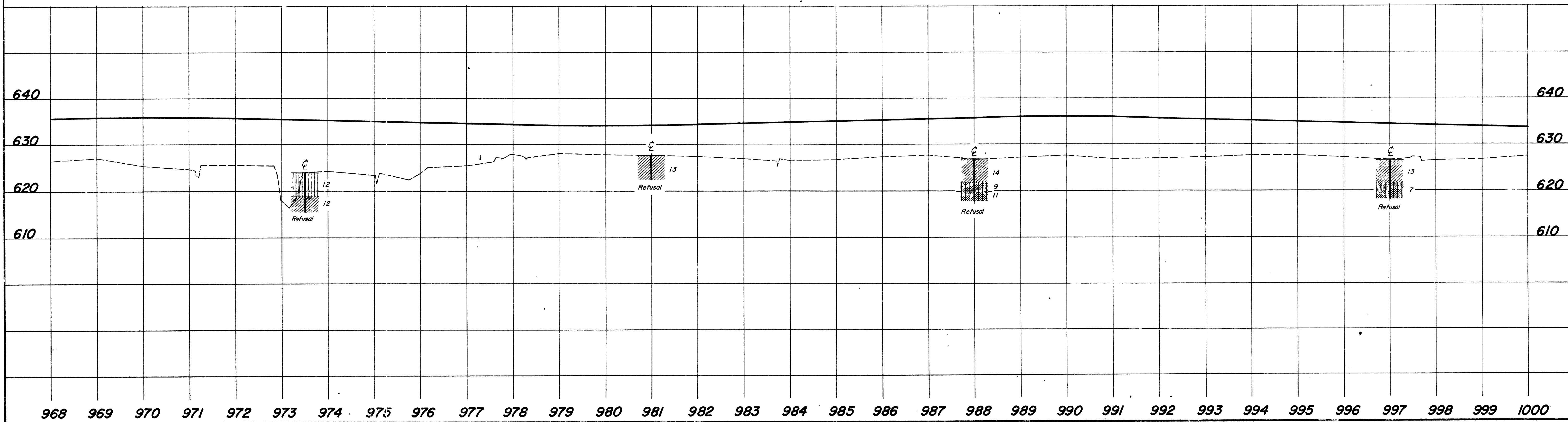
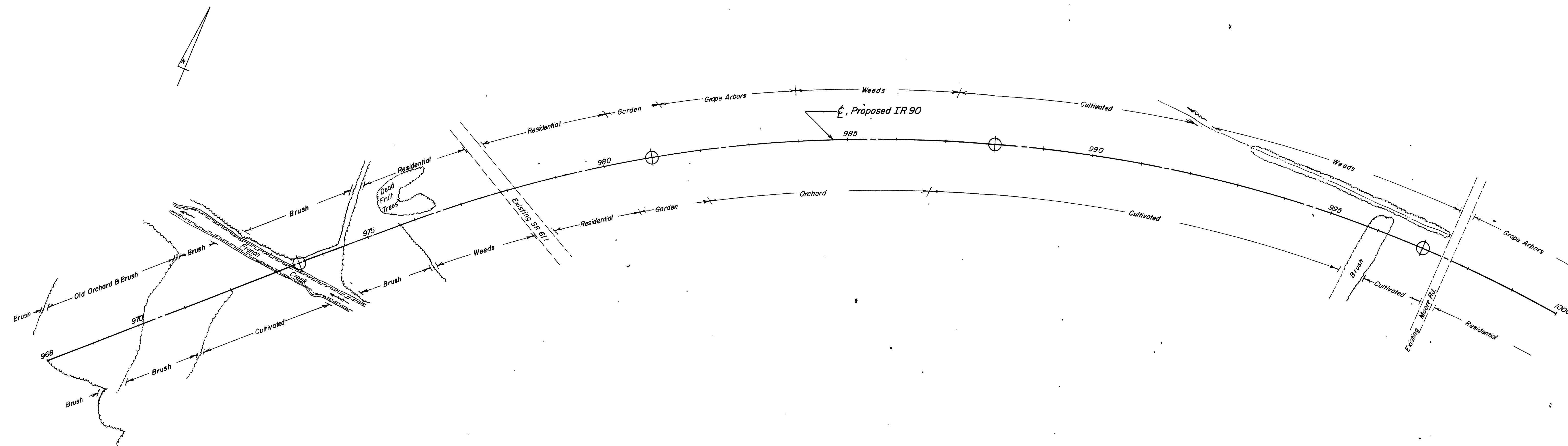


SOIL PROFILE
 LORAIN COUNTY
 LOR-IR90-17.21

5
 21

OHIO STATE HIGHWAY TESTING LABORATORY
 1620 W BROAD ST COLUMBUS 23, OHIO

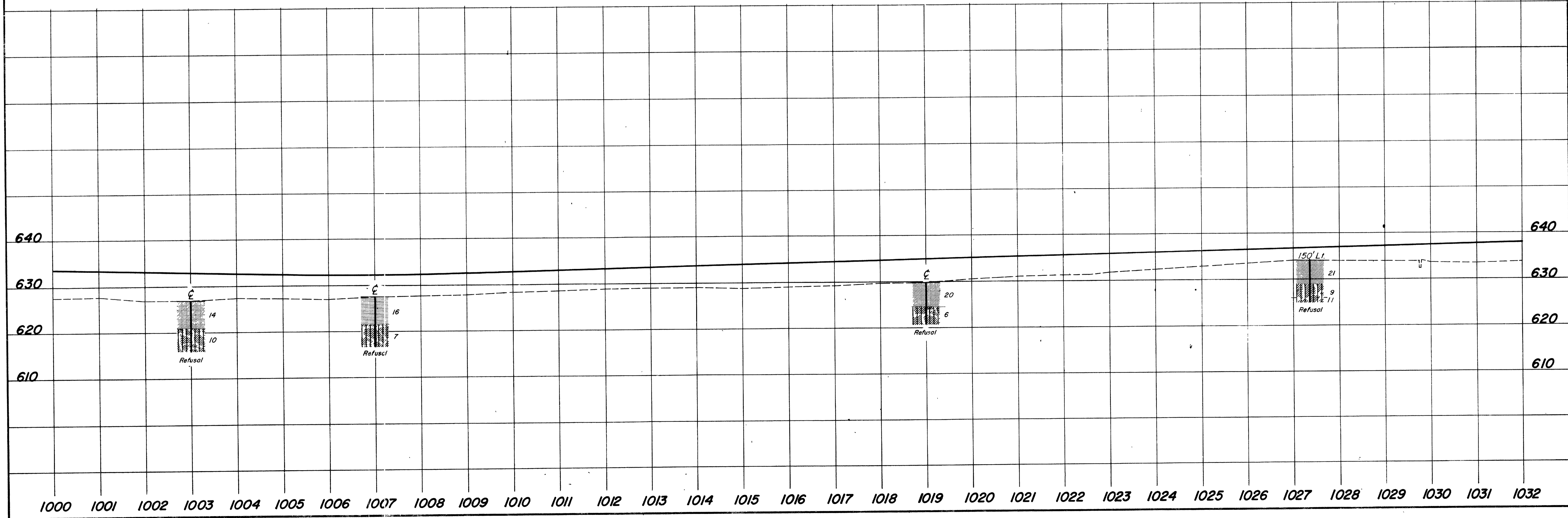
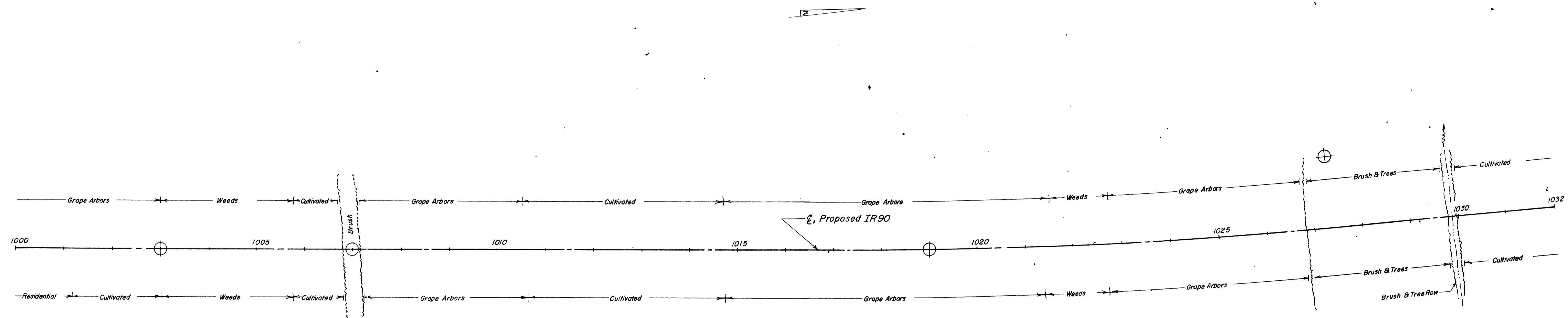




SOIL PROFILE
LORAIN COUNTY
LOR-IR90-17.21

7
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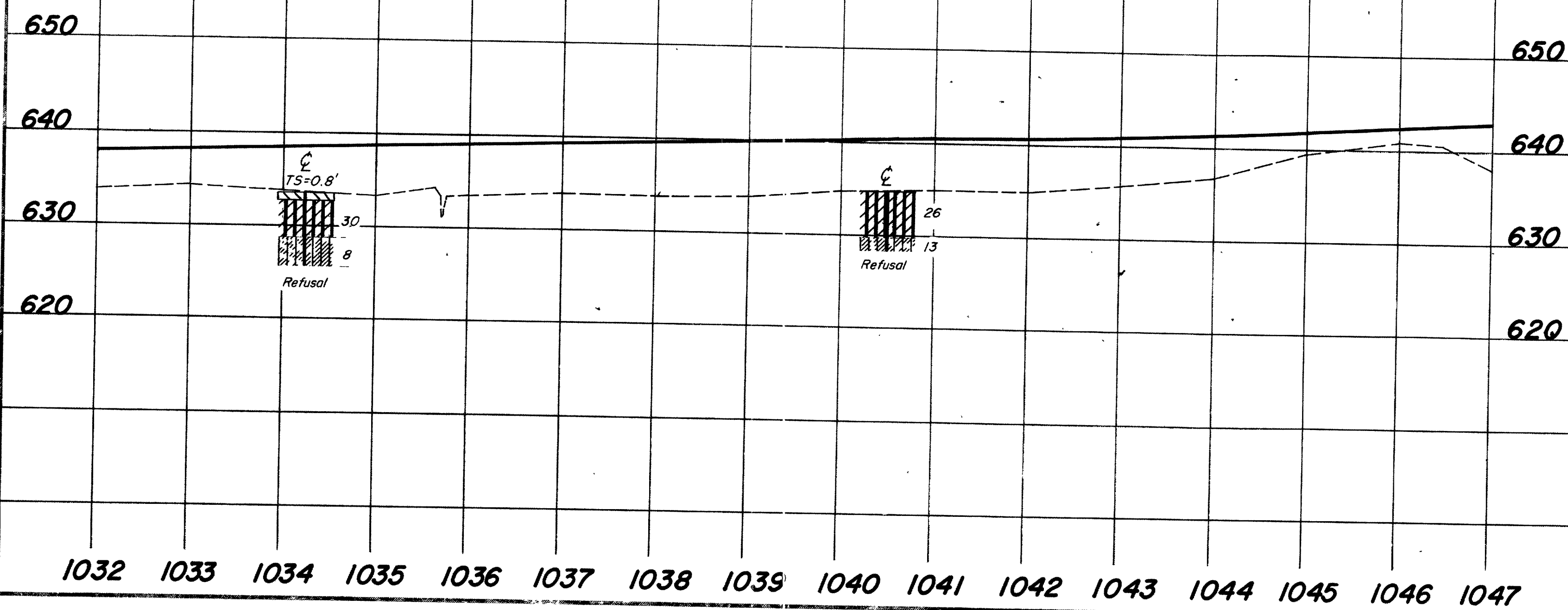
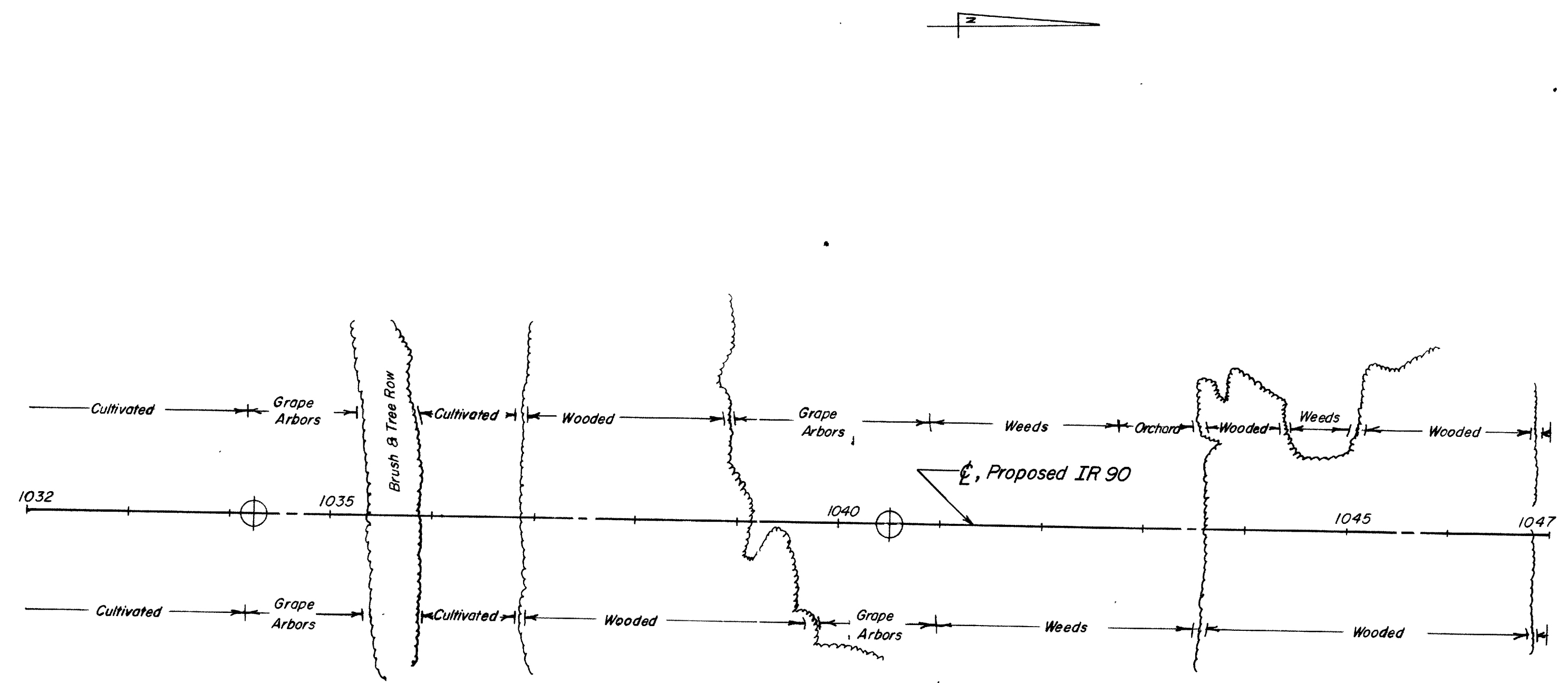
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD COLUMBUS 23 OHIO



SOIL PROFILE
 LORAIN COUNTY
 LOR-IR90-17.21

8
 21

OHIO STATE HIGHWAY TESTING LABORATORY
 1620 W BROAD ST COLUMBUS 23, OHIO



GEOLOGY AND OBSERVATIONS OF THE SITE

The structure site is located on the relatively flat glaciated Lake Plain, in an area where lacustrine and beach deposits overlie shale bedrock, of Lower Mississippian and Upper Devonian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings and five drive rod penetration tests, made between November 16 and 18, 1964.

INVESTIGATIONAL FINDINGS

The borings disclosed that relatively flat-lying shale bedrock surface, encountered at 10 and 12 feet below ground surface, elevations 620 and 619 feet, is overlain by dense to very dense clayey, sandy silt and stiff clay. The borings were terminated 13 and 15 feet below bedrock surface, at elevations 606 and 605 feet.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with near-refusal to penetration at 8 and 9-foot depths, elevation 622 feet, considered to be in the dense materials above bedrock surface, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test.
X = Number of Blows for First 6 Inches.
Y = Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance " R " $<$ 10,000 lbs.
- Resistance " R " $>$ 10,000 lbs.
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.

- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests of other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

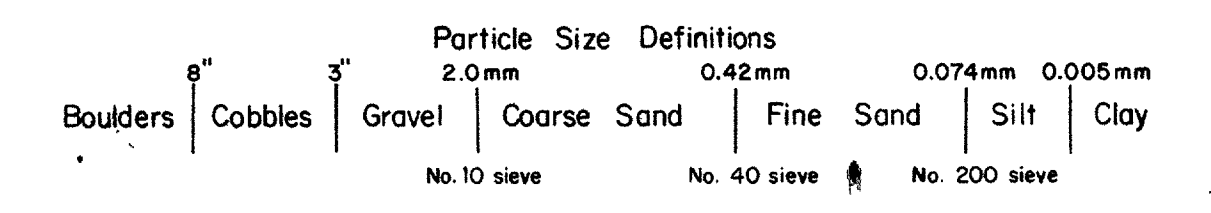
Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING

Date Started 11-17-64 Sampler Type SB Dia. 1 3/8" Water Elev. _____
 Date Completed 11-18-64 Casing Length _____ Dia. _____
 Boring No. B-1 Station & Offset 112+52, 13' 2" (FORWARD PIER) Surface Elev. 639.8'

Elev.	Depth	Std. Pen. (bl)	Rec. R.	Loss R.	Description	Sample No.	Physical Characteristics							SMTL. Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.		
639.2	0																
627.7	2																
625.2	4	4/5			Mottled Brown and Gray Gravelly Clay	1	27	1	4	36	32	41	14	24			
622.7	6	11/11			Grayish-Brown Gravelly Silt, Trace of Organic	2	32	3	6	37	28	28	5	26			
620.2	8	30/4			Gray Silty Sand and Shale Fragments	3	36	16	8	24	16	25	3	15			
620.2	10				TOP OF ROCK												
	12		3.8	1.2	Shale, black, carbonaceous, fissile, firm, beddy broken, jointed, and with many thick clay seams (Maximum 0.8") in top 11.0'. Core loss 21%.												
	14																
	16																
	18		3.7	1.3													
	20																
	22																
	24		4.3	0.7													
608.2	24				BOTTOM OF BORING												

LOG OF BORING

Date Started 11-18-64 Sampler Type SB Dia. 1 3/8" Water Elev. _____
 Date Completed 11-18-64 Casing Length _____ Dia. _____
 Boring No. B-2 Station & Offset 112+52, 13' 2" (FORWARD PIER) Surface Elev. 631.1'

Elev.	Depth	Std. Pen. (bl)	Rec. R.	Loss R.	Description	Sample No.	Physical Characteristics							SMTL. Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.		
631.1	0																
628.6	2																
626.1	4	5/7			No Sample Recovered - Brown Silty Clay												
623.6	6	7/9			Mottled Brown and Gray Silt and Clay	1	0	2	6	25	67	40	15	21			
621.1	8	17/40			Brown and Gray Sandy Gravelly Silt	2	20	10	13	26	23	23	6	13			
618.1	10	30/40			Dark-Gray Silty Sand & Carbonaceous Shale Fragments	3	47	19	8	15	11	25	5	13			
	12				TOP OF ROCK												
	14		1.4	1.6	Shale, black, carbonaceous, poorly fissile, firm, jointed and broken in part, with clay seams. Core loss 19%.												
	16																
	18		4.3	0.7													
	20																
	22																
	24		4.8	0.2													
606.1	24				BOTTOM OF BORING												

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

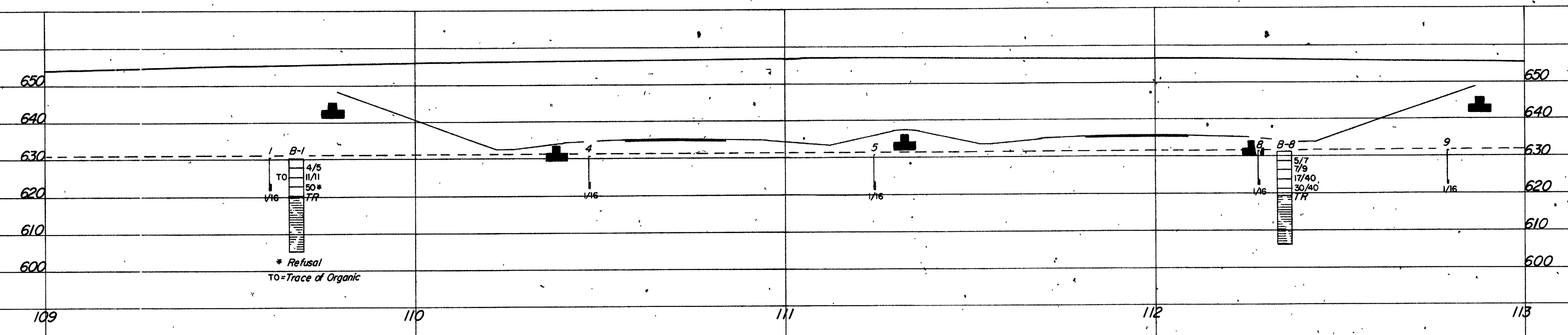
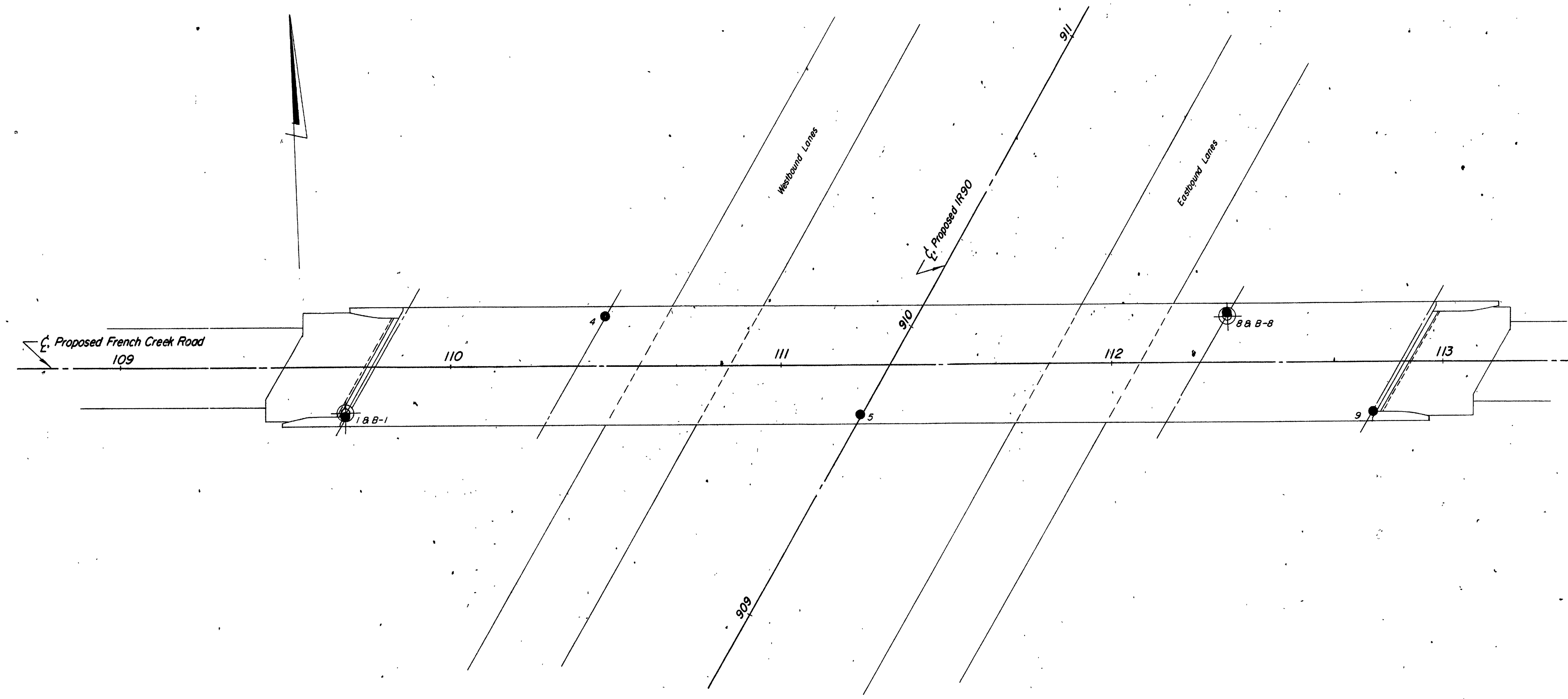
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR90-1754
UNDER FRENCH CREEK ROAD
SEC. LOR-IR90-16.21

CHECKED BY L.N.L.	REVIEWED BY R.D.R.	DATE 12/4/64
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APR 23 1964

LOR-IR90-17.21

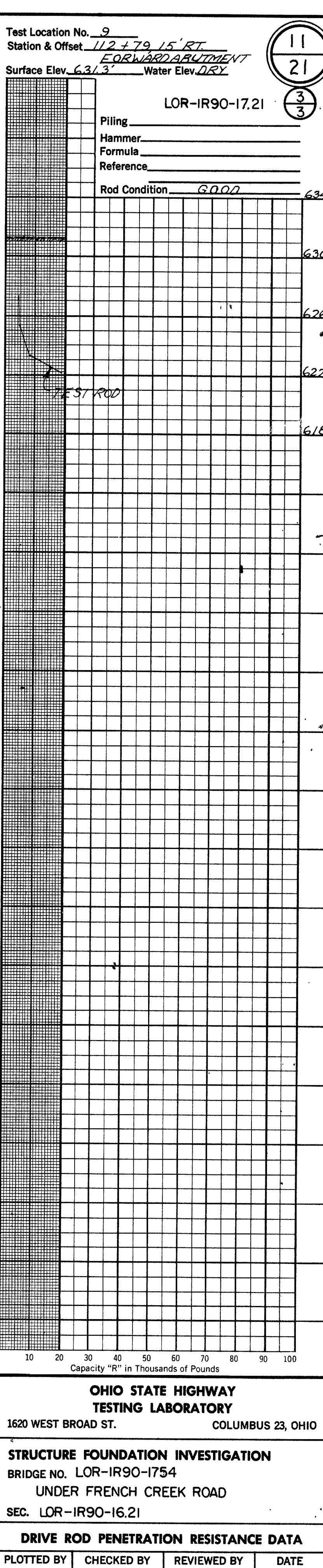
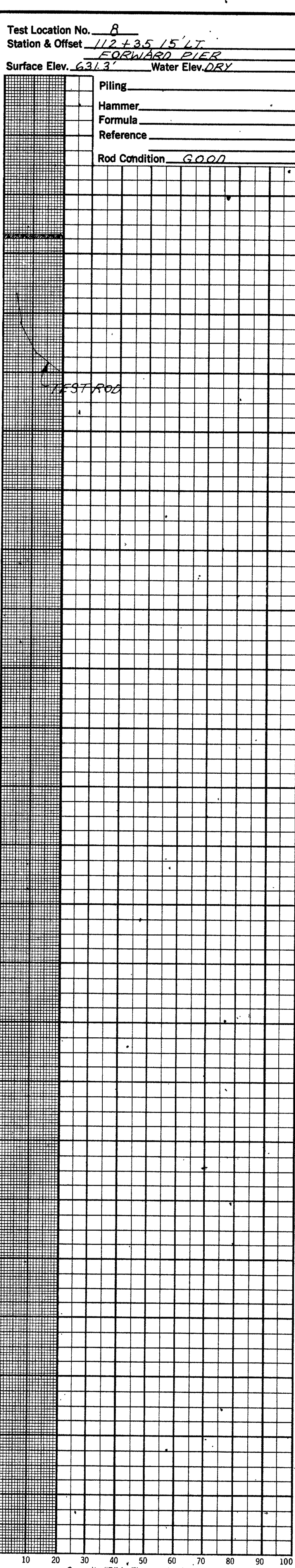
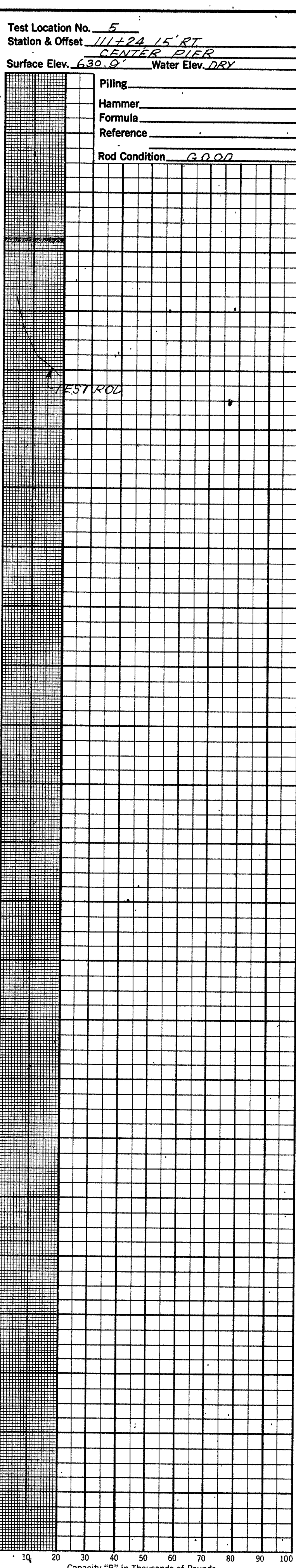
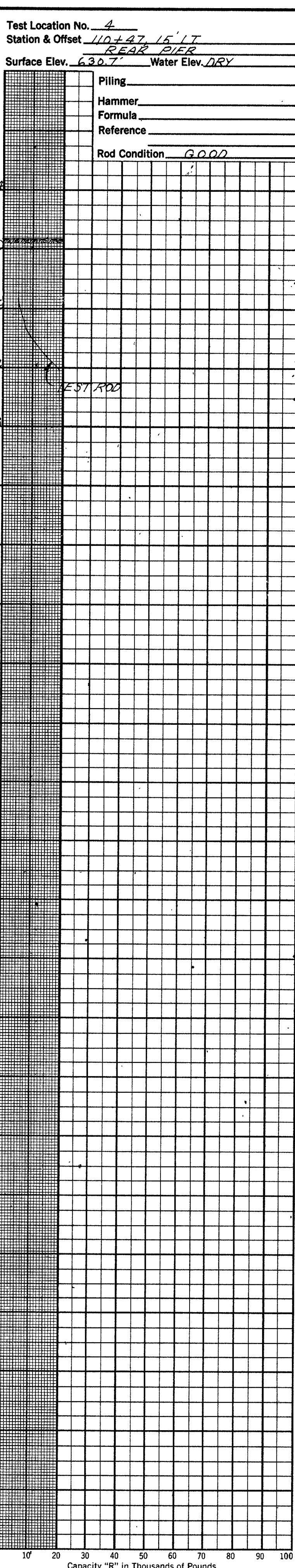
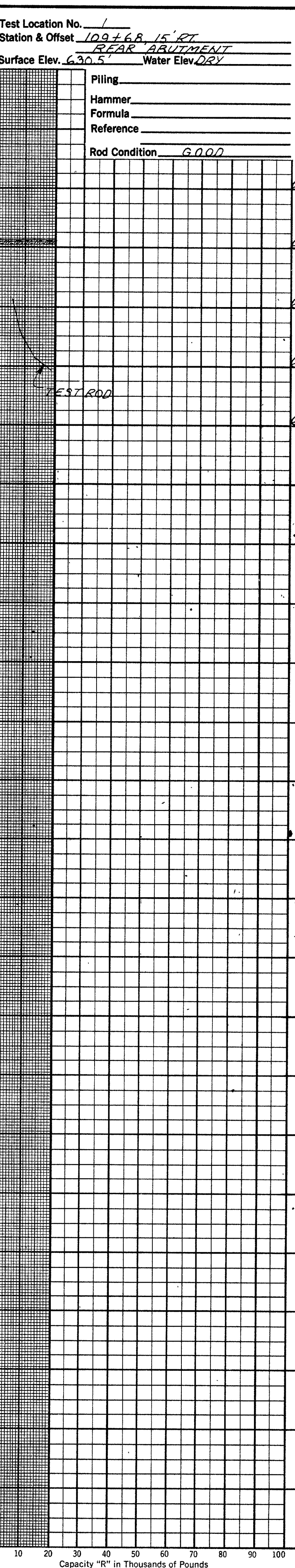
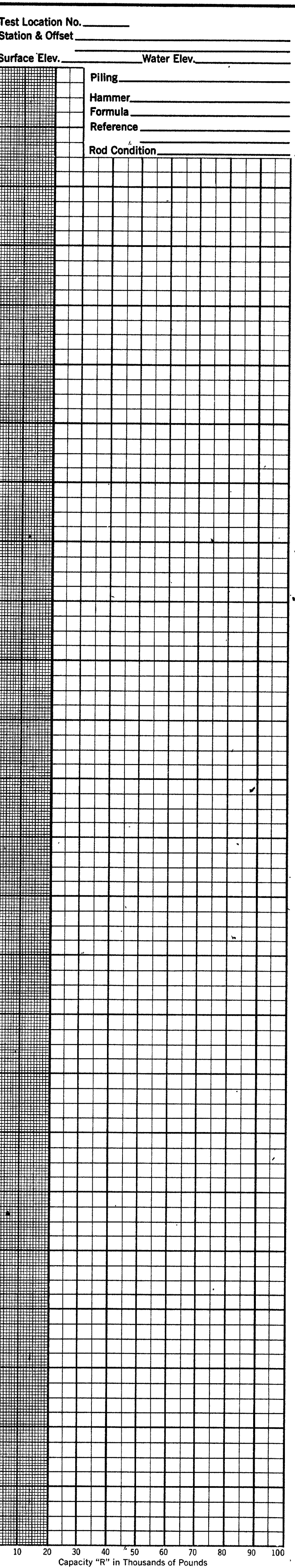
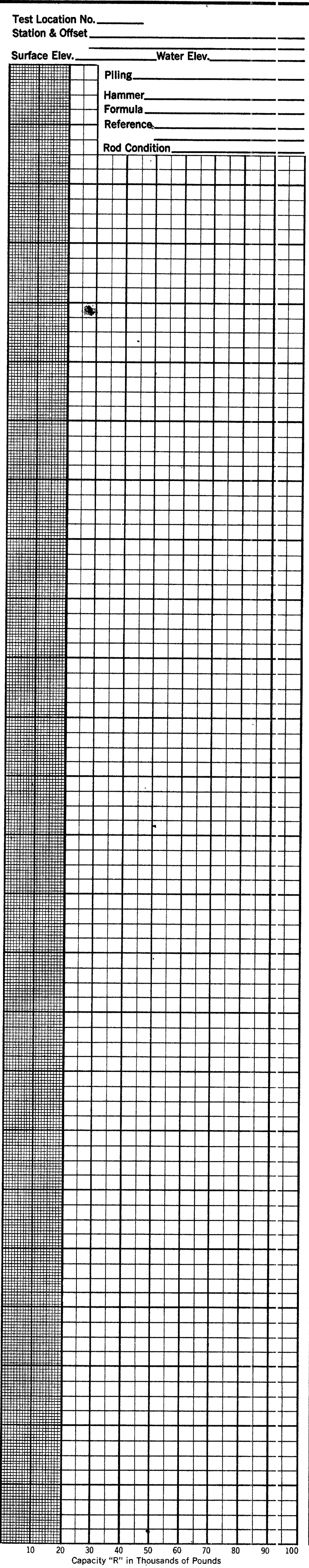
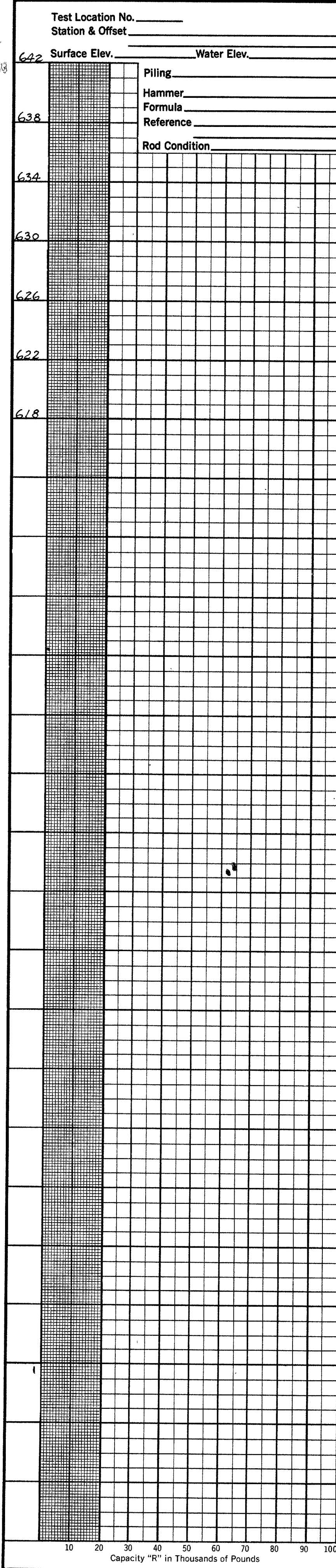
10
21
2
3



OHIO STATE HIGHWAY TESTING LABORATORY 1620 WEST BROAD ST., COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. LOR-IR90-1754 UNDER FRENCH CREEK ROAD SEC. LOR-IR90-16.21			
PLAN AND PROFILE			
DRAWN BY R.L.C.	CHECKED BY L.N.L.	REVIEWED BY R.D.R.	DATE 12/4/64

SCALE: 1" = 20'

APR 2 1964



11
21
3
3

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR90-1754
UNDER FRENCH CREEK ROAD
SEC. LOR-IR90-16.21

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R.C.	CHECKED BY L.N.L.	REVIEWED BY R.D.R.	DATE 12/4/64
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APR 83

GEOLOGY OF THE SITE

The structure site is located on the relatively flat glaciated Lake Plain, in an area where lacustrine and beach deposits overlie shale bedrock, of Lower Mississippian and Upper Devonian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings, made on December 2 and 3, and sixteen drive rod penetration tests, made on November 17 and 18, 1964.

INVESTIGATIONAL FINDINGS

The borings disclosed that sloping shale bedrock surface, encountered at 14 and 20 feet below ground surface, elevations 613 and 609 feet, is overlain by dense to very dense gravelly sandy silts and stiff clay. The borings were terminated 18 and 16 feet below bedrock surface, at elevations 599 feet.

Red soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with near-refusal and refusal to penetration at 2 to 10-foot depths, elevations 628 to 613 feet, considered to be in the dense materials above bedrock surface, as revealed by the borings.

No free water was observed in any of the red sounding holes.

LEGEND

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale

SYMBOLS OF ROCK TYPES

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test.
X = Number of Blows for First 6 Inches.
Y = Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance " R " $< 10,000$ lbs.
- Resistance " R " $> 10,000$ lbs.
- Indicates Final Measurement of Penetration, in Inches.
- Indicates Free Water Elevation.
- Indicates Static Water Elevation.
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

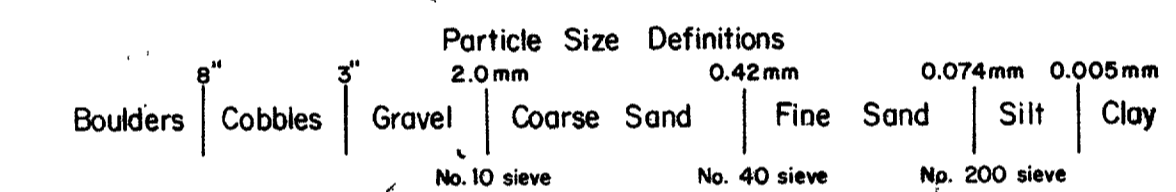
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D. 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D. 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING

Date Started 12-2-64 Date Completed 12-2-64 Boring No. B-4
 Sampler Type SS Dia. 1 3/8" Casing Length NONE Dia. NONE Station & Offset 927+47, 74' Lt (REAR ABUTMENT) Surface Elev. 628.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample no.	Physical Characteristics										SHT. Class.		
							% Agg.	% G.S.	% F.S.	% Silt	% Clay	LL	PL	W.C.	Class.				
628.5	0																		
623.5	5	50/*			Dark Gray and Brown Gravelly Silt	1	34	6	8	30	22	26	5	14					
621.0	8	22/31			Gray and Brown Gravelly Silt	2	28	5	7	33	27	25	6	12					
618.5	10	10/30			Gray Gravelly Clay	3	23	2	2	18	55	35	11	18					
616.0	12	50* (0.4')			Dark Gray Silty Sandy Gravel	4	53	8	9	20	10	NP	NP	9					
613.5	16	50* (0.3')			Gray Sandy Gravelly Silt	5	38	9	8	28	17	NP	NP	14					
611.0	18	50/*			Dark Gray Silty Sand with Shale Fragments	6	40	28	10	10	12	NP	NP	12					
608.5	20				TOP OF ROCK														
	22																		
	24		4.9	0.1	Shale, black, carbonaceous, fissile, firm, slightly jointed. Core loss 6%.														
	26																		
	28																		
598.5	30			4.5	0.5														

* REFUSAL

BOTTOM OF BORING

LOG OF BORING

Date Started 12-3-64 Date Completed 12-3-64 Boring No. B-14A
 Sampler Type SS Dia. 1 3/8" Casing Length NONE Dia. NONE Station & Offset 928+50, 40' Rt (FORWARD ABUTMENT) Surface Elev. 628.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample no.	Physical Characteristics										SHT. Class.		
							% Agg.	% G.S.	% F.S.	% Silt	% Clay	LL	PL	W.C.	Class.				
628.7	0																		
623.7	5	26/30			Gray and Brown Sandy Gravelly Silt	1	31	9	11	20	29	29	10	23					
621.2	8	23/28			Gray Sandy Gravelly Silt	2	36	9	11	23	21	24	6	12					
618.7	10	50/*			Dark Gray Silty Sandy Gravel	3	61	12	6	10	11	25	4	10					
616.2	12	50*			Dark Gray Silt and Shale Fragments	4	54	6	3	31	6	PL	22	13					
615.2	14	(0.3')			TOP OF ROCK														
	16																		
	18		2.1	2.9															
	20																		
	22		3.8	1.2															
	24																		
	26																		
	28																		
598.7	30			5.0	0.0														

* Refusal

BOTTOM OF BORING

Shale, black, carbonaceous, fissile, medium-firm, broken and slightly weathered in top 8.0'. Core loss 27%.

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design contracts for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY TESTING LABORATORY
 1620 WEST BROAD STREET, COLUMBUS 23, OHIO

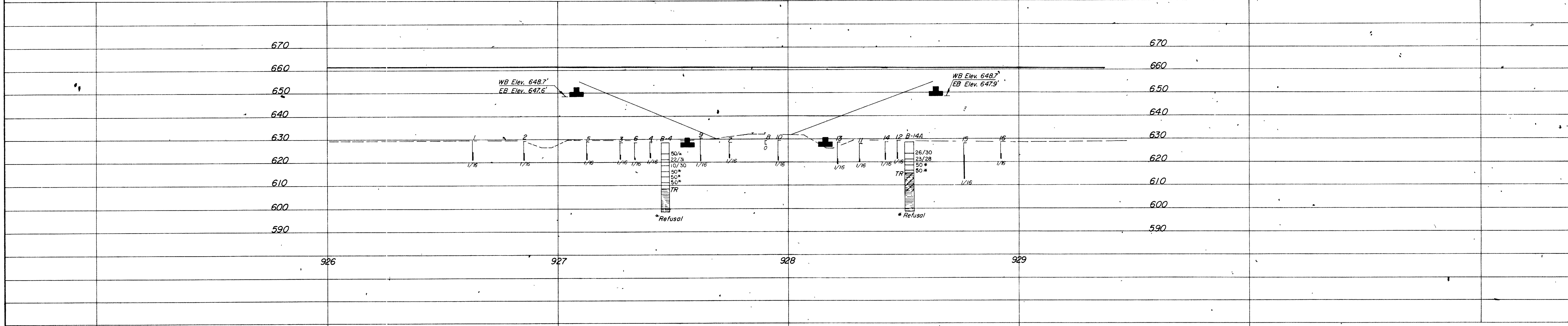
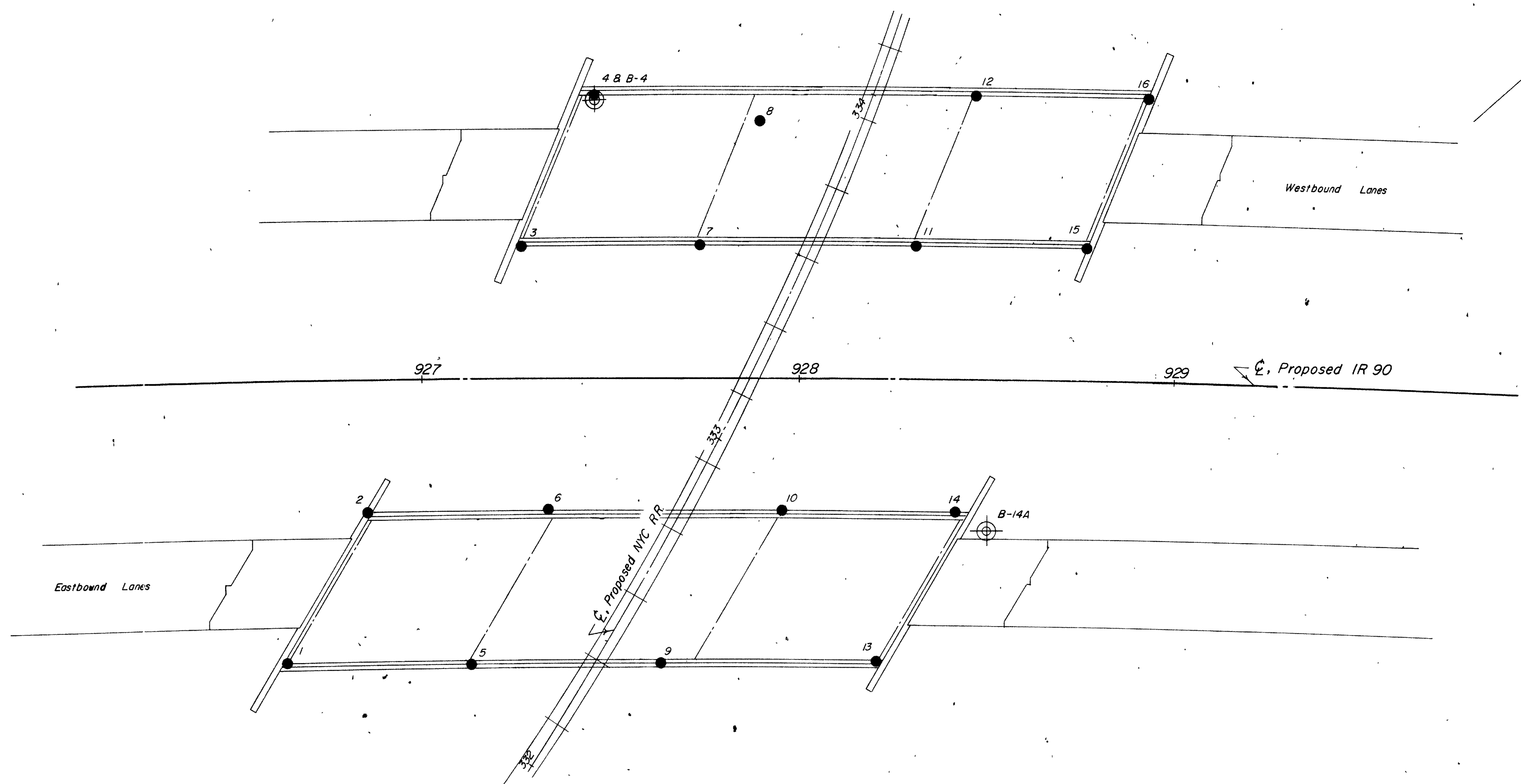
STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. LOR-IR 90-1785 L/R
 SEC. OVER NYC RR LOR-IR 90-16.21

CHECKED BY R. H. P. REVIEWED BY R. D. R. DATE 12/28/64

APR 83

LOR-IR 90-17.21

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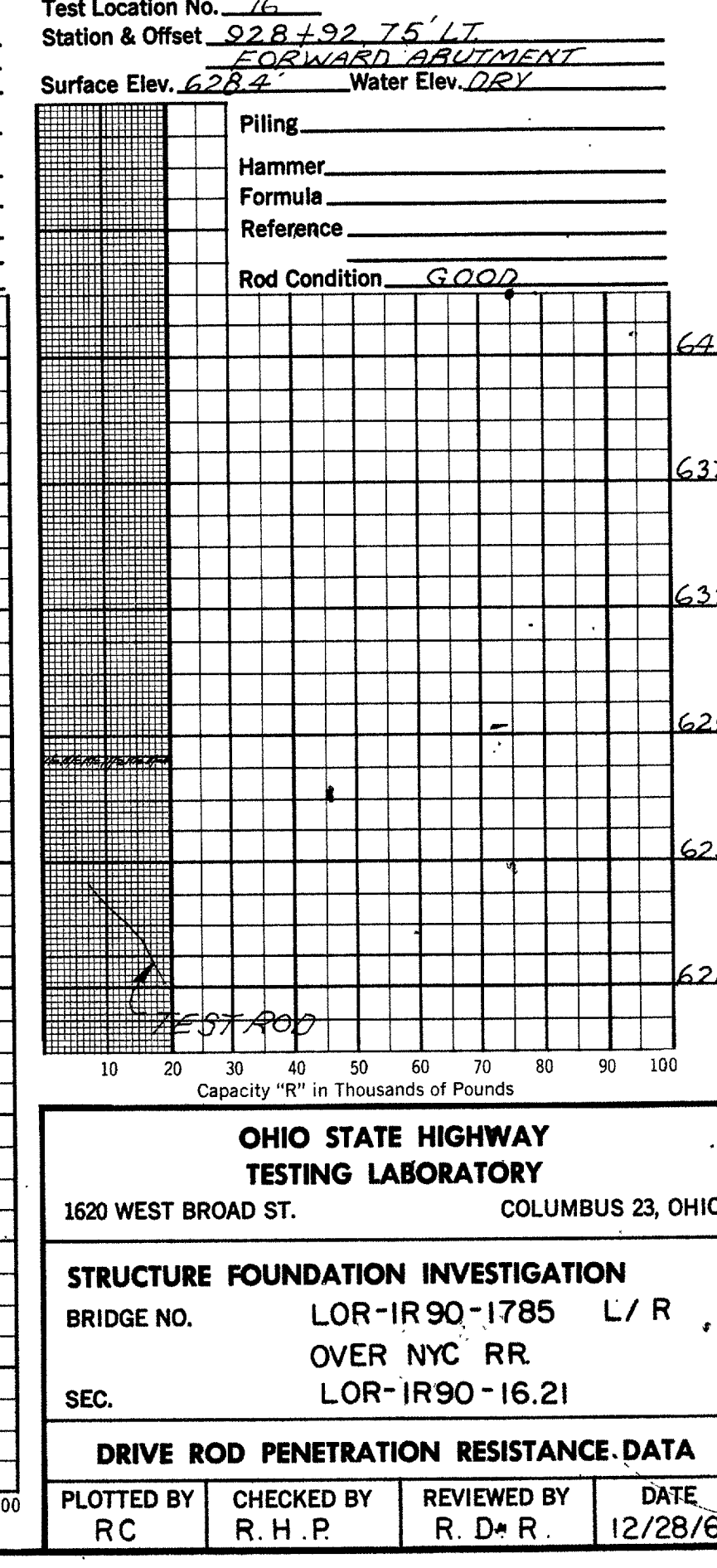
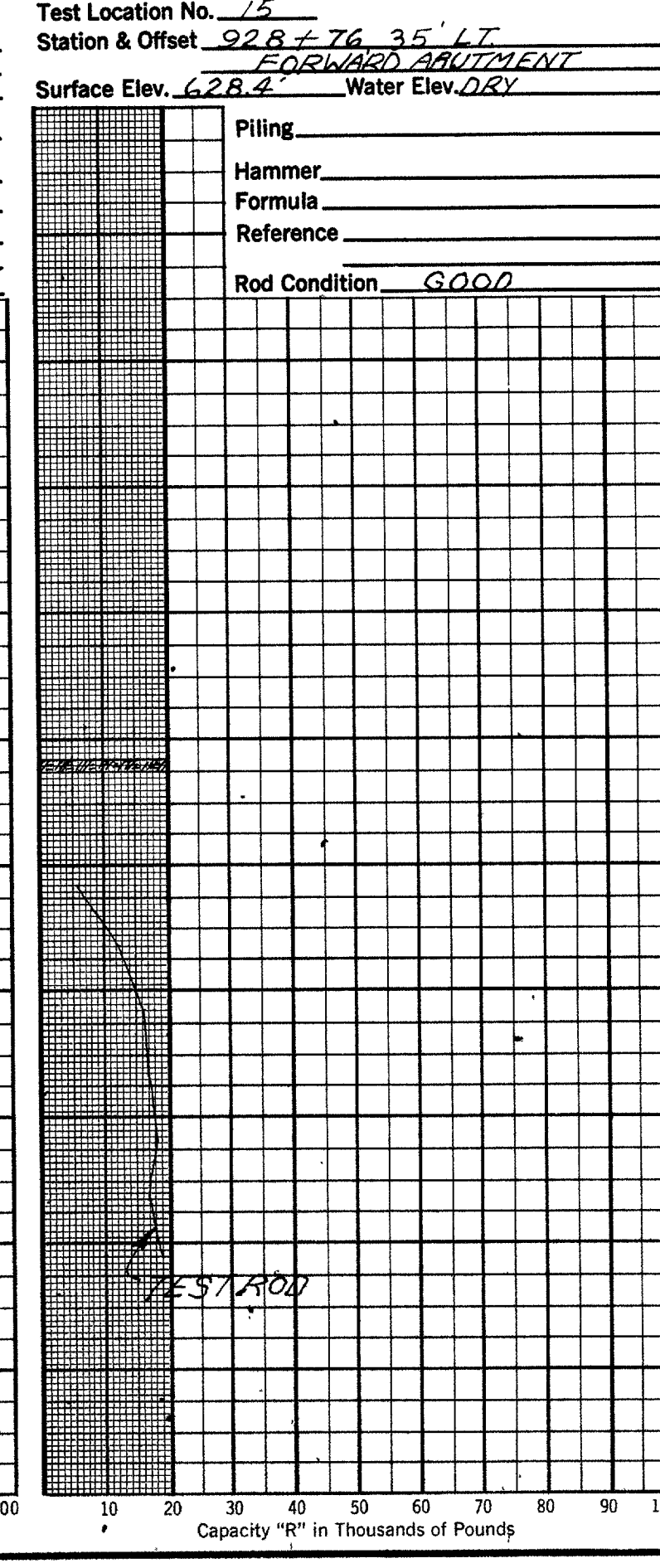
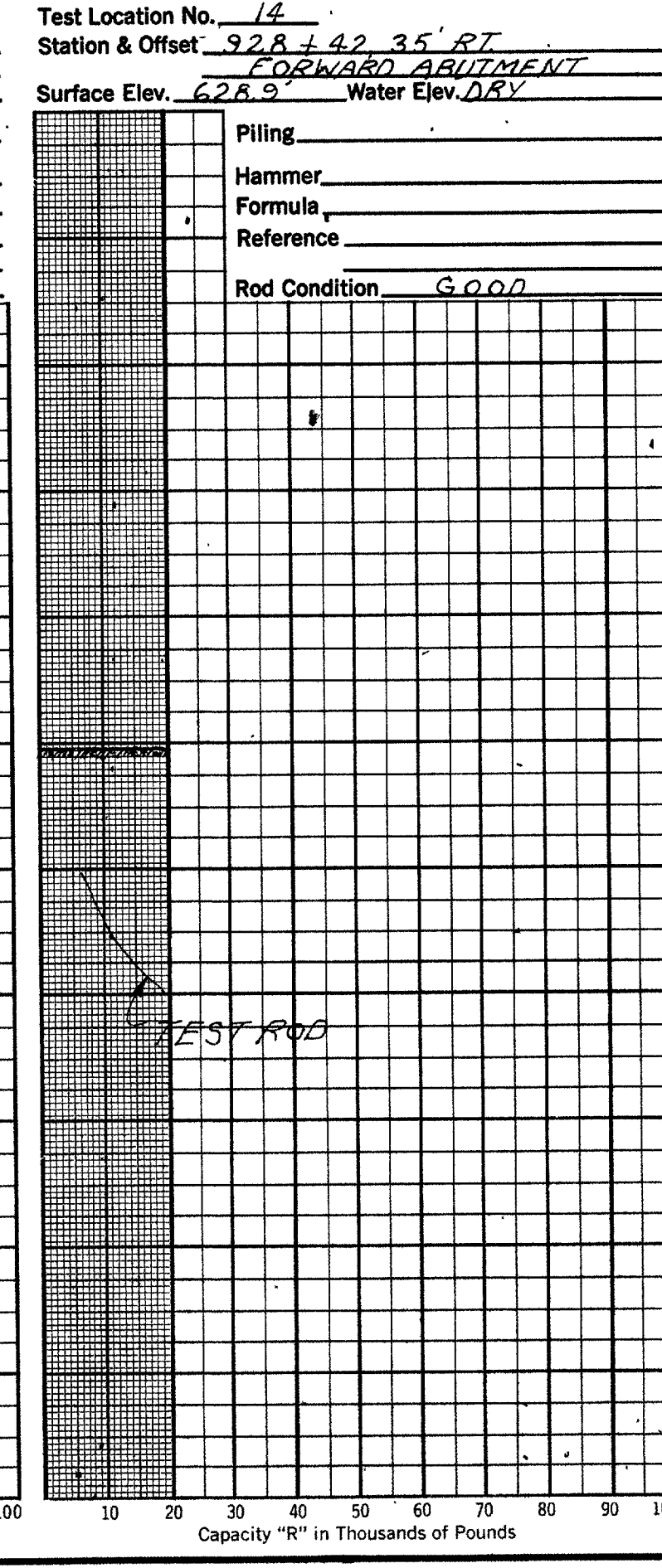
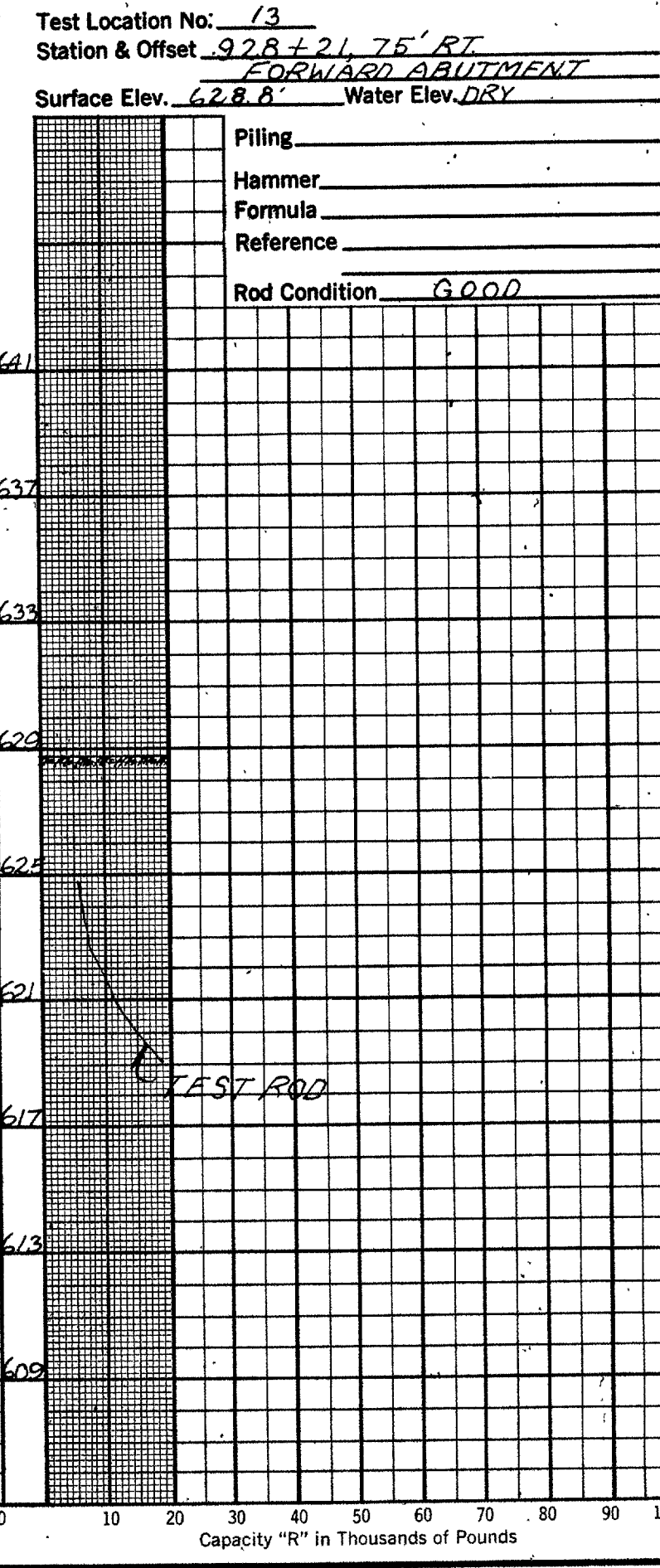
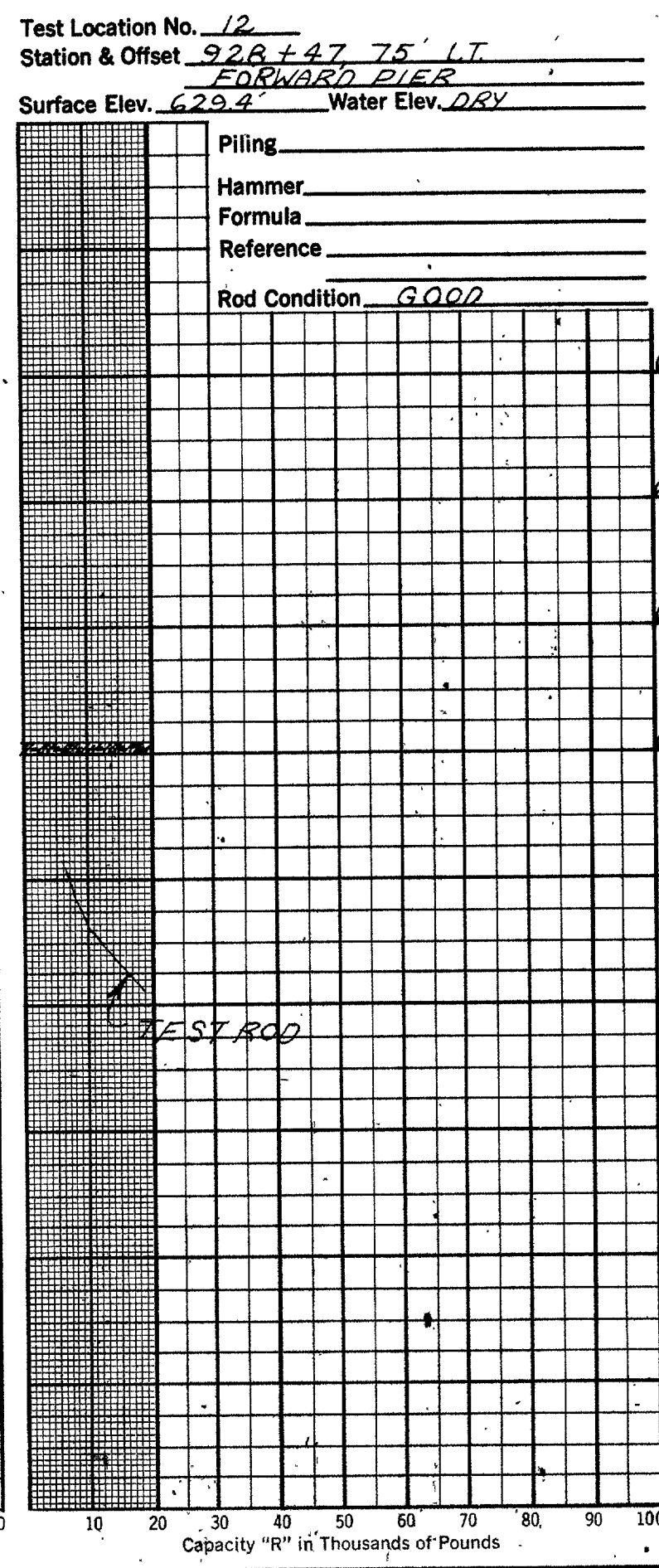
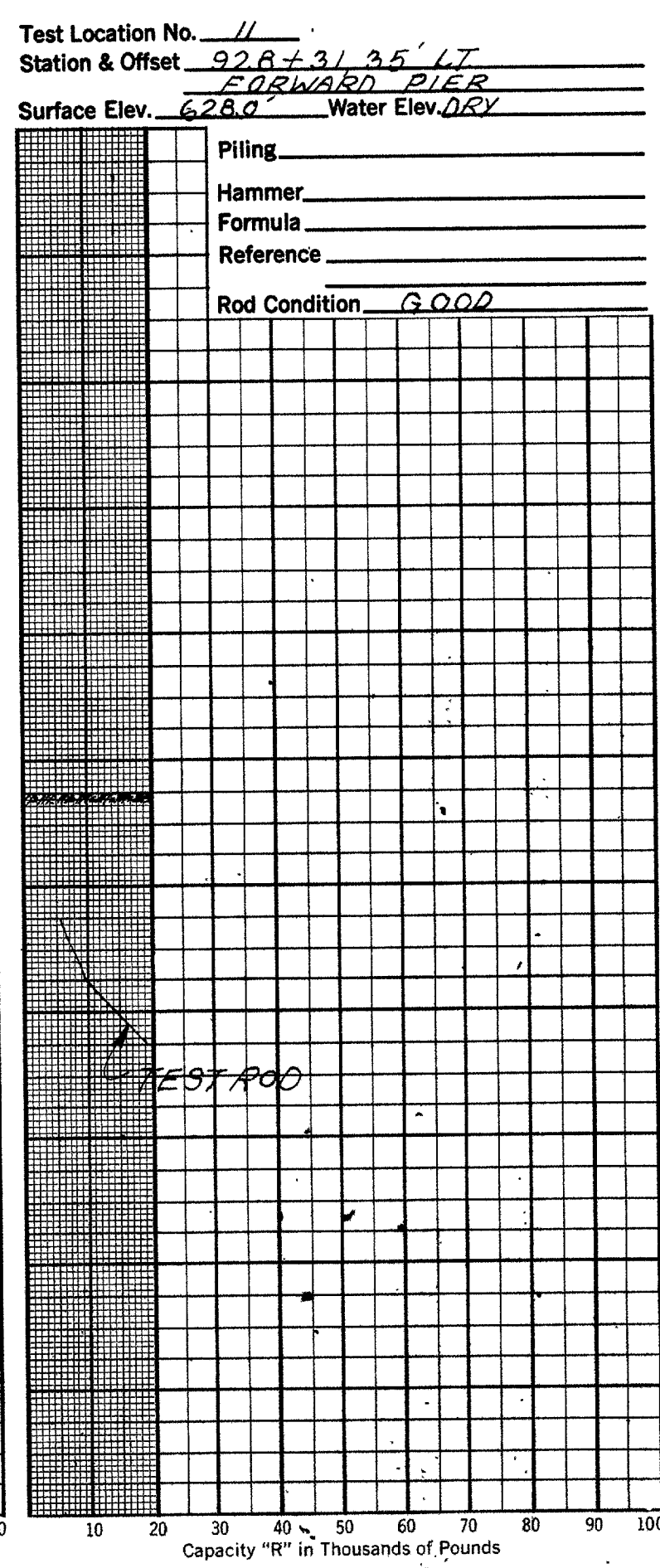
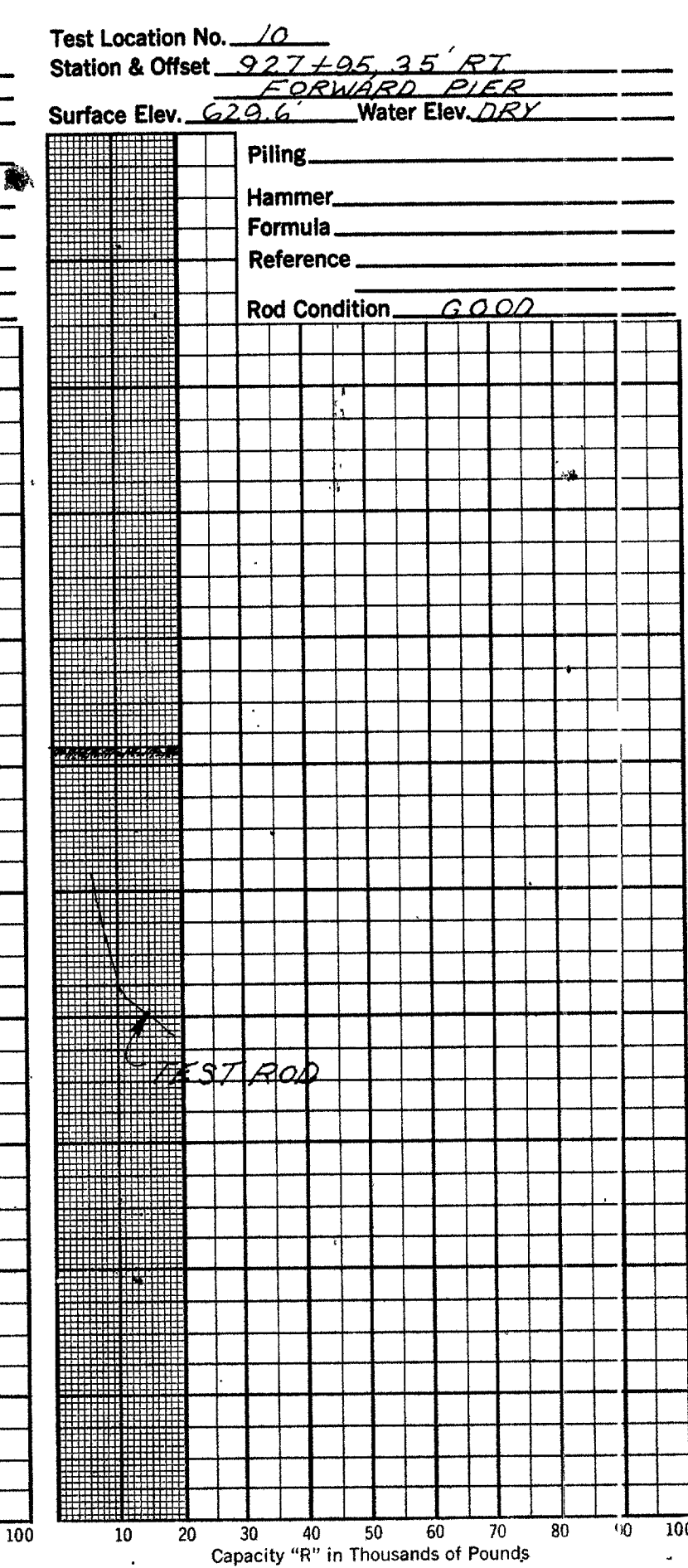
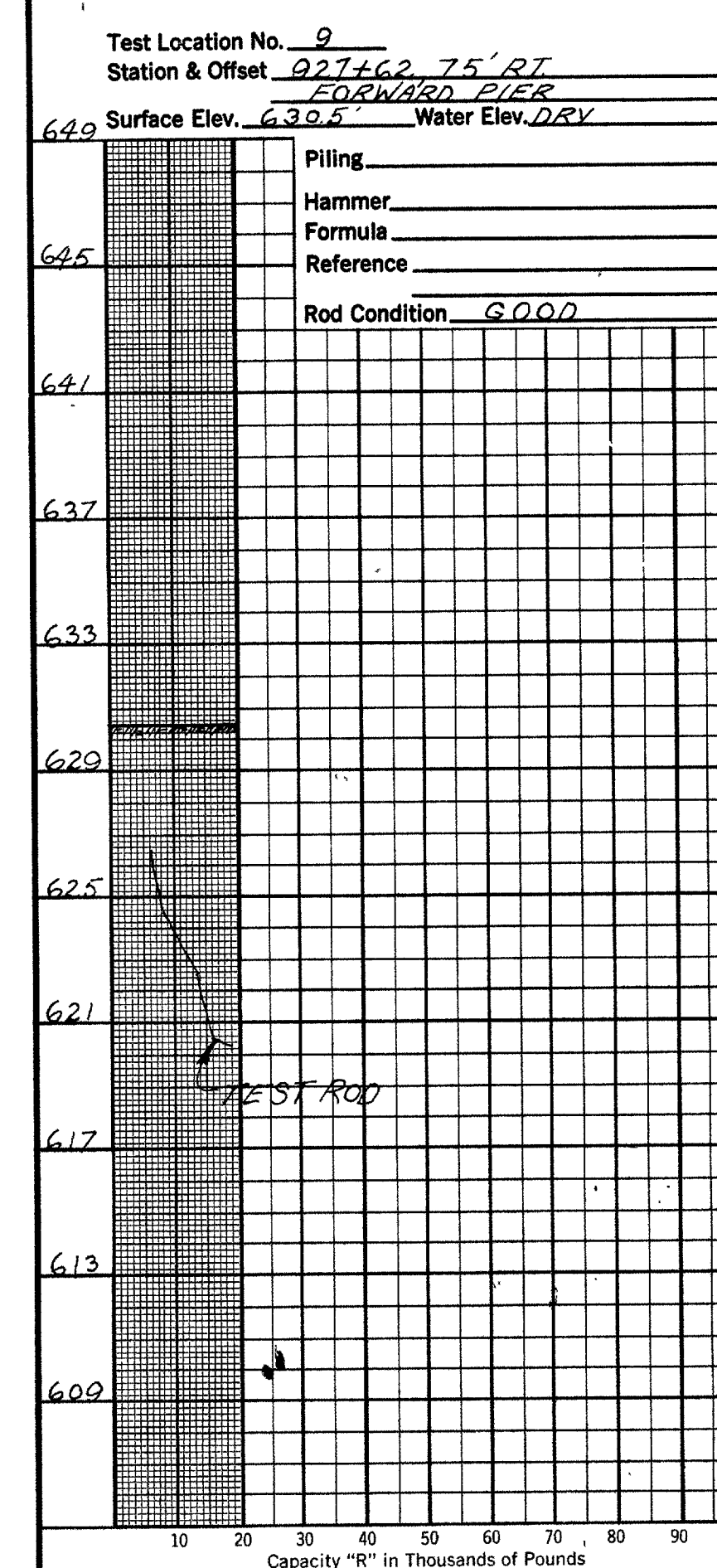
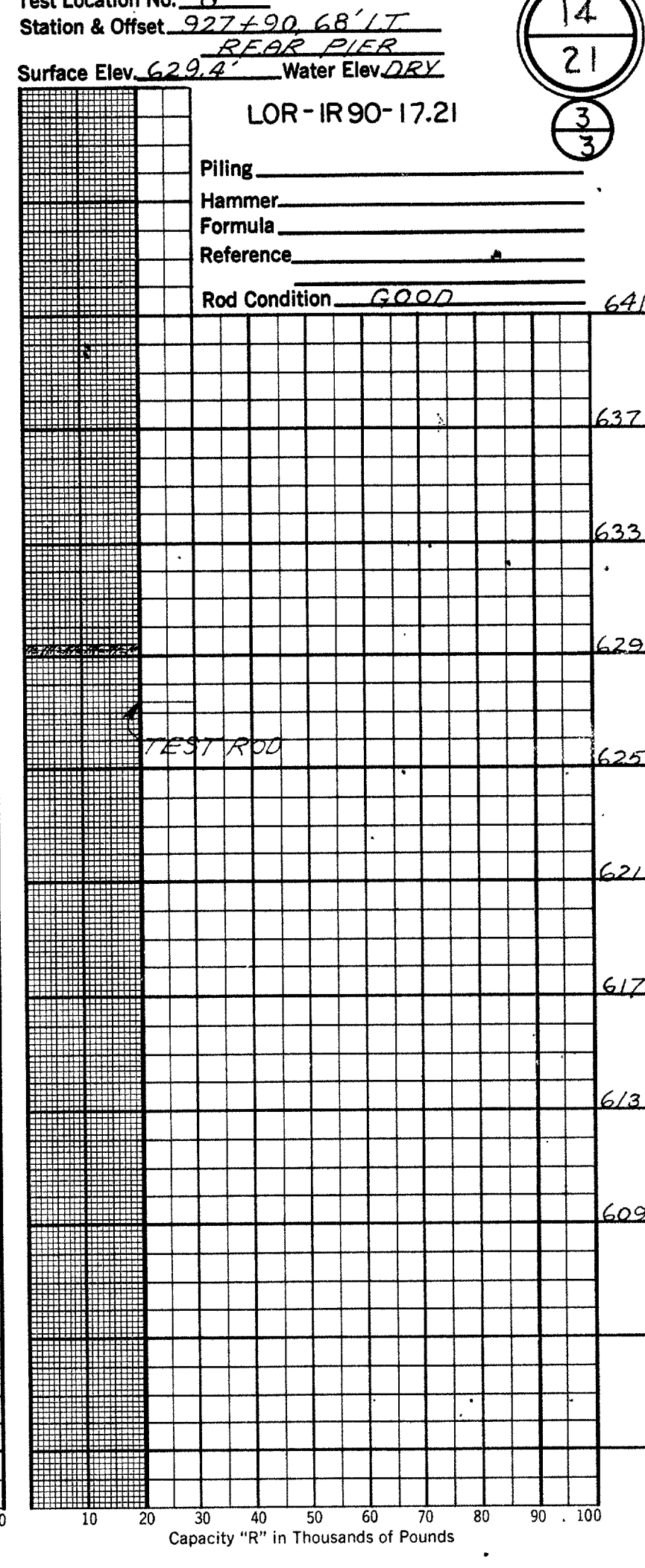
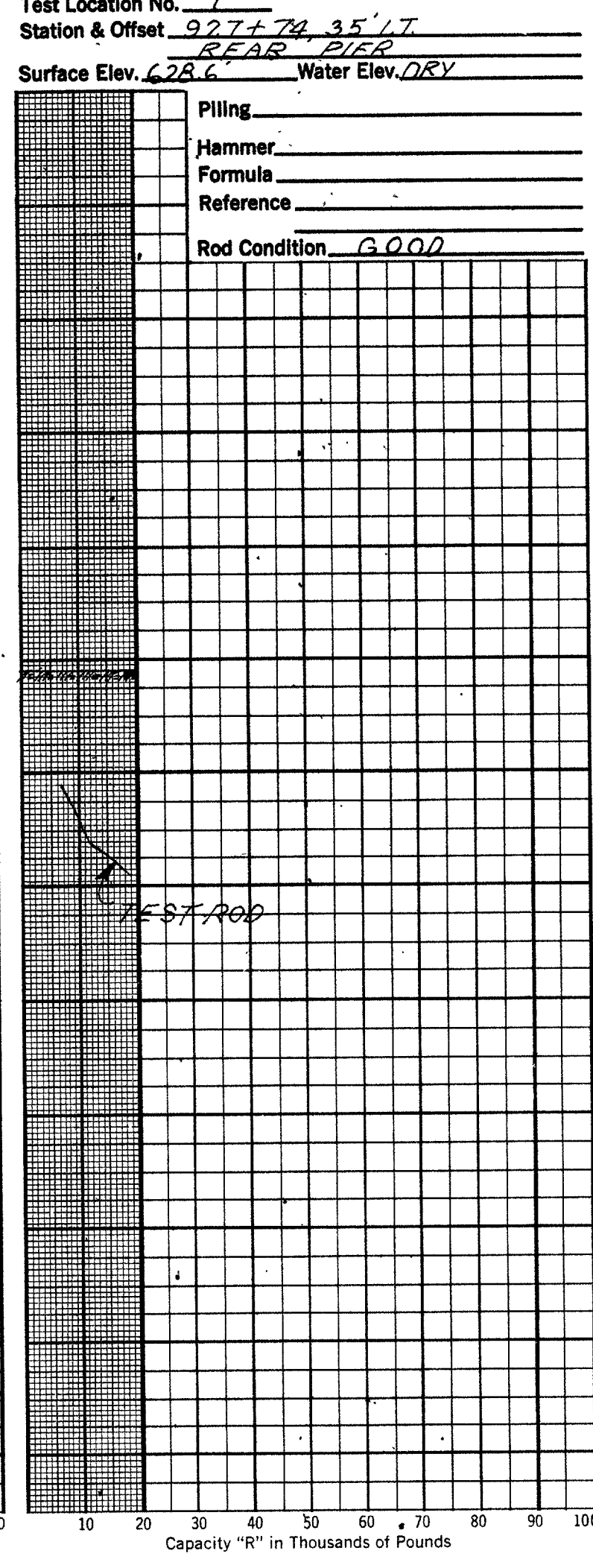
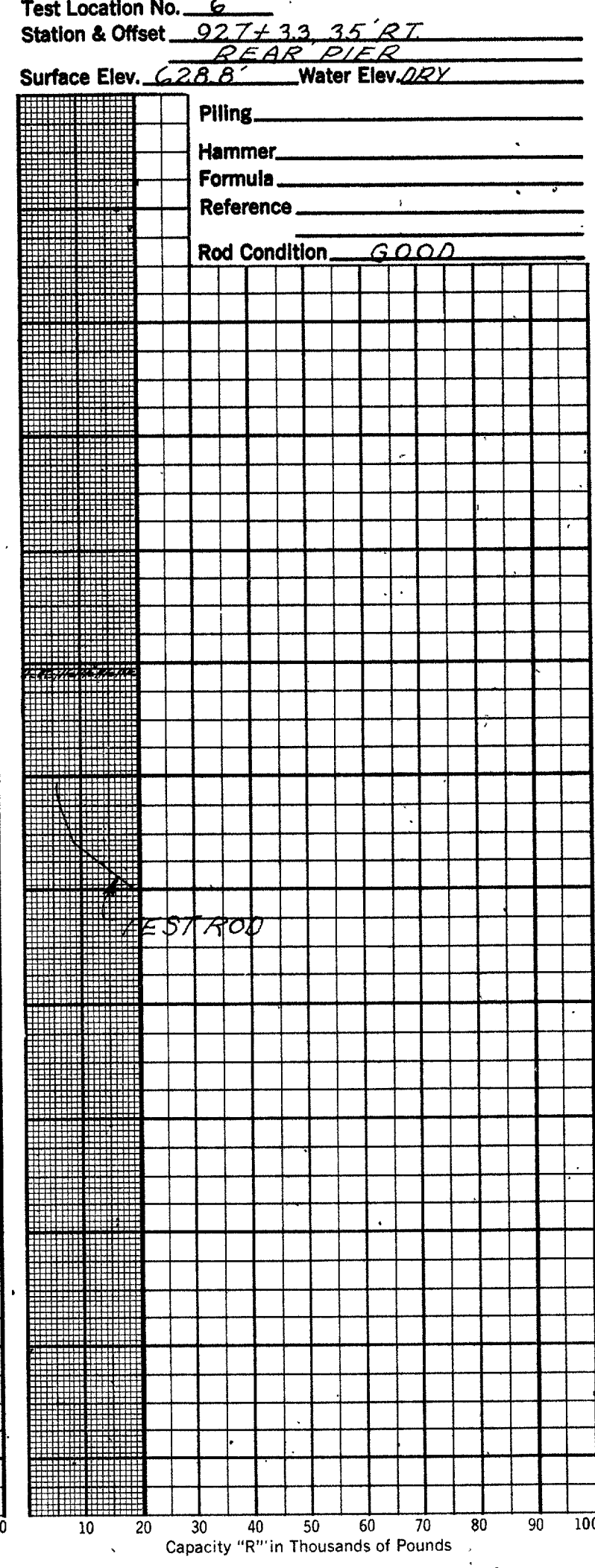
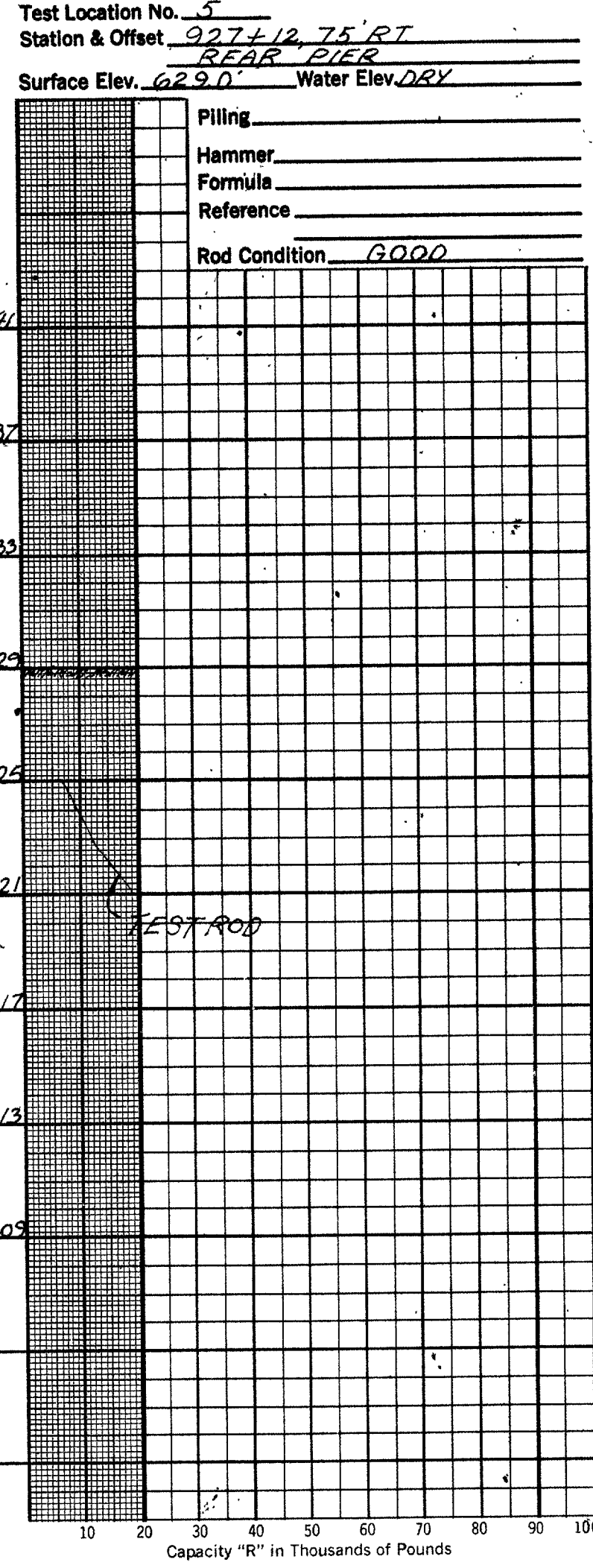
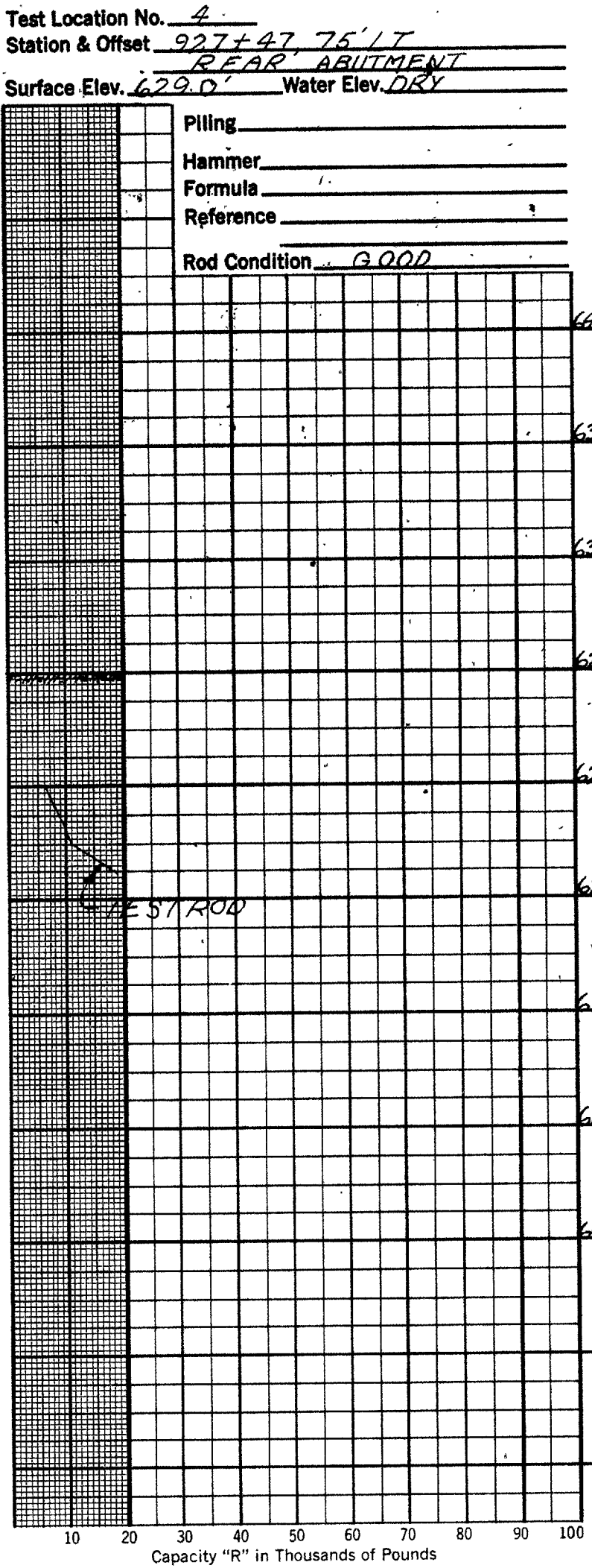
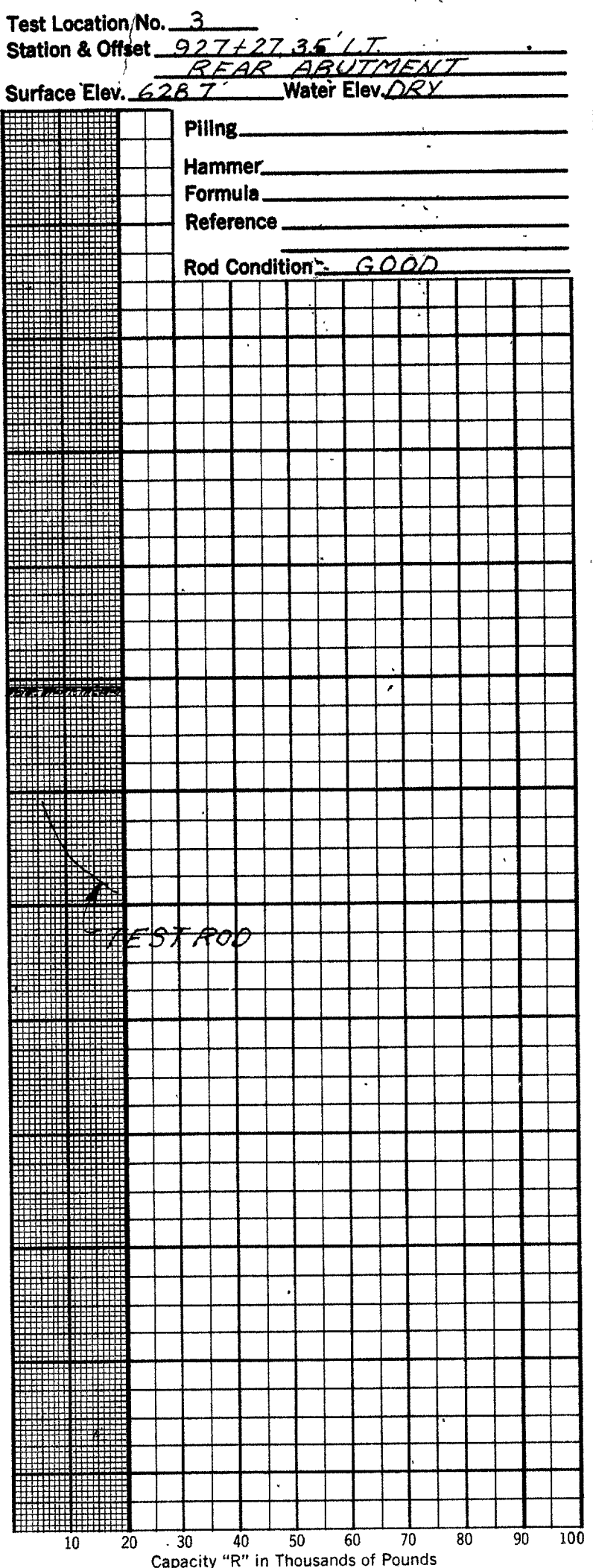
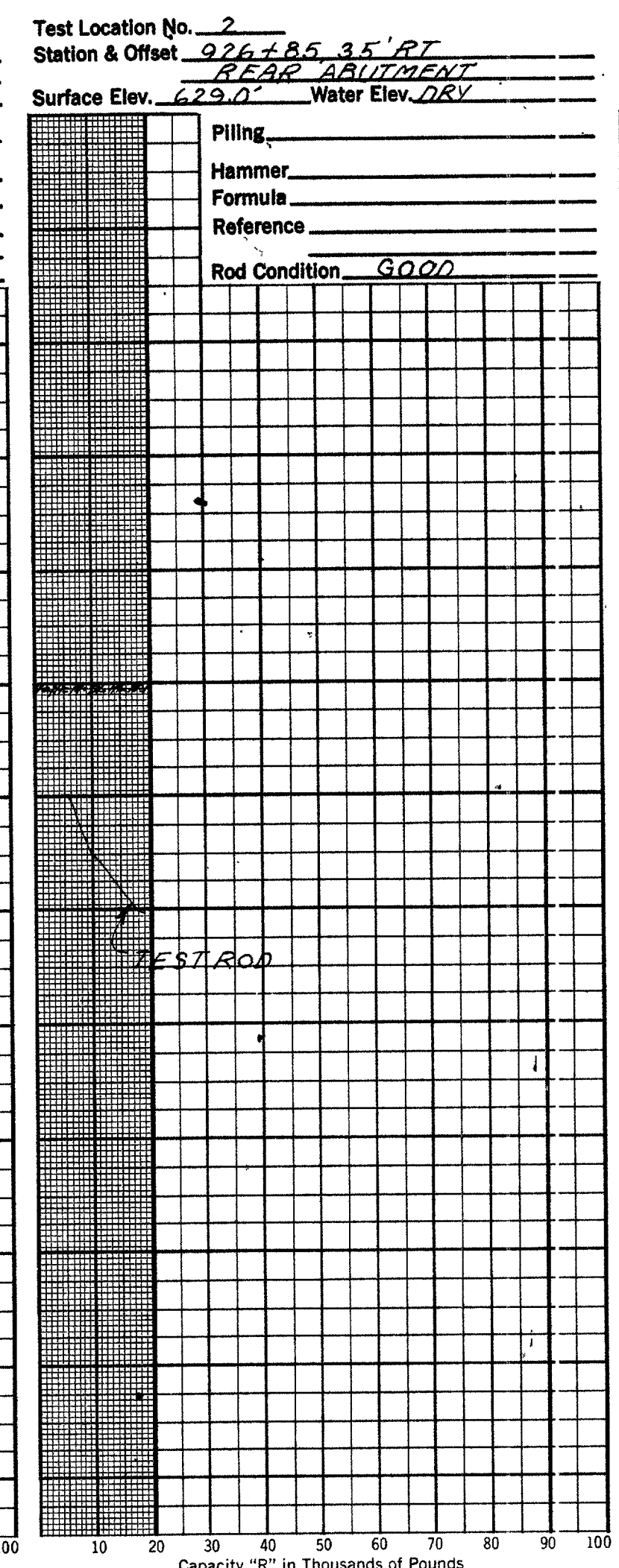
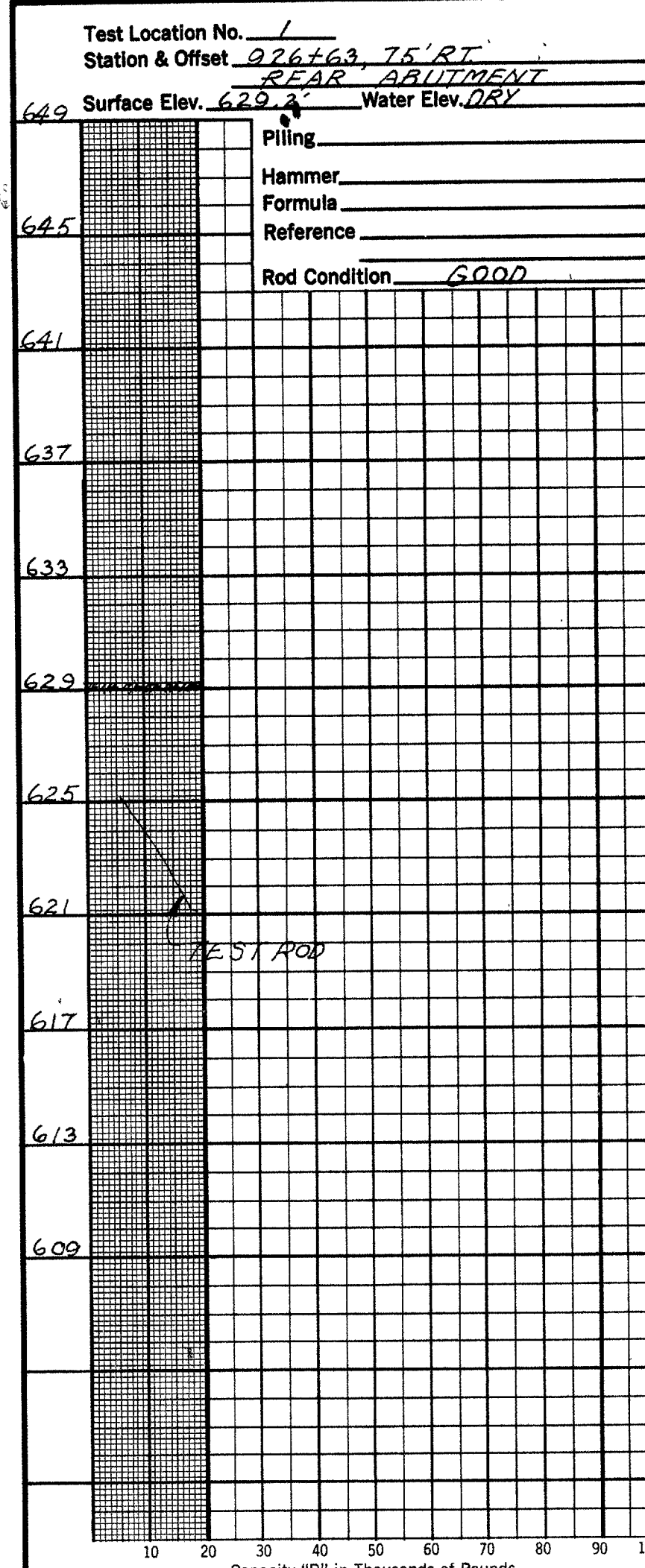
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR 90-1785 L/R
OVER NYC RR.
SEC. LOR-IR 90-16.21

PLAN AND PROFILE

DRAWN BY R. L. F.	CHECKED BY R. H. P.	REVIEWED BY R. D. R.	DATE 12/28/64
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SCALE: 1"=20'



OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR 90-1785 L / R
OVER NYC RR
SEC. LOR-IR90-16.21

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY RC	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 12/28/64
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GEOLOGY OF THE SITE

The structure site is located on the relatively flat portion of the glaciated Mississippi Valley Plain, presently being incised by French Creek, in an area where lacustrine and beach deposits overlie shale bedrock of Lower Mississippian and Upper Devonian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings and eight drive rod penetration tests, made between June 15 and 17, 1965.

INVESTIGATIONAL FINDINGS

The borings disclosed that medium-stiff silty clays, very dense to extremely dense silts and some scattered intervals of boulders, overlie sloping bedrock surfaces, encountered at 15-foot depth, elevation 612 feet, in Boring B-16, and considered to be at 18-foot depth, elevation 609 feet, in Boring B-1. Boring B-16, was terminated 10 feet below bedrock surface, at elevation 602 feet. Boring B-1 was discontinued in extremely dense material containing boulders, considered to be immediately above bedrock surface.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with near-refusal and abrupt refusal to penetration at 8 to 13 foot depths, elevations 618 to 613 feet, considered to be on or above bedrock surface in boulders and extremely dense material, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- Top of Rock

- SYMBOLS OF ROCK TYPES**
- Cobal
 - Weathered Indurated Clay
 - Indurated Clay
 - Weathered Shale
 - Shale
 - Boulders and/or Cobbles

LEGEND

- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.
- Drive Rod Penetration Resistance Sounding Log - Profile
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z Indicates Final Measurement of Penetration, in Inches.
- W Indicates Free Water Elevation.
- Indicates Static Water Elevation.

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

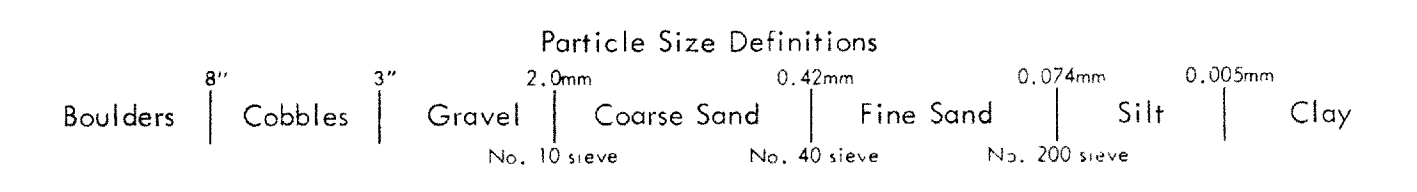
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING

Date Started 6-16-65 Sampler Type SB Dia. 1 3/8" Water Elev. _____
 Date Completed 6-17-65 Casing Length 7.5' Dia. 1 1/2"
 Boring No. B-1 Station & Offset 966+40, 103' E (REAR ABUTMENT) Surface Elev. 626.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Physical Characteristics							SHTL Class.				
						Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.		P.I.	W.C.		
626.8	0				Topsoil												
621.8	2																
620.3	6	4/10			Mottled Brown and Gray Gravelly Silt	1	18	5	6	41	30	31	9	18			
618.3	8				Boulder (Quartzite)												
616.8	10																
615.8	10	15/52			Gray Sandy Silt with Stone Fragments	2	20	8	10	36	26	27	9	11			
611.8	14				Boulders (Sandstone, gray, fine-grained)												
608.8	18				Boulders (Shale, carbonaceous, black)												

BOTTOM OF BORING

LOG OF BORING

Date Started 6-15-65 Sampler Type SB Dia. 1 3/8" Water Elev. _____
 Date Completed 6-15-65 Casing Length _____ Dia. _____
 Boring No. B-16 Station & Offset 967+22, 91' E (FORWARD ABUTMENT) Surface Elev. 627.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Physical Characteristics							SHTL Class.				
						Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.		P.I.	W.C.		
627.0	0																
622.0	6	8/13			Brown and Gray Clayey Silt	1	0	5	11	49	35	27	8	13			
619.5	8	9/18			Brown Silty Clay	2	0	0	2	38	60	47	20	21			
617.0	10																
614.5	12	12/19			Gray Sandy Silt	3	11	6	10	33	40	26	9	19			
612.0	14	18/38			Gray Silt	4	0	5	13	55	27	21	3	26			
611.5	16	20/50*			Dark Gray Silty Sandy and Stone Fragments	5	43	18	9	18	12	28	8	9			
	18		3.1	1.9													
	20																
	22																
	24		3.1	1.9													
608.0																	

BOTTOM OF BORING

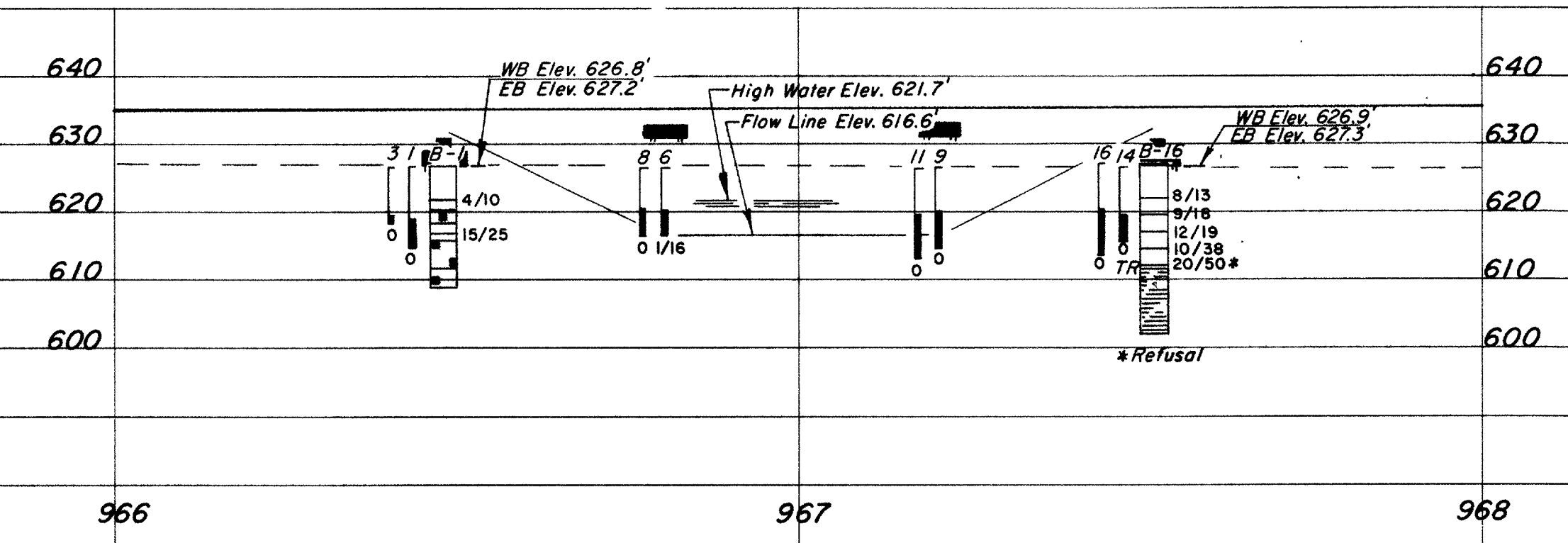
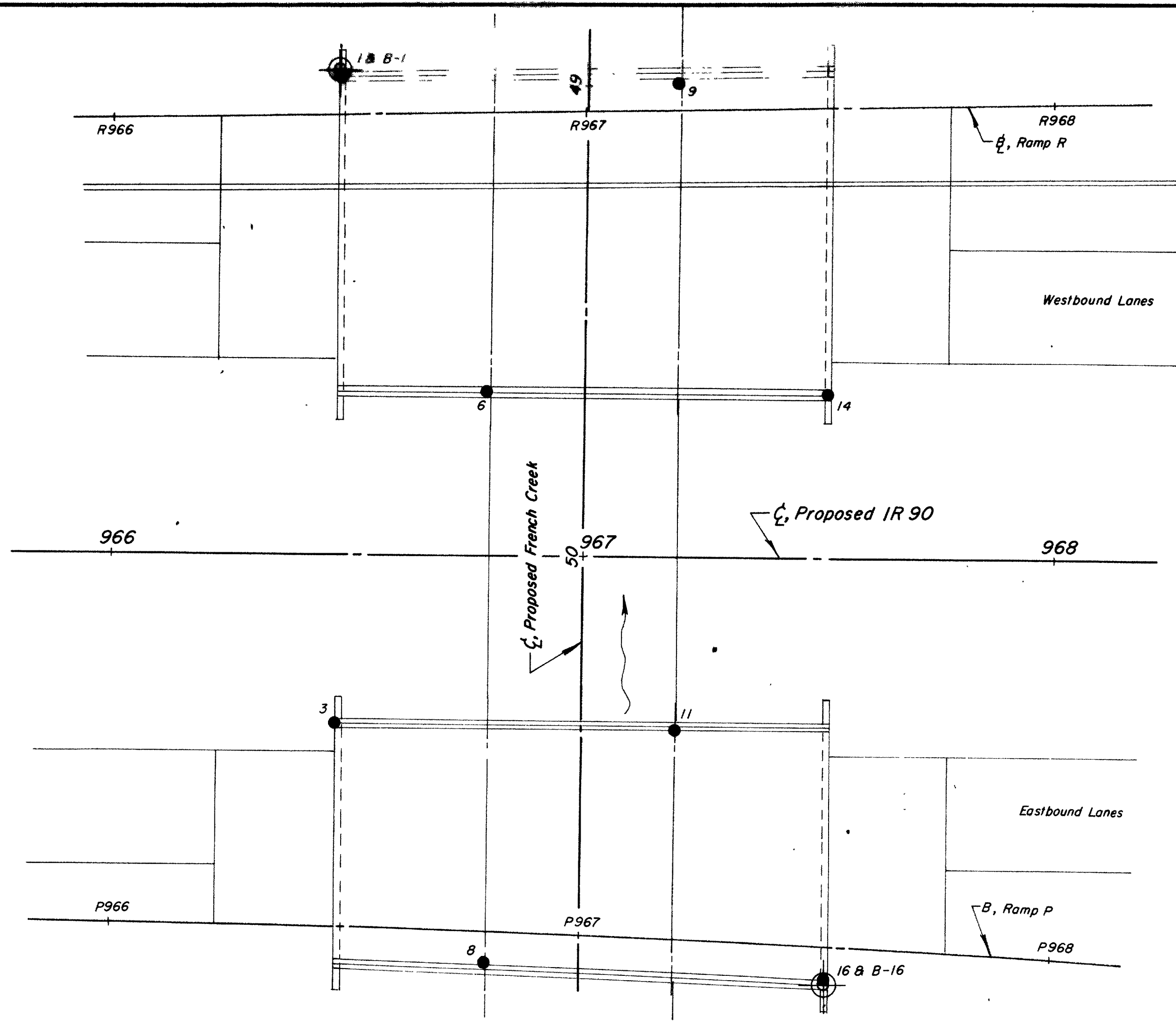
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

**OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY**
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR90-1861 L/R
OVER FRENCH CREEK
SEC. LOR-IR90-16.21

CHECKED BY R. H. P.	REVIEWED BY R. D. R.	DATE 7/20/65
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APR 21 1965



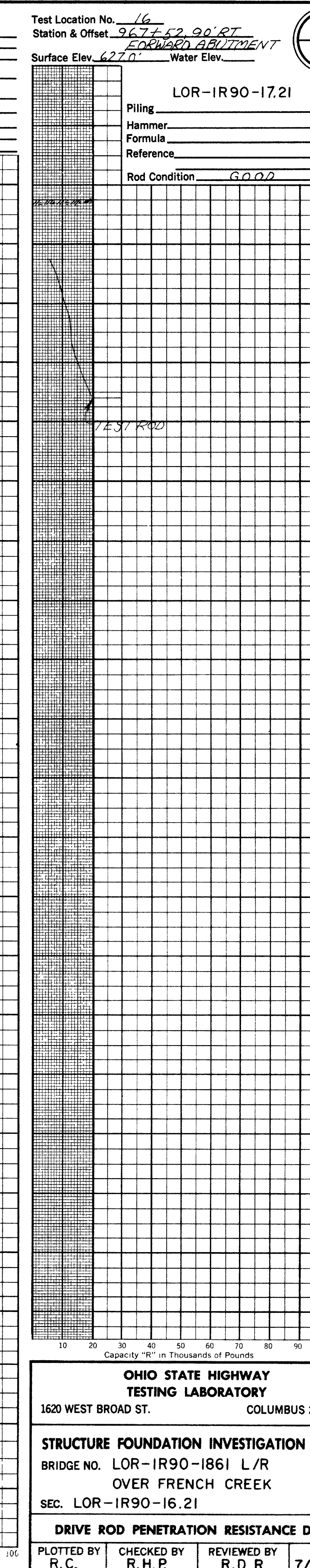
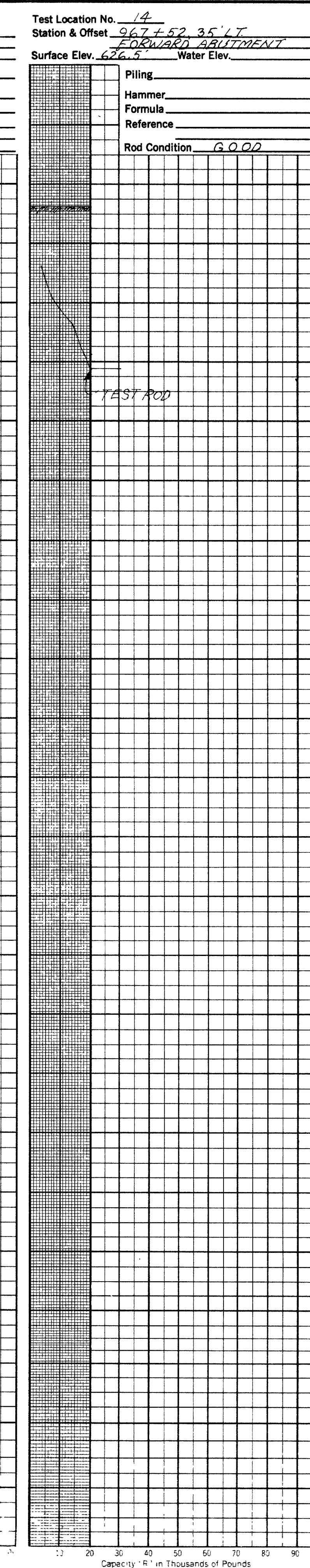
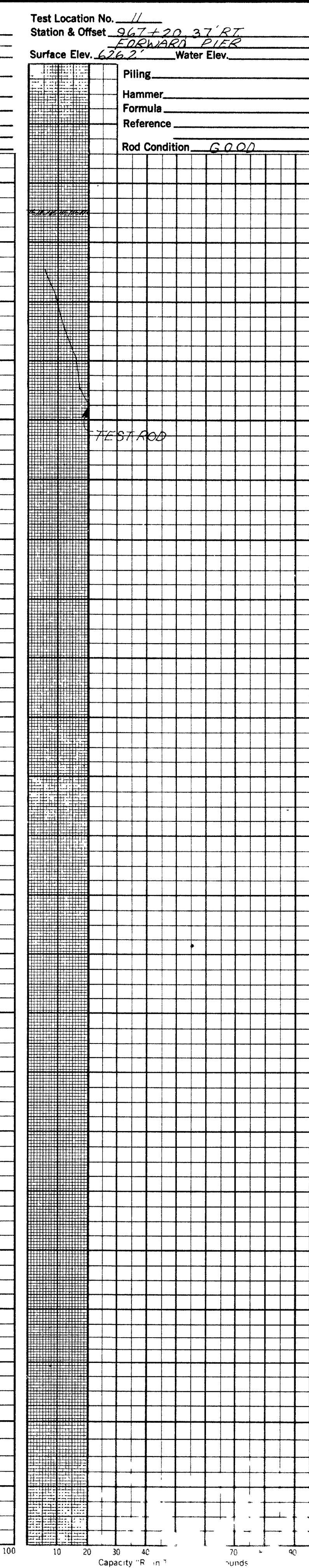
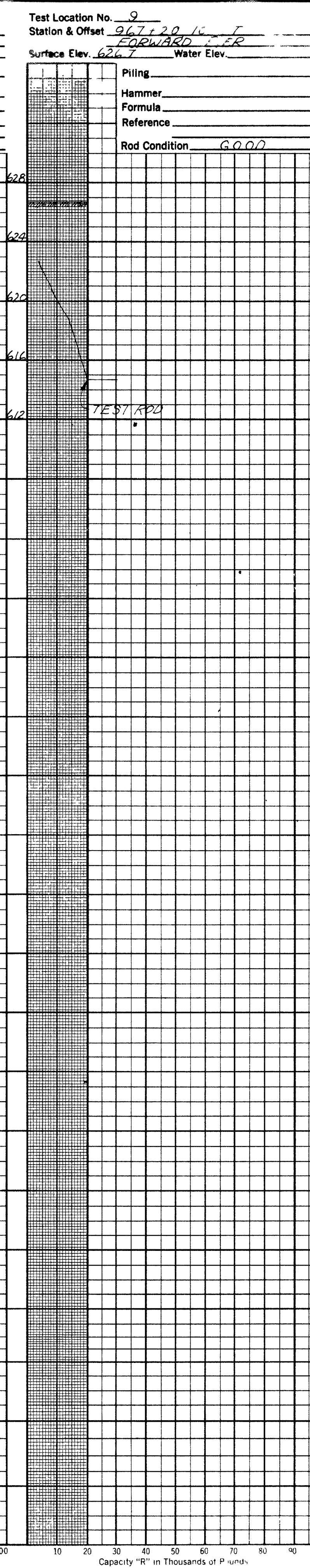
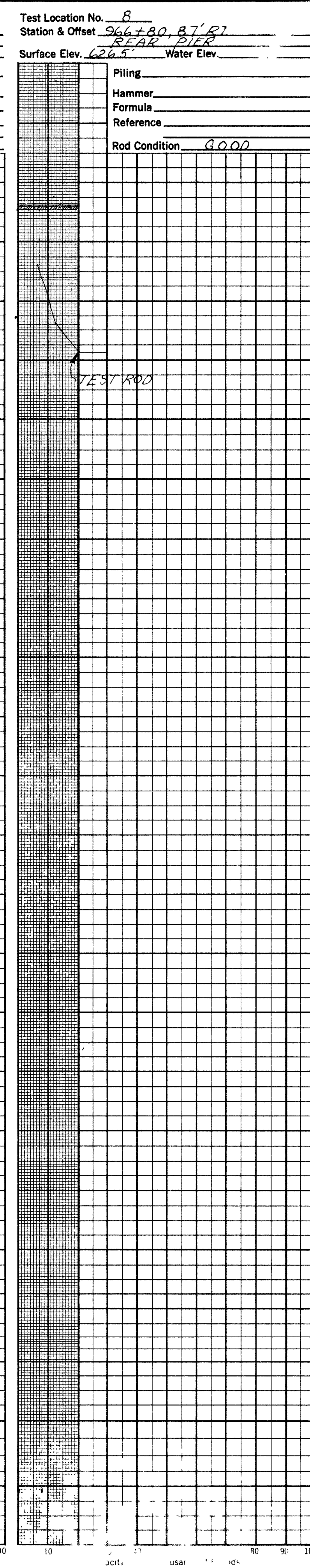
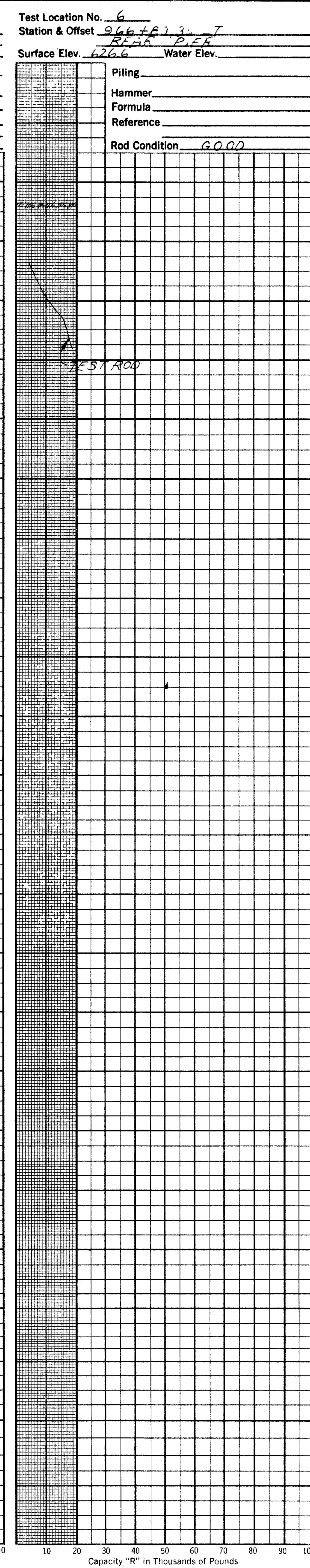
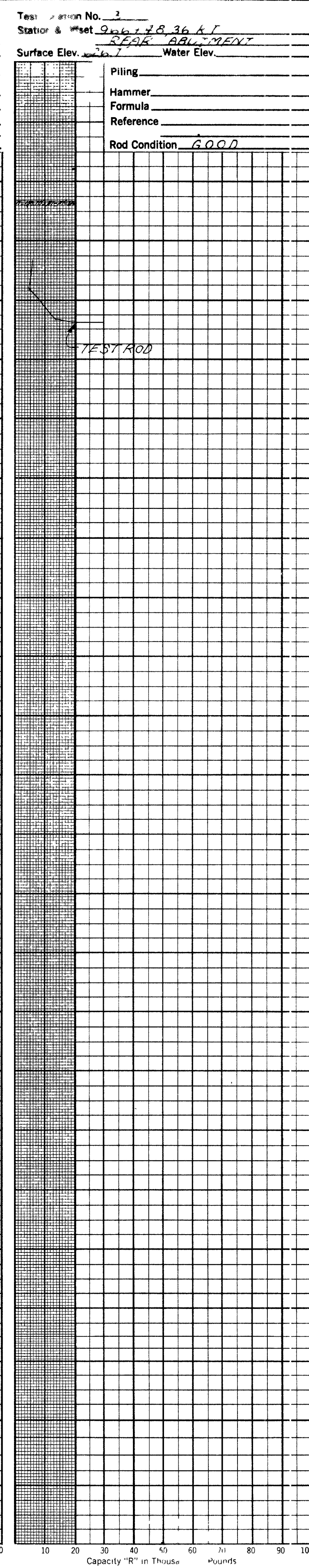
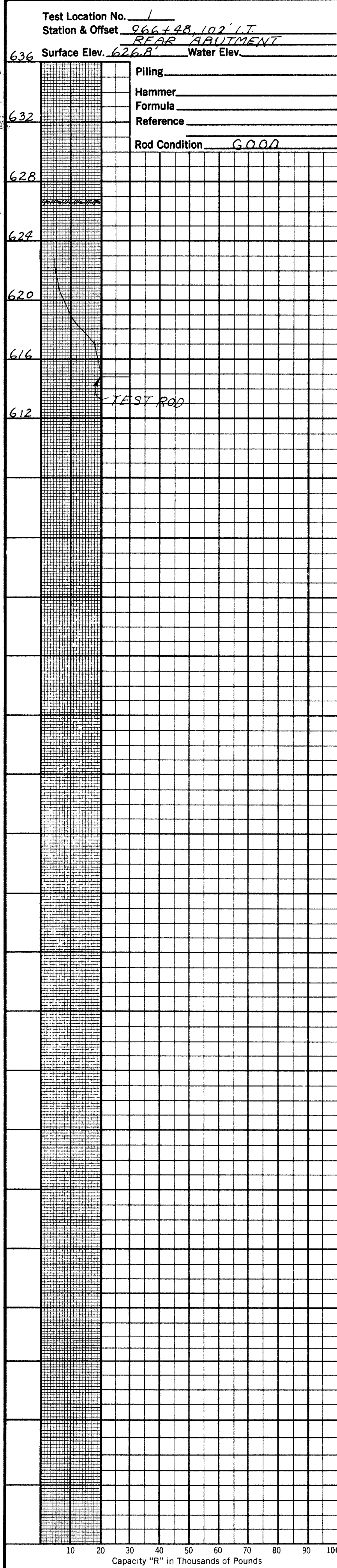
OHIO DEPARTMENT OF HIGHWAYS
 TESTING LABORATORY
 1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. LOR-IR90-1861 L/R
 OVER FRENCH CREEK
 SEC. LOR-IR90-16.21

PLAN AND PROFILE

DRAWN BY R.L.C.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 7/20/65
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SCALE: 1" = 20'



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21
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OHIO STATE HIGHWAY TESTING LABORATORY
 1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. LOR-1R90-1861 L/R
 OVER FRENCH CREEK
 SEC. LOR-1R90-16.21

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R.C.
 CHECKED BY R.H.P.
 REVIEWED BY R.D.R.
 DATE 7/20/65

APR 24 1965

GEOLOGY OF THE SITE

The structure site is located on the relatively flat glaciated Lake Plain, in an area where lacustrine and beach deposits overlie shale bedrock, of Lower Mississippian and Upper Devonian ages.

EXPLORATION








The exploration consisted of two drive sample-core borings and one drive sample boring, made between March 3 and 9, 1965, and five drive rod penetration tests, made on February 24, 1965.






INVESTIGATIONAL FINDINGS

The borings disclosed that dense and very dense sandy, clayey silts and stiff to hard clays overlie shale bedrock surface, encountered at 22 feet below ground surface, elevations 606 and 605 feet. The borings B-2 and B-10 were terminated 6 and 13 feet below bedrock surface, at elevations 599 and 593 feet. Boring B-5 was terminated at 22-foot depth, elevation 606 feet, after penetrating in excess of 15 feet of material requiring in excess of 30 blows per foot in the standard penetration test, considered to be on bedrock surface.







Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated upon encounter with near-refusal and refusal to penetration at 9 and 10-foot depths, elevations 618 and 617 feet, considered to be in very dense silt, as revealed by the borings.

No free water was observed in any of the rod sounding holes.










-  Auger Boring Location - Plan View.
-  Press and / or Drive Sample and / or Core Boring Location - Plan View.
-  Drive Rod Penetration Resistance Sounding Location - Plan View.
-  Capped Pile
-  Footing
-  Footing on Pile
-  TR Top of Rock

-  Coal
-  Weathered Indurated Clay
-  Indurated Clay
-  Weathered Shale
-  Shale

SYMBOLS OF ROCK TYPES

-  Weathered Sandstone
-  Sandstone
-  Leached Dolomite
-  Dolomite
-  Leached Limestone
-  Limestone

LEGEND

-  Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
-  Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.
-  Drive Rod Penetration Resistance Sounding Log - Profile
-  Casing
-  Resistance "R" < 10,000 lbs.
-  Resistance "R" > 10,000 lbs.
-  Z Indicates Final Measurement of Penetration, in Inches.
-  W— Indicates Free Water Elevation.
-  Indicates Static Water Elevation.

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

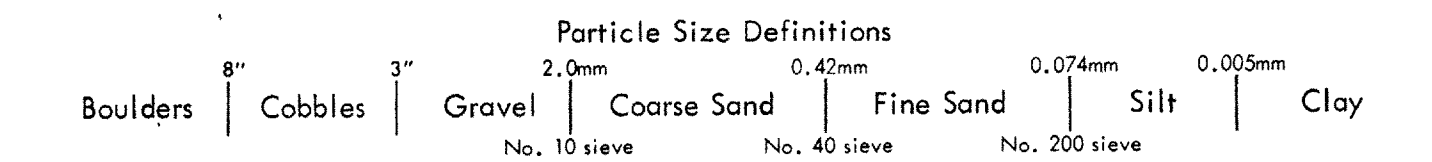
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140-pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

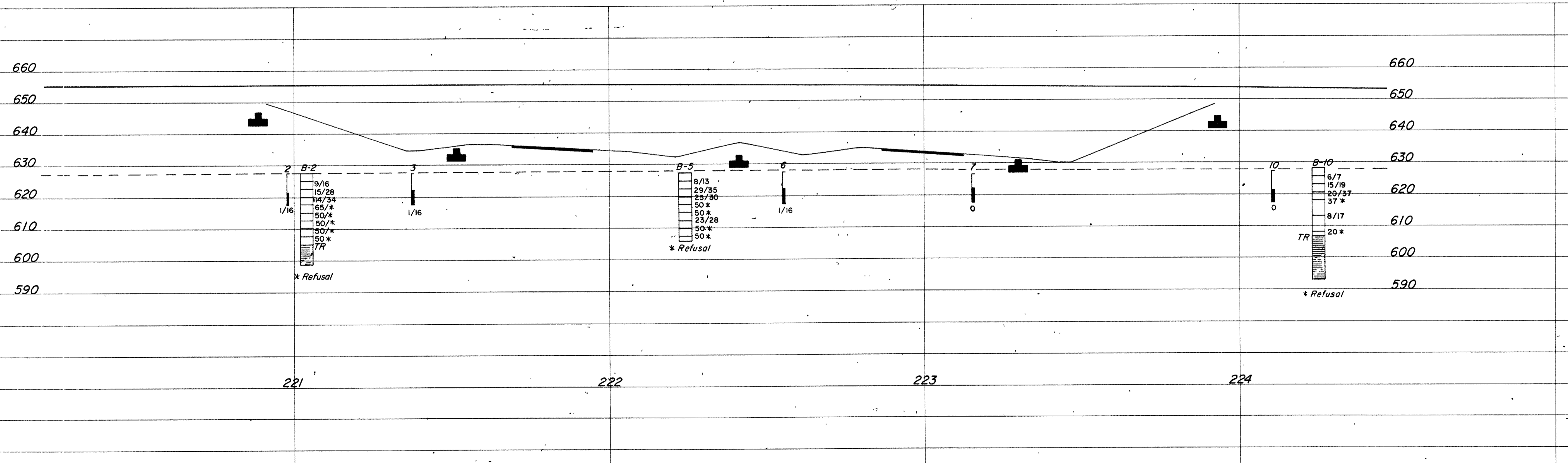
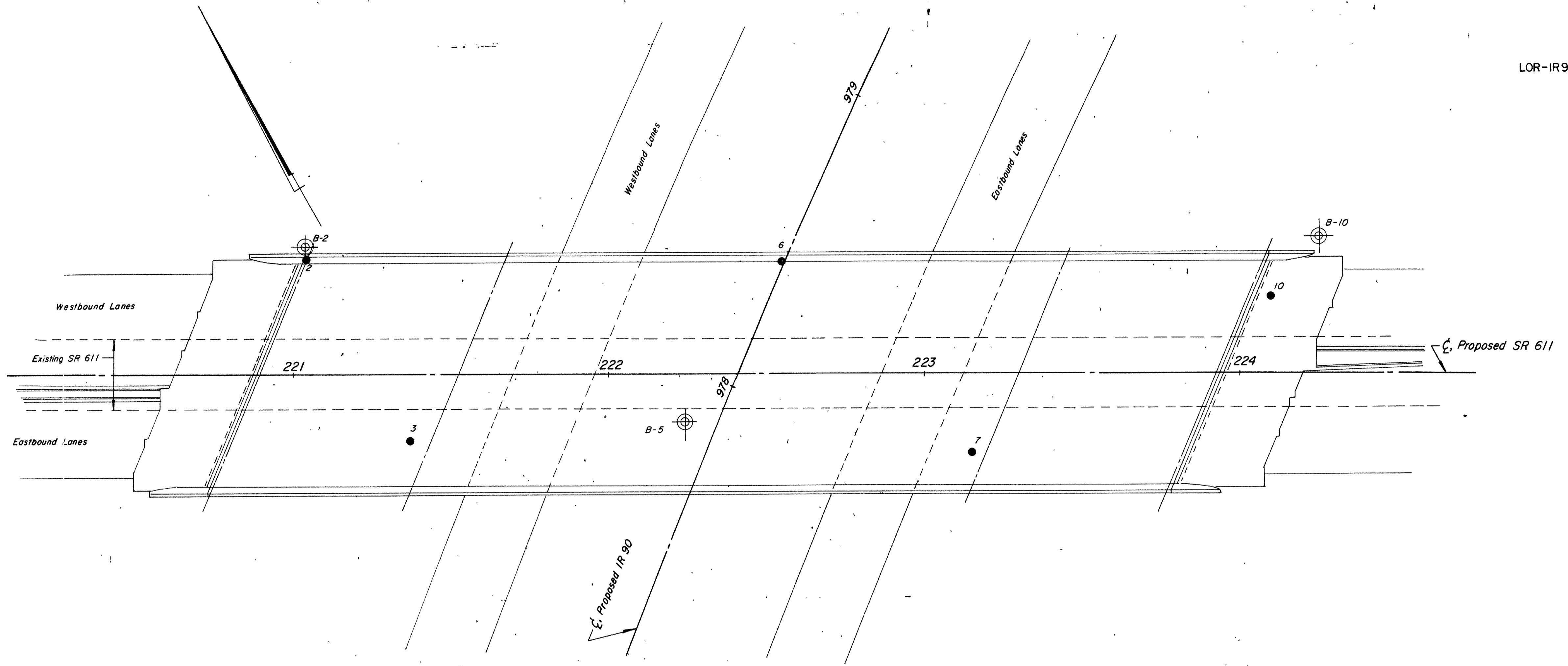
OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. LOR-IR90-1882
UNDER SR 611
SEC. LOR-IR90-16.21

CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 3/24/65
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APR 24 1965

LOR-IR90-17.21



OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. LOR-IR90-1882 UNDER SR 611 SEC. LOR-IR90-16.21			
PLAN AND PROFILE			
DRAWN BY R.L.C.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 3/24/65

SCALE: 1" = 20'

APR 21

LOG OF BORING
 Date Started 3-8-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
 Date Completed 3-9-65 Casing Length NONE Dip. _____
 Boring No. B-2 Station & Offset 221+04, 40' Lt (REAR ABUTMENT) Surface Elev. 627.8'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.		W.C.		
627.8	0																
625.3	2																
	4	9/16			Brown and Gray Gravelly Clay	1	26	5	7	32	30	40	18	23			
622.8	6	15/28			Brown and Gray Clayey Silt	2	0	6	12	41	41	29	8	18			
620.3	8	14 3/4			Brown and Gray Sandy Silt	3	0	10	11	42	37	30	7	17			
617.8	10	65/*			Gray Silt	4	0	6	11	47	36	22	3	12			
615.3	12	50/*			Gray Sandy Silt	5	0	13	12	42	33	23	5	9			
612.8	14	50/*			Gray Sandy Gravelly Silt	6	33	12	12	27	16	22	4	11			
610.3	16	50/*			Gray Silty Sandy Gravel	7	51	14	10	15	10	PL +18	12				
607.8	20	50* (0.3')			Dark-Gray Silt and Shale Fragments	8	V	I	S	U	A	L	FL +20	8			
605.2	22				TOP OF ROCK												
	24		2.4	0.0	Shale, black, carbonaceous, fissile, medium-firm, jointed and broken between 25.0' and 27.5'. Core loss 15%.												
	26																
598.8	28		3.1	0.9		BOTTOM OF BORING											

*Refusal

LOG OF BORING
 Date Started 3-4-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
 Date Completed 3-5-65 Casing Length NONE Dip. _____
 Boring No. B-5 Station & Offset 222+24, 15' Rt (CENTER PIER) Surface Elev. 627.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.		
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.		W.C.	
627.3	0															
624.8	2															
	4	8/13			Brown and Gray Silt and Clay	1	0	5	7	72	16	38	12	21		
622.3	6	29/35			Brown and Gray Sandy Silt	2	0	30	13	22	35	28	6	14		
619.8	8	23/30			Brown and Gray Silt	3	0	8	9	66	17	26	6	16		
617.3	10	50* (0.7')			Gray Sandy Silt	4	0	13	12	37	38	23	4	13		
614.8	12	50* (0.6')			Gray Gravelly Clay	5	18	7	5	35	35	32	11	21		
612.3	14	23/28			Gray Sandy Gravelly Silt	6	23	9	11	24	33	25	7	14		
609.8	16	50* (0.6')			Gray Sandy Silt	7	0	20	13	36	31	25	5	11		
607.3	20	50* (0.3')			Gray Silt and Shale Fragments	8	V	I	S	U	A	L	FL +20	8		
605.8	22				BOTTOM OF BORING											

*Refusal

LOG OF BORING
 Date Started 3-3-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
 Date Completed 3-4-65 Casing Length 20' Dia. 3 1/2" _____
 Boring No. B-10 Station & Offset 224+25, 43' Lt (FORWARD ABUTMENT) Surface Elev. 628.1'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics							SHTL Class.			
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.		W.C.		
628.1	0																
625.6	2																
	4	6/7			Brown Sandy Clay	1	0	15	14	29	42	35	11	38			
623.1	6	15/19			Brown and Gray Sandy Silt	2	0	9	13	33	45	29	8	15			
620.6	8	20/37			Brown Clayey Silt	3	0	9	10	65	16	28	7	14			
618.1	10	37/*			Gray and Brown Clayey Silt	4	0	4	9	37	50	28	8	14			
615.6	12				Carbonaceous shale boulders.												
614.1	14				Gray silty clay.												
613.1	16	8/17			Gray Silt and Clay	5	0	3	4	24	69	34	11	18			
608.1	20	20/*			Gray Silt and Stone Fragments	6	V	I	S	U	A	L	FL +19	11			
606.6	22																
	24		3.4	0.1	TOP OF ROCK												
	26																
	28																
	30		5.0	0.0	Shale, dark gray, slightly carbonaceous, fissile, firm, broken in top 3.0'. Core loss 2%.												
	32																
	34																
593.1	34		4.8	0.2	BOTTOM OF BORING												

*Refusal

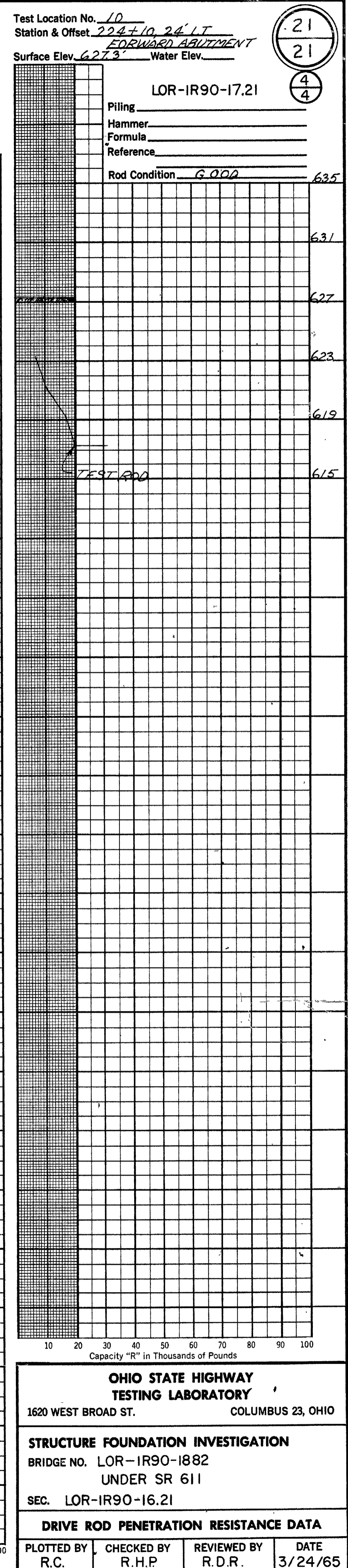
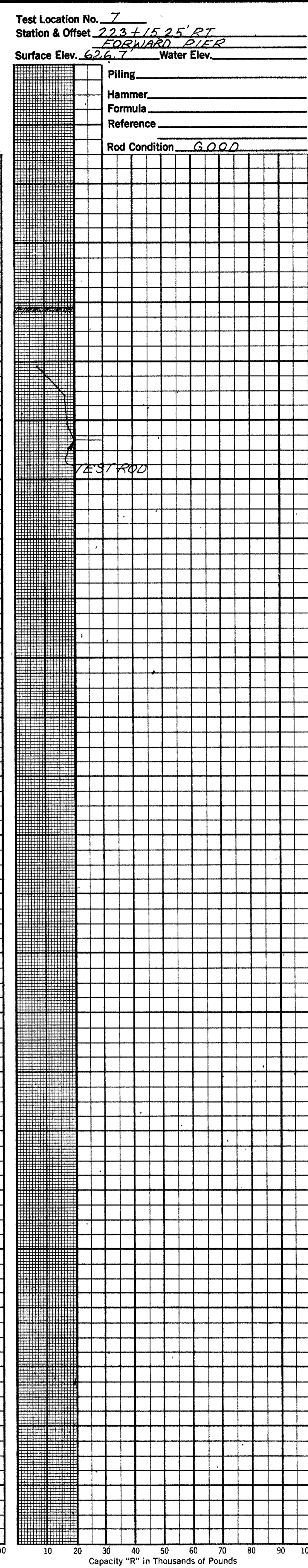
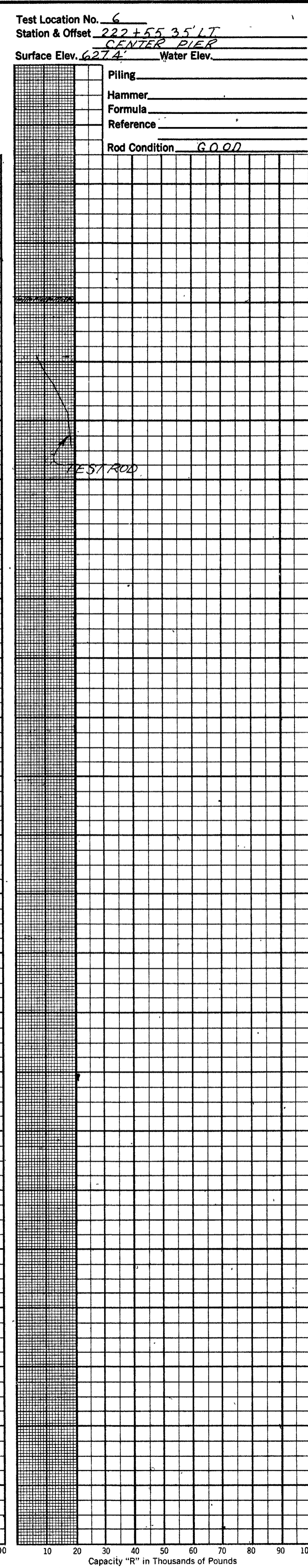
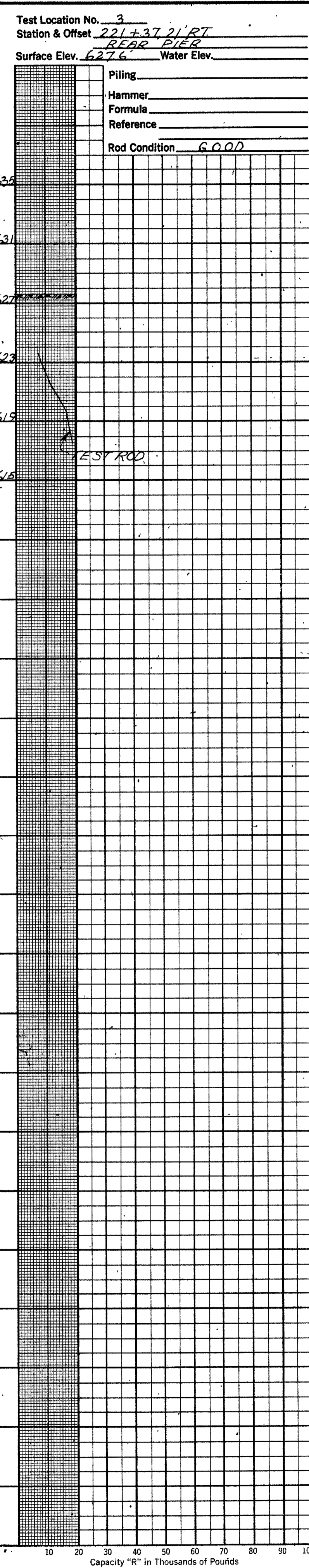
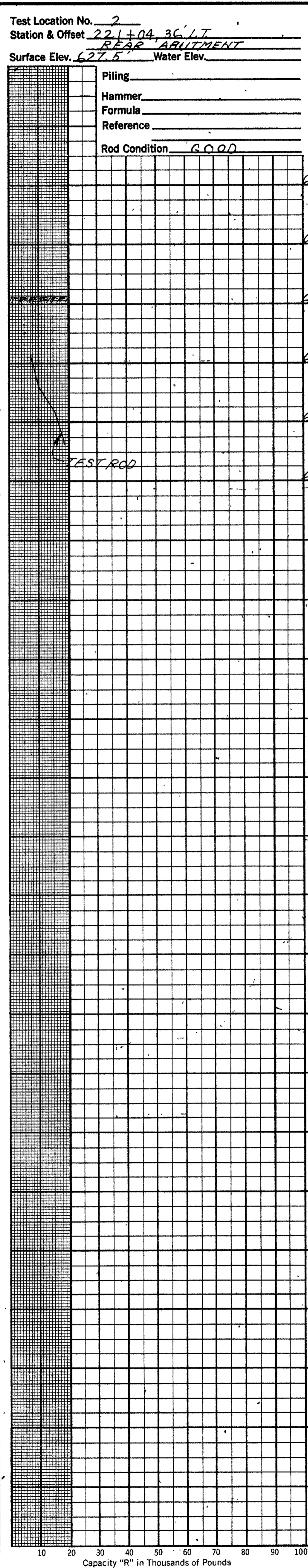
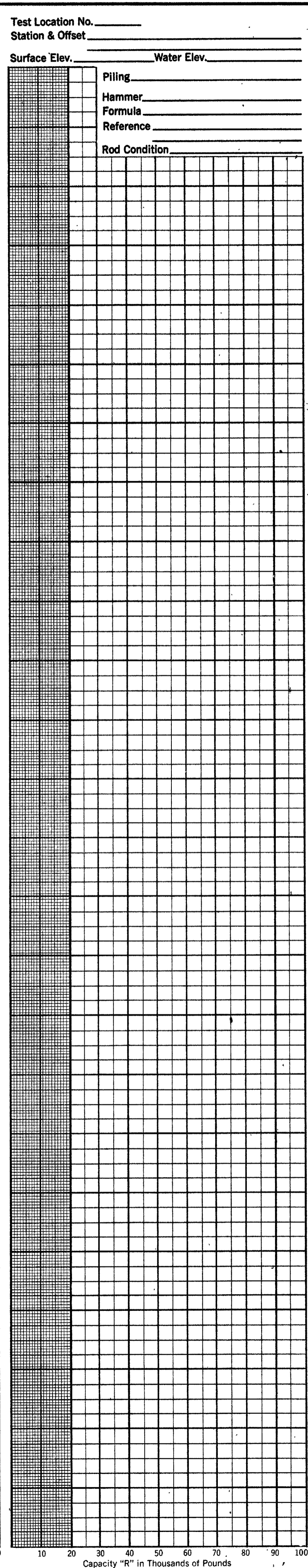
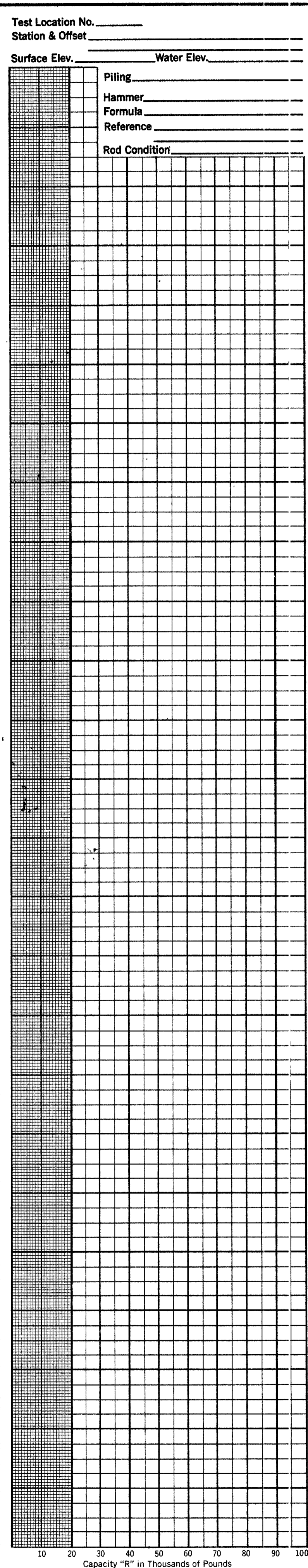
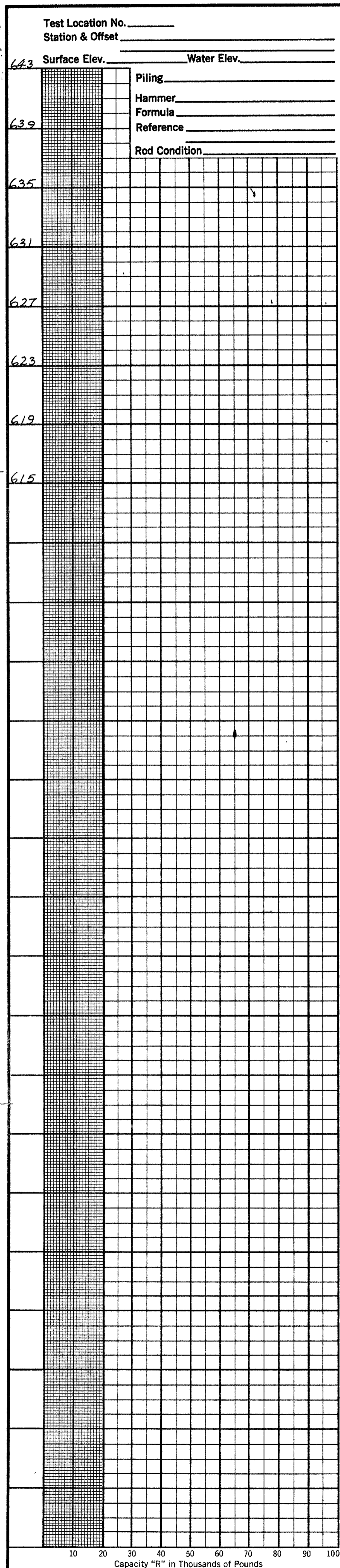
OHIO DEPARTMENT OF HIGHWAYS
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STRUCTURE FOUNDATION INVESTIGATION
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 SEC. LOR-IR 90-16.21

BORING DATA

TYPED BY B.J.R.	CHECKED BY R.C.	REVIEWED BY R.D.R.	DATE 3/24/65
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APR 21



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OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
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DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R.C. CHECKED BY R.H.P. REVIEWED BY R.D.R. DATE 3/24/65