

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

MICROFILMED
NOV 1 1965

I-74-(13) II

red 353
1-100

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-74-(13) II

1
351

HAMILTON COUNTY
HAM-74-11.37

Note: Project designation HAM-52-11.37 appearing throughout this plan shall be considered to read HAM-74-11.37

HAM-74-11.37
GREEN TOWNSHIP

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the 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 to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Approved J. R. Boothe
Date 2-24-66 Director Deputy Director

Approved C. H. Altvater
Date 5-23-66 Engineer of Bridges

Approved R. N. Ricketts
Date 5-24-66 Engineer of Location & Design

Approved P. E. Shultz
Date 5-24-66 Deputy Director of Design & Construction

Approved J. W. Wilson
Date 6-3-66 Deputy Director of Planning & Programming

Approved T. H. Board
Date 6-3-66 Deputy Director of Right of Way

Approved _____
Date _____ First Assistant Director

Approved P. A. Washburn
Date 6/3/66 Director of Highways

Revised Sheet Nos. 8, 9, 15, 20, 23, 23A, 23B, 24, 36, 215, 251 & 280
8-31-66 C.E.H.

Revised Sheet Nos. 334 & 349 and add Sheet Nos. 334 & 349 S
9-7-66 C.E.H.

PREPARED BY

VOGT, IVERS & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI, O CHICAGO, ILL.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DIVISION ENGINEER DATE

CONVENTIONAL SIGNS

State Line	-----
County Line	-----
Township Line	-----
Section Line	-----
Center Line	-----
Corporation Line	-----
Fence Line	-----
Guard Rail (existing)	-----
Guard Rail (proposed)	-----
Steam Railroad	-----
Power Poles	⊕ ⊕ ⊕ ⊕
Telephone Poles	⊕ ⊕ ⊕ ⊕
Trees or Stumps (existing)	⊗ ⊗ ⊗ ⊗
Property Line	-----
Limited Access and Right of Way	L.A. R/W
Right of Way Only	R.W.
Existing Right of Way	-----
Limited Access Only	L.A.

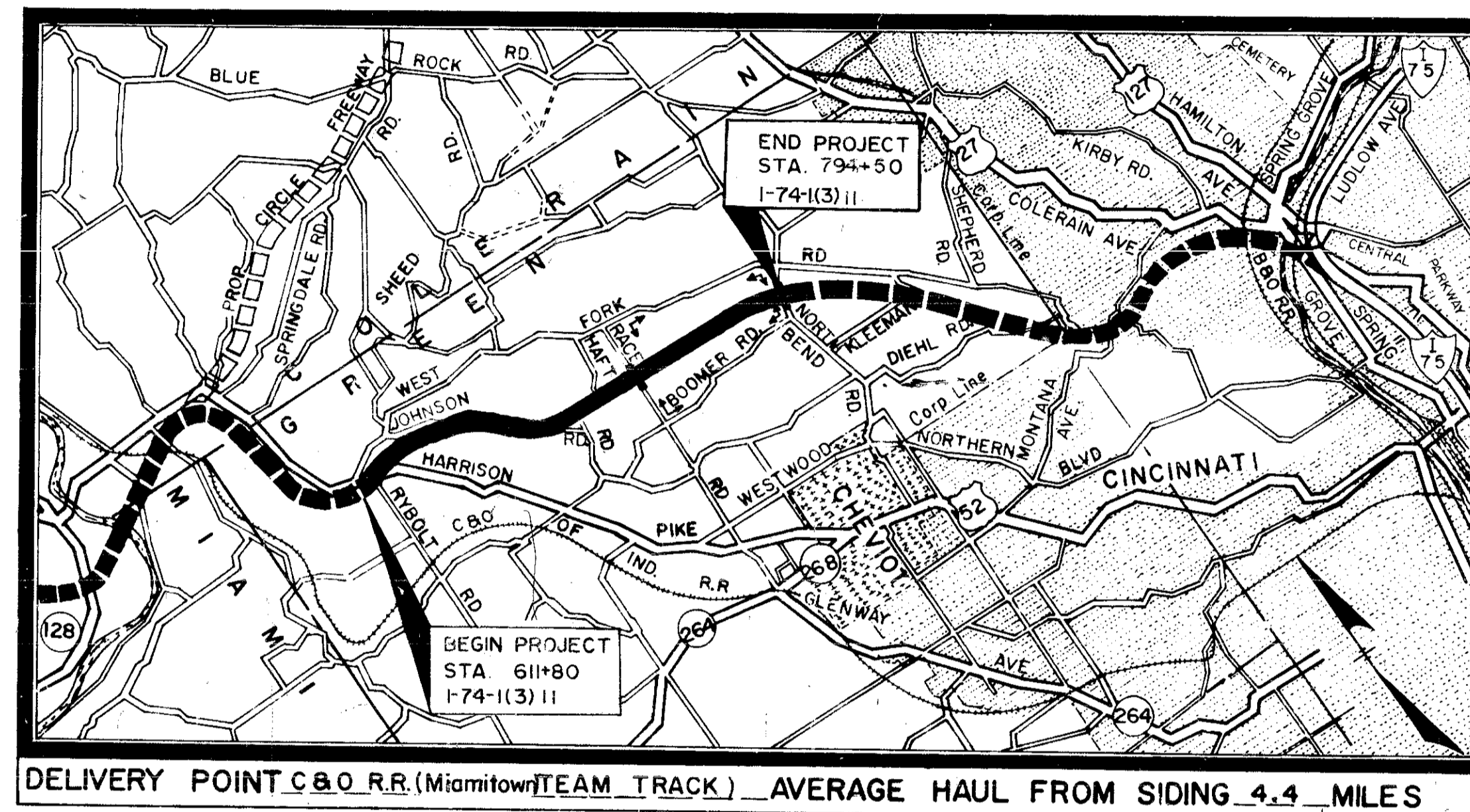
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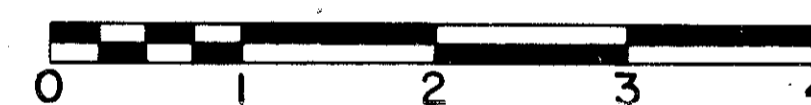
Sheet Nos. 173, 174, 175, 176, 260, 261, and 262 were deleted from this Plan.

LINE DATA

Begin Project	Sta. 611 + 80	W. B. Lanes
End Project	Sta. 794 + 50	
Net Length Project	18,270 ft. or 3.460 miles	
Add for Approaches		
West Approach	Sta. 599 + 50 to Sta. 611 + 80	1,230.0
Race Road	Sta. 13 + 19 to Sta. 23 + 40	1,030.00
North Bend Road	Sta. 10 + 31.75 to Sta. 32 + 38	2,206.25
East Approach	Sta. 794 + 50 to Sta. 798 + 00	350.00
Total Length of Work	23,086.25 Lin. ft. or 4.372 Miles	



LOCATION MAP
SCALE OF MILES



Portion to be improved under this contract	-----
Portion to be improved under separate contract	-----
Future Construction	-----
State & Federal Roads	-----
Other Roads	-----

SCALE

Plan	1" = 50'
Profile: Horizontal	1" = 50'
Profile: Vertical	1" = 10'

Supplemental	Prints	of	Standard	Construction	Drawings
BP-1	6-1-65	F-3	L-1	6-1-65	CB-4
BP-2	6-1-65	MC-6	SP-53	6-30-61	CB-5
BP-3	6-1-65	MC-5	1-2A	6-1-65	CB-6
BP-4	6-1-65	GR-6	MH-2	6-1-65	CB-8
BP-7	1-1-66	GR-1	CB-2-2A & B	6-1-65	MH-1
BP-6	6-1-65	GR-5B	CB-3	6-1-65	MH-1A
F-2	6-1-65	GR-2A	CB-3A	6-1-65	A3-1-54

SUPPLEMENTAL SPECIFICATIONS

801	9-2-65
806	3-3-66
808	2-7-66
811	3-29-65
815	8-6-65
816	8-6-65
1001	3-21-66
825	4-22-65
828	3-21-66

File No. **HAMILTON COUNTY** **HAM-74-11.37**
Date of Letting _____ 19____
Contract No. _____

Scale: 1" = 200'

LEGEND

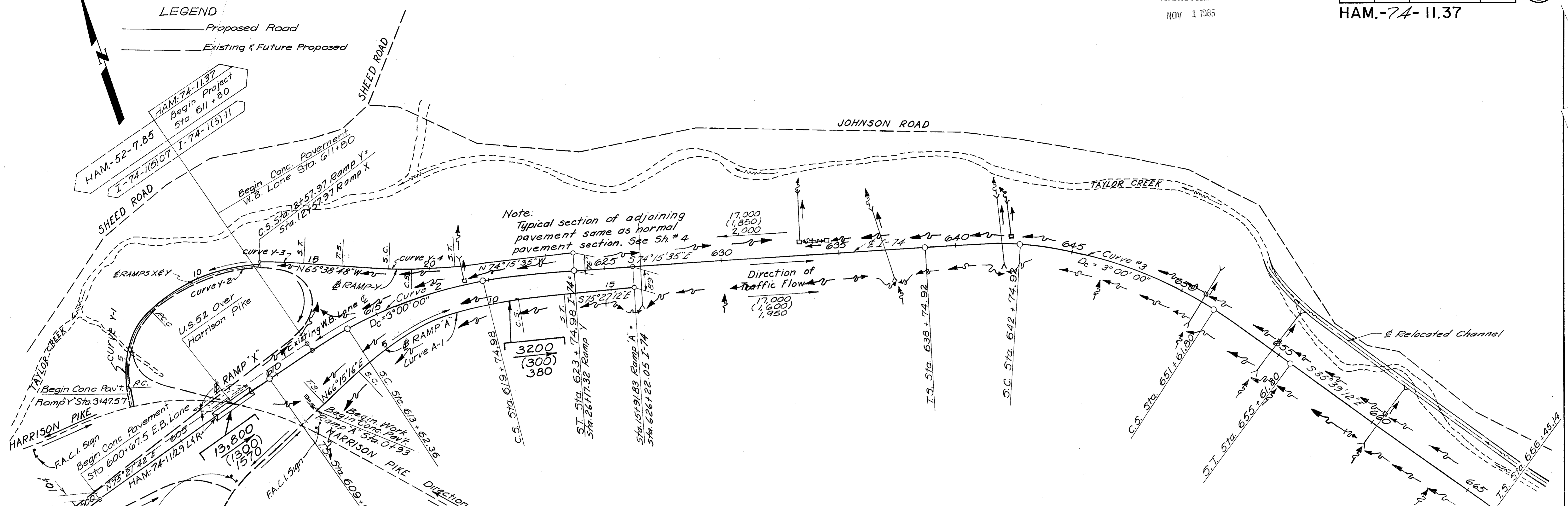
- Proposed Road
- - - Existing & Future Proposed

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NOV 1 1985

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2	OHIO	

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Note:
Typical section of adjoining pavement same as normal pavement section. See Sh # 4

CURVE NO.	LOCATION	POINT	STATION	COORDINATES	
				NORTH	EAST
2	I-74	T.S.	609+62.36	443,219.21	1,386,946.45
		S.C.	613+62.36	443,306.69	1,387,336.57
		P.I.	616+81.74	443,401.01	1,387,642.49
		C.S.	619+74.98	443,300.82	1,387,946.54
		S.T.	623+74.98	443,205.86	1,388,334.90
3	I-74	T.S.	638+74.92	442,798.96	1,389,778.53
		S.C.	642+74.92	442,677.14	1,390,159.37
		P.I.	647+45.01	442,562.93	1,390,616.04
		C.S.	651+61.80	442,172.46	1,390,878.97
		S.T.	655+61.80	441,855.93	1,391,123.20
Y-1	RAMP-Y	P.C.	3+65.10	Same as RAMP-Y Built Under HAM-52-785	Same as RAMP-X Built Under HAM-52-785
		P.I.	5+71.27		
		P.C.C.	7+40.17		
		P.C.C.	7+40.17		
Y-2	RAMP-Y	P.I.	10+10.35	Same as RAMP-Y Built Under HAM-52-785	Same as RAMP-X Built Under HAM-52-785
		C.S.	12+57.97		
Y-3	RAMP-Y	C.S.	12+57.97	443,725.79	1,387,074.63
		P.I.	13+24.75	443,706.55	1,387,138.57
		S.T.	14+57.97	443,651.51	1,387,260.16
		T.S.	16+25.05	443,582.62	1,387,412.37
		S.C.	18+25.05	443,503.34	1,387,595.77
Y-4	RAMP-Y	P.I.	18+68.93	443,482.05	1,387,634.55
		C.S.	19+12.15	443,473.49	1,387,677.78
		S.T.	21+12.15	443,415.89	1,387,869.29
		T.S.	1+34.53	443,037.89	1,387,132.86
		S.C.	3+34.53	443,114.13	1,387,317.71
A-1	RAMP-A	P.I.	7+32.21	443,278.56	1,387,679.94
		C.S.	10+91.83	443,174.15	1,388,063.81
		S.T.	12+91.83	443,128.45	1,388,258.47
		S.T.	12+91.83	443,128.45	1,388,258.47

DESIGN DESIGNATION

ADT 1962	22,400
ADT 1975	34,000
1975 DDHV (A.M.)	(1800) & (1600)
1975 DDHV (P.M.)	2000 & 1950
Trucks	4%
D.S.	70mph
ADT 1987	53,230
DHV 1987	5320
DIR. DIST. 1987	62%

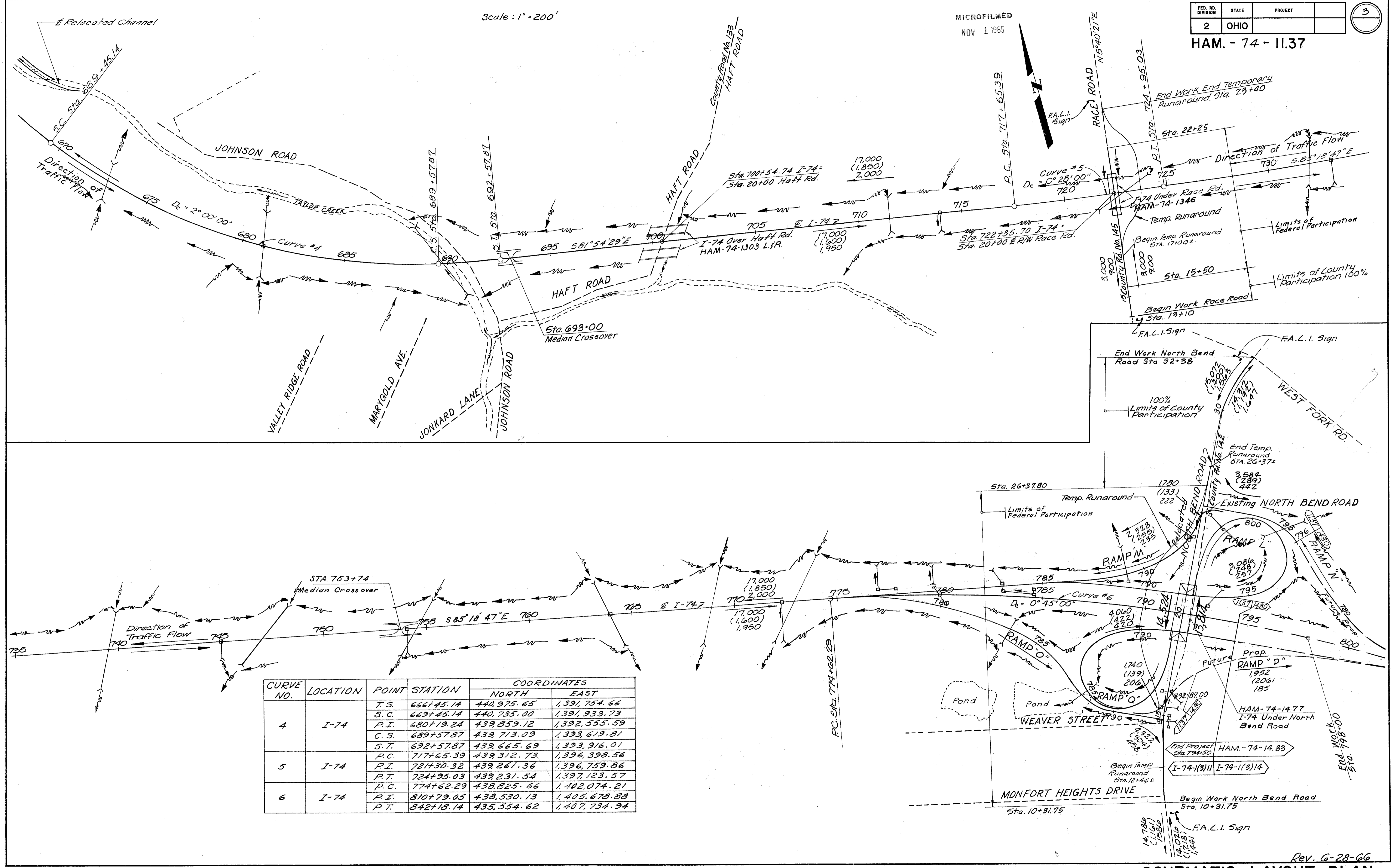
Scale: 1" = 200'

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HAM - 74 - 11.37



CURVE NO.	LOCATION	POINT	STATION	COORDINATES	
				NORTH	EAST
4	I-74	T.S.	666+45.14	440,975.65	1,391,754.66
		S.C.	669+45.14	440,735.00	1,391,333.73
		P.I.	680+19.24	439,859.12	1,392,555.59
		C.S.	689+57.87	439,713.09	1,393,619.81
		S.T.	692+57.87	439,665.69	1,393,916.01
5	I-74	P.C.	717+65.39	439,312.73	1,396,398.56
		P.I.	721+30.32	439,261.36	1,396,759.86
		P.T.	724+95.03	439,231.54	1,397,123.57
6	I-74	P.C.	774+62.29	438,825.66	1,402,074.21
		P.I.	810+79.05	438,530.13	1,405,673.88
		P.T.	842+18.14	435,354.62	1,407,734.94

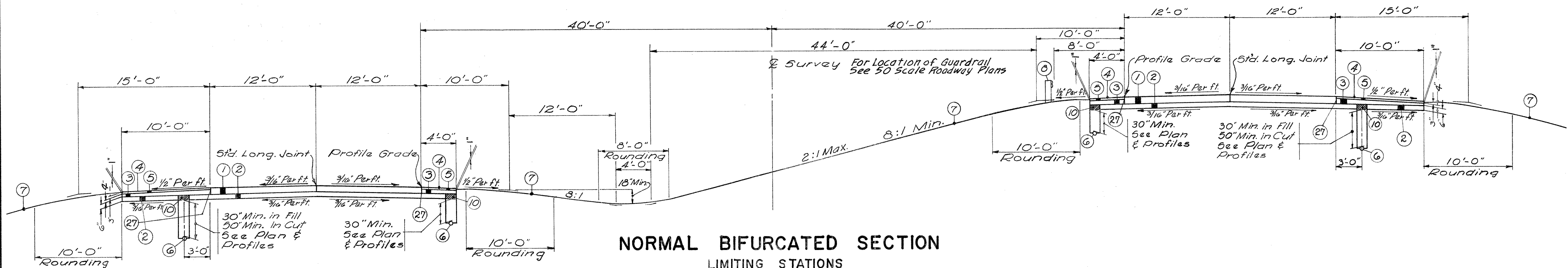
TYPICAL SECTIONS

TYPE 45I

SCALE 3/16" = 1' - 0"

FED. RD. DIVISION	STATE	PROJECT	4
2	OHIO		

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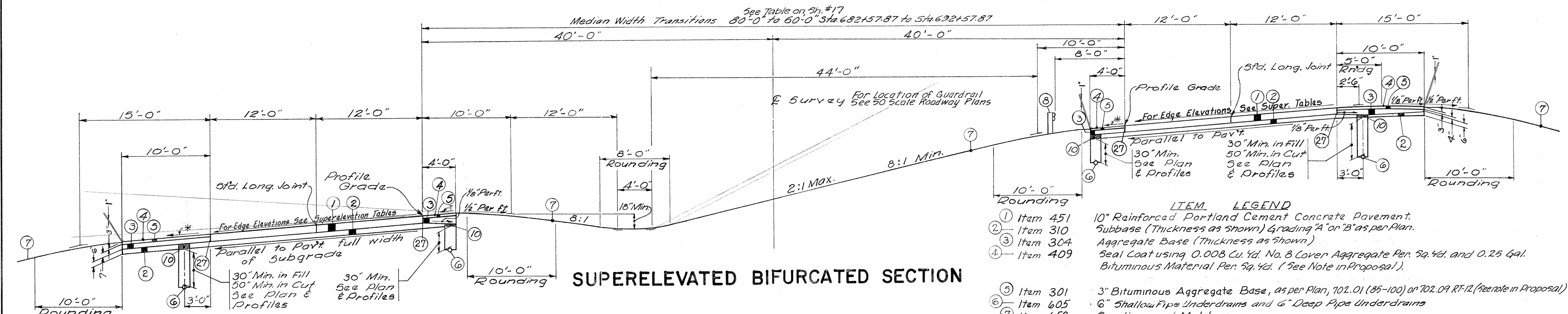


NORMAL BIFURCATED SECTION

LIMITING STATIONS

Sta. 600+67.50 - Sta. 606+62.30 (E.B. Lanes) See Note "A"
 Sta. 623+74.98 - Sta. 629+48 ± [Sta. 629+48 ± - Sta. 634+00 ±
 Sta. 634+00 ± - Sta. 638+74.92 See lower left Corner Sh. No. 5
 Sta. 655+61.80 - Sta. 666+45.14

Note:
 For Side Slope Treatment in Rock See Sh. 5
 For Side Slope Treatment in Fill See Sh. 8
 For Side Slope Treatment in Cut See Sh. 8



SUPERELEVATED BIFURCATED SECTION

LIMITING STATIONS

Sta. 606+62.30 - 609+41.86 (Bridge And Approach Slabs E.B. Lanes)

Notes:
 † - Slope of Paved Berm to be same slope as pavement.
 * - Shoulder Slope is 1/2" Per ft. unless super-elevation is greater than 1/2" Per ft. Then shoulder slope must be the same as pavement super-elevation.
 ϕ - For shoulder treatment along acceleration & deceleration lanes, see Miscellaneous Sheet No. 14
 A - Profile Grade Carried at Pavement, This Station Run

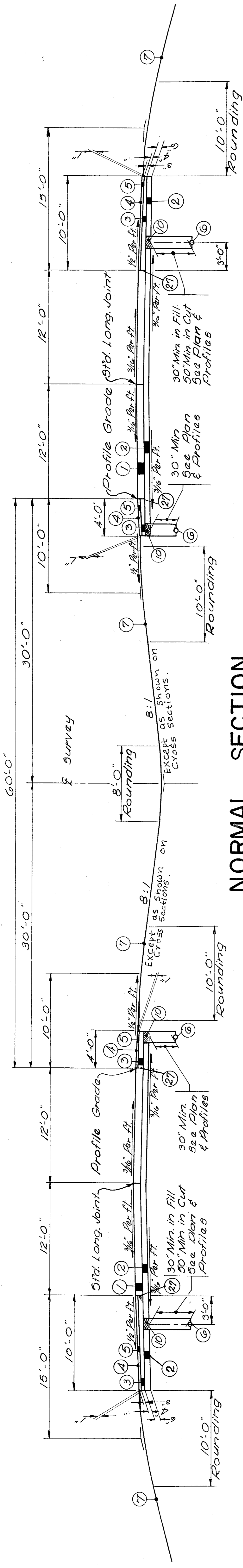
Sta. 609+41.86 - Sta. 611+80 (E.B. Lanes) See Note "A"
 Sta. 611+80 - Sta. 613+00 ±
 Sta. 621+00 ± - Sta. 623+74.98 [Sta. 629+48 ± - Sta. 634+00 ±
 Sta. 638+74.92 - Sta. 639+00 ± See lower left Corner Sh. No. 5
 Sta. 640+25 ± - Sta. 643+50 ±
 Sta. 653+25 ± - Sta. 655+61.80
 Sta. 668+20 ± - Sta. 670+40 ±
 Sta. 671+30 ± - Sta. 675+00 ±
 Sta. 677+68 ± - Sta. 679+00 ±
 Sta. 679+56 ± - Sta. 681+55 ±
 Sta. 685+50 ± - Sta. 692+00 ±

- #### ITEM LEGEND
- ① Item 451 10" Reinforced Portland Cement Concrete Pavement. Subbase (Thickness as shown) Grading "A" or "B" as per Plan.
 - ② Item 310 Aggregate Base (Thickness as shown)
 - ③ Item 304 Seal Coat using 0.008 Cu. Yd. No. 8 Cover Aggregate Per. Sq. Yd. and 0.25 Gal. Bituminous Material Per. Sq. Yd. (See Note in Proposal).
 - ④ Item 409 3" Bituminous Aggregate Base, as per Plan, 702.01 (85-100) or 702.09 RT-12 (See Note in Proposal)
 - ⑤ Item 301 6" Shallow Pipe Underdrains and 6" Deep Pipe Underdrains
 - ⑥ Item 605 Seeding and Mulching
 - ⑦ Item 659 Guard Rail, Type 4
 - ⑧ Item 606 6" Pipe Underdrain, 707.06 or 707.12
 - ⑨ Item 605 Drainage Connection using No. 8 Aggregate (See Note in Proposal)
 - ⑩ Item Special Remove subbase for width of Trench and replace with No. 8 Size Aggregate Immediately Prior To Placing The Item 304 Aggregate Base
 - ⑪ Item 612 Concrete Median Standard
 - ⑫ Item 609 Concrete Curb Standard Type "2A"
 - ⑬ Item 402 1 1/2" Asphalt Concrete (85-100)
 - ⑭ Item 302 1 1/2" Asphalt Concrete (85-100)
 - ⑮ Item 408 Bituminous Prime Coat, 702.09, RT-2 or RT-3. Applied at the rate of 0.40 gal/yd²
 - ⑰ Item 451 Sealed Joint Between Concrete Pavement And Paved Shoulder (See Note in Proposal)

TYPICAL SECTIONS TYPE 451 & 404

SCALE 3/16" = 1'-0"

REV. NO.	DATE	PROJECT
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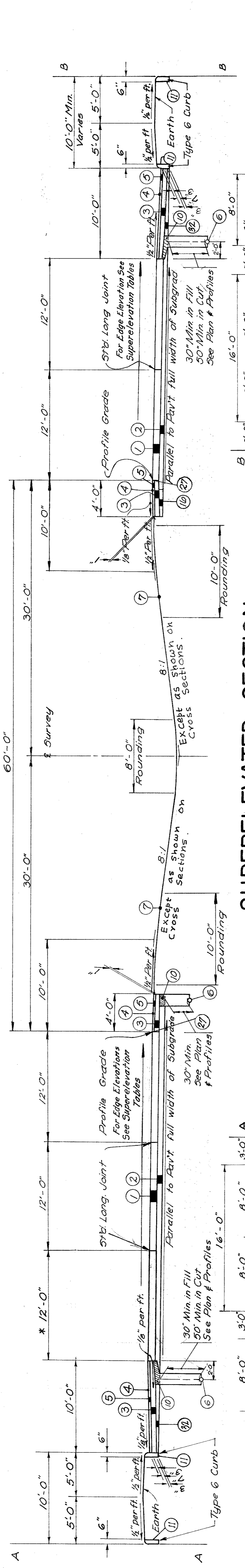


NORMAL SECTION

LIMITING STATIONS
 Sta. 701+79.24 - Sta. 702+50.1
 Sta. 704+50.1 - Sta. 705+21.0
 Sta. 709+25.1 - Sta. 710+00.1
 Sta. 711+00.1 - Sta. 712+28.1
 Sta. 713+50.1 - Sta. 714+25.1
 Sta. 715+00.1 - Sta. 716+25.1

NOTE: For side slope treatment in back. See 5A 5
 For side slope treatment in fill. See 5A 8
 For side slope treatment in cut. See 5A 8
 For Item Legend. See 5A 4 & 5A 9

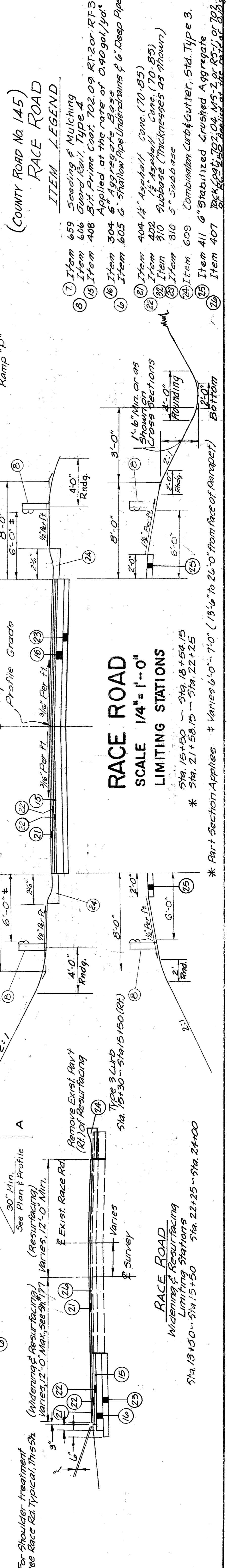
NOTE: For side slope treatment in back. See 5A 5
 For side slope treatment in fill. See 5A 8
 For side slope treatment in cut. See 5A 8
 For Item Legend. See 5A 4 & 5A 9



SUPERELEVATED SECTION

SCALE 1/4" = 1'-0"

LIMITING STATIONS
 Sta. 789+50 to Sta. 794+50 ±



RACE ROAD

SCALE 1/4" = 1'-0"

LIMITING STATIONS
 Sta. 15+50 - Sta. 18+54.15
 Sta. 21+58.15 - Sta. 22+25

* Part Section Applies ± Varies 6'-0" - 7'-0" (15'-0" to 26'-0" from face of Rampet)

RACE ROAD
 Widening & Resurfacing
 Limiting Stations
 Sta. 13+50 - Sta. 15+50
 Sta. 22+25 - Sta. 24+00

(COUNTY ROAD No. 145)
RACE ROAD

ITEM LEGEND

- ⑦ Item 659 Seeding & Mulching
- ⑧ Item 606 Guard Rail, Type 4
- ⑨ Item 408 5 1/2" Prime Coat, 702.09 RT-20-RT3
- ⑩ Item 304 5" Aggregate Base Applied at the rate of 0.40 gal/yd.
- ⑪ Item 605 6" Shallow Pipe Underdrains & 6" Deep Pipe Underdrains
- ⑫ Item 404 1/4" Asphalt Conc. (70-85)
- ⑬ Item 402 1/2" Asphalt Conc. (70-85)
- ⑭ Item 310 Subbase (Thicknesses as shown)
- ⑮ Item 310 5" Subbase
- ⑯ Item 609 Combination Curb & Gutter, Std. Type 3.
- ⑰ Item 407 Stabilized Crushed Aggregate

* Backfill to be used for passing under North Bend Rd. structure only.

* Note: Type 6 Curb to be used for passing under North Bend Rd. structure only.

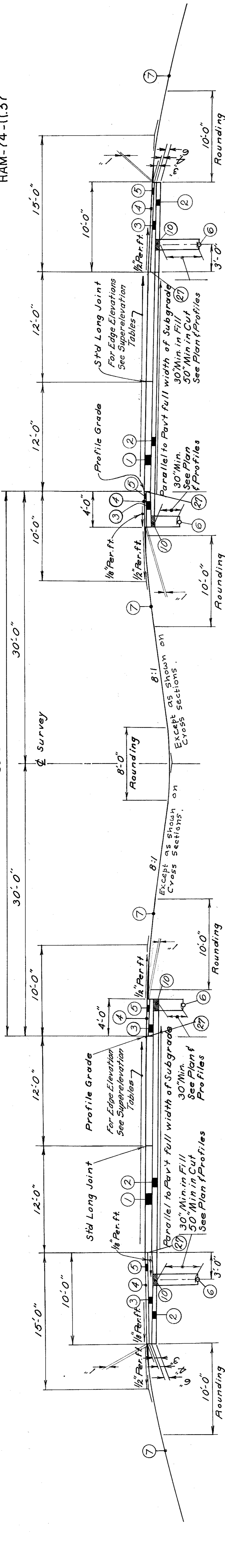
* Part Section Applies ± Varies 6'-0" - 7'-0" (15'-0" to 26'-0" from face of Rampet)

TYPICAL SECTIONS

TYPICAL SECTIONS - TYPE 451

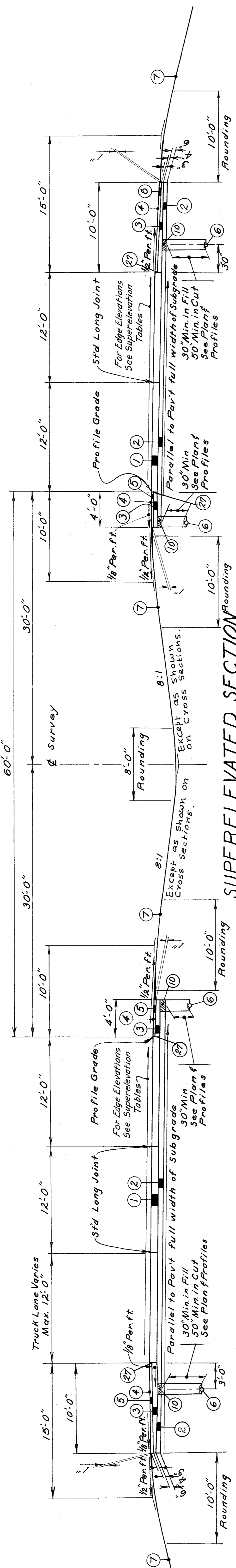
SCALE 3/16" = 1'-0"

REP. DIV.	PROJECT
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SUPERELEVATED SECTION

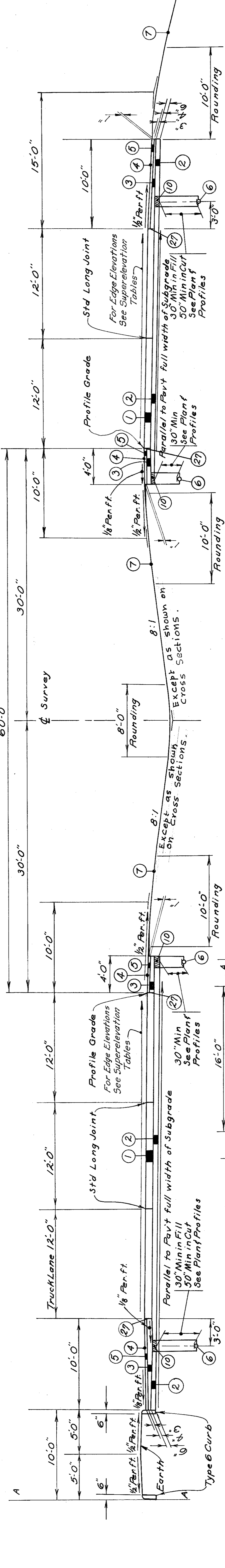
Limiting Stations
STA. 773+12.29 to STA. 778+00



SUPERELEVATED SECTION

Limiting Stations
STA. 781+50 to STA. 783+00

Rock Section - for Slope & Underdrain Treatment See Sh. 5



SUPERELEVATED SECTION

Limiting Stations
STA. 789+50 to STA. 793+00

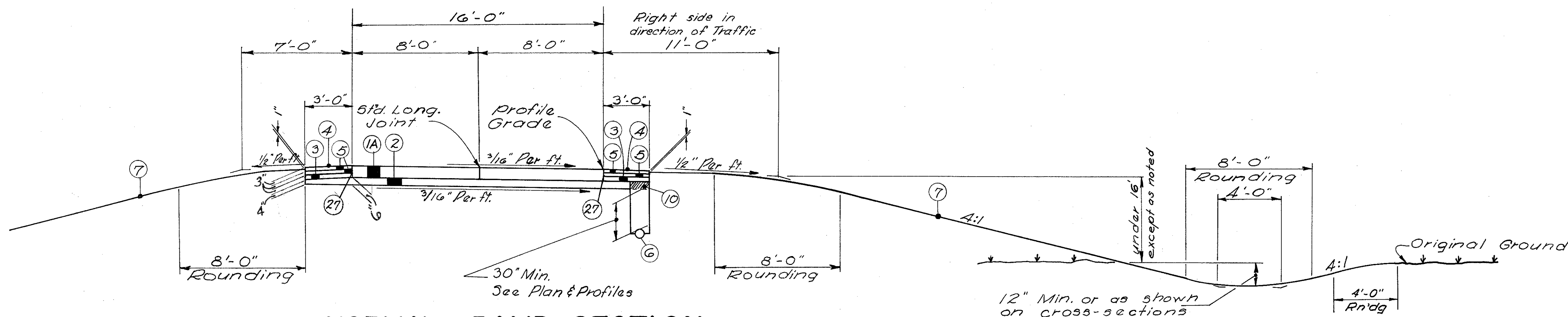
For Item Legend See Sh. No. 4
For Side Slope Treatment See Sh. No. 8

TYPICAL SECTIONS TYPE 451

SCALE 1/4" = 1' - 0"

FED. RD. DIVISION	STATE	PROJECT
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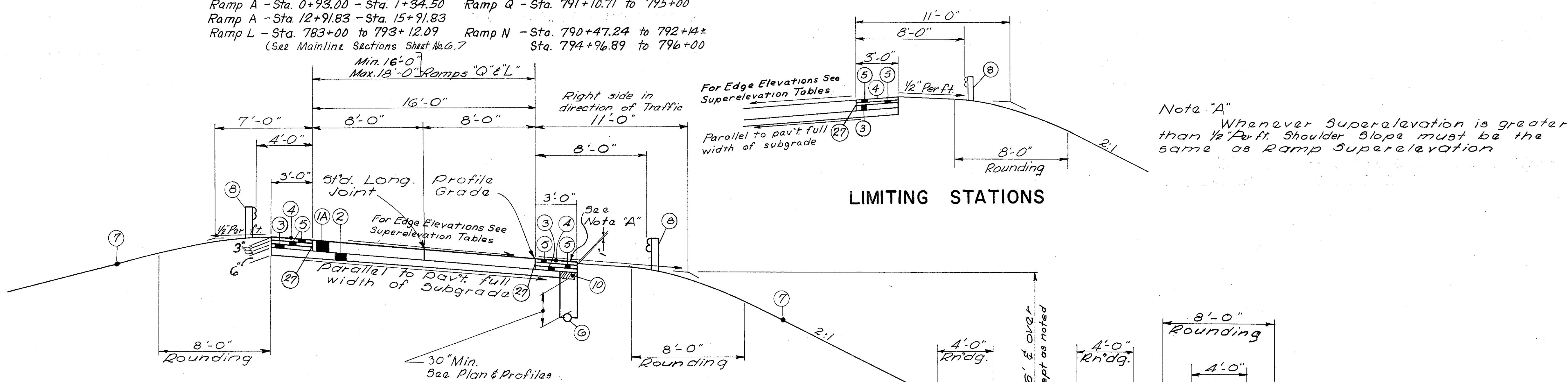
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NORMAL RAMP SECTION

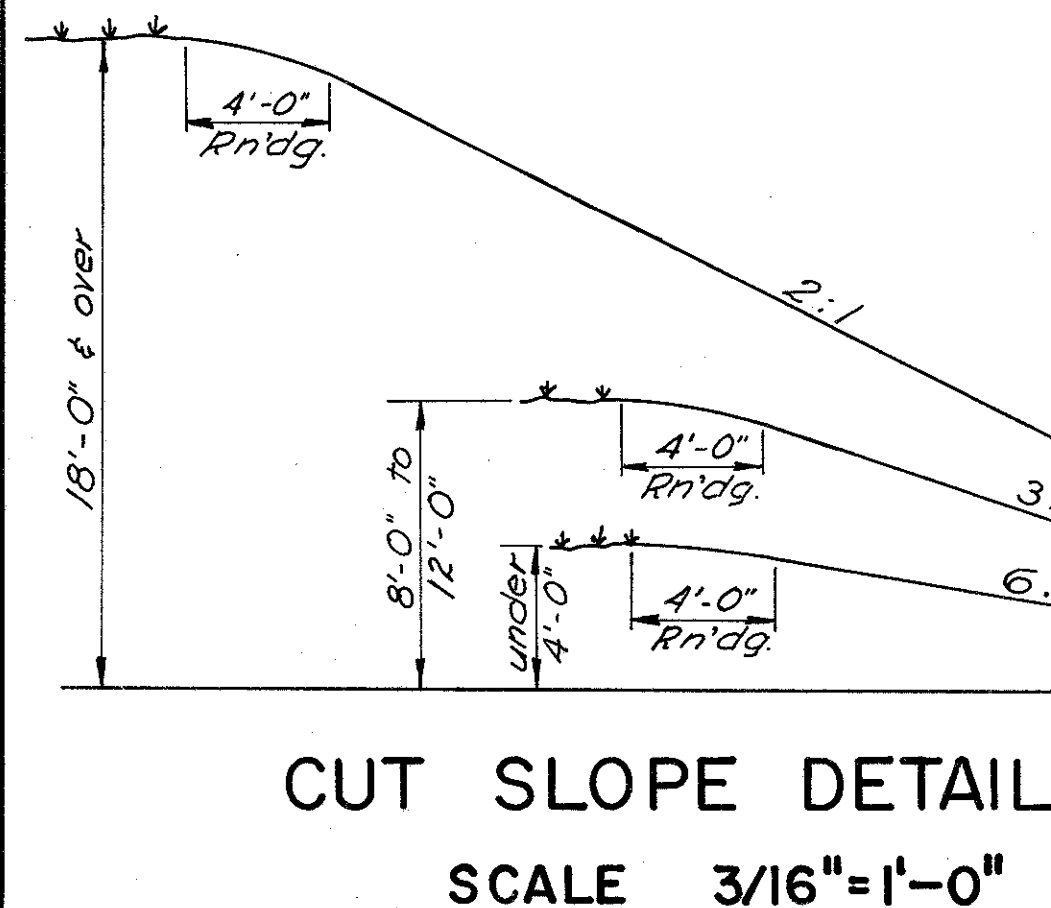
- LIMITING STATIONS**
- Ramp Y - Sta. 14+57.97 - Sta. 16+25.05
 - Ramp A - Sta. 0+93.00 - Sta. 1+34.50
 - Ramp L - Sta. 12+91.83 - Sta. 15+91.83
 - Ramp L - Sta. 783+00 to 793+12.09 (See Mainline Sections Sheet No. 6, 7)
 - Ramp M - Sta. 783+00 to 788+50.53
 - Ramp Q - Sta. 791+10.71 to 795+00
 - Ramp N - Sta. 790+47.24 to 792+14±
 - Ramp N - Sta. 794+96.89 to 796+00

Note: For Item Legend, See Sheet No. 9



SUPERELEVATED RAMP SECTION

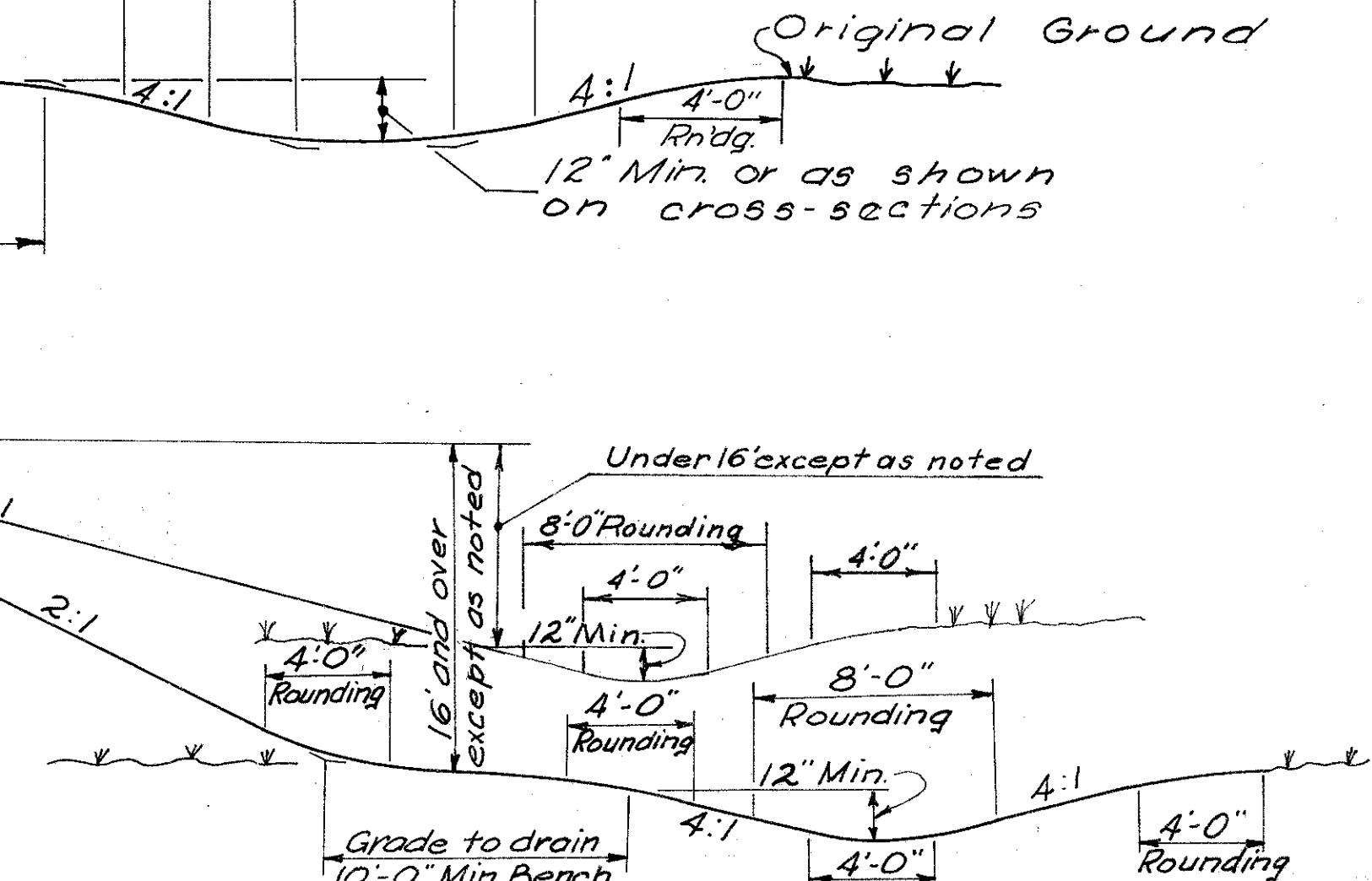
- LIMITING STATIONS**
- Ramp Y - Sta. 14+00 - Sta. 14+57.97
 - Ramp Y - Sta. 16+25.05 - Sta. 21+12.15
 - Ramp A - Sta. 1+34.50 - Sta. 12+91.83
 - Ramp L - Sta. 793+12.09 - Sta. 798+89±
 - Ramp L - Sta. 800+57± - Sta. 802+44±
 - Ramp L - Sta. 802+44± - Sta. 803+97.14 (See 20 Scale Detail Sheet No. 196, 208)
 - Ramp Q - Sta. 779+86.16 - Sta. 781+36± (See 20 Scale Detail Sheet No. 207)
 - Ramp Q - Sta. 781+36± to Sta. 783+16±
 - Ramp Q - Sta. 784+68± to Sta. 791+10.71
 - Ramp O - Sta. 776+00 to 780+20.01 (See 20 Scale Detail Sheet No. 208)
 - Ramp O - Sta. 780+20.01 to Sta. 786+26.11
 - Ramp O - Sta. 787+87.06 to Sta. 788+72±
 - Ramp M - Sta. 788+50.53 to Sta. 792+47.27
 - Ramp M - Sta. 792+47.27 to Sta. 794+06.84 (See 20 Scale Detail Sheet No. 212)
 - Ramp P - Sta. 790+16.43 to Sta. 791+87± (See 20 Scale Detail Sheet No. 207)
 - Ramp N - Sta. 794+12± to Sta. 794+96.89 (See 20 Scale Detail Sheet No. 212)



FILL SLOPE DETAIL

SCALE 3/16" = 1' - 0"

For Mainline Only

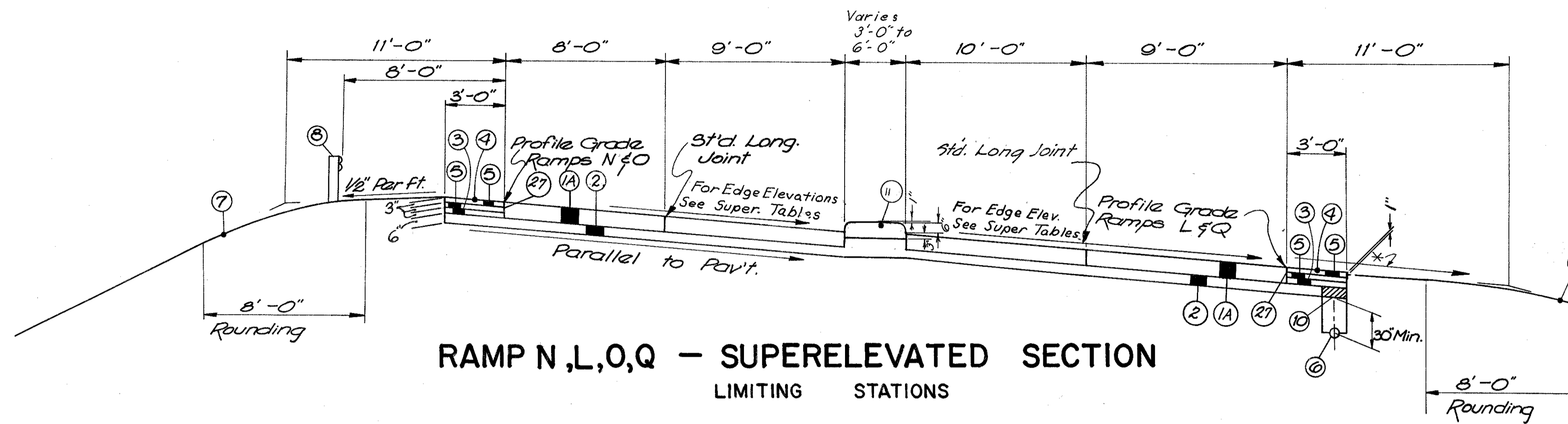


RAMP TYPICAL SECTIONS TYPE 451

SCALE $\frac{1}{4}'' = 1'-0''$

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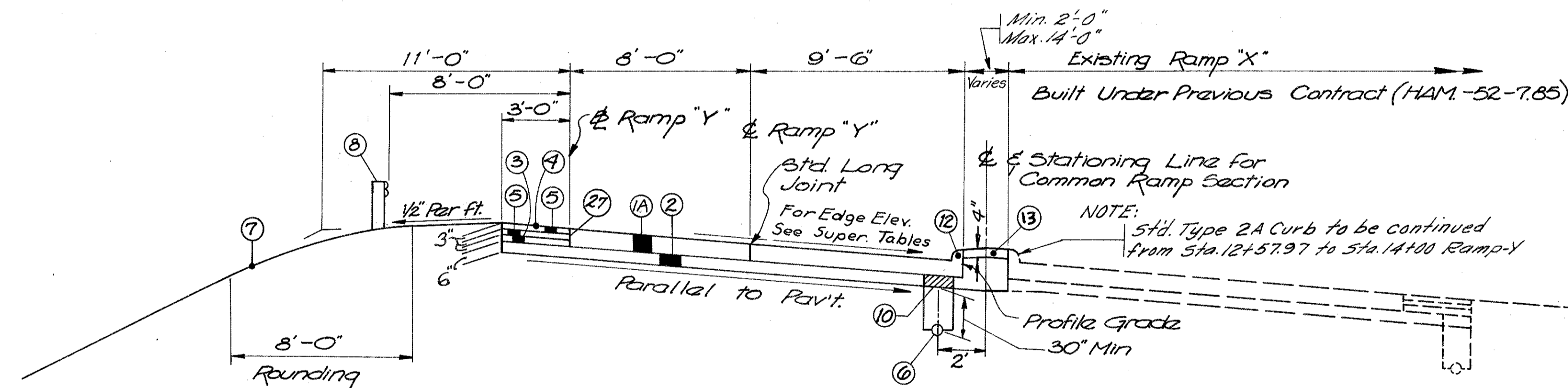
HAM. -52 -11.37



*-Shoulder Slope is $\frac{1}{2}''$ Per Ft. Unless Superelevation is Greater Than $\frac{1}{2}''$ Per Ft. Then Shoulder Slope Must Be the Same As Pavement Superelevation.

RAMP N, L, O, Q - SUPERELEVATED SECTION LIMITING STATIONS

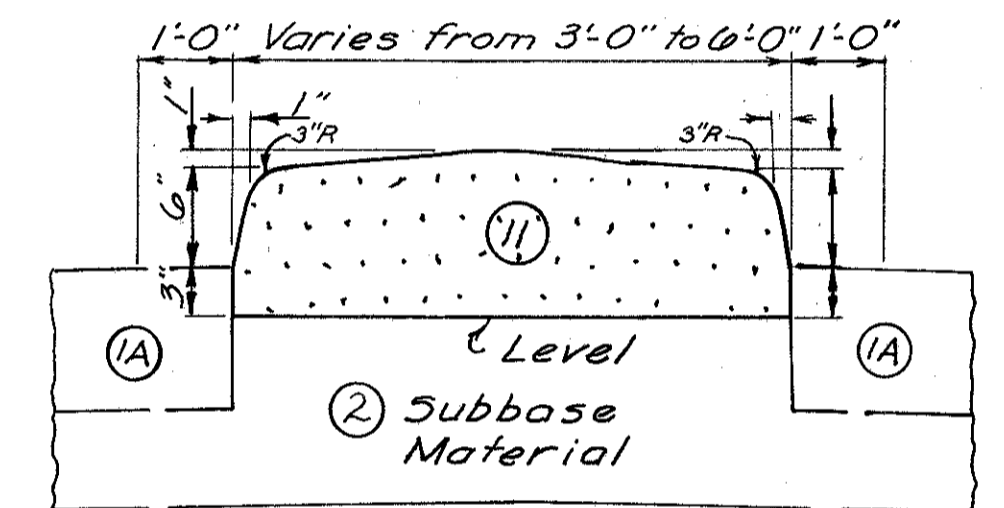
Ramp 'L' - Sta. 798+89± to Sta. 800+57±
Ramp 'Q' - Sta. 783+16± to Sta. 784+68±
Ramp 'O' - Sta. 788+72± to Sta. 790+50±
Ramp 'N' - Sta. 792+14± to Sta. 794+12±



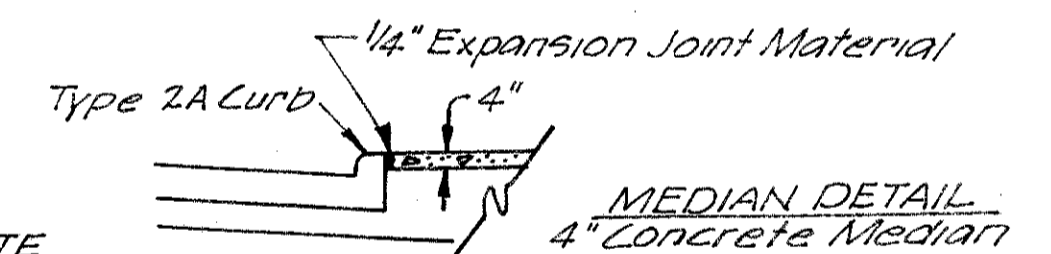
RAMP Y - SUPERELEVATED SECTION LIMITING STATIONS

Sta. 31+47.57 - Sta. 14+00

NOTE: For side slope treatment. See Sh. 8



MEDIAN SECTION

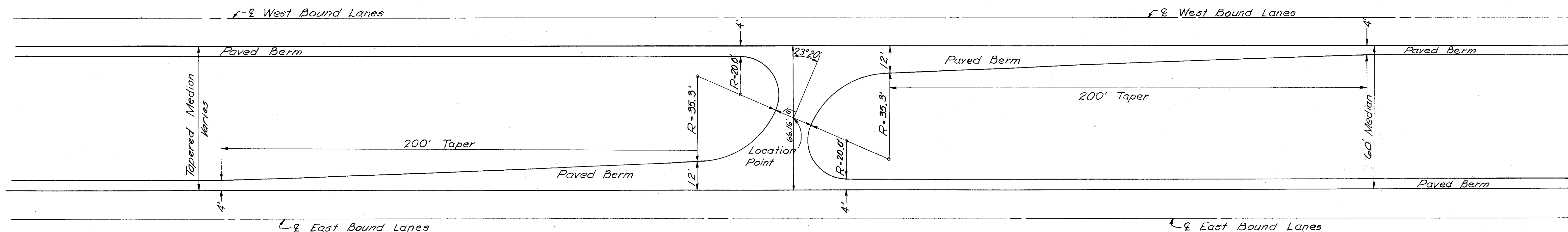


NOTE: Joints: $\frac{1}{4}''$ Expansion Joints shall be constructed @ 20' intervals. Metal Separator Plates on Templates shall be used if necessary to hold the joint material in accurate position during the placing of the concrete. Separator plates on templates, if used, shall be removed as soon as the concrete is in place to insure the accurate retention of the joint material. Expansion joint material shall meet the requirements of Section 705.03. In addition to the $\frac{1}{4}''$ expansion joints, contraction joints consisting of $\frac{1}{2}''$ minimum depth impressed joint formed and sealed as per standard drawing B.P. 3 shall be placed in the concrete median at intervals not to exceed 10 feet.

ITEM LEGEND

- | | | |
|-----------|---------|--|
| (1A) Item | 451 | 9" Reinforced Portland Cement Concrete Pavement |
| (2) Item | 310 | Subbase (Thickness as shown) Grading 'A' or 'B' as per plan |
| (3) Item | 304 | Aggregate Base (Thicknesses as shown) |
| (4) Item | 409 | Seal Coat using 0.008 Cu. Yd. No. 8 Cover Aggregate per Sq. Yd. and 0.25 Gal. Bituminous Material Per Sq. Yd. (See Note in Proposal) |
| (5) Item | 301 | 3" Bituminous Aggregate Base, as per plan 702.01(85-100) or 702.09 RT-12- |
| (6) Item | 605 | 6" Shallow Pipe Underdrain (See Note in Proposal) |
| (7) Item | 659 | Seeding & Mulching |
| (8) Item | 606 | Guard Rail Type 4 |
| (10) Item | Special | Drainage Connection using No. 8 Aggregate (See Note in Proposal) |
| (11) Item | 612 | Concrete Median, Standard |
| (12) Item | 609 | Concrete Curb Standard Type 2A |
| (13) Item | 612 | 4" Concrete Median, As Per Plan |
| (27) Item | 451 | Sealed Joint Between Concrete Pavement and Paved Shoulder (See Proposal Note). |

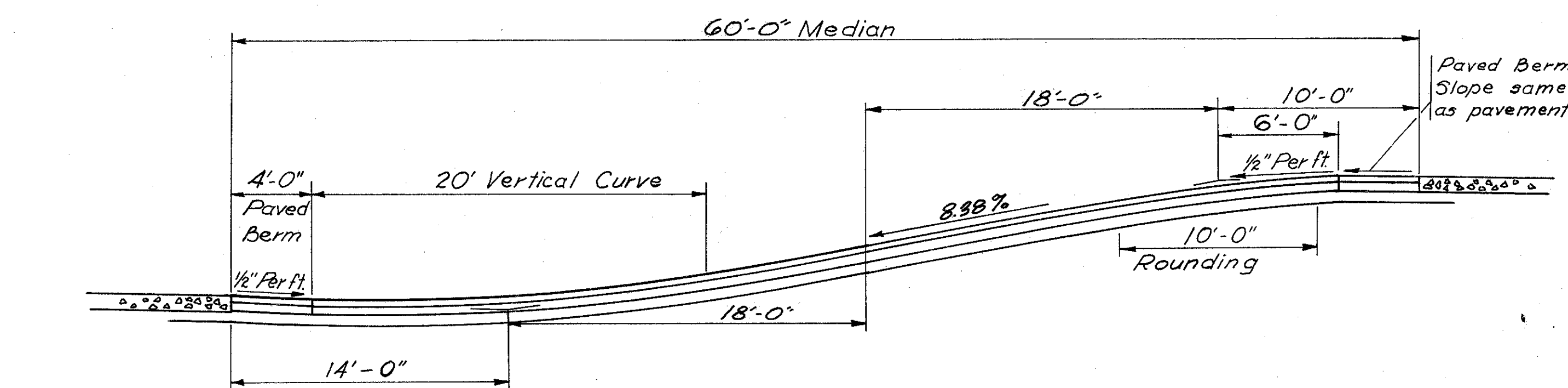
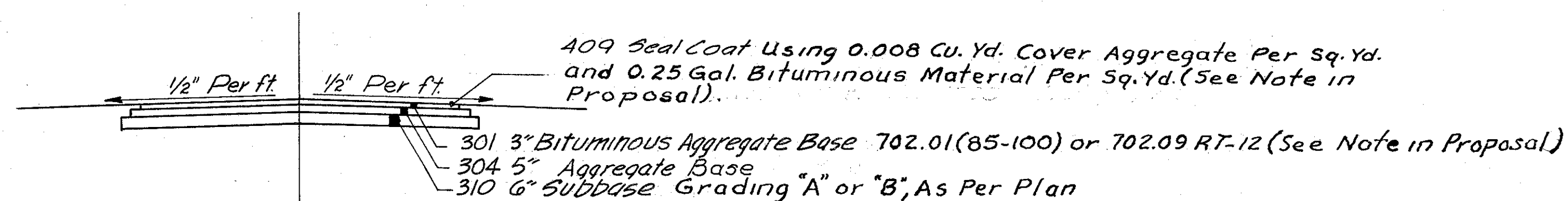
U-TURN



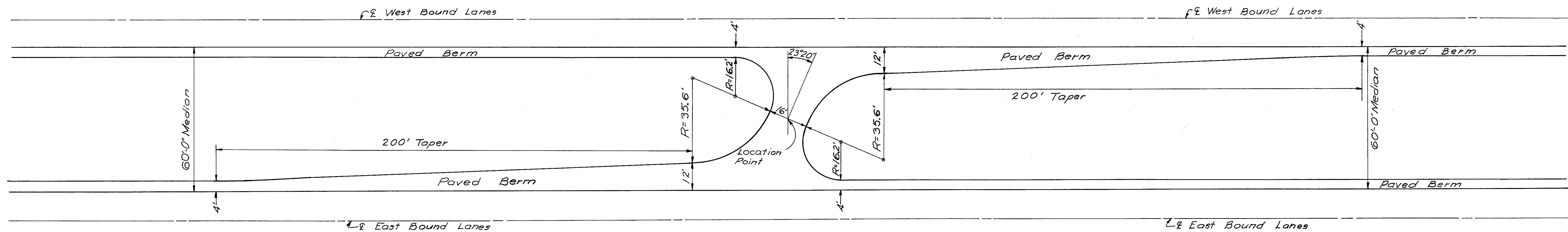
TYPICAL CROSSOVER

NO SCALE

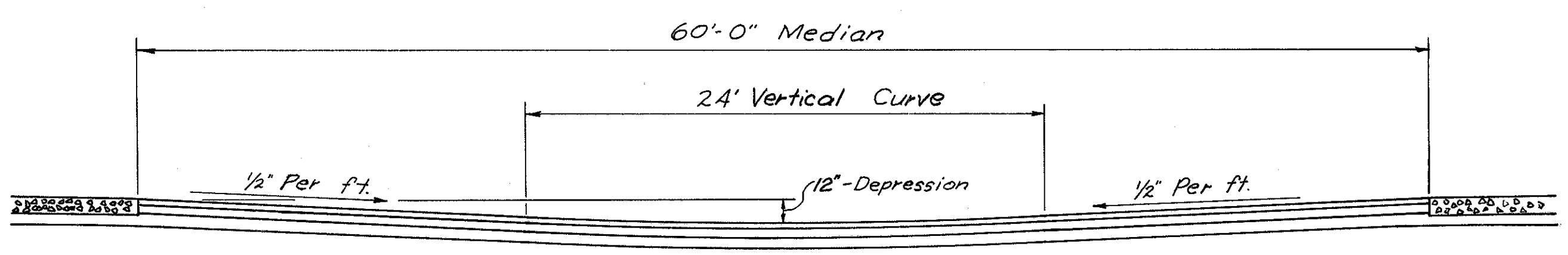
Sta. 693+00



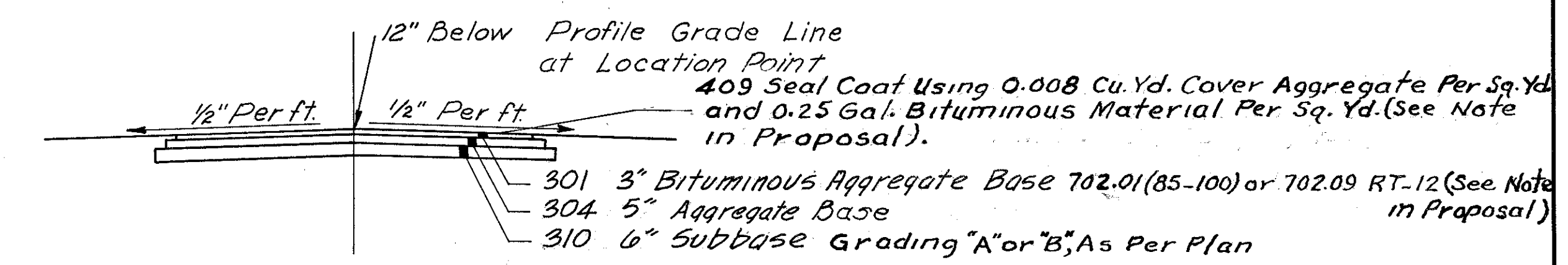
U-TURN



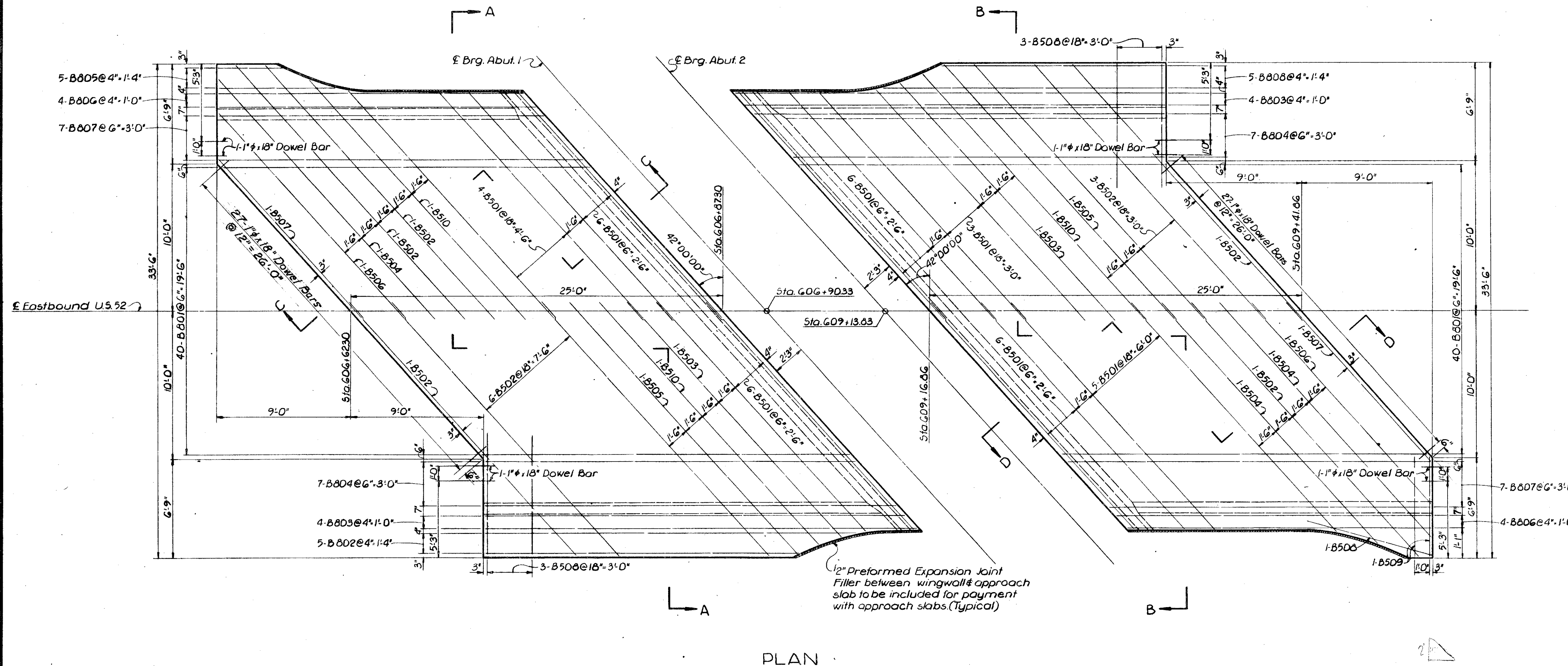
TYPICAL CROSSOVER
 SCALE 1" = 20'-0"
 Sta. 753+74



CROSSOVER PROFILE - NORMAL SECTION
 SCALE 3/16" = 1'-0"
 LOCATION OF CROSSOVER
 STA. 753+74

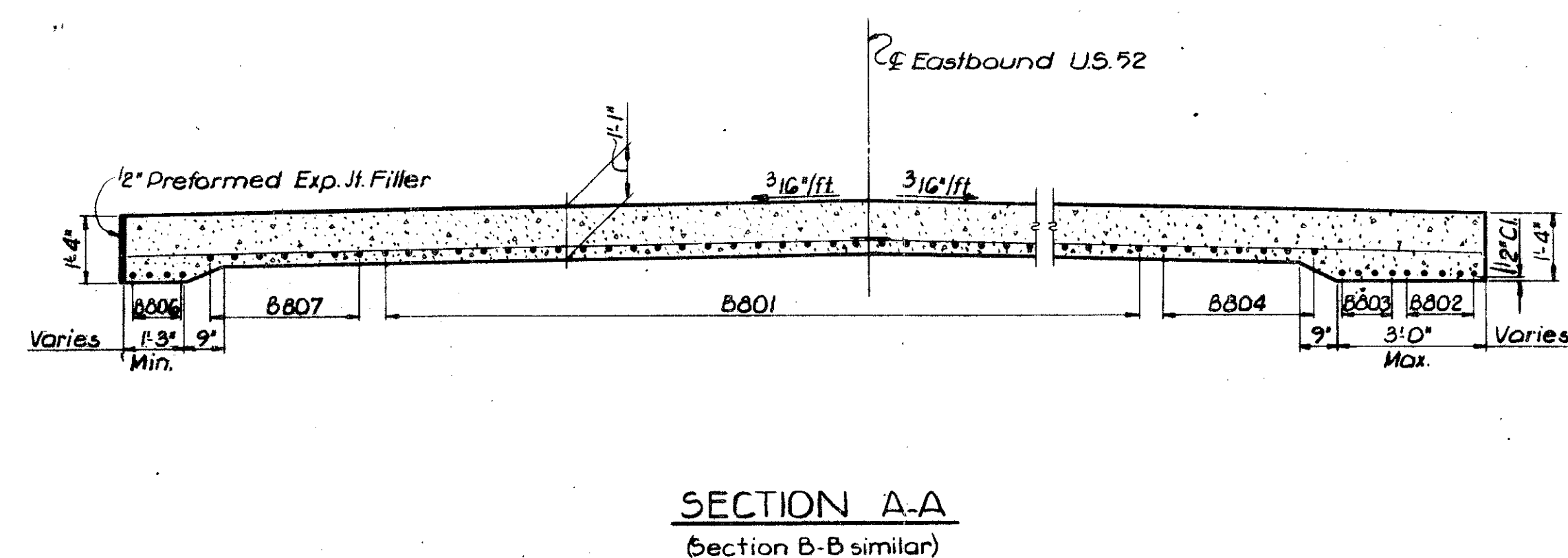


CROSSOVER - TYPICAL SECTION
 SCALE 3/16" = 1'-0"
 LOCATION OF CROSSOVER
 STA. 753+74

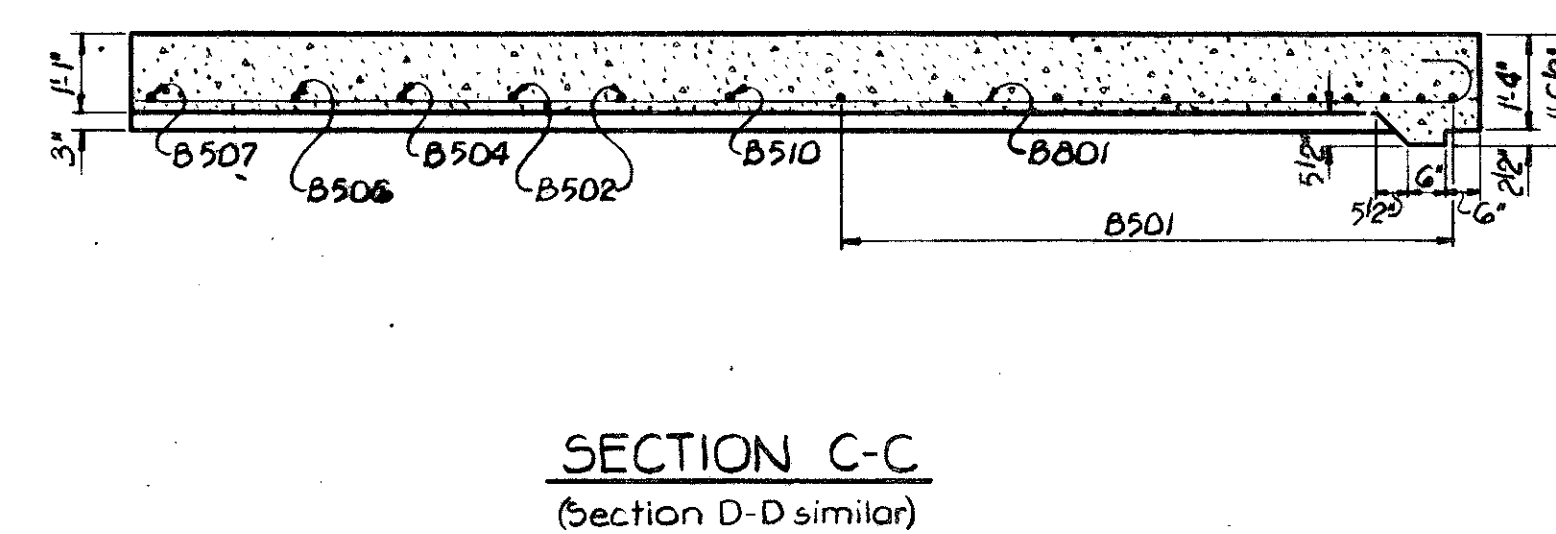


REINFORCING STEEL LIST				
MARK	LENGTH	SHAPE	NO.	WEIGHT
B501	21'-0"	Str.	36	789
B502	23'-5"	Str.	14	342
B503	21'-6"	Str.	2	45
B504	21'-10"	Str.	3	68
B505	23'-1"	Str.	2	48
B506	18'-7"	Str.	2	38
B507	14'-7"	Str.	2	30
B508	8'-6"	Str.	7	62
B509	6'-9"	Str.	2	14
B510	22'-2"	Str.	3	69
B801	25'-6"	Bt.	80	5447
B802	Varies 20'-6" to 24'-6" Incr. 12" ea.	Str.	5	300
B803	Varies 28'-10" to 29'-10" Incr. 4" 2 ea.	Bt.	8	627
B804	Varies 25'-8" to 28'-5" Incr. 5/2" 2 ea.	Bt.	14	1011
B805	Varies 4'-0" to 7'-4" Incr. 10" ea.	Str.	5	76
B806	Varies 21'-2" to 22'-2" Incr. 4" 2 ea.	Bt.	8	463
B807	Varies 22'-6" to 23'-3" Incr. 5/2" 2 ea.	Bt.	14	892
B808	Varies 14'-8" to 18'-0" Incr. 10" ea.	Str.	5	218
				10539

BENDING DIAGRAM	
B801	24'-8"
B803	Varies 28'-0" to 29'-0" Incr. 4" 2 ea.
B804	Varies 24'-10" to 27'-7" Incr. 5/2" 2 ea.
B806	Varies 20'-4" to 21'-4" Incr. 4" 2 ea.
B807	Varies 21'-8" to 24'-5" Incr. 5/2" 2 ea.



SECTION A-A
(Section B-B similar)

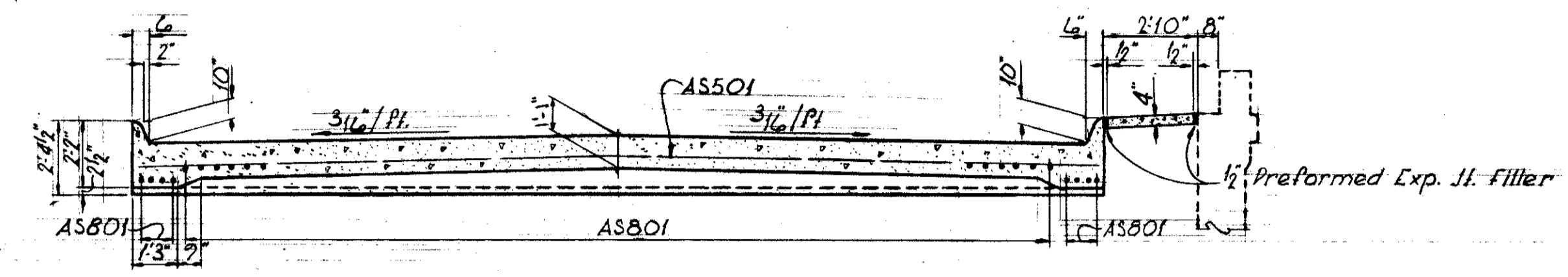
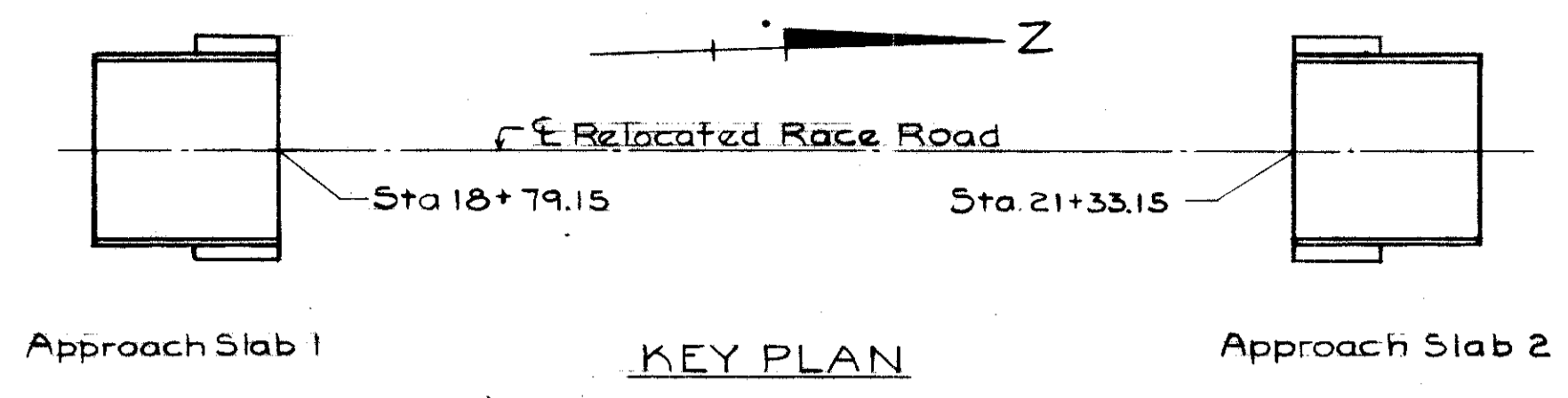


SECTION C-C
(Section D-D similar)

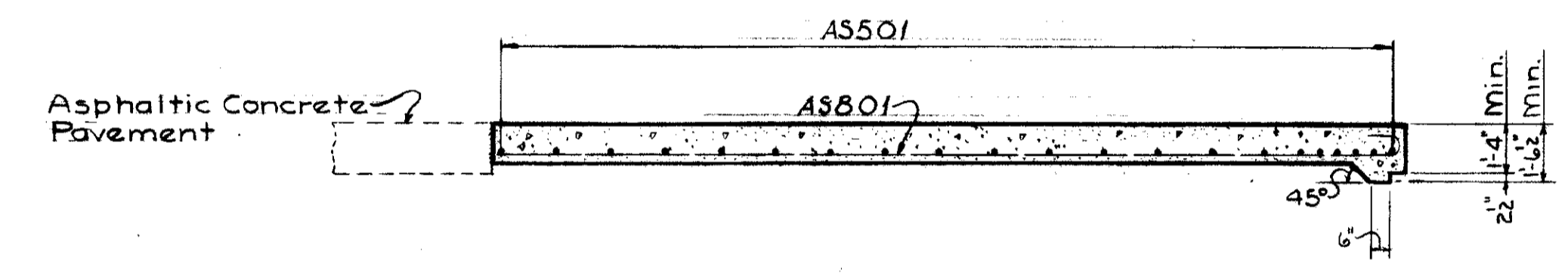
G2-1"φ x 18" Dowel Bars required.
For notes and details not shown, see Std. Dwg. AS-1-54,
revised 8-10-65

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO				
APPROACH SLABS				
BRIDGE NO. HAM-74-1129 R I-74 OVER HARRISON PIKE				
HAMILTON COUNTY STA. 606+87.30 to STA. 609+16.00				
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE
C.E.S.	C.E.S.	I.G.V.	L.P.H.	JAD 10-13-65

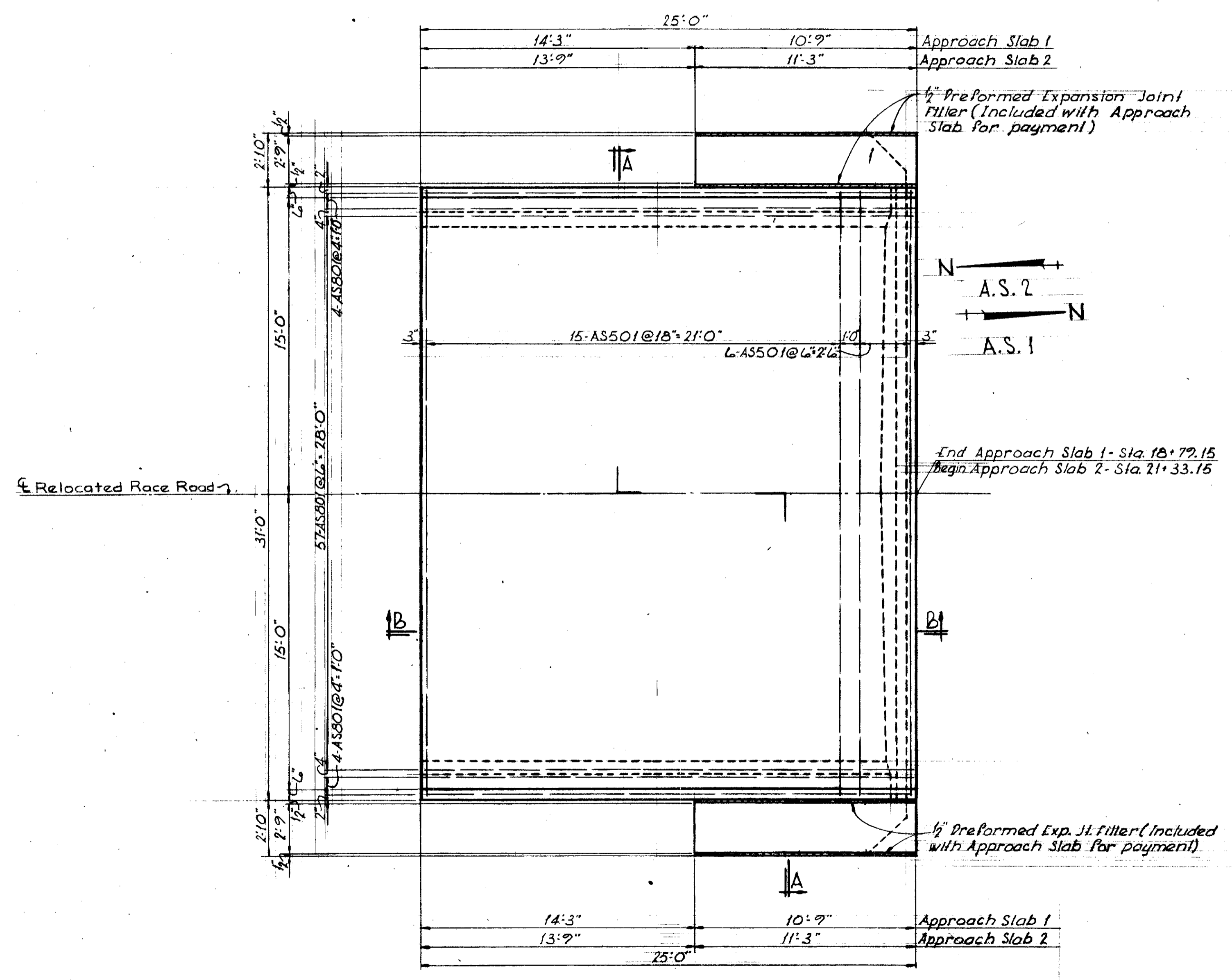
HAM 74-11.37



SECTION A-A



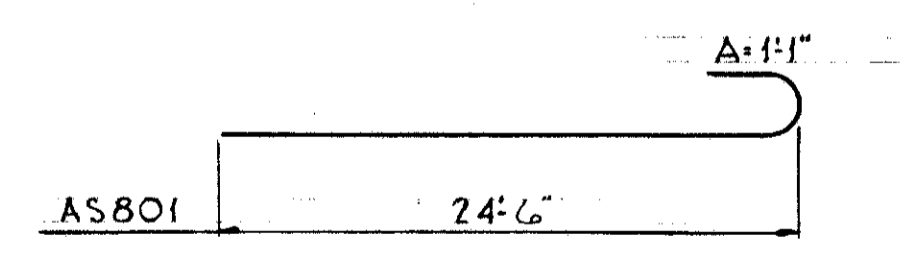
SECTION B-B



PLAN-APPROACH SLABS 1 & 2

REINFORCING STEEL LIST				
MARK	LENGTH	TYPE	NO.	WEIGHT
AS501	30'-8"	Sir.	42	1,343
AS801	25'-7"	Bl.	130	8,880

Note: The No. given includes reinforcing steel for Approach Slabs 1 & 2.



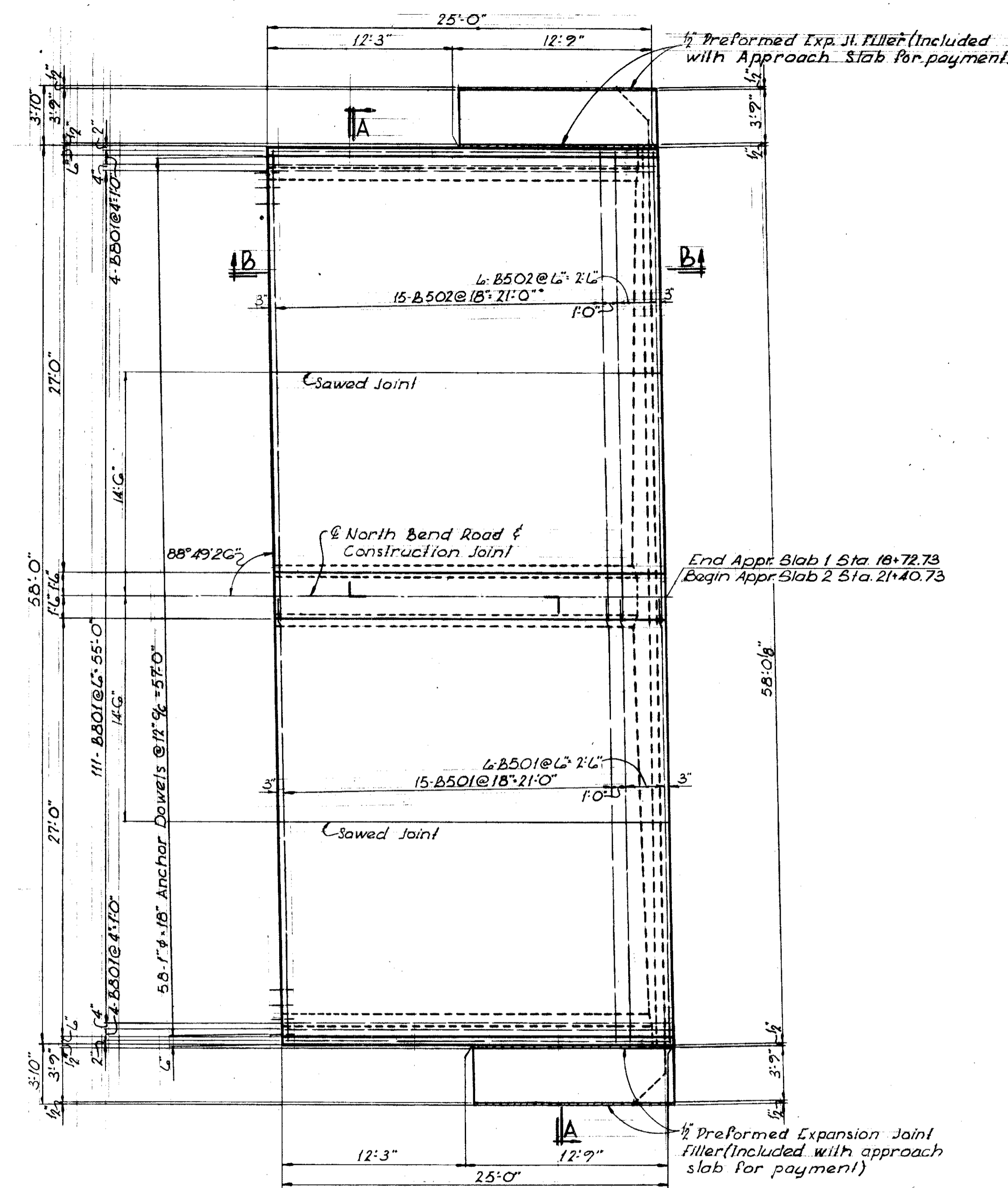
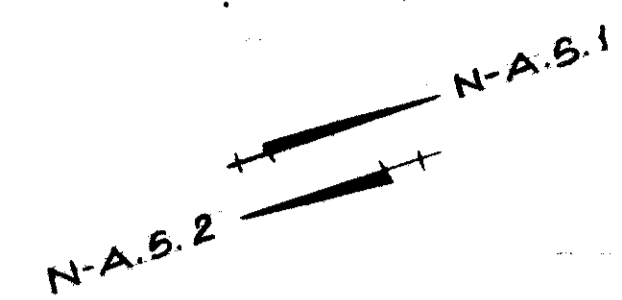
BENDING DIAGRAM

NOTE: For additional notes and details see Standard Drawing A5-1-54, Rev. 8-10-65

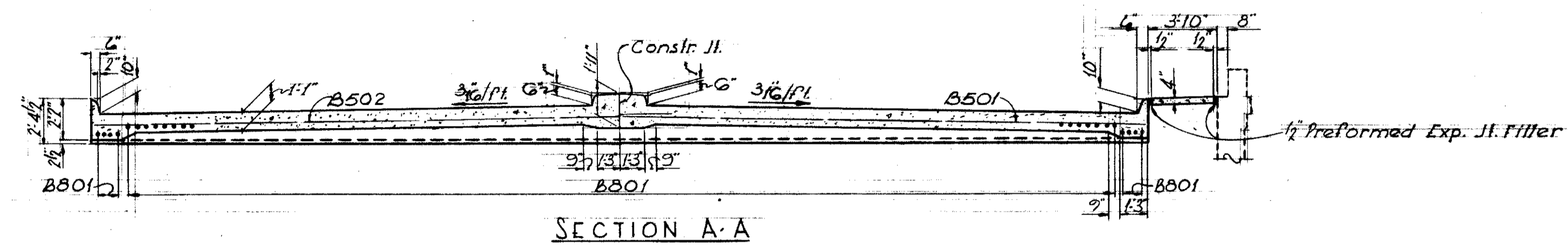
VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

APPROACH SLAB 1 & 2
BRIDGE NO. HAM-74-1346
RACE ROAD OVER I-74
HAMILTON COUNTY STA. 18+79.15 to
STA. 21+33.15

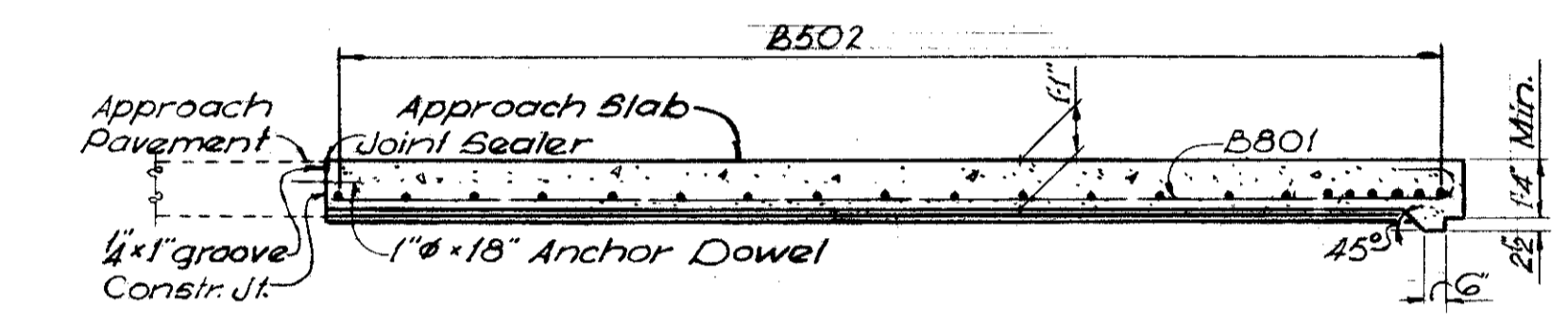
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	DPR	~	HOU	JAD	10-13-65	



PLAN
APPROACH SLABS 1 & 2



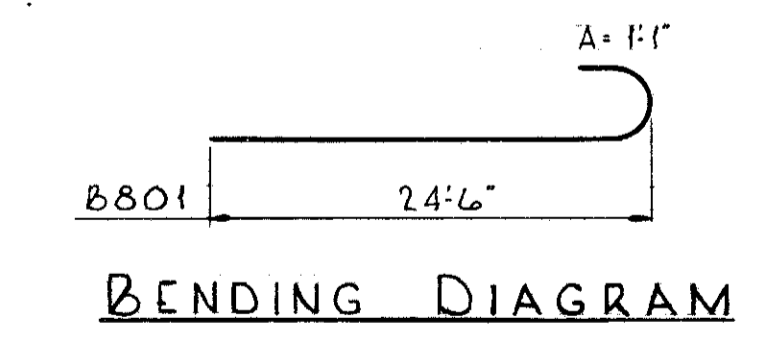
SECTION A-A



SECTION B-B

REINFORCING STEEL LIST				
MARK	LENGTH	TYPE	NO.	WEIGHT
B501	28'-7"	SIP	42	1,152
B502	30'-6"	SIP	42	1,336
B801	25'-7"	BI.	238	16,257

Note:
The No. given includes the reinforcing steel needed for Approach Slabs 1 & 2.

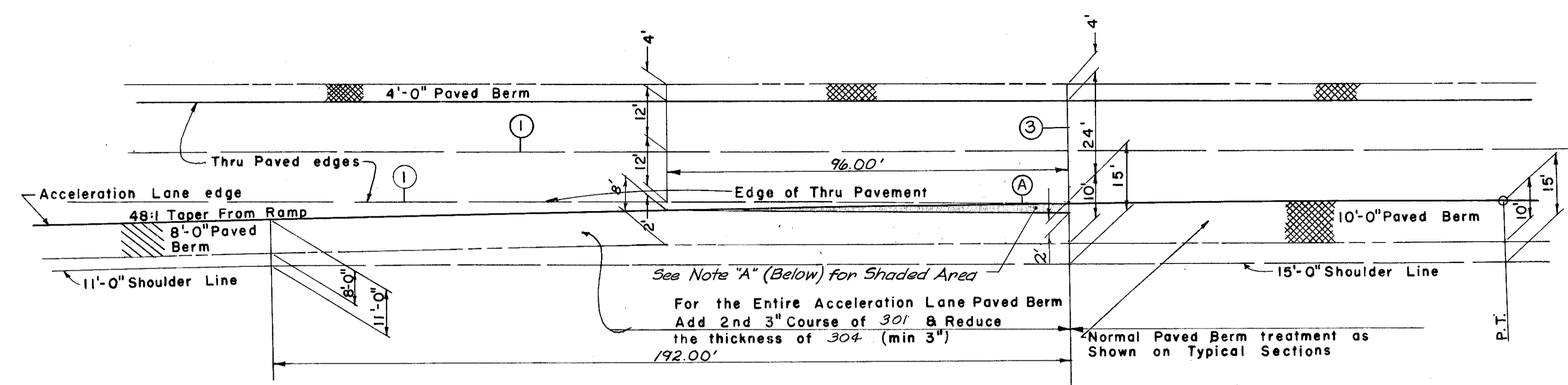


BENDING DIAGRAM

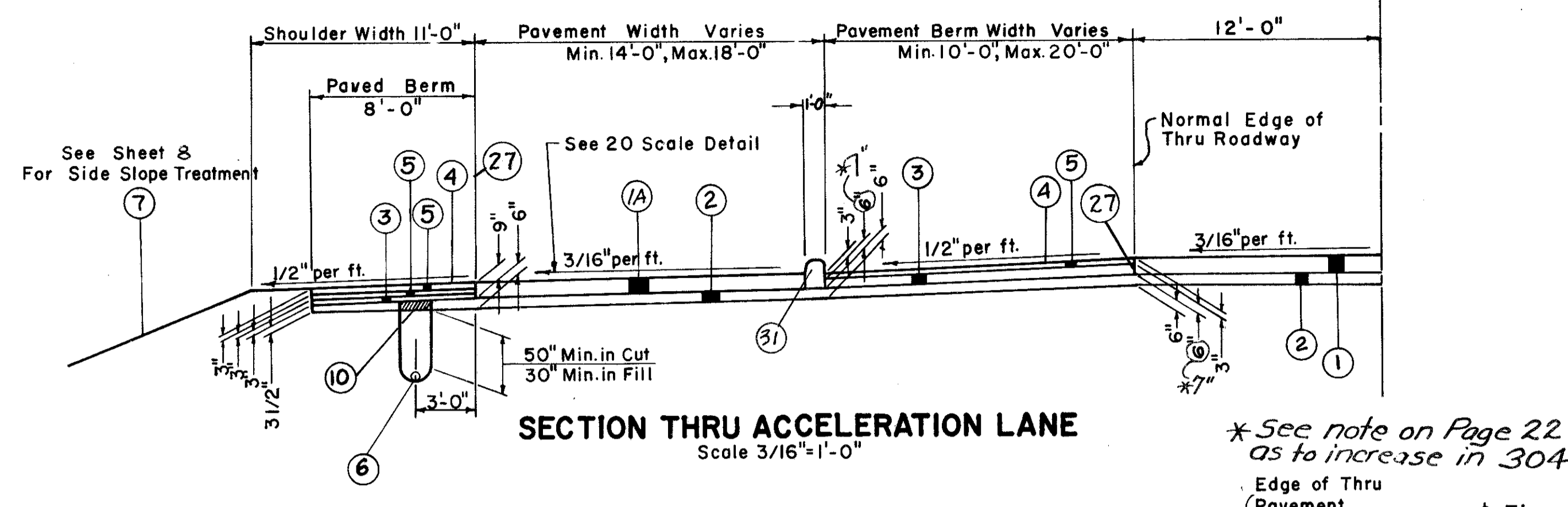
NOTES
1. For additional notes and details, see Std. Dwg. AS-1-54, revised 8-10-65.

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO						
APPROACH SLABS 1 & 2 BRIDGE NO. HAM-74-1477 I-74 UNDER NORTH BEND ROAD HAMILTON COUNTY STA. 18+72.23 to STA. 21+40.73						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
~	G.J.W.	~	H.D.J.	JAD	10/13/63	

HAM-52-11.37

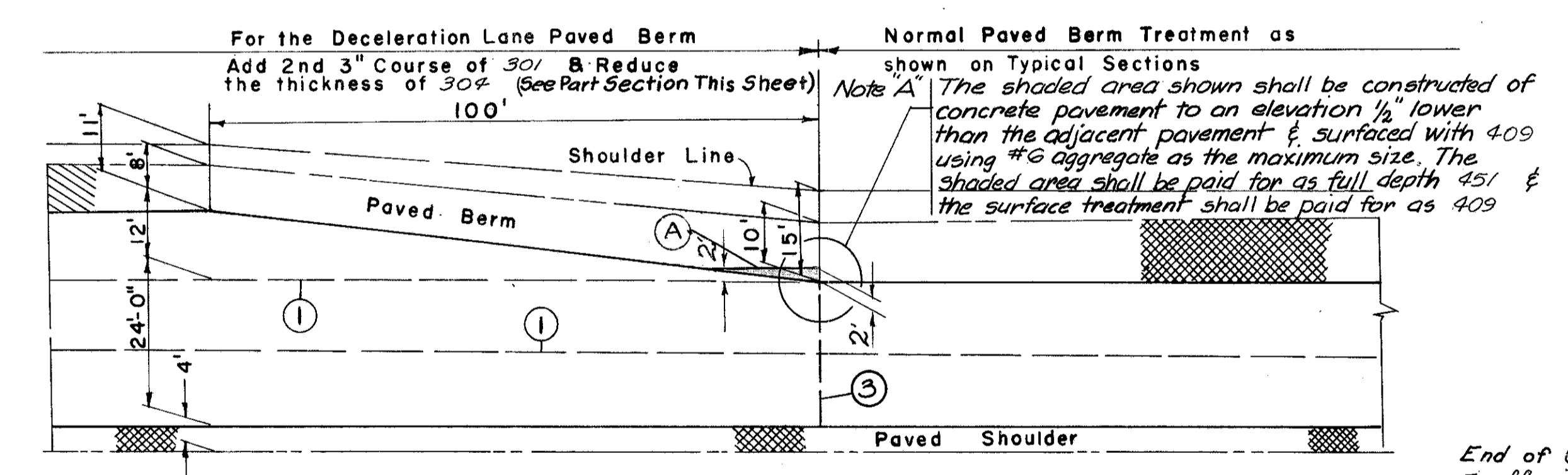


TYPICAL DETAIL OF TAPER JOINT-ACCELERATION LANE TERMINALS
SCALE 1"=20'

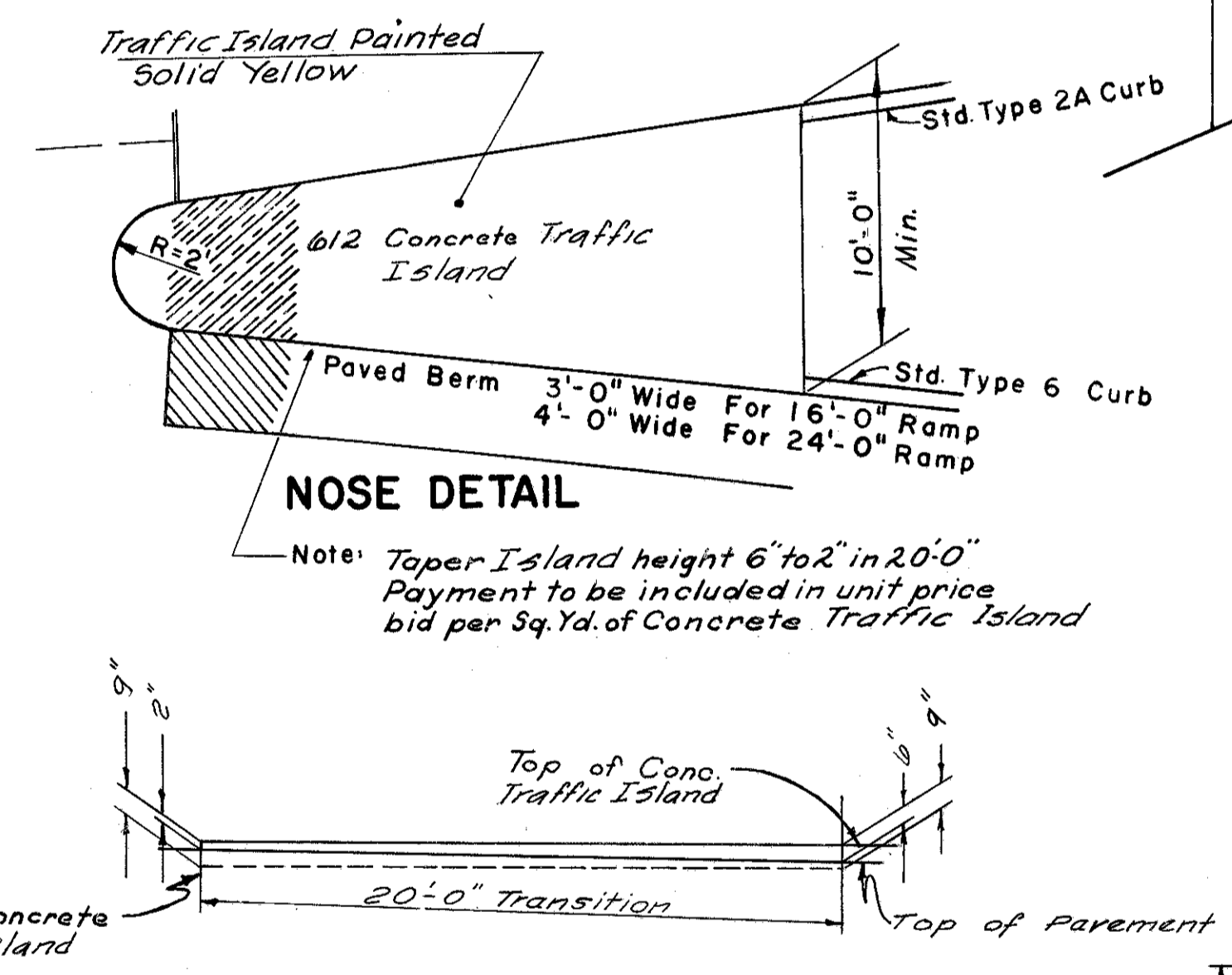


SECTION THRU ACCELERATION LANE
Scale 3/16"=1'-0"

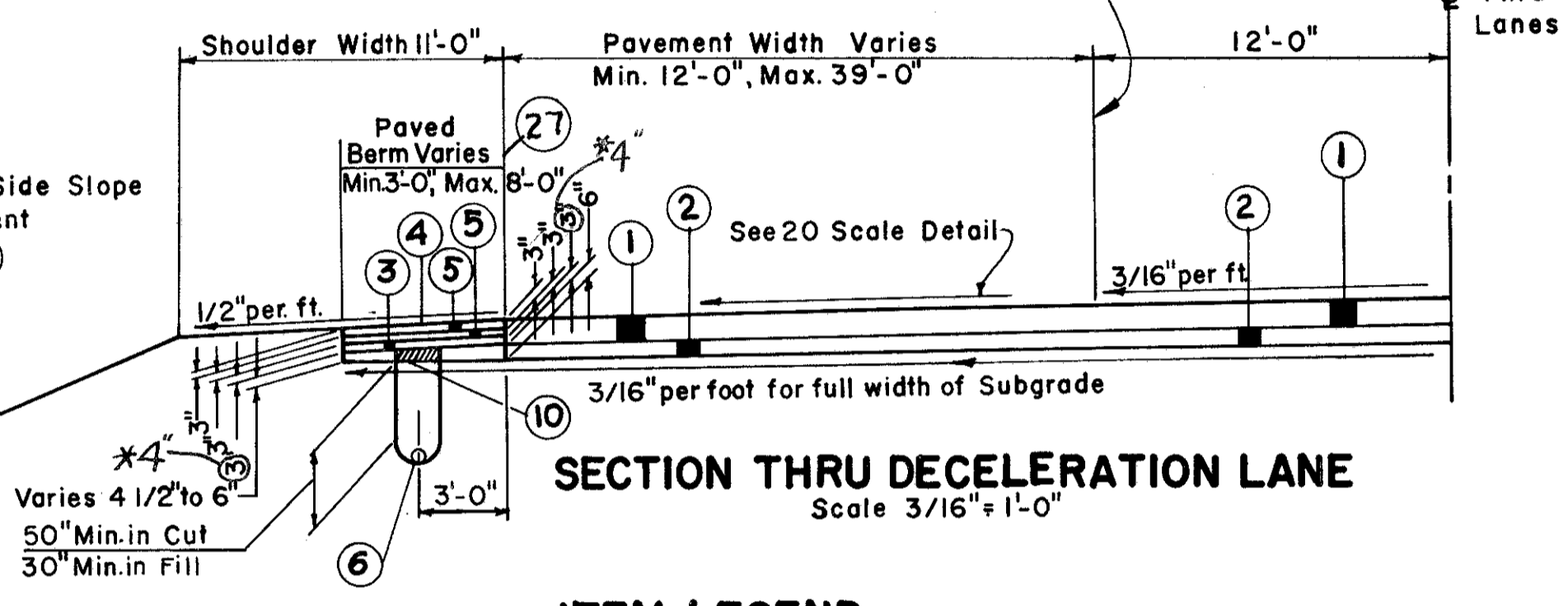
* See note on Page 22 as to increase in 304



TYPICAL DETAILS OF TAPER ON DECELERATION LANE TERMINALS
SCALE 1"=20'



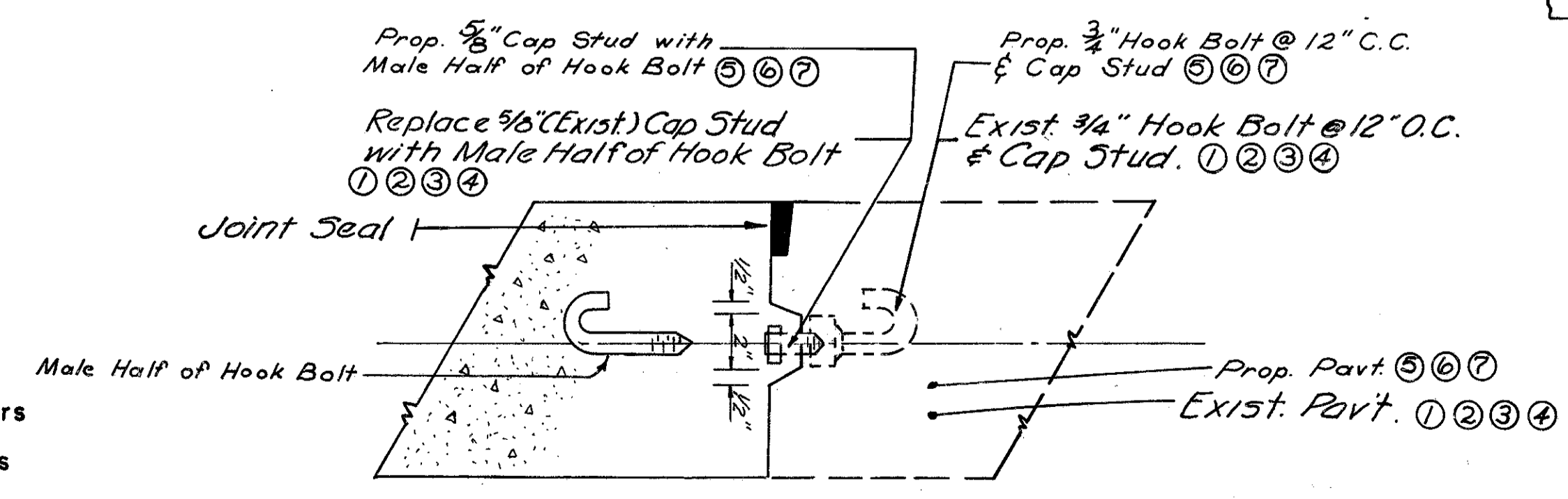
TYPICAL ISLAND TRANSITION
SCALE 1"=5'



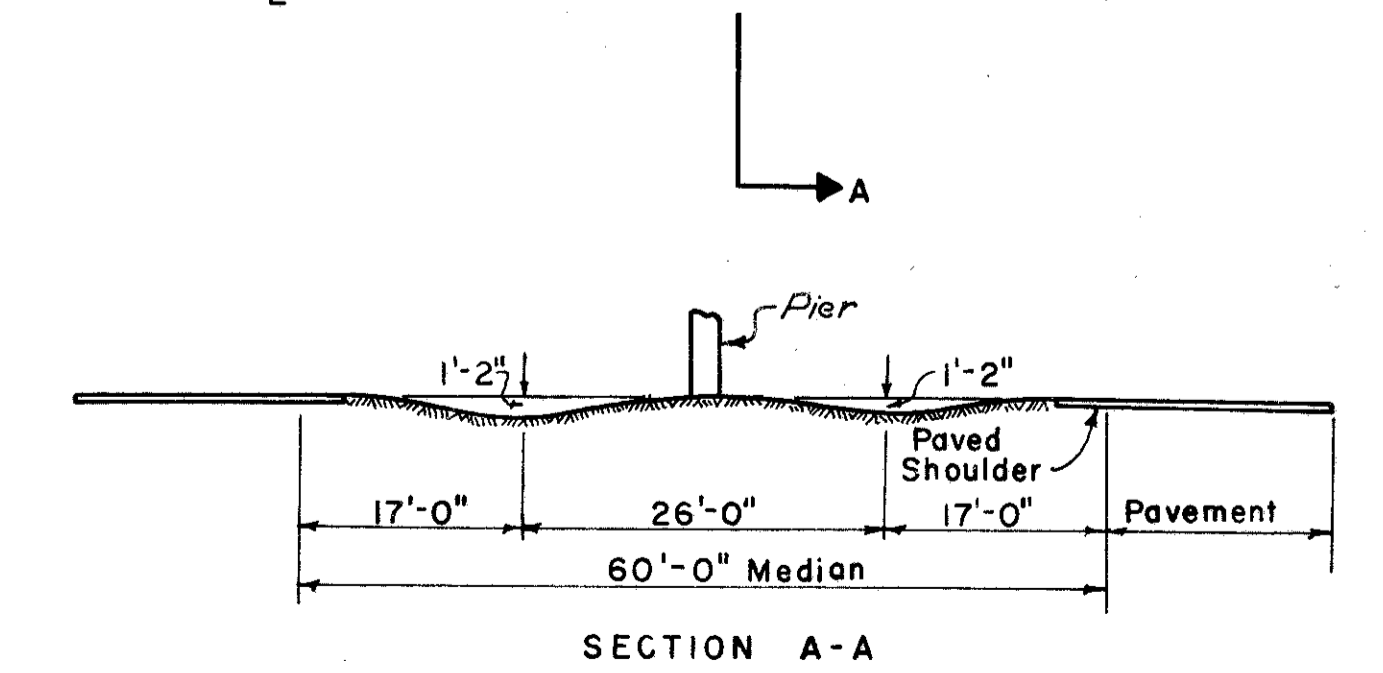
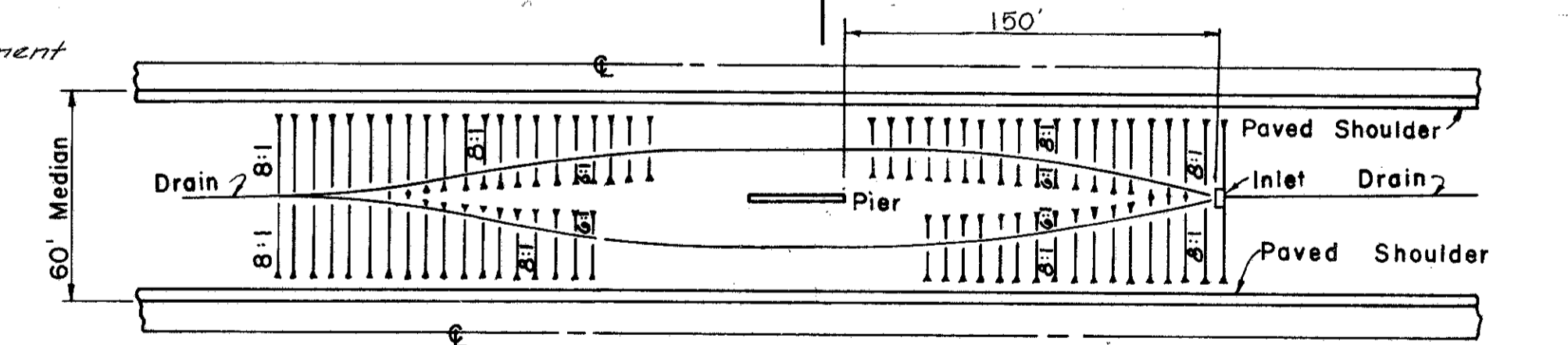
SECTION THRU DECELERATION LANE
Scale 3/16"=1'-0"

- ITEM LEGEND**
- (1) Item 609 Concrete Curb Standard Type "B"
 - (2) Item 451 10" Reinforced Portland Cement Concrete Pavement
 - (3) Item 310 Subbase, Grading "A" or "B" As per Plan (Thickness as Shown)
 - (4) Item 304 Aggregate Base (Thicknesses as Shown)
 - (5) Item 409 Seal Coat using using 0.008 Cu. Yd. No. 8 Cover Aggregate 1 1/4" & 0.25 Gal. Bituminous Material 1 1/4" (see Note in Proposal)
 - (6) Item 301 3/4" Bituminous Aggregate Base, as per Plan, 702.01 (85-100) or 702.09 RT-12 (see note in Proposal)
 - (7) Item 659 Seeding and Mulching
 - (8) Item 451 9" Reinforced Portland Cement Concrete Pavement
 - (9) Item 605 6" Shallow Pipe Underdrains and 6" Deep Pipe Underdrains
 - (10) Item Special Drainage Connection using No. 8 Aggregate (see Note in Proposal) Remove Subbase for width of Trench and Replace with No. 8 Size Aggregate Immediately Prior to Placing the Item 304 Aggregate Base

- JOINT LEGEND**
- (1) Standard Longitudinal Joint
 - (4) Standard Longitudinal Key Joint without tie bars
 - (5) Standard Expansion Joint without dowel bars
 - (2) Standard Expansion Joint
 - (3) Standard Contraction Joint



- SPECIAL HOOK BOLT & KEY JOINT**
- (5) Mainline I-74 - Sta. 794+50
 - (6) Ramp "P" - Sta. 792+87
 - (7) Ramp "N" - Sta. 796+00
 - (1) Mainline I-74 E.B. Sta. 600+67.5
 - (2) Mainline I-74 W.B. Sta. 611+80
 - (3) Ramp "A" Sta. 0+93
 - (4) Ramp "Y" Sta. 3+47.57



DITCH DETAIL
FOUR LANE DIVIDED 60' MEDIAN AT PIERS

SUPERELEVATION TABLES

HAM-52-11.37

Dc = 3°00'		CURVE # 2				S.E. 0.083' per ft.			
Station	Profile Grade	EASTBOUND LANES			WESTBOUND LANES			Profile Grade	
		Lt. Edge	℄	Rt. Edge	Lt. Edge	℄	Rt. Edge		
608+88.11	637.36	637.17	637.36	637.17	634.86	634.67	634.86	634.67	
609+00	637.72	637.53	637.69	637.50	635.22	635.06	635.22	635.03	
25	638.47	638.28	638.38	638.19	635.97	635.88	635.97	635.78	
50	639.22	639.03	639.06	638.87	636.72	636.69	636.72	636.53	
T.S. = 62.36	639.59	639.40	639.40	639.21	637.09	637.09	637.09	636.90	
75	639.97	639.78	639.72	639.53	637.47	637.53	637.47	637.28	
610+00	640.72	640.53	640.34	640.15	638.22	638.40	638.22	638.03	
+00.61	640.74	640.55	640.36	640.17	638.24	638.43	638.24	638.05	
25	641.47	641.28	641.03	640.78	638.96	639.26	639.01	638.77	
50	642.22	642.03	641.73	641.42	639.69	640.10	639.80	639.50	
75	642.97	642.78	642.42	642.06	640.41	640.93	640.58	640.22	
611+00	643.72	643.53	643.12	642.70	641.11	641.74	641.33	640.92	
25	644.47	644.28	643.81	643.34	641.79	642.54	642.07	641.60	
50	645.22	645.03	644.51	643.97	642.47	643.33	642.80	642.28	
75	645.97	645.78	645.20	644.61	643.13	644.10	643.52	642.94	
612+00	646.72	646.53	645.89	645.25	643.77	644.87	644.22	643.58	
25	647.28	647.28	646.59	645.90	644.25	645.68	644.97	644.25	
50	648.03	648.03	647.28	646.53	644.90	646.43	645.68	644.90	
75	648.78	648.78	647.97	647.16	645.57	647.17	646.37	645.57	
613+00	649.53	649.53	648.67	647.81	646.20	647.92	647.06	646.20	
25	650.28	650.28	649.36	648.44	646.82	648.66	647.74	646.82	
50	651.03	651.03	650.06	649.09	647.43	649.37	648.40	647.43	
SC = 62.36	651.40	651.40	650.40	649.40	647.73	649.73	648.73	647.73	
Profile Grade Moves from ℄ to Lt. Edge Profile Grade Moves from ℄ to Rt. Edge									
25	647.28	647.28	646.59	645.90	644.25	645.68	644.97	644.25	
50	648.03	648.03	647.28	646.53	644.90	646.43	645.68	644.90	
75	648.78	648.78	647.97	647.16	645.57	647.17	646.37	645.57	
613+00	649.53	649.53	648.67	647.81	646.20	647.92	647.06	646.20	
25	650.28	650.28	649.36	648.44	646.82	648.66	647.74	646.82	
50	651.03	651.03	650.06	649.09	647.43	649.37	648.40	647.43	
SC = 62.36	651.40	651.40	650.40	649.40	647.73	649.73	648.73	647.73	
From Station 613+62.36 to 619+74.98									
Constant	0.00	-1.00	-2.00		+2.00	+1.00	0.00		
619+74.98	666.25	666.25	665.25	664.25	657.67	659.67	658.67	657.67	
620+00	666.72	666.72	665.78	664.84	657.91	659.79	658.85	657.91	
25	667.17	667.17	666.30	665.43	658.14	659.88	659.01	658.14	
50	667.61	667.61	666.80	665.99	658.35	659.97	659.16	658.35	
75	668.04	668.04	667.29	666.54	658.55	660.05	659.30	658.55	
621+00	668.45	668.45	667.76	667.07	658.74	660.12	659.43	658.74	
25	668.86	668.86	668.23	667.60	658.92	660.18	659.55	658.92	
50	669.25	669.25	668.69	668.13	659.08	660.20	659.64	659.08	
75	669.64	669.64	669.14	668.64	659.23	660.23	659.73	659.23	
622+00	670.01	670.01	669.57	669.13	659.37	660.25	659.81	659.37	
25	670.37	670.37	670.00	669.63	659.49	660.23	659.86	659.49	
50	670.72	670.72	670.41	670.10	659.61	660.23	659.92	659.61	
75	671.06	671.06	670.81	670.56	659.71	660.21	659.96	659.71	
623+00	671.38	671.38	671.19	671.00	659.79	660.19	659.98	659.79	
25	671.70	671.70	671.58	671.39	659.87	660.18	660.06	659.87	
50	672.00	672.00	671.94	671.75	659.93	660.17	660.12	659.93	
ST = 74.98	672.30	672.30	672.30	672.11	659.97	660.16	660.16	659.97	
624+00	672.58	672.58	672.64	672.45	660.01	660.14	660.20	660.01	
25	672.85	672.85	672.97	672.78	660.03	660.10	660.22	660.03	
49.98	673.11	673.11	673.30	673.11	660.04	660.04	660.23	660.04	
Dc = 3°00' CURVE # 3 S.E. 0.083' per ft.									
637+99.92	680.61	680.61	680.80	680.61	660.11	660.30	660.11		
638+25	680.87	680.87	680.99	680.80	660.37	660.34	660.46	660.37	
+50	681.12	681.12	681.18	680.99	660.62	660.75	660.81	660.62	
T.S. = +74.92	681.37	681.37	681.37	681.18	660.87	661.06	661.06	660.87	
639+00	681.62	681.62	681.56	681.37	661.12	661.37	661.31	661.12	
+25	681.87	681.87	681.75	681.56	661.37	661.68	661.56	661.37	
+50	682.12	682.12	681.93	681.74	661.62	662.00	661.81	661.62	
+75	682.37	682.37	682.12	681.87	661.87	662.37	662.12	661.87	
640+00	682.62	682.62	682.31	682.00	662.12	662.74	662.43	662.12	
+25	682.87	682.87	682.49	682.11	662.37	663.13	662.75	662.37	
+50	683.12	683.12	682.68	682.24	662.62	663.50	663.06	662.62	
+75	683.37	683.37	682.87	682.37	662.87	663.87	663.37	662.87	
641+00	683.62	683.62	683.06	682.50	663.12	664.24	663.68	663.12	
+25	683.87	683.87	683.24	682.61	663.37	664.63	664.00	663.37	
+50	684.12	684.12	683.43	682.74	663.62	665.00	664.31	663.62	
+75	684.37	684.37	683.62	682.87	663.87	665.37	664.62	663.87	
642+00	684.62	684.62	683.81	683.00	664.12	665.74	664.93	664.12	
+25	684.87	684.87	684.00	683.13	664.37	666.11	665.24	664.37	
+50	685.12	685.12	684.18	683.24	664.62	666.50	665.56	664.62	
+74.92	685.37	685.37	684.37	683.37	664.87	666.87	665.87	664.87	
From Station 642+74.92 to 651+61.80									
Constant	0.00	-1.00	-2.00		+2.00	+1.00	0.00		

Dc = 3°00'		CURVE #3				S.E. 0.083' per ft.			
Station	Profile Grade	EASTBOUND LANES			WESTBOUND LANES			Profile Grade	
		Lt. Edge	℄	Rt. Edge	Lt. Edge	℄	Rt. Edge		
C.S. 651+61.80	693.66	693.66	692.66	691.66	673.18	675.18	674.18	673.18	
+75	693.75	693.75	692.78	691.81	673.25	675.19	674.22	673.25	
652+00	693.92	693.92	693.02	692.12	673.42	675.22	674.32	673.42	
+25	694.08	694.08	693.24	692.40	673.58	675.26	674.42	673.58	
+50	694.25	694.25	693.47	692.69	673.75	675.31	674.53	673.75	
+75	694.41	694.41	693.69	692.97	673.91	675.35	674.63	673.91	
653+00	694.57	694.57	693.92	693.27	674.07	675.38	674.72	674.07	
+25	694.73	694.73	694.14	693.55	674.23	674.41	674.82	674.23	
+50	694.90	694.90	694.37	693.84	674.40	675.46	674.93	674.40	
+75	695.06	695.06	694.59	694.12	674.56	675.50	675.03	674.56	
654+00	695.22	695.22	694.82	694.42	674.72	675.52	675.12	674.72	
+25	695.38	695.38	695.04	694.70	674.88	675.56	675.22	674.88	
+50	695.55	695.55	695.27	694.99	675.05	675.61	675.33	675.05	
+75	695.71	695.71	695.49	695.27	675.21	675.65	675.43	675.21	
655+00	695.87	695.87	695.72	695.53	675.37	675.71	675.56	675.37	
+25	696.03	696.03	695.94	695.75	675.53	675.81	675.72	675.53	
+50	696.20	696.20	696.17	695.98	675.70	675.92	675.89	675.70	
+75	696.28	696.28	696.28	696.09	675.78	675.97	675.97	675.78	
656+00	696.36	696.36	696.39	696.20	675.86	676.02	676.05	675.86	
+25	696.52	696.52	696.61	696.42	676.02	676.12	676.21	676.02	
+50	696.69	696.69	696.85	696.66	676.18	676.21	676.37	676.18	
+75	696.77	696.77	696.96	696.77	676.26	676.26	676.45	676.26	
Dc = 2°00' CURVE #4 S.E. 0.064' per ft.									
665+70.14	702.82	702.82	703.01	702.82	682.32	682.32	682.51	682.32	
+75	702.86	702.86	703.05	702.88	682.36	682.34	682.53	682.36	
666+00	703.02	703.02	703.21	703.10	682.52	682.44	682.63	682.52	
+25	703.18	703.18	703.37	703.32	682.68	682.54	682.73	682.68	
T.S. +45.14	703.32	703.32	703.51	703.51	682.81	682.62	682.81	682.81	
+50	703.35	703.35	703.54	703.55	682.85	682.65	682.84	682.85	
+75	703.51	703.51	703.70	703.78	683.01	682.74	682.93	683.01	
667+00	703.67	703.67	703.86	704.00	683.17	682.84	683.03	683.17	
+25	703.83	703.83	704.03	704.23	683.33	682.93	683.13	683.33	
+50	704.00	704.00	704.27	704.54	683.50	682.96	683.23	683.50	
+75	704.16	704.16	704.49	704.82	683.66	683.00	683.33	683.66	
668+00	704.32	704.32	704.72	705.12	683.82	683.02	683.42	683.82	
+25	704.48	704.48	704.94	705.40	683.98	683.06	683.52	683.98	
+50	704.65	704.65	705.17	705.69	684.15	683.11	683.63	684.15	
+75	704.81	704.81	705.40	705.99	684.31	683.13	683.72	684.31	
669+00	704.97	704.97	705.62	706.27	684.47	683.17	683.82	684.47	
+25	705.13	705.13	705.85	706.57	684.63	683.19	683.91	684.63	
SC +45.14	705.27	705.27	706.04	706.81	684.76	683.22	683.99		

SUPERELEVATION TABLES

RAMP 'Y' S.E.=0.0833'perft

Station	Profile Grade of XY Ramps	1.5' Lt. Rt. Edge Pav't	17.5' Lt. Lt. Edge Pav't
3+50	588.37		588.79
P.C. +65.10			
+75	588.75		588.46
4+00	589.28	589.28	589.28
+25	589.95	589.93	590.20
+50	590.70	590.68	590.95
+75	591.45	591.43	591.70
5+00	592.20	592.18	592.45
+25	592.95	592.93	593.20
+50	593.70	593.67	594.10
+75	594.52	594.47	595.07
6+00	595.46	595.40	596.16
+25	596.54	596.47	597.40
+50	597.75	597.66	598.76
+75	599.03	598.93	600.19
7+00	600.30	600.19	601.61
+25	601.58	601.46	603.04
P.C.C. +40.17			
+50	602.85	602.73	604.31
+75	604.12	604.00	605.58
8+00	605.40	605.28	606.86
+25	606.67	606.55	608.13
+50	607.95	607.83	609.41
+75	609.22	609.10	610.68
9+00	610.50	610.30	611.96
+25	611.77	611.65	613.23
+50	613.05	612.93	614.51
+75	614.32	614.20	615.78
10+00	615.60	615.48	617.06
+25	616.87	616.75	618.33
+50	618.15	618.03	619.61
+75	619.42	619.30	620.88
11+00	620.70	620.58	622.16
+25	621.97	621.85	623.43
+50	623.25	623.13	624.71
+75	624.52	624.40	625.98
12+00	625.80	625.68	627.26
+25	627.07	626.95	628.53
+50	628.35	628.23	629.81
C.S. 12+57.97	Profile Gr. Moves 17.5' to Lt. Edge Pav't.		

DC = 0°45'00" CURVE #6 S.E. = 0.024'per Ft.

Station	EASTBOUND LANES			WESTBOUND LANES		
	Left Edge Profile Gr.	E	Right Edge	Left Edge	E	Right Edge Profile Gr.
773+12.29	889.01	889.20	889.01	889.01	889.20	889.01
+25	889.37	889.53	889.34	889.40	889.56	889.37
+50	890.08	890.17	889.98	890.18	890.27	890.08
+75	890.79	890.82	890.63	890.95	890.98	890.79
774+00	891.50	891.47	891.28	891.72	891.69	891.50
+25	892.21	892.12	891.93	892.49	892.40	892.21
+50	892.92	892.76	892.57	893.27	893.11	892.92
+62.29	893.27	893.08	892.89	893.65	893.46	893.27
+75	893.63	893.41	893.19	894.07	893.85	893.63
775+00	894.34	894.06	893.78	894.90	894.62	894.34
+0385	894.45	894.16	893.87	895.03	894.74	894.45
+25	895.05	894.76	894.47	895.63	895.34	895.05
	From Sta. 775+00 to Sta. 794+50					
Constant		-0.29	-0.58	+0.58	+0.29	

MEDIAN TRANSITION

Station & Survey	Rt. Edge * Conc. Pav't	Lt. Edge * Conc. Pav't
682+57.87	40.00	40.00
683+00	39.58	39.58
684+00	38.58	38.58
685+00	37.58	37.58
686+00	36.58	36.58
687+00	35.58	35.58
688+00	34.58	34.58
689+00	33.58	33.58
690+00	32.58	32.58
691+00	31.58	31.58
692+00	30.58	30.58
692+57.87	30.00	30.00

* Radial to Project E Station

RAMP 'Y' CONT.

Station	Left Edge Prof. Gr.	Right Edge
C.S. 12+57.97	Prof. Gr. Moves 17.5' Left	
12+75	631.08	629.76
13+00	632.35	631.18
+25	633.63	632.60
+50	634.90	634.02
+75	636.18	635.44
14+00	637.45	636.89
+25	638.73	638.30
+50	640.00	639.71
S.T. 14+57.97		
+75	641.28	641.08
15+00	642.55	642.43
+25	643.80	643.75
+41.51	644.60	644.60
+50	645.00	645.03
+75	646.14	646.24
16+00	647.24	647.41
T.S. +25.05	648.29	648.54

RAMP 'Y' CURVE #4

Station & Ramp 'Y'	Left Edge & Prof. Gr.	Right Edge & Prof. Gr.
T.S. 16+25.05	648.29	648.54
+50	649.28	649.60
+75	650.22	650.60
17+00	651.11	651.56
+25	651.95	652.47
+50	652.74	653.32
+75	653.47	654.12
18+00	654.16	654.88
S.C. +25.05	654.80	655.58
+50	655.38	656.16
+75	655.91	656.69
19+00	656.39	657.17
C.S. +12.15	656.61	657.39
+25	656.82	657.54
+50	657.20	657.80
+75	657.55	658.03
20+00	657.90	658.26
+25	658.26	658.51
+50	658.61	658.74
+75	658.96	658.97
21+00	659.31	659.19
S.T. 21+12.15	659.47	659.28

MAINTAINING TRAFFIC

- Minimum provisions for the maintenance of traffic on roads affected by this improvement shall be as follows:
 - Harrison Pike Interchange
Ramp "Y" shall be paved in such a manner that traffic shall be maintained at all times on Ramp "X"
 - Haft Road
Two lanes of traffic will be maintained at all times.
 - Race Road
Two-way traffic shall be maintained at all times, except as noted below, on the existing road until the temporary run-around pavement has been placed and opened to traffic. Class B pavement shall be used for the temporary run-around. Beyond the limits of the temporary run-around pavement one-way traffic, between 9:00 A.M. and 2:30 P.M., will be permitted for a period not to exceed 14 consecutive calendar days. Beyond the limits of the temporary run-around traffic shall be maintained by use of either the existing pavement, the proposed pavement, or temporary roadways surfaced with Item 410 aggregate and stabilized with Item 616 calcium chloride.
 - North Bend Road
Two-way, two-lane traffic (in each direction) shall be maintained at all times on the existing road until the temporary run-around pavement has been placed and opened to traffic. Class A temporary pavement shall be 36' wide constructed on a minimum 46' width roadway, measured from out to out of shoulders. Beyond the limits of the temporary pavement two-way two-lane traffic (in each direction) shall be maintained at all times except for period not to exceed 21 consecutive calendar days one-way, one-lane traffic (in each direction) will be permitted, beyond the limits of the temporary pavement, between 9:00 A.M. and 2:30 P.M. Beyond the limits of the temporary run-around traffic shall be maintained by use of either the existing pavement, the proposed pavement, or temporary roadways surfaced with 410 aggregate and stabilized with Item 616 calcium chloride.
A temporary bituminous sidewalk shall be provided on the temporary relocated North Bend Road. The sidewalk should be held to not more than a 3 foot wide asphalt surfaced sidewalk placed directly on the ground and separated from the roadway surface. The bituminous material shall be 2 inches thick and the sidewalk shall be placed on one side only of the temporary road.
- If traffic is maintained on new asphalt concrete, the requirements of the specifications shall be met for protection of completed asphalt concrete courses.
- If the Contractor so elects, he may submit alternate methods for the maintenance of traffic (except for Item 615) 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.
- The limits and duration of use of temporary roadways shall be held to an absolute minimum, and in all cases shall be subject to the approval of the Engineer.
- Item 410, Traffic Compacted Surface; Item 616, Calcium Chloride; and Item 616, Water, for Dust Control shall be applied on Temporary Roadways as directed in the amounts requested by the Engineer. See Quantities in the General Summary.
- The hardness and soundness requirements of the specifications shall be waived on all of the Item 410 material used for maintenance of traffic.

ITEM 203, EMBANKMENT, USING GRANULAR MATERIAL, AS PER PLAN

A cut-off drain, using Granular Material, shall be provided in the vicinity of existing Ramp K at Harrison Pike Interchange (See Sht. No. 15). Material furnished for this item shall be as defined in Sec. 203.02 except that size No. 8 Aggregate shall be used. The Granular Material shall be placed and compacted as directed by the Engineer.

DESIGN SPEED

The geometrics for this project have been planned for a design speed of 70 miles per hours.

GENERAL NOTES

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 installed and maintained in this field office during the construction of this project. The Contractor shall also provide and maintain sanitary provisions as per 107.06. All the above is included in the lump sum price bid for Field Office.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

The rounded corners shown on Standard Drawing MC-1, as modified by the typical sections, apply to all cross sections, even though otherwise shown on these plans.

UNDERGROUND UTILITIES

The locations of the underground utilities shown on the plans have been obtained by diligent field checks 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 change order governing completion of this project.

CONSTRUCTION LAYOUT STAKES

See note in proposal describing the work included in this lump sum pay item.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS

The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following approximate locations:

- Rt. side of Harrison Pike @ Sta. 59+50
- Lt. side of Harrison Pike @ Sta. 71+75
- Lt. side of exist. Ramp "K" @ intersection of exist. Rybolt Rd.
- Rt. side of Race Rd. @ Sta. 12+75
- Lt. side of Race Rd. @ Sta. 23+00
- Rt. side of North Bend Rd. @ Sta. 9+50
- Lt. side of North Bend Rd. @ Sta. 32+00

Sign details shall be as specified on Standard Drawing FACI-1, "Code N-55 (1)-132(3)"

The signs shall be erected in accordance with Standard Drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

ITEM 607 - WOVEN WIRE FENCE TYPE 47, REMOVED AND RESET AS PER PLAN

This item shall include the removing and the resetting of approximately 429 Linear Feet of existing Woven Wire Fence, Type 47, at approximate Mainline Sta. 618+00+ (See Sheet No. 337). The existing woven wire fence and component parts shall be removed in accordance with 202.07. The existing fence and component parts shall be erected in accordance with "Item 607 - Fence". Fence or component parts materials, which are damaged or are determined by the Engineer to be unsatisfactory for reuse, shall be replaced by the Contractor at no additional cost to the State. Payment for the above work will be made at the Contract Unit Price bid per Linear Foot of "Item 607 - Woven Wire Fence Type 47 Removed and Reset, As Per Plan" which shall constitute full compensation to the Contractor for the furnishing of all labor, material, equipment, tools and incidental expense necessary to complete this item in place.

DRAINING LAKE

The Contractor shall drain the lake located to the right of Ramp "O" (Sta. 785±-788±). The lake shall be drained at a rate not to exceed 250 gallons per minute in order to prevent downstream erosion. The Contractor shall follow the Engineer's instructions in regard to the manner and time of emptying the lake so that removal of fish and other consideration to the property owner may be given. Payment for this work shall be included in Item 203 - Excavation not including Embankment Construction, As Per Plan.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

Monuments shall be constructed of Class C concrete, cast-in-place in a circular hole eight (8) inches in diameter and forty-four (44) inches in depth. Top of concrete shall be finished at a depth of two (2) inches below ground level and the upper six (6) inch portion of the concrete shall be formed. One-half (1/2) inch steel rods six (6) inches long shall be embedded in the wet concrete as directed by the Engineer to mark the centerline and station.

For locations, See Sheet No. 256.

SEEDING

- (Outside Interstate Limits)

Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections.

- (Interstate Limits)

Quantities for seeding are calculated for the soil areas between the right-of-way fence lines, between the right-of-way lines in unfenced areas, and within the work limits for areas outside the right-of-way lines covered by work agreement or slope easement.

ITEM 203 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.

Septic Tanks are indicated on plans as follows: *(Continued from Sheet No. 19)*

Sheet 185	NORTH BEND RD.	Sheet 177	Race Rd.
	Sta. 16+00 Lt.		Sta. 15+45 Rt.
	Sta. 16+45 Lt.		Sta. 16+80 Rt.
	Sta. 17+05 Rt.		Sta. 17+25 Lt.
	Sta. 17+50 Lt.		Sta. 18+45 Rt.
	Sta. 17+90 Rt.		Sta. 19+75 Rt.
	Sta. 18+20 Lt.		
	Sta. 19+60 Rt.		
	Sta. 19+95 Rt.		
	Sta. 20+25 Lt.		
	Sta. 20+80 Lt.		
	Sta. 22+15 Lt.		
	Sta. 22+95 Lt.		

SEEDING PREPARATION AREAS 659

The reference in the first paragraph of 659.09 to preparation of the seed bed in front of residences, etc., shall on this project be considered to be particularly applicable to all areas listed in 659.09 in addition to the following areas:

- Sta. 10+31 To 13+45 Rt. & Lt. North Bend Rd.
- Sta. 26+35 To 32+38 Rt. & Lt. North Bend Rd.
- Sta. 15+00 To 18+00 Left & Rt. Race Rd.
- Sta. 21+50 To 22+25 Right & Lt. Race Rd.

BENCHING OF FOUNDATION SLOPES

Although cross sections on this plan indicate specific widths and depths of proposed benching of the embankment foundation in certain areas, no waiver of the specifications is intended and all other sloped foundation areas shall be benched as set forth in 203.09. No additional payment will be made for benching required by the provisions of 203.09.

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, except that those trees for which protection and preservation work is indicated elsewhere in these plans shall not be removed.

The following is an approximate estimate of the number of trees and stumps to be removed.

SIZES	TREES			STUMPS		
	Normal County Particip.	100% County Particip.	TOTAL No. TREES	Normal County Particip.	TOTAL No. STUMPS	
18"	4,484	0	4,484	0	0	
30"	151	3	154	11	11	
48"	3	0	3	0	0	
60"	0	0	0	0	0	

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right-of-way and/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.

DRAINAGE GENERAL NOTES

REMOVAL OF EXISTING PIPE

The removal of all existing pipe drains within the limits of proposed excavation items shall be included for payment in the unit prices bid for the respective excavation items, unless otherwise itemized in the plans.

CONNECTIONS TO EXISTING PIPE

At places where the plans provide for 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.

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 by Item 603 Type "B", Class B Bidding, one Commercial size larger than 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. The optimum outlet elevation shall be, if possible, one foot above the flowline elevation of the ditch. Lateral tile fields which cross the roadway shall be intercepted by Type "E", C1, C pipe 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:

- Item 603 6" Pipe, Type "B", C1, B 150 Lin. Ft.
- Item 603 6" Pipe, Type "E", C1, C 500 Lin. Ft.
- Item 603 6" Pipe, Type "F", 50 Lin. Ft.

The Contractor shall not order any of the above materials without prior approval of the Project Engineer.

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 until new facilities are completed and placed into use.

Payment 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.

GENERAL NOTES

TILE FOR SUBGRADE DRAINAGE

6" Drain Tile, 706.07, 706.09 shall be furnished and placed by the Contractor in manholes, catch basins and inlets for subgrade drainage, where, and as directed by the Engineer. Payment for same shall be included in the price bid per "Each" for manholes, catch basins and inlets.

EROSION PROTECTION AT CULVERTS AND OTHER OUTLETS AS PER PLAN

Erosion protection, such as Paved Gutters, Dumped Rock Channel Protection etc., where provided in the plan at structures and other pipe outlets, shall be placed immediately after installation of the pipe or structure.

ITEM 604 No. 6 CATCH BASINS

A 2" depressed pavement shall be provided for all CB-6 catch basins, in lieu of the 1" depressed pavement, as per standard drawing.

SEQUENCE OF CONSTRUCTION OPERATIONS

1. Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until 451 is placed.
2. Place subbase out to outside edge of underdrain or to one foot 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 aggregate (AASHO M43) as shown on typical sections.
5. Complete shoulder construction.

SPRING DRAINS

Reference is made to the detailed drawing on Sheet No. 247 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:

- Item 605 - 5" Unclassified Pipe Underdrain, 707.06 or 707.12, as per plan 500 L.F.
- Item 605 - Aggregate Drains for springs, as per plan 15 L.F.

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.

CUT-OFF WALLS

For Details of cut-off walls required for Riprap using 6" Reinforced Concrete Slab, see Detail Sheet No. 247. Payment for cut-off walls shall be included in unit price bid for Item 601 "Riprap Using 6" Reinforced Concrete Slab As Per Plan".

Dumped Rock Channel Protection, As Per Plan

The size of stone furnished for this item, as provided in Sec. 601.07, is hereby modified to permit the use of stones as large as may be conveniently placed to the lines and grades called for in the plans and to permit the inclusion not to exceed 10 percent by weight of spalls and stones of less than 1/3 cubic foot volume. Any piece of stone or broken masonry resulting from the removal of existing structures and meeting the above requirements may be used in this item.

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 carry flow from any plumbing fixtures including floor drains and sink drains or drains from livestock lots or barns 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 not including Embankment Construction As Per Plan".

PAVEMENT

CONTRACTION AND EXPANSION JOINTS

Although specific locations of certain expansion and contraction joints have been detailed on this plan, 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.

PART WIDTH CONSTRUCTION

Because of the necessity of building (portions of) this project under traffic and constructing the pavement part at a time, extreme care shall be taken to prevent the construction of a butt joint on centerline in the 304 and 310 courses.

This shall be accomplished by building the 304 and 310 courses, placed with the first portion of the pavement built, at least eighteen (18) inches beyond the center line and by surfacing no closer than eighteen (18) inches to this edge of the above courses. When the second portion of the pavement is built, at least twelve (12) inches of these projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement built. Payment for this operation shall be included in the unit prices bid for the pertinent pavement items.

ITEM 310 SUBBASE, GRADING A OR B AS PER PLAN

Material for this item shall meet the requirements of grading A or B of 310.02 except that for either grading, no more than 10% of the material shall pass a No. 200 sieve after all operations of placing and compacting have been completed.

ITEM SPECIAL - CLEANING AND DISPOSING OF SEPTIC TANKS

This item shall include cleaning, backfilling and removing 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 202. 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 3 feet 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. This item shall be paid for at the unit price bid per each for "Item Special - Cleaning and Disposing 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. (Continued on Sh. 18) See, Septic Tanks are Indicated on Plans as Follows."

ITEM SPECIAL - MOWING UNPAVED AREAS

The Contractor shall mow all unpaved areas as often as required by the Engineer so that growth height will not exceed 12" at any time during the life of the contract. Mowing shall be performed with suitable tools and equipment so that growth will be cut no shorter than three inches in height. The number of acres to be paid for will be for each operation performed by the Contractor for the actual area mowed, as directed by the Engineer. The Acres measured as provided above shall be paid for at the Contract unit price bid per acre for "Item Special - Mowing Unpaved Areas", which price and Payment shall constitute full compensation for furnishing all labor, materials, tools, equipment and incidentals necessary to complete this item.

An Estimated Quantity of 140 Acres has been provided in the General Summary.

ITEM 604 - STANDARD MANHOLE No. 1, MODIFIED

Standard Catch Basin CB-6 Frame and Cover Castings shall be used in lieu of the Standard Manhole No. 1 Frame and Cover Castings. see Item 30-D, Sheet No. 4.

ITEM 601 - PAVED GUTTERS

The Provisions of 203.13 are hereby expanded to the extent that the subgrade under 601 Paved Gutters shall be compacted to a depth of 6 inches below the surface of the subgrade and to the full width of the Paved Gutters. No Waiver of the specifications is intended and for Paved Gutter placed contiguously with the Paved portion of the Roadway, the six-inch compaction shall apply beyond the limits of Normal Subgrade Preparation. The Cost of compacting subgrade to a depth of six-inches shall be included in the pertinent unit price bid for 203.

GENERAL SUMMARY

* 100% County Participation
 ☆ 100% State Participation

SHEET NUMBER

ITEM	TYPE CODE 7221											TYPE CODE 4005								100% County	100% State	Normal Part.	ITEM	QUAN.	UNIT	DESCRIPTION <i>Code Type 7221 Unless Otherwise Noted</i>
	19 General Notes	27 ☆	27	31	35	39	*186	43	43-A	186	23	27	31	35	39	43	43-A	186								
DRAINAGE																										
202						Lump			Lump											3	Lump	202	Lump	Lump	Existing Structures Removed	
202						1	3		7												8	202	11	Ea.	Inlets Removed	
601										73	94.0	1,006.8	895	857.8	394	57.0	6.4				73	601	73	C. Y.	Dumped Rock Channel Protection, as per plan	
601						11				525											4036	601	4,036	C. Y.	Dumped Rock Channel Protection	
601														* 32	162.2	62.2					11	601	11	S. Y.	Riprap, Grout Filled	
601											76.8	112.8	70	* 455							32	601	316	S. Y.	Riprap, Using 6" Reinforced Concrete Slab, As Per Plan	
601																					455	601	455	L. F.	Paved Gutter, Standard Type 1-2	
601														93							93	601	93	L. F.	Paved Gutter, Standard Type 1-4	
602			14.1	101.7	74.6	79.4		45.0	24.7	1.1											340.6	602	340.6	C. Y.	Concrete Masonry	
603								90	124												214	603	214	L. F.	24" Conduit, Type A, with Class B Bedding, 706.02 or 706.08	
603								126													126	603	126	L. F.	24" Conduit, Type A, with Class B Bedding, 706.02 Class II	
603									228												220	603	228	L. F.	24" Conduit, Type A, with Class B Bedding, 706.02 Class II	
603									308												308	603	308	L. F.	24" Conduit, Type A, with Class B Bedding, 707.05, 12 Gage	
603				474	472																946	603	946	L. F.	30" Conduit, Type A, with Class B Bedding, 706.02 Class II	
603				972		332															1304	603	1304	L. F.	30" Conduit, Type A, with Class B Bedding, 706.02 Class II	
603						628															628	603	628	L. F.	30" Conduit, Type A, with Class B Bedding, 707.05, 12 Gage	
603			374	328		302		316													1018	603	1,018	L. F.	36" Conduit, Type A, with Class B Bedding, 707.05, 8 Gage	
603				376																	302	603	302	L. F.	42" Conduit, Type A, with Class B Bedding	
603				322		350		464													376	603	376	L. F.	48" Conduit, Type A, with Class B Bedding, 707.05, 8 Gage	
603																					1156	603	1,156	L. F.	54" Conduit, Type A, with Class B Bedding, 707.05, 8 Gage, Shop Elongated & Shop Struttad	
603				422																	422	603	422	L. F.	180" Conduit, Type A, with Class B Bedding, 707.03, 1-1 Gage, Shop Elongated, and with Six Bolts per Foot of Longitudinal Seam	
603	150																				150	603	150	L. F.	6" Conduit, Type B, with Class B Bedding	
603		64																			112	603	112	L. F.	12" Conduit, Type B, with Class B Bedding	
603		184		70	154	266	38	644	318	462											2088	603	2,136	L. F.	15" Conduit, Type B, with Class B Bedding	
603								86	196	88											370	603	370	L. F.	15" Conduit, Type B, with Class B Bedding, 706.02 Class III, or 706.08	
603						74															74	603	74	L. F.	18" Conduit, Type B, with Class B Bedding	
603					138																164	603	164	L. F.	12" Conduit, Type C, with Class B Bedding	
603			100		30				26	68											246	603	246	L. F.	15" Conduit, Type C, with Class B Bedding	
603			24																		24	603	24	L. F.	18" Conduit, Type D	
603	500				34																34	603	34	L. F.	18" x 11" Conduit, Type D, 707.01	
603																					300	603	300	L. F.	6" Conduit, Type E	
603	50		150	110	150	190		200	90												940	603	940	L. F.	6" Conduit, Type F	
603			168			80															248	603	248	L. F.	12" Conduit, Type F	
603			68	94	158	42		114	276												752	603	752	L. F.	15" Conduit, Type F	
603						38															38	603	38	L. F.	18" Conduit, Type F	
604								2	1												3	604	3	Ea.	Standard No. 2-A-6 Paved Shoulder Inlet	
604								2													2	604	2	Ea.	Standard No. 2-2-A Catch Basin	
604								1													2	604	2	Ea.	Standard No. 2-2-B Catch Basin	
604								1		6											6	604	7	Ea.	Standard No. 3 Catch Basin	
604																					10	604	10	Ea.	Standard No. 3-A Catch Basin	
604																					8	604	8	Ea.	Standard No. 4 Catch Basin	
604			3	6	2	4		3	1												12	604	12	Ea.	Standard No. 5 Catch Basin	
604			2					7	5												14	604	14	Ea.	Standard No. 6 Catch Basin	
604																					1	604	1	Ea.	Standard No. 8 Catch Basin	
604			1	4	1																6	604	6	Ea.	Standard No. 1 Manhole	
604									1												1	604	1	Ea.	Standard No. 1 Manhole, Modified as per plan	
604					2																2	604	2	Ea.	Standard No. 2 Manhole	
605			7,401	12,177	7,565	10,969		7,512	3,585												49,209	605	49,209	L. F.	6" Shallow Pipe Underdrain	
605			50			350		272													672	605	672	L. F.	6" Deep Pipe Underdrain	
605		4.00	7,261	3,857	7,878	4,574		7393	4,440												400	605	35,803	L. F.	6" Pipe Underdrain, 707.06 or 707.12	
605	15																				15	605	15	L. F.	Aggregate Drains for Springs, as per plan	
605			140			250		50													440	605	440	L. F.	6" Unclassified Pipe Underdrain	
605	500																				500	605	500	L. F.	6" Unclassified Pipe Underdrain, 707.06 or 707.12, as per plan	

GENERAL SUMMARY

* 100% County Participation

SHEET NUMBER

ITEM	TYPE CODE 7221										SUB TOTALS		ITEM	QUAN.	UNIT	DESCRIPTION	
	*23	23	26	30	34	38	42	187	215	*187	215*	100% County					Normal
304	0.10	50.9										0.10	50.9	304	51	M. Gal.	Water
304			1174	1850	1696	1679	1513		626			15	10172	304	10187	L.Y.	Aggregate Base
301			873	975	1022	1078	1177		878				6003	301	6003	L.Y.	Bituminous Aggregate Base, 702.01(85-100) or 702.09 RT-12 as per plan
402								22	88	264	7		271	402	376	L.Y.	Asphalt Concrete (70-85)
611			139			278		372	272				1001	611	1001	S.Y.	Reinforced Concrete Approach Slabs (T=13"), As Per Plan
305								314		1274			314	305	1588	S.Y.	8" Portland Cement Concrete Base
609			1776					1710	1862				5406	609	5406	L.F.	Concrete Curb Standard Type 2A
609									352				4190	609	4190	L.F.	Concrete Curb Standard Type 6
609													100	609	100	L.F.	Concrete Curb Standard Type 7
609													1487	609	1487	L.F.	Concrete Curb Standard Type 8
609													608	609	628	L.F.	Combination Curb & Gutter Standard Type 3
609								501		1230	20		501	609	1731	L.F.	Concrete Curb Standard Type 2B
310									192		12		347	310	359	L.Y.	Subbase
310			4268	5569	5434	5702	6206		4712				31891	310	31891	L.Y.	Subbase, Grading "A" or "B" As per plan
310								1153		246			1553	310	1399	L.Y.	Subbase, Grading "C" or "D"
613								13		12			13	613	25	Ea.	Traffic Divider Standard
451			17001	21333	20137	21333	25990						106694	451	106694	S.Y.	10" Reinforced Portland Cement Concrete Pavement
404								52	38	150	18		90	404	258	L.Y.	Asphalt Concrete (70-85)
407								144		392	44		144	407	530	Gal.	Tack Coat: 702.04 MS-2 or RS-1; or 702.02 RL-70 or RL-250
408								12	425	109	35		436	408	531	Gal.	Bituminous Prime Coat, 702.09 RT-2 or RT-3
409			2117	3022	3030	3202	3014		1431				437	409	15816	Gal.	Seal Coat Bituminous Material, as per plan
409			68	97	98	103	97		46				509	409	509	L.Y.	Seal Coat Cover Aggregate, No. 8
411								4	14	39	9		21	411	69	L.Y.	Stabilized Crushed Aggregate
452								141	244	559			385	452	944	S.Y.	7" Plain Portland Cement Concrete Pavement
451								6384	20811				27195	451	27195	S.Y.	9" Reinforced Portland Cement Concrete Pavement
612			131						155				286	612	286	S.Y.	4" Concrete Median, as per Plan
612								275					275	612	275	S.Y.	Concrete Median Standard
612			16						92				143	612	143	S.Y.	9" Concrete Traffic Island
Special													1864	Special	1864	L.Y.	Drainage Connection Using No. 8 Aggregate

It is estimated that an additional quantity of 1604 L.Y. of Item 304 Aggregate Base will be required due to the increase in thickness of Item 451 from 9" to 10"

For Lighting Quantities See Sh. # 263
 For Signing Quantities See Sh. # 280
 For Water Work Quantities See Sh. # 255

614 Lump Sum L. S. Field Office
 Lump Sum L. S. Maintaining Traffic
 Lump Sum L. S. Construction Layout Stakes

STRUCTURES 20' SPAN & OVER

Bridge No. Ham. - 74-11 29 R See Sh. No. 282 For Quantities
 Bridge No. Ham. - 74-13 03 L&R See Sh. No. 295 For Quantities
 Bridge No. Ham. - 74-13 46 See Sh. No. 310 For Quantities
 Bridge No. Ham. - 74-14 77 See Sh. No. 319 For Quantities

⊗ (not including Embankment Construction)

EXCAVATION AND EMBANKMENT				
STATIONS		Excavation	Embankment	
FROM	TO	203 ⊗	203	
		Cu. Yds.	Cu. Yds.	
Mainline I-74				
611+80	620+00	143,296	2,591	2,798
620+00	630+00	39,788	151,725	163,863
630+00	640+00	62,275	127,000	137,160
640+00	650+00	104,635	47,833	51,660
650+00	660+00	52,571	108,836	117,543
660+00	670+00	43,058	130,004	140,404
670+00	680+00	36,042	100,193	108,208
680+00	690+00	53,071	119,149	128,681
690+00	699+45.5	172,301	35,859	38,728
Race Rd.				
13+10	15+50 *	725	19	
15+50	22+25	3,099	914	
720+00	730+00	153,737	6,078	6,564
730+00	740+00	27,847	119,710	129,507
740+00	750+00	9,140	70,342	75,969
750+00	760+00	63,879	38,698	41,794
760+00	770+00	72,444	79,964	86,364
770+00	780+00	7,616	185,954	200,830
780+00	790+00	120,601	1,649	1,781
790+00	795+50	74,453	0	0
North Bend Interchange				
10+31.75	26+37.80	10,972	19,953	21,549
26+37.80	32+38 *	901	324	350
Ramp O		8,260	30,306	
Ramp M		28,010	3,020	3,262
Ramp Q		16,667	16,025	17,307
Ramp L		16,753	35,418	38,251
Ramp N		324	42,972	
Ramp P		6,621	138	149
Channel Relocation		19,583	37,198	40,174
Harrison Pike Int.				
Ramp "A"		78,026	3,217	
Ramp "Y"		23,494	1,454	1,570
Ramp "K" Slide Corr. ☆	☆ 15,200	☆ 15,200	☆ 16,416	
Mainline I-74 Eastbound only				
600+67.5	611+80	609	317	342
Total Normal Participation		1,579,580	1,577,950	
Total State 100% ☆		15,200	15,200	
Total County 100% *		1,651	343	
Total		1,596,431	1,593,493	

☆ Indicates 100% State Participation
* Indicates 100% County Participation

SEEDING CALCULATIONS				
ITEMS	100% State Part.	100% County Part.	Normal Part.	
	Sq. Yds.	Sq. Yds.	Sq. Yds.	
Gross Area between Seeding Limits	4,612	8,536	871,653	
DEDUCTIONS				
Pavement Concrete	862	1,189	134,274	
Pavement Bituminous	—	4,701	2,527	
Paved Shoulder	—	—	63,264	
Sod Area	—	—	3234	
Paved Gutters	—	202	62	
Median Pavement	—	—	704	
Approach Slabs	—	—	1001	
411 Stabilized Crushed Aggregate	—	48	21	
Total Area To Be Deducted	862	6140	205,087	
Net Area To Be Seeded and Protected	3,750	2,396	666,566	

FERTILIZER & LIMING MATERIAL			
PARTICIPATION	STATE	COUNTY	NORMAL
Seeding Area (Sq. Yds.)	3,750	2,396	666,566
Sodding Area (Sq. Yds.)	—	—	3187
Special Sodding Area (Sq. Yds.)	—	—	47
TOTAL AREA (Sq. Yds.)	3,750	2,396	669,800
Fertilizer @ 20 lbs. per 1000 Sq. Ft. (Tons)	.337	.215	60.28
Lime @ 100 lbs. per 1000 Sq. Ft. (Tons)	1.687	1.078	301.41

621 PAVEMENT MARKINGS			
CODE	100% COUNTY	NORMAL	TOTAL
Barrier Lines, 4"	630 Ft.	2668 Ft.	3298 Ft.
6" Lane and Center Lines	2.76 Mi.	2.76 Mi.	2.76 Mi.
4" Edge Lines	0.12 Mi.	19.25 Mi.	19.37 Mi.
4" Lane Lines	0.02 Mi.	.44 Mi.	.46 Mi.
8" Channelizing Lines	—	2655 Ft.	2655 Ft.
Broad Traverse Stripes	—	L. 5	L. 5
Curb and Island Marking	—	L. 5	L. 5

For Quantity Breakdown see Sh. # 23.B
Item 621 PAVEMENT MARKINGS Quantities carried to Sheet No. 20.

203 SUBGRADE PREPARATION			
ITEMS	Normal	100% County	Sq. Yds.
Pavement Concrete - Rock	97,076	—	97,076
Pavement Bituminous	1,208	—	1,208
Paved Shoulders - Rock	42,064	—	42,064
Approach Slabs	1,001	—	1,001
Pavement (305 Base) Bituminous	314	1274	1,588
TOTAL	141,663	1274	142,937

203 WATER						
ITEMS	100% State Part.	Normal Part.	100% County Part.	Totals @ 5 Gal. Per Cu. Yd.		
	Cu. Yd.	Cu. Yd.	Cu. Yd.	State Part.	Normal Part.	County Part.
203 Embankment	15,200	1,577,950	343	76	7,889.75	1.71
411	—	21	48	—	0.11	0.24
310	—	33,391	258	—	166.96	1.29
TOTAL 203 WATER	15,200	1,577,950	343	76.0	8,056.82	3.24
304 WATER						
304	—	10,172	15	—	50.86	0.08
TOTAL 304 WATER	—	10,172	15	—	50.86	0.08

616 DUST CONTROL			
ITEMS	Tons.	M. Gals.	
Water	—	10	
Calcium Chloride	25	—	

DRAINAGE CONNECTION USING No. 8 AGGREGATE 1864 Cu. Yd.

Center Line Reference Monument, As Per Plan	
For Location see Table on R/W Sheet No. 326	Quantity
100% County Participation	3
Normal Participation	42
Total	45

203 PROOF ROLLING			
ITEM	Sq. Yd.	@2000 S.Y./Hr.	Hours
Mainline, (451) - Rock Cut	74,381		37.19
Mainline, Paved Shoulders - R.C.	38,562		19.28
Ramps, (451) - R.C.	16,311		8.16
Ramps, Paved Shoulders - R.C.	3,502		1.75
Approach Slabs	1001		0.50
North Bend Road (451)	6268		3.14
North Bend Road (305)	277		0.14
Total (Normal Participation)	140,302		70.16
North Bend Road (305)	1,028		0.51
Total (100% County Participation)	1,028		0.51

AGGREGATE FOR MAINTAINING TRAFFIC			
ITEM 410 (Cu. Yds.)	Normal	100% County	
Traffic Compacted Surface Type "A" or "B" as per plan	138	412	
Traffic Compacted Surface, Type "C" as per Plan	69	206	

RIGHT OF WAY FENCE				
Station	Code No. 7221	Remove & Reset Extn.	Type 47	Chain Link
5+48± - 9+86±			331	
617+80± -			245	
617+80± -			184	
617+67± - 629+00				906
617+84± - 629+00				194
629+00 - 644+00				1525
642+50 - 644+00				174
644+00 - 660+00				1523
644+00 - 652+00				894
660+00 - 675+00				1592
675+00 - 690+00				1602
689+58 - 690+00				69
690+00 - 706+00				1487
690+00 - 706+00				1566
706+00 - 721+00				1524
706+00 - 721+00				1496
721+00 - 736+00				1659
721+00 - 736+00				1515
736+00 - 752+00				1646
736+00 - 752+00				1648
752+00 - 768+00				1624
752+00 - 768+00				1614
768+00 - 782+00				1416
768+00 - 782+00				1445
782+00 - 786+67±				495
786+67 - 790+65±				453
782+20± - 786+26±				390
792+54± - 795+00±				195
786+26± - 792+05±				721
13+50± - 16+70±				318
23+68± - 26+25±				269
790+64± - 793+24±				300
793+24 - 793+36±				407
			429	28,335
				2,663

+ 100% State

601 DUMPED ROCK CHANNEL PROTECTION		
For Quantity Breakdown See R/W Sh. #	AS PER PLAN	STANDARD
337		15 Lu. Yd.
338	23 Lu. Yd.	60 Lu. Yd.
339		60 Lu. Yd.
340	6 Lu. Yd.	75 Lu. Yd.
341		90 Lu. Yd.
342		15 Lu. Yd.
343		60 Lu. Yd.
344	13 Lu. Yd.	30 Lu. Yd.
345	31 Lu. Yd.	45 Lu. Yd.
346		45 Lu. Yd.
347		15 Lu. Yd.
348		15 Lu. Yd.
TOTAL	73 Lu. Yd.	525 Lu. Yd.

PAVEMENT MARKING QUANTITIES

REF.	SIDE	STATION		4"	4"	6"	8"	BROAD	CURB &	4"
		FROM	TO	EDGE LINE	LANE LINE	LANE LINE	CHANNEL LINE	TRANSVERSE STRIPES	ISLAND MARKING	BARRIER LINE
				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP	LUMP	LIN. FT.
F74EB	Rt.	600+67.50	626+22.05	5110						
	Rt.	629+00	631+88		288				Lump	
	Rt.	626+22.05	629+00	278			278			
F74WB	Lt.	611+80	617+81	1202						
	Lt.	617+81.11	620+70	100			289		Lump	
	Lt.	620+70	623+35		265					
	Lt.	611+80	794+50				18,270			
F74EB	Rt.	600+67.50	794+50				19,383			
	Rt.	626+22.05	780+25.96	30,808						
	Rt.	778+00	781+25.96	100			326		Lump	
	Rt.	775+63	778+00		237					
F74WB	Lt.	618+81	777+00	31,638						
	Lt.	770+12	773+00	288	288					
	Lt.	773+00	777+00	400			400		Lump	
F74EB	Rt.	781+25.96	794+50	2648						
F74WB	Lt.	777+00	794+50	3500						
	Lt.	783+00	794+50				1150			
Ramp A	Rt & Lt.	0+15	0+93	160						
	Rt.	0+93	15+92	1499						
	Lt.	0+93	11+60	1067						
	Lt.	9+75	15+92						Lump	
Ramp Y	Lt.	3+47	21+12	1765				Lump	Lump	
	Rt.	14+00	21+12	712						
	Lt.	21+12	23+05				193	Lump		
Ramp O	Lt.	777+30	778+00							
	Lt.	778+00	780+26				226	Lump	Lump	
	Rt & Lt.	780+20	791+52	2264						
	Med.	788+00	792+00		400				Lump	
	Lt. & Rt.	791+52	792+05	118					Lump	
	Lt.	790+80	791+52						Lump	
	Lt.	787+75	788+55						Lump	
Ramp M	Rt & Lt.	777+00	792+47	3096						
	Med.	780+00	781+00		100					
	Med.	781+00	783+00	200			200			
	Rt.	777+00	783+00						Lump	
	Lt.	783+00	786+00						Lump	
	Lt.	791+47	794+00						Lump	
	Rt.	791+47	792+48						Lump	
SUB TOTAL				86953	1578	38803	1912	Lump	Lump	

PAVEMENT MARKING QUANTITIES

REF.	SIDE	STATION		4"	4"	6"	8"	BROAD	CURB &	4"	
		FROM	TO	EDGE LINE	LANE LINE	LANE LINE	CHANNEL LINE	TRANSVERSE STRIPES	ISLAND MARKING	BARRIER LINE	
				LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP	LUMP	LIN. FT.	
Ramp L	Rt & Lt.	777+00	792+47	3094							
	Rt.	783+00	785+00						Lump		
	Rt.	792+12	795+28						Lump		
	Lt.	792+12	803+97						Lump		
	Rt.	800+60	802+34						Lump		
Ramp N	Rt & Lt.	791+00	796+00	1000							
	Med.	790+60	794+12		352						
	Rt & Lt.	791+46	791+05	180					Lump		
	Rt.	791+05	792+15						Lump		
	Rt.	794+12	795+23						Lump		
Ramp Q	Rt.	780+36	782+36						Lump		
	Lt.	781+28	783+15						Lump		
	Lt.	784+70	785+75						Lump		
	Rt & Lt.	781+28	794+50	2644							
	Lt.	788+51	791+50						Lump		
Ramp P	Rt.	790+16	792+87	271					Lump		
	Lt.	791+87	792+87	100					Lump		
Race Rd.	Rt & Lt.	15+50	22+25	1350						1350	
	Med.	15+50	22+25		675						
Race Rd.	100% County Charge										
	Rt & Lt.	13+40	15+50	400						400	
	Med.	13+40	15+50		200						
	Med.	13+40	15+50								
	Rt & Lt.	22+25	23+40	230						230	
	Med.	22+25	23+40		115						
100% County Total Ft. =			630	315						630	
Actual Ft. =				118							
Miles =			.12	.02							
North Bend Rd.	Rt & Lt.	10+31	12+30		199				Lump	Lump	398
	Med.	12+30	14+86	512							
	Med.	15+42	24+65	1435							
	Med.	25+43	27+90	190	494	304					
	* * 5' Lt.	27+90	32+00							410	920
	* * 5' Rt.	27+90	32+00							410	
	* * Rt & Lt.	25+43	32+00							190	1314
	Lt.	10+31	13+84	353							
	Rt.	10+31	14+85	454							
	Lt.	16+25	22+81	656							
Lt.	23+80	32+00	258	820	362						
Rt & Lt.	32+00	32+40	150								
Rt.	17+63	23+94	631								
Rt.	26+35	32+00	3	565	562						
TOTAL OF ABOVE LESS 100% COUNTY				13131	2851						2668
				14709	4795						
SUB TOTAL				86953	1578	38803	1912				
SUB TOTAL				101662	6373	38803	1912	Lump	Lump		2668
				100,084	4429						

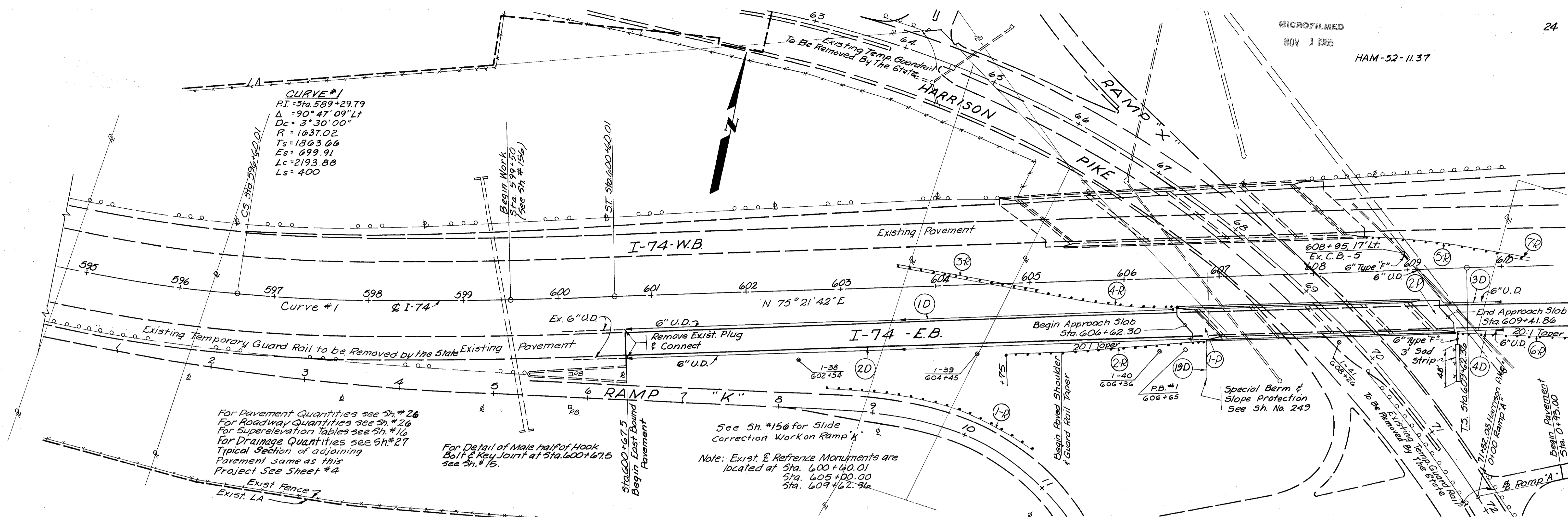
PAVEMENT MARKING QUANTITIES

REF.	SIDE	STATION		4" EDGE LINE	4" LANE LINE	6" LANE LINE	8" CHANNEL LINE	BROAD TRANSVERSE STRIPES	CURB & ISLAND MARKING	4" BARRIER LINE	
		FROM	TO	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LUMP	LUMP	LIN. FT.	
SUB TOTAL FROM PRECEDING SHEET				101662	6373	38803	1912	Lump	Lump	2668	
Gore Q	Lt.	16+15	16+45	100.084	4429		45	Lump	Lump		
	Lt.	15+06	16+45				154	Lump	Lump		
	Med.	13+49	13+64						Lump		
	Med.	14+70	14+85						Lump		
	Med.	15+33	15+48						Lump		
Gore M	Lt.	23+79	24+25				46				
	Lt.	22+79	24+25				146	Lump			
	Lt.	21+65	23+80						Lump		
	Med.	24+50	24+65						Lump		
	Med.	25+43	26+04						Lump		
Gore P	Rt.	16+22	16+63				41				
	Rt.	16+22	18+50						Lump		
	Rt.	16+63	18+04				141	Lump			
Gore L	Rt.	23+62	23+94				32				
	Rt.	23+62	25+00				138	Lump	Lump		
	Med.	24+50	24+65						Lump		
TOTAL 100% County				0.42 Mi.	0.16 Mi.					630 Ft.	
TOTALS (NORMAL)				100084	6373	38803	2655			2668	
TOTAL FT. (NORMAL)				101662	6373	38803	2655			2668	
LANE LINE LENGTH				1661	*2390	*1451					
NET TOTAL (NORMAL)				18.95	13.25 Mi.	4.4 Mi.	2.76 Mi.	2655 Ft.	Lump	Lump	2668 Ft.

* Lane Line Length = Sta. Length x $\frac{15}{15+25}$
 ** See Details Page 251E for Lane Plan

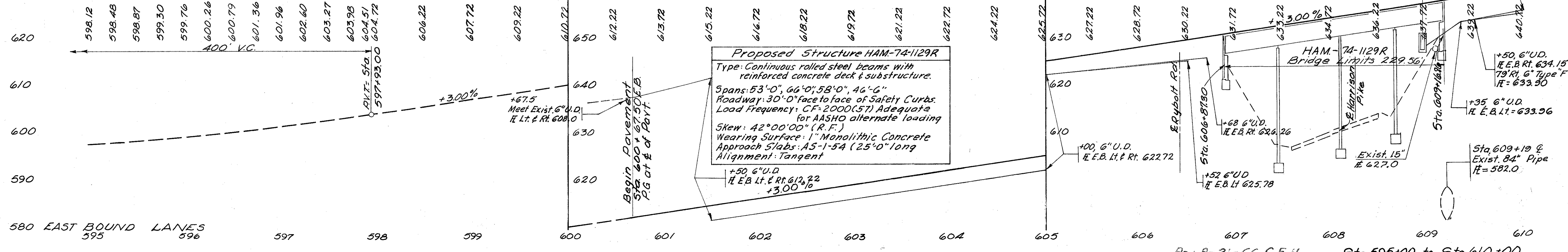
DELINEATOR QUANTITIES

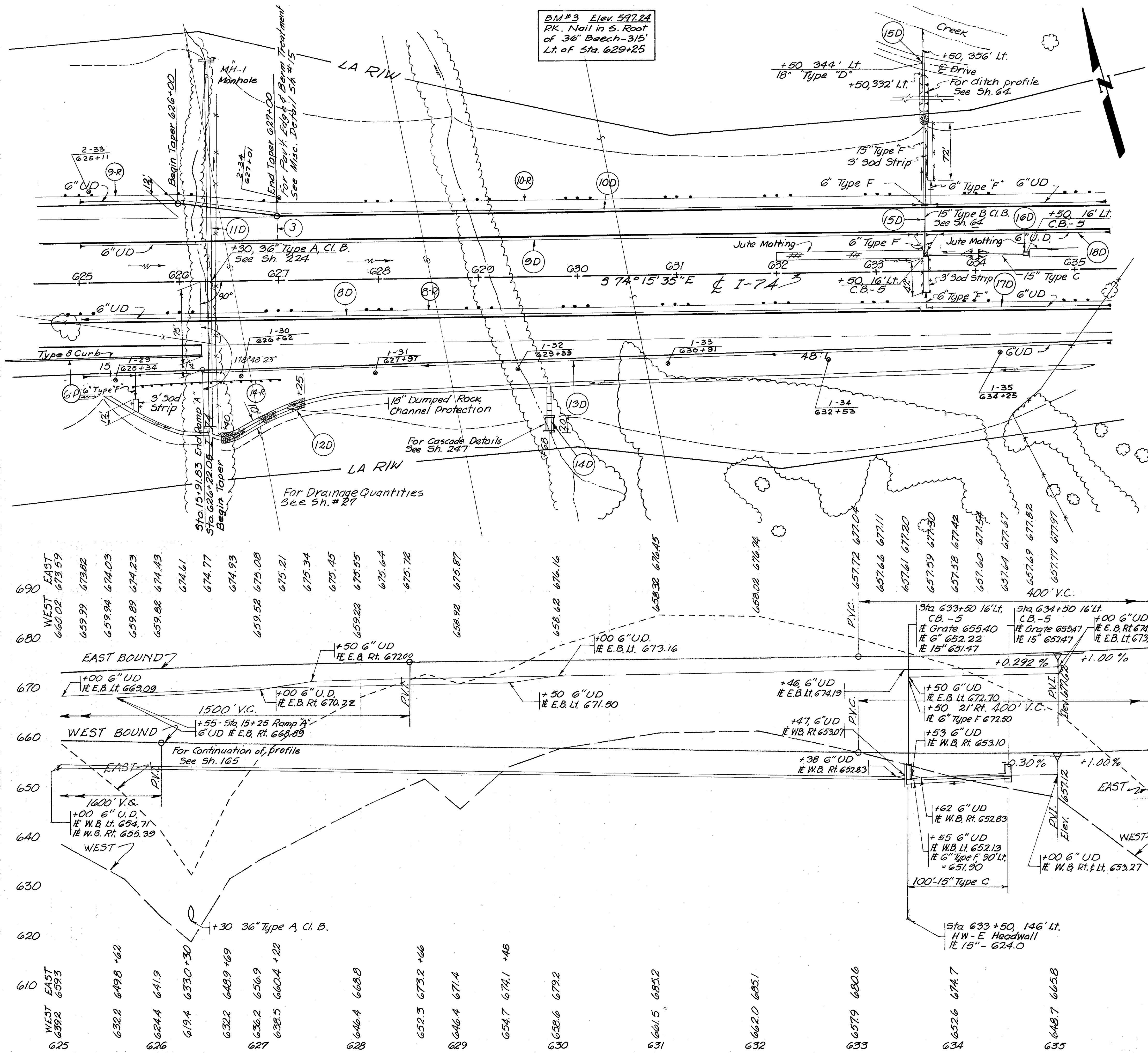
REFERENCE	STATION		SIDE	SPACING	C 2		C 3		A 1		REFERENCE	STATION		SIDE	SPACING	C 2		C 3		A 1	
	FROM	TO			POST	BRKT.	POST	BRKT.	POST	BRKT.		FROM	TO			POST	BRKT.	POST	BRKT.	POST	BRKT.
I-74 E.B.	601+25	605+25	Rt.	200'					3		Ramp Q	781+20	—	Rt./Lt.	80'	2					
	607+25	609+25	Rt.	200'					2			782+00	—	Lt.	80'	1					
	611+25	621+25	Rt.	200'					6			782+50	784+00	Lt.	50'	4					
	626+25	637+25	Rt.	100'	12							784+80	—	Rt./Lt.	80'	2					
	638+25	—	Rt.	100'			1					785+80	787+80	Rt.	100'	3					
	640+25	698+25	Rt.	200'					30			788+40	790+20	Rt.	30'	7					
	700+25	—	Rt.	200'					1			790+85	791+52	Rt.	—	2					
	702+25	770+25	Rt.	200'					35			791+52	791+96	Rt.	30'	2					
	772+25	780+25	Rt.	100'	9							North Bend Road									
	781+25	793+25	Rt.	200'					7			13+84	—	Rt./O	—	1					
W.B.	611+80	617+80	Lt.	200'					4												
	619+05	627+05	Lt.	100'	9						Ramp Q	779+90	780+40	Rt.	—	2					
	629+05	699+05	Lt.	200'					36			780+70	781+60	Rt.	30'	4					
	701+05	—	Lt.	200'						1		781+60	782+80	Lt.	30'	5					
	703+05	763+05	Lt.	200'					30			782+80	785+20	Rt.	30'	9					
	765+00	—	Lt.	200'						1		785+20	788+80	Lt.	30'	13					
	766+05	783+05	Lt.	100'	18							789+50	—	Lt./Rt.	—	2					
	785+00	793+00	Lt.	200'					5			790+40	794+40	Rt.	100'	5					
Ramp A	0+30	1+00	Rt.	30'	3							North Bend Road									
	1+75	3+35	Rt.	80'	3							10+30	14+30	Rt.	80'	6					
	3+35	9+75	Lt.	80'	9							17+35	21+35	Rt.	100'	2	3				
	9+75	12+95	Rt.	80'	5							24+60	—	Rt.	—	1					
	13+95	14+95	Rt.	100'	2							25+80	26+38	Rt.	—	2					
Ramp Y	3+10	3+21	Lt.	30'	2							18+60	23+60	Lt.	100'	4	2				
	3+45	12+65	Lt.	40'	24							26+20	29+20	Lt.	100'	4					
	13+35	—	Lt.	70'	1							30+31	—	—	—	1					
	14+35	20+35	Lt.	100'	7																
Ramp L	785+30	794+30	Lt.	100'	10																
	794+90	—	Rt./Lt.	60'	2																
	795+20	801+80	Rt.	30'	23																
	802+10	—	Rt./Lt.	30'	2																
	802+40	—	Lt.	30'	1																
	803+00	—	Lt.	60'	1																
	804+00	—	Lt.	100'	1																
Ramp M	784+05	789+05	Lt.	100'	6																
	789+65	—	Rt./Lt.	60'	2																
	789+95	791+45	Rt.	30'	6																
	791+85	—	Rt./Lt.	40'	2																
	792+25	793+85	Lt.	40'	5																
Ramp N	791+05	792+05	Lt.	100'	2																
	791+50	—	Lt./Rt.	—	2																
	792+65	—	Lt.	60'	1																
	792+95	793+25	Lt.	30'	2																
	793+85	794+15	Lt.	—	2																
	794+15	—	Lt.	100'	1																
SUB TOTAL					175		2		156	4	FINAL TOTAL					269	5	2	156	4	



PAVEMENT SYMBOLS

Item 451 10" Reinforced Portland Cement Concrete Pavement	Item 404 1 1/4" Asphalt Concrete (70-85)	Item 409 Seal Coat Aggregate, No. 8, & Bit. MH.
Item 310 6" Subbase, Grading "A" or "B" As per plan	Item 402 1 1/4" Asphalt Concrete (70-85)	Item 301 6" Bituminous Aggregate Base
Item 451 9" Reinforced Portland Cement Concrete Pavement	Item 407 Tack Coat: 702.04 MS-2 or RS-1, or 702.02 RC-70 or RC-250	Item 304 3" Aggregate Base
Item 310 6" Subbase Grading "C" or "D" As per plan	Item 305 8" Portland Cement Concrete Base	Item 310 Subbase Grading "A" or "B" As per plan
Item 404 1 1/4" Asphalt Concrete (70-85)	Item 612 Concrete Median, Standard	Item 409 Seal Coat Cover Aggregate, No. 8, & Bit. MH.
Item 402 2 @ 1/2" Asphalt Concrete (70-85)	Item 310 Subbase Grading "A" or "B" As per plan	Item 301 3" Bituminous Aggregate Base
Item 408 Bituminous Prime Coat, 702.09 Rt-2 or Rt-3	Item 452 7" Plain Portland Cement Concrete Pavement	Item 304 6" Aggregate Base
Item 304 6" Aggregate Base	Item 404 1 1/4" Asphalt Concrete (70-85)	Item 310 Subbase Grading "A" or "B" or Regular Grading as per Appropriate Typical Section
Item 310 5" Subbase Grading "A" or "B" As per plan	Item 407 Tack Coat: 702.04 MS-2 or RS-1, or 702.02 RC-70 or RC-250	Item 409 Seal Coat Cover Aggregate, No. 8, & Bit. MH.
Item 404 2-1" Asphalt Concrete (70-85)	Item 402 Asphalt Concrete (70-85)	Item 301 3" Bituminous Aggregate Base
Item 408 Bituminous Prime Coat, 702.09 Rt-2, or Rt-3 @ 0.40 gal. per Sq. Yd.	Item 409 Seal Coat Aggregate, No. 8, & Bit. MH.	Item 304 6" Aggregate Base
Item 411 5" Stabilized Crushed Aggregate	Item 301 3" Bituminous Aggregate Base	Item 310 Subbase Grading "A" or "B" As per plan





BM#3 Elev 597.24
PK. Nail in S. Root
of 36" Beech-3/5'
Lt. of Sta. 629+25

Station	Item	Quantity	Unit
625	1-R	24	Sq. Yd.
626	2-R	24	Sq. Yd.
627	3-R	24	Sq. Yd.
628	4-R	24	Sq. Yd.
629	5-R	24	Sq. Yd.
630	6-R	24	Sq. Yd.
631	7-R	24	Sq. Yd.
632	8-R	24	Sq. Yd.
633	9-R	24	Sq. Yd.
634	10-R	24	Sq. Yd.
635	11-R	24	Sq. Yd.

Station	Item	Quantity	Unit
625	1-P	418	Sq. Yd.
626	2-P	168	Sq. Yd.
627	3-P	51	Sq. Yd.
628	4-P	300	Sq. Yd.
629	5-P	271	Sq. Yd.
630	6-P	128	Sq. Yd.
631	7-P	418	Sq. Yd.
632	8-P	168	Sq. Yd.
633	9-P	51	Sq. Yd.
634	10-P	300	Sq. Yd.
635	11-P	271	Sq. Yd.

Station	Item	Quantity	Unit
625	14-R	8.5	Sq. Yd.
626	15-R	269	Sq. Yd.
627	16-R	180	Sq. Yd.
628	17-R	90	Sq. Yd.
629	18-R	458	Sq. Yd.
630	19-R	1667	Sq. Yd.
631	20-R	90	Sq. Yd.
632	21-R	458	Sq. Yd.
633	22-R	1667	Sq. Yd.
634	23-R	90	Sq. Yd.
635	24-R	458	Sq. Yd.

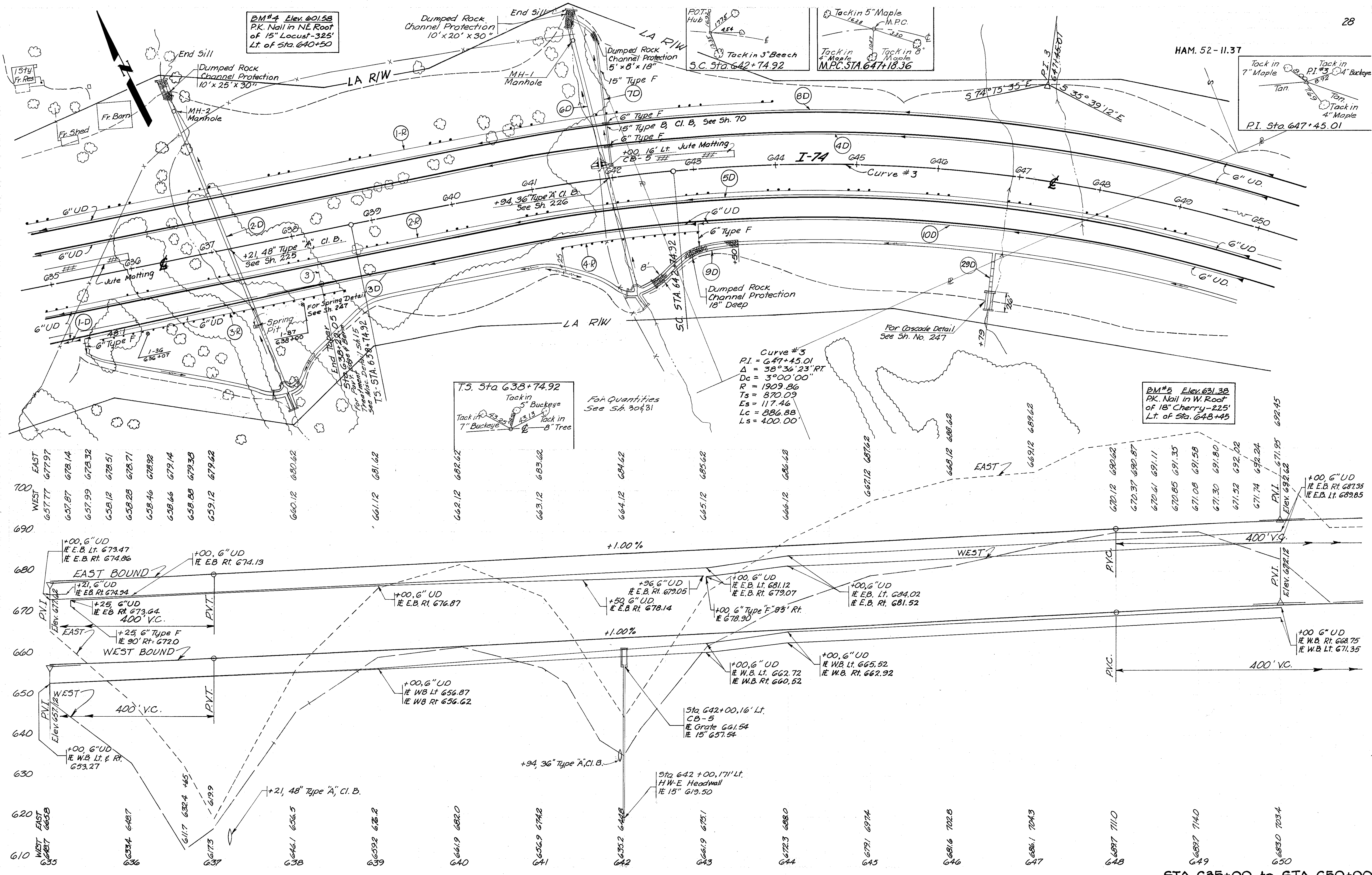
ESTIMATED QUANTITIES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HAM - 74 - 11.37

REF. NO.	STATION TO STATION	SIDE	Bands & Branches							TYPE "A" C.I.B.		603				605				602	411	604			601		660		667		SEE SHEET NO.						
			Bands			Wee Wee Tee				707.05 0 Ga. 36"	15"	Type "D" 18"	TYPE "F"			TYPE "B" C.I.B.		Underdrain		Masonry	Stabilized Crushed Aggregate	Catch Basin	Manhole	Dumped Rock Channel Prot.	6" Rein. Conc. Riprap	Sodding for Special Berm Slope Protection	Sodding	Jute Matting									
			15" 30°	6" 45°	6" 90°	12" 30°	6" 45°	6" 60°	6"				12"	15"	12"	15"	Shallow 6"	Deep 6"	707.06 707.12 6"										Unclassified 6"	Cu. Yd.		Cu. Yd.	CB-5 Ea.	CB-6 Ea.	MH-1 Ea.	Cu. Yd.	Sq. Yd.
DRAINAGE																																					
1-D	600+67 - 606+25	Rt																																			
2-D	600+67 - 606+68	Rt																																			
3-D	608+95 - 613+96	Lt & Rt	1																																		
4-D	609+50 - 620+45	Rt																																			
5-D	611+80 - 616+81	Lt	2																																		
6-D	611+80 - 616+97	Lt																																			
7-D	619+00	Lt & Rt																																			
8-D	619+00 - 633+46	Lt & Rt	1																																		
9-D	619+00 - 633+50	Lt																																			
10-D	621+58 - 635+00	Lt																																			
11-D	626+30	Lt & Rt								374																											
12-D	626+40 - 627+25	Rt																																			
13-D	625+55 - 635+00	Rt																																			
14-D	629+68	Rt																																			
15-D	633+50	Lt	2									24																									
16-D	633+50 - 634+50	Lt																																			
17-D	633+50 - 635+00	Rt																																			
18-D	633+50 - 635+00	Lt																																			
19-D	606+86	Rt																																			
RAMP "A"																																					
20-D	0+93 - 15+25	Rt																																			
21-D	2+50 - 10+26	Lt	1																																		
22-D	9+75 - 10+26	Lt																																			
23-D	1+00 - 3+35	Lt																																			
RAMP "Y"																																					
24-D	4+00 - 4+50	Rt																																			
25-D	4+50	Lt & Rt																																			
26-D	4+50 - 5+71	Rt																																			
27-D	5+75	Lt & Rt																																			
28-D	5+75 - 13+15	Rt																																			
29-D	14+00 - 21+00	Rt																																			
30-D	15+25 - 24+00	Lt	1																																		
RAMP "X" (Slide Correction)																																					
31-D	5+36 - 9+25	Rt																																			
State Participation																																					
S										374	100																										
												24	140	168	68						64	184	7,401	50	400	7,261	140	14.1	2.5	3	2	1	94.0	76.9	47	305	375

STA. 595+00 - STA. 635+00



BM#4 Elev. 601.58
 P.K. Nail in NE. Root
 of 15" Locust-325'
 Lt. of Sta. 640+50

P.O.T. Hub
 Tack in 3" Beech
 S.C. Sta. 642+74.92

Tack in 5" Maple
 M.P.C.
 Tack in 4" Maple
 M.P.C. STA. 647+18.36

HAM. 52-11.37

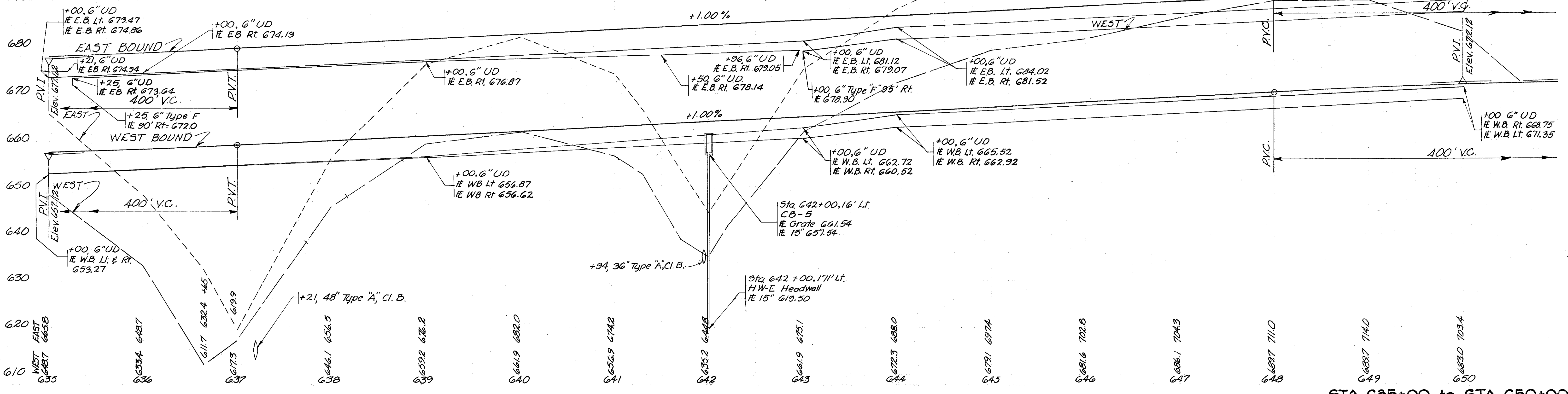
Tack in 7" Maple
 Tack in P.I. #3
 Tack in 4" Buckeye
 Tack in 4" Maple
 P.I. Sta. 647+45.01

T.S. Sta. 638+74.92
 Tack in 5" Buckeye
 Tack in 7" Buckeye
 Tack in 8" Tree

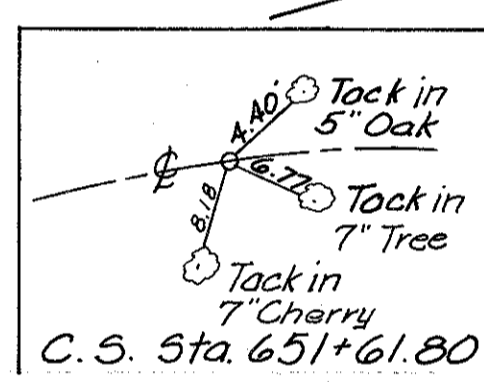
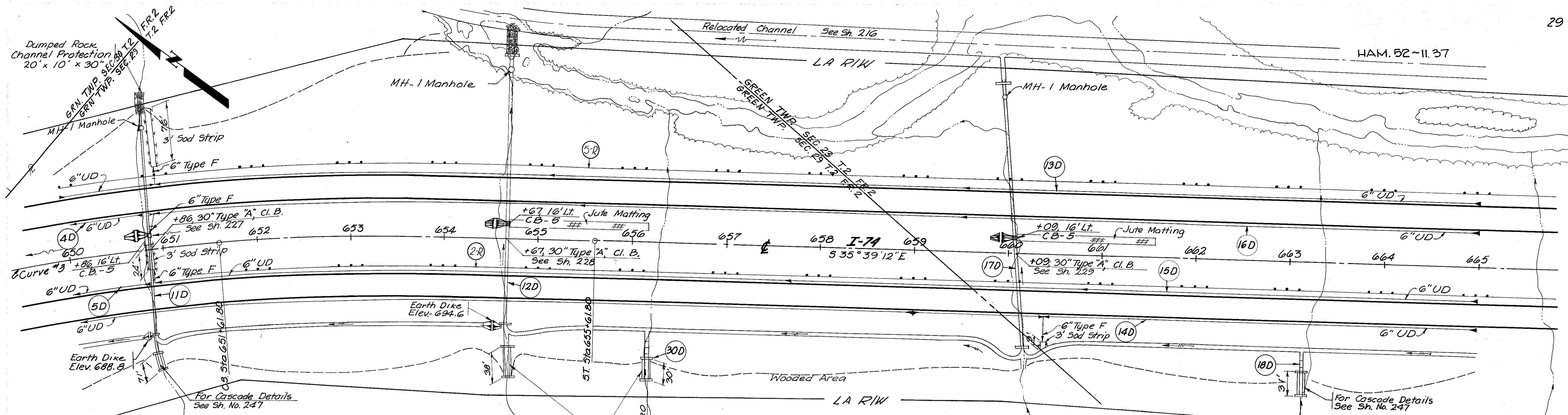
Curve #3
 P.I. = 647+45.01
 Δ = 38°36'23" RT
 Dc = 3°00'00"
 R = 1909.86
 Ts = 870.09
 Es = 117.46
 Lc = 886.88
 Ls = 400.00

BM#5 Elev. 631.38
 P.K. Nail in W. Root
 of 18" Cherry-225'
 Lt. of Sta. 648+45

EAST	700	677.97
WEST	690	657.77
		678.14
		678.32
		678.51
		678.71
		678.92
		679.14
		679.38
		679.62
		680.62
		681.62
		682.62
		683.62
		684.62
		685.62
		686.62
		687.62
		688.62
		689.62
		690.62
		691.11
		691.35
		691.58
		691.80
		692.02
		692.24
		692.45
		692.62

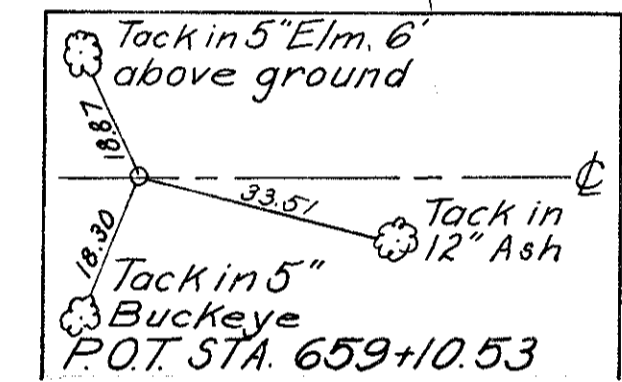
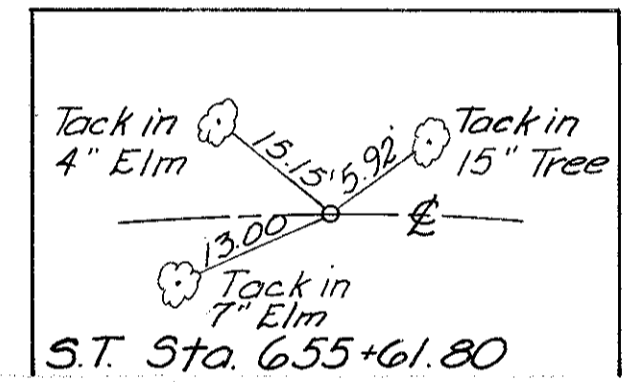


STA. 635+00 to STA. 650+00



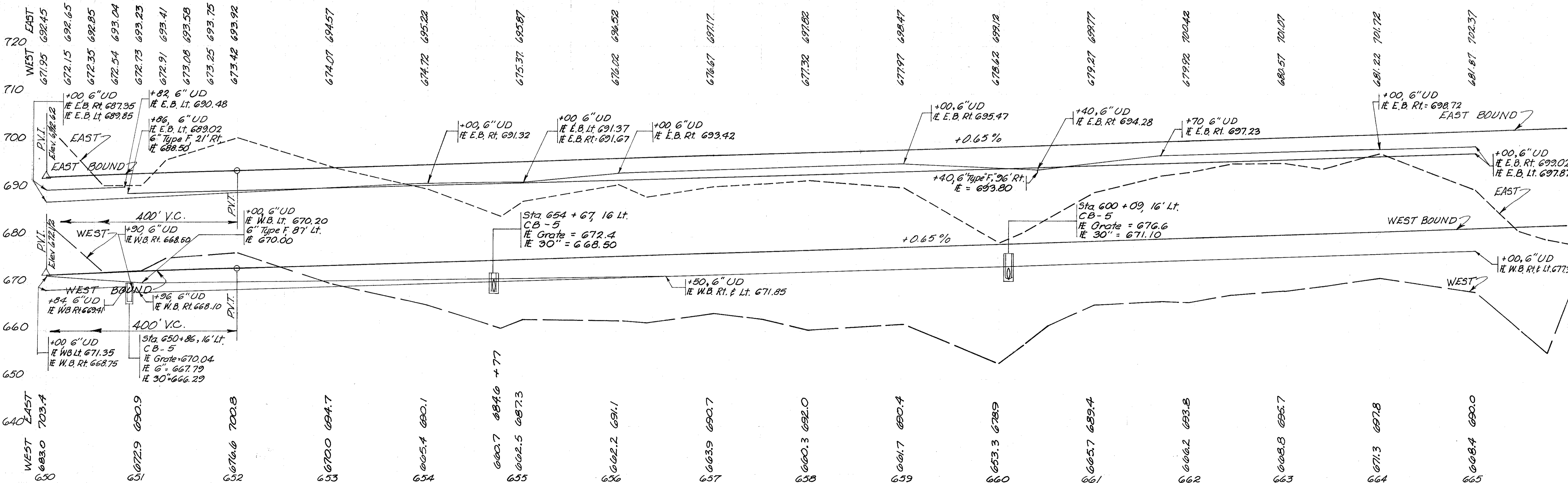
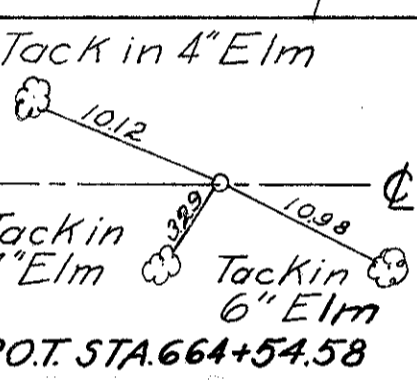
Curve # 3
 P.I. = 647+45.01
 $\Delta = 38^\circ 36' 23''$ RT
 Dc = 3°00'00"
 R = 1909.86
 Ts = 870.09
 Es = 117.46
 Lc = 886.88
 Ls = 400.00

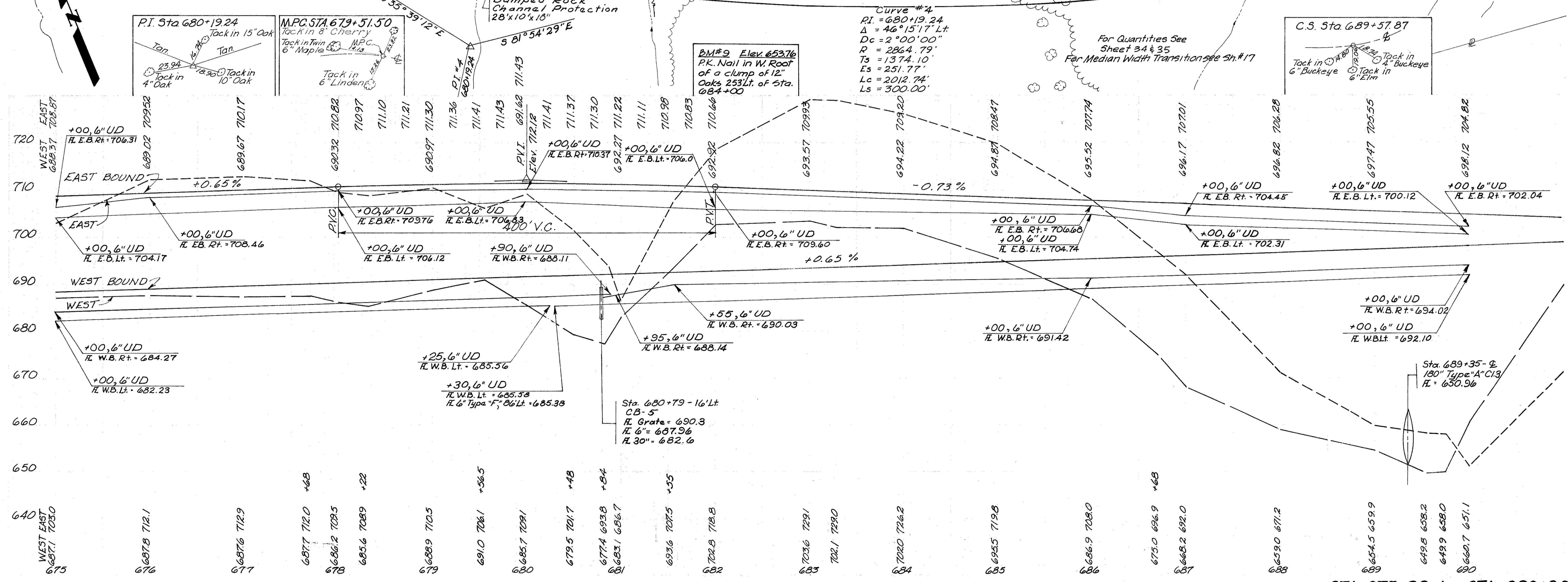
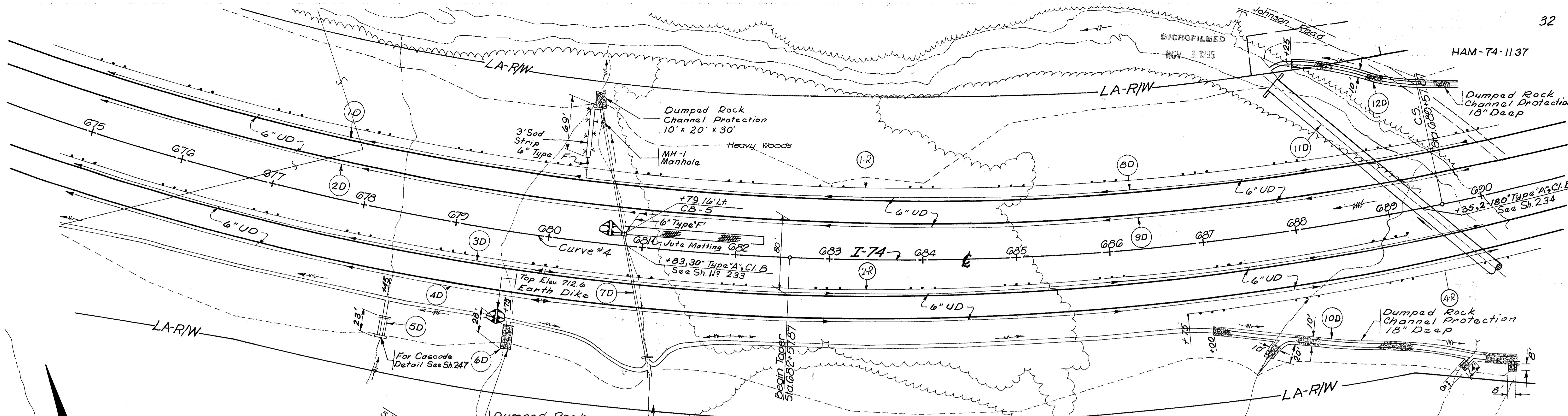
BM # 2 Elev. 625.71
 PK Nail in S. Root of 15' Oak - 160'
 Lt. of Sta. 654+80



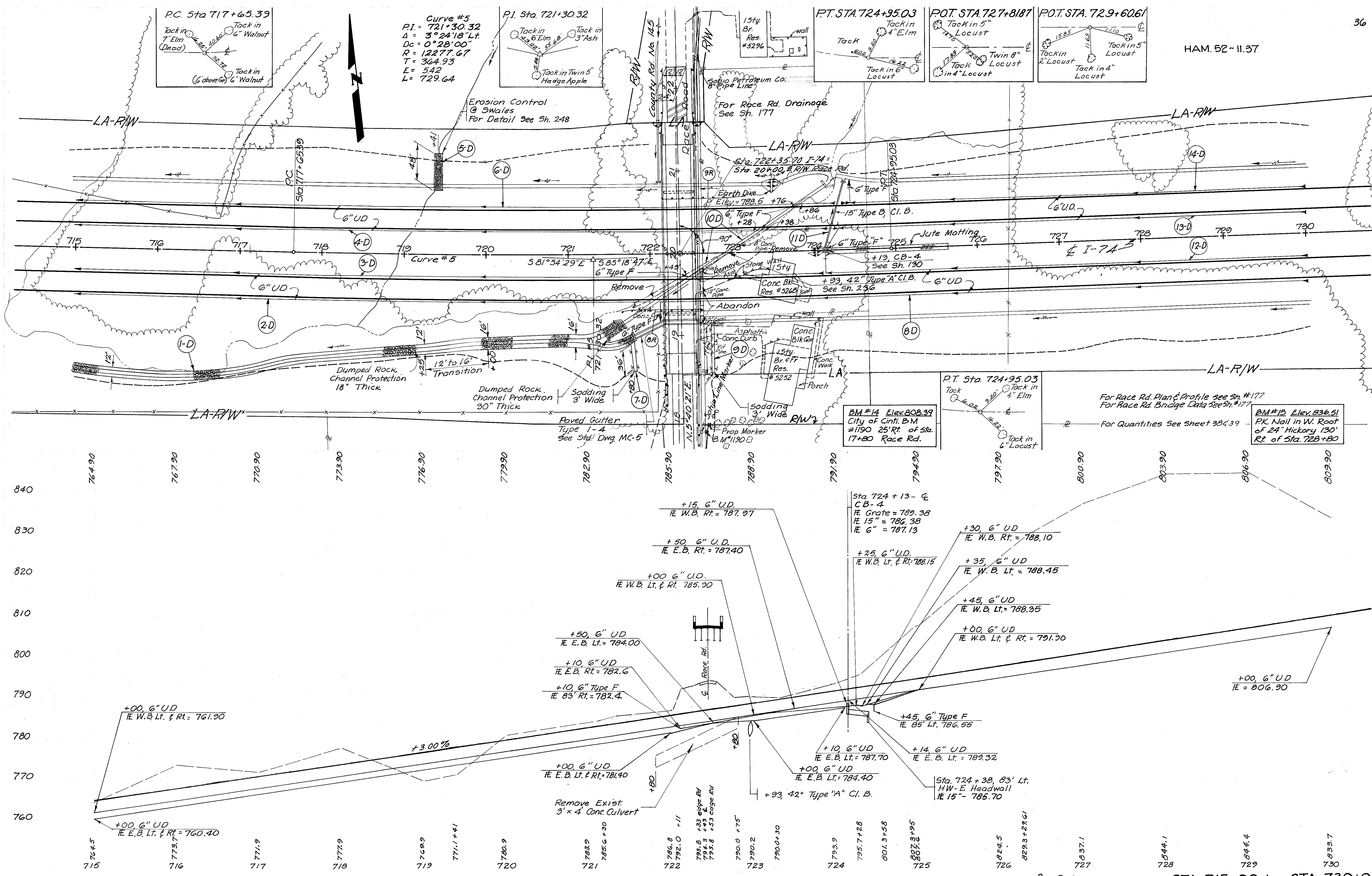
BM # 7 Elev. 629.62
 PK Nail in S. Root of 12' Oak - 195'
 Lt. of Sta. 663+85

For Quantities See Sh. 30
 # 31





HAM. 52-11.37



PC. Sta. 717+65.39
 Tack in 7" Elm (Dead)
 Tack in 6" Walnut
 Tack in 6" Walnut
 Tack in 6" Walnut

Curve #5
 P.I. = 721+30.32
 $\Delta = 3^{\circ}24'18''$ Lt.
 $D_c = 0^{\circ}28'00''$
 $R = 12277.67$
 $T = 364.93$
 $E = 542$
 $L = 729.64$

P.I. Sta. 721+30.32
 Tack in 6" Elm
 Tack in 3" Ash
 Tack in Twin 5" Hedge Apple

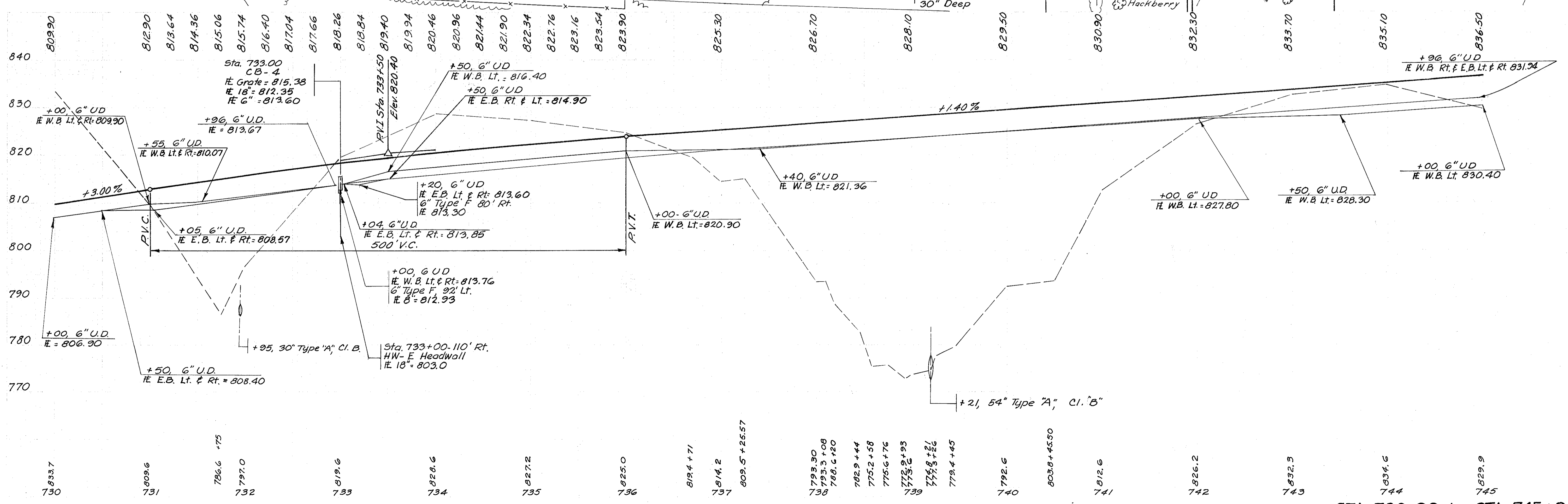
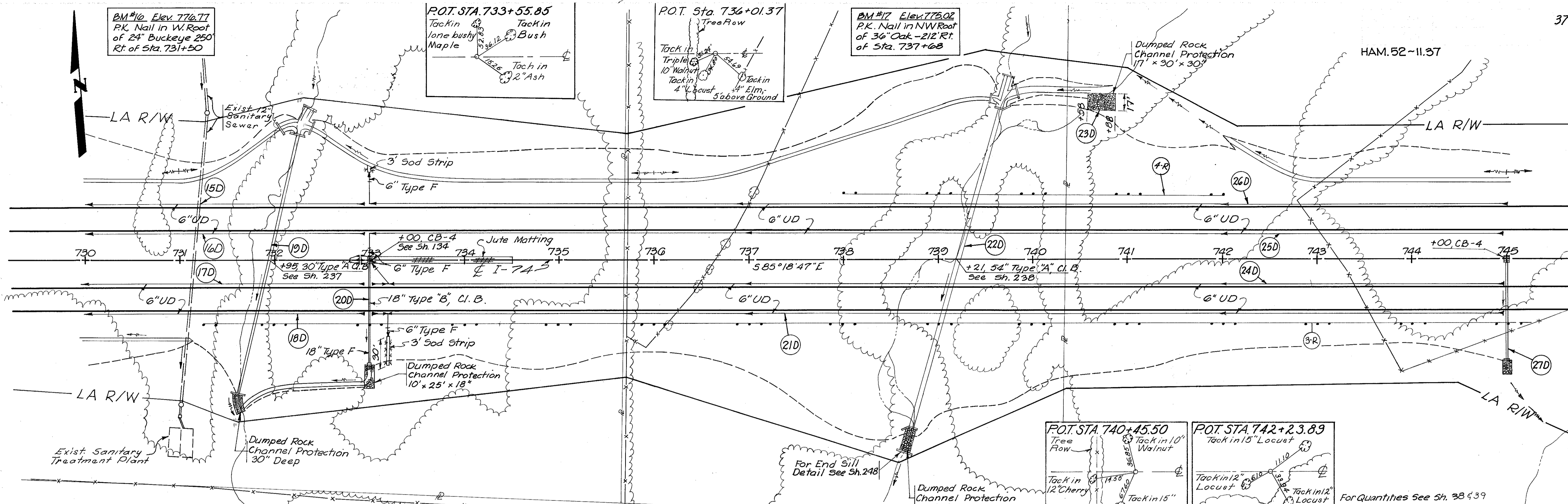
P.T. STA. 724+95.03
 Tack in 4" Elm
 Tack in 6" Locust

P.O.T. STA. 727+8187
 Tack in 5" Locust
 Tack in 8" Locust
 Tack in 4" Locust

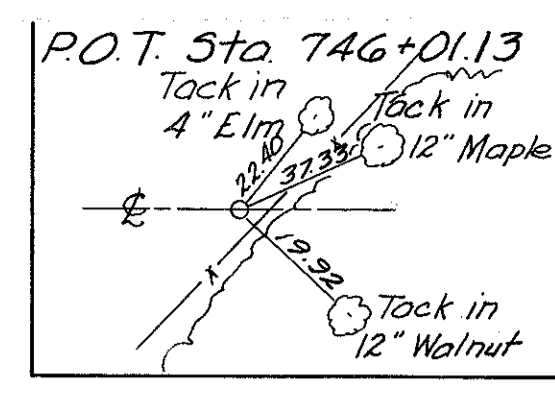
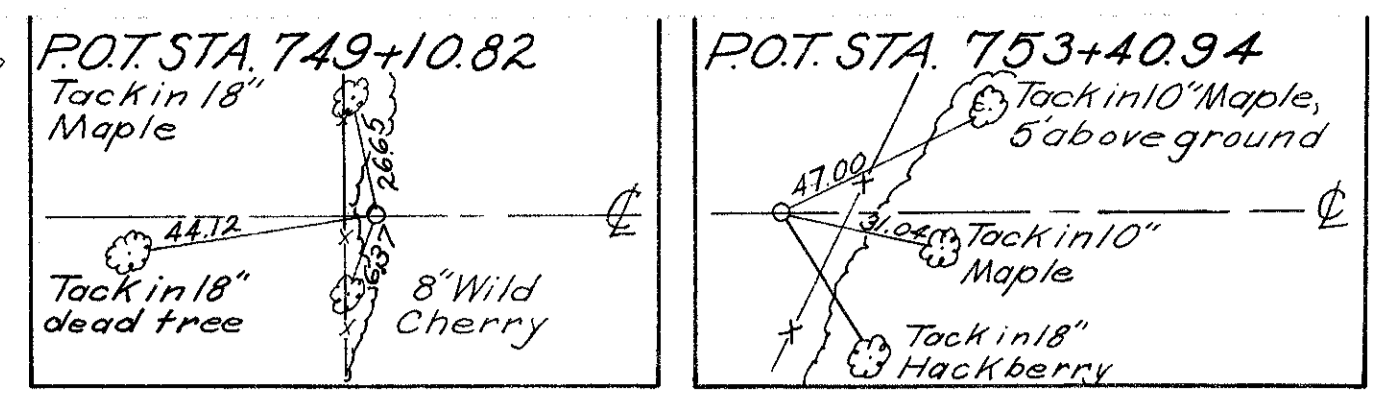
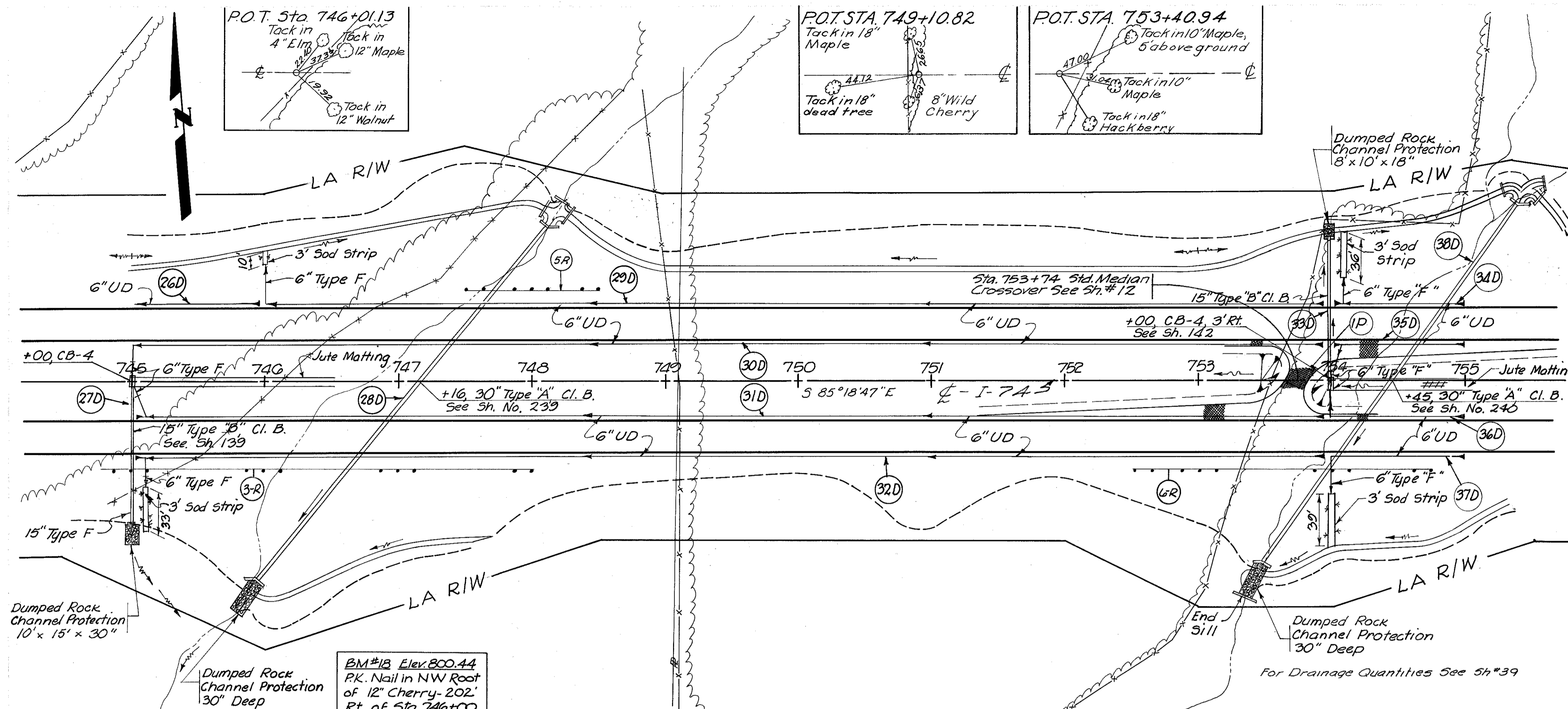
P.O.T. STA. 729+6061
 Tack in 5" Locust
 Tack in 2" Locust
 Tack in 4" Locust

BM #14 Elev. 808.39
 City of Cincinnati B.M.
 #1190 25' Rt. of Sta.
 17+80 Race Rd.

BM #15 Elev. 836.51
 P.K. Nail in W. Root
 of 24" Hickory 130'
 Rt. of Sta. 728+80



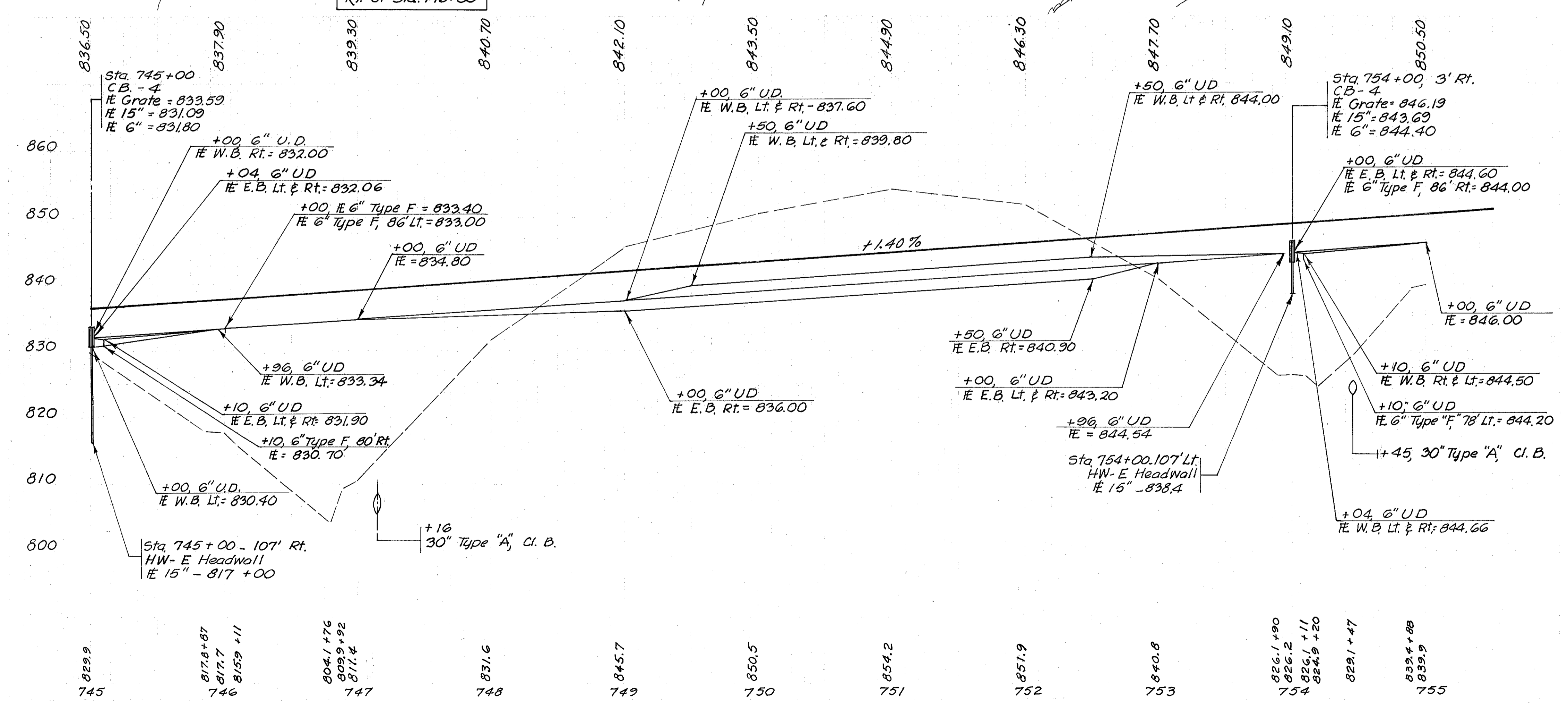
STA. 730+00 to STA. 745+00



409 409 301 304 310 451
 Seal Coat Seal Coat Bit. Aggregate Subbase 10% Conc.
 Cover Agg. Bit. Mat. Agg. Grading Base as per
 No. 8 as per Plan
 Cu. Yd. G.A.L. Cu. Yd. Cu. Yd. Cu. Yd. Sq. Yd.

37
36
36
36
36

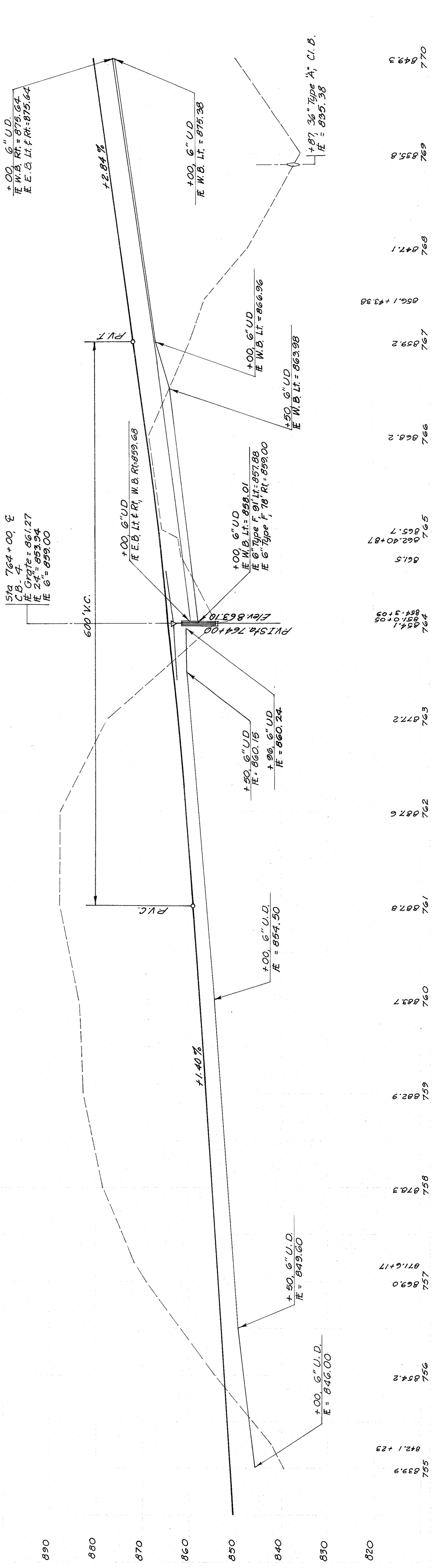
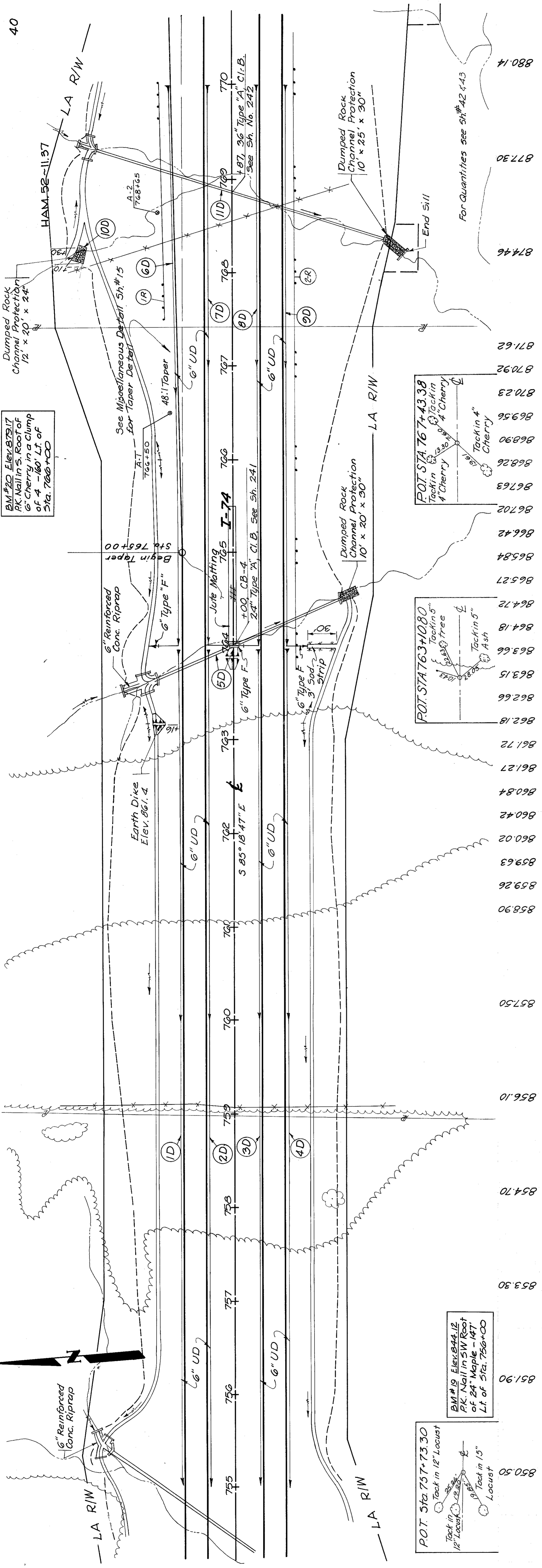
37.5	167	389	606	2111	8000	37
250	778	244	304	1407	5333	36
3	90	56	75	73		38



606
Guard
200
Type A
200
1075
400
100
285
100
100

ROADWAY
 Not Used
 Not Used
 3-R 731+25 - 743+00
 4-R 738+00 - 742+00
 5-R 747+50 - 748+50
 6-R 752+50 - 754+75
 9-R 721+47 - 722+67
 9-R 722+17 - 723+17

PAVEMENT
 715+00-750+00
 750+00-745+00
 745+00-755+00
 Median Crossover
 IP 753+75 ±



STA. 755+00 to STA. 770+00

BM #20 Elev. 879.17
 R.K. Nail in S. Root of
 6" Cherry in a Clump
 of 4 - 160' Lt. of
 Sta. 766+00

POT STA. 767+43.38
 Tack in 4" Cherry
 Tack in 4" Cherry

POT STA. 763+10.80
 Tack in 5" Ash
 Tack in 5" Ash

BM #19 Elev. 844.12
 R.K. Nail in SW Root
 of 24" Maple - 147'
 Lt. of Sta. 756+00

POT Sta 757+73.30
 Tack in 12" Locust
 Tack in 15" Locust

Sta 764+00. E
 C.B. - 4
 E Orig. = 861.27
 E 2" = 853.94
 E 6" = 859.00

+00. 6" U.D.
 E W.B. Lt. = 875.64
 E E.C. Lt. = 875.64

+50. 6" U.D.
 E = 849.60

+00. 6" U.D.
 E = 846.00

+50. 6" U.D.
 E = 854.50

+50. 6" U.D.
 E W.B. Lt. = 860.24

+00. 6" U.D.
 E W.B. Lt. = 858.01
 E 6" Type F, 91' Lt. = 857.88
 E 6" Type F, 76' Lt. = 859.00

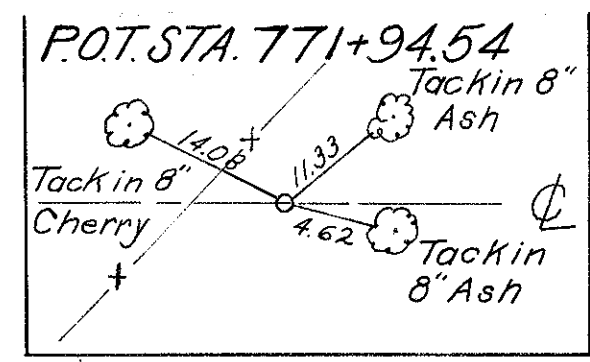
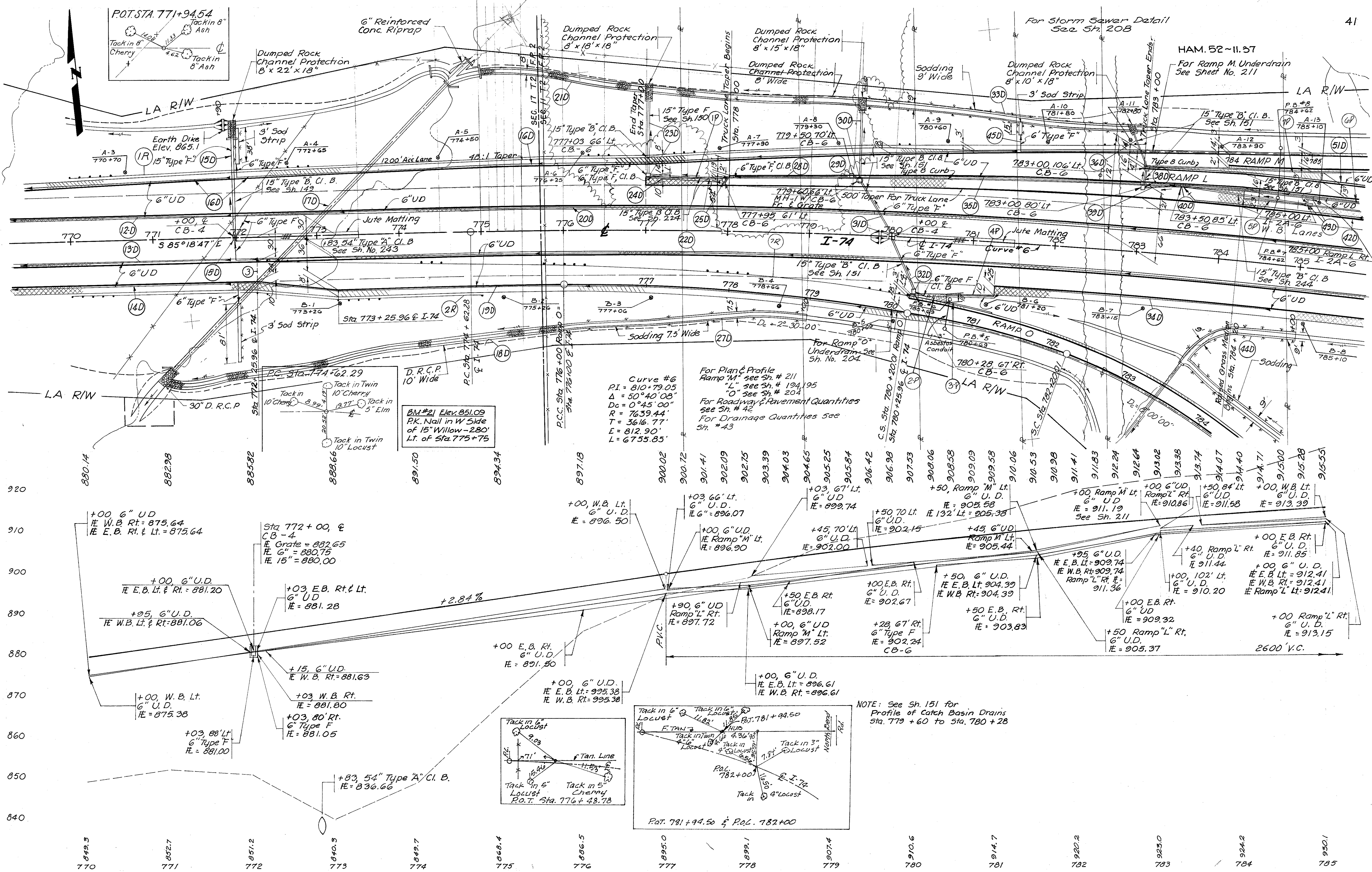
+00. 6" U.D.
 E W.B. Lt. = 866.96

+50. 6" U.D.
 E W.B. Lt. = 863.98

+00. 6" U.D.
 E W.B. Lt. = 875.38

+87. 36" Type A, C.I.B.
 E = 855.38

890	870.14	859.2	868.2	865.7	861.5	854.1	851.0	847.1	849.3
880	873.30	870.92	870.23	869.56	868.90	868.26	867.63	867.02	866.42
870	874.46	871.62	870.23	869.56	868.90	868.26	867.63	867.02	866.42
860	877.30	874.46	870.23	869.56	868.90	868.26	867.63	867.02	866.42
850	880.14	877.30	870.23	869.56	868.90	868.26	867.63	867.02	866.42
840		871.62	870.23	869.56	868.90	868.26	867.63	867.02	866.42
830		873.30	870.23	869.56	868.90	868.26	867.63	867.02	866.42
820		874.46	870.23	869.56	868.90	868.26	867.63	867.02	866.42



6" Reinforced Conc. Riprap

Dumped Rock Channel Protection 8' x 18' x 18"

Dumped Rock Channel Protection 8' x 15' x 18"

For Storm Sewer Detail See Sh. 208

HAM. 52-11.37

For Ramp M Underdrain See Sheet No. 211

Curve #6

PI = 810+79.05

$\Delta = 50^\circ 40' 08"$

$D_c = 0' 45' 00"$

R = 7639.44'

T = 3616.77'

E = 812.90'

L = 6755.85'

For Plan & Profile Ramp "M" see Sh. # 211

"L" see Sh. # 194, 195

"O" see Sh. # 204

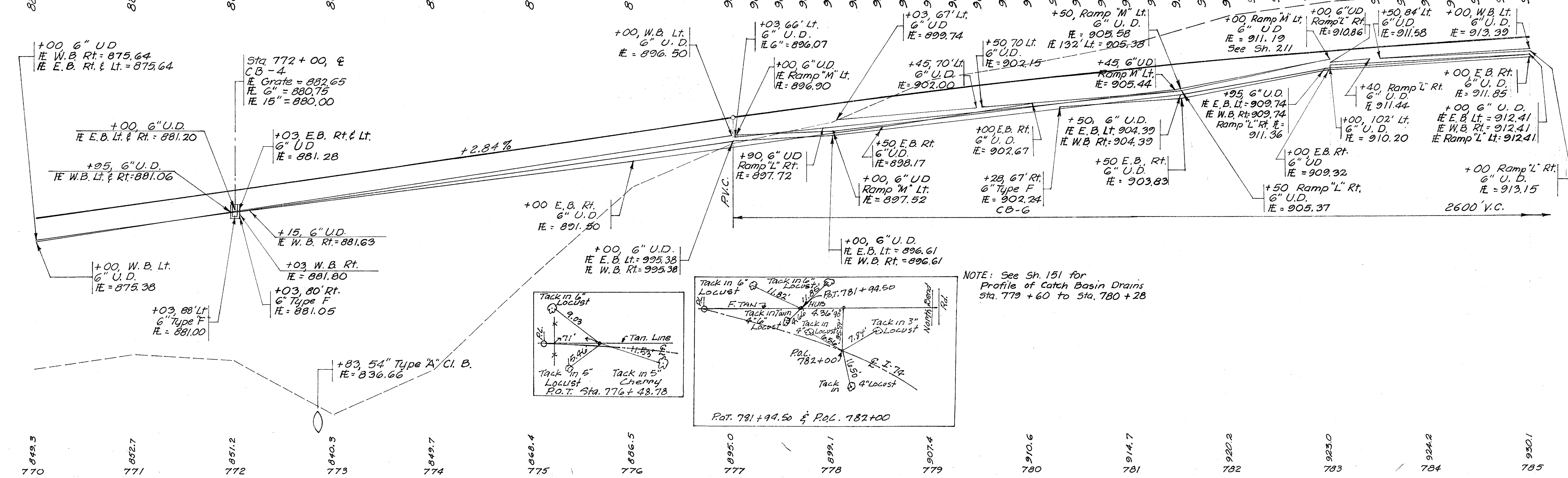
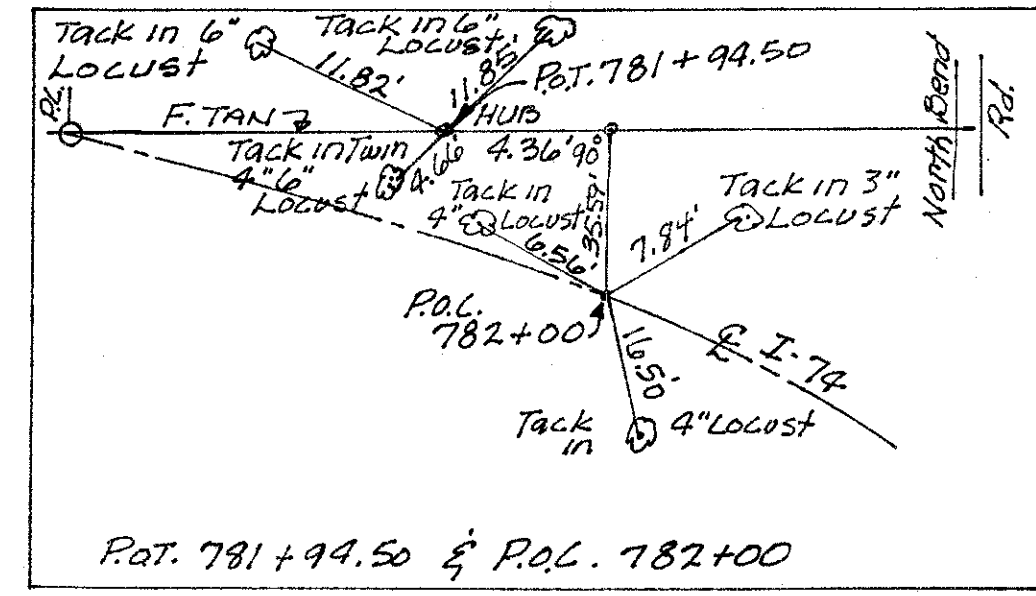
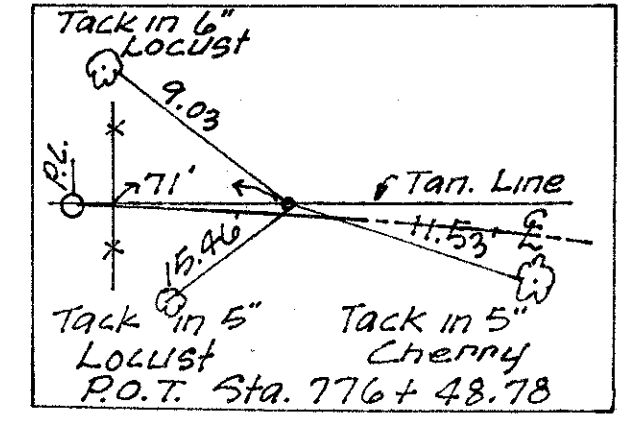
For Roadway & Pavement Quantities see Sh. # 42

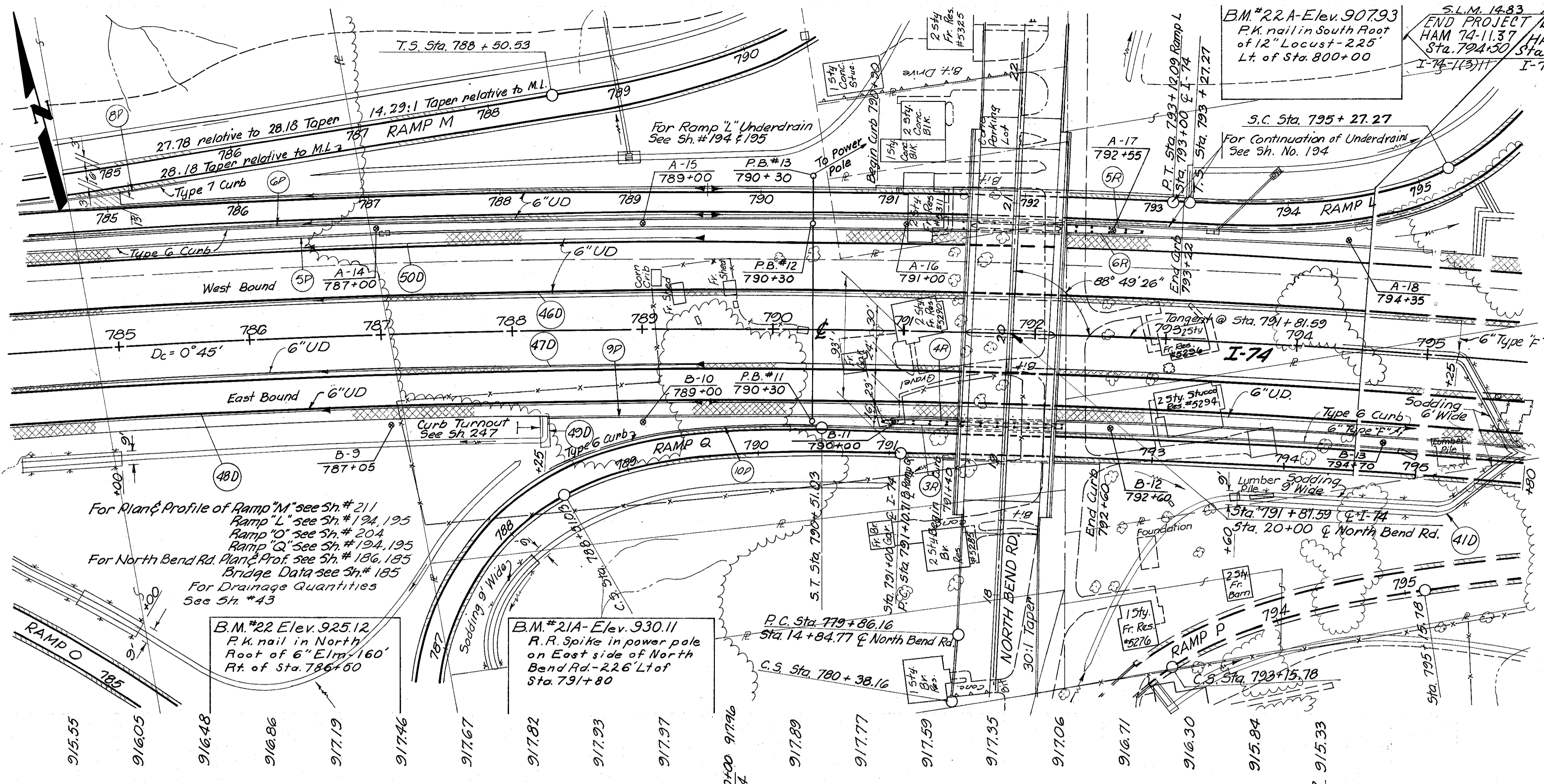
For Drainage Quantities see Sh. # 43

BM #21 Elev. 851.09

R.K. Nail in W Side of 15" Willow - 280' Lt. of Sta. 775+75

NOTE: See Sh. 151 for Profile of Catch Basin Drains Sta. 779+60 to Sta. 780+28

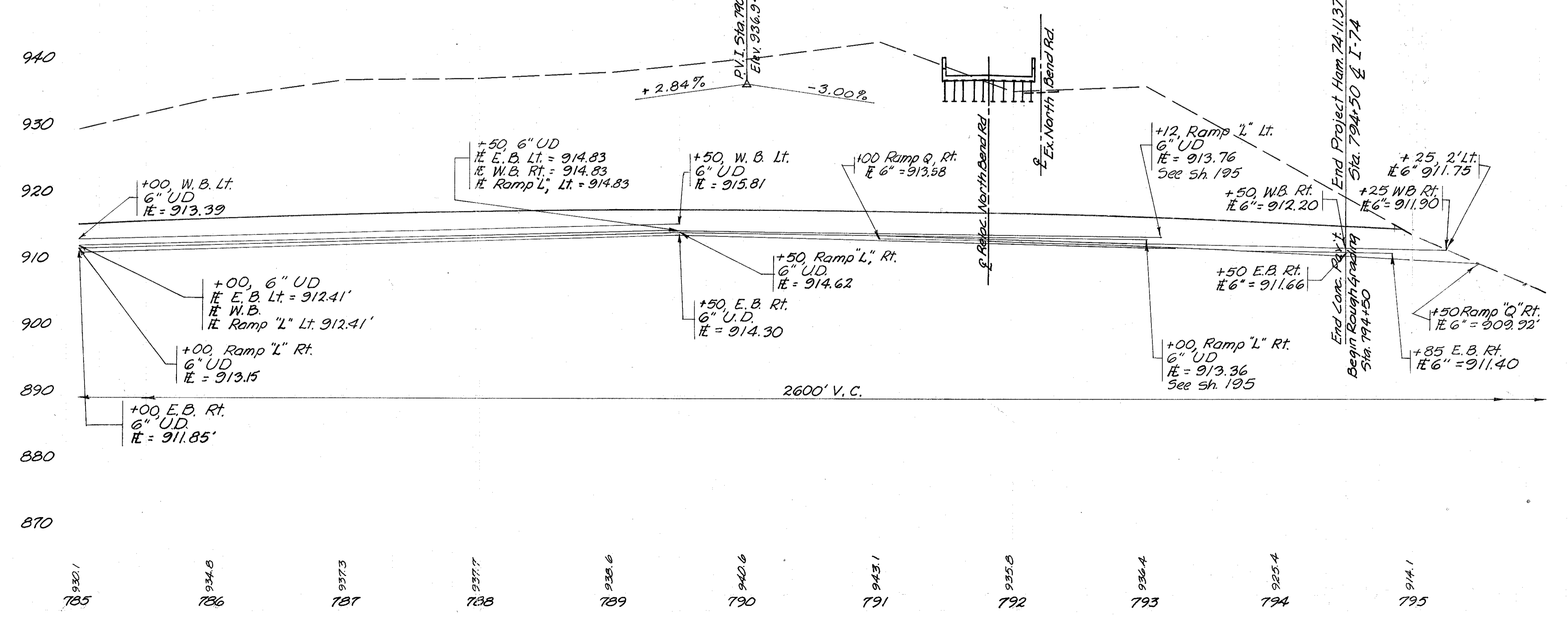




See Sh. #194 for Plan & Profile of End of Work

S.L.M. 14.83
 END PROJECT / BEGIN PROJECT
 HAM 74-11.37 HAM 74-14.83
 Sta. 794+50 Sta. 794+50

Subbases	310	409	409	301	304	310	421
Seal Coat Seal Coat							
Aggregate Subbase							
Grading							
Base							
11" 12" Conc. Pav.							
Cu. Yd.	8.5	269	200	100	457	1664	40#41
Cu. Yd.	6.0	181	120	60	366	1477	41
Cu. Yd.	33.0	1028	345	535	2019	8000	40
Cu. Yd.	25.5	796	266	405	1971	8516	41
Cu. Yd.	24	740	246	413	1393	6333	42
Cu. Yd.	155						



Temporarily Comp.	606	606	609	609	609	609	
Guard							
Traffic							
Island							
Ln. Ft.	35	58	58	1030	1108	200	50
Sq. Yd.				625	525		
Ln. Ft.				235	110		

ROADWAY

1A	767+50 - 783+00	Lt.	1550
2A	763+75 - 775+00	Rt.	1125
3A	790+88 - 792+25.5	Rt.	137.5
4A	791+44.5 - 792+84	Lt.	137.5
5A	791+46.5 - 792+84	Lt.	137.5
6A	792+26.1 - 790+19.1	Rt.	800

PAVEMENT

755+00 - 775+00	Lt.	720
770+00 - 785+00	Rt.	56
785+00 - 794+50	Rt.	1108

Acceleration Taper

765+00 - 777+00	Lt.	35
-----------------	-----	----

Deceleration Taper

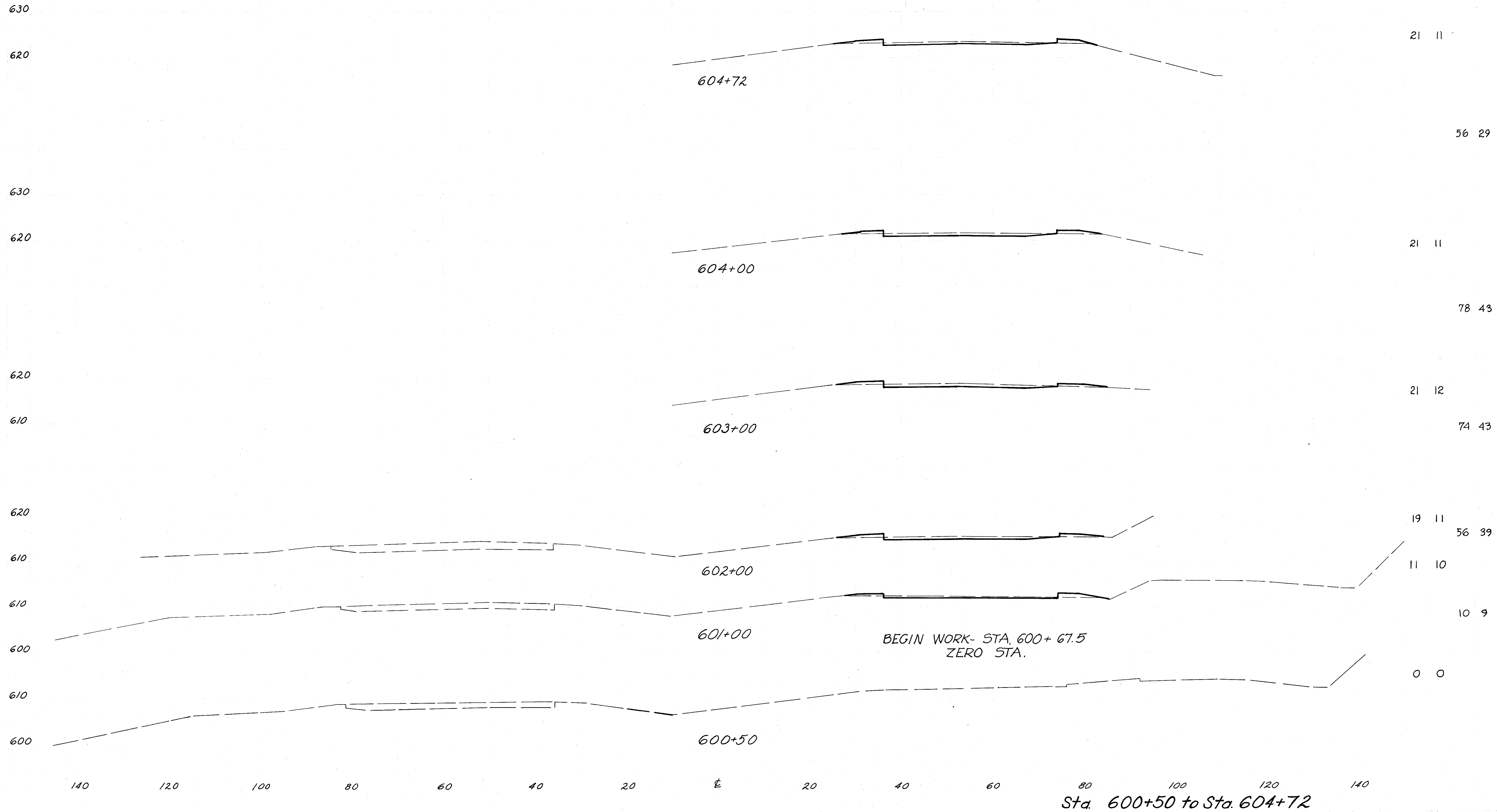
772+25.96 - 780+25.96	Lt.	720
-----------------------	-----	-----

ROADWAY

1-P	777+00 - 784+20	Lt.	720
2-P	780+25.96	Rt.	56
3-P	780+55.1	Rt.	1030
4-P	780+54.1	Rt.	1108
5-P	784+20 - 794+50	Lt.	200
6-P	784+20 - 795.28	Ramp L, Rt.	625
7-P	785+00 - 785+00	Ramp M, Nose	525
8-P	785+00 - 785+50	Ramp M, Nose	235
9-P	788+25 - 794+50	Ramp Q, Rt.	110
10-P	788+51 - 794+50	Ramp Q, Lt.	
11-P	790+50 - 793+25	Ramp L, Lt.	
12-P	791+38 - 792+48	Ramp Q, Rt.	

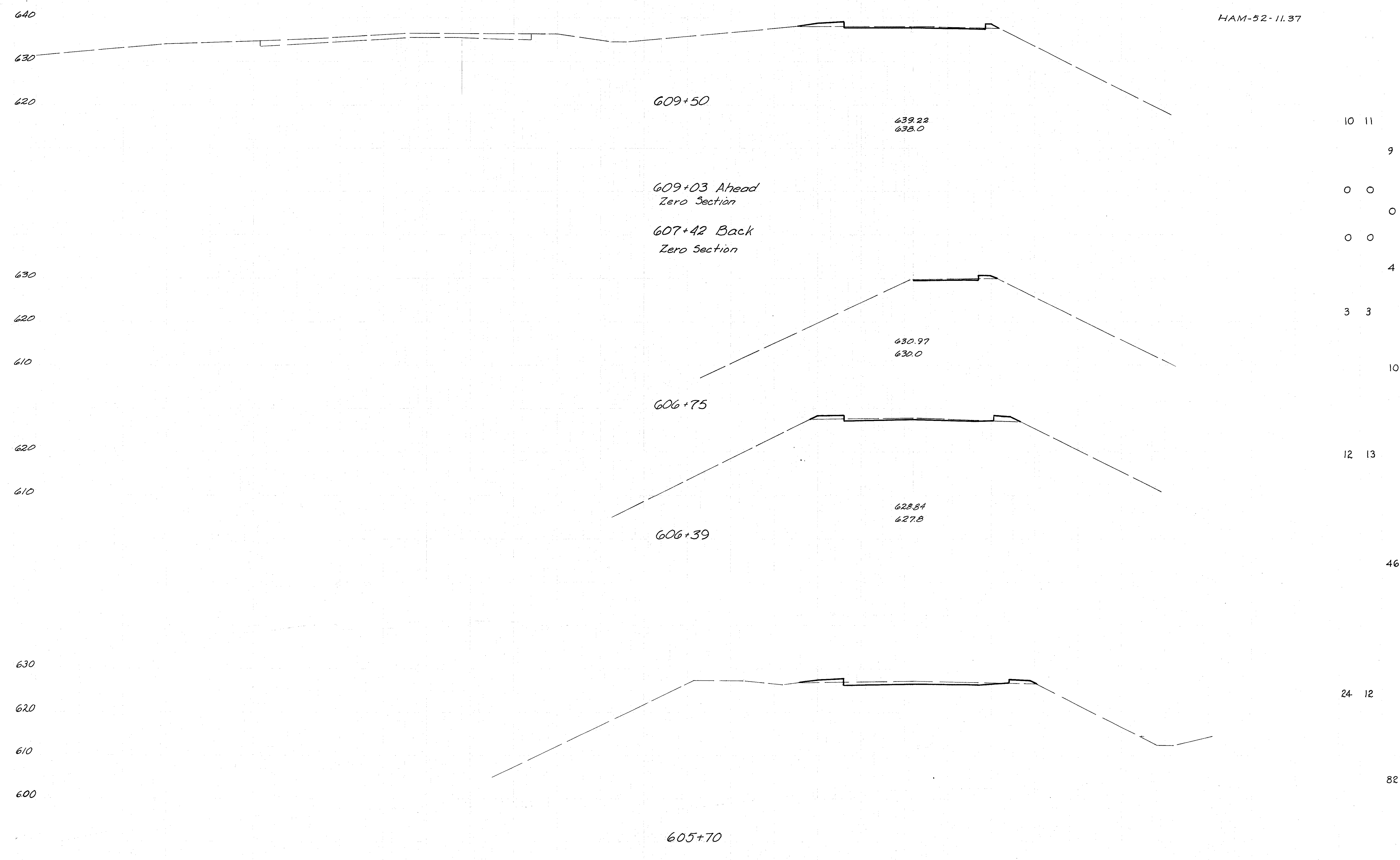
155 97 3014 4177 1513 6206 25990

3225 800 35 58 9763 920 50



140 120 100 80 60 40 20 E 20 40 60 80 100

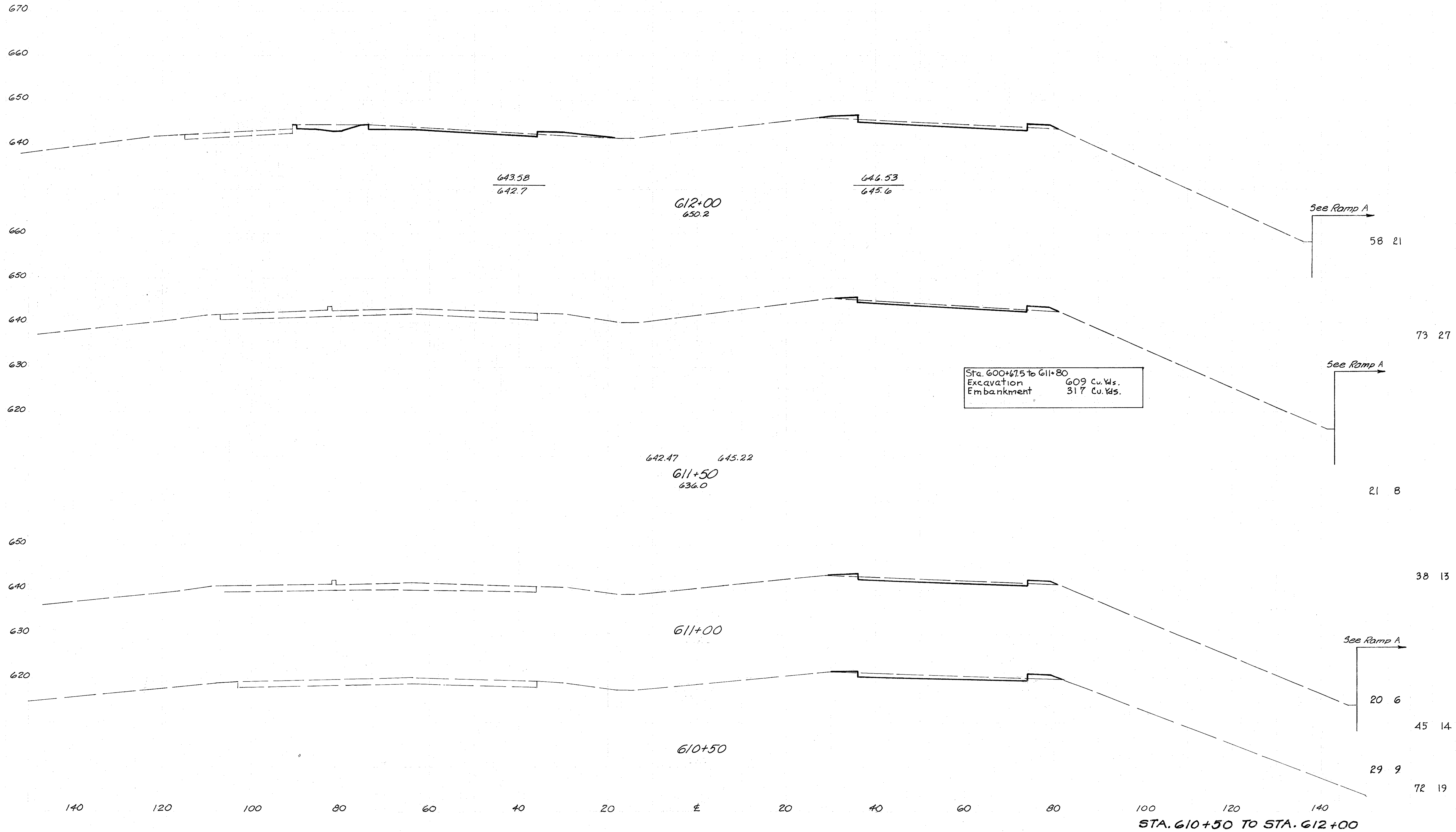
HAM-52-11.37



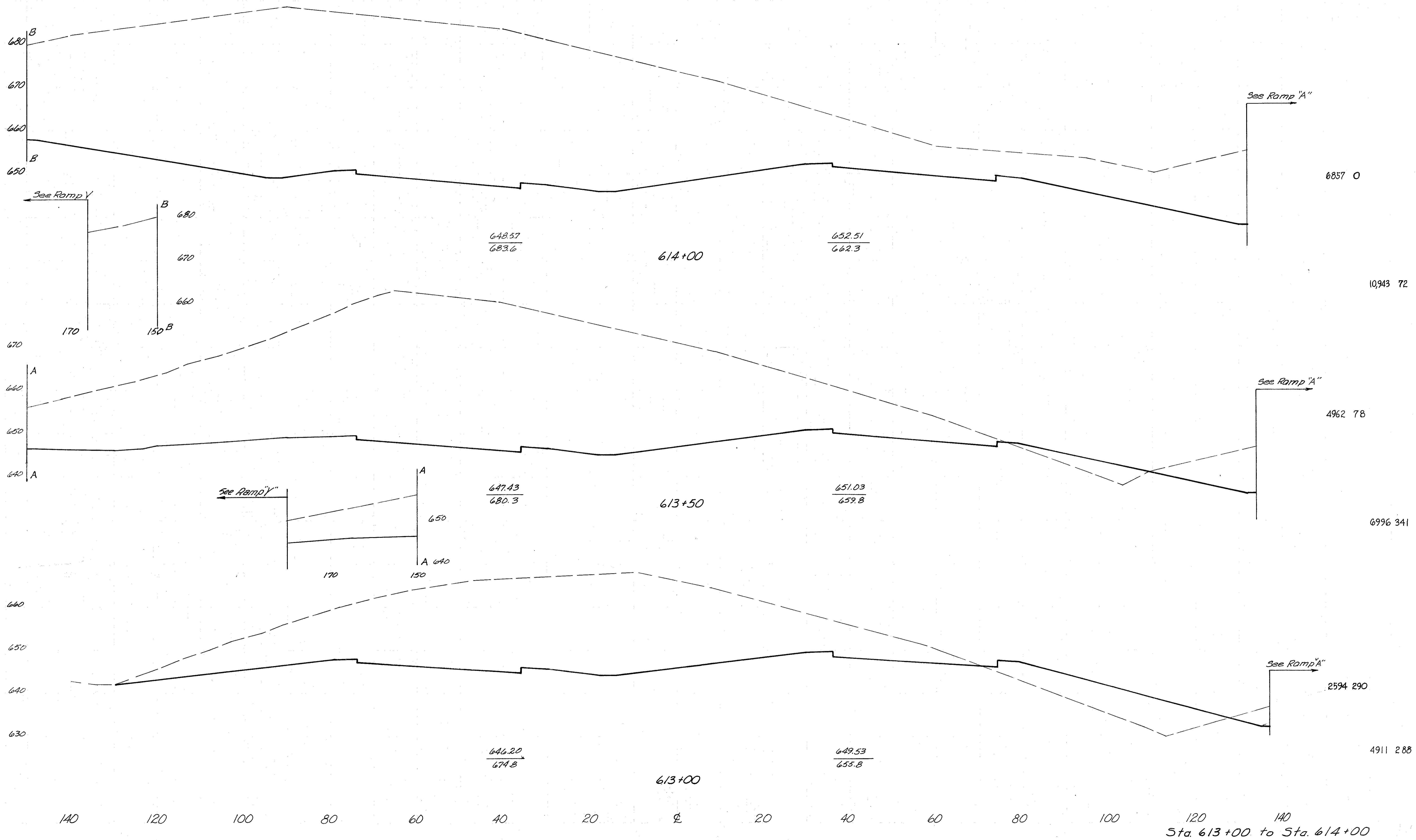
140 120 100 80 60 40 20 E 20 40 60 80 100 120 140

STA. 605+70 TO STA. 609+50

HAM-52-11.37

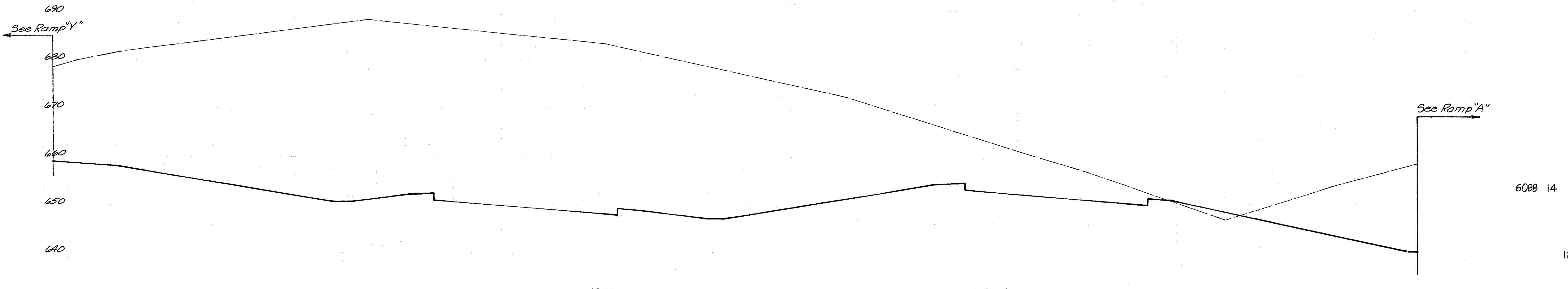
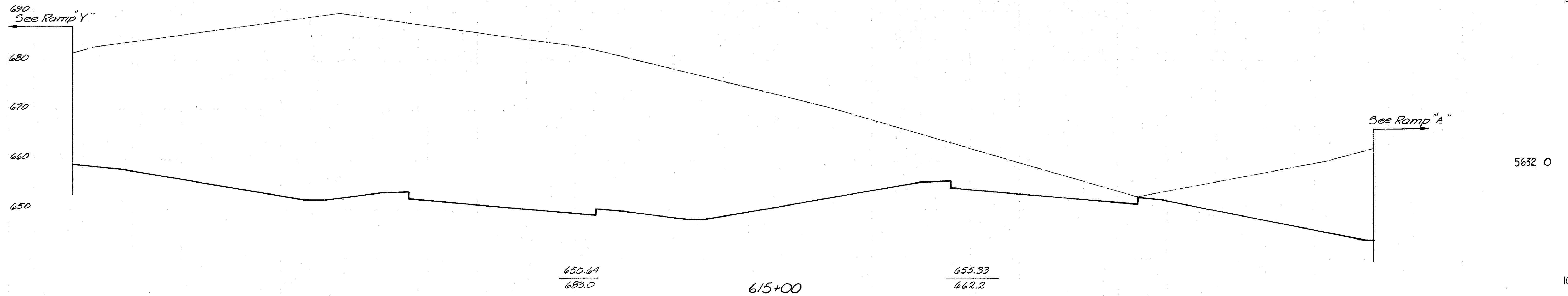
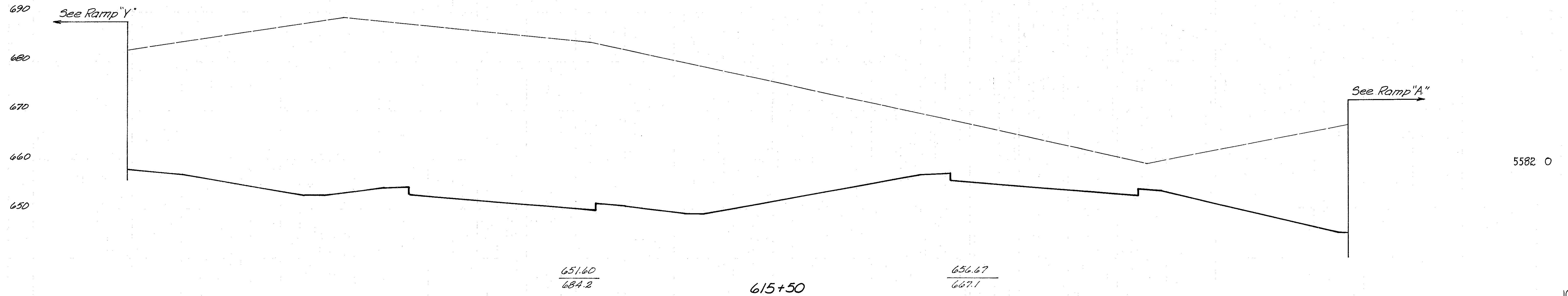


HAM.-52-11.37



HAM. - 52-11.37

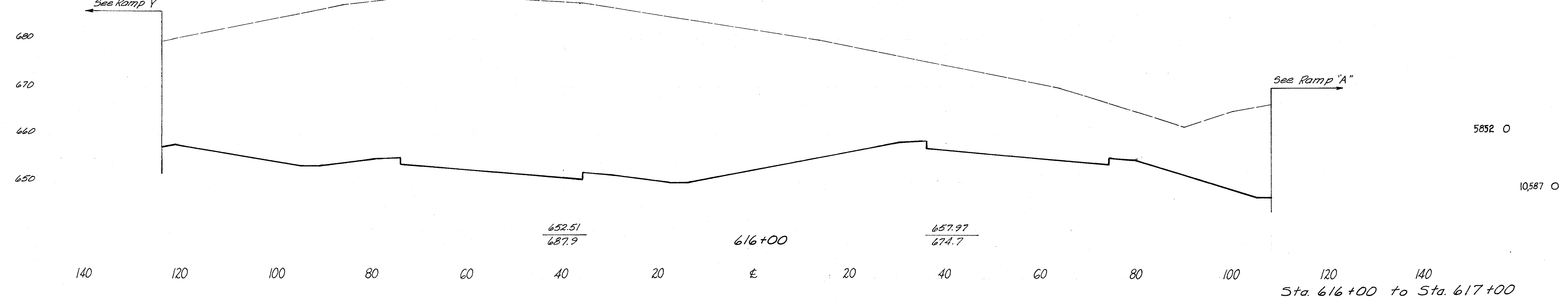
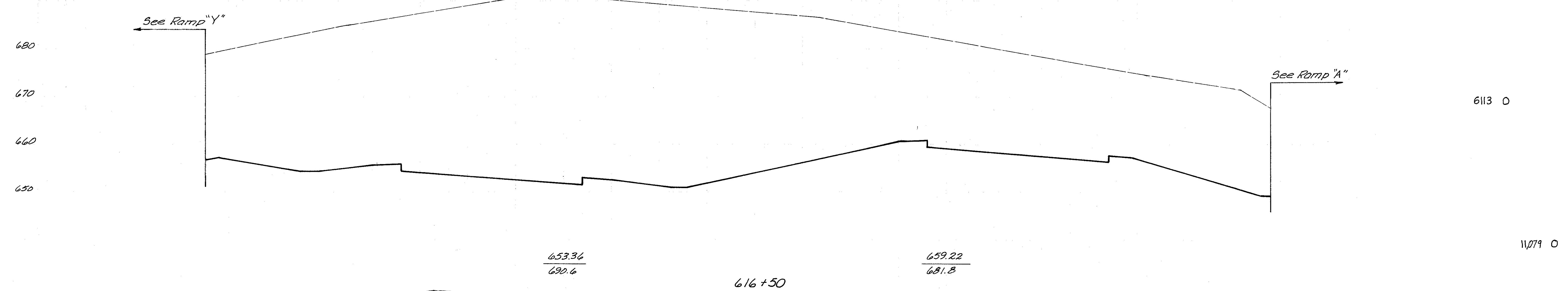
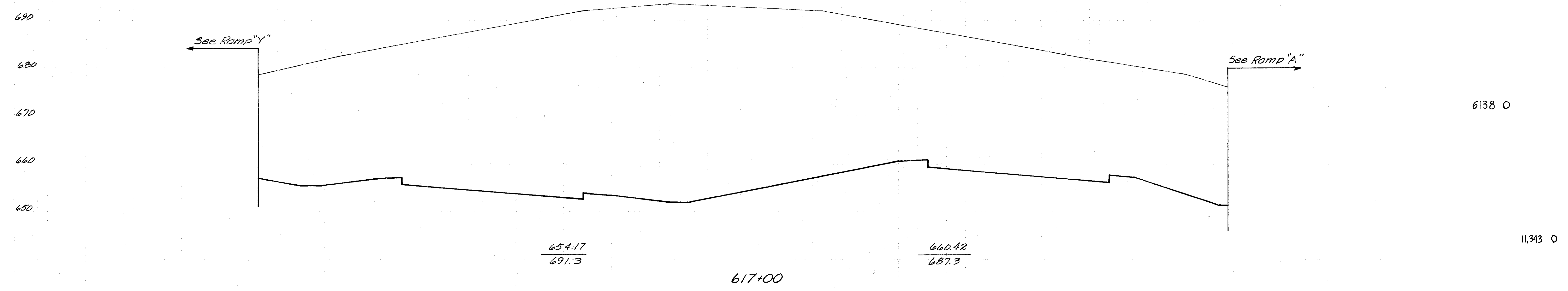
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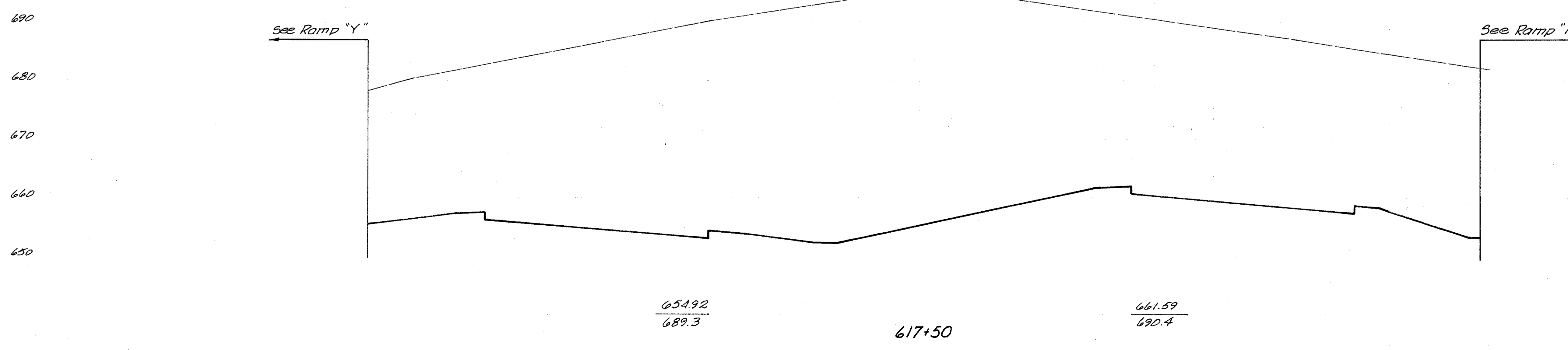
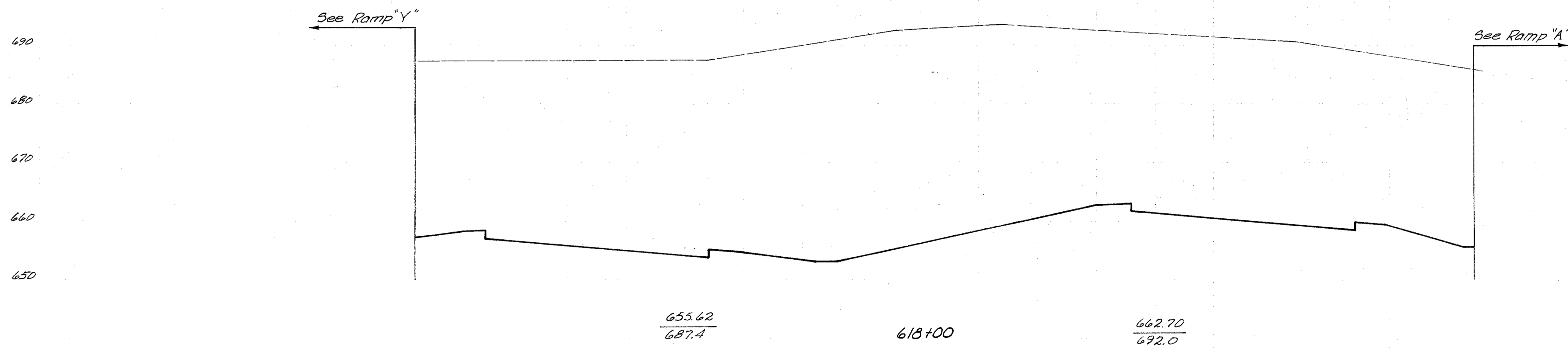
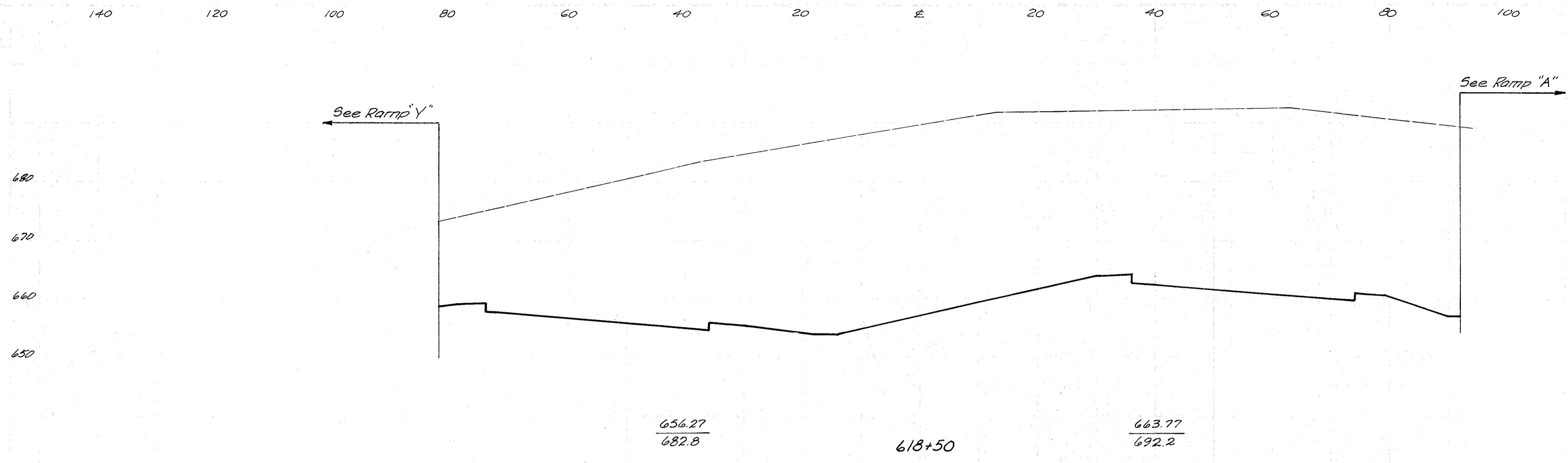
140 120 100 80 60 40 20 E 20 40 60 80 100

Sta. 614+50 to Sta. 615+50

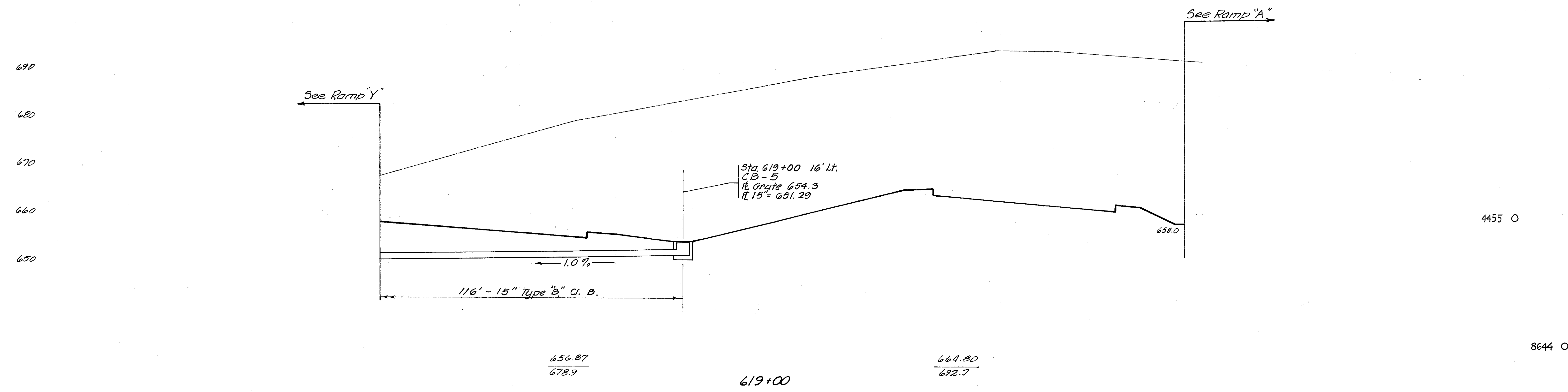
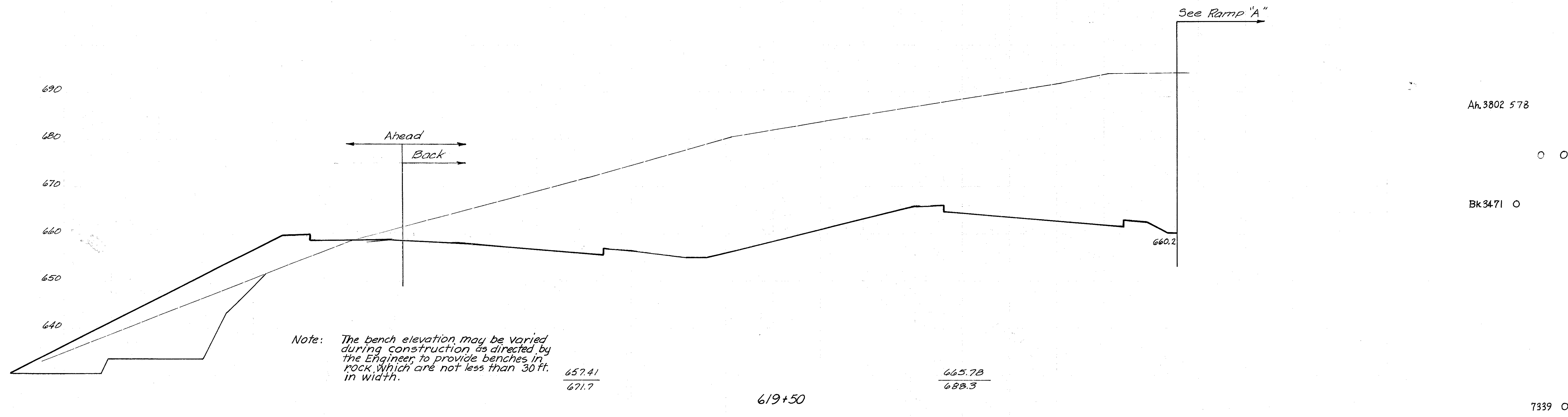
HAM-52-11.37



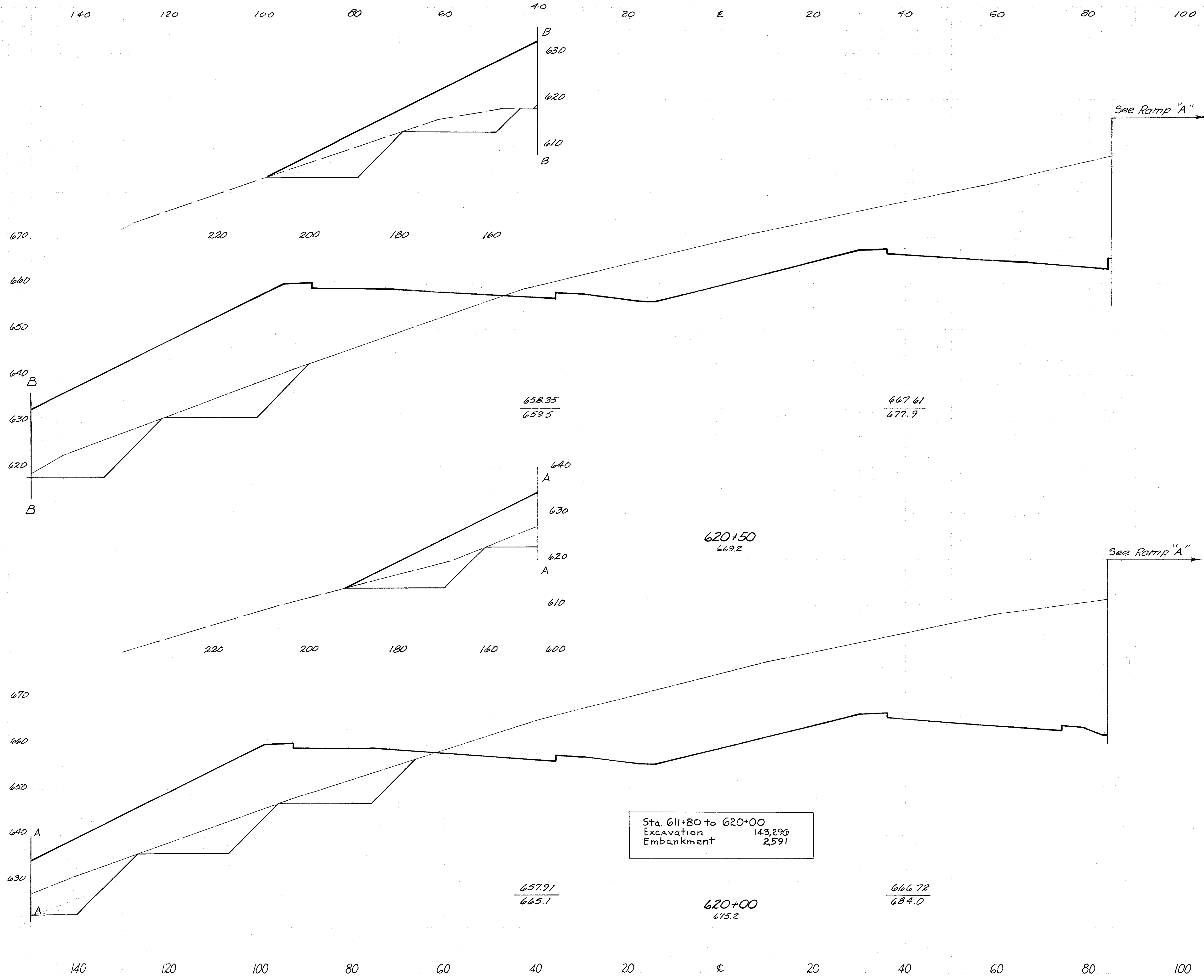
HAM 52-11.37



Sta. 617+50 to Sta. 618+50



HAM-52-11.37



Sta. 611+80 to 620+00	
Excavation	143,290
Embankment	2,591

1843 2051

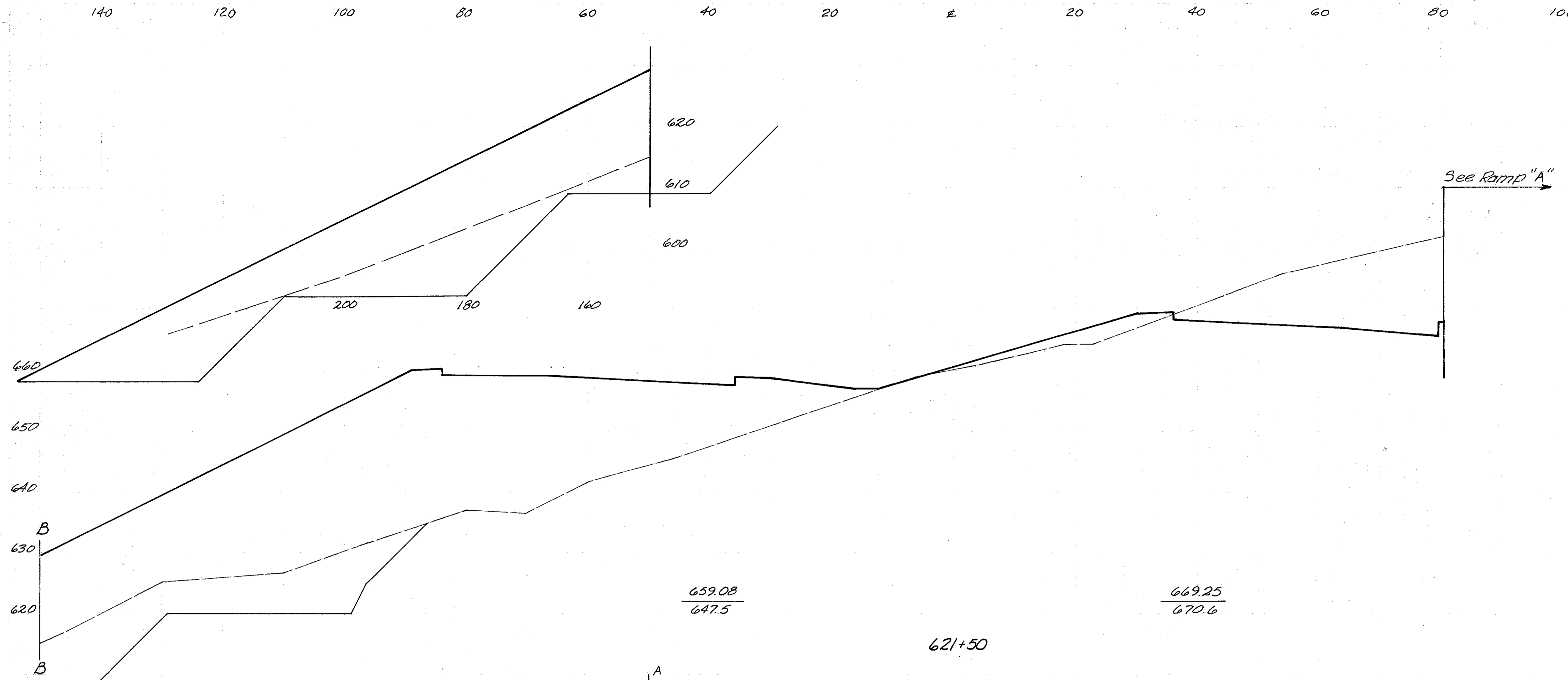
4238 3193

2734 1398

6051 1848

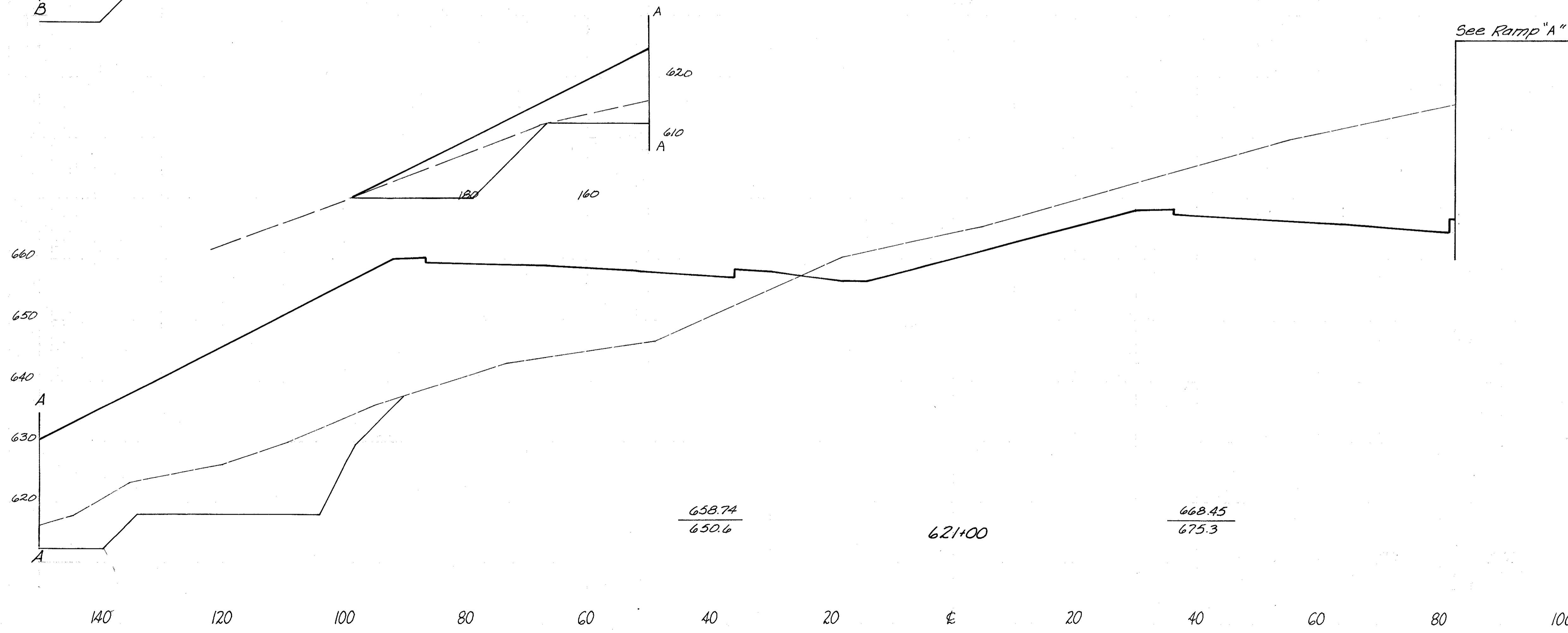
Sta. 620+00 to Sta. 620+50

HAM-52-11.37



1366 4067

2662 6253



1509 2686

3104 4386

Sta 621+00 to Sta. 621+50

$$\frac{659.08}{647.5}$$

$$\frac{669.25}{670.6}$$

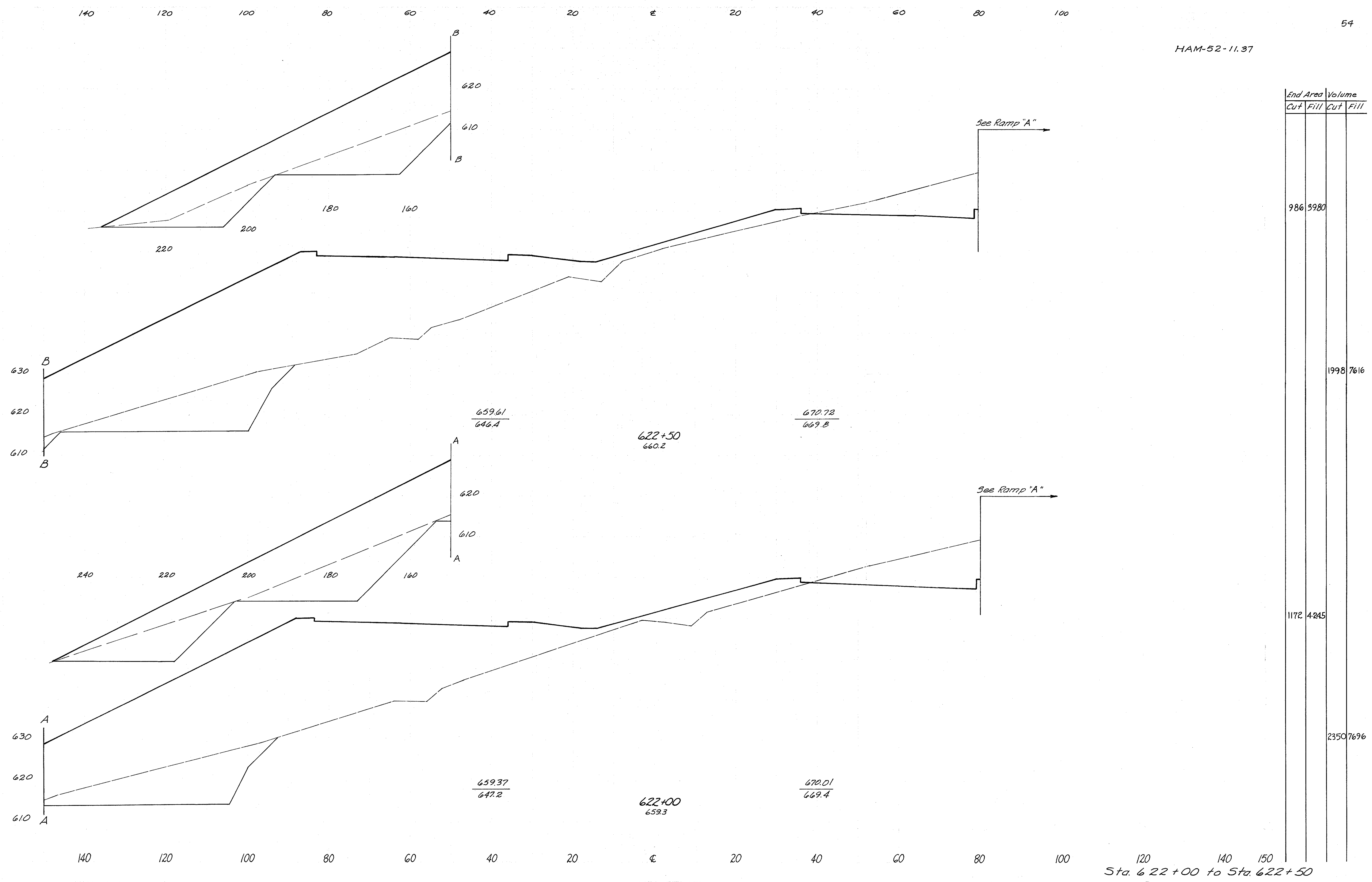
621+50

$$\frac{658.74}{650.6}$$

$$\frac{668.45}{675.3}$$

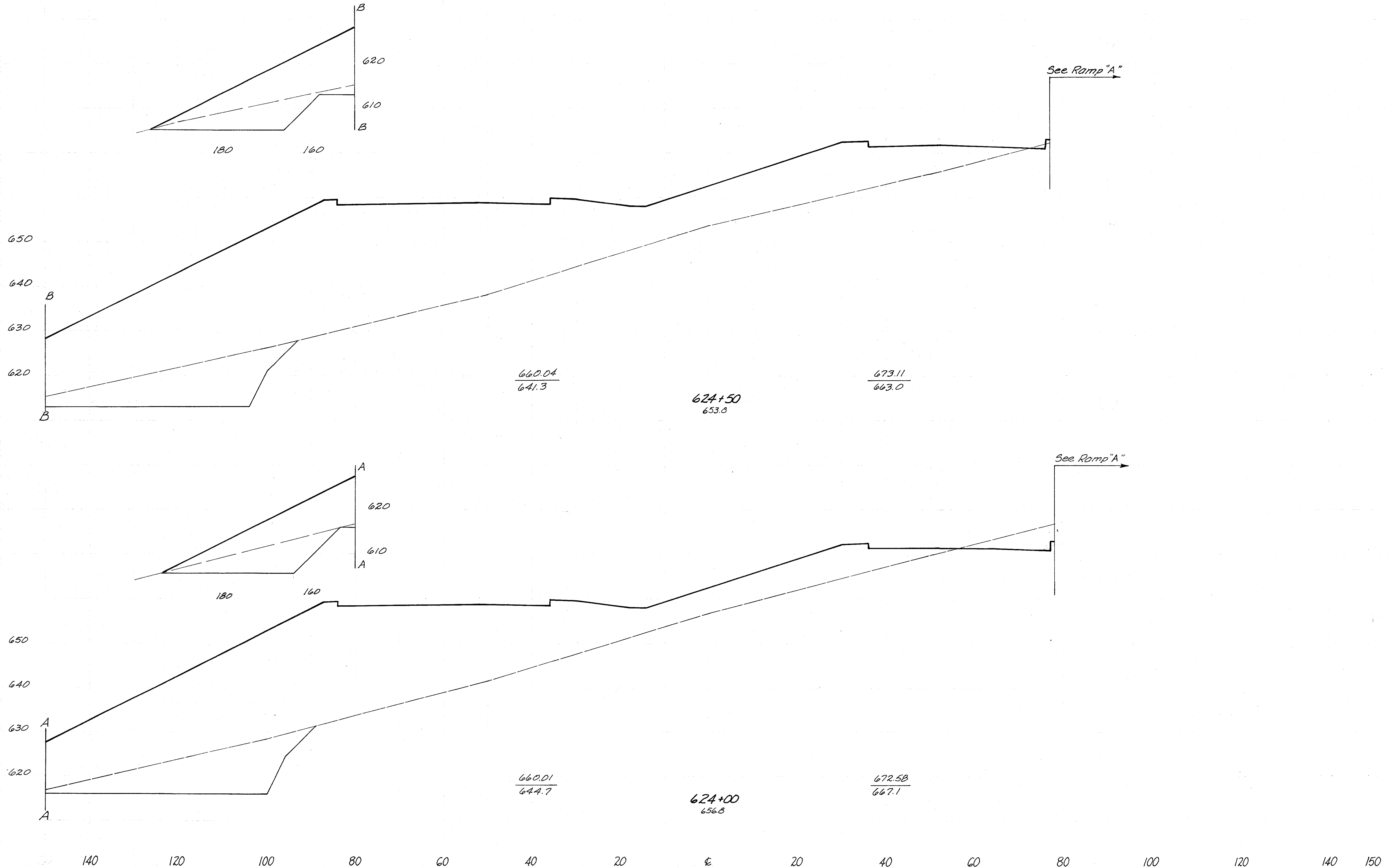
621+00

HAM-52-11.37



End Area		Volume	
Cut	Fill	Cut	Fill
986	3980		
		1998	7616
1172	4245		
		2350	7696

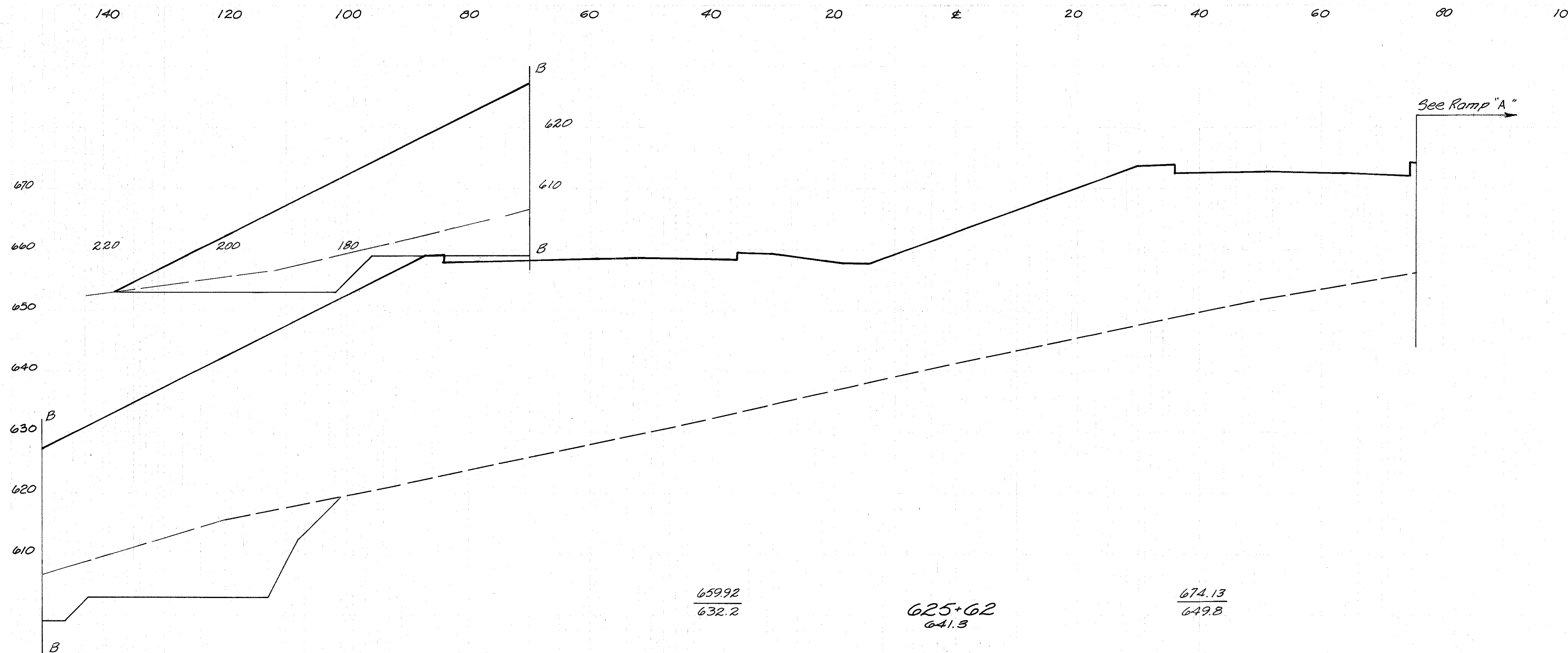
120 140 150
Sta. 622+00 to Sta. 622+50



End Area		Volume	
Cut	Fill	Cut	Fill
557	4243		
		1067	7251
595	3588		
		1381	6723

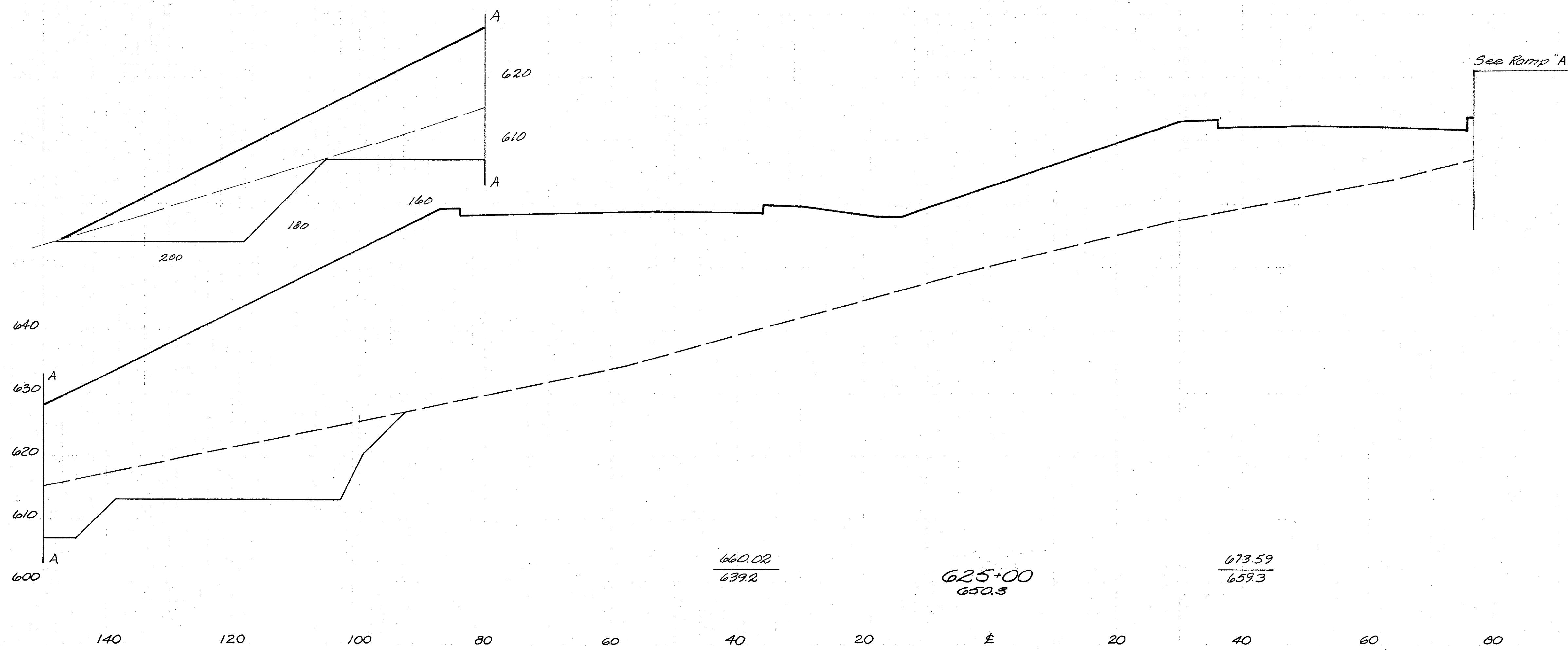
Sta. 624+00 to Sta. 624+50

HAM-52-11.37



660 7052

1599 14074

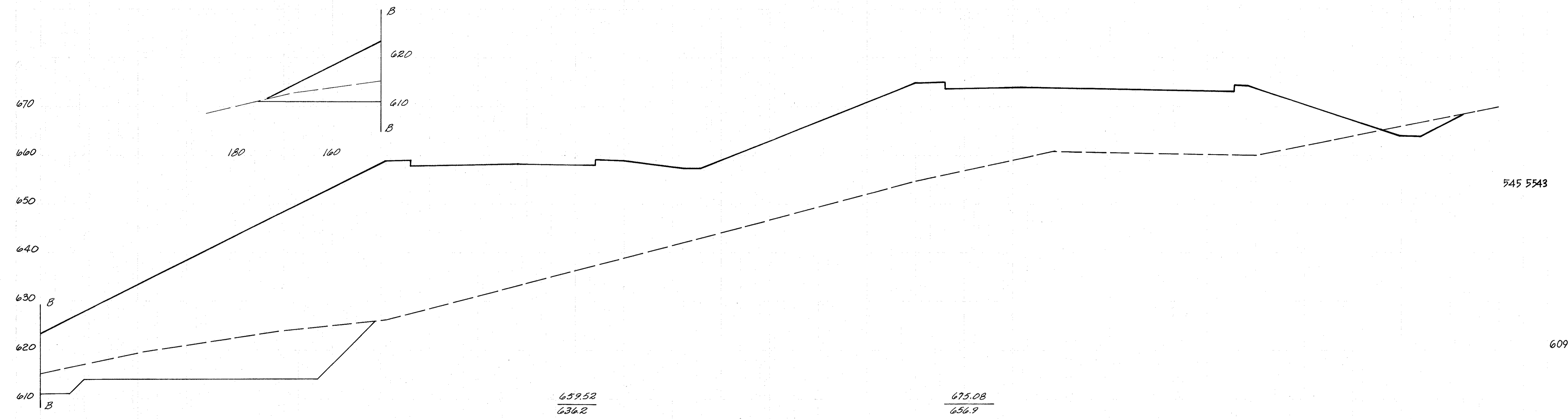


733 5207

1194 8750

100 120 140
STA. 625+00 TO STA. 625+62

HAM-52-11.37



545 5543

609 7,182



627+00
646.7

516 6969

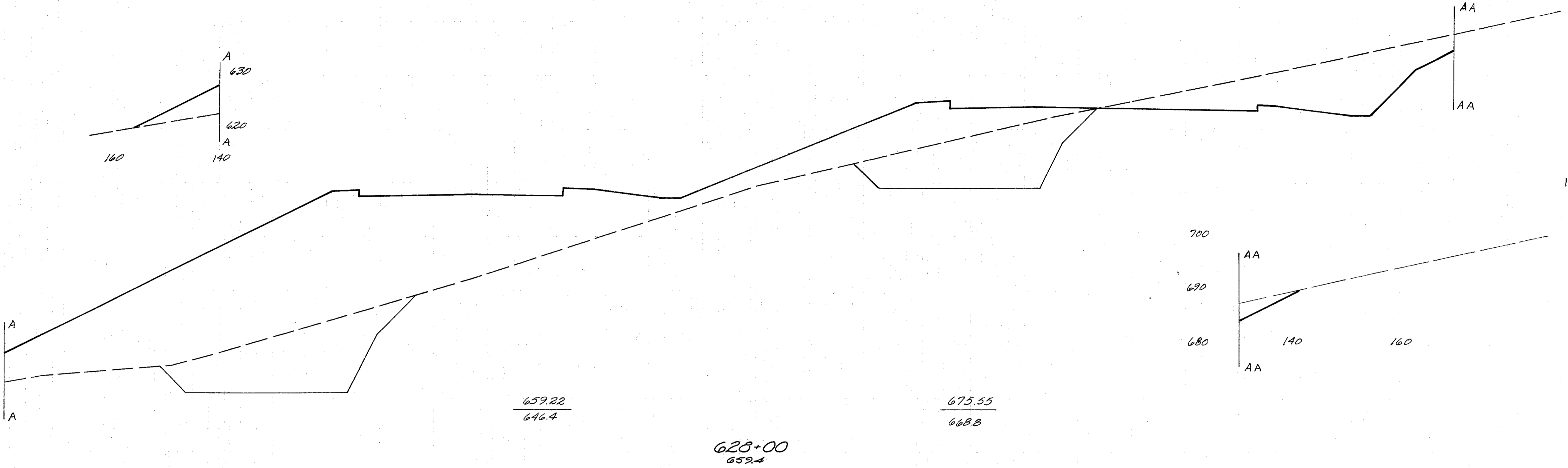
805 13,185

626+69
640.2

STA. 626+69 TO STA. 627+00

HAM-52-11.37

690
680
670
660
650
640
630
620
610



1125 3026

2672 10,981

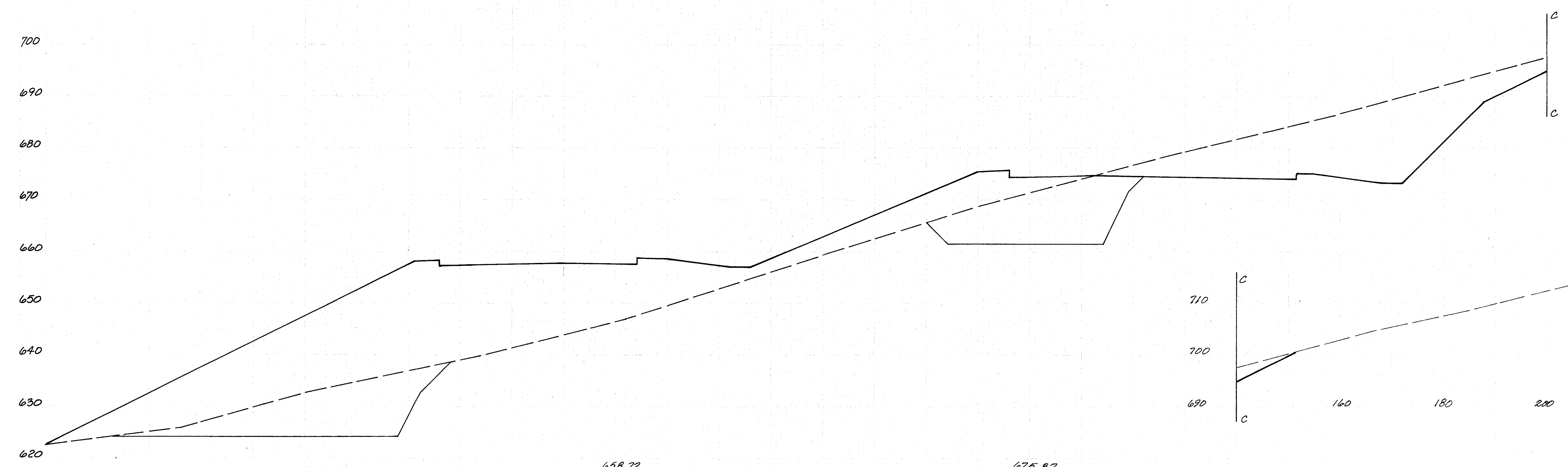
670
660
650
640
630
620
610



725 4577

517 4123

HAM-52-11.37



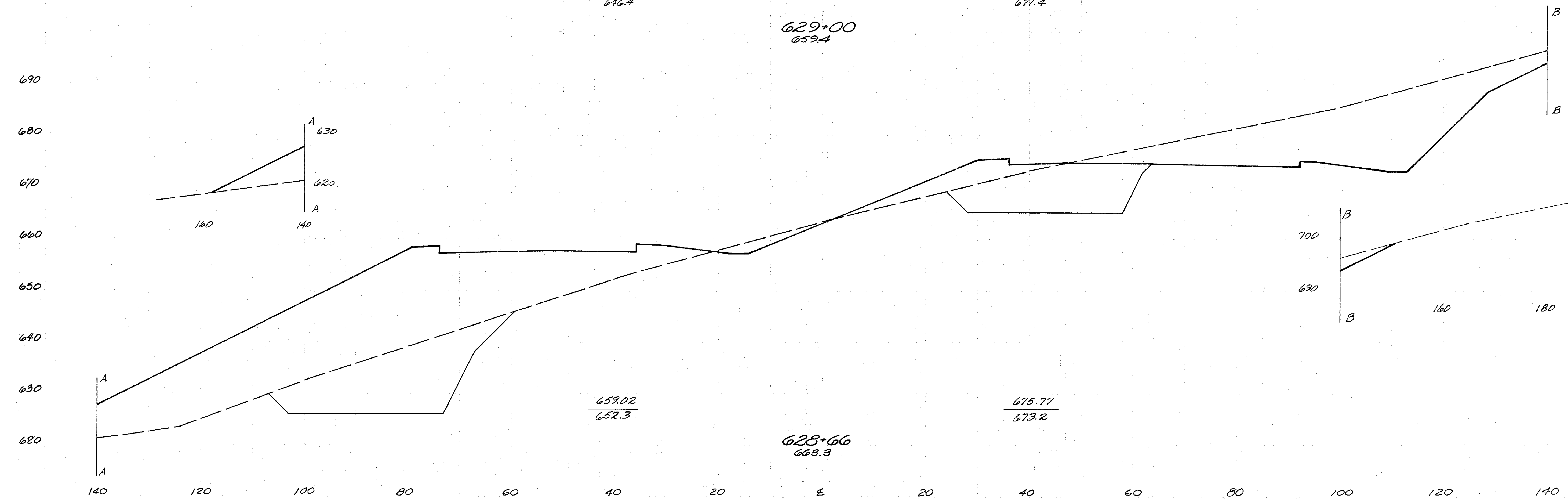
1405 2612

1776 3044

$$\frac{658.72}{646.4}$$

$$\frac{675.87}{671.4}$$

629+00
659.4



1416 2222

3106 6414

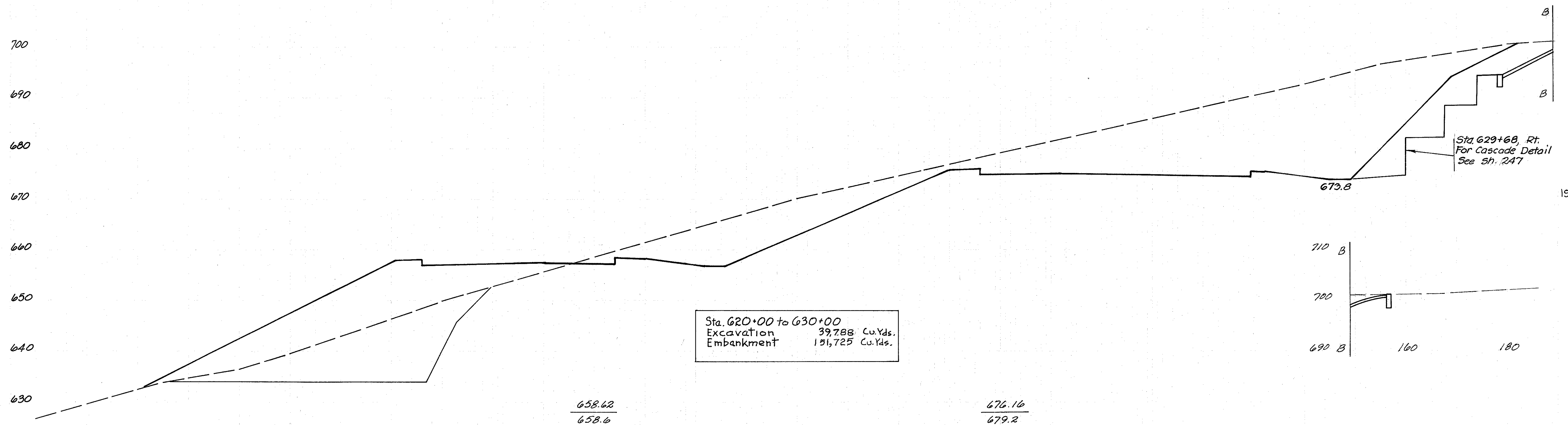
$$\frac{659.02}{652.3}$$

$$\frac{675.77}{673.2}$$

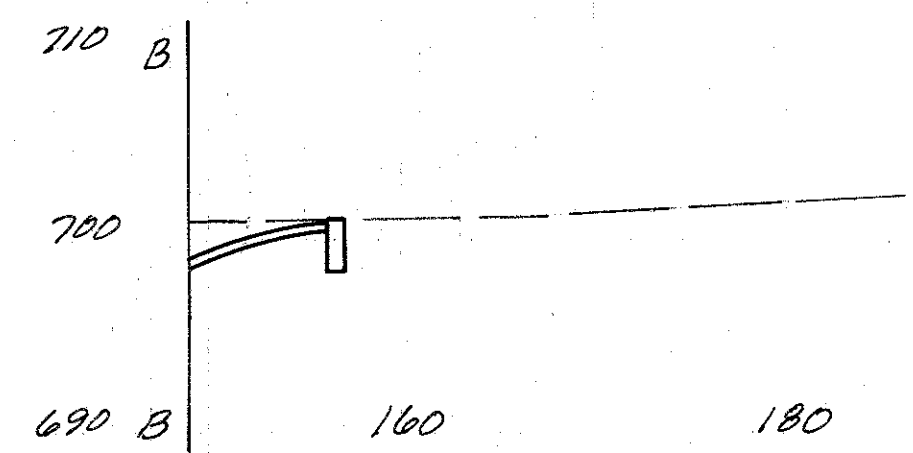
628+66
663.3

STA. 628+66 TO STA. 629+00

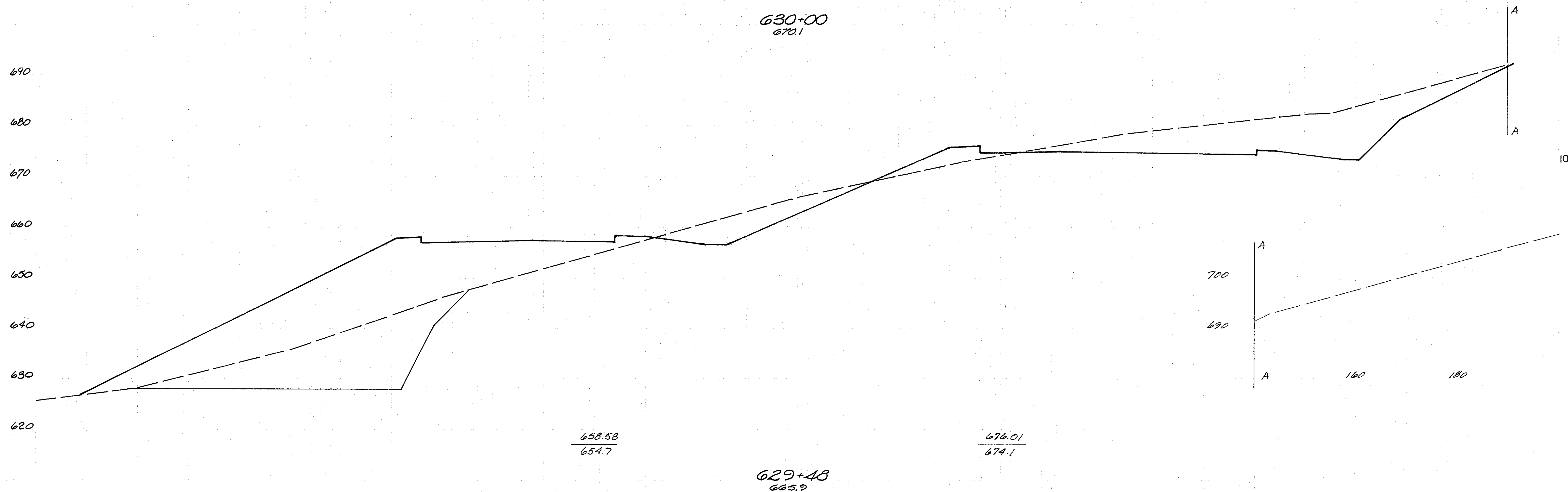
HAM-52-11.37



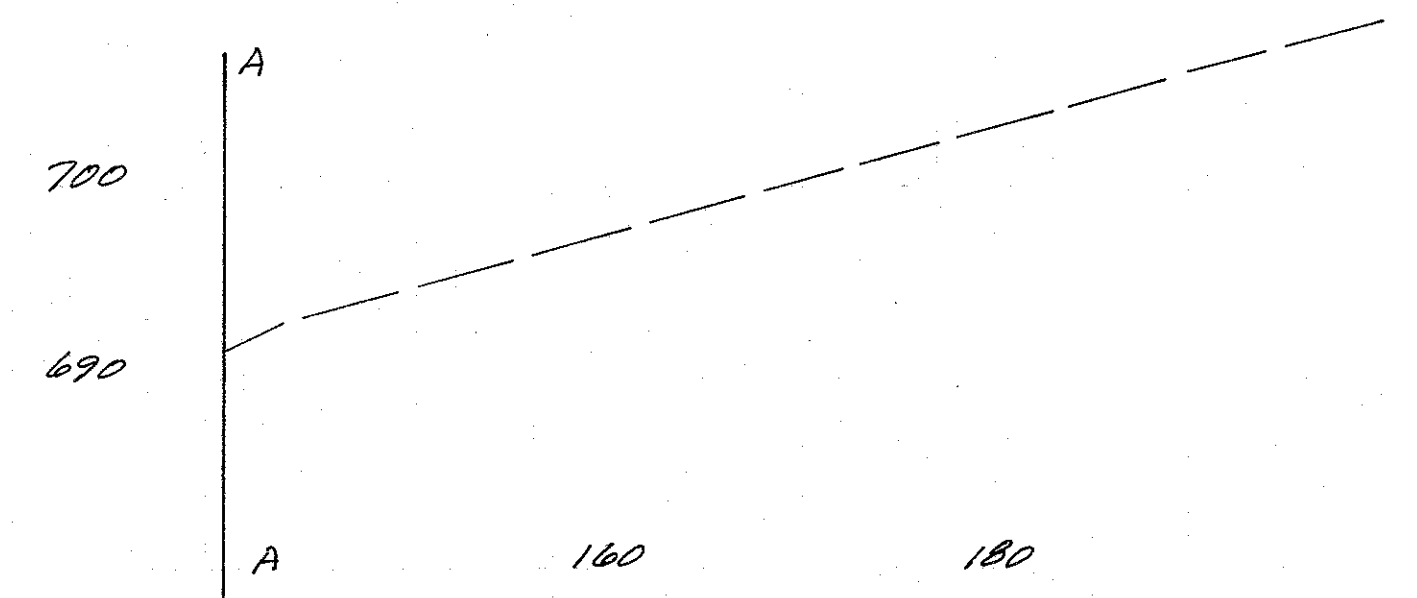
1930 911



2855 2290



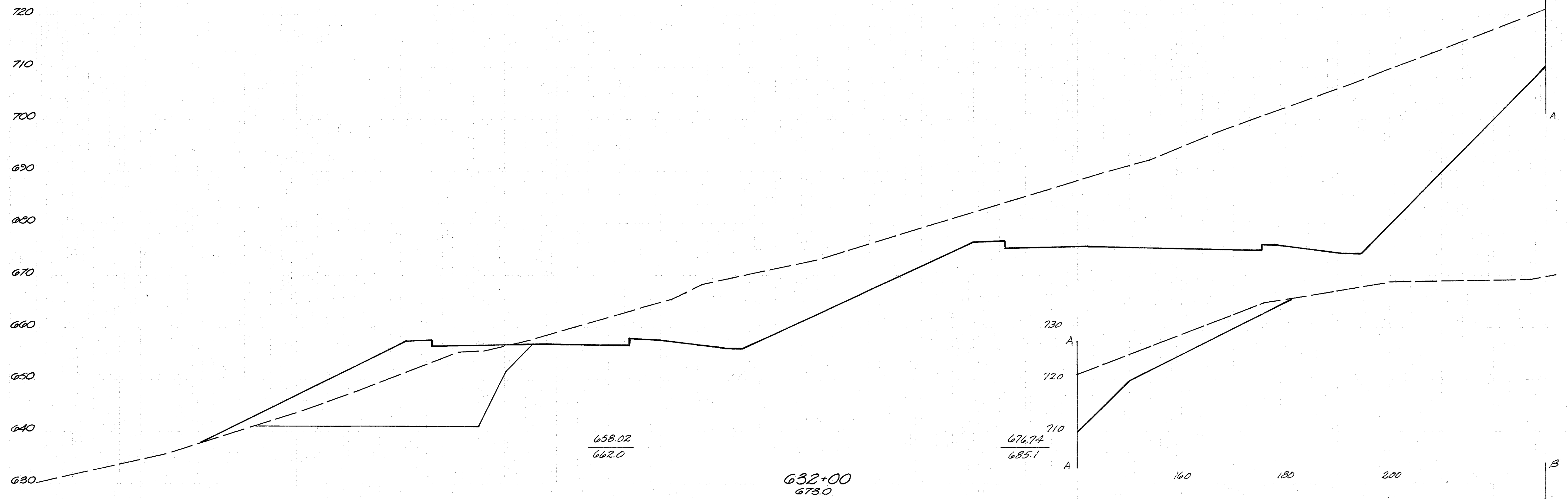
1035 #15



2169 3579

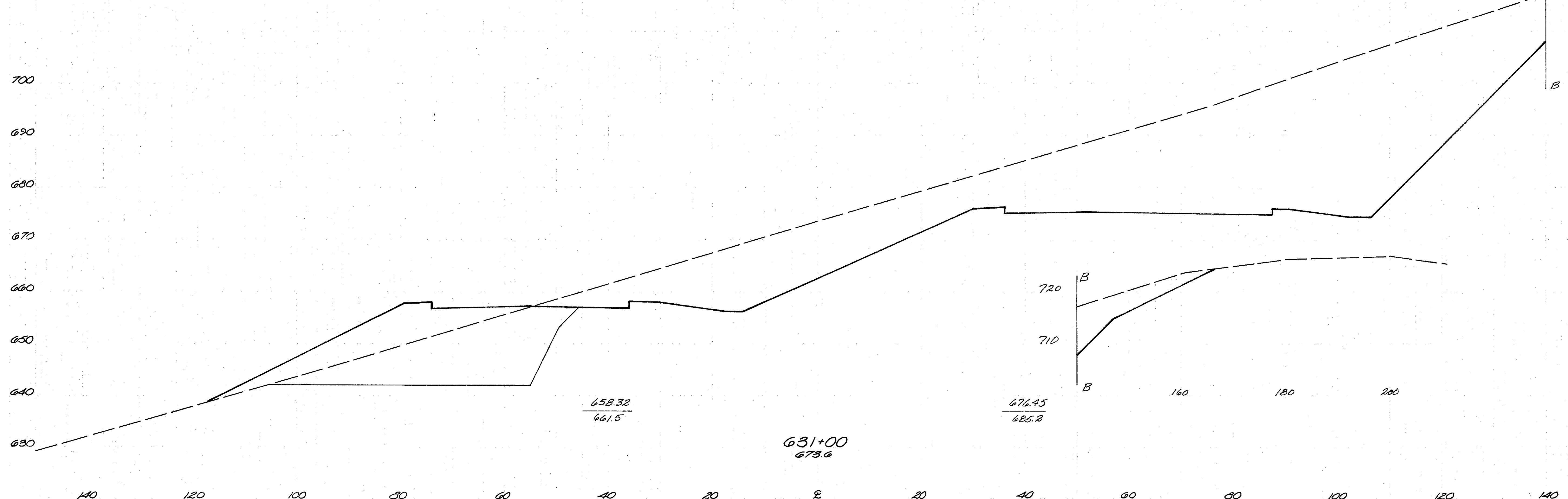
STA. 629+48 TO STA. 630+00

HAM-52-11.37



3478 563

12,561 2,315



3305 687

8306 2959

STA. 631+00 TO STA. 632+00

$$\frac{658.02}{662.0}$$

$$\frac{676.74}{685.1}$$

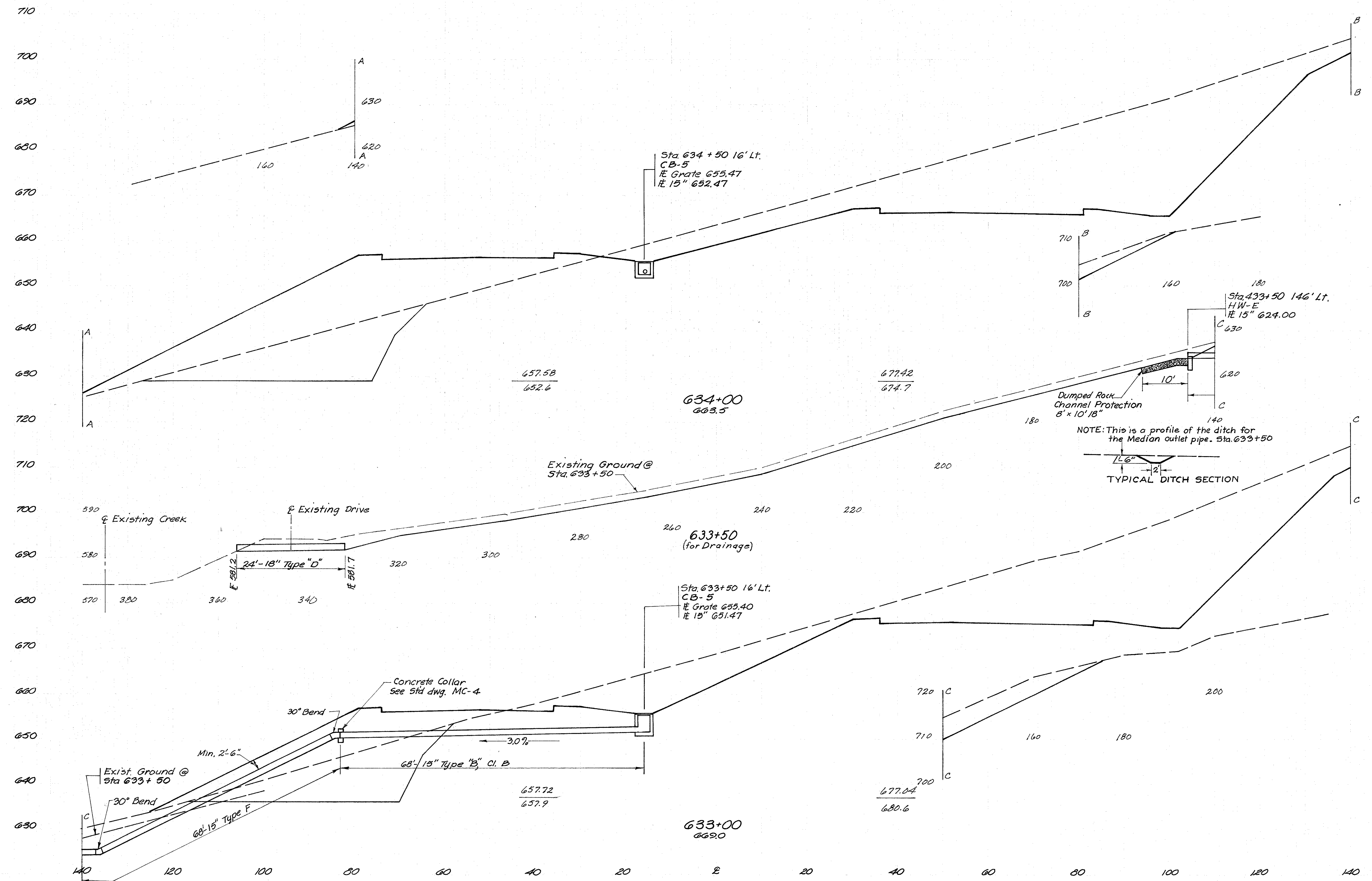
$$\frac{658.32}{661.5}$$

$$\frac{676.45}{685.2}$$

632+00
673.0

631+00
673.6

HAM-52-11.37



2300 1285

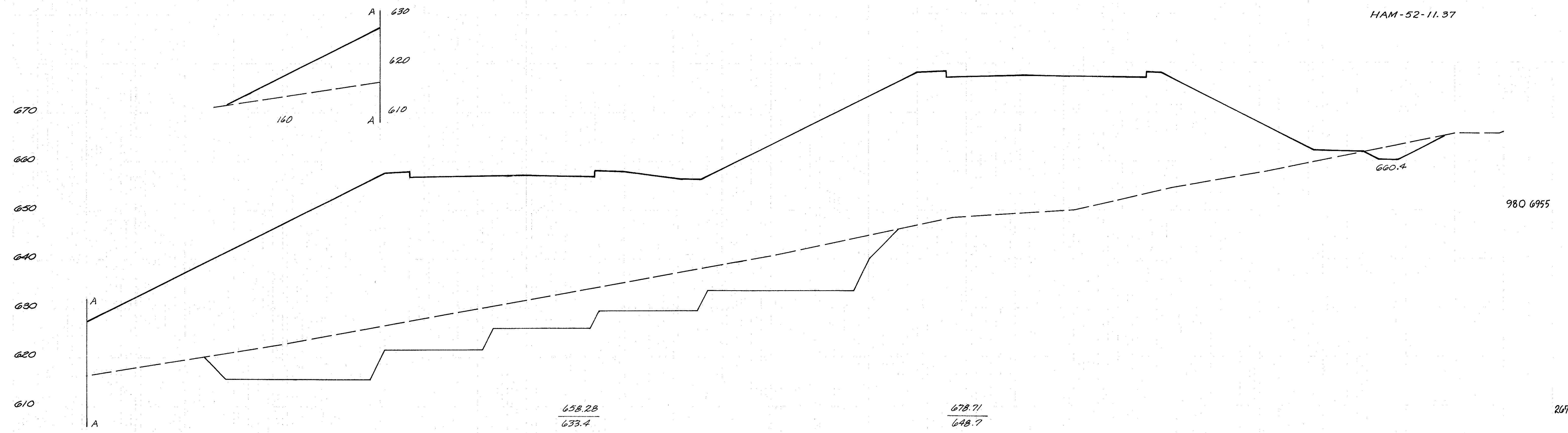
8541 3802

2312 768

10722 2465

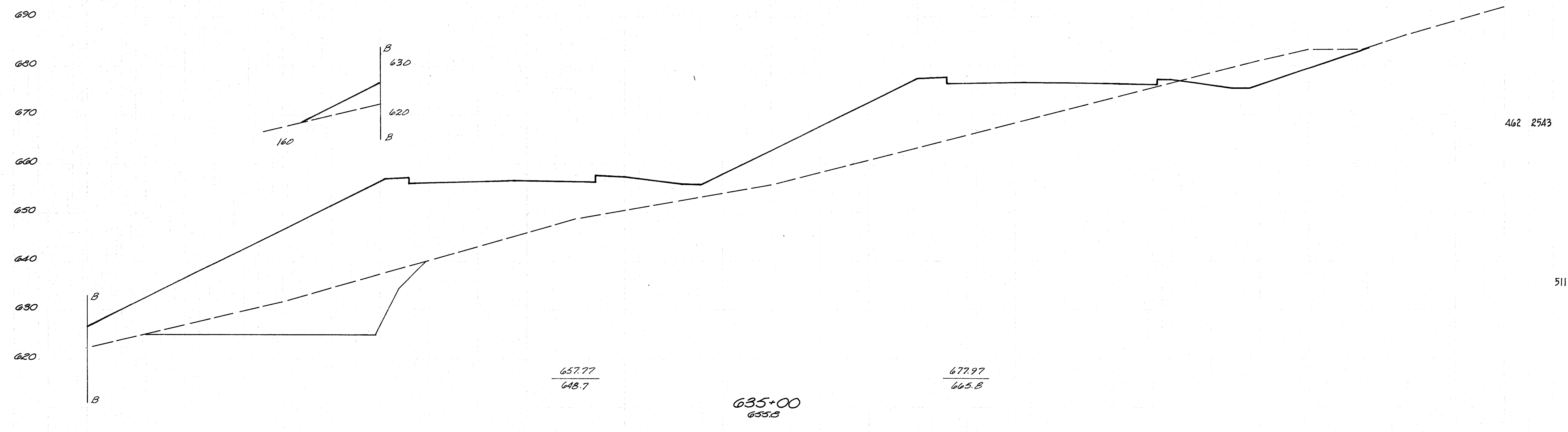
STA. 633+00 TO STA. 634+00

HAM-52-11.37



980 6955

2690 17,589



462 2543

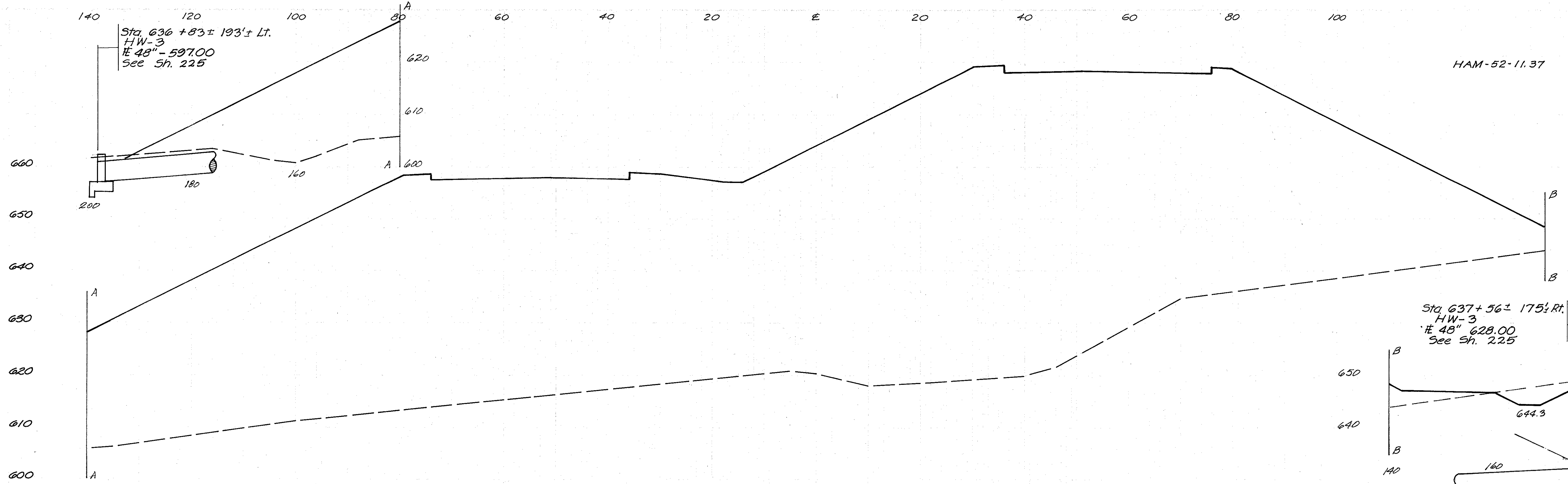
5115 7089

STA. 635+00 TO STA. 636+00

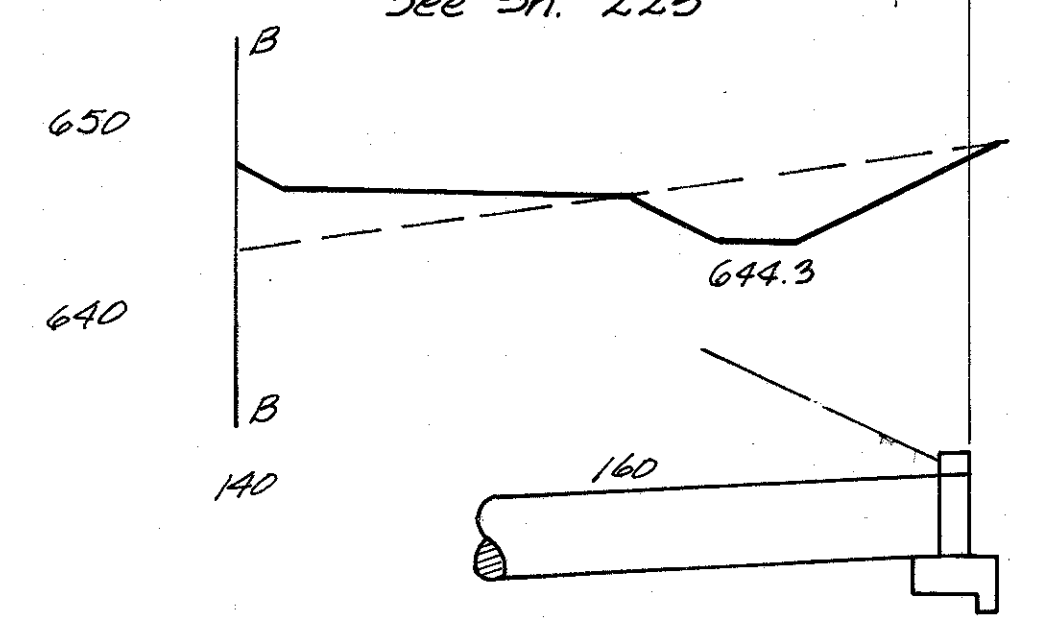
HAM-52-11.37

140 120 100 80 60 40 20 E 20 40 60 80 100

Sta. 636 + 83 ± 193' ± Lt.
HW-3
48" - 597.00
See Sh. 225



Sta. 637 + 56 ± 175' ± Rt.
HW-3
48" 628.00
See Sh. 225



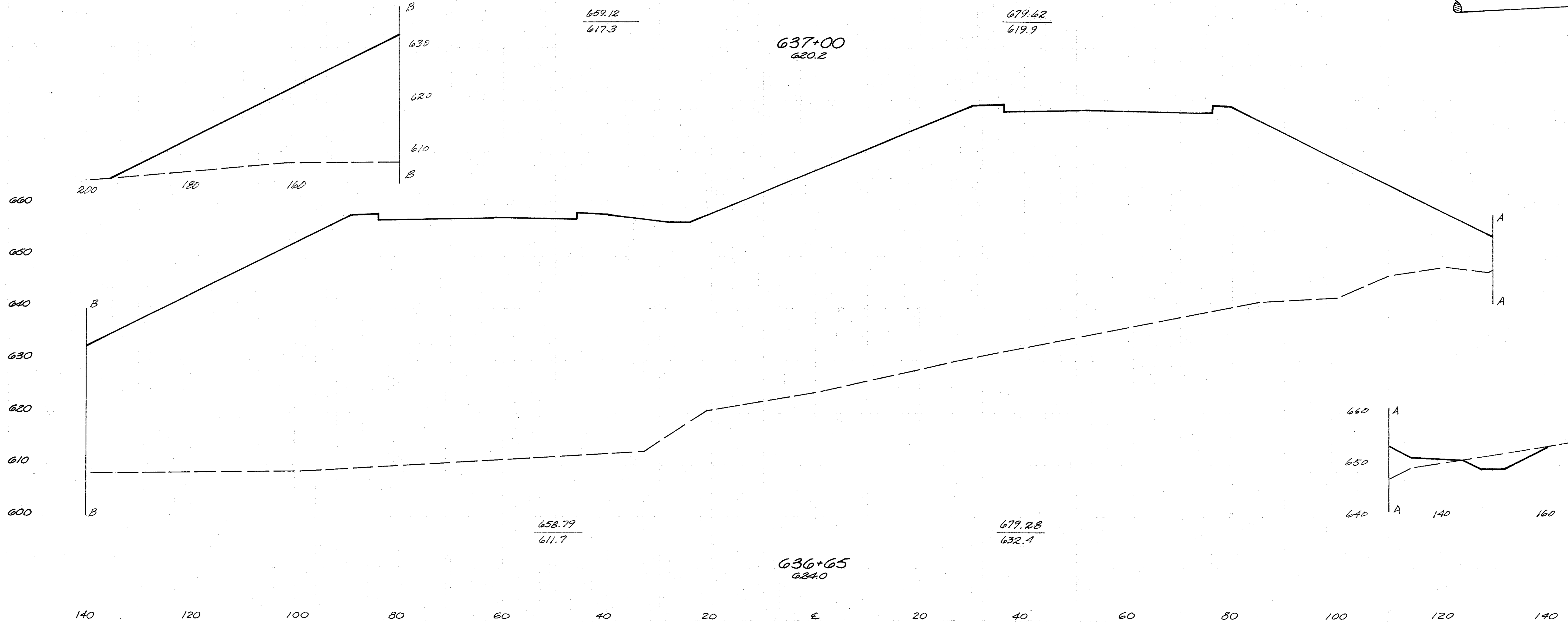
40 11,557

42 14,783

659.12 / 617.3

637+00
620.2

679.42 / 619.9



25 11,253

1210 21,917

140 120 100 80 60 40 20 E 20 40 60 80

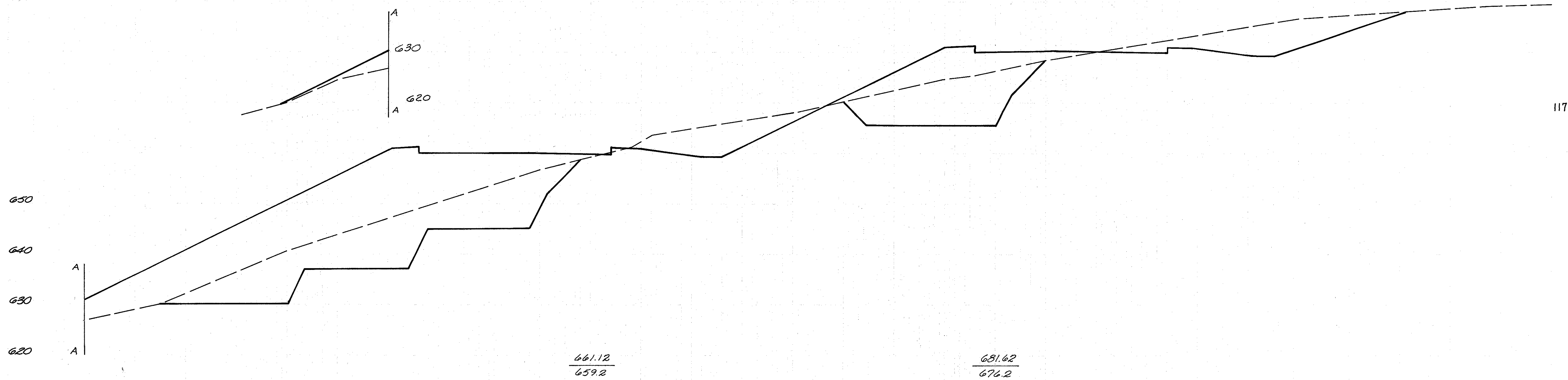
658.79 / 611.7

636+65
624.0

679.28 / 632.4

100 120 140
STA. 636+65 TO STA. 637+00

HAM-52-11.37



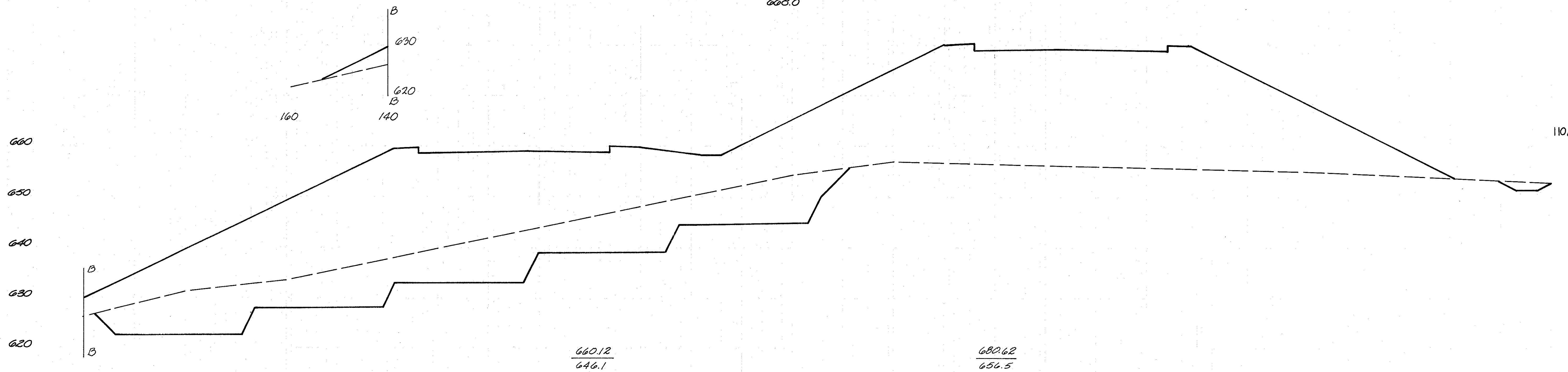
1177 2870

4232 14,960

$\frac{461.12}{659.2}$

$\frac{681.62}{676.2}$

639+00
668.0



1108 5208

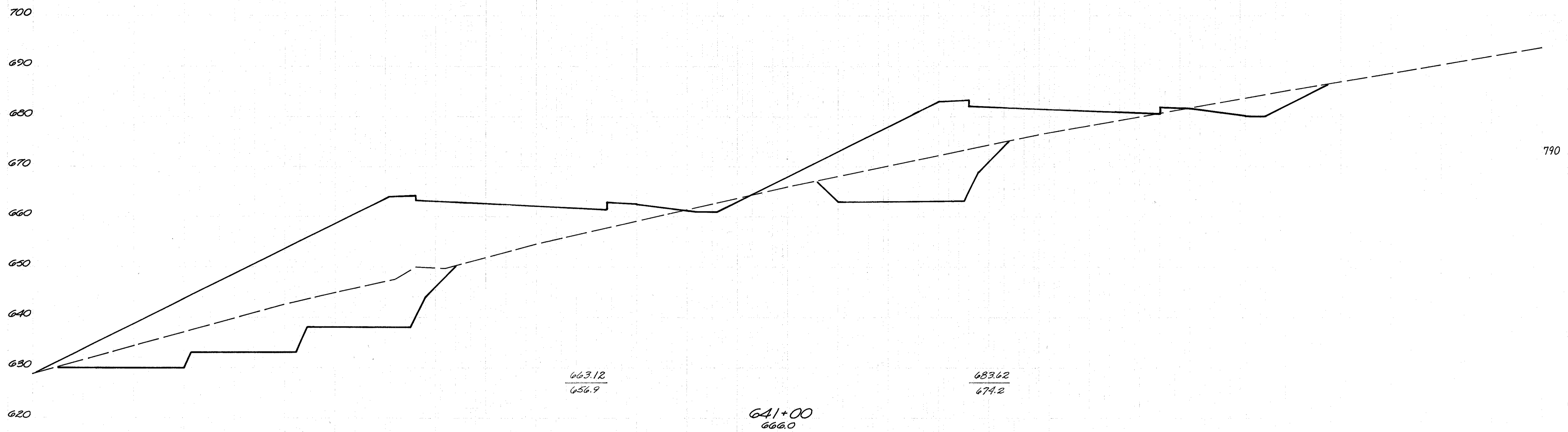
2126 31,047

$\frac{660.12}{646.1}$

$\frac{680.62}{656.5}$

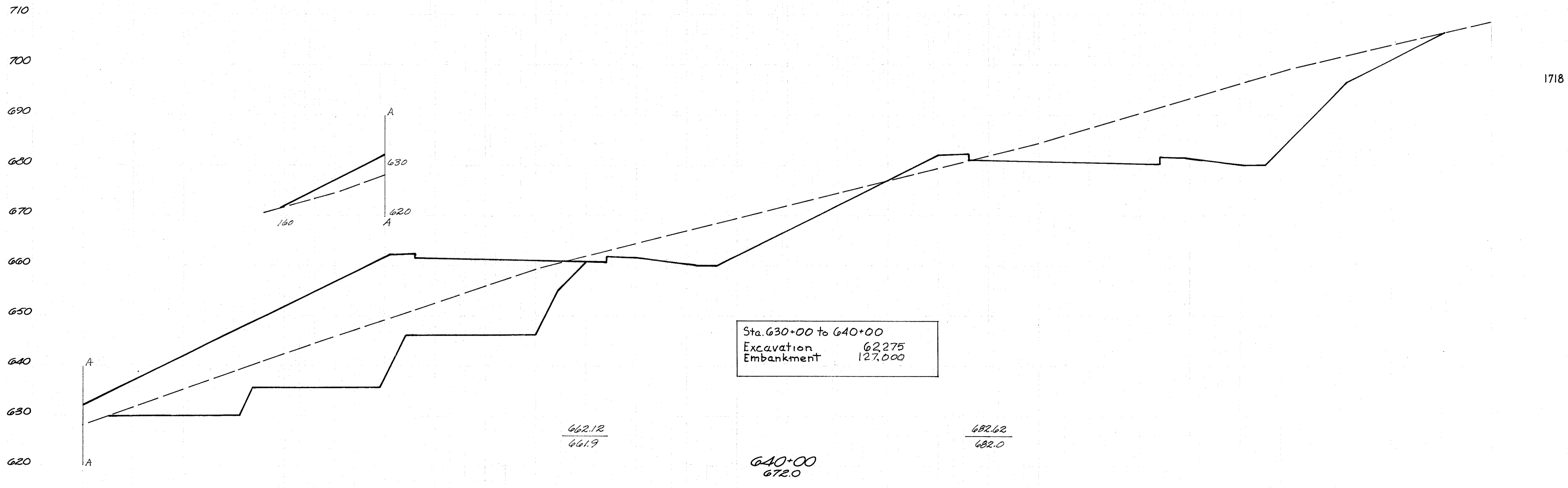
638+00
654.3

HAM-52-11.37



790 2189

4645 6813



1718 1490

5361 8074

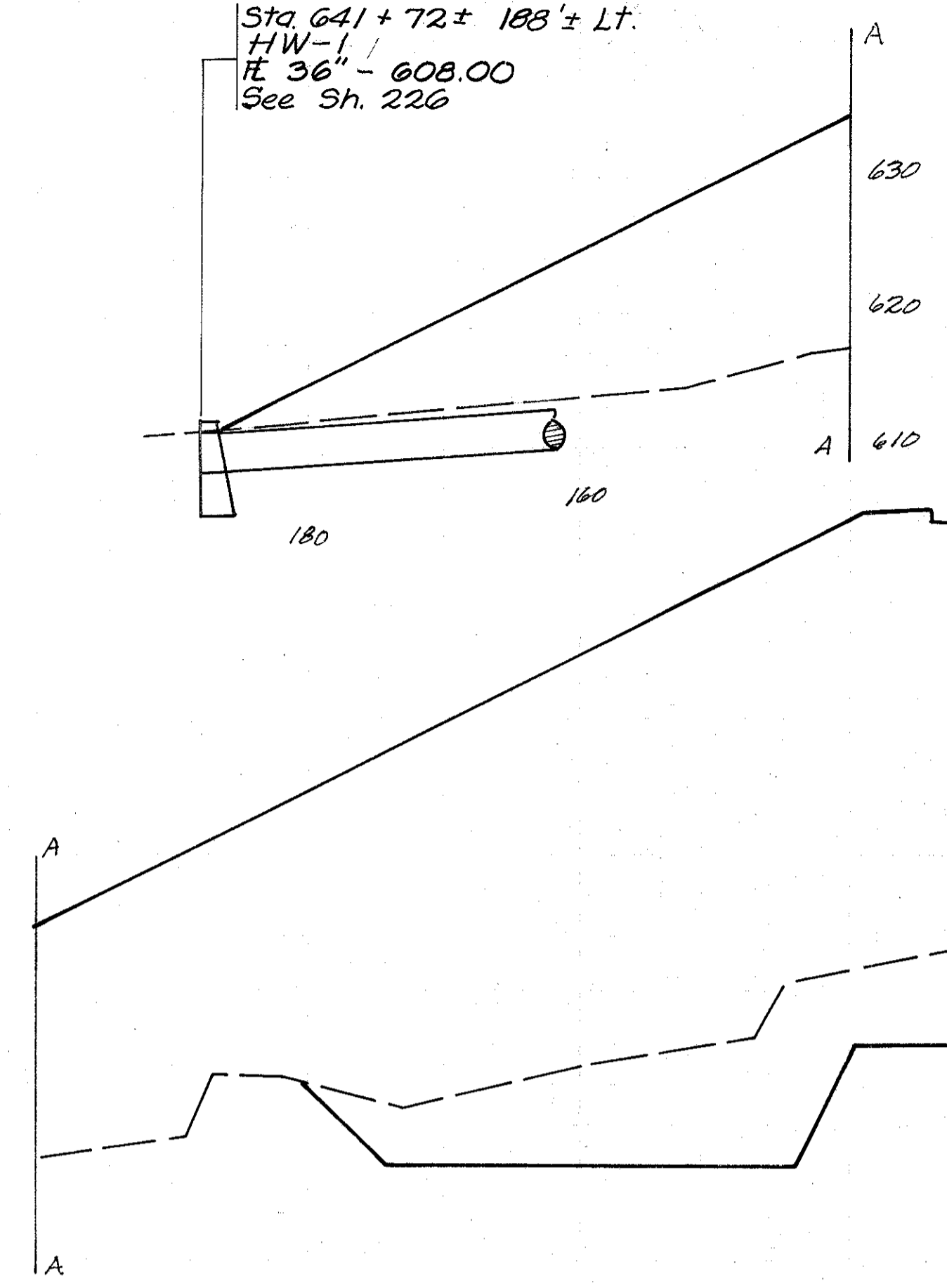
Sta. 630+00 to 640+00	
Excavation	62,275
Embankment	127,000

STA. 640+00 TO STA. 641+00

HAM-52-11.37

Sta 641+72± 188'± Lt.
HW-1
H 36" - 608.00
See Sh. 226

680
670
660
650
640
630
620
610



1262 7521

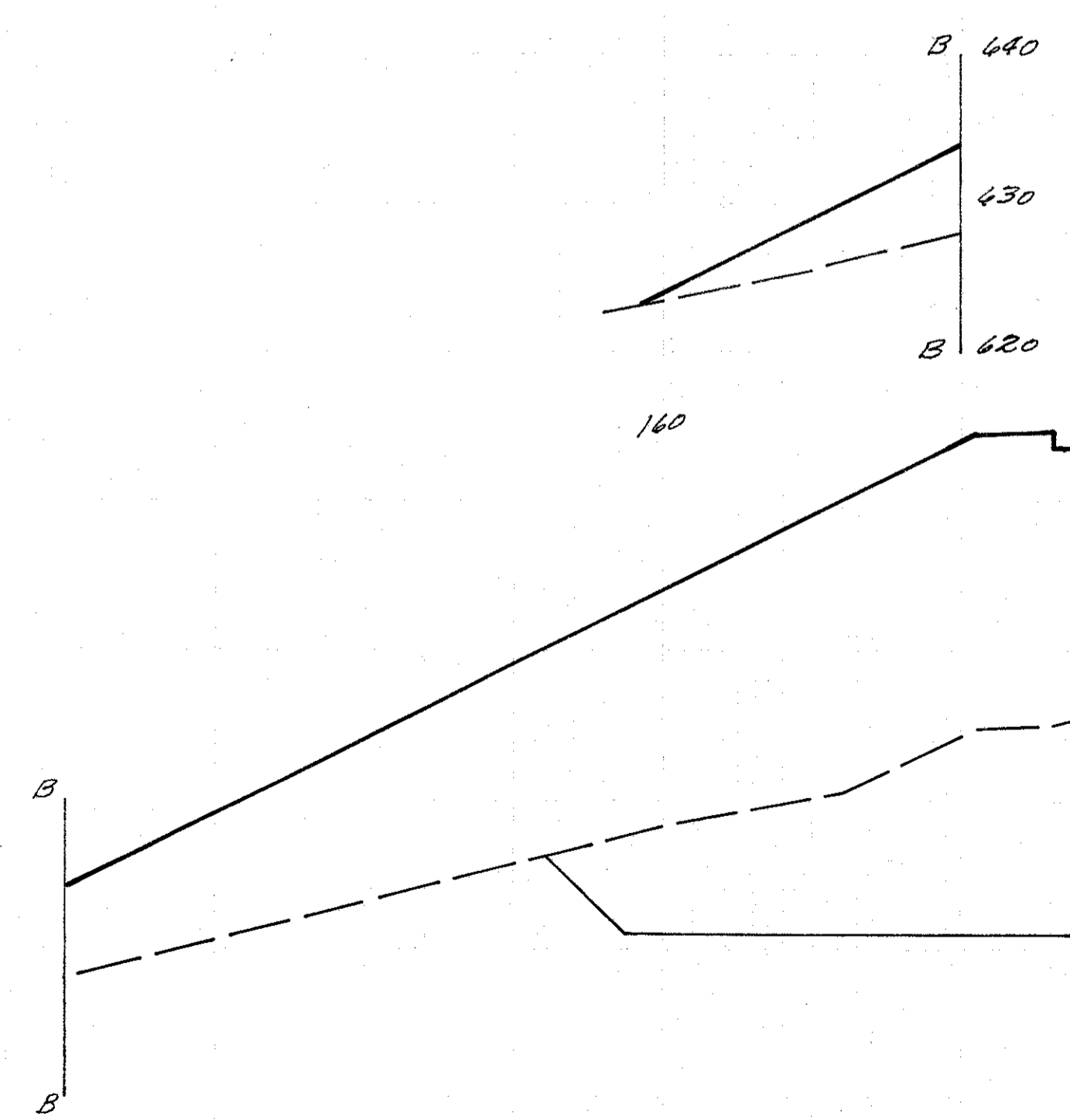
1747 8568

$\frac{663.81}{639.2}$

$\frac{684.31}{654.0}$

641+69
647.0

690
680
670
660
650
640
630
620



1096 4046

1013 3348

$\frac{663.91}{653.0}$

$\frac{683.91}{666.6}$

641+29
659.8

140

120

100

80

60

40

20

±

20

40

60

80

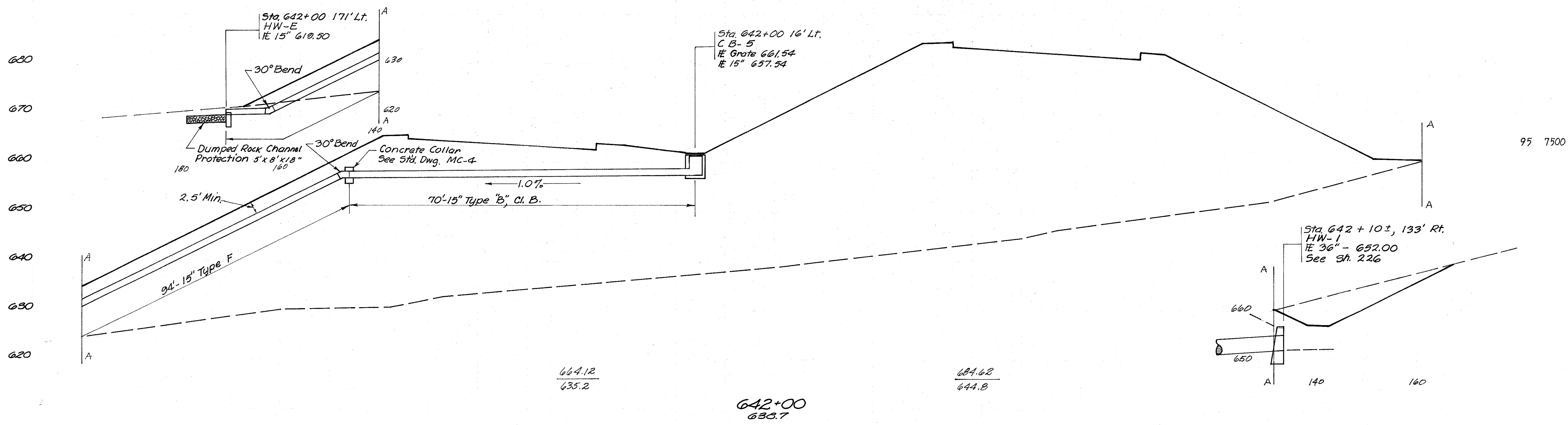
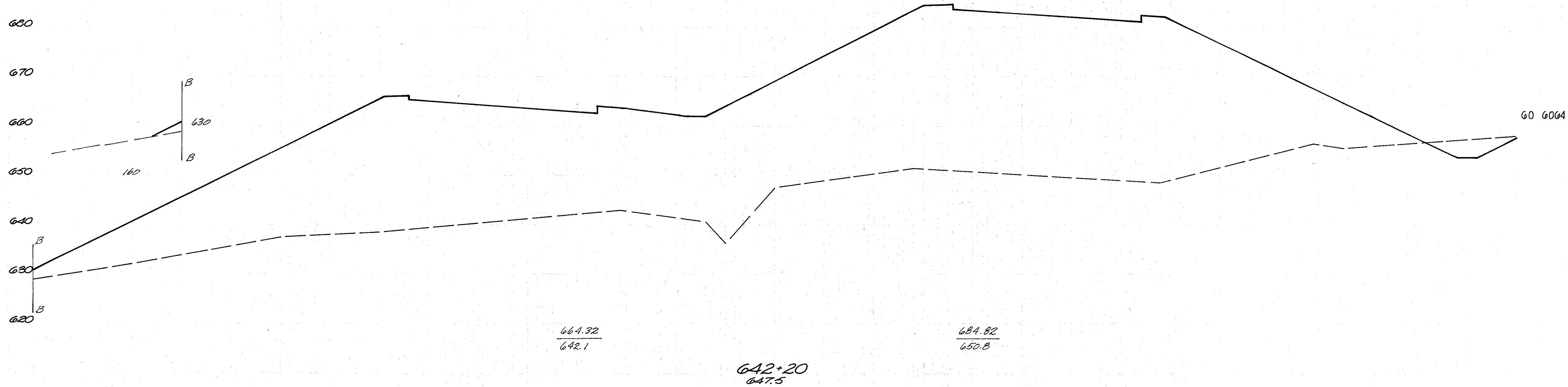
100

120

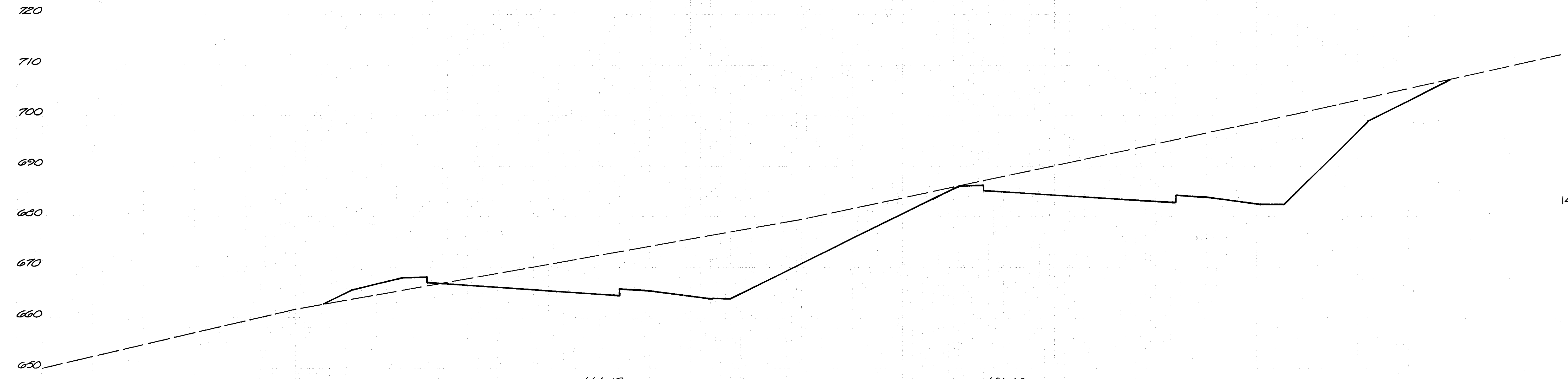
140

STA. 641+29 TO STA. 641+69

HAM-52-11.37



HAM-52-11.37



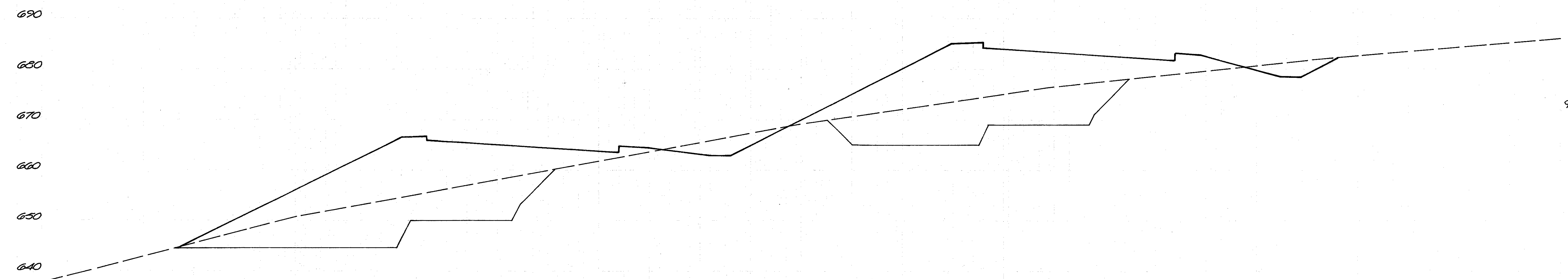
1448 47

4354 3556

$\frac{666.12}{672.3}$

$\frac{686.62}{688.0}$

644+00
679.5



903 1873

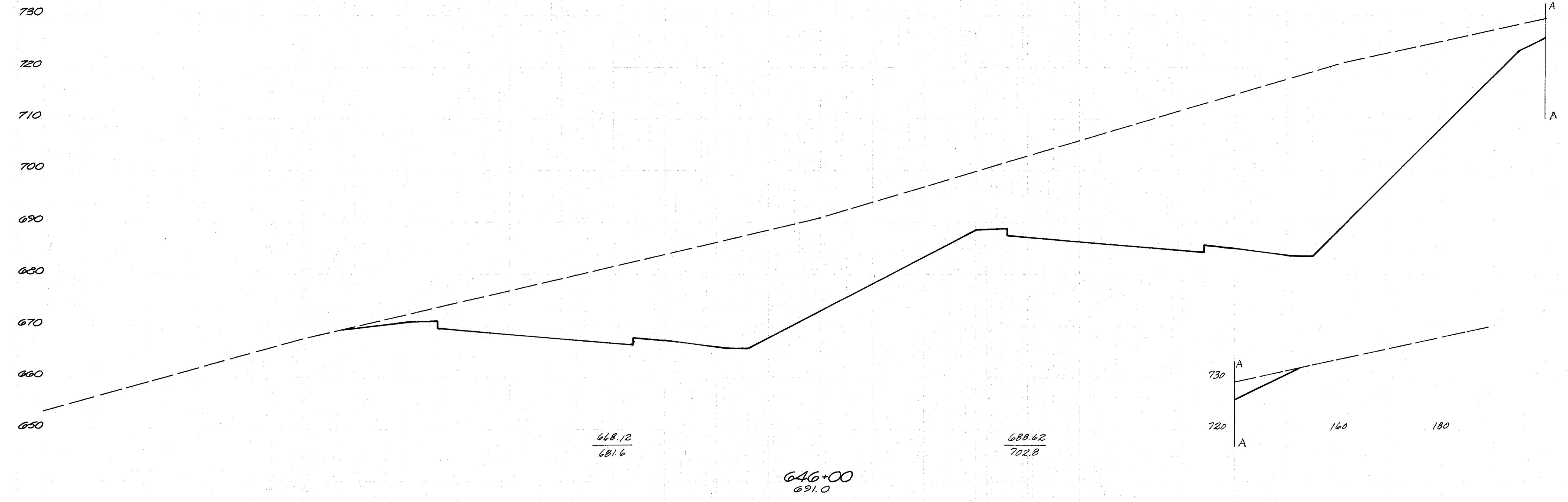
1427 11,759

$\frac{665.12}{661.9}$

$\frac{685.62}{675.1}$

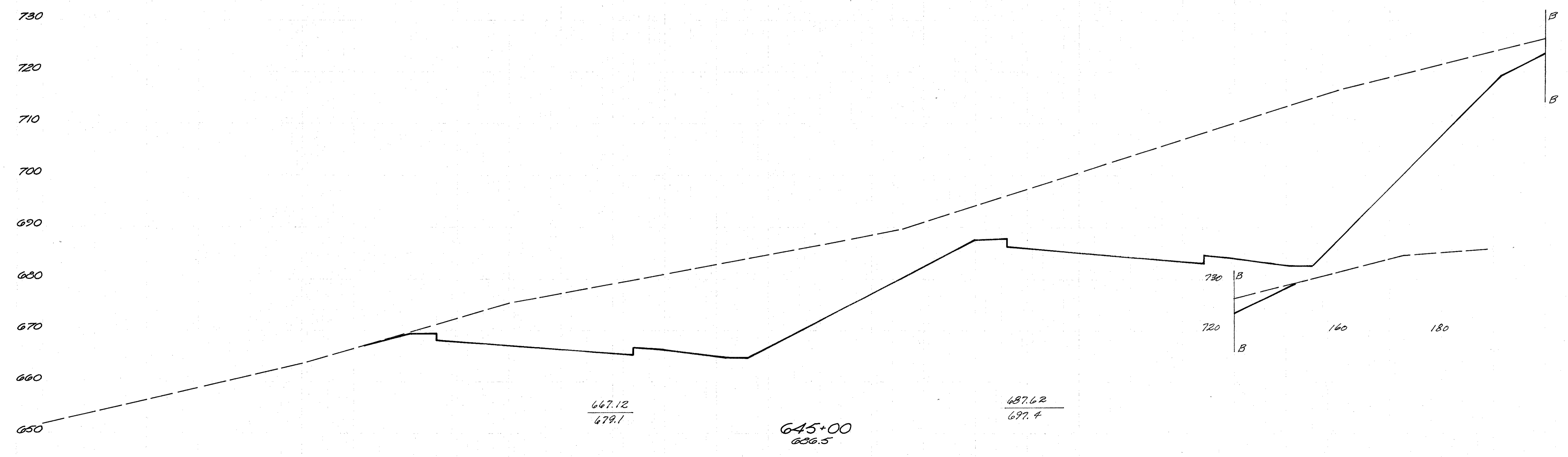
643+00
669.2

HAM-52-11.37



4051 O

13,086 O

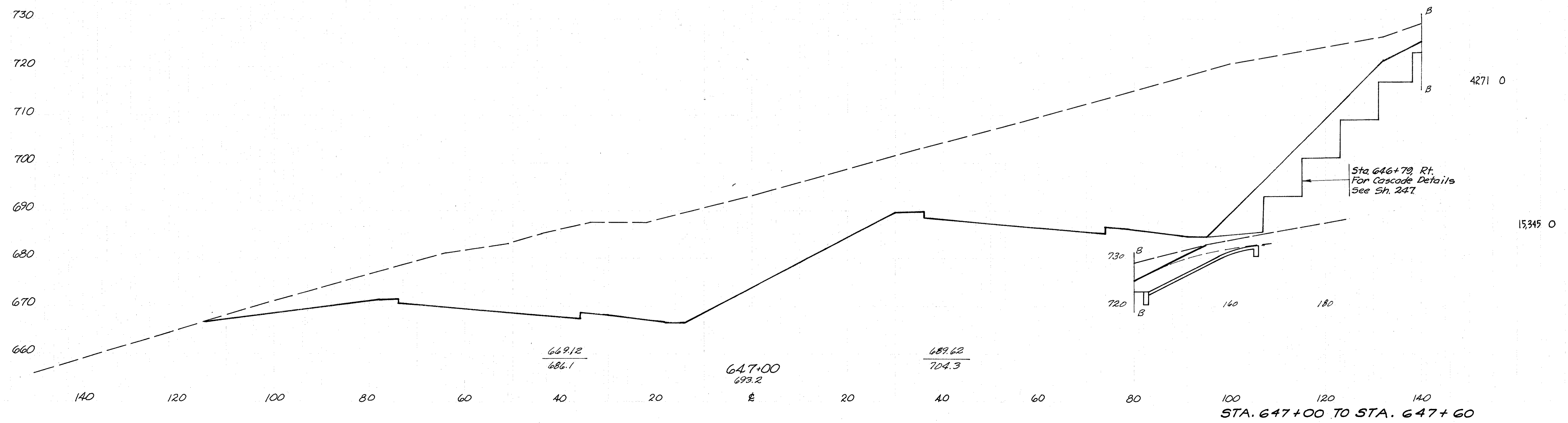
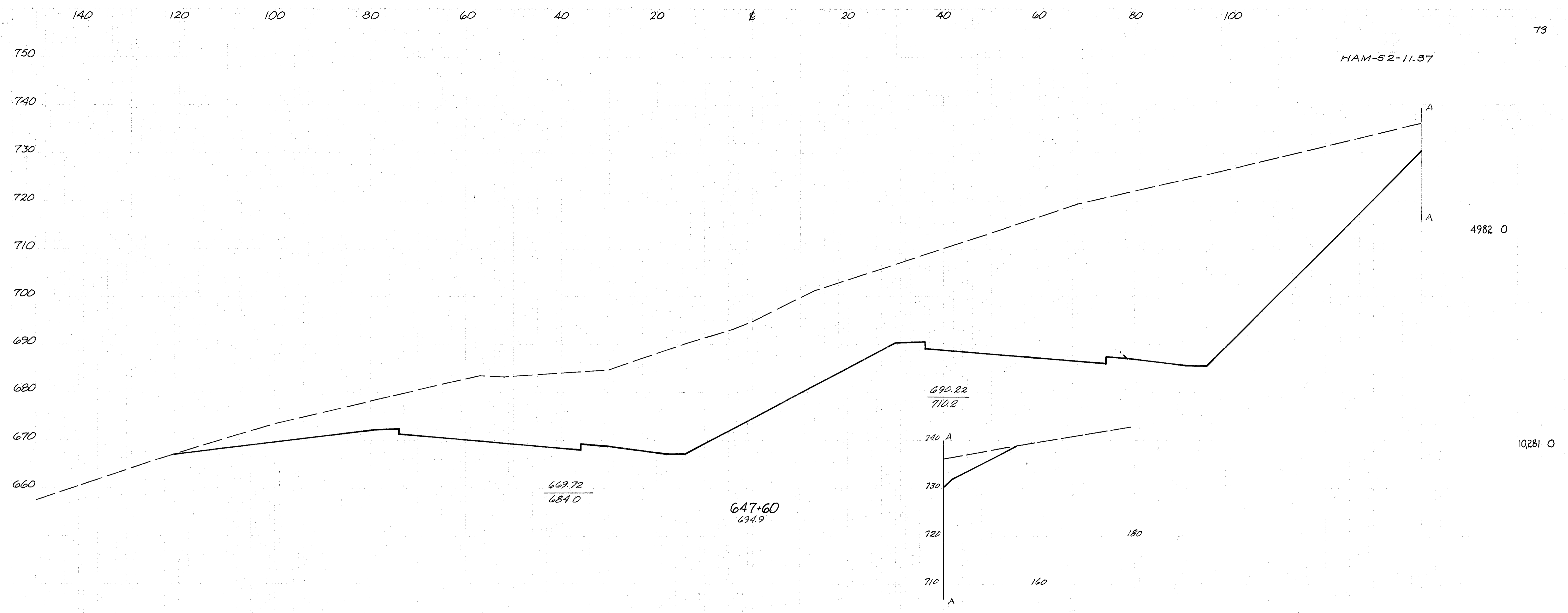


3051 O

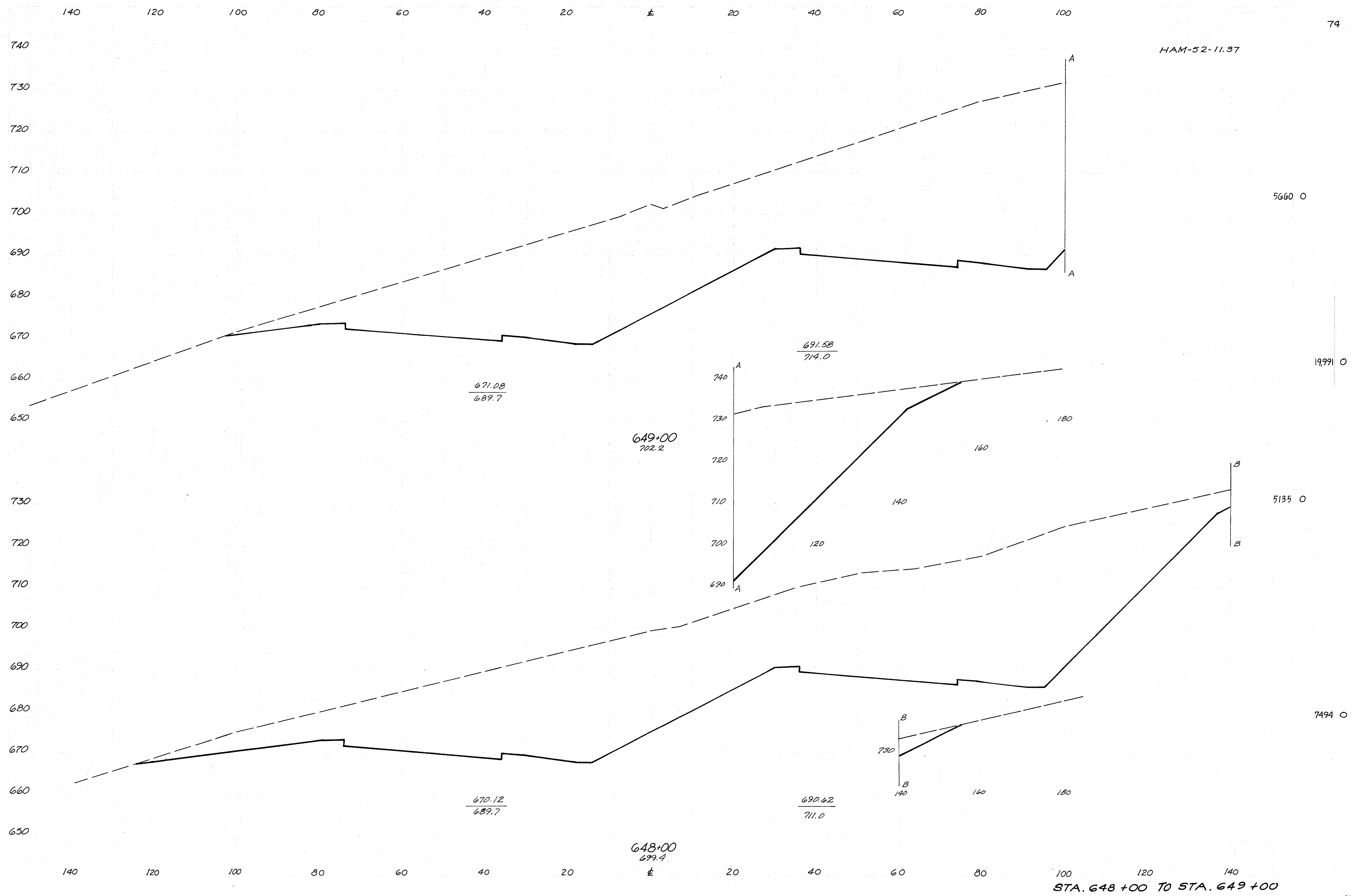
8332.87

STA. 645+00 TO STA. 646+00

HAM-52-11.37



HAM-52-11.37



649+00
702.2

648+00
699.4

$\frac{671.08}{689.7}$

$\frac{691.58}{714.0}$

$\frac{670.12}{689.7}$

$\frac{690.62}{711.0}$

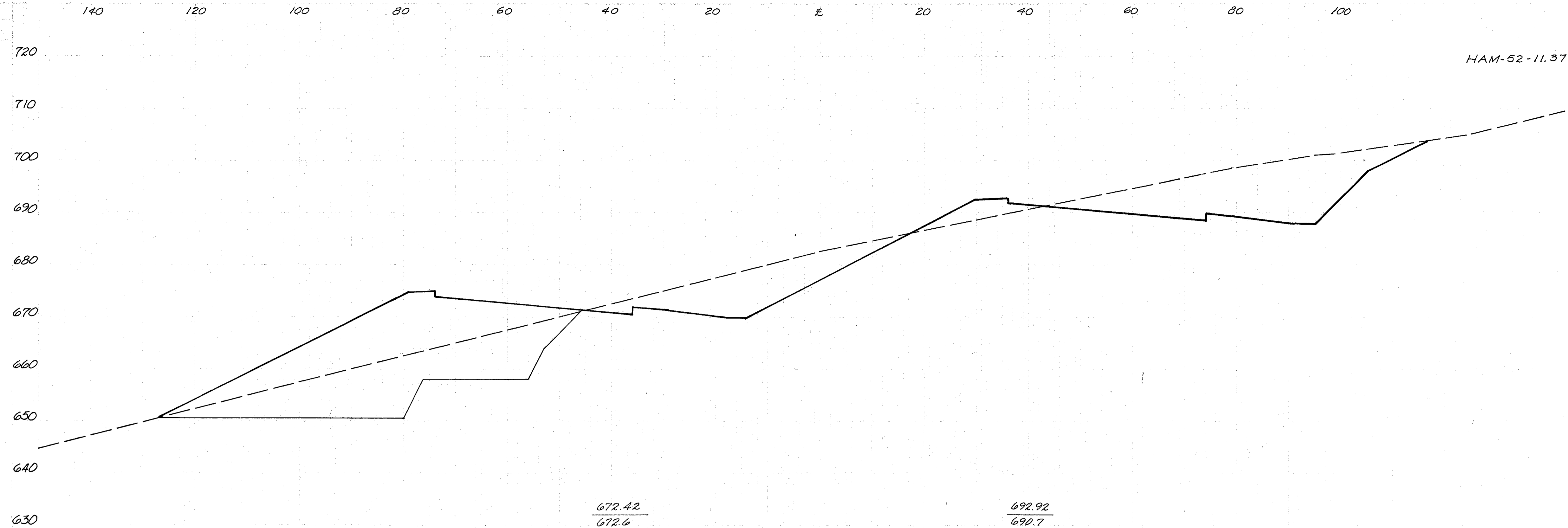
5660 O

19991 O

5135 O

7494 O

STA. 648+00 TO STA. 649+00



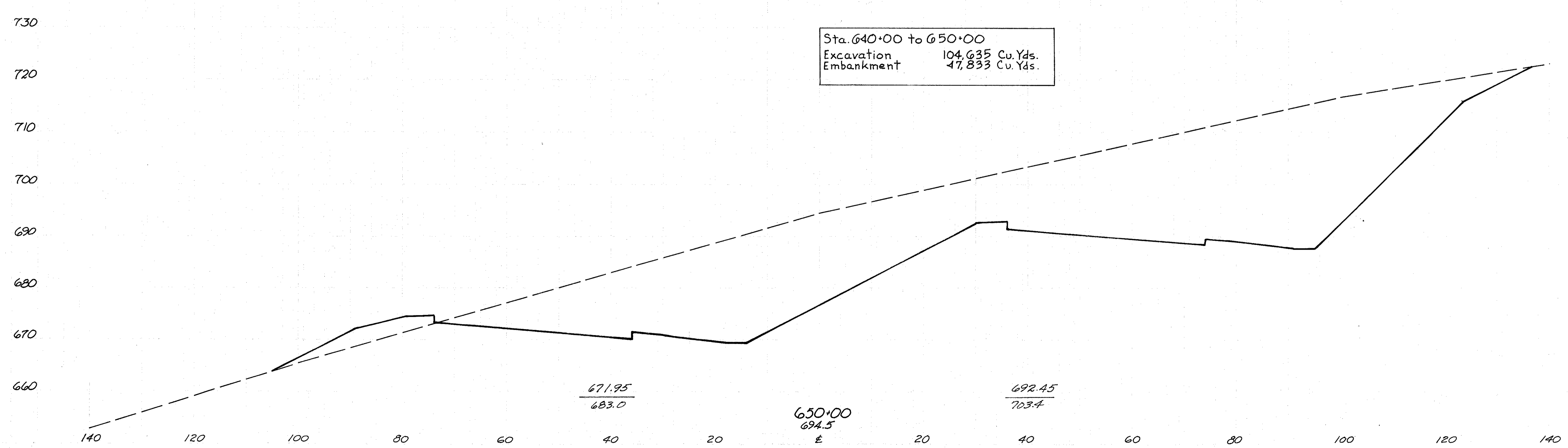
1297 1067

4722 1199

$\frac{672.42}{672.6}$

$\frac{692.92}{690.7}$

650+59
682.7



3025 30

16084 56

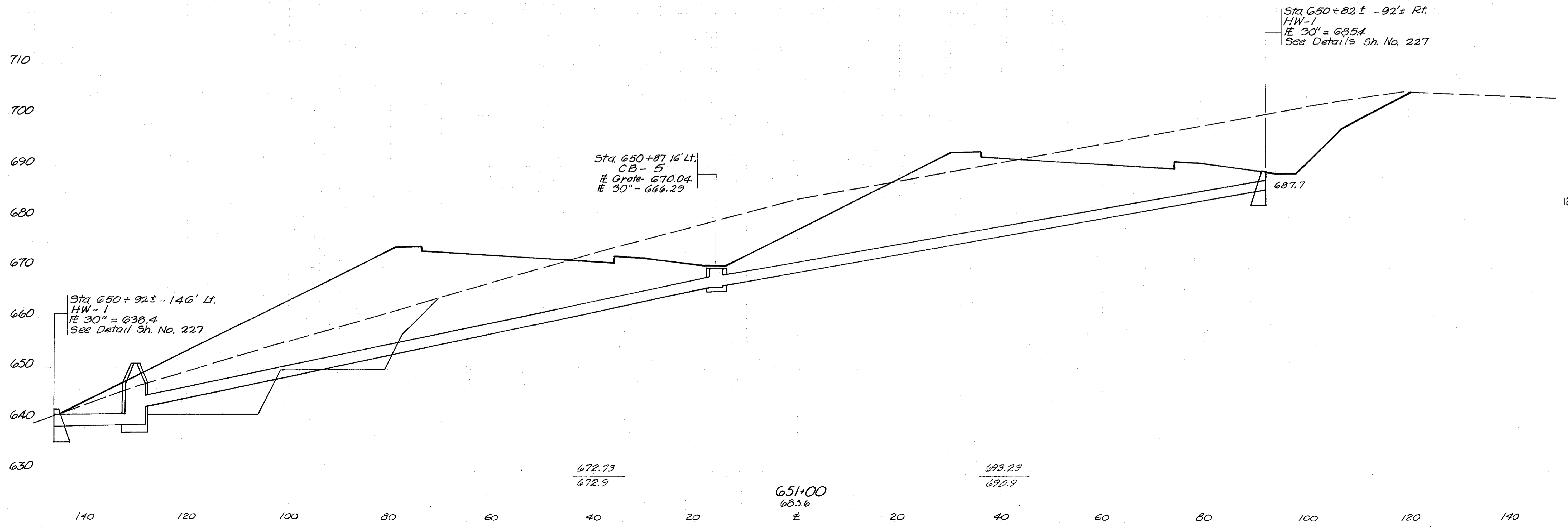
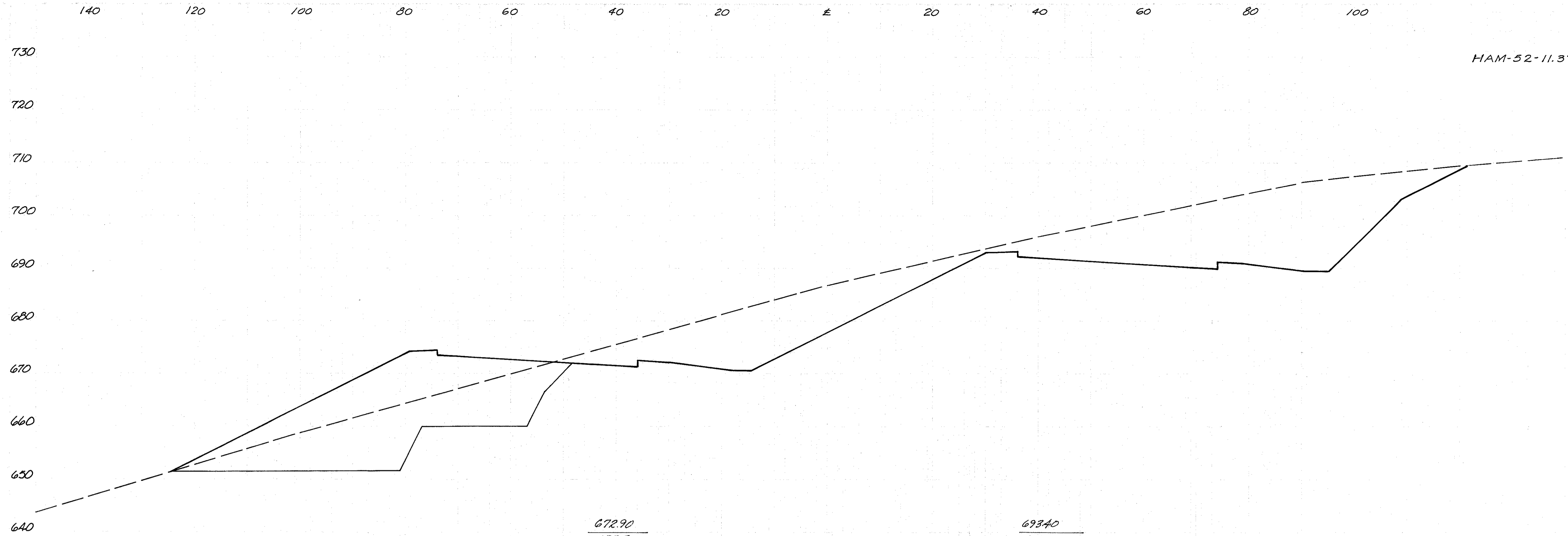
$\frac{671.95}{683.0}$

$\frac{692.45}{703.4}$

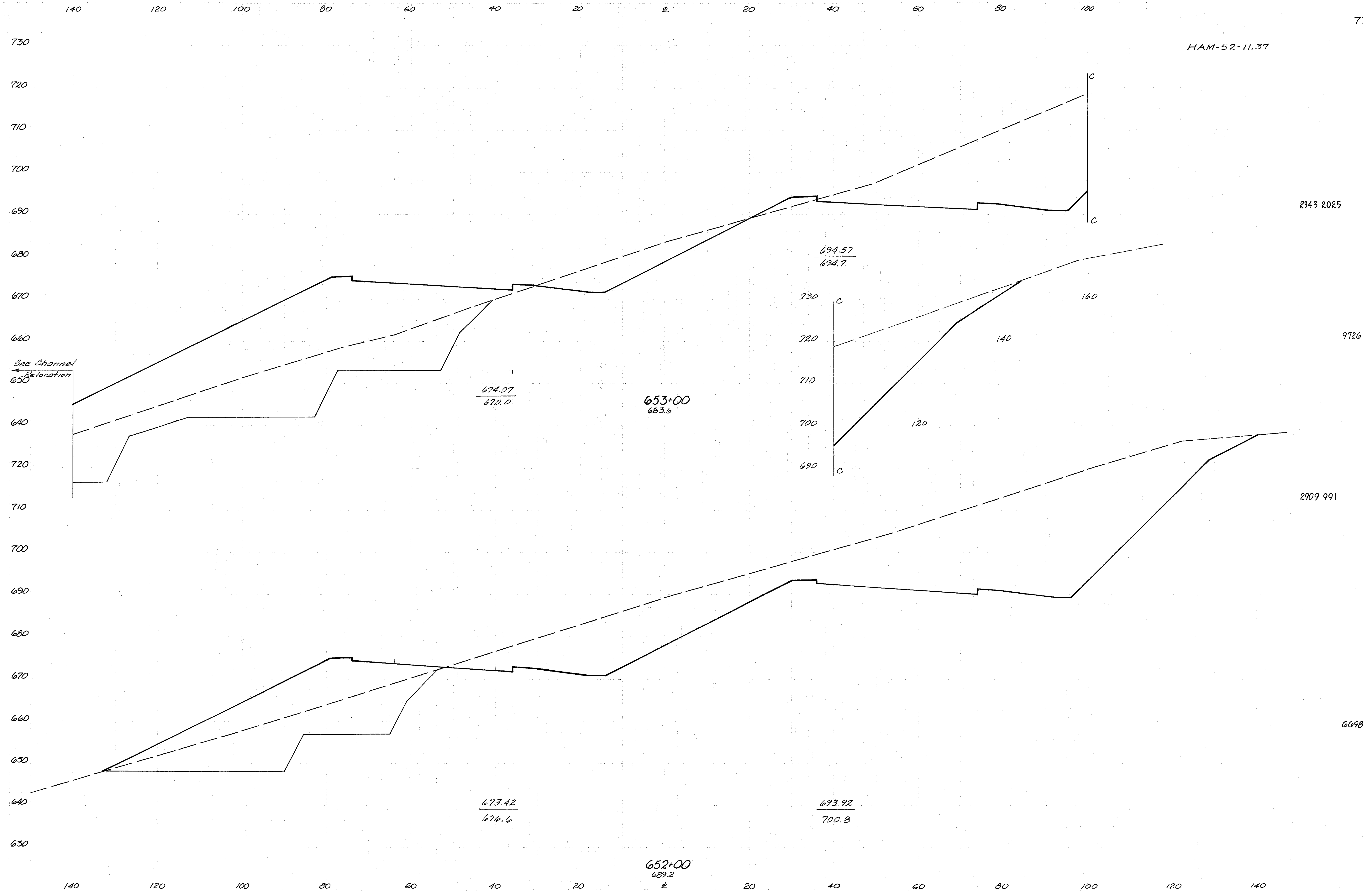
650+00
694.5

STA. 650+00 TO STA. 650+59

HAM-52-11.37



HAM-52-11.37



HAM-52-11.37

710
700
690
680
670
660
650
640
630
620
610
600
650
640
630
620

See Channel Relocation

See Channel Relocation

Sta. 654+67 16' Lt.
CB-5
E Grate - 673.4
E 30" - 668.50

Sta. 654+67.91' Rt.
HW-1 Headwall
E 30" - 689.89
See Detail Sh. No. 228

654+77
674.3

675.22
660.7

695.72
684.6

1378 4340

4190 10,620

1561 3108

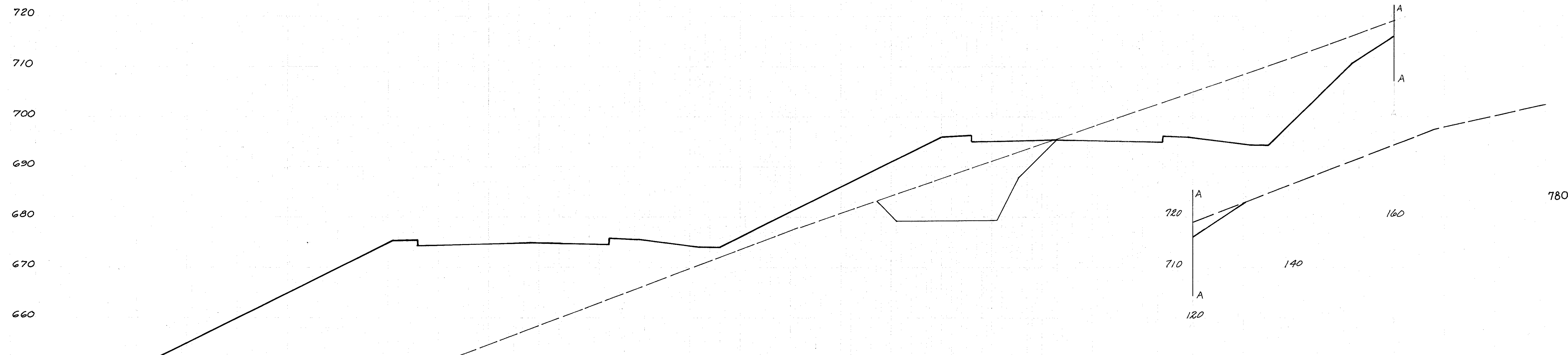
7230 9506

654+00
678.2

674.72
665.4

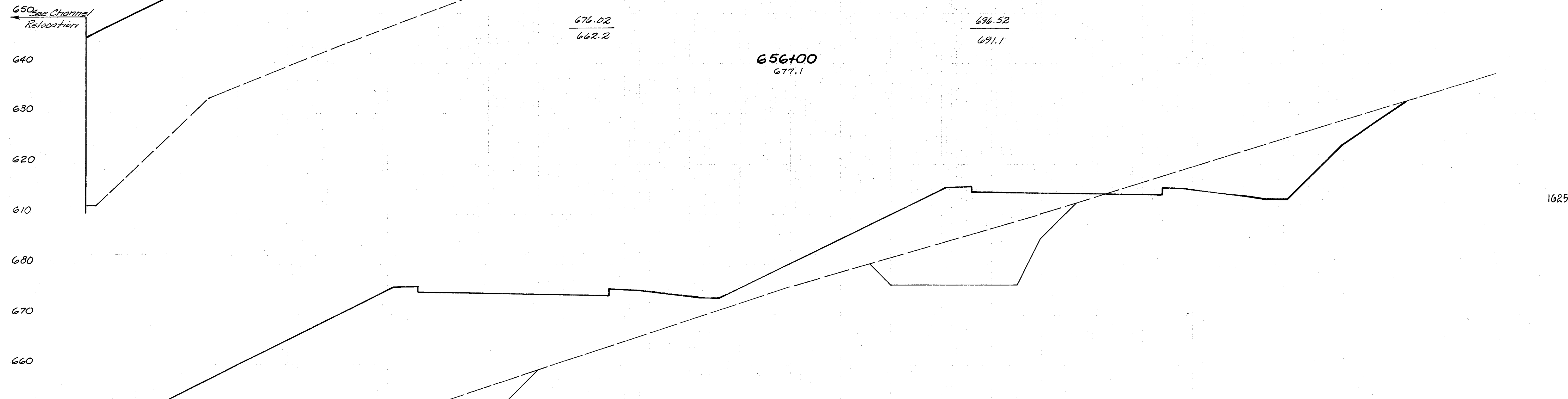
695.22
690.1

HAM-52-11.37



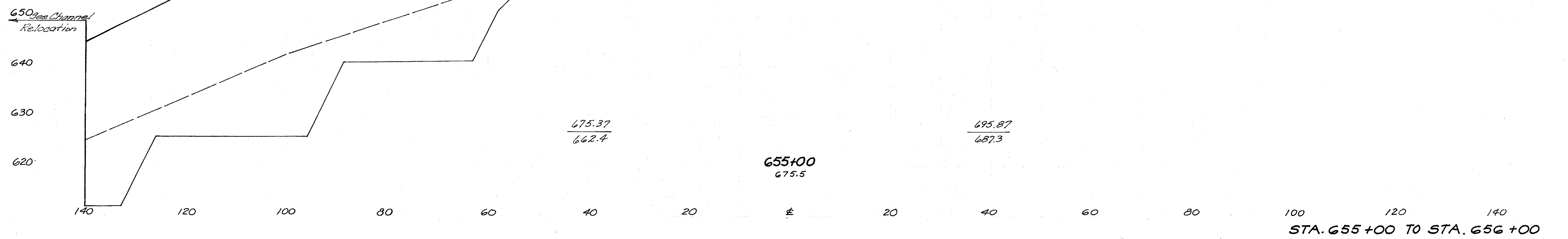
780 3194

445413217



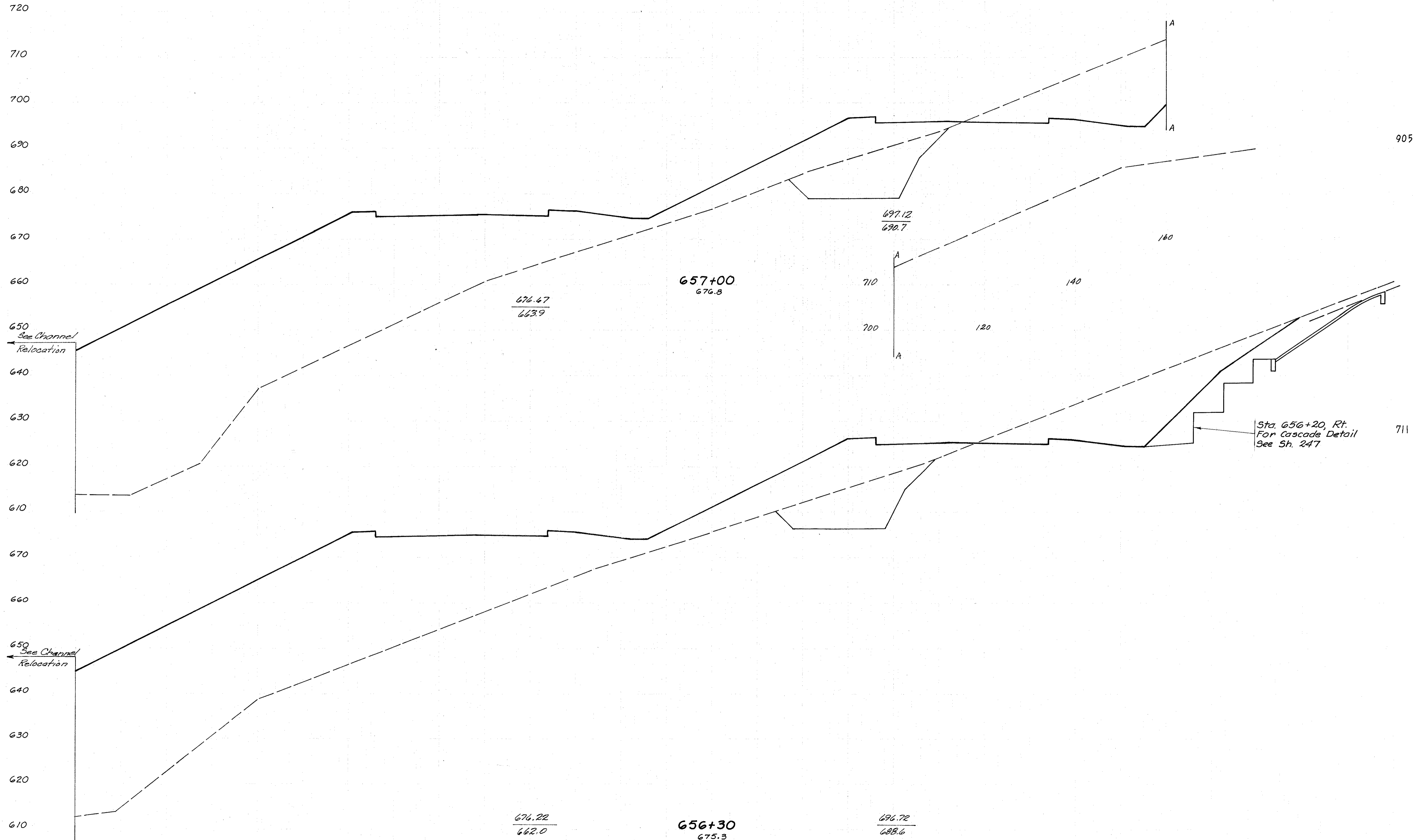
1625 3943

1279 3528



STA. 655+00 TO STA. 656+00

HAM-52-11.37



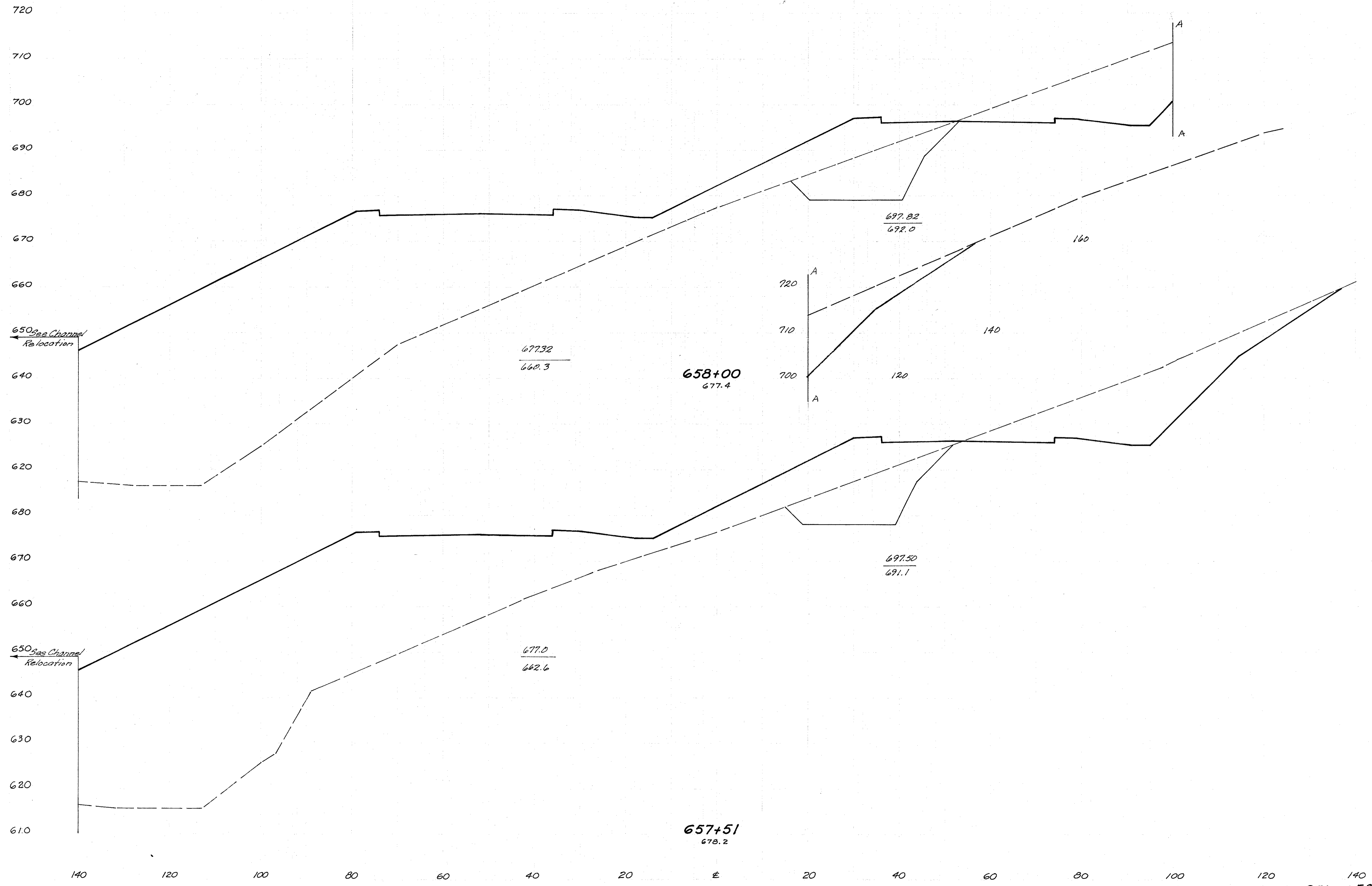
905 3587

2095 9323

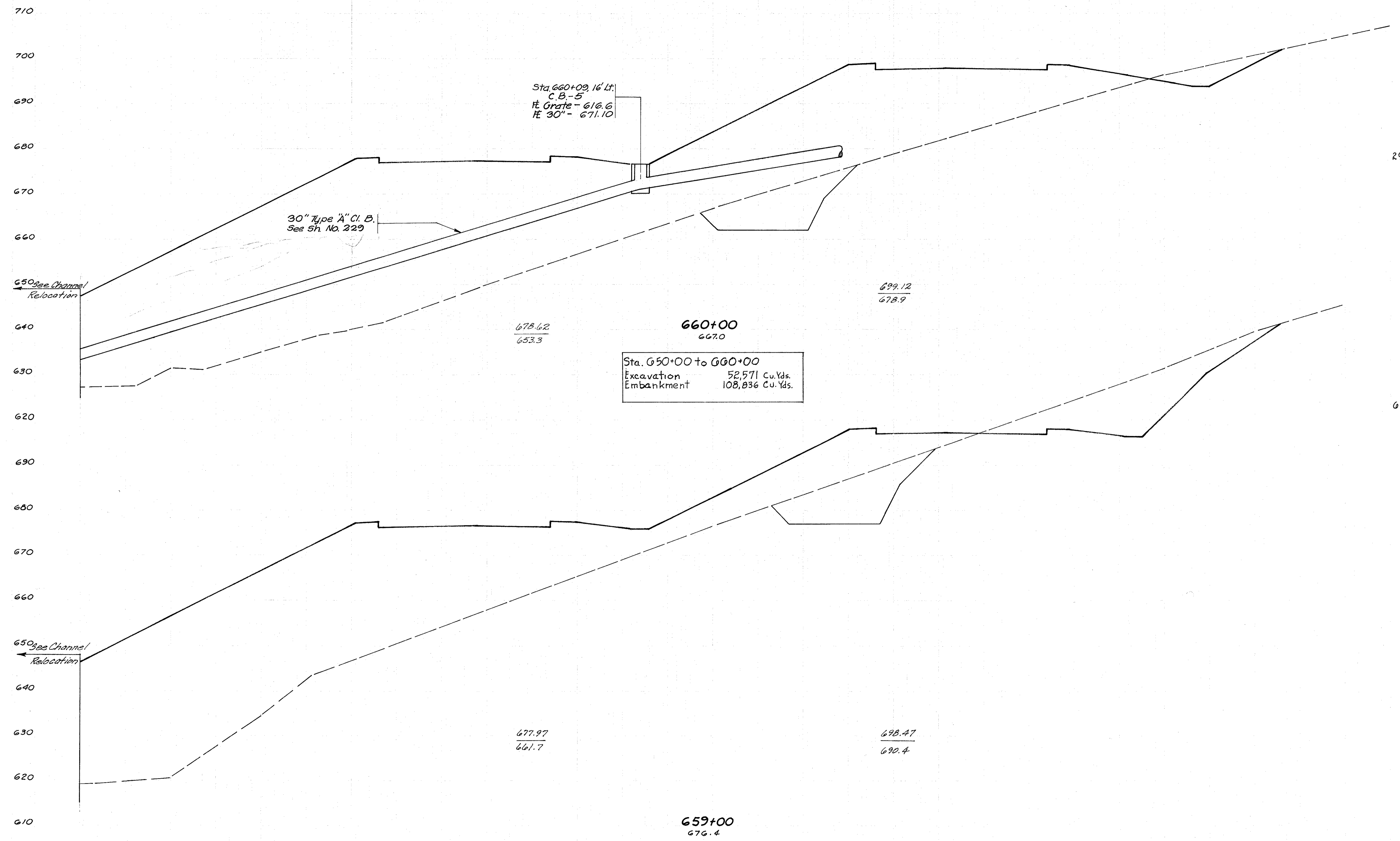
711 3605

828 3777

HAM-52-11.37



HAM-52-11.37



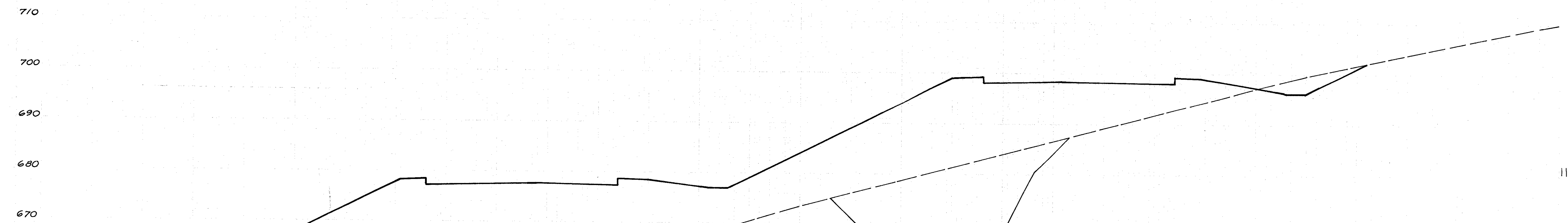
295 5390

1759 16,730

655 3869

300714,997

HAM-52-11.37



1187 4913

1120 5181

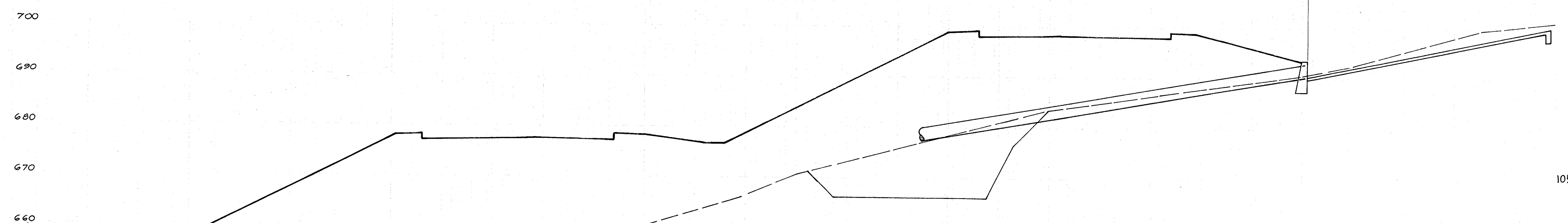
$$\frac{678.95}{661.3}$$

660+51
673.5

$$\frac{699.45}{684.0}$$

Sta 660+19, 102' Rt.
HW-1
± 30" - 690.30
See Detail Sh. No. 229

See Channel
Relocation
←



1053 5459

599 4822

$$\frac{678.78}{657.2}$$

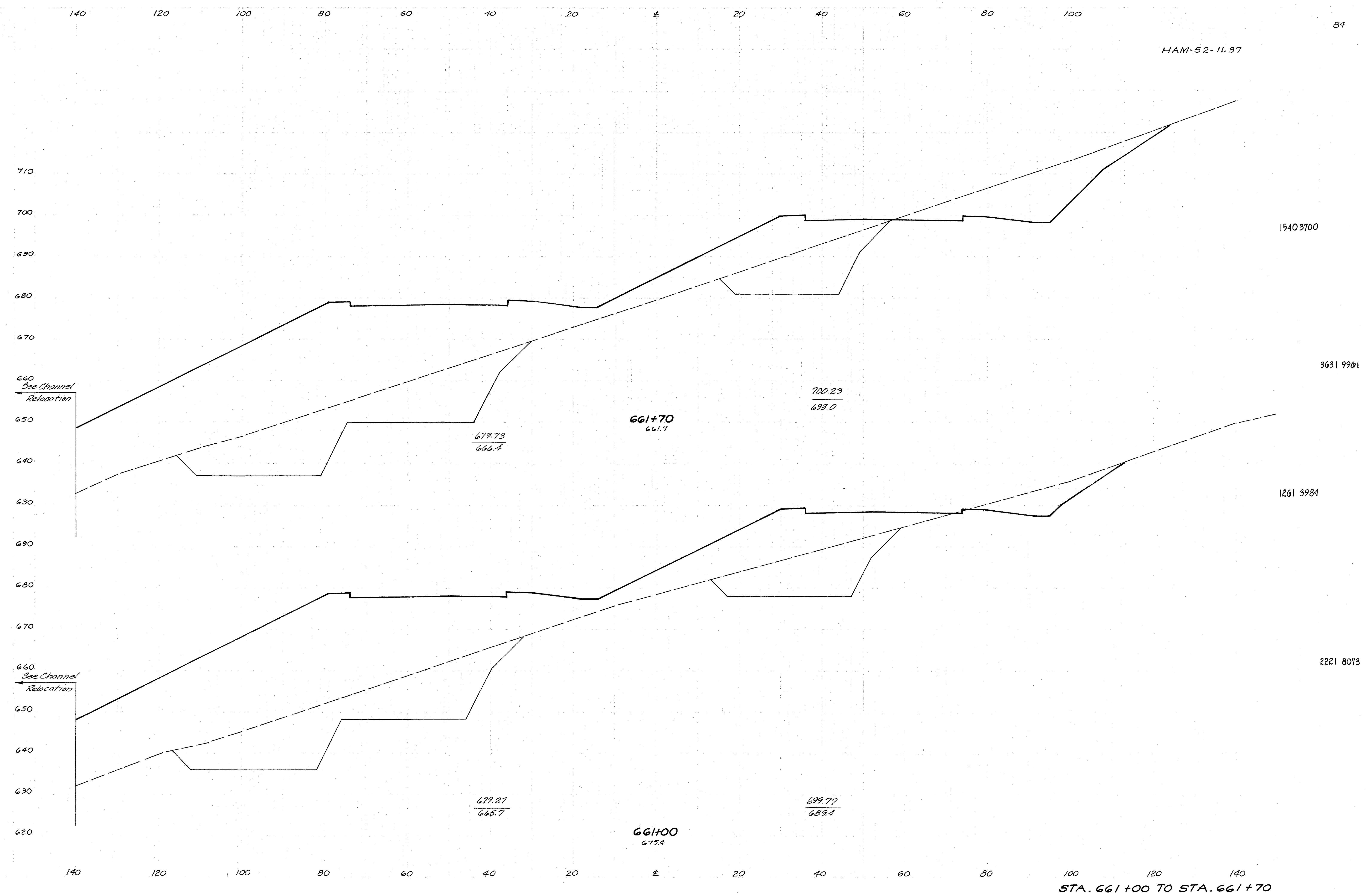
660+24
670.3

$$\frac{699.38}{681.0}$$

See Channel
Relocation
←

140 120 100 80 60 40 20 ± 20 40 60 80 100 120 140
STA. 660+24 TO STA 660+51

HAM-52-11.37



15403700

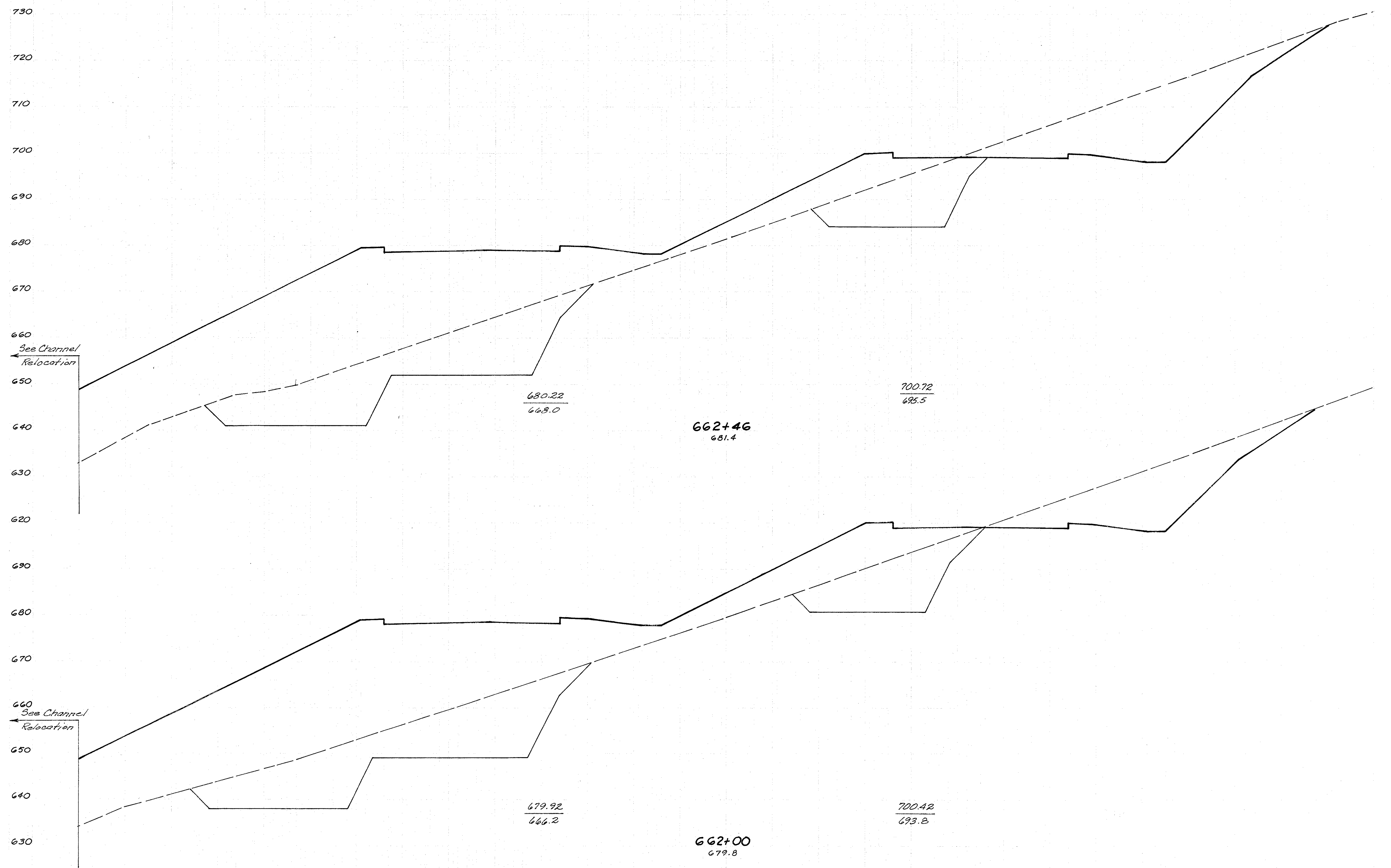
3631 9901

1261 3984

2221 8073

STA. 661+00 TO STA. 661+70

HAM-52-11.37



See Channel Relocation

See Channel Relocation

680.22
668.0

700.72
685.5

662+46
681.4

679.92
666.2

700.42
693.8

662+00
679.8

1640 3375

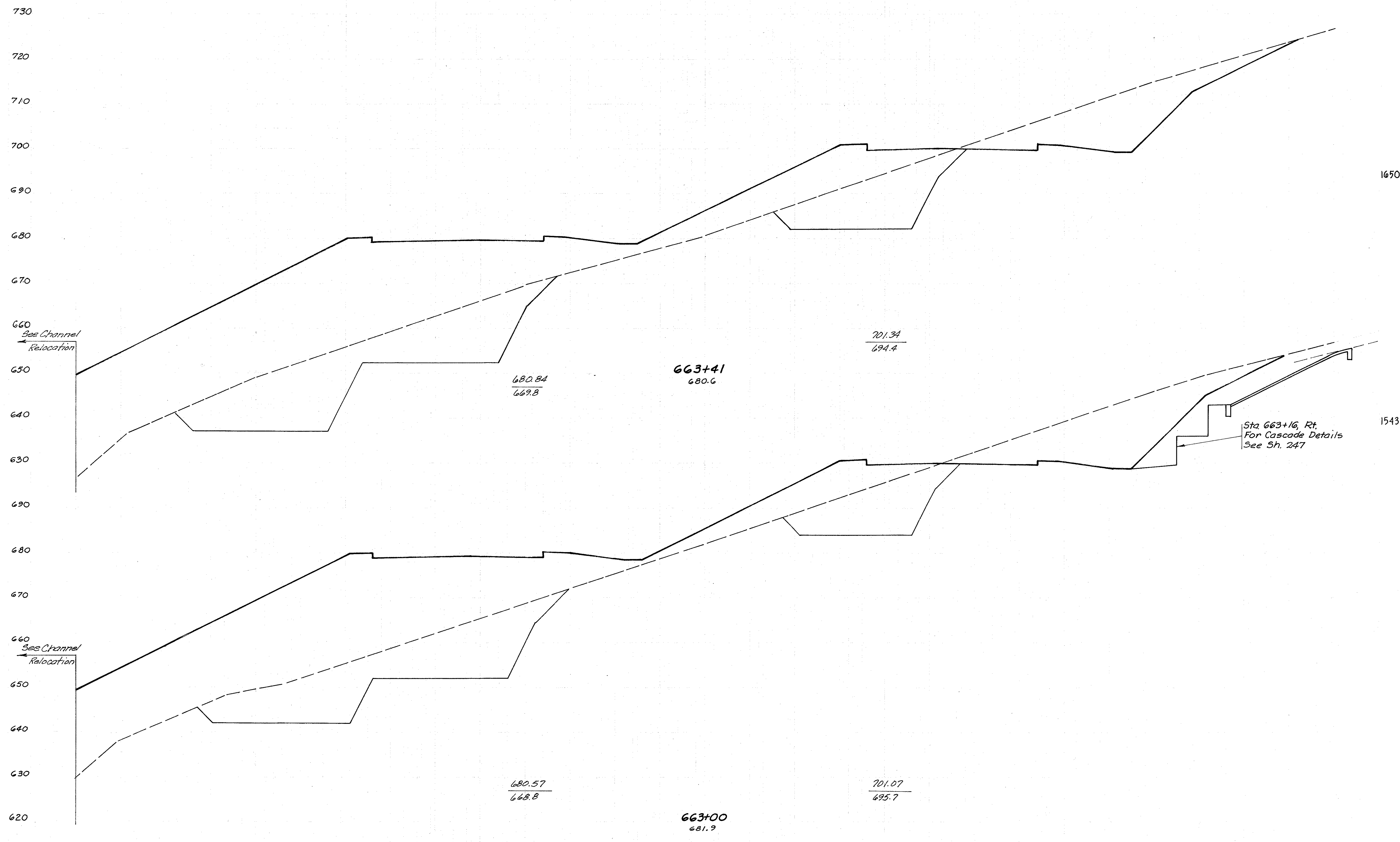
2749 6040

1587 3716

1737 4120

STA. 662+00 TO STA. 662+46

HAM-52-11.37



660
See Channel
Relocation

660
See Channel
Relocation

663+41
680.6

663+00
681.9

680.84
669.8

701.34
694.4

680.57
668.8

701.07
695.7

Sta 663+16, Rt.
For Cascade Details
See Sh. 247

1650 3703

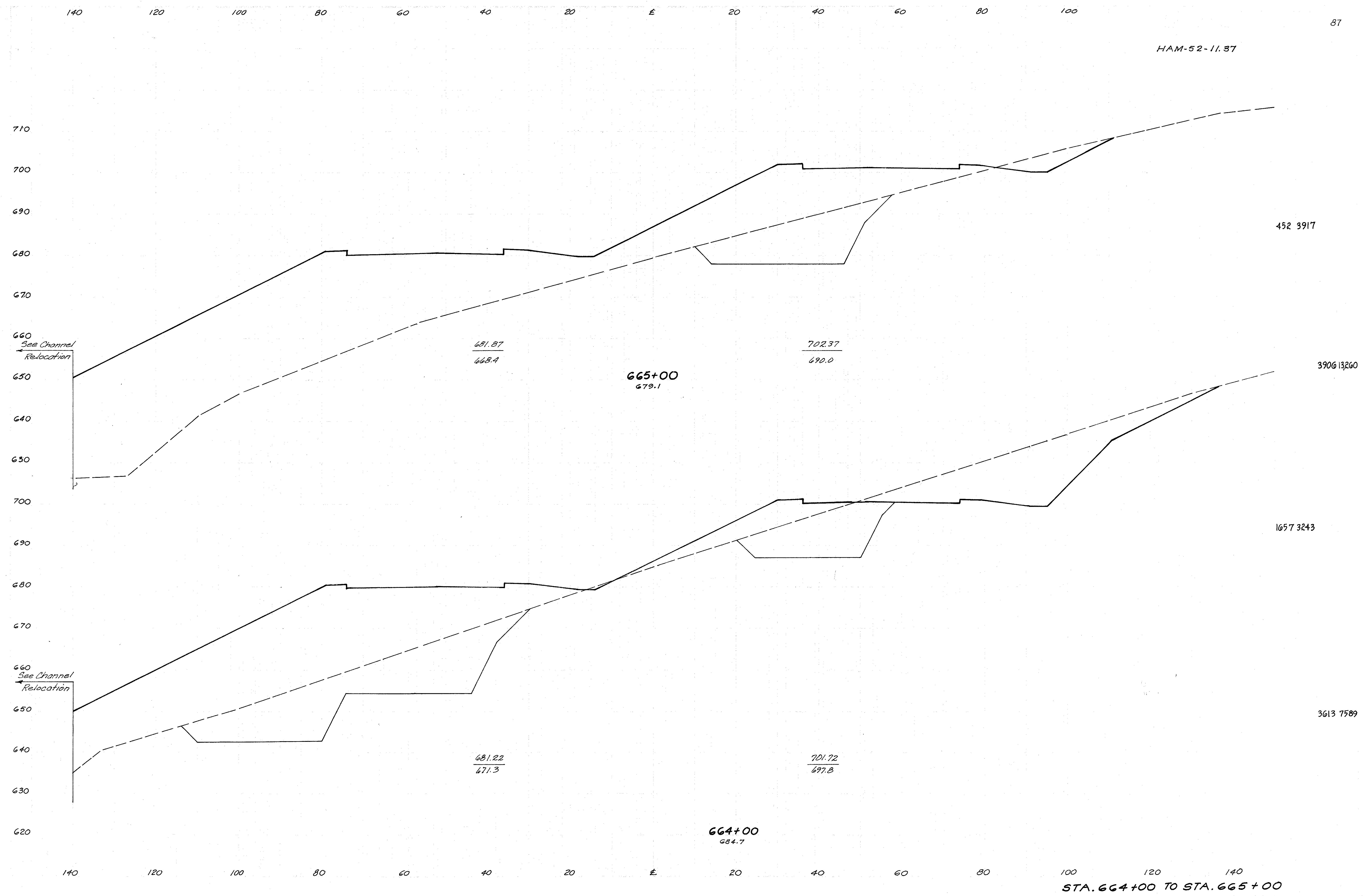
2424 5365

1543 3364

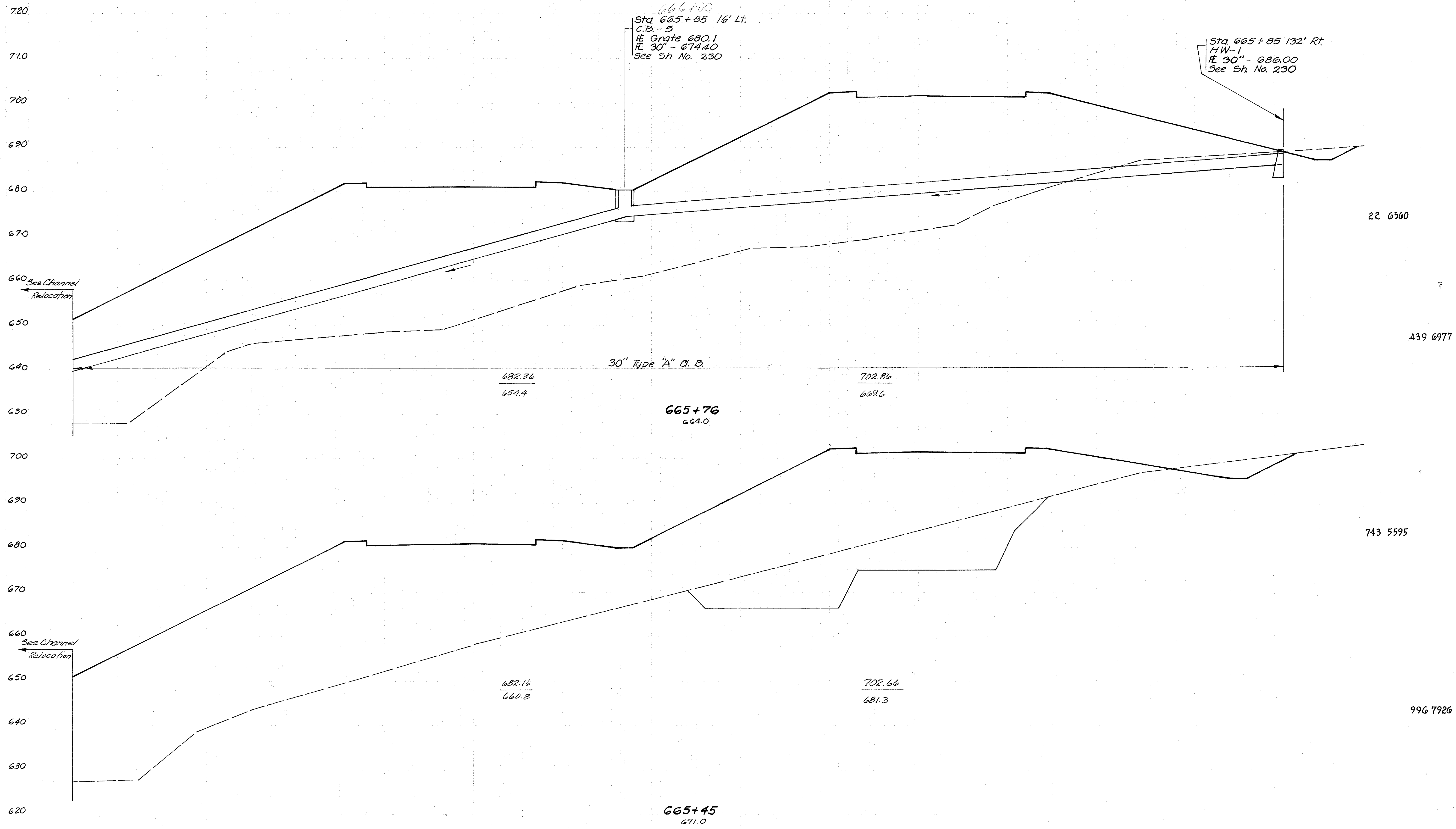
3183 6139

STA. 663+00 TO STA. 663+41

HAM-52-11.37

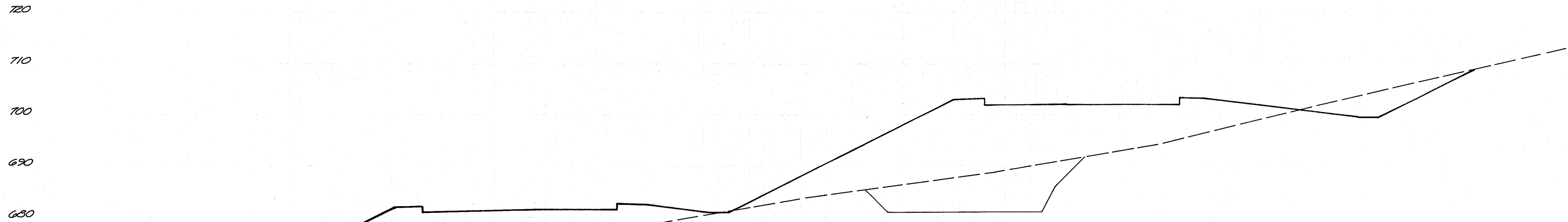


HAM-52-11.37



STA. 665+45 TO 665+76

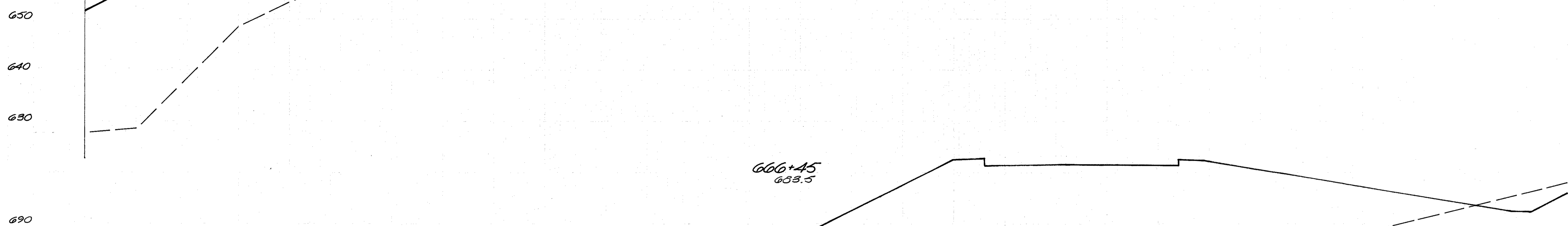
HAM-52-11.37



329 3007

784 6961

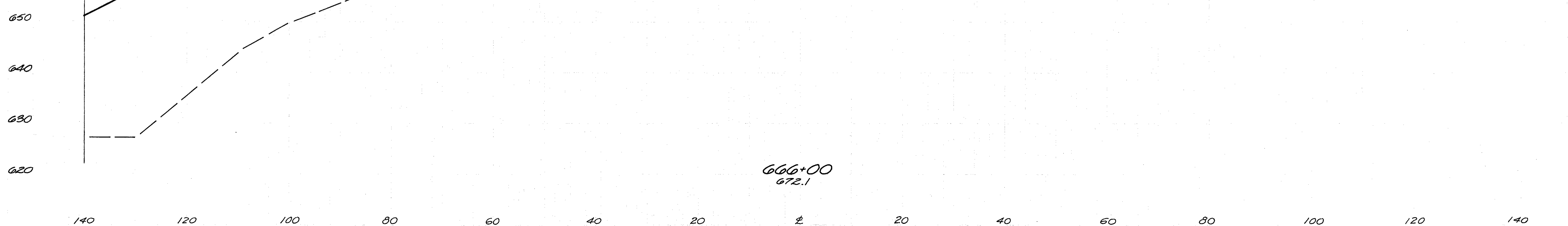
660
See Channel
Relocation



612 5352

282 5294

660
See Channel
Relocation



STA. 666+00 TO 666+45

HAM-52-11.37

740
730
720
710
700
690
680
670
660
650
640
700
690
680
670
660
650
640
630

140 120 100 80 60 40 20 ± 20 40 60 80 100

140 120 100 80 60 40 20 ± 20 40 60 80 100

See Channel
Relocation

See Channel
Relocation

$\frac{683.63}{685.1}$

$\frac{704.13}{707.6}$

667+70
695.3

$\frac{683.17}{680.9}$

$\frac{703.67}{700.0}$

667+00
690.8

2030 1069

3259 3041

484 1277

828 4363

STA. 667+00 TO 667+70

HAM-52-11.37

740

730

720

710

700

690

680

670

660

650

640

710

700

690

680

670

660

650

640

140

120

100

80

60

40

20

±

20

40

60

80

100

140

120

100

80

60

40

20

±

20

40

60

80

100

120

140

See Channel
Relocation

See Channel
Relocation

$\frac{683.95}{683.1}$

$\frac{704.45}{706.7}$

668+20
695.0

$\frac{683.82}{684.3}$

$\frac{704.32}{707.5}$

668+00
695.8

1625 1028

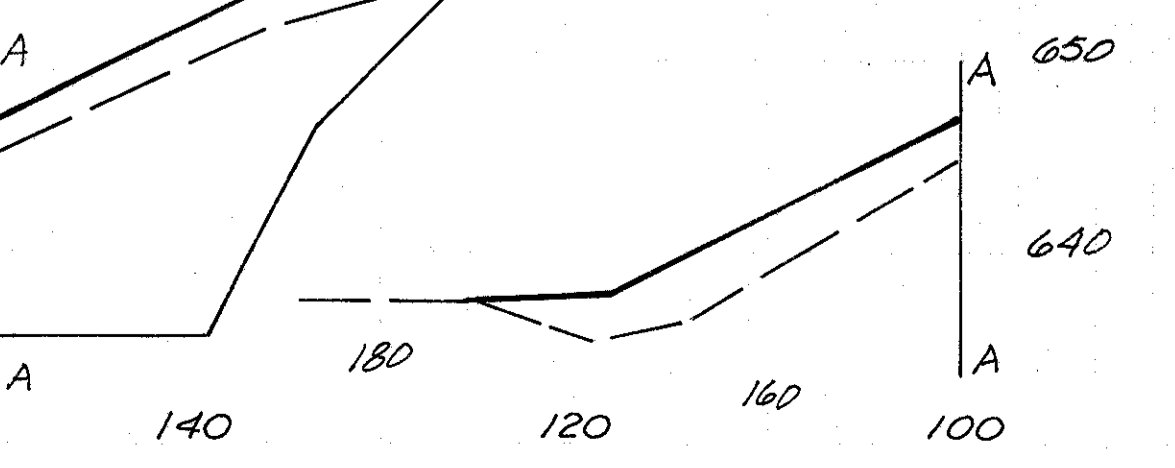
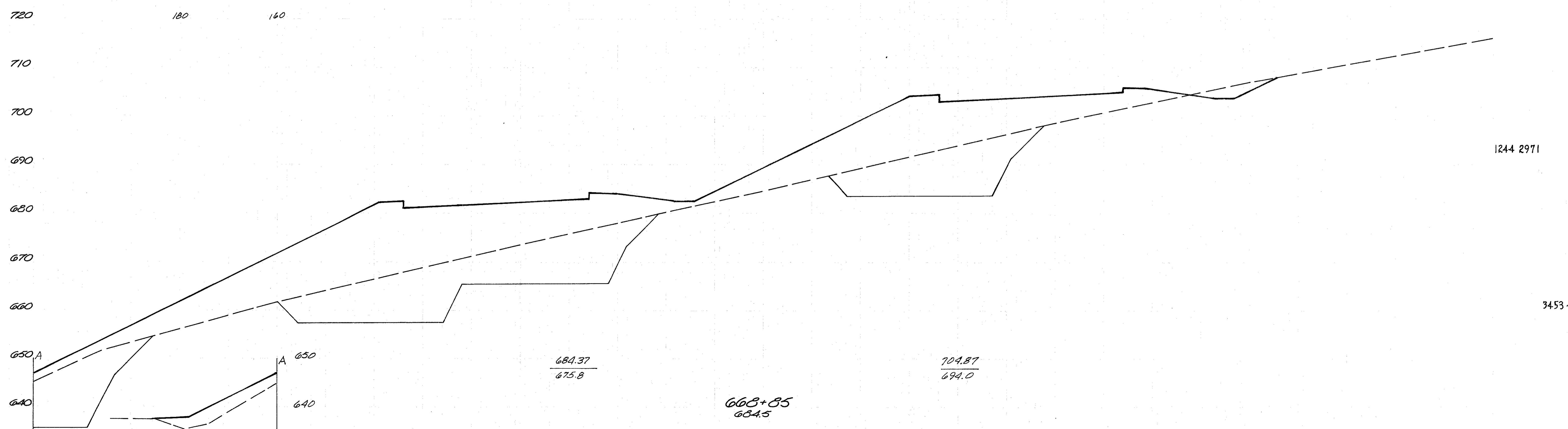
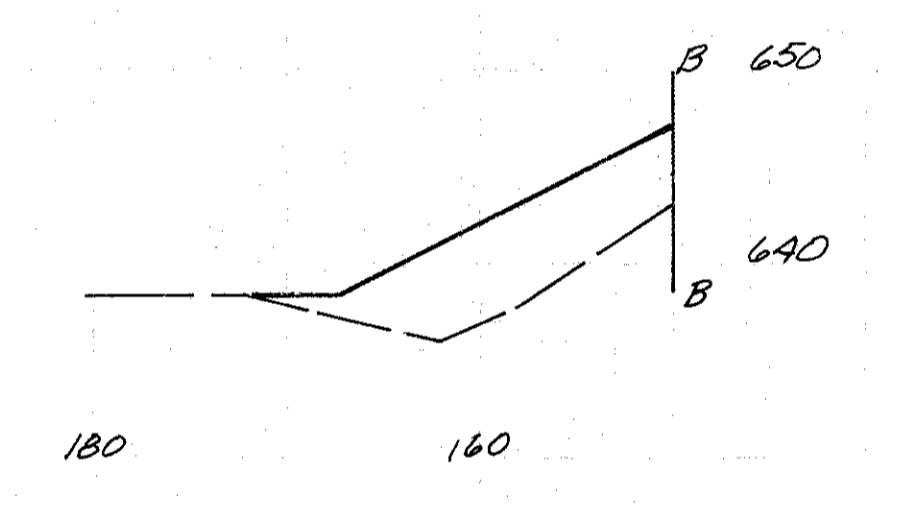
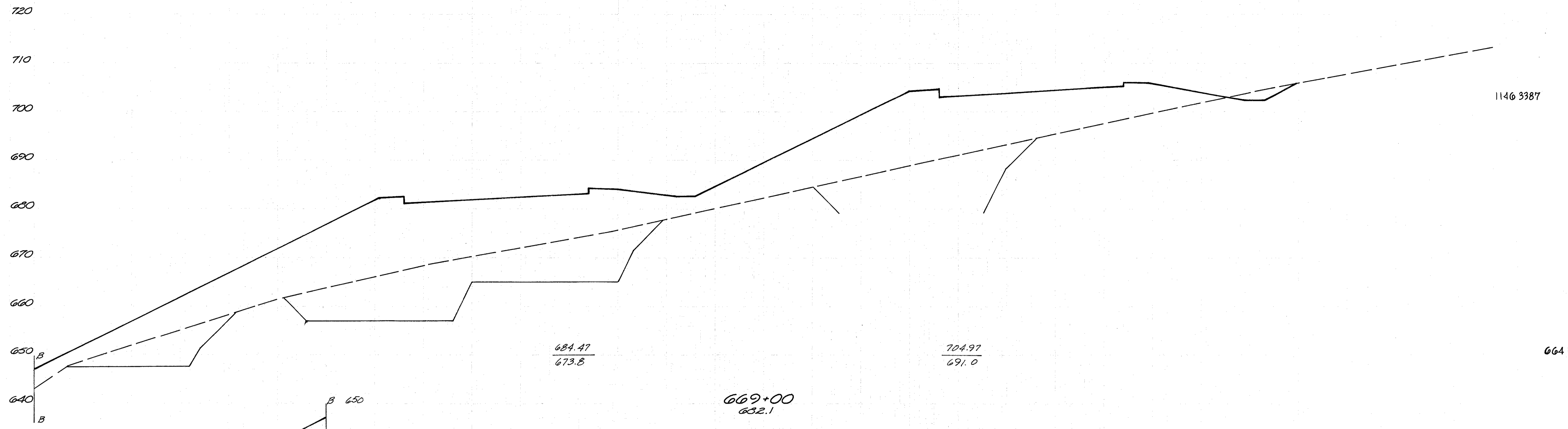
1264 726

1787 933

2120 1112

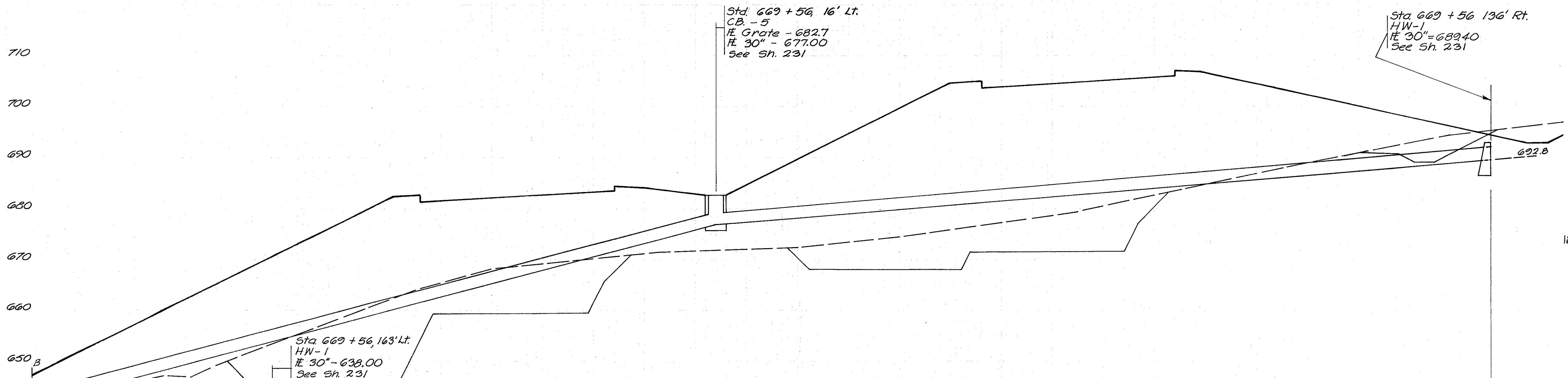
STA. 668+00 TO STA. 668+20

HAM-52-11.37



STA. 668+85 TO STA. 669+00

HAM-52-11.37



Sta. 669 + 56 16' Lt.
 C.B. - 5
 # Grate - 682.7
 # 30" - 677.00
 See Sh. 231

Sta. 669 + 56 136' Rt.
 HW-1
 # 30" = 689.40
 See Sh. 231

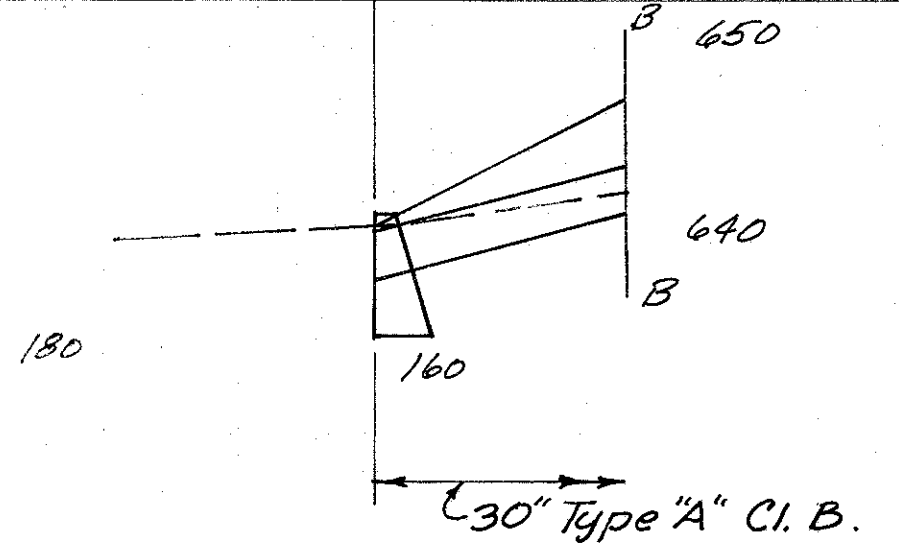
Sta. 669 + 56 163' Lt.
 HW-1
 # 30" - 638.00
 See Sh. 231

30" Type "A", Cl. B.

$\frac{684.76}{670.2}$

$\frac{705.26}{677.2}$

669+45
 672.3



650 B

640 B

650

640

30" Type "A" Cl. B.

700

690

680

670

660

650 A

640 A

650

640

160

$\frac{684.61}{673.9}$

$\frac{705.11}{687.7}$

669+21
 679.7

697.5

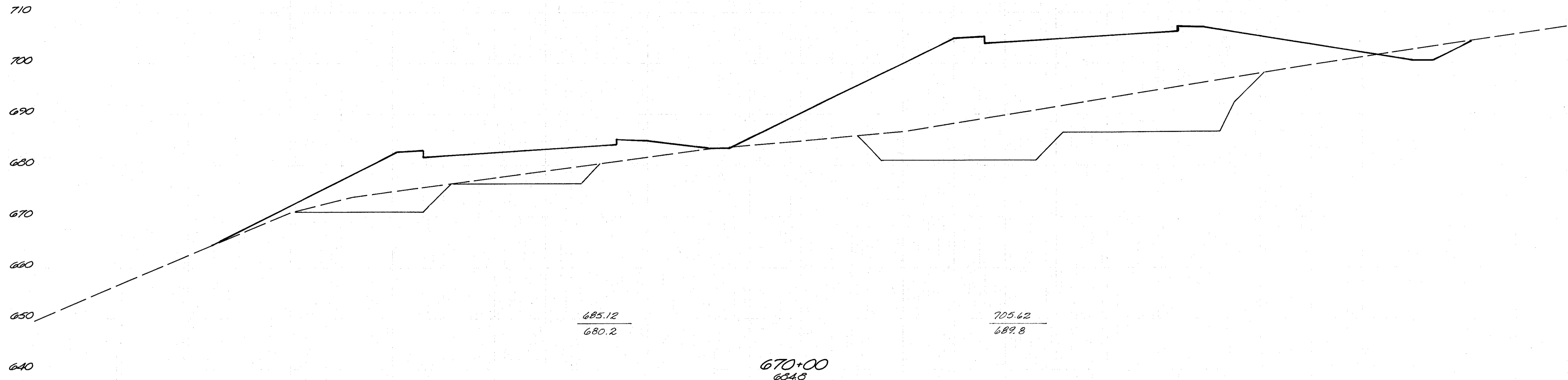
1232 5725

1146 4380

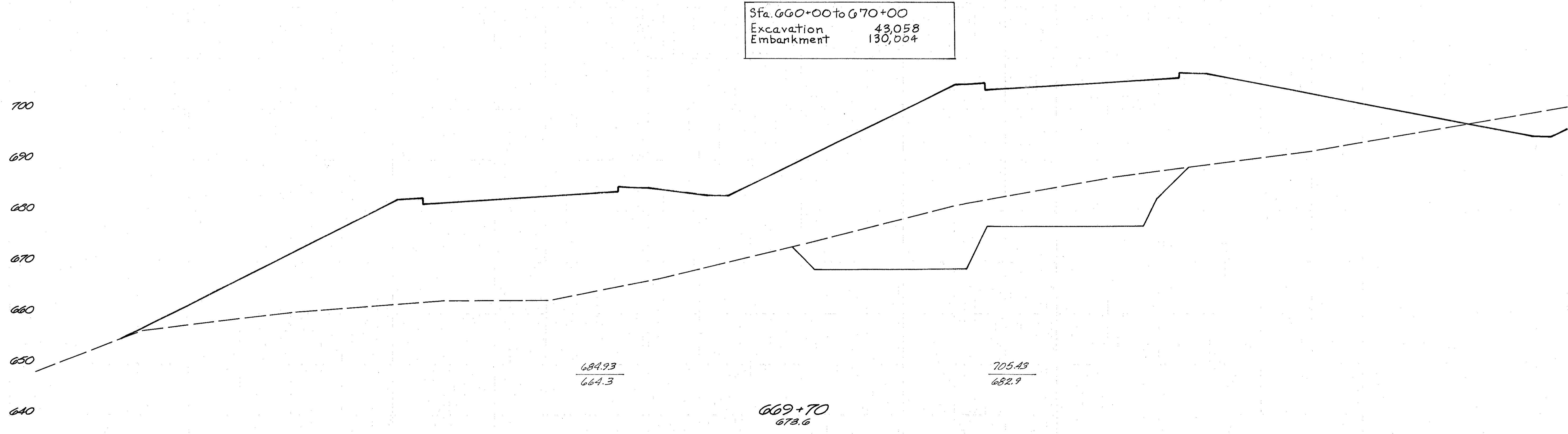
1346 4132

969 2923

HAM-52-11.37



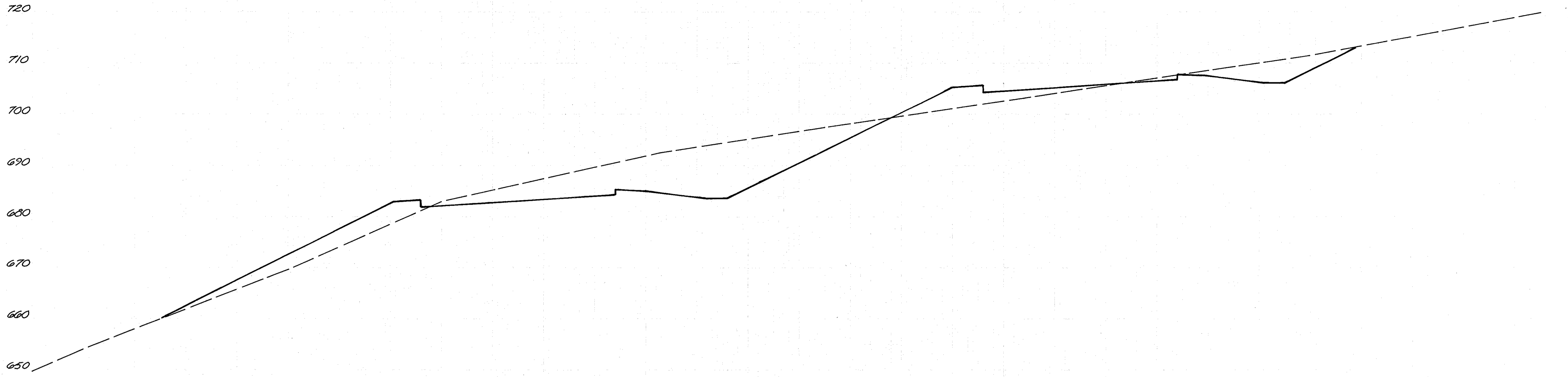
780 3782



891 4789

140 120 100 80 60 40 20 0 20 40 60 80 100

HAM-52-11.37

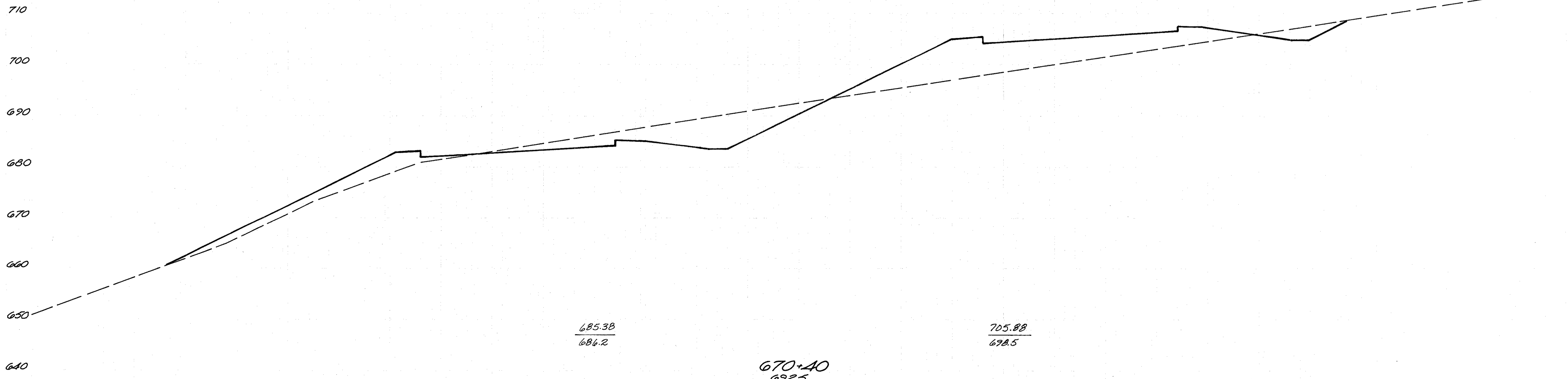


552 199

444 374

670+71
696.8

706.08
702.6



221 453

691 1955

670+40
692.5

705.88
698.5

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 670+40 TO STA. 670+71

HAM-52-11.37

720
710
700
690
680
670
660
650

496 307

630 327

$\frac{685.97}{688.8}$

$\frac{706.47}{702.3}$

671+30
695.5

720
710
700
690
680
670
660
650

638 222

639 226

$\frac{685.77}{689.7}$

$\frac{706.27}{704.0}$

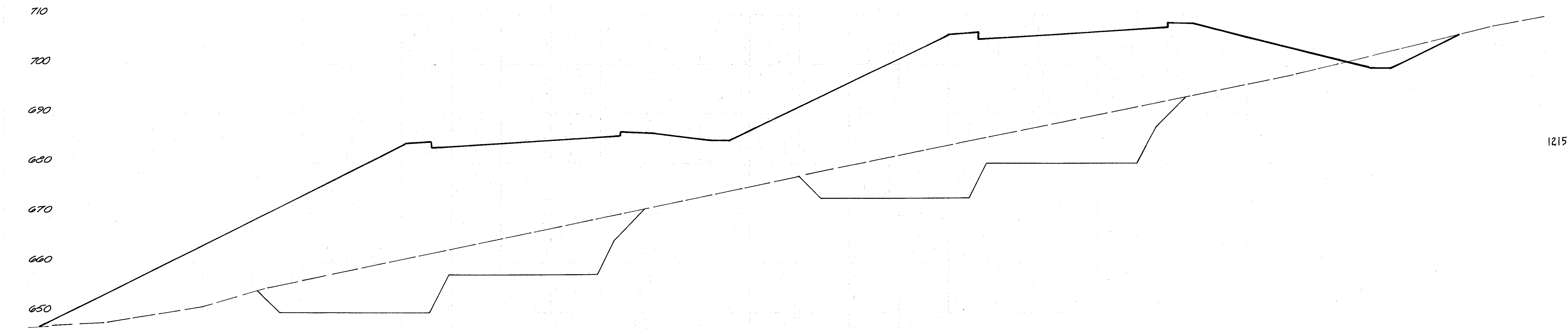
671+00
697.4

140 120 100 80 60 40 20 0 20 40 60 80 100

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 671+00 TO STA. 671+30

HAM-52-11.37



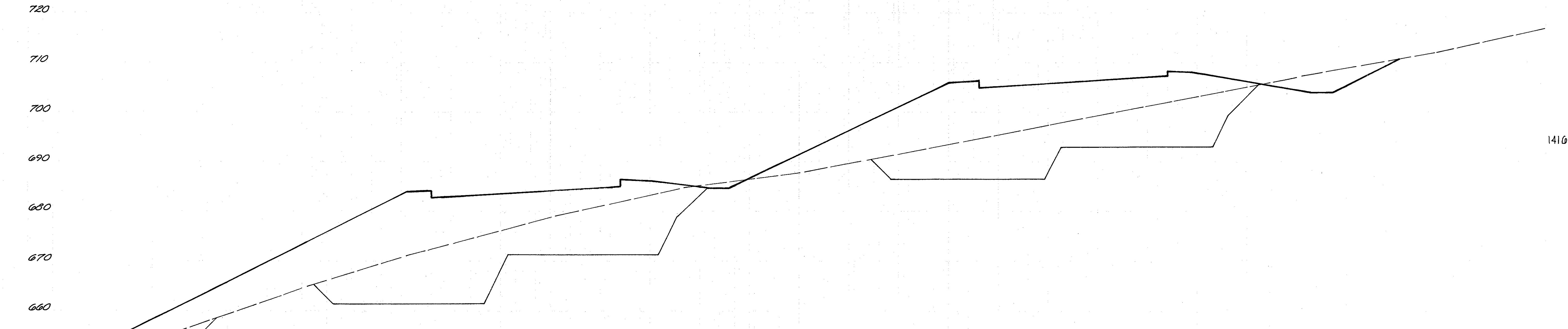
1215 5025

1608 4828

$\frac{686.42}{669.0}$

$\frac{706.92}{685.7}$

672+00
677.6



1416 2876

1310 2222

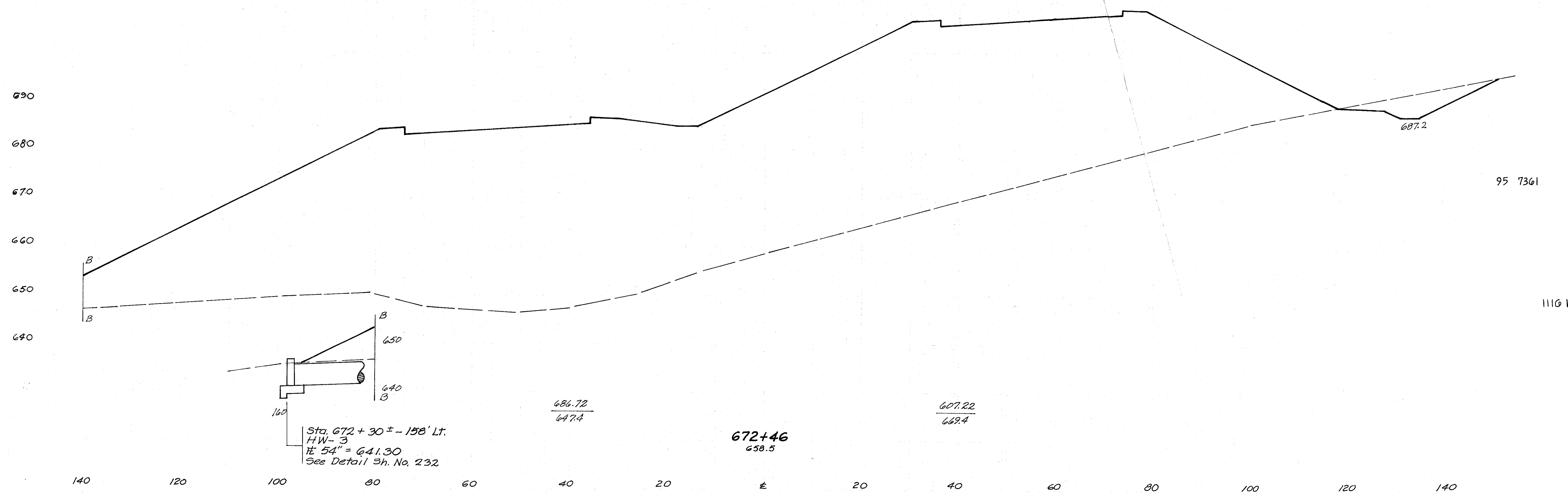
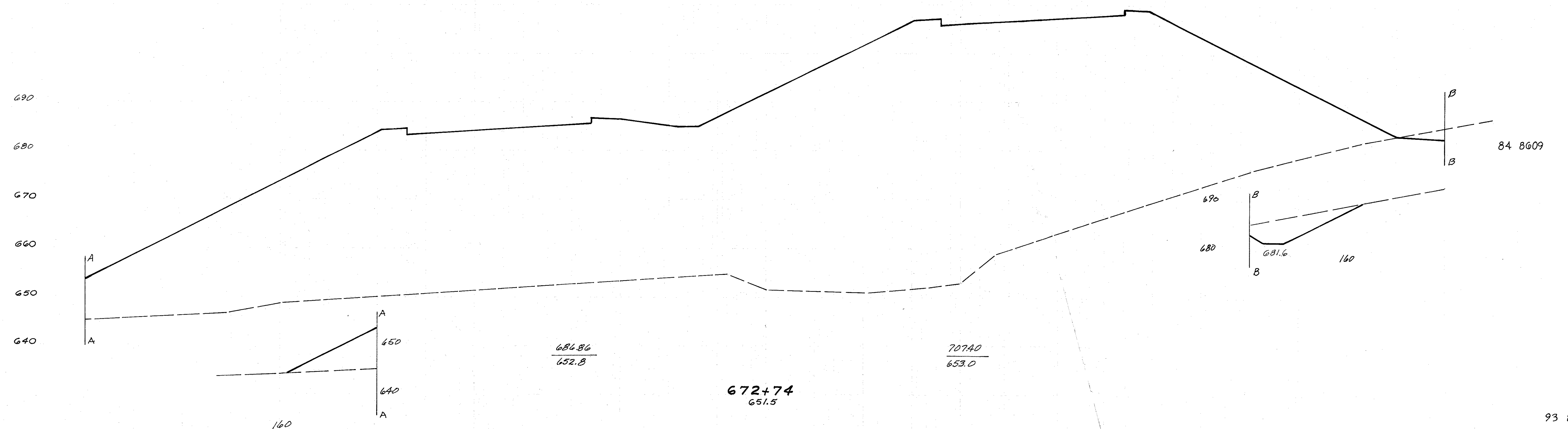
$\frac{686.20}{681.0}$

$\frac{706.70}{695.3}$

671+67
687.9

140 120 100 80 60 40 20 ± 20 40 60 80 100 120 140
STA. 671+67 TO STA. 672+00

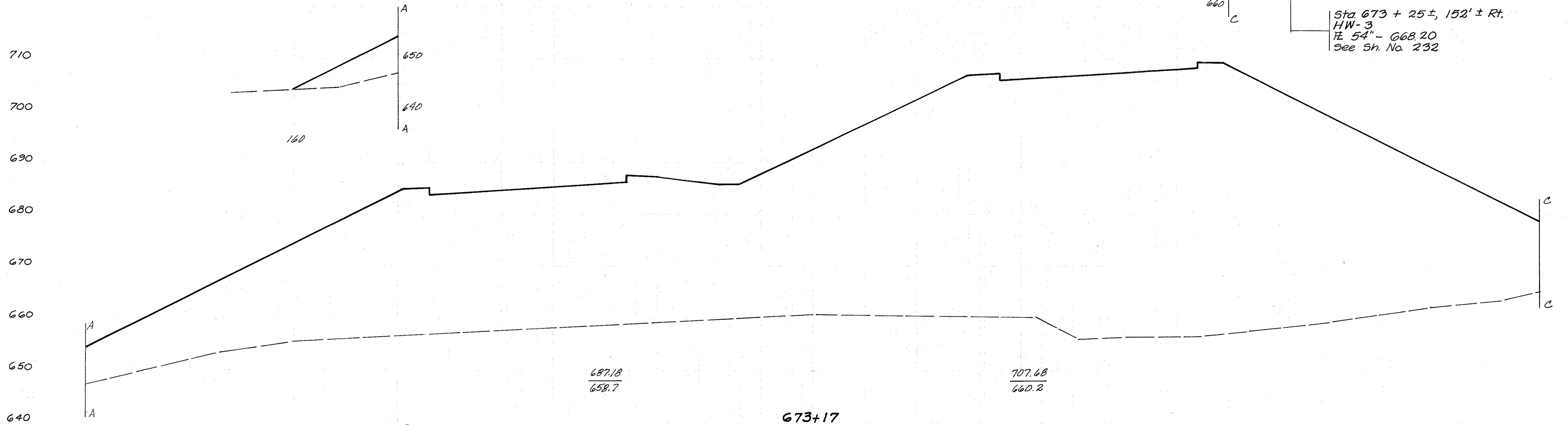
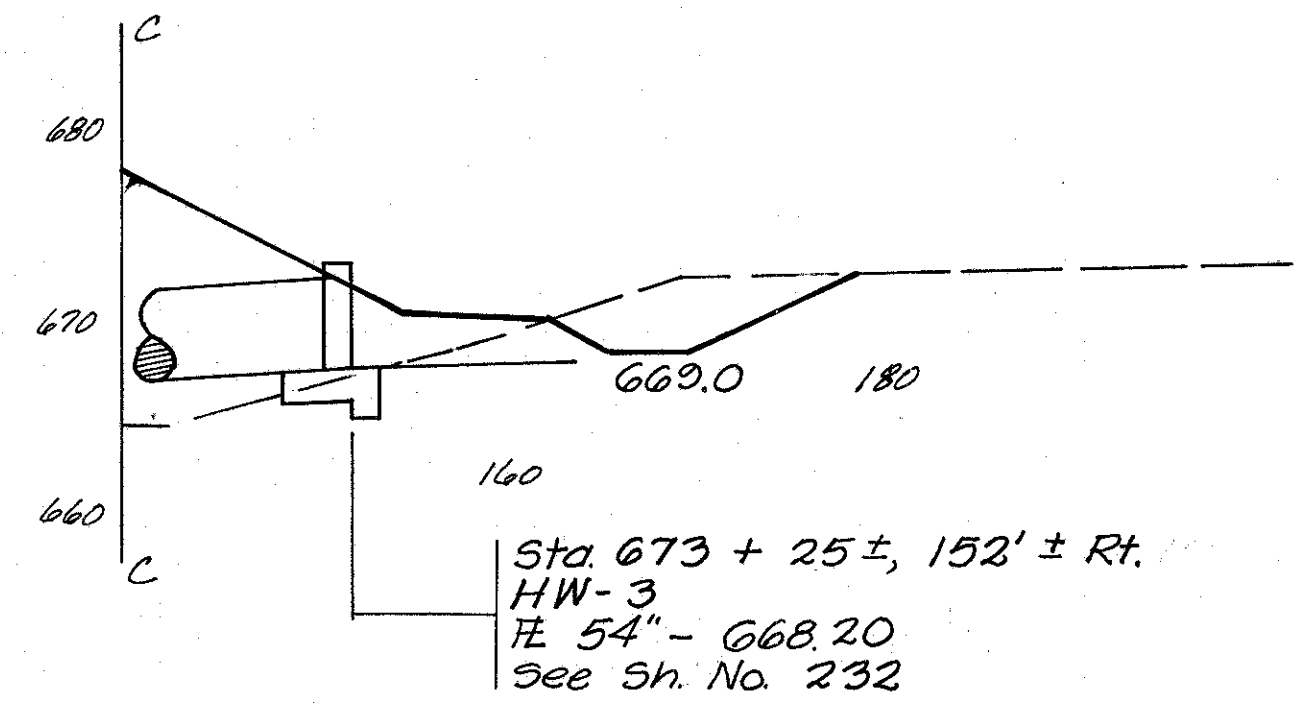
HAM-52-11.37



Sta. 672 + 30 ± - 158' Lt.
 HW-3
 H 54" = 641.30
 See Detail Sh. No. 232

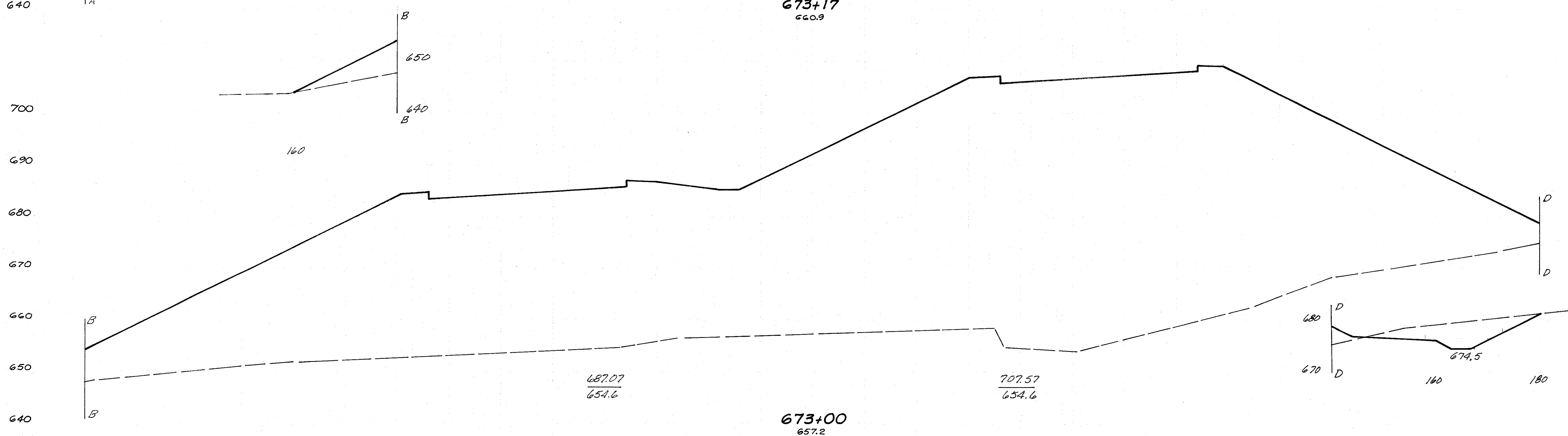
STA. 672+46 TO STA. 672+74

HAM-52-11.37



40 8996

50 5635



120 8904

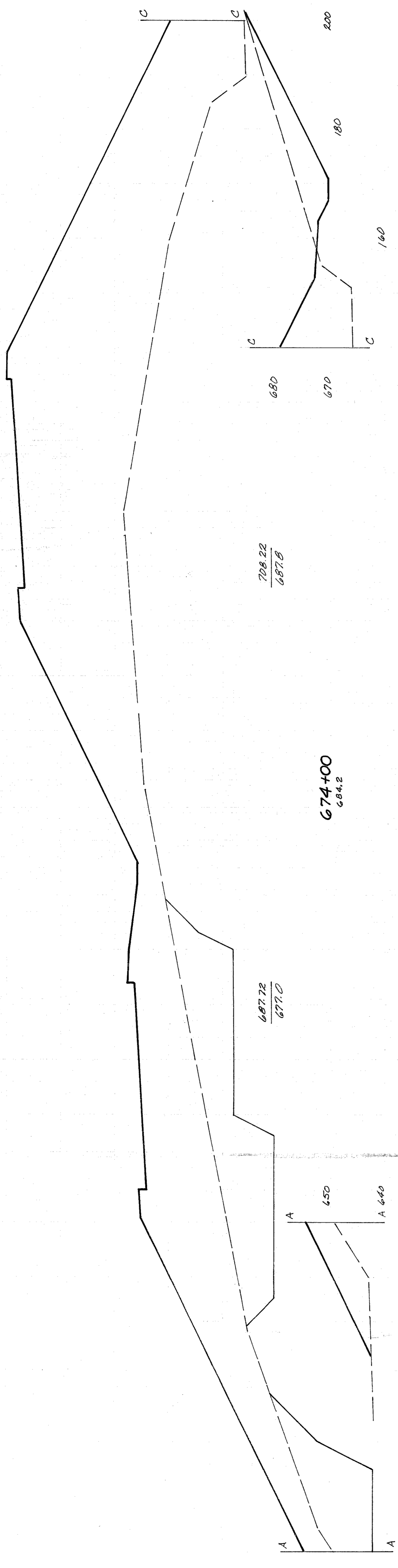
98 8443

STA. 673+00 TO STA. 673+17

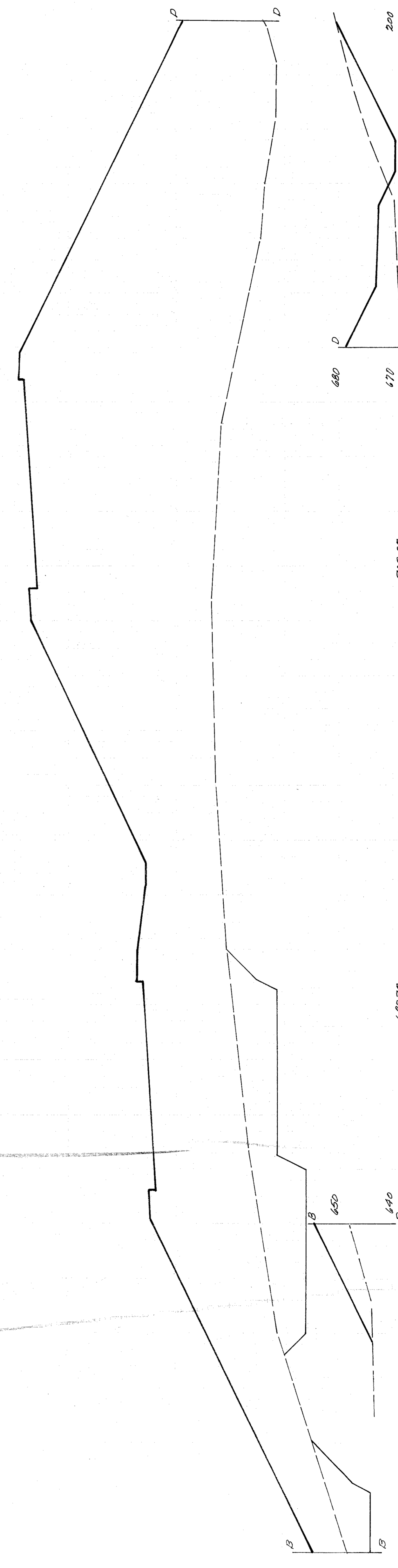
140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

HAM-52-11.97

700
690
680
670
660
650
640



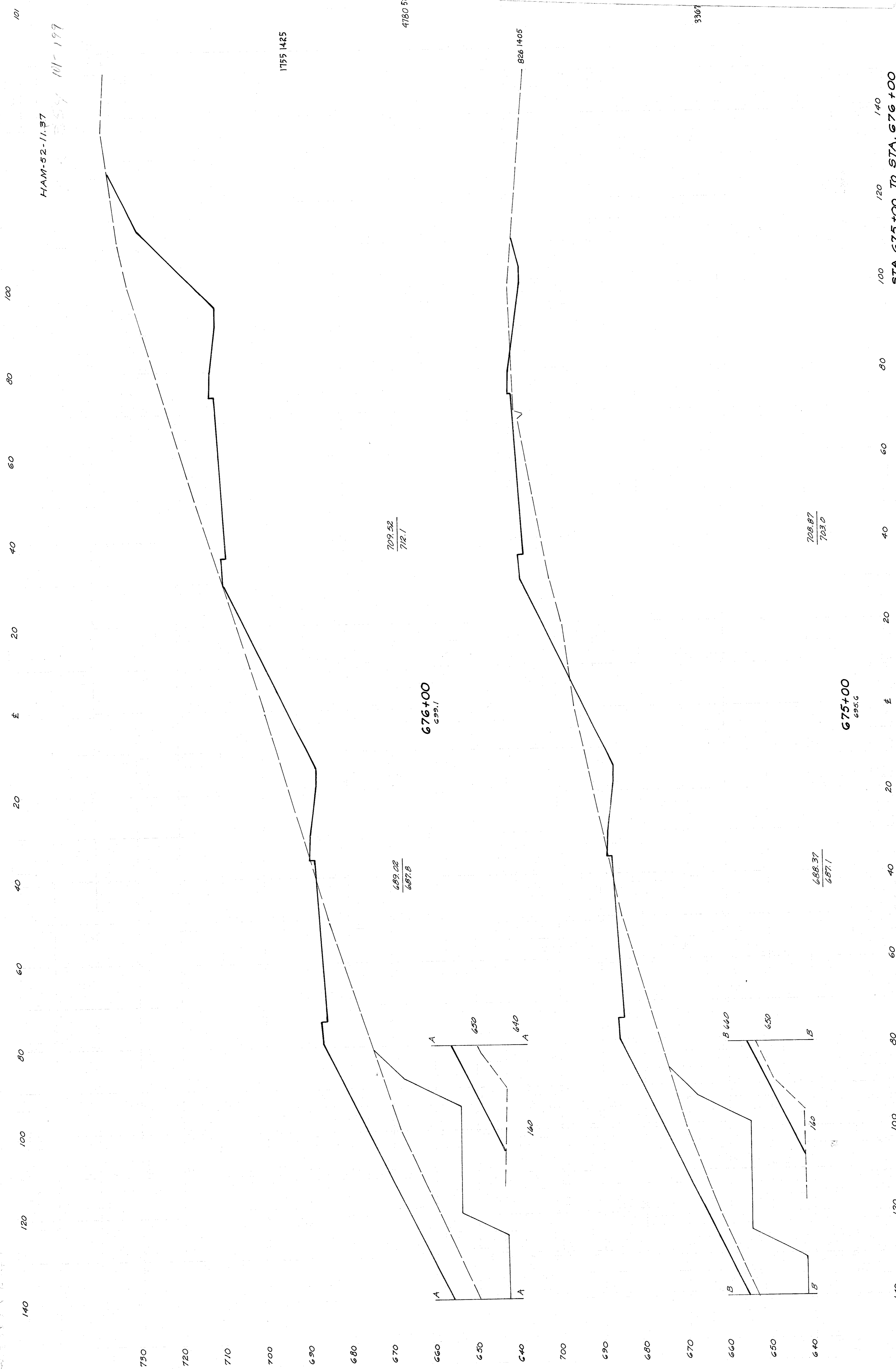
680
670
660
650
640



140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

STA. 672+46 TO STA. 674+00

HAM-52-11.37
101-199



$\frac{709.52}{712.1}$

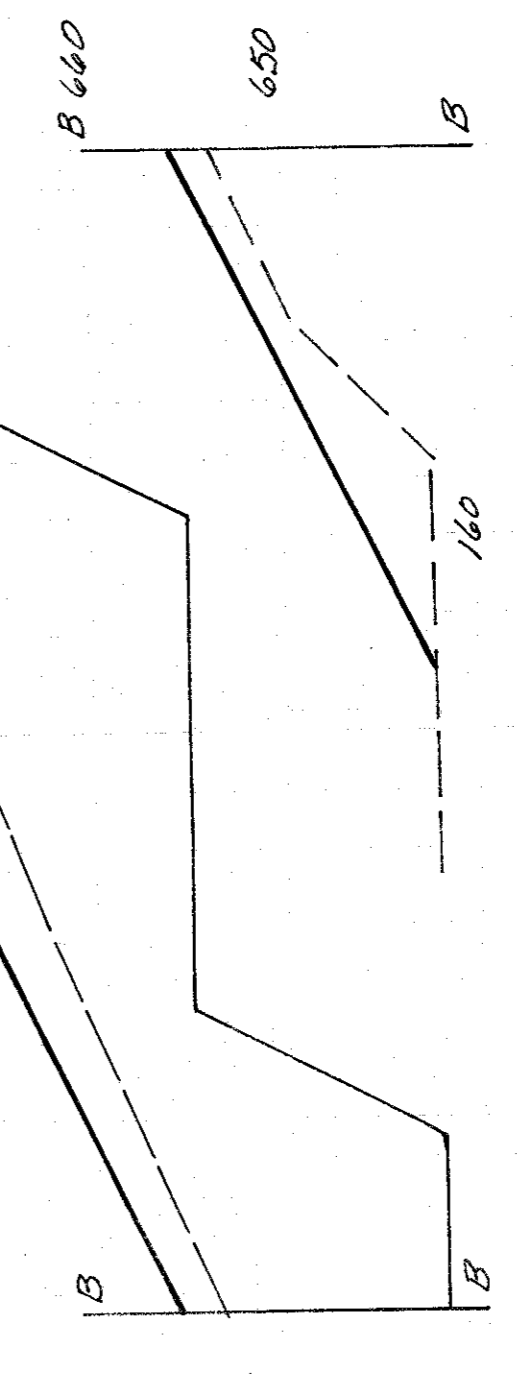
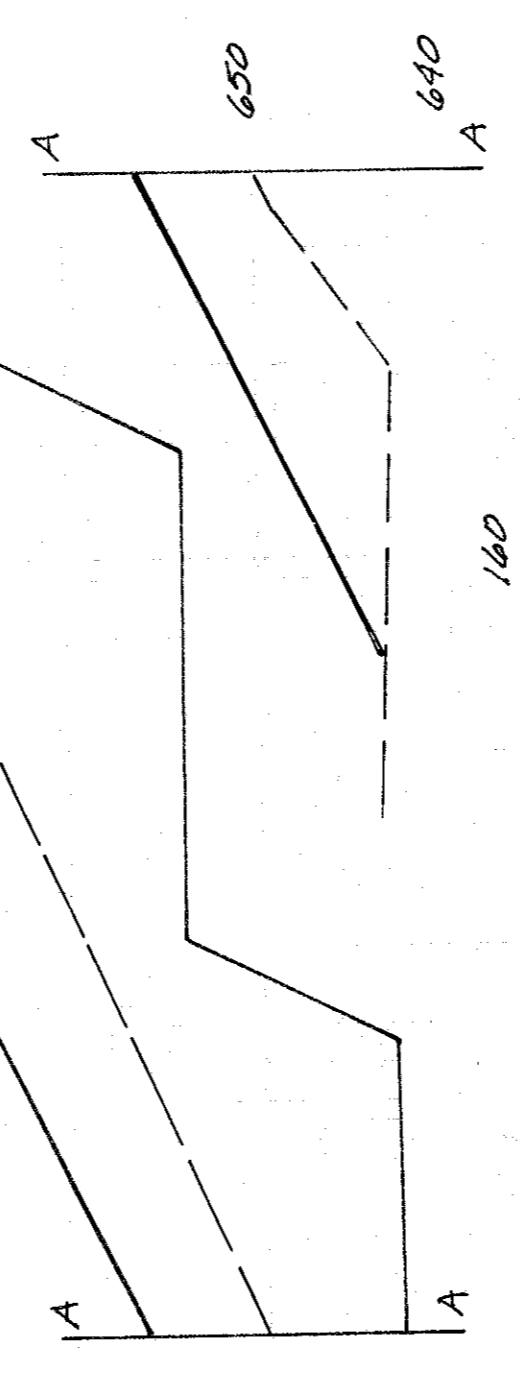
676+00
699.1

$\frac{689.02}{687.8}$

$\frac{708.87}{703.0}$

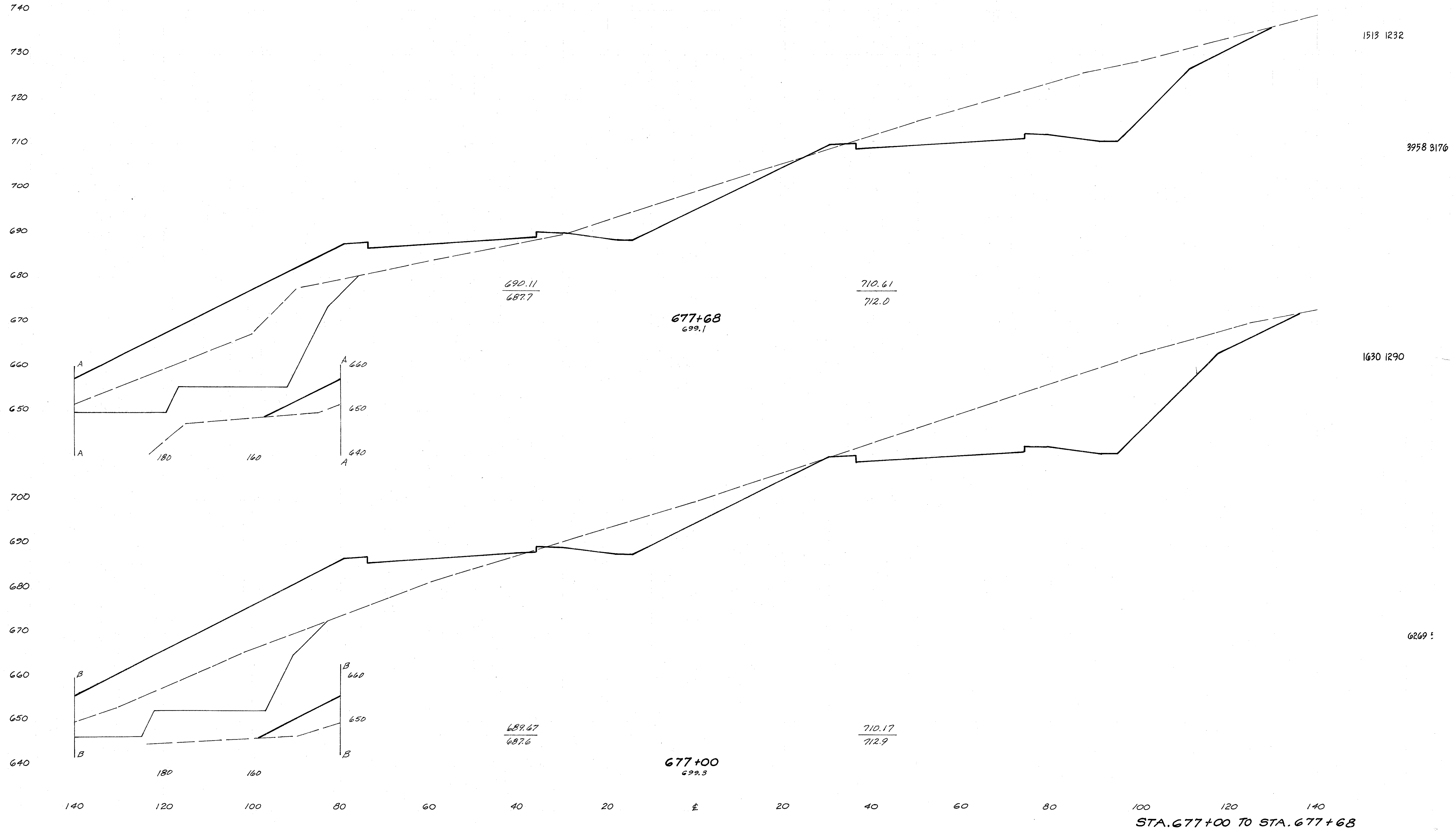
675+00
695.6

$\frac{688.37}{687.1}$

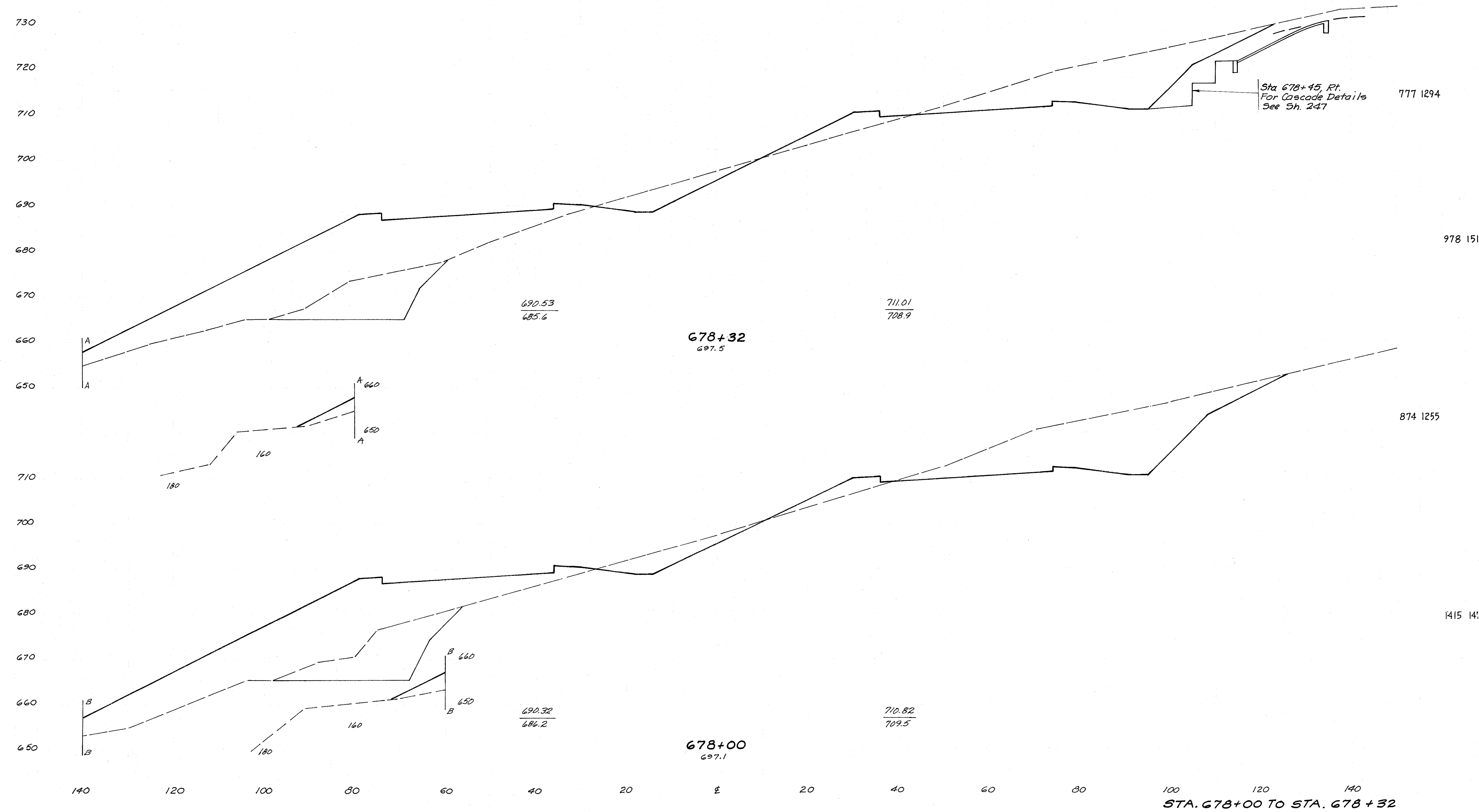


100 120 140
STA. 675+00 TO STA. 676+00

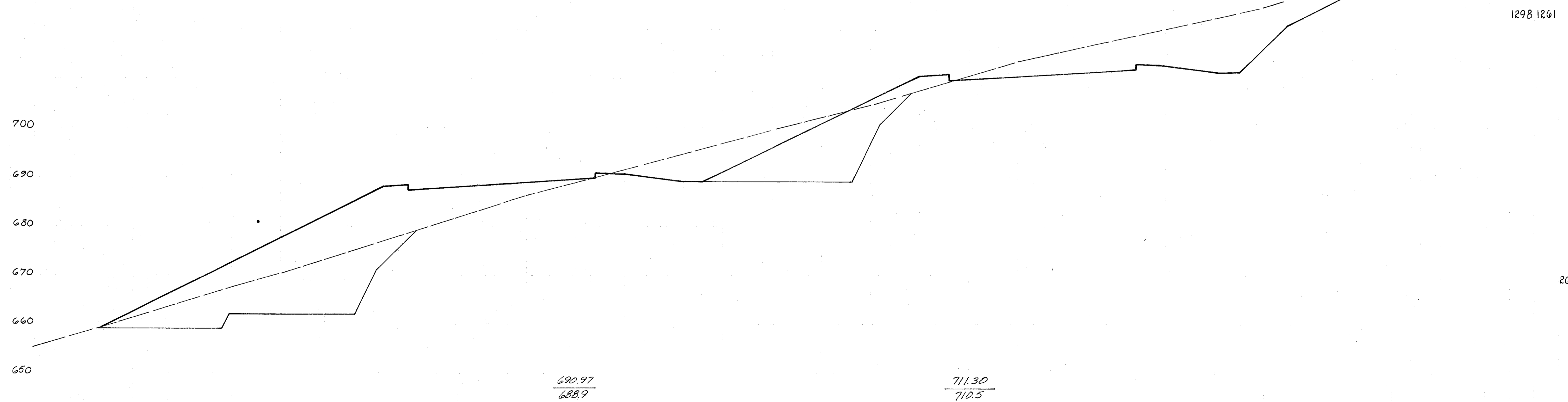
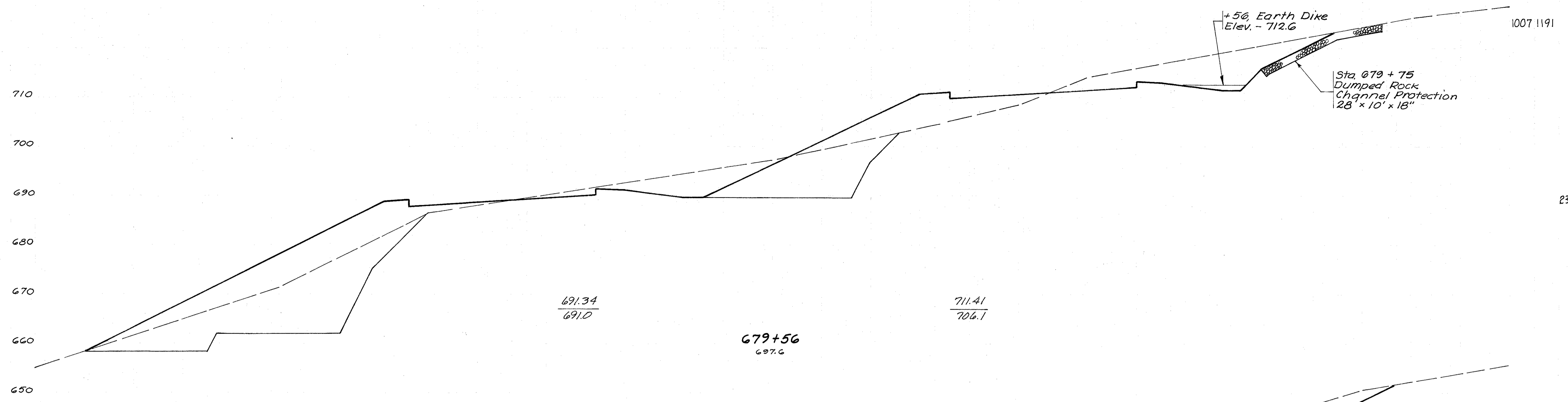
HAM-52-11.37



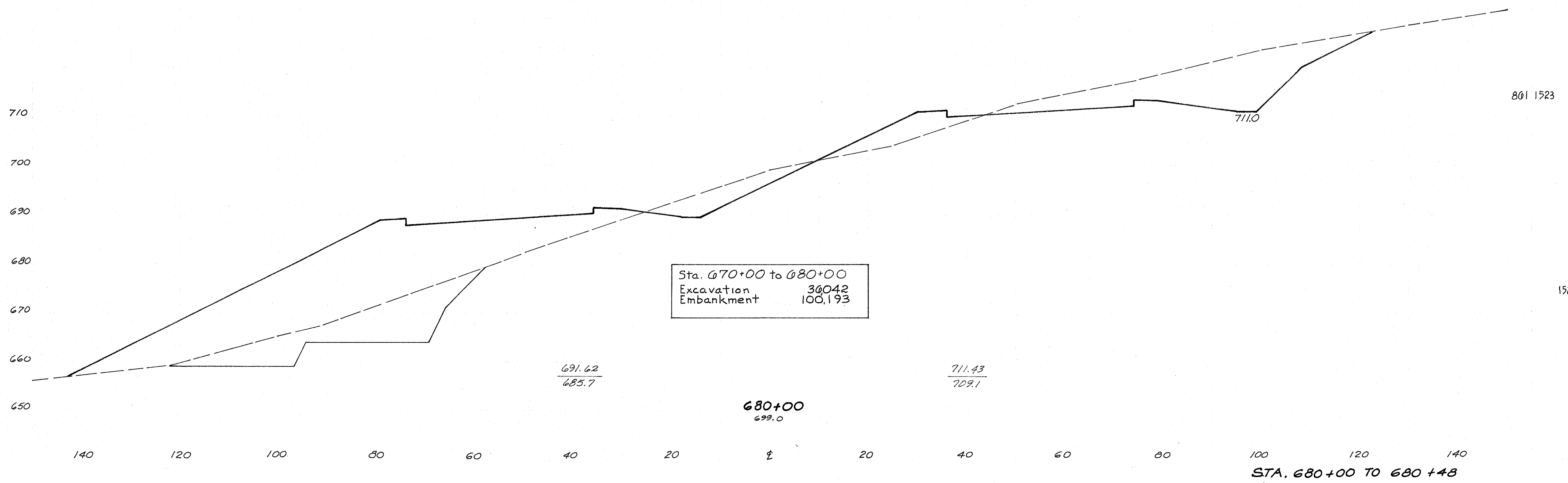
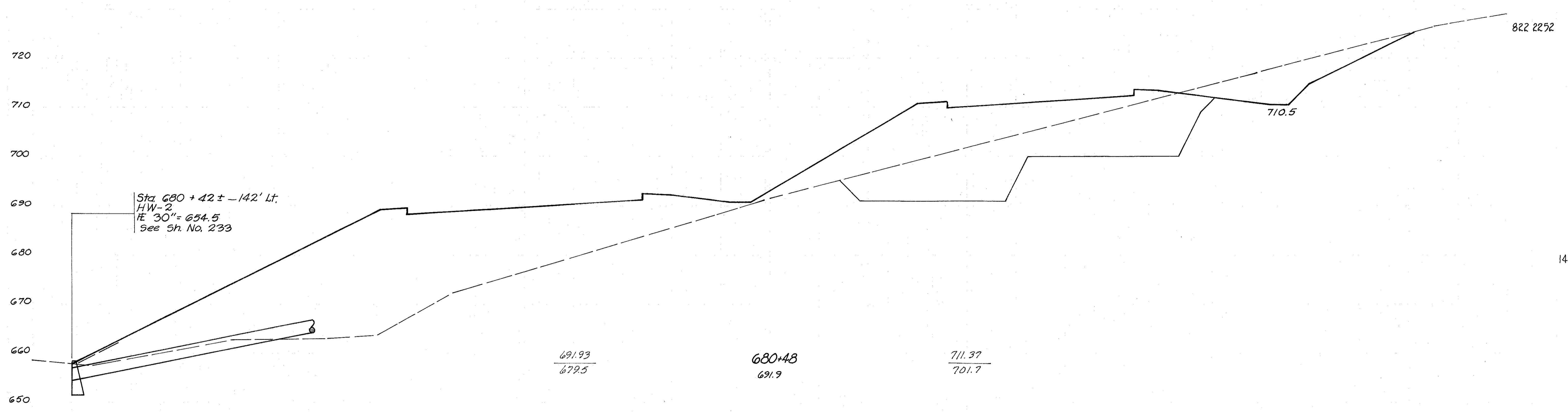
HAM-52-11.37



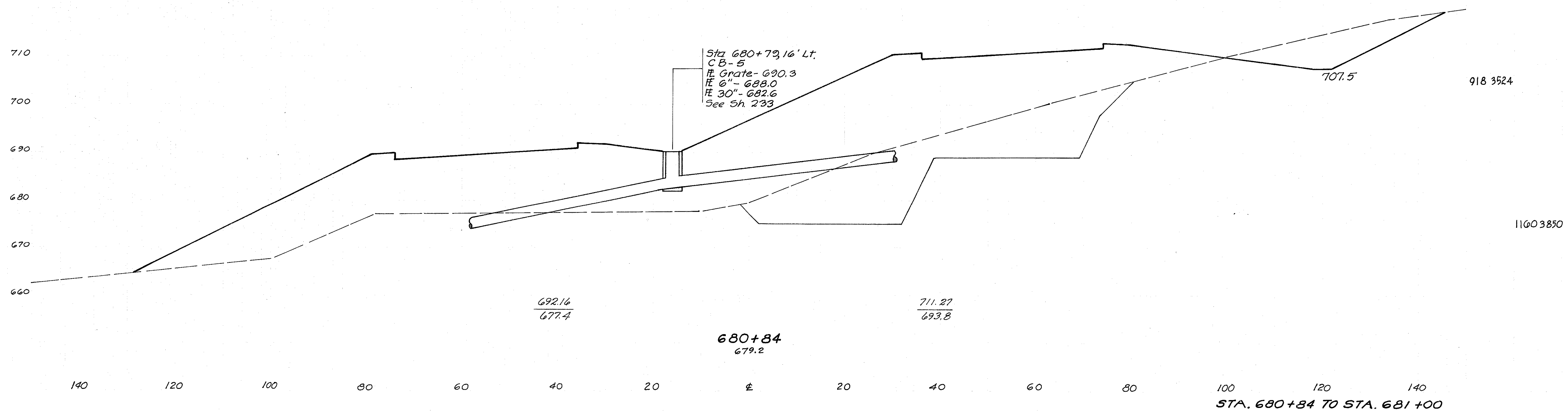
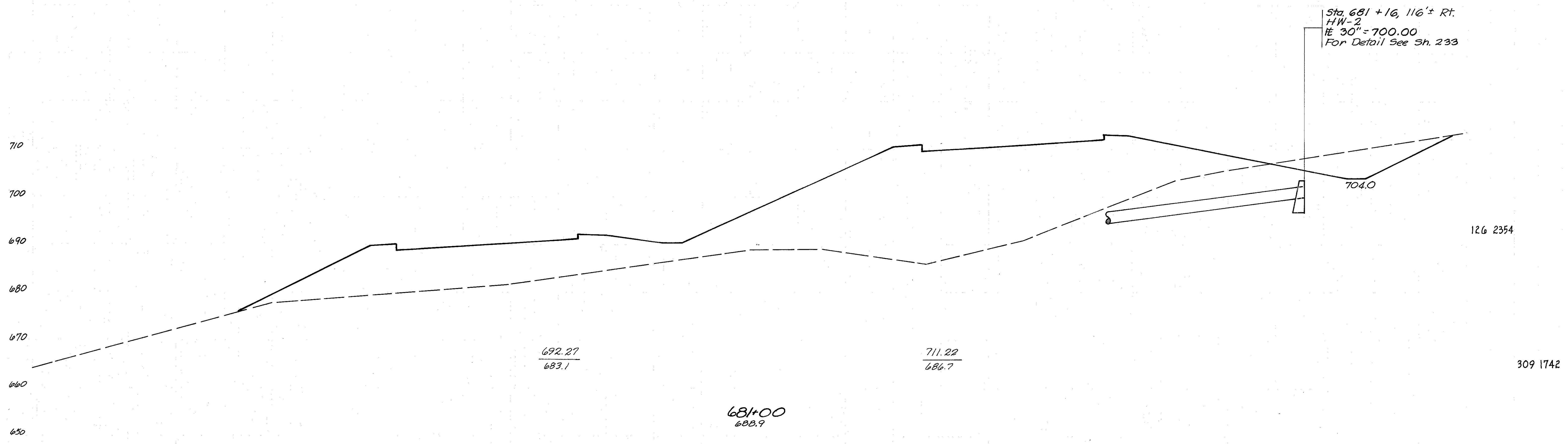
HAM-52-11.37



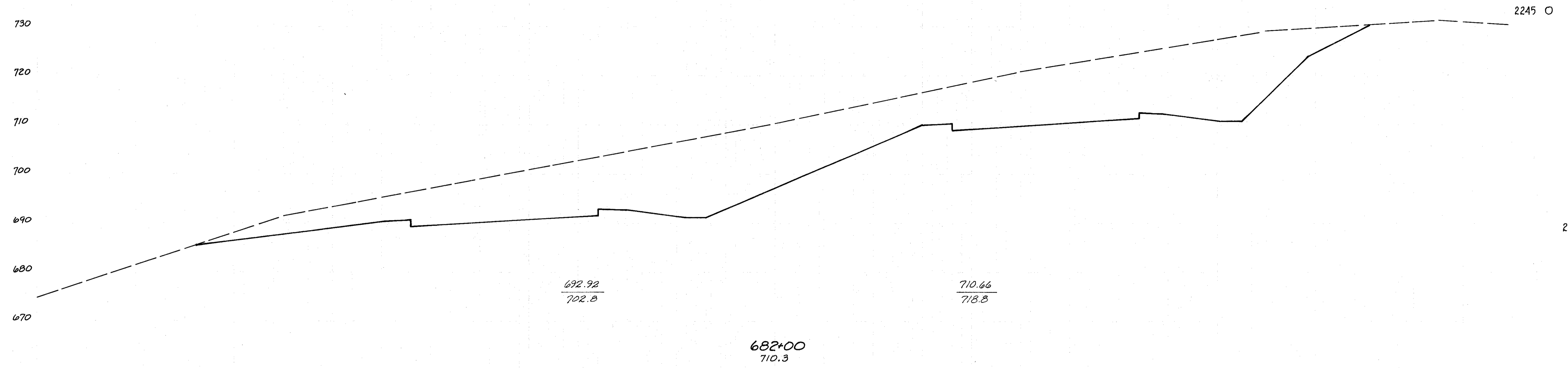
HAM-52-11.37



HAM-52-11.37

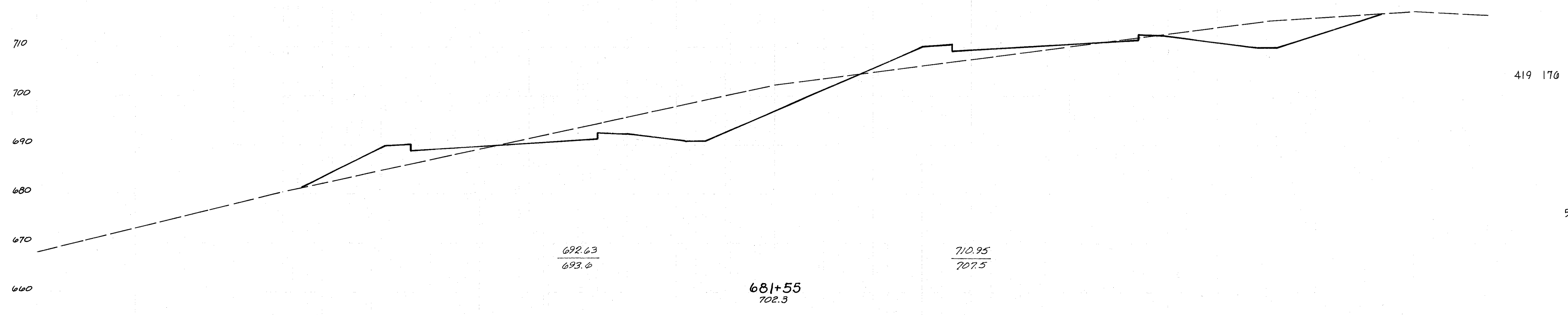


HAM-52-11.37



2220 147

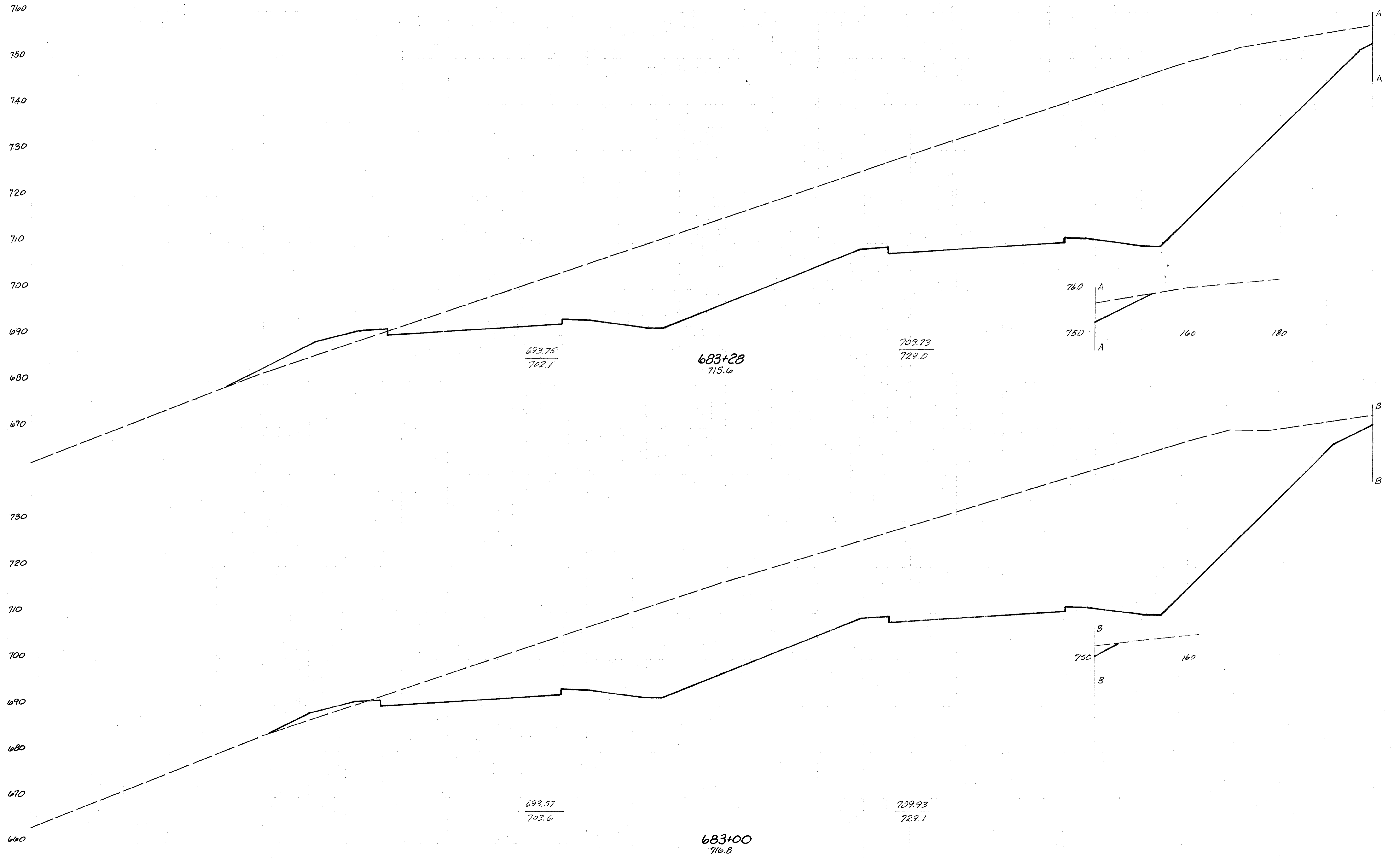
2245 0



419 176

555 2577

HAM-52-11.37



3150 52

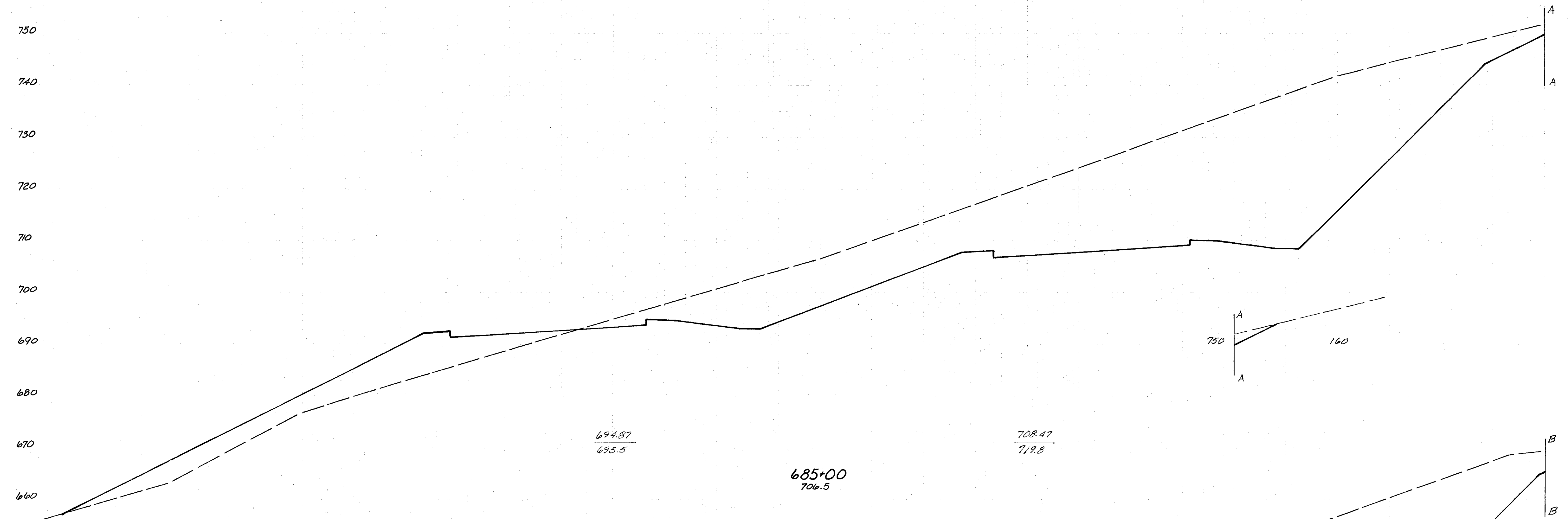
3093 37

3973 20

11,515 37

STA. 683+00 TO STA. 683+28

HAM-52-11.37



2491 392

11,521 782



3730 30

9173 109

$\frac{694.87}{695.5}$

$\frac{708.47}{719.8}$

685+00
706.5

$\frac{694.22}{702.0}$

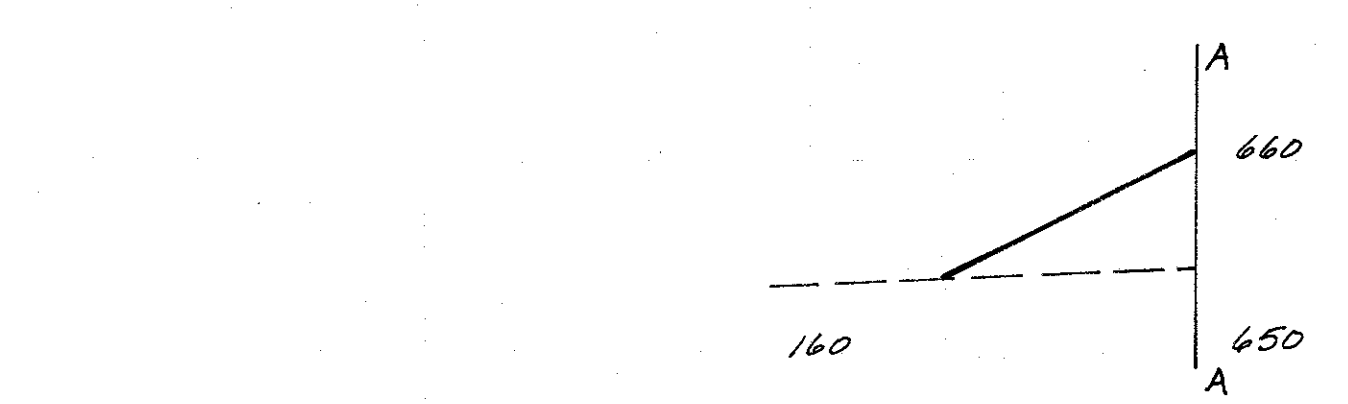
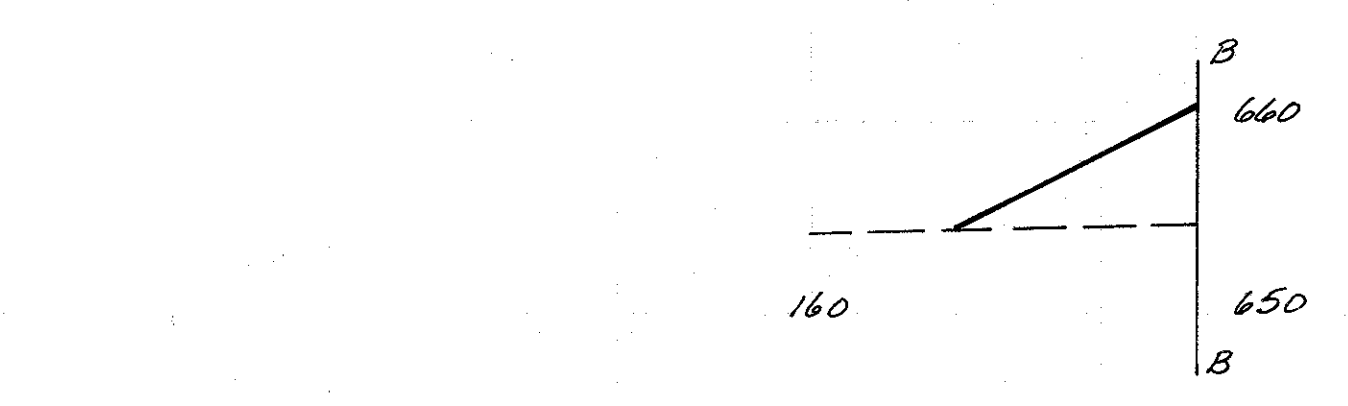
$\frac{709.20}{726.2}$

684+00
713.4

STA. 684+00 TO STA. 685+00

HAM-52-11.37

730
720
710
700
690
680
670
660
650
730
720
710
700
690
680
670
660
650



$\frac{695.96}{675.0}$

$\frac{707.24}{696.9}$

686+68
688.2

$\frac{695.52}{686.9}$

$\frac{707.74}{708.0}$

686+00
697.1

428 3822

2249 7845

1358 2408

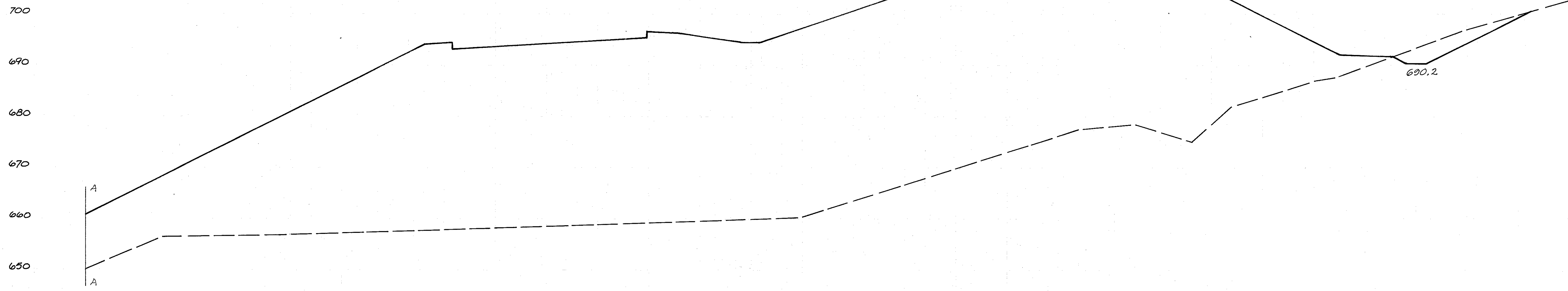
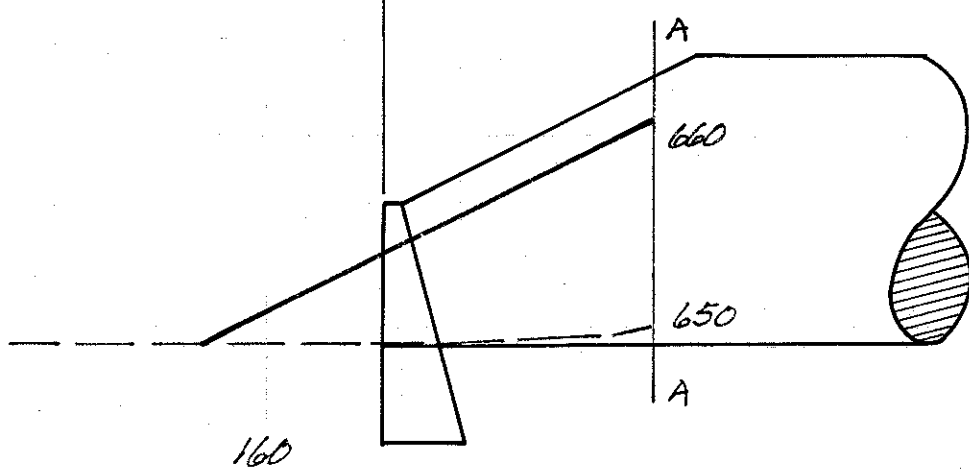
7128 5185

140 120 100 80 60 40 20 E 20 40 60 80 100

///

HAM-52-11.37

Sta. 687+98 154' LT.
HW 5P-53 Headwall
E 180" - 642.00
For Detail See Sh. 234



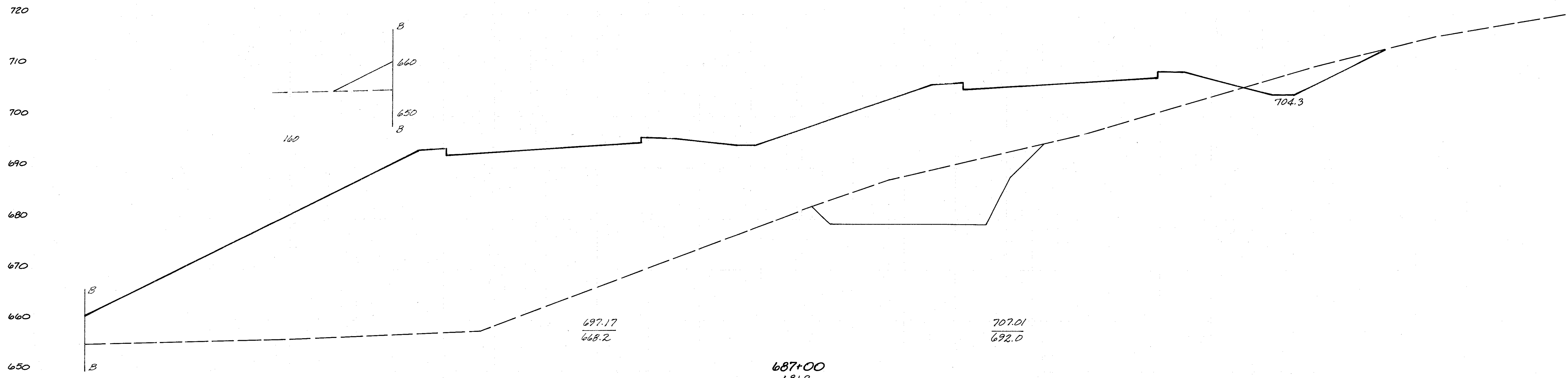
55 7284

894 22,269

$\frac{696.82}{659.0}$

$\frac{706.28}{671.2}$

688+00
660.3



428 4741

507 5074

$\frac{697.17}{668.2}$

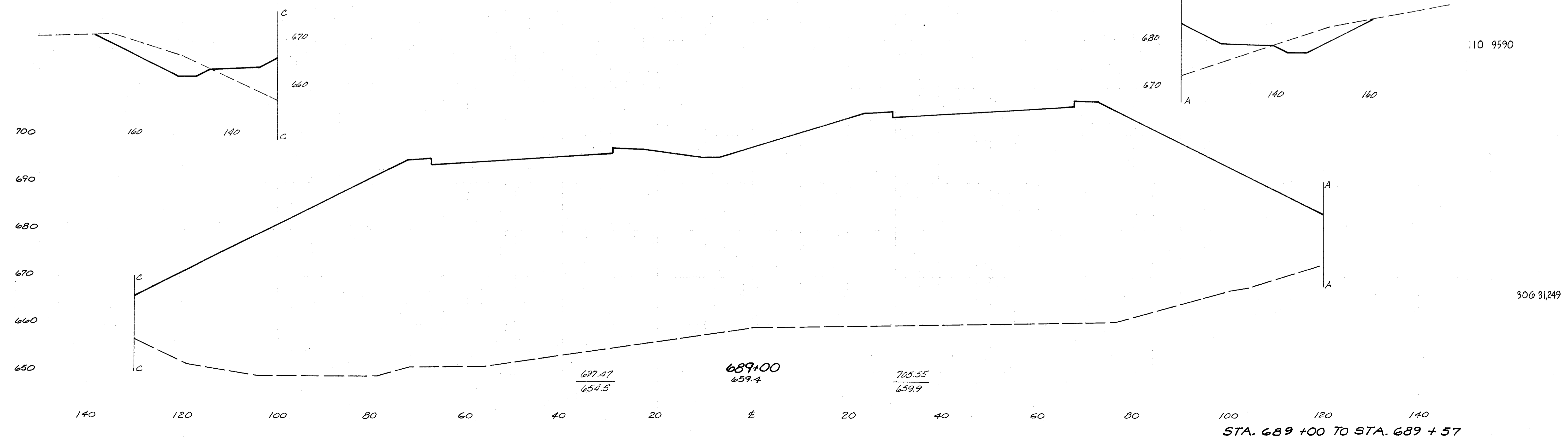
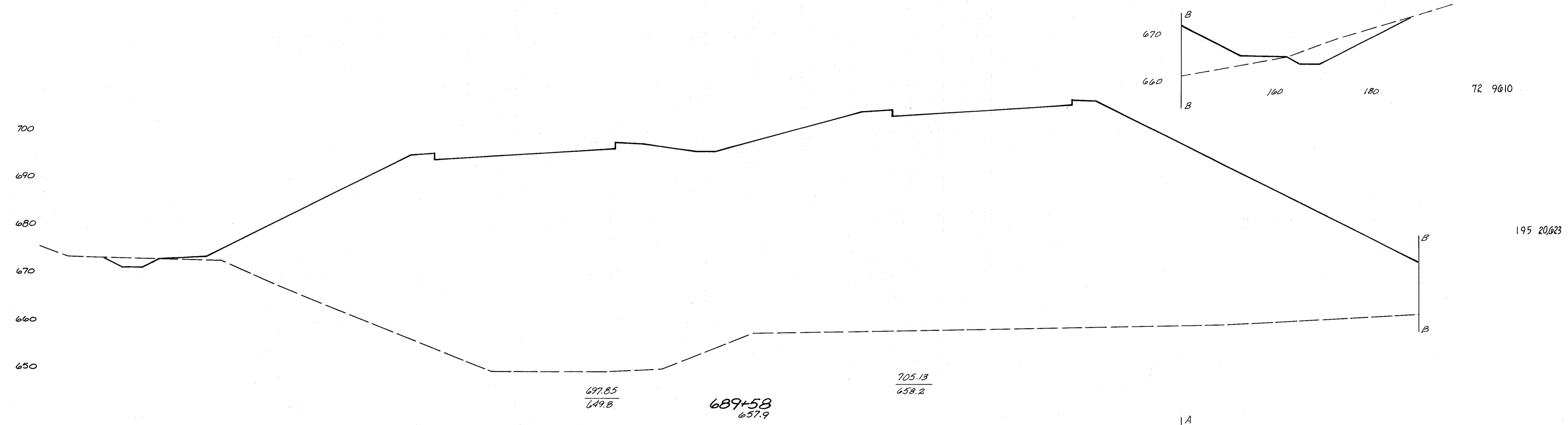
$\frac{707.01}{692.0}$

687+00
681.9

140 120 100 80 60 40 20 E 20 40 60 80 100 120 140

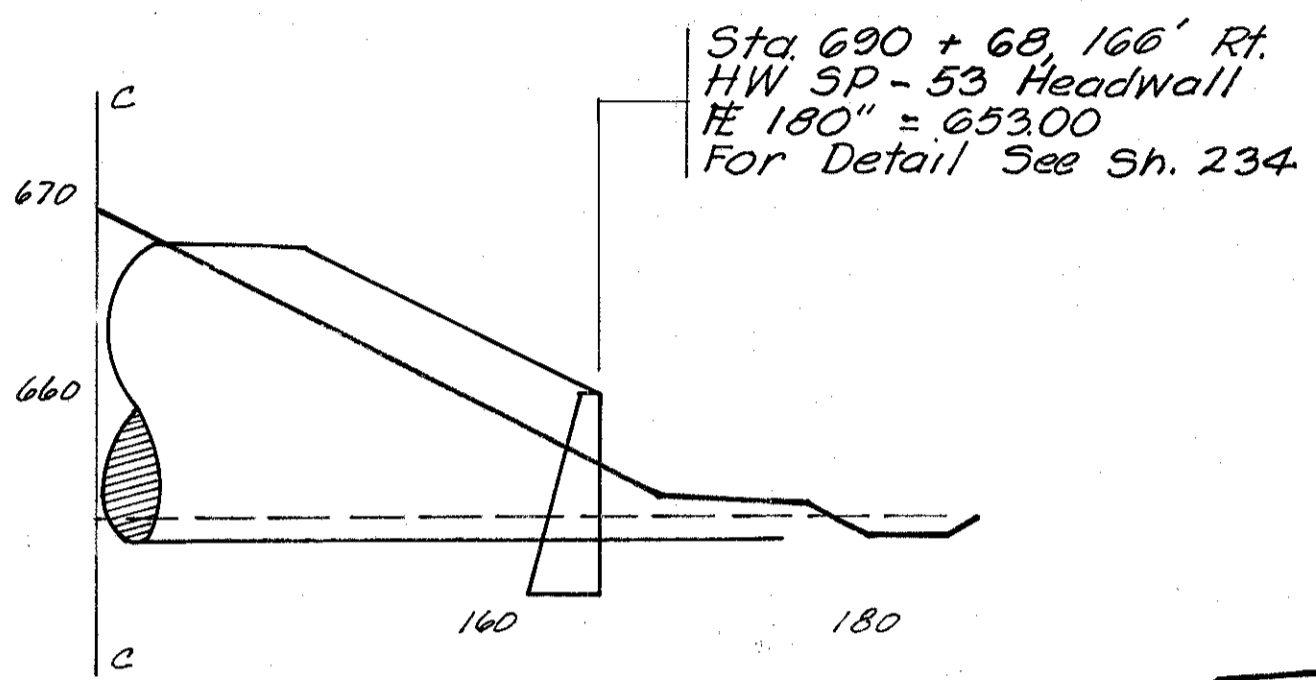
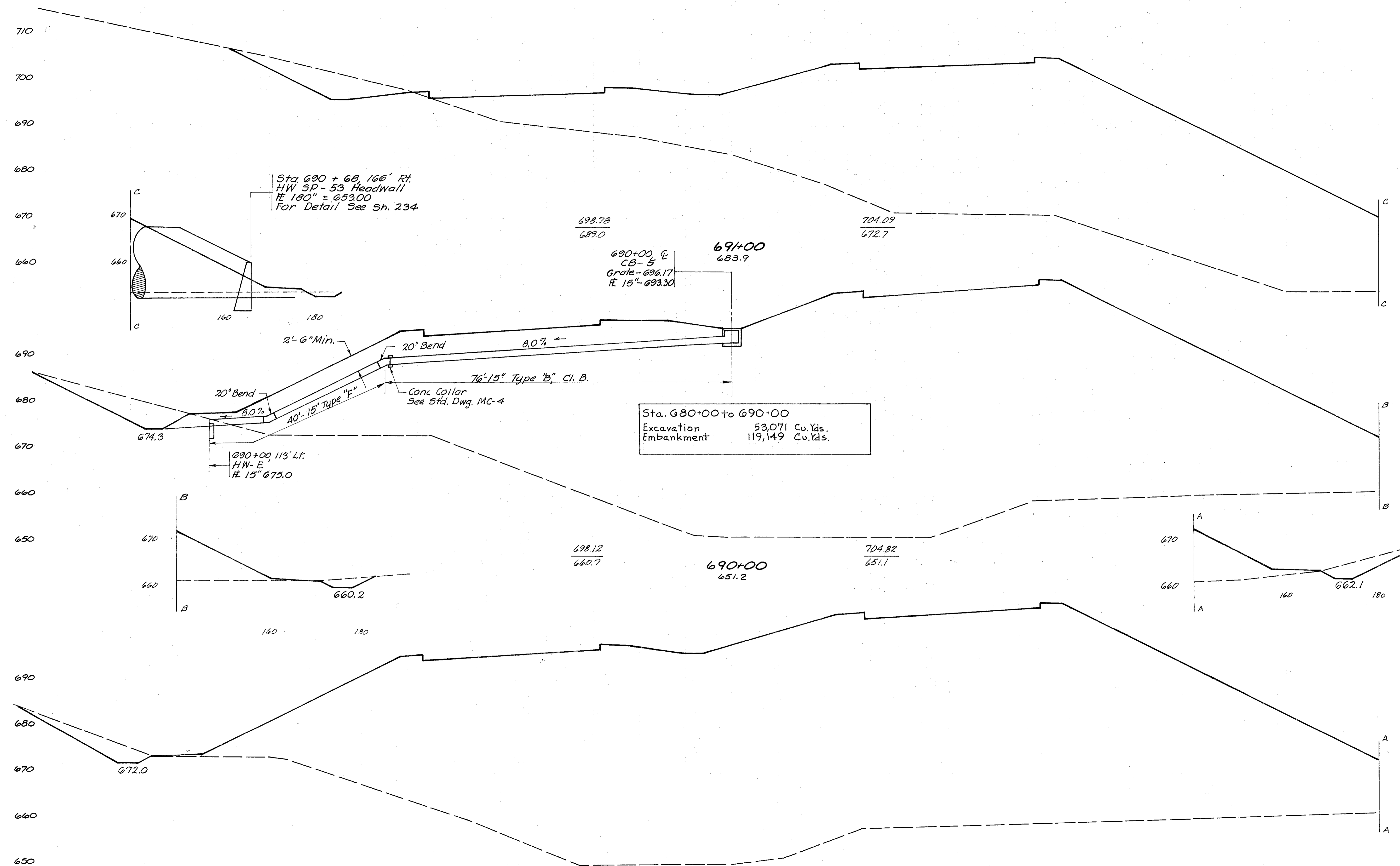
STA. 687+00 TO STA. 688+00

HAM-52-11.37



STA. 689 +00 TO STA. 689 + 57

HAM-52-11.37



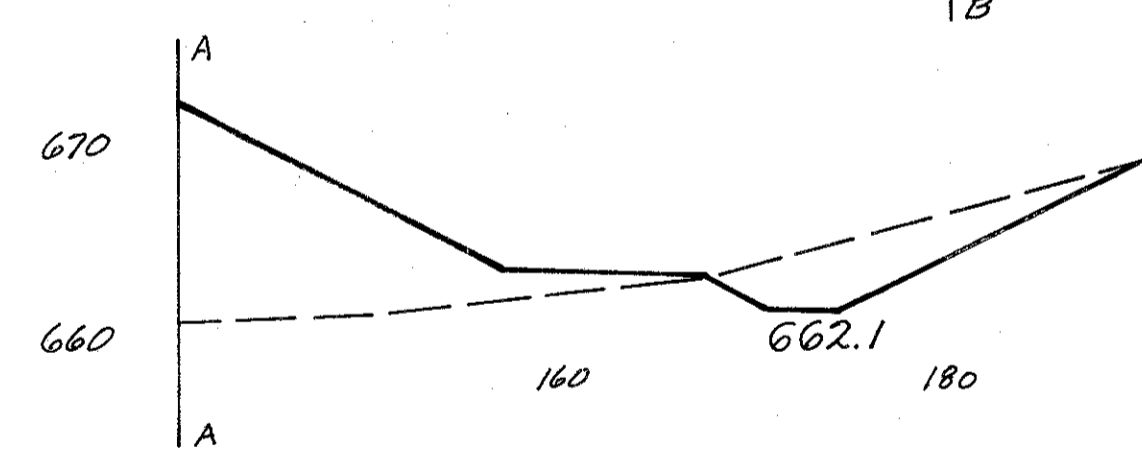
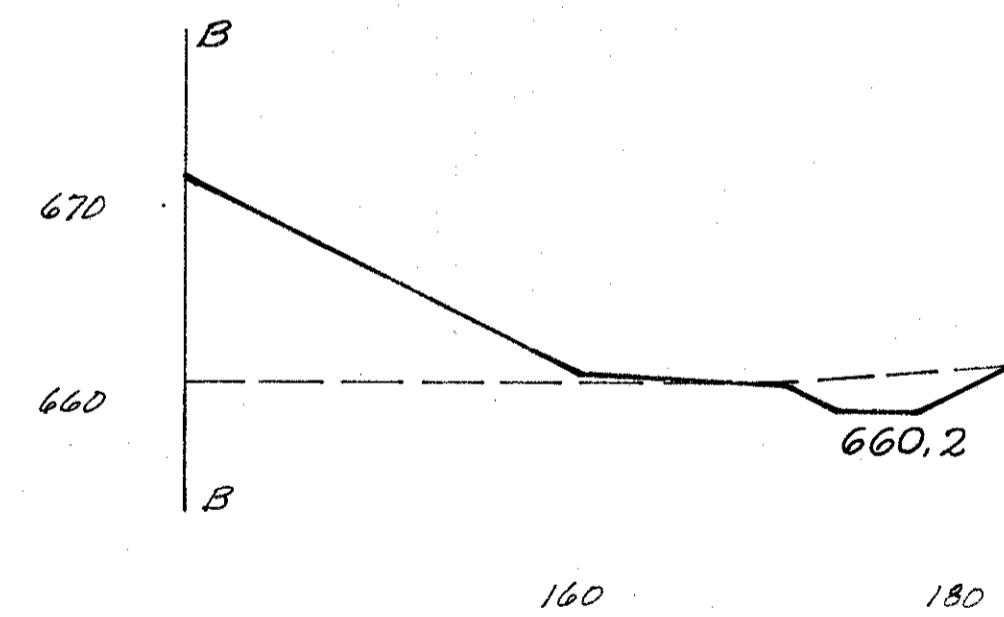
698.78
689.0

690+00 E
CB-5
Grate-696.17
E 15"-693.30

691+00
683.9

Sta. 680+00 to 690+00
Excavation 53,071 Cu. Yds.
Embankment 119,149 Cu. Yds.

690+00 113' Lt.
HW-E
E 15" 675.0



129 738

443 25021

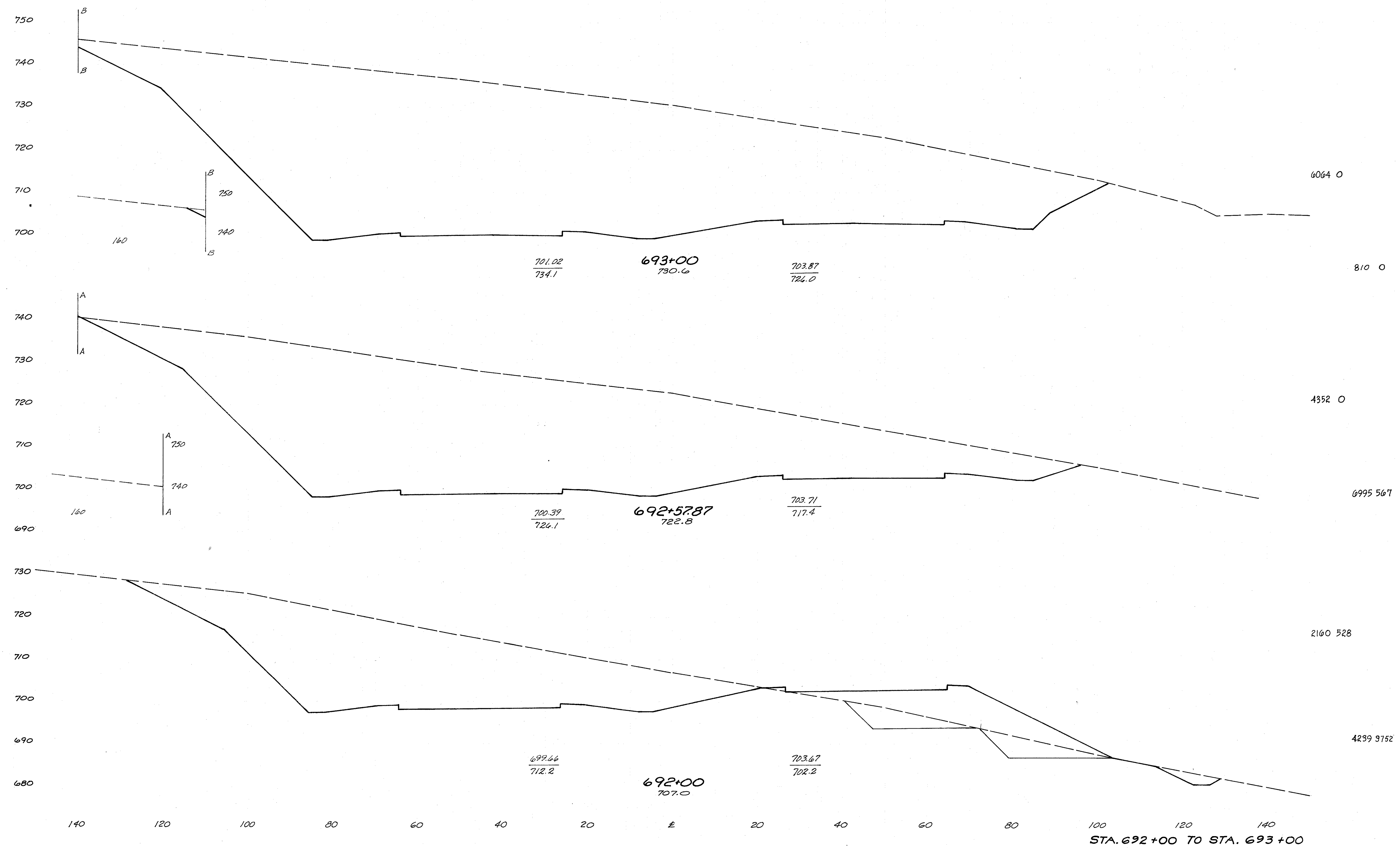
110 8773

93 7994

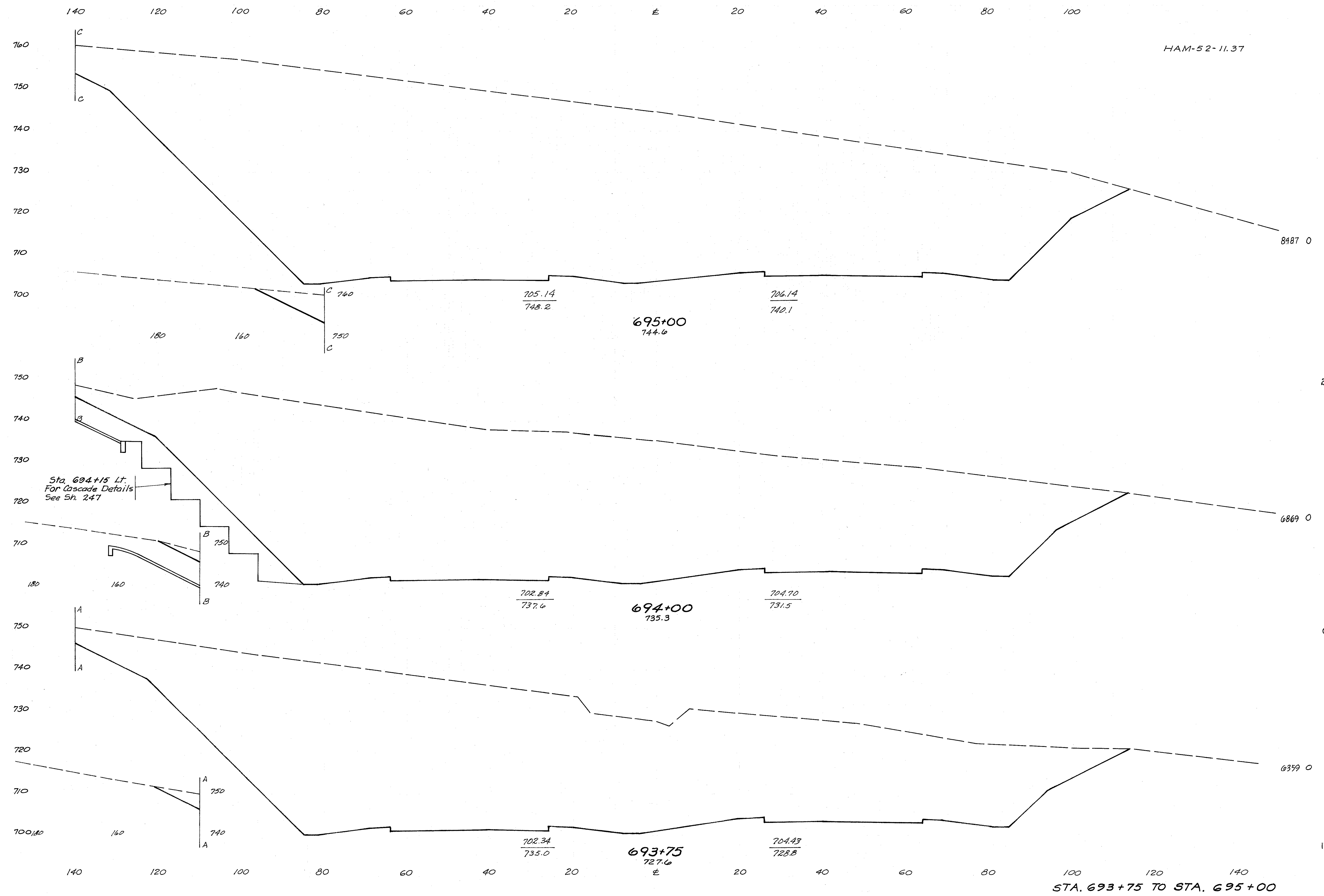
100 9215

57 6274

HAM-52-11.37

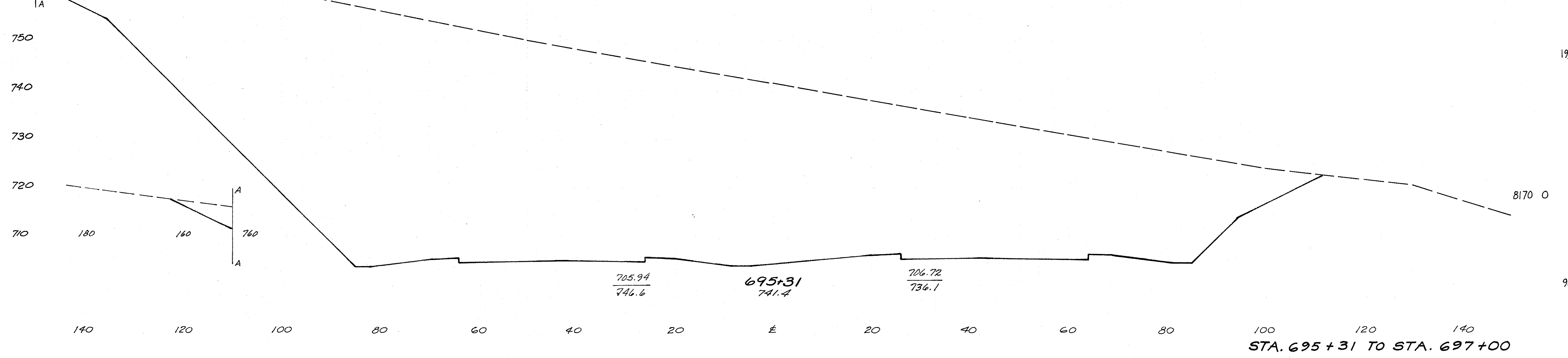
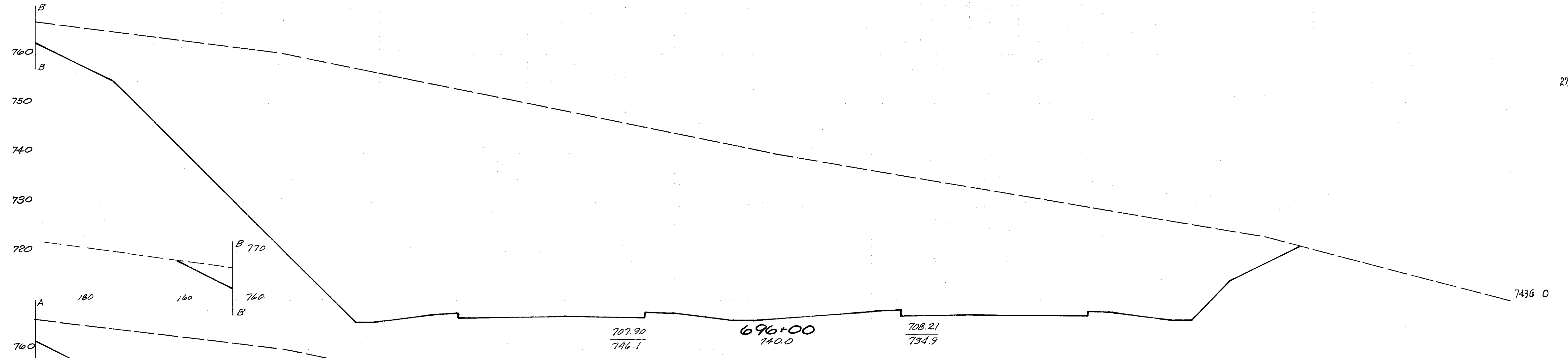
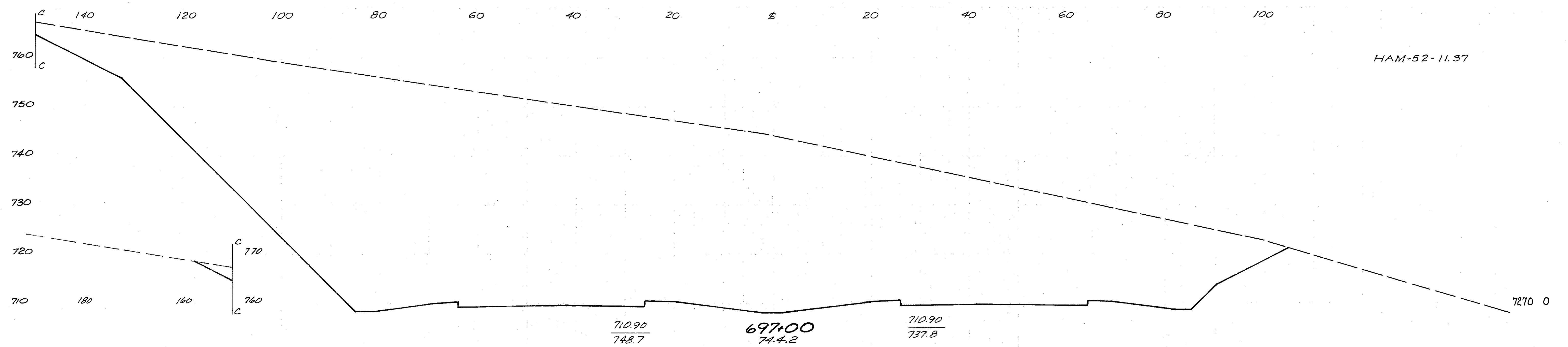


HAM-52-11.37



STA. 693+75 TO STA. 695+00

HAM-52-11.37



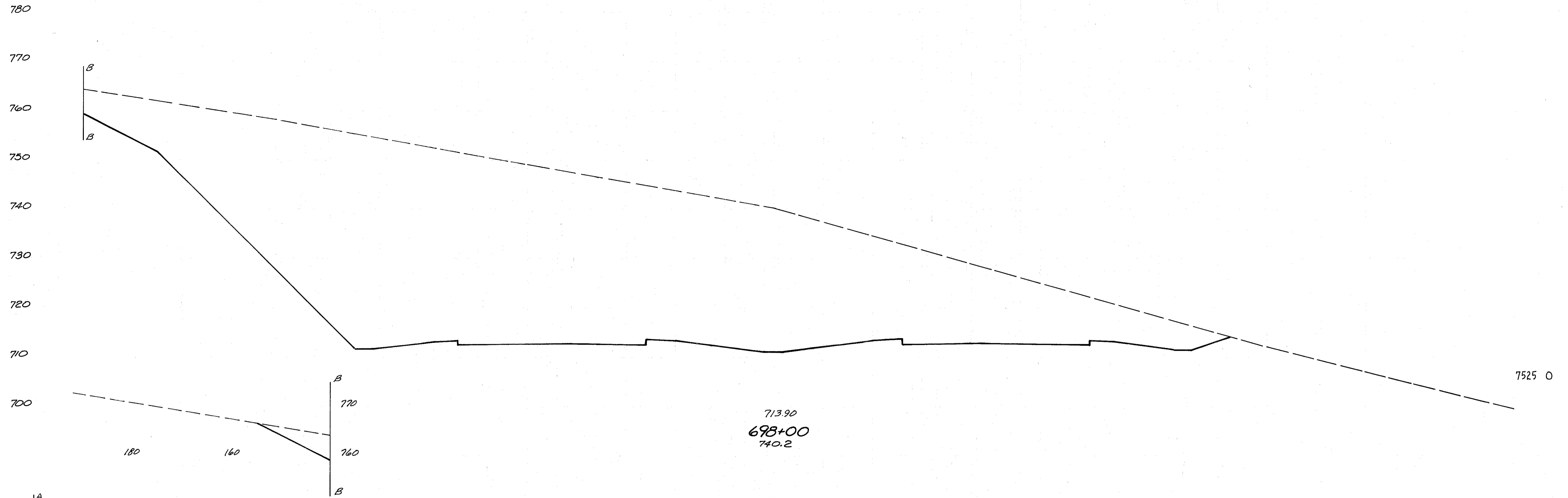
STA. 695+31 TO STA. 697+00

27,234.0

19,940.0

9,561.0

HAM-52-11.37



7525 0

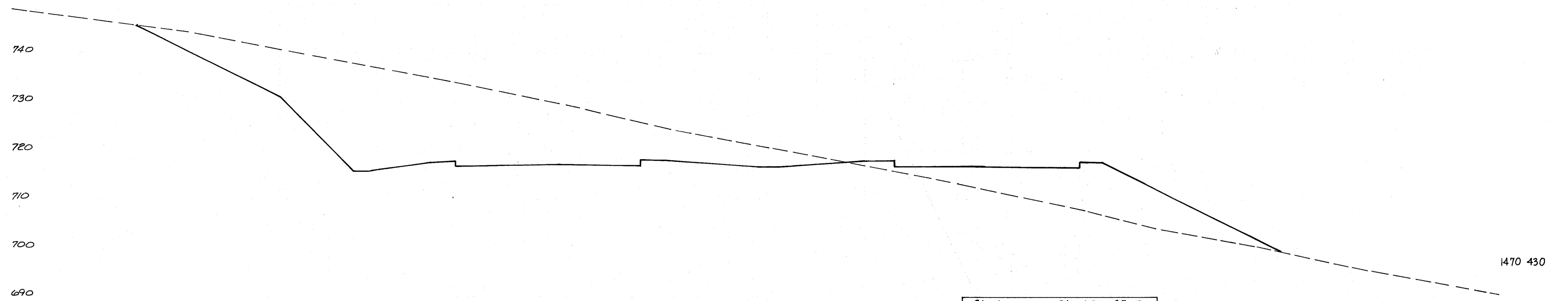
2,795 0



7005 0

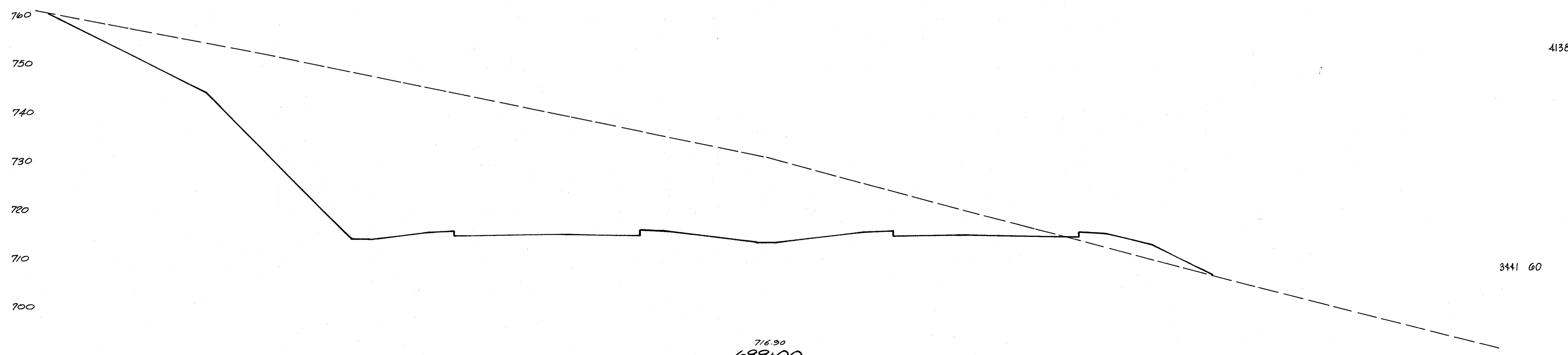
5023 0

HAM-52-11.37



718.20
699+45.5
720.7

470 430



716.90
699+00
731.7

4138 408

3441 60

STA. 699+00 TO STA. 699+45.5

HAM. 74 - 11.37

720
710
700
710
700
690
740
730
720
710
700
690
680

184 322

288 999

75 577

95 732

0 0

0 0

1199 3

691 2

2241 448

725.65
701+85.7
726.1

701+25.7
710.3

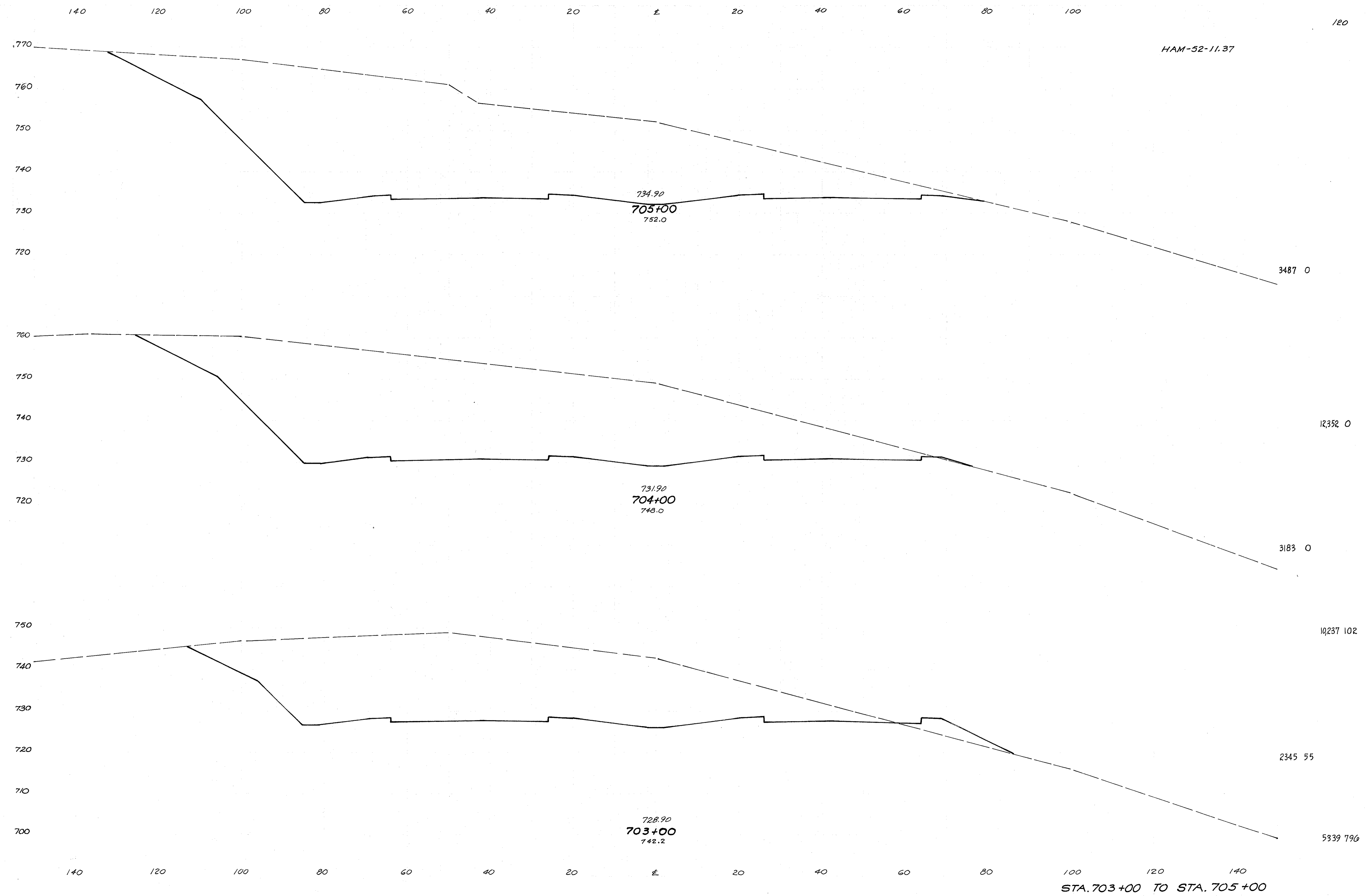
Zero Section
700+57.20

Zero Section
700+95.23

700+01.5
707.2

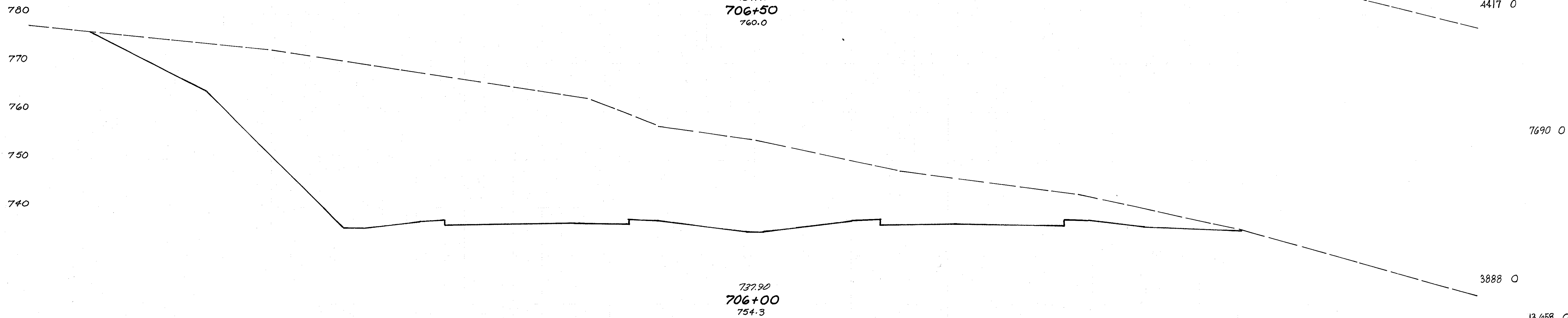
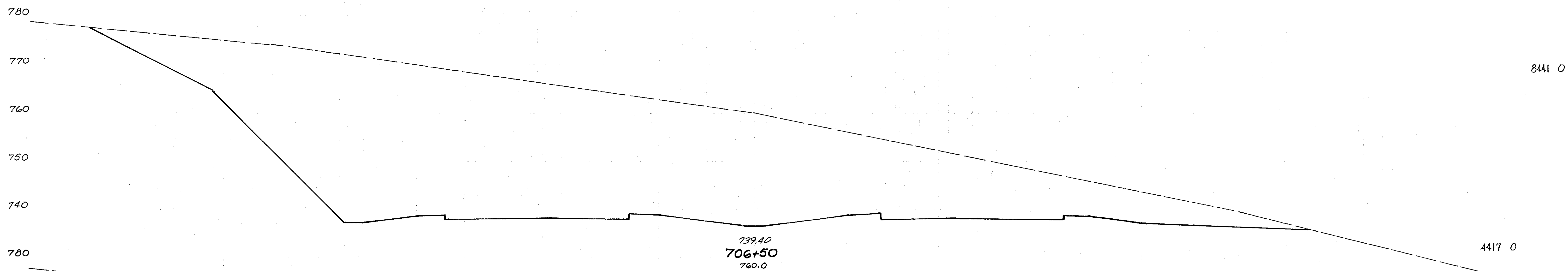
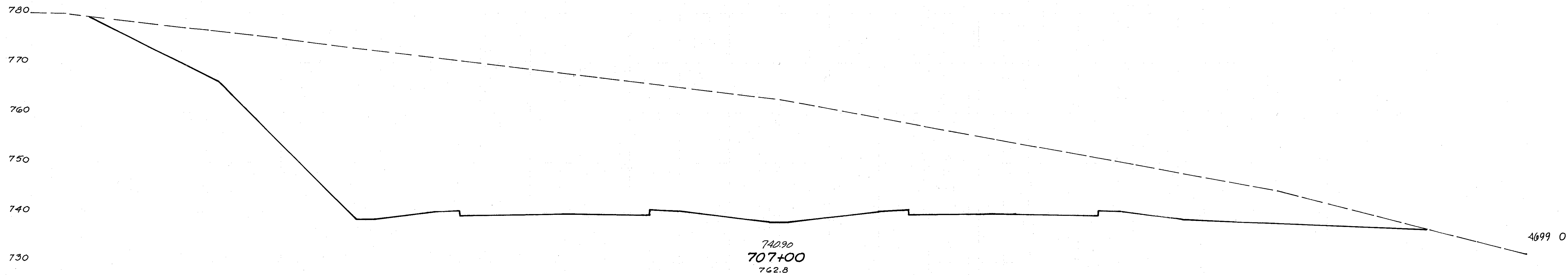
140 120 100 80 60 40 20 E 20 40 60 80 100 120 140
Sta. 700+01.5 to Sta. 701+85.7

HAM-52-11.37



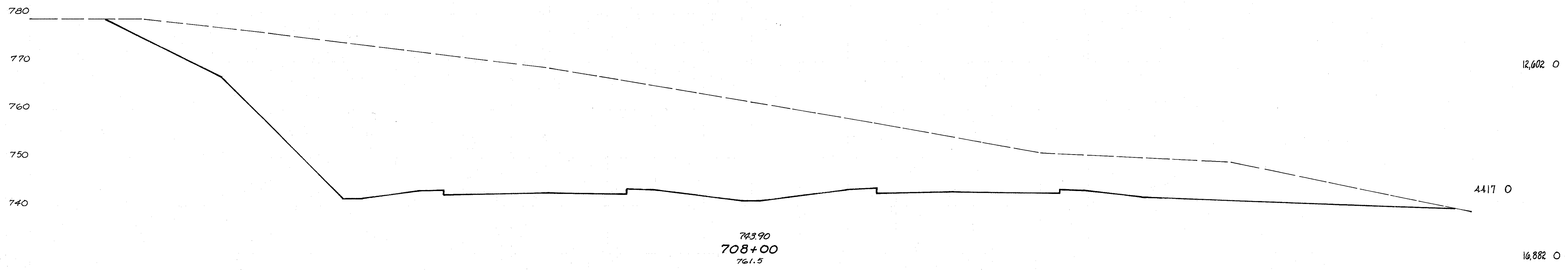
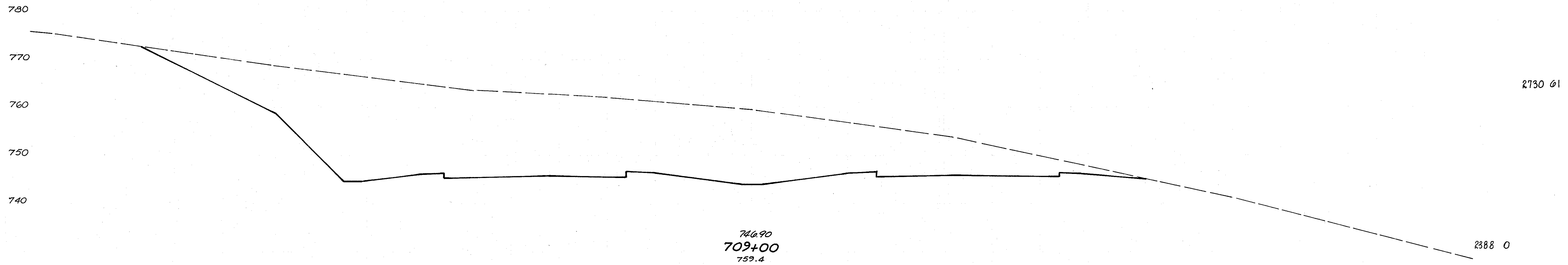
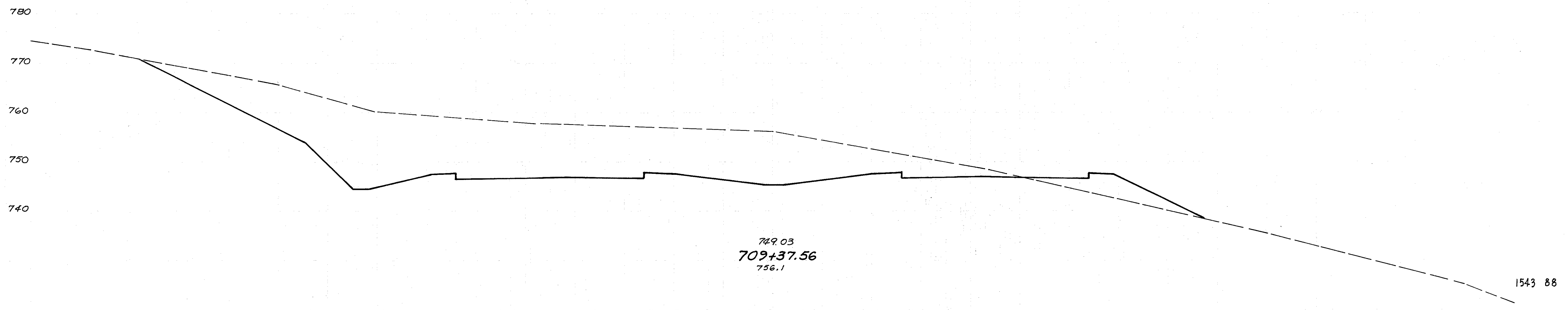
STA. 703+00 TO STA. 705+00

HAM-52-11.37

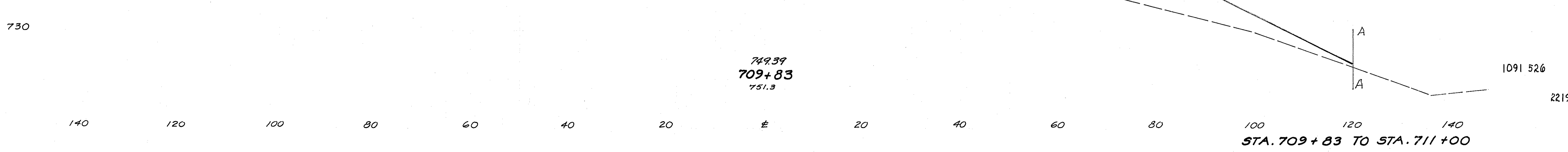
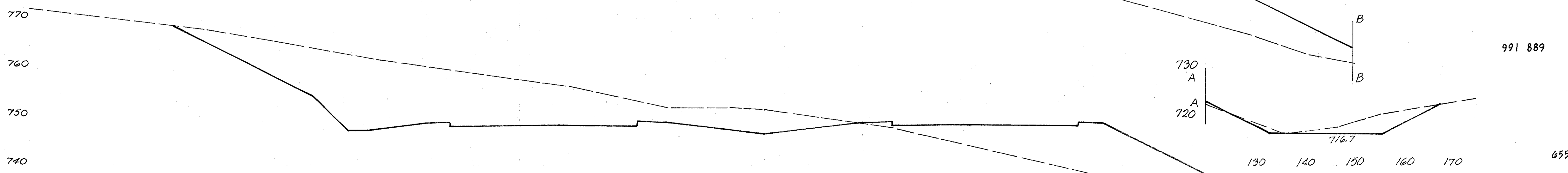
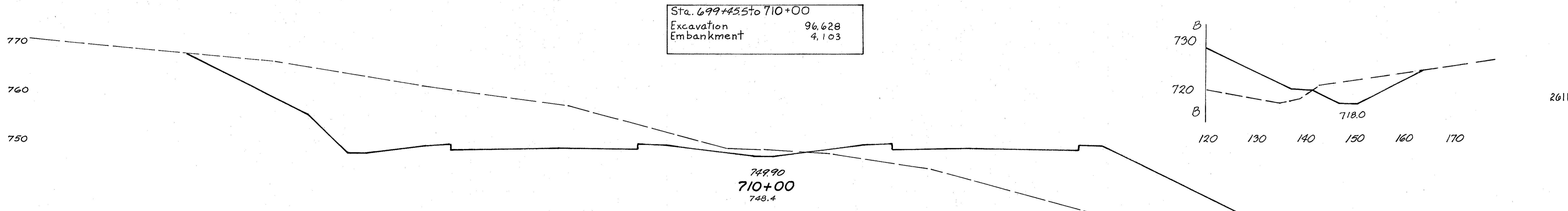
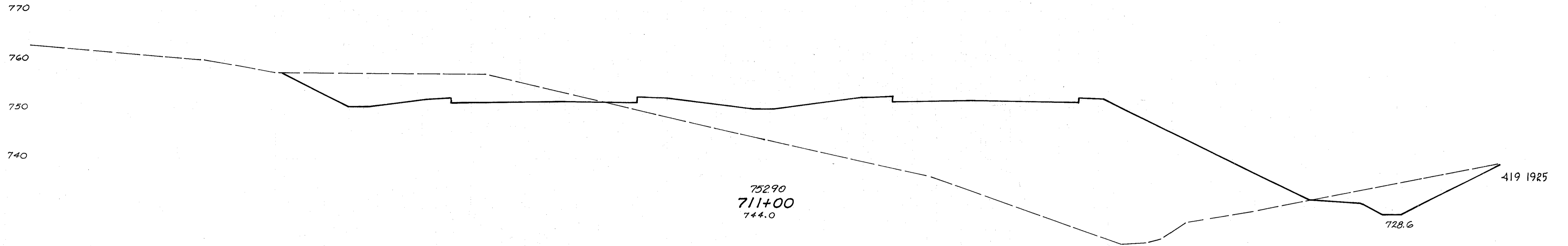


STA. 706+00 TO STA. 707+00

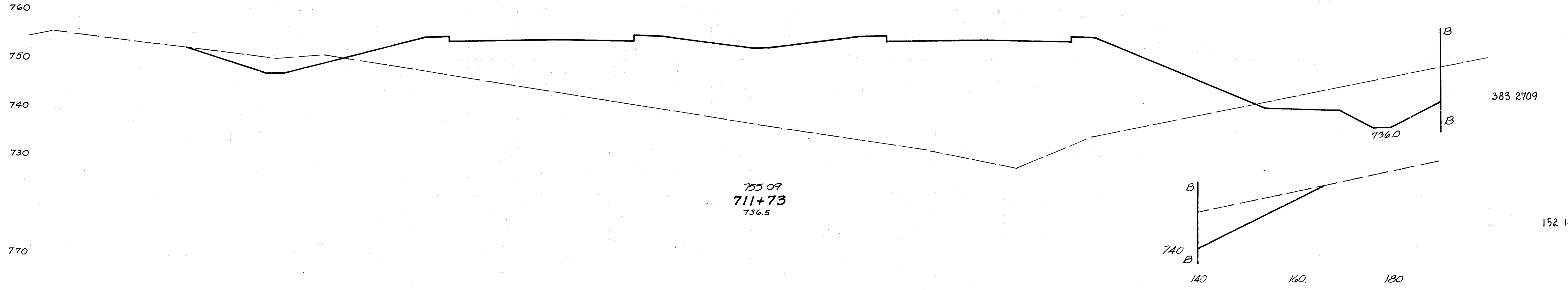
HAM-52-11.37



HAM-52-11.37

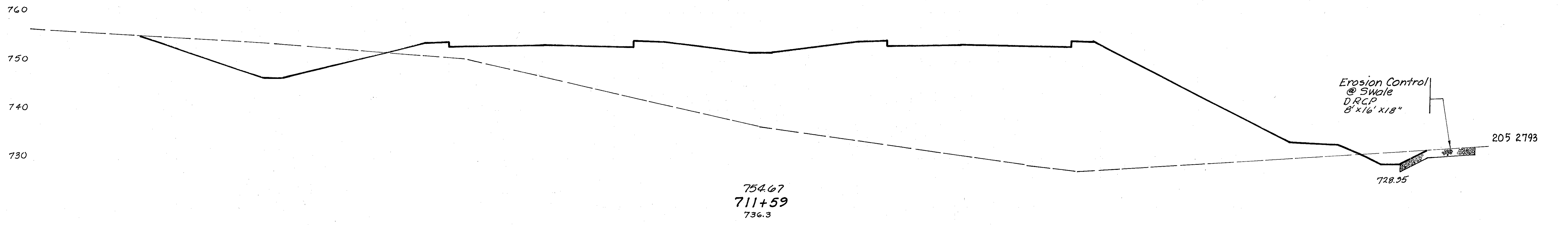


HAM-52-11.37



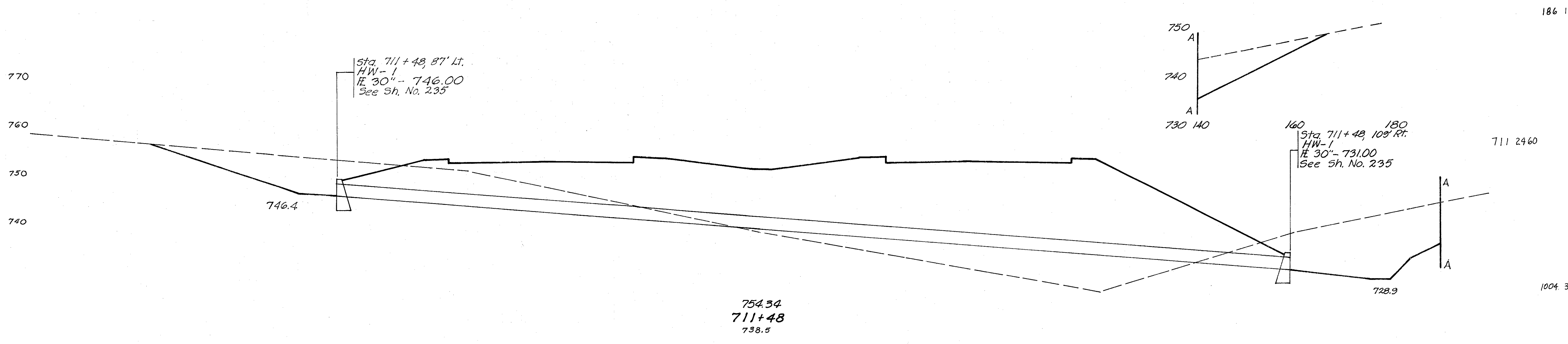
383 2709

152 1427



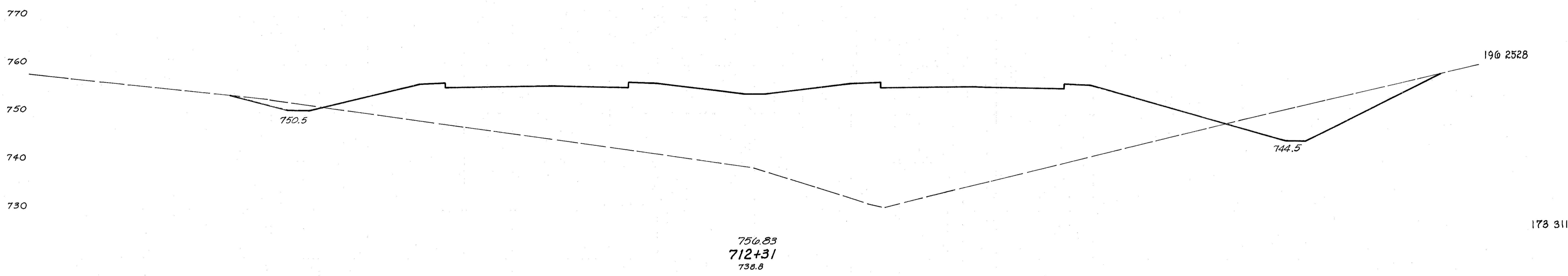
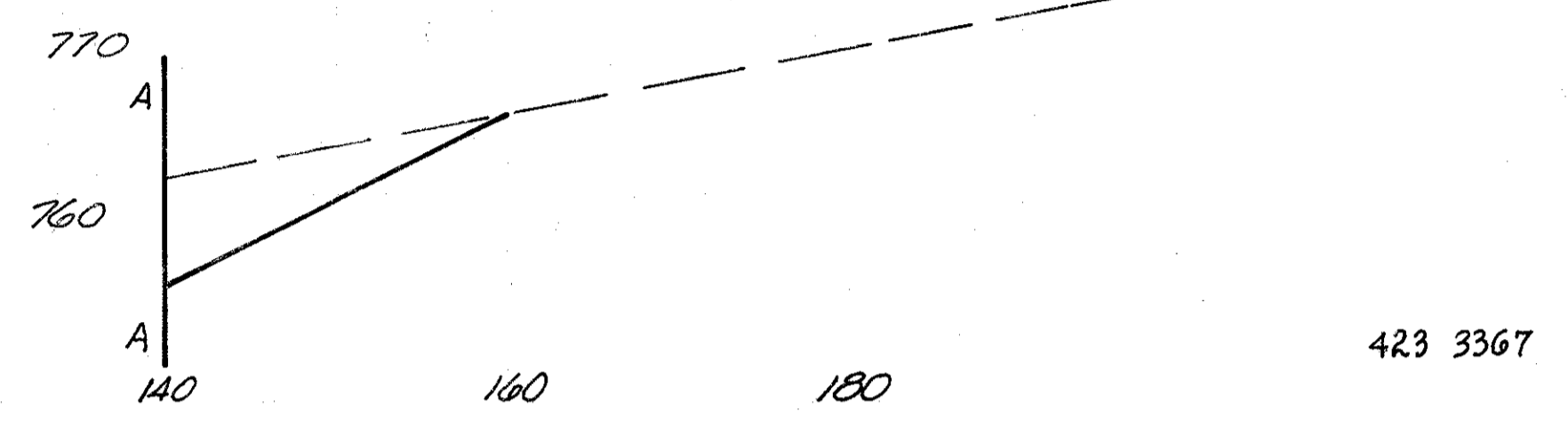
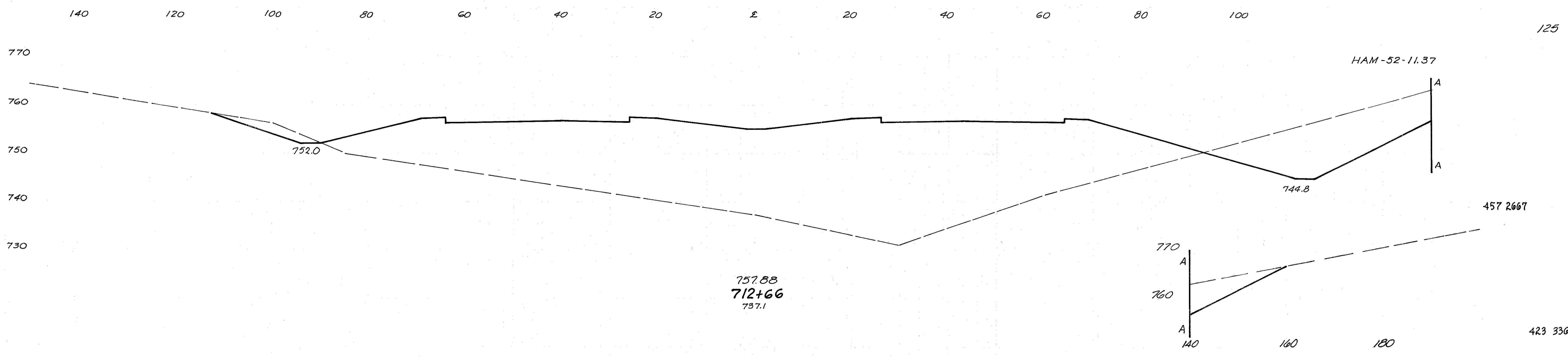
205 2793

186 1070



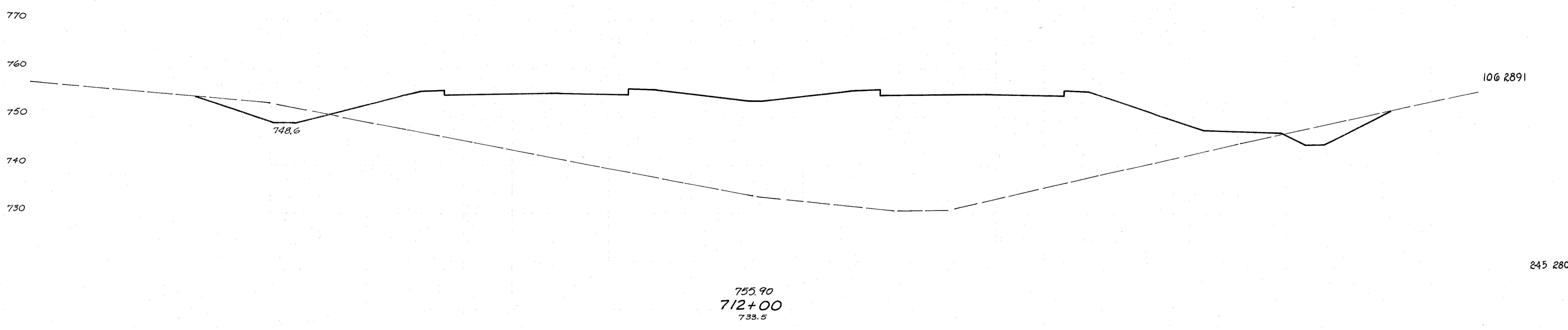
711 2960

1004 3897



750.83
712+31
738.8

173 3111

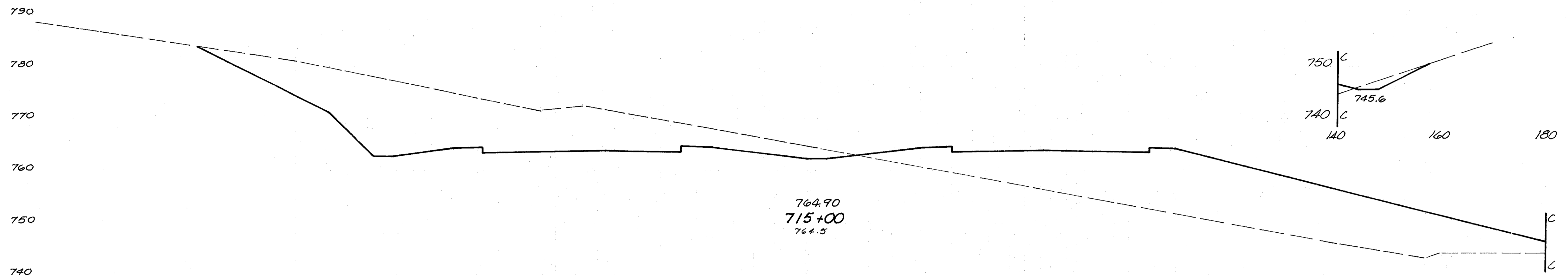


755.90
712+00
733.5

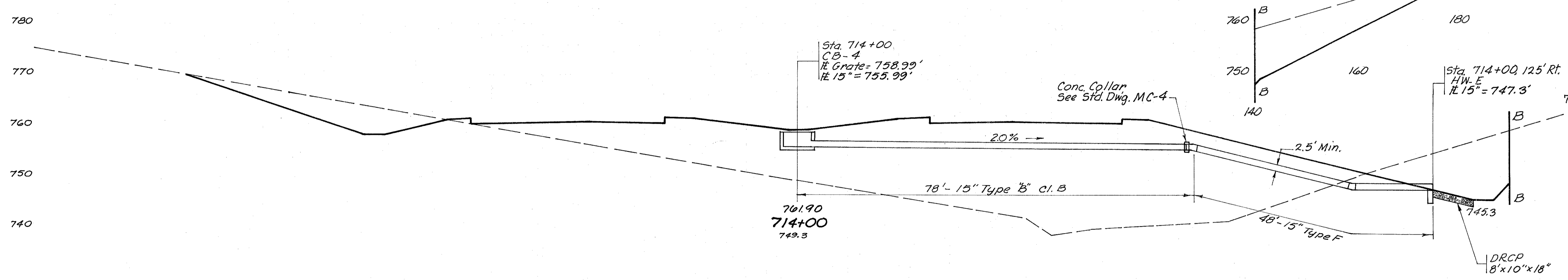
245 2800

STA. 712+00 TO STA. 712+66

HAM-52-11.37



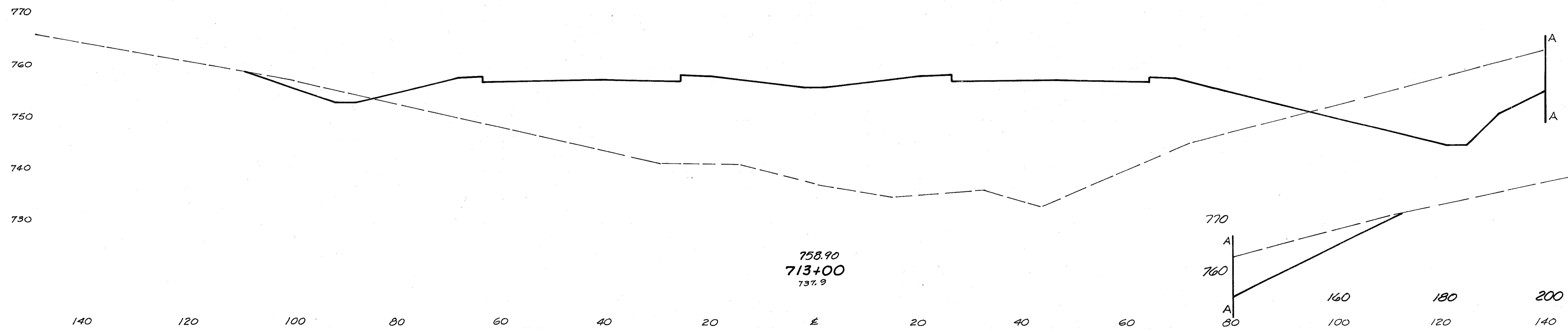
923 1037



30375769

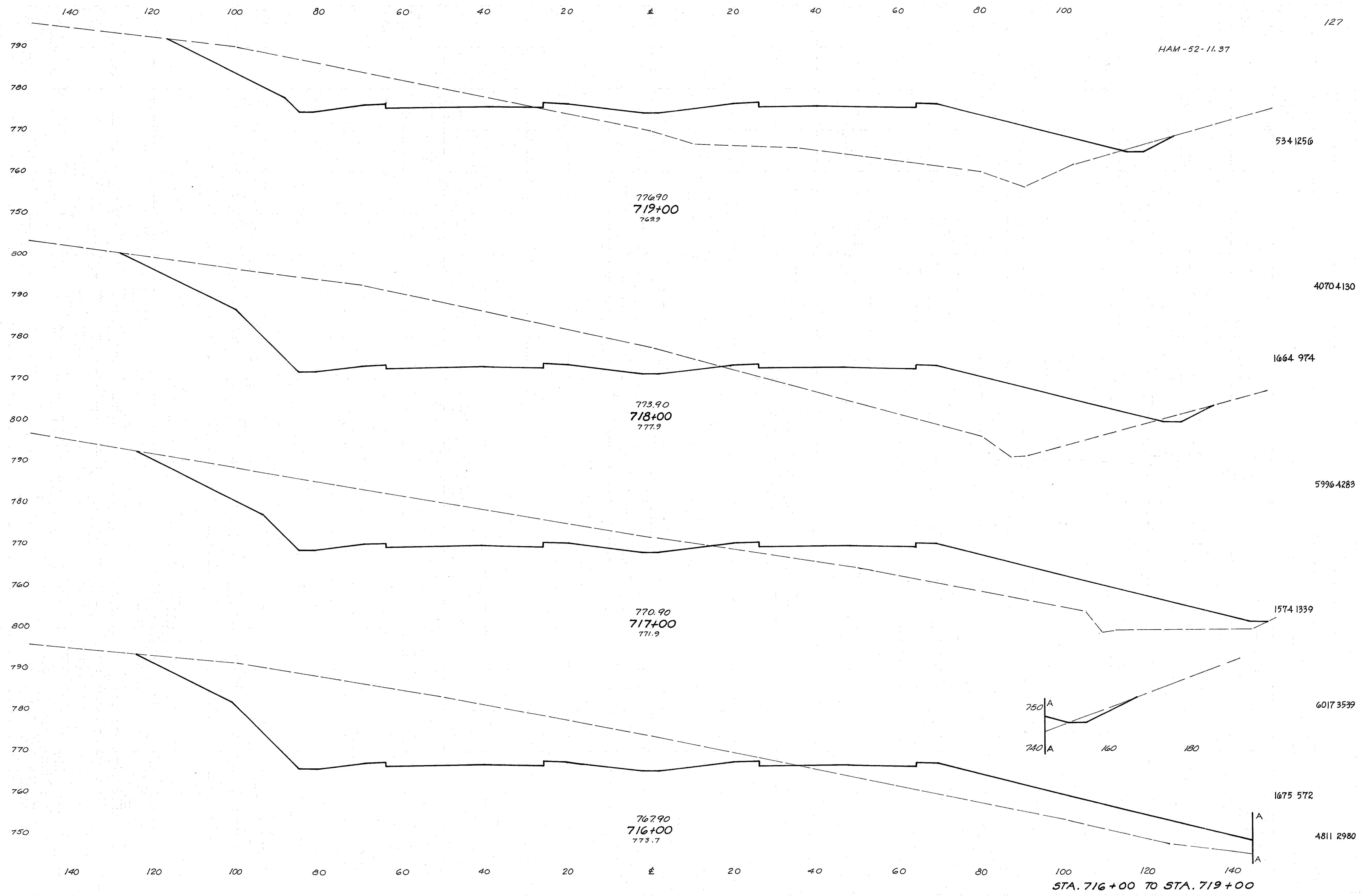
717 2078

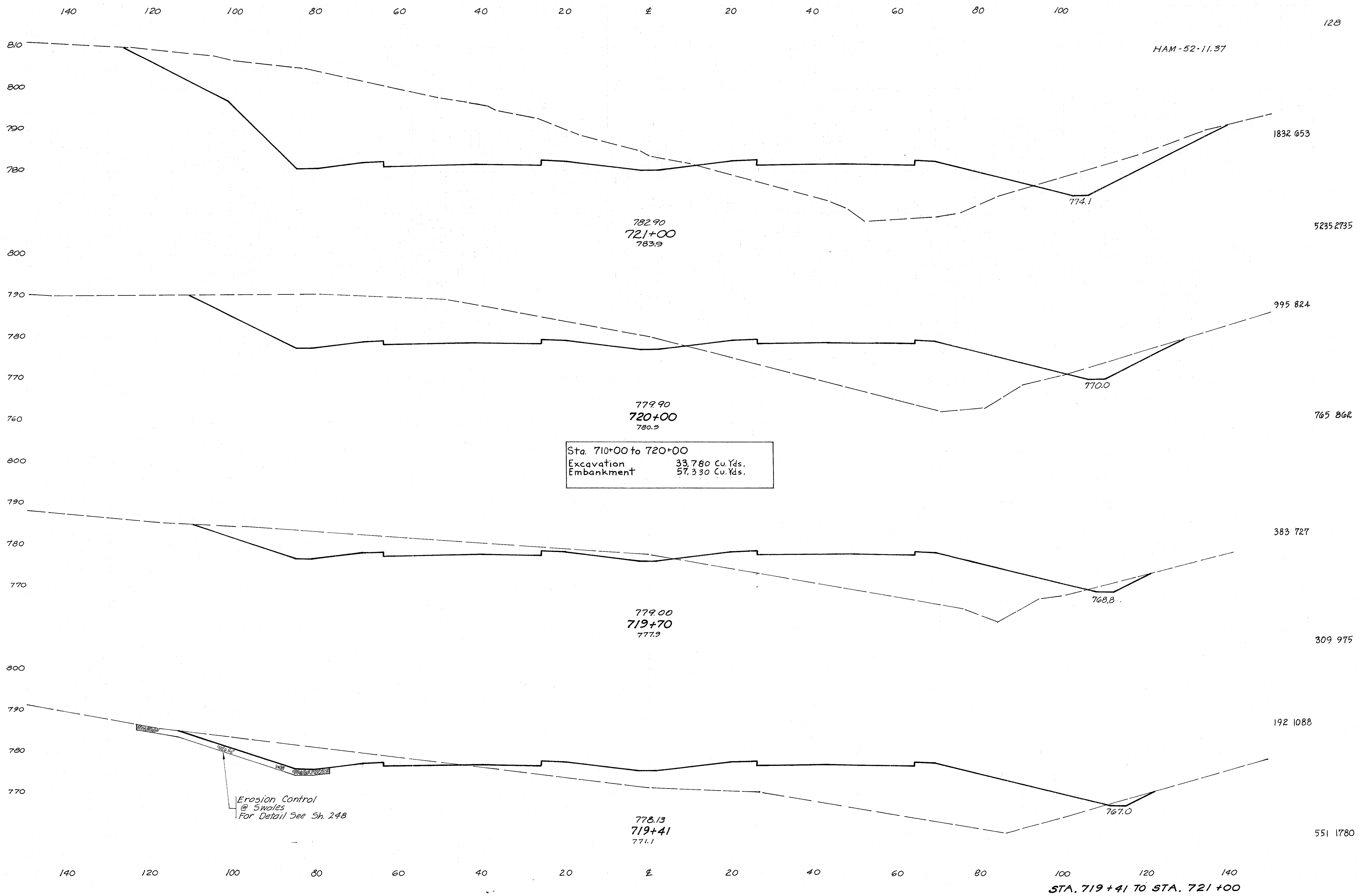
2682 8774

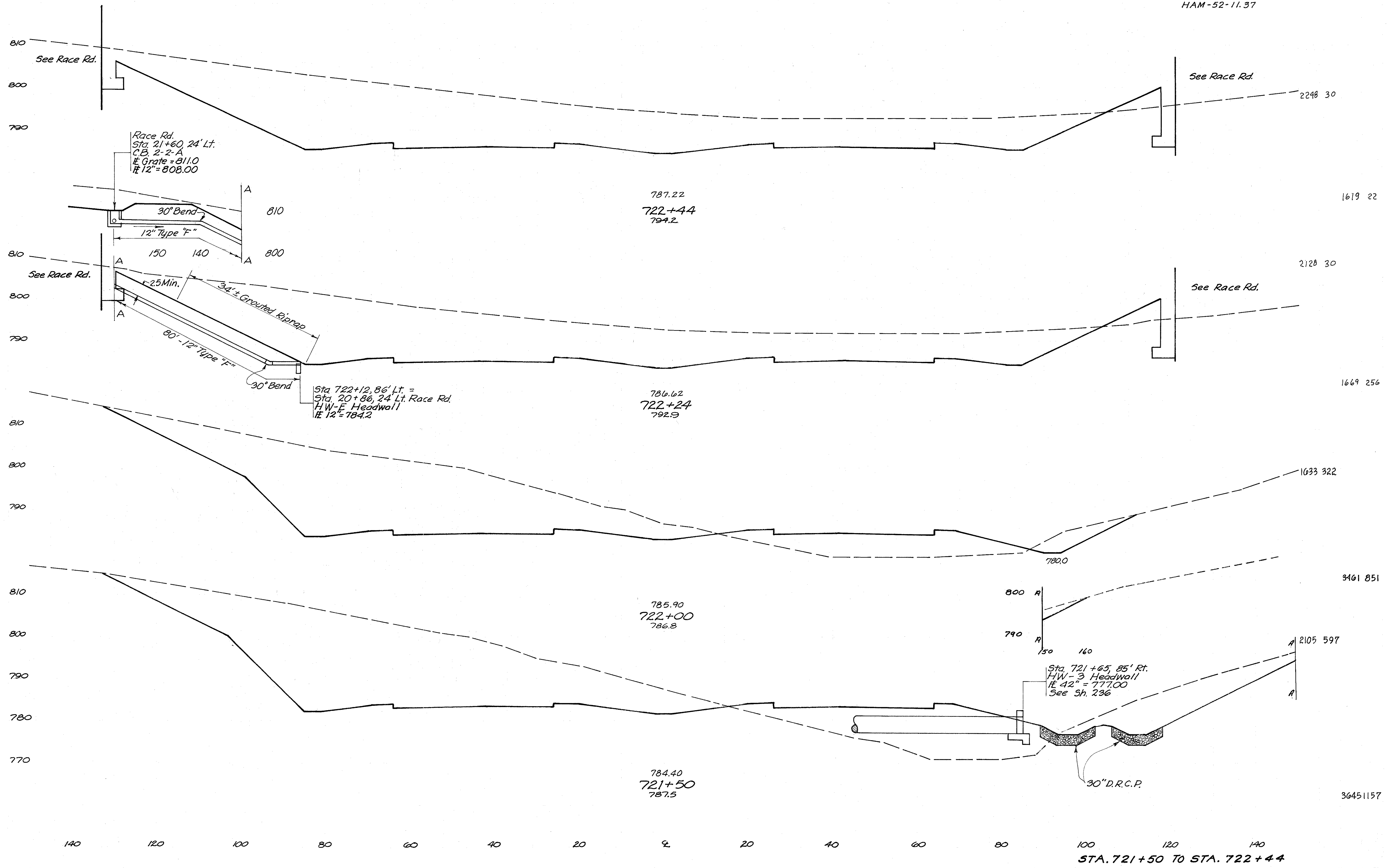


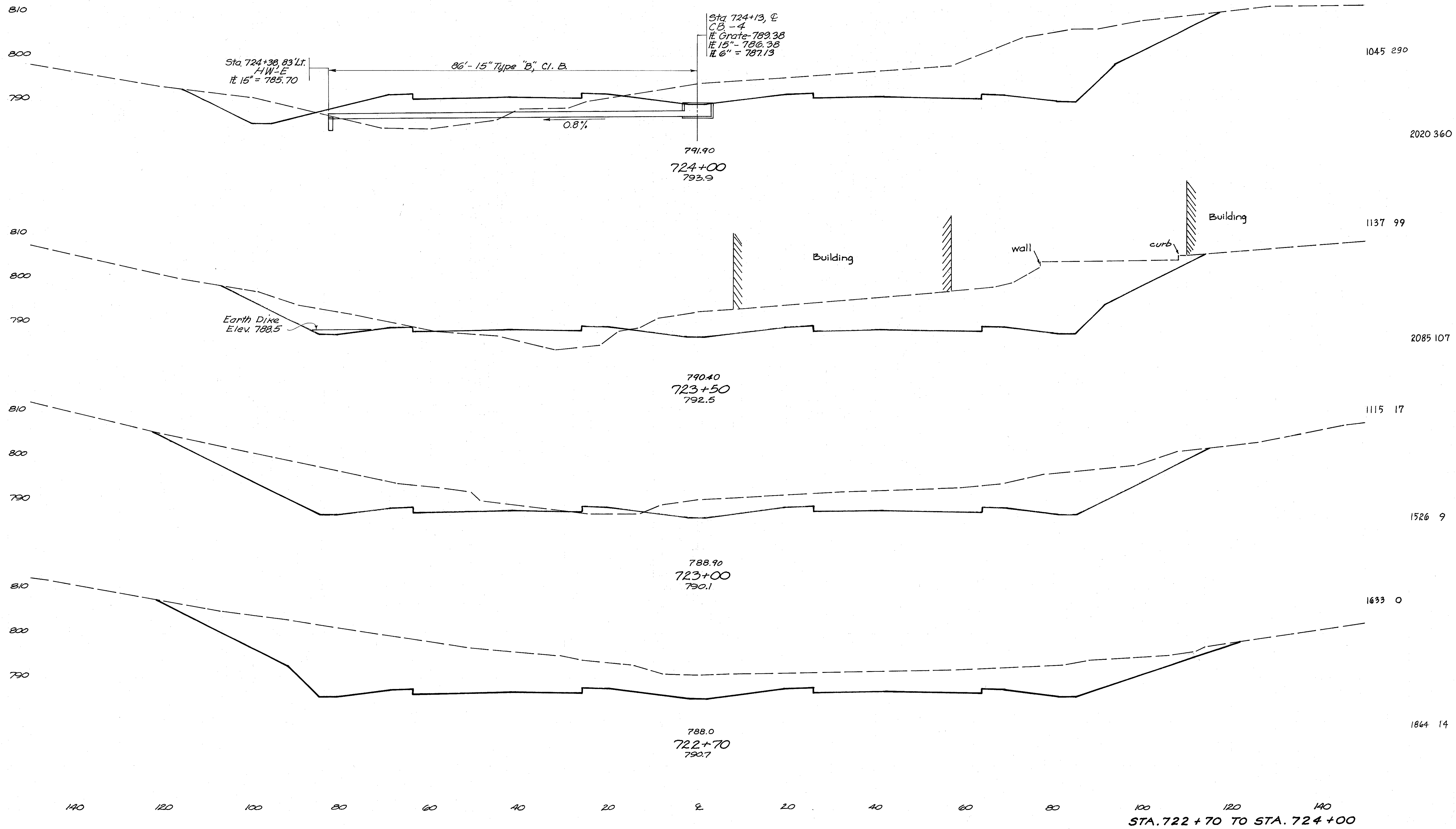
731 2660

748 3354

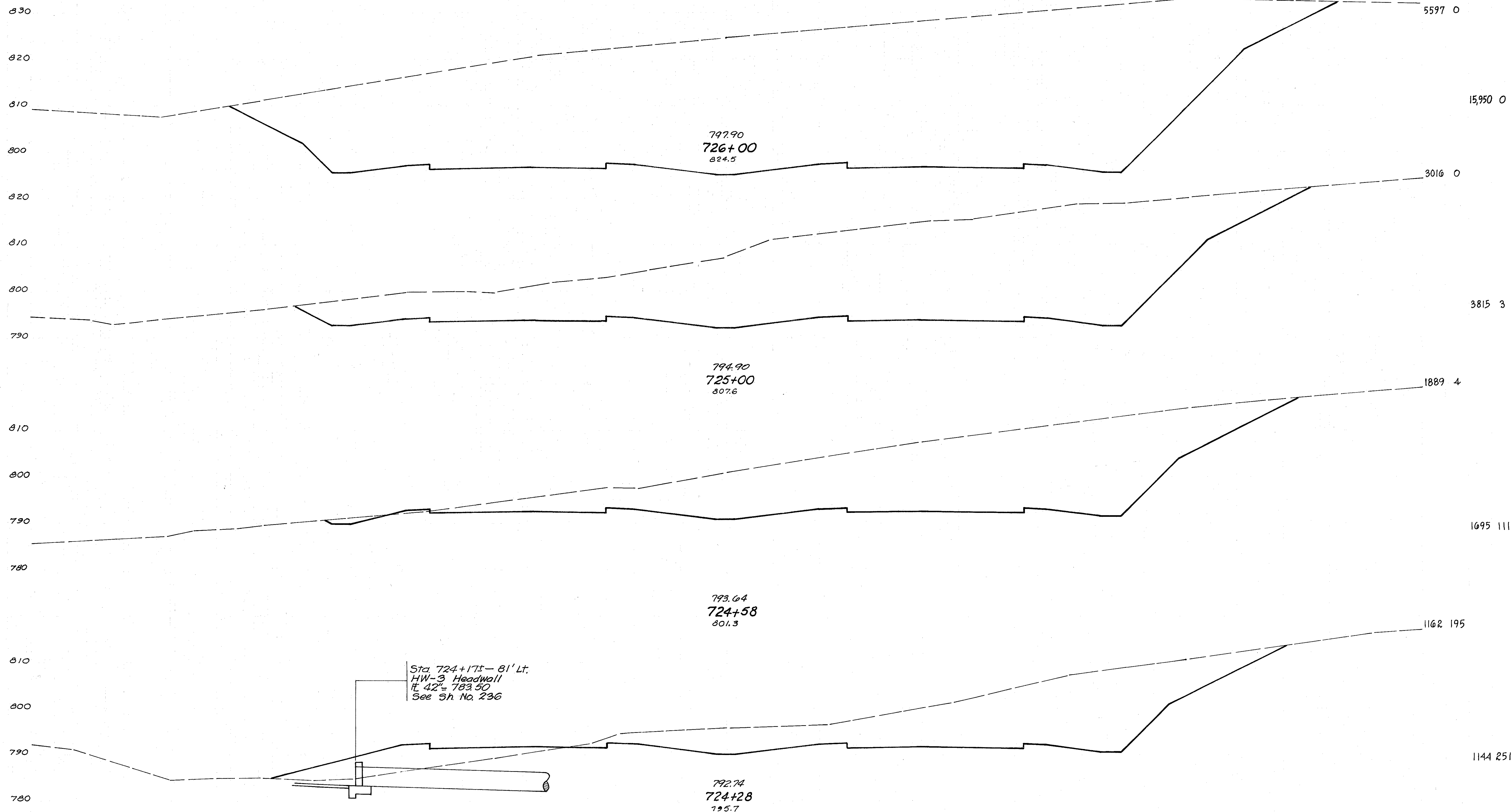








HAM-52-11.37



5597 0

15,950 0

3016 0

3815 3

1889 4

1695 111

1162 195

1144 251

Sta. 724+17± - 81' Lt.
 HW-3 Headwall
 ft. 42' = 783.50
 See Sh. No. 236

797.90
 726+00
 824.5

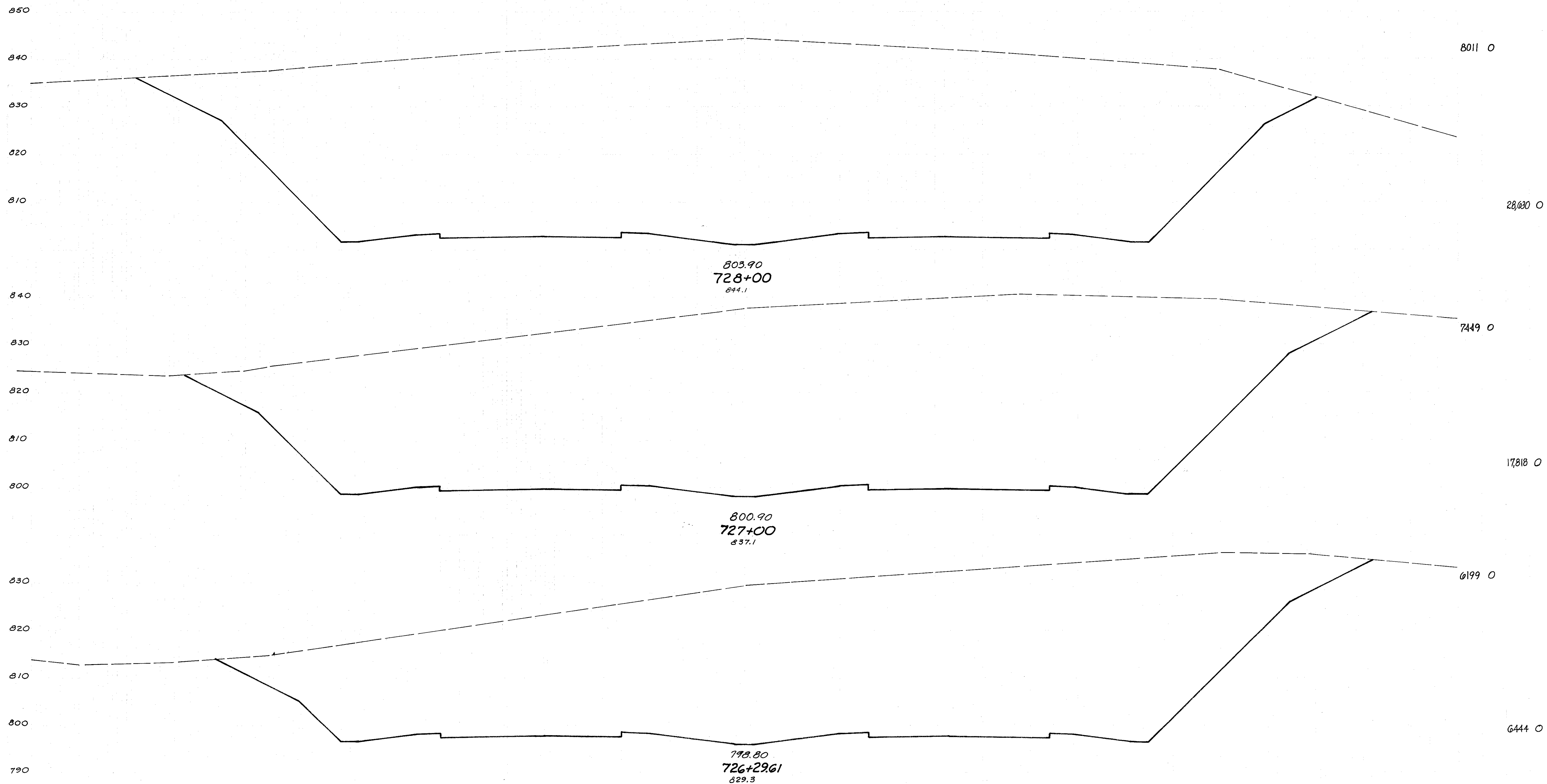
794.90
 725+00
 807.6

793.64
 724+58
 801.3

792.74
 724+28
 795.7

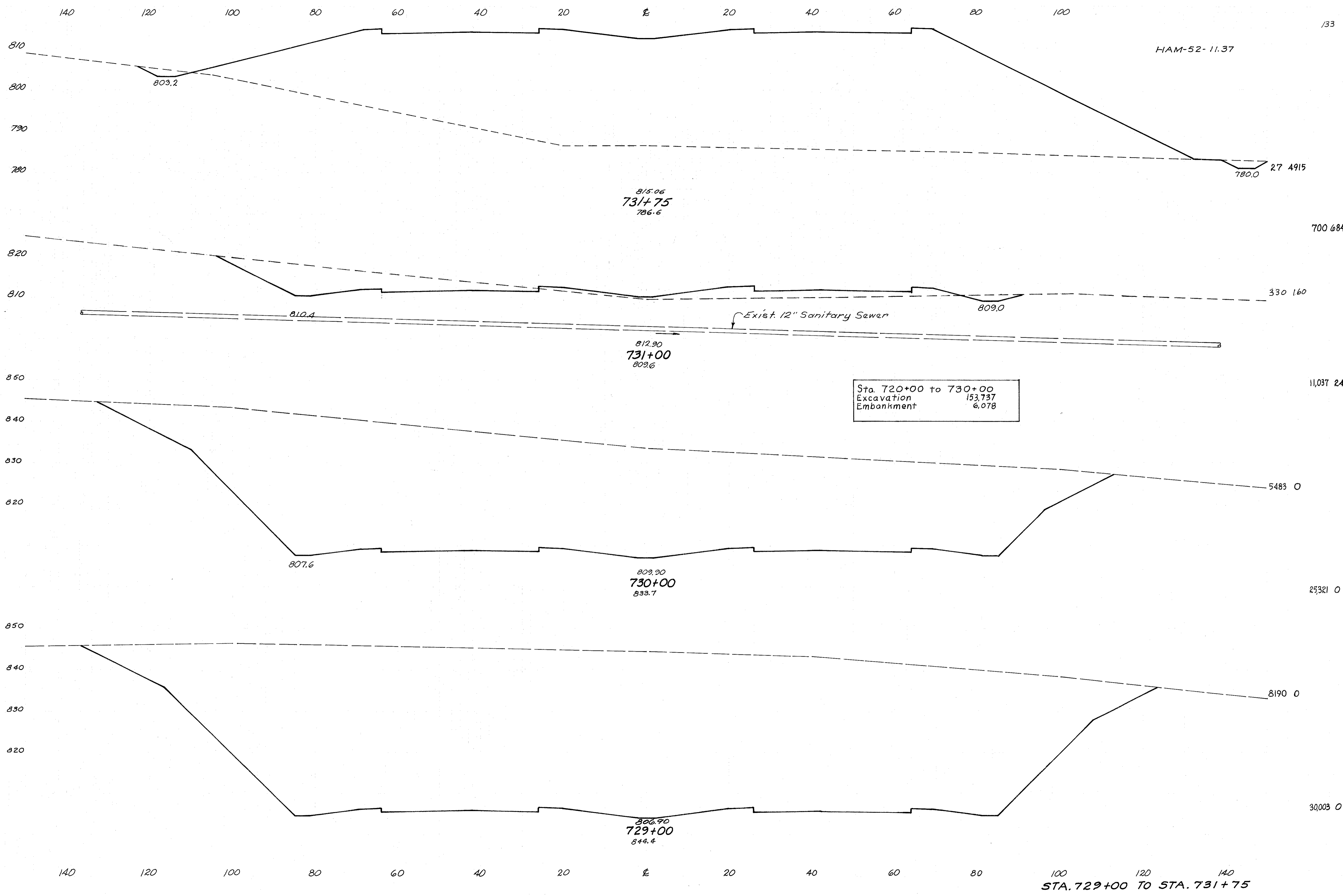
STA. 724 +28 TO STA. 726 +00

HAM-52-11.37

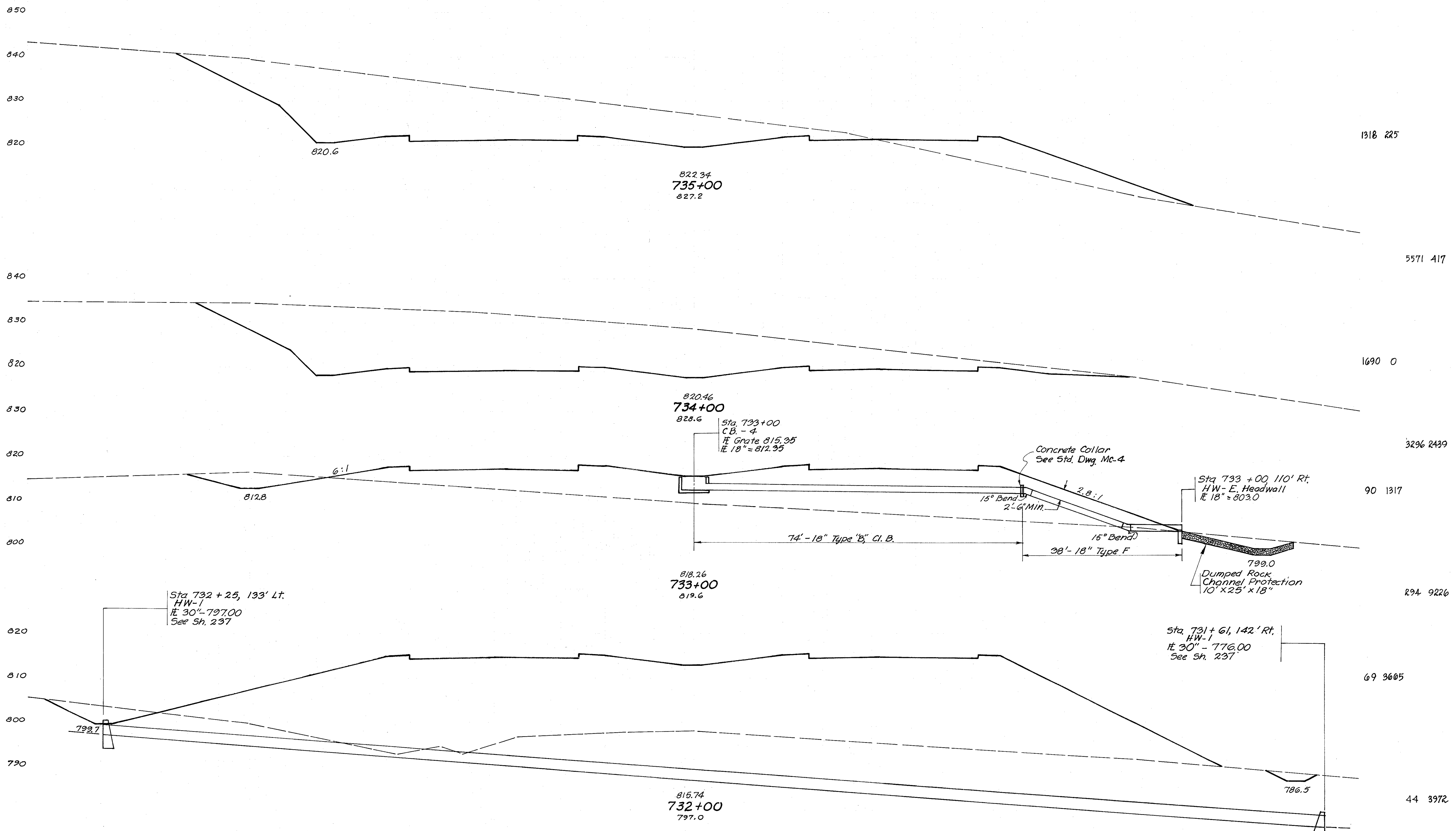


140 120 100 80 60 40 20 £ 20 40 60 80 100
STA. 726+29.61 TO STA. 728+00

HAM-52-11.37



HAM-52-11.37



Sta 732 + 25, 133' Lt.
HW-1
30" - 797.00
See Sh. 237

Sta 733+00
C.B. - 4
Grate 815.95
18" = 812.95

Concrete Collar
See Std. Dwg. Mc. 4

Sta 733 + 00 110' Rt.
HW - E. Headwall
18" = 803.0

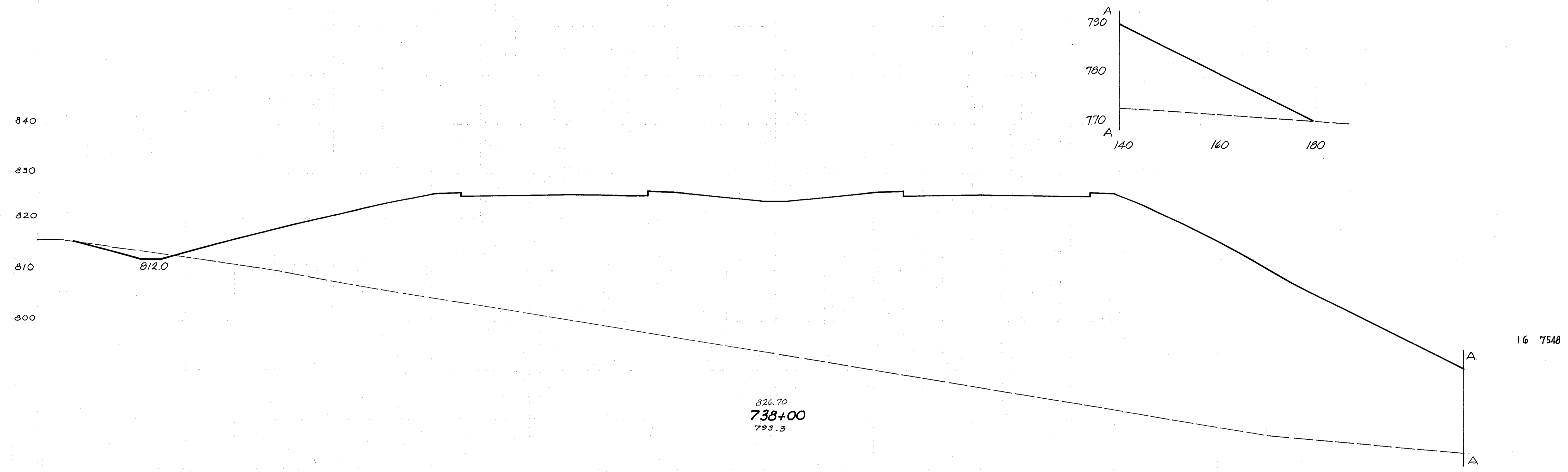
799.0
Dumped Rock
Channel Protection
10' x 25' x 18"

Sta. 731 + 61, 142' Rt.
HW-1
30" - 776.00
See Sh. 237

815.74
732+00
797.0

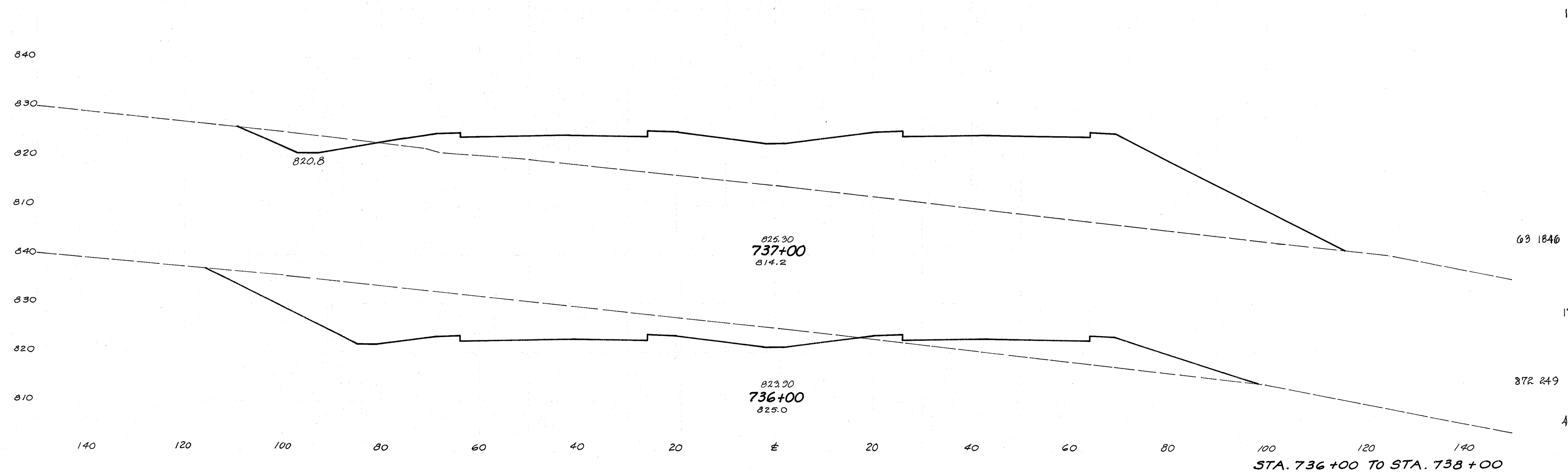
STA. 732+00 TO STA. 735+00

HAM-52-11.37



826.70
738+00
793.3

16 7548



825.90
737+00
814.2

823.90
736+00
825.0

146 17397

63 1846

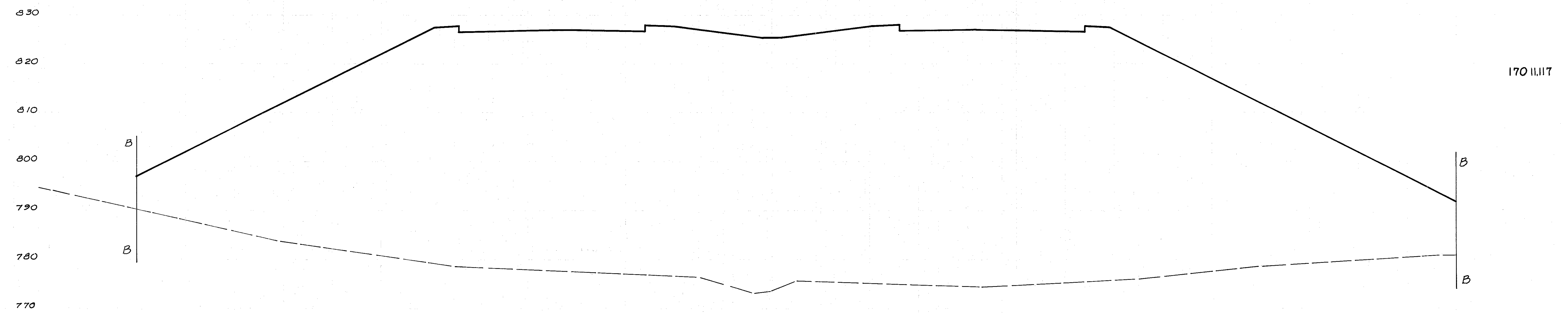
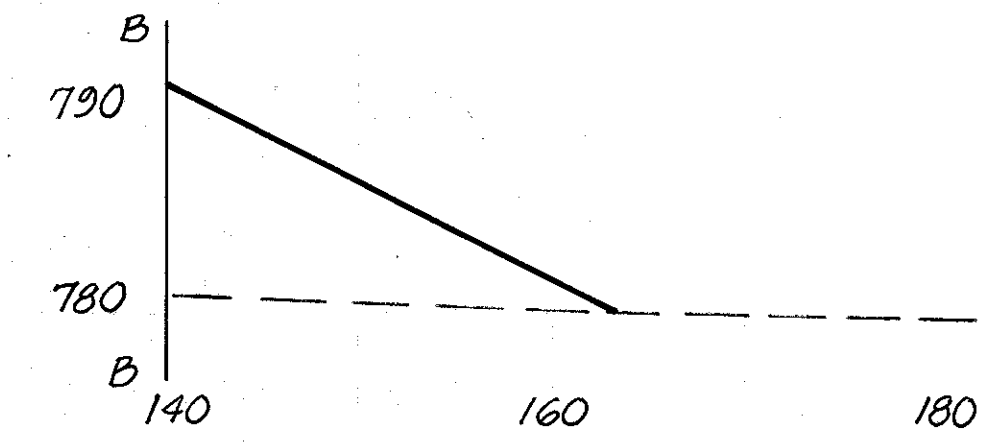
1732 3880

872 249

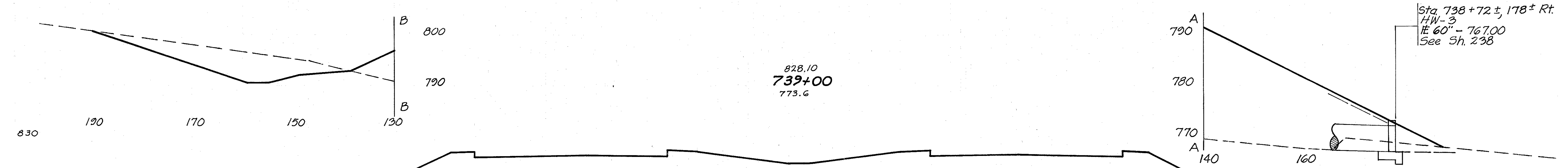
4056 878

STA. 736+00 TO STA. 738+00

HAM-52-11.37

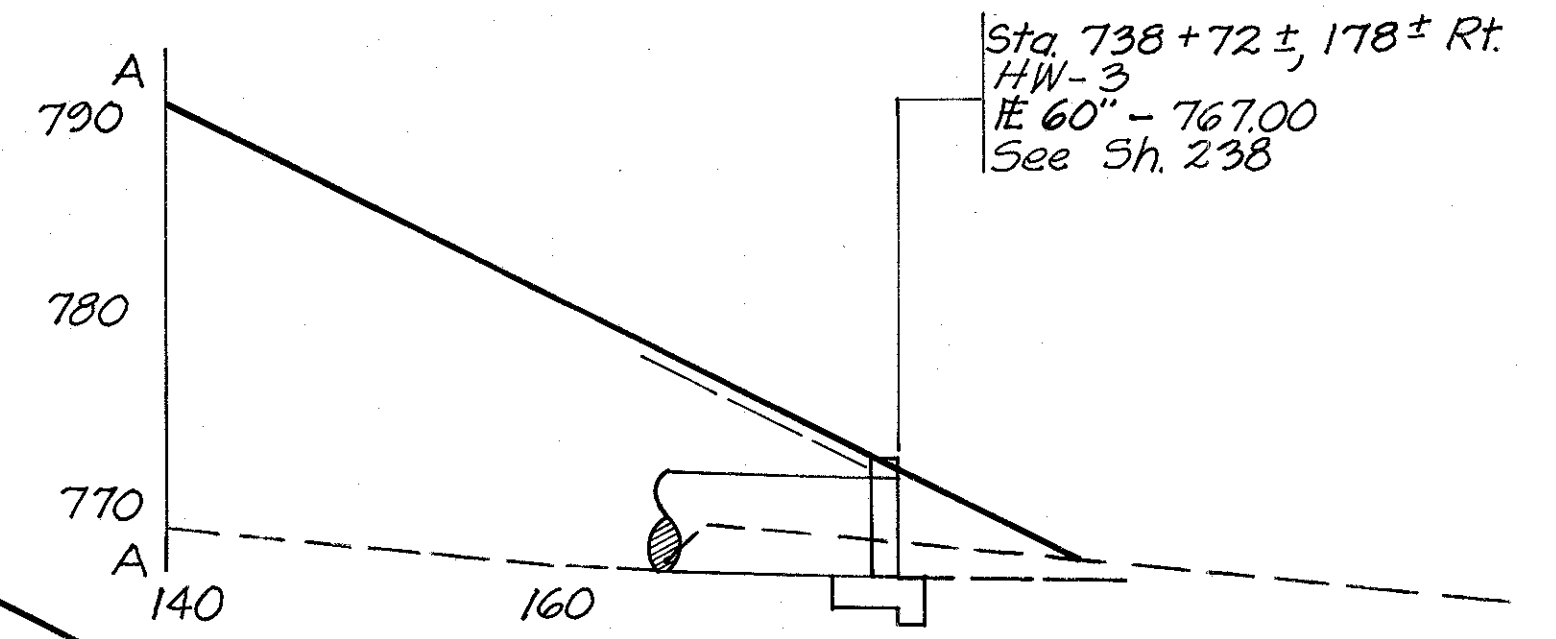


170 11,117

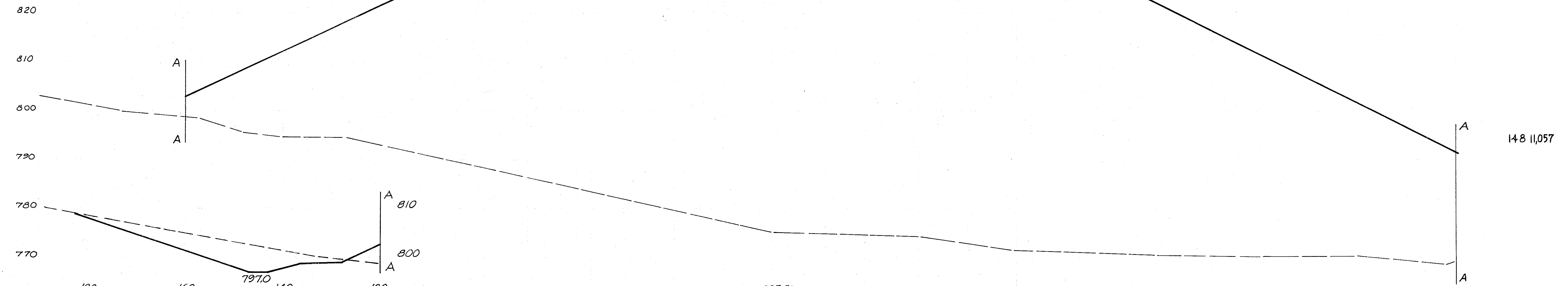


247 17,245

828.10
739+00
773.6



148 11,057

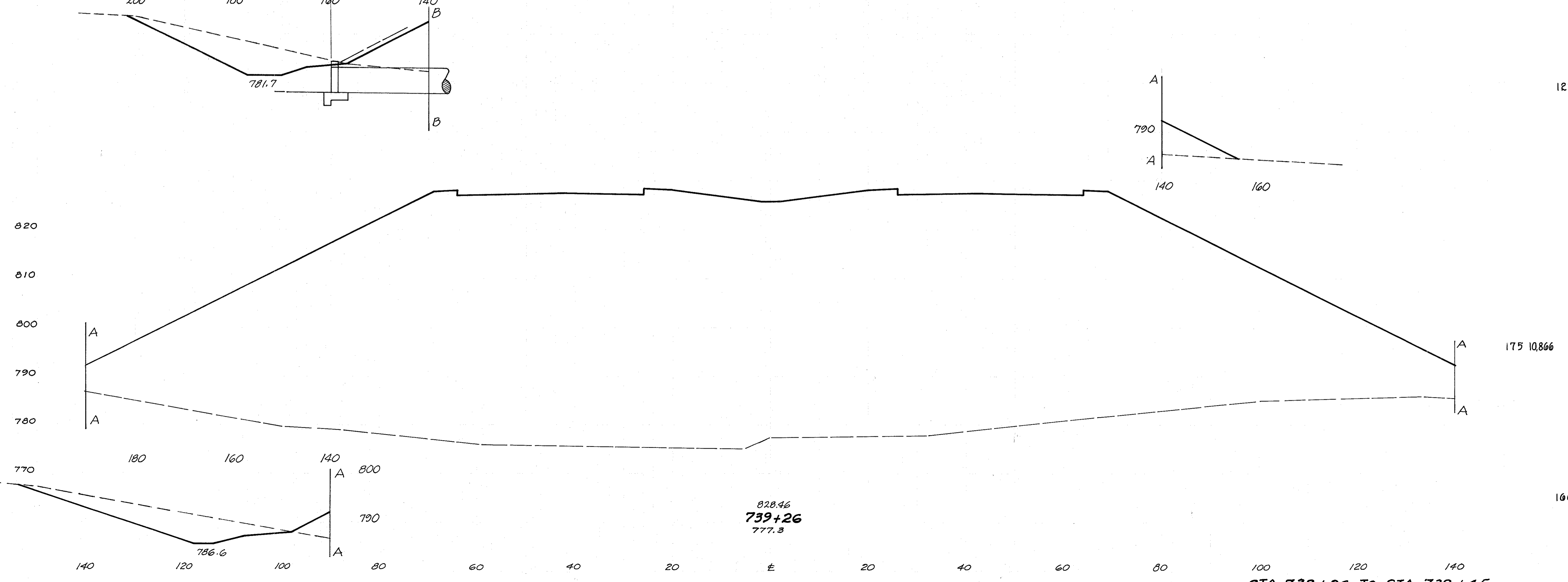
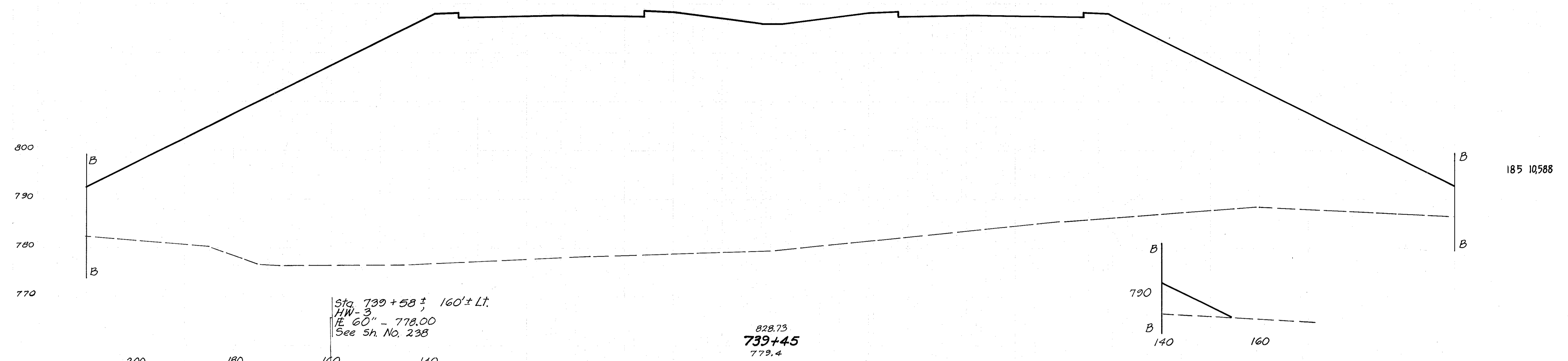


176 19,984

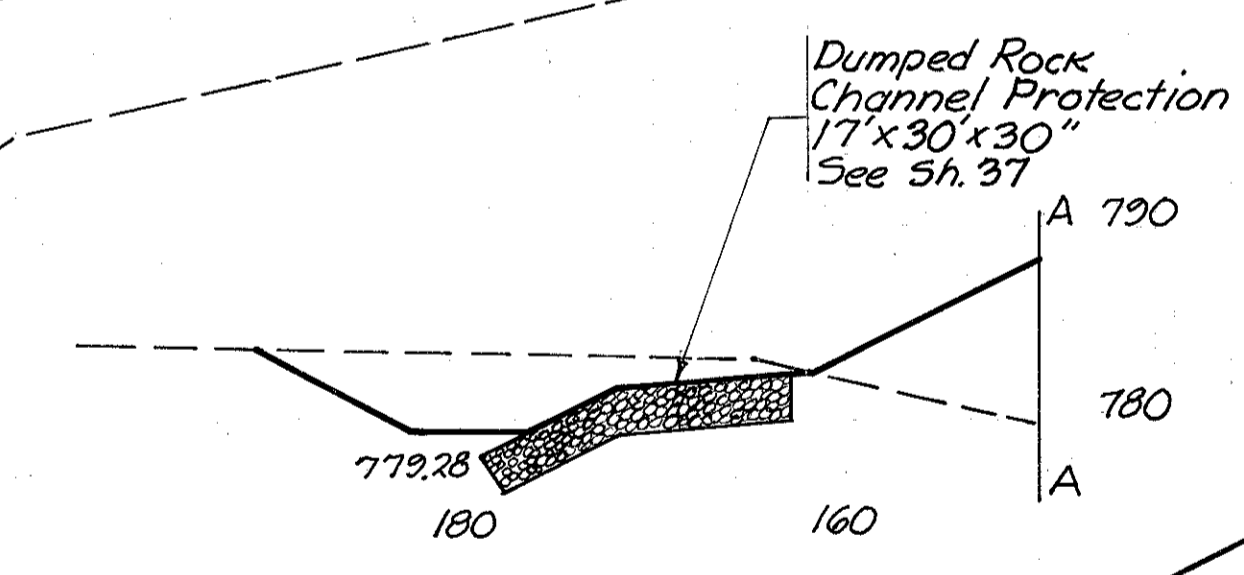
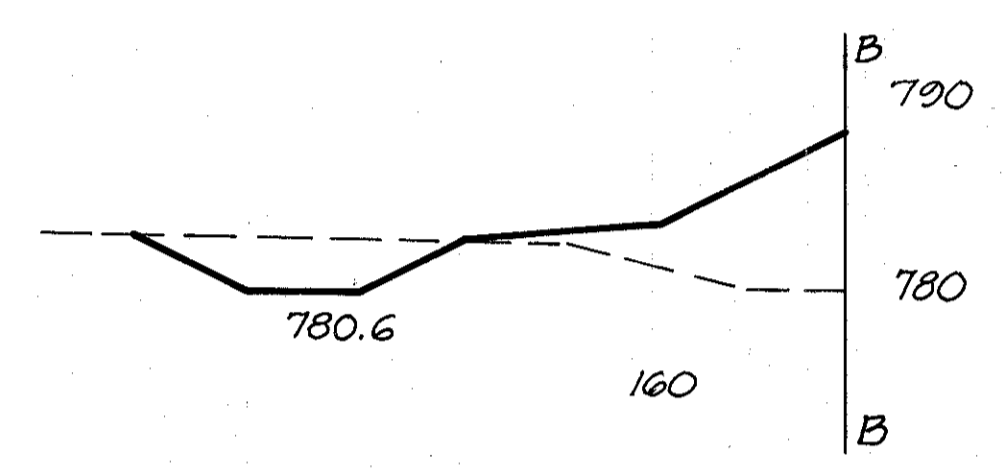
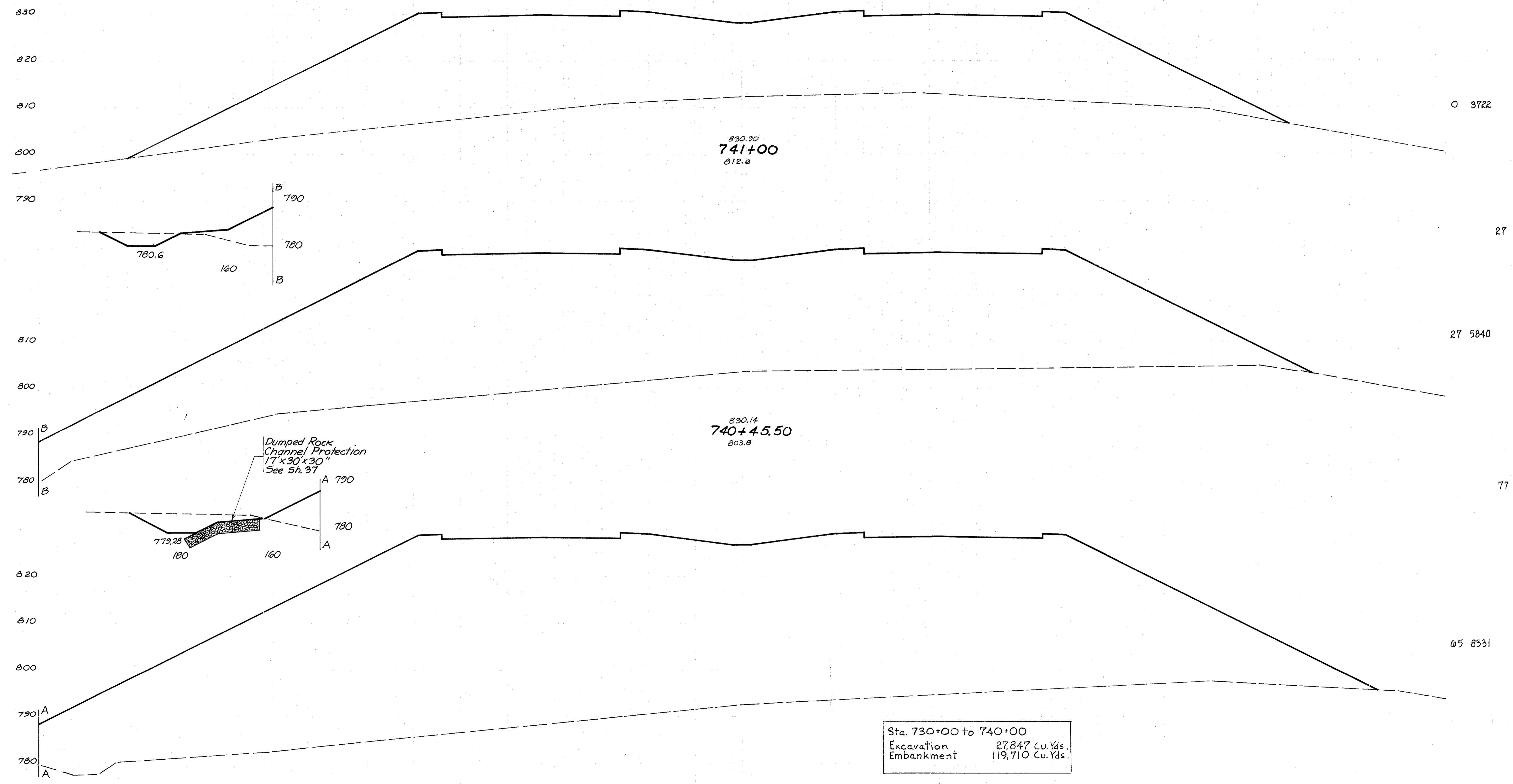
827.51
738+58
775.2

140 120 100 80 60 40 20 E 20 40 60 80 100
STA. 738+58 TO STA. 739+00

HAM-52-11.37



HAM-52-11.37



830.90
741+00
812.6

830.14
740+4.50
803.8

829.00
740+00
792.6

Sta. 730+00 to 740+00	
Excavation	27,847 Cu. Yds.
Embankment	119,710 Cu. Yds.

3722

9650

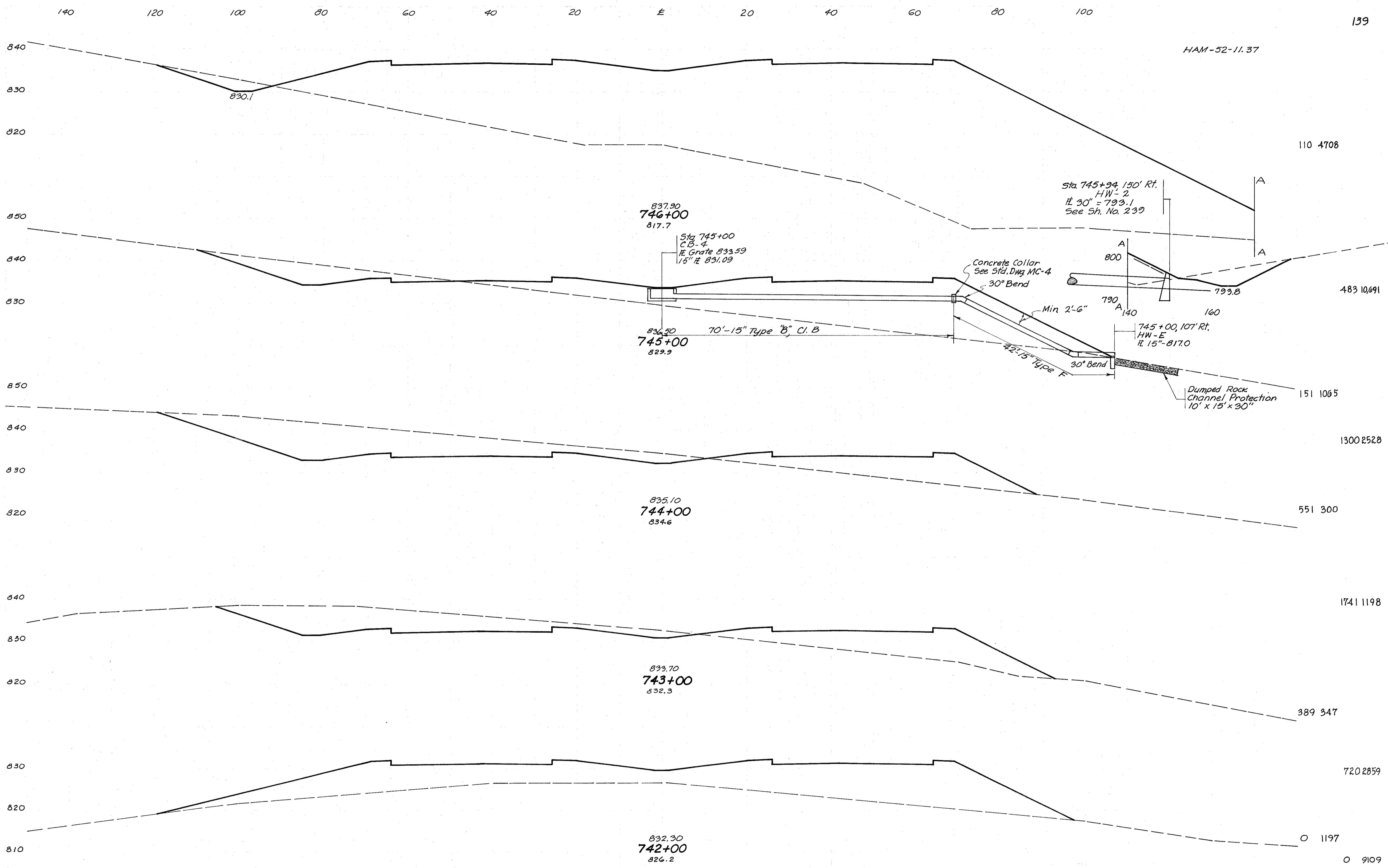
5840

11936

8331

19,269

HAM-52-11.37



STA. 742+00 TO STA. 746+00

O 9109

O 1197

720 2859

389 347

551 300

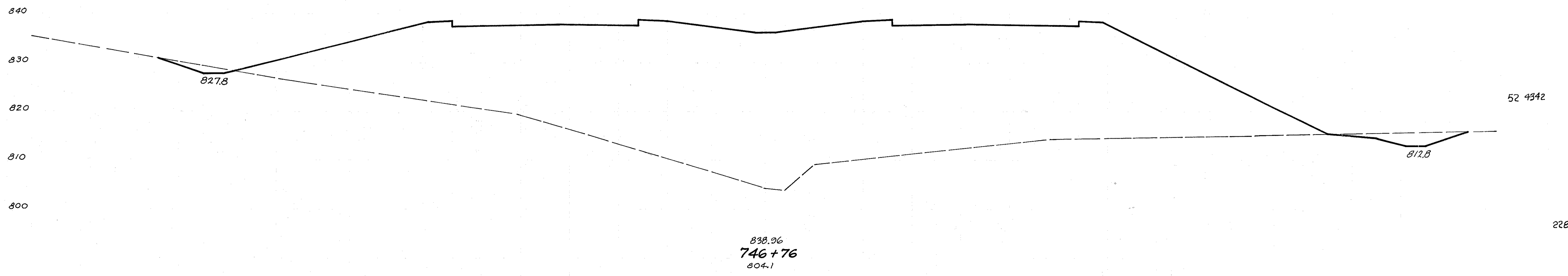
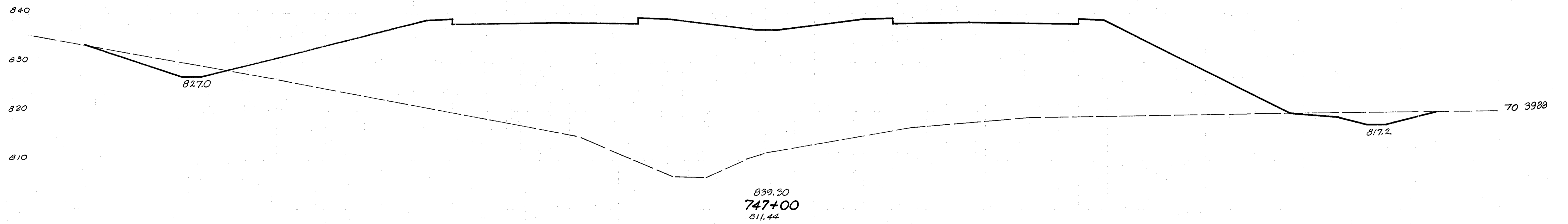
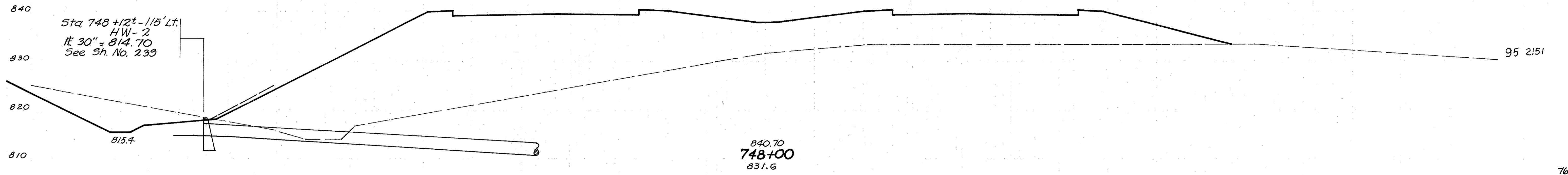
1300 2528

151 1065

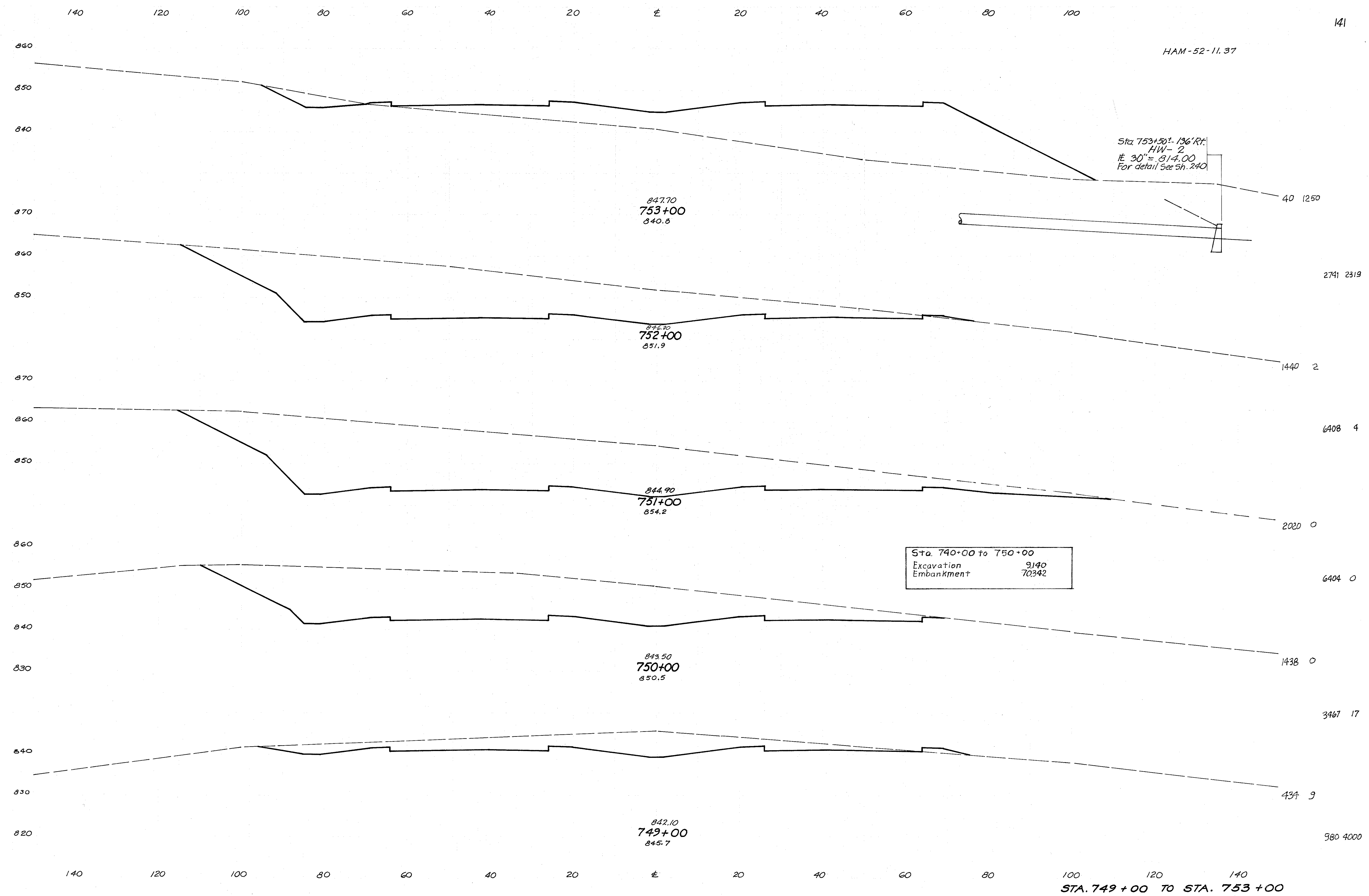
483 10691

110 4708

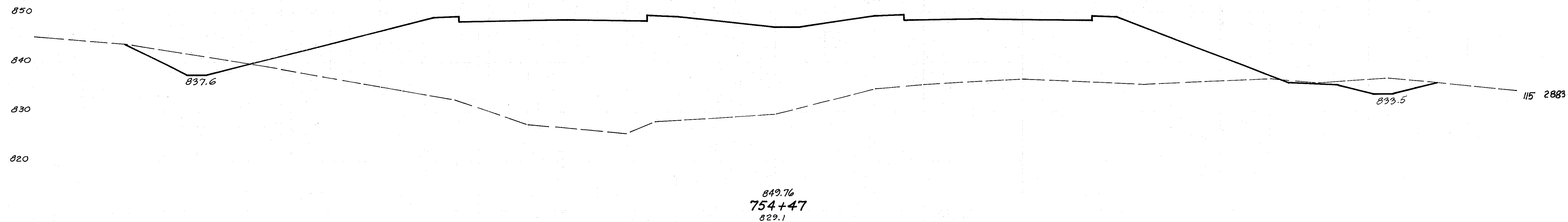
HAM-52-11.37



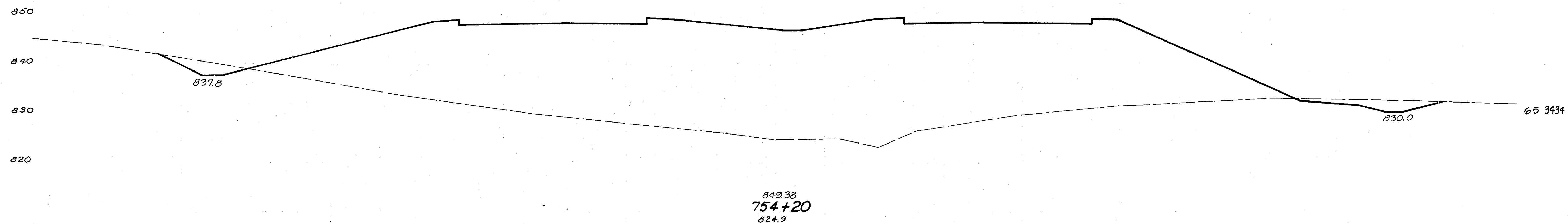
HAM-52-11.37



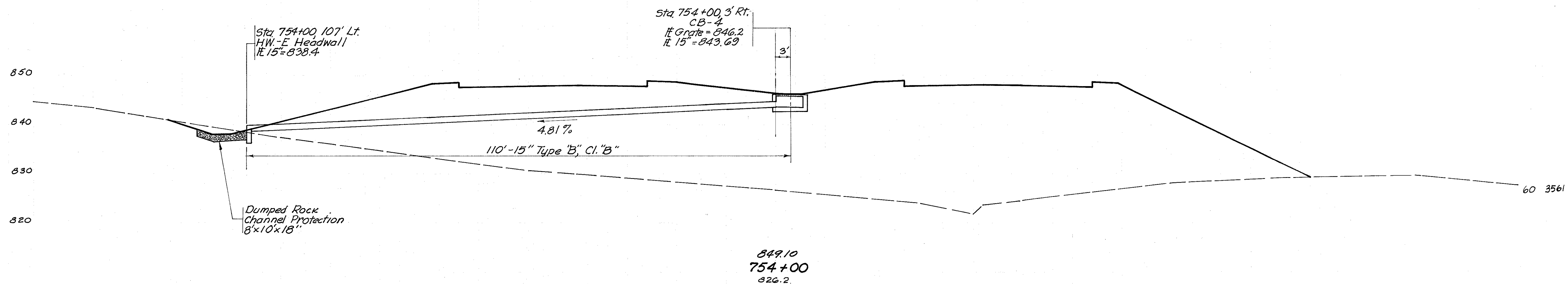
HAM-52-11.37



90 3159

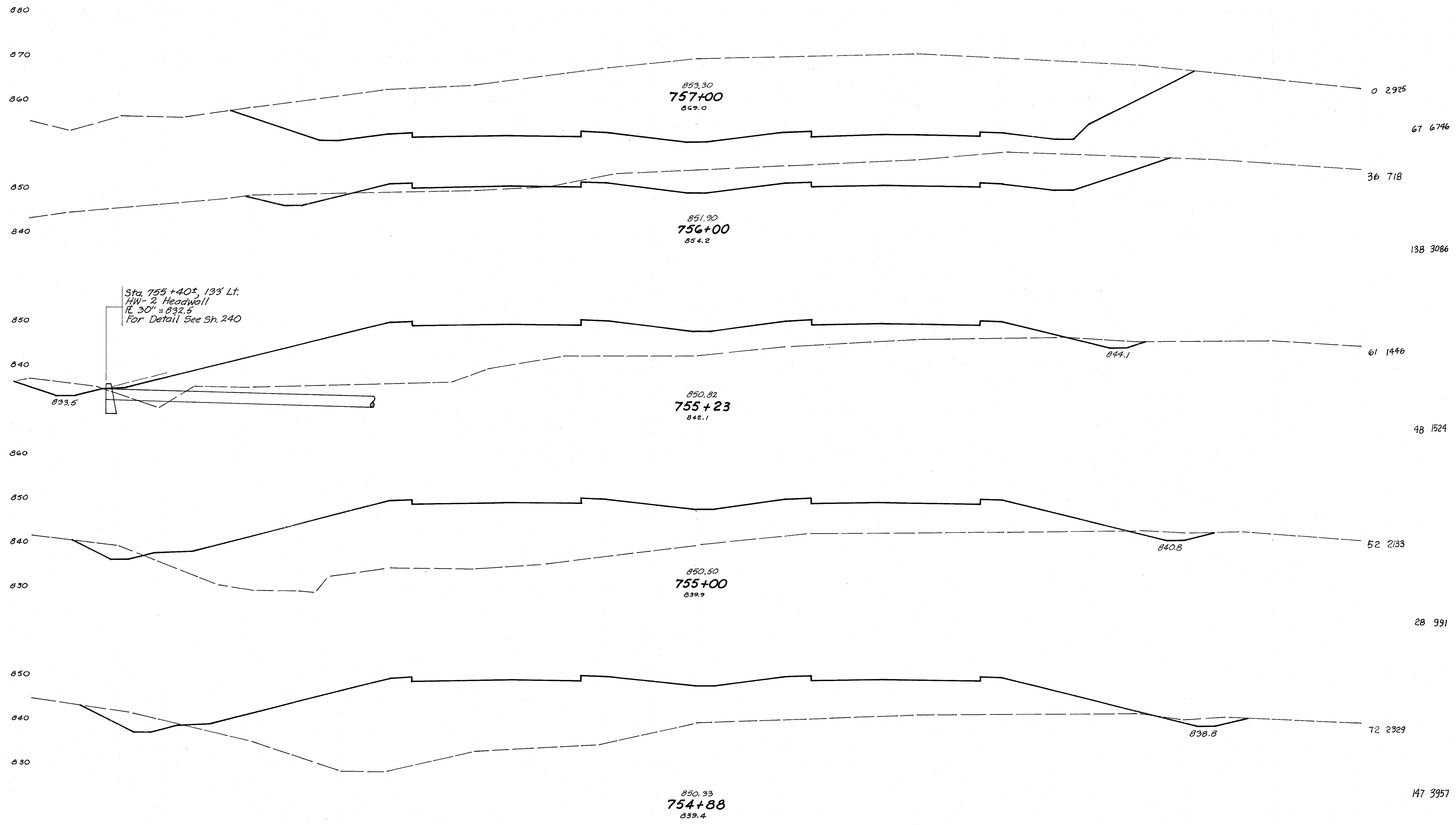


46 2591

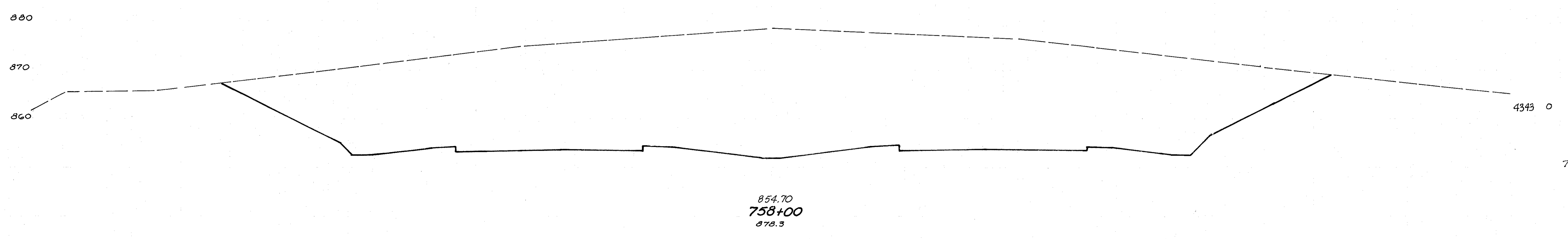
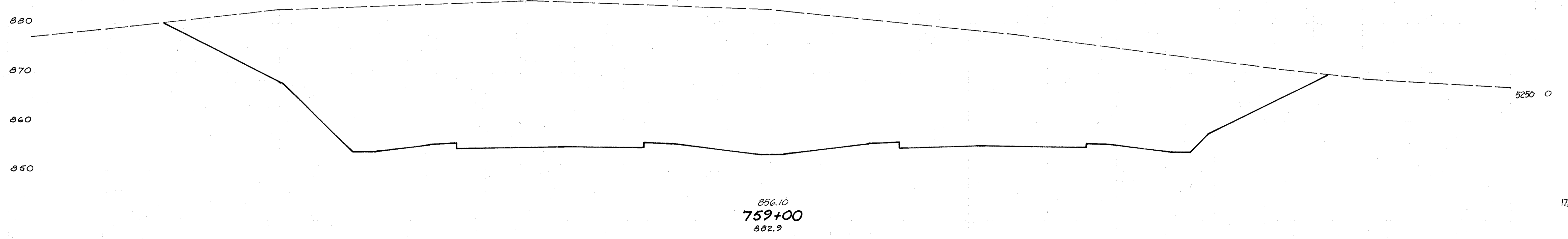
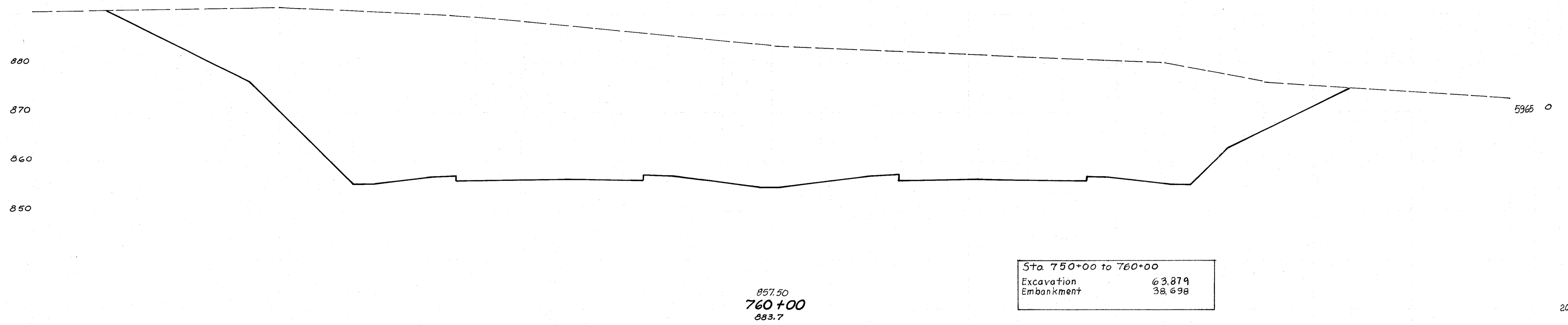


185 8904

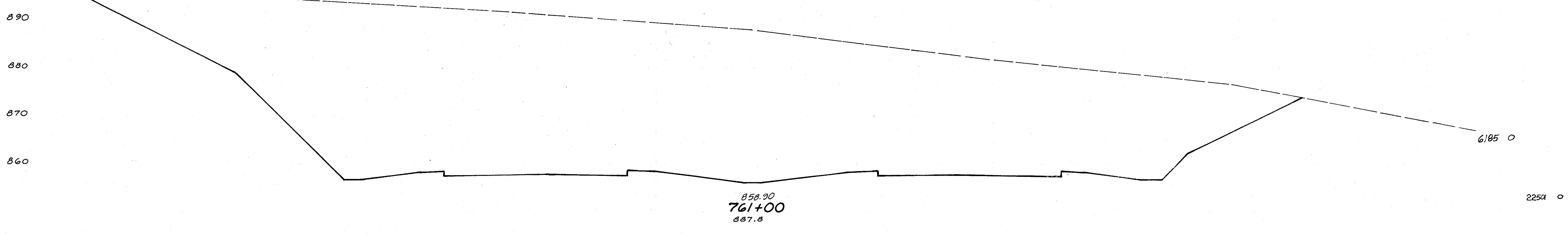
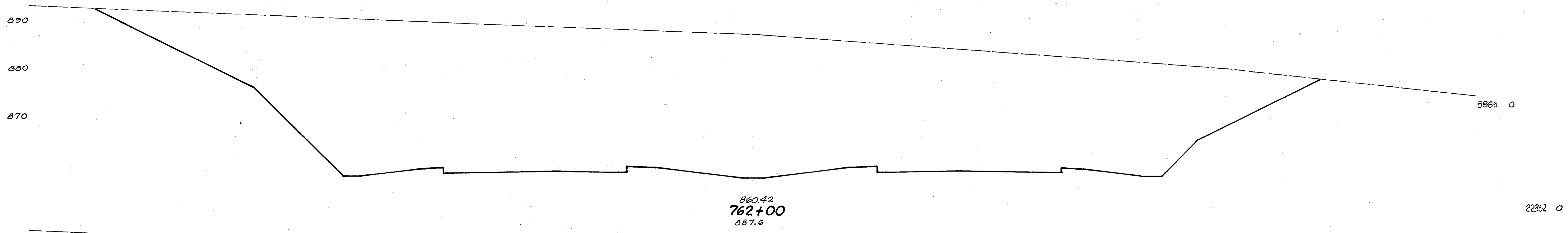
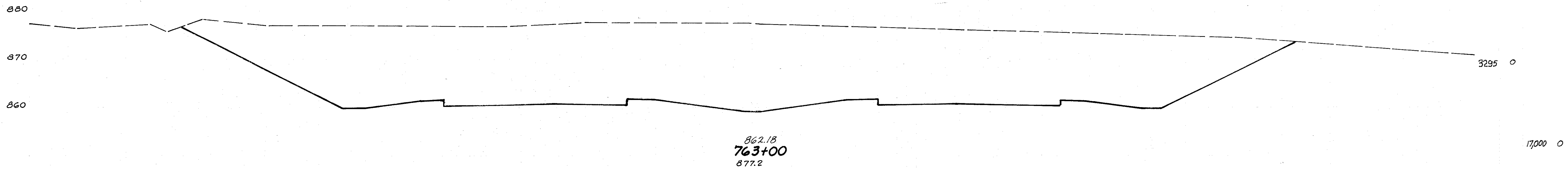
HAM-52-11.37



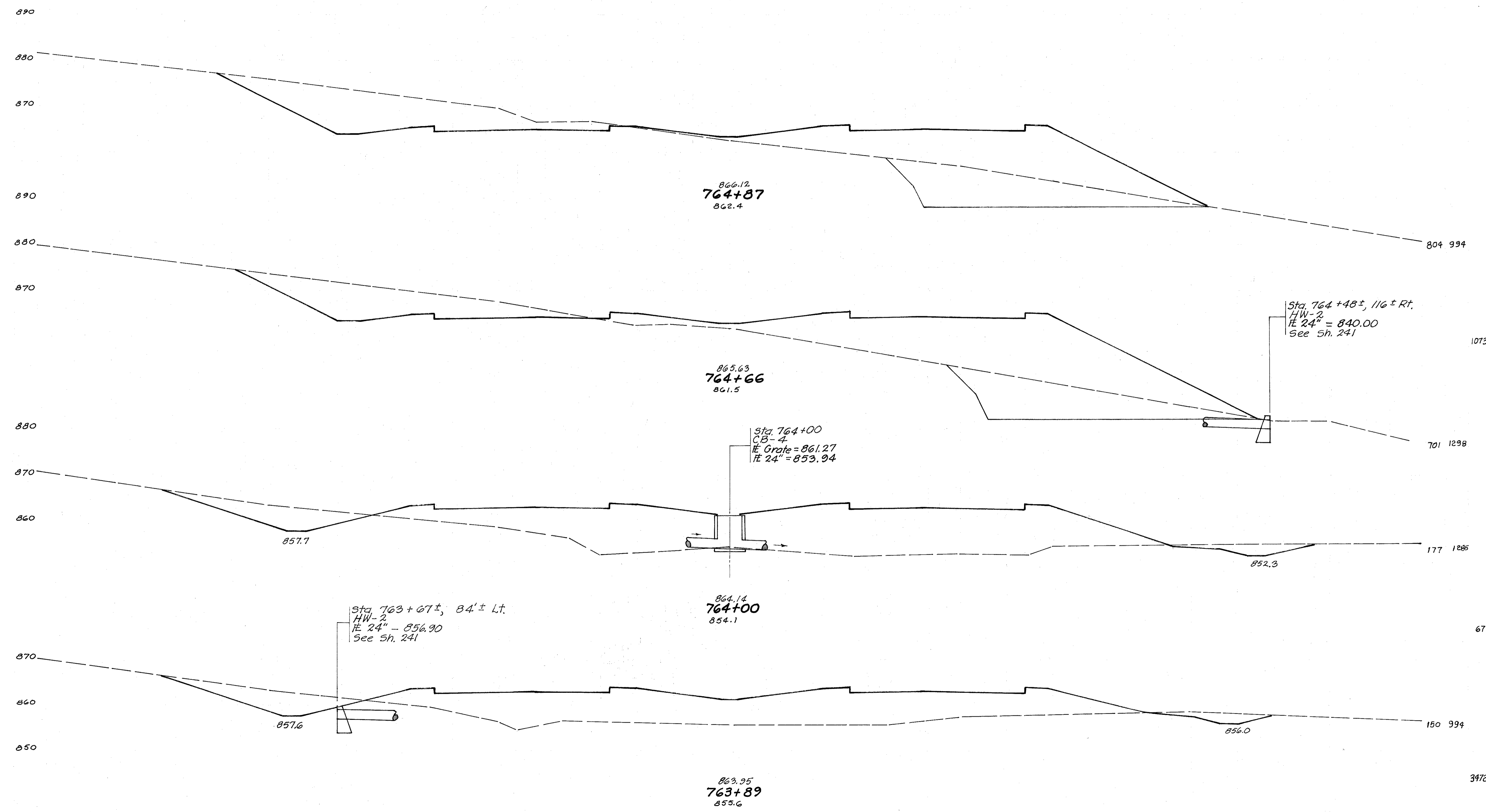
HAM-52-11.37



HAM-52-11.37



HAM-52-11.37

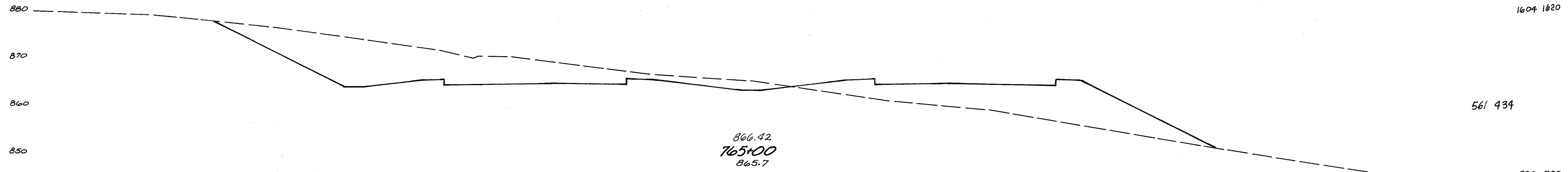
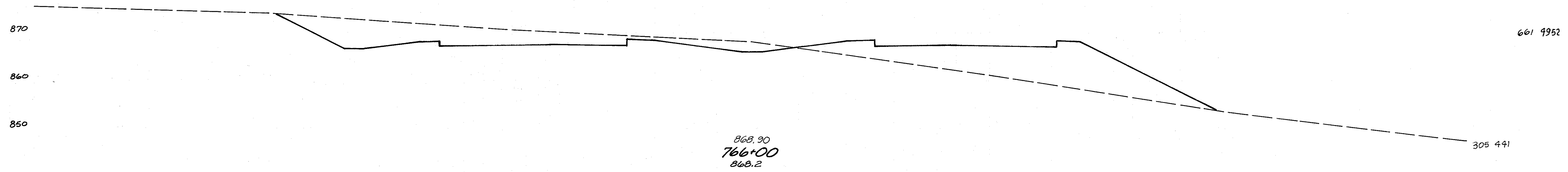
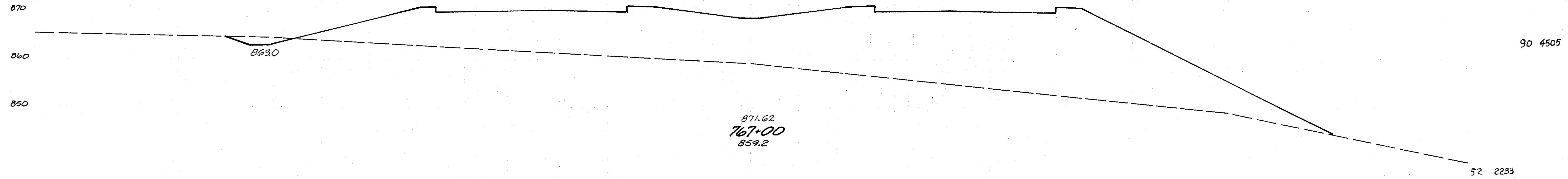
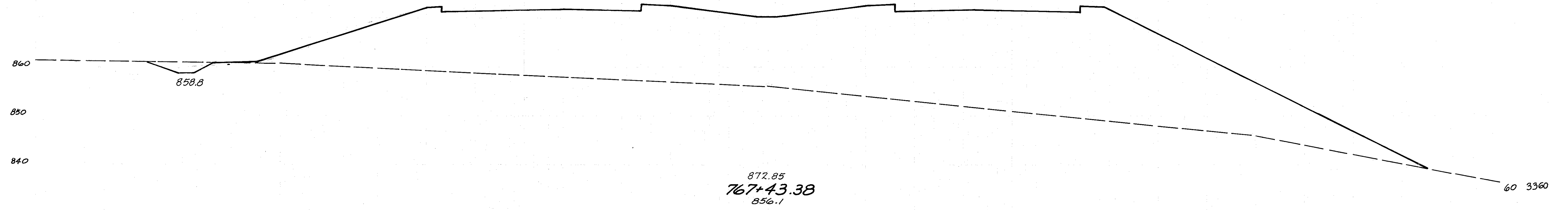


Sta. 763+67±, 84'± Lt.
 HW-2
 24" = 856.90
 See Sh. 241

Sta. 764+00
 CB-4
 24" = 861.27
 24" = 853.94

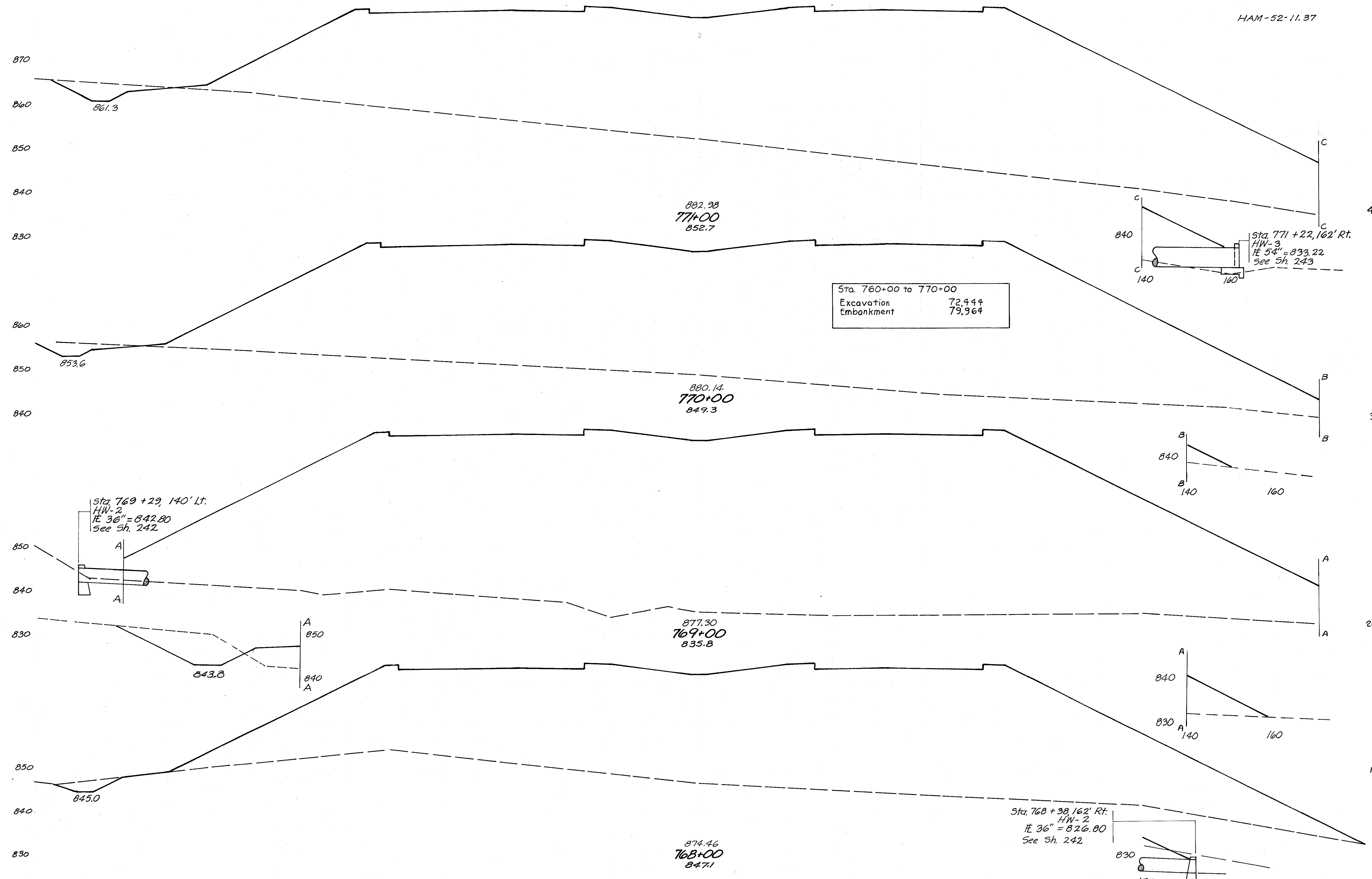
Sta. 764+48±, 116± Rt.
 HW-2
 24" = 840.00
 See Sh. 241

HAM-52-11.37

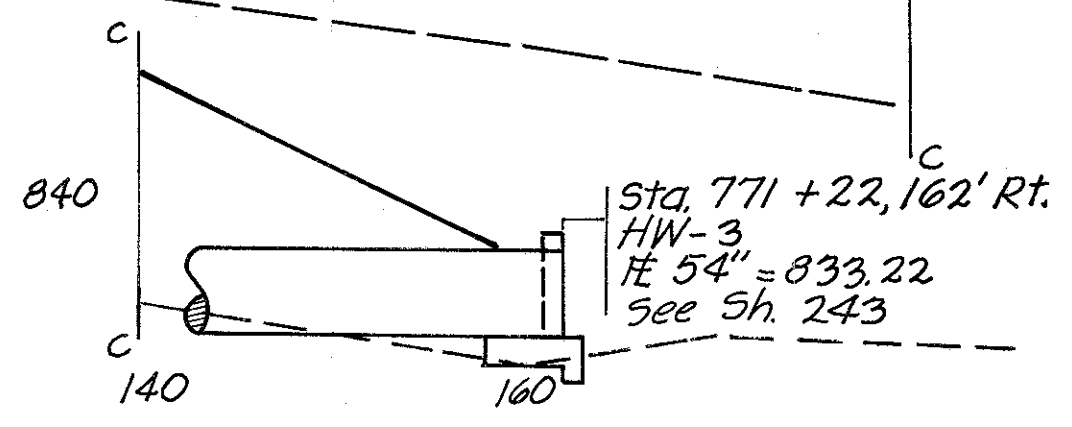


140 120 100 80 60 40 20 E 20 40 60 80 100

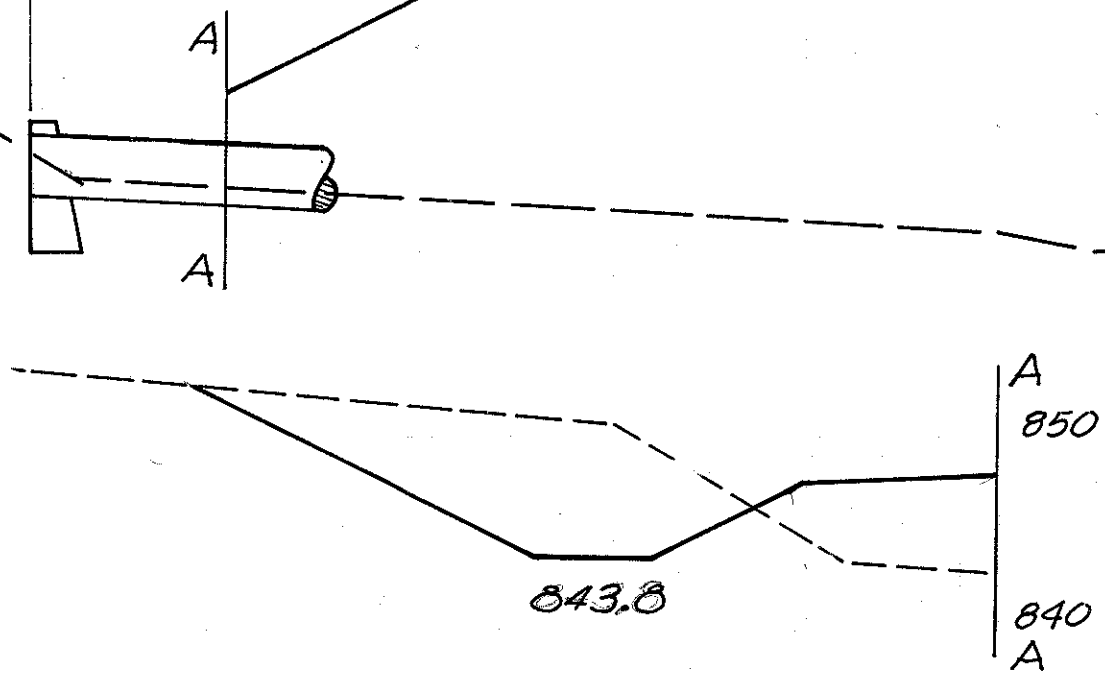
HAM-52-11.37



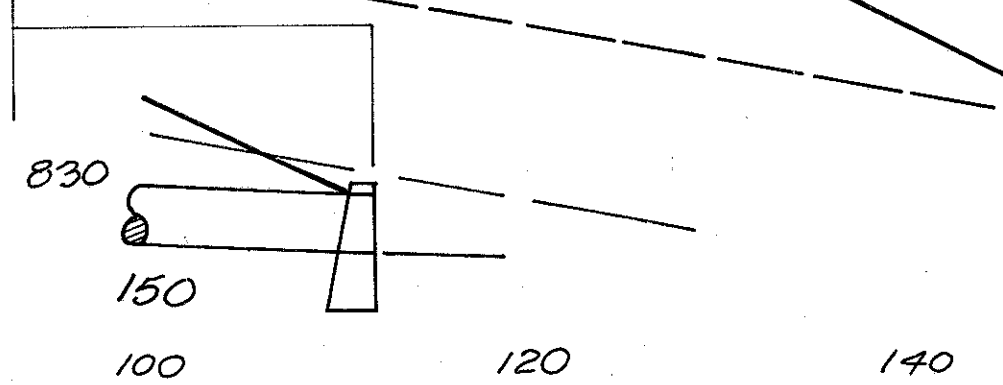
Sta. 760+00 to 770+00	
Excavation	72,444
Embankment	79,964



Sta. 769+29, 140' Lt.
HW-2
H 36" = 842.80
See Sh. 242



Sta. 768+38, 162' Rt.
HW-2
H 36" = 826.80
See Sh. 242



STA. 768+00 TO STA. 771+00

45 6539

148 2382

35 6319

435 28023

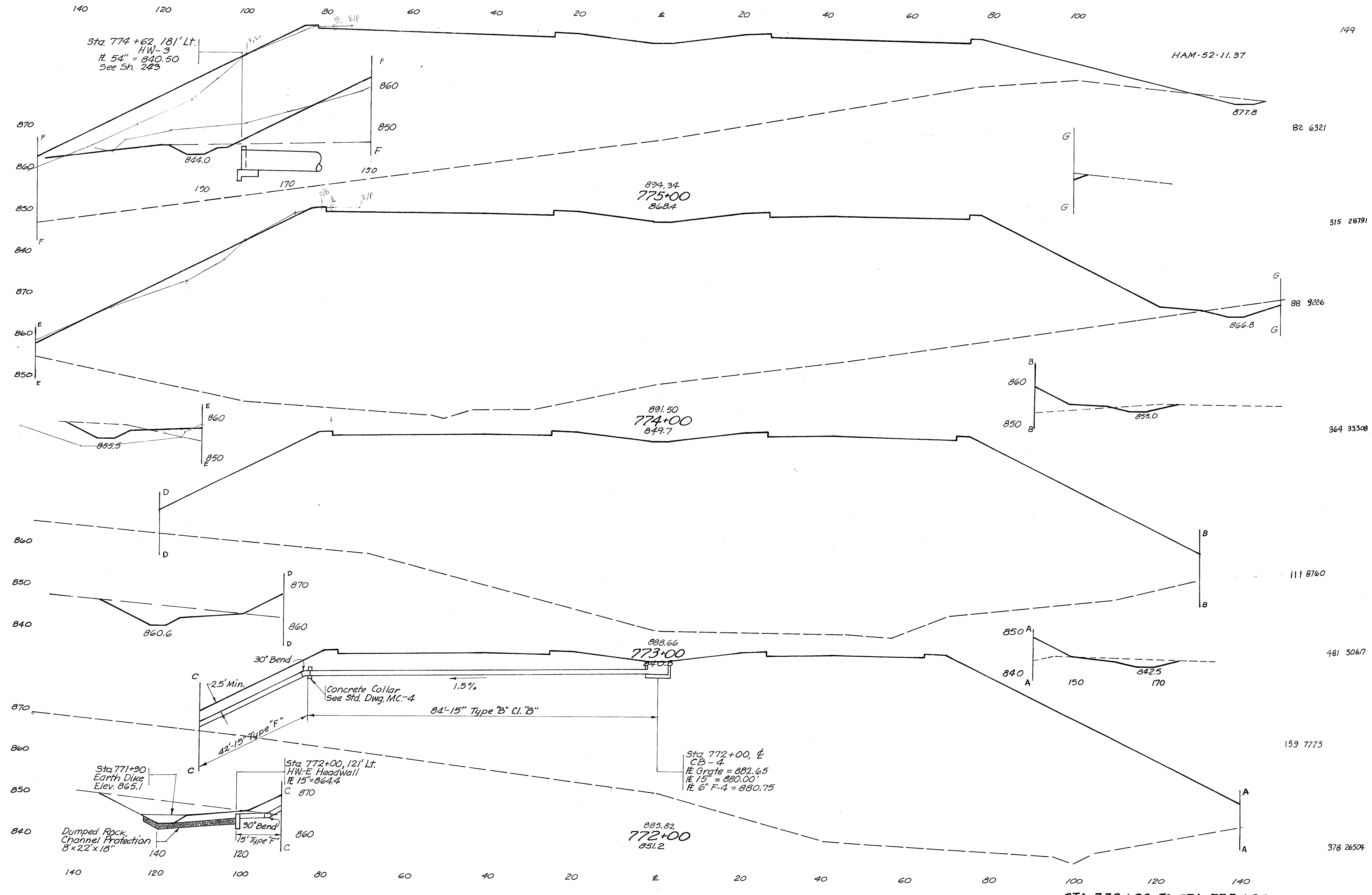
200 8813

391 25823

11 5131

74 8884

140 120 100 80 60 40 20 E 20 40 60 80 100



149

82 6321

315 28791

88 9226

364 33308

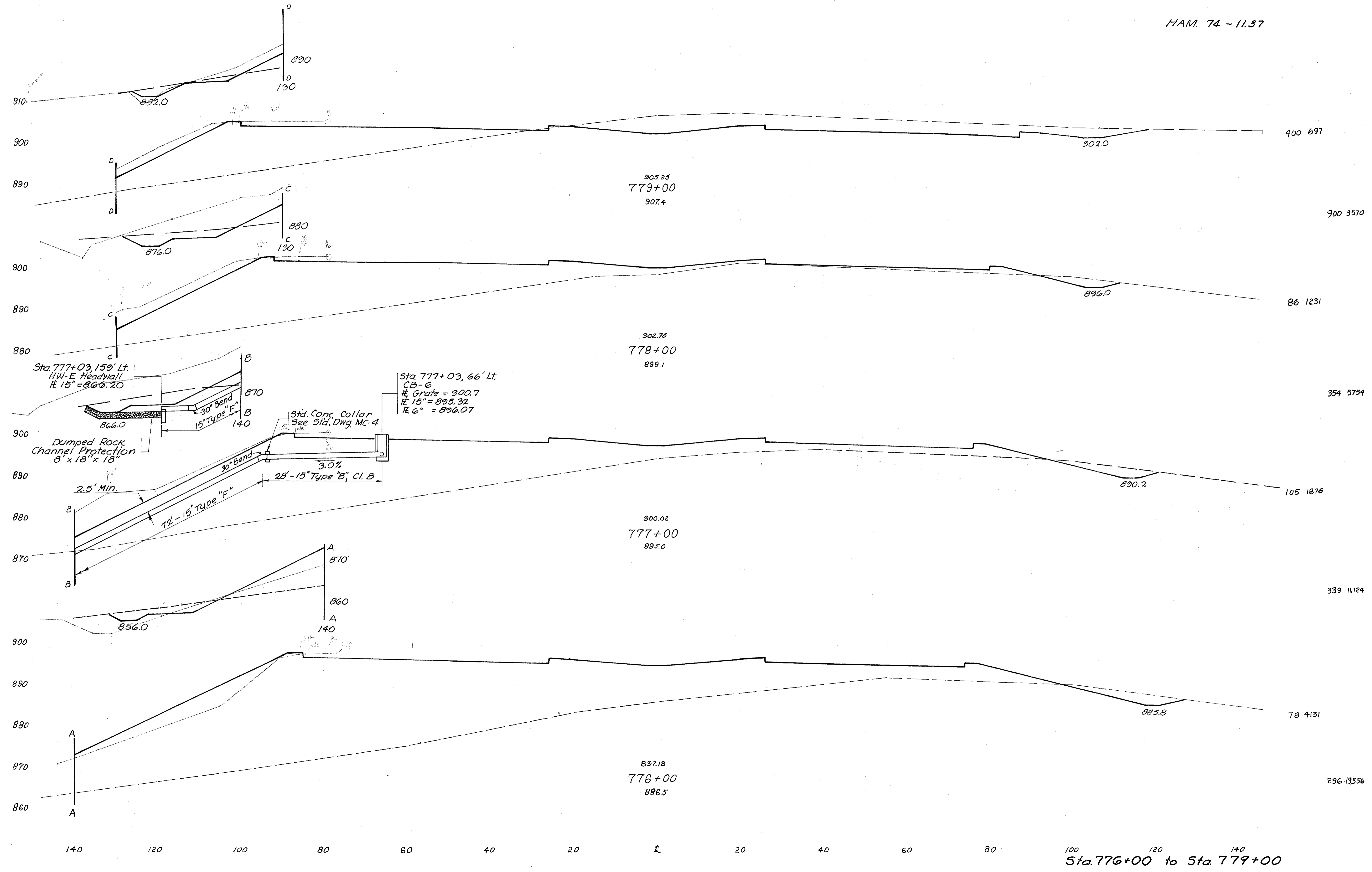
111 8760

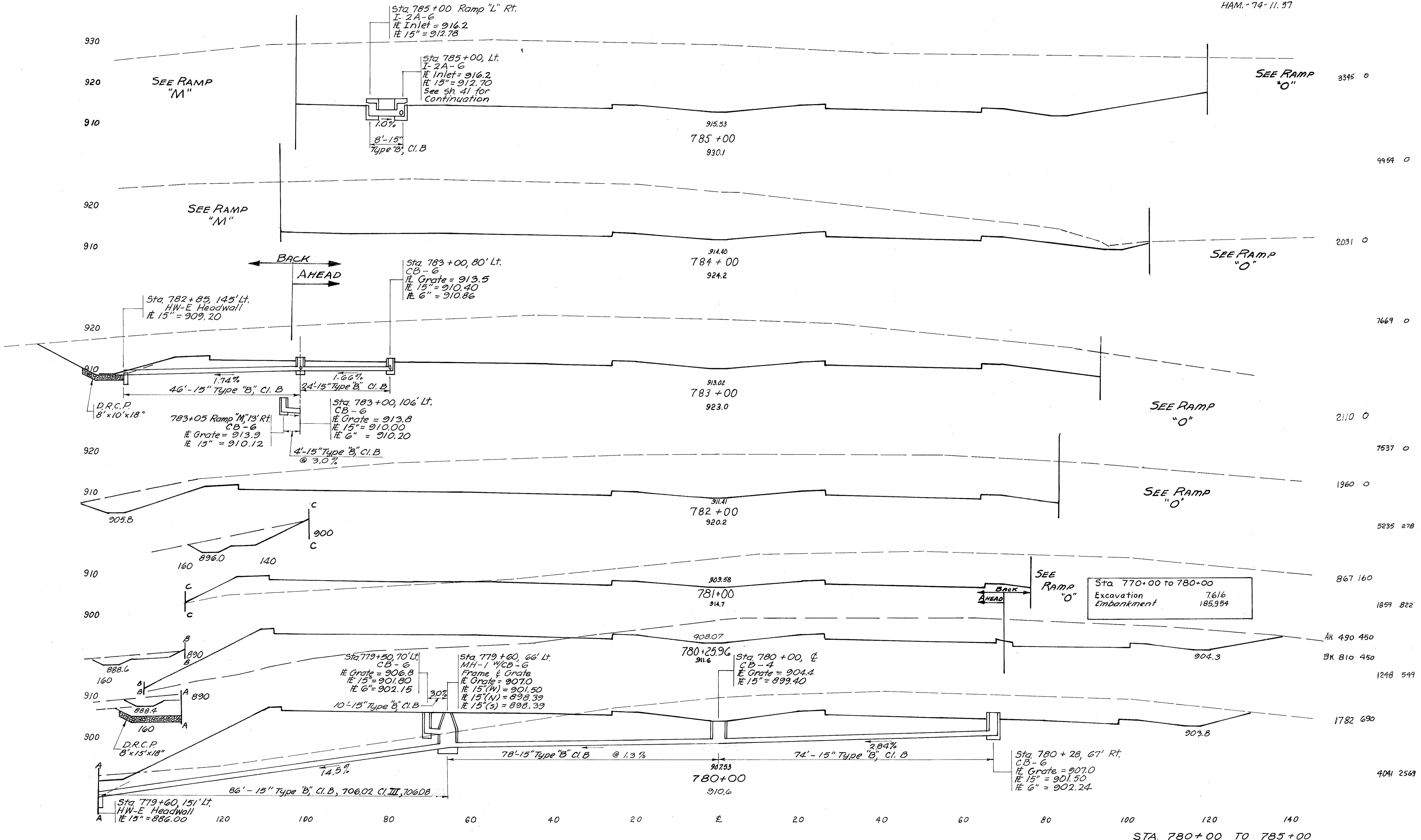
481 3067

159 7773

378 26504

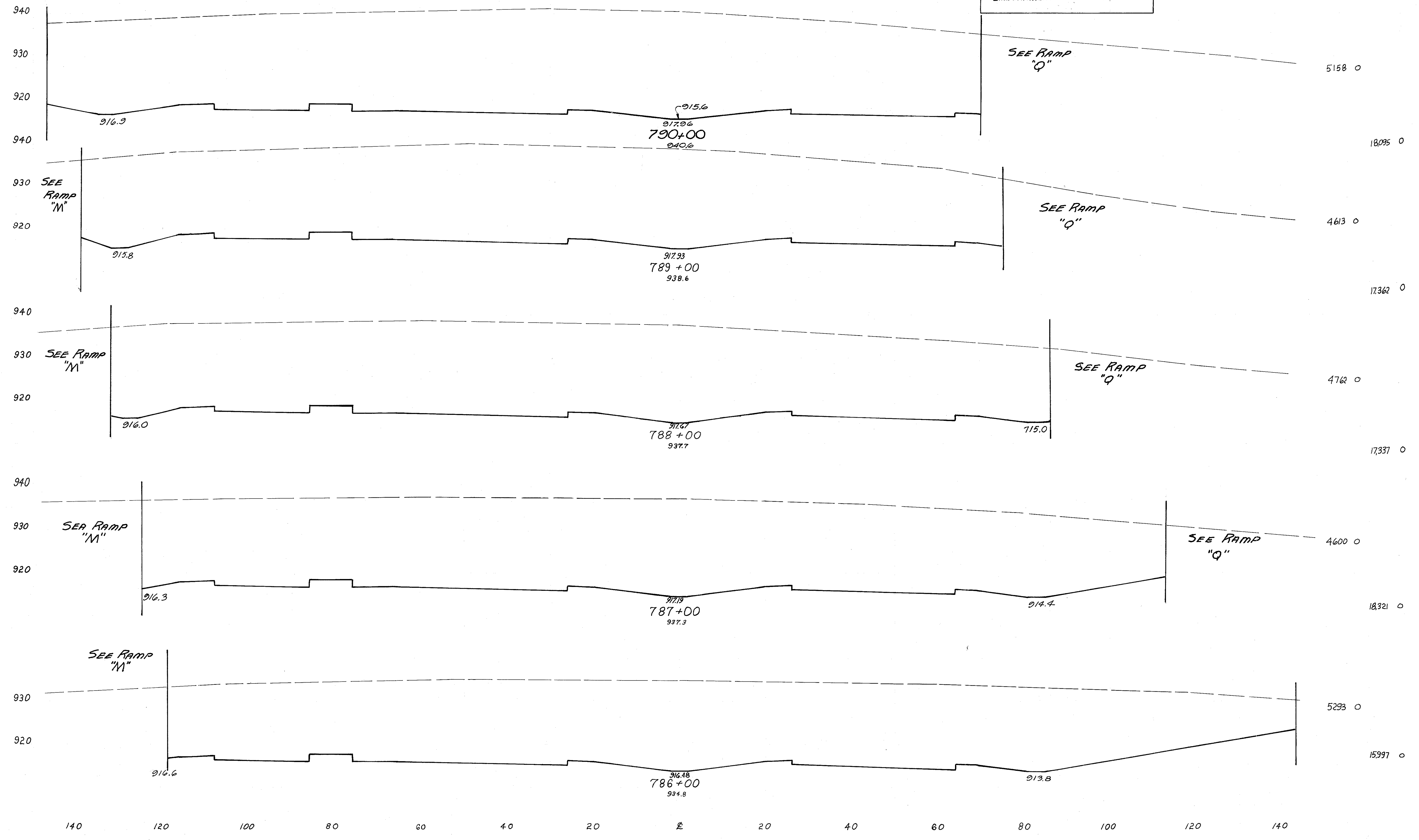
HAM. 74-1137





HAM. 74-11.37

Sta 780+00 to 790+00	
Excavation	120601
Embankment	1649

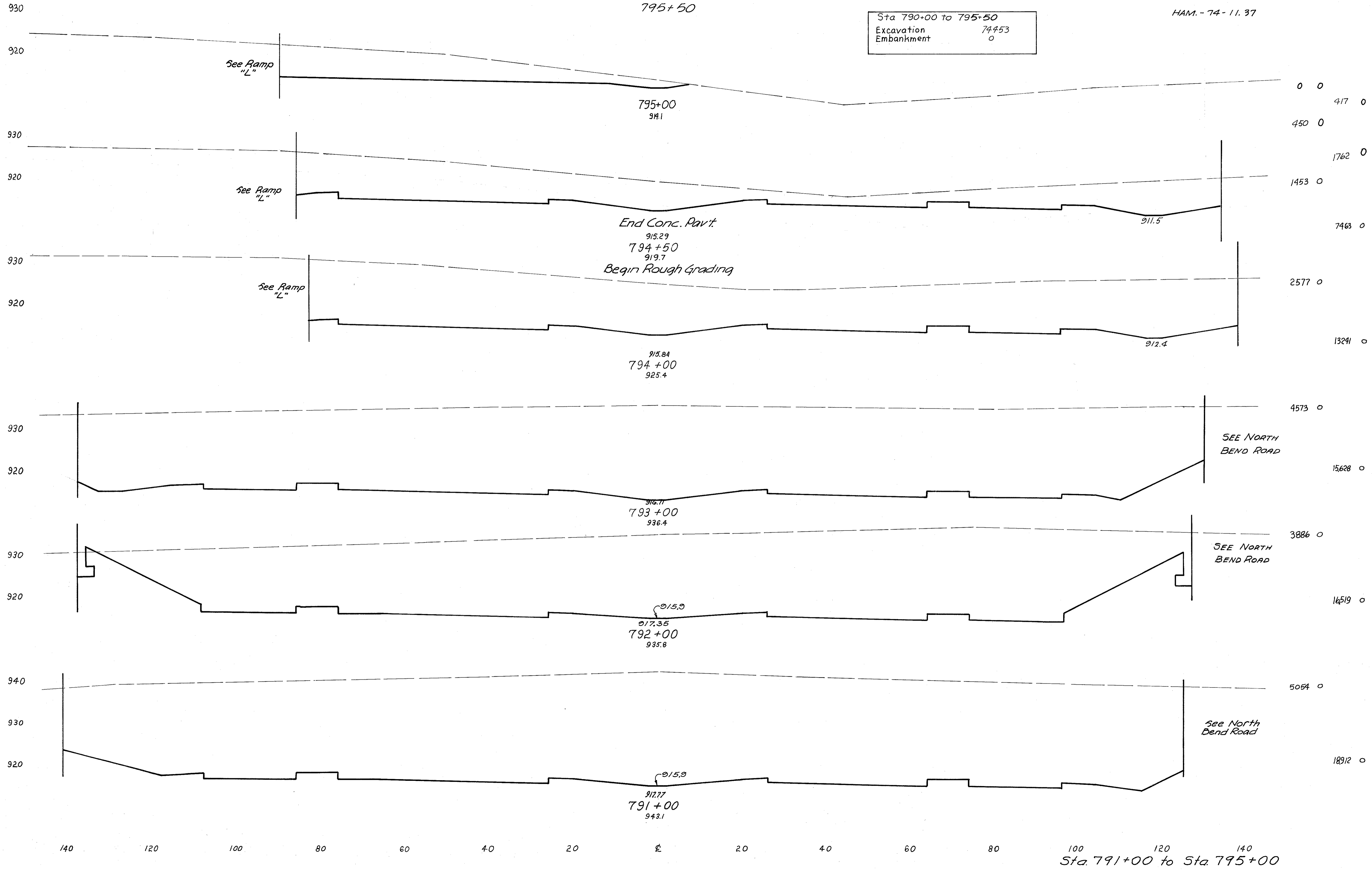


STA. 786+00 TO 790+00

End Rough Grading
Zero Sta.
795+50

Sta 790+00 to 795+50	
Excavation	74453
Embankment	0

HAM. - 74 - 11. 37

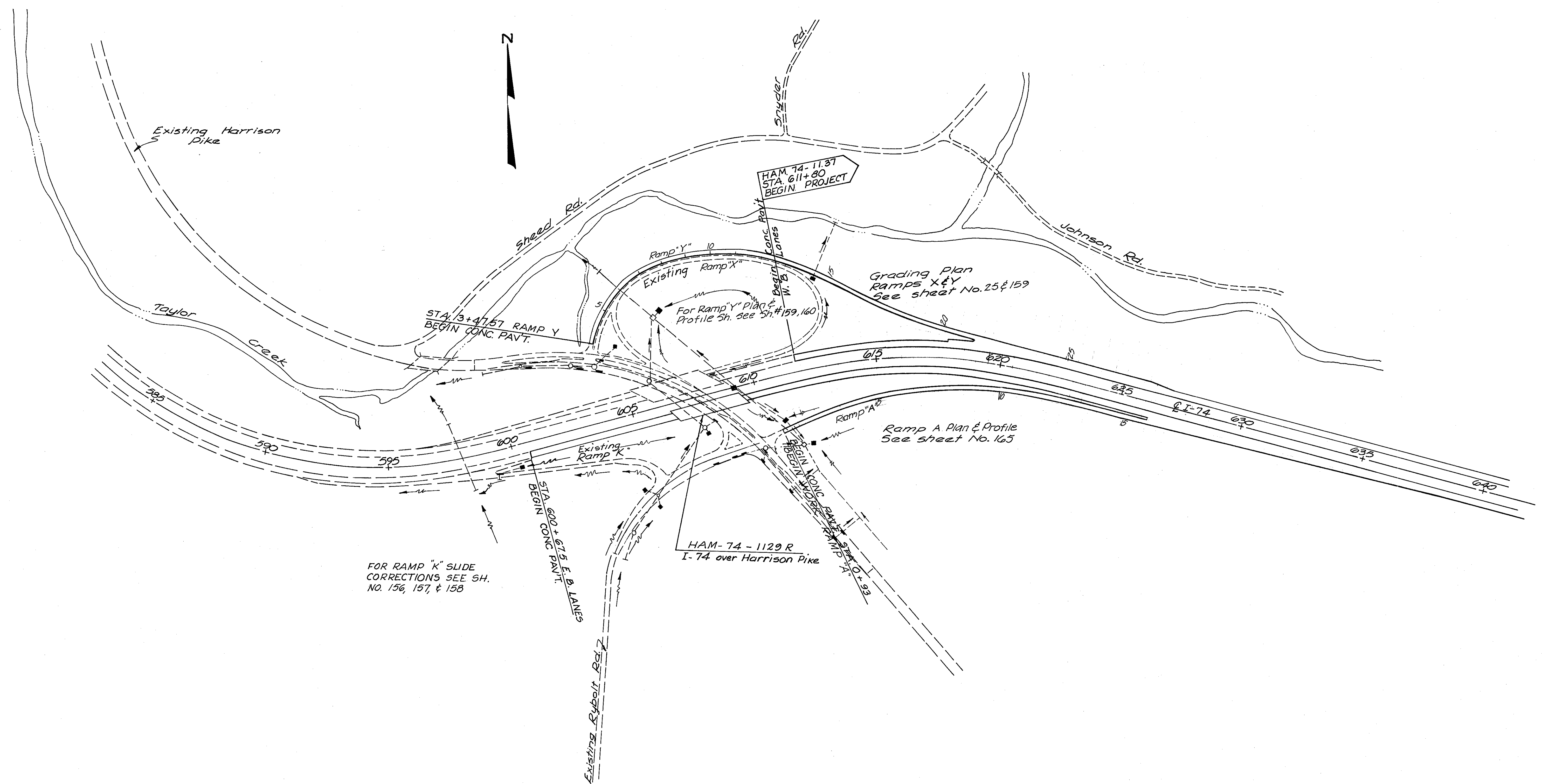


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

154

HAM-52-11.37

HARRISON PIKE INTERCHANGE SCHEMATIC PLAN

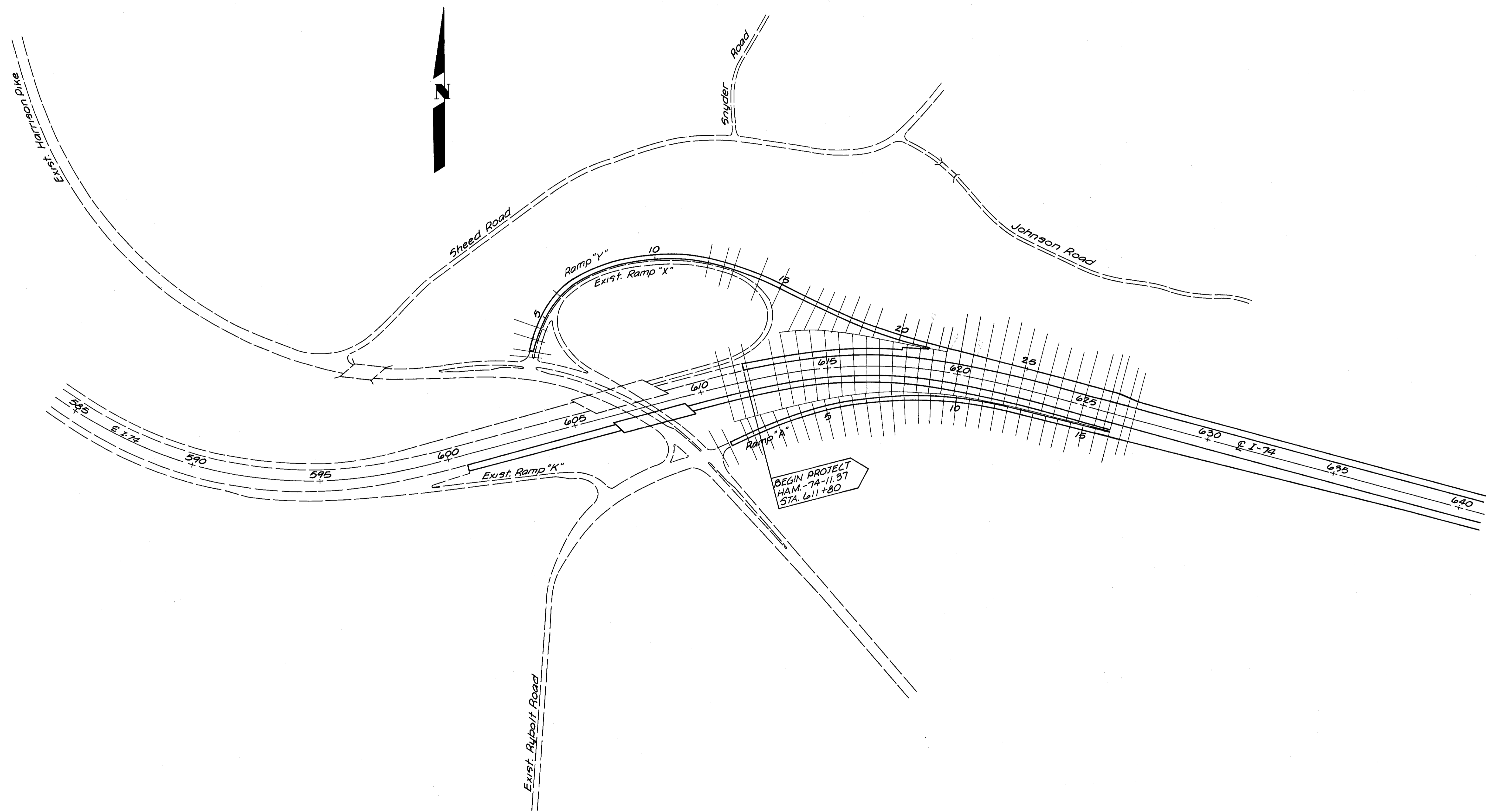


SCALE 1" = 200'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

155

HAM-74-11.37

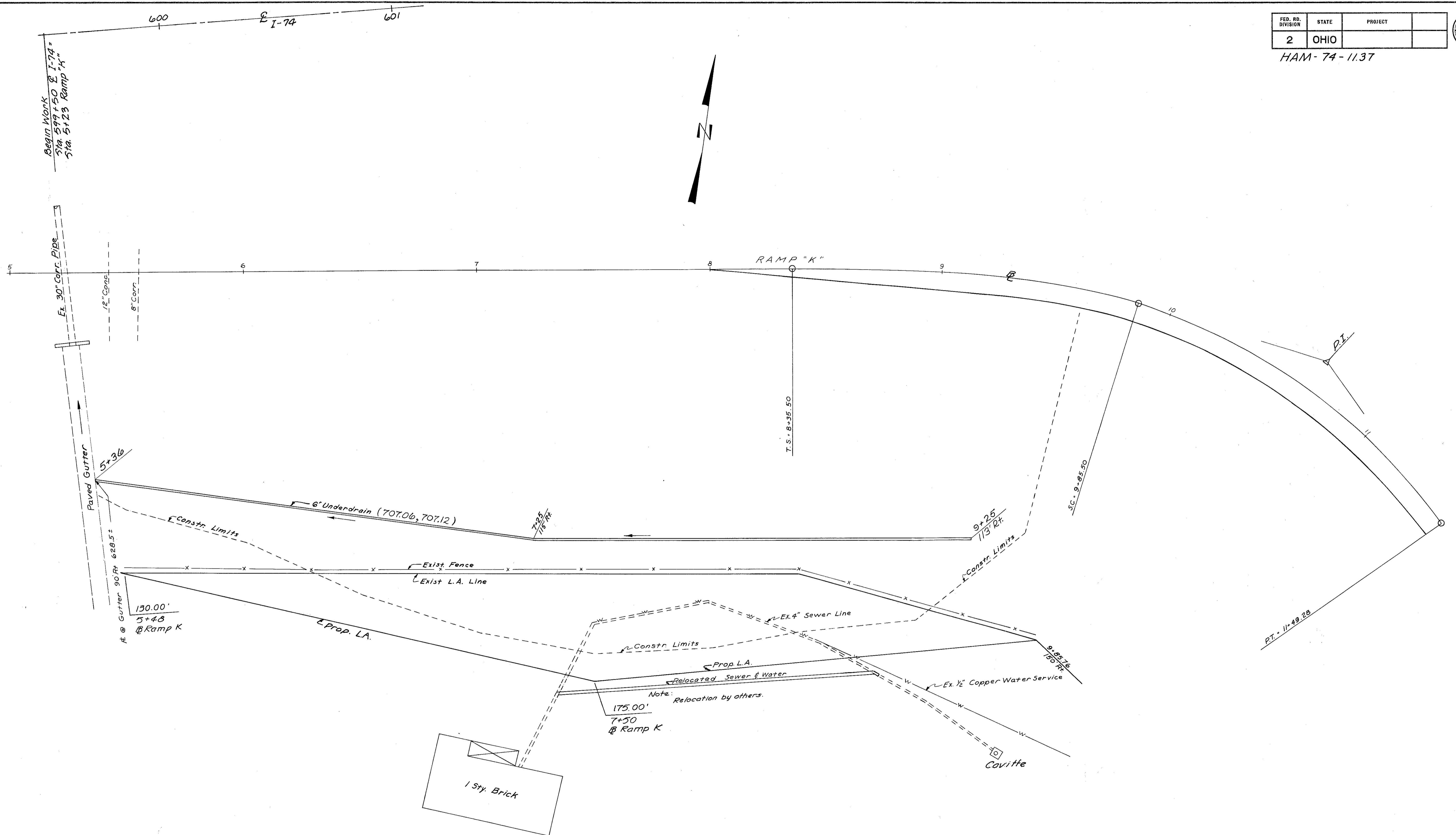
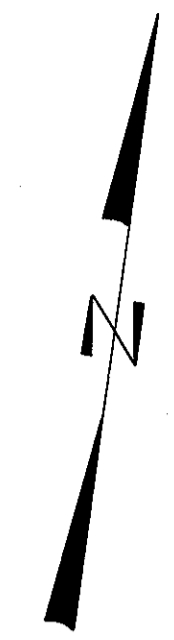


CROSS SECTION LAYOUT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

156

HAM-74-11.37

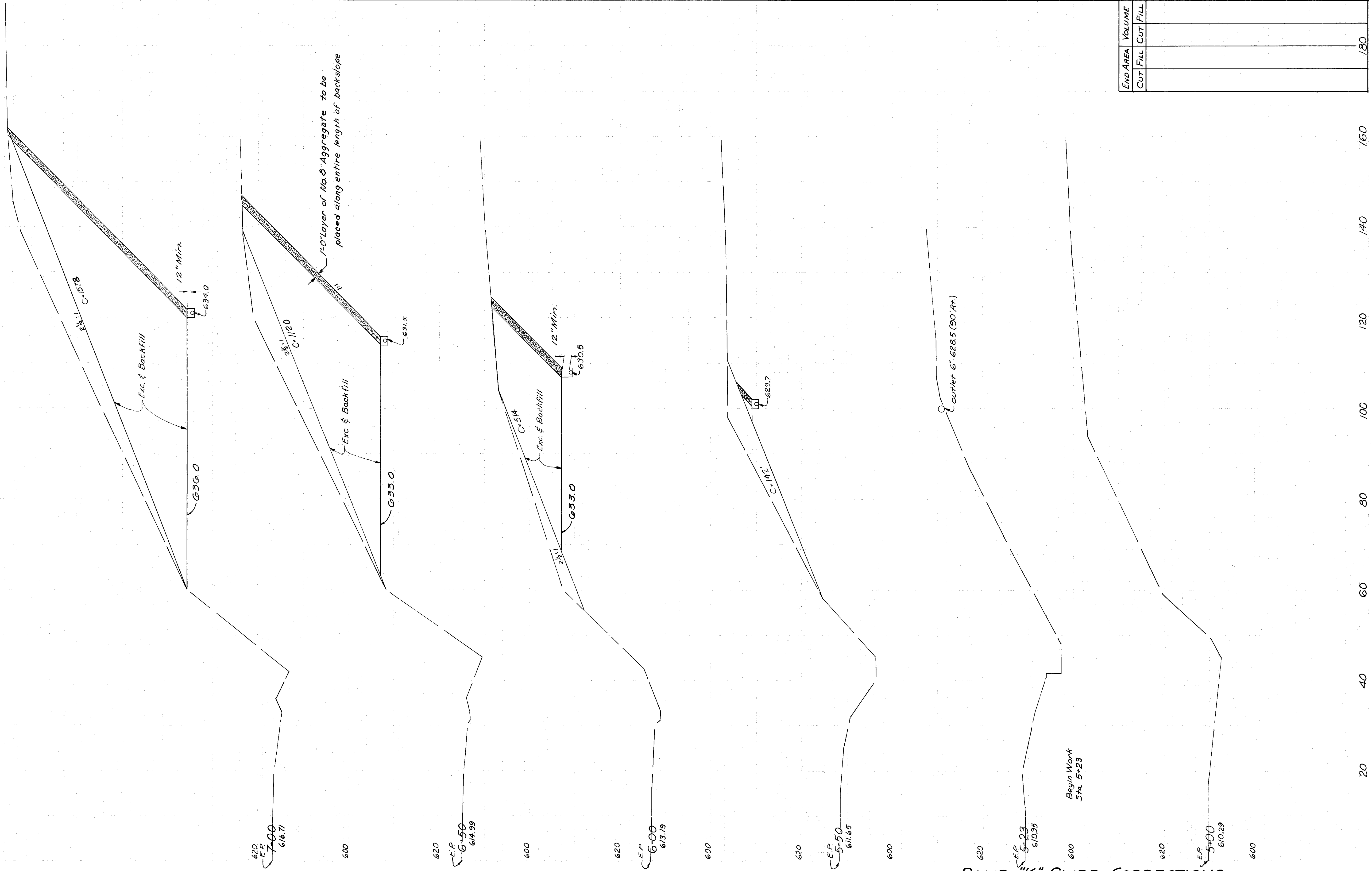


RYBOLT ROAD SLIDE CORRECTION RAMP "K"

HAM.-74-11.37

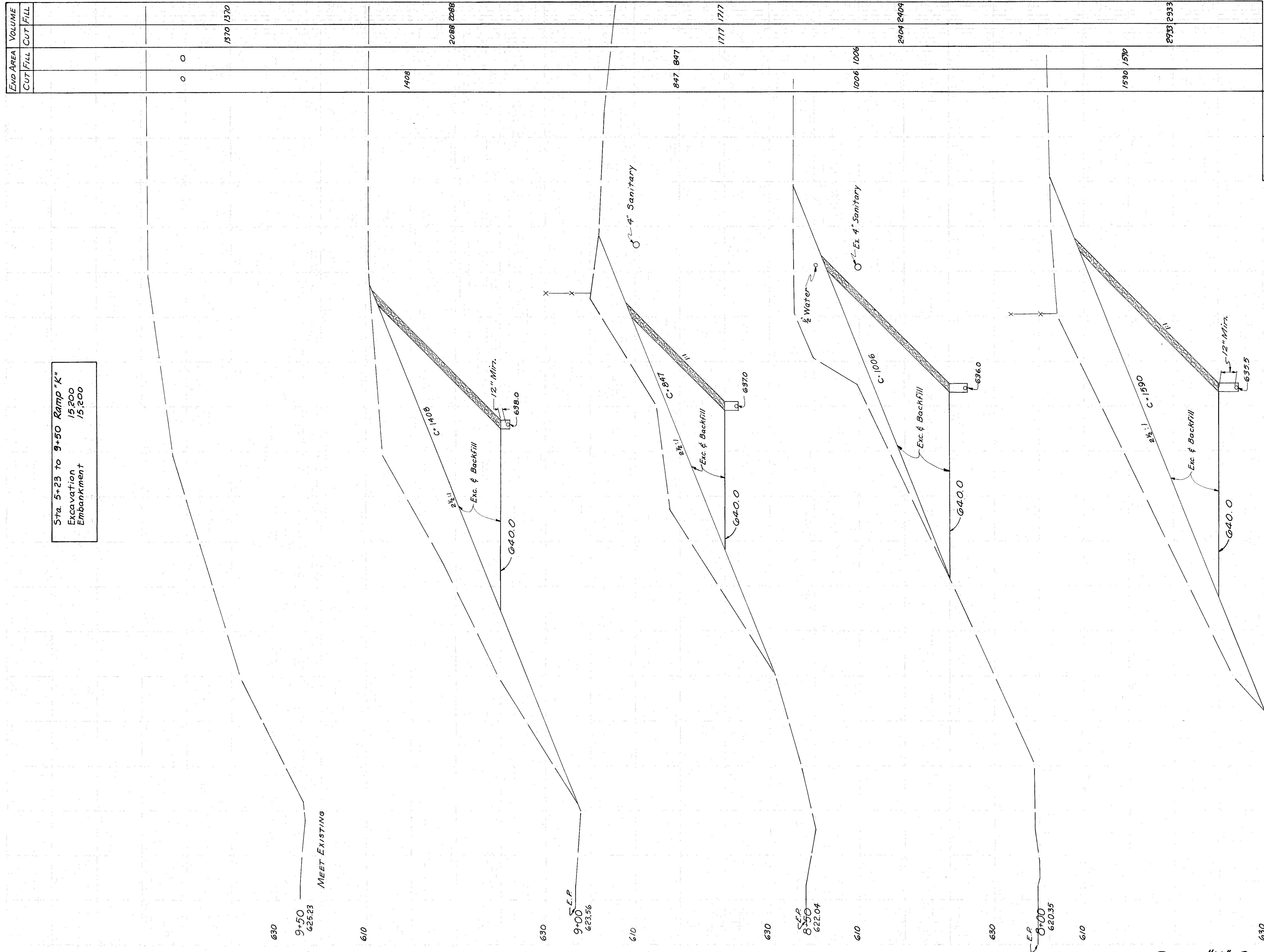
END AREA		VOLUME	
CUT	FILL	CUT	FILL
1578	1578	2998	2998
1120	1120	153	153
574	574	607	607
142	142	70	70
0	0	0	0

END AREA		VOLUME	
CUT	FILL	CUT	FILL
			180

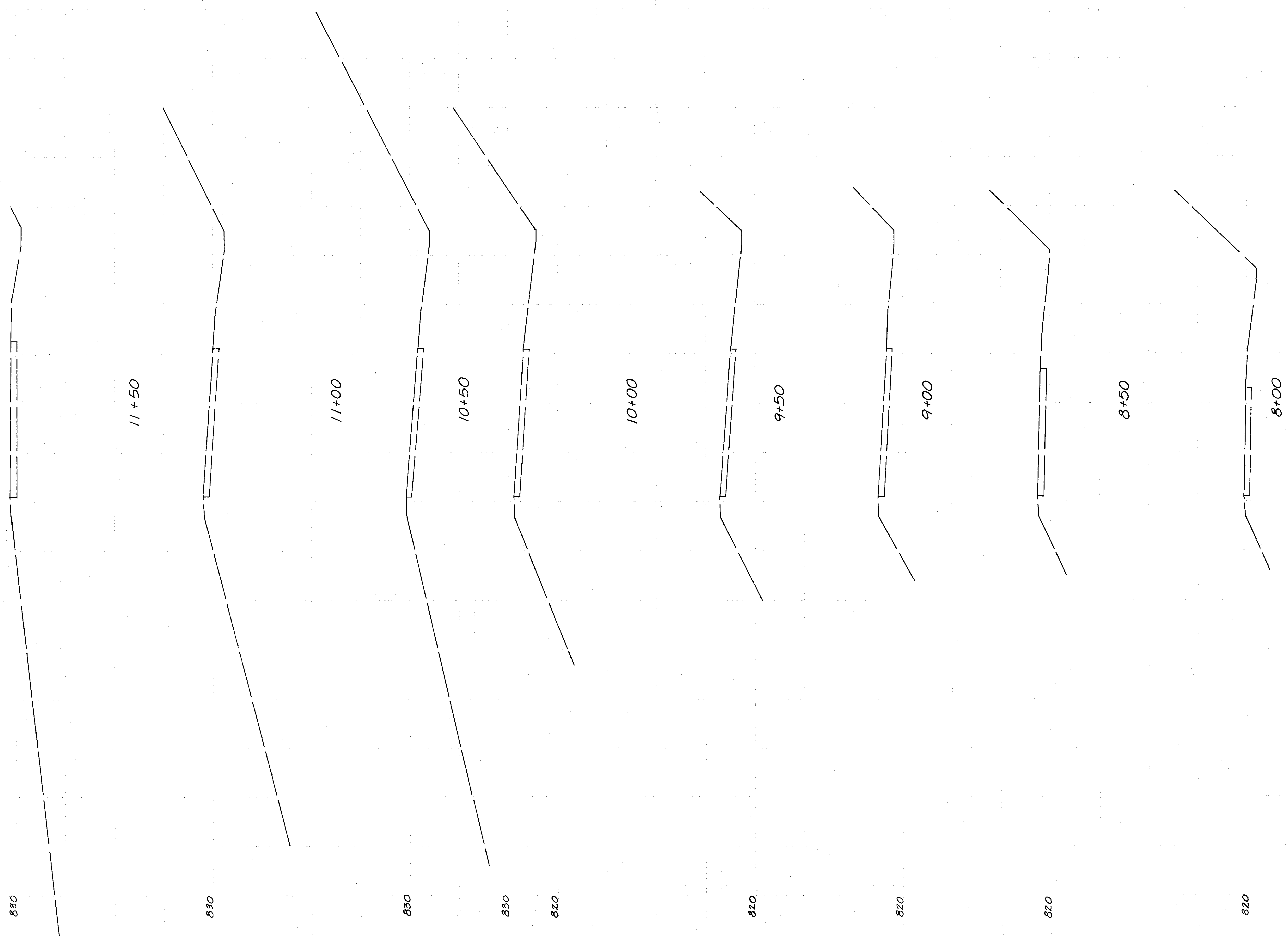


RAMP "K" SLIDE CORRECTIONS

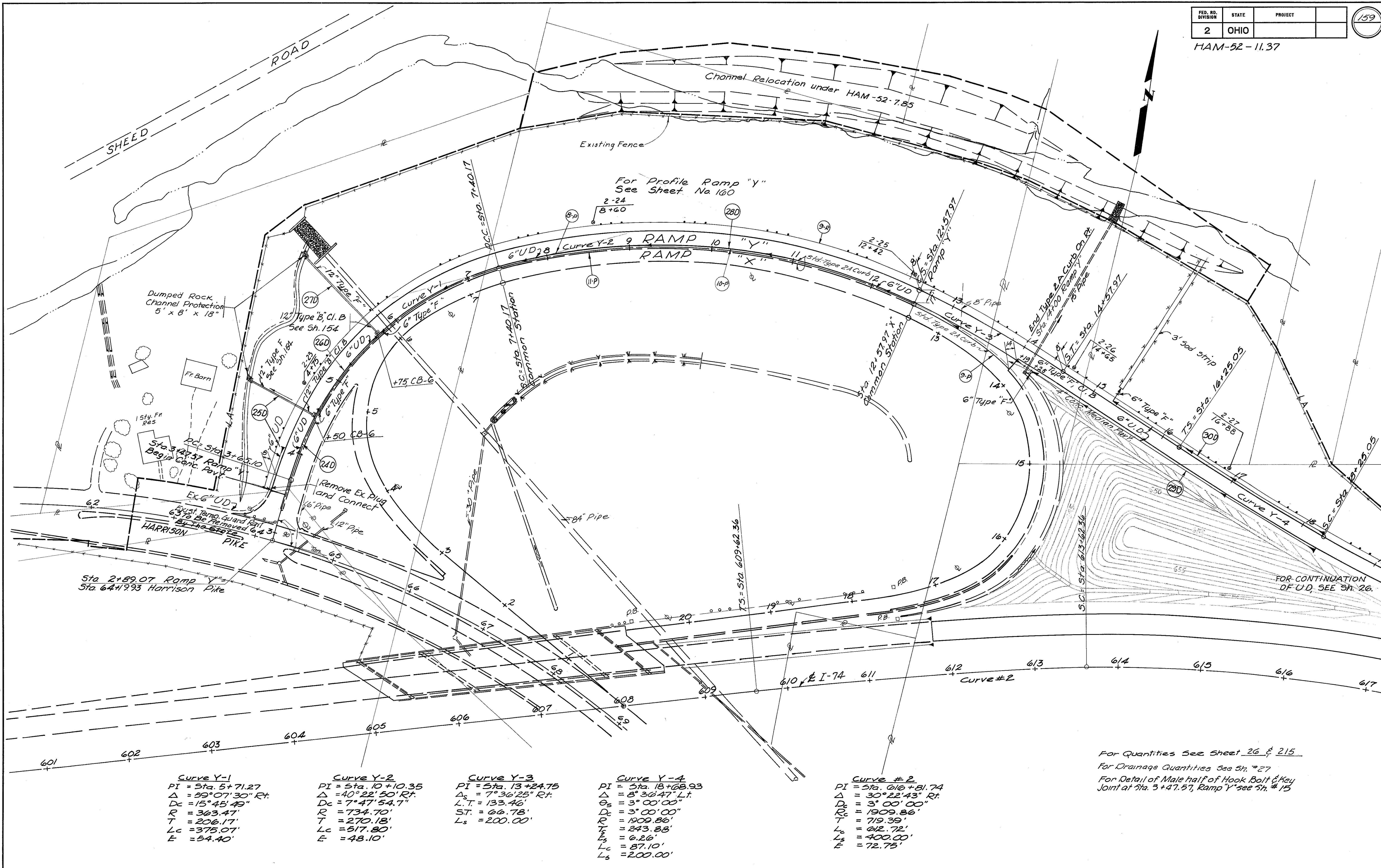
Sta. 5+23 to 9+50 Ramp "K"
Excavation 15,200
Embankment 15,200



RAMP "K" SLIDE CORRECTIONS



EXIST. RAMP "K" Sta. 8+00 - Sta. 11+50



Curve Y-1
 PI = Sta. 5+71.27
 $\Delta = 59^{\circ}07'30''$ Rt.
 DC = 15'45'49"
 R = 363.47'
 T = 206.17'
 Lc = 375.07'
 E = 54.40'

Curve Y-2
 PI = Sta. 10+10.35
 $\Delta = 40^{\circ}22'50''$ Rt.
 DC = 7'47'54.7"
 R = 734.70'
 T = 270.18'
 Lc = 517.80'
 E = 48.10'

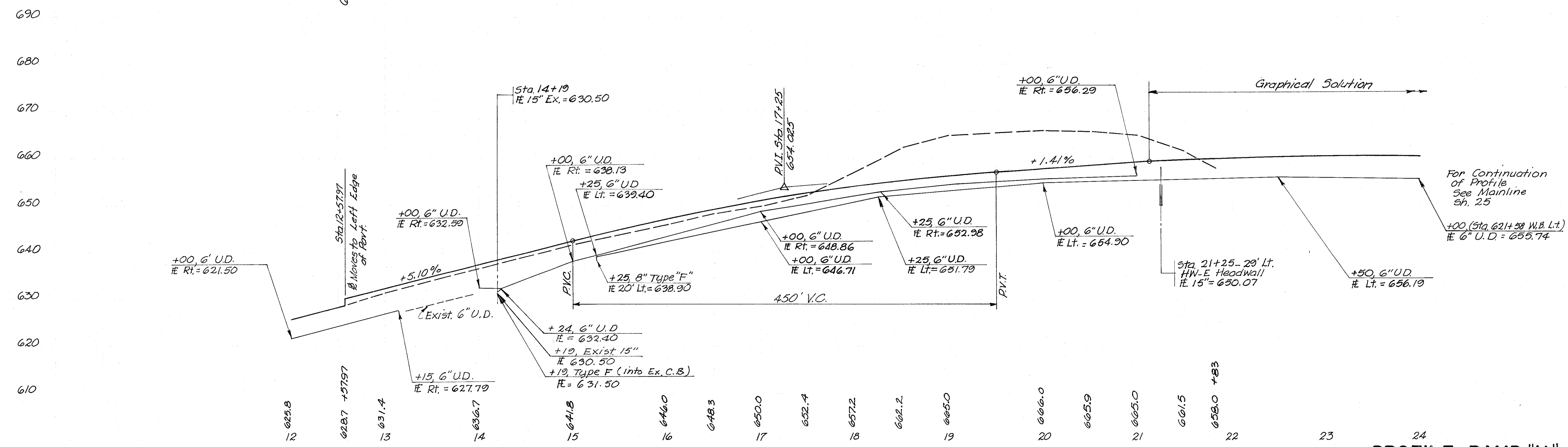
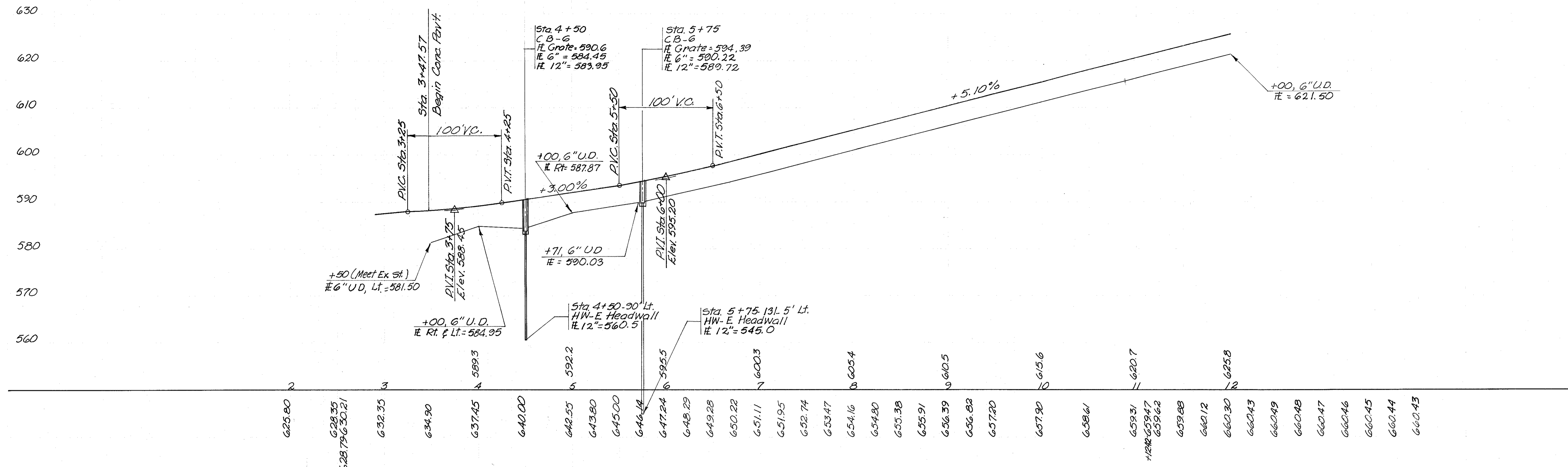
Curve Y-3
 PI = Sta. 13+24.75
 $\Delta_s = 7^{\circ}36'25''$ Rt.
 L.T. = 133.46'
 S.T. = 66.78'
 Ls = 200.00'

Curve Y-4
 PI = Sta. 18+68.93
 $\Delta = 8^{\circ}30'47''$ Lt.
 $\Delta_s = 3^{\circ}00'00''$
 DC = 3'00'00"
 R = 1909.86'
 T = 243.88'
 $T_s = 6.26'$
 Lc = 87.10'
 Ls = 200.00'

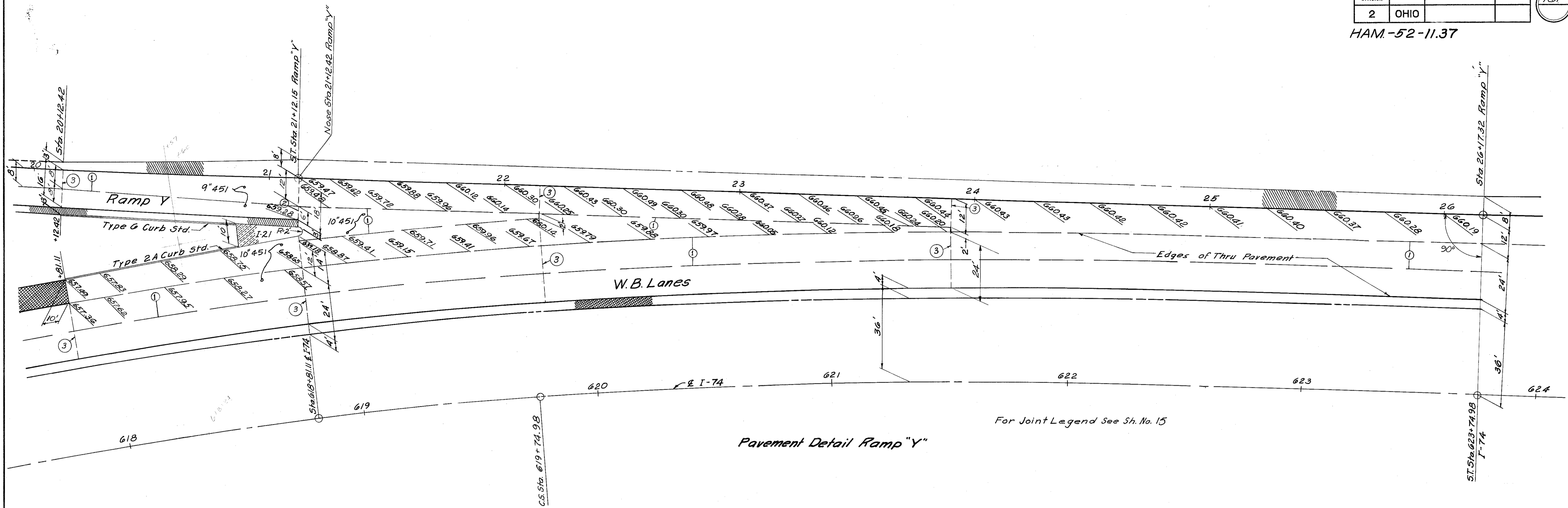
Curve #2
 PI = Sta. 610+81.74
 $\Delta = 30^{\circ}22'43''$ Rt.
 DC = 3'00'00"
 R = 1909.86'
 T = 719.39'
 Lc = 612.72'
 Ls = 400.00'
 E = 72.75'

For Quantities See Sheet 26 & 215
 For Drainage Quantities See Sh. #27
 For Detail of Male half of Hook Bolt & Key Joint at Sta. 3+47.57, Ramp 'Y' see Sh. #15

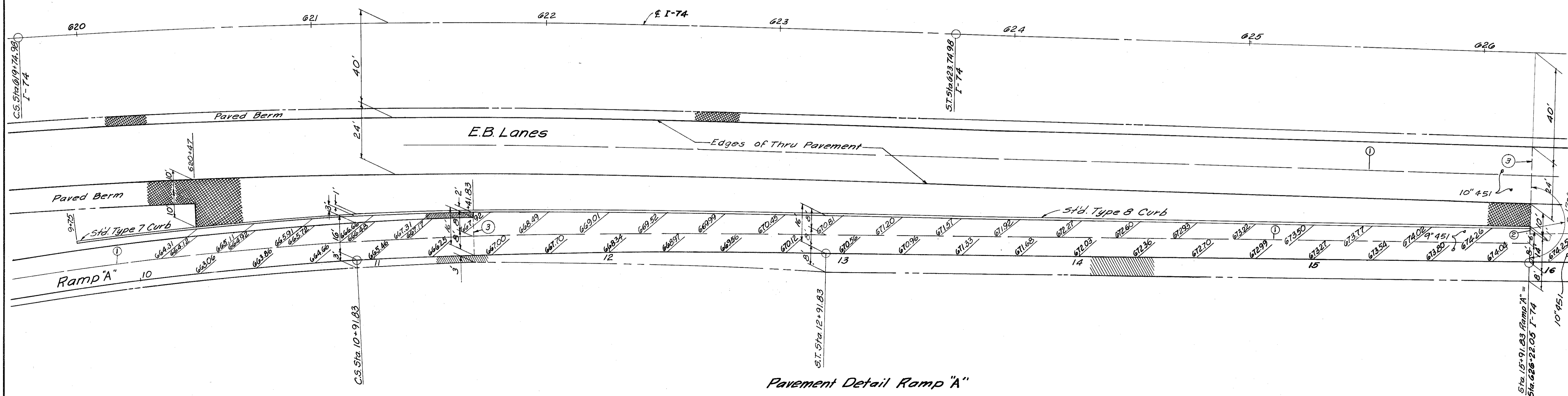
RAMP "Y"



PROFILE RAMP "Y"

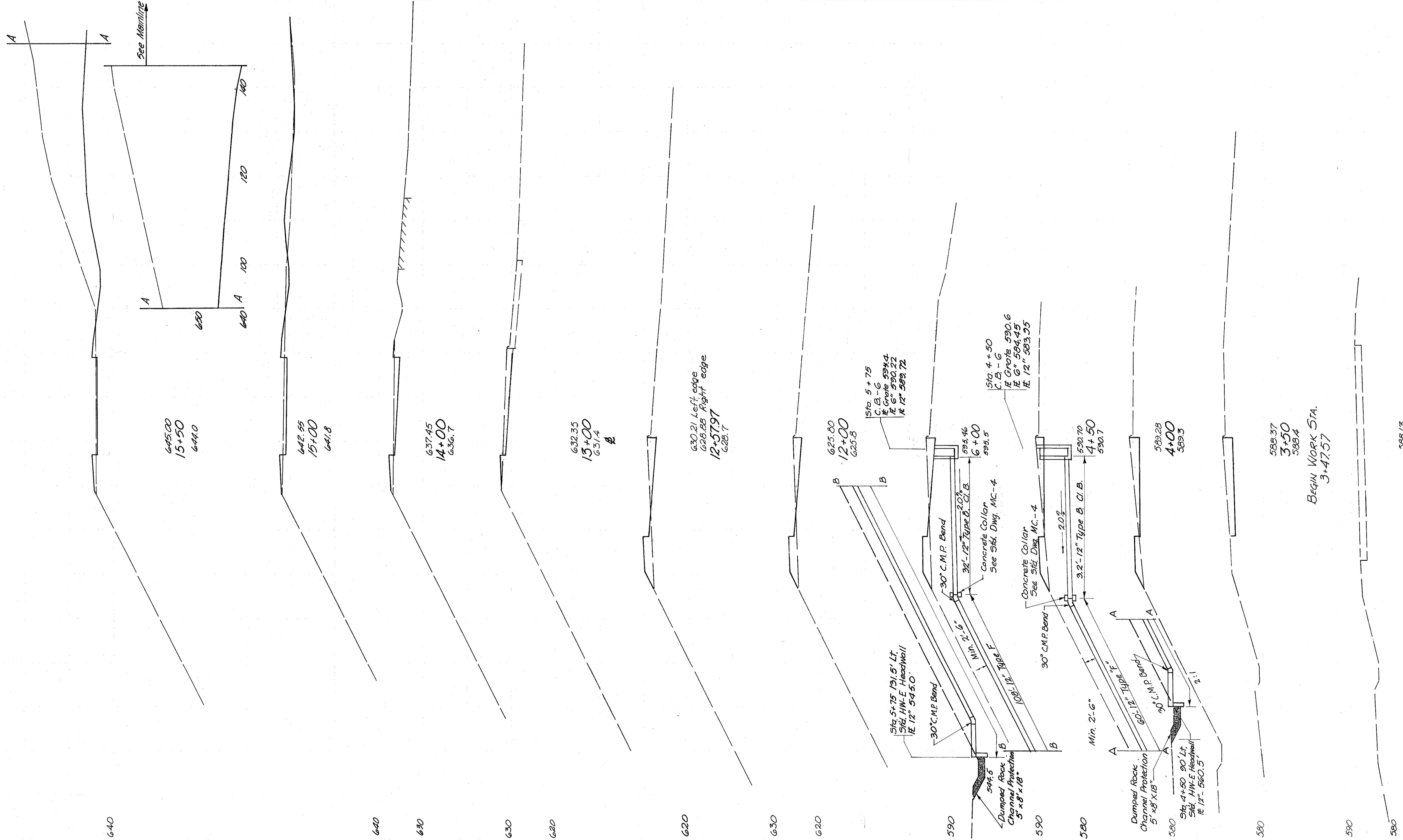


For Joint Legend See Sh. No. 15



End Area	Volume
Cut	Fill
Cut	Fill
1593	10
19	34
15	7
27	4
20	30
20	22
20	15
22	18
30	14
45	0

HAM.-52-11.37



RAMP "Y" STA. 3+27.5 TO STA. 15+00

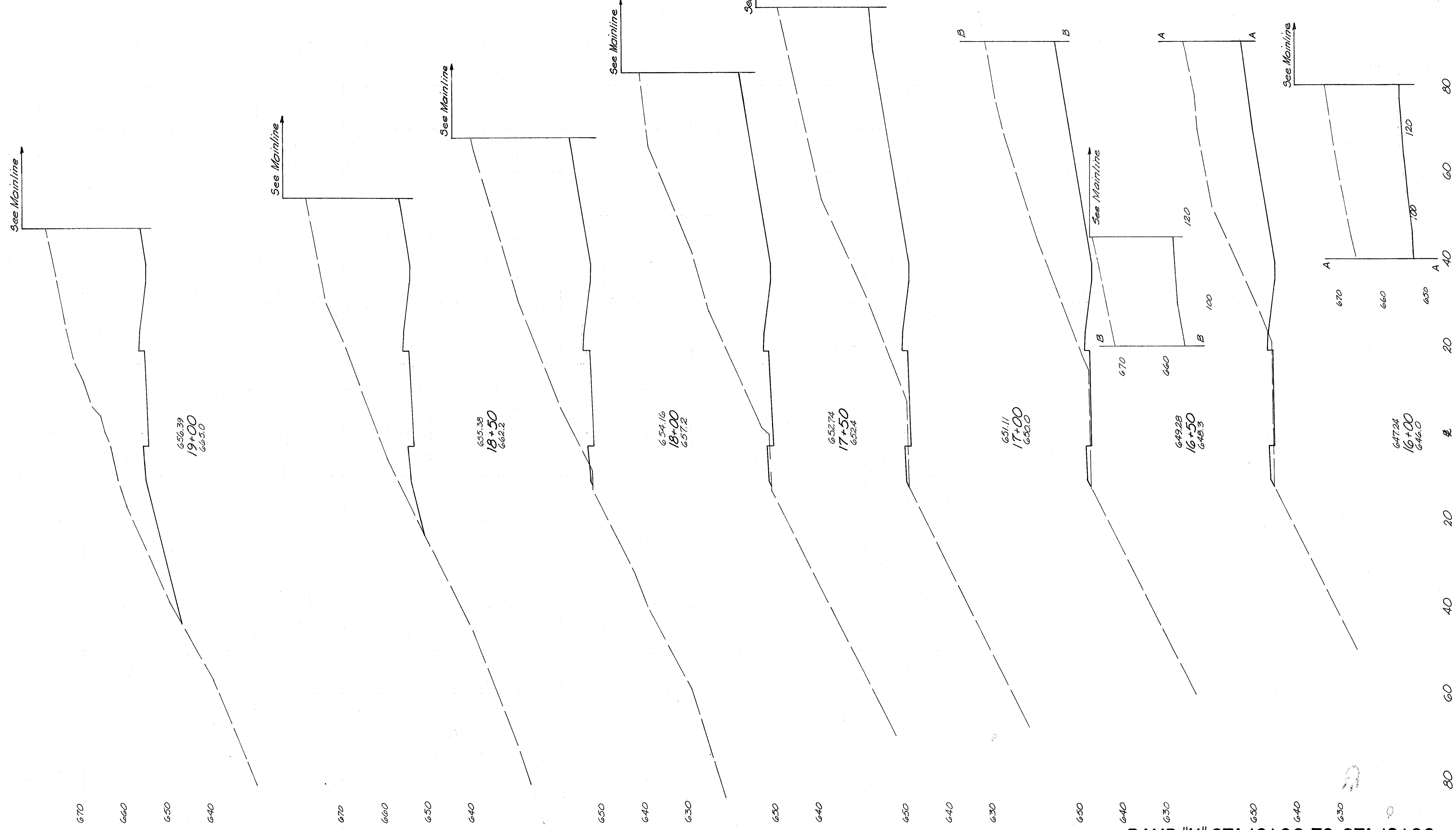
BEGIN WORK STA.
3+47.57

588/3
3+27.5
588.1

80 60 40 20 0 20 40 60 80

End Area	Volume
Cut	Fill
960	0
1723	0
901	0
1789	2
1031	2
2153	6
1294	4
2340	8
1294	6
2291	13
1241	8
1305	11
2557	18
2683	19

HAM-52-11.37

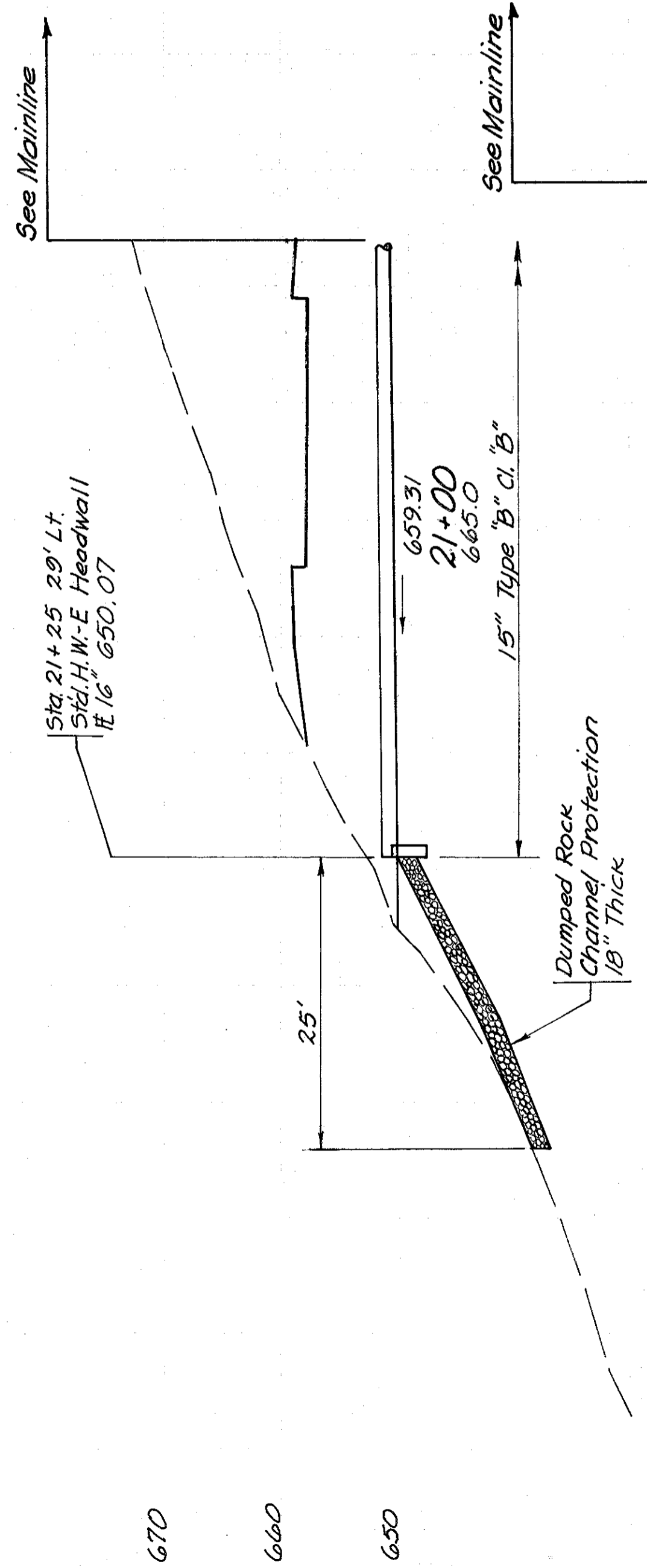
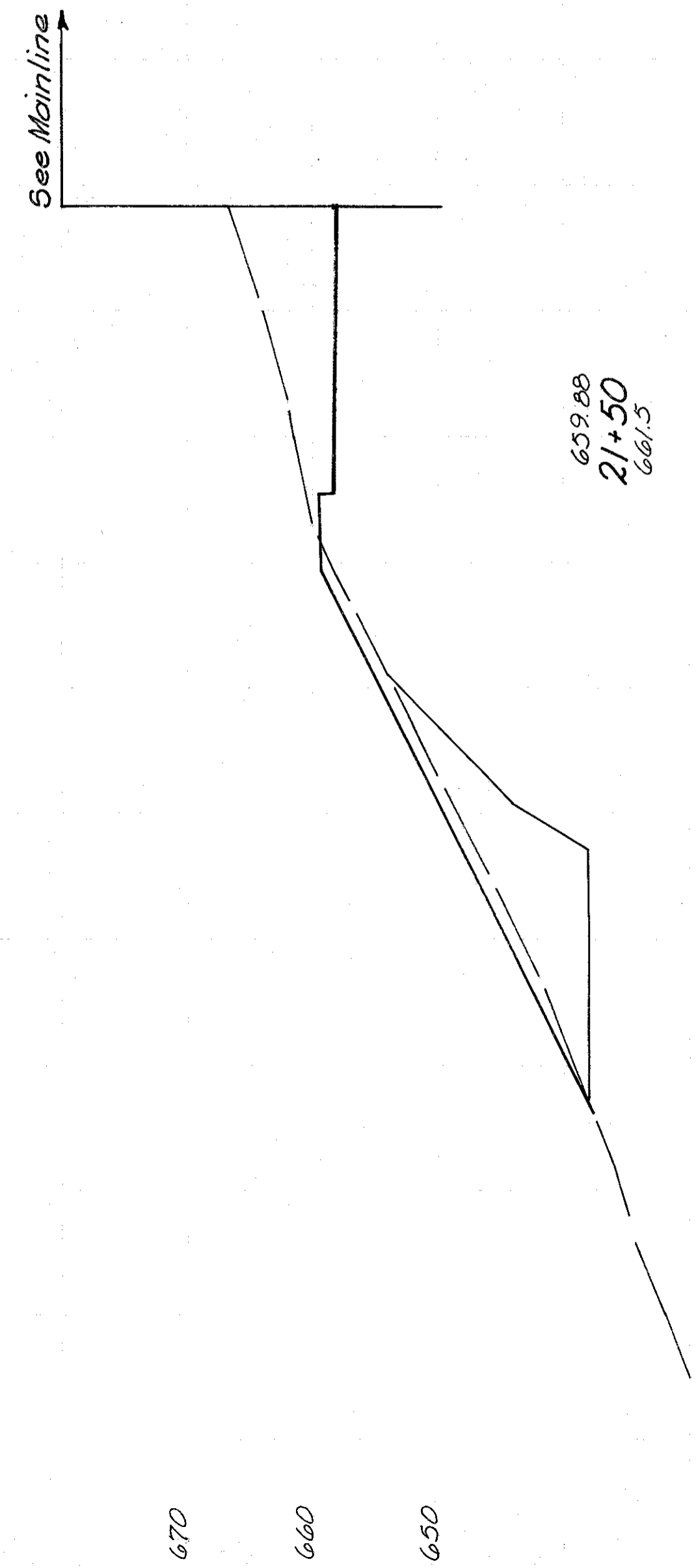
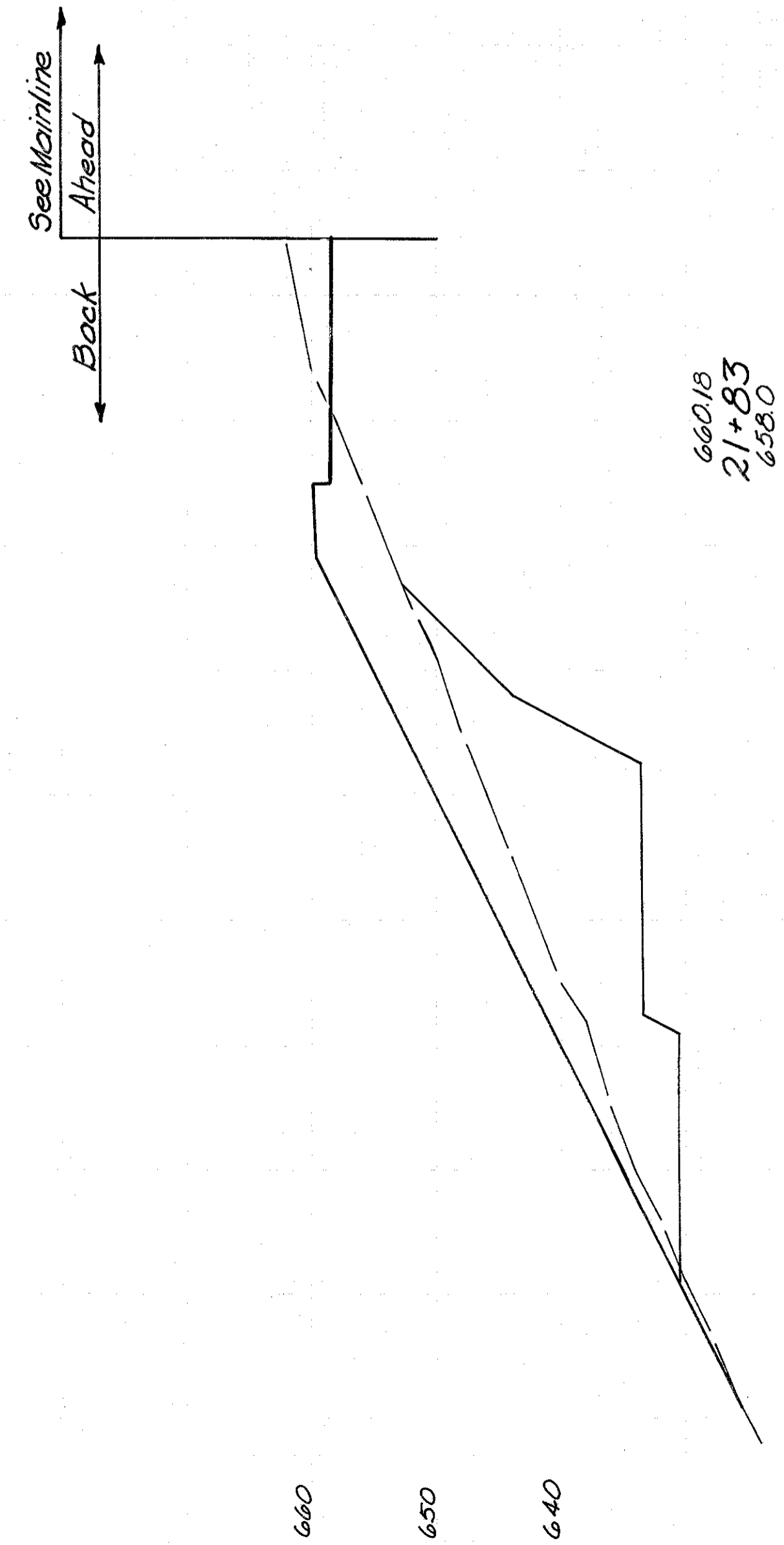


RAMP "Y" STA.16+00 TO STA.19+00

End Area Volume	
Cut	Fill
350	542
252	173
325	0
485	0
675	0
390	463
534	160
750	0
1074	0
3027	0

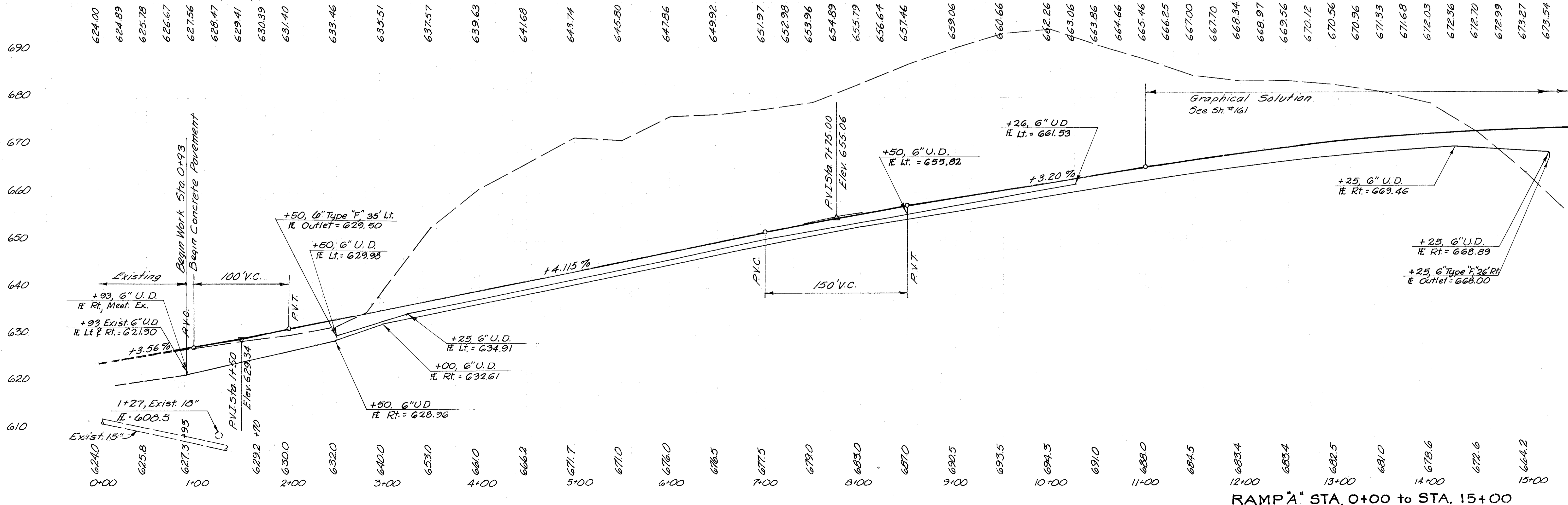
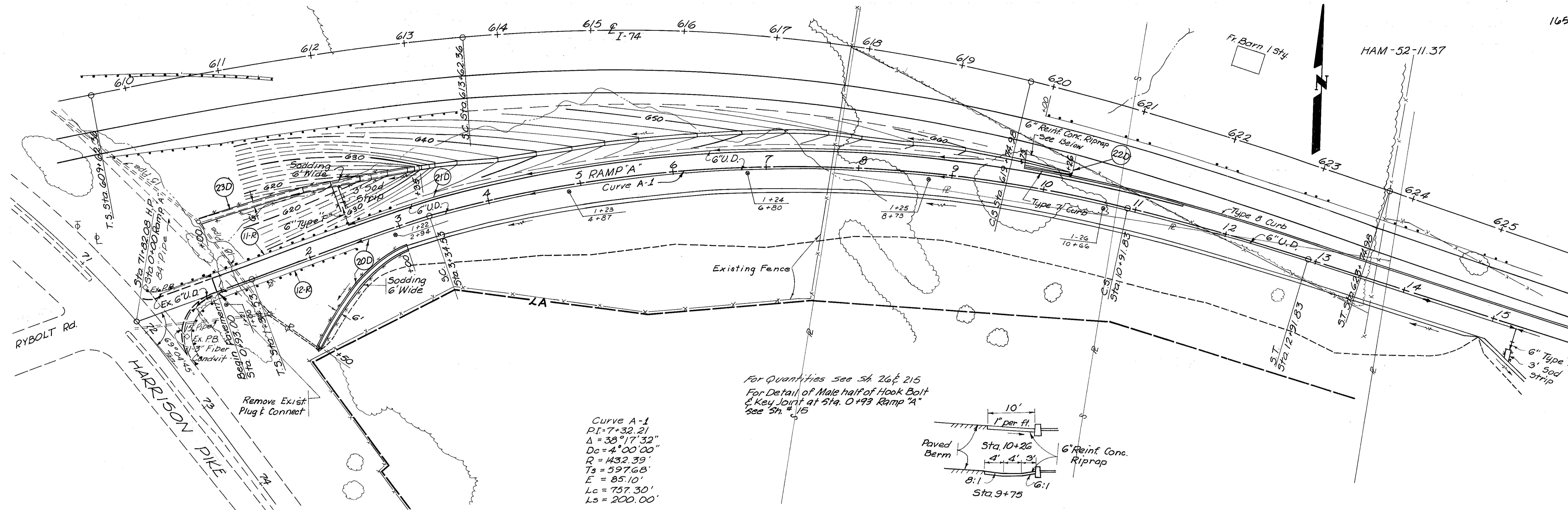
HAM-52-11.37

STA. 3+50 TO 21+83
Excavation
Embankment
23,494
1,454



RAMP "Y" STA. 20+00 TO STA. 21+83

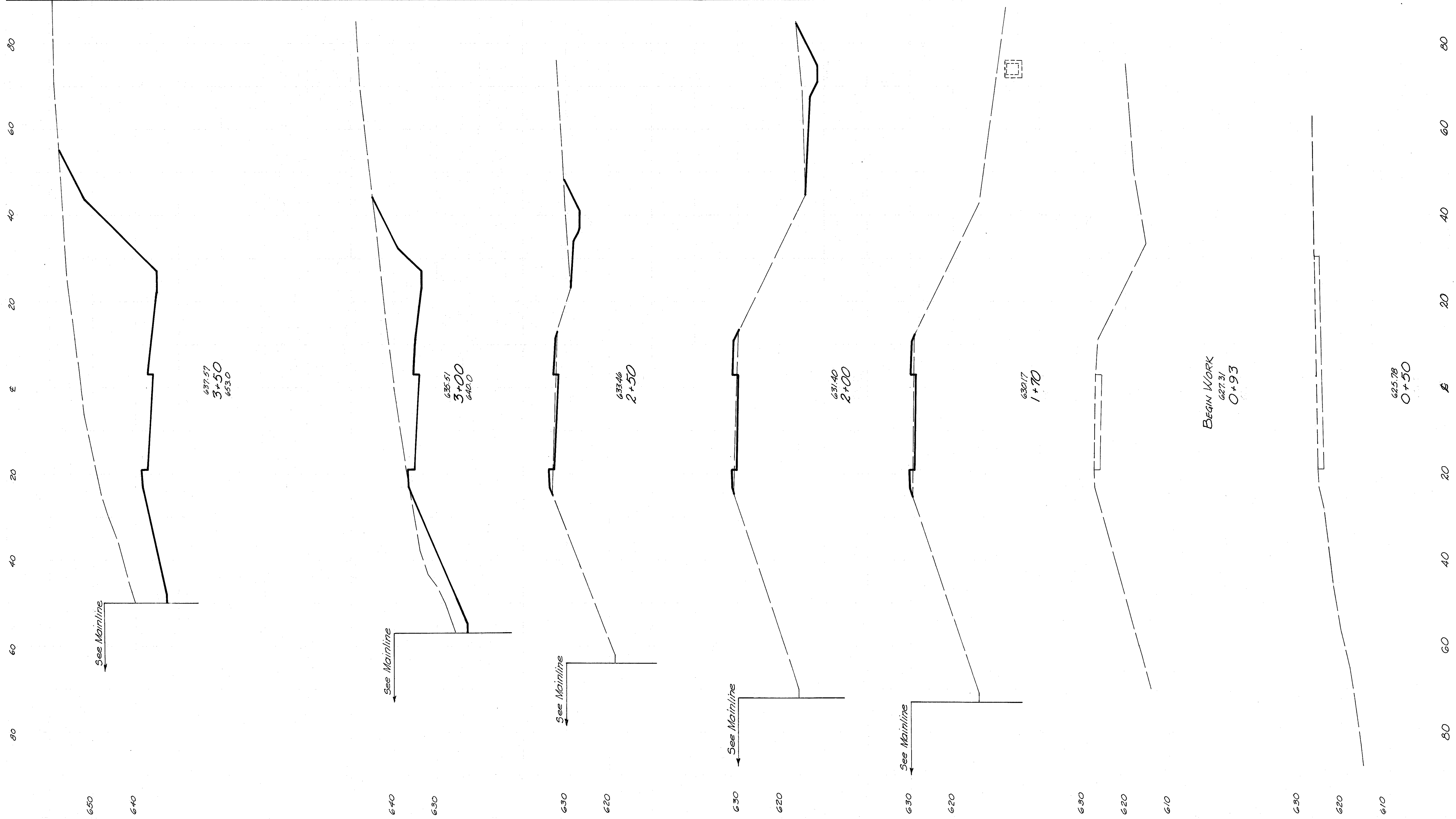
80
60
40
20
0
20
40
60
80



RAMP A STA. 0+00 to STA. 15+00

End Area	Volume		
Cut	Fill	Cut	Fill
1338	0	1662	0
457	0	476	10
51	11	119	20
78	11	48	12
9	11	13	16
0	0		

HAM-52-11.37



RAMP "A" STA. 0+50 TO STA. 3+50

625.78
0+50

BEGIN WORK
627.31
0+93

630.17
1+70

631.40
2+00

633.46
2+50

635.51
3+00

637.57
3+50

See Mainline

See Mainline

See Mainline

See Mainline

See Mainline

HAM-52-11.37

End Area	Volume
Cut	Fill
2512	0
2312	0
4215	0
2456	0
2150	0
1877	0
4467	0
4265	0
3729	0

End Areas		Volume	
Cut	Fill	Cut	Fill
		2977	0

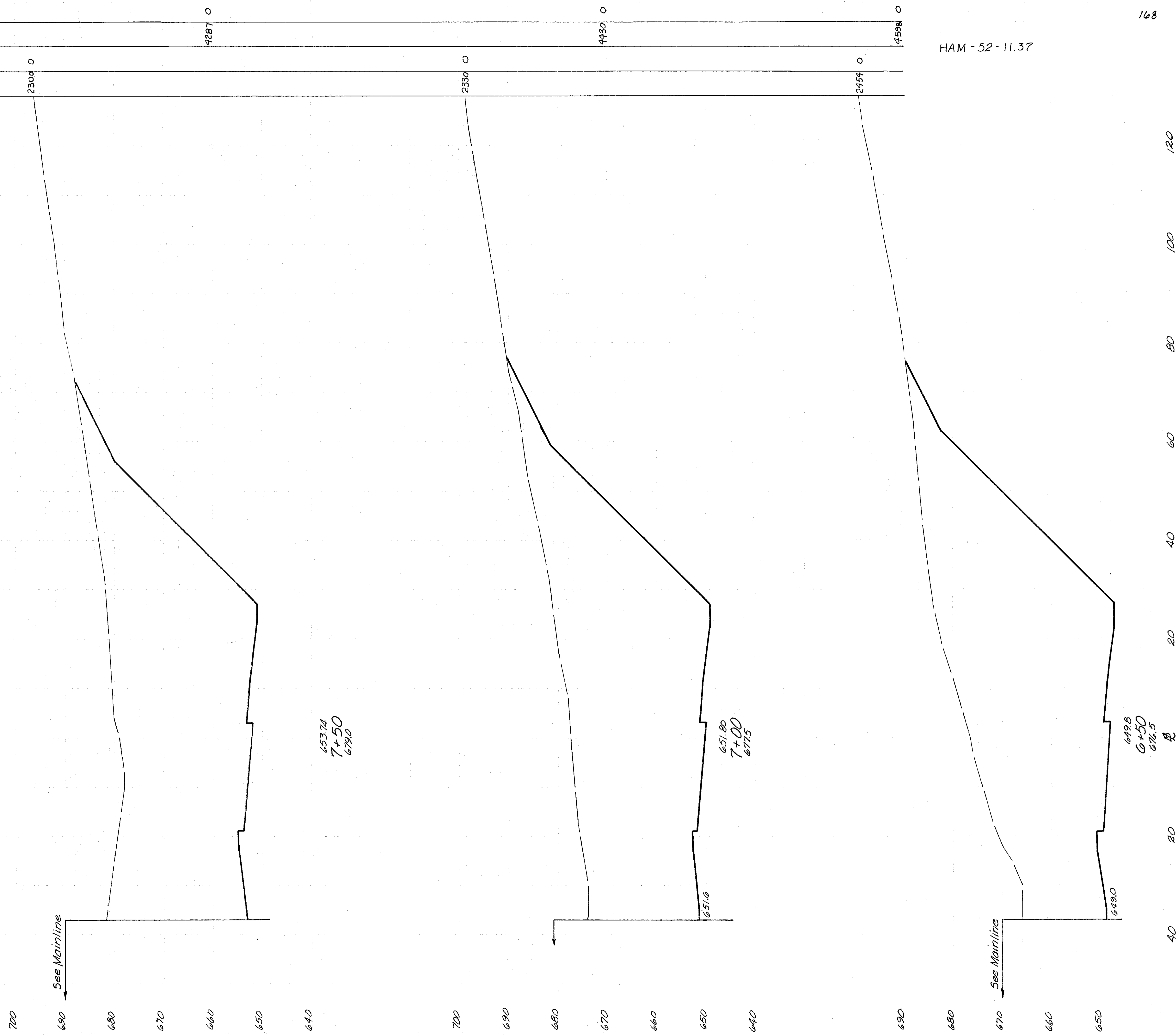


RAMP "A" STA. 4+00 to STA. 6+00

End Area Volume

Cut Fill Cut Fill

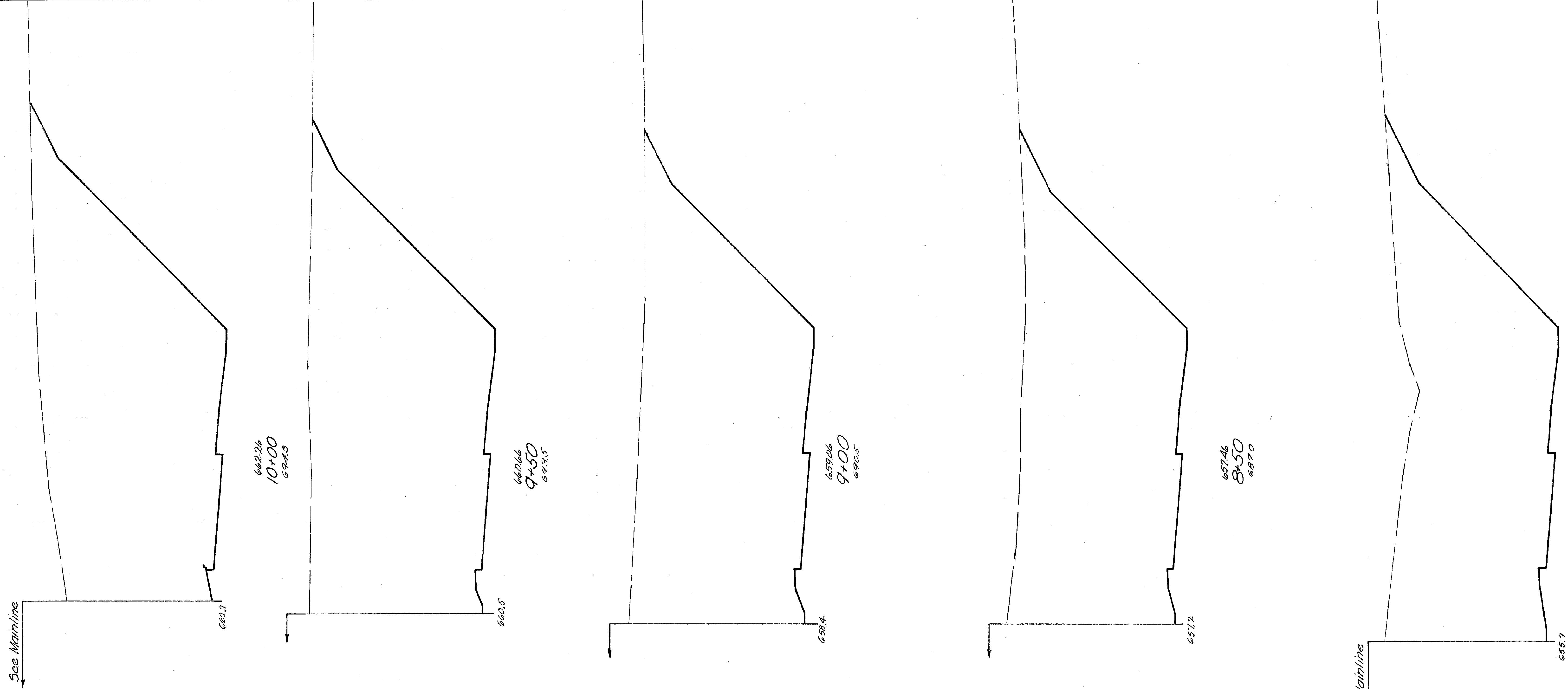
HAM-52-11.37



Encl Area Volume
Cut Fill Cut Fill

2130	4583	4555	4305	4162	4208
0	0	0	0	0	0

HAM-52-11.37



690 680 670 660 690 680 670 660 690 680 670 660 690 680 670 660 650

Ramp A Sta. 8+00 to Sta. 10+00

80 60 40 20 0 20 40 60 80

End Area	Volume
Cut	Fill
Cut	Fill
1070	0
1156	0
1340	0
1652	0
2025	0
2061	0
2311	0
2770	0
3404	0
4125	0

HAM-52-11.37

700
690
680
670
660

See Mainline

663.56
12+50
683.4

690
680
670
660

668.34
12+00
683.4

690
680
670
660

667.00
11+50
684.5

690
680
670
660

665.46
11+00
688.0

690
680
670
660

See Mainline

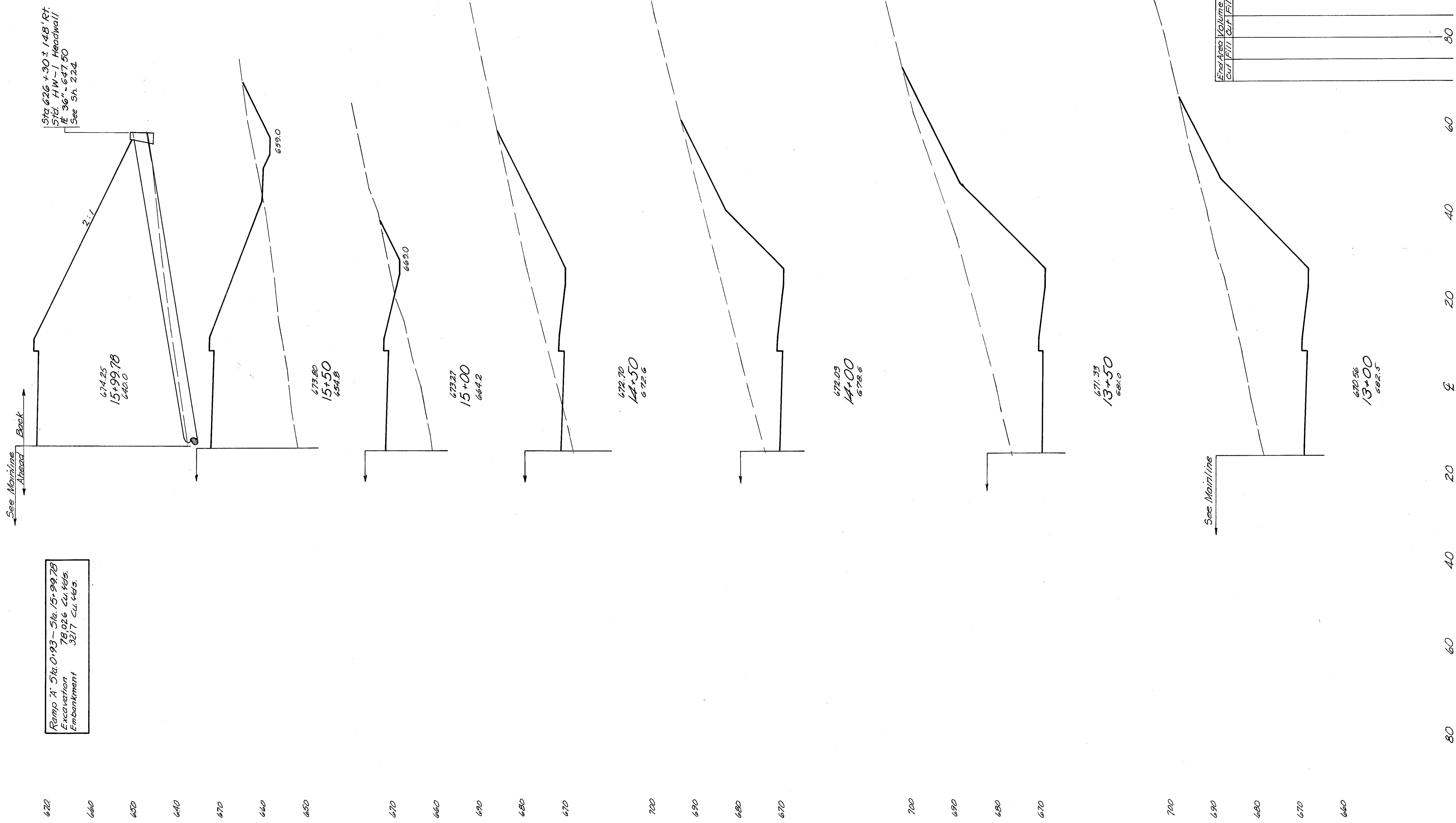
663.86
10+50
691.0

Ramp A Sta. 10+50 to Sta. 12+50

170
80
60
40
20
0
20
40
60
80

End Area	Volume	End Area	Volume
Cut	Fill	Cut	Fill
0	1627	75	651
69	2100	30	232
97	818	267	14
275	228	587	0
791	13	890	0
1321	0	940	0
1648	0	1861	0

HAM-52-11.37



Ramp A Sta. 0+93 - Sta. 15+99.78
Excavation 78,026 cu. yds.
Embankment 3217 cu. yds.

Sta. 626 + 30 ± 148' Rt.
Std. HW-1 Headwall
36" - 647.50
See Sh. 224

674.25
15+99.78
640.0

673.80
15+50
654.8

673.27
15+00
664.2

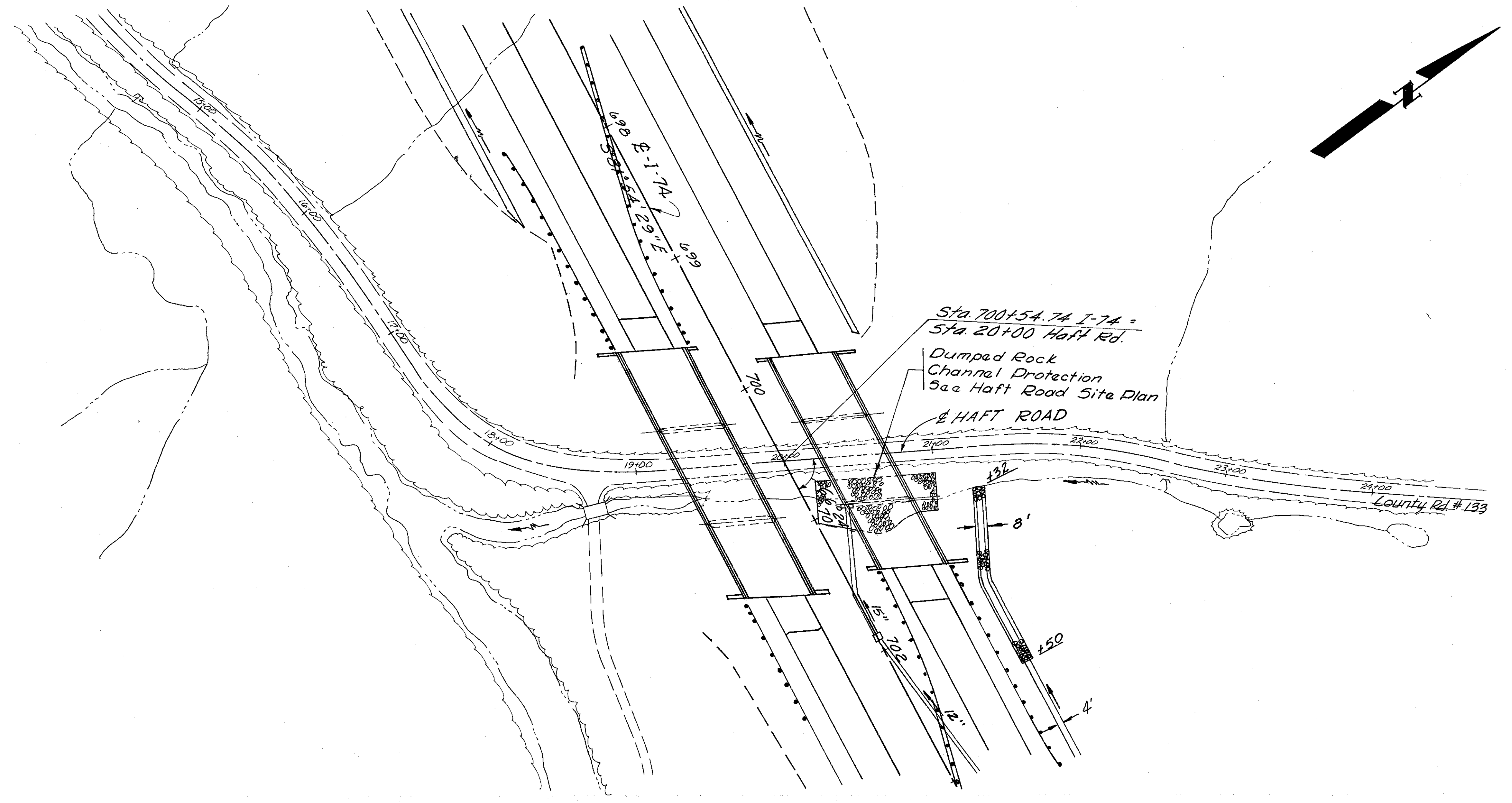
672.70
14+50
672.6

672.03
14+00
678.6

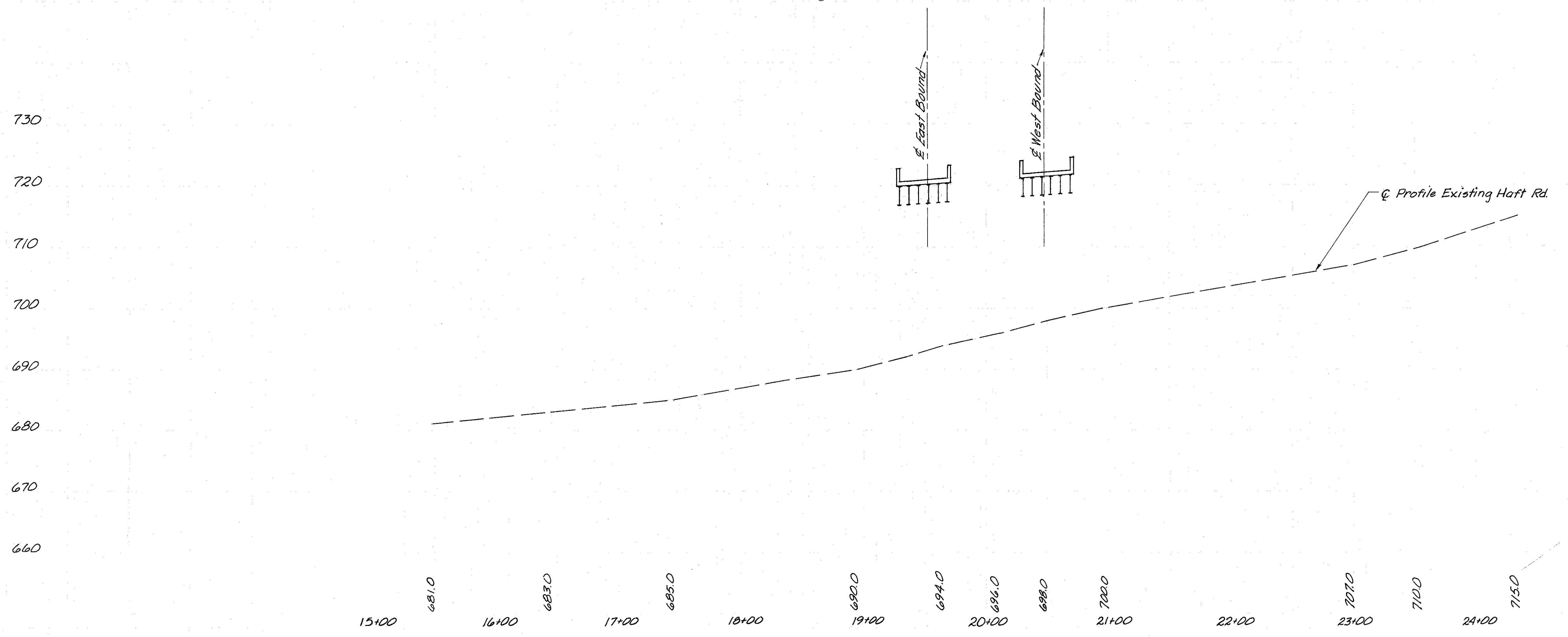
671.33
13+50
681.0

670.56
13+00
682.5

HAM-74-11.37

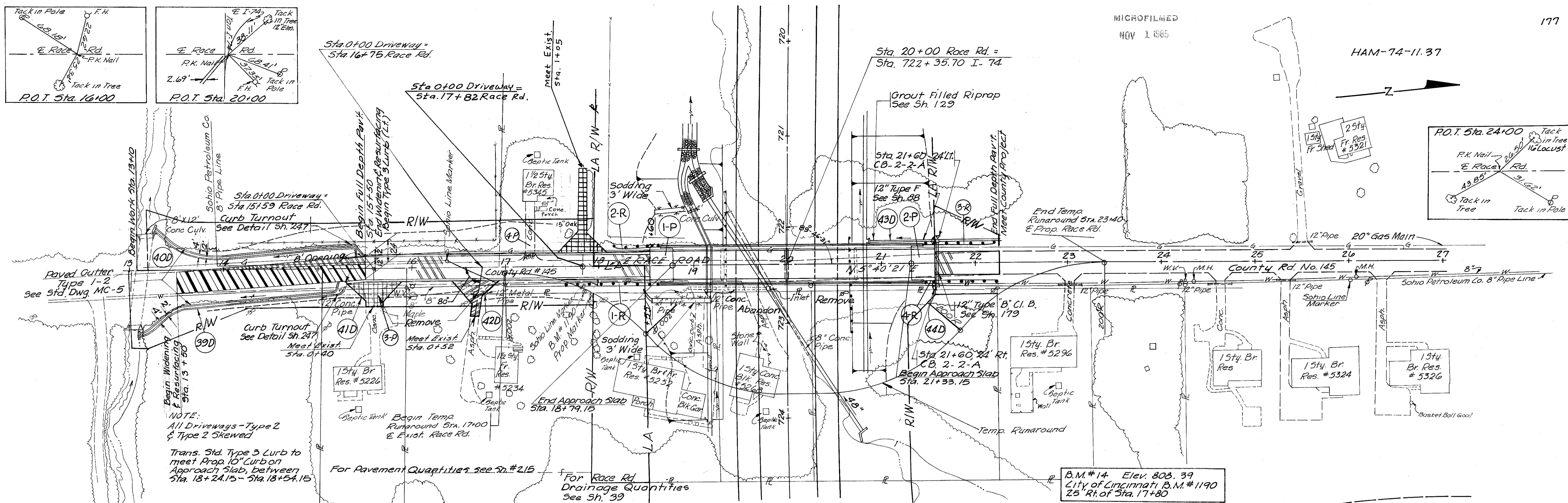


For Mainline Plan & Profile
 see Sh. # 33
 For Bridge Data see Sh. # 33



HAFT ROAD

HAM-74-11.37

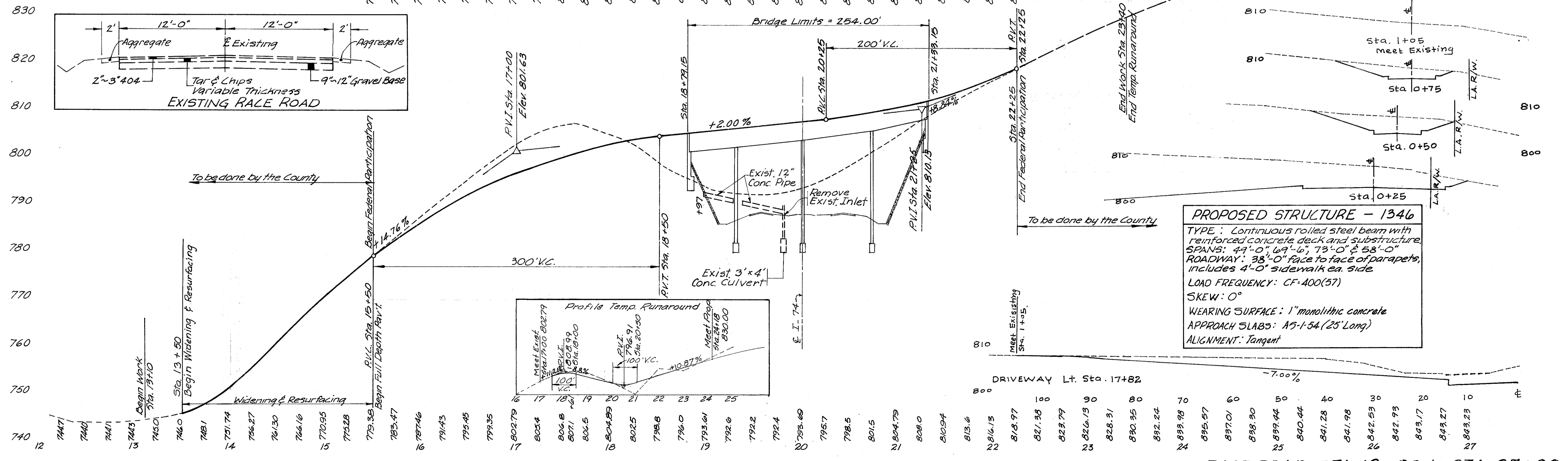


NOTE:
All Driveways - Type 2
& Type 2 Skewed
Trans. Std. Type 3 Lurb to
meet Prop. 10\"/>

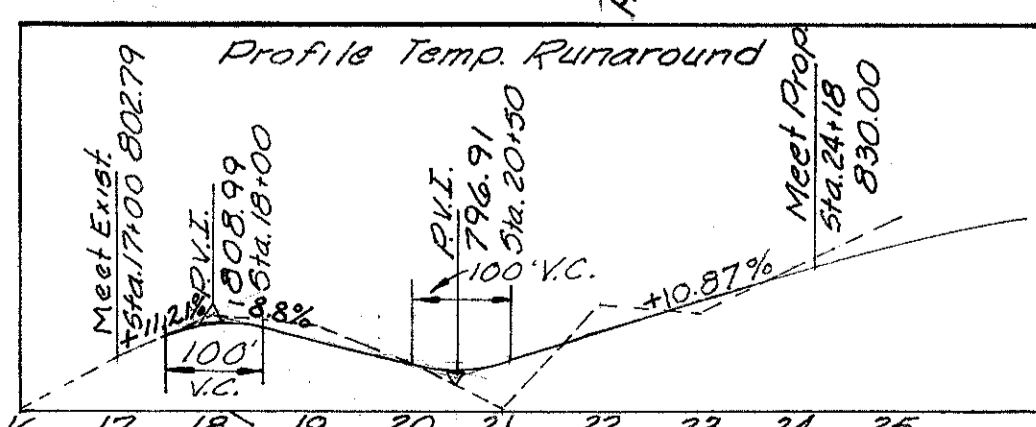
For Pavement Quantities see Sh. #215

For Race Rd
Drainage Quantities
See Sh. 39

B.M.#14 Elev. 808.39
City of Cincinnati B.M.#1190
25' Rt. of Sta. 17+80



PROPOSED STRUCTURE - 1346
TYPE: Continuous rolled steel beam with reinforced concrete deck and substructure.
SPANS: 47'-0", 69'-6", 73'-0" & 58'-0"
ROADWAY: 38'-0" face to face of parapets, includes 4'-0" sidewalk ea. side
LOAD FREQUENCY: CF-400(57)
SKEW: 0°
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: 15'-1.54' (25' Long)
ALIGNMENT: Tangent

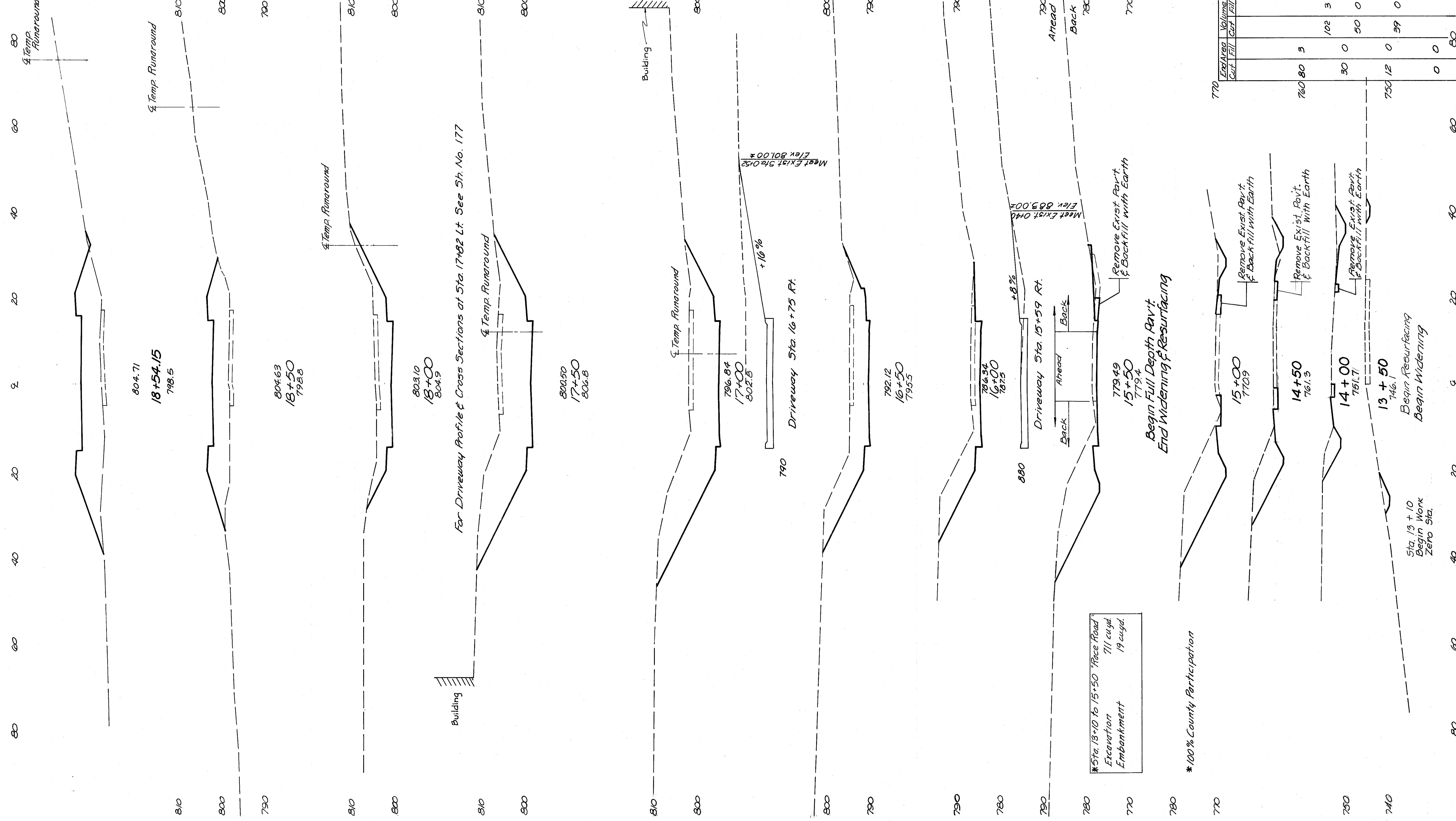


DRIVEWAY Lt. Sta. 17+82

RACE ROAD STA. 12+00 to STA. 27+00

End Area	Volume
Cut	Fill
0	300
0	40
0	240
144	222
579	0
866	0
667	0
389	0
319	0
330	10
167	4
229	6

HAM - 52 - 11.37

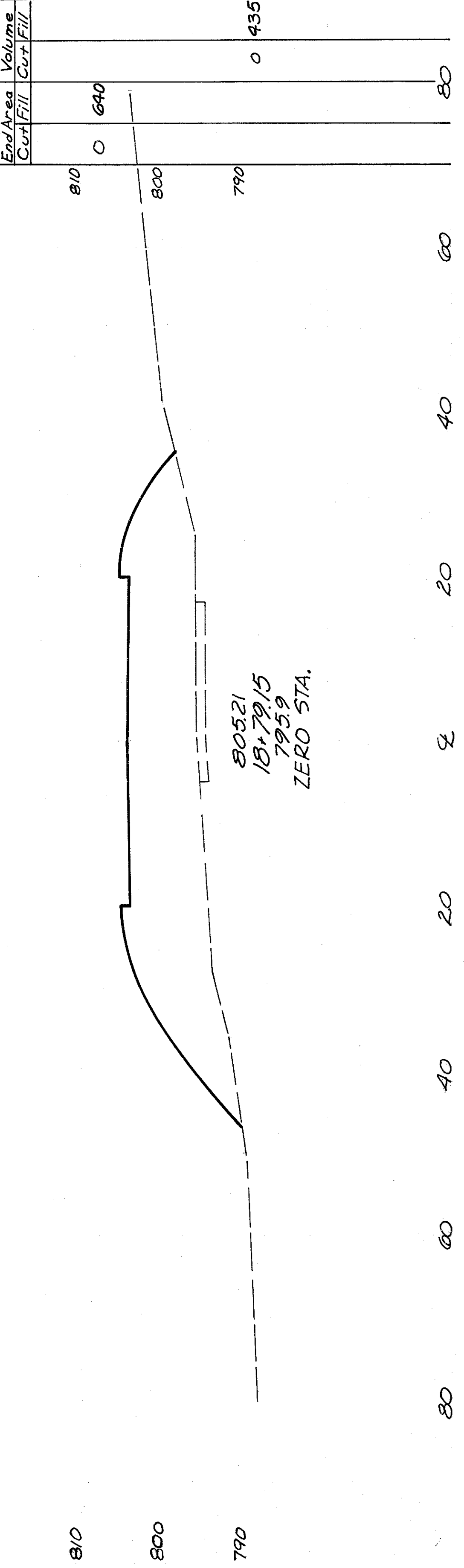
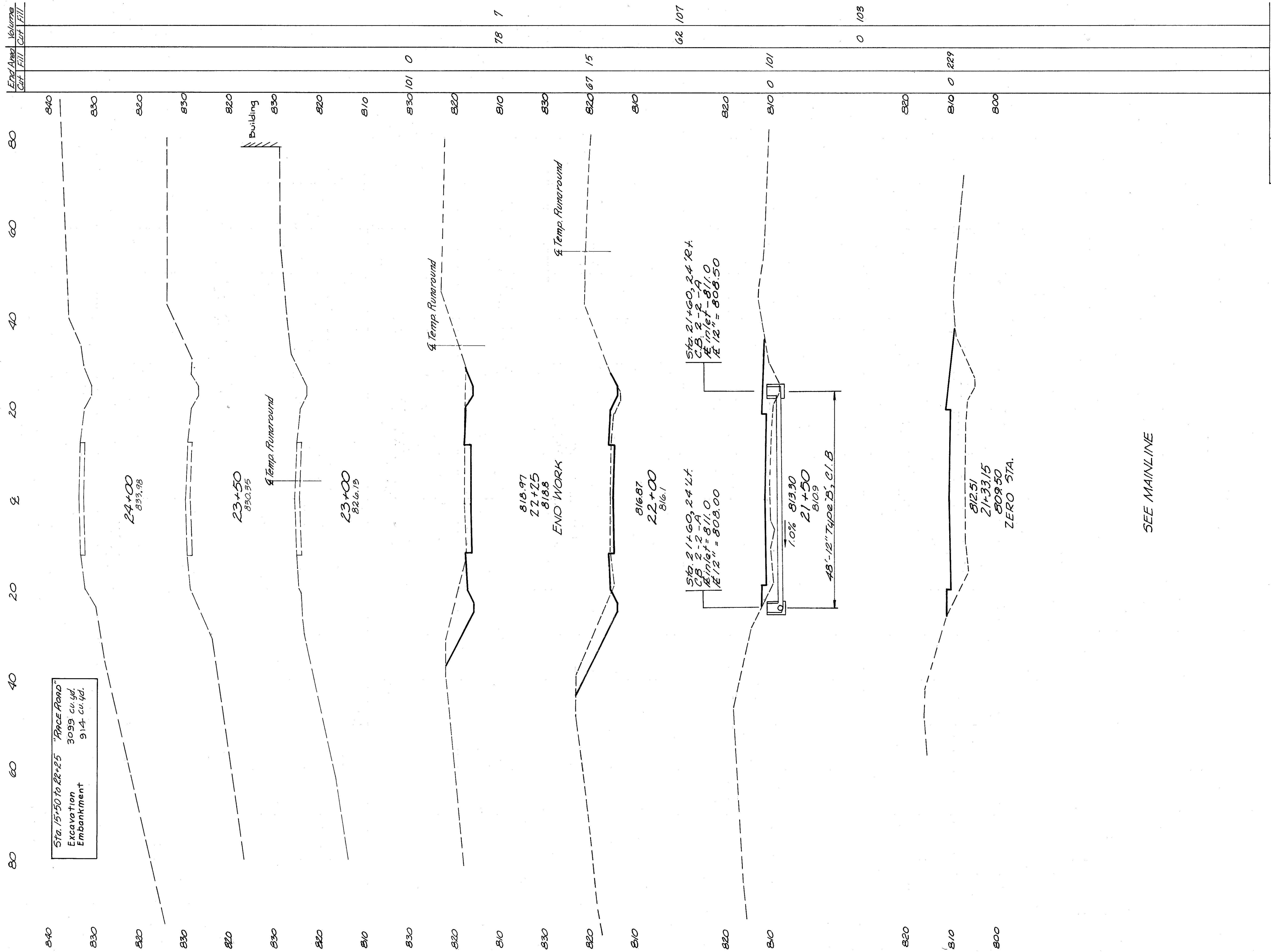


End Area	Volume
Cut	Fill
760	80
30	102
3	3
0	50
12	39
0	0
0	80

*Sta. 13+10 to 15+50 Race Road Excavation Embankment 711 cu yd. 19 cu yd.

*100% County Participation

RACE ROAD STA. 14+00 to STA. 18+54.15



SEE MAINLINE

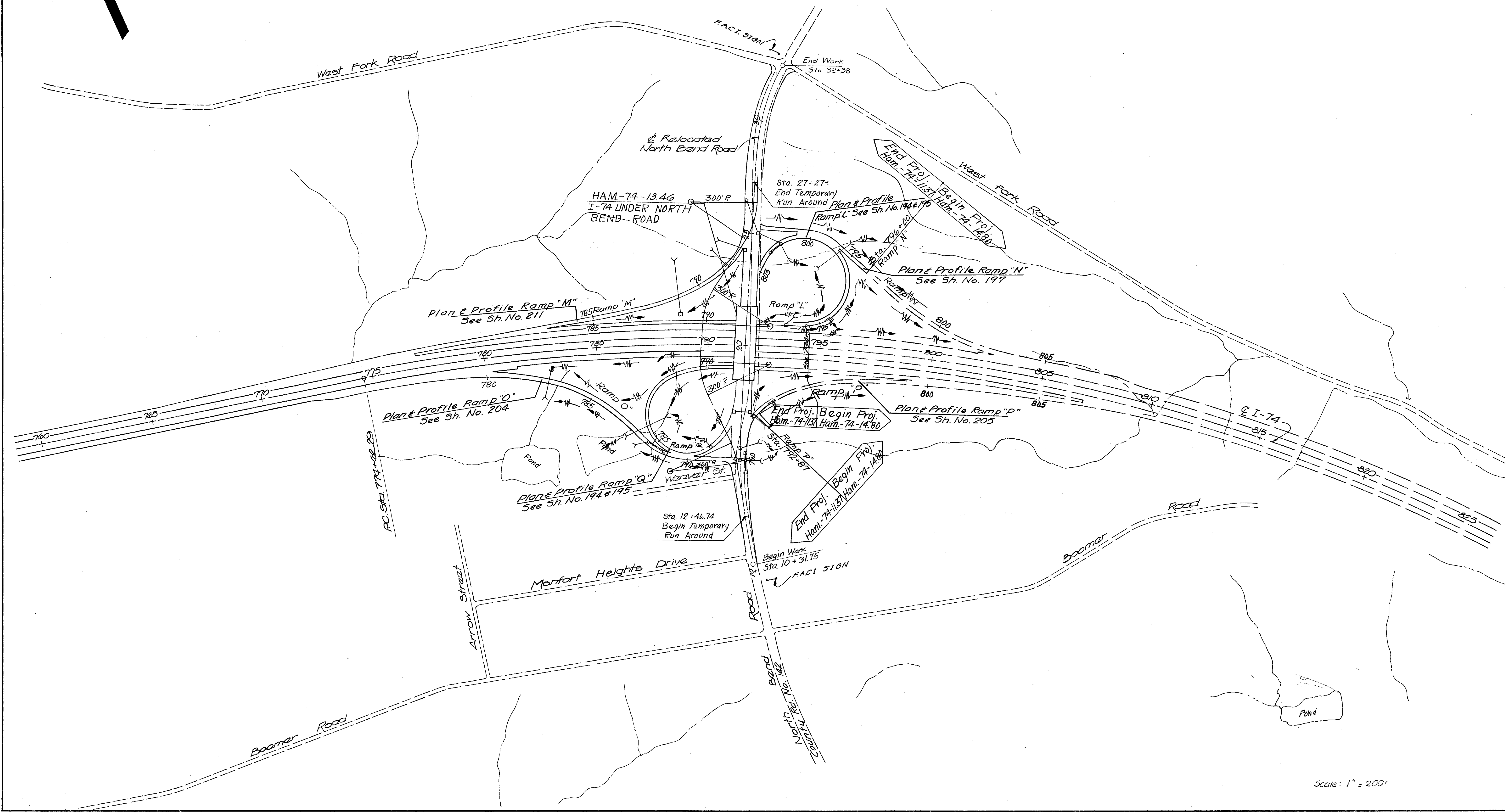
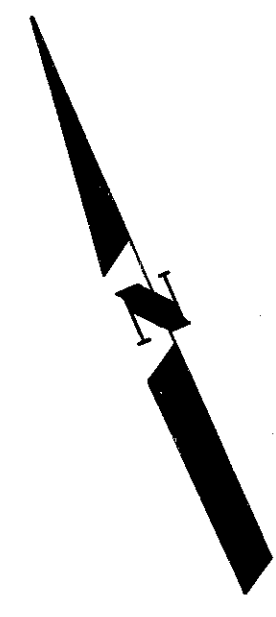
RACE ROAD STA. 18+79.15 to STA. 24+00

HAM-74-11.37

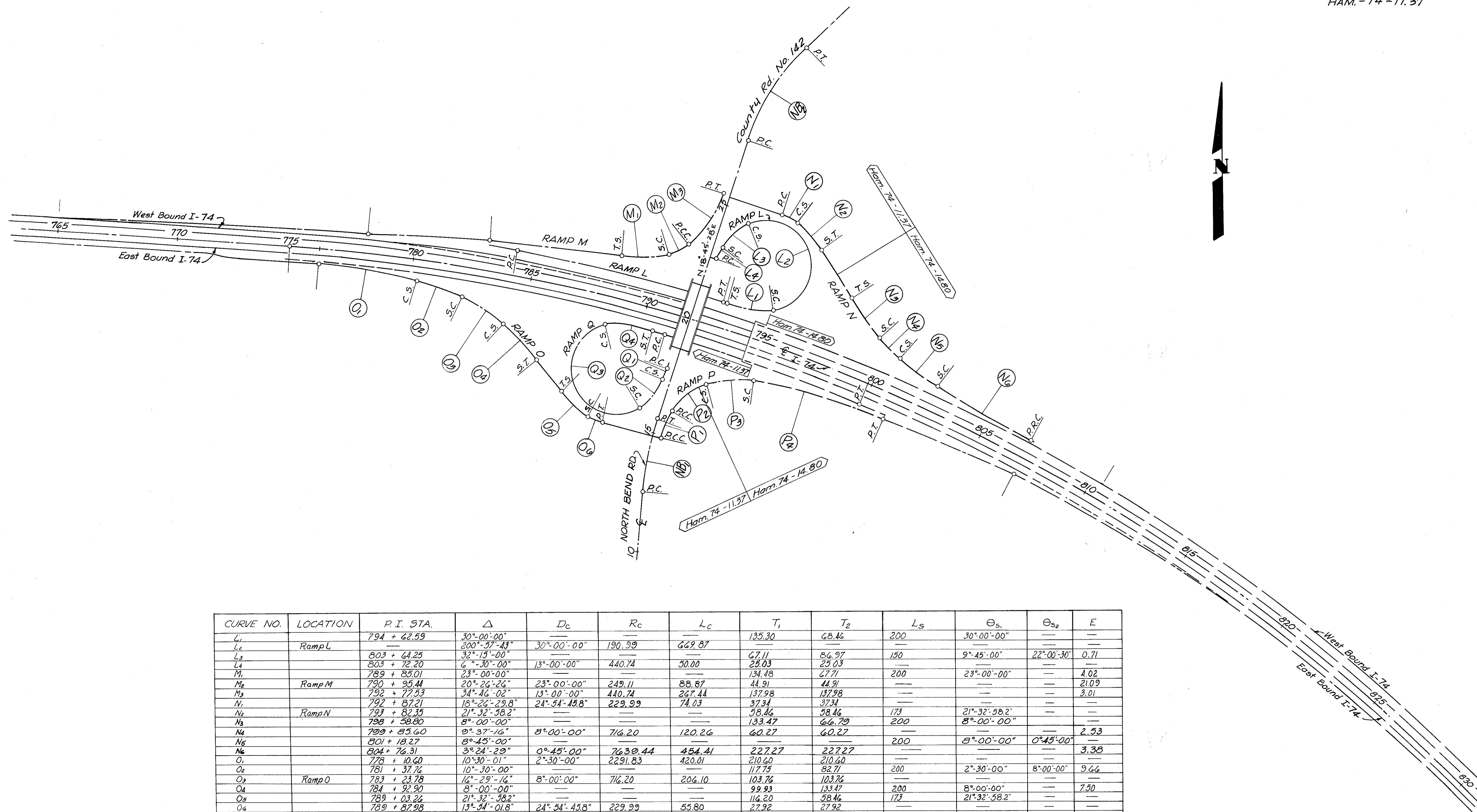
End Area	Volume
Cut	Fill
840	0
830	0
820	0
810	0
800	0
790	0
780	0
770	0
760	0
750	0
740	0
730	0
720	0
710	0
700	0
690	0
680	0
670	0
660	0
650	0
640	0
630	0
620	0
610	0
600	0
590	0
580	0
570	0
560	0
550	0
540	0
530	0
520	0
510	0
500	0
490	0
480	0
470	0
460	0
450	0
440	0
430	0
420	0
410	0
400	0
390	0
380	0
370	0
360	0
350	0
340	0
330	0
320	0
310	0
300	0
290	0
280	0
270	0
260	0
250	0
240	0
230	0
220	0
210	0
200	0
190	0
180	0
170	0
160	0
150	0
140	0
130	0
120	0
110	0
100	0
90	0
80	0

End Area	Volume
Cut	Fill
810	0
800	0
790	0
780	0
770	0
760	0
750	0
740	0
730	0
720	0
710	0
700	0
690	0
680	0
670	0
660	0
650	0
640	0
630	0
620	0
610	0
600	0
590	0
580	0
570	0
560	0
550	0
540	0
530	0
520	0
510	0
500	0
490	0
480	0
470	0
460	0
450	0
440	0
430	0
420	0
410	0
400	0
390	0
380	0
370	0
360	0
350	0
340	0
330	0
320	0
310	0
300	0
290	0
280	0
270	0
260	0
250	0
240	0
230	0
220	0
210	0
200	0
190	0
180	0
170	0
160	0
150	0
140	0
130	0
120	0
110	0
100	0
90	0
80	0

NORTH BEND ROAD INTERCHANGE SCHEMATIC PLAN



Scale: 1" = 200'



CURVE NO.	LOCATION	P.I. STA.	Δ	D_c	R_c	L_c	T_1	T_2	L_s	Θ_{s1}	Θ_{s2}	E
L_1	Ramp L	794 + 62.59	30°-00'-00"	30°-00'-00"	190.99	664.87	135.30	68.46	200	30°-00'-00"	—	—
L_2		—	200°-57'-43"	—	—	—	—	—	—	—	—	—
L_3		803 + 64.25	32°-15'-00"	—	—	—	—	—	—	—	—	—
L_4	Ramp M	803 + 72.20	6°-30'-00"	13°-00'-00"	440.74	30.00	67.11	86.97	150	9°-45'-00"	22°-30'-30"	0.71
M_1		789 + 85.01	23°-00'-00"	—	—	—	—	—	—	—	—	—
M_2		790 + 95.44	20°-26'-26"	23°-00'-00"	249.11	88.87	44.91	44.91	—	—	—	21.09
M_3	Ramp N	792 + 77.53	34°-46'-02"	13°-00'-00"	440.74	267.44	137.98	137.98	—	—	—	3.01
N_1		797 + 87.21	18°-26'-29.8"	24°-54'-45.8"	229.99	74.03	37.34	37.34	—	—	—	—
N_2		797 + 82.35	21°-32'-58.2"	—	—	—	—	—	—	—	—	—
N_3	Ramp O	798 + 58.80	8°-00'-00"	—	—	—	—	—	—	—	—	—
N_4		799 + 53.60	9°-37'-16"	8°-00'-00"	716.20	120.26	60.27	60.27	—	—	—	2.53
N_5		801 + 18.27	8°-45'-00"	—	—	—	—	—	—	—	—	—
N_6	Ramp P	804 + 76.31	3°-24'-29"	0°-45'-00"	7639.44	454.41	227.27	227.27	—	—	—	3.38
O_1		778 + 10.60	10°-30'-01"	2°-30'-00"	2291.83	420.01	210.60	210.60	—	—	—	—
O_2		781 + 37.76	10°-30'-00"	—	—	—	—	—	—	—	—	—
O_3	Ramp Q	783 + 23.78	16°-29'-16"	8°-00'-00"	716.20	206.10	103.76	103.76	—	—	—	—
O_4		784 + 92.90	8°-00'-00"	—	—	—	—	—	—	—	—	—
O_5		789 + 03.26	21°-32'-58.2"	—	—	—	—	—	—	—	—	—
O_6	Ramp R	789 + 82.98	13°-54'-01.8"	24°-54'-45.8"	229.99	55.80	27.92	27.92	—	—	—	—
P_1		790 + 77.73	14°-48'-54"	13°-00'-00"	440.74	113.96	57.30	57.30	—	—	—	1.70
P_2		792 + 27.61	42°-38'-22"	23°-00'-00"	185.39	185.39	97.22	97.22	—	—	—	3.70
P_3	Ramp S	793 + 89.79	25°-15'-00"	—	—	—	—	—	—	—	—	—
Q_1		798 + 09.15	13°-08'-42"	2°-15'-00"	2546.48	584.22	293.40	293.40	—	—	—	16.85
Q_2		780 + 11.22	6°-30'-00"	13°-00'-00"	440.74	50.00	25.03	25.03	—	—	—	0.71
Q_3	Ramp T	781 + 23.14	32°-15'-00"	—	—	—	—	—	—	—	—	—
Q_4		—	199°-27'-43"	30°-00'-00"	190.99	664.87	—	—	—	—	—	—
Q_5		789 + 19.49	30°-00'-00"	—	—	—	—	—	—	—	—	—
N_{B1}	North Bend Rd.	14 + 03.88	12°-31'-15"	4°-00'-00"	1432.39	313.02	157.14	157.14	—	—	—	8.59
N_{B2}		30 + 30.57	27°-37'-20"	6°-00'-00"	954.93	465.93	237.70	237.70	—	—	—	29.14
N_{B3}		30 + 30.57	27°-37'-20"	6°-00'-00"	954.93	465.93	237.70	237.70	—	—	—	29.14
N_{C1}	I-74	810 + 79.06	50°-40'-08"	0°-45'-00"	7639.44	6755.85	3616.77	3616.77	—	—	—	812.90

Scale 1" = 200'

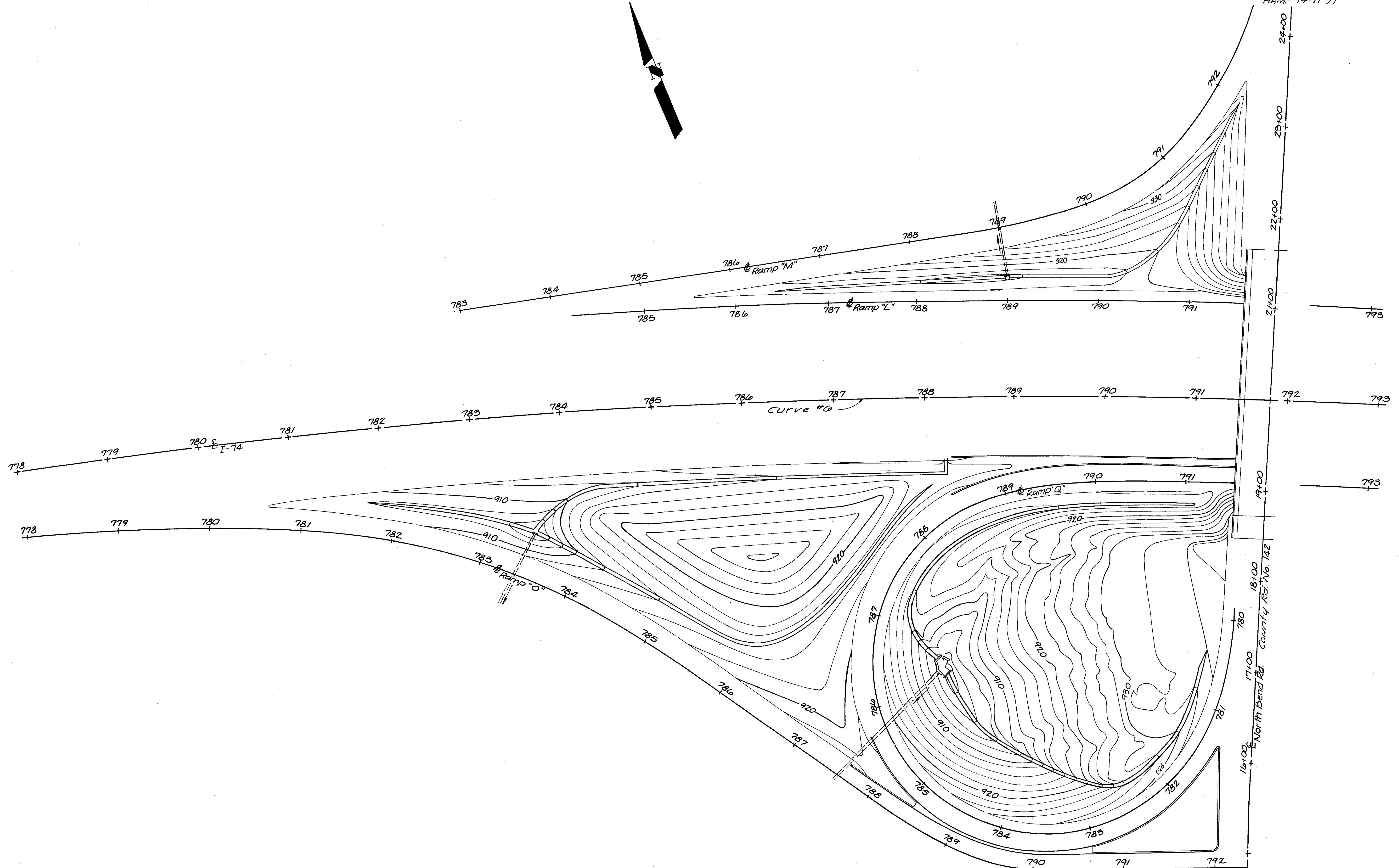
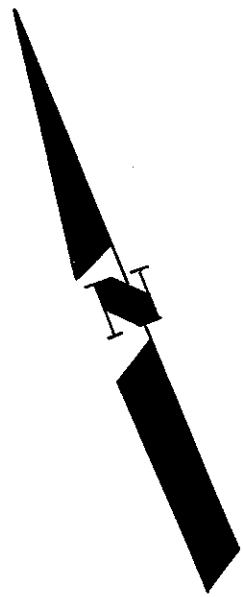


CROSS SECTION LAYOUT

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

183

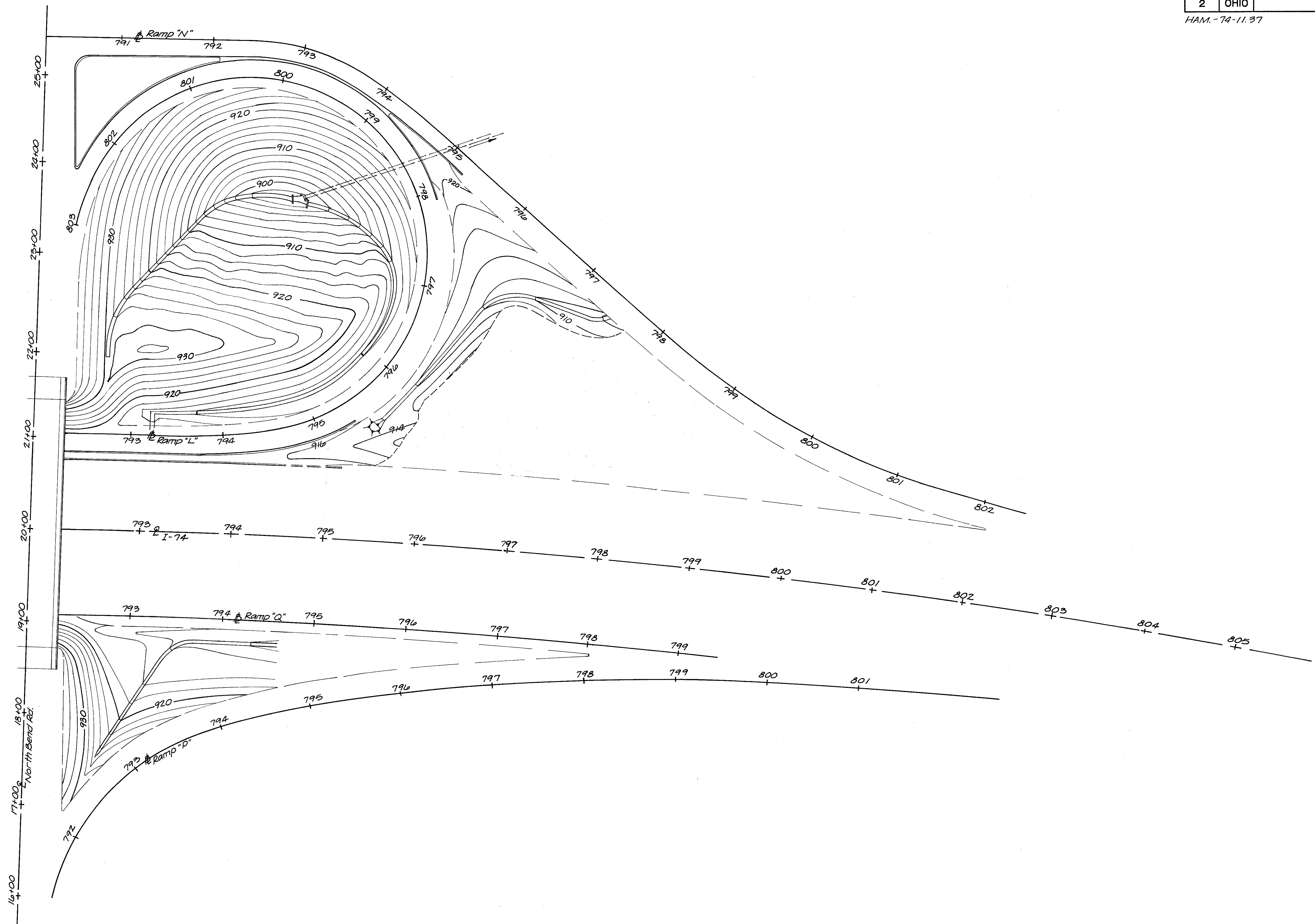
HAM-74-11.37



16+00
17+00
18+00
19+00
20+00
21+00
22+00
23+00
24+00

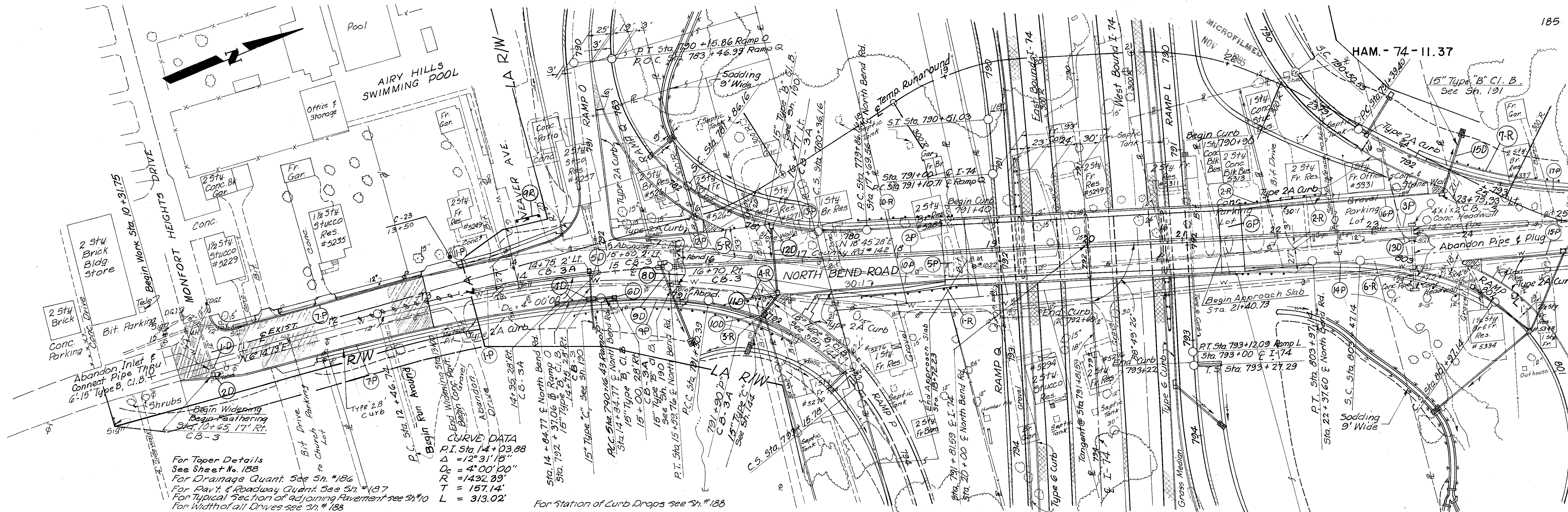
North Bend Rd. County Rd. No. 142

HAM. - 74-11.37



GRADING PLANS

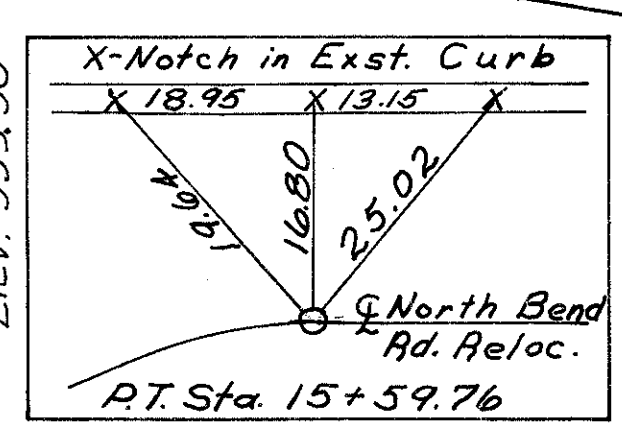
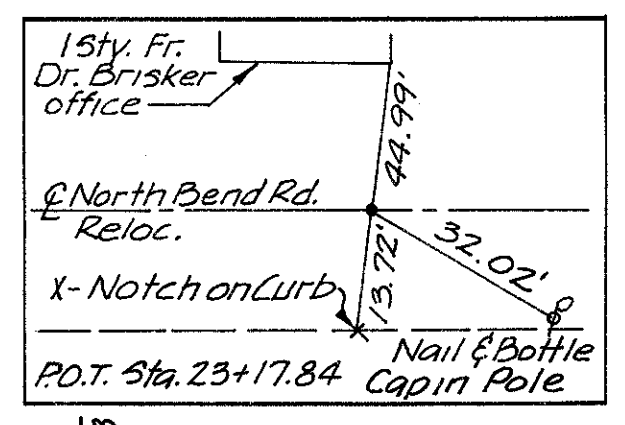
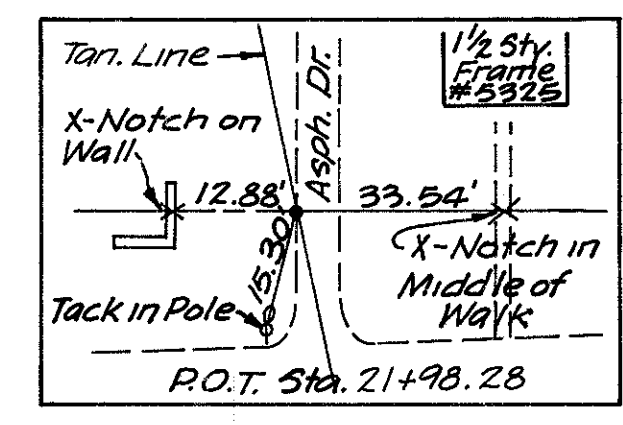
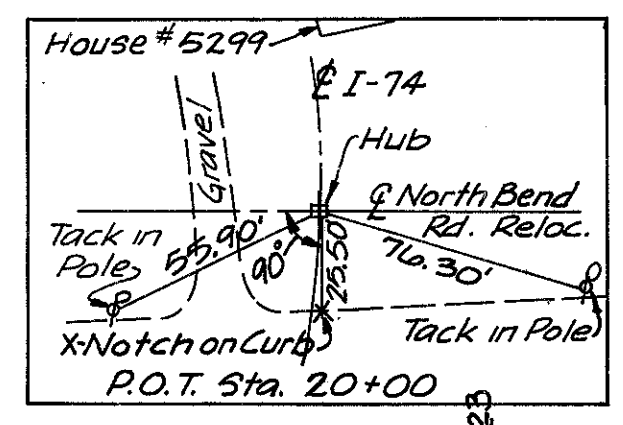
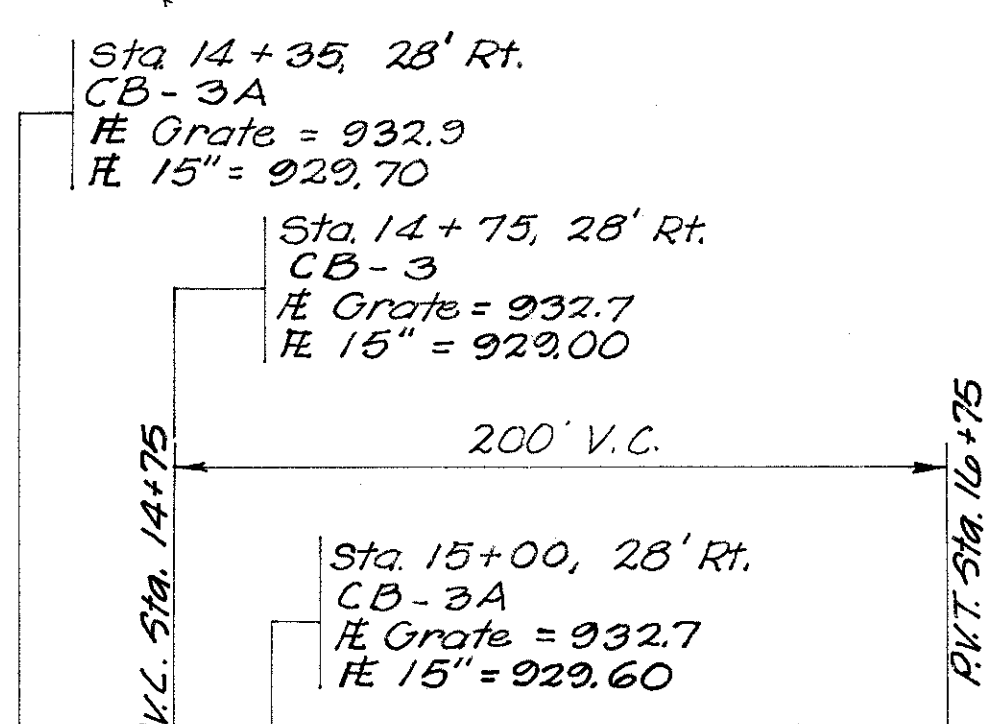
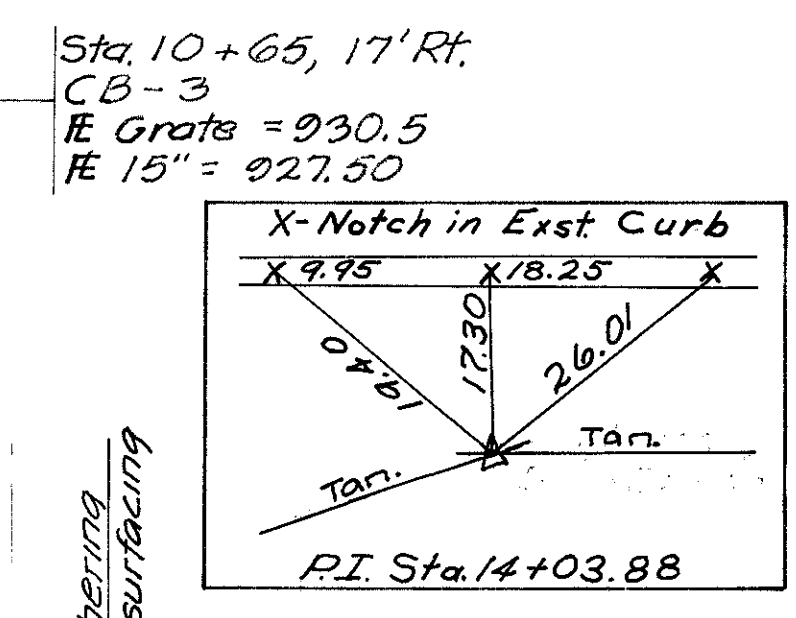
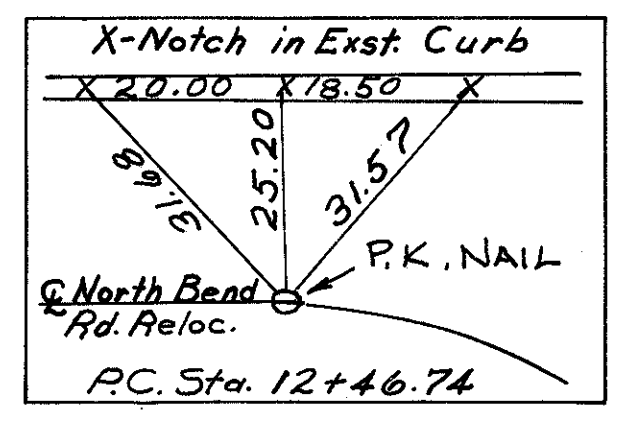
HAM - 74 - 11.37



CURVE DATA
 P.I. Sta. 14+03.88
 $\Delta = 12^{\circ}31'15''$
 $R_c = 4^{\circ}00'00''$
 $T = 1432.89'$
 $L = 313.02'$

For Station of Curb Drops see Sh. # 188

932.20	932.95	933.60	934.20	934.54	934.78	934.95	935.05	934.95	934.80	934.65	934.50	934.35	934.20	934.05	933.90	933.77	933.70	933.66	933.68	933.74	933.86	934.01	934.22	934.46	934.60	934.92	935.15	935.38	935.61	935.84	936.07	936.30	936.53	936.77	937.00	937.23	937.46	937.69	937.92	938.15	938.35	938.50	938.60	938.65	938.64	938.57	938.45	938.28	938.05	937.77	937.44	937.06	936.62	936.12	935.57	934.97
--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------



PROPOSED STRUCTURE 1477

TYPE: Continuous rolled steel beam with reinforced concrete deck and substructure

SPANS: 56'-0", 69'-6", 81'-6", 57'-0"

ROADWAY: 69'-0" Face to face of parapet includes 3'-0" sidewalk each side and 3'-0" raised median

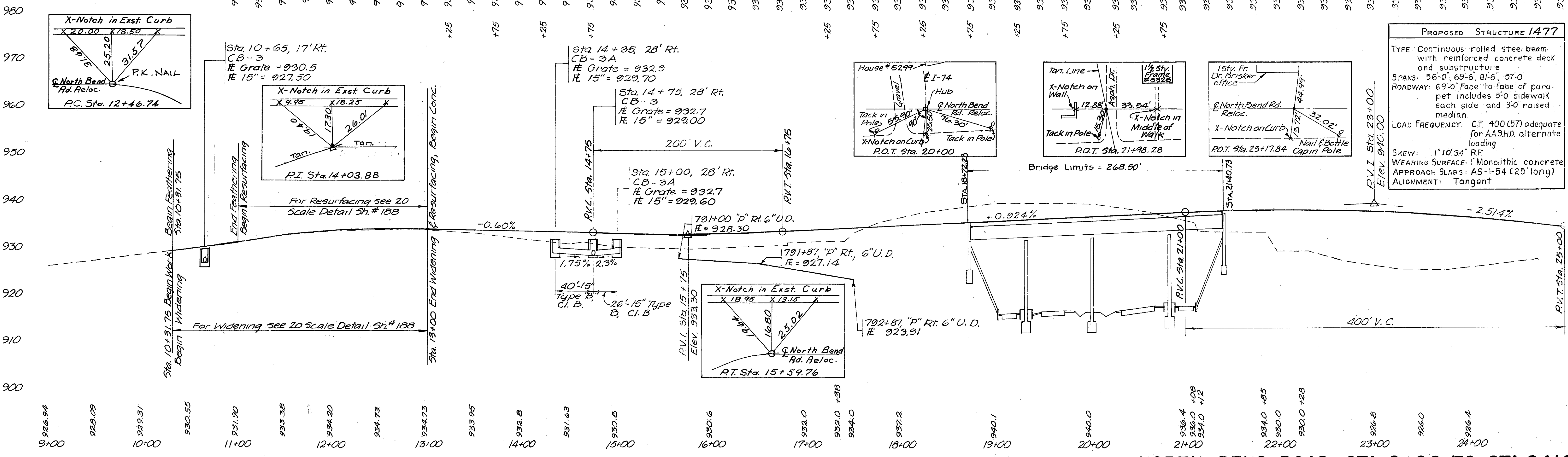
LOAD FREQUENCY: C.F. 400 (57) adequate for AASHO alternate loading

SKEW: 1°10'34" R.F.

WEARING SURFACE: 1" Monolithic concrete

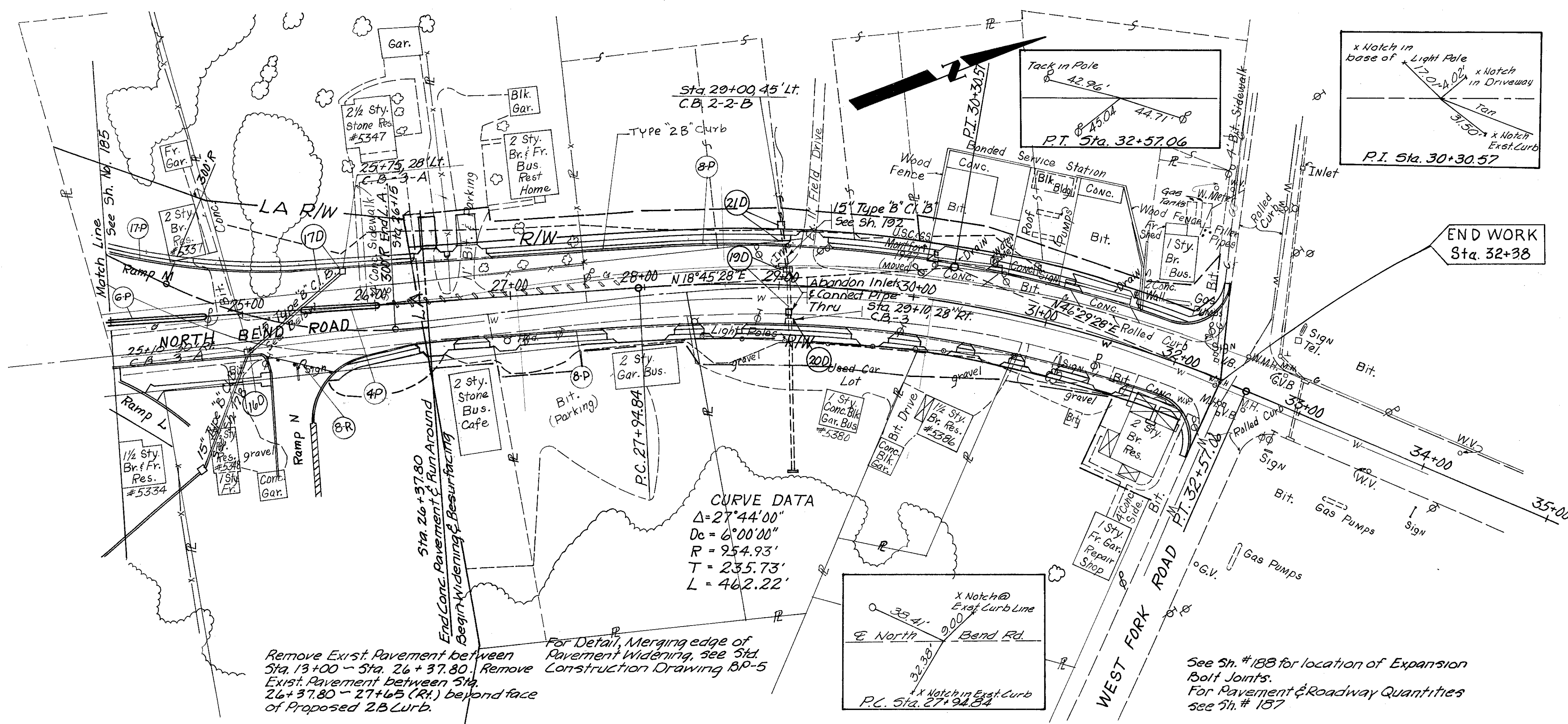
APPROACH SLABS: AS-1-54 (25' long)

ALIGNMENT: Tangent



NORTH BEND ROAD STA. 9+00 TO STA. 24+00

HAM-74-11.37



CURVE DATA
 $\Delta = 27^{\circ}44'00''$
 $D_c = 6^{\circ}00'00''$
 $R = 954.93'$
 $T = 235.73'$
 $L = 462.22'$

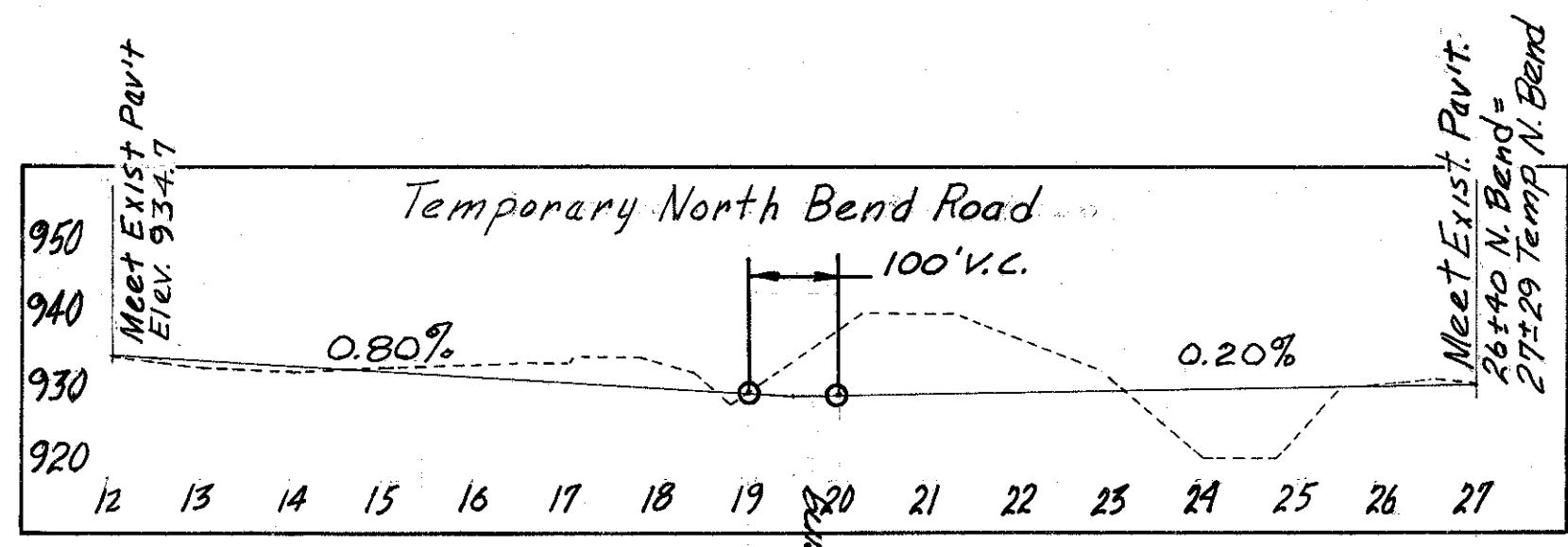
Remove Exst. Pavement between Sta. 13+00 - Sta. 26+37.80. Remove Exst. Pavement between Sta. 26+37.80 - 27+65 (Rt.) beyond face of Proposed 2B Curb.

See Sh. #188 for location of Expansion Bolt Joints. For Pavement & Roadway Quantities see Sh. #187

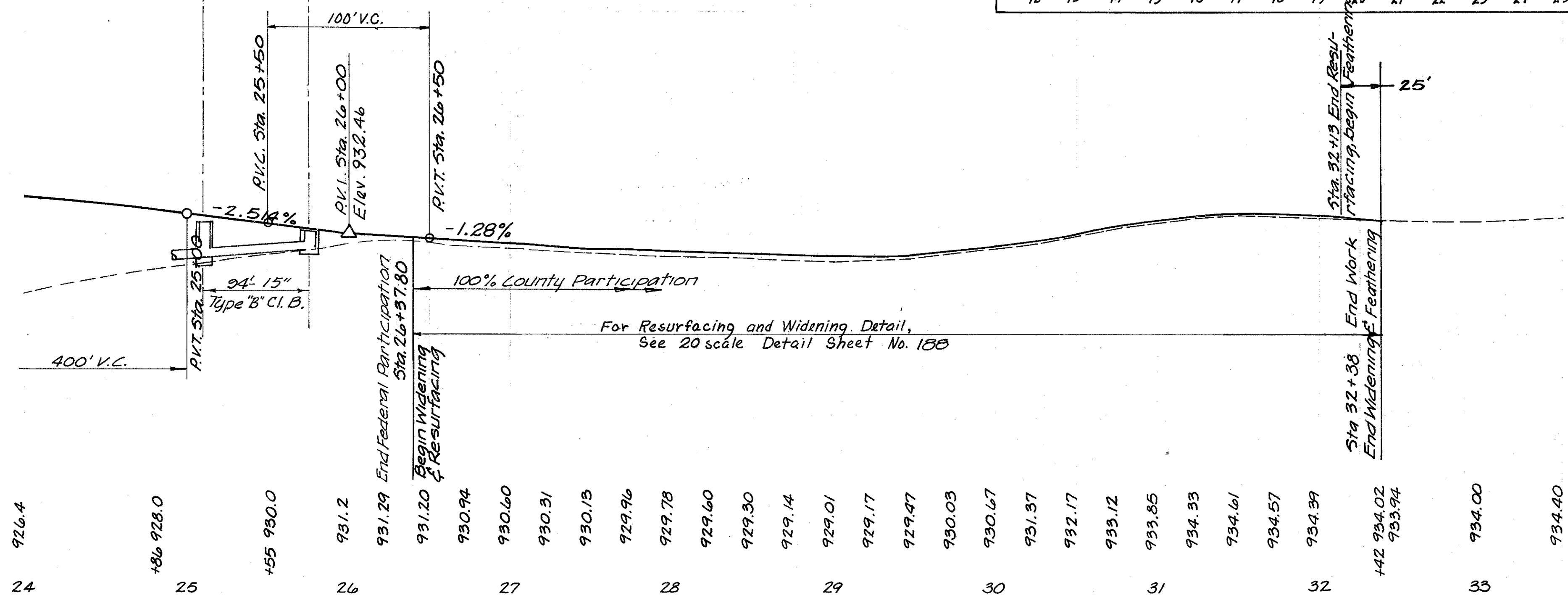
- 937.06
- 936.62
- 936.12
- 935.57
- 934.97
- 934.34
- 933.71
- 933.13
- 932.61
- 932.18
- 931.82
- 931.50
- 931.20

Sta. 25+10.30' Rt.
 C.B. - 3 A
 # Grate = 934.0
 # 15" = 929.50

Sta. 25+75.28' Lt.
 C.B. - 3 A
 # Grate = 932.6
 # 15" = 930.40



- 926.4
- +86 928.0
- +55 930.0
- 931.2
- 931.29
- 931.20
- 930.94
- 930.60
- 930.31
- 930.13
- 929.96
- 929.78
- 929.60
- 929.30
- 929.14
- 929.01
- 929.17
- 929.47
- 930.03
- 930.67
- 931.37
- 932.17
- 933.12
- 933.85
- 934.33
- 934.61
- 934.57
- 934.39
- +42 934.02
- 933.94
- 934.00
- 934.40



706.02 (Class III)
 603
 Type 15" 15" L.F. E.A.
 15" 15" L.F. E.A.
 15" 15" L.F. E.A.

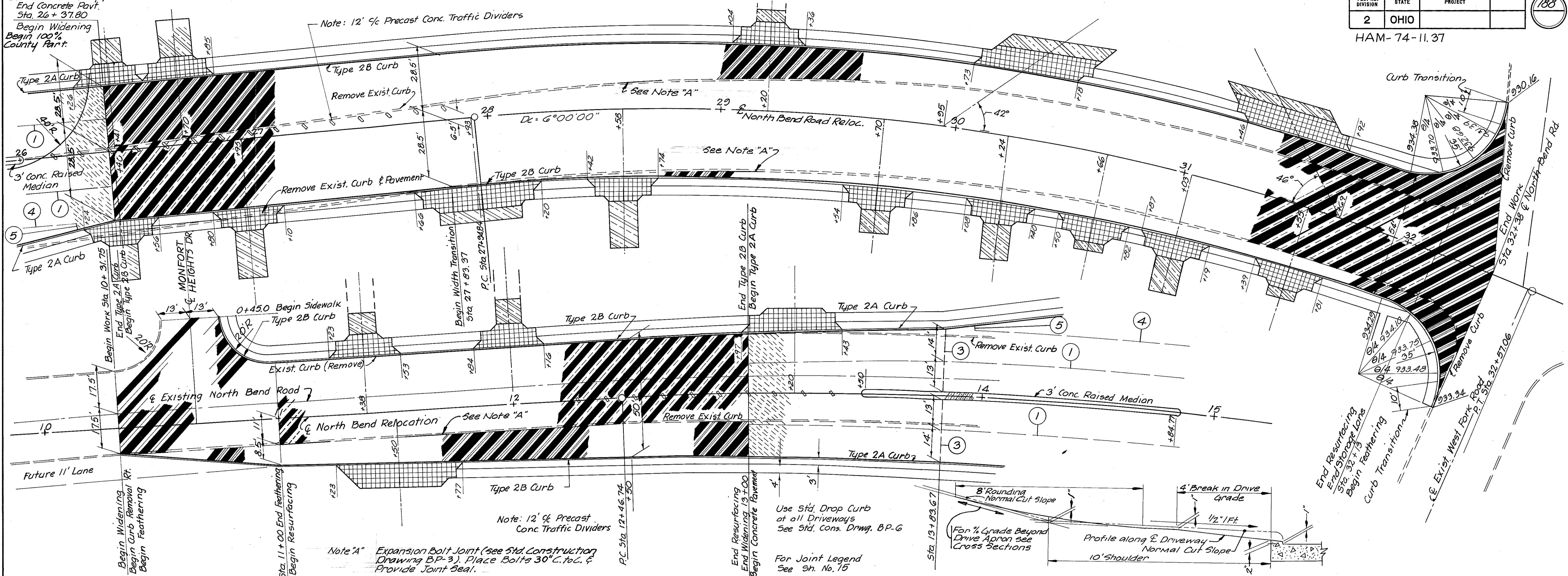
601 660 602
 Dumped Rock, Sodding Masonry Protection
 C.Y. S.Y. C.Y.

202
 Inlets Structure Removed
 Ea. Ea.

Station	603	604	601	660	602	202	DRAINAGE	Participation
24							10+65 Rt.	Normal Participation
25	6					1	10+65 Rt.	100% County Participation
26	40		1.4	2	0.26		14+35 - 14+75 Rt.	7 Lump 66
27	32						14+75 Rt.	3
28	36		1.4	2	0.26		14+75 - 15+00 Rt.	1.0 Lump 66
29	28		1.4	2	0.26		15+00 - 15+75 Rt.	
30	74		2.2	2	0.26		15+75 - 16+70 Rt.	
31	66		1.4	2	0.26		16+70 - 16+90 Rt.	
32	98						16+90 - 17+10 Rt.	
33	94						17+10 - 25+75 Lt.	
	** 4						25+75 Lt.	
	** 34						25+75 - 29+10 Lt.	

NORTH BEND RD. STA. 24+00 - STA. 33+00

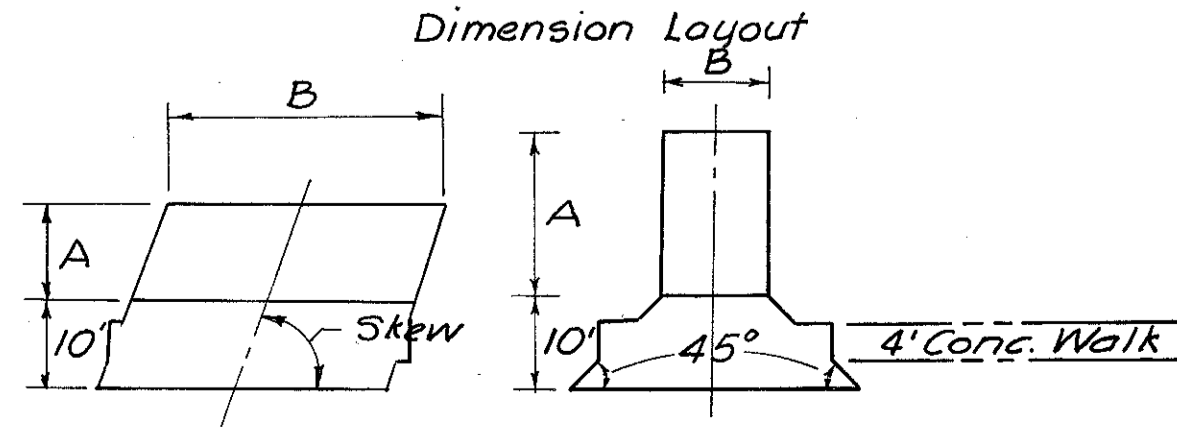
End Federal Participation
End Concrete Pavt.
Sta. 26 + 37.80
Begin Widening
Begin 100%
County Part.



Station	Profile Grade	Right Side				Left Side			
		Width from C	Elevation	Width from C	Elevation	Width from C	Elevation	Width from C	Elevation
11+00	932.20	19.50	931.71	-	-	-	-	24.50	931.75
+25	932.95	20.42	932.63	-	-	-	-	24.58	932.59
+50	933.60	21.33	933.28	-	-	-	-	24.67	933.21
+75	934.20	22.27	933.78	-	-	-	-	24.75	933.98
12+00	934.54	23.17	934.18	-	-	-	-	24.83	934.63
+25	934.78	24.08	934.40	-	-	-	-	24.92	935.13
+50	934.95	25.00	934.42	-	-	-	-	25.00	935.47
+75	935.05	25.66	934.19	-	-	-	-	25.66	935.92
13+00	934.95	26.31	933.84	12.92	934.41	12.92	935.49	26.31	936.02
+25	934.80	26.96	933.67	13.37	934.24	13.37	935.36	26.96	935.93
+50	934.65	27.62	933.49	13.83	934.07	13.83	935.23	27.62	935.81
+75	934.50	28.40	933.31	14.28	933.90	14.28	935.10	28.40	935.69
14+00	934.35	28.5	933.22	14.5	933.80	14.5	934.90	28.5	935.48
+25	934.20	28.5	933.07	14.5	933.65	14.5	934.75	28.5	935.33
+50	934.05	28.5	932.92	14.5	933.50	14.5	934.60	28.5	935.18
+75	933.90	28.5	932.90	14.5	933.42	14.5	934.38	28.5	934.90
15+00	933.77	28.5	932.86	14.5	933.31	14.5	934.23	28.5	934.66
+25	933.70	28.5	932.96	14.5	933.32	14.5	934.08	28.5	934.44
+50	933.66	28.5	933.09	14.5	933.39	14.5	933.93	28.5	934.23
+75	933.68	28.5	933.25	14.5	933.47	14.5	933.89	28.5	934.11
16+00	933.74	28.5	933.41	14.5	933.67	14.5	933.88	28.5	934.02
+25	933.86	28.5	933.43	14.5	933.65	14.5	933.93	28.5	934.00
+50	934.01	28.5	933.58	14.5	933.80	14.5	934.01	28.5	934.01
+75	934.22	28.5	933.79	14.5	934.01	14.5	934.15	28.5	934.08
17+00	934.46	28.5	934.03	14.5	934.25	14.5	934.32	28.5	934.18
+25	934.63	28.5	934.27	14.5	934.49	14.5	934.49	28.5	934.27

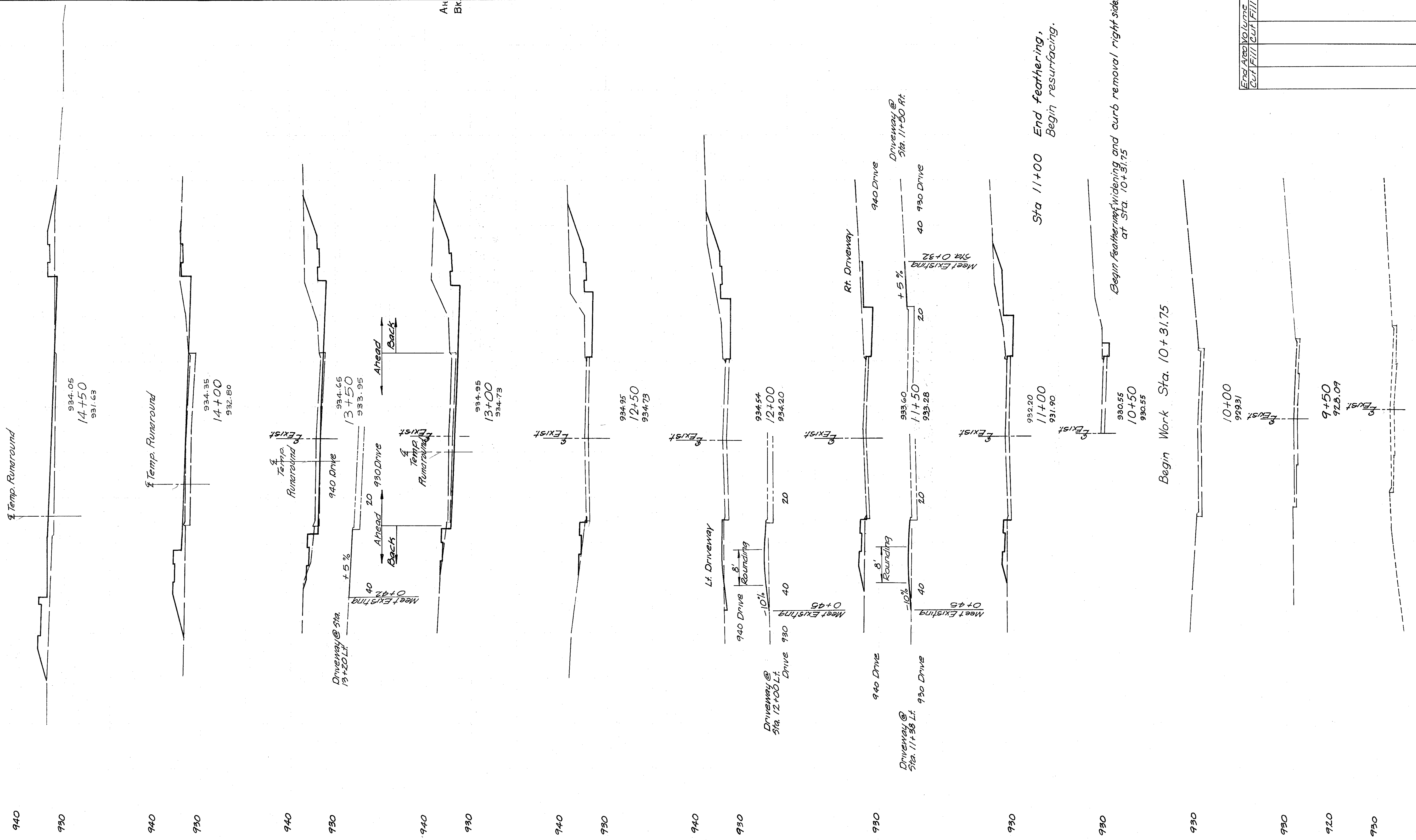
TABLE FOR DRIVEWAYS

Station	Dimension		Area (S.Y.)	Remarks
	A	B		
13+20 Lt.	10'	24'	39	
11+38 Lt.	10'	12'	27	13 @ 90°
11+50 Rt.	10'	35'	51	39 *
12+00 Lt.	15'	10'	24	17 *
26+41 Lt.	10'	14'	68	16 *
26+40 Rt.	15'	12'	27	20 *
26+70 Lt.	15'	14'	68	23 *
26+95 Rt.	20'	12'	27	27 *
27+93 Rt.	5'	35'	52	19 *
28+58 Rt.	20'	12'	27	27 *
29+20 Lt.	5'	12'	27	7 *
29+70 Rt.	10'	12'	27	13 *
29+95 Lt.	5'	45'	64	25 @ 42° 5K
30+24 Rt.	15'	12'	27	20 @ 90° 5K
30+66 Rt.	5'	12'	27	7 *
31+03 Rt.	15'	12'	27	20 *
31+69 Lt.	5'	45'	64	25 @ 46° 5K
31+55 Rt.	5'	12'	27	7 @ 90° 5K



Station	Profile Grade	Left				Right			
		Width from C	Elevation	Width from C	Elevation	Width from C	Elevation	Width from C	Elevation
25+00	934.97	14.5	934.76	28.5	934.55	14.5	934.54	28.5	934.53
+25	934.34	14.5	934.12	28.5	933.90	14.5	933.90	28.5	933.90
+50	933.71	14.5	933.49	28.5	933.30	14.5	933.49	28.5	933.30
+75	933.13	14.5	932.98	28.5	932.83	14.5	932.90	28.5	932.73
26+00	932.61	14.5	932.60	28.5	932.50	14.5	932.50	28.5	932.32
+25	932.18	14.5	932.16	28.5	932.17	14.5	932.04	28.5	931.93
+50	931.82	-	-	28.5	931.88	-	-	28.5	931.60
+75	931.50	-	-	28.5	931.67	-	-	28.5	931.30
27+00	931.20	-	-	28.5	931.43	-	-	28.5	930.98
+25	930.97	-	-	28.5	931.23	-	-	28.5	930.66
+50	930.74	-	-	28.5	931.10	-	-	28.5	930.36
+75	930.52	-	-	28.5	930.99	-	-	28.5	930.10
28+00	930.29	-	-	28.48	930.79	-	-	28.40	929.78
+25	930.10	-	-	28.45	930.65	-	-	28.25	929.50
+50	929.92	-	-	28.42	930.50	-	-	28.10	929.20
+75	929.77	-	-	28.39	930.48	-	-	27.95	929.03
29+00	929.70	-	-	28.36	930.50	-	-	27.80	928.88
+25	929.72	-	-	28.33	930.48	-	-	27.65	928.84
+50	929.94	-	-	28.30	930.72	-	-	27.50	929.17
+75	930.40	-	-	28.27	931.10	-	-	27.35	929.80
30+00	930.98	-	-	28.24	931.61	-	-	27.20	930.37
+25	931.64	-	-	28.21	932.18	-	-	27.05	931.10
+50	932.38	-	-	28.18	932.71	-	-	26.90	931.95
+75	933.33	-	-	28.15	933.62	-	-	26.75	932.90
31+00	934.29	-	-	28.12	934.47	-	-	26.60	934.08
+25	934.88	-	-	28.09	934.98	-	-	26.45	934.65
+50	934.79	-	-	28.06	934.80	-	-	26.30	934.60
+75	934.68	-	-	28.03	934.51	-	-	26.15	934.40
32+00	934.50	-	-	28.00	934.30	-	-	26.00	934.29

End Area Volume	Cut	Fill	Out	Fill
4	95			
31	144			
30	60			
93	5			
AH 120 3				
BK 100 3				
101	2			
72	2			
160	4			
113	2			
50	0			
70	0			
111	0			
88	0			
0	0			



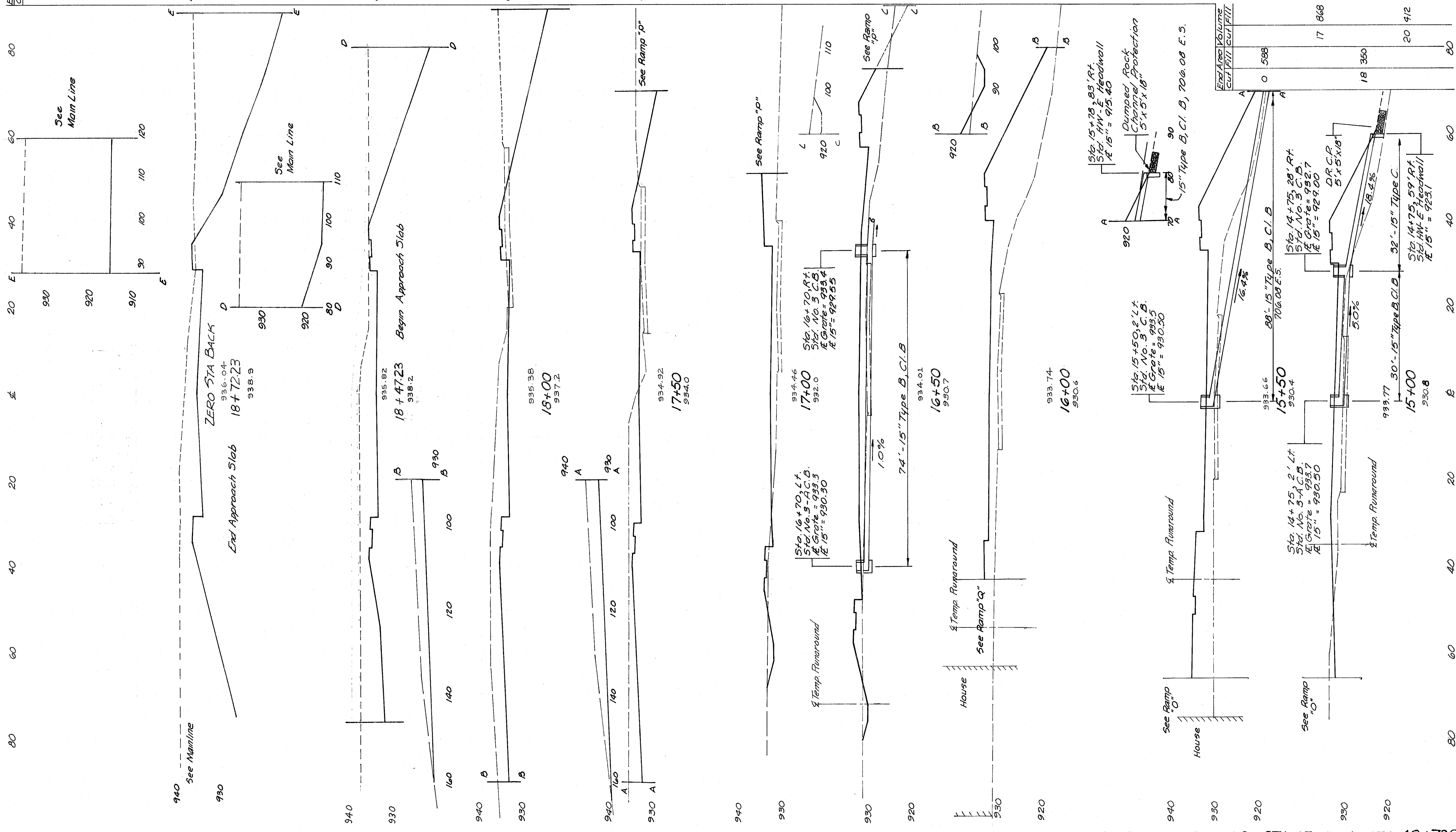
End Area Volume	Cut	Fill	Out	Fill

NORTH BEND ROAD STA. 9+00 to STA. 14+50

HAM. -74-11.37

Sta.	End Area	Volume
	Cut	Fill
1800	6	1361
1140	0	1595
693	10	1094
435	80	421
20	150	57
42	310	57
20	575	19

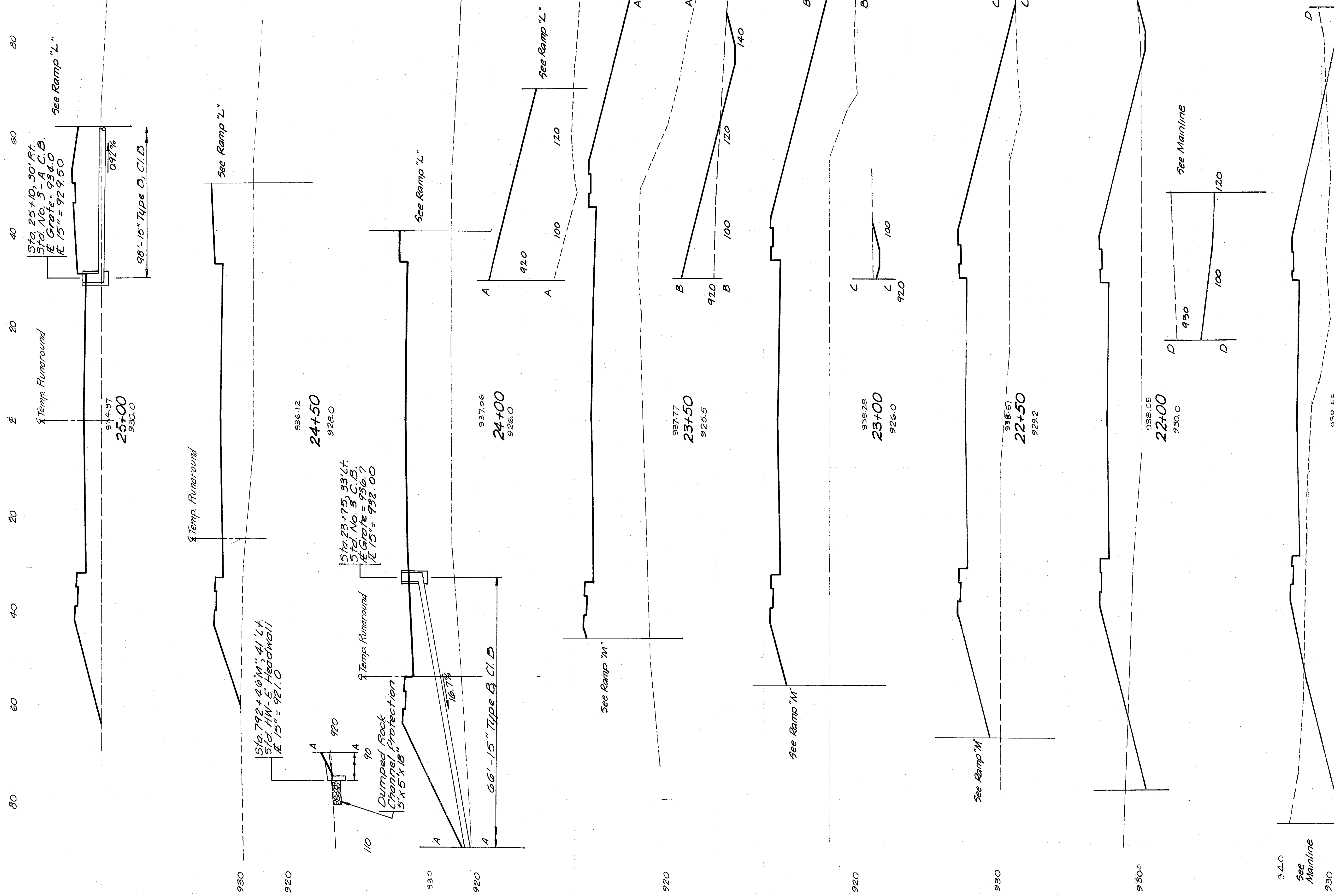
HAM - 52 - 11.37



Sta.	End Area	Volume
	Cut	Fill
0	588	17
18	360	20
80	412	80

NORTH BEND ROAD STA. 15+00 to STA. 18+72.23

End Area	Volume
Cut	Fill
0	470
0	1000
0	610
0	1734
0	3211
0	2805
40	1730
12	1150
60	800
470	450
491	375

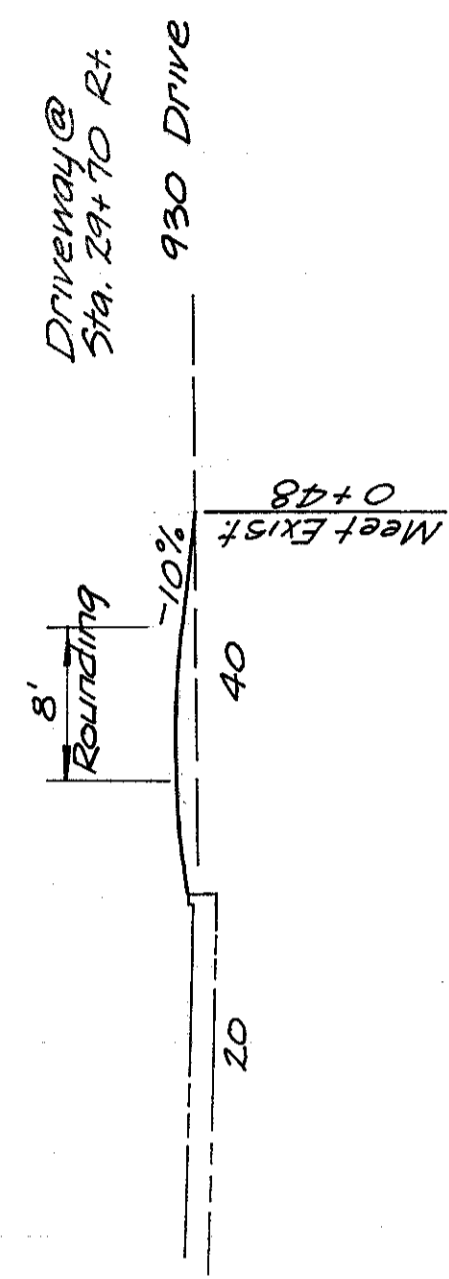


End Area	Volume
Cut	Fill
590	360
80	80

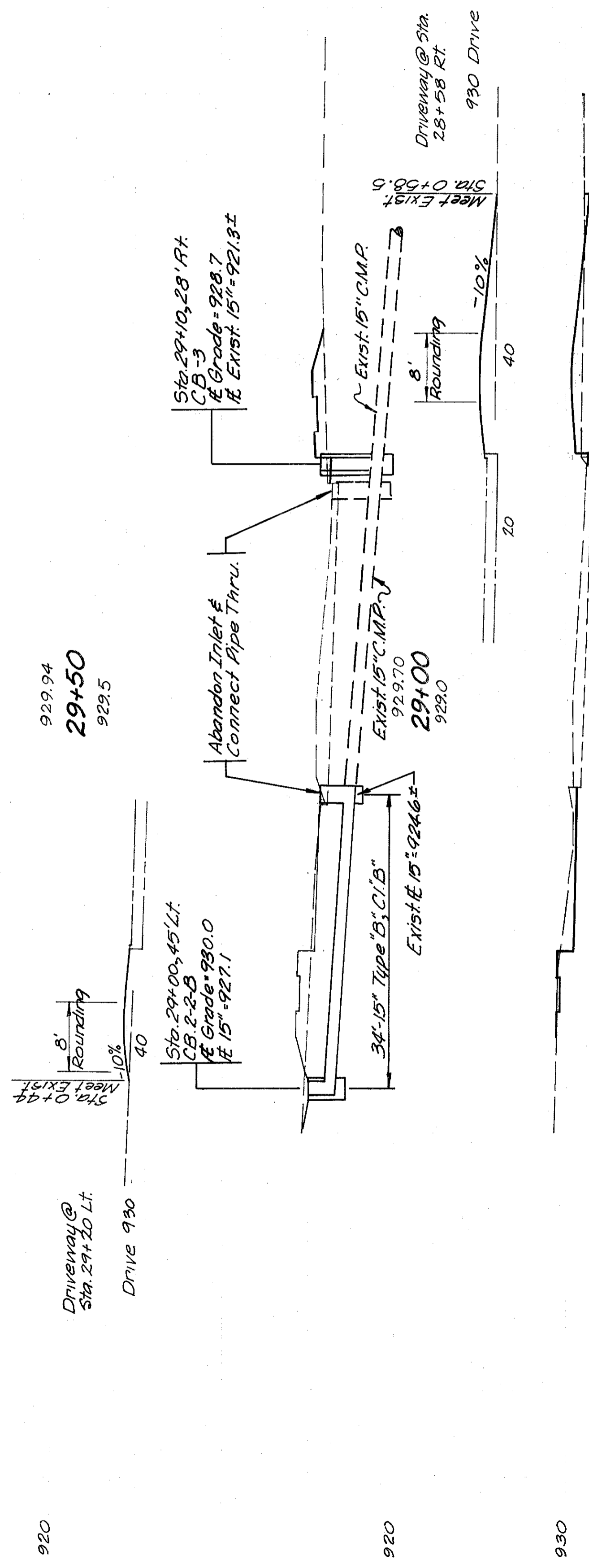
HAM. 74-1137

NORTH BEND ROAD STA. 21+00 to STA. 25+00

End Area Volume
Cut Fill Cut Fill



930



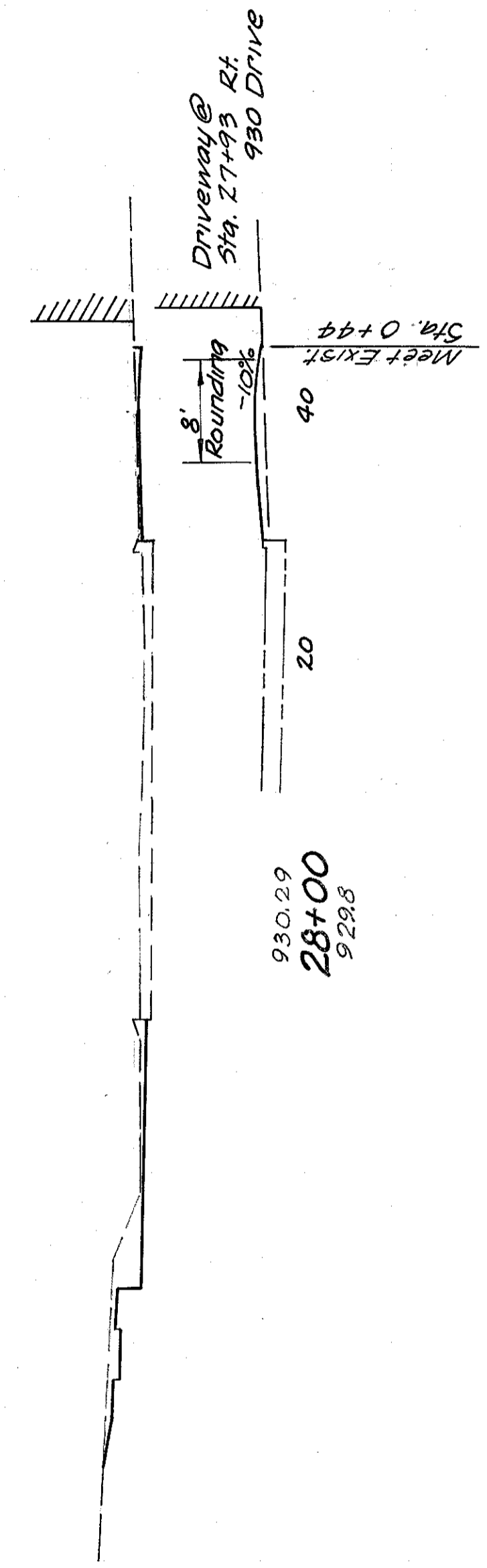
920

920

930

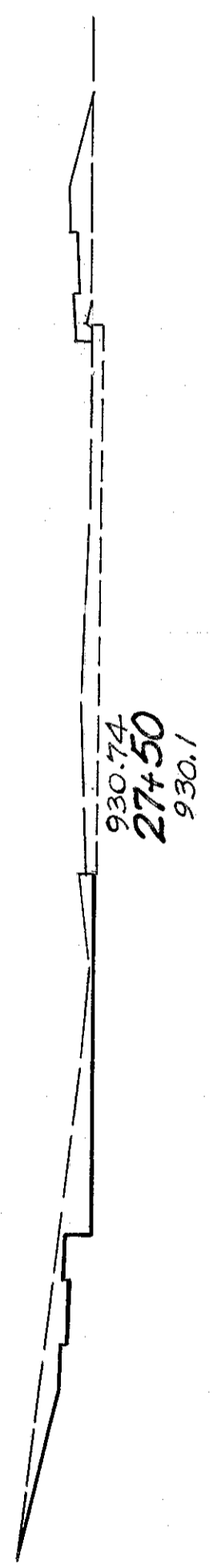
929.92
28+50
929.5

920

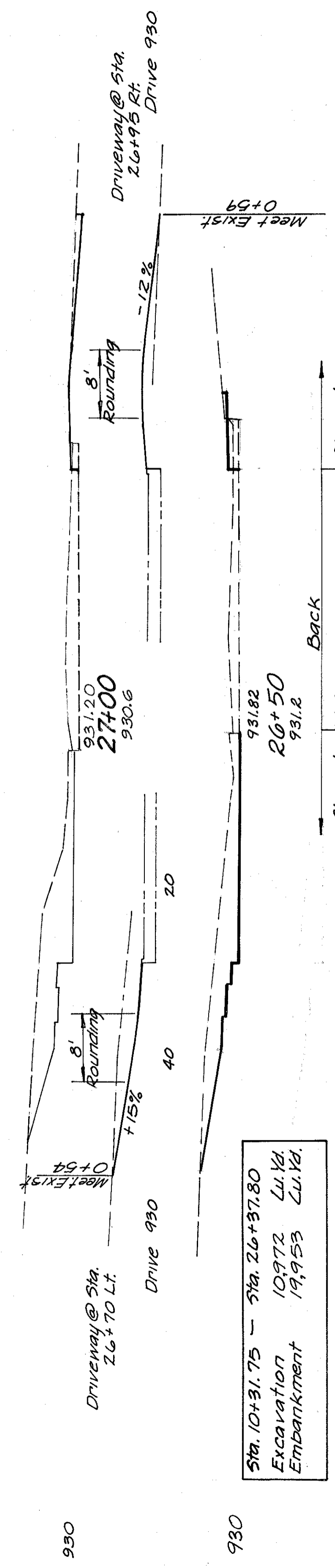


930

920

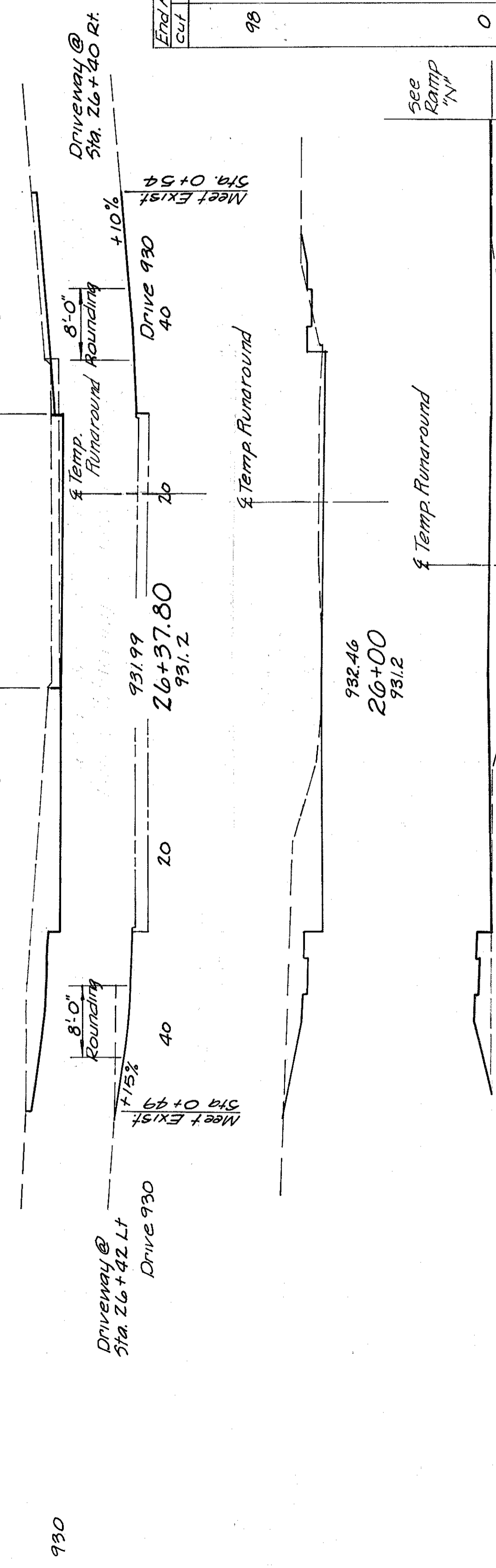


930



930

930



930

930

16	16	19	47
5	35	17	51
13	20	43	19
33	0	63	14
35	15	132	17
108	3	179	10
85	8	47	3
121	4	182	6

HAM.-74-11.37

98	4	91	112
0	117	0	543
80	80	80	80

192

End Area Volume
Cut Fill Cut Fill

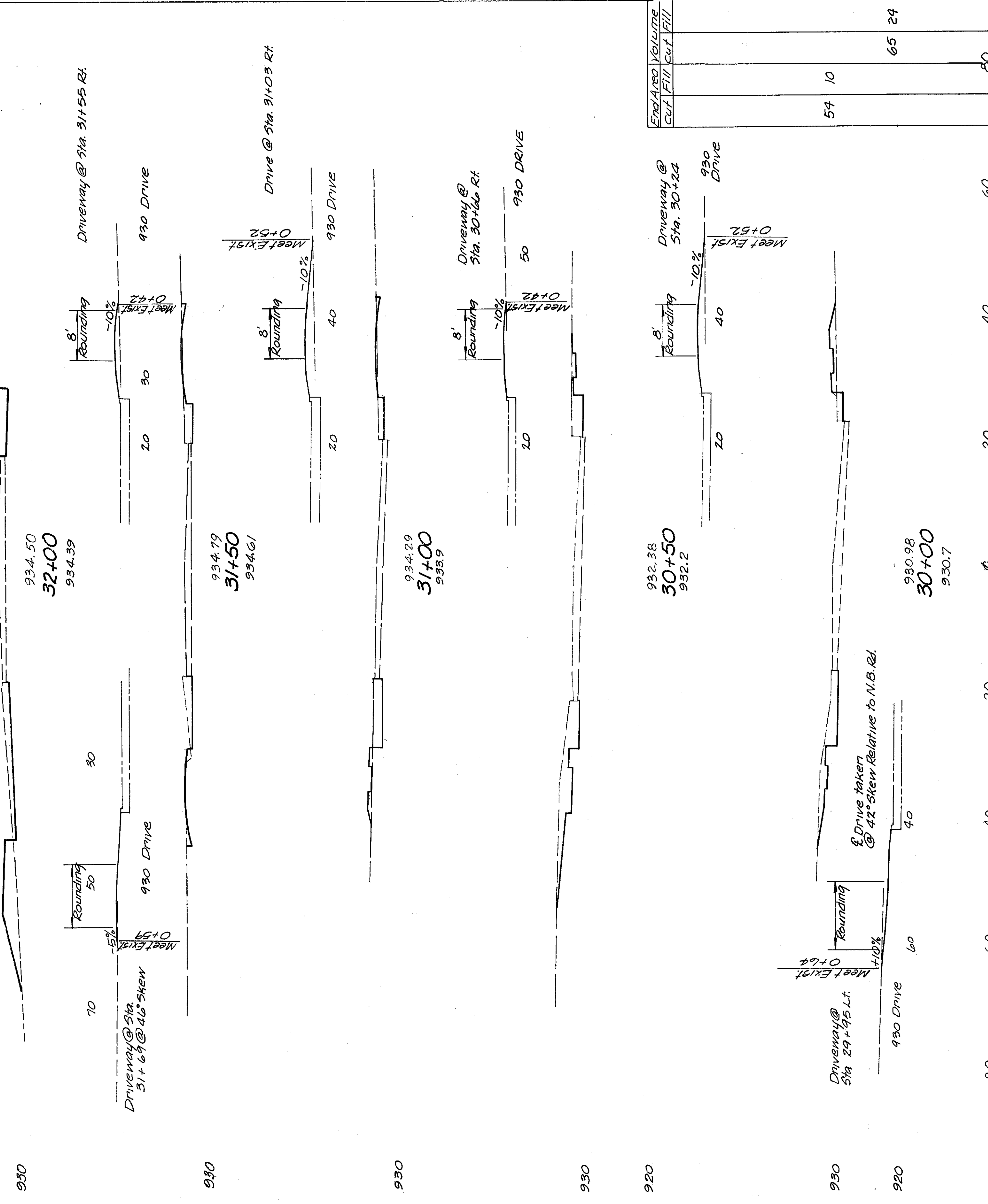
0	0	32	25
45	35	66	35
26	3	46	66
24	4	82	4
65	0	110	9

HAM-74-11.37

Sta. 26+97.80- Sta. 32+38 *
Excavation 901 L.L.Yd.
Embankment 324 L.L.Yd.

* Indicates 100% County Participation

END WORK
STA. 32+38
ZERO STA.

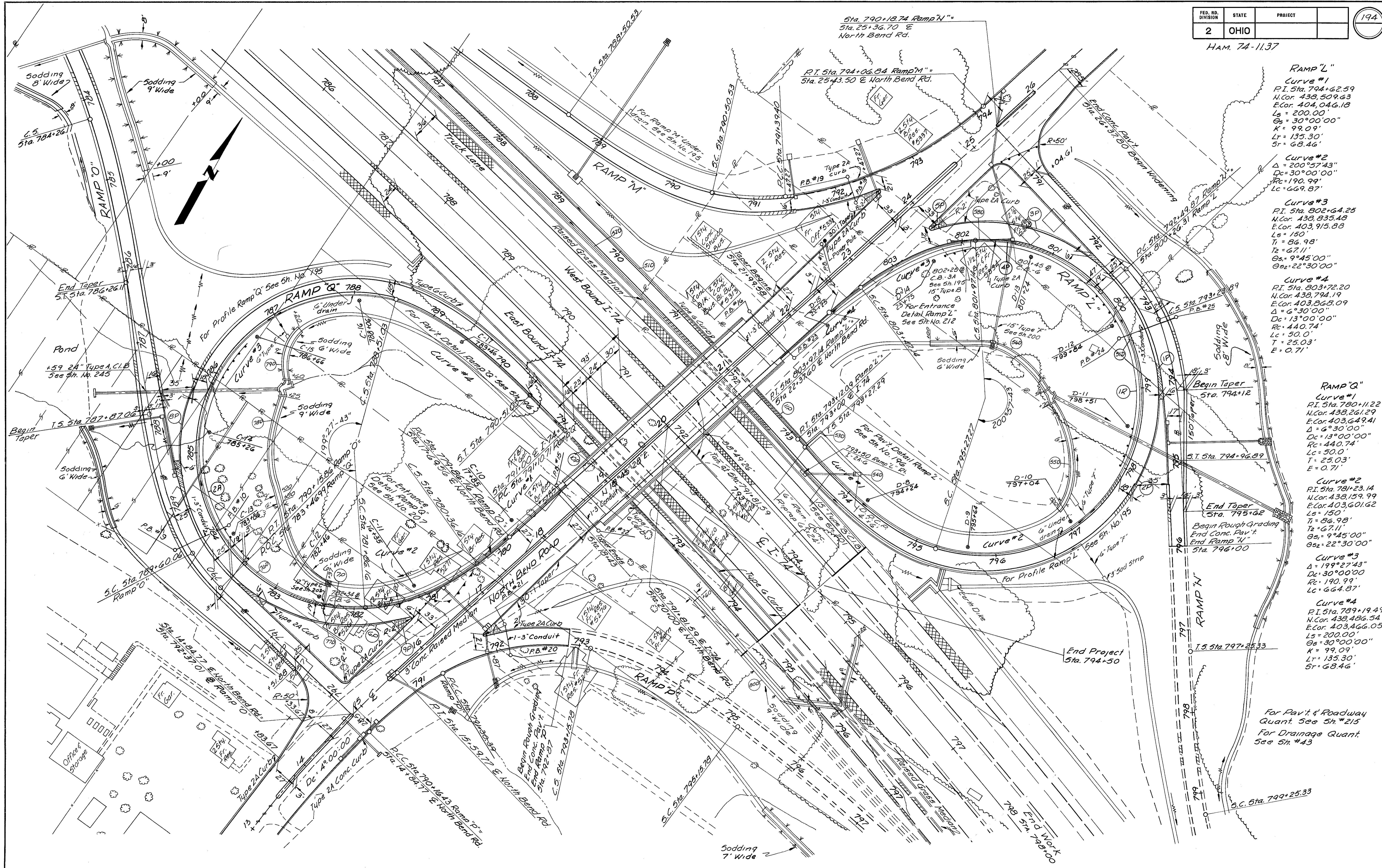


End Area Volume
Cut Fill Cut Fill

54	10	65	24
		80	

NORTH BEND ROAD STA. 30+00 to STA. 32+00

HAM. 74-11.37



RAMP "L"
Curve #1
 P.I. Sta. 794+62.59
 N.Cor. 438,509.63
 E.Cor. 404,046.18
 Ls = 200.00'
 Δ = 30°00'00"
 K = 99.09'
 Lt = 135.30'
 St = 68.46'

Curve #2
 Δ = 200°57'43"
 Dc = 30°00'00"
 Rc = 190.99'
 Lc = 669.87'

Curve #3
 P.I. Sta. 802+64.25
 N.Cor. 438,835.48
 E.Cor. 403,915.88
 Ls = 150'
 Tl = 86.98'
 T2 = 67.11'
 Δ = 9°45'00"
 Δs2 = 22°30'00"

Curve #4
 P.I. Sta. 803+72.20
 N.Cor. 438,794.19
 E.Cor. 403,868.09
 Δ = 6°30'00"
 Dc = 13°00'00"
 Rc = 440.74'
 Lc = 50.0'
 T = 25.03'
 E = 0.71'

RAMP "Q"
Curve #1
 P.I. Sta. 780+11.22
 N.Cor. 438,261.29
 E.Cor. 403,649.41
 Δ = 6°30'00"
 Dc = 13°00'00"
 Rc = 440.74'
 Lc = 50.0'
 T = 25.03'
 E = 0.71'

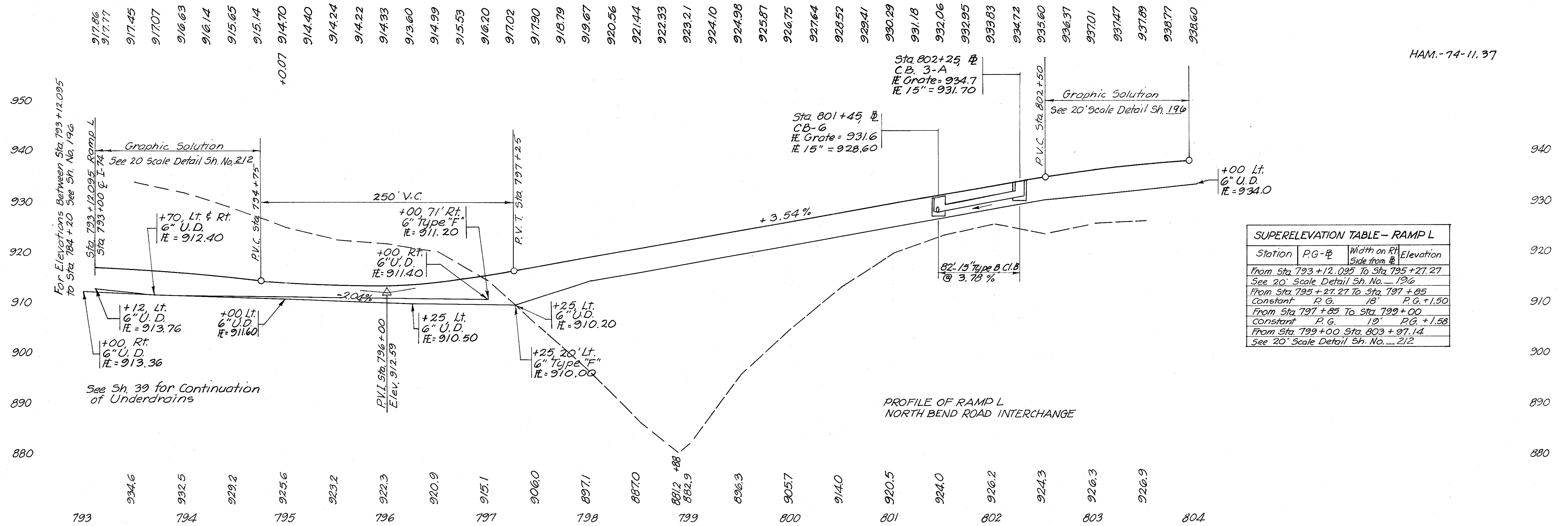
Curve #2
 P.I. Sta. 791+23.14
 N.Cor. 438,159.99
 E.Cor. 403,601.62
 Ls = 150'
 Tl = 86.98'
 T2 = 67.11'
 Δ = 9°45'00"
 Δs2 = 22°30'00"

Curve #3
 Δ = 199°27'43"
 Dc = 30°00'00"
 Rc = 190.99'
 Lc = 664.87'

Curve #4
 P.I. Sta. 789+19.49
 N.Cor. 438,486.54
 E.Cor. 403,466.05
 Ls = 200.00'
 Δ = 30°00'00"
 K = 99.09'
 Lt = 135.30'
 St = 68.46'

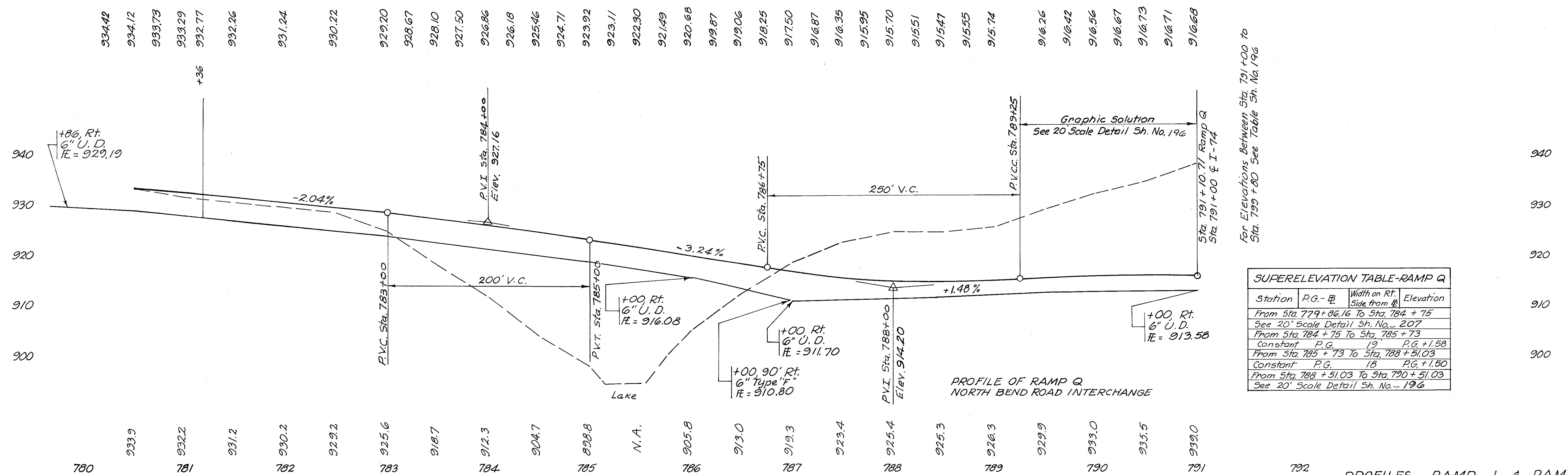
For Pav't. & Roadway Quant. See Sh. #215
 For Drainage Quant. See Sh. #43

PLAN-NORTH BEND RD. INT.-RAMP "L" & RAMP "Q"



SUPERELEVATION TABLE - RAMP L

Station	P.G. - E	Width on Rt. Side from E	Elevation
From Sta. 793+12.095 To Sta. 795+27.27 See 20' Scale Detail Sh. No. 196			
From Sta. 795+27.27 To Sta. 797+85 Constant P.G. 18' P.G. +1.50			
From Sta. 797+85 To Sta. 799+00 Constant P.G. 19' P.G. +1.58			
From Sta. 799+00 To Sta. 803+97.14 See 20' Scale Detail Sh. No. 212			

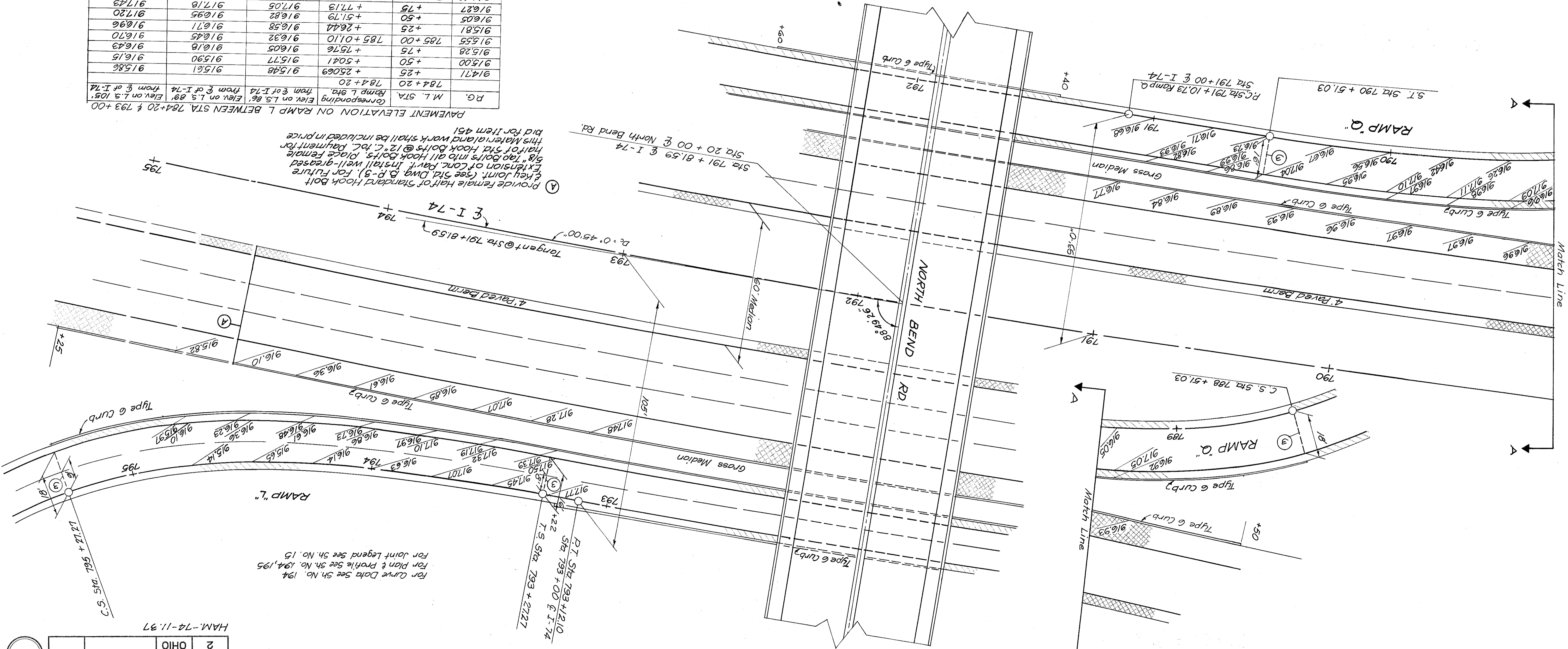


For Elevations Between Sta. 791+00 to Sta. 799+80 See Table 5h. No. 196

SUPERELEVATION TABLE - RAMP Q

Station	P.G. - E	Width on Rt. Side from E	Elevation
From Sta. 779+86.16 To Sta. 784+75 See 20' Scale Detail Sh. No. 207			
From Sta. 784+75 To Sta. 785+73 Constant P.G. 19' P.G. +1.58			
From Sta. 785+73 To Sta. 788+51.03 Constant P.G. 18' P.G. +1.50			
From Sta. 788+51.03 To Sta. 790+51.03 See 20' Scale Detail Sh. No. 196			

For Curve Data See Sh. No. 194
 For Plan & Profile See Sh. No. 195
 For Joint Legend See Sh. No. 15



PAVEMENT ELEVATION ON RAMP L BETWEEN STA 784+20 & 793+00

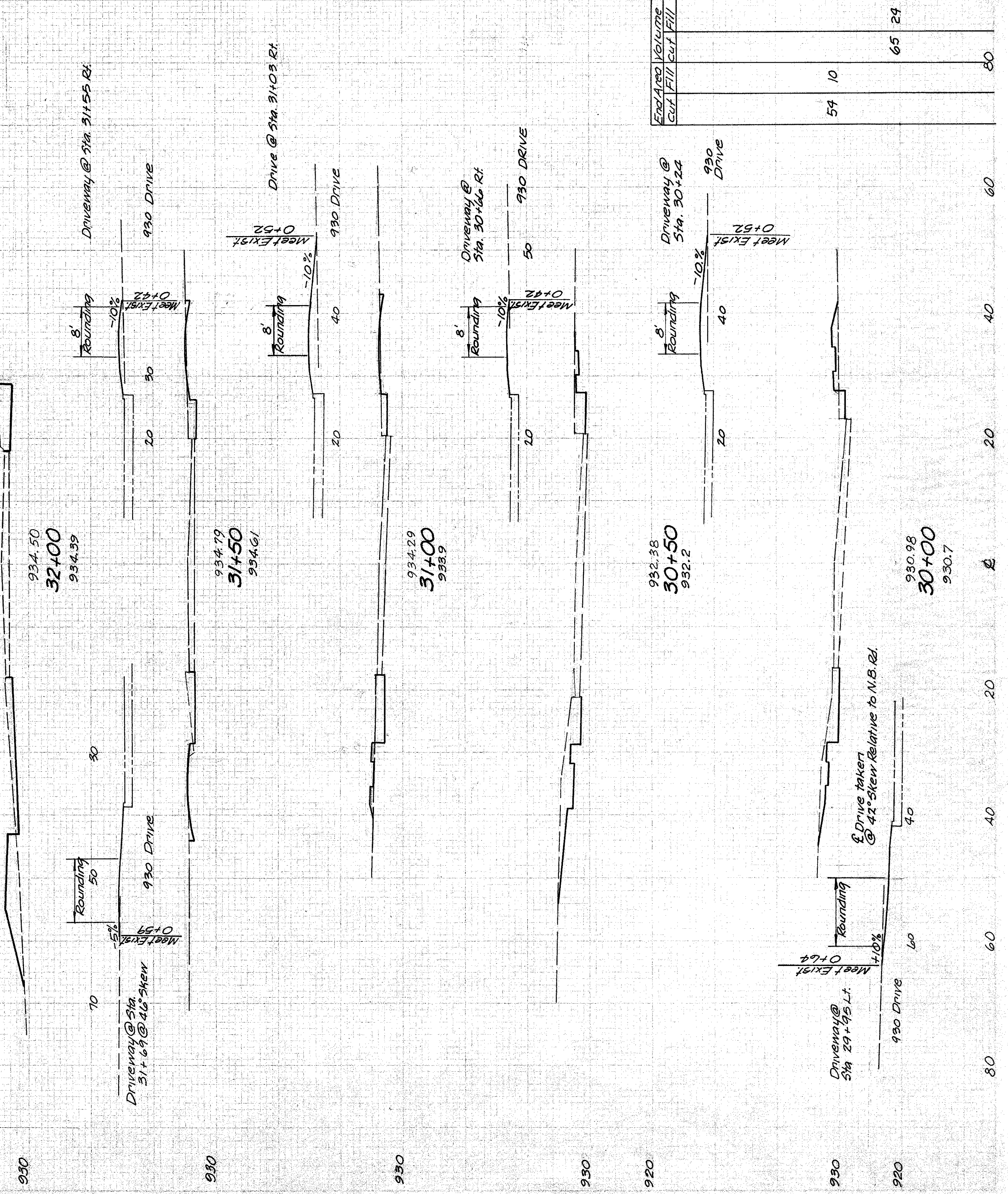
915.61	915.86	915.90	915.77	915.41	+50.41	915.77	915.86	915.90	915.77	915.41	+25.069	915.48	915.61
915.00	915.00	915.00	915.00	915.00	+50.00	915.00	915.00	915.00	915.00	915.00	+25.000	915.00	915.00
915.28	915.28	915.28	915.28	915.28	+75.76	915.28	915.28	915.28	915.28	915.28	+25.069	915.28	915.28
915.81	915.81	915.81	915.81	915.81	+26.41	915.81	915.81	915.81	915.81	915.81	+25.069	915.81	915.81
916.05	916.05	916.05	916.05	916.05	+51.79	916.05	916.05	916.05	916.05	916.05	+25.069	916.05	916.05
916.27	916.27	916.27	916.27	916.27	+26.41	916.27	916.27	916.27	916.27	916.27	+25.069	916.27	916.27
916.48	916.48	916.48	916.48	916.48	+75.76	916.48	916.48	916.48	916.48	916.48	+25.069	916.48	916.48
916.70	916.70	916.70	916.70	916.70	+50.41	916.70	916.70	916.70	916.70	916.70	+25.069	916.70	916.70
916.96	916.96	916.96	916.96	916.96	+50.41	916.96	916.96	916.96	916.96	916.96	+25.069	916.96	916.96
917.20	917.20	917.20	917.20	917.20	+51.79	917.20	917.20	917.20	917.20	917.20	+25.069	917.20	917.20
917.43	917.43	917.43	917.43	917.43	+26.41	917.43	917.43	917.43	917.43	917.43	+25.069	917.43	917.43
917.63	917.63	917.63	917.63	917.63	+75.76	917.63	917.63	917.63	917.63	917.63	+25.069	917.63	917.63
917.83	917.83	917.83	917.83	917.83	+50.41	917.83	917.83	917.83	917.83	917.83	+25.069	917.83	917.83
918.01	918.01	918.01	918.01	918.01	+50.41	918.01	918.01	918.01	918.01	918.01	+25.069	918.01	918.01
918.18	918.18	918.18	918.18	918.18	+51.79	918.18	918.18	918.18	918.18	918.18	+25.069	918.18	918.18
918.34	918.34	918.34	918.34	918.34	+26.41	918.34	918.34	918.34	918.34	918.34	+25.069	918.34	918.34
918.48	918.48	918.48	918.48	918.48	+75.76	918.48	918.48	918.48	918.48	918.48	+25.069	918.48	918.48
918.61	918.61	918.61	918.61	918.61	+50.41	918.61	918.61	918.61	918.61	918.61	+25.069	918.61	918.61
918.73	918.73	918.73	918.73	918.73	+50.41	918.73	918.73	918.73	918.73	918.73	+25.069	918.73	918.73
918.85	918.85	918.85	918.85	918.85	+51.79	918.85	918.85	918.85	918.85	918.85	+25.069	918.85	918.85
918.96	918.96	918.96	918.96	918.96	+26.41	918.96	918.96	918.96	918.96	918.96	+25.069	918.96	918.96
919.03	919.03	919.03	919.03	919.03	+75.76	919.03	919.03	919.03	919.03	919.03	+25.069	919.03	919.03
919.08	919.08	919.08	919.08	919.08	+50.41	919.08	919.08	919.08	919.08	919.08	+25.069	919.08	919.08
919.11	919.11	919.11	919.11	919.11	+50.41	919.11	919.11	919.11	919.11	919.11	+25.069	919.11	919.11
919.12	919.12	919.12	919.12	919.12	+51.79	919.12	919.12	919.12	919.12	919.12	+25.069	919.12	919.12
919.04	919.04	919.04	919.04	919.04	+26.41	919.04	919.04	919.04	919.04	919.04	+25.069	919.04	919.04
918.99	918.99	918.99	918.99	918.99	+75.76	918.99	918.99	918.99	918.99	918.99	+25.069	918.99	918.99
918.74	918.74	918.74	918.74	918.74	+50.41	918.74	918.74	918.74	918.74	918.74	+25.069	918.74	918.74
918.58	918.58	918.58	918.58	918.58	+50.41	918.58	918.58	918.58	918.58	918.58	+25.069	918.58	918.58
918.36	918.36	918.36	918.36	918.36	+51.79	918.36	918.36	918.36	918.36	918.36	+25.069	918.36	918.36
918.50	918.50	918.50	918.50	918.50	+26.41	918.50	918.50	918.50	918.50	918.50	+25.069	918.50	918.50
918.36	918.36	918.36	918.36	918.36	+75.76	918.36	918.36	918.36	918.36	918.36	+25.069	918.36	918.36
918.21	918.21	918.21	918.21	918.21	+50.41	918.21	918.21	918.21	918.21	918.21	+25.069	918.21	918.21
917.96	917.96	917.96	917.96	917.96	+50.41	917.96	917.96	917.96	917.96	917.96	+25.069	917.96	917.96
917.83	917.83	917.83	917.83	917.83	+51.79	917.83	917.83	917.83	917.83	917.83	+25.069	917.83	917.83
917.61	917.61	917.61	917.61	917.61	+26.41	917.61	917.61	917.61	917.61	917.61	+25.069	917.61	917.61
917.44	917.44	917.44	917.44	917.44	+75.76	917.44	917.44	917.44	917.44	917.44	+25.069	917.44	917.44
917.25	917.25	917.25	917.25	917.25	+50.41	917.25	917.25	917.25	917.25	917.25	+25.069	917.25	917.25
917.06	917.06	917.06	917.06	917.06	+50.41	917.06	917.06	917.06	917.06	917.06	+25.069	917.06	917.06
916.89	916.89	916.89	916.89	916.89	+51.79	916.89	916.89	916.89	916.89	916.89	+25.069	916.89	916.89
916.71	916.71	916.71	916.71	916.71	+26.41	916.71	916.71	916.71	916.71	916.71	+25.069	916.71	916.71
916.54	916.54	916.54	916.54	916.54	+75.76	916.54	916.54	916.54	916.54	916.54	+25.069	916.54	916.54
916.36	916.36	916.36	916.36	916.36	+50.41	916.36	916.36	916.36	916.36	916.36	+25.069	916.36	916.36
916.18	916.18	916.18	916.18	916.18	+50.41	916.18	916.18	916.18	916.18	916.18	+25.069	916.18	916.18
916.04	916.04	916.04	916.04	916.04	+51.79	916.04	916.04	916.04	916.04	916.04	+25.069	916.04	916.04
915.92	915.92	915.92	915.92	915.92	+26.41	915.92	915.92	915.92	915.92	915.92	+25.069	915.92	915.92
915.83	915.83	915.83	915.83	915.83	+75.76	915.83	915.83	915.83	915.83	915.83	+25.069	915.83	915.83
915.74	915.74	915.74	915.74	915.74	+50.41	915.74	915.74	915.74	915.74	915.74	+25.069	915.74	915.74
915.58	915.58	915.58	915.58	915.58	+50.41	915.58	915.58	915.58	915.58	915.58	+25.069	915.58	915.58
915.49	915.49	915.49	915.49	915.49	+51.79	915.49	915.49	915.49	915.49	915.49	+25.069	915.49	915.49
915.36	915.36	915.36	915.36	915.36	+26.41	915.36	915.36	915.36	915.36	915.36	+25.069	915.36	915.36
915.25	915.25	915.25	915.25	915.25	+75.76	915.25	915.25	915.25	915.25	915.25	+25.069	915.25	915.25
915.11	915.11	915.11	915.11	915.11	+50.41	915.11	915.11	915.11	915.11	915.11	+25.069	915.11	915.11
914.97	914.97	914.97	914.97	914.97	+50.41	914.97	914.97	914.97	914.97	914.97	+25.069	914.97	914.97
914.84	914.84	914.84	914.84	914.84	+51.79	914.84	914.84	914.84	914.84	914.84	+25.069	914.84	914.84
914.74	914.74	914.74	914.74	914.74	+26.41	914.74	914.74	914.74	914.74	914.74	+25.069	914.74	914.74
914.57	914.57	914.57	914.57	914.57	+75.76	914.57	914.57	914.57	914.57	914.57	+25.069	914.57	914.57
914.44	914.44	914.44	914.44	914.44	+50.41	914.44	914.44	914.44	914.44	914.44	+25.069	914.44	914.44
914.32	914.32	914.32	914.32	914.32	+50.41	914.32	914.32	914.32	914.32	914.32	+25.069	914.32	914.32
914.21	914.21	914.21	914.21	914.21	+51.79	914.21	914.21	914.21	914.21	914.21	+25.069	914.21	914.21
914.18	914.18	914.18	914.18	914.18	+26.41	914.18	914.18	914.18	914.18	914.18	+25.069	914.18	914.18
914.05	914.05	914.05	914.05	914.05	+75.76	914.05	914.05	914.05	914.05	914.05	+25.069	914.05	914.05
913.93	913.93	913.93	913.93	913.93	+50.41	913.93	913.93	913.93	913.93	913.93	+25.069	913.93	913.93
913.88	913.88	913.88	913.88	913.88	+50.41	913.88	913.88	913.88	913.88	913.88	+25.069	913.88	913.88
913.75	913.75	913.75	913.75	913.75	+51.79	913.75	913.75	913.75	913.75	913.75	+25.069	913.75	913.75
913.63	913.63	913.63	913.63	913.63	+26.41	913.63	913.63	913.63	913.63	913.63	+25.069	913.63	913.63
913.52	913.52	913.52	913.52	913.52	+75.76	913.52	913.52	913.52	913.52	913.52	+25.069	913.52	913.52
913.44	913.44	913.44	913.44	913.44	+50.41	913.44	913.44	913.44	913.44	913.44	+25.069	913.44	913.44
913.32	913.32	913.32	913.32	913.32	+50.41	913.32	913.32	913.32	913.32	913.32	+25.069	913.32	913.32
913.25	913.25	913.25	913.25	913.25	+51.79	913.25	913.25	913.25	913.25	913.25	+25.069	913.25	913.25
913.22	913.22	913.22	913.22	913.22	+26.41	913.22	913.22	913.22	913.22	913.22	+25.069	913.22	913.22
913.21	913.21	913.21	913.21	913.21	+75.76	913.21	913.21	913.21	913.21	913.21	+25.069	913.21	913.21
913.00	913.00	913.00	913.00	913.00	+50.41	913.00	913.00	913.00	913.00	913.00	+25.069	913.00	913.00
912.92	912.92	912.92	912.92	912.92	+50.41	912.92	912.92	912.92	912.92	912.92	+25.069	912.92	912.92
912.57	912.57	912.57	912.57	912.57	+51.79	912.57	912.57	912.57	912.57	912.57	+25.069	912.57	912.57
912.44	912.44	912.44											

End Area	Volume
Cut	Fill
0	0
45	35
26	3
29	4
65	0
32	25
66	35
96	66
82	4
110	9

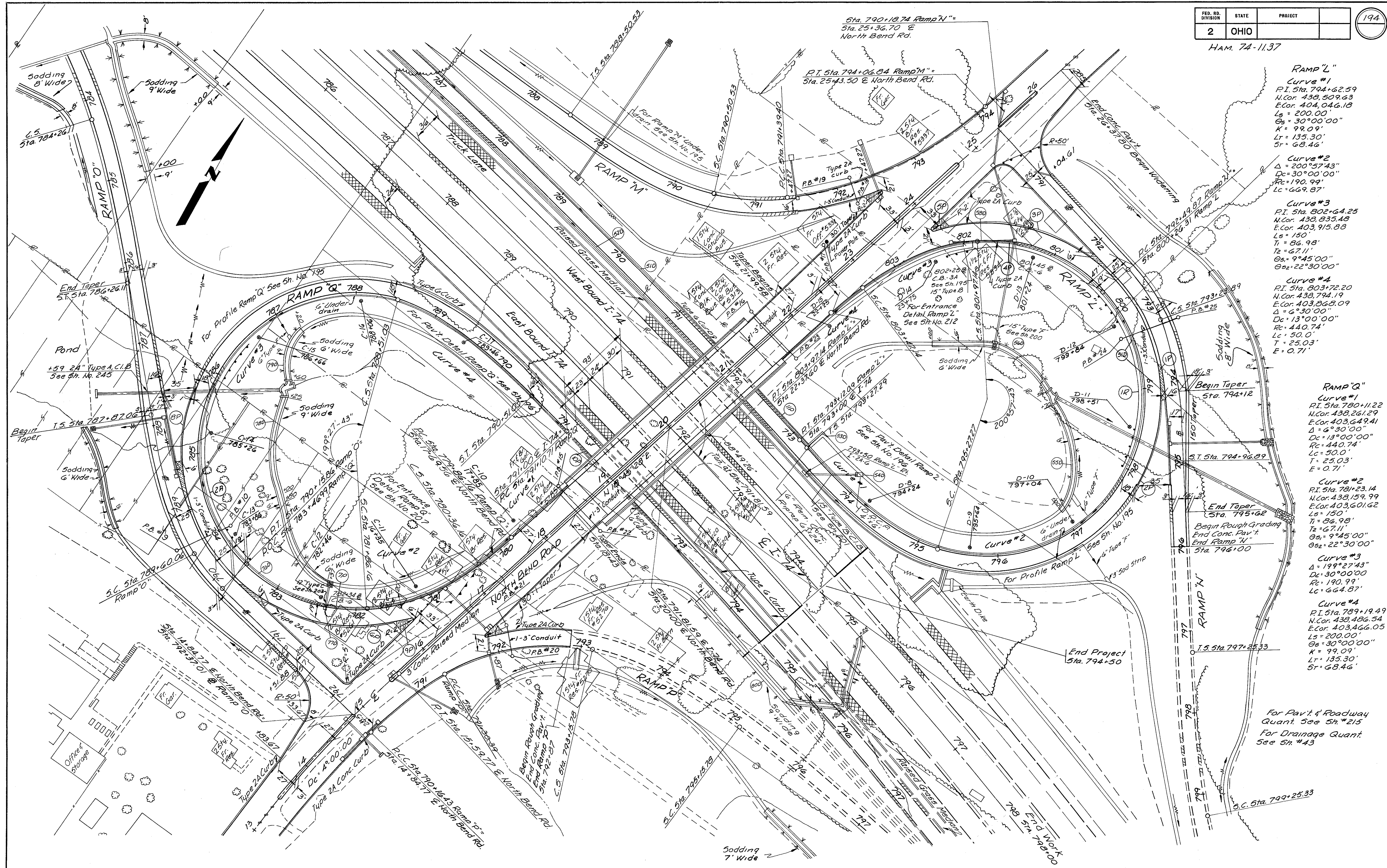
Sta. 26+37.80- Sta. 32+38 *
Excavation 901 L.V.L.
Embankment 324 L.V.L.

* Indicates 100% County Participation

END WORK
STA. 32+38
ZERO STA.



End Area	Volume
Cut	Fill
54	10
65	24
80	80



RAMP 'L'
 Curve #1
 $PI. Sta. 794+62.59$
 $N. Cor. 438, 509.63$
 $E. Cor. 404, 046.18$
 $L_s = 200.00'$
 $\Delta = 30^\circ 00' 00''$
 $K = 99.09'$
 $Lr = 135.30'$
 $St = 68.46'$

Curve #2
 $\Delta = 200^\circ 57' 43''$
 $D_c = 30^\circ 00' 00''$
 $R_c = 190.99'$
 $L_c = 664.87'$

Curve #3
 $PI. Sta. 802+64.25$
 $N. Cor. 438, 835.48$
 $E. Cor. 403, 915.88$
 $L_s = 150'$
 $T_1 = 86.98'$
 $T_2 = 67.11'$
 $\Delta = 9^\circ 45' 00''$
 $\Delta_{02} = 22^\circ 30' 00''$

Curve #4
 $PI. Sta. 803+72.20$
 $N. Cor. 438, 794.19$
 $E. Cor. 403, 868.09$
 $\Delta = 6^\circ 30' 00''$
 $D_c = 13^\circ 00' 00''$
 $R_c = 440.74'$
 $L_c = 50.0'$
 $T = 25.03'$
 $E = 0.71'$

RAMP 'Q'
 Curve #1
 $PI. Sta. 780+11.22$
 $N. Cor. 438, 261.29$
 $E. Cor. 403, 649.41$
 $\Delta = 6^\circ 30' 00''$
 $D_c = 13^\circ 00' 00''$
 $R_c = 440.74'$
 $L_c = 50.0'$
 $T = 25.03'$
 $E = 0.71'$

Curve #2
 $PI. Sta. 781+23.14$
 $N. Cor. 438, 159.99$
 $E. Cor. 403, 601.62$
 $L_s = 150'$
 $T_1 = 86.98'$
 $T_2 = 67.11'$
 $\Delta = 9^\circ 45' 00''$
 $\Delta_{02} = 22^\circ 30' 00''$

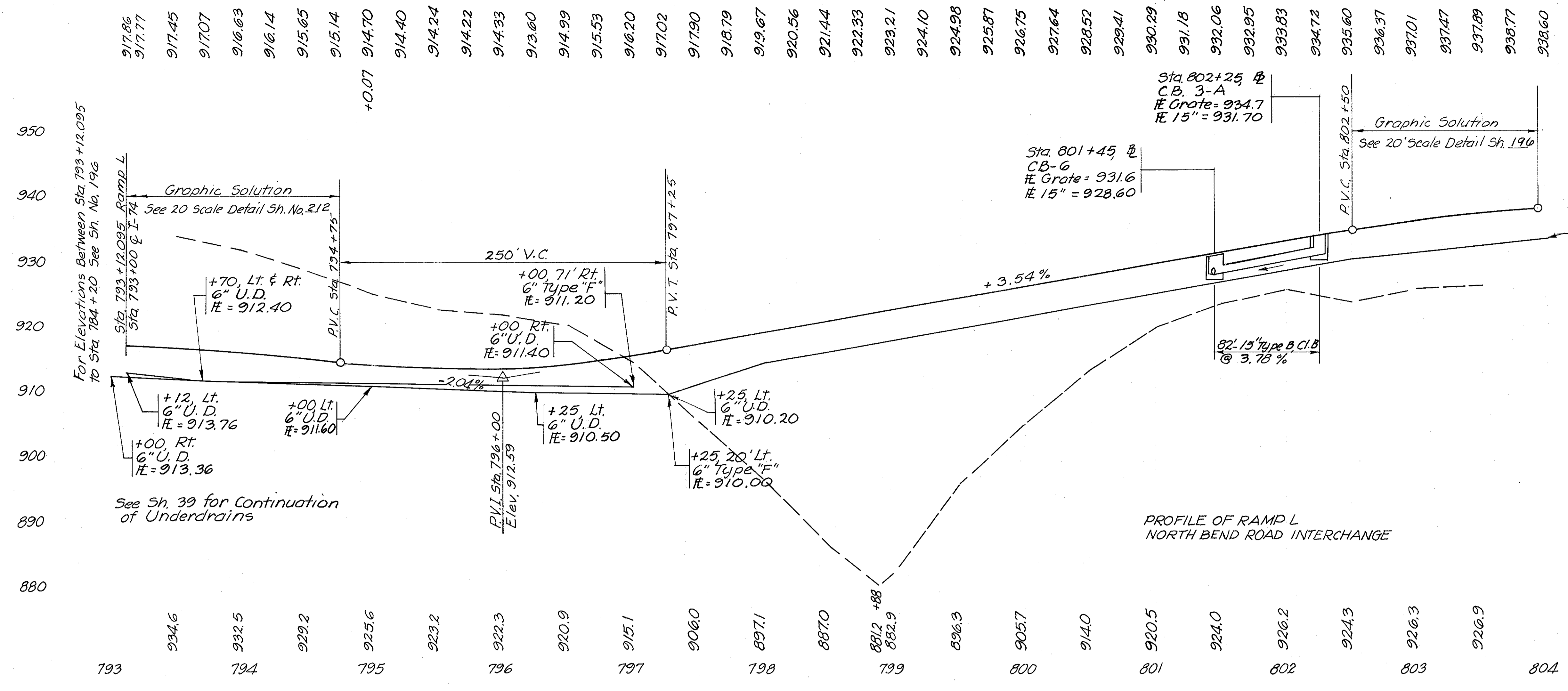
Curve #3
 $\Delta = 199^\circ 27' 43''$
 $D_c = 30^\circ 00' 00''$
 $R_c = 190.99'$
 $L_c = 664.87'$

Curve #4
 $PI. Sta. 789+19.49$
 $N. Cor. 438, 486.54$
 $E. Cor. 403, 466.05$
 $L_s = 200.00'$
 $\Delta = 30^\circ 00' 00''$
 $K = 99.09'$
 $Lr = 135.30'$
 $St = 68.46'$

For Pav't. Roadway Quant. See Sh. #215
 For Drainage Quant. See Sh. #43

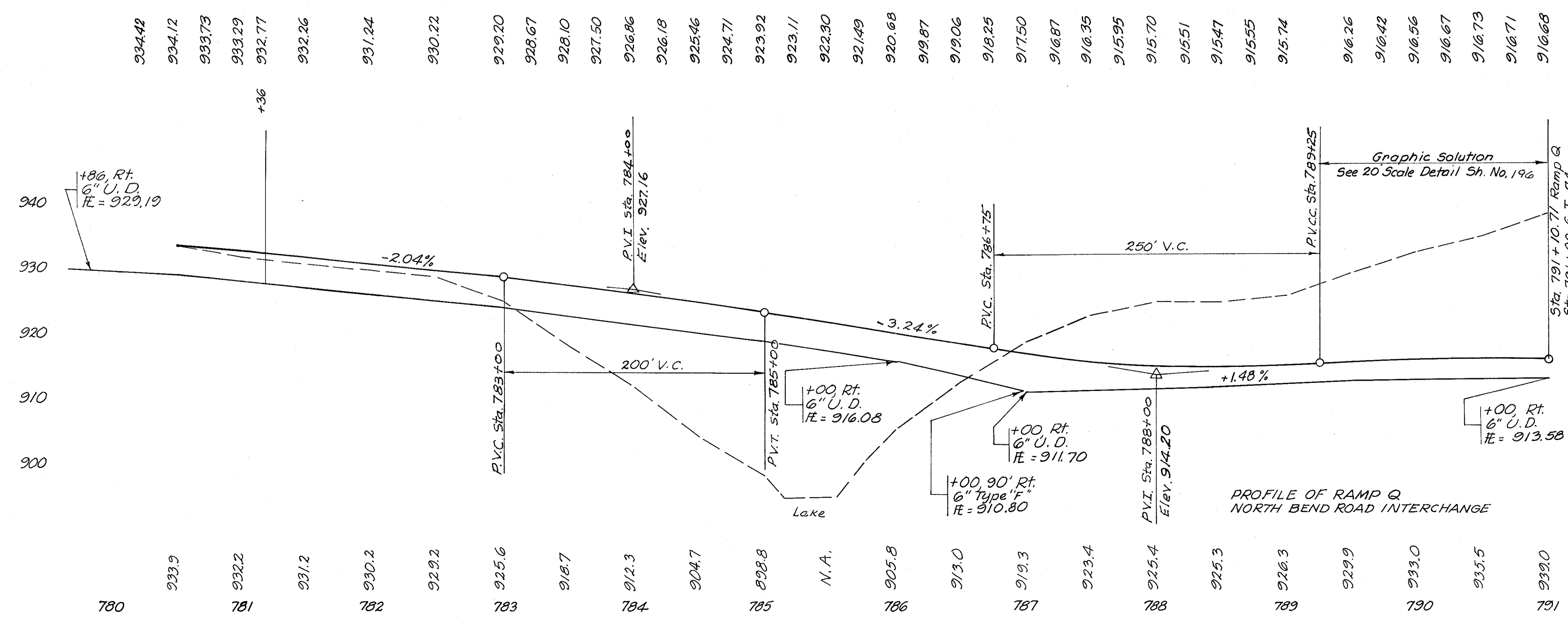
PLAN-NORTH BEND RD. INT.-RAMP 'L' & RAMP 'Q'

HAM.-74-11.37



SUPERELEVATION TABLE - RAMP L

Station	P.G. - #	Width on Rt. Side from #	Elevation
From Sta. 793+12.095 To Sta. 795+27.27 See 20' Scale Detail Sh. No. 196			
From Sta. 795+27.27 To Sta. 797+85 Constant P.G. 18' P.G. +1.50			
From Sta. 797+85 To Sta. 799+00 Constant P.G. 19' P.G. +1.58			
From Sta. 799+00 Sta. 803+27.14 See 20' Scale Detail Sh. No. 212			



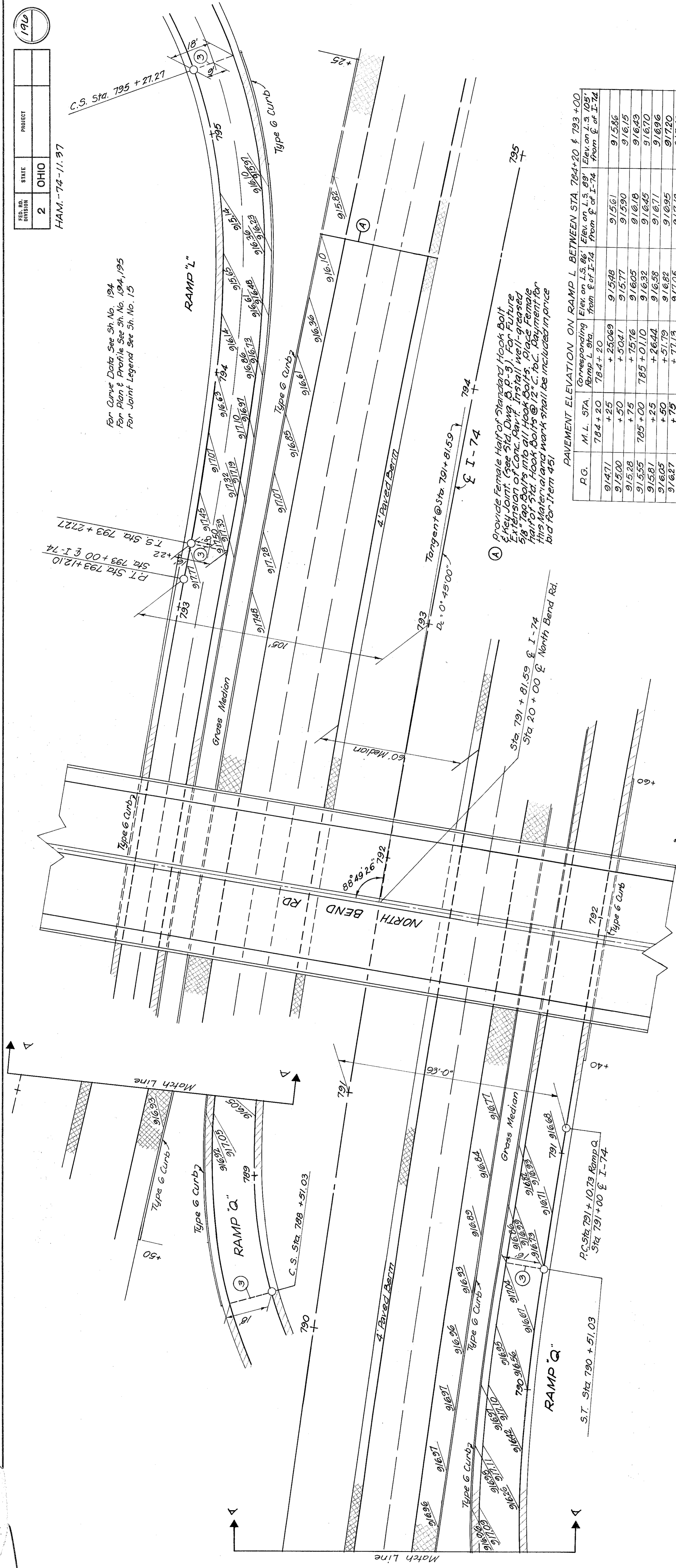
SUPERELEVATION TABLE - RAMP Q

Station	P.G. - #	Width on Rt. Side from #	Elevation
From Sta. 779+86.16 To Sta. 784+75 See 20' Scale Detail Sh. No. 207			
From Sta. 784+75 To Sta. 785+73 Constant P.G. 19' P.G. +1.58			
From Sta. 785+73 To Sta. 788+51.03 Constant P.G. 18' P.G. +1.50			
From Sta. 788+51.03 To Sta. 790+51.03 See 20' Scale Detail Sh. No. 196			

ED. DIV.	STATE	PROJECT
2	OHIO	

HAM - 74 - 1 - 37

For Curve Data See Sh. No. 124
 For Plan & Profile See Sh. No. 124, 125
 For Joint Legend See Sh. No. 13



PAVEMENT ELEVATION ON RAMP L BETWEEN STA. 784+20 & 793+00

R.G.	M.L. STA.	Corresponding Elev. on L.S. 86' from E of I-74	Elev. on L.S. 89' from E of I-74	Elev. on L.S. 105' from E of I-74
914.71	784+20	+25	915.48	915.61
915.00	+50	+50.41	915.77	915.90
915.28	+75	+75.76	916.05	916.18
915.55	785+00	+75.01	916.32	916.45
915.81	+25	+26.44	916.58	916.71
916.05	+50	+51.79	916.82	916.95
916.27	+75	+77.13	917.05	917.18
916.48	786+00	+76.47	917.25	917.38
916.68	+25	+27.82	917.45	917.58
916.86	+50	+53.16	917.63	917.76
917.03	+75	+78.51	917.80	917.93
917.19	787+00	+77.85	917.96	918.09
917.33	+25	+29.19	918.10	918.23
917.46	+50	+54.54	918.23	918.36
917.57	+75	+79.88	918.34	918.47
917.67	788+00	+79.22	918.44	918.57
917.76	+25	+30.57	918.53	918.66
917.83	+50	+55.91	918.60	918.73
917.88	+75	+81.25	918.65	918.73
917.93	789+00	+80.59	918.70	918.73
917.96	+25	+31.94	918.73	918.76
917.97	+50	+57.28	918.74	918.77
917.97	+75	+82.63	918.74	918.77
917.96	790+00	+81.97	918.73	918.76
917.93	+25	+33.32	918.70	918.66
917.89	+50	+58.66	918.66	918.62
917.84	+75	+84.00	918.61	918.57
917.77	791+00	+83.34	918.54	918.50
917.68	+25	+34.69	918.45	918.38
917.59	+50	+60.03	918.36	918.25
917.48	+75	+85.38	918.25	918.12
917.35	792+00	+84.72	918.12	917.98
917.21	+25	+36.06	917.98	917.83
917.06	+50	+61.40	917.83	917.66
916.89	+75	+86.75	917.66	917.49
916.71	793+00	+86.09	917.48	917.31

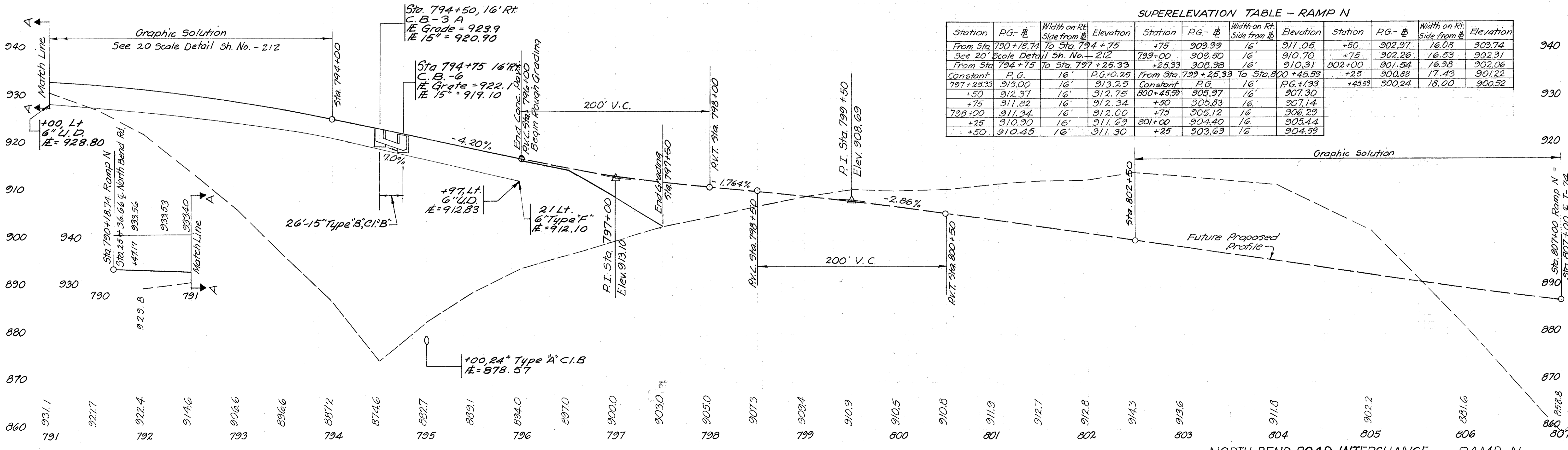
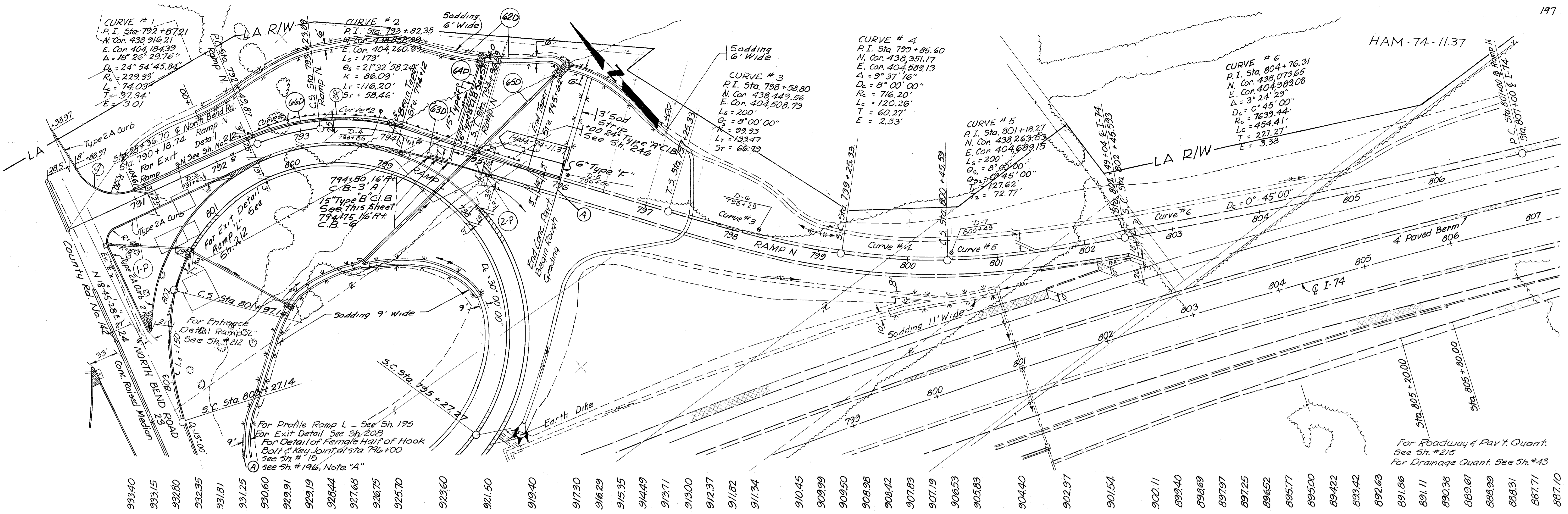
PAVEMENT ELEVATION ON RAMP Q BETWEEN STA. 796+25 & 799+80

R.G.	M.L. Sta.	Corresponding Elev. on R.S. 74' from E of I-74	Elev. on R.S. 77' from E of I-74	Elev. on R.S. 93' from E of I-74
913.07	+25	796+29.32	912.07	911.95
912.70	+50	+54.02	911.70	911.58
912.30	+75	+78.71	911.30	911.18
911.90	797+00	+77.04	910.90	910.78
911.48	+25	+28.10	910.48	910.36
911.04	+50	+52.80	910.04	909.92
910.59	+75	+77.50	909.59	909.47
910.13	798+00	+76.84	909.13	909.01
909.66	+25	+26.89	908.66	908.54
909.17	+50	+51.58	908.17	908.05
908.66	+75	+76.28	907.66	907.54
908.14	799+00	+75.62	907.14	907.02
907.61	+25	+27.67	906.61	906.49
907.06	+50	+52.36	906.06	905.94
906.50	+75	+77.06	905.50	905.38
906.04	+80	+80	905.04	904.92

PAVEMENT ELEVATION ON RAMP Q BETWEEN STA. 791+00 & 796+00

R.G.	M.L. Sta.	Corresponding Elev. on R.S. 74' from E of I-74	Elev. on R.S. 77' from E of I-74	Elev. on R.S. 93' from E of I-74
917.77	791+00	916.77	916.90	916.65
917.68	+25	+35.41	916.68	916.56
917.59	+50	+60.10	916.59	916.47
917.48	+75	+84.80	916.48	916.36
917.35	792+00	+84.14	916.35	916.23
917.21	+25	+34.19	916.21	916.09
917.06	+50	+58.89	916.06	915.94
916.89	+75	+83.58	915.89	915.77
916.71	793+00	+82.92	915.71	915.59
916.51	+25	+32.97	915.51	915.43
916.30	+50	+57.67	915.30	915.18
916.08	+75	+82.36	915.08	914.96
915.84	794+00	+81.70	914.84	914.72
915.59	+25	+31.76	914.59	914.47
915.33	+50	+56.45	914.33	914.21
915.05	+75	+81.15	914.05	913.93
914.75	795+00	+80.49	913.75	913.63
914.44	+25	+30.54	913.44	913.32
914.12	+50	+55.23	913.12	913.00
913.79	+75	+79.93	912.79	912.67
913.44	796+00	+79.27	912.44	912.32

PAVEMENT DETAIL - NORTH BEND ROAD INTERCHANGE - RAMPS L & Q



SUPERELEVATION TABLE - RAMP N

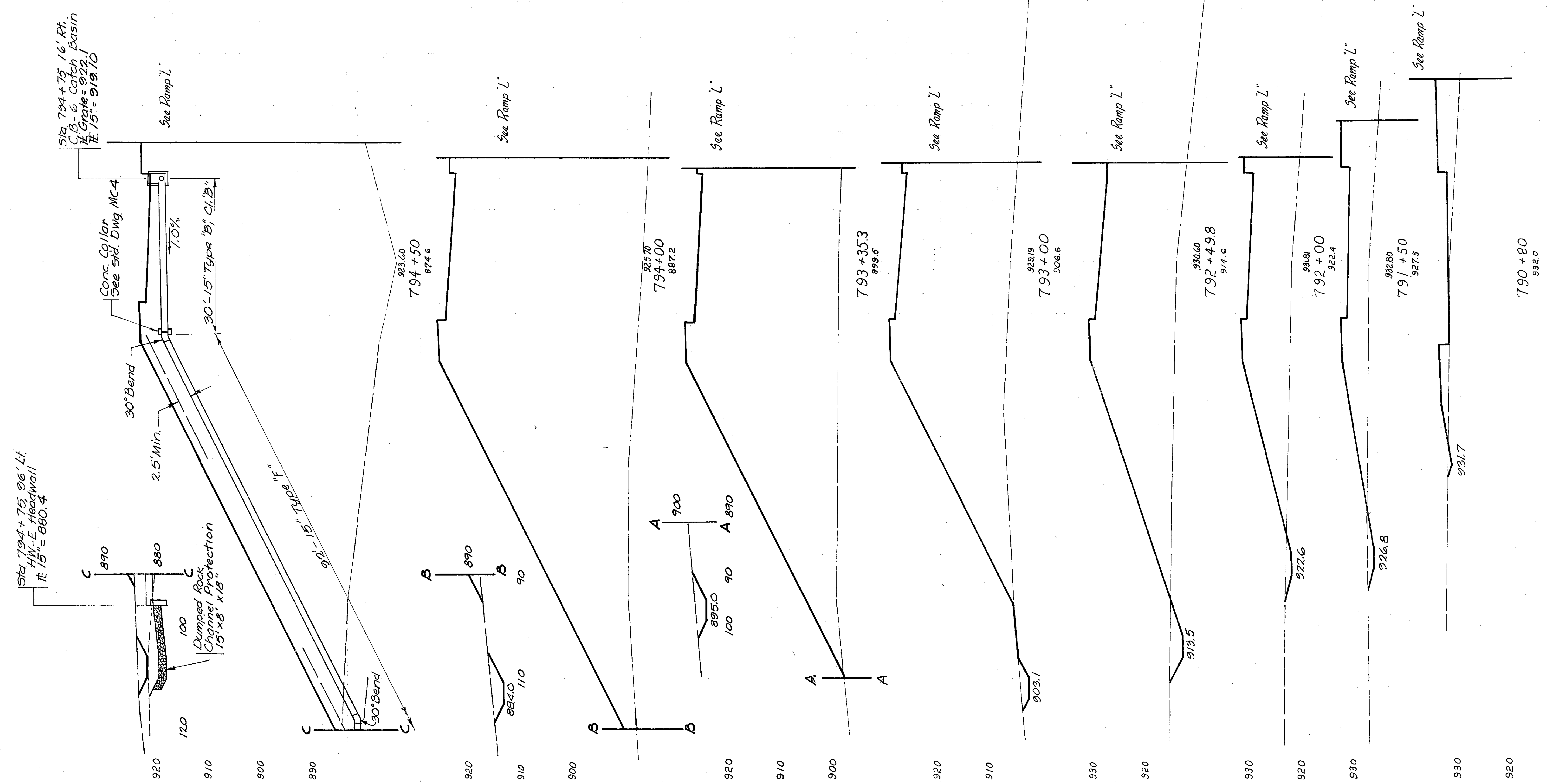
Station	P.G. - #	Width on Rt. Side from #	Elevation	Station	P.G. - #	Width on Rt. Side from #	Elevation	Station	P.G. - #	Width on Rt. Side from #	Elevation
From Sta. 790+18.74	To Sta. 794+75	+75	909.99	16'	911.05	+50	902.97	16.08	903.74		
See 20' Scale Detail Sh. No. - 212											
799+00	909.50	16'	910.70	+75	902.26	16.53	902.91				
From Sta. 794+75	To Sta. 797+25.33	+25.33	908.98	16'	910.31	802+00	901.54	16.98	902.06		
Constant P.G. 16' From Sta. 799+25.33 To Sta. 800+45.59											
797+25.33	913.00	16'	913.25	Constant P.G. 16'	P.G. +1.33	+45.59	900.24	18.00	900.52		
+50	912.37	16'	912.75	800+45.59	905.97	16'	907.30				
+75	911.82	16'	912.34	+50	905.83	16'	907.14				
798+00	911.34	16'	912.00	+75	905.12	16'	906.29				
+25	910.90	16'	911.69	801+00	904.40	16'	905.44				
+50	910.45	16'	911.30	+25	903.69	16'	904.59				

NORTH BEND ROAD INTERCHANGE - RAMP N

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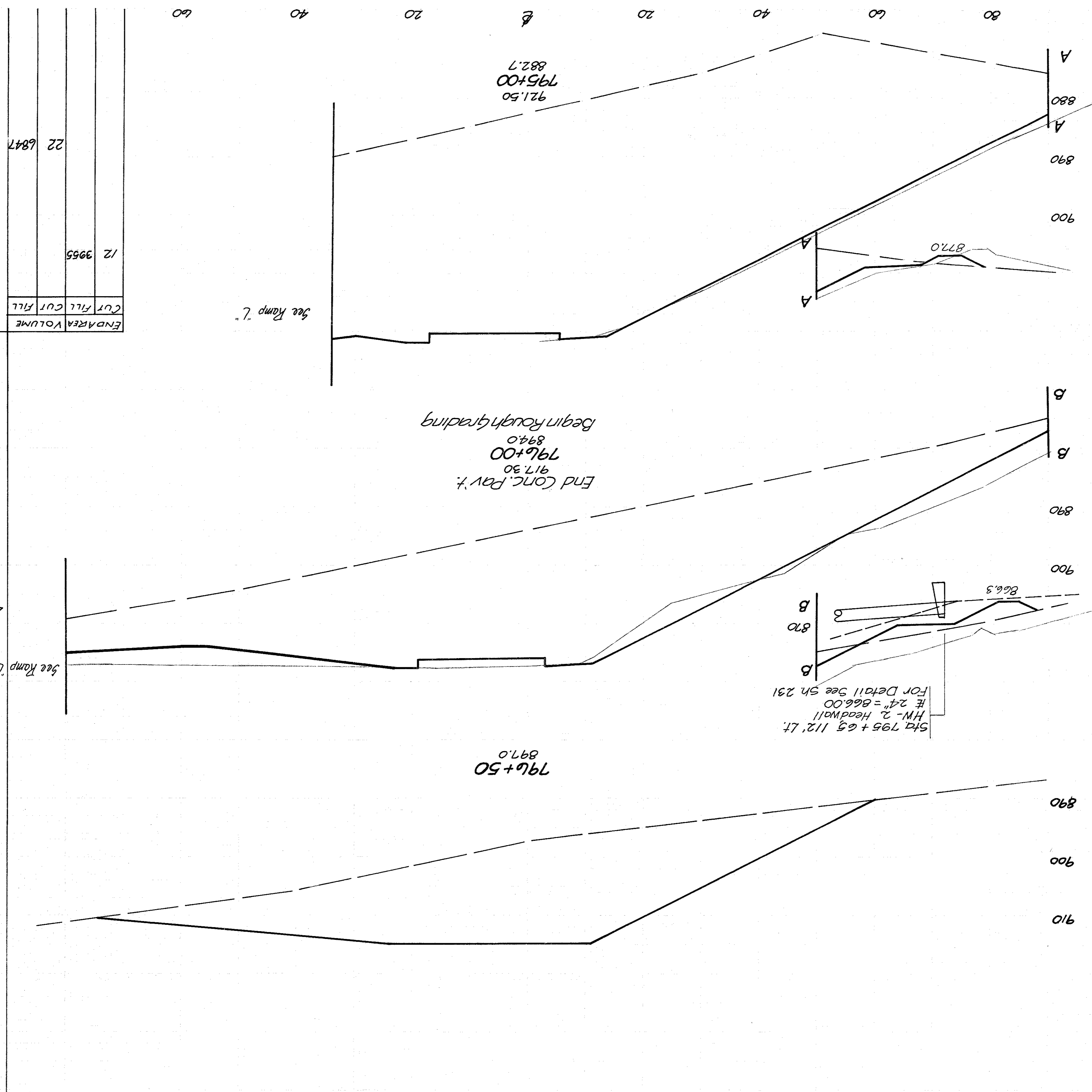
END AREA		VOLUME	
CUT	FILL	CUT	FILL
		12	3440
			28 5741
		18	2760
			34 5633
		10	1920
			14 2106
		12	1930
			31 2069
		22	905
			30 1301
		10	500
			19 748

END AREA		VOLUME	
CUT	FILL	CUT	FILL
10	308		
		13	513
0	88		
			80



RAMP 'N' STA. 790+80 ~ STA. 794+50

RAMP 'N' STA. 795+00 - STA. 797+50



Sta. 795+63 112' Lt.
 HW-2 Headwall
 H=24" = 866.00
 For Detail See SH. 231

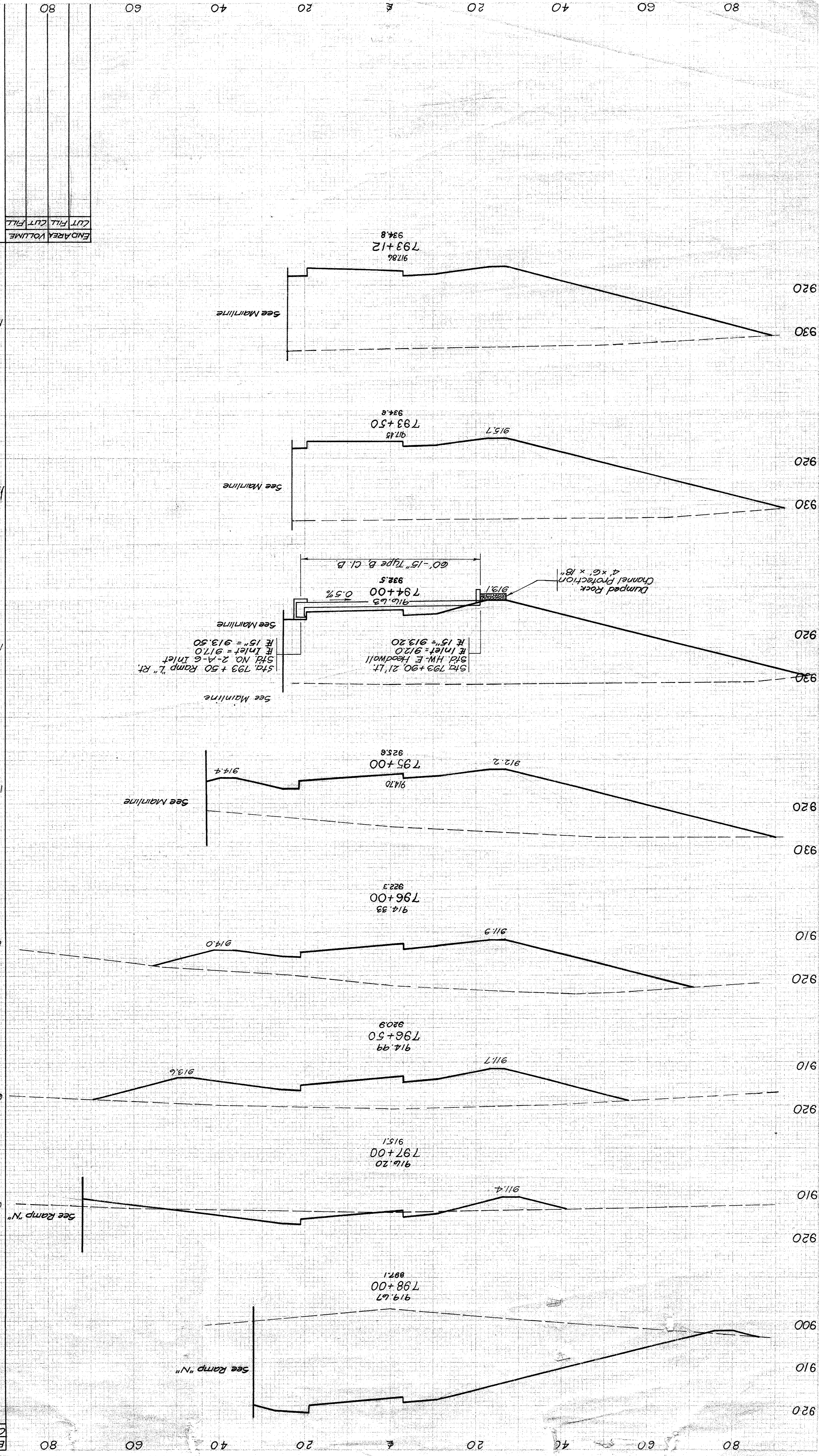
END AREA VOLUME	96	11,932
CUT FILL	40	2488
CUT FILL		

END AREA VOLUME	37	3563
CUT FILL	0	1360
CUT FILL	0	2519
CUT FILL		

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199

RAMP "L" STA. 793+12 - STA. 798+00



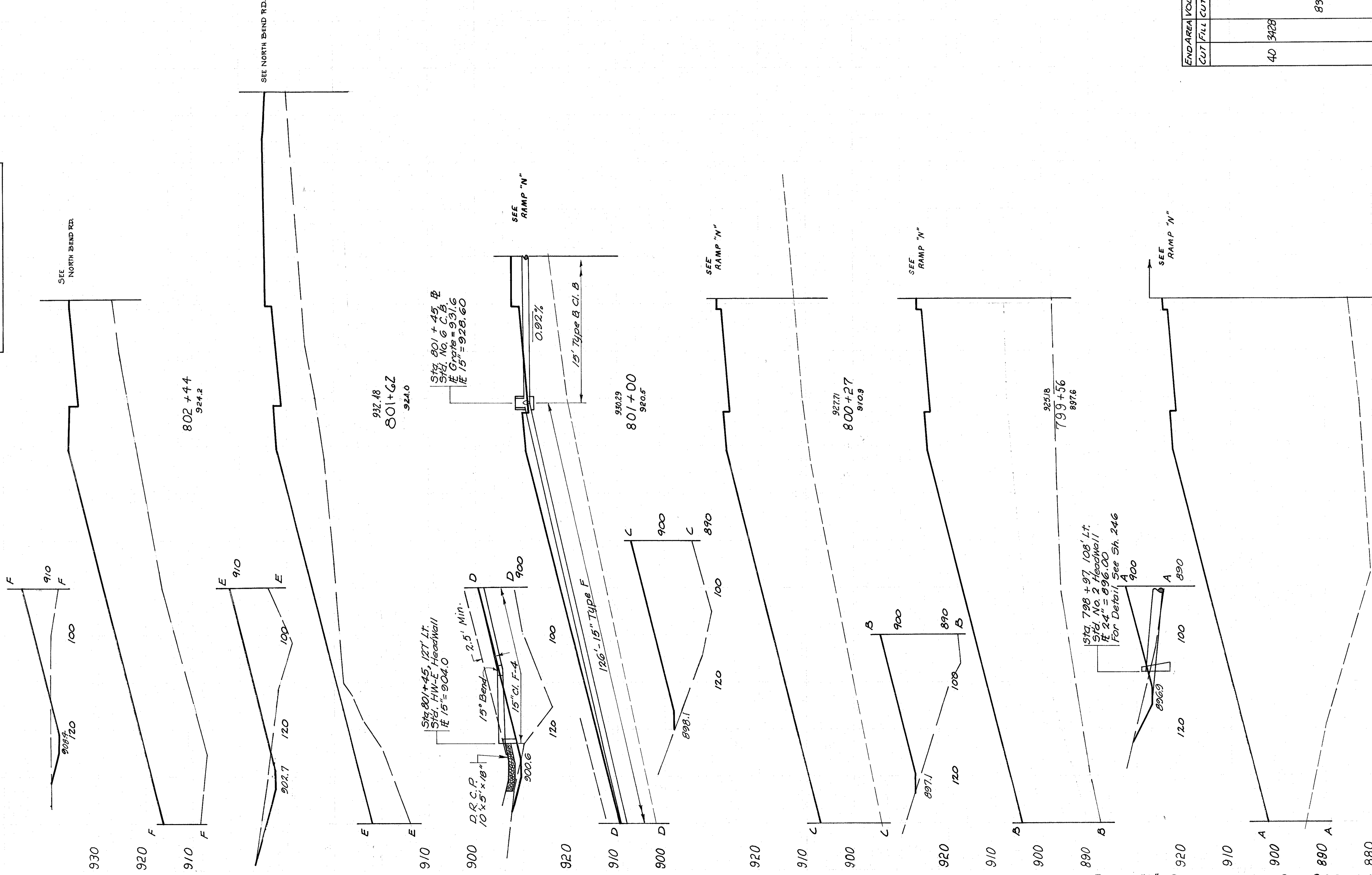
END AREA VOLUME
CUT FILL CUT FILL

END AREA VOLUME
CUT FILL CUT FILL

200
HAM-74-11.37
Red 355 200-300

1590	0	1590	0
2181	0	1560	0
2972	0	1650	0
5296	0	1210	0
3833	0	860	0
1926	0	680	0
690	74	65	80
130	1500	5	1590

Sta 793+12 to 802+44
Excavation
Embankment
16753
35718

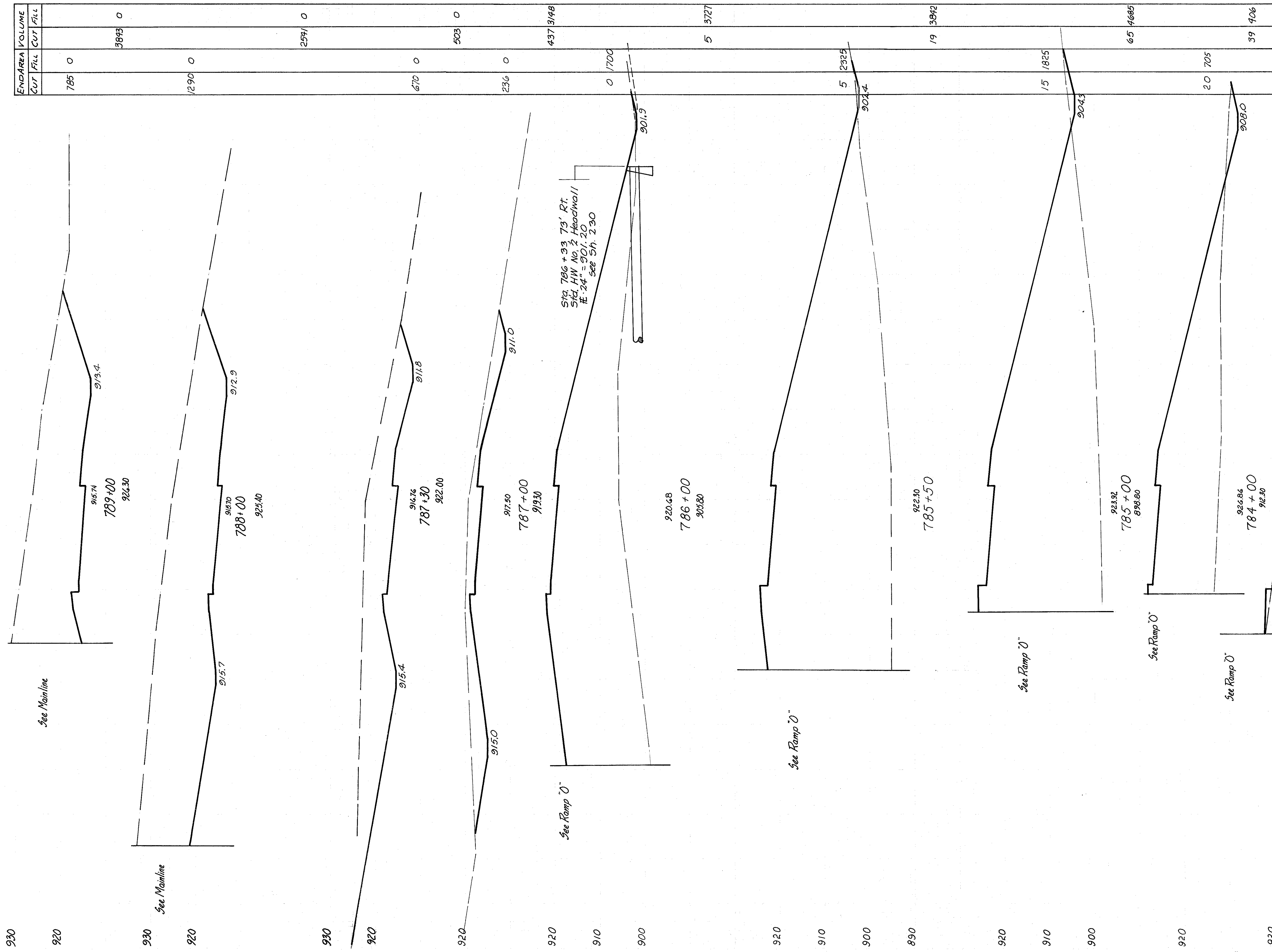


RAMP "L" STA. 799+00 ~ STA. 802+44

END AREA	VOLUME		
CUT	FILL	CUT	FILL
23	1435	65	4082
20	1240	29	2999
5	1320	7	4671
0	2136	0	6503
0	2810	41	6469

END AREA	VOLUME		
CUT	FILL	CUT	FILL
40	3428	83	9200
			80

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END AREA VOLUME		
CUT	FILL	CUT FILL
50	26	104
30	60	48
10	28	80

END AREA VOLUME		
CUT	FILL	CUT FILL
785	0	3843
1290	0	2591
670	0	503
236	0	437
0	1700	3148
5	2325	5727
19	3842	65
15	1825	4685
20	705	39
		406

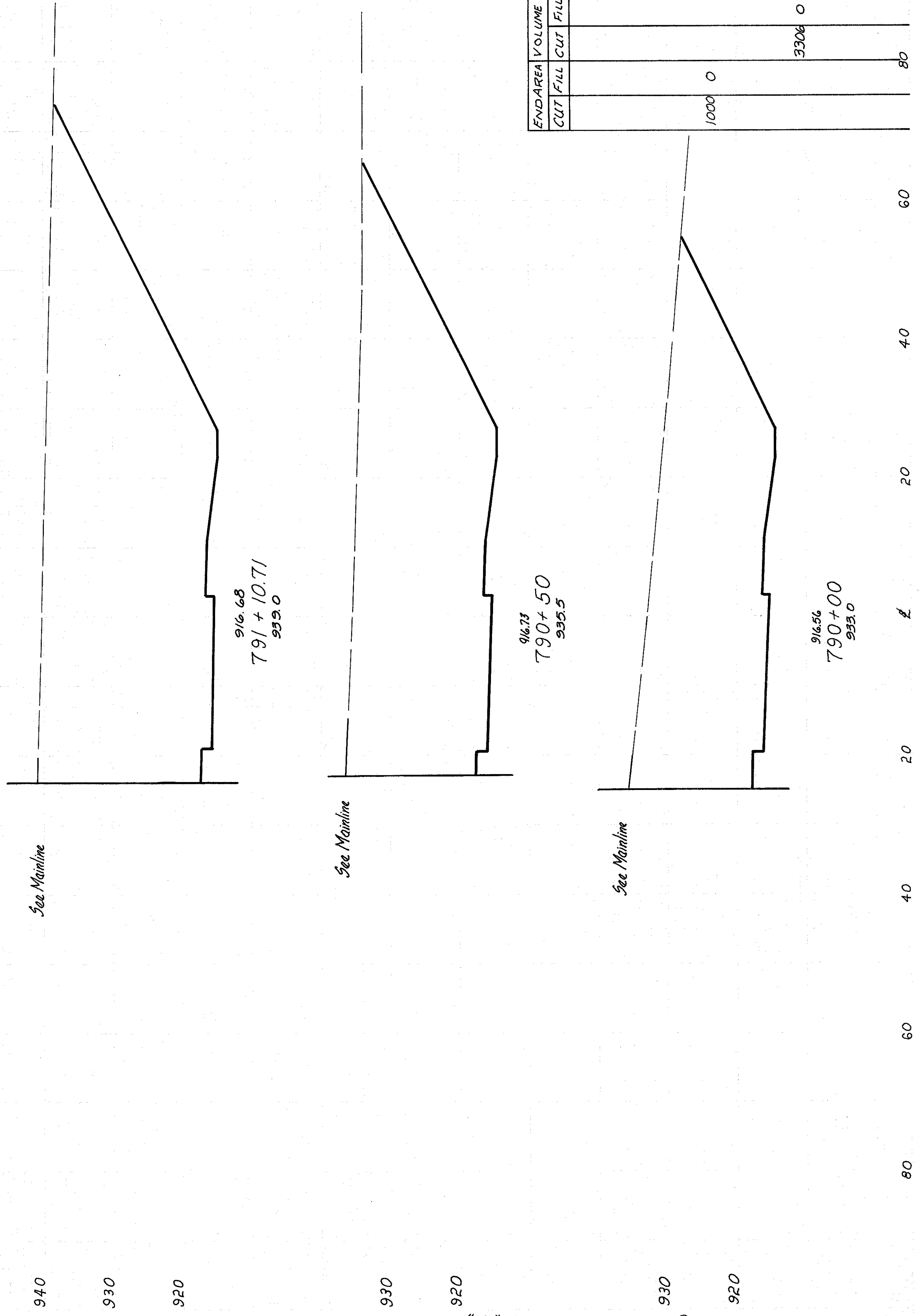
HAM-74-11.37

RAMP "Q" STA. 781+35 ~ STA. 789+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1845	0
			3592
		1335	0
			2162

HAM.-74-11.37

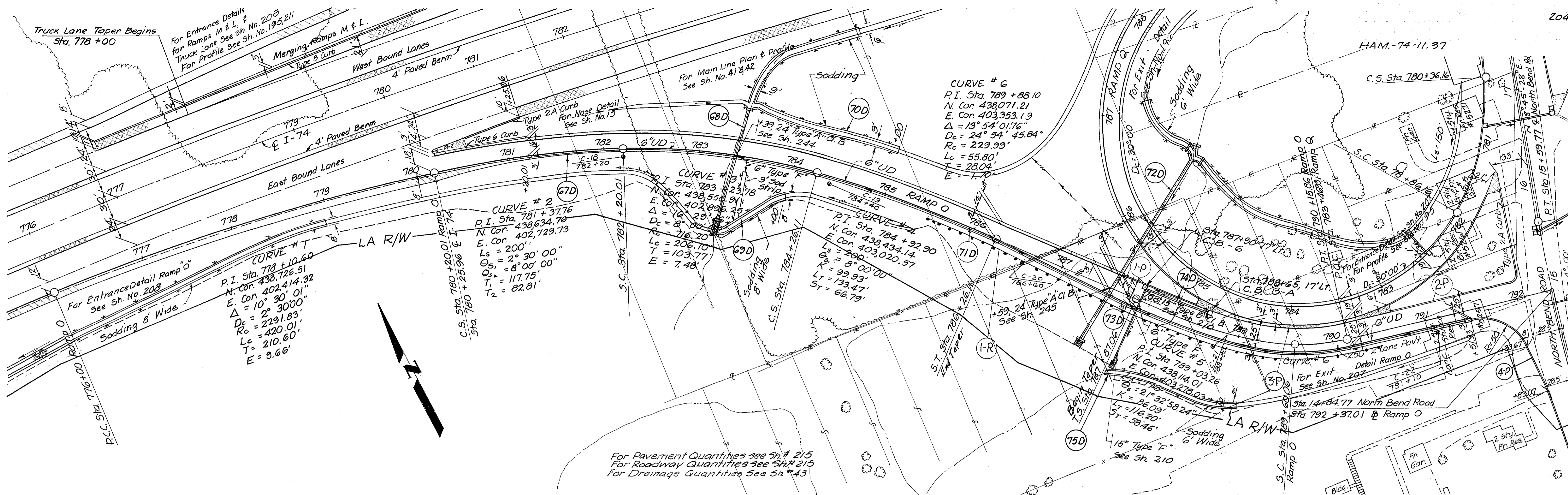
Sta 781+35 to 791+10.71
Excavation 16.667
Embankment 16.025



END AREA		VOLUME	
CUT	FILL	CUT	FILL
		1000	0
			3306

80 60 40 20 0 20 40 60 80

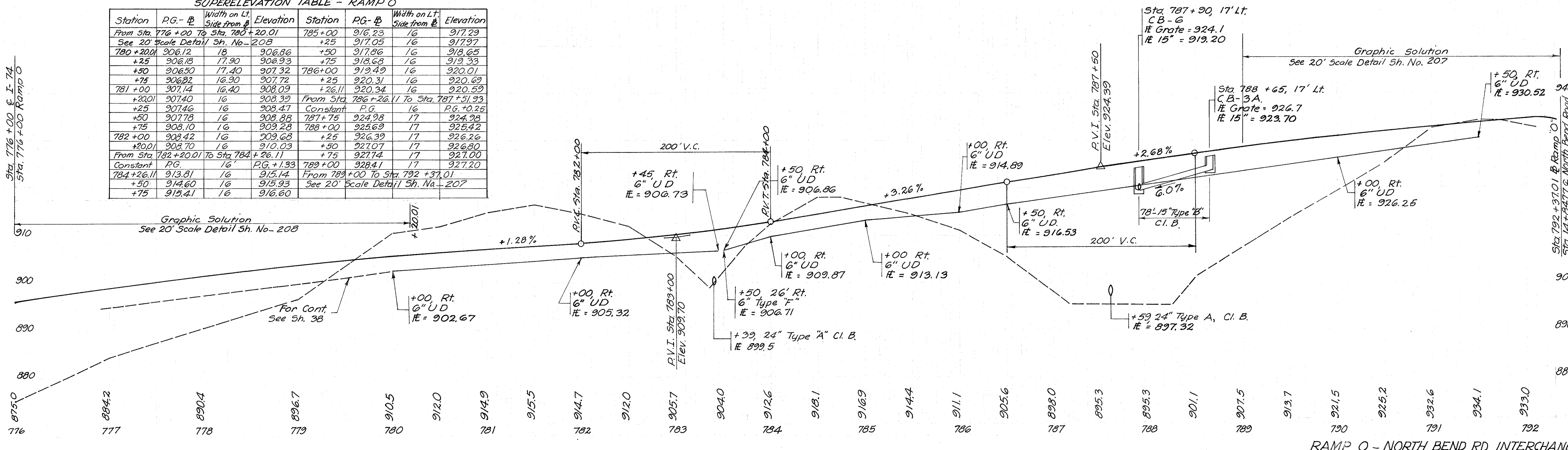
RAMP "Q" STA. 790+00 ~ STA. 791+10.71

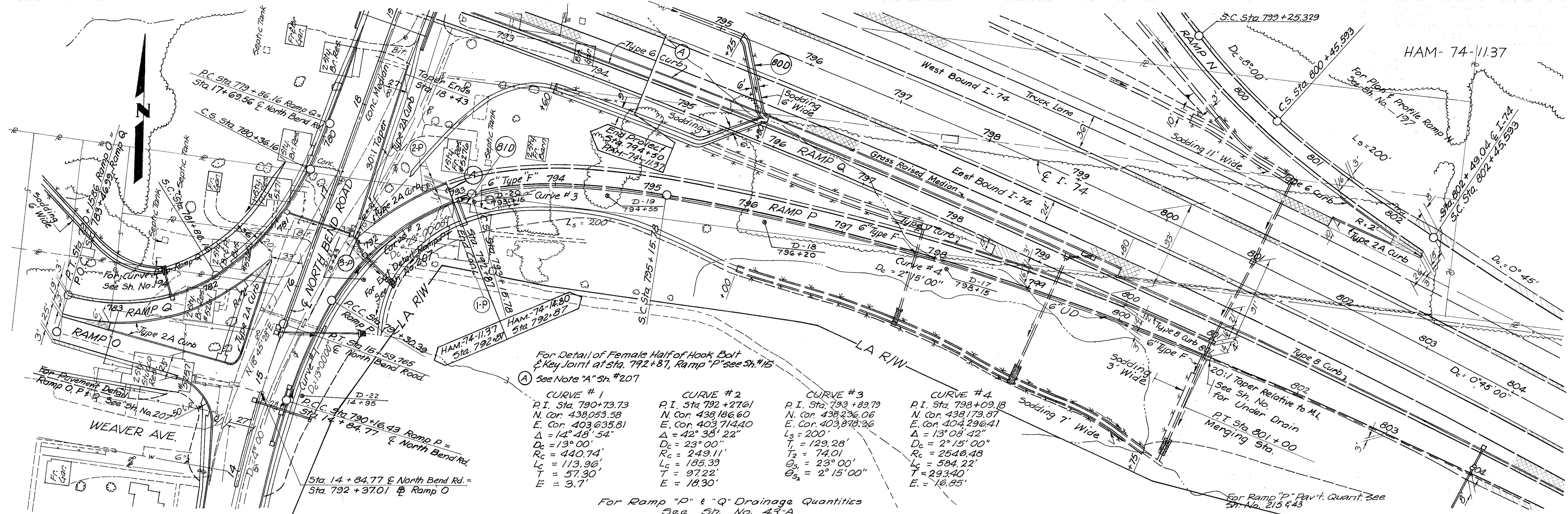


896.10
896.81
897.51
898.20
898.88
899.58
900.23
900.90
901.53
902.16
902.77
903.34
903.90
904.44
904.93
905.37
905.77
906.12
906.18
906.50
906.82
907.14
907.46
907.78
908.10
908.42
908.77
909.18
909.66
910.20
910.80
911.45
912.18
912.97
913.78
914.60
915.41
916.23
917.05
917.86
918.68
919.49
920.31
921.13
921.94
923.57
924.39
925.06
925.73
926.40
927.07
927.74
928.41
929.23
929.82
930.35
930.85
931.32
931.79
932.26
932.72
933.17
933.74
934.26
934.69

SUPERELEVATION TABLE - RAMP O

Station	PG-#	Width on Lt. Side from #	Elevation	Station	PG-#	Width on Lt. Side from #	Elevation
From Sta. 776+00 To Sta. 780+20.01				785+00	916.23	16	917.29
See 20' Scale Detail Sh. No. 208				+25	917.05	16	917.97
780+20.01	906.12	18	906.86	+50	917.86	16	918.65
+25	906.13	17.90	906.93	+75	918.68	16	919.33
+50	906.50	17.40	907.32	786+00	919.49	16	920.01
+75	906.82	16.90	907.72	+25	920.31	16	920.69
781+00	907.14	16.40	908.09	+26.11	920.34	16	920.59
+20.01	907.40	16	908.39	From Sta. 786+26.11 To Sta. 787+31.93			
+25	907.46	16	908.47	Constant P.G.	16	PG. +0.25	
+50	907.78	16	908.88	787+75	924.98	17	924.98
+75	908.10	16	909.28	788+00	925.69	17	925.42
782+00	908.42	16	909.68	+25	926.39	17	926.26
+20.01	908.70	16	910.03	+50	927.07	17	926.80
From Sta. 782+20.01 To Sta. 784+26.11				+75	927.14	17	927.00
Constant P.G.	16	PG. +1.93	789+00	928.41	17	927.20	
784+26.11	913.81	16	915.14	From 789+00 To Sta. 792+37.01			
+50	914.60	16	915.93	See 20' Scale Detail Sh. No. 207			
+75	915.41	16	916.60				





For Detail of Female Half of Hook Bolt & Key Joint at Sta. 792+87, Ramp "P" see Sh. #15
 See Note "A" Sh. #207

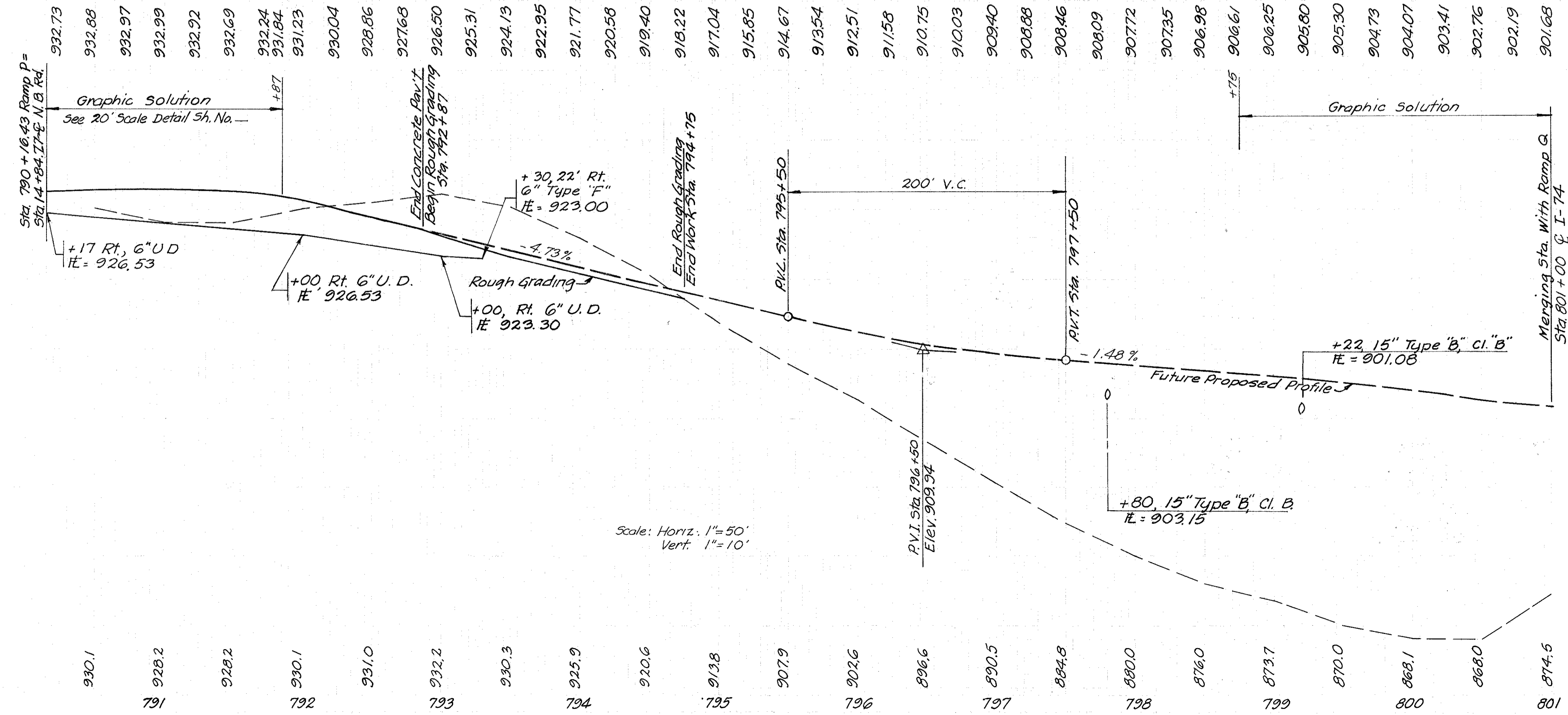
CURVE #1
 P.I. Sta. 790+73.73
 N. Cor. 438,053.58
 E. Cor. 403,635.81
 $\Delta = 14^{\circ} 48' 54"$
 $D_c = 13^{\circ} 00'$
 $R_c = 440.74'$
 $L_c = 113.96'$
 $T = 57.90'$
 $E = 3.7'$

CURVE #2
 P.I. Sta. 792+27.61
 N. Cor. 438,186.60
 E. Cor. 403,714.40
 $\Delta = 42^{\circ} 38' 22"$
 $D_c = 23^{\circ} 00'$
 $R_c = 249.11'$
 $L_c = 185.39'$
 $T = 97.22'$
 $E = 18.30'$

CURVE #3
 P.I. Sta. 793+89.79
 N. Cor. 438,236.06
 E. Cor. 403,878.36
 $\Delta = 13^{\circ} 08' 42"$
 $D_c = 2^{\circ} 15' 00"$
 $L_c = 584.22'$
 $T = 293.40'$
 $E = 16.85'$

CURVE #4
 P.I. Sta. 798+09.18
 N. Cor. 438,173.87
 E. Cor. 404,296.41
 $\Delta = 13^{\circ} 08' 42"$
 $D_c = 2^{\circ} 15' 00"$
 $L_c = 584.22'$
 $T = 293.40'$
 $E = 16.85'$

For Ramp "P" & "Q" Drainage Quantities
 See Sh. No. 43-A



Station	P.G.	Width on Lt. Side from #	Elevation
From Sta. 790+16.43 To Sta. 791+87			
791+87	931.84	20'	933.51
792+00	931.23	19.61	932.86
+25	930.04	18.86	931.61
+50	928.86	18.11	930.37
+75	927.63	17.36	929.13
792+87	927.11	17	928.53
793+00	926.50	16	927.83
+15.78	925.75	16	927.08
+25	925.31	16	926.60
+50	924.13	16	925.30
+75	922.95	16	924.00
794+00	921.77	16	922.70
+25	920.58	16	921.39
+50	919.40	16	920.09
+75	918.22	16	918.79
795+00	917.04	16	917.49
+15.78	916.29	16	916.67
From Sta. 795+15.78 To Sta. 798+75			
Constant	P.G.	16	P.G.+0.38

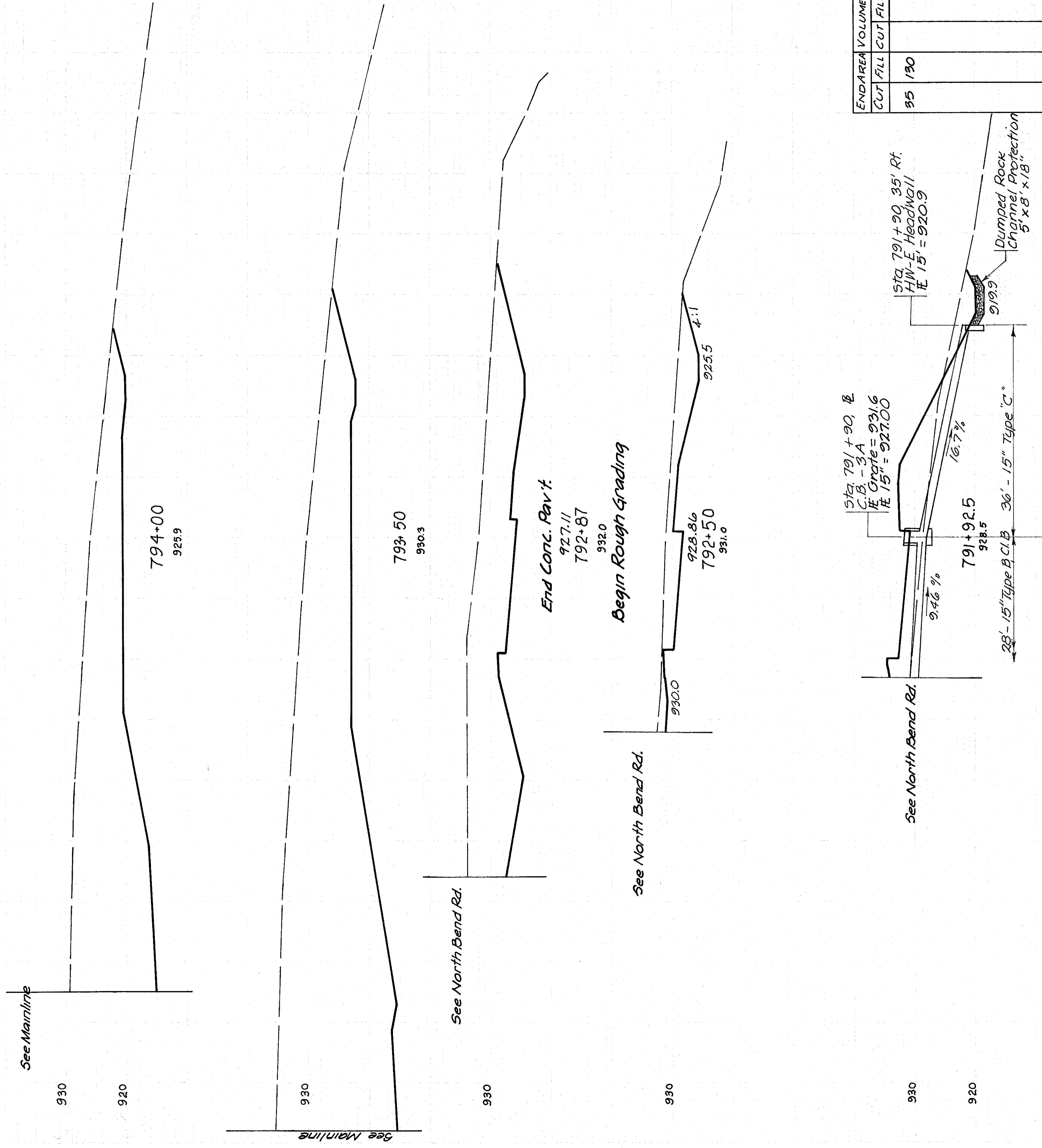
END AREA VOLUME	
CUT	FILL
0	0
860	0
1560	0
590	0
195	0
194	0
2241	0
2508	0
497	0
181	138

HAM-74-11.37

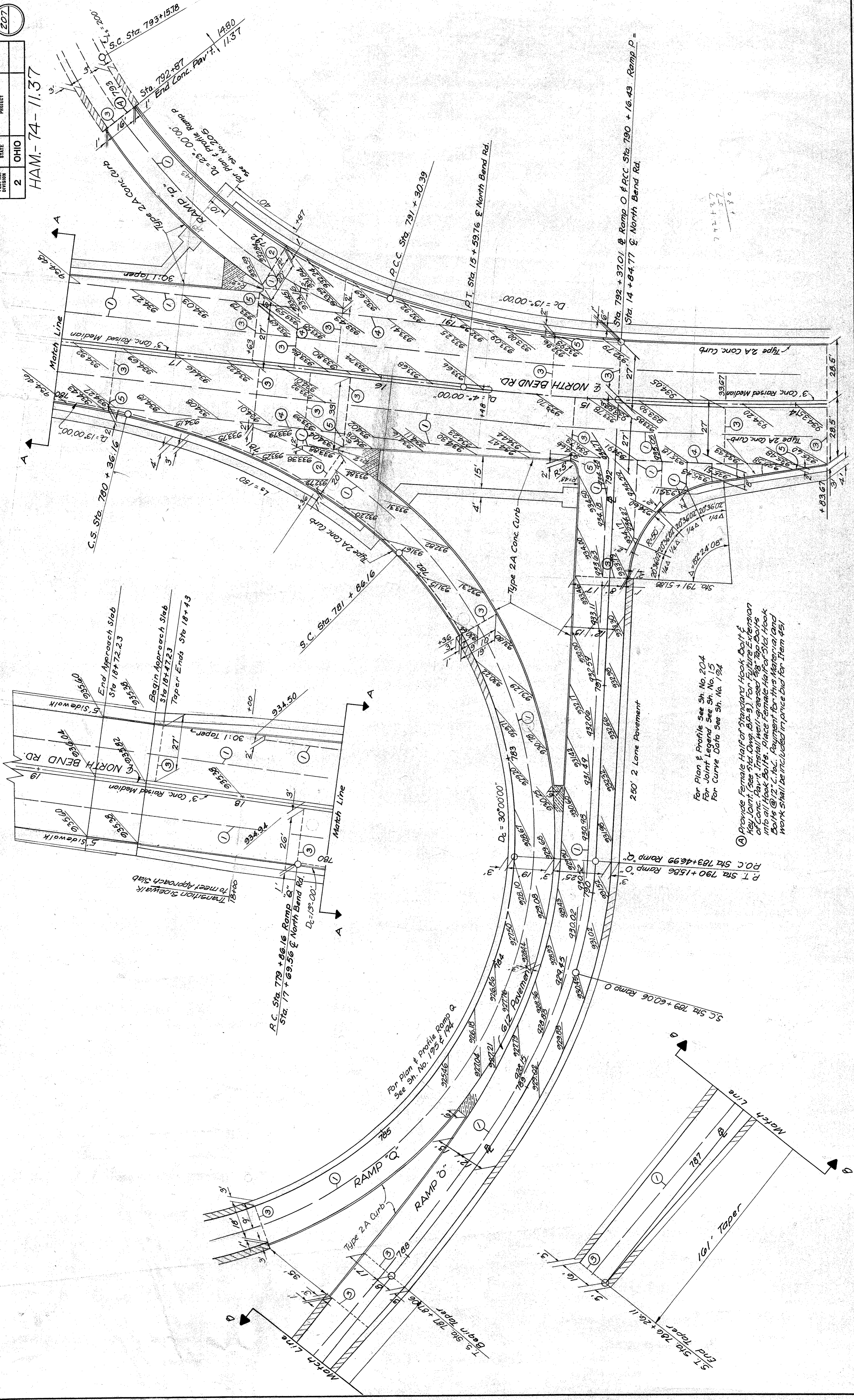
END AREA VOLUME	
CUT	FILL
95	130
0	0

Ramp "P" Sta. 791+92.5 - Sta. 794+75
 Excavation 662' Cu. Yds.
 Embankment 738 Cu. Yds.

End Work
 794+75
 End Rough Grading



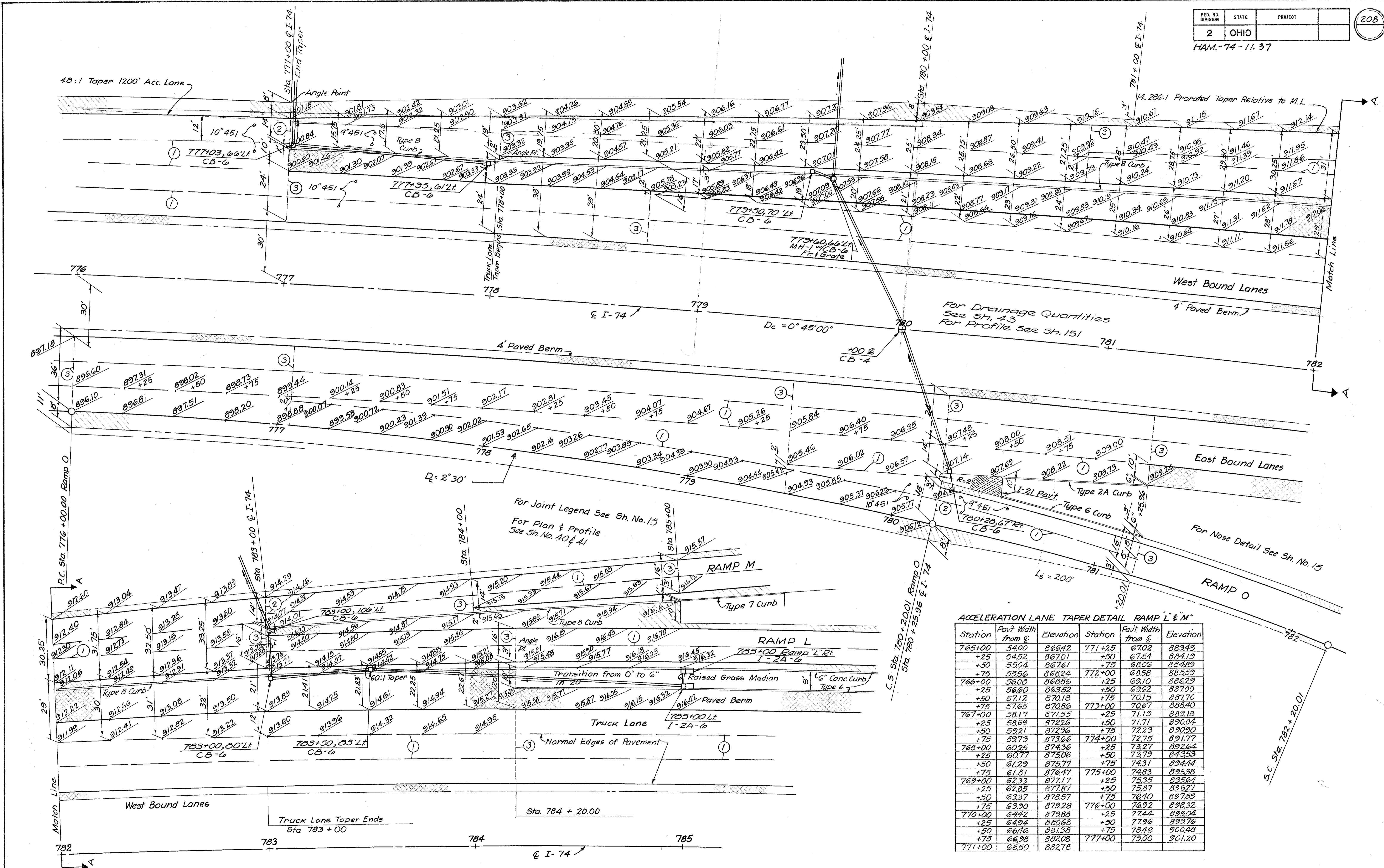
207	PROJECT
2	OHIO
HAM-74-11.37	



For Plan & Profile See Sh. No. 204
 For Joint Legend See Sh. No. 15
 For Curve Data See Sh. No. 194

① Provide Female Half of Standard Hook Bolt & Key Joint (See Sta. Dwg. Sp. 5). For Future Extension of Conc. Pav't. Install well-graded 18" Top Bolts into all Hook Bolts. Place Female Half of Std. Hook Bolts @ 12" C. to C. Payment for this Material and work shall be included in price bid for Item #51.

PAVEMENT DETAIL - NORTH BEND ROAD INTERCHANGE - RAMPS Q, O, P

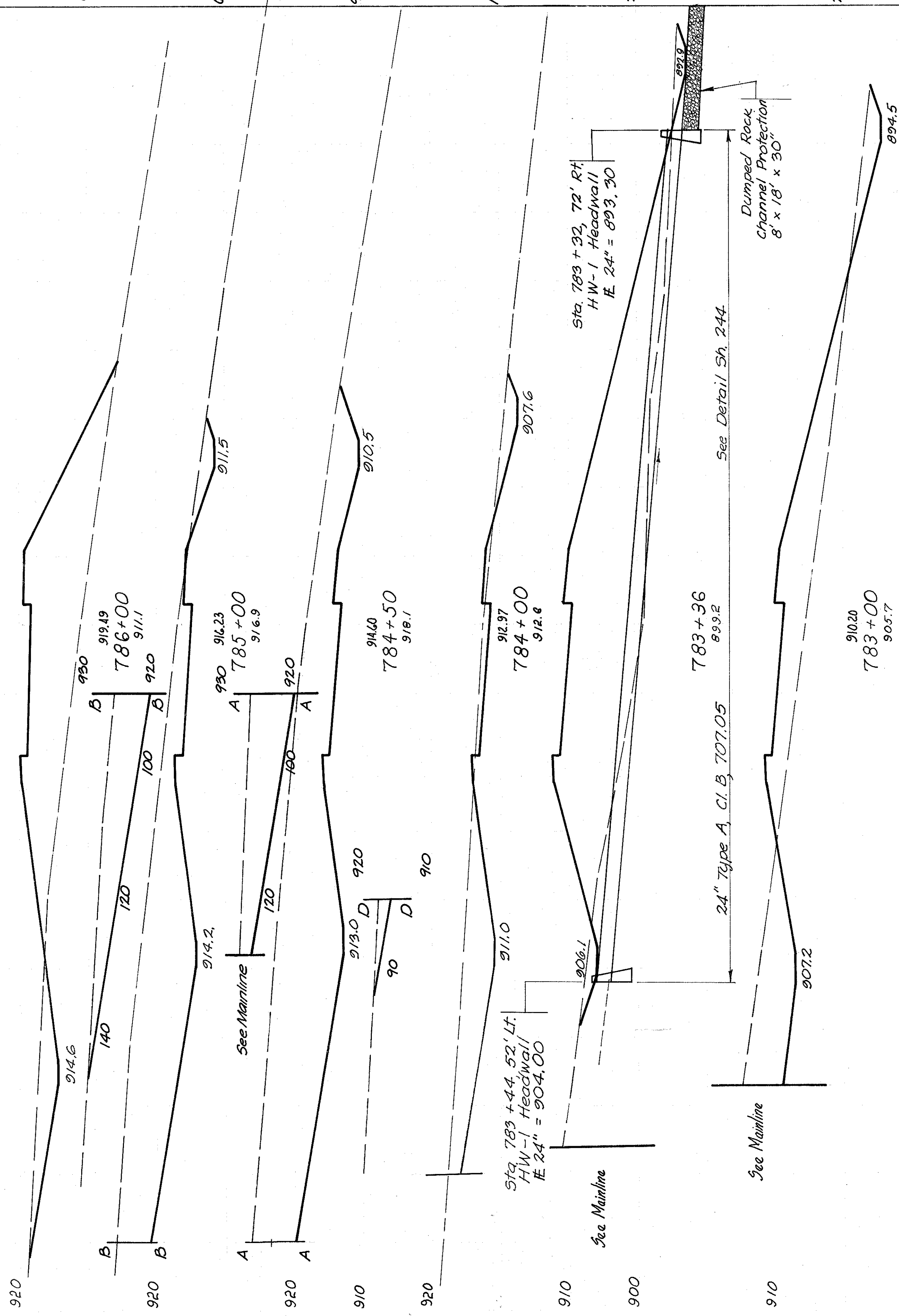
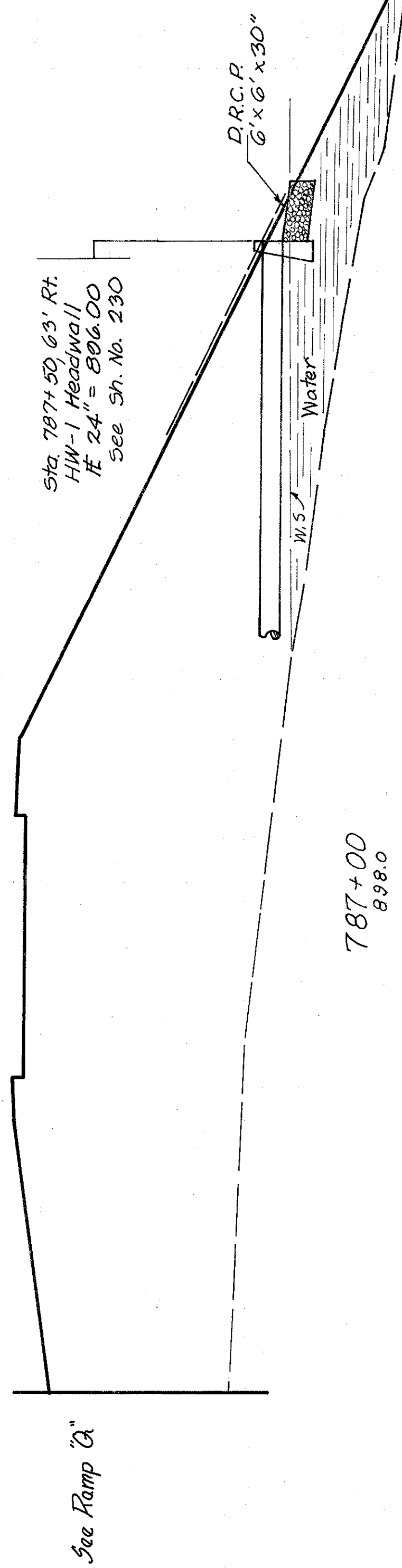
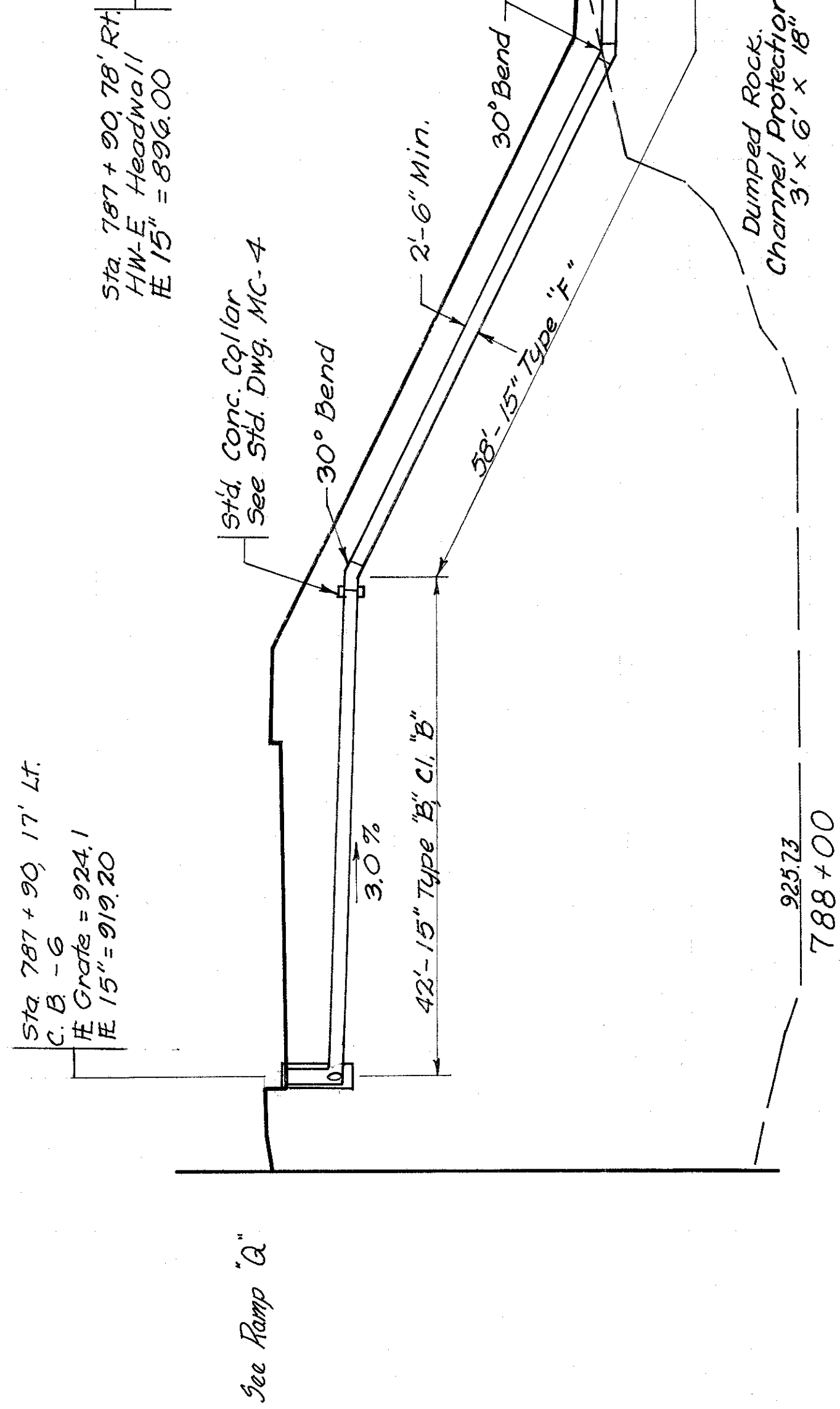


ACCELERATION LANE TAPER DETAIL RAMP L & M

Station	Pavt. Width from E	Elevation	Station	Pavt. Width from E	Elevation
765+00	54.00	866.42	771+25	67.02	883.49
+25	54.52	867.01	+50	67.54	884.19
+50	55.04	867.61	+75	68.06	884.89
+75	55.56	868.24	772+00	68.58	885.59
766+00	56.08	868.86	+25	69.10	886.29
+25	56.60	869.52	+50	69.62	887.00
+50	57.12	870.18	+75	70.15	887.70
+75	57.65	870.86	773+00	70.67	888.40
767+00	58.17	871.55	+25	71.19	889.18
+25	58.69	872.26	+50	71.71	890.04
+50	59.21	872.96	+75	72.23	890.90
+75	59.73	873.66	774+00	72.75	891.77
768+00	60.25	874.36	+25	73.27	892.64
+25	60.77	875.06	+50	73.79	893.53
+50	61.29	875.77	+75	74.31	894.44
+75	61.81	876.47	775+00	74.83	895.38
769+00	62.33	877.17	+25	75.35	896.34
+25	62.85	877.87	+50	75.87	897.27
+50	63.37	878.57	+75	76.40	898.29
+75	63.90	879.28	776+00	76.92	899.32
770+00	64.42	879.98	+25	77.44	900.34
+25	64.94	880.68	+50	77.96	901.36
+50	65.46	881.38	+75	78.48	902.48
+75	65.98	882.08	777+00	79.00	903.60
771+00	66.50	882.78			

PAVEMENT DETAIL - NORTH BEND ROAD INTERCHANGE - RAMPS L, M, O

END AREA		VOLUME	
CUT	FILL	CUT	FILL
22	3278	0	2505
41	10710	120	5435
		65	430
		660	0
		910	0
		178	10
		22	755
		240	175
		548	0
		1959	324
		2135	0



END AREA		VOLUME	
CUT	FILL	CUT	FILL
605	0	60	0

RAMP "O" STA. 781+00 ~ STA. 788+00

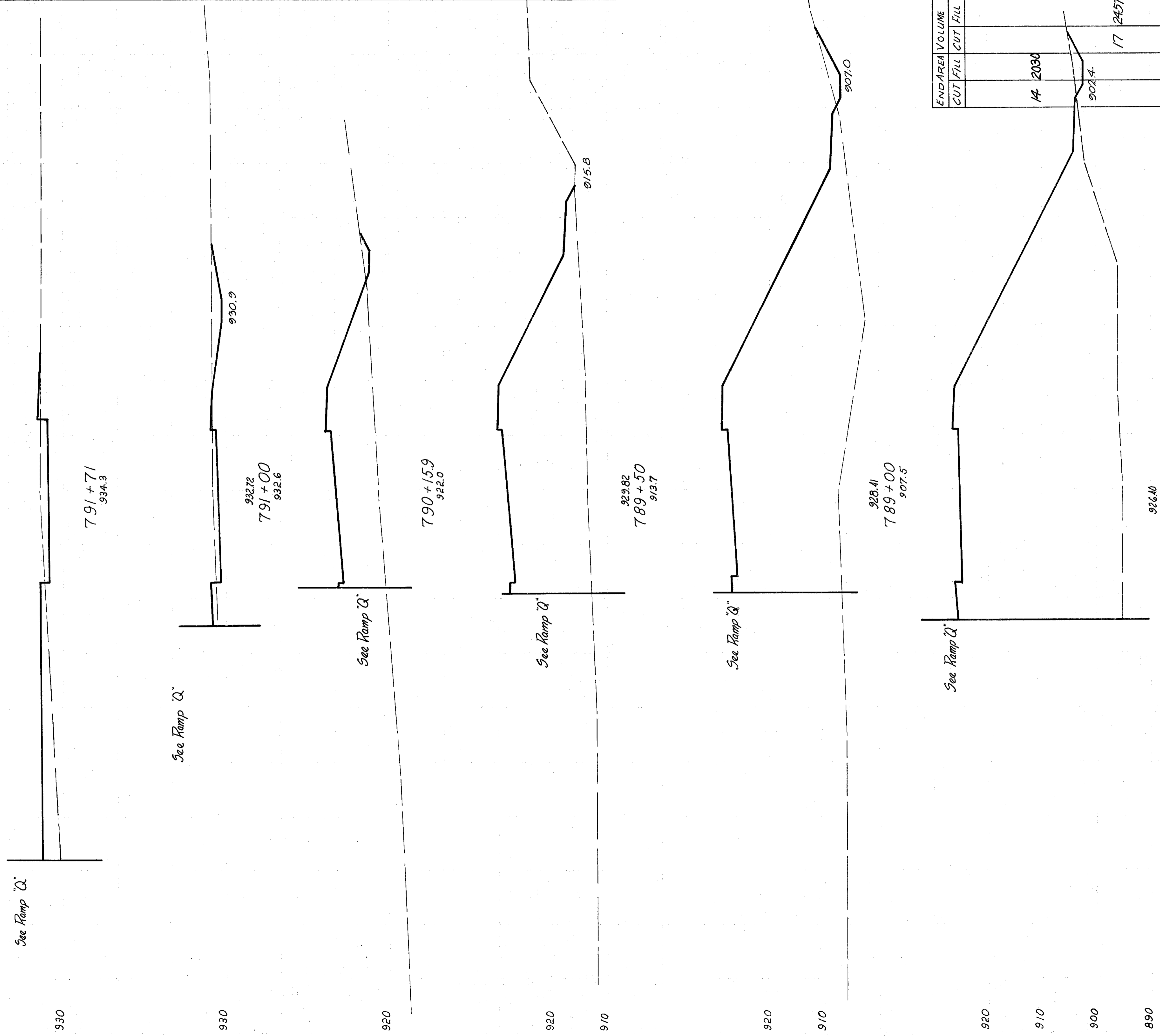
HAM.-74-11.37

END AREA	VOLUME	CUT	FILL	CUT	FILL
				32	110
				114	155
				95	574
				6	362
				7	1436
				15	2077
				16	1430
				41	4806

HAM.-74-11.37

210

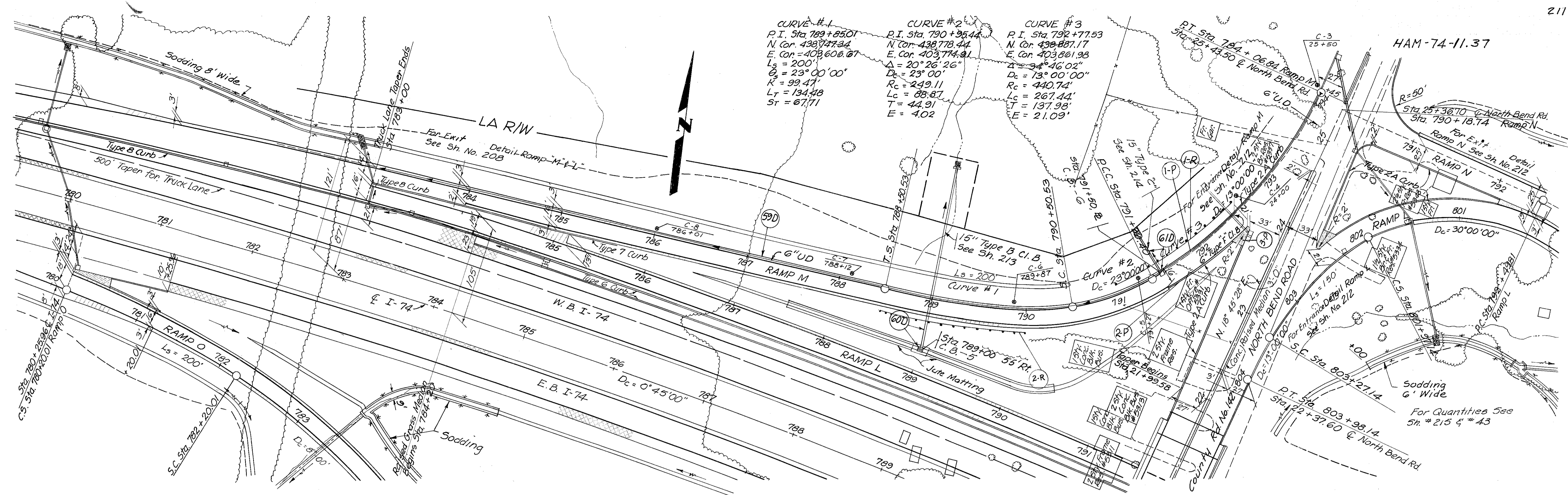
Sta. 781+00 to 791+71
Excavation 826.0
Embankment 30.306



END AREA	VOLUME	CUT	FILL	CUT	FILL
				14	2030
				904.4	17
				2457	80

RAMP "O" STA. 788+25 ~ STA. 791+71

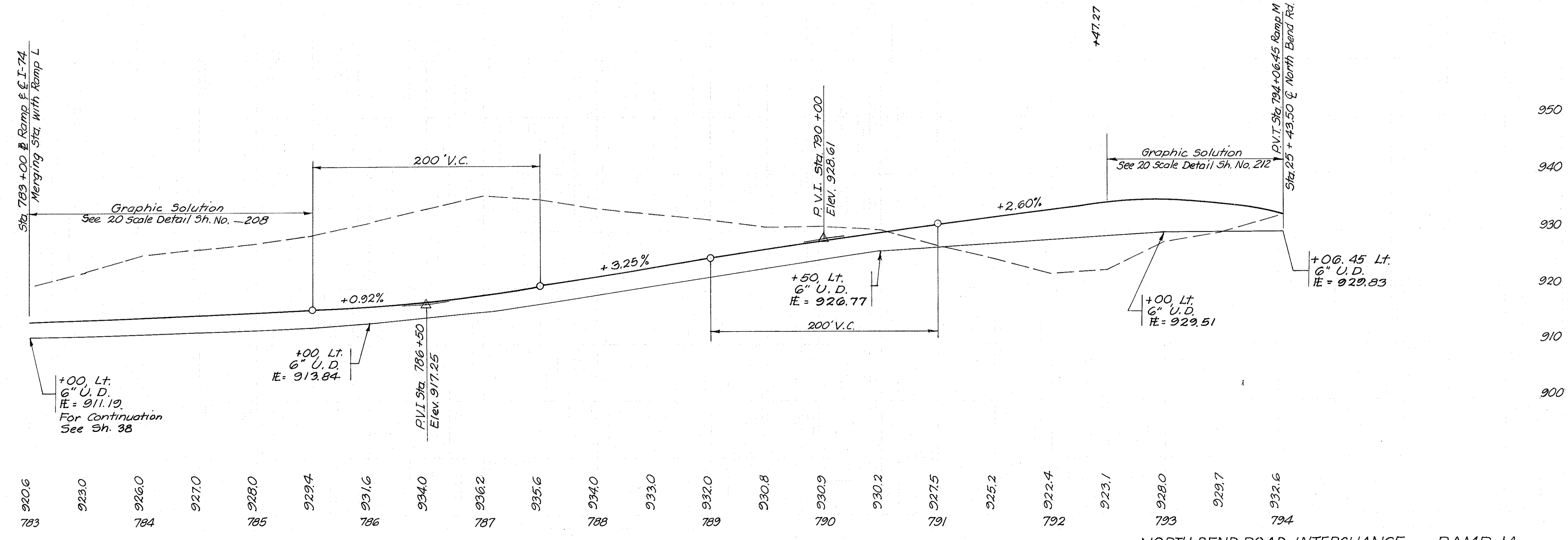
80 60 40 20 0 20 40 60 80



- 914.07
- 914.32
- 914.53
- 914.75
- 914.93
- 915.20
- 915.44
- 915.65
- 915.87
- 916.10
- 916.33
- 916.60
- 916.94
- 917.35
- 917.83
- 918.39
- 919.02
- 919.72
- 920.50
- 921.31
- 922.12
- 922.93
- 923.74
- 924.55
- 925.37
- 926.17
- 926.95
- 927.71
- 928.45
- 929.17
- 929.87
- 930.55
- 931.21
- 931.86
- 932.51
- 933.16
- 933.81
- 934.46
- 934.99
- 935.11
- 935.40
- 935.36
- 935.15
- 934.87
- 934.25

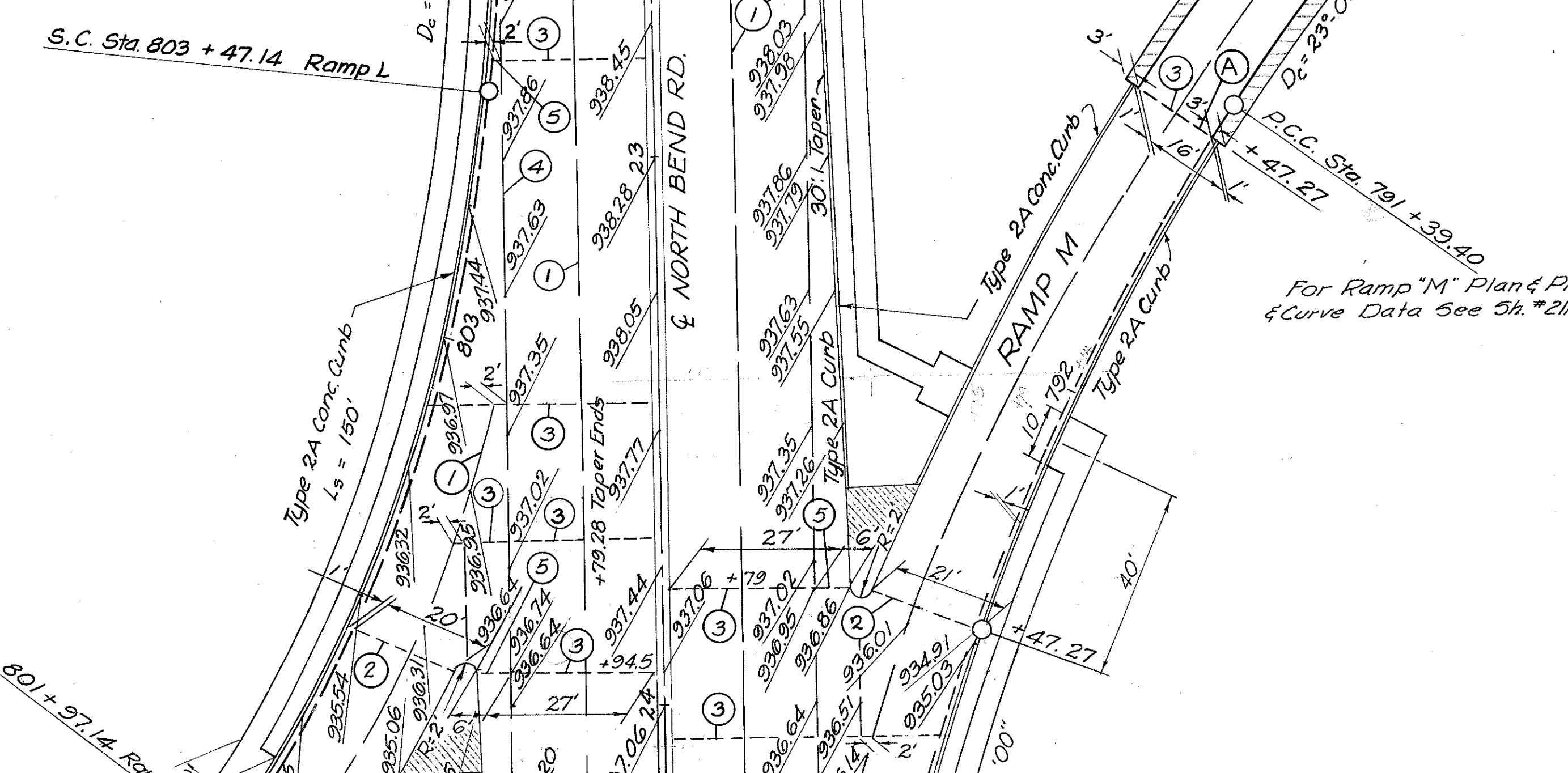
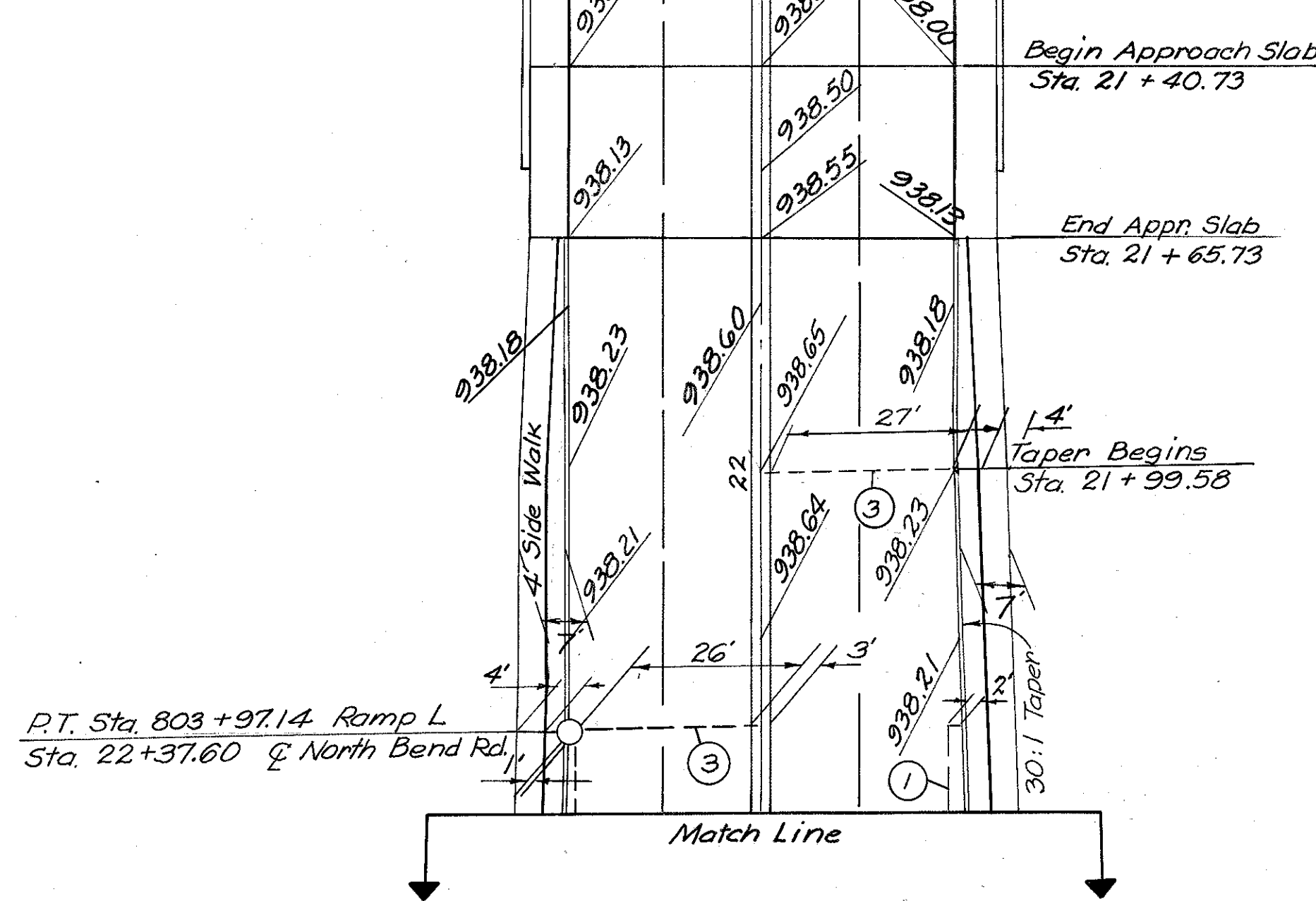
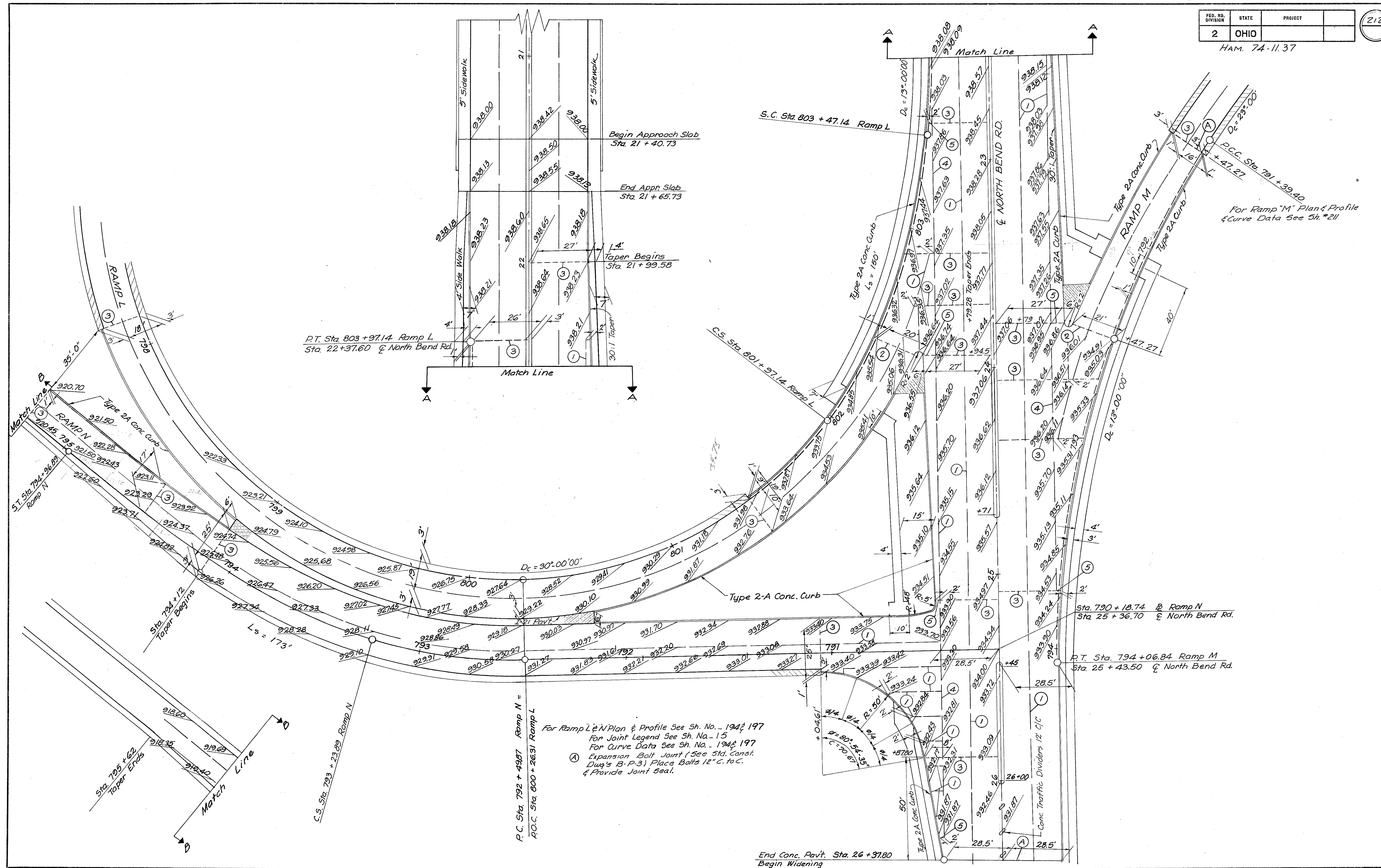
SUPERELEVATION TABLE-RAMP M

Station	P.G. ±	Width on Lt. Side from P.G.	Elevation
From Sta. 783+00 To Sta. 785+00 See 20' Scale Detail Sh. No. 208			
From Sta. 785+00 To Sta. 788+50.53			
Constant	P.G.	16'	P.G.+0.25
788+50.53	923.74	16'	923.99
+75	924.55	16'	924.94
789+00	925.37	16'	925.89
+25	926.17	16'	926.83
+50	926.95	16'	927.74
+75	927.71	16'	928.64
790+00	928.45	16'	929.51
+25	929.17	16'	930.37
+50.53	929.87	16'	931.20
From Sta. 790+50.53 To Sta. 791+47.47			
Constant	P.G.	16'	P.G.+1.33
791+47.47	932.44	16'	933.77
+50	932.51	16.10'	933.85
+75	933.16	17.10'	934.58
792+00	933.81	18.10'	935.32
+25	934.46	19.10'	936.05
+47.47	934.99	20'	936.66
From Sta. 792+47.27 To Sta. 794+06.84 See 20' Scale Detail Sh. No. 212			



NORTH BEND ROAD INTERCHANGE RAMP M

HAM. 74-11.37



For Ramp "M" Plan & Profile & Curve Data See Sh. #21

For Ramp L & N Plan & Profile See Sh. No. - 194 & 197
 For Joint Legend See Sh. No. - 15
 For Curve Data See Sh. No. - 194 & 197
 (A) Expansion Bolt Joint (See Std. Const. Div's B-P-3) Place Bolts 12" c. to c. & Provide Joint Seal.

End Conc. Pav't. Sta. 26 + 31.80
 Begin Widening

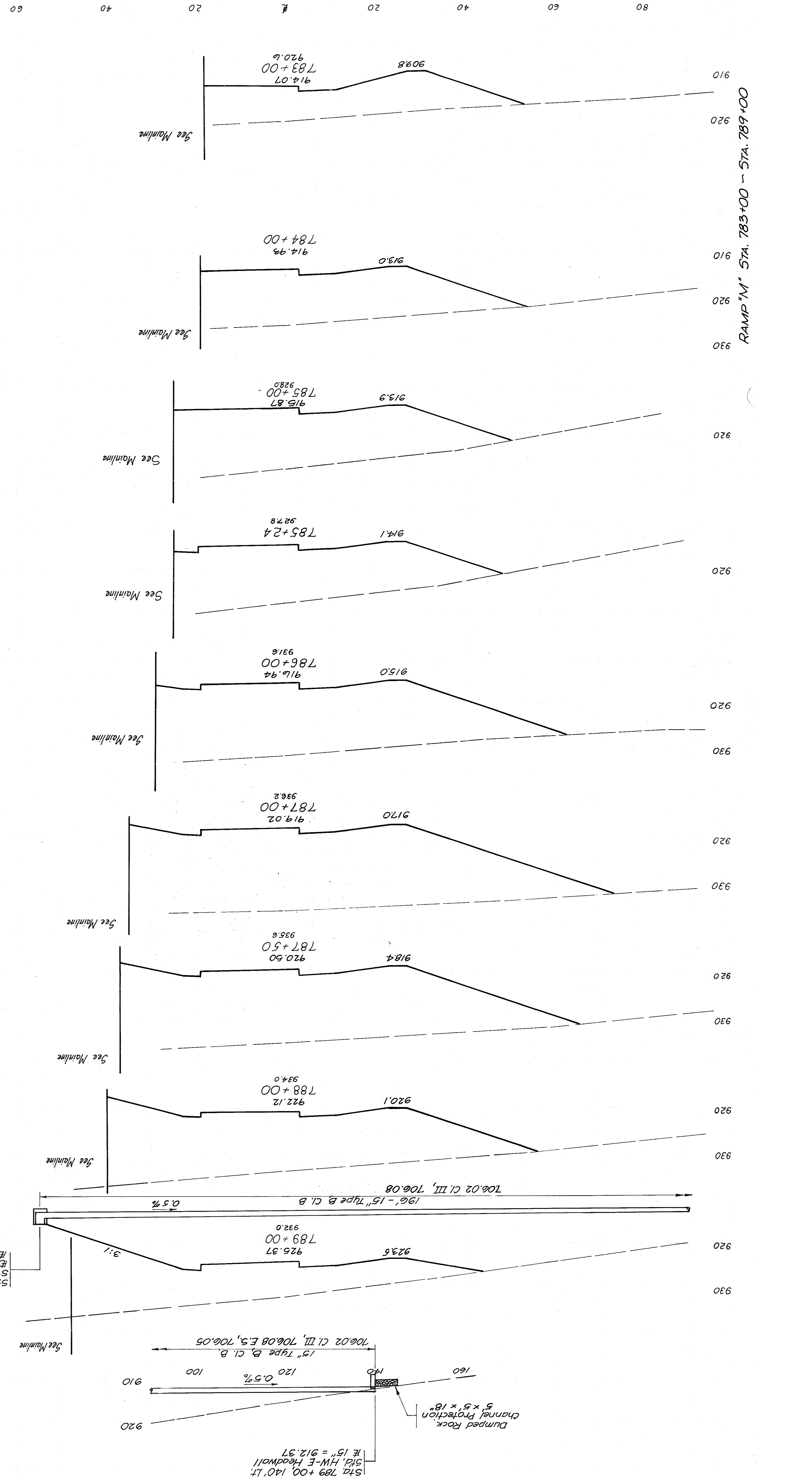
PAVEMENT DETAIL - NORTH BEND ROAD INTERCHANGE - RAMPS L, M, N

END AREA	CUT	FILL	CUT	FILL
470				
80				

STATION	CUT	FILL	CUT	FILL
750				
3445				
2769				
1875				
3180				
1560				
5009				
1145				
2702				
775				
713				
830				
2833				
700				
2167				

HAM-74-11.57

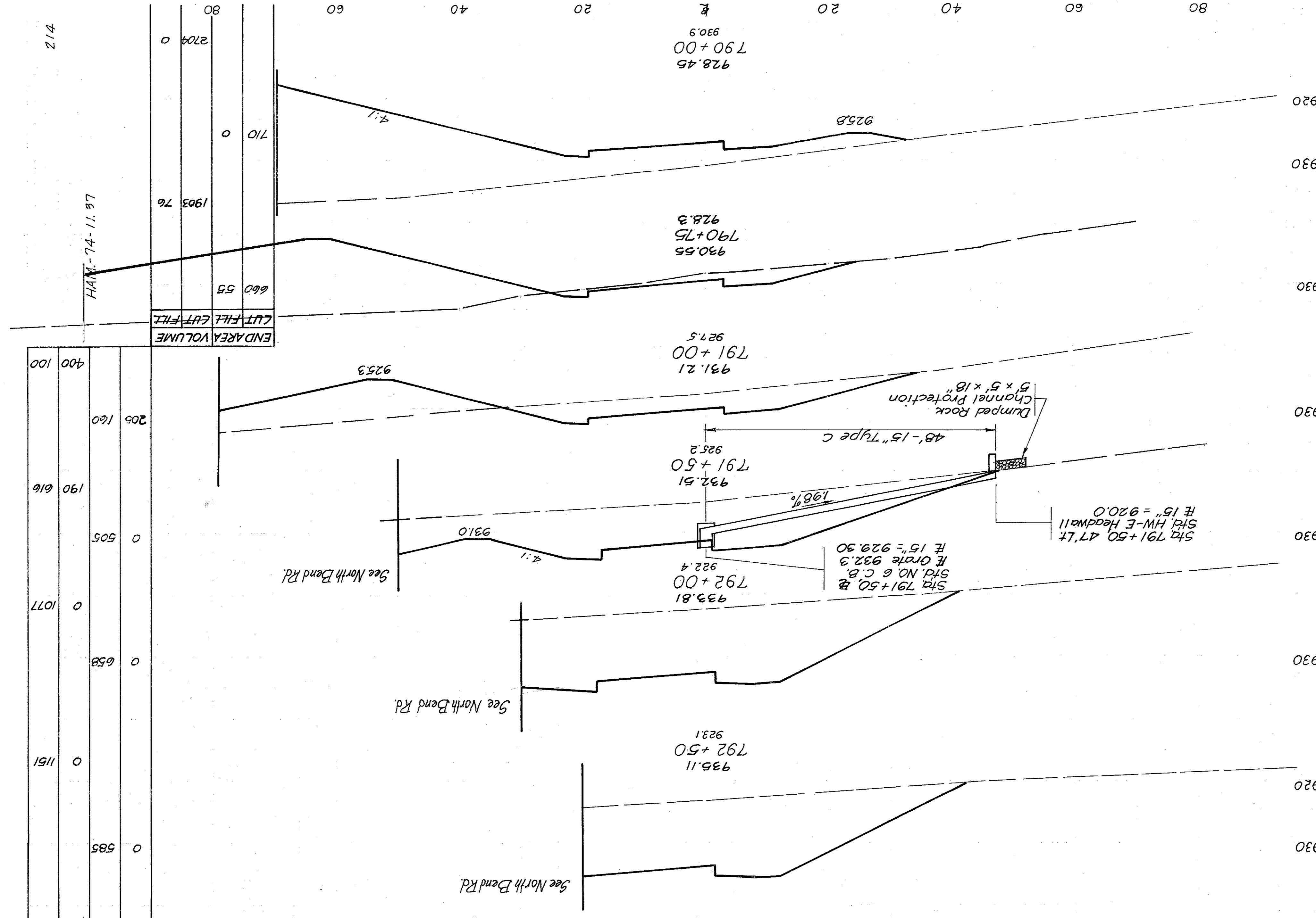
STA. 789+00, 55' Rt.
 STL NO. 5 C.B.
 # Grite = 915.5
 # 15" = 913.00



RAMP "M" STA. 783+00 - STA. 789+00

20 40 60 80

RAMP "M" STA. 790+00 - STA. 792+50



Sta 783+00 to 792+50
Excavation 28010
Embankment 3020

END AREA VOLUME	
FILL	660 55
CUT	1903 76
CUT FILL	710 0
	2704 0
	80

END AREA VOLUME	
FILL	0 585
CUT	0 1151
CUT FILL	0 658
	0 1077
	0 505
	190 616
	205 160
	400 100

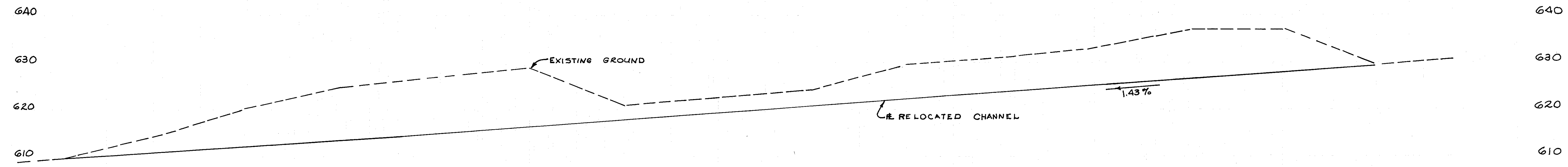
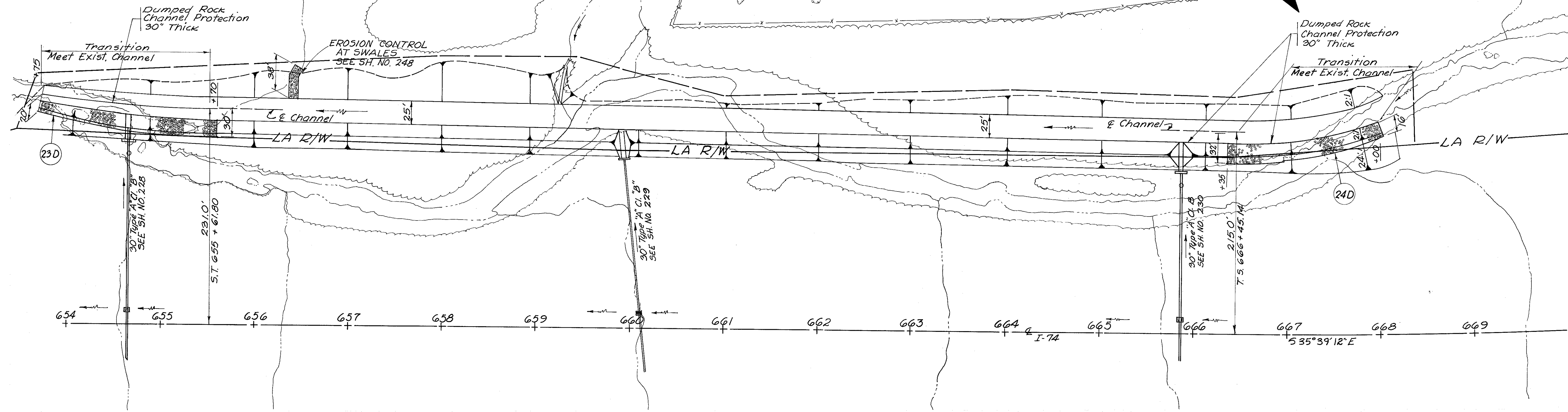
END AREA VOLUME	
FILL	
CUT	

H.M. 74-11-97

712

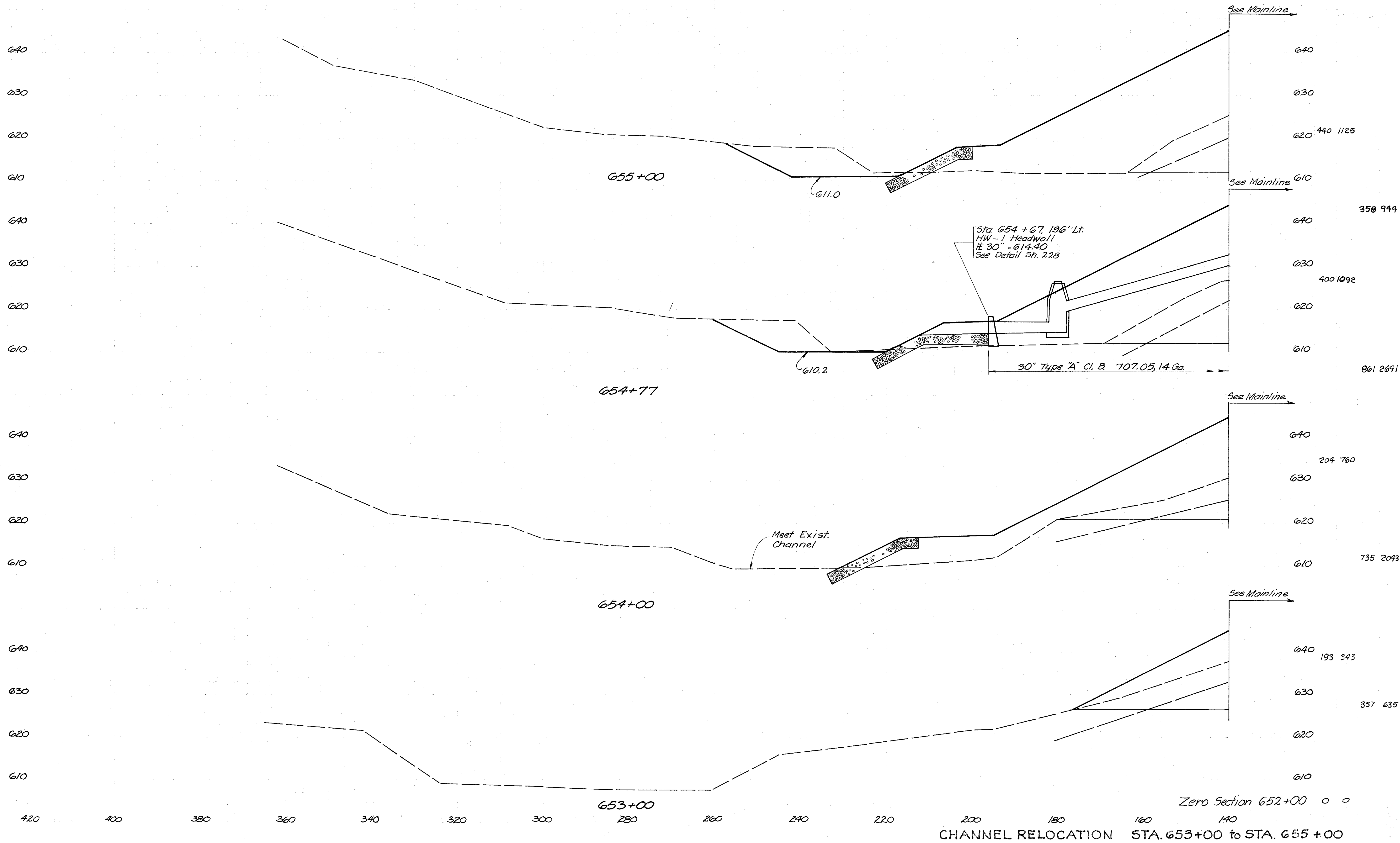
HAM-52-11.37

Note: Dumped Rock to be placed 18" below Channel bottom (See X-Sections)

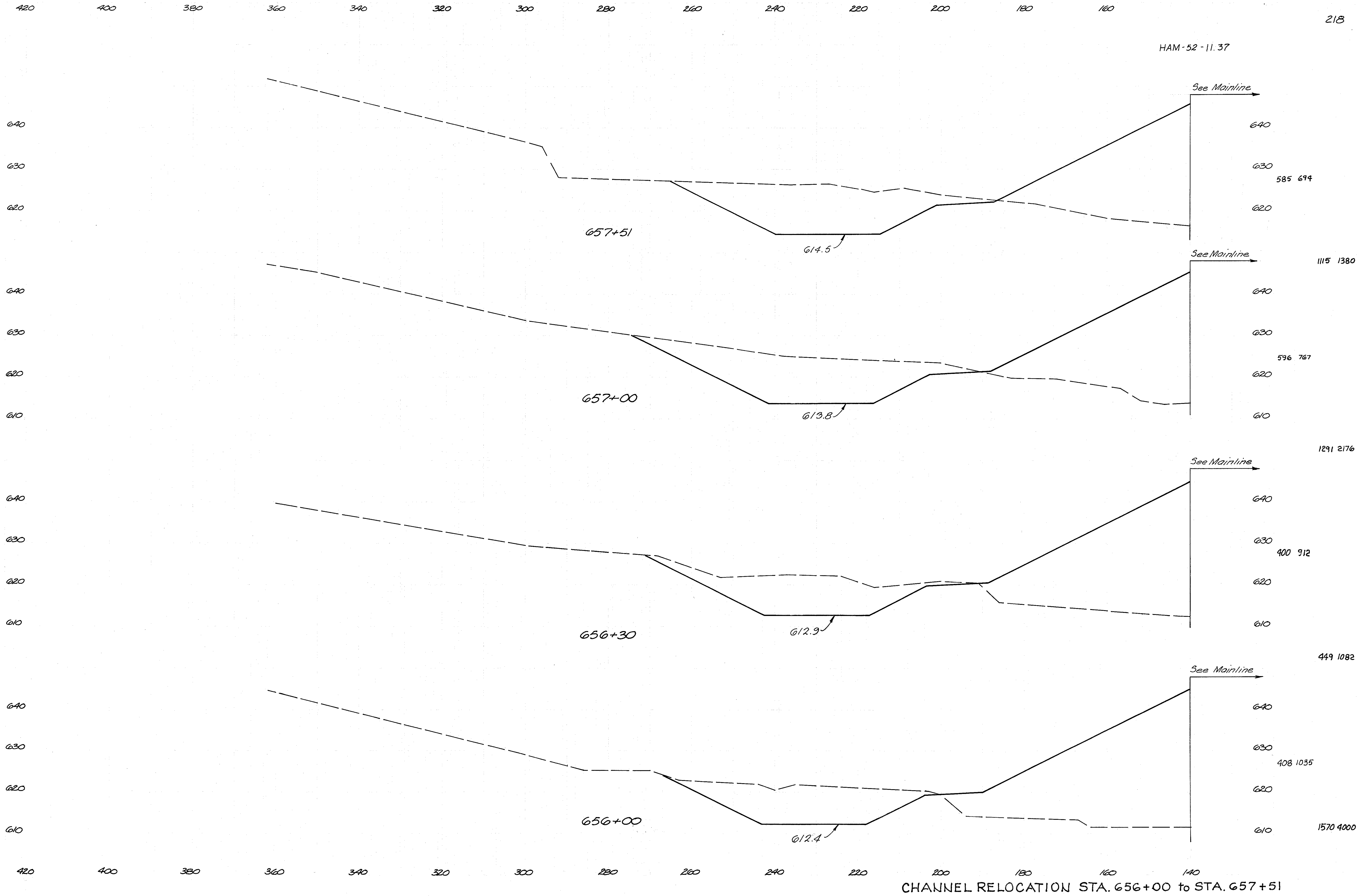


654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 CHANNEL RELOCATION STA. 654+00 to STA. 669+00

HAM -52-11.37

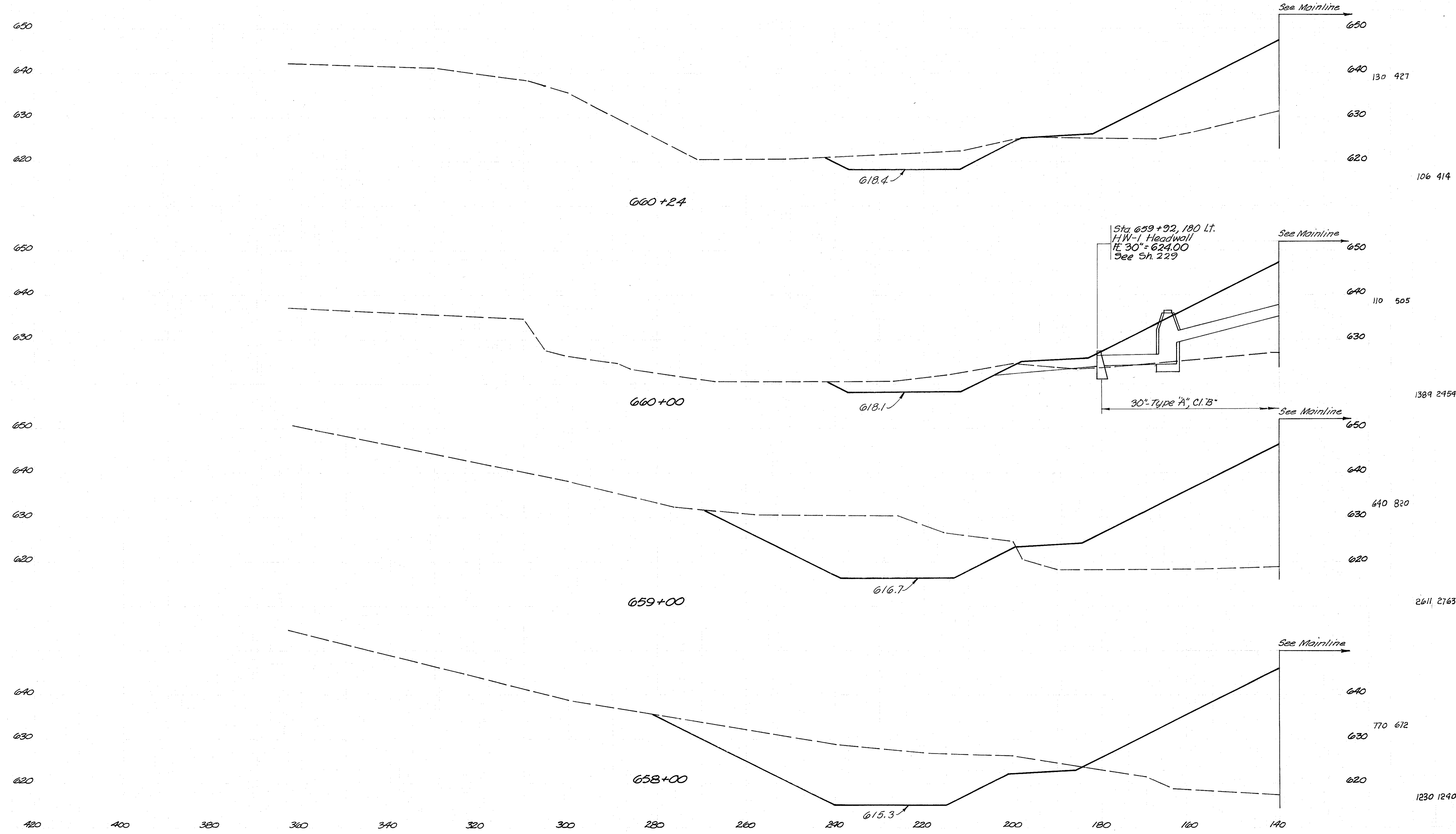


HAM-52-11.37

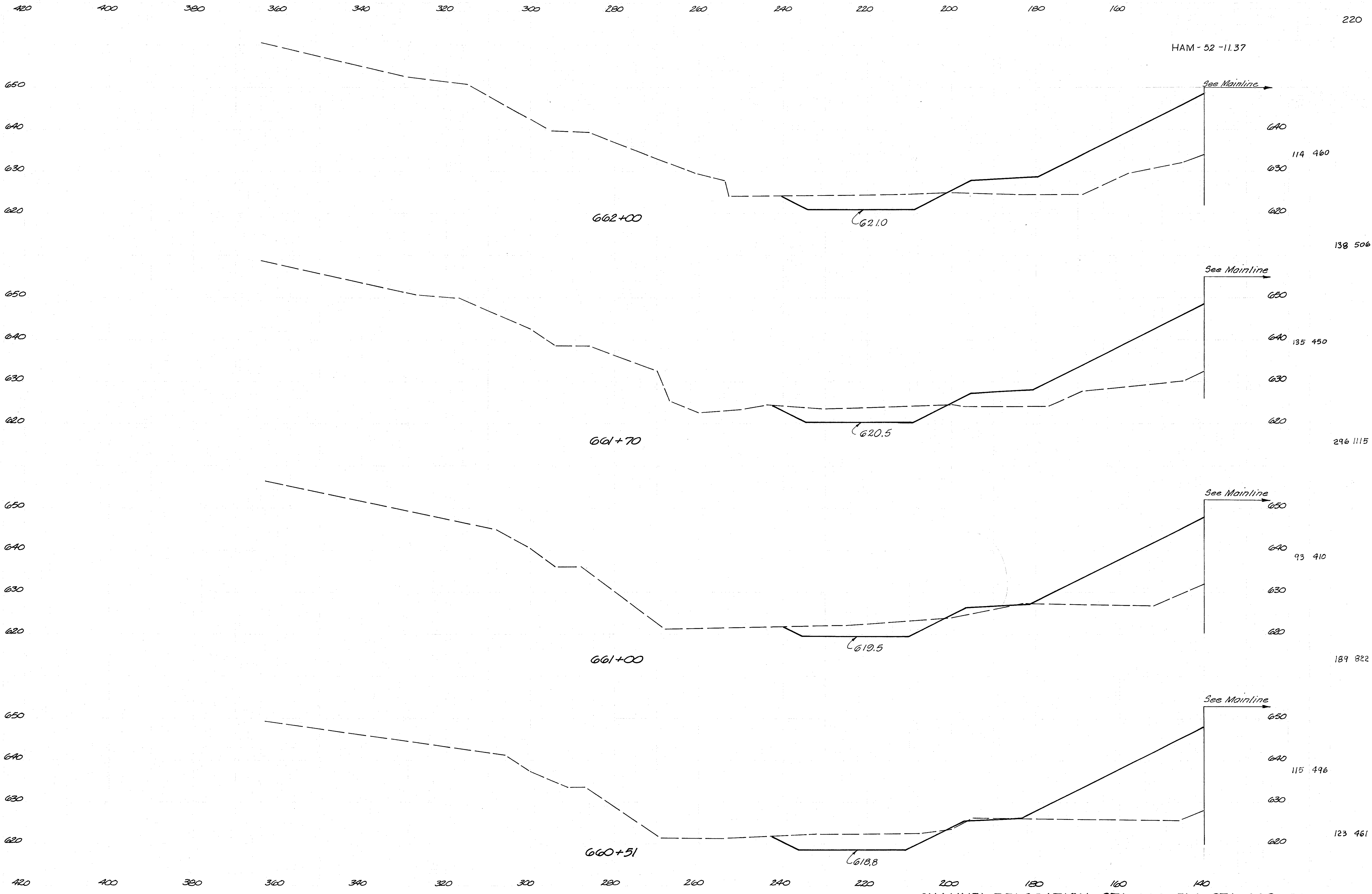


CHANNEL RELOCATION STA. 656+00 to STA. 657+51

HAM-52-11.37

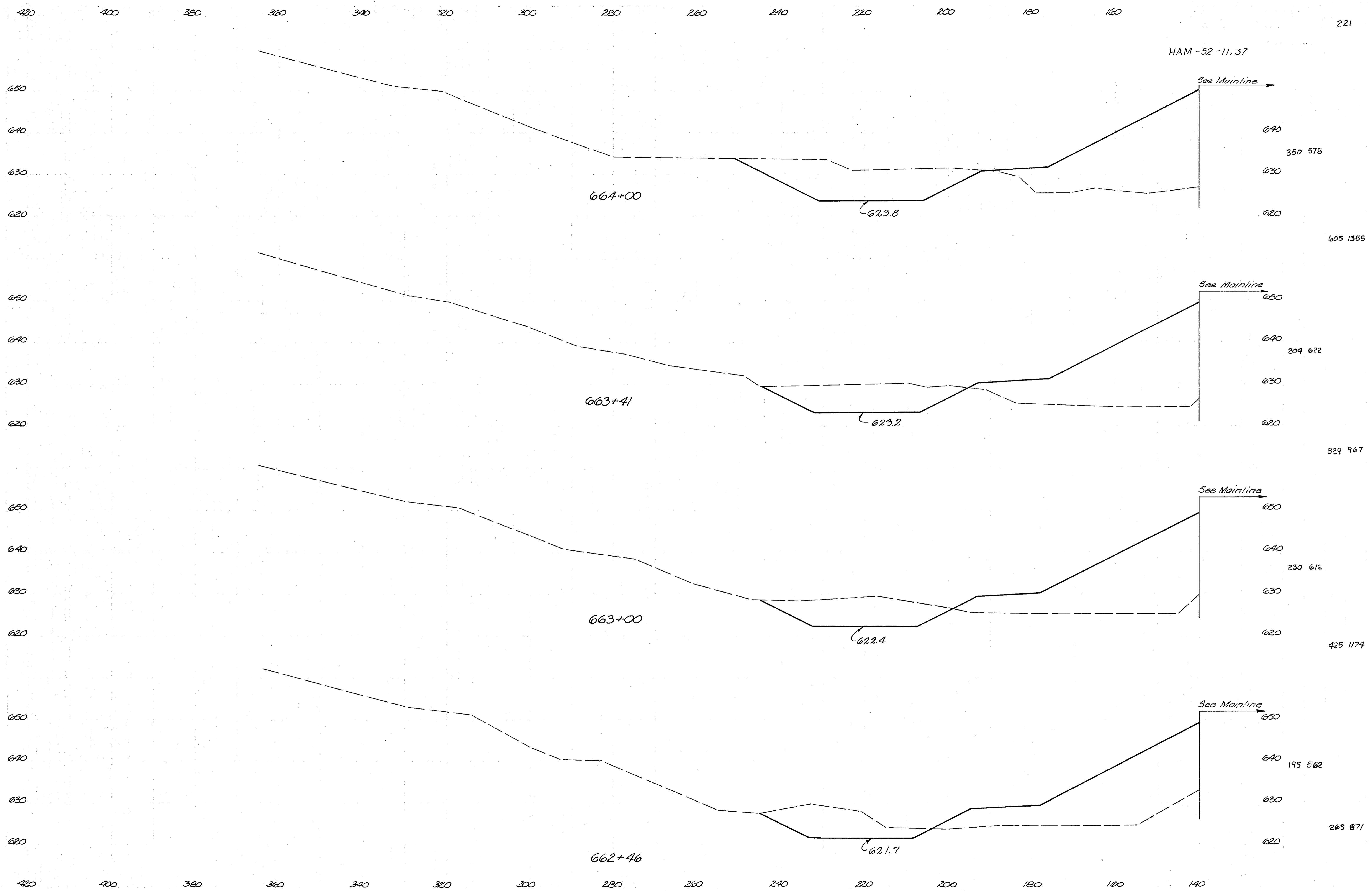


CHANNEL RELOCATION STA. 658+00 to STA. 660+24



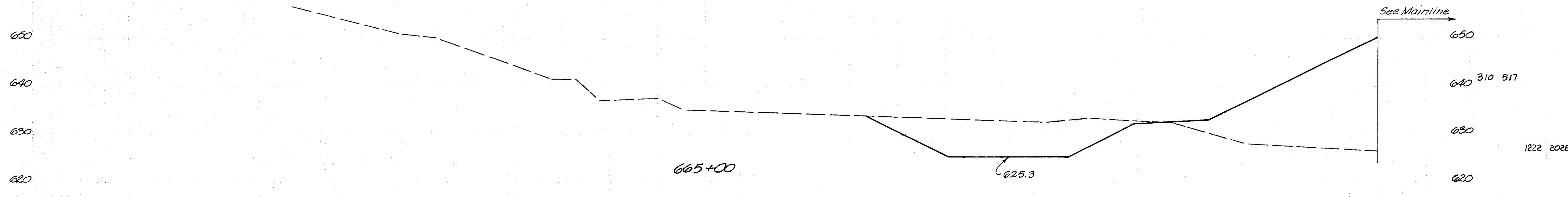
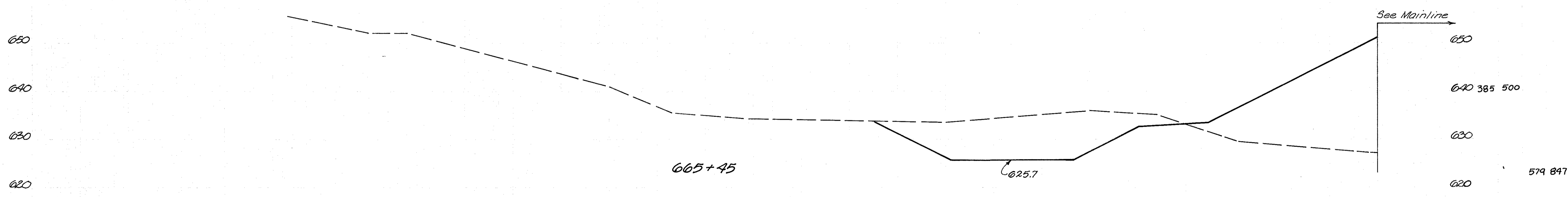
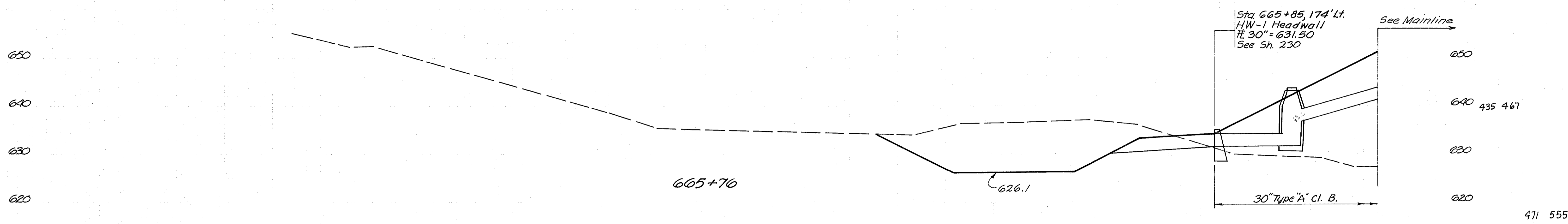
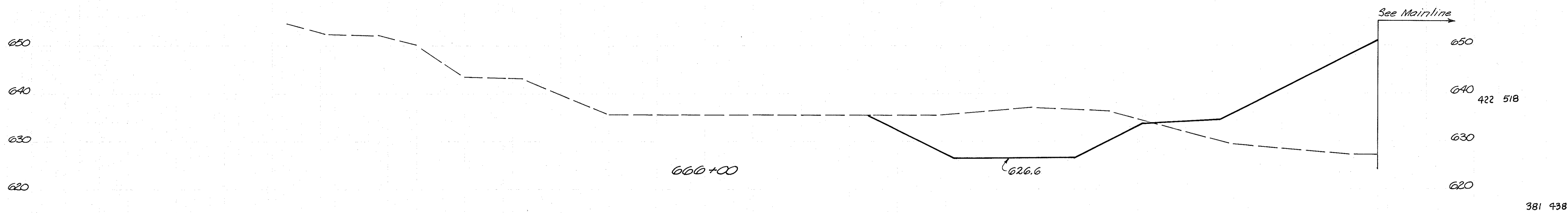
CHANNEL RELOCATION STA. 660+51 to STA. 662+00

HAM-52-11.37



CHANNEL RELOCATION STA. 662+46 to STA. 664+00

HAM-52-11.37



CHANNEL RELOCATION STA. 665+00 to STA. 666+00

HAM-52 -11.37

Zero Section
668+85

STA. 652+00 to 668+85
Excavation 19,583
Embankment 37,198

650
640
630
650
640
630
650
640
630
650
640
630
650
640
630

See Mainline
650 0 0
640 0 156
630 30 166

See Mainline
650 82 317
640
630 192 468

See Mainline
650 264 525
640
630 861 1425

See Mainline
650 400 574
640
630 764 1165

See Mainline
650
640 350 570
630 643 907

668+20

668+00

667+70

667+00

666+45

Meet Exist. Channel

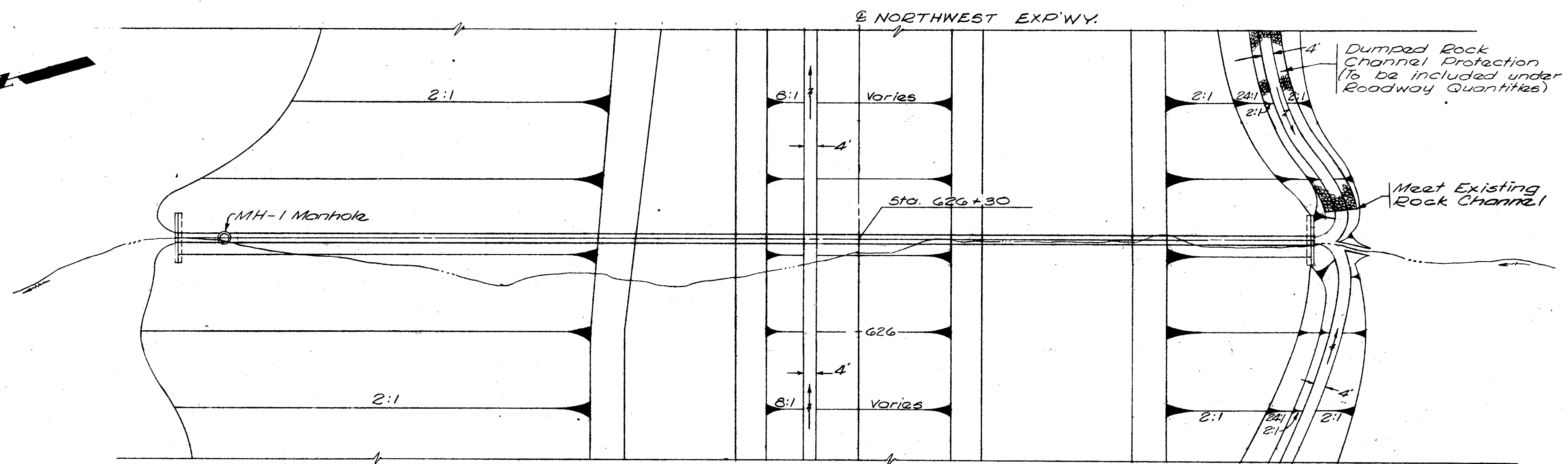
Dumped Rock
Channel Protection
30" Deep

Meet Exist. Channel

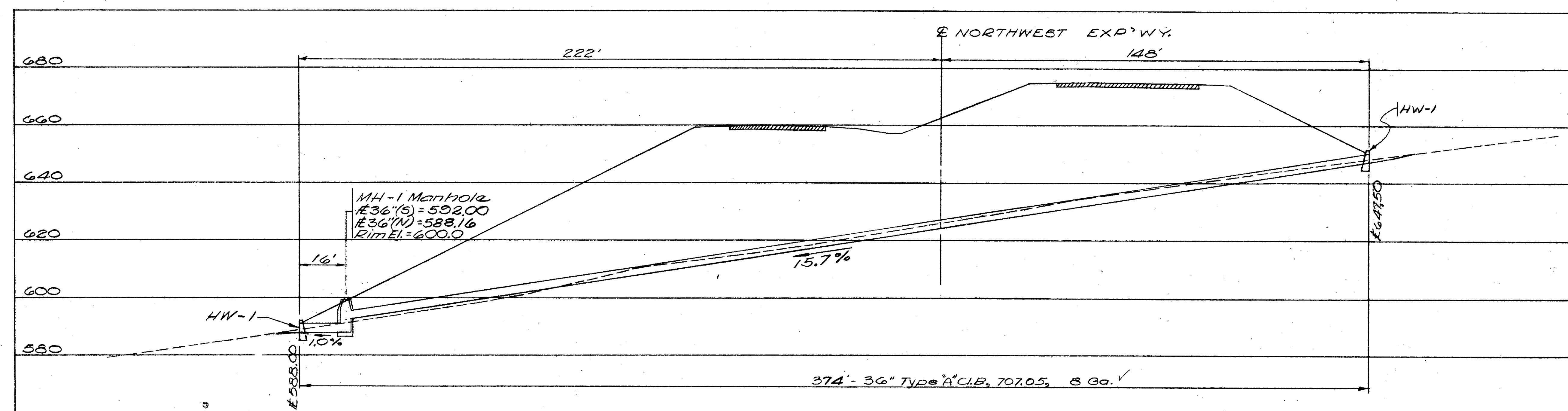
628.1

627.2

CHANNEL RELOCATION STA. 666+45.14 to STA. 668+20



D.A. = 22.51 Ac.
Q₅₀ = 60 c.f.s.



ESTIMATED QUANTITIES

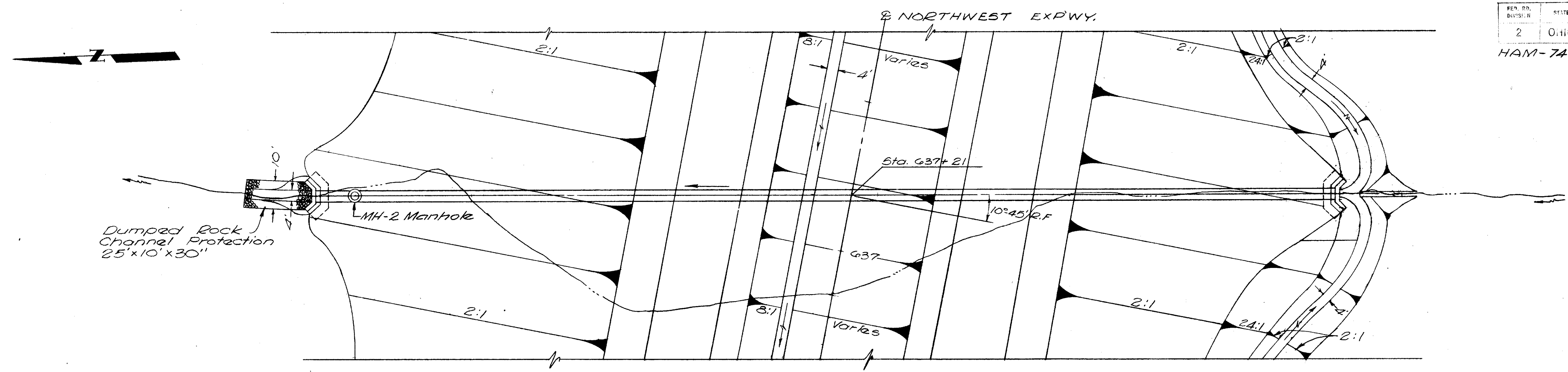
603	36" Pipe, Type A C.I.B., 707.05, 8 Ga.	374 Lin. Ft.
602	Masonry, Cl. C	130 Cu. Yds.
604	MH-1 Manhole	1 Ea.

CULVERT DATA

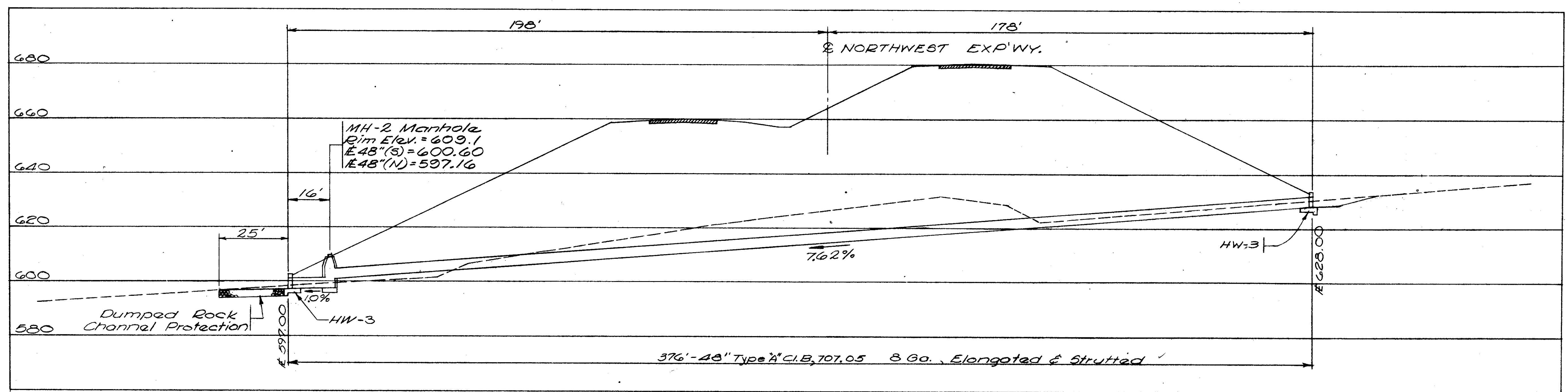
TYPE: Type A C.I.B., 707.05, 8 Ga. with HW-1 Headwalls Lt. & Rt.

SIZE: 36" x 374"

WORK REQ'D.: Construct a 36" Pipe Culvert with HW-1 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan. Construct MH-1 Manhole as shown.



D.A. = 65.8 Ac.
Q50 = 119 c.f.s.



ESTIMATED QUANTITIES

603	48" Pipe Type A C.I.B, 707.05 8 Ga. Elongated and Strutted	376 Lin. Ft.
602	Masonry Cl. C (Headwalls)	17 Cu. Yds.
604	MH-2 Manhole	1 Ea.
601	Dumped Rock Channel Protection	23.2 Cu. Yds.

CULVERT DATA

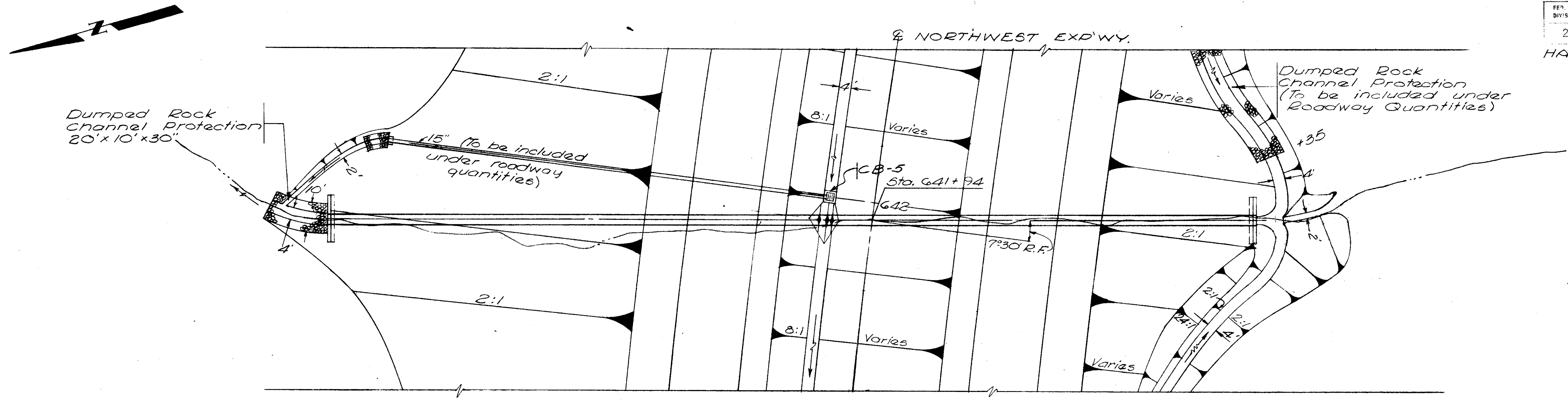
TYPE: Type A C.I.B, 707.05 8 Ga. Elongated and Strutted with HW-3 Headwalls Lt. & Rt.

SIZE: 48" x 376'

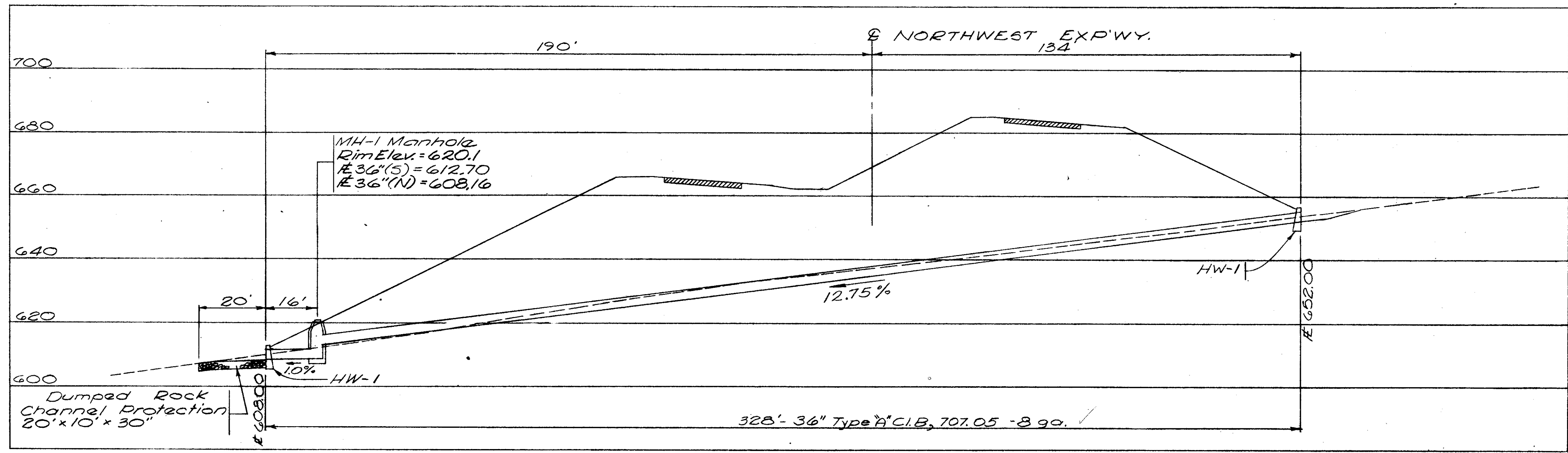
WORK REQ'D.: Construct a 48" Pipe Culvert with HW-3 Headwalls Lt. & Rt. Construct inlet & outlet channels as shown. Place Dumped Rock Channel Protection at outlet as shown.

Construct MH-2 Manhole as shown.

HAM-74-11.37



D.A. = 30 Ac.
Q50 = 791 c.f.s.

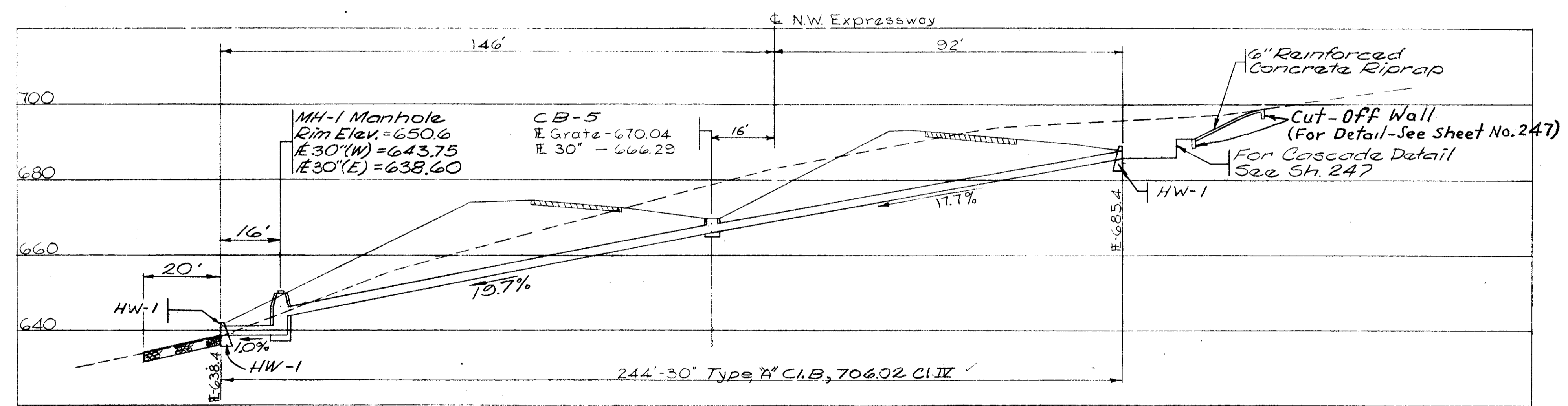
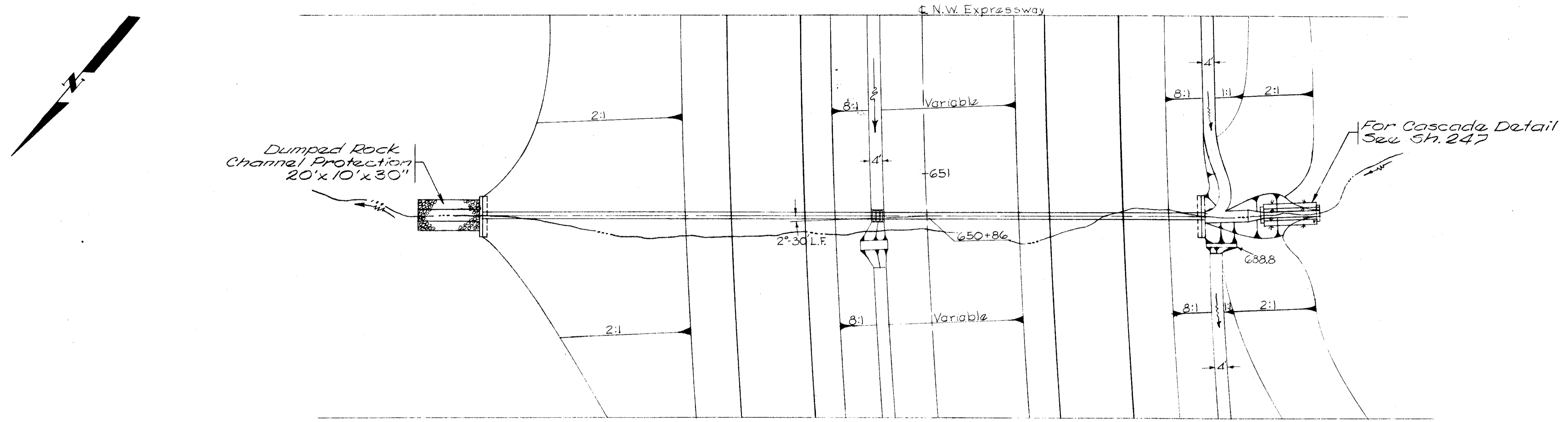


ESTIMATED QUANTITIES
 603 36" Pipe, Type A C.I.B, 707.05 8 ga. 328 Lin. Ft.
 602 Masonry, Cl. C (Headwalls) 13 Cu. Yds.
 601 Dumped Rock Channel Protection 19 Cu. Yds.

CULVERT DATA
 TYPE: Type A C.I.B, 707.05, 8 ga.
 with HW-1 Headwalls
 SIZE: 36" x 328'
 WORK REQ'D: Construct a 36" Pipe
 Culvert with HW-1 Headwalls
 Lt. & Rt. Construct Inlet &
 Outlet Channels as per plan.
 Place Dumped Rock Channel
 Protection at
 outlet as shown.

Scale: 1" = 20'

PIPE CULVERT - STA. 641+94



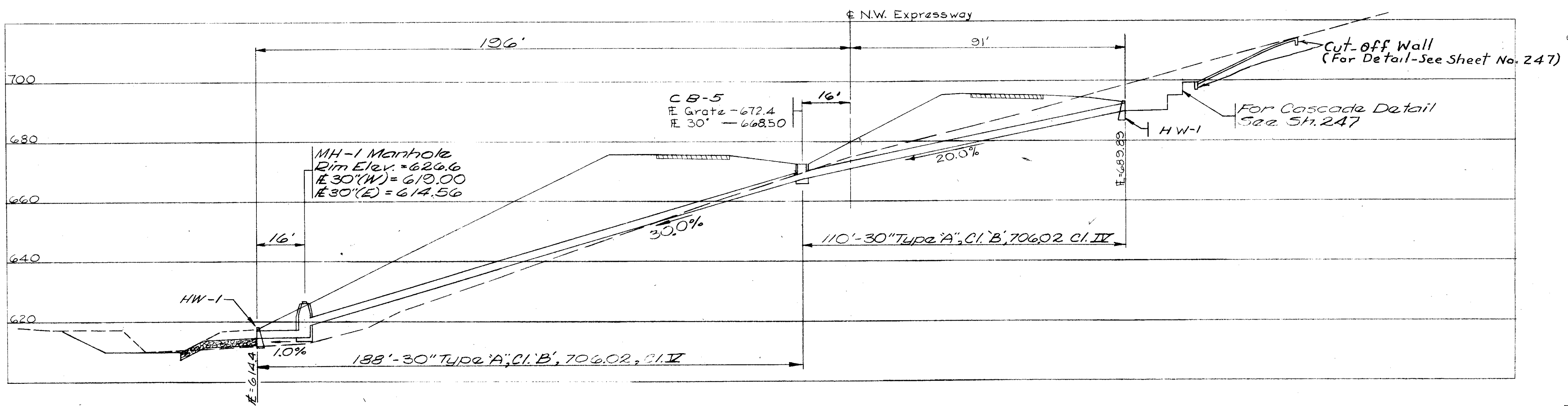
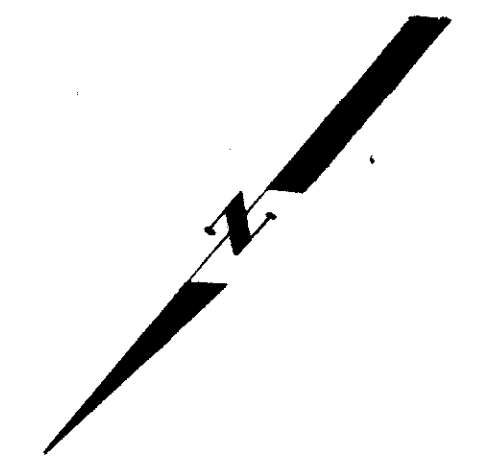
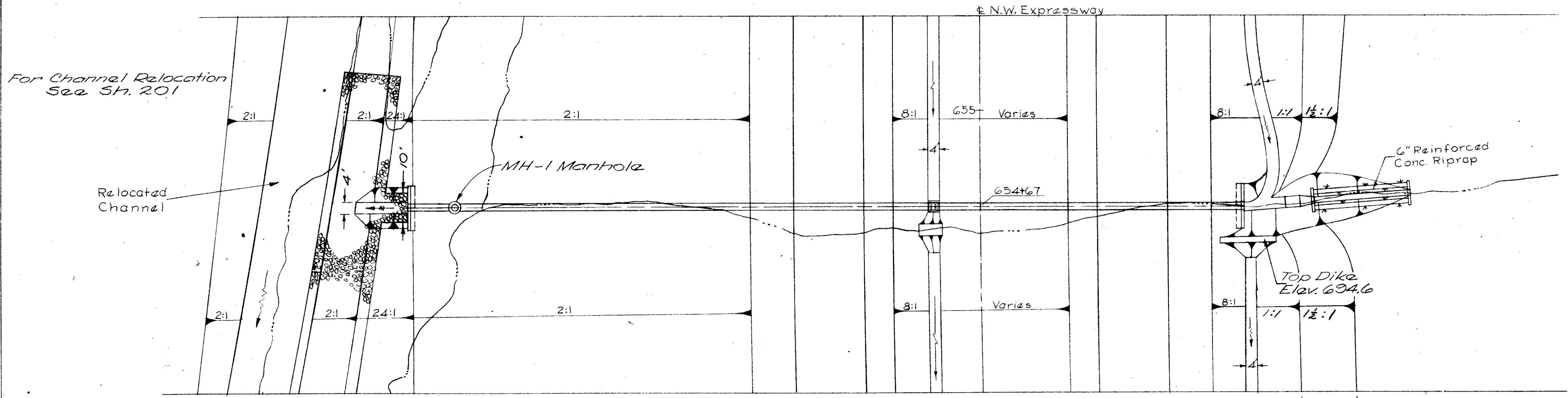
ESTIMATED QUANTITIES

603 30" Pipe Type A' C.I.B, 70602 C.I.IV	244 Lin.Ft.
602 Masonry, C.I.C, Conc.	9.4 Cu.Yds.
660 Sodding	7 Sq.Yds.
604 CB-5 Catch Basin	1 Each
601 Dumped Rock Channel Protection	185 Cu.Yds.
601 6" Reinforced Conc. Rip Rap	9.5 Sq.Yds.

CULVERT DATA

TYPE: 30" Pipe, Type A' C.I.B, 70602 C.I.IV with HW-1 Lt. & Rt.
 SIZE: 30" x 244'
 WORK REQ'D: Construct a pipe culvert with HW-1 Headwalls left & right.
 Construct end sills and cutoff walls as shown.
 Excavate inlet & outlet channels as shown.
 Place 6" Reinforced Conc. Rip Rap & Dumped Rock channel protection as shown.
 Place CB-5 Catch Basin as shown.
 Place Cascade as per detail.

D.A.	-	5.0 Ac.
Q ₅₀	-	28.0 cfs.



DA = 6.3 Ac.
Q₅₀ = 30.5 c.f.s.

ESTIMATED QUANTITIES

601 6" Reinforced Concrete Riprap	17	Sq. Yds.
602 Masonry, Cl. C, (Headwalls)	24	Cu. Yds.
603 30" Pipe, Type A, Cl. B, 706.02, Cl. IV	188	Lin. Ft.
604 30" Pipe, Type A, Cl. B, 706.02, Cl. IV	110	Lin. Ft.
604 MH-1 Manhole	1	Ea.
604 CB-5 Catch Basin	1	Ea.
660 Sodding	13	Sq. Yds.
667 Jute Matting	125	Sq. Yds.

Note: Dumped Rock Channel Protection To Be Included In Channel Relocation Quantities.

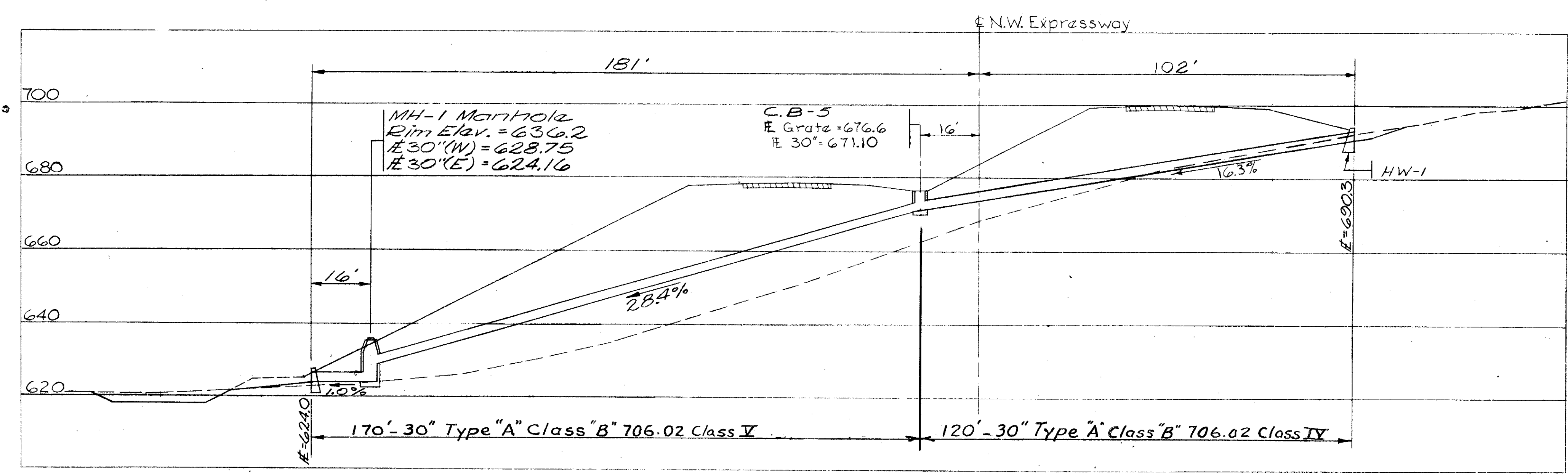
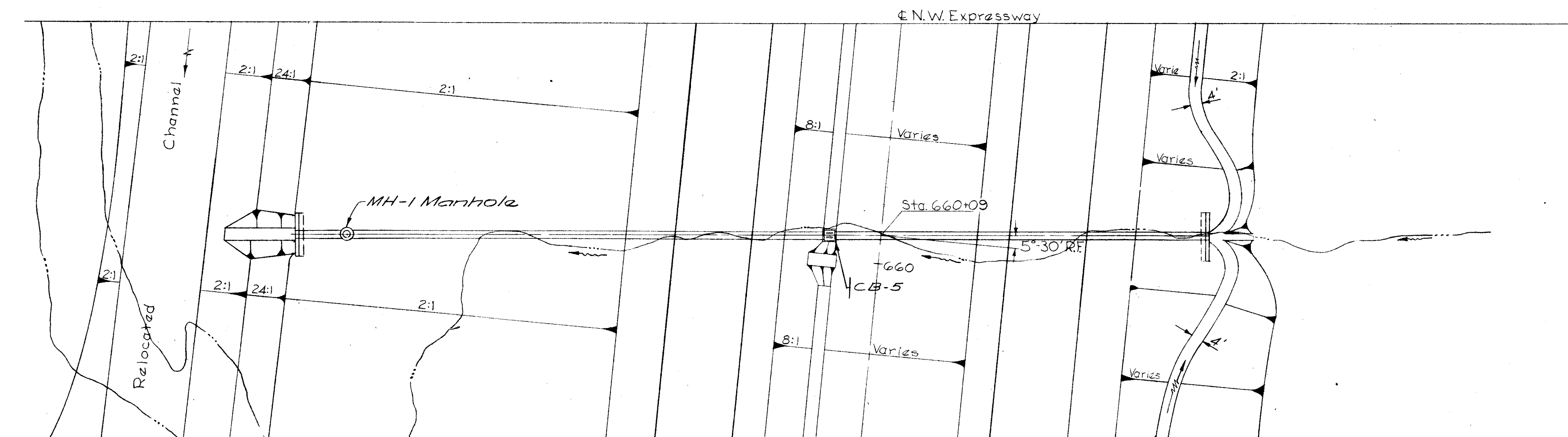
CULVERT DATA

TYPE: Type 'A', Cl. B, 706.02, Cl. IV with HW-1 Headwall Lt. & Rt. Type 'A', Cl. B, 706.02, Cl. IV with HW-1 Headwall Rt.

SIZE: 30" x 188'; 30" x 110'

WORK REQ'D.: Construct a 30" Pipe Culvert with HW-1 Headwalls Lt. & Rt. Construct CB-5 Catch Basin & MH-1 Manhole as shown. Construct Cascade as per detail. Construct inlet & outlet channels as per plan. Place Jute Matting as per detail.

Scale: 1"=20'

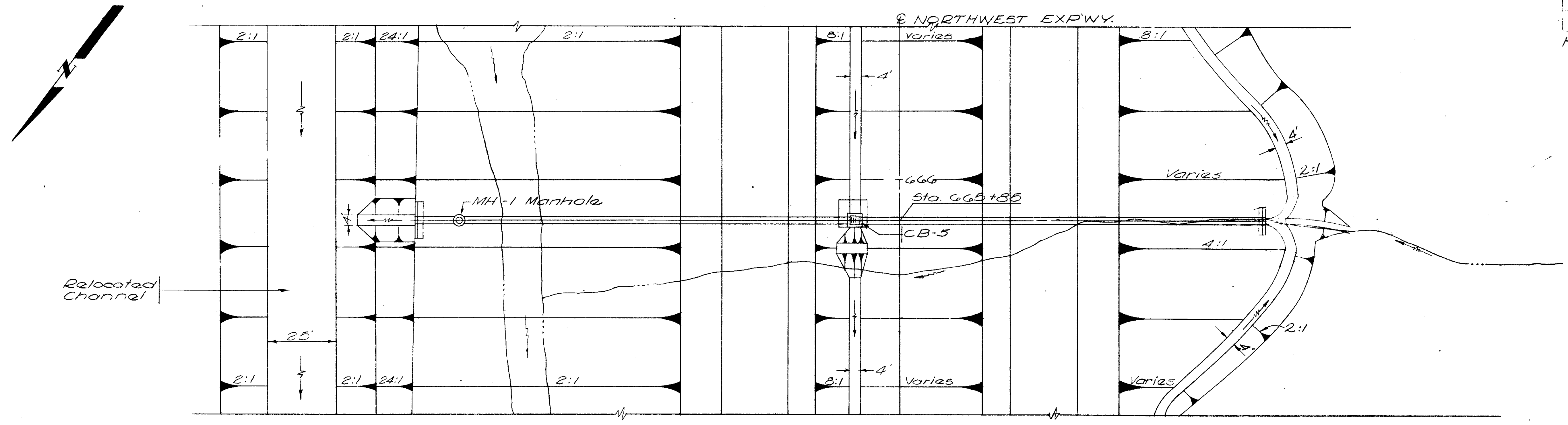


DA. — 93Ac.
Q₅₀ — 339cfs

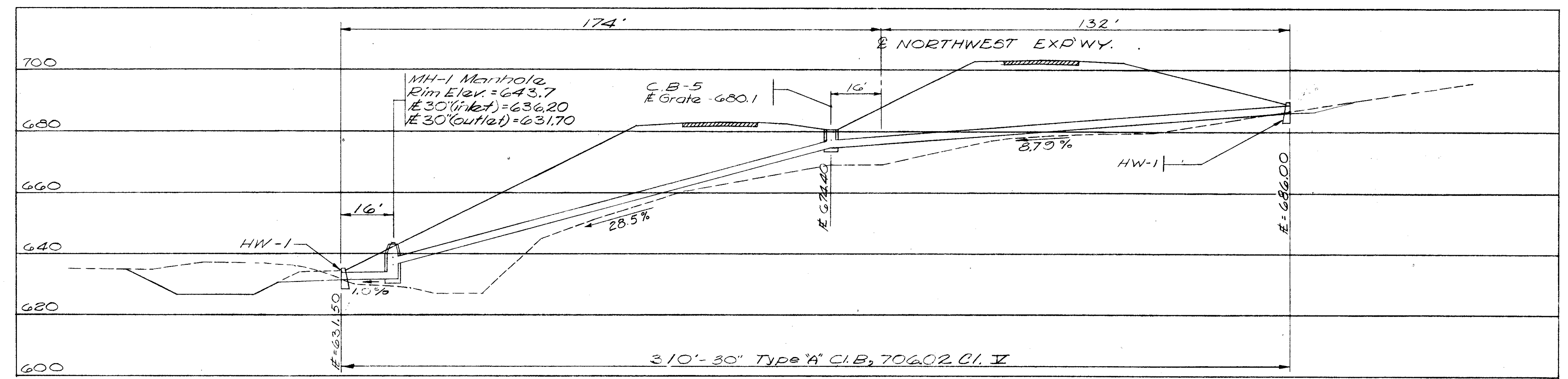
ESTIMATED QUANTITIES

602	30" Pipe, Type "A", Cl. "B", 706.02 Cl. IV	120 Lin. Ft.
602	Masonry, Cl. "C", (Headwalls)	9.4 Cu. Yds.
603	30" Pipe, Type "A", Cl. "B", 706.02, Cl. V	170 Lin. Ft.
604	MH-1 Manhole	1 Ea.
604	CB-5 Catch Basin	1 Ea.
667	Jute Matting	125 Sq. Yds.

CULVERT DATA
706.02 Cl. IV
TYPE: Type "A", Cl. "B", 706.02 Cl. V, with HW-1 Lt. & Rt.
SIZE: 30" x 120' (Class IV) and 30" x 170' (Class V)
WORK REQ.: Construct a 30" Pipe Culvert with HW-1 Headwalls Lt. & Rt. Construct a MH-1 Manhole & CB-5 Catch Basin as shown. Construct inlet & outlet channels as per plan. Place Jute Matting as per detail.



D.A. = 12.8 Ac.
Q₅₀ = 42.5 c.f.s.



ESTIMATED QUANTITIES

603 30" Pipe, Type "A", Cl. B, 70602 Cl. V	310 Lin. Ft.
602 Masonry, Cl. C (Headwalls)	24 Cu. Yds.
604 MH-1 Manhole	1 Each
604 C.B-5 Catch Basin	1 Each
667 Jute Matting	125 Sq. Yds.

CULVERT DATA

TYPE: Type "A", Cl. B, 70602 Cl. V with HW-1 Headwalls Lt. & Rt.

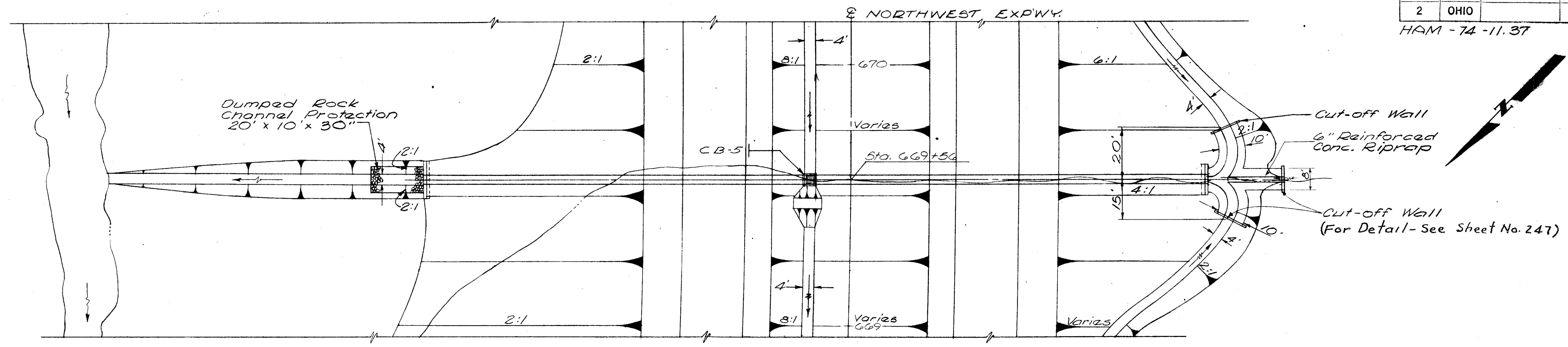
SIZE: 30" x 310'

WORK REQ'D.: Construct a 30" Pipe Culvert with HW-1 Headwalls Lt. & Rt. Construct CB-5 Catch Basin & MH-1 Manhole as shown. Construct inlet & outlet channels as per plan.

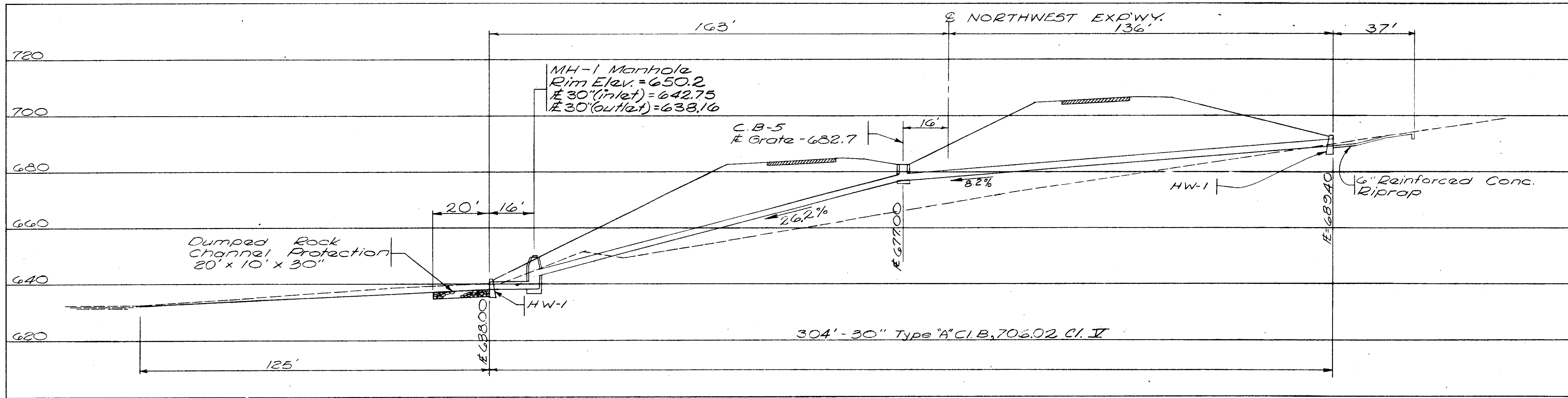
Place Jute Matting as per detail.

Scale: 1"=20'

HAM - 74 - 11.37



D.A. = 12.4 Ac.
Q50 = 39.5 c.f.s.



ESTIMATED QUANTITIES

603	30" Pipe, Type A C.I.B, 706.02 Cl. II	304	Lin. Ft.
602	Masonry, Cl. C (Headwalls)	24	Cu. Yds.
604	MH-1 Manhole	1	Each
604	C.B.-5 Catch Basin	1	Each
601	Dumped Rock Channel Protection	185	Cu. Yds.
601	6" Reinforced Concrete Riprap	52	Sq. Yds.
203	Excavation not Including Embankment Construction	475	Cu. Yds.
667	Jute Matting	125	Sq. Yds.

CULVERT DATA

TYPE : CB-5 Catch Basin & MH-1 Manhole with Type A, Cl. B, 706.02 Cl. II Pipe with HW-1 Headwalls Lt. & Rt.
 SIZE : 30" x 30'
 WORK REQ'D. : Construct a CB-5 Catch Basin & MH-1 Manhole with a 30" Pipe with HW-1 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan. Place 6" Reinforced Concrete Riprap at inlet & Dumped Rock Channel Protection at outlet as per detail. Place Jute Matting as per detail.

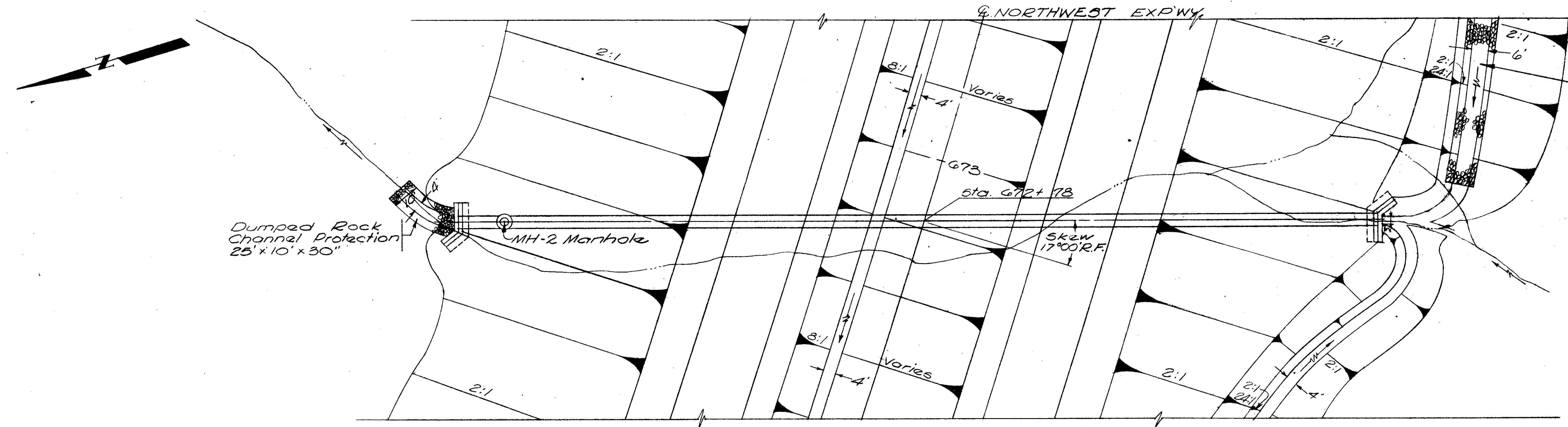
Zero Section	Cut (S.F.) Area	Cut (CY) Volume
HW + 125	0	26.7
HW + 35	16	20.8
HW + 0	16	
Total		47.5

Scale 1" = 10'

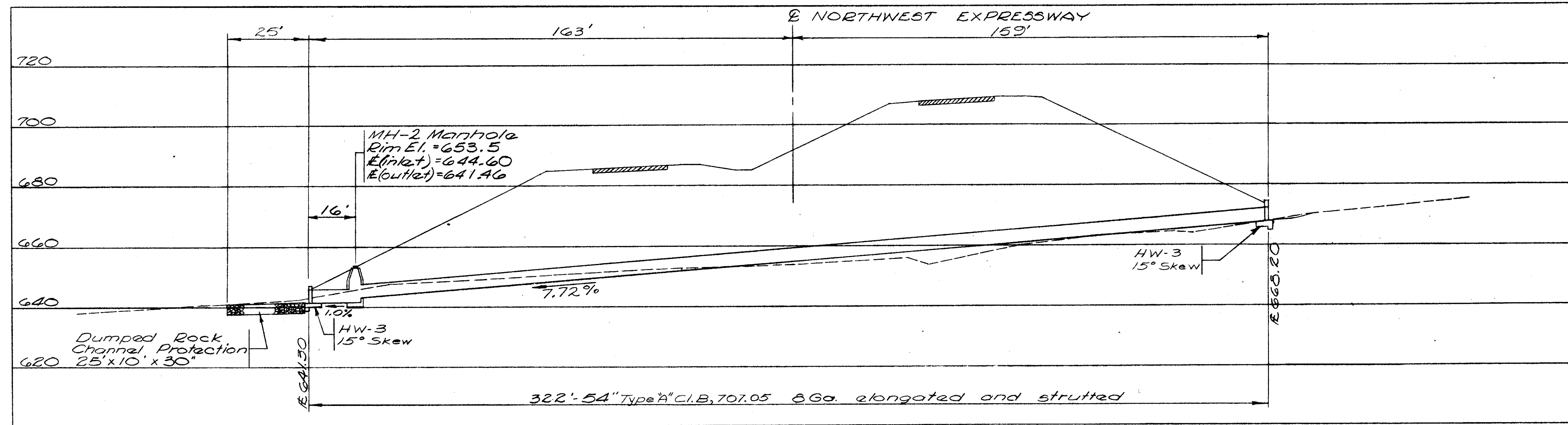
Scale : 1" = 20'

HAM-74-11.37

Dumped Rock Channel Protection To Be Included In Rdwy. Quantities



D.A. = 95 Ac.
Q50 = 157 c.f.s.



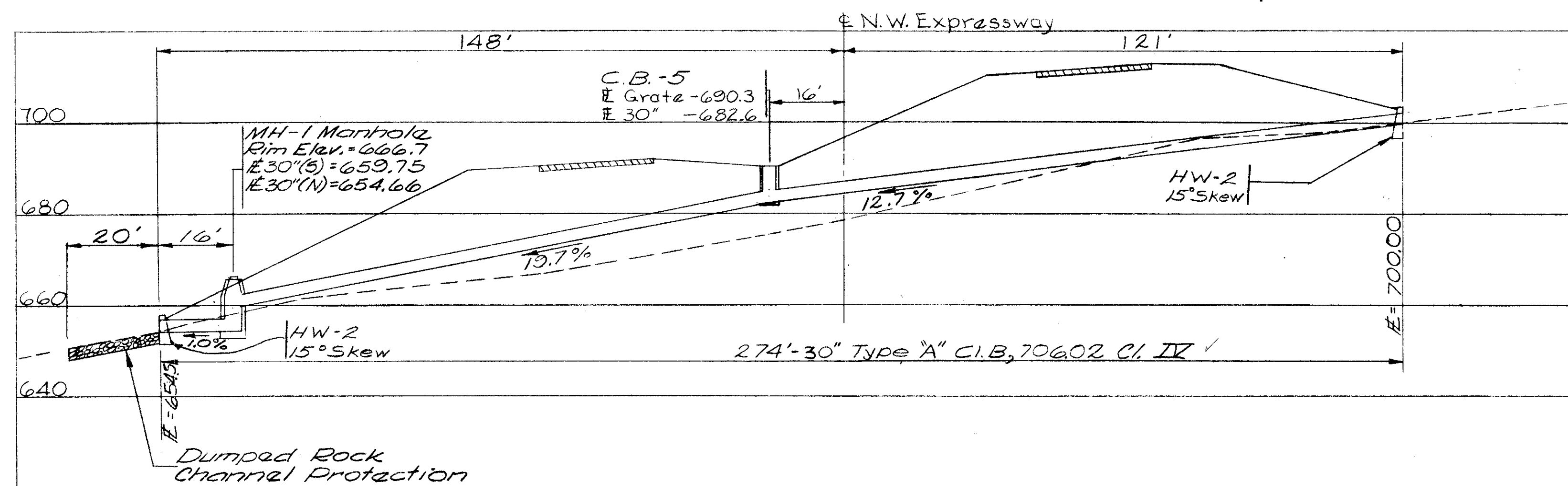
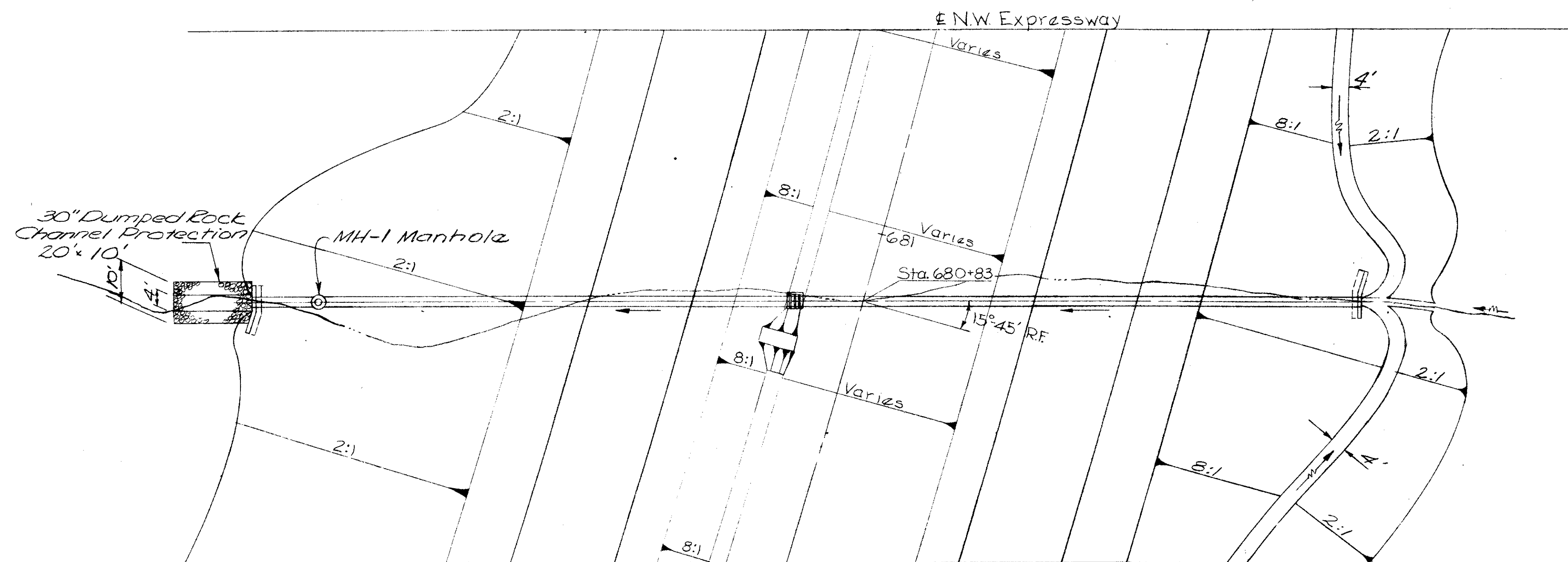
ESTIMATED QUANTITIES

603	54" Pipe Type A C.I.B. 707.05, 8 Ga. elongated & strutted	322	Lin. Ft.
602	Masonry C.I.C.	24.4	Lin. Ft.
601	Dumped Rock Channel Protection	23	Cu. Yds.
604	MH-2 Manhole	1	Each

CULVERT DATA
 TYPE : Type A C.I.B. 707.05, 8 Ga. elongated & strutted with HW-3 Lt. & Rt.
 SIZE : 54" x 322'
 WORK REQ'D. : Construct a 54" Pipe Culvert, shop elongated & strutted, with HW-3 Lt. & Rt. Construct inlet & outlet channels as per plan.

Dumped Rock Channel with End Sill at outlet as per detail. Construct MH-2 Manhole as shown.

Scale : 1" = 20'



D.A. - 10.7 Ac.
Q₅₀ - 354 cfs

ESTIMATED QUANTITIES

- 603 30" Pipe Type 'A' CI. B, 70602 CI. IV
- 602 Masonry CI. C
- 604 MH-1 Manhole
- 601 Dumped Rock Channel Protection
- 604 C.B.-5 Catch Basin
- 667 Jute Matting

- 274' Lin. Ft.
- 7.6 Cu. Yd.
- 1 Each
- 18.5 Cu. Yd.
- 1 Each
- 125 Sq. Yd.

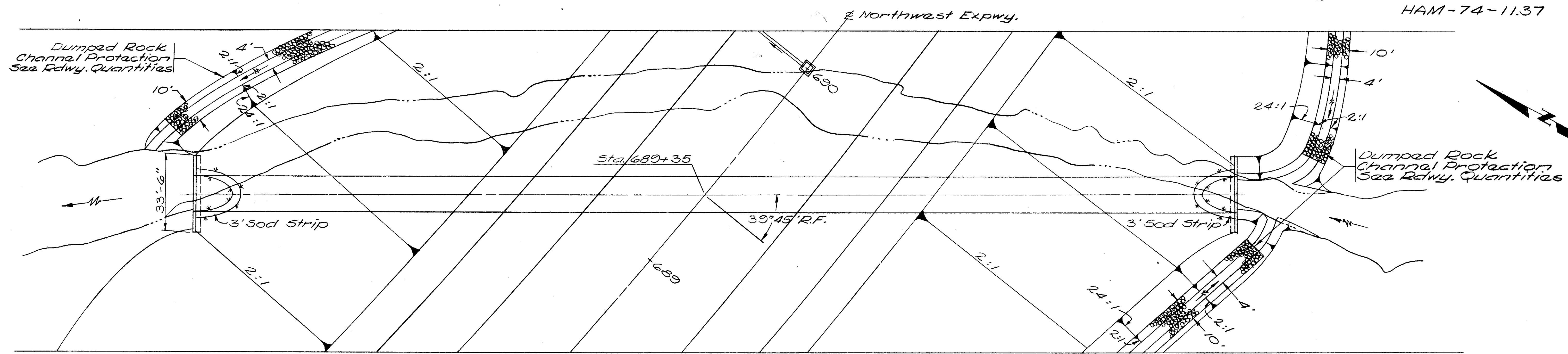
CULVERT DATA

TYPE: Type 'A' CI. B, 70602 CI. IV with HW-2 Lt & Rt.
 SIZE: 30" x 274'
 WORK REQ'D: Construct a 30" Pipe Culvert with HW-2 Lt & Rt.
 Place Dumped Rock Channel Protection as shown.
 Place C.B.-5 Catch Basin & MH-1 Manhole as shown.

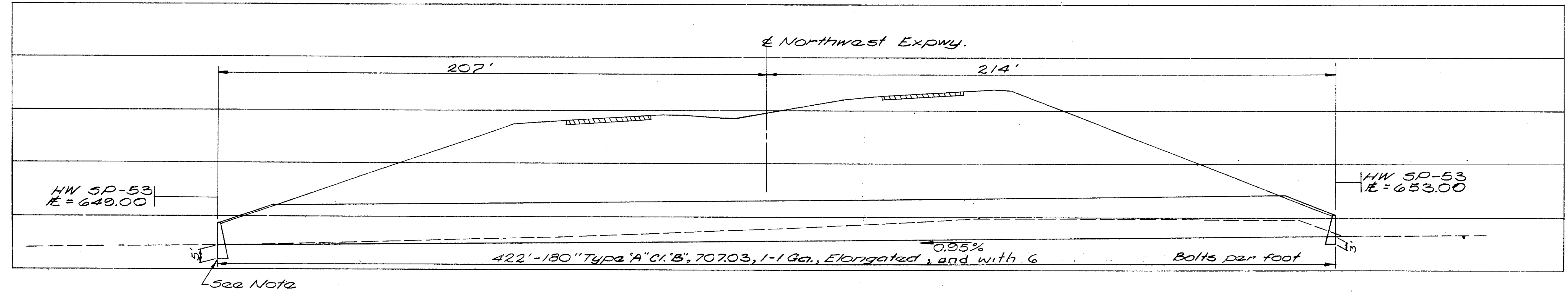
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FED. RD. DIVISION	STATE	PROJECT	234
2	OHIO		

HAM-74-11.37



D.A. = 2470 Ac.
Q₅₀ = 2300 c.f.s.



ESTIMATED QUANTITIES

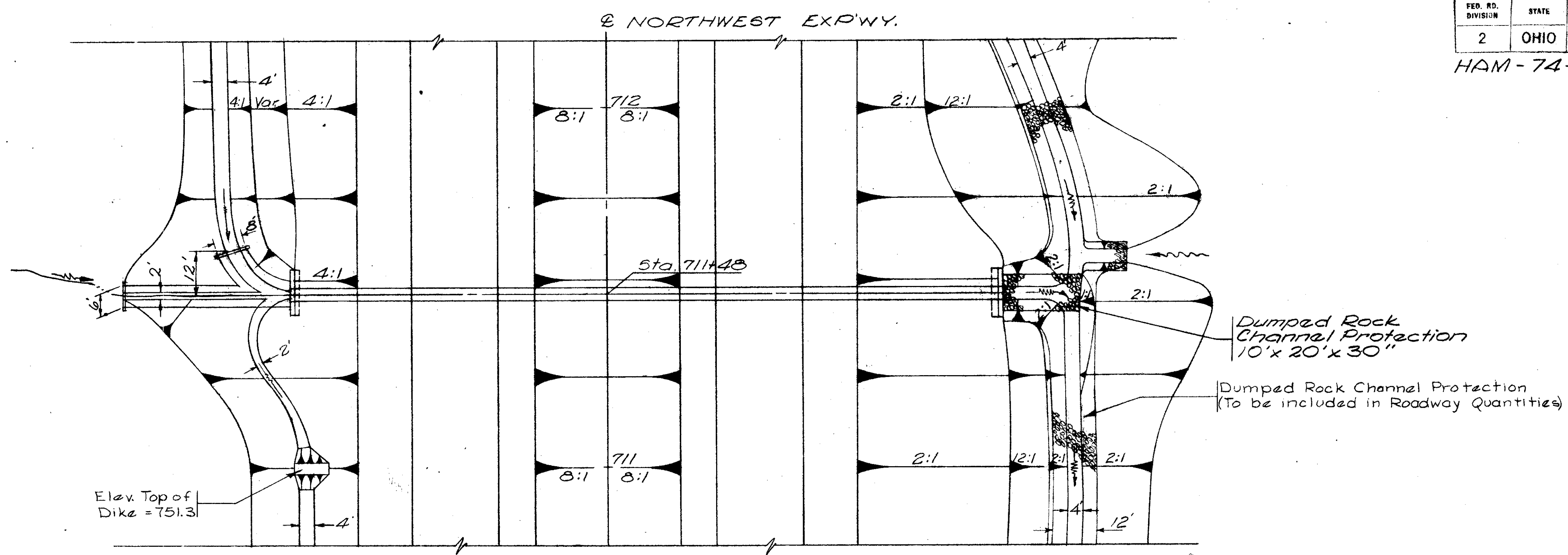
602 Masonry, Class "E" (Headwalls)	56.8 Cu. Yd.
603 180" Pipe, Type "A", Cl. "B", 70703, 1-1 Ga., Elongated, and with 6 Bolts per foot	422 Lin. Ft.
660 Sodding	33 Sq. Yd.

CULVERT DATA

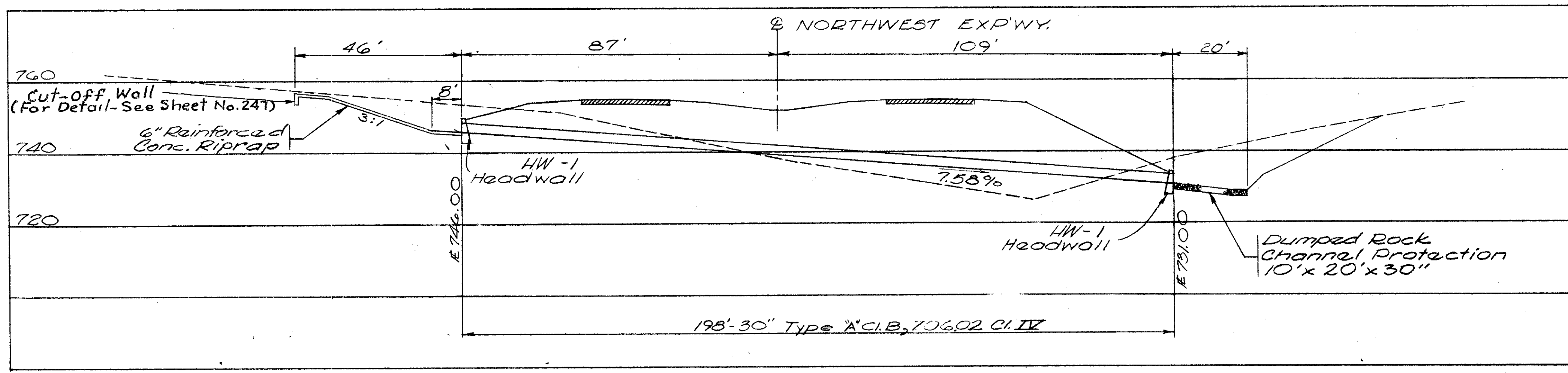
TYPE: Type "A", Cl. "B", 70703, 1-1 Gage, Elongated, and with six Bolts per foot of longitudinal seam with HW-5P-53 Headwalls Lt. & Rt.
 SIZE: 180" x 422"
 WORK REQ'D.: Construct a 180" Pipe Culvert with HW-5P-53 Headwalls Lt. & Rt. Construct Inlet & Outlet channels as shown. Place Sodding as shown.

Note: Depth of Headwall at outlet end increases from 3' to 5' below flowline.

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D.A. = 12 Ac.
Q50 = 41 c.f.s

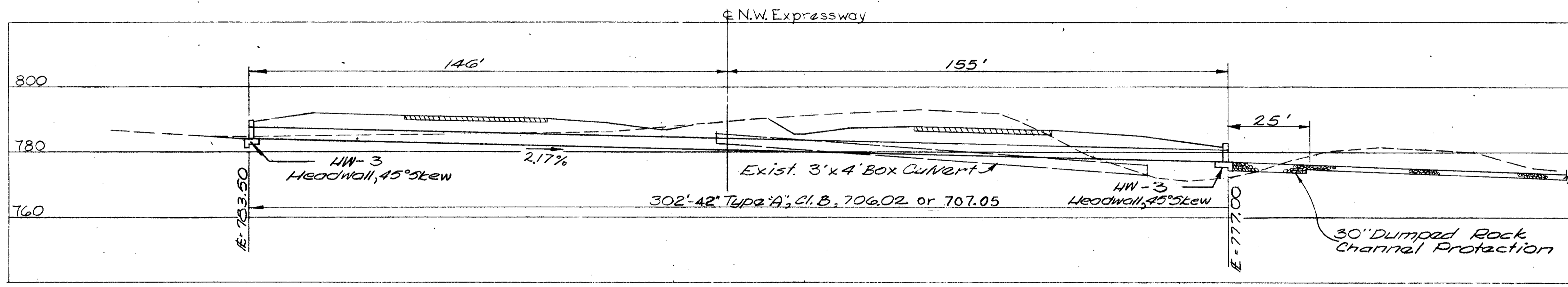
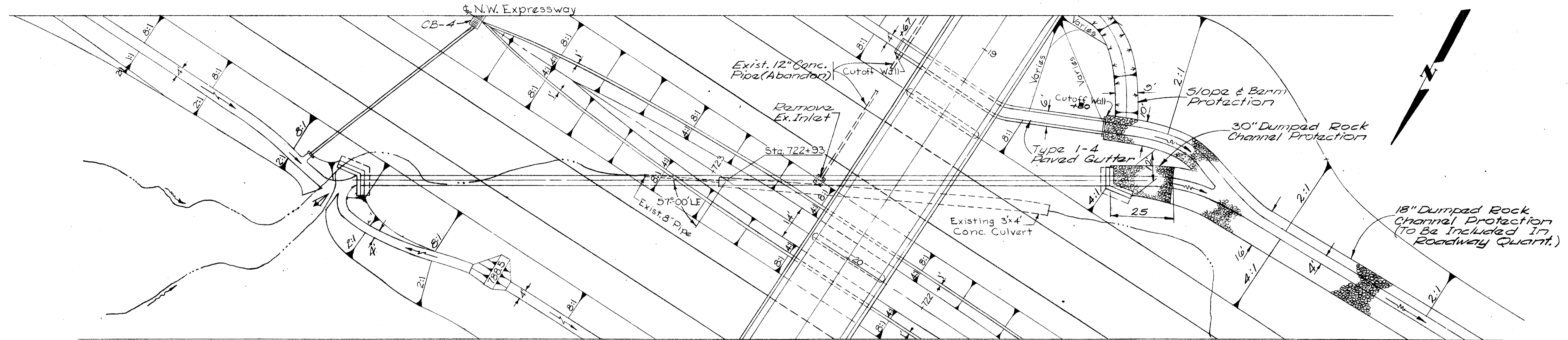


ESTIMATED QUANTITIES

603 30" TYPE 'A', C.I.B., 706.02 C.I. IV	198 Lin. Ft.
602 Masonry C.I. C (Headwalls)	9.4 Cu. Yds.
601 6" Reinforced Conc. Riprap	41.0 Sq. Yds.
601 Dumped Rock Channel Prot.	18.5 Cu. Yds.

CULVERT DATA
 TYPE: Type 'A' C.I.B., 706.02 C.I. IV, with HW-1 Headwalls Lt. & Rt.
 SIZE: 30" x 198'
 WORK REQ'D.: Construct a 30" Pipe Culvert with HW-1 Headwalls Lt. & Rt. construct inlet & outlet channels as per plan. Place 6" Reinforced Riprap at inlet & Dumped Rock Channel Protection at outlet as shown.

Scale: 1"=20'



ESTIMATED QUANTITIES

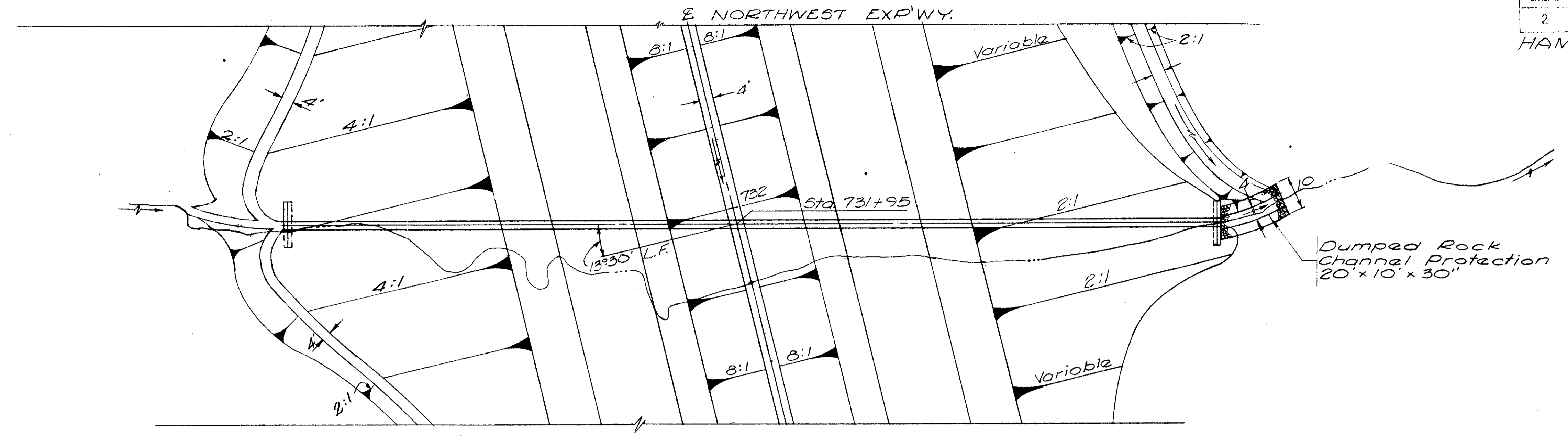
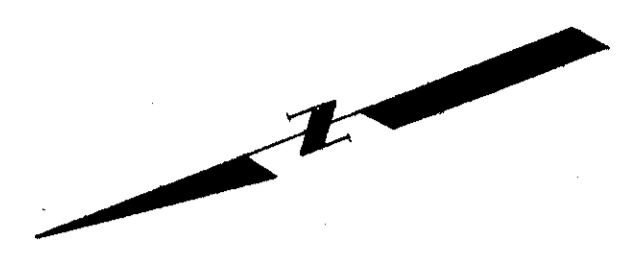
603	42" Pipe, Type 'A', Cl. B, 706.02 or 707.05	302 Lin. Ft.
602	Masonry, Cl. 'C' Conc. (Headwalls)	20.6 Cu. Yd.
601	Dumped Rock Channel Protection	30 Cu. Yd.
601	Paved Gutter, Type 1-4	93 Lin. Ft.
202	Inlets Removed	1 Ea.
202	Removal of Existing Structure	Lump

CULVERT DATA

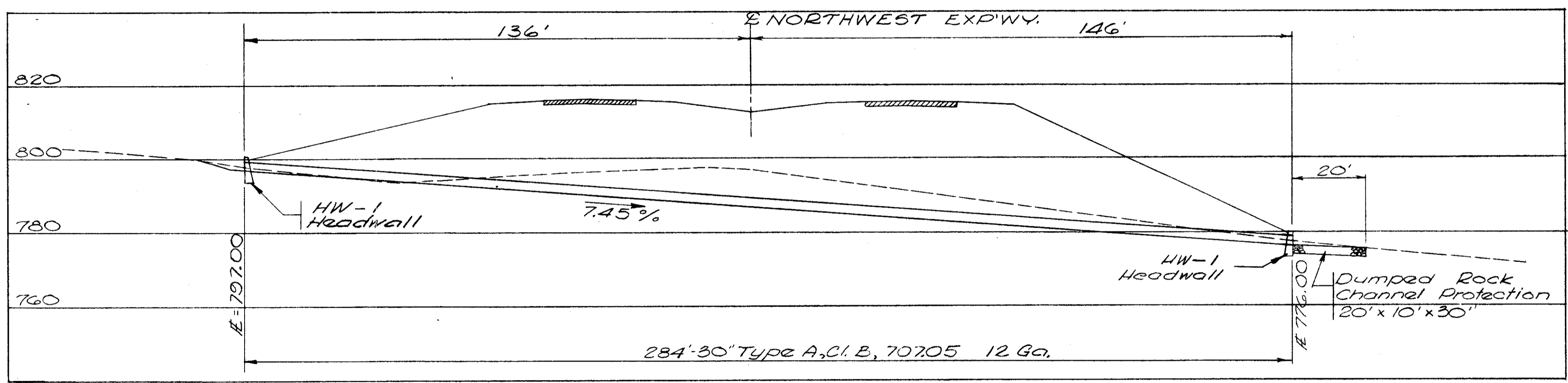
707.05
 TYPE: Type 'A', Cl. B, 706.02 or 707.05 with HW-3 Headwalls Lt. & Rt.
 SIZE: 300' x 42"
 WORK REQ'D: Construct a pipe culvert with HW-3 Headwalls right and left.
 Place Dumped Rock Channel Protection as shown.
 Place Slope and Berm Protection as shown.
 Place Paved Gutter as shown.
 Remove existing culvert

D.A. — 30 Ac.
 Q₅₀ — 72 cfs.

Scale: 1"=20'



D.A. = 11.8 Ac.
Q₅₀ = 40 c.f.s.



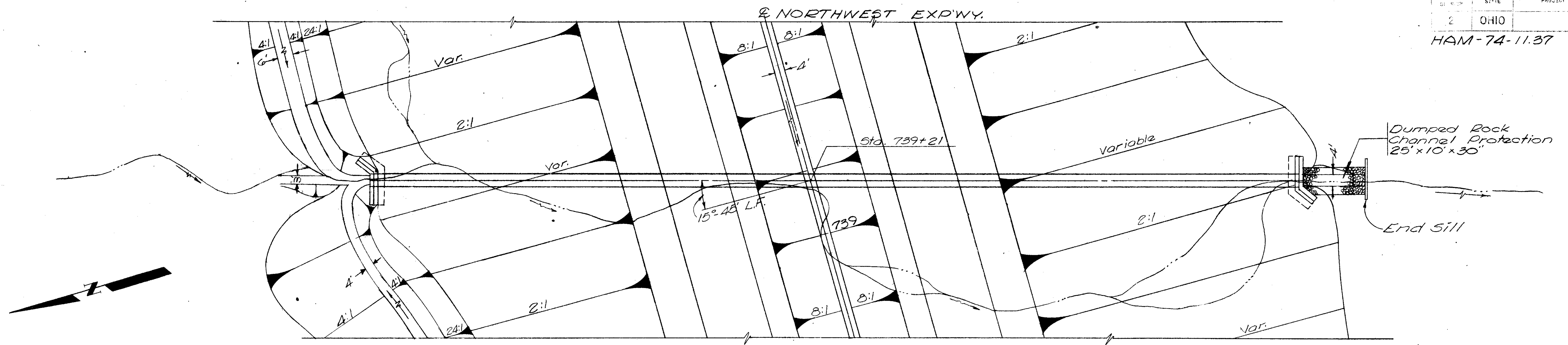
ESTIMATED QUANTITIES

603	30" Pipe, Type A, C.I. B, 70705 12 Ga.	284	Lin. Ft.
602	Masonry, C.I. C (Headwalls)	34	Cu. Yds.
601	Dumped Rock Channel Protection	185	Cu. Yds.

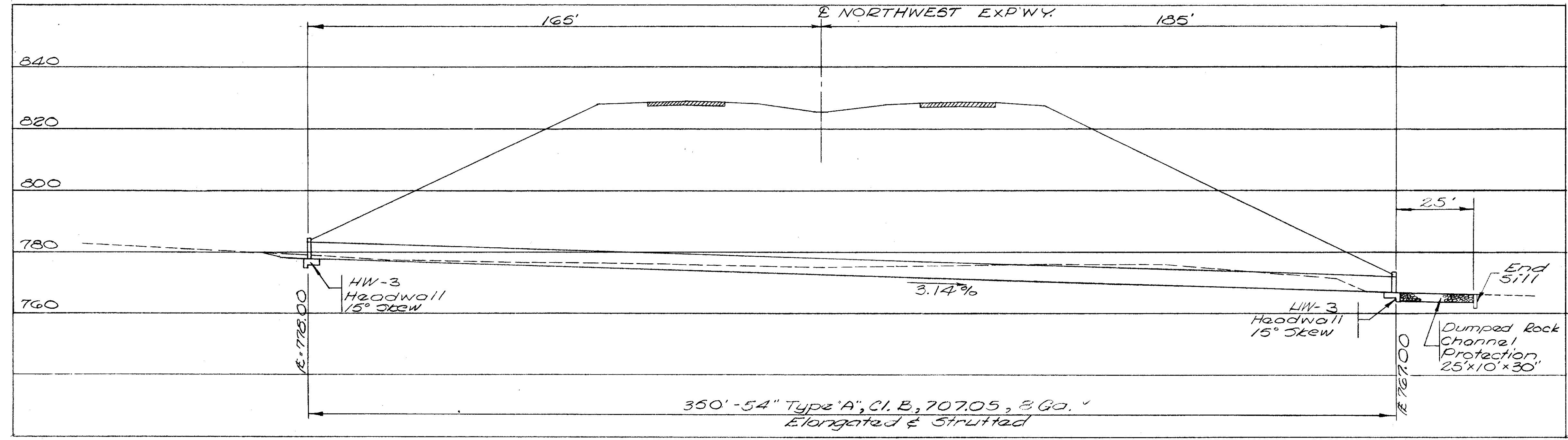
CULVERT DATA

TYPE: Type A; C.I. B, 70705, 12 Ga. with
HW-1 Headwalls Lt. & Rt.
SIZE: 30" x 284"
WORK REQ'D.: Construct a 30" Pipe
Culvert with HW-1 Headwalls
Lt. & Rt. Construct inlet & outlet
channels as per plan.

Place
dumped rock channel prot-
ection at outlet as per detail



D.A. = 93 Ac.
Q₅₀ = 153 cfs.



ESTIMATED QUANTITIES

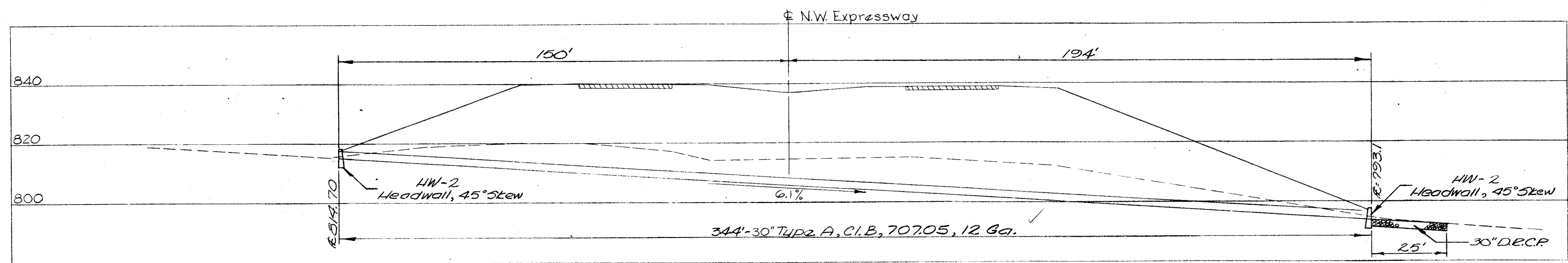
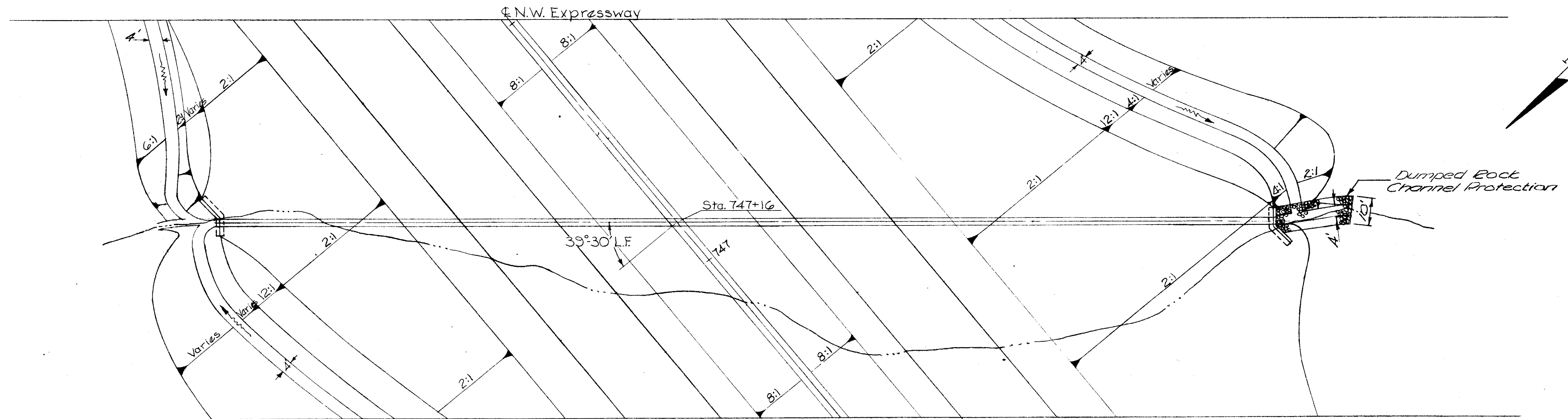
602 Masonry, Cl. C	27.2 Cu. Yds.
601 Dumped Rock Channel Protection	23.2 Cu. Yds.
603 54" Pipe, Type 'A', Cl. B, 70705, 8 Ga. Elongated & Struttad	350 Lin. Ft.

CULVERT DATA

TYPE: Type 'A', Cl. B, 70705, 8 Ga. Elong. & Struttad with HW-3 Headwalls Lt. & Rt.
 SIZE: 54" x 350'
 WORK REQ'D: Construct a 54" Pipe Culvert with HW-3 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan.

Place Dumped Rock Channel Protection at outlet as per detail

Scale: 1" = 20'



ESTIMATED QUANTITIES

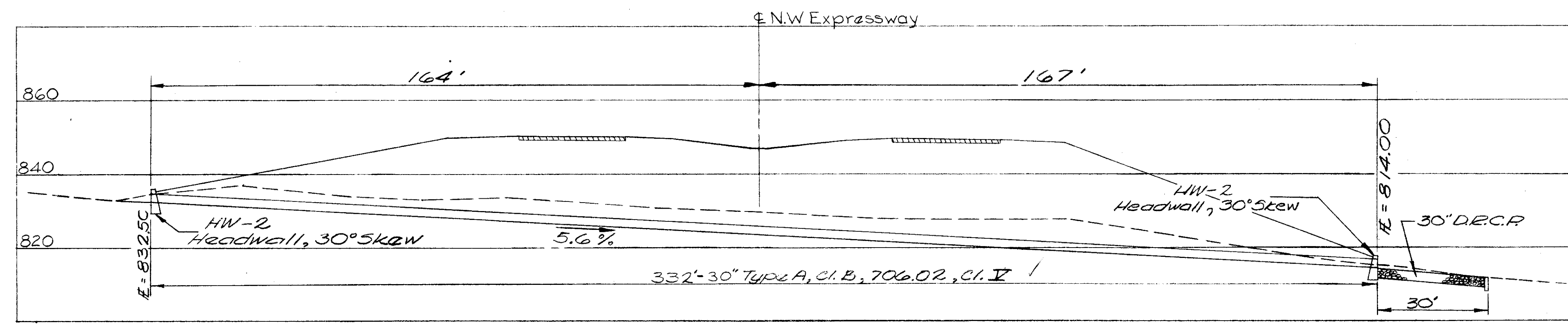
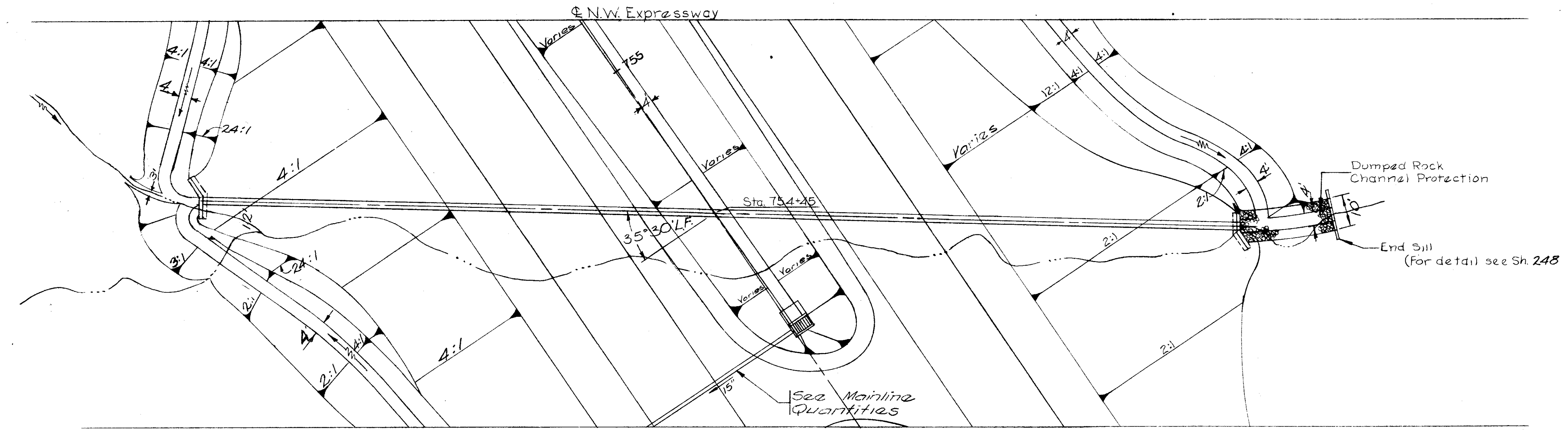
- | | | | |
|-----|--|------|---------|
| 603 | 30" Pipe, Type A, C.I.B., 707.05, 12 Ga. | 344 | Lin.Ft. |
| 602 | Masonry, C.I.C Conc. (Headwalls) | 9.4 | Cu.Yds. |
| 601 | Dumped Rock Channel Protection | 26.9 | Cu.Yds. |

CULVERT DATA

TYPE: Type A, C.I.B., 707.05, 12Ga. with HW-2 Headwalls Lt. & Rt.
 SIZE: 30" x 344'
 WORK REQ'D: Construct a 30" Pipe Culvert with HW-2 Headwalls Left and Right.
 Channel Protection as Shown. Dumped Rock

D.A.	9.6 Ac
Q ₅₀	35 c.f.s.

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ESTIMATED QUANTITIES

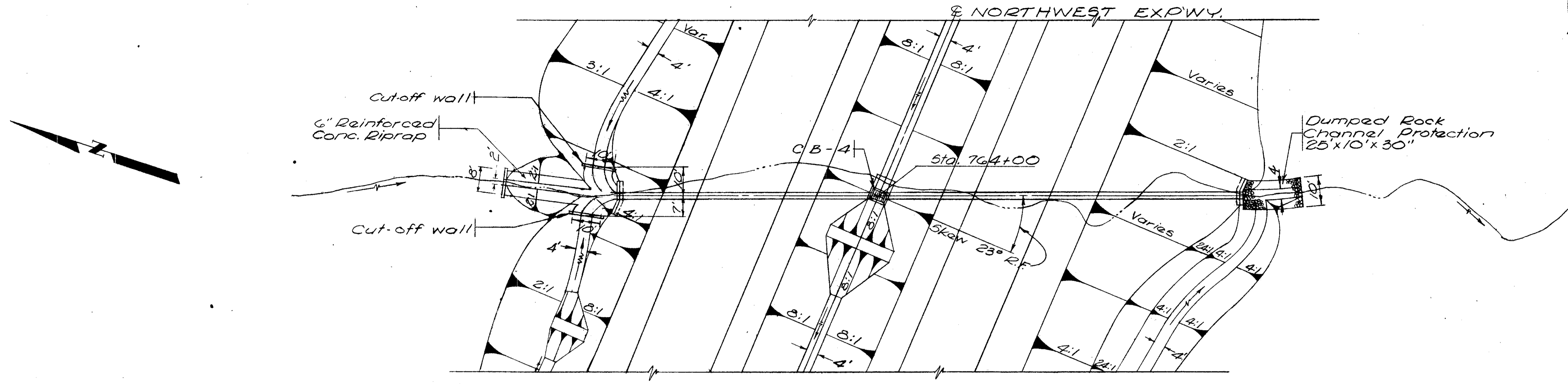
602 Masonry	11.7 Cu.Yd.
603 30" Pipe, Type A, Cl. B, 706.02 Cl. V	332 Lin.Ft.
601 Dumped Rock Channel Protection	2.78 Cu.Yd.

CULVERT DATA

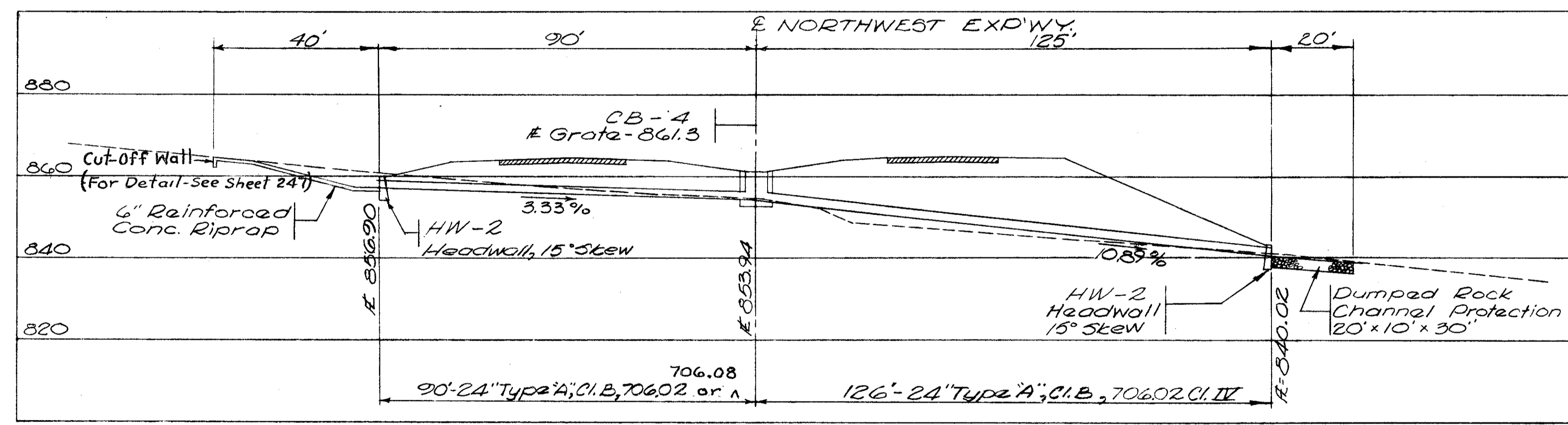
TYPE: Type A, Cl. B, 706.02 Cl. V with HW-2 Lt. & Rt.
 SIZE: 30" x 332'
 WORK REQ'D: Construct a pipe culvert with HW-2 Headwalls left and right.
 Place Dumped Rock Channel Protection as shown.

D.A.	12.8Ac.
Q ₅₀	42 c.f.s.

Scale: 1"=20'



D.A. = 3.5 Ac.
Q50 = 17 c.f.s.



ESTIMATED QUANTITIES

603	24" Pipe, Type A; C.I.B, 70602 or A	706.08	90 Lin. Ft.
603	24" Pipe, Type A; C.I.B, 70602 C.I.IV		126 Lin. Ft.
602	Masonry, C.I. C (Headwalls)		5.4 Cu. Yds.
604	Catch Basin, CB-4		1 Each
601	6" Reinforced Conc. Riprap		47.0 Sq. Yds.
601	Dumped Rock Channel Protection		18.5 Cu. Yds.
667	Jute Matting		125 Sq. Yds.

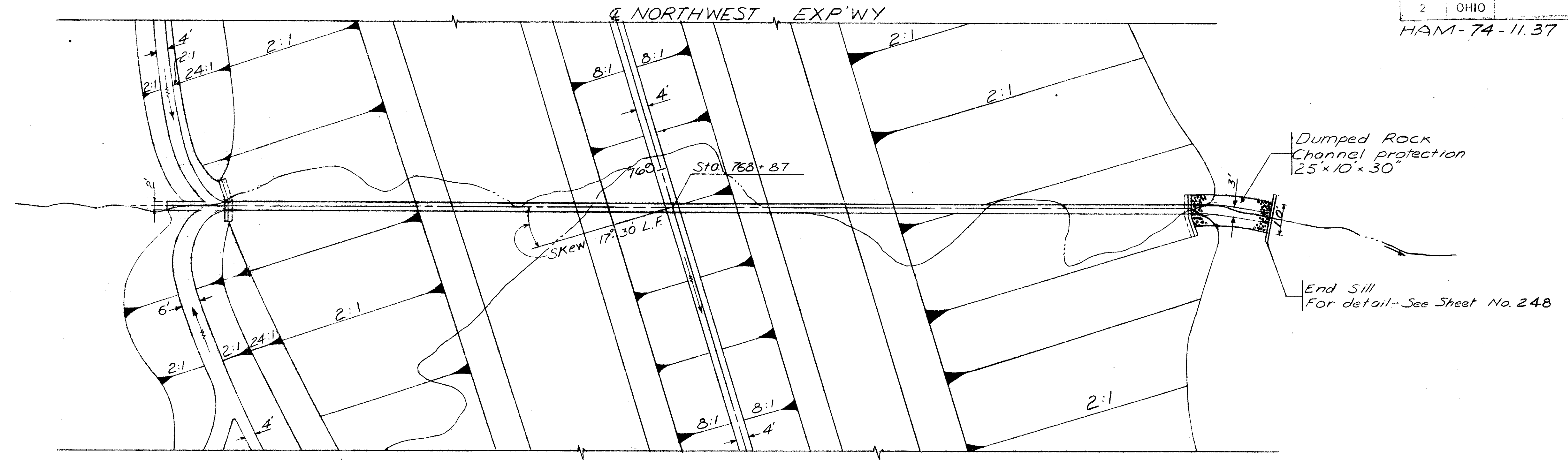
CULVERT DATA

TYPE : CB-4 with Type A; C.I.B, 70602 or 706.08 Lt. & 706.02 C.I.IV Rt. with HW-2 Headwalls Lt. & Rt.

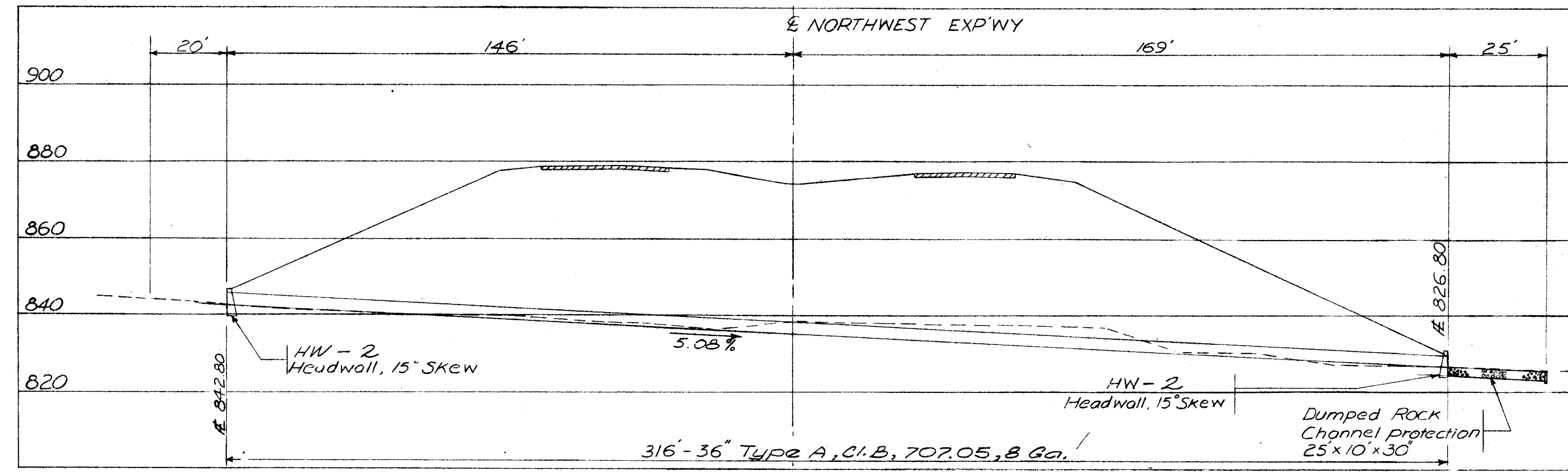
SIZE : 24" x 90' Lt. 24" x 126' Rt.

WORK REQ'D: Construct a CB-4 Catch Basin with a 24" Pipe and HW-2 Headwall Lt. & a 24" Pipe with HW-2 Headwall Rt. Construct inlet & outlet channels as shown. Place 6" Reinforced Concrete Riprap at inlet & Dumped Rock Channel Protection at outlet as per detail.

Scale : 1"=20'



D.A. = 23.85 Ac.
Q₅₀ = 62 c.f.s.



ESTIMATED QUANTITIES

603 36" Pipe, Type A, Cl. B, 707.05, 8 Ga.	316 Lin. Ft.
602 Masonry, Cl. C (Headwalls)	13.4 Cu. Yds.
601 Dumped Rock Channel Protection	23.2 Cu. Yds.

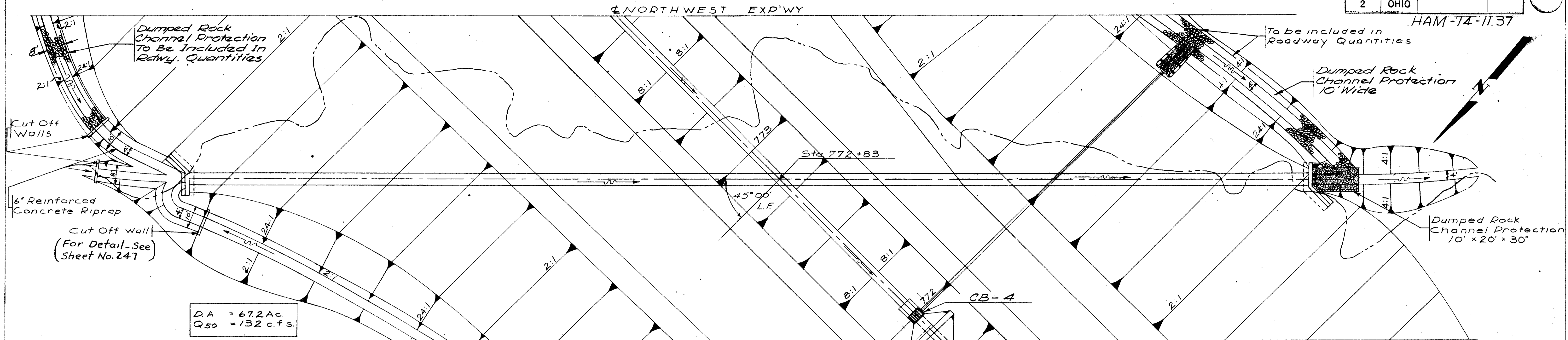
CULVERT DATA

TYPE: Type A Cl. B, 707.05, 8 Ga. with HW-2 Headwalls Left & Rt.

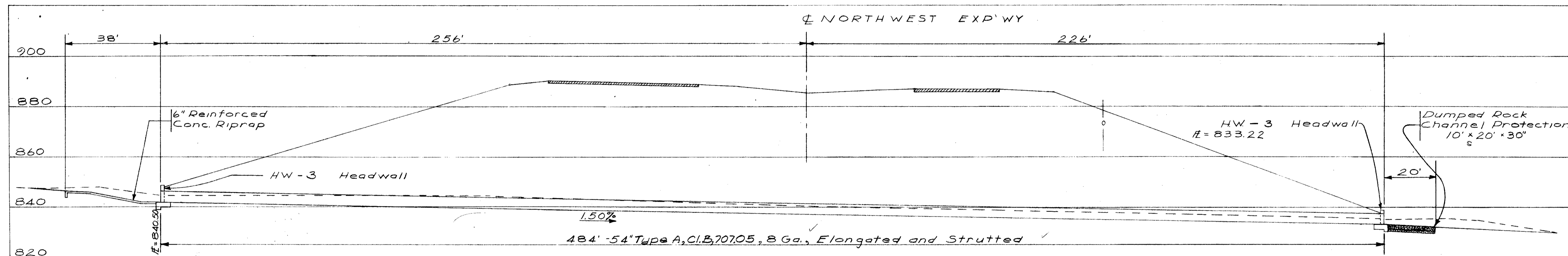
SIZE: 36" x 316"

WORK: REQD: Construct a pipe culvert with HW-2 Headwalls Lt & Rt. Construct inlet & outlet Channels as shown. Place Dumped Rock Channel protection at outlet as per detail. Construct end sill Rt. & cutoff wall Lt. as shown.

Scale: 1"=20'



DA = 672 Ac.
Q₅₀ = 132 c.f.s.



ESTIMATED QUANTITIES

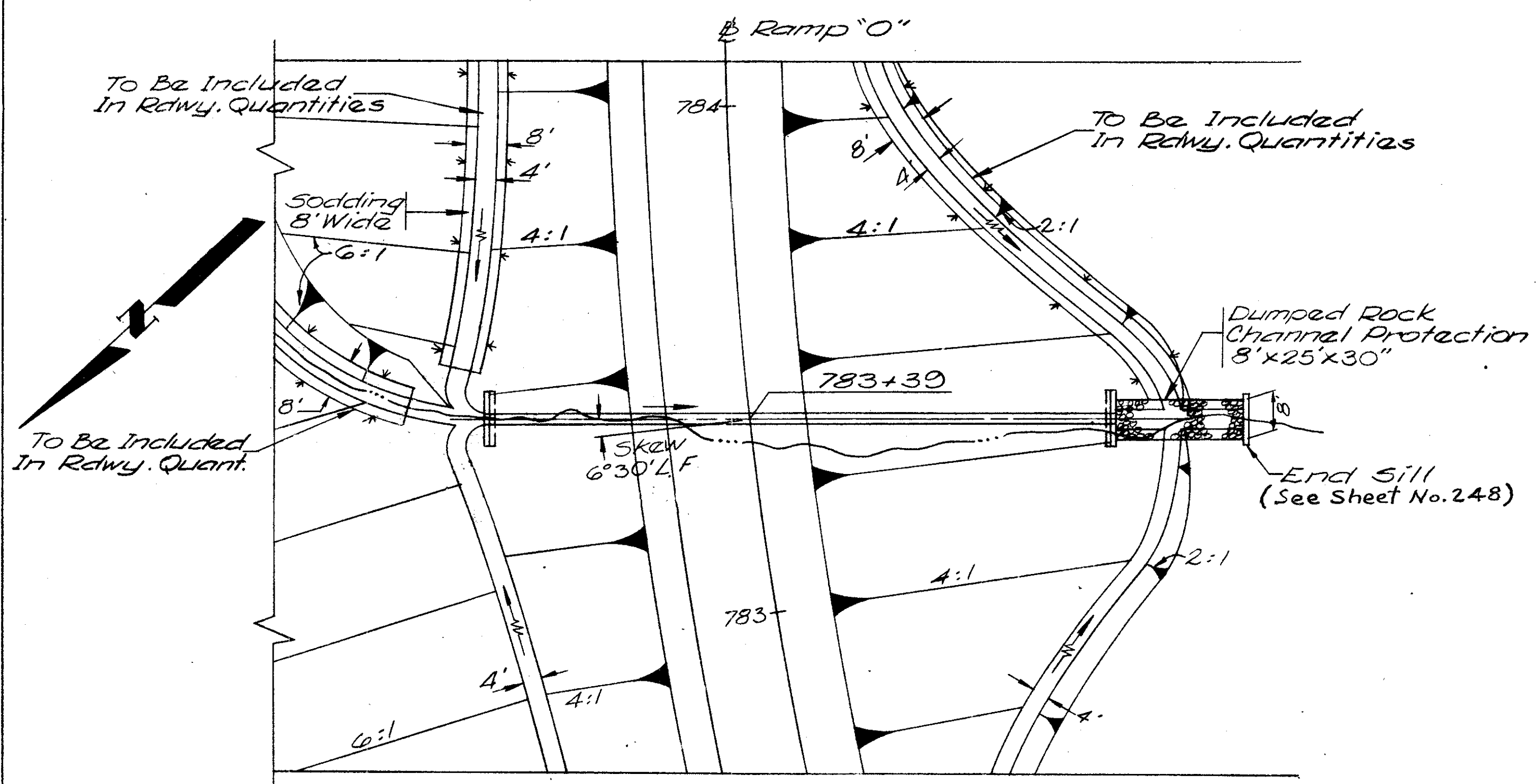
603	54" Pipe, Type A, C.I.B. 70705, 8 Ga. Elongated and Struttred	484 Lin. ft.
602	Masonry, C.I.C. (Headwalls)	252 Cu. Yds.
601	Dumped Rock Channel Protection	18.5 Cu. Yds.
601	6" Reinforced Conc. Riprap	93.8 Sq. Yds.
203	Excavation Not Including Embankment Construction	77.2 Cu. Yds.

CULVERT DATA

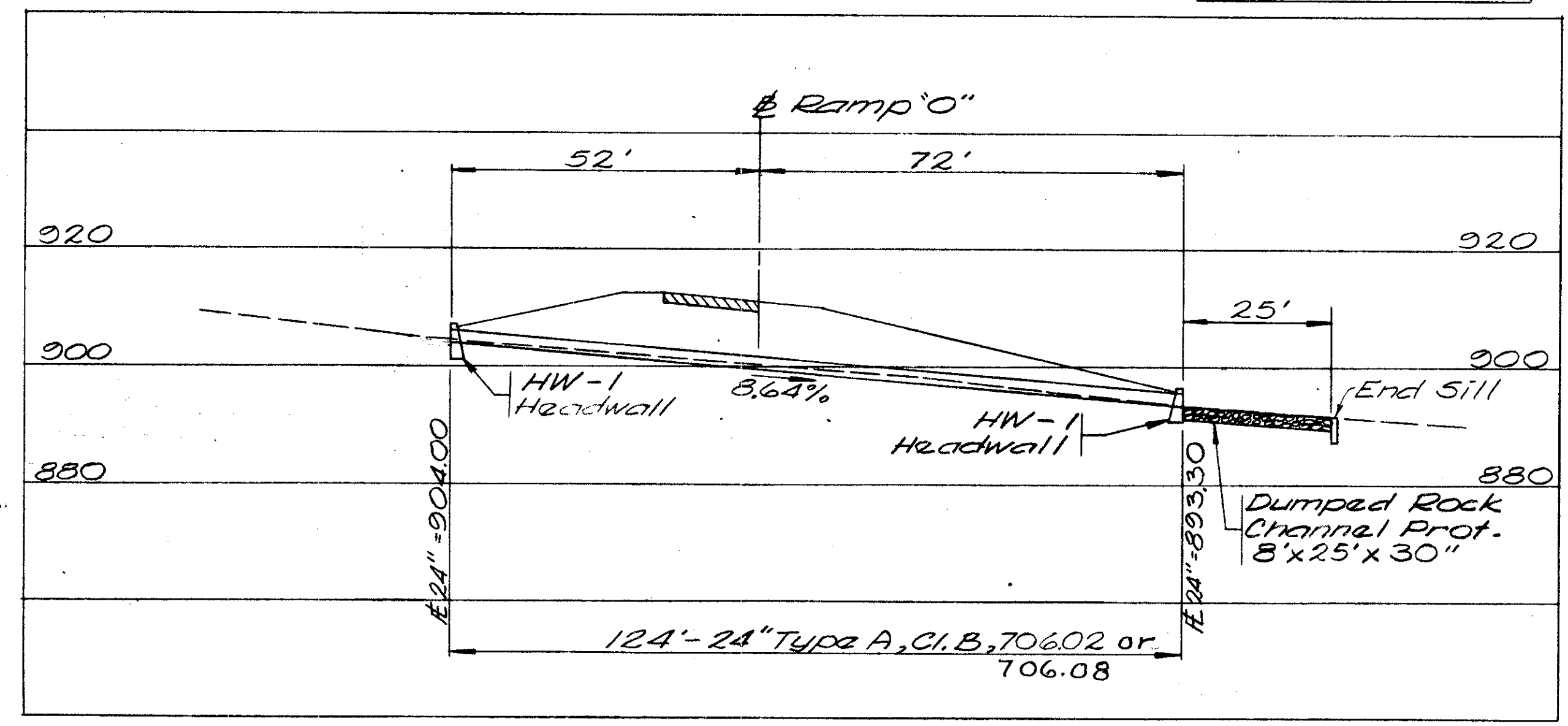
TYPE: Type A, C.I.B. 70705, 8 Ga., Elongated and Struttred with HW - 3 Headwalls Lt. & Rt.
 SIZE: 54" x 484'
 WORK REQ'D: Construct a 54" Pipe Culvert with HW - 3 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan. Place Dumped Rock Channel Protection at outlet as shown. Place 6" Reinforced Conc. Riprap at inlet as shown.

Zero Section	Cut (ft) Area	Cut (c.y) Vol.
HW+71		13.4
HW+50	35	24.0
HW+35	48	21.8
HW+20	29	17.8
HW+0	19	
TOTAL		77.2

Outlet Channel Cross-Sections



D.A. = 3.1 Ac.
Q₅₀ = 17.8 c.f.s.



ESTIMATED QUANTITIES

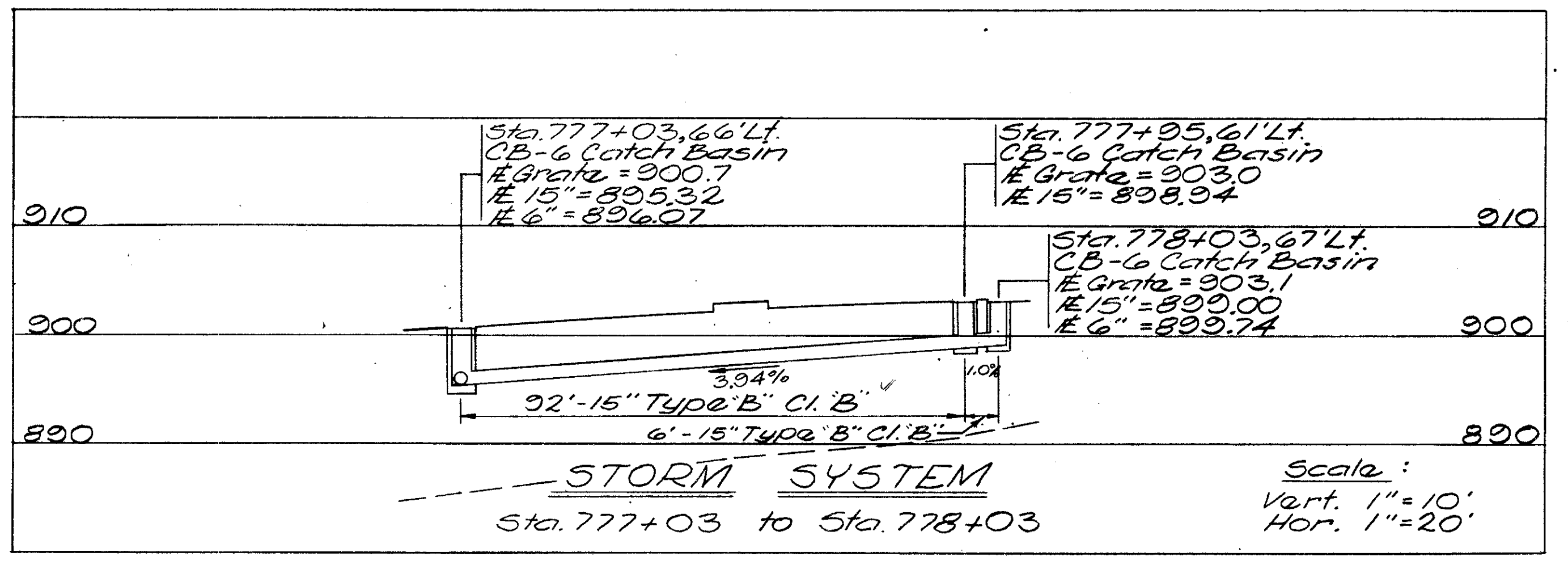
- 601 Dumped Rock Channel Protection 18.5 Cu. Yds.
- 602 Masonry, Cl. C (Headwalls) 9.2 Cu. Yds.
- 603 24" Pipe, Type A, Cl. B, 706.02 or 706.08 124 Lin. Ft.

CULVERT DATA

TYPE: Type A, Cl. B, 706.02 or 706.08 with HW-1 Headwalls Lt. & Rt.
 SIZE: 24" x 124"
 WORK REQ'D: Construct a 24" Pipe Culvert with HW-1 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan. Place Dumped Rock Channel Protection at outlet

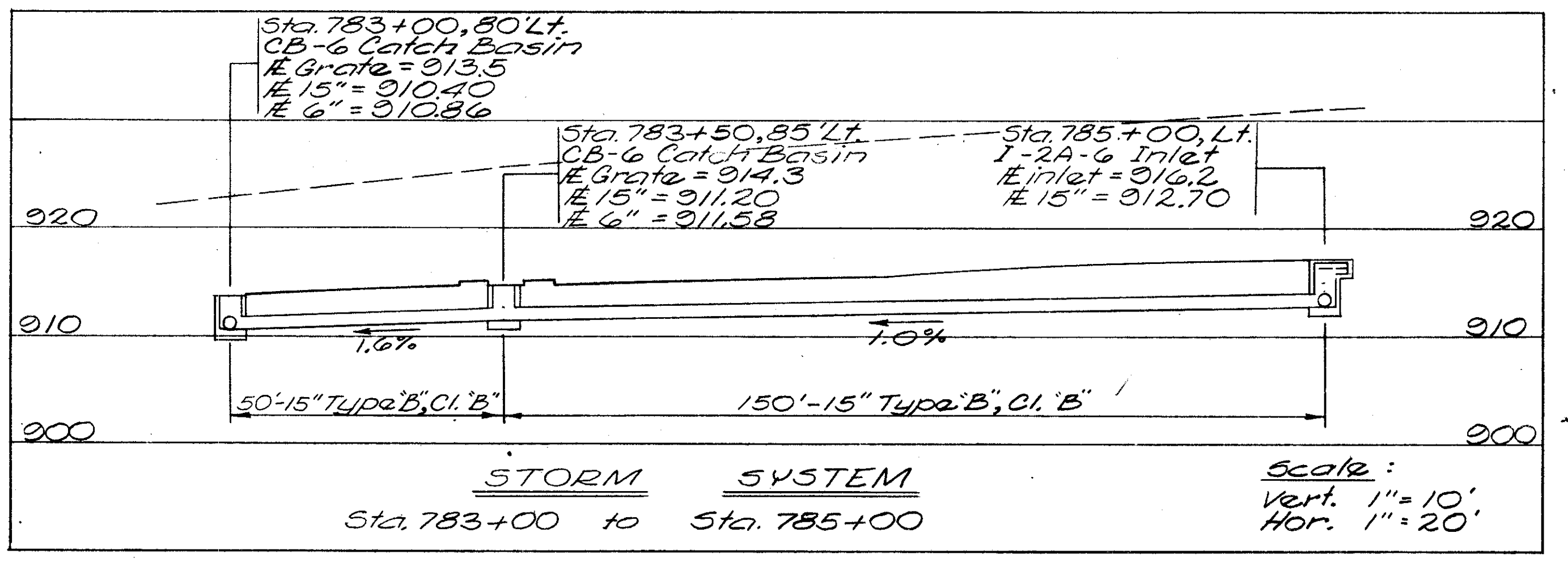
Scale: 1" = 20'

PIPE CULVERT - STA 783+39 RAMP "0"



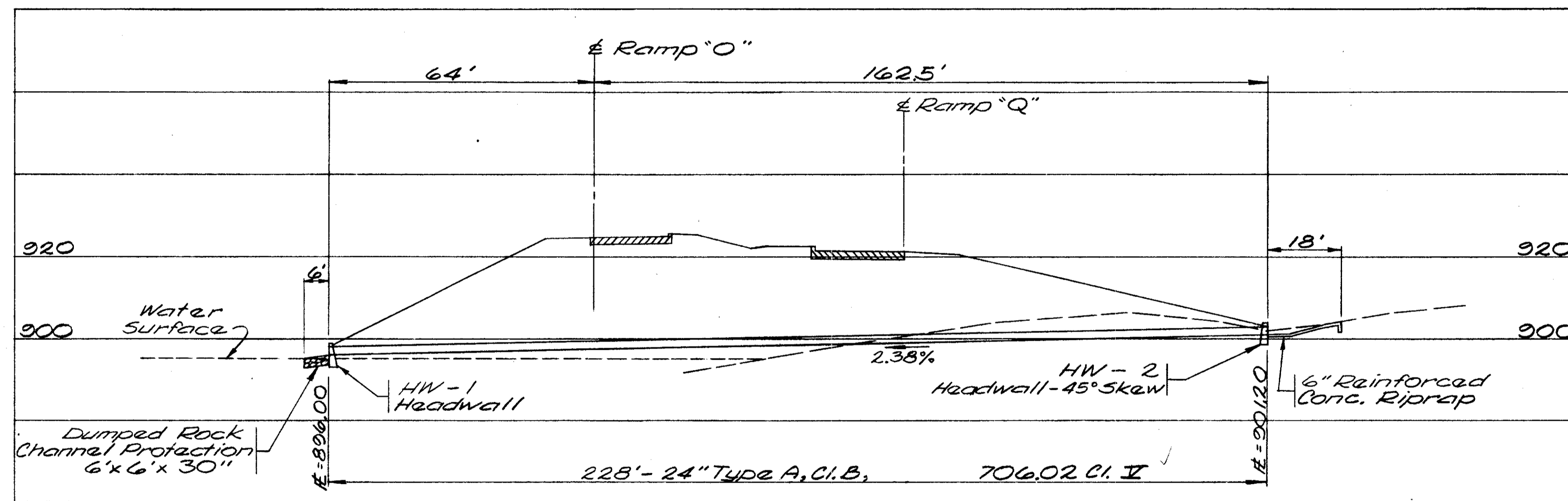
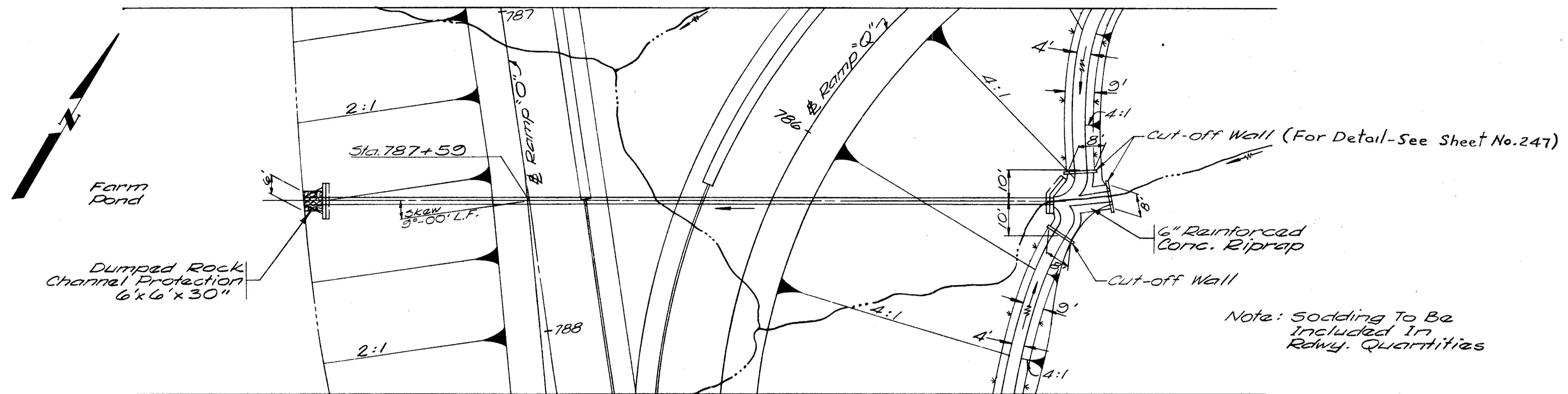
STORM SYSTEM
Sta. 777+03 to Sta. 778+03

Scale:
Vert. 1" = 10'
Hor. 1" = 20'



STORM SYSTEM
Sta. 783+00 to Sta. 785+00

Scale:
Vert. 1" = 10'
Hor. 1" = 20'



ESTIMATED QUANTITIES

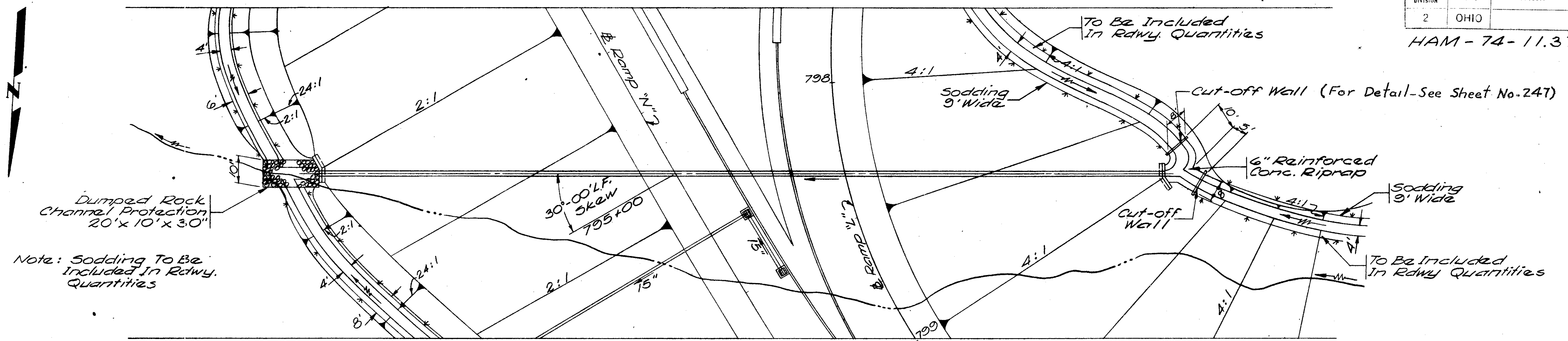
601	Dumped Rock Channel Protection	3.3	CU. Yds.
601	6" Reinforced Concrete Riprap	26.7	Sq. Yds.
602	Masonry, C.I. C (Headwalls)	7.1	CU. Yds.
603	24" Pipe, Type A, C.I. B,	706.02	Lin. Ft.

CULVERT DATA

TYPE: Type A, C.I. B, 706.02 C.I. II with HW-2 at Inlet & HW-1 at Outlet
 SIZE: 24" x 228"
 WORK REQ'D: Construct a 24" Pipe Culvert with HW-2 (45° skew) at inlet & HW-1 at outlet. Construct inlet & outlet channels as per plan. Place Dumped Rock Channel Protection at outlet & 6" Reinforced Concrete Riprap at inlet as per detail.

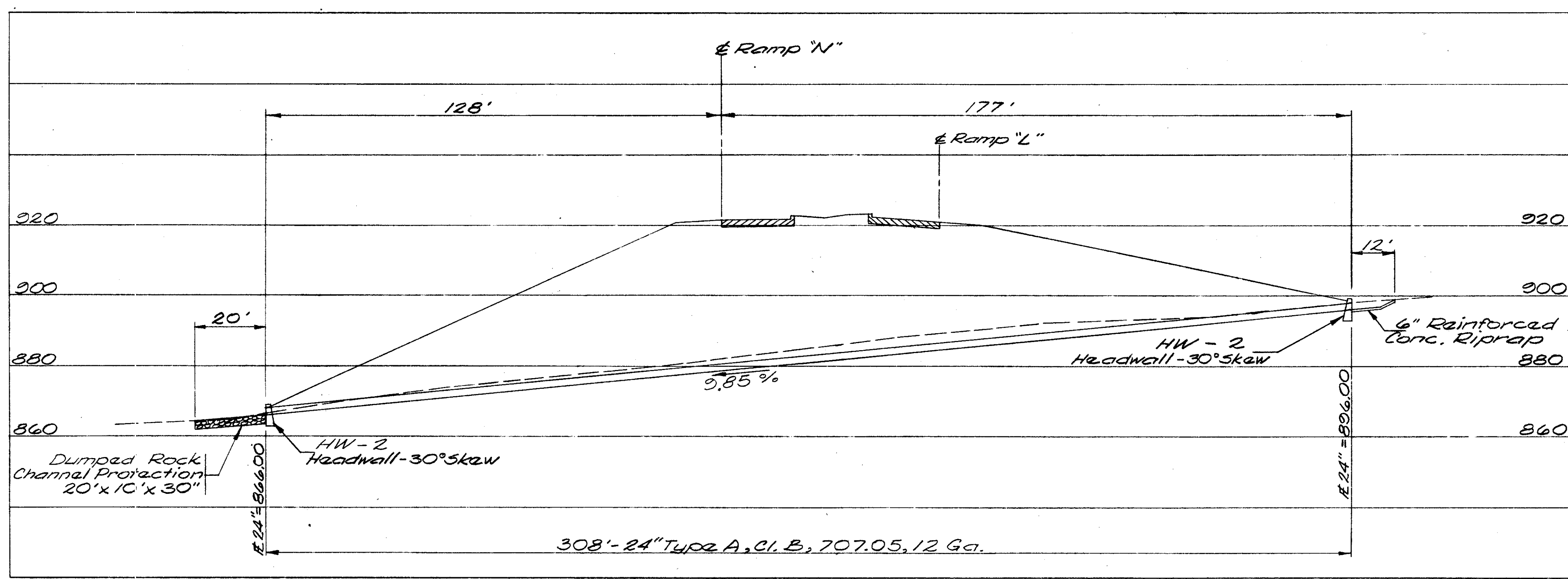
Scale: 1" = 20'

PIPE CULVERT - STA. 787+50 RAMP "O"



Note: Sodding To Be Included In Railway Quantities

D.A. = 3.8 Ac.
Q₅₀ = 18.6 c.f.s.



ESTIMATED QUANTITIES

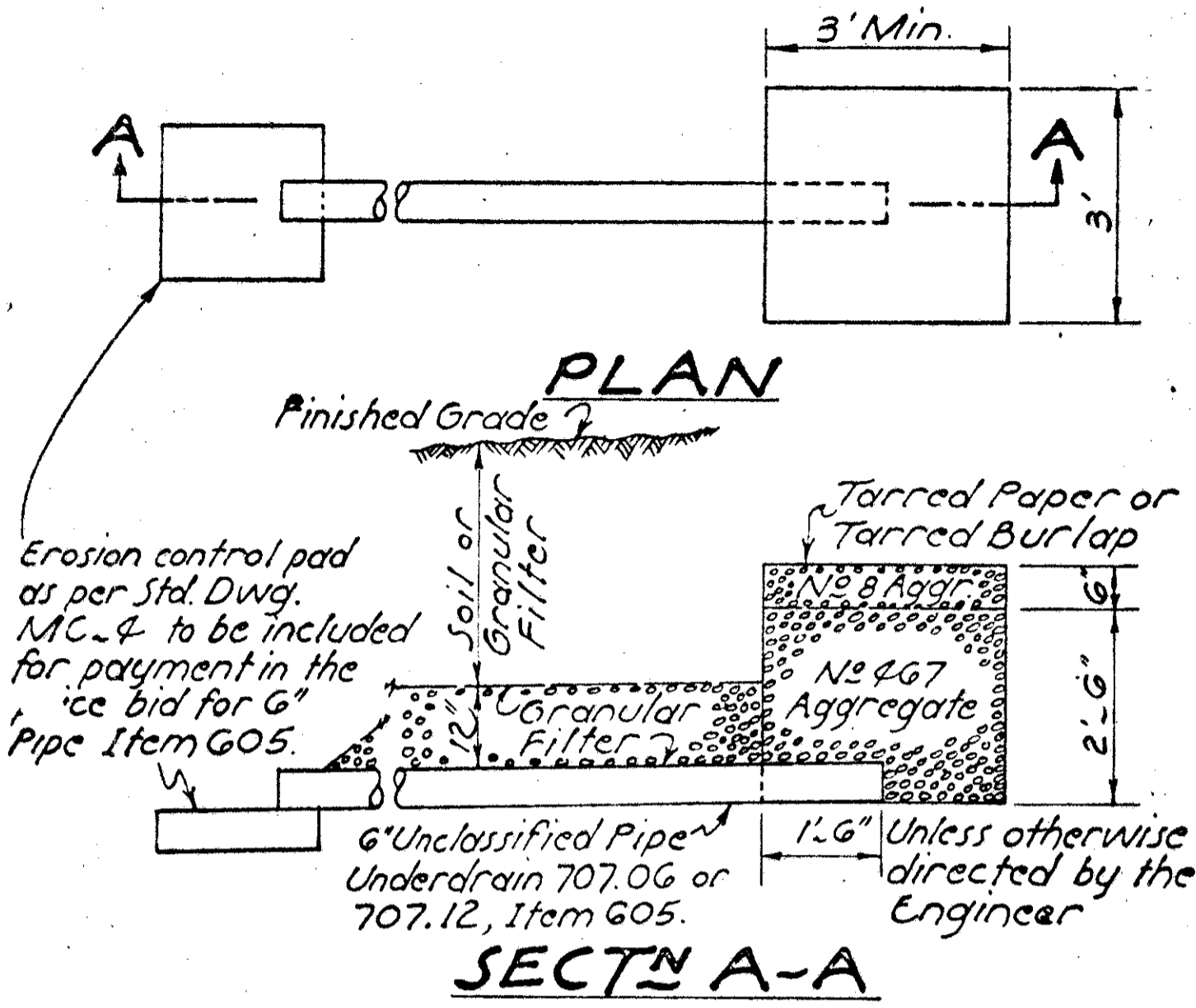
601	Dumped Rock Channel Protection	18.5	Cu. Yds.
601	6" Reinforced Concrete Riprap	19.5	Sq. Yds.
602	Masonry, C.I. C, Headwalls	6.6	Cu. Yds.
603	24" Pipe, Type A, C.I. B, 707.05, 12 Ga.	308	Lin. Ft.

CULVERT DATA

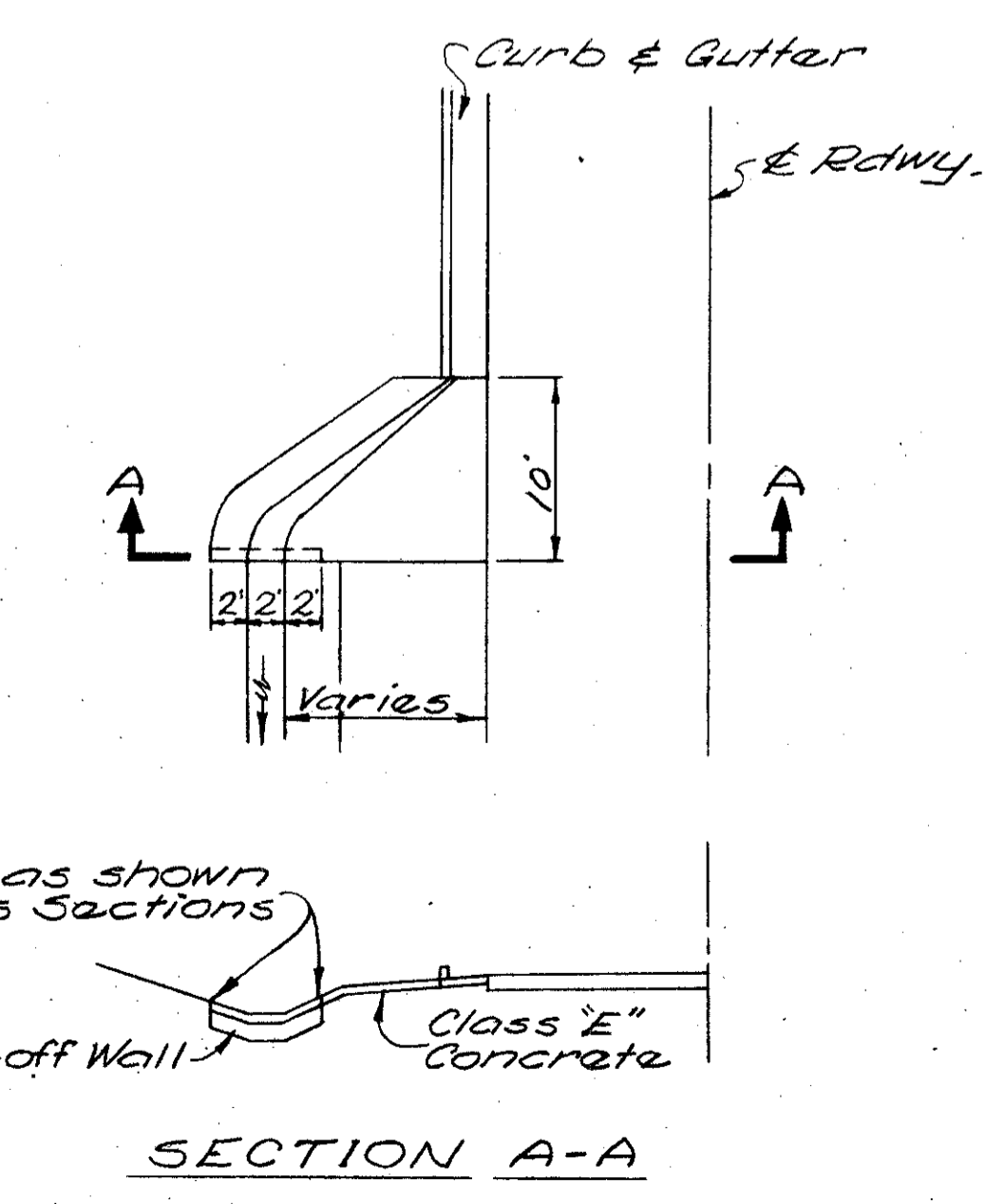
TYPE: Type A, C.I. B, 707.05, 12 Ga. with HW - 2 Headwalls (30° Skew) Lt. & Rt.
 SIZE: 24" x 308'
 WORK REQ'D: Construct a 24" Pipe Culvert with HW - 2 Headwalls Lt. & Rt. Construct inlet & outlet channels as per plan. Place Dumped Rock Channel Protection at outlet & 6" Reinforced Concrete Riprap at inlet as per detail.

Scale: 1" = 20'

SPRING DRAIN DETAIL



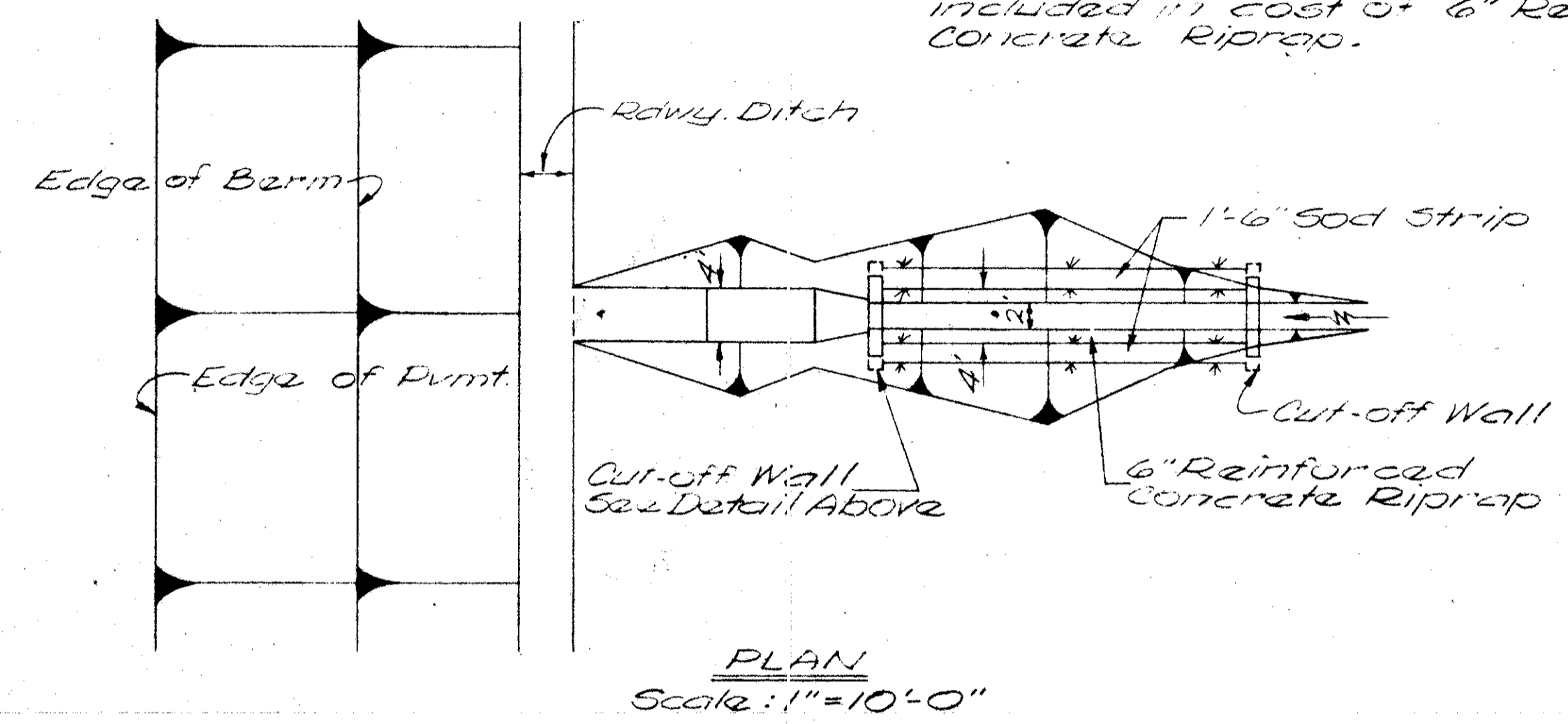
Note: Aggregates, tarred paper or tarred burlap, and necessary excavation for spring drains shall be included for payment in the unit price bid per Lin. Ft. for "Item 605, Aggregate Drains for Springs, as per plan".
 The 6" pipe 707.06 or 707.12 shall be covered with granular filter material [605.03(c)] to a height of one (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 603.08.
 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. 19



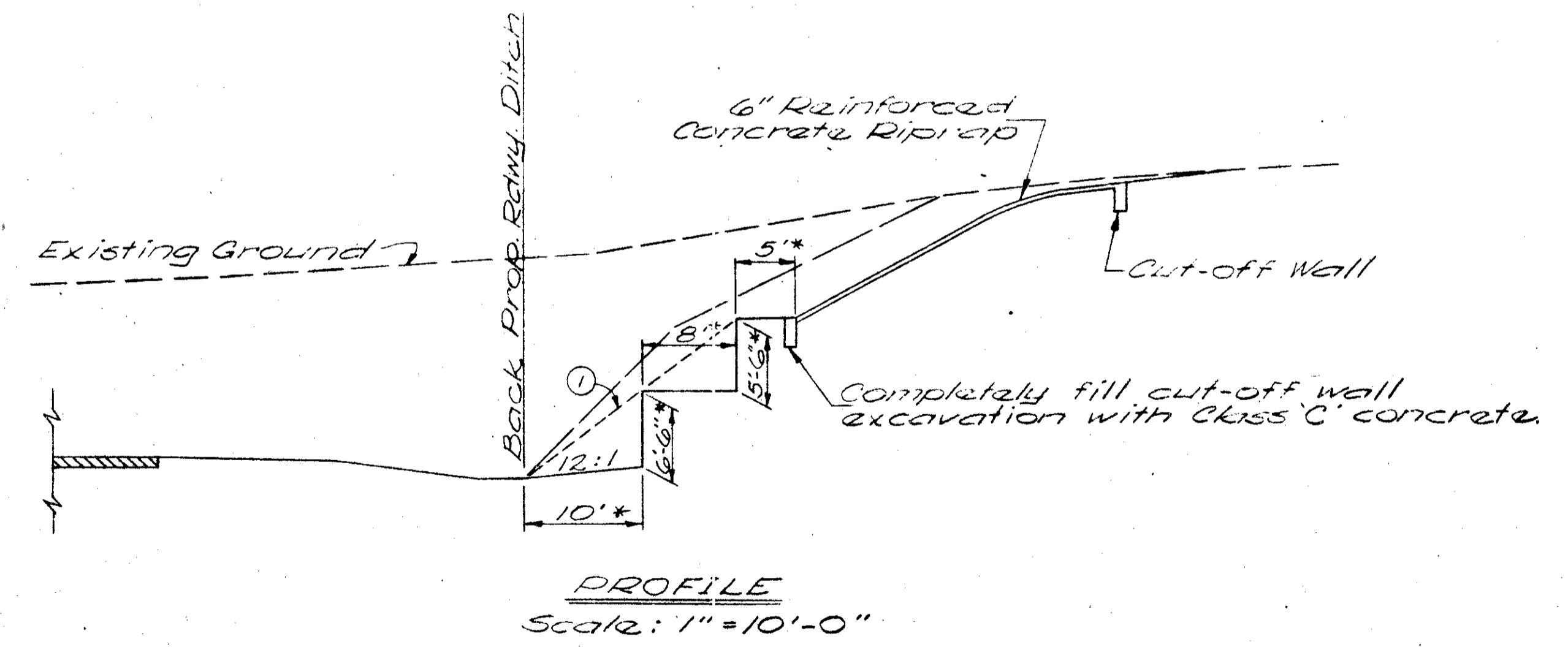
Slopes as shown on Cross Sections
 SECTION A-A
 DETAIL FOR DRAINAGE OF CURB ENDINGS

REINFORCING STEEL					
Mark	Size	Shape	No. Reqd.	Length	Weight
301	3/8" Ø	Str. #	2	3'-2"	1.3
302	3/8" Ø	Str. #	1	2'-0"	0.9
303	3/8" Ø	Str. #	2	7'-6"	2.8
304	3/8" Ø	Br. #	1	7'-10"	2.9
				Total (lbs.)	7.8

CUT-OFF WALL DETAIL
 Scale: 1" = 2'-0"
 Note: All steel to be placed 2" clear. Cost of cut-off wall to be included in cost of 6" Reinforced Concrete Riprap.



PLAN
 Scale: 1" = 10'-0"

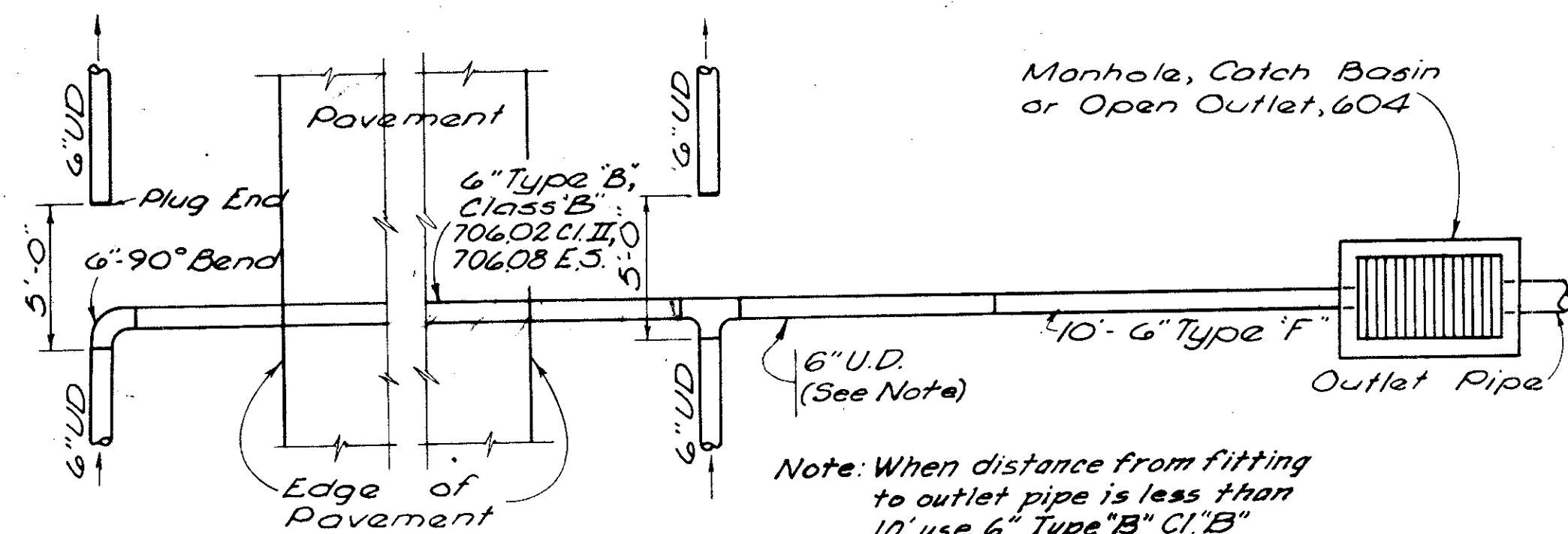


PROFILE
 Scale: 1" = 10'-0"

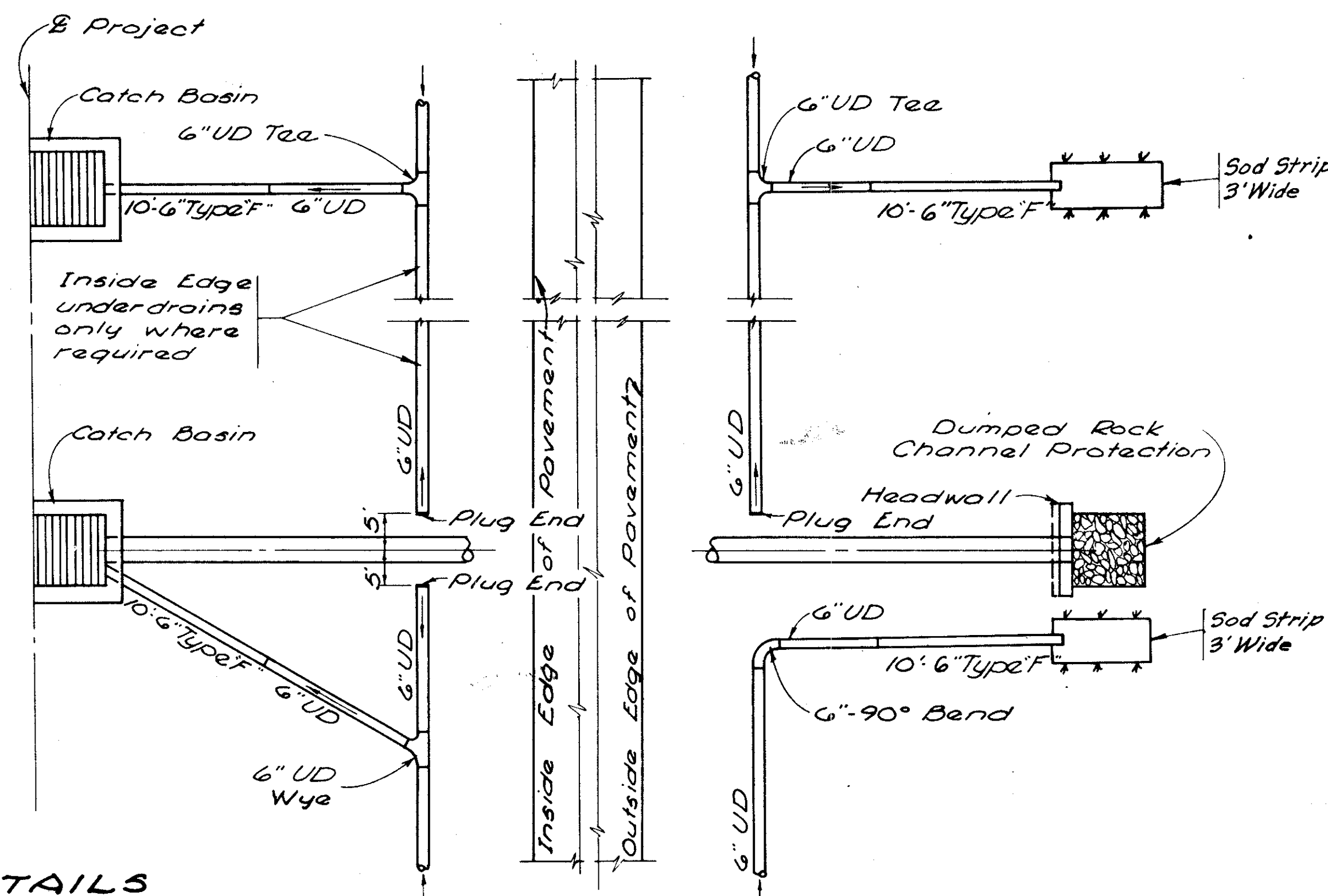
① Note: The walls of special flume to be on 1:1 slope between this plane and the top of rock. Below this plane the walls will be vertical.
 * Note: These dimensions are to be considered as approximate and may be varied during construction to conform with the natural planes of stratification encountered in the rock.

CASCADE DETAIL

Note: 600* refers to construction details in the Manual of Standard Construction Drawings.

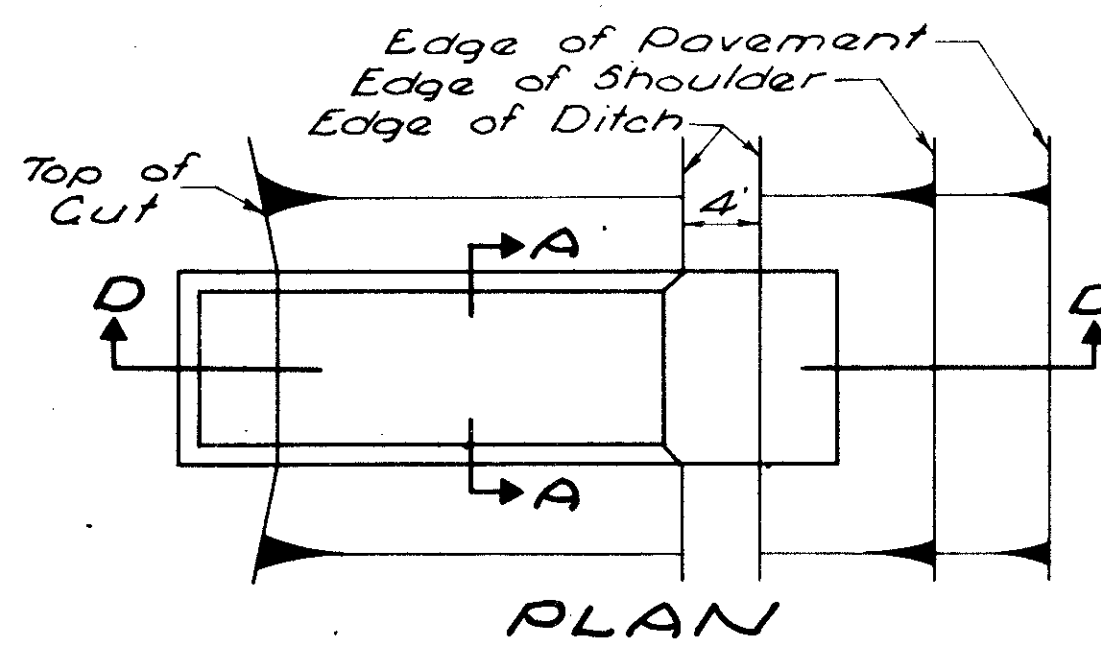


Note: When distance from fitting to outlet pipe is less than 10' use 6" Type "B" Cl. "B"

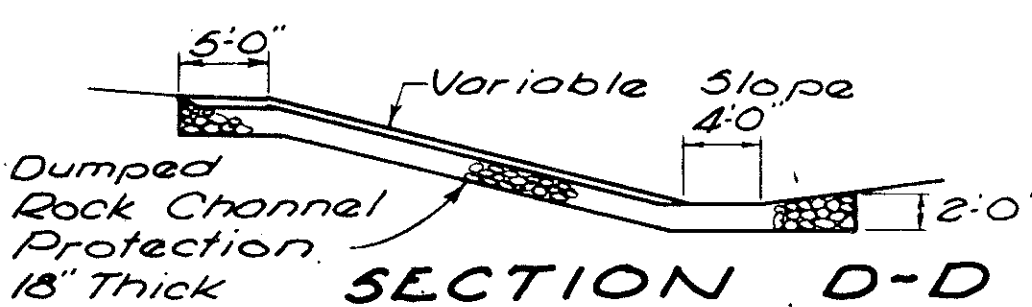


UNDERDRAIN OUTLET DETAILS

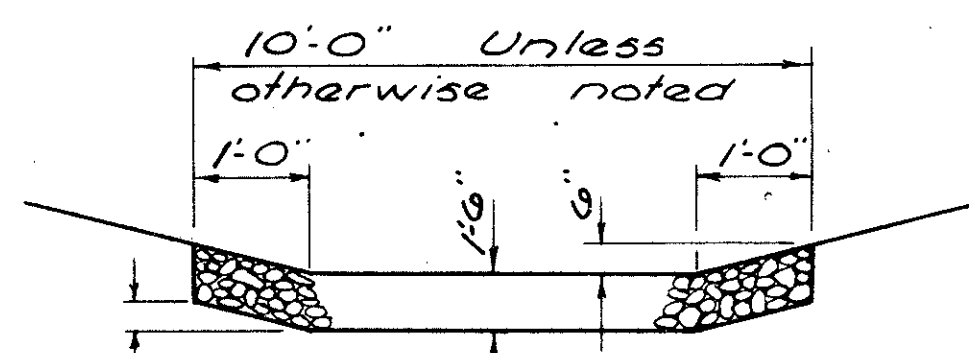
Underdrains to be placed in accordance with the Typical Sections & Plan-Profile sheets



PLAN

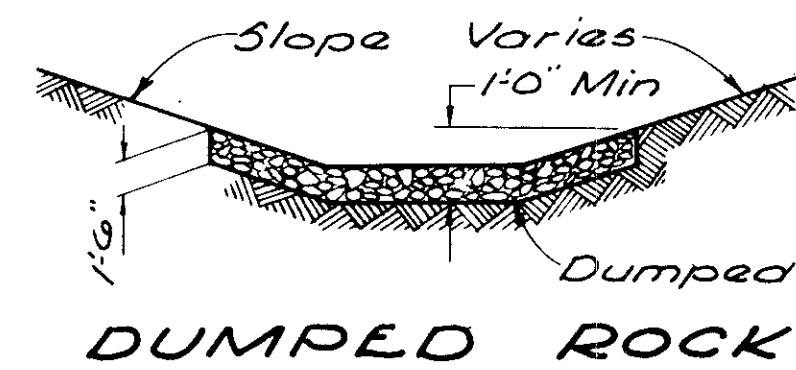


SECTION D-D

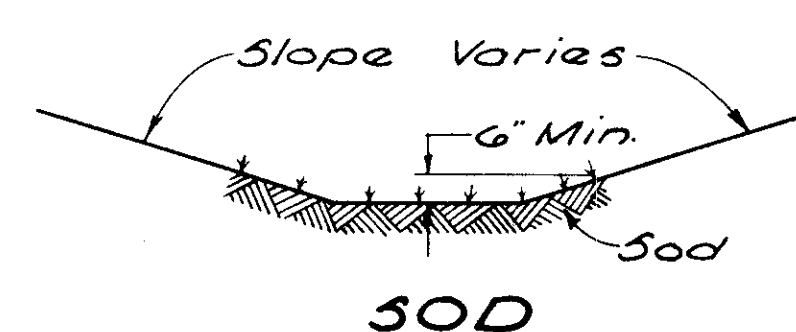


SECTION A-A

EROSION CONTROL AT SWALES

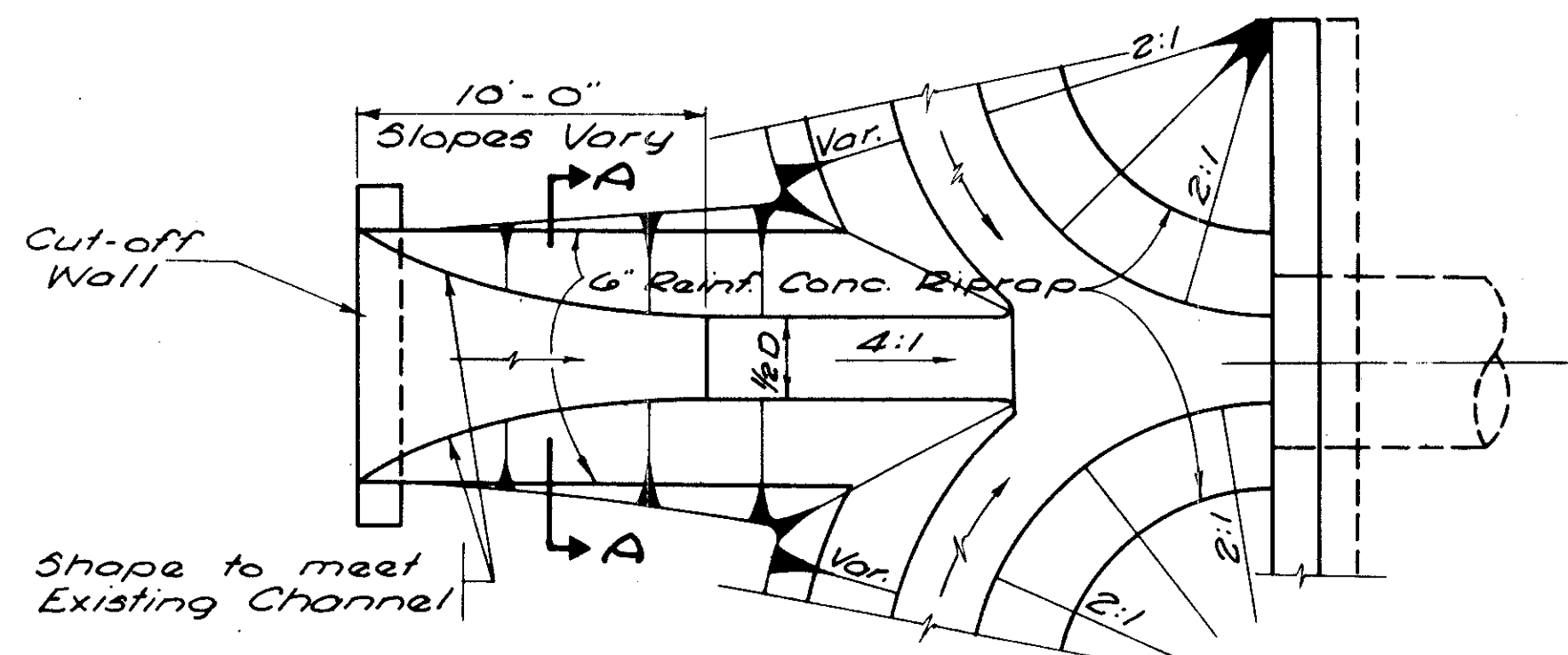


DUMPED ROCK

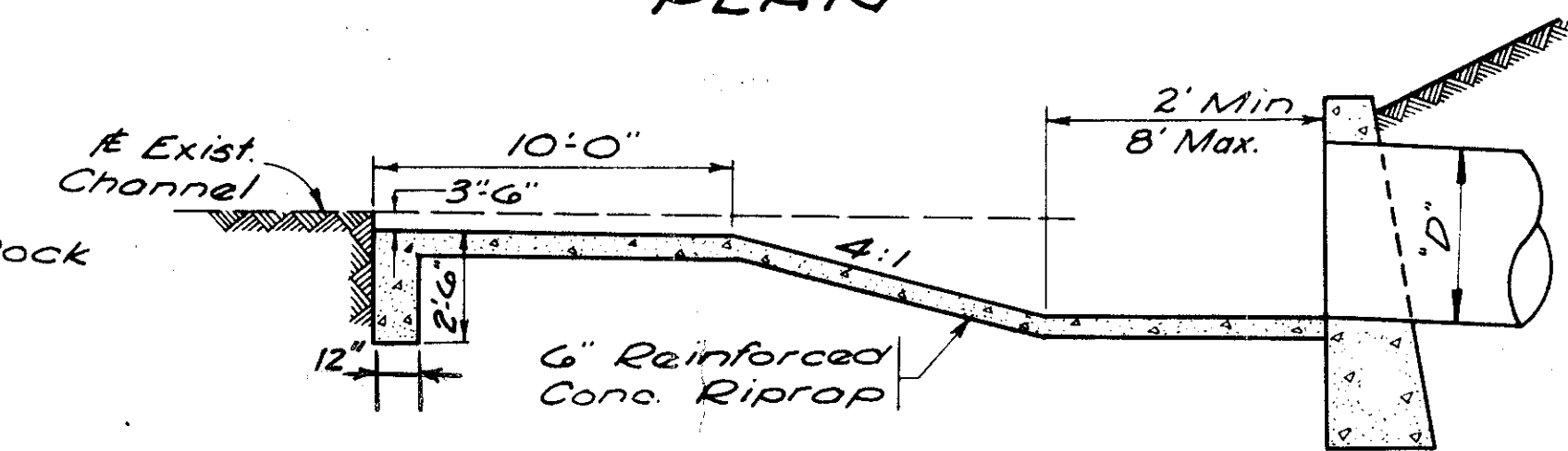


SOD

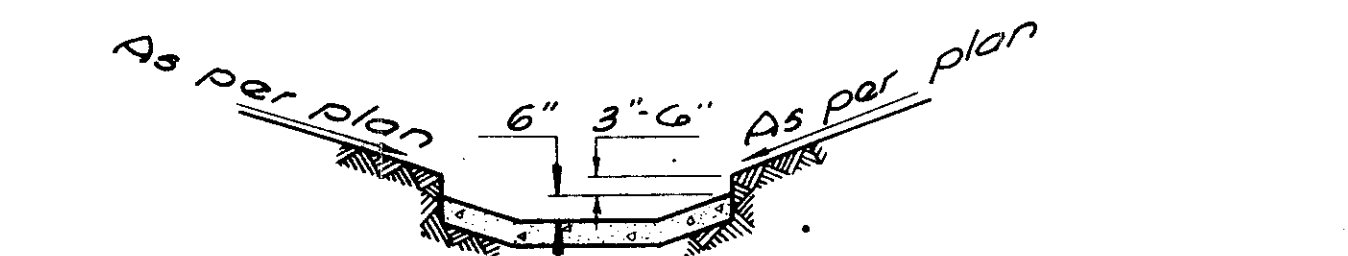
TYPICAL DITCH PROTECTION



PLAN

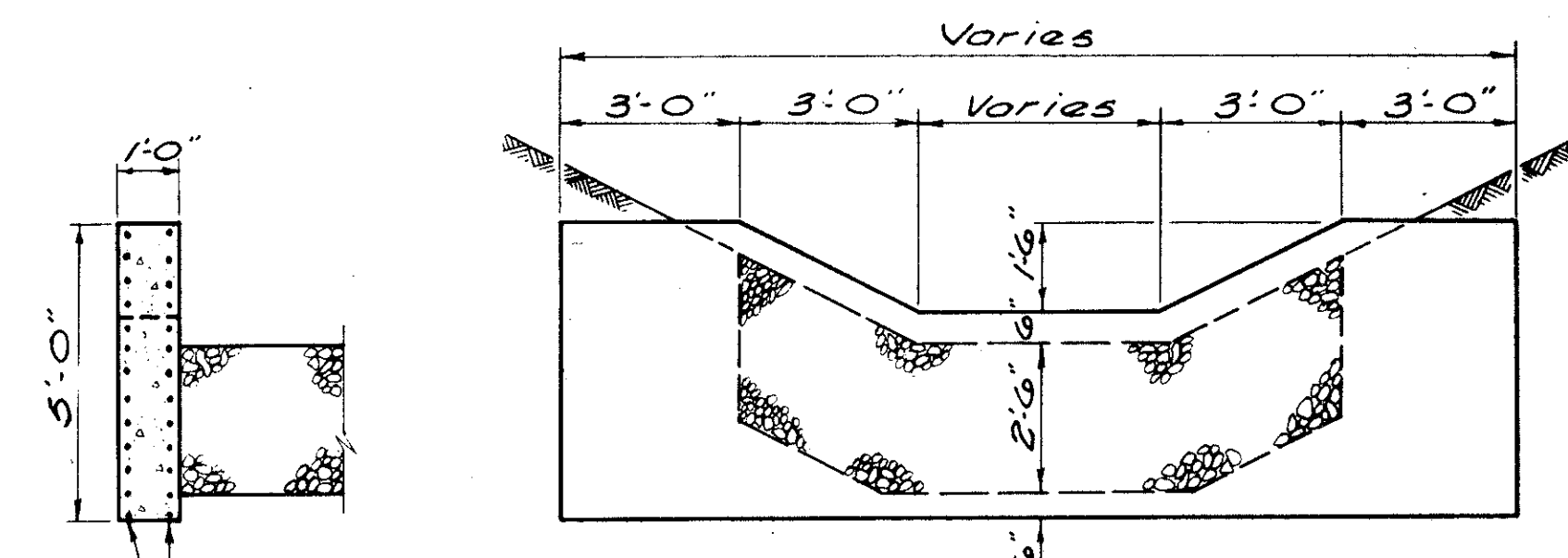


PROFILE



SECTION A-A

PAVED ENTRANCE DETAIL



Place 4x4 1/2 Welded Wire Fabric 2" from each face. Cost to be included in unit cost for Item 602, Class "C" Concrete.

END SILL DETAIL

SPECIAL BERM & SLOPE PROTECTION

Prior to placement of sod in 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 the top and bottom with stakes spaced of four foot intervals and attached in rows four feet apart.

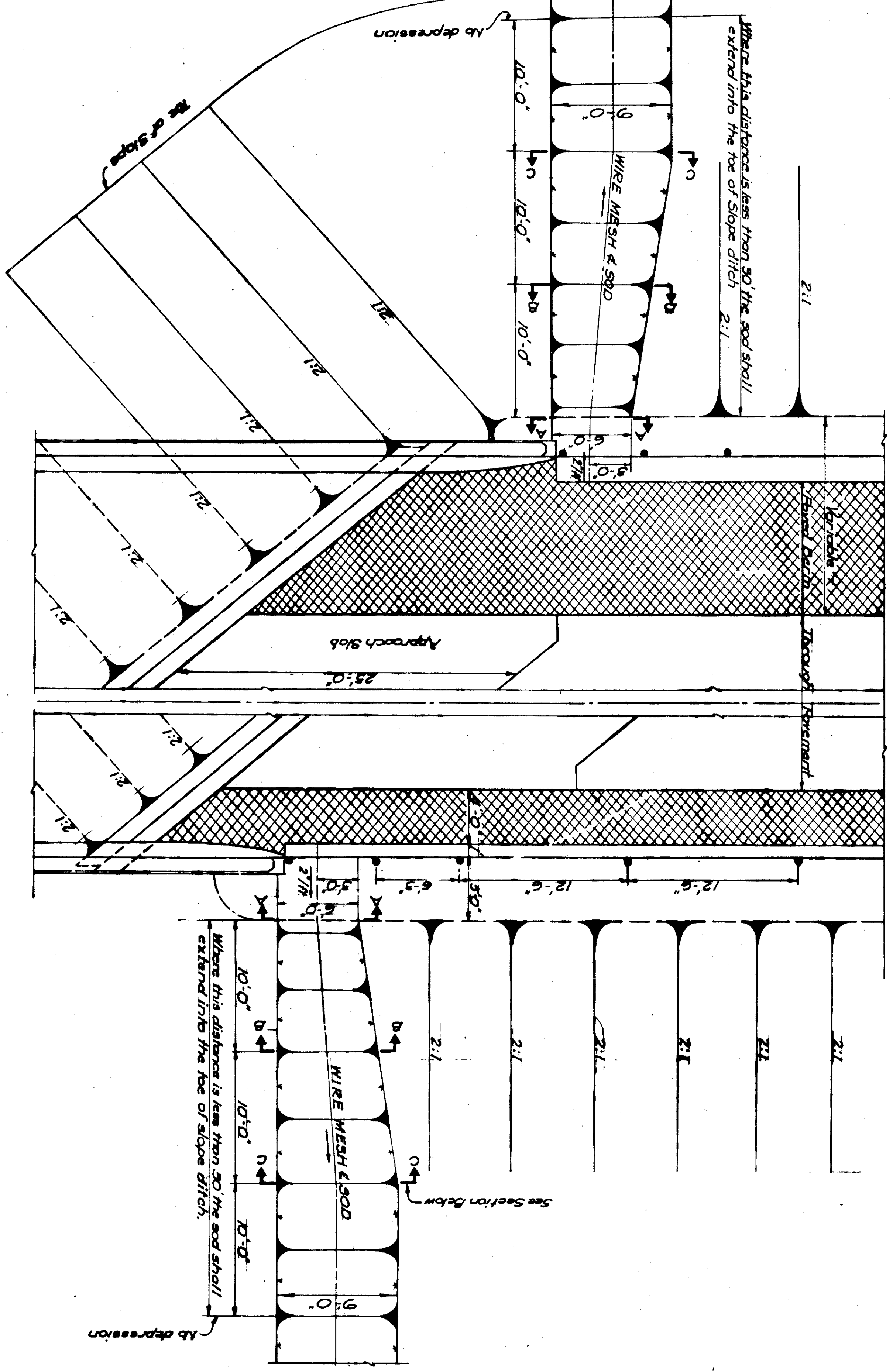
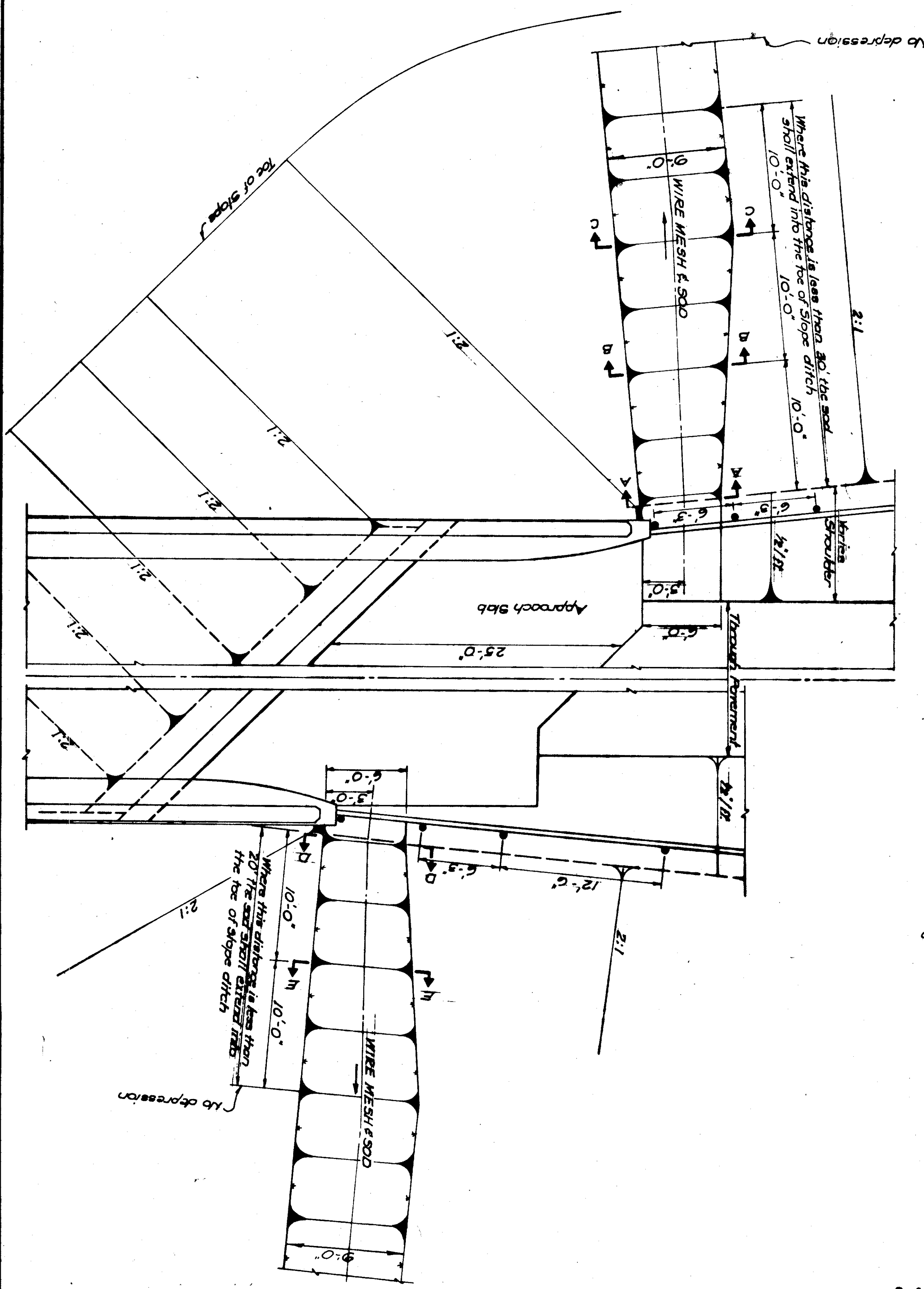
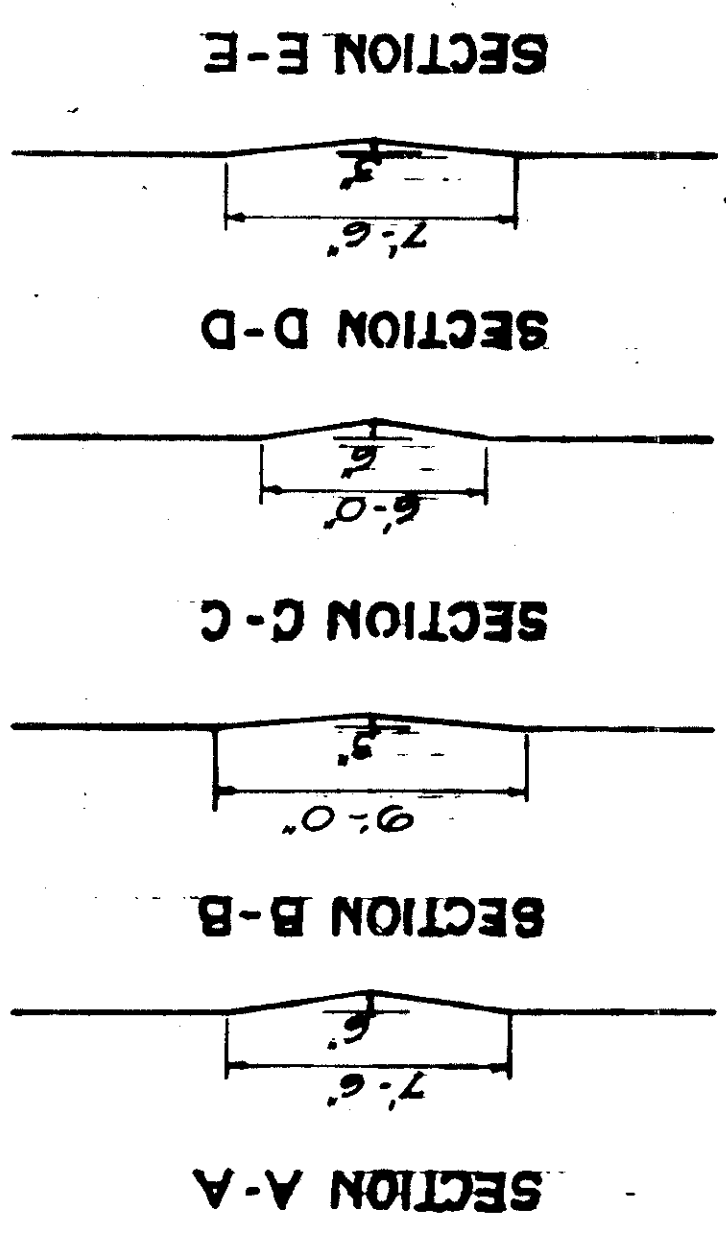
Stakes shall be 1"x6" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

The fence shall be straight line poultry fence or equivalent with strand width of four feet having a two inch mesh and all wires No. 20 gauge.

Each strand of fencing shall be fastened together at twelve inch intervals by means of hog rings. The fence shall be secured to the wood stakes by metal staples.

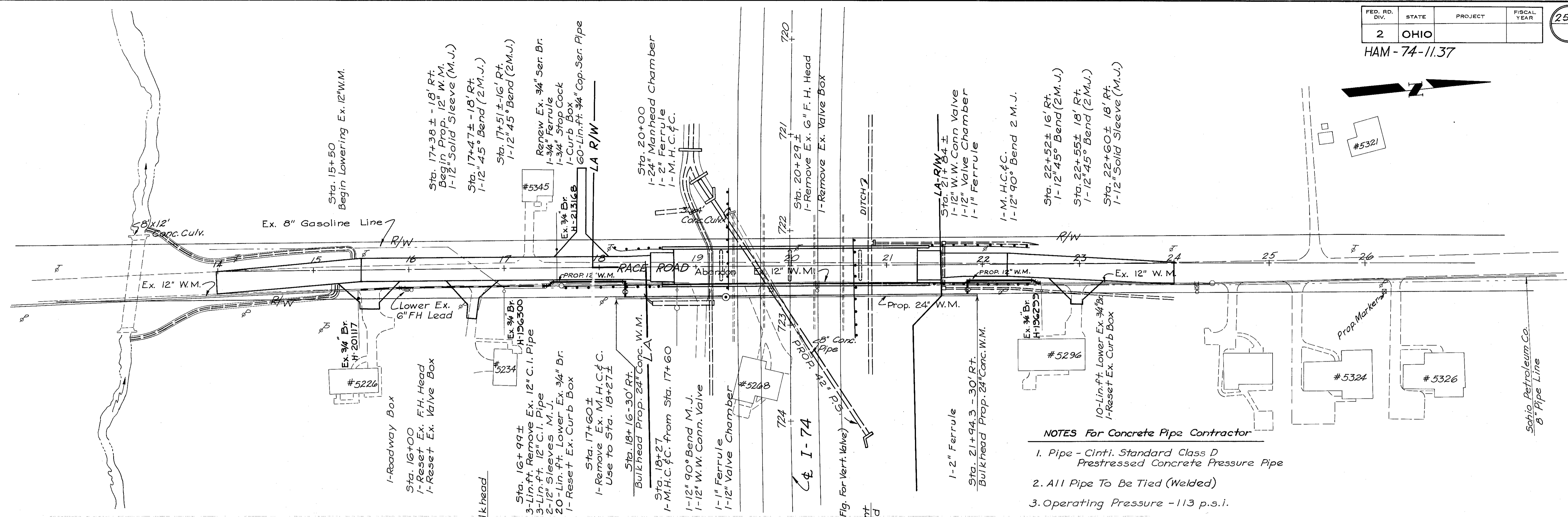
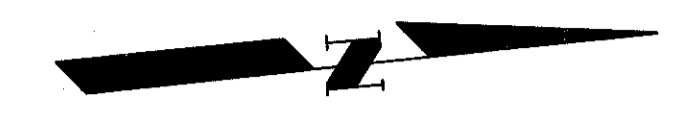
Sod shall be laid in accordance with Construction and Material Specifications Section 620.06 and Erosion control is required only where rate of slope is steeper than 2:1.

Payment for all of the above shall be included in the unit price bid for Item 620 Sodding for special berm and slope protection.



249	PROJECT	STATE	2	OHIO
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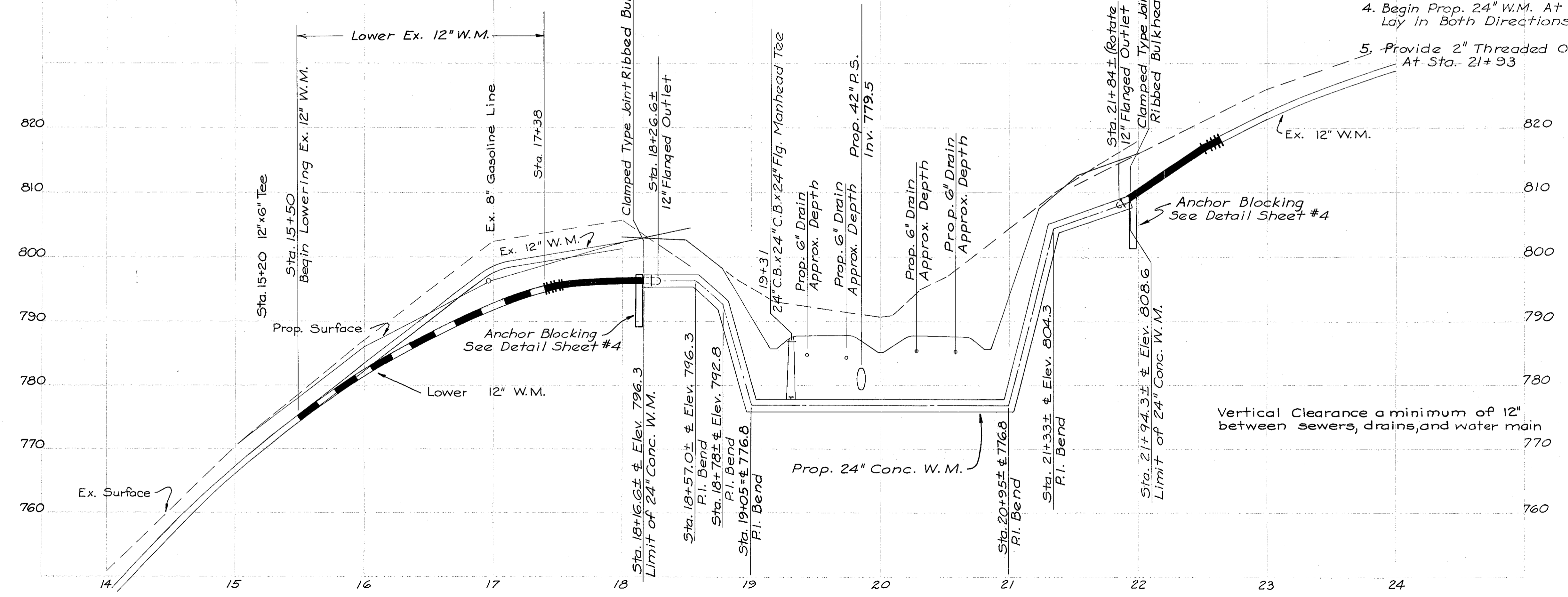
HAM-74-11.37



- NOTES For Concrete Pipe Contractor**
1. Pipe - Cinti. Standard Class D Prestressed Concrete Pressure Pipe
 2. All Pipe To Be Tied (Welded)
 3. Operating Pressure - 113 p.s.i.
 4. Begin Prop. 24" W.M. At Sta. 19+31 And Lay In Both Directions.
 5. Provide 2" Threaded Outlet At Sta. 21+93

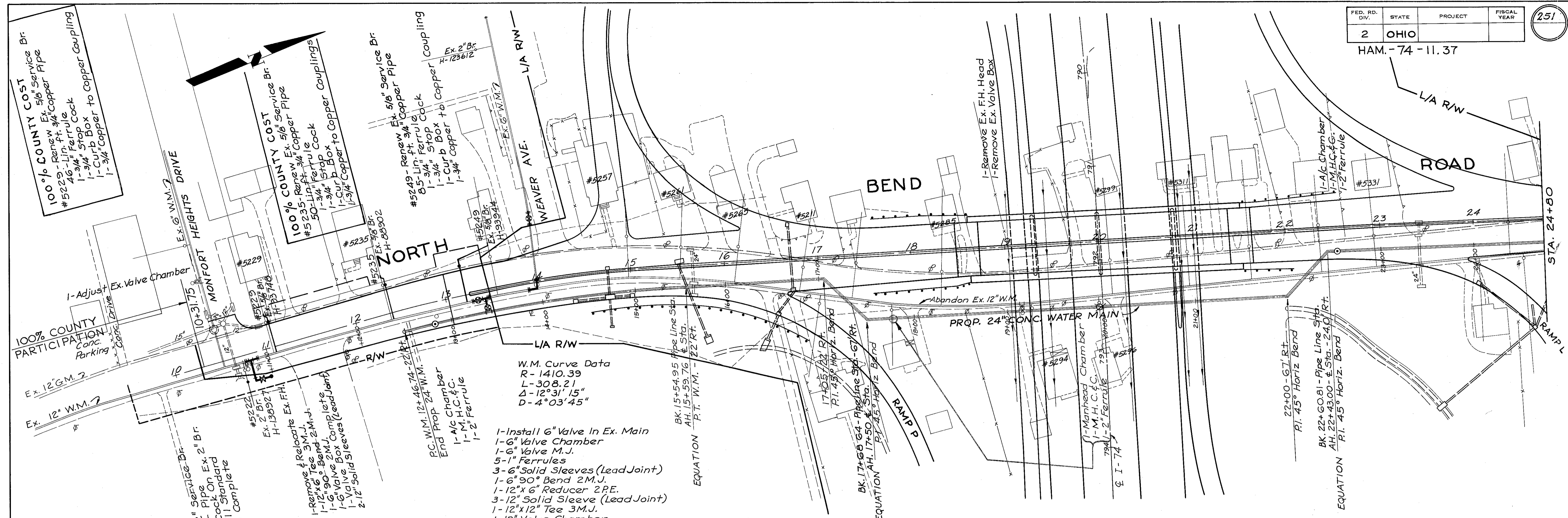
SCALE: 1" = 50' HOR.
1" = 10' VERT.

ALL BENDS & TEES TO HAVE CONCRETE BLOCKING AS SHOWN ON SHEET NO. 4.



WATER WORKS PLANS

RACE ROAD WATER LINE



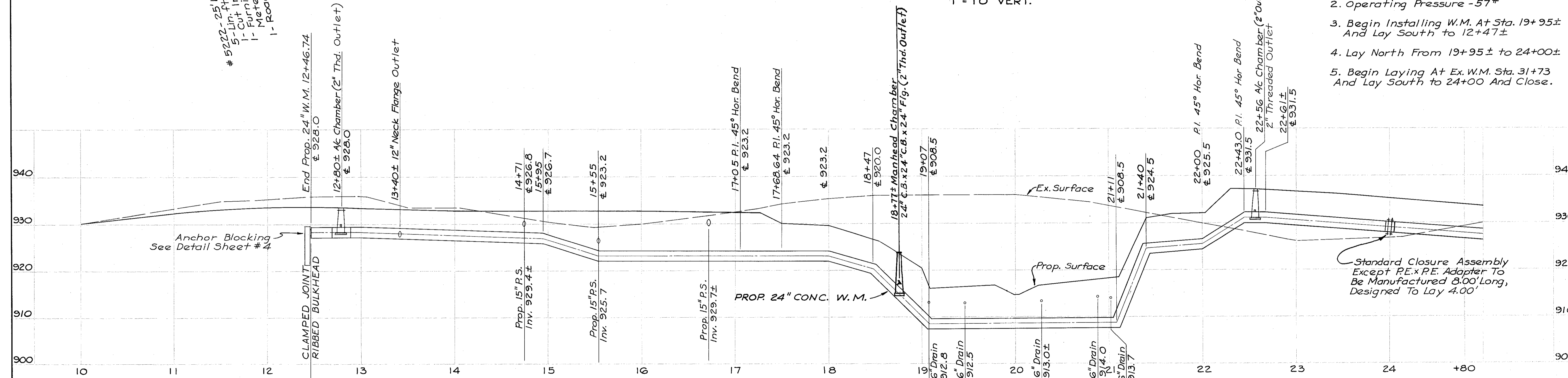
W.M. Curve Data
 R - 1410.39
 L - 308.21
 Δ - 12° 31' 15"
 D - 4° 03' 45"

- 1- Install 6" Valve In Ex. Main
- 1- 6" Valve Chamber
- 1- 6" Valve M.J.
- 5- 1" Ferrules
- 3- 6" Solid Sleeves (Lead Joint)
- 1- 6" 90° Bend 2M.J.
- 1- 12" x 6" Reducer 2P.E.
- 3- 12" Solid Sleeve (Lead Joint)
- 1- 12" x 12" Tee 3M.J.
- 1- 12" Valve Chamber
- 1- 12" Valve M.J.
- 1- 12" W.W. Conn. Valve Chamber
- 1- 12" W.W. Conn. Valve
- 3- M.H.C. & C.
- 1- Remove Ex. M.H.C. & C.

SCALE: 1" = 50' HOR.
 1" = 10' VERT.

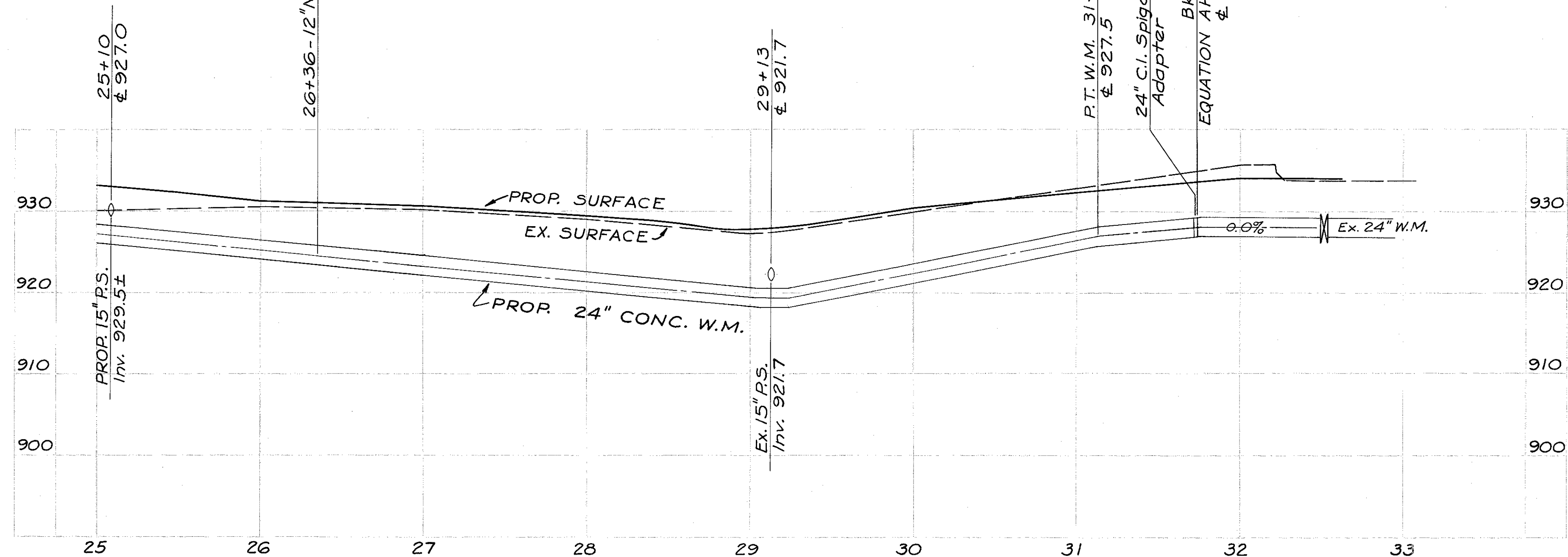
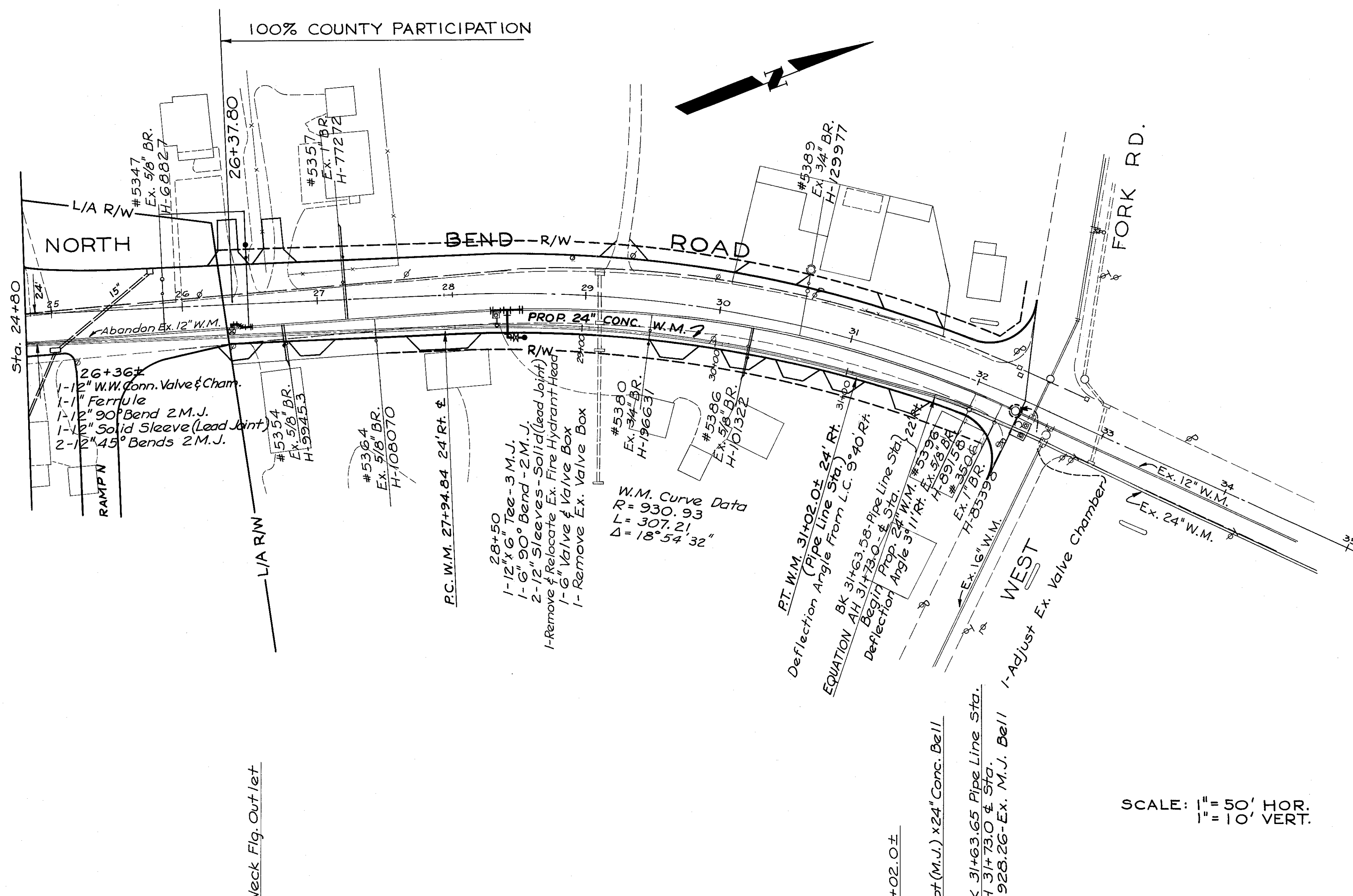
NOTES TO PIPE CONTRACTOR

1. Pipe - Cinti Standard Class B Prestressed Concrete Pipe.
2. Operating Pressure - 57#
3. Begin Installing W.M. At Sta. 19+95± And Lay South to 12+47±
4. Lay North From 19+95± to 24+00±
5. Begin Laying At Ex. W.M. Sta. 31+73 And Lay South to 24+00 And Close.



WATER WORKS PLANS

NORTH BEND ROAD WATER LINE

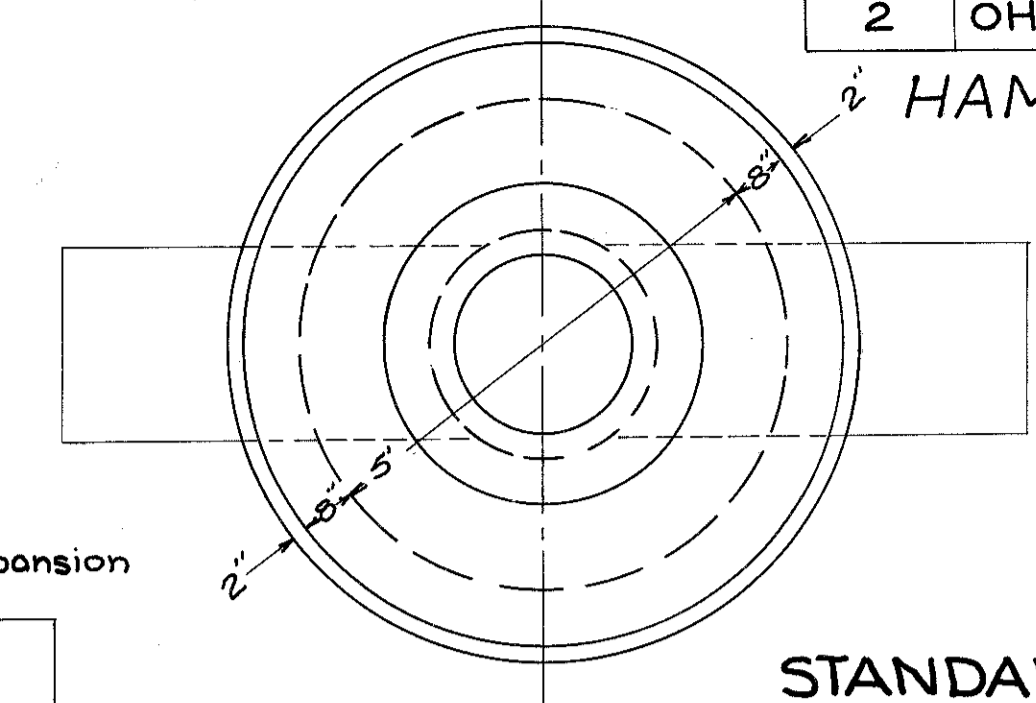
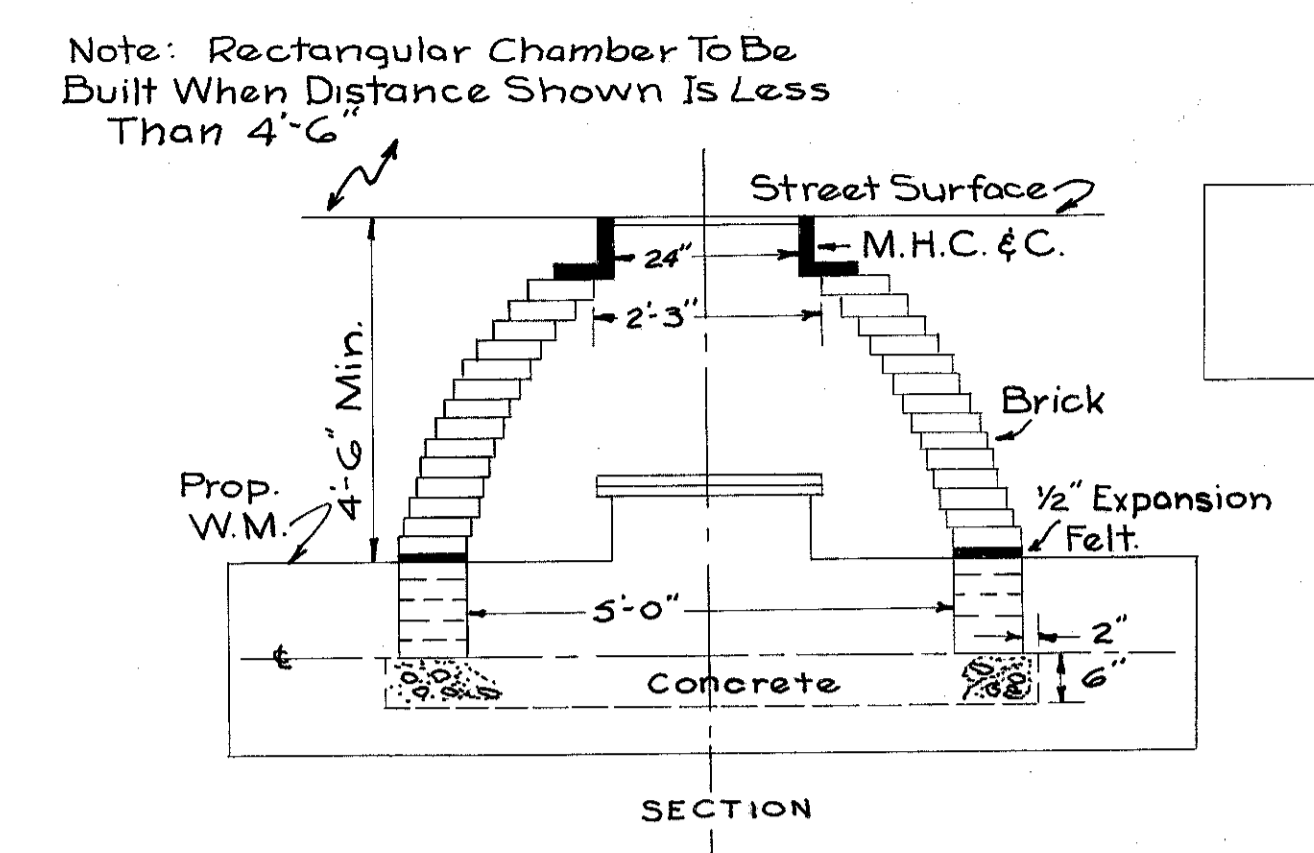
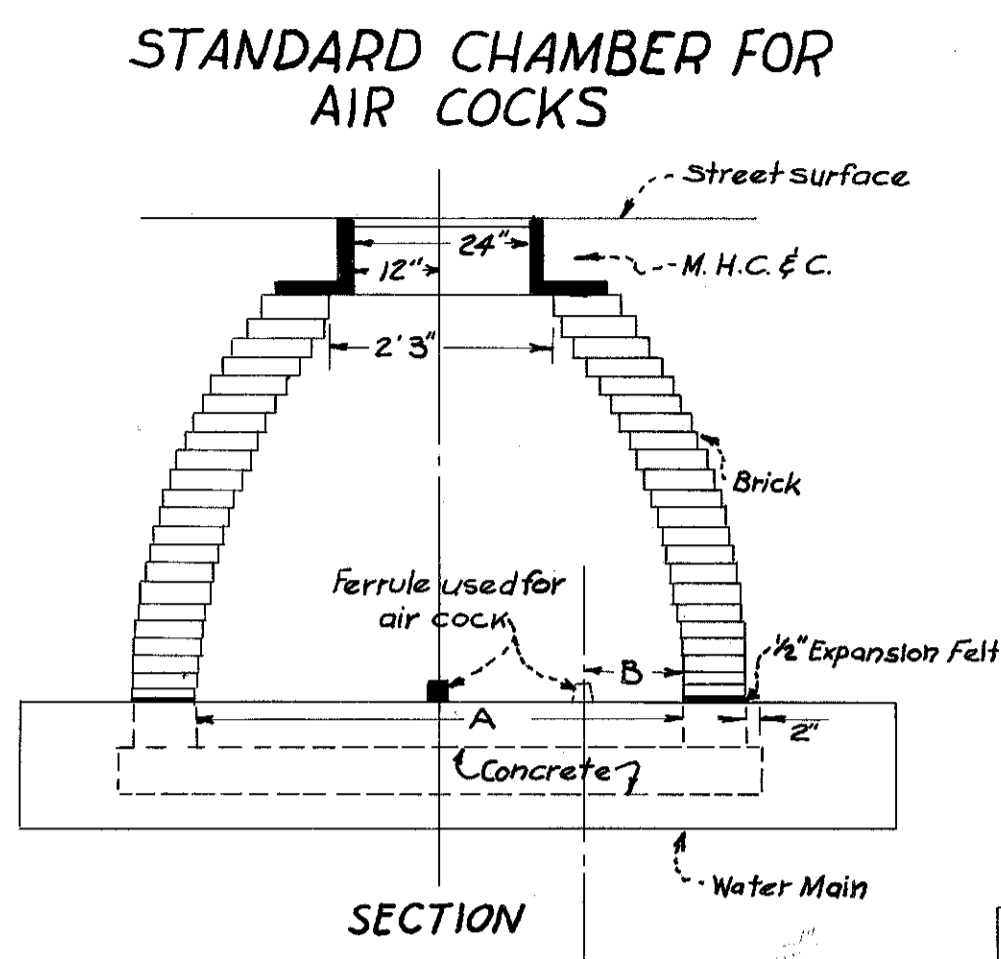
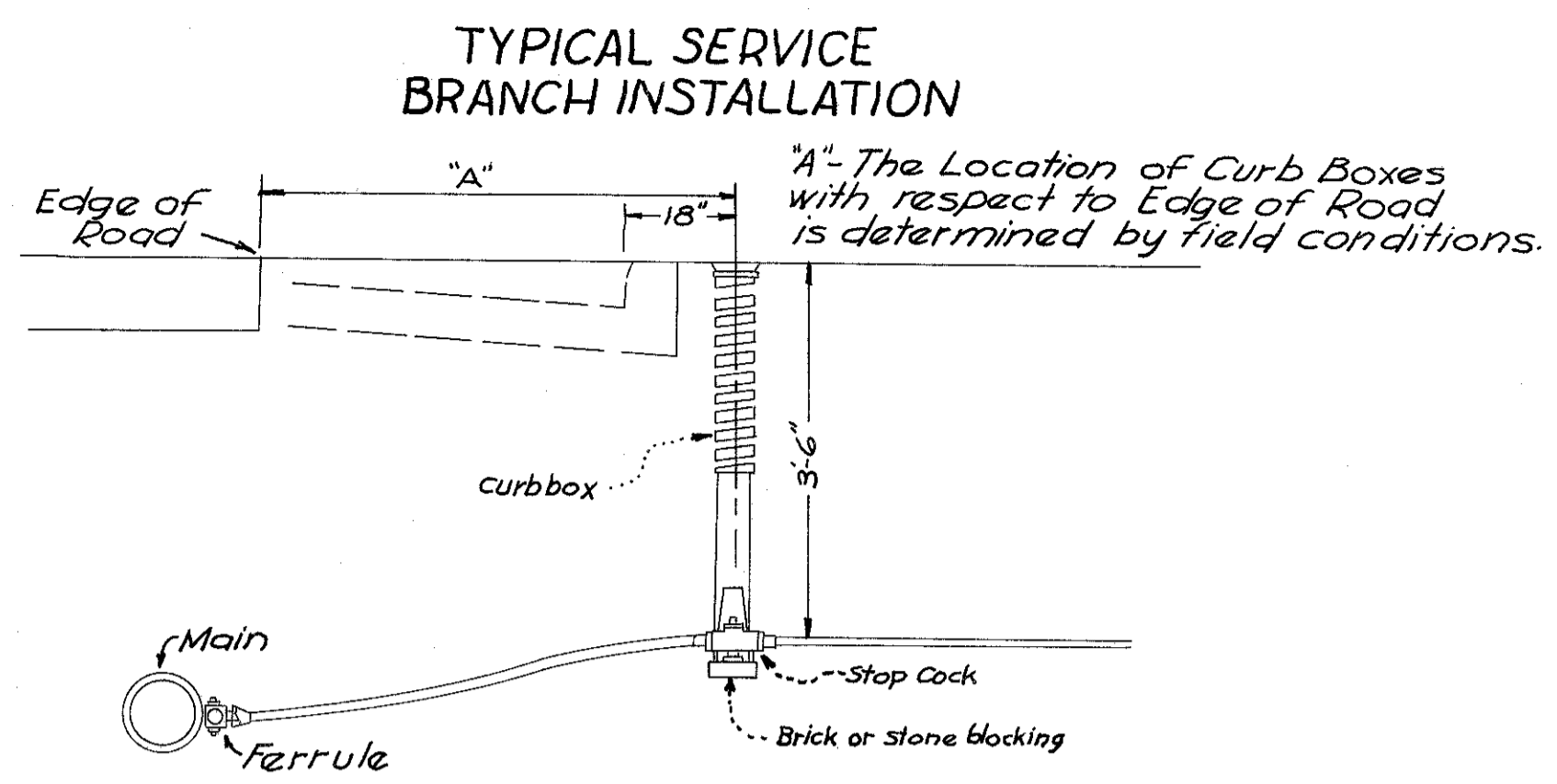


SCALE: 1" = 50' HOR.
1" = 10' VERT.

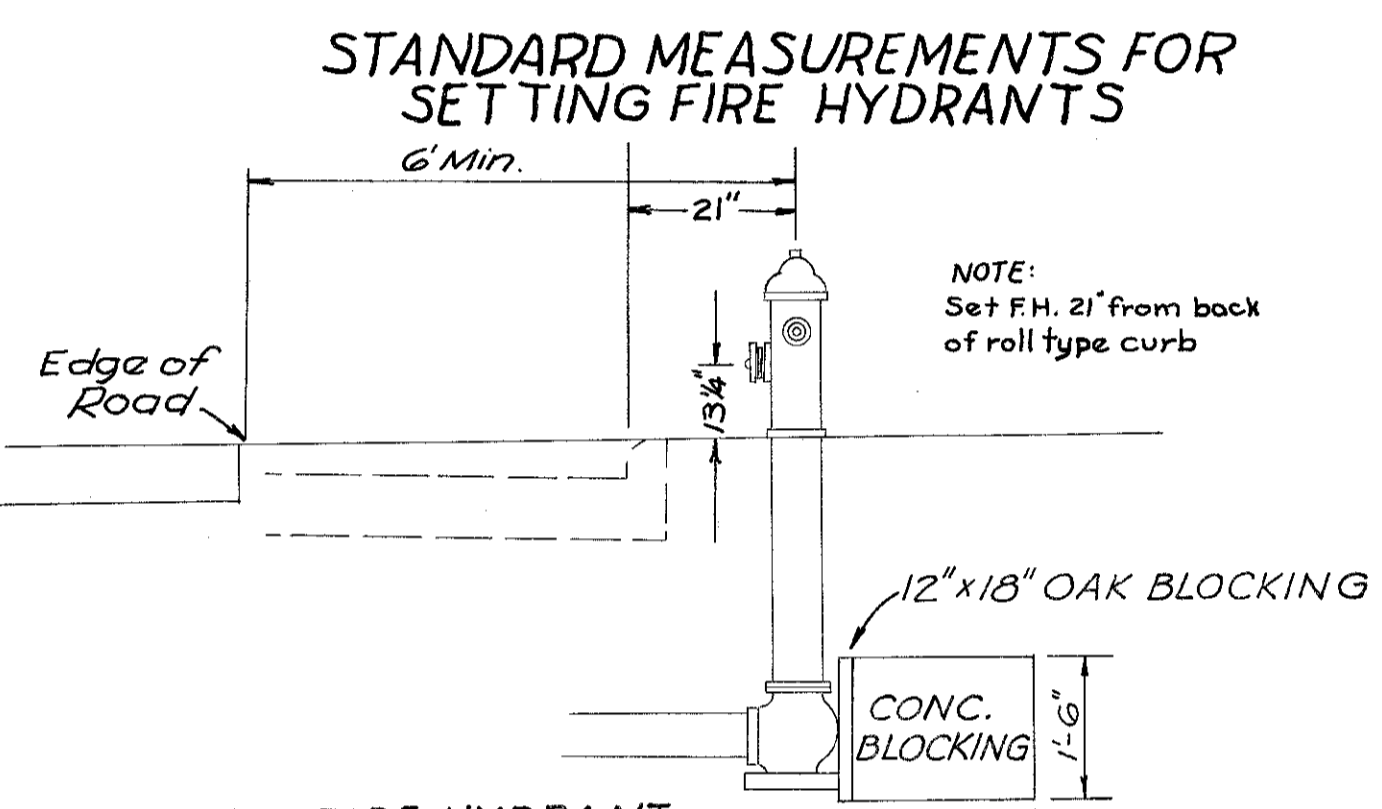
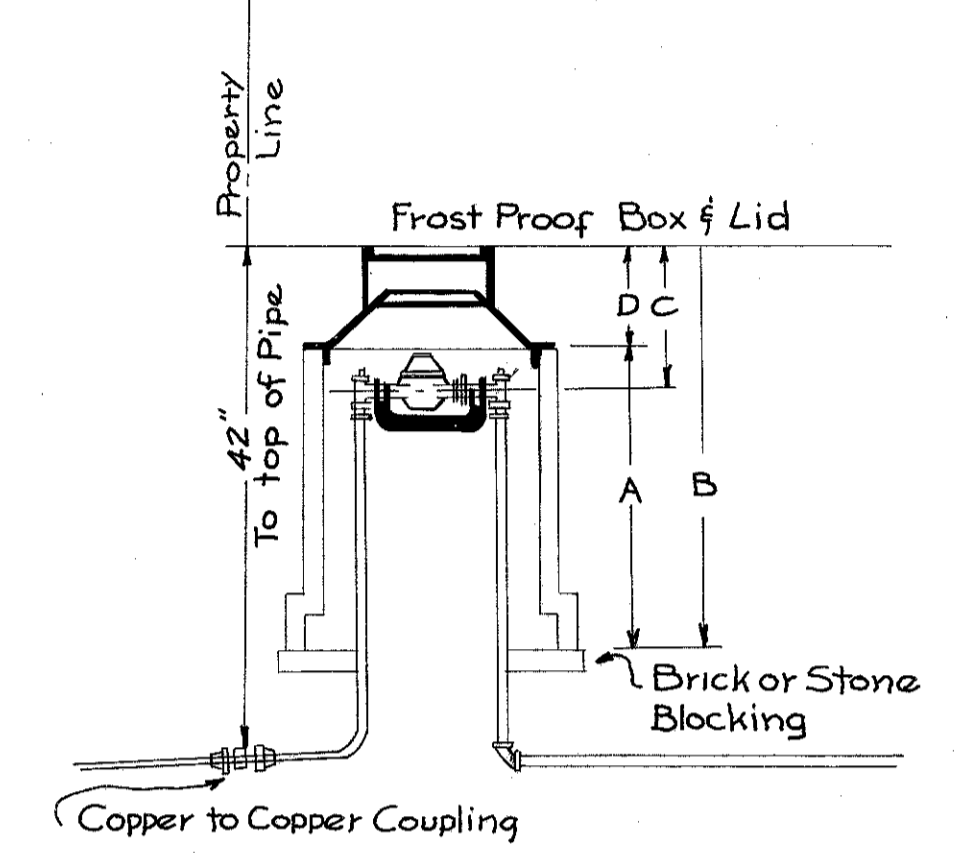
- 100% PROJECT PARTICIPATION**
- # 5347 - 1-Remove & Relocate Ex. Meter Pit
Renew Ex. 5/8" Br.
150 Lin.ft. 3/4" Copper Pipe
1-3/4" Stop Cock
1-3/4" Ferrule
1-Roadway Box
1-3/4" Copper to Copper Coupling
- 100% COUNTY COST**
- # 5354 - Renew Ex. 5/8" Br.
27-Lin.ft. 3/4" Copper Pipe
1-3/4" Ferrule
1-3/4" Stop Cock
1-Curb Box
1-3/4" Copper to Copper Coupling
 - # 5357 - 1-Renew Ex. 1" Br.
70-Lin. Ft. 1" Copper Pipe
1-1" Ferrule
1-1" Stop Cock
1-1" Copper to Copper Coupling
1-Curb Box
 - #5364 1-Reset Ex. Curb Box
 - #5380 - 1-Cut In Stop Cock On Ex. 3/4" Br.
1-Curb Box
1-3/4" Stop Cock
 - #5386 - Renew Ex. 5/8" Br.
35-Lin. ft. 3/4" Copper Pipe
1-3/4" Stop Cock
1-3/4" Ferrule
1-Curb Box
1-3/4" Copper to Copper Coupling
 - # 5389 - 30' Lower Ex. 3/4" Br.
1-Cut & Reverse Ex. 3/4" Stop Cock
1-3/4" Copper to Copper Coupling
1-Roadway Box
1-Reset Ex. Meter Box Setting

WATER WORKS PLANS

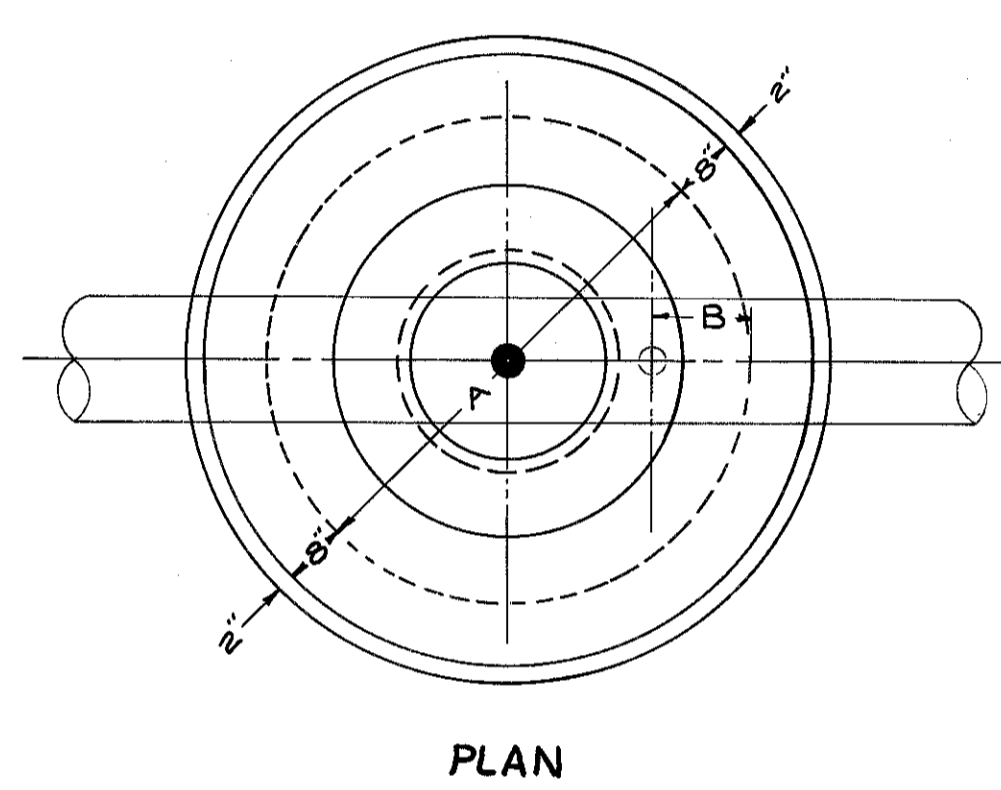
NORTH BEND ROAD WATER LINE



STANDARD METER SETTING FOR OUTSIDE FROST PROOF BOX



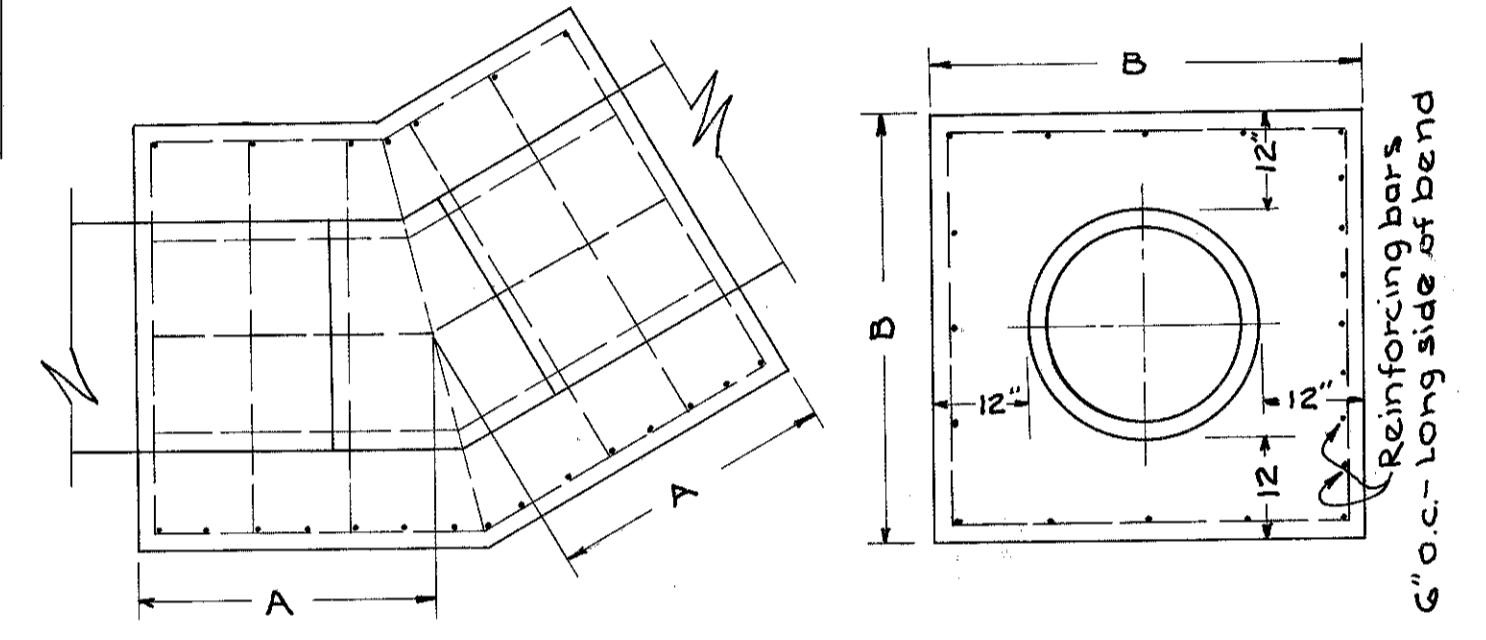
NO PART OF ANY FIRE HYDRANT SETTING SHALL BE CLOSER THAN FIVE (5) FEET TO ANY DRIVEWAY SEWER INLET UTILITY POLE OR GUY WIRE ANCHOR



For Estimate Only

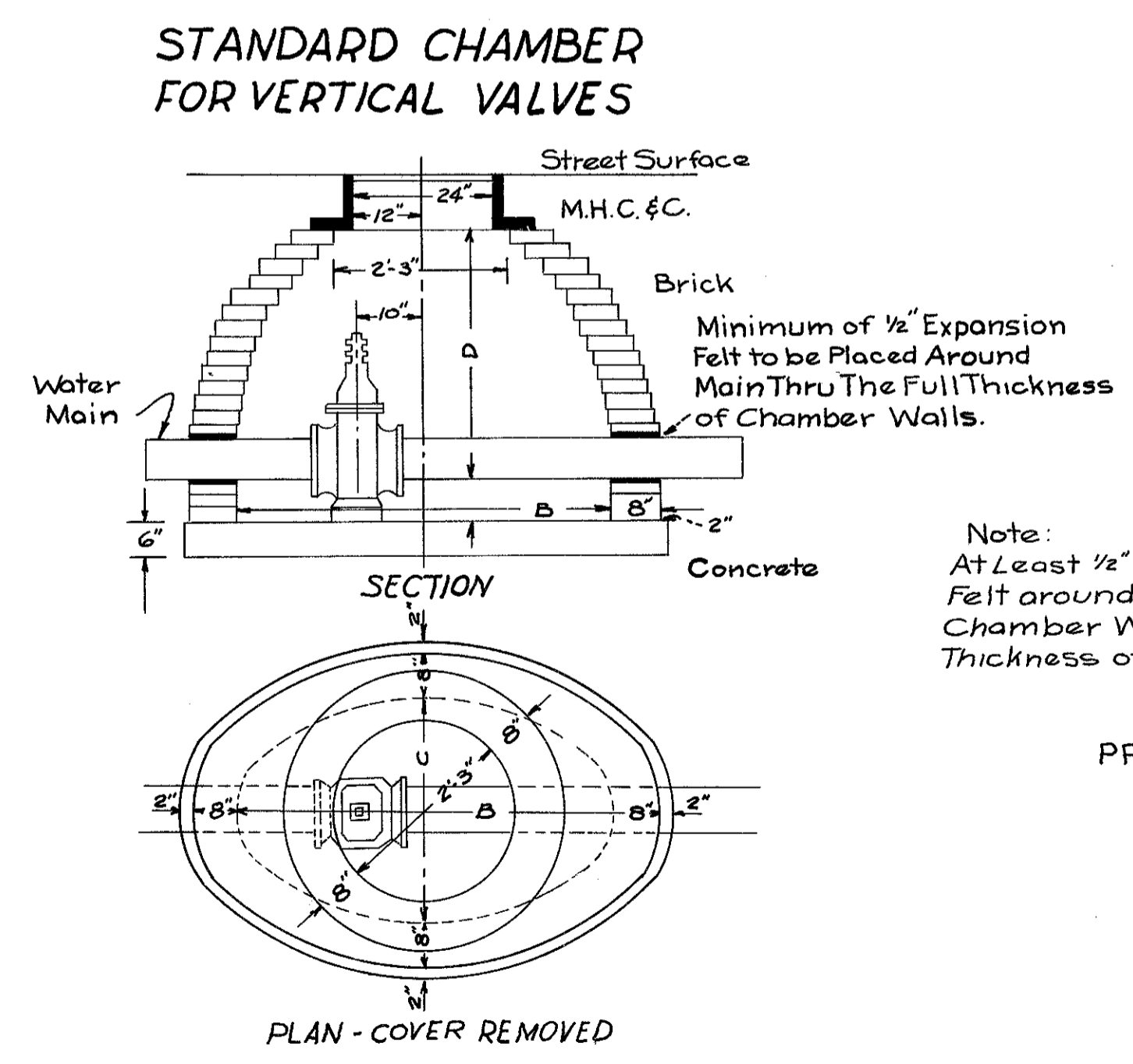
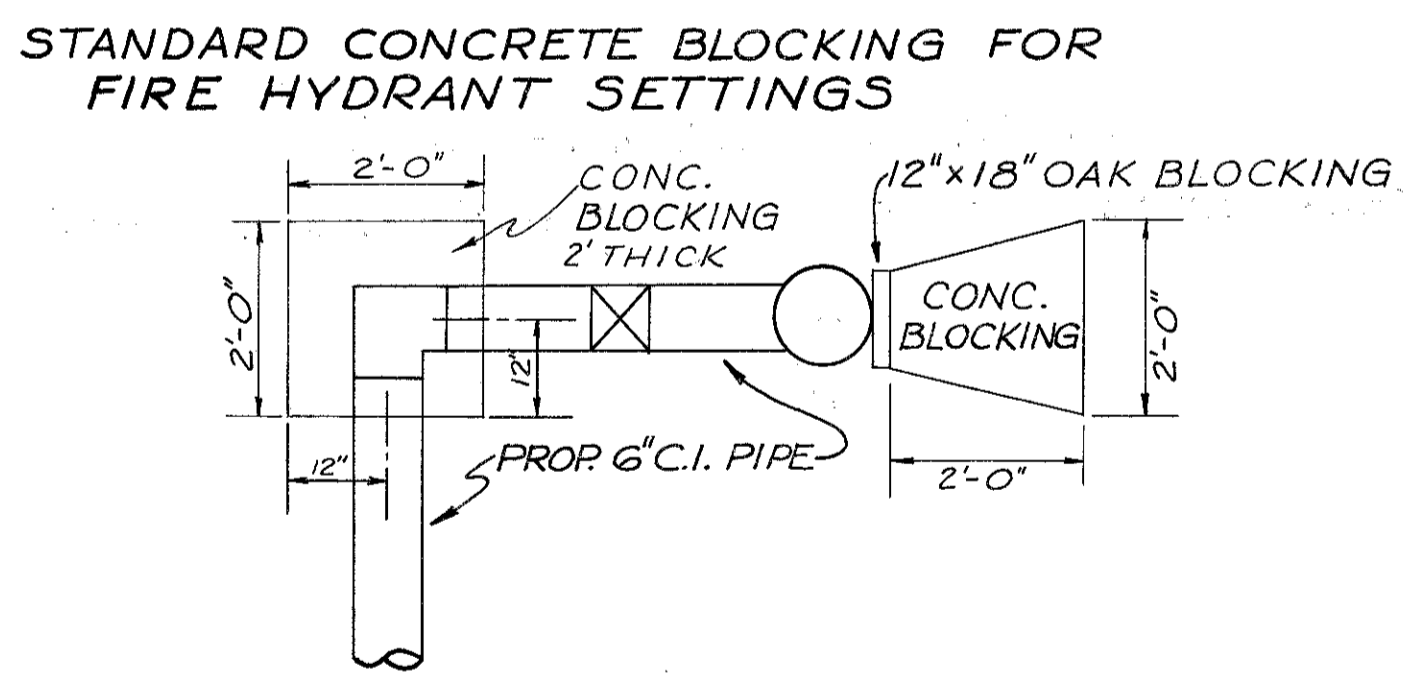
Size of Ferrule	A	B	Cu. Yds. Conc.	Cu. Yds. Brick
1"	3'-0"	1'-0"	0.3	1.0
1 1/2" & 2"	5'-0"	2'-6"	0.6	1.4

NOTE: All reinforcing bars shall be 3/4" round bars spaced 12" o.c. except on long side of bend where they shall be 6" o.c.



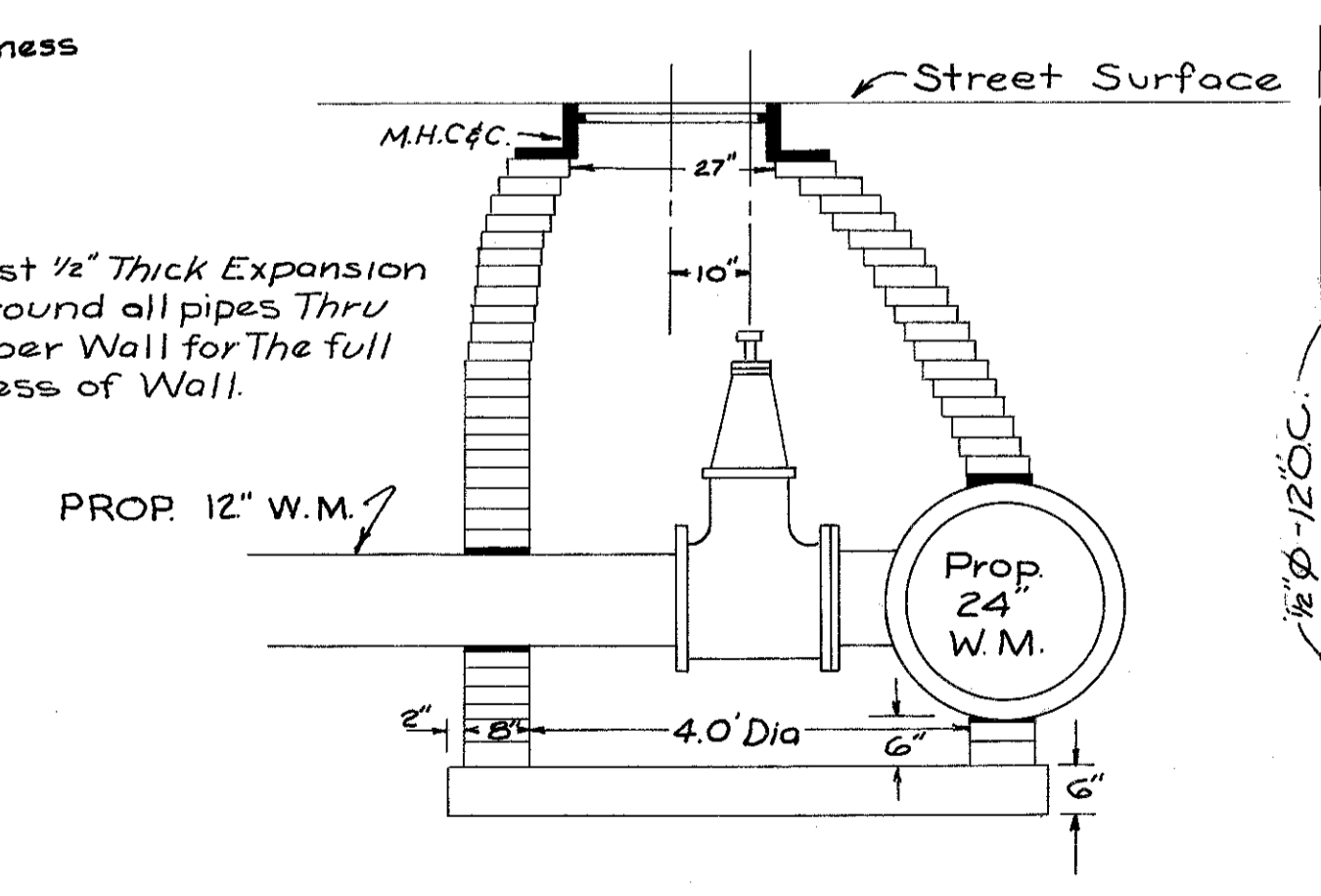
Size Pipe	Pressure under 100 lbs. p.s.i.					Pressure over 100 lbs. p.s.i.						
	Degree Bend	A	B	cu. yds. Conc.	lbs. ft. Tied Steel ea. side	Degree Bend	A	B	cu. yds. Conc.	lbs. ft. Tied Steel ea. side		
24"	0° to 15°	3'-0"	4'-5"	3.5	440	16	0° to 15°	6'-0"	4'-5"	8.0	865	48
	15° to 30°	3'-0"	4'-5"	3.5	440	32	15° to 30°	6'-0"	4'-5"	8.0	865	64
	30° to 45°	4'-0"	4'-5"	4.7	580	48	30° to 45°	6'-0"	4'-5"	8.0	865	80

METER SIZE	A	B	C	D	WITH PIPE TITLE
3/8"	27 1/2"	36 3/4"	16"	9 1/4"	20"
3/4"	27 1/2"	36 3/4"	16"	9 1/4"	20"
1"	27 1/2"	36 3/4"	17"	9 1/4"	20"

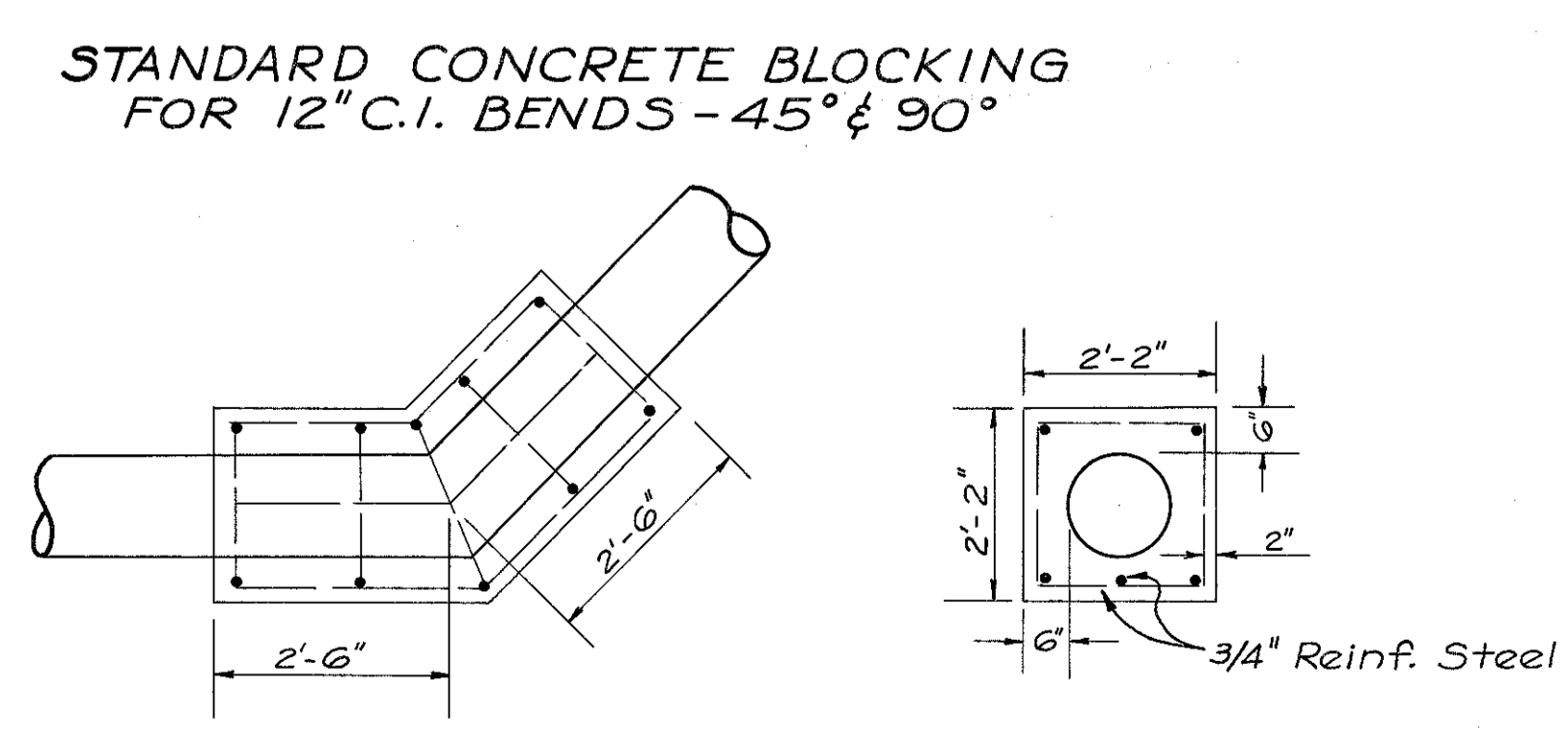
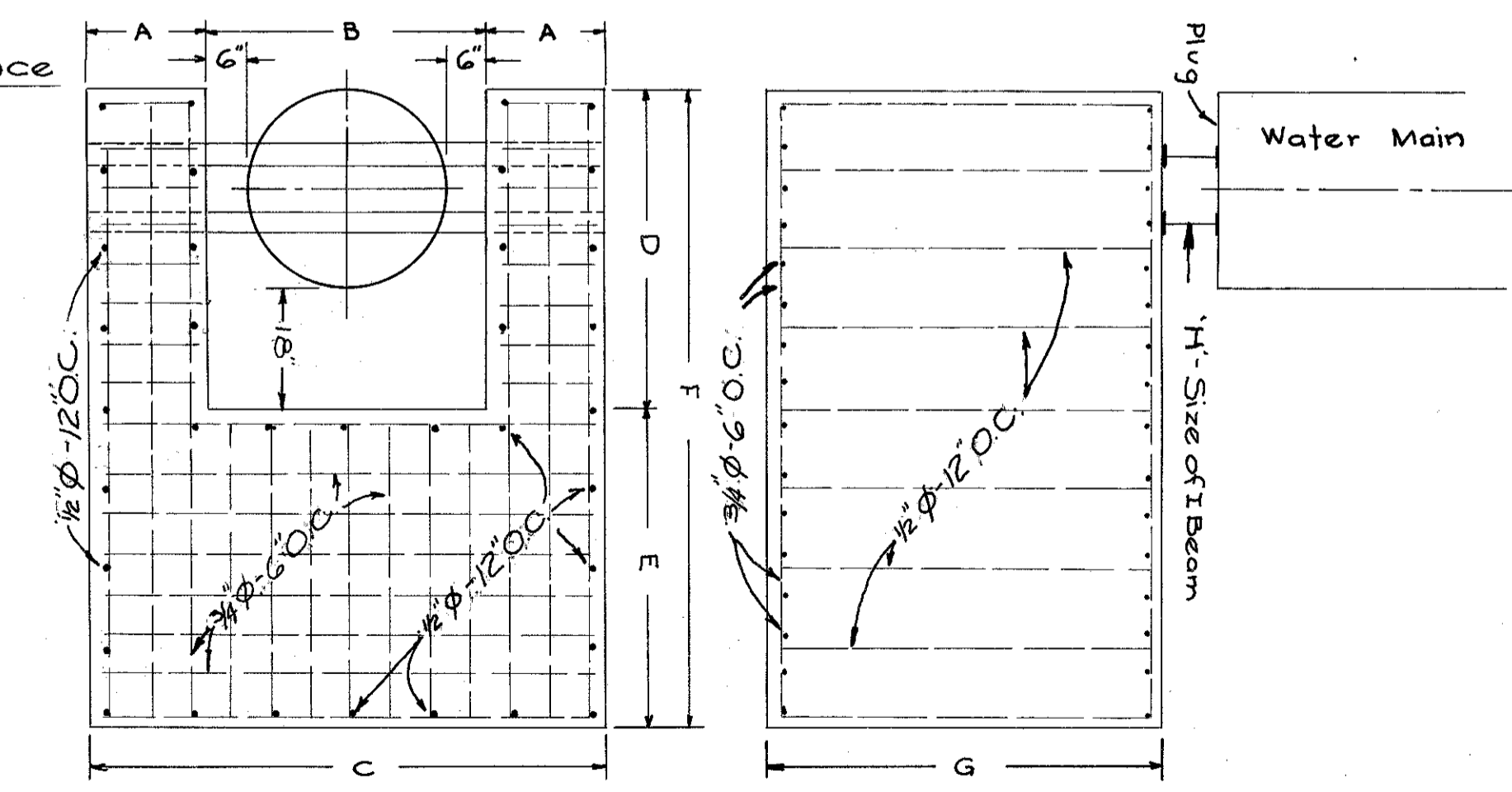


Note: At Least 1/2" Thick Expansion Felt around all pipes Thru Chamber Wall for the full Thickness of Wall.

STANDARD VALVE CHAMBER FOR FLANGE VALVE OUTLETS ON CONCRETE PIPE



BLOCKING FOR DEAD END MAINS



FOR ESTIMATE ONLY

SIZE OF VALVE	A	B	C	D	Cu. Yds. CONC.	Cu. Yds. BRICK
4'-6" - 8'	6'	5'-0"	3'-0"	2'-11"	0.5	1.3
10'-12"	6'	5'-0"	4'-0"	2'-11"	0.6	1.6

Size of Main	100 lbs. Max. Pressure								200 lbs. Max. Pressure							
	A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	H
24" Conc.	1'-6"	3'-6"	6'-6"	4'-0"	4'-0"	8'-0"	6'-0"	4"	2'-0"	3'-6"	7'-6"	4'-0"	4'-0"	8'-0"	5'-0"	4"

SUPPLEMENTAL SPECIFICATIONS

NOTES

W-60 REMOVING AND RELOCATING EXISTING FIRE HYDRANTS.

W-60.01 DESCRIPTION. THIS ITEM SHALL COVER THE REMOVING OF AN EXISTING FIRE HYDRANT AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL APPLY ONLY TO A FIRE HYDRANT THAT IS TO BE ATTACHED TO A LEAD OTHER THAN THE LEAD TO WHICH IT IS CURRENTLY CONNECTED. THE CONTRACTOR SHALL MAKE THE NECESSARY EXCAVATION, CAREFULLY DISCONNECT THE HYDRANT BY MEANS OF WIRE BRUSHING AND FLUSHING, HAUL, AND INSTALL THE HYDRANT IN THE NEW LOCATION. THE HYDRANT SHALL BE SET IN ACCORDANCE WITH THE PROVISIONS SET FORTH IN ITEM W-11.02.

W-60.02 PAYMENT. PAYMENT FOR THE ITEM OF "REMOVING AND RELOCATING EXISTING FIRE HYDRANTS" WILL BE MADE AT THE UNIT PRICE BID WHICH SHALL COVER ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO REMOVE AND RELOCATE THE FIRE HYDRANT COMPLETE, INCLUDING EXCAVATION, LOADING, HAULING, UNLOADING AND BACKFILLING. ANY NECESSARY PIPE LAYING WILL BE PAID FOR UNDER ITEM W-1

W-62 FURNISH AND INSTALL STANDARD METER SETTING COMPLETE.

W-62.01 DESCRIPTION. THIS ITEM SHALL COVER THE FURNISHING AND INSTALLING OF A STANDARD FROST PROOF METER SETTING COMPLETE, WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE WATER WORKS INSPECTOR. THE CONTRACTOR SHALL MAKE THE NECESSARY EXCAVATION, INSTALL THE TILE, HOOD, METER AND ITS APPURTENANCES, AND BACKFILL ALL OPENINGS. THE CONTRACTOR SHALL ALSO REMOVE THE EXISTING METER SETTING AND RECONNECT THE ENDS OF THE SERVICE BRANCH WHERE THE ORIGINAL METER SETTING WAS REMOVED. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE WATER WORKS STANDARD DRAWINGS AND THE RULES AND REGULATIONS GOVERNING THE INSTALLATION OF SERVICE BRANCHES ALL SERVICE PIPE, FROM THE WATER MAIN TO THE NEW METER SETTING, SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE WATER WORKS GOVERNING SERVICE BRANCHES.

W-62.02 PAYMENT. PAYMENT FOR THIS ITEM WILL BE MADE AT THE UNIT PRICE BID WHICH SHALL COVER ALL LABOR, EQUIPMENT AND MATERIAL REQUIRED TO FURNISH AND INSTALL THE FROST PROOF METER SETTING COMPLETE, INCLUDING EXCAVATION, FURNISHING AND INSTALLING THE TILE, HOOD AND METER APPURTENANCES, REMOVING AND RELOCATING THE EXISTING METER, RECONNECTING THE ENDS OF THE SERVICE BRANCH WHERE THE ORIGINAL SETTING WAS REMOVED, MAKING ALL JOINTS AND CONNECTIONS, BACKFILLING AND RESTORING THE SURROUNDING AREA. ALL NEW PIPE, OTHER THAN THAT REQUIRED TO RECONNECT THE ENDS OF THE BRANCH WHERE THE ORIGINAL METER SETTING WAS REMOVED, WHICH MUST BE INSTALLED TO CONFORM TO THE RULES AND REGULATIONS OF THE WATER WORKS, WILL BE PAID FOR AT THE UNIT PRICE BID TO FURNISH AND INSTALL THE APPROPRIATE SIZE SERVICE PIPE AND FITTINGS.

W-67. REMOVING AND RELOCATING EXISTING METER BOX SETTINGS.

W-67.01 DESCRIPTION. THIS ITEM SHALL COVER THE REMOVING AND RELOCATING OF EXISTING STANDARD FROST PROOF METER BOX SETTINGS, WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAKE ANY NECESSARY EXCAVATION, CAREFULLY REMOVE THE TILE, HOOD, METER AND ITS APPURTENANCES AND RESET THEM IN A LOCATION, AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL RECONNECT THE ENDS OF THE SERVICE BRANCH WHERE THE ORIGINAL METER SETTING WAS REMOVED. THE BRANCH SHALL BE RECONNECTED IN A STRAIGHT LINE GRADE AT 3.5 FEET OF COVER. THE TILE, HOOD, AND METER AND ITS APPURTENANCES SHALL ALL BE RESET TO CONFORM TO THE WATER WORKS STANDARD DRAWINGS ON FILE IN THE OFFICE OF THE SUPERINTENDENT OF THE WATER WORKS. ALL SERVICE PIPE, FROM THE WATER MAIN TO THE NEW METER SETTING, SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE WATER WORKS GOVERNING SERVICE BRANCHES.

W-67.02 PAYMENT. PAYMENT FOR THE ITEM OF "REMOVING AND RELOCATING EXISTING METER BOX SETTINGS" WILL BE MADE AT UNIT PRICE BID WHICH SHALL COVER ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO REMOVE AND RELOCATE THE METER BOX SETTING COMPLETE, INCLUDING EXCAVATING, REMOVING AND RESETTING THE TILE, HOOD, METER AND ITS APPURTENANCES, RECONNECTING THE ENDS OF THE SERVICE BRANCH WHERE THE ORIGINAL METER SETTING WAS REMOVED, MAKING ALL JOINTS AND CONNECTIONS, BACKFILLING, AND RESTORING THE SURROUNDING DISTURBED AREA. ALL NEW PIPE, OTHER THAN THAT REQUIRED TO RECONNECT THE ENDS OF THE BRANCH WHERE THE ORIGINAL METER SETTING WAS REMOVED, WHICH MUST BE INSTALLED TO CONFORM TO THE RULES AND REGULATIONS OF THE WATER WORKS, WILL BE PAID FOR AT THE UNIT PRICE BID TO FURNISH AND INSTALL THE APPROPRIATE SIZE SERVICE PIPE AND FITTINGS.

W-68 RESETTING EXISTING METER BOX SETTING

W-68.01 DESCRIPTION. THIS ITEM SHALL COVER THE RESETTING TO GRADE OF EXISTING STANDARD FROST PROOF METER BOX SETTING, WHERE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL MAKE ANY NECESSARY EXCAVATION, CAREFULLY REMOVE THE EXISTING TILE, HOOD, METER AND ITS APPURTENANCES, ADD OR REMOVE ANY PIPE AND FITTINGS REQUIRED TO RESET THE METER TO THE PROPER GRADE, RESET THE METER AND ITS APPURTENANCES, AND REST THE TILE AND HOOD TO THE PROPER GRADE. THE COMPLETE INSTALLATION SHALL CONFORM TO THE WATER WORKS STANDARD DRAWINGS ON FILE IN THE OFFICE OF THE SUPERINTENDENT OF THE WATER WORKS.

W-68.02 PAYMENT. PAYMENT FOR THE ITEM OF "RESETTING EXISTING METER BOX SETTINGS" WILL BE MADE AT THE UNIT PRICE BID WHICH SHALL COVER ALL LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO RESET THE EXISTING METER BOX SETTING COMPLETE, INCLUDING EXCAVATION, REMOVAL OF THE EXISTING TILE, HOOD, METER AND ITS APPURTENANCES, REMOVAL OF EXISTING PIPE, THE FURNISHING AND INSTALLATION OF ADDITIONAL PIPE AND FITTINGS, RESETTING OF THE TILE, HOOD, AND THE METER AND ITS APPURTENANCES, BACKFILL, RESTORATION OF THE SURROUNDING DISTURBED AREA, AND ANY OTHER OPERATION NECESSARY FOR THE SATISFACTORY COMPLETION OF THE RESETTING.

W-63 WELDING TIED JOINTS - REINFORCED CONCRETE PIPE.

W-63.01 DESCRIPTION. WELDING OF TIED JOINTS OF REINFORCED CONCRETE PRESSURE PIPE SHALL BE DONE IN ACCORDANCE WITH SECTION C-4.23 OF THE CITY OF CINCINNATI GENERAL CONSTRUCTION AND MATERIAL SPECIFICATIONS.

W-63.02 PAYMENT. PAYMENT FOR ITEM "WELDING TIED JOINTS-REINFORCED CONCRETE PIPE" WILL BE MADE AT THE PRICE BID PER JOINT PER SIZE AS DESIGNATED. PAYMENT FOR THIS ITEM SHALL COVER ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY TO PERFORM THE OPERATION.

WATER MAIN ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PROVISIONS OF GENERAL CONSTRUCTION AND MATERIAL SPECIFICATIONS FOR HIGHWAYS AND SEWERS, DATED JANUARY 1, 1956, AND THE SPECIFICATIONS OF THE CINCINNATI WATER WORKS GOVERNING THE INSTALLATION OF WATER MAINS AND APPURTENANCES IN FORCE AT THE TIME OF THE OPENING OF THE BIDS. COPIES OF THESE SPECIFICATIONS ARE ON FILE AT THE OFFICE OF THE ENGINEER OF CONTRACT SALES FOR STATE HIGHWAY DEPARTMENT AND AT THE OFFICES OF THE CITY ENGINEER OF CINCINNATI, OHIO.

THIS PLAT WAS PREPARED FOR THE CONVENIENCE OF THE CONTRACTOR FROM AVAILABLE RECORDS. THE CINCINNATI WATER WORKS CAN NOT GUARANTEE THE ACCURACY OF THESE RECORDS NOR CAN IT BE HELD LIABLE FOR ANY INACCURACIES IN THIS PLAT. TEST HOLES MUST BE DUG, OR DITCH OPENED, BY THE CONTRACTOR, FAR ENOUGH IN ADVANCE OF CROSSING ANY UTILITY OR OTHER UNDERGROUND STRUCTURE TO AVOID ANY DIFFICULTY THAT MAY ARISE IN THE EXECUTION OF THIS CONTRACT.

LINE AND GRADE FOR THE PROPOSED WATER MAIN SHOWN ON THESE DRAWINGS ARE SUBJECT TO CHANGE WHEN NECESSARY IN THE LAYING OF THESE MAINS. IF THE CONTRACTOR RUNS INTO ANY DIFFICULTY WITH ANY UTILITY OR UNDERGROUND STRUCTURE THAT WAS NOT UNCOVERED FAR ENOUGH IN ADVANCE TO BE AVOIDED, THE CONTRACTOR SHALL ASSUME THE COST OF ALL ENGINEERING, LABOR, AND MATERIAL NECESSARY TO BY-PASS OR CHANGE THE UTILITY OR STRUCTURE IN THE PATH OF THE PROPOSED WATER MAINS.

A CUSHION OF 12" SHALL BE MAINTAINED BETWEEN THE PROPOSED WATER MAINS AND THE EXISTING SEWERS, INLET CONNECTION AND DRAINS. IF A GREATER CLEARANCE IS DESIRED IT WILL BE SO DESIGNATED. BUILDING SEWER LATERALS ARE NOT TO BE DISTURBED OR TRAPPED. EXISTING DRAINS, SEWERS, AND CULVERTS ARE NOT TO BE DISTURBED. IF WATER MAIN IS TO BE LAID UNDER CULVERTS AND/OR PIPE SEWERS THEY SHALL BE TUNNELED AND BACKFILLED WITH CLASS "T" CONCRETE.

PAYMENT WILL BE MADE ONLY FOR WORK PERFORMED AND NO PAYMENT WILL BE MADE FOR NON-PERFORMANCE OF ANY ITEM OR FOR NON-PERFORMANCE OF ANY PORTION OF THE ESTIMATED QUANTITY GIVEN FOR ANY ITEM.

FIRE HYDRANT REMOVAL: THE EXISTING FIRE HYDRANT LEAD SHALL BE BROKEN OUT SIX INCHES AWAY FROM THE SHOE AND THE FIRE HYDRANT AND SHOE SHALL BE CAREFULLY REMOVED.

REINFORCED CONCRETE THRUST BLOCKS MUST BE USED ON ALL BENDS, TEES AND FIRE HYDRANTS. ANY VARIATION FROM THE DIMENSIONS OF THE BLOCKING SHOWN ON THE DETAIL DRAWING MUST BE APPROVED BY THE WATER WORKS INSPECTOR AND THE PROJECT ENGINEER.

ALL SPECIALS AND APPURTENANCES USED ON THIS PROJECT SHALL BE THAT WHICH HAS BEEN INSPECTED AT SITE OF MANUFACTURER BY THE CINCINNATI WATER WORKS. ALL CAST IRON PIPE AND SPECIALS SHALL BE CEMENT LINED.

ALL PIPE AND SPECIALS TO BE CAST IRON, CEMENT LINED, EITHER LEAD, MECHANICAL OR COMPRESSION TYPE JOINTS.

CONTRACTOR IS TO NOTIFY CINCINNATI WATER WORKS INSPECTION OFFICE PRIOR TO WATER MAIN RELOCATION.

PIPE REMOVED FOR CONSTRUCTION PURPOSES IS NO LONGER THE PROPERTY OF HAMILTON COUNTY AND SHALL BE DISPOSED OF BY THE CONTRACTOR. NO PAYMENT WILL BE MADE FOR HAULING THIS MATERIAL.

ALL WATER CONSUMERS MUST BE PROVIDED WITH ADEQUATE WATER SERVICE FOR REQUIRED USAGE AND FIRE PROTECTION AT ALL TIMES AT THE CONTRACTORS' EXPENSE. IN THE EVENT THAT DURING CONSTRUCTION TEMPORARY WATER LINES ARE NECESSARY TO PROVIDE SUCH SERVICE, THE CONTRACTOR MUST PROVIDE, AT HIS COST, PIPE OF SUFFICIENT SIZE.

NO PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING TEMPORARY FLUGS.

Code Y060

RACE ROAD PARTICIPATION: 40.78% PROJECT 59.22% COUNTY	NORTH BEND ROAD PARTICIPATION: 34.56% PROJECT 65.44% COUNTY	NORTH BEND ROAD 100% COUNTY PARTICIPATION	TOTAL	UNITS	SUMMARY	CITY OF CINCINNATI SPEC.	STATE OF OHIO SPEC.
378	1423	526	2327	LIN.FT.	LAYING 24" REINF. CONCRETE PIPE INCLUDING FURNISHING M.H.C.&C. & FERRULES	W-7	Special
198	53	10	261	LIN.FT.	FURNISHING & LAYING 12" C.I. PIPE INCLUDING PIPE, VALVES, SPECIALS & M.H.C.&C.	W-1	
	47	10	57	LIN.FT.	FURNISHING & LAYING 6" C.I. PIPE INCLUDING PIPE, VALVES, SPECIALS & M.H.C.&C.	W-1	
	1	1	2	EACH	REMOVING & RELOCATING EX. FIRE HYDRANT HEAD	W-60	
			1	EACH	RESETTING EXISTING FIRE HYDRANT HEAD	W-12	
			2	EACH	REMOVING EXISTING FIRE HYDRANT HEAD	W-13	
9	26	10	45	LIN.FT.	REMOVING EXISTING 12" WATER MAINS	W-15	
	20		20	LIN.FT.	REMOVING EXISTING 6" WATER MAINS	W-15	
188			188	LIN.FT.	LOWERING EXISTING 12" WATER MAINS	W-23	
10			10	LIN.FT.	LOWERING EXISTING 6" WATER MAINS	W-23	
	25		25	LIN.FT.	LOWERING EXISTING 2" SERVICE BRANCHES	W-25	
30		30	60	LIN.FT.	LOWERING EXISTING 3/4" SERVICE BRANCHES	W-25	
60	235	158	453	LIN.FT.	FURNISHING & INSTALLING 3/4" COPPER SERVICE PIPE & FITTINGS	W-28	
		70	70	LIN.FT.	FURNISHING & INSTALLING 1" COPPER SERVICE PIPE & FITTINGS	W-28	
	5		5	LIN.FT.	FURNISHING & INSTALLING 2" COPPER SERVICE PIPE & FITTINGS	W-28	
		1	1	EACH	FURNISHING & INSTALLING 3/4" STOP COCK IN EXISTING LINE	W-32	
	1		1	EACH	FURNISHING & INSTALLING 2" STOP COCK IN EXISTING LINE	W-32	
		1	1	EACH	CUTTING & REVERSING EX. 3/4" STOP COCK INCLUDING FURNISHING MATERIAL	W-36	
1	1	6	8	EACH	FURNISHING & INSTALLING CURB BOX	W-40	
1	2	1	4	EACH	FURNISHING & INSTALLING ROADWAY BOX	W-40	
		1	1	EACH	FURNISHING & INSTALLING VALVE BOX	W-41	
2		1	3	EACH	RESETTING EXISTING CURB BOX	W-42	
1			1	EACH	RESETTING EXISTING VALVE BOX	W-44	
190	450	250	890	CU.YD.	ROCK EXCAVATION	W-45	
6	13	2	21	CU.YD.	BRICK MASONRY	W-47	
65	45	2	112	CU.YD.	CONCRETE MASONRY CLASS C	W-48	
1			1	EACH	REMOVING & RE-USING EXISTING M.H.C.&C.	W-54	
1	1	1	3	EACH	REMOVING EXISTING VALVE BOX	W-55	
6070	4330	100	10500	LB.	REINFORCING STEEL	C-3	
24	32		56	EACH	WELDING TIED JOINTS - 24" R.C. PIPE	W-63	
	1		1	EACH	FURNISHING & INSTALLING - STANDARD METER SETTING COMPLETE - 3/4"	W-62	
	1		1	EACH	FURNISHING & INSTALLING - STANDARD METER SETTING COMPLETE - 2"	W-62	
		1	1	EACH	RESETTING EXISTING METER BOX SETTING INCLUDING FURNISHING MATERIAL	W-68	
	1	1	2	EACH	ADJUSTING EX. VALVE CHAMBERS	S-11	Special

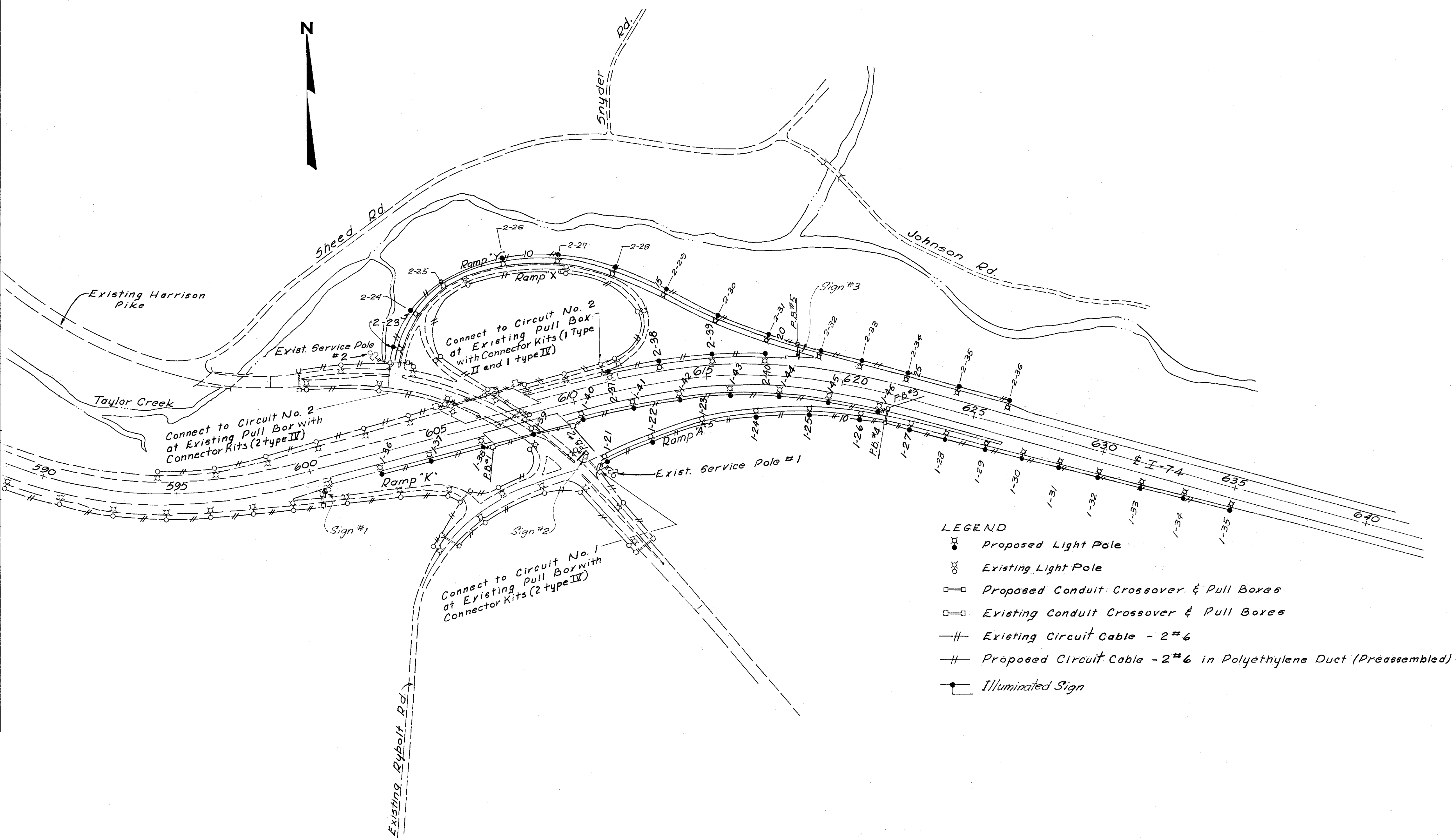
THE CONCRETE PIPE AND SPECIALS WILL BE DELIVERED, BY THE PIPE FABRICATOR, TO ANY SPOT DESIGNATED BY THE CONTRACTOR WHICH IS ACCESSIBLE BY "OVER THE ROAD" TRACTOR TRAILER.

THE CONTRACTOR SHALL FURNISH ALL MATERIAL NECESSARY TO PERFORM THE WATER MAIN AND BRANCH RELOCATION WORK AS PROPOSED ON THE DRAWINGS INCLUDING ANY ADDITIONAL MATERIAL NEEDED TO MEET UNEXPECTED CONDITIONS EXCEPT THE 24" REINFORCED CONCRETE PIPE. THE COST OF ALL MATERIAL IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS ITEMS.

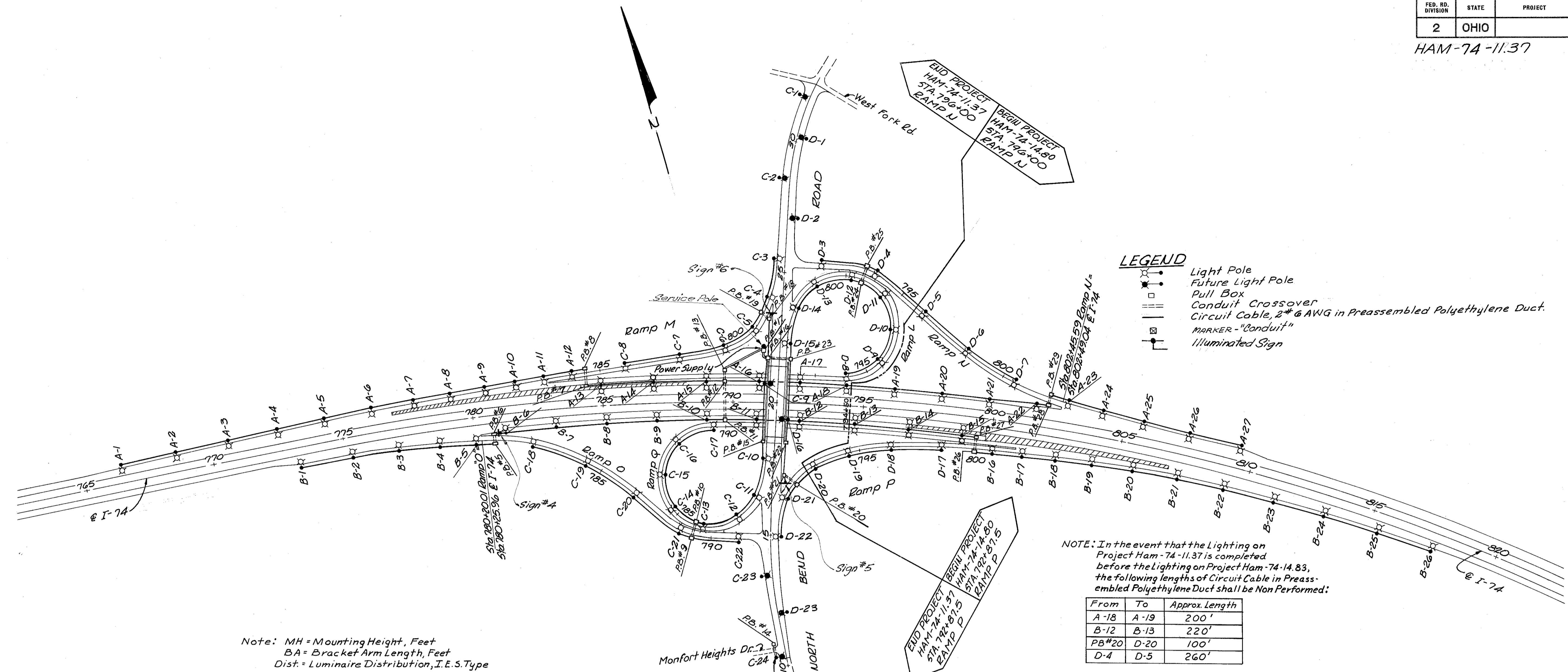
HAM-74-1137

Standard	Station	Remarks	MH	BA	Dist
Cir. 1	Eastbound I-74 & Ramp "A"				
	Ramp "A"				
1-21	1+00		30	10	II
1-22	2+94				
1-23	4+87				
1-24	6+80				
1-25	8+73				
1-26	10+66		30	10	II
	Mainline				
1-27	622+79		30	15	II
1-28	624+20				
1-29	625+61				
1-30	627+02				
1-31	628+47				
1-32	629+99				
1-33	631+58				
1-34	633+24				
1-35	634+97				
1-36	602+54				
1-37	604+45				
1-38	606+36		30	15	
1-39	608+26	Bridge	30	12	
1-40	610+16		30	15	
1-41	612+06				
1-42	613+96				
1-43	615+85				
1-44	617+74				
1-45	619+63				
1-46	621+52		30	15	II
Cir. 2	Westbound I-74 & Ramp "Y"				
	Ramp "Y"				
2-23	3+86		30	10	II
2-24	5+36				
2-25	6+86				
2-26	9+04				
2-27	11+22				
2-28	13+40				
2-29	15+47				
2-30	17+54				
2-31	19+61				
	Mainline				
2-32	619+10		30	15	II
2-33	620+60				
2-34	622+30				
2-35	624+20				
2-36	626+10				
2-37	611+50				
2-38	613+38				
2-39	615+26				
2-40	617+14				

Note: MH = Mounting Height, Feet
 BA = Bracket Arm Length
 Dist = Luminaire Distribution, I.E.S. Type



HAM-74-11.37



Note: MH = Mounting Height, Feet
 BA = Bracket Arm Length, Feet
 Dist = Luminaire Distribution, I.E.S. Type

From	To	Approx. Length
A-18	A-19	200'
B-12	B-13	220'
PB#20	D-20	100'
D-4	D-5	260'

Pole No.	STATION	REMARKS	Pole No.	STATION	REMARKS
Circuit A	Westbound	MH BA Dist Project	Circuit B	Eastbound	MH BA Dist Project
A-1	766+50	32.5 15 III HAM-74-11.37	B-1	773+26	32.5 15 III HAM-74-11.37
A-2	768+65		B-2	775+26	
A-3	770+70		B-3	777+06	
A-4	772+65		B-4	778+66	
A-5	774+50		B-5	780+06	
A-6	776+25		B-6	781+20	
A-7	777+90		B-7	783+15	
A-8	779+30	32.5	B-8	785+10	
A-9	780+60	40	B-9	787+05	
A-10	781+80		B-10	789+00	15 III
A-11	782+80		B-11	790+95	15/10 III/II
A-12	783+90	40 15 III	B-12	792+60	Double Mast Arm HAM-74-11.37
A-13	785+10	Double Mast Arm 32.5 15/10 III/II	B-13	794+70	Double Mast Arm HAM-74-14.83
A-14	787+00	Double Mast Arm	B-14	796+80	Double Mast Arm
A-15	789+00	Double Mast Arm	B-15	798+90	Double Mast Arm
A-16	791+00	Double Mast Arm	B-16	800+10	40 15 III
A-17	792+55	15/10 III/II	B-17	801+25	
A-18	794+35	15 III HAM-74-11.37	B-18	802+55	
A-19	796+15	15 III HAM-74-14.83	B-19	804+00	40
A-20	797+95		B-20	805+60	32.5
A-21	799+75		B-21	807+35	
A-22	801+55		B-22	809+20	
A-23	802+69		B-23	811+15	
A-24	804+09		B-24	813+20	
A-25	805+69		B-25	815+35	
A-26	807+49		B-26	817+55	32.5 15 III HAM-74-14.83
A-27	809+49	32.5 15 III HAM-74-14.83			

Marker Required at end of Conduit Crossover.

POLE NO.	STATION	REMARKS	POLE NO.	STATION	REMARKS
Circuit C	Westside North Bend Rd, Ramps M, Q & O	MH BA Dist Project	Circuit D	Eastside North Bend Rd, Ramps N, L & P	MH BA Dist Project
C-1	31+75 North Bend Road	Future	D-1	30+15 North Bend Rd	Future
C-2	28+60 "	Future	D-2	27+05 "	Future
C-3	25+50 "		D-3	791+60 Ramp N	32.5 10 II HAM-74-11.37
C-4	24+00 "		D-4	793+85 "	
C-5	791+27 Ramp M		D-5	796+06 "	HAM-74-14.83
C-6	789+87 "		D-6	798+29 "	
C-7	788+12 "		D-7	800+49 "	
C-8	786+01 "	32.5 10 II HAM-74-11.37	D-8	794+24 Ramp L	HAM-74-11.37
C-9	20+75 North Bend Road	Future *	D-9	795+64 "	
C-10	17+85 "	32.5 10 II HAM-74-11.37	D-10	797+04 "	
C-11	16+35 "		D-11	798+51 "	
C-12	782+46 Ramp Q		D-12	799+84 "	
C-13	783+86 "		D-13	801+24 "	
C-14	785+26 "		D-14	23+75 North Bend Road	
C-15	786+66 "		D-15	22+25 "	32.5 10 II HAM-74-11.37
C-16	788+06 "		D-16	19+35 "	Future *
C-17	789+46 "		D-17	798+15 Ramp P	32.5 10 II HAM-74-14.83
C-18	782+20 Ramp O		D-18	796+20 "	
C-19	784+40 "		D-19	794+55 "	
C-20	786+60 "		D-20	793+15 "	HAM-74-14.83
C-21	788+80 "		D-21	16+43 North Bend Road	32.5 10 II HAM-74-11.37
C-22	791+10 "	32.5 10 II HAM-74-11.37	D-22	14+95 "	
C-23	13+50 North Bend Road	Future	D-23	12+05 "	Future
C-24	10+35 "	Future			

* See Bridge Lighting Details

CONSTRUCTION & MATERIAL SPECIFICATIONS

THESE PLANS AND SPECIFICATIONS ARE SUPPLEMENTARY TO THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, CONSTRUCTION AND MATERIAL SPECIFICATIONS DATED JAN. 1, 1965. THE FOLLOWING NOTES ARE AMENDMENTS TO, AND SHALL BE CONSIDERED PART OF THE ABOVE SPECIFICATIONS:

625.03 GENERAL

- ELECTRICAL ENERGY FURNISHED BY CINCINNATI GAS & ELECTRIC CO., CINCINNATI, OHIO
- POWER REQUIREMENTS - 50 KVA - 2400/4160 60 CYCLE, SINGLE PHASE, DISTRIBUTION TRANSFORMER 1S 480 V. SINGLE PHASE, GED NEUTRAL.

625.07 LUMINAIRES

LUMINAIRES SHALL BE GE - M-400, WESTINGHOUSE, - 0V-25 OR L.M. UNISTYLE, OR APPROVED EQUAL. LUMINAIRES SHALL BE ASA-IES - TYPE II & III MEDIUM CUTOFF, WITH INTREGAL REGULATOR TYPE 24/480 BALLASTS AS NOTED ON PLANS.

625.08 LAMPS

LAMPS SHALL BE ASA-H33-1CD 400W CLEAR. LAMPS SHALL BE GE "BONUSLINE", WESTINGHOUSE "LIFEGUARD", SYLVANIA "BANNER LINE" OR APPROVED EQUAL.

625.11 PULLBOXES

USE 18" DIA. FIBER PULL BOXES, WITH 19" C.I. COVERS. PULL BOXES SHALL BE AS SHOWN ON STD. DWG. NO. H.L. 3 EXCEPT WALL THICKNESS TO BE 0.37".

625.13 CONDUIT

ALL CONDUIT DIRECTLY BURIED INCLUDING 3" CROSSOVER CONDUIT SHALL BE 713.04 TYPE II OR III.

625.14 CABLE

ALL CIRCUIT CABLE SHALL BE #6 AWG COPPER STRANDED SINGLE CONDUCTOR, CROSS LINKED POLYETHYLENE INSULATION WITHOUT JACKET, GE #ST-58063 OR APPROVED EQUAL POLE & BRACKET CABLE SHALL BE #10 AWG COPPER STRANDED SINGLE CONDUCTOR WITH TYPE THHN INSULATION.

625.15 UNIT TYPE DUCT-CABLE SYSTEMS

FACTORY PREASSEMBLED DUCT-CABLE SHALL BE 2-#6 AWG COPPER CONDUCTORS AS SPECIFIED IN 625.14 IN 1 1/2" MIN. I.D. DUCT.

625.17 CONNECTIONS

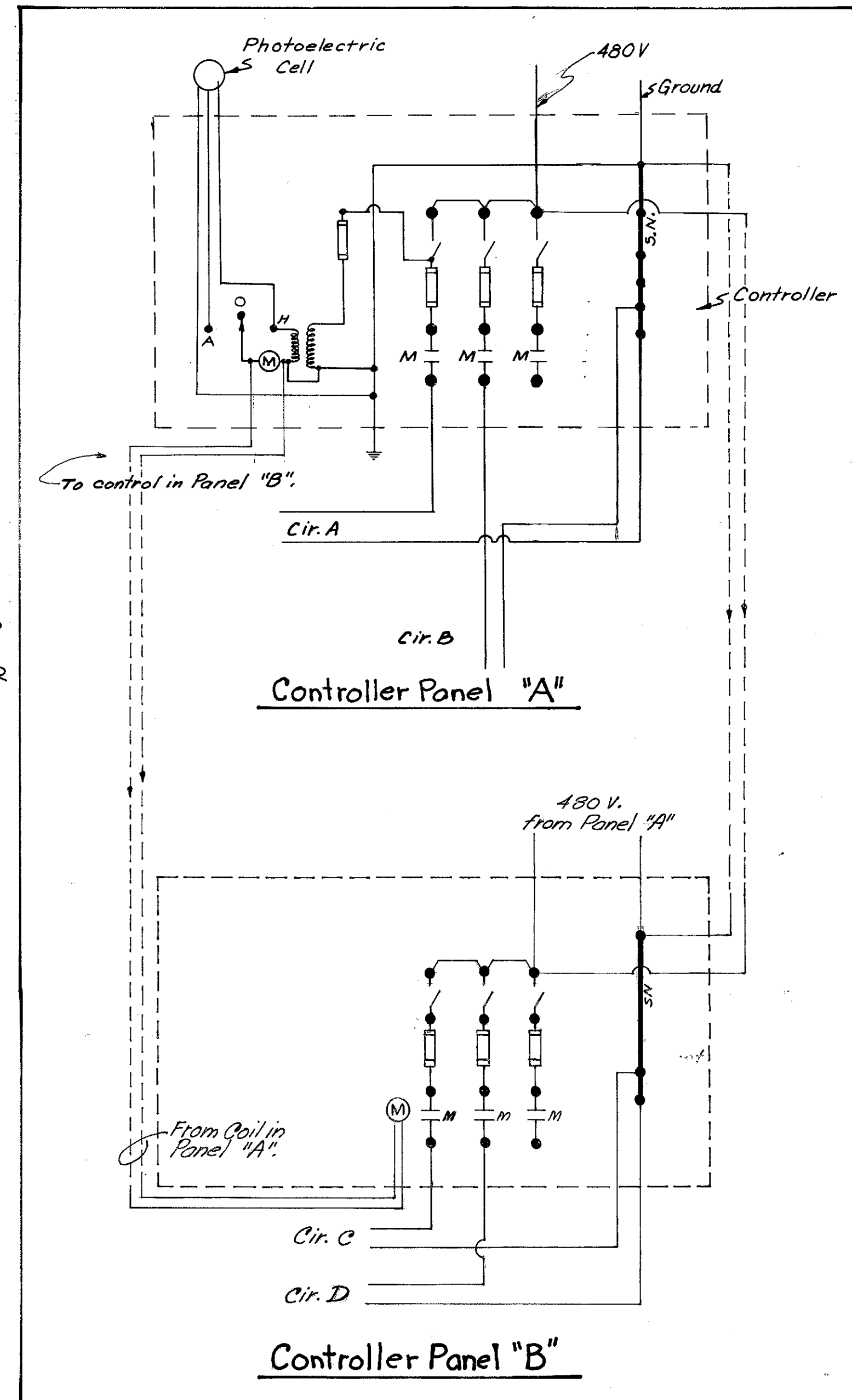
FUSED TYPE KITS SHALL BE EQUIPPED WITH A 6 AMP. FUSE AND SHALL BE CONNECTED IN THE PHASE LINE ONLY.

WIRE - CABLE - DUCT-CABLE IDENTIFICATION

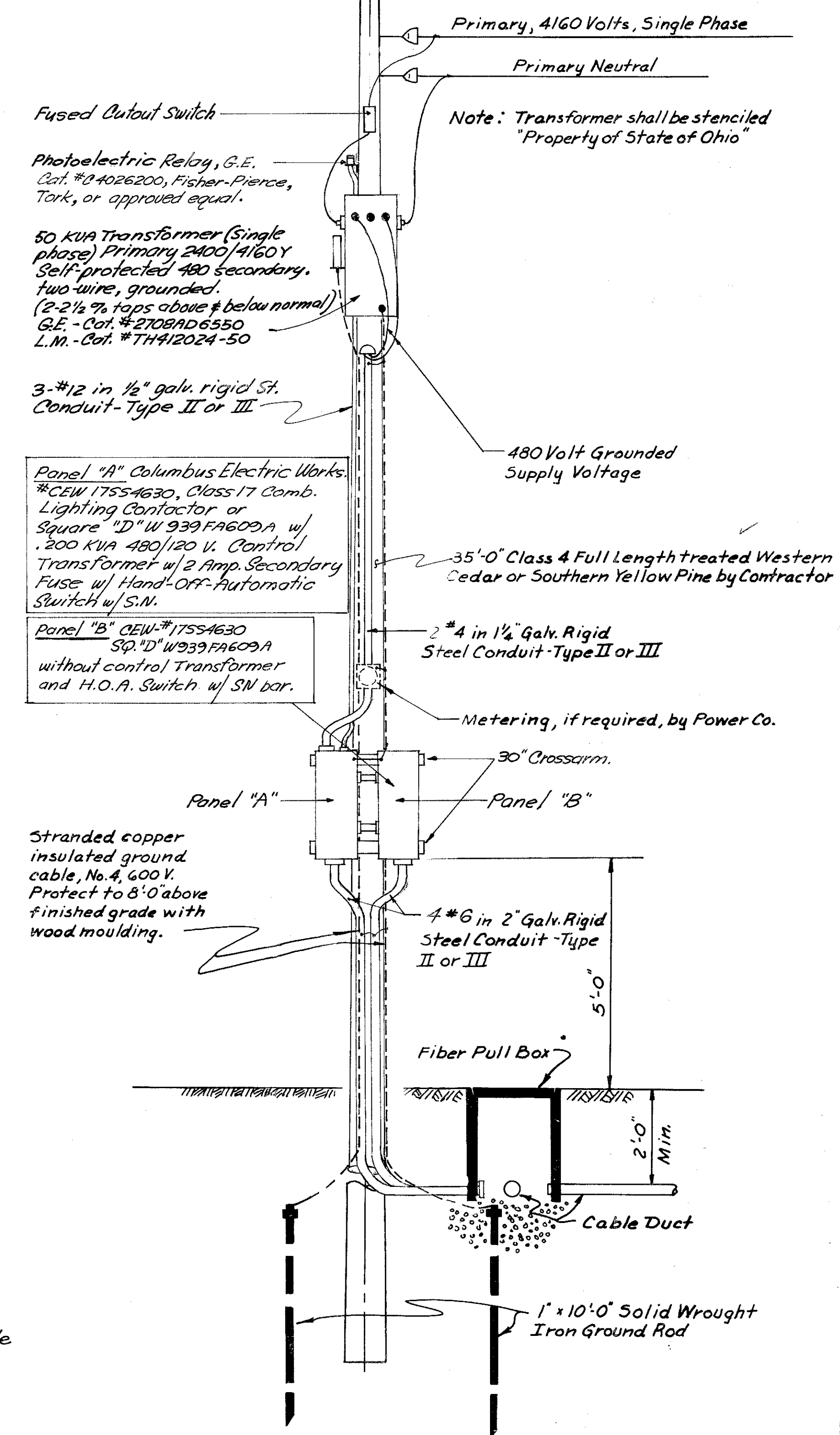
ALL CIRCUIT AND GROUND CABLES AND DUCT-CABLE SHALL BE IDENTIFIED IN EACH PULL BOX, MANHOLE, JUNCTION BOXES (Type A or B, Raceway, Bridge), CONTROL HOUSING, etc. TAGS SHALL BE CIRCULAR IN SHAPE, 2" MINIMUM IN DIAMETER AND NOT LESS THAN .031" THICK COPPER OR BRASS. USE STEEL LETTERING & DIES, 1/4" MINIMUM SIZE, OR THE EQUIVALENT ENGRAVING PROCESS TO MARK THE TAG. IT SHALL BE SECURELY ATTACHED WITH AN AWG #16 OR LARGER BARE COPPER WIRE.

MARKING OF TAGS SHALL CONSIST OF AN ABBREVIATION FOR THE GROUND WIRES; "GR'D" AND CIRCUIT WITH NUMBER OR LETTER "Ckt. A", etc.

MECHANICAL PROPERTIES FOR ANCHOR BASE LIGHT POLES													
GA.	POLE SIZE	ANCHOR BOLT				Elastic Defl. rate Inches per 100 LBS.	At 2/3 Yield Str.			At Yield Str.			Design Number
		DIA. BOLT CIRCLE	PROJ. ABOVE FOUND.	MAX. ARM LENGTH	MT'G. HG'T.		LOAD IN LBS.	Total Defl. in Inches	PERM. SET in Inches	LOAD IN LBS.	Total Defl. in Inches	PERM. SET in Inches	
11	80"x422"x27'-0"	11.0"	2 5/8"	12'-0"	30'-0"	2.37	568	13.96	.50	852	22.71	252	11A10B30
11	80"x387"x29'-6"	11.0"	2 5/8"	10'-0"	32'-6"	3.32	517	17.66	.50	776	28.84	308	11A10B32.5
11	85"x472"x27'-0"	11.5"	2 3/4"	15'-0"	30'-0"	1.89	643	12.65	.50	965	20.56	232	11A15B30
11	90"x487"x29'-6"	12.5"	3"	15'-0"	32'-6"	2.16	659	14.73	.50	989	24.00	264	11A15B32.5
7	110"x575"x37'-6"	15.0"	-	25'-0"	40'-0"	1.70	1156	20.15	.50	1734	32.93	345	7A15B40
11	80"x450"x25'-0"	11.0"	2 5/8"	12'-0"	28'-0"	1.77	616	11.40	.50	924	18.49	214	11A12B28

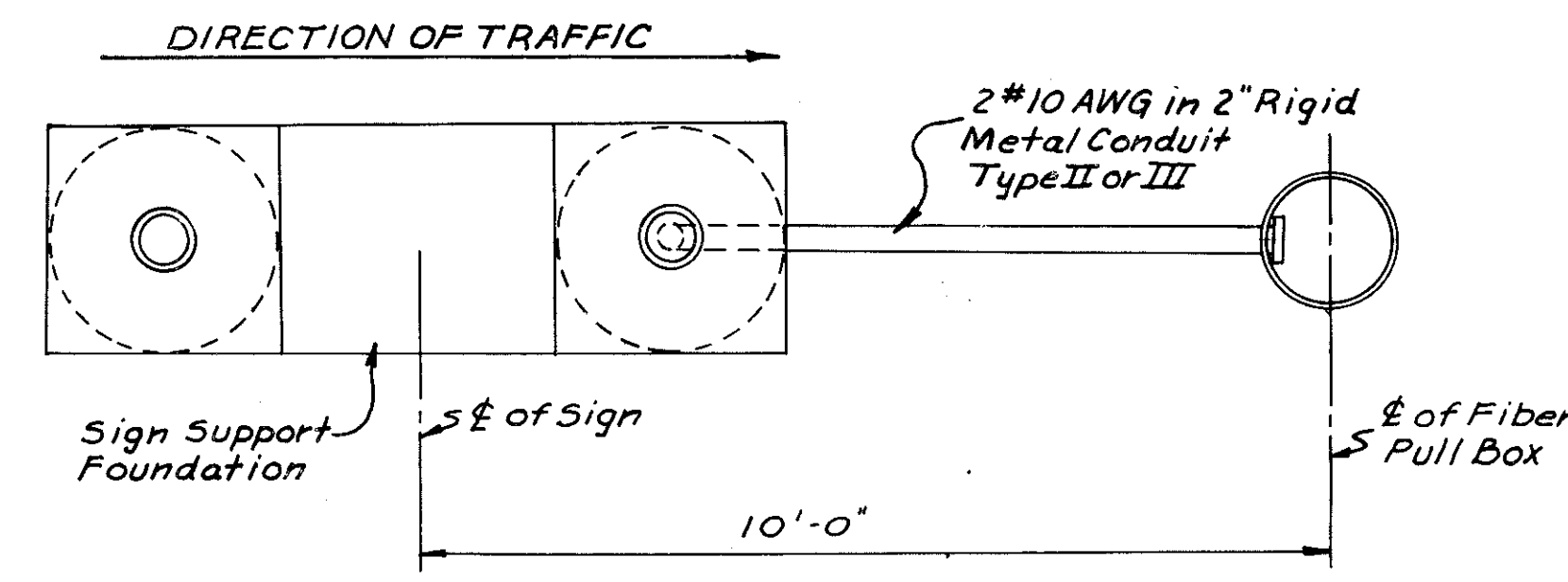


Schematic for Controller Panels A & B



SERVICE POLE DETAIL

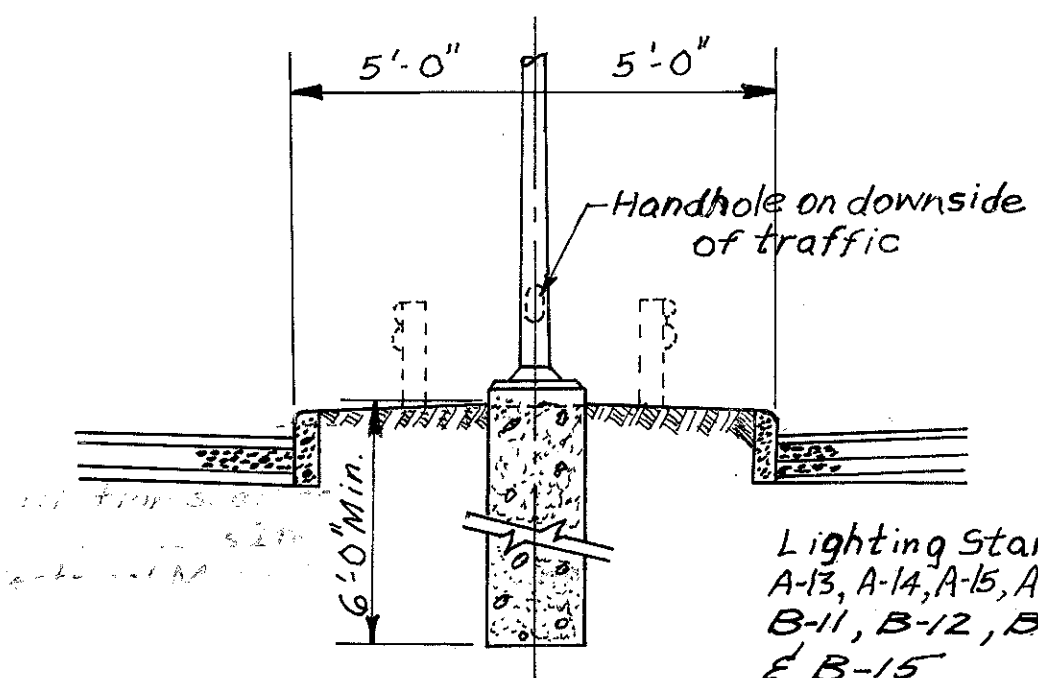
North Bend Road Interchange



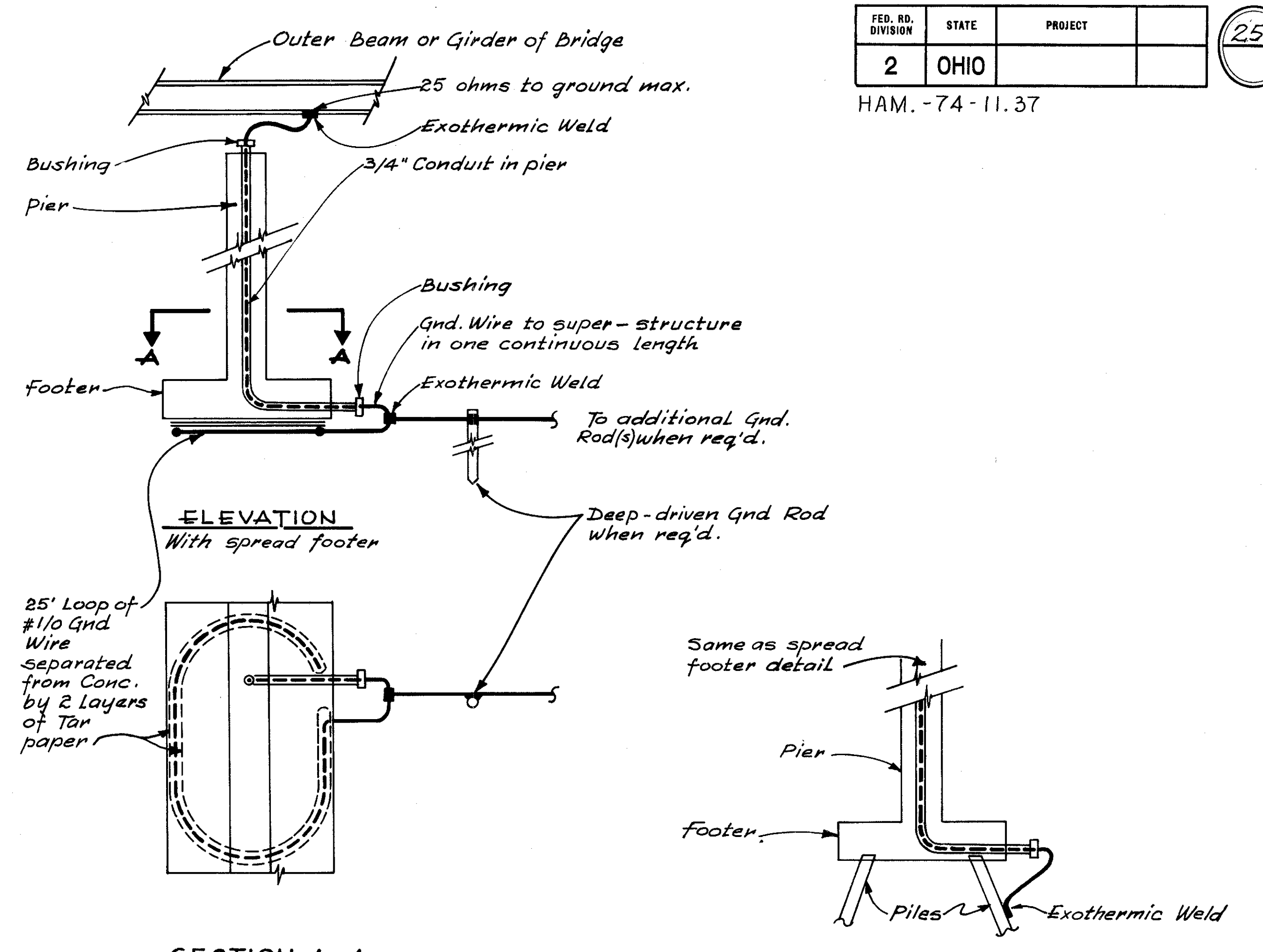
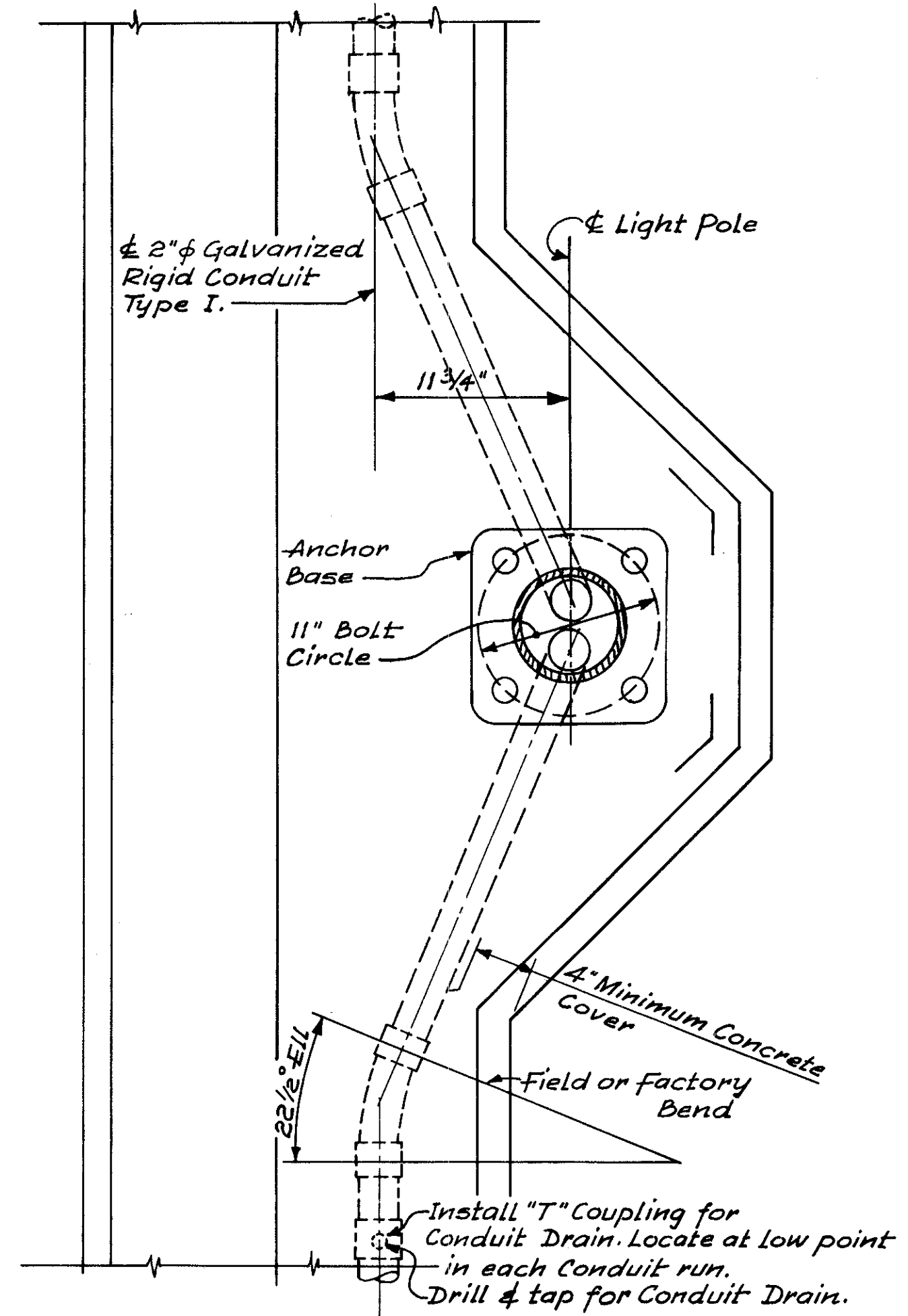
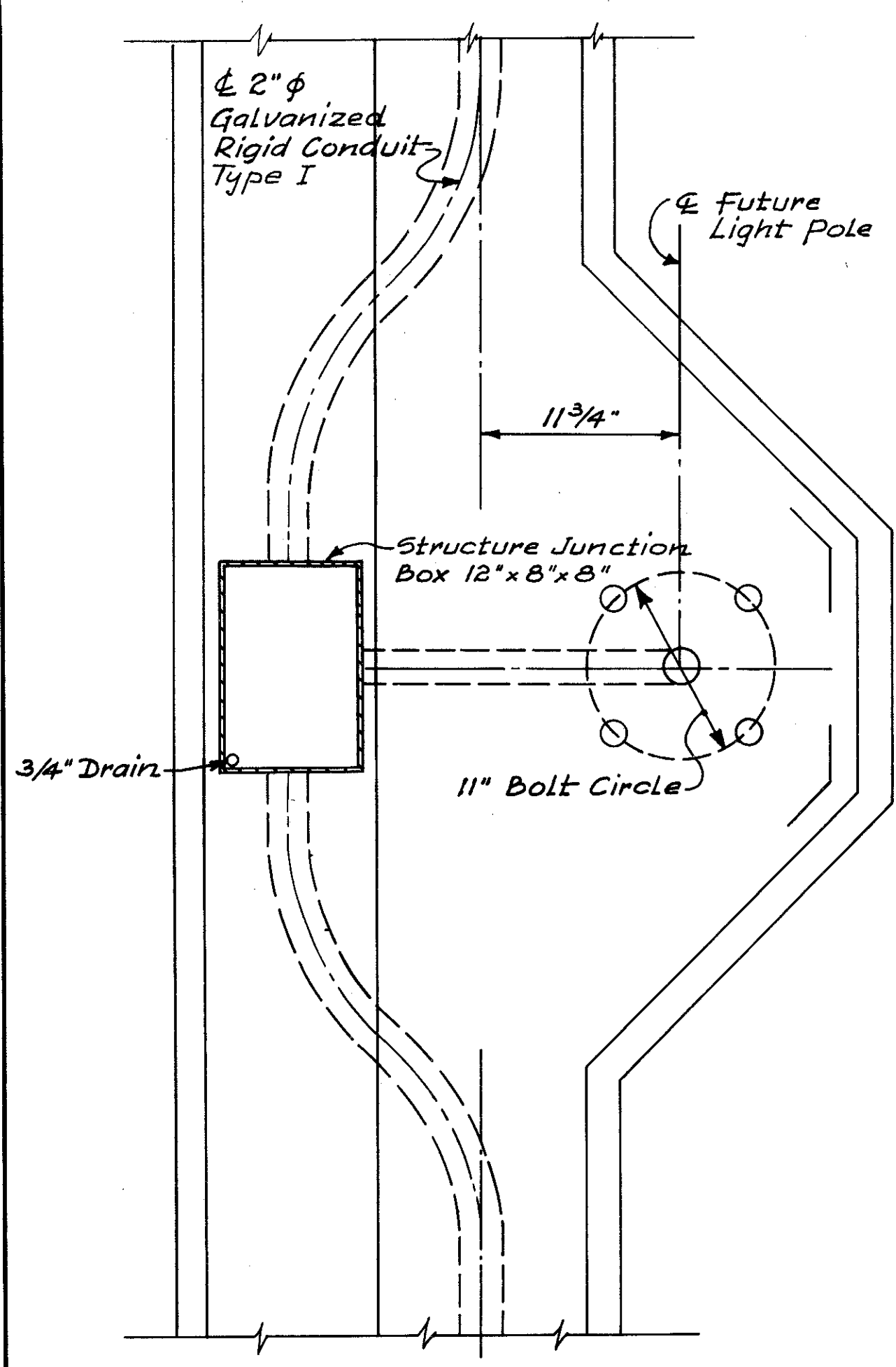
ILLUMINATED SIGN SERVICE DETAIL
NOT TO SCALE

ANCHOR BOLT DATA				
Pole Base Diameter	Anchor Bolt Size	BC	P	
8.0"	1" x 40"	1"	2 5/8"	
8.5"	1" x 40"	1 1/2"	2 3/4"	
9.0"	1" x 40"	12 1/2"	3"	
11.0"	1 1/2" x 60"	15"	3 5/8"	

Note: For additional Anchor Bolt details see Standard Construction Drawing HL-3

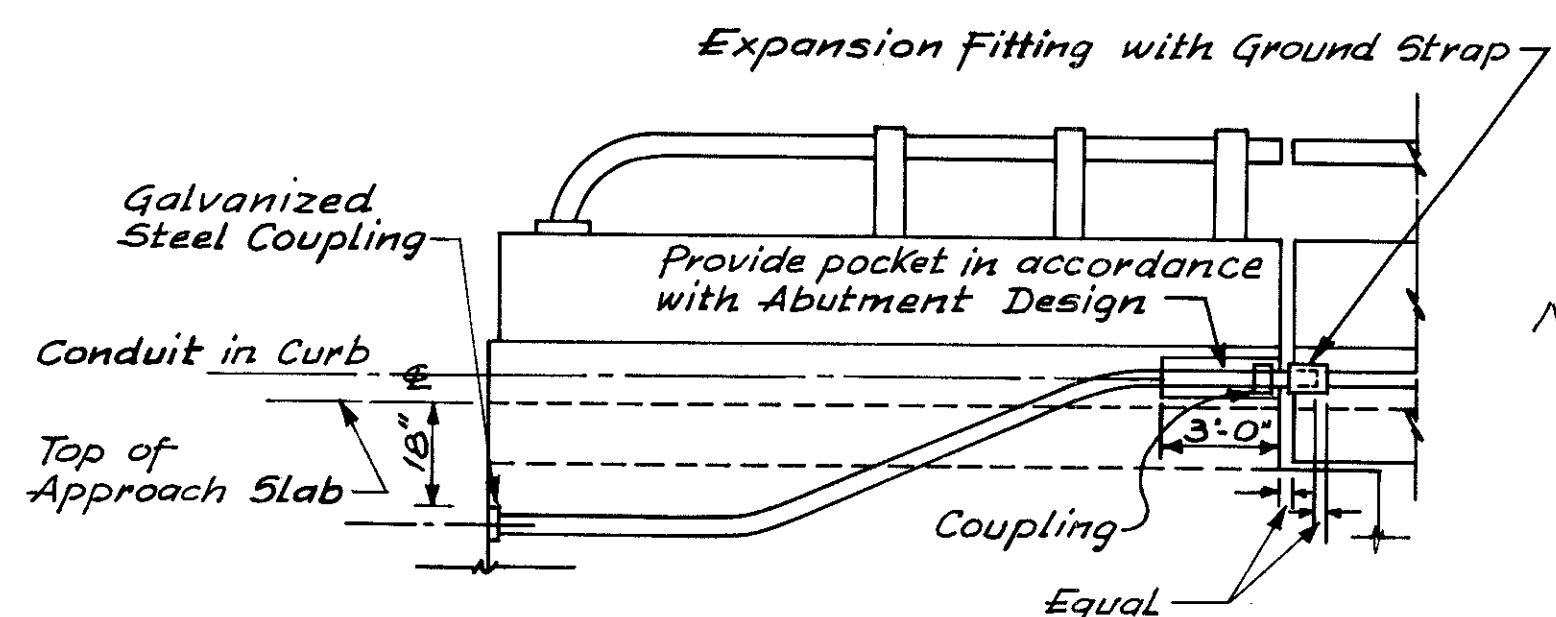
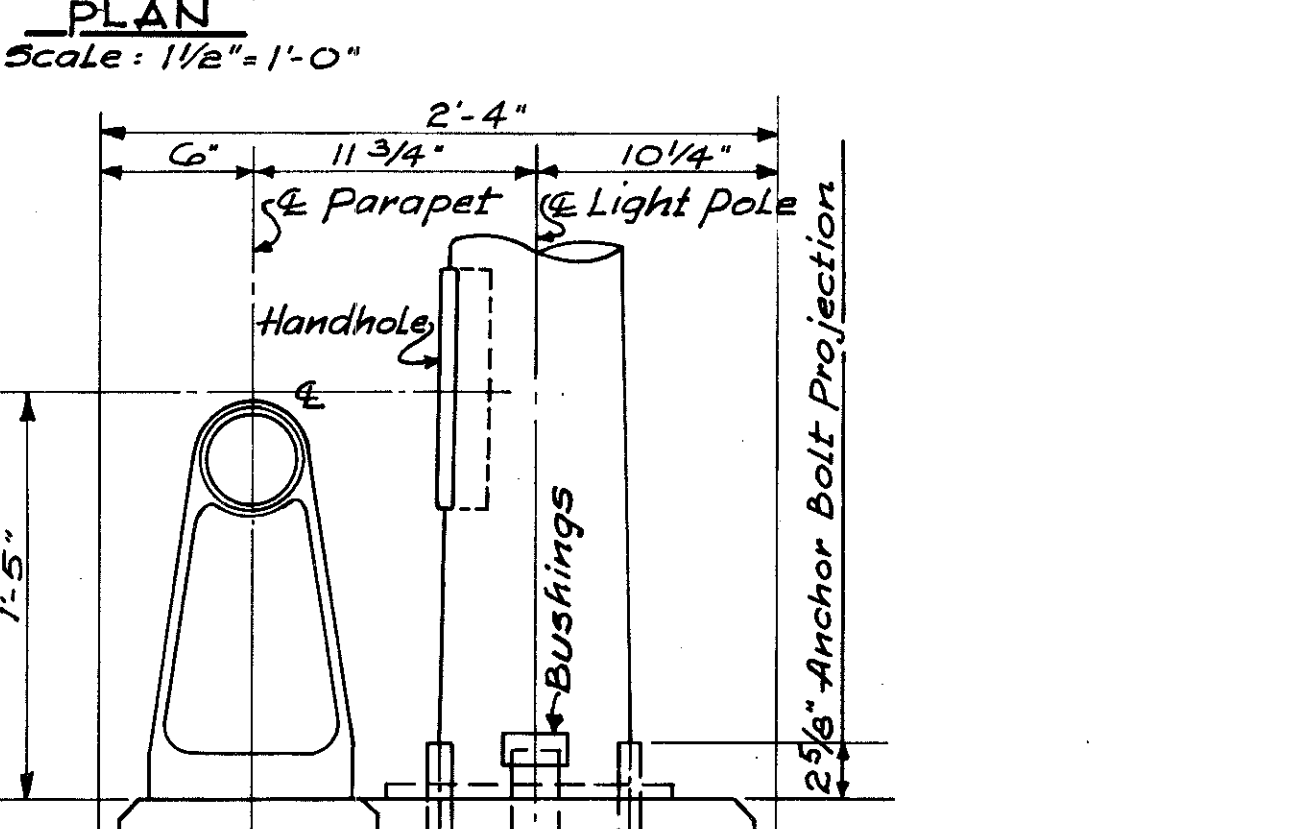
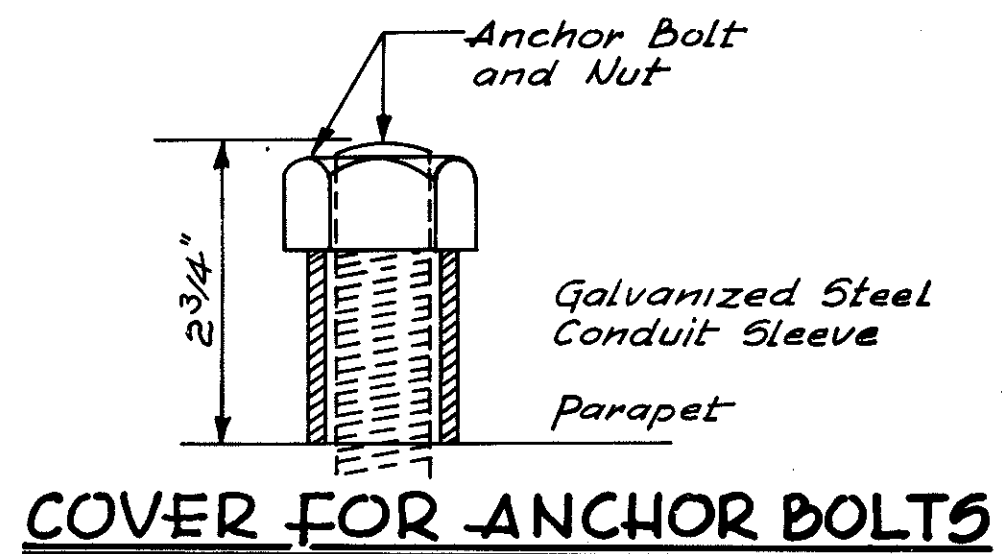


LOCATION DETAIL
MEDIAN LIGHT POLE

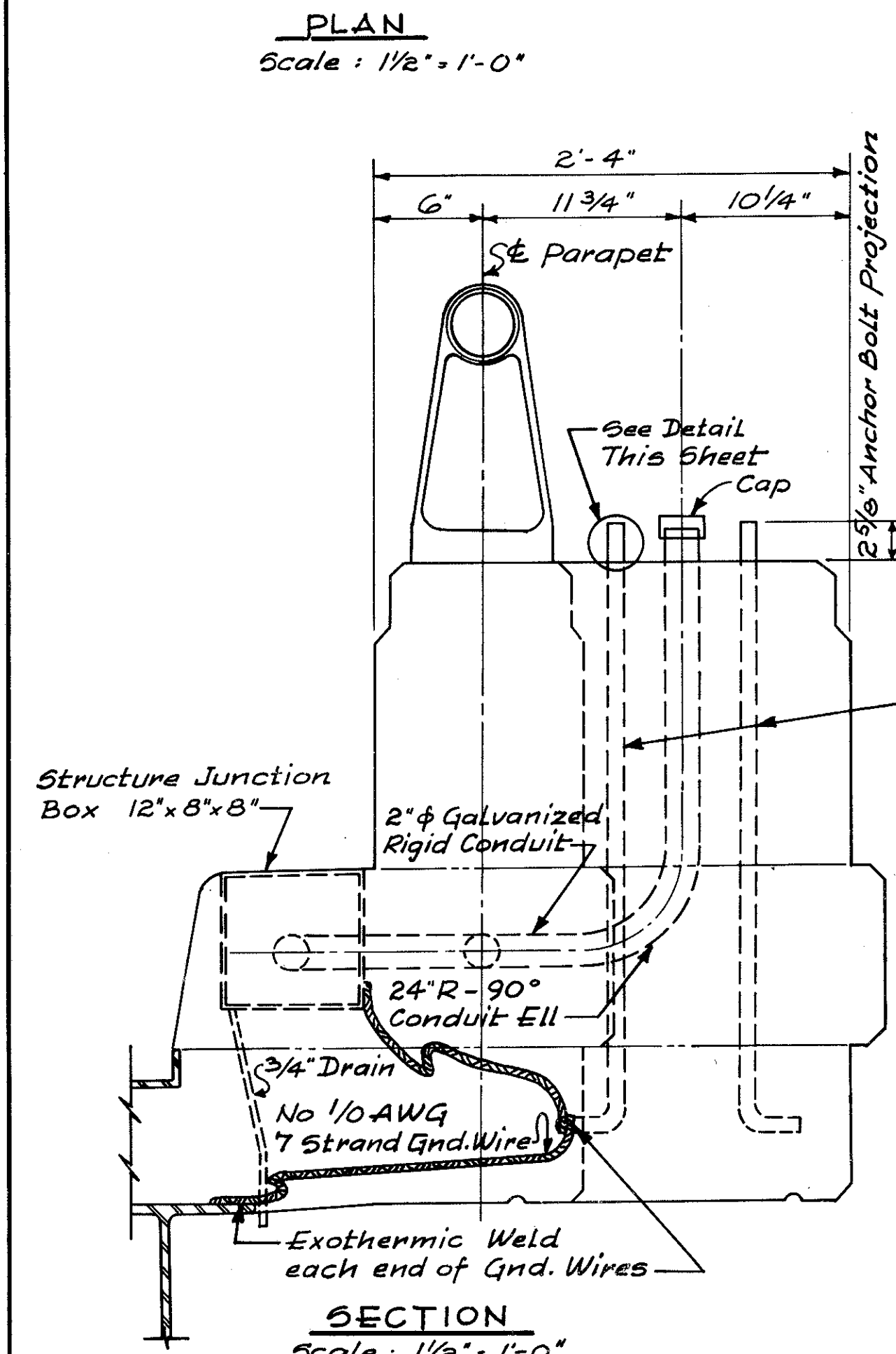


STRUCTURE GROUNDING DETAILS

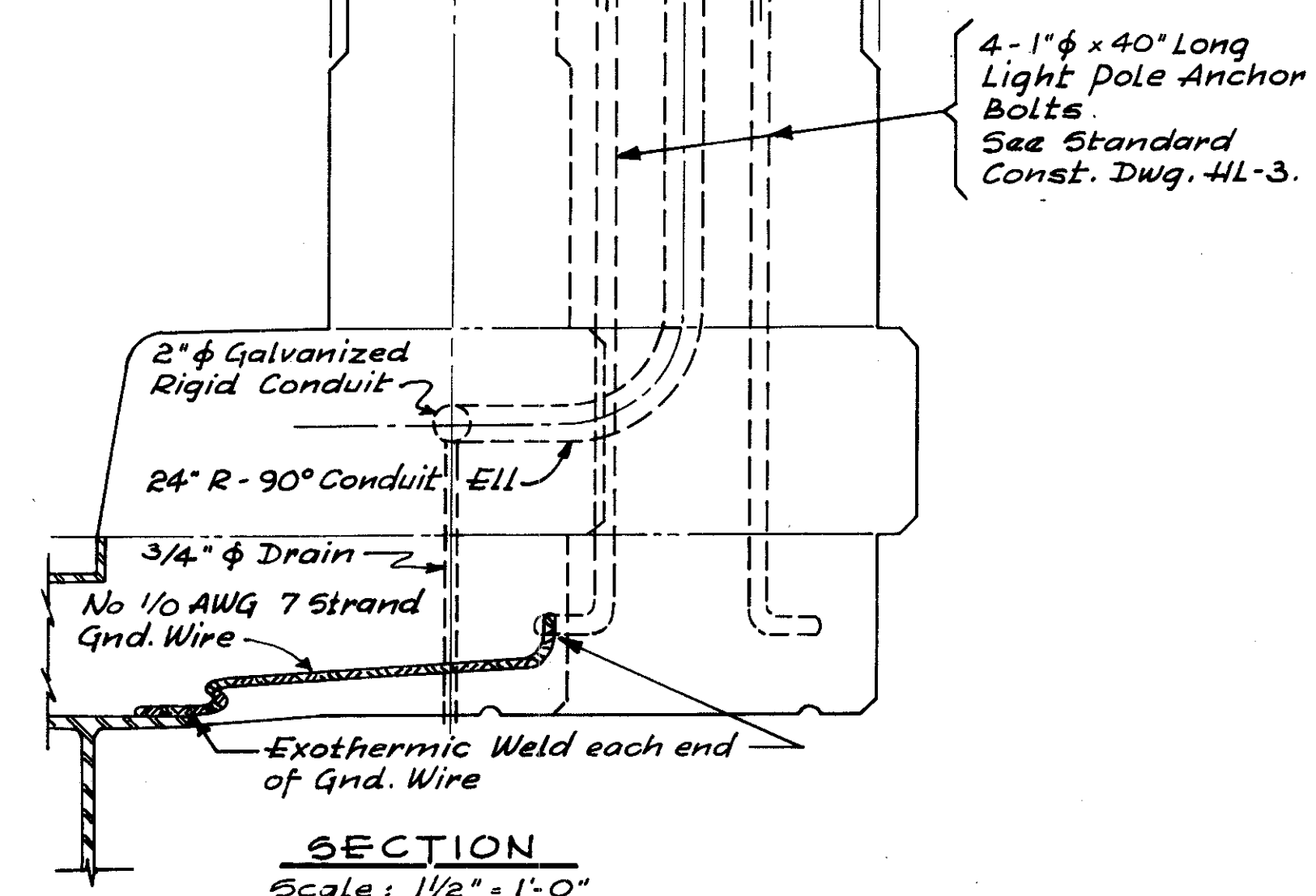
Not to Scale



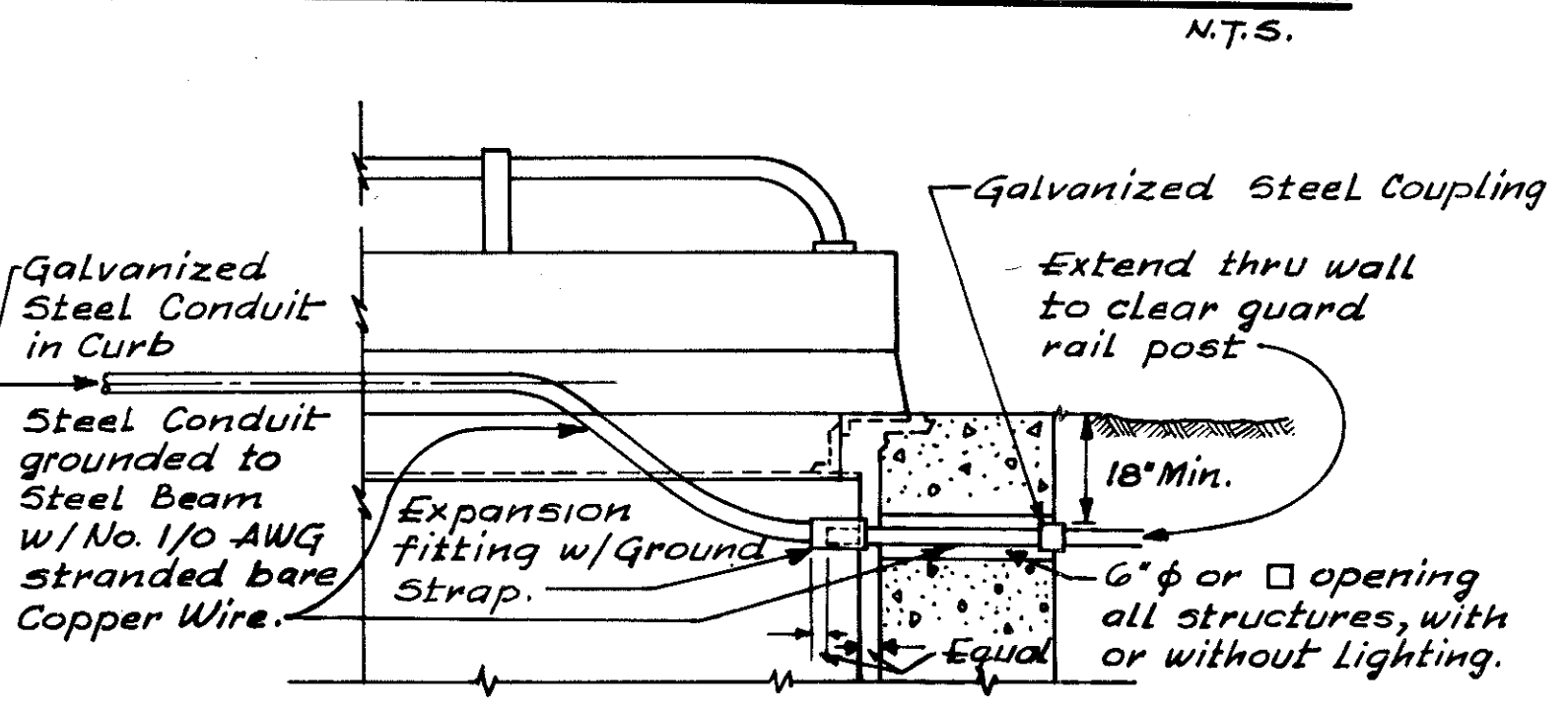
NOTE: Standard Drawing HL-4 is supplementary to this drawing. In case of conflict, this drawing shall be used.



4-1" x 40" Long Light Pole Anchor Rods (for Grounding)
Galvanized Nuts & Exposed Ends 1" to 4" beyond threads.



CONDUIT THROUGH ABUTMENT



BRIDGE LIGHTING DETAILS

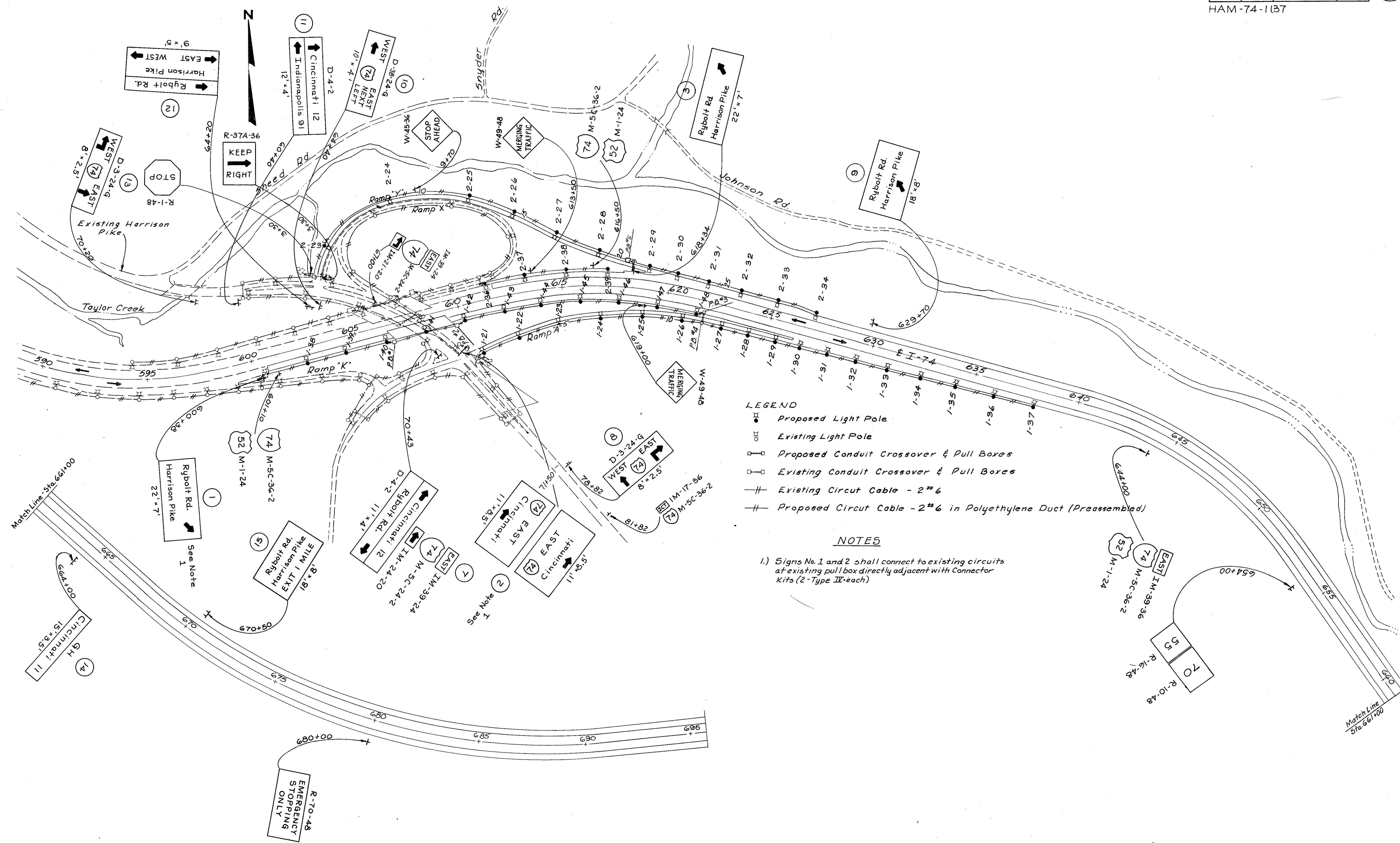
GENERAL LIGHTING QUANTITIES

Line No	ITEM	STRUCTURES				ROADWAY										ROADWAY TOTALS			DESCRIPTION CODE TYPE 7221
		HAM-74-1129 R		HAM-74-1477		I-74-1(a)11		I-74-1(a)11		I-74-1(a)11		I-74-1(a)11		QUANTITY	UNIT	ITEM			
		Sh.No.		Total	Total	I-74-1(a)11	Total	I-74-1(a)11	Total	I-74-1(a)11	Total	I-74-1(a)11	Total						
1																			
2																			
3																			
4	G25											15	15		Each	G25	Light Pole, 11A 10B30, Circular Cross Section		
5	G25	1		1											Each	G25	Light Pole, 11A 12B28, Circular Cross Section		
6	G25											28	28		Each	G25	Light Pole, 11A 15B30, Circular Cross Section		
7	G25														Each	G25	Light Pole, 11A 10B32.5, Circular Cross Section		
8	G25											31	31		Each	G25	Light Pole, 11A 15B32.5, Circular Cross Section		
9	G25											19	19		Each	G25	Light Pole, 11A 15B32.5, Circular Cross Section		
10	G25											7	7		Each	G25	Light Pole, 11A 10B15B32.5, Circular Cross Section, Brackets @ 180°		
11	G25											4	4		Each	G25	Light Pole, 7A 15B40, Circular Cross Section		
12	G25											43	43		Each	G25	Luminaire, Type II W/Integral/400 Watt Mercury Ballast (480 V)		
13	G25	1		1								38	38		Each	G25	Luminaire, Type III W/Integral/400 Watt Mercury Ballast (480 V)		
14												30	30						
15	G25	1		1								43	43		Each	G25	Lamp, Mercury, H33 - 1CD		
16	G25											43	43		Each	G25	Ground Rod Unit		
17																			
18	G25											43	43		Each	G25	Light Pole Foundation, 24" x 24" x 6' Deep		
19	G25											43	43		Each	G25	Light Pole Foundation, 24" x 24" x 8' Deep		
20																			
21	G25											5	5		Each	G25	Pull Box, Round Fiber 18" I.D.		
22																			
23	G25											1	1		Each	G25	Marker		
24																			
25	G25											6340	6340		Lin. Ft.	G25	Trench, 24" Deep		
26																			
27	G25											35	35		Lin. Ft.	G25	Conduit, 3" Rigid Ferrous Metal, Type II or Type III		
28	G25	290		290	610	610									Lin. Ft.	G25	Conduit, 2 inch, Type I, in Bridges		
29																			
30	G25	638		638	1342	1342						78	78		Lin. Ft.	G25	Circuit Cable, 1/2 600 Volt #6 AWG		
31	G25	100		100								4180	4180		Lin. Ft.	G25	Pole and Bracket Cable 1/2, 600 Volt, #10 AWG, Type THHN		
32																			
33	G25											6306	6306		Lin. Ft.	G25	Duct-Cable 600 Volt, Two Insulated 1/2 No. 6 AWG		
34																			
35	G25											8	8		Each	G25	Connector Kit, Type I, Unfused		
36	G25	1		1								44	44		Each	G25	Connector Kit, Type II, Fused		
37	G25	1		1								44	44		Each	G25	Connector Kit, Type III, Unfused		
38	G25											14	14		Each	G25	Connector Kit, Type IV, Unfused		
39																			
40	G25														LUMP	Lump	G25	Service Pole	
41	G25														LUMP	Lump	G25	50 KVA Distribution Transformer and Protective Equipment	
42																			
43	G25	1		1		1									Each	G25	Structure Grounding System		
44																			
45	G25					2									Each	G25	Structure Junction Box, 12" x 8" x 8"		
46																			
47	G25	1		1								Lump	Lump		Lump	Lump	G25	Circuit and Light Pole Identification	
48																			
49	G25	1		1		2									Set of 4	G25	Anchor Bolts for Light Pole on Bridge		
50																			
51																			
52																			
53																			
54																			
55	G25														15	Each	G25	Light Pole, 11A 10B30, Other than Circular cross section	
56	G25	1		1											Each	G25	Light Pole, 11A 12B28, Other than Circular Cross Section		
57	G25														28	Each	G25	Light Pole, 11A 15B30, Other than Circular Cross Section	
58	G25														31	Each	G25	Light Pole, 11A 10B32.5, Other than Circular Cross Section	
59	G25														19	Each	G25	Light Pole, 11A 15B32.5, Other than Circular Cross Section	
60	G25														7	Each	G25	Light Pole, 11A 10B-15B32.5, Other than Circular Cross Section	
61	G25																G25	Brackets at 180°	
62															4	Each	G25	Light Pole, 7A 15B40, Other than Circular cross section	
63																			
64																			
65																			
66																			
67																			
68																			

HAM - 74 - 11.37

GENERAL LIGHTING QUANTITIES

Line No.	ITEM	STRUCTURES				ROADWAY								ROADWAY TOTALS			DESCRIPTION
		HAM-74-1129 R		HAM-74-1477										QUANTITY	UNIT	ITEM	
		I-74-1(3)11	Total	I-74-1(3)11	Total	I-74-1(3)11	Total	I-74-1(3)11	Total	I-74-1(3)11	Total	I-74-1(3)11	Total				
1																	
2																	
3																	
4	G25													15	Each	G25	Light Pole, 11A 10B30, Circular Cross Section
5	G25	1	1												Each	G25	Light Pole, 11A 12B28, Circular Cross Section
6	G25													28	Each	G25	Light Pole, 11A 15B30, Circular Cross Section
7	G25													31	Each	G25	Light Pole, 11A 10B32.5, Circular Cross Section
8	G25													31	Each	G25	Light Pole, 11A 15B32.5, Circular Cross Section
9	G25													19	Each	G25	Light Pole, 11A 15B32.5, Circular Cross Section
10	G25													7	Each	G25	Light Pole, 11A 10B15B32.5, Circular Cross Section, Brackets @ 180°
11	G25													4	Each	G25	Light Pole, 7A 15B40, Circular Cross Section
12	G25													43	Each	G25	Luminaire, Type II "W"/Integral/400 Watt Mercury Ballast (480V)
13	G25	1	1											38	Each	G25	Luminaire, Type III "W"/Integral/400 Watt Mercury Ballast (480V)
14														30	Each	G25	
15	G25	1	1											43	Each	G25	Lamp, Mercury, H33 - 1CD
16	G25													43	Each	G25	Ground Rod Unit
17																	
18	G25													43	Each	G25	Light Pole Foundation, 24" x 24" x 6' Deep
19	G25													4	Each	G25	Light Pole Foundation, 24" x 24" x 8' Deep
20																	
21	G25													5	Each	G25	Pull Box, Round Fiber 18" I.D.
22																	
23	G25													1	Each	G25	Marker
24																	
25	G25													6340	Lin. Ft.	G25	Trench, 24" Deep
26																	
27	G25													35	Lin. Ft.	G25	Conduit, 3" Rigid Ferrous Metal, Type II or Type III
28	G25	290	290	610	610									585	Lin. Ft.	G25	Conduit, 2 inch, Type I, in Bridges
29																	
30	G25	638	638	1342	1342									78	Lin. Ft.	G25	Circuit Cable, 1/c 600 Volt #6 AWG
31	G25	100	100											4180	Lin. Ft.	G25	Pole and Bracket Cable 1/c, 600 Volt, #10 AWG, Type THHN
32																	
33	G25													6306	Lin. Ft.	G25	Duct-Cable 600 Volt, Two Insulated 1/c No. 6 AWG
34																	
35	G25													8	Each	G25	Connector Kit, Type I, Unfused
36	G25	1	1											44	Each	G25	Connector Kit, Type II, Fused
37	G25	1	1											44	Each	G25	Connector Kit, Type III, Unfused
38	G25													14	Each	G25	Connector Kit, Type IV, Unfused
39																	
40	G25													LUMP	Lump	G25	Service Pole
41	G25													LUMP	Lump	G25	50 KVA Distribution Transformer and Protective Equipment
42																	
43	G25	1	1	1	1										Each	G25	Structure Grounding System
44																	
45	G25			2	2										Each	G25	Structure Junction Box, 12" x 8" x 8"
46																	
47	G25	1	1											Lump	Lump	G25	Circuit and Light Pole Identification
48																	
49	G25	1	1	2	2										Set of 4	G25	Anchor Bolts for Light Pole on Bridge
50																	
51																	
52																	
53																	
54																	ALTERNATE BID ITEMS
55	G25													15	Each	G25	Light Pole, 11A 10B30, Other than Circular cross Section
56	G25	1	1												Each	G25	Light Pole, 11A 12B28, Other than Circular Cross Section
57	G25													28	Each	G25	Light Pole, 11A 15B30, Other than Circular Cross Section
58	G25													31	Each	G25	Light Pole, 11A 10B32.5, Other than Circular Cross Section
59	G25													19	Each	G25	Light Pole, 11A 15B32.5, Other than Circular Cross Section
60	G25													7	Each	G25	Light Pole, 11A 10B-15B32.5, Other than Circular Cross Section
61	G25																Brackets at 180°
62														4	Each	G25	Light Pole, 7A 15B40, Other than Circular cross Section
63																	
64																	
65																	
66																	
67																	
68																	



LEGEND

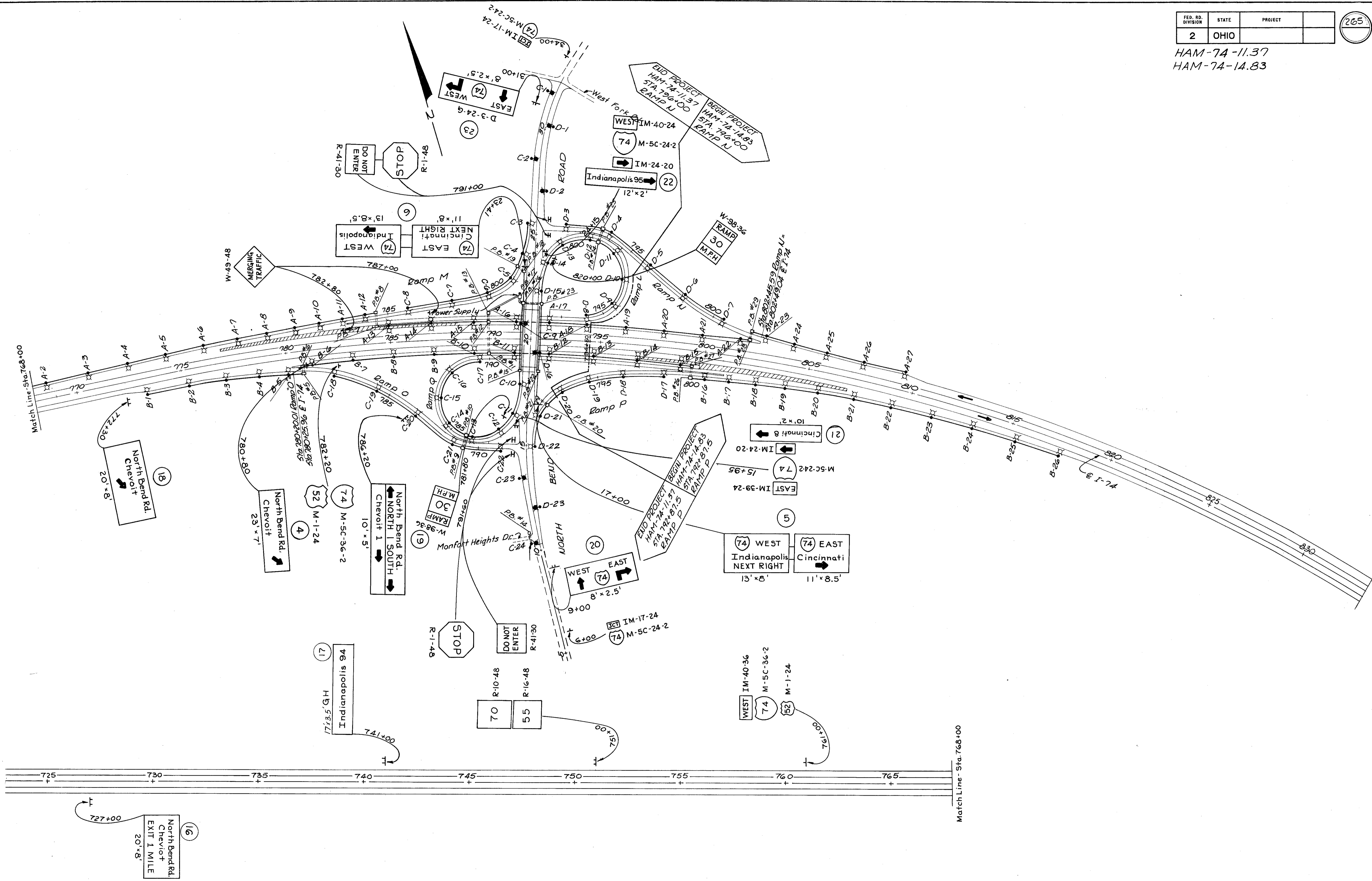
- Proposed Light Pole
- ⊗ Existing Light Pole
- ▭ Proposed Conduit Crossover & Pull Boxes
- ◻ Existing Conduit Crossover & Pull Boxes
- Existing Circuit Cable - 2#6
- Proposed Circuit Cable - 2#6 in Polyethylene Duct (Preassembled)

NOTES

1.) Signs No. 1 and 2 shall connect to existing circuits at existing pull box directly adjacent with Connector Kits (2-Type III each)

HARRISON PIKE INTERCHANGE - SIGNING SCHEMATIC

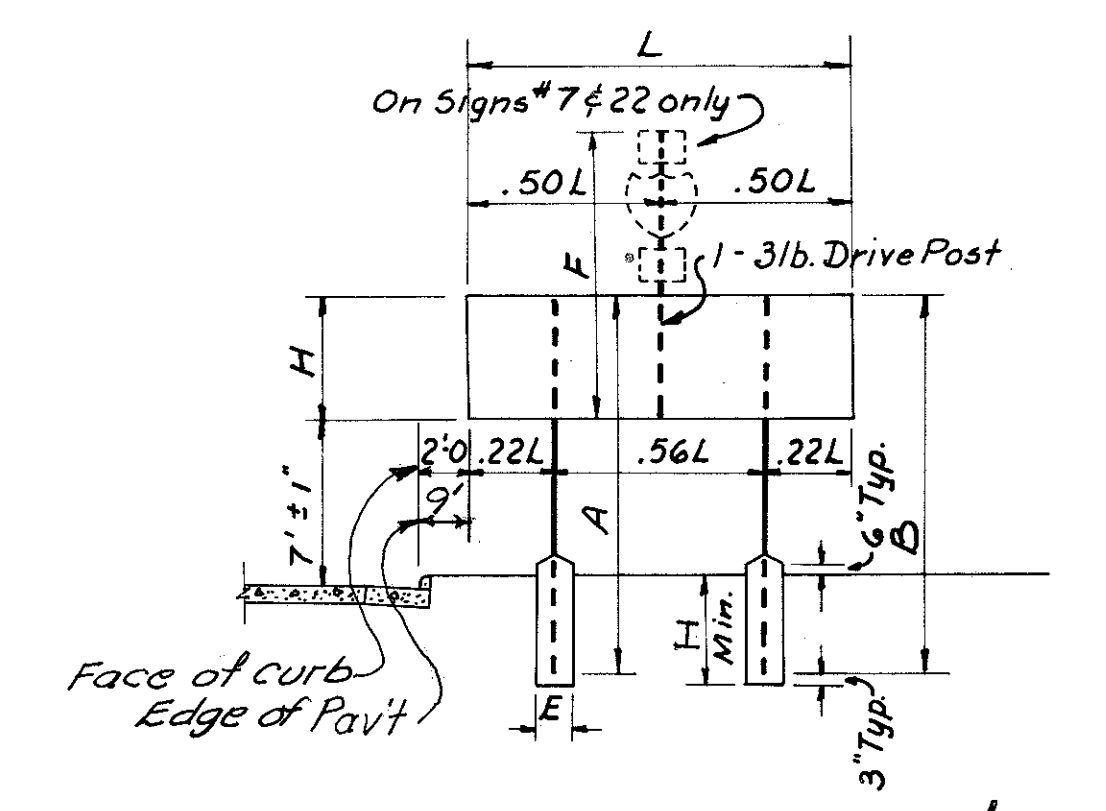
HAM-74-11.37
HAM-74-14.83



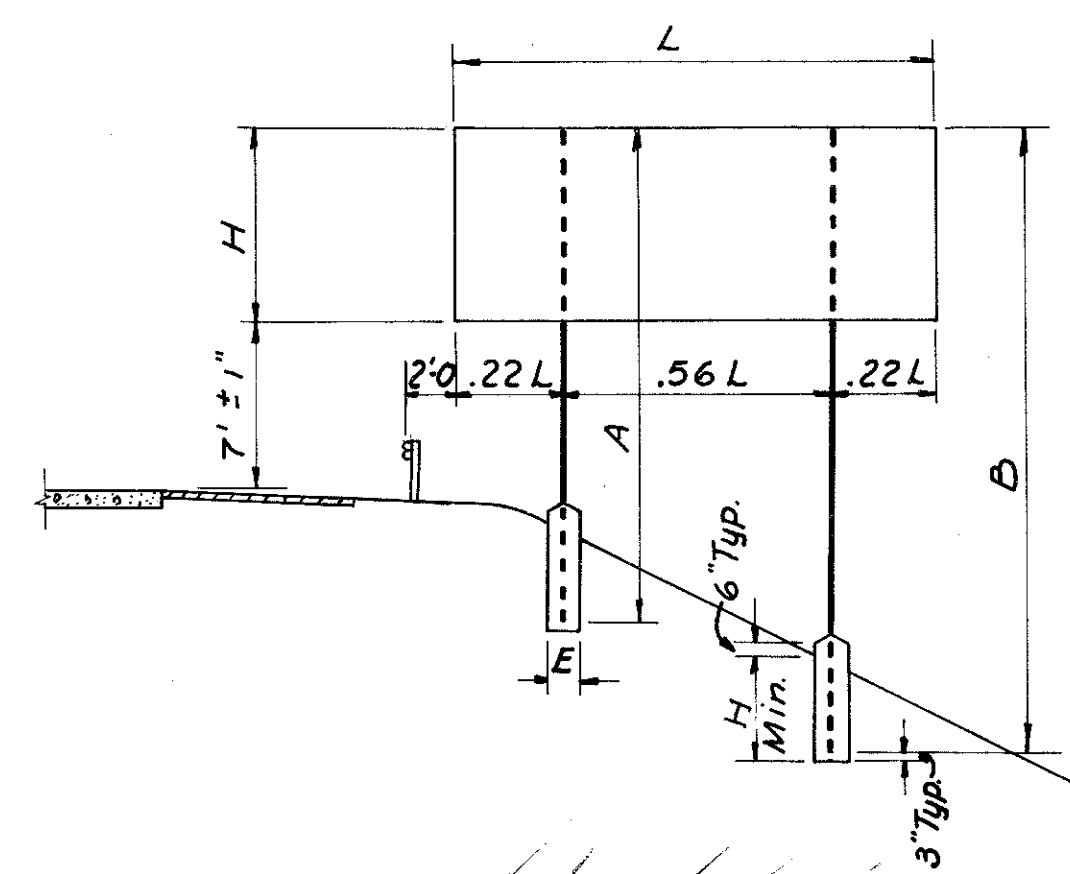
FLAT SHEET SIGN QUANTITIES

H.A.M. - 74 - 11.37

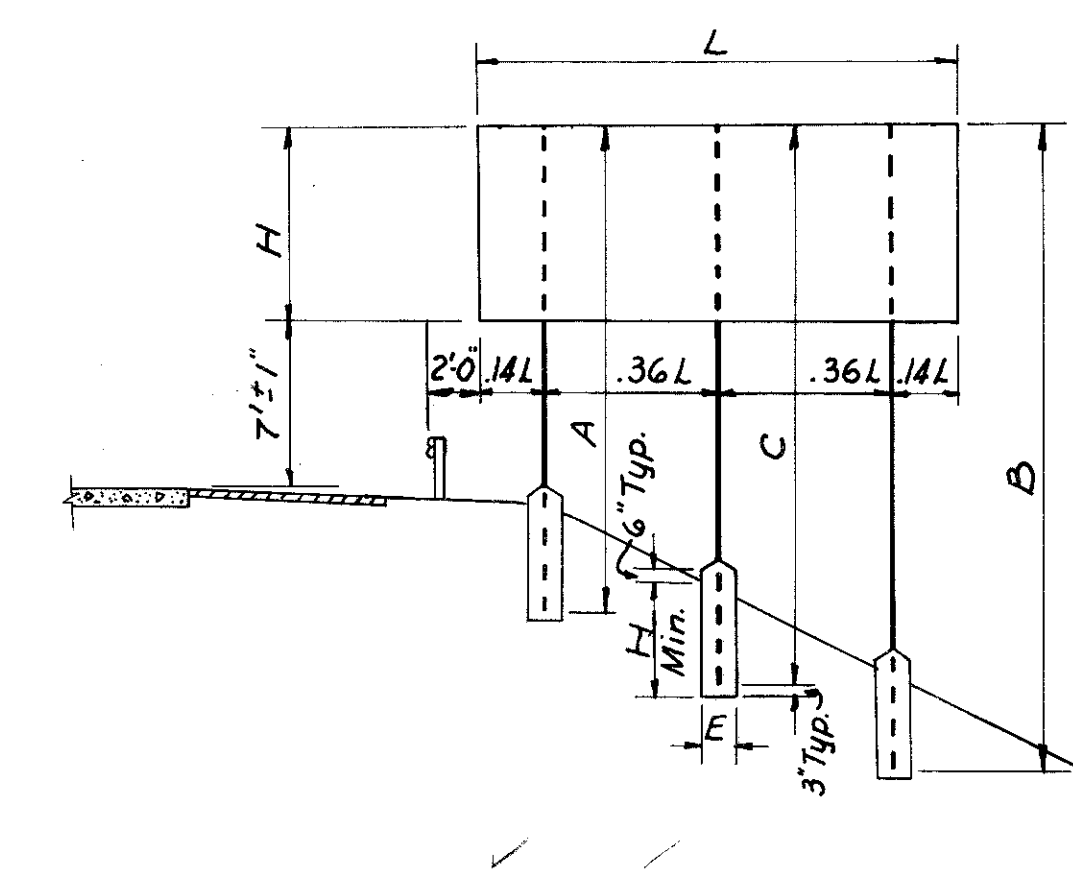
REFERENCE	STATION	SIGNS																SUPPORTS								
		M-5C-362 3'x3'	M-1-24 2'x2'	IM-17-36 3'x1.5'	IM-39-36 3'x1.5'	IM-40-36 3'x1.5'	R-1-48 4'x4'	R-37A-36 3'x3.5'	R-41-30 2.5'x2.5'	R-10-48 4'x5'	R-16-48 4'x4'	W-49-48 4'x4'	W-45-36 3'x3'	R-70-48 4'x3'	M-5C-242 2'x2'	IM-39-24 2'x1'	IM-40-24 2'x1'	IM-24-20 1'8'x1'3"	IM-17-24 2'x1'	W-98-36 3'x3.5'	IM-21-20 1-8'x1-3"	3# Post L.F.	6# Beam L.F.	8# Beam L.F.	Conc. for Ground Mounted Signs Cu.Yds.	
I-74	601+10	1	1																				15.0		.1	
	613+50																						17.5		.1	
	616+50	1	1																				15.0		.1	
	619+00																						17.5		.1	
	644+00	1	1	1																			16.5		.1	
	654+00								1	1													18.0		.2	
	680+00																						15.0		.1	
	751+00								1	1													18.0		.2	
	761+00	1	1			1																	16.5		.1	
782+20	1	1																				15.0		.1		
782+80																						17.5		.1		
I-74	787+00																					17.5		.1		
Ramp Y	3+30																						16.0		.1	
"	3+30																						14.0		.1	
"	9+70																						16.0		.1	
Harrison Pike	70+43																						15.0		.1	
"	81+82	1	1																				16.0		.2	
Ramp O	791+60							2	2													16.0		.2		
Ramp Q	781+80																					15.5		.1		
Ramp L	820+00																					15.5		.1		
Ramp N	791+00							2	2													16.0		.2		
Harrison Pike	67+00														1	1						17.0		.1		
N. Bend Rd.	6+00																					15.0		.1		
"	21 15+95														1	1										
"	22 24+15														1	1										
	34+00														1	1						15.0		.1		
TOTALS		6	5	1	1	1	5	1	4	2	2	4	1	1	6	3	1	3	2	2	1		30.0	306.0	103.0	2.7
TOTALS: SQ. FT.		54	20	4.5	4.5	4.5	80	10.5	25	40	32	64	9	12	24	6	2	6	4	21	2					
TYPE TOTALS: SQ. FT.															425											



SIGN No. 7, 8, 10, 11, 12, 13, 20, 21, 22 & 23



SIGN No. 9, 15, 16, 17 & 18

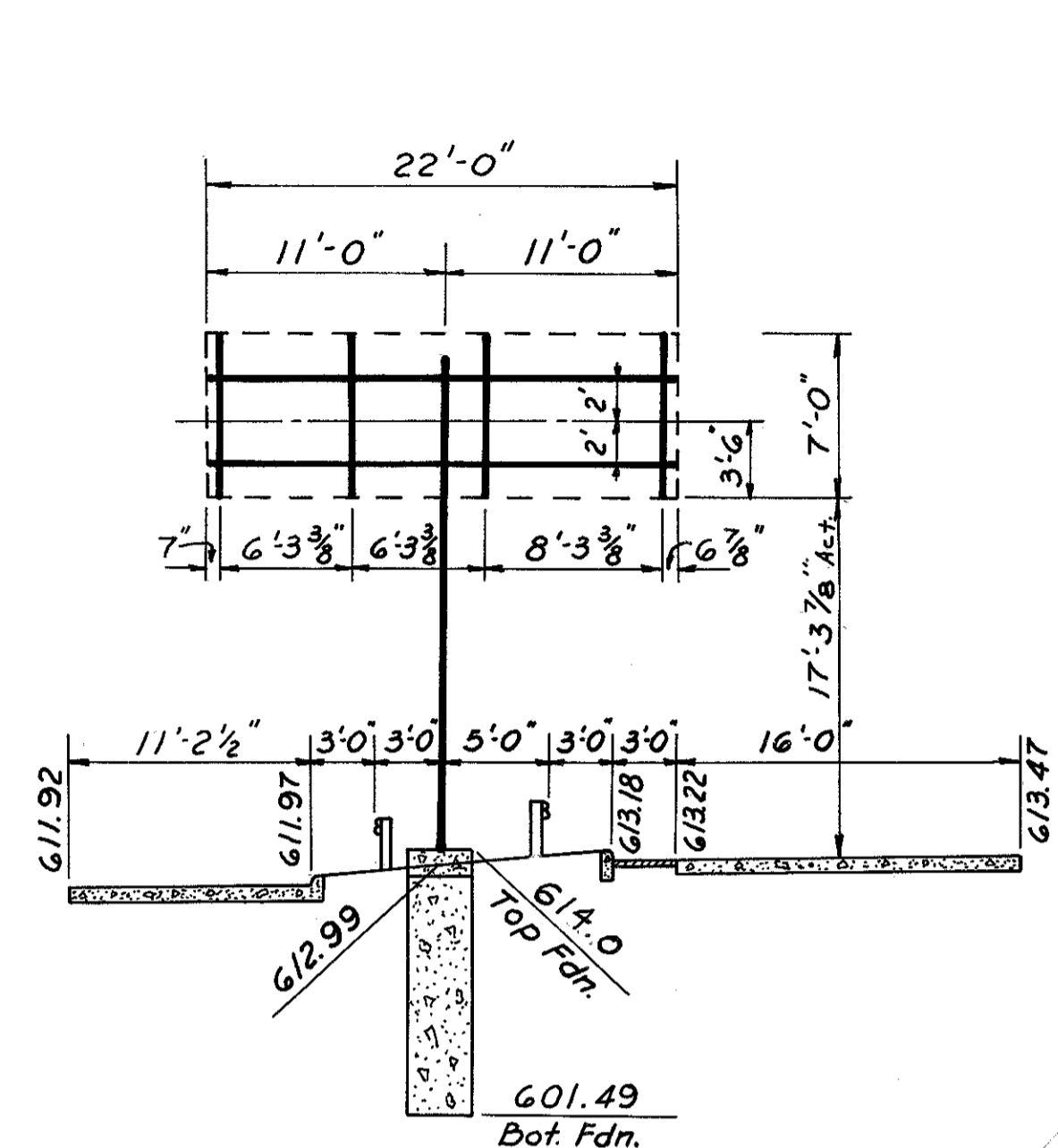


SIGN No. 14 & 19

Note: For foundation embedment see MS-1 Detail, Sheet 275.

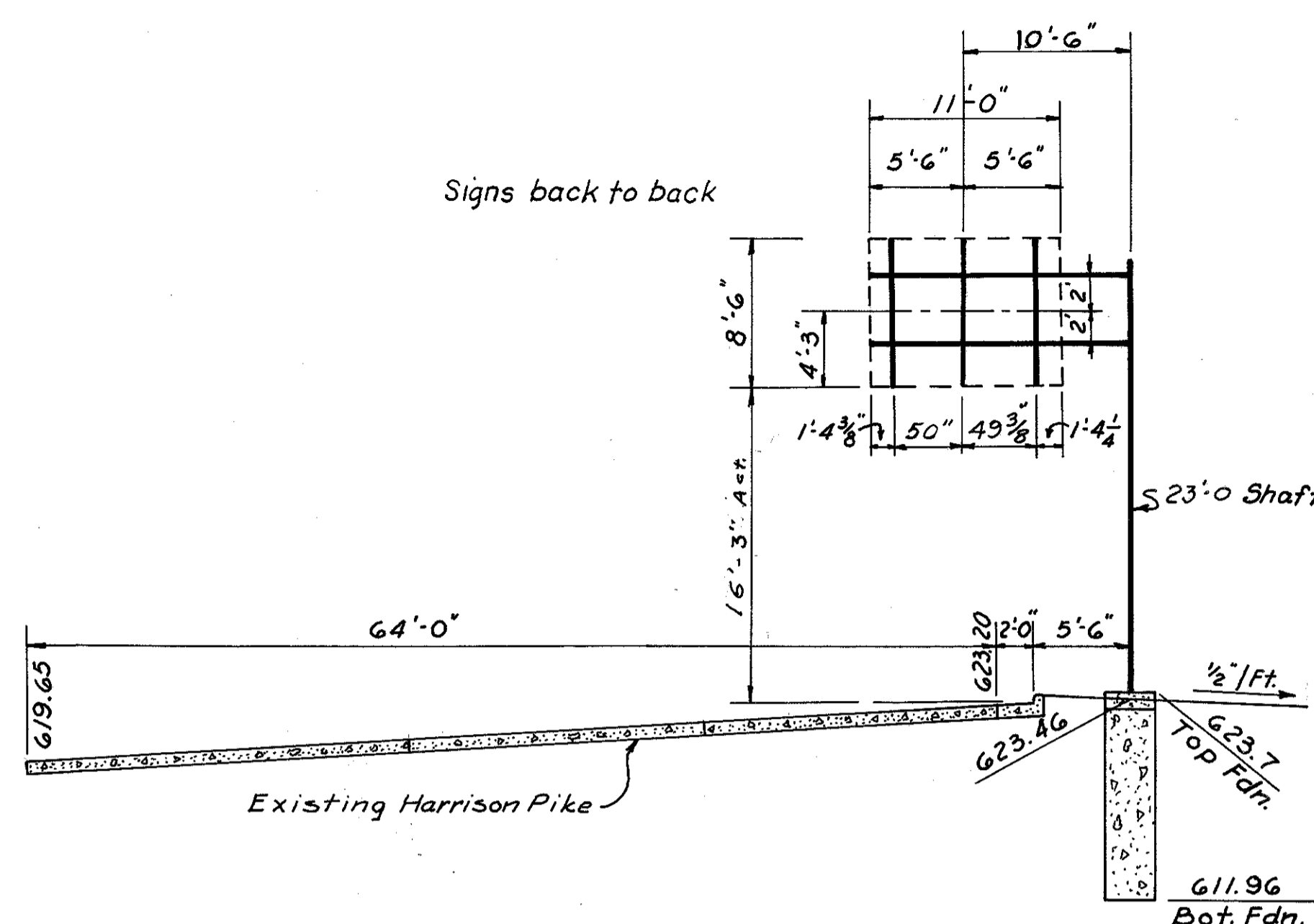
GROUND MOUNT SIGN SUPPORTS

Sign No.	Station	L	H	Supports	A	B	C	E	F
7	70+43 Harrison Pk	11'-0"	4'-0"	4 lb. PB & 3 lb. PB	14'-3"	14'-3"		1'-0"	8'-9"
8	78+82 Harrison	8'-0"	2'-6"	3 lb. PB	13'-9"	15'-0"		1'-0"	
9	629+70 W.B. I-74	18'-0"	8'-0"	12 B 22	23'-7"	28'-7"		2'-6"	
10	64+40 Harrison	10'-0"	4'-0"	4 lb. PB	15'-0"	15'-5"		1'-0"	
11	60+40 Harrison	12'-0"	4'-0"	4 lb. PB	14'-7"	15'-5"		1'-0"	
12	64+20 Harrison	9'-0"	5'-0"	3 lb. PB	14'-6"	14'-6"		1'-0"	
13	58+20 Harrison	8'-0"	2'-6"	3 lb. PB	13'-6"	14'-6"		1'-0"	
14	664+00 E.B. I-74	15'-0"	3'-6"	3 lb. PB	14'-11"	16'-3"	15'-7"	1'-0"	
15	670+50 W.B. I-74	18'-0"	8'-0"	12 W 27	28'-6"	24'-6"		2'-6"	
16	727+00 E.B. I-74	20'-0"	8'-0"	12 B 22	21'-11"	23'-3"		2'-6"	
17	741+00 E.B. I-74	17'-0"	3'-6"	10 B 11.5	15'-6"	20'-3"		2'-6"	
18	772+30 E.B. I-74	20'-0"	8'-0"	12 W 27	22'-11"	28'-6"		2'-6"	
19	786+20 Ramp O	10'-0"	5'-0"	4 lb. PB	16'-2"	19'-9"	18'-0"	1'-0"	
20	9+00 North Bend	8'-0"	2'-6"	3 lb. PB	12'-9"	14'-0"		1'-0"	
21	15+95 North Bend	10'-0"	2'-0"	4 lb. PB	13'-0"	13'-0"		1'-0"	6'-9"
22	24+15 North Bend	12'-0"	2'-0"	3 lb. PB	12'-3"	12'-3"		1'-0"	6'-9"
23	31+00 North Bend	8'-0"	2'-6"	3 lb. PB	14'-3"	15'-0"		1'-3"	



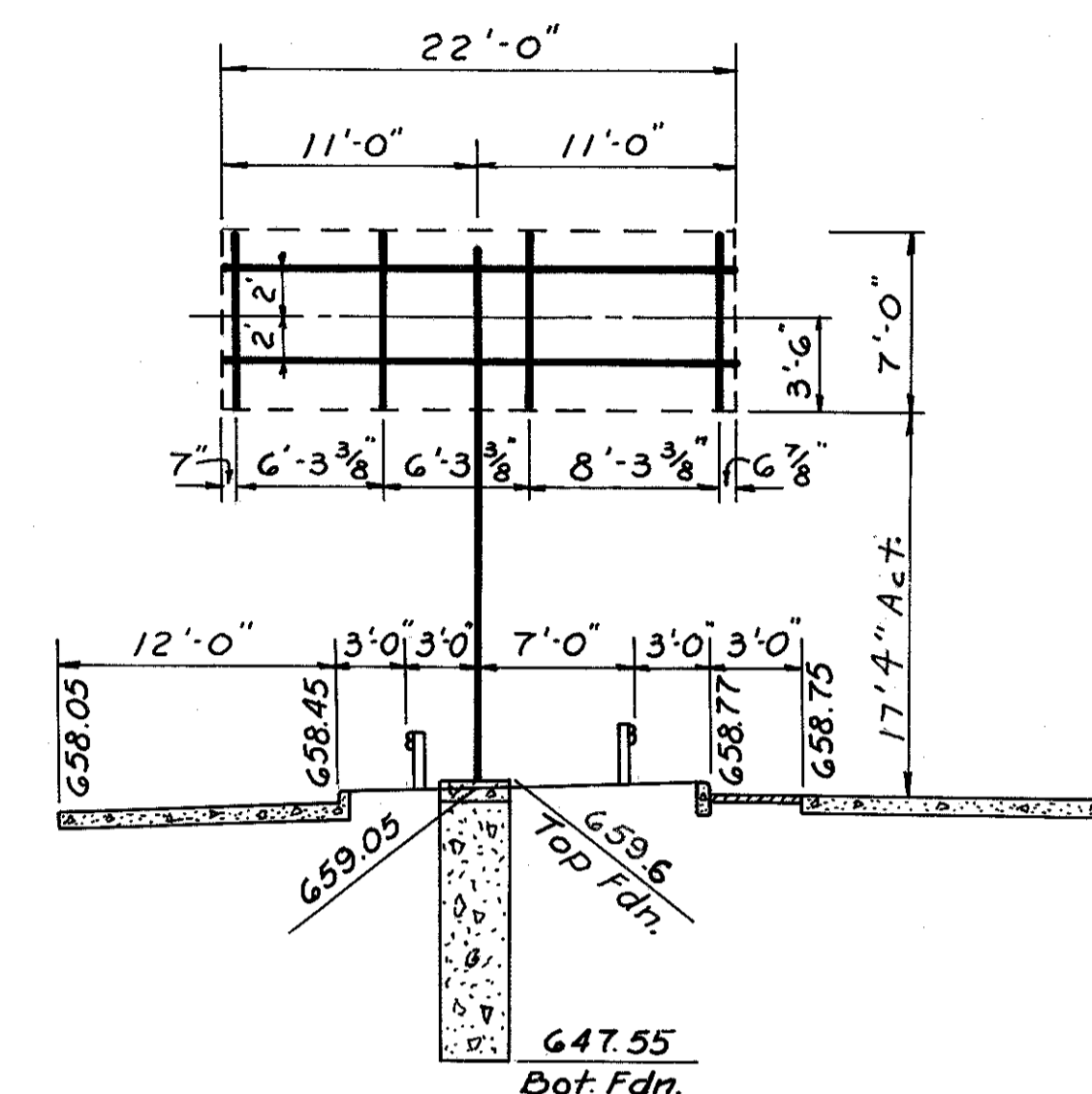
OVERHEAD SIGN SUPPORT No. 1

STA. 600+38
 816 No. 9.24 Design 3
 Arm Length - 11'-0"
 Y-Brackets - Steel (Detail A, Std. Dwg. EI-1)
 Illuminated



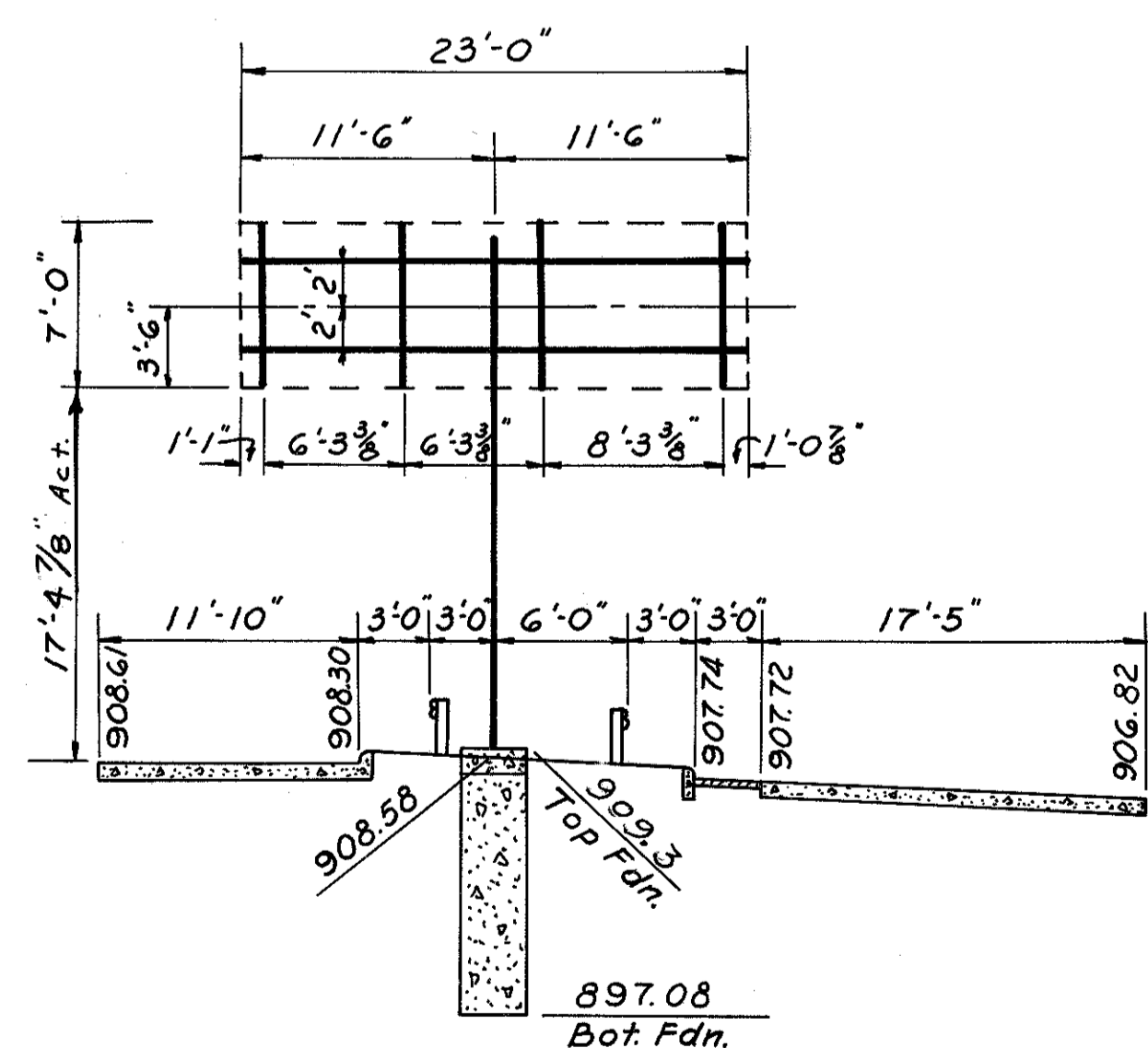
OVERHEAD SIGN SUPPORT No. 2

STA. 71+50 Harrison Pike
 816 No. 12.24 Design 3, Modified
 Arm Length 16'-0"
 Y-Brackets - Steel
 Illuminated



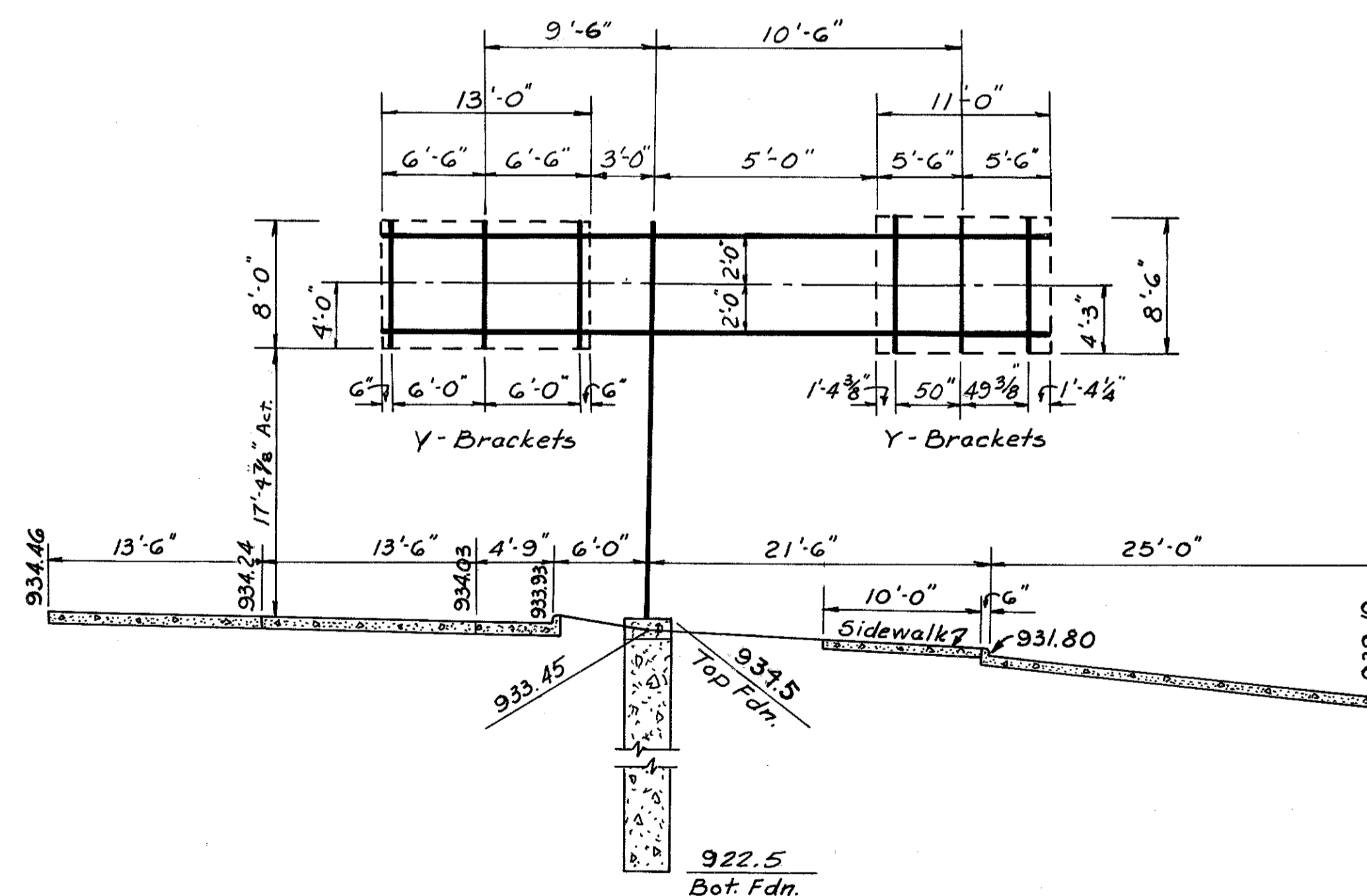
OVERHEAD SIGN SUPPORT No. 3

STA. 618+34
 816 No. 9.24 Design 3
 Arm Length - 11'-0"
 Y-Brackets - Steel (Detail A, Std. Dwg. EI-1)
 Illuminated



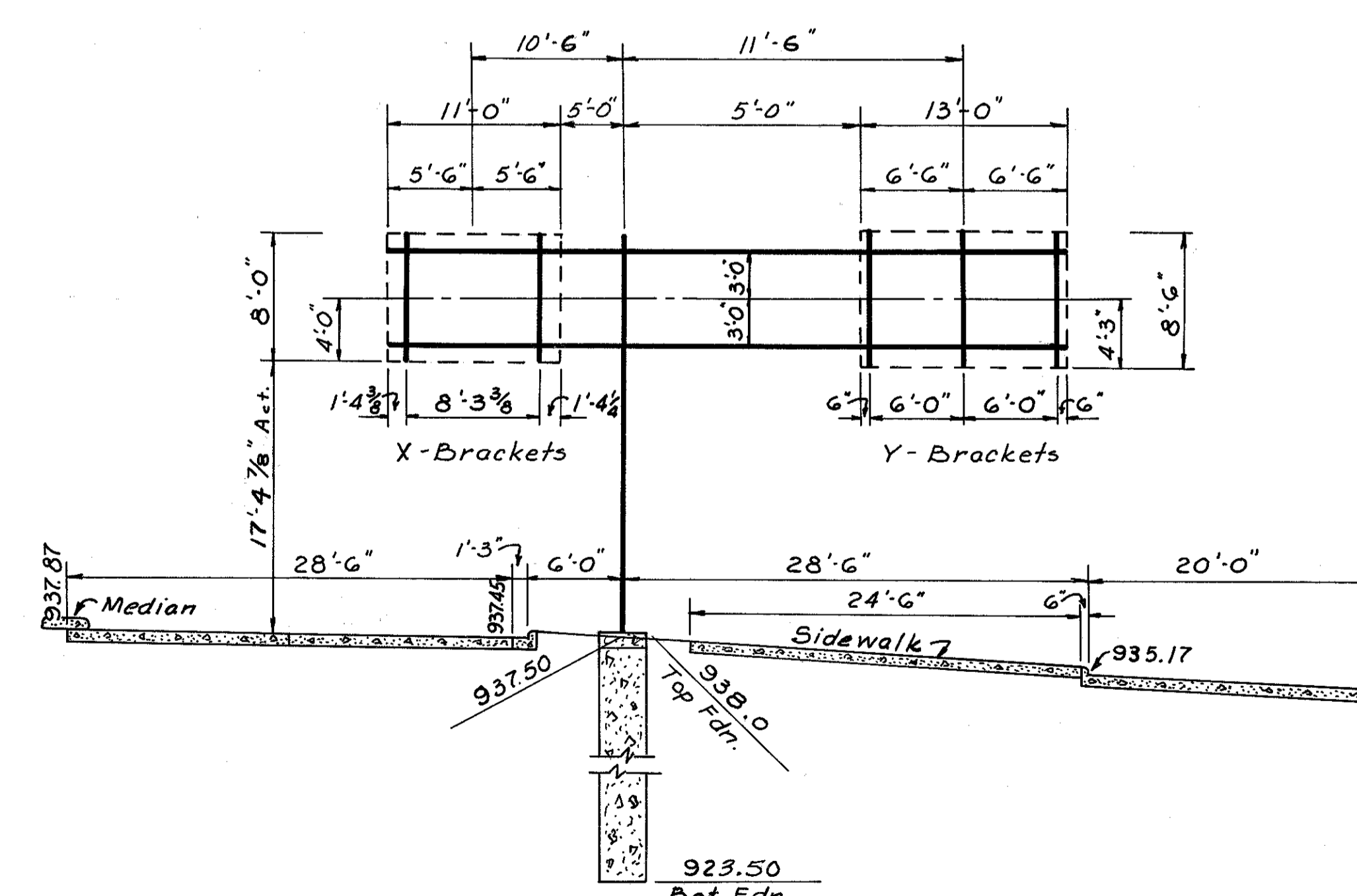
OVERHEAD SIGN SUPPORT No. 4

STA. 780+80
 816 No. 9.24 Design 3
 Arm Length - 11'-6"
 Y-Brackets - Steel
 Illuminated



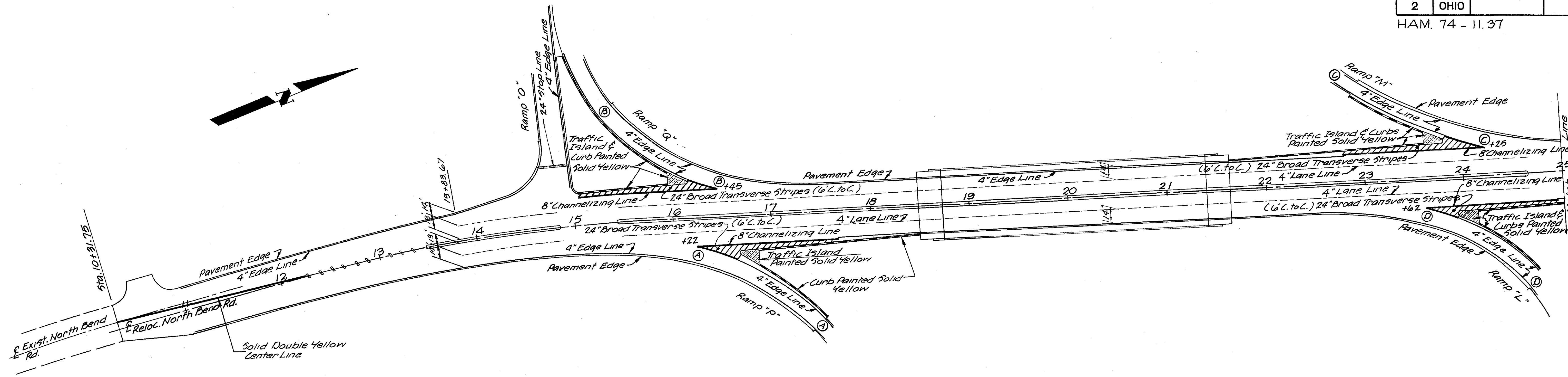
OVERHEAD SIGN SUPPORT No. 5

STA. 17+00 North Bend Rd.
 816 No. 10.48 Design 4
 Arm Length - 11'-0"
 Y-Brackets - Steel (Detail A, Std. Dwg. EI-1)
 Illuminated

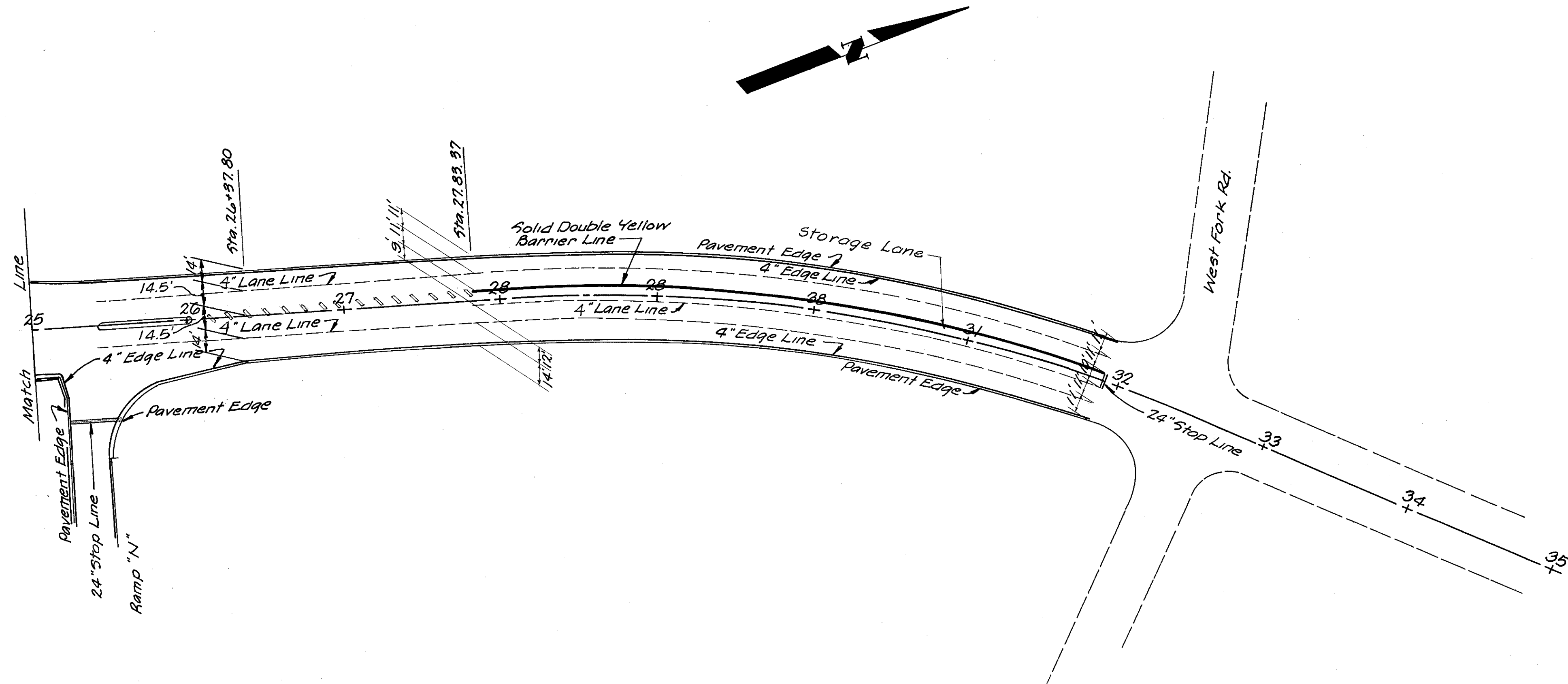


OVERHEAD SIGN SUPPORT No. 6







STA. 23+41 North Bend Rd.
 816 No. 10.48 Design 6
 Arm Length - 16'-0" & 18'-0"
 X & Y Brackets - Steel
 Illuminated



- Ⓐ - 15', Inside face to face of Painted Lines
- Ⓑ - 18', " " " " " " "
- Ⓒ - 15', " " " " " " "
- Ⓓ - 18', " " " " " " "



SIGN SUPPORT SYMBOLS

Sign on one support 
 Sign on two supports 
 Sign on three supports 
 Signs, back to back on one support 
 Single support overhead structure 
 Double support overhead structure 

IDENTIFICATION OF TRAFFIC SIGNS

Identification of all traffic signs is by reference number or code number. Reference numbers refer to the sign design bearing the same number. Code numbers refer to standard drawings with the same number.

ORIENTATION OF SIGN FACES

Signs shall be erected so that the face of the sign is vertical and at a right angle to the center of the lane which the sign serves. Where lanes divide on sharp horizontal curves, sign faces shall be placed perpendicular to the tangent to the curve at the sign location station, so as to be most effective both day and night.

DIMENSIONS

Dimensions of signs are indicated on the plans with the horizontal dimension first, then the vertical dimension.

The illuminated overhead signs have a 1'-0" glare shield at the bottom which is included in the dimensions shown and in the square footage indicated under sign erection.

IDENTIFICATION OF TRAFFIC SIGNS

Identification of all traffic signs is by reference number or code number. Reference numbers refer to the sign design bearing the same number. Code numbers refer to standard drawings with the same number.

ORIENTATION OF SIGN FACES

Signs shall be erected so that the face of the sign is vertical and at a right angle to the center of the lane which the sign serves. Where lanes divide on sharp horizontal curves, sign faces shall be placed perpendicular to the tangent to the curve at the sign location station, so as to be most effective both day and night.

DIMENSIONS

Dimensions of signs are indicated on the plans with the horizontal dimension first, then the vertical dimension.

The illuminated overhead signs have a 1'-0" glare shield at the bottom which is included in the dimensions shown and in the square footage indicated under sign erection.

TRAFFIC SIGN SUPPORTS

Traffic sign supports shall be furnished and installed in accordance with the provisions of Supplemental Specification 816.

Details and dimensions of the ground mounted sign supports are tabulated on sheet No. 266.

Details and dimensions of the overhead sign supports are shown on sheets 267, 269 through 274.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS

Payment for this item shall be based on plan dimensions (or dimensions as modified by the engineer) in lieu of plan quantities as specified in supplemental specifications 816. Payment for reinforcing steel shall be included in the unit price bid for this item.

TRAFFIC SIGN ERECTION

The Contractor shall erect sign panels, furnished by others, as noted on the Signing Schematic, sheets 264 and 265. The panels shall be mounted on the brackets or beam supports provided in the plans. The Glare Shields will be furnished by others for erection by the Contractor. A schedule for sign erection shall be submitted to the Division Traffic Engineer and the Bureau of Traffic, 450 East Town St., Columbus, Ohio, 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 Item 815, Sign Erection By Type, as per plan shall include all necessary equipment, man power, 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 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.

SIGN STRUCTURE No. 2

Sign Structure No. 2 at Sta. 71+50 on Harrison Pike, shall not be installed until the structural steel for the new I-74 Bridge over Harrison Pike is in place and a field check determines the correct location.

ELECTRICAL - GENERAL

MATERIALS TO BE FURNISHED MAY BE SPECIFIED IN THE PLANS BY A GIVEN MANUFACTURER'S CATALOG NUMBER OR TYPE. THIS IS FOR DESCRIPTIVE PURPOSES ONLY AND THE CONTRACTOR MAY ASSUME THAT APPROVED EQUAL MATERIALS MAY BE FURNISHED.

DISCONNECT SWITCH WITH TYPE "Y" OR "Z" ENCLOSURE

THIS ITEM SHALL INCLUDE FURNISHING AND INSTALLING A 30 AMP. 600 VOLT FUSED DISCONNECT SWITCH OF THE TYPE AND MAKE AS INDICATED ON SHEET NO. 274. IT SHALL BE MOUNTED IN A NEMA (4) STAINLESS STEEL ENCLOSURE TYPE "Y" OR "Z" AND ATTACHED TO EACH SIGN SUPPORT (UNLESS OTHERWISE NOTED) BY A MOUNTING BRACKET AS DETAILED ON THE ABOVE SHEET. ENCLOSURES ON BRIDGES WILL BE FASTENED DIRECTLY TO THE CONCRETE PIERS.

PAYMENT FOR THIS ITEM SHALL BE ON A BID BASIS OF UNITS INSTALLED AND ACCEPTED.

EACH SWITCH ENCLOSURE SHALL BE FURNISHED WITH ONE PADLOCK. PADLOCKS SHALL HAVE A BRASS BODY AND WROUGHT IRON SHACKLE EQUAL TO RUSSWIN NO. 2882 KA OR MASTER NO. 4KA OR APPROVED EQUAL.

PAYMENT FOR LOCKS SHALL BE INCLUDED IN THE COST OF SWITCH ENCLOSURES.

TRANSFORMERS

TRANSFORMERS TYPES SHALL BE AS SHOWN ON SHEET NO. 274. TRANSFORMERS ARE TO BE MOUNTED IN THE BOTTOM OF THIS SWITCH ENCLOSURE CABINET.

PAYMENT FOR TRANSFORMERS SHALL BE PER CONTRACT UNIT PRICE BID FOR EACH TYPE INSTALLED AND ACCEPTED.

625 SIGNS WIRED, COMPLETE AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND/OR INSTALLATION OF THE ELECTRICAL SIGN LIGHTING SYSTEM COMPONENTS FOR EACH ILLUMINATED SIGN.

WORK SHALL INCLUDE THE INSTALLATION OF LIGHT FIXTURES AND BALLASTS, AND INSTALLATION OF ALL RIGID AND FLEXIBLE CONDUIT, CONDULETS, JUNCTION BOXES, WIRE, FASTENERS, HARDWARE, AND ALL OTHER ITEMS REQUIRED TO ENERGIZE THE SIGN LIGHTING SYSTEM. SEE DETAILS ON SHEETS 272 AND 273.

ILLUMINATED SIGNS REQUIRING TWO (2) BALLASTS SHALL BE CONSIDERED AS AN EQUIVALENT OF TWO (2) SEPARATE SIGNS FOR DETERMINATION OF PAY QUANTITIES.

THE COST OF FURNISHING AND INSTALLING WIRE AND NECESSARY FASTENERS FROM THE DISCONNECT SWITCH TO THE SIGNS (OR BETWEEN SIGNS) ON THE SAME SUPPORTS MEMBERS SHALL BE INCIDENTAL TO THE COST OF VARIOUS ITEMS INCLUDED IN THIS WORK.

BASIS OF PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE PER EACH SIGN WIRED WHICH PRICE SHALL INCLUDE ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS TO PROVIDE A COMPLETE AND ACCEPTED ITEM.

FIXTURES AND LAMPS

ILLUMINATION OF SIGNS ON THIS PROJECT SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS. LIGHT FIXTURES SHALL BE ATTACHED TO BOTTOM OF SIGNS. PROXIMITY OF LIGHT FIXTURES FROM SIGN IS SHOWN IN THE TABLE ON SHEET 273.

LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURE AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT, BAKED ENAMEL SUCH AS UNIVERSAL PAINT AND VARNISH INC. #9850 OR EQUIVALENT BY MIDWESTERN COLOR WORKS OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKET.

LAMPS SHALL BE TYPE F72 OR F96 - T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96 - T12/CW/SO AS MANUFACTURED BY WESTINGHOUSE, OR F72 OR F96 - PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS 7'-0" OR GREATER IN HEIGHT.

INSPECTION AND TESTING OF SIGN LIGHTING

THE CONTRACTOR SHALL FURNISH ALL EQUIPMENT NECESSARY TO DEMONSTRATE TO THE ENGINEER THAT ALL CIRCUITS ARE FREE FROM SHORT CIRCUITS AND UNSPECIFIED GROUNDS, AND ARE PROPERLY CONNECTED AND OPERABLE BEFORE ACCEPTANCE. THIS DEMONSTRATION SHALL INCLUDE A MEGGARING TEST TO SHOW THAT ALL CONDUCTORS ARE CLEAR OF GROUNDS AND THAT THE RESISTANCE AT THE GROUND IS NOT MORE THAN 25 OHMS. VOLTAGE AND AMPERAGE TESTS SHALL BE MADE AT THE SIGN SUPPORT SWITCH.

THE COST OF THESE TESTS SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR THE VARIOUS SIGN LIGHTING ITEMS CONTAINED IN THIS PROJECT.

AFTER THE SIGN LIGHTING SYSTEM IS COMPLETED, THE ENTIRE SYSTEM SHALL BE OPERATED CONTINUOUSLY EACH NIGHT UNTIL SEVEN (7) CONSECUTIVE DAYS ELAPSE WITHOUT FAILURE OR DEFECT. THE CONTRACTOR SHALL CORRECT ANY DEFECTS WHICH MAY DEVELOP AT NO EXTRA COST TO THE STATE.

DURING THE TEST PERIOD, ADJUSTMENTS TO FIXTURE AIMING ANGLES SHALL BE MADE AS DIRECTED BY THE ENGINEER TO OBTAIN MAXIMUM UNIFORMITY IN SIGN ILLUMINATION.

POWER SUPPLY

POWER SHALL BE OBTAINED FROM THE 480 VOLT MULTIPLE ROADWAY LIGHTING CIRCUITS.

BALLAST

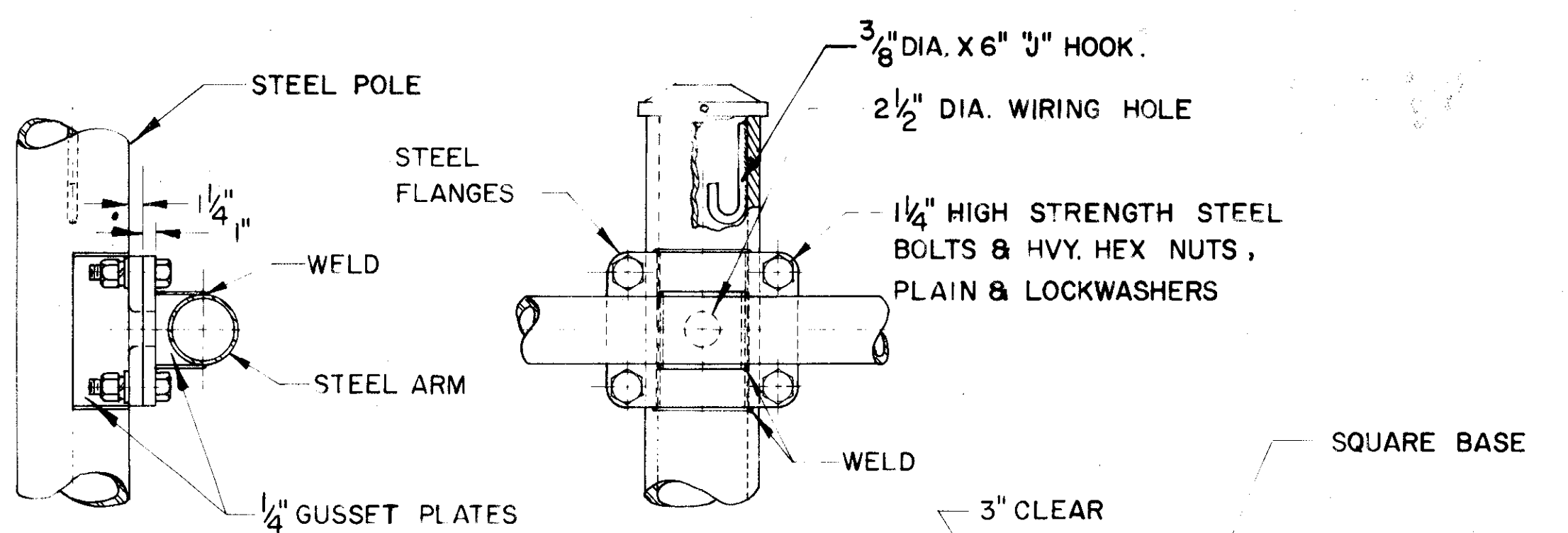
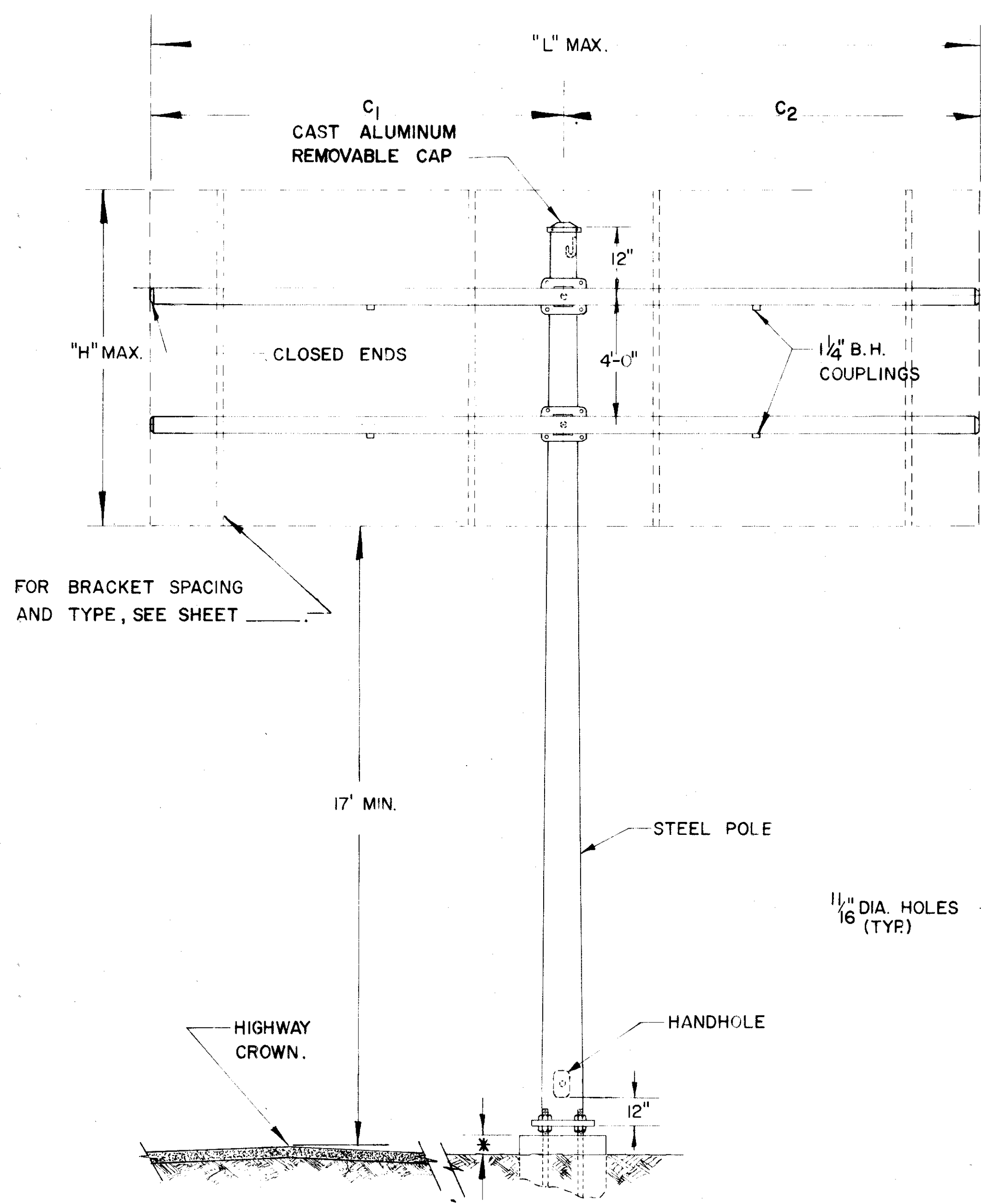
BALLAST FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF - 20°F.

PAYMENT FOR THIS ITEM SHALL BE ON A BID BASIS OF DIFFERENT TYPE UNITS FURNISHED.

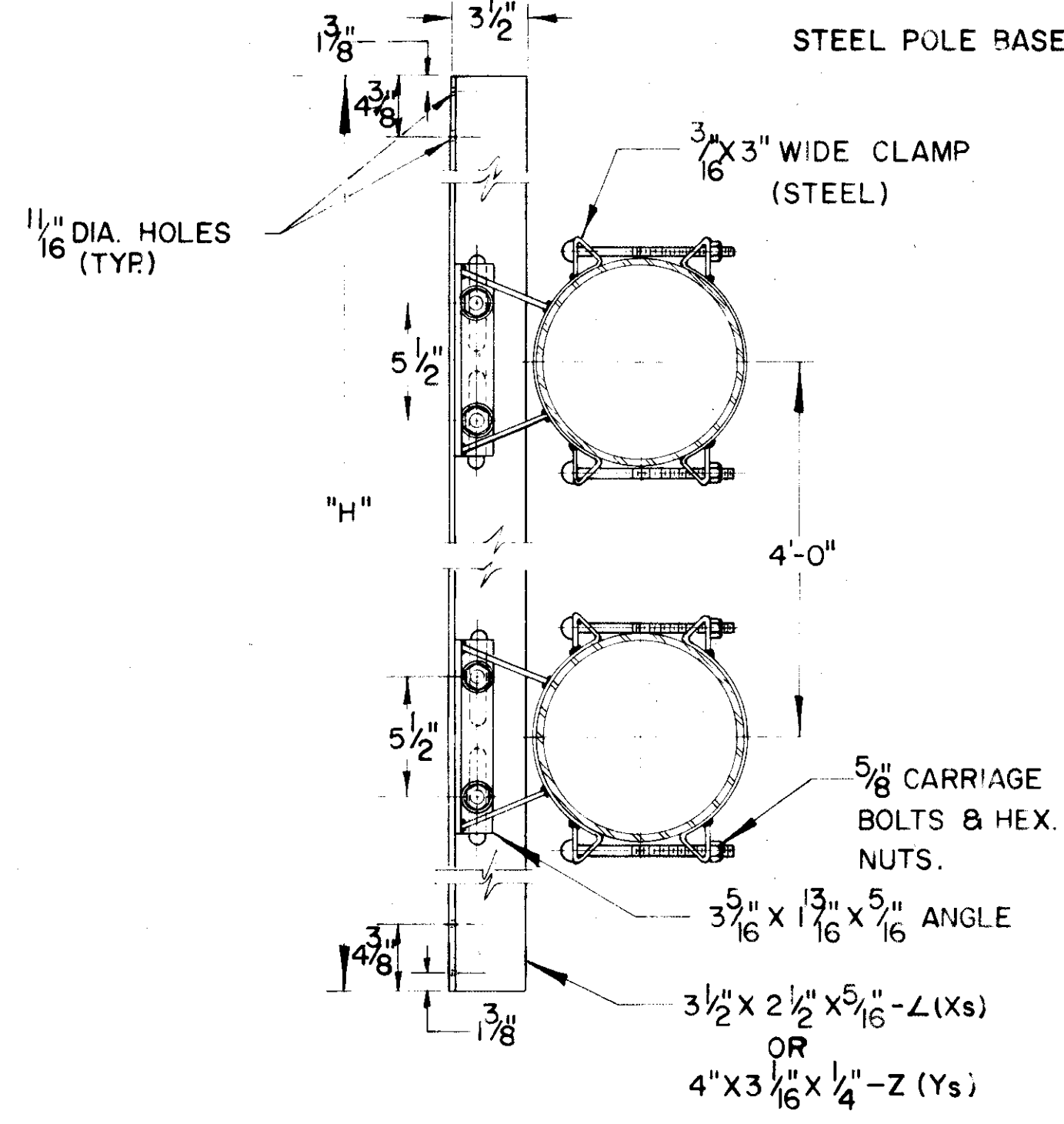
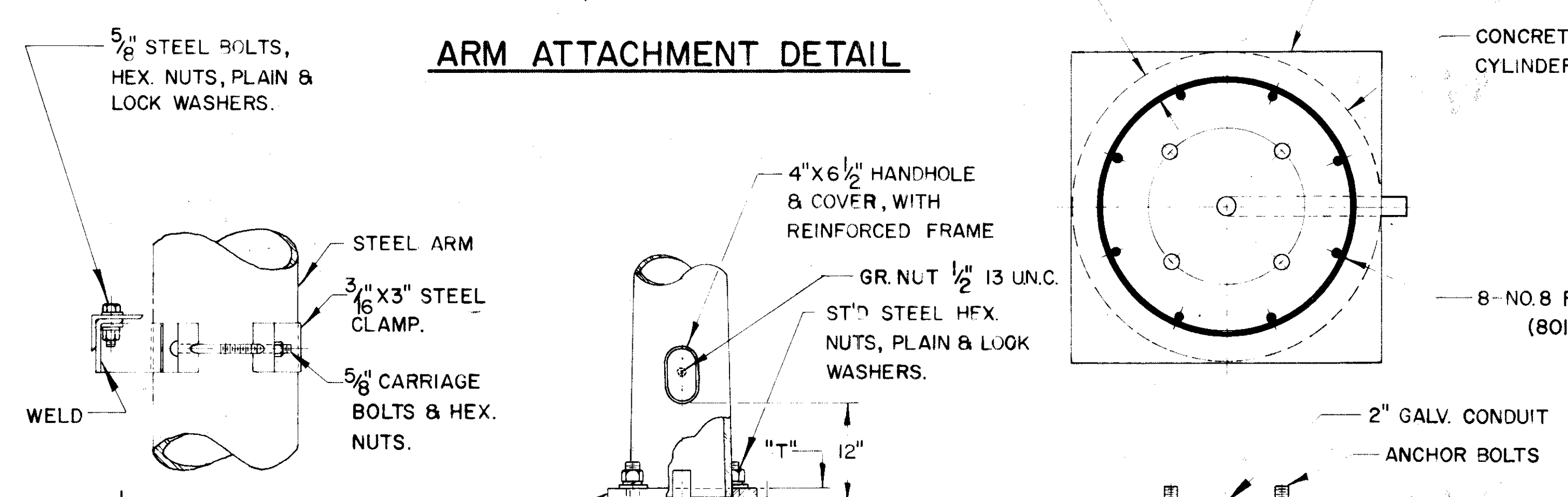
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NOTES

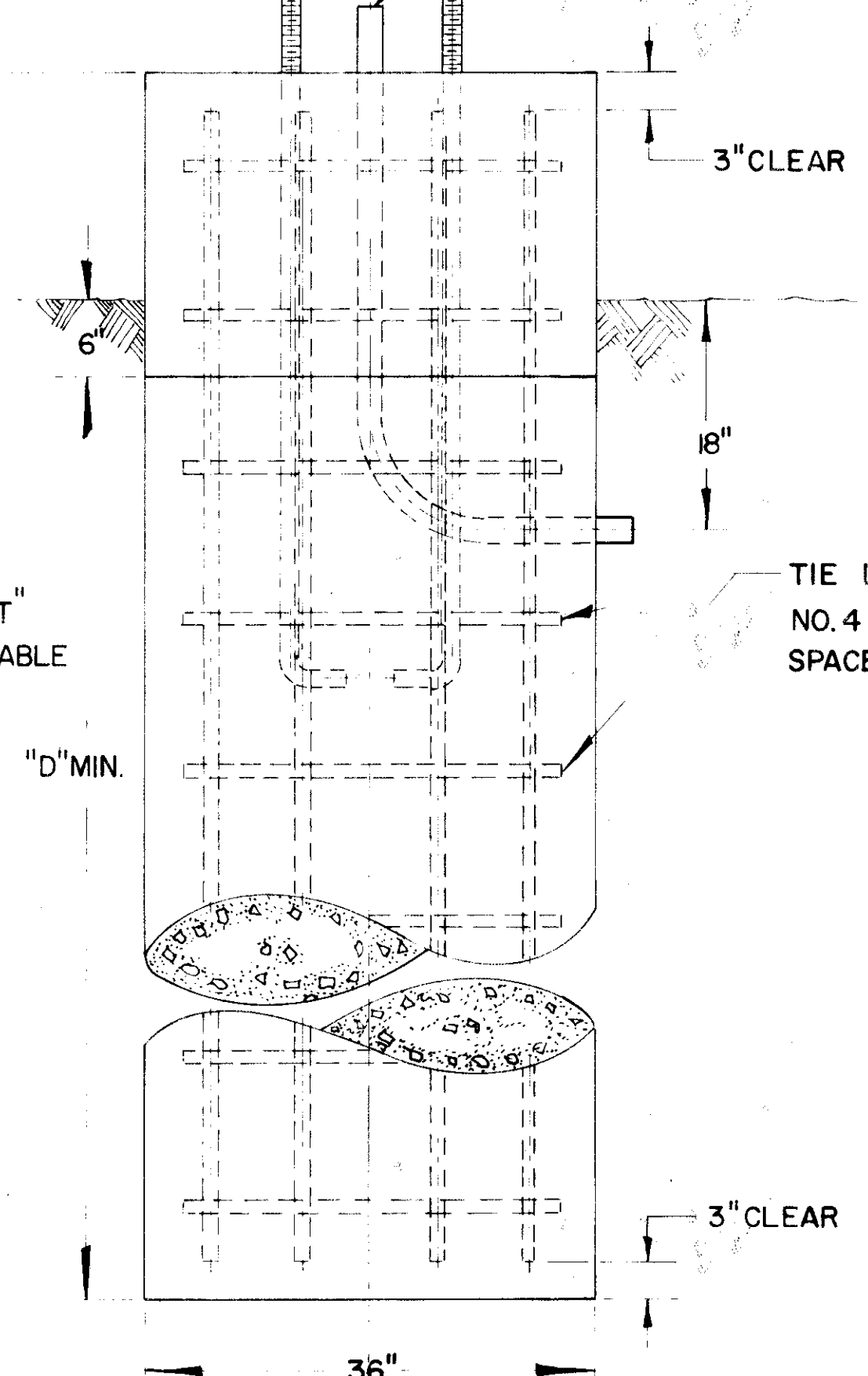
- GENERAL**
 MAXIMUM SIGN AREAS AND ARM LENGTHS SHOWN IN TABLE, ARE FOR BALANCED DESIGN ($C_1 = C_2$).
 FOR UNBALANCED DESIGN ($C_1 \neq C_2$), THE PRODUCT OF THE ACTUAL SIGN AREA ($C_1 H$ or $C_2 H$) TIMES 1/2 OF ACTUAL ARM ($1/2 C_1$ or $1/2 C_2$) SHALL BE LESS THAN THE PRODUCT OF 45% OF MAXIMUM SIGN AREA TIMES 1/2 MAX ARM FOR BALANCED DESIGN. ($0.45 H 2C_1 1/2C_1$ or $0.45 H 2C_2 1/2C_2$)
- DESIGN**
 THE DESIGN OF OVERHEAD SUPPORTS SHALL BE IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 13, 1961.
- * FOUNDATION**
 THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.
- SOILS**
 THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.
- FINISH**
 ALL STRUCTURAL PORTIONS OF THE SIGN SUPPORTS, SIGN BRACKETS, HARDWARE AND CONDUIT SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH SEC. 711.02 (EXCEPT AS OTHERWISE SHOWN).
- MATERIALS**
 ALL MATERIALS TO BE FURNISHED SHALL BE IN ACCORDANCE WITH SEC. 711.02 WITH THE FOLLOWING ADDITIONS:
 TAPERED TUBES SHALL BE STEEL, SAE 1015 AND COLD ROLLED TO OBTAIN A MINIMUM YIELD STRENGTH OF 48,000PSI.
 STEEL PIPE: 4" DIAMETER AND UNDER SHALL BE STEEL-ASTM-A120 OVER 4" DIAMETER SHALL BE ASTM-A53, GRADE B
 ANCHOR BOLTS SHALL BE HIGH STRENGTH STEEL ASTM-A107, GRADE C-1035
 HIGH STRENGTH CLAMPS SHALL BE STEEL-ASTM-A242
- PAYMENT FOR CONDUIT**
 PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.
- REINFORCING STEEL**
 COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.
 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.



ARM ATTACHMENT DETAIL



POLE DETAIL

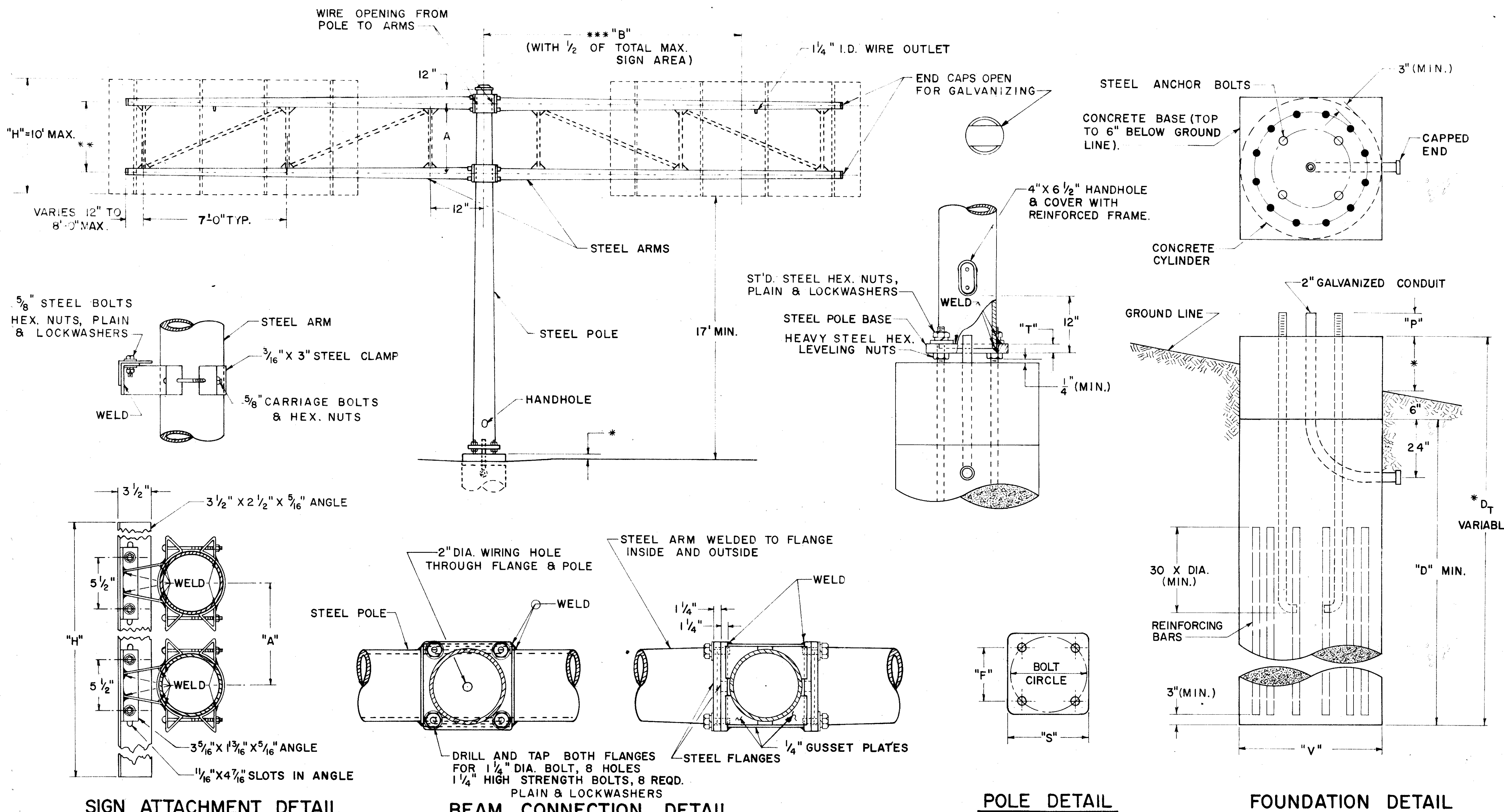


FOUNDATION DETAIL

DESIGN	POLE SIZE (STD.)	MAX. ARM SIZE	MAX. SIGN LENGTH "L"	MAX. SIGN AREA	B	F	P	S	T	ANCHOR BOLTS	"D" MIN.
1.	3GA. 14" X 10.78" X 23'	4" SCH. 40 12'-0"	24'-0"	120 SQ FT	20"	14 1/8"	7"	20 1/2"	2"	3/4" X 90"	9'
2.	3GA. 16.5" X 13" X 25'	4" SCH. 40 9'-0"	18'-0"	180 SQ FT	23 1/2"	16 5/8"	8"	24 1/2"	2"	2" X 90"	11'
3.	3GA. 16.5" X 13.28" X 23'	6" SCH. 40 12'-0"	24'-0"	180 SQ FT	23 1/2"	16 5/8"	8"	24 1/2"	2"	2" X 95"	11'
4.	OGA. 18" X 14.5" X 25'	6" SCH. 40 12'-0"	24'-0"	240 SQ FT	25 1/2"	18"	9"	26 1/2"	2 1/2"	2 1/4" X 96"	13'

REINFORCEMENT SCHEDULE			
MARK	NO.	LEN.	TYPE
402	12	6'-6"	103
801	8	D-6"	STR.

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		
OVERHEAD SIGN SUPPORT	816 No. 9.24	DATE 6-17-64
APPROVED _____ ENGINEER OF TRAFFIC		



NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. 625.13 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

* FOUNDATION - THE TOP ELEVATION OF ALL FOUNDATIONS SHALL BE BUILT UP 1'-0" ABOVE THE HIGHWAY CROWN.

** ERECTION - ARMS 20' AND OVER IN LENGTH SHALL BE TRUSS TYPE USING 3" X 3" X 3/8" ANGLES WELDED TO GUSSET PLATES WITH THE INSIDE EDGES OF THE ARMS PARALLEL.

*** VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM C OF POLE TO C OF SIGN DOES NOT EXCEED THE PRODUCT OF "B" TIMES 1/2 THE MAX. SIGN AREA.

GENERAL - THE MAX. SIGN AREA ON EACH SIDE OF THE POLE EQUALS 1/2 THE MAX. TOTAL AREA IN THE CHART.

MATERIAL - STEEL POLE BASES, AND FLANGES SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7. AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN
 THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

DESIGN NO.	POLE SIZE	* * ARM SIZE	DIM. A	DIM. *** B	DIM. "D" MIN.	DIM. F	DIM. P	DIM. S	DIM. T	BOLT CIRCLE	ANCHOR BOLT SIZE	DIM. V	MAX SIGN AREA	REINF. BARS SIZE	REINF. BARS NO.
1	3ga. 18" X 14.64" X 24'-0"	7ga., 5.7" X 4.02" X 12'-0"	4'	8'	9'	18"	8 3/8"	26 1/2"	2"	25 1/2"	2" X 96"	3'-0"	160	3/4"	12
2	3ga. 18" X 14.64" X 24'-0"	7ga., 6.9" X 4.66" X 16'-0"	4'	12'	9'	18"	8 3/8"	26 1/2"	2"	25 1/2"	2" X 96"	3'-0"	160	3/4"	12
3	0ga., 18" X 14.64" X 24'-0"	7ga., 7.5" X 5.82" X 12'-0"	4'	8'	11'	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 108"	3'-0"	240	1"	12
4	0ga., 18" X 14.64" X 24'-0"	7ga., 8.3" X 6.06" X 16'-0"	4'	12'	11'	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 108"	3'-0"	240	1"	12
5	0ga., 18" X 14.64" X 24'-0"	7ga., 10" X 7.2" X 20'-0"	4'	16'	11'	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 108"	3'-0"	220	1"	12
6	2 ply 3ga., 18" X 14.5" X 25'-0"	7ga., 10" X 7.48" X 18'-0"	6'	10'	14'	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 144"	3'-0"	360	1 1/8"	12
7	2 ply 3ga., 18" X 14.5" X 25'-0"	7ga., 11" X 7.92" X 22'-0"	6'	14'	14'	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 144"	3'-0"	360	1 1/8"	12
8	2 ply 0ga., 18" X 14.5" X 25'-0"	7ga., 12.5" X 9.14" X 24'-0"	6'	14'	17'	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 168"	3'-0"	480	1 1/4"	12
9	2 ply 0ga., 18" X 14.5" X 25'-0"	3ga., 12.5" X 8.58" X 28'-0"	6'	18'	17'	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 168"	3'-0"	480	1 1/4"	12

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
OVERHEAD SIGN SUPPORT	816 No.10.48
APPROVED <i>Robert E. Loman</i> ENGINEER OF TRAFFIC	
DATE 11-2-61 1-18-62 3-30-62 4-18-62 5-19-64	

HAM - 74-11.37

NOTES

FABRICATION - ALL PORTIONS OF THE SIGN SUPPORT, INCLUDING SIGN ATTACHMENTS, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH THE REQUIREMENTS OF A.S.T.M. DESIGNATIONS A-123 AND A-153. THE CONDUIT SHALL BE GALVANIZED IN ACCORDANCE WITH SEC. 625.13 AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS FOR PAYMENT.

* **FOUNDATION** - THE TOP ELEVATION OF FOUNDATIONS SHALL BE VARIED SO AS TO MAINTAIN A MINIMUM CLEARANCE OF 17' BETWEEN THE BOTTOM OF THE SIGN AND THE HIGHWAY CROWN.

* * **ERECTION** - VALUES OF "B" MAY BE EXCEEDED PROVIDED THE PRODUCT OF ACTUAL SIGN AREA TIMES THE DISTANCE FROM C OF POLE TO C OF SIGN DOES NOT EXCEED THE MAX. SIGN AREA TIMES "B".

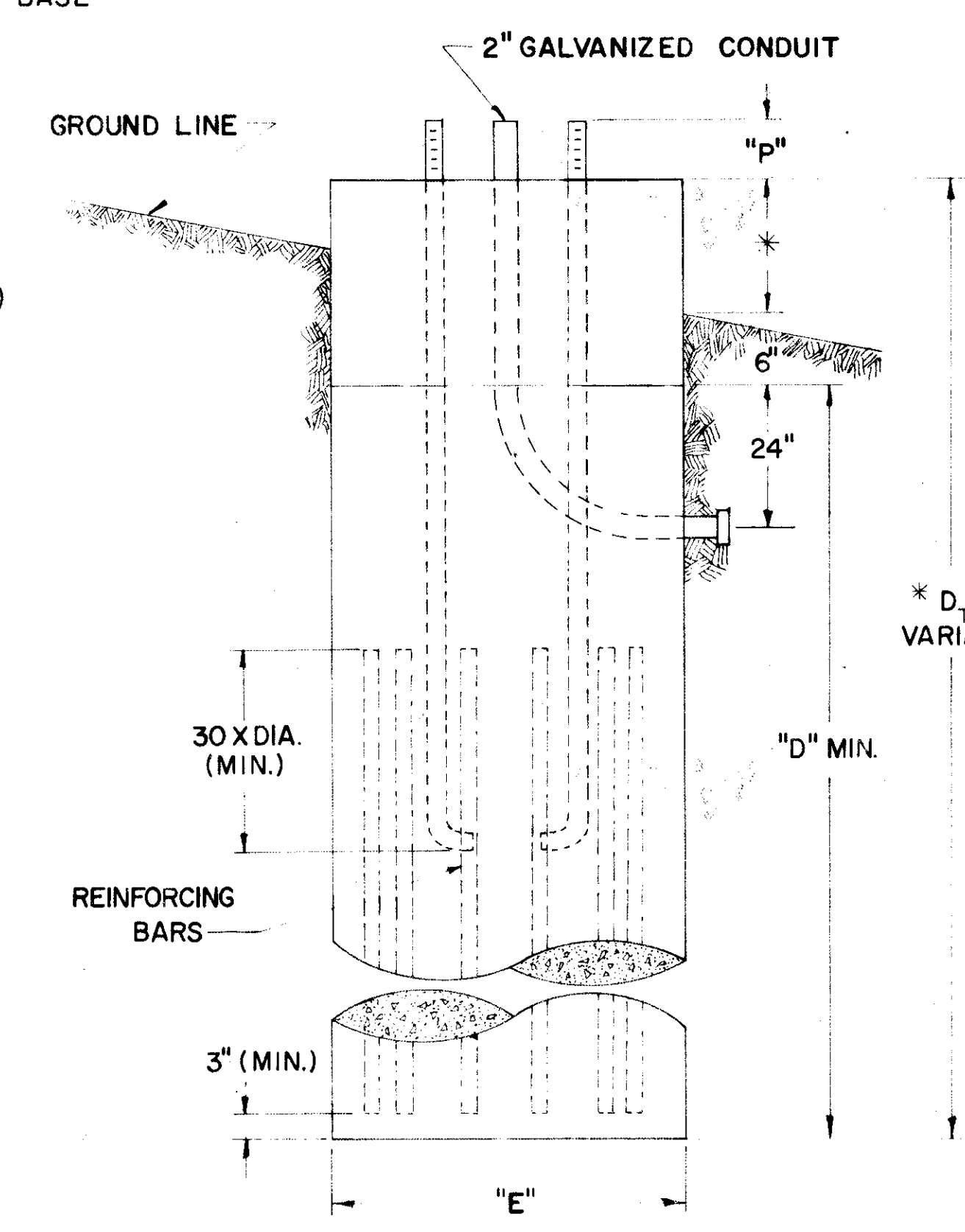
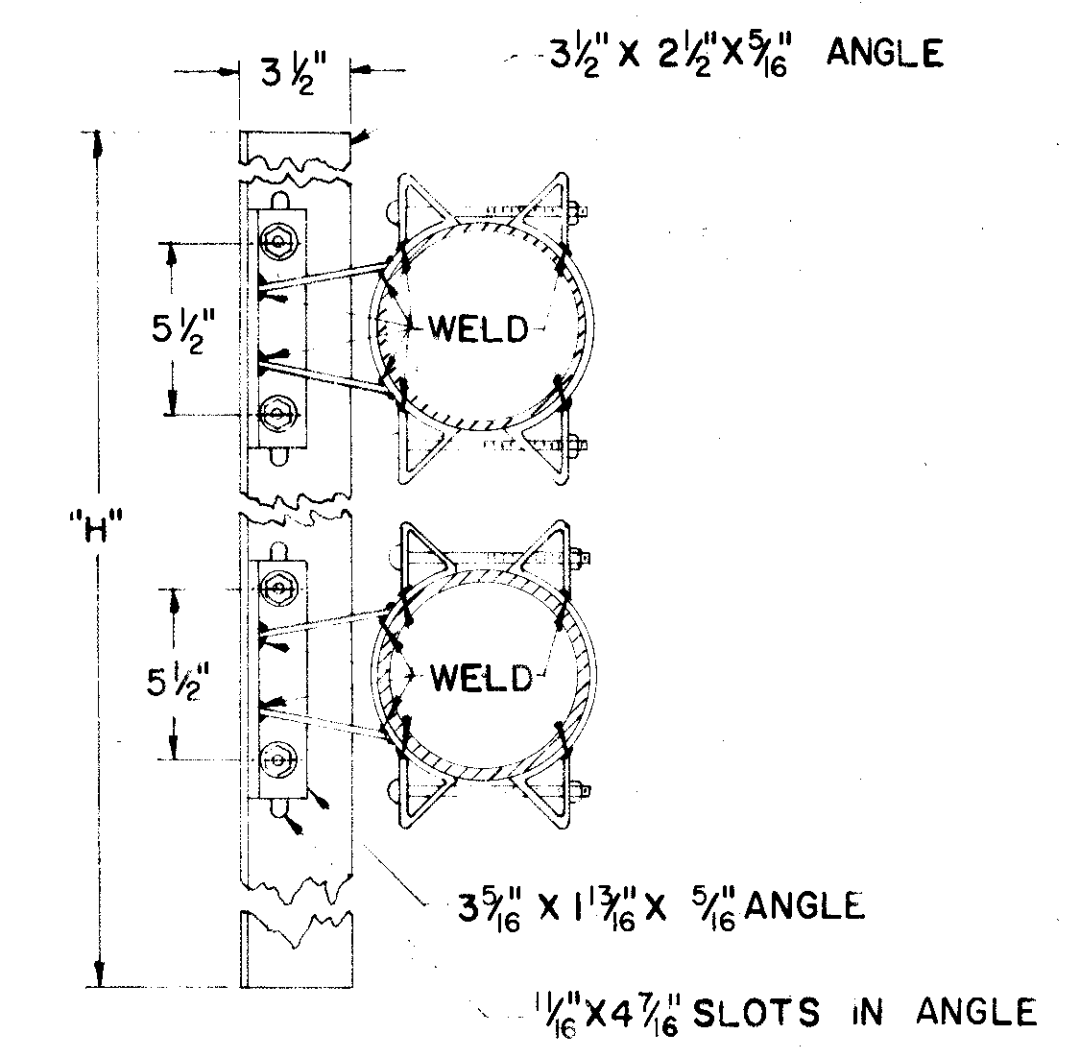
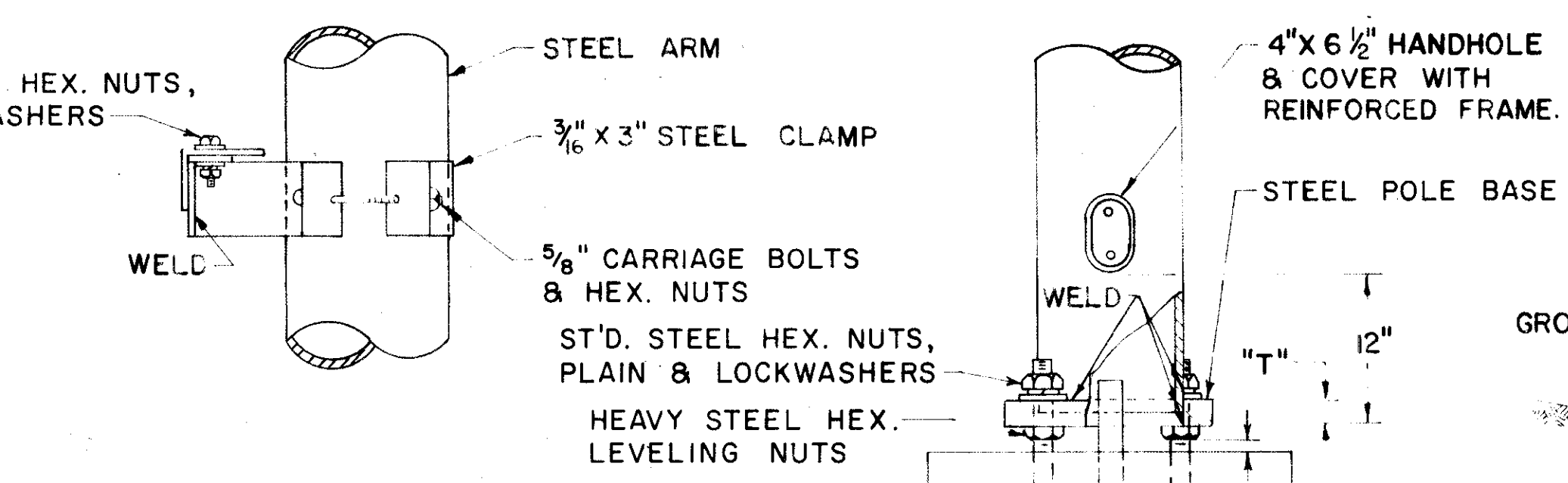
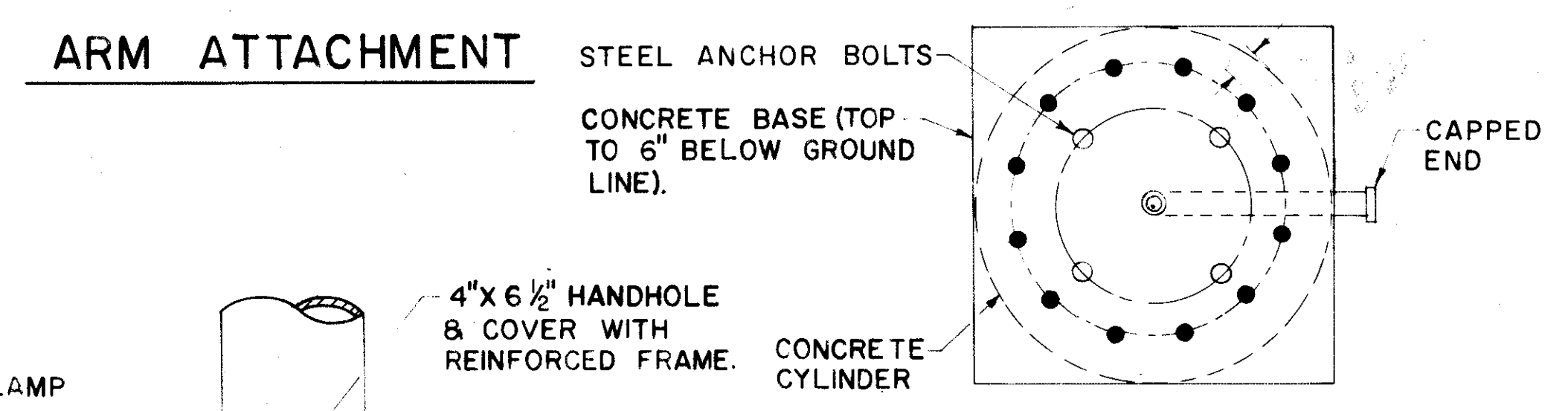
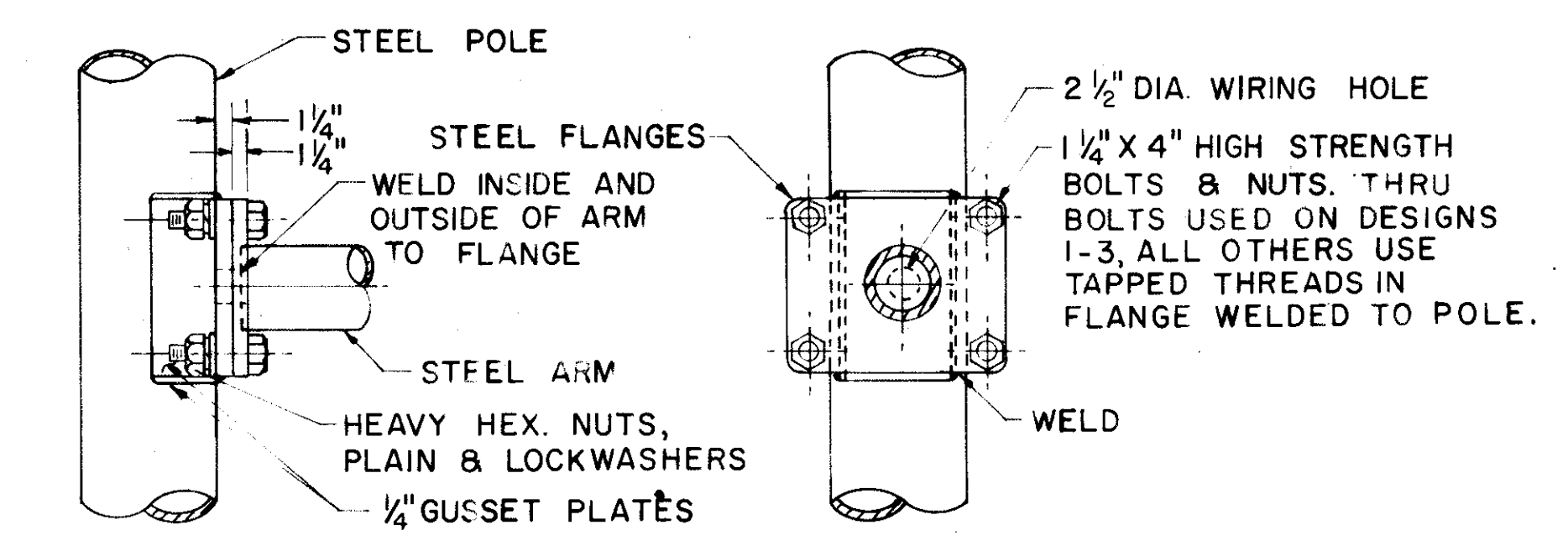
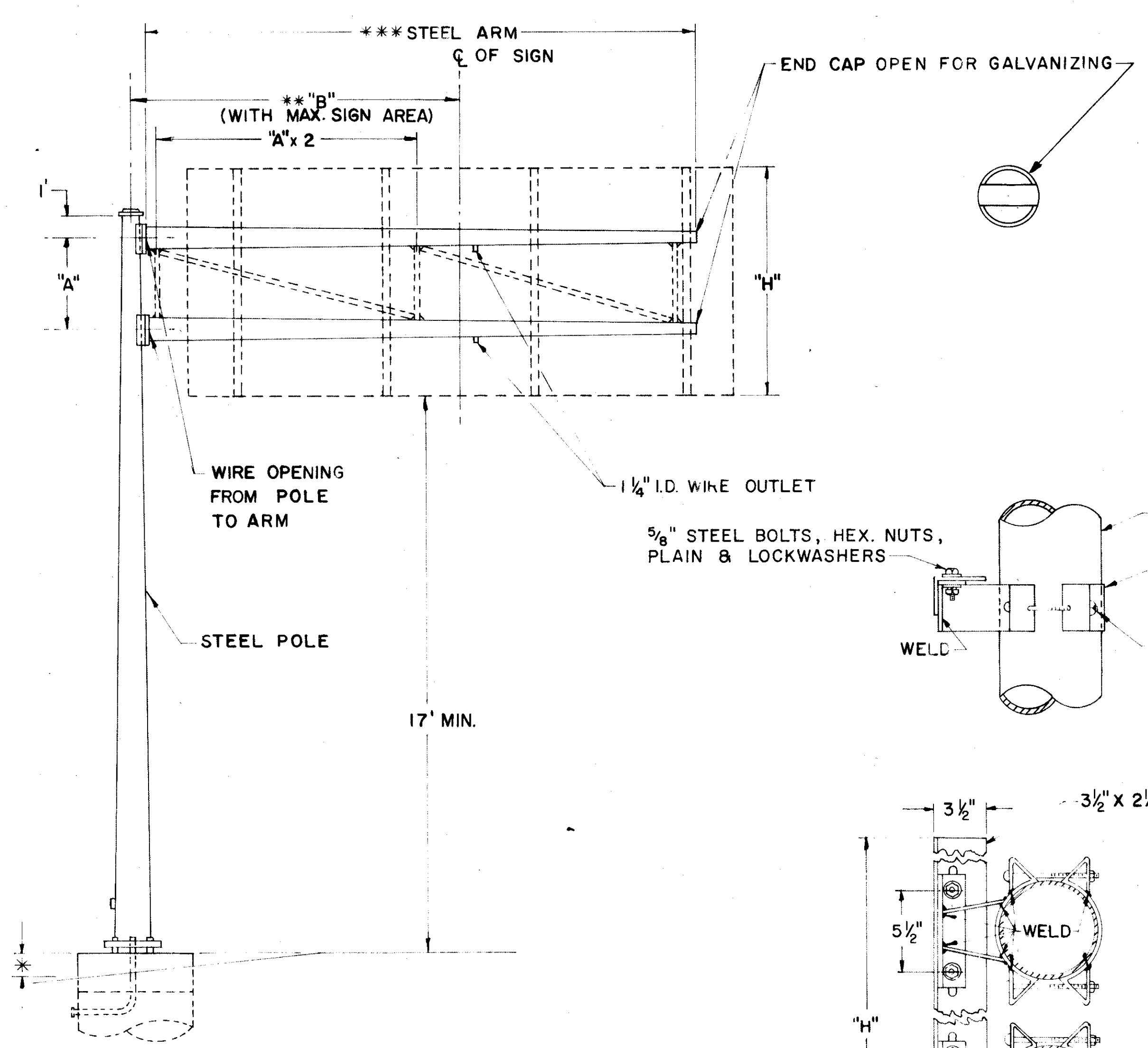
* * * **ARMS** 20' LONG OR LONGER ARE TO BE TRUSS TYPE WITH 3"x3"x3/8" ANGLES WELDED TO GUSSET PLATES.

MATERIAL - STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7 AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

SOILS - THE FOUNDATION DETAILS SHOWN ARE FOR AVERAGE SOIL CONDITIONS (MEDIUM CLAY, CEMENTED SAND AND GRAVEL, SANDY CLAY, OR STIFF CLAY). FOR POOR SOIL CONDITIONS, INCREASE "D" MIN. BY: 50% IN DRY OR WET SAND, 60% IN SILTY CLAY, 100% IN SOFT CLAY, AND FROM 75% TO 150% IN WET SILT, DEPENDING ON QUICKSAND ACTION.

REINFORCING STEEL - REINFORCING STEEL AS SHOWN IN TABLE SHALL BE INSTALLED WHEN "D_T" EXCEEDS THE ANCHOR BOLT LENGTH BY MORE THAN 3 FT. THE COST AND PLACEMENT OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS.

DESIGN
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.



SIGN ATTACHMENT DETAIL

POLE DETAIL

FOUNDATION DETAIL

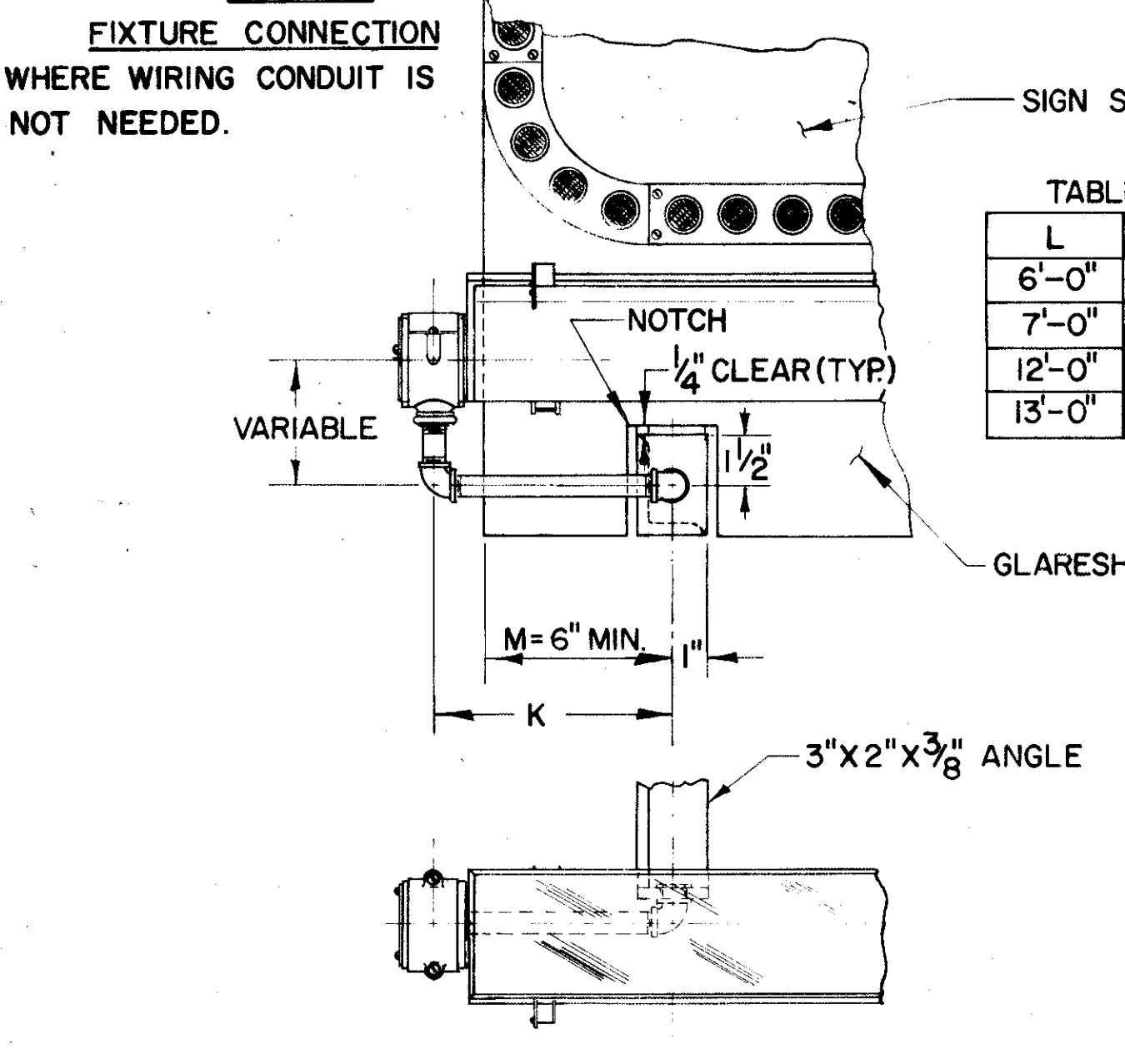
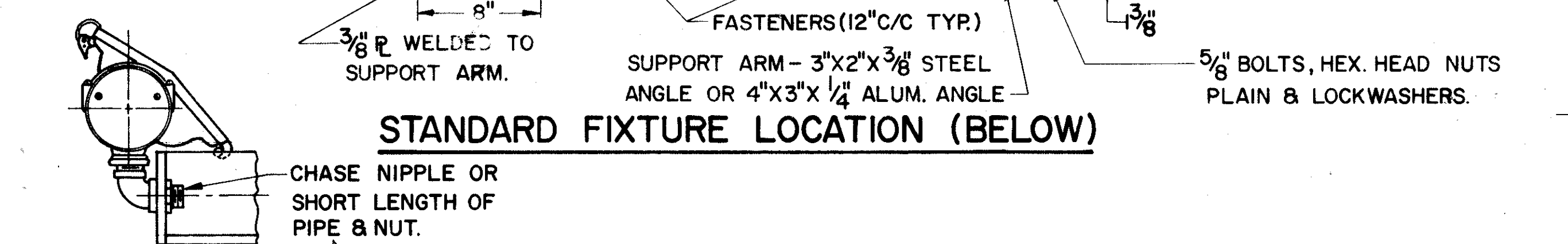
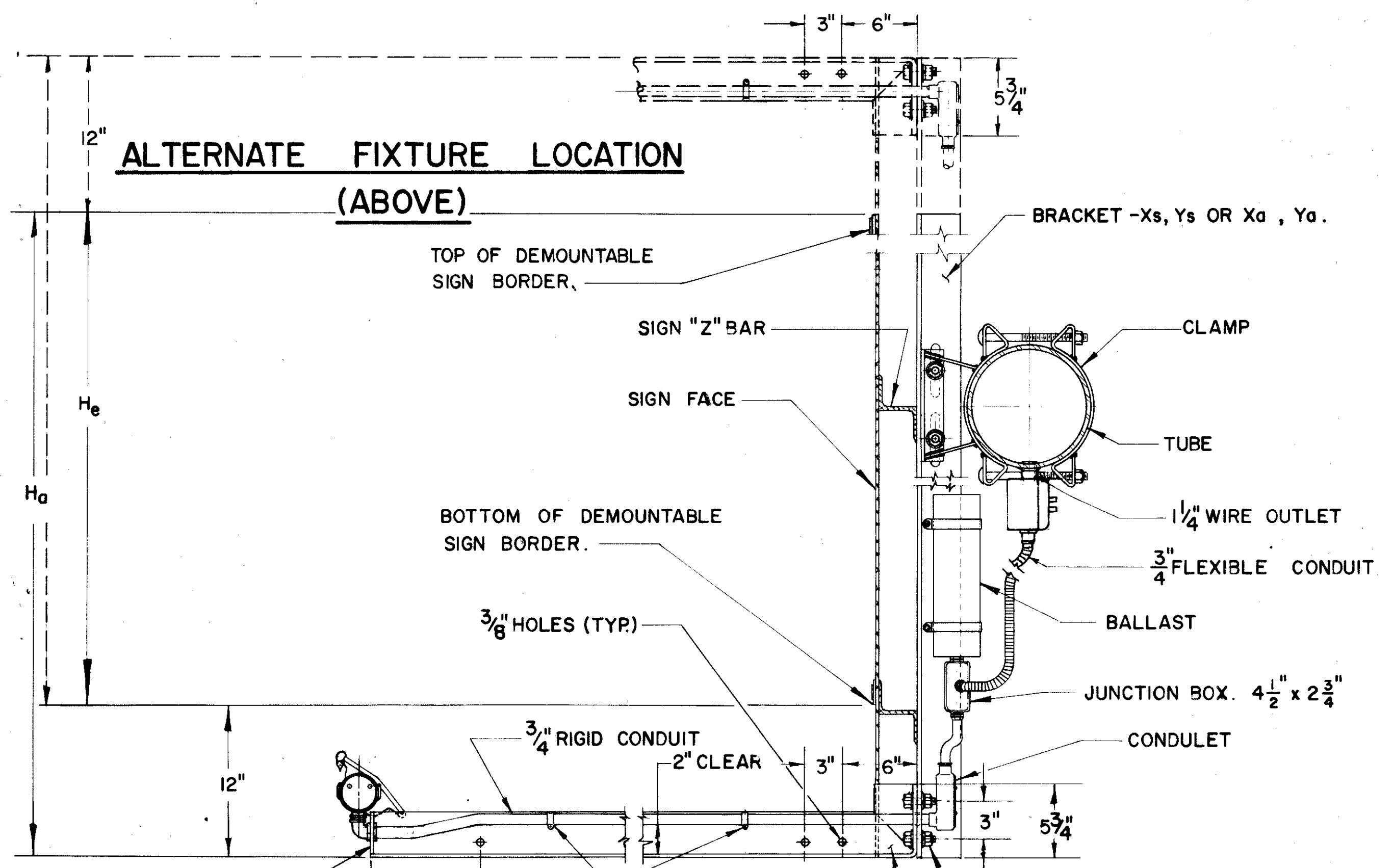
DESIGN NO.	POLE SIZE	*** ARM SIZE	DIM A	DIM **B	DIM "D" MIN.	DIM F	DIM F	DIM P	DIM S	DIM T	BOLT CIRCLE	ANCHOR BOLT SIZE	MAX SIGN AREA	REINF. BARS	
														SIZE	NO.
1	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 6.9" X 4.66" X 16'-0"	4'	12'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
2	3 Ga, 12" X 8.78" X 23'-0"	7 Ga, 8" X 5.2" X 20'-0"	4'	16'	9'	3'-0"	11 5/16"	7 3/4"	17"	2"	16"	1 3/4" X 90"	80	3/4"	12
3	3 Ga, 15" X 11.5" X 25'-0"	7 Ga, 8.3" X 6.06" X 16'-0"	4'	12'	11'	3'-0"	15 1/2"	8 3/8"	23"	2"	22"	2" X 96"	120	1"	12
4	3 Ga, 16" X 12.5" X 25'-0"	3 Ga, 9.2" X 6.40" X 20'-0"	4'	16'	11'	3'-0"	16 5/8"	8 3/8"	24 1/2"	2"	23 1/2"	2" X 96"	120	1"	12
5	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 11" X 7.92" X 22'-0"	6'	14'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
6	0 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 8.86" X 26'-0"	6'	18'	13'	3'-0"	18"	9 3/8"	26 1/2"	2 1/2"	25 1/2"	2 1/4" X 120"	180	1 1/8"	12
7	2 PLY 7 Ga, 18" X 14.36" X 26'-0"	7 Ga, 12.5" X 9.14" X 24'-0"	6'	14'	15'	3'-0"	18"	9 3/4"	26 1/2"	2 1/2"	25 1/2"	2 1/2" X 144"	240	1 1/4"	12
8	2 PLY 1/4", 18" X 14.36" X 26'-0"	3 Ga, 12.5" X 8.58" X 28'-0"	6'	18'	15'	3'-0"	18"	11 1/4"	26 1/2"	3"	25 1/2"	3" X 144"	240	1 1/4"	12

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

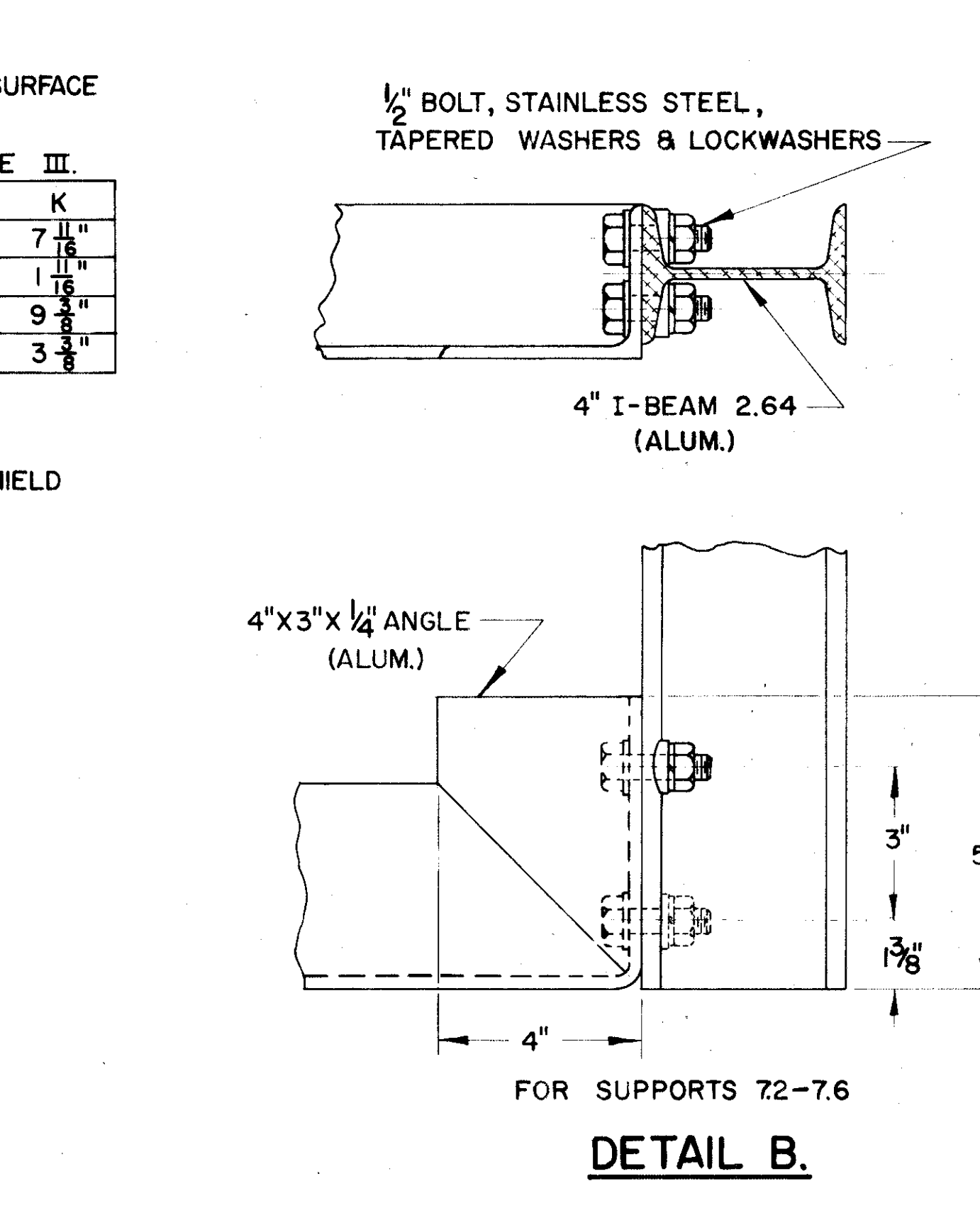
OVERHEAD SIGN SUPPORT **816 No. 12.24**

APPROVED *Robert E. Loman*
ENGINEER OF TRAFFIC

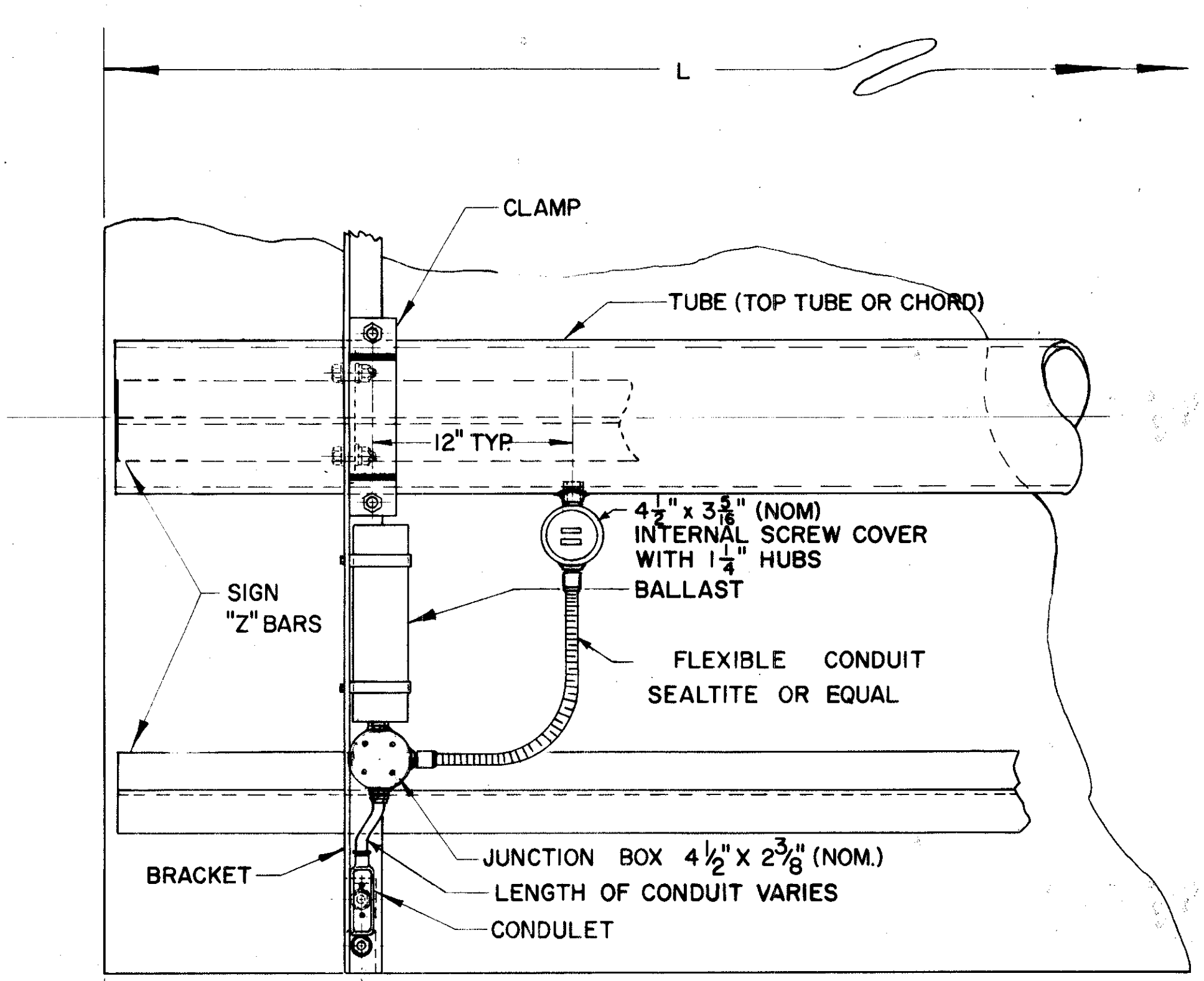
DATE 8-18-61
4-11-62



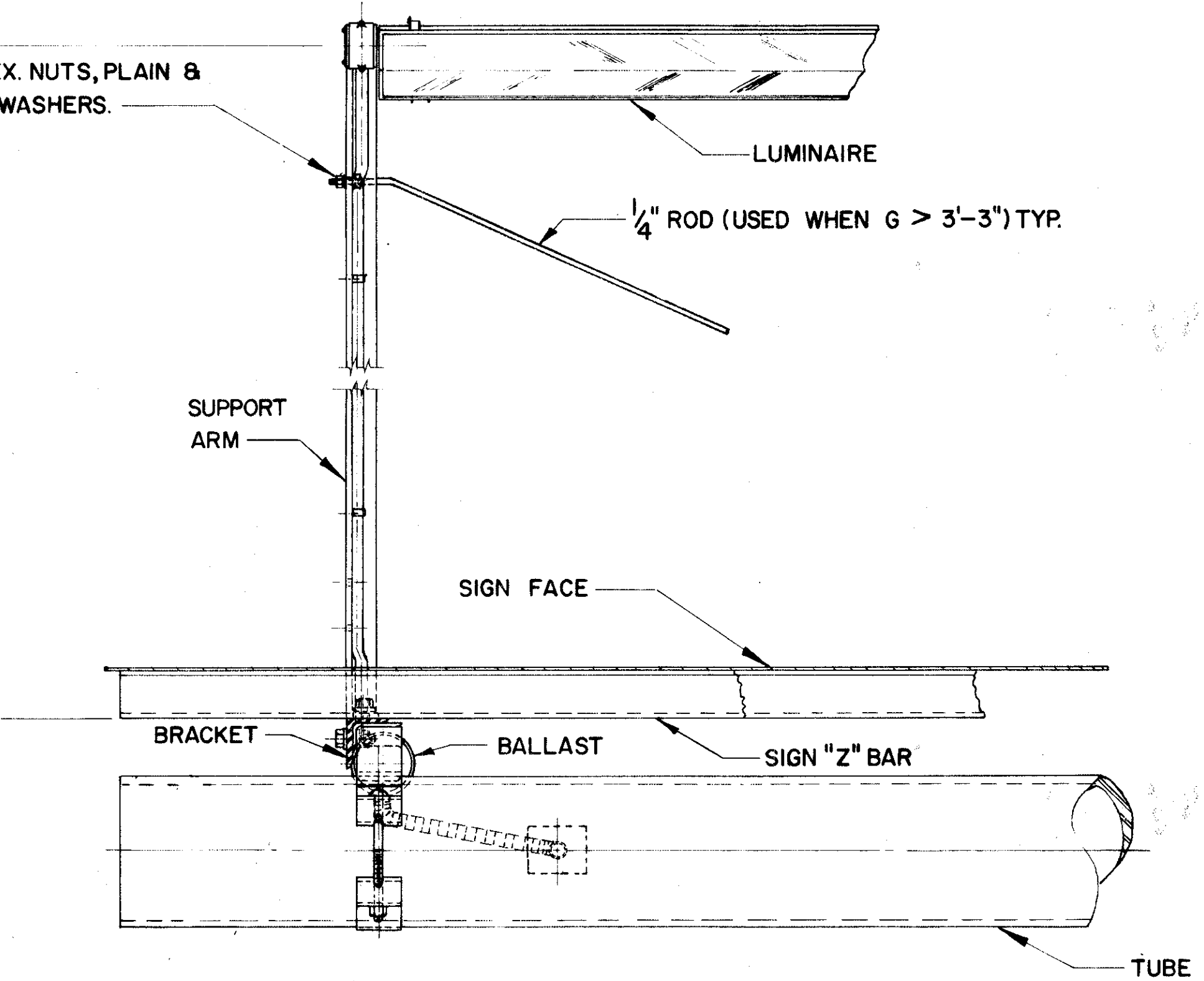
DETAIL A.



DETAIL B.



REAR VIEW



TOP VIEW

FABRICATION — ALL STRUCTURAL COMPONENTS SHOWN ON THIS SHEET SHALL CONFORM TO SUPPLEMENT SPECIFICATIONS 816.
MATERIALS — THE MATERIALS USED IN THE COMPONENTS SHOWN ON THIS SHEET SHALL BE IN CONFORMANCE WITH THE MATERIALS USED IN THE SIGN SUPPORT.

TABLE I.

"L" SIGN LENGTH	FIXTURES OF NUMBER	"M" EDGE DISTANCE				NO BALLAST
		A	B	LT.	RT.	
6'-0"	1	6"	6"	6"	6"	1
8'-0"	1	10 3/8"	10 1/4"	16 3/8"	16 1/4"	1
10'-0"	1	10 3/8"	10 1/4"	16 3/8"	16 1/4"	1
12'-0"	2	6"	6"	6"	6"	1
14'-0"	2	8 5/8"	8 5/8"	14 3/8"	14 3/8"	1
16'-0"	1	8 5/8"	8 5/8"	14 3/8"	14 3/8"	1
18'-0"	2	8 5/8"	8 5/8"	14 3/8"	14 3/8"	1
20'-0"	3	7"	6 7/8"	13"	12 7/8"	2
22'-0"	2	7"	6 7/8"	13"	12 7/8"	2
24'-0"	1	7"	6 7/8"	13"	12 7/8"	2
26'-0"	3	7"	6 7/8"	13"	12 7/8"	2

Sn = Nominal Fixture Length, 72" & 96" respectively.
Sa = Actual Fixture Length, for mounting purposes, 75 3/8" and 99 3/8" respectively. (Slight variation for different manufacturers.)
M = Distance from edge of sign to center of notch, min. 6". When the length of the sign minus 1'-0" is less than the sum of the actual fixture lengths, an offset "K" is used. For additional details see detail A and table III.

TABLE II.

MAX. BRACKET SPACING FOR EXTERNALLY ILLUMINATED SIGNS

ACTUAL SIGN HEIGHT "Ha"	SUPPORT TYPES		
	9,12, 11,08, 13,2, 7,2	9,24,10,48,12,24,14,5,15,8, 7,2 to 7,6	
	SINGLE TUBE	DOUBLE TUBE	
	DOUBLE TUBE	C/C 36"-42"	C/C 48"-54" C/C 60"-72"
	MAXIMUM BRACKET SPACING		
to 5'-0"	6'-4" with X 8'-4" with Y	8'-4" with X	8'-4" with X 8'-4" with Y
5'-6" to 8'-0"	6'-4" with Y	4'-2" with X 6'-4" with Y	6'-4" with X 6'-4" with Y
8'-6" to 10'-0"	3'-2" with X 4'-2" with Y	6'-4" with Y	6'-4" with Y 8'-4" with Y
10'-6" to 12'-0"		4'-2" with Y	6'-4" with Y 6'-4" with Y
12'-6" to 14'-0"		3'-2" with Y	3'-2" with Y 4'-2" with Y

Ha = ACTUAL SIGN HEIGHT
He = EFFECTIVE SIGN HEIGHT
BRACKET SIZE: Xs = 3 1/2" x 2 1/2" x 5/16" - L @ 6.1 LB. STEEL } 9,12, 10,48, 11,08,
Ys = 4" x 3 1/8" x 1/4" - Z @ 8.2 LB. STEEL } 12,24, 14,5 & 15,8
Xa = 3" x 2 1/16" x 1/4" - Z @ 2.33 LB. ALUM. } 7,2 Thru 7,6
Ya = 4" x 2 1/32" x 3/16" - I @ 2.64 LB. ALUM.

WHEN MAX. ALLOWABLE SPACING IS LESS THAN ACTUAL FIXTURE LENGTHS, Sa, ADDITIONAL STANDARD BRACKETS MUST BE FURNISHED, EQUAL IN HEIGHT TO "Ha".

SUPPORTS 7.2 THROUGH 7.6 SHALL HAVE AN ALUMINUM FIXTURE ARM, 4" x 3" x 1/4" ANGLE. SEE DETAIL B. BOLTS AND ACCESSORIES SHALL BE STAINLESS STEEL.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

STRUCTURAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS

APPROVED *Jack C. Falter*
ENGINEER OF TRAFFIC

DATE
10-16-63
5-6-64
10-29-64

SIGN LIGHTING NOTES

SIGN ILLUMINATION

SIGN ILLUMINATION SHALL BE BY ATTACHED FLUORESCENT FIXTURES AS SHOWN ON ILLUMINATED SIGN DETAIL SHEETS.

LAMPS

LAMPS SHALL BE TYPE F72 OR F96-T12/CW/HO AS MANUFACTURED BY WESTINGHOUSE, GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS TO A MAXIMUM HEIGHT OF 6'-6". LAMP TYPE SHALL BE F72 OR F96-T12/CW/SHO AS MANUFACTURED BY WESTINGHOUSE, F72 OR F96-PG17/CW AS MANUFACTURED BY GENERAL ELECTRIC OR APPROVED EQUAL FOR SIGNS THAT ARE 7'-0" OR GREATER IN HEIGHT.

LAMP FIXTURES

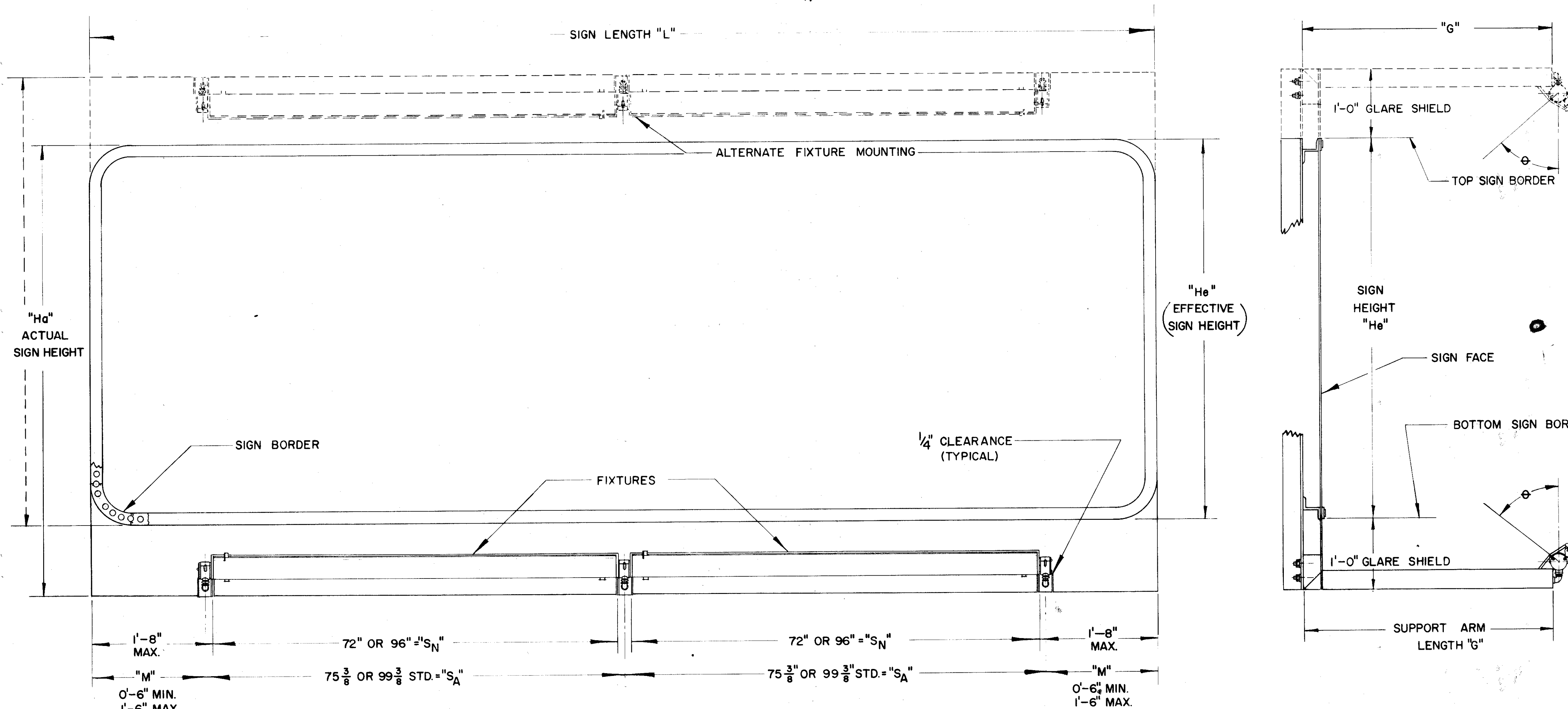
LIGHTING FIXTURES SHALL BE CONSTRUCTED OF CORROSION RESISTANT MATERIALS OR WITH HIGH QUALITY CORROSION RESISTANT FINISH. ALL FIXTURES SHALL BE SPECIFICALLY DESIGNED FOR OUTDOOR SIGN LIGHTING SERVICE. MAJOR COMPONENTS SHALL INCLUDE WEATHERPROOF CAST ALUMINUM MOUNTING HUBS DESIGNED TO SECURELY LOCK THE FIXTURES AT ANY ANGLE THROUGH 360 DEGREES. INDICATORS IN 10 DEGREE INCREMENTS SHALL BE STAMPED OR CAST INTO THE HUB TO FACILITATE PROPER AIMING OF THE FIXTURE. FINAL ADJUSTMENT OF FIXTURE SHALL BE DONE AT NIGHT UNDER THE PROJECT ENGINEER'S DIRECTION.

THE BODY DESIGN OF THE FIXTURE SHALL PROVIDE AN ASYMMETRIC SPECULAR ALZAK REFLECTOR TO GIVE A HIGH LEVEL OF UNIFORM ILLUMINATION AND SHALL PROVIDE A WIREWAY FROM END TO END. WHEN ADJACENT FIXTURES ARE WIRED TOGETHER THROUGH THE WIREWAY, WIRE BETWEEN FIXTURES SHALL BE ENTIRELY ENCLOSED.

EXTERIOR FINISH OF THE FIXTURE BODY SHALL BE INTERSTATE GREEN COLOR, HEAT RESISTANT BAKED ENAMEL AS #8950 UNIVERSAL PAINT AND VARNISH INC., OR APPROVED EQUAL. REFLECTOR, LAMP AND SOCKETS SHALL BE PROTECTED BY A HINGED DOOR OF CLEAR ACRYLIC PLASTIC WITH ALUMINUM OR STAINLESS STEEL FRAME AND NEOPRENE GASKETING.

BALLASTS

BALLASTS FOR FIXTURES SHALL BE WEATHER-PROOF OUTDOOR TYPE FOR A 120 VOLT 60 CYCLE SYSTEM AND SHALL PROVIDE LAMP STARTING AT AN AMBIENT TEMPERATURE OF -20°F. BALLASTS SHALL BE MOUNTED ON SIGN BRACKET ONLY. WIRING SHALL BE ACCOMPLISHED IN SUCH A MANNER THAT THE SIGN MAY BE REMOVED WITHOUT DISTURBING THE ELECTRICAL WIRING.



EFFECTIVE SIGN HEIGHT "H"	SUPPORT ARM LENGTH "G"	APPROX. AIMING ANGLE φ
3'-0" to 5'-0"	2'-9"	25°
5'-0" to 6'-6"	3'-3"	25°
7'-0" to 10'-0"	4'-3"	17°
10'-6" to 13'-0"	5'-9"	23°

"L" SIGN LENGTH	NO. OF FIXTURES		H _e = 3'-0" to 6'-6" LAMP = T12/cw/ho		H _e = 7'-0" to 13'-0" LAMP = T12/cw/sho	
	72	96	BALLAST NO. TYPE	WATTAGE PER SIGN	BALLAST NO. TYPE	WATTAGE PER SIGN
6'-0" to 7'-0"	1	1	A	190	C	250
8'-0" to 9'-0"	1	1	A	190	C	250
10'-0" to 11'-0"	1	1	A	190	C	250
12'-0" to 13'-0"	2	1	B	250	D	425
14'-0" to 15'-0"	2	1	B	250	D	425
16'-0" to 17'-0"	1	1	B	250	D	425
18'-0" to 19'-0"	2	1	B	250	D	425
20'-0" to 21'-0"	3	2	A & B	440	C & D	675
22'-0" to 23'-0"	2	2	A & B	440	C & D	675
24'-0" to 25'-0"	1	2	A & B	440	C & D	675
26'-0" to 27'-0"	3	2	A & B	440	C & D	675

BALLASTS

TYPE	MANUFACTURERS		WATTAGE
	G.E.	JEFFERSON	
A	GG 3583	257-151	190
B	GG 3535	257-171	250
C	GG 3585	257-231	250
D	GG 3588	257-181	425

BALLASTS SHALL BE GENERAL ELECTRIC, JEFFERSON AS SPECIFIED ABOVE OR EQUAL.

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
ELECTRICAL DETAILS FOR EXTERNALLY ILLUMINATED SIGNS	EI-2
APPROVED <i>[Signature]</i> ENGINEER OF TRAFFIC	DATE 10-31-63 5-6-64 10-29-64

NOTES

GENERAL

DETAILS OF THIS SHEET SHALL APPLY TO EACH OVERHEAD SIGN STRUCTURE TO SUPPORT EXTERNALLY ILLUMINATED SIGNS.

SERVICE

ELECTRIC SERVICE SHALL ENTER THROUGH A 2" GALVANIZED RIGID STEEL CONDUIT INSTALLED IN STRUCTURE FOUNDATION AS PER DETAIL. SIGN SERVICE OR CIRCUITRY SHALL BE CONTROLLED AS REQUIRED BY THE SYSTEM DESIGN AT THE PRIMARY SOURCE.

SERVICE CONDUCTORS SHALL BE THE SIZE AND TYPE AS SPECIFIED.

COMBINATION SWITCH AND TRANSFORMER

(TYPE Y OR Z ENCLOSURE REQUIRED AS PER SCHEDULE ON THIS SHEET)

THIS COMBINATION SHALL BE A 30 OR 60 AMPERE 600 VOLT SWITCH WITH A .25 TO 3.0 KVA TRANSFORMER. THE COMBINATION AND ENCLOSURE SHALL BE AS SQUARE D CLASS 9421, COLUMBUS ELECTRIC WORKS CLASS 101, PANALS INCORPORATED-CLASS 9400, OR APPROVED EQUAL.

TRANSFORMER

THE TRANSFORMER SHALL BE DRY TYPE SINGLE FACE 240/480 VOLT PRIMARY 120/240 VOLT SECONDARY, THE TYPE AND CAPACITY AS SPECIFIED IN DETAILED SCHEDULE ON THIS SHEET.

ENCLOSURE

THE ENCLOSURE SHALL BE NEMA #4 WATER TIGHT .063 GAGE STAINLESS STEEL ASTA 302-303. A DISCONNECT HANDLE SHALL BE FLANGE MOUNTED AND CAPABLE OF BEING LOCKED IN EITHER POSITION. THE ENCLOSURE SHALL BE EQUIPPED WITH A DOOR LOCKING MECHANISM WITH A DEFEATER THAT NECESSITATES TWO HANDS TO OPERATE MECHANISM WITH THE SWITCH IN OFF POSITION. SPACE FOR A 2" INSULATED CHASE NIPPLE SHALL BE PROVIDED APPROXIMATELY 2 1/4" ABOVE THE CENTER LINE OF THE LOWER MOUNTING SLOT. THIS ENCLOSURE AND STRUCTURE SHALL BE FIELD DRILLED AND TAPPED FOR THE REQUIRED NIPPLE AS SHOWN ON THE DETAIL ON THIS SHEET.

THIS ENCLOSURE SHALL BE FLANGE MOUNTED ON BRACKETS WITH 5/16"-18x3/4" HEX HEAD CADMIUM PLATED MACHINE BOLTS. ENCLOSURES SHALL BE TYPE Y OR Z AS SPECIFIED AND DIMENSIONED ON THIS SHEET.

ENCLOSURE MOUNTING BRACKET

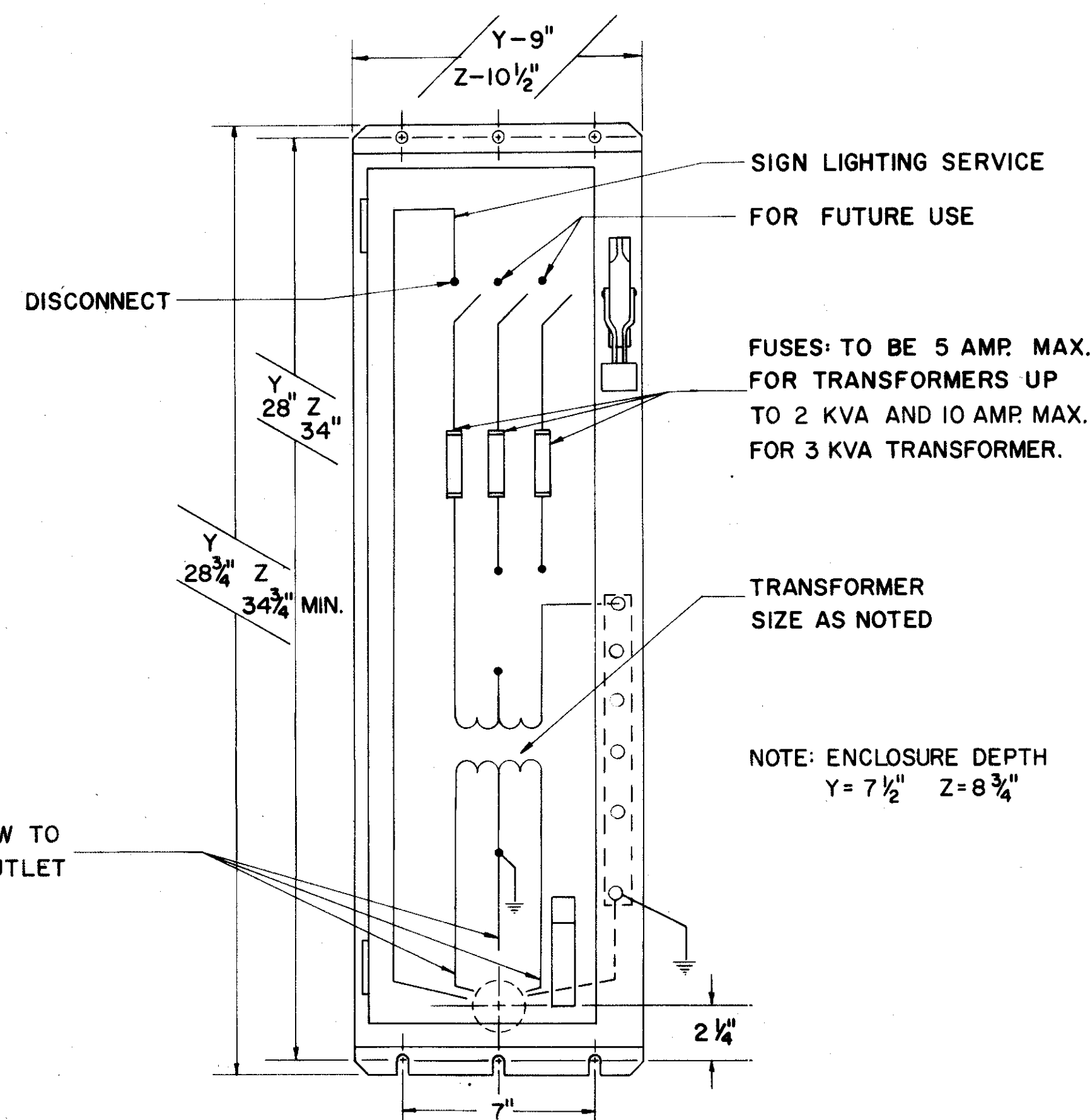
THE ENCLOSURE MOUNTING BRACKET SHALL BE FABRICATED THEN GALVANIZED BEFORE ASSEMBLY. THE BRACKET SHALL BE FIELD MOUNTED WITH 5/16" HEX HEAD SELF TAPPING CADMIUM PLATED SCREWS. THE SIGN SUPPORT SHALL BE FIELD DRILLED, AS PER DETAIL.

WIRE AND CABLE

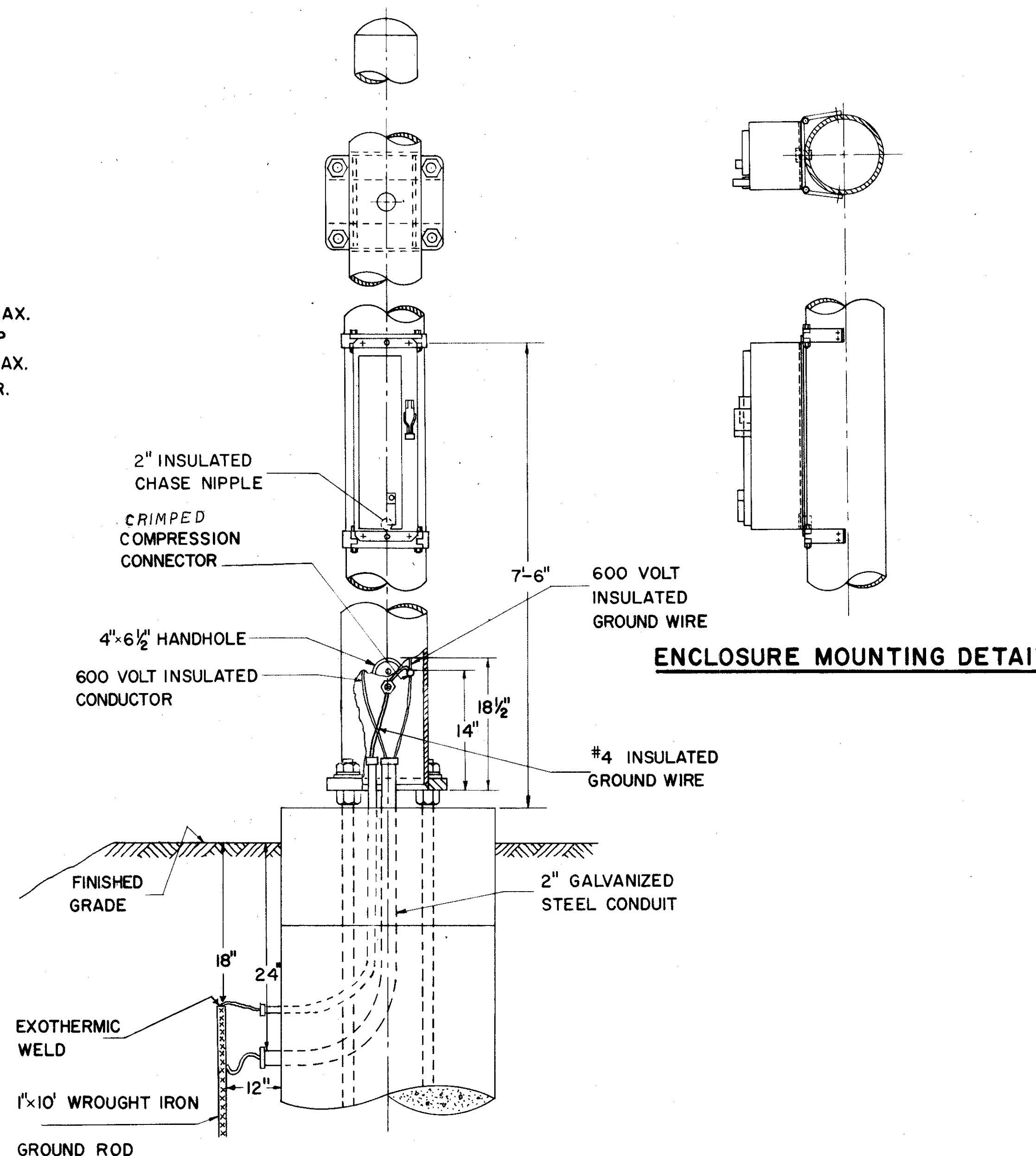
ALL WIRE AND CABLE UP TO AND INCLUDING #4 SHALL COMPLY WITH FAA TYPE A SPECIFICATIONS. #2 OR LARGER WIRE OR CABLE SHALL BE G. E. 58006 OR ANACONDA AP-10711, OR EQUAL. ALL WIRE AND CABLE SHALL BE 600 VOLT.

GROUNDING

EACH SIGN SUPPORT OR STRUCTURE SHALL BE GROUNDED WITH A #4 RUBBER INSULATION AND NEOPRENE JACKETED CONDUCTOR. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO THE SWITCH THEN TO THE COMPRESSION CONNECTOR IN THE SIGN SUPPORT THEN TO A 1"x10" SOLID WROUGHT IRON GROUND ROD. GROUND CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO GROUND ROD AND THEN TAPED WITH PLASTIC ELECTRICAL TAPE AT EACH EXPOSED PORTION OF CONDUCTOR. THE WELDED CONNECTION AND TAPED PORTION SHALL BE PAINTED 2 COATS OF INSULATING ENAMEL.

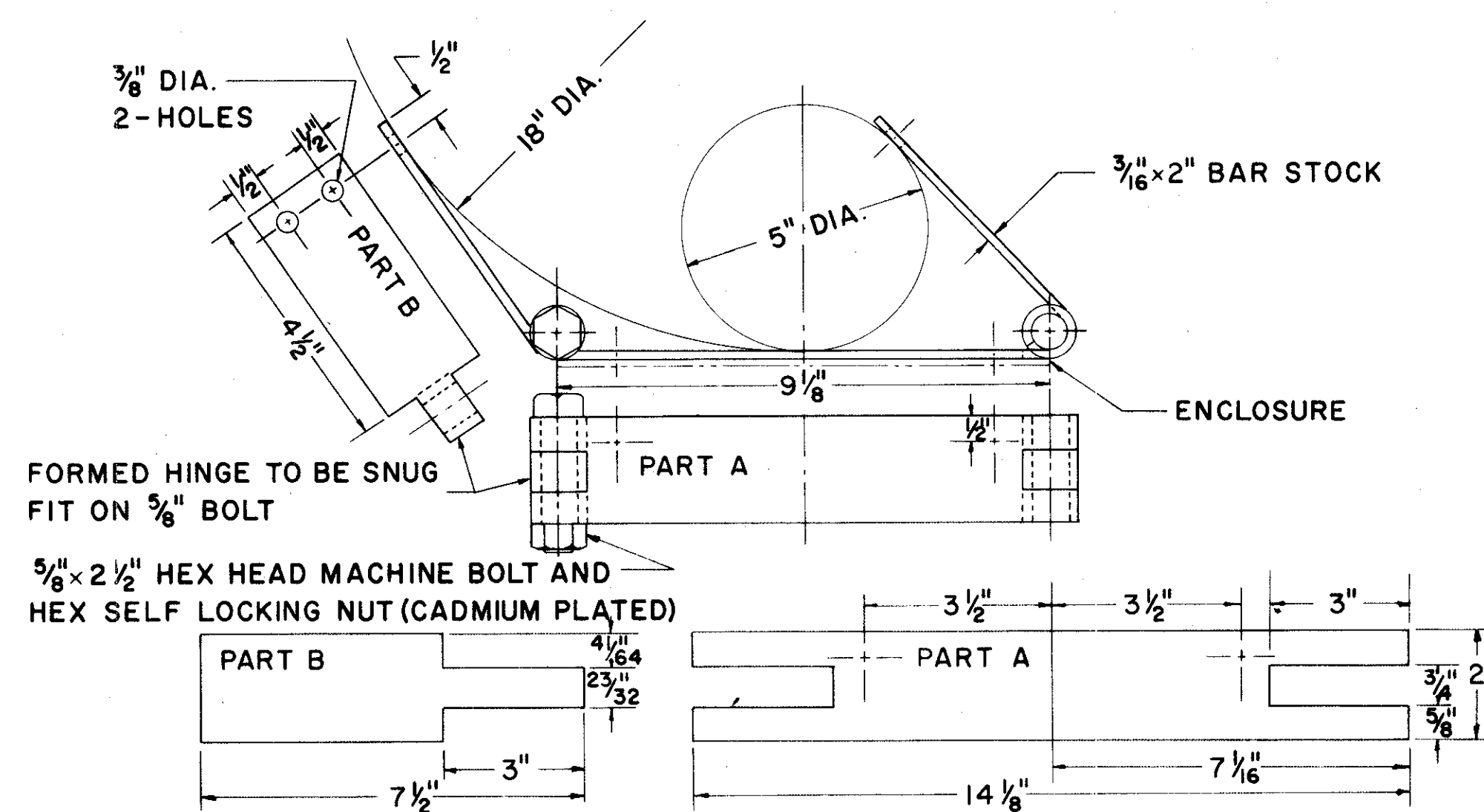


TYPICAL ENCLOSURE DETAIL
480 VOLT SIGN LIGHTING SERVICE

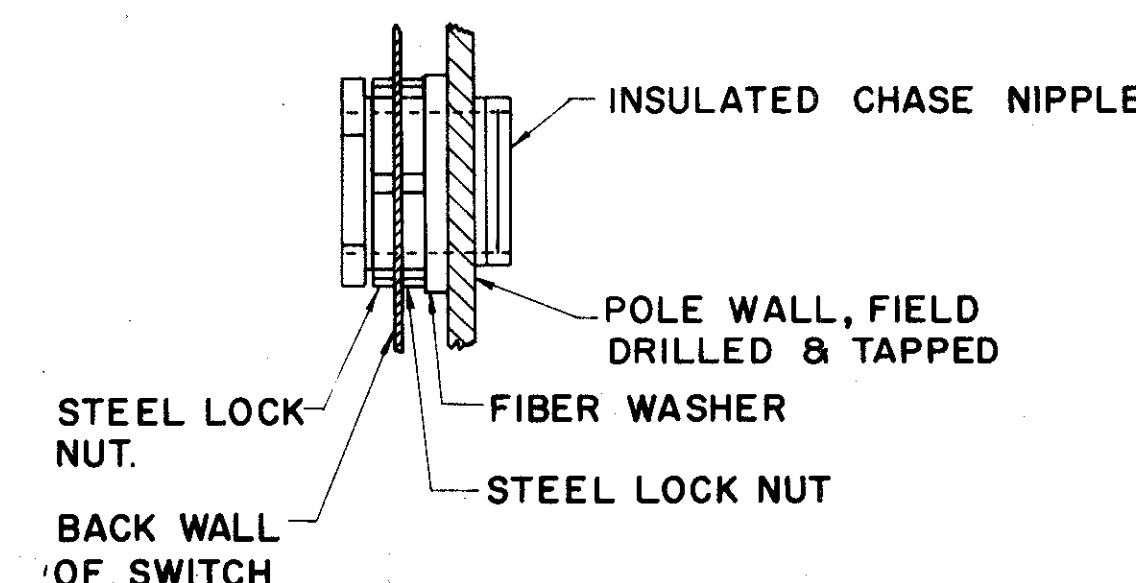


ENCLOSURE MOUNTING DETAIL

SIGN SUPPORT DETAIL FOR ILLUMINATED SIGNS



ENCLOSURE MOUNTING BRACKET



INSULATED CHASE NIPPLE ASSEMBLY DETAIL
AS MANUFACTURED BY THOMAS BETTS, APPLETON, STEEL CITY, OR EQUAL.

TRANSFORMERS

TYPE	MANUFACTURERS G.E.	JEFFERSON	OUTPUT K.V.A.	SWITCH TRANSFORMER ENCLOSURE
I	9T51Y7	244-241	.25	Y
II	9T51Y8	244-251	.50	Y
III	9T51Y9	244-261	.75	Y
IV	9T51Y10	244-101-100	1.00	Z
V	9T51Y11	244-111-100	1.50	Z
VI	9T51Y12	244-121-100	2.00	Z
VII	9T51Y13	244-131	3.00	Z

BUREAU OF TRAFFIC
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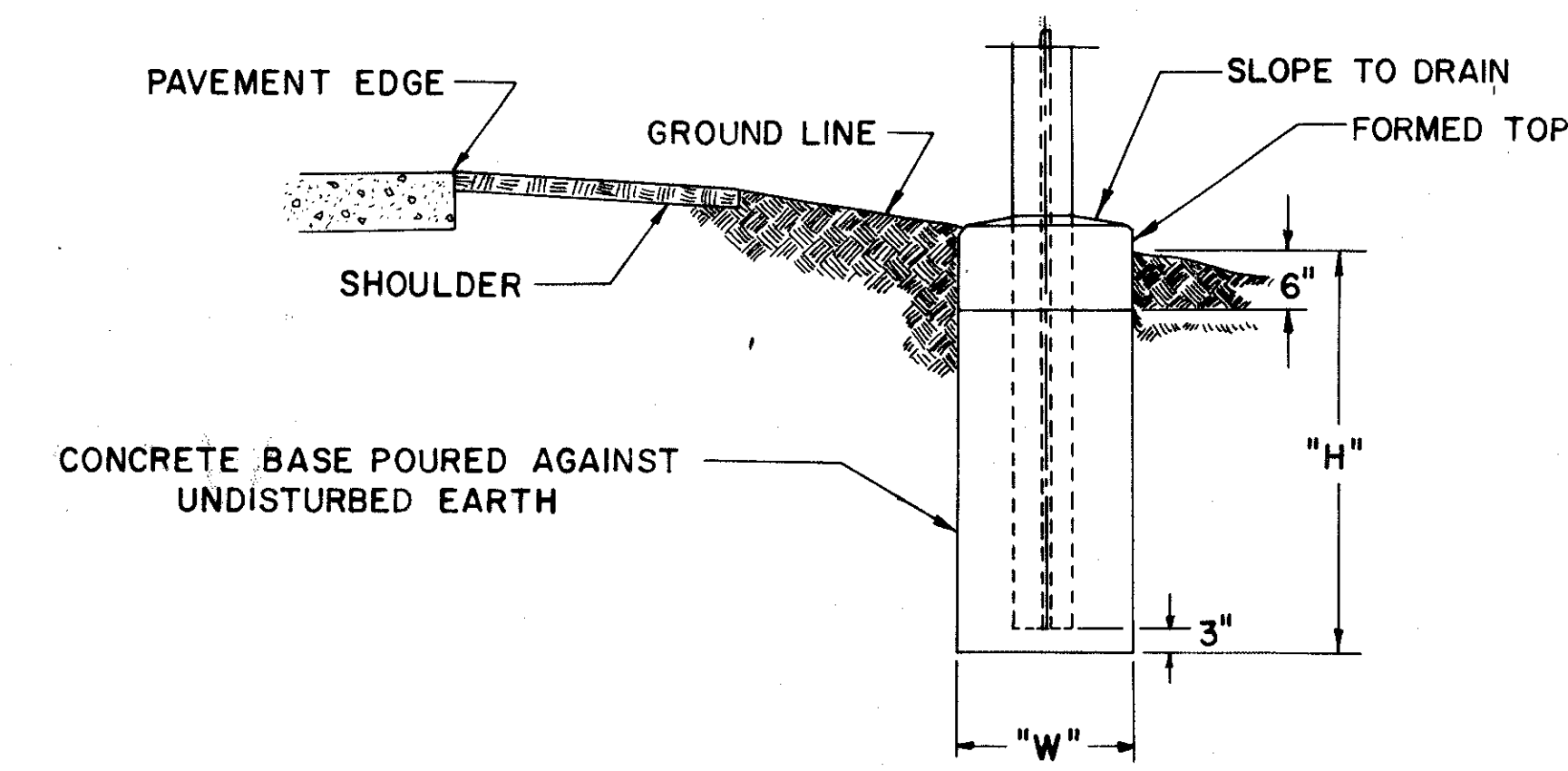
ELECTRICAL SIGN
SERVICE DETAILS
480 VOLT SYSTEM

ES-3A

DATE
6-18-64

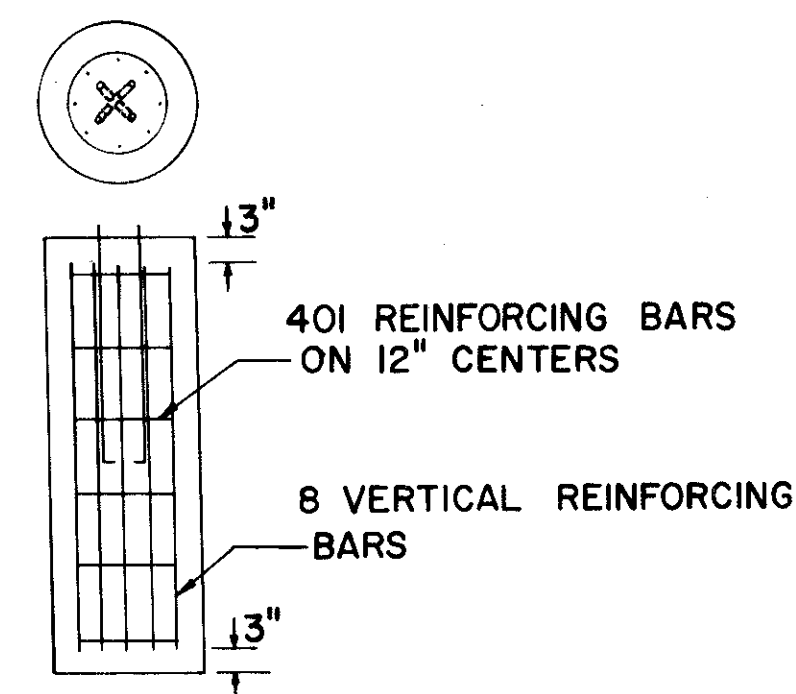
APPROVED _____
ENGINEER OF TRAFFIC

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
10B11.5	2'-6"	5.25'	1.9
10B17	2'-6"	6.0'	2.2
12B22	2'-6"	6.75'	2.5
14WF27	2'-6"	8.0'	2.9
14WF30	2'-6"	8.25'	3.0
14WF34	2'-6"	9.0'	3.3
16WF36	2'-6"	9.75'	3.5
16WF40	2'-6"	10.0'	3.6
16WF45	2'-6"	10.5'	3.8
18WF50	2'-6"	11.5'	4.2

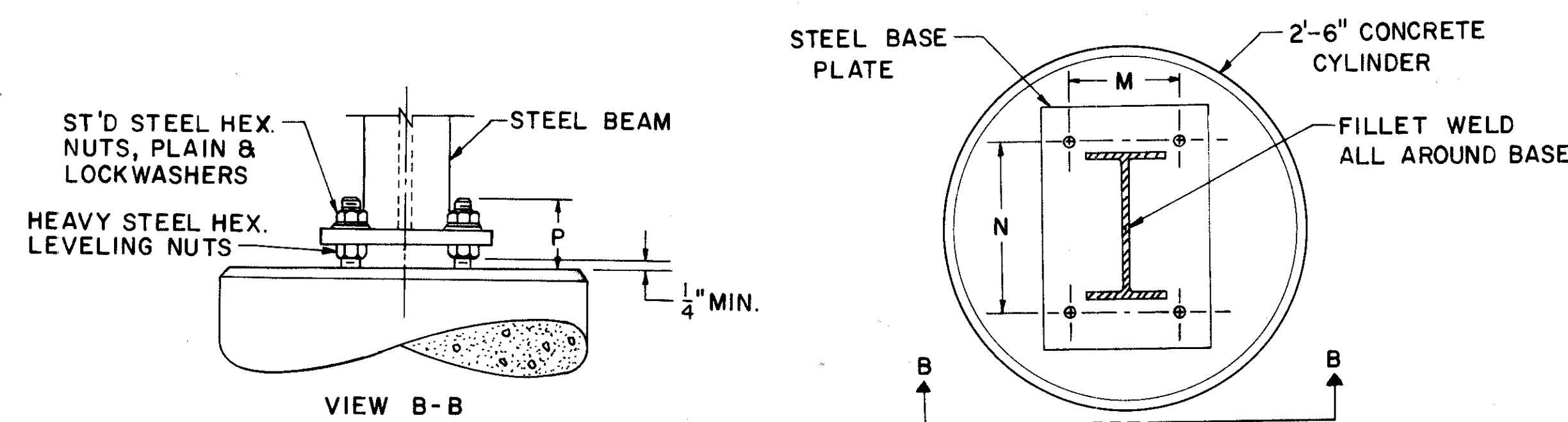


FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS

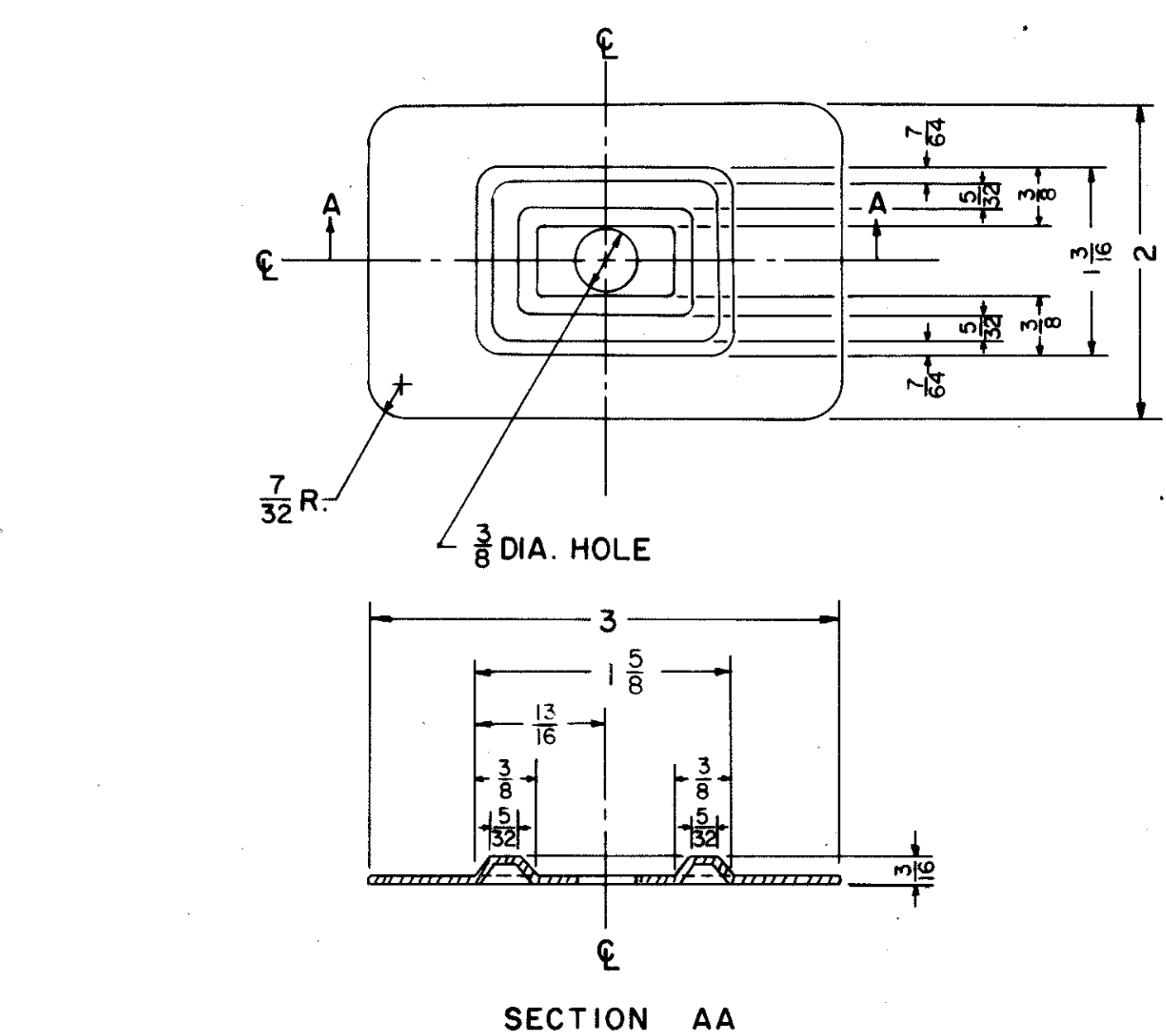
BEAM SIZE	ANCHOR BOLTS		BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST	MARK	TYPE	NO.	LENGTH	WEIGHT FOR 1 POST
	DIA.	LENGTH														
10 B11.5	3/4"	3'-0"	7/8" x 6" x 18"	7/8"	3 1/2"	14"	3 1/2"	1/4"	5.25'	2'-6"	1.9	401	101	6	7'-6"	45
												402	STR.	8	5'-0"	
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 3/4"	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 3/4"	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 3/4"	5/16"	9.0'	2'-6"	3.3	401	101	11	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"	



REINFORCING FOR ALTERNATE ANCHOR BASE

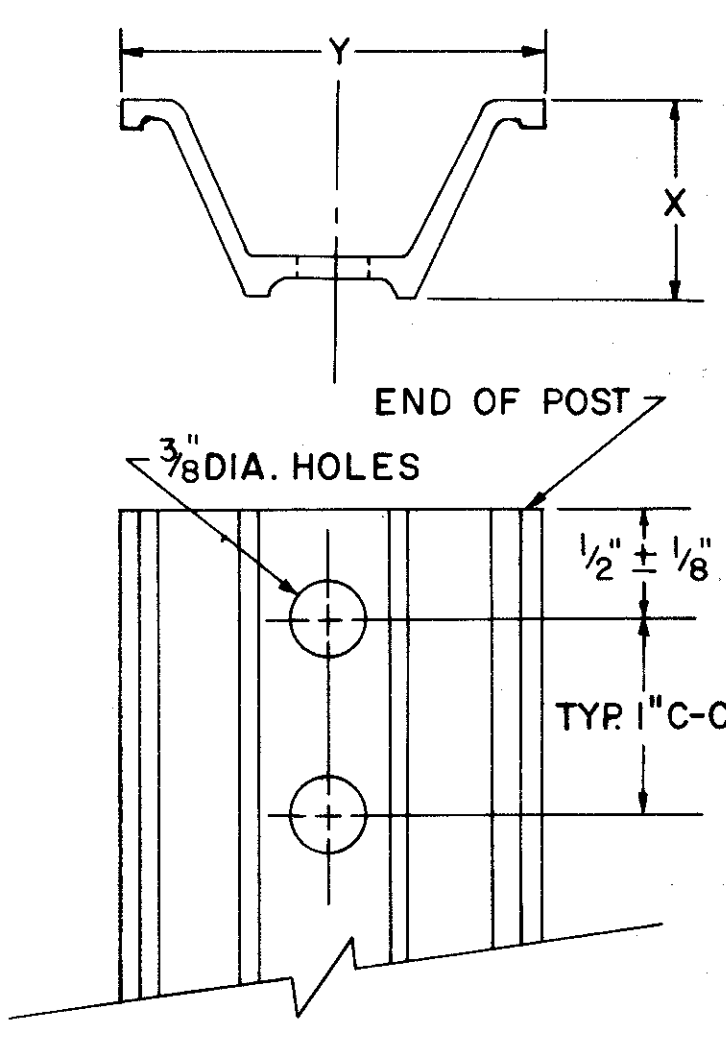


ALTERNATE ANCHOR BASE DETAILS



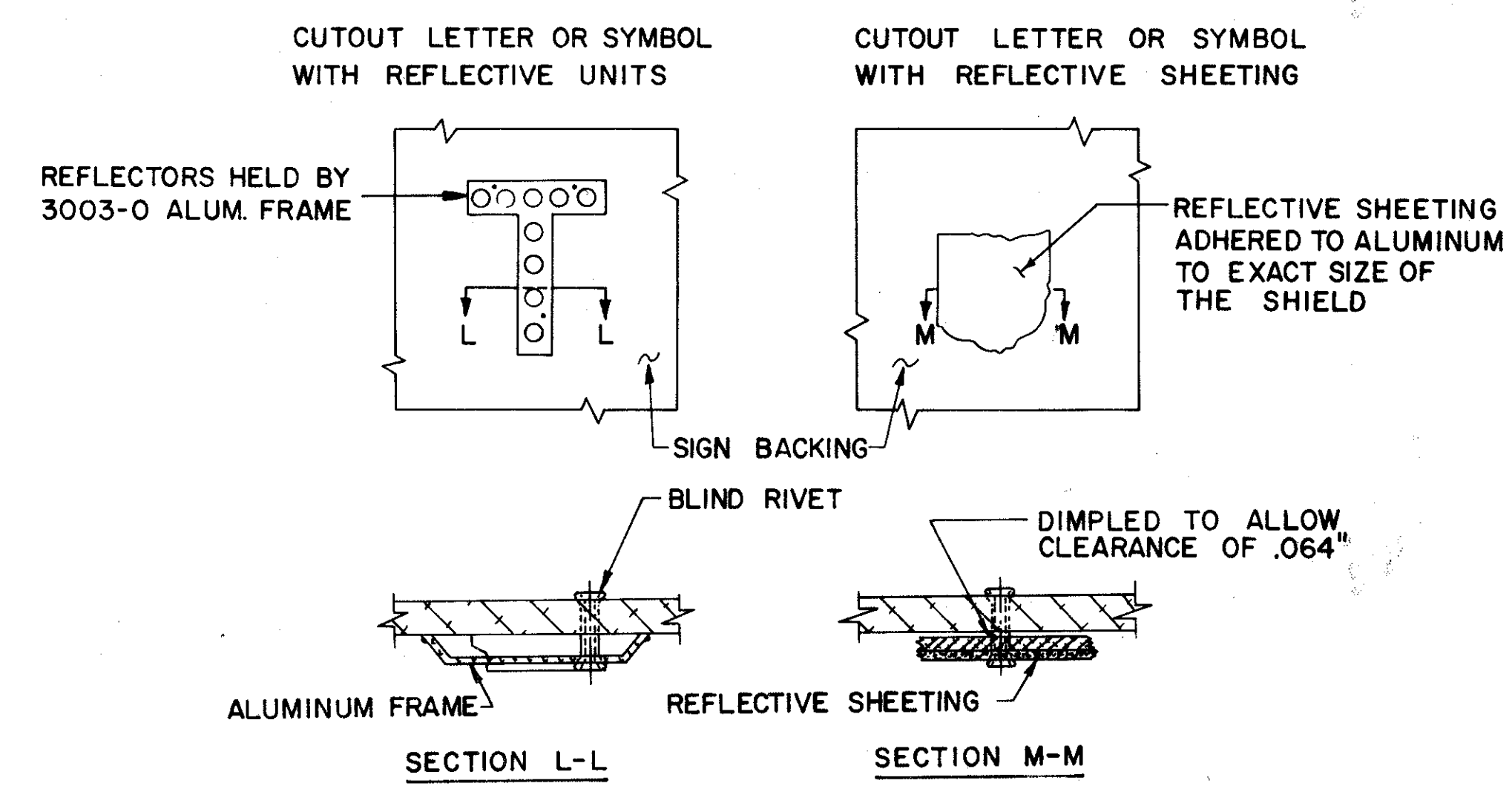
NOTE: THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE. METAL SHALL BE 16 GAUGE STEEL. ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL

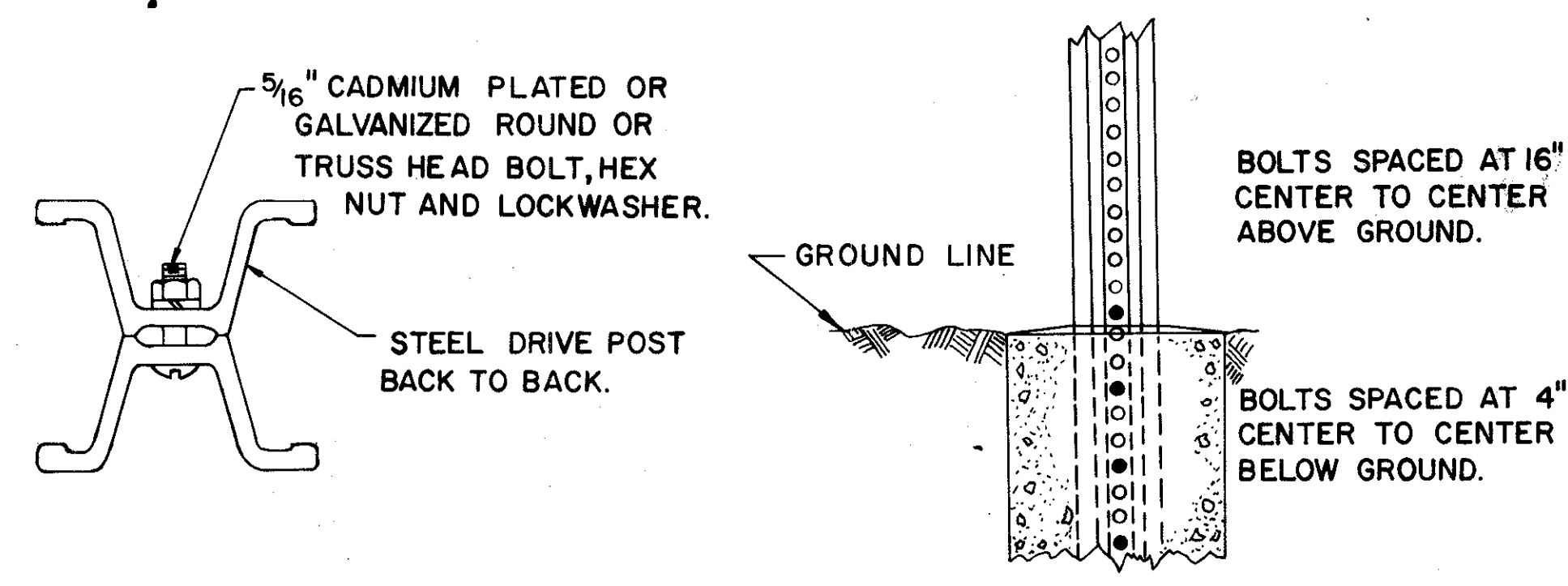


WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 5/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2"	3 5/8"

DRIVE POST DETAILS



DEMOUNTABLE LETTERS & SYMBOLS



4#, 6# & 8# BEAM 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.

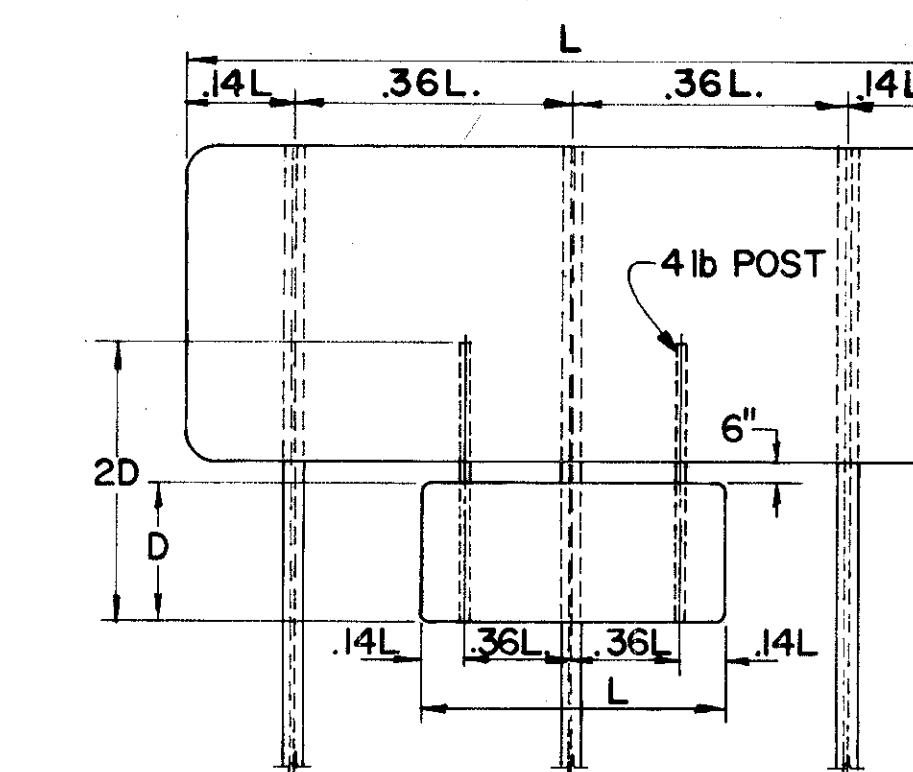
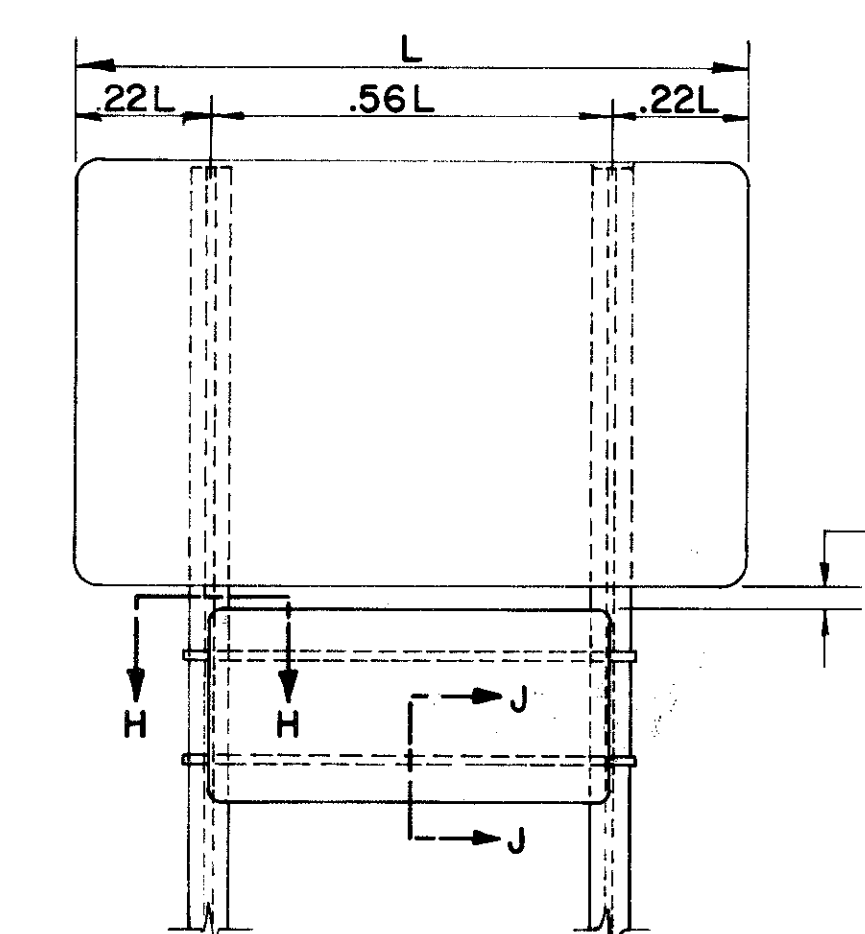
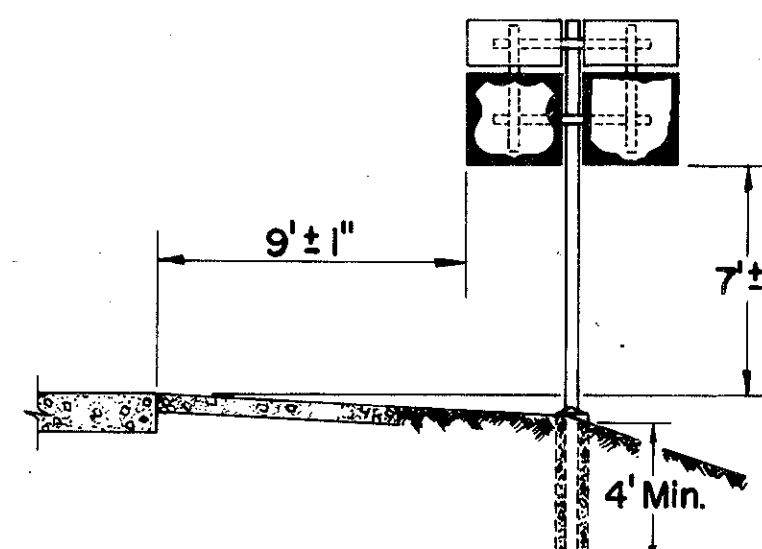
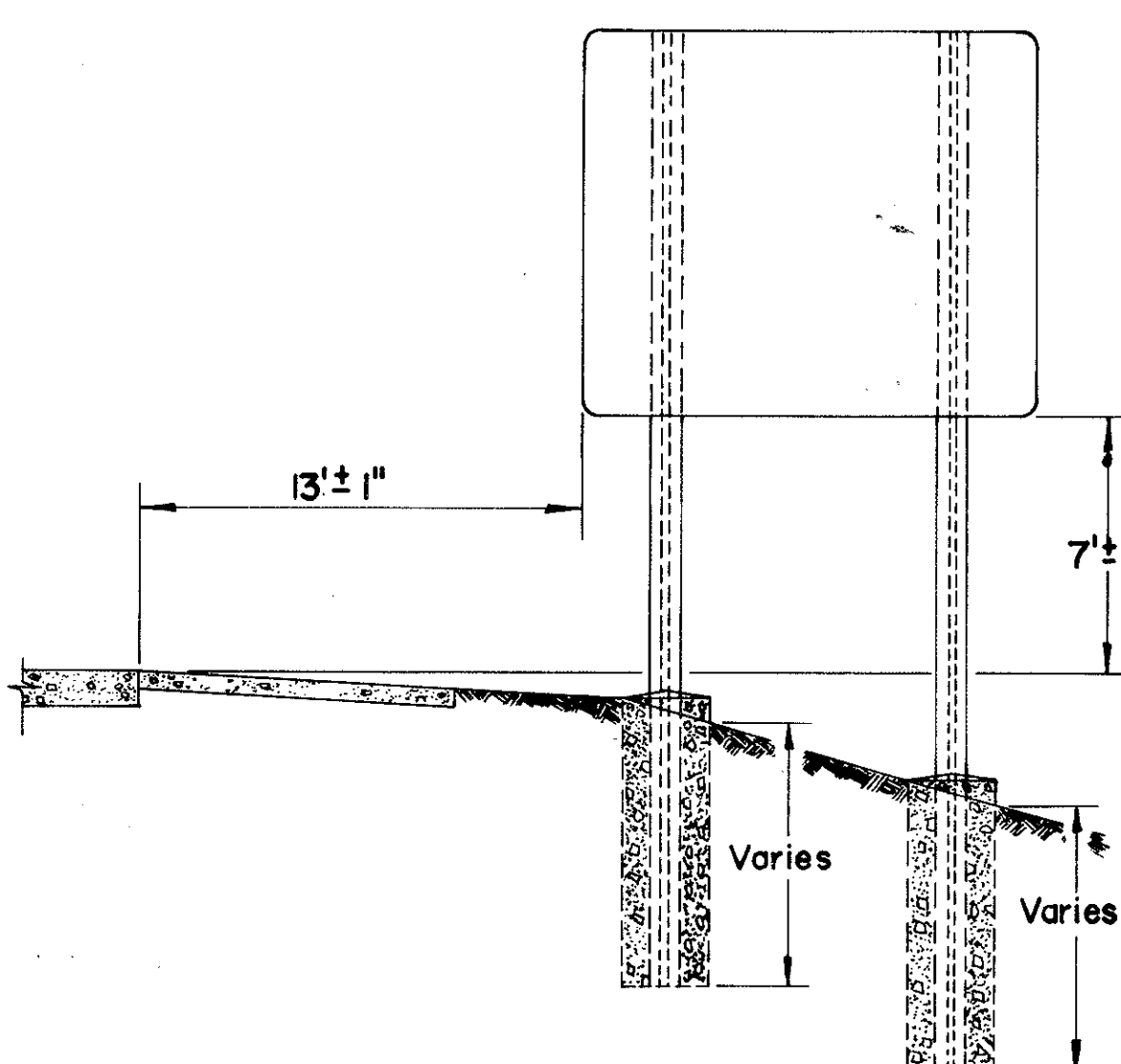
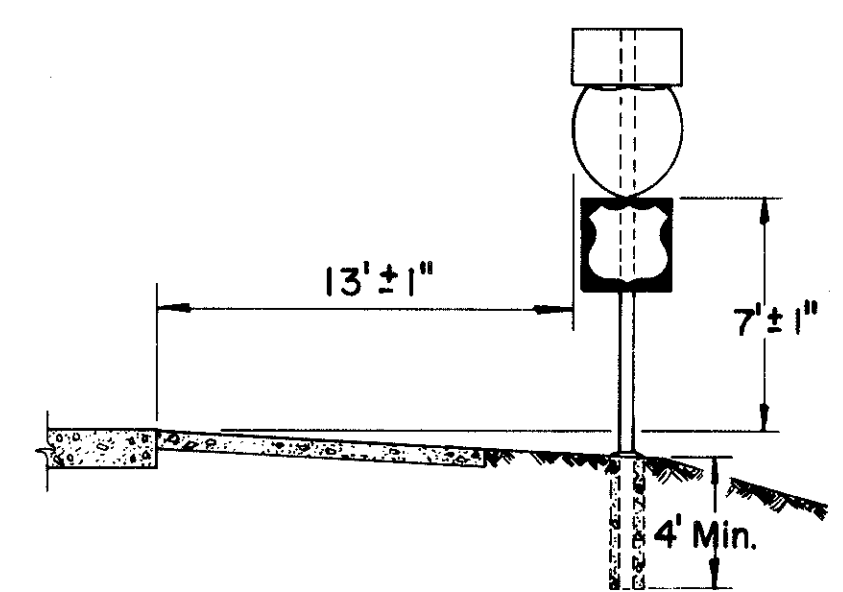
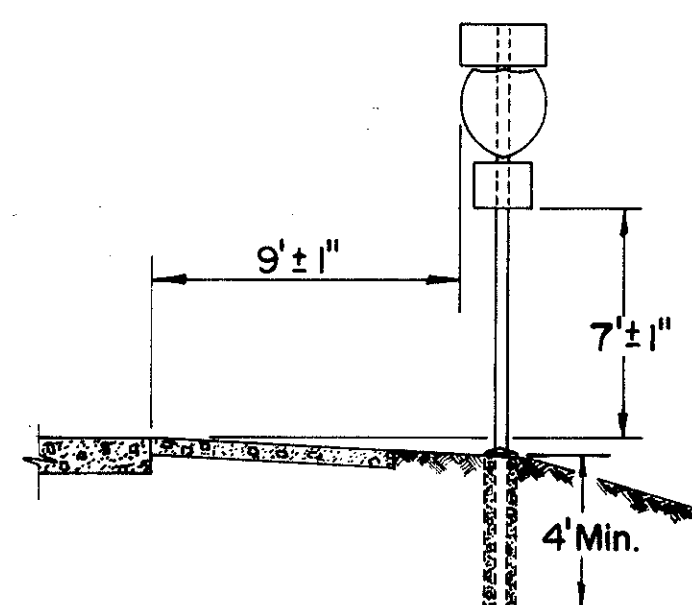
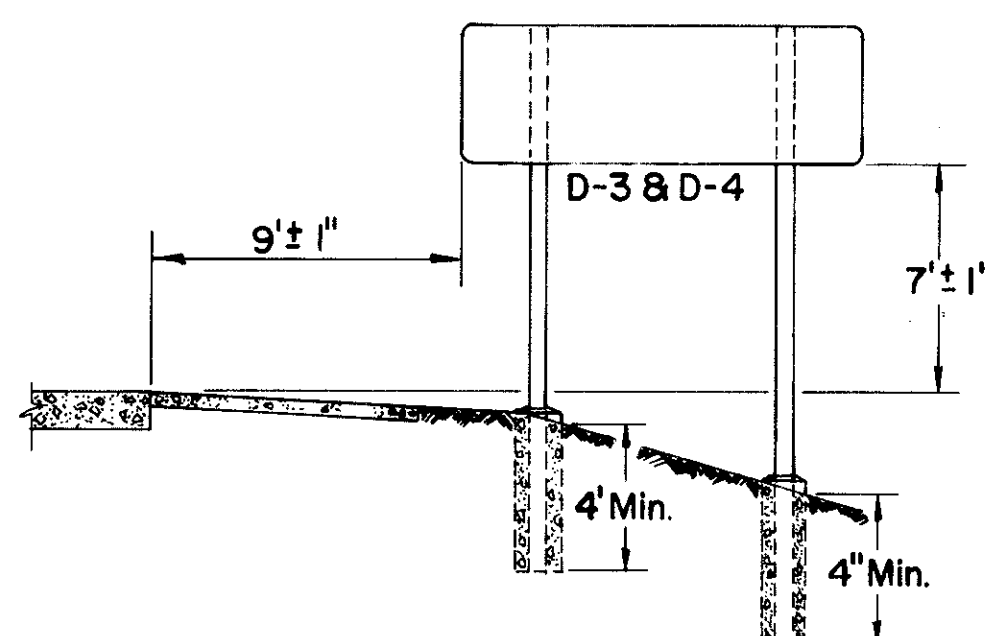
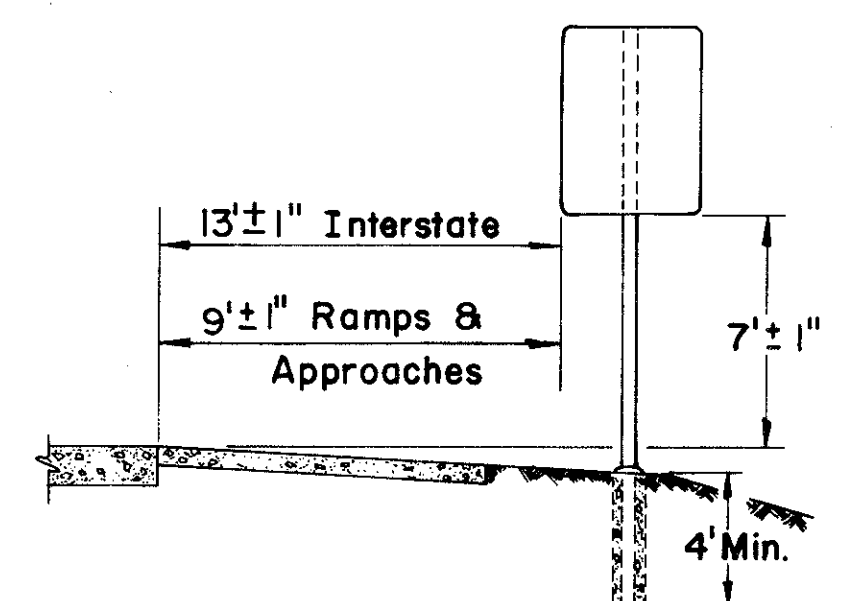
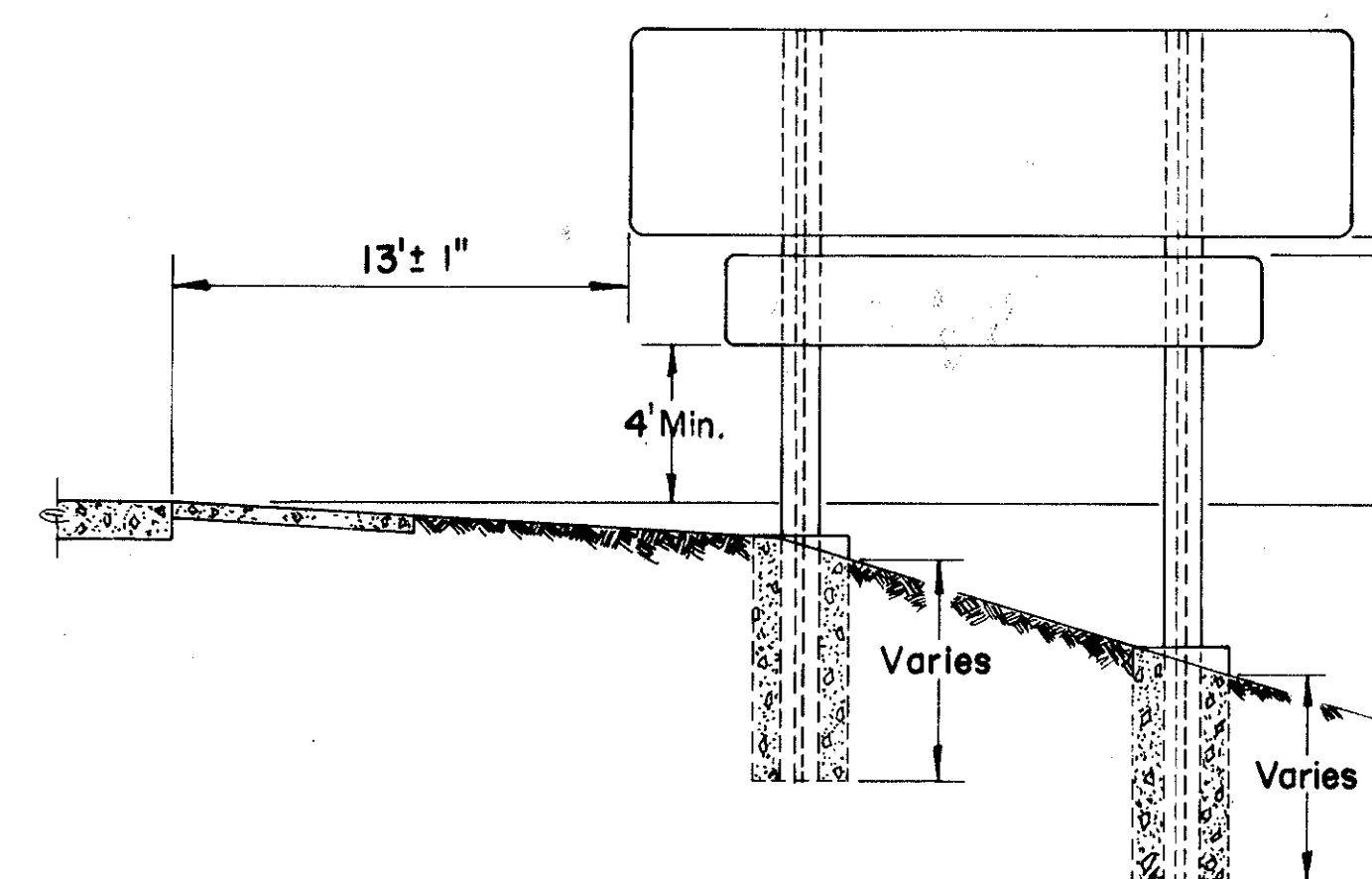
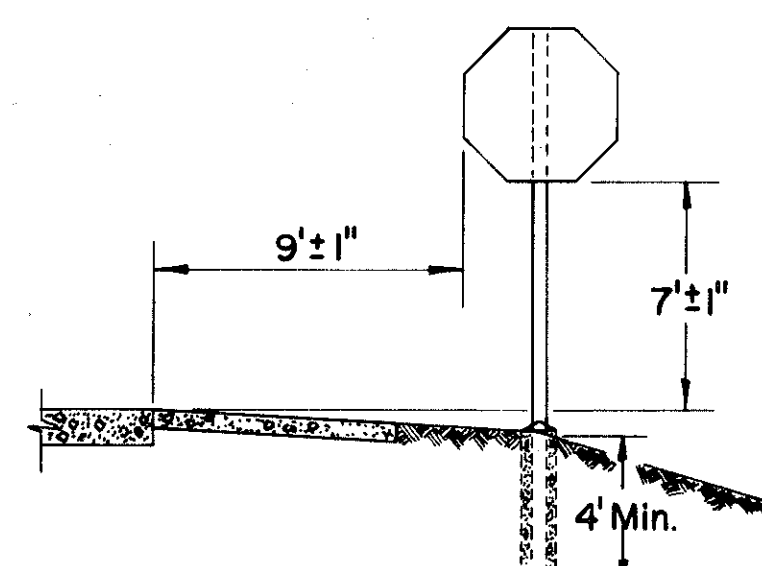
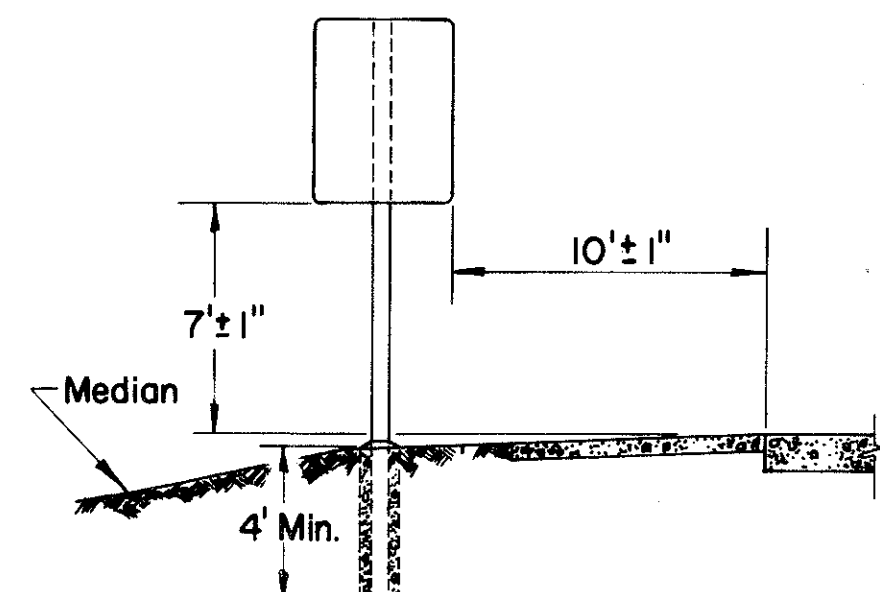
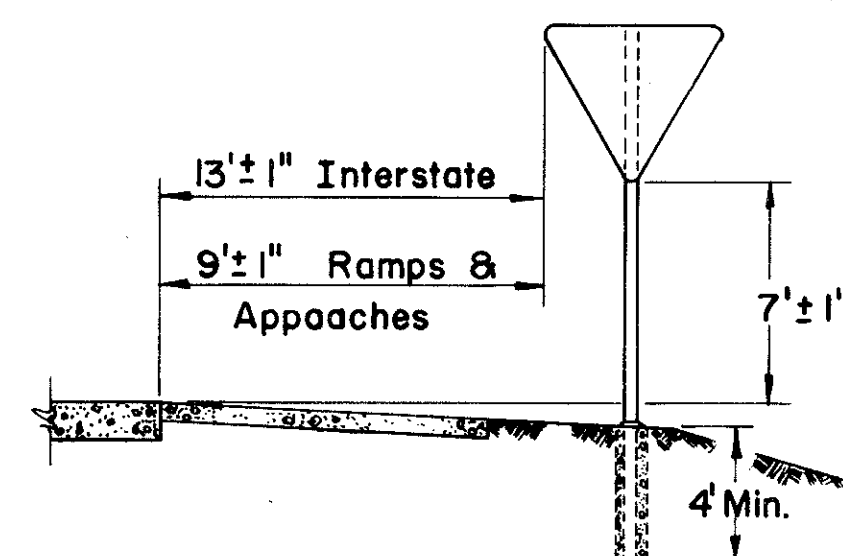
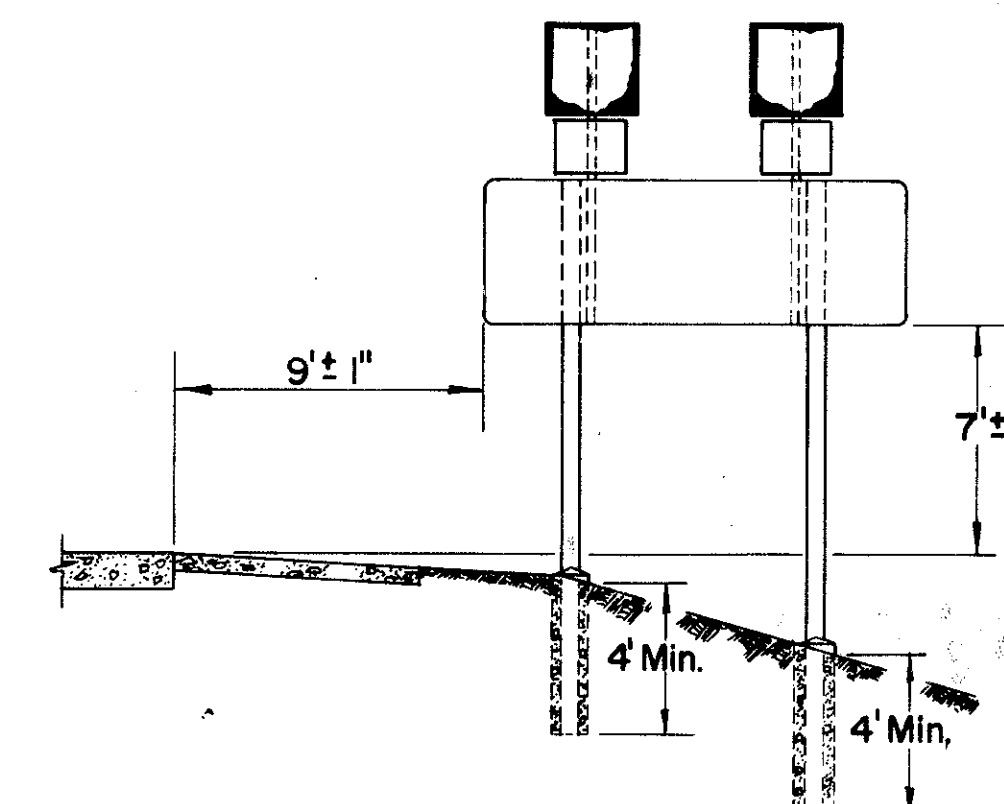
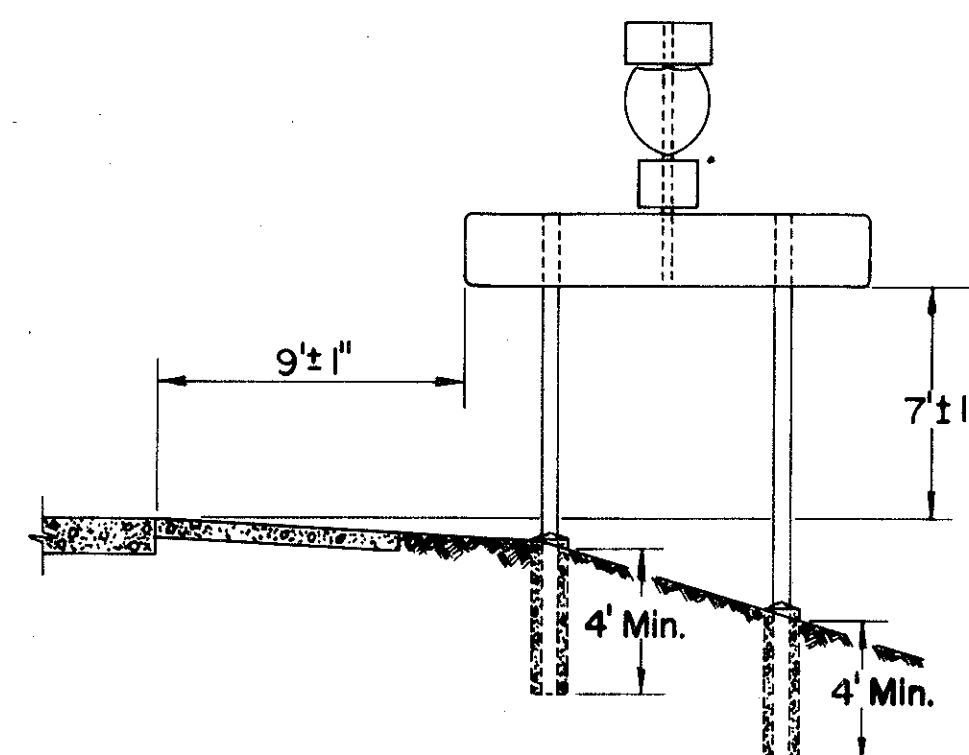
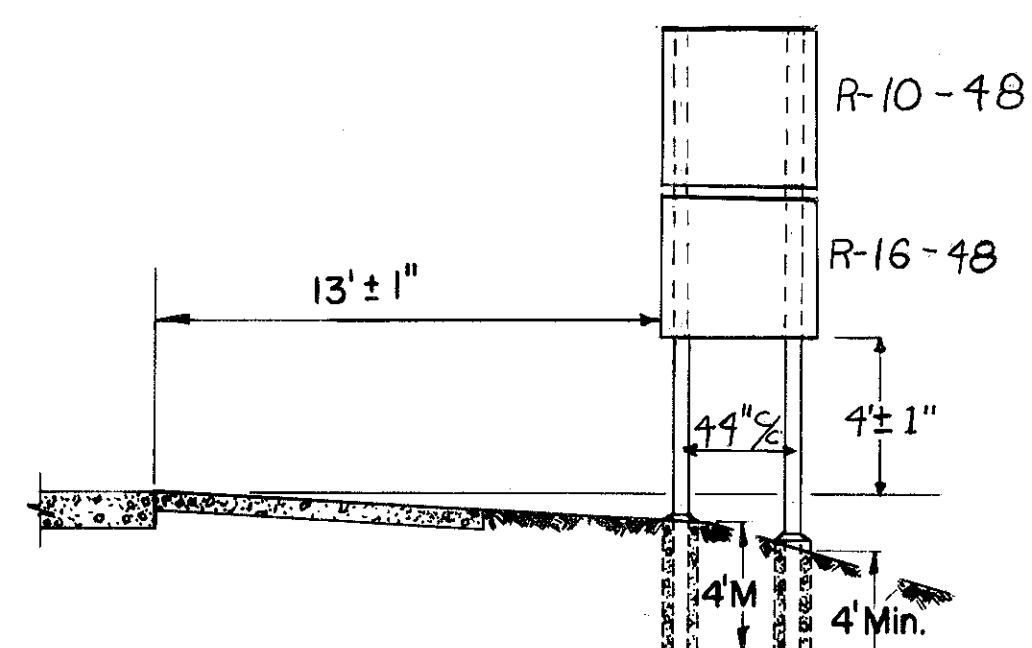
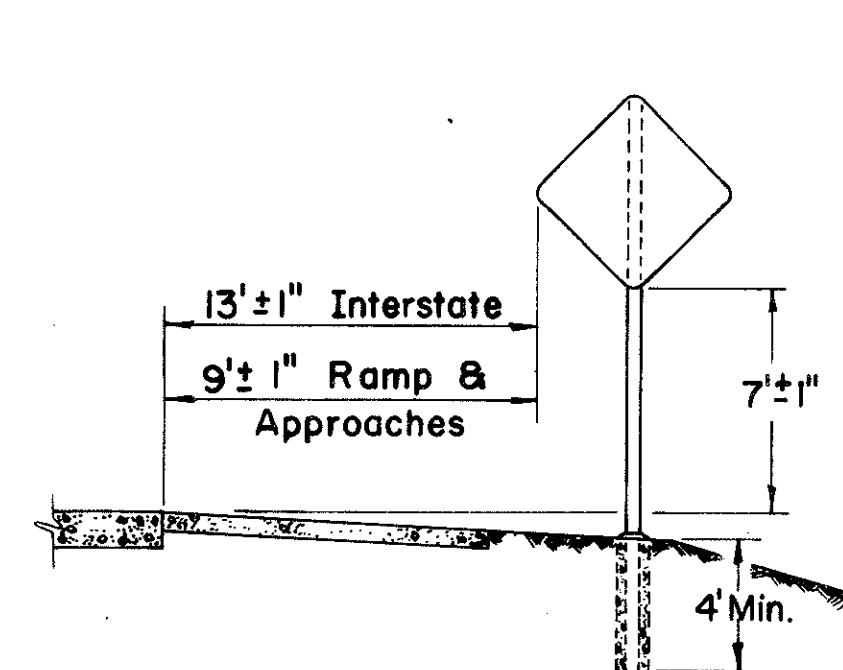
DEMOUNTABLE SHIELDS SHALL BE AFFIXED TO THE BACKING UTILIZING 5/16" TRUSS HEAD BOLTS, PLAIN AND LOCKWASHERS. FOR HOLE LOCATION DETAILS SEE SHEET NO. 272.

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. B209GSI1A-T6).

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		DATE 10-29-63 8-19-64 10-13-65
MISCELLANEOUS SIGNING ITEMS	MSI	
APPROVED <i>Fred C. Taylor</i> ENGINEER OF TRAFFIC		

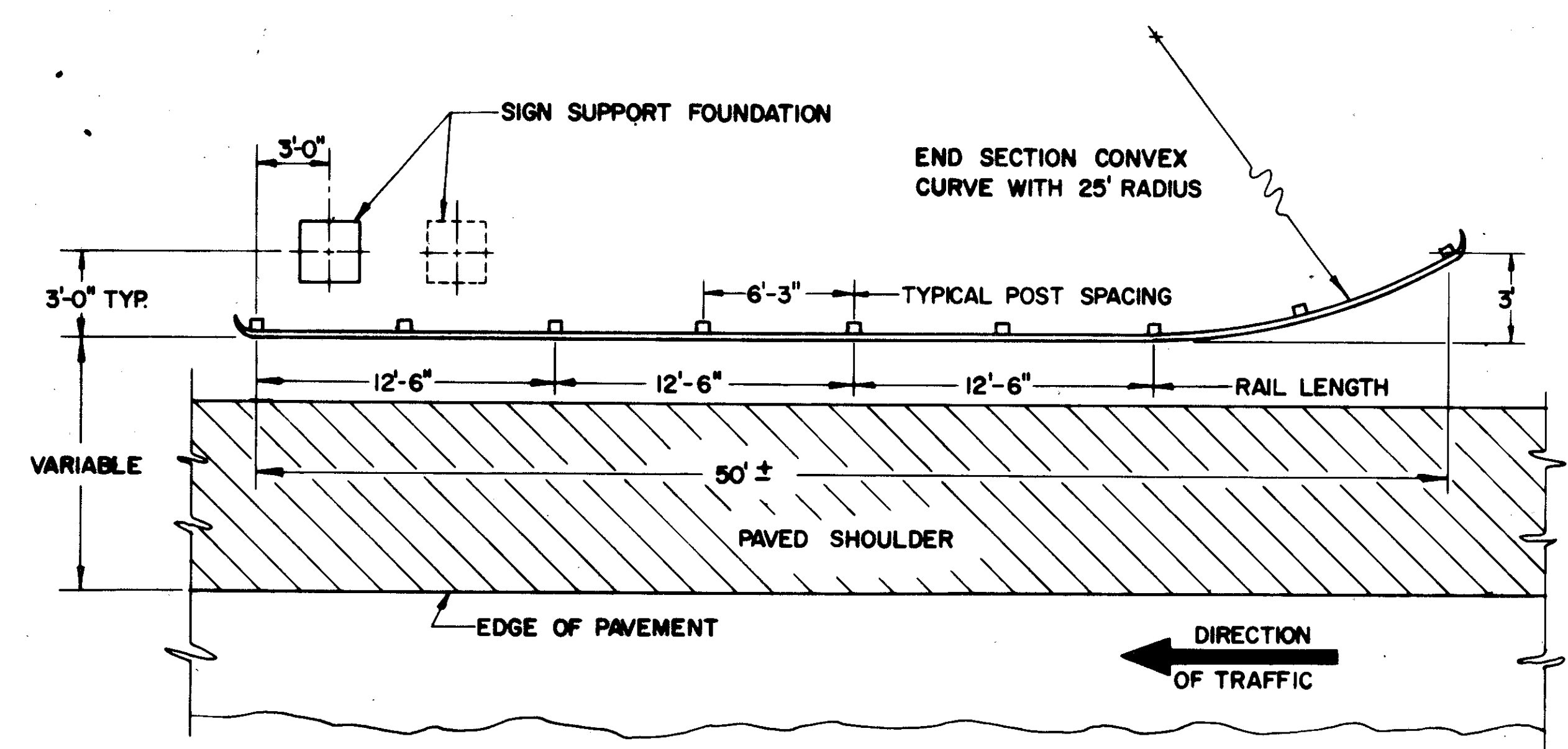
NOTES

- BOLT HOLE LOCATIONS ARE INDICATED ON THE SIGN DESIGN SHEETS NO. 272.
- HORIZONTAL BACK BRACING SHALL ALWAYS BE MOUNTED ON THE FRONT FLANGE OF THE SUPPORT EXCEPT WHERE SIGNS ARE MOUNTED BACK TO BACK. BACK BRACING SHALL NEVER EXTEND ABOVE TOP EDGE OF UPPERMOST SIGN PLATE AND SHALL BE ATTACHED TO SUPPORTS USING 5/16" GALVANIZED STEEL BOLTS.
- SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" WIDE, USED ON SIGN FACE ONLY.
- SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.
- HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 3'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE. ALL SIGN SHALL BE ERECTED 1'-0"±1" BEHIND EXISTING GUARD RAIL UNLESS OTHERWISE SPECIFIED ON PLANS OR BY THE ENGINEER.
- VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".
- GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION. FOR BEARING PLATE DETAILS SEE SHEET NO. 275.

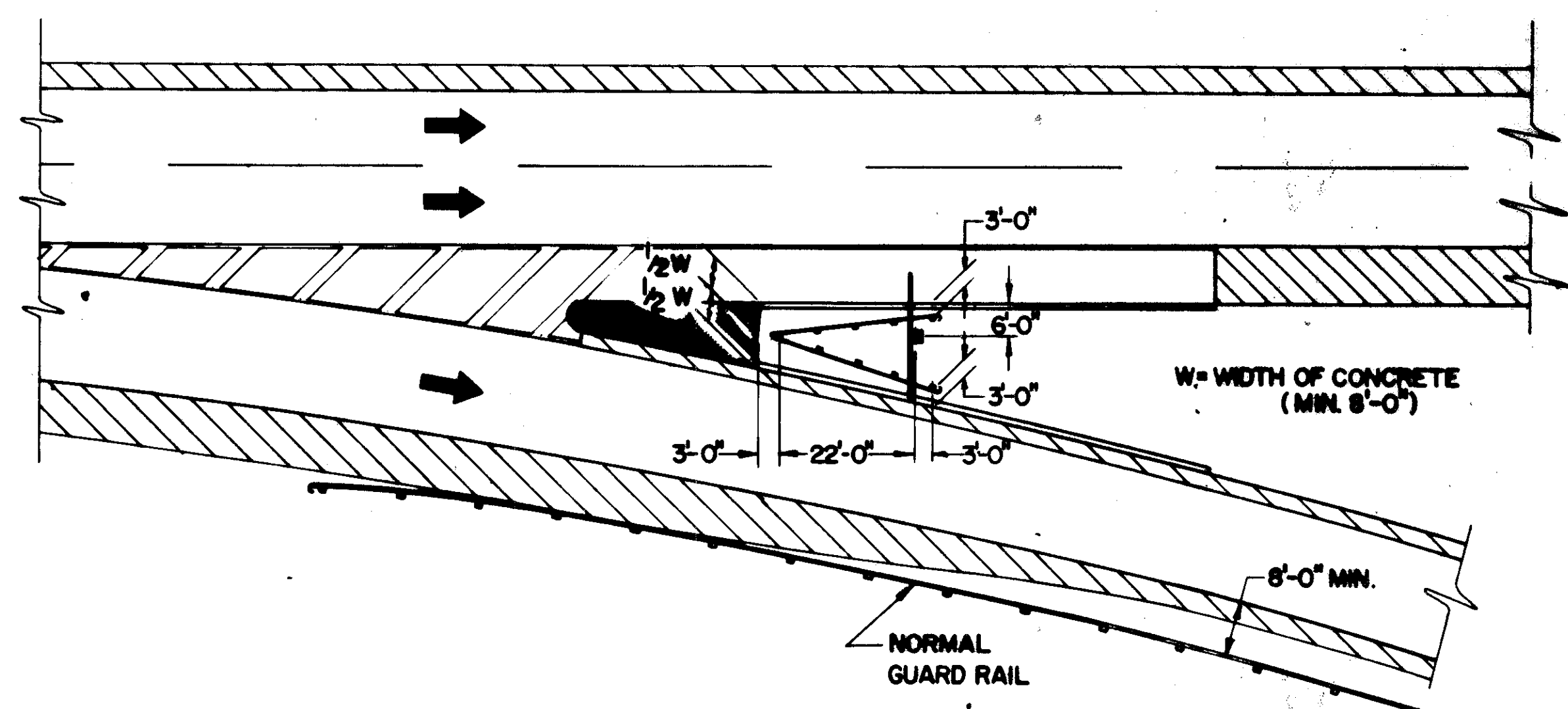


ERECTION OF SECONDARY SIGN WHEN "L" IS 13'-0" AND 14'-0".
FOR SECTIONS "J-J" & "H-H" SEE DETAIL SHEET NO. _____

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		DATE 10-12-65
TYPICAL PLACEMENT OF SIGNS		TPS-1
APPROVED <i>Fred C. Parby</i> ENGINEER OF TRAFFIC		



GUARD RAIL DETAILS



GORE INSTALLATION (TYPICAL)

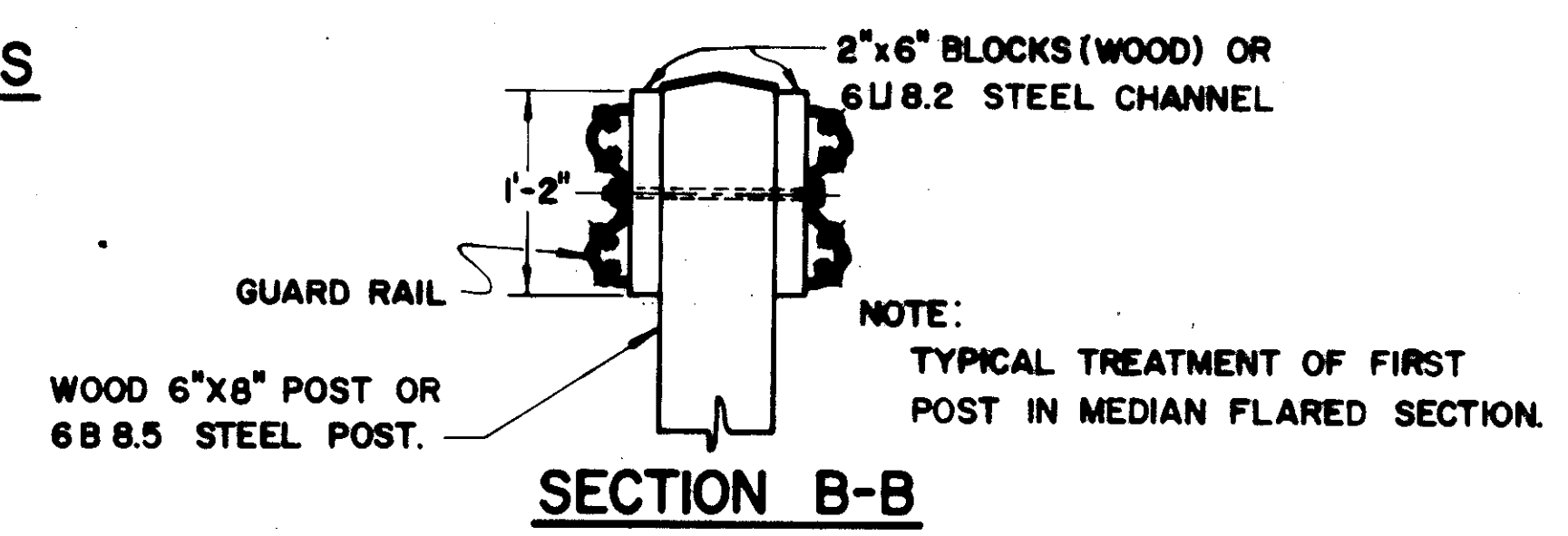
NOTES

GENERAL
 PROTECTIVE GUARD RAIL FOR OVERHEAD SIGN STRUCTURES SHALL CONFORM TO ITEM 606 AND STANDARD CONSTRUCTION DRAWING GR.1 AND 2A.

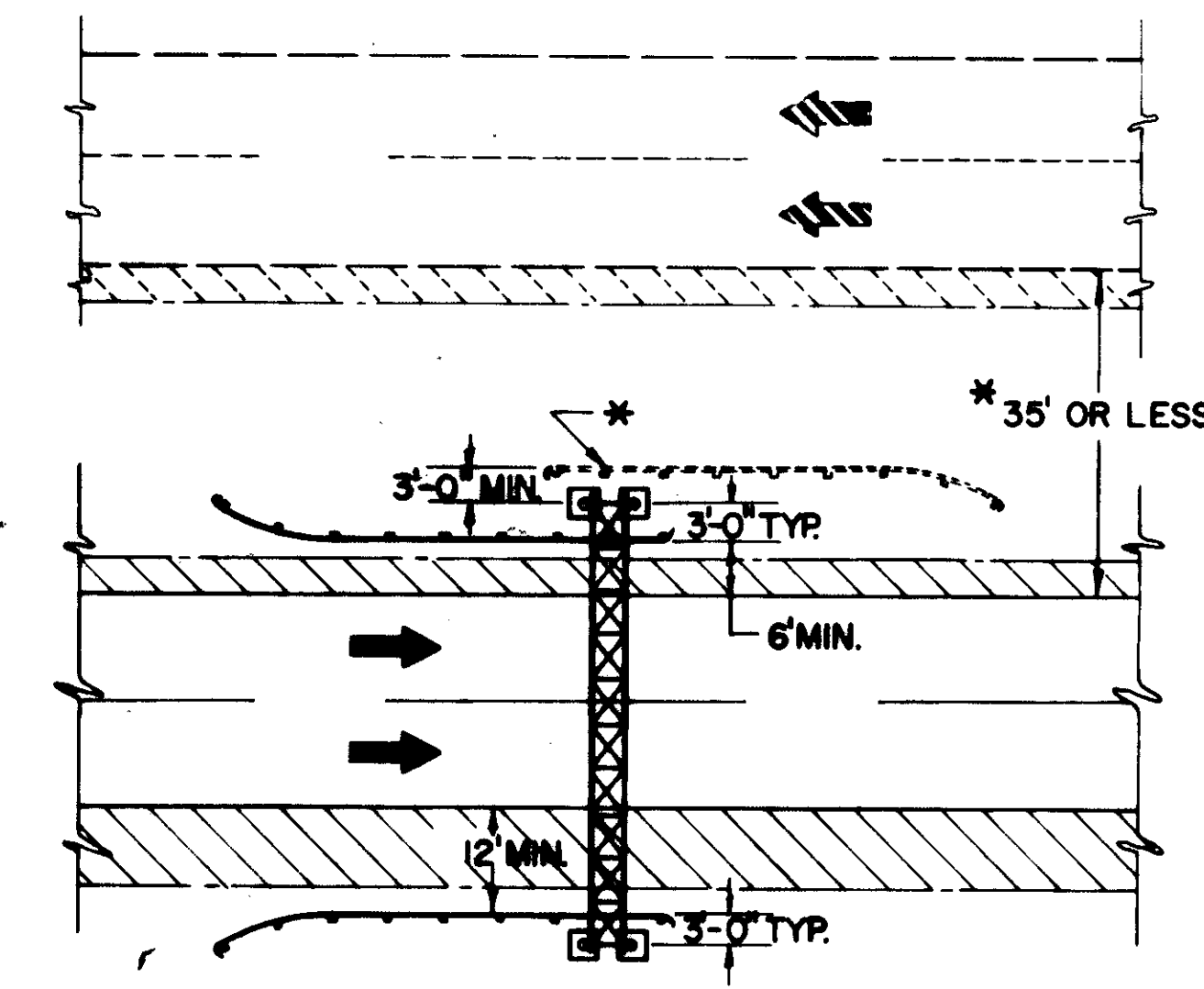
A MIN. OF 50' OF GUARDRAIL IS REQUIRED USING 6'-3" POST SPACING. WHEN 12'-6" POST SPACING IS SPECIFIED, THE MINIMUM GUARD RAIL LENGTH SHALL BE 75'. WHERE THE PROPOSED GUARD RAIL FLARES, IT SHALL BE CONSTRUCTED OF GUARD RAIL ELEMENTS WHICH HAVE BEEN FABRICATED TO FIT.

IN CASES WHERE NO RADII HAS BEEN SPECIFIED OR THE FABRICATED ELEMENTS DO NOT FIT THE CONDITIONS, THE TWO END POSTS OF THE FLARED SECTION SHALL BE ENCASED IN A MINIMUM THICKNESS OF 4" OF CLASS "E" CONCRETE FOR THE FULL DEPTH OF THE POST BELOW THE GROUND LINE. PAYMENT FOR ENCASEMENT, IF REQUIRED, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE GUARD RAIL.

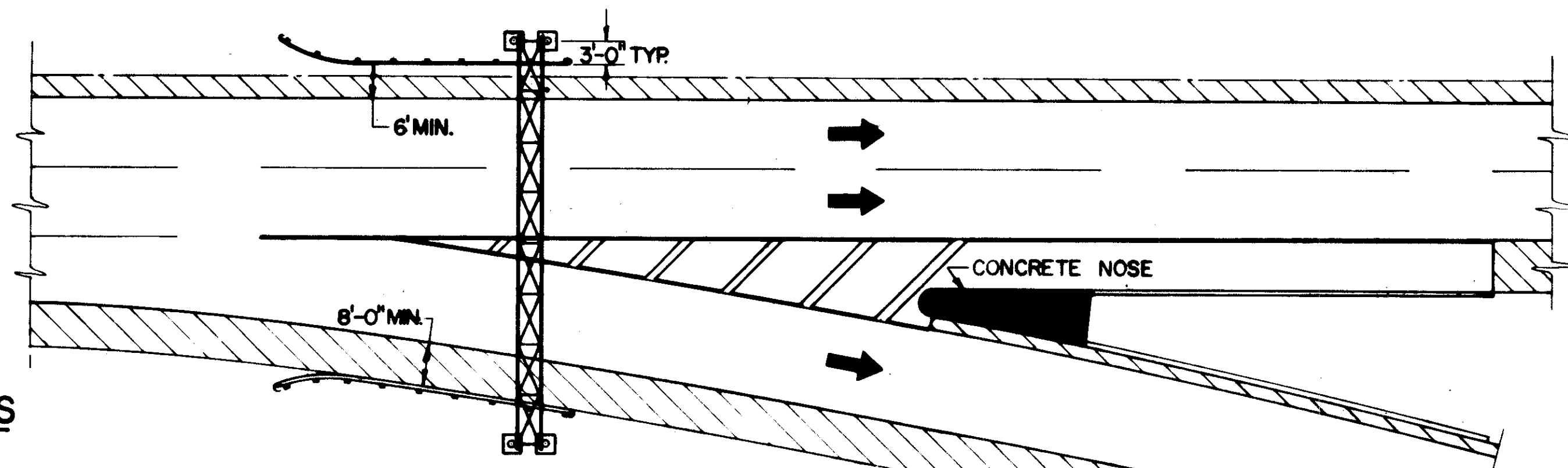
ALL GUARD RAIL SHALL HAVE APPROPRIATE TERMINAL SECTIONS. FOR DETAILS SEE GR. 2A THE GORE INSTALLATIONS NOSE SECTION SHALL BE A BARRIER TERMINAL TYPE MOUNTED ON A SINGLE POST.



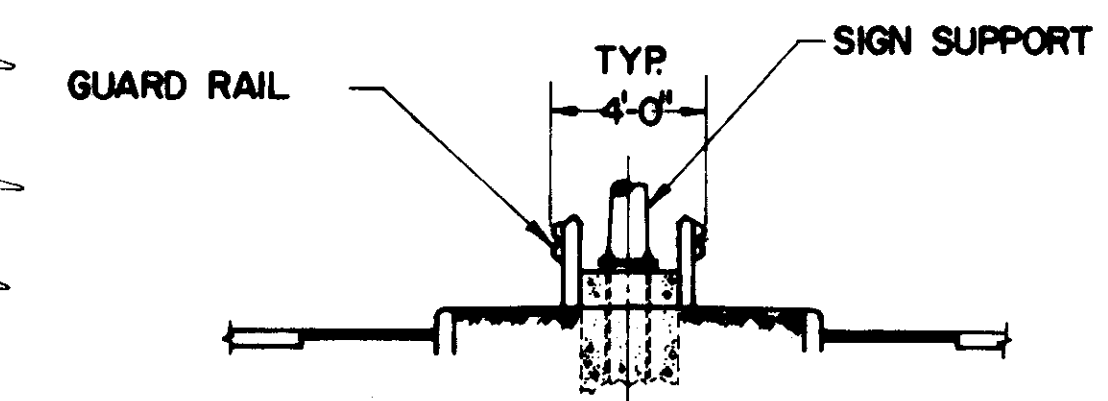
SECTION B-B



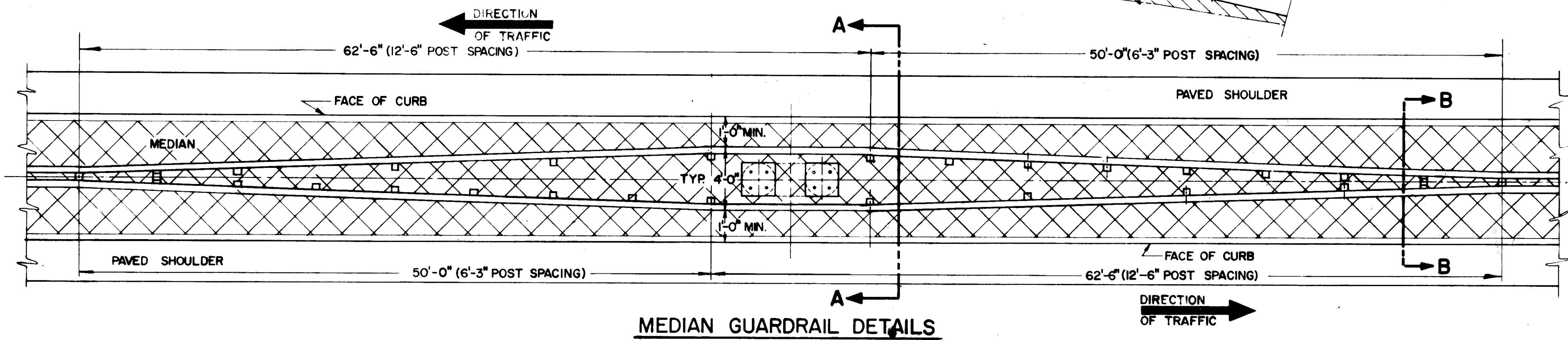
GUARD RAIL DETAILS (SPAN TYPE)



SECTION A-A



DESIGN
 THE DESIGN OF GUARD RAIL PROTECTION FOR OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATIONS FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

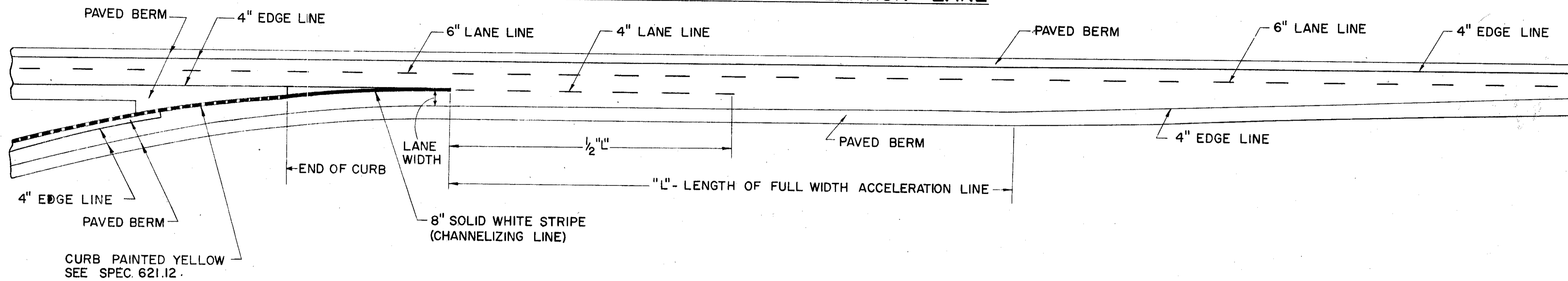


MEDIAN GUARDRAIL DETAILS

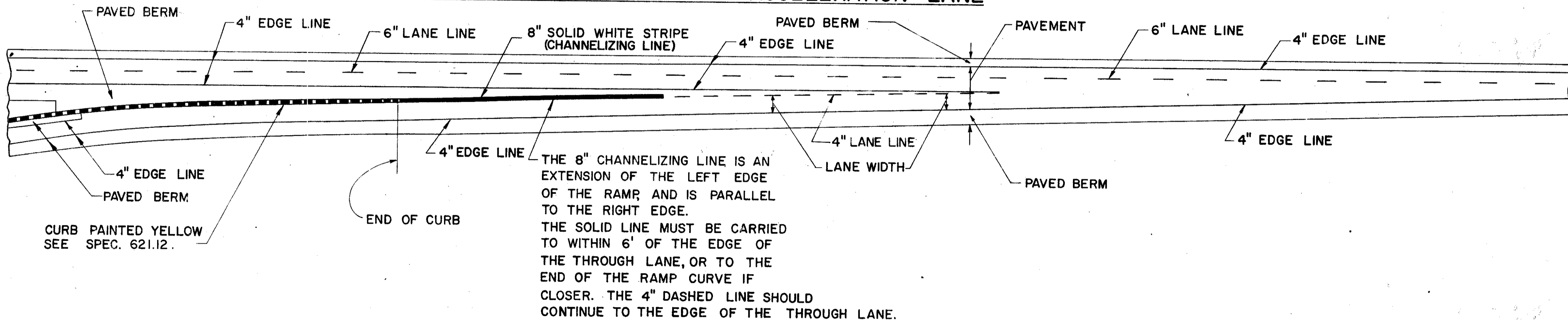
BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		
GUARD RAIL DETAILS FOR OVERHEAD SIGN SUPPORTS	GR-7	DATE 3-10-65 6-1-65 9-10-65 11-8-65
APPROVED <i>Ed C. Taylor</i> ENGINEER OF TRAFFIC		

HAM-74-11.37

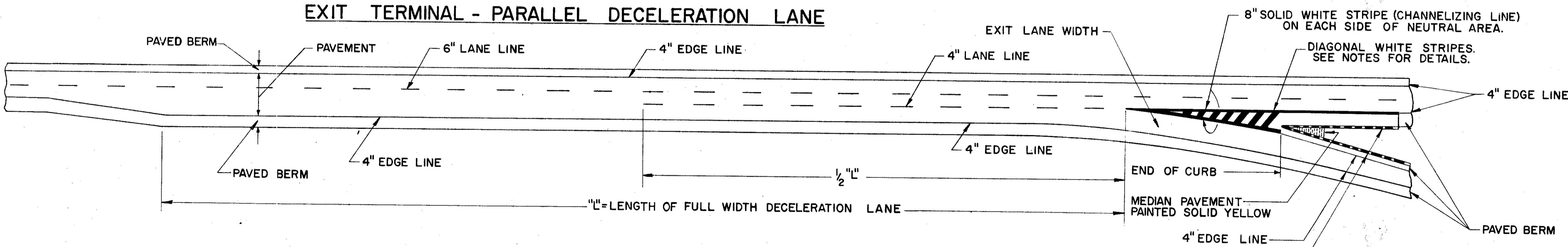
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



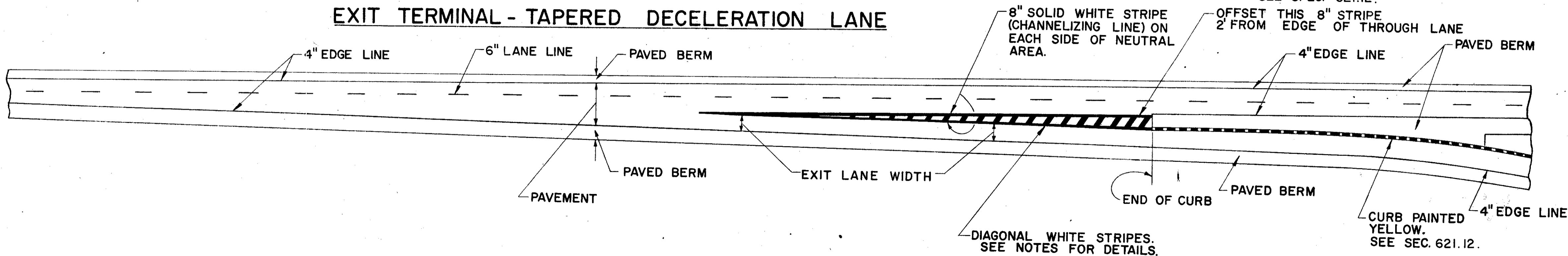
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



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.

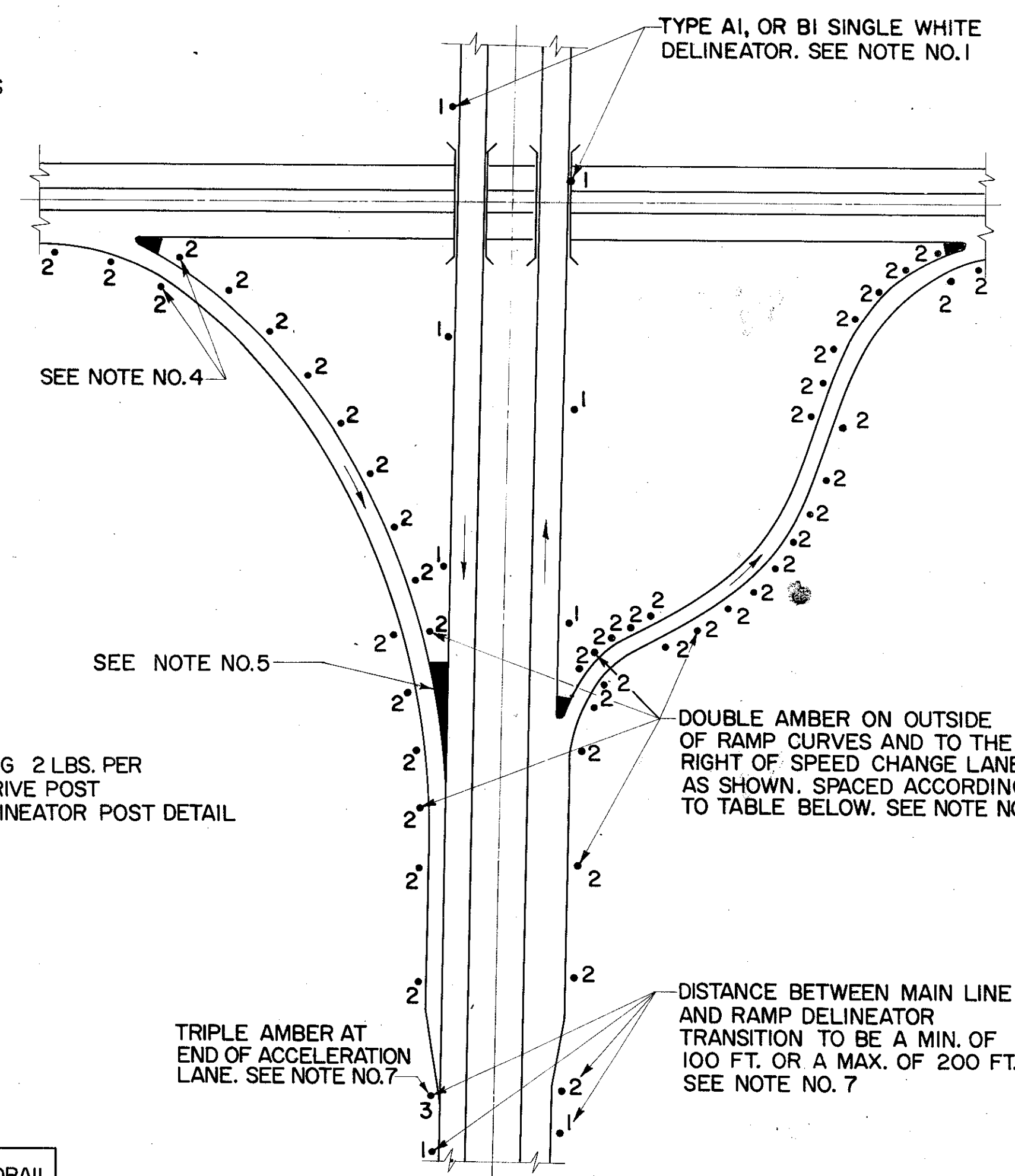
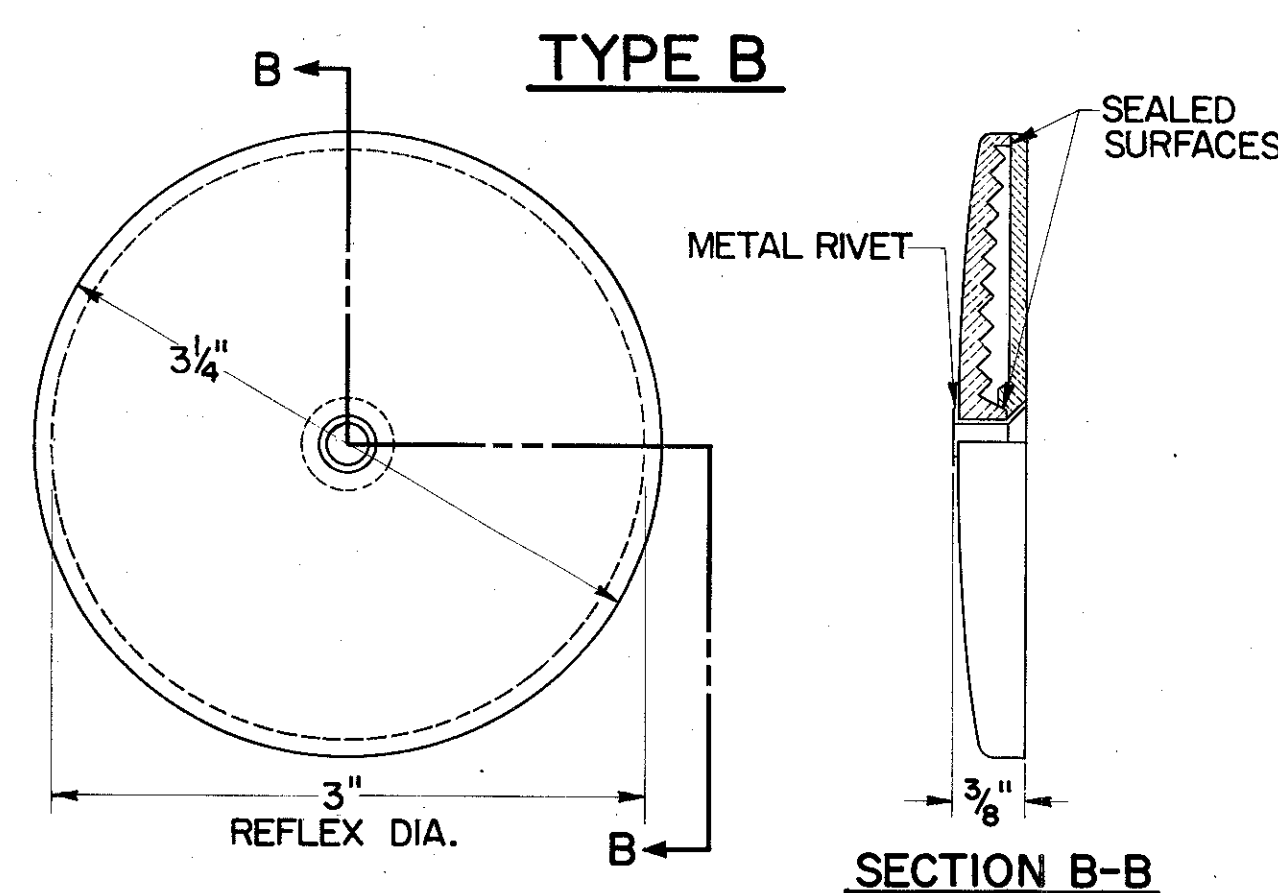
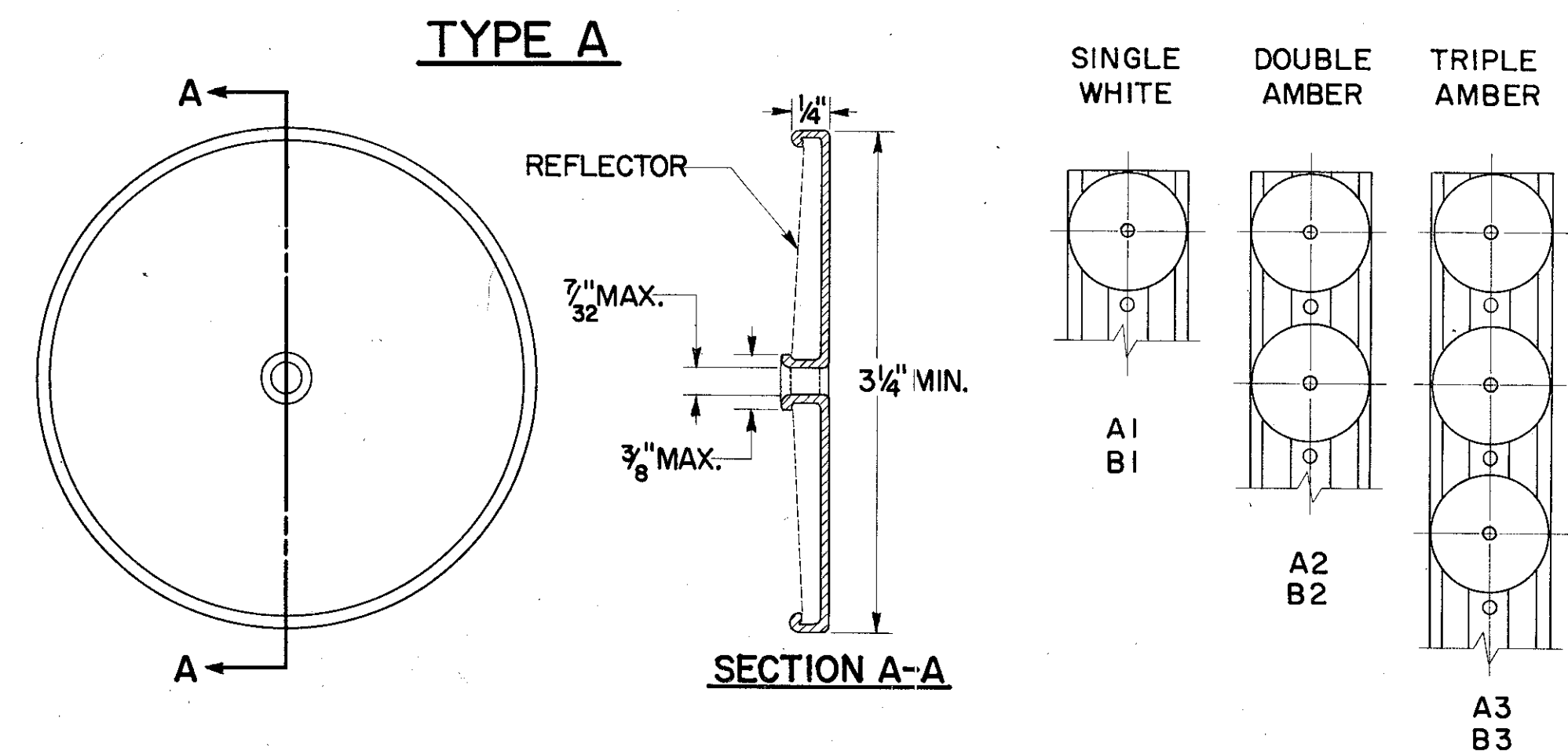
DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF 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.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

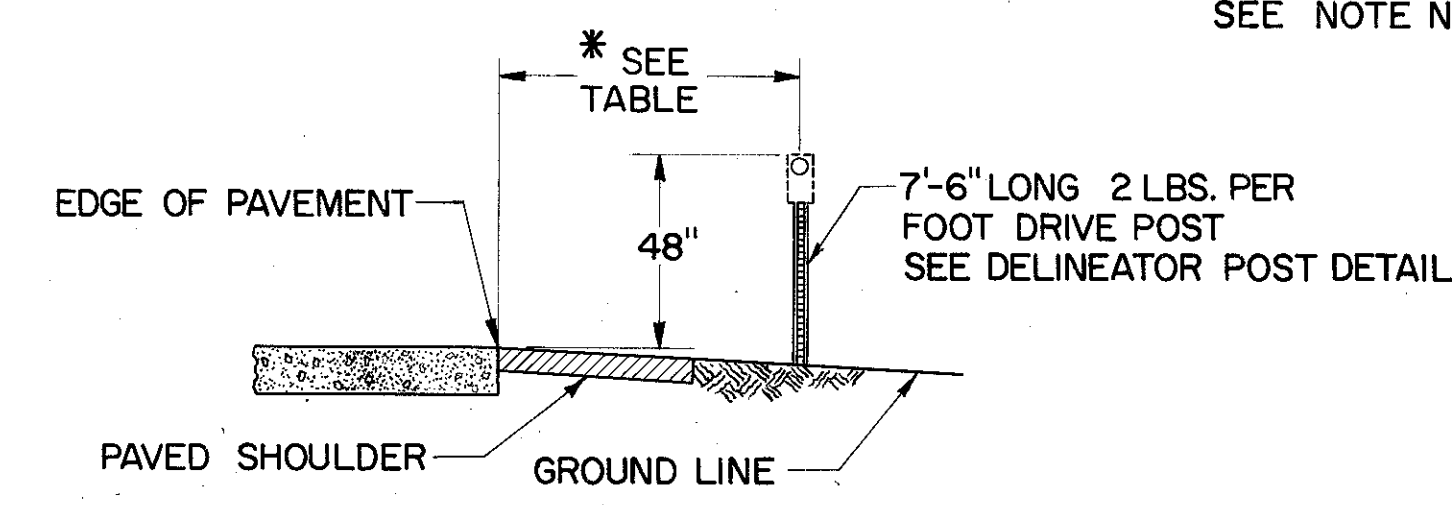
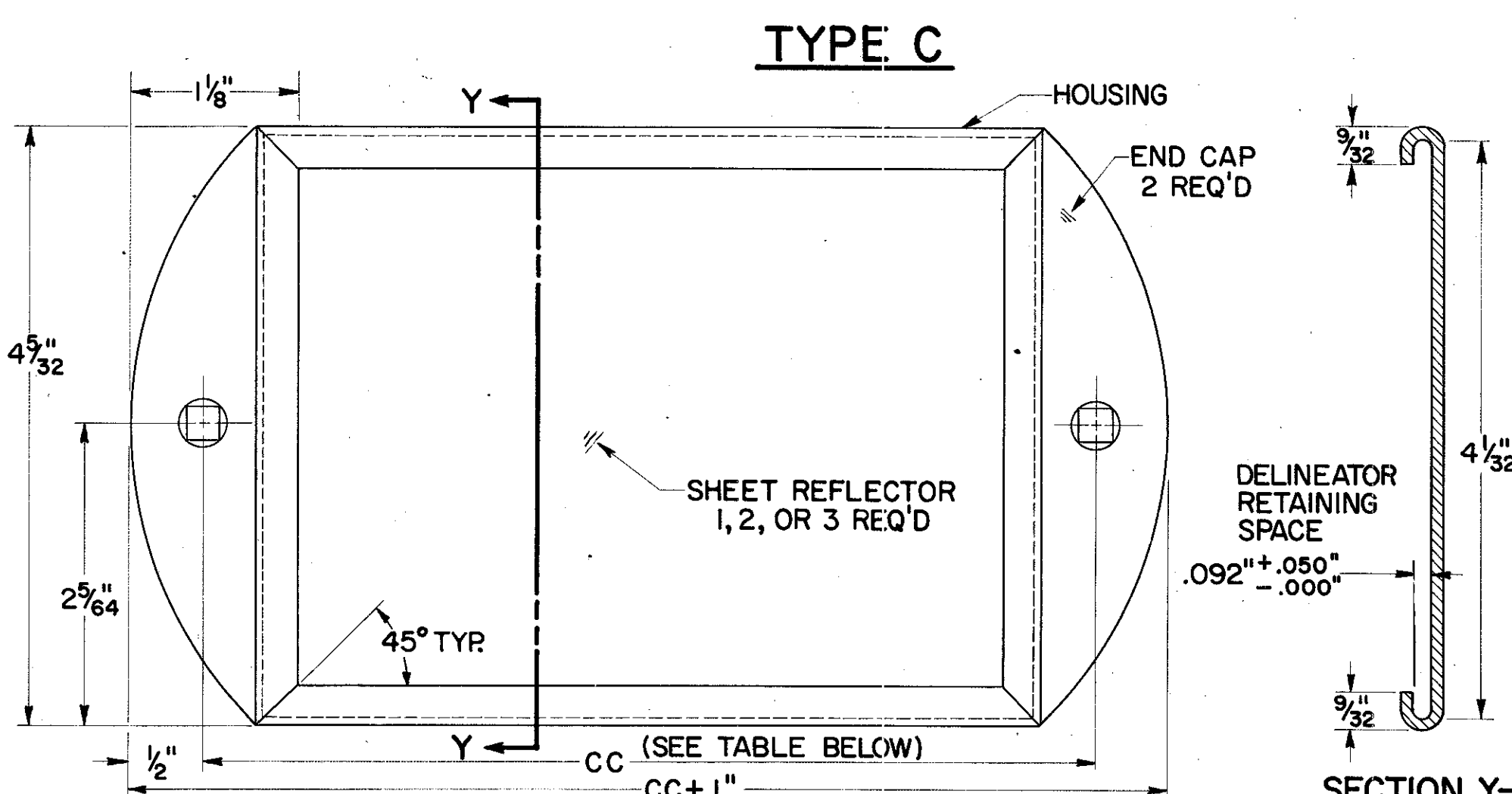
PAVEMENT MARKING 621

DATE
7-17-61
4-6-62
5-24-65

APPROVED *Robert E. Lower*
ENGINEER OF TRAFFIC



- NOTES**
- 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.
 - DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH ITEM NO. 620, (5-1-65).
 - PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620. DELINEATORS".
 - WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
 - NO DELINEATORS ARE TO BE PLACED IN PAVED BERM.
 - WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
 - RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
 - ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.



*** 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.

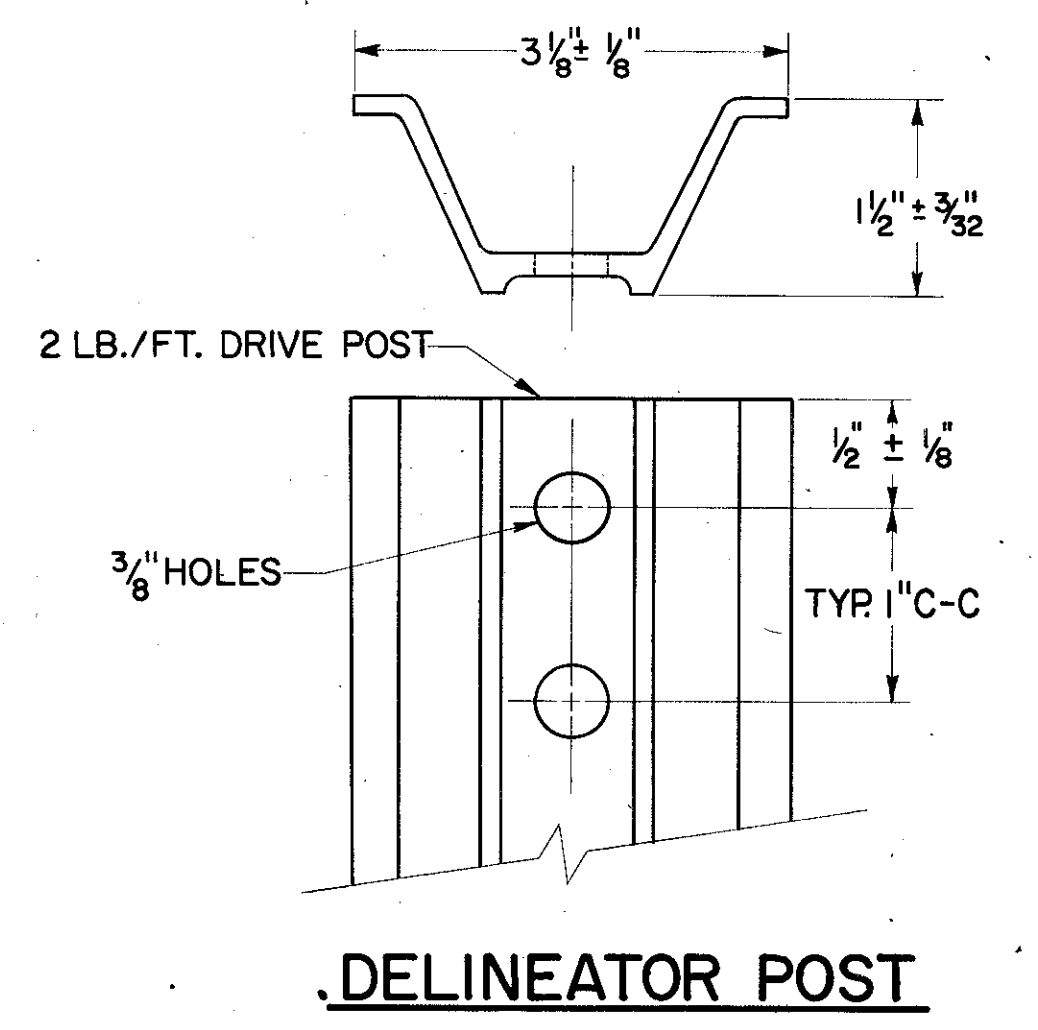
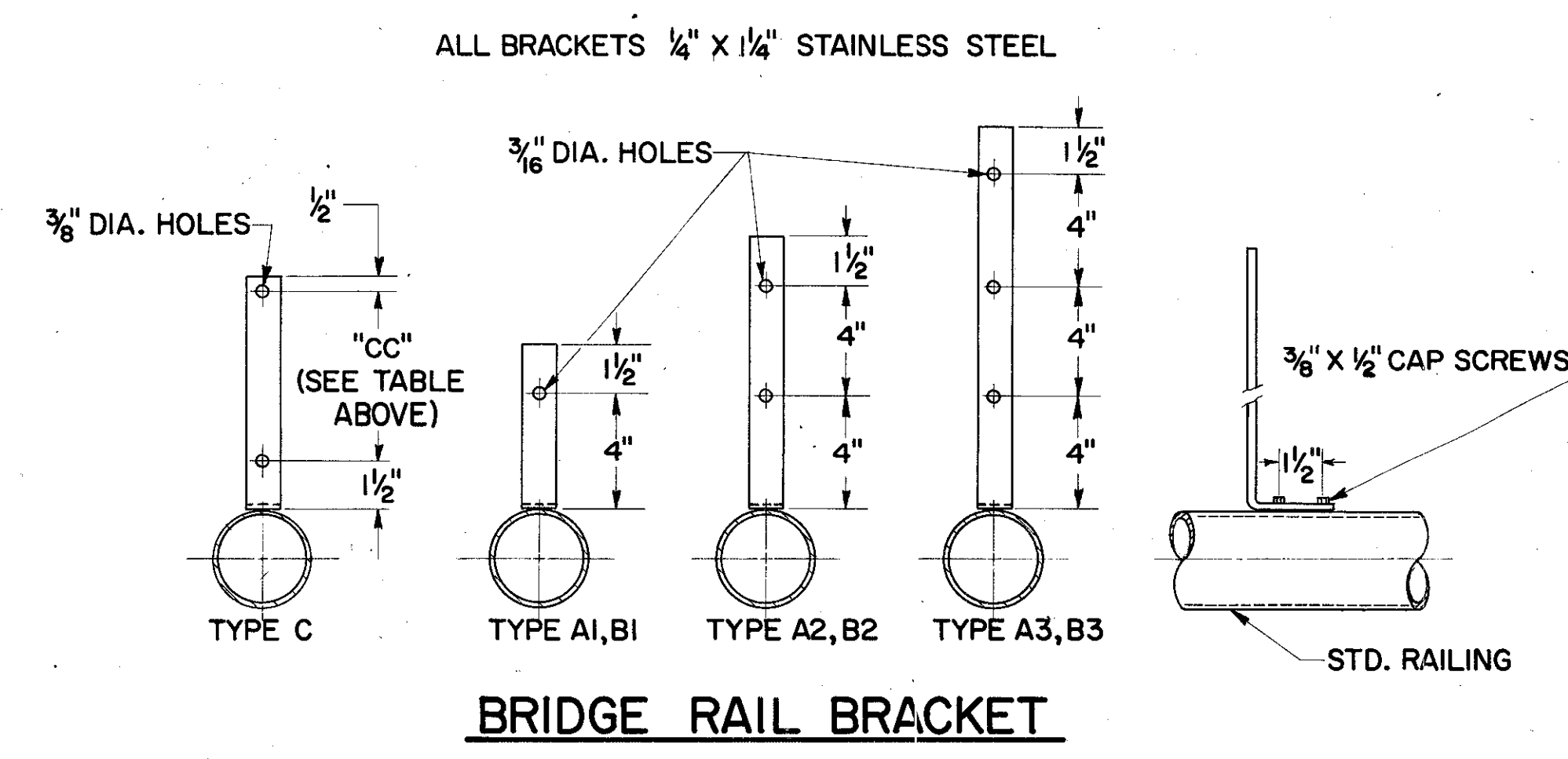
TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

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

* 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"



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

620

APPROVED *Robert Colamer*
ENGINEER OF TRAFFIC

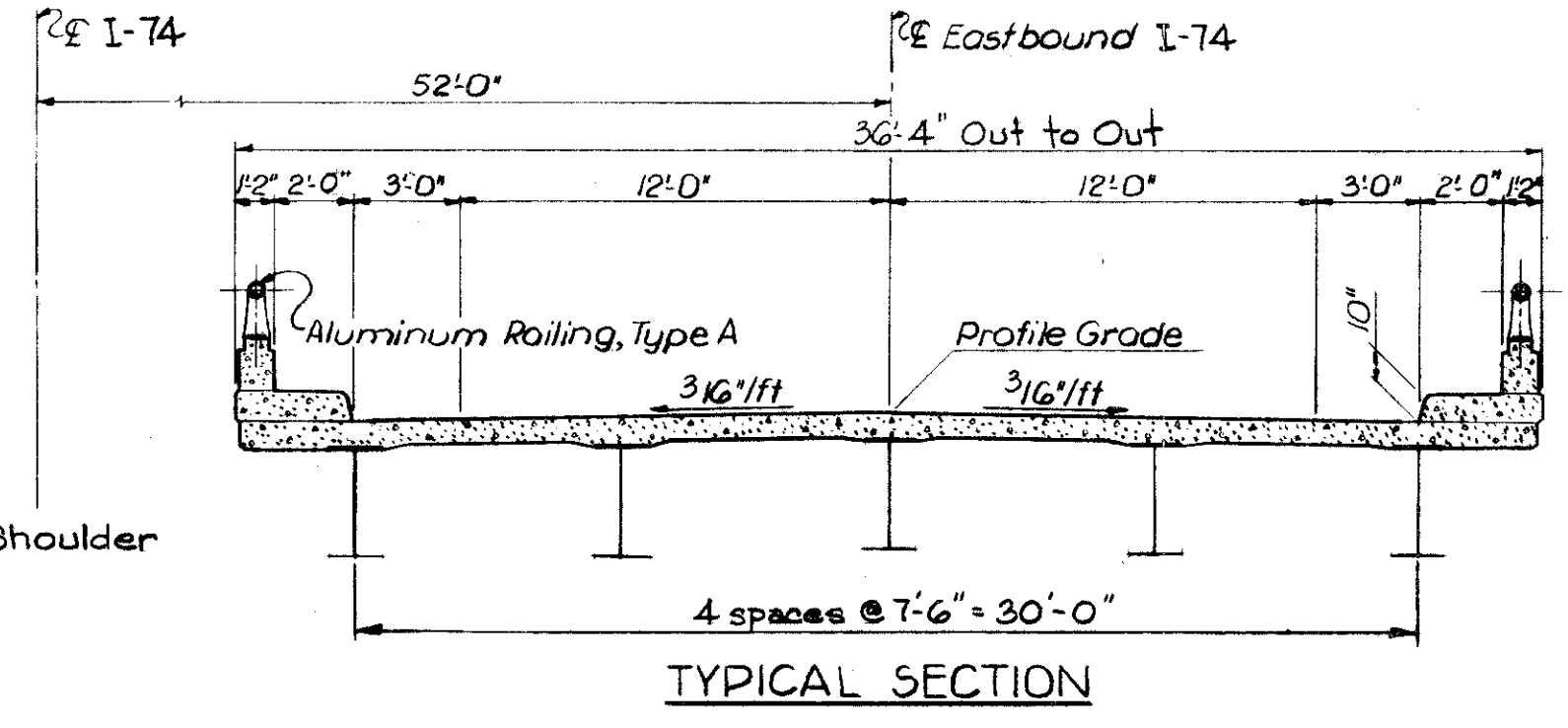
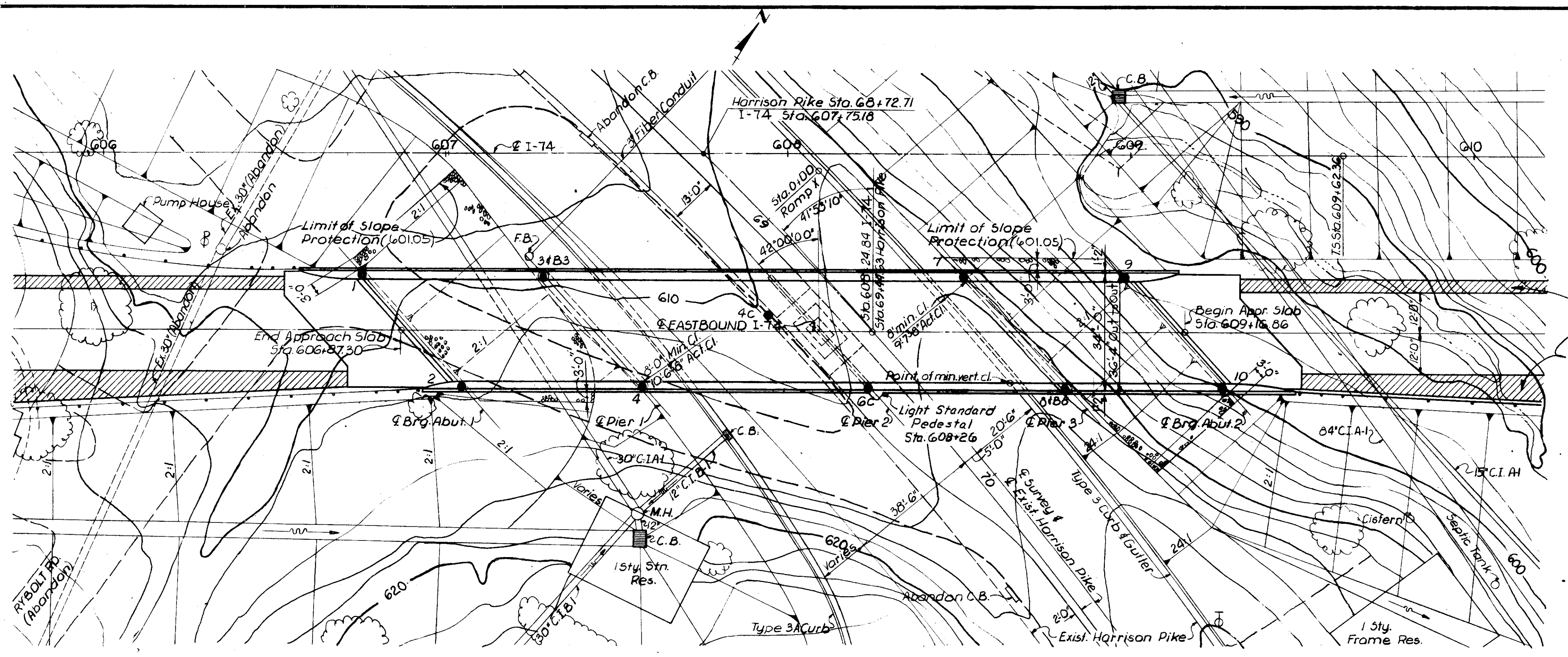
DATE
9-25-62
5-24-65

MICROFILMED
NOV 1 1965

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

281

HAM-74-11.37



CURVE DATA - HARRISON PIKE

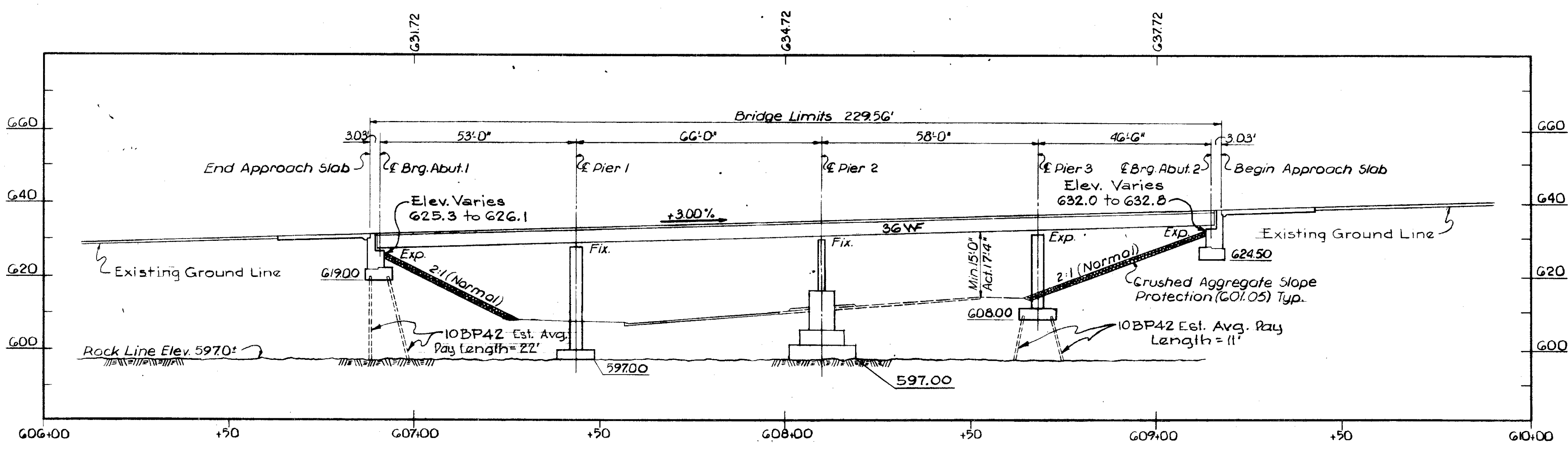
P.I. Sta. 67+39.595
Dc = 5°00'00"
Δ = 57°24'13"
R = 1145.92'
L = 1148.07'
T = 627.41'

NOTES:

- ◆ Core Boring & Rod Sounding
- Rod Sounding

Note:
Contours indicate the ground surface before the embankment was placed for Project 749-G1. See roadway cross sections this project.

PLAN



BENCH MARK
B.M. #2 Elev. 710.06
PK Nail in N. Root of 12" Cherry
207' Rt. Sta. 624+15

PROPOSED STRUCTURE
TYPE: Continuous rolled steel beams with reinforced concrete deck and substructure.
SPANS: 53'-0"; 66'-0"; 58'-0"; 46'-6"
ROADWAY: 30'-0" face to face of safety curbs.
LOAD FREQUENCY: CF-2000(97) Adequate for AASHO alternate loading
SKEW: 42°00'00" (R.F.)
WEARING SURFACE: 1" Monolithic concrete
APPROACH SLABS: A5-1-54 (25'-0" long)
ALIGNMENT: Tangent

VOGT, IVERS, SEAMAN & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SITE PLAN
BRIDGE NO. HAM-74-1129 R
I-74 OVER HARRISON PIKE
HAMILTON COUNTY STA. 606+87.30 to
STA. 609+16.86

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
AERIAL	—	C.E.S.	I.G.V.	RDU	

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL
503		Lump Sum	Cofferdams, cribs and sheeting				Lump
503	985	Cu. Yds.	Unclassified Excavation	377	608		
505		Lump Sum	First Test Pile				
507	746	Lin. Ft.	Steel Piles, 10 BP 42	442	304		
509	132,970	Lbs.	Reinforcing Steel	14,494	45,574	72,902	
511	264	Cu. Yds.	Class "C" Concrete, Superstructure			264	
511	109	Cu. Yds.	Class "C" Concrete, Piers above footings		109		
511	138	Cu. Yds.	Class "E" Concrete, Abutments above footings	138			
511	225	Cu. Yds.	Class "E" Concrete, Pier & Abutment footings	73	152		
512	21	Lin. Ft.	Preformed Sealing Strip	21			
513	232,034	Lbs.	Structural Steel		43,417	188,617	
514	232,034	Lbs.	Field Painting of Structural Steel		43,417	188,617	
517	516.00	Lin. Ft.	Bridge Railing, Type "A"	64.00		452.00	
518	42	Cu. Yds.	Porous Backfill	42			
518	10	Each	Scuppers, including supports			10	
518	84	Lin. Ft.	6" Perforated Helical C.M.P., 707.06, including specials.	84			
518	94	Lin. Ft.	6" Helical C.M.P., 707.06, non-perforated	94			
601	201	Sq. Yds.	Crushed Aggregate, Slope Protection				201
* 625			Lighting System				
808	264	Units	Water-reducing Set-retarding Admixture			264	
825	1070	Sq. Yds.	Concrete Surface Treatment			1070	
828	81	Lin. Ft.	Joint Sealer	81			

Materials in approach slabs are not included in the above estimated quantities.

For Summary of Bridge Lighting Details and Quantities, see Sheet Nos. 259 and 263.

GENERAL NOTES

REFERENCE shall be made to the following:

- Standard Drawings: AR-1-57, revised 4-2-62
- AS-1-54, revised 8-10-65
- SD-1-65, dated 11-8-65
- FSB-1-62, revised 1-15-63
- RB-1-55, revised 2-2-59

- Supplemental Specifications: 808 dated 2-7-66
- 811 dated 3-29-65
- 825 dated 4-22-65
- 828 dated 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.

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., except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p. s. i.

Piles shall be driven to firm contact with rock with a hammer of not less than 11,000 ft. lbs. per blow. If the length of penetration is approximately equal to the depth to rock according to the bridge foundation investigation report, the firm contact shall be considered as attained when the capacity according to the formula in Sec. 507.05 is not less than the following values for a pile hammer of the indicated energy rating.

For Abutment 1 piles
 49 tons per pile using an 11,000 ft. lb. hammer
 42 tons per pile using a 15,000 ft. lb. hammer

For Pier 3 piles
 49 tons per pile using an 11,000 ft. lb. hammer
 44 tons per pile using a 15,000 ft. lb. 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 35 tons per pile for the abutment piles and 30 tons per pile for the pier piles.

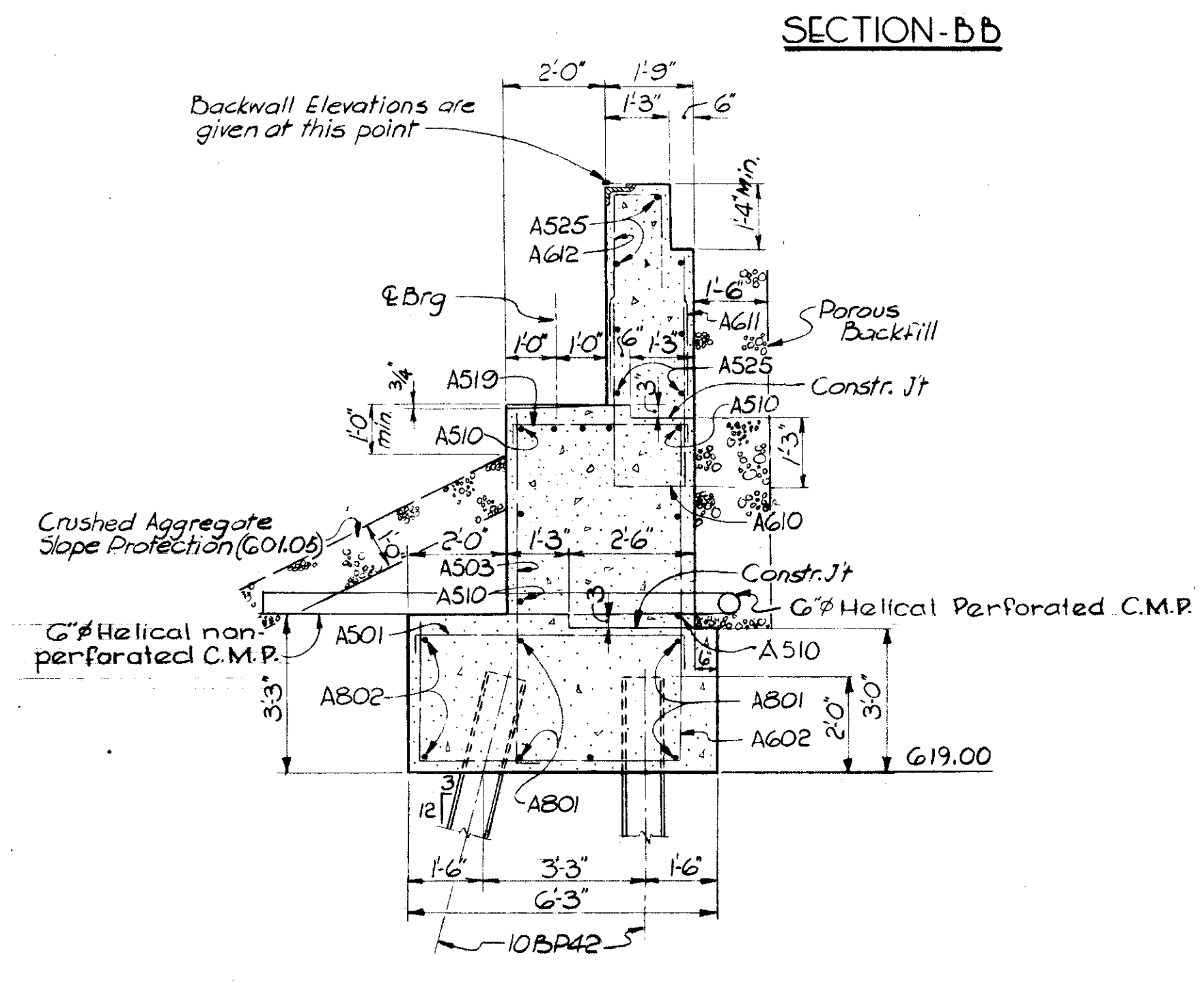
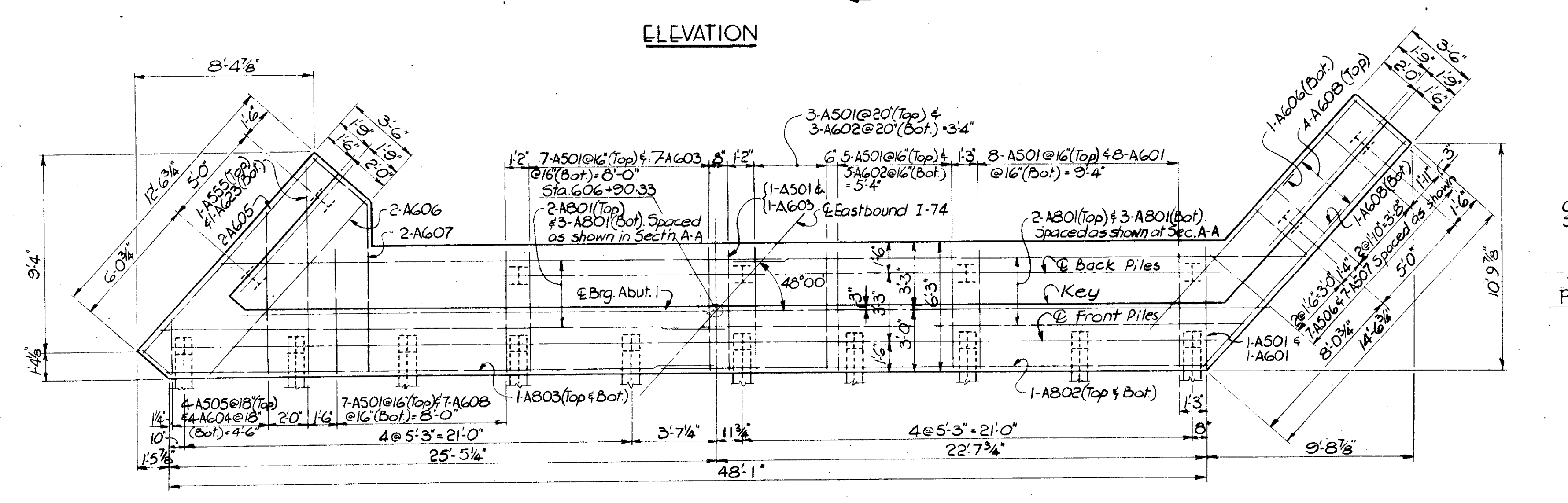
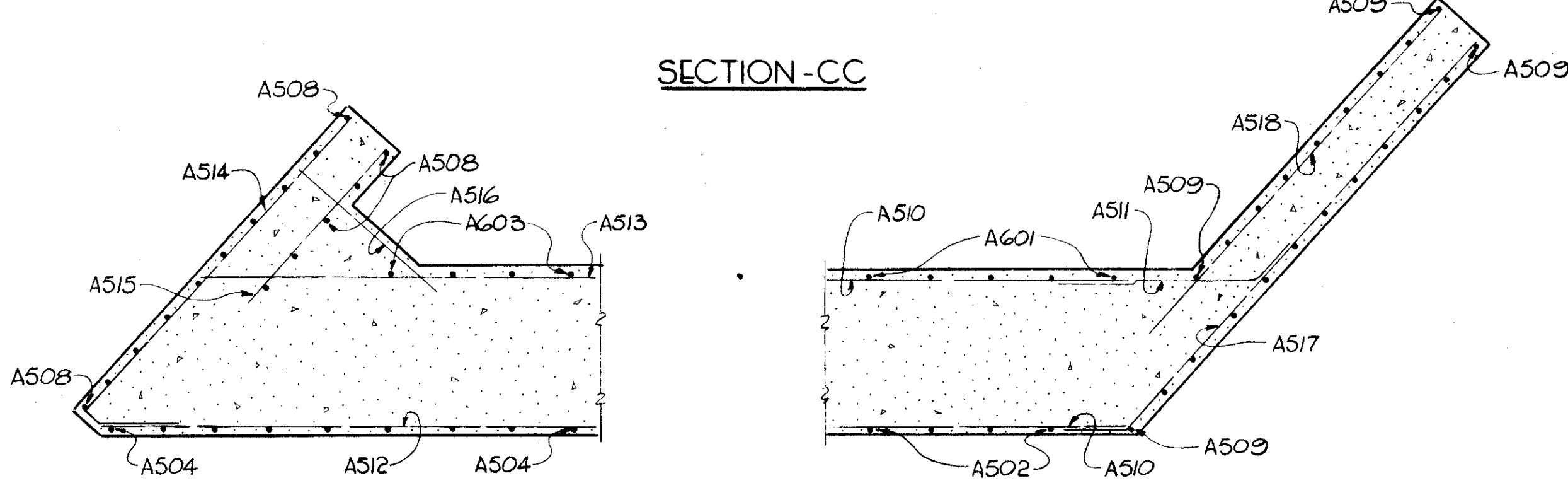
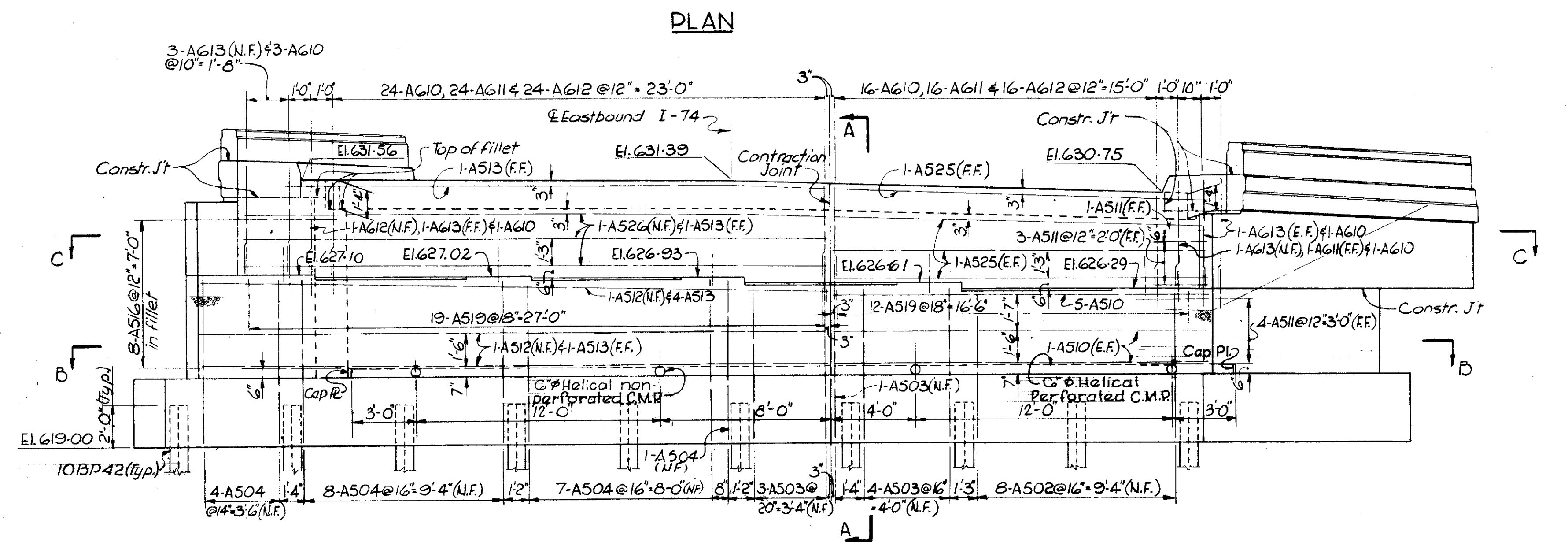
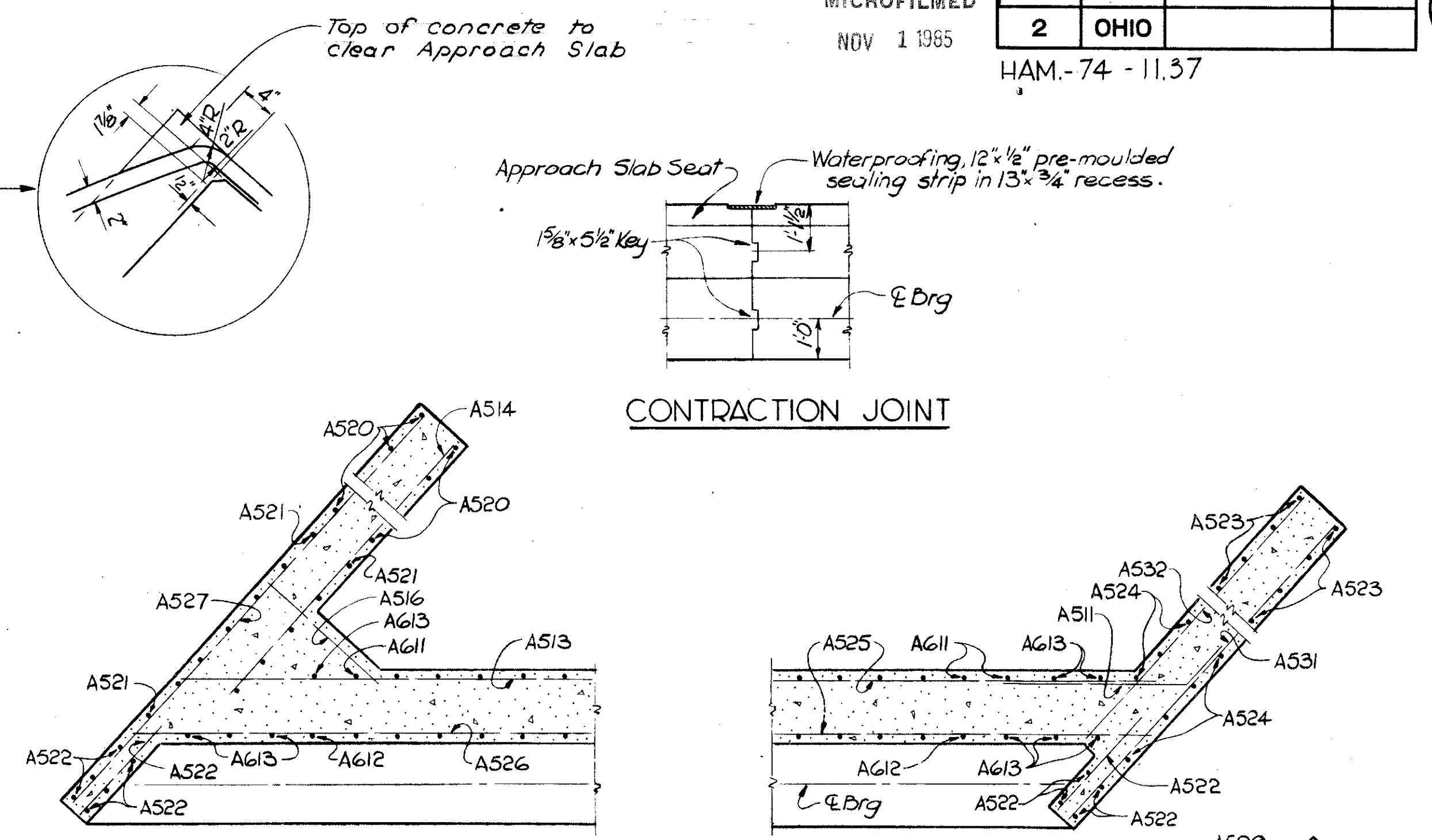
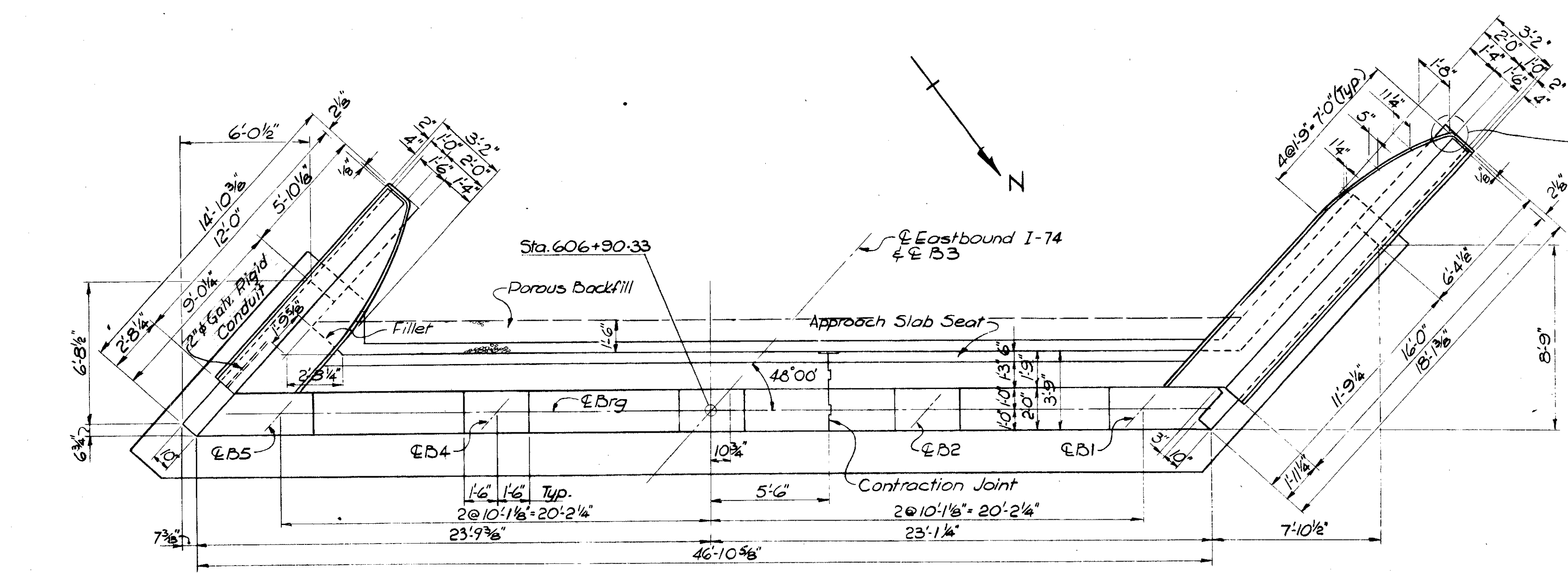
FOUNDATION BEARING PRESSURE: Abutment 2 footing is designed for a maximum allowable bearing pressure of 2.5 tons per sq. ft., Pier 1 footing is designed for a maximum bearing pressure of 4.0 tons per sq. ft. and Pier 2 footing is designed for a maximum bearing pressure of 5.0 tons per sq. ft.

PIER 1 and PIER 2 FOOTINGS shall extend a minimum of 3' into undisturbed rock or to the elevation shown, whichever is lower. Excavation at plan depth shall not be exposed to weathering prior to pouring footing concrete.

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.

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

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
ESTIMATED QUANTITIES & GENERAL NOTES BRIDGE NO. HAM-74-1129 R I-74 OVER HARRISON PIKE HAMILTON COUNTY STA. 606+87.30 to STA. 609+16.86					
DESIGNED RKK	DRAWN LPH	TRACED ~	CHECKED HDJ	REVIEWED DATE JAD 10-13-65	REVISED



- NOTES:
1. Porous Backfill, 1'-6" thick, full length of the abutment, shall extend up to the underside of the approach slab.
 2. Designations used are:
N.F. = Near Face
F.F. = Far Face
E.F. = Each Face
 3. For Railing Details see Std. Dwg. AR-1-57.
 4. For Wingwall Details see Sh. 285
 5. For Reinforcing Steel List see Sh. 292
 6. Excavation for the abutment shall be made before driving piles.

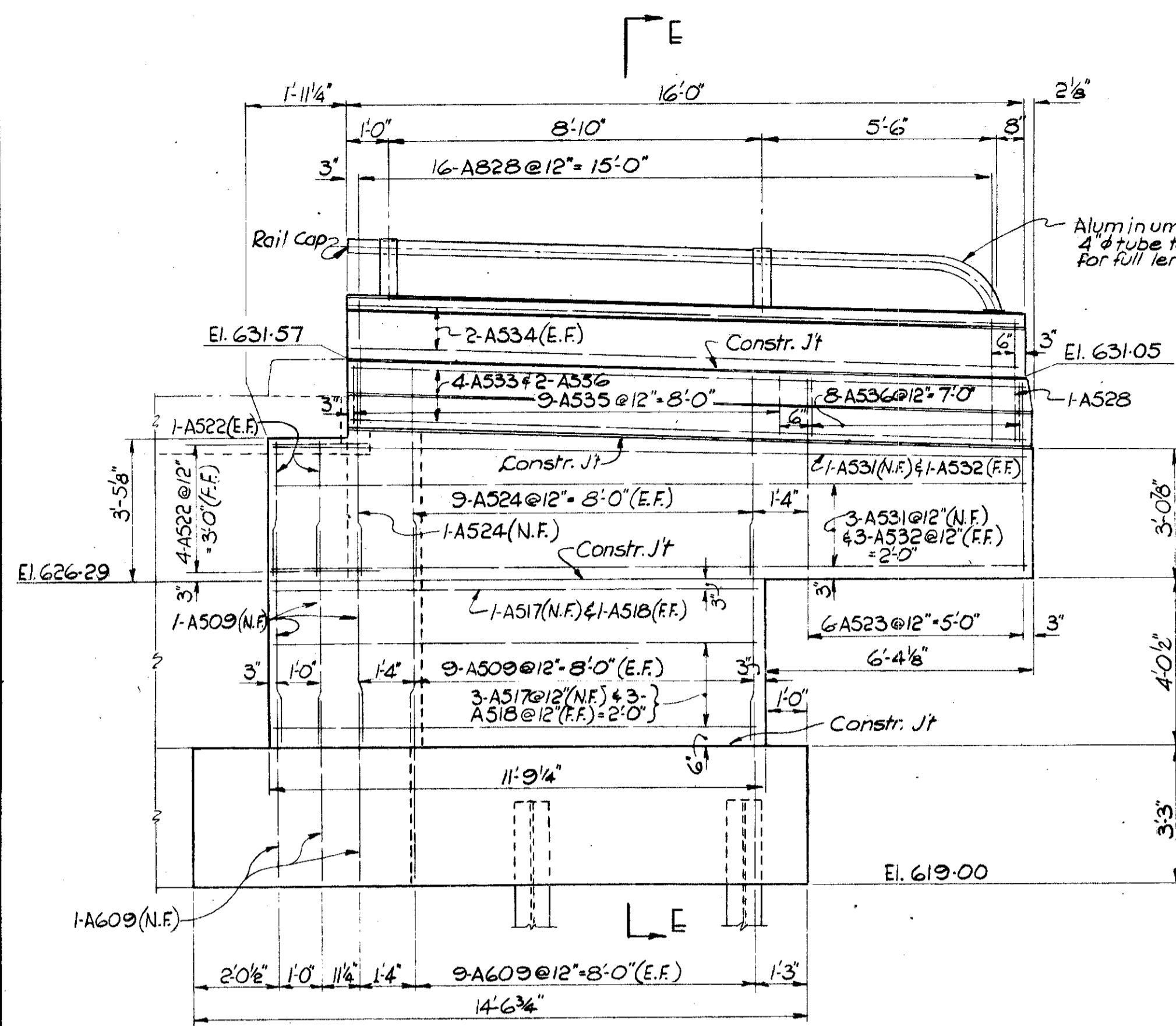
VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

ABUTMENT I
BRIDGE NO. HAM-74-1129R
I-74 OVER HARRISON PIKE

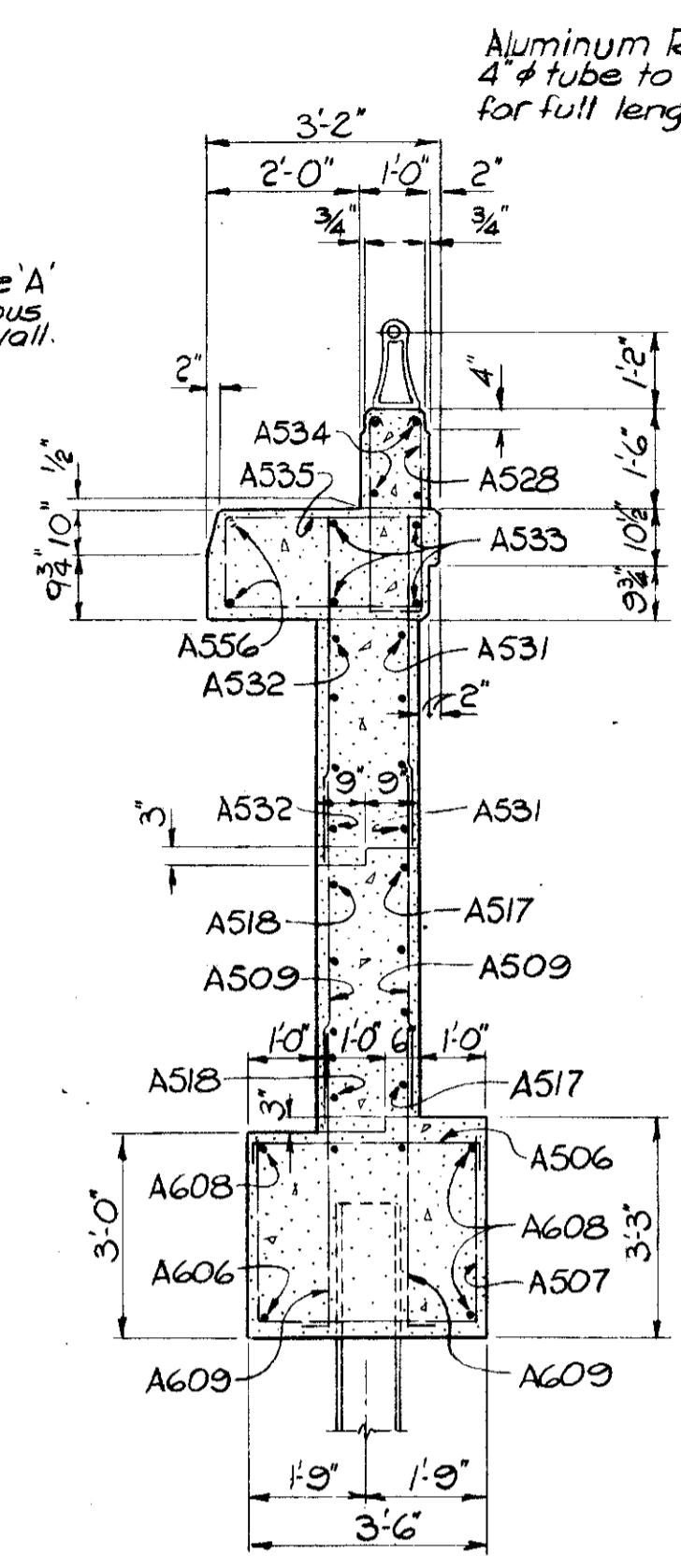
HAMILTON COUNTY STA. 606 + 67.30 to
STA. 609 + 16.86

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.E.S.	C.E.S.	D.J.W.	H.E.O.	JAD	10-13-65	

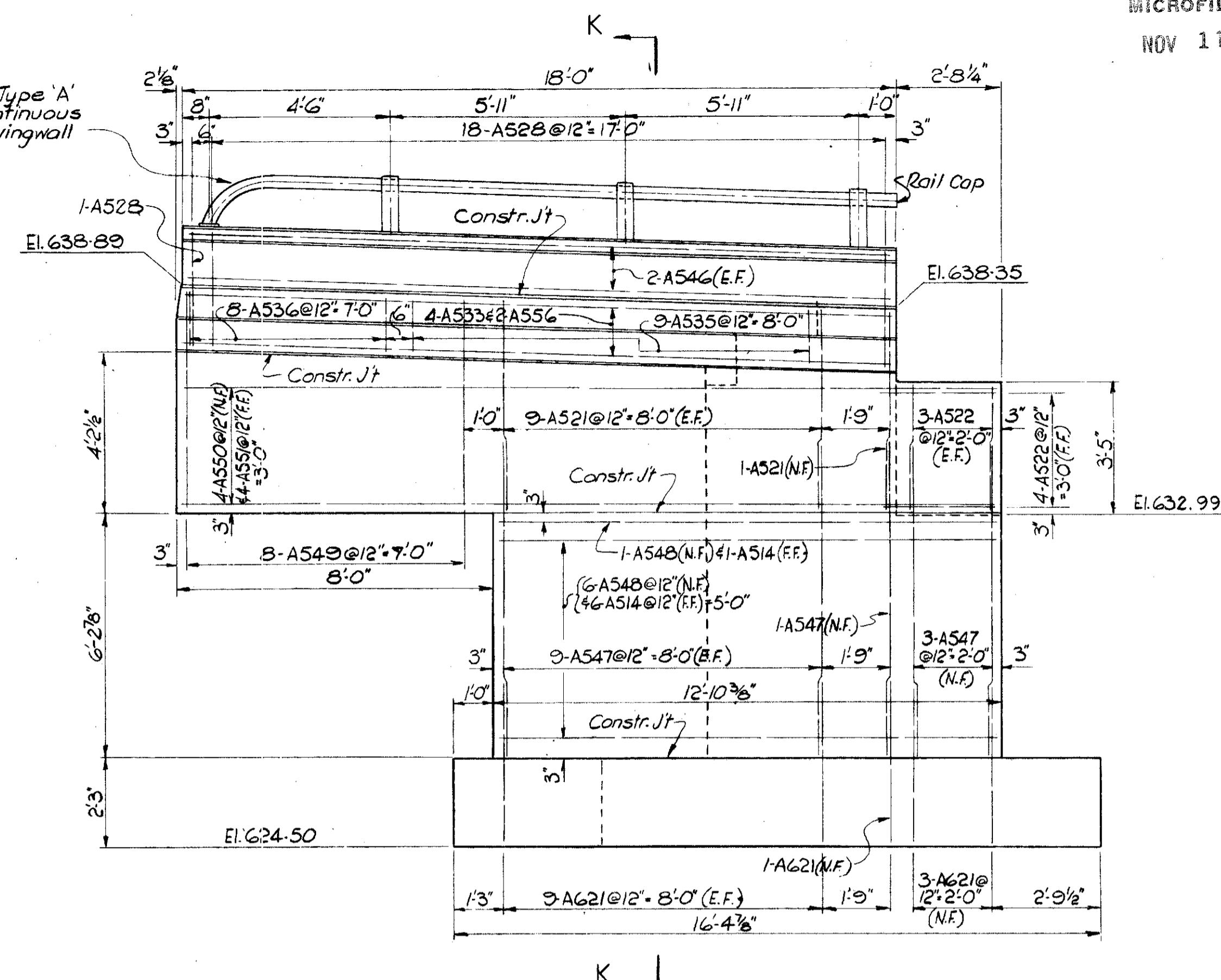
HAM - 74 - 1137



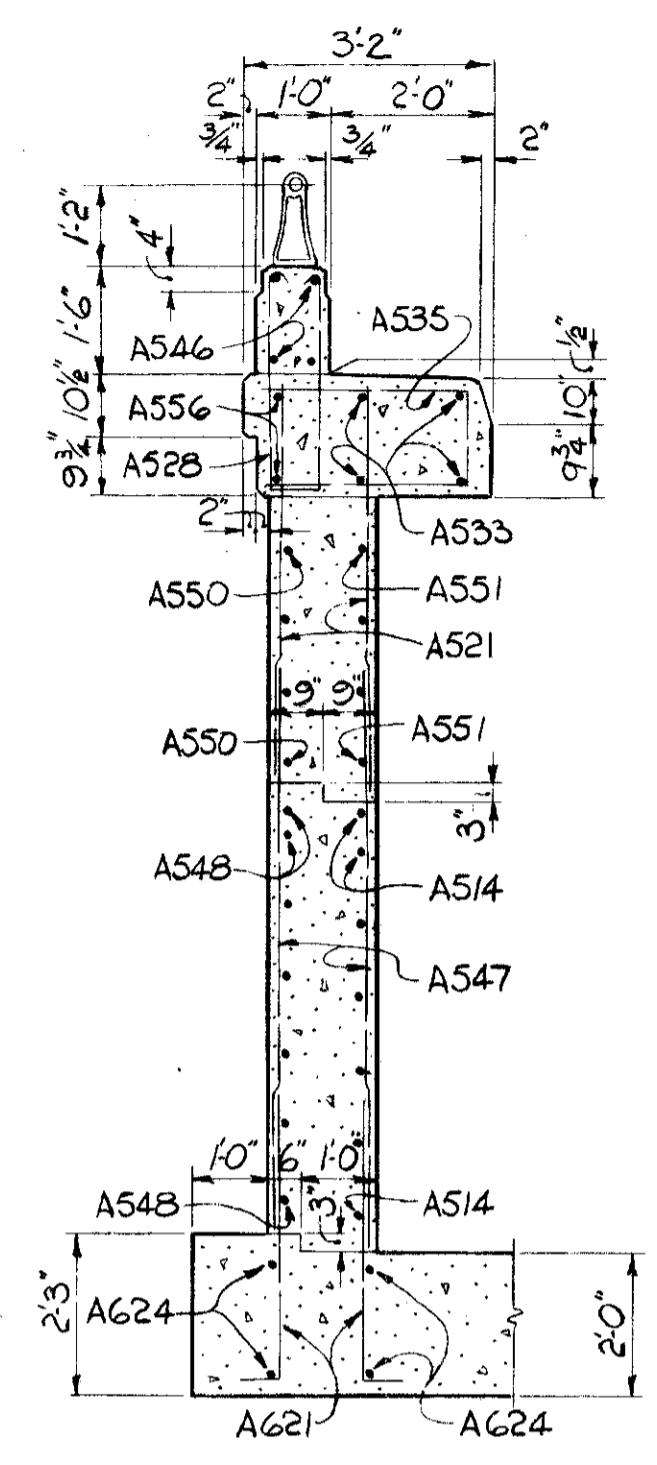
ELEVATION NORTH WINGWALL ABUT. 1



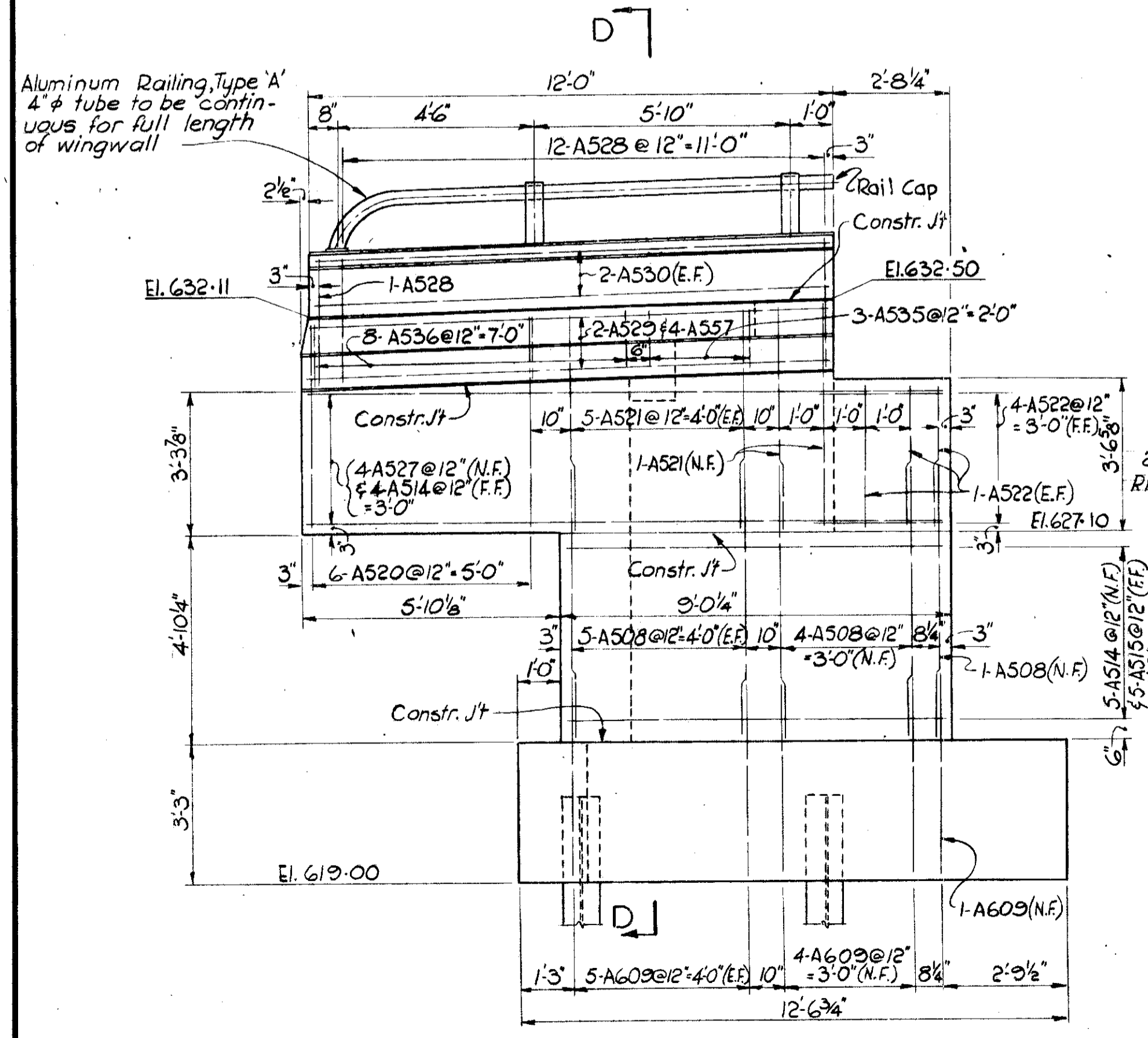
SECTION - EE



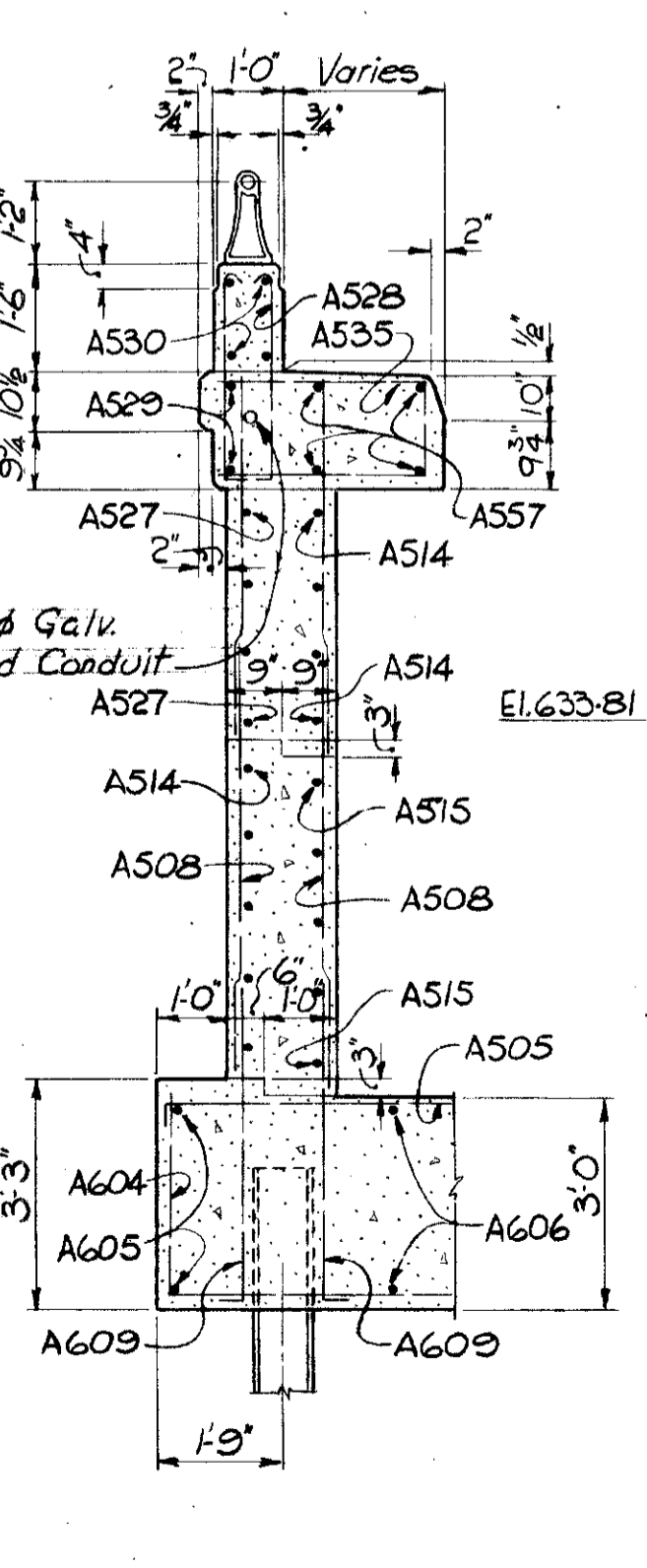
ELEVATION NORTH WINGWALL ABUT. 2



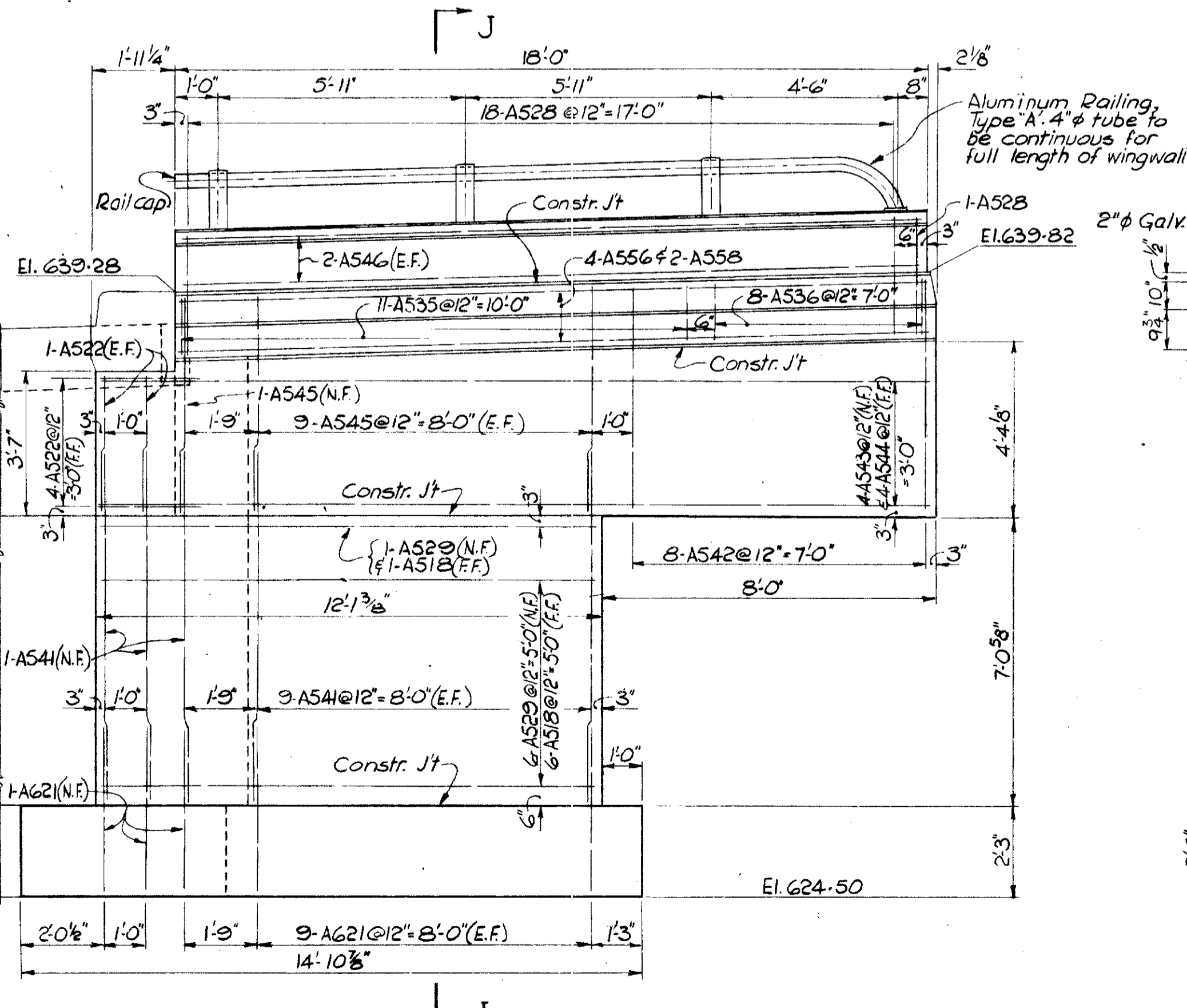
SECTION - KK



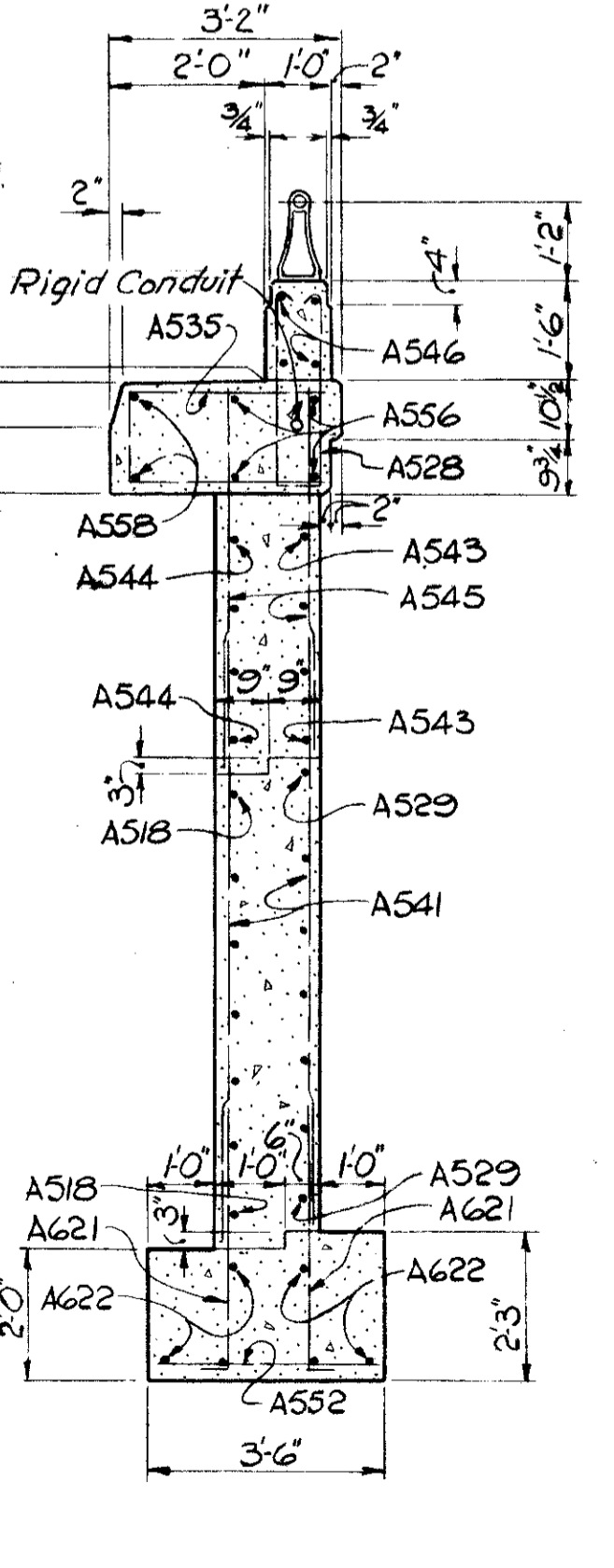
ELEVATION SOUTH WINGWALL ABUT. 1



SECTION - DD



ELEVATION SOUTH WINGWALL ABUT. 2



SECTION - JJ

NOTES:
1 For Reinforcing Steel List see Sh. 292

LEGEND
NF = Near Face
FF = Far Face
EF = Each Face

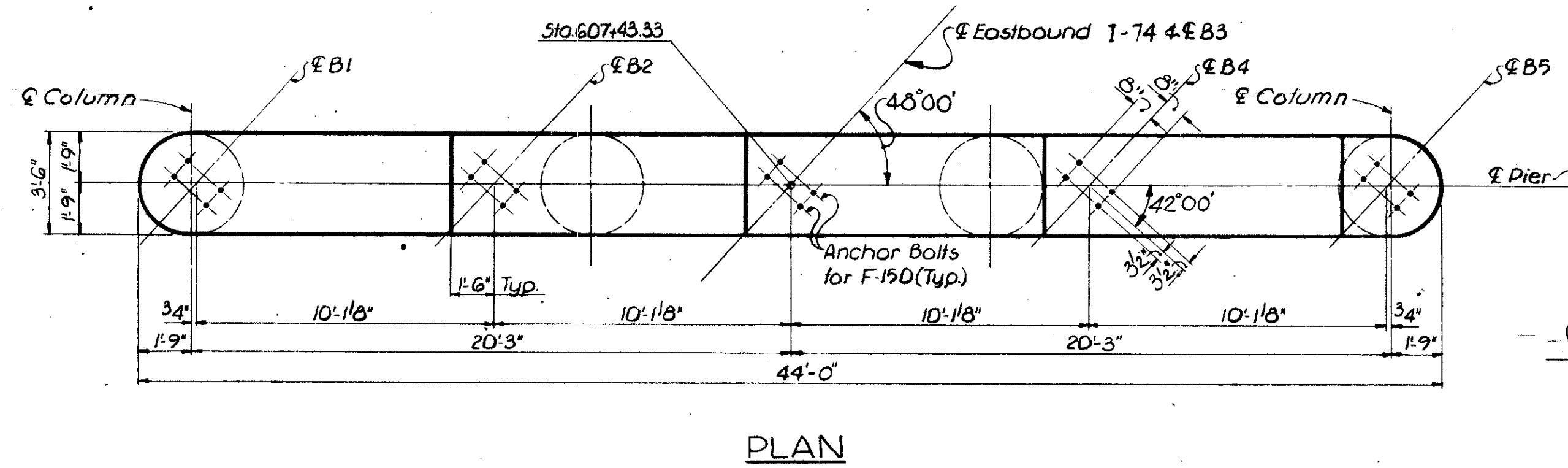
VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
ABUTMENT 1 & 2 WINGWALL DETAILS BRIDGE NO. HAM - 74 - 1129R 1-74 OVER HARRISON PIKE					
HAMILTON COUNTY STA. 606 + 87.30 to STA. 609 + 16.86					
DESIGNED C.E.S.	DRAWN C.E.S.	TRACED D.J.W.	CHECKED H.E.O.	REVIEWED JAD 10-13-65	DATE

MICROFILMED
NOV 1 1985

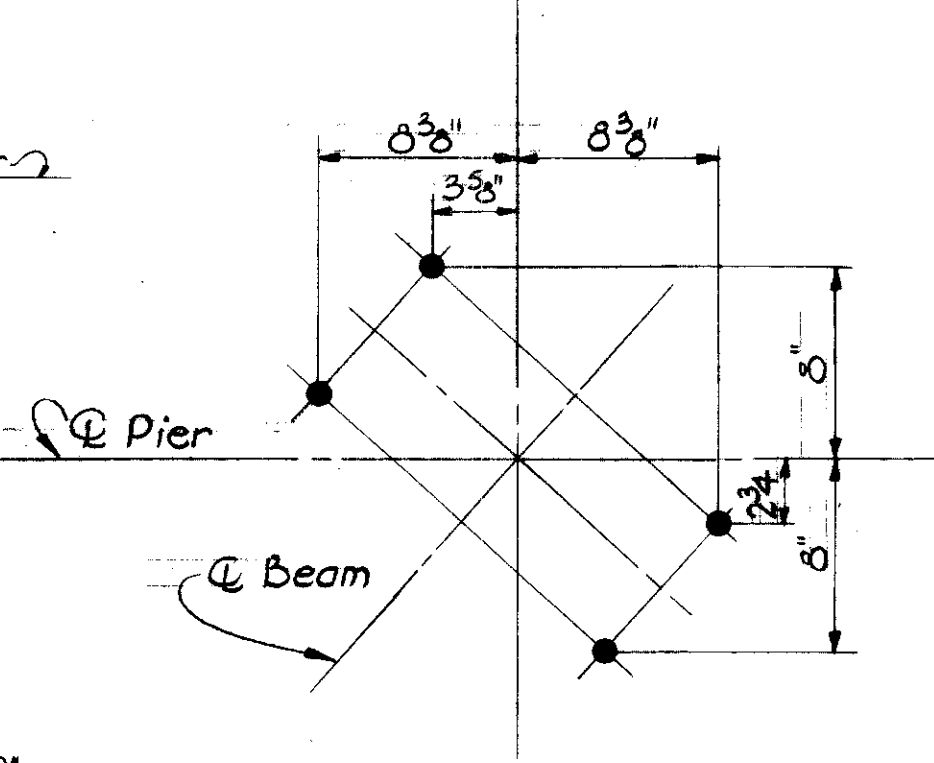
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

286

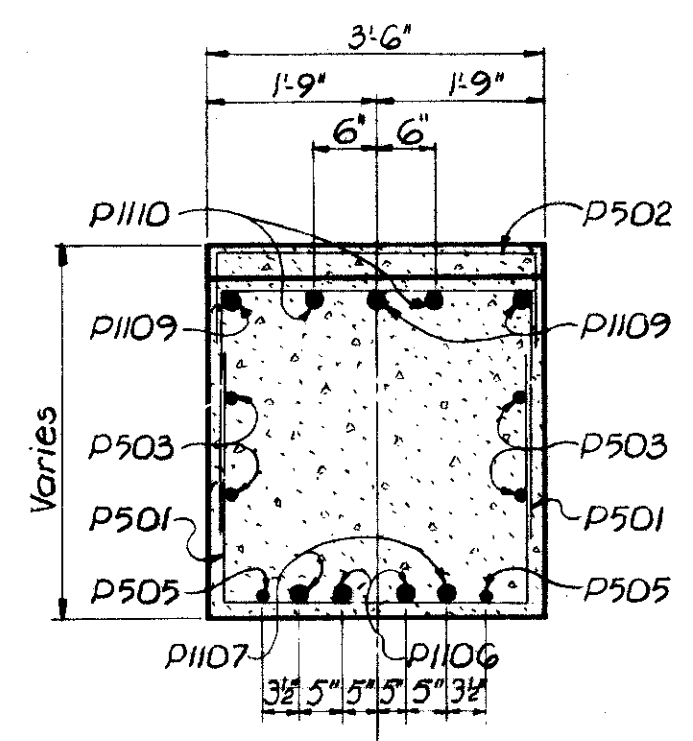
HAM-74-11.37



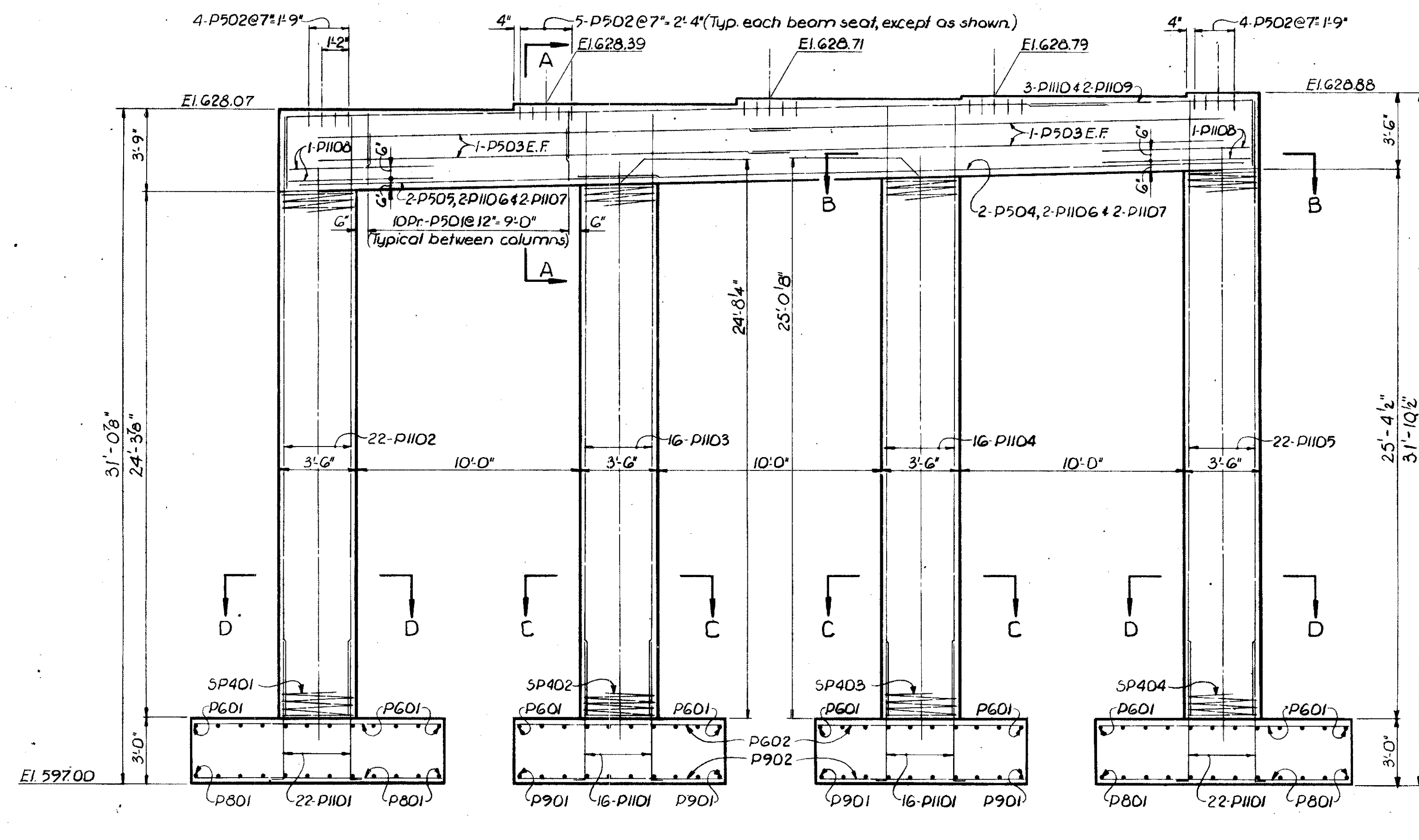
PLAN



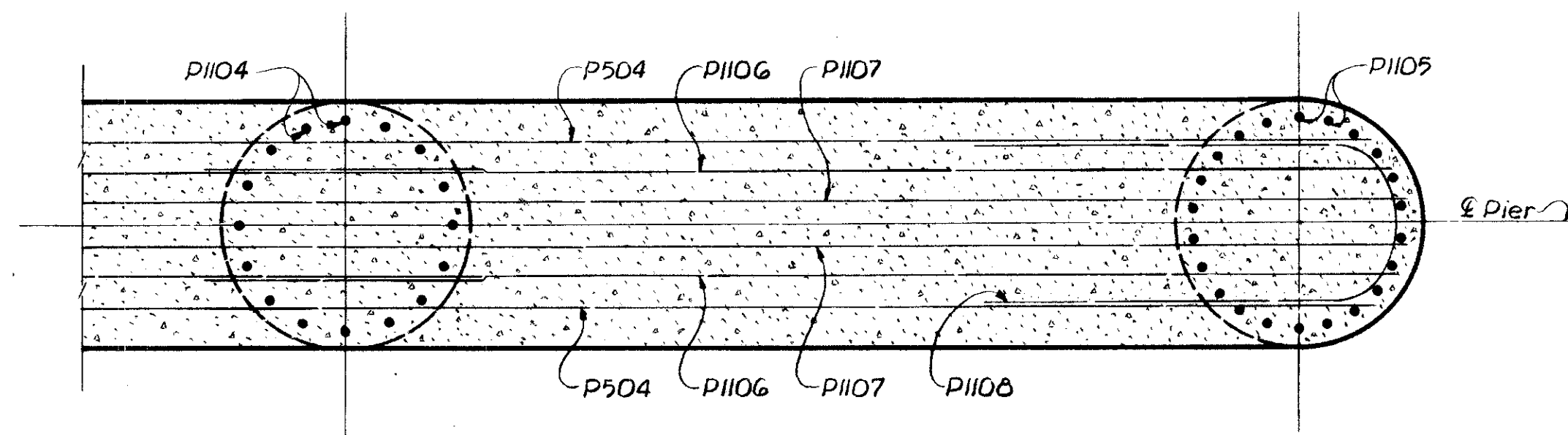
ANCHOR BOLT LAYOUT



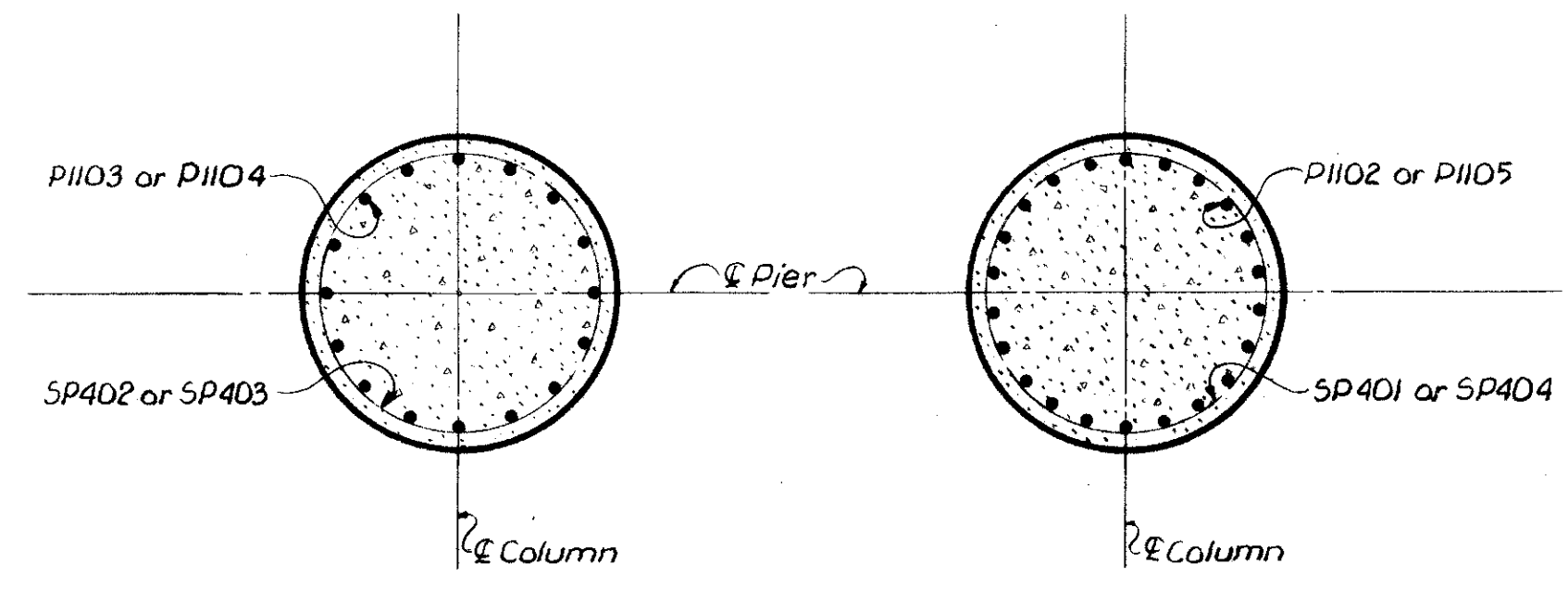
SECTION A-A



ELEVATION



SECTION B-B

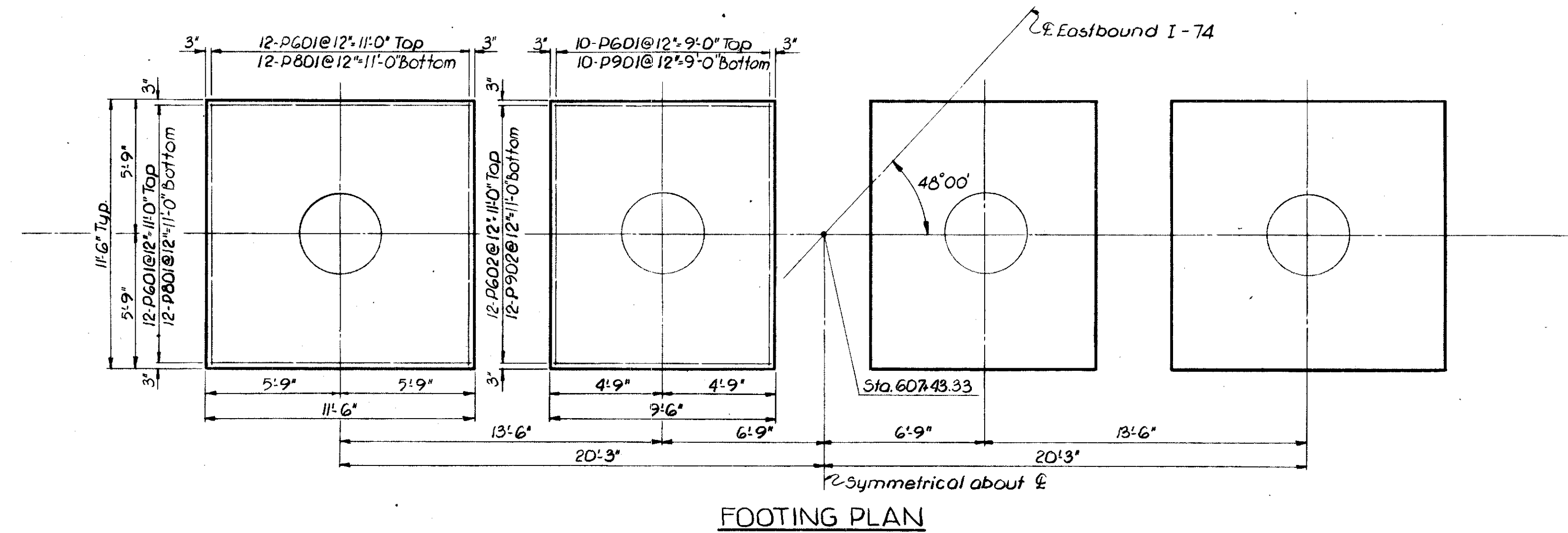


SECTION C-C

SECTION D-D

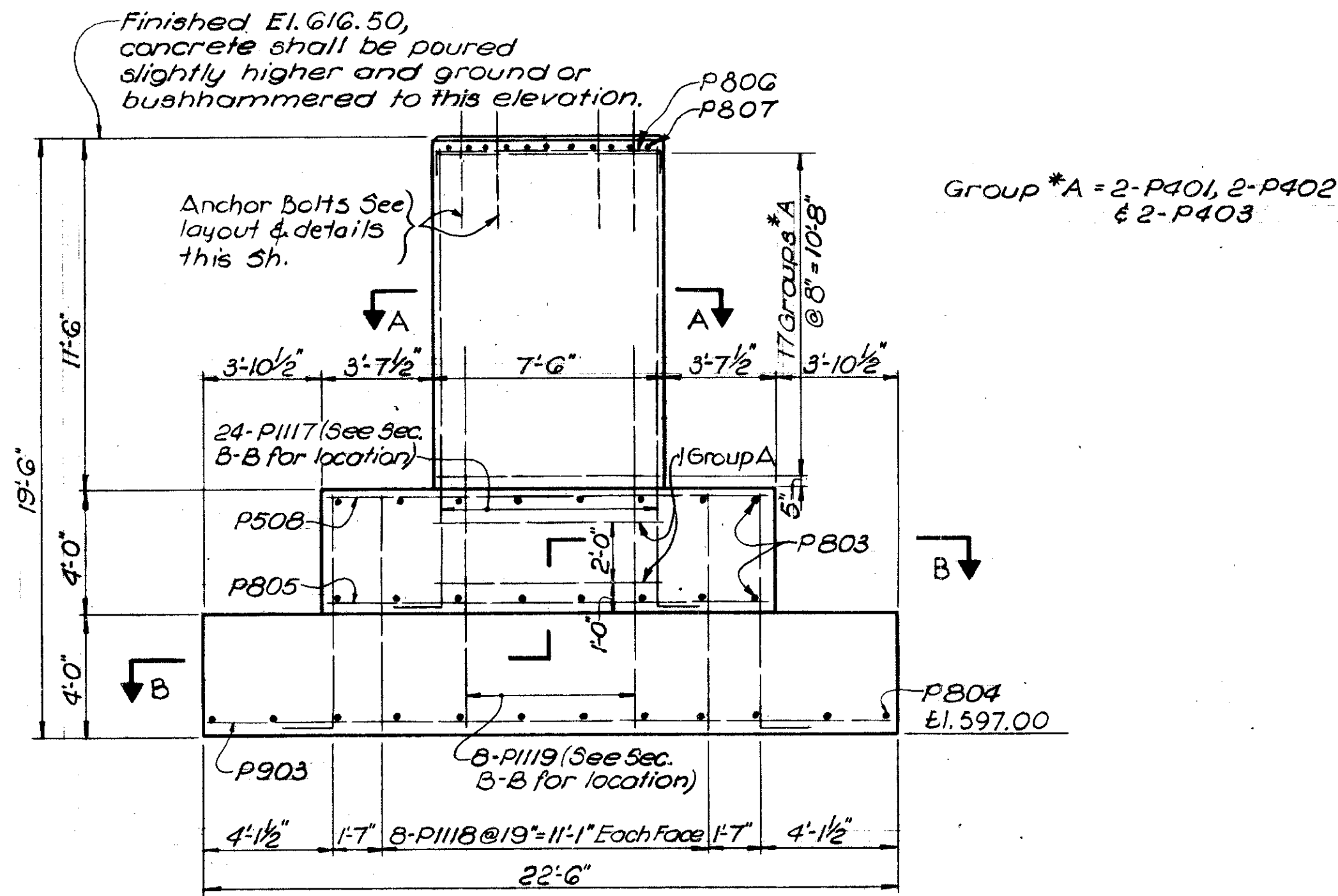
NOTES

- 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 bolt holes.
- FOOTINGS shall extend a minimum of 3' into undisturbed rock or to the elevation shown, whichever is lower.
- E.F. denotes each face.
- For Reinforcing Steel List see Sh 292

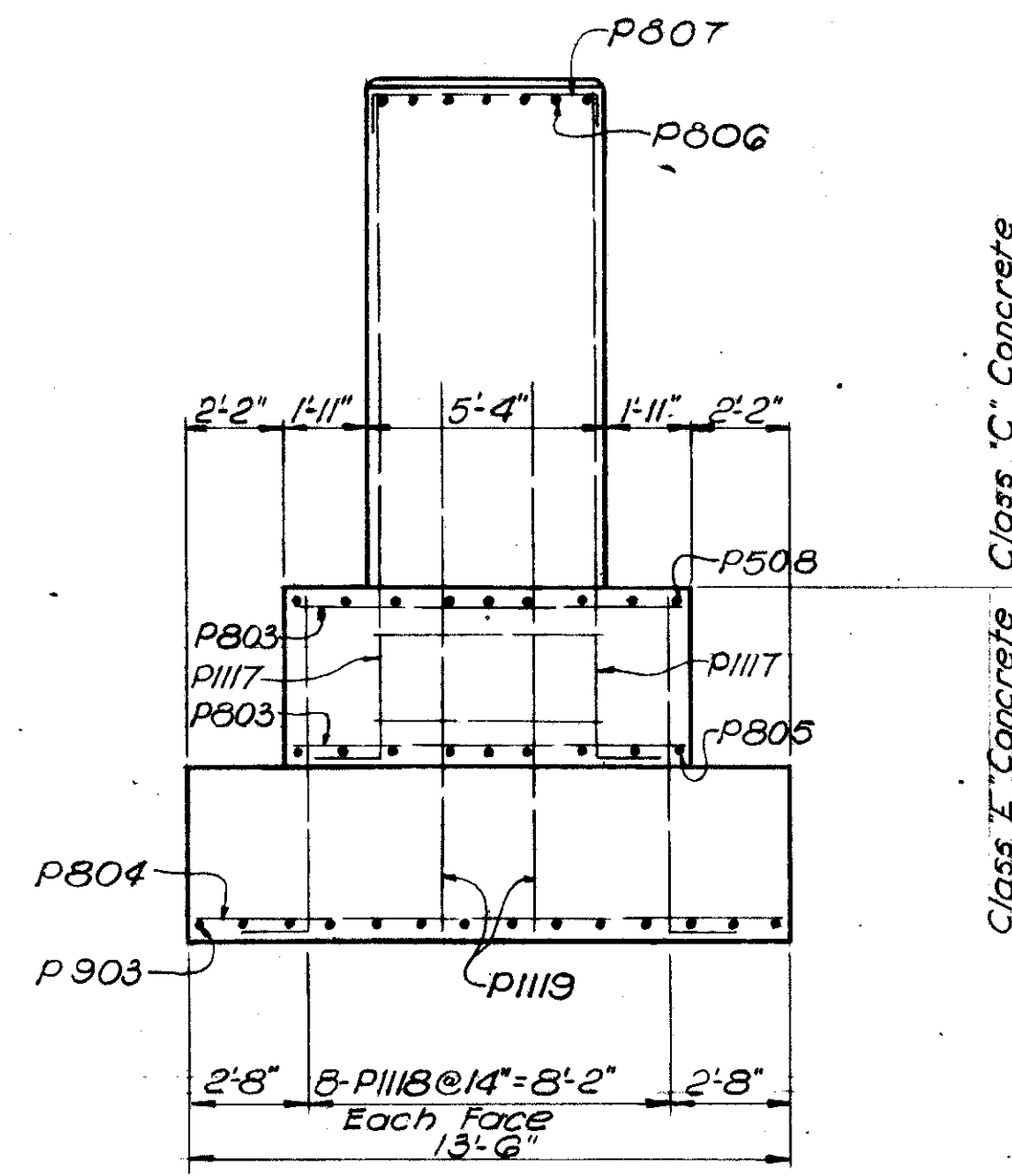


FOOTING PLAN

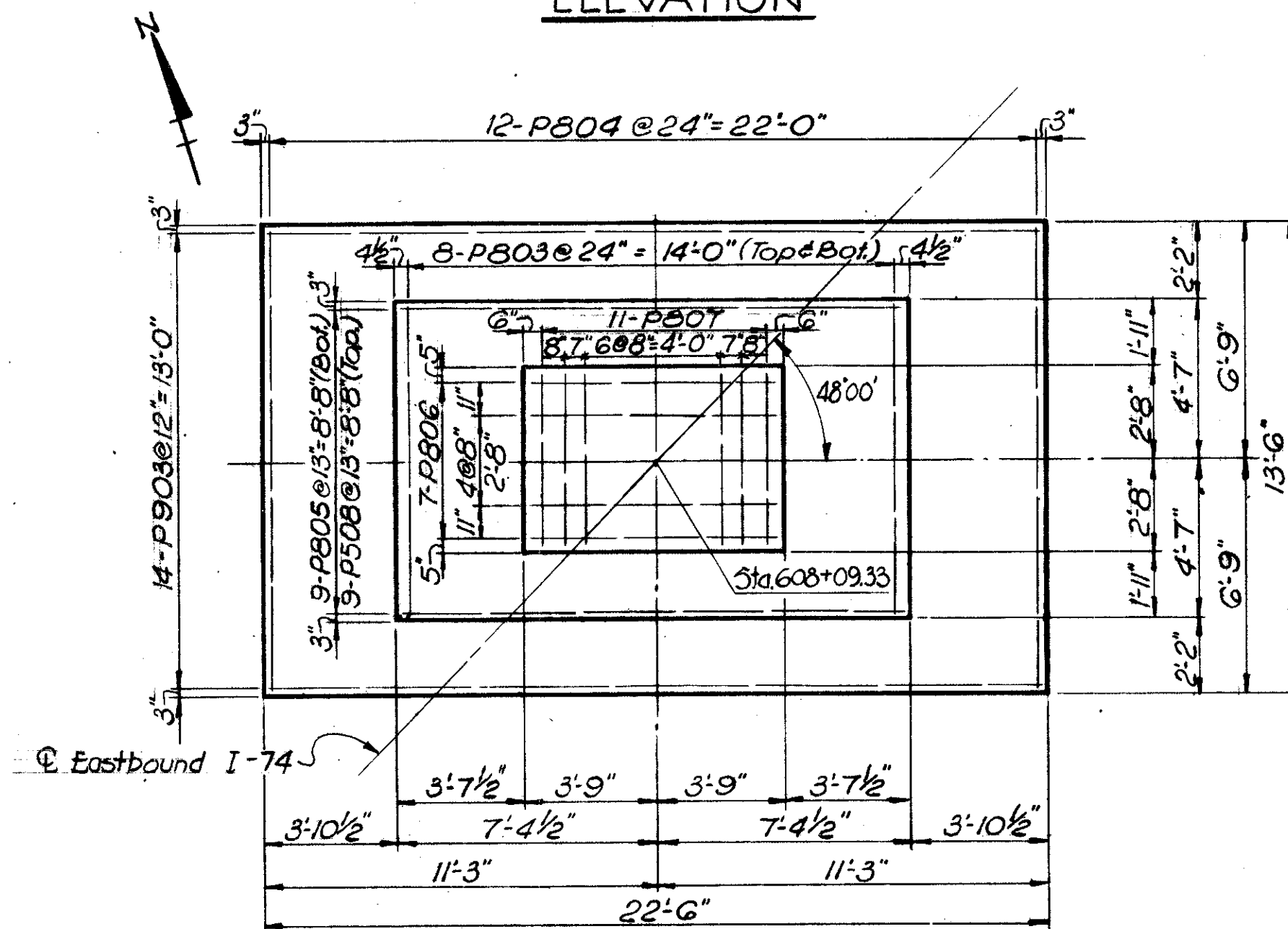
VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
PIER 1					
BRIDGE NO. HAM-74-1129 R I-74 OVER HARRISON PIKE					
HAMILTON COUNTY			STA. 609+87.30 TO STA. 609+16.86		
DESIGNED R.K.S.	DRAWN C.E.S.	TRACED I.G.V.	CHECKED L.P.H.	REVIEWED DATE JAD 10-13-65	REVISED



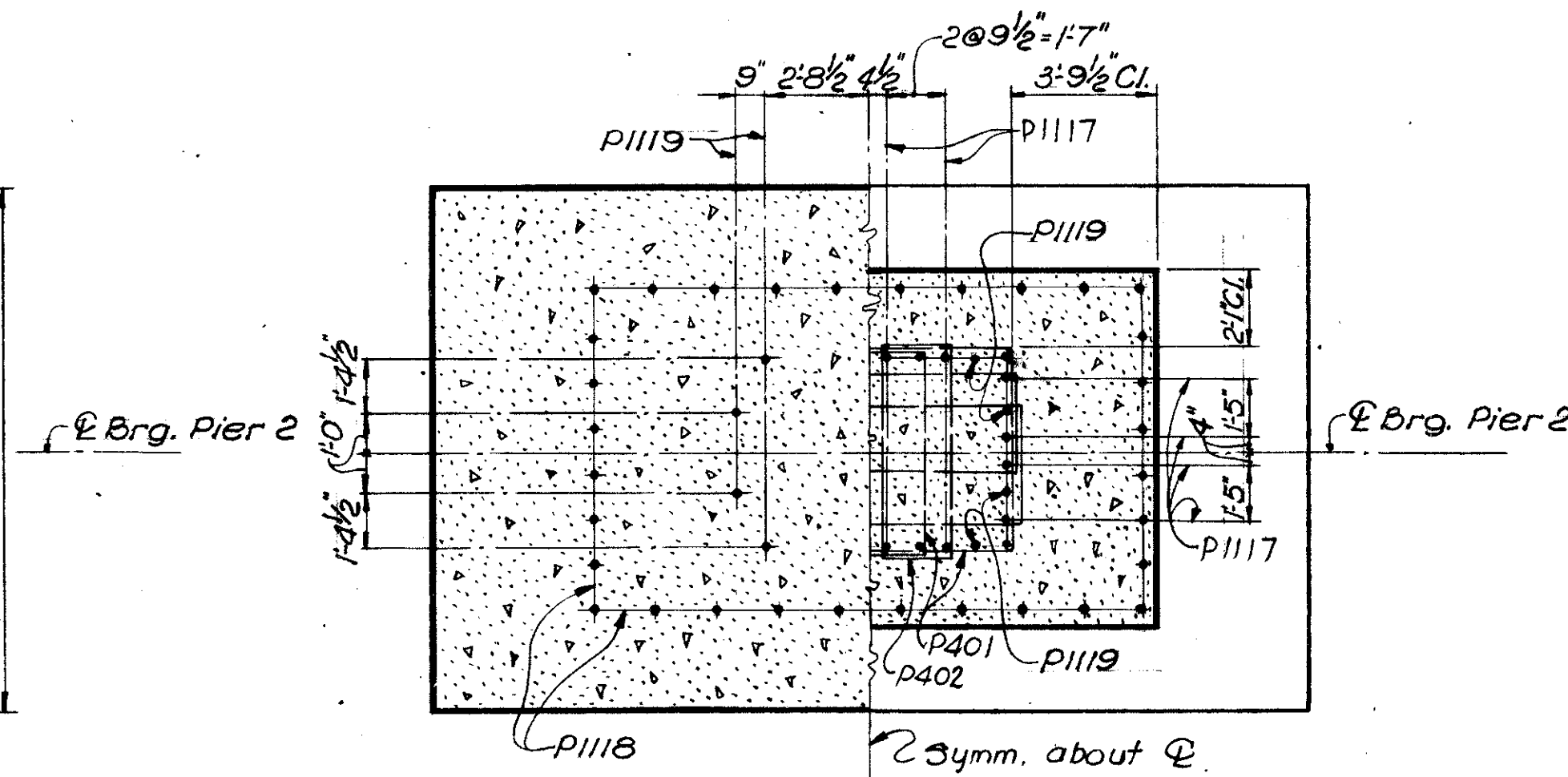
ELEVATION



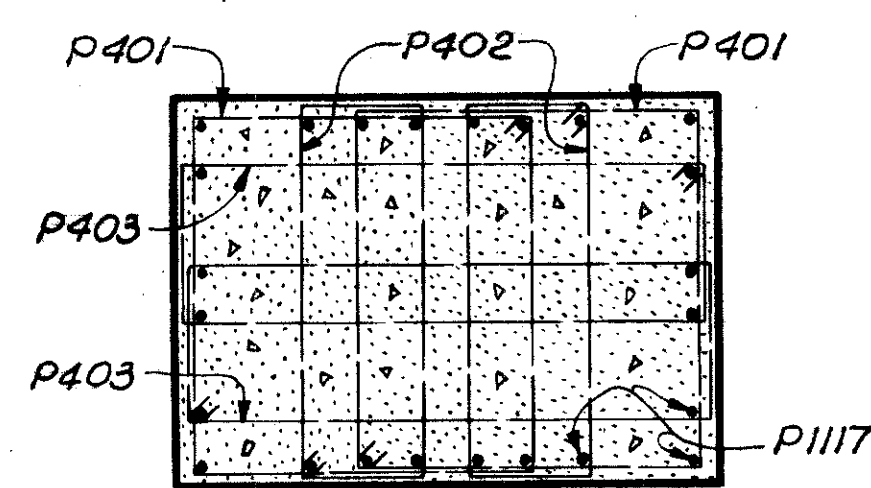
END ELEVATION



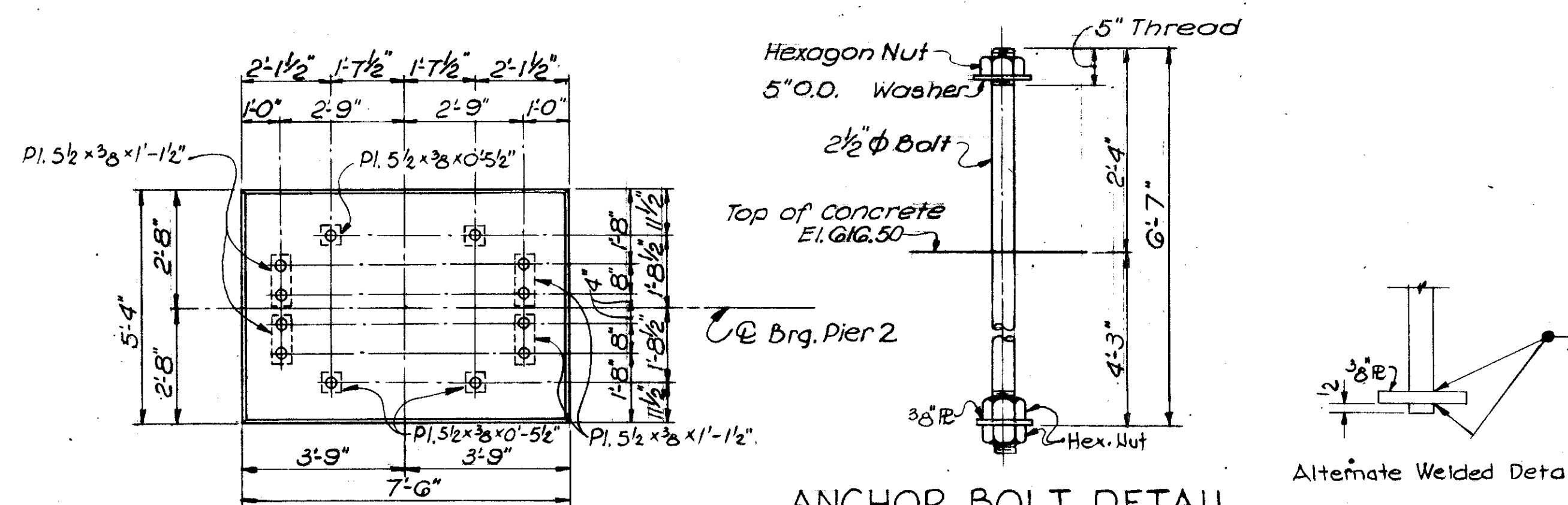
FOUNDATION PLAN



SECTION B-B



SECTION A-A



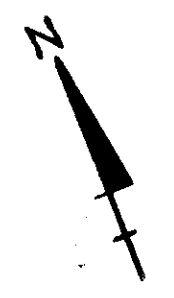
ANCHOR BOLT DETAIL
(Anchor bolts shall be cast-in-place, See Note 2)

ANCHOR BOLT LAYOUT

NOTES

1. Footing shall extend a minimum of 3' into undisturbed rock or to the elevation shown, whichever is lower.
2. Anchor bolts shall be cast-in-place. The contractor shall construct a template of sufficient strength to properly hold the bolts in alignment during the concreting operation.
3. For Reinforcing Steel List See Sh. 292

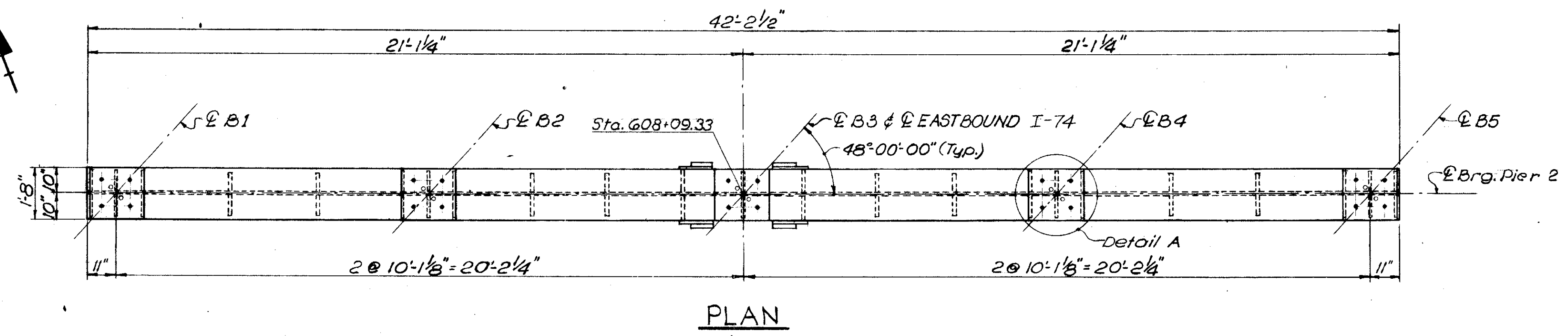
VOGT, IVERS, & ASSOCIATES ENGINEERS CINCINNATI		ARCHITECTS CHICAGO	
FOUNDATION FOR PIER 2			
BRIDGE NO. HAM-74-1129 R I-74 OVER HARRISON PIKE			
HAMILTON COUNTY STA. 606 + 87.30 to STA. 609 + 16.86			
DESIGNED	DRAWN	TRACED	CHECKED
C.E.S.	J.T.	~	E.R.B.
REVIEWED	DATE	REVISED	
	JAD 10-13-65		



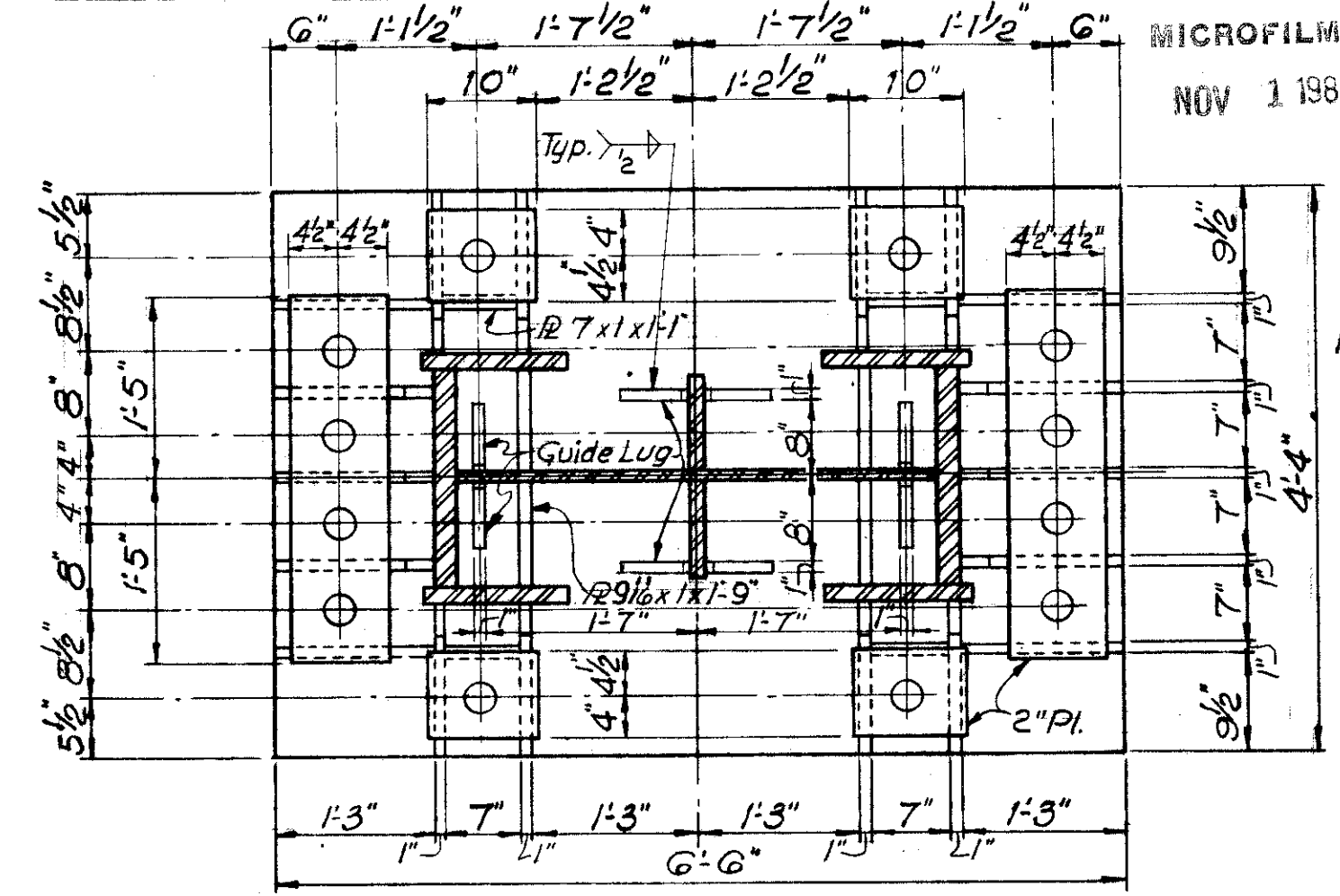
MICROFILMED
NOV 1 1965

FED. RD. DIVISION	STATE	PROJECT	288
2	OHIO		

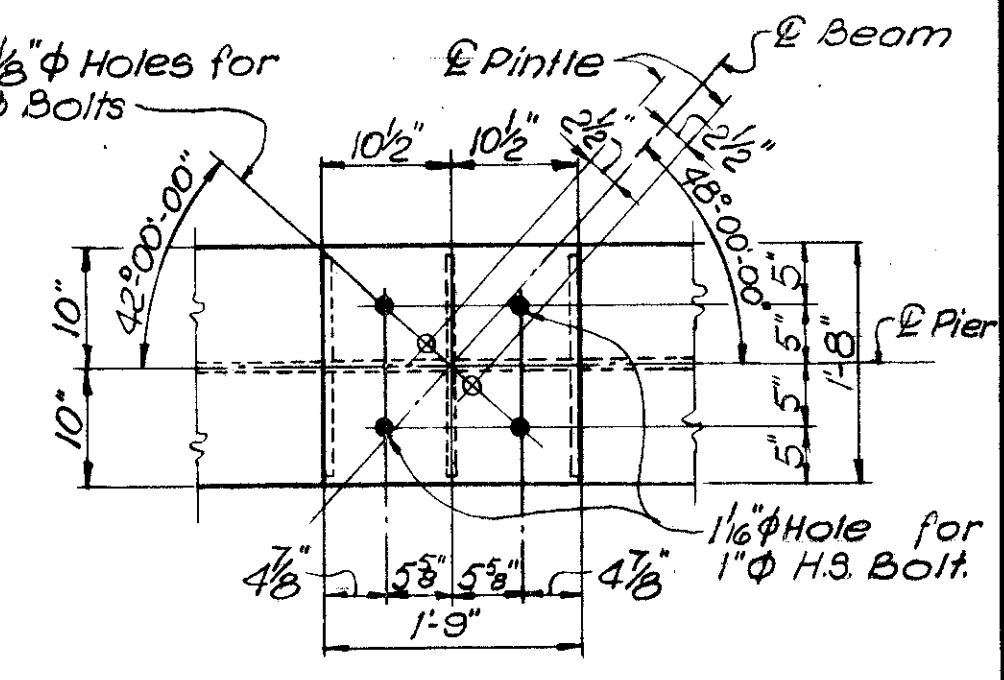
HAM-74-11.37



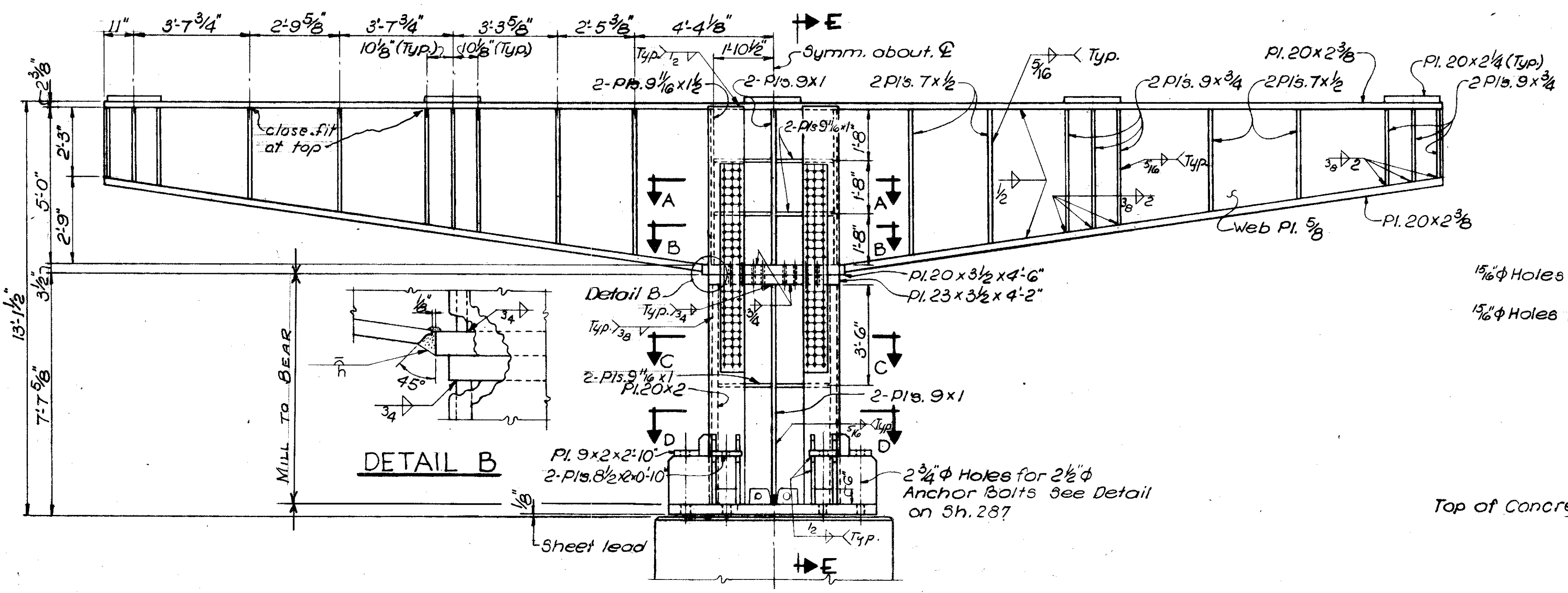
PLAN



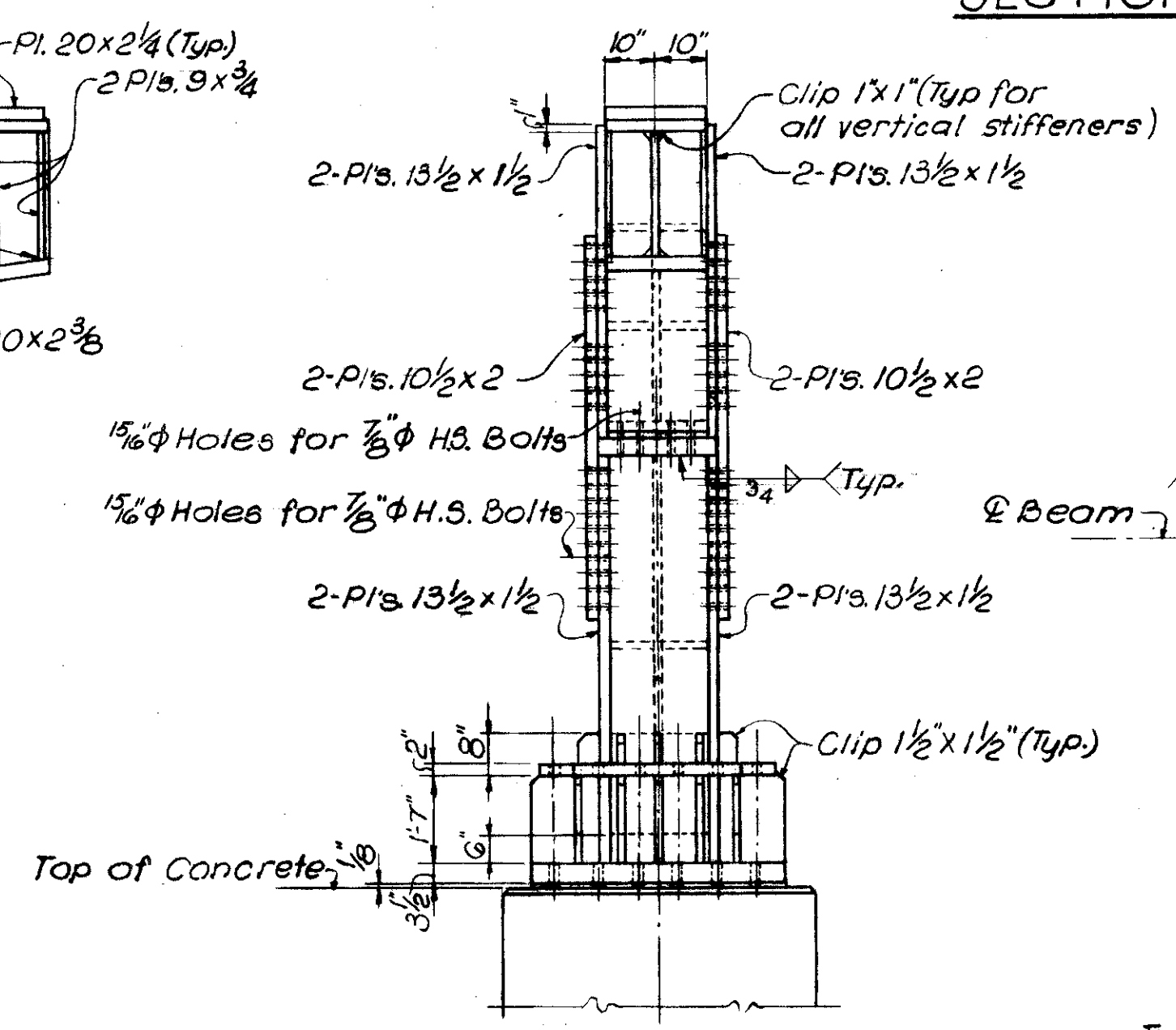
SECTION D-D



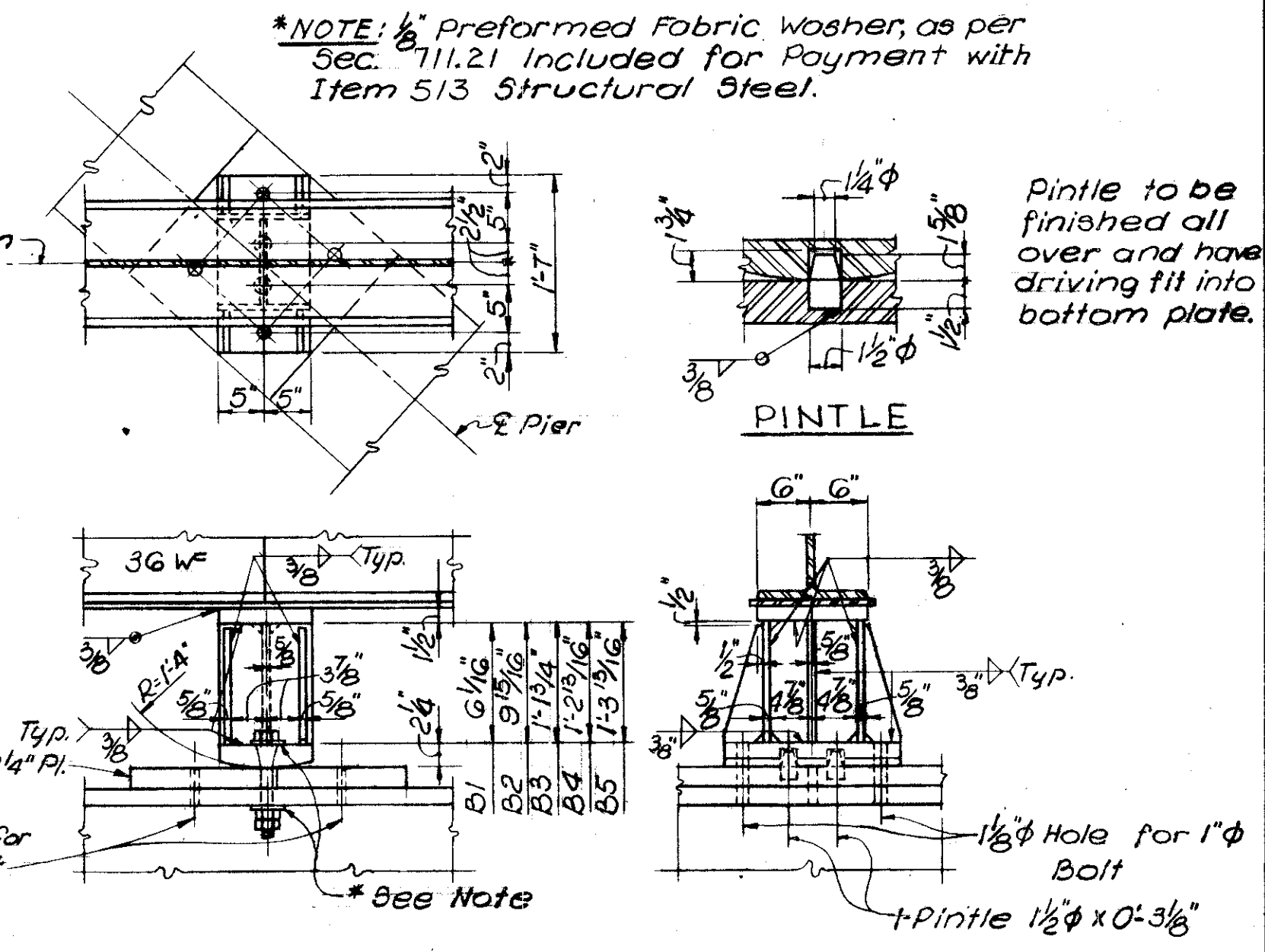
DETAIL A



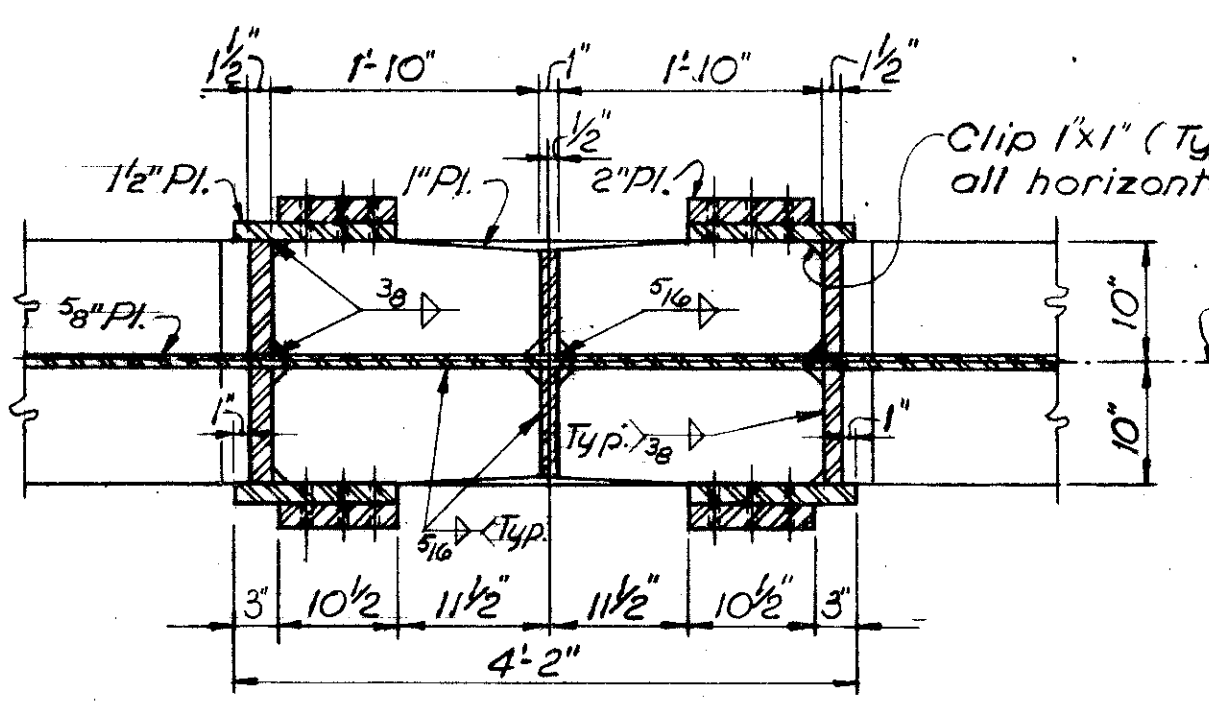
ELEVATION



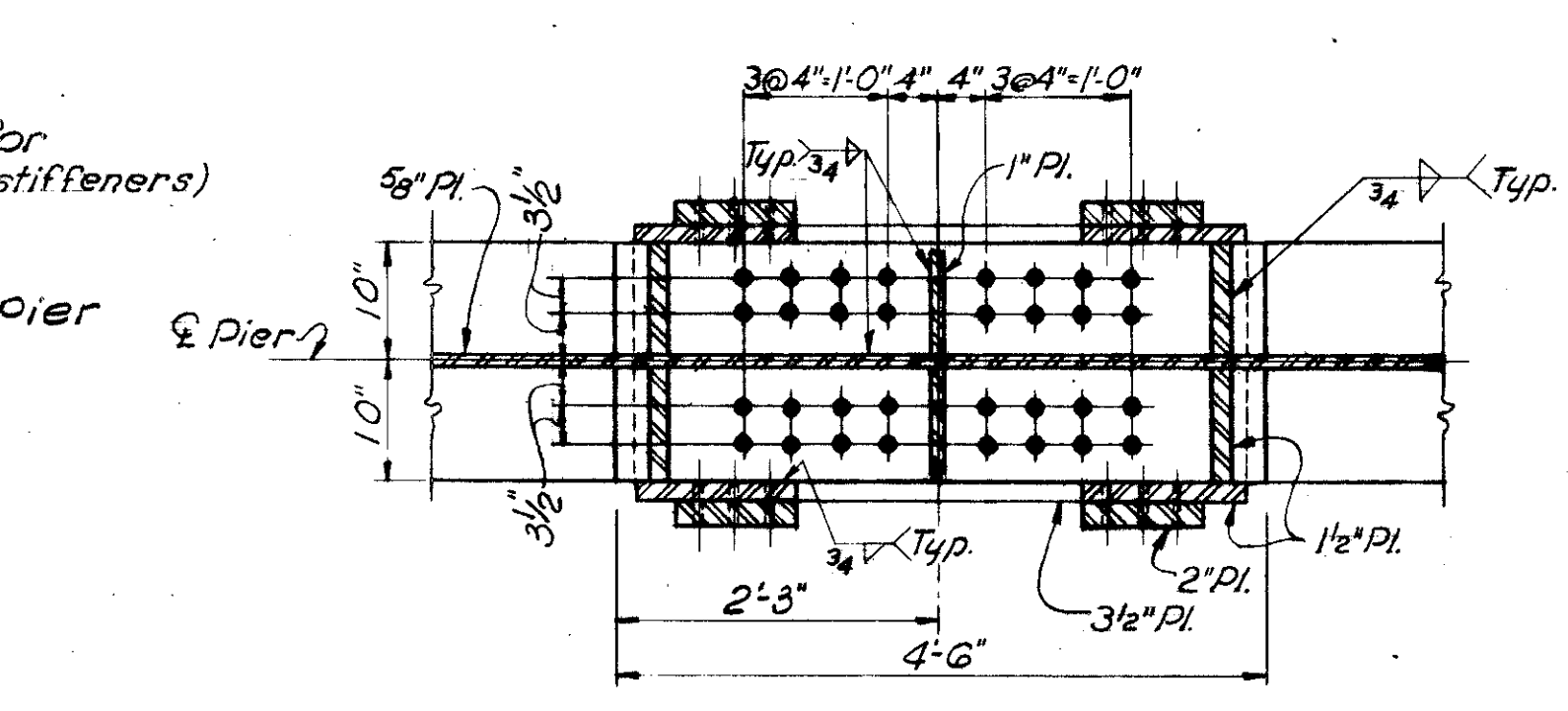
END ELEVATION



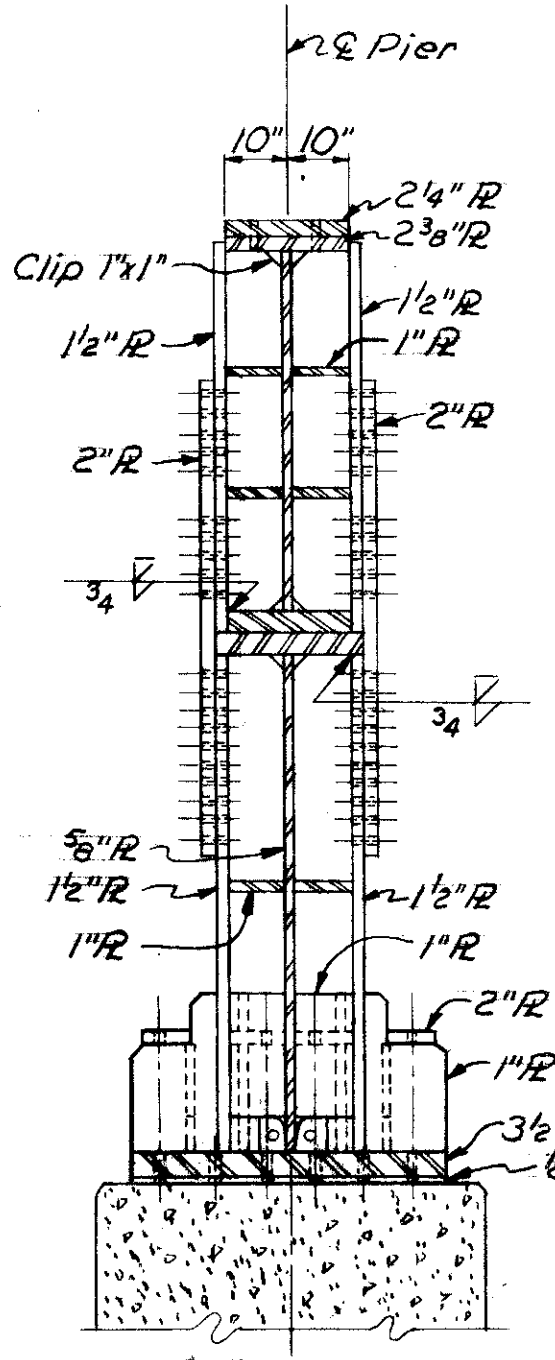
SHOE DETAIL



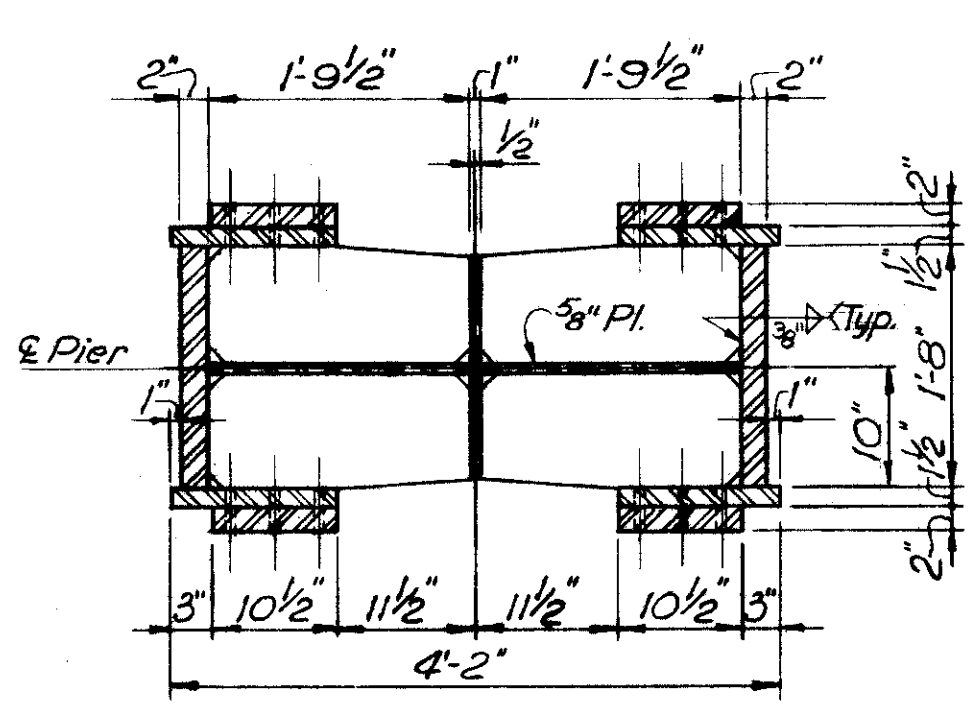
SECTION A-A



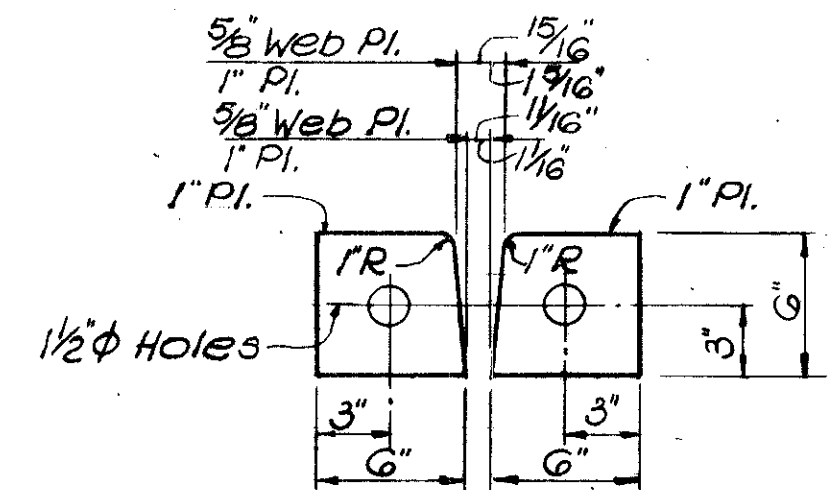
SECTION B-B



SECTION E-E



SECTION C-C



GUIDE LUG DETAIL

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

PIER 2

BRIDGE NO. HAM-74-1129R
I-74 OVER HARRISON PIKE

HAMILTON COUNTY STA. 606+87.30 to
STA. 609+16.86

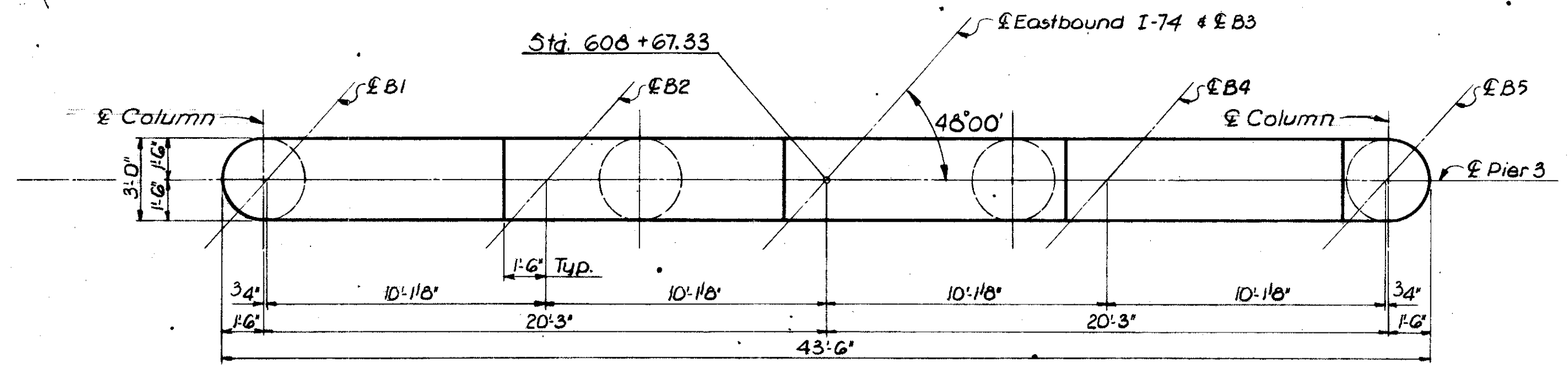
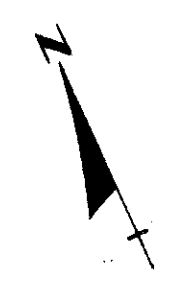
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
P.J.K.	J.T.	~	C.E.S.	JAD 10-13-65	

MICROFILMED
NOV 1 1965

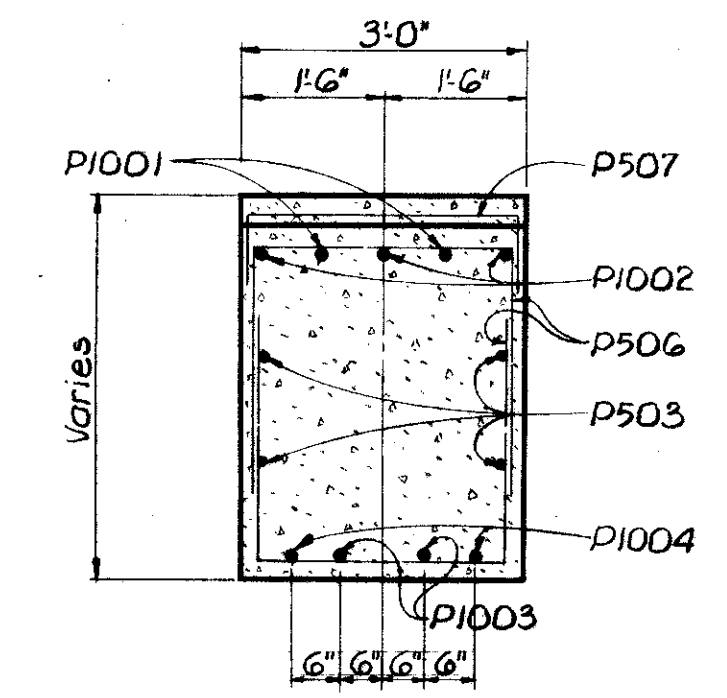
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

289

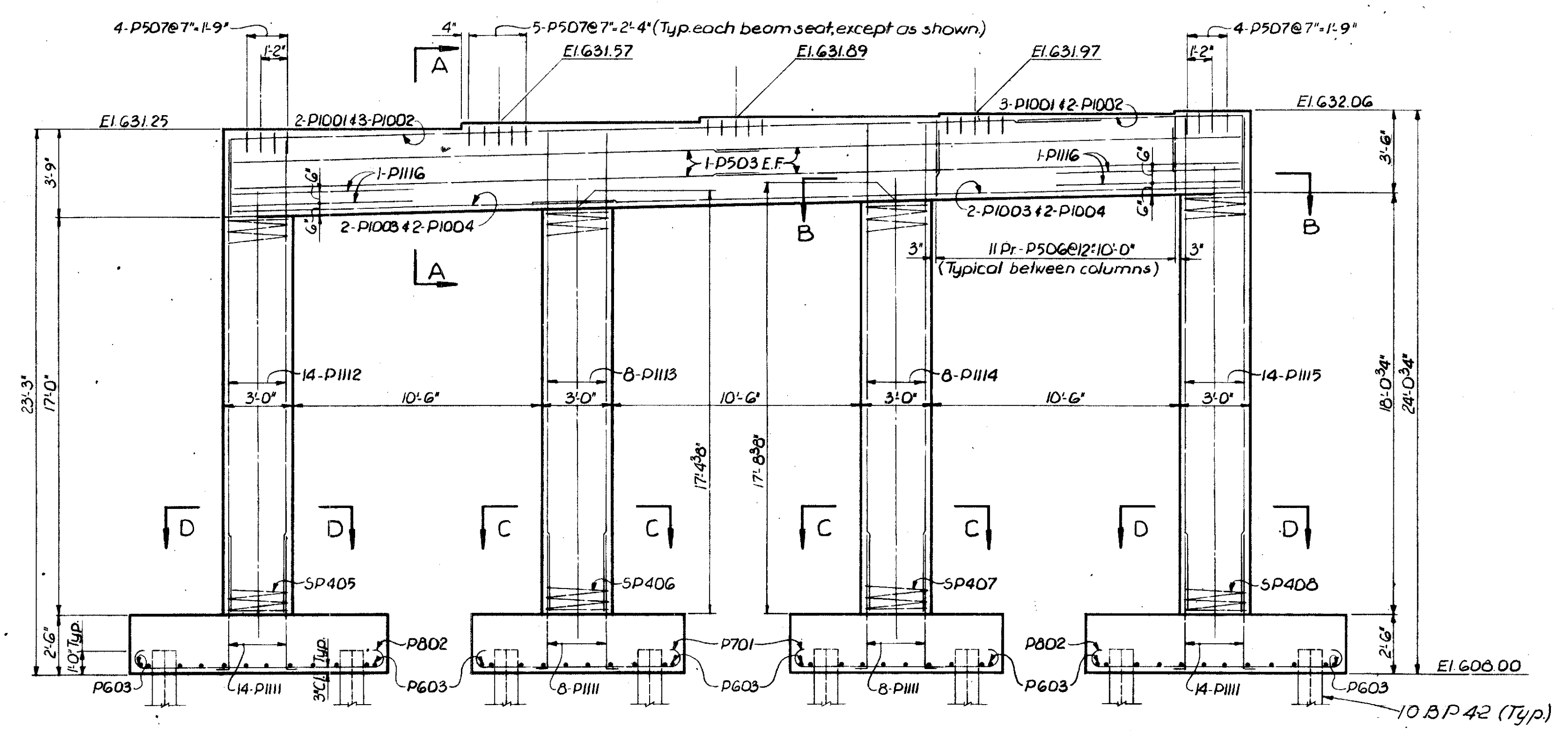
HAM-74-11.37



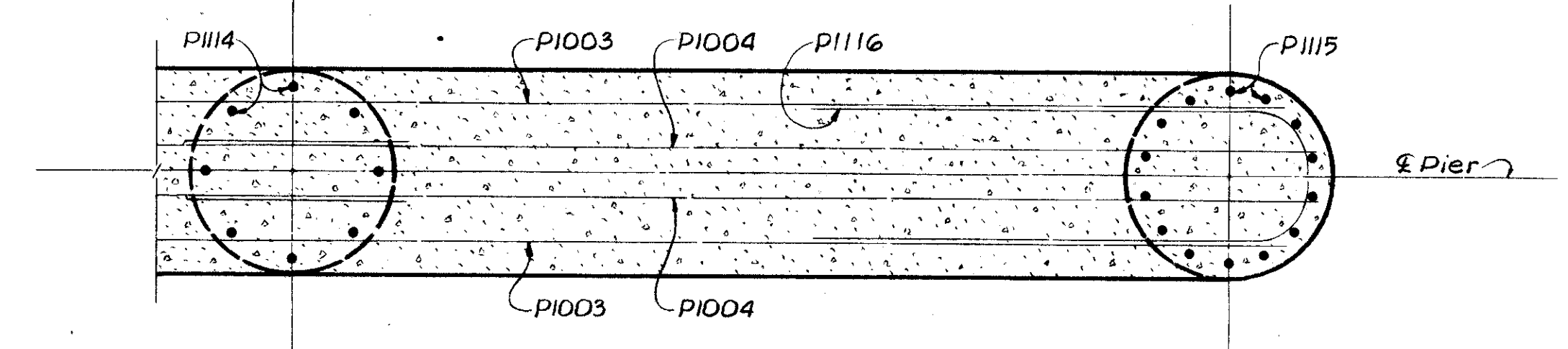
PLAN



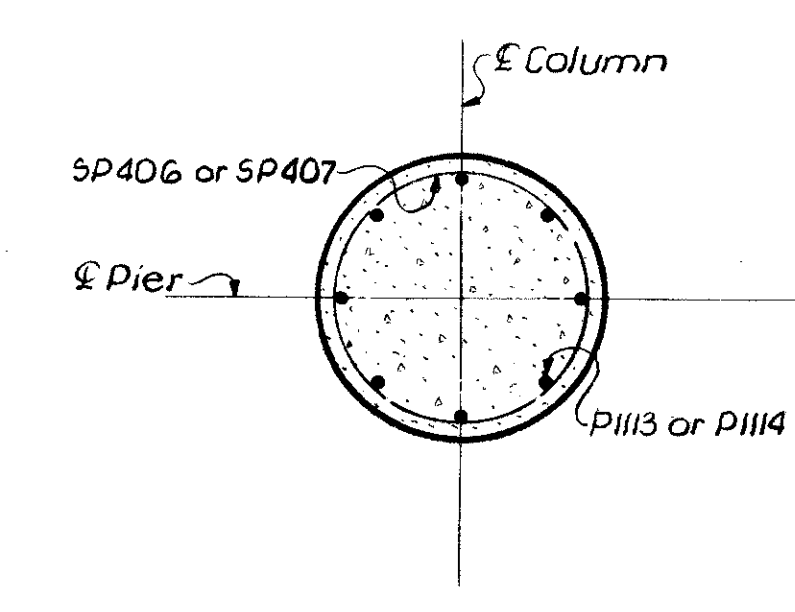
SECTION A-A



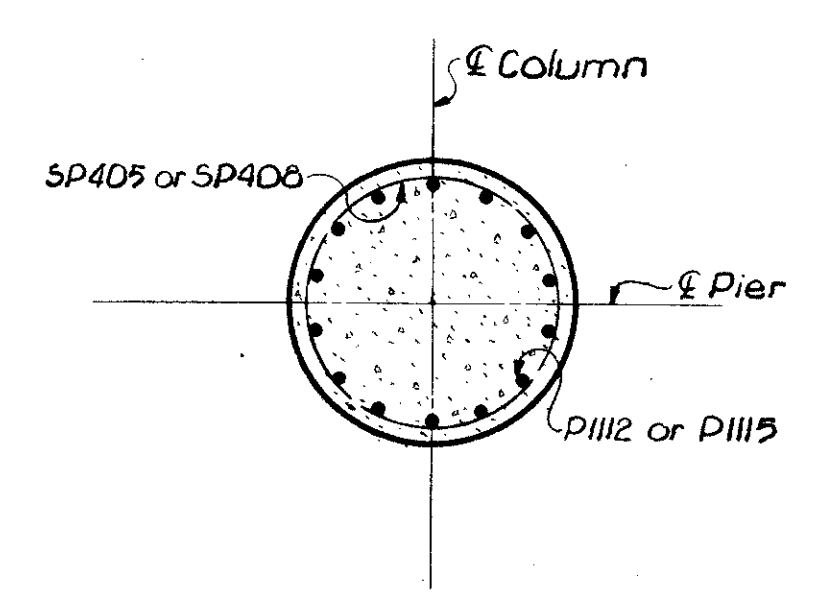
ELEVATION



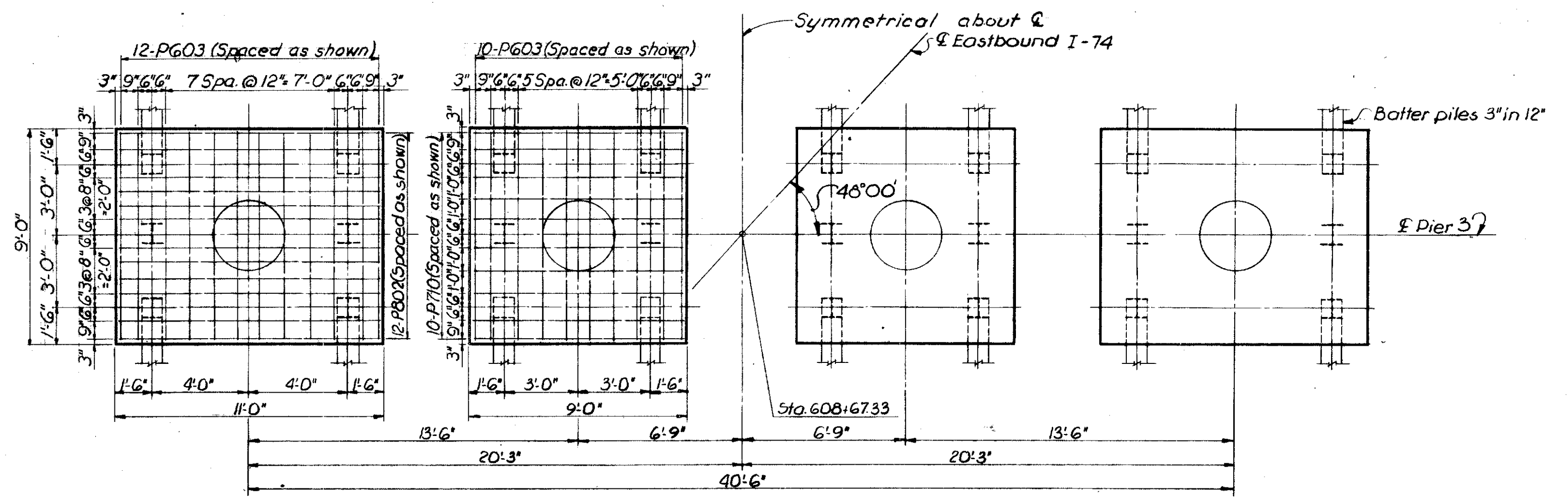
SECTION B-B



SECTION C-C



SECTION D-D

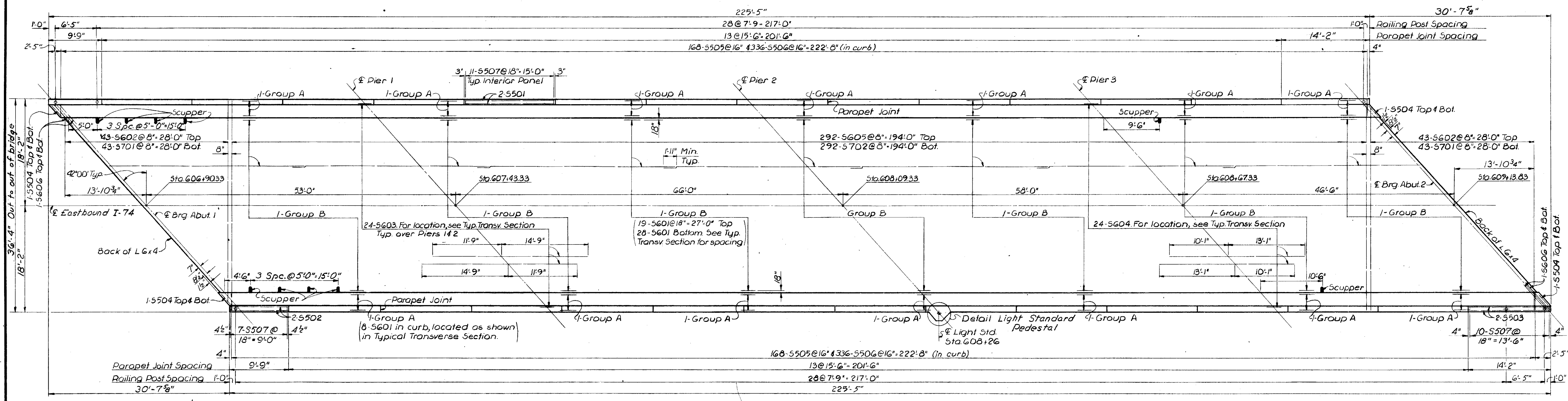


FOOTING PLAN

NOTES

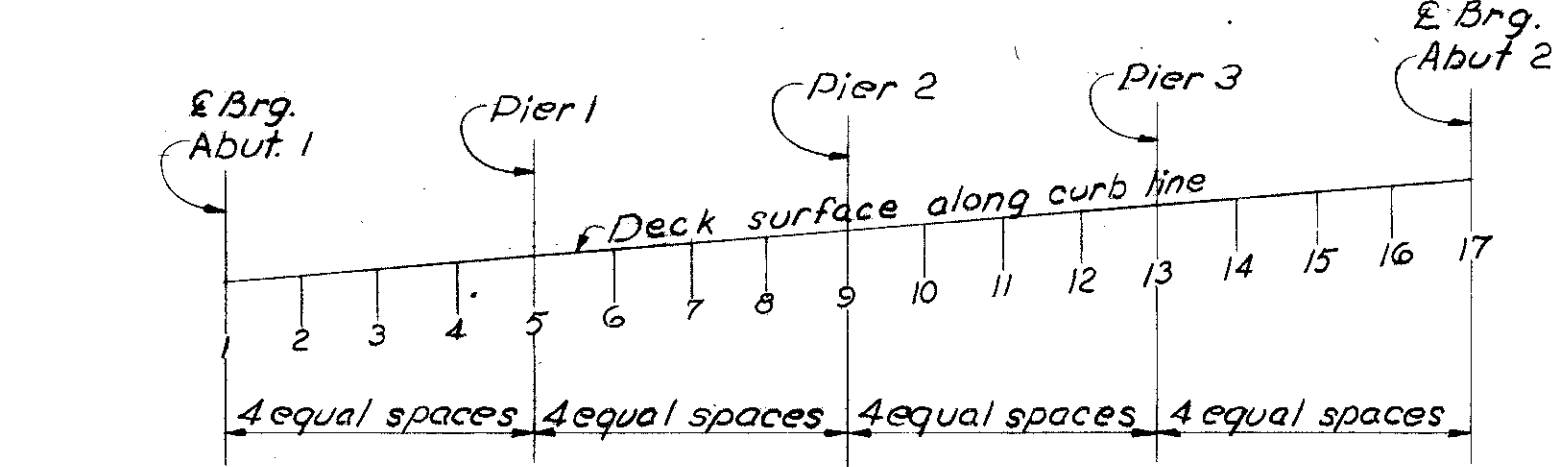
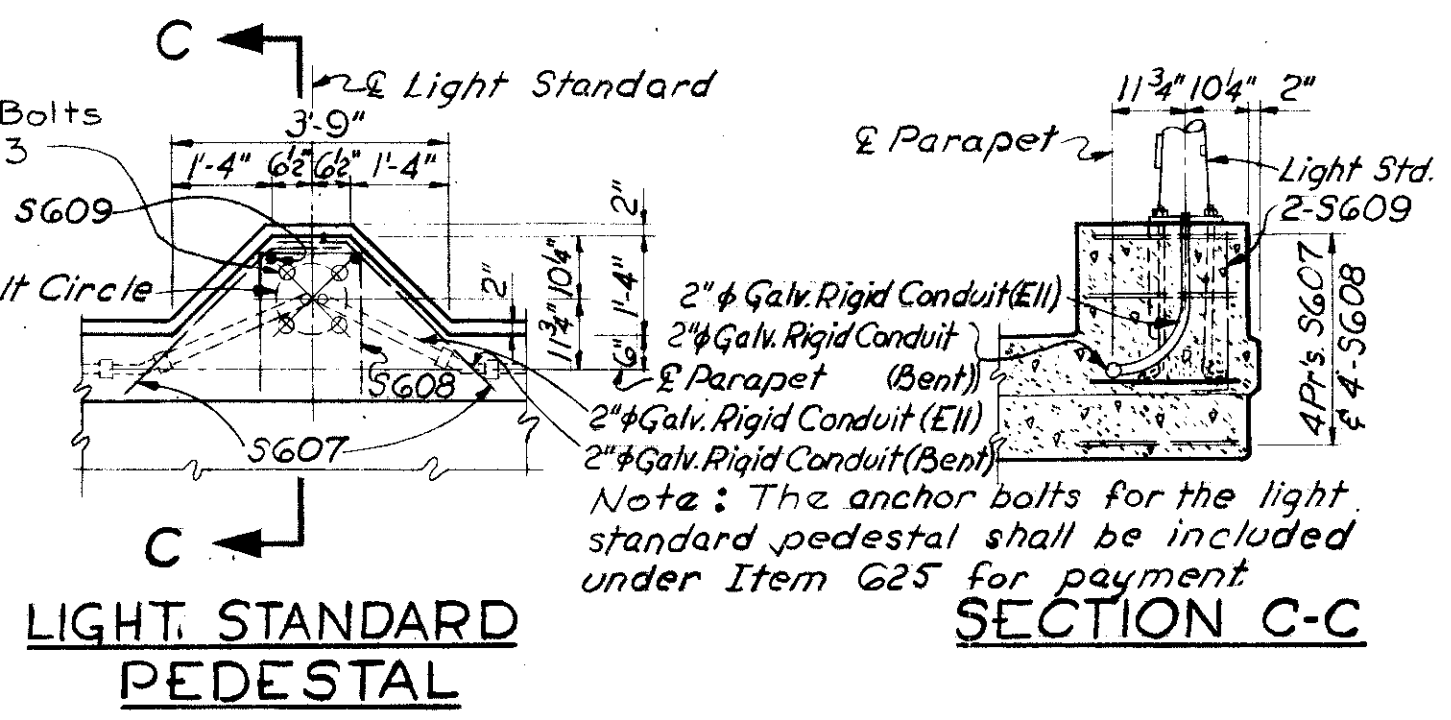
1. E.F. denotes each face.
2. For Reinforcing Steel List see Sh. 292

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO						
PIER 3						
BRIDGE NO. HAM-74-1129 R I-74 OVER HARRISON PIKE						
HAMILTON COUNTY STA. 606+87.30 to STA. 609+16.86						
DESIGNED R.K.S.	DRAWN C.E.S.	TRACED I.G.V.	CHECKED L.P.H.	REVIEWED JAD 10-13-65	DATE	REVISED



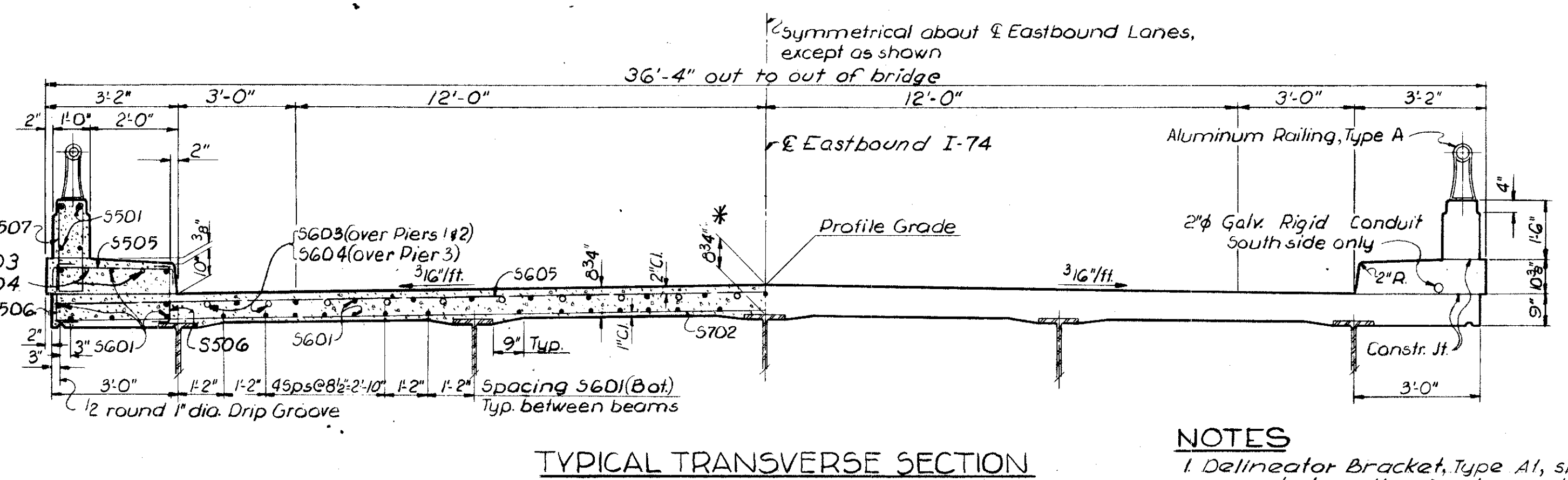
PLAN

FINISHED PAVEMENT ELEVATIONS				
STATION	PROFILE GRADE	NORTH CURB-15' LI.	SOUTH CURB-15' RI.	
G07+00	631.72	631.49		
+25	632.47	632.24	632.24	
+50	633.22	632.99	632.99	
+75	633.97	633.74	633.74	
G08+00	634.72	634.49	634.49	
+25	635.47	635.24	635.24	
+50	636.22	635.99	635.99	
+75	636.97	636.74	636.74	
G09+00	637.72	637.49	637.49	
+25	638.47		638.24	



POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LEFT CURB	630.79	631.21	631.61	631.99	632.38	632.90	633.40	633.89	634.36	634.81	635.24	635.68	636.10	636.46	636.81	637.16	637.50
RIGHT CURB	631.60	632.02	632.42	632.80	633.19	633.71	634.21	634.70	635.17	635.62	636.07	636.49	636.91	637.27	637.62	637.97	638.31

SCREED ELEVATIONS
Adjusted for slab deflections



TYPICAL TRANSVERSE SECTION

DECK SLAB HAUNCH: 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 volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

- NOTES
1. Delineator Bracket, Type A1, shall be mounted on the bridge railing at the following locations: Sta. G07+25 and Sta. G08+25, G09+00 right of I-74.
 2. For end dam details, see Std. Dwg. SD-1-65 Sh. 1 and 2 of 3.
 3. Slab thickness includes 1" monolithic wearing surface.
 4. For scupper details, see Std. Dwg. SD-1-65, Sh. 2 of 3, all scuppers shall be Type I.
 5. Spread or cut longitudinal steel in slab to clear scuppers.
 6. For Railing Details, see Std. Dwg. AR-1-57
 7. For Reinforcing Steel List, see Sh. 292

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SUPERSTRUCTURE ROADWAY SLAB

BRIDGE NO. HAM-74-1129 R
I-74 OVER HARRISON PIKE

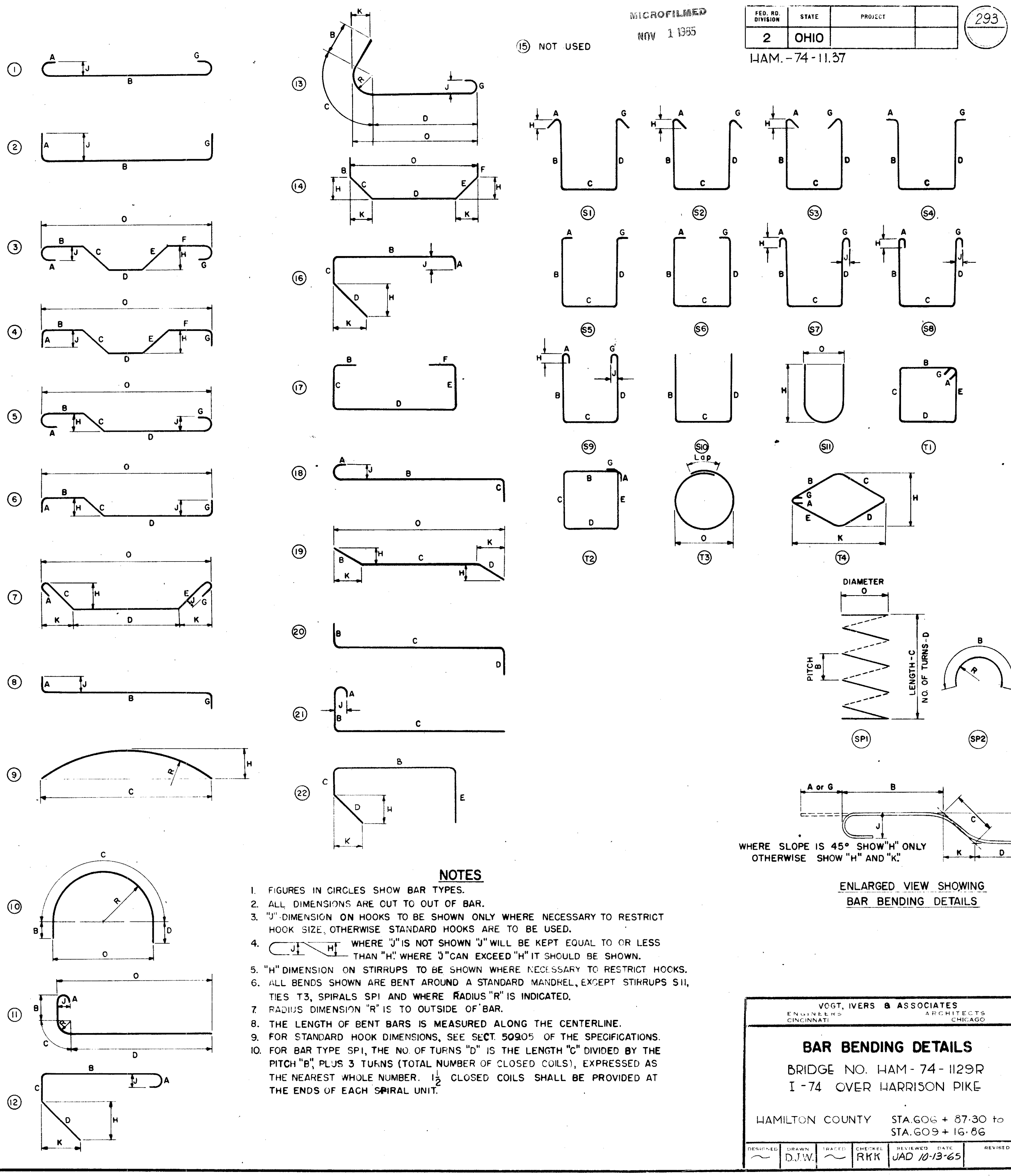
HAMILTON COUNTY STA. G06+87.30 to STA. G09+16.86

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.E.S.	E.E.S.	I.G.V.	C.E.S.	JAD	10-13-65	

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	HAM.-74-11.37

ABUTMENTS					PIERS					SUPERSTRUCTURE					REPLACEMENT BARS															
MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	
A501	32	6'-3"	Bt	209	A601	9	14'-4"	Bt	194	P401	34	20'-0"	Bt	454	S501	104	15'-2"	Str	—	RE 4	1	5'-3"	Bt	—						
A502	8	7'-3"	Bt	60	A602	8	14'-7"	Bt	175	P402	34	14'-0"	Bt	318	S502	8	9'-5"	Str	79	RE 5	1	5'-7"	Str	—						
A503	8	7'-6"	Bt	63	A603	15	15'-0"	Bt	338	P403	34	19'-4"	Bt	439	S503	8	13'-10"	Str	115	RE 6	3	5'-11"	Str	—						
A504	20	7'-11"	Bt	165	A604	4	8'-0" to 13'-0"	Bt	63					S504	8	4'-6"	Bt	38	RE 7	2	6'-3"	Str	—							
A505	4	2'-8" to 7'-8" by 1'-8" each	Bt	22										S505	336	3'-6"	Bt	1227	RE 8	1	6'-6"	Str	—							
A506	7	4'-2"	Bt	30	A605	2	12'-4"	Str	37					S506	672	2'-4"	Bt	1635	RE 9	1	6'-10"	Str	—							
A507	7	8'-1"	Bt	59	A606	3	11'-0"	Str	50	P501	60	8'-1"	Bt	506	S507	320	5'-7"	Bt	1863	RE 10	1	7'-3"	Str	—						
A508	15	6'-9"	Str	106	A607	2	11'-3"	Bt	34	P502	23	4'-2"	Bt	100							RE 11	2	7'-7"	Str	—					
A509	21	5'-10"	Str	128	A608	51	14'-2"	Str	1085	P503	16	21'-1"	Str	352																
A510	20	17'-5"	Str	363	A609	36	5'-7"	Bt	302	P504	2	28'-0"	Str	58																
A511	19	5'-3"	Bt	114	A610	94	8'-5"	Bt	1188	P505	2	14'-8"	Str	31																
A512	7	29'-1"	Str	212	A611	82	2'-10"	Str	349	P506	66	7'-7"	Bt	522																
A513	21	26'-8"	Str	584	A612	82	6'-9"	Bt	831	P507	23	3'-8"	Bt	88																
A514	16	10'-8"	Bt	178	A613	18	5'-2"	Str	140	P508	9	14'-5"	Str	135																
A515	5	4'-6"	Str	23	A614	29	8'-11"	Bt	388	S601	441	33'-11"	Str	22466																
A516	17	5'-0"	Str	89	A615	1	7'-6"	Bt	11	S602	86	3'-0" to 34'-0" by 8" 2 each	Str	2394																
A517	4	13'-1"	Bt	55	A616	7	26'-2"	Str	275	S603	48	26'-6"	Str	1911																
A518	11	10'-0"	Str	115	A617	1	25'-2"	Bt	38	S604	24	23'-2"	Str	835																
A519	62	4'-5"	Bt	286	A618	18	6'-11"	Str	187	P601	68	11'-0"	Str	1123																
A520	6	10'-5"	Bt	65	A619	7	6'-8"	Str	70	P602	24	9'-0"	Str	324	S605	292	35'-8"	Str	15643											
A521	31	5'-1"	Str	164	A620	5	6'-5"	Str	48	P603	44	9'-10"	Bt	650	S606	8	6'-0"	Str	72											
A522	36	3'-4"	Str	125	A621	43	4'-7"	Bt	296	S607	8	3'-7"	Bt	43	S608	4	4'-5"	Bt	27											
A523	6	9'-11"	Bt	62	A622	6	14'-9"	Str	133	S609	2	2'-7"	Bt	8																
A524	19	4'-10"	Str	96	A623	1	15'-1"	Bt	23	P701	20	10'-2"	Bt	416	S701	86	3'-0" to 34'-0" by 8" 2 each	Str	3258											
A525	14	19'-2"	Str	280	A624	4	14'-9"	Str	89	S702	292	35'-8"	Str	21888																
A526	6	28'-1"	Str	176																										
A527	4	14'-6"	Str	60																										
A528	68	6'-11"	Bt	491						P801	48	11'-0"	Str	1410																
A529	9	13'-3"	Bt	124	A801	10	26'-5"	Str	795	P802	24	12'-8"	Bt	812																
A530	4	11'-6"	Str	48	A802	2	25'-4"	Str	135	P803	16	8'-10"	Str	377																
A531	4	17'-10"	Str	74	A803	2	27'-0"	Bt	144	P804	12	13'-2"	Str	422																
A532	4	15'-10"	Str	66						P805	9	14'-5"	Str	346																
A533	8	15'-8"	Str	131						P806	7	6'-2"	Str	115																
A534	4	15'-6"	Str	65						P807	11	6'-10"	Bt	201																
A535	32	6'-1"	Bt	203																										
A536	32	3'-1" to 6'-0" by 5" 4 each	Bt	152																										
A537	32	4'-3"	Bt	142																										
A538	17	6'-8"	Str	118						P901	20	11'-0"	Str	748																
A539	7	6'-5"	Str	47						P902	24	9'-0"	Str	734																
A540	8	6'-0"	Str	50						P903	14	22'-2"	Str	1055																
A541	21	8'-11"	Str	195																										
A542	8	11'-11"	Bt	99																										
A543	4	19'-10"	Str	83																										
A544	4	18'-0"	Str	75						P1001	5	12'-7"	Bt	271																
A545	19	5'-4"	Str	106						P1002	5	39'-10"	Bt	857																
A546	8	17'-8"	Str	147						P1003	4	29'-8"	Str	511																
A547	22	8'-1"	Str	185						P1004	4	16'-2"	Str	278																
A548	7	14'-6"	Bt	106																										
A549	8	11'-7"	Bt	97																										
A550	4	20'-6"	Str	86																										
A551	4	16'-6"	Str	69						P1101	76	7'-6"	Bt	3028																
A552	6	3'-2"	Str	20						P1102	22	27'-6"	Str	3214																
A553	7	13'-7"	Bt	14						P1103	16	27'-10"	Str	2366																
A554	4	8'-0" to 13'-0" by 1'-8" each	Str	44						P1104	16	28'-2"	Str	2394																
A555	1	10'-8"	Bt	11						P1105	22	28'-4"	Str	3312																
A556	8	17'-8"	Str	147						P1106	4	16'-8"	Str	354																
A557	4	9'-8"	Str	40						P1107	4	30'-2"	Str	631																
A558	2	19'-8"	Str	41			</																							

MARK	TYPE	DIMENSIONS FOR BENDING												
		A	B	C	D	E	F	G	H	J	K	R	O	
A501	2	6"	5'-3"											
A502	2	6"	6'-9"											
A503	2	6"	7'-0"											
A504	2	6"	7'-5"											
A505	2	6"	Varies 2'-8" to 7'-8"											
A506	2	6"	3'-2"											
A507	17			2'-7"	3'-2"	2'-7"								
A511	19			4'-9"	1'-0"	2'-7"								
A519	2	6"	3'-5"	4'-9"	1'-0"	2'-7"								5'-5"
A520	17			4'-9"	1'-2"	4'-9"								
A523	17			4'-6"	1'-2"	4'-6"								
A528	53	7'	2'-10"	B"	2'-10"									
A535	17			2'-6"	1'-4"	2'-6"								
A536	17			Varies 1'-0" to 2'-6"	1'-4"	Varies 1'-0" to 2'-6"								
A537	2	6"	3'-9"											
A542	17			5'-6"	1'-2"	5'-6"								
A549	17			5'-4"	1'-2"	5'-4"								
A553	19			10'-9"	2'-11"									
A555	2	6"	9'-8"											
A548	12		12'-6"	6"	1'-7"									
A514	12		8'-8"	6"	1'-7"									
AG01	17			2'-10"	5'-3"	6'-7"								
AG02	17			2'-10"	5'-3"	6'-10"								
AG03	17			2'-10"	5'-3"	7'-3"								
AG04	17			2'-10"	Varies 2'-8" to 7'-8"	2'-10"								
AG07	19			8'-0"	3'-3"									
AG09	2	8"	4'-11"											
AG10	17			3'-8"	1'-5"	3'-8"								
AG12	17			4'-2"	11"	2'-0"								
AG14	17			3'-8"	5'-5"									
AG15	17			3'-8"	4'-0"									
AG17	19			23'-8"	1'-7"									
AG21	2	8"	3'-11"											
AG23	17			2'-10"	9'-8"	2'-10"								
A803	19			25'-4"	1'-8"									
P401	T1	5'	5'-0"	4'-10"	5'-0"	4'-10"								
P402	T1	5'	5'-0"	1'-10"	5'-0"	1'-10"								
P403	T1	5'	2'-4"	7'-2"	2'-4"	7'-2"								
P501	17			2'-7"	3'-2"	2'-7"								
P502	2	6"	3'-2"											
P506	17			2'-7"	2'-8"	2'-7"								
P507	2	6"	2'-8"											
P603	1	8"	8'-6"											
P701	1	10"	8'-6"											
P802	1	1'-1"	10'-6"											
P807	17			1'-2"	4'-11"	1'-2"								
P1001	17			3'-3"	9'-8"									
P1002	17			3'-3"	36'-11"									
P1101	17			1'-6"	6'-4"									
P1103	10		5'-10"	3'-6"	5'-10"								1'-2"	2'-4"
P1109	17			3'-3"	37'-0"									
P1110	17			3'-3"	10'-4"									
P1111	2	1'-2"	5'-10"											
P1116	10		6'-0"	3'-0"	6'-0"								1'-0"	2'-0"
P1117	2	1'-2"	15'-3"											
P1118	2	1'-2"	7'-7"											
P1119	2	1'-2"	12'-4"											
SP401	SP1		3 1/2"	24'-3"	86									3'-2"
SP402	SP1		3 1/2"	24'-7"	87									3'-2"
SP403	SP1		3 1/2"	24'-11"	88									3'-2"
SP404	SP1		3 1/2"	25'-3"	90									3'-2"
SP405	SP1		4 1/8"	17'-0"	48									2'-8"
SP406	SP1		4 1/2"	17'-4"	49									2'-8"
SP407	SP1		4 1/2"	17'-8"	50									2'-8"
SP408	SP1		4 1/2"	18'-0"	51									2'-8"
S504	17			1'-0"	2'-9"	1'-0"								
S505	2	6"	2'-6"											
S506	2			1'-4"										
S507	53	5"	2'-2"	3"	2'-2"								2'-4"	
S507	16			1'-0"	2'-7"								1'-10"	
S608	17		1'-10"	1'-0"	1'-10"									
S609	2	6"	2'-1"											
A517	19		1'-7"	11'-6"										
A529	19		1'-7"	11'-8"										



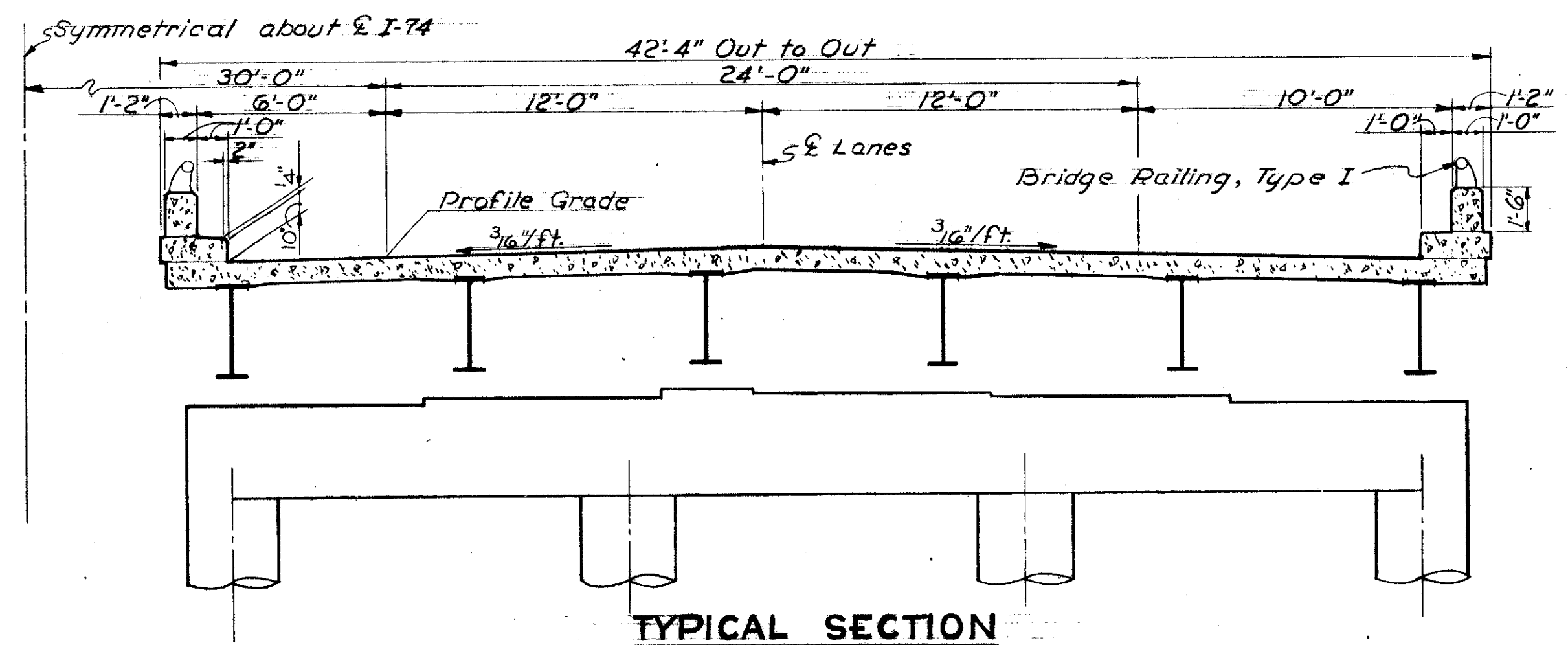
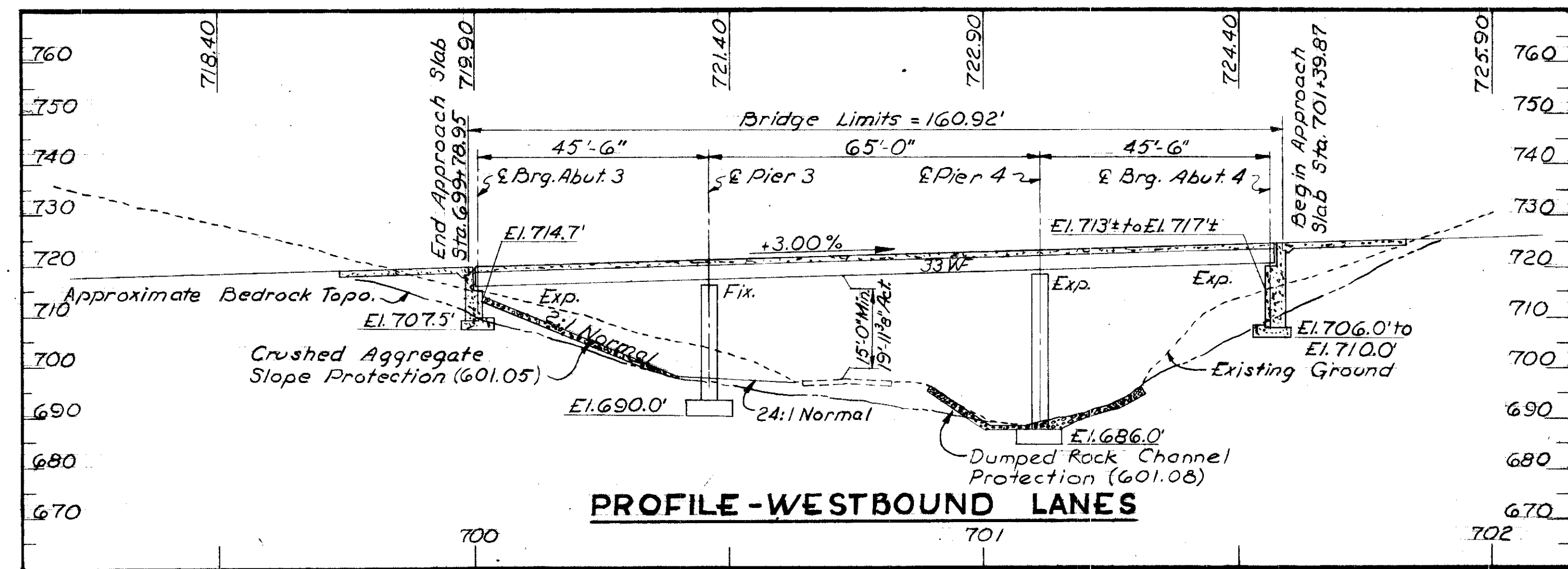
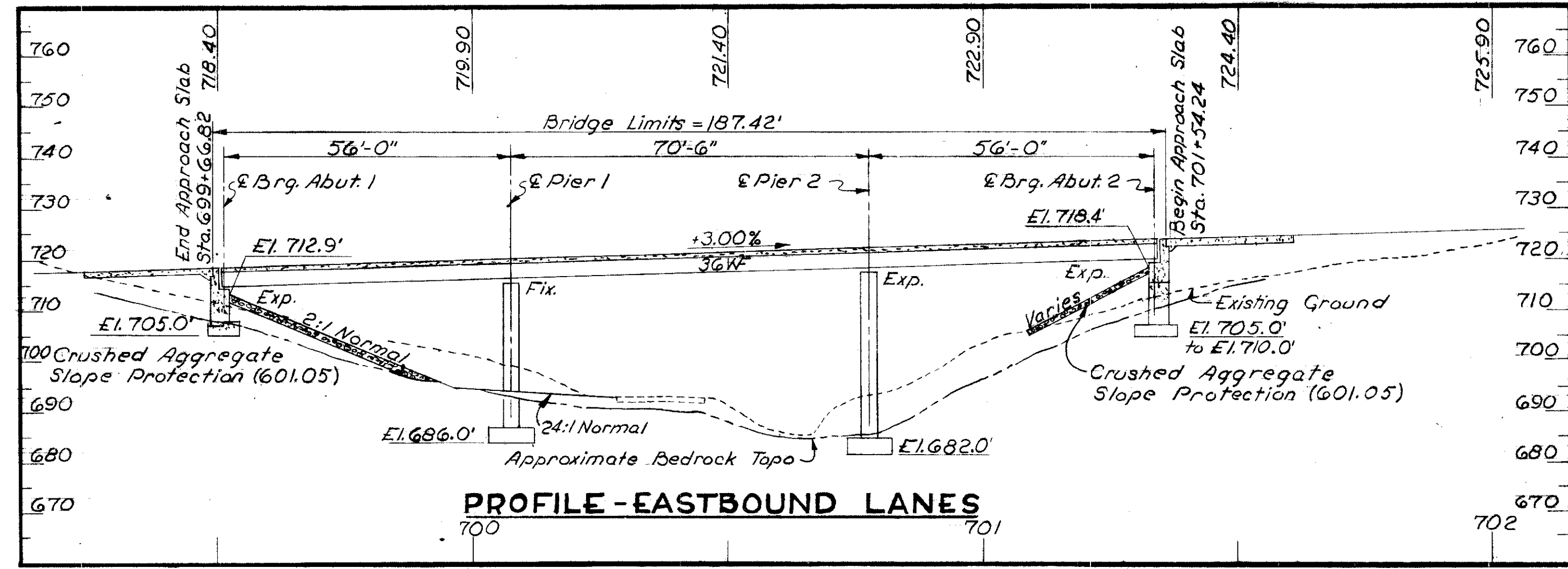
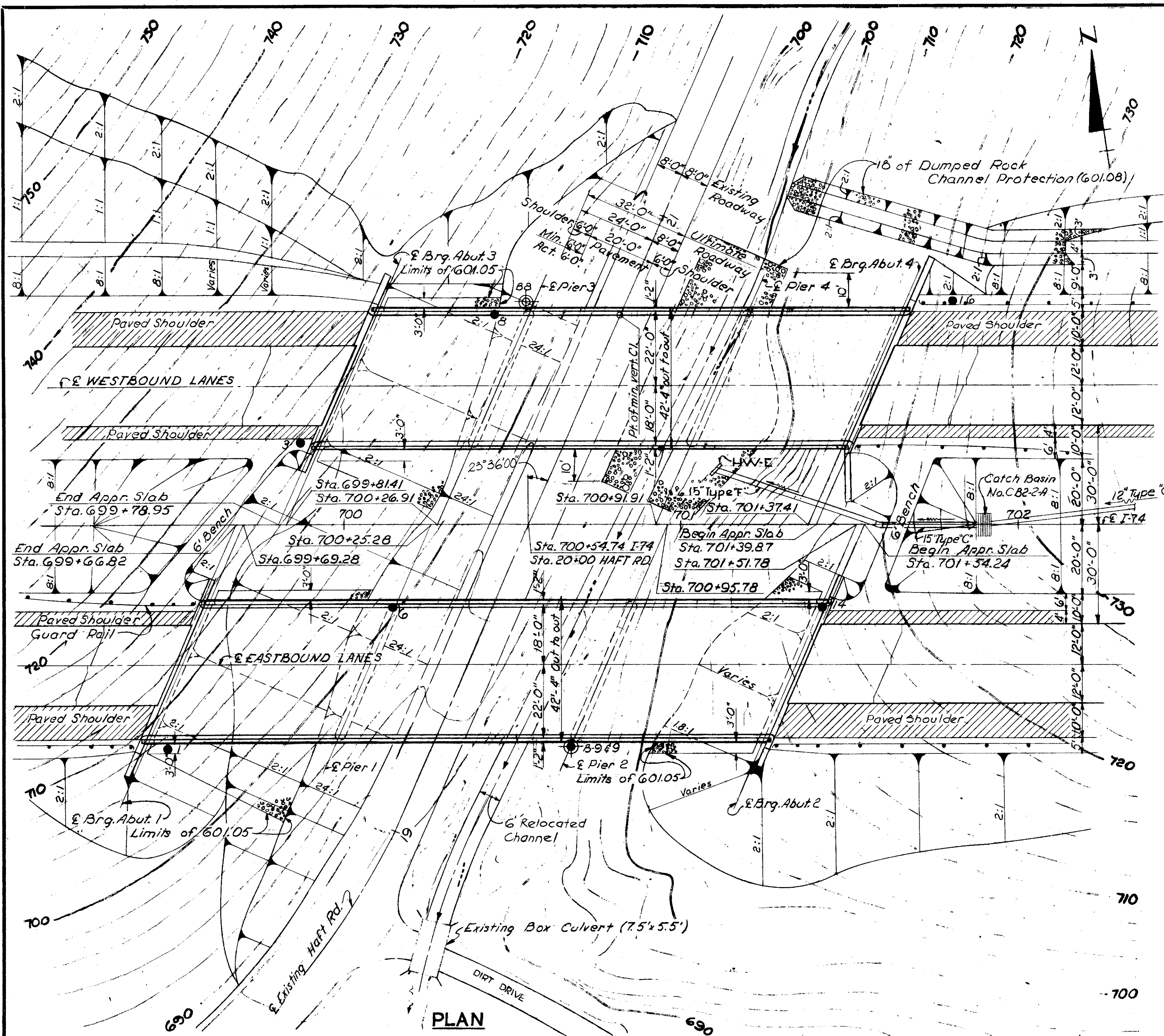
NOTES

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H"; WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUPS S11, TIES T3, SPIRALS S1 AND WHERE RADIUS "R" IS INDICATED.
- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECT. 50905 OF THE SPECIFICATIONS.
- FOR BAR TYPE S1, THE NO. OF TURNS "D" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY OTHERWISE SHOW "H" AND "K"

ENLARGED VIEW SHOWING BAR BENDING DETAILS

VOGT, IVERS & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO	
BAR BENDING DETAILS	
BRIDGE NO. HAM-74-1129R I-74 OVER HARRISON PIKE	
HAMILTON COUNTY STA. 606 + 87.30 to STA. 609 + 16.86	
DESIGNED	DATE
DRAWN	DATE
CHECKED	DATE
REVIEWED	DATE
JAD	10-13-65



STREAM DATA

Drainage Area: 181 acres
Flow Line Elev.: Varies, 684± to 691±
Design Water Depth: 4.4 ft. (50 yr. design)

B.M. #12 Elev. 691.62
P.K. Nail in north root of 15" Oak - 217' right of Sta. 702+80

- ⊕ Press-Drive Sample - Core Boring
- Drive Rod Penetration Resistance Sounding

PROPOSED STRUCTURE

TYPE: Continuous rolled steel beam with reinforced concrete deck and substructure.
SPANS: 56'-0", 70'-6", 56'-0" Eastbound Structure.
45'-6", 65'-0", 45'-6" Westbound Structure.
ROADWAY: Face to face of parapet:
40'-0" E.B. & W.B.
LOAD FREQUENCY: C.F. = 2000 (57).
Adequate for A.A.S.H.O. alternate loading.
SKEW: 23°36'00" L.F.
WEARING SURFACE: 1" monolithic concrete
APPROACH SLABS: A.S. 1-54 (25' long).
ALIGNMENT: Tangent
1975 A.D.T.: 17,000 V.P.D. Eastbound
17,000 V.P.D. Westbound

VOGT-IVERS and Associates
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SITE PLAN
BRIDGE NO. HAM-74-1303 L&P
I-74 OVER HAFT ROAD
STA. 699+66.82 to STA. 701+54.24 E.B.
STA. 699+78.95 to STA. 701+39.87 W.B.
HAMILTON COUNTY

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
Aerial	DJKW	RKK	PJJ	DHW	

DESIGNED DRAWN
 CHECKED REVIEWED DATE
 JAD 10-13-65
 H.O.J.
 TRACED
 PKK P.J.J.
 VOGT, IVERS, & ASSOCIATES
 ENGINEERS ARCHITECTS
 CHICAGO
 ESTIMATED QUANTITIES
 & GENERAL NOTES
 BRIDGE NO. HAM-74-1303L&R
 I-74 OVER HAFT ROAD
 HAMILTON COUNTY
 STA. 699+66.82 to
 STA. 701+54.24 EB
 STA. 699+78.95 to
 STA. 701+39.87 WB

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., 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 construction of the abutments, Highway Structures of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.

REFERENCE shall be made to the following:
 Standard Drawings: BR-1-65, revised 11-24-65
 AS-1-54, revised 8-10-65
 SD-1-65, dated 11-8-65
 FS-B-1-62, revised 1-15-63
 Supplemental Specifications: 808 dated 2-7-65
 811 dated 3-29-65
 825 dated 4-22-65
 828 dated 3-21-66

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.
 FOOTINGS shall extend a minimum of 3' into undisturbed shale or to the elevation shown, whichever is lower. Excavation at plan depth shall not be exposed to weathering prior to pouring footing concrete.
 FOUNDATION BEARING PRESSURE: Abutment and Pier footings are designed for a maximum bearing pressure of 4.0 tons per sq. ft.
 MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine.

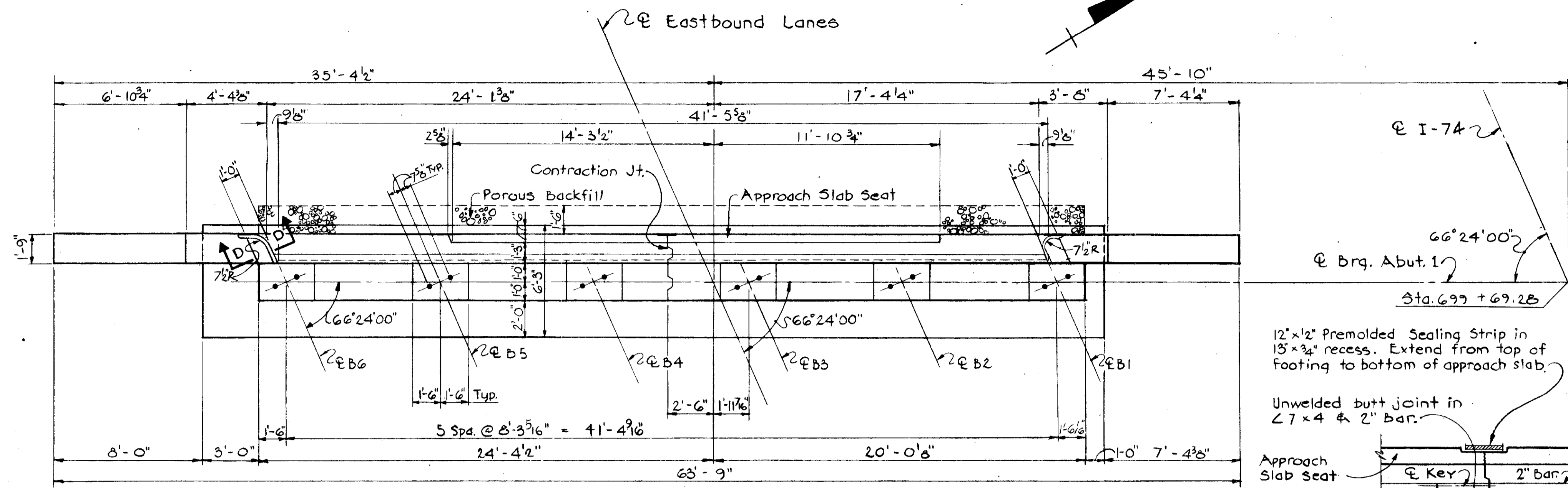
GENERAL NOTES

Materials in approach slabs are not included in the above estimated quantities.

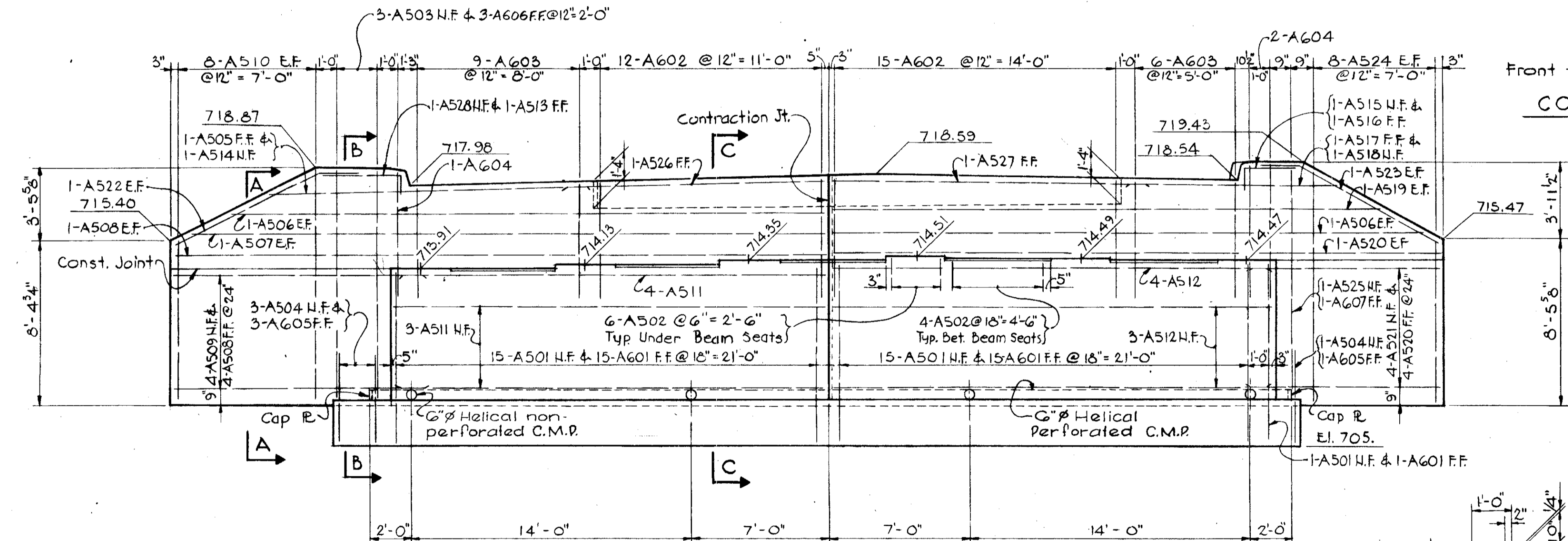
ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL
503	512	Cu.Yds.	Unclassified Excavation	364	148		
503	402	Cu.Yds.	Shale Excavation	130	272		
509	234,143	Lbs.	Reinforcing Steel	21,635	95,359	127,149	
511	440	Cu.Yds.	Class "C" Concrete - Superstructure			440	
511	176	Cu.Yds.	Class "C" Concrete - Piers above footings		176		
511	295	Cu.Yds.	Class "E" Concrete - Abutments above footings	295			
511	214	Cu.Yds.	Class "E" Concrete - Pier and Abutment footings	120			
512	33	Lin.Ft.	Premolded Sealing Strip	33			
513	355,530	Lbs.	Structural Steel			355,530	
514	355,530	Lbs.	Field Painting of Structural Steel			355,530	
517	695.08	Lin.Ft.	Bridge railing, Type I			695.08	
518	103	Cu.Yds.	Porous Backfill	103			
518	15	Each	Scuppers, including supports		15		
518	178	Lin.Ft.	6" Reinforced Helical CMR 707.06, including specials	178			
518	220	Lin.Ft.	6" Helical CMR 707.06, non-perforated	220			
601	752	Sq.Yds.	Crushed Aggregate Slope Protection			752	
808	440	Units	Water-reducing, Set-retarding Admixture		440		
825	1825	Sq.Yds.	Concrete Surface Treatment		1825		
828	166	Lin.Ft.	Joint Sealer		166		

HAM-74-1137
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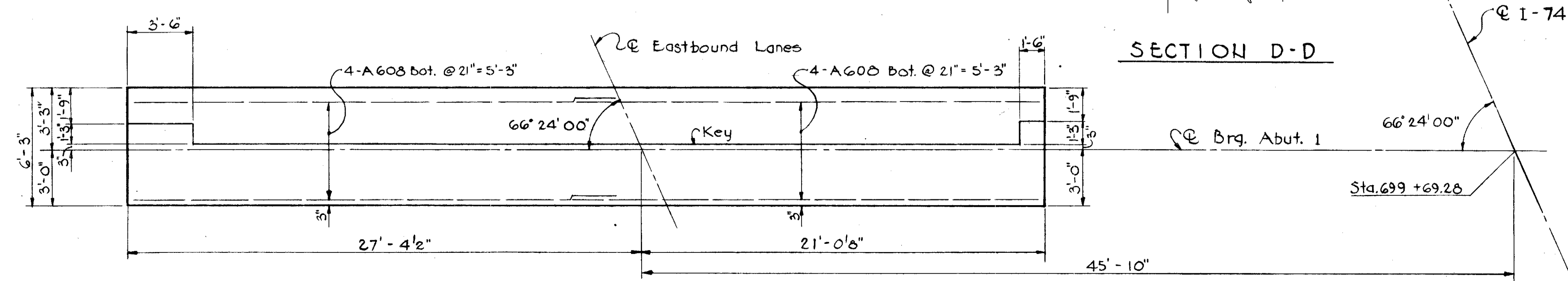
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NOV 1 1965



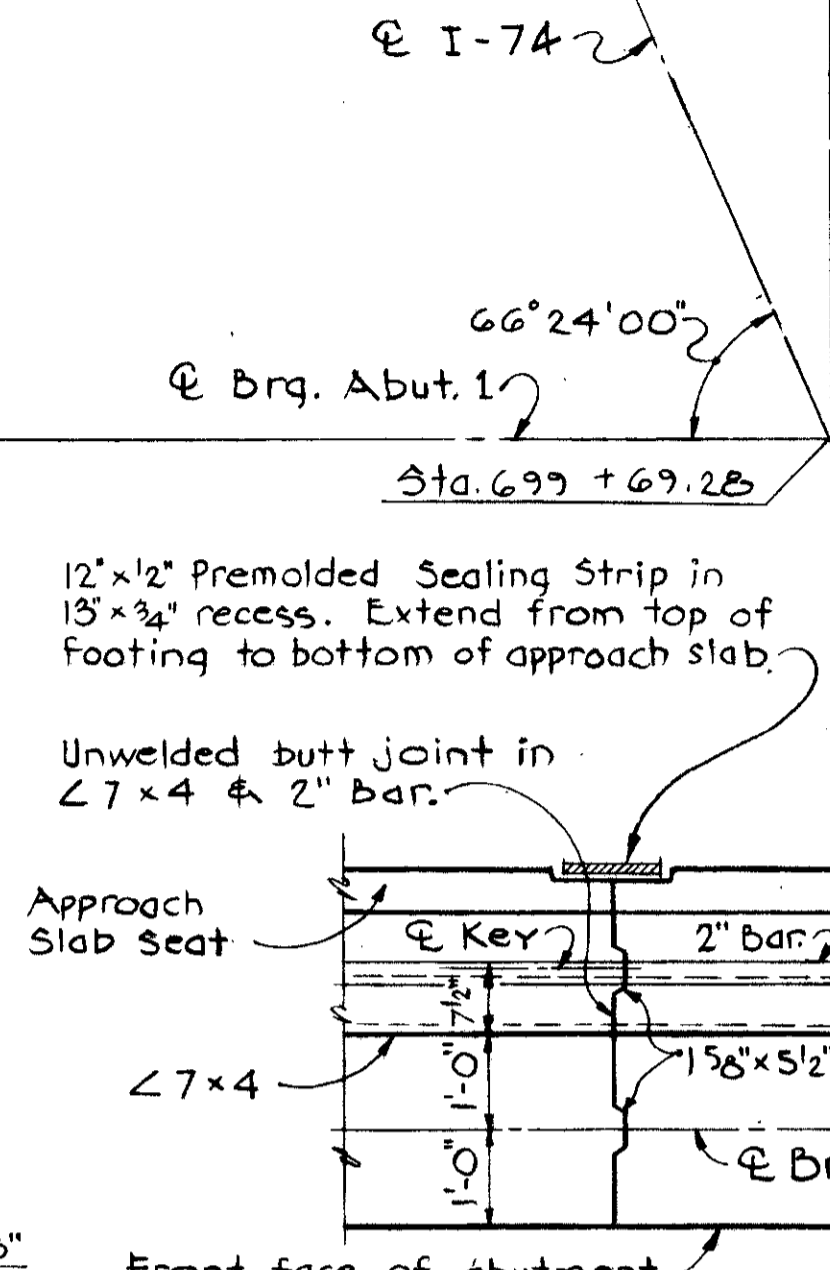
PLAN



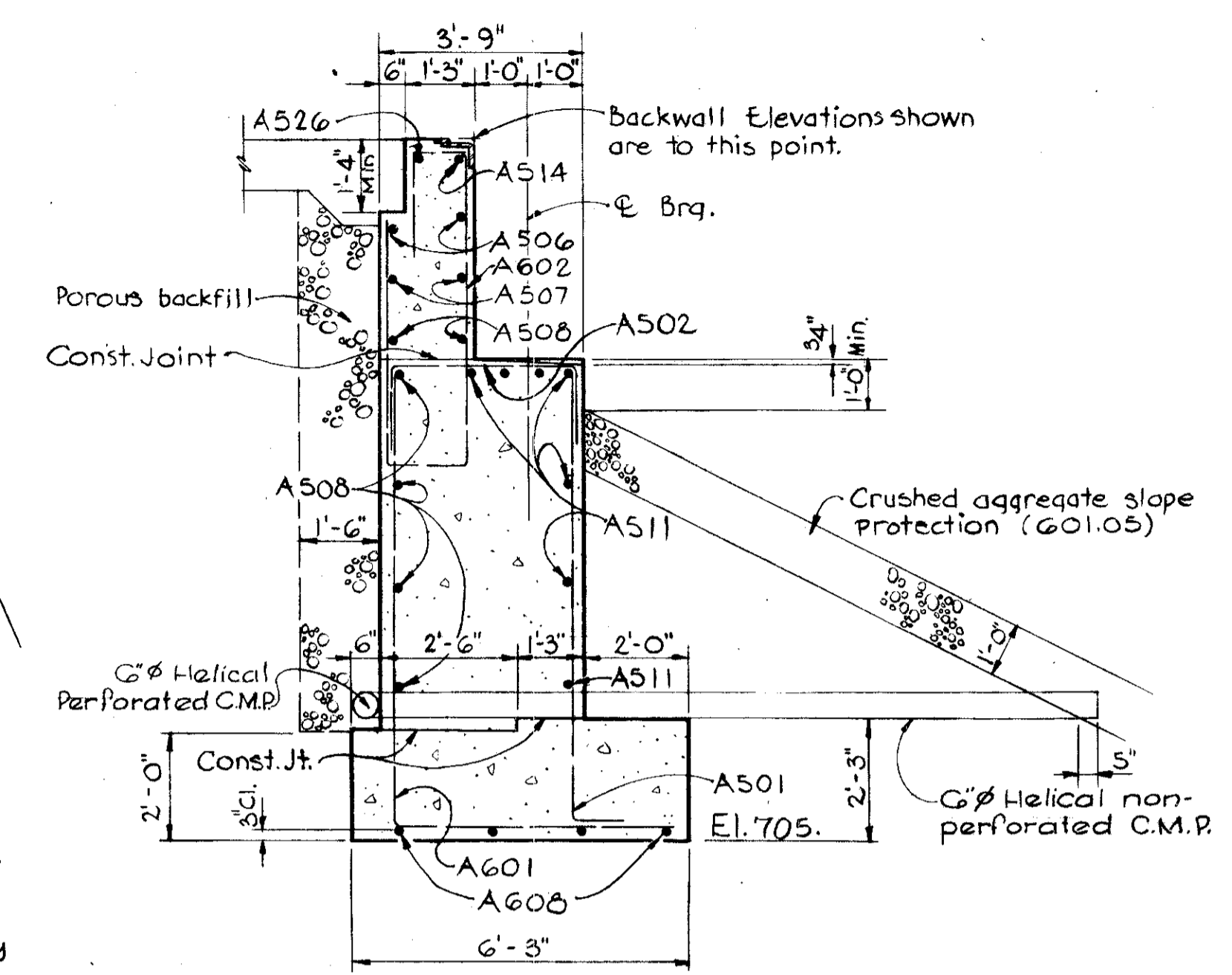
ELEVATION



FOOTING PLAN



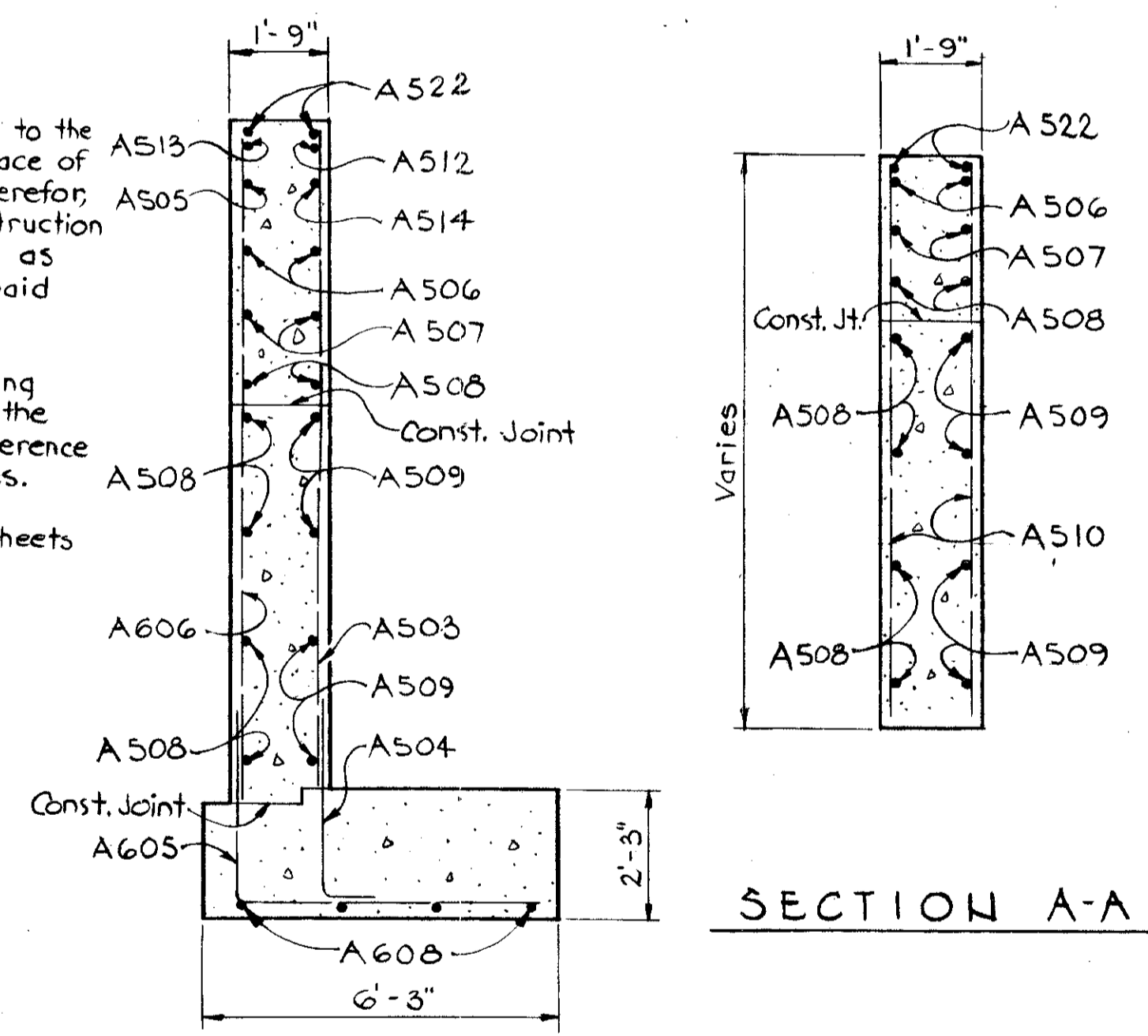
CONTRACTION JOINT DETAIL



SECTION C-C

NOTES

1. Porous backfill shall extend upward to the bottom of approach slab or to the surface of the paved shoulders. Excavation therefore, 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.
2. 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 rod holes.
3. For end dam details see SD-1-65 Sheets 1 & 2 of 3 dated 11-8-65
4. For reinforcing steel lists see Sheet 306



SECTION A-A

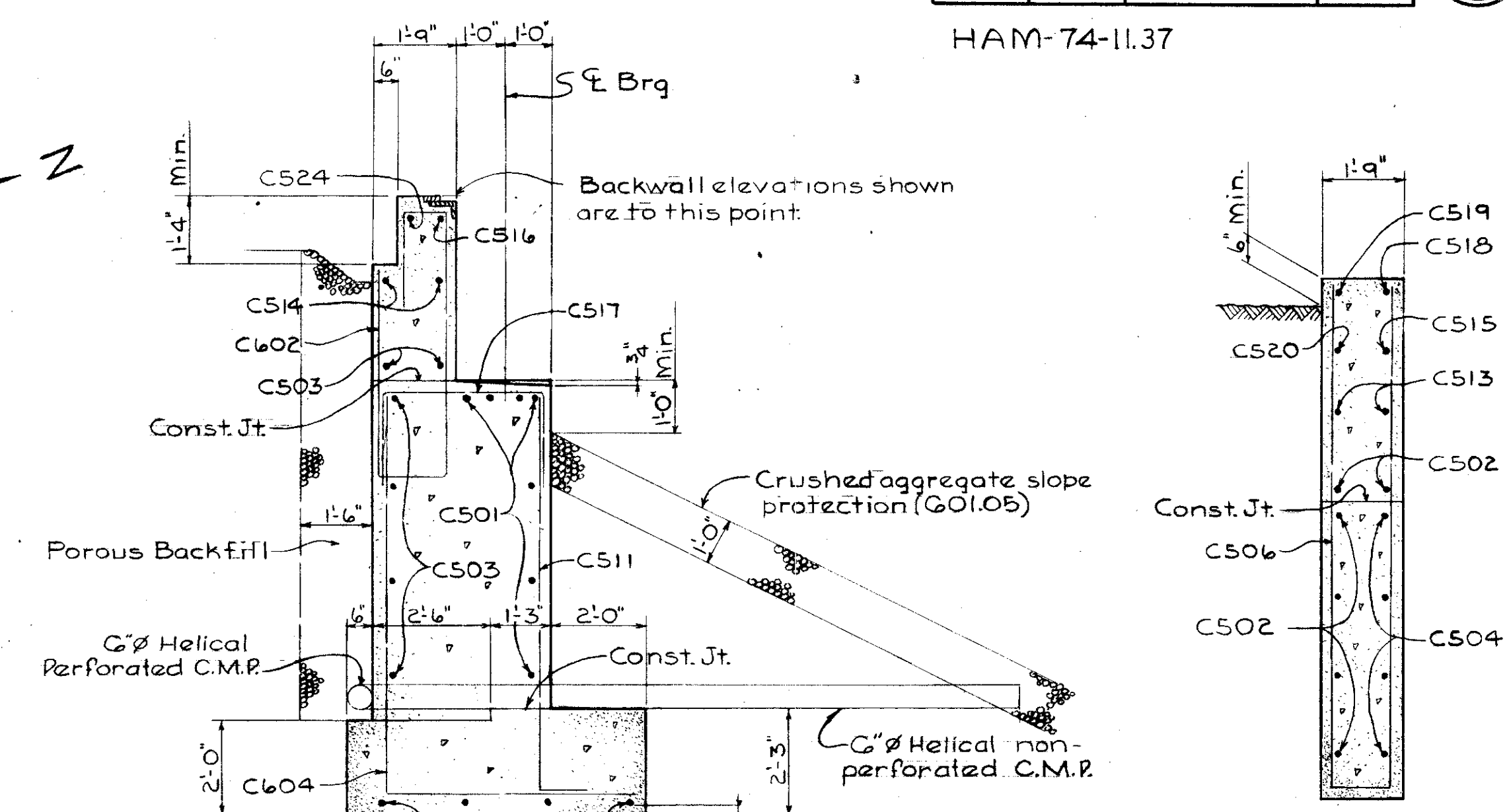
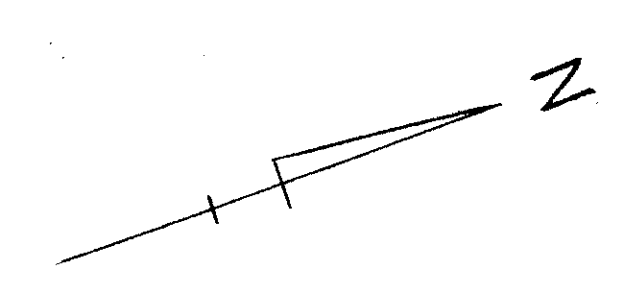
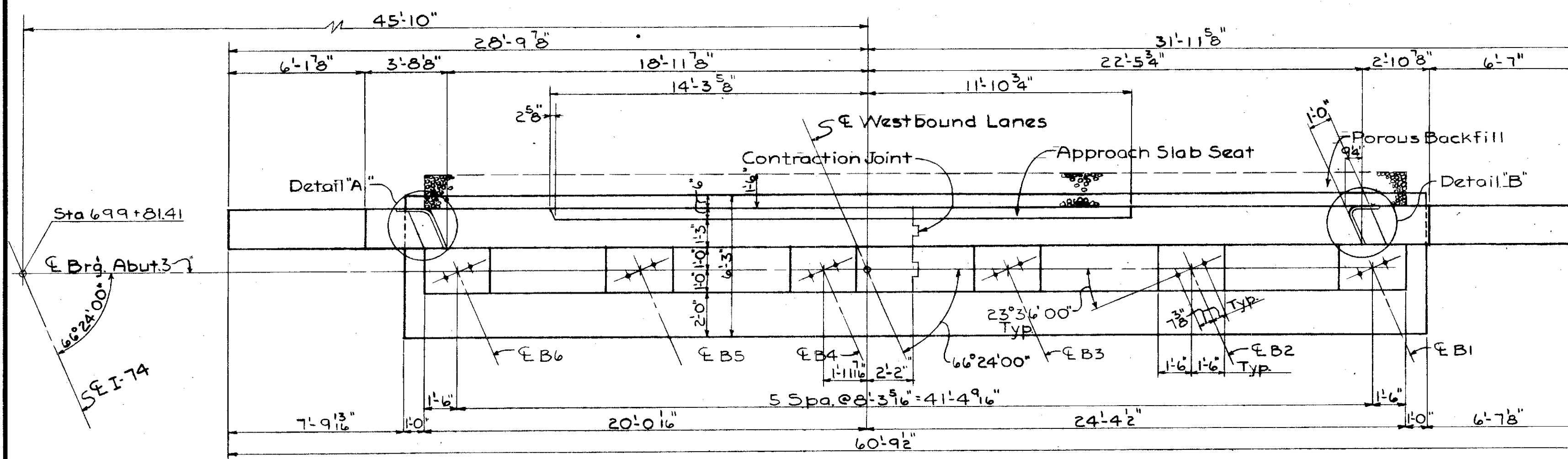
SECTION B-B

LEGEND

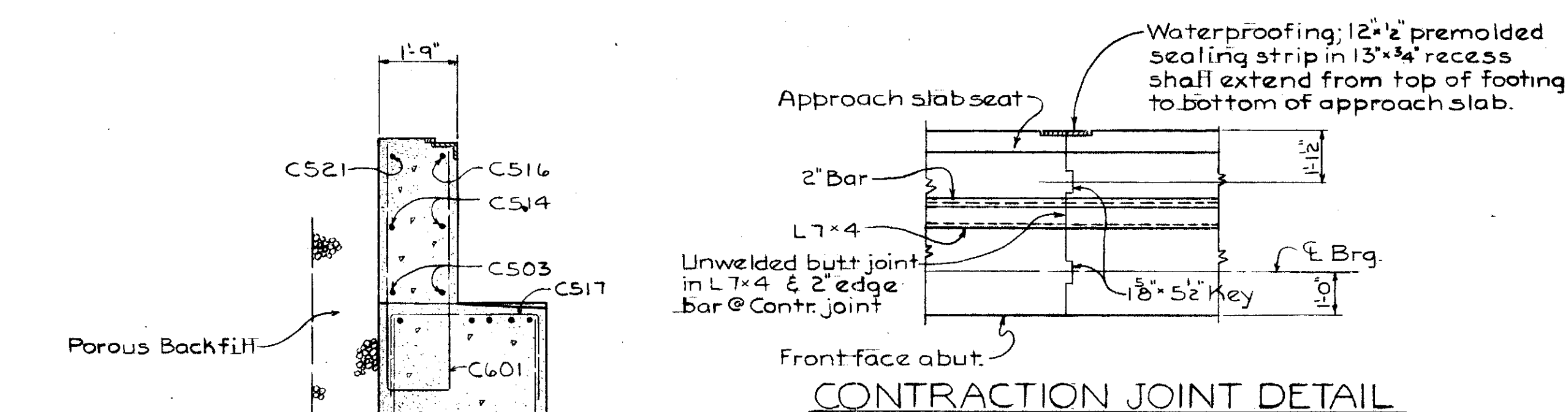
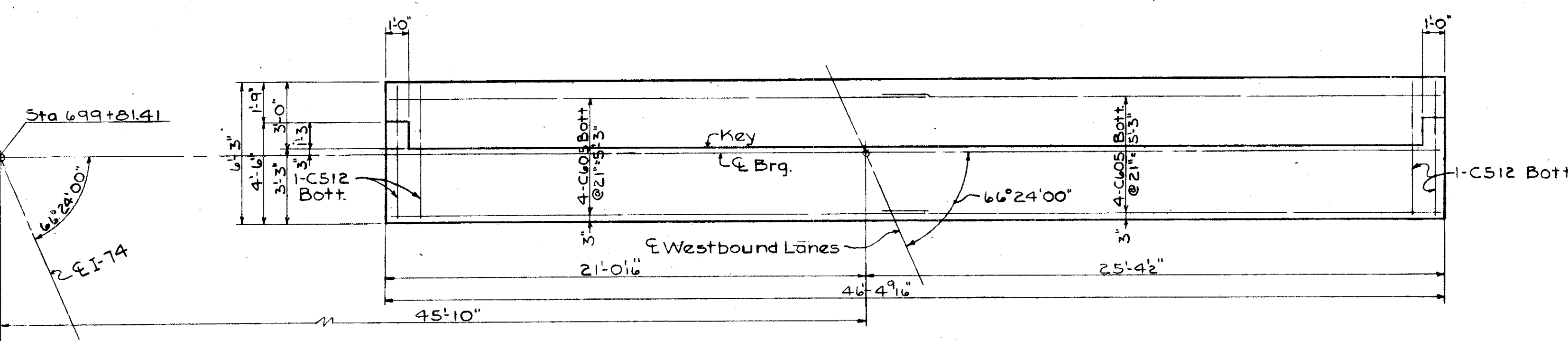
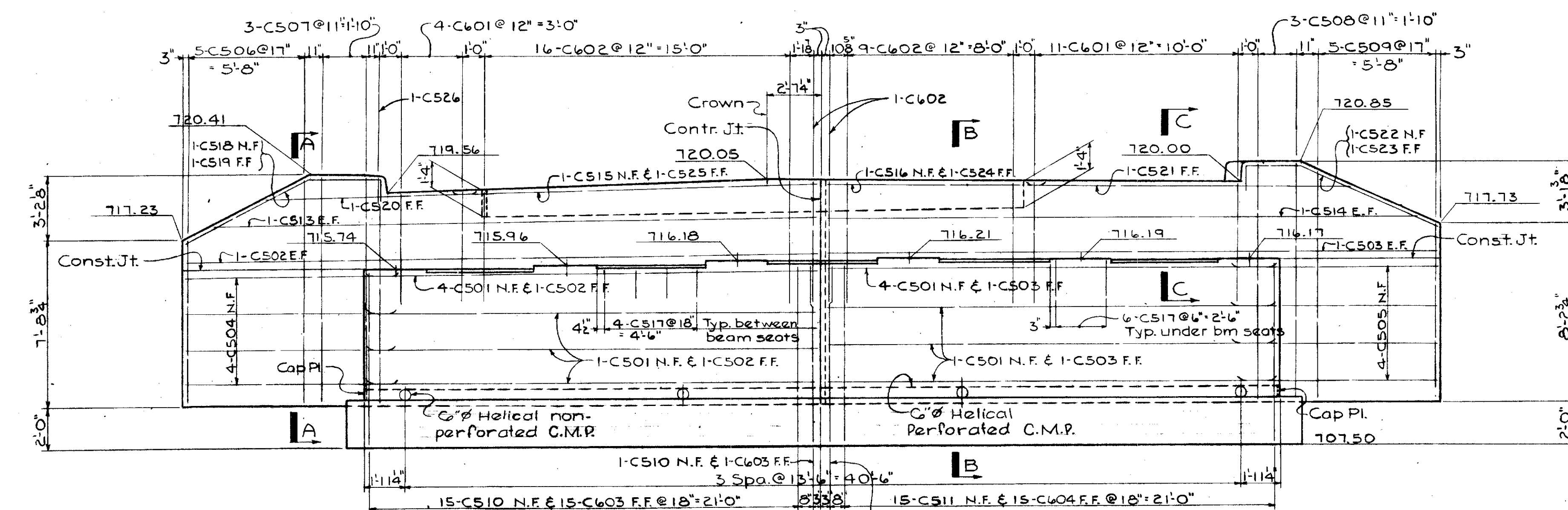
- E.F. = Each Face
- N.F. = Near Face
- F.F. = Far Face

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
ABUTMENT 1					
BRIDGE NO. HAM-74-1303 R					
I - 74 E. B.					
OVER HAFT ROAD					
HAMILTON COUNTY STA. 699+66.82 to					
STA. 701+54.24 E. B.					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
G.K.	G.K.	~	G.H.S.	JAD 10-13-65	

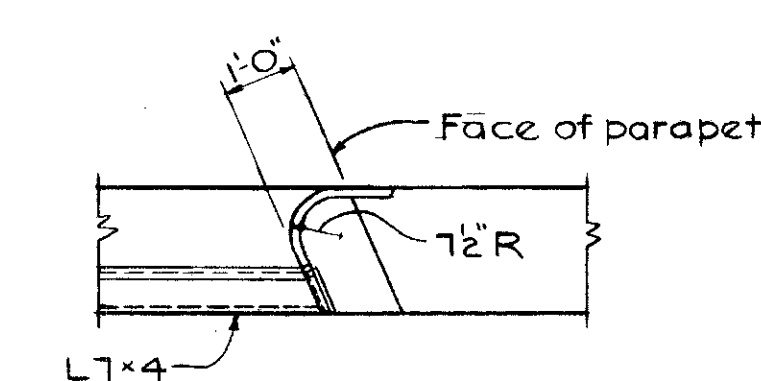
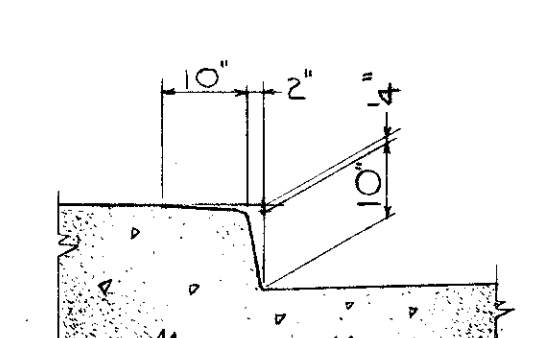
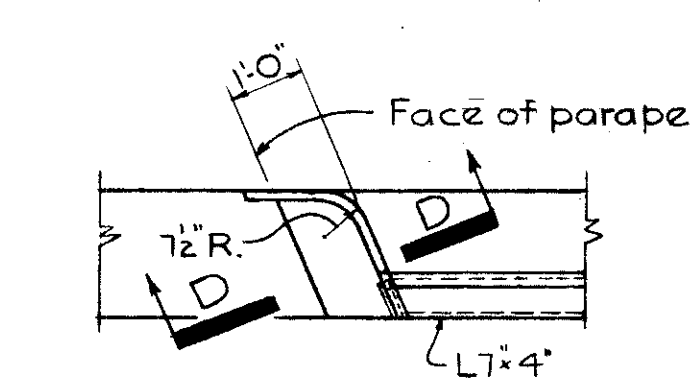
HAM-74-11.37



SECTION A-A



SECTION C-C

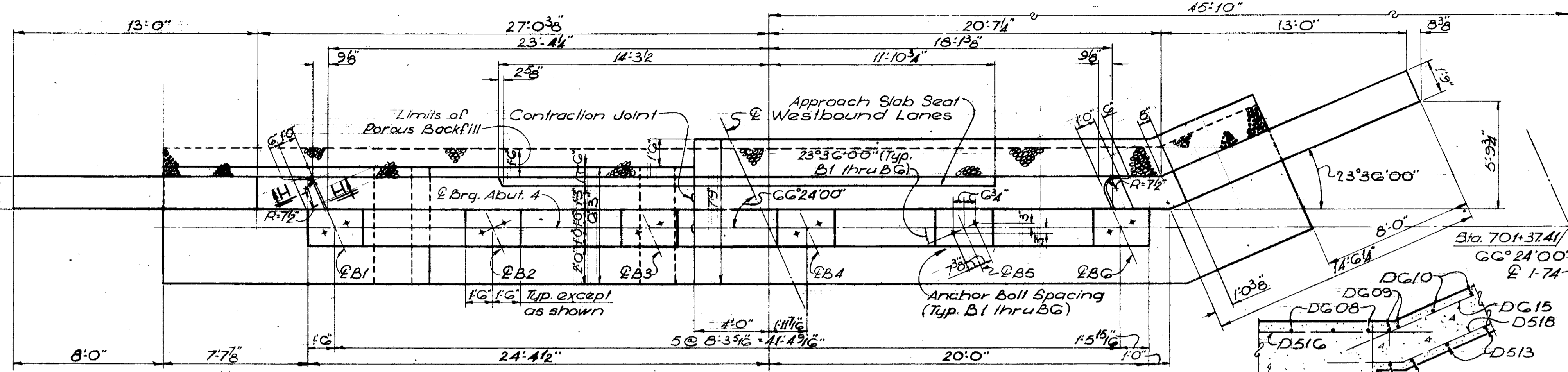


LEGEND
N.F. Near Face
F.F. Far Face
E.F. Each Face

- NOTES**
1. Porous backfill, 1 1/2" thick, shall extend up to the bottom of approach slab or paved shoulder. Excavation in excess of that required for construction of the abutment shall be considered as paid for in the bid price per cubic yard for porous backfill.
 2. Special care shall be taken in placing reinforcing steel in vicinity of bridge seats to avoid interference with the drilling of anchor rod holes.
 3. For end dam details, see SD-1-65 Shs. 1 & 2 of 3
 4. For reinforcing 1st see Sh. 306

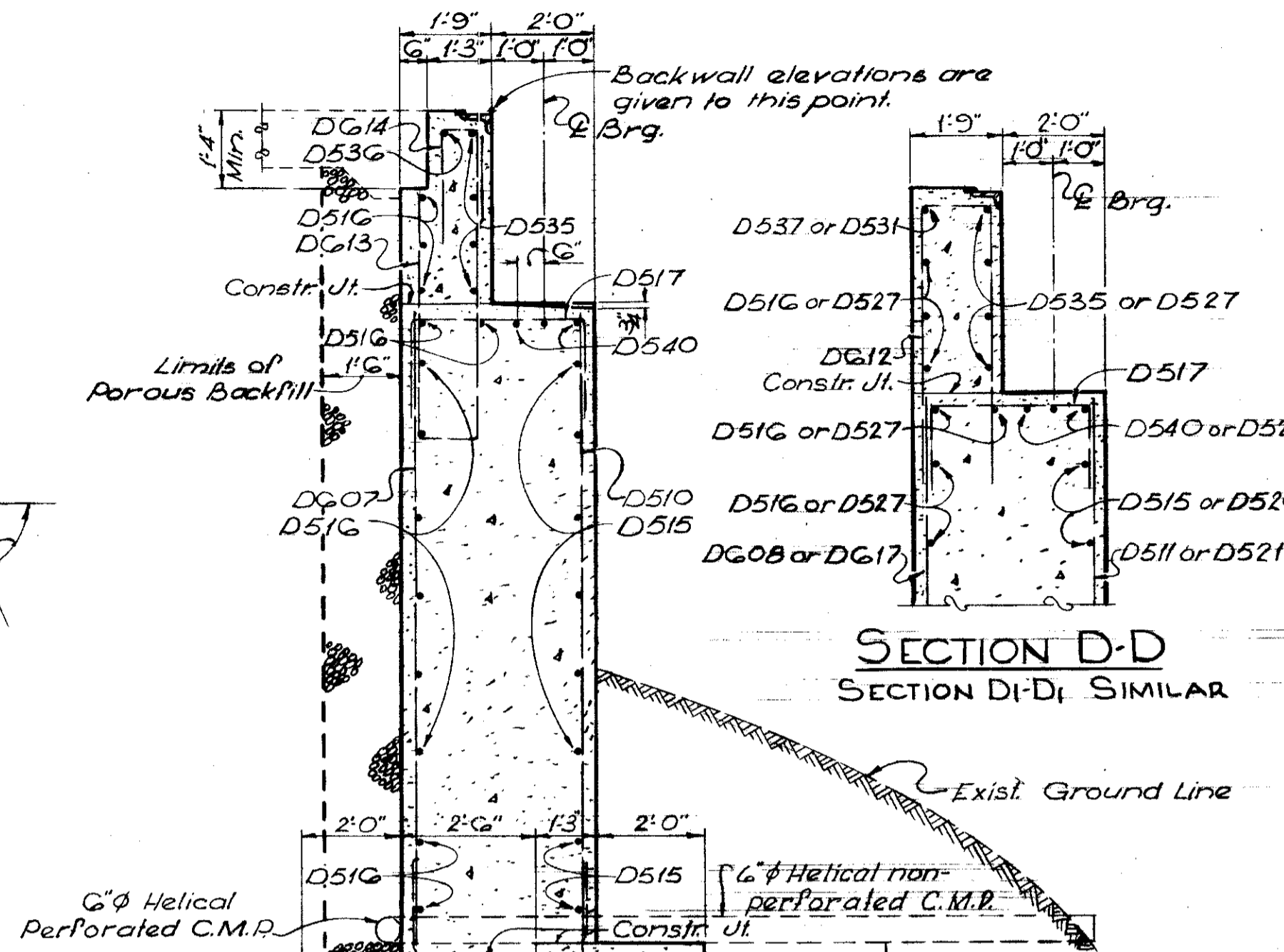
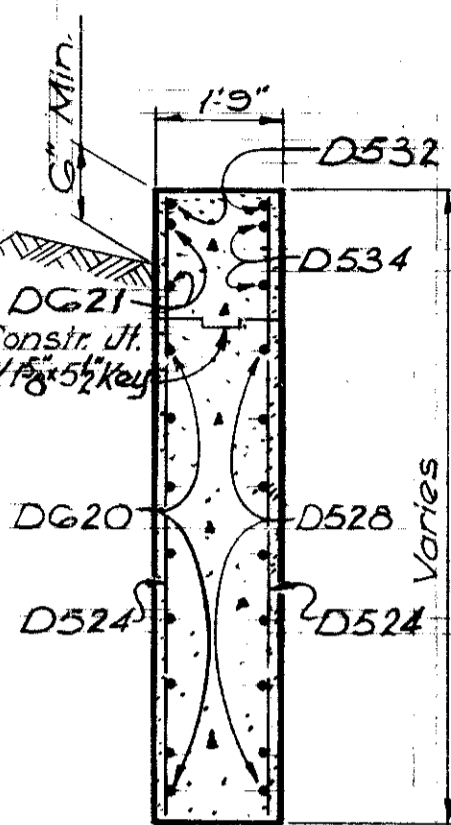
VOGT, IVERS, & ASSOCIATES ENGINEERS CINCINNATI		ARCHITECTS CHICAGO	
ABUTMENT 3			
BRIDGE NO. HAM-74-1303L			
I-74 OVER HAFT ROAD			
HAMILTON COUNTY		STA. 699 + 78.95 to STA. 701 + 39.87, W.B.	
DESIGNED DPR	DRAWN DPR	TRACED B.C.	REVIEWED DATE JAD 10-13-65

SECTION H-H

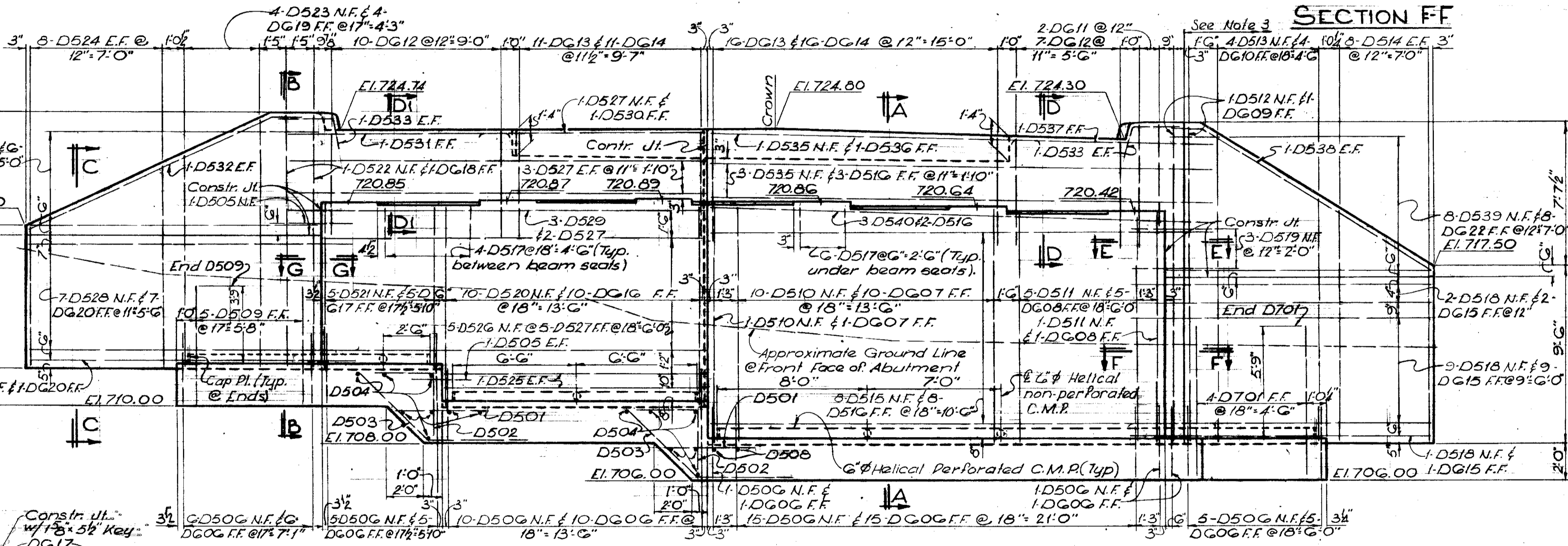


PLAN

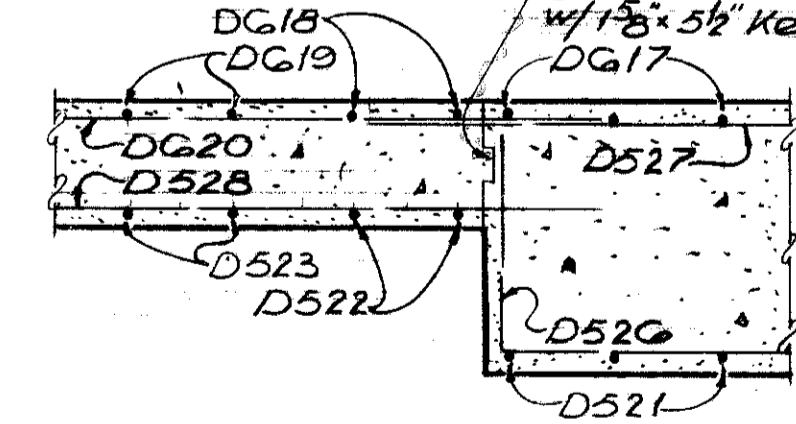
SECTION C-C



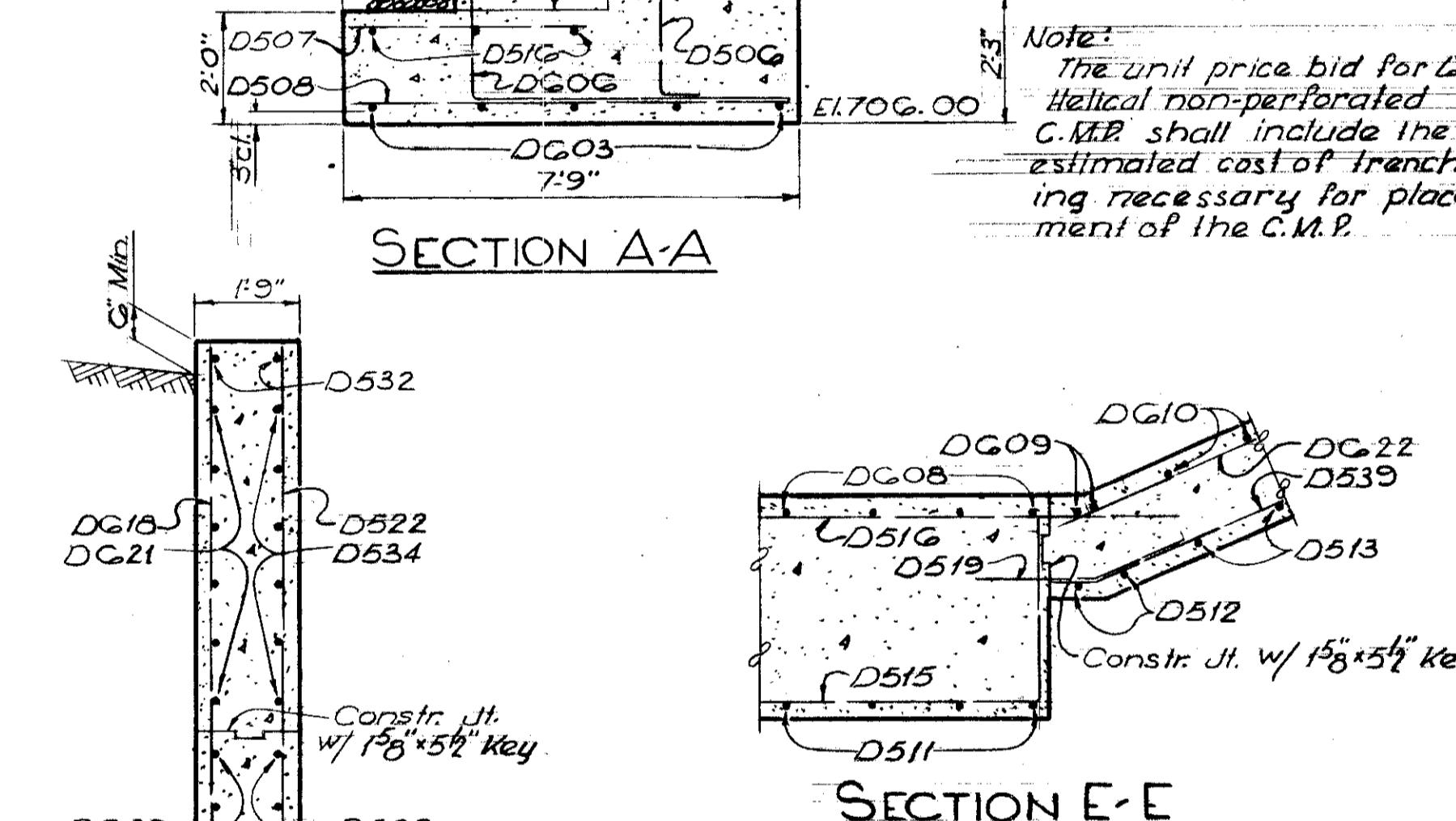
SECTION D-D
SECTION D1-D1 SIMILAR



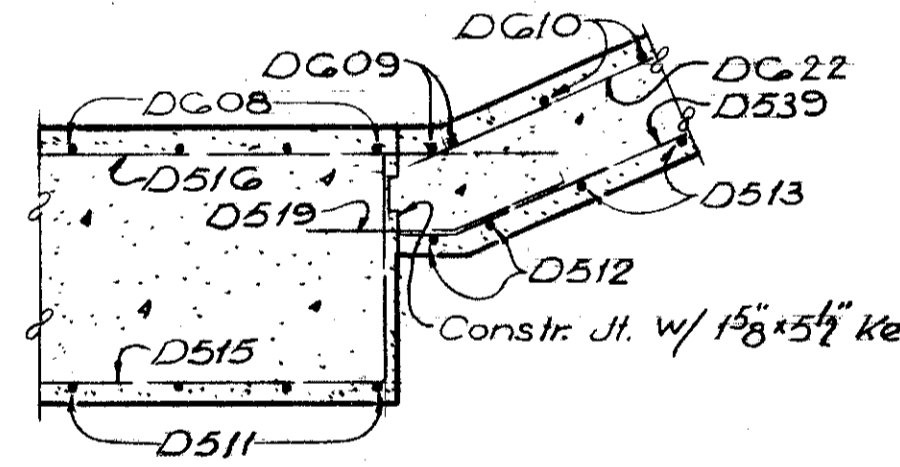
ELEVATION



SECTION G-G



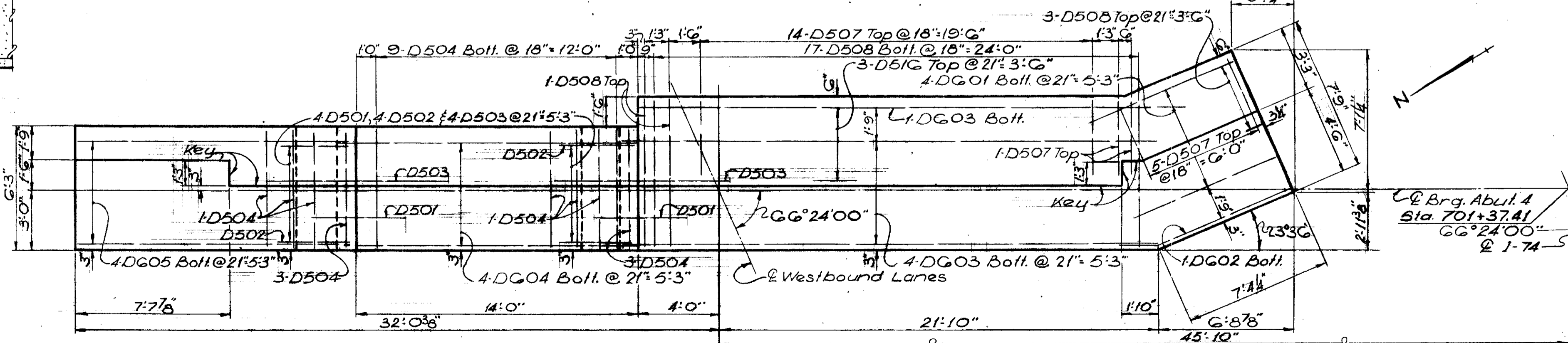
SECTION A-A



SECTION E-E

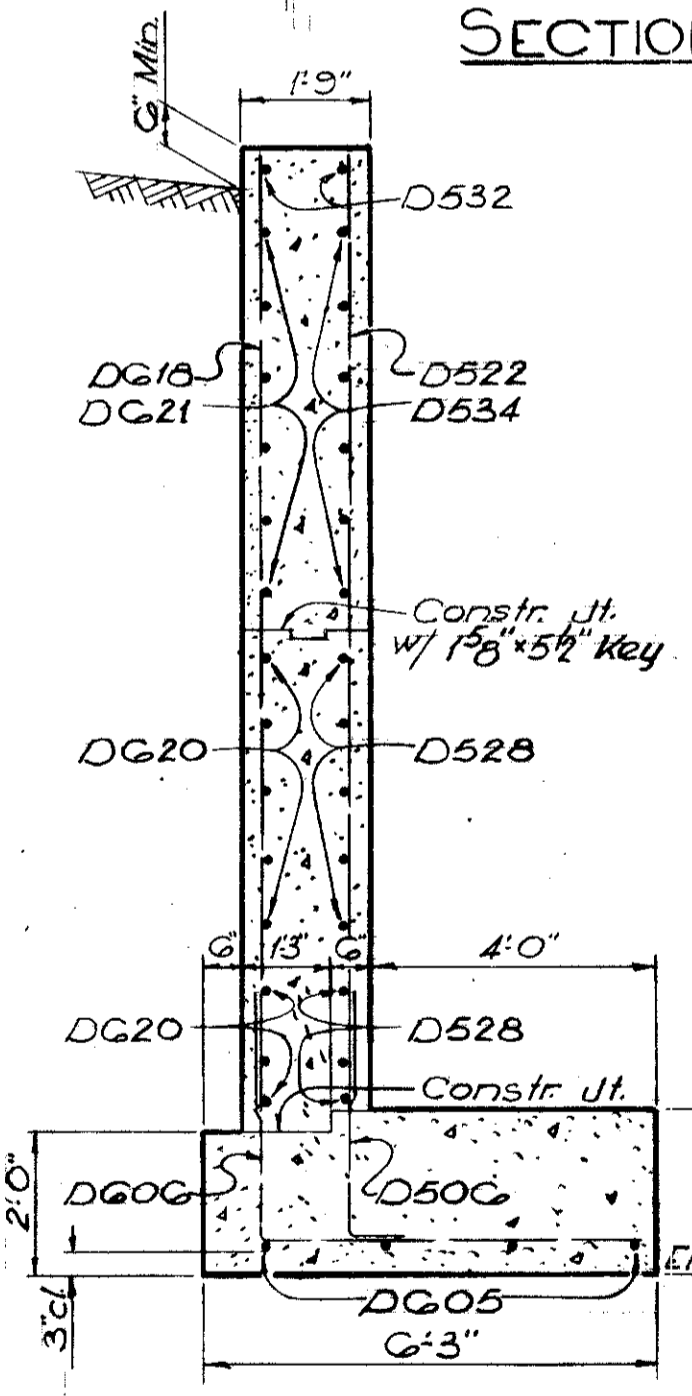
NOTES

1. Construction of the superstructure shall be completed prior to placing backfill above the level of the beam seats.
2. Footings shall extend a minimum of 3' into undisturbed rock or to the elevation shown on the plans, whichever is lower.
3. Spacing of reinforcing steel is measured along front face of wingwall.
4. For additional notes, see Sh. 296.
5. Minimum clearance for reinforcing bars shall be 2" from face of concrete, unless otherwise noted.
6. For Reinforcing Steel List, see Sh. 306.
7. For Contraction Joint Detail, see Sh. 296.



FOOTING PLAN

SECTION B-B



LEGEND
E.F. = Each Face
N.F. = Near Face
F.F. = Far Face

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

ABUTMENT 4
BRIDGE NO. HAM-74-1303-L&R
I-74 OVER HAFT ROAD

HAMILTON COUNTY = STA. 699+66.82 to STA. 701+54.24 E
STA. 699+78.95
STA. 701+39.87

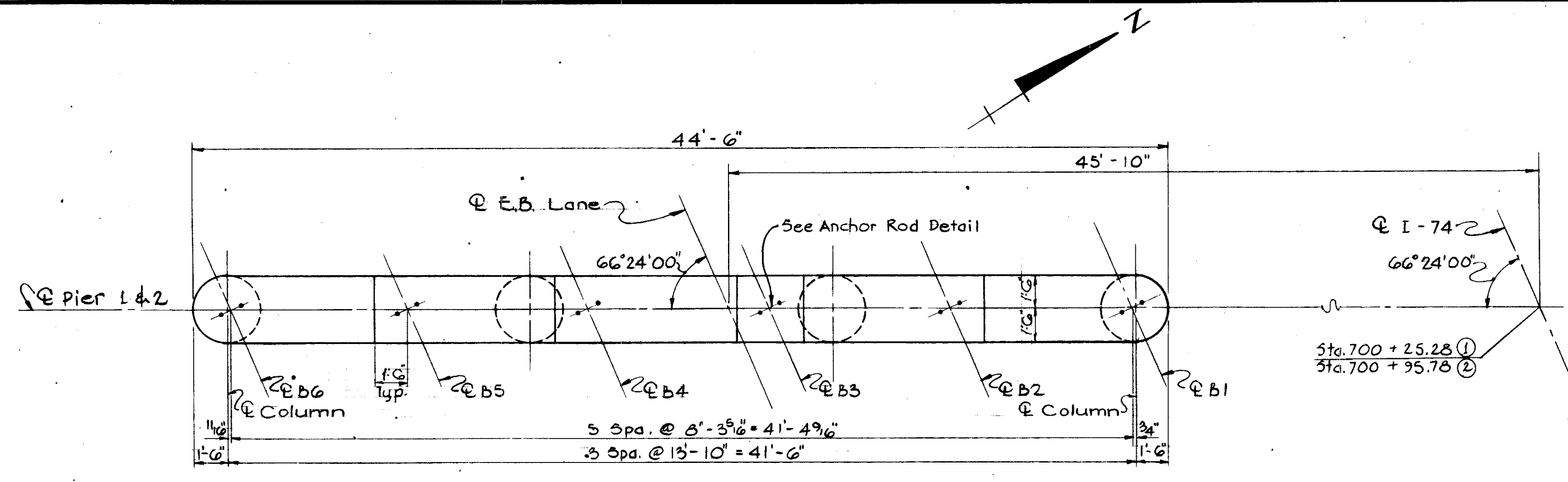
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
H.D.J.	G.J.W.		L.B.H.	JAD	10-13-65

MICROFILMED
NOV 1 1965

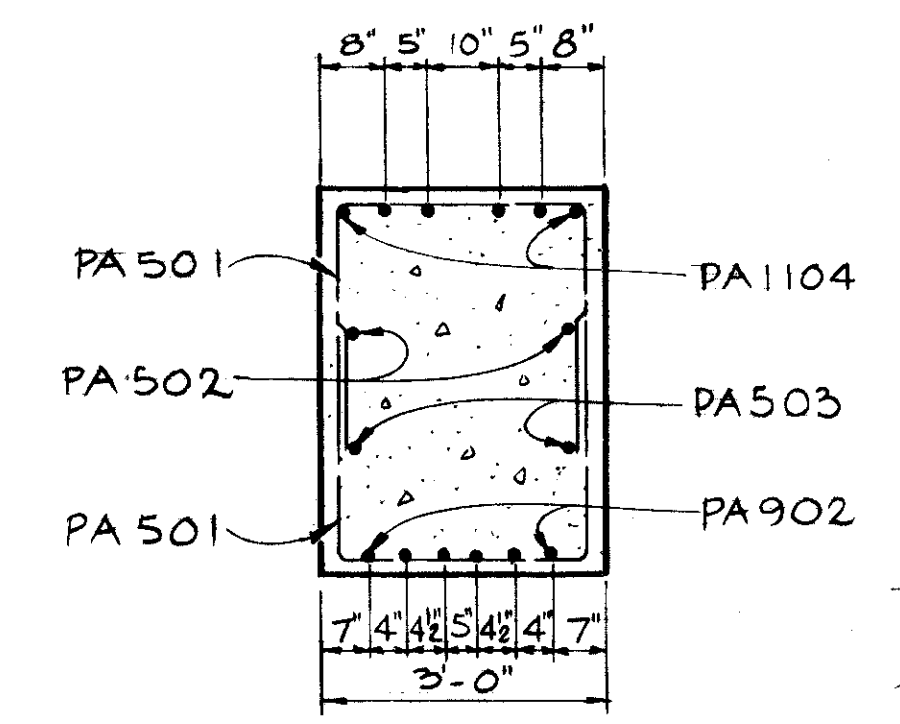
FED. RD. DIVISION	STATE	PROJECT
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300

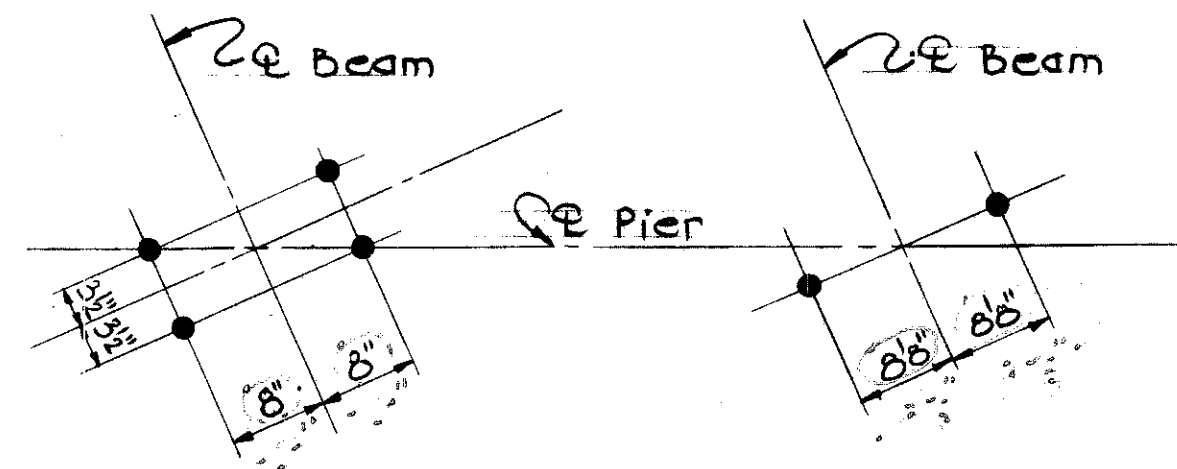
HAM - 74-11.37



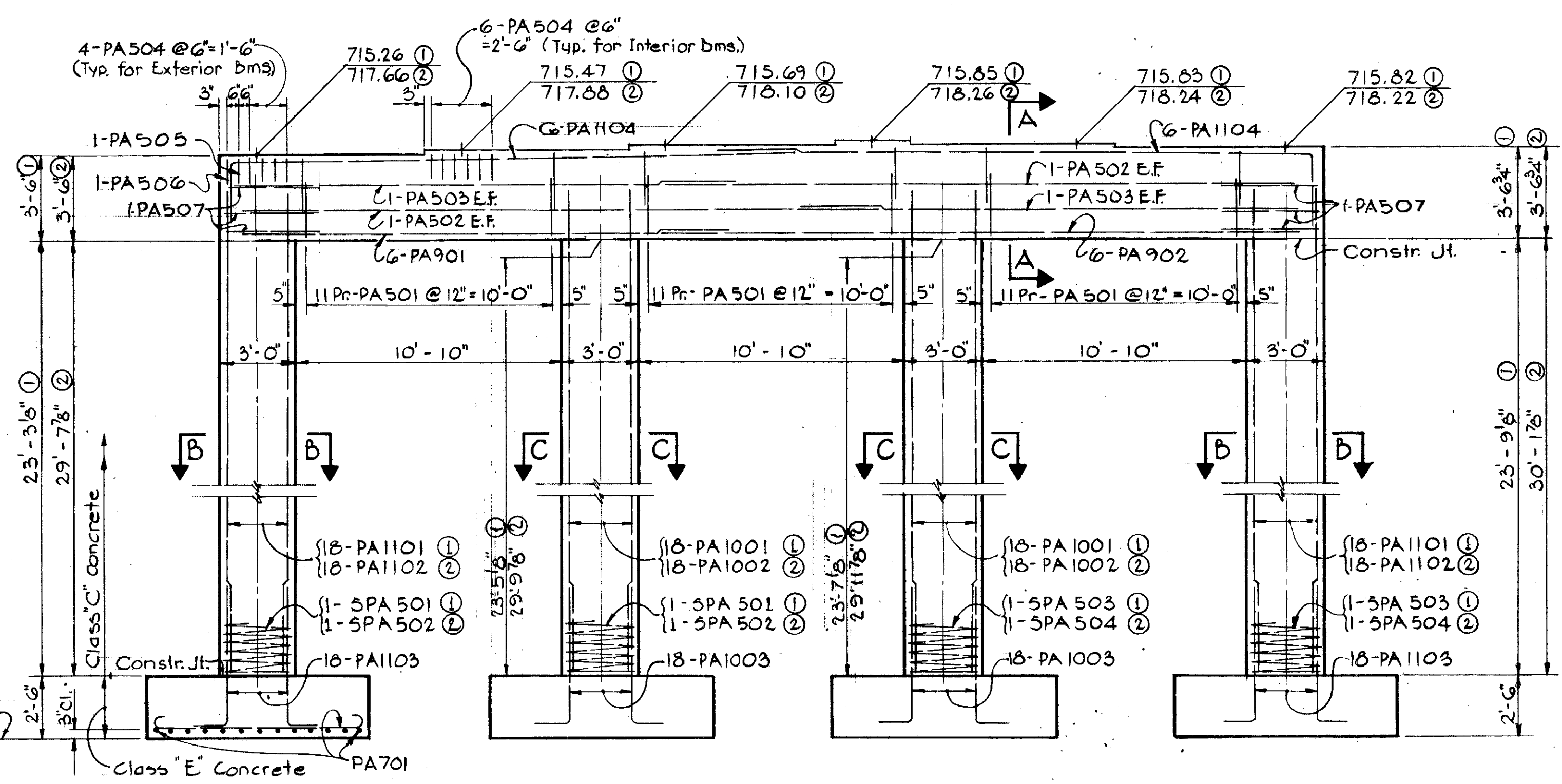
PLAN



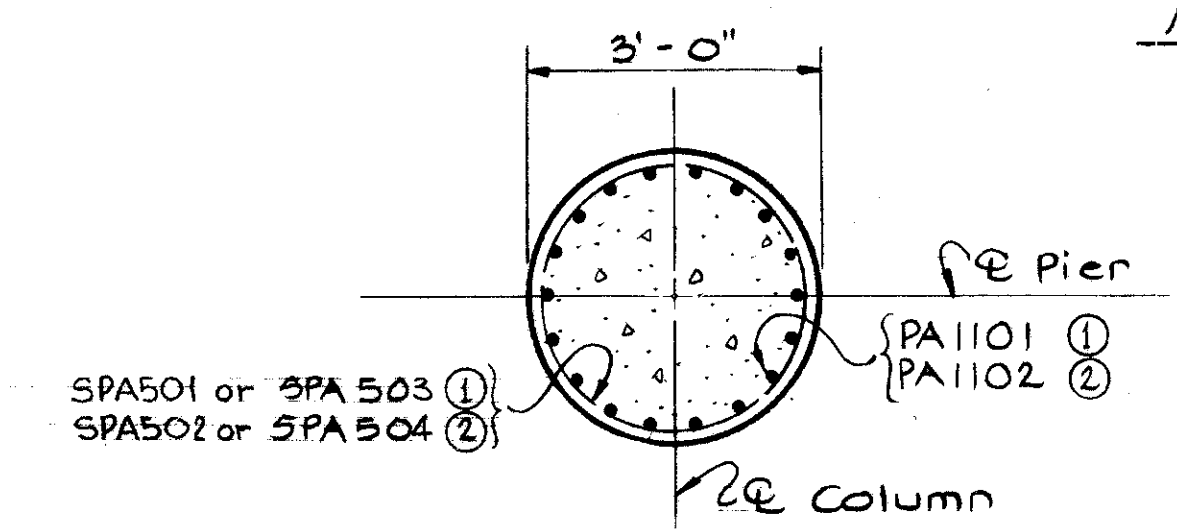
SECTION A-A



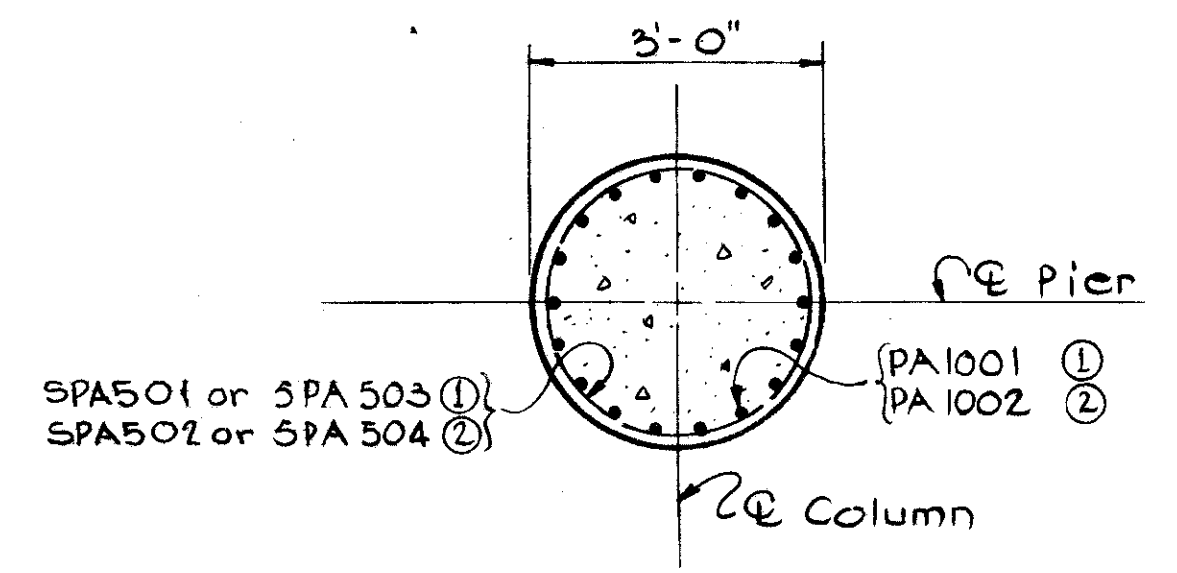
PIER 1 PIER 2
ANCHOR ROD DETAIL-TYPICAL



ELEVATION



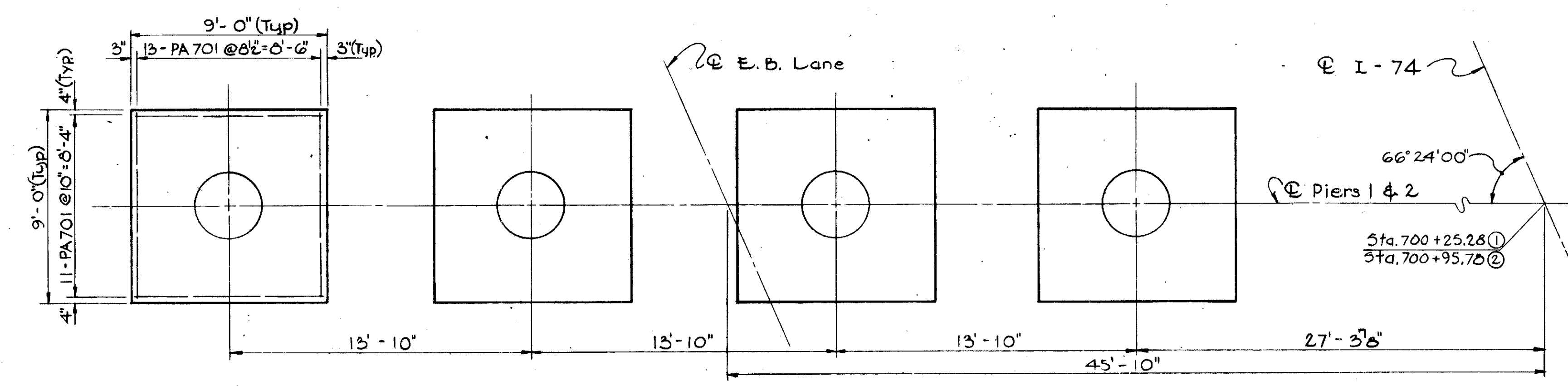
SECTION B-B



SECTION C-C

NOTES

- 1 - 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 rod holes.
- 2 - For Reinforcing Steel List, see Sheet 306



FOOTING PLAN

LEGEND

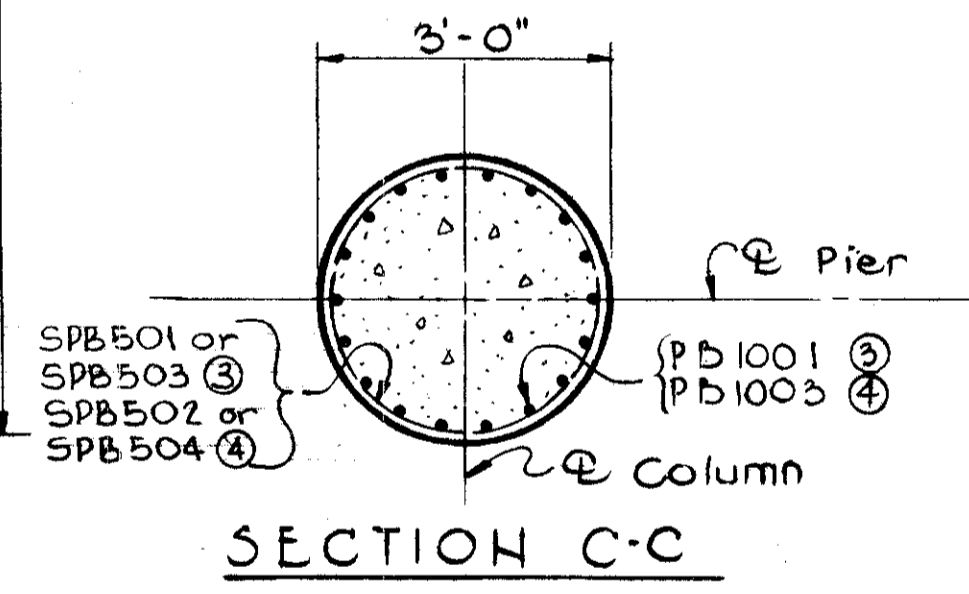
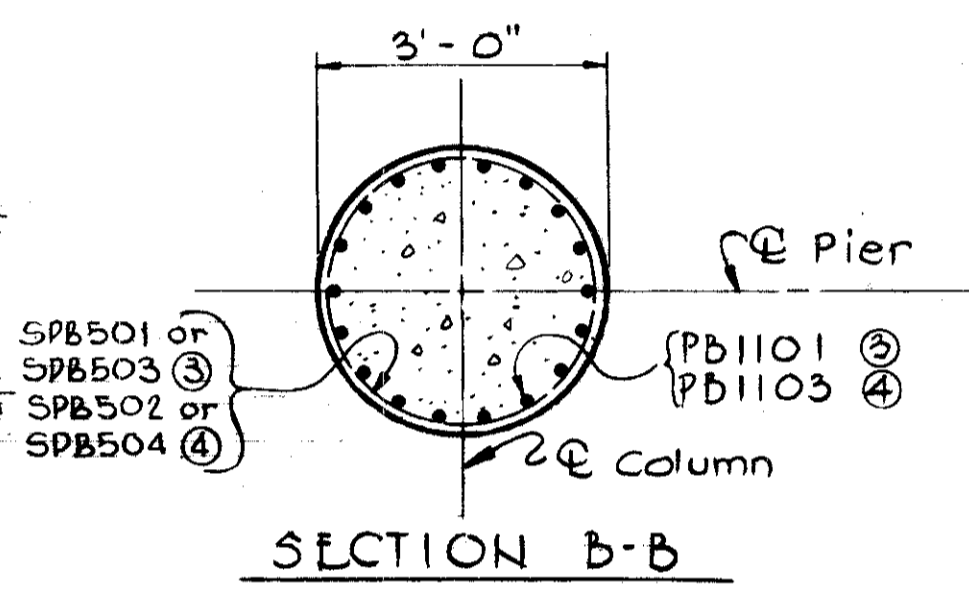
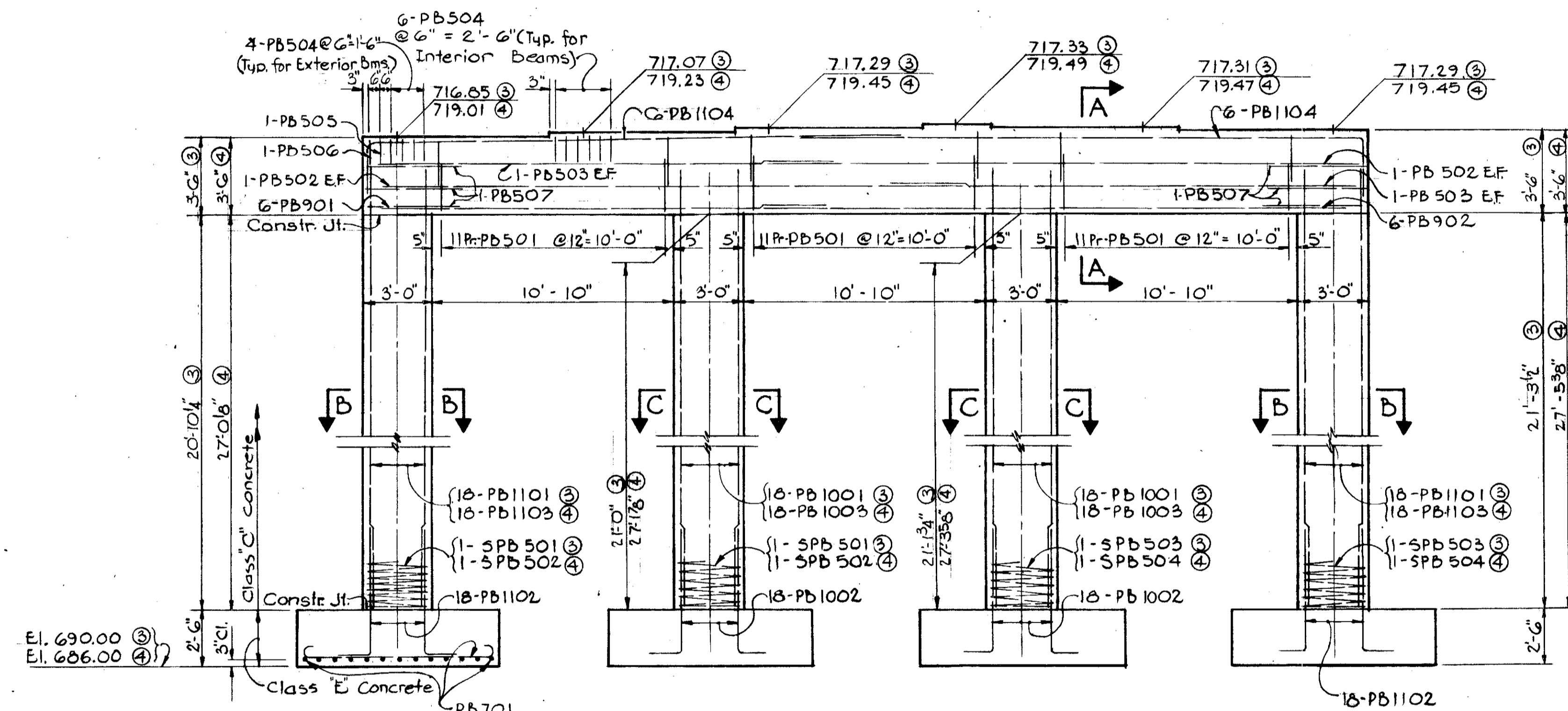
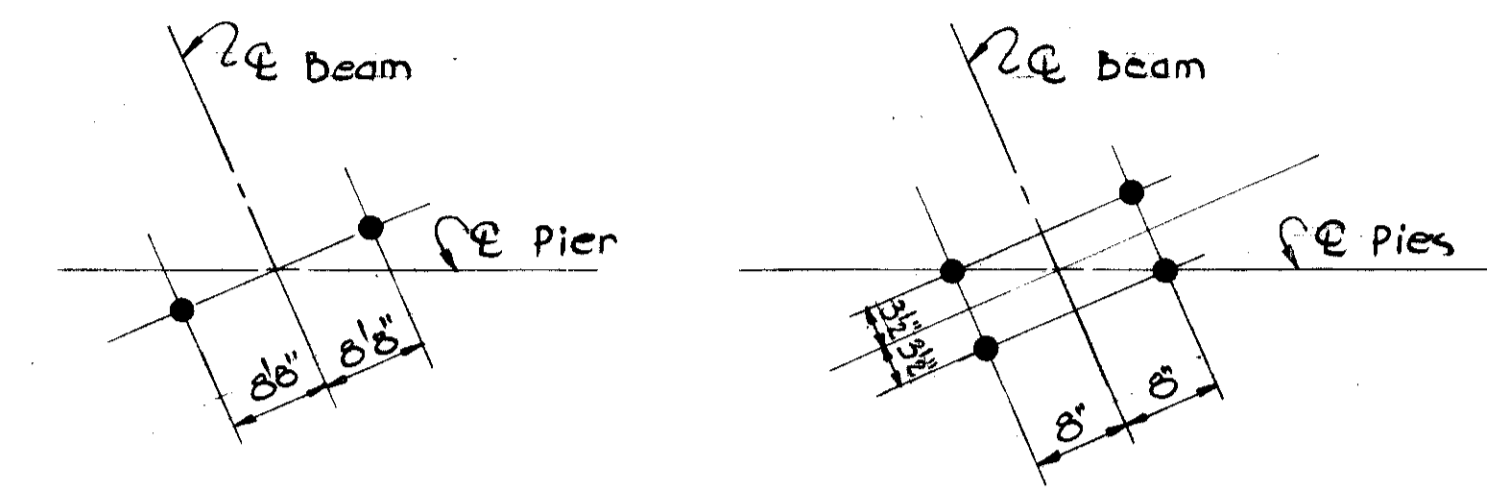
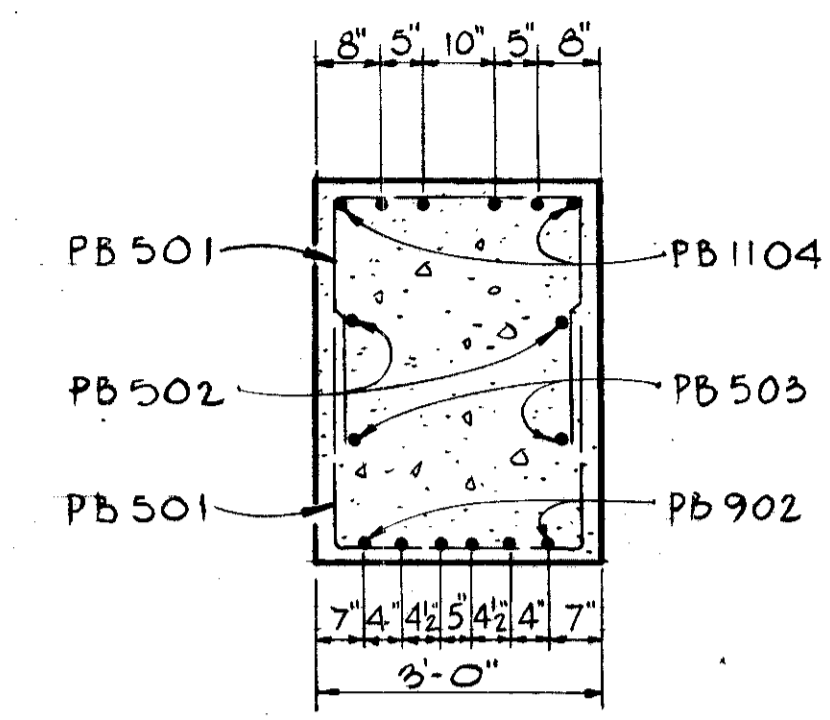
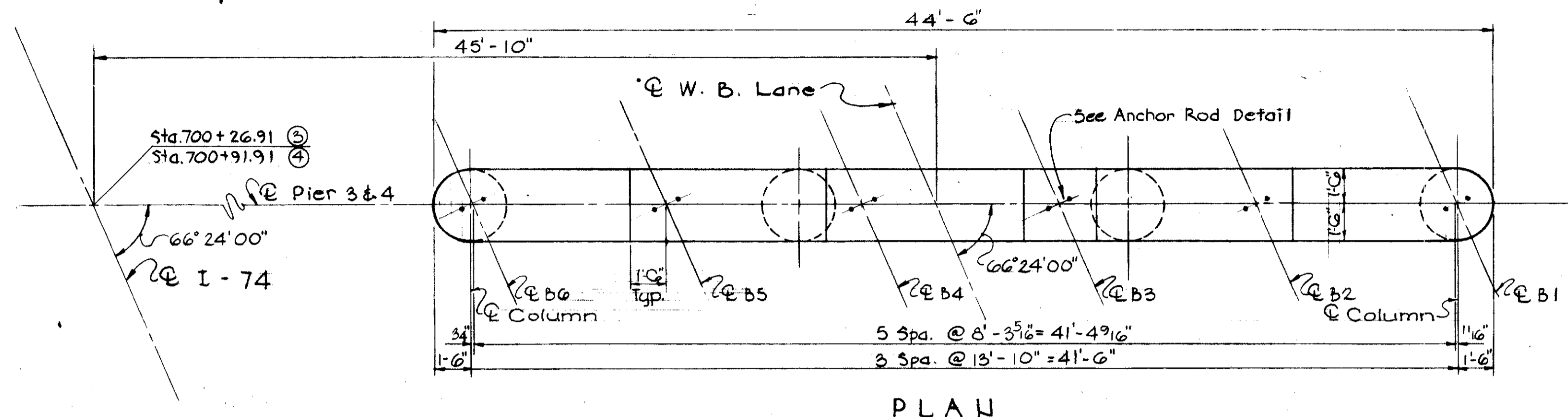
- E.F. = Each Face
- ① = Pier 1
- ② = Pier 2

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

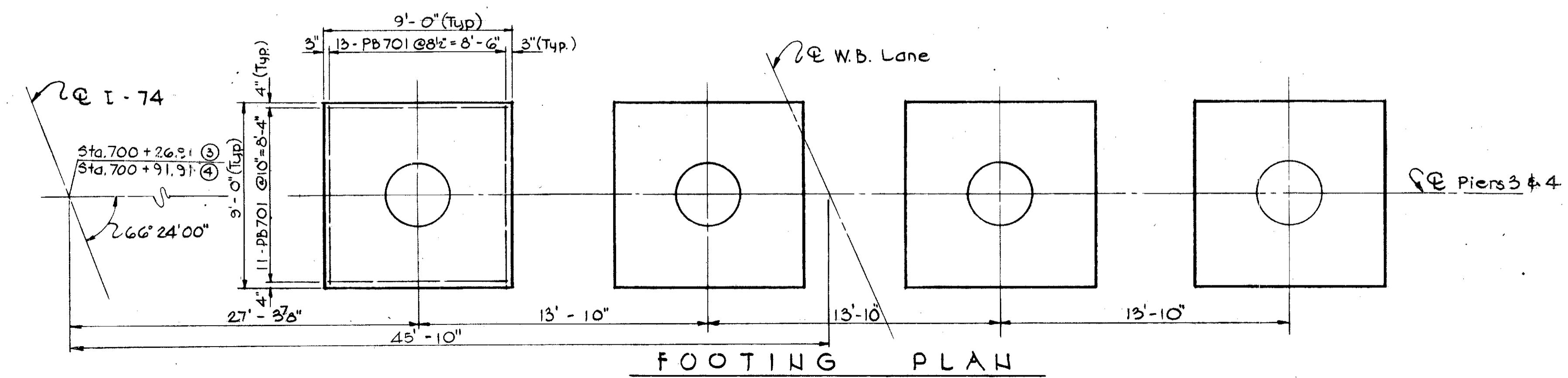
PIERS 1 & 2
BRIDGE NO. HAM-74-1303 R
I-74 E.B.
OVER HAFT ROAD
HAMILTON COUNTY STA. 699 + 66.82 to
STA. 701 + 54.24 E.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.F.L.	G.K.	~	M.E.	JAD	10-13-65	

foot 356
301-351
Plus Soil Profile



- NOTES:
1. 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 rod holes.
 2. For Reinforcing Steel List, see Sheet 306



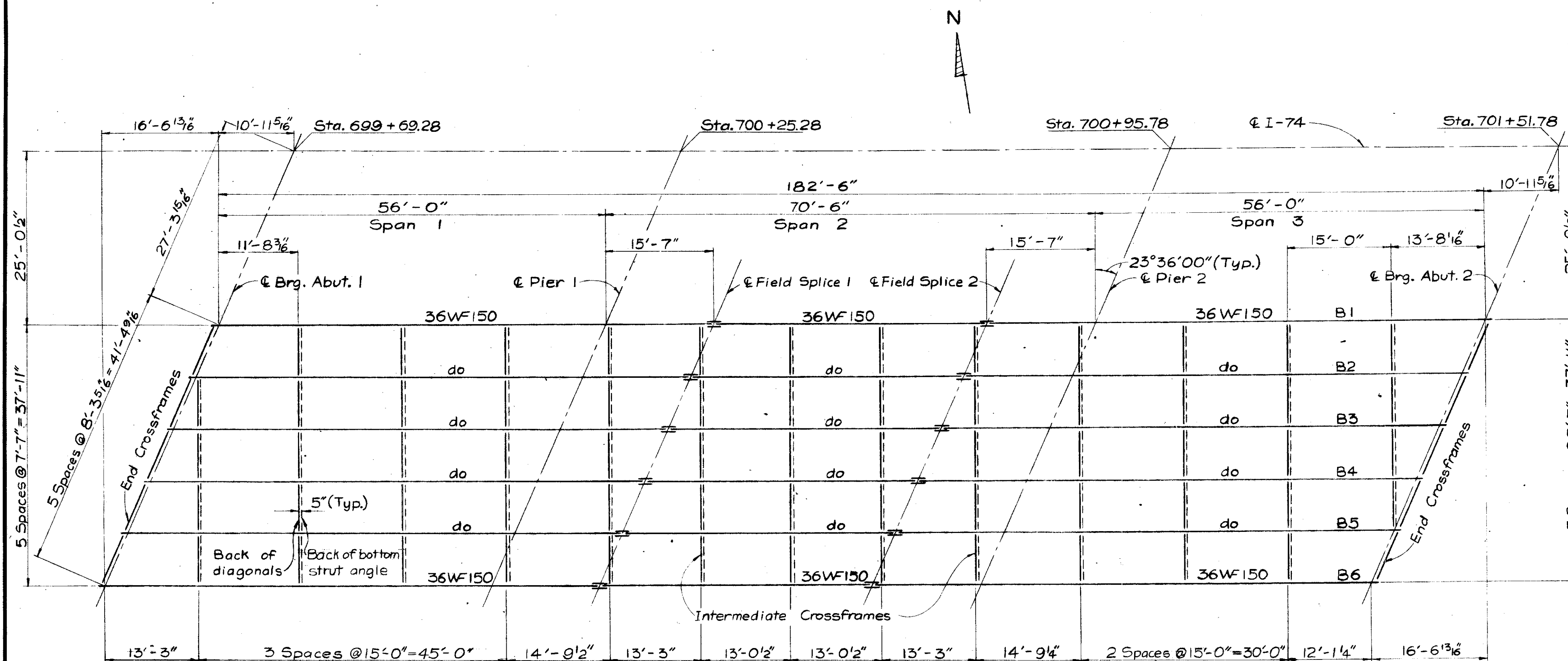
- LEGEND
- E.F. = Each Face
 (3) = Pier 3
 (4) = Pier 4

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

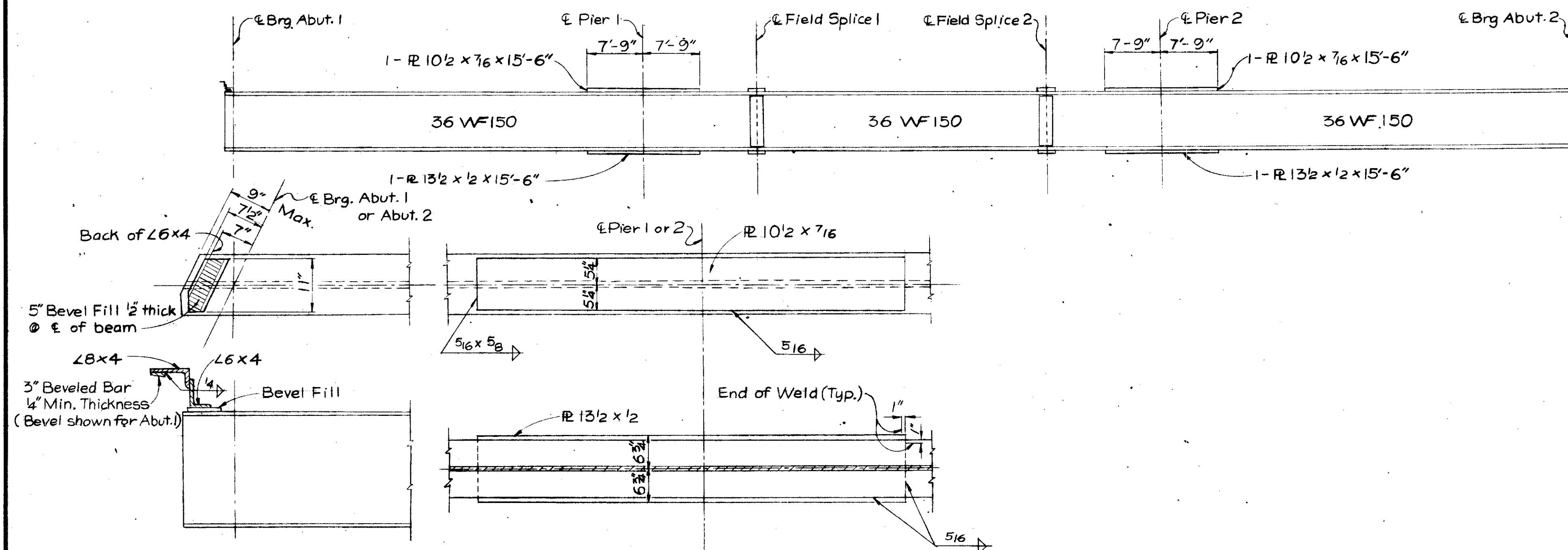
PIERS 3 & 4
BRIDGE NO. HAM-74-1303L
I-74 W. B.
OVER HAFT ROAD
HAMILTON COUNTY STA. 699+78.95 to STA. 701+39.87 W. B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.F.L.	G.K.	~	M.E.	JAD	10-13-65	

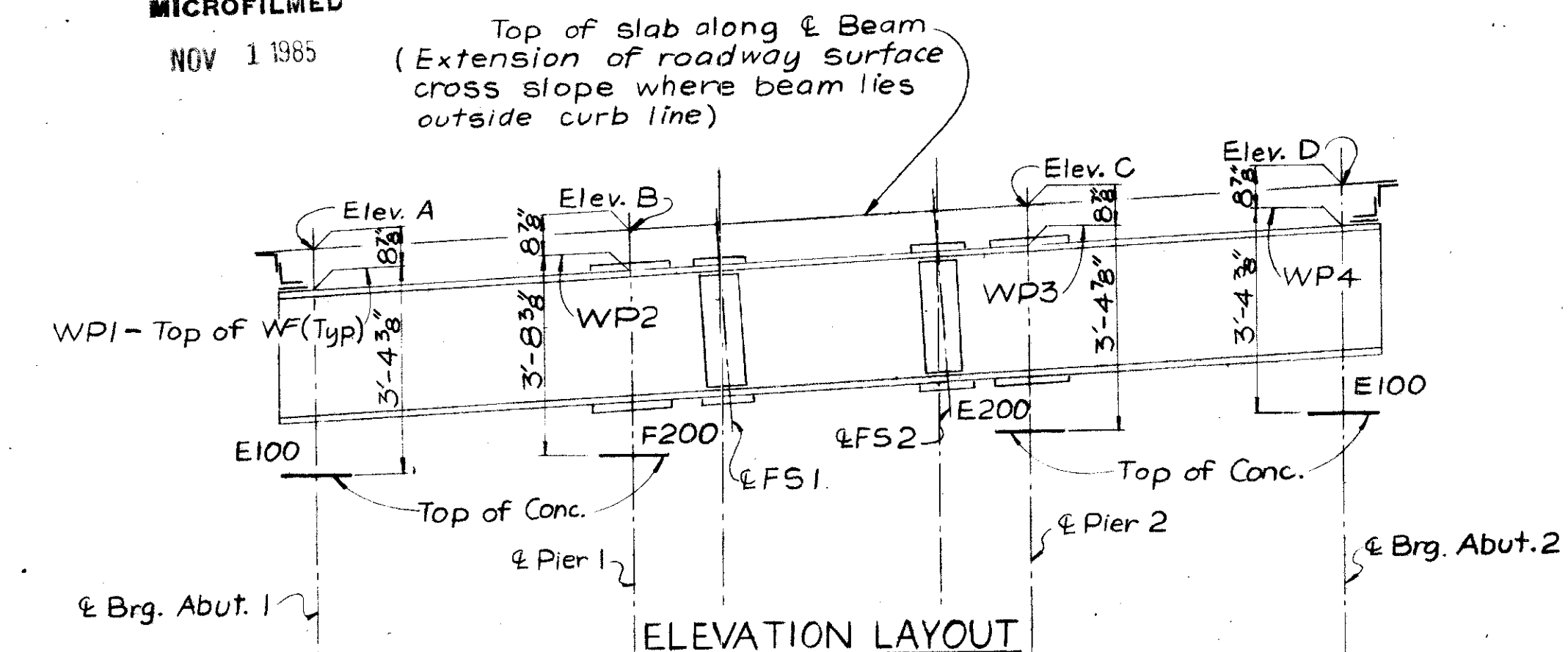
HAM-74-11.37



EASTBOUND FRAMING PLAN



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NOV 1 1985



NOTE:
1. The base line is a straight line passing through all indicated working points.
2. Tabulated values in the Deflection & Camber Table shall be measured from the Working Lines.

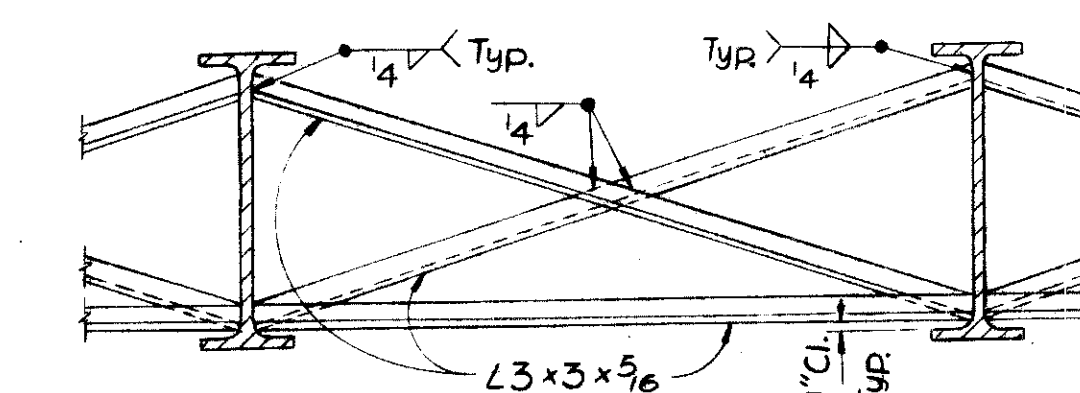
Deflection due to weight of steel	0	0	1/16"	0	0	1/16"	1/16"	1/16"	0	0	1/16"	0	0
Deflection due to remaining D. L.	0	3/16"	1/4"	1/8"	0	3/16"	5/16"	3/16"	0	1/8"	1/4"	3/16"	0
Required Shop Camber	0	3/16"	5/16"	1/8"	0	1/4"	3/8"	1/4"	0	1/8"	5/16"	3/16"	0

DEFLECTION & CAMBER

BEAM	Elev. A	Elev. B	Elev. C	Elev. D
B1	718.573	720.253	722.368	724.048
B2	718.592	720.272	722.387	724.067
B3	718.611	720.291	722.406	724.086
B4	718.449	720.129	722.244	723.924
B5	718.231	719.911	722.026	723.706
B6	718.014	719.694	721.809	723.489

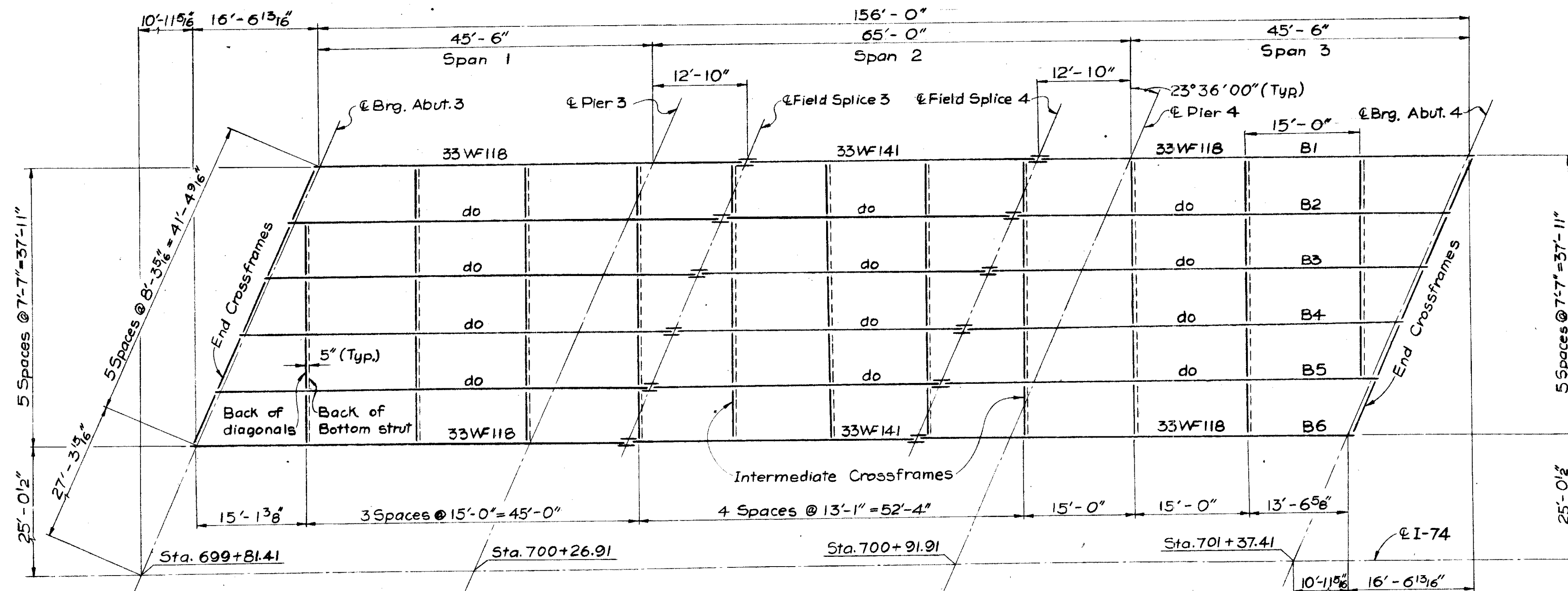
NOTES

- For End Crossframe and End Dam Details, see Std. Dwg. SD-1-65, Sh. 1 of 3 dated 11-8-65. A beveled bar will be required at End Dams because roadway gradient exceeds 2.0%.
- For Curb Plate Details at End Dam, see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
- For Details of Fixed and Sliding Bearings, see Std. Dwg. FSB-1-62, Rev. 1-15-63.
- For Scupper Location, see Sh. 304.
- For Details of Standard Scupper, see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
- For Beam Field Splice Details, see Std. Dwg. SD-1-65, Sh. 3 of 3 dated 11-8-65.
- For Adjusted Curb Line Elevations, see Sh. 304.

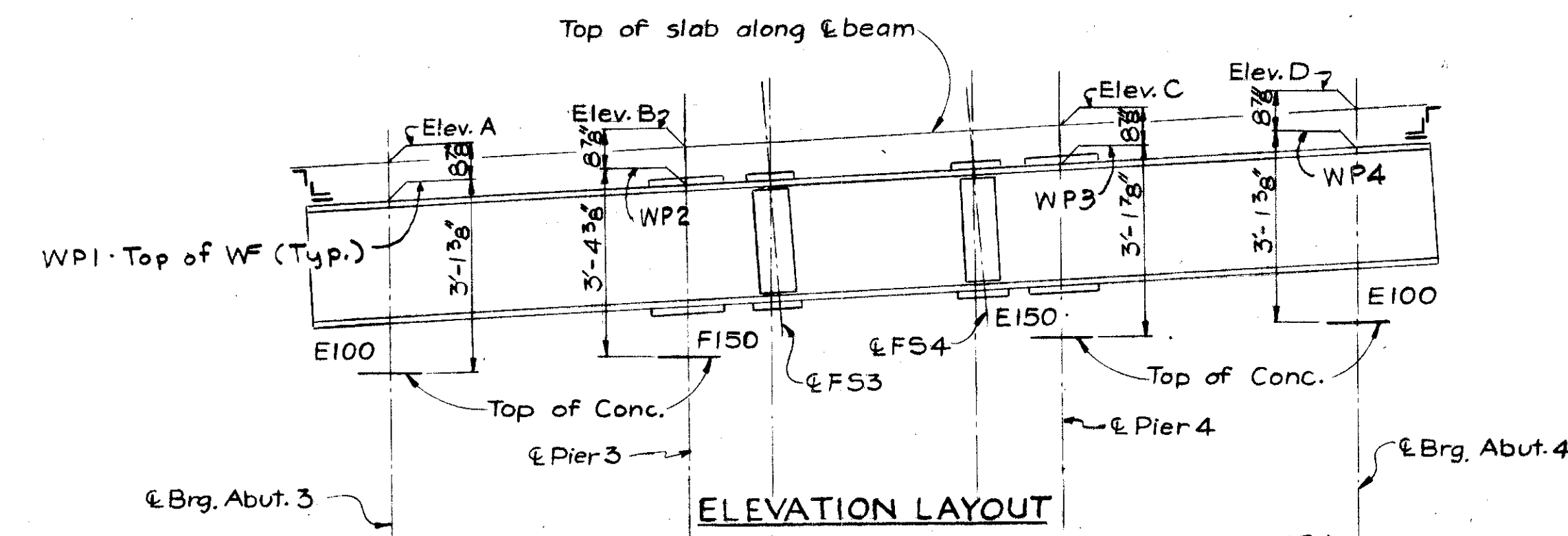


TYPICAL INTERMEDIATE CROSSFRAME

VOGT, IVERS, & ASSOCIATES ENGINEERS CINCINNATI		ARCHITECTS CHICAGO	
EASTBOUND FRAMING PLAN			
BRIDGE NO. HAM-74-1303 R I-74 OVER HAFT ROAD HAMILTON COUNTY STA. 699+66.82 to STA. 701+54.24 E.B.			
DESIGNED	DRAWN	TRACED	CHECKED
LHY	LHY	LHY	COC
REVIEWED DATE	REVIEWED		
JAD 10-13-65			



FRAMING PLAN



NOTE:
 1. The base line is a straight line passing through all indicated working points (W.P.)
 2. Tabulated values in the Deflection and Camber Table shall be measured from the working line.

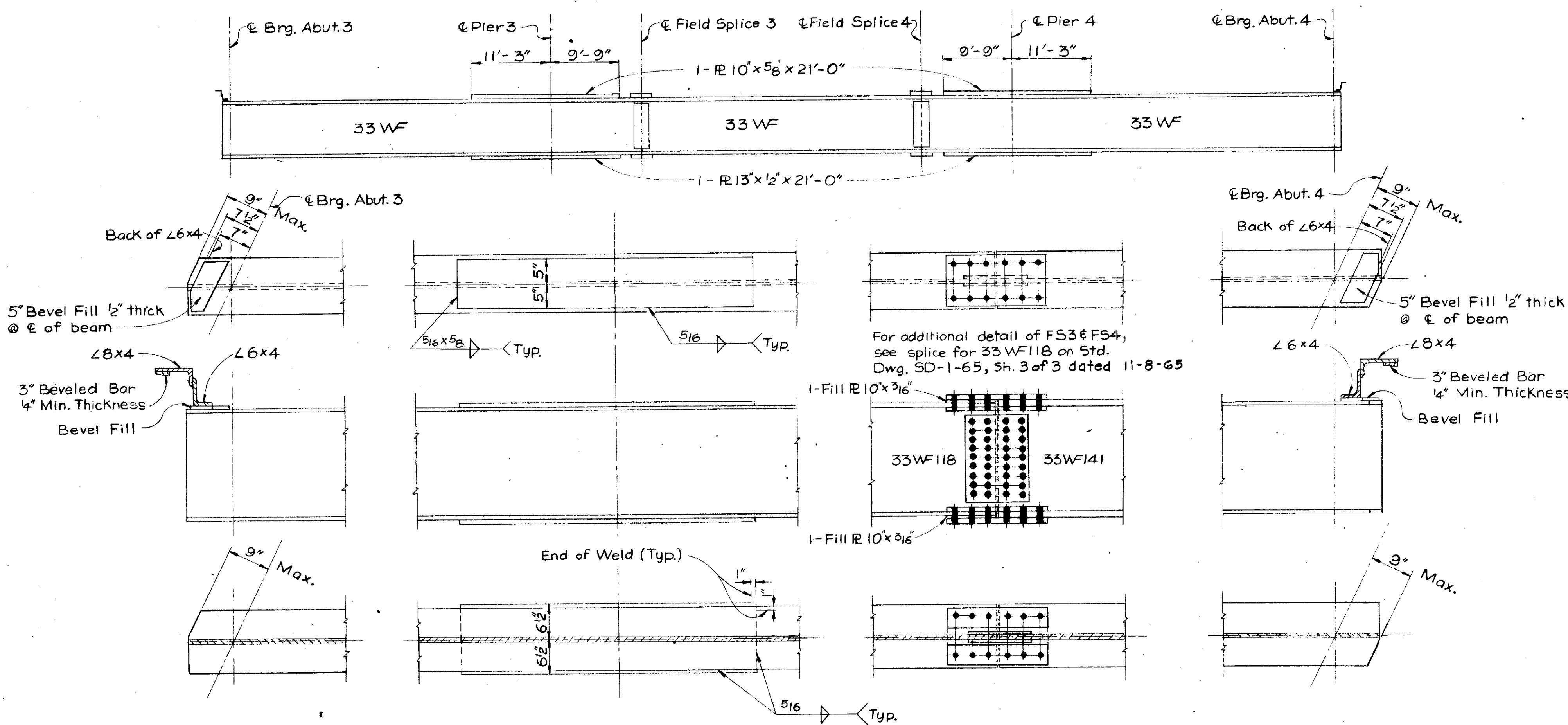
Deflection due to weight of steel	0	0	0	0	0	0	1/16	0	0	0	0	0	0
Deflection due to remaining D. L.	0	1/8	1/8	1/16	0	3/16	7/16	3/16	0	1/16	1/8	1/8	0
Adjustment req'd for deflection	0	1/8	1/8	1/16	0	3/16	1/2	3/16	0	1/16	1/8	1/8	0
Required Shop Camber	0	1/8	1/8	1/16	0	3/16	1/2	3/16	0	1/16	1/8	1/8	0

DEFLECTION & CAMBER

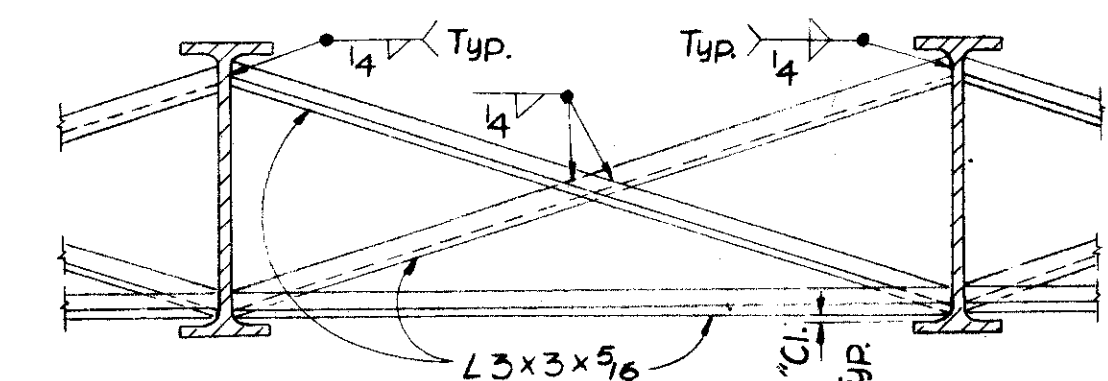
BEAM	Elev. A	Elev. B	Elev. C	Elev. D
B1	720.028	721.393	723.343	724.708
B2	720.047	721.412	723.362	724.727
B3	720.066	721.431	723.381	724.746
B4	720.029	721.394	723.344	724.709
B5	719.811	721.176	723.126	724.491
B6	719.593	720.958	722.908	724.273

NOTES

- For End Crossframe and End Dam Details, see Std. Dwg. SD-1-65, Sh. 1 of 3 dated 11-8-65. A beveled bar will be required at End Dams because roadway gradient exceeds 2.0%.
- For Curb Plate Details at End Dam, see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
- For Details of Fixed and Sliding Bearings, see Std. Dwg. FSB-1-62, Rev. 1-15-63.
- For Scupper locations, see Sh. 305
- For Details of Standard Scuppers, see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
- For adjusted Curb Line Elevations, see Sh. 305



BEAM DETAILS



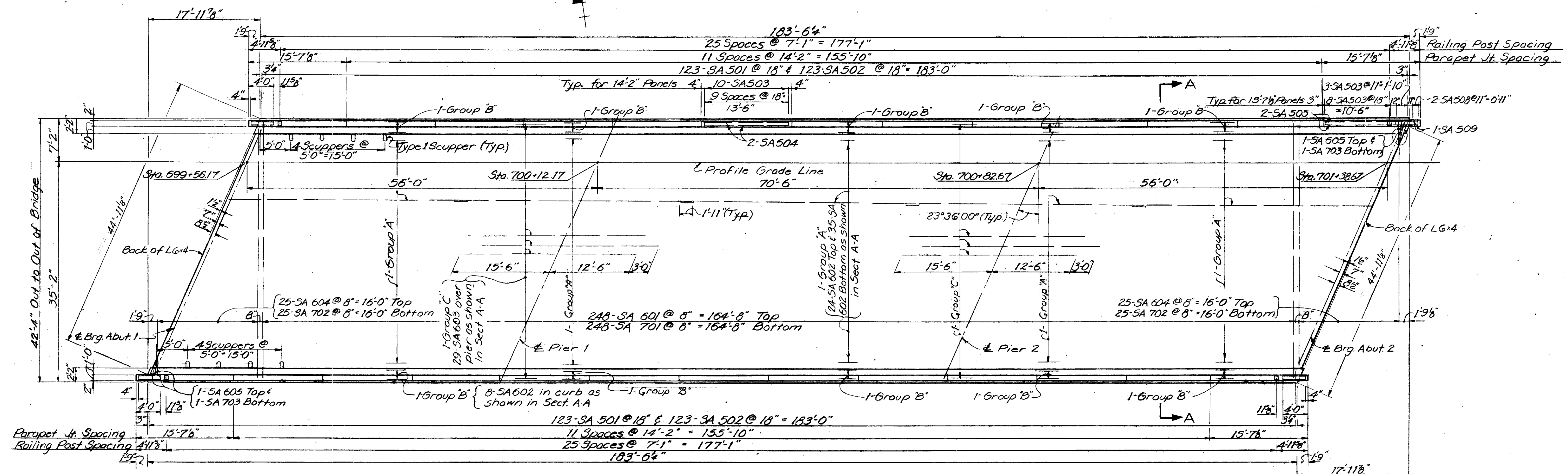
TYPICAL INTERMEDIATE CROSSFRAME

VOGT, IVERS, & ASSOCIATES
 ENGINEERS ARCHITECTS
 CINCINNATI CHICAGO

**WESTBOUND
 FRAMING PLAN
 BRIDGE NO. HAM-74- 1303 L
 I-74
 OVER HAFT ROAD**

HAMILTON COUNTY STA. 699+78.95 to
 STA. 701+39.87 W.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LHY	LHY	LHY	ERB	JAD	10-13-65	

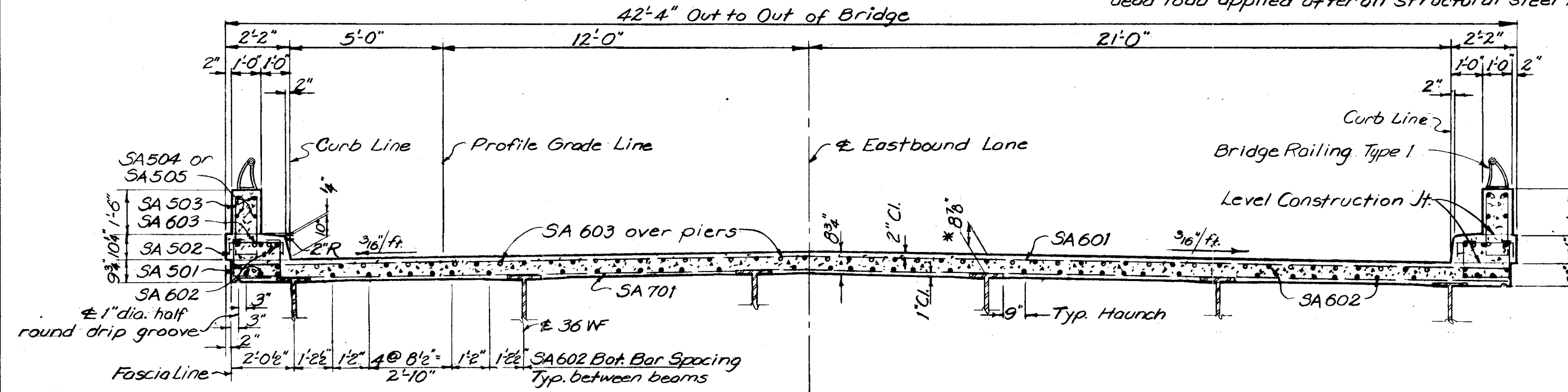


EASTBOUND PLAN

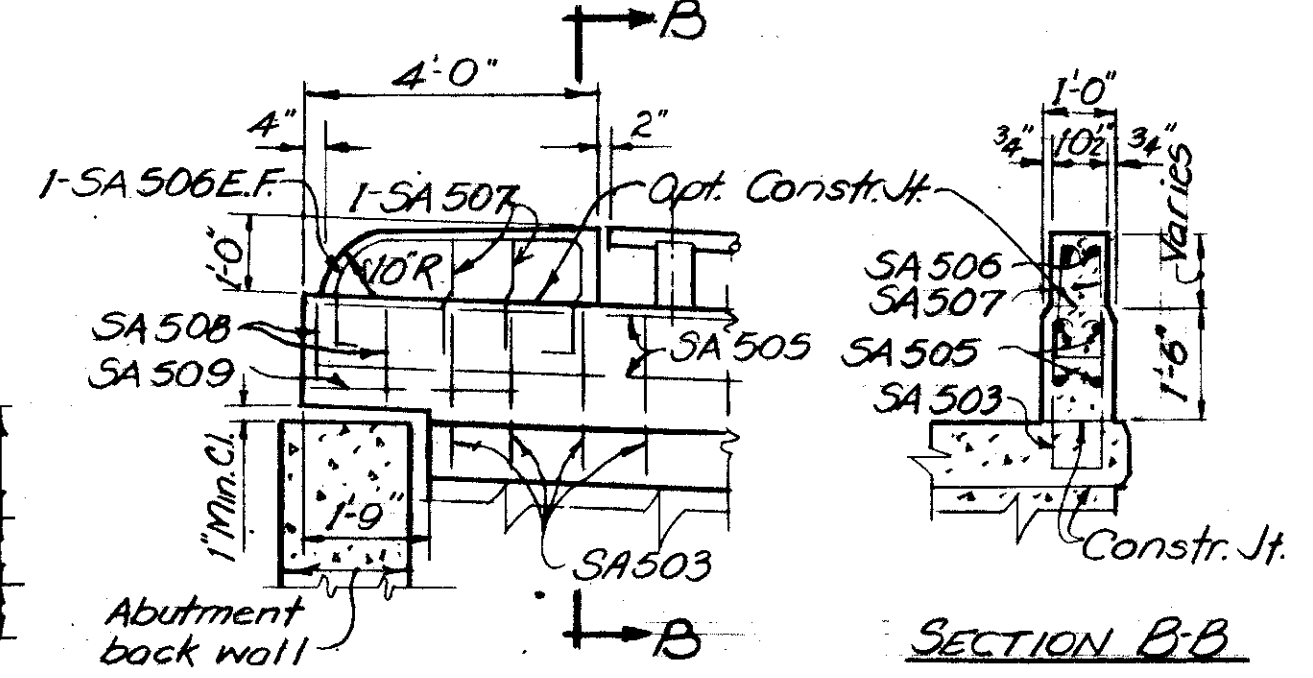
Location	E Brg. Abut. 1	4 Ft.	1/2 Ft.	3/4 Ft.	E Pier 1	4 Ft.	1/2 Ft.	3/4 Ft.	E Pier 2	4 Ft.	1/2 Ft.	3/4 Ft.	E Brg. Abut. 2
Left Curb	718.57	719.01	719.43	719.84	720.25	720.80	721.34	721.85	722.37	722.80	723.23	723.65	724.05
Right Curb	718.01	718.45	718.87	719.28	719.69	720.23	720.78	721.29	721.81	722.24	722.67	723.09	723.49

ADJUSTED TOP OF SLAB ELEVATIONS AT CURB LINE
NOTE: Elevations are adjusted for deflection due to dead load applied after all structural steel is erected.

STATION	PROFILE GRADE	LEFT CURB LINE	RIGHT CURB LINE	LEFT CURB LINE
699+50	718.40	718.59	718.26	
+75	719.15	719.34	719.01	719.07
700+00	719.90	720.09	719.76	719.82
+25	720.65	720.84	720.51	720.57
+50	721.40	721.59	721.26	721.32
+75	722.15	722.34	722.01	722.07
701+00	722.90	723.09	722.76	722.82
+25	723.65	723.84	723.51	723.57



SECTION AA



TYPICAL CANTILEVER END POST DETAIL

- NOTES:
- Slab thickness includes 1" monolithic wearing surface.
 - For Railing & Parapet Jt. details, see Std. Dwg. BR-1-65, Sh. 1 of 2, Revised 11-24-65.
 - For End Dam & Curb Plate details, see Std. Dwg. SD-1-65, Sh. 1 of 3, Dated 11-8-65.
 - For Scupper details see Std. Dwg. SD-1-65, Sh. 2 of 3, Dated 11-8-65.
 - For Reinforcing Steel List, see Sh. 306.
 - Spread or cut reinforcing steel to clear scuppers as necessary.
 - Demolition Bracket, Type A1, shall be mounted on the bridge railing at Sta. 700+25, 6'-6" right of C.L. 7-74.

* This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon 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 volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications.

DECK SLAB HAUNCH: A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" & 12" provided that the slope shall not be more than 1:4 for a haunch less than 9" in width.

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

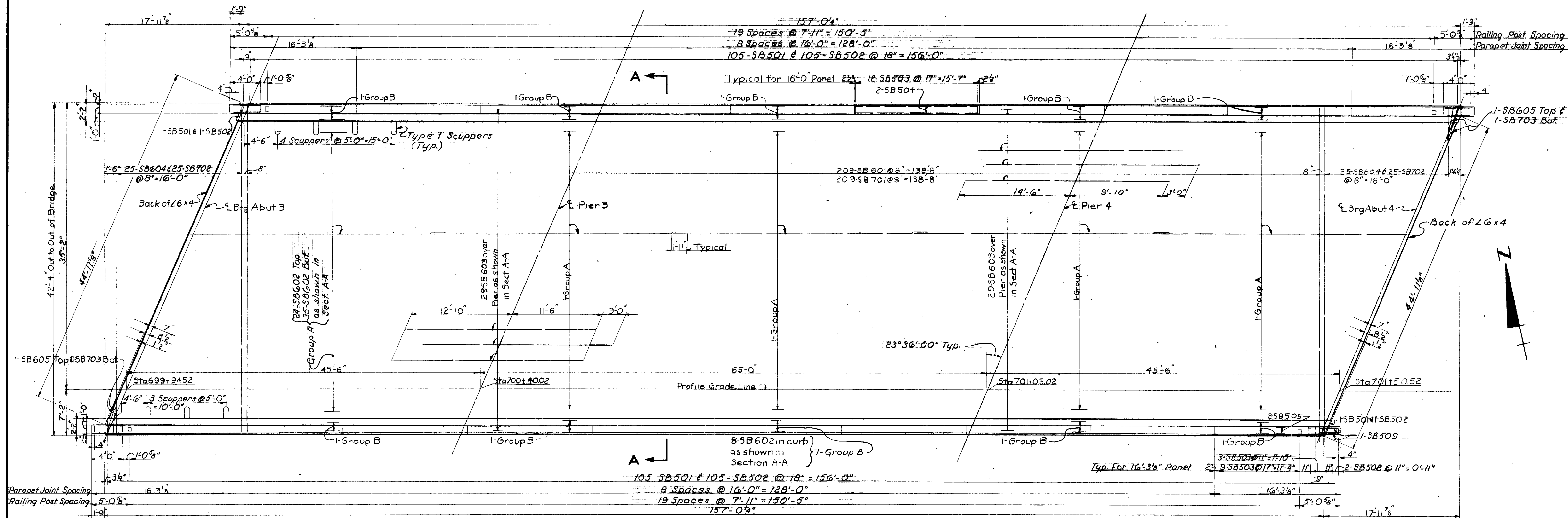
EASTBOUND SUPERSTRUCTURE ROADWAY SLAB
BRIDGE NO. HAM 74-1303 R
I-74
OVER HAFT ROAD
HAMILTON COUNTY STA. 699+66.82
STA. 701+54.24 EB

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
gms	gms	gms	cod	3/10/74	

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NOV 1 1985

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

305



WESTBOUND PLAN

Location	¢ Brg Abut 3	1/4 Pt	1/2 Pt	3/4 Pt	¢ Pier 3	1/4 Pt	1/2 Pt	3/4 Pt	¢ Pier 4	1/4 Pt	1/2 Pt	3/4 Pt	¢ Brg Abut 4
LEFT CURB	720.03	720.38	720.72	721.06	721.39	721.90	722.40	722.87	723.34	723.69	724.04	724.38	724.71
RIGHT CURB	719.59	719.94	720.28	720.62	720.96	721.46	721.97	722.43	722.91	723.25	723.60	723.94	724.27

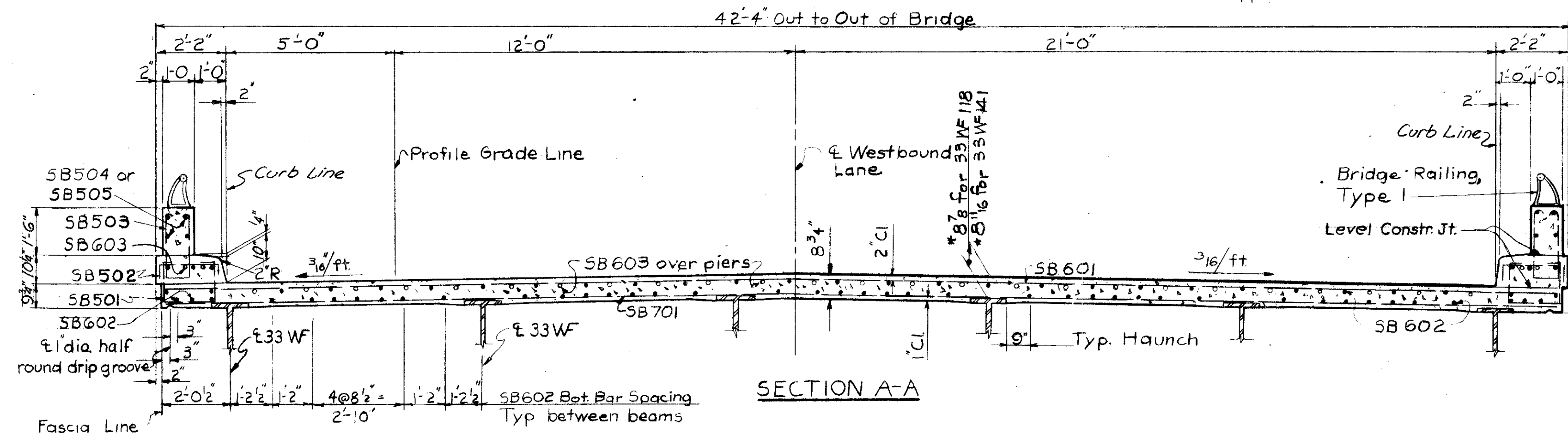
ADJUSTED TOP OF SLAB ELEVATIONS AT CURB LINE

NOTE: Elevations are adjusted for deflection due to dead load applied after all structural steel is erected.

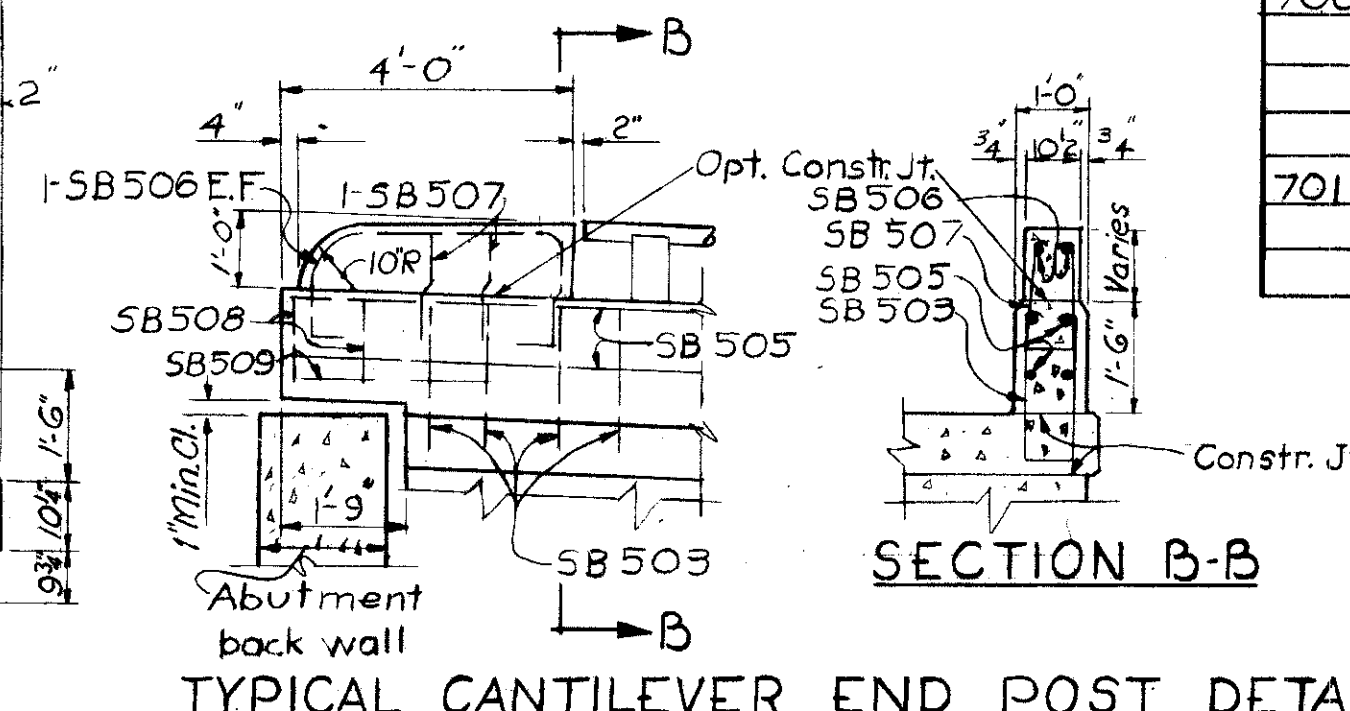
FINISHED PAVEMENT ELEVATIONS

STATION	PROFILE GRADE	¢ LANE	LEFT CURB LINE	RIGHT CURB LINE
700+00	719.90	720.09	—	719.82
+25	720.65	720.84	720.51	720.57
+50	721.40	721.59	721.26	721.32
+75	722.15	722.34	722.01	722.07
701+00	722.90	723.09	722.76	722.82
+25	723.65	723.84	723.51	723.57
+50	724.40	724.59	724.26	—

7. Delineator Bracket, Type A1, shall be mounted on the bridge railing at Sta. 701+05, 64'-6" left of ¢ T-74.



SECTION A-A



TYPICAL CANTILEVER END POST DETAIL

- NOTES:
- Slab thickness includes 1" monolithic wearing surface.
 - For Railing & Parapet Jt details, see Std. Dwg. B2-1-65, Sh. 1 of 2, Rev. 11-24-65
 - For End Dam & Curb Plate details, see Std. Dwg. SD-1-65, Sh. 1 of 3, Dtd. 11-8-65
 - For Scupper details, see Std. Dwg. SD-1-65, Sh. 2 of 3, Dtd. 11-8-65
 - For Reinforcing Steel List, see Sh. 306
 - Spread or cut reinforcing steel to clear scuppers as necessary.

Deck Slab Haunch: A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" & 12" provided that the slope shall not be 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 upon 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 volume of encased steel plates as per Sec. 511.19 of the Const. & Material Specs.

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

**WESTBOUND
SUPERSTRUCTURE ROADWAY SLAB**

BRIDGE NO. HAM-74-1303L
I-74
OVER HAFT ROAD

HAMILTON COUNTY STA. 699+78.95 to
STA. 701+39.87 W.B.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ahp	ahp	ahp	cdc	JAD	10-13-65	

NOTES

- 1. 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.
2. BARS MARKED WITH AN ASTERISK TO BE INCLUDED FOR PAYMENT UNDER ITEM 517, RAILING.
3. SPIRAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM TOP OF THE FOOTING TO THE BOTTOM OF CAP, OR TO WITHIN 2" (±) OF THE TOP OF COLUMN FOR PIERS WITHOUT CAPS, TO THE NEAREST INCH.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER 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.
4. SEE SHEET FOR BENDING DETAILS.

Main table with columns: MARK, NO., LENGTH, TYPE, WEIGHT for ABUTMENT 1, 2, 3, 4, PIERS 1&2, PIERS 3&4, SUPERSTRUCTURE E.B., SUPERSTRUCTURE W.B.

REPLACEMENT BARS

Table with columns: MARK, NO., LENGTH, TYPE, WEIGHT for replacement bars.

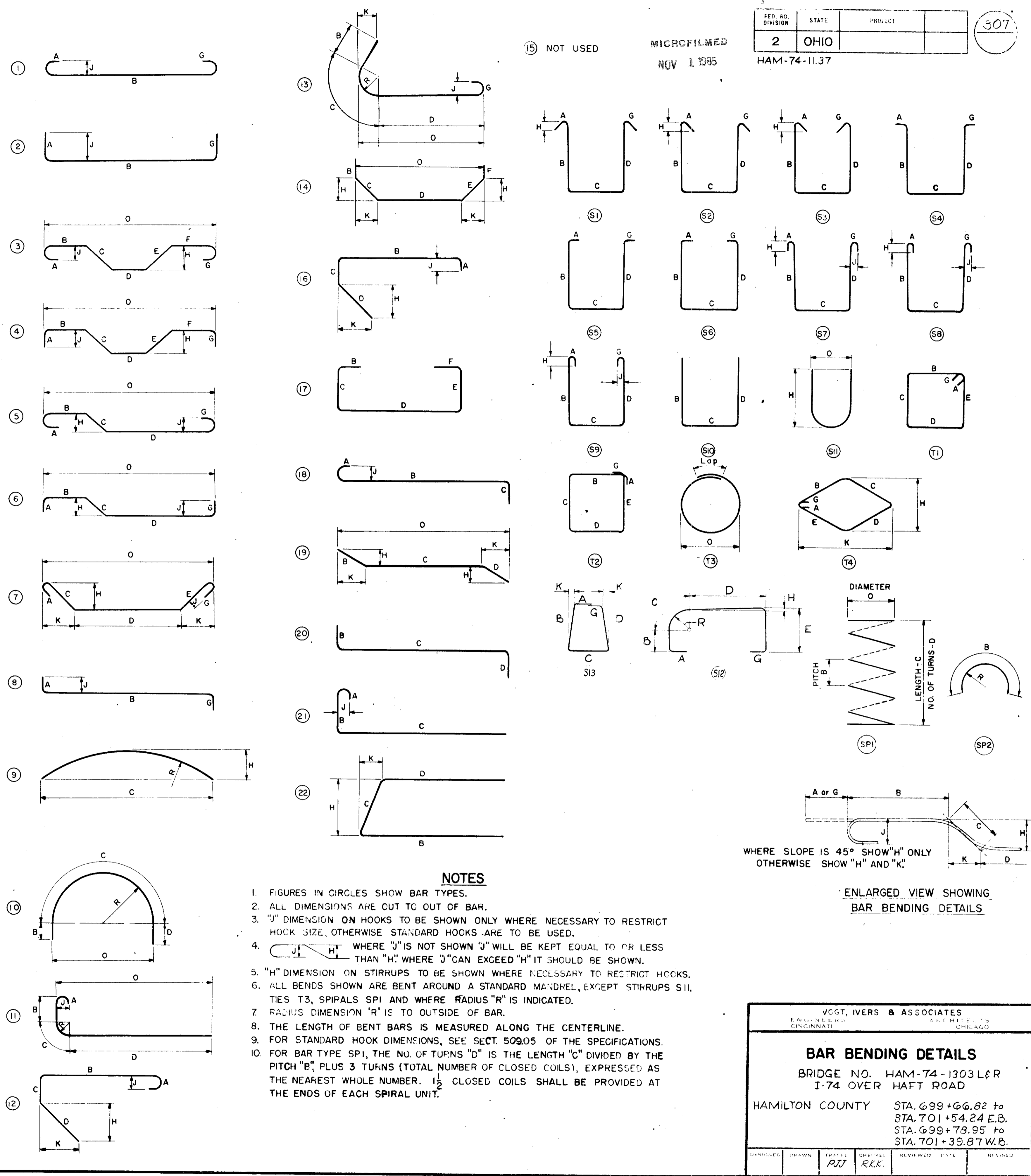
VOGT, IVERS & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO

REINFORCING STEEL LIST BRIDGE NO. HAM-74-1303L&R I-74 OVER HAFT ROAD

HAMILTON COUNTY STA. 699+66.82 to STA. 701+54.24 E.B. STA. 699+78.95 to STA. 701+39.87 W.B.

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NOV 1 1985
HAM-74-11.37

MARK	TYPE	DIMENSIONS FOR BENDING												
		A	B	C	D	E	F	G	H	J	K	R	O	
AA501	2	6"	8'-6"											
502	17		1'-7"	3'-5"	1'-7"									
504	2	6"	5'-0"											
513	17		1'-6"	3'-6"										
515	17		1'-6"	2'-3"										
516	17		1'-6"	3'-0"										
522	16			1'-7"	7'-7"			6'-10"		3'-5"				
523	16				8'-2"			7'-2"		3'-10"				
AA528	17		1'-6"	4'-3"										
AA601	20		5'-5"	8'-6"										
602	17		4'-3"	1'-5"	5'-6"	11"	2'-6"							
603	17			5'-6"	1'-5"	5'-6"								
604	17			6'-1"	1'-5"	6'-1"								
AA605	20		4'-6"	5'-5"										
AA502	17			2'-6"	2'-8"	2'-6"								
503	2	6"	6'-8"											
505	2	6"	3'-4"											
508	17			2'-11"	3'-5"	2'-11"								
509	2	6"	3'-5"							6"				
513	17			5'-8" to 9'-0" by 8"	1'-5"	5'-8" to 9'-0" by 8"								
514	17			4'-7" to 7'-11" by 8"	1'-5"	4'-7" to 7'-11" by 8"								
520	16		1'-0"	3'-3"	7'-7"			6'-10"		3'-6"				
521	16		1'-0"	3'-6"	7'-7"			6'-10"		3'-6"				
522	16		1'-0"	3'-0"	8'-9"			7'-10"		4'-0"				
AA523	16		1'-0"	3'-6"	8'-9"			7'-10"		4'-0"				
AA604	17			6'-11"	1'-5"	6'-11"								
605	17			6'-0"	1'-5"	6'-0"								
AA606	17		4'-6"	1'-5"	6'-0"	11"	3'-0"							
AA701	2	10"	7'-4"											
AA703	2	10"	4'-0"											
AA506	17		7'-4" to 10'-4" by 9"	1'-5"	7'-4" to 10'-4" by 9"									
507	17		10'-7"	1'-5"	10'-7"									
508	17		10'-11"	1'-5"	10'-11"									
509	17		7'-10" to 10'-6" by 8"	1'-5"	7'-10" to 10'-6" by 8"									
510	20		1'-0"	7'-8"										
511	20		1'-0"	8'-2"										
517	17		1'-7"	3'-5"	1'-7"									
518	6	1'-6"	3'-6"	6'-8"						3'-1"				
519	6	1'-6"	3'-0"	6'-8"						3'-1"				
522	6	1'-6"	2'-9"	7'-0"						3'-1"				
523	6	1'-6"	3'-3"	7'-0"						3'-1"				
AA526	17		10'-7"	1'-5"	9'-9"									
AA601	17		5'-7"	1'-5"	5'-7"									
602	17		1'-11"	11"	6'-0"	1'-5"	4'-10"							
603	20		5'-5"	7'-8"										
AA604	20		5'-5"	8'-2"										
AA502	20		3'-1"	3'-1"										
503	19		4'-9"	4'-9"				3'-6"		3'-6"				
506	2	6"	3'-7"											
509	20		5'-4"	5'-9"										
515	20		3'-5"	23'-8"										
517	17			1'-7"	3'-5"	1'-7"								
518	19		2'-7"	14'-4"				1'-0 3/8"		2'-4 3/8"				
519	19		1'-7"	1'-7"				7 5/8"		1'-5 3/8"				
526	20		3'-5"	20'-0"										
532	19		1'-7"	14'-3"				8"		1'-5 1/2"				
533	19		1'-7"	2'-6"				1'-6"		3 3/4"				
535	19		1'-7"	25'-0"				7 3/8"		1'-5 3/8"				
538	19		1'-0"	15'-4"				5 3/8"		10 1/2"				
AA539	19		1'-0"	2'-1" to 4'-4" by 1'-9"				4 3/4"		11"				
AA602	19		1'-11"	7'-2"				9 1/4"		1'-9"				
606	20		3'-8"	5'-6"										
611	17			6'-6"	10"	6'-6"								
612	17			5'-9"	1'-4"	5'-9"								
613	17			5'-9"	1'-4"	4'-5"								
AA614	17			2'-2"	10"	1'-11"								
AA701	2	10"	7'-9"											



NOTES

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H", WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUPS S11, TIES T3, SPIRALS S11 AND WHERE RADIUS "R" IS INDICATED.
- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECT. 509.05 OF THE SPECIFICATIONS.
- FOR BAR TYPE S11, THE NO. OF TURNS "D" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY OTHERWISE SHOW "H" AND "K"

ENLARGED VIEW SHOWING BAR BENDING DETAILS

VCGT, IVERS & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

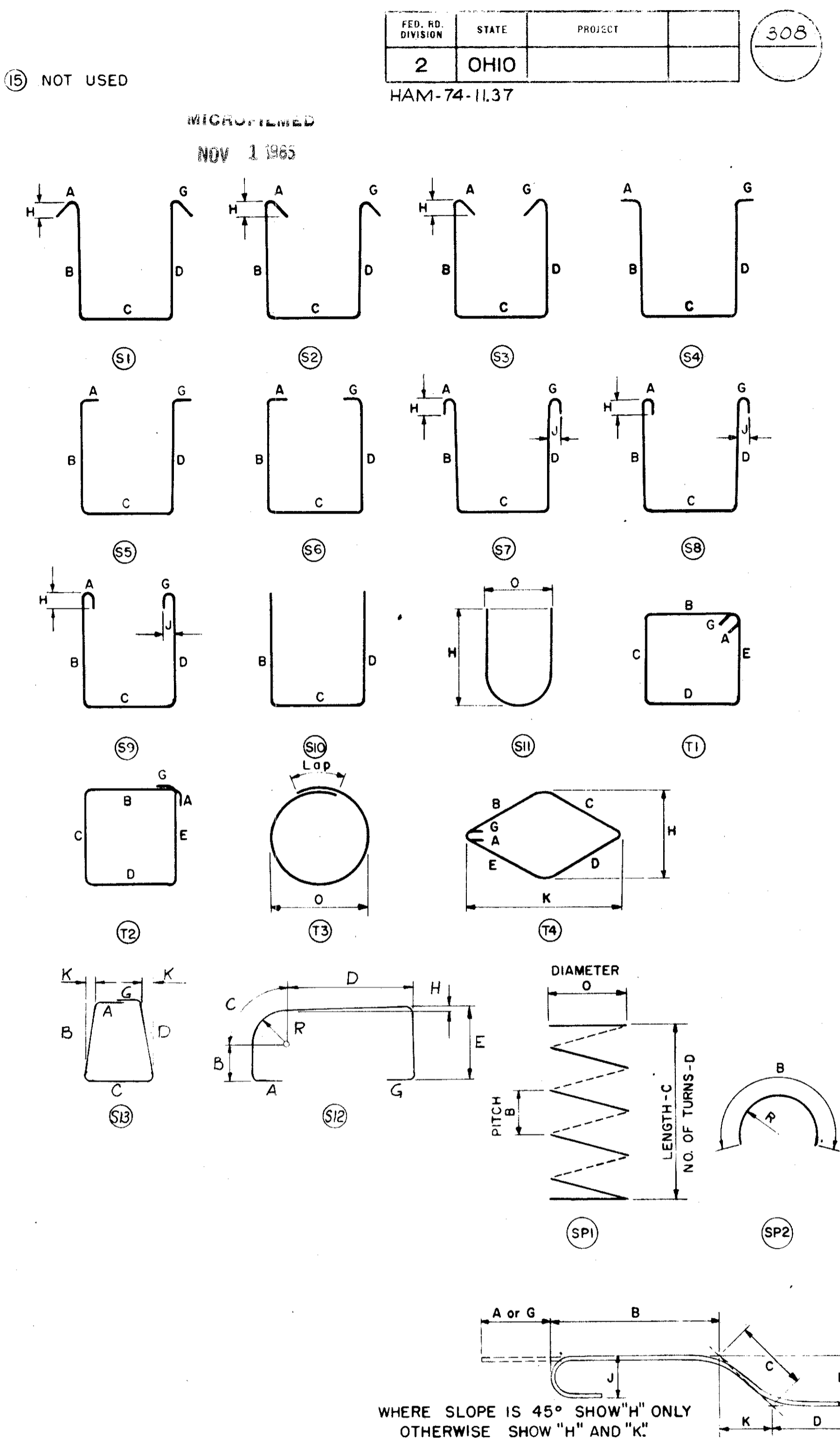
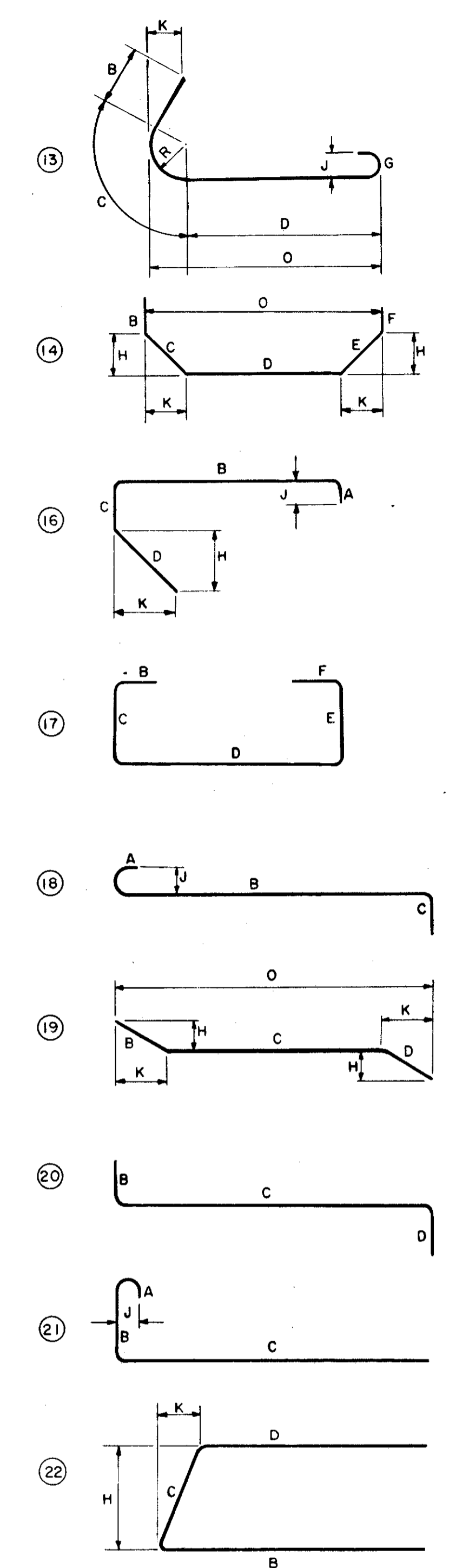
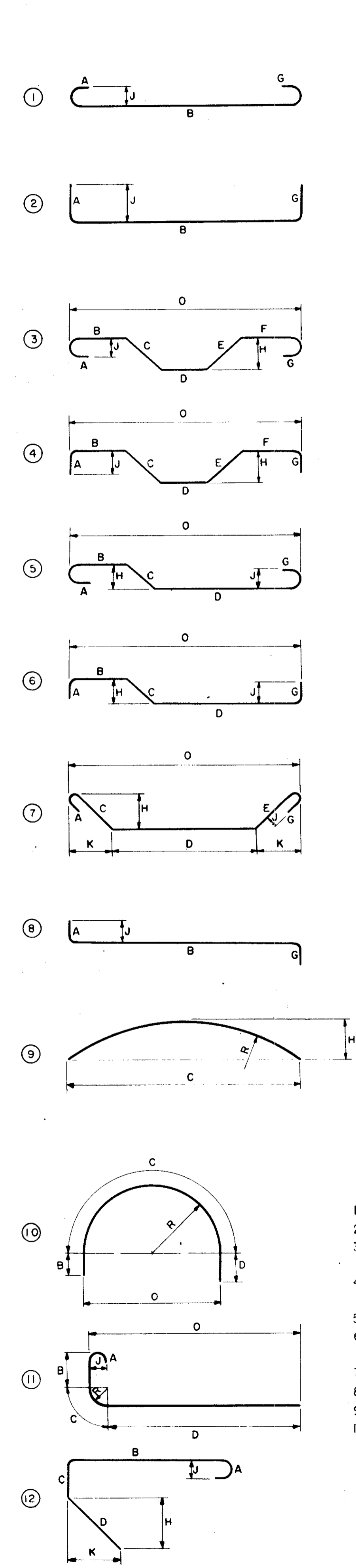
BAR BENDING DETAILS
BRIDGE NO. HAM-74-1303 L&R
I-74 OVER HAFT ROAD
HAMILTON COUNTY STA. 699+66.82 to STA. 701+54.24 E.B.
STA. 699+78.95 to STA. 701+39.87 W.B.

DESIGNED	DRAWN	TRACK	CHECKED	REVIEWED	DATE	REVISED
		RJ	RKK			

HAM-74-1137

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MARK	TYPE	DIMENSIONS FOR BENDING												
		A	B	C	D	E	F	G	H	J	K	R	O	
PA501	S10		2'-5"	2'-8"	2'-5"									
504	2	6"	2'-8"				6"							
505	2	6"	2'-2"				6"							
506	2	6"	1'-4"				6"							
PA507	10		1'-8"	4'-2"	1'-8"						1'-4"	2'-8"		
PA701	1	10"	8'-6"				10"							
PA1003	20		1'-1"	5'-6"										
PA1103	20		1'-2"	5'-10"										
PA1104	17			3'-2"	23'-10"									
SPA501	SPI		3/4"	23'-5"	90							2'-8"		
502	SPI		3/4"	29'-10"	113							2'-8"		
503	SPI		3/4"	23'-9"	91							2'-8"		
SPA504	SPI		3/4"	30'-2"	114							2'-8"		
PB501	S10		2'-5"	2'-8"	2'-5"									
504	2	6"	2'-8"				6"							
505	2	6"	2'-2"				6"							
506	2	6"	1'-4"				6"							
PB507	10		1'-8"	4'-2"	1'-8"						1'-4"	2'-8"		
PB701	1	10"	8'-6"				10"							
PB1002	20		1'-1"	5'-6"										
PB1102	20		1'-2"	5'-10"										
PB1104	17			3'-2"	23'-10"									
SPB501	SPI		3/4"	21'-0"	81							2'-8"		
502	SPI		3/4"	27'-2"	103							2'-8"		
503	SPI		3/4"	21'-4"	82							2'-8"		
SPB504	SPI		3/4"	27'-5"	104							2'-8"		
SA501	S6	6"	1'-4"	1'-6"	1'-4"							6"		
502	2	6"	1'-6"				6"					6"		
503	S3	5"	2'-2"	8"	2'-2"		6"					6"		
506	S12	6"	9"	1'-0"	2'-8"	1'-5"	6"					6"		
507	S13	6"	1'-6"	8"	1'-6"		6"			3'-4"	8"	6"		
SA508	S3	5"	1'-0"	8"	1'-0"		5"					5"		
SB501	S6	6"	1'-4"	1'-6"	1'-4"							6"		
502	2	6"	1'-6"				6"					6"		
503	S3	5"	2'-2"	8"	2'-2"		6"					6"		
506	S12	6"	9"	1'-0"	2'-8"	1'-5"	6"					6"		
507	S13	6"	1'-6"	8"	1'-6"		6"			3'-4"	8"	6"		
SB508	S3	5"	1'-0"	8"	1'-0"		5"					5"		



- NOTES**
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 - FOR BAR TYPE SPI, THE NO. OF TURNS "D" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY
OTHERWISE SHOW "H" AND "K"

ENLARGED VIEW SHOWING
BAR BENDING DETAILS

VOGT, IVERS & ASSOCIATES
ENGINEERS
CINCINNATI, OHIO

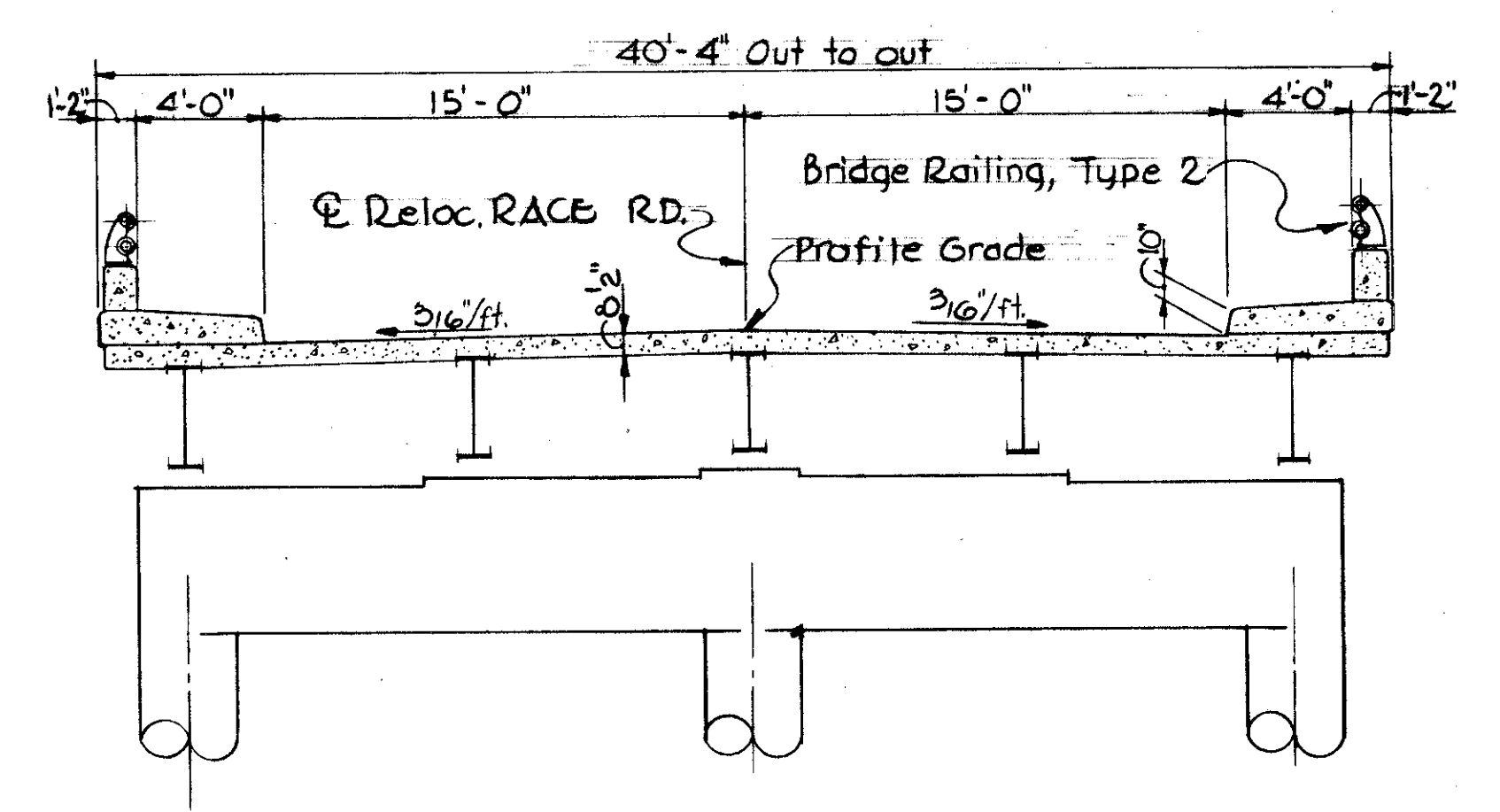
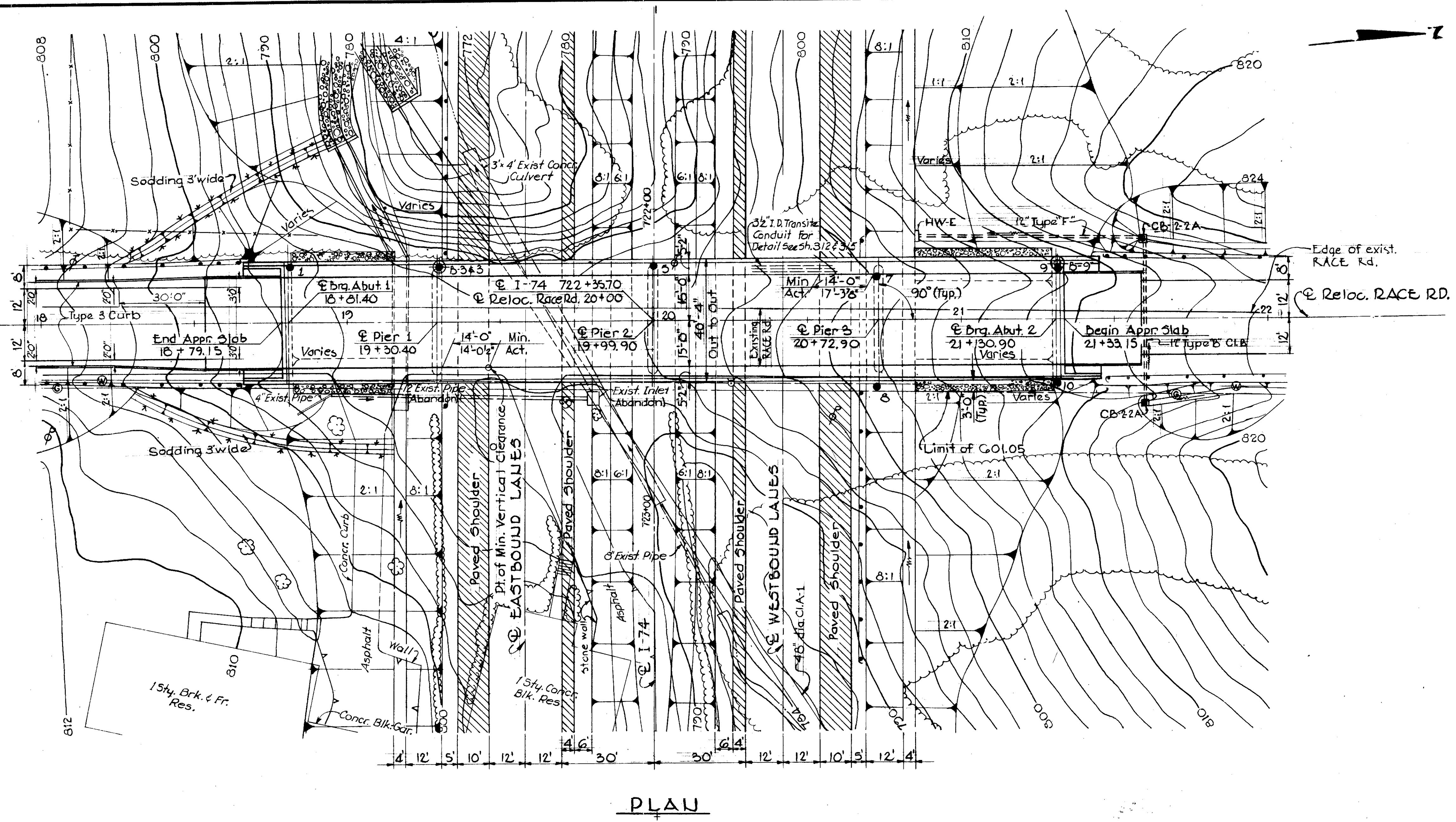
BAR BENDING DETAILS

BRIDGE NO. HAM-74-1303 L&R
I-74 OVER HAFT ROAD

HAMILTON COUNTY STA. 699+66.82 to
STA. 701+54.24 E.P.
STA. 699+78.95 to
STA. 701+39.87 W.B.

DESIGNED: DRAWN: CHECKED: REVISIONS: DATE

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NOV 1 1995

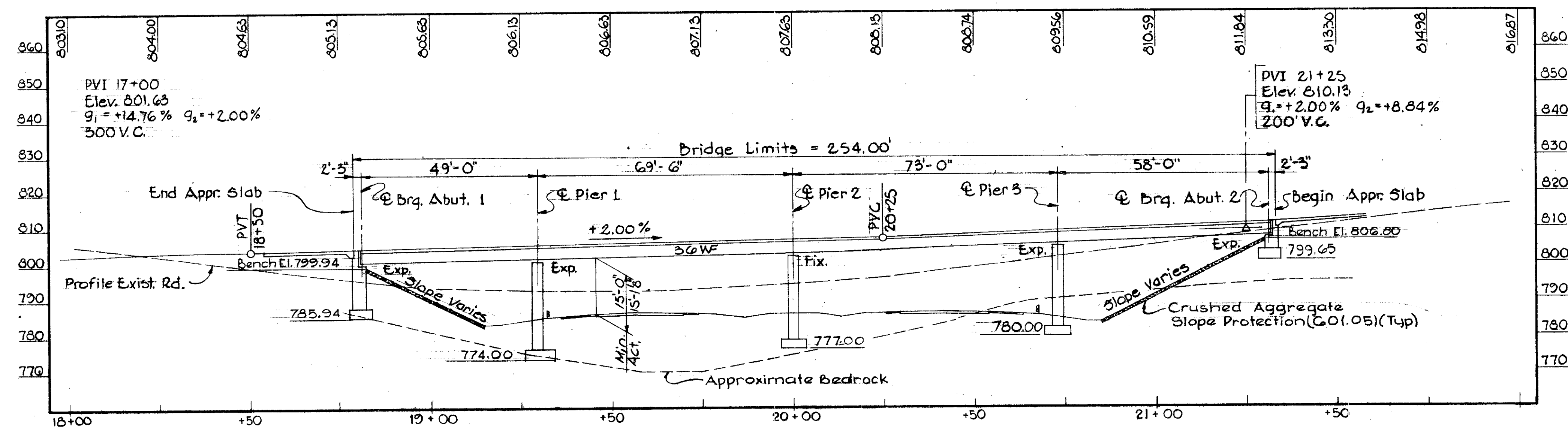


TYPICAL SECTION

- ⊙ Press-Drive Sample-Core Boring- Plan view
- ◆ Drive Rod Penetration Resistance Sounding- Plan view

BENCH MARK
BM #14 Elev. 808.39
City of Cin. BM #1190
25' Rt. of Sta. 17+80 Race Rd.

PLAN



PROFILE

1975 ADT = 6000 V.P.D.

PROPOSED STRUCTURE

TYPE: Continuous rolled steel beam with reinforced concrete deck and substructure.
 SPALLS: 49'-0", 69'-6", 73'-0" & 58'-0"
 ROADWAY: 38'-0" face to face of parapets, includes 4'-0" sidewalk ea. side.
 LOAD FREQUENCY: CF = 400 (57)
 SKEW: 0°
 WEARING SURFACE: 1" monolithic concrete
 APPROACH SLABS: A5-1-54 (25' Long)
 ALIGNMENT: Tangent

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SITE PLAN
BRIDGE NO. HAM 74-1346
RACE ROAD OVER I-74
HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
Aerial	JCH	L.R.E.	G.K.	D.S.M.	

MICROFILMED
NOV 1 1985

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

310

HAM-74-11.37

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL
503		Lump Sum	Cofferdams, Cribbs, and Sheeting				Lump
503	655	Cu.Yds.	Unclassified Excavation	319	336		
503	104	Cu.Yds.	Shale Excavation	10	94		
509	136,819	Lbs.	Reinforcing Steel	11,857	43,453	81,509	
511	368	Cu.Yds.	Class "C" Concrete, Superstructure			368	
511	95	Cu.Yds.	Class "C" Concrete, Piers above footings		95		
511	108	Cu.Yds.	Class "E" Concrete, Abutments above footings	108			
511	170	Cu.Yds.	Class "E" Concrete, Pier and Abutment footings	48	122		
513	261,749	Lbs.	Structural Steel			261,749	
514	261,749	Lbs.	Field Painting of Structural Steel			261,749	
517	549.50	Lin.Ft.	Bridge Railing, Type 2	47.67		501.83	
518	30	Cu.Yds.	Porous Backfill	30			
518	10	Each	Scuppers, including supports			10	
518	76	Lin.Ft.	6" Perforated Helical C.M.R. 707.06, including specials	76			
518	59	Lin.Ft.	6" Helical C.M.R. 707.06, non-perforated	59			
601	452	Sq.Yds.	Crushed Aggregate Slope Protection				452
808	368	Units	Water-reducing, Set-retarding Admixture			368	
825	1295	Sq.Yds.	Concrete Surface Treatment			1295	
828	60	Lin.Ft.	Joint Sealer	60			

Materials in approach slabs are not included in the above estimated quantities.

GENERAL NOTES

REFERENCE shall be made to the following:

Standard Drawings: BR-1-65, revised 11-24-65
AS-1-54, revised 8-10-65
SD-1-65, dated 11-8-65
FSB-1-62, revised 1-15-63

Supplemental Specifications: 808 dated 2-7-66
811 dated 3-29-65
825 dated 4-22-65
828 dated 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.

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

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.

FOUNDATION BEARING PRESSURE: Abutment 1 footing and all pier footings are designed for a maximum bearing pressure of 3.5 tons per sq. ft. Abutment 2 footing is designed for a maximum allowable bearing pressure of 2.5 tons per sq. ft.

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.

ABUTMENT 1, PIER 1, PIER 2 and PIER 3 FOOTINGS shall extend a minimum of 3' into undisturbed shale or to the elevation shown, whichever is lower. Excavation at plan depth shall not be exposed to weathering prior to pouring footing concrete.

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

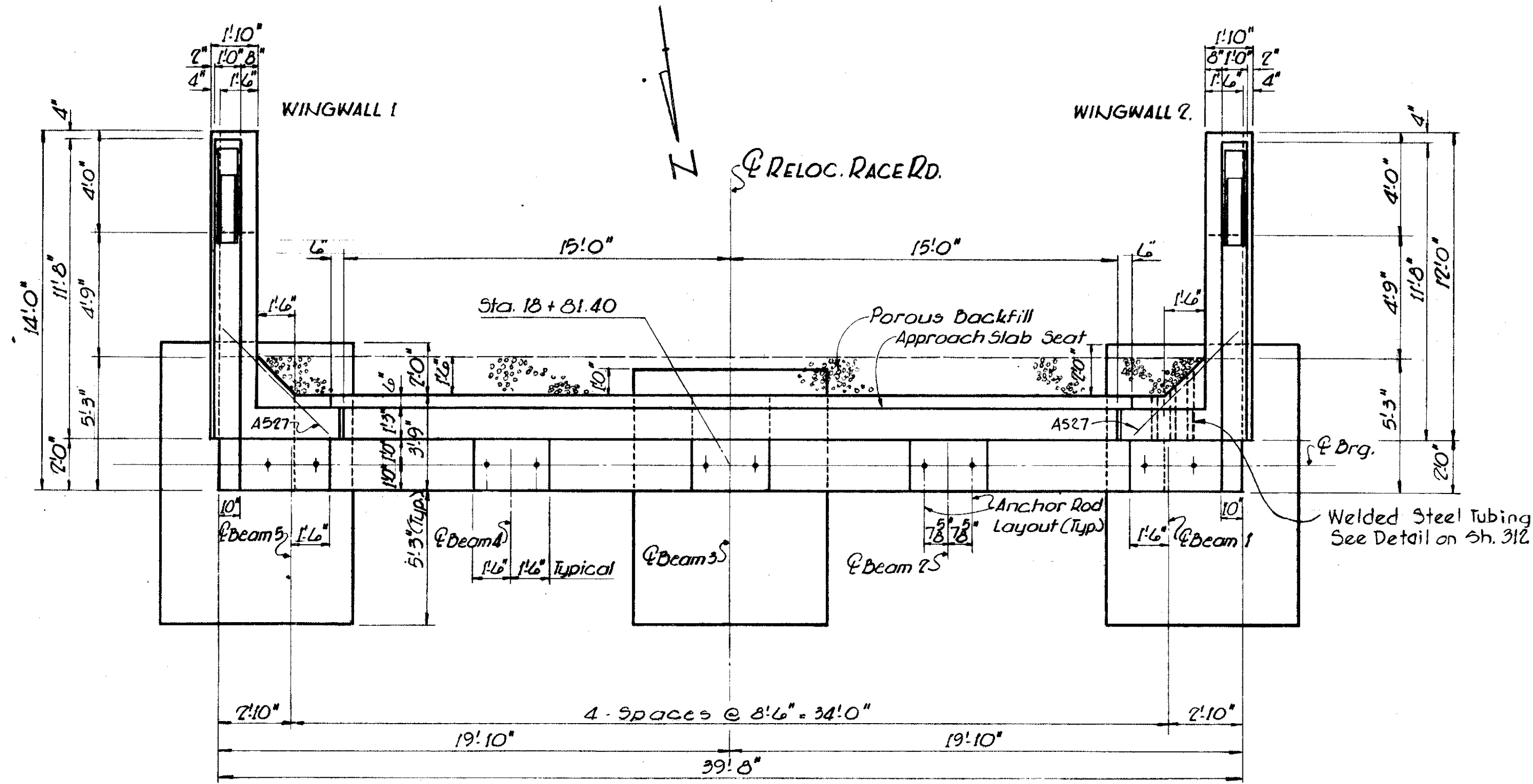
VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
ESTIMATED QUANTITIES & GENERAL NOTES					
BRIDGE NO. HAM-74-1346 RACE ROAD OVER I-74					
HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
R.K.K.	P.J.J.	~	H.O.J.	JAD	10-11-65

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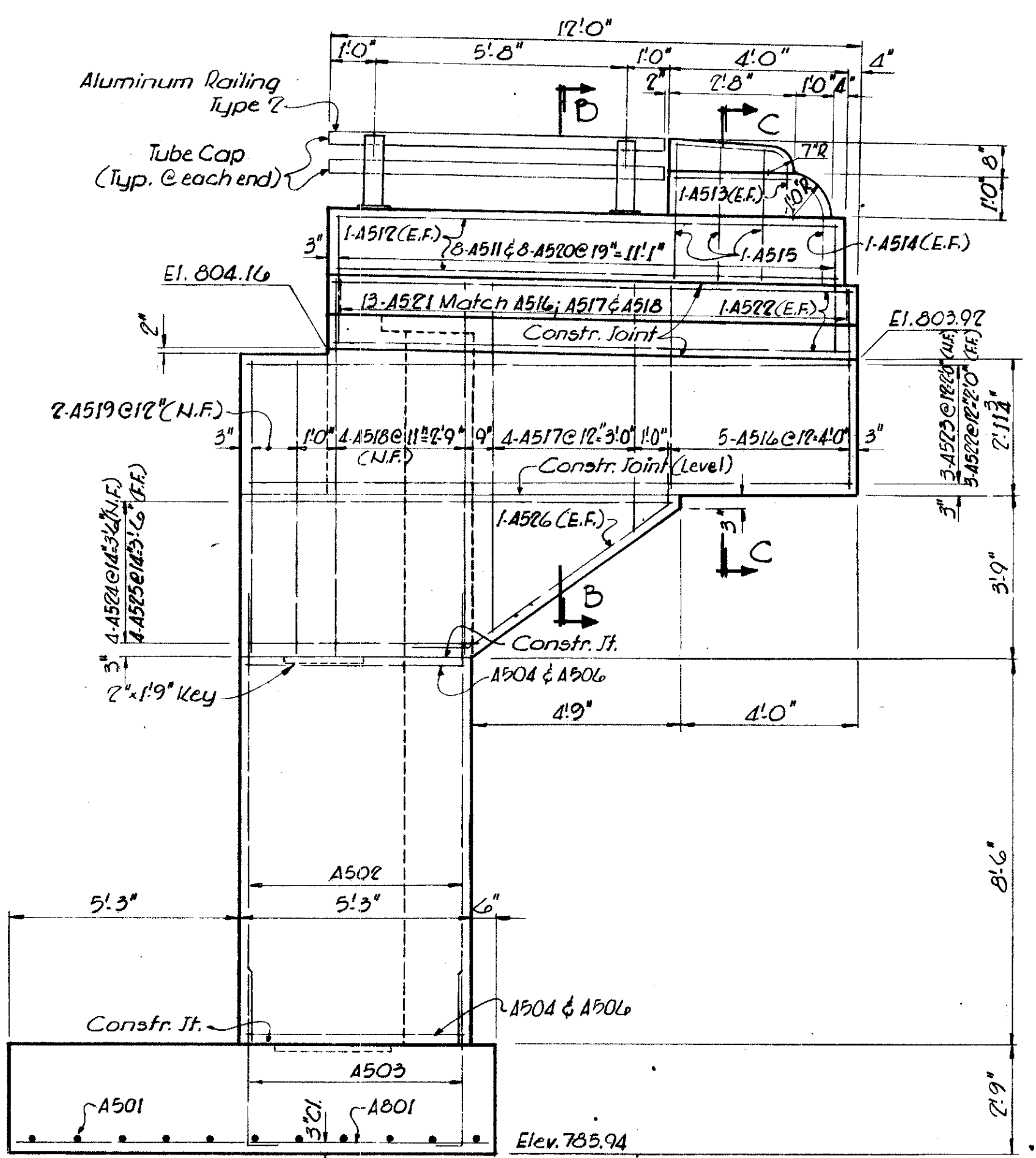
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

311

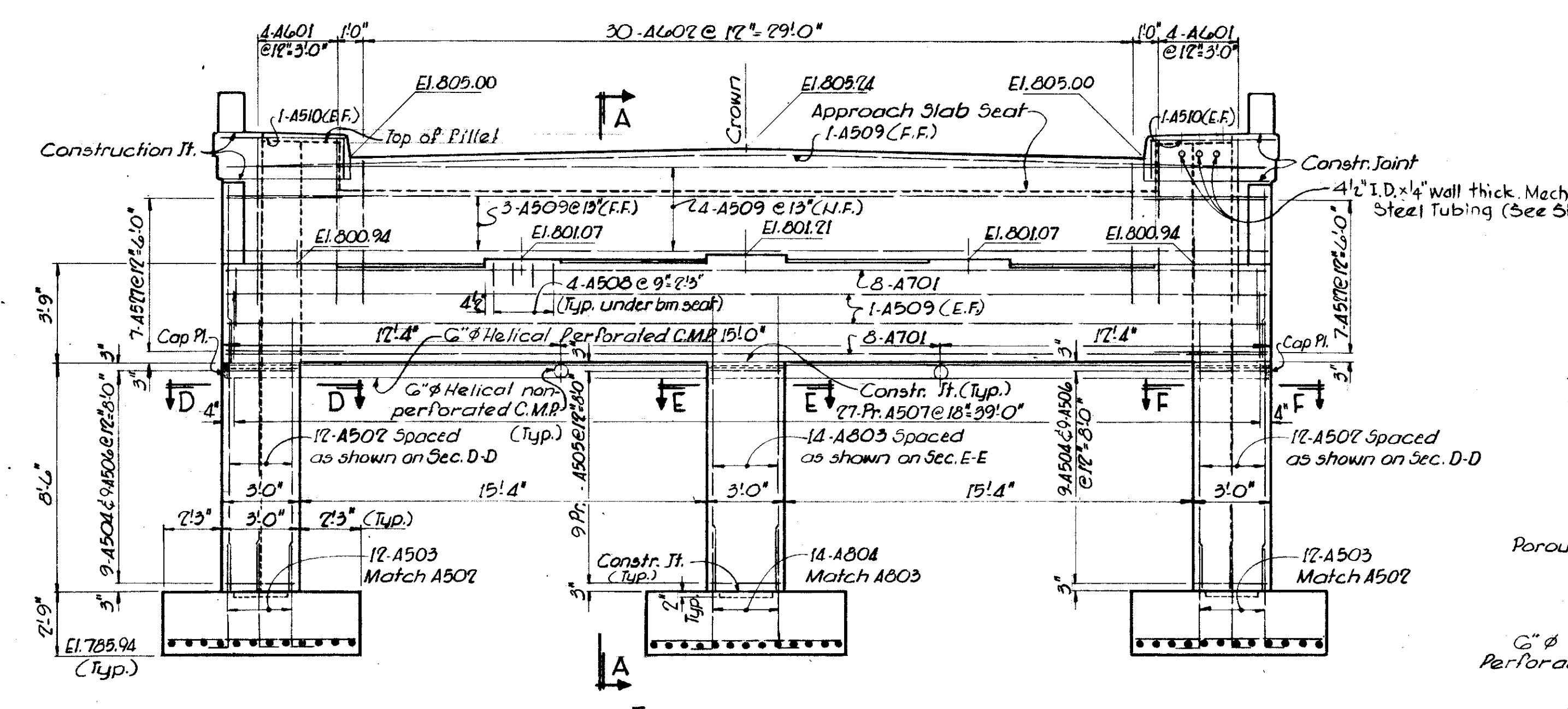
HAM - 74 - II - 37



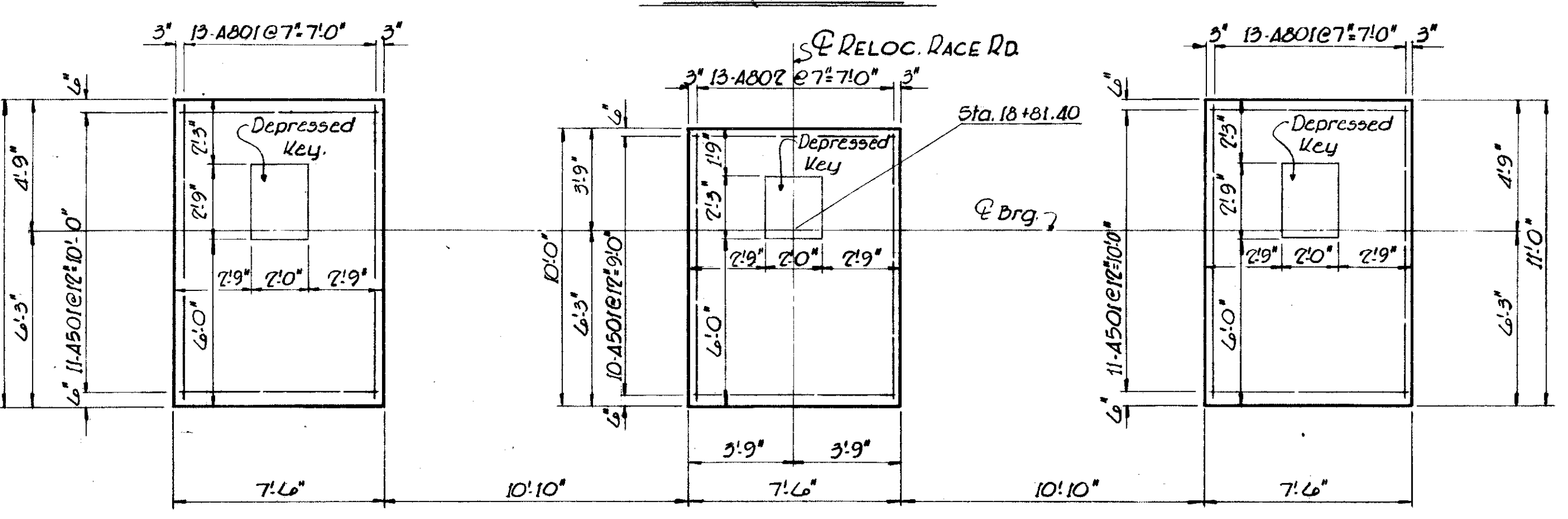
PLAN



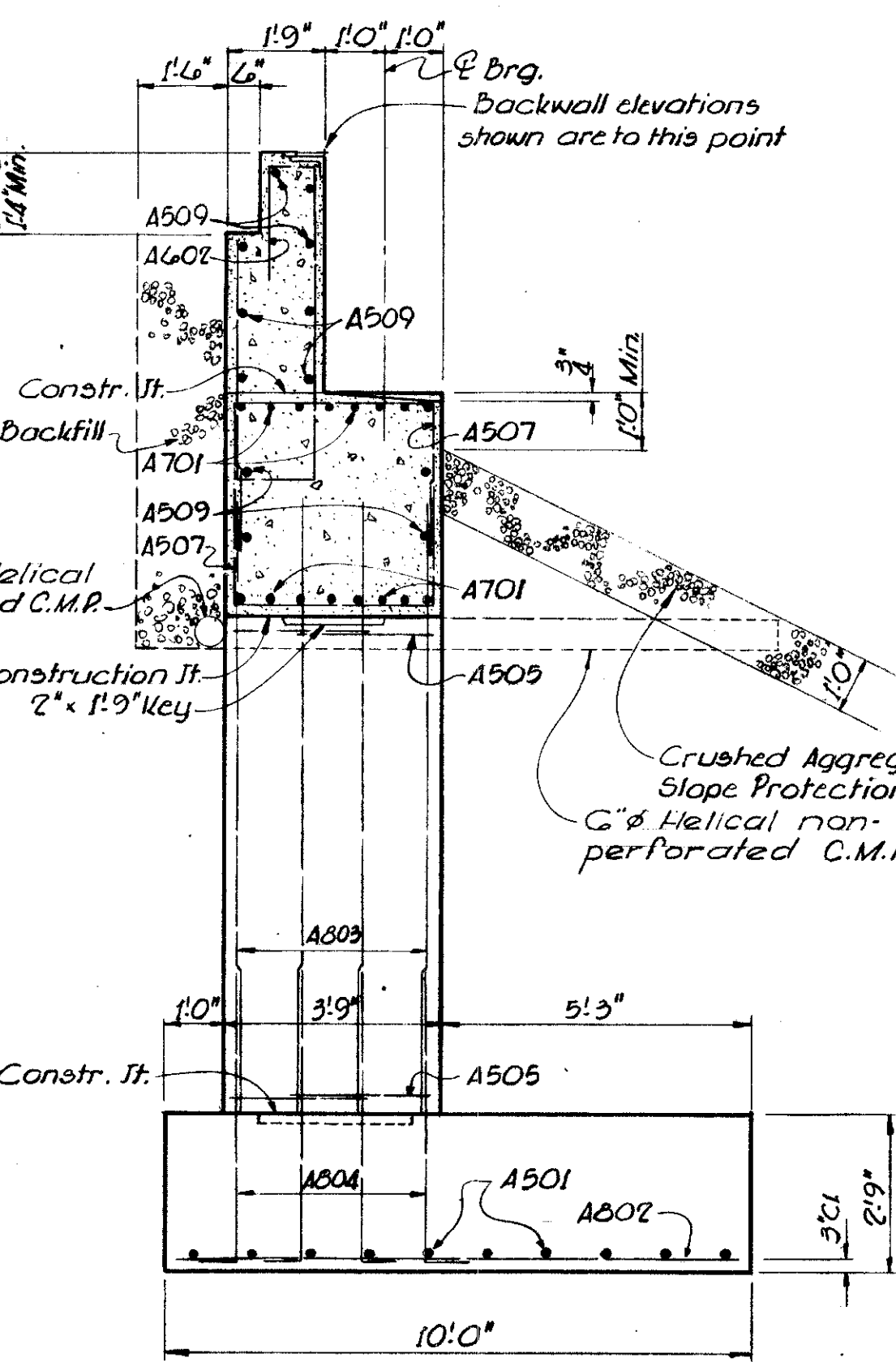
ELEVATION-WINGWALL 2
WINGWALL 1 OPP. HAND



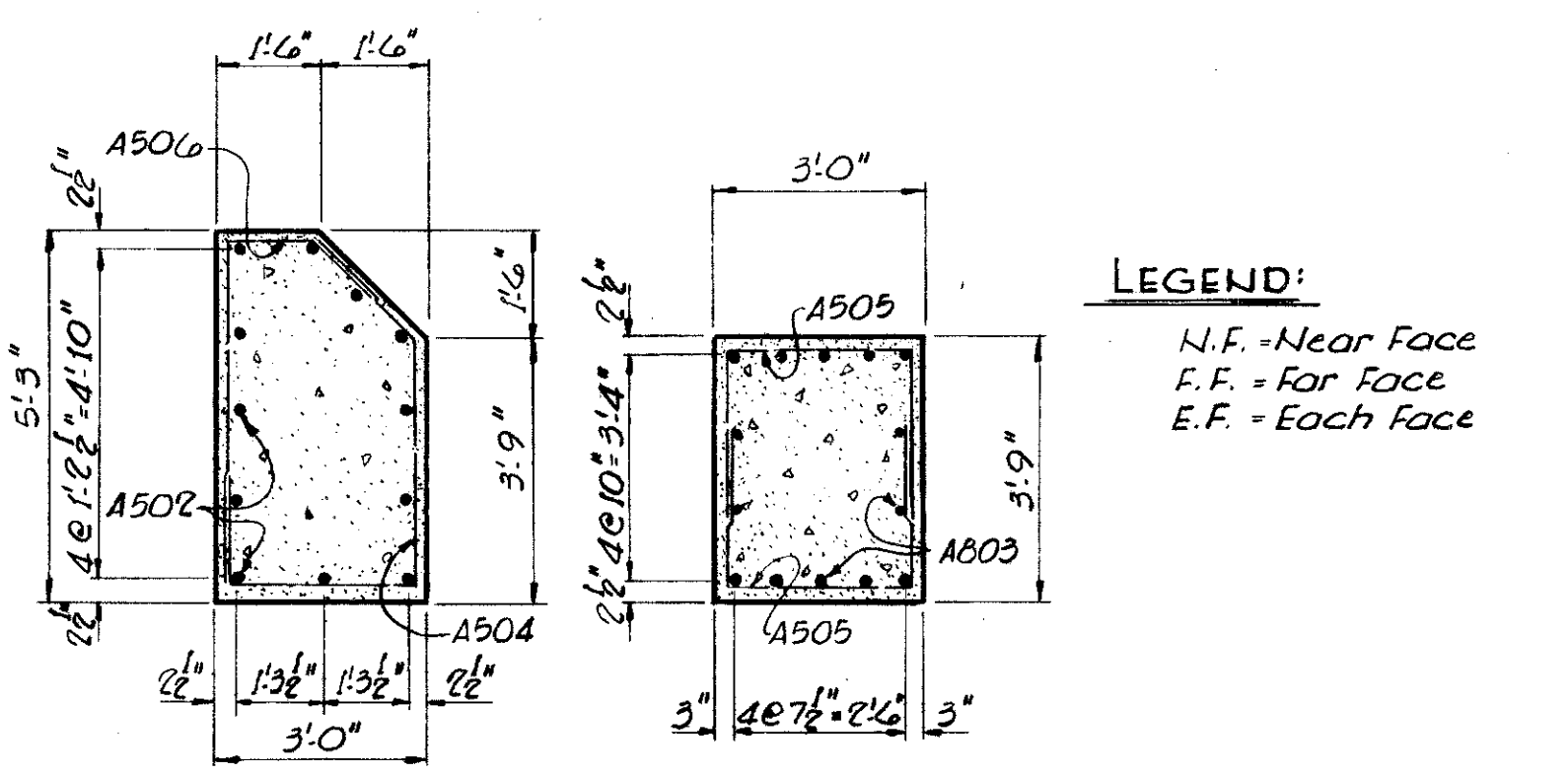
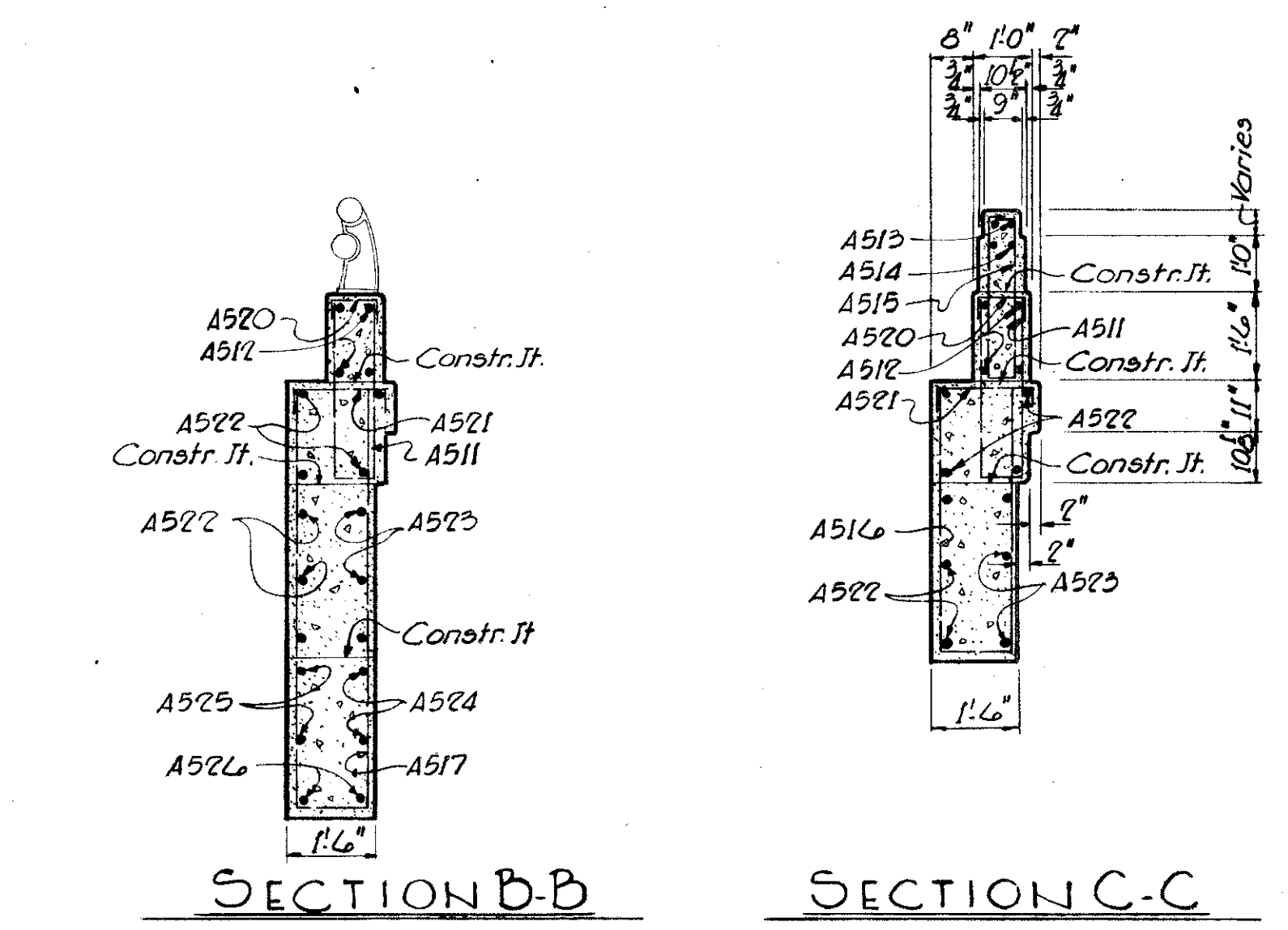
ELEVATION



FOOTING PLAN



SECTION A-A



LEGEND:
N.F. - Near Face
F.F. - Far Face
E.F. - Each Face

NOTES:

1. Footings shall extend a minimum of 3' into undisturbed rock or to the elevation shown, whichever is lower.
2. Porous backfill, 1'4" thick and full length of the abutment, shall extend up to the bottom of the approach slab or paved shoulder. Excavation therefor, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cubic yard paid for porous backfill.
3. 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 rod holes.
4. Excavation at plan depth for footings shall not be exposed to weathering prior to pouring footing concrete.
5. For end dam details, see Std. Dwg. SD-1-65, Sh. 1 & 2 of 3 dated 11-8-65
6. Parapet concrete shall be included under Item 517 for payment.
7. After the pedestals have been constructed, the earth fill shall be placed and compacted up to the bottom of the crossbeam after which the abutment shall be completed and the remaining fill placed and compacted.
8. For Reinforcing Steel List, see Sh. 316

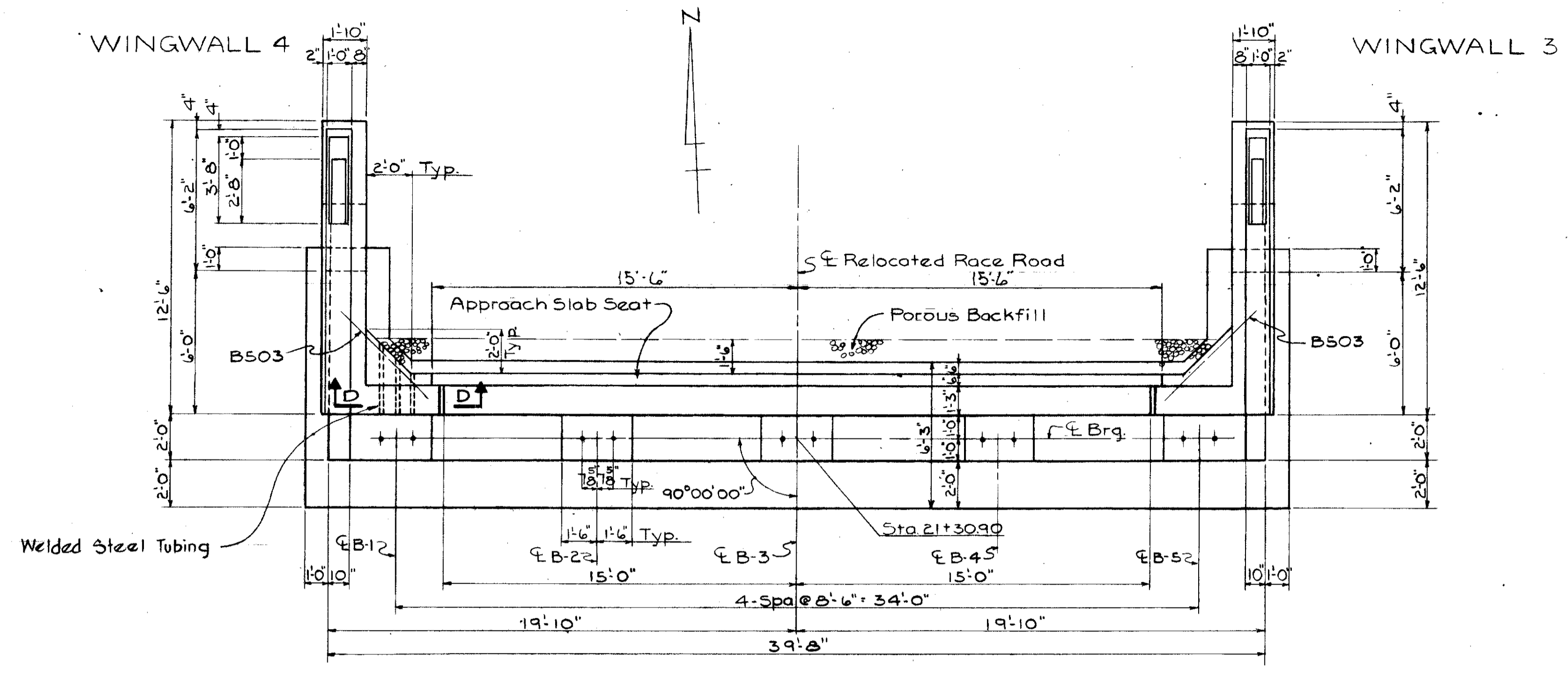
VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

ABUTMENT I
BRIDGE NO. HAM-74-1346
RACE ROAD OVER I-74

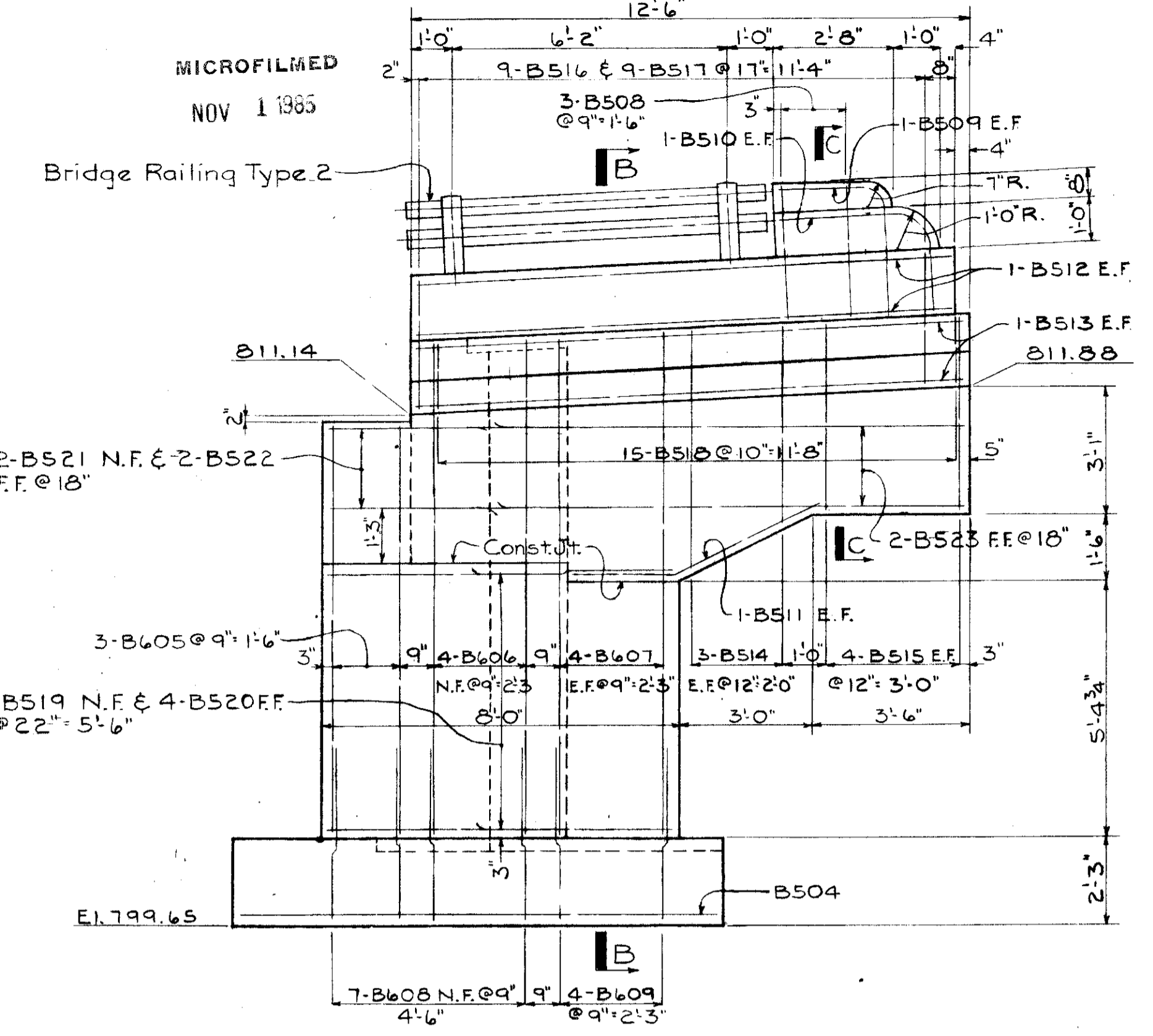
HAMILTON COUNTY STA. 18 + 79.15 TO
STA. 21 + 83.15

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.D.C.	S.T.	-	GHS	JAD	10/11/65	

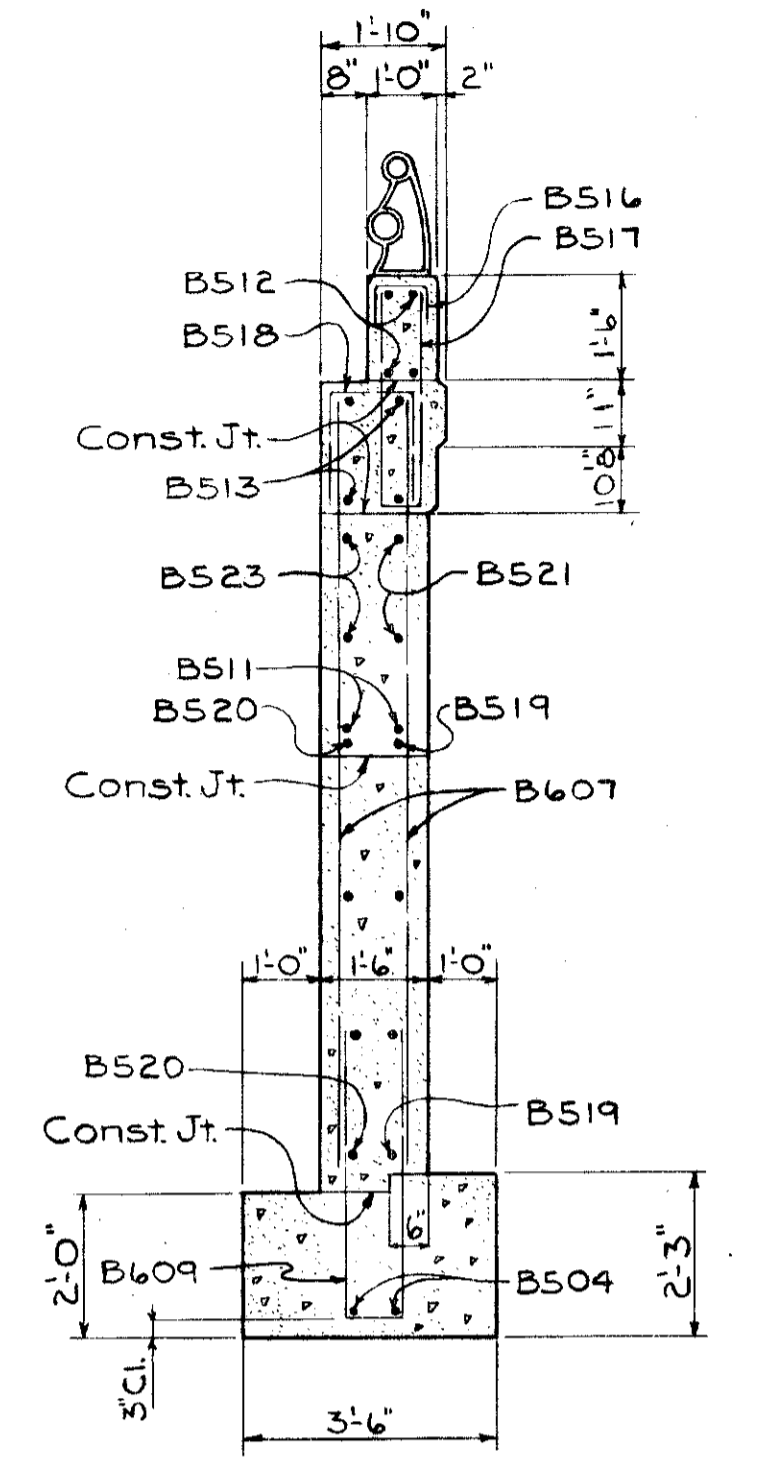
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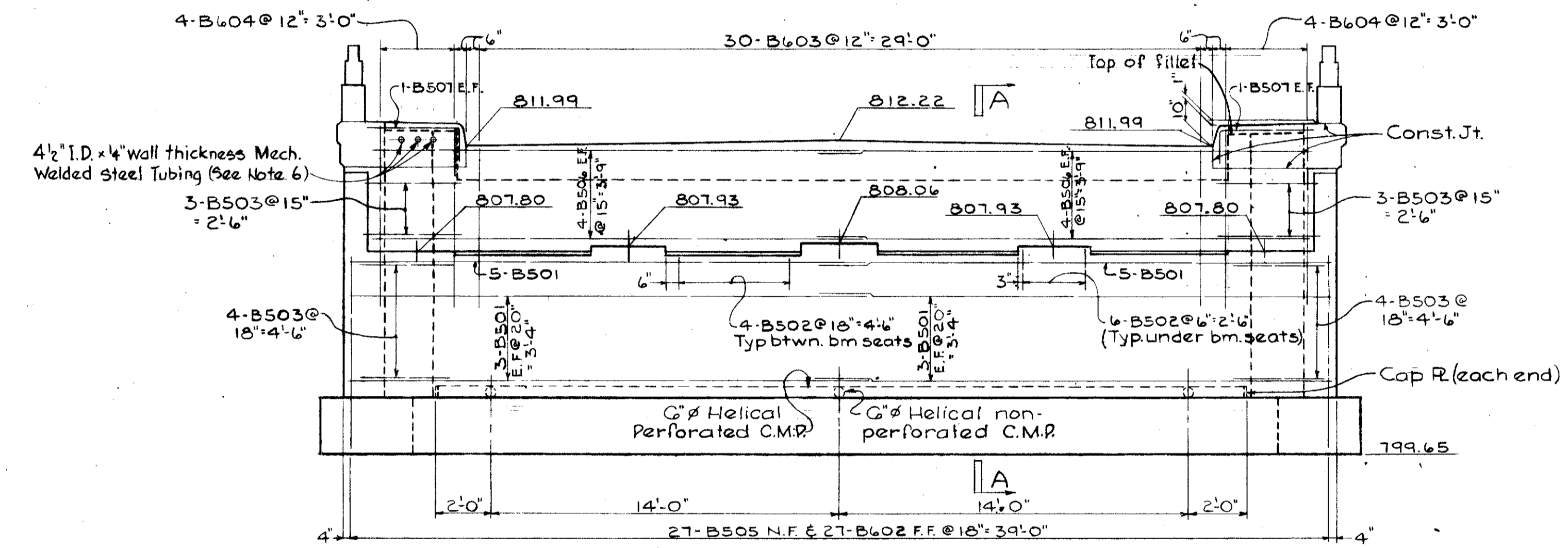
PLAN



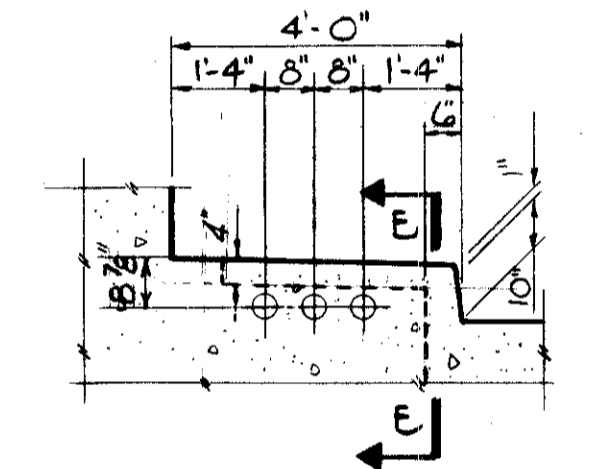
ELEVATION-WINGWALL 3
WINGWALL 4 SIMILAR



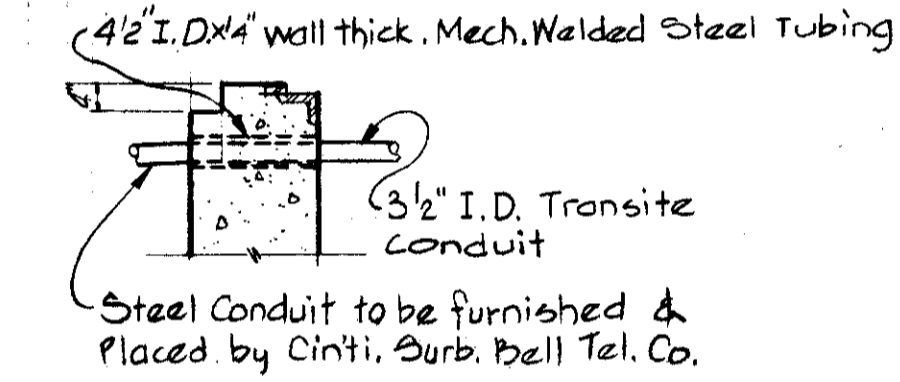
SECTION B-B



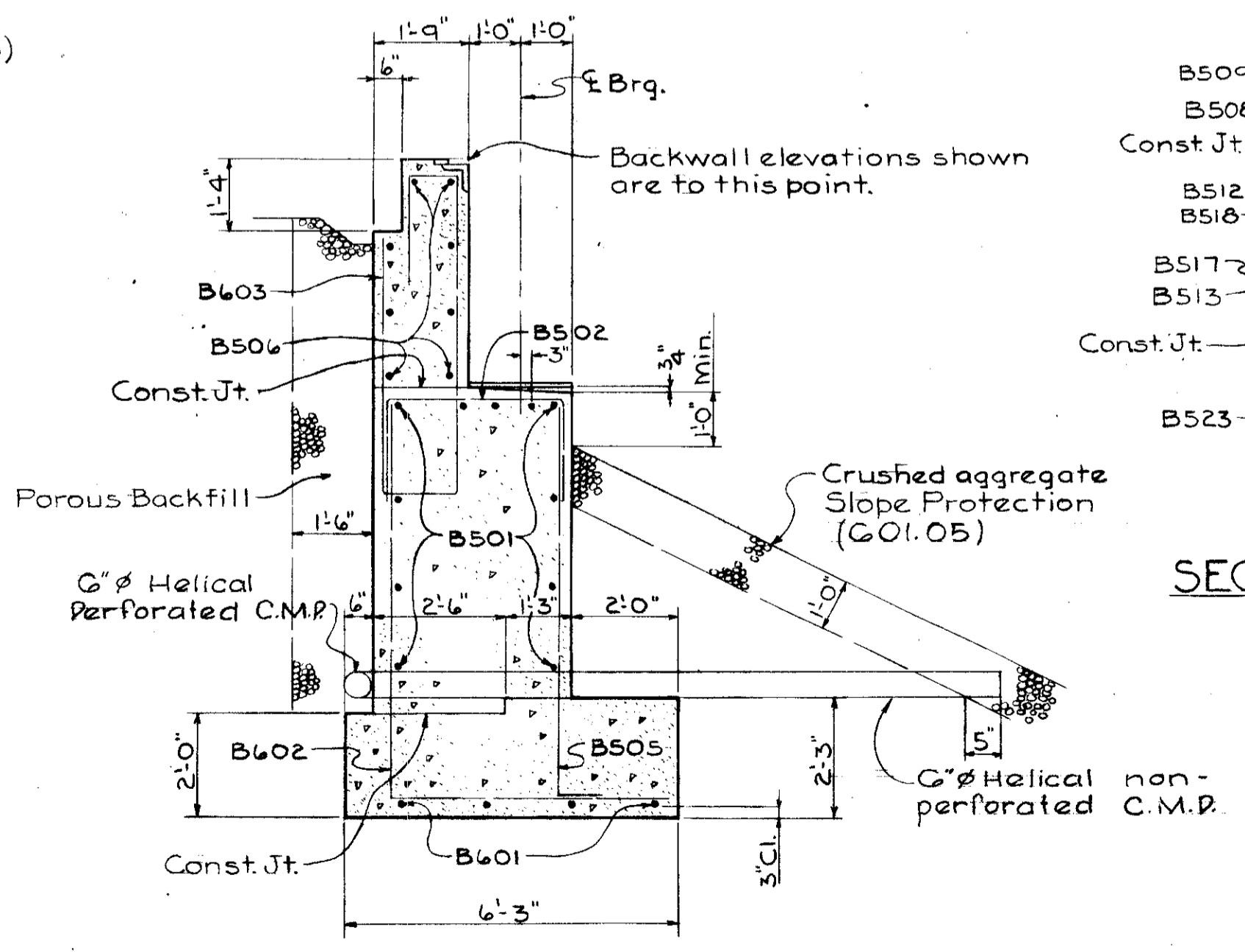
ELEVATION



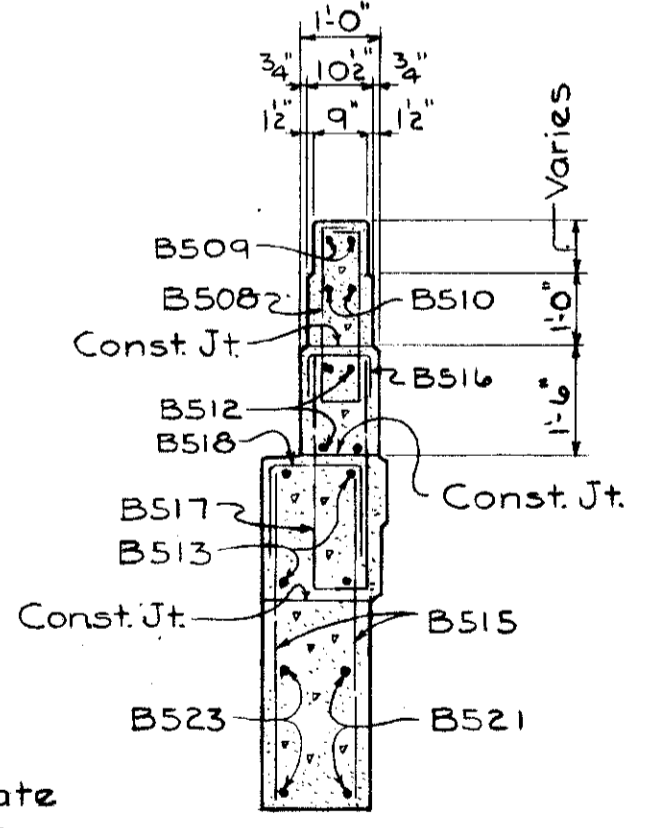
SECTION D-D



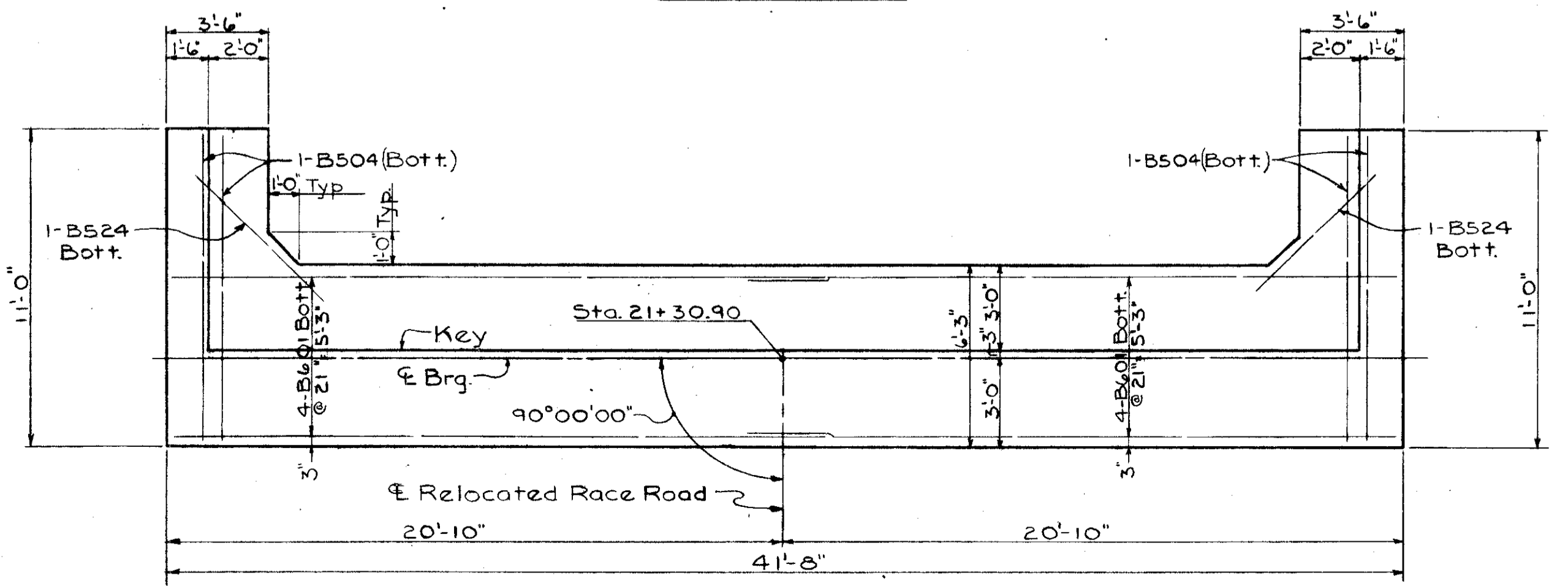
SECTION E-E



SECTION A-A



SECTION C-C



FOOTING PLAN

NOTES

1. Porous backfill, 1'-6" thick, full length of abutment, shall extend up to the bottom of approach slab. Excavation in excess of that required for construction of the abutment shall be considered as paid for in the bid price per cubic yard paid for porous backfill.
2. Special care shall be taken in placing reinforcing steel in vicinity of bridge seats to avoid interference with the drilling of anchor rod holes.
3. For end dam details, see SD-1-65 Shs. 1 & 2 of 3.
5. For reinforcing list see Sh. 3/16
6. The 4 1/2" I.D. x 1/4" Wall thickness Mech. Welded Steel Tubing shall be furnished and placed by the Contractor. Cost to be included in the unit price bid for Item 511, Mass E Concrete Abutment above footings, and is chargeable to the Cinti, Sub. Bell Tel. Co.

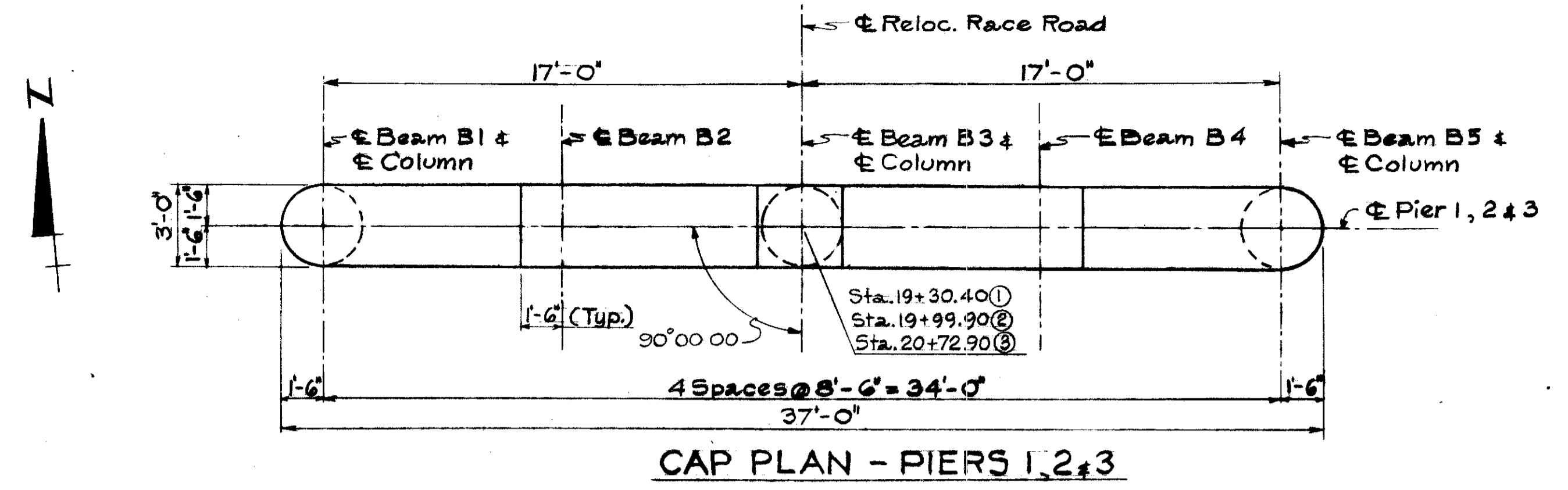
LEGEND

E.F.: Each Face
N.F.: Near Face
F.F.: Far Face

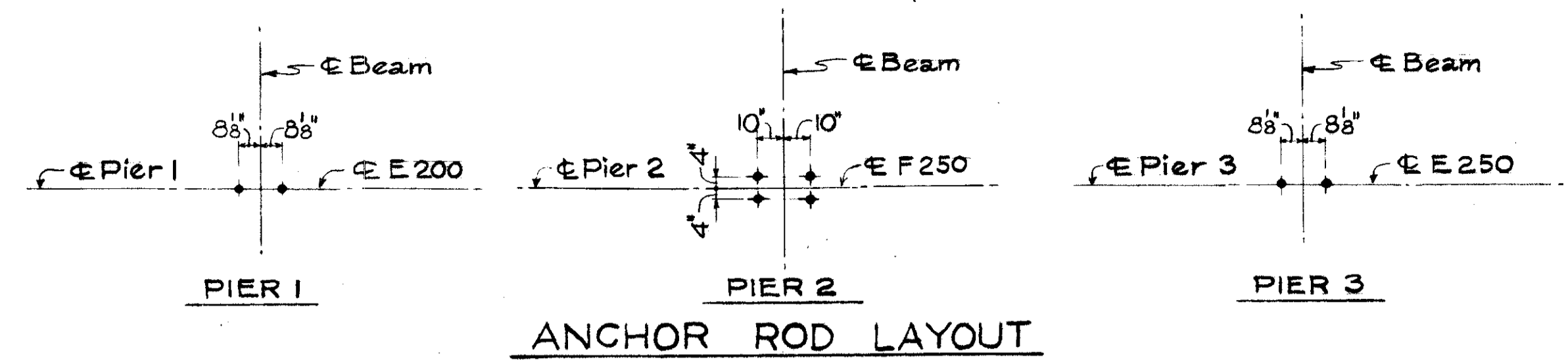
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ABUTMENT 2 BRIDGE NO. HAM-74-1346 RACE ROAD OVER I-74 HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DPR	DPR		G.R.H.	JAD 10-11-65	

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NOV 1 1985

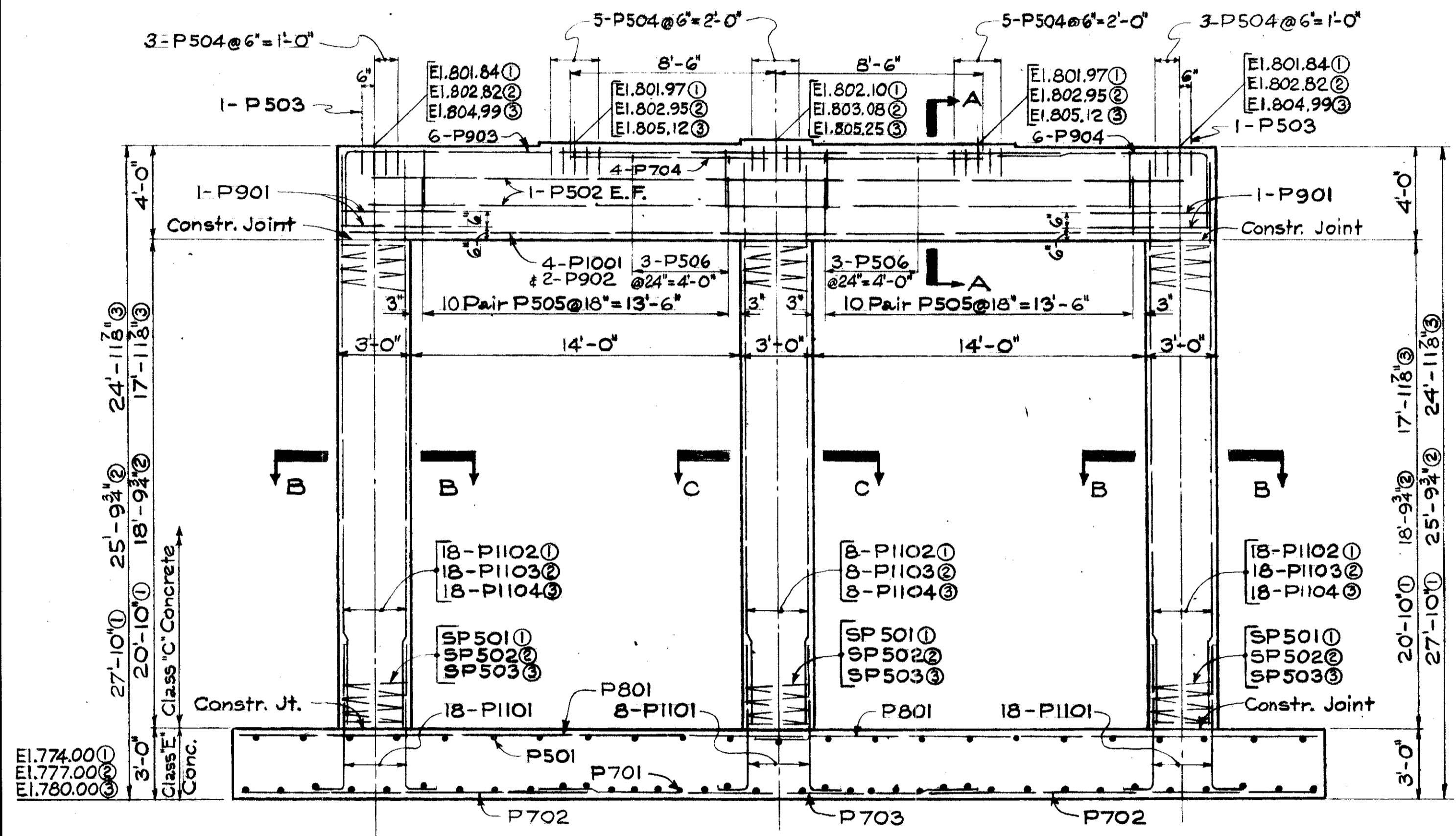
HAM 74-11.37



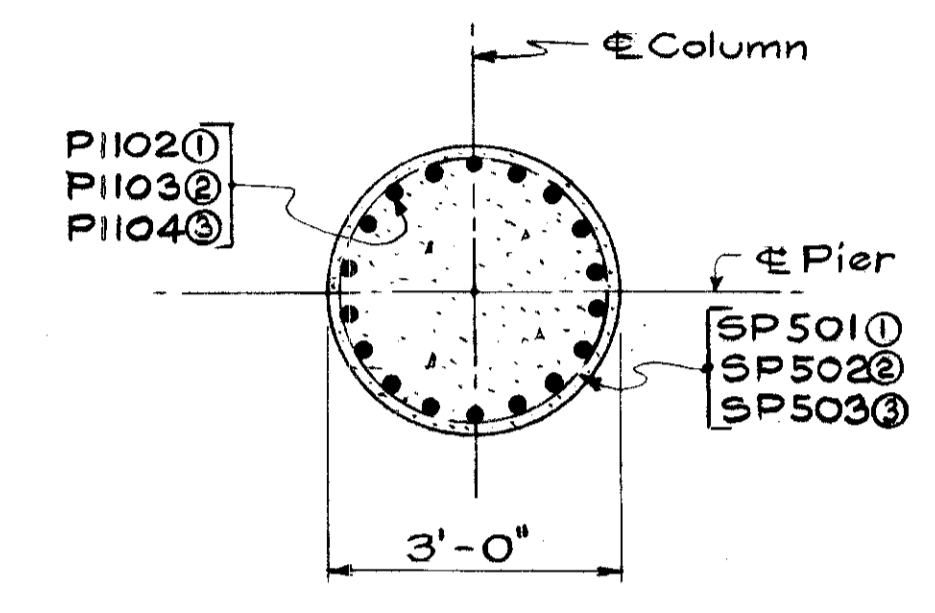
CAP PLAN - PIERS 1, 2 & 3



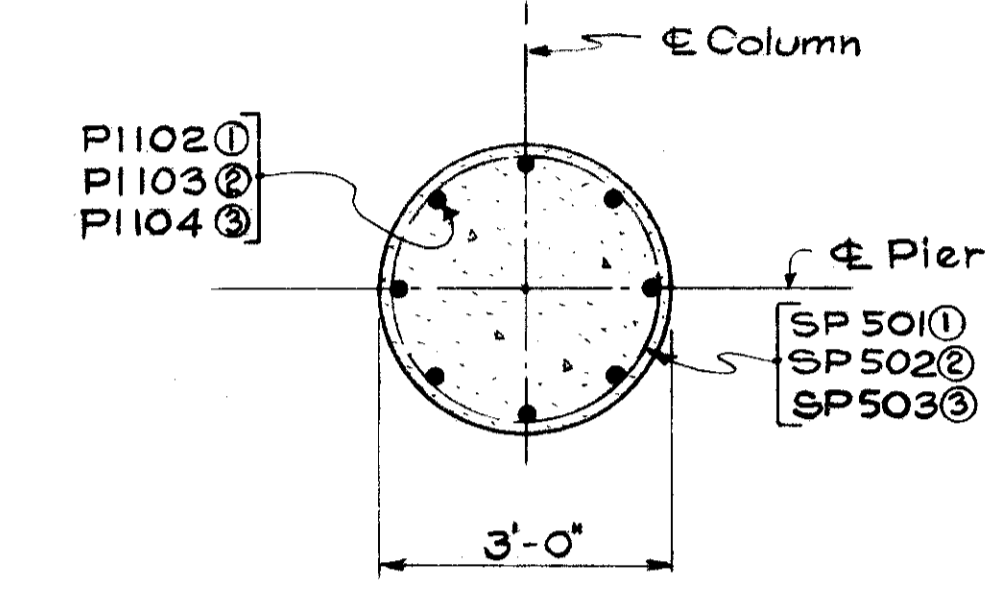
ANCHOR ROD LAYOUT



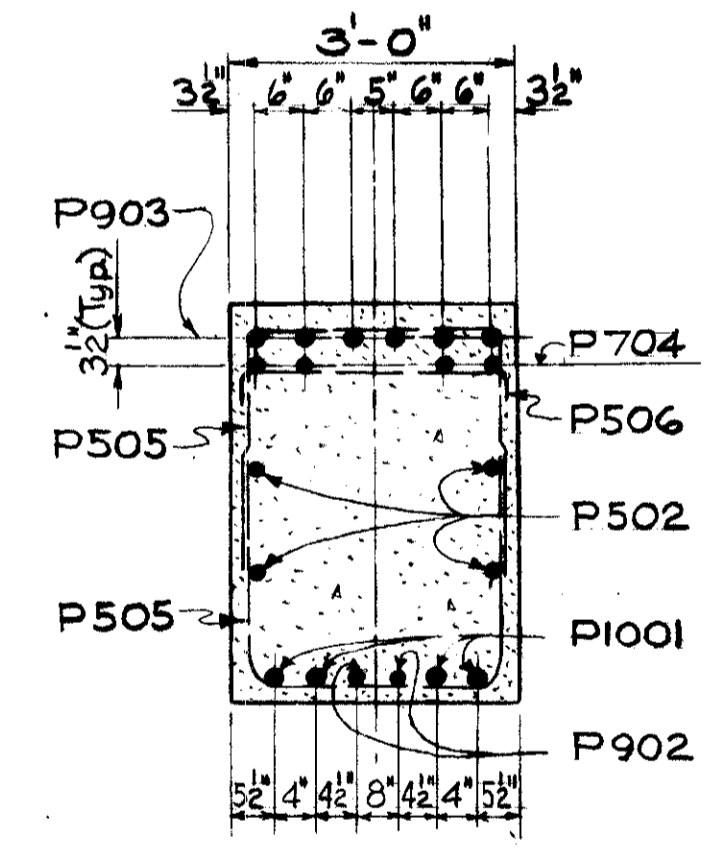
ELEVATION - PIERS 1, 2 & 3



SECTION B-B



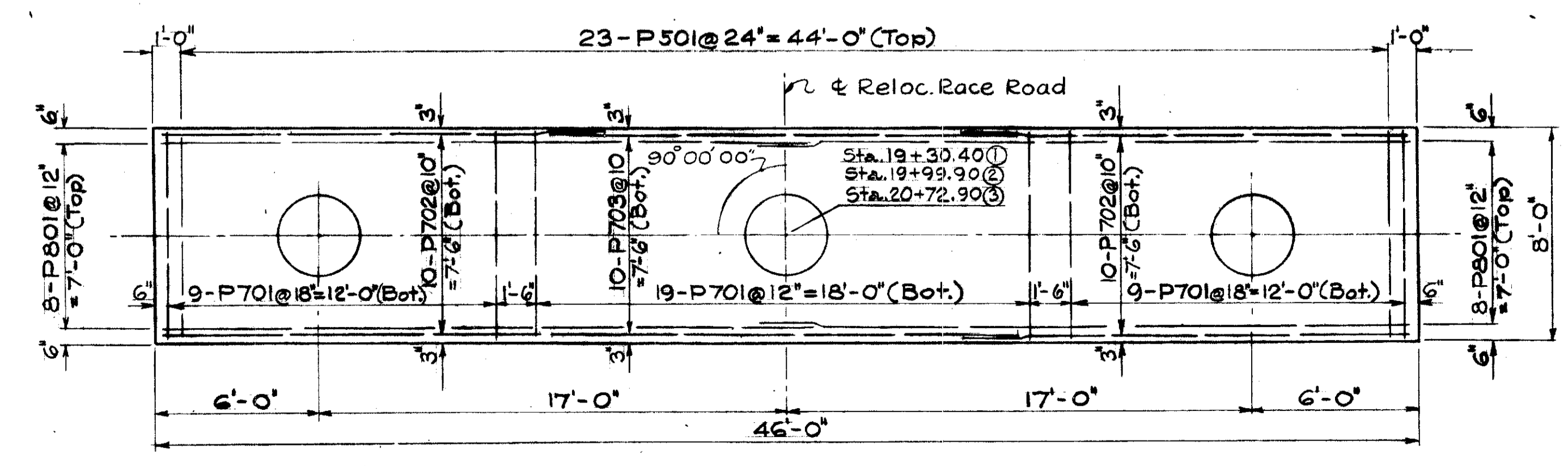
SECTION C-C



SECTION A-A

NOTES:

1. Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seats so as to avoid interference with the drilling of anchor rod holes.
2. Place dowels in footing to insure correct spacing of main column steel.
3. For REINFORCING STEEL LIST, see Sh. 3/6

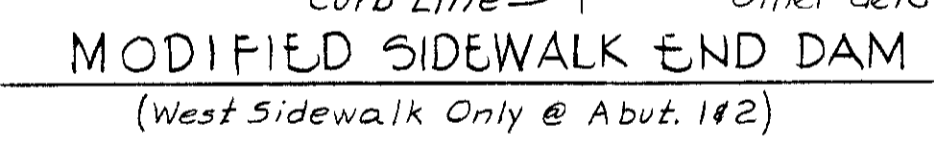
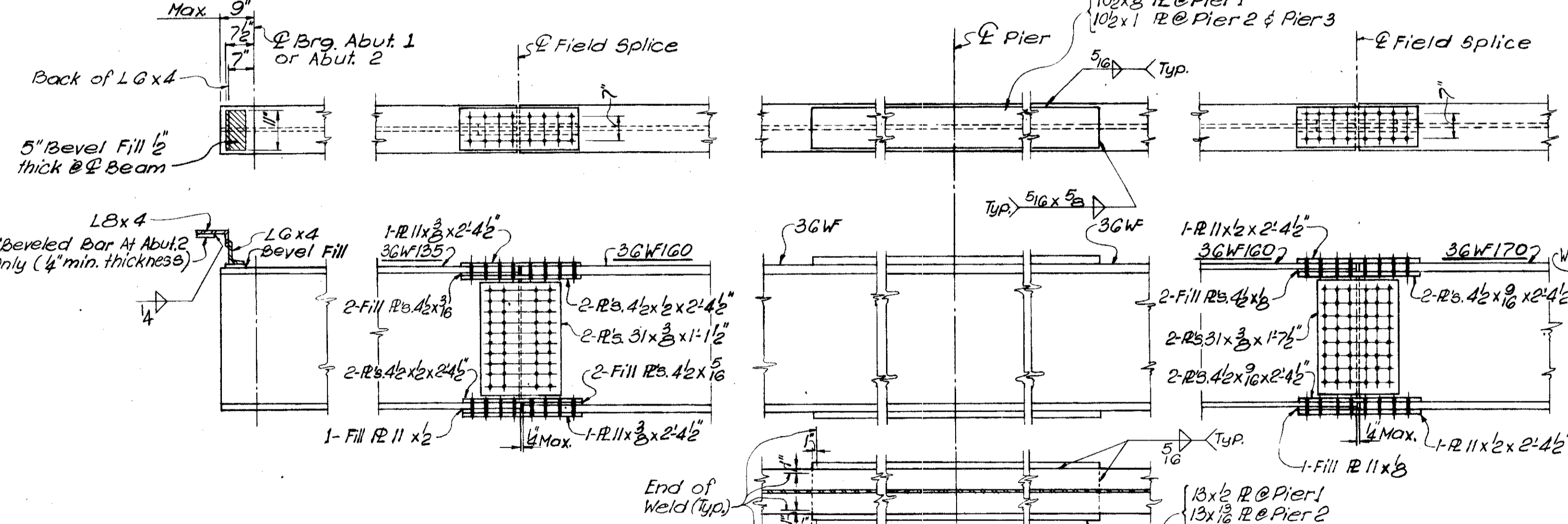
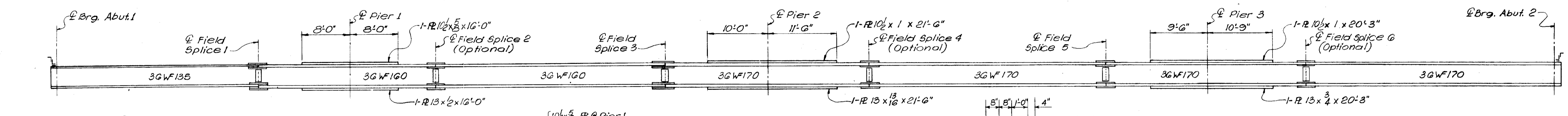
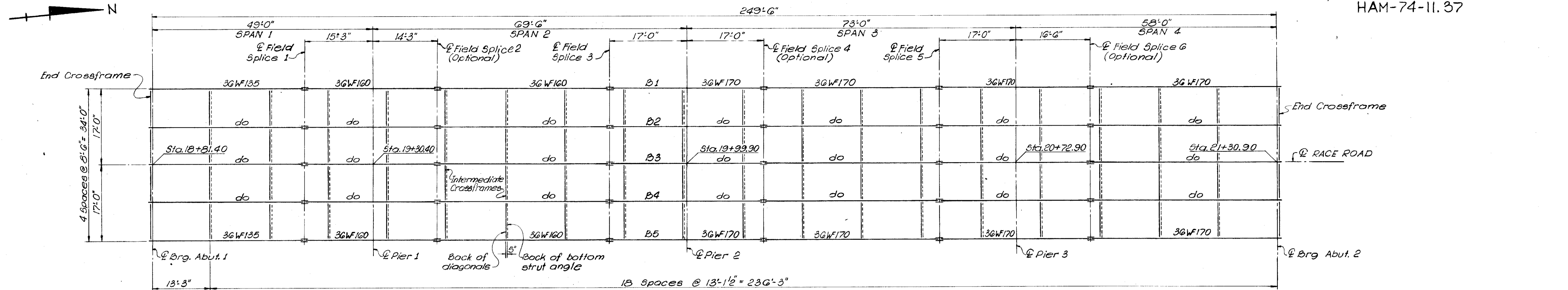


FOOTING PLAN - PIERS 1, 2 & 3

LEGEND:

- E.F. = Each Face
 ① = Pier 1
 ② = Pier 2
 ③ = Pier 3

VOGT, IVERS, & ASSOCIATES ENGINEERS CINCINNATI		ARCHITECTS CHICAGO	
PIERS 1, 2 & 3 BRIDGE NO. HAM 74-1346 RACE ROAD OVER I-74			
HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15			
DESIGNED RDU	DRAWN M.P.S.	TRACED ~	CHECKED IJS
REVIEWED DATE JAD 10-11-65		REVISED	



- NOTES:
1. For details of End Crossframes and End Dams see Std. Dwg. SD-1-65 Sh. 1 of 3 dated 11-8-65.
 2. For details of Field Splices not shown see Std. Dwg. SD-1-65, Sh. 3 of 3 dated 11-8-65.
 3. For details of Sidewalk End Dam & Curb Plates see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
 4. For details of Scaupper, see Std. Dwg. SD-1-65, Sh. 2 of 3 dated 11-8-65.
 5. For Scaupper Location see Sh. 315
 6. For details of Fixed and Sliding Bearings see Std. Dwg. FBB-1-62, Rev. 1-15-63.
 7. For Adjusted Curb Line Elevations see Sh. 315

BEAM	ELEV. A	ELEV. B	ELEV. C	ELEV. D	ELEV. E
B1 & B5	804.993	805.973	807.363	809.215	811.901
B2 & B4	805.125	806.105	807.495	809.347	812.033
B3	805.258	806.238	807.628	809.480	812.166

* Negative Camber - Concave side up
** Extension of roadway surface where beam lies outside curb line.

	0'	3'	6'	9'	12'	15'	18'	21'	24'	27'	30'	33'	36'	39'	42'	45'	48'	51'	54'	57'	60'	
Deflection due to weight of steel	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
Deflection due to remaining dead load	0"	3/16"	3/16"	1/8"	0"	3/16"	5/16"	3/16"	0"	3/16"	3/8"	3/8"	0"	1/16"	1/4"	1/4"	0"	1/16"	1/16"	0"	0"	0"
Adjustment required for vertical curve	0"	-1' 3/8"	-2' 1/8"	-1' 5/8"	0"	-1' 5/8"	-2' 1/8"	-1' 3/8"	0"	-1' 3/8"	-2' 1/8"	-1' 5/8"	0"	-1' 3/8"	-2' 1/8"	-1' 5/8"	0"	-1' 3/8"	-2' 1/8"	-1' 5/8"	0"	0"
Shop camber required	0"	3/16"	3/16"	1/8"	0"	3/16"	5/16"	3/16"	0"	3/16"	3/8"	3/8"	0"	1/16"	1/4"	1/4"	0"	1/16"	1/16"	0"	0"	0"

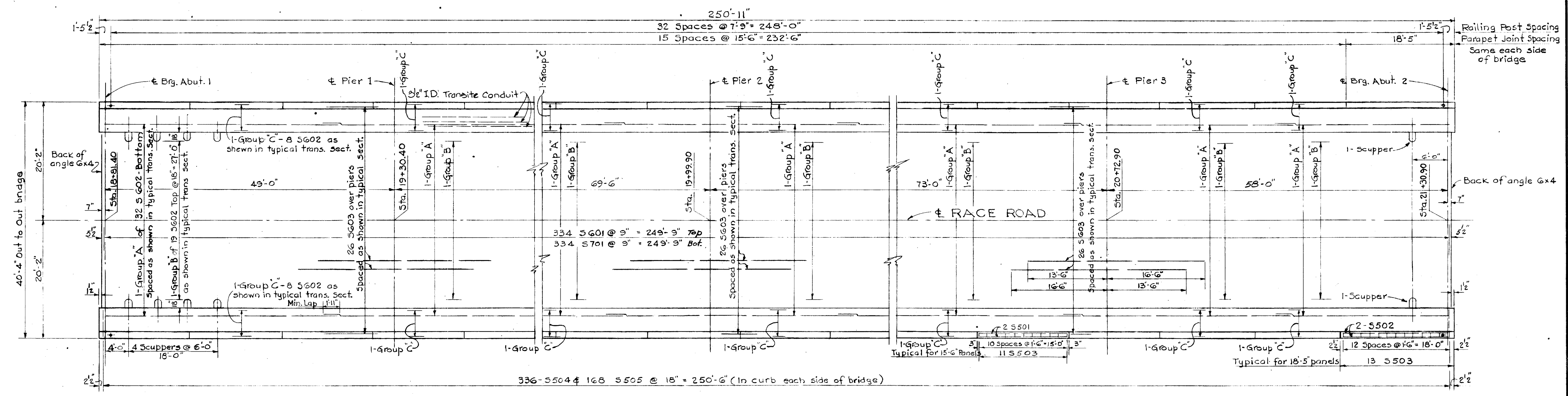
NOTES:
1. Working Lines are straight lines passing thru indicated work points (WP).
2. Tabulated values in the Deflection & Camber Table shall be measured from the Working Lines.

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

FRAMING PLAN
BRIDGE NO. HAM-74-1346
RACE ROAD OVER I-74

HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15

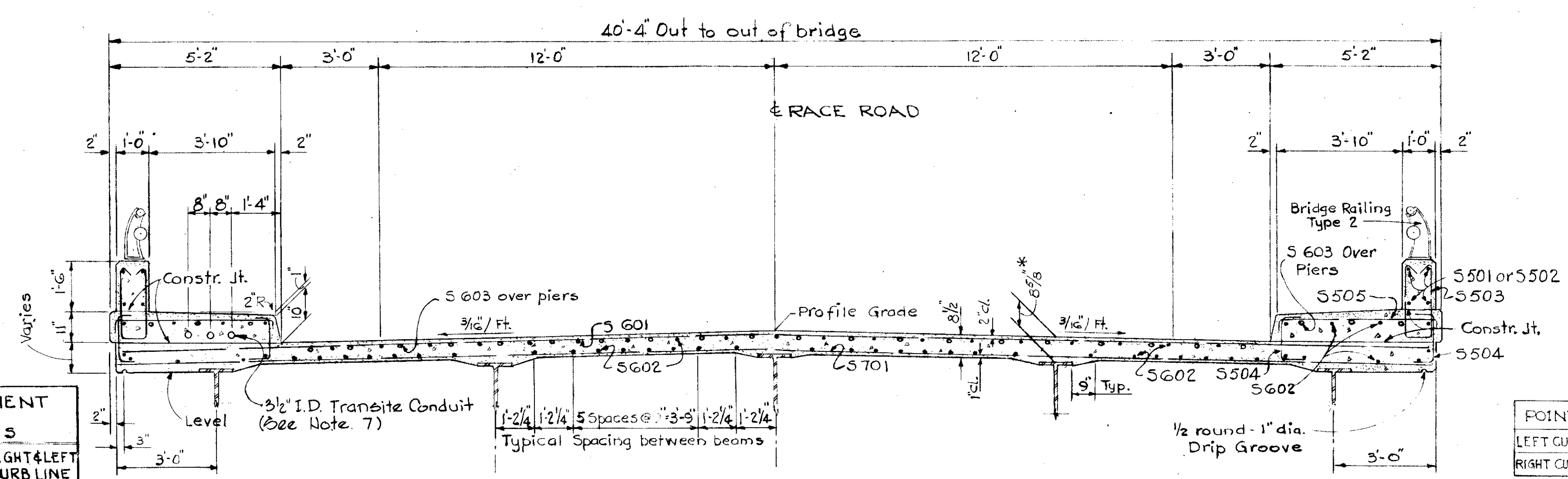
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.R.B.	J.M.T.		C.D.C.	JAD	10-11-65	



PLAN

NOTES

1. Slab thickness includes 1" monolithic wearing surface.
2. Spread or cut longitudinal reinforcing steel in slab to clear scuppers.
3. For railing and parapet joint details, see Std Dwg BR-1-65 Sh. 2 of 2.
4. For scupper details not shown, see Std Dwg SD-1-65 Sh. 2 of 3. All scuppers to be Type 1 and shall be supported on the deck form by cone nut assemblies similar to those shown in Gutter Support B.
5. For end dam details, see Std. Dwg. SD-1-65 Sheets 1 & 2 of 3.
6. For Reinforcing Steel List, see Sh. 3.6
7. The 36" I.D. Transite Conduit shall be furnished and placed by the Cincinnati Sub. Bell Telephone Company.

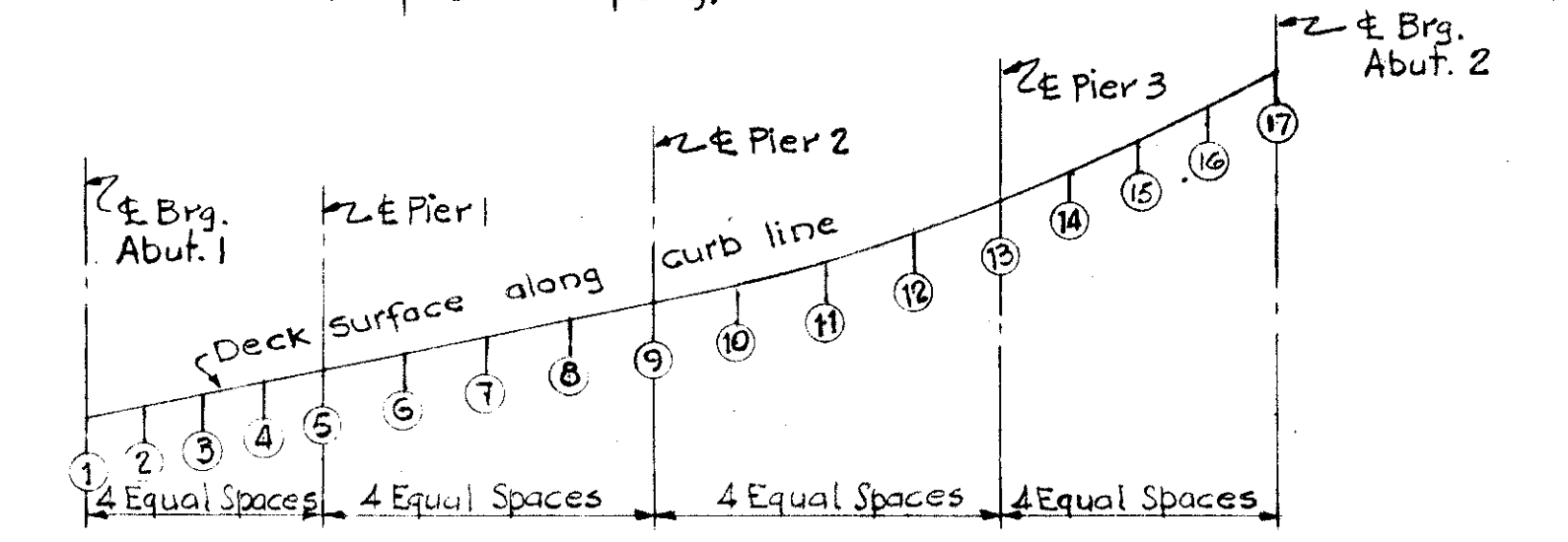


TYPICAL TRANSVERSE SECTION

FINISHED PAVEMENT ELEVATIONS		
STATION	PROFILE GRADE	RIGHT & LEFT CURB LINE
19+00	805.63	805.40
+25	806.13	805.90
+50	806.63	806.40
+75	807.13	806.90
20+00	807.63	807.40
+25	808.13	807.90
+50	808.74	808.51
+75	809.36	809.33
21+00	810.59	810.36
+25	811.64	811.61

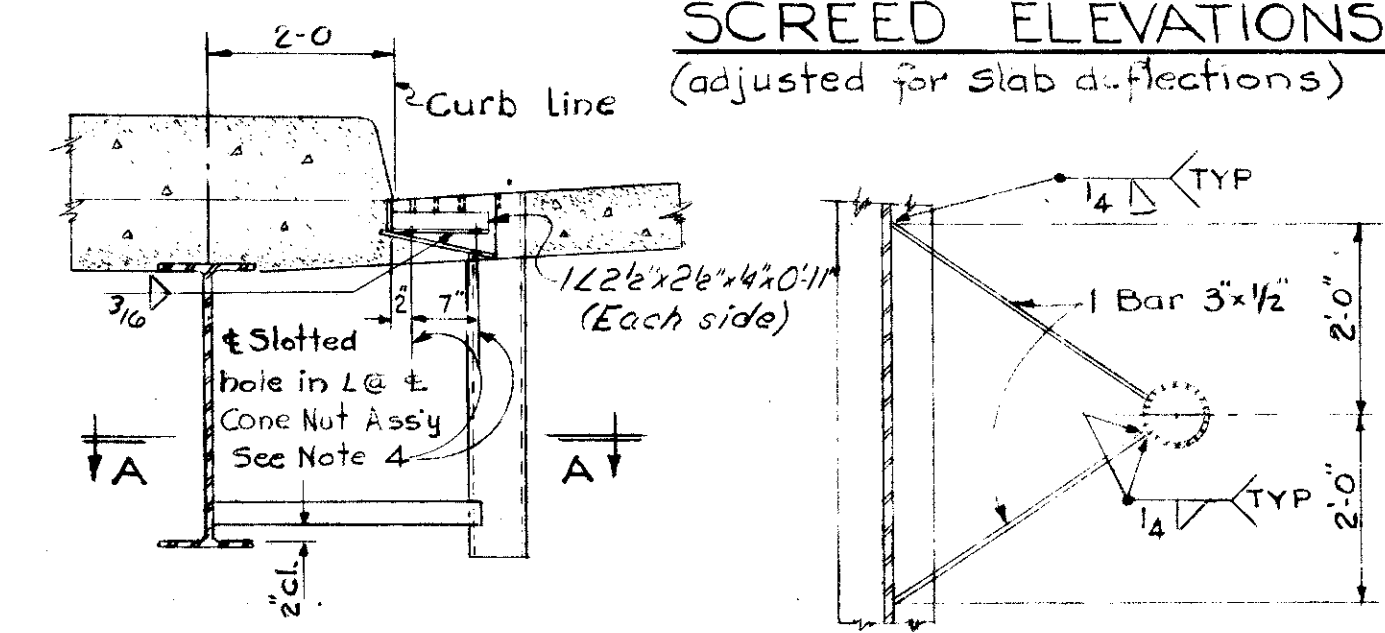
DECK SLAB HAUNCH: A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

* 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 volume of encased steel plates as per Sec. 511.19 of The Construction and Material Specifications.



POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LEFT CURB	805.02	805.28	805.53	805.76	806.00	806.36	806.72	807.06	807.39	807.77	808.17	808.65	809.25	809.82	810.47	811.17	811.93
RIGHT CURB	805.02	805.28	805.53	805.76	806.00	806.36	806.72	807.06	807.39	807.77	808.17	808.65	809.25	809.82	810.47	811.17	811.93

SCREED ELEVATIONS
(adjusted for slab deflections)



SCUPPER ELEVATION

SECTION A-A

VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO	
SUPERSTRUCTURE ROADWAY SLAB	
BRIDGE NO. HAM-74 - 134G RACE ROAD OVER I-74 HAMILTON COUNTY STA. 18+79.15 to STA. 21+33.15	
DESIGNED ERB	DRAWN H.R.
TRACED ~	CHECKED RDU
REVIEWED DATE JAO 10-11-65	REVISION

ABUTMENTS										PIERS					SUPERSTRUCTURE					REPLACEMENT BARS					MICROFILMED										
ABUTMENT 1					ABUTMENT 2																														
MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	
A501	32	7'-2"	Str.	239	B501	22	20'-6"	Str.	470	P501	69	7'-8"	Str.	552	S501	120	15'-2"	Str.	—	RE5	1	5'-7"	Bt.	—											
A502	24	10'-3"	Str.	257	B502	46	6'-4"	Bt.	304	P502	12	34'-0"	Str.	426	S502	8	18'-1"	Str.	—	RE5	1	5'-7"	Str.	—											
A503	24	4'-7"	Bt.	115	B503	14	5'-6"	Str.	80	P503	6	4'-0"	Bt.	25	S503	356	5'-7"	Bt.	2073	REG	3	5'-11"	Str.	—											
A504	18	9'-3"	Bt.	174	B504	4	10'-8"	Str.	44	P504	63	4'-5"	Bt.	290	S504	672	2'-4"	Bt.	1635	RET	2	6'-3"	Str.	—											
A505	18	7'-5"	Bt.	139	B505	27	8'-5"	Bt.	237	P505	120	7'-7"	Bt.	949	S505	336	5'-9"	Bt.	2015	RE8	1	6'-6"	Str.	—											
A506	18	7'-8"	Bt.	144	B506	16	19'-8"	Str.	328	P506	18	3'-8"	Bt.	69							RE9	1	6'-10"	Str.	—										
A507	54	8'-2"	Bt.	460	B507	4	5'-9"	Bt.	24											RE10	1	7'-3"	Str.	—											
A508	20	4'-5"	Bt.	92	B508	6	6'-11"	Bt.	43											RE11	2	7'-7"	Str.	—											
A509	12	39'-4"	Str.	492	B509	4	4'-7"	Bt.	19						S601	334	38'-8"	Str.	19398																
A510	4	5'-11"	Bt.	25	B510	4	5'-11"	Bt.	21	P701	111	7'-8"	Str.	1740	S602	469	37'-7"	Str.	26475																
A511	16	6'-7"	Bt.	110	B511	4	5'-9"	Bt.	24	P702	60	16'-7"	Str.	2034	S603	78	30'-0"	Str.	3575																
A512	8	11'-4"	Str.	95	B512	8	11'-10"	Str.	99	P703	30	17'-0"	Str.	1042																					
A513	4	3'-5"	Bt.	14	B513	8	12'-2"	Str.	102	P704	12	17'-0"	Str.	417																					
A514	4	5'-2"	Bt.	22	B514	12	4'-3" to 5'-3" by 6' (400)	Str.	60																										
A515	6	7'-0"	Bt.	44	B515	16	4'-0"	Str.	67						S701	334	38'-8"	Str.	26398																
A516	10	9'-5"	Bt.	99	B516	18	1'-5"	Bt.	28	P801	48	24'-1"	Str.	3086																					
A517	8	11'-6" to 16'-3" by 17'-2"	Bt.	115	B517	18	6'-5"	Bt.	120																										
A518	3	8'-3"	Str.	69	B518	30	4'-1"	Bt.	128																										
A519	4	6'-7"	Str.	28	B519	8	10'-0"	Bt.	83	P901	12	10'-0"	Bt.	408																					
A520	16	1'-8"	Bt.	28	B520	8	5'-2"	Bt.	43	P902	6	34'-6"	Str.	704																					
A521	26	2'-4"	Bt.	63	B521	4	15'-0"	Bt.	63	P903	18	33'-0"	Bt.	2080																					
A522	14	11'-8"	Str.	170	B522	4	3'-5"	Str.	14	P904	18	12'-4"	Bt.	755																					
A523	6	13'-8"	Str.	86	B523	4	11'-6"	Bt.	48																										
A524	8	5'-2" to 9'-8" by 11'-6"	Str.	62	B524	2	6'-0"	Str.	12																										
A525	8	2'-0" to 6'-6" by 11'-6"	Str.	36						P1001	12	34'-0"	Str.	1756																					
A526	4	9'-9"	Bt.	40																															
A527	14	6'-0"	Str.	88	B601	8	21'-8"	Str.	260																										
					B602	27	12'-10"	Bt.	320	P1101	132	7'-2"	Bt.	5026																					
					B603	30	13'-9"	Bt.	620	P1102	44	24'-3"	Str.	5669																					
A601	8	15'-7"	Bt.	187	B604	8	15'-5"	Bt.	185	P1103	44	22'-3"	Str.	5201																					
A602	30	13'-9"	Bt.	620	B605	6	12'-11"	Bt.	116	P1104	44	21'-5"	Str.	5007																					
					B606	8	10'-8"	Str.	128																										
					B607	16	10'-10"	Str.	260																										
A701	16	39'-4"	Str.	1286	B608	14	4'-7"	Bt.	96	SP501	3	20'-10"	Bt.	2261																					
					B609	8	8'-8"	Bt.	104	SP502	3	18'-10"	Bt.	2032																					
										SP503	3	18'-0"	Bt.	1964																					
A801	26	10'-8"	Str.	740																															
A802	13	9'-8"	Str.	336																															
A803	14	11'-0"	Str.	411																															
A804	14	5'-11"	Bt.	221																															

FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

316

HAM-74-11.37

NOTES

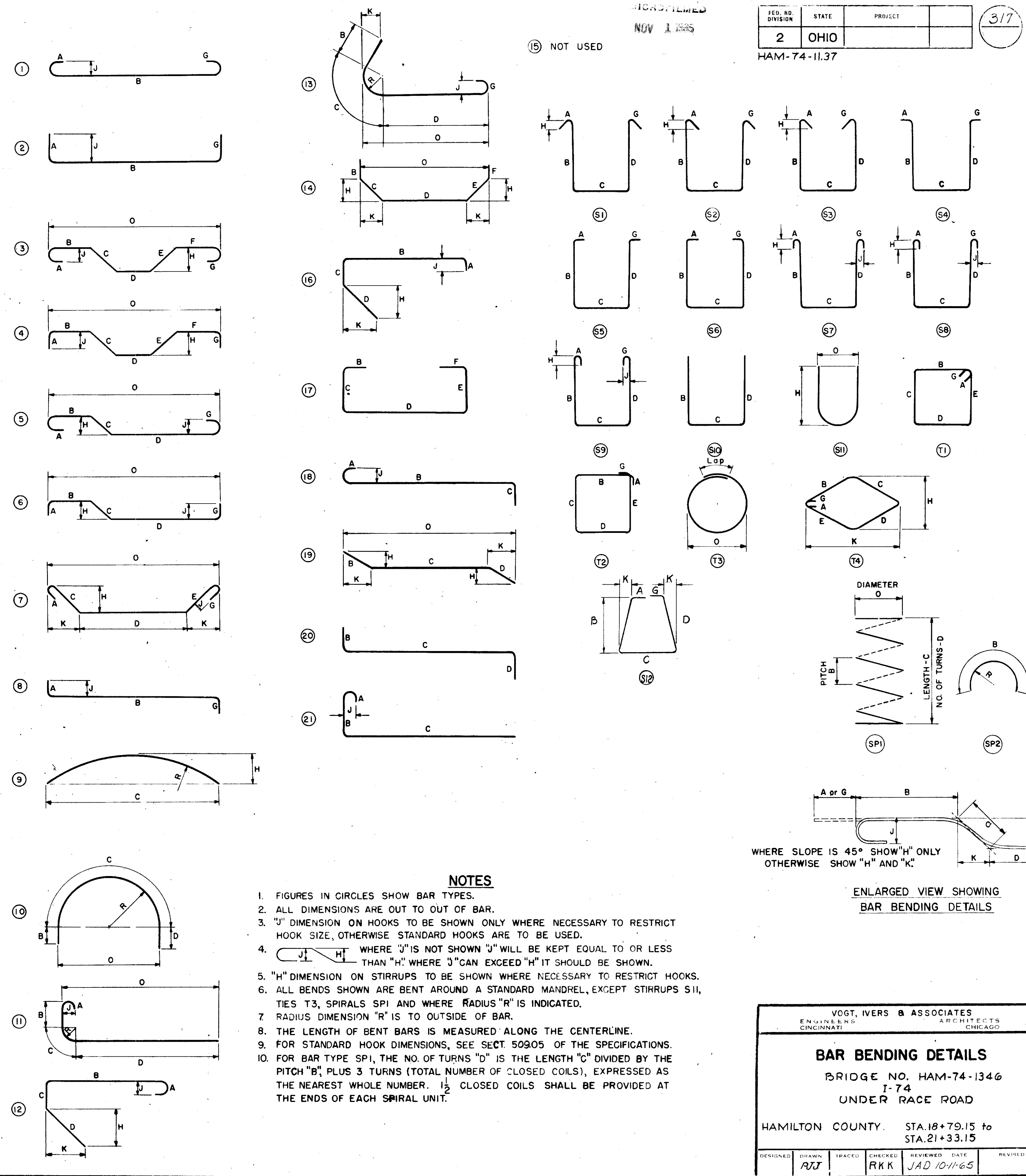
- BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.
- BARS MARKED WITH AN ASTERISK TO BE INCLUDED FOR PAYMENT UNDER ITEM 517, RAILING.
- SPIRAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM TOP OF THE FOOTING TO THE BOTTOM OF CAP, OR TO WITHIN 2" (±) OF THE TOP OF COLUMN FOR PIERS WITHOUT CAPS, TO THE NEAREST INCH.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER 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.
- SEE SHEET 317 FOR BENDING DETAILS.

VOGT, IVERS & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

REINFORCING STEEL LIST
BRIDGE NO. HAM-74-1346
I-74
UNDER RACE ROAD
HAMILTON COUNTY STA.18+79.15 to
STA.21+33.15

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	RJJ		RKK	JAD 10-11-65	

MARK	TYPE	DIMENSIONS FOR BENDING												
		A	B	C	D	E	F	G	H	J	K	R	O	
A503	2	6"	4'-1"											
504	16	1'-7"	2'-8"	3'-5"	1'-10 1/2"									
505	17			2'-6"	2'-8"	2'-6"			1'-4"		1'-4"			
506	16		4'-11"	1'-4"	1'-7"				1'-1 1/2"		1'-1 1/2"			
507	17			2'-6"	3'-5"	2'-6"								
508	2	6"	3'-5"					6"						
510	17			1'-7"	4'-6"									
511	17			3'-1"	0'-8"	3'-1"								
513	11		10"	0'-7 3/4"	1'-11"						5"	2'-4"		
514	11		1'-4"	1'-4"	2'-6"						10"	3'-4"		
515	17		6"	3'-0"	0'-6"	3'-0"	6"							
516	17			4'-3"	1'-2"	4'-3"								
517	17			4'-6" to 7'-8" by 9 1/2"	1'-2"	4'-6" to 7'-8" by 9 1/2"								
520	2	6"	0'-8"				6"							
521	2	6"	1'-4"				6"							
A526	14			2'-0"	5'-9"	2'-0"			1'-7 1/2"		1'-2"			
A601	17		4'-5"	1'-5"	6'-8"	0'-11"	2'-10"							
A602	17		4'-5"	1'-5"	5'-9"	0'-11"	1'-11"							
A804	2	11"	5'-0"											
B502	17		1'-7"	3'-5"	1'-7"									
505	20		1'-0"	7'-7"										
507	20		1'-7"	4'-4"										
508	36	6"		2'-9"			6"							
509	11		2'-0"	8"	1'-11"						5"	2'-4"		
510	11		1'-3"	1'-4"	2'-6"						10"	3'-4"		
511	19		3'-6"	2'-3"					1'-7"		3'-1"			
516	17		6"	8"	6"									
517	17		3'-0"	8"	3'-0"									
518	17		1'-6"	1'-4"	1'-6"									
519	17		1'-7"	7'-8"	1'-0"									
520	20		1'-0"	4'-4"										
521	20		1'-0"	14'-2"										
B523	20		1'-0"	10'-8"										
B602	20		5'-5"	7'-7"										
603	17		1'-11"	11"	5'-8"	1'-5"	4'-6"							
604	17		2'-9"	11"	6'-6"	1'-5"	4'-6"							
605	17		4'-0"	6"	8'-9"									
608	2	8"	3'-11"											
B609	17		3'-11"	1'-2"	3'-11"									
P503	17			1'-0"	2'-3"	1'-0"								
504	17			1'-0"	2'-8"	1'-0"								
505	510		2'-7"	2'-8"	2'-7"									
P506	2			6"	2'-8"	6"								
P901	511								4'-3"			2'-8"		
903	17			3'-9"	29'-6"									
P904	17			3'-9"	8'-10"									
P1101	20		1'-2"	6'-4"										
SP501	SP1		3/4"	20'-10"	80							2'-8"		
502	SP1		3/4"	18'-10"	73							2'-8"		
SP503	SP1		3/4"	18'-0"	69							2'-8"		
S503	S3	5"	2'-2"	8"	2'-2"			5"	2 3/4"					
504	2	6"	1'-4"					6"						
S505	2	6"	4'-9"					6"						



NOTES

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H", WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUPS S11, TIES T3, SPIRALS SP1 AND WHERE RADIUS "R" IS INDICATED.
- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECT. 50905 OF THE SPECIFICATIONS.
- FOR BAR TYPE SP1, THE NO. OF TURNS "D" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY OTHERWISE SHOW "H" AND "K".

ENLARGED VIEW SHOWING BAR BENDING DETAILS

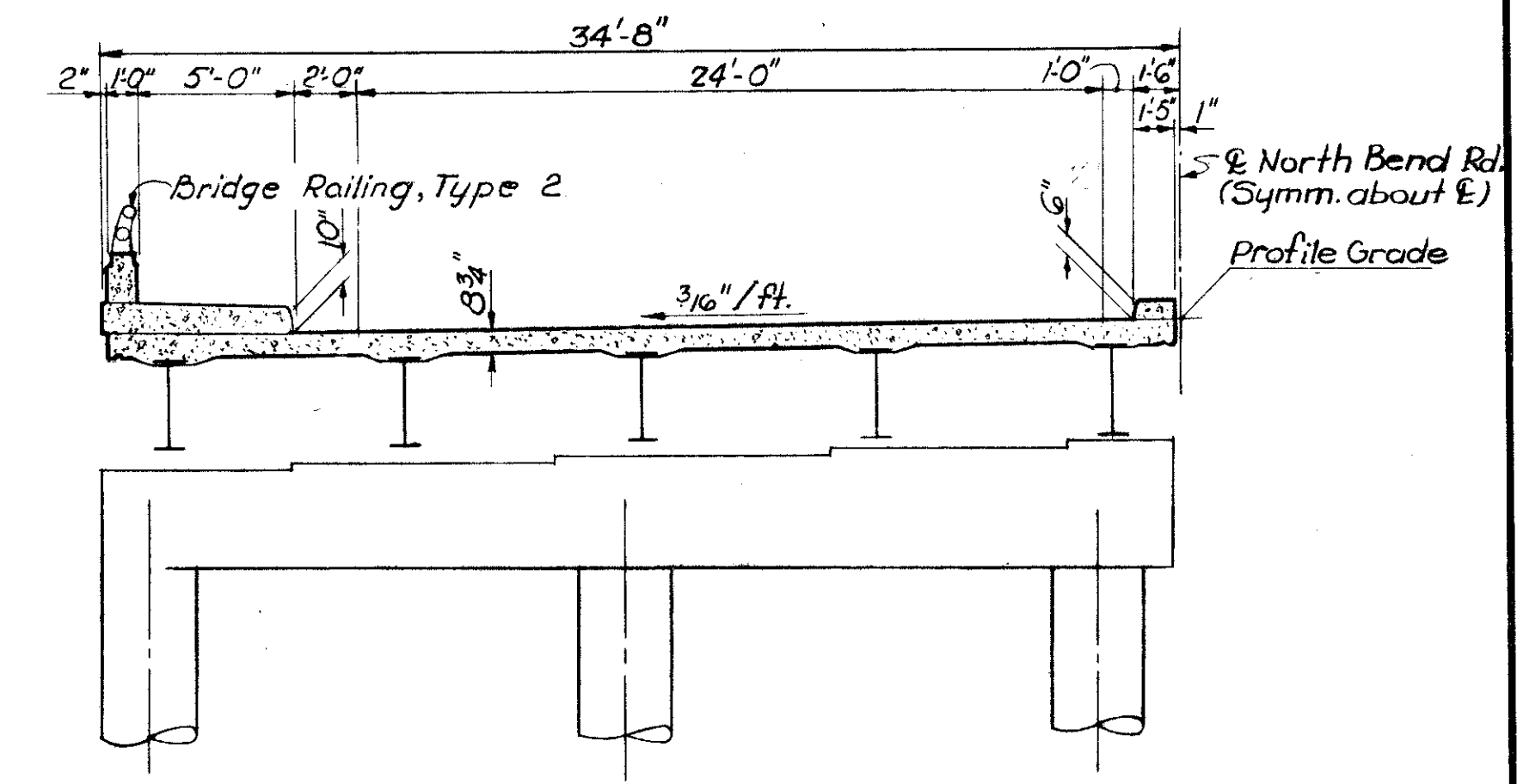
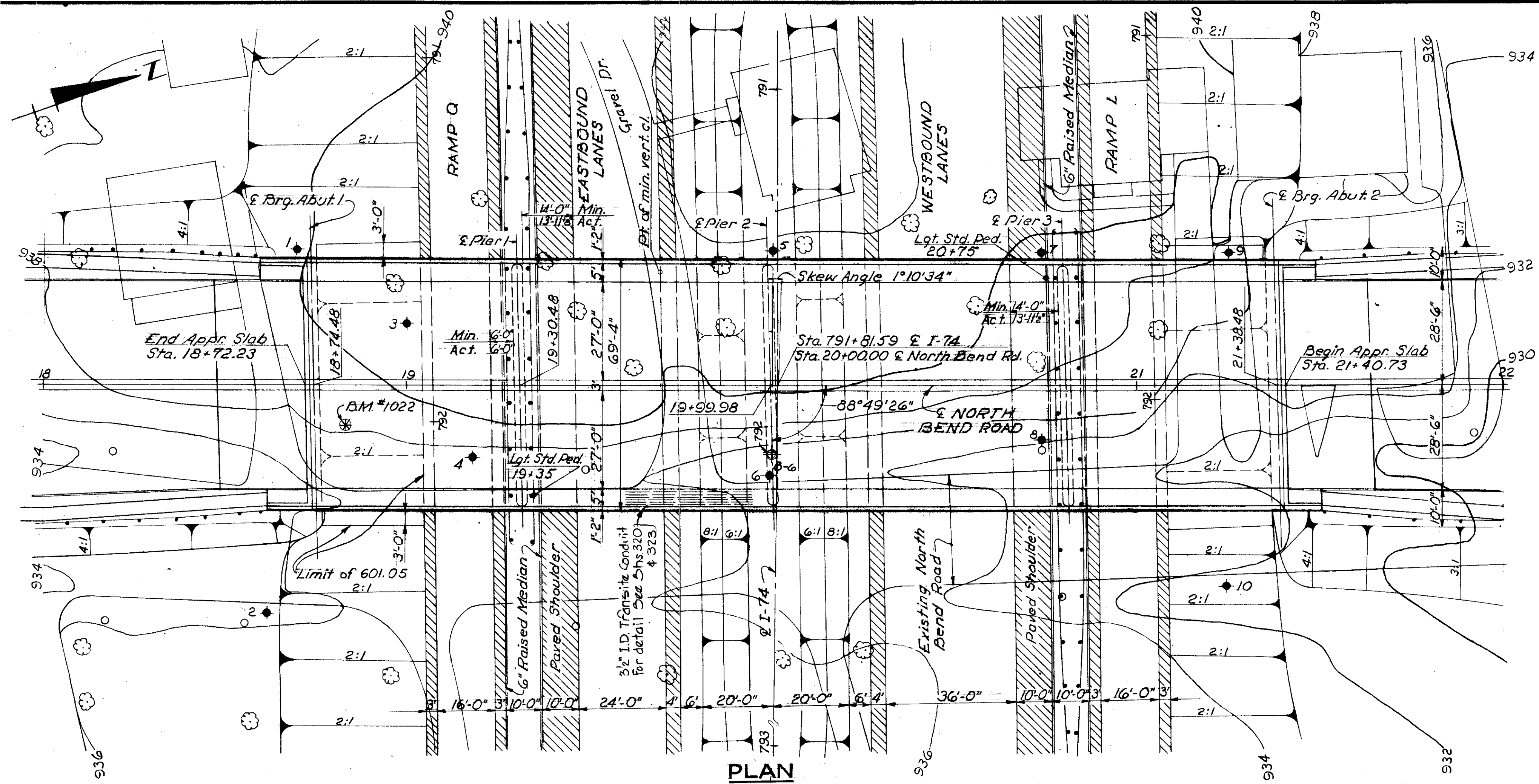
VOGT, IVERS & ASSOCIATES
 ENGINEERS ARCHITECTS
 CHICAGO CHICAGO

BAR BENDING DETAILS
 BRIDGE NO. HAM-74-1346
 I-74
 UNDER RACE ROAD

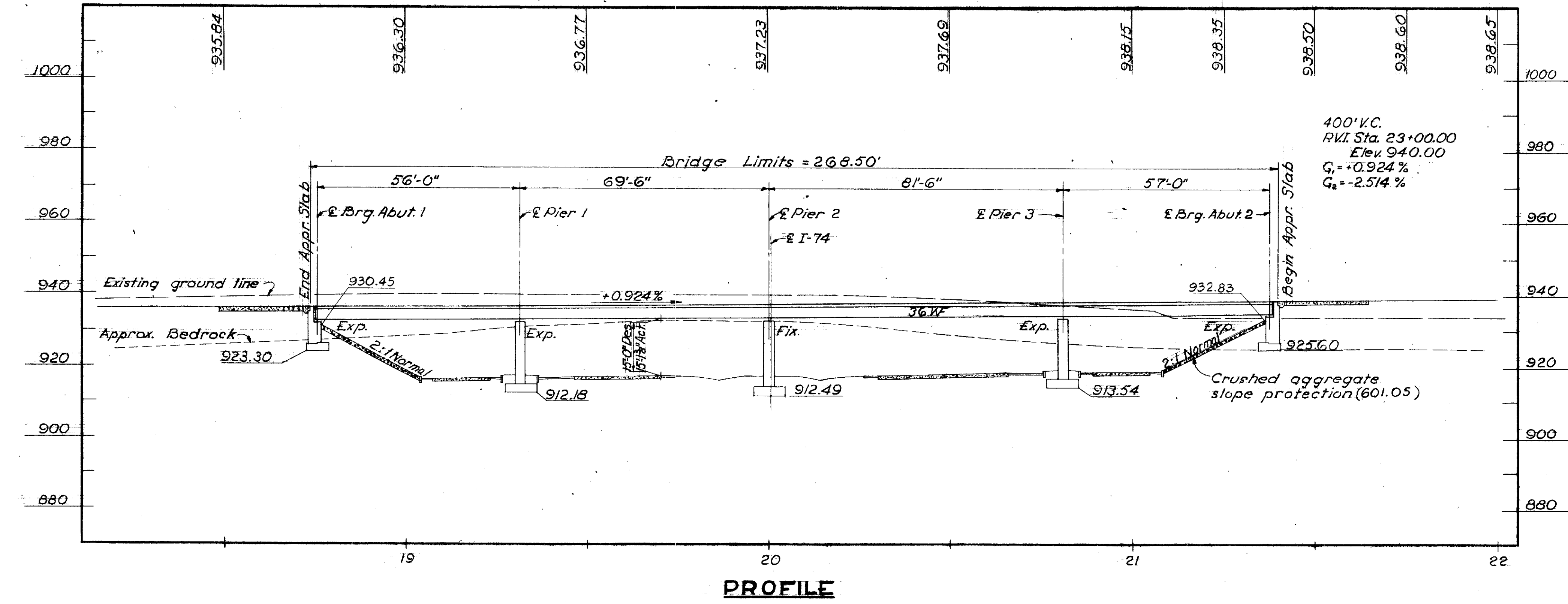
HAMILTON COUNTY. STA. 18+79.15 to STA. 21+33.15

DESIGNED	DRAWN	SPACED	CHECKED	REVIEWED	DATE	REVISED
	RJT		RKK	JAD	10/1/65	

MICROFILMED
NOV 1 1985



BENCH MARK
BM NO. 21A, Elevation 930.11
R.R. Spike in power pole on
East side of North Bend Road
226' Lt. of sta. 791+80



- ⊕ Press and/or Drive Sample and/or Core Boring.
- ◆ Drive rod penetration resistance sounding.

PROPOSED STRUCTURE

TYPE: Continuous rolled steel beams with reinforced concrete deck and substructure.
 SPANS: 56'-0", 69'-6", 81'-6", 57'-0"
 ROADWAY: 69'-0" Face to face of parapets, includes 5'-0" sidewalk each side and 3'-0" raised median.
 LOAD FREQUENCY: C.F. = 400 (57).
 SKEW: 1°10'34" RF
 WEARING SURFACE: 1" Monolithic concrete
 APPROACH SLABS: AS-1-54 (25' long)
 ALIGNMENT: Tangent

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SITE PLAN

BRIDGE NO. HAM-74-1477
I-74 UNDER NORTH BEND RD.
HAMILTON COUNTY STA. 18+72.23 to STA. 21+40.73

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
Aerial	J.C.H.	E.P.A.	P.J.U.	L.U.S.	2

MICROFILMED
NOV 1 1985

HAM-74-11.37

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL
503	317	Cu.Yds.	Unclassified Excavation	317			
503	437	Cu.Yds.	Rock Excavation	65	372		
509	252,585	Lbs.	Reinforcing Steel	14,602	77,833	160,150	
511	627	Cu.Yds.	Class "C" Concrete, Superstructure			627	
511	157	Cu.Yds.	Class "C" Concrete, Piers above footings		157		
511	179	Cu.Yds.	Class "E" Concrete, Abutments above footings	179			
511	249	Cu.Yds.	Class "E" Concrete, Pier and Abutment footings	75	174		
512	18	Lin.Ft.	Premolded Sealing Strip	18			
513	533,068	Lbs.	Structural Steel			533,068	
514	533,068	Lbs.	Field Painting of Structural Steel			533,068	
517	585.50	Lin.Ft.	Bridge Railing Type 2	54.67		530.83	
518	65	Cu.Yds.	Porous Backfill	65			
518	20	Each	Scuppers, including supports			20	
518	120	Lin.Ft.	6" Perforated Helical C.M.P. 707.06, including specials	120			
518	156	Lin.Ft.	6" Helical C.M.P. 707.06, non-perforated	156			
601	521	Sq.Yds.	Crushed Aggregate Slope Protection				521
808	627	Units	Water-reducing, Set-retarding Admixture			627	
*625			Lighting System				
825	2265	Sq.Yds.	Concrete Surface Treatment			2265	
828	108	Lin.Ft.	Joint Sealer	108			

Materials in approach slabs are not included in the above estimated quantities.

*For Summary of Bridge Lighting Details and Quantities, see Sheet Nos. 259 and 263.

GENERAL NOTES

REFERENCE shall be made to the following:

- Standard Drawings: BR-1-65, revised 11-24-65
- AS-1-54, revised 8-10-65
- SD-1-65, dated 11-8-65
- FSB-1-62, revised 1-15-63
- Supplemental Specifications: 808 dated 2-7-66
- 811 dated 3-29-65
- 825 dated 4-22-65
- 828 dated 3-21-66

FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower. Excavation at plan depth shall not be exposed to weathering prior to pouring footing concrete.

FOUNDATION BEARING PRESSURE: Abutment and Pier footings are designed for a maximum bearing pressure of 5.0 tons per sq. ft.

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.

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

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.

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

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.

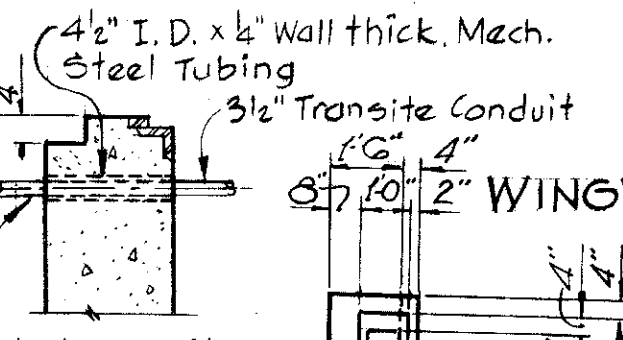
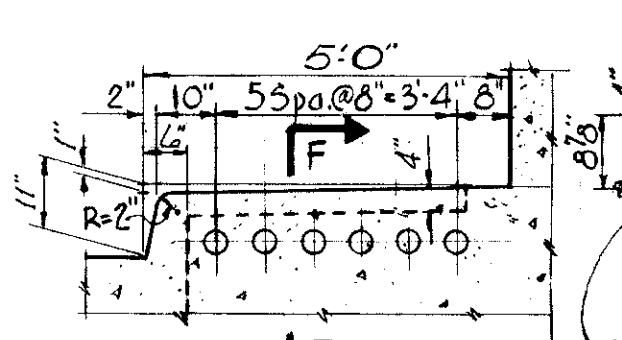
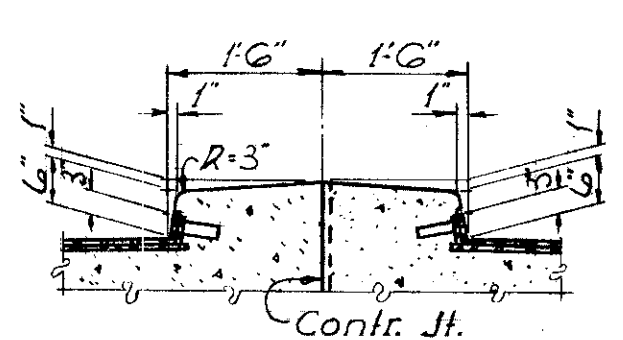
REINFORCING STEEL - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p. s. i., except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p. s. i.

VOGT, IVERS, & ASSOCIATES		ENGINEERS ARCHITECTS	
CINCINNATI		CHICAGO	
ESTIMATED QUANTITIES & GENERAL NOTES			
BRIDGE NO. HAM-74-1477			
I-74 UNDER NORTH BEND RD.			
HAMILTON COUNTY STA. 18+72.23 to STA. 21+40.73			
DESIGNED	DRAWN	TRACED	CHECKED
R.K.K.	P.J.J.	~	H.D.J.
REVIEWED	DATE	REVISION	
JAD	10-13-65		

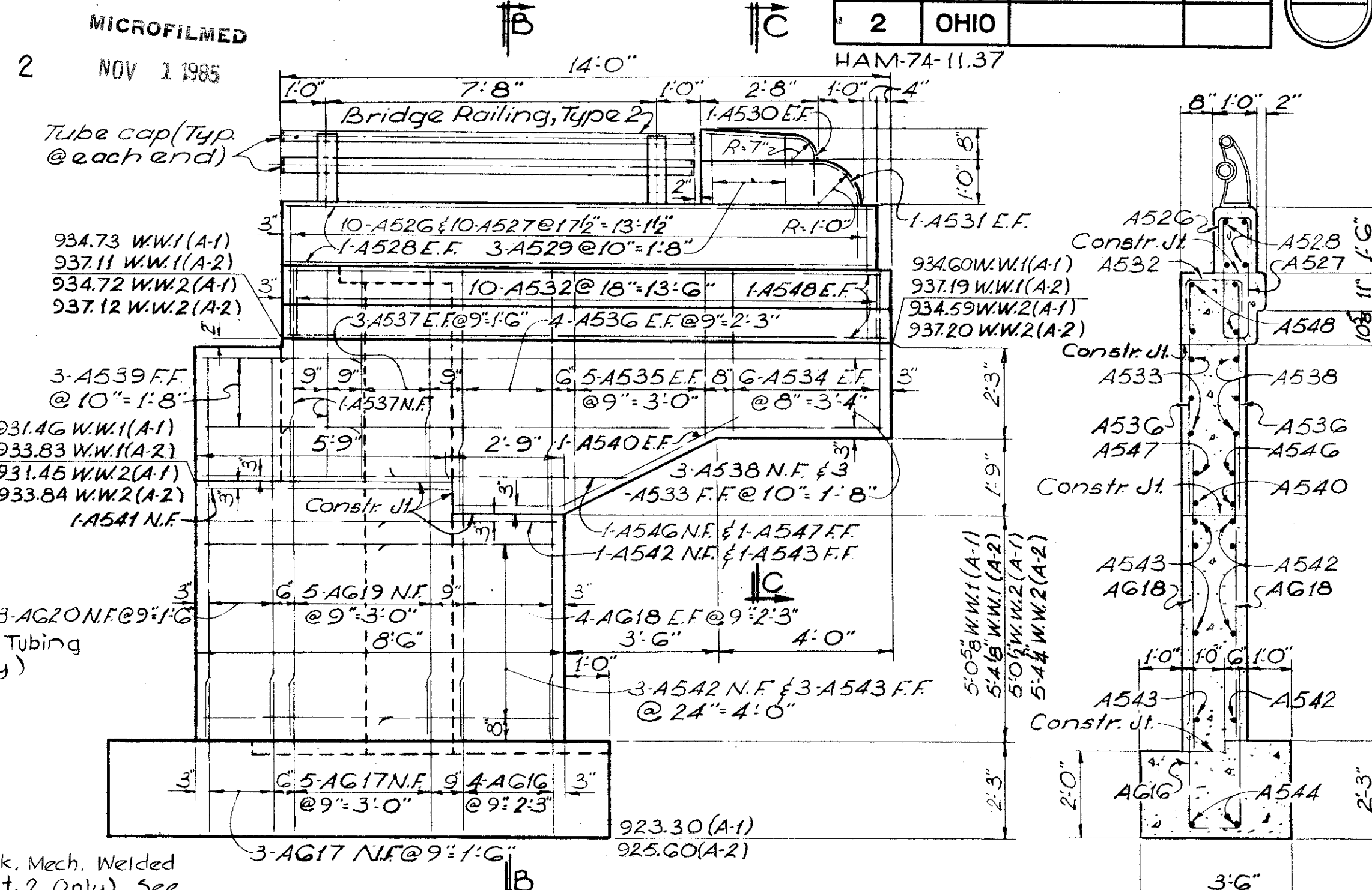
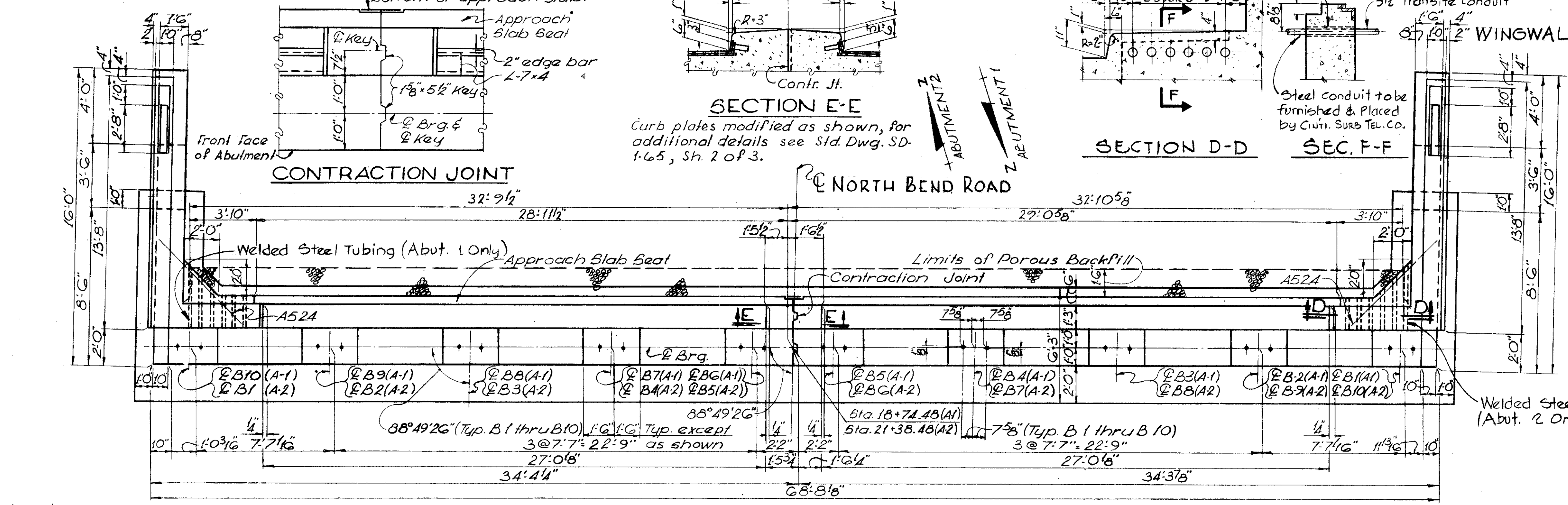
HAM-74-11.37

WINGWALL 1

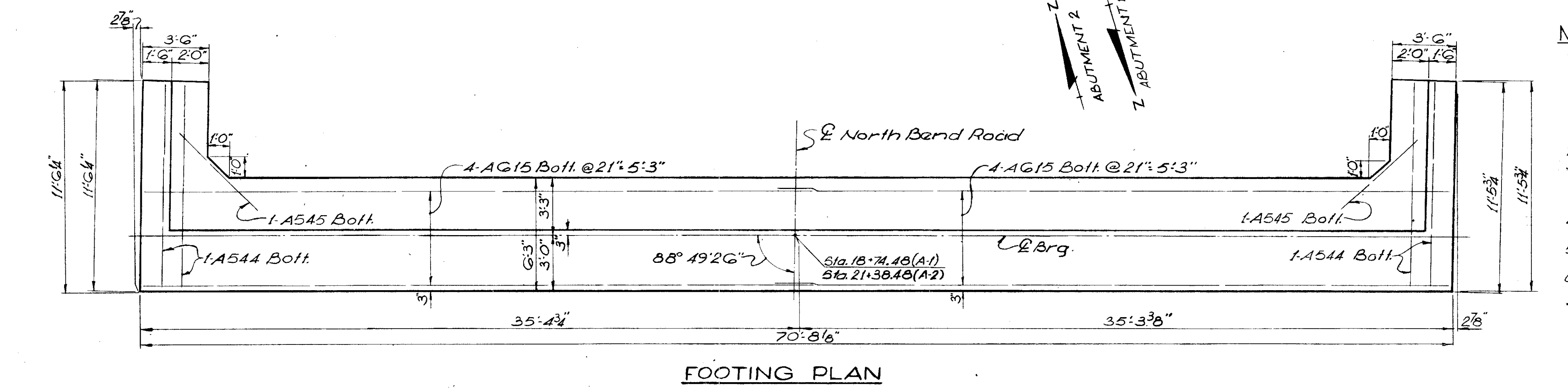
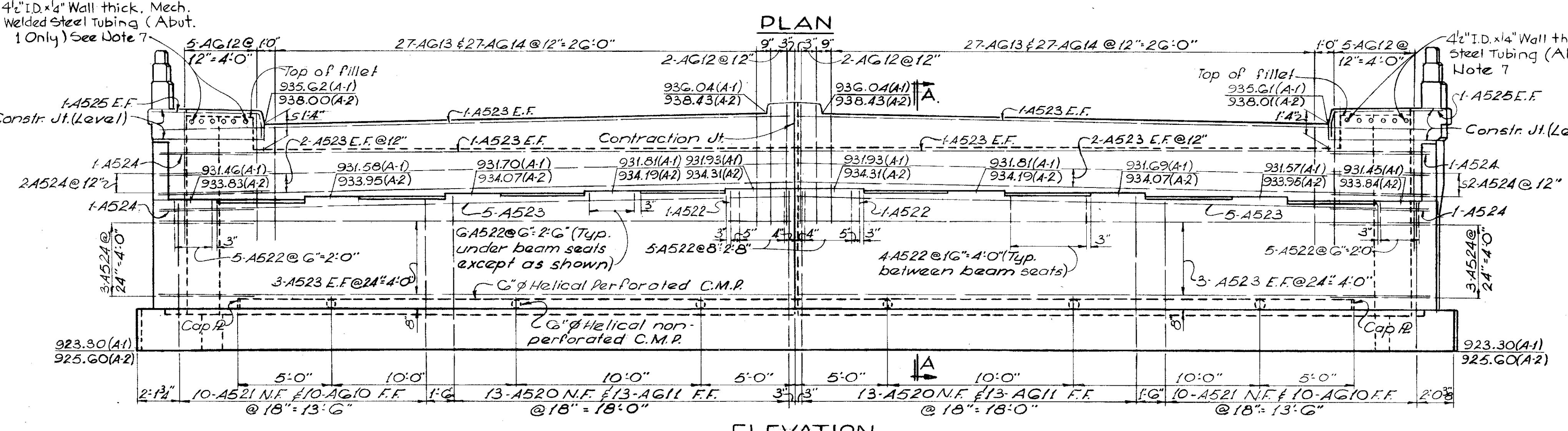
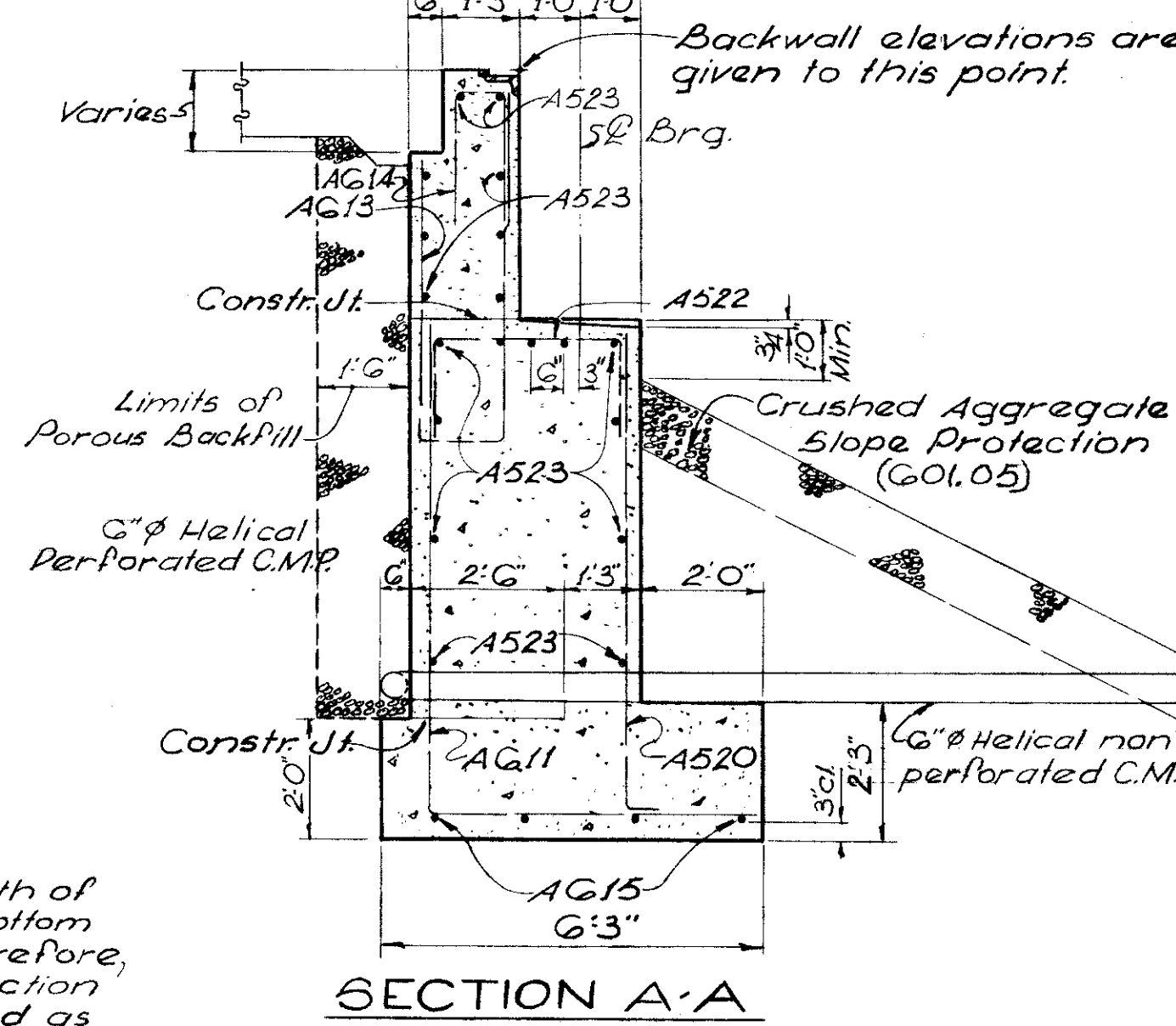
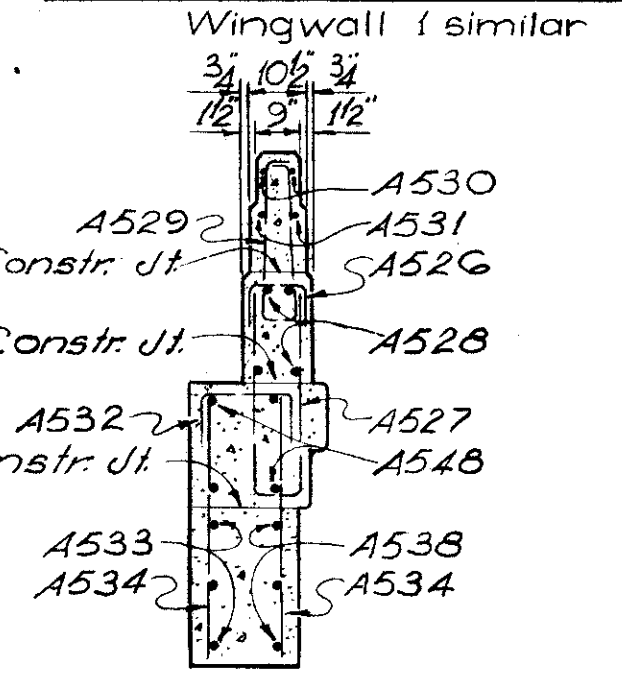
12" x 1/2" Pramolded Sealing Strip in 13"x3" recess, extend from top of footing to bottom of approach slab.



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SECTION B-B



NOTES

1. Porous backfill, 1/2" thick and full length of the abutment, shall extend up to the bottom of the approach slab. Excavation, therefore, in excess of that required for construction of the abutment, shall be considered as paid for in the bid price per cubic yard paid for porous backfill.
2. For Reinforcing Steel List, see Sh. 324
3. 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 rod holes.
4. Bridge railing shall be continuous for full length of wingwalls.
5. For end dam details, see Std. Dwg. SD-1-65, Shs. 1 and 2 of 3.
6. Parapet concrete is to be included under Item 517 for payment.
7. The 4 1/2" I.D. x 1/2" Wall thickness Mech. Welded Steel Tubing shall be furnished and placed by the Contractor. Cost to be included in the unit price bid for Item 511 Class E Concrete - Abutment above footing and is chargeable to the Cinti. Sub. Tel. Co.

LEGEND

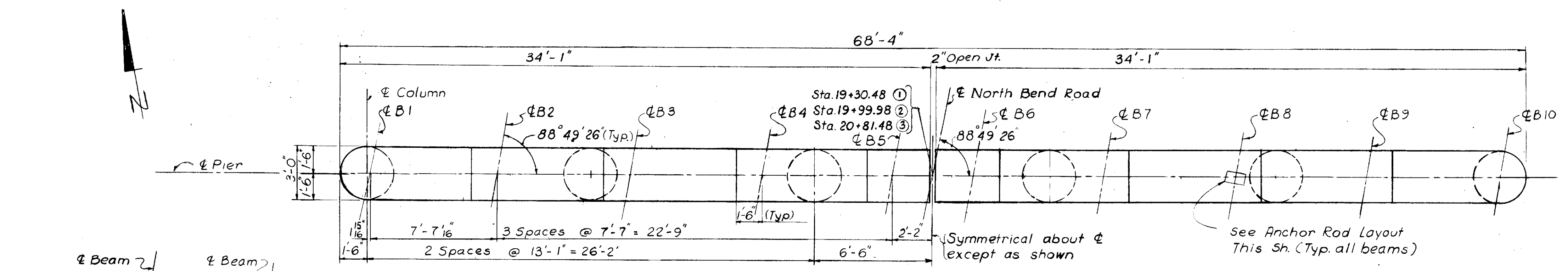
- E.F. = Each Face
- N.F. = Near Face
- F.F. = Far Face
- W.W.1 = Wingwall 1
- W.W.2 = Wingwall 2
- (A.1) = Abutment 1
- (A.2) = Abutment 2

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

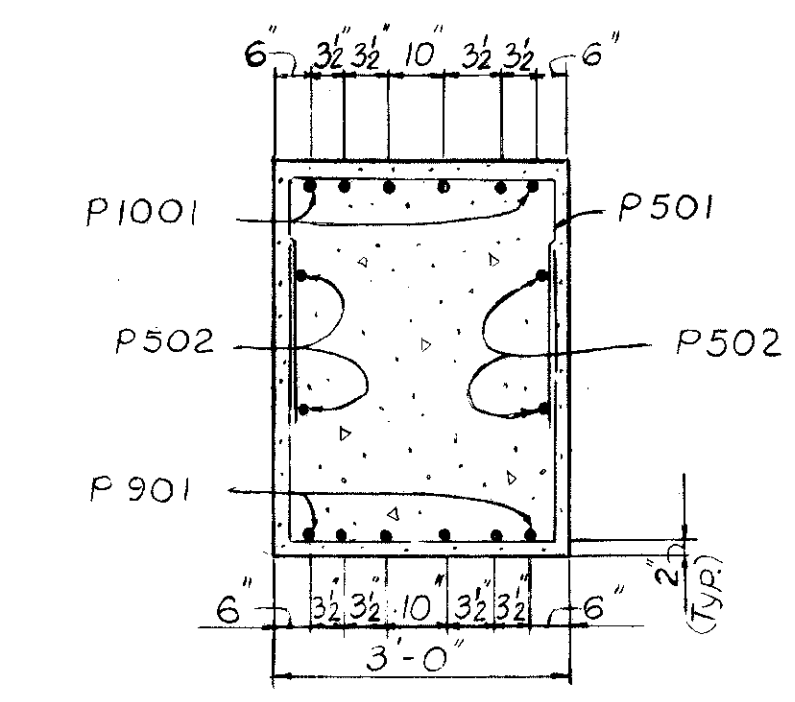
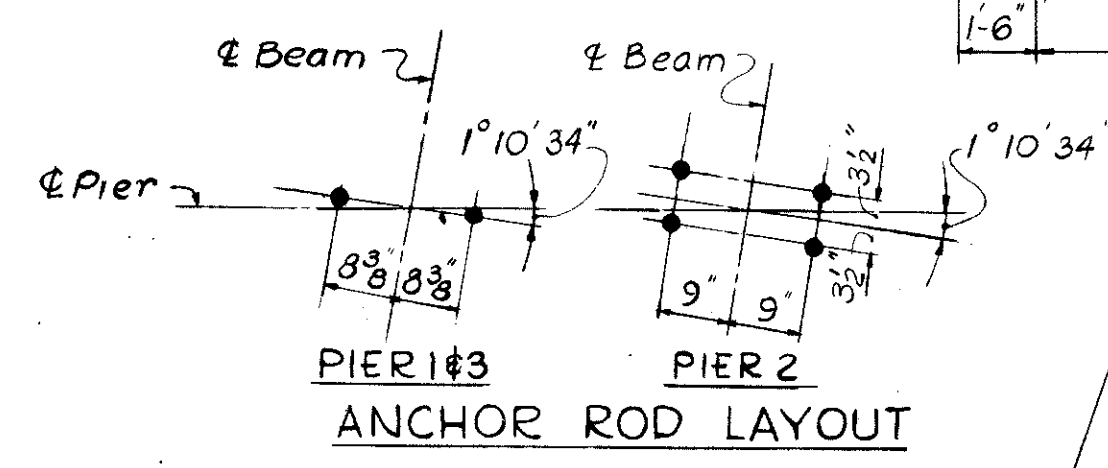
ABUTMENTS 1 & 2
BRIDGE No. HAM-74-1477
I-74 UNDER
NORTH BEND ROAD
HAMILTON COUNTY STA. 18+72.23 to
STA. 21+40.73

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.J.W.			H.D.	JAD	10-13-65	

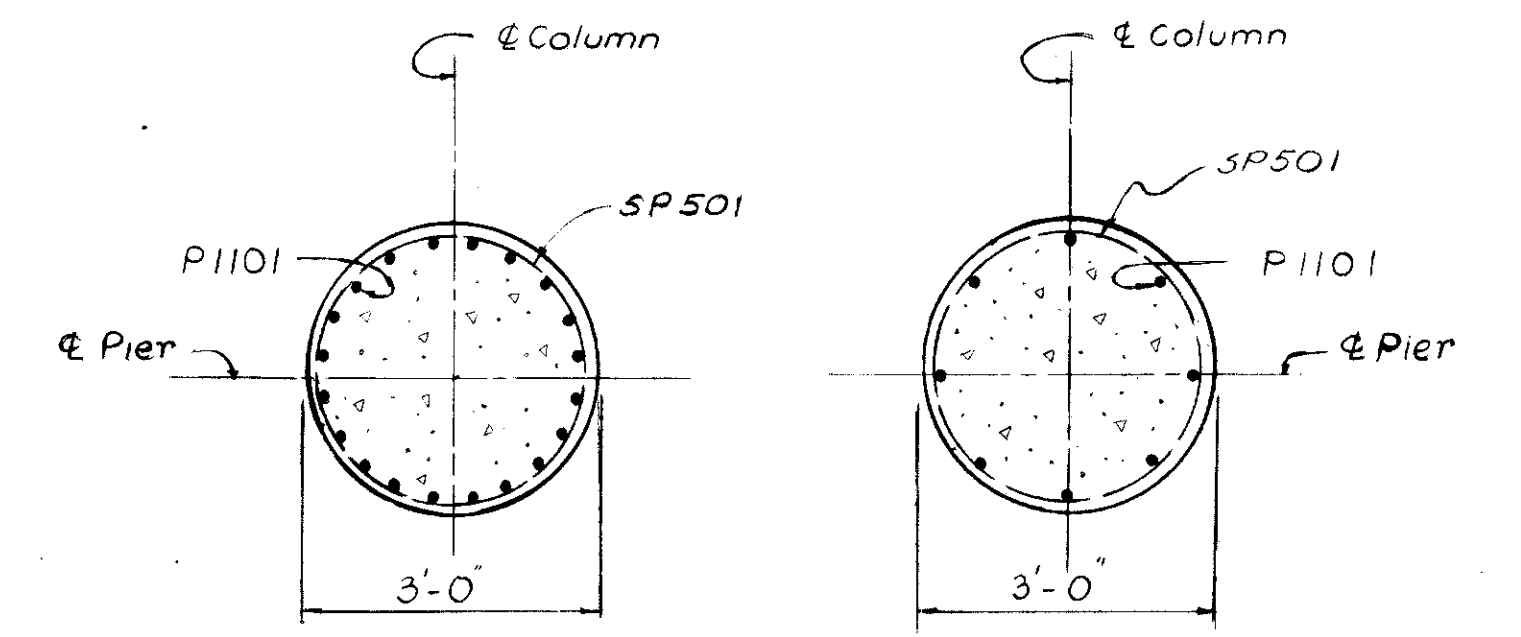
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PLAN

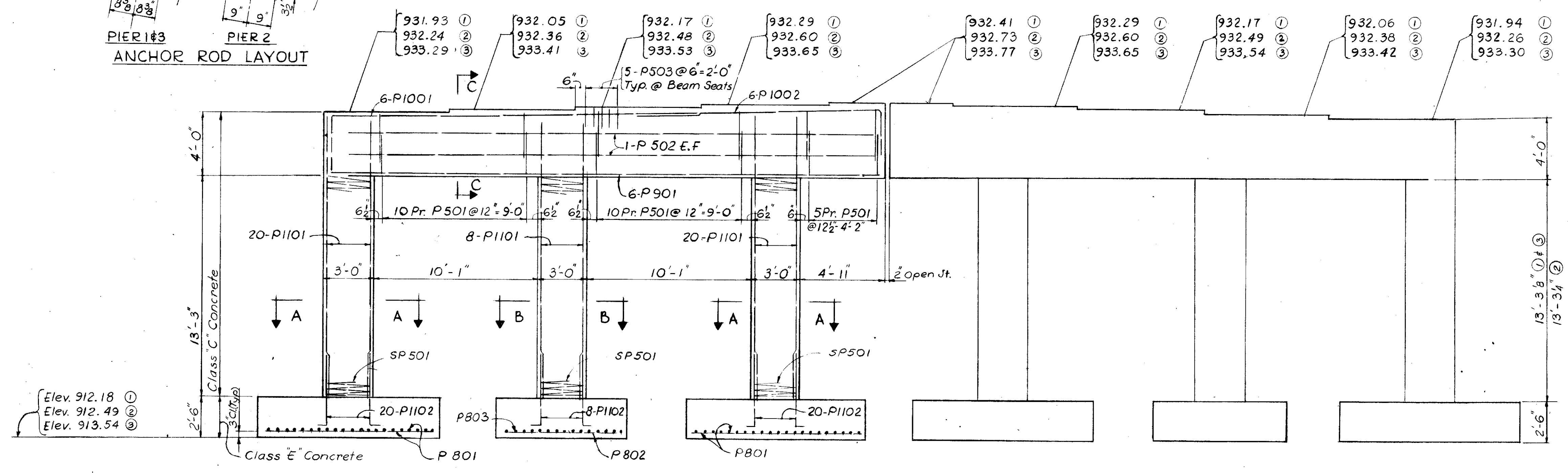


SECTION C-C

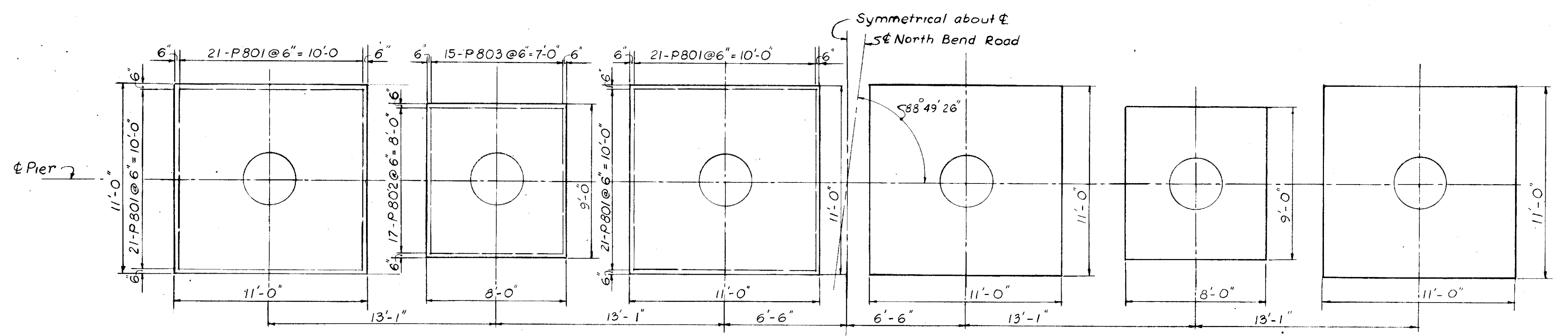


SECTION A-A

SECTION B-B



ELEVATION



FOOTING PLAN

NOTES

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 rod holes.
For Reinforcing Steel List see Sheet 324

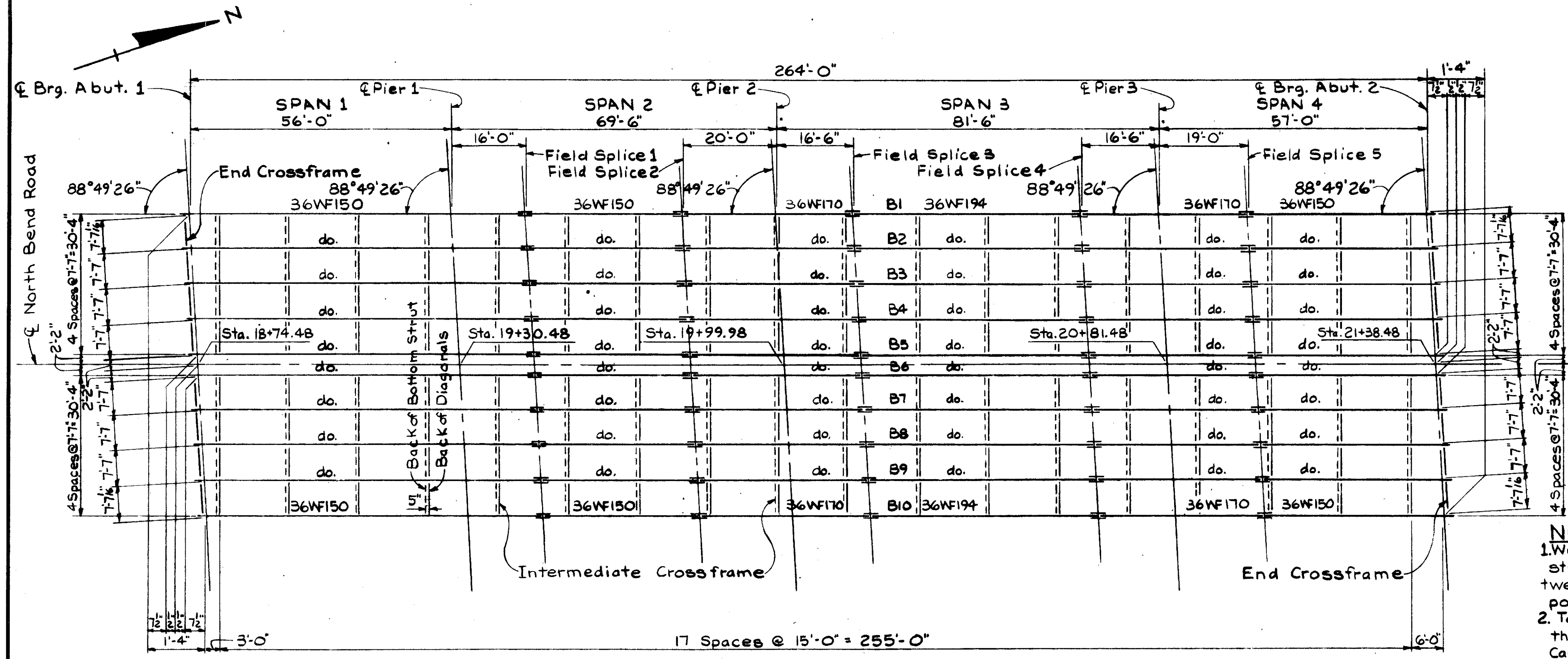
LEGEND

- ① - Pier 1
- ② - Pier 2
- ③ - Pier 3
- E.F. - Each Face.

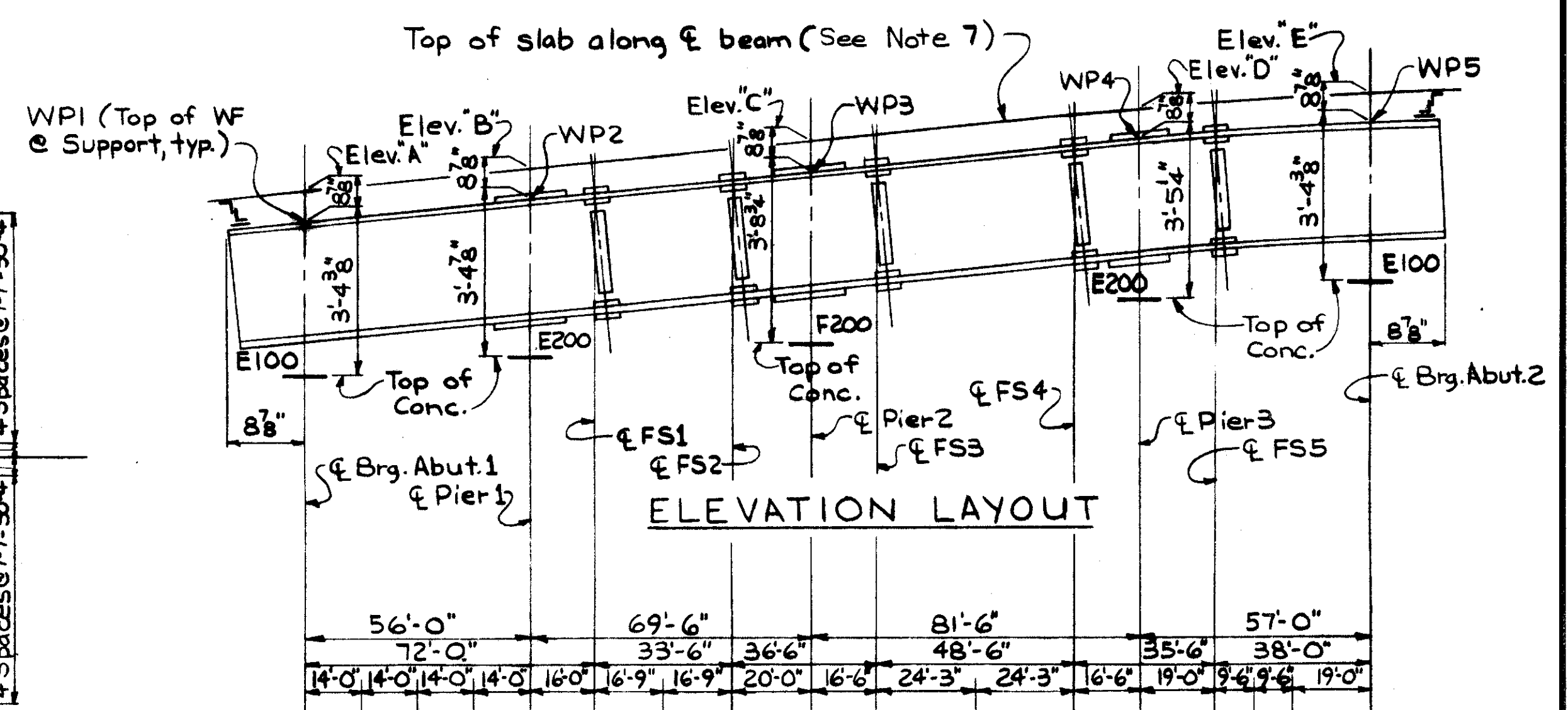
VOGT, IVERS, & ASSOCIATES ENGINEERS ARCHITECTS CINCINNATI CHICAGO					
PIERS					
BRIDGE NO. HAM-74-1477 I-74 UNDER NORTH BEND RD.					
HAMILTON COUNTY STA. 18+72.23 to STA. 21+40.73					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RDU	IJS	~	COO	JAO 10-13-65	

MICROFILMED
NOV 1 1985

HAM-74-11.37



FRAMING PLAN



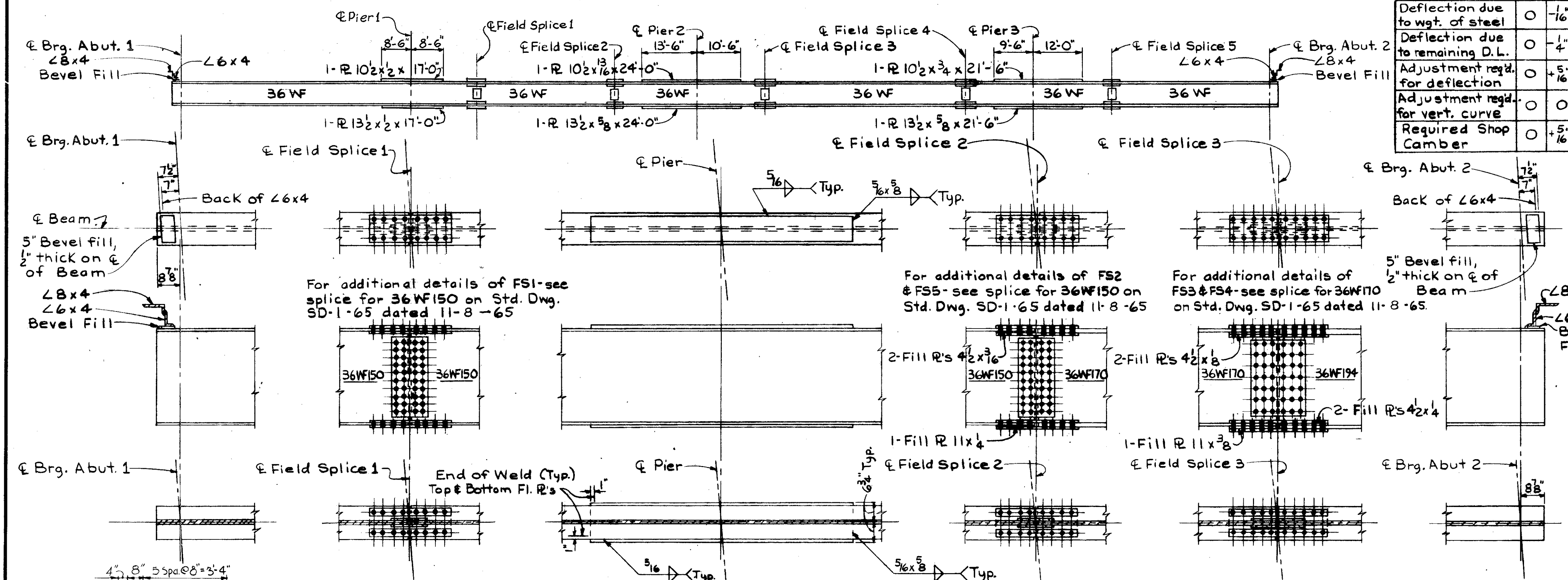
NOTES

- Working lines are straight lines between indicated working points (W.P.)
- Tabulated values in the Deflection and Camber Table shall be measured from the working lines.

Deflection due to wgt. of steel	0	-1/16"	1/16"	0	0	0	-1/16"	0	0	-1/16"	-1/8"	-1/16"	0	0	-1/16"	-1/16"	0
Deflection due to remaining D.L.	0	-1/4"	-5/16"	-3/16"	0	-1/16"	-3/16"	-1/16"	0	-5/16"	-5/8"	-5/16"	0	-1/16"	-3/16"	-3/16"	0
Adjustment reqd. for deflection	0	+5/16"	+3/8"	+3/16"	0	+1/16"	+1/4"	+1/16"	0	+3/8"	+3/4"	+3/8"	0	+1/16"	+1/4"	+1/4"	0
Adjustment reqd. for vert. curve	0	0	0	0	0	0	0	0	0	0	0	0	0	+1/4"	+5/16"	+5/16"	0
Required Shop Camber	0	+5/16"	+3/8"	+3/16"	0	+1/16"	+1/4"	+1/16"	0	+3/8"	+3/4"	+3/8"	0	+5/16"	+9/16"	+9/16"	0

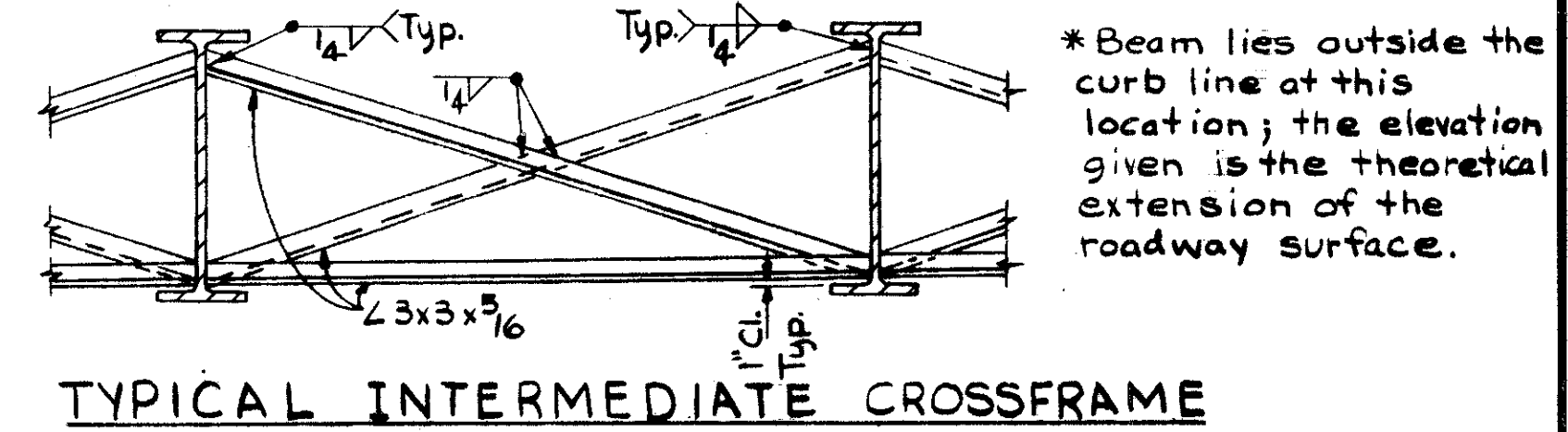
DEFLECTION & CAMBER

BEAM	Elev. "A"	Elev. "B"	Elev. "C"	Elev. "D"	Elev. "E"	Dim. "F"	Dim. "G"	Dim. "H"	Dim. "I"
B1	935.554	936.072	936.714	937.467	937.932	3/16"	3/8"	9/16"	2'-4 1/2"
B2	935.674	936.192	936.834	937.587	938.052	3/16"	3/8"	9/16"	2'-4 1/2"
B3	935.794	936.312	936.954	937.707	938.171	3/16"	3/8"	9/16"	2'-4 1/2"
B4	935.914	936.431	937.074	937.827	938.290	3/16"	3/8"	9/16"	2'-4 1/2"
B5	936.034	936.551	937.194	937.947	938.410	3/16"	3/8"	9/16"	2'-4 1/2"
B6	936.035	936.552	937.194	937.947	938.410	3/16"	3/8"	9/16"	2'-4 1/2"
B7	935.918	936.435	937.077	937.830	938.293	3/16"	3/8"	9/16"	2'-4 1/2"
B8	935.801	936.318	936.960	937.713	938.175	3/16"	3/8"	9/16"	2'-4 1/2"
B9	935.684	936.201	936.843	937.596	938.058	3/16"	3/8"	9/16"	2'-4 1/2"
B10	935.567	936.084	936.726	937.479	937.940	3/16"	3/8"	9/16"	2'-4 1/2"

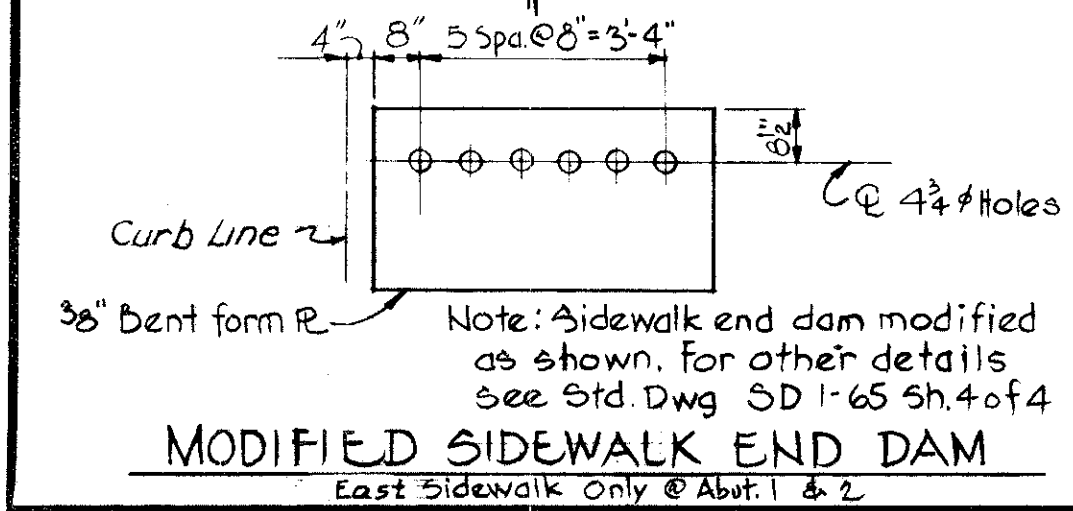


NOTES

- For Details of End Crossframe, see Std. Dwg. SD-1-65, sh. 1 of 3 dated 11-8-65.
- For Details of Bevel Fills, see Detail D on Std. Dwg. SD-1-65, sh. 1 of 3, dated 11-8-65.
- For Details of Fixed and Sliding Bearings, see Std. Dwg. FSB-1-62, Rev. 1-15-62.
- For Details of End Dams and Curb Plates, see Std. Dwg. SD-1-65, sheets 1 and 2 of 3, dated 11-8-65.
- For Scupper locations see sh. 323
- For Standard Scupper Details, see Std. Dwg. SD-1-65, sheets 2 of 3 dated 11-8-65.
- The top of slab at & beam includes the theoretical continuation of cross-slope at exterior beams.



TYPICAL INTERMEDIATE CROSSFRAME



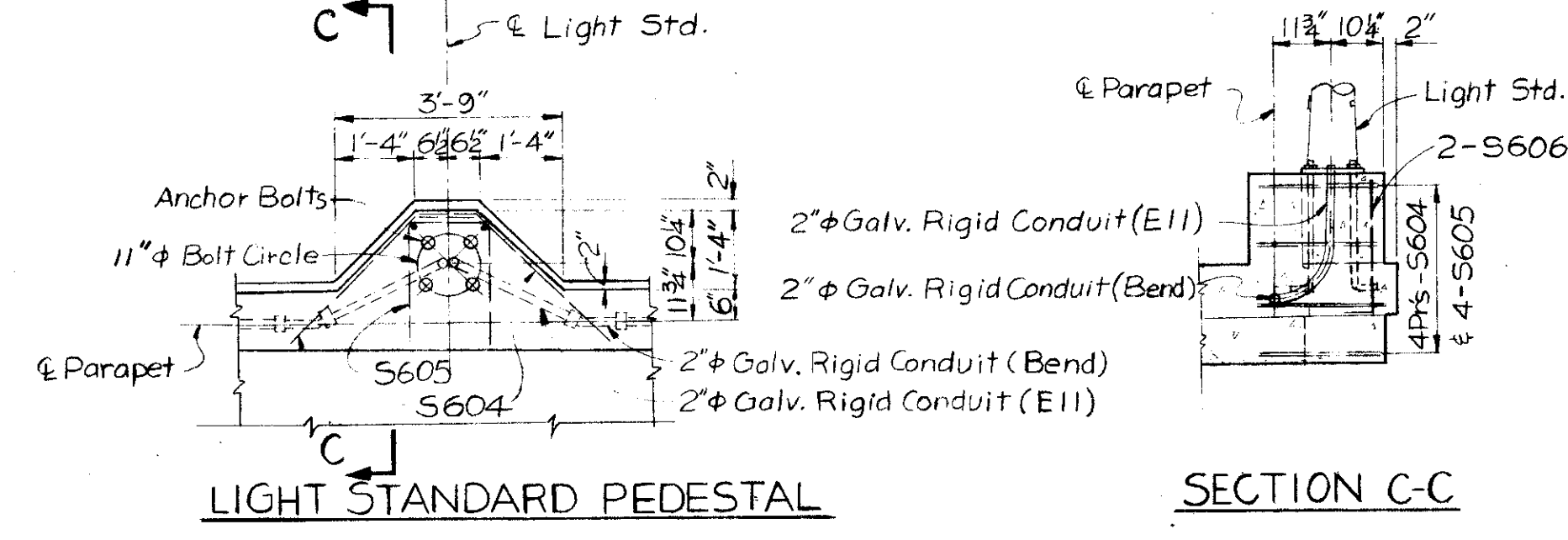
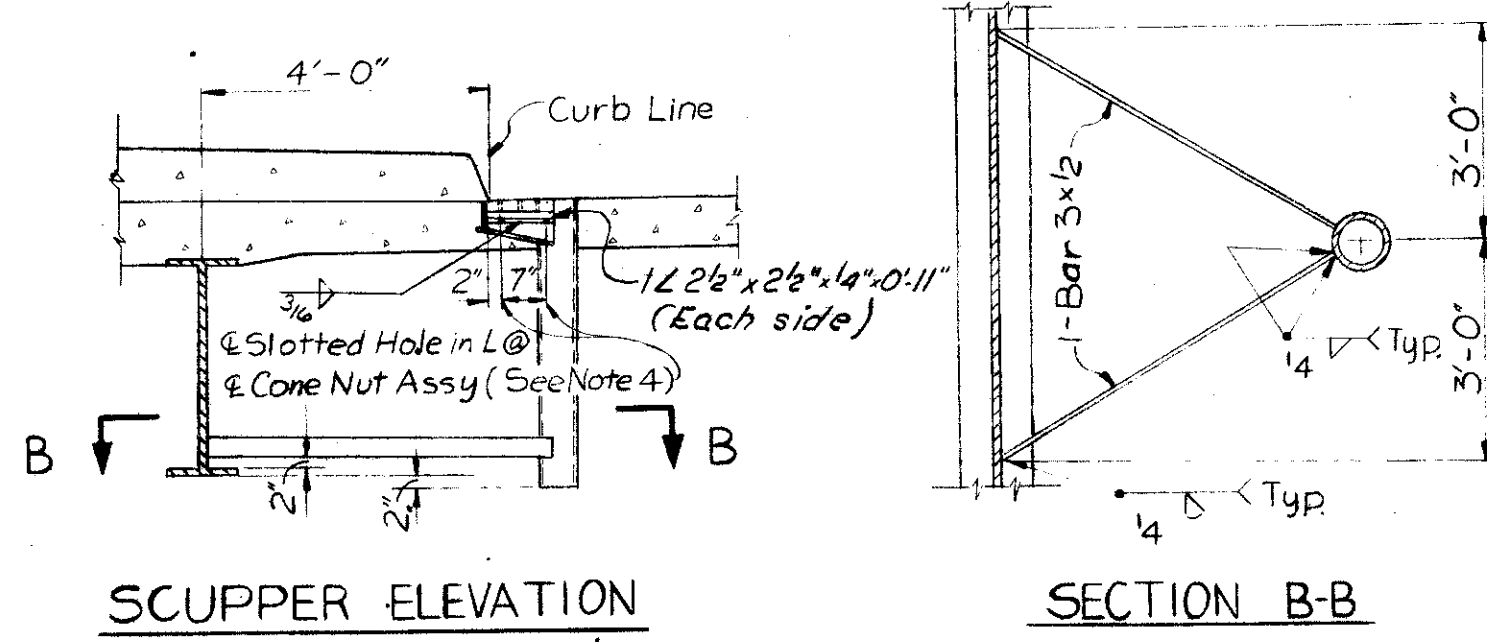
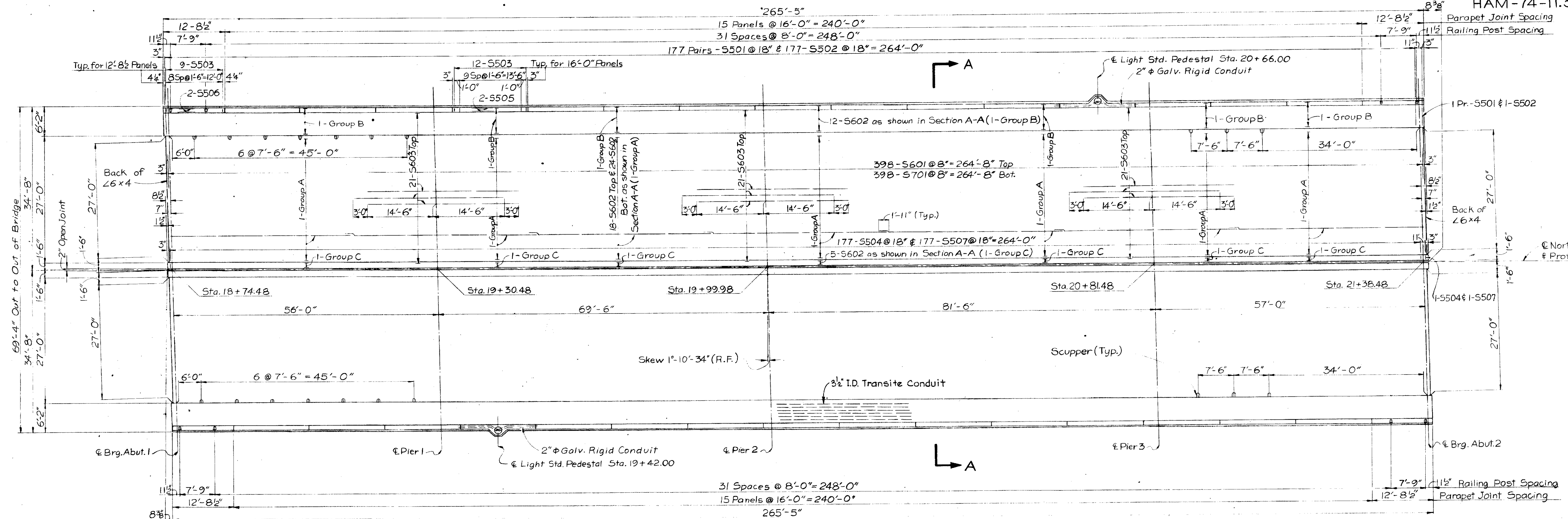
MODIFIED SIDEWALK END DAM

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

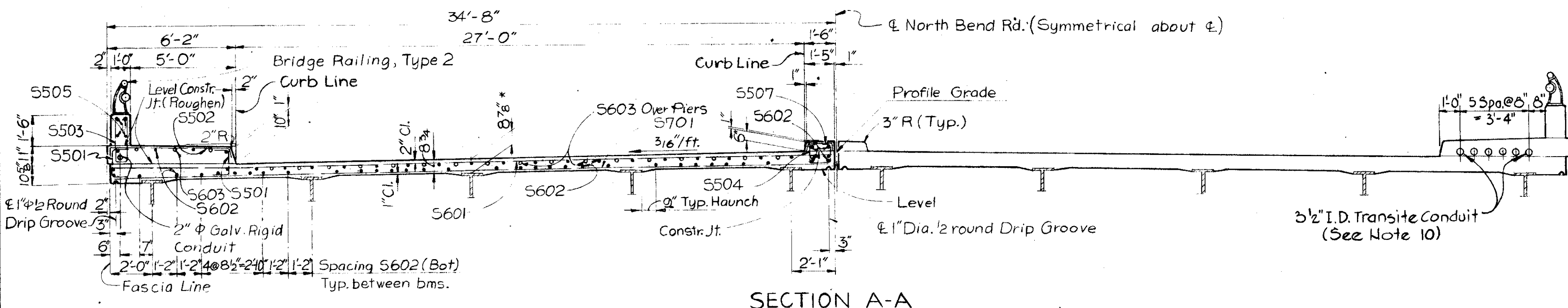
FRAMING PLAN
BRIDGE NO. HAM-74-1477
I-74
UNDER NORTH BEND ROAD
HAMILTON COUNTY STA. 18+72.23 to
STA. 21+40.73

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
JJS	DHW	~	JJS	JAD	10-13-65	

HAM-74-11.37



- NOTES:**
- Slab thickness includes 1" monolithic wearing surface.
 - For Railing and Parapet Details, see Std. Dwg. BR-1-65, sh. 2 of 2 revised 11-24-65.
 - For End Dam and Curb Plate Details, see Std. Dwg. SD-1-65, sh. 1 & 2 of 3 dated 11-8-65.
 - For Scupper details not shown, see Std. Dwg. SD-1-65, sh. 2 of 3 dated 11-8-65. Scuppers shall be Type 1.
 - Provide for expansion in the 2" galvanized rigid conduit at all expansion joints.
 - For Reinforcing Steel List, see Sh. 324.
 - Spread or cut reinforcing steel to clear scuppers as necessary.
 - The Anchor Bolts for the Light Standard Pedestals shall be included under Item C-25 for payment.
 - 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.
 - The 3/2" I.D. Transite Conduit shall be furnished and placed by the Cincinnati Sub. Bell Telephone Company.



*This is a nominal dimension. The quantity of deck concrete to be paid for shall be based upon 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 volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specification.

Location	¢ Brg. Abut. 1	¼ Pt.	½ Pt.	¾ Pt.	¢ Pier 1	¼ Pt.	½ Pt.	¾ Pt.	¢ Pier 2	¼ Pt.	½ Pt.	¾ Pt.	¢ Pier 3	¼ Pt.	½ Pt.	¾ Pt.	¢ Brg. Abut. 2
Sd'w'k. Curbs	935.61	935.76	935.90	936.02	936.13	936.30	936.47	936.62	936.77	936.99	937.20	937.37	937.53	937.66	937.80	937.91	937.99
Median Curbs	936.04	936.19	936.33	936.45	936.56	936.73	936.90	937.05	937.20	937.42	937.63	937.80	937.96	938.09	938.23	938.34	938.42

ADJUSTED TOP OF SLAB ELEVATION AT CURB LINE

NOTE: Elevations are adjusted for deflection due to dead load applied after all structural steel is erected.

FINISHED PAVEMENT ELEVATIONS			
STATION	PROFILE GRADE	MEDIAN CURB LINES 1'-6" FROM P.G.	SIDEWALK CURB LINES 2'-6" FROM P.G.
18+75	936.07	936.05	935.63
19+00	936.30	936.28	935.86
19+25	936.53	936.51	936.09
19+50	936.77	936.74	936.32
19+75	937.00	936.98	936.55
20+00	937.23	937.21	936.78
20+25	937.46	937.44	937.01
20+50	937.69	937.67	937.24
20+75	937.92	937.90	937.48
21+00	938.15	938.13	937.71
21+25	938.36	938.33	937.91
21+50	938.51	938.48	938.06

VOGT, IVERS, & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

SUPERSTRUCTURE ROADWAY SLAB

BRIDGE NO. HAM-74-14.77
I-74
UNDER NORTH BEND RD.
HAMILTON COUNTY STA. 18+72.23 to STA. 21+40.73

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LHY	LHY	LHY	CCG	JAD	10-13-65	

ABUTMENTS 1&2					PIERS					SUPERSTRUCTURE					REPLACEMENT BARS														
MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT	MARK	NO.	LENGTH	TYPE	WEIGHT
A520	52	8'-6"	Bt	461	P501	300	7'-11"	Bt	2477	S501	712	2'-3"	Bt	1671	RE5	1	5'-7"	Bt	—										
A521	40	8'-3"	Bt	344	P502	24	32'-8"	Str	818	S502	356	6'-8"	Bt	2475	RE5	2	5'-7"	Str	—										
A522	180	6'-4"	Bt	1189	P503	150	4'-0"	Bt	626	S503	396	5'-7"	Bt	2306	REG	C	5'-11"	Str	—										
A523	76	34'-0"	Str	2695						S504	356	3'-7"	Bt	1330	RE7	3	6'-3"	Str	—										
A524	28	5'-11"	Str	173						S505	120	15'-8"	Str	—	RE8	1	6'-6"	Str	—										
A525	8	7'-2"	Bt	60	P901	504	10'-8"	Str	14354	S506	16	12'-5"	Str	207	RE9	1	6'-10"	Str	—										
A526	40	1'-8"	Bt	70	P802	102	7'-8"	Str	2088	S507	356	2'-0"	Bt	743	RE10	1	7'-3"	Str	—										
A527	40	6'-3"	Bt	261	P803	90	8'-8"	Str	2083					RE11	2	7'-7"	Str	—											
A528	16	13'-4"	Str	223						S601	796	34'-1"	Str	40750															
A529	12	5'-6"	Bt	69						S602	826	39'-6"	Str	49006															
A530	8	3'-7"	Bt	30	P901	36	33'-2"	Str	4060	S603	126	32'-0"	Str	6056															
A531	8	5'-1"	Bt	42						S604	16	3'-6"	Bt	84															
A532	40	2'-2"	Bt	90						S605	8	4'-4"	Bt	52															
A533	12	11'-6"	Str	144	P1001	36	25'-3"	Bt	3911																				
A534	48	3'-7"	Str	179	P1002	36	15'-6"	Bt	2401	S606	4	2'-7"	Bt	16															
A535	40	3'-9" to 5'-3" by 4'-2"	Str	188																									
A536	32	5'-6"	Str	184						S701	796	34'-1"	Str	55454															
A537	32	4'-10"	Str	161	P1101	288	16'-9"	Str	25630																				
A538	12	17'-1"	Bt	214	P1102	288	6'-11"	Bt	10584																				
A539	12	3'-7"	Str	45																									
A540	8	6'-8"	Bt	56																									
A541	4	6'-5"	Bt	27																									
A542	16	10'-2"	Bt	170	SP501	18	13'-3"	Bt	8801																				
A543	16	4'-2"	Str	70																									
A544	8	11'-2"	Str	93																									
A545	4	4'-10"	Str	20																									
A546	4	11'-0"	Bt	46																									
A547	4	5'-8"	Str	24																									
A548	16	13'-8"	Str	228																									
A610	40	13'-0"	Bt	781																									
A611	52	13'-3"	Bt	1035																									
A612	28	15'-4"	Bt	645																									
A613	108	11'-1"	Bt	1798																									
A614	108	4'-7"	Bt	743																									
A615	16	36'-2"	Str	869																									
A616	16	8'-8"	Bt	208																									
A617	32	4'-7"	Bt	220																									
A618	32	7'-3"	Str	348																									
A619	20	7'-11"	Str	238																									
A620	12	8'-11"	Str	161																									

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAM-74-11.37

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.
- BARS MARKED WITH AN ASTERISK TO BE INCLUDED FOR PAYMENT UNDER ITEM 517, RAILING.
- SPIRAL REINFORCING BARS: THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM TOP OF THE FOOTING TO THE BOTTOM OF CAP, OR TO WITHIN 2" (±) OF THE TOP OF COLUMN FOR PIERS WITHOUT CAPS, TO THE NEAREST INCH.
SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM 509.
FOUR STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER 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.
- SEE SHEET 8 FOR BENDING DETAILS.

VOGT, IVERS & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

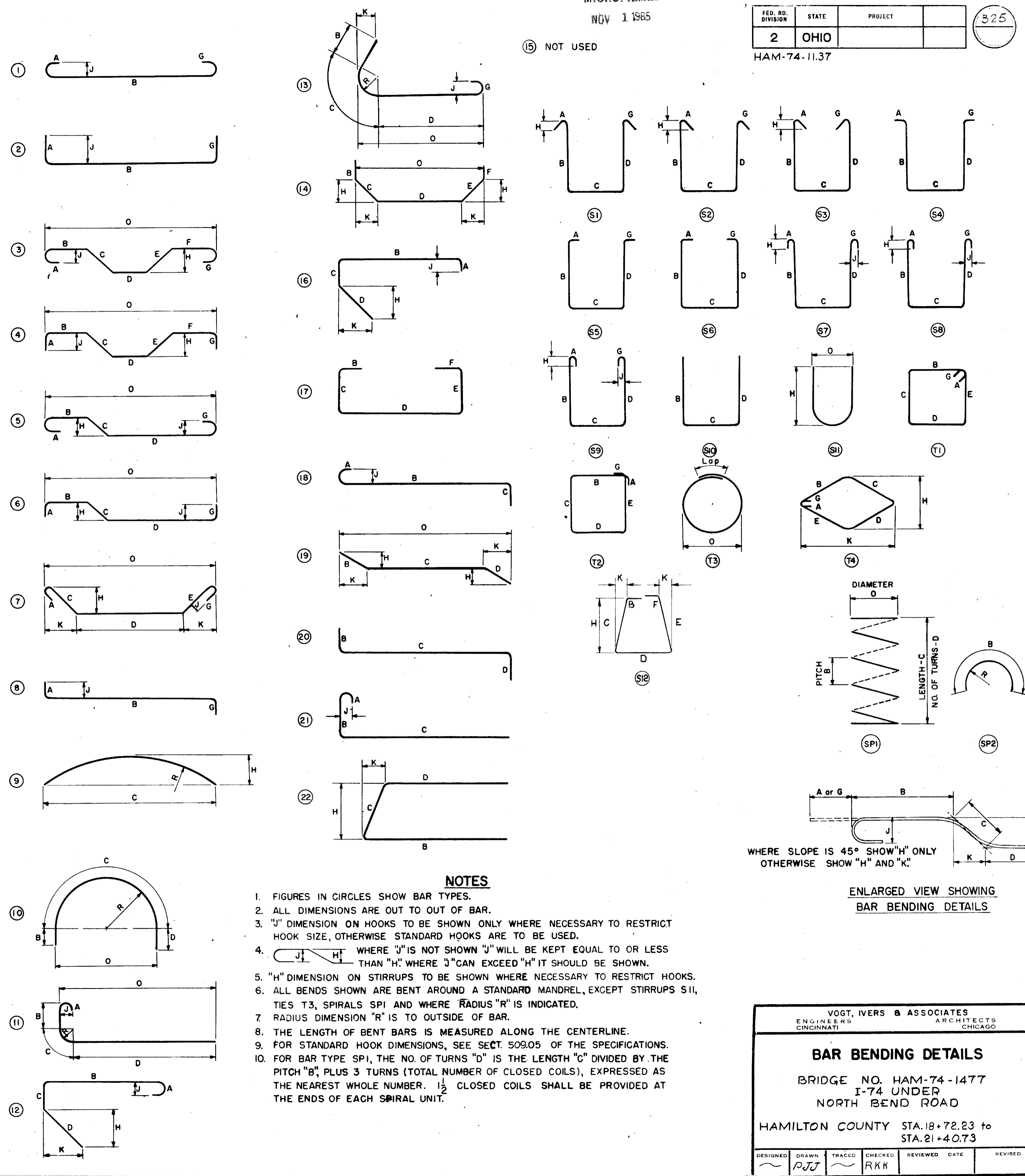
REINFORCING STEEL LIST

BRIDGE NO. HAM-74-1477
I-74 UNDER
NORTH BEND ROAD

HAMILTON COUNTY STA. 18+72.23 to
STA. 21+40.73

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	RJT		RKK			

MARK	TYPE	DIMENSIONS FOR BENDING												
		A	B	C	D	E	F	G	H	J	K	R	O	
AS20	2	6"	8'-0"											
AS21	2	6"	7'-9"											
AS22	17			1'-7"	3'-5"	1'-7"								
AS25	14		10"	8"	5'-8"				7'-4"	2"				
AS26	2	6"	8"					6"						
AS27	17			2'-11"	8"	2'-11"								
AS29	S-12		5"	2'-3"	8"	2'-3"	5"		2'-3"	1'-2"	5"			
AS30	11		1'-0"	8"	1'-11"									
AS31	11		1'-3"	1'-4"	2'-6"						10"			
AS32	2	6"	1'-2"					6"						
AS38	17			6"	15'-8"	1'-2"								
AS40	19		2'-5"	4'-3"					1'-13/8"	2'-17/8"				
AS41	20		1'-2"	5'-5"										
AS42	17			1'-2"	8'-1"	1'-2"								
AS46	17			6"	9'-7"	1'-2"								
AG10	20		5'-5"	7'-9"										
AG11	20		5'-5"	8'-0"										
AG12	17		2'-6"	11"	6'-8"	1'-5"	4'-6"							
AG13	17			4'-2"	1'-5"	5'-10"								
AG14	17			2'-0"	11"	2'-0"								
AG16	17				1'-2"	3'-11"								
AG17	2	8"	3'-11"											
PS01	S10		2'-9"	2'-8"	2'-9"									
PS03	2	8"	2'-8"				8"							
PI001	17		3'-0"	22'-7"										
PI002	2	1'-1"	14'-5"											
PI102	2	1'-2"	5'-9"											
SP501	SP1		3/4"	13'-3"	52							2'-9"		
SS01	2	6"	1'-3"					6"						
SS02	2	6"	5'-8"					6"						
SS03	S3	5"	2'-2"	8"	2'-2"			5"	2'-3/4"					
SS04	S6	6"	11"	1'-0"	11"			6"						
SS07	2	6"	1'-0"					6"						
SG04	12			8"	2'-10"				2'-0"		2'-0"			
SG05	S10		1'-10"	1'-0"	1'-10"									
SG06	2	6"	2'-1"											



NOTES

- FIGURES IN CIRCLES SHOW BAR TYPES.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR.
- "J" DIMENSION ON HOOKS TO BE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- WHERE "J" IS NOT SHOWN "J" WILL BE KEPT EQUAL TO OR LESS THAN "H" WHERE "J" CAN EXCEED "H" IT SHOULD BE SHOWN.
- "H" DIMENSION ON STIRRUPS TO BE SHOWN WHERE NECESSARY TO RESTRICT HOOKS.
- ALL BENDS SHOWN ARE BENT AROUND A STANDARD MANDREL, EXCEPT STIRRUPS S11, TIES T3, SPIRALS S11 AND WHERE RADIUS "R" IS INDICATED.
- RADIUS DIMENSION "R" IS TO OUTSIDE OF BAR.
- THE LENGTH OF BENT BARS IS MEASURED ALONG THE CENTERLINE.
- FOR STANDARD HOOK DIMENSIONS, SEE SECT. 509.05 OF THE SPECIFICATIONS.
- FOR BAR TYPE S11, THE NO. OF TURNS "D" IS THE LENGTH "C" DIVIDED BY THE PITCH "B", PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER. 1/2 CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

WHERE SLOPE IS 45° SHOW "H" ONLY OTHERWISE SHOW "H" AND "K"

ENLARGED VIEW SHOWING BAR BENDING DETAILS

VOGT, IVERS & ASSOCIATES
ENGINEERS ARCHITECTS
CINCINNATI CHICAGO

BAR BENDING DETAILS

BRIDGE NO. HAM-74-1477
I-74 UNDER
NORTH BEND ROAD

HAMILTON COUNTY STA. 18+72.23 to
STA. 21+40.73

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	RJJ		RKK			

LOCATION PLAN

HAM-74-11.37

HAMILTON COUNTY

GREEN TOWNSHIP

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

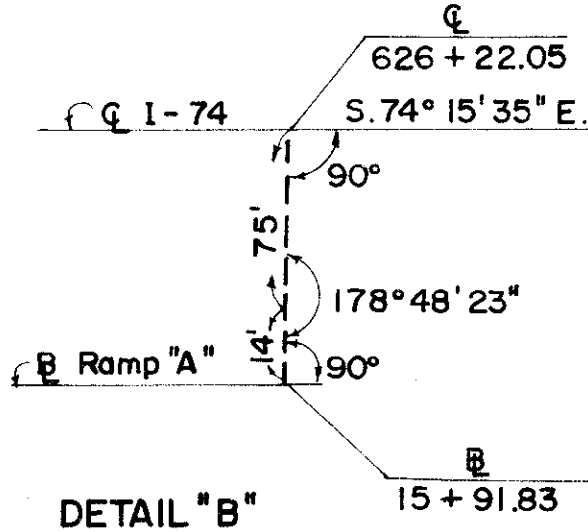
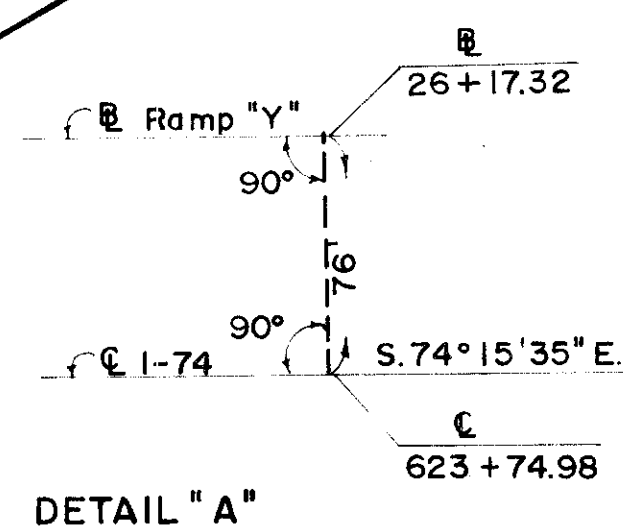
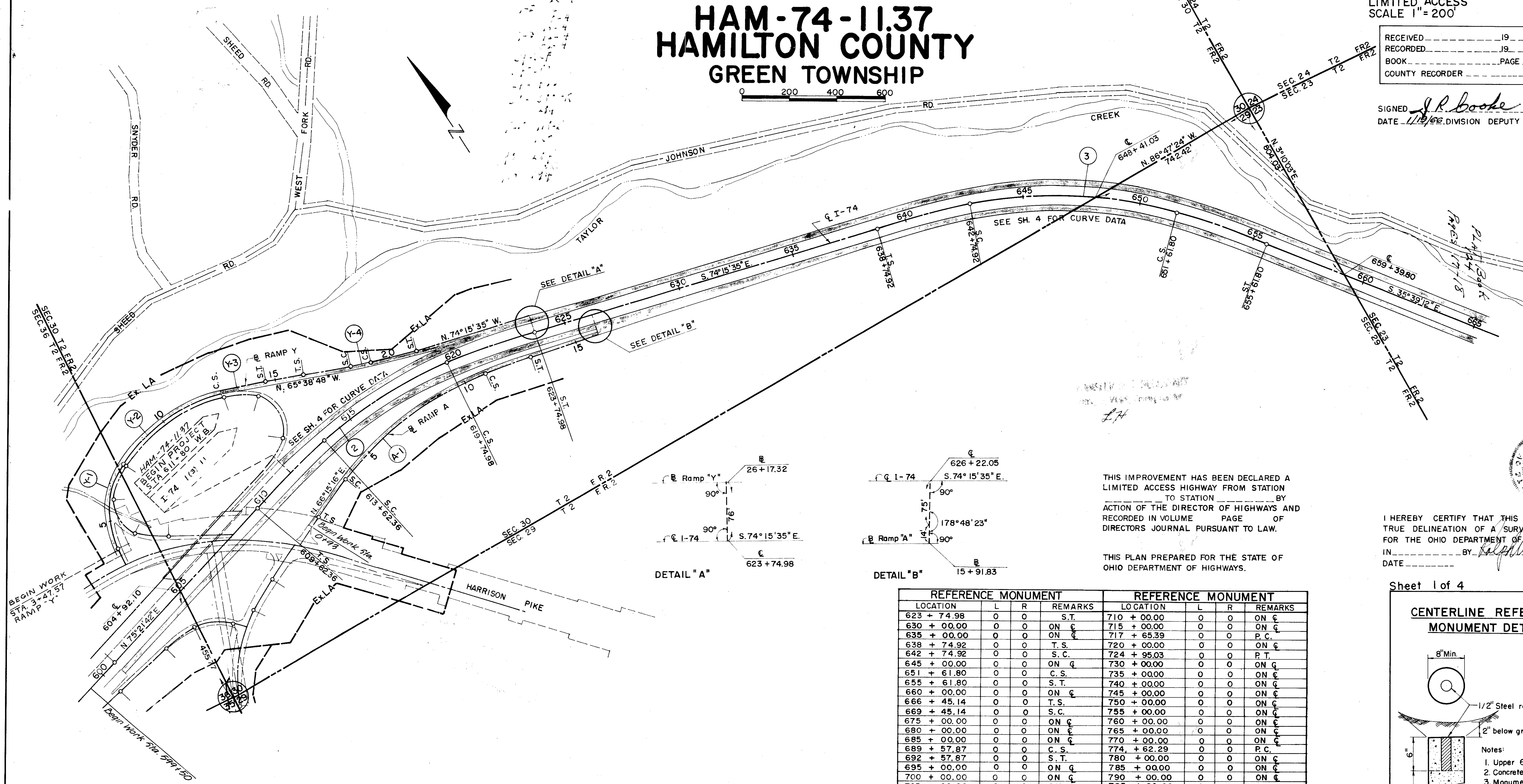
320

HAM-74-11.37
R/W PLAN
LIMITED ACCESS
SCALE 1" = 200'

1
20

RECEIVED	19
RECORDED	19
BOOK	PAGE
COUNTY RECORDER	

SIGNED *J.R. Booke*
DATE 1/19/62 DIVISION DEPUTY DIRECTOR



THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION TO STATION BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME PAGE OF DIRECTORS JOURNAL PURSUANT TO LAW.

THIS PLAN PREPARED FOR THE STATE OF OHIO DEPARTMENT OF HIGHWAYS.

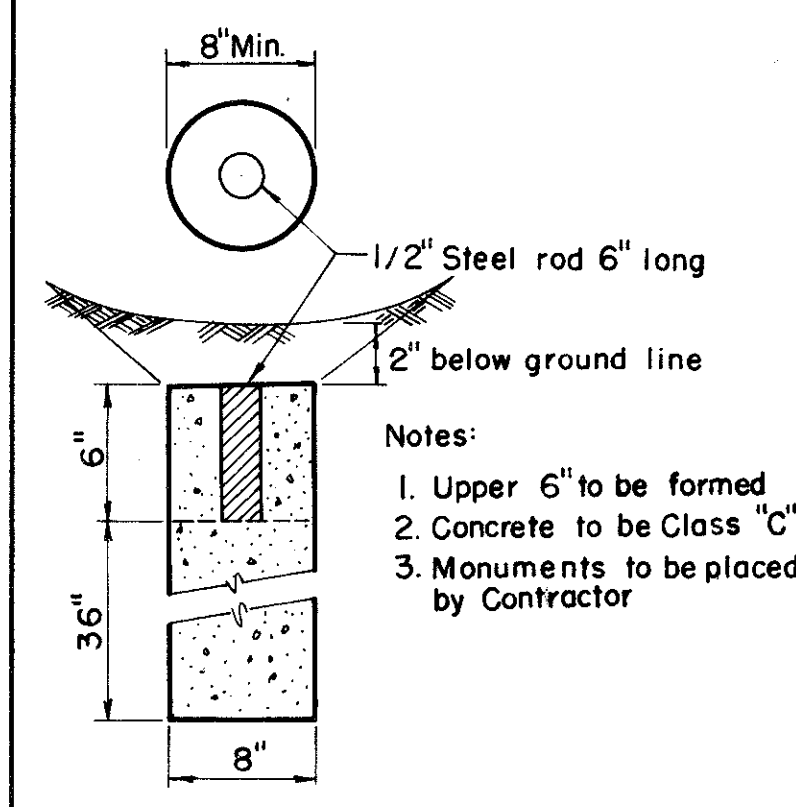
I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN BY *[Signature]* DATE

REFERENCE MONUMENT				REFERENCE MONUMENT			
LOCATION	L	R	REMARKS	LOCATION	L	R	REMARKS
623 + 74.98	0	0	S.T.	710 + 00.00	0	0	ON C
630 + 00.00	0	0	ON C	715 + 00.00	0	0	ON C
635 + 00.00	0	0	ON C	717 + 65.39	0	0	P.C.
638 + 74.92	0	0	T.S.	720 + 00.00	0	0	ON C
642 + 74.92	0	0	S.C.	724 + 95.03	0	0	P.T.
645 + 00.00	0	0	ON C	730 + 00.00	0	0	ON C
651 + 61.80	0	0	C.S.	735 + 00.00	0	0	ON C
655 + 61.80	0	0	S.T.	740 + 00.00	0	0	ON C
660 + 00.00	0	0	ON C	745 + 00.00	0	0	ON C
666 + 45.14	0	0	T.S.	750 + 00.00	0	0	ON C
669 + 45.14	0	0	S.C.	755 + 00.00	0	0	ON C
675 + 00.00	0	0	ON C	760 + 00.00	0	0	ON C
680 + 00.00	0	0	ON C	765 + 00.00	0	0	ON C
685 + 00.00	0	0	ON C	770 + 00.00	0	0	ON C
689 + 57.87	0	0	C.S.	774 + 62.29	0	0	P.C.
692 + 57.87	0	0	S.T.	780 + 00.00	0	0	ON C
695 + 00.00	0	0	ON C	785 + 00.00	0	0	ON C
700 + 00.00	0	0	ON C	790 + 00.00	0	0	ON C
705 + 00.00	0	0	ON C	795 + 00.00	0	0	ON C
* 14 + 00.00	25'		Q RACE RD.	10 + 00.00	40'		Q N. BEND RD.
* 17 + 00.00	25'		Q RACE RD.	12 + 46.74	40'		PC Q N. BEND RD.
* 24 + 00.00	25'		Q RACE RD.	26 + 00.00	40'		Q N. BEND RD.
				* 27 + 94.84	40'		PC Q N. BEND RD.

Note: * 100% County Participation
PLAT BIC 124 PAGES 17+18

Sheet 1 of 4

CENTERLINE REFERENCE MONUMENT DETAIL



DATE	REVISED	BY

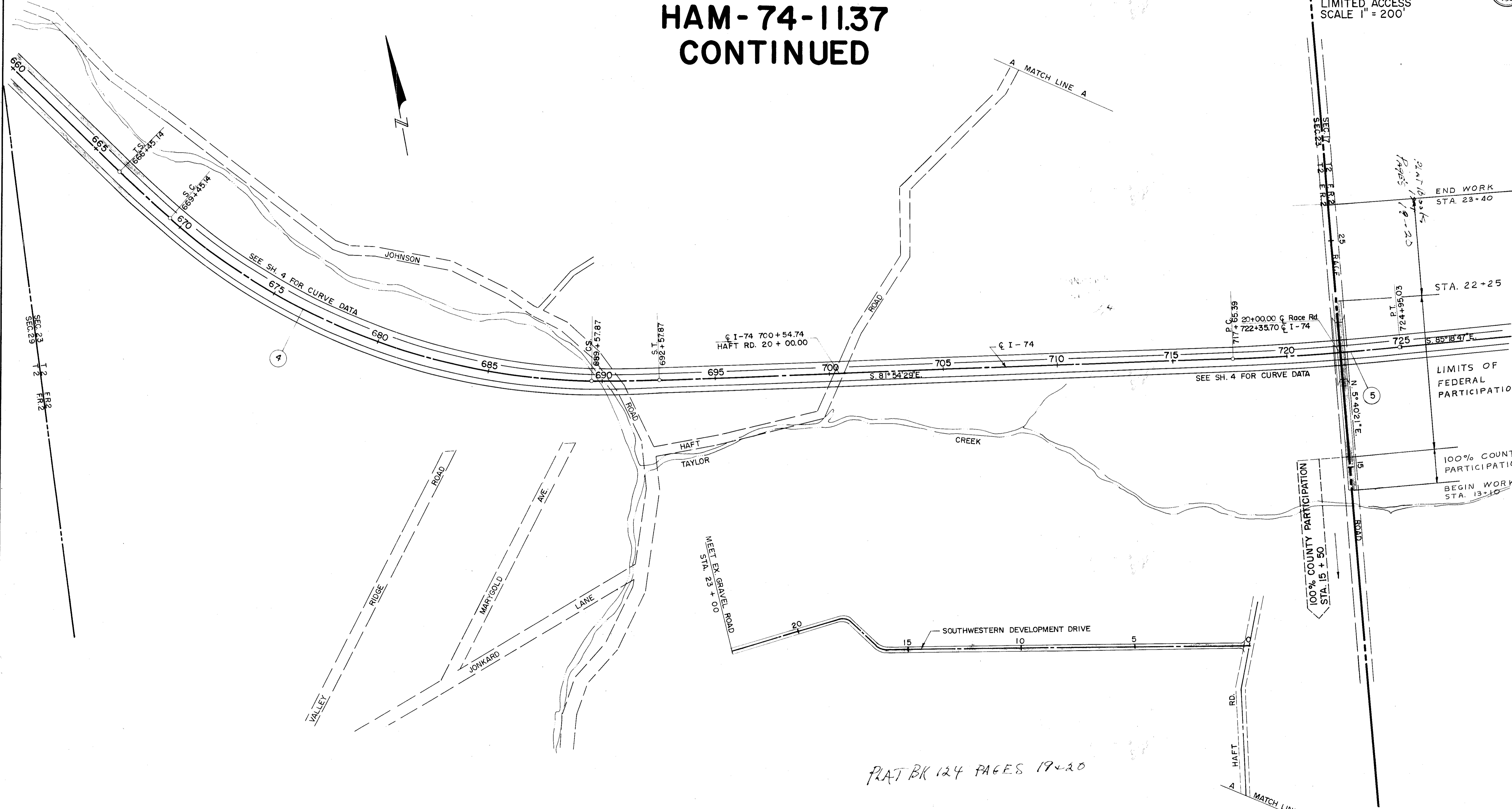
REG. FOR RECORD NO. 1 AT 8:05
GILBERT A. SHAWEN, SURVEYOR, HAMILTON COUNTY, OHIO

1
20

LOCATION PLAN HAM-74-11.37 CONTINUED

FED. RD. DIVISION	STATE	PROJECT	327
2	OHIO		2

HAM-74-11.37
R/W PLAN
LIMITED ACCESS
SCALE 1" = 200'



PLAT BK 124 PAGES 19+20

Sheet 2 of 4

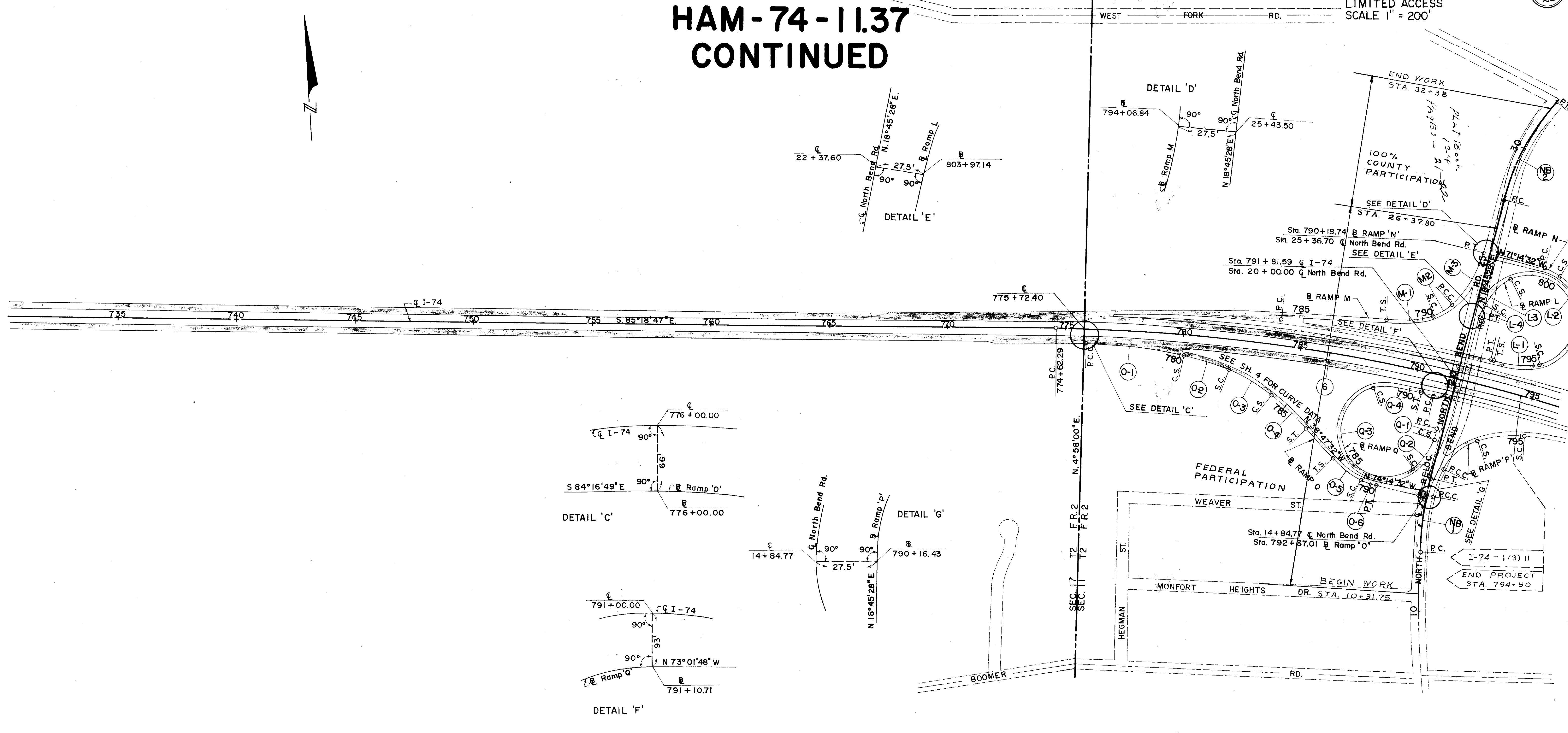
DATE	REVISED	BY

LOCATION PLAN HAM-74-11.37 CONTINUED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

328
3
26

HAM-74-11.37
R/W PLAN
LIMITED ACCESS
SCALE 1" = 200'



Sheet 3 of 4

DATE	REVISED	BY

3
26

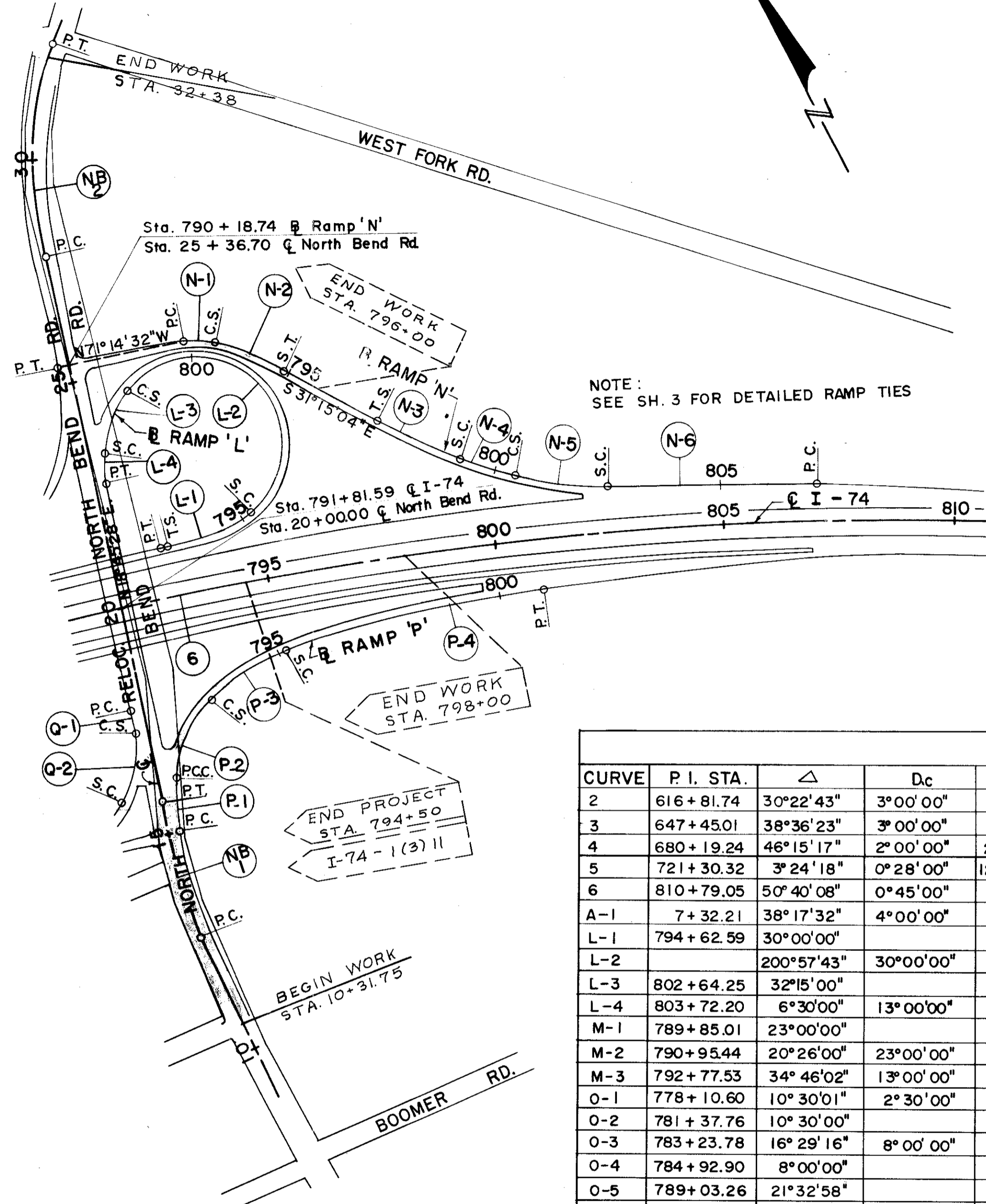
LOCATION PLAN HAM-74-1137 CONTINUED



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HAM-74-1137
R/W PLAN
LIMITED ACCESS
SCALE 1" = 200'

320
4
26



CURVE DATA												
CURVE	P. I. STA.	Δ	Dc	Rc	Lc	T1	T2	Ls-1	Ls-2	Os-1	Os-2	E
2	616+81.74	30°22'43"	3°00'00"	1909.86'	612.62'	719.39'	719.39'	400.00'	400.00'	6°00'00"	6°00'00"	72.75'
3	647+45.01	38°36'23"	3°00'00"	1909.86'	886.88'	870.09'	870.09'	400.00'	400.00'	6°00'00"	6°00'00"	117.46'
4	680+19.24	46°15'17"	2°00'00"	2864.79'	2012.74'	1374.10'	1374.10'	300.00'	300.00'	3°00'00"	3°00'00"	251.77'
5	721+30.32	3°24'18"	0°28'00"	12277.67'	729.64'	364.93'	364.93'					5.42'
6	810+79.05	50°40'08"	0°45'00"	7639.44'	6755.85'	3616.77'	3616.77'					812.90'
A-1	7+32.21	38°17'32"	4°00'00"	1432.39'	757.30'	597.68'	597.68'	200.00'	200.00'			85.10'
L-1	794+62.59	30°00'00"				135.30'	68.46'	200.00'		30°00'00"		
L-2		200°57'43"	30°00'00"	190.99'	669.87'							
L-3	802+64.25	32°15'00"				67.11'	86.98'	150.00'		9°45'00"	22°30'00"	
L-4	803+72.20	6°30'00"	13°00'00"	440.74'	50.00'	25.03'	25.03'					0.71'
M-1	789+85.01	23°00'00"				134.48'	67.71'	200.00'		23°00'00"		
M-2	790+95.44	20°26'00"	23°00'00"	249.11'	88.87'	44.91'	44.91'					4.02'
M-3	792+77.53	34°46'02"	13°00'00"	440.74'	267.44'	137.98'	137.98'					21.09'
O-1	778+10.60	10°30'01"	2°30'00"	2291.83'	420.01'	210.60'	210.60'					9.66'
O-2	781+37.76	10°30'00"				117.75'	82.81'	200.00'		2°30'00"	8°00'00"	
O-3	783+23.78	16°29'16"	8°00'00"	716.20'	206.10'	103.77'	103.77'					7.48'
O-4	784+92.90	8°00'00"				133.47'	66.79'	200.00'		8°00'00"		
O-5	789+03.26	21°32'58"				116.20'	58.46'	173.00'		21°32'58"		
O-6	789+87.98	13°54'02"	24°54'46"	229.99'	55.80'	27.92'	27.92'					18.30'
Q-1	780+11.22	6°30'00"	13°00'00"	440.74'	50.00'	25.03'	25.03'					0.71'
Q-2	781+23.14	32°15'00"				86.98'	67.11'	150.00'		9°45'00"	22°30'00"	
Q-3		199°27'43"	30°00'00"	190.99'	664.87'							
Q-4	789+19.49	30°00'00"				135.30'	68.46'	200.00'		30°00'00"		
Y-1	5+71.27	59°07'30"	15°45'49"	363.47'	375.07'	206.17'	206.17'					54.40'
Y-2	10+10.35	40°22'50"	7°47'55"	734.70'	517.80'	270.18'	270.18'					48.10'
Y-3	13+24.75	7°36'25"				133.46'	66.78'	200.00'				
Y-4	18+68.93	8°36'47"	3°00'00"	1909.86'	612.72'	719.39'	719.39'	400.00'	400.00'			72.75'
NB-1	14+03.88	12°31'15"	4°00'00"	1432.39'	313.02'	157.14'	157.14'					8.59'
NB-2	30+30.57	27°44'00"	6°00'00"	954.93'	462.22'	235.73'	235.73'					29.14'
N-1	792+87.21	18°26'30"	24°54'46"	229.99'	74.03'	37.34'	37.34'					3.01'
N-2	793+82.35	21°32'58"				116.20'	58.46'	173.00'		21°32'58"		
N-3	798+58.80	8°00'00"				133.47'	66.79'	200.00'		8°00'00"		
N-4	799+85.60	9°37'16"	8°00'00"	716.20'	120.26'	60.27'	60.27'					2.53'
N-5	801+18.27	8°45'00"				127.62'	72.77'	200.00'		8°00'00"	0°45'00"	
N-6	804+76.31	3°24'29"	0°45'00"	7639.44'	454.41'	227.27'	227.27'					3.38'
P-1	790+73.73	14°48'54"	13°00'00"	440.74'	113.96'	57.30'	57.30'					3.70'
P-2	792+27.61	42°38'22"	23°00'00"	249.11'	185.39'	97.22'	97.22'					18.30'
P-3	793+89.79	25°15'00"				129.28'	74.01'	200.00'		23°00'00"	2°15'00"	
P-4	798+09.18	13°08'42"	2°15'00"	2546.46'	584.22'	293.40'	293.40'					16.85'

CONTROL POINT STATION								
CURVE	P. I. STA.	P. C. STA.	P. T. STA.	P. C. C. STA.	T. S. STA.	S. C. STA.	C. S. STA.	S. T. STA.
2	616+81.74				609+62.36	613+62.36	619+74.98	623+74.98
3	647+45.01				638+74.92	642+74.92	651+61.80	655+61.80
4	680+19.24				666+45.14	669+45.14	689+57.87	692+57.87
5	721+30.32	717+65.39	724+95.03					
6	810+79.05	774+62.29	842+18.14					
A-1	7+32.21				1+34.53	3+34.53	10+91.83	12+91.83
L-1	794+62.59				793+27.27	795+27.27		
L-2						795+27.27	801+97.14	
L-3	802+64.25					803+47.14	801+97.14	
L-4	803+72.20		803+97.14			803+47.14		
M-1	789+85.01				788+50.53	790+50.53		
M-2	790+95.44				791+39.40	790+50.53		
M-3	792+77.53		794+06.84		791+39.40			
O-1	778+10.60				776+00.00			
O-2	781+37.76					782+20.01	780+20.01	
O-3	783+23.78					782+20.01	784+26.11	
O-4	784+92.90						784+26.11	786+26.11
O-5	789+03.26					787+87.06	789+60.06	
O-6	789+87.98		790+15.86			789+60.06		
Q-1	780+11.22	791+10.71					780+36.16	
Q-2	781+23.14					781+86.16	780+36.16	
Q-3						781+86.16	788+51.03	
Q-4	789+19.49						788+51.03	790+51.03
Y-1	5+71.27	3+65.10			7+40.17			
Y-2	10+10.35				7+40.17			
Y-3	13+24.75						12+57.97	
Y-4	18+68.93						12+57.97	14+57.97
NB-1	14+03.88	12+46.74	15+59.77			16+25.05	18+25.05	19+12.15
NB-2	30+30.57	27+94.84	32+57.06					21+12.15
N-1	792+87.21	792+49.87						793+23.89
N-2	793+82.35							793+23.89
N-3	798+58.80				797+25.33	799+25.33		794+96.89
N-4	799+85.60					799+25.33	800+45.59	
N-5	801+18.27					802+45.59	800+45.59	
N-6	804+76.31	807+00.00				802+45.59		
P-1	790+73.73	790+16.43			791+30.39			
P-2	792+27.61				791+30.39			
P-3	793+89.79						793+15.78	
P-4	798+09.18	801+00.00					793+15.78	

PLAT BK 124 PAGES 23-24

SHEET 4 of 4

DATE	REVISED	BY

4
26

PROPERTY PLAN

HAM-74-11.37

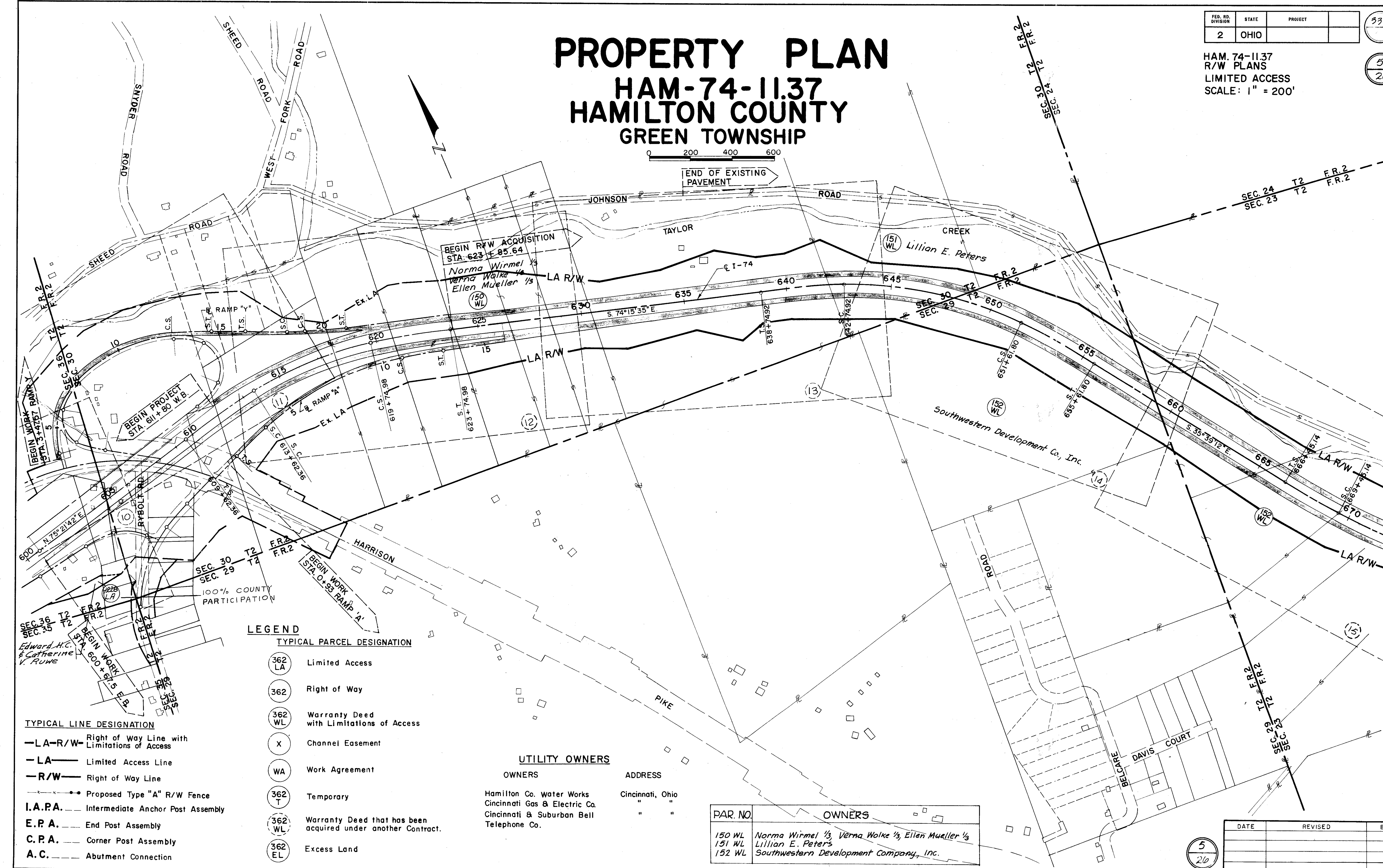
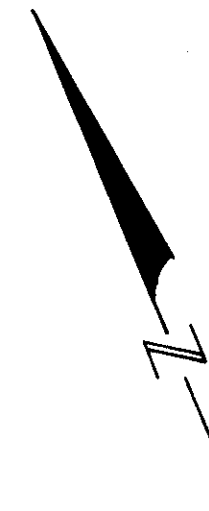
HAMILTON COUNTY

GREEN TOWNSHIP

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

HAM. 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE: 1" = 200'

330
5
26



LEGEND

- TYPICAL PARCEL DESIGNATION**
- 362 LA Limited Access
 - 362 Right of Way
 - 362 WL Warranty Deed with Limitations of Access
 - X Channel Easement
 - WA Work Agreement
 - 362 T Temporary
 - 362 WL Warranty Deed that has been acquired under another Contract.
 - 362 EL Excess Land

TYPICAL LINE DESIGNATION

- LA-R/W- Right of Way Line with Limitations of Access
- LA- Limited Access Line
- R/W- Right of Way Line
- - - Proposed Type "A" R/W Fence
- I.A.P.A. Intermediate Anchor Post Assembly
- E.P.A. End Post Assembly
- C.P.A. Corner Post Assembly
- A.C. Abutment Connection

UTILITY OWNERS

OWNERS	ADDRESS
Hamilton Co. Water Works	Cincinnati, Ohio
Cincinnati Gas & Electric Co.	" "
Cincinnati & Suburban Bell Telephone Co.	" "

PAR. NO.	OWNERS
150 WL	Norma Wirmel 1/3, Verna Wolke 1/3, Ellen Mueller 1/3
151 WL	Lillian E. Peters
152 WL	Southwestern Development Company, Inc.

DATE	REVISED	BY

5
26

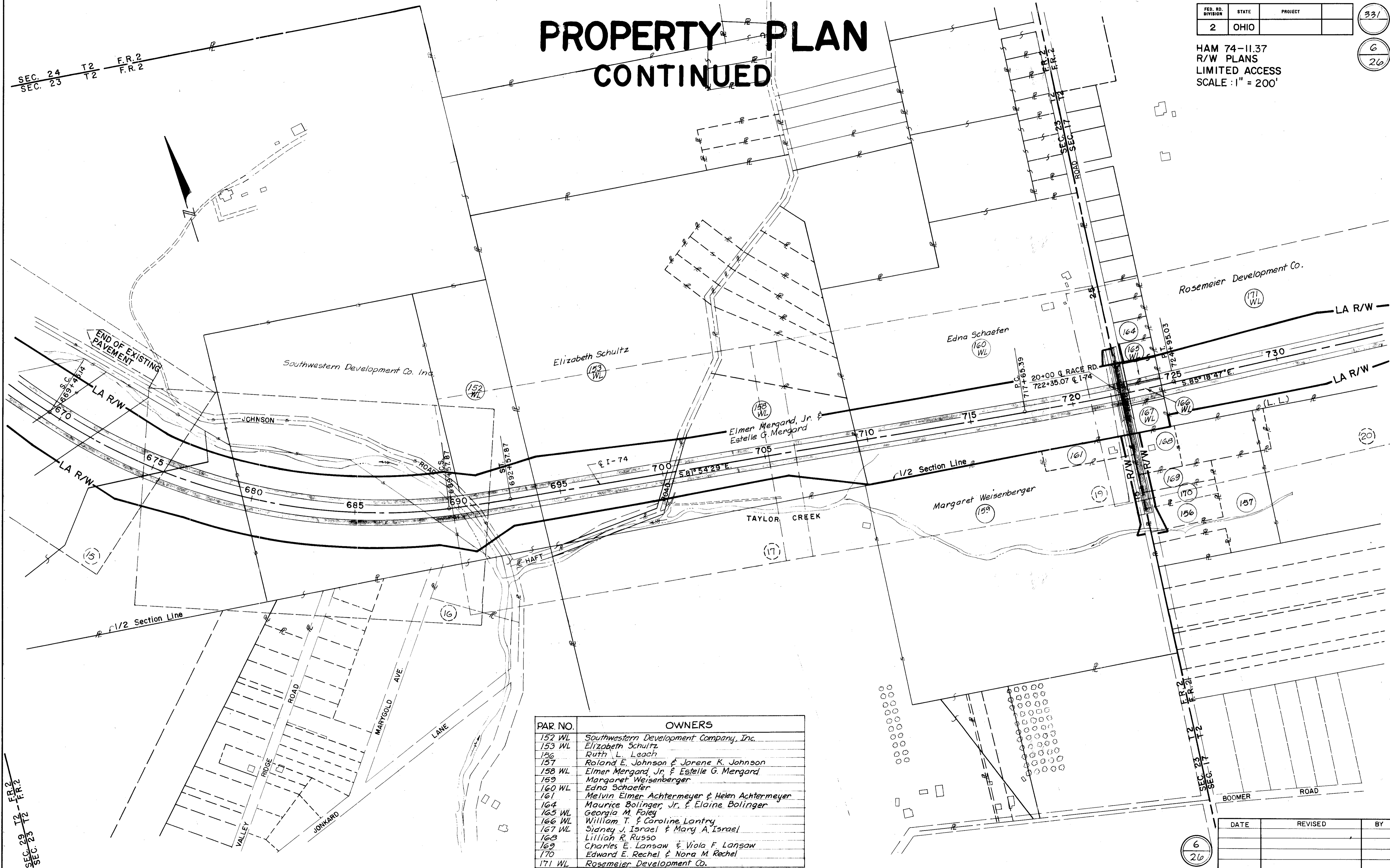
PROPERTY PLAN CONTINUED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

331

HAM 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE: 1" = 200'

6
26



PAR. NO.	OWNERS
152 WL	Southwestern Development Company, Inc.
153 WL	Elizabeth Schultz
156	Ruth L. Leach
157	Roland E. Johnson & Jorene K. Johnson
158 WL	Elmer Mergard, Jr. & Estelle G. Mergard
159	Margaret Weisenberger
160 WL	Edna Schaefer
161	Melvin Elmer Achtermeyer & Helen Achtermeyer
164	Maurice Bollinger, Jr. & Elaine Bollinger
165 WL	Georgia M. Foley
166 WL	William T. & Caroline Lantry
167 WL	Sidney J. Israel & Mary A. Israel
168	Lillian R. Russo
169	Charles E. Lansaw & Viola F. Lansaw
170	Edward E. Rechel & Nora M. Rechel
171 WL	Rosemeier Development Co.

DATE	REVISED	BY

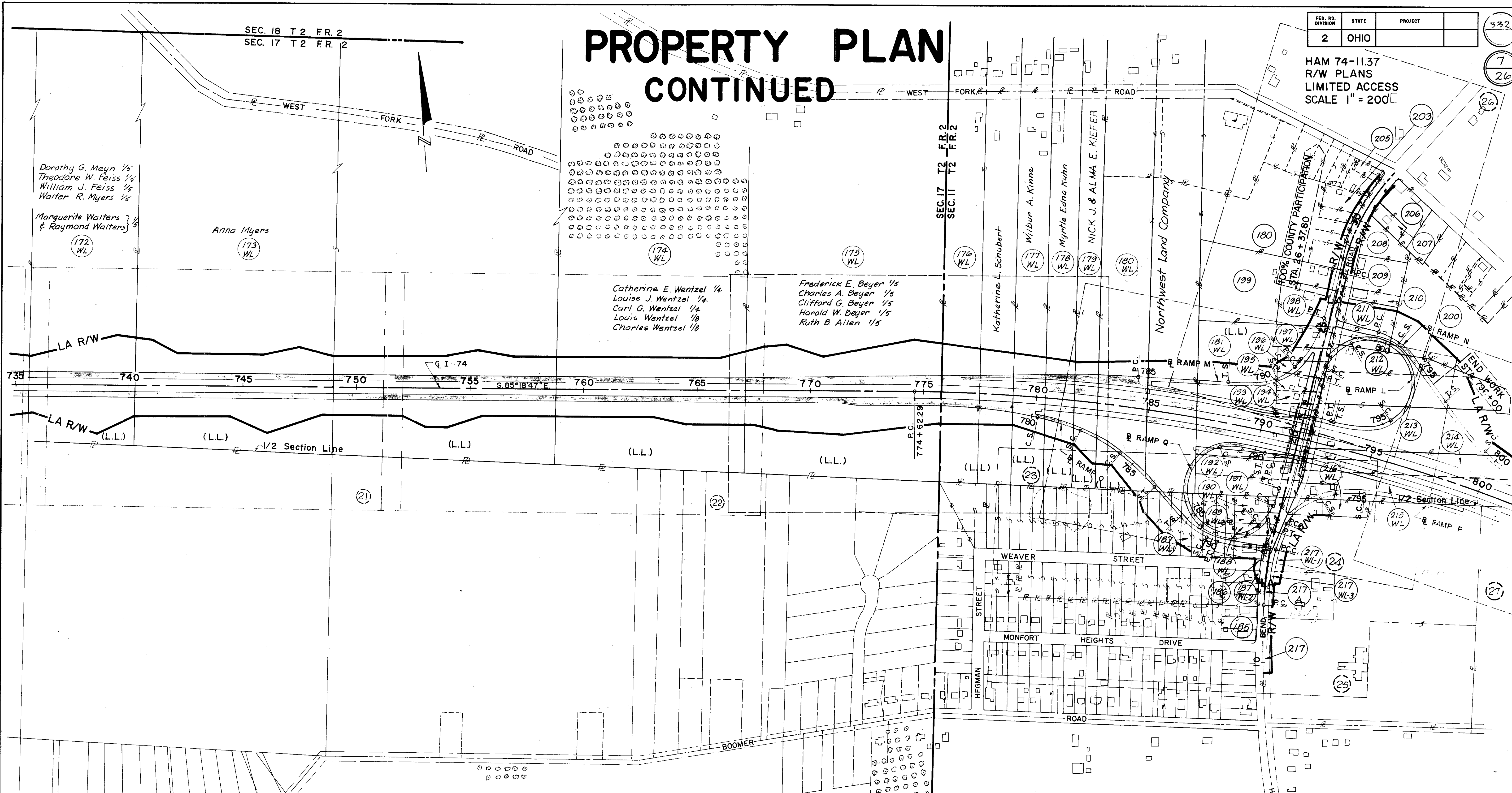
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26

PROPERTY PLAN CONTINUED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HAM 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 200'

332
7
26



PAR. NO.	OWNERS	PAR. NO.	OWNERS
172 WL	Marquerite Walters & Raymond Walters 1/2 ET AL 1/2	189 WL	Henrietta E. Schubert
173 WL	Anna Myers	190 WL	Stanley Schaecker
174 WL	Catherine E. Wentzel 1/4 Et Al. 3/4	191 WL	Susan Bucher
175 WL	Frederick E. Beyer 1/2 Et. Al. 1/2	192 WL	Nicholas S. Bucher & Elvema Bucher
176 WL	Katherine L. Schubert	193 WL	Nicholas Kiefer
177 WL	Wilbur A. Kinne	194 WL	Mark A. Lindeman
178 WL	Myrtle Edna Kuhn	195 WL	Richard E. Feldman & Grace Margie Feldman
179 WL	Carl B. Kuhn Jr.	196 WL	Allan Brisker & Marjorie A. Brisker
180 WL	Northwest Land Company	197 WL	Henrietta E. Schubert
181 WL	Anna Kiefer	198 WL	Mathilda Rack
185 WL	The Hidy Company	199	Robert J. Morgan & Florence Morgan
186	Hamilton County Commissioner	200	Carolyn Holtgreve
187 WL	Charlotte M. Mc Neill	203	Marathon Finance Company
188 WL	Carolyn A. Spitznagel	205	Melany A. Luttmer

DATE	REVISED	BY
2-14-66	Par. 179 WL. Was Carl B. Kuhn	RLR.

7
26

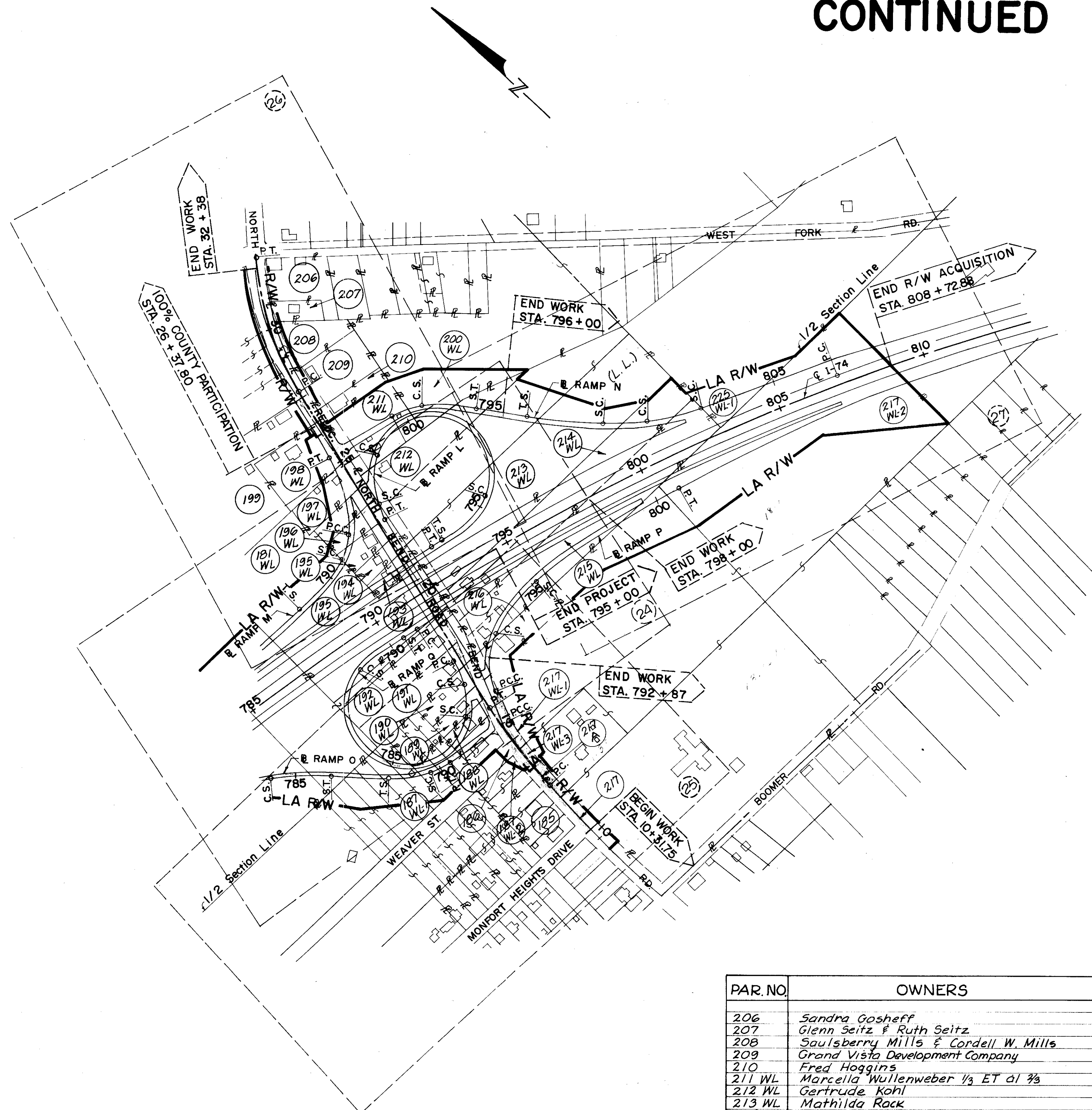
PROPERTY PLAN CONTINUED

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

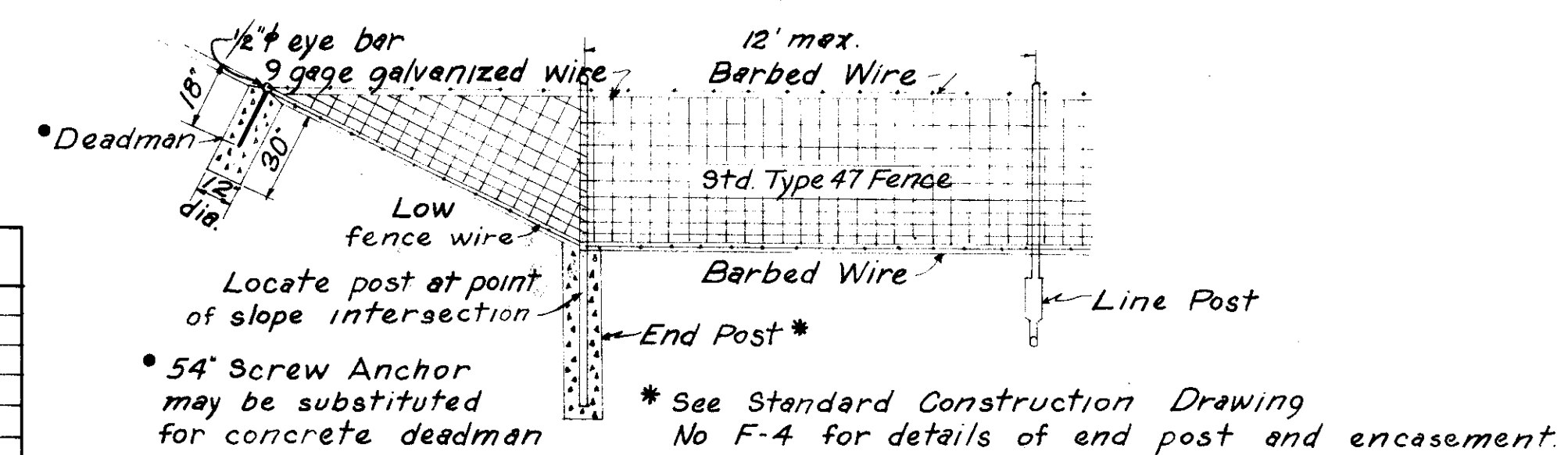
333

HAM 74-11.37
R/W PLAN
LIMITED ACCESS
SCALE 1" = 200'

8
26



PAR. NO.	OWNERS
206	Sandra Gosheff
207	Glenn Seitz & Ruth Seitz
208	Saulsbury Mills & Cordell W. Mills
209	Grand Vista Development Company
210	Fred Hoggins
211 WL	Marcella Wullenweber 1/3 ET al 2/3
212 WL	Gertrude Kohl
213 WL	Mathilda Rack
214 WL	Bigner, Inc.
215 WL	Mathilda Rack
216 WL	Dorothy G. Grannen
217 WL	Karl J. Aiter, Archbishop of Cincinnati
225 WL-1	Anna Guenther Di Buono



**FENCE TERMINAL
AT TOE OF DEEP FILL SLOPE**

DATE	REVISED	BY

8
26

R/W PLAN

HAM.-74-11.37

HAMILTON COUNTY

DATE	REVISION	BY
2-15-66	PAR 179 WL WAS CARL B. KUHN	R.L.R.
4-13-66	IRENE E KINNE ET AL ADDED	R.L.R.

FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS

Superseded by Sheet No. 334S

334
9
26

LEGEND

- (A. P.) = Advanced Procurement
- (L. L.) = Land Locked
- * = Federal Non-Participation
- ⊗ = See End of Summary

Total No. Of Owners 58

SUMMARY OF R/W REQUIRED

PARCEL NO.	OWNER	P.R.O.	DEED BOOK	RECORD PAGE	RECORD AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	TYPE FUND	REMARKS
						LAND	BLDG.	LEFT	RIGHT			
117 LA thru 147 LA	Acquired Under Contract HAM 52-7.85 For Contract HAM 74-11.37									10,11,12		
*122B-LA	Edward H. Ruwe & Catherine V. Ruwe				0.231	No				10		
150 WL	Norma Wirmel, Verna Wolke & Ellen Mueller		3063	690	85.08±	15.55	Yes	14.13±	55.40±	12,13		Fr. Shed - Fr. Barn
151 WL	Lillian E. Peters		3255	592	80	3.95	No	75.81	0.24	13,14		To const. Channel
152 WL	Southwestern Development Company, Inc.	0.67	3228	89	239.15	36.73	No	120.73	81.02	13,15,16,17		
152 X-1	"				0.026	No				14		To const. channel
152 X-2	"				2.39	No				14,15		To const. Channel
152 X-3	"				0.10	No				15		To const. channel
152 X-4	"	0.04			0.07	No				16		To const. Channel
152 T	"				3.41	No				18		To const. drive
153 WL	Elizabeth Schultz		2026	190	34.59±	4.33	No	29.08±	1.18±	17		
154												Not Used
155												Not Used
*156	Ruth Lynn Leach	0.07	3220	155	0.89	0.08	No		0.74	20		
*157	Roland E. Johnson & Jorane K. Johnson	0.01	3338	10	13.80±	0.02	No		13.77±	20		
158 WL	Elmer Mergard, Jr. & Estelle G. Mergard		2613	550	11.33±	5.86	No	3.06±	2.41±	17,19		
*159	Margaret Weisenberger	0.26	1093	477	82.67±	0.18	No		82.23±	20		
160 WL	Edna Schaefer	0.25	3015	597	59.40±	10.28	No	48.80		19,20		
160	"	0.04			0.03	No				20		
161	Melvin Elmer Achtermeyer & Helen Achtermeyer	0.07	2285	381	1.00	0.04	No		0.89	19,20		
162 thru 163												To const. drive
*164 T	Maurice Bolinger, Jr. & Elaine Bolinger		2901	165	0.46	0.06	No	0.46		20		To Const. Temp. Runaround
165 WL	Georgia M. Foley		3188	252	0.92	0.51	No	0.40		20		
165	"				0.01	No				20		
165 T	"				0.21	No				20		To const. temp. Runaround
166 WL	William T. & Caroline Lantry		2930	291	0.46	0.46	Yes			20		(A) BY STATE OF OHIO 283300 RES. (B) TOTAL TAKE - (1 STY. CONC. BK.) (C) CONTIN. OF THE S. 1/4 OF THE S. 1/4 OF SEC. 16, T. 28 N., R. 28 W., CO. 19, OHIO
*167 WL	Sidney J. Israel & Mary A. Israel	0.14	1866	483	3.00	0.04	No		2.82	20		To grade & const. drive
168 WL	Lillian Russo									20		
168 WA	"									20		
*169	Charles E. Lansow & Viola F. Lansow	0.06	3155	613	0.791	0.02	No		0.65	20		
*170	Edward E. Rechel & Nora M. Rechel	0.05	2906	595	0.65	0.02	No		0.58	20		
171 WL	Rosemeier Development Company		3414	482	57.978	7.52	No	48.29±	2.17±(LL)	20		
172 WL	(Marguerita Walter & Raymond Walter 1/2), Dorothy G. Meyn 1/2, Theodore W. Feiss 1/2, William J. Feiss 1/2, Walter R. Myers 1/2		2721	351	28.28	3.80	No	23.50±	0.98±(LL)	21		
			3413	268								
173 WL	Anna Myers		2068	41	92.76	12.22	No	72.70±	7.84±(LL)	21, 22		
174 WL	Catherine E. Wentzel 1/4, Louise J. Wentzel 1/4, Carl G. Wentzel 1/4, Louis Wentzel 1/4 & Charles Wentzel 1/4		2682	86	36.00	5.36	No	26.20±	4.44±(LL)	22		
175 WL	Frederick E. Beyer 1/2, Charles A. Beyer 1/2		3193	309	35.80	6.96	No	24.55±	4.29±(LL)	23		
175 X-1	Clifford G. Beyer 1/2, Harold W. Beyer 1/2 & Ruth B. Allen 1/2					0.04	No			23		To const. channel
175 X-2	"					0.05	No			23		To const. channel
176 WL	Katherine L. Schubert		2023	61	12.65±	2.42	No	8.21±	2.02±(LL)	23		
177 WL	Wilbur A. Kinne (deceased) Irene E. Kinne et al. (Widow)		2640	43	5.60±	1.05	No	3.71±	0.84±(LL)	23		
178 WL	Murtle Edna Kuhn		3127	151	4.94±	1.00	No	3.30±	0.64±(LL)	23		
179 WL	Nick J. & Alma E. Kiefer		3423	995	4.12±	0.94	No	2.76±	0.42±(LL)	23, 24		
180 WL	Northwest Land Company	0.02	3450	670	19.38±	5.88	No	13.02±	0.40±(LL)	24		
*180 T	"		3450	674		0.06	No			26		To grade & const. Drive
181 WL-1	Anna Kiefer	0.15	1660	497	5.51±	3.71	Yes	1.39±(LL)		24		(2 Sty. Fr. Fr. Gr.)
181 WL-2	"	0.04				0.22	No			24		2 Fr. Shed, Corn Grid
181 S	"		1660	497		0.08	No			24		To const. Storm Sewer
182 thru 184												Not Used
185 WA	The Hidy Company		3372	253	0.70		No			25		To Const. drive

SUMMARY OF R/W REQUIRED

PARCEL NO.	OWNER	P.R.O.	DEED BOOK	RECORD PAGE	RECORD AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	TYPE FUND	REMARKS
						LAND	BLDG.	LEFT	RIGHT			
186	Hamilton County Commissioner					0.04	No			25		Vacation of Weaver St
187 WL-1	Charlotte M. McNeill		2002	308	10.81±	1.88	Yes	8.93±		24, 25		(2 Sty. Stucco) Res.
187 WL-2	"					0.02	No			25		
187 WA	"						No			25		To const. drive
188 WL	Carolyn A. Spitznagel		2600	414	0.18	0.18	Yes			24, 25		Total Take - (2 Sty. Br.) Res.
189 WL	Henrietta E. Schubert		1865	72	0.63	0.63	Yes			24, 25		Total Take - (2 Sty. Br. & Fr.) Res.
190 WL	Stanley Schneckner		1775	147	0.33	0.33	Yes			24		Total Take (1 Sty. Fr.) Res.
191 WL	Susan Bucher	0.05	3007	94	0.85	0.80	Yes			24		Total Take (1 Sty. Br.) Res.
192 WL	Nicholas S. Bucher & Elverna Bucher	0.05	3007	128	0.87	0.82	Yes			24		Total Take (2 Sty. Br., Fr. & Fr. Gr.) Res.
193 WL	Nicholas Kiefer	0.04	1764	499	0.251	0.21	Yes			24		Total Take (2 Sty. Fr.) Res.
194 WL	Mark A. Lindeman	0.04	3122	57	0.25	0.21	Yes			24		Total Take - (2 Sty. Conc. Bk.) (1 Sty. Conc. Bk.)
195 WL	Richard E. Feldman & Grace Margie Feldman	0.04	2897	287	0.32	0.28	Yes			24		Total Take (2 Sty. Fr. - 1 Sty. Conc.) Res.
196 WL	Allan Brisker & Marjorie A. Brisker	0.05	2908	38	0.35	0.30	Yes			24		Total Take - (1 Sty. Fr.) Bus.
197 WL	Henrietta E. Schubert	0.07	2602	30	0.58	0.24	Yes	0.27LL		24, 26		(2 Sty. Br.) Res.
198 WL	Mathilda Rack	0.09	61	20795	1.36	0.20	No	1.04		26		R.L.
*198 T	"	0.02				0.01	No			26		R.L.
*199	Robert J. Morgan & Florence Morgan	0.08	2005	100	3.36	0.04	No	3.24		26		To grade & const. drive.
*199 T	"					0.04	No			26		
200 WL	Carolyn Holtgrewe		3389	147	17.781	0.93	No	16.85		25, 26, 27		
201	"											Not Used
202	"											Not Used
*203	Marathon Finance Company		3385	396	0.75	0.02	No	0.73		26		To grade & resurface
*203 T	"					0.06	No			26		Not Used
204	"											Not Used
*205	Melany A. Luttmer		2816	37	0.14	0.01	Yes	0.13		26		(Gas Pump)
*205 T	"					0.02	Yes			26		To grade & resurface
*206	Sandra Gosheff		2810	193	0.76	0.04	Yes	0.72		26		(2 Sty. Br.) Bus. & Res.
*206 T	"					0.01	No			26		To grade & const. drive
*206 WA	"									26		To remove bldg.
*207	Glenn Seitz & Ruth Seitz		3134	16	0.24	0.02	No	0.22		26		
*207 T	"					0.02	No			26		To grade & const. drive
*208	Saulsbury Mills & Cordell W. Mills		3065	13	0.53	0.04	No	0.49		26		
*208 T	"					0.07	No			26		To grade & const. drive
*209	Grand Vista Development Company	0.10	3446	63	0.84	0.01	No	0.73		26		
*209 T	"					0.04	No			26		To grade & const. drive
*210	Fred Hoggins	0.03	2180	234	0.28		No	0.25		26		
*210 T	"					0.01	No			26		To grade & const. drive
211 WL	Marcella Wullenweber 1/2, Helen C. Wullenweber 1/2, August F. Wullenweber 1/2		3089	578	1.00	1.00	Yes			26		Total Take (2 1/2 Sty. Fr. Conc. Gr.) Res.
212 WL	Gertrude Kohl	0.08	2396	513	1.318	1.238	Yes			24, 27		Total Take (1 1/2 Sty. Br. & Fr.) Res.
213 WL	Mathilda Rack	0.24	2188	608	7.63±	5.63	Yes	1.76±(LL)		24, 27		(2 Sty. Fr.) Res.
214 WL	Bigner, Inc.	0.07	3305	485	2.49	2.42	Yes			24, 27		Total Take (2 Sty. Fr. - 2 Sty. Fr. Barn) Res.
215 WL	Mathilda Rack	0.08	1896	61	2.63	2.55	Yes			24, 27		Total Take (1 Sty. Fr. - 2 Sty. Fr. Barn) Res.
216 WL	Dorothy G. Grannen	0.06	1733	599	0.713	0.653	Yes			24		Total Take (1 Sty. Fr.) Res.
217 WL-1	Karl J. Alter	0.18	97	34216	33.21	0.38	No			25		R.L.
217 WL-2	"		141	50691		0.89	Yes		25, 45	24, 27		1 Back-stop R.L.
217 WL-3	"	0.03				0.04	No			25		
217	"		2452	245-227		0.08	No			25		Not R.L.
217 A	"	0.11	2106	624		0.05	No			25		R.L.
217 T	"					0.17	No			25		

R/W PLAN

HAM.-74-11.37

HAMILTON COUNTY

DATE	REVISION	BY
2-15-66	PAR 179 WL WAS CARL B. KUHN	R.L.R.
4-13-66	IRENE E KINNE ET AL ADDED	R.L.R.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS

Supersedes Sheet No. 334

3345
351
95
26

LEGEND
(A.P.) = Advanced Procurement
(L.L.) = Land Locked
* = Federal Non-Participation
⊗ = See End of Summary

Total No. Of Owners 58

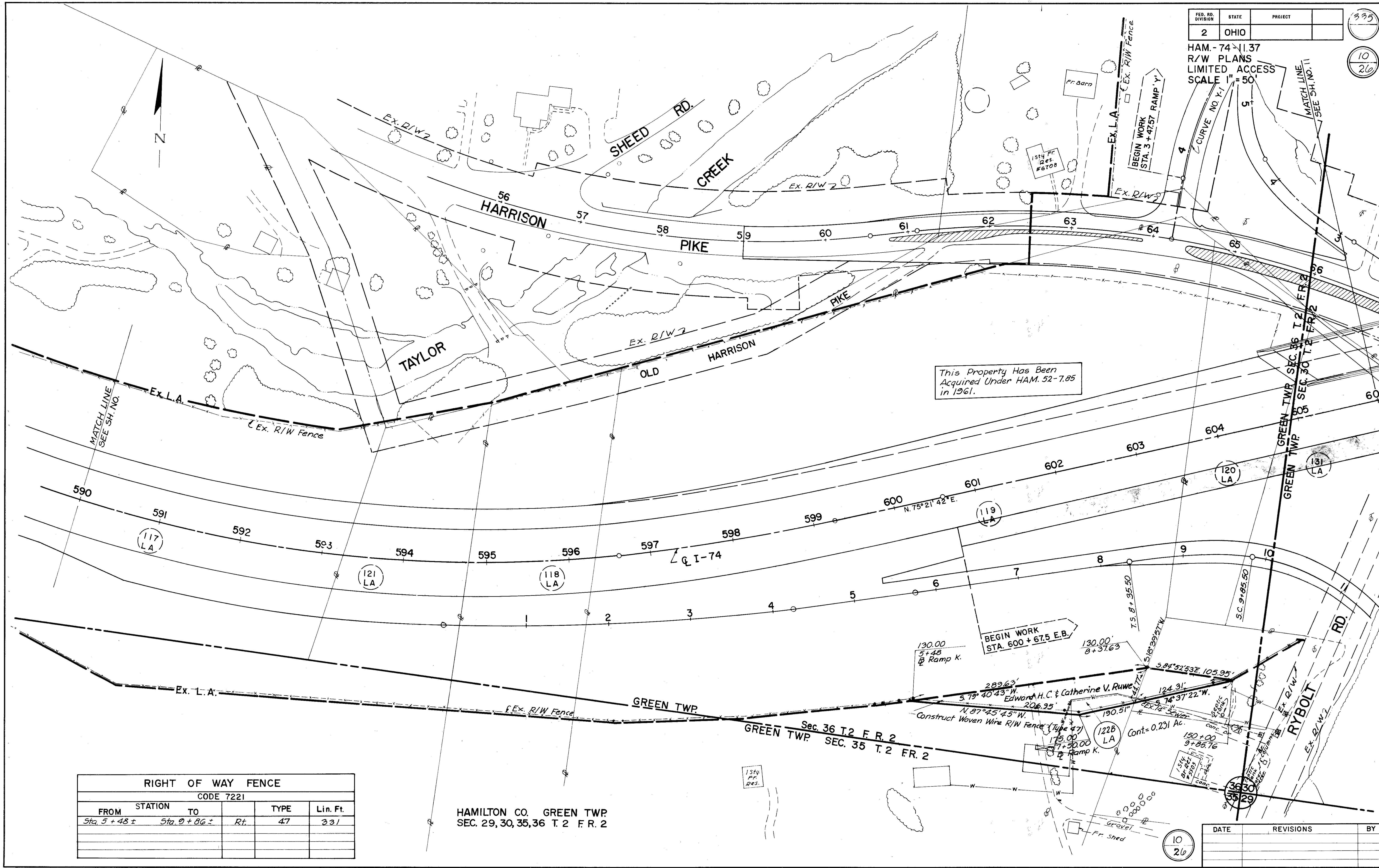
SUMMARY OF R/W REQUIRED												
PARCEL NO.	OWNER	P.R.O.	DEED BOOK	RECORD PAGE	RECORD AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	TYPE FUND	REMARKS
						LAND	BLDG.	LEFT	RIGHT			
117 LA thru 147 LA	Acquired Under Contract HAM 52-785 For Contract HAM 74-11.37									10,11,12		
*122B-LA	Edward H. Ruwe & Catherine V. Ruwe				0.231	No				10		
150 WL	Norma Wirmel, Verna Wolke & Ellen Mueller		3063	690	85.08±	15.55	Yes	14.13±	55.40±	12,13		Fr. Shed - Fr. Barn
150 X	"				0.24	No				13		To const. Channel
151 WL	Lillian E. Peters		3255	592	80	3.95	No	75.81	0.24	13,14		
152 WL	Southwestern Development Company, Inc.	0.67	3228	89	239.15	36.73	No	120.73	81.02	14,15		To const. channel
152 X-1	"				0.026	No				14		To const. Channel
152 X-2	"				2.39	No				14,15		To const. Channel
152 X-3	"				0.10	No				15		To const. channel
152 X-4	"	0.04			0.07	No				16		To const. channel
152 T	"				3.41	No				18		To const. drive
153 WL	Elizabeth Schultz		2026	190	34.59±	4.33	No	29.08±	1.18±	17		
154												Not Used
155												Not Used
*156	Ruth Lynn Leach	0.07	3220	155	0.89	0.08	No		0.74	20		
*157	Roland E. Johnson & Jorane K. Johnson	0.01	3338	10	13.80±	0.02	No		13.77±	20		
158 WL	Elmer Mergard, Jr. & Estelle G. Mergard		2613	550	11.33±	5.86	No	3.06±	2.41±	17,19		
*159	Margaret Weisenberger	0.26	1093	477	82.67±	0.18	No		82.23±	20		
160 WL	Edna Schaefer	0.25	3015	597	59.40±	10.28	No	48.80		19,20		
160	"	0.04			0.03	No				20		
161	Melvin Elmer Achtermeyer & Helen Achtermeyer	0.07	2285	381	1.00	0.04	No		0.89	19,20		
161 WA	"									20		To const. drive
162 thru 163												
*164 T	Maurice Bolinger, Jr. & Elaine Bolinger		2901	165	0.46	0.06	No	0.46		20		To const. temp. runaround
165 WL	Georgia M. Foley		3188	252	0.92	0.51	No	0.40		20		
165	"				0.01	No				20		
165 T	"				0.21	No				20		To const. temp. runaround
166 WL	William T. & Caroline Lantry		2930	291	0.46	0.46	Yes			20		(A) State of Ohio (B) Total Take (1.51±) (C) Comm. of the S. 1/4 of the S. 1/4 of Sec. 24, T. 22 N., R. 22 E., 1/4 Sec. 24, T. 22 N., R. 22 E.
*167 WL	Sidney J. Israel & Mary A. Israel		2965	86	0.61	0.61	Yes			20		(A) State of Ohio (B) Total Take (1.51±) (C) Comm. of the S. 1/4 of the S. 1/4 of Sec. 24, T. 22 N., R. 22 E.
168	Lillian Russo	0.14	1866	483	3.00	0.04	No		2.82	20		To grade & const. drive
168 WA	"									20		
*169	Charles E. Lansaw & Viola F. Lansaw	0.06	3155	613	0.731	0.02	No		0.65	20		
*170	Edward E. Rechel & Nora M. Rechel	0.05	2306	595	0.65	0.02	No		0.58	20		
171 WL	Rosemeier Development Company		3414	482	57.978	7.52	No	48.29±	2.17±(LL)	20		
172 WL	(Marguerita Walter & Raymond Walter 1/2), Dorothy G. Meyn 1/2, Theodore W. Feiss 1/2, William J. Feiss 1/2, Walter R. Myers 1/2		2721	351	28.28	3.80	No	23.50±	0.98±(LL)	21		
173 WL	Anna Myers		2068	41	92.76	12.22	No	72.70±	7.84±(LL)	21,22		
174 WL	Catherine E. Wentzel 1/4, Louise J. Wentzel 1/4, Carl G. Wentzel 1/4, Louis Wentzel 1/4 & Charles Wentzel 1/4		2682	86	36.00	5.36	No	26.20±	4.44±(LL)	22		
175 WL	Frederick E. Beyer 1/2, Charles A. Beyer 1/2		3193	309	35.80	6.96	No	24.55±	4.29±(LL)	23		
175 X-1	Clifford G. Beyer 1/2, Harold W. Beyer 1/2 & Ruth B. Allen 1/2					0.04	No			23		To const. channel
175 X-2	"					0.05	No			23		To const. channel
176 WL	Katherine L. Schubert		2023	61	12.65±	2.42	No	8.21±	2.02±(LL)	23		
177 WL	Wilbur A. Kinne (deceased) Irene E. Kinne et al. (Widow)		2640	43	5.60±	1.05	No	3.71±	0.84±(LL)	23		
178 WL	Myrtle Edna Kuhn		3127	151	4.94±	1.00	No	3.30±	0.64±(LL)	23		
179 WL	Nick J. & Alma E. Kiefer		3423	995	4.12±	0.94	No	2.76±	0.42±(LL)	23,24		
180 WL	Northwest Land Company	0.02	3450	670	19.38±	5.88	No	13.02±	0.40±(LL)	24		
*180	"		3450	674		0.06	No			26		
*180 T	"					0.07	No			26		To grade & const. drive
181 WL-1	Anna Kiefer	0.15	1660	497	5.51±	3.71	Yes	1.39±(LL)		24		(2) Fr. Shed, 1 Fr. Gr.
181 WL-2	"	0.04				0.22	No			24		To const. Storm Sewer
181 S	"		1660	497		0.08	No			24		
182 thru 184												Not Used
185 WA	The Hidy Company		3372	233	0.70		No			25		To const. drive

SUMMARY OF R/W REQUIRED												
PARCEL NO.	OWNER	P.R.O.	DEED BOOK	RECORD PAGE	RECORD AREA	TO BE ACQUIRED		RESIDUE		SHEET NO.	TYPE FUND	REMARKS
						LAND	BLDG.	LEFT	RIGHT			
186	Hamilton County Commissioner					0.04	No			25		Vacation of Weaver St
187 WL-1	Charlotte M. McNeill		2002	308	10.81±	1.77	Yes	8.83±		24,25		(2) Sty. Stucco Res.
187 WL-2	"					0.02	No			25		
187	"					0.19	Yes			25		To const. Weaver St.
188 WL	Carolyn A. Spitznagel		2600	414	0.18	0.18	Yes			24,25		Total Take - (2 Sty. Br.) Res.
189 WL	Henrietta E. Schubert		1865	72	0.63	0.63	Yes			24,25		Total Take - (2 Sty. Br. & Fr.) Res.
190 WL	Stanley Schneckner		1775	147	0.33	0.33	Yes			24		Total Take (1 Sty. Fr.) Res.
191 WL	Susan Bucher	0.05	3007	94	0.85	0.80	Yes			24		Total Take (1 Sty. Br.) Res.
192 WL	Nicholas S. Bucher & Elvanna Bucher	0.05	3007	128	0.87	0.82	Yes			24		Total Take (2 Sty. Br. & Fr.) Res.
193 WL	Nicholas Kiefer	0.04	1764	499	0.251	0.21	Yes			24		Total Take (2 Sty. Fr.) Res.
194 WL	Mark A. Lindeman	0.04	3122	57	0.25	0.21	Yes			24		Total Take (2 Sty. Conc. Br.) Res.
195 WL	Richard E. Feldman & Grace Margie Feldman	0.04	2897	287	0.32	0.28	Yes			24		Total Take (2 Sty. Fr. - 1 Sty. Conc.) Res.
196 WL	Allan Brisker & Marjorie A. Brisker	0.05	2908	38	0.35	0.30	Yes			24		Total Take - (1 Sty. Fr.) Bus.
197 WL	Henrietta E. Schubert	0.07	2602	30	0.58	0.24	Yes	0.27LL		24,26		(2) Sty. Br.) Res.
198 WL	Mathilda Rack	0.09	61	20795	1.36	0.20	No	1.04		26		R.L.
*198 T	"	0.02				0.01	No			26		R.L.
*198 T	"					0.02	No			26		R.L. Const. Slope beyond R/W Const. Dr.
*199	Robert J. Morgan & Florence Morgan	0.08	2005	100	3.36	0.04	No	3.24		26		
*199 T	"					0.04	No			26		To grade & const. drive.
200 WL	Carolyn Holtgrewe		3389	147	17.781	0.93	No	16.85		25,26,27		
201	"											Not Used
202	"											Not Used
*203	Marathon Finance Company		3385	396	0.75	0.02	No	0.73		26		
*203 T	"					0.06	No			26		To grade & resurface
204	"											Not Used
*205	Melany A. Luttmner		2816	37	0.14	0.01	Yes	0.13		26		(Gas Pump)
*205 T	"					0.02	Yes			26		To grade & resurface
*206	Sandra Gosheff		2810	193	0.76	0.04	Yes	0.72		26		(2 Sty. Br.) Bus. & Res.
*206 T	"					0.02	No			26		To grade & const. drive
*206 T-1	"					0.09	No			26		To remove bldg.
*207	Glenn Seitz & Ruth Seitz		3134	16	0.24	0.02	No	0.22		26		
*207 T	"					0.02	No			26		To grade & const. drive
*208	Saulsberry Mills & Cordell W. Mills		3065	13	0.53	0.04	No	0.49		26		
*208 T	"					0.07	No			26		To grade & const. drive
*209	Grand Vista Development Company	0.10	3446	63	0.84	0.01	No	0.73		26		
*209 T	"					0.04	No			26		To grade & const. drive
*210	Fred Hoggins	0.03	2180	234	0.28		No	0.25		26		
*210 T	"					0.01	No			26		To grade & const. drive.
211 WL	Marcella Wullenweber 1/2, Helen C. Wullenweber 1/2, August F. Wullenweber 1/2		3089	578	1.00	1.00	Yes			26		Total Take (2 1/2 Sty. Fr. Conc. Gr.) Res.
212 WL	Gertrude Kohl	0.08	2396	513	1.318	1.238	Yes			24,27		Total Take (1 1/2 Sty. Br. & Fr.) Res.
213 WL	Mathilda Rack	0.24	2188	608	7.63±	5.63	Yes	1.76±(LL)		24,27		(2) Sty. Fr.) Res.
214 WL	Bigner, Inc.	0.07	3305	485	2.49	2.42	Yes			24,27		Total Take (2 Sty. Stucco Fr. Gr.) Res.
215 WL	Mathilda Rack	0.08	1896	61	2.63	2.55	Yes			24,27		Total Take (1 Sty. Fr. - 2 Sty. Fr. Barn) Res.
216 WL	Dorothy G. Grannen	0.06	1733	599	0.713	0.653	Yes			24		Total Take (1 Sty. Fr.) Res.
217 WL-1	Karl J. Alter	0.18	97	34216	33.21	0.38	No			25		R.L.
217 WL-2	"		141	50691		6.89	Yes			25,45		1 Back-stop R.L.
217 WL-3	"	0.03				0.04	No			25		
217	"											

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

HAM. - 74 - 11.37
 R/W PLANS
 LIMITED ACCESS
 SCALE 1" = 50'

335
 10
 26



This Property Has Been Acquired Under HAM. 52-7.85 in 1961.

RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	Sta. 5+48 ±	Sta. 9+86 ±	Rt.	47
				331

HAMILTON CO. GREEN TWP
 SEC. 29, 30, 35, 36 T. 2 F. R. 2

BEGIN WORK
 STA. 600 + 67.5 E.B.

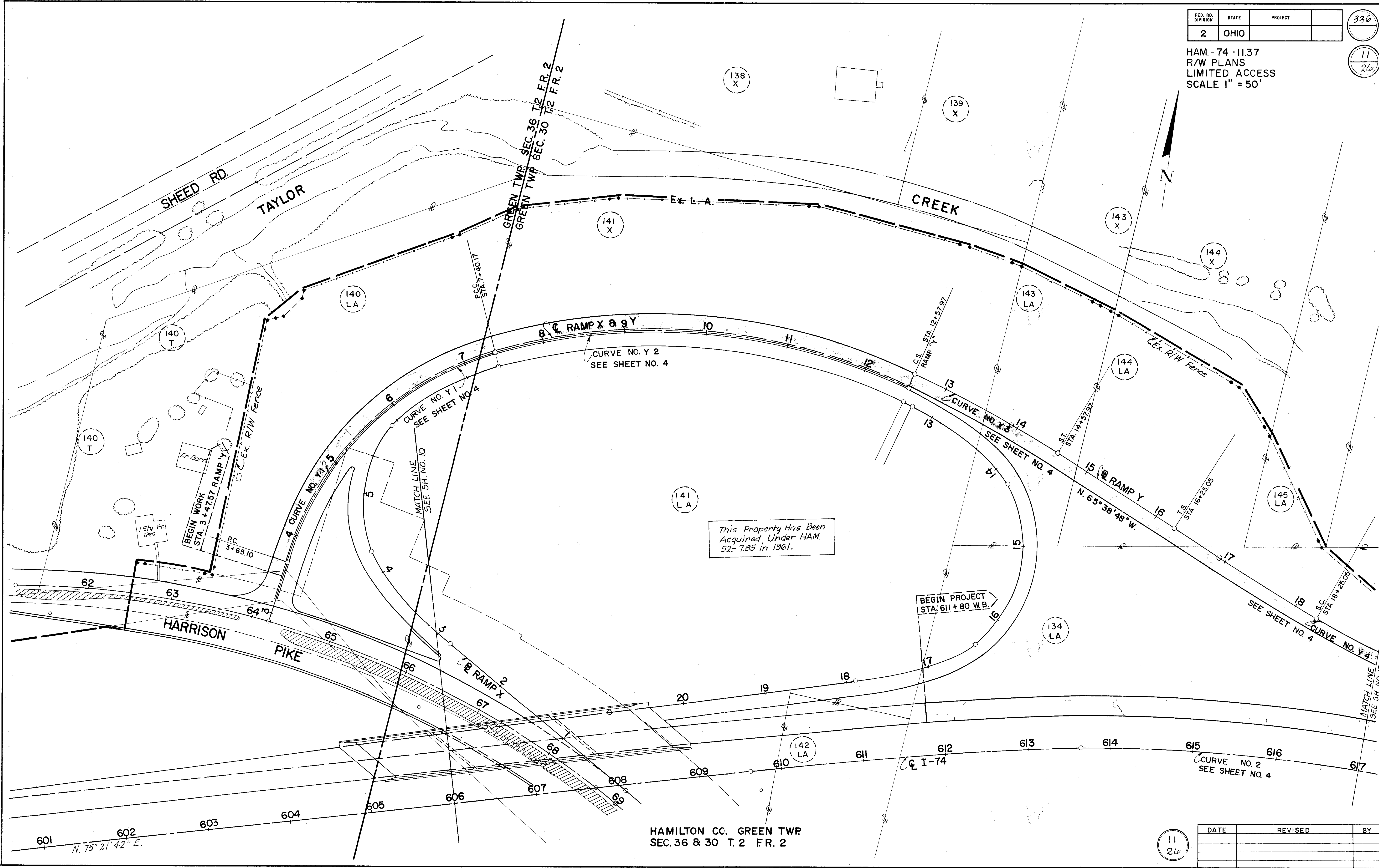
DATE	REVISIONS	BY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

336

11
26

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'



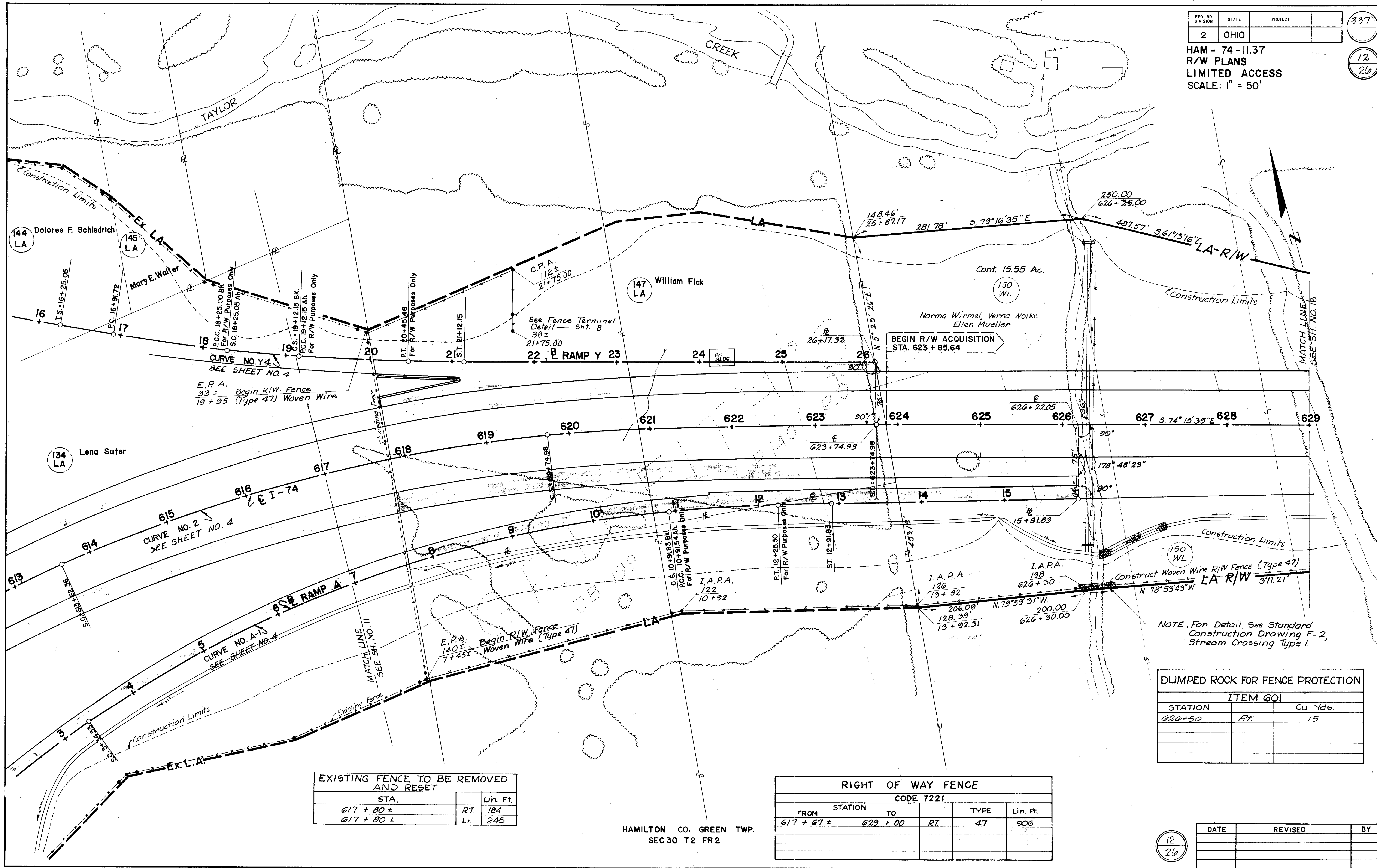
This Property Has Been Acquired Under HAM. 52-7.85 in 1961.

HAMILTON CO. GREEN TWP
SEC. 36 & 30 T. 2 F.R. 2

11
26

DATE	REVISED	BY

R/W PLAN STA. 601+00 TO STA. 617+00



EXISTING FENCE TO BE REMOVED AND RESET		
STA.		Lin. Ft.
617 + 80 ±	RT.	184
617 + 80 ±	Lt.	245

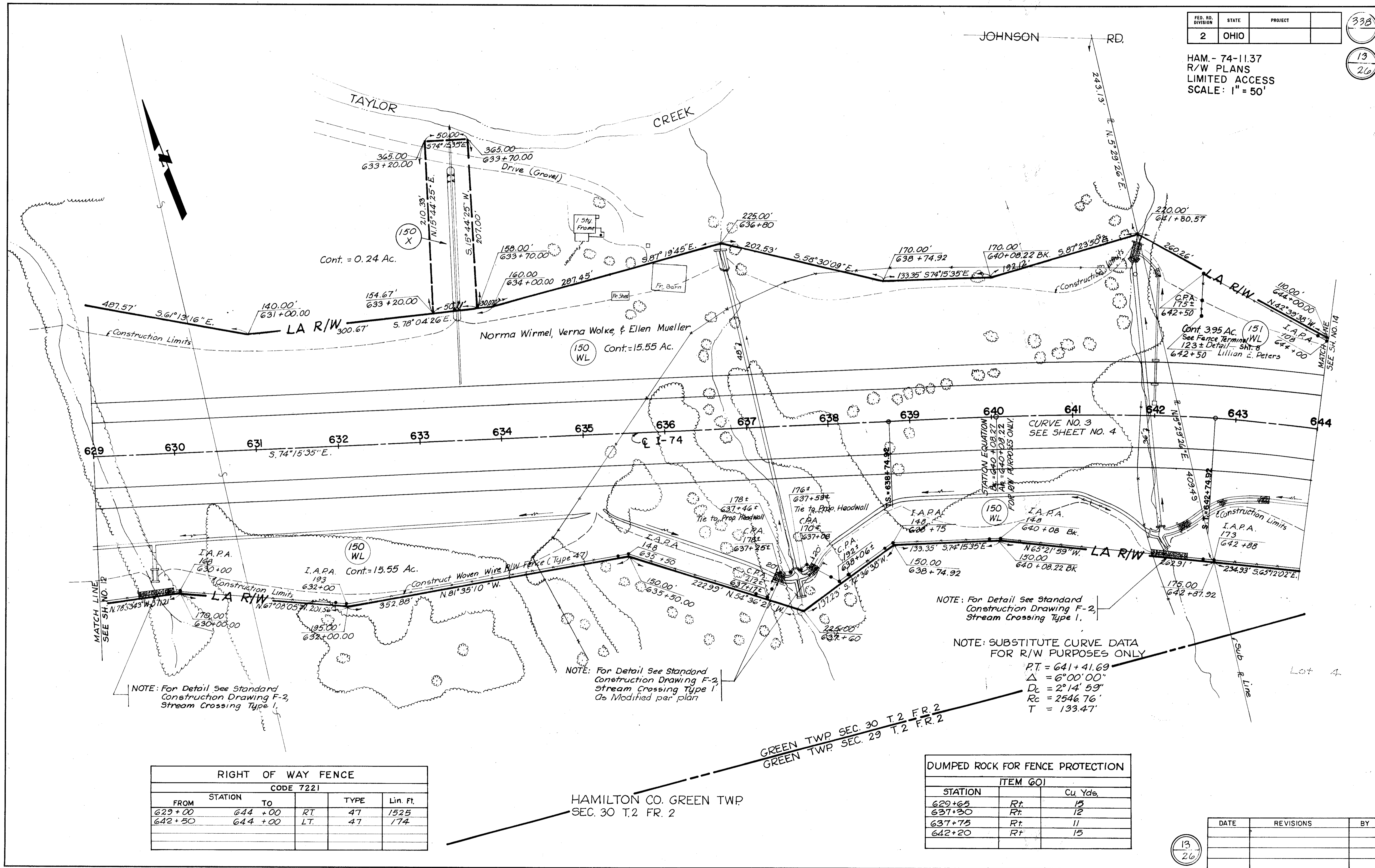
RIGHT OF WAY FENCE				
CODE 7221				
FROM STATION	TO	TYPE		Lin. Ft.
617 + 67 ±	629 + 00	RT.	47	906

DUMPED ROCK FOR FENCE PROTECTION		
ITEM 601		
STATION		Cu. Yds.
626 + 50	RT.	15

HAMILTON CO. GREEN TWP.
SEC 30 T2 FR 2

DATE	REVISED	BY

HAM - 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE: 1" = 50'



NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1 as Modified per plan

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: SUBSTITUTE CURVE DATA FOR R/W PURPOSES ONLY

P.T. = 641+41.69
Δ = 6°00'00"
Dc = 2°14'59"
Rc = 2546.76'
T = 133.47'

RIGHT OF WAY FENCE				
CODE 7221				
FROM STATION	TO	TYPE		Lin. Ft.
629+00	644+00	RT	47	1525
642+50	644+00	LT	47	174

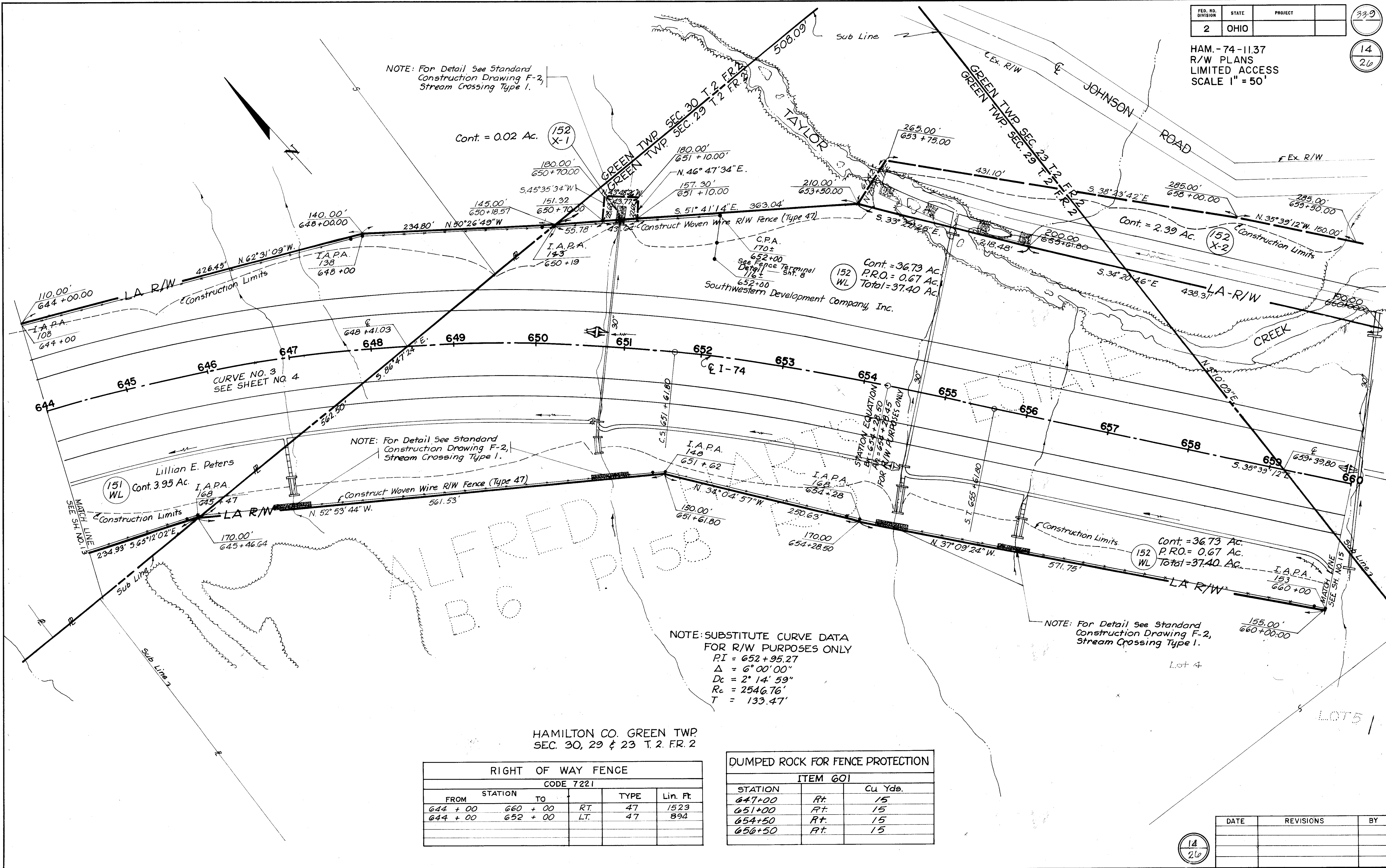
HAMILTON CO. GREEN TWP
SEC. 30 T.2 FR. 2

DUMPED ROCK FOR FENCE PROTECTION		
STATION	ITEM	Cu. Yds.
629+65	R+	15
637+30	R+	12
637+75	R+	11
642+20	R+	15

DATE	REVISIONS	BY

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.



NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: SUBSTITUTE CURVE DATA FOR R/W PURPOSES ONLY
 $PI = 652 + 95.27$
 $\Delta = 6^{\circ} 00' 00''$
 $Dc = 2^{\circ} 14' 59''$
 $Rc = 2546.76'$
 $T = 133.47'$

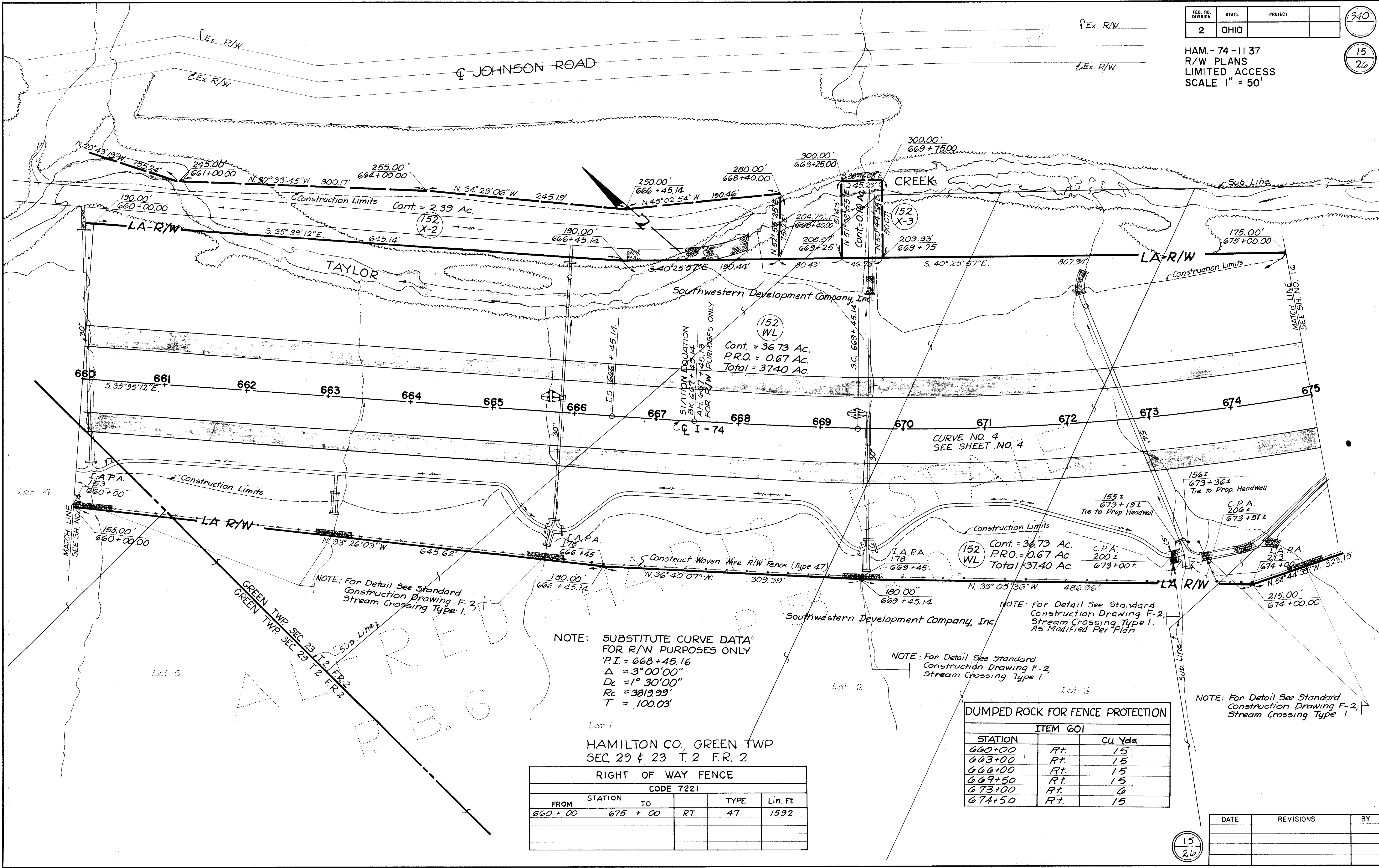
HAMILTON CO. GREEN TWP.
SEC. 30, 29 & 23 T. 2. FR. 2

RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
644 + 00	660 + 00	RT.	47	1523
644 + 00	652 + 00	LT.	47	892

DUMPED ROCK FOR FENCE PROTECTION		
ITEM 601		
STATION	Rt.	Cu Yds.
647+00	Rt.	15
651+00	Rt.	15
654+50	Rt.	15
656+50	Rt.	15

DATE	REVISIONS	BY

HAM - 74 - 11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'



NOTE: SUBSTITUTE CURVE DATA FOR R/W PURPOSES ONLY
 P.I. = 668+45.16
 $\Delta = 3^{\circ}00'00''$
 $D_c = 1^{\circ}30'00''$
 $R_c = 3819.99'$
 $T = 100.03'$

HAMILTON CO., GREEN TWP.
 SEC. 29 & 23 T. 2 F.R. 2

RIGHT OF WAY FENCE				
CODE 7221				
FROM STATION	TO	TYPE		Lin. Ft.
660+00	675+00	RT	47	1592

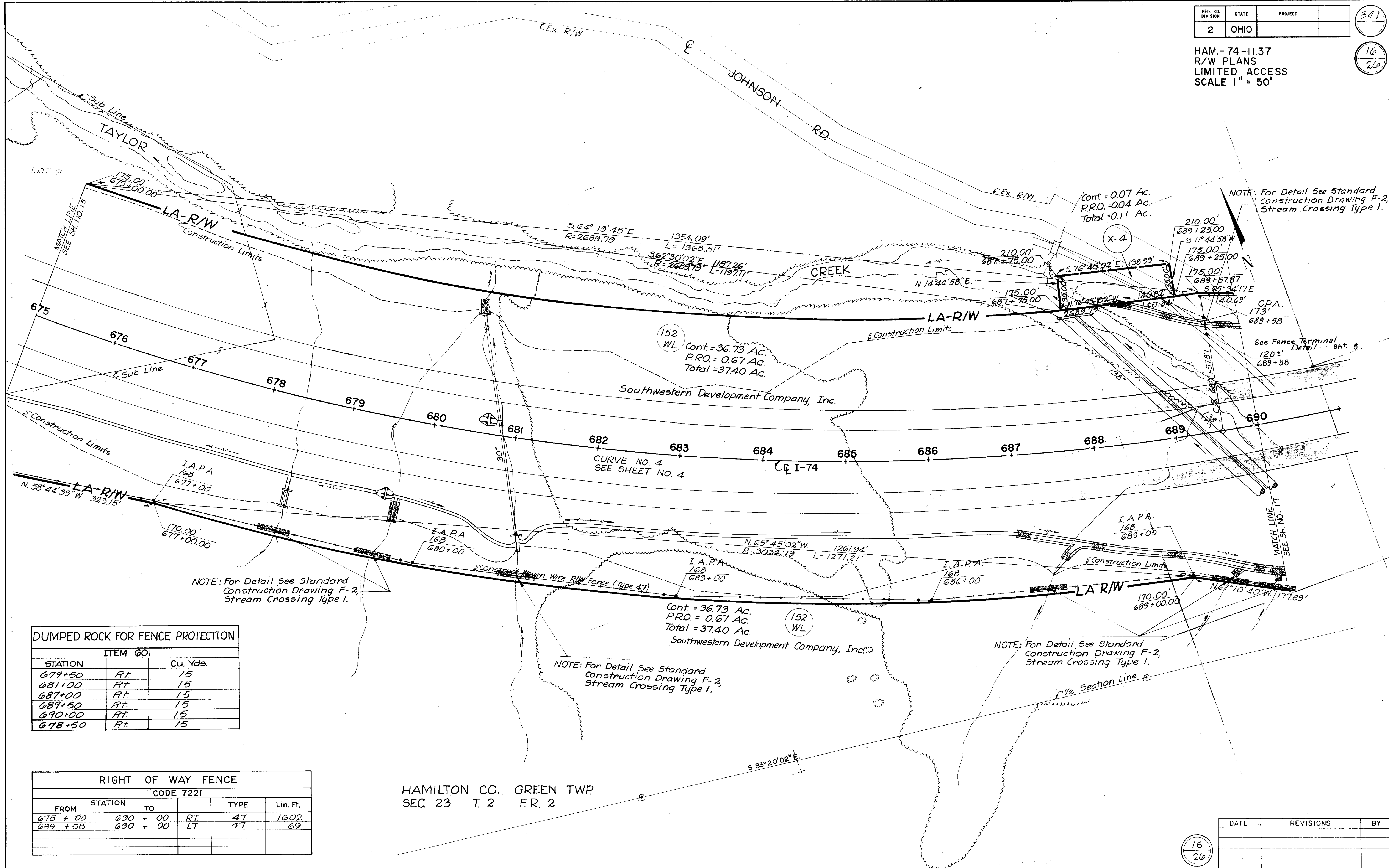
DUMPED ROCK FOR FENCE PROTECTION

ITEM 601		
STATION		Cu Yds.
660+00	Rt.	15
663+00	Rt.	15
666+00	Rt.	15
669+50	Rt.	15
673+00	Rt.	0
674+50	Rt.	15

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1

DATE	REVISIONS	BY

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'



NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

DUMPED ROCK FOR FENCE PROTECTION		
STATION	ITEM GOI	Cu. Yds.
679+50	Rt.	15
681+00	Rt.	15
687+00	Rt.	15
689+50	Rt.	15
690+00	Rt.	15
678+50	Rt.	15

RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
675 + 00	690 + 00	RT	47	1602
689 + 58	690 + 00	LT	47	69

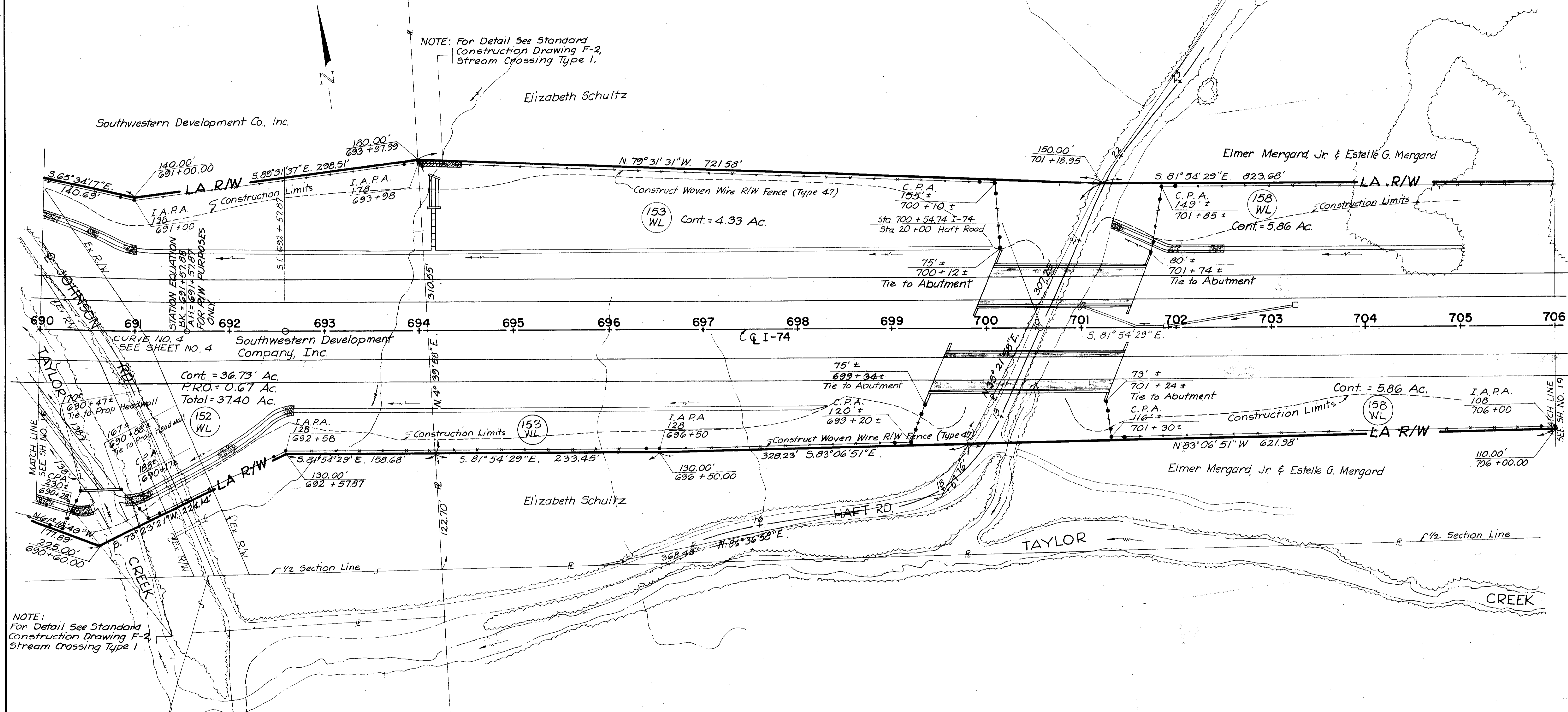
HAMILTON CO. GREEN TWP.
SEC. 23 T. 2 FR. 2

DATE	REVISIONS	BY

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

NOTE: SUBSTITUTE CURVE DATA
FOR R/W PURPOSES ONLY
P.I. = 690 + 57.90
 $\Delta = 3^{\circ}00'00''$
 $D_c = 1^{\circ}30'00''$
 $R_c = 3819.99'$
 $T = 100.03'$

NOTE: For Detail See Standard
Construction Drawing F-2,
Stream Crossing Type I.



NOTE:
For Detail See Standard
Construction Drawing F-2,
Stream Crossing Type I.

DUMPED ROCK FOR FENCE PROTECTION		
ITEM 601		
STATION	ITEM	Cu. Yds.
794+00	Lt.	15

RIGHT OF WAY FENCE				
CODE 7221				
FROM STATION	TO	TYPE		Lin. Ft.
690 + 00	706 + 00	RT.	47	1487
690 + 00	706 + 00	LT.	47	1566

HAMILTON CO, GREEN TWP.
SEC. 23 T. 2 F. R. 2

DATE	REVISIONS	BY

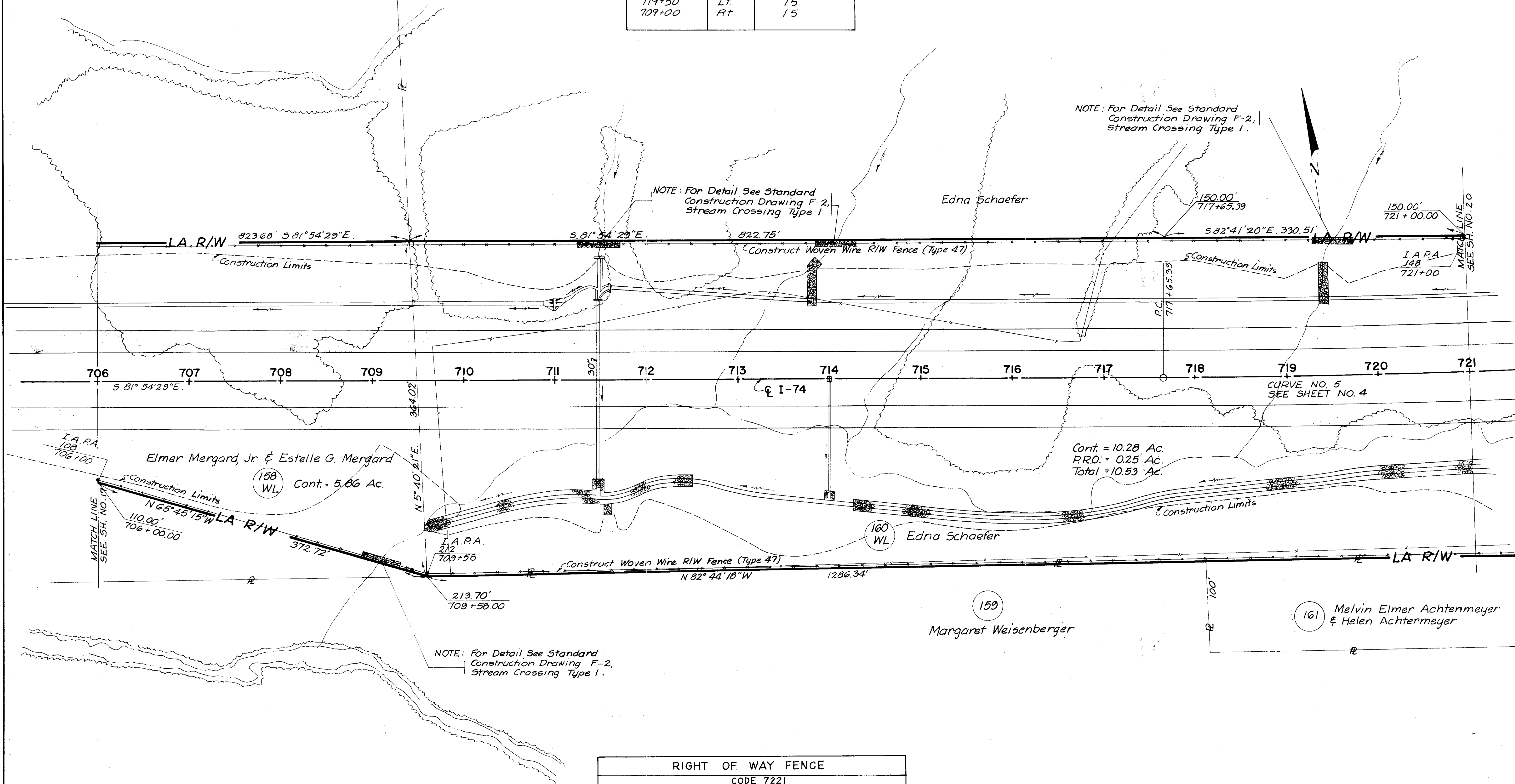
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

343

18
26

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

DUMPED ROCK FOR FENCE PROTECTION		
STATION	ITEM GOI	Cu Yds.
711+50	Lt.	15
714+00	Lt.	15
719+50	Lt.	15
709+00	Rt.	15



RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	706 + 00	721 + 00	RT	1524
	706 + 00	721 + 00	LT	1496

HAMILTON CO. GREEN TWP
SEC. 23 T. 2 FR. 2

DATE	REVISIONS	BY

18
26

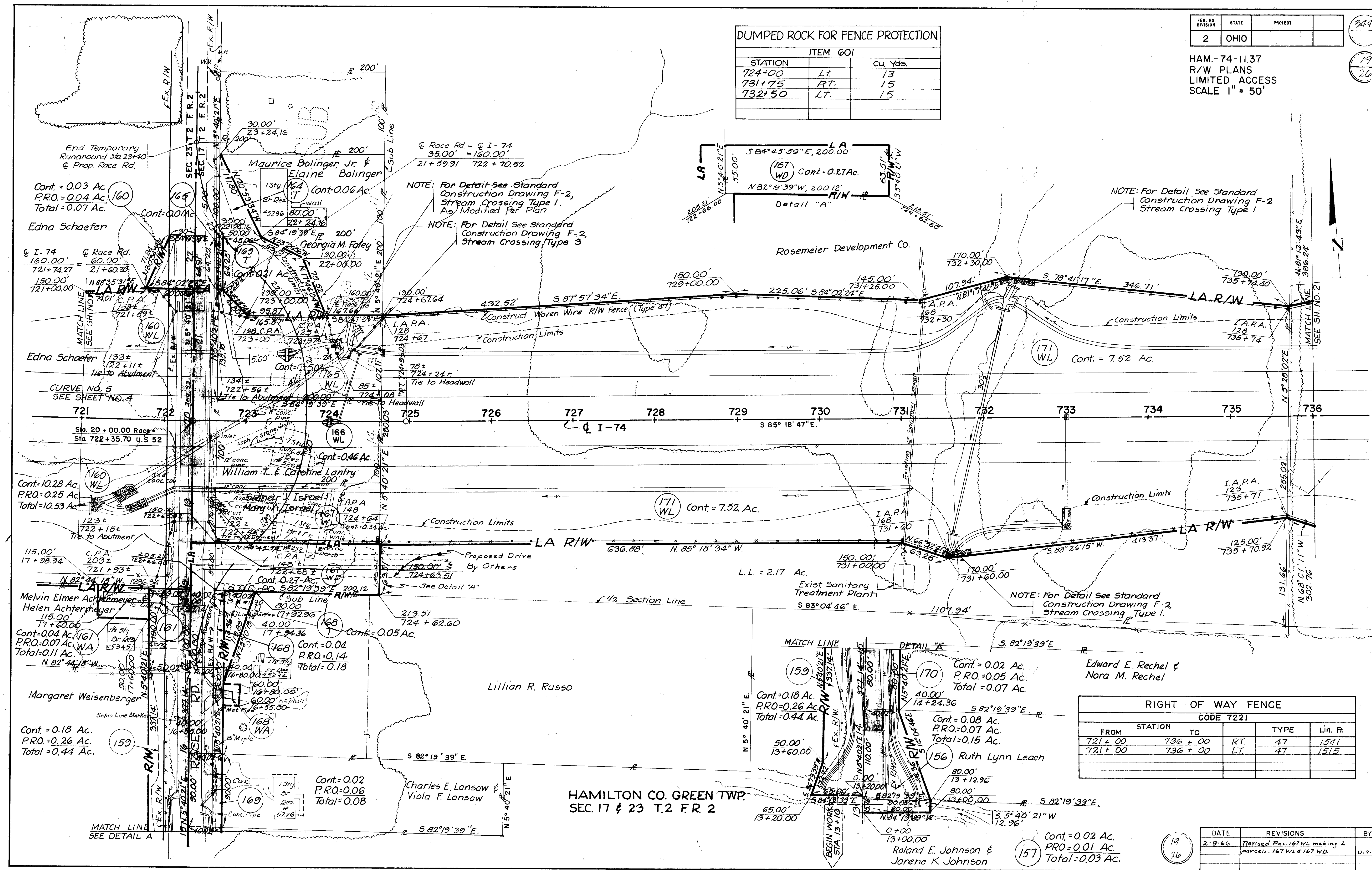
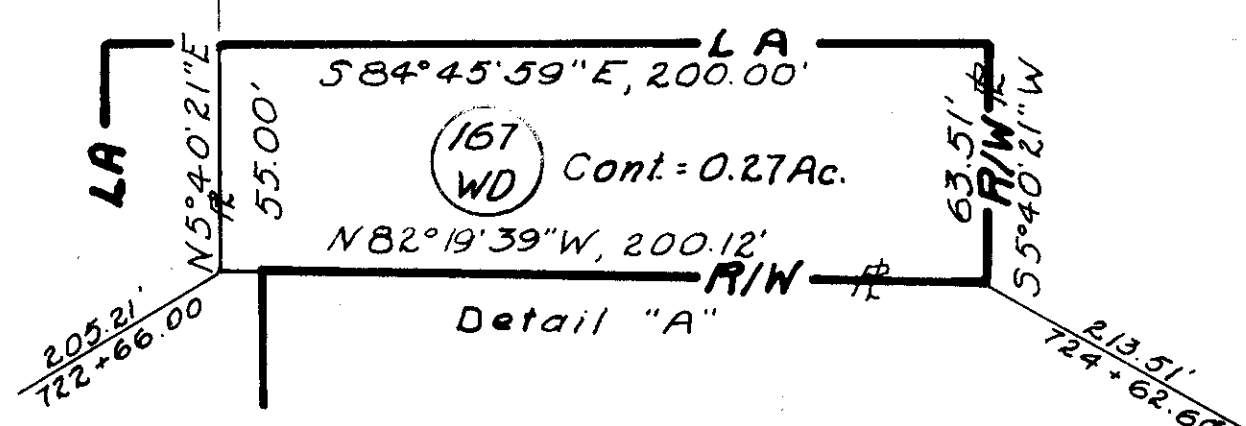
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

344
19
26

HAM-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

DUMPED ROCK FOR FENCE PROTECTION

STATION	ITEM	Cu. Yds.
724+00	Lt.	13
731+75	Rt.	15
732+50	Lt.	15



RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	721+00	736+00	RT	47
	721+00	736+00	LT	47

DATE	REVISIONS	BY
2-9-66	Revised Plan 167 WL making 2 parcels, 167 WL & 167 WD.	D.R.C.

R/W PLAN STA. 721+00 TO 736+00

HAMILTON CO. GREEN TWP.
SEC. 17 & 23 T.2 F.R.2

Cont. = 0.02 Ac.
PRO = 0.01 Ac.
Total = 0.03 Ac.
157
Roland E. Johnson &
Jorene K. Johnson

Cont. = 0.03 Ac.
PRO = 0.04 Ac.
Total = 0.07 Ac.
160
Edna Schaefer

Cont. = 10.28 Ac.
PRO = 0.25 Ac.
Total = 10.53 Ac.
160
Edna Schaefer

Cont. = 0.04 Ac.
PRO = 0.07 Ac.
Total = 0.11 Ac.
161
Melvin Elmer Achtermeier

Cont. = 0.18 Ac.
PRO = 0.26 Ac.
Total = 0.44 Ac.
159
Margaret Weisenberger

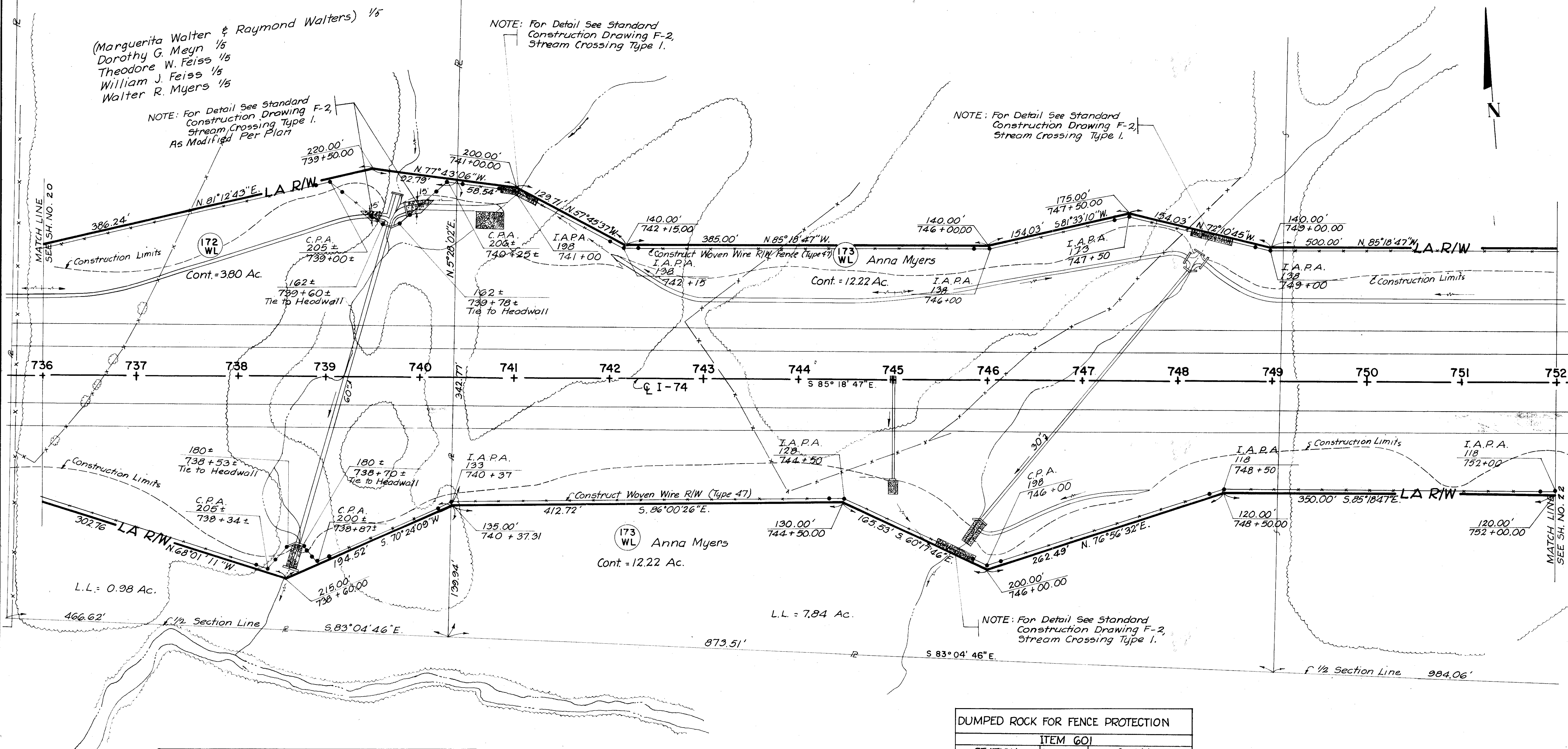
Cont. = 0.02
PRO = 0.06
Total = 0.08
169
Charles E. Lansaw &
Viola F. Lansaw

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1. As Modified Per Plan

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 3

NOTE: For Detail See Standard Construction Drawing F-2 Stream Crossing Type 1

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.



NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1, As Modified Per Plan

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

RIGHT OF WAY FENCE				
CODE 7221				
FROM STATION	TO	TYPE		Lin. Ft.
736 + 00	752 + 00	RT.	47	1646
736 + 00	752 + 00	LT.	47	1648

HAMILTON CO. GREEN TWP
SEC. 17 T. 2 F. R. 2

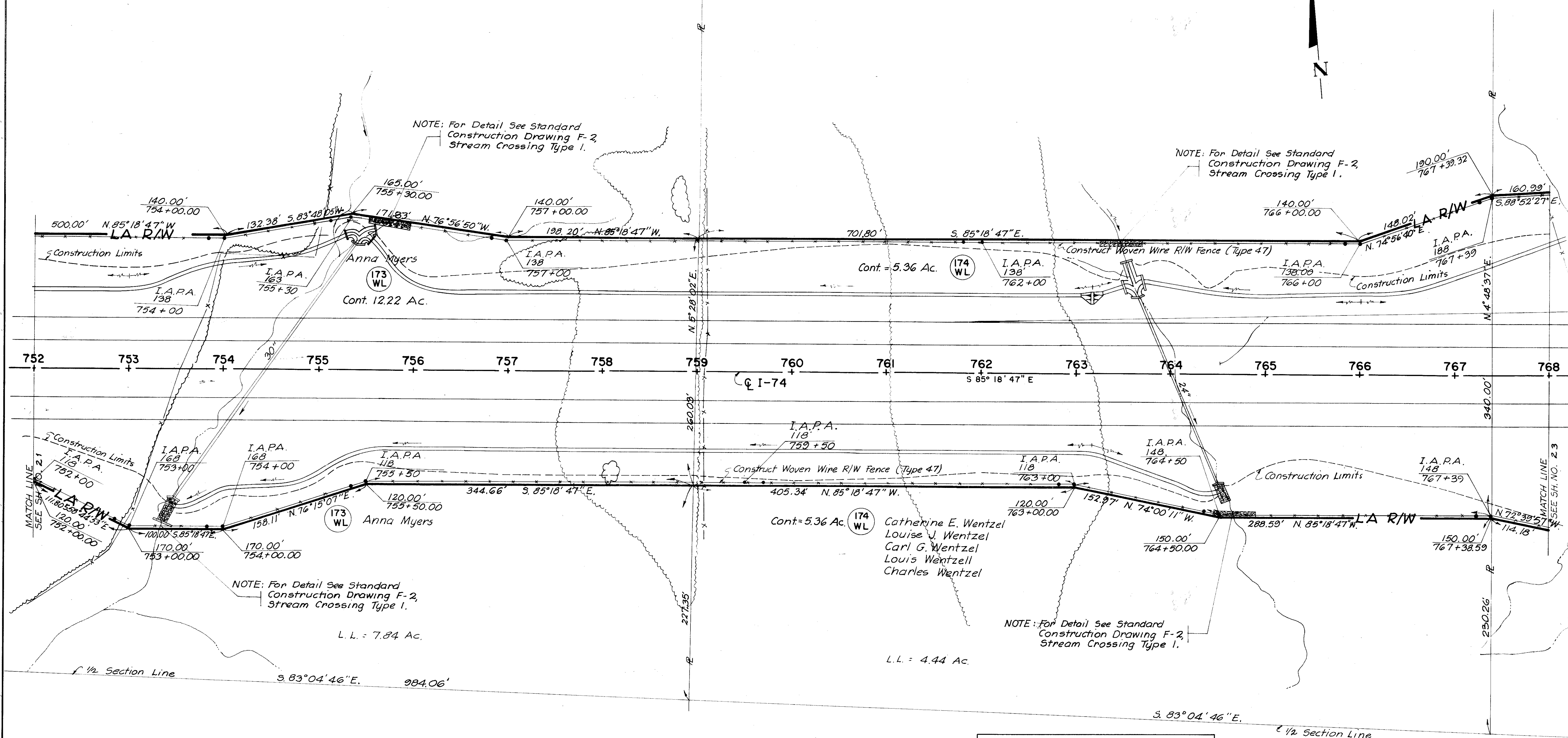
DUMPED ROCK FOR FENCE PROTECTION		
STATION	ITEM	Cu. Yds.
639 + 50	Lt.	12
639 + 75	Lt.	19
741 + 00	Lt.	15
745 + 50	Rt.	15
748 + 50	Lt.	15

DATE	REVISIONS	BY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

346
21
26

HAM.-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'



RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	752 + 00	768 + 00	RT.	1624
	752 + 00	768 + 00	LT.	1614

HAMILTON CO. GREEN TWP
SEC. 17 T 2 F. R. 2

DUMPED ROCK FOR FENCE PROTECTION		
STATION	ITEM	Qty.
753 + 50	Rt.	15
755 + 00	Lt.	15
763 + 50	Lt.	15
764 + 50	Rt.	15

DATE	REVISIONS	BY

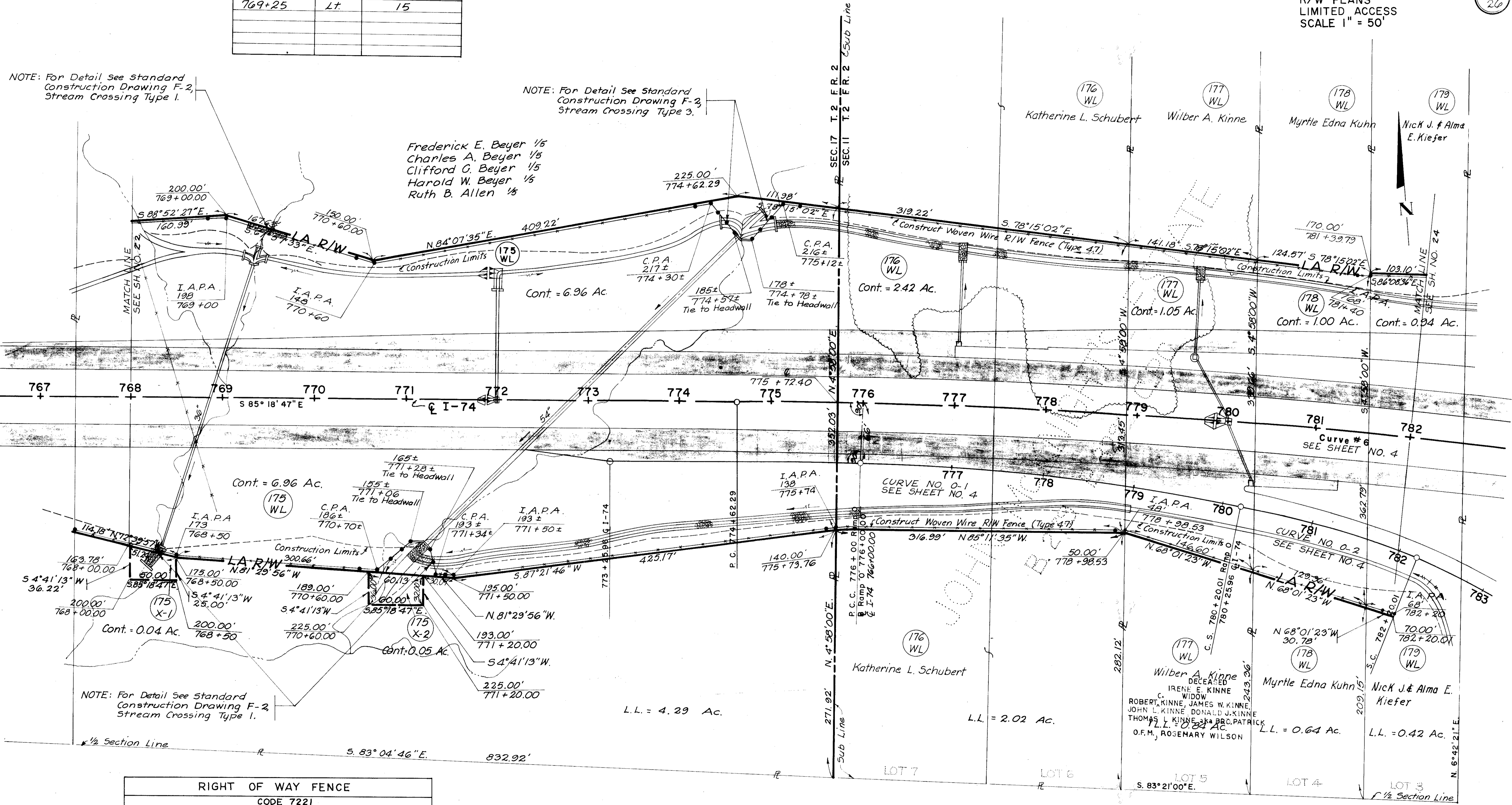
R/W PLAN STA. 752+00 TO 768+00

DUMPED ROCK FOR FENCE PROTECTION		
ITEM 601		
STATION	Lt.	Cu. Yds.
769+25	Lt.	15

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 1.

NOTE: For Detail See Standard Construction Drawing F-2, Stream Crossing Type 3.

Frederick E. Beyer 1/5
Charles A. Beyer 1/5
Clifford G. Beyer 1/5
Harold W. Beyer 1/5
Ruth B. Allen 1/5



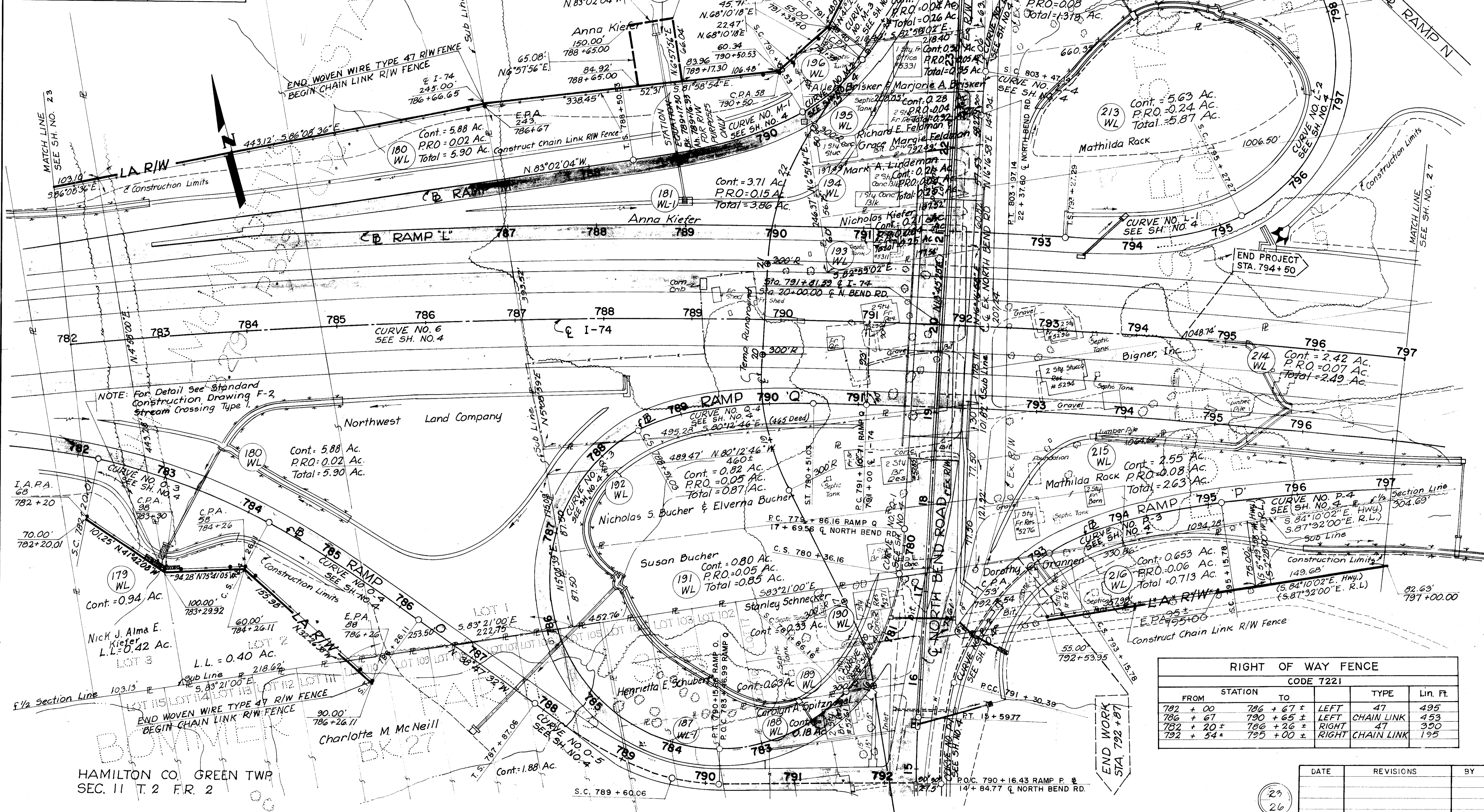
RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	768+00	782+00	RT	1416
	768+00	782+00	LT	1445

HAMILTON CO. GREEN TWP
SEC. 17 & 11. T 2 F. R. 2

DATE	REVISIONS	BY
2-15-66	Per 179 WL Was Carl B. Kuhn RLR	
4-13-66	BENEFICIARIES ADDED	R.L.R.

DUMPED ROCK FOR FENCE PROTECTION		
ITEM 601		
STATION	R.F.	Cu. Yds.
783+00		15

NOTE: SUBSTITUTE CURVE DATA FOR R/W PURPOSES ONLY
 $PI = 789+84.64$
 $\Delta = 23^{\circ}00'00''$
 $D_c = 1721'58''$
 $R_c = 332.81'$
 $T = 67.71'$



NOTE: For Detail See Standard Construction Drawing F-2 Stream Crossing Type 1

RIGHT OF WAY FENCE				
CODE T221				
FROM STATION	TO	TYPE	Lin. Ft.	
782 + 00	786 + 67 ±	LEFT	47	495
786 + 67	790 + 65 ±	LEFT	CHAIN LINK	453
782 + 20 ±	786 + 26 ±	RIGHT	47	350
792 + 54 ±	795 + 00 ±	RIGHT	CHAIN LINK	195

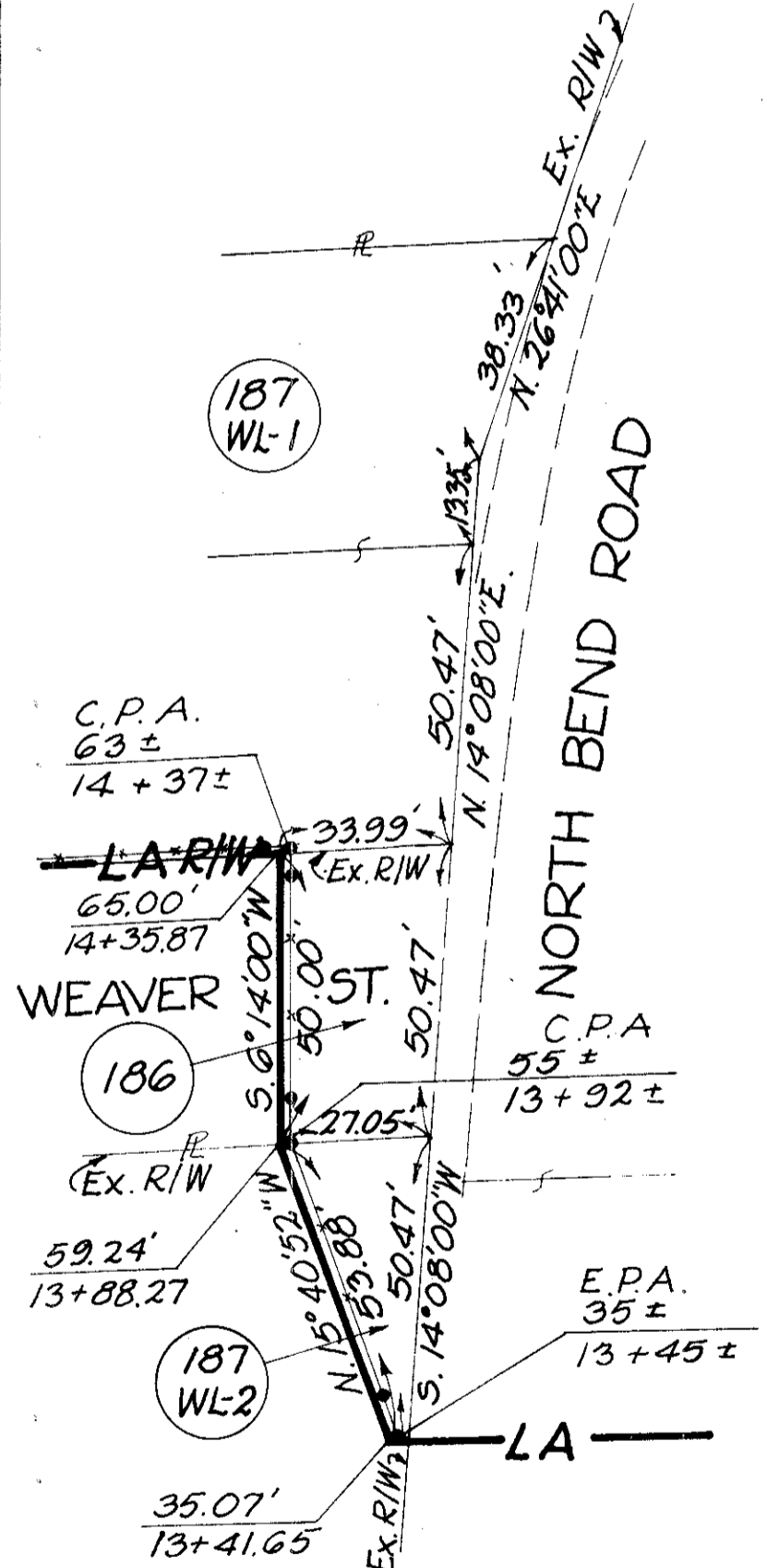
DATE	REVISIONS	BY

HAMILTON CO. GREEN TWP
SEC. 11 T. 2 F.R. 2

HAM. 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

Superseded by Sheet No. 3495

END WOVEN WIRE TYPE 47 R/W FENCE
BEGIN CHAIN LINK R/W FENCE



DETAIL 'F'
No Scale

RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
786 + 26±	792 + 05±	RT.	CHAIN LINK	721
13 + 50±	16 + 70±	RT.	CHAIN LINK	318

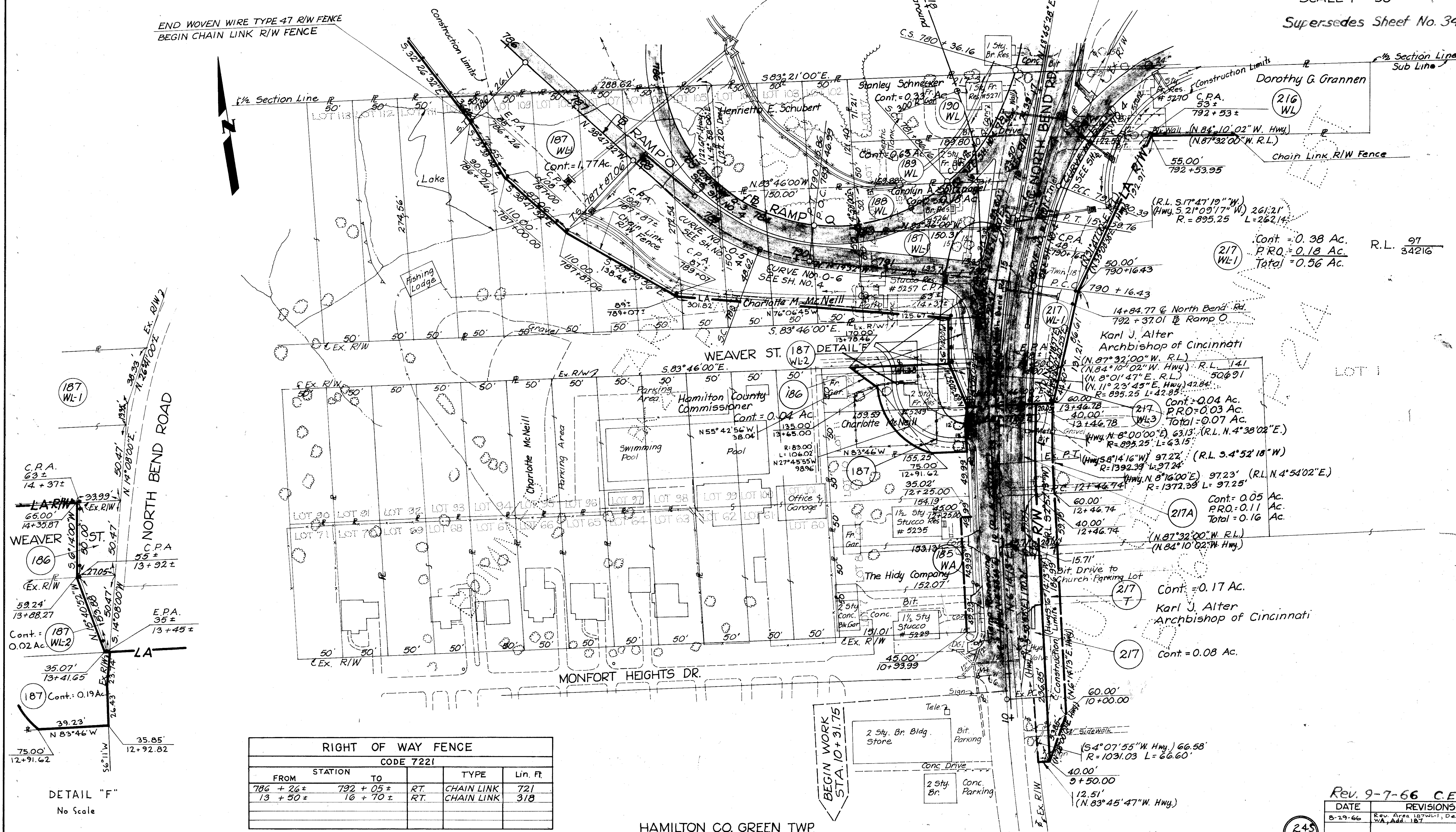
HAMILTON CO. GREEN TWP.
SEC. II T. 2 FR. 2

Rev. 9-7-66 C.E.H.

DATE	REVISIONS	BY

HAM. 74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

Supersedes Sheet No. 349



END WOVEN WIRE TYPE 47 R/W FENCE
BEGIN CHAIN LINK R/W FENCE



RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
	786 + 26 ±	792 + 05 ±	RT. CHAIN LINK	721
	13 + 50 ±	16 + 70 ±	RT. CHAIN LINK	318

DETAIL "F"
No Scale

HAMILTON CO. GREEN TWP.
SEC. II T. 2 FR. 2

Rev. 9-7-66 C.E.H.

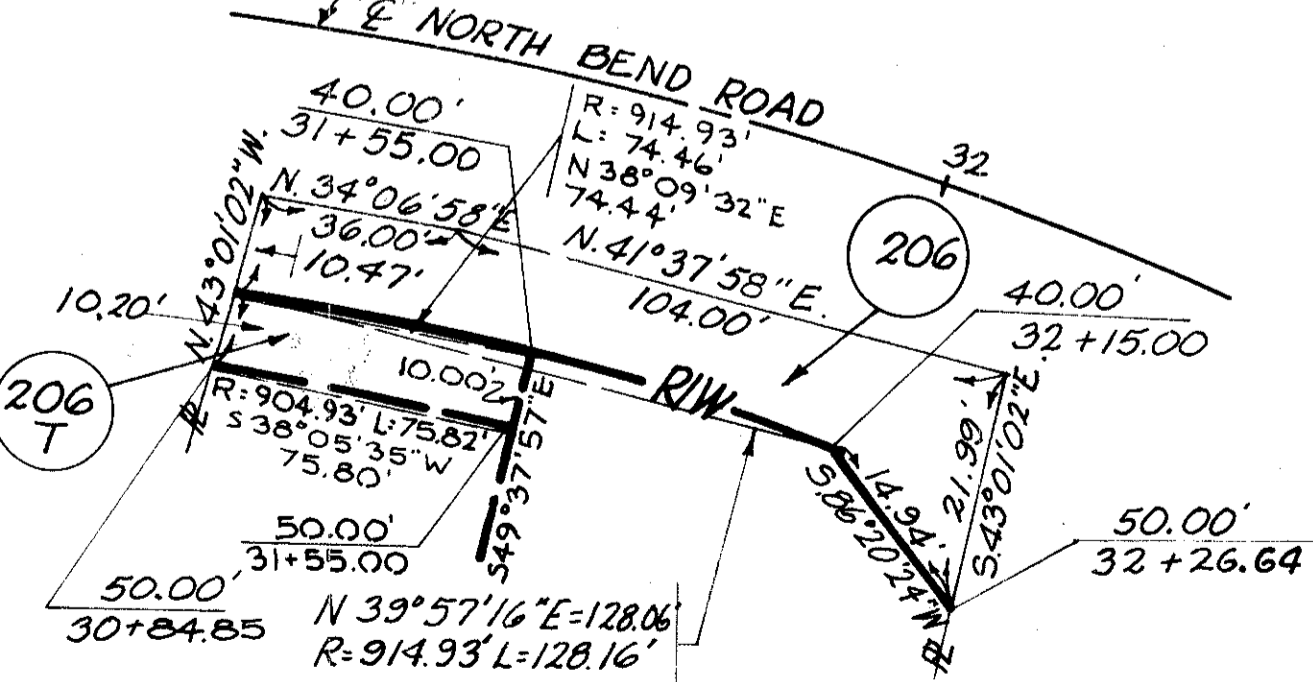
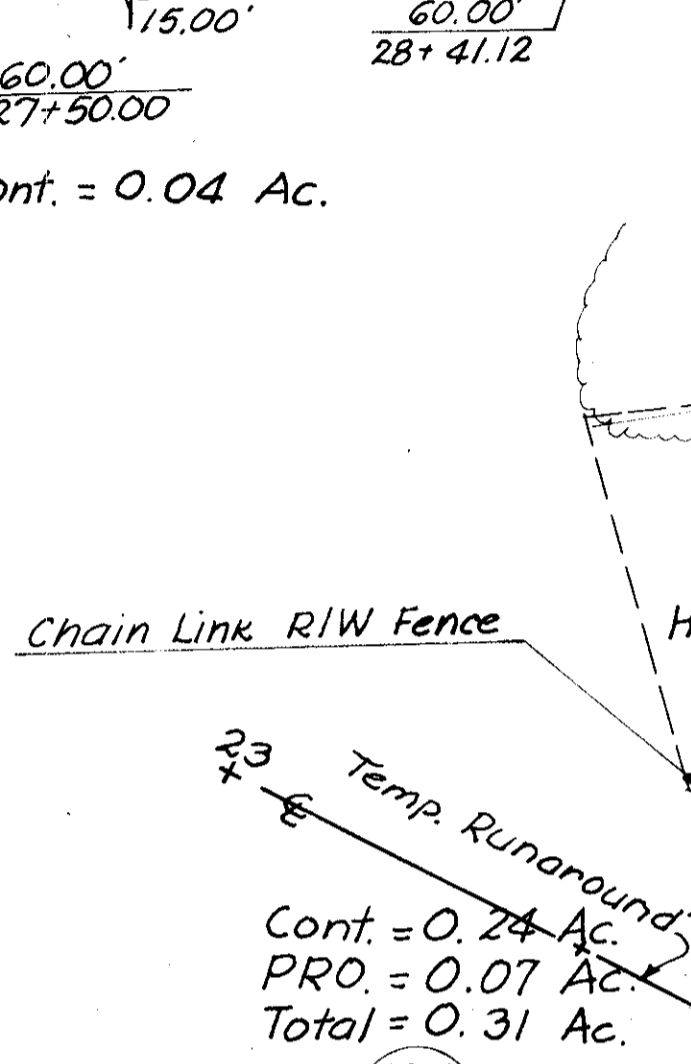
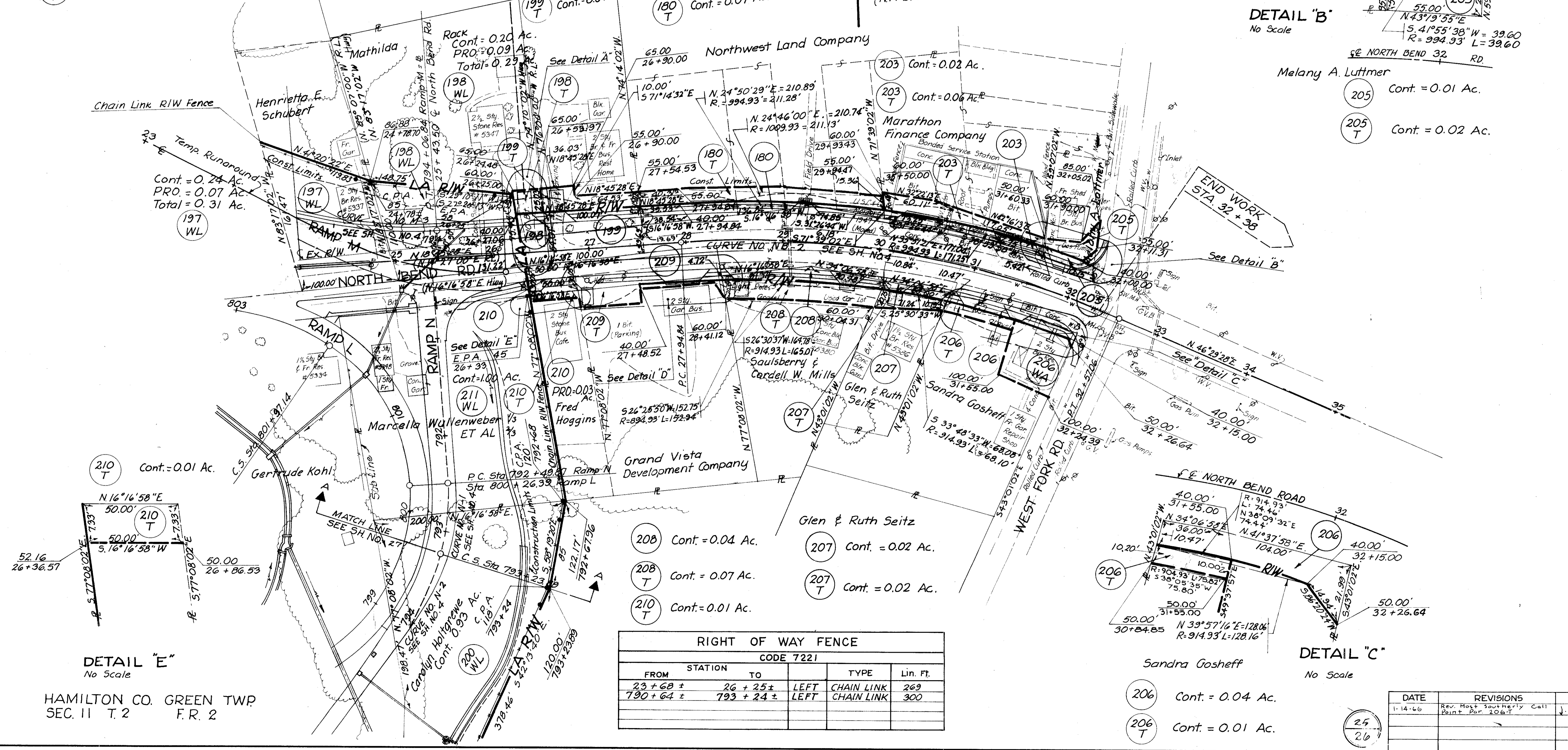
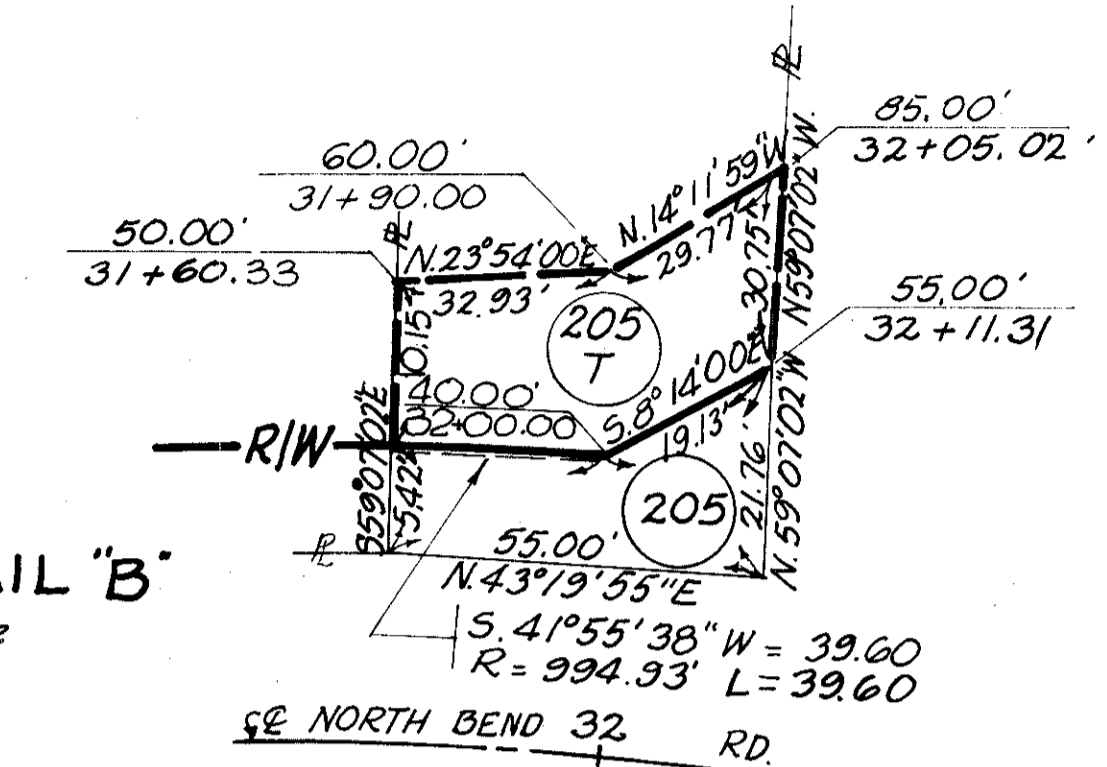
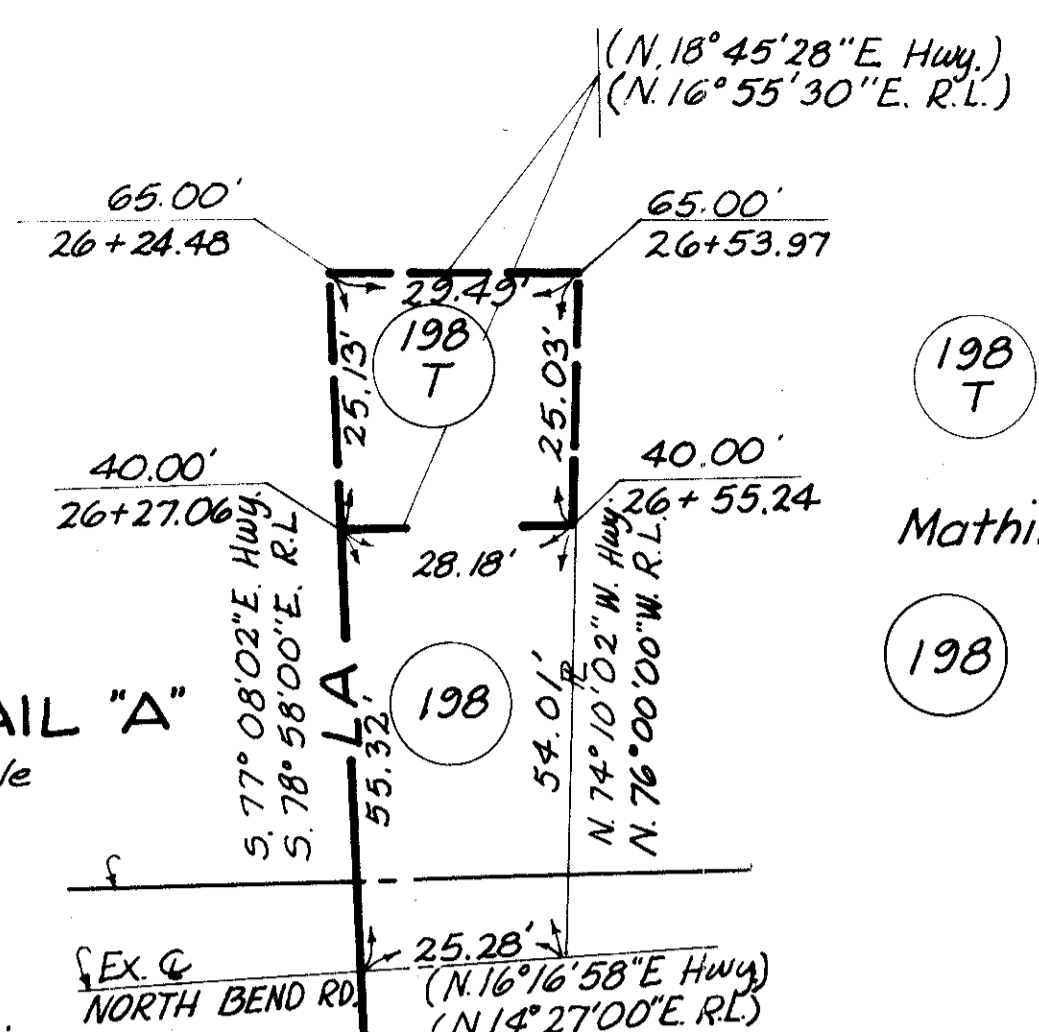
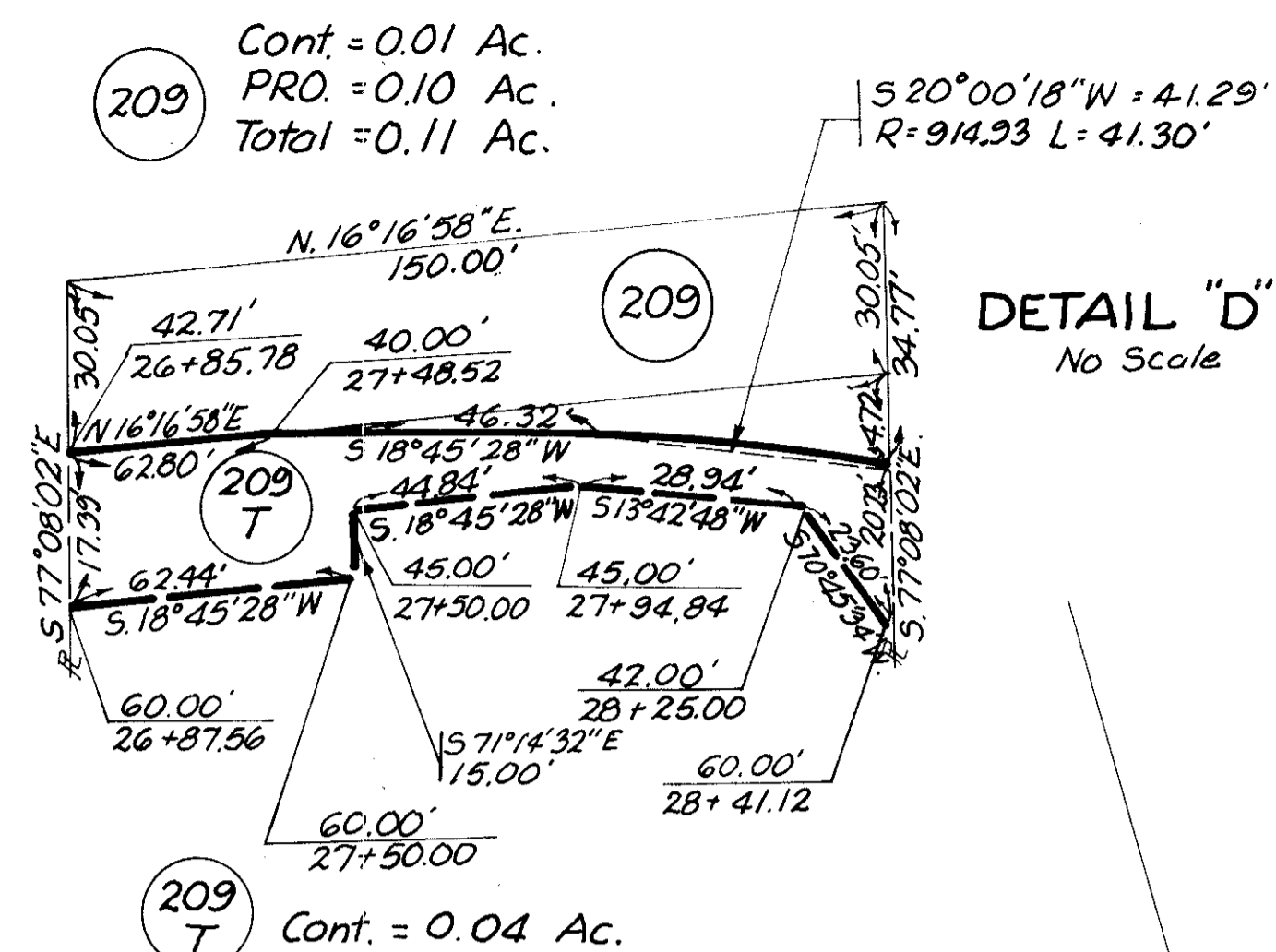
DATE	REVISIONS	BY
8-29-66	Rev. Area 187 WL-1, Del. 187 WA, Add. 187	J.P.C.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

350

HAM. 74-1137
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

25
26



100% COUNTY PARTICIPATION
STA. 26 + 37.80

RIGHT OF WAY FENCE					
CODE 7221					
FROM	STATION	TO	TYPE	Lin. Ft.	
23 + 68 ±	26 + 25 ±	26 + 25 ±	LEFT CHAIN LINK	269	
790 + 64 ±	793 + 24 ±	793 + 24 ±	LEFT CHAIN LINK	300	

206 Cont. = 0.04 Ac.
206 T Cont. = 0.01 Ac.

DATE	REVISIONS	BY
1-14-66	Rev. Max. Southerly Call Point Per 206 T	J.P.M.

HAMILTON CO. GREEN TWP.
SEC. 11 T. 2 F. R. 2

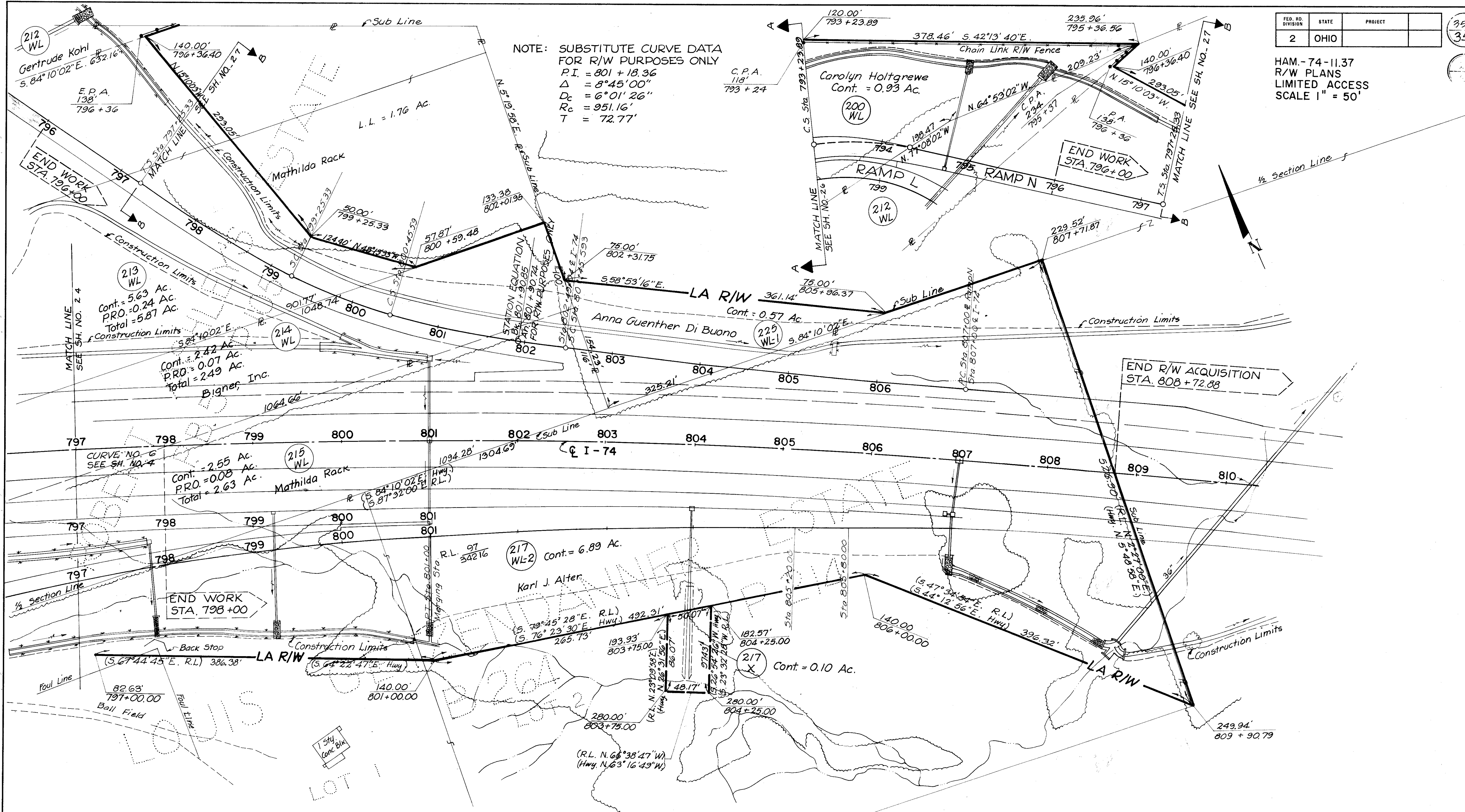
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

351
351

HAM-74-11.37
R/W PLANS
LIMITED ACCESS
SCALE 1" = 50'

NOTE: SUBSTITUTE CURVE DATA FOR R/W PURPOSES ONLY
 P.I. = 801 + 18.36
 $\Delta = 8^{\circ}45'00''$
 $D_c = 6^{\circ}01'26''$
 $R_c = 951.16'$
 $T = 72.77'$

C.P.A.
113'
793 + 24



RIGHT OF WAY FENCE				
CODE 7221				
FROM	STATION	TO	TYPE	Lin. Ft.
793 + 24		796 + 36 ±	LEFT CHAIN LINK	407

HAMILTON CO. GREEN TWP.
SEC. 11 T. 2 F. R. 2

DATE	REVISION	BY

26
26

R/W PLAN STA. 797+00 TO STA. 810+00

GENERAL INFORMATION

INTRODUCTION

The project consists of the relocation of 2.5 miles of USF 52, beginning immediately east of the junction of USF 52 and Fyott Road, extending eastward, and terminating at North Bend Road, 1.4 miles north of Cheviot. Included in this report are profiles of Face Road and North Bend Road.

Proposed grades indicates the following:

- USF 52 - cuts, maximum 61 feet in depth; fill embankment, maximum 60 feet in height.
- Face Road - cut, maximum 6 feet in depth; fill embankment, maximum 11 feet in height.
- North Bend Road - cut, maximum 2 feet in depth, fill embankments, maximum 9 feet in height.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The project is located in the highly dissected, glaciated Lexington peneplain region, in an area where thin glacial drift and residual soils overlie interbedded shales, limestone, and indurated clays, of Ordovician age. Bedrock exposures were noted along the project and measured sections of these outcrops were made.

EXPLOATION

Exploratory borings were made by means of truck-mounted mechanical earth auger, hand auger (in areas of difficult access), and rotary type drill rig, during November and December, 1962, and January and February, 1963. Included in this report are logs of borings and drive rod probes from project HAM-52-7.65, and bridge foundation investigations on the subject project.

INVESTIGATIONAL FINDINGS

Materials immediately below grade and in the embankment foundation areas are comprised of shallow, generally not deeper than 5 feet, silt clays and occasional clays, in the A-6 and A-7-6 classifications, having moisture contents generally in the lower portions of the plastic range, as well as interbedded shales, limestone, and indurated clays.

Bedrock is anticipated in the excavations in the following areas:

- Stations 611+00 to 611+75 - interbedded shale and limestone at left grade, and in the left ditch.
- Stations 611+75 to 613+00 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 613+00 to 615+50 - interbedded shale and limestone at both grades, and in the median and left ditches and left backslope.
- Stations 615+50 to 619+50 - interbedded shale and limestone at both grades, and in the ditches and backslopes.
- Stations 619+50 to 620+50 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 620+50 to 622+00 - interbedded shale and limestone at right grade, and in the right ditch and backslope.
- Stations 622+00 to 624+50 - interbedded shale and limestone in the right ditch and backslope.
- Stations 624+50 to 627+70 - interbedded shale and limestone in the right ditch and backslope.
- Stations 627+70 to 629+00 - interbedded shale and limestone at right grade, and in the right and median ditches and right backslope.
- Stations 629+00 to 634+00 - interbedded shale and limestone in the right ditch and backslope.
- Stations 634+00 to 634+50 - interbedded shale and limestone in the median and right ditches and right backslope.
- Stations 634+50 to 639+80 - interbedded shale and limestone in the median and right ditches and right backslope.
- Stations 639+80 to 640+20 - interbedded clay bedrock and limestone at right grade, and in the right ditch and backslope.
- Stations 640+20 to 642+50 - interbedded shale and limestone in the right and median ditches and right backslope.
- Stations 642+50 to 650+25 - interbedded shale and limestone at left grade, and in the median and right ditches and right backslope.
- Stations 650+25 to 652+10 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 652+10 to 655+50 - interbedded shale and limestone at right grade, and in the right ditch and backslope.
- Stations 655+50 to 659+50 - interbedded shale and limestone in the right ditch and backslope.
- Stations 659+50 to 664+70 - interbedded shale and limestone in the right ditch and backslope.
- Stations 664+70 to 666+50 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 666+50 to 671+40 - interbedded shale and limestone in the median ditch.
- Stations 671+40 to 675+00 - interbedded shale and limestone in the median ditch.
- Stations 675+00 to 676+00 - interbedded shale and limestone in the median and right ditches.
- Stations 676+00 to 677+70 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 677+70 to 680+50 - interbedded shale and limestone in the right ditch and backslope; probably in the median ditch where depth of cut exceeds 5 feet.
- Stations 680+50 to 681+00 - interbedded shale and limestone in the median ditch.
- Stations 681+00 to 681+00 - interbedded shale and limestone at both grades, and in the median and right ditches and right backslope.
- Stations 681+00 to 686+40 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 686+40 to 687+40 - interbedded shale and limestone at right grade, and in the right ditch and backslope.
- Stations 687+40 to 688+70 - interbedded shale and limestone in the right ditch and backslope.
- Stations 688+70 to 691+25 - interbedded shale and limestone in the left ditch and backslope.
- Stations 691+25 to 691+70 - interbedded shale and limestone at left grade, and in the left ditch and backslope.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 137 SAMPLES TESTED

DESCRIPTION	H. R. B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Stone fragments with sand, silt, and clay	A-2-7(2)	A-2-7	69	1	2	6	22	47	27	9	2
Silt	A-4(8)	A-4b	0	1	4	50	45	28	4	22	2
Silt and clay	A-6(10)	A-6a	3	4	6	27	50	35	15	17	17
Silty clay	A-6(12)	A-6b	13	3	4	30	50	36	19	17	20
Elastic clay	A-7-5(18)	A-7-5	7	2	0	16	70	62	26	26	5
Clay	A-7-6(16)	A-7-6	7	2	0	22	66	50	26	22	89
Clay bedrock											
Weathered indurated clay											
Weathered shale											2
Indurated Clay											
Shale											
Limestone											
Various other materials											
Sod and/or Topsoil-X' - Approximate depth.											
Auger boring - plan view.											
Drive sample and/or core boring - plan view.											
Auger boring plotted to vertical scale only.											
Drive sample and/or core boring plotted to vertical scale only.											
Number of blows for "Standard Penetration" test. X=number of blows for the first 6 inches. Y=number of blows for the second 6 inches.											
Water content nearly equal to or greater than liquid limit.											
Indicates a non-plastic material with high water content.											
Free water.											
Mechanically driven steel rod sounding - plan view.											
Mechanically driven steel rod sound plotted to vertical scale only.											

NOTE: Figures beside borings indicate water content in percent. e.g. 15

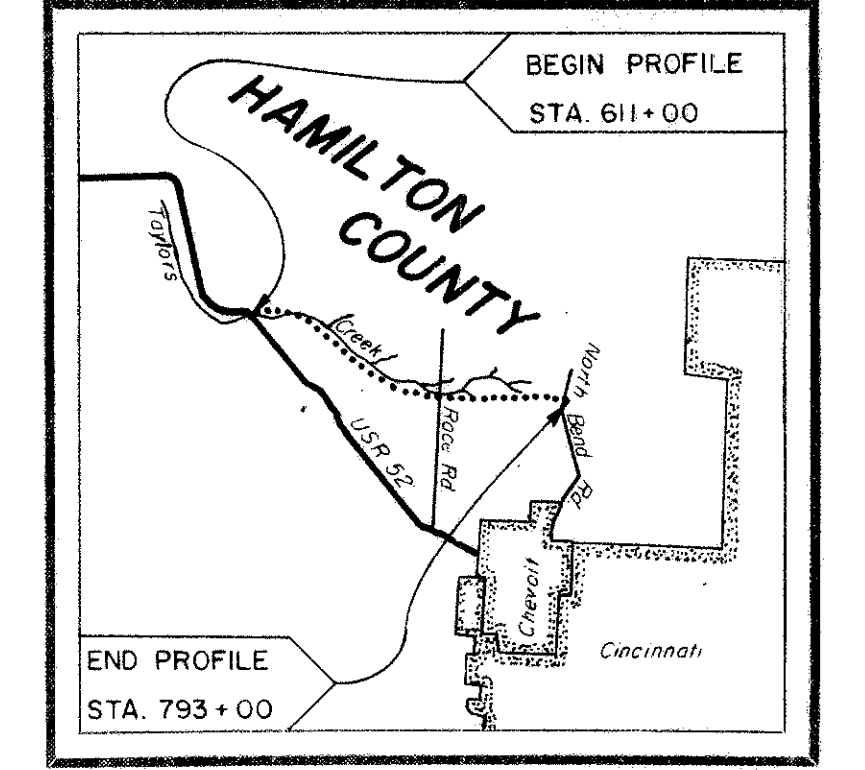
- Stations 691+70 to 692+70 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 692+70 to 694+00 - interbedded shale and limestone at both grades, and in the median and left ditches and left backslope.
- Stations 694+00 to 696+40 - interbedded shale and limestone at both grades, and in the ditches and backslopes.
- Stations 696+40 to 697+40 - interbedded shale and limestone at both grades, and in the median and left ditches and left backslope.
- Stations 697+40 to 698+10 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 698+10 to 699+50 - interbedded shale and limestone at left grade, and in the left ditch and backslope.
- Stations 699+50 to 700+10 - interbedded shale and limestone in the left ditch and backslope.
- Stations 700+10 to 702+50 - interbedded shale and limestone at left grade and in the left ditch and backslope.
- Stations 702+50 to 705+00 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 705+00 to 706+00 - interbedded shale and limestone at both grades, and in the median and left ditches and left backslope.
- Stations 706+00 to 707+50 - interbedded shale and limestone at both grades, and in the ditches and backslopes.
- Stations 707+50 to 708+20 - interbedded shale and limestone at both grades, and in the median and left ditches and left backslope.
- Stations 708+20 to 709+50 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 709+50 to 710+00 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 710+00 to 711+00 - interbedded shale and limestone in the left ditch and backslope.
- Stations 711+00 to 714+70 - interbedded shale and limestone in the left ditch and backslope.
- Stations 714+70 to 715+00 - interbedded shale and limestone at left grade, and in the left ditch and backslope.
- Stations 715+00 to 716+00 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 716+00 to 718+00 - interbedded shale and limestone at left grade, and in the left ditch and backslope.
- Stations 718+00 to 719+50 - interbedded limestone and shale in the left ditch and backslope.
- Stations 719+50 to 721+50 - interbedded shale and limestone at left grade, and in the left ditchline and backslope.
- Stations 721+50 to 722+70 - interbedded shale and limestone at left grade, and in the median and left ditches and left backslope.
- Stations 722+70 to 722+50 - interbedded shale and limestone in the left ditch.
- Stations 722+50 to 723+40 - interbedded shale and limestone in the right ditch and backslope.
- Stations 723+40 to 724+80 - interbedded shale and limestone at right grade, and in the right ditch and backslope.
- Stations 724+80 to 725+00 - interbedded shale and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 725+00 to 725+00 - interbedded shale and limestone at both grades, and in the median and right ditches and right backslope.
- Stations 725+00 to 726+00 - interbedded shale and limestone at both grades, and in the ditches and backslopes.
- Stations 726+00 to 727+75 - interbedded shale and limestone at left grade, and in the left ditch and backslope.
- Stations 727+75 to 729+00 - interbedded shale and limestone in the left ditch and backslope.
- Stations 729+00 to 730+00 - interbedded shale and limestone in the left ditch and backslope.
- Stations 730+00 to 731+00 - interbedded shale and limestone in the left ditch and backslope.
- Stations 731+00 to 731+00 - interbedded indurated clay and limestone at right grade.
- Stations 731+00 to 736+50 - interbedded indurated clay and limestone at right grade, and in the median and right ditches and right backslope.
- Stations 736+50 to 737+00 - interbedded indurated clay and limestone at both grades, and in the ditches and backslope.
- Stations 737+00 to 738+00 - interbedded shale and limestone in the left ditch.

HAM-52-11.37 appearing throughout the Profile Sheets shall read HAM-74-11.37

SOIL PROFILE
HAMILTON COUNTY
HAM-74-11.37
 OHIO STATE HIGHWAY TESTING LABORATORY
 1620 W. BROAD ST., COLUMBUS 23, OHIO

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR 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.

Fed. No. I-74-1(3)11



Recon. - N.P.L. - 11/9/63
 Drilling - Auger - R.L.S., A.J.P., L.M.D. - 11/5/62 to 11/16/62
 Core - K.D.E., D.W.B., W.G.S., W.R.B., C.A.P. - 12/16/62 to 2/8/63
 Drafting - R.P.W., F.E.S. - 2/25/63

Stations 761+50 to 761+00 - interbedded indurated clay and limestone at right grade, and in the median and right ditches and right backslope.

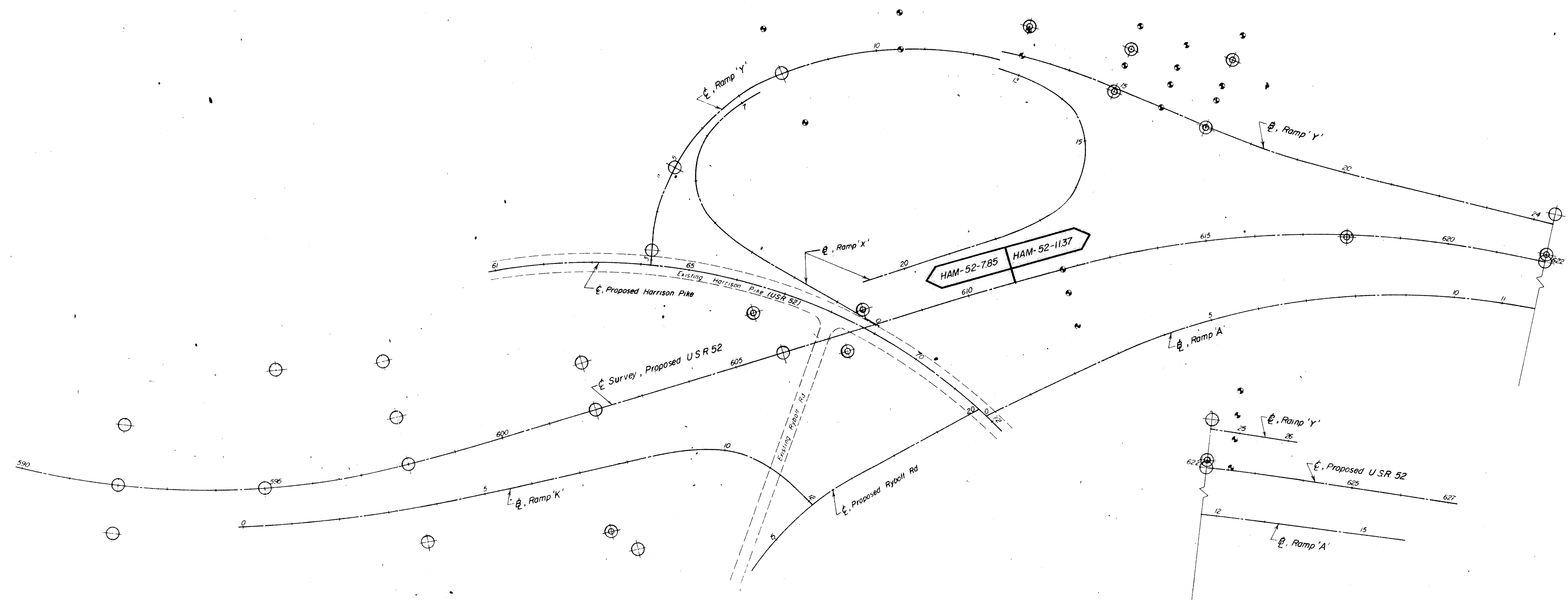
Stations 762+00 to 765+00 - interbedded indurated clay and limestone at both grades, and in the ditches and backslopes.

Race and North Bend Roads

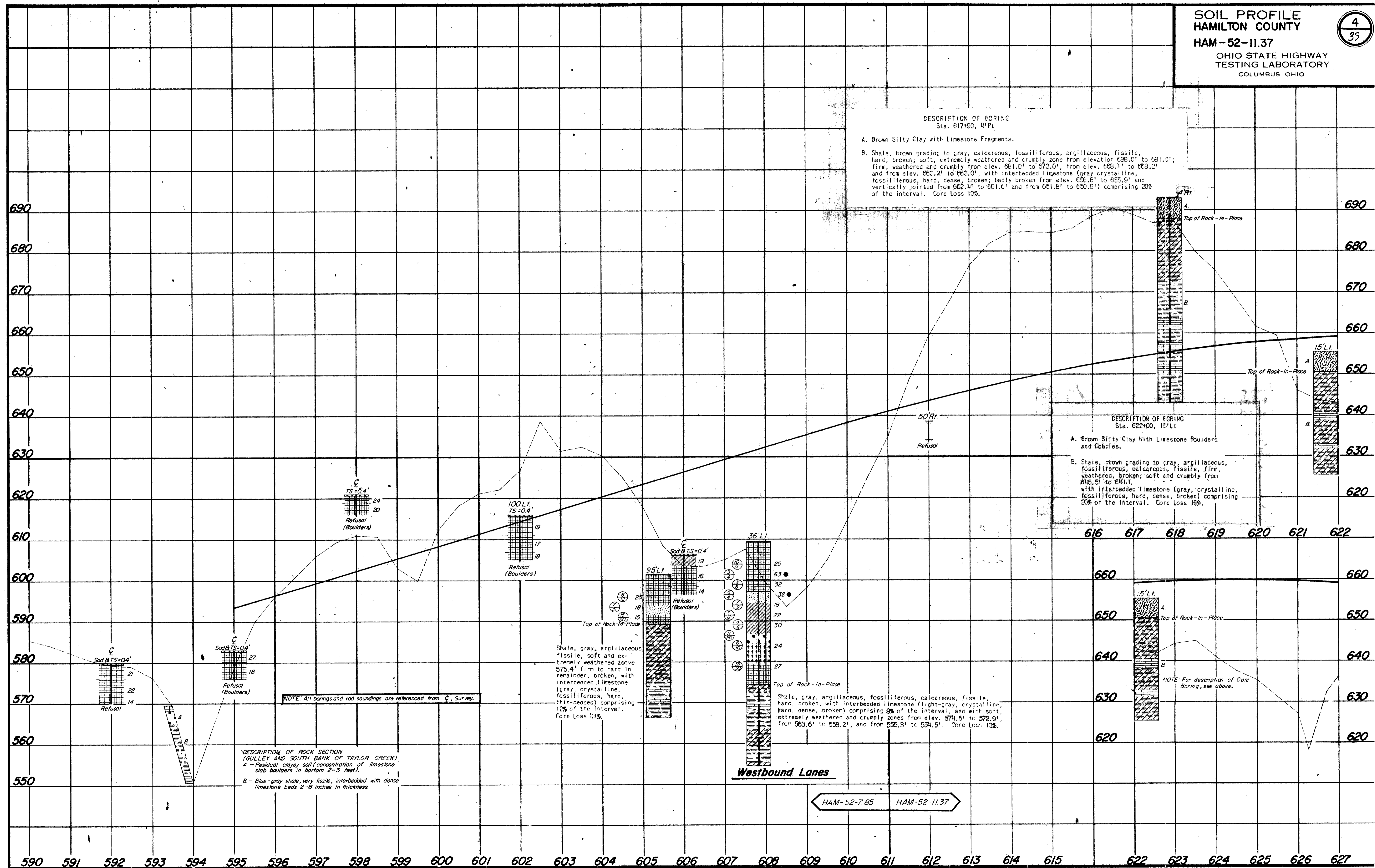
Materials occurring immediately below proposed grades and in the embankment foundation area are comprised of silt clays and clays, in the A-6 and A-7-6 classifications.

Soft materials were encountered at stations 655+00, 659+00, and 770+00.

Throughout the project, the foundation of side-hill embankments comprises shallow soil cover overlying sloping bedrock surface.



CROSS SECTION INDEX	
Station	Sheet No.
USR 52	
612+00	13
622+00	13



DESCRIPTION OF BORING
Sta. 617+00, 1 1/2 Ft.

A. Brown Silty Clay with Limestone Fragments.

B. Shale, brown grading to gray, calcareous, fossiliferous, argillaceous, fissile, hard, broken; soft, extremely weathered and crumbly zone from elevation 688.0' to 681.0'; firm, weathered and crumbly from elev. 681.0' to 673.0', from elev. 668.1' to 668.2' and from elev. 662.2' to 663.0', with interbedded limestone (gray crystalline, fossiliferous, hard, dense, broken; badly broken from elev. 656.8' to 655.9' and vertically jointed from 662.4' to 661.6' and from 651.8' to 650.9') comprising 20% of the interval. Core Loss 10%.

DESCRIPTION OF BORING
Sta. 622+00, 15' Lt.

A. Brown Silty Clay With Limestone Boulders and Cobbles.

B. Shale, brown grading to gray, argillaceous, fossiliferous, calcareous, fissile, firm, weathered, broken; soft and crumbly from 645.5' to 641.1, with interbedded limestone (gray, crystalline, fossiliferous, hard, dense, broken) comprising 20% of the interval. Core Loss 16%.

Shale, gray, argillaceous, fossiliferous, soft and extremely weathered above 575.4' firm to hard in remainder, broken, with interbedded limestone (gray, crystalline, fossiliferous, hard, thin-peaced) comprising 12% of the interval. Core Loss 11%.

Shale, gray, argillaceous, fossiliferous, calcareous, fissile, hard, broken, with interbedded limestone (light-gray, crystalline, hard, dense, broken) comprising 9% of the interval, and with soft, extremely weathered and crumbly zones from elev. 574.5' to 572.9', from 563.6' to 559.2', and from 556.3' to 554.5'. Core Loss 13%.

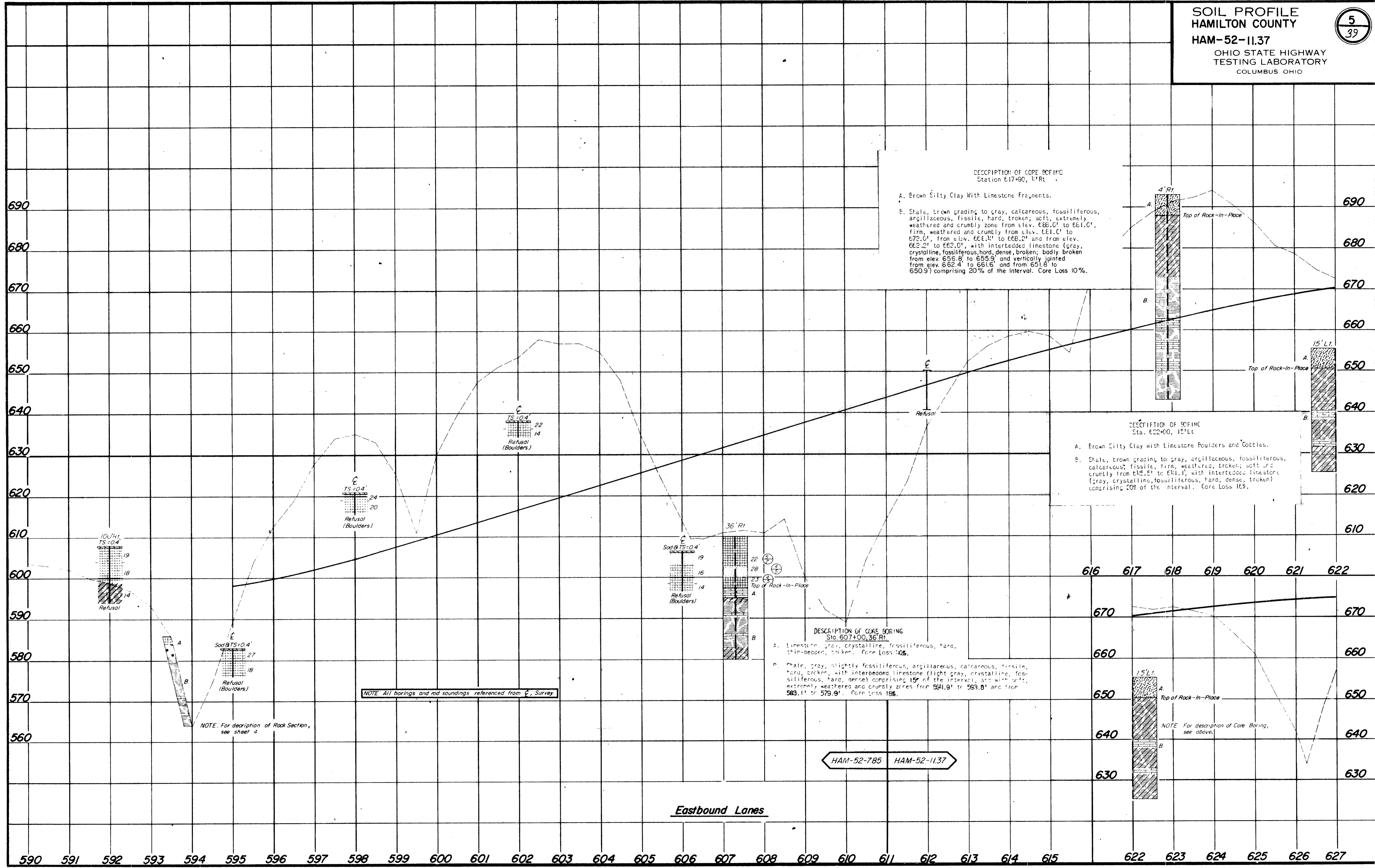
DESCRIPTION OF ROCK SECTION
(GULLEY AND SOUTH BANK OF TAYLOR CREEK)
A - Residual clayey soil (concentration of limestone slab boulders in bottom 2-3 feet).
B - Blue-gray shale, very fissile, interbedded with dense limestone beds 2-8 inches in thickness.

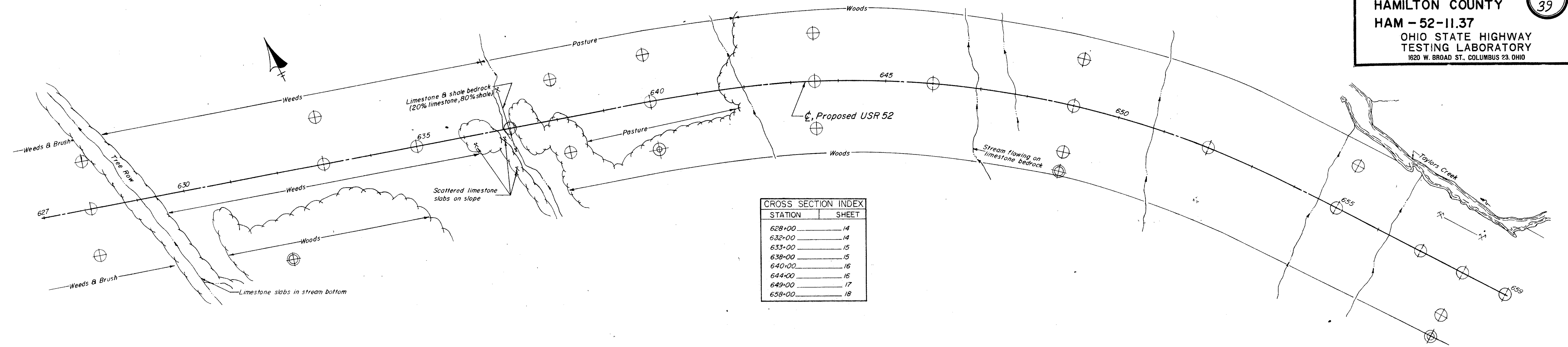
NOTE: All borings and rod soundings are referenced from C, Survey.

NOTE: For description of Core Boring, see above.

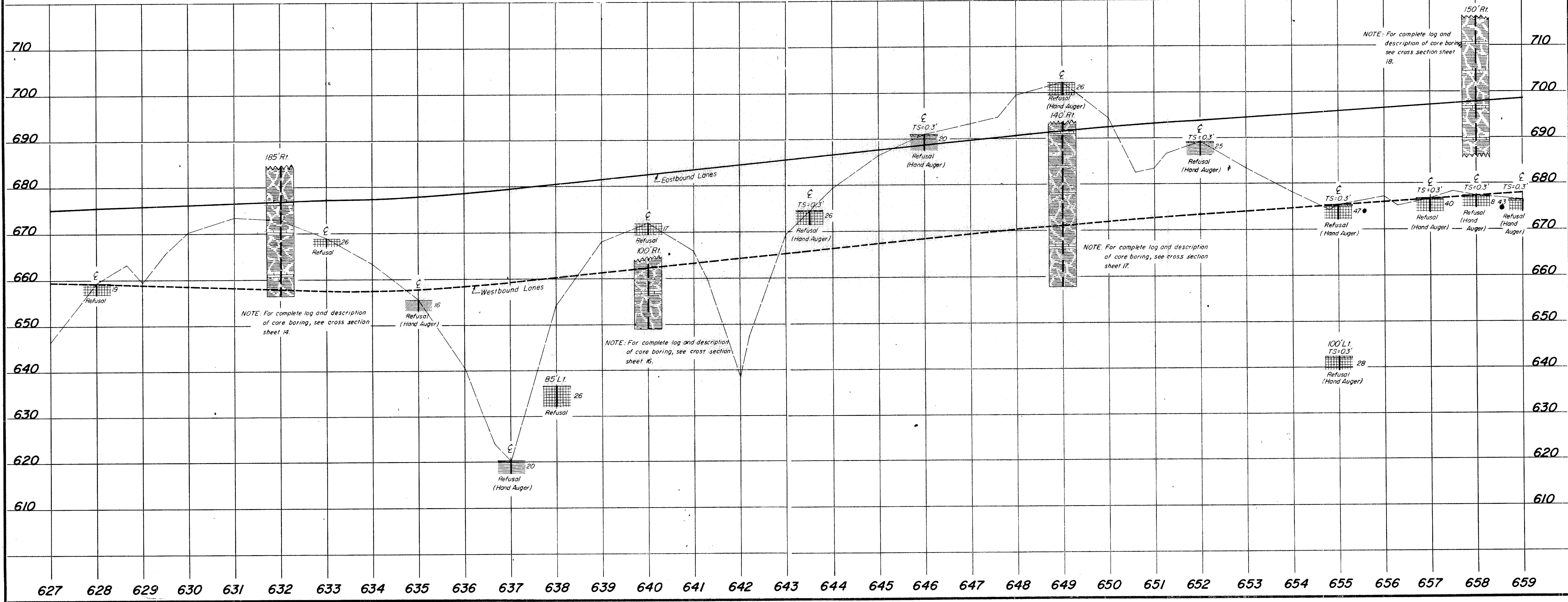
Westbound Lanes

HAM-52-7.85 HAM-52-11.37

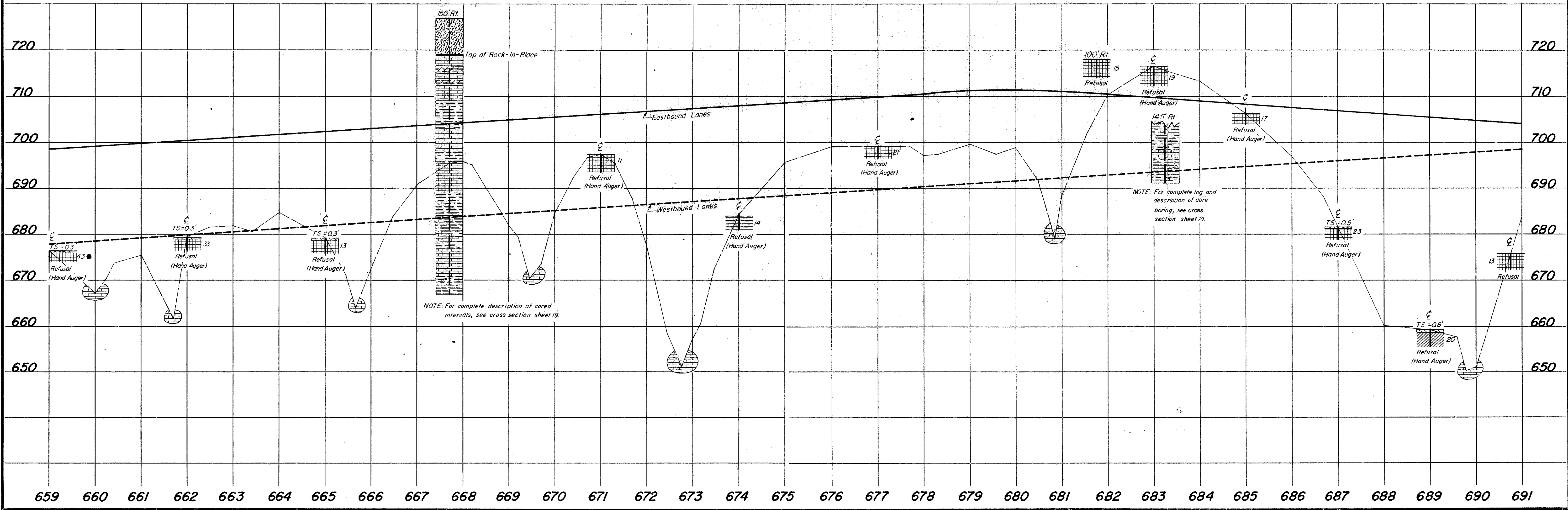
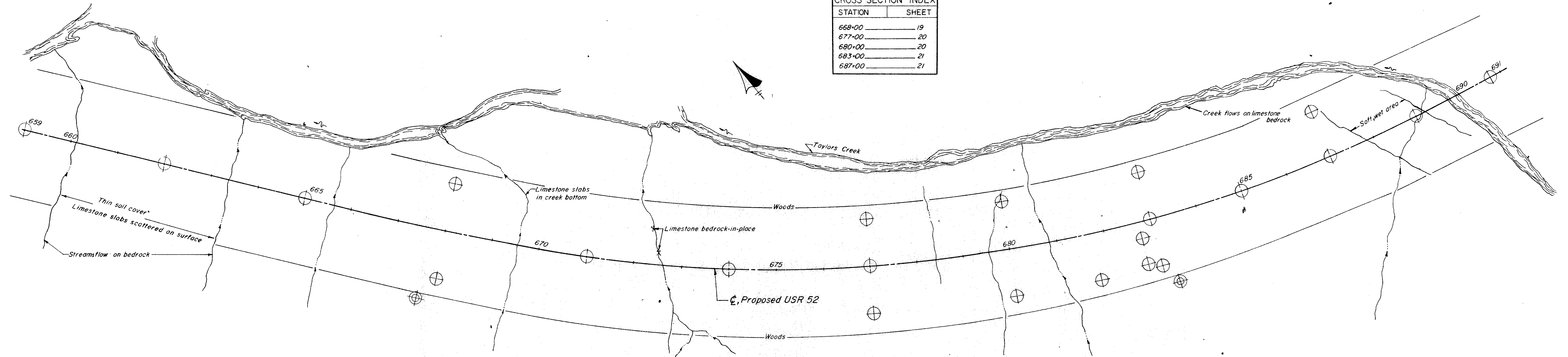


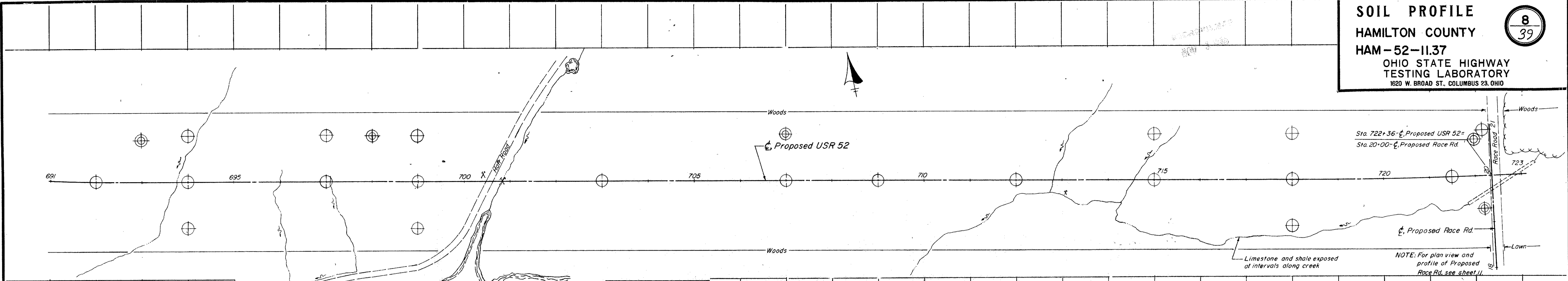


CROSS SECTION INDEX	
STATION	SHEET
628+00	14
632+00	14
633+00	15
638+00	15
640+00	16
644+00	16
649+00	17
658+00	18

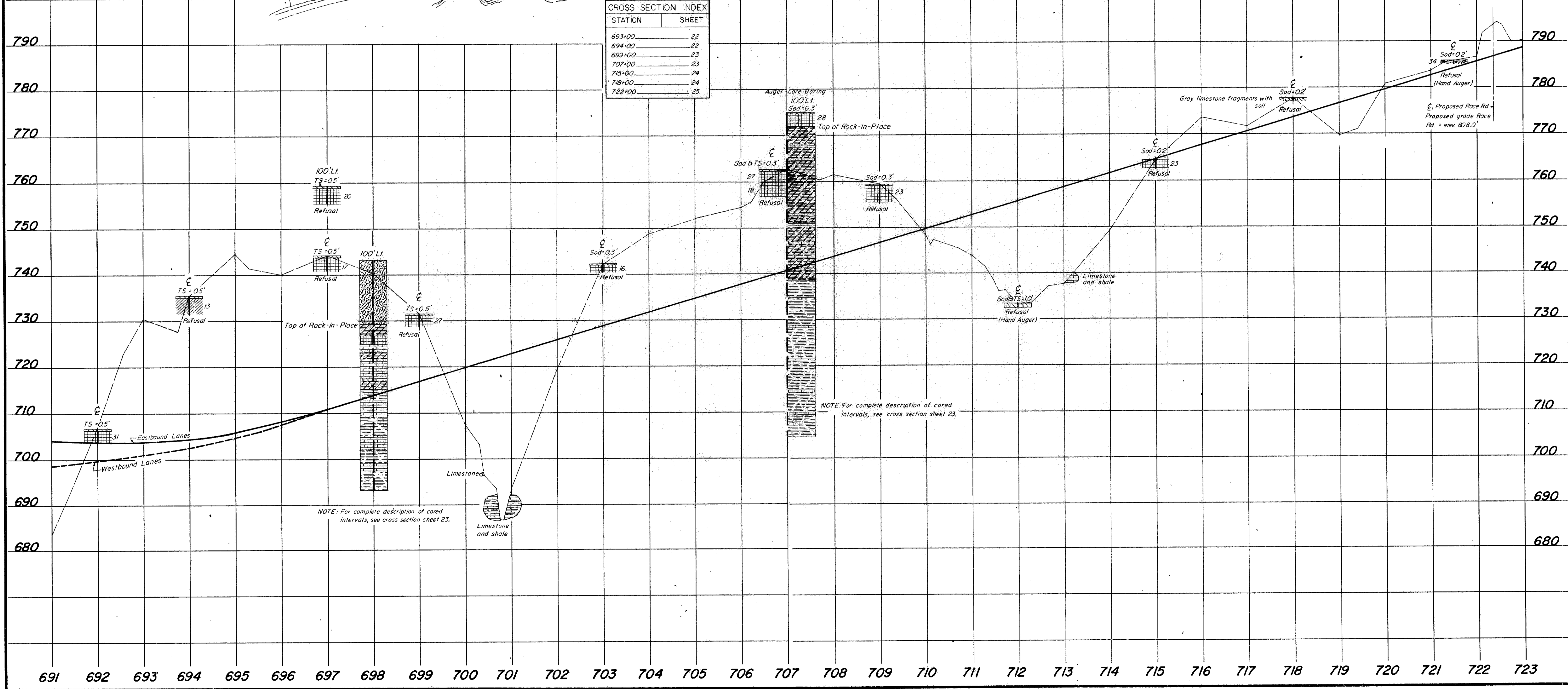


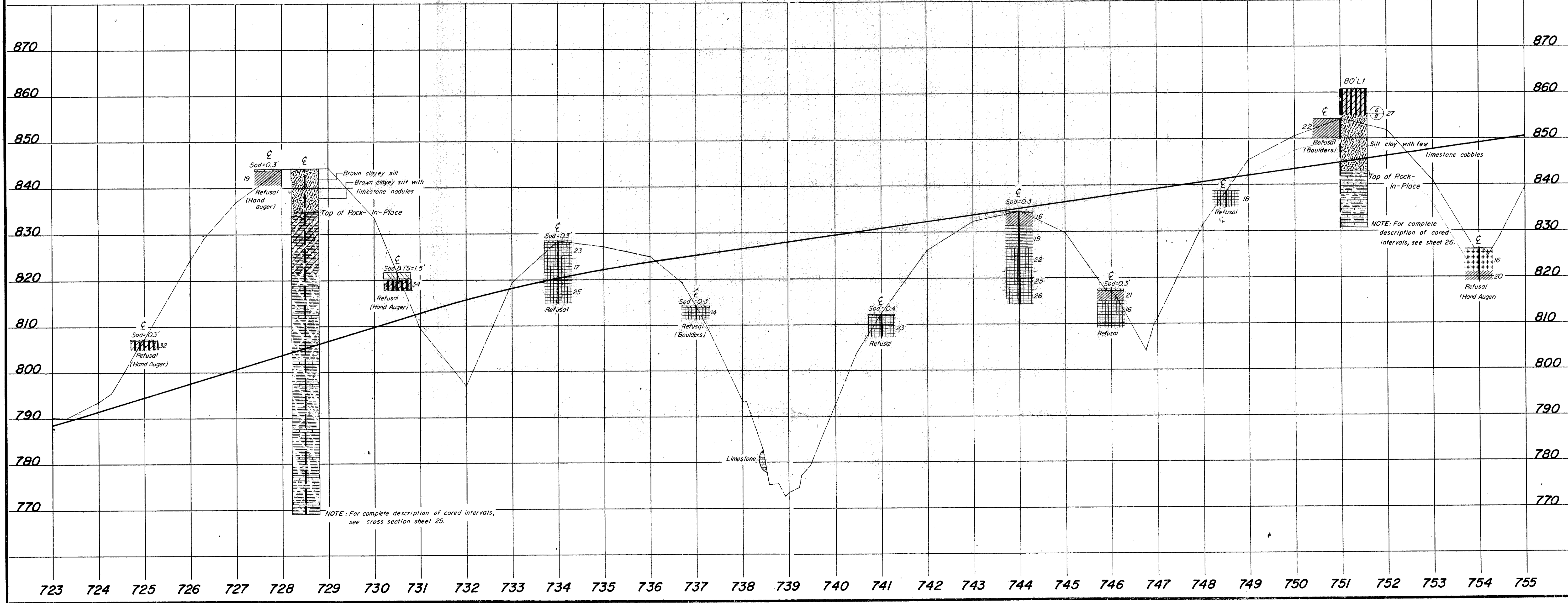
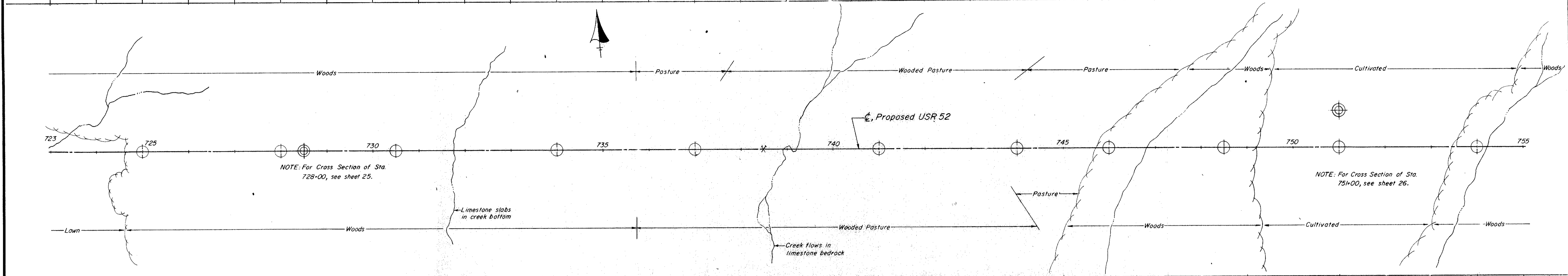
CROSS SECTION INDEX	
STATION	SHEET
668+00	19
677+00	20
680+00	20
683+00	21
687+00	21





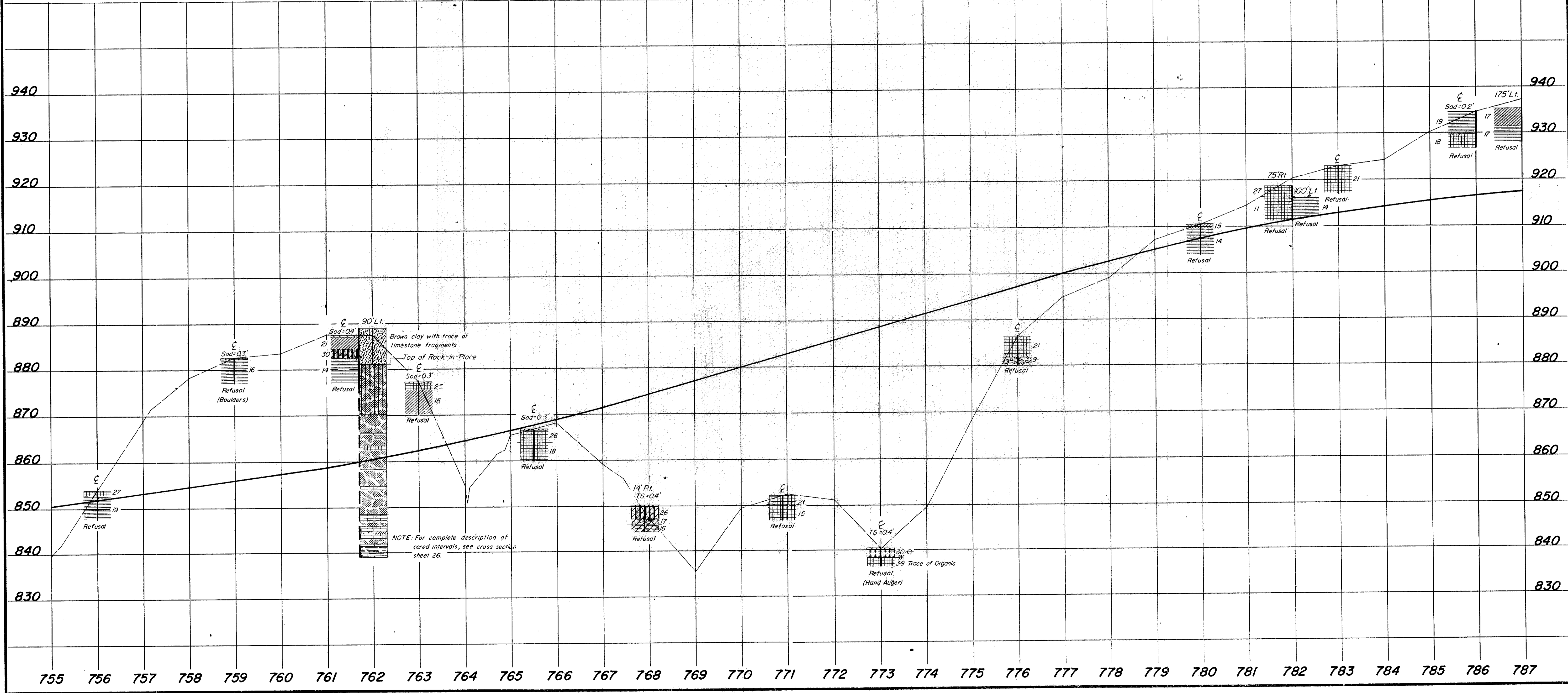
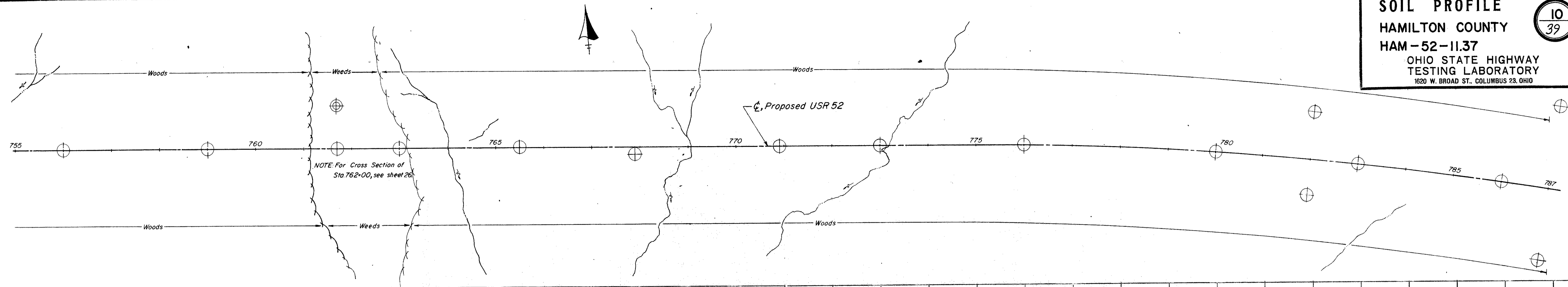
CROSS SECTION INDEX	
STATION	SHEET
693+00	22
694+00	22
699+00	23
707+00	23
715+00	24
718+00	24
722+00	25



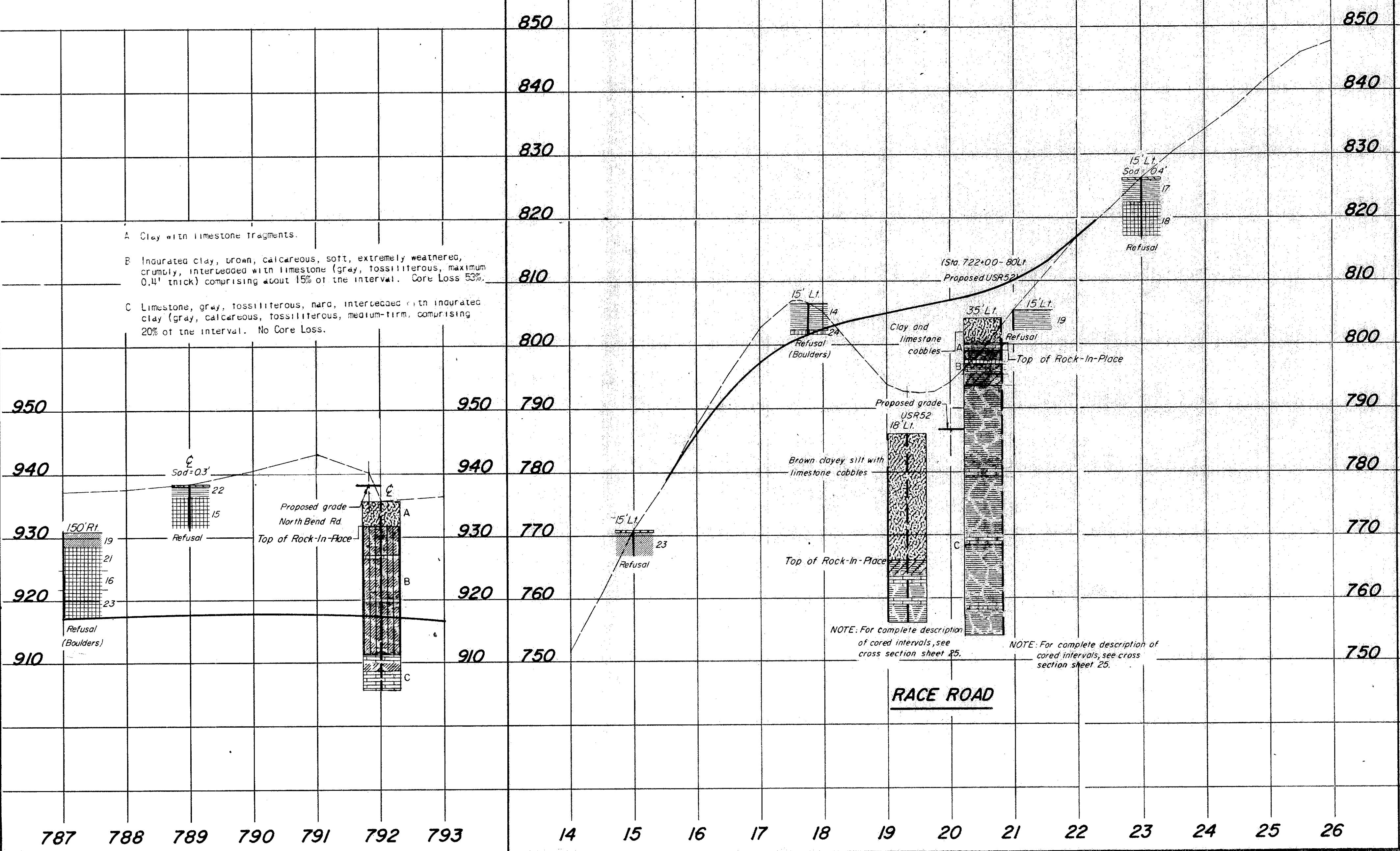
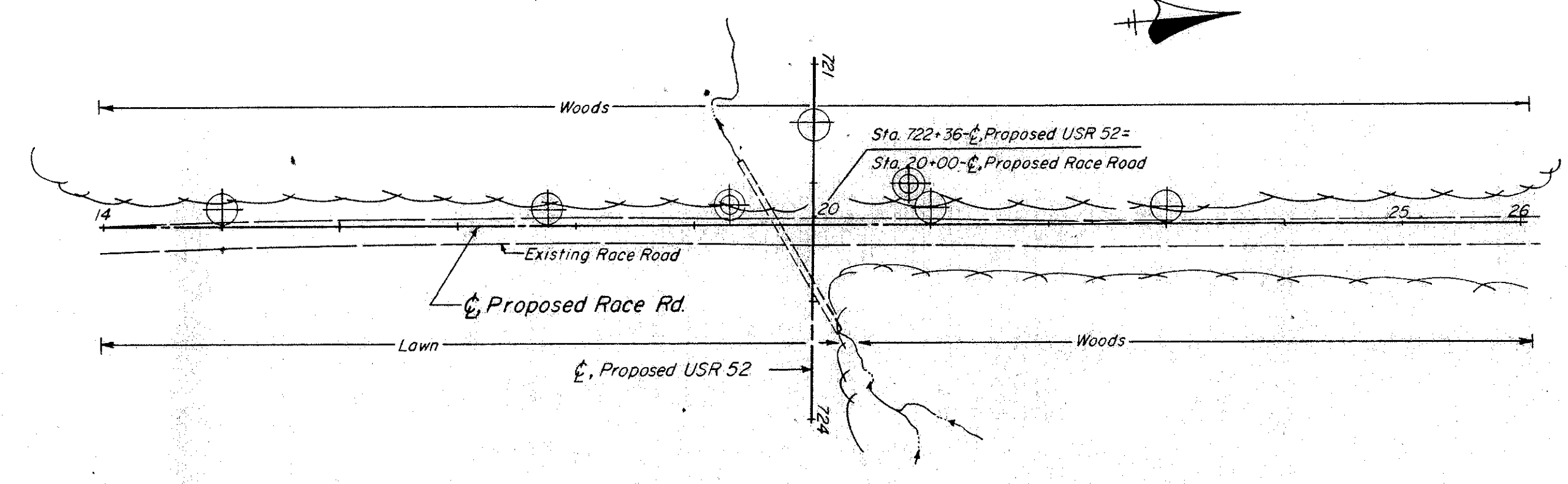
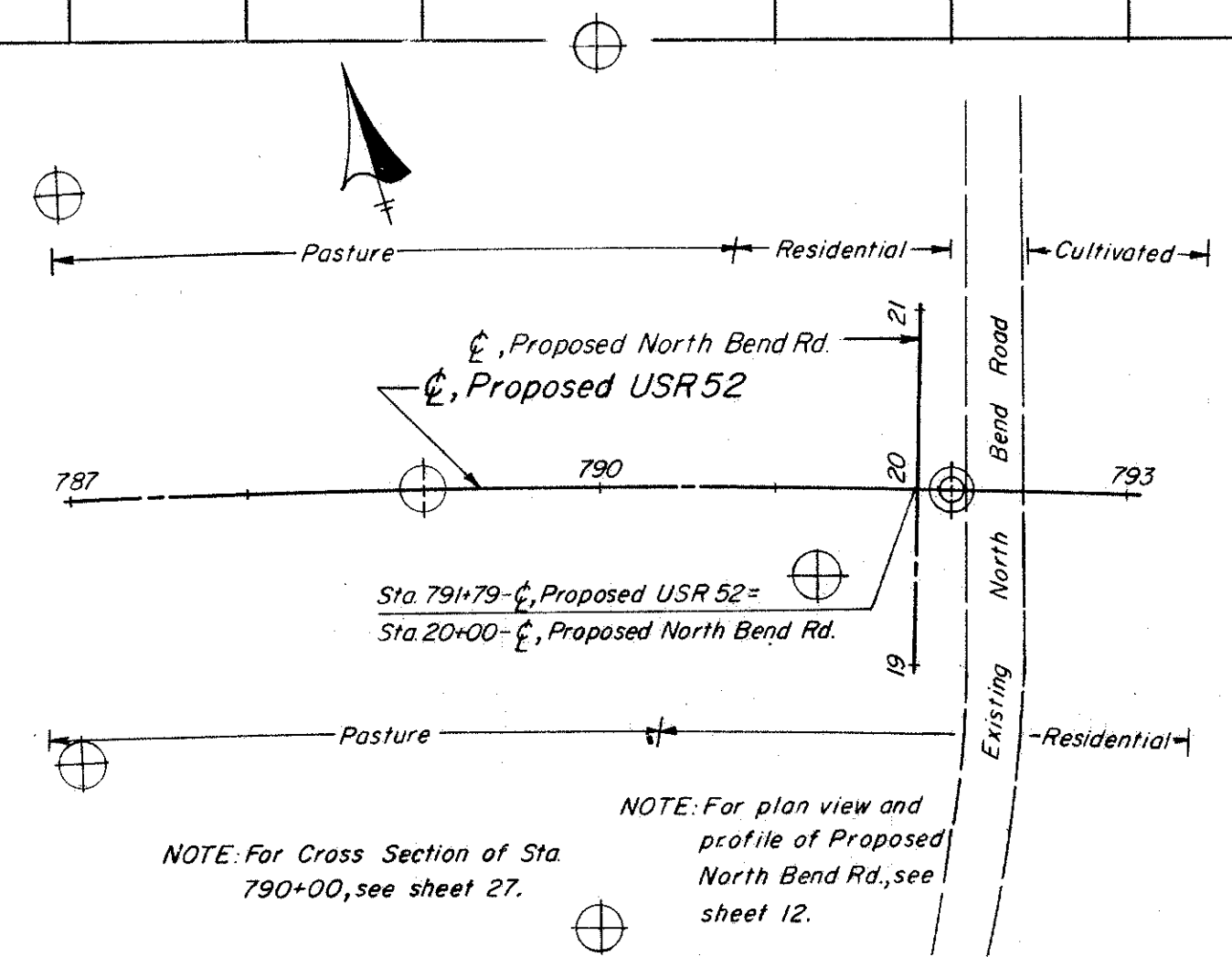


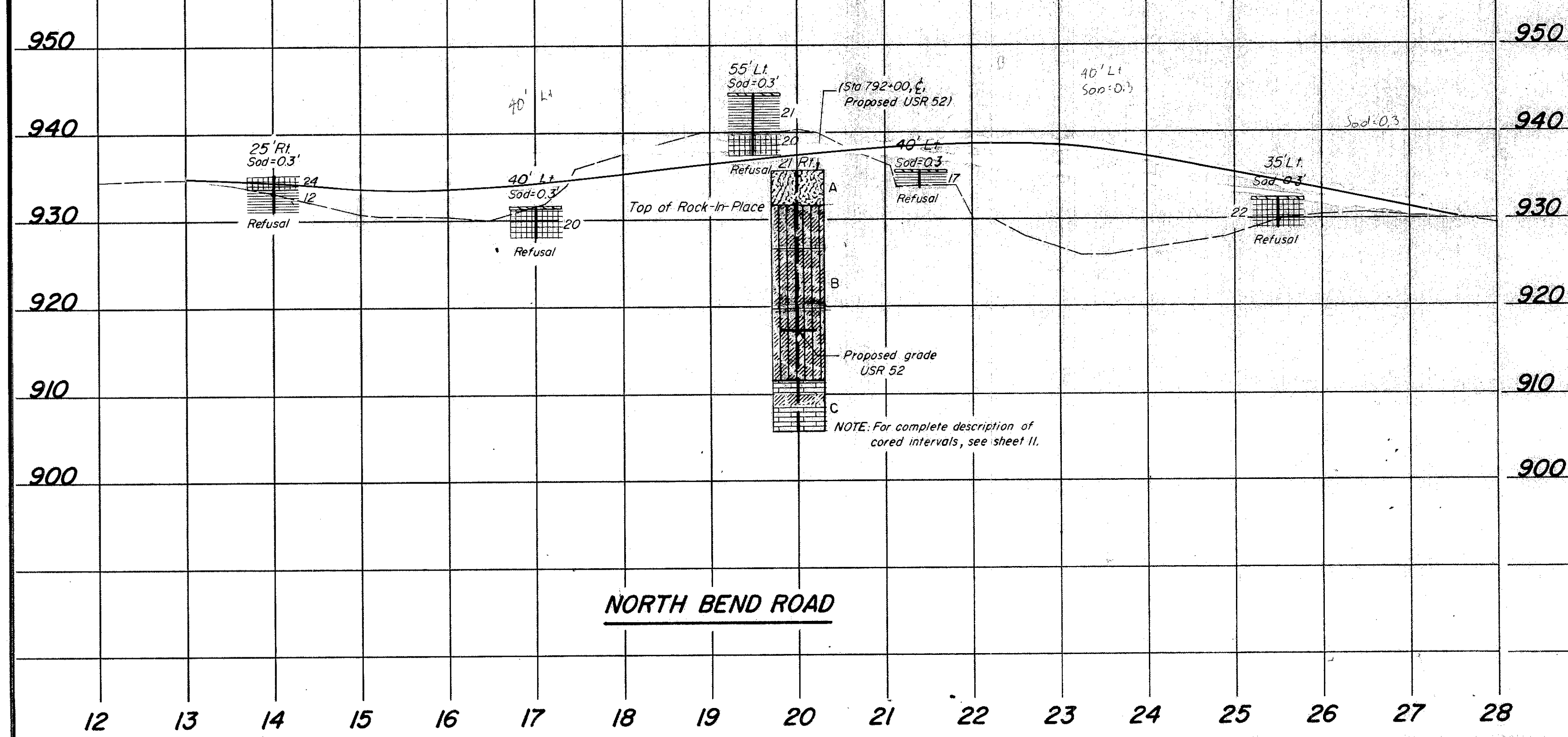
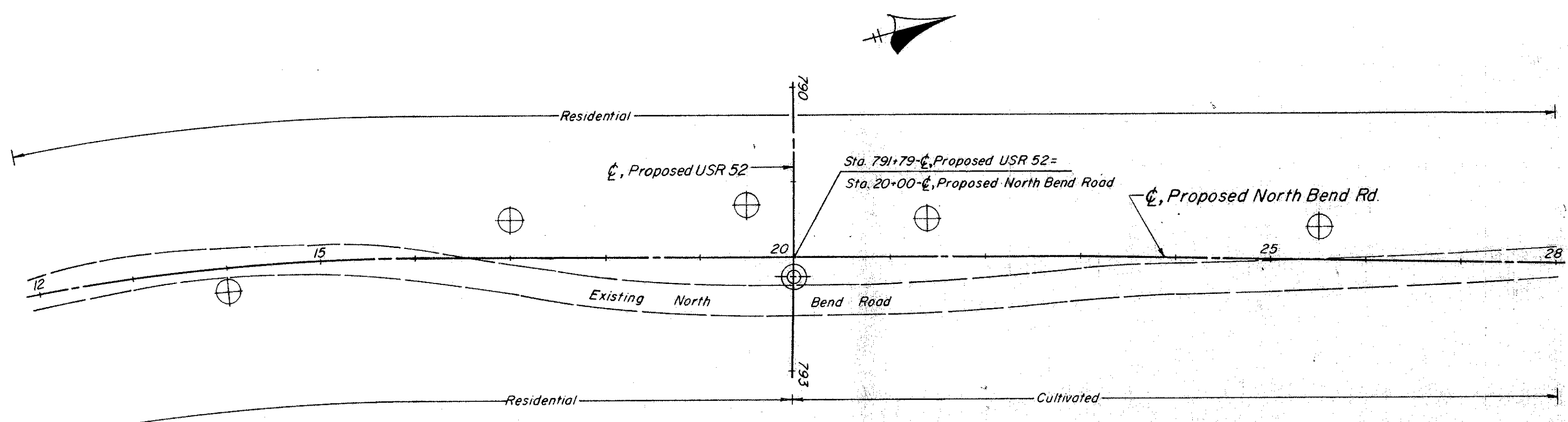
SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
 OHIO STATE HIGHWAY
 TESTING LABORATORY
 1620 W. BROAD ST., COLUMBUS 23, OHIO

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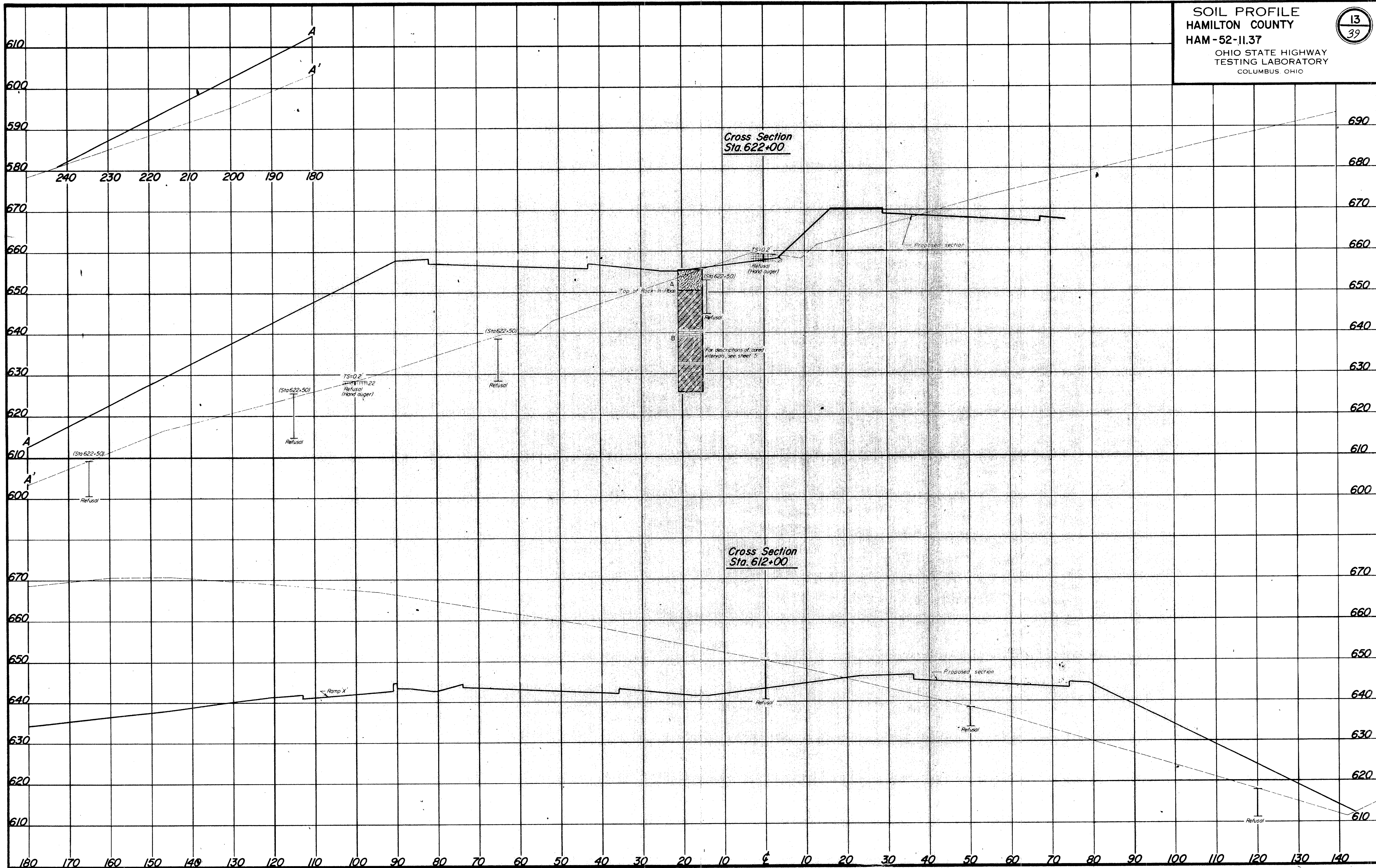


NOTE: For complete description of cored intervals, see cross section sheet 26.





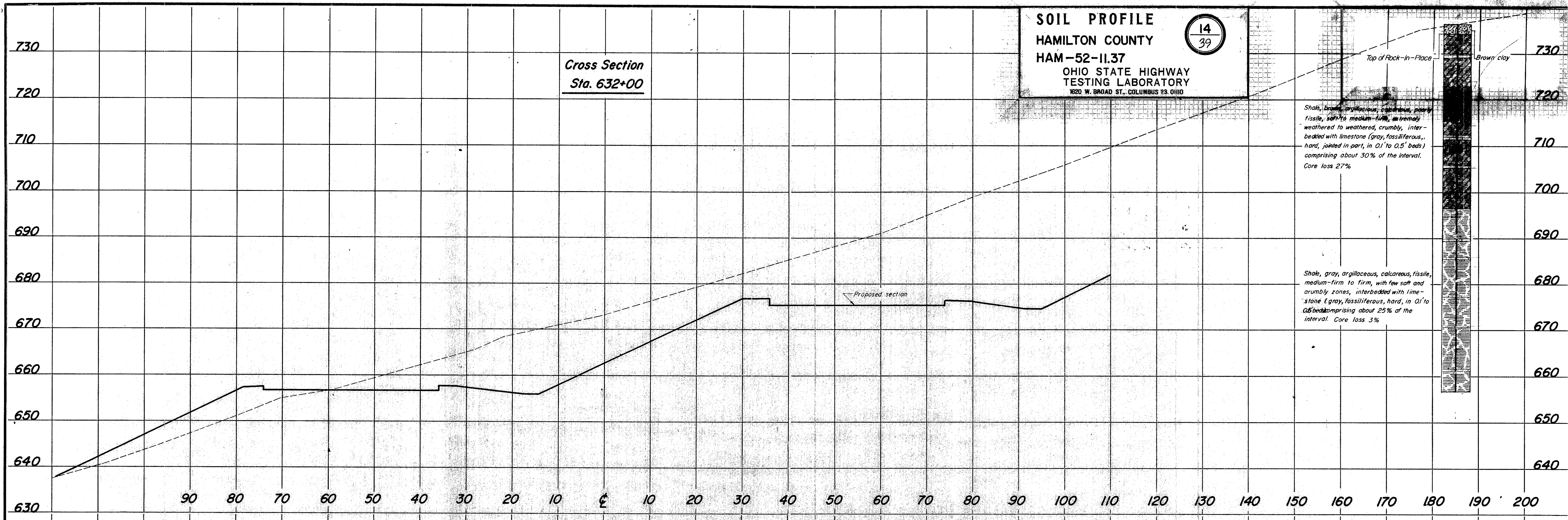
NORTH BEND ROAD



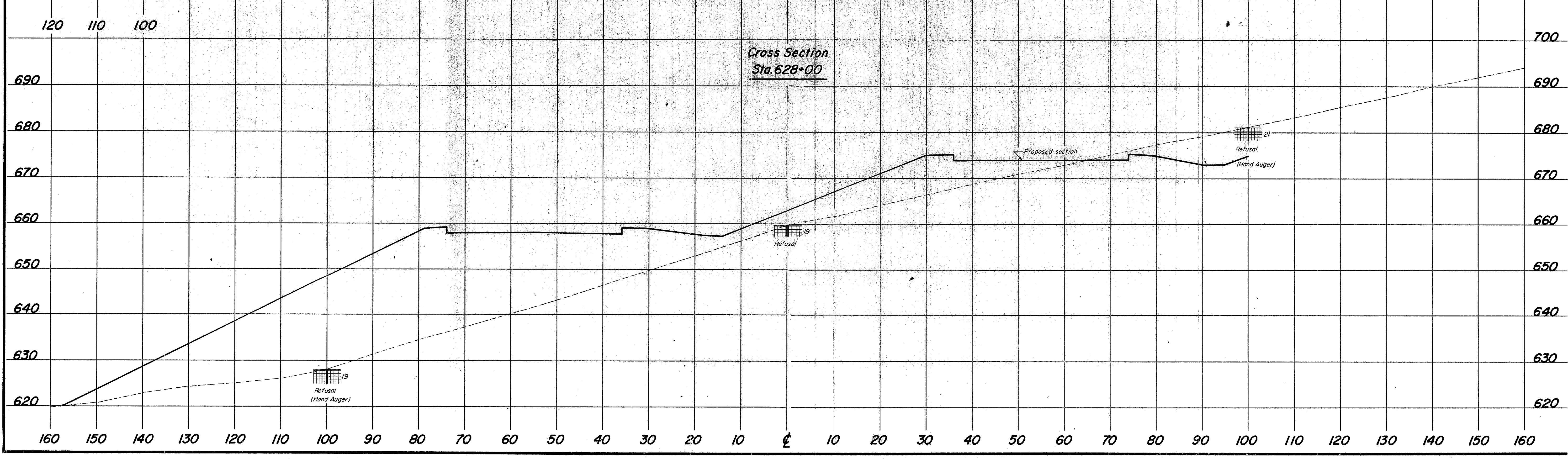
SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
OHIO STATE HIGHWAY
TESTING LABORATORY
1820 W. BROAD ST., COLUMBUS 23, OHIO

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Cross Section
Sta. 632+00

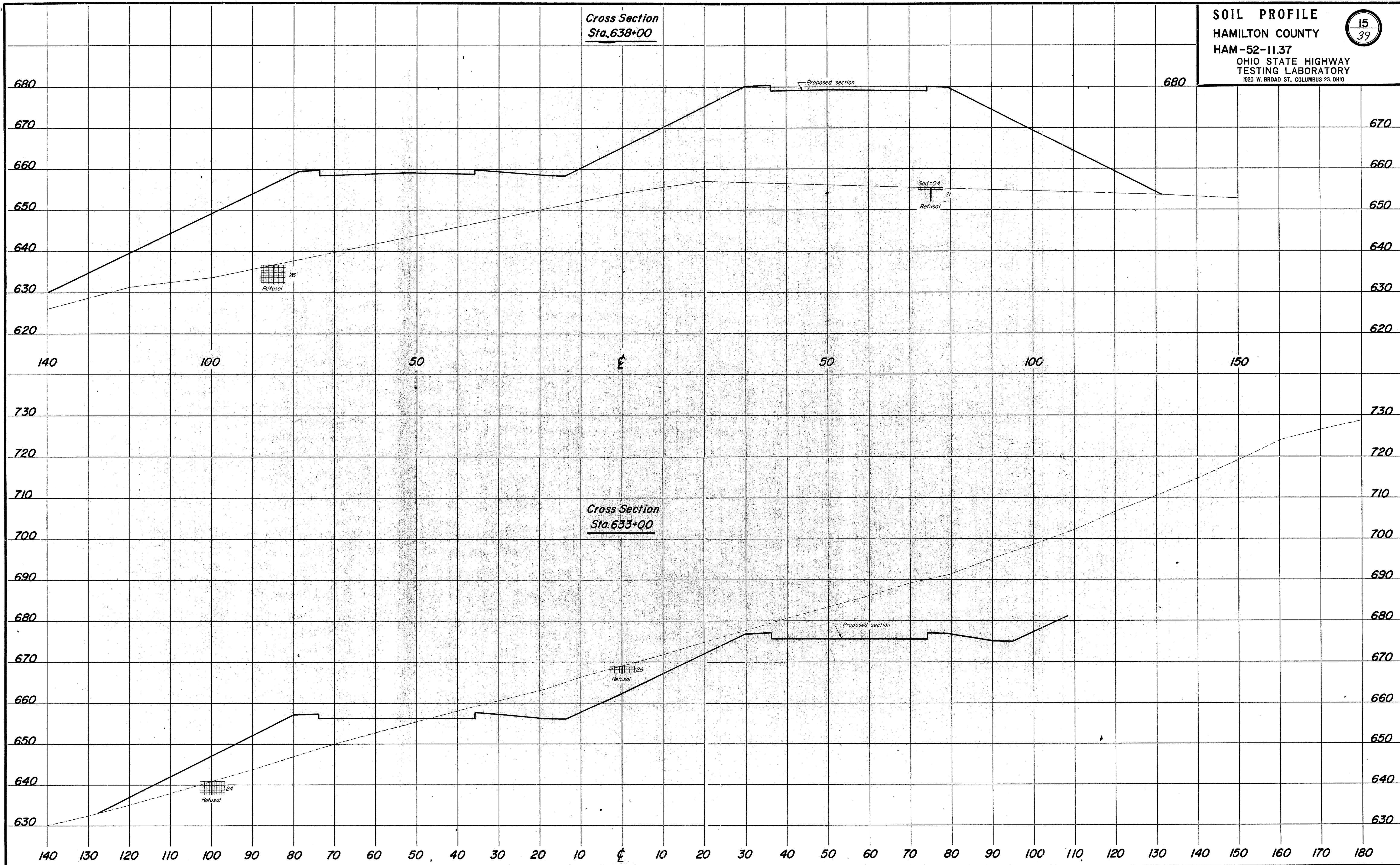


Cross Section
Sta. 628+00



Cross Section
 Sta. 638+00

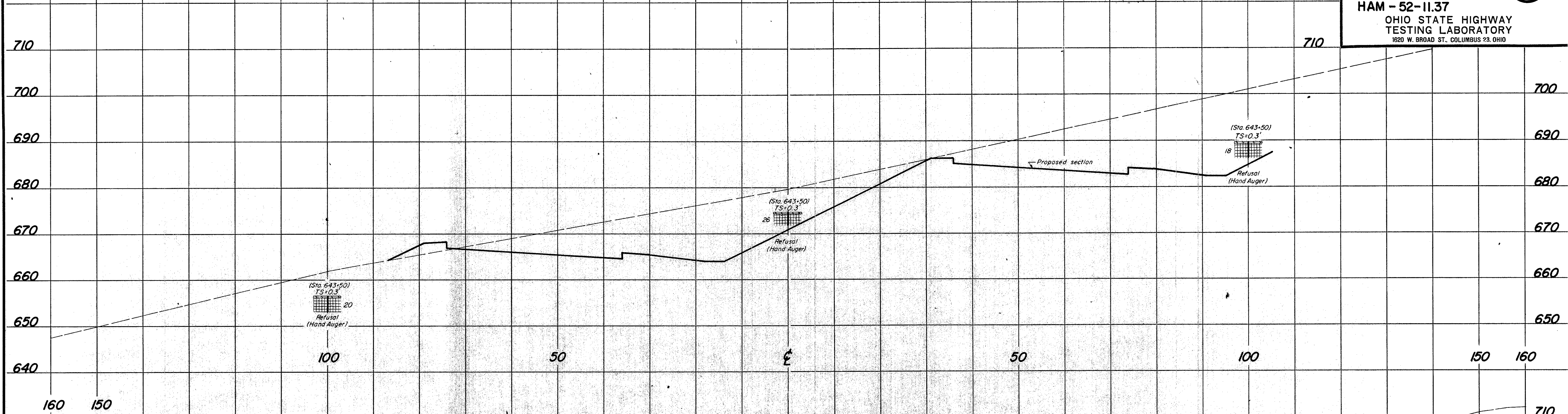
Cross Section
 Sta. 633+00



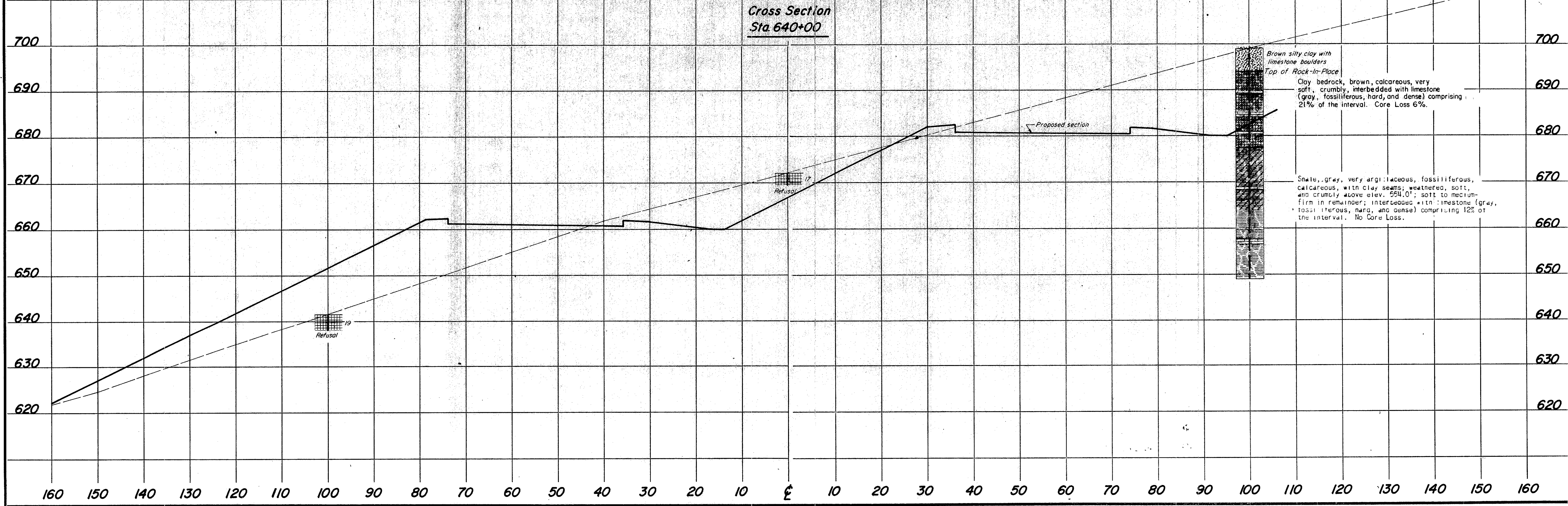
Cross Section
Sta. 644+00

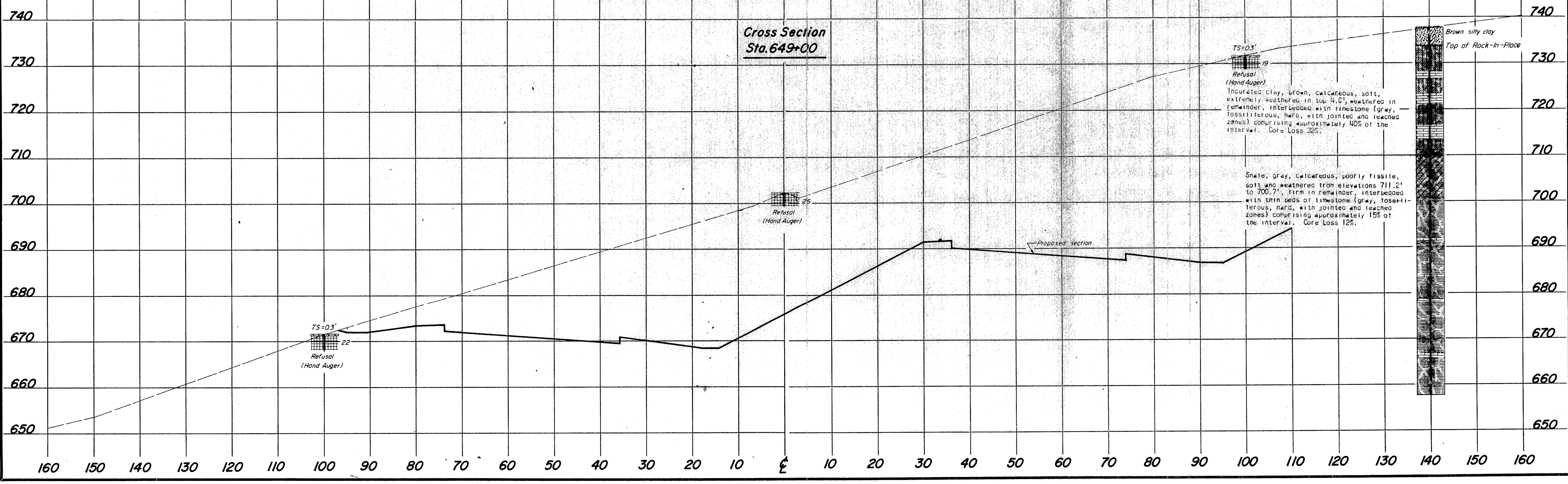
SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

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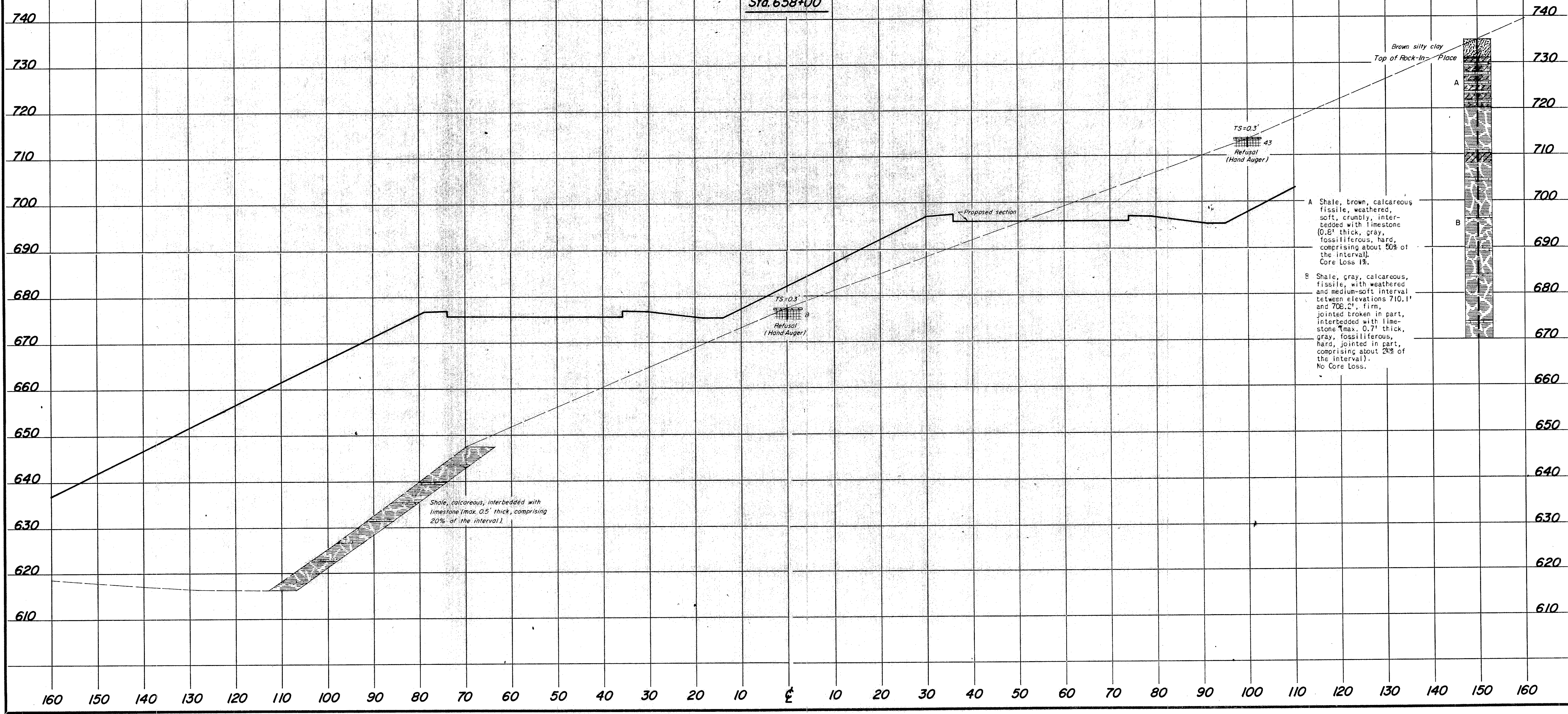


Cross Section
Sta. 640+00





Cross Section
Sta. 658+00



A Shale, brown, calcareous, fissile, weathered, soft, crumbly, interbedded with limestone (0.8' thick, gray, fossiliferous, hard, comprising about 50% of the interval). Core Loss 1%.

B Shale, gray, calcareous, fissile, with weathered and medium-soft interval between elevations 710.1' and 708.2', firm, jointed broken in part, interbedded with limestone (max. 0.7' thick, gray, fossiliferous, hard, jointed in part, comprising about 2% of the interval). No Core Loss.

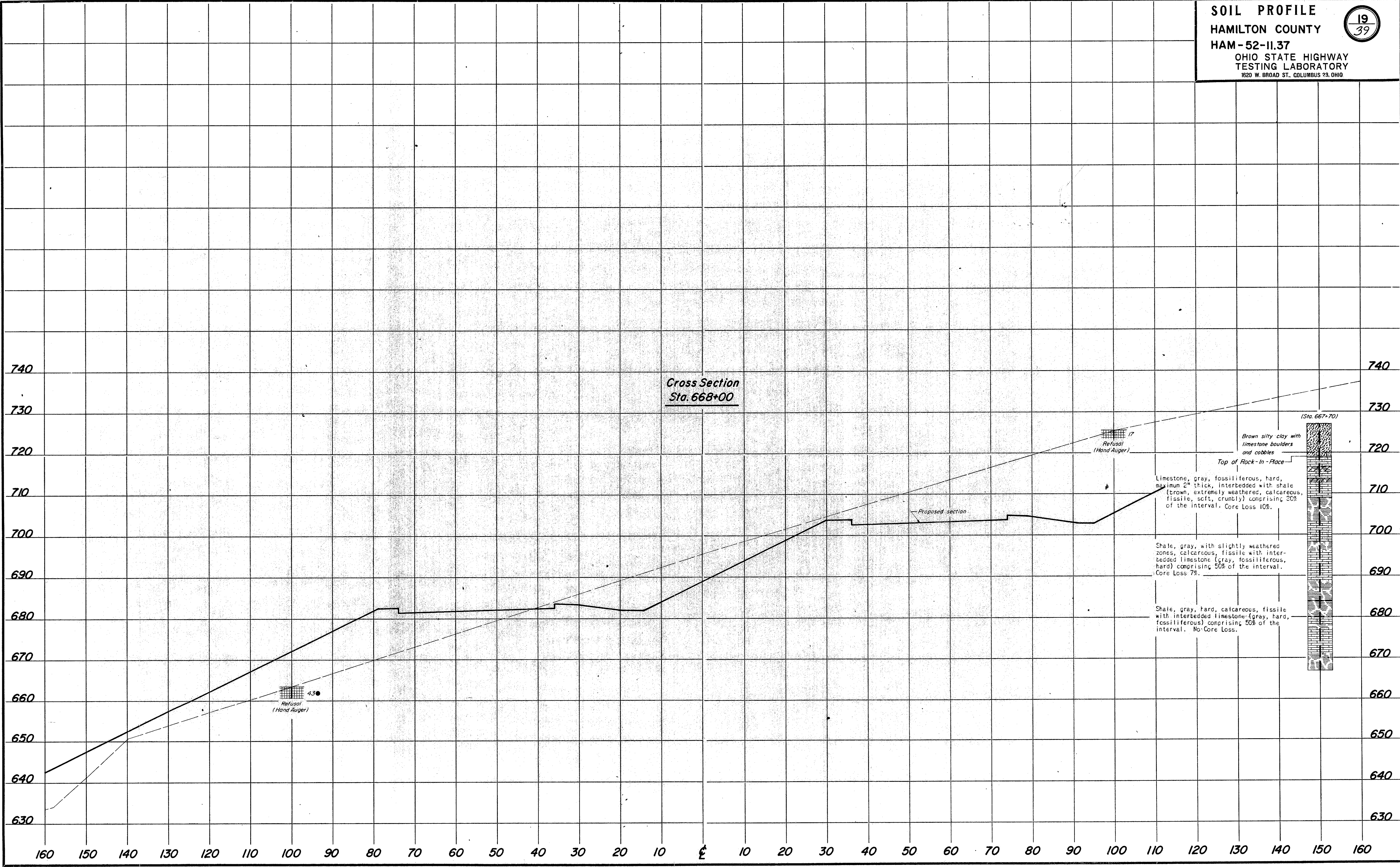
Shale, calcareous, interbedded with limestone (max. 0.5' thick, comprising 20% of the interval).

Brown silty clay
 Top of Rock-In-Place

Proposed section

TS=0.3
 Refusal
 (Hand Auger)

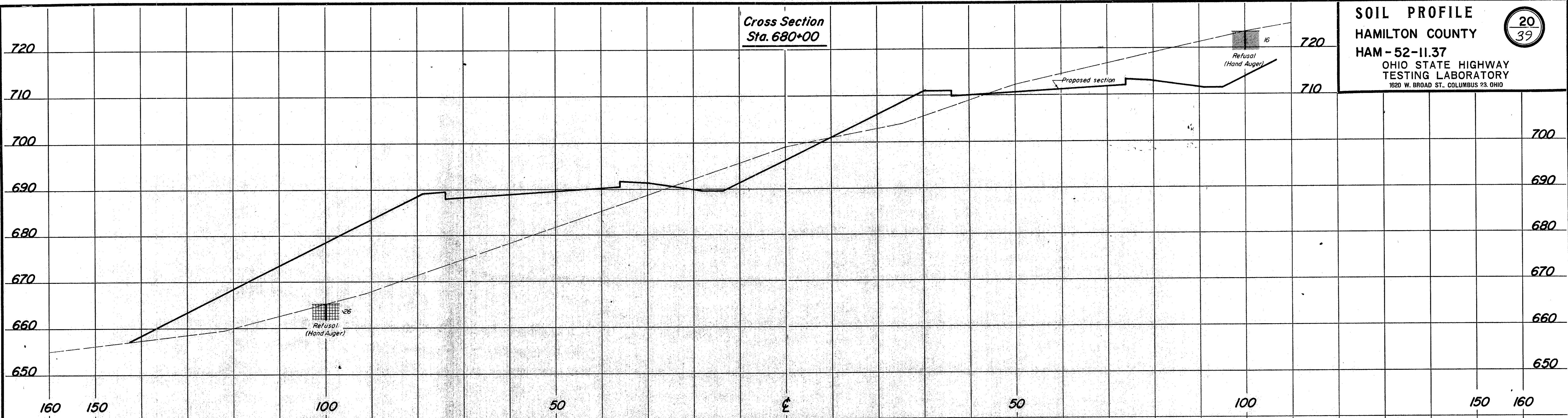
TS=0.3
 43
 Refusal
 (Hand Auger)



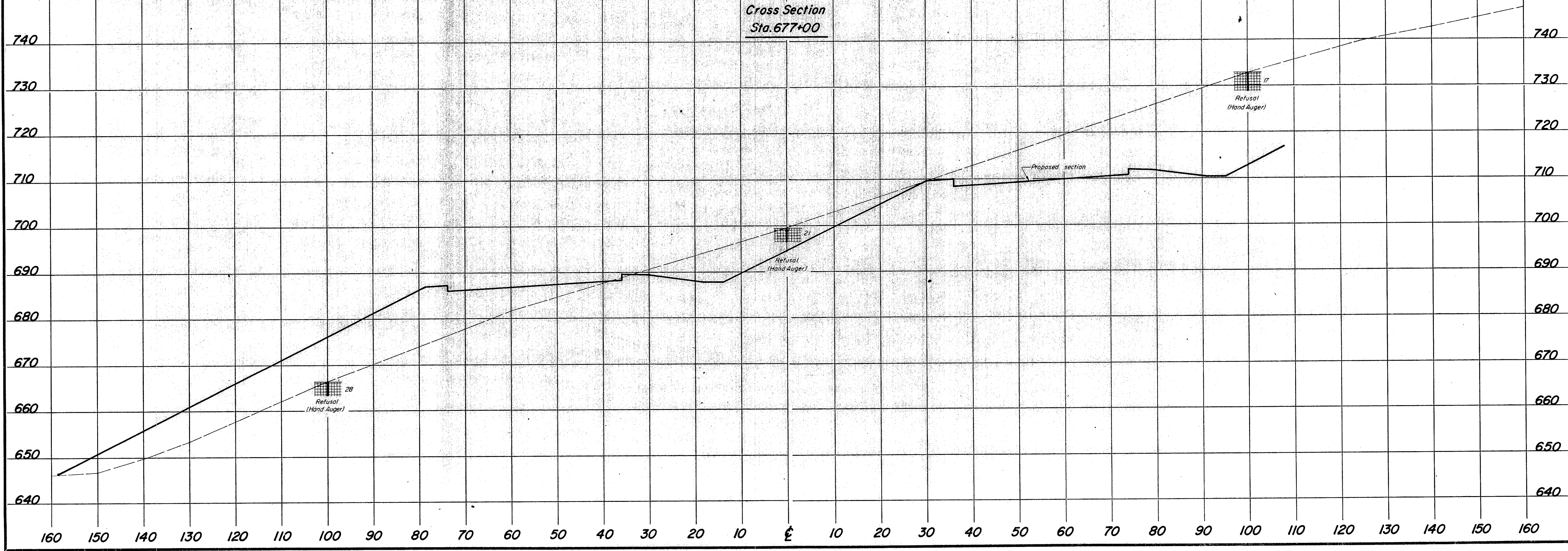
**Cross Section
Sta. 680+00**

SOIL PROFILE
HAMILTON COUNTY
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OHIO STATE HIGHWAY
TESTING LABORATORY
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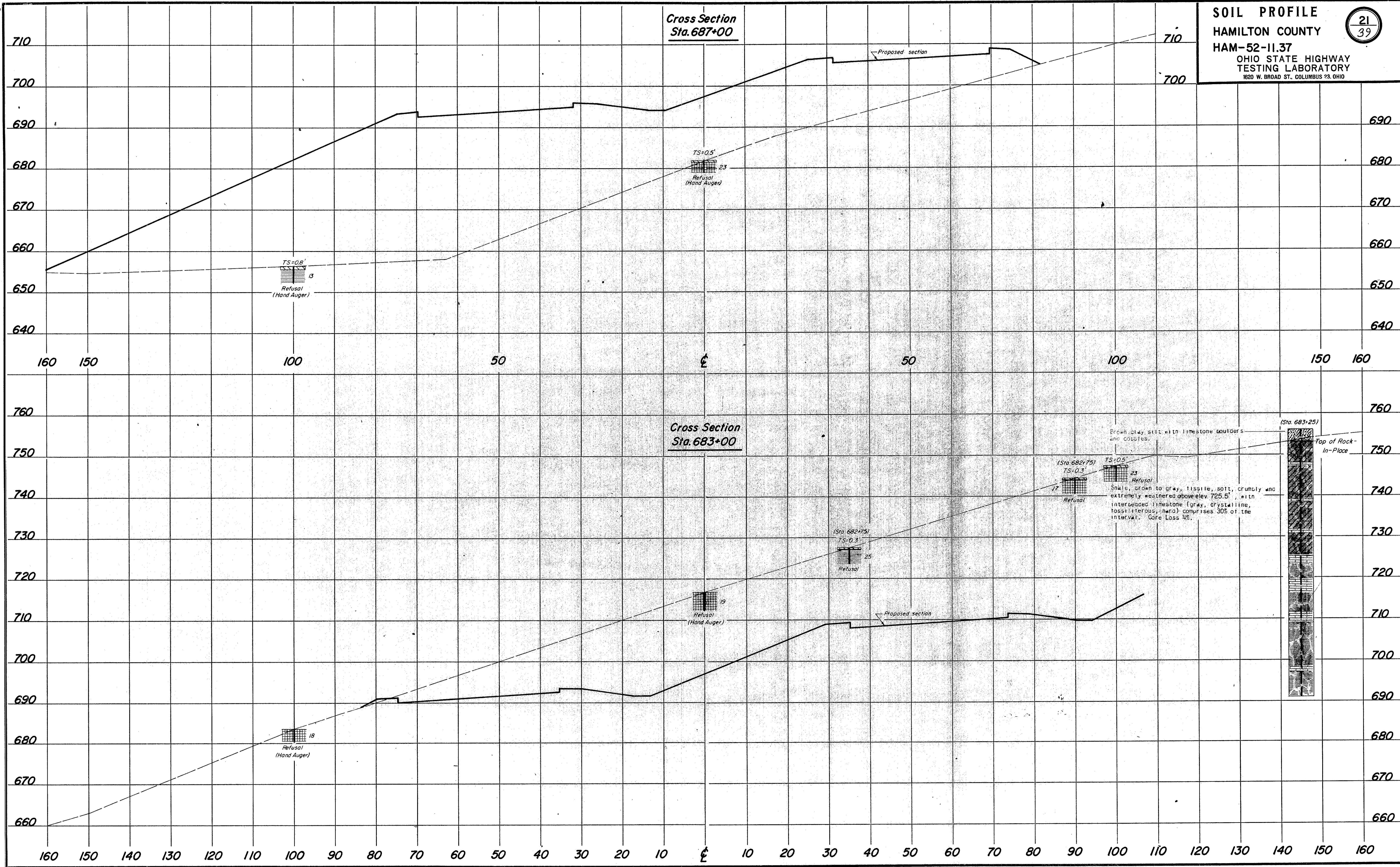


**Cross Section
Sta. 677+00**



**Cross Section
Sta. 687+00**

**Cross Section
Sta. 683+00**



Brown clay silt with limestone boulders and cobbles.

(Sta. 682+75)
TS=0.3
Refusal

(Sta. 682+75)
TS=0.3
Refusal

(Sta. 683+25)
TS=0.5
Refusal

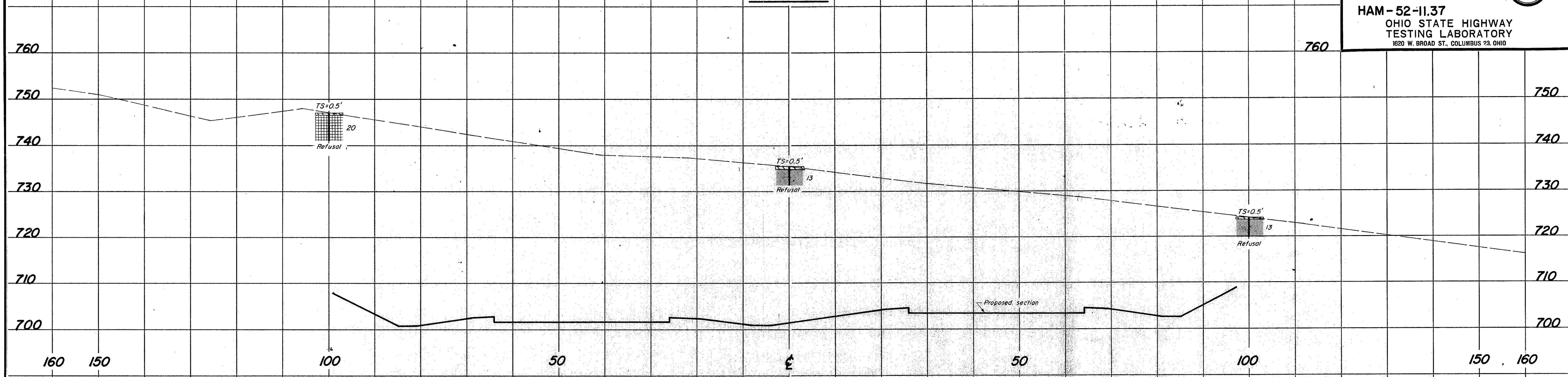
Shale, brown to gray, fissile, soft, crumbly and extremely weathered above elev. 725.5', with interbedded limestone (gray, crystalline, fossiliferous, hard) comprises 30% of the interval. Core Loss 4%.

Top of Rock-In-Place

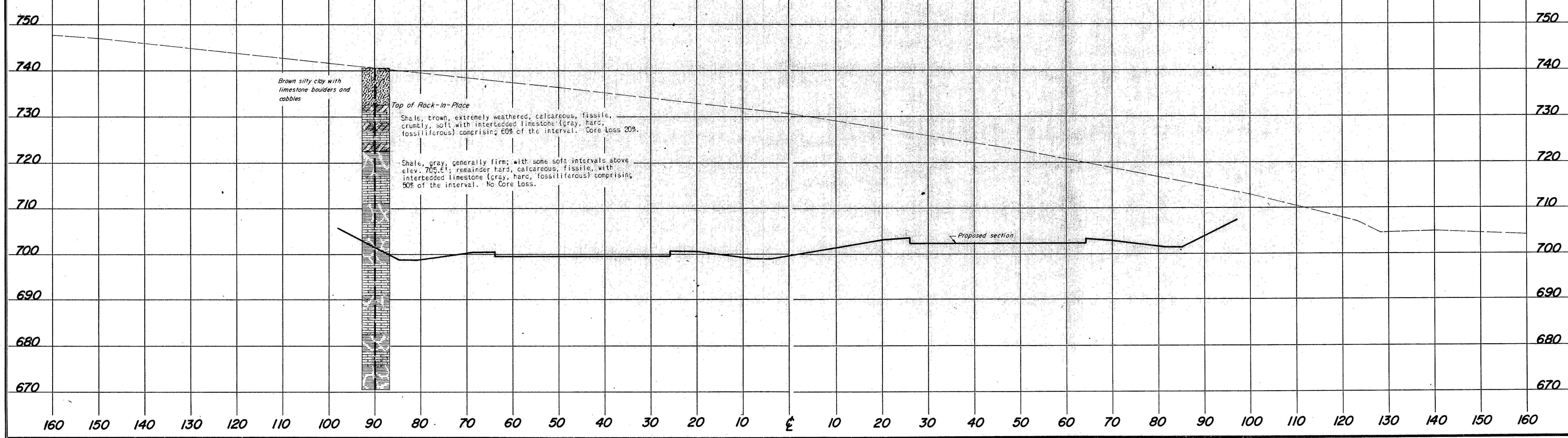
**Cross Section
Sta. 694+00**

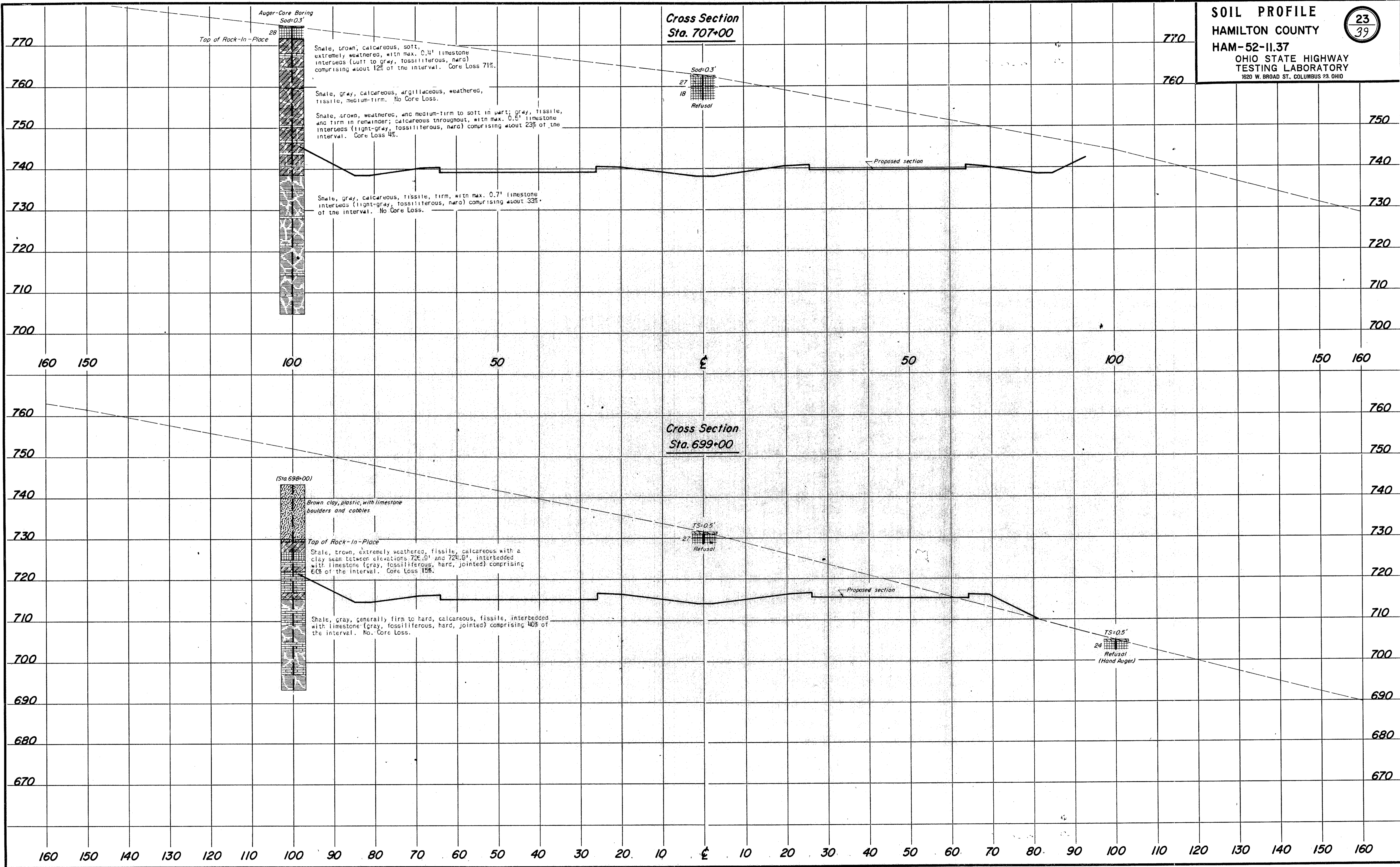
SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 W. BROAD ST., COLUMBUS 23, OHIO

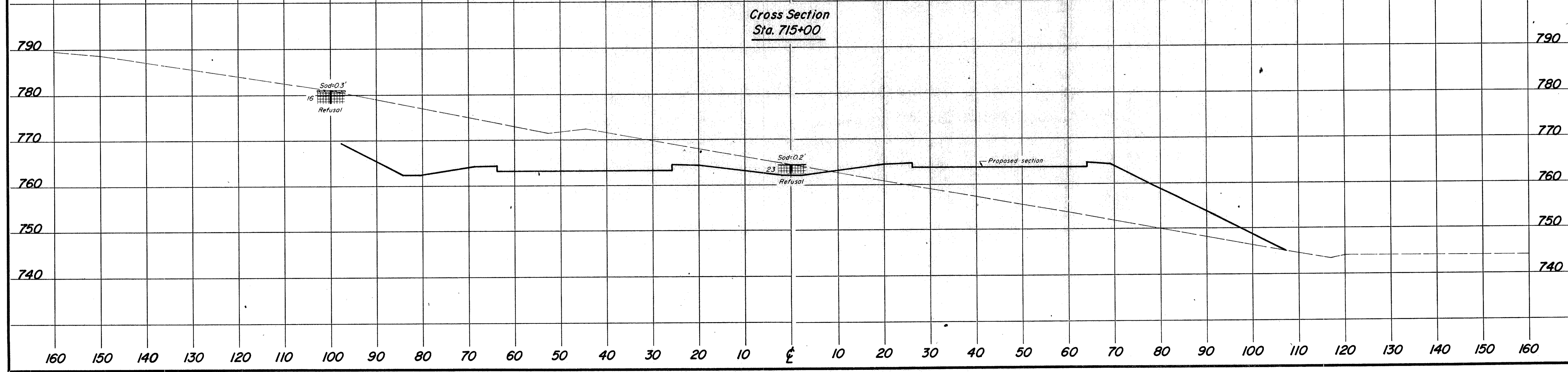
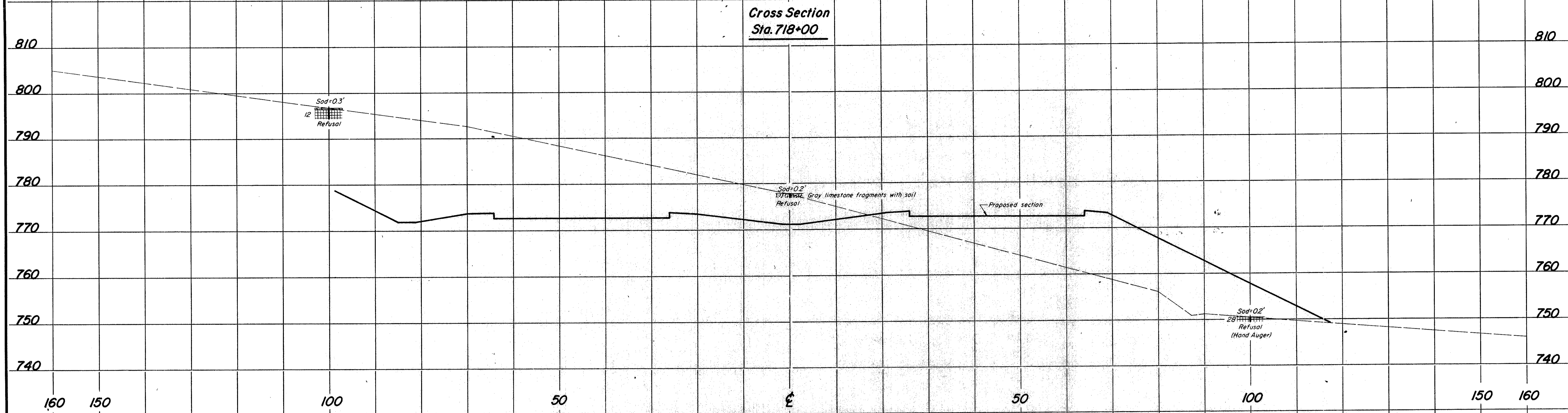
22
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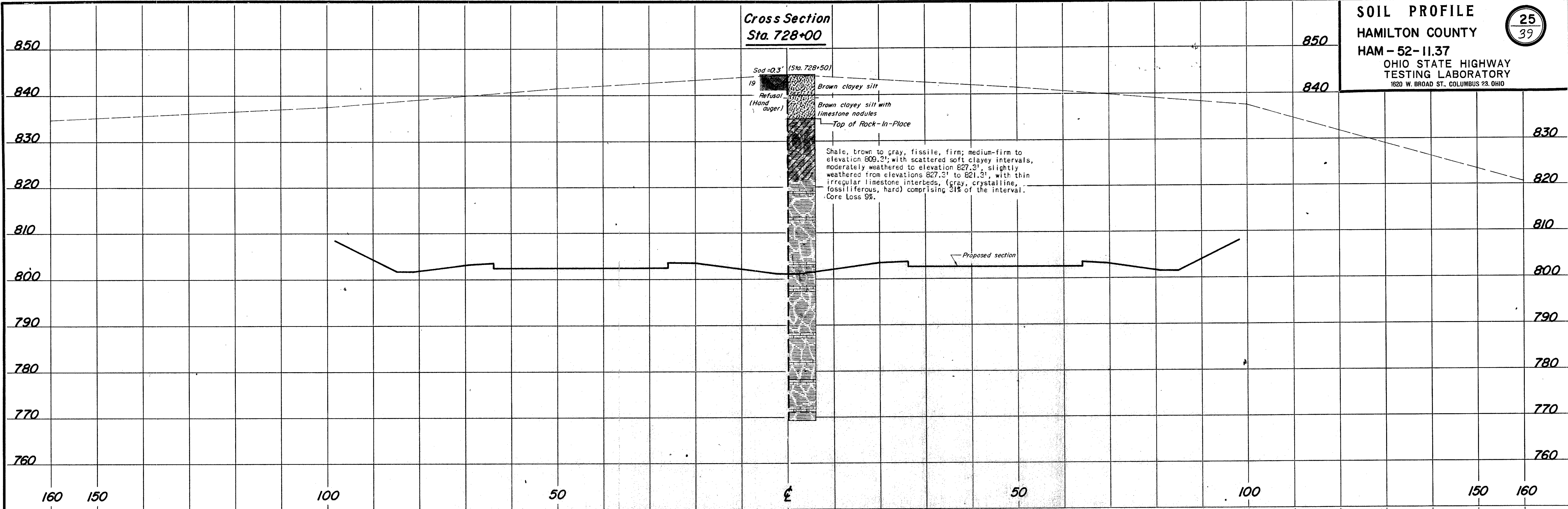
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Sta. 693+00**



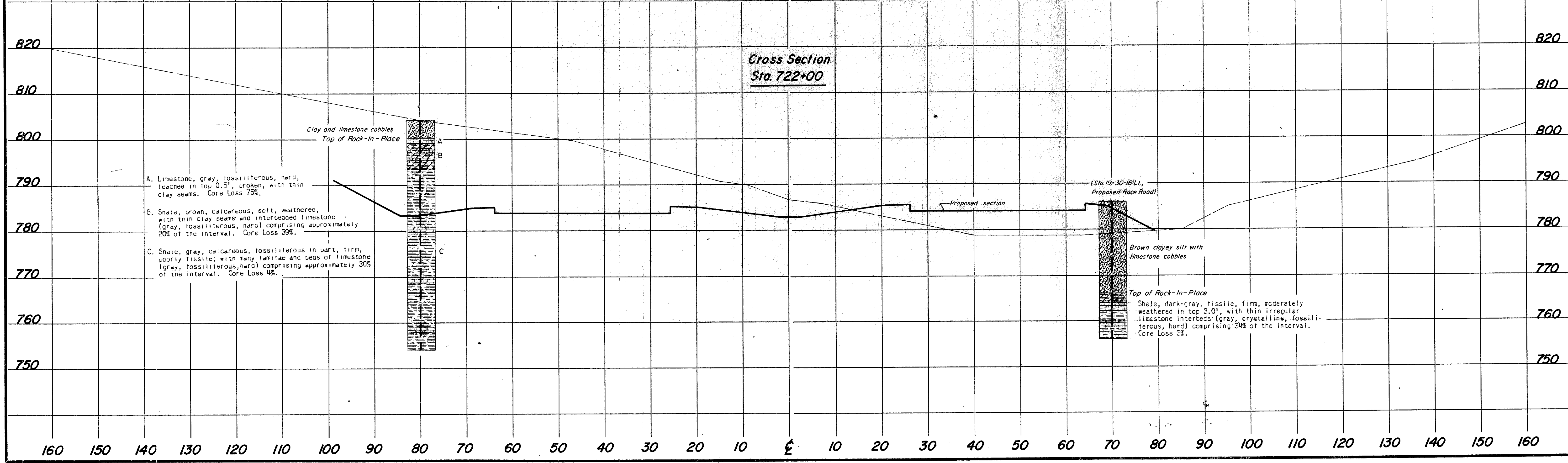




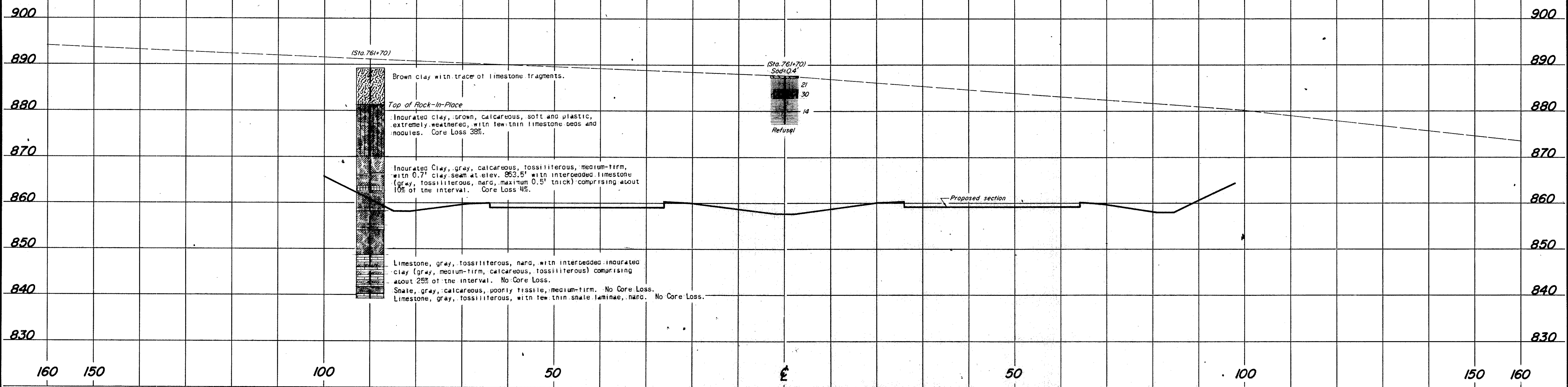
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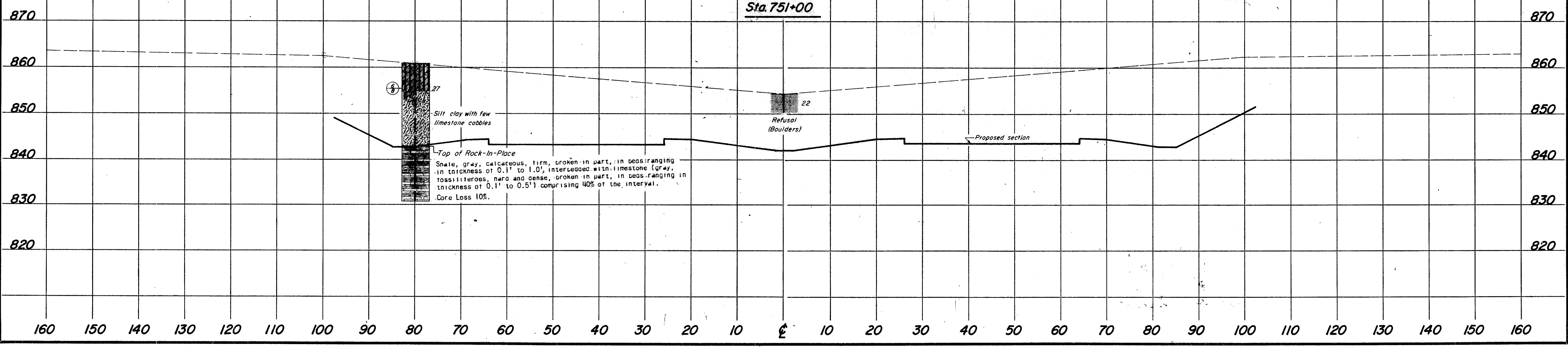
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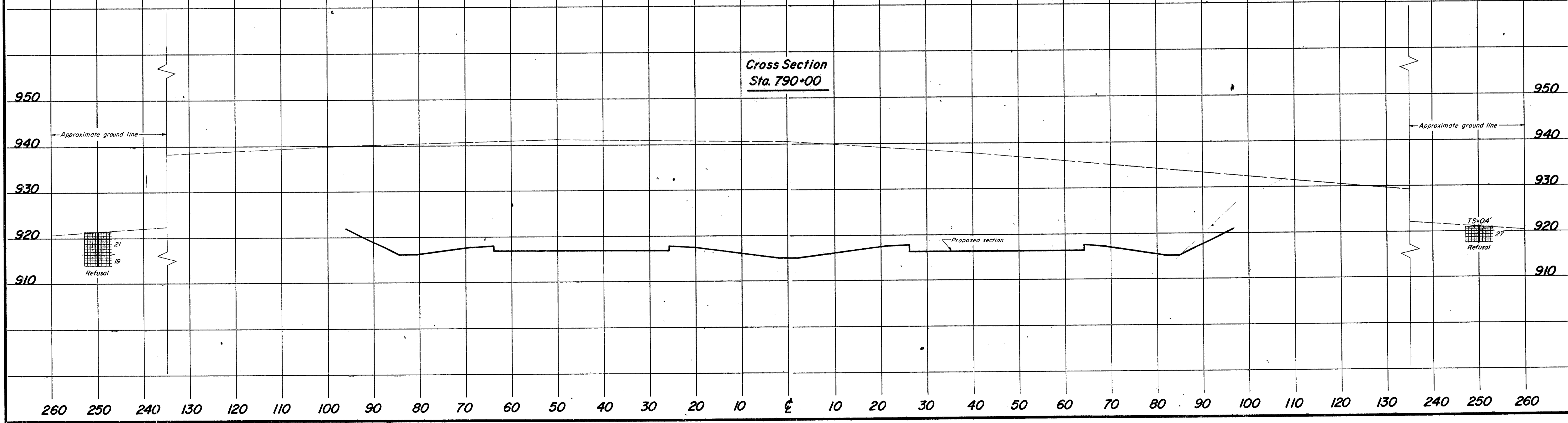


Cross Section
Sta. 762+00



Cross Section
Sta. 751+00

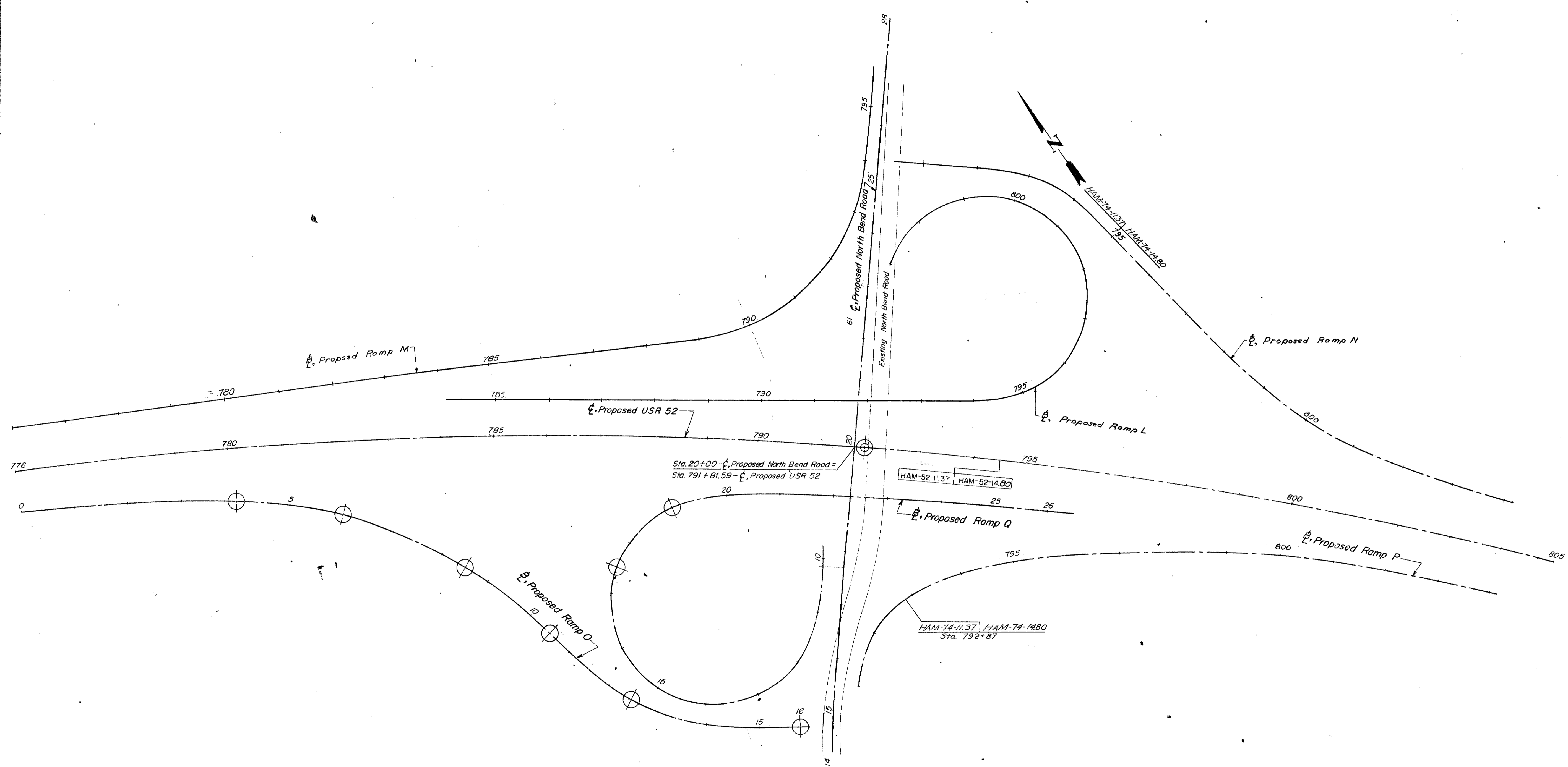




SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
SUPPLEMENT

29
39

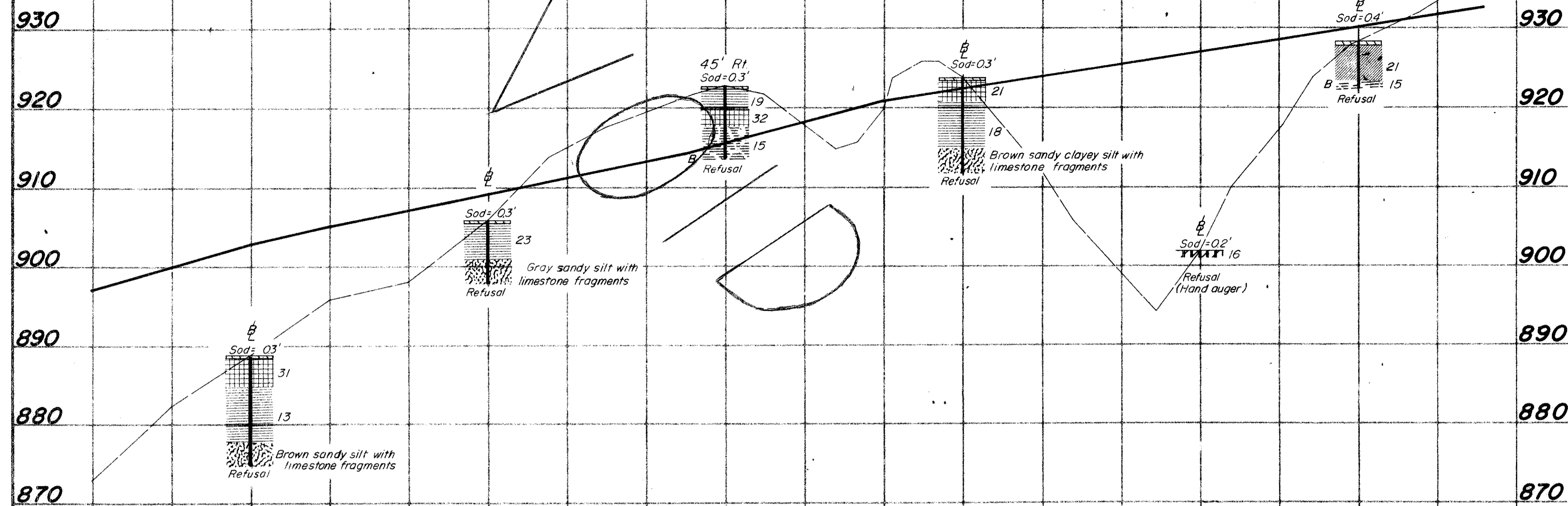
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



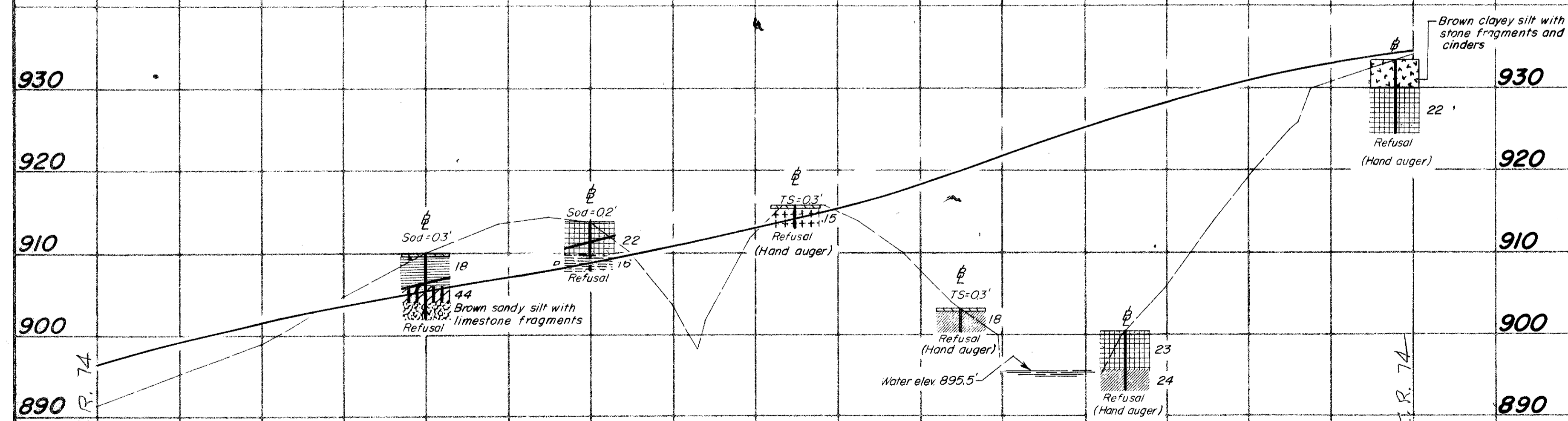
SOIL PROFILE
HAMILTON COUNTY
HAM-52-11.37
SUPPLEMENT

30
39

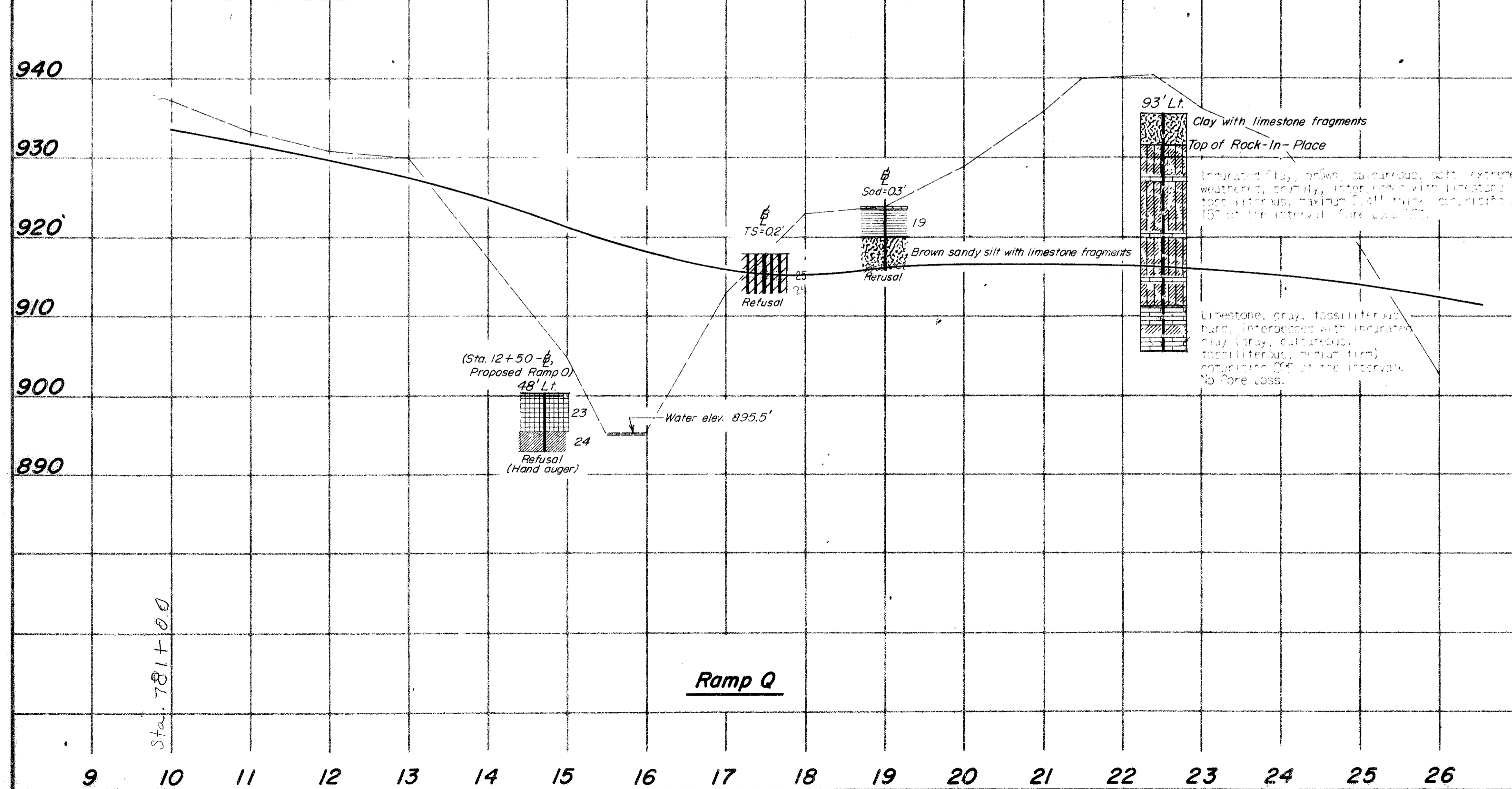
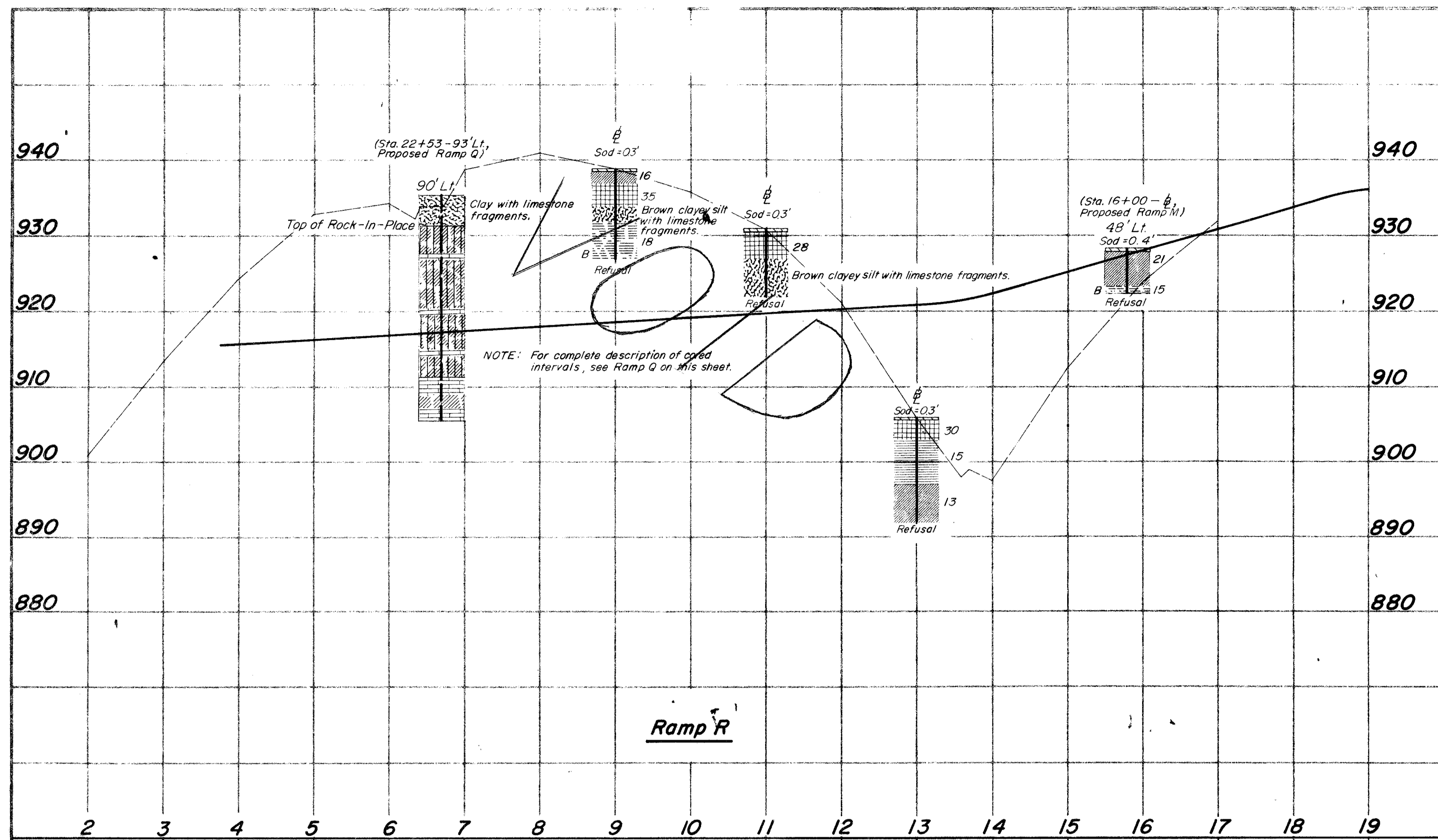
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO



Ramp M



Ramp O



GEOLOGY AND OBSERVATIONS OF THE SITE

The structure site is located upon the highly dissected Lexington Penneplain. Shallow residual soils overlie interbedded shale and limestone bedrock, of Ordovician age. Bedrock outcrops were observed in the backslope and stream bed.

EXPLORATION

The exploration consisted of two core borings and seven drive rod penetration tests, made between June 4 and 7, 1963.

INVESTIGATIONAL FINDINGS

The borings disclosed that bedrock surface, encountered at 4 and 8-foot depths, elevations 700 and 685 feet, is overlain by very stiff clay and very dense limestone boulders. The borings were terminated at 20 and 30-foot depths, elevations 678 and 670 feet, after penetrating 16 and 22 feet below bedrock surface.

The rod soundings met abrupt refusal to penetration at 1 to 13-foot depths, elevations 721 to 684 feet, considered to be on or slightly below bedrock surface, with the exception of rod sounding number 8, which terminated approximately 4 feet below bedrock surface, as indicated by the borings.

On the basis of the tests and rock outcrops, bedrock surface is considered to slope downward from the areas of the rear and forward abutments, to the central portion of the structure site and also to slope downward from the left to the right side of the site.

Following is a table listing the substructure elements and the approximate elevation of bedrock surface below the ends of the elements as determined by tests:

SUBSTRUCTURE ELEMENT	APPROXIMATE ELEVATION OF BEDROCK SURFACE			
	Eastbound		Westbound	
	Right	Left	Right	Left
Rear Abutment	705'	707'	711'	715'
Rear Pier	693'	693'	697'	700'
Forward Pier	685'	687'	688'	693'
Forward Abutment	706'	713'	718'	721'

If it is the intention to found substructure units on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be well drained at all times.

The crushing strength of the interbedded shale and limestone is not expected to exceed 150 tons per square foot.

No free water was observed in the rod sounding holes.

LEGEND

- Auger Boring-Plan View.
- Press and/or Drive Sample and/or Core Boring-Plan View.
- Drive Rod Penetration Resistance-Soundings-Plan View.
- Electrical Resistivity Probe-Plan View.
- Indicates Auger Boring.
- Indicates Press and/or Drive Sample and/or Core Boring.
- Electrical Resistivity Probe plotted to vertical scale only.
- Top of Rock.
- Water saturated zone.
- Total Depth.

- Horizontal bar on log indicates the depth the sample was taken.
- Figures to the right of boring log in profile view indicate the number of blows for "Standard Penetration" test.
X = First 6 inches
Y = Second 6 inches
- 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.
- Footing.
- Capped pile.
- Footing on pile.

SYMBOLS OF ROCK TYPES

- Coal.
- Weathered, Indurated Clay.
- Indurated Clay.
- Weathered Shale.
- Shale.
- Weathered Sandstone.
- Sandstone.
- Leached Dolomite.
- Dolomite.
- Leached Limestone.
- Limestone.

GENERAL INFORMATION

Drive Rod Penetration 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 conditions may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are 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, depths of press samples, field sample number, sample description based on laboratory test results and the Casagrande-A.C. 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.

Particle Size Definitions

8"	3"	2.0mm	0.42mm	0.075mm	0.0075mm
Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt
		No. 10 sieve	No. 40 sieve	No. 200 sieve	Clay

LOG OF BORING

Date Started 6-5-63 Date Completed 6-5-63 Boring No. B-8 Station & Offset 700+8, 67' Lt. (REAR ABUTMENT) Sampler Type SS Dia. 1 3/8" Casing Length Dia. Water Elev. Surface Elev. 708.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Physical Characteristics								SHTL Class.	
						Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI		W.C.
708.3	0				Brown clay and limestone boulders (Driller's Description)										
	2														
	4														
	6														
	8														
699.8	8					TOP OF ROCK									
	12		2.4	2.6											
	18		2.5	2.5											
	24		4.5	0.5											
	28		4.9	0.1											
678.3	30														

Shale, brown and gray, soft to firm, moderately fissile, calcareous, few angular limestone pebbles and clay seams; interbedded with limestone, (light gray, hard, very fossiliferous, thin-bedded, argillaceous seams) comprising 30% of the interval. Core loss 20%.

LOG OF BORING

Date Started 6-4-63 Date Completed 6-4-63 Boring No. B-9 Station & Offset 700+67, 67' Rt. (FORWARD PIER) Sampler Type SS Dia. 1 3/8" Casing Length Dia. Water Elev. Surface Elev. 689.6'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Physical Characteristics								SHTL Class.
						Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	LL	PI	
689.6	0				Brown clay and limestone boulders (Driller's Description)									
	2													
685.3	4		0.7	0.9	TOP OF ROCK									
	6													
	8		5.0	0.0										
	10													
	12		4.9	0.1										
	14													
	16													
	18		5.0	0.0										
689.6	20													

Shale, gray, soft to firm, calcareous, fissile and fossiliferous-in-part, weathered to 5.1', few clay seams with angular limestone pebbles; interbedded with limestone, (gray, hard, very fossiliferous, thin-bedded, with argillaceous seams) comprising 30% of the interval. Core loss 6%.

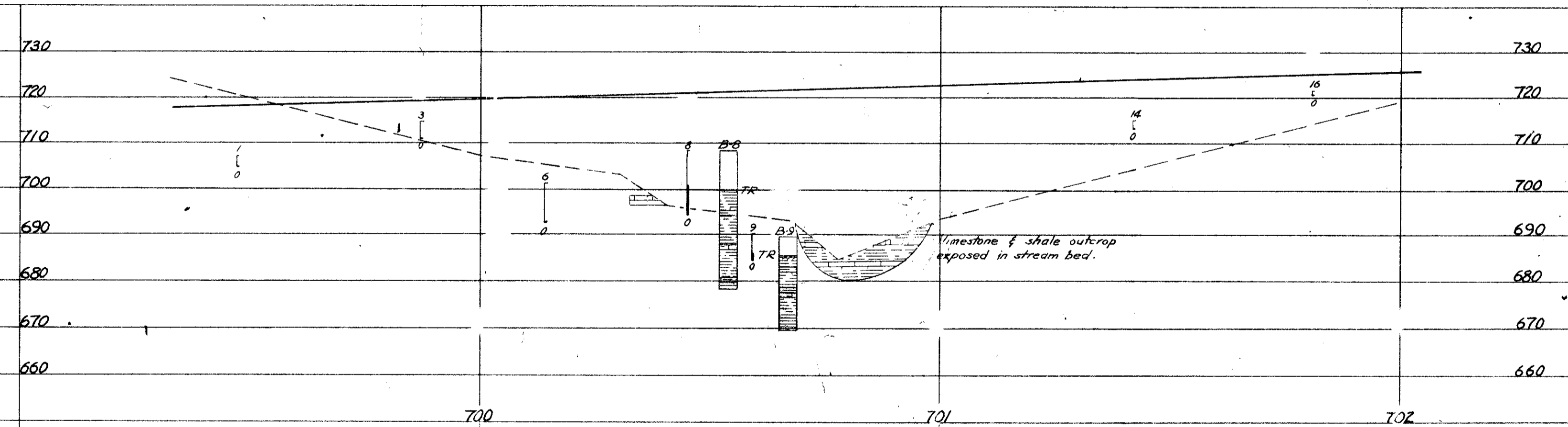
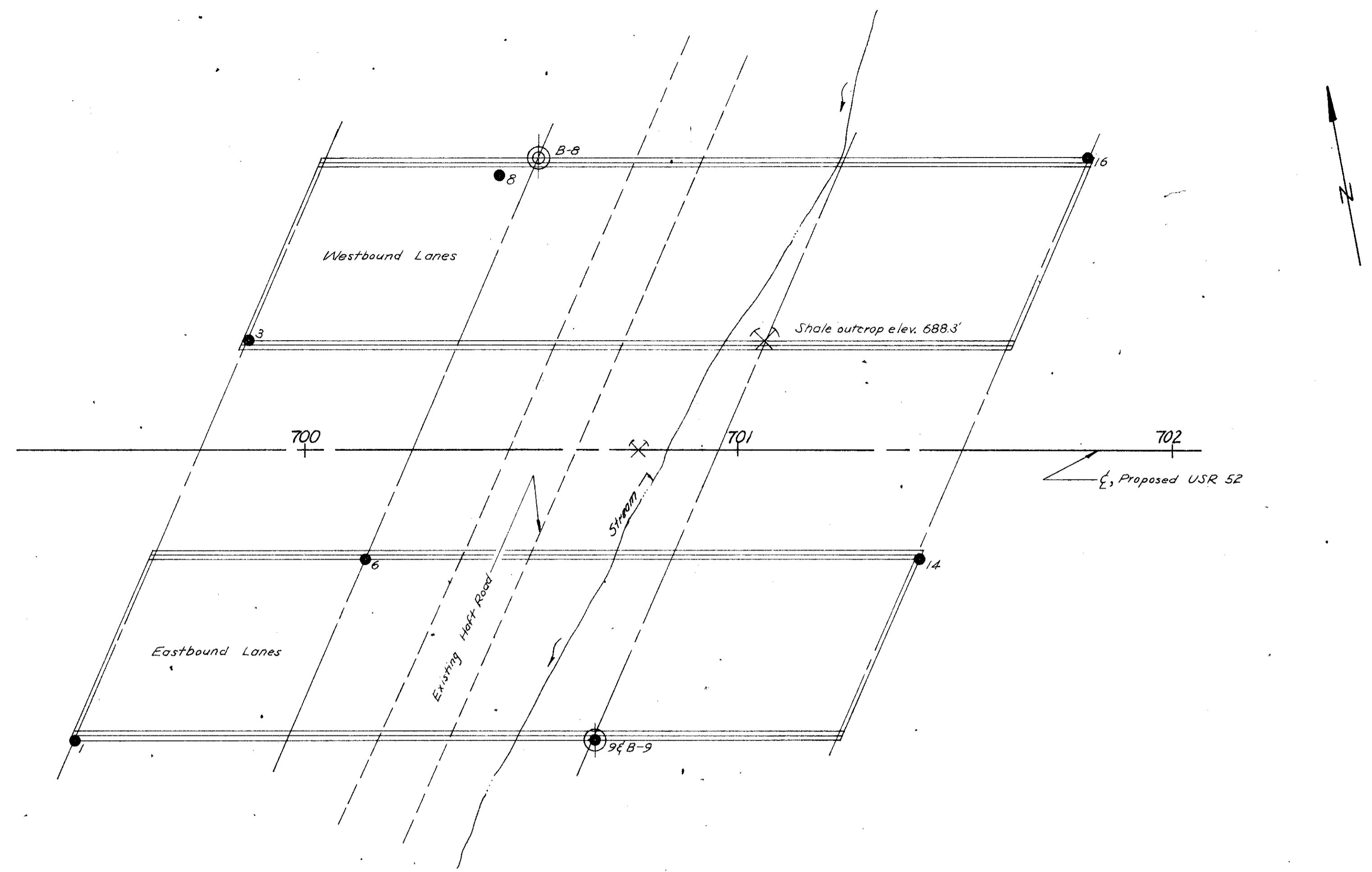
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-52-1303 L&R
OVER HAFT ROAD
SEC. HAM-52-1137

CHECKED BY R.L.P. REVIEWED BY R.D.P. DATE 6-27-63

MICROFILMED
M.I.H.S.

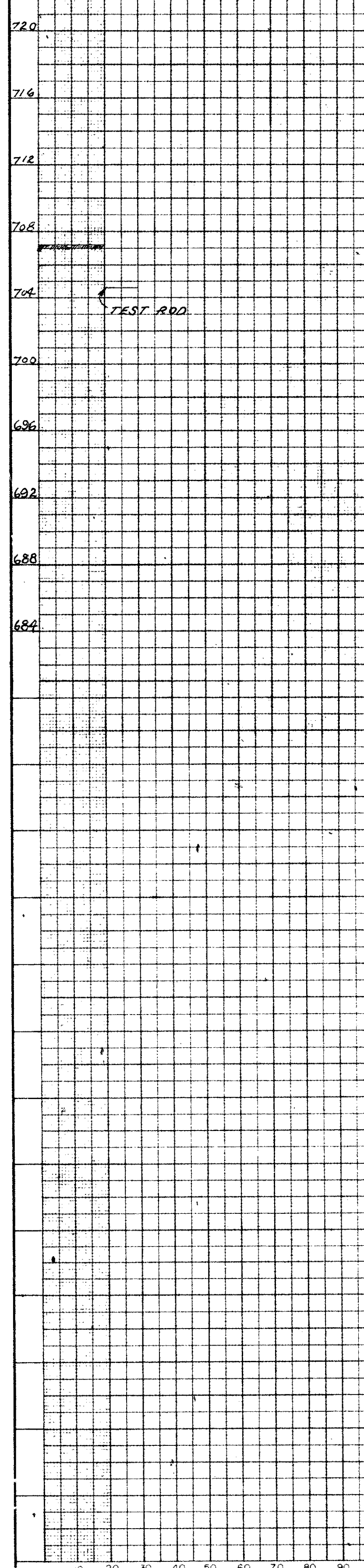


OHIO STATE HIGHWAY TESTING LABORATORY 601 WEST BROAD ST. COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION PROJECT NO. HAM-52-1303 L&R OVER HAFT ROAD HAM-52-11.37			
PLAN AND PROFILE			
DRAWN BY E.P.S.	CHECKED BY R.L.R.	REVIEWED BY R.D.R.	DATE 6-27-63

SCALE: 1" = 20'

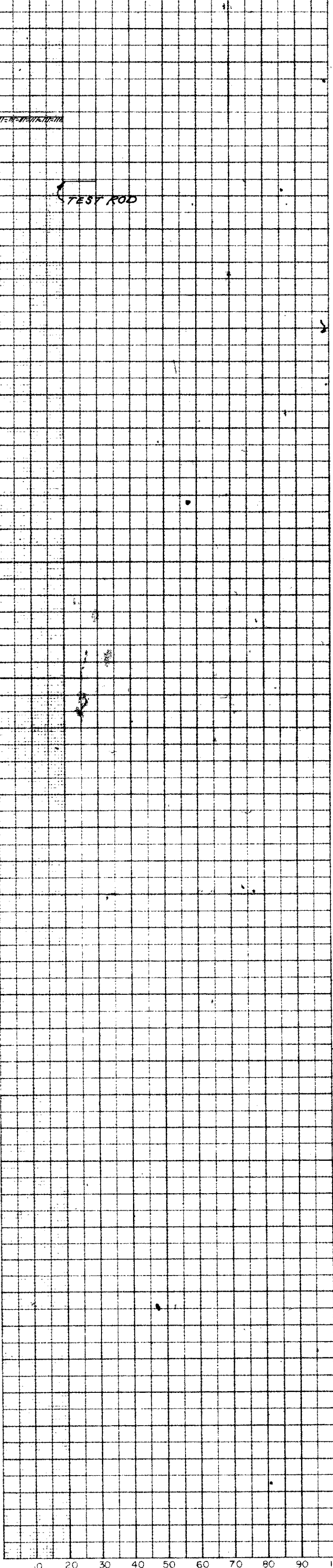
Test Location No. 1
Station B Offset 699+47.67 RT
REAR ABUTMENT
Surface Elev. 707.2 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



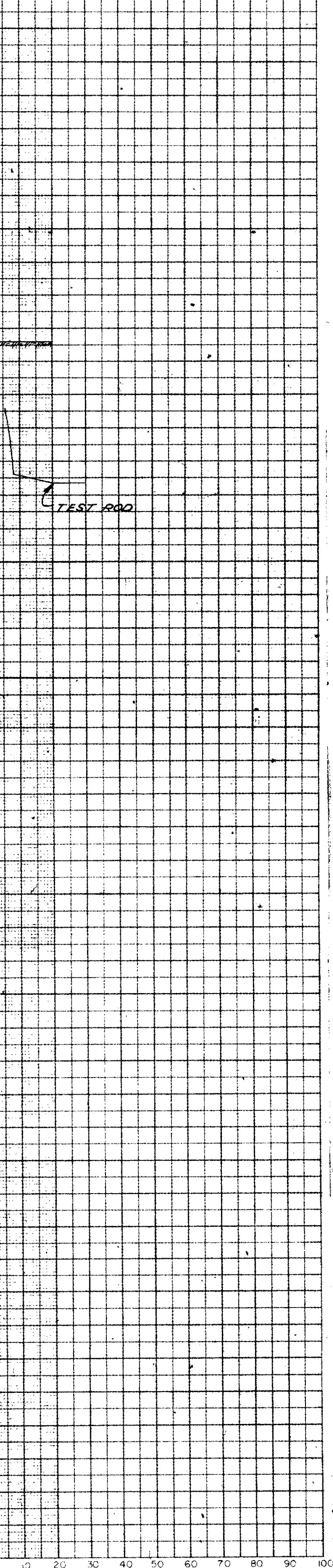
Test Location No. 3
Station B Offset 699+87.25 LT
REAR ABUTMENT
Surface Elev. 714.7 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



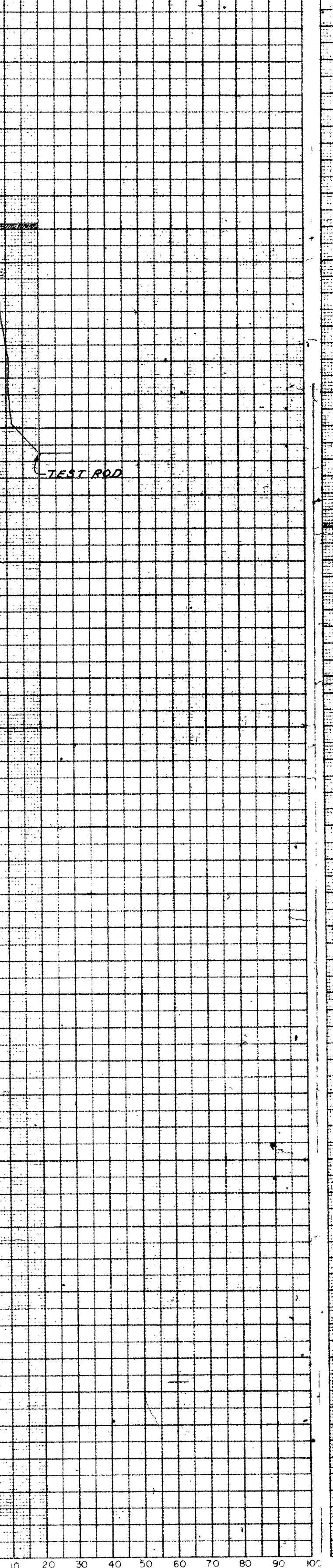
Test Location No. 6
Station B Offset 700+14.25 RT
REAR PIER
Surface Elev. 701.2 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



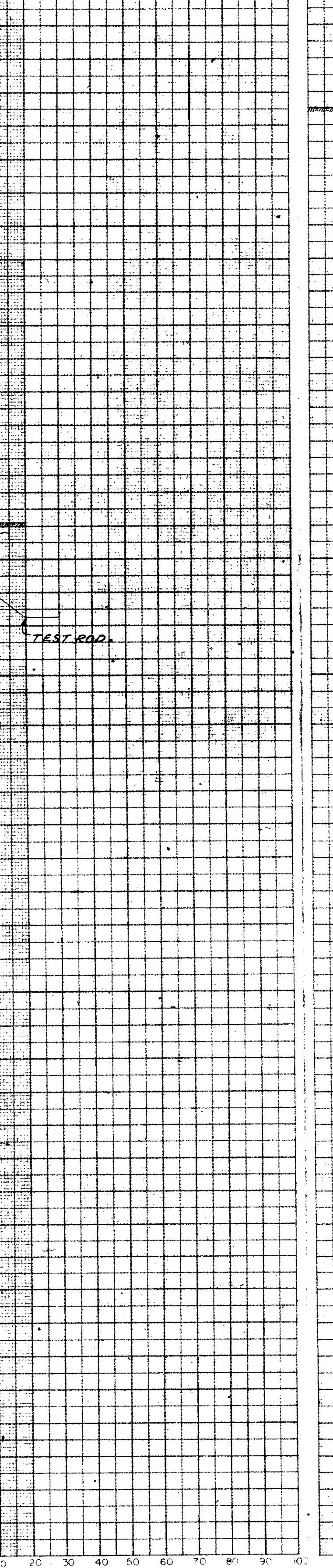
Test Location No. 8
Station B Offset 700+45.63 LT
REAR PIER
Surface Elev. 708.3 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



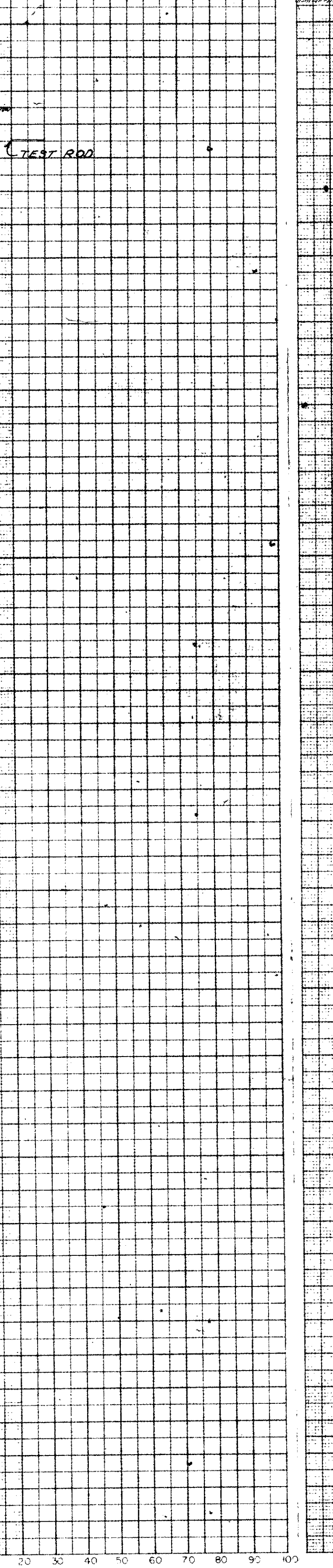
Test Location No. 9
Station B Offset 700+67.67 RT
FORWARD PIER
Surface Elev. 690.2 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



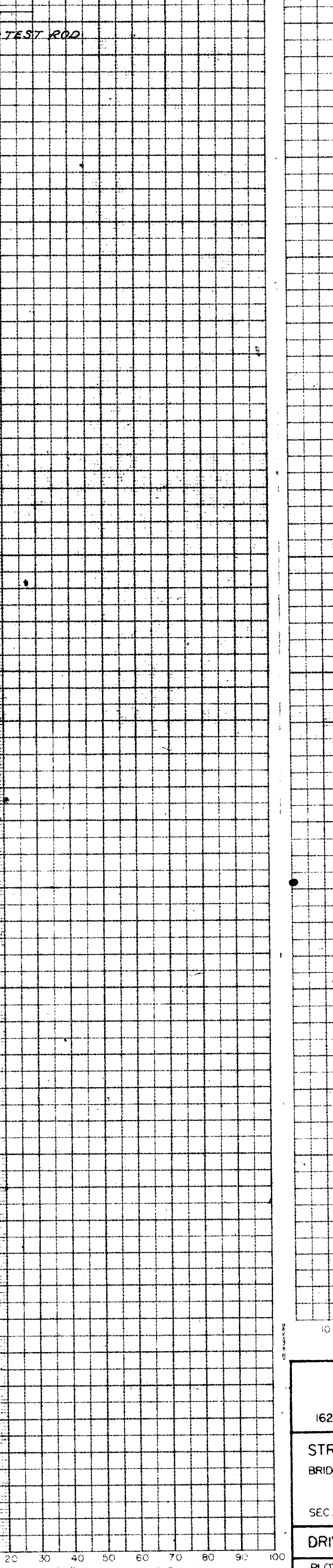
Test Location No. 14
Station B Offset 701+42.25 RT
FORWARD ABUTMENT
Surface Elev. 715.0 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



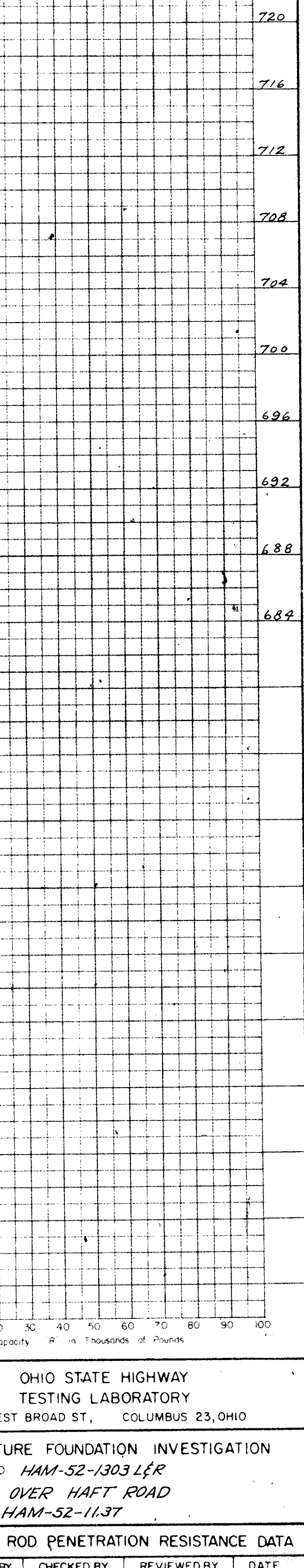
Test Location No. 16
Station B Offset 701+81.67 LT
FORWARD ABUTMENT
Surface Elev. 721.8 Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



Test Location No. 17
Station B Offset
Surface Elev. Water Elev.

Piling
Hammer
Formula
Reference
Rod Condition



OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-52-1303 L&R
OVER HAFT ROAD
SEC. HAM-52-1137
DRIVE ROD PENETRATION RESISTANCE DATA
PLOTTED BY E.R. CHECKED BY F.L.R. REVIEWED BY R.D.R. DATE 6-27-63

GEOLOGY OF THE SITE

The structure site is located upon moderately dissected terrain, where thin residual soil cover overlies interbedded shale and limestone, of Ordovician age.

EXPLORATION

The exploration consisted of two drive sample-core borings, one hand-driven probe, and six drive rod penetration tests, made on February 7 and 8, and March 3, 1963.

INVESTIGATIONAL FINDINGS

Boring B-3 disclosed moist, medium-stiff gravelly clay and dense clayey silt with cobbles above bedrock surface, encountered at 20-foot depth, elevation 771 feet. Boring B-9 disclosed dense silty clay with boulders and cobbles above bedrock surface, encountered at 14-foot depth, elevation 795 feet. Due to the dense nature of the material, boring B-9 was cored through its entire length.

The rod soundings generally met gradual increase in penetration resistance, occasionally erratic (considered indicative of cobbles and boulders), and were terminated upon encounter with abrupt refusal to penetration at 2 to 19-foot depths, elevations 805 to 772 feet, considered to be slightly above or on bedrock surface, in the dense silts, cobbles, and boulders, as revealed by the borings. The hand probe was discontinued at 3-foot depth upon encounter with boulders and cobbles, as revealed by the borings.








On the basis of the tests, bedrock surface is considered to slope downward from the forward to the rear portion of the site, between elevations 795 and 771 feet. Only the forward pier elevation, as shown on the site plan, is considered to be on or below bedrock surface.







If it is the intention to found substructure units on bedrock, it is considered advisable that the open excavations be inspected in the field

in order to insure that the excavations have been extended to rock throughout the entire founding area. It is further suggested that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be kept drained at all times, due particularly to the fact that while the shale bedrock is generally firm in place, it is susceptible to disintegration upon exposure to the atmosphere and water.










Unconfined compression tests on similar interbedded limestone and shale bedrock indicates a crushing strength on the order of 100 to 150 tons per square foot.

No free water was observed in 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

-  Coal
-  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.

SYMBOLS OF ROCK TYPES

-  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.

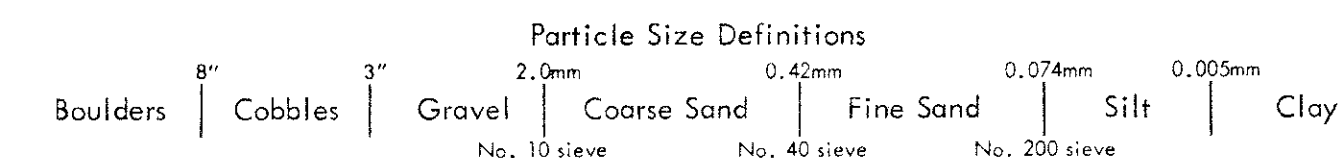
Drive Sample Borings - Drive-Press Sample Borings

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.



State of Ohio
Department of Highways
Testing Laboratory

LOG OF BORING

Date Started 2-7-63 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 2-7-63 Casing Length _____ Dia. _____

Project Identification: HAMILTON
HAM-52-11.37
HAM-52-1346
RACE ROAD OVER USR 52

Boring No. B-3 Station & Offset 19+30, 18' Lt. (REAR PIER) Surface Elev. 791.1

Elev.	Depth	S.M.	Spec.	Loss	Description	Field No.	Lab. Nos.	Physical Characteristics										SMTL Class			
								% Agg.	C.S.	F.S.	Silt	Clay	LL	PI	WC						
791.1	0																				
	2																				
	4																				
786.1	6	3/3			Brown Gravelly Clay	1	6170	29	2	3	21	45	49	26	27						
	8																				
781.1	10	2/2			Brown and Gray Gravelly Clay	2	6171	26	3	3	25	43	46	22	26						
	12																				
	14																				
776.1	16	5/7			Brown and Gray Clayey Silt	3	6172	0	1	2	51	46	PL	29	35						
775.1	18																				
	20		2.6	1.4	Brown Clayey Silt and limestone cobbles.																
771.1	22				TOP OF ROCK																
	24		4.7	0.3	Shale, dark gray, fissile, firm, moderately weathered in top 3.0'; with thin, irregular limestone interbeds (gray, crystalline, fossiliferous, hard) comprising 3/4 of the interval. Core loss 3%.																
	26																				
	28																				
761.1	30		5.0	0.0																	

BOTTOM OF BORING

State of Ohio
Department of Highways
Testing Laboratory

LOG OF BORING

Date Started 2-7-63 Date Completed 2-8-63 Water Elev. _____

Project Identification: HAMILTON
HAM-52-11.37
HAM-52-1346
RACE ROAD OVER USR 52

Boring No. B-9 Station & Offset 21+31, 18' Lt. (FORWARD ABUTMENT) Surface Elev. 808.8

Elev.	Depth	S.M.	Spec.	Loss	Description
808.8	0				
	2				
	4	0.5	4.5		Brown Silty Clay with Limestone Boulders and Cobbles.
	6				
	8	1.8	2.2		
	10				
	12				
794.8	14	4.0	1.0		TOP OF ROCK
	16				
	18	5.0	0.0		Shale, gray, fissile, firm, calcareous, with interbedded limestone (gray, crystalline, fossiliferous, hard) comprising 50% of the interval; with soft clay seams less than 1 inch in thickness throughout. Core loss 10%.
	20				
	22				
	24	3.4	1.6		
783.8					BOTTOM OF BORING

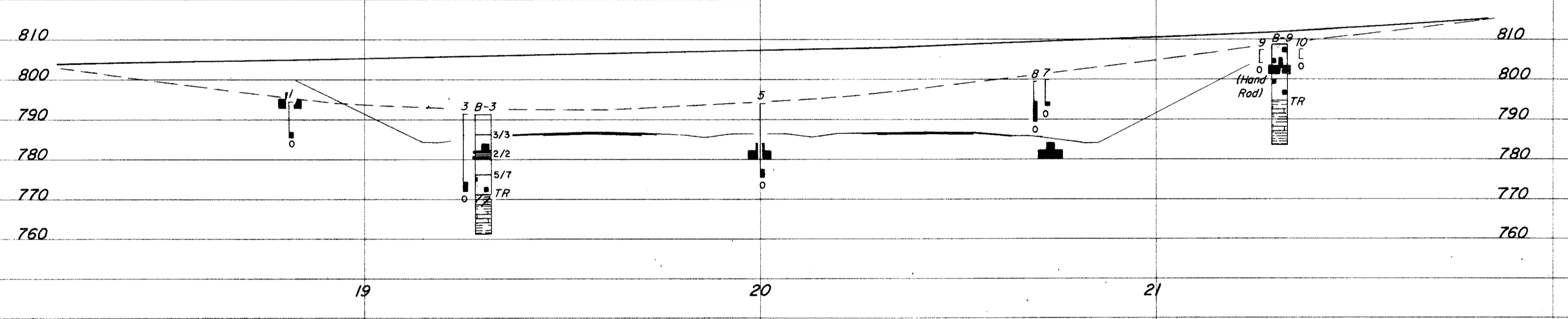
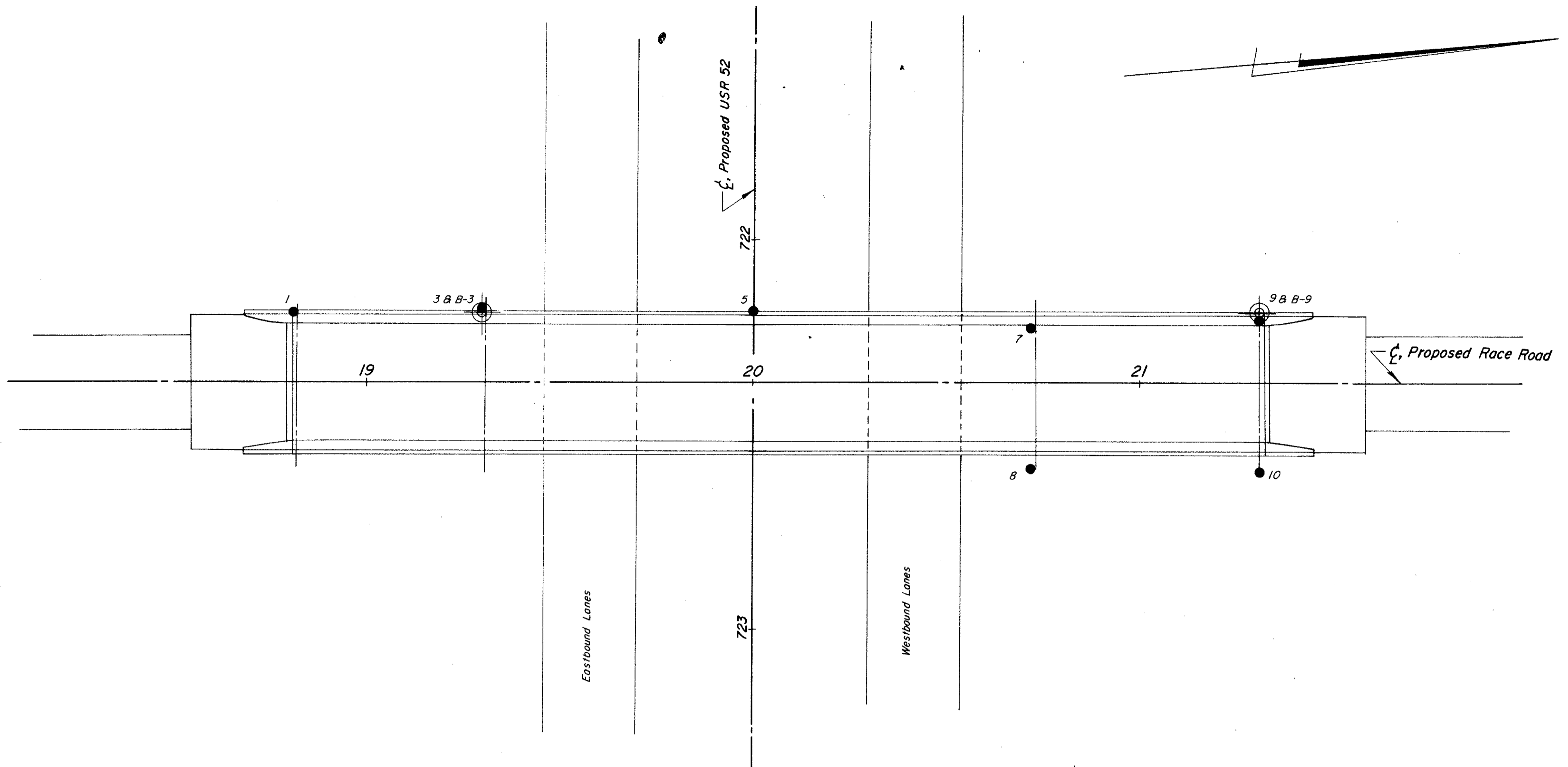
REVISED 4/27/65

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OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-52-1346
UNDER RACE ROAD
SEC. HAM-52-11.37

CHECKED BY R.P.W.	REVIEWED BY R.D.R.	DATE 3/18/63
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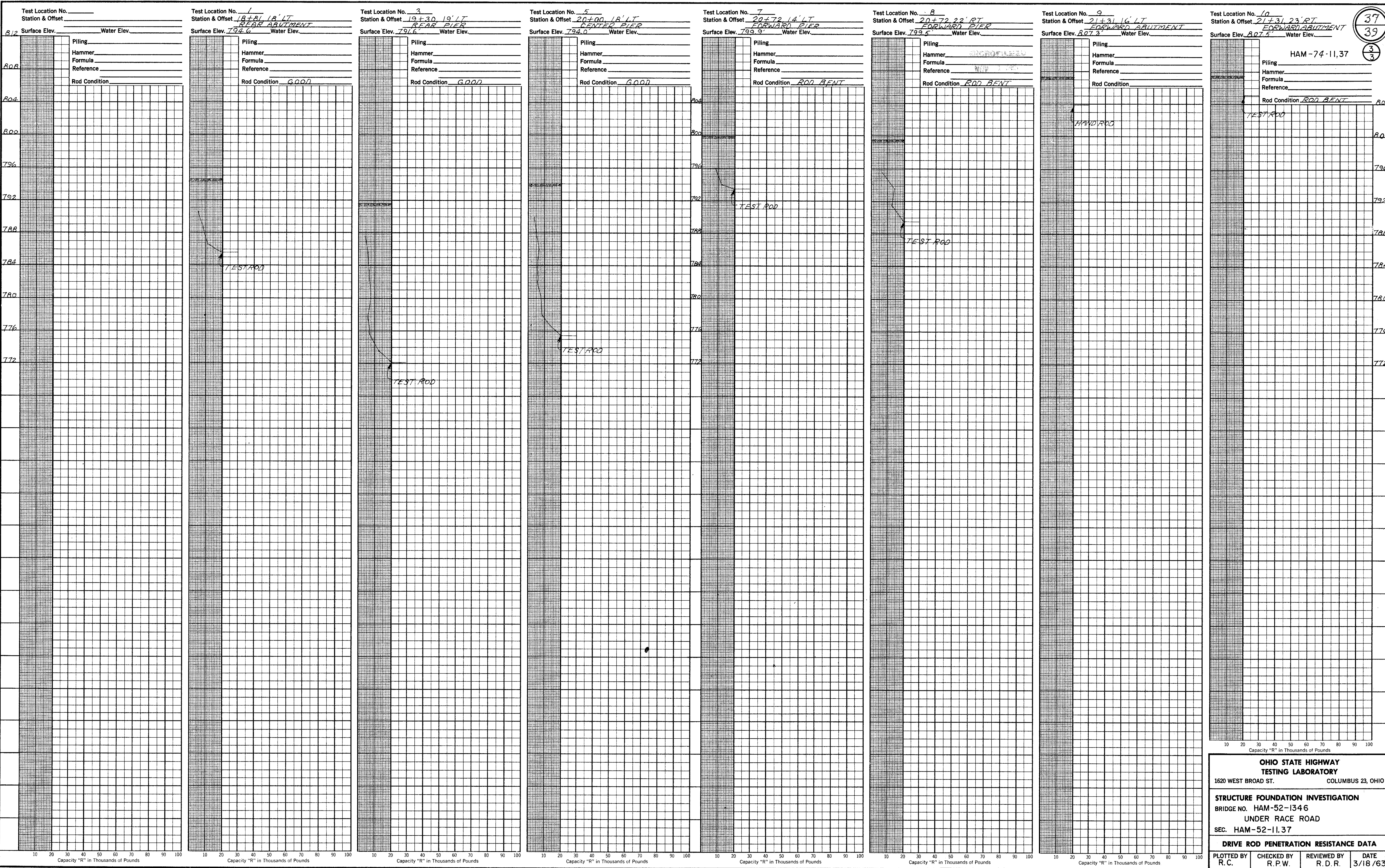


REVISED 4/27/65

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-52-1346
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PLAN AND PROFILE			
DRAWN BY R.L.F.	CHECKED BY R.P.W.	REVIEWED BY R.D.R.	DATE 3/18/63

SCALE: 1" = 20'



37
39
3
3

HAM-74-11,37

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. HAM-52-1346
UNDER RACE ROAD
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DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R. C.	CHECKED BY R. P. W.	REVIEWED BY R. D. R.	DATE 3/18/63
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REVISED 4/27/65

Structure Foundation Investigation

HAM-52-1177
RSP 52 UNDER NORTH BEND ROAD

LOCATION OF THE SITE
The structure site is located upon moderately dissected terrain. Thin residual soils overlie interbedded limestone and indurated clay of Devonian age.

EXPLANATION
The exploration consisted of ten drive rod penetration tests, made on March 5 and 6, 1965. The test results are shown on the log. The soil profile investigation in the vicinity of this structure site.

INVESTIGATIONAL FINDINGS

The boring disclosed intervals of subsurface material as follows:

DEPTH	DESCRIPTION
At surface to 927'	Dense clay with limestone fragments.
927' to 911'	Transitional zone - Low strength indurated clay with thin intervals of hard limestone - crushing strength of the indurated limestone is approximately 50 tons per square foot.
Below 911'	Firm bedrock - Hard limestone with medium strength indurated clay - crushing strength of the indurated limestone and indurated clay is approximately 150 tons per square foot.

The rod sometimes generally met appreciable resistance to penetration and was halted - considered to be on, or to have penetrated into the transitional zone, and terminated on limestone intervals.

It is suspected that the area of the footing contact not be subjected to prolonged atmospheric exposure, and that the excavation be kept drained at all times, due to the fact that the indurated clay bedrock is generally fine in place. It is susceptible to disintegration upon exposure to dry atmospheric air.

No free water was encountered in the test holes.

One String 12-6-62
One Completed 12-18-62
Boring No. B-6
Sample Type SS
Dia. 1 3/8"
Core Length 10' RT (CENTER PIECE)
Surface Elev. 935.8

Elev.	Depth	Pen. Rate	Pen. Time	Pen. Loss	Description	Sample No.	Gravel %	Fine Sand %	Silt %	Clay %	LL	PL	W	C	Class.
935.8	0														
931.8	4	0.6	4.4		Clay with limestone fragments										
	6				TOP OF ROCK										
	8														
	10	1.3	3.7												
	12														
	14	3.5	1.5		Indurated clay, brown, calcareous, soft, extremely friable, interbedded with limestone (gray fossiliferous, interbedded with limestone film) comprising about 15% of the interval. Core loss 53%.										
	16														
	18	2.2	2.8												
	20														
	22														
	24	4.6	2.4												
	26														
	28														
	30														

TRANSITIONAL ZONE

Indurated clay, brown, calcareous, soft, extremely friable, interbedded with limestone (gray fossiliferous, interbedded with limestone film) comprising about 15% of the interval. Core loss 53%.

BOTTOM OF BORING

GENERAL INFORMATION

Drive Rod Penetration Tests
Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 125 lb. drop hammer, into the ground, using a 125 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 in thousands of pounds which is a measure of both the strength and the bearing capacity of the soil. The test results are reported to the Ohio Department of Highways, Bureau of Bridges, for interpretation. A graph is prepared by plotting the value "M" 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 conditions 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 3-foot cut 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 a 2" O. D. 1 1/2" I. D. thin-walled press-sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

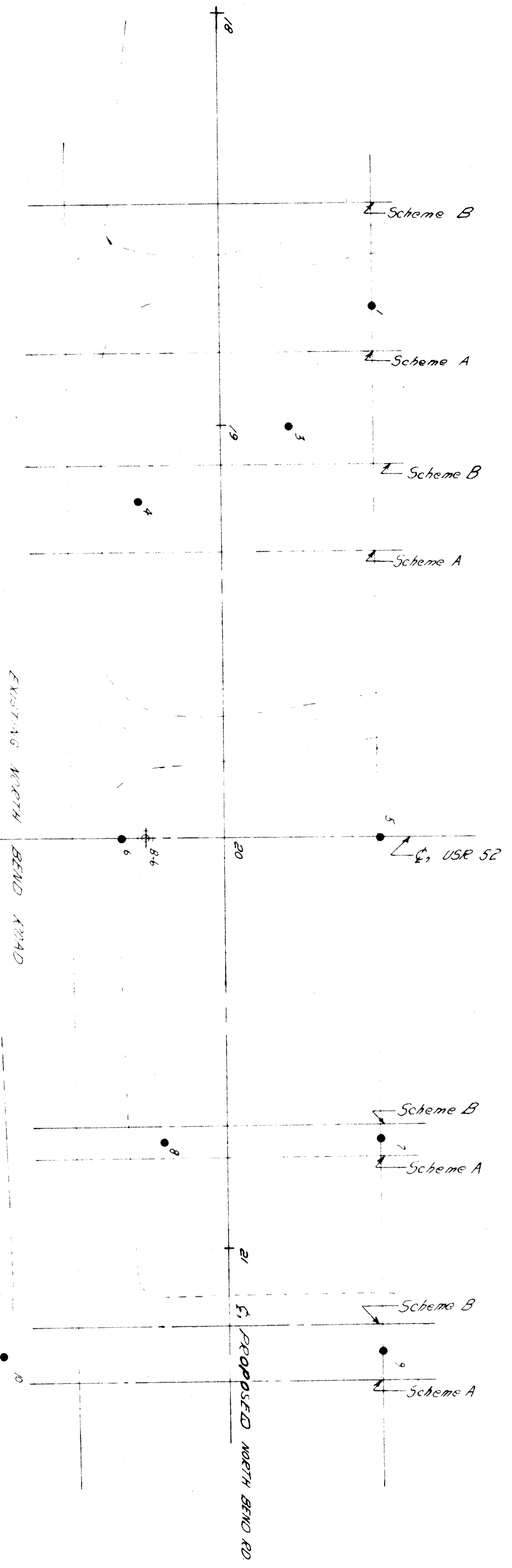
The Boring Log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch on laboratory tests of press samples, laboratory sample number, sample description - based on laboratory tests of press samples, and moisture content determinations. Results of strength and moisture content testing appear on separate enclosures.

At depths where the 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.

Particle Size Definitions

Boulders	6"	Gravel	2.0mm	Coarse Sand	0.425mm	Fine Sand	0.075mm	Silt	0.005mm	Clay	< 0.002mm
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- Boring Plan Legend**
- ⊕ Auger Boring
 - ⊕ Press and/or Drive Sample and/or Core Boring
 - Drive Rod Penetration Resistance Soundings
 - A Indicates Auger Boring
 - B Indicates Press and/or Drive Sample and/or Core Boring



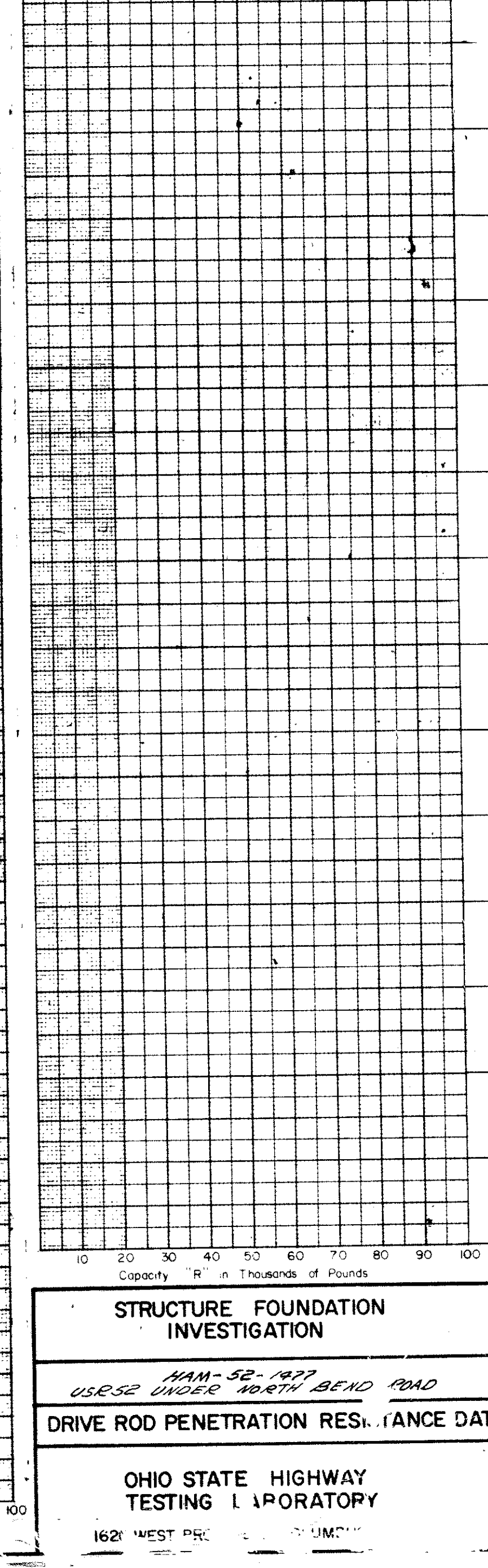
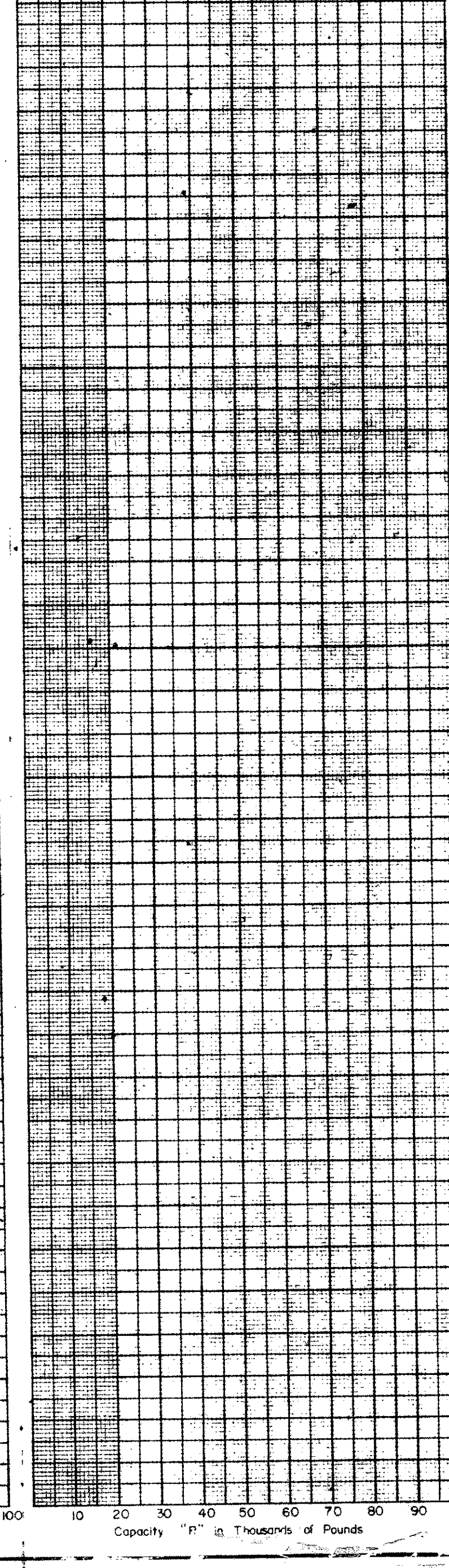
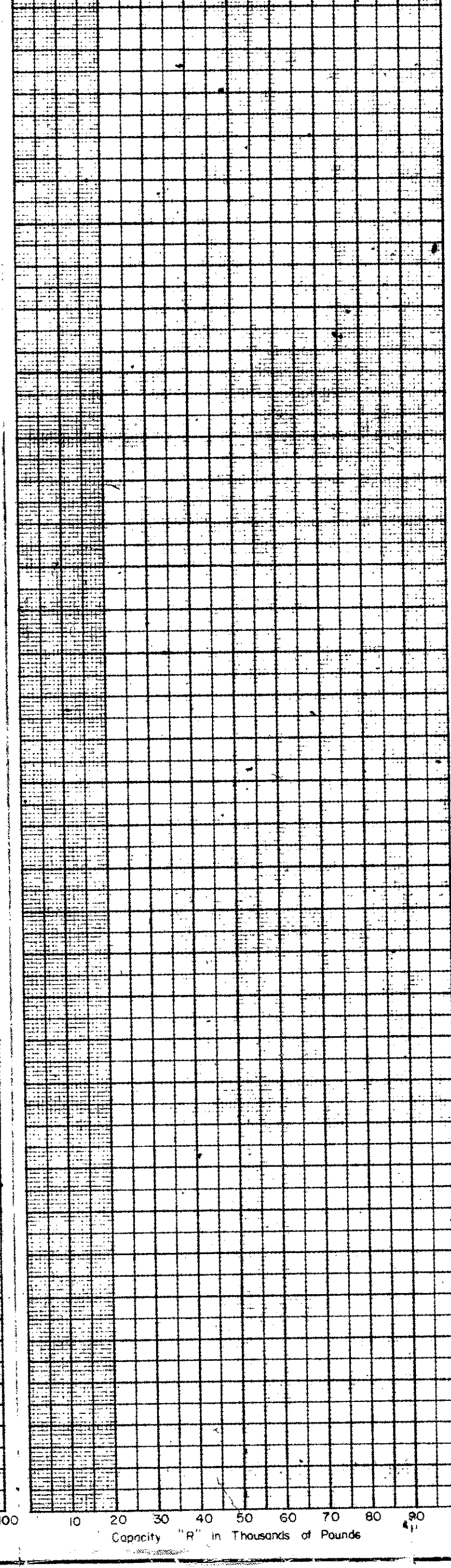
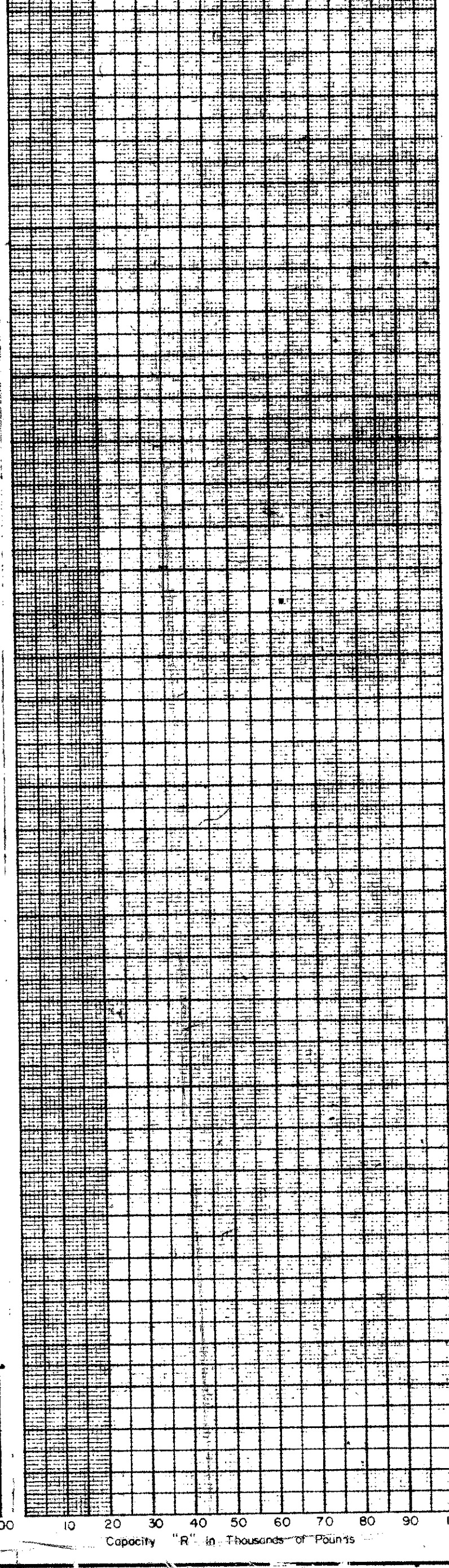
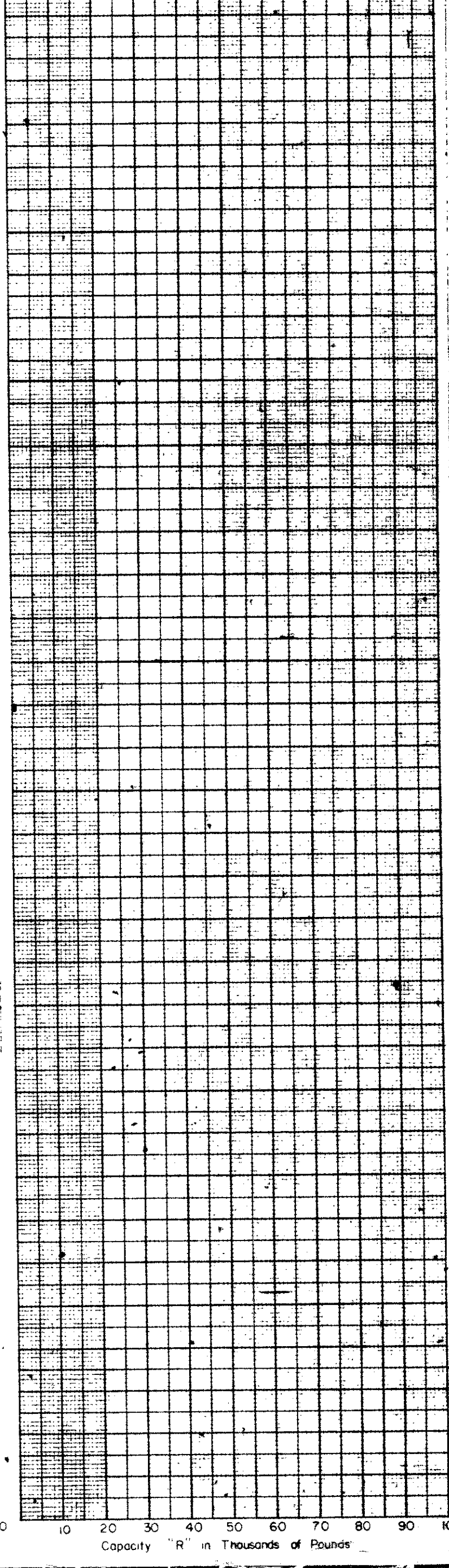
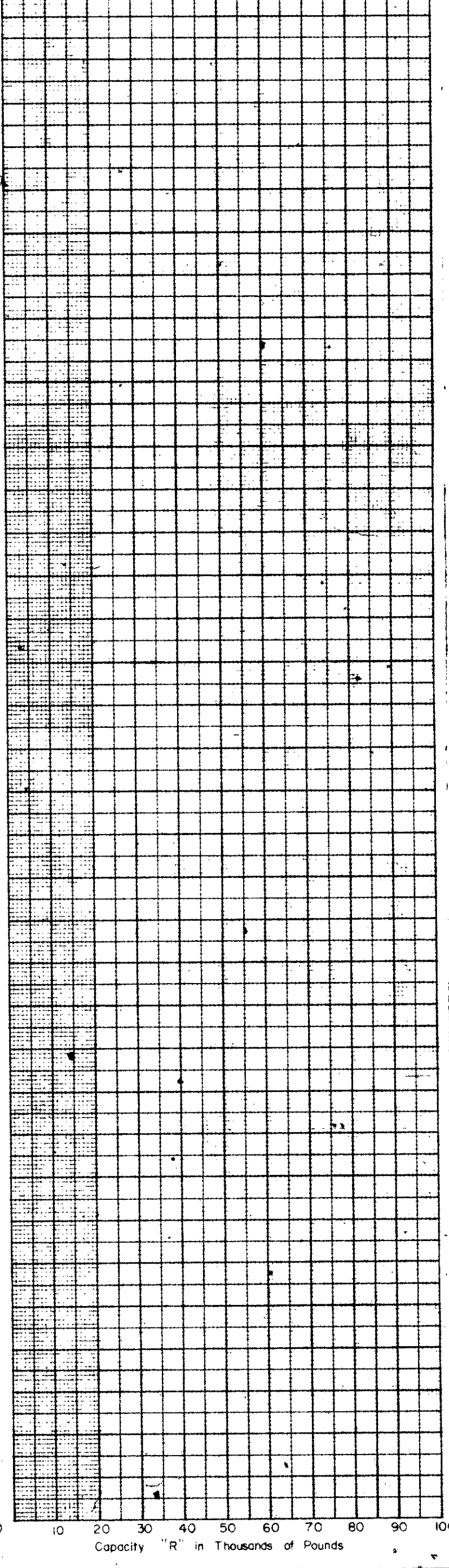
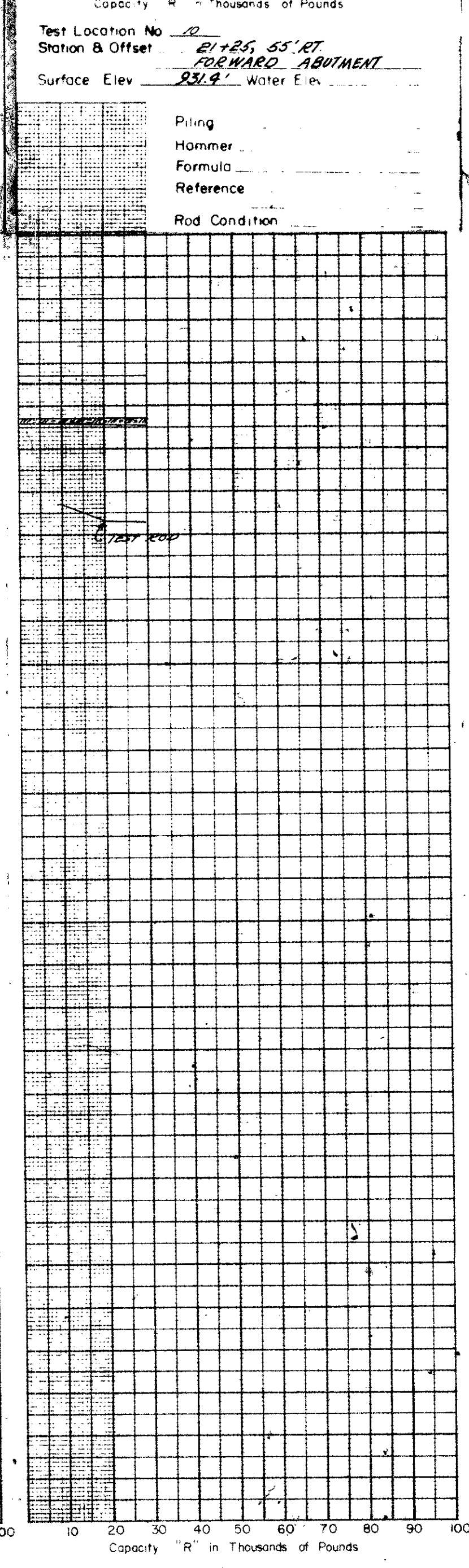
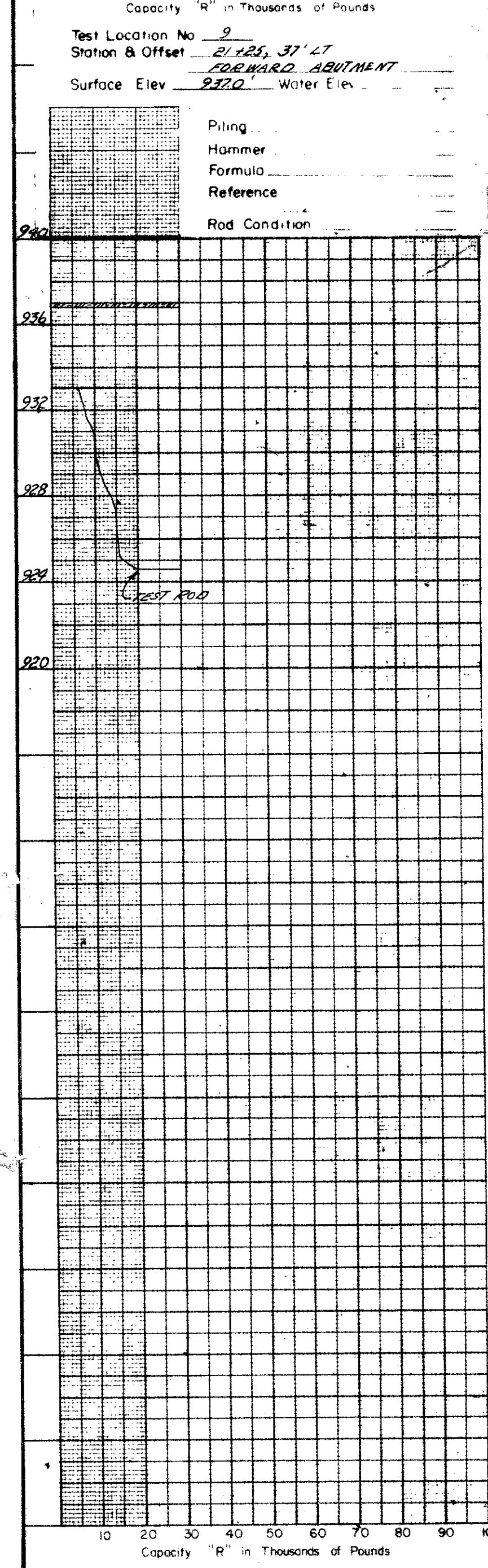
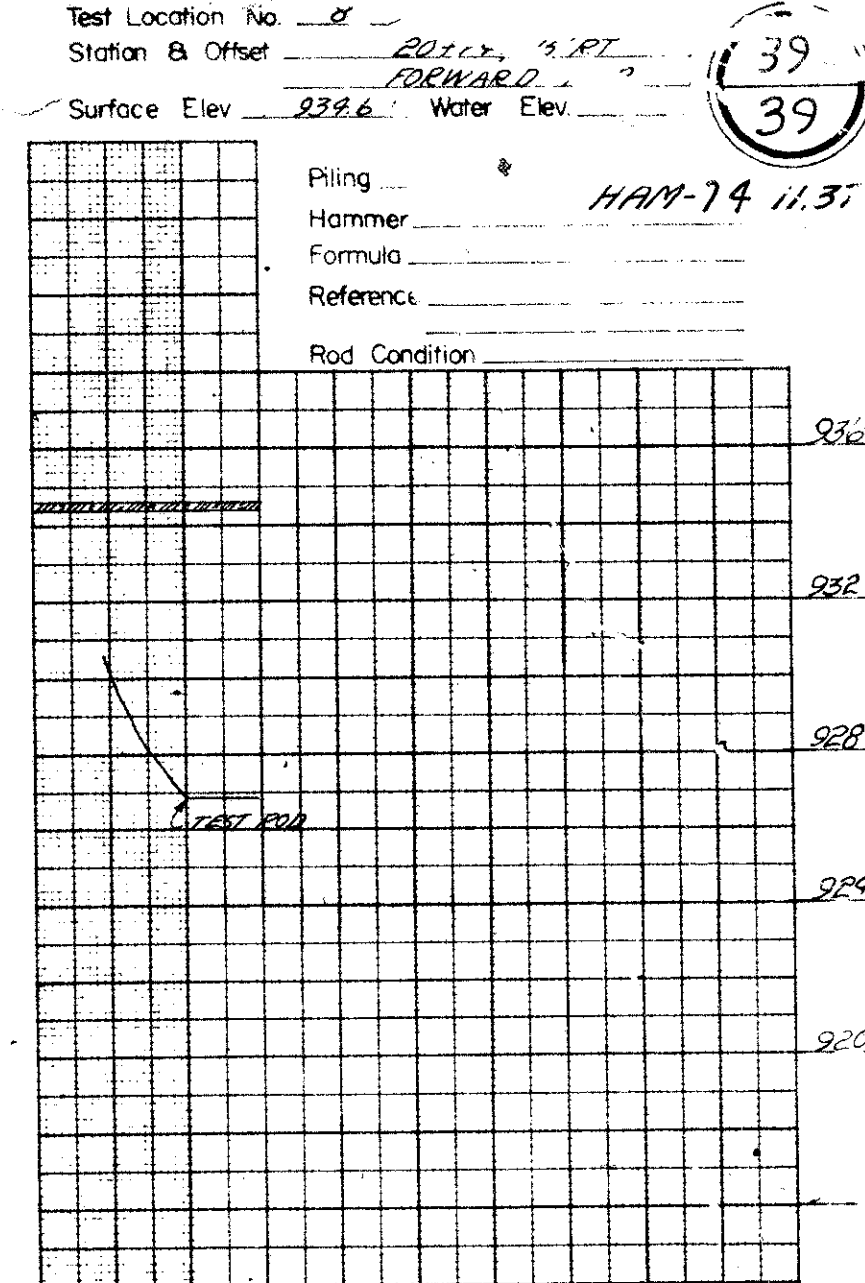
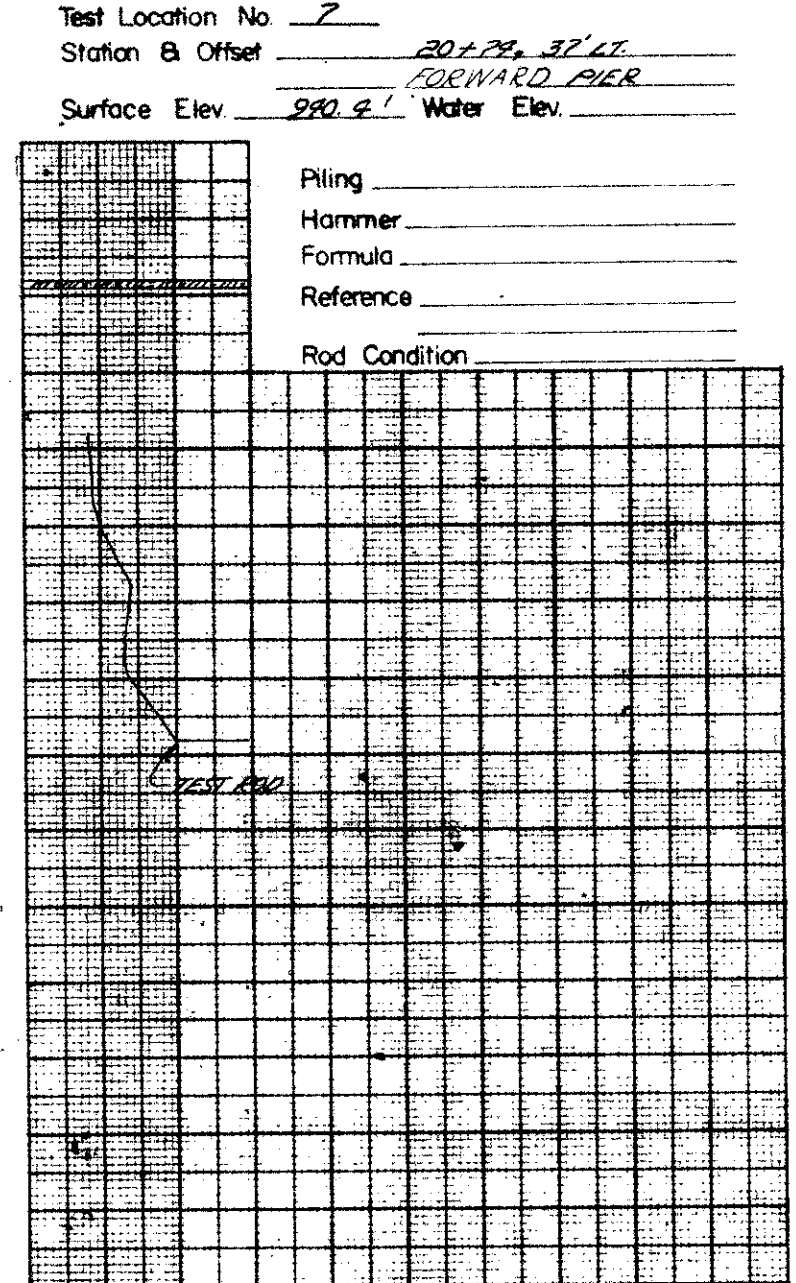
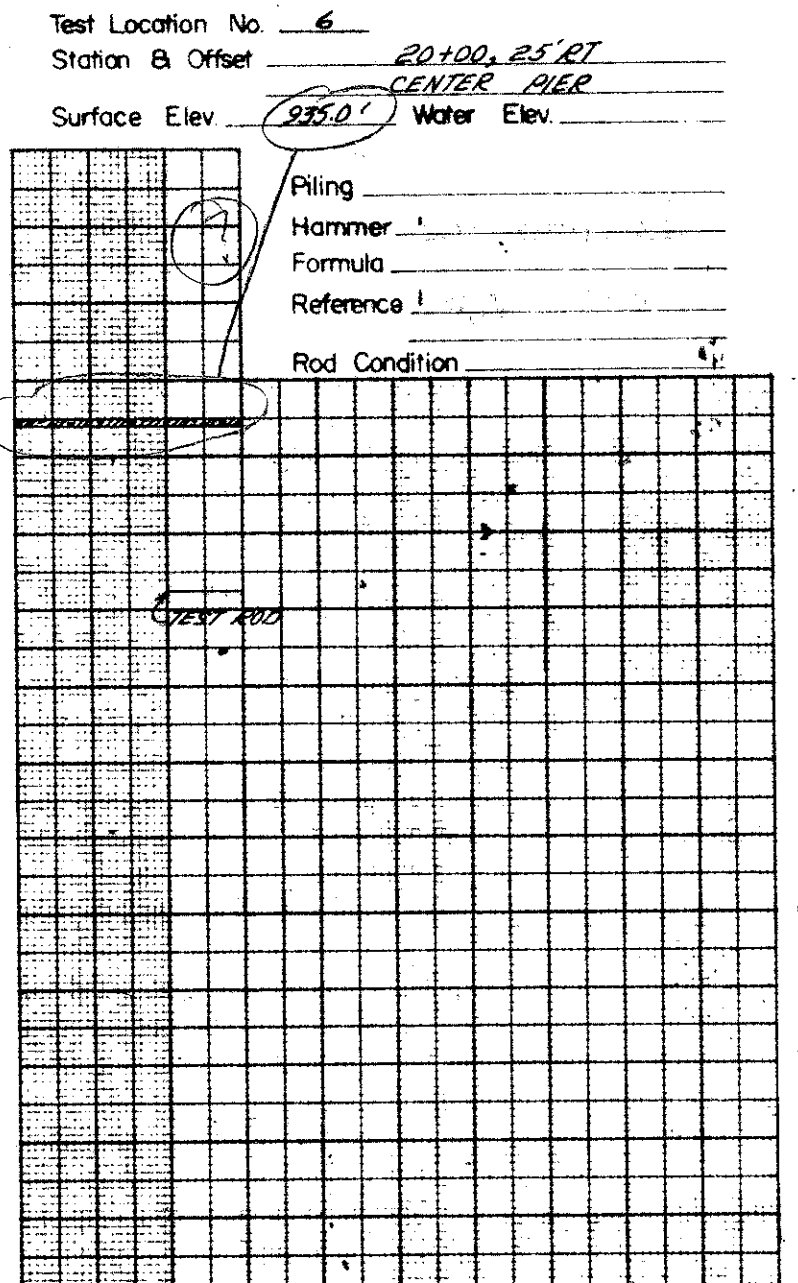
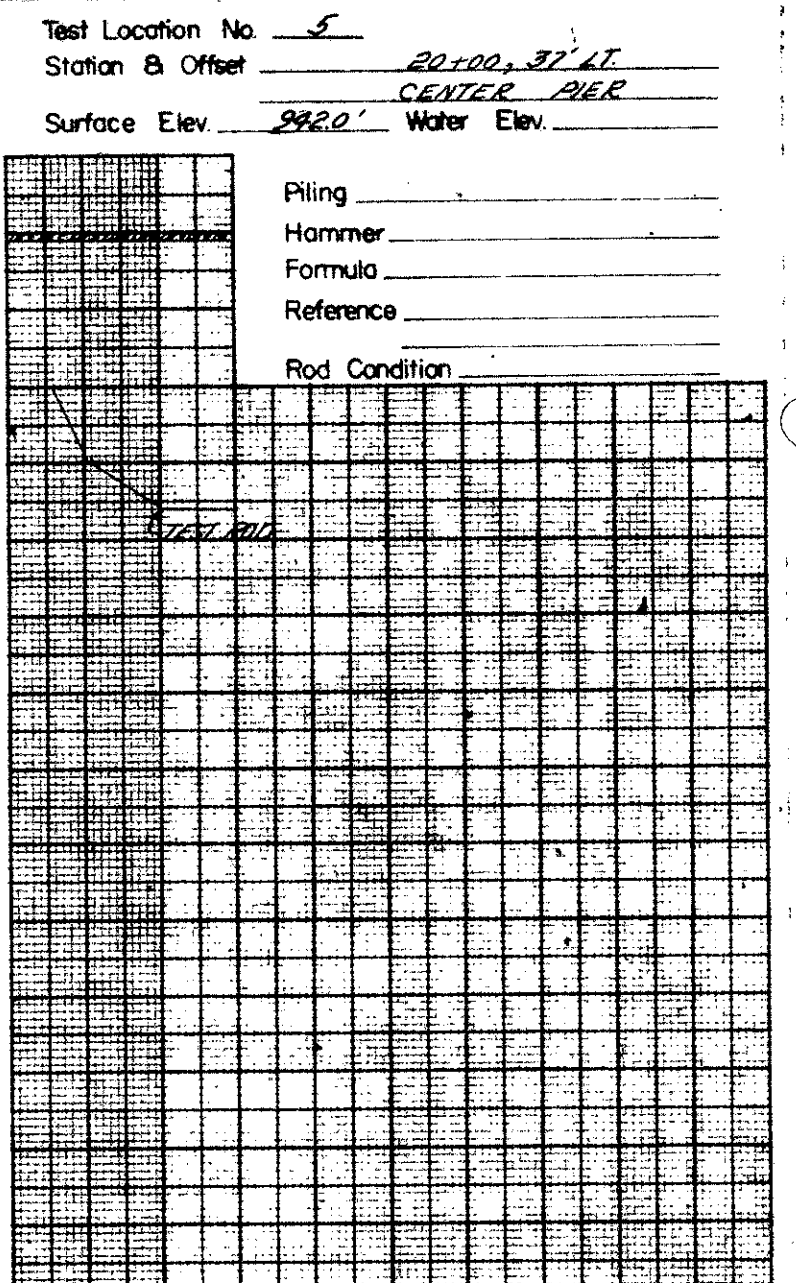
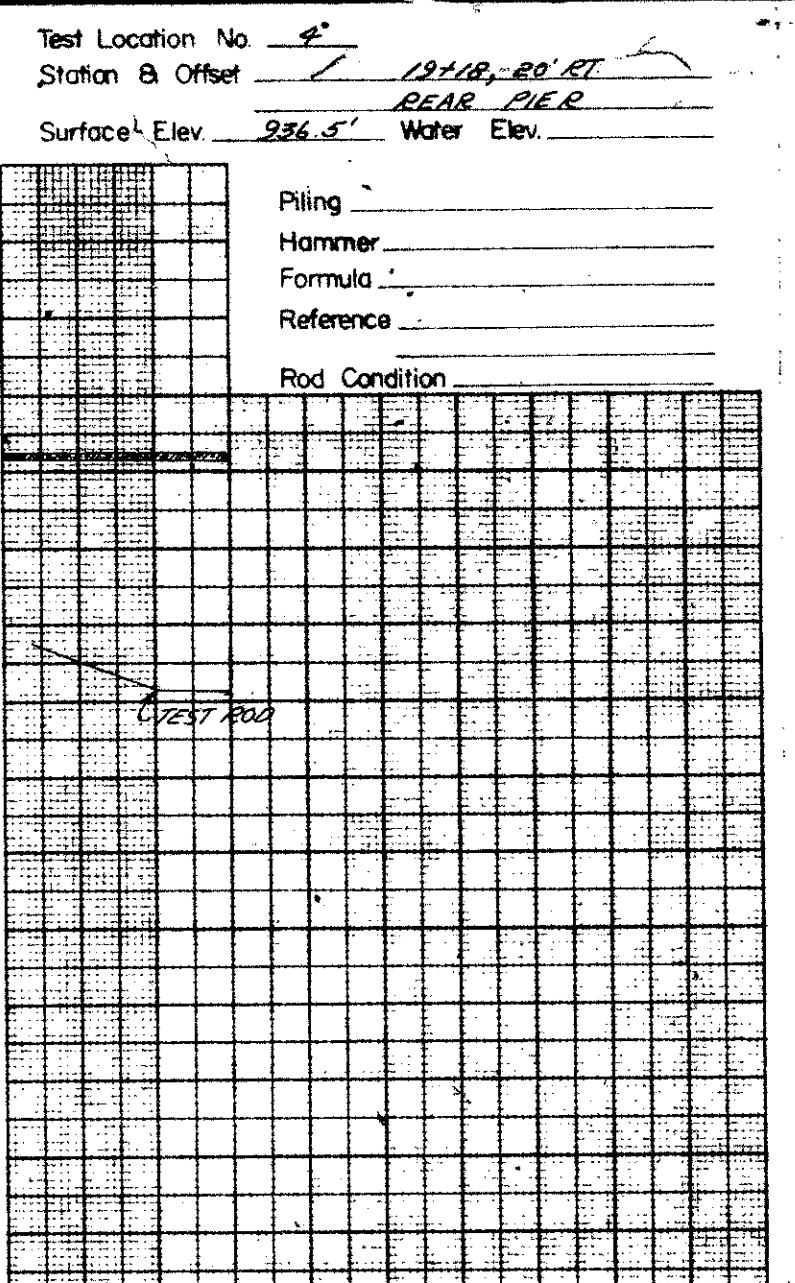
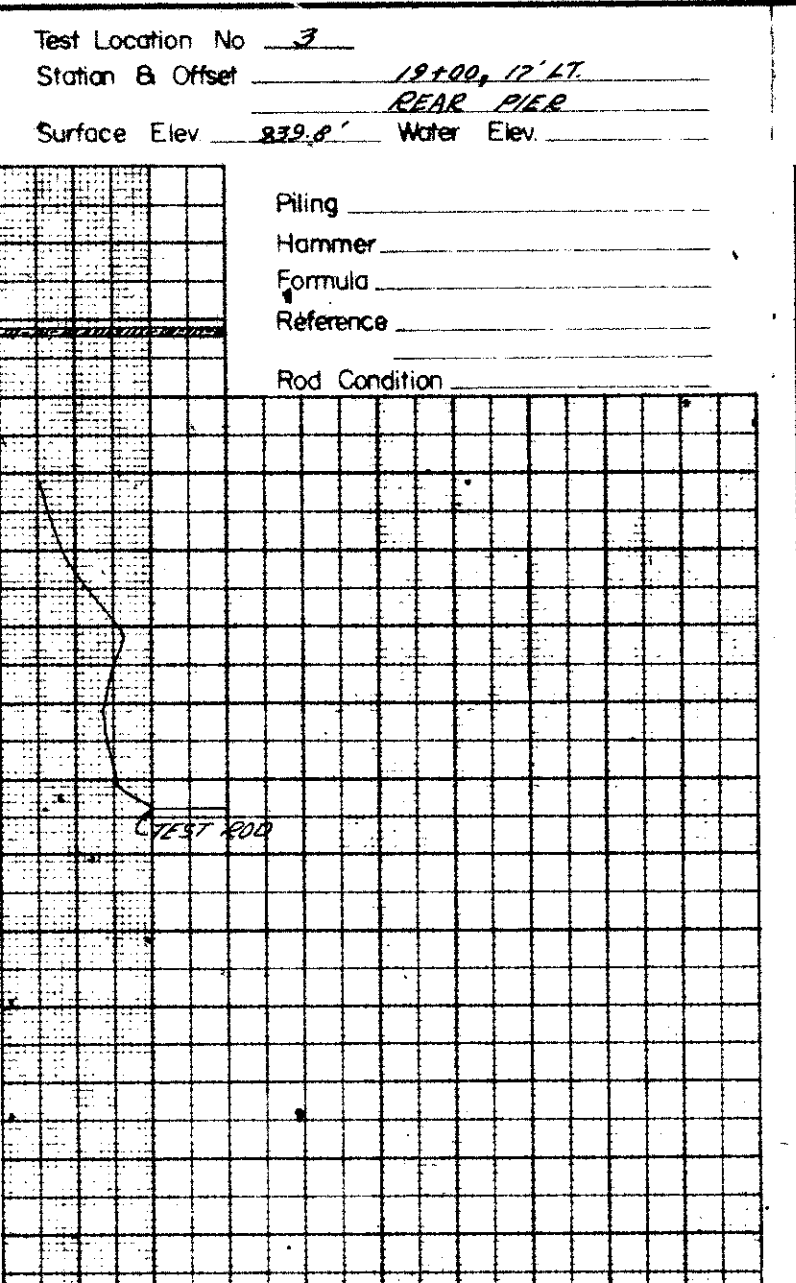
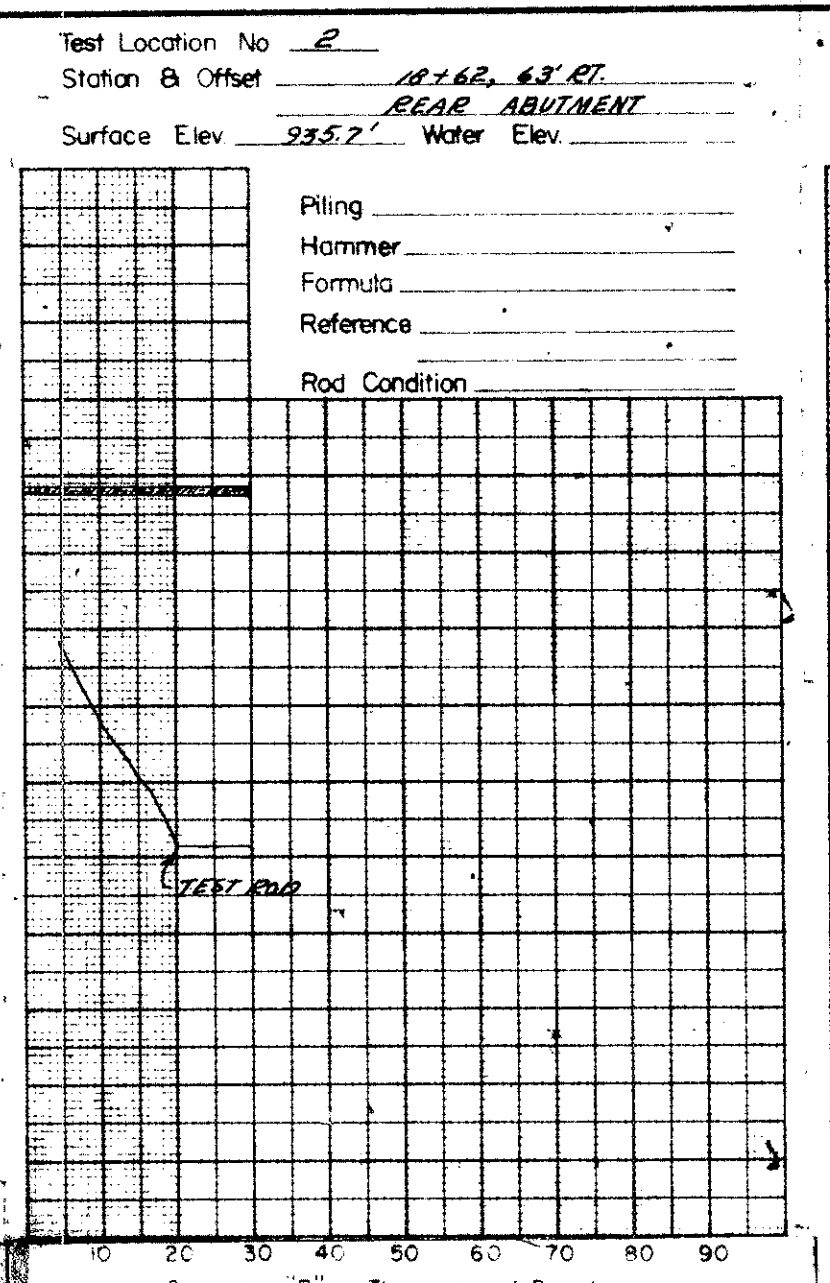
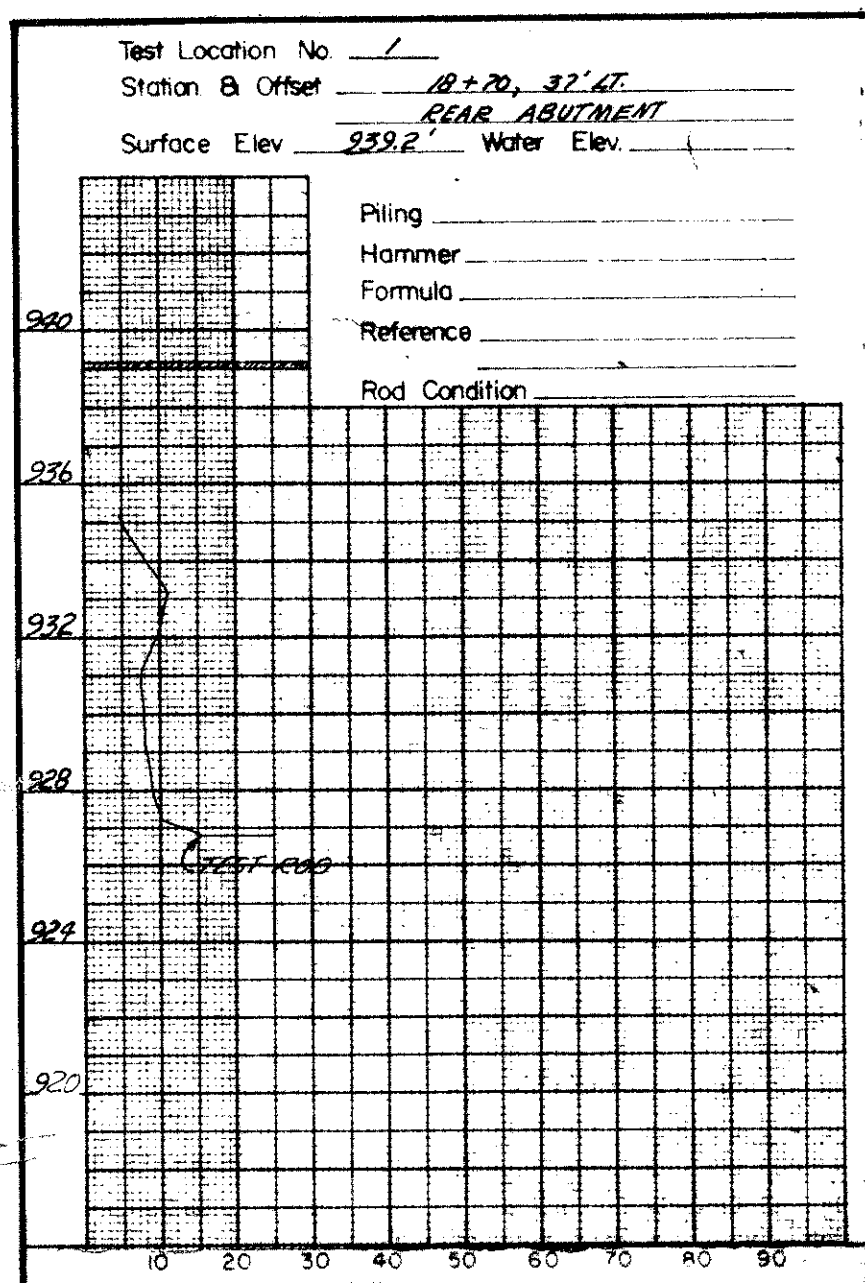
BORING PLAN
SCALE 1"=20'

NOTE: Information shown by this subsurface investigation was obtained by means of test borings and laboratory tests. 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.

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BRIDGE NO. HAM-52-1177
USR 52 UNDER NORTH BEND RD
SEC. HAM-52-1137

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
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STRUCTURE FOUNDATION INVESTIGATION

HAM-52-1977
 US-52 UNDER NORTH BEND ROAD

DRIVE ROD PENETRATION RESISTANCE DATA

OHIO STATE HIGHWAY TESTING LABORATORY

162 WEST PINE COLUMBUS, OHIO