

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

I-70-3(9)75

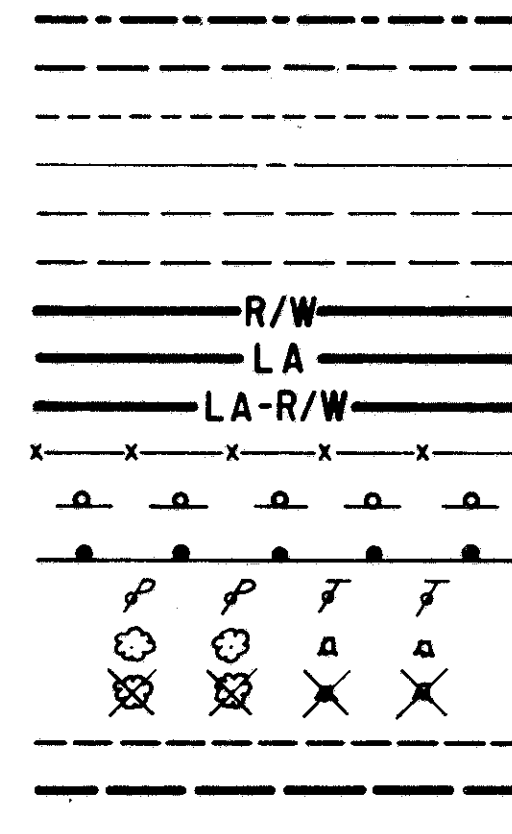
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	I-70-3(9)75

MADISON COUNTY
MAD- 70-6.25

374

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE & V.M.S. LINE
ENTER LINE
PROPERTY LINE
EXISTING RIGHT-OF-WAY
PROPOSED RIGHT-OF-WAY
PROPOSED LIMITED ACCESS
PROPOSED LIMITED ACCESS & RIGHT-OF-WAY
FENCE LINE
EXISTING GUARD RAIL
PROPOSED GUARD RAIL
POLE LINE (POWER, TELEPHONE)
EXISTING TREES, STUMPS
EXISTING TREES, STUMPS, TO BE REMOVED
TEMPORARY EASEMENT
CHANNEL EASEMENT
WORK LIMITS



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Sheet Nos. 285 & 302 revised 6-10-68 EBL
Sheet Nos. 319, 321, 324 & 325 revised 7-19-68 EBL

LINE DATA

REMARKS

PROJECT

WORK

I.R.-70	330+00.00 TO 580+80.00	328+70.00 TO 580+80.00 = 25,210.00 LIN. FT.
LAFAYETTE - MECHANICSBURG ROAD T.R.110		15+00.00 TO 38+25.00 = 2,325.00 LIN. FT.
LAFAYETTE PLAIN CITY ROAD C.R.5		15+50.00 TO 35+00.00 = 1,950.00 LIN. FT.
U.S. 42		671+23.00 TO 704+75.00 = 3,352.00 LIN. FT.
S.R. 29		548+75.00 TO 577+75.00 = 2,900.00 LIN. FT.
NET LENGTH	25,080 LIN. FT = 4.750 MILES	35,737 LIN. FT. = 6.768 MILES

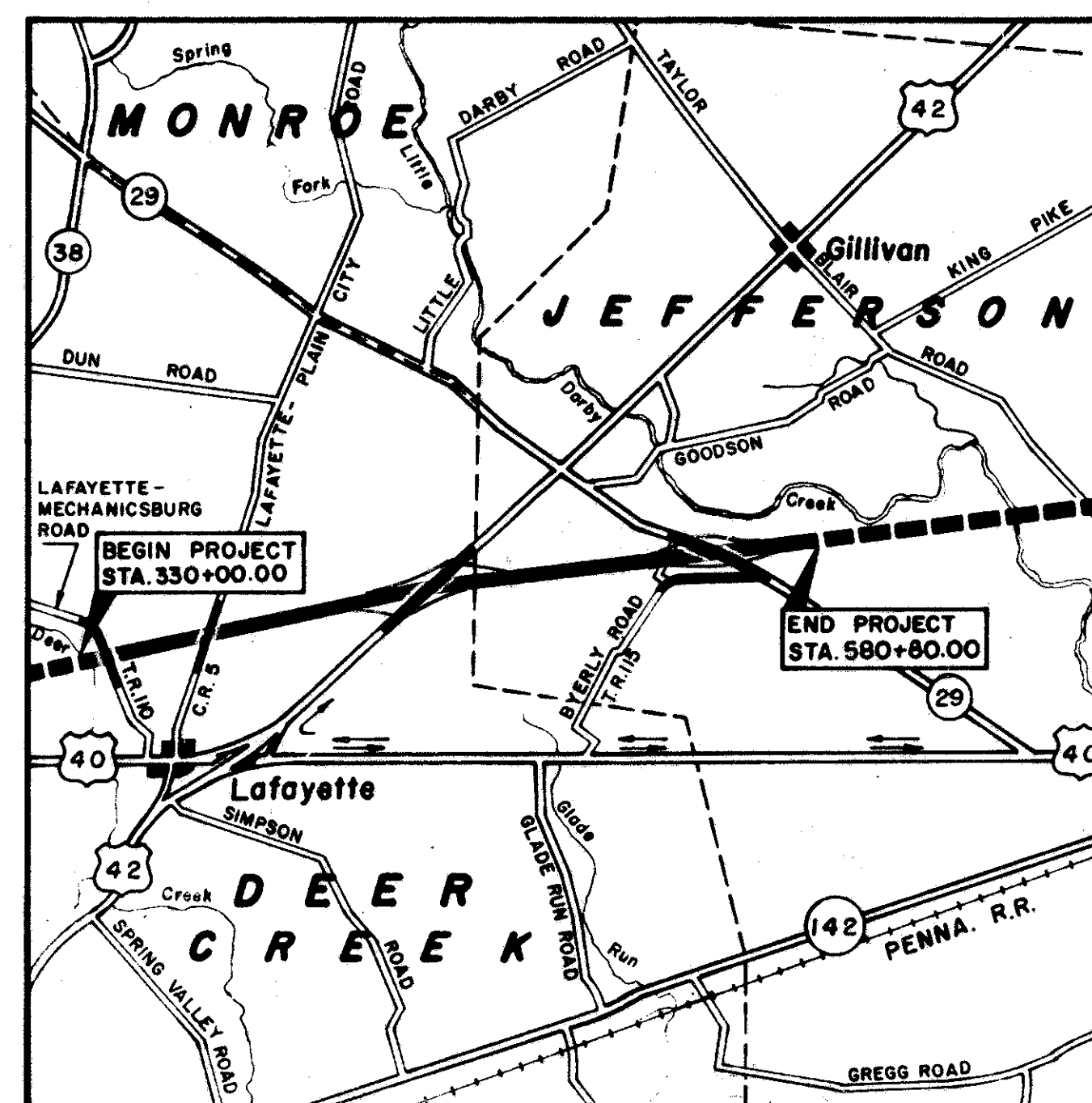
Sheet No. 336 revised 6-21-68 EBL
Sheet No. 325 revised 7-19-68 EBL

PREPARED AND RECOMMENDED BY
FRANKLIN ENGINEERING, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

MAD-70-6.25

MADISON COUNTY

DEER CREEK AND JEFFERSON TOWNSHIPS



LOCATION MAP



PORTION TO BE IMPROVED BY OTHERS
PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
DETOUR

SCALES

PLAN	1"=50' 0"	60'
PROFILE-HORIZONTAL	1"=50' 0"	90'
PROFILE-VERTICAL	1"=5' 0"	5'
CROSS SECTIONS	1"=10' 0"	10'

STANDARD CONSTRUCTION DRAWINGS							
DWG. NO.	DATE	DWG. NO.	DATE	DWG. NO.	DATE	F-5	10-1-66
B P - 1	6-1-65	MC-6	6-1-65	SP-53	6-30-61	L-1	6-1-65
B P - 2	1-17-68	MC-7	3-1-66	CB-2-2-A&B	6-1-65	MC-8	12-1-67
B P - 3	1-10-67	F-2	6-1-65	MH-1A	8-1-66	AS-1-67	1-1-68
B P - 4	1-10-67	F-3	10-1-66	CB-4	6-1-65	BR-1-65 Sh. 142	11-24-65
B P - 5	6-1-65	FACI-1	9-15-67	CB-5	6-1-65	RB-1-55	2-2-59
B P - 6	6-1-65	FACI-2	6-1-65	CB-6	6-1-65	SD-1-65 Sh. 142	11-8-65
B P - 7	1-1-66	MH-1	6-1-65	GR-1	1-1-67	F-6	10-1-66
MC - 1	10-1-67	HW-2	6-1-65	GR-2A	1-1-67	CS-1-65 Sh. 142	6-1-65
MC - 3	5-1-66	HW-3	6-1-65	GR-5B	6-1-65	A-1-54	11-8-65
MC - 4	6-1-65	HW-E	6-1-65	GR-6	6-1-65	P-1-54	11-8-65

SUPPLEMENTAL SPECIFICATIONS	
801	1-1-67
808	1-13-67
811	1-1-67
815	1-1-67
816	8-6-65
825	12-19-67
828	1-1-67
830	1-1-67
831	5-25-67
832	5-25-67
806	1-1-67
1001	3-21-66

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, REVISED CODE OF OHIO.

1967 SPECIFICATIONS

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

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

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

APPROVED: Frank M. Williams
DATE: 8-2-66 DIVISION DEPUTY DIRECTOR

APPROVED: C. F. Roberts
DATE: 2-20-68 ENGINEER OF BRIDGES

APPROVED: R. E. Lattin
DATE: 2-21-68 ENGINEER OF LOCATION & DESIGN

APPROVED: R. E. Lattin
DATE: 2-21-68 ENGINEER OF DESIGN & CONSTRUCTION

APPROVED: T. H. Board
DATE: 2-6-68 DEPUTY DIRECTOR OF RIGHT-OF-WAY

APPROVED: Thomas M. Major
DATE: 3-6-68 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED: R. E. Wilson
DATE: 3-6-68 CHIEF ENGINEER

APPROVED: R. E. Wilson
DATE: 3-6-68 DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER

DATE

FILE NO.

MADISON COUNTY
MAD-70-6.25
DATE OF LETTING
CONTRACT NO.

APPROVED
MAR 1 1980

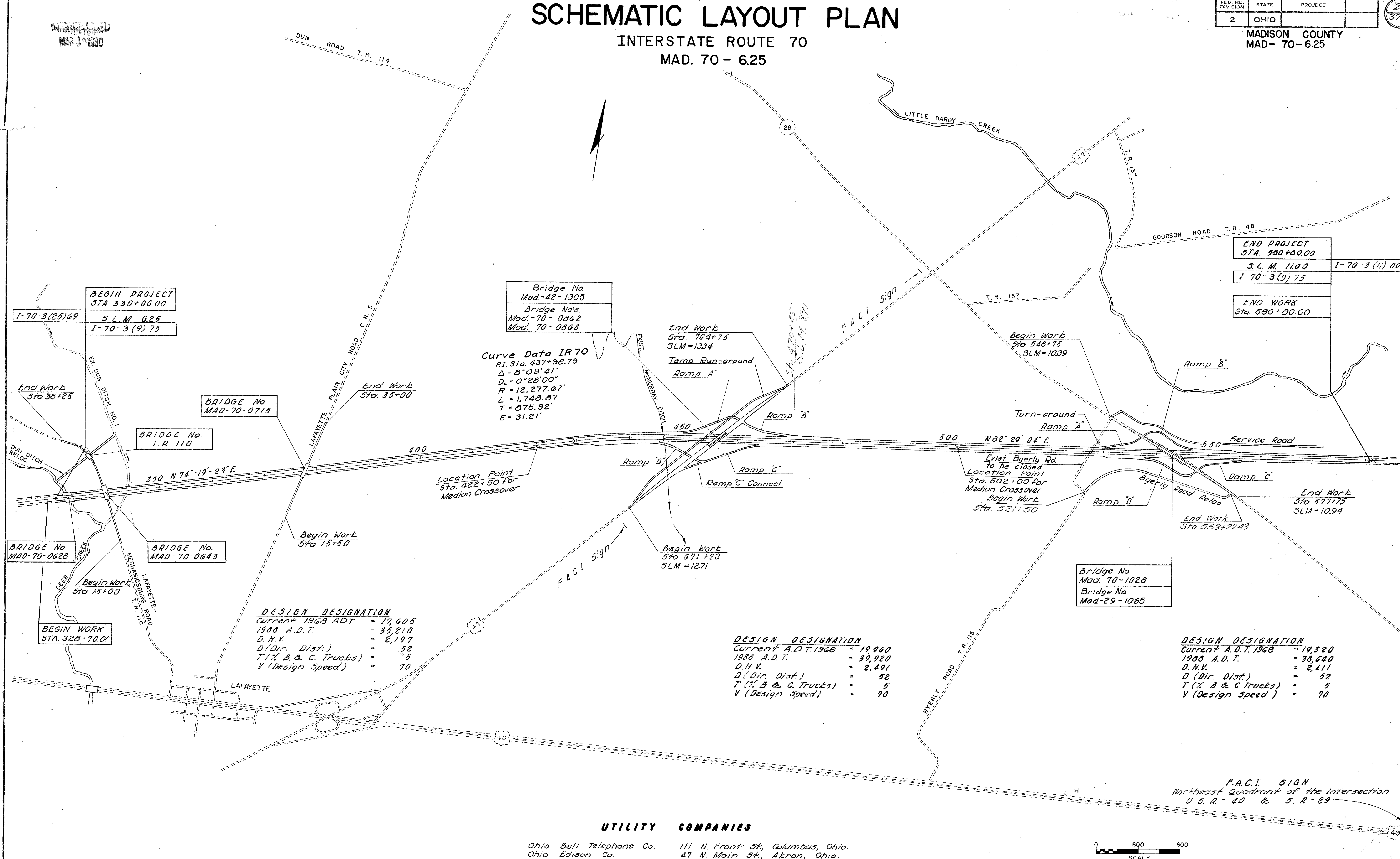
SCHEMATIC LAYOUT PLAN

INTERSTATE ROUTE 70
MAD. 70 - 6.25

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD- 70-6.25

2
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UTILITY COMPANIES


Ohio Bell Telephone Co.
Ohio Edison Co.

111 N. Front St., Columbus, Ohio.
47 N. Main St., Akron, Ohio.

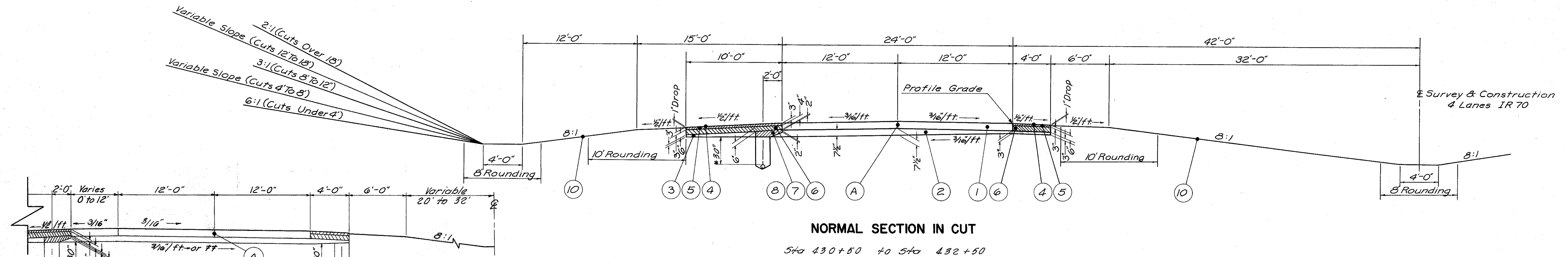
0 800 1600
SCALE

TYPE 451

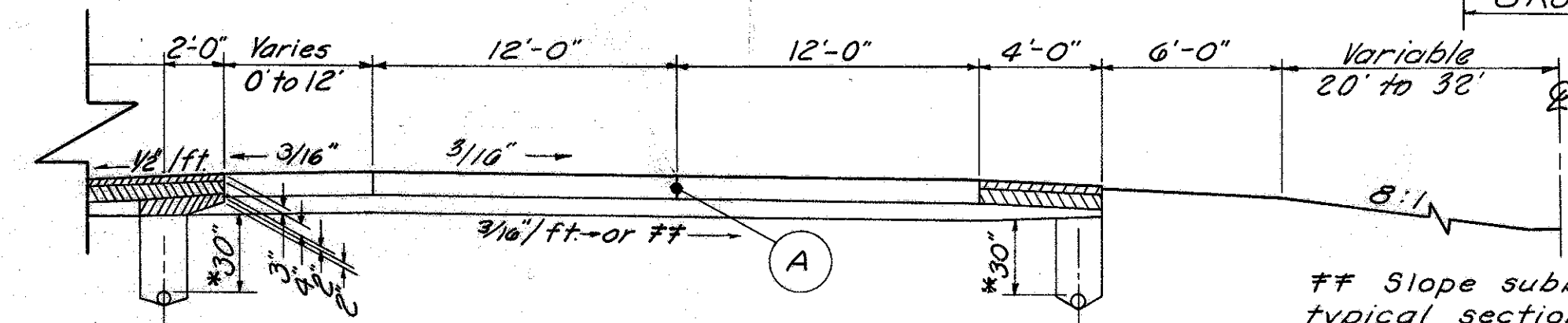
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



MADISON COUNTY
MAD- 70-6.25



NORMAL SECTION IN CUT

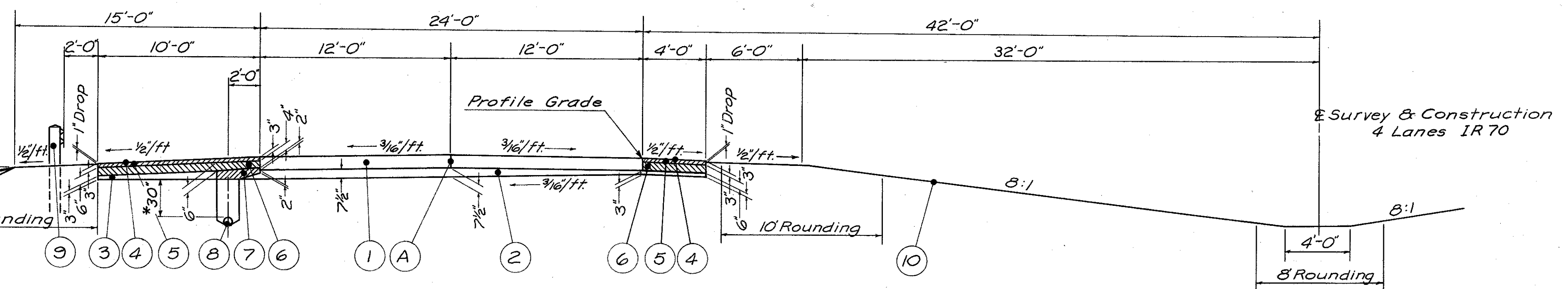
$$\cancel{540} \ 430 + 50 \quad \neq \quad \cancel{540} \ 432 + 50$$


TRANSITION SECTION (4 LANES TO 6 LANES)

$$5\text{to } 456+50 \quad \text{to} \quad 5\text{to } 470+45$$

Profile Grade 42' Lt. & Rt. of E Survey & Construction I.R-70

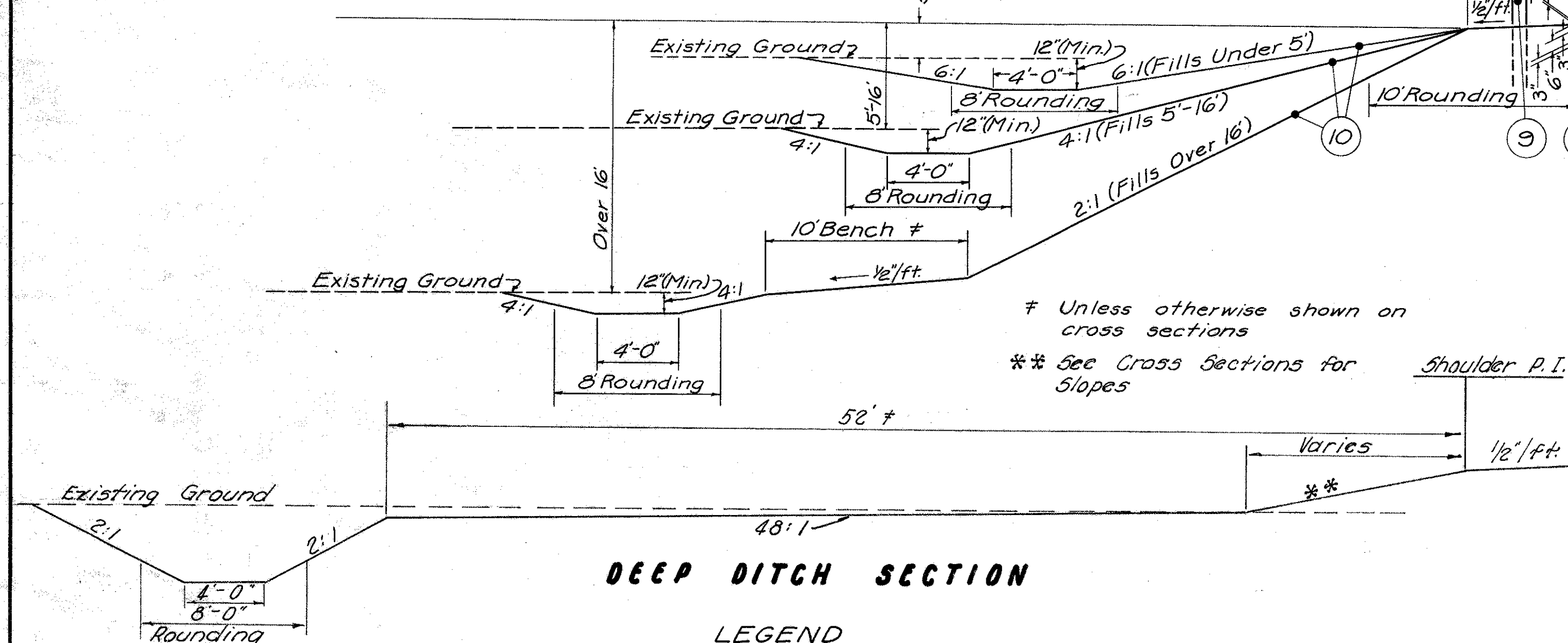
Slope subbase as per 4 lane typical section to beginning of 6" underdrain at Sta. 459+00 Lt. & Sta. 458+00 Rt. Then Transition to a 3/4 Lane Typical in 25' for each Lane.



NORMAL SECTION IN FILL

Sta 330+00 to Sta 331+55.07
Sta 333+52.93 to Sta 430+50
Sta 432+50 to Sta 456+50

* Underdrains - 30" Below Subbase (Shallow)



DEEP DITCH SECTION

LEGEND

- | | |
|---|---|
| <p>(A) Standard Longitudinal Joint</p> <p>(1) Item 451 9" Reinforced Portland Cement Concrete Pavement</p> <p>(2) Item 310 Subbase, Grading "A" or "B", as per plan (See General Note)</p> <p>(3) Item 310 Subbase</p> <p>(4) Item 409 Seal Coat Using 0.008 C.Y N^o 8 Cover Aggregate Per S.Y.
 & 0.3 gal. Bituminous Material Per S.Y.(See Note in Proposal)</p> <p>(5) Item 301 Bituminous Aggregate Base, as per plan, 702.01(85-100) or 702.09 RT-10
 (See Note in Proposal)</p> | <p>(6) Item 304 Aggregate Base</p> <p>(7) Item Special Drainage Connection, Using N^o 8
 Aggregate (See Note in Proposal)</p> <p>(8) Item 605 *6" Shallow Underdrain</p> <p>(9) Item 606 Guard Rail, Type 4 Modified As Per Plan.</p> <p>(10) Item 659 Seeding & Mulching, as per plan</p> |
|---|---|

NOTES:

1. Sequence of operations: (1) Install pipe underdrain on outside shoulder, (2) place subbase out to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present, (3) construct Item 451, (4) remove subbase and any contaminated backfill over drain and replace with N^o 8 aggregate as shown by (7), (5) complete shoulder construction.
2. Standard Drawing MC-1 slope rounding is to be used on backslopes.
3. See Cross Sections for slope treatment & guard rail.

TYPE 451

MADISON COUNTY
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Sta. 534+00 to Sta. 566+00
Sta. 569+00 to Sta. 580+80



Sta. 470+45 to Sta. 534+00
Sta. 566+00 to Sta. 569+00

Underdrains - 30" Below Subbase (Shallow)
Underdrains - 50" Below Subbase (Deep)
Underdrains - 30" to 50" Below Subbase (Unclassified;
See line sheets for elevations and grades)

LEGEND

(A) Standard Longitudinal Joint

(1) Item 451 9" Reinforced Portland Cement Concrete Pavement

(2) Item 310 Subbase, Grading "A" or "B" as per plan (See General Note)

(3) Item 310 Subbase

(4) Item 409 Seal Coat Using 0.008 C.Y. Cover Aggregate Per S.Y.
& 0.3 gal. Bituminous Material Per S.Y. (See Note in Proposal)

(5) Item 301 Bituminous Aggregate Base, as per plan, 702.01 (85-100) or
702.09, Rt-10, (See Note in Proposal)

- ⑥ Item 304 Aggregate Base
- ⑦ Item Special Drainage Connection, Using No 8 Aggregate (See Note in Proposal)
- ⑧ Item 605 6" Pipe Underdrains (See Typical Section for Depth)
- ⑨ Item 606 Guard Rail, Type 4 Modified As per plan.
- ⑩ Item 659 Seeding & Mulching, as per plan

1. Sequence of Operations: (1) Install pipe underdrain on outside shoulder. Installation of shallow underdrain in median may be deferred until Item 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 Item 451, (4) remove subbase and any contaminated backfill over drain and replace with N° 8 aggregate as shown by (7), (5) complete shoulder construction.
2. Standard Drawing MC-1 slope rounding is to be used on backslopes.
3. See cross sections for slope treatment & guard rail.
4. Adjacent to Speed Change Lane, use key joint without tiebars for joint 24' from median edge of pavement (See Pavement Detail Sheets 219 to 222)

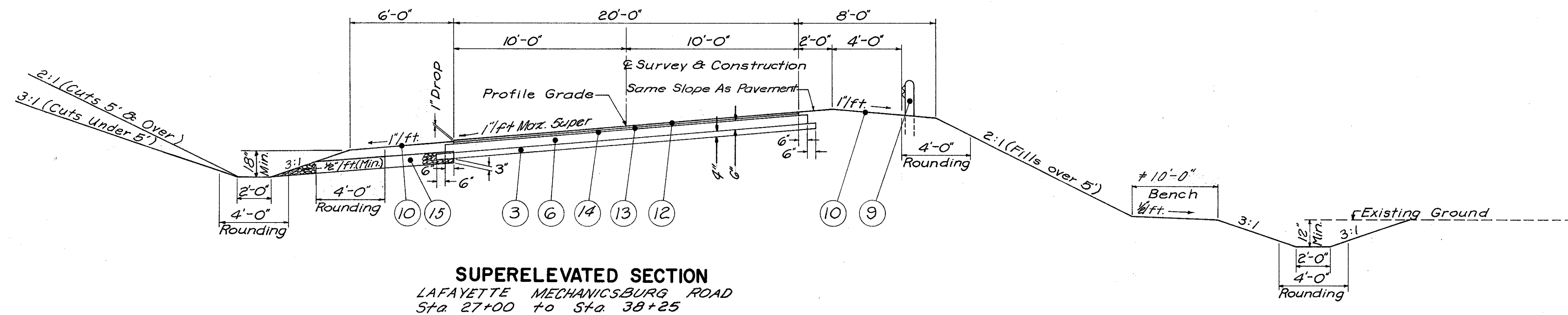
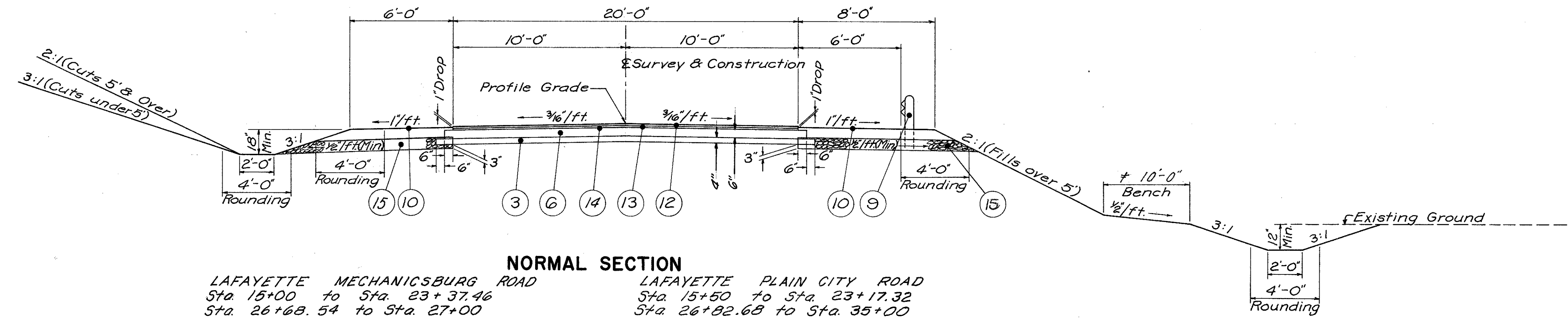
TYPICAL SECTIONS

TYPE 404 on 304

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD- 70-6.25

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LEGEND

- | | |
|---|---|
| (3) Item 310 Subbase | (13) Item 403 1 1/4" Asphalt Concrete (85-100) |
| (6) Item 304 Aggregate Base | (14) Item 408 Bituminous Prime Coat, 700.09 RT-2 or RT-3 Applied at the Rate of 0.4 Gal. per S.Y. |
| (9) Item 606 Guard Rail Type 4 Modified As Per Plan | (15) Item 605 Aggregate Drains |
| (10) Item 659 Seeding & Mulching, as per plan | |
| (12) Item 404 1 1/4" Asphalt Concrete (85-100) | |

NOTES:

- Standard Drawing MC-1 slope rounding is to be used on backslopes.
 - See cross sections for slope treatment & guard rail.
 - Limiting Stations include transition lengths.
 - Aggregate Drains shall be placed at fifty (50) foot intervals on each side of normal crowned sections and at twenty-five (25) foot intervals on the low side only of superelevated sections.
- # Unless Otherwise Shown on Cross Sections

LAFAYETTE MECHANICSBURG ROAD (TR 110)
LAFAYETTE PLAIN CITY ROAD (CR 5)

TYPICAL SECTIONS

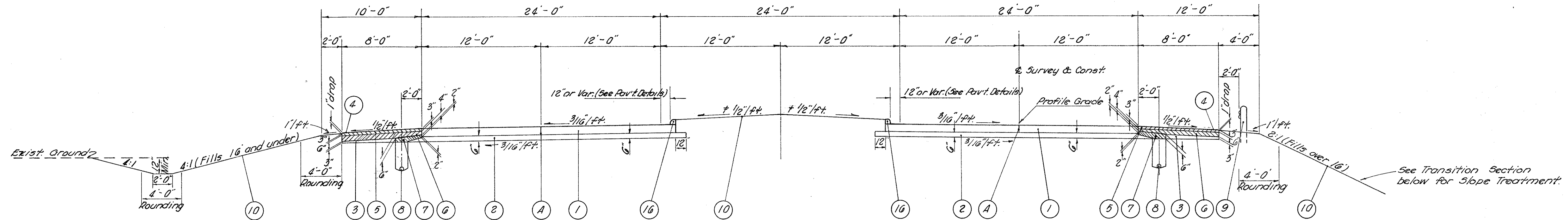
TYPICAL SECTIONS

TYPE 451

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

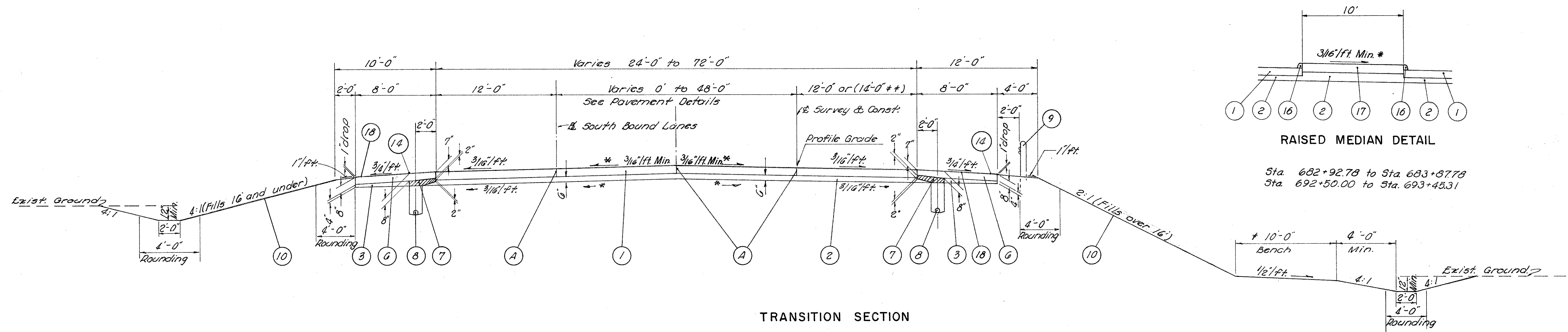
MADISON COUNTY
MAD-70-6.25

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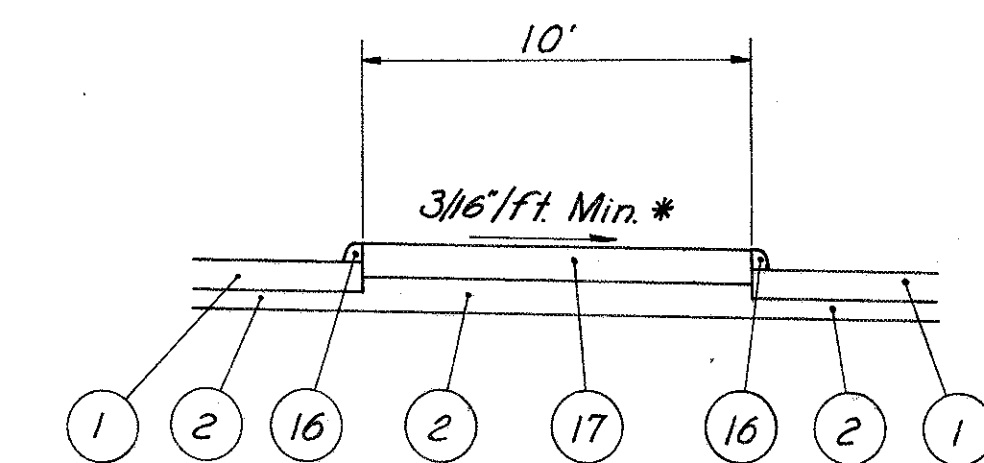
NORMAL SECTION

Sta 678+50.16 to Sta 686+08.49
Sta 690+85.51 to Sta 695+46.19



TRANSITION SECTION

Sta 673+25 to Sta 678+50.16
Sta 695+46.19 to Sta 702+75



RAISED MEDIAN DETAIL

Sta 682+92.78 to Sta 683+57.78
Sta 692+50.00 to Sta 693+45.31

LEGEND

- (A) Standard Longitudinal Joint
- (1) Item 451 9" Reinforced Portland Cement Concrete Pavement
- (2) Item 310 Subbase, Grading "A" or "B", As per plan (See General Note)
- (3) Item 310 Subbase,
- (4) Item 409 Seal Coat Using 0.008 Cu. Yd. No. 8 Cover Aggregate Per S.Y. & 0.3 Gal. Bituminous Material per Sq. Yd. (See Note in Proposal)
- (5) Item 301 Bituminous Aggregate Base, 702.01 (85-100) or 702.09, RT-10 As per plan, See Note in Proposal.
- (6) Item 304 Aggregate Base

- (7) Item Special Drainage Connection, Using No. 8 Aggregate (See Note in Proposal)
- (8) Item 605 6" Shallow Pipe Underdrains
- (9) Item 606 Guard Rail, Type 4 Modified As Per Plan
- (10) Item 659 Seeding & Mulching as per plan.
- (16) Item 609 Type 2-A Curb
- (17) Item 612 Concrete Median
- (14) Item 408 Bituminous Prime Coat 702.09 RT-2 or RT-3 Applied at the rate of 0.4 Gal. per S.Y.
- (18) Item 409 Seal Coat Using 0.008 Cu. Yd. No. 8 Cover Aggregate per Sq. Yd. and 0.30 Gal. 702.09, RT-9 or RT-10 or 702.02, MC-800 or MC-3000 per Sq. Yd.

NOTES

1. Sequence of operations: (1) install pipe underdrain on outside shoulder, (2) place subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present, (3) construct Item 451, (4) remove subbase and any contaminated backfill over drain and replace with No. 8 aggregate as shown by (10), (5) complete shoulder construction
2. Standard Drawing M.C.-1 slope rounding is to be used on back slopes
3. See Cross Section for slope treatment & Guard Rail.
4. Top of Pipe Underdrains are 30" below Subbase
- * Refer to Pavement Details for Cross Slope

* Unless otherwise shown on Cross Sections

** Applies from: Sta 673+25 - Sta 675+66.67

USR 42

TYPICAL SECTIONS

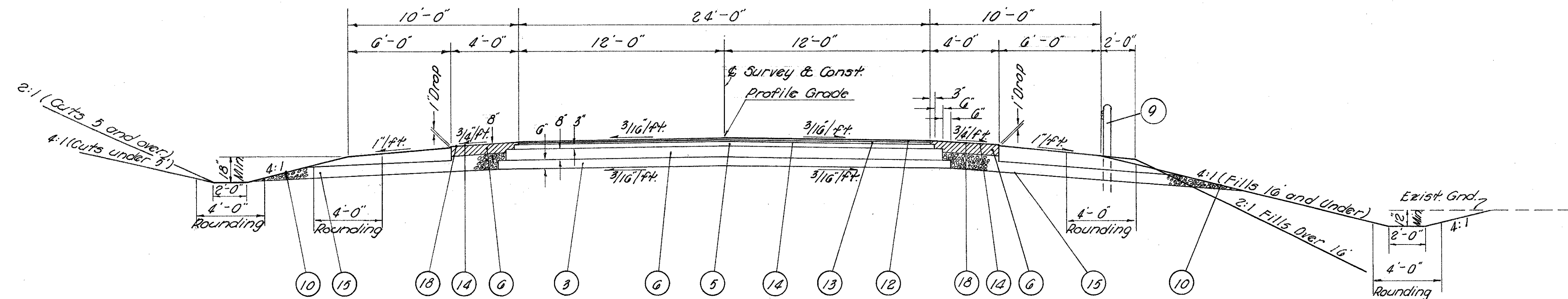
TYPICAL SECTIONS

TYPE 404 on 301

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

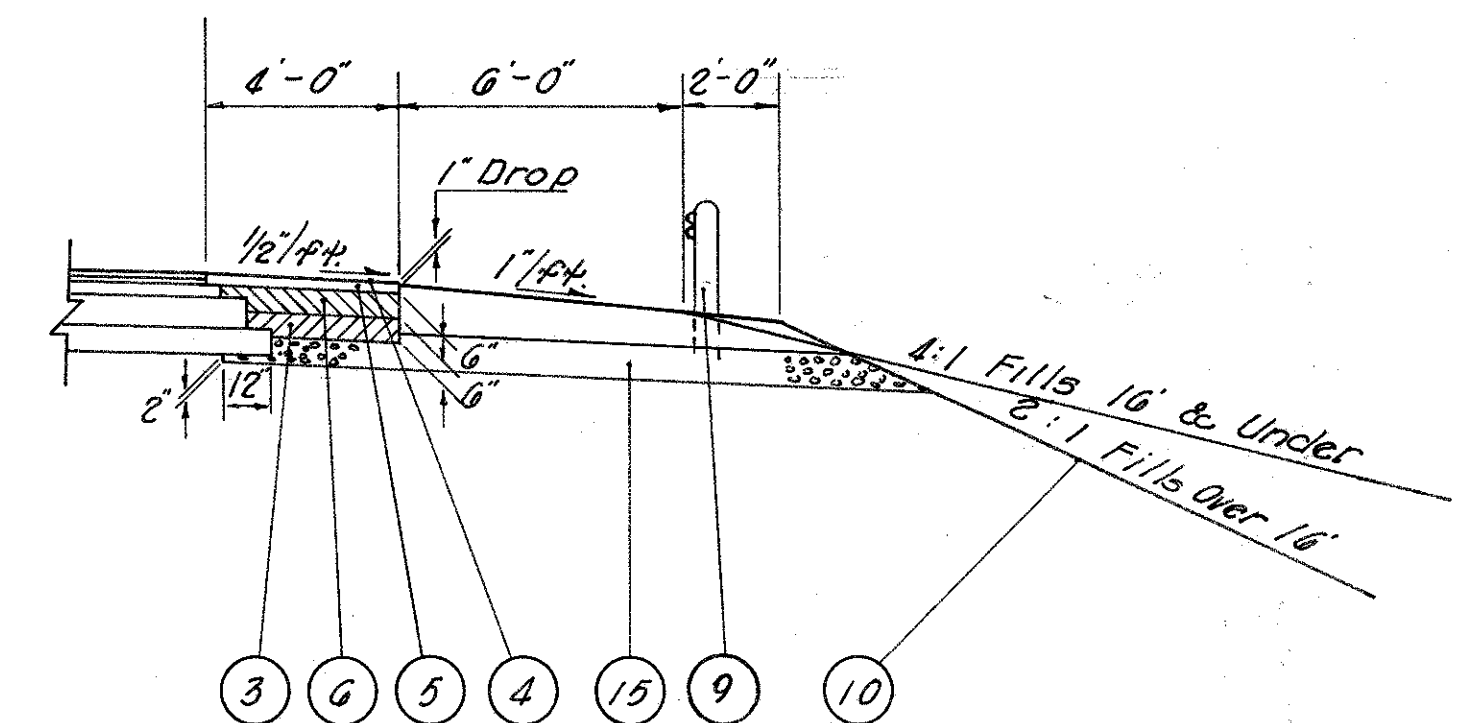
MADISON COUNTY
MAD - 70-6.25

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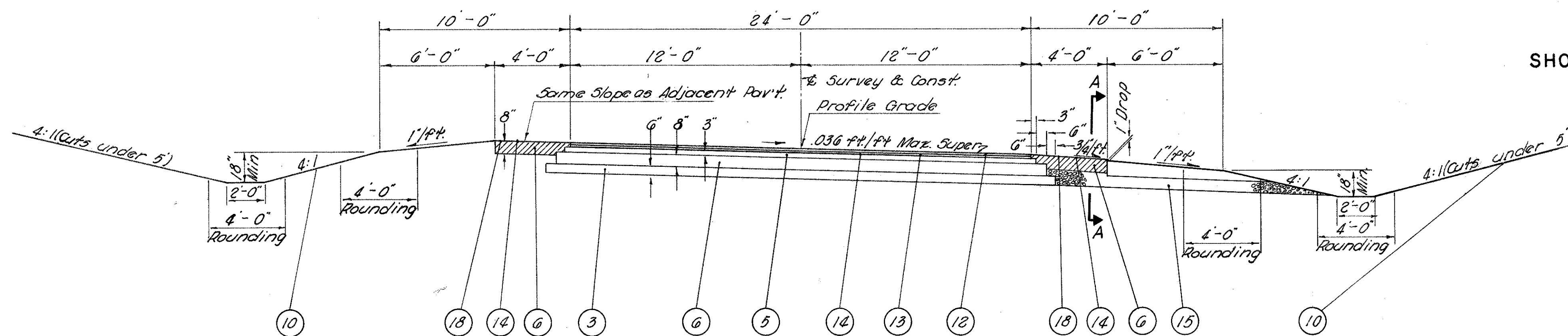


NORMAL SECTION

Sta 548+75 to Sta 559+54.3.6
Sta 565+41.64 to Sta 571+50
Sta 577+00 to Sta 577+75

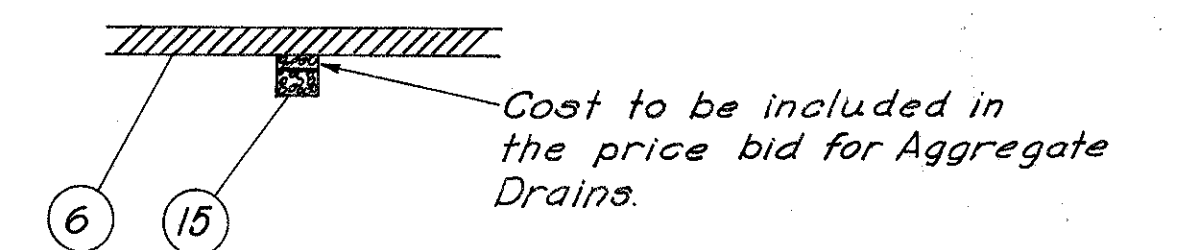


SHOULDER TREATMENT WITHIN
INTERCHANGE LIMITS
(See Pavement Details)



SUPERELEVATED SECTION

Sta 571+50 to Sta 577+00



SECTION A-A

LEGEND

- ③ Item 310 Subbase
- ④ Item 409 Seal Coat Using 0.008 Cu. Yd. No. 8 Cover Aggregate Per Square Yard and 0.3 Gallon 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-10 (See Note in Proposal)
- ⑥ Item 304 Aggregate Base
- ⑨ Item 606 Guard Rail Type 4 Modified As per plan.
- ⑩ Item 659 Seeding & Mulching as Per Plan
- ⑫ Item 404 1 1/4" Asphalt Concrete (70-85)
- ⑬ Item 403 1 1/4" Asphalt Concrete (70-85)
- ⑭ Item 408 Bituminous Prime Coat, 702.09 RT-2 or RT-3 Applied at the rate of 0.40 Gal. per Sq. Yd.
- ⑮ Item 605 Aggregate Drains
- ⑯ Item 409 Seal Coat Using 0.008 Cu. Yd. No. 8 Cover Aggregate and 0.30 Gal. 702.09, RT-9 or RT-10 or 702.02, MC-800 or MC. 3000 per Sq. Yd.

NOTES

- 1. Standard Drawing MC-1 slope rounding is to be used on backslopes
- 2. See Cross Sections for slope treatment & Guard Rail.
- 3. Aggregate Drains shall be placed at fifty (50) foot intervals on each side of normal crowned sections and at twenty-five (25) foot intervals on the low side only of superelevated sections. In lieu of Item 60505 all Aggregate Drains shall be placed prior to placement of Paved or Aggregate shoulders.

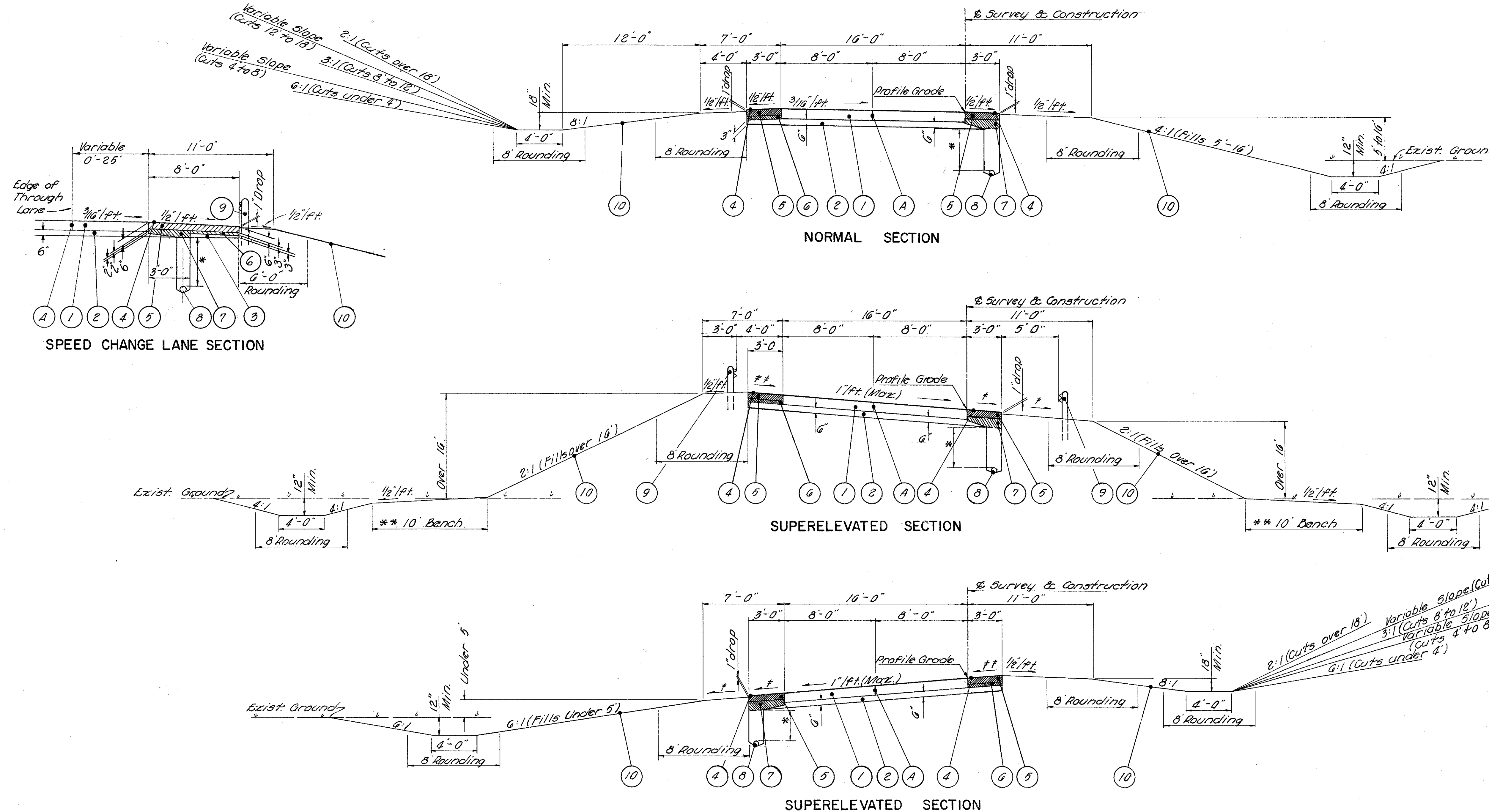
TYPICAL SECTIONS

TYPE 451

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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MADISON COUNTY
MAD - 70-625



LEGEND

- | | |
|---|--|
| (A) Standard Longitudinal Joint | (6) Item 304 3" Aggregate Base |
| (1) Item 451 9" Reinforced Portland Cement Concrete Pavement | (7) Item Special Drainage Connection, Using No. 8 Aggregate (See Note in Proposal) |
| (2) Item 310 Subbase, Grading "A" or "B", As per plan (See General Note) | (8) Item 605 6" * Pipe Underdrain |
| (4) Item 409 Seal Coat Using 0.008 C.V. No. 8 Cover Aggregate per S.Y. & 0.3 gal. Bituminous Material Per S.Y. (See Note in Proposal) | (9) Item 606 Guard Rail, Type 4 Modified As Per Plan |
| (5) Item 301 6" Bituminous Aggregate Base, as per plan, 70201 (85-100) or 70209, R.T.-10. (See Note in Proposal) | (10) Item 659 Seeding & Mulching, as per plan. |
| (3) Item 310 Subbase | |

NOTES

- * Underdrains - Variable Depth Below Subbase (Unclassified; See Line Sheets for Elevations and Grades)
- * Underdrains - 30" Below Subbase in Fill (Shallow)
- * Underdrains - 50" Below Subbase in Cut (Deep)
- * 1/2" per foot Min. Slope or Same Slope as Pavement
- * Same Slope as Pavement
- ** Unless Otherwise Shown on Cross Sections
- 1. Sequence of operations: (1) install pipe underdrain on outside shoulder, (2) place subbase to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present, (3) construct Item 451, (4) remove subbase and any contaminated backfill over drain and replace with No. 8 aggregate as shown by (7), (5) complete shoulder construction.
- 2. Standard Drawing MC-1 slope rounding is to be used on back slopes.
- 3. See Cross Section for slope treatment & guard rail.
- 4. Left & Right is referenced to the direction of travel instead of stationing. The 11' shoulder is always on the right of traffic.

RAMPS

TYPICAL SECTIONS

U. S. R. - 42

Ramp "A"
Sta. 454+50 to Sta. 457+50
Ramp "B"
Sta. 467+25 to Sta. 469+47
Ramp "C"
Sta. 451+00 to Sta. 452+98.62
Sta. 456+98.62 to Sta. 459+75

S. R. - 29

Ramp "A"
Sta. 531+75 to Sta. 533+50
Ramp "B"
Sta. 540+75 to Sta. 542+00
Ramp "C"
Sta. 551+50 to Sta. 554+50

U. S. R. - 42

Ramp "A"
Sta. 457+50 to Sta. 461+50
Ramp "C"
Sta. 449+04.38 to Sta. 451+00
Sta. 459+75 to Sta. 465+50
Ramp "D"
Sta. 445+76.95 to Sta. 451+11.5

S. R. - 29

Ramp "B"
Sta. 536+52.68 to Sta. 540+75
Ramp "C"
Sta. 548+75 to Sta. 551+50
Sta. 554+50 to Sta. 556+25
Ramp "D"
Sta. 538+78.07 to Sta. 543+50

U. S. R. 42

Ramp "A"
Sta. 448+50 to Sta. 454+50
Ramp "B"
Sta. 461+50 to Sta. 467+25

S. R. 29

Ramp "A"
Sta. 529+25 to Sta. 531+75
Sta. 533+50 to Sta. 536+18.90
Ramp "B"
Sta. 542+00 to Sta. 546+46.93
Ramp "D"
Sta. 543+50 to Sta. 548+30.42

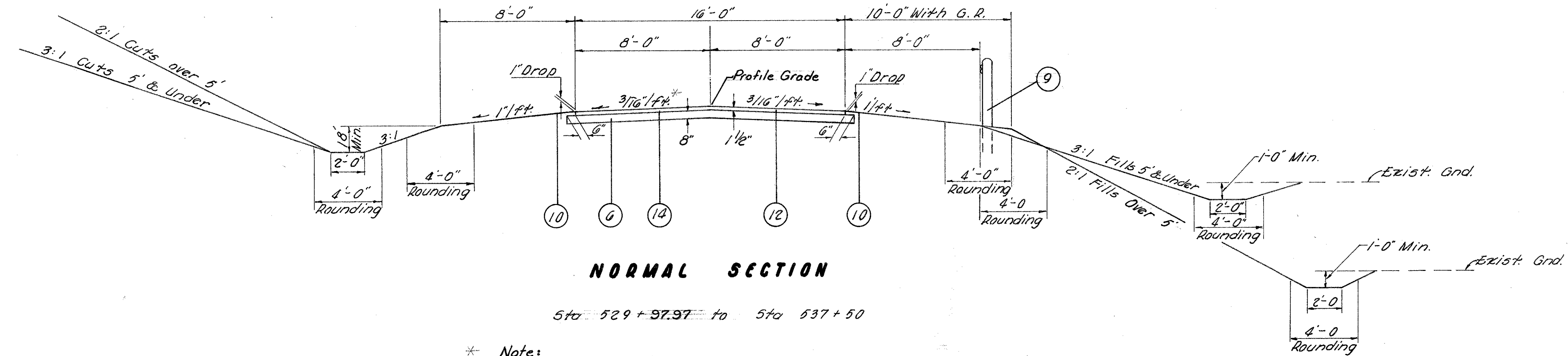
TYPICAL SECTIONS

TYPE 404
TYPE 304

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD- 70-625

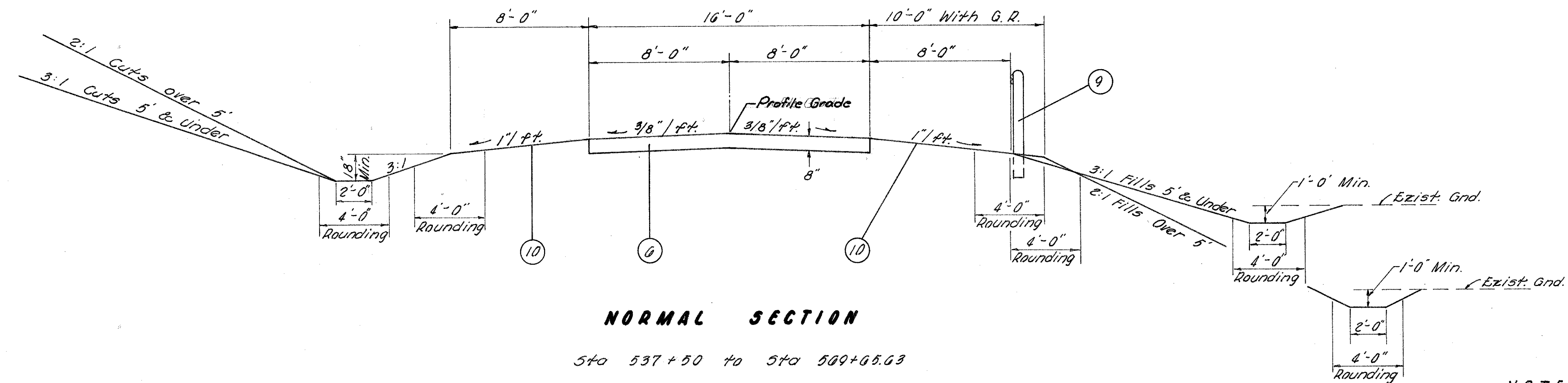
374



NORMAL SECTION

Sta 529+37.37 to Sta 537+50

* Note:
From Sta 530+28 to Sta 532+47 the pavement will not have normal crown, the pavement will slope 3/16"/ft across the pavement. See table on sheet #223 for pavement edge elevations.



NORMAL SECTION

Sta 537+50 to Sta 589+65.63

LEGEND

- ⑥ Item 304 Aggregate Base
- ⑨ Item 606 Guard Rail Type 4 Modified As Per Plan
- ⑩ Item 659 Seeding & Mulching as per plan
- ⑫ Item 404 1/2" Asphalt Concrete (85-100) using 402 Composition (85-100)
- ⑭ Item 408 Bituminous Prime Coat, 702.09 RT-2 or RT-3 Applied at the rate of 0.4 Gal. per S.Y.

NOTES

1. Standard Drawing M C-1 Slope rounding is to be used on back slopes.
2. See Cross Sections for slope treatment & Guard Rail.

SERVICE ROAD

TYPICAL SECTIONS

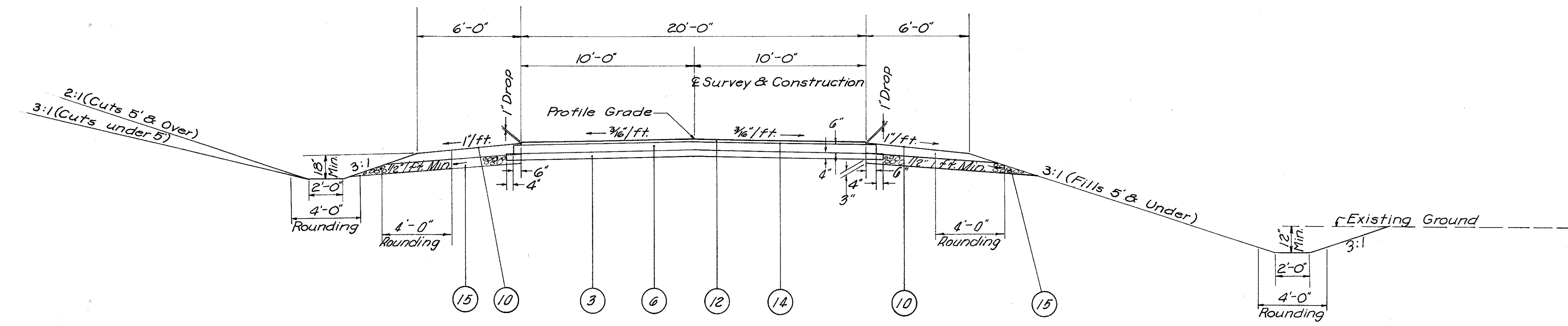
TYPICAL SECTIONS

TYPE 404 on 304

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

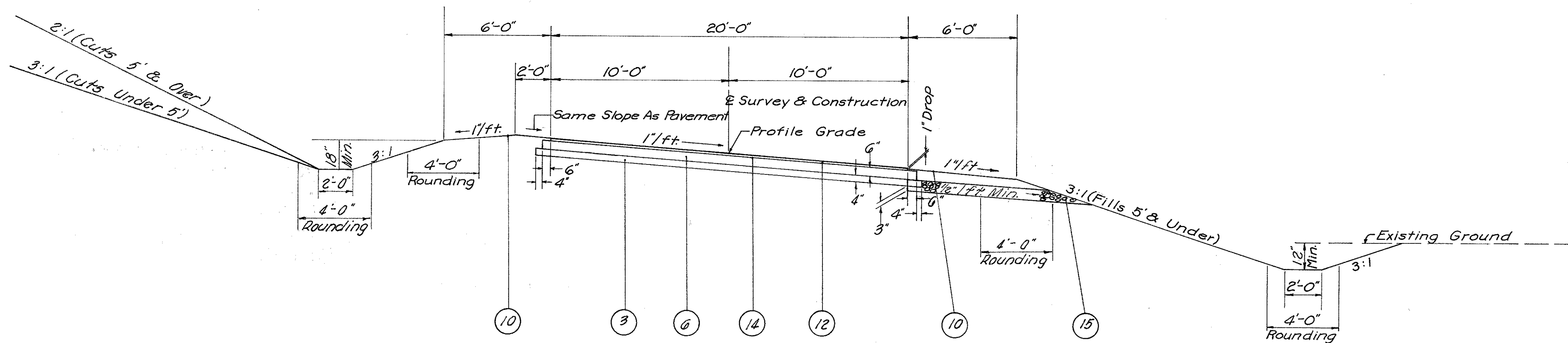
MADISON COUNTY
MAD - 70-6.25

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NORMAL SECTION

Sta 538+50 to Sta 550+00



SUPERELEVATED SECTION

Sta 521+00 to Sta 538+50
Sta 550+00 to Sta 553+23

LEGEND

- ③ Item 310 Subbase
- ⑥ Item 304 Aggregate Base
- ⑩ Item 659 Seeding & Mulching as per plan

- ⑫ Item 404 1 1/2" Asphalt Concrete (85-100) using 402 Composition (85-100)
- ⑭ Item 408 Bituminous Prime Coat, 702.09 RT-2 or RT-3 Applied at the rate of 0.40 Gal. Per S.Y.
- ⑮ Item 605 Aggregate Drains.

NOTES:

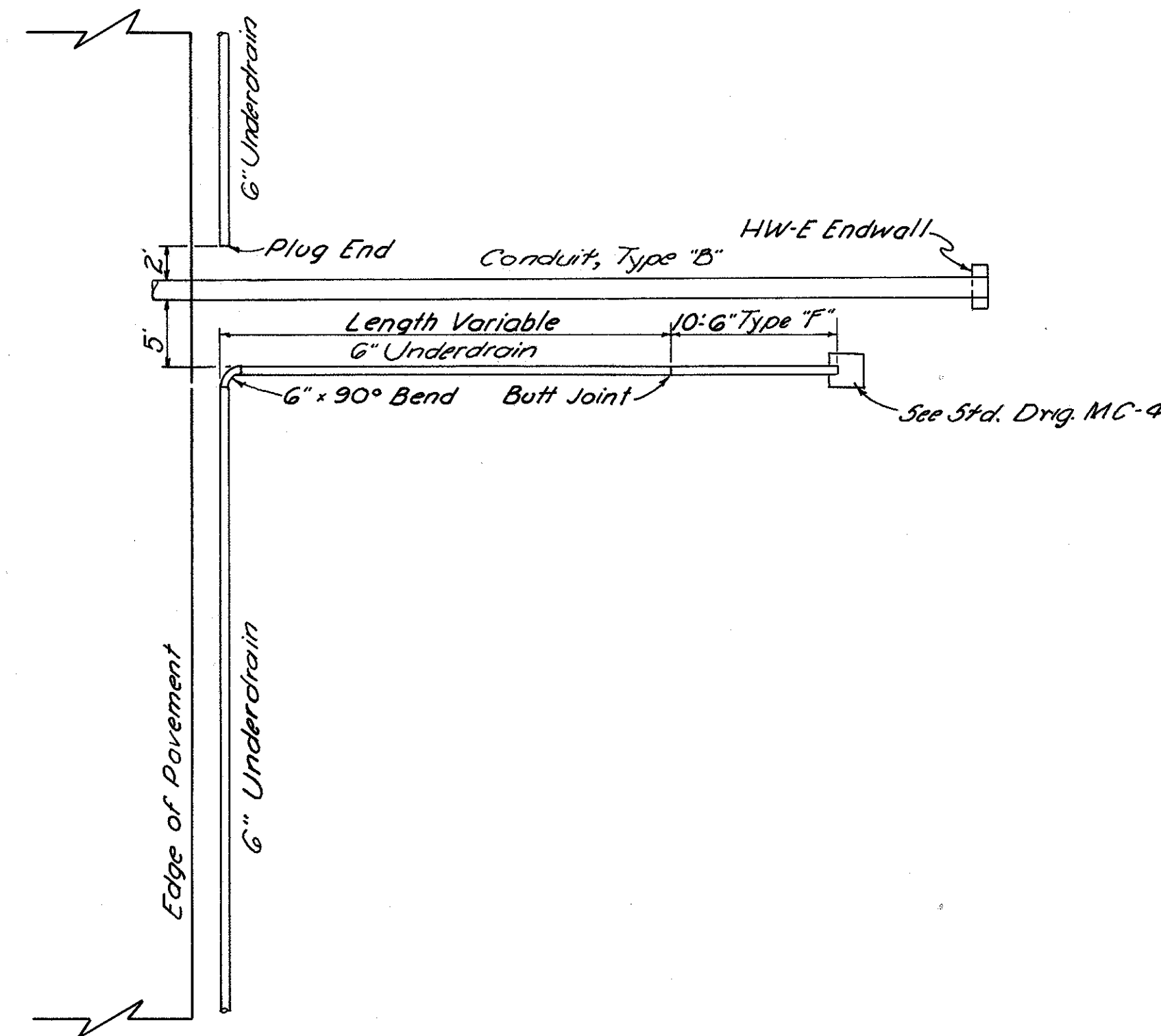
1. Standard Drawings M.C.-1 Slope Rounding is to be used on Backslopes
2. See Cross Sections for Slope Treatment & Guard Rail
3. Aggregate Drains shall be placed at (50) Foot Intervals on each side of normal crowned sections, and at Twenty Five (25) Foot Intervals on the Low Side only of Superelevated Sections
4. Limiting Stations include transition length.

TYPICAL DETAILS OF UNDERDRAIN OUTLETS

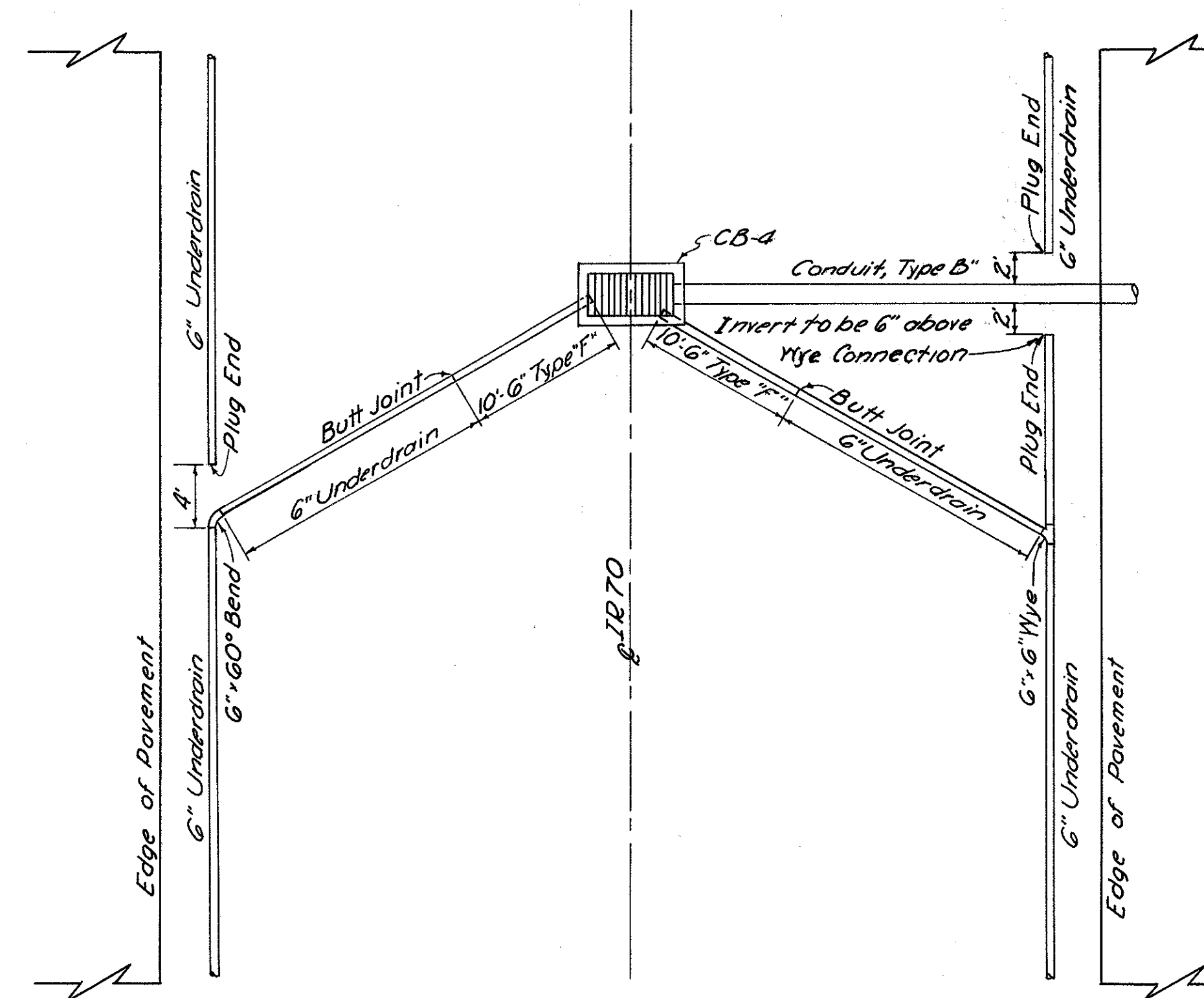
FED. RD. DIVISION	STATE	PROJECT
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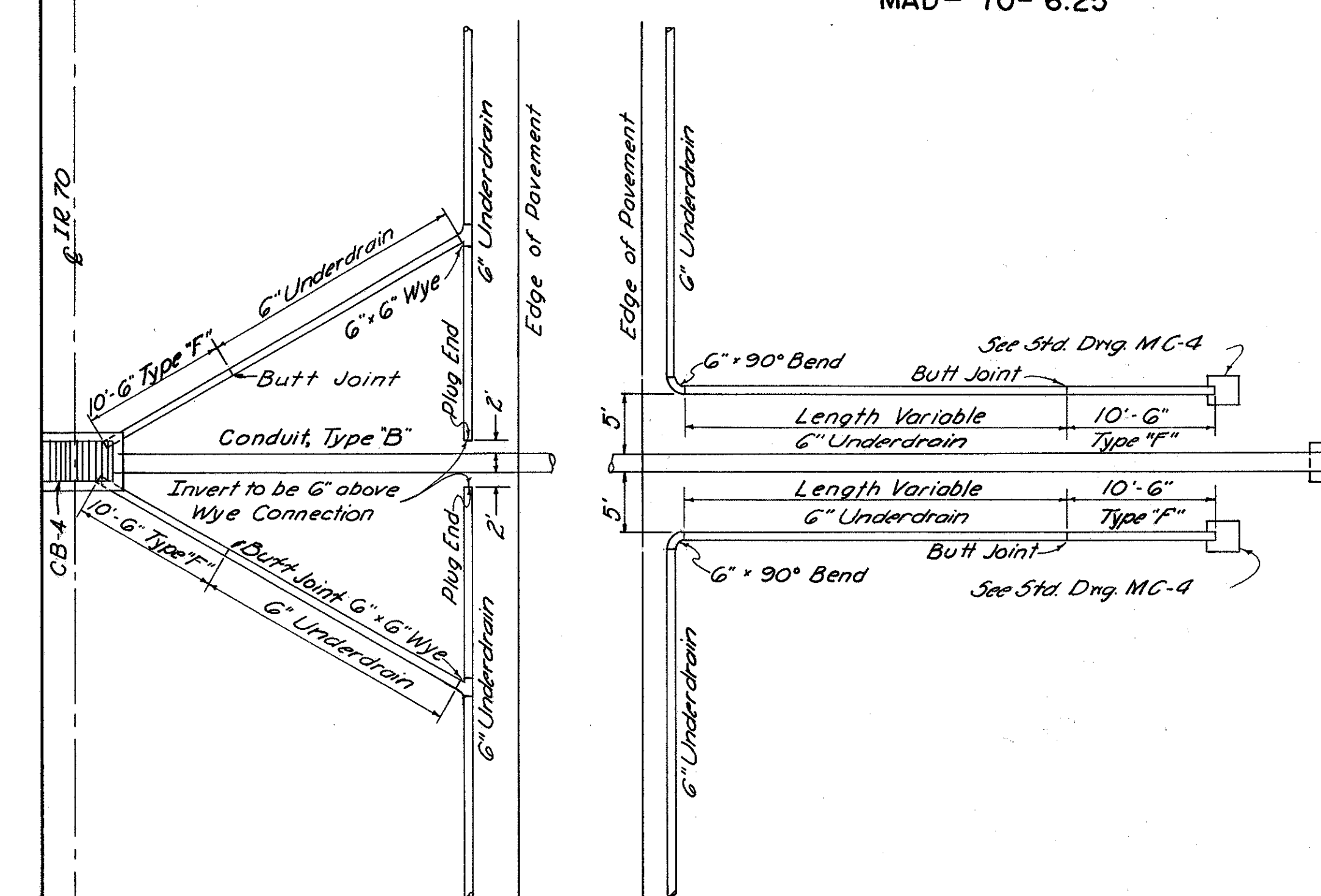
MADISON COUNTY
MAD- 70- 6.25



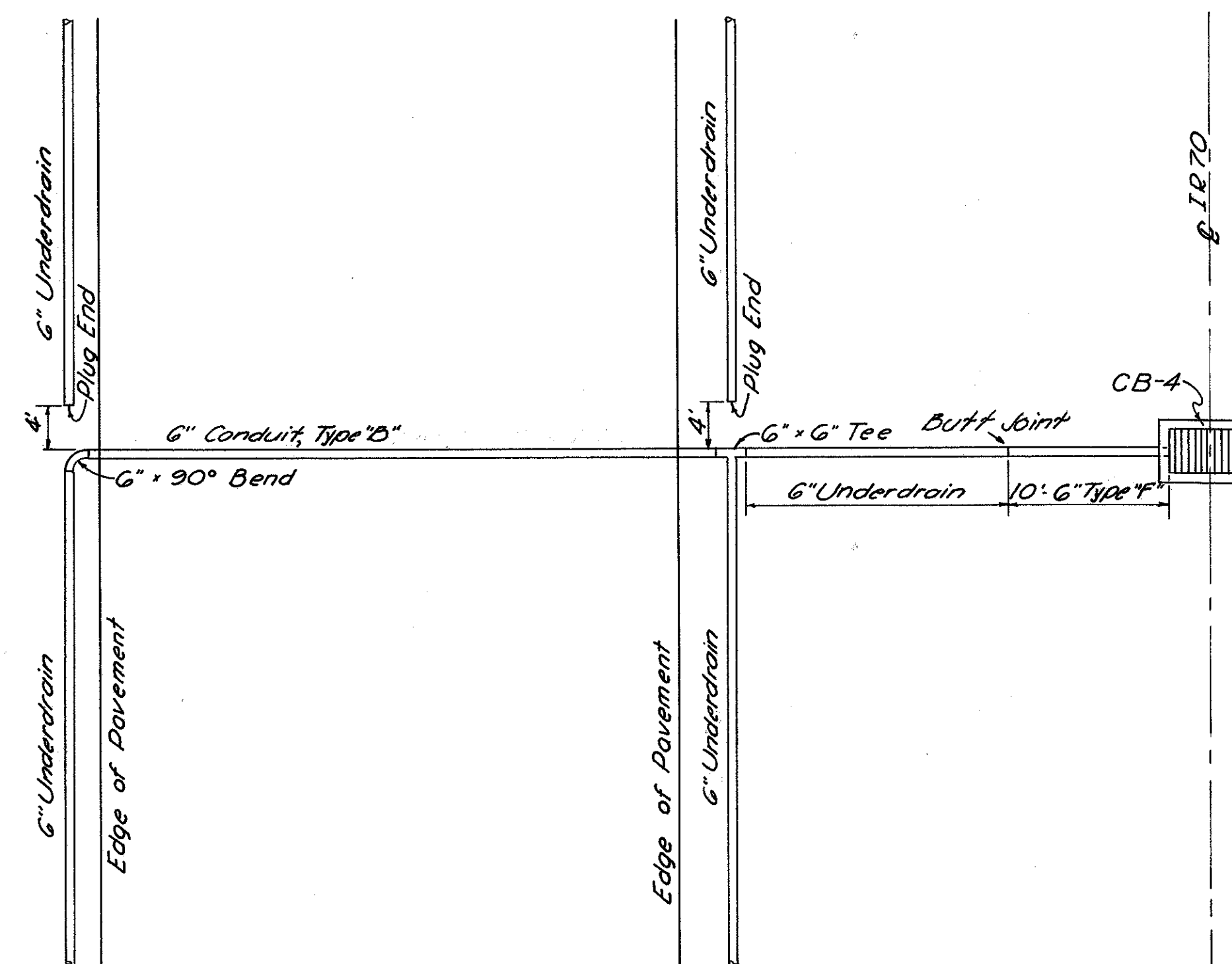
UNDERDRAIN OUTLET DETAIL "A"



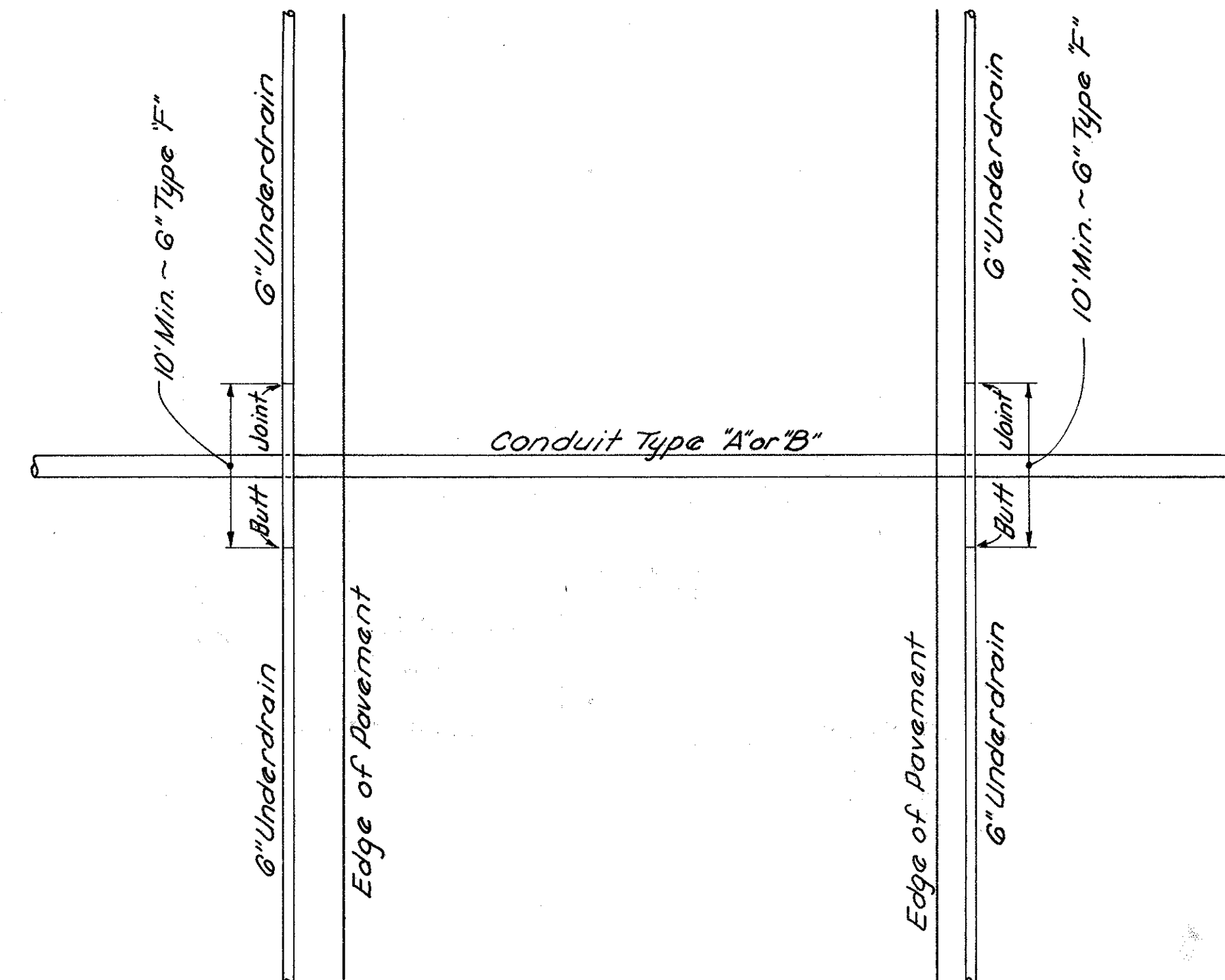
UNDERDRAIN OUTLET DETAIL "B"



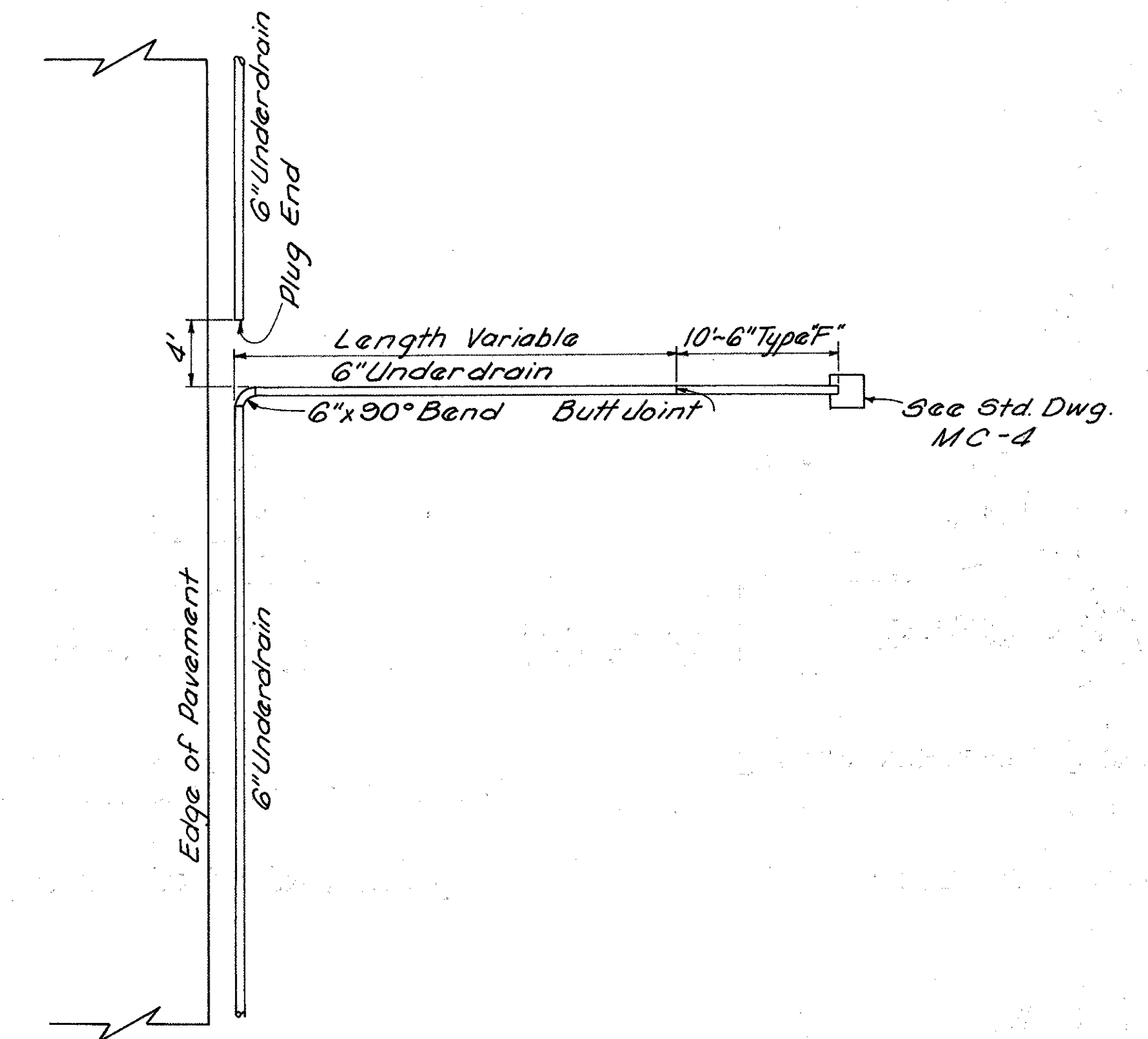
UNDERDRAIN OUTLET DETAIL "C"



UNDERDRAIN OUTLET DETAIL "D"



UNDERDRAIN OUTLET DETAIL "E"



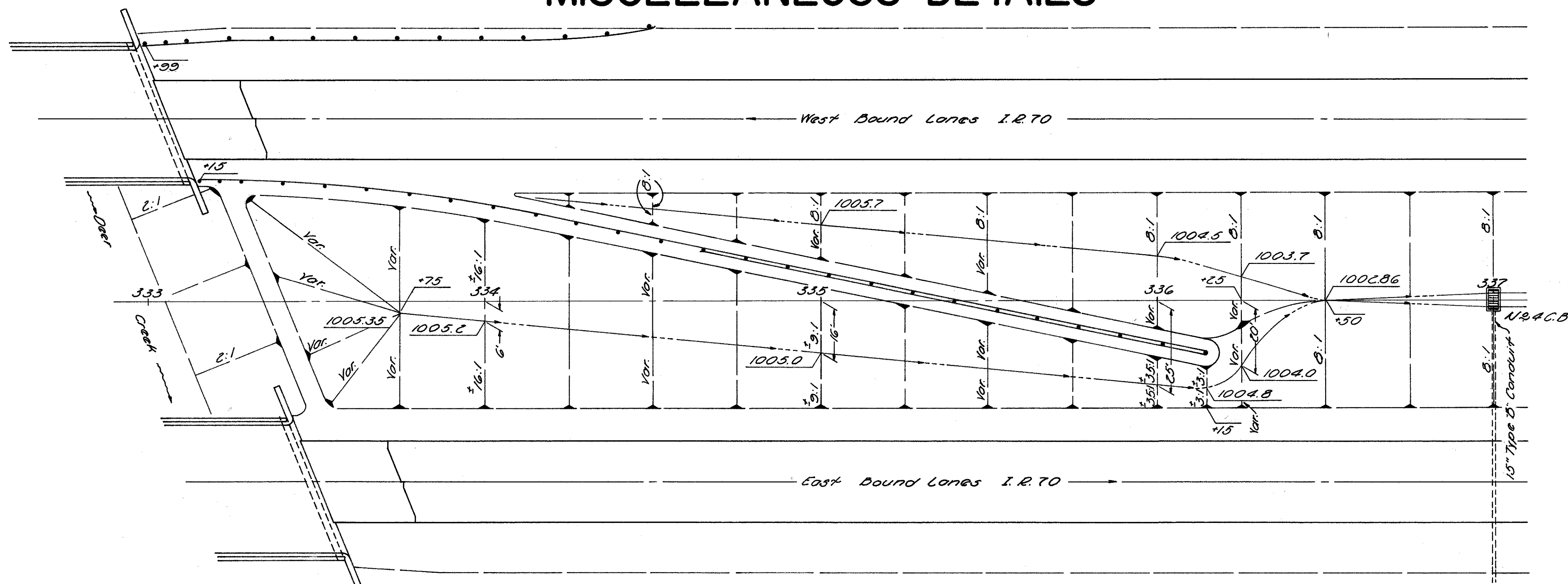
UNDERDRAIN OUTLET DETAIL "F"

MISCELLANEOUS DETAILS

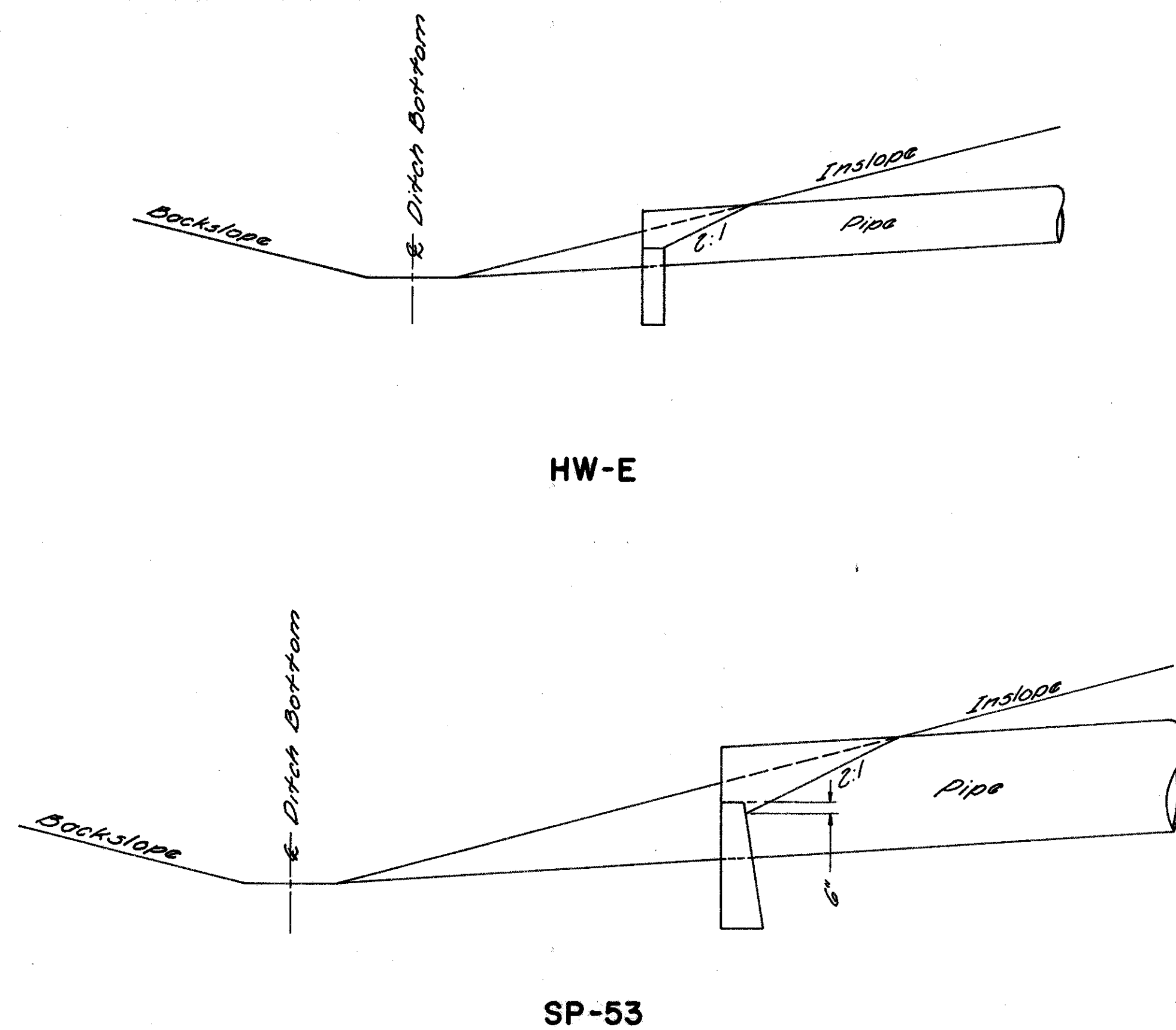
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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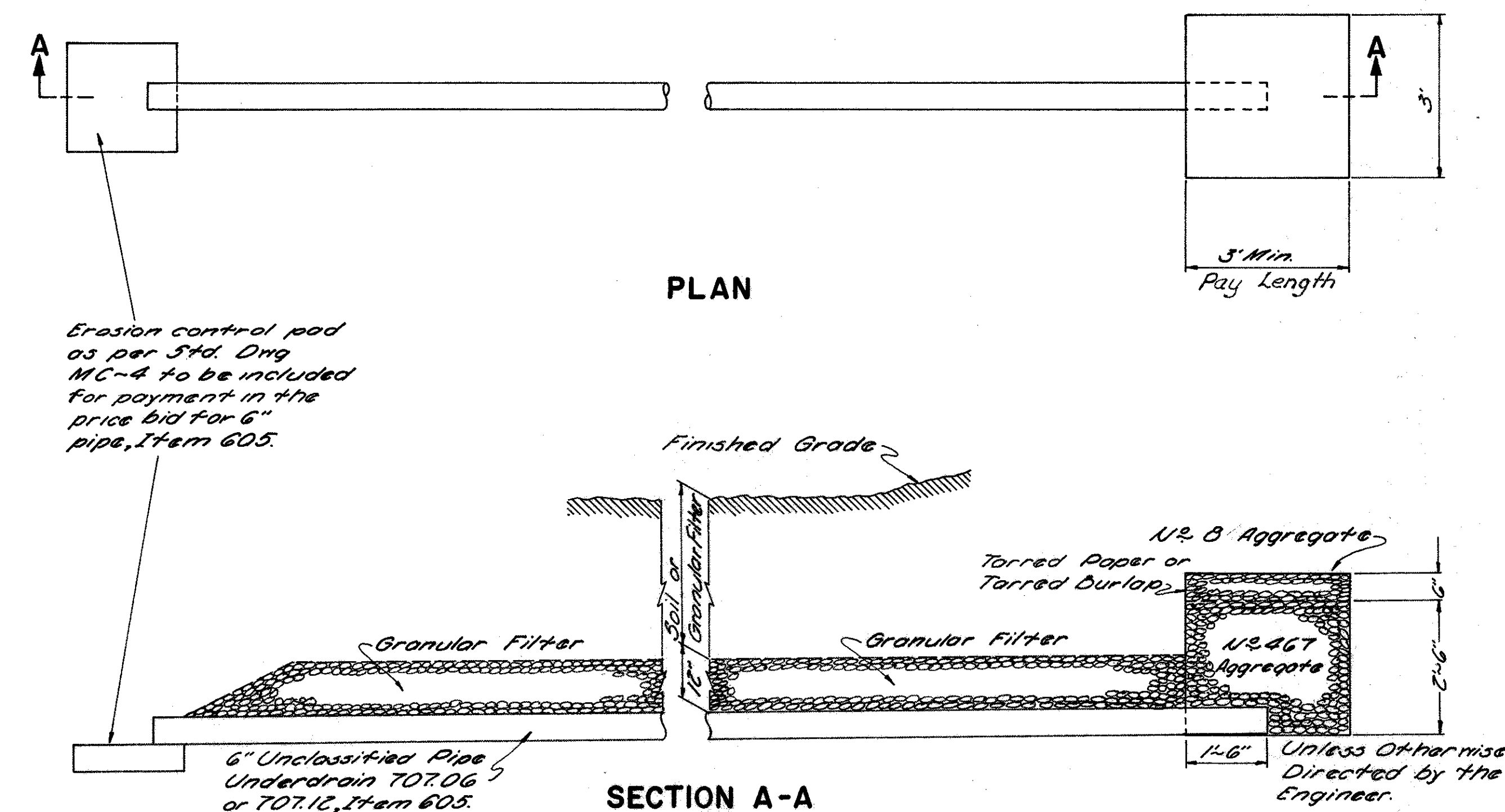
MADISON COUNTY
MAD-70-6.25



MEDIAN DETAIL WITH GUARD RAIL

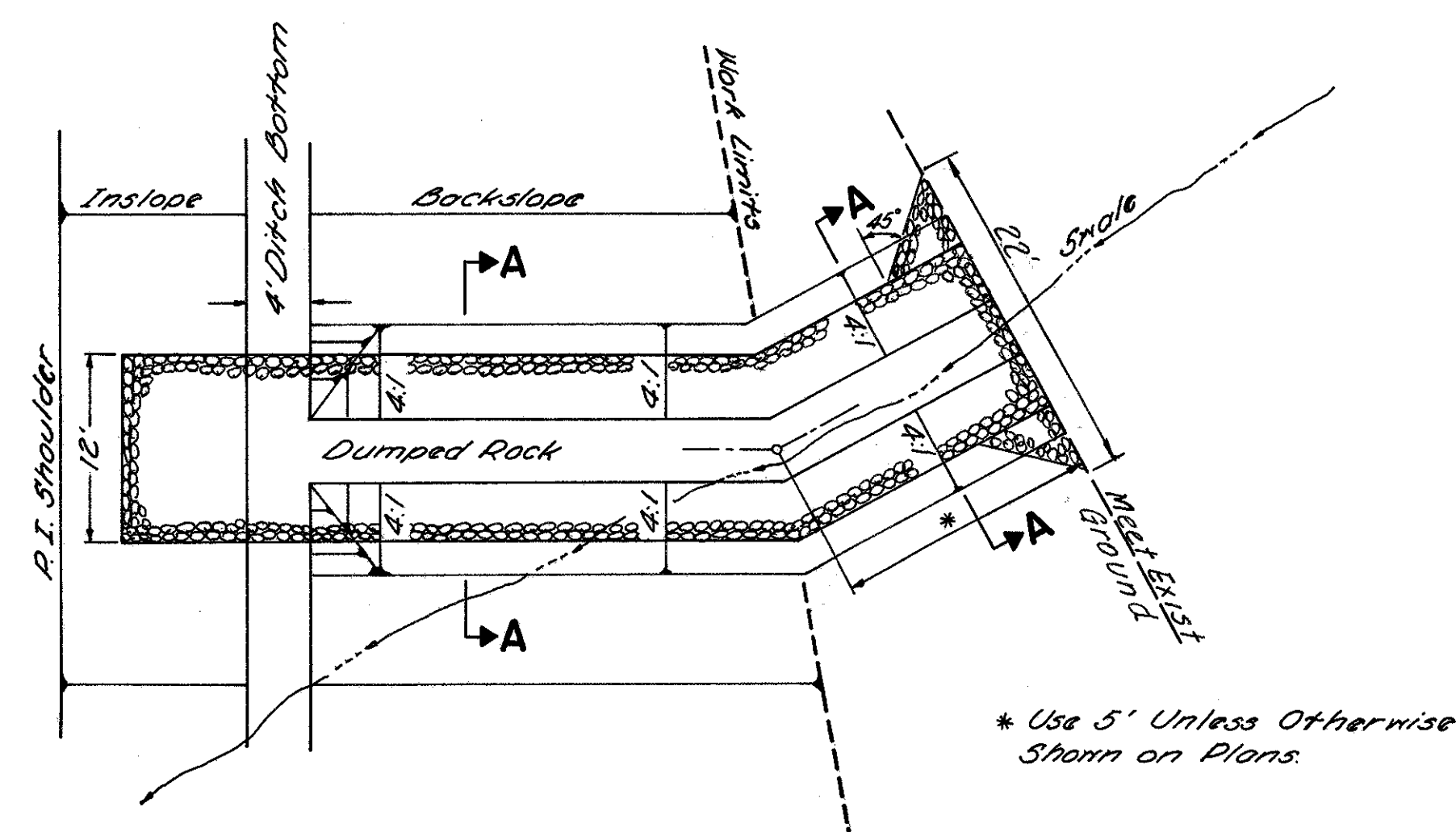


HW-E & SP-53 END WALL

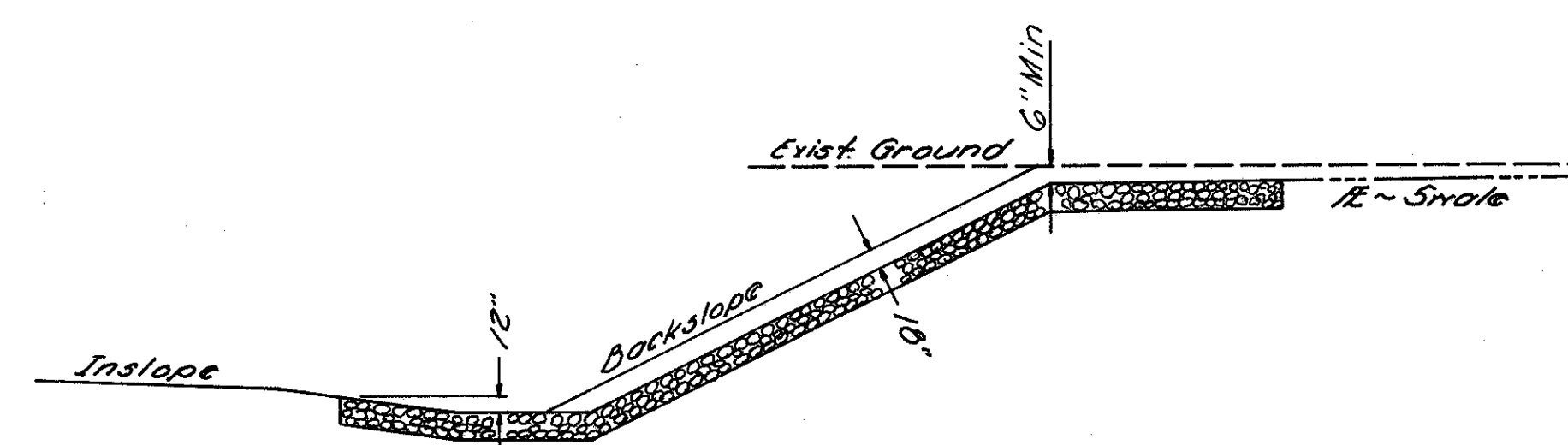


SPRING DRAIN DETAIL

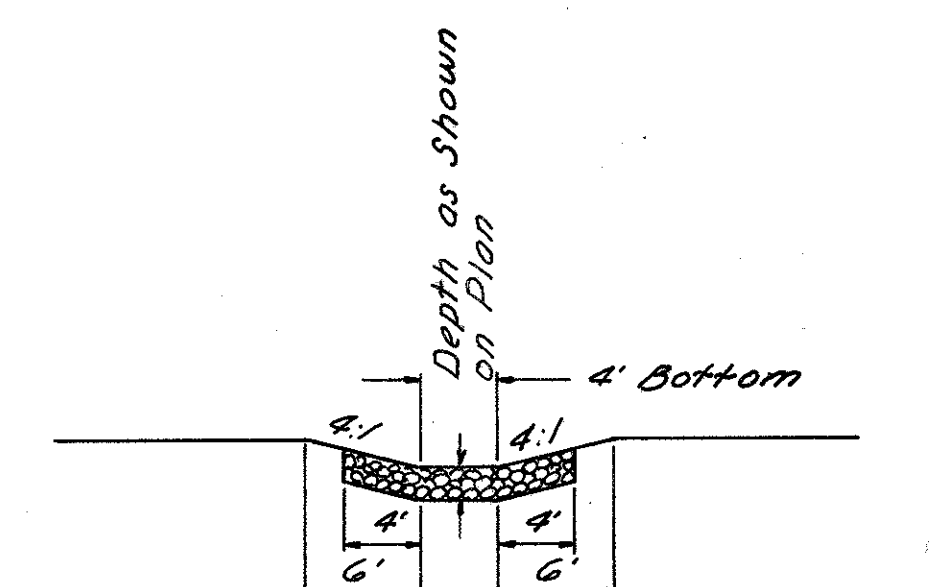
MISCELLANEOUS DETAILS



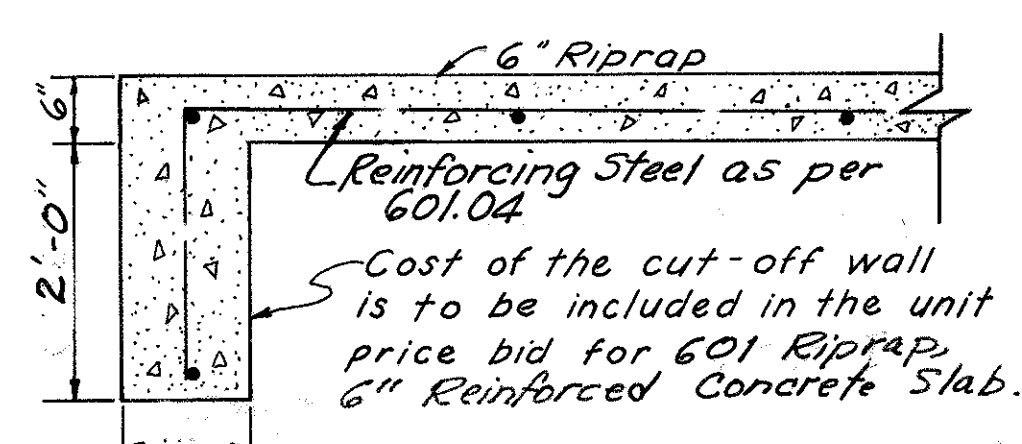
PLAN



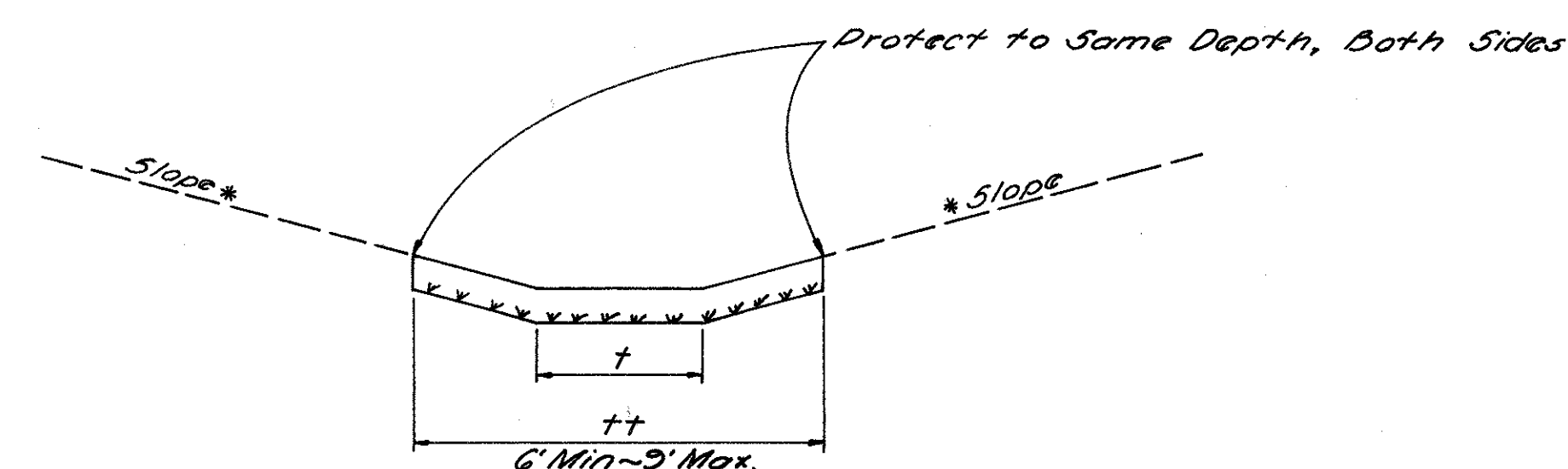
PROFILE



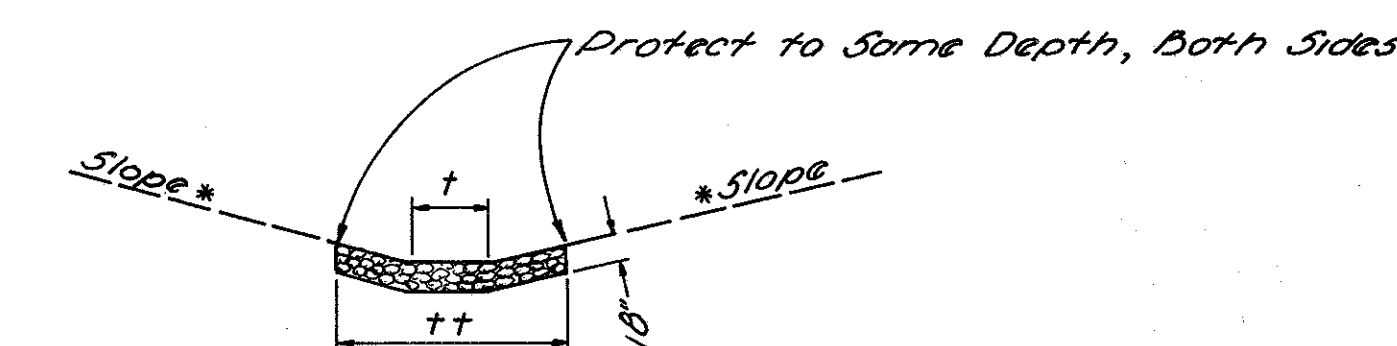
SECTION A-A
SWALE PROTECTION



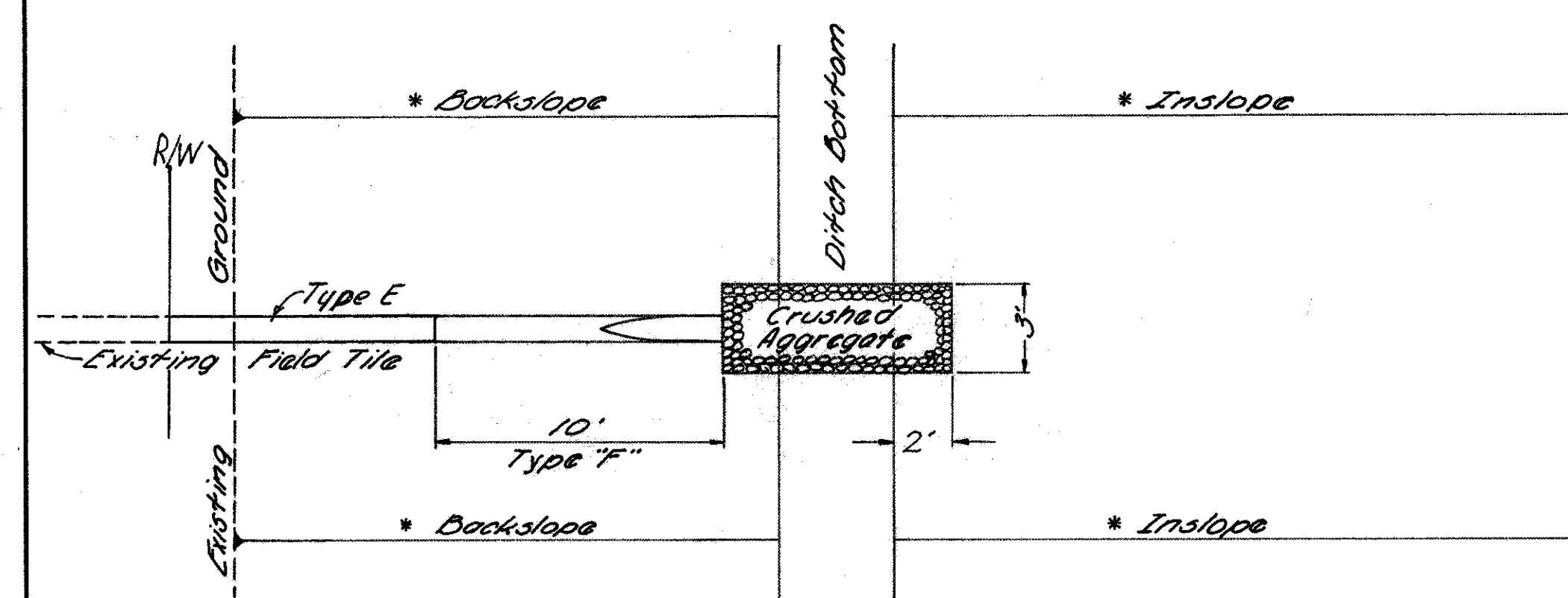
RIPRAP CUT-OFF WALL



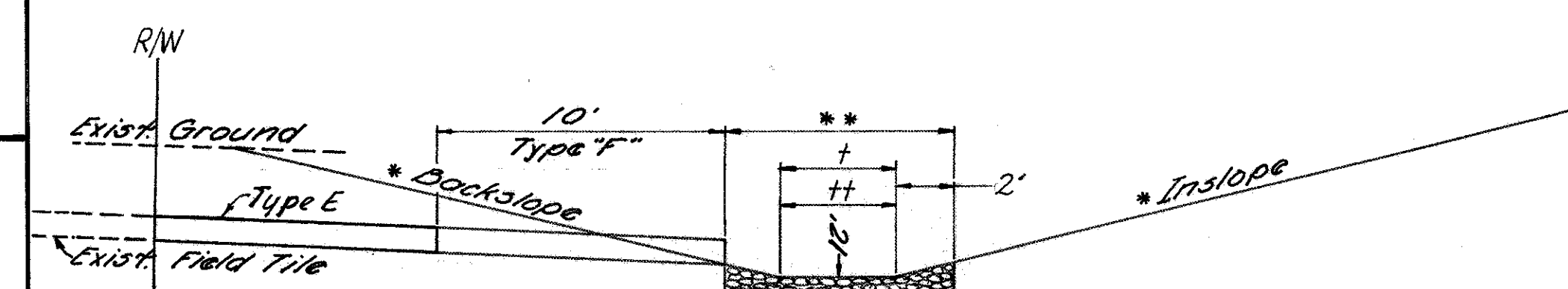
SOD DITCH PROTECTION



DUMPED ROCK CHANNEL PROTECTION
(FOR DITCHES)



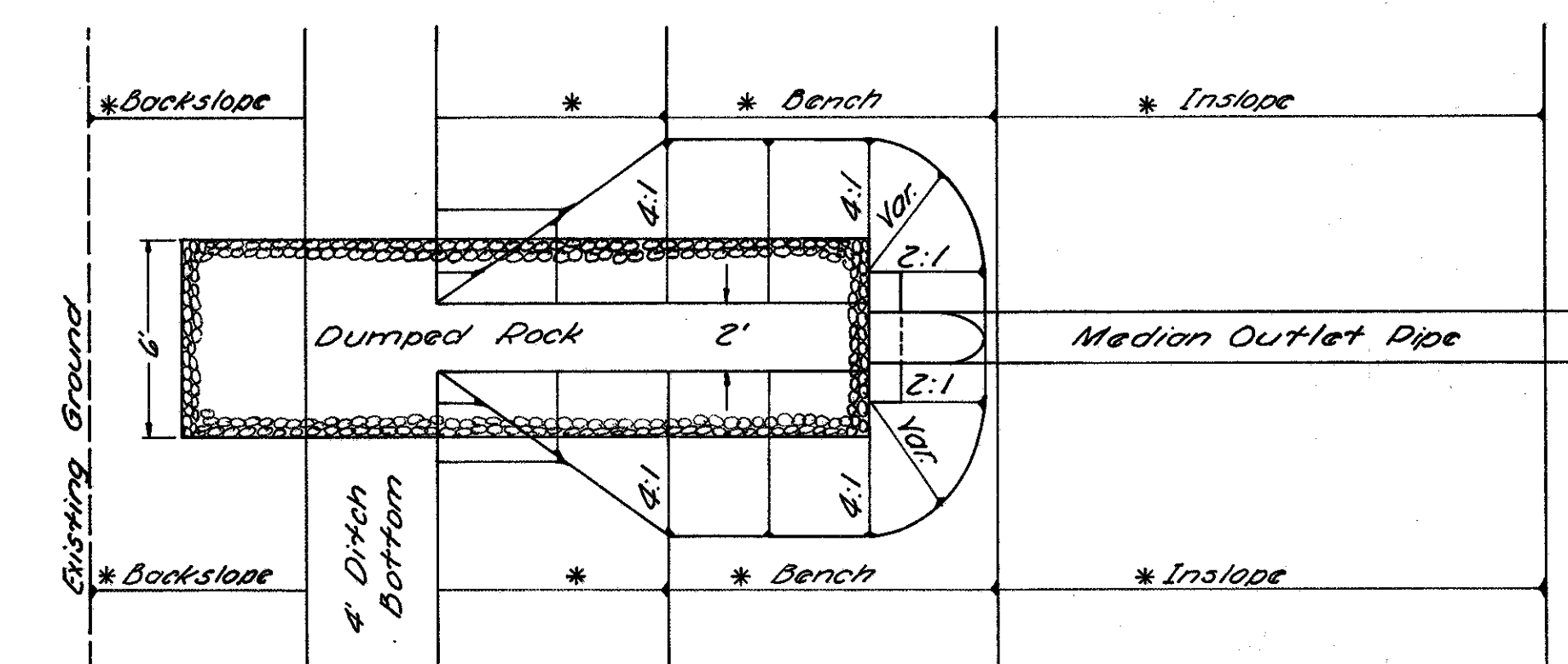
PLAN



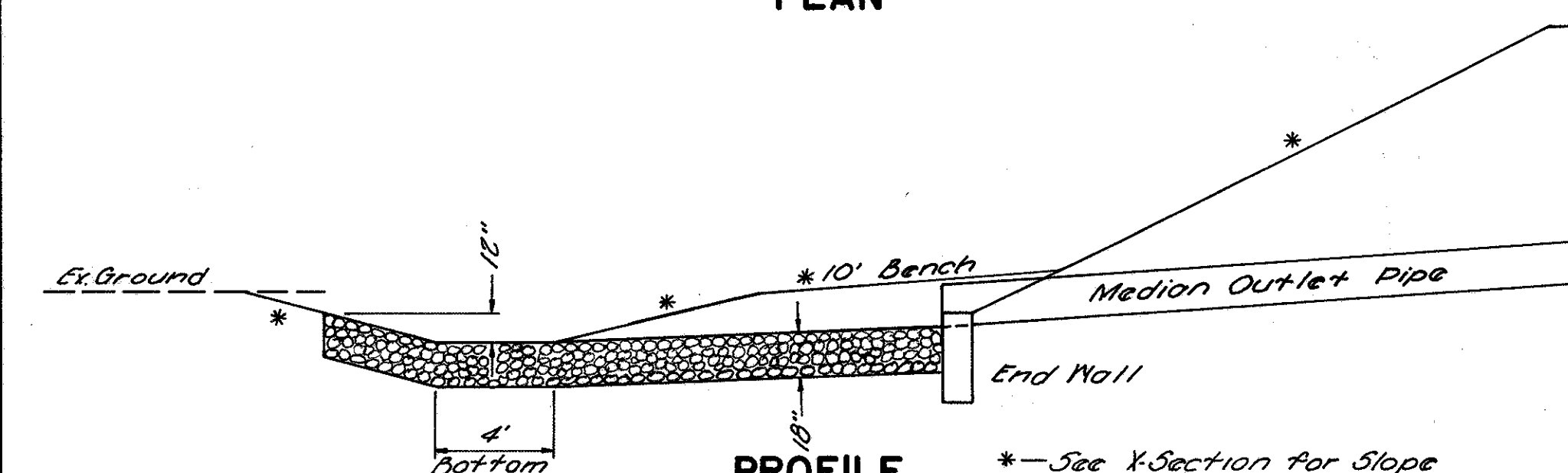
PROFILE

(CRUSHED AGGREGATE)

FIELD TILE PROTECTION



PLAN



PROFILE

(DUMPED ROCK)

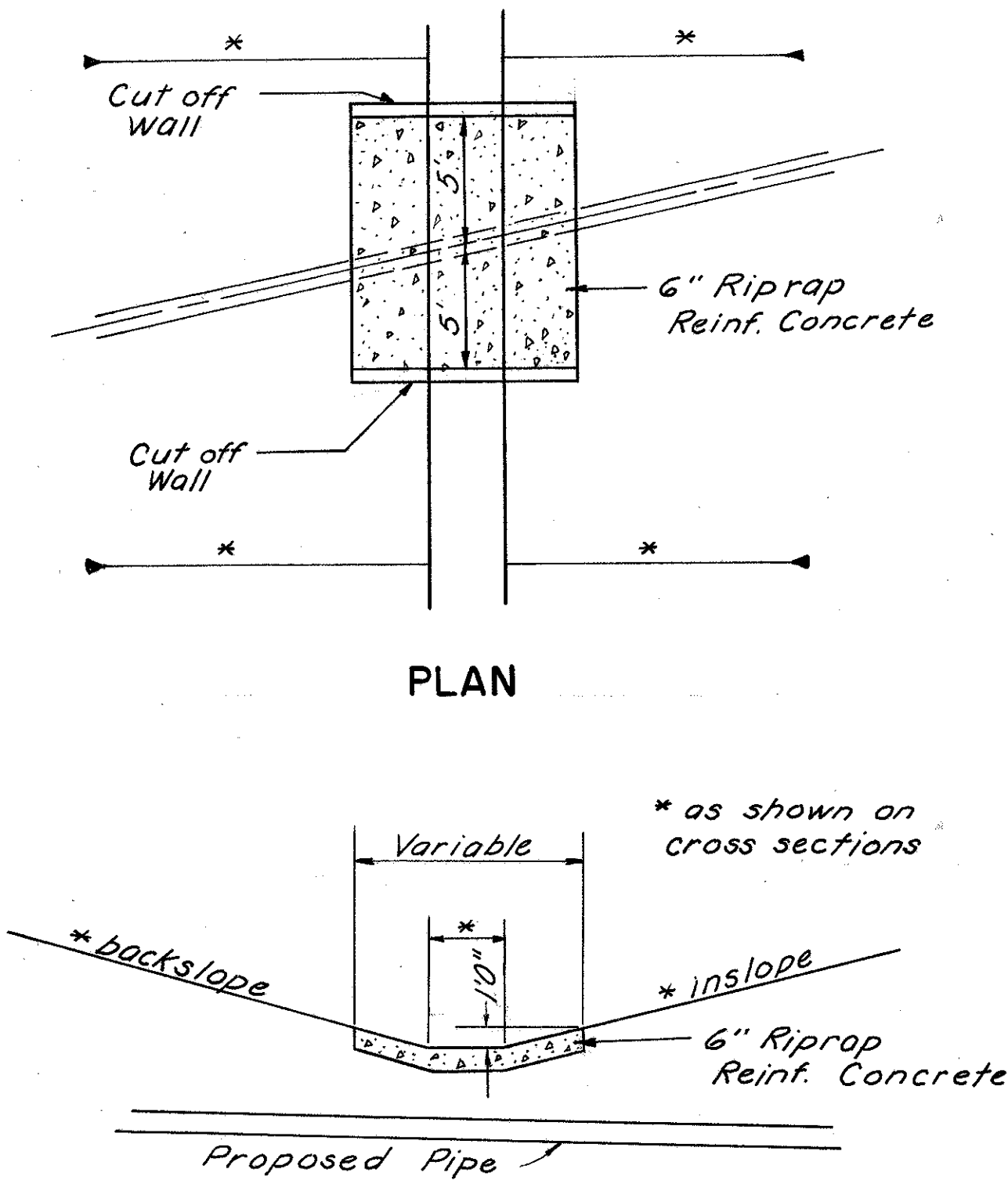
MEDIAN OUTLET PROTECTION

MISCELLANEOUS DETAILS

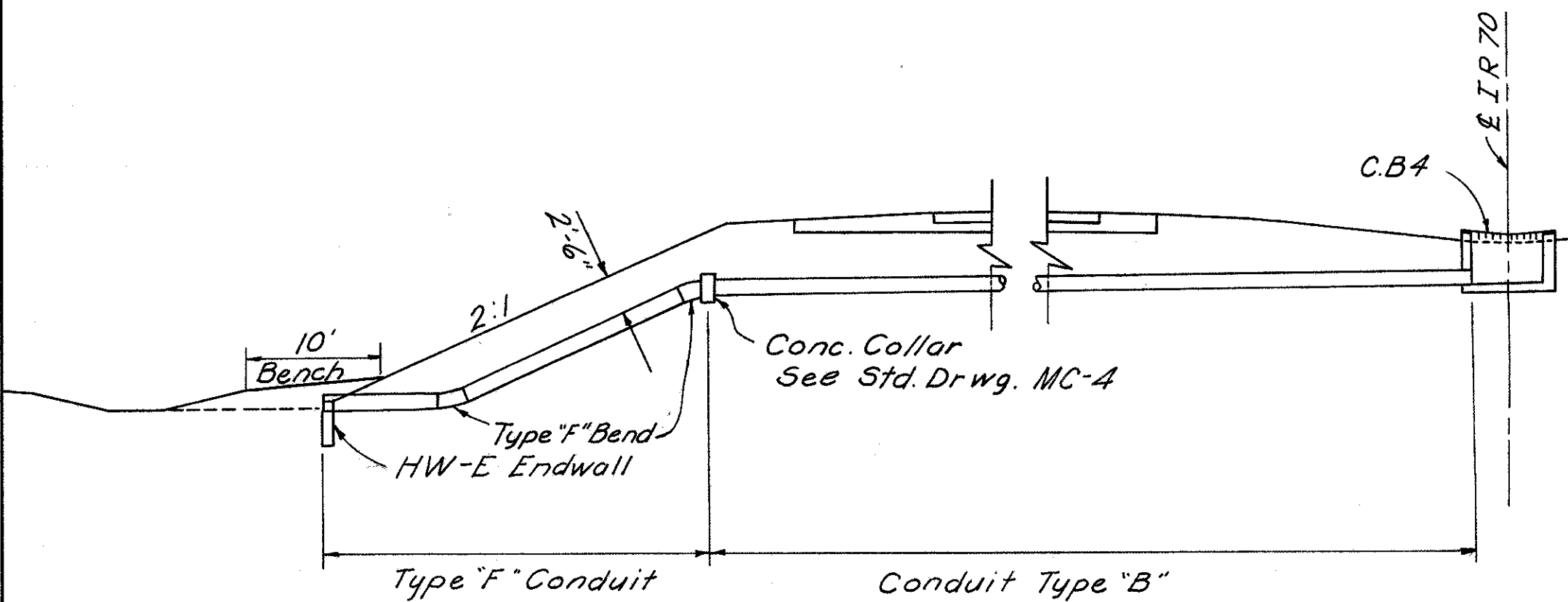
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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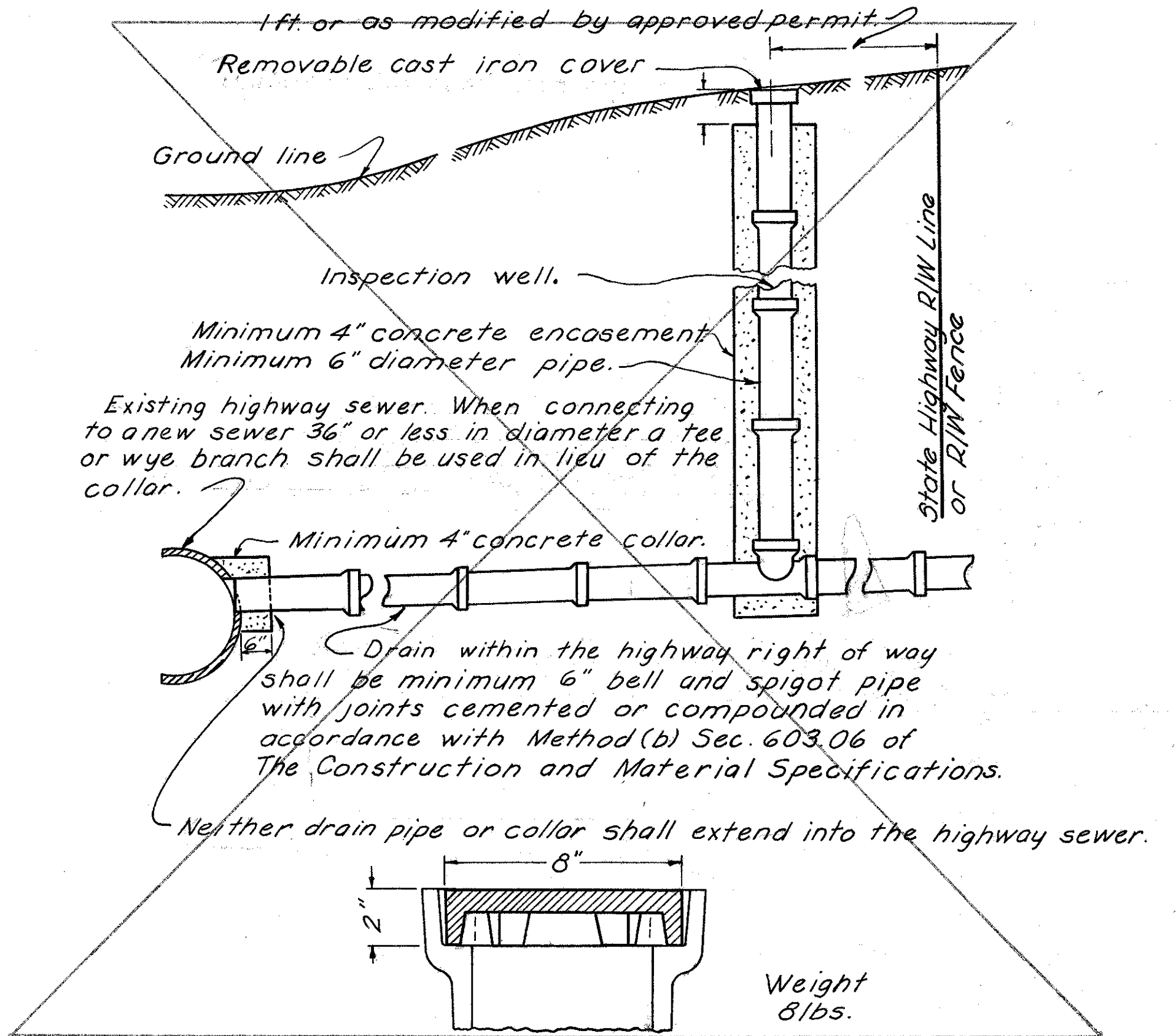
MADISON COUNTY
MAD-70-6.25



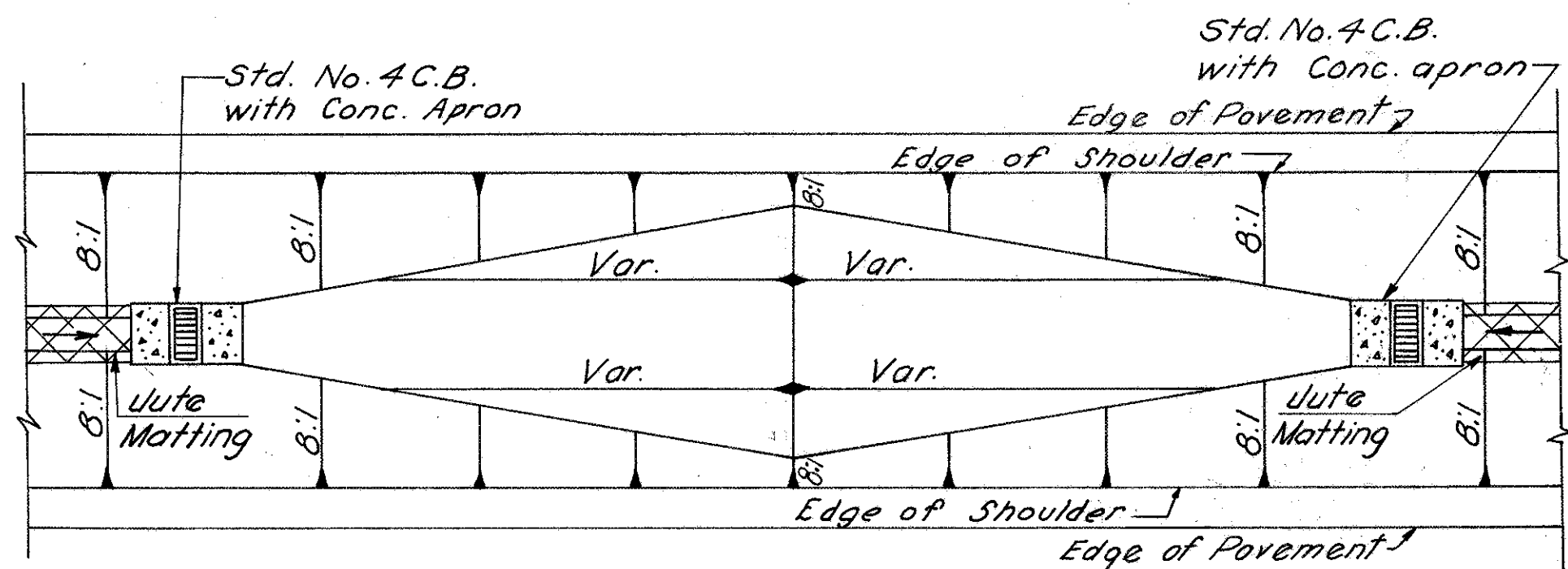
DITCH PROTECTION OVER
PROPOSED PIPE



MEDIAN OUTLET DETAIL IN HIGH-FILL

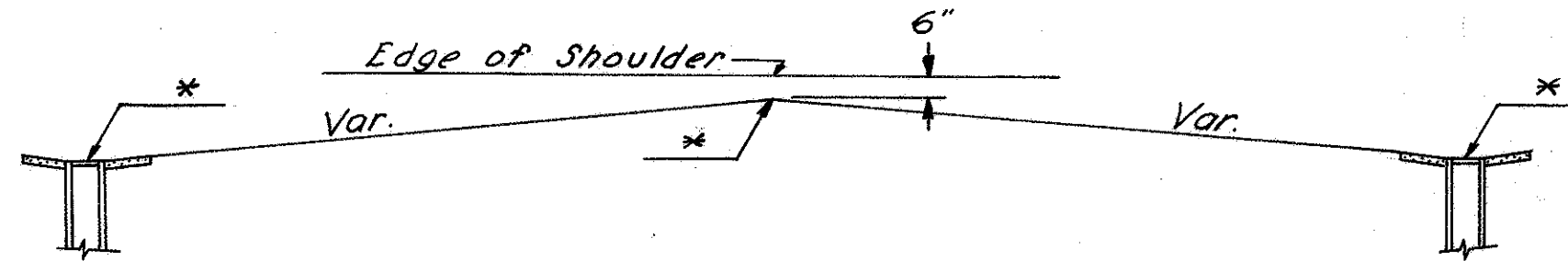


FOR DETAILS OF INSPECTION WELL, SEE STANDARD DRAWING MC-8
INSPECTION WELL



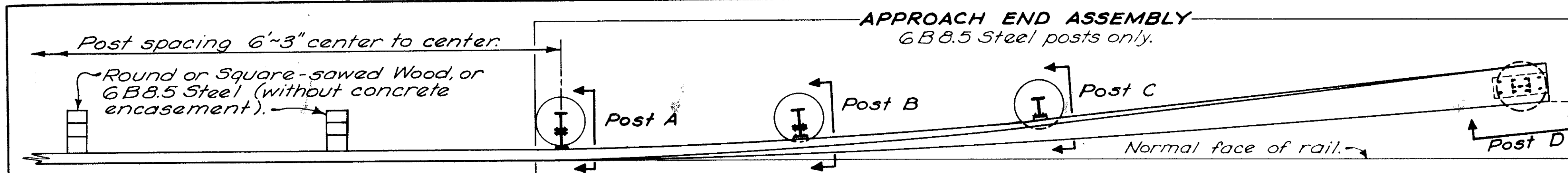
* For elevations see
Plan & Profile Sheets

PLAN

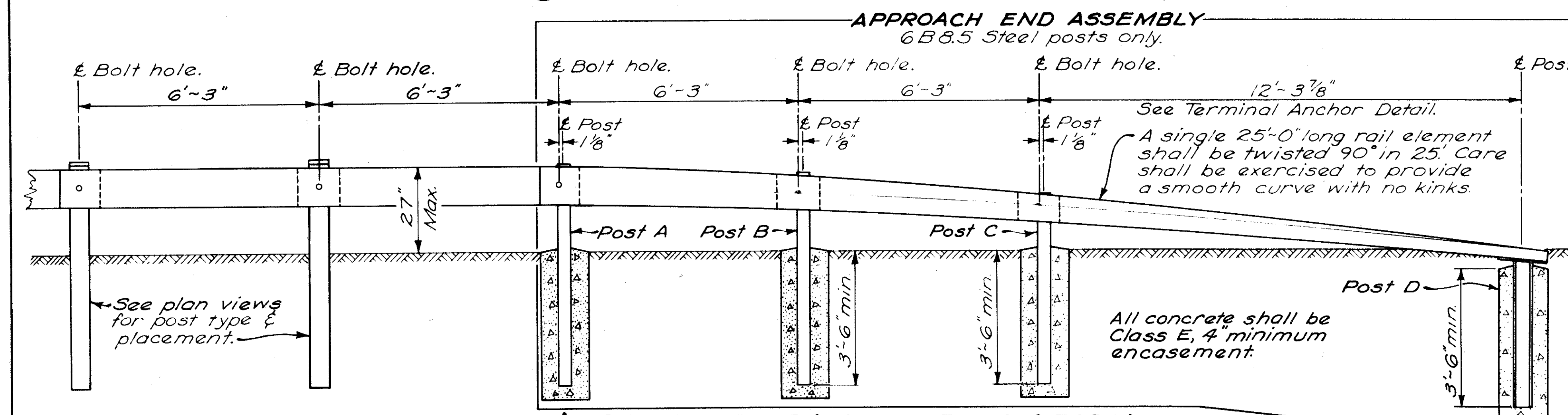


ELEVATION

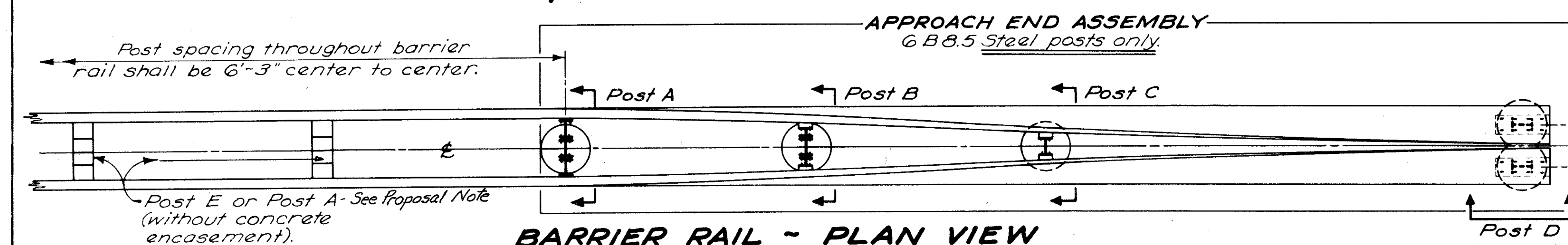
MEDIAN DITCH DETAIL



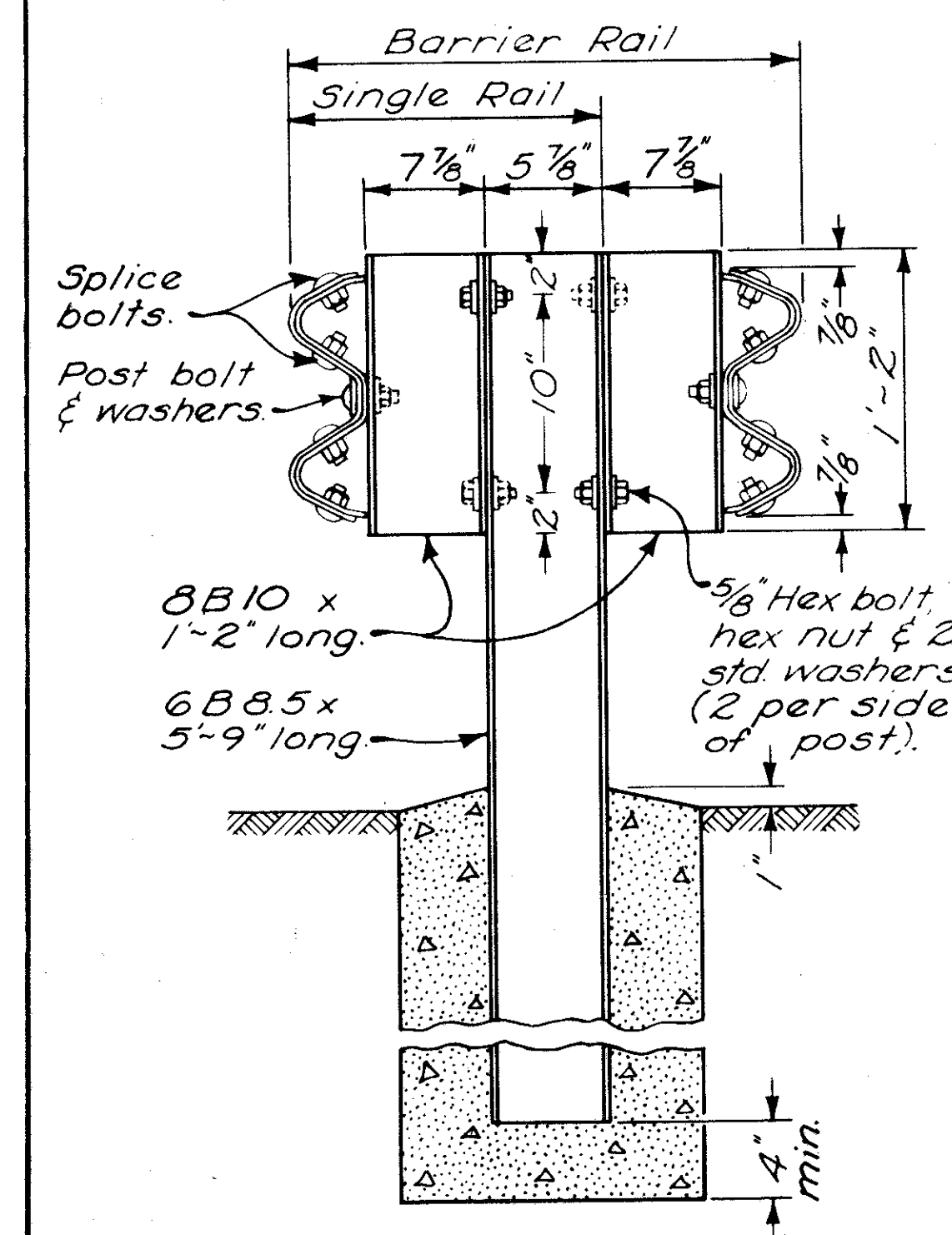
SINGLE RAIL ~ PLAN VIEW



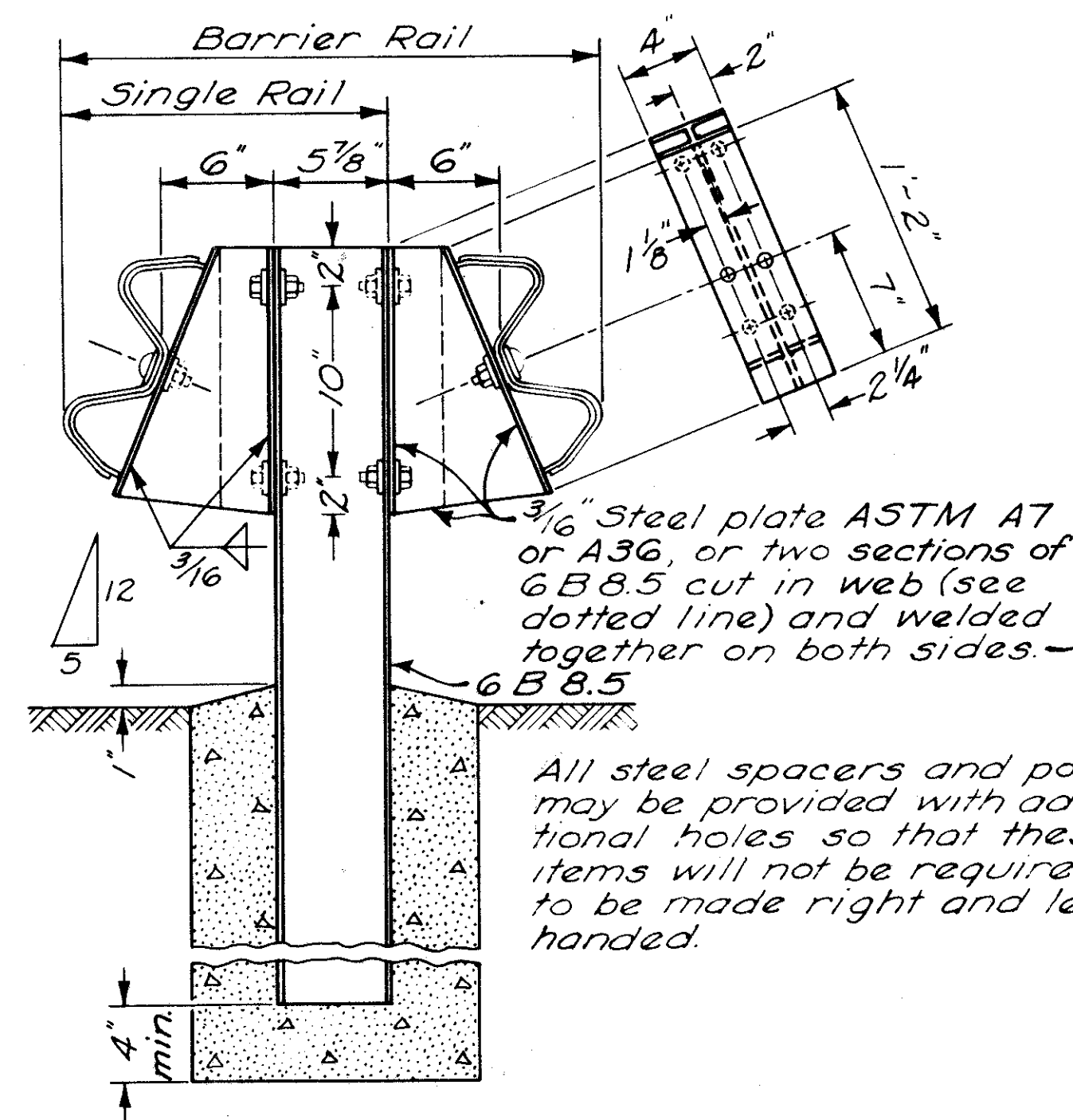
SINGLE & BARRIER RAIL ~ ELEVATION



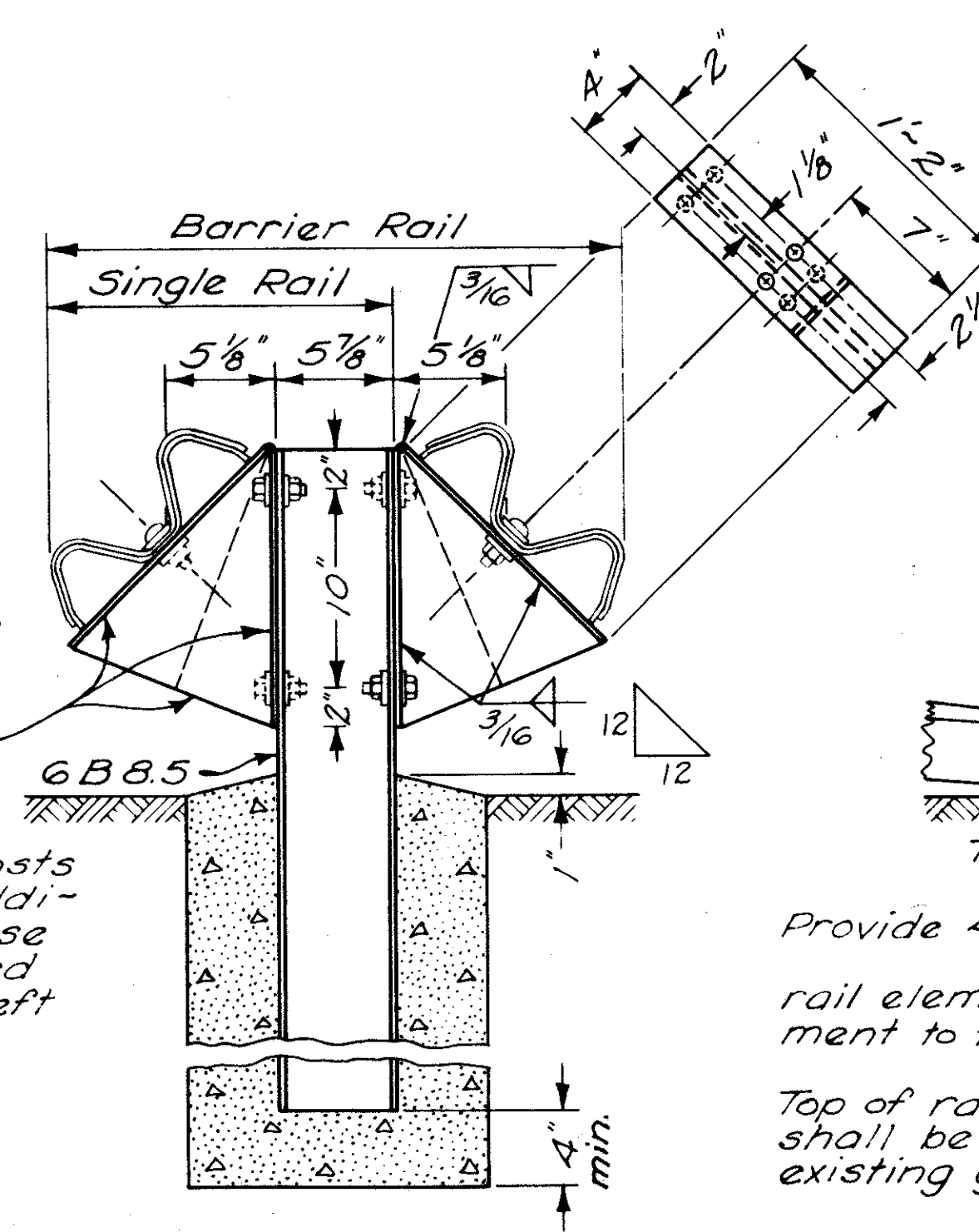
BARRIER RAIL ~ PLAN VIEW



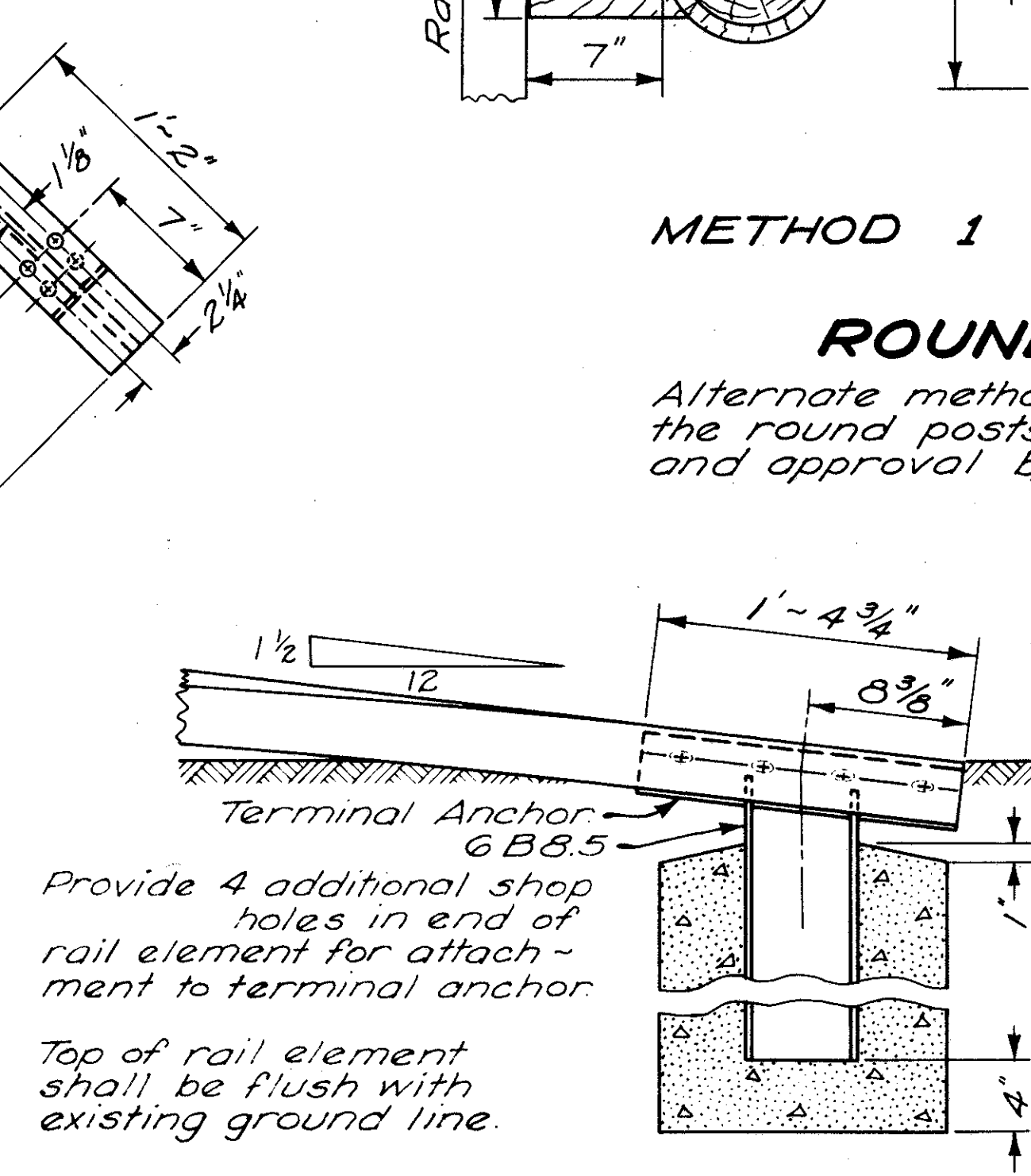
POST A



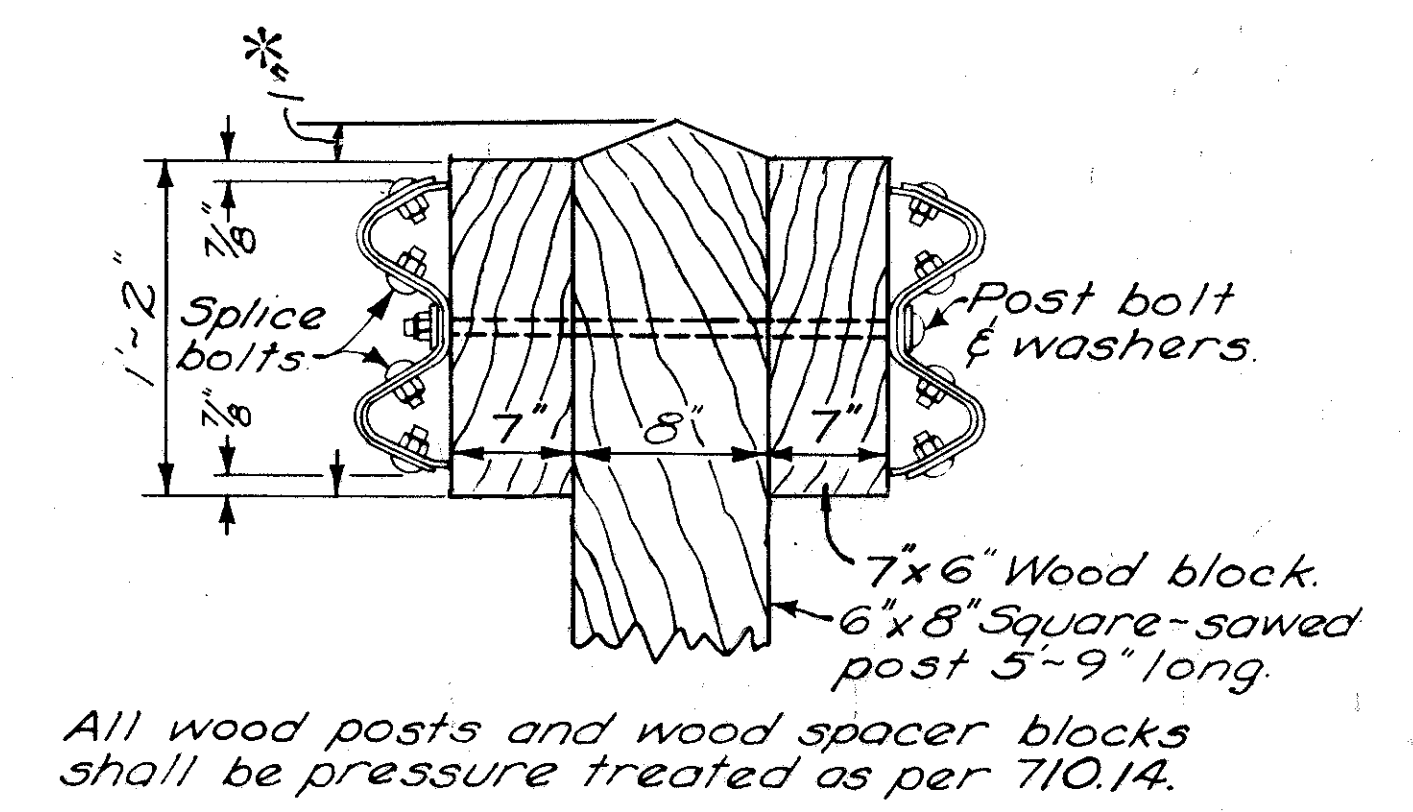
POST B



POST C



POST D



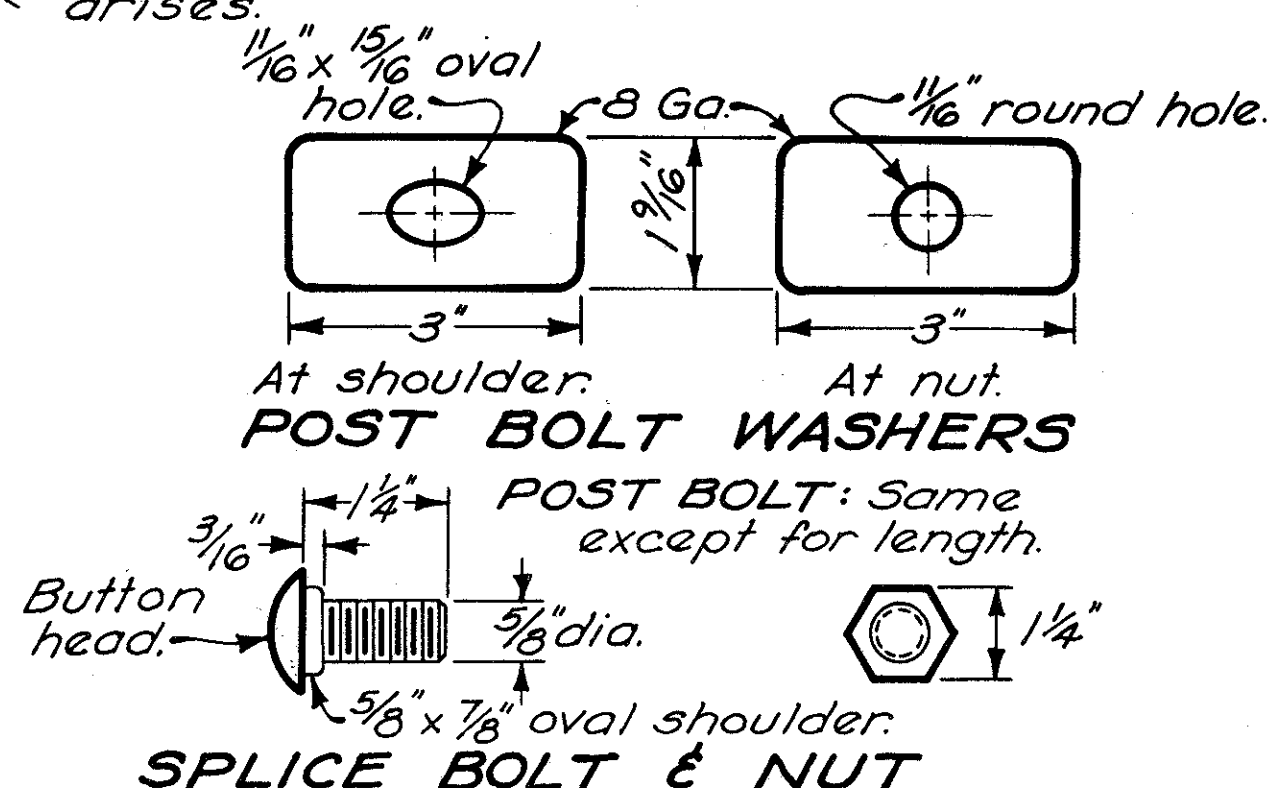
POST E

NOTES

For details not shown, see Standard Drawings GR-1 and GR-2A.

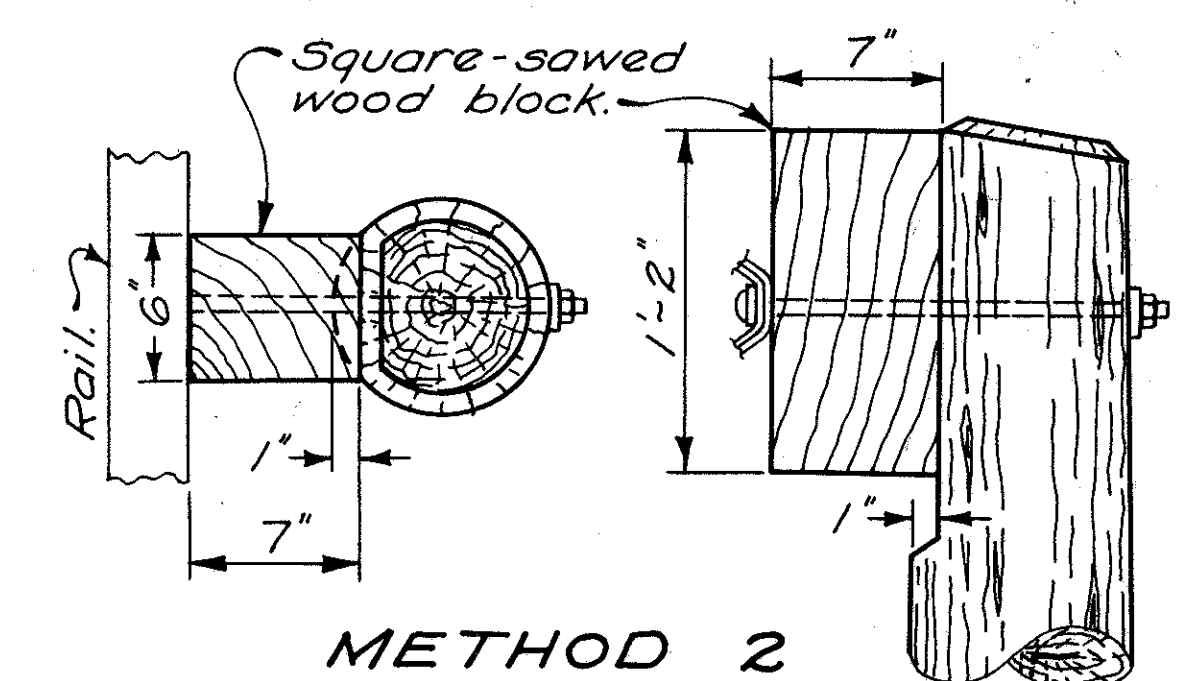
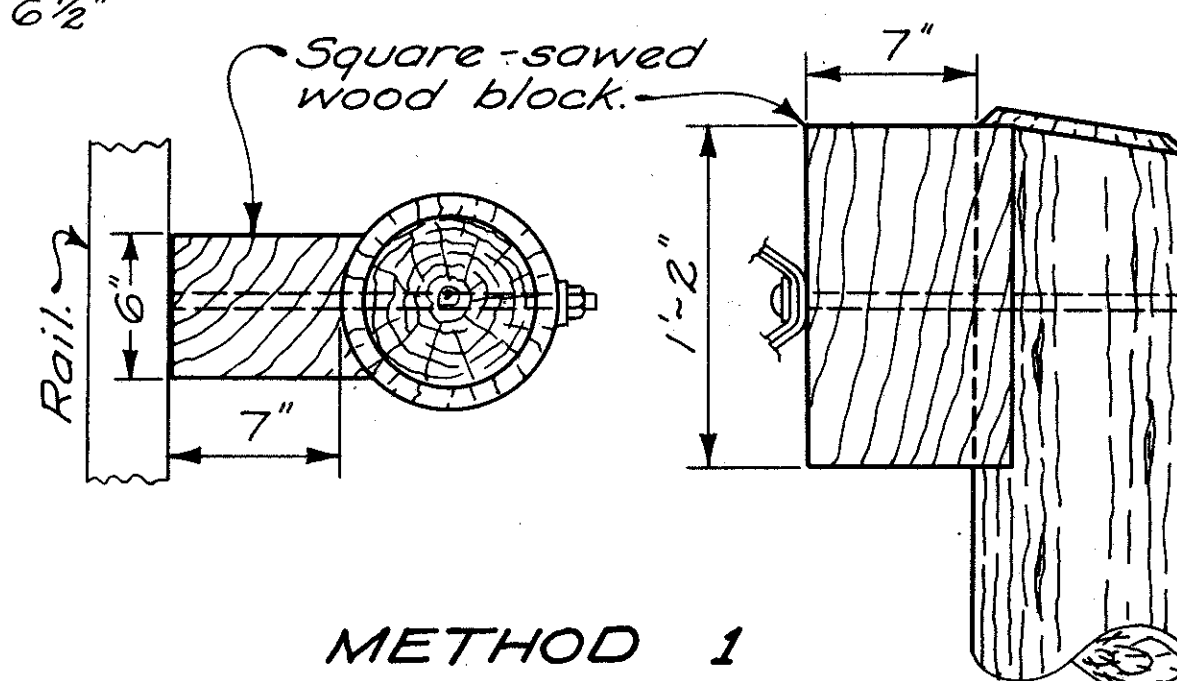
All steel parts shall be galvanized in accordance with ASTM A123, A153 or A525, whichever may apply.

This drawing shall govern where a conflict arises.



ELEVATION

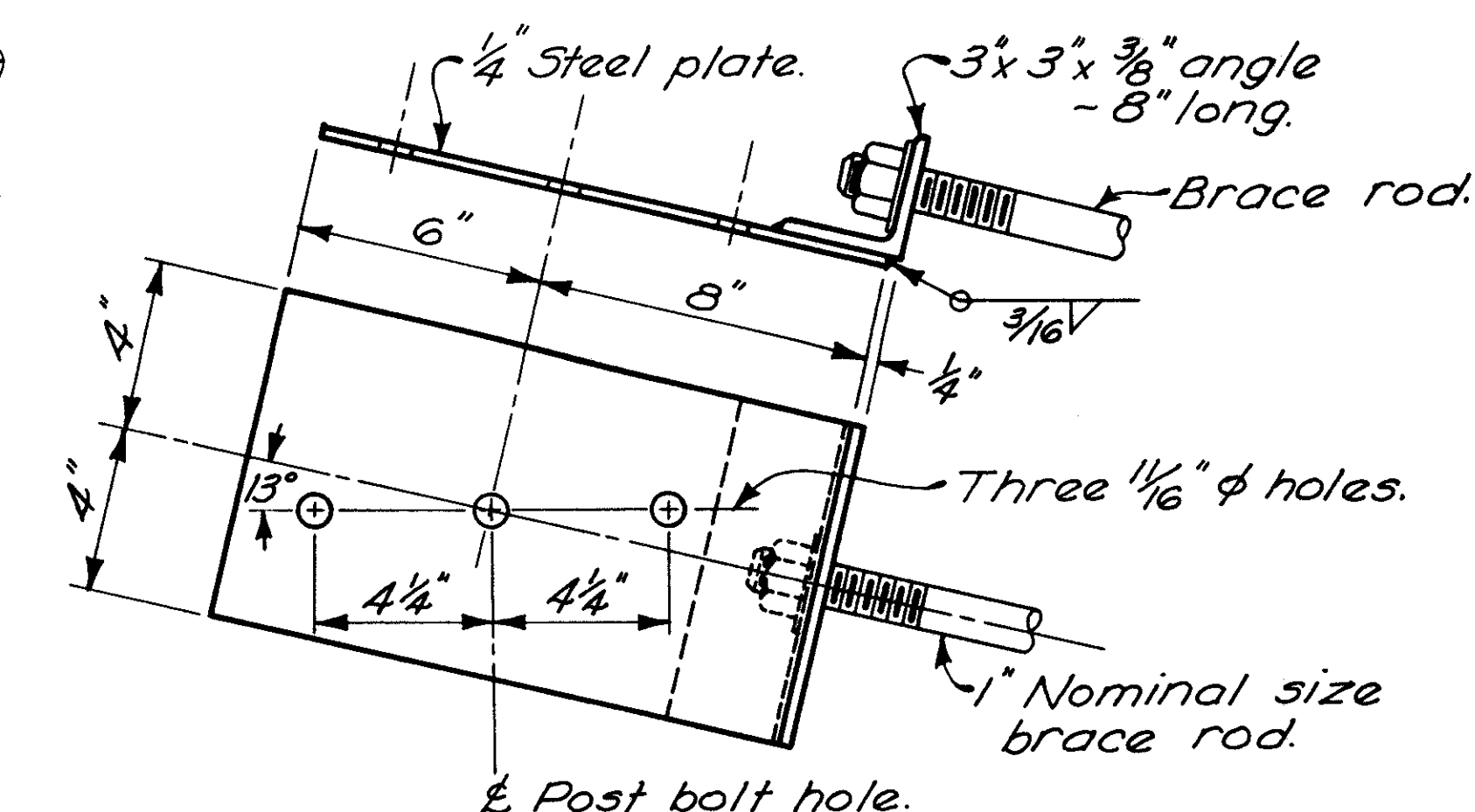
TERMINAL ANCHOR DETAIL



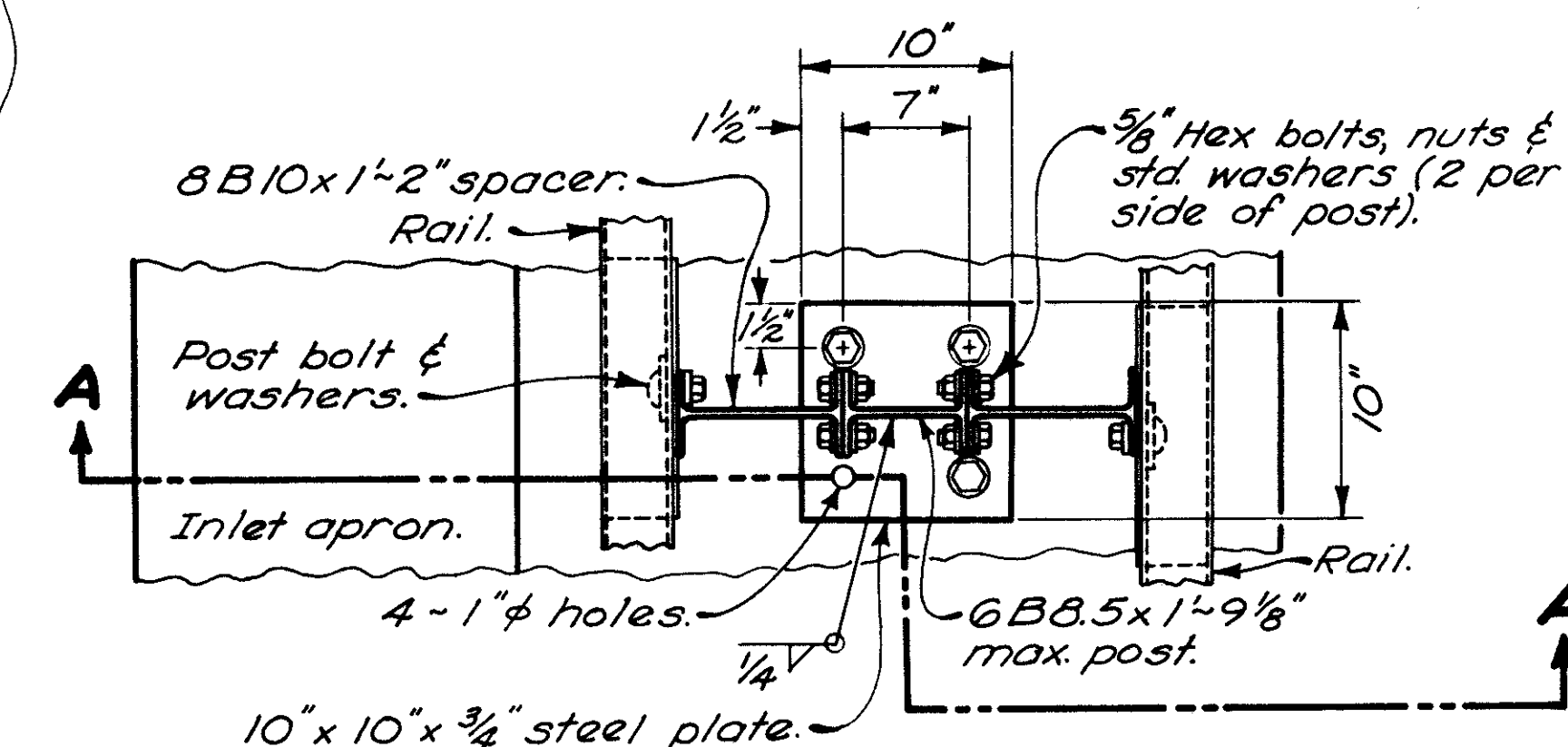
ROUND WOOD POSTS*

Alternate methods of placing the spacer blocks on the round posts may be submitted for consideration and approval by the Engineer.

Posts may be round or square-sawed wood, or 6B8.5 steel. See Standard Drawings GR-1 & GR-2A, and special detail sheet "Guard Rail ~ Approach End Assembly."



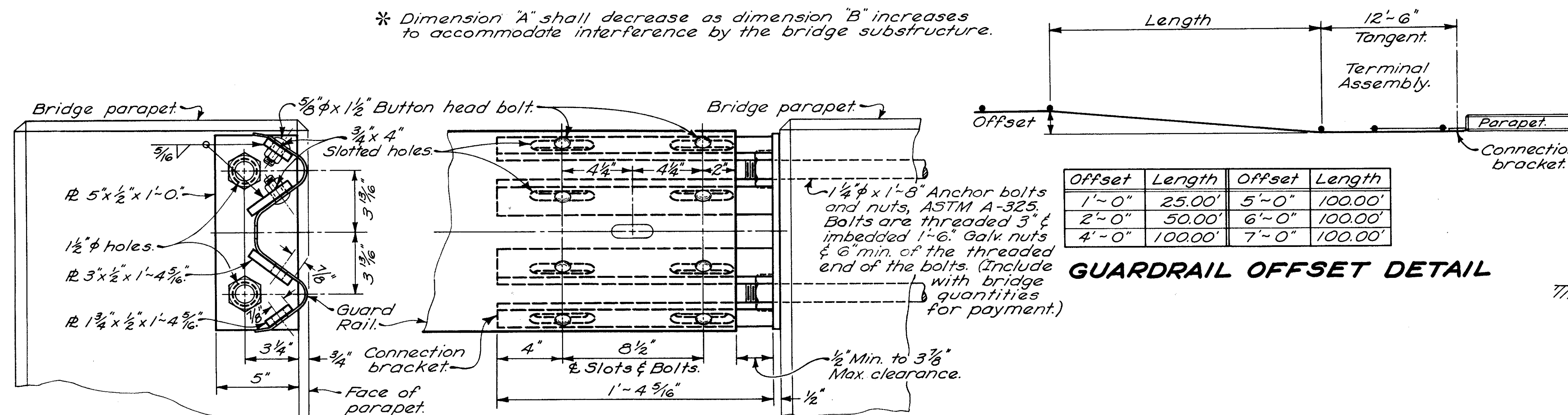
BRACE ROD PLATE



PLAN VIEW

ELEVATION
GUARDRAIL TERMINAL AT BRIDGE

* Dimension "A" shall decrease as dimension "B" increases to accommodate interference by the bridge substructure.



GUARDRAIL OFFSET DETAIL

<i>Offset</i>	<i>Length</i>	<i>Offset</i>	<i>Length</i>
1' ~ 0"	25.00'	5' ~ 0"	100.00'
2' ~ 0"	50.00'	6' ~ 0"	100.00'
4' ~ 0"	100.00'	7' ~ 0"	100.00'

CONNECTION BRACKET DETAIL
GUARDRAIL ~ BRIDGE CONNECTION

The connection bracket shall be galvanized after welding and shall be included with guardrail for payment.

SECTION A-A

BARRIER RAIL MOUNTED ON MEDIAN INLET

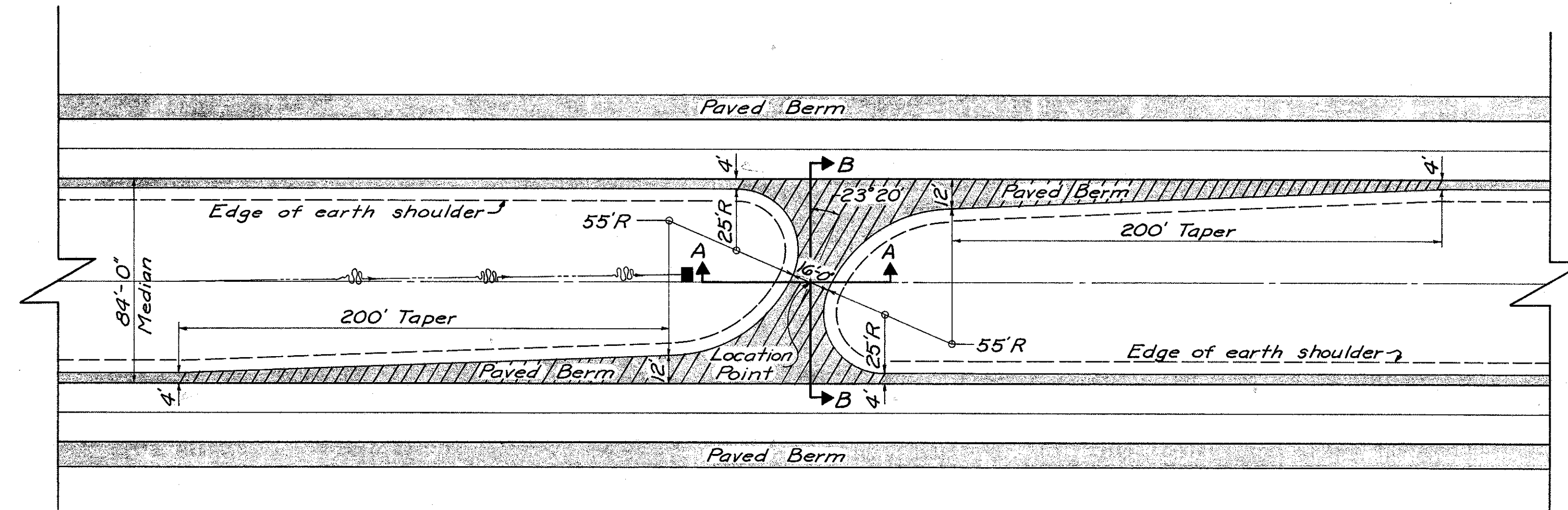
This design shall be used for posts located over inlets regardless of the type of post used on the approaches.

MEDIAN CROSSOVER DETAILS

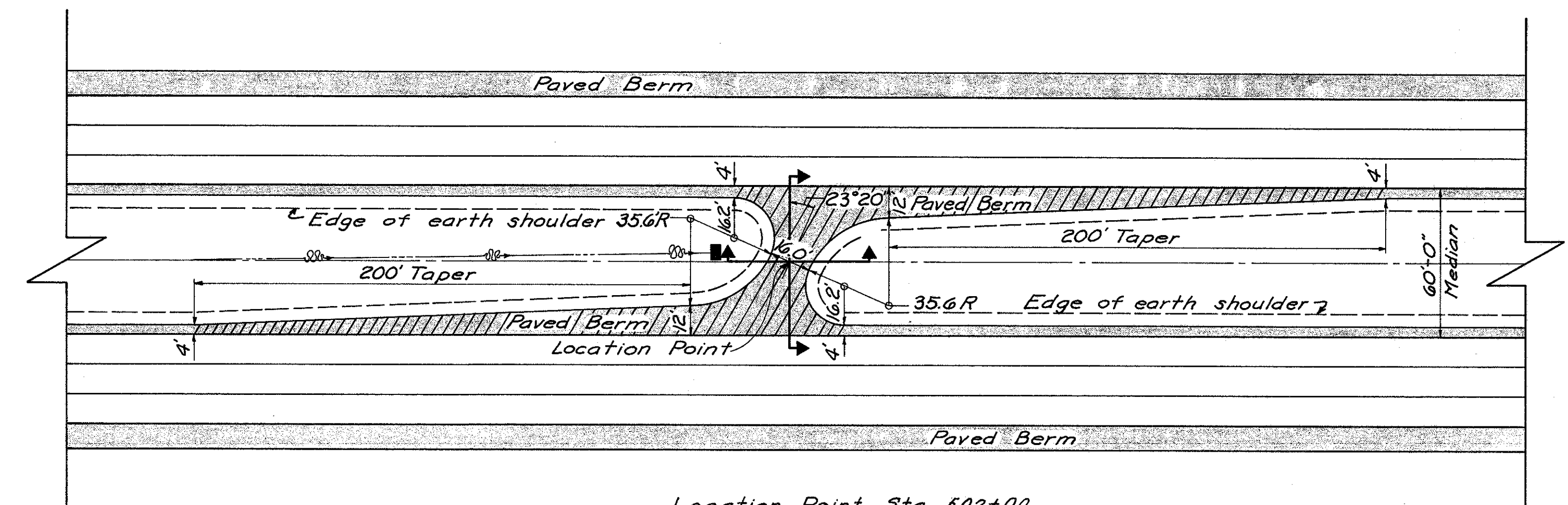
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD- 70-6.25

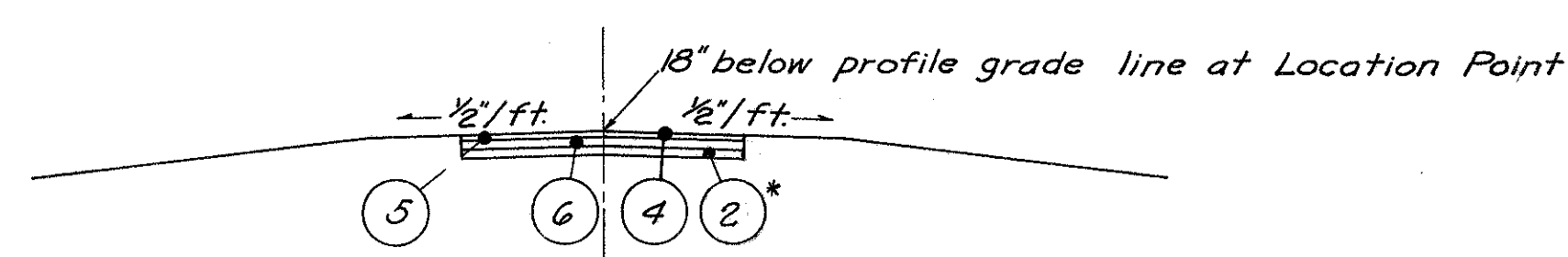
16
374



Location Point Sta. 422+50
(84' Median)

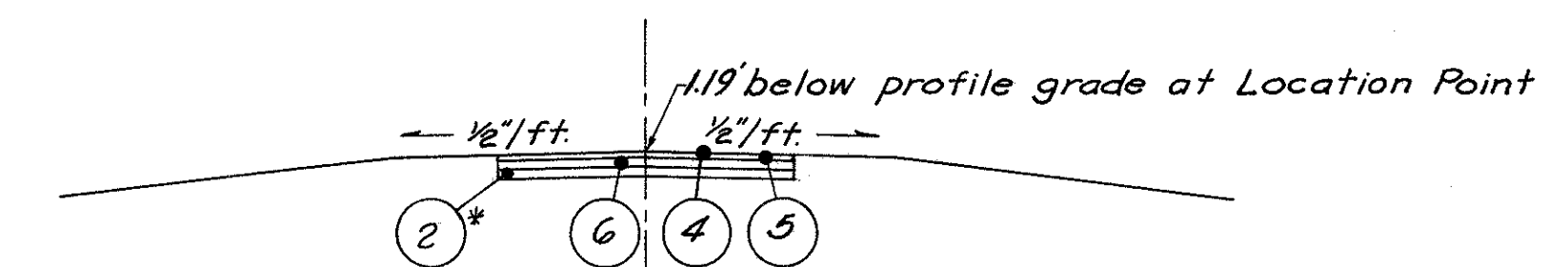


Location Point Sta. 502+00
(60' Median)

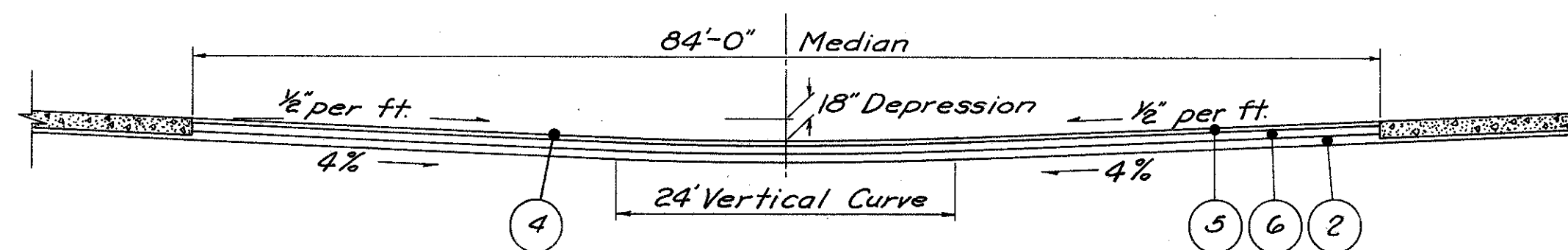


SECTION A-A

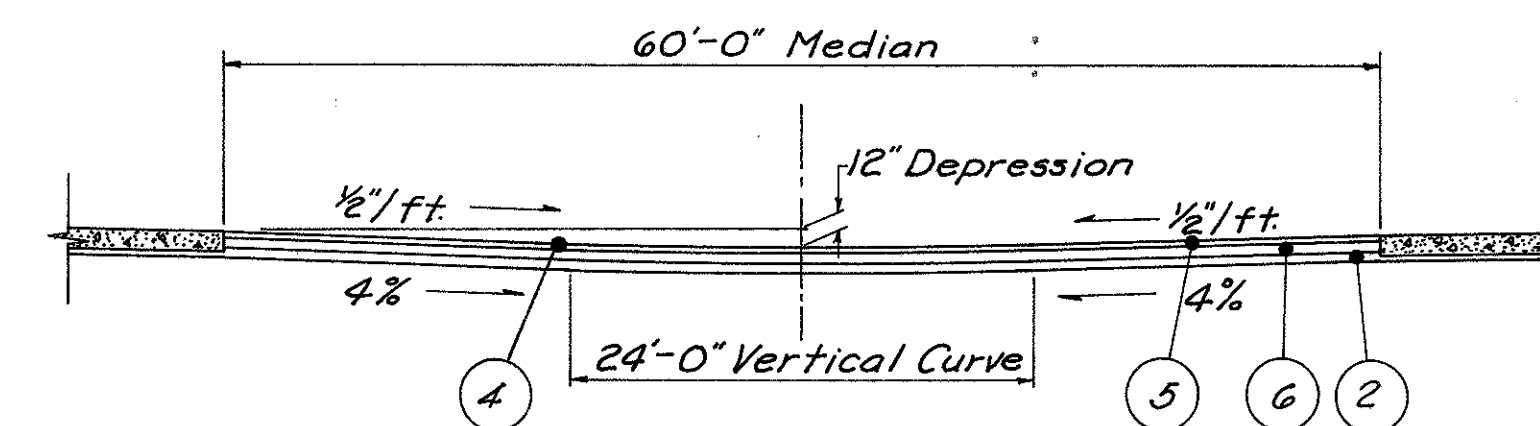
Item 310 Legend
 - 310 thickness as per 4 lane or 6 lane Mainline Typical Section.
 - 310 constant 6" thickness.



SECTION A-A



SECTION B-B



SECTION B-B

Note: For Legend of Pavement Items
See Typical Section Sheet N^o 3 & 4

GENERAL NOTES

FIELD OFFICE

The Contractor shall, in addition to the requirements of 105.152, provide a suitable field office having a minimum of 400 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 install and maintain electric outlet and lights with 110 volts. 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.

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 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 details, See standard drawing MC-1. For location, See Sheet No. 338, 339, and 340.

ELEVATION DATUM

All elevations are based on U. S. G. S. datum.

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:

- 1) At the intersection of U. S. 40 and S. R. 29 Northeast quadrant.
- 2) At the intersection of U. S. R. 42 and S. R. 29 West quadrant on the Right.
- 3) Sta. 669+00 U. S. R. 42.

Sign details shall be as specified on Standard Drawing FACI-1, "Code N-55 (1) - 120(2)".

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

REMOVAL OF EXISTING PIPE

The removal of all existing pipe drains which would normally be removed in various excavation items shall be included for payment in the unit prices bid for the respective excavation items, unless otherwise itemized in the plans.

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.

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.

END TAPER DETAIL

The End Taper Detail shall be constructed of concrete, pavement to an elevation one half inch lower than the adjacent pavement and surfaced with Item 409 using No. 8 Aggregate of the maximum size, the crossed hatched area shall be paid for as full depth Item 451 and the surface treatment shall be paid for as Item 409. See sheets 183-190, and 218-222.

CHANNEL EMBANKMENT

Portions of the existing channel outside the roadbed shall be filled & sloped to drain as called for on the plans and included for payment in the price bid for Item 203 Embankment. The Contractor shall use either suitable or unsuitable material to the extent available for channel embankments.

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

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

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

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

An estimated quantity has been provided in the plans for channel embankment as follows:

Deer Creek	1405	Cu. Yds.
Glade Run	203	Cu. Yds.

SUPERELEVATION

Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in the portion between the beginning of the transition and the point where the superelevation equals twice the crown.

EMBANKMENT CONSTRUCTION

Stations 457+00 to 459+00 on I-70, 682+00 to 694 on U. S. 42, 457+00 to 461+75 on Ramp "A", 453+00 to 457+00 on Ramp "C".

Between the above limiting Stations, the embankment foundation shall be cleared and grubbed, but not scalped, and the initial 12 inches of embankment to be placed shall consist of granular material placed by the method of end-dumping. Granular material for this work shall meet the requirements of 203.02 modified to require not less than 85 percent, by weight, of the grains or particles retained on a No. 200 sieve. The rate of embankment placement between the above limits shall not exceed 3 feet per week for the entire height of fill. Payment for furnishing and placing this 12 inch granular layer is to be included in the unit price bid for 203 Embankment, as per plan.

MAIL BOX APPROACHES

These shall be placed as directed by the Engineer. Eight (8) approaches have been estimated for a total of 14 Cu. Yds. of Item 404, Asphalt Concrete (85 - 100) 2 inches thick, and 35 Cu. Yds. of Item 304, Aggregate Base, 5 inches thick. These approaches shall be constructed as per Standard Drawing BP-6.

DRIVE LOCATIONS

The location of residence and field drives may be adjusted by the Engineer during construction.

GENERAL NOTES

FARM DRAINS

All farm drains which are encountered during construction shall be provided with unobstructed outlets under the direction of the Engineer. Existing collectors which are located below the roadway ditch elevations and which cross the roadway shall be replaced within the right-of-way limits by Item 603 Conduit, Type B with Class B Bedding, 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 by 603 Type F Conduit. 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 603 Type E Conduit and carried in a longitudinal direction to an adequate outlet or roadway crossing.

The location, type, size and grade of required replacements shall be determined by the Engineer during construction and payment shall be made on final measurements.

The following estimated quantities have been included in the General Summary for the work noted above.

- Item 603 6" Conduit, Type B with Class B Bedding 600 Lin. Ft.
- Item 603 8" Conduit, Type B with Class B Bedding 600 Lin. Ft.
- Item 603 12" Conduit, Type B with Class B Bedding 300 Lin. Ft.
- Item 603 6" Conduit, Type E 500 Lin. Ft.
- Item 603 8" Conduit, Type E 350 Lin. Ft.
- Item 603 12" Conduit, Type E 500 Lin. Ft.
- Item 603 6" Conduit, Type F 100 Lin. Ft.
- Item 603 8" Conduit, Type F 70 Lin. Ft.
- Item 603 12" Conduit, Type F 30 Lin. Ft.
- Item 601, Crushed Aggregate Slope Protection, 20 Sq. Yds.
- Item 604, Standard Number 2-2-B Catch Basin, Modified as per Plan, 2 each

All necessary bends and branches shall be included for payment with the conduit of which they become a part.

None of the above materials shall be ordered by the Contractor until requested by the Engineer.

ITEM 605 AGGREGATE DRAINS

Aggregate drains shall be placed at fifty (50) foot intervals on each side of normal crowned sections and at twenty-five (25) foot intervals on the low side only of superelevated sections, except where Item 605 Pipe Underdrains have been provided.

An aggregate drain shall be placed at the low point of each sag vertical curve.

SPRING DRAINS

Reference is made to the detailed drawing on Sheet No. 12 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 - 6" Unclassified Pipe Underdrain, 707.06 or 707.12 as per plan 200 L. F.

Item 605 - Aggregate Drains for springs, as per plan 21 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.

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 Interstate Limited Access 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 lines. Payment for said plugging shall be included in the unit price bid for Item 203 Excavation.

TREATED SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS - FOR COUNTY ROADS ONLY

Treated sanitary flow may be discharged into the county highway drainage system provided the owner has secured the approval of the local health authorities and the County; no permit will be required from the State.

The following estimated quantities have been included in the general summary for use as directed by the Engineer in making the above described connections:

- Item 603, 6" Conduit, Type C with Class 'B' Bedding, 100 Lin. Ft.
 - Item 603 2 (two) Inspection Wells
- These shall not be ordered until directed by the 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 pipe items.

ITEM SPECIAL - CLEANING AND DISPOSAL OF SEPTIC TANKS

This item shall include cleaning, backfilling and removal of all or any portion of existing septic tanks.

All septic tanks lying within the proposed right-of-way limits shall be cleaned and emptied. Material removed from these tanks shall be classified as unsuitable and disposed of outside the right-of-way or easement lines.

When the septic tanks are located above the finished pavement or ground lines, they shall be entirely removed and disposed of in accordance with Sec. 203.05.

When the tanks are located below the finished pavement or ground lines, the tops of the tanks shall be removed, and the walls shall be removed to a depth of 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 Sec. 203.02.

This item shall be paid for at the unit price bid per each for "Item Special - Cleaning and Disposal of Septic Tanks", which price and payment shall constitute full compensation for cleaning, removing and disposing of excess materials, backfilling and for all labor, tools, equipment and incidentals necessary to complete this item including incidental excavation.

Carried to General Summary (2) Septic Tanks

DRILLED WELL ABANDONED

The existing concrete or stone slab well cover and pumping equipment shall be removed and disposed of. The casing shall be cut off at least two (2) feet below the proposed finished grade outside the proposed pavement areas or at least two (2) feet below the proposed subgrade elevation inside proposed pavement areas and capped with Class E concrete or a standard threaded pipe cap. The unit price bid for each "Drilled Well Abandoned" shall include payment for all labor, tools, materials, and incidentals necessary to complete this item.

CLEANING PRIVY VAULTS

Privy vaults shall be cleaned and filled with suitable material as directed by the Engineer. Material removed from these vaults shall be classified as unsuitable and disposed of outside the limits of right-of-way or easement lines. The cleaning of privy vaults shall be paid for under Item Special, cleaning of privy vaults.

The backfilling of privy vaults shall be paid for under Items 203 Roadway Excavation and Embankment. The price bid for this item shall constitute full compensation for performing all the requirements of the item and for all labor, equipment, tools and incidentals necessary to complete this item.

An estimated amount of embankment for backfilling privy vaults has been carried to cross sections.

Carried to General Summary (2) Privy Vaults

LOCATION AND SIZE OF PIPE

The location, type, depth and size of all existing pipes are shown as nearly exact as the available information will permit. The State will not be responsible for any variations found during construction.

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



MADISON COUNTY
MAD-70-6.25

ITEM 659 - SEEDING

(a) U. S. R. 42 and S. R. 29.

Quantities for seeding are calculated for the soil areas between lines ten (10) feet outside the work limits, as shown on the cross sections, or to the right-of-way line if such line is less than ten (10) feet from the work limits.

(b) Lafayette-Mechanicsburg Road, Lafayette-Plain City Road, Service Road and Byerly Road.

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

(c) Interstate Route 70.

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.

All slopes 2:1 or steeper:

- 60% Ky 31 Fescue (Festuca arundinacea 'Ky 31')
- 25% Ky Bluegrass (Poa pratensis)
- 10% Red Clover (Trifolium pratensis)
- 5% Red Top (Agrostis alba)

All other areas to be seeded:

- 50% Pennlawn Fescue (Festuca rubra 'Pennlawn')
- 35% Ky Bluegrass (Poa pratensis)
- 10% Alsike Clover (Trifolium hybridum)
- 5% Red Top (Agrostis alba)

When asphalt is used as a tie, it shall be applied at the rate of 300 gallons per acre or 6.88 gallons per 1000 sq. ft. in lieu of the rate set forth in Method

No asphalt shall be applied when the temperature is below 40° F.

When straw is used as a mulch it shall be applied at such a rate as to insure a minimum two (2) inch depth loose measure, approximately two (2) tons per acre.

The actual operation of seeding shall not be performed between the dates of October 15 and February 14.

830 SEEDING AND EXCELSIOR MATTING shall be used on slopes as indicated below:

Lafayette - Mechanicsburg Road:

Sta. 28+00 to Sta. 30+50 left

U. S. R. 42 Interchange:

- Ramp "A" Sta. 456+50 to Sta. 457+50 left
Sta. 457+50 to Sta. 460+00 right
- Ramp "B" Sta. 462+00 to Sta. 463+50 left
- Ramp "C" Sta. 452+00 to Sta. 457+50 right
- Ramp "D" Sta. 448+50 to Sta. 450+50 right

Bridges:

- 70-0643 Sta. 22+50 to Sta. 28+00
- 70-0715 Sta. 22+50 to Sta. 27+50
- 70-0862
- 8 0863 Sta. 683+00 to Sta. 696+00
- 70-1028 Sta. 559+00 to Sta. 566+00

ITEM 659 - Liming

The area to be limed shall be determined by laboratory test prior to fertilizing, seeding and sodding, and after the finished grade has been established. The lime shall be applied at the standard rate to the areas as directed by the Engineer.

ITEM 659 - FERTILIZER

Fertilizer with the analysis of 18-46-0 shall be uniformly applied at the rate of fifteen (15) pounds per 1000 sq. ft. over the entire area to be seeded or sodded and worked into a depth of not less than three (3) inches.

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	No. Trees	No. Stumps
18"	108	20
30"	18	2
48"	24	1
60"	3	0

All trees within the right-of-way limits of this project and outside the work limits shall be reviewed by the Engineer and subject to their salvage or removal.

The method for marking trees and shrubs to be salvaged or removed will be established by the Engineer. No work will be permitted in areas where trees are present prior to the staking, by the contractor, of the work limits. The staking interval shall be 50 feet where applicable.

- Sta. 336+00 to Sta. 348+00
- Sta. 430+00 to Sta. 435+50

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.

DUMPED ROCK CHANNEL PROTECTION

The location of dumped rock channel protection at swales shall be adjusted by the Engineer during construction to fit the swale.

No. 2-2B CATCH BASIN MODIFIED, AS PER PLAN

Eliminate the grating and replace with a 3/4" steel plate, 2' - 3 1/2" x 2' - 3 1/2". The top of plate shall be a maximum of 6" above ground.

No. 4 CATCH BASIN

The flow line of the grate is at the front edge of the grate at catch basin center line.

STANDARD NO. 6 CATCH BASINS MODIFIED

Modification No. 1; Depress grate 2" in lieu of 1" as per Standard Drawing CB-6.

Modification No. 2; Depress grate 2" in lieu of 1" as per Standard Drawing CB-6, and eliminate the 4-1" dowels in the concrete apron.

The stationing as listed in the plans is to the center line of the grate, and the elevation is on the grate.

GENERAL NOTES

TRAFFIC NOTES

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.

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.

DUST CONTROL

An estimated amount of 616 (Calcium Chloride) and 616 (water) has been provided for dust control, as directed by the Engineer, as shown below:

616 Water	100 M. Gals.
616 Calcium Chloride	10 Tons

816 ALTERNATE DESIGNS FOR OVERHEAD SIGN SUPPORTS

IF THE CONTRACTOR DESIRES TO FURNISH AN ALTERNATE DESIGN FOR OVERHEAD SIGN SUPPORTS, THE ALTERNATE DESIGNS MUST BE SUBMITTED TO THE STATE AT LEAST 21 DAYS PRIOR TO OPENING OF BIDS. THE BIDDER WILL BE NOTIFIED AS TO ACCEPTANCE OR REJECTION OF ALTERNATE DESIGN AT LEAST 7 DAYS BEFORE BIDS ARE TO BE OPENED. ALTERNATE DESIGNS MUST UTILIZE TUBULAR STRUCTURAL MEMBERS. SUBMISSIONS SHALL BE MADE TO OHIO DEPARTMENT OF HIGHWAYS, BUREAU OF TRAFFIC, 450 EAST TOWN ST, COLUMBUS, OHIO 43215.

ADJUSTING GUARD RAIL LOCATIONS~

Prior to staking the guard rail, the Engineer shall make a field inspection and, if necessary, adjust the stations of the end posts to accommodate field conditions and to provide better protection for traffic.

LIGHTS AND SIGNS AT ADJACENT ROAD INTERSECTIONS

The contractor shall perform, in addition to the general requirements of Item 614 on this project, the following:

Provide, erect and maintain standard 48" x 30" size "Road Closed () Miles Ahead" signs, sign supports and lights at the following location during periods in which the affected roads are closed to traffic:

1. Lafayette-Mechanicsburg Road at U. S. R. 40.
2. Lafayette-Mechanicsburg Road at U. S. R. 38.
3. Lafayette-Plain City Road at U. S. R. 40.
4. Lafayette-Plain City Road at Dun Road.

Provide, erect and maintain signs for traffic control over the temporary roadway detour on U. S. R. 42.

Payment for providing, erecting, maintaining and removing lights, signs, and sign supports shall be included in the lump sum bid for "Item 614, Maintaining Traffic."

Note:

A quantity of Item 616, Dust Control should also be provided in the plan for use in Maintaining Traffic as per Item 614.

GUARD RAIL, MODIFIED AS PER PLAN~

TYPE 4.

(1) The post spacing for all Type 4 guard rail shall be at 6'-3" intervals with spacer blocks attached between the posts and rail element instead of 12'-6" spacing without spacer blocks as indicated on the plans.

(2) All approach (entrance) ends of Type 4 guard rail on divided lane highways shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 15. Where either end is adjacent to proposed bridges, the new bridge connector assembly will apply unless otherwise detailed on the plans. The exit (trailing) ends of Type 4 guard rail shall be as detailed on Std. Dwg. GR-2A.

(3) Type 4 guard rail located on two-lane, two-directional highways shall be constructed with the new guard rail approach end assemblies on both ends except when one end is adjacent to or continues across a bridge.

TYPE 4 BARRIER DESIGN~

(1) The post spacing for all Type 4 barrier design rail shall be at 6'-3" intervals with spacer blocks attached between the post and rail elements instead of 12'-6" spacing without spacer blocks as indicated on the plans.

(2) All approach (entrance) ends of Type 4 barrier design rail shall be constructed with the new guard rail approach end assemblies as detailed on plan page No. 15. Exceptions to this will occur where the medium guard consists of a combination of Type 4 and barrier design as shown on Std. Dwg. GR-5A and GR-5B, and the median is 84' wide between pavements.

BASIS OF PAYMENT~

Type 4 guard rail with post spacing at 6'-3", spacer blocks and new approach end assemblies will be paid for as "606 Guard Rail, Type 4, modified as per plan, complete in place."

Type 4 barrier design with post spacing at 6'-3", spacer blocks and new approach end assemblies will be paid for as "606 Guard Rail, Type 4 barrier design modified as per plan" complete in place.

GENERAL

The Contractor shall, before work is started on the project, submit in writing to the Director, for approval, a schedule of operations.

In no case shall the stipulations of this traffic note waive the requirements of either the Construction and Material Specifications or the Manual of Uniform Traffic Control Devices.

LAFAYETTE-MECHANICSBURG ROAD - TOWNSHIP ROAD 110 AND LAFAYETTE-PLAIN CITY ROAD - COUNTY ROAD 5

Two way traffic shall be maintained at all times on either the existing or proposed pavement except as noted below.

Lafayette-Mechanicsburg Road - Township Road 110 may be closed for nine (9) consecutive calendar months, during which time Lafayette-Plain City Road shall remain open to traffic.

Lafayette-Plain City Road - County Road 5 may be closed for nine (9) consecutive calendar months, during which time Lafayette-Mechanicsburg Road shall remain open to traffic.

BYERLY ROAD - TOWNSHIP ROAD 115

Two way traffic shall be maintained at all times on the existing road until the proposed relocation is completed. Then close the appropriate existing portion.

STATE ROUTE 29

State Route 29 may be closed for a period of nine (9) consecutive calendar months while the separation is being constructed, except the existing or proposed pavement should remain open either to the east or west to existing or relocated Byerly Road whichever is in use at the time.

U. S. R. 42

Two way traffic shall be maintained at all times using the temporary Class "B" Road, existing pavement, or proposed pavement.

TEMPORARY ROAD, ITEM 615

A Class "B" temporary road shall be provided as prescribed in Item 615 to maintain two way traffic along U. S. R. 42. The following quantities are provided for the temporary road, as shown below:

Item 615	Class B	Temporary Pavement	8,533 Sq. Yds.
Item 615		Temporary Road	Lump

LOCAL TRAFFIC

An estimated quantity of 20 Cu. Yd. Item 410, Traffic Compacted Surface Course Type "A" or "B" is provided for maintaining local traffic as per Item 614, Maintaining Traffic.

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD- 70- 6.25

21
374

ITEM 451 9" REINFORCED PORTLAND CEMENT CONCRETE MAINLINE

(A) FOUR LANE

STA. 330+00.00 TO STA. 456+50.00 = 12,650.00 LF
DEDUCT FOR STRUCT. NO. MAD-70-0628 = - 197.85 LF
TOTAL = 12,452.15 LF

$(12,452.15 \times 48) \div 9 = 66,411.41$ SY

(B) FOUR LANE TO SIX LANE TRANSITION

STA. 456+50.00 (E.B.) TO STA. 468+50.00 (E.B.) = 1,200.00 LF = 4,000.00 SY
 $(1,200.00 \times 30) \div 9$
STA. 456+50.00 (W.B.) TO STA. 458+45.00 (W.B.) = 195.00 LF = 520.00 SY
 $(195.00 \times 24) \div 9$
STA. 458+45.00 (W.B.) TO STA. 470+45.00 (W.B.) = 1,200.00 LF = 4,000.00 SY
 $(1,200.00 \times 30) \div 9$
STA. 468+50.00 (E.B.) TO STA. 470+45.00 (E.B.) = 195.00 LF = 780.00 SY
 $(195.00 \times 36) \div 9$

(C) SIX LANE

STA. 470+45.00 TO STA. 580+80.00 = 11,035.00 LF = 88,280.00 SY
 $(11,035.00 \times 72) \div 9$

U. S. R. 42 INTERCHANGE

U. S. R. 42

(A) SOUTH PAVEMENT WIDTH TRANSITION

STA. 673+25.00 TO STA. 675+25 (ℓ SUR. & CONST.) = 200.00 LF = 311.12 SY
 $(200 \times 14) \div 9$
STA. 675+25.00 TO STA. 675+66.67 (ℓ SUR. & CONST.) = 41.67 LF = 120.38 SY
 $(41.67 \times 26) \div 9$
STA. 675+66.67 TO STA. 678+47.22 (ℓ SUR. & CONST.) = 280.55 LF = 748.13 SY
 $(280.55 \times 24) \div 9$
STA. 673+25.00 TO STA. 673+96.00 (S. B. LANES) = 71.00 LF = 86.78 SY
 $(71.00 \times 11) \div 9$
STA. 673+96.00 TO STA. 676+06.00 (S. B. LANES) = 210.00 LF = 280.00 SY
 $(210 \times 12) \div 9$
STA. 676+06.00 TO STA. 678+50.16 (ℓ S. B. LANES) = 244.16 LF = 678.22 SY
 $(244.16 \times 25) \div 9$
STA. 673+25.00 TO STA. 675+25.00 (ℓ SUR. & CONST.)
WEDGE AREA = $(975 \div 9)$ = 108.33 SY
STA. 675+25.00 TO STA. 676+06.00 (ℓ SUR. & CONST.)
WEDGE AREA = $(662.5 \div 9)$ = 73.61 SY
STA. 676+06.00 TO STA. 678+47.22 (ℓ SUR. & CONST.)
WEDGE AREA = $(3640 \div 9)$ = 404.44 SY
STA. 678+47.22 TO STA. 695+46.19 (ℓ SUR. & CONST.) = 1,698.97 LF
DEDUCT FOR STRUCT. NO. MAD-70-0862 & 0863 = - 477.02 LF
TOTAL = 1,221.95 LF
 $2(1,221.95 \times 25) \div 9 = 6,788.61$ SY

451 - Continued

STA. 681+07.08 TO STA. 685+90.53 (ℓ SUR. & CONST.)
ADD FOR MEDIAN OPENING AND TAPERS
 $4588.86 \div 9 = 509.87$ SY
STA. 690+46.00 TO STA. 695+46.19 (ℓ SUR. & CONST.)
ADD FOR MEDIAN OPENING AND TAPERS
 $4752.50 \div 9 = 528.06$ SY
STA. 695+46.19 TO STA. 697+84 (ℓ SUR. & CONST.) = 237.81 LF = 660.58 SY
 $(237.81 \times 25) \div 9$
STA. 697+84.00 TO STA. 702+75.00 (ℓ SUR. & CONST.) = 491.00 LF = 654.67 SY
 $(491.00 \times 12) \div 9$
STA. 695+46.19 TO STA. 698+66.00 (ℓ S. B. LANES) = 319.81 LF = 888.36 SY
 $(319.81 \times 25) \div 9$
STA. 698+66.00 TO STA. 700+71.35 (S. B. LANES) = 205.35 LF = 273.80 SY
 $(205.35 \times 12) \div 9$
STA. 700+68.4 TO STA. 702+65.00 (ℓ SUR. & CONST.) = 196.59 LF = 262.12 SY
 $(196.59 \times 12) \div 9$
STA. 695+46.19 TO STA. 697+84.00 (ℓ SUR. & CONST.)
WEDGE AREA = $(3466.57 \div 9)$ = 385.17 SY
STA. 697+84.00 TO STA. 698+63.00 (ℓ SUR. & CONST.) = 79.00 LF = 74.61 SY
 $(79 \times 8.5) \div 9$
STA. 698+66.00 TO STA. 700+71.35 (S. B. LANES)
WEDGE AREA = $(1062.93 \div 9)$ = 118.10 SY
ADD FOR 2-A CURBING = 92.38 SY

RAMP "A"

1200' ACCELERATION LANE
 $[(1200 \times 12.5) \div 9 + (96 \times 1) \div 9] = 1,677.33$ SY
STA. A-444+50.00 TO STA. A-448+50.00 $[(300 \times 15) + (100 \times 17)] \div 9 = 688.89$ SY
STA. A-448+50.00 TO STA. A-460+91.07 = $(1241.07 \times 16) \div 9 = 2,206.35$ SY
U. S. R. 42 TERMINAL = $(2,279.38 \div 9) = 253.26$ SY

RAMP "B"

U. S. R. 42 TERMINAL = $(3,161.58 \div 9) = 351.29$ SY
STA. 461+49.97 TO STA. 469+46.71 = $(796.74 \times 16) \div 9 = 1,416.43$ SY
STA. B-469+46.71 TO STA. 470+46.71 = $(100 \times 17) \div 9 = 188.89$ SY
DECELERATION LANE = $(11,877.10 \div 9) = 1,319.68$ SY

RAMP "C"

DECELERATION LANE = $5,995.47 \div 9 = 666.16$ SY
STA. C-449+04.38 TO STA. C-450+04.38 = $(100 \times 17 \div 9) = 188.89$ SY
STA. C-450+04.38 TO STA. C-464+50.00 = $(1445.62 \times 16) \div 9 = 2,569.99$ SY
STA. C-464+50.00 TO STA. C-468+50.00 = 688.89 SY

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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MADISON COUNTY
MAD-70-625

451- Continued

RAMP "C" (CONTINUED)

1200' ACCELERATION LANE	=	1,677.35 SY
STA. 451+32.54 TO STA. 451+71.07 (RAMP "C" CONNECTION) = (38.53 x 24) ÷ 9	=	102.75 SY
STA. 451+71.07 TO STA. 452+71.07 (RAMP "C" CONNECTION) = (100 x 19) ÷ 9	=	211.11 SY
STA. 452+71.07 TO STA. 452+98.62 (RAMP "C" CONNECTION) = 27.55 x 15) ÷ 9	=	45.92 SY
ADD FOR 50' RAD RETURN (RAMP "C" CONNECTION) = (105 ÷ 9)	=	11.57 SY
400' ACCELERATION LANE = (400 x 10) ÷ 9 + (40 x 1) ÷ 9	=	448.89 SY

RAMP "D"

DECELERATION LANE = (14,038.43) ÷ 9	=	1,559.82 SY
STA. D-444+76.95 TO STA. D-445+76.95 = (100 x 17) ÷ 9	=	188.89 SY
STA. D-445+76.95 TO STA. D-451+11.49 = (534.54 x 16) ÷ 9	=	950.22 SY
U. S. R. 42 TERMINAL = (3,161.54 ÷ 9)	=	351.28 SY

S. R. 29 INTERCHANGE

RAMP "A"

1200' ACCELERATION LANE	=	1,677.33 SY
STA. A-525+25.00 TO STA. A-529+25.00	=	688.89 SY
STA. A-529+25.00 TO STA. A-536+18.90 = (693.90 x 16) ÷ 9	=	1,233.60 SY
S. R. 29 TERMINAL = (3,972.17 ÷ 9)	=	441.11 SY

RAMP "B"

S. R. 29 TERMINAL = (2,879.87 ÷ 9)	=	319.99 SY
STA. B-536+52.68 TO STA. B-546+46.93 = (994x25 x 16) ÷ 9	=	1,767.55 SY
STA. B-546+46.93 TO STA. B-547+46.93 = (100.17) ÷ 9	=	188.89 SY
DECELERATION LANE = (14,333.67 ÷ 9)	=	1,592.64 SY

RAMP "C"

S. R. 29 TERMINAL = (3,952.17 ÷ 9)	=	441.11 SY
STA. C-548+75.02 TO STA. C-556+25.00 = (749.98 x 16) ÷ 9	=	1,333.30 SY
STA. C-556+25.00 TO C-560+25.00	=	688.89 SY
1200' ACCELERATION LANE	=	1,677.33 SY

451- Continued

RAMP "D"

DECELERATION LANE = (14,333.67 ÷ 9)	=	1,592.64 SY
STA. D-537+78.07 TO STA. D-538+78.07 = (100 x 17) ÷ 9	=	188.89 SY
STA. D-538+78.07 TO STA. D-548+30.42 = (952.35 x 16) ÷ 9	=	1,693.07 SY
S. R. 29 TERMINAL = (2,879.87 ÷ 9)	=	319.99 SY
		211,647.92 SY

TO GENERAL SUMMARY = 211,648 SQ. YDS. TOTAL 451

ITEM 310 SUBBASE GRADING "A" OR "B" AS PER PLAN

MAINLINE

(A) FOUR LANE: THICKNESS = 7-1/2"

STA. 330+00.00 TO STA. 456+50.00(E. B. LANES)	=	12,650.00 LF
STA. 330+00.00 TO STA. 458+45.00(W. B. LANES)	=	12,845.00 LF
DEDUCT FOR STRUCT. NO. MAD-70-0628 (BOTH LANES)	=	295.72 LF
TOTAL LENGTH =		25,199.28 LF
251.9928 STA x 57.107 CU. YDS./STA.	=	14,390.55 CY
ADD FOR MEDIAN CROSSOVER STA. 422+50 = (6,891.88 SF x 6") ÷ (12 x 27)	=	127.63 CY
DEDUCT 4' SHOULDERS FOR MEDIAN CROSSOVER= 2(4 x 288.11 x 3") ÷ (12 x 27)	=	- 21.36 CY
DEDUCT FOR U. S. R. 42 RAMPS "A" & "D" = (2,107.00 LF x 2.67 x 7.5") ÷ (12 x 27)	=	-130.22 CY

(B) FOUR LANE TO SIX LANE TRANSITION: THICKNESS = 6"

STA. 456+50.00 TO STA. 468+50.00(E. B. LANES)	=	1,200.00 LF
STA. 458+45.00 TO STA. 470+45.00(W.B. LANES)	=	1,200.00 LF
TOTAL LENGTH =		2,400.00 LF
(2,400.00 x 36.67' x 6") ÷ (12 x 27)	=	1,629.78 CY
STA. 468+50.00 TO STA. 470+45.00 (195' x42.67 x 6") ÷ (12 x 27)	=	154.09 CY

(C) SIX LANE: THICKNESS = 6"

STA. 470+45.00 TO STA. 580+80.00 = 11,035.00 LF 2(110.35 STA.) x 78.248 CU. YDS./STA.	=	17,269.33 CY
ADD FOR MEDIAN CROSSOVER STA. 502+00 (3324.16 x 6") ÷ (12 x 27)	=	61.56 CY
ADD FOR PARTIAL MEADIAN CROSSOVER STA. 580+80 (BACK) = (512 x10 x 6") ÷ (12 x 27)	=	9.48 CY
DEDUCT FOR RAMP "B" AND RAMP "C" U. S. R. 42 INTERCHANGE PLUS S. R. 29 INTERCHANGE RAMPS = (6,315.00 x2.67 x 6") ÷ (12 x 27)	=	-312.24 CY

CALCULATIONS

310 - Continued (Grading A or B)

U. S. R. 42 INTERCHANGE

U. S. R. 42

FROM ITEM 451, AREA FOR ITEM 310 = 13,954.96 SY (13,954.96 SY x 6") ÷ (12 x 3)	=	2,325.82 CY
ADD FOR ITEM 612 AREAS = (1978.54 SF x 12") ÷ (12 x 27)	=	73.28 CY
ADD FOR APPROACH SLABS = 4(1220.25 x 6") ÷ (12 x 27)	=	90.39 CY
ADD FOR 1' EXTENSION ALONG 2-A CURB = (1815.08 LF x 6") ÷ (12 x 27)	=	33.61 CY
ADD FOR PAVED SHOULDERS = (4,061.59 x 2.67 x 6") ÷ (12 x 27)	=	200.82 CY

RAMP "A"

ACCELERATION LANE = (15,096.00 SF x 7.5") ÷ (12 x 27)	=	349.44 CY
STA. A-444+50.00 TO STA. A-448+50.00 = (6,200.00 SF x 6") ÷ (12 x 27)	=	114.81 CY
STA. A-448+50.00 TO STA. A-460+91.07 = (19,857.15 SF x 6") ÷ (12 x 27)	=	367.73 CY
U. S. R. TERMINAL = (2,279.34 SF x 6") ÷ (12 x 27)	=	42.21 CY
ADD FOR PAVED SHOULDER ACCELERATION LANE = (1200.00 LF x 3.0 x 7.5") ÷ (12 x 27)	=	83.33 CY
ADD FOR PAVED SHOULDER RAMP "A" = (9,345.60 SF x 6") ÷ (12 x 27)	=	173.07 CY

RAMP "B"

U. S. R. 42 TERMINAL = (3,161.58 SF x 6") ÷ (12 x 27)	=	58.55 CY
STA. B-461+49.97 TO STA. B-469+46.71 = (12,747.87 SF x 6") ÷ (12 x 27)	=	236.07 CY
STA. B-469+46.71 TO STA. B-470+46.71 = (1,700.00 SF x 6") ÷ (12 x 27)	=	31.48 CY
DECELERATION LANE = (11,877.10 SF x 6") ÷ (12 x 27)	=	219.94 CY
ADD FOR PAVED SHOULDER = (8,795.66 SF x 6") ÷ (12 x 27)	=	162.88 CY
ADD FOR ITEM 612 AREA AT NOSING	=	8.30 CY

RAMP "C" U. S. R. 42

DECELERATION LANE =(5,995.47SFx 6") ÷ (12 x 27)	=	111.03 CY
ADD FOR ITEM 612 AREA AT NOSING	=	4.64 CY
STA. C-449+04.38 TO STA. C-450+04.38 = (1700 SF x 6") ÷ (12 x 27)	=	31.48 CY
STA. C-450+04.38 TO STA. C-464+50.00 = (23,129.92 SF x 6") ÷ (12 x 27)	=	428.33 CY

310 - Continued (Grading A or B)

STA. C-464+50.00 TO STA. C-468+50.00 = (6,200.00 SF x 6") ÷ (12 x 27)	=	114.81 CY
ACCELERATION LANE = (15,096 SF x 6") ÷ (12 x 27)	=	279.56 CY
STA. 451+32.54 TO STA. 451+71.07 (RAMP "C" CONN.) = (924.72 SF x 6") ÷ (12 x 27)	=	17.12 CY
STA. 451+71.07 TO STA. 452+71.07 (RAMP "C" CONN.) = (1,900.00 SF x 6") ÷ (12 x 27)	=	35.19 CY
STA. 452+71.07 TO STA. 452+98.62 (RAMP "C" CONN.) = (413.25 SF x 6") ÷ (12 x 27)	=	7.65 CY
ADD FOR 50' RADIUS RETURN (RAMP "C" CONN.) = (105.00 SF x 6") ÷ (12 x 27)	=	1.94 CY
ACCELERATION LANE (RAMP "C" CONN.) = (4,040 SF x 6") ÷ (12 x 27)	=	74.81 CY
ADD FOR PAVED SHOULDERS RAMP "C" = (15,378.89 SF x 6") ÷ (12 x 27)	=	284.79 CY
ADD FOR PAVED SHOULDERS RAMP "C" (CONN.) = (901.00 SF x 6") ÷ (12 x 27)	=	16.69 CY

RAMP "D" U. S. R. 42

DECELERATION LANE = (14,038.43 SF x 7.5") ÷ (12 x 27)	=	324.96 CY
STA. D-444+76.95 TO STA. D-445+76.95 = (1,700.00 SF x 6") ÷ (12 x 27)	=	31.48 CY
STA. D-445+76.95 TO STA. D-451+11.49 = (8,552.64 x 6") ÷ (12 x 27)	=	158.38 CY
U. S. R. 42 TERMINAL = (3,161.54 SF x 6") ÷ (12 x 27)	=	58.54 CY
ADD FOR PAVED SHOULDER DECELERATION LANE = (2,405.85 SF x 7.5") ÷ (12 x 27)	=	55.69 CY
ADD FOR ITEM 612 AREA AT NOSING	=	8.40 CY
ADD FOR PAVED SHOULDER RAMP "D" = (4,587.95 SF x 6") ÷ (12 x 27)	=	84.96 CY

S. R. 29 INTERCHANGE

RAMP "A"

1200 ACCELERATION LANE = (15,096 SF x 6") ÷ (12 x 27)	=	279.56 CY
STA. A-525+25.00 TO STA. A-529+25.00 = (6,200.00 SF x 6") ÷ (12 x 27)	=	114.81 CY
STA. A-529+25.00 TO STA. A-536+18.90 = (1,110.24 SF x 6") ÷ (12 x 27)	=	20.56 CY
S. R. 29 TERMINAL = (3,972.17 SF x 6") ÷ (12 x 27)	=	73.18 CY
ADD FOR PAVED SHOULDERS = (9,821.47 SF x 6") ÷ (12 x 27)	=	181.88 CY

CALCULATIONS

310 - Continued , Grading A or B

S. R. 29 INTERCHANGE (CONTINUED)

RAMP "B"

S. R. 29 TERMINAL = (2,879.87 S. F. x 6") ÷ (12 x 27)	=	53.33 CY
STA. B-536+52.68 TO STA. B-546+46.93 = (15,908.00 S. F. x 6") ÷ (12 x 27)	=	294.59 CY
STA. B-546+46.93 TO STA. B-547+46.93 = (1,700.00 SF x 6") ÷ (12 x 27)	=	31.48 CY
DECELERATION LANE = (14,333.77 SF x 6") ÷ (12 x 27)	=	265.44 CY
ADD FOR ITEM 612 AREA AT NOSING	=	8.40 CY
ADD FOR PAVED SHOULDERS = (9,631.12 SF x 6") ÷ (12 x 27)	=	178.35 CY

RAMP "C"

S. R. 29 TERMINAL = (3,952.17 SF x 6") ÷ (12 x 27)	=	73.18 CY
STA. C-548+75.02 TO STA. C-556+25.00 = (11,999.68 SF x 6") ÷ (12 x 27)	=	222.22 CY
STA. C-556+25.00 TO STA. C-560+25.00 = (6,200.00 SF x 6") ÷ (12 x 27)	=	114.81 CY
1200' ACCELERATION LANE = (15,096.00 SF x 6") ÷ (12 x 27)	=	279.56 CY
ADD FOR PAVED SHOULDERS (10,263.07 SF x 6") ÷ (12 x 27)	=	190.06 CY

RAMP "D"

DECELERATION LANE = (14,333.77 SF x 6") ÷ (12 x 27)	=	265.44 CY
STA. D-537+78.07 TO STA. D-538+78.07 = (1700.00 SF x 6") ÷ (12 x 27)	=	31.48 CY
STA. D-538+78.07 TO STA. D-548+30.42 = (15,237.60 SF x 6") ÷ (12 x 27)	=	282.18 CY
S. R. 29 TERMINAL = (2,879.87 SF x 6") ÷ (12 x 27)	=	53.33 CY
ADD FOR ITEM 612 AREA AT NOSING	=	8.00 CY
ADD FOR PAVED SHOULDERS = (9,379.73 SF x 6") ÷ (12 x 27)	=	173.70 CY

43,076.32 CY

TO GENERAL SUMMARY 43,076 CU. YDS.

310, Grading A or B

ITEM 310 SUBBASE

MAINLINE: OUTSIDE SHOULDER

FOUR LANE: THICKNESS = 7-1/2"

STA. 330+00.00 TO STA. 456+50.00(E.B. LANES)	=	12,650.00 LF
STA. 330+00.00 TO STA. 458+45.00(W.B. LANES)	=	12,845.00 LF
DEDUCT FOR STRUCT. NO. MAD-70-0628 (BOTH LANES)	=	- 295.72 LF
DEDUCT FOR U. S. R. 42 RAMPS "A" & "D"	=	-2,107.00 LF
NET LENGTH	=	23,092.28 LF
(23,092.28 LF x 2.84 SF) ÷ 27	=	2,428.97 CY

310 - Continued

FOUR LANE TO SIX LANE TRANSITION: THICKNESS = 6"

STA. 456+50.00 TO STA. 468+50.00(E.B. LANES)	=	1,200.00 LF
STA. 458+45.00 TO STA. 470+45.00(W.B. LANES)	=	1,200.00 LF
STA. 468+50.00 TO STA. 470+45.00(E.B. LANES)	=	195.00 LF
NET LENGTH	=	2,595.00 LF

(2,595.00 LF x 2.50 SF) ÷ 27 = 240.28 CY

SIX LANE: THICKNESS = 6"

STA. 470+45.00 TO STA. 580+80.00	=	11,035.00 LF
2(11,035.00 LF x 2.50 SF) ÷ 27	=	2,043.51 CY
DEDUCT FOR RAMP "B" & "C" OF U. S. R. 42 INTERCHANGE PLUS S. R. 29 INTERCHANGE RAMPS = (6,393.26 LF x 2.50 SF) ÷ 27	=	- 591.96 CY

U. S. R. 42 INTERCHANGE

U. S. R. 42: OUTSIDE SHOULDERS

(A) AGGREGATE SHOULDERS, LENGTH = 2,513.61 LF (2,513.61 LF x 2.072 SF) ÷ 27	=	192.90 CY
(B) PAVED SHOULDERS, LENGTH = 1,547.99 LF (1,547.98 LF x 1.628 SF) ÷ 27	=	93.34 CY

RAMP "A"

ACCELERATION LANE = (1200 LF x 1.835 SF) ÷ 27	=	81.55 CY
STA. A-444+50.00 TO STA. A-447+50 = (300.00 LFx 1.640 SF) ÷ 27	=	18.22 CY
STA. A-447+50.00 TO STA. A-449+00 = (150.00 LF x 0.820 SF) ÷ 27	=	4.56 CY
ADD FOR PAVED BERM AREA = (354.00 LF x 12.33 LF x 6.75") ÷ (12 x 27)	=	90.93 CY

RAMP "B"

STA. B-469+46.93 TO STA. B-470+46.93 = (100 LF x 0.820 SF) ÷ 27	=	3.04 CY
DECELERATION LANE = (881.33 LF x 1.640 SF) ÷ 27	=	48.78 CY

RAMP "C"

STA. C-464+00.00 TO STA. C-465+50.00 = (150 LF x 0.820 SF) ÷ 27	=	4.56 CY
STA. C-465+50.00 TO STA. C-468+50.00 = (300 LF x 1.640 SF) ÷ 27	=	18.22 CY
ACCELERATION LANE = (1200 LF x 1.640 SF) ÷ 27	=	72.89 CY
ADD FOR PAVED BERM AREA = (400 LF x 12.33 LF x 6") ÷ (12 x 27)	=	91.33 CY

RAMP "D"

DECELERATION LANE = (801.95 LF x 1.835 SF) ÷ 27	=	54.50 CY
STA. D-444+76.95 TO STA. D-445+95 = (100 LF x 0.820 SF) ÷ 27	=	3.04 CY

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD- 70-6.25

25
374

310- Continued

S. R. 29 INTERCHANGE

S. R. 29

STA. 548+75.00 TO STA. 577+75.00 = 2,900.00 LF
DEDUCT FOR STRUCTURE AND APPROACH SLABS = - 587.28 LF
NET LENGTH = 2,312.72 LF

(2,312.72 LF x 13.25 SF) ÷ 27 = 1,134.95 CY
ADD FOR APPROACH SLABS = 2(25 LF x 59.37 LF x 6") ÷ (12 x 27) = 54.97 CY
ADD FOR PAVED SHOULDERS = (1213.44 LF x 1.563 SF) ÷ 27 = 70.24 CY

RAMP "A"

ACCELERATION LANE = (1200 LF x 1.640 SF) ÷ 27 = 72.89 CY
STA. 525+25.00 TO STA. 528+25.00 = (300 LF x 1.640 SF) ÷ 27 = 18.22 CY
STA. 528+25.00 TO STA. 529+75.00 = (150 LF x 0.820 SF) ÷ 27 = 4.56 CY
ADD FOR PAVED BERM AREA = (436 LF x 12.33 LF x 6") ÷ (12 x 27) = 99.55 CY

RAMP "B"

STA. B-546+46.93 TO STA. B-547+46.93 = (100' LF x 0.820 SF) ÷ 27 = 3.04 CY
DECELERATION LANE = (803.07 LF x 1.640 SF) ÷ 27 = 48.78 CY

RAMP "C"

STA. C-555+75.00 TO STA. C-557+25.00 = (150.00 LF x 0.820 SF) ÷ 27 = 4.56 CY
STA. C-557+26.00 TO STA. C-560+25.00 = (300.00 LF x 1.640 SF) ÷ 27 = 18.22 CY
ACCELERATION LANE = (1200 LF x 1.640 SF) ÷ 27 = 72.89 CY
ADD FOR PAVED BERM AREA = (436 LF x 12.33 LF x 6") ÷ (12 x 27) = 99.55 CY

RAMP "D"

DECELERATION LANE = (803.07 LF x 1.640 SF) ÷ 27 = 48.78 CY
STA. D-537+78.07 TO STA. D-538+78.07 = (100 LF x 0.820 SF) ÷ 27 = 3.04 CY

BYERLY RD.

STA. 520+00 TO STA. 552+56.66 = 3,156.66 LF
(3,156.66 LF x 7.333 SF) ÷ 27 = 857.33 CY
ADD FOR BYERLY RD. TERMINAL WITH S. R. 29 =
(2,287.64 SF x 4") ÷ (12 x 27) = 28.24 CY

LAFAYETTE MECHANICSBURG RD.

STA. 15+00.00 TO STA. 15+50.00 = (50 L.F. x 19 LF x 4") ÷ (12 x 27) = 1.17 CY
STA. 15+50.00 TO STA. 37+75.00 = 2,225.00 LF
DEDUCT FOR STRUCTURE = 337.08 LF
NET LENGTH = 1,887.92 LF
(1887.92 LF x 7.333 SF) ÷ 27 = 512.75 CY

310- Continued

ADD FOR APPROACH SLABS = (1425.00 SF x 6") ÷ (12 x 27) = 26.39 CY
STA. 37+75.00 TO STA. 38+25.00 = (50 LF x 18 LF x 4") ÷ (12 x 27) = 1.17 CY

LAFAYETTE PLAIN CITY

STA. 15+50.00 TO STA. 35+00.00 = 1,950.00 LF
DEDUCT FOR STRUCTURE = 365.36 LF
NET LENGTH = 1,584.64 LF
(1,584.64 LF x 7.333 SF) ÷ 27 = 430.38 CY
ADD FOR APPROACH SLABS = (1,598.00 SF x 6") ÷ (12 x 27) = 29.59 CY
8,544.67 CY

TO GENERAL SUMMARY = 8,545 CU. YDS. TOTAL 310

ITEM 304 AGGREGATE BASE

MAINLINE INSIDE SHOULDERS

STA. 330+00.00 TO STA. 580+80.00 = 25,080.00 LF
DEDUCT FOR STRUCT. NO. MAD-70-0628 = 147.86 LF
NET LENGTH = 24,932.14 LF
2(24,932.14 LF x 4.0' x 6") ÷ (12 x 27) = 3,693.65 CY
ADD FOR MEDIAN CROSSOVER STA. 422+50 =
(4,587.00 SF x 6") ÷ (12 x 27) = 84.94 CY
ADD FOR MEDIAN CROSSOVER STA. 502+00 =
(3,324.16 SF x 6") ÷ (12 x 27) = 61.56 CY
ADD FOR PARTIAL MEDIAN CROSSOVER AT STA. 580+80 (Back) =
(512 SF x 6") ÷ (12 x 27) = 9.48 CY

MAINLINE OUTSIDE SHOULDERS

STA. 330+00.00 TO STA. 580+80.00 = 25,080.00 LF
DEDUCT FOR STRUCTURE MAD-70-0628 = 147.86 LF
NET LENGTH = (24,932.14) LF
2(24,932.14 LF x 4.78 SF) ÷ 27 = 8,827.82 CY
DEDUCT FOR RAMPS "A" & "D" U. S. R. 42 INTERCHANGE = 2,107.00 LF
DEDUCT FOR RAMPS "B" & "C" U. S. R. 42 INTERHCANGE PLUS S. R. 29 RAMPS = 6,393.26 LF
TOTAL = 8,500.26 LF
TOTAL DEDUCTION FOR RAMPS = (8,500.26 LF x 4.78 SF) ÷ 27 = 1,504.86 CY

CALCULATIONS

ITEM 304 AGGREGATE BASE (CONTINUED)

U. S. R. 42 INTERCHANGE

U. S. R. 42

(A) AGGREGATE SHOULDERS, LENGTH = 2,513.61 LF (2,513.61 LF x 5.222 SF) ÷ 27	=	486.15 CY
(B) PAVED SHOULDERS, LENGTH = 1,547.98 LF (1,547.98 LF x 3.777 SF) ÷ 27	=	216.55 CY

RAMP "A"

ACCELERATION LANE = (1,200 LF x 5 LF x 3") ÷ (12 x 27)	=	55.56 CY
STA. A-444+50 TO STA. A-447+50 = (300 LF x 5 LF x 3") ÷ (12 x 27)	=	13.89 CY
STA. A-447+50 TO STA. A-449+00 = (150 LF x 2.5 LF x 3") ÷ (12 x 27)	=	3.47 CY
ADD FOR PAVED BERM AREA = (354 LF x 5 LF x 6") ÷ (12 x 27)	=	32.78 CY
STA. 448+50 TO STA. 449+00(RT) = (50 LF x 2.5' x 3") ÷ (12 x 27)	=	1.16 CY
STA. 449+00 TO STA. 457+50(RT) = (580 LF x 3' x 3") ÷ (12 x 27)	=	23.61 CY
STA. 457+50 TO STA. 461+00(LT) = (350 LF x 3' x 3") ÷ (12 x 27)	=	9.72 CY
STA. 461+00(RT) TO U. S. R. 42 = (59.32 LF x 3' x 3") ÷ (12 x 27)	=	1.65 CY
40' TAPER LEFT RADIUS RETURN = (40 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.77 CY

RAMP "B"

U. S. R. 42 TO STA. B-461+50.19 (RT) = (80 LF x 3' x 3") ÷ (12 x 27)	=	2.20 CY
STA. B-461+49.97 TO STA. B-470+46.71 (RT) = (896.74 LF x 3' x 3") ÷ (12 x 27)	=	24.91 CY
50' TAPER LEFT RADIUS RETURN = (50 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.96 CY
STA. B-469+46.71 TO STA. B-470+46.71 (LT) = (100 LF x 2.5' x 3") ÷ (12 x 27)	=	2.31 CY
STA. B-470+46.71 TO STA. 479+28.04 (LT) & I. R. 70 = (881.33 LF x 5' x 3") ÷ (12 x 27)	=	40.80 CY

RAMP "C"

STA. 675+66.67 TO STA. 677+75 (U. S. R. 42) = (208.33 LF x 5' x 3") ÷ (12 x 27)	=	9.64 CY
STA. C-447+37.75 TO STA. C-449+04.38 = (166.63 LF x 5' x 3") ÷ (12 x 27)	=	7.71 CY
STA. C-449+04.38 TO STA. C-450+04.38 (RT) = (100 LF x 2.5' x 3") ÷ (12 x 27)	=	2.31 CY
STA. C-449+04.38 TO STA. C-452+98.00 (LT) = (393.62 LF x 3' x 3") ÷ (12 x 27)	=	10.93 CY
STA. C-452+53 TO STA. C-452+98.00 (LT) = (45 LF x 4.5' x 3") ÷ (12 x 27)	=	1.88 CY
U. S. R. 42 TO STA. 452+98.62 RAMP "C" CONN. = (158 LF x 3' x 3") ÷ (12 x 27)	=	4.39 CY
STA. C-452+98.62 TO STA. C-464+00 (LT) = (1,101.38 LF x 3' x 3") ÷ (12 x 27)	=	30.59 CY
STA. C-464+00 TO STA. C-464+50 (LT) = (50 LF x 2.5' x 3") ÷ (12 x 27)	=	1.16 CY

304 - Continued

STA. C-464+00 TO STA. C-465+50 (RT) = (150' x 2.5' x 3") ÷ (12 x 27)	=	3.47 CY
STA. C-465+50 TO STA. 480+50 (RT) I. R. 70 = (1500 LF x 5' x 3") ÷ (12 x 27)	=	69.44 CY
ADD FOR PAVED BERM AREA = (400 LF x 5' x 6") ÷ (12 x 27)	=	37.04 CY

RAMP "D"

STA. 436+75 I. R. 70 TO STA. D-444+76.95 = (801.95 LF x 5.0' x 3") ÷ (12 x 27)	=	37.13 CY
STA. D-444+76.95 TO STA. D-445+76.95 (RT) = (100 LF x 2.5' x 3") ÷ (12 x 27)	=	2.31 CY
STA. D-444+76.95 TO STA. D-451+92 (LT) = (715.05 LF x 3' x 3") ÷ (12 x 27)	=	19.86 CY
50' TAPER RT. RADIUS RETURN = (50' x 2.5' x 2.5") ÷ (12 x 27)	=	0.96 CY

S. R. 29 INTERCHANGE

S. R. 29

FROM ITEM 310, NET LENGTH = 2,312.72 LF (2,312.72 LF x 17.00 SF) ÷ 27	=	1,456.16 CY
ADD FOR AGGREGATE SHOULDERS = (2839.14 LF x 2.45 SF) ÷ (27)	=	257.63 CY
ADD FOR PAVED SHOULDERS = (1213.44 LF x 1.73 SF) ÷ (27)	=	77.75 CY

RAMP "A"

ACCELERATION LANE = (1200 LF x 5' x 3") ÷ (12 x 27)	=	55.56 CY
STA. A-525+25 TO STA. A-528+25 = (300 LF x 5' x 3") ÷ (12 x 27)	=	13.89 CY
STA. A-528+25 TO STA. A-529+75 + (150 LF x 2.5' x 3") ÷ (12 x 27)	=	3.47 CY
ADD FOR PAVED BERM AREA = (436 LF x 5' x 6") ÷ (12 x 27)	=	40.37 CY
STA. A-529+25 TO STA. A-529+75 (RT) = (50 LF x 2.5' x 3") ÷ (12 x 27)	=	1.16 CY
STA. A-529+75 TO STA. A-536+74.59 (RT) = (699.59 LF x 3' x 3") ÷ (12 x 27)	=	19.43 CY
STA. A-536+74.59 RT TO S. R. 29 = (66 LF x 3' x 3") ÷ (12 x 27)	=	1.83 CY
40' TAPER LT. RADIUS RETURN = (40 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.77 CY

RAMP "B"

S. R. 29 TO STA. B-536+50 (RT) = (70.76 LF x 3' x 3") ÷ (12 x 27)	=	1.96 CY
STA. B-536+50 TO STA. B-541+25 (LT) = (457 LF x 3' x 3") ÷ (12 x 27)	=	13.19 CY
STA. B-541+25 TO STA. B-547+46.93 (RT) = (621.93 LF x 3' x 3") ÷ (12 x 27)	=	17.28 CY
STA. B-546+46.93 TO STA. B-547+46.93 (LT) = (100 LF x 2.5' x 3") ÷ (12 x 27)	=	2.31 CY
STA. B-547+46.93 TO STA. 555+50 I. R. 70 (LT) = (803.07 LF x 3' x 3") ÷ (12 x 27)	=	22.31 CY
ADD FOR 50' TAPER LT. RADIUS RETURN @ S. R. 29 = (50 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.96 CY

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD - 70- 6.25

27
374

ITEM 304 AGGREGATE BASE (CONTINUED)

RAMP "C"

S. R. 29 TO STA. C-548+19.33 (LT) = (66 LF x 3' x 3") ÷ (12 x 27)	=	1.83 CY
STA. C-548+19.33 TO STA. C-555+75 (LT) = (755.67 LF x 3' x 3") ÷ (12 x 27)	=	20.99 CY
STA. C-555+75 TO STA. C-556+25 (LT) = (50 LF x 2.5' x 3") ÷ (12 x 27)	=	1.16 CY
STA. C-555+75 TO STA. C-557+25 (RT) = (150 LF x 2.5' x 3") ÷ (12 x 27)	=	3.47 CY
STA. C-560+25 TO STA. 575+25 I. R. 70 (RT) = (1500 LF x 5' x 3") ÷ (12 x 27)	=	69.44 CY
STA. C-557+25 TO STA. C-560+25 = (300 LF x 5'x 3") ÷ (12 x 27)	=	13.89 CY
40' TAPER RT. RADIUS RETURN @ S. R. 29 = (40 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.77 CY
ADD FOR PAVED BERM AREA = (436 LF x 5' x 6") ÷ (12 x 27)	=	40.37 CY

RAMP "D"

STA. 529+75 I. R. 70 TO STA. D-537+78.07 = (803.07 LF x 5' 3") ÷ (12 x 27)	=	37.18 CY
STA. D-537+78.07 TO STA. D-538+78.07 (RT) = (100 LF x 2.5' x 3") ÷ (12 x 27)	=	2.31 CY
STA. D-537+78.07 TO STA. D-543+50(LT) = (571.93 LF x 3' x 3") ÷ (12 x 27)	=	15.89 CY
STA. D-543+50 TO STA. D-548+00 =(450 LF x 3' x 3") ÷ (12 x 27)	=	12.50 CY
STA. D-548+00(LT) TO S. R. 29 = (103.86 LF x 3' x 3")÷(12 x 27)	=	2.89 CY
ADD FOR 50' TAPER RT. RADIUS RETURN @ S. R. 29 = (50 LF x 2.5' x 2.5") ÷ (12 x 27)	=	0.96 CY

BYERLY ROAD

STA. 521+00 TO STA. 552+56.66 = 3,156.66 LF (3,156.66 LF x 10.50 SF) ÷ 27	=	1,227.59 CY
ADD FOR BYERLY RD. TERMINAL WITH S. R. 29 = (2,287.64 SF x 6") ÷ (12 x 27)	=	42.36 CY

SERVICE ROAD

S. R. 29 TO STA. 530+75.10 = (2,735.00 SF x 8") ÷ (12 x 27)	=	67.53 CY
STA. 530+75.10 TO STA. 537+75 = (699.90 LF x 17' x 8") ÷ (12 x 27)	=	293.78 CY
STA. 537+50 TO STA. 569+65.63 = (3,215.63 LF x 16'x 9")÷(12 x 27)	=	1,429.17 CY

LAFAYETTE MECHANICSBURG

STA. 15+00 TO STA. 15+50 = (50 LF x 18' x 6") ÷ (12 x 27)	=	16.67 CY
STA. 15+50 TO STA. 37+75	=	2,225.00 LF
DEDUCT FOR STRUCTURE	=	- 337.08 LF
NET LENGTH	=	1,887.92 LF
(1,887.92 LF x 10.55 SF) ÷ 27	=	737.69 CY
STA. 37+75 TO STA. 38+25 = (50 LF x 18' x 6") ÷ (12 x 27)	=	16.67 CY

304- Continued

LAFAYETTE PLAIN CITY

STA. 15+50 TO STA. 35+00	=	1,950.00 LF
DEDUCT FOR STRUCTURE	=	- 365.36 LF
NET LENGTH	=	1,584.64 LF
(1,584.64 LF x 10.55 SF) ÷ 27	=	619.18 CY
		18,979.74 CY
TO GENERAL SUMMARY = 18,950 CU. YDS.	TOTAL 304	

ITEM 301 BITUMINOUS AGGREGATE BASE, "AS PER PLAN"

MAINLINE INSIDE SHOULDERS

FROM ITEM 304 CALC. NET LENGTH FOR INSIDE SHOULDERS = 24,932.14 LF 2(24,932.14 LF x 4' x 3") ÷ (12 x 27)	=	1,846.83 CY
ADD FOR MEDIAN CROSSOVER STA. 422+50 = (4,587.00 SF x 3")÷(12 x 27)=		44.33 CY
ADD FOR MEDIAN CROSSOVER STA. 502+00 = (3,324.16 SF x 3")÷(12 x 27)=		30.78 CY
ADD FOR PARTIAL MEDIAN CROSSOVER TO STA. 580+80 (BACK) = (512.0 SF x 3") ÷ (12 x 27)	=	4.74 CY

MAINLINE OUTSIDE SHOULDERS

FROM ITEM 304 CALC. NET LENGTH FOR OUTSIDE SHOULDERS = 24,932.14 LF 2(24,932.14 x 10' x 3") ÷ (12 x 27)	=	4,617.06 CY
FROM ITEM 304 CALC. TOTAL DEDUCTION FOR U. S. R. 42 & S. R. 29 INTERCHANGES = 8,500.26 (8,500.26 LF x 10' x 3") ÷ (12 x 27)	=	- 787.06 CY

U. S. R. 42 INTERCHANGE

U. S. R. 42

PAVED SHOULDER LENGTH = 1,547.98 LF (1,547.98 LF x 8' x 3") ÷ (12 x 27)	=	114.67 CY
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RAMP "A"

ACCELERATION LANE = (1200 LF x 8' x 6") ÷ (12 x 27)	=	177.78 CY
STA. A-444+50 TO STA. A-447.50 = (300 LF x 8' x 6") ÷ (12 x 27)	=	44.44 CY
STA. A-447+50 TO STA. A-449+00 (LT) = (150 LF x 5.5' x 6") ÷ (12 x 27)	=	15.28 CY
STA. A-448+50 TO STA. A-449+00 (RT) = (50 LF x 2.5' x 6") ÷ (12 x 27)	=	2.31 CY
ADD FOR PAVED BERM AREA = (354 LF x 5 LF x 3") ÷ (12 x 27)	=	16.39 CY
ADD FOR PAVED SHOULDERS STA. A-449+00 AHEAD (LT & RT) = (7,870.60 SF x 6") ÷ (12 x 27)	=	145.75 CY

CALCULATIONS

ITEM 301 BITUMINOUS AGGREGATE BASE "AS PER PLAN" (CONTINUED)

RAMP "B"

ADD FOR PAVED SHOULDERS U. S. R. 42 TO STA. B-469+46.93 (LT) = (2,921.45 SF x 6") ÷ (12 x 27)	=	54.10 CY
ADD FOR PAVED SHOULDERS U. S. R. 42 TO STA. B-470+46.71 (RT) = (2,930.22 SF x 6") ÷ (12 x 27)	=	54.26 CY
STA. B-469+46.71 TO STA. B-470+46.71 (LT) = (100 LF x 5.5' x 6") ÷ (12 x 27)	=	10.19 CY
STA. B-470+46.71 TO STA. 479+28.04 I. R. 70 (LT) = (881.33 LF x 8' x 6") ÷ (12 x 27)	=	130.57 CY

RAMP "C"

STA. 675+66.67 U. S. R. 42 TO STA. 677+75 U. S. R. 42 (RT) = (208.33 LF x 8' x 6") ÷ (12 x 27)	=	30.86 CY
STA. C-447+37.75 TO STA. C-449+04.38 = (166.63 LF x 8' x 6") ÷ (12 x 27)	=	24.69 CY
STA. C-449+04.38 TO STA. 450+04.38 (RT) = (100 LF x 5.5' x 6") ÷ (12 x 27)	=	10.19 CY
STA. C-450+04.38 (RT) TO STA. C-464+00 (RT) = (1,395.62 LF x 3' x 6") ÷ (12 x 27)	=	77.53 CY
STA. C-464+00 TO STA. C-465+50 (RT) = (150 LF x 5.5' x 6") ÷ (12 x 27)	=	15.28 CY
STA. C-465+50 RT TO STA. 480+50 (RT) I. R. 70 = (1500 LF x 8' x 6") ÷ (12 x 27)	=	222.22 CY
STA. C-449+04.38 TO STA. C-452+53 (LT) = (348.62 LF x 3' x 6") ÷ (12 x 27)	=	19.37 CY
STA. C-452+53 TO STA. C-452+98.62 (LT) = (45.62 LF x 7.5' x 6") ÷ (12 x 27)	=	6.34 CY
U. S. R. 42 TO STA. C-452+98.62 (RAMP "C" CONN., LT & RT) = (901.0 SF x 6") ÷ (12 x 27)	=	16.69 CY
STA. C-452+98.62 TO STA. C-464+00 (LT) = (1101.38 LF x 3' x 6") ÷ (12 x 27)	=	61.19 CY
STA. C-464+00 TO STA. C-464+50 (LT) = (50 LF x 2.5' x 6") ÷ (12 x 27)	=	2.31 CY
ADD FOR PAVED BERM AREA = (400 LF x 5' x 3") ÷ (12 x 27)	=	18.52 CY

RAMP "D"

STA. 436+75 I. R. 70 RT TO STA. D-444+76.95 RT = (801.95 LF x 8' x 6") ÷ (12 x 27)	=	118.81 CY
STA. D-444+76.95 TO STA. D-445+76.95 (RT) = (100 LF x 5.5' x 6") ÷ (12 x 27)	=	10.19 CY
STA. D-445+76.95 RT TO U. S. R. 42 = (2,142.80 SF x 6") ÷ (12 x 27)	=	39.68 CY
STA. D-444+76.95 TO STA. D-451+92 LT = (715.05 LF x 3' x 6") ÷ (12 x 27)	=	39.73 CY

301 As per plan - Continued

S. R. 29 INTERCHANGE

RAMP "A"

ACCELERATION LANE = (1200 LF x 8' x 6") ÷ (12 x 27)	=	177.78 CY
STA. A-525+25 TO STA. A-528+25 (LT) = (300 LF x 8' x 6") ÷ (12 x 27)	=	44.44 CY
STA. A-528+25 TO STA. A-529+75 (LT) = (150 LF x 5.5' x 6") ÷ (12 x 27)	=	15.28 CY
STA. A-529+25 TO STA. A-529+75 (RT) = (50 LF x 2.5' x 6") ÷ (12 x 27)	=	2.31 CY
STA. A-529+75 LT TO S. R. 29 = (2449.70 SF x 6") ÷ (12 x 27)	=	45.36 CY
STA. A-529+75 RT TO S. R. 29 = (2296.77 SF x 6") ÷ (12 x 27)	=	42.53 CY
ADD FOR PAVED BERM AREA = (436 LF x 5' x 3") ÷ (12 x 27)	=	20.19 CY

RAMP "B"

S. R. 29 TO STA. B-546+46.93 (LT) = (3,418.84 SF x 6") ÷ (12 x 27)	=	63.31 CY
S. R. 29 TO STA. B-547+46.93 (RT) = (3,503.07 SF x 6") ÷ (12 x 27)	=	64.87 CY
STA. B-546+46.93 LT TO STA. B-547+46.93 LT = (100 LF x 5.5' x 6") ÷ (12 x 27)	=	10.19 CY
STA. B-547+46.93 LT TO STA. 555+50 IR 70 LT = (803.07 LF x 8' x 6") ÷ (12 x 27)	=	118.97 CY

RAMP "C"

S. R. 29 TO STA. C-555+75 (LT) = (2465.01 SF x 6") ÷ (12 x 27)	=	45.65 CY
S. R. 29 TO STA. C-555+75 (RT) = (2723.06 SF x 6") ÷ (12 x 27)	=	50.43 CY
STA. C-555+75 TO STA. C-556+25 (LT) = (50 LF x 2.5' x 6") ÷ (12 x 27)	=	2.31 CY
STA. C-555+75 TO STA. C-557+25 (RT) = (150 LF x 5.5' x 6") ÷ (12 x 27)	=	15.28 CY
STA. C-557+25 RT TO STA. 572+25 I. R. 70 RT = (1500 LF x 8' x 6") ÷ (12 x 27)	=	222.22 CY
ADD FOR PAVED BERM AREA = (436 LF x 5' x 3") ÷ (12 x 27)	=	20.19 CY

RAMP "D"

STA. 529+75 I. R. 70 (RT TO STA. D-537+78.07 = (803.07 LF x 8' x 6") ÷ (12 x 27)	=	118.97 CY
STA. D-537+78.07 TO STA. D-538+78.07 (RT) = (100 LF x 5.5' x 6") ÷ (12 x 27)	=	10.19 CY
STA. D-538+78.07 RT TO S. R. 29 = (3293.14 SF x 6") ÷ (12 x 27)	=	60.98 CY
STA. D-537+78.07 LT TO S. R. 29 = (3377.38 SF x 6") ÷ (12 x 27)	=	62.54 CY

8,450.01 CY

TO GENERAL SUMMARY = 8,450 CU. YDS. TOTAL 301 As Per Plan

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD- 70- 6.25

29
374

ITEM 301 BITUMINOUS AGGREGATE BASE

S. R. 29

FROM ITEM 310 NET LENGTH = 2,312.72 LIN. FT.
(2,312.72 LF x 24.5' x 3") ÷ (12 x 27) = 524.64 CY
ADD FOR PAVED SHOULDERS = (1213.44 LF x 4' x 3") ÷ (12 x 27) = 44.94 CY
569.58 CY

TO GENERAL SUMMARY - 570 CU. YDS.

ITEM 403 ASPHALT CONCRETE (85-100)

LAFAYETTE MECHANICSBURG RD.

STA. 15+00 TO STA. 15+50 = (50 LF x 17' x 1-1/4") ÷ (12 x 27) = 3.28 CY
STA. 15+50 TO STA. 37+75 = 2,225.00 LF
DEDUCT FOR STRUCTURE = - 337.08 LF
NET LENGTH = 1,887.92 LF
(1887.92 LF x 20' x 1-1/4") ÷ (12 x 27) = 145.67 CY
STA. 37+75 TO STA. 38+25 = (50 LF x 17' x 1-1/4") ÷ (12 x 27) = 3.28 CY

LAFAYETTE PLAIN CITY RD.

FROM ITEM 304, NET LENGTH = 1,584.64 LF
(1,584.64 LF x 20' x 1-1/4") ÷ (12 x 27) = 122.27 CY
TO GENERAL SUMMARY - 275 CU. YDS. TOTAL 403 (85-100) 274.50 CY

ITEM 403 ASPHALT CONCRETE (70-85)

S. R. 29

FROM ITEM 310, NET LENGTH = 2,312.72 LF
(2,312.72 LF x 24' x 1-1/4") ÷ (12 x 27) = 214.14 CY
TO GENERAL SUMMARY - 215 CU. YDS. TOTAL 403 (70-85)

ITEM 404 ASPHALT CONCRETE (85-100)

LAFAYETTE MECHANICSBURG RD.

ITEM 404 IS THE SAME AS ITEM 403 = 152.23 CY
LAFAYETTE PLAIN CITY RD.
ITEM 404 IS THE SAME AS ITEM 403 = 122.27 CY
274.50 CY
TO GENERAL SUMMARY - 275 CU. YDS.

ITEM 404 ASPHALT CONCRETE (70-85)

S. R. 29

ITEM 404 IS THE SAME AS ITEM 403 214.14 CY
TO GENERAL SUMMARY - 215 CU. YDS.

ITEM 404 ASPHALT CONCRETE WITH SAME COMPOSITION AS 402

BYERLY ROAD

STA. 521+00 TO STA. 552+56.66 LF
(3156.66 LF x 20' x 1-1/2") ÷ (12 x 27) = 292.28 CY
STA. 552+56.66 TO S. R. 29 = (2,287.64 SF x 1-1/2") ÷ (12 x 27) = 10.59 CY

SERVICE ROAD

S. R. 29 TO STA. 530+75.10 = (2656.00 SF x 1-1/2") ÷ (12 x 27) = 12.30 CY
STA. 530+75.10 TO STA. 537+75 =
(699.90 LF x 16' x 1-1/2") ÷ (12 x 27) = 51.84 CY
367.01 CY

TO GENERAL SUMMARY = 367 CU. YDS.

ITEM 407 TACK COAT

U. S. R. 42 FEATHERING

2(24 x 10 x 0.1) ÷ 9 = 5.33 GAL.
TO GENERAL SUMMARY = 5.00 GAL.

ITEM 408 BITUMINOUS PRIME COAT

LAFAYETTE MECHANICSBURG RD.

STA. 15+00 TO STA. 15+50 = (50 LF x 17' x 0.4) ÷ 9 = 37.78 GAL.
STA. 15+50 TO STA. 37+75 - STRUCTURE =
(1,887.92 LF x 20' x 0.4) ÷ 9 = 1,678.15 GAL.
STA. 37+75 TO STA. 38+25 = (50 LF x 17' x 0.4) ÷ 9 = 37.78 GAL.

LAFAYETTE PLAIN CITY RD.

FROM ITEM 304, NET LENGTH = 1,584.64 LIN. FT.
(1,584.64 LF x 20' x 0.4) ÷ 9 = 1,408.57 GAL.

U. S. R. 42

FROM ITEM 310 LENGTH OF AGGREGATE SHOULDERS = 2,513.61 LF
(2,513.61 LF x 8' x 0.4) ÷ (9) = 893.73 GAL.

S. R. 29

FROM ITEM 310, NET LENGTH = 2,312.72 LF
(2,312.72 LF x 24' x 0.4) ÷ (9) = 2,466.90 GAL.
ADD FOR AGGREGATE SHOULDERS = (2839.14 x 4' x 0.4') ÷ (9) = 504.74 GAL.

BYERLY ROAD

STA. 521+00 TO STA. 552+56.66 = 3,156.66 LF
(3,156.66 LF x 20' x 0.4) ÷ 9 = 2,805.90 GAL.
STA. 552+56.66 TO S. R. 29 = (2287.64 SF x 0.4) ÷ 9 = 101.67 GAL

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

30
374

MADISON COUNTY
MAD-70-6.25

ITEM 408 BITUMINOUS PRIME COAT (CONTINUED)

SERVICE ROAD

S. R. 29 TO STA. 530+75.10 = (2,656.00 SF x 0.4) ÷ 9 = 118.04 GAL.

STA. 530+75.10 TO STA. 537+75 = (699.90 x 16' x 0.4) ÷ 9 = 497.71 GAL.

10,550.97 GAL.

TO GENERAL SUMMARY = 10,551 GAL.

ITEM 409 SEAL COAT BITUMINOUS MATERIAL & COVER

AGGREGATE (FOR SHOULDERS PAVED WITH 301 BASE) as per plan

FROM ITEM 301, 3" THICKNESS

MAINLINE INSIDE SHOULDERS & MEDIAN CROSSOVERS = 1,935.49 CY

MAINLINE OUTSIDE SHOULDERS = 3,383.00 CY

U. S. R. 42

U. S. R. 42 PAVED BERM AREA = 114.67 CY

RAMP "A" PAVED BERM AREA = 16.39 CY

RAMP "C" PAVED BERM AREA = 18.52 CY

S. R. 29

S. R. 29 PAVED BERM AREA = 44.94 CY

RAMP "A" PAVED BERM AREA = 20.19 CY

RAMP "C" PAVED BERM AREA = 20.19 CY

TOTAL = 5,533.20 CY

5,533.20 CY x 12 = 66,398.40 SY

FROM ITEM 301, 6" THICKNESS

U. S. R. 42 INTERCHANGE

RAMP A = 385.56 CY

RAMP B = 249.12 CY

RAMP C = 486.67 CY

RAMP D = 208.41 CY

S. R. 29 INTERCHANGE

RAMP A = 327.70 CY

RAMP B = 257.34 CY

RAMP C = 335.89 CY

RAMP D = 252.68 CY

TOTAL = 2,503.37 CY

2,503.37 CY x 6 = 15,020.22 SY

TOTAL = 87,041.82 SY

81,418.62 SY x 0.008 CY/SY = 651.35 CY SEAL COAT COVER AGG. NO. 8

81,418.62 SY x 0.25 GAL/SY = 20,354.66 GALS. SEAL COAT BITUMINOUS MATERIAL

TO GENERAL SUMMARY = 651 CU. YDS. SEAL COAT COVER AGGREGATE NO. 8

TO GENERAL SUMMARY = 20,355 GALS. SEAL COAT BITUMINOUS MATERIAL as per plan

ITEM 409 SEAL COAT BITUMINOUS MATERIAL AND COVER

AGGREGATE (FOR AGGREGATE SHOULDERS)

U. S. R. 42

FROM ITEM 304 LENGTH OF AGGREGATE SHOULDERS = 2,513.61 LF

(2,513.61 LF x 8') ÷ 9 = 2,234.32 SY

S. R. 29

FROM ITEM 304, LENGTH OF AGGREGATE SHOULDERS = 2,839.14 LF

(2,839.14 LF x 4') ÷ 9 = 1,261.84 SY

TOTAL = 3,496.16 SY

3,496.16 SY x 0.008 CY/SY = 27.97 CU. YDS. SEAL COAT COVER AGG. NO. 8

3,496.16 SY x 0.30 GALS./SY = 1,048.85 GALS. SEAL COAT BITUMINOUS MATERIAL

TO GENERAL SUMMARY = 28 CU. YDS. SEAL COAT COVER AGGREGATE NO. 8

TO GENERAL SUMMARY = 1,049 GALS. SEAL COAT BITUMINOUS MATERIAL

ITEM 203 SUBGRADE PREPARATION

ADD FOR CONCRETE (FROM ITEM 451) = 211,647.92 SY

ADD FOR PAVED SHOULDERS (FROM ITEM 409) = 87,041.82 SY

ADD FOR APPROACH SLABS (FROM ITEM 611) - MAINLINE AND U. S. R. 42 = 606.90 SY

ITEM 203 SUBGRADE PREPARATION SUBTOTAL = 299,296.64 SY

LAFAYETTE MECHANICSBURG RD. (FROM ITEM 404) = 152.23 CY

LAFAYETTE PLAIN CITY RD. (FROM ITEM 404) = 122.27 CY

STATE ROUTE 29 (FROM ITEM 404) = 214.14 CY

TOTAL = 488.64 CY

(488.64 CY x 36) ÷ 1-1/4" = 14,072.83 SY

BYERLY RD. (FROM ITEM 404) = 302.87 CY

SERVICE RD. (FROM ITEM 404) = 64.14 CY

TOTAL = 367.01 CY

(367.01 CY x 36) ÷ 1-1/2" = 8,808.40 SY

ADD FOR APPROACH SLABS (FROM ITEM 611) = 547.10 SY

TOTAL = 322,724.97 SY

TO GENERAL SUMMARY = 322,725 SQ. YDS.

CALCULATIONS

ITEM 203 PROOF ROLLING

FROM ITEM 203 SUBGRADE PREPARATION SUB TOTAL

299,296.64 SY ÷ 2000 SY/HR = 149.64 HRS.

TO GENERAL SUMMARY = 150 HOURS

ITEM 605 AGGREGATE DRAINS

LAFAYETTE MECHANICSBURG ROAD

STA. 15+50 TO STA. 18+00 = 12 EACH

STA. 31+00 TO STA. 38+00 = 30 EACH

TOTAL FOR 3:1 SLOPE = 42 EACH

42 EACH x 10.5 L. F. = 441 LF

STA. 18+50 TO STA. 23+50 = 22 EACH

STA. 26+50 TO STA. 30+50 = 18 EACH

TOTAL FOR 2:1 SLOPE = 40 EACH

40 EACH x 11.0 L. F. = 440 LF

ADD FULL WIDTH DRAIN AT THE BEGINNING AND END = 4(10.5)+16+14 = 72 LF

LAFAYETTE PLAIN CITY RD.

STA. 16+00 TO STA. 19+50 = 16 EACH

STA. 31+50 TO STA. 34+50 = 14 EACH

TOTAL FOR 3:1 SLOPE = 30 EACH

30 EACH x 10.5 L. F. = 315 LF

STA. 20+00 TO STA. 23+00 = 14 EACH

STA. 27+00 TO STA. 31+00 = 18 EACH

TOTAL FOR 2:1 SLOPE = 32 EACH

32 EACH x 11.0 L. F. = 352 LF

ADD FULL WIDTH DRAIN AT THE BEGINNING AND END = 2(10.5+15+10.5) = 74 LF

BYERLY ROAD

STA. 521+50 TO STA. 552+50 = 124 EACH FOR 3:1 SLOPE

124 EACH x 10.5 LF = 1,302 LF

ADD FULL WIDTH DRAIN AT THE BEGINNING = 10.5+20+10.5 = 41 LF

STATE ROUTE 29

STA. 549+25 TO STA. 556+25 = 30 EACH

STA. 568+75 TO STA. 577+25 = 36 EACH

TOTAL FOR 4:1 SLOPE = 66 EACH

66 EACH x 16 L. F. = 1,056 LF

STATE ROUTE 29 (CONTINUED)

STA. 556+75 TO STA. 558+25 = 8 EACH

STA. 566+75 TO STA. 568+25 = 8 EACH

TOTAL FOR 5:1 (AUG) SLOPE = 16 EACH

16 EACH x 17.5 LF = 280 LF

STA. 558+75 TO STA. 559+75 = 6 EACH

STA. 565+25 TO STA. 566+25 = 6 EACH

TOTAL FOR 4:1 (AUG) SLOPE = 12 EACH

12 EACH x 16 L. F. = 192 LF

ADD FOR FULL WIDTH DRAIN AT THE BEGINNING AND END = 2(16+22+16) = 108 LF

TOTAL = 4,673.00 LF

TO GENERAL SUMMARY = 4,673 L. F. TOTAL 605 AGGREGATE DRAINS

ITEM SPECIAL DRAINAGE CONNECTION

MAINLINE

(A) FOUR LANE: SUBBASE THICKNESS = 7-1/2"

TOTAL LENGTH FROM ITEM 310 SUBBASE GRADING "A" OR "B" = 25,199.28 LF

DEDUCT FOR 4 APPROACH SLABS = 4 x 25 = 100.00 LF

DEDUCT FOR U. S. R. 42 RAMPS "A" & "D" = 2,107.00 LF

NET LENGTH = 22,992.28 LF

(22,992.28 LF x 1.30 SF/LF) ÷ 27 = 1,107.04 CY

(B) FOUR LANE TO SIX LANE TRANSITION: SUBBASE THICKNESS = 6"

TOTAL LENGTH FROM ITEM 310 SUBBASE GRADING "A" OR "B" = 2,595.00 LF

(2,595.00 LF x 1.24 SF/LF) ÷ 27 = 119.18 CY

(C) SIX LANE: SUBBASE THICKNESS = 6"

TOTAL LENGTH FROM ITEM 310 SUBBASE GRADING

"A" OR "B" = 11,035.00 LF

2(11,035.00 LF x 1.24 SF/LF) ÷ 27 = 1,013.59 CY

DEDUCT FOR RAMPS (SEE ITEM 310 SUBBASE GRADING)

"A" OR "B" = 6,393 LF

(6,393.26 LF x 1.24 SF/LF) ÷ 27 = - 293.62 CY

CALCULATIONS

ITEM SPECIAL DRAINAGE CONNECTION (CONTINUED)

U. S. R. 42 INTERCHANGE

FROM U. S. R. 42 LINE SHEETS = 4,181 LIN. FT.

(4,181 LF x 1.24 SF) ÷ 27

= 192.02 CY

FROM RAMP-LINE SHEETS TOTAL LENGTH OF ITEM 605 PIPE UNDERDRAIN
IS AS FOLLOWS:

(A) U. S. R. 42 INTERCHANGE:

RAMP A	=	1,460 LF
RAMP B	=	1,489 LF
RAMP C	=	2,250 LF
RAMP D	=	1,219 LF

(B) S. R. 29 INTERCHANGE:

RAMP A	=	1,214 LF
RAMP B	=	1,595 LF
RAMP C	=	1,294 LF
RAMP D	=	1,569 LF

TOTAL = 12,090 LF

(12,090 LF x 1.97 SF) ÷ 27

= 882.12 CY

TOTAL = 3020.33 CY

TO GENERAL SUMMARY = 3,021 C. Y.

ITEM 611 APPROACH SLABS:

DEER CREEK	=	267.00 SY
U. S. R. 42	=	339.90 SY
ITEM 611 APPROACH SLAB SUB-TOTAL	=	606.90 SY
LAFAYETTE MECHANICSBURG	=	143.50 SY
LAFAYETTE PLAIN CITY	=	143.00 SY
T. R. 110 OVER DUN DITCH NO. 1	=	89.90 SY
STATE ROUTE 29	=	171.70 SY
TOTAL	=	1,155.00 SY

TO GENERAL SUMMARY = 1,155 SQ. YDS.

ITEM 203 EARTHWORK

	EXCAVATION	EMBANKMENT	
FROM MAINLINE LINE SHEETS	= 417,386 CY	= 418,553	CY
FROM U. S. R. 42 LINE SHEETS	= 5,140 CY	= 182,584	CY
FROM U. S. R. 42 RAMP LINE SHEETS	= 26,431 CY	= 127,027	CY
FROM S. R. 29 LINE SHEETS	= 12,534 CY	= 67,614	CY
FROM S. R. 29 RAMP LINE SHEETS	= 27,508 CY	= 41,390	CY
FROM LAFAYETTE MECHANICSBURG LINE SHEETS	= 19,428 CY	= 56,120	CY
FROM LAFAYETTE PLAIN CITY LINE SHEETS	= 1,838 CY	= 42,800	CY
FROM BYERLY RD. LINE SHEETS	= 6,728 CY	= 6,758	CY
FROM SERVICE RD. LINE SHEETS	= 45,181 CY	= 13,631	CY
TOTAL	= 562,178 CY	= 956,537	CY

TO GENERAL SUMMARY = 562,178 C. Y. EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION

TO GENERAL SUMMARY = 956,537 C. Y. EMBANKMENT

ITEM 659 SEEDING AND MULCHING

FROM MAINLINE LINE SHEETS	=	568,574	SY
FROM U. S. R. 42 LINE SHEETS	=	35,500	SY
FROM U. S. R. 42 RAMP LINE SHEETS	=	77,746	SY
FROM S. R. 29 LINE SHEETS	=	35,066	SY
FROM S. R. 29 RAMP LINE SHEETS	=	51,435	SY
FROM LAFAYETTE MECHANICSBURG LINE SHEETS	=	27,137	SY
FROM LAFAYETTE PLAIN CITY LINE SHEETS	=	13,145	SY
FROM BYERLY RD. LINE SHEETS	=	17,131	SY
FROM SERVICE RD. LINE SHEETS	=	30,413	SY

DEDUCT FOR ITEM 660 SODDING = - 5,290 SY

DEDUCT FOR ITEM 601 = - 6,839 SY

TOTAL = 844,018 SY

TO GENERAL SUMMARY = 844,018 S. Y.

CALCULATIONS

FED. RD DIVISION	STATE	PROJECT	
2	OHIO		

33
374

MADISON COUNTY
MAD-70-6.25

EXCELSIOR MATTING

Lafayette - Mechanicsburg Road =

Sta 28+00 to 30+50 left = 14,250 SF

U.S.R. 42 Interchange :

Ramp "A"	Sta. 456+50 to Sta. 457+50	left	= 4,000 SF
	Sta. 457+50 to Sta. 460+00	right	= 11,250 SF
Ramp "B"	Sta. 462+00 to Sta. 463+50	left	= 6,000 SF
Ramp "C"	Sta. 452+00 to Sta. 457+50	right	= 22,000 SF
Ramp "D"	Sta. 448+50 to Sta. 450+50	right	= 7,400 SF

Bridges :

70-0643	Sta. 22+50 to Sta. 28+00	= 20,700 SF
70-0715	Sta. 22+50 to Sta. 27+50	= 13,950 SF
70-0862		
8 0863	Sta. 683+00 to Sta. 696+00	= 65,850 SF
70-1028	Sta. 559+00 to Sta. 566+00	= 23,800 SF
		189,200 SF

189,200 SF ÷ 9 = 21022.2

TO GENERAL SUMMARY 21022 Sq.Yds.

ITEM 659 COMMERCIAL FERTILIZER

FROM ITEM 659 SEEDING AREA 844,018 S.Y. + 5278 S.Y. (SOD) = 849,296 SY

VOLUME = 849,296 SY x 15 x 9) ÷ (1000 x 2000) = 57.327 TONS

TO GENERAL SUMMARY = 57.33 TONS

ITEM 659 AGRICULTURAL LIMING

FROM ITEM 659 SEEDING AREA 844,018 S.Y. + 5278 S.Y. (SOD) = 849,296 SY

VOLUME = 849,296 SY x 100 x 9) ÷ (1000 x 2000) = 382.188 TONS

TO GENERAL SUMMARY 382.19 TONS

34
374

GENERAL SUMMARY

[illegible]

35
374

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD-70-6.25

36
374

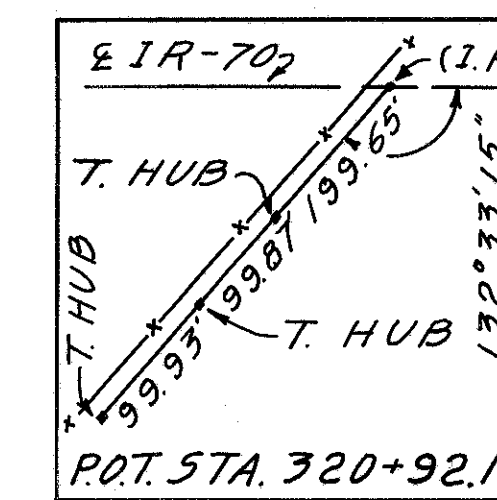
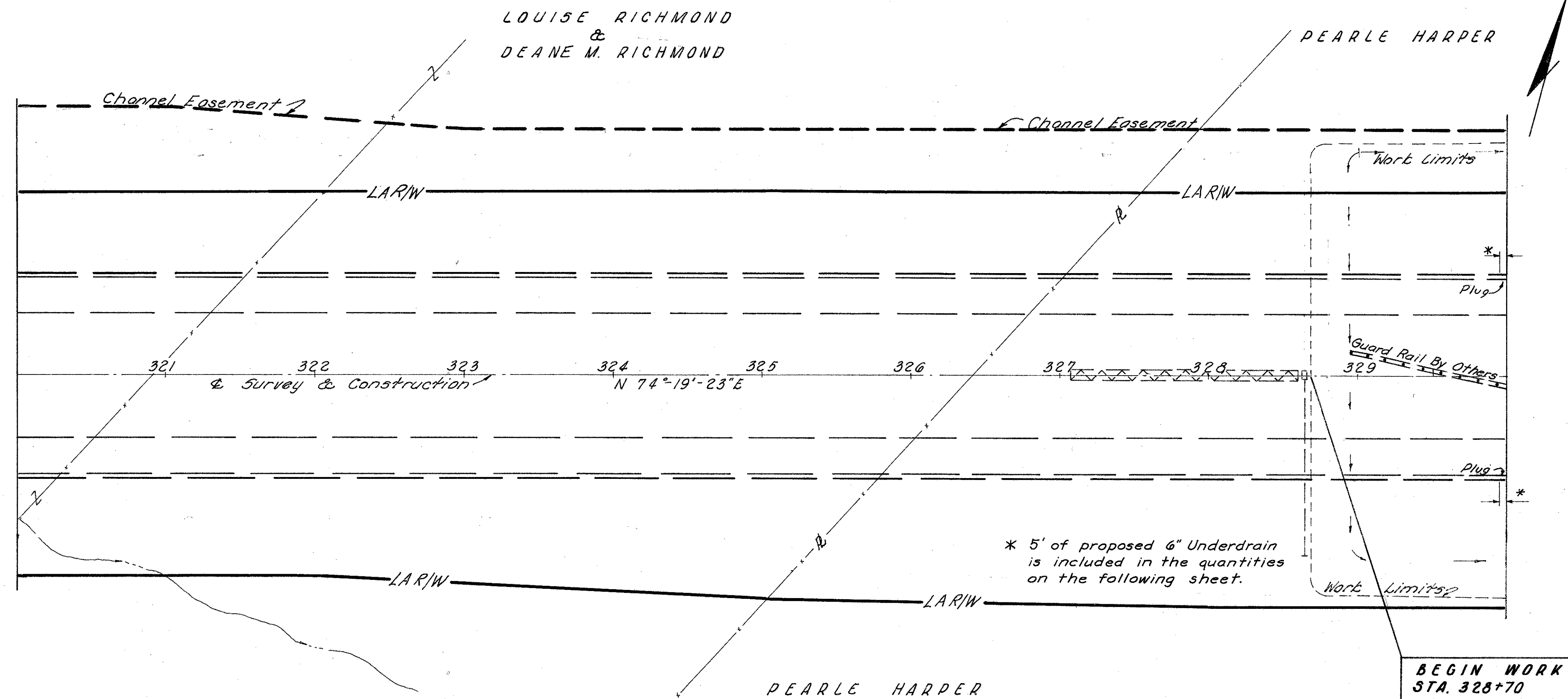
GENERAL SUMMARY

37
374

SUB SUMMARY

[illegible]

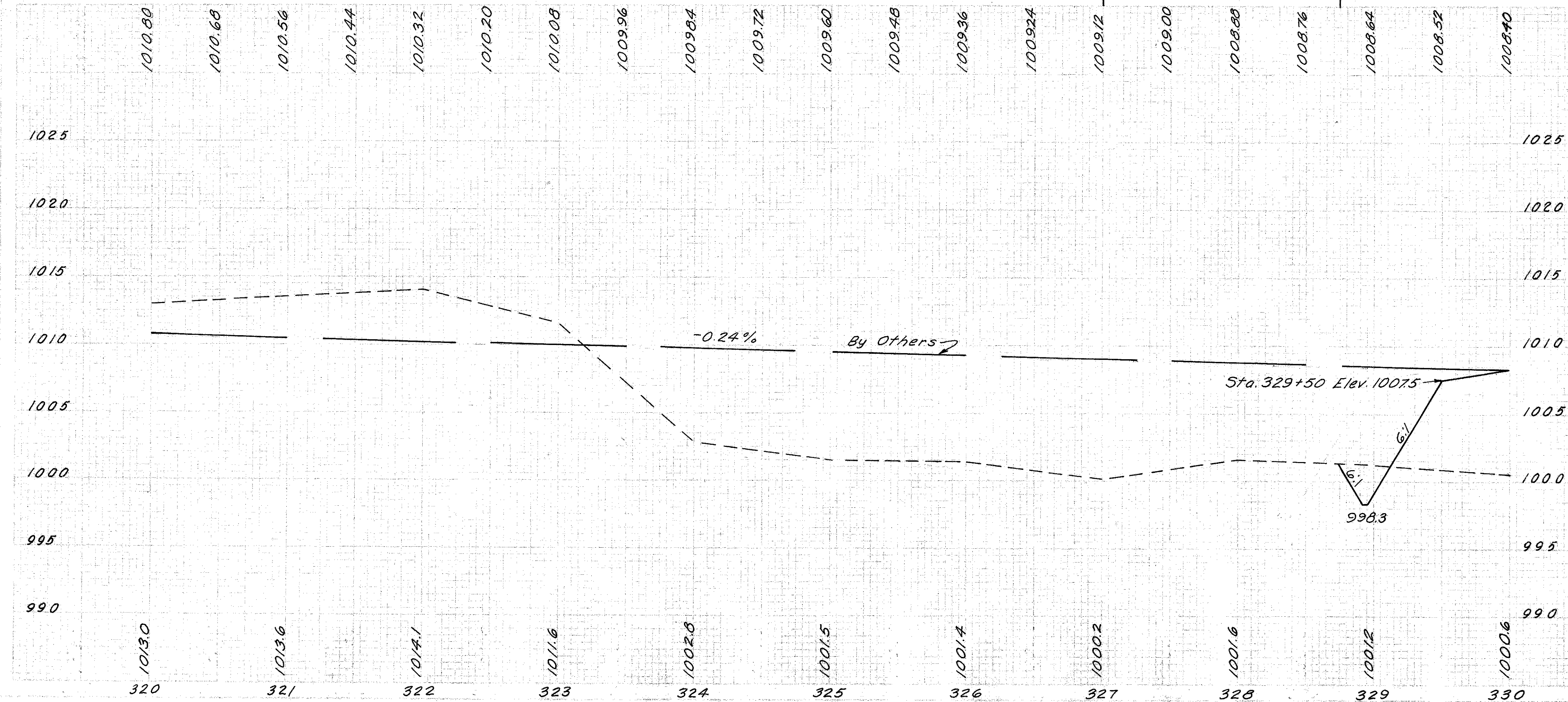
MADISON COUNTY
MAD- 70-6.25

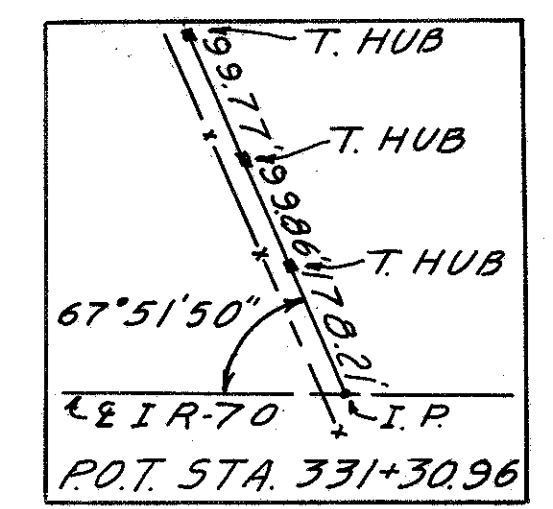
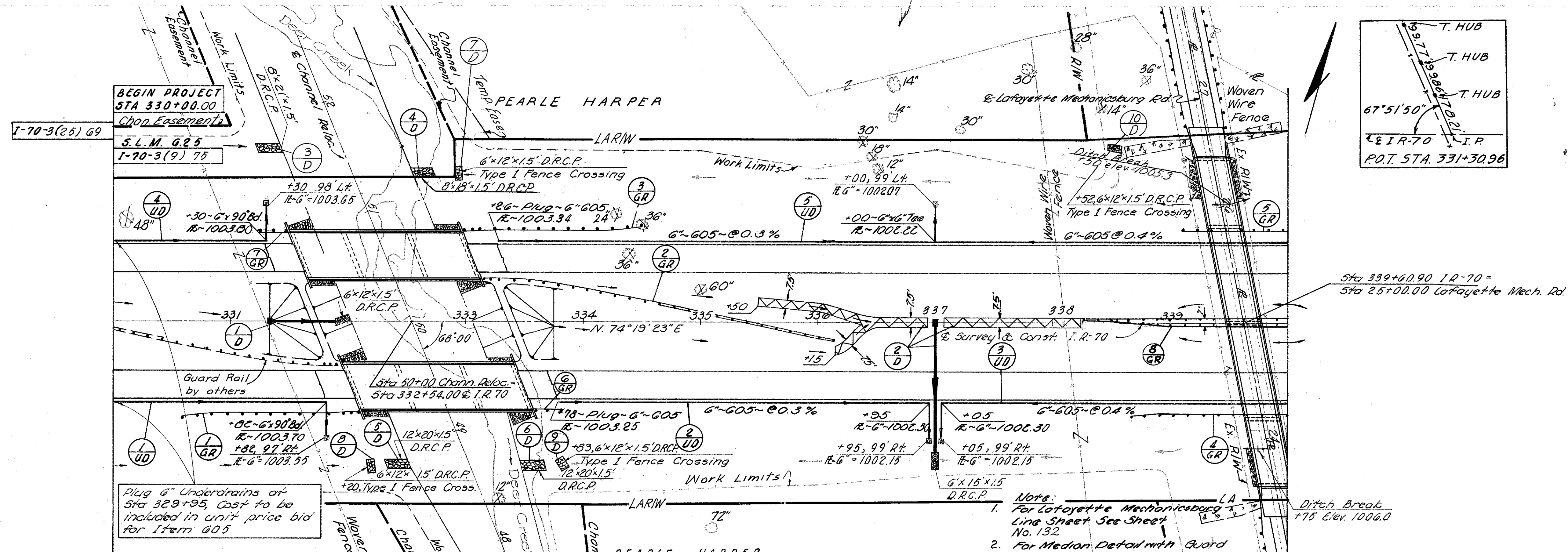


LOUISE RICHMOND
&
DEANE M. RICHMOND

PEARLE HARPER

B.M. 32 Elev. 1002.20
Sta 327+90, 158 L+
5" Steel Post

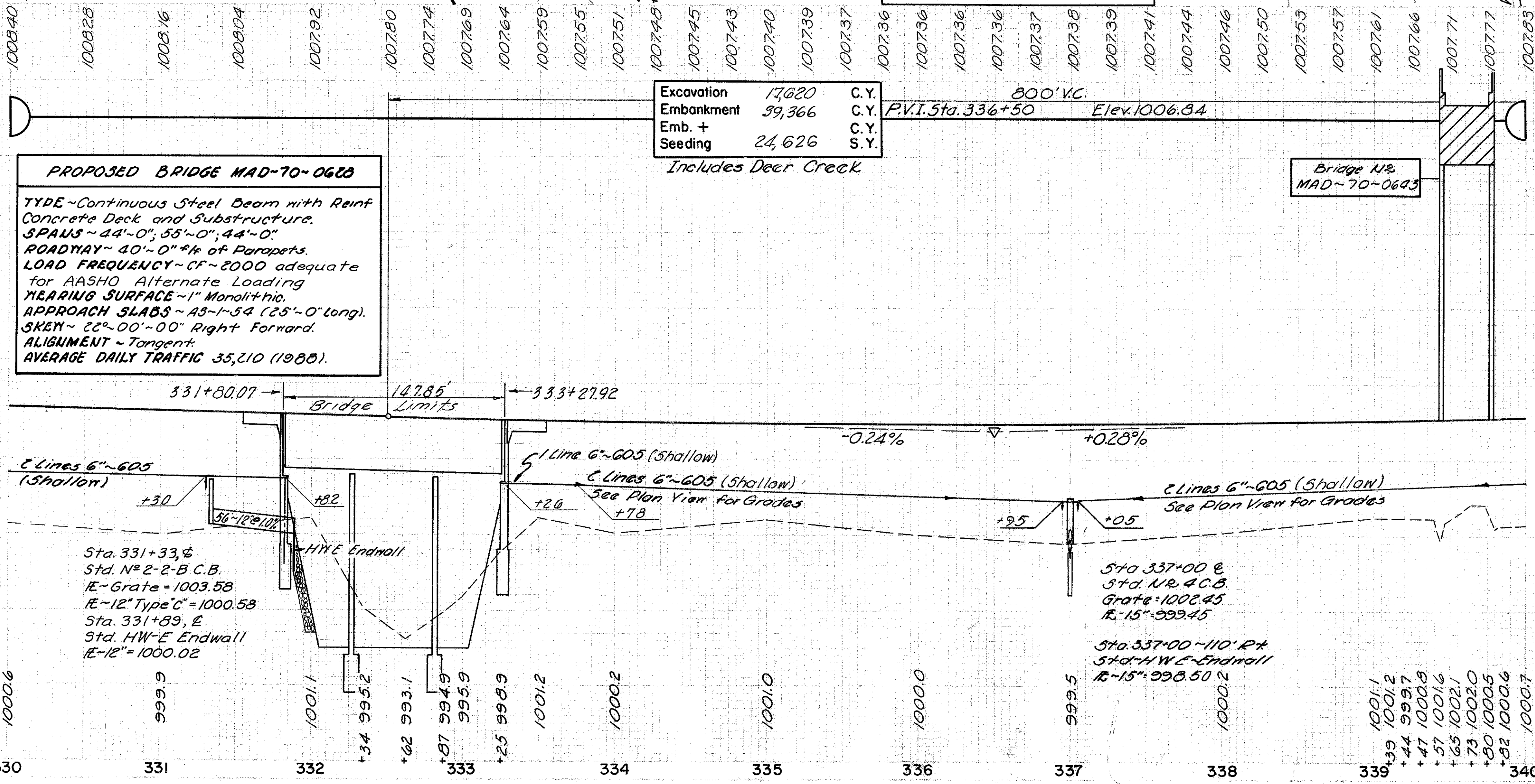




Note: Adjacent Mainline Typical Section is the same as I.R. 70 Typical Section for this Project (9'-48" on G-110)

B.M. 33 Elev. 1004.50
Sta. 336+63.175' Lt.
R.R. Spike in 14" Hickory Tree.

- 1. For Lafayette Mechanicsburg Rd. Line Sheet See Sheet No. 132
- 2. For Median Detail with Guard Rail See Sheet No. 12
- 3. For Deer Creek Reloc. Line Sheet See Sheet No. 126



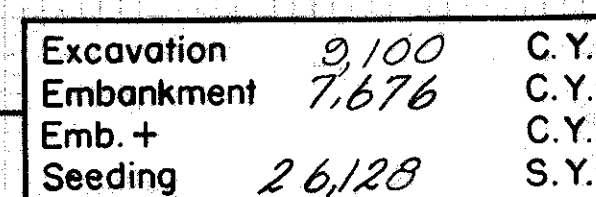
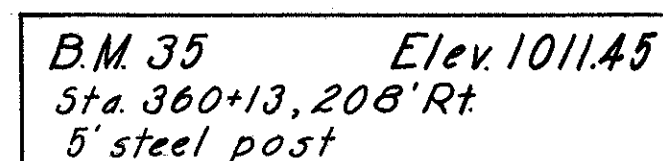
PROPOSED BRIDGE MAD-70-0623
TYPE-Continuous Steel Beam with Reinf Concrete Deck and Substructure.
SPANS-44'-0", 55'-0", 44'-0"
ROADWAY-40'-0" w/ Parapets.
LOAD FREQUENCY-CF-2000 adequate for AASHTO Alternate Loading
WEARING SURFACE-1" Monolithic.
APPROACH SLABS-13'-0" (25'-0" long).
SKIN-26'-00"-00" Right Forward.
ALIGNMENT-Tangent
AVERAGE DAILY TRAFFIC 35,210 (1988).

Excavation 17,620 C.Y.
Embankment 39,366 C.Y.
Emb. + Seeding 24,626 C.Y.
Includes Deer Creek

Bridge No. MAD-70-0643

REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	DUMPED ROCK CHAN. PROT.	601 C.V.	602 C.V.	603 12" W/C L. B. BEDDING	604 15" W/C L. B. BEDDING	605 STD. 2-2-B C.B.	606 JUTE MATTING
1-D 331+33 to 331+39	Lt.	65	4.0	0.23	56				
2-D 331+00	Lt.	67	5.0	0.26	110				275
3-D 331+23 to 331+44	Lt.		9.3						
4-D 332+36 to 332+74	Lt.		8.0						
5-D 332+31 to 332+51	Rt.		13.3						
6-D 333+56 to 333+76	Rt.		13.3						
7-D 332+95	Lt.		4.0						
8-D 332+20	Rt.		4.0						
9-D 333+63	Rt.		4.0						
10-D 338+52	Lt.		4.0						
TOTALS			68.9	0.49	56	110	1	1	275

REF. STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	603 TYPE "F"	604 TYPE "F"	605 GUARD RAIL TYPE 4	606 GUARD RAIL TYPE 4	BENDS AND BRANCH
7-GR 333+26 - 333+51	Lt.		L.F.	L.F.	L.F.	L.F.	Each
1-UD 329+95 - 331+82	Rt.	F	10	206			1
2-UD 333+78 - 336+95	Rt.	C	10	338			1
3-UD 337+05 - 340+00	Rt.	C	10	316			1
4-UD 329+95 - 331+30	Lt.	F	10	155			1
5-UD 333+26 - 340+00	Lt.		10	695			1
6-GR 333+58 - 333+83	Rt.			25			
7-GR 330+58.33 - 332+08.33	Rt.			150			
8-GR 333+15.02 - 336+15.02	Rt.			150	150		
9-GR 332+92.67 - 334+29.67	Lt.			150			
4-GR 338+65 - 340+00	Rt.			135			
5-GR 339+10 - 340+00	Lt.			90			
6-GR 338+25 - 340+00	Lt.			300			
TOTALS			50	1770	1025	175	

[illegible]

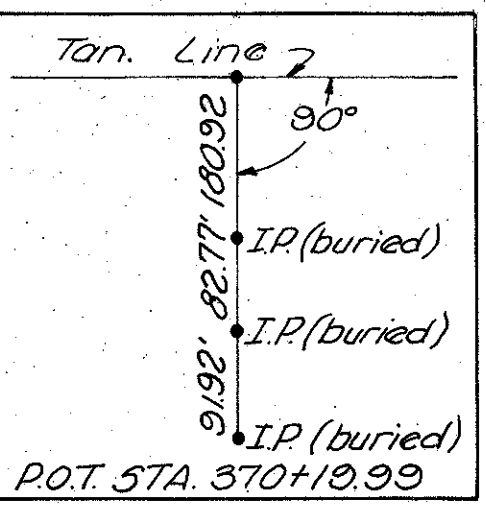
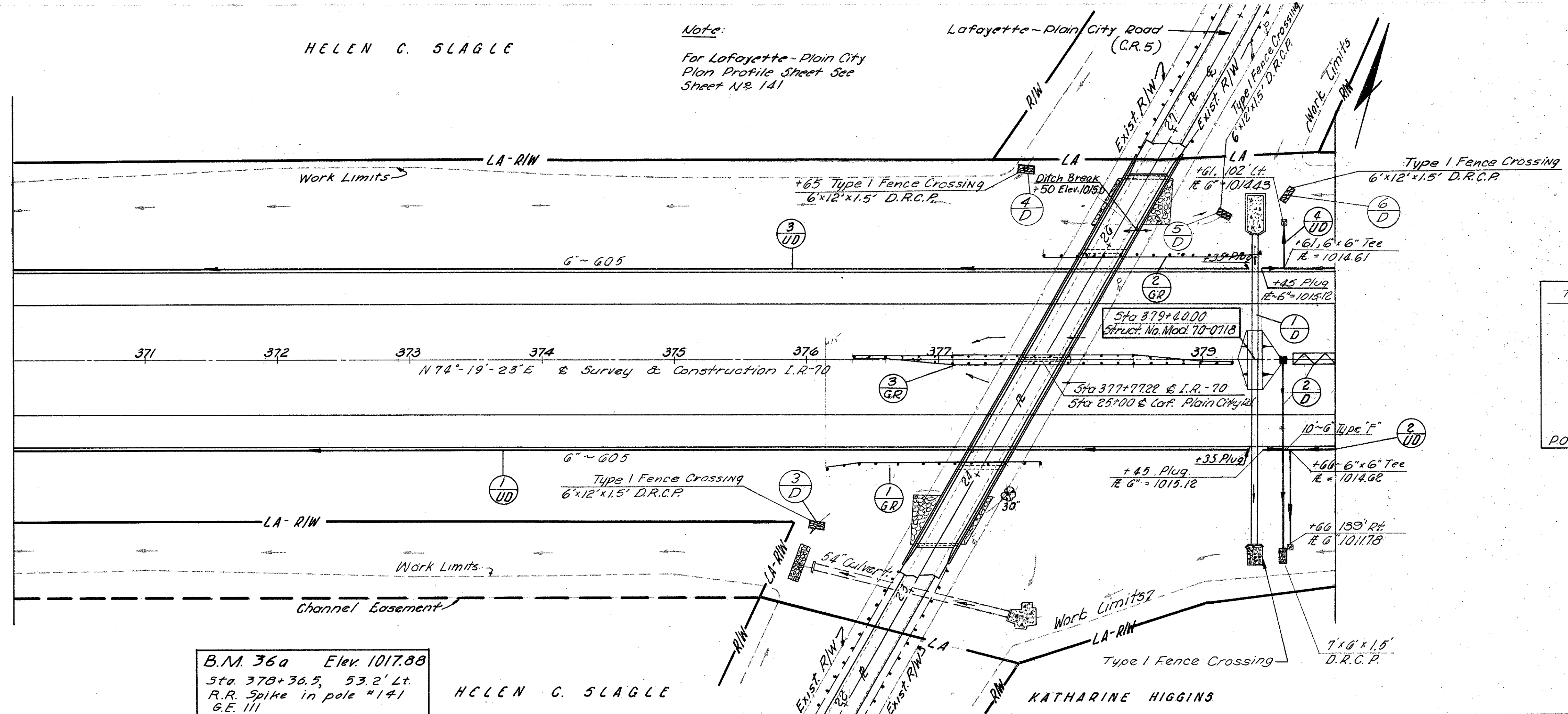
HELEN C. SLAGLE

Note:

For Lafayette-Plain City
Plan Profile Sheet See
Sheet N# 141

Lafayette-Plain City Road
(C.R. 5)

MADISON COUNTY
MAD - 70-6.25



B.M. 36a Elev. 1017.88
Sta. 378+36.5, 53.2' Lt.
R.R. Spike in pole #141
G.E. III

HELEN C. SLAGLE

KATHARINE HIGGINS

Excavation	71.97	C.Y.
Embankment	96.78	C.Y.
Emb. + Seeding	27.722	S.Y.

BRIDGE #2
MAD-70-0715

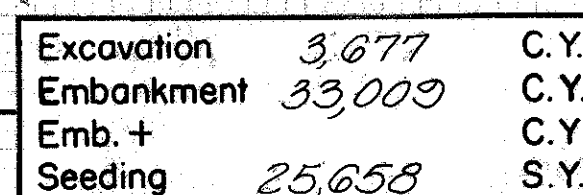
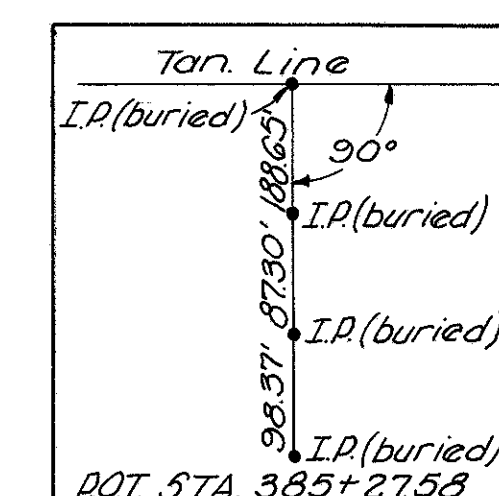
Sta. 379+61 &
Std. C.B.-4
Grate = 1014.41
E-15' Type B = 1011.41
142' R.F. Sta. 379+61
Std. H.W.-E Endwall
E-15' Type B = 1010.12

REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	601		602		603		604	605
			DUMPED RIPRAP 6" REIN. CONC.	CONC.	MASONRY CONC.	TYPE A W.C.L. 3" BEDDING	TYPE B W.C.L. 3" BEDDING	STD. NO. C.B. 4		
			C.Y.	S.Y.	C.Y.	L.F.	L.F.	Each	S.Y.	
* 1-D 379+40	L&R	251	14.0	36.3	10.96	238				
2-D 379+61	R.F.		2.3		0.26		142	1	26.7	
3-D 379+08	R.F.		4							
4-D 379+65	L.F.		4							
5-D 379+16	L.F.		4							
6-D 379+63	L.F.	76	4							
TOTALS			32.3	36.3	11.22	238	142	1	26.7	

* For Additional Quantities See Other Quantity Box

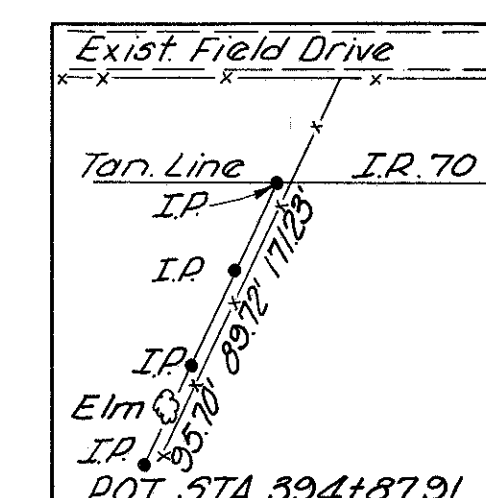
REF. STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	600		603		605		606		607
			SHOULDER	TYPE "F"	SHOULDER	GUARD RAIL TYPE 4	GUARD RAIL TYPE 4	GUARD RAIL TYPE 4	GUARD RAIL TYPE 4	BENDS AND BRANCHES	
			S.Y.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	Each	
1-UD 370+00 - 379+35	R.F.					935					
2-UD 379+45 - 380+00	R.F.			20		106				1	
3-UD 370+00 - 379+35	L.F.					935					
4-UD 379+45 - 380+00	L.F.			10		79				1	
1-GR 376+50 - 377+50	R.F.						162.5				
2-GR 378+125 - 379+12.5	L.F.						162.5				
3-GR 376+34 - 379+21.5	L.F.						475			50	
* 1-D 379+40	L&R		10.2								
TOTALS			10.2	30		2055	800			50	

MADISON COUNTY
MAD - 70-6.25

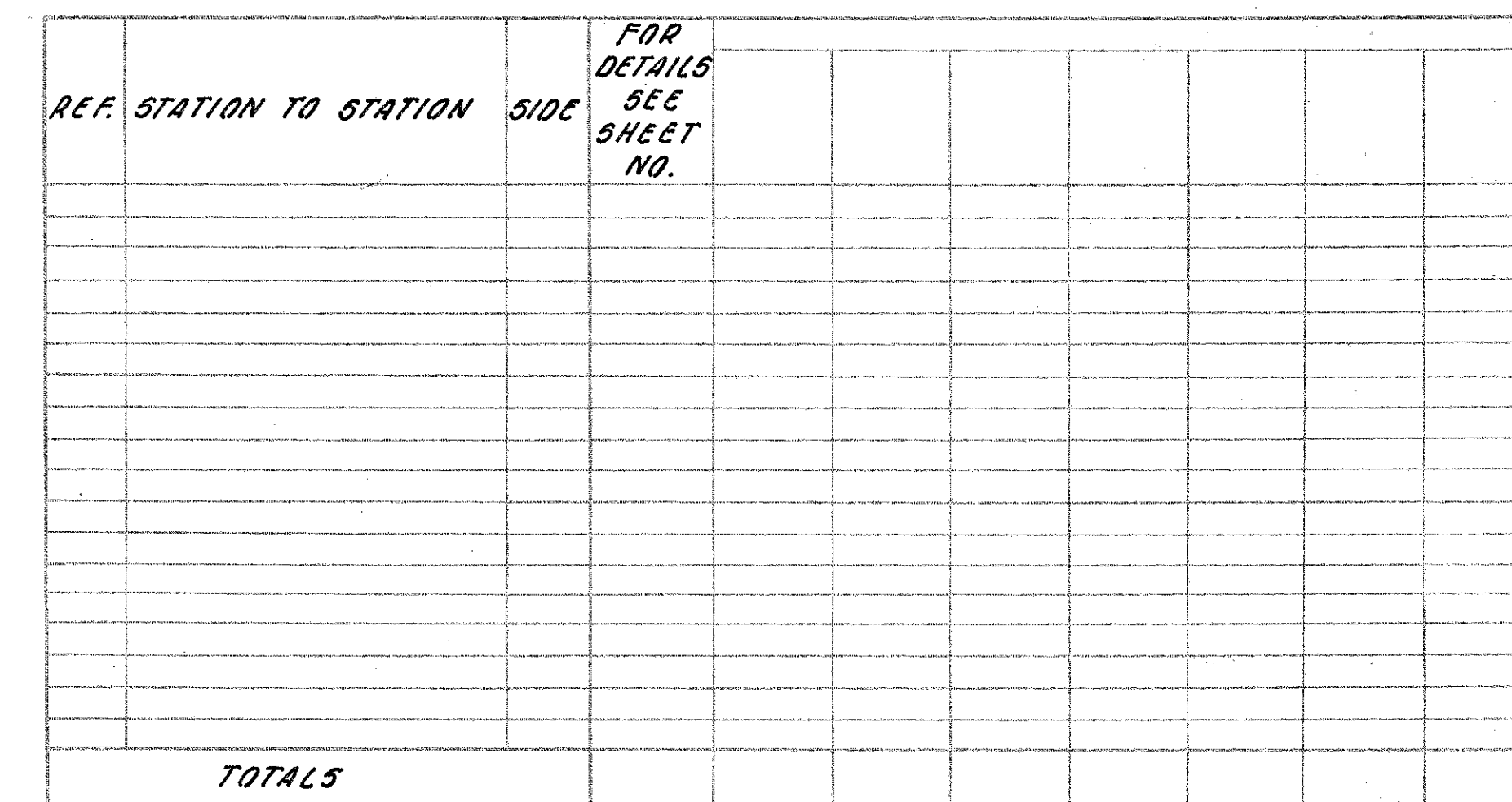


				G03		G05		BENDS AND BRANCH G" Each
REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	" TYPE F		" SHALLOW		
				LIN FT.		Lin Ft.		
IUD	380+00 to 387+97	Rt.				797		
EUD	388+05 to 390+00	Rt.	A	10		220		1
3UD	380+00 to 387+96	Lf.				796		
AUD	388+00 to 390+00	Lf.	F	10		226		1
TOTALS				20		2039		

STA. 380+00 TO STA. 390+00

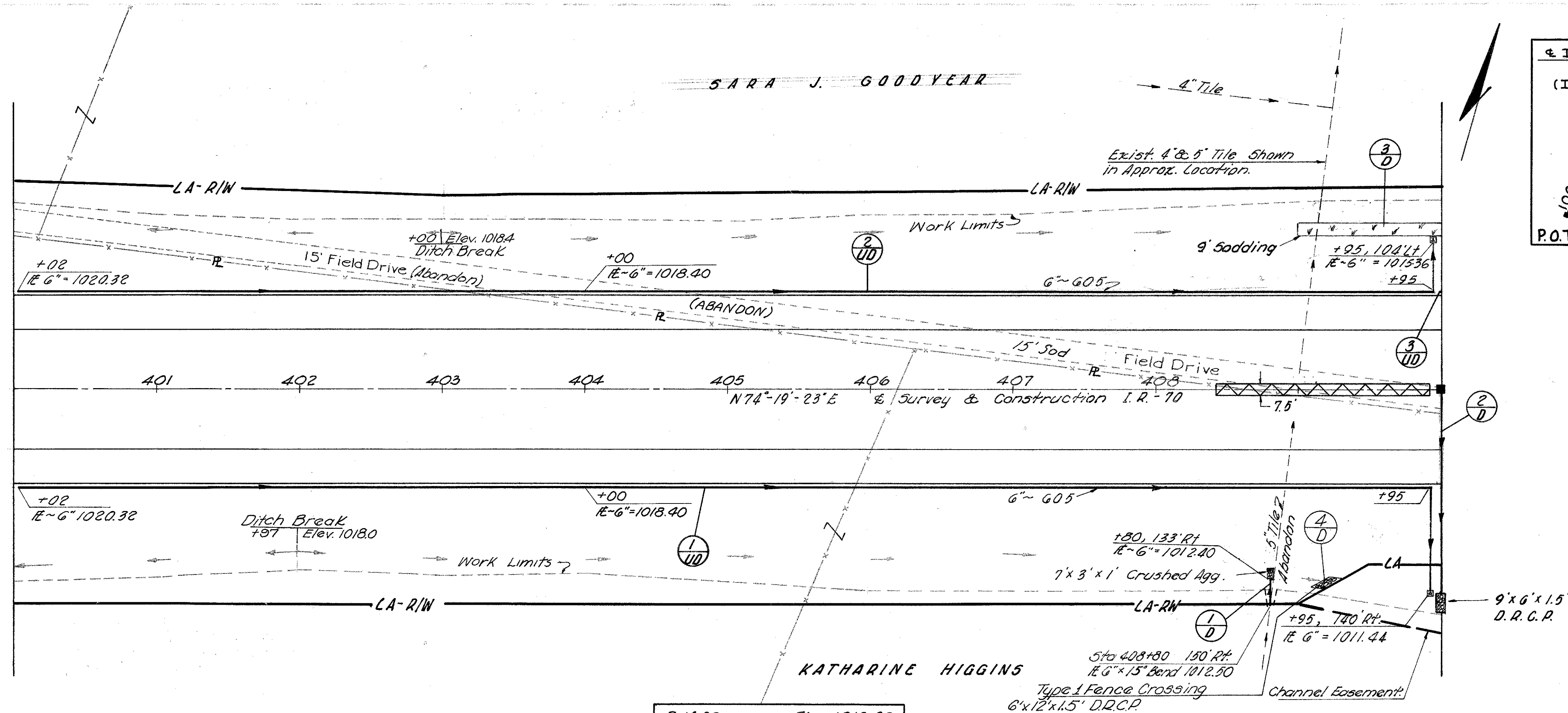
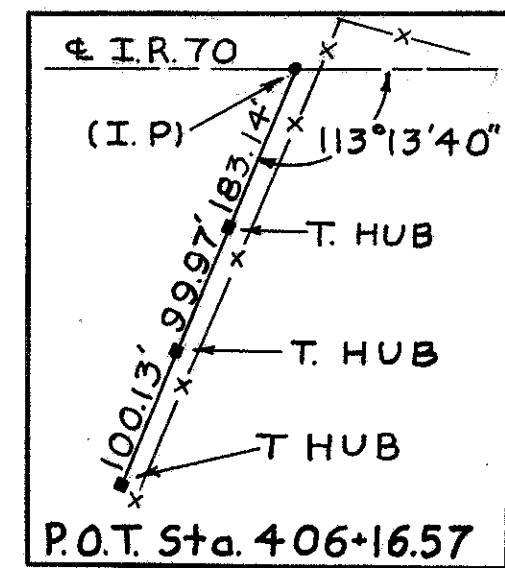


B.M. 38 Elev. 1020.33
Sta. 393+22, 188' Lt.
5' steel post driven flush
in fence line.

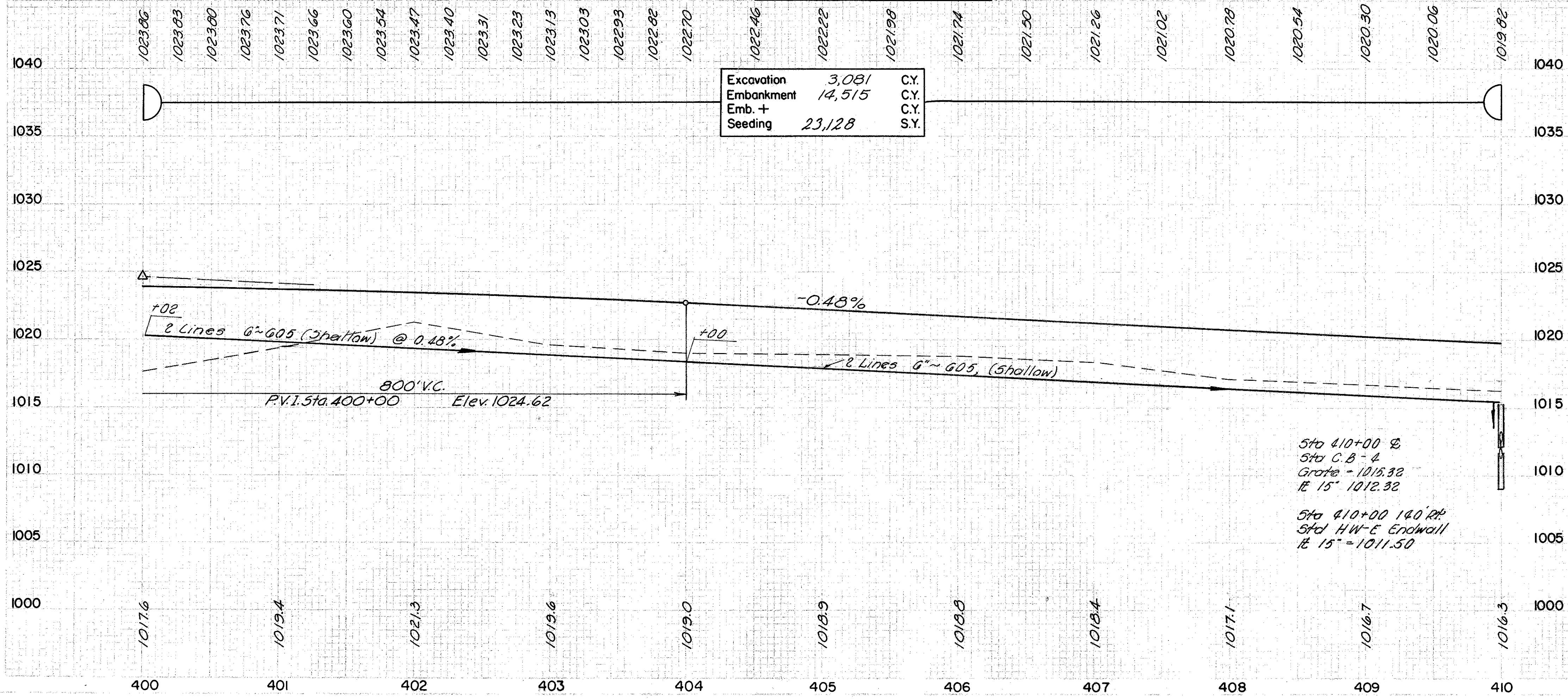


REF.	STATION TO STATION	SIDE	605 G" SHALLOW C.F.
1-UD	390+00 - 400+00	RT.	1000
2-UD	390+00 - 400+00	LT.	1000
TOTALS			2000

MADISON COUNTY
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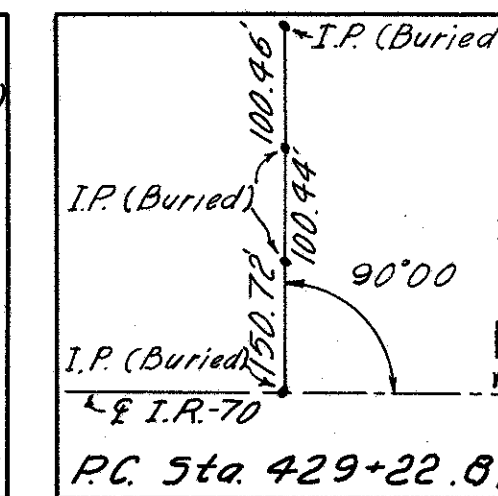
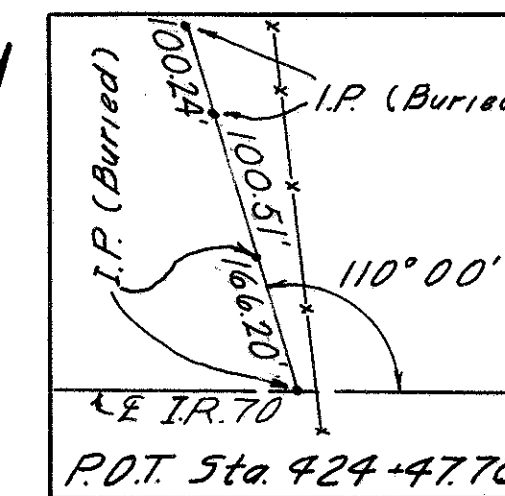
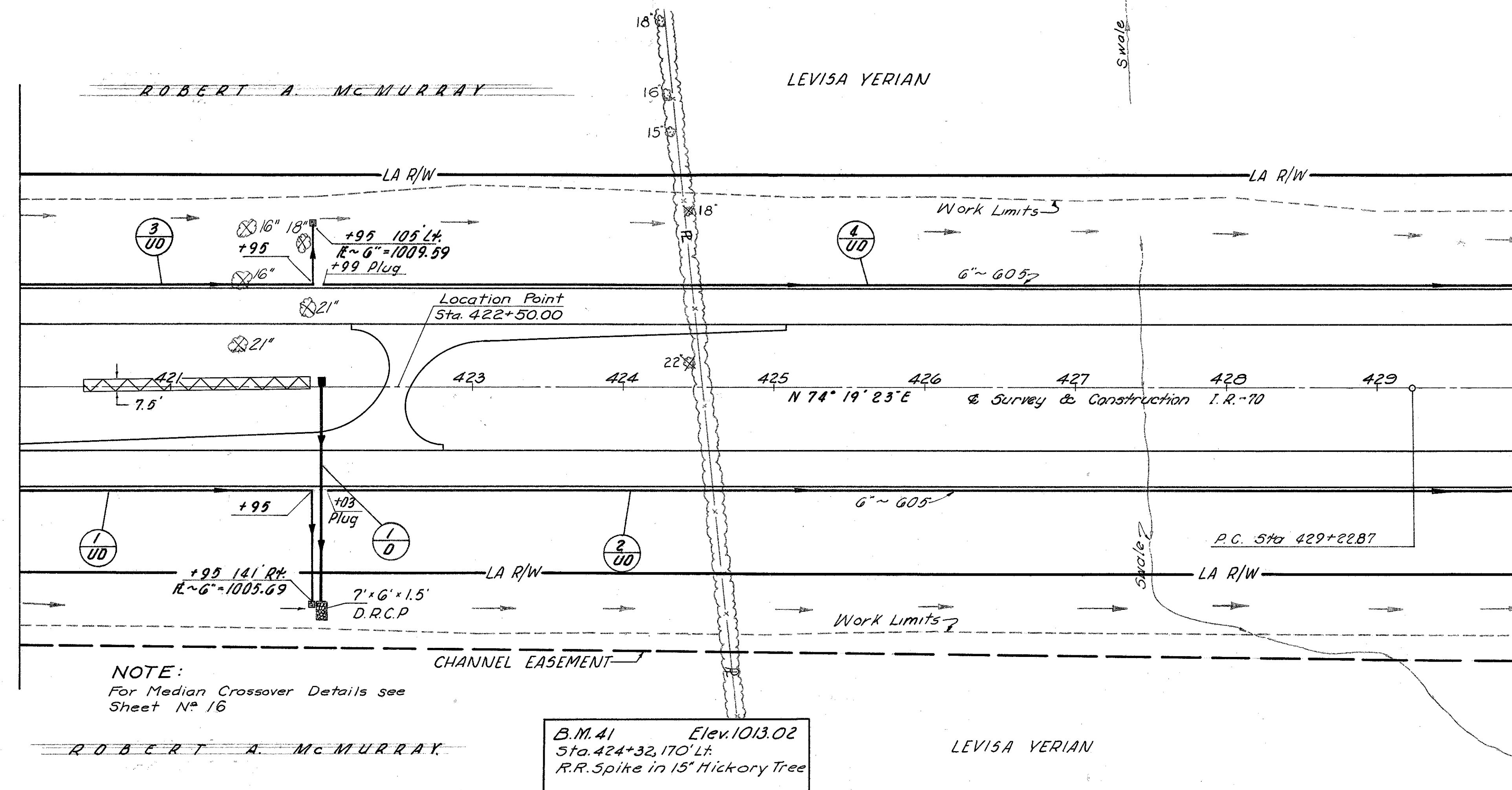
B.M.39 Elev. 1019.29
Sta. 405+40, 172' Rt.
5' steel post driven flush
in fence line.



Excavation	3,081	C.Y.
Embankment	14,515	C.Y.
Emb. + Seeding	23,128	S.Y.

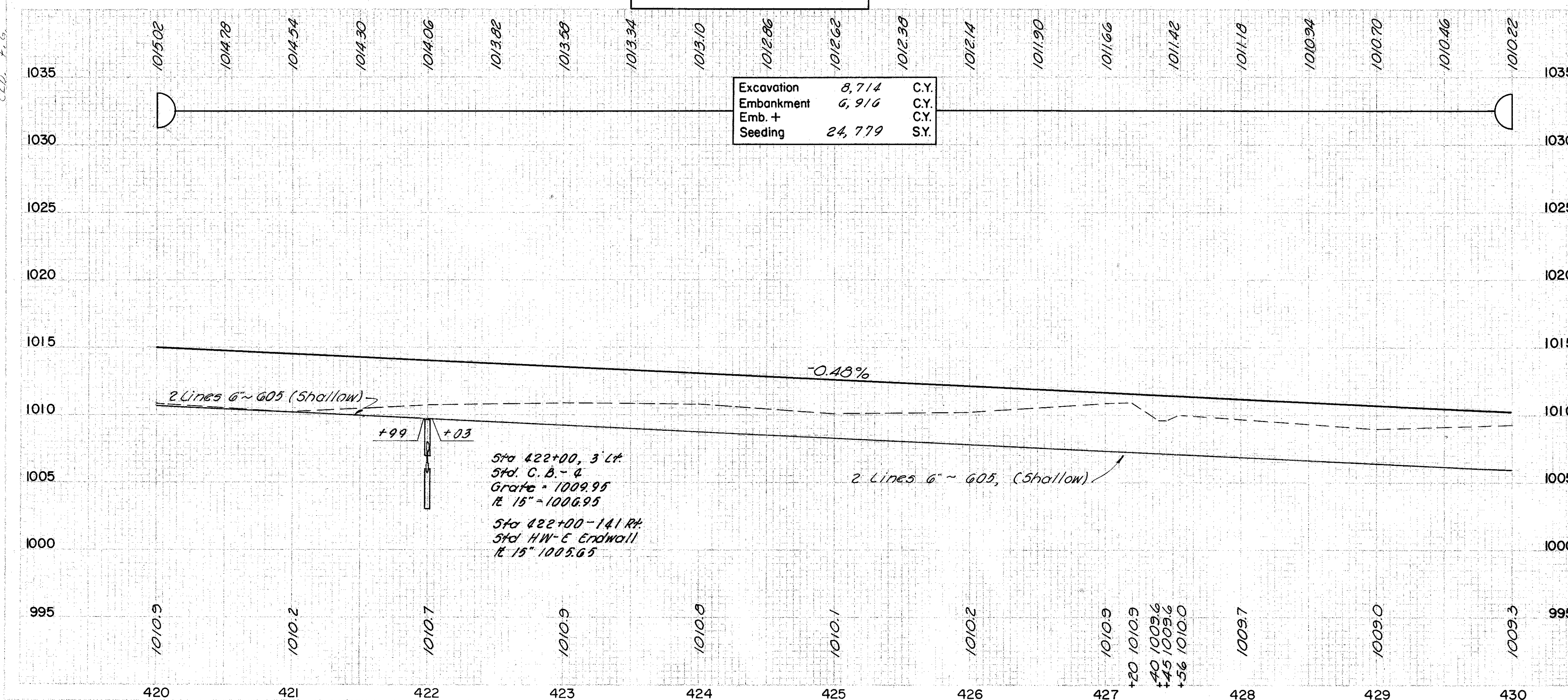
REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO	G02	G03	G04	G01	G00	G07
			MASONRY CONC.	15" TYPE "B" W/CL. "B" BEDDING	STD. C.B.-4	DUMPED ROCK CHAN. PROT.	SODDING	JUTE MATTING
			Cu. Yd.	Lin. Ft.	Each	Cu. Yds.	Sq. Yd.	Sq. Yd.
2-D 410+00	Rt.	83	0.26	140	1	3		125
3-D 409+00 - 410+00	Lt.					4	100	
4-D 409+20	Rt.							
TOTALS			0.26	140	1	7	100	125

REF. STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAILS	G03		G01	G05	BENDS AND BRANCHES G"
			6" TYPE E	6" TYPE F	CRUSH AGGR. SLOPE PROT.	SHALLOW	
			Lin. Ft.	Lin. Ft.	S. Y.	Lin. Ft.	Each
1-UD 400+02 - 409+95	Rt.	A		10		1055	1
2-UD 400+02 - 409+95	Lt.	F		10		1019	1
3-UD 409+99 - 410+00	Lt.					1	
1-D 408+80	Rt.		7	10	2.3		1
TOTALS			7	30	2.3	2075	



REC. NO. 0107884	DATE 8/2/72	PROJECT PROPERTY	48 37
2	OHIO		

MADISON COUNTY
MAD - 70- 6.25

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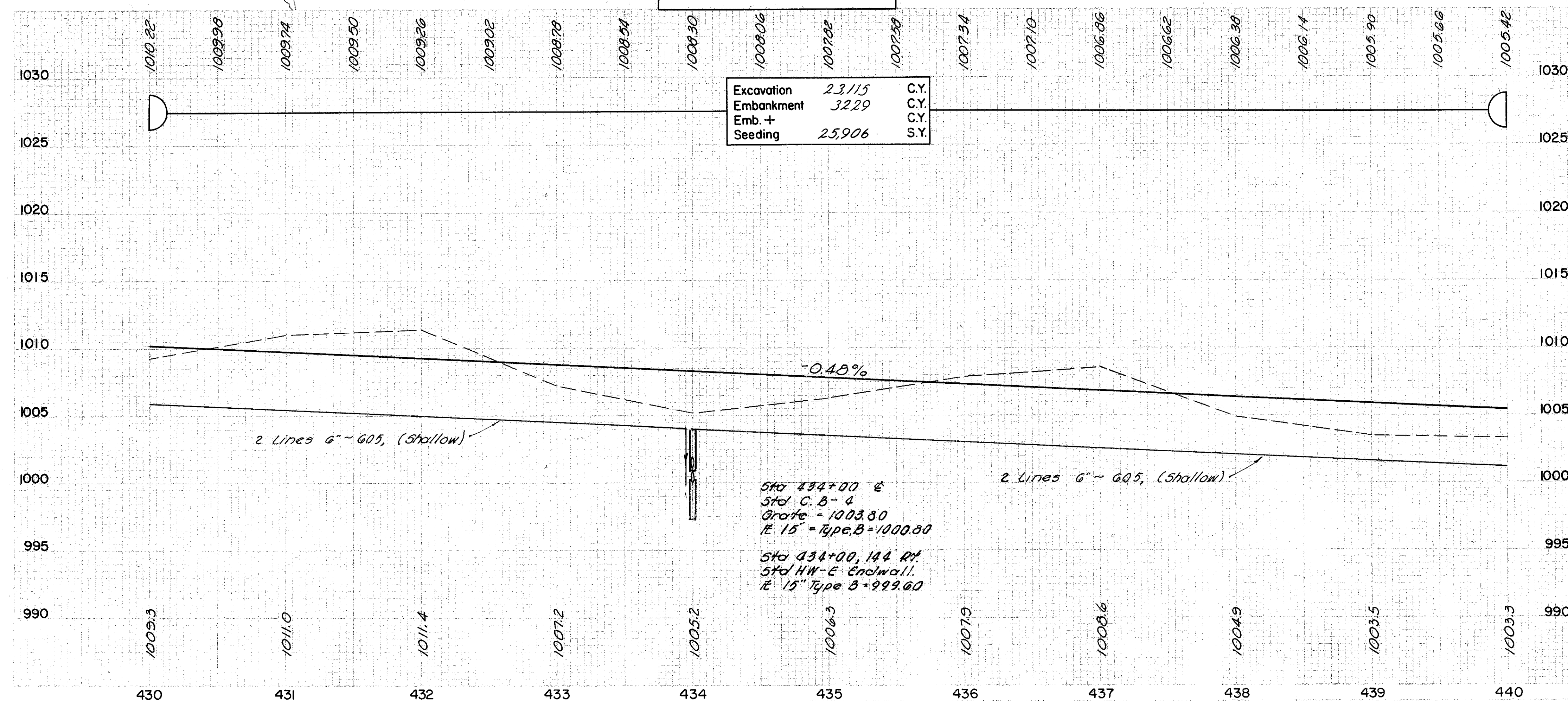
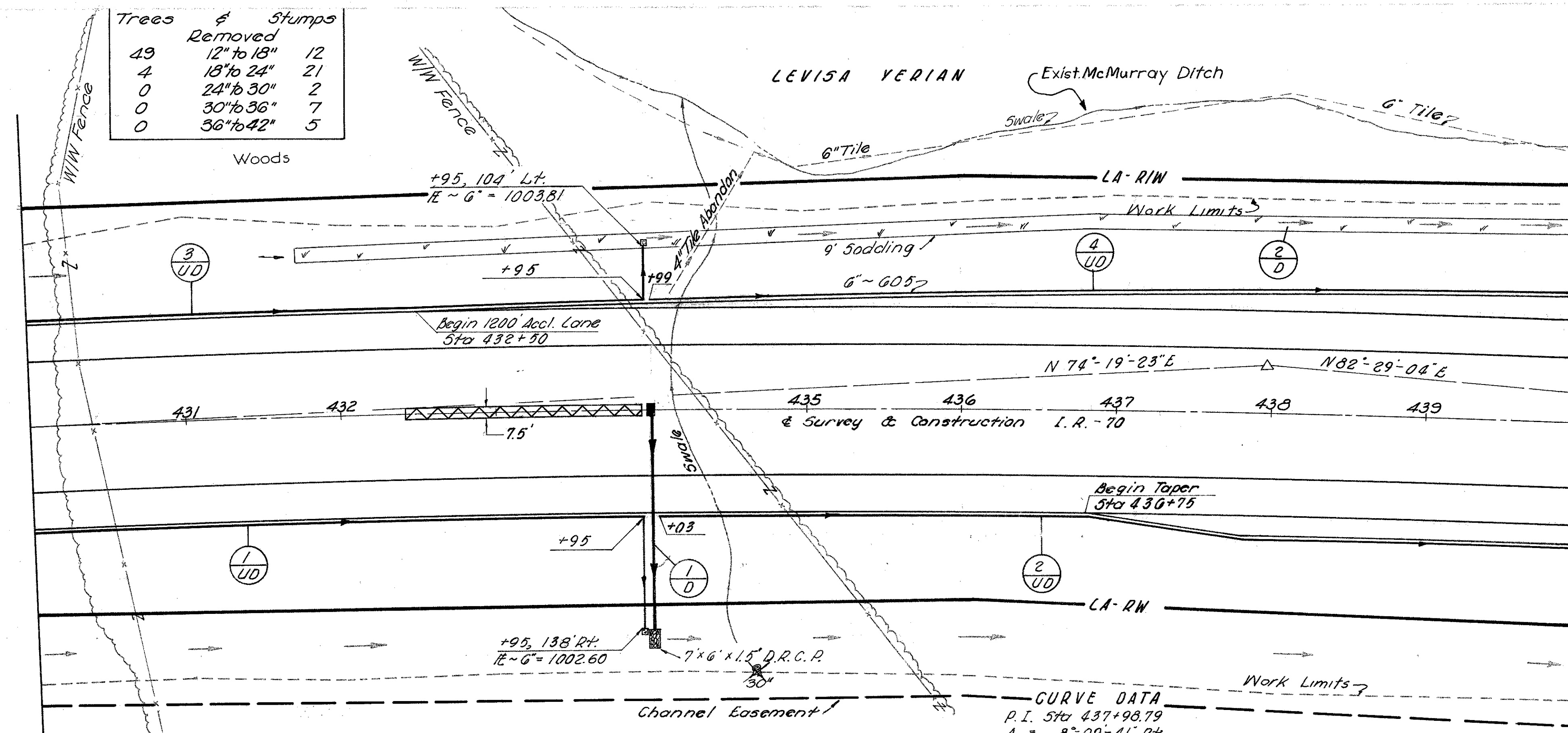
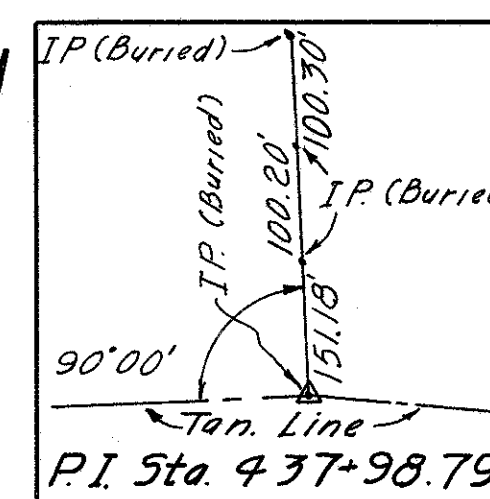
<i>REF.</i>	<i>STATION TO STATION</i>	<i>SIDE</i>	<i>UNDER DRAIN OUTLET DETAIL</i>	<i>G03 6" TYPE F-</i>	<i>G05 6" SHALLOW</i>	<i>BENDS & BRANCHES 6"</i>	
				<i>Lin. Ft.</i>	<i>Lin. Ft.</i>	<i>Ea.</i>	
I-UD	420+00 to 421+95	R+	A	10	258	1	
C-UD	422+03 to 430+00	R+	F	10	797		
S-UD	420+00 to 421+95	L+			222	1	
H-UD	421+99 to 430+00	L+			301		
<i>TOTALS</i>				20	2078		

STA. 420+00 TO STA. 430+00

FED. ID 00000000	STATE OHIO	PROJECT 2
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MADISON COUNTY
MAD- 70-6.25

49
374



REF	STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO	602 MASONRY CONC.	603 TYPE B W/C. B BEDDING	604 STD. C.B. 4	660 SODDING	667 JUTE MATTING	601 DUMPED ROCK CHAN. PROT.
				Cu. Yds.	Lin. Ft.	Each	Sq. Yds.	Sq. Yds.	Cu. Yds.
I-D	434+00	Rt.	87	0.26	144	1		125	2.3
E-D	431+75 - 440+00	Lt.					825		
TOTALS				0.26	144	1	825	125	2.3

[illegible]

STA. 430+00 TO STA. 440+00

I.P. BURIED

99.90'

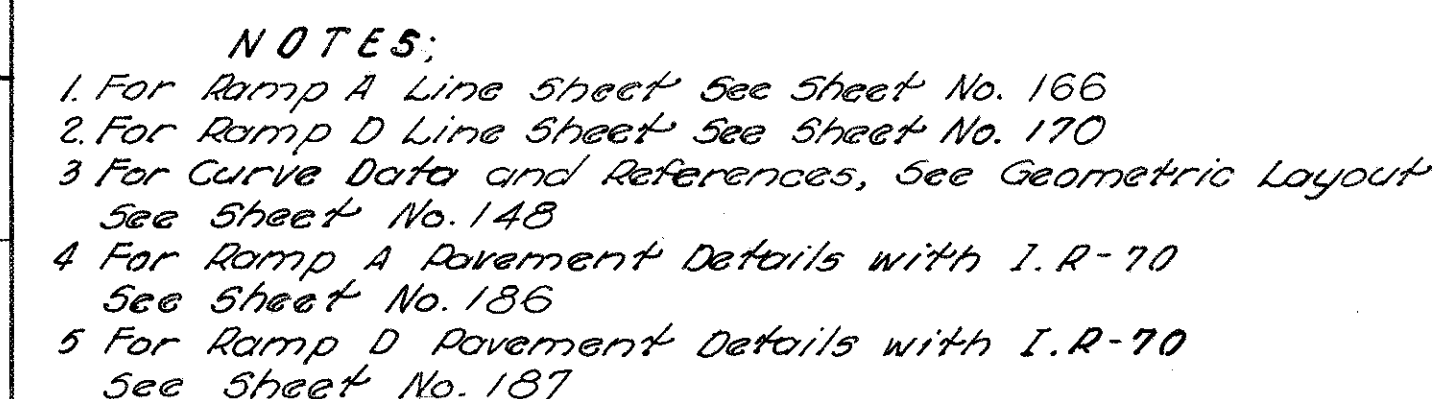
100.04'

204.35'

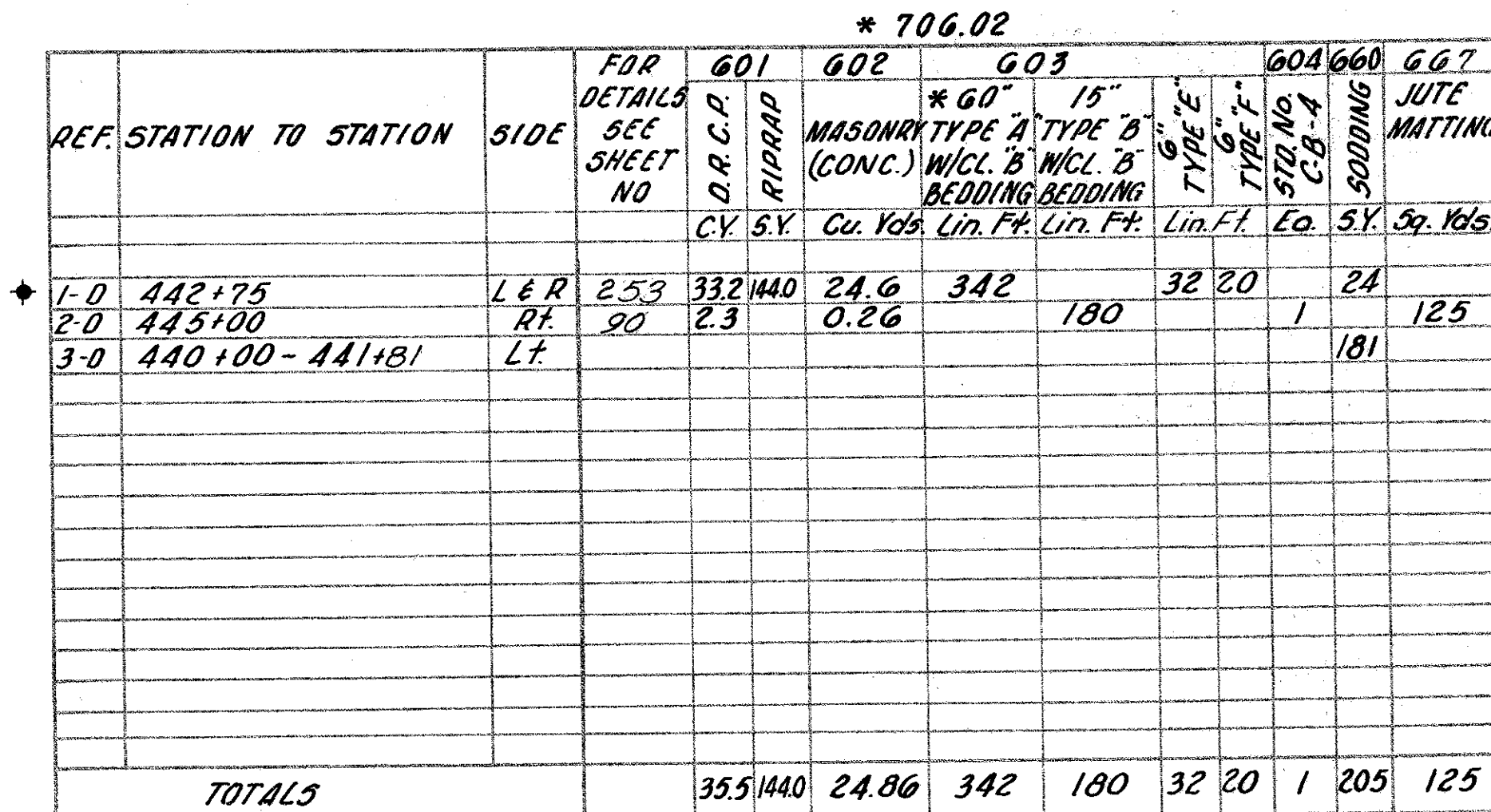
90°00'

I.R. 70

P.T. Sta. 446+71.7

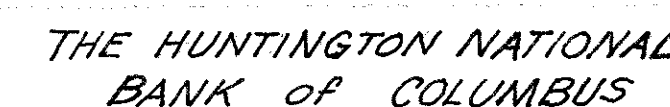


Ex. Ground
Profile
Topo.
S. M.
Ref.

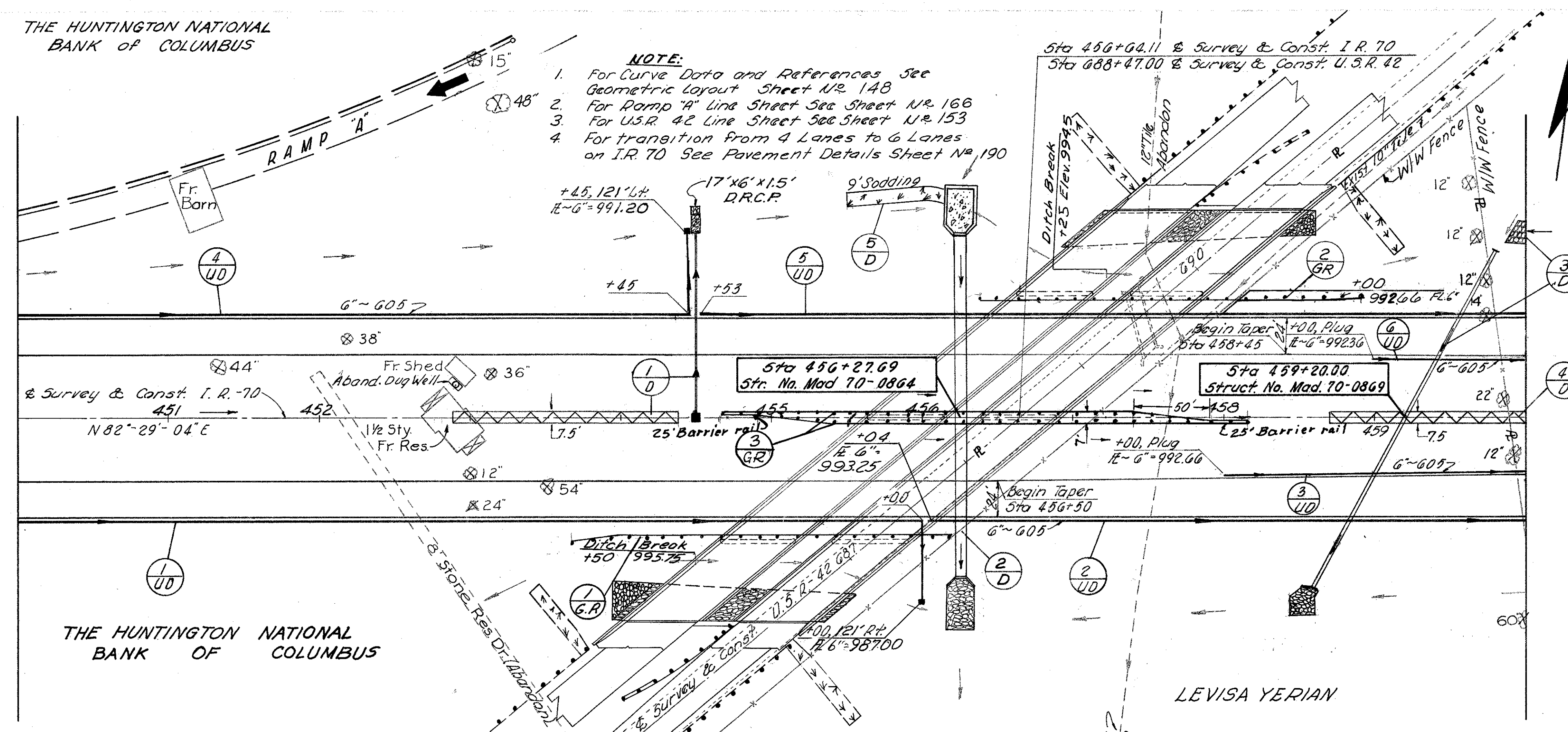


◆ For Additional Quantities see Other Quantity Box

REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	603 6" TYPE "F"	605 6" SHALLOW	606 GUARD RAIL TYPE 4 AS PER PLAN	BENDS & BRANCHES 6"	
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	
1-UD	440+00 to 440+28.	R*			28			
2-UD	445+03 to 450+00	R*			497			
3-UD	440+00 to 444+00	L*	F	10	414		1	
4-UD	444+04 to 4-447+50	L*	F		346			
5-UD	444+50 to 450+00	L*			550			
1-GR	442+80 to 444+05	R, R				250		
1-D	442+75	L*					1	
TOTALS				10	1835	250	2	



- NOTE:
1. For Curve Data and References See Geometric layout Sheet N^o 148
 2. For Ramp H^o Line Sheet See Sheet N^o 166
 3. For U.S.R. 4E Line Sheet See Sheet N^o 153
 4. For transition From 4 Lanes to 6 Lanes on I.R. 70 See Pavement Details Sheet N^o 190

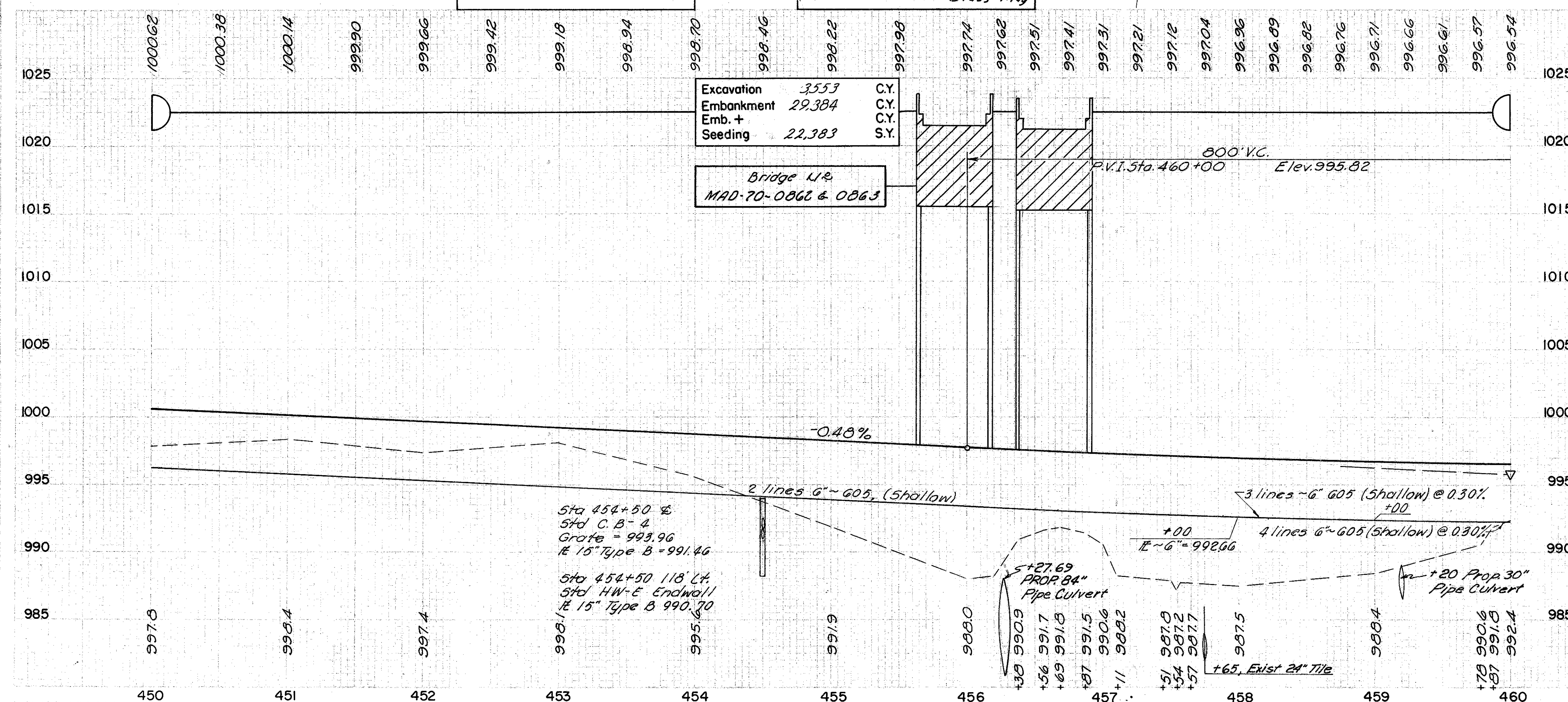


THE HUNTINGTON NATIONAL
BANK OF COLUMBUS

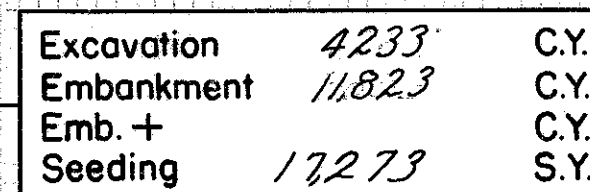
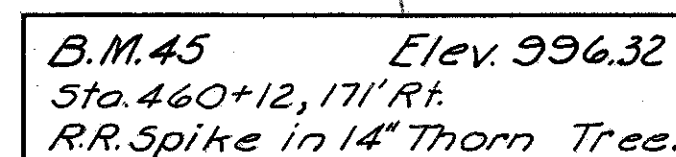
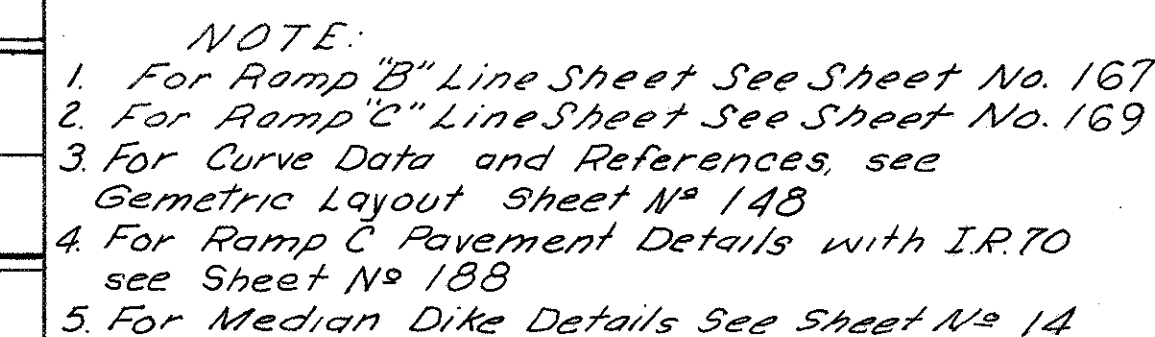
LEVISA YERIAN

B.M. 44 Elev. 996.94
Sta. 453+17, 209' Lt.
R.R. Spike in 48" Oak Tree.

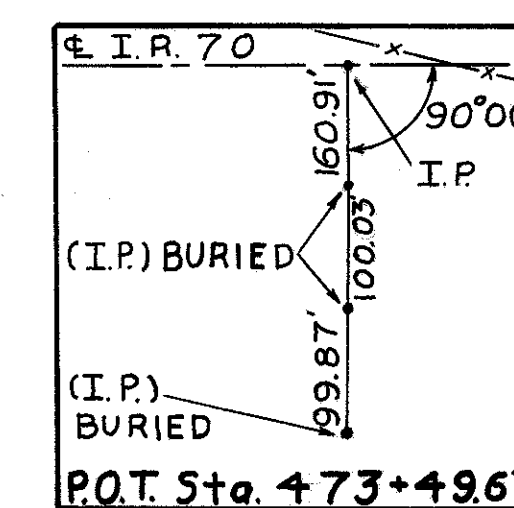
B.M. 44b Elev. 991.42
Sta. 457+32.3, 81.3' Lt.
Brass Plug



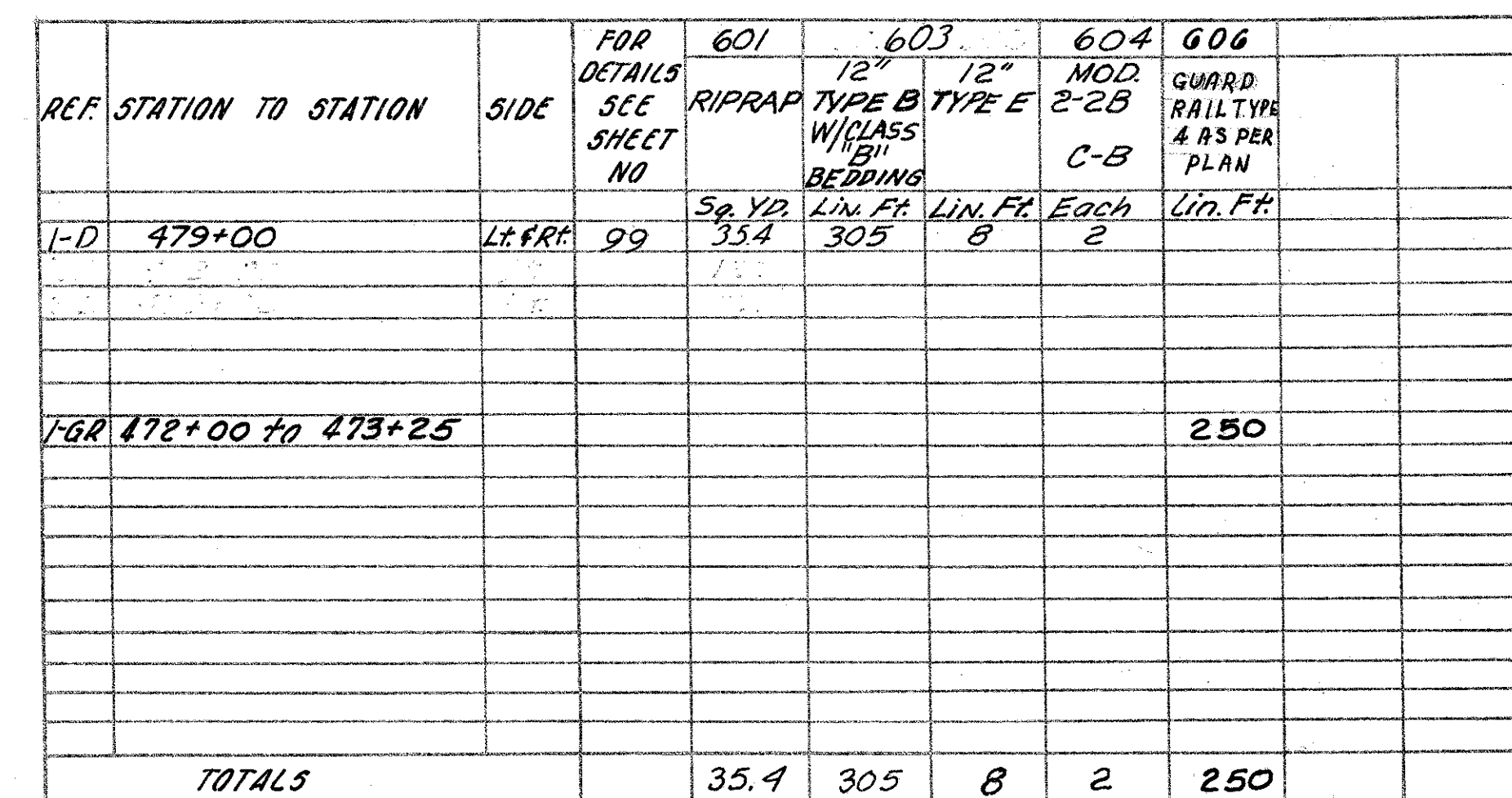
REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	603 6" TYPE "F"	605 6" SHALLOW	606 GUARD RAIL, BARRIER DESIGN AS PER PLAN	606 GUARD RAIL TYPE 4	BEND AND BRANCH 6" Eq.
				Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	
1-UD	450+00 TO 456+00	RT	F	10	643			1
2-UD	456+04 TO 460+00	RT	F		396			
3-UD	458+00 TO 460+00	RT			200			
4-UD	450+00 TO 454+45	LT	A	10	488			1
5-UD	454+53 TO 460+00	LT	A		547			
6-UD	459+00 TO 460+00	LT			100			
1-GR	453+67 TO 456+17	RT					250	
2-GR	456+37.5 TO 458+87.5	LT					250	
2-GR	454+65 TO 458+15	Q				50	600	
TOTALS				20	2374	50	1100	



REF.	STATION TO STATION	SIDE	G03		G05		BEND AND BRANCH 6"	
			UNDER DRAIN OUTLET DETAIL	G" F	G" TYPE B W/C L B BEDDING			G" SHALLOW
				Lin. Ft.	Lin. Ft.			Lin. Ft.
							Eg.	
1-UD	460+00 TO 468+50	R#			35	850	1	
2-UD	468+50 TO 470+00	R#				150		
3-UD	460+00 TO 470+00	R#		10		1024	1	
4-UD	460+00 TO 462+00	L#	C	20		219	1	
5-UD	462+00 TO 470+00	L#	C	10		829	1	
6-UD	460+00 TO 461+95	L#	C	20		224	1	
7-UD	462+05 TO 470+00	L#	C	10		834	1	



- | Ex. Ground | Plotted
Ref. | Ck | Indexed |
|------------|-----------------|-----|---------|
| Profile | A | E 2 | 614-65 |
| Topo. | D-11 | 541 | T-22 |
| B. M. | | | |
| Ref. | | | JE |
| Scale | ✓ | 614 | 614 |



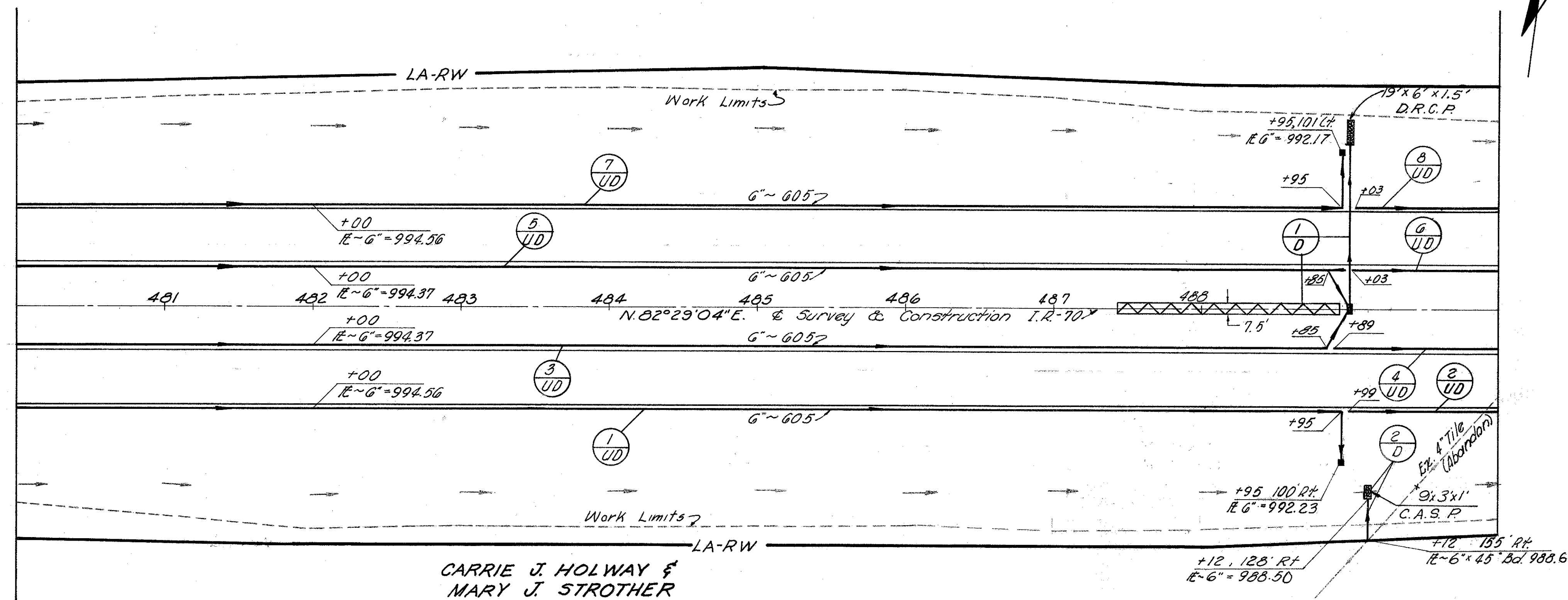
REF.	STATION TO STATION	SIDE	605 6" SHALLOW
			Lim. Ft.
1-UD	470+00 to 478+00	Rt	800
2-UD	478+02 to 480+00	Rt	198
3-UD	470+00 to 478+00	Rt	800
4-UD	478+02 to 480+00	Rt	198
5-UD	470+00 to 478+00	Lt	800
6-UD	478+02 to 480+00	Lt	198
7-UD	470+00 to 470+45	Lt	45
8-UD	B-475+00 to B-478+00	Lt	300
9-UD	B-478+02 to B-480+00	Lt	198
	TOTALS		3537

STA. 470+00 TO STA. 480+00

CARRIE J. HOLWAY &
MARY J. STROTHER

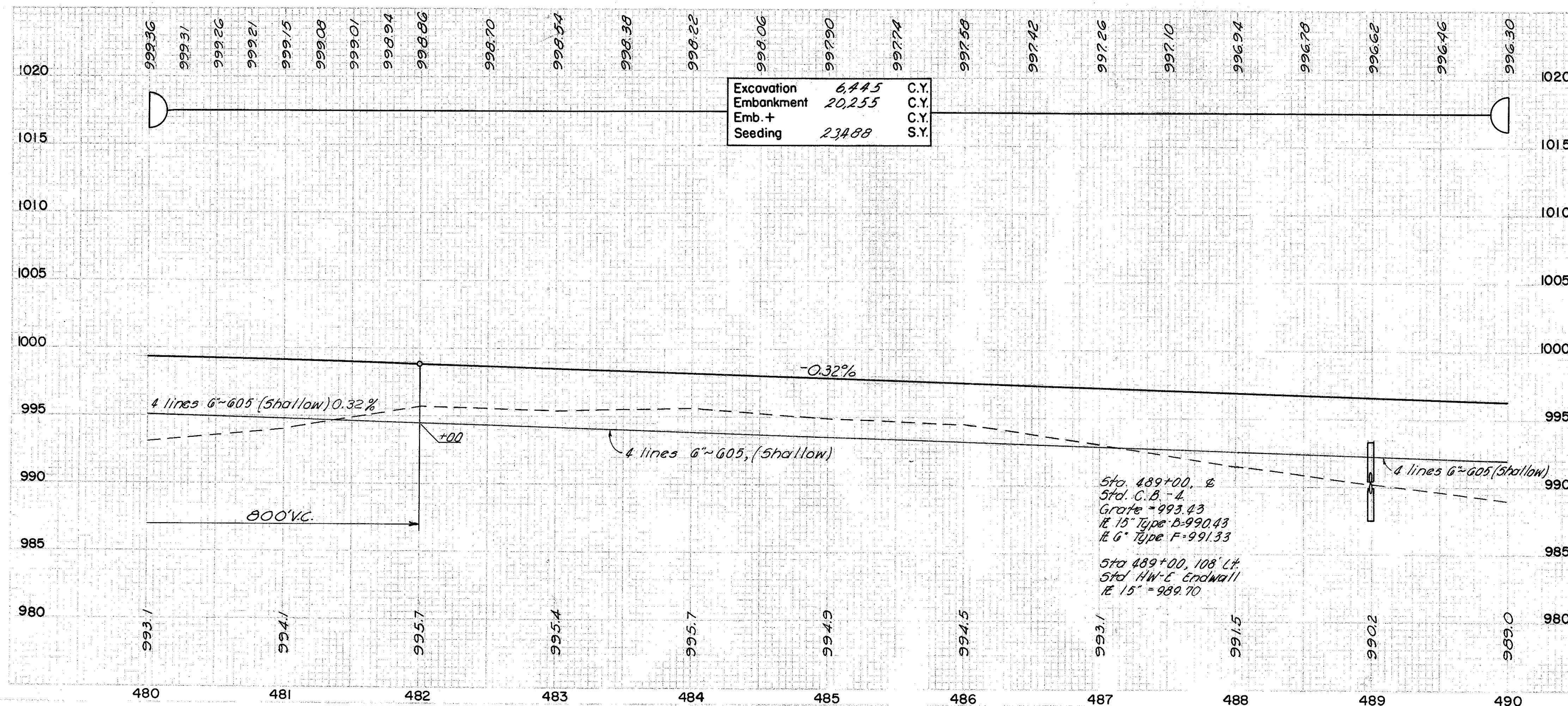
SEN. NO.	STATE	PROJECT	
2	OHIO		54 374

MADISON COUNTY
MAD- 70-6.25



CARRIE J. HOLWAY &
MARY J. STROTHER

Plotting	Checked	Initial
Profile	Profile	Profile
Type	Type	Type
S. M.	S. M.	S. M.
Ref.	Ref.	Ref.
JE		



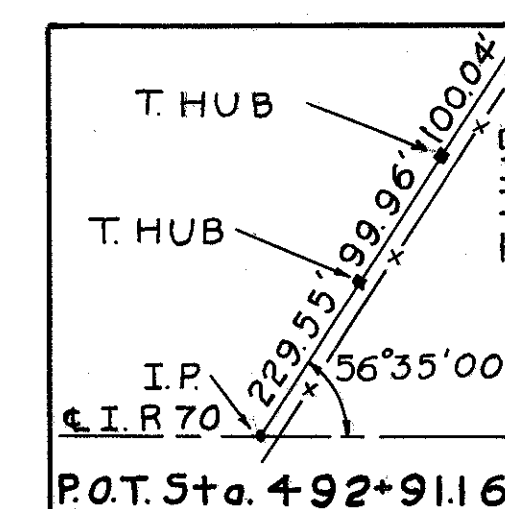
Excavation	6,445	C.Y.
Embankment	20,255	C.Y.
Emb. + Seeding	23,488	S.Y.

REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	602 MASONRY (CONC.) Ct. Vols.	603 15" TYPE 'B' WGL 'B' BEDDING Lin. Ft. Each	604 570' C.B.-4 C.P. 5K	601 D.R.C.P. C.P. 5K	607 JUTE MATTING Sq. Yds.
1-D 489+00	Lt.	101	0.26	108	1	63	125
2-D 489+12	Rt.	101				3	
TOTALS			0.26	108	1	63	125

* FOR ADDITIONAL QUANTITIES SEE OTHER QUANTITY BOX

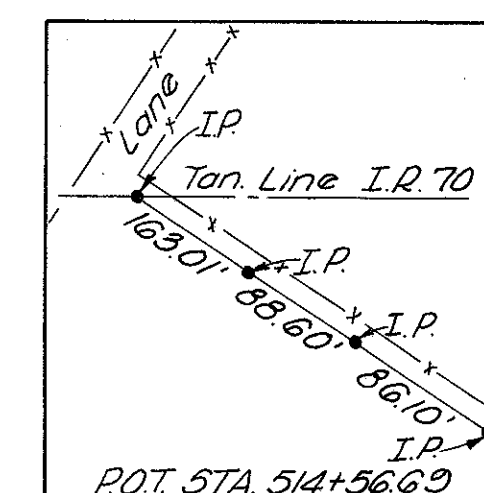
REF. STATION TO STATION	SIDE	603 TYPE 'F' TYPE 'E' SHALLOW Lin. Ft.	605 6" SHALLOW Lin. Ft.	BENDS & BRANCHES 6" Each	UNDER DRAIN OUTLET DETAILS
1-UD 480+00 to 488+95	Rt.	10	917	1	F
2-UD 488+99 to 490+00	Rt.		101		F
3-UD 480+00 to 489+00	Rt.	10	905	1	B
4-UD 488+89 to 490+00	Rt.		111		
5-UD 480+00 to 489+00	Lt.	10	917	1	B
6-UD 489+03 to 490+00	Lt.		97		
7-UD 480+00 to 488+95	Lt.	10	918	1	A
8-UD 489+03 to 490+00	Lt.		97		
2-D 489+12	Rt.	10	17	1	
TOTALS		50	17	4063	

STA. 480+00 TO STA. 490+00

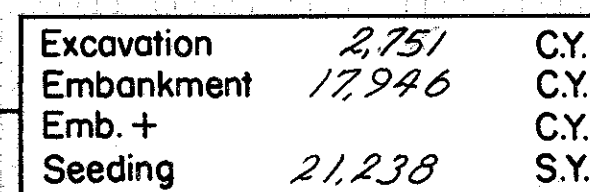


* FOR ADDITIONAL QUANTITIES SEE OTHER QUANTITY BOX

REF.	STATION TO STATION	SIDE	605 6" SHALLOW	BENDS AND BRANCHES 12" Each
1-UD	490+00 to 500+00	Rt.	1000	
2-UD	490+00 to 500+00	Rt.	1000	
3-UD	490+00 to 500+00	Lt.	1000	
4-UD	490+00 to 500+00	Lt.	1000	
2-D	497+83	Lt.		1
TOTALS			4000	



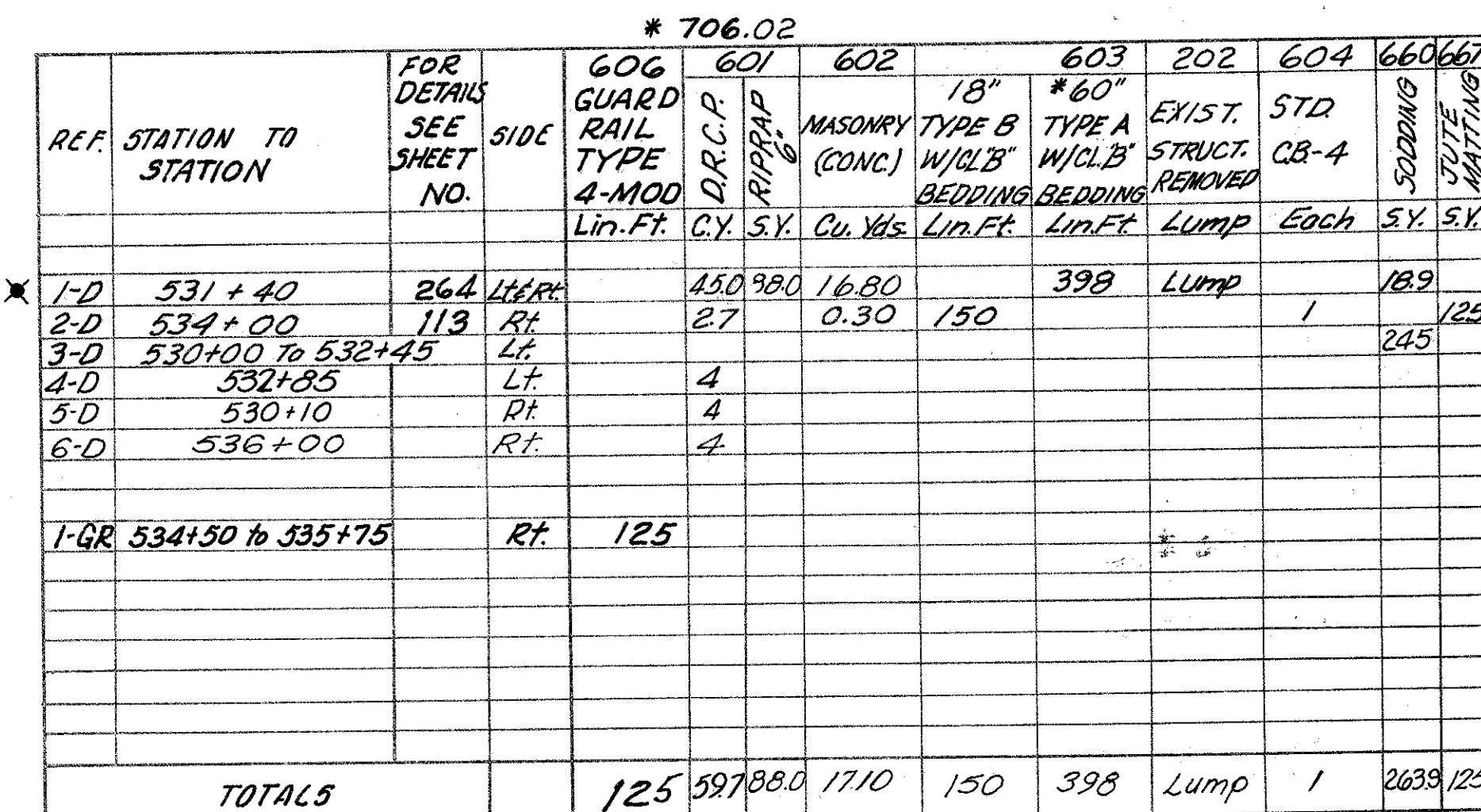
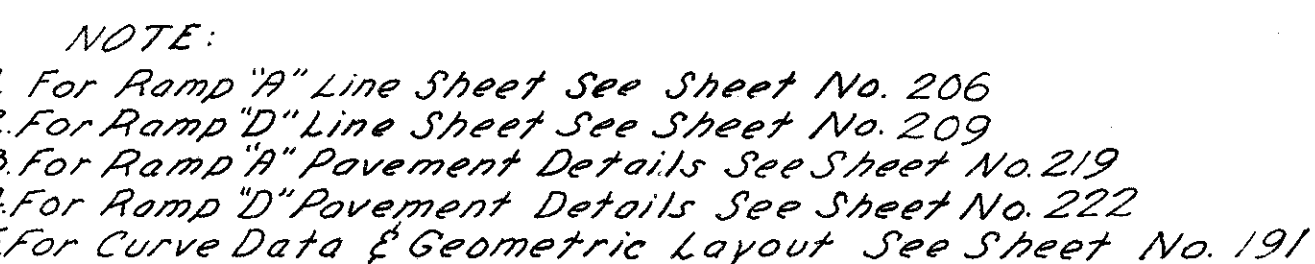
CECIL EDWARD FLANNERY &
CECIL FLANNERY.



✱ FOR ADDITIONAL QUANTITIES SEE OTHER QUANTITY BOX

			603			605				
REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	6" TYPE "F"	6" TYPE "E"	6" SHALLOW		BENDS & BRANCHES 6"		
				Lin. Ft.	Lin. Ft.	Lin. Ft.		Each.		
1-UD	510+00 to 510+95	RT.	F	10		121		1		
2-UD	510+99 to 520+00	RT.				901				
3-UD	510+00 to 511+00	RT.	B	10		105		1		
4-UD	510+89 to 520+00	RT.				911				
5-UD	510+00 to 511+00	LT.	B	10		117		1		
6-UD	511+03 to 520+00	LT.				897				
7-UD	510+00 to 510+95	LT.	A	10		121		1		
8-UD	511+03 to 520+00	LT.				897				
2-D	510+00 to 510+25	LT.			4					
3-D	514+84	LT.		10	10			1		
TOTALS				50	22	4070				

STA. 510+00 TO STA. 520+00



* FOR ADDITIONAL QUANTITIES SEE OTHER QUANTITY BOX

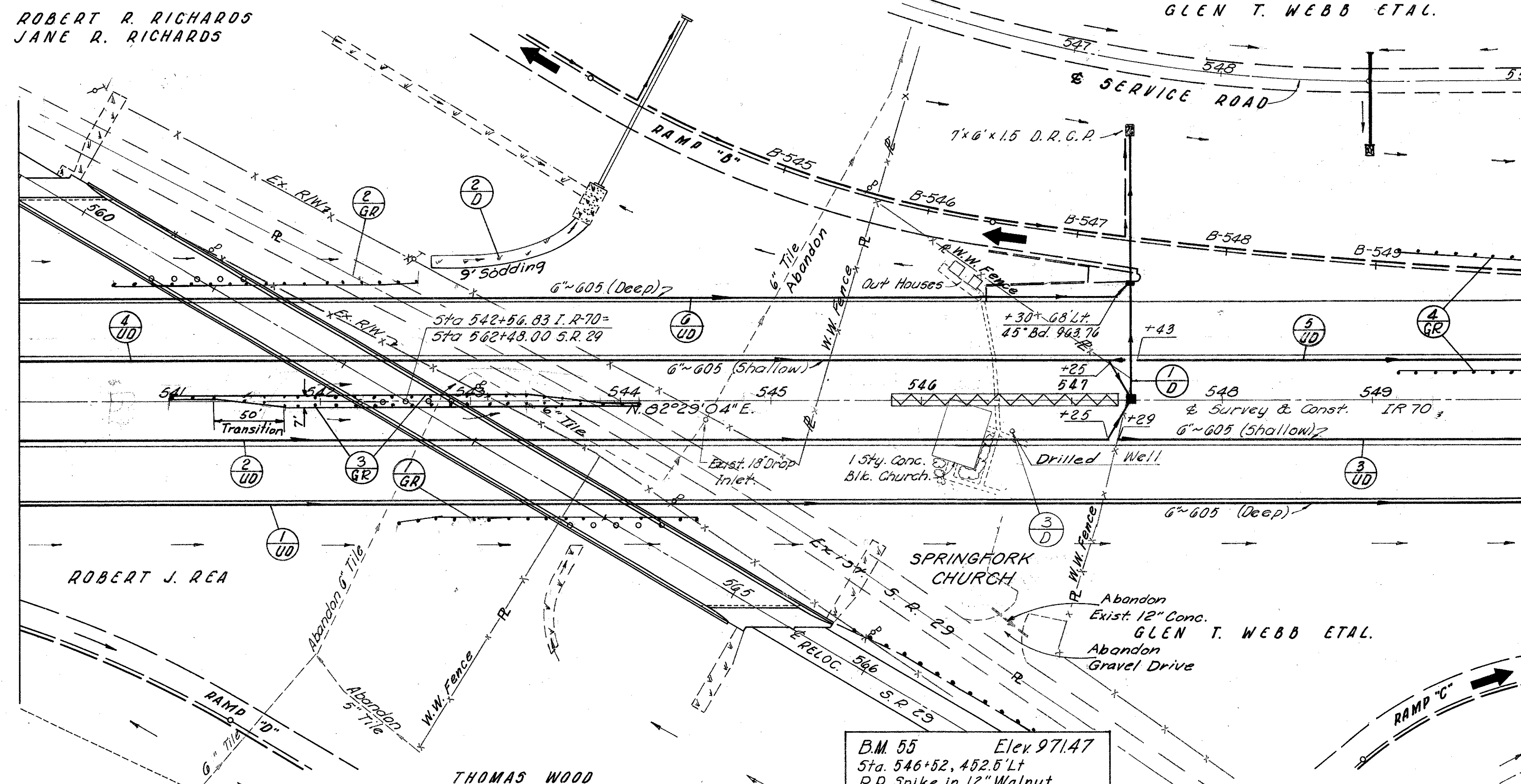
			603				605		BENDS AND BRANCHES	
REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	6" TYPE "B" W/CLB BEDDING Lin. Ft.	6" TYPE "F" TYPE "F" Lin. Ft.	10" TYPE "F" Lin. Ft.	8" TYPE "F" Lin. Ft.	6" SHALLOW Lin. Ft.	6" DEEP Lin. Ft.	6" JO
1-UD	530+00 To 533+25	Rt.	A					325		
2-UD	530+00 To 534+00	Rt.	B		10			417		1
3-UD	534+03 To 540+00	Rt.						597		
4-UD	537+82 To 540+00	Rt.							218	
5-UD	530+00 To 534+00	Lt.	D					400		
6-UD	534+04 To 540+00	Lt.						596		
7-UD	530+00 To 534+00	Lt.	D	42	10			418		2
8-UD	534+04 To 540+00	Lt.							596	
1-D	531+40	Lt. Rt.				50	40			2
TOTALS				42	20	50	40	2753	814	

STA. 530+00 TO STA. 540+00

ROBERT R. RICHARDS
JANE R. RICHARDS

GLEN T. WEBB ETAL.

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NOTE:

1. For Curve Data and References See Geometric Layout See Sheet No. 191
2. For Ramp 'B' Pavement Details with I.R. 70 See Sheet No. 220
3. For Ramp 'B' Line Sheet See Sheet No. 207
4. For Ramp 'C' Line Sheet See Sheet No. 208
5. For Ramp 'D' Line Sheet See Sheet No. 209
6. For S.R. 29 Line Sheet See Sheet No. 195 & 196

Excavation	65685	C.Y.
Embankment	75	C.Y.
Emb. +		C.Y.
Seeding	16082	S.Y.

Bridge No.
MAD-70-1020

Sta 547+40 &
Sta. No. 4 C.B.
Grate = 966.28
R ~ 15" Type B 963.78
R ~ 6" Type F 964.45

Sta 547+40, 78' Lt.
Std. No. 6 C.B. Mod-1
Grate = 969.30
R ~ 15" Type B (In & Out) = 963.19
R ~ 6" Type F = 963.70

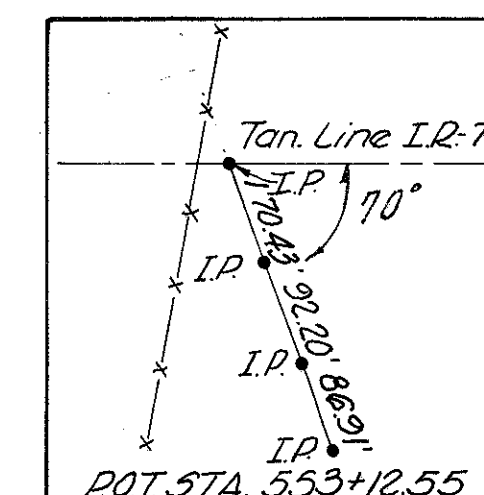
Sta. 547+40, 176' Lt.
Sta. HW-E Endwall
R ~ 15" Type B = 962.45

REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	601 DUMPED ROCK CHAN. PROT.	602 MASONRY CONC.	603 15" TYPE B WGL. B' BEDDING	604 STD. C.B. - 4	605 STD. C.B. 6 Mod-1	606 SODDING	607 JUTE MATTING
1-D 547+40	Lt.	116	2.3	0.26	176	1	1	105	125
2-D 542+75 - 547+73	Lt.								
TOTALS			2.3	0.26	176	1	1	105	125

REF. STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	603 6" TYPE F	606 GUARD RAIL BARRIER DESIGN	605 6" SHALLOW	606 6" DEEP	606 GUARD RAIL TYPE 4-MOD	606 BENDS & BRANCHES	SPECIAL DRILLED WELL ABAND.
1-D 540+00 - 550+00	Rt.					100.0			
2-D 540+00 - 547+40	Rt.	B	10		745			1	
3-D 547+29 - 550+00	Rt.				271				
4-D 540+00 - 547+40	Lt.		10		757			1	
5-D 547+43 - 550+00	Lt.				257				
6-D 540+00 - 547+40	Lt.	B	10			734		1	
7-D 549+15 - 550+00	Lt.								
8-D 542+50 - 544+50	Rt.							170	
9-D 540+625 - 542+62.5	Lt.							200	
10-D 541+00 - 544+12.5	Lt.							575	
11-D 546+60	Rt.								1
TOTALS			30	50	2030	1734	1145		1

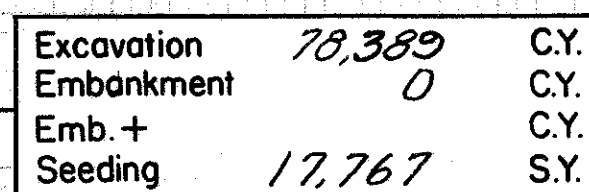
STA. 540+00 TO STA. 550+00

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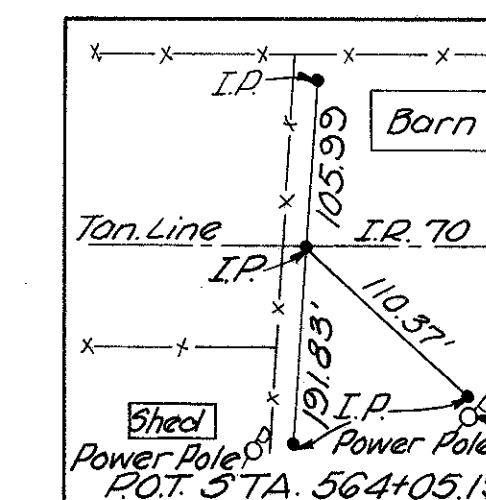
NOTE:

1. For Ramp "C" Line Sheet, See Sheet No. 208
2. For Ramp "C" Pavement Details, See Sheet No. 221
3. For Ramp "C" Curve Data & Geometric Layout, See Sheet No. 191
4. For Service Rd. Line Sheet, See Sheet No. 225
5. For Ramp "B" Pavement Details, See Sheet No. 220

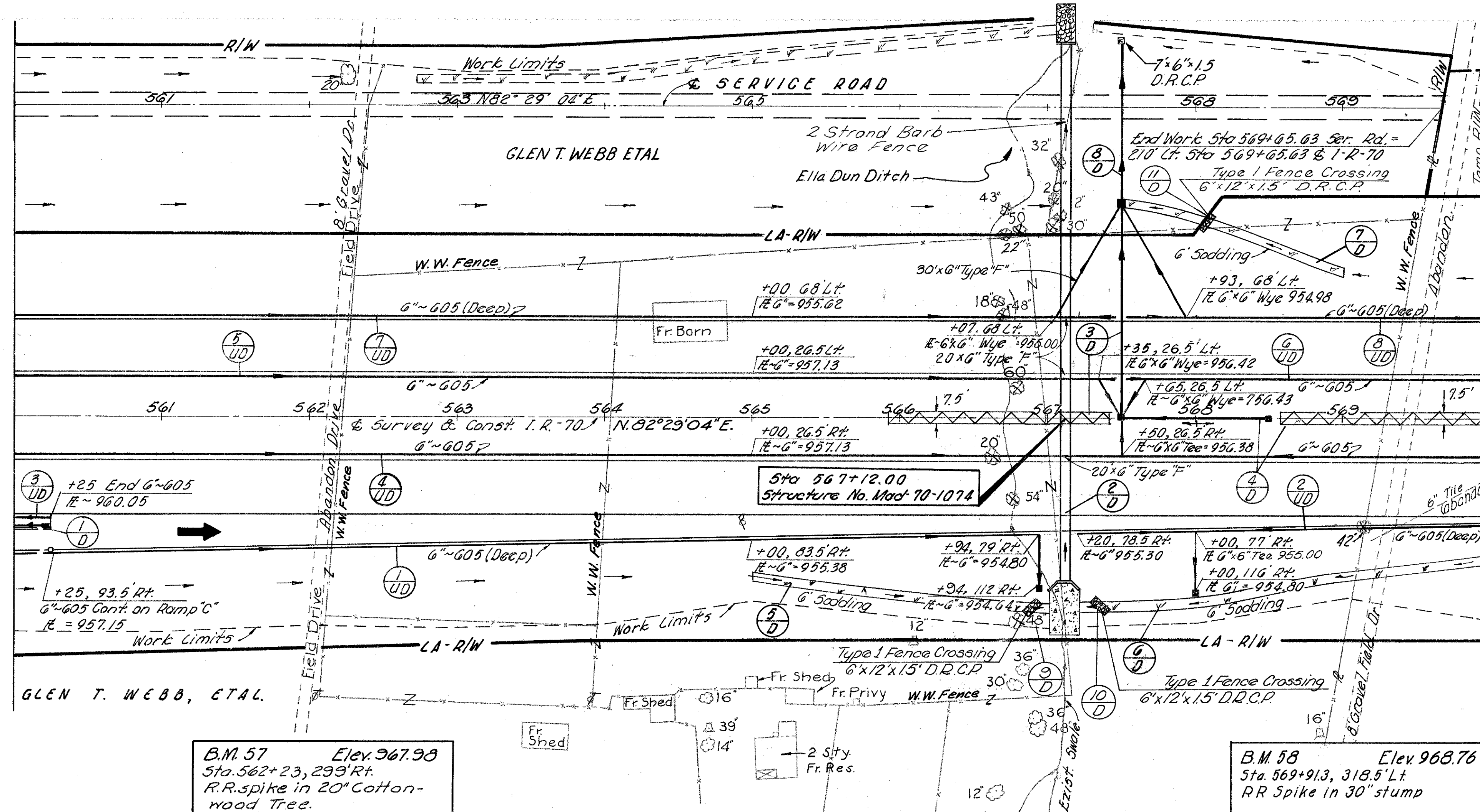


REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	603		605		606		BENDS AND BRANCHES 6" Each
				6"	6"	6"	GUARD RAIL TYPE 4. MOD			
				TYPE F"	SHALLOW	DEEP	TYPE			
				Lin.Ft.	Lin.Ft.	Lin.Ft.	C.F.			
1UD	550+00 to 553+00	Rt.	B	10		317			1	
2UD	553+03 to 559+16	Rt.	C	10	606				1	
3UD	559+16 to 560+00	Rt.	C	10	73				1	
4UD	550+00 to 559+01	Rt.	B	20	911				1	
5UD	559+07 to 560+00	Rt.			93					
6UD	550+00 to 559+00	Lt.	B	20	907					
7UD	559+03 to 560+00	Lt.			97				1	
8UD	552+00 to 552+95	Lt.	A	10		153			1	
9UD	553+03 to 558+95	Lt.	A	10		653			1	
10UD	559+03 to 560+00	Lt.				97				
LOCK	550+00 to 550+40	Lt.					80			
TOTALS				90	2692	1220	80			

STA. 550+00 TO STA. 560+00



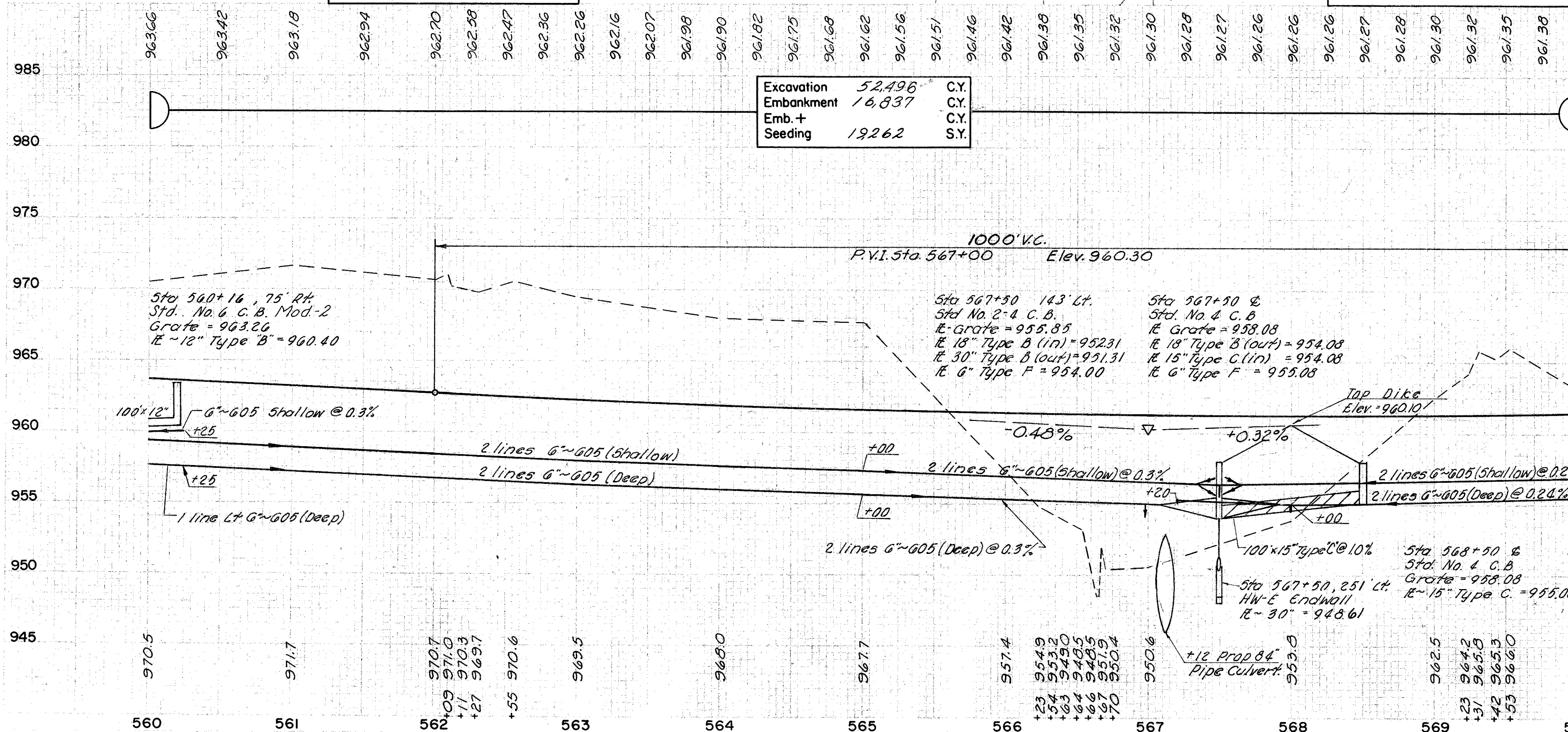
NOTE:
1. For Service Rd. Line Sheet See Sheet No. 226
2. For Ramp "C" Pavement Details See Sheet No. 221



B.M. 57 Elev. 967.98
Sta. 562+23, 293' Rt.
RR spike in 20" Cotton-wood Tree.

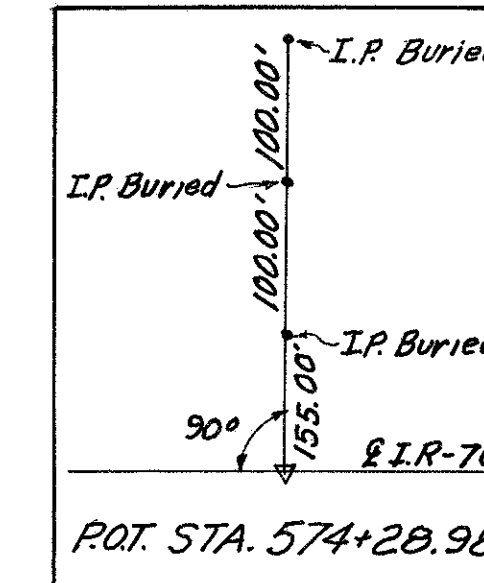
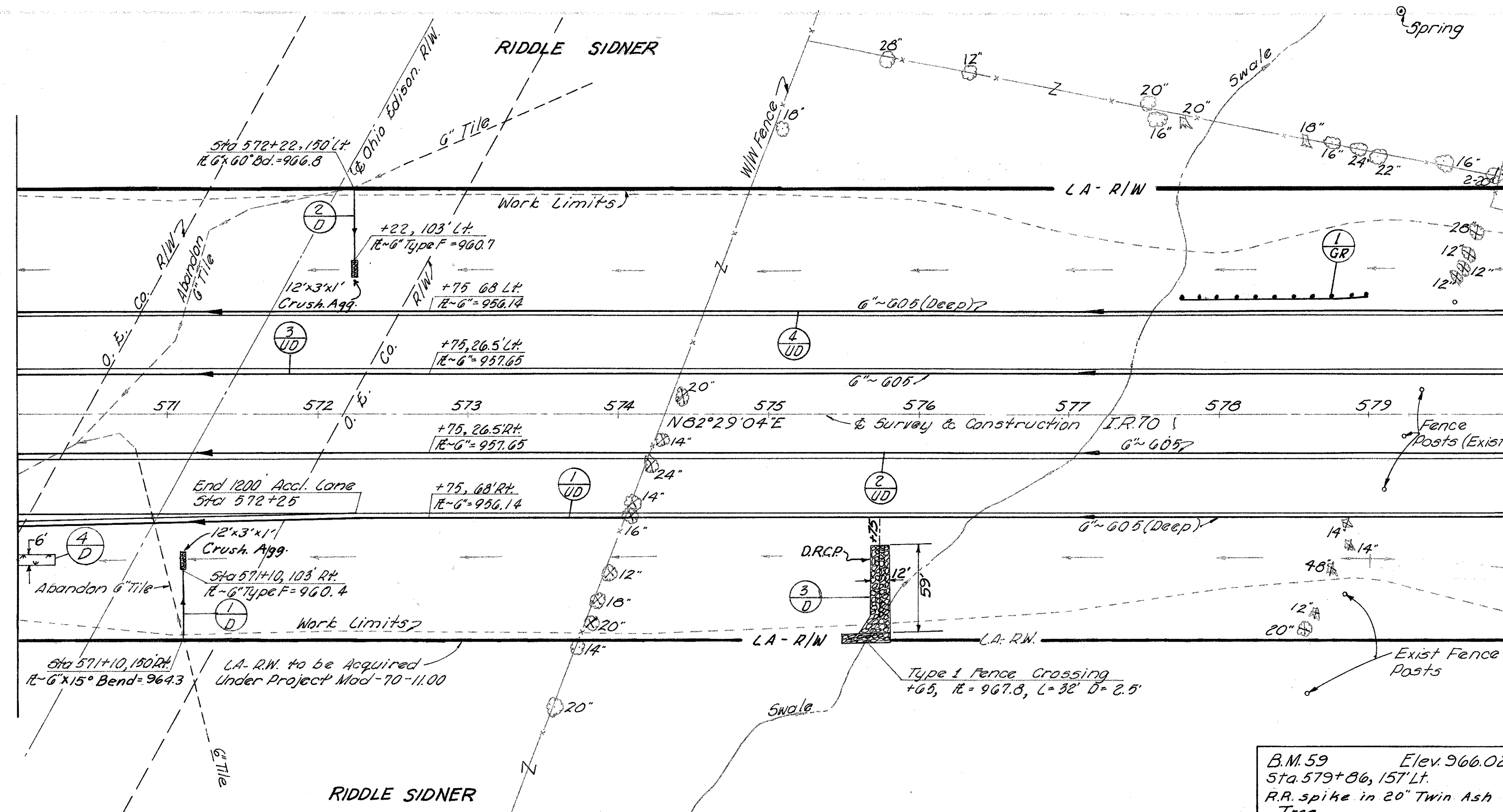
B.M. 58 Elev. 968.76
Sta. 569+91.3, 318.5' Lt.
RR Spike in 30" stump

Excavation	52,496	C.Y.
Embankment	16,837	C.Y.
Emb. + Seeding	19,262	S.Y.



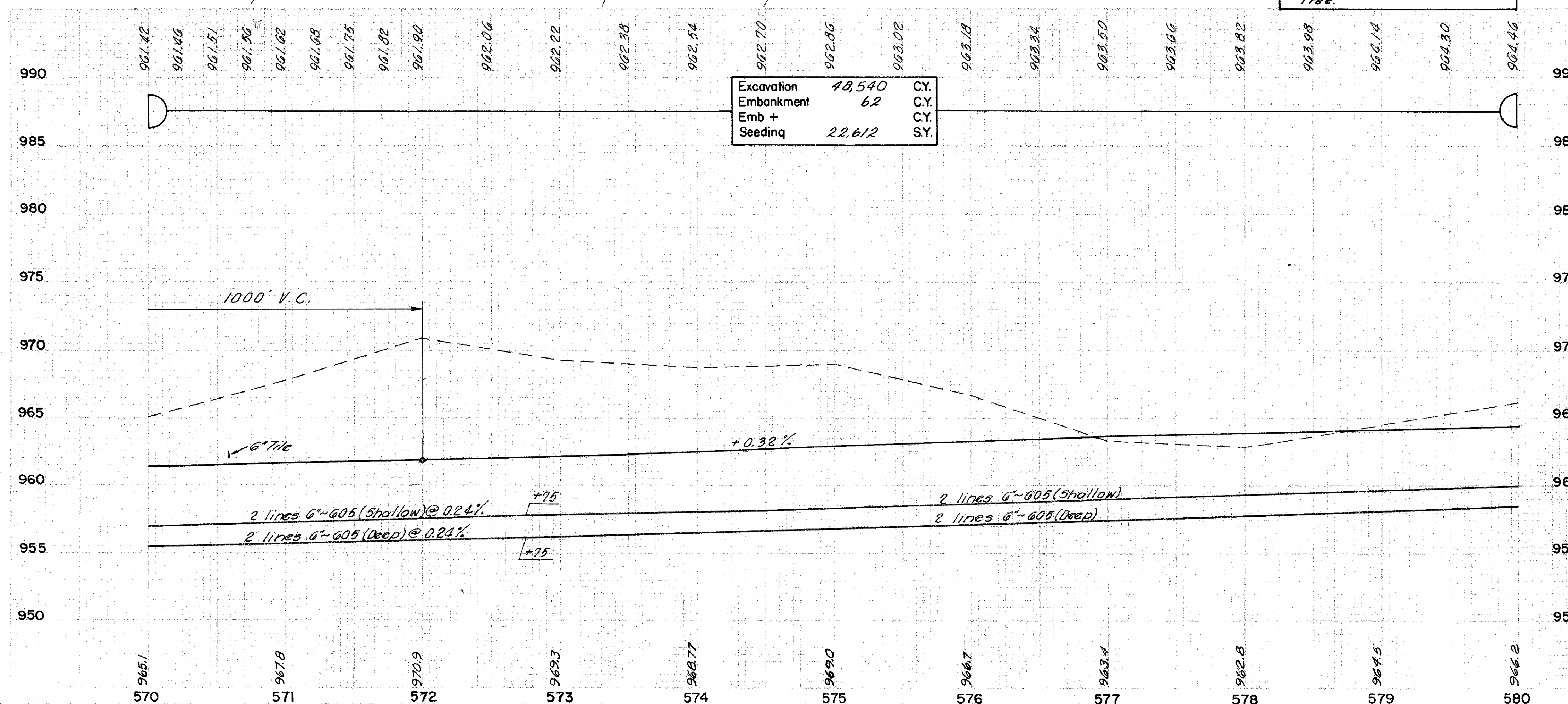
REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	G01		G02		G03		G04		G05		BENDS AND BRANCHES	B.Y.	S.Y.
			D.R.C.P.	CONC.	C.V.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.	L.F.			
1-D 560+00 - 560+16	Rt.	120													
2-D 567+12	Lt.	269	278.75	86.79	364										
3-D 567+50	Lt.	122													
4-D 567+50 - 568+50	Lt.	122													
5-D 568+00 - 569+00	Rt.														
6-D 567+20 - 570+00	Rt.														
7-D 567+52 - 569+00	Lt.														
8-D 567+50	Lt.	122	24	0.51											
9-D 568+08	Rt.	4													
10-D 567+35	Rt.	4													
11-D 568+08	Lt.	4													
TOTALS			422.75	27.30	364	16	108	143	100	2	1	1	4304	250	

REF.	STATION TO STATION	SIDE	UNDER DRAIN OUTLET DETAIL	G03	G05		BENDS AND BRANCHES G
				G"	G"	G"	
				TYPE "T"	SHALLOW	DEEP	
				L.F.	L.F.	L.F.	Each
1-UD	560+25 - 566+24	RT		10		692	1
2-UD	567+20 - 570+00	RT		10		309	1
3-UD	560+00 - 560+25	RT			25		
4-UD	560+00 - 570+00	RT		30	996		1
5-UD	560+00 - 567+50	LT		30	747		1
6-UD	567+50 - 570+00	LT		10	267		1
7-UD	560+00 - 567+50	LT		60		776	1
8-UD	567+50 - 570+00	LT		10		326	1
TOTALS				160	2035	2103	



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374



REF.	STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	601	603	605		660		
				DUMPED ROCK CHAN. PROT. Cu Yds.	CRUSH. AGG. SLOPE PROT. Sq Yds.	6" TYPE 2 Lim.Ft.	6" TYPE 2 Lim.Ft.	6" SHALLOW Lim.Ft.	6" DEEP Lim.Ft.	Sodding S.Y.
★ 1-D	571+10	Rt.	123	40	37	10				
★ 2-D	572+22	Lt.	123	40	37	10				
3-D	575+75	Rt.	124	87.6						
4-D	570+00 to 570+25							17		
1-UD	570+00 to 580+00	Rt.						1000		
2-UD	570+00 to 580+00	Rt.					1000			
3-UD	570+00 to 580+00	Lt.					1000			
4-UD	570+00 to 580+00	Lt.						1000		
TOTALS				87.6	8	74	20	2000	2000	17

FOR ADDITIONAL QUANTITIES SEE OTHER QUANTITY BOX

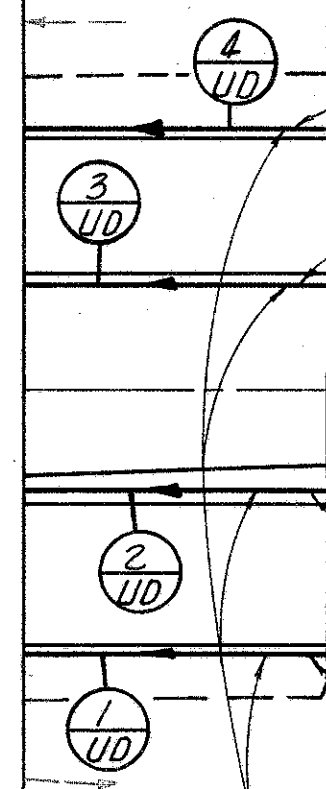
REF.	STATION TO STATION	SIDE	BENDS & BRANCHES EACH	606 GUARD RAIL TYPE 4 MOD LIN. FT.
1-D	571+10	Rt.	1	
2-D	572+22	Lt.	1	
1-GR	571+75 to 579+00	Lt.		125
TOTALS				125

STA. 570+00 TO STA. 580+00

END PROJECT
STA. 580+80.00

S.L.M. 11.00
I-70-3(9/75)

END WORK
STA. 580+90.00



6"~605 (Deep)
6"~605 (Shallow)
6"~605 (Shallow)
6"~605 (Deep)

Unplug exist. 6" Underdrain and
Connect with Proposed Underdrain
at Sta 580+75. Cost to be included
in unit Price bid for Item 605

NOTE: Adjacent Mainline Typical Section
is the same as I.R. 70 Typical Section for
this Project (9"~451 on 6"~3/0 - 6 Lanes

RIDDLE SIDNER

LA & R/W

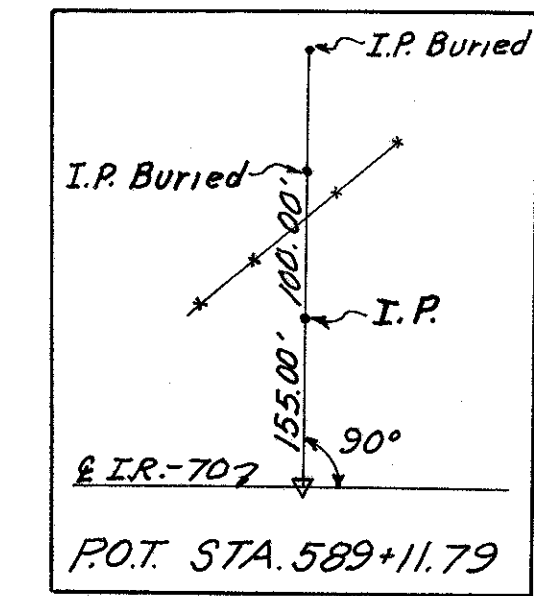
LA & R/W

LA & R/W

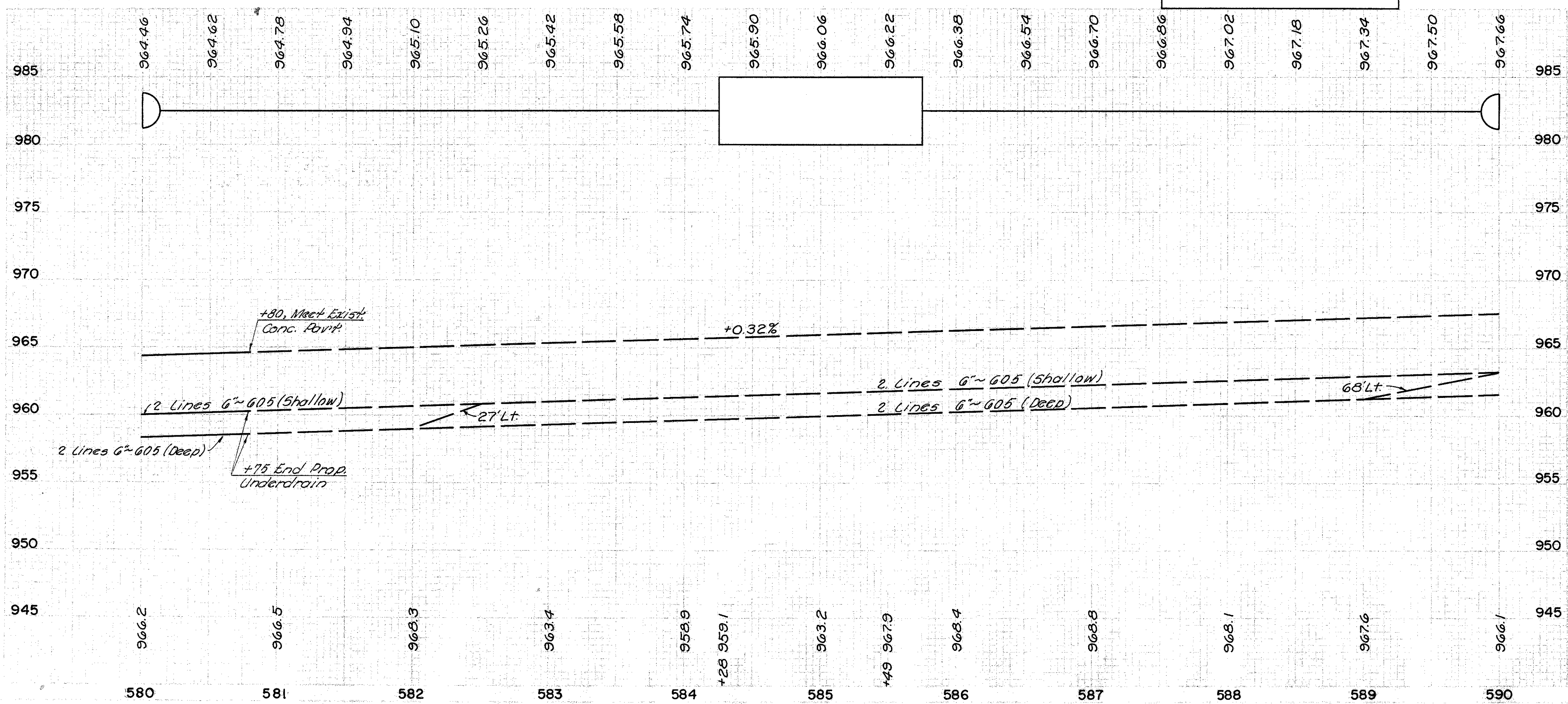
LA & R/W

RIDDLE SIDNER

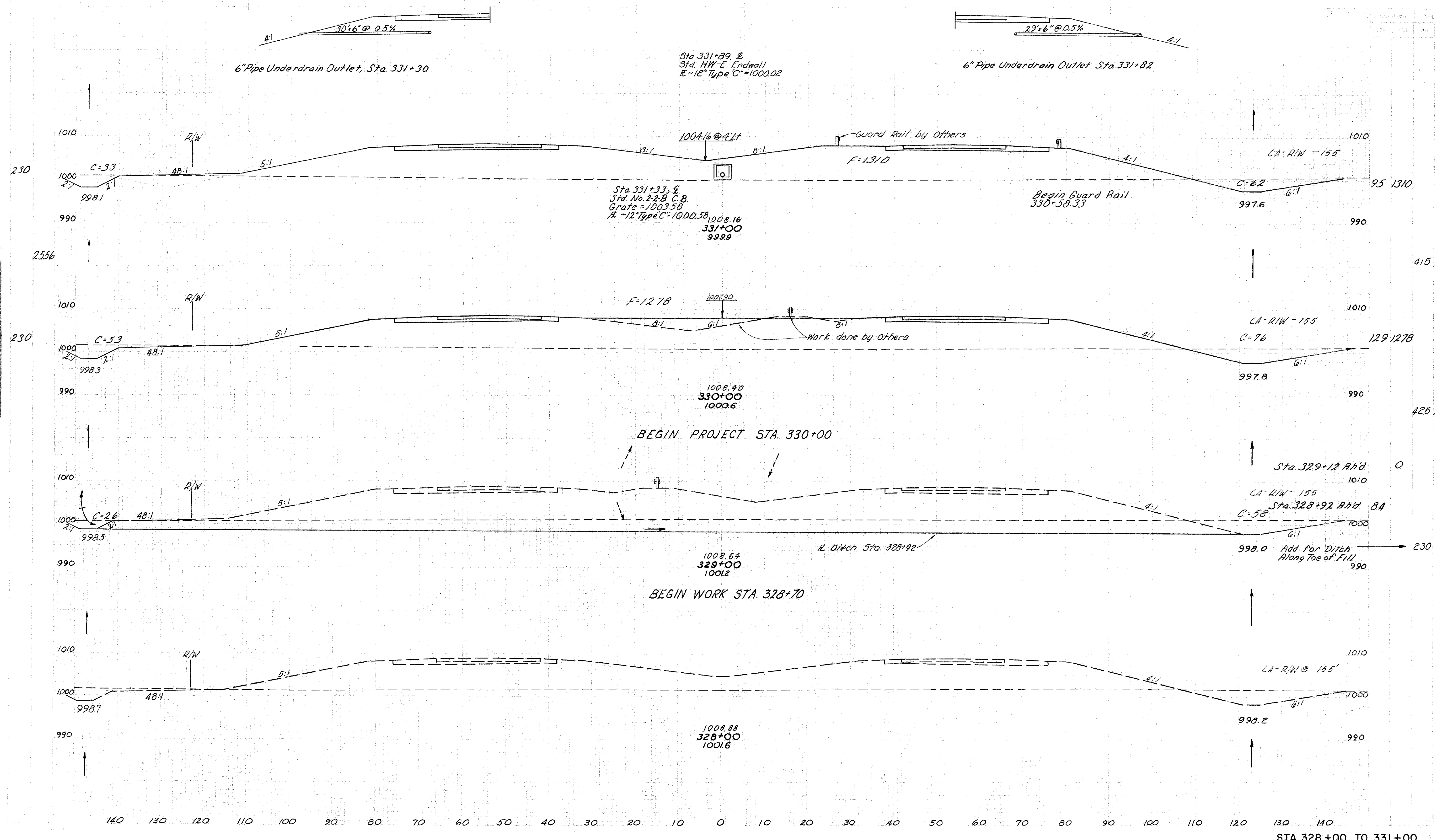
B.M. 60 Elev. 965.57
Sta. 588+28.2 154.1' Rt.
R.R. Spike in 24" Thorn



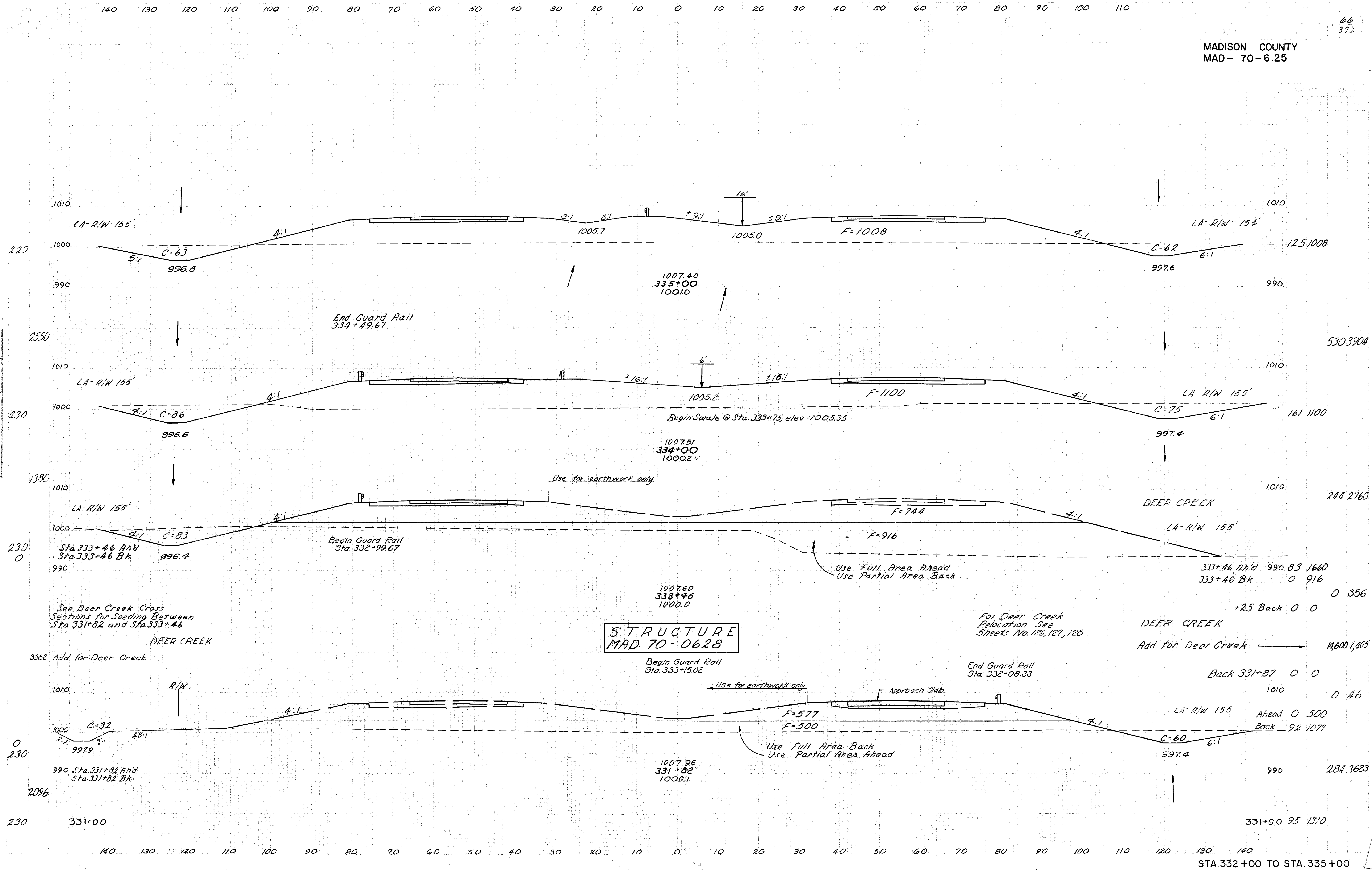
MADISON COUNTY
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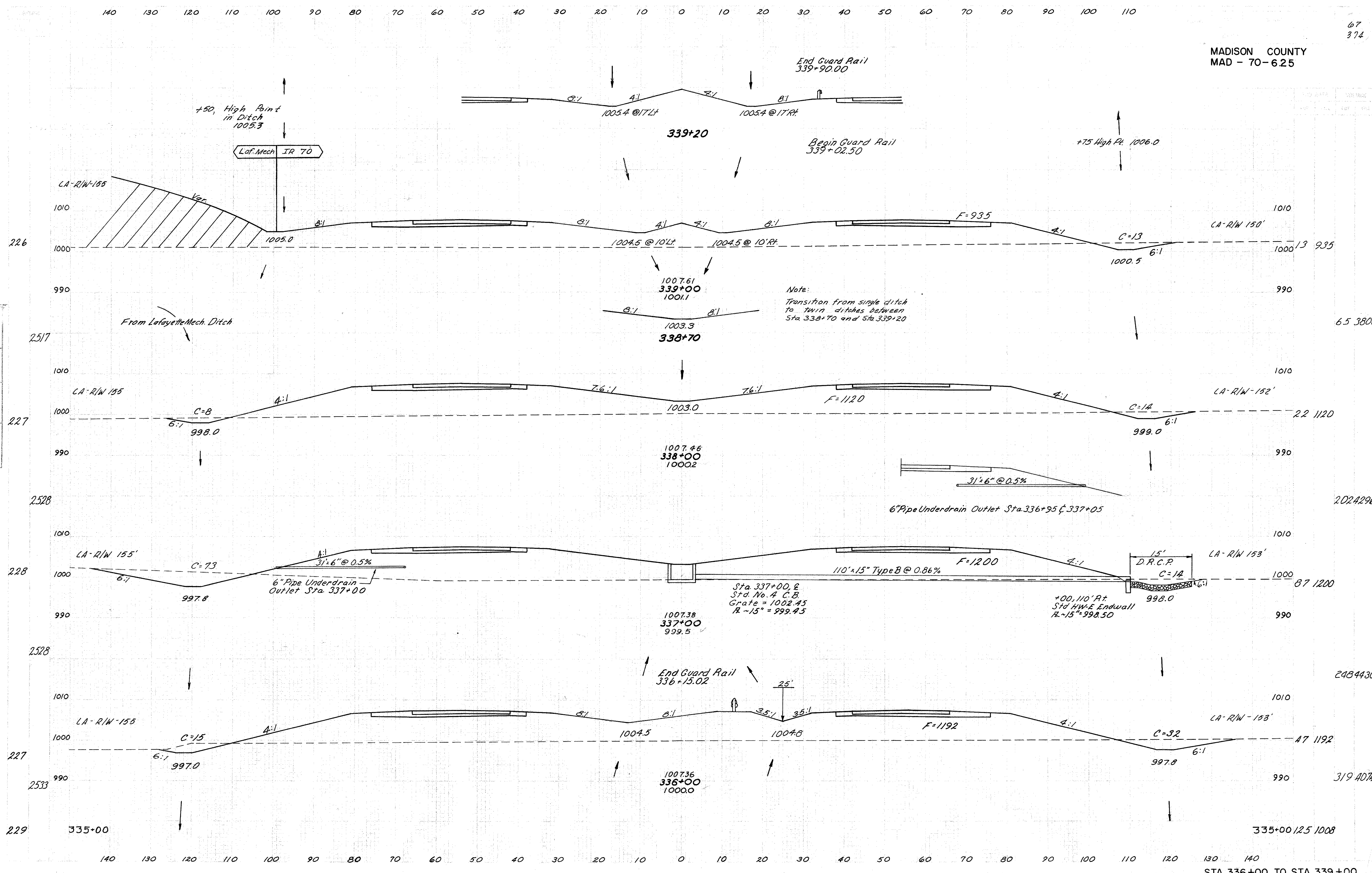


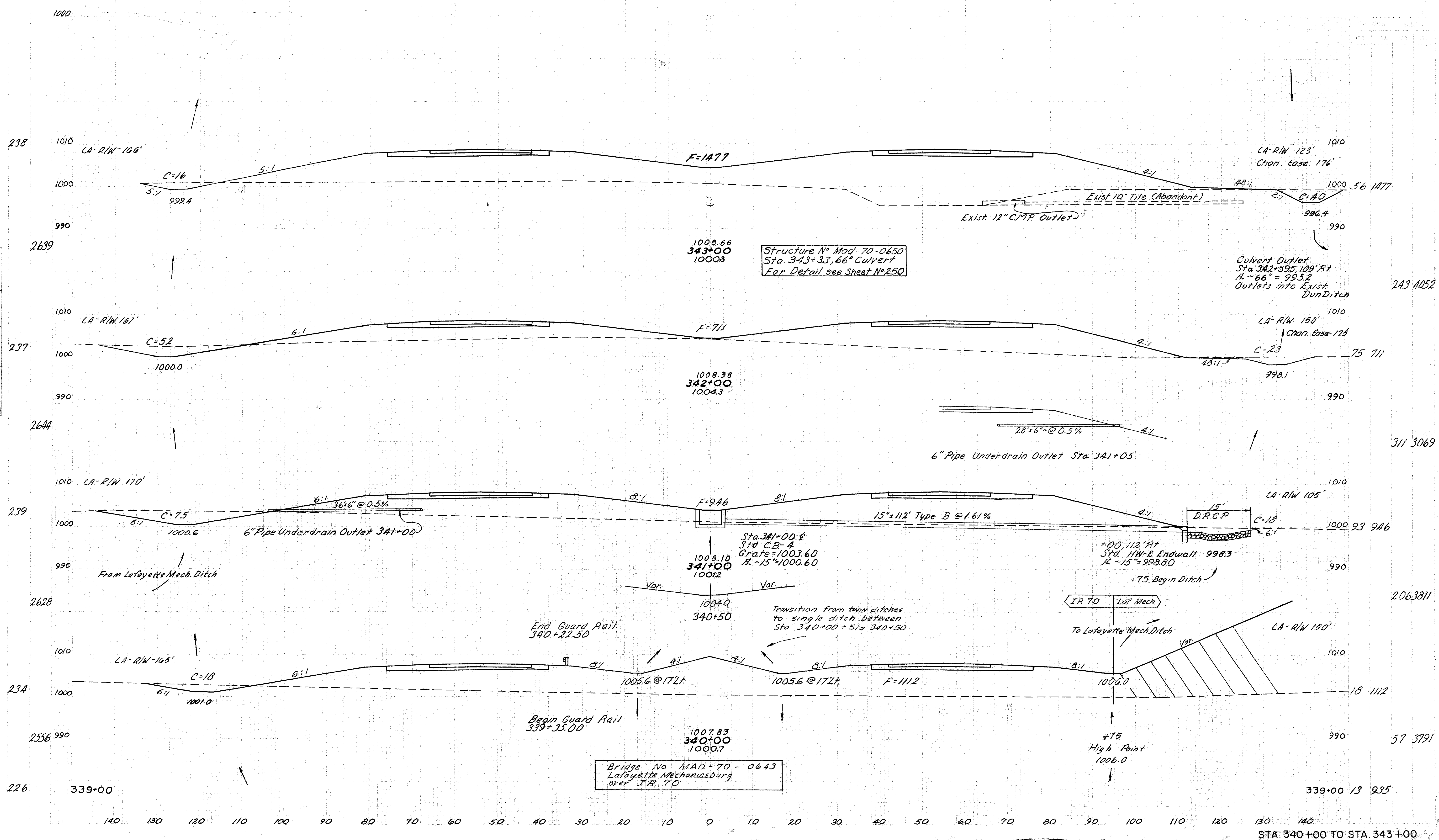
REF STATION TO STATION	SIDE	605									
		6" SHALLOW	6" DEEP								
1 UD 580+00 to 580+75	Rt.	L.F.	L.F.								
2 UD 580+00 to 580+75	Rt.	75	75								
3 UD 580+00 to 580+75	Lt.	75	75								
4 UD 580+00 to 580+75	Lt.	75	75								
TOTALS		150	150								



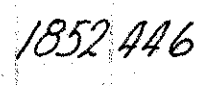
Ex. Ground	Plotted	Checked	Dated
Template			
Plan			
Earthwork Chart			
Sealing Chart			

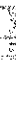







Ex. Ground	Plotted	Chk	Dist
Template	Plotted	Chk	Dist
Plan	Plotted	Chk	Dist
Endored Quant.	Plotted	Chk	Dist
Staking Quant.	Plotted	Chk	Dist



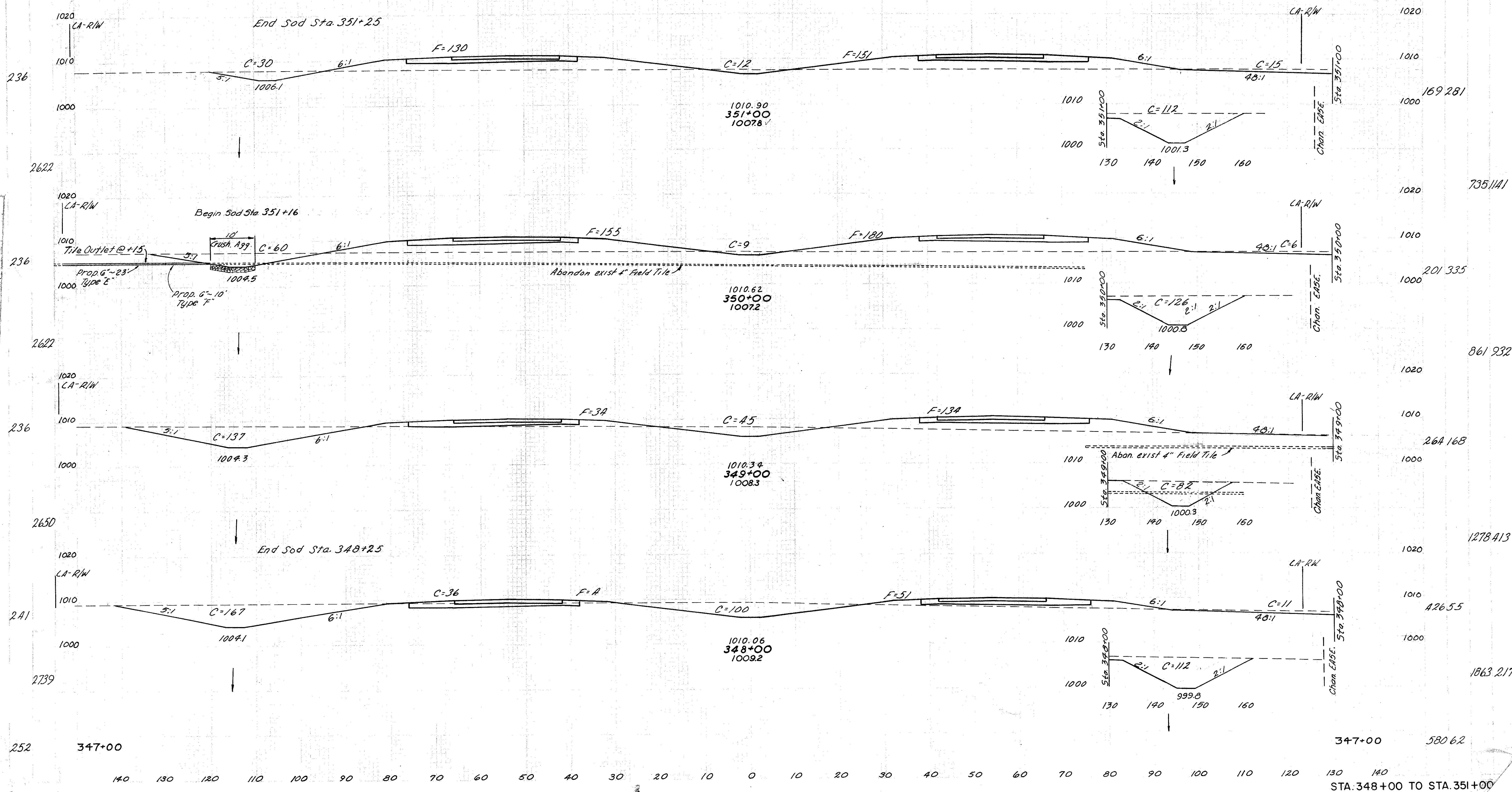
Ex. Group	Planted	Cl	Infld
Temple			
Plan.			
Earlwork Quant.			
Seeding Quant.		F. G	~

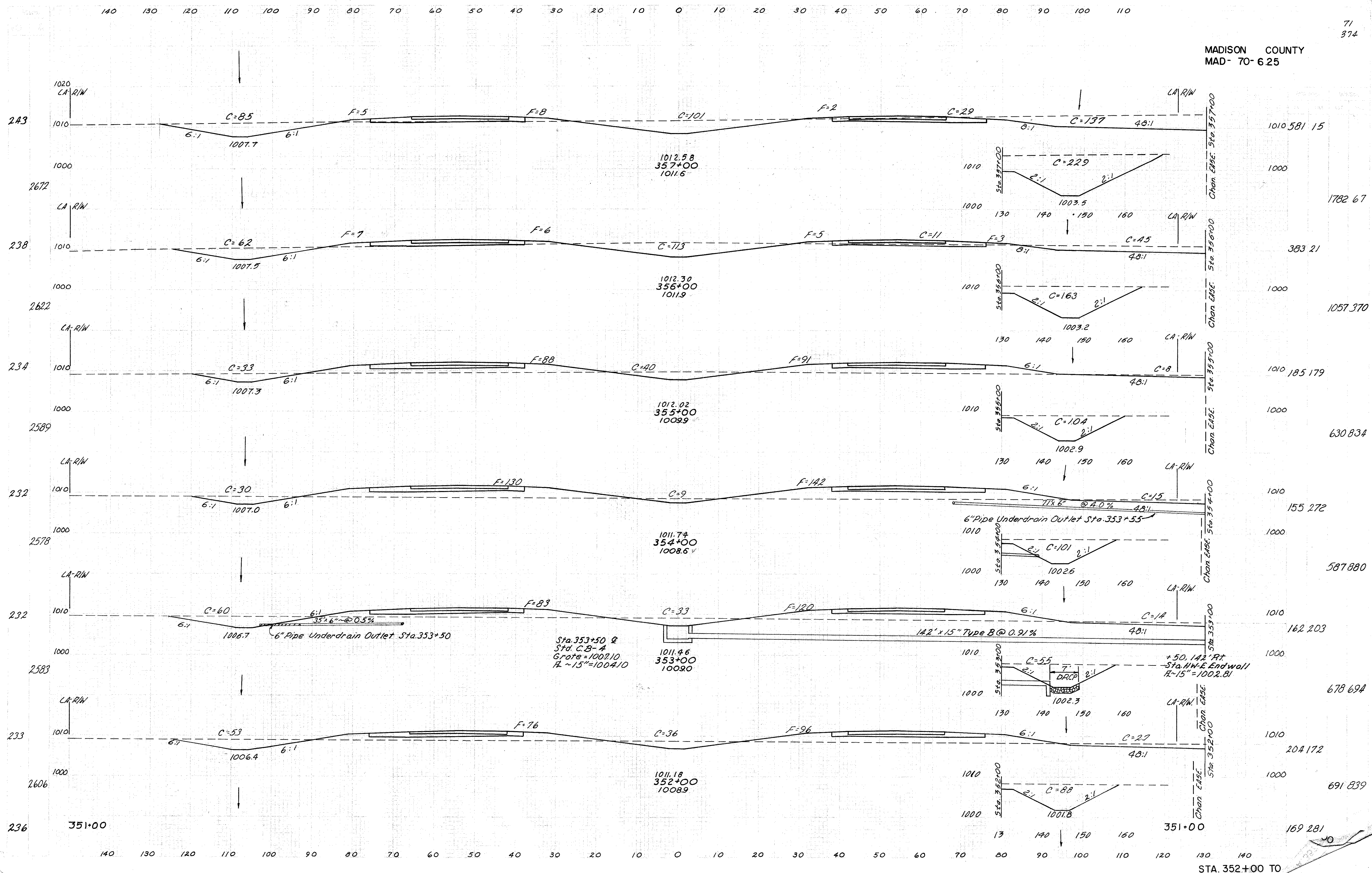
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70
374

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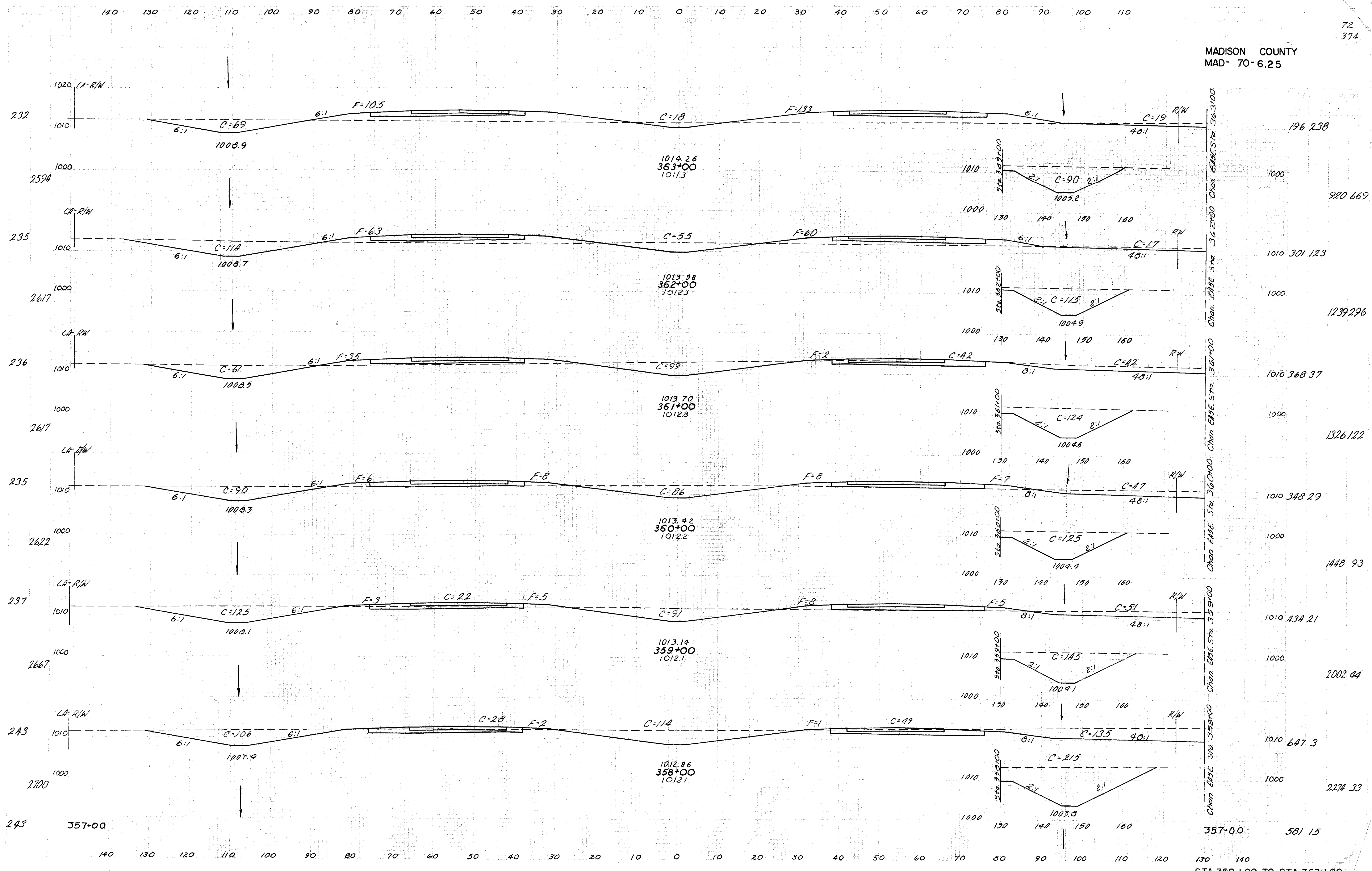
By Ground	Plotted	Checked
Template		
Plan		
Endmark Cont.		
Sealing Cont.		



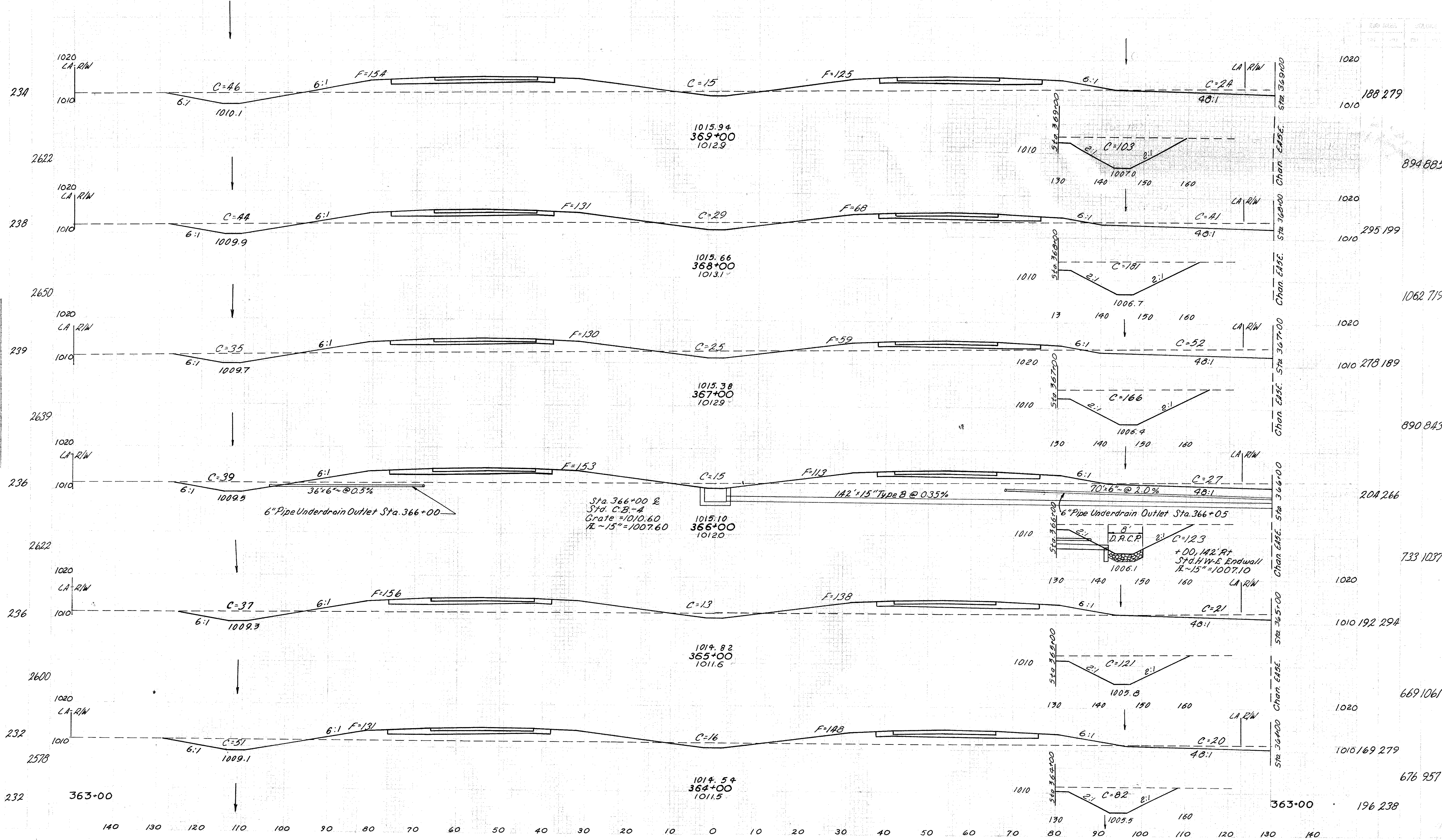


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Sta. Ground	Profiled	Gr.	Ind.
Plan	Profiled	Gr.	Ind.
Stakeout	Profiled	Gr.	Ind.
Stakeout	Profiled	Gr.	Ind.

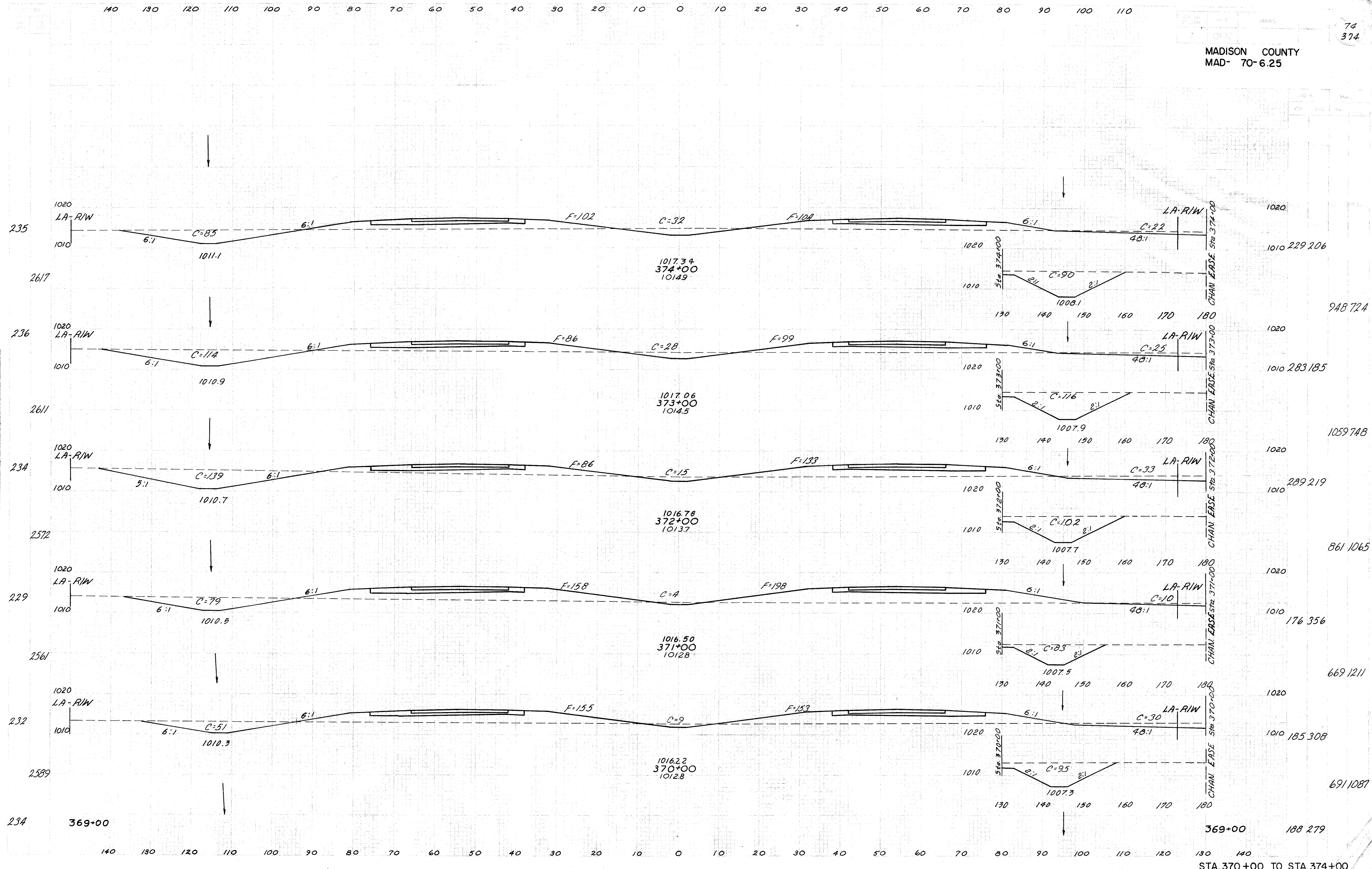


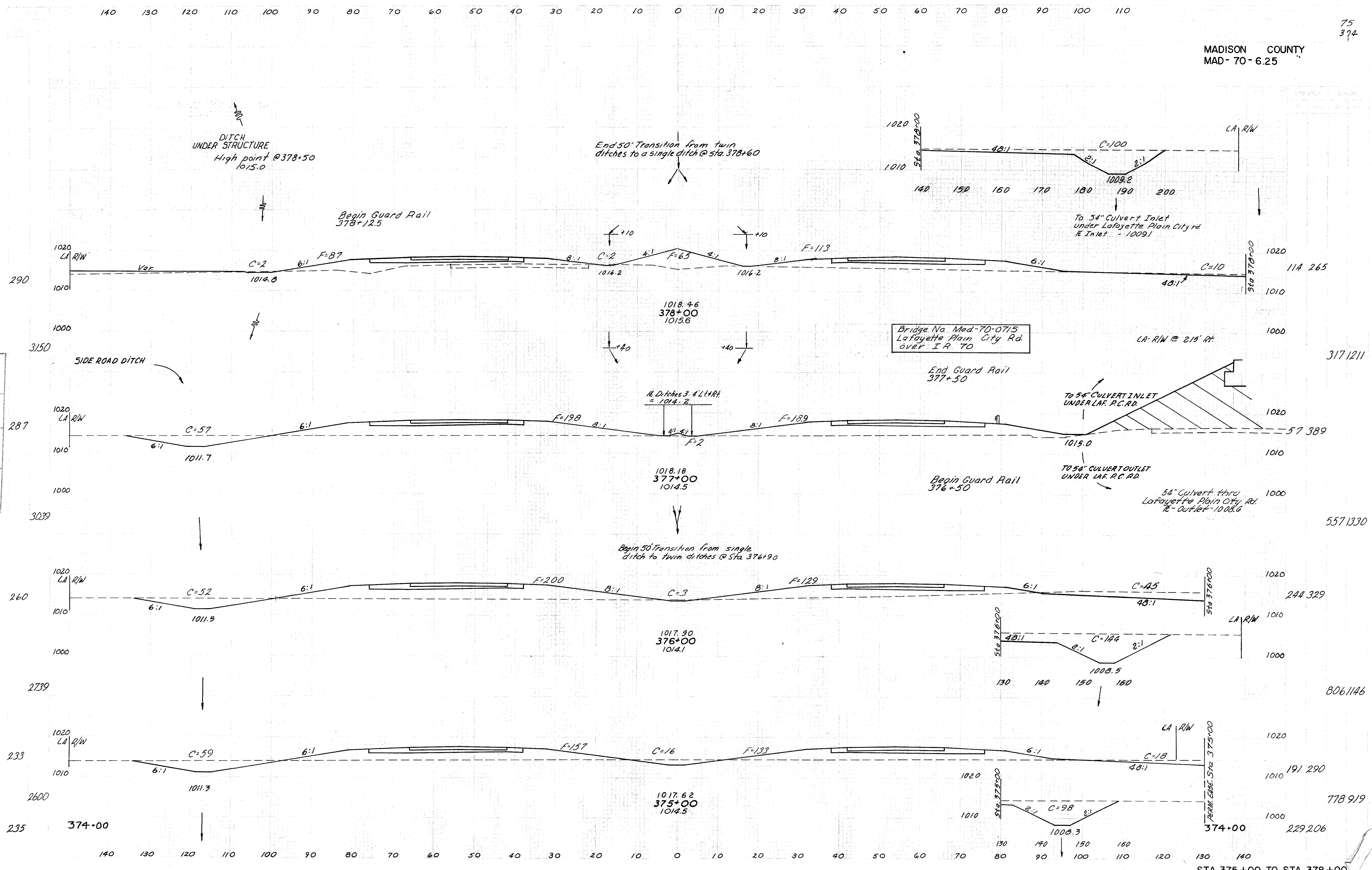
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As Ground	Plotted	Checked	Indexed
Complete	1/10	1/10	1/10
Plan	1/10	1/10	1/10
Section	1/10	1/10	1/10
Detail	1/10	1/10	1/10
Section	1/10	1/10	1/10
Detail	1/10	1/10	1/10

Initial					
Plot					
Ex. Ground					
Complete					
Plan					
Earthwork Chart					
Sealing Chart					

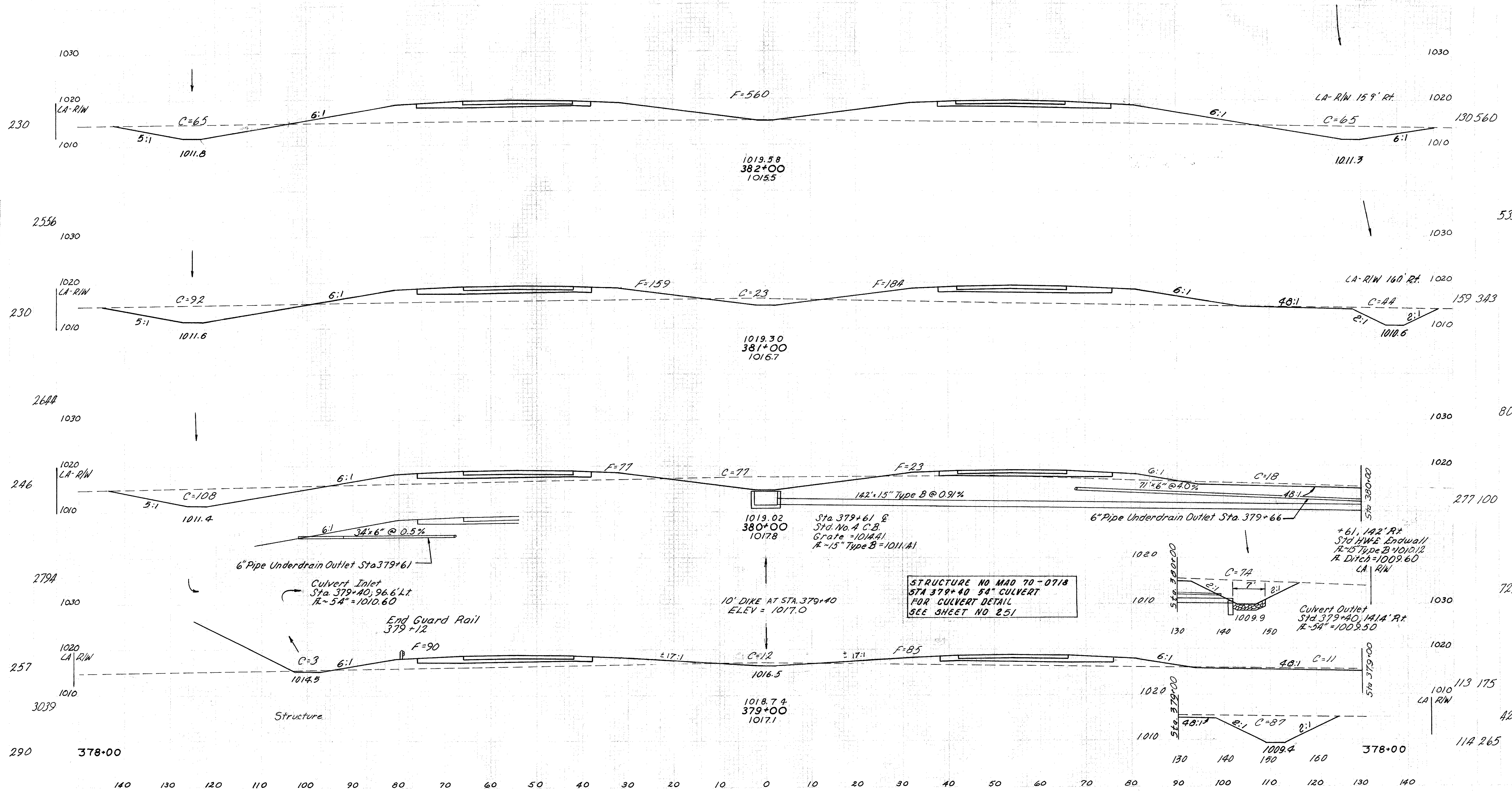




140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

76
374

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5351672

807820

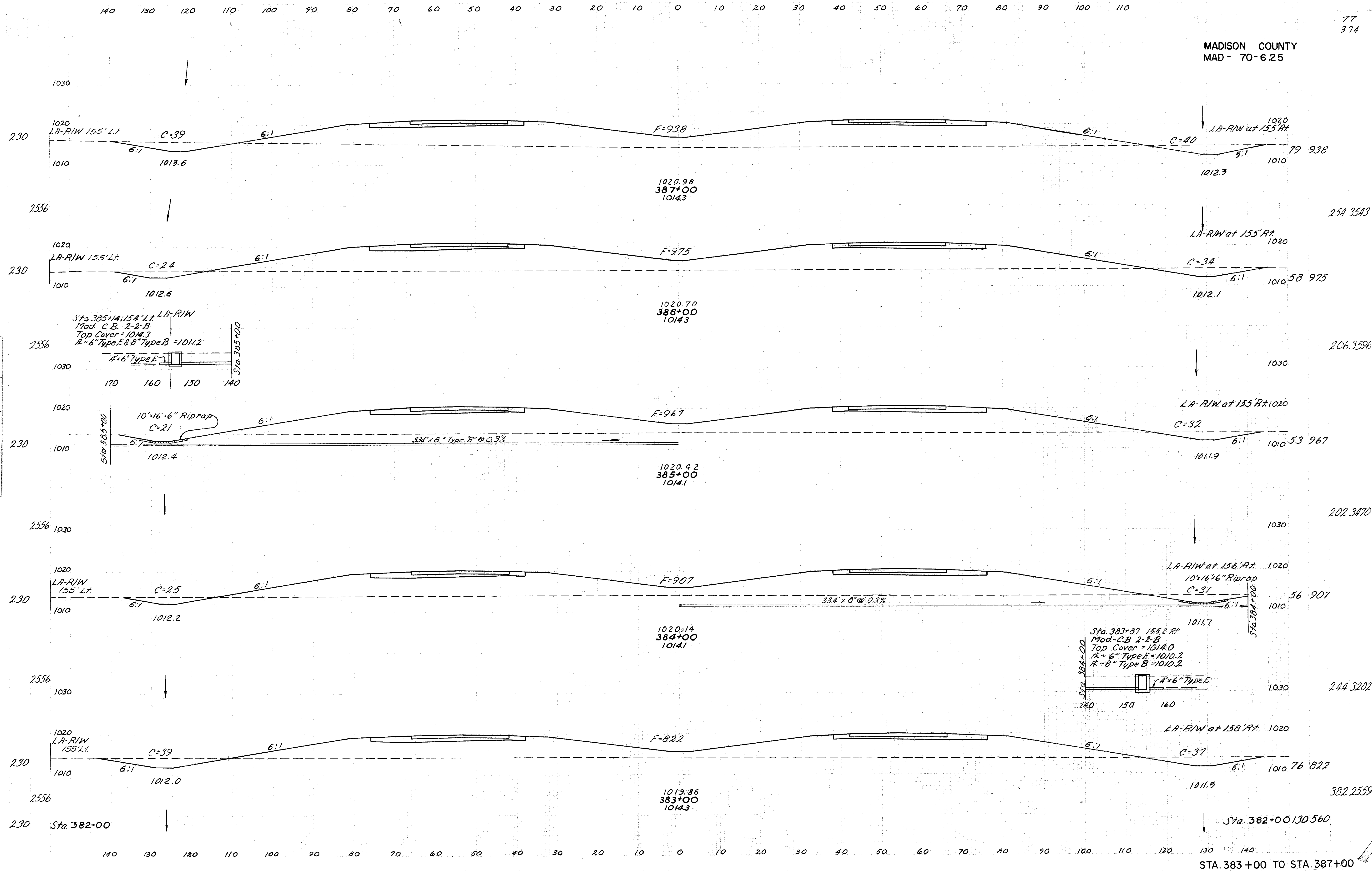
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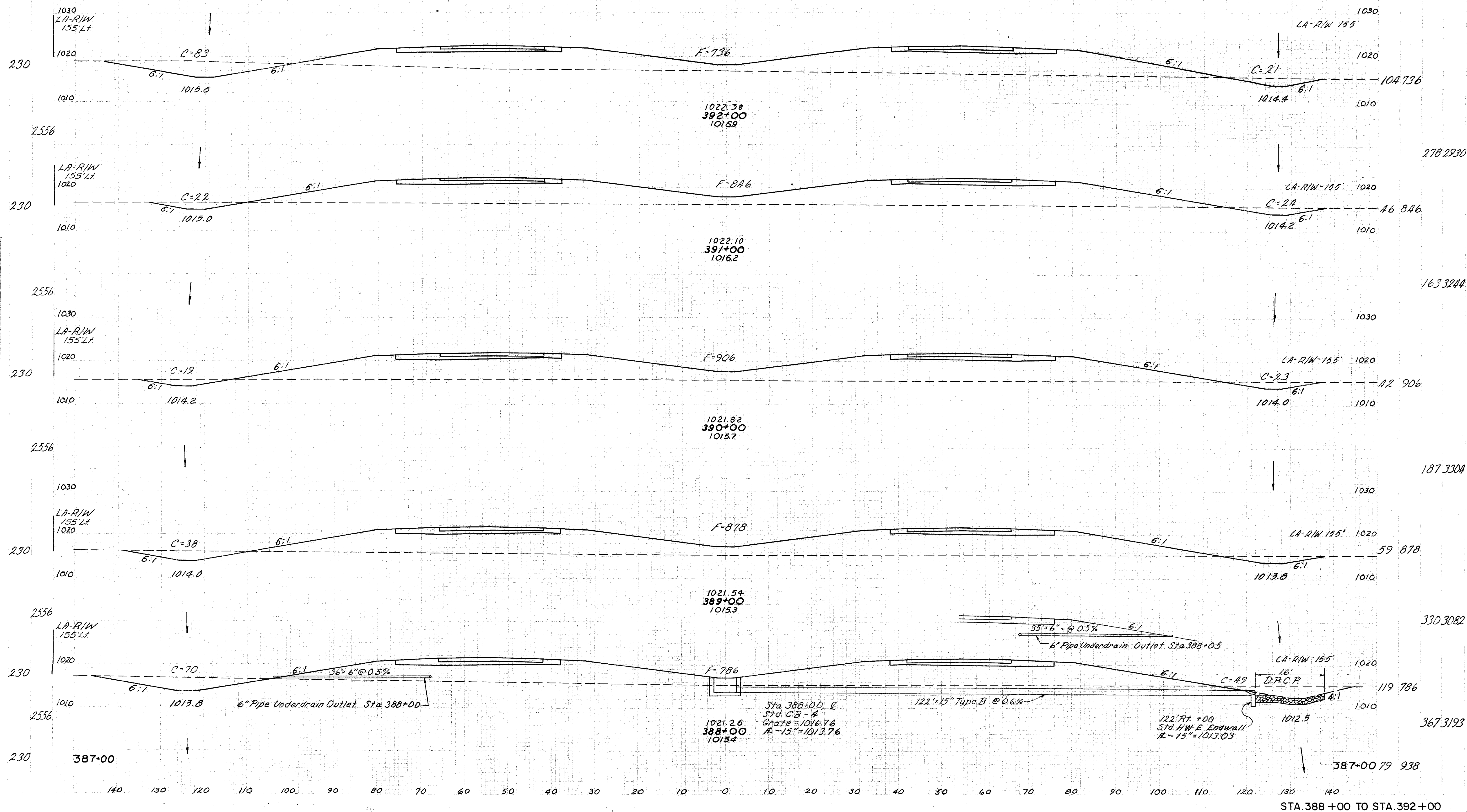
114265

STA. 379+00 TO STA. 382+00

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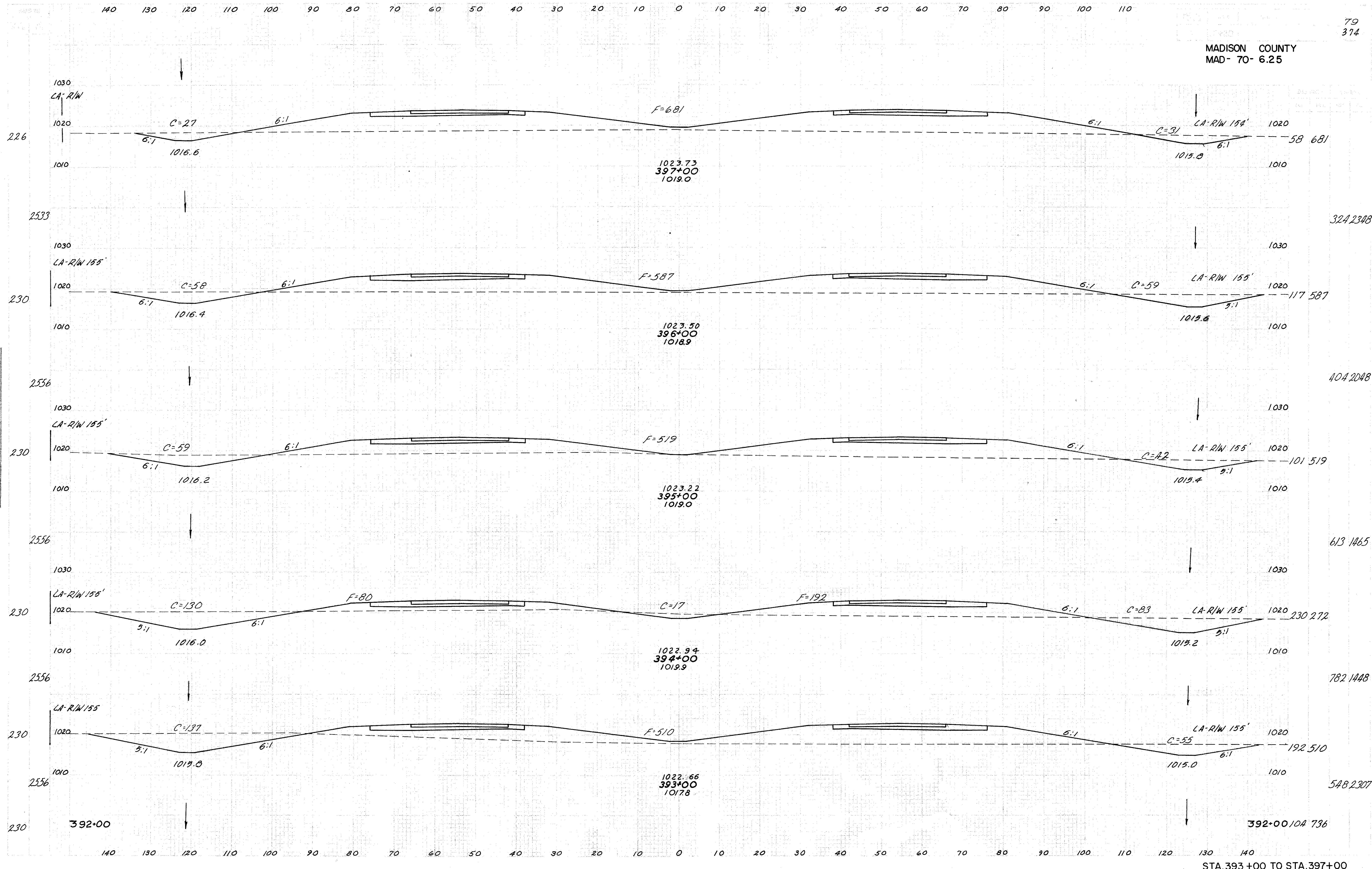


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STA. 388+00 TO STA. 392+00

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324 2348

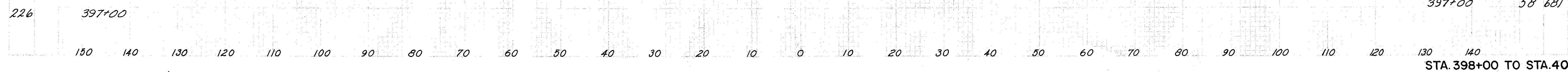
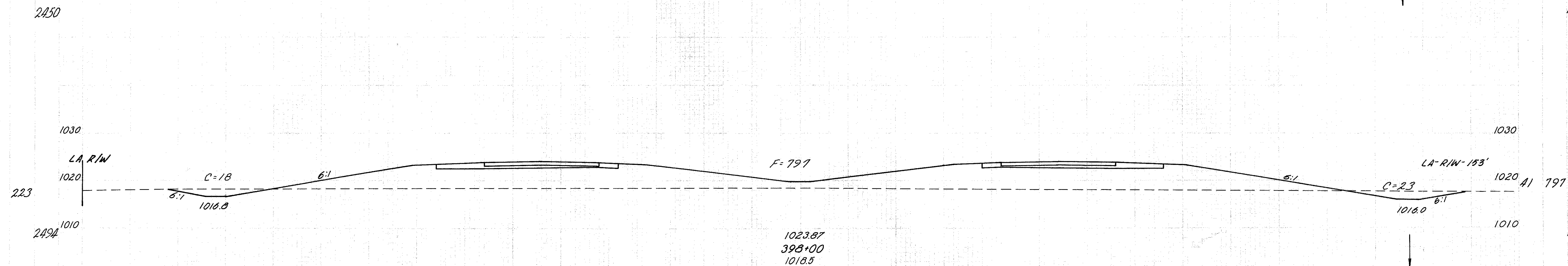
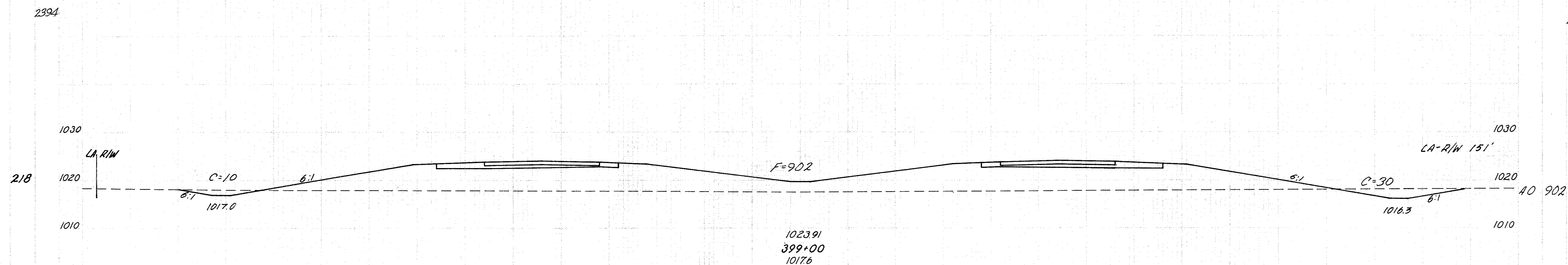
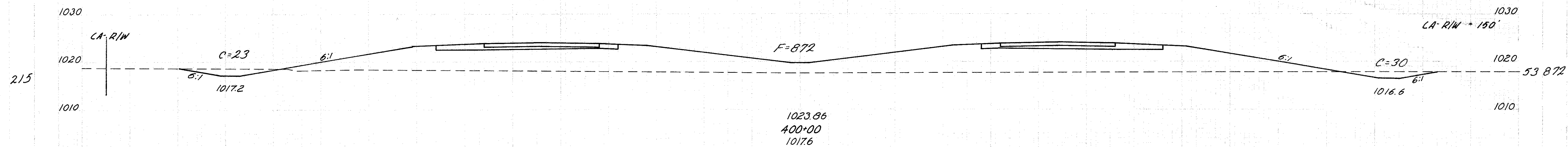
404 2048

613 1465

782 1448

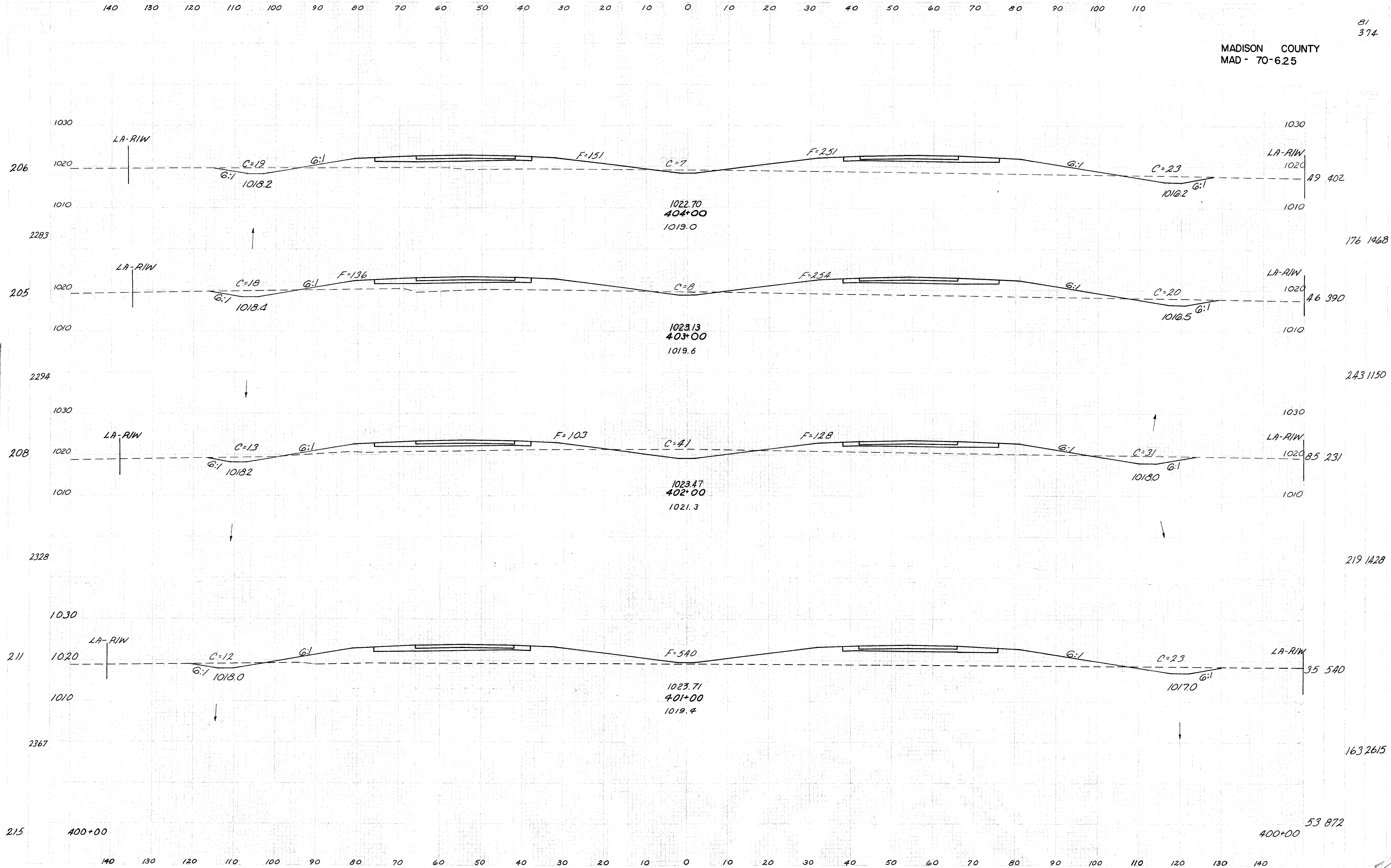
548 2307

MADISON COUNTY
MAD- 70-625

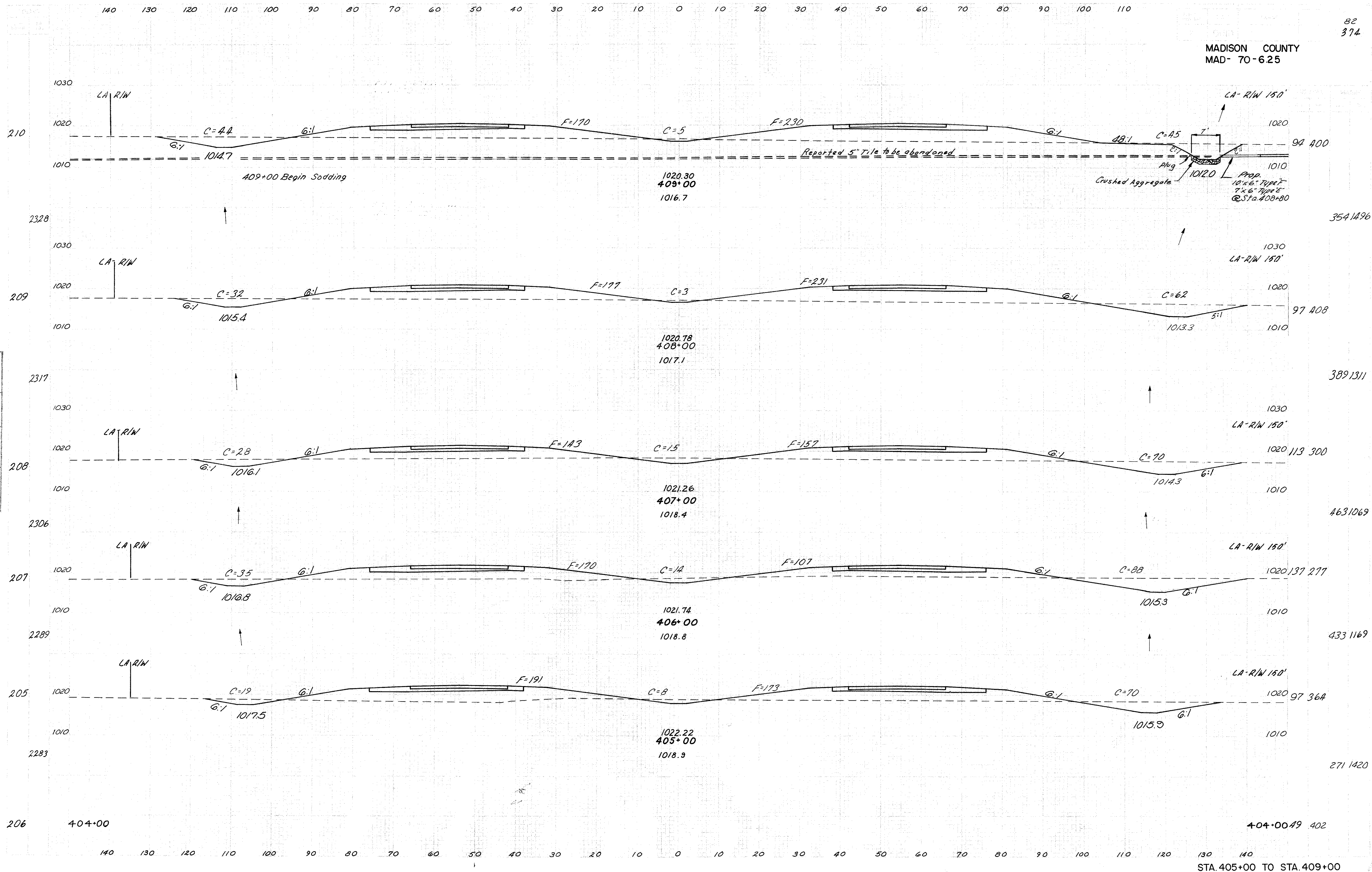


Inked E.M.	
Plotted E.S.C. D.L.D.	Fig. ✓
Ex. Ground Template Plan.	Seeding Quant. Seeding Quant.

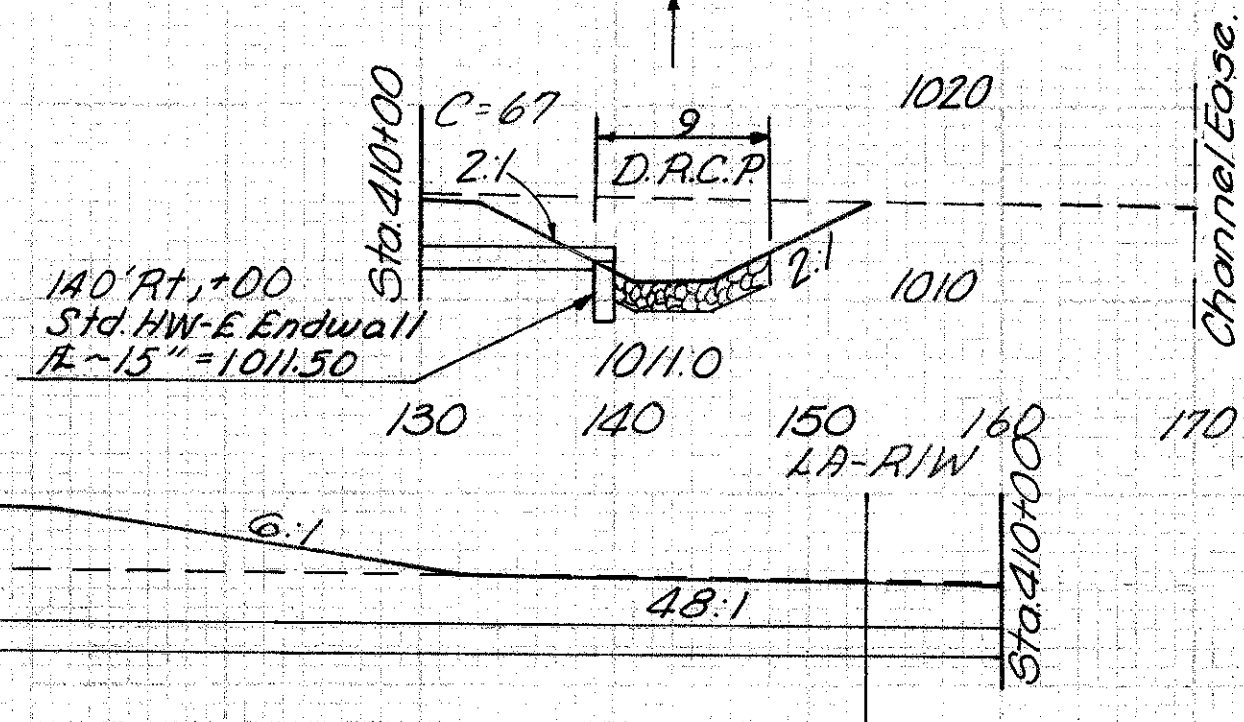
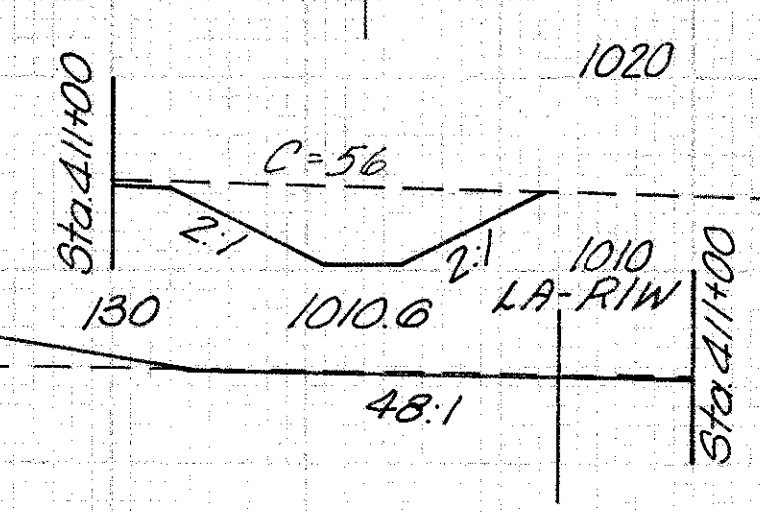
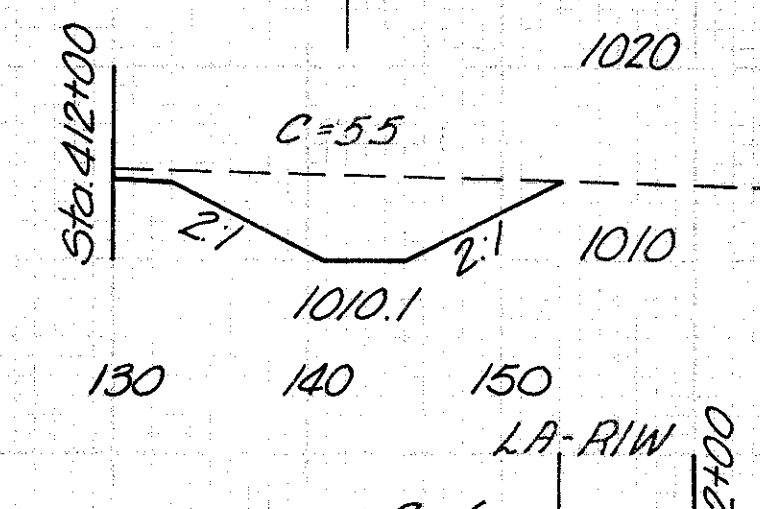
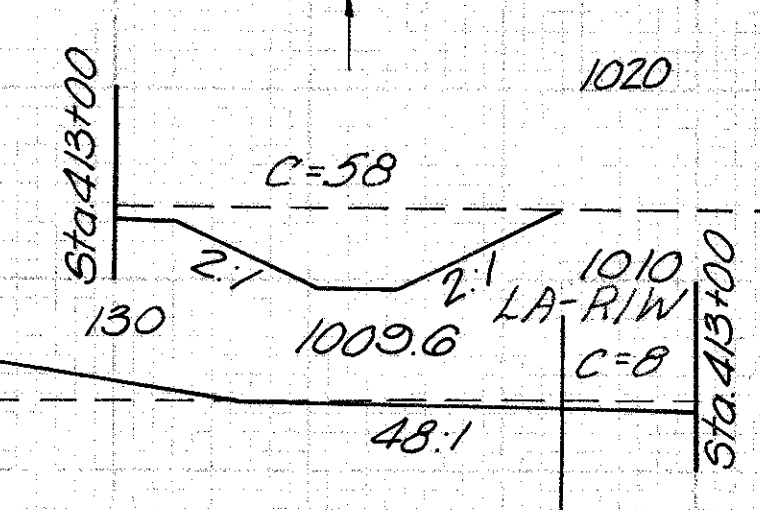
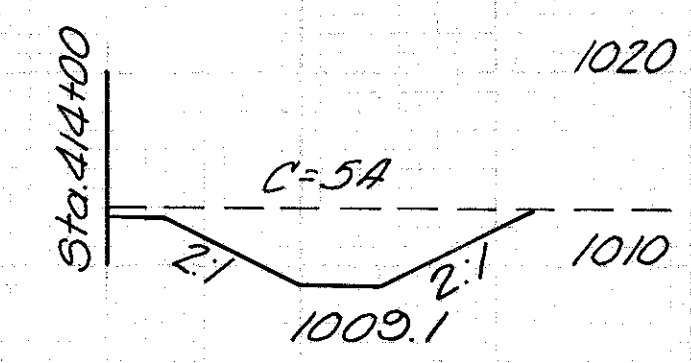
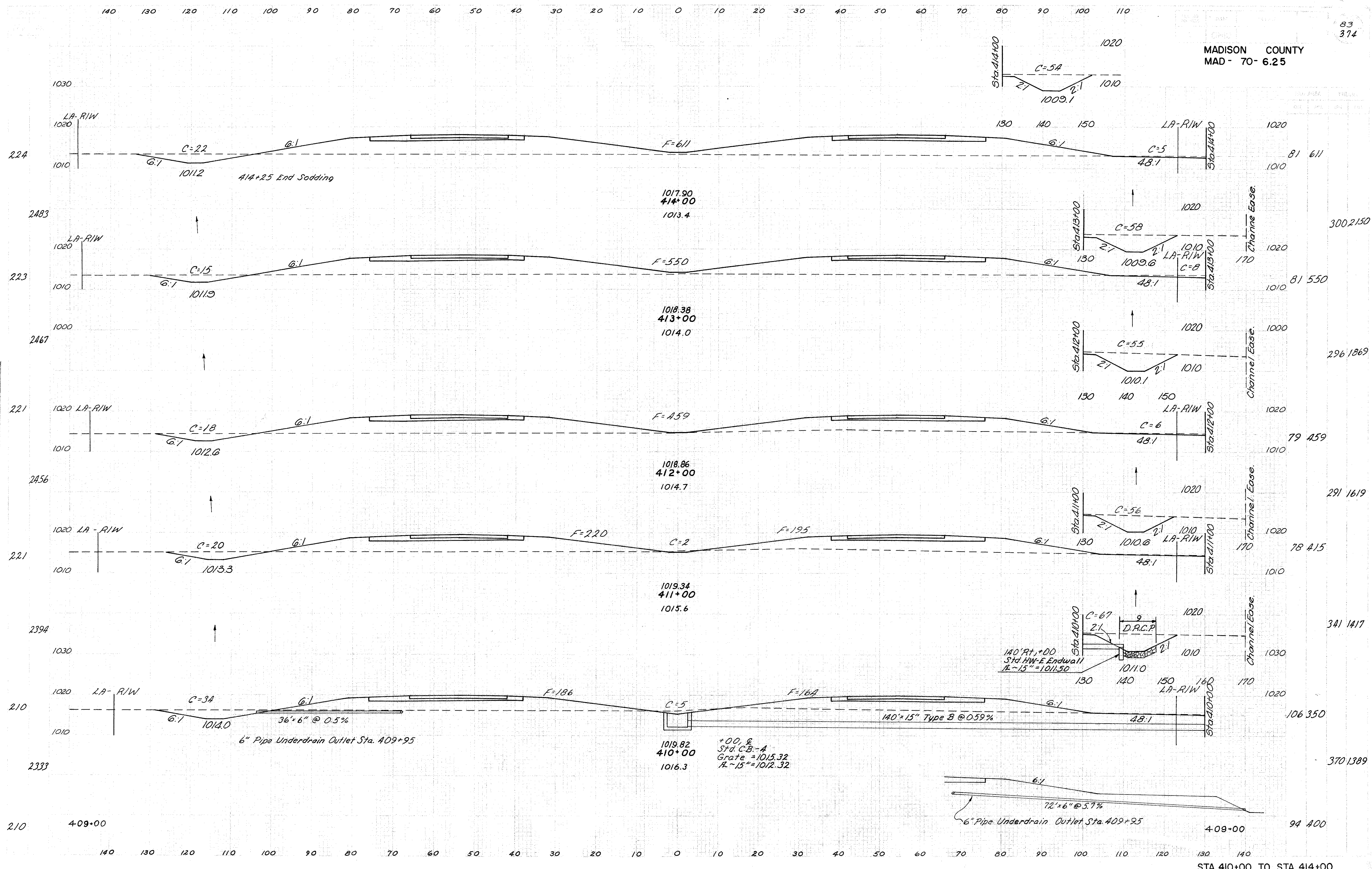
Ex. Ground	Proposed	City	State
Complete	11-1-10	Madison	Ill.
Plan	Profile	FG	DLM
Earthwork Quant.	10	FG	DLM
Grading Quant.			



MADISON COUNTY
MAD- 70-6.25



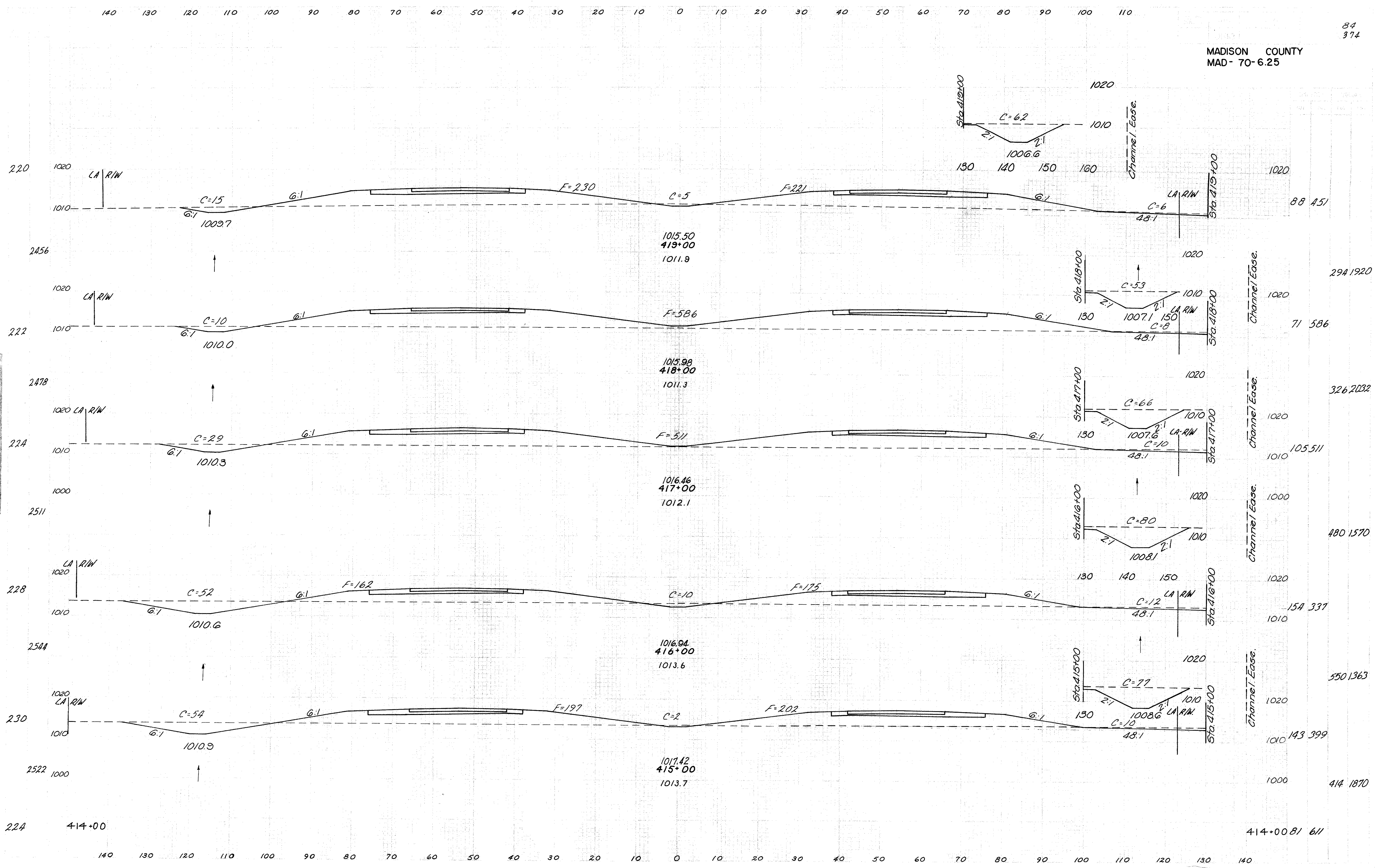
Ex. Ground	Plotted	ok	filled
Template	✓	ok	filled
Plan			
Endwork Chart			
Sending Quant.	0	5	✓



1019.82
410+00
1016.3

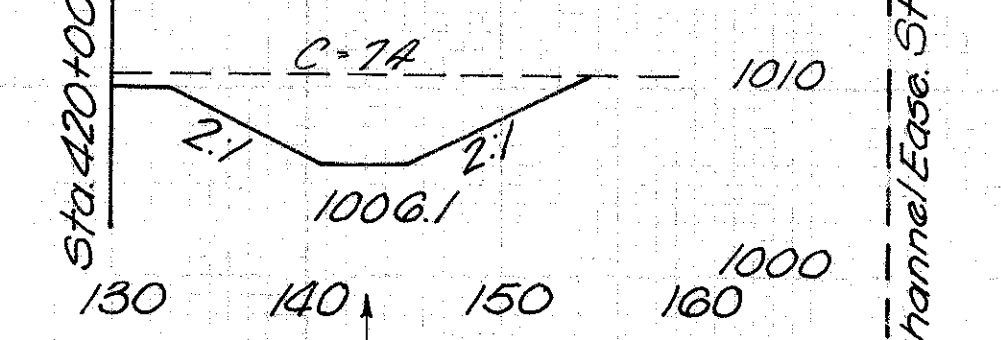
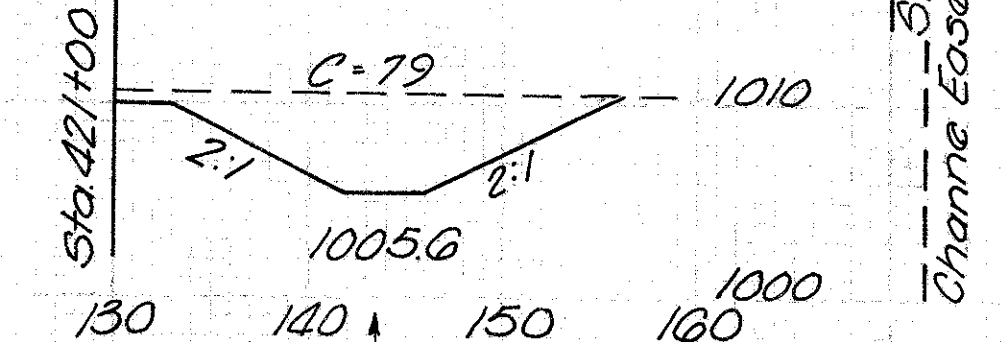
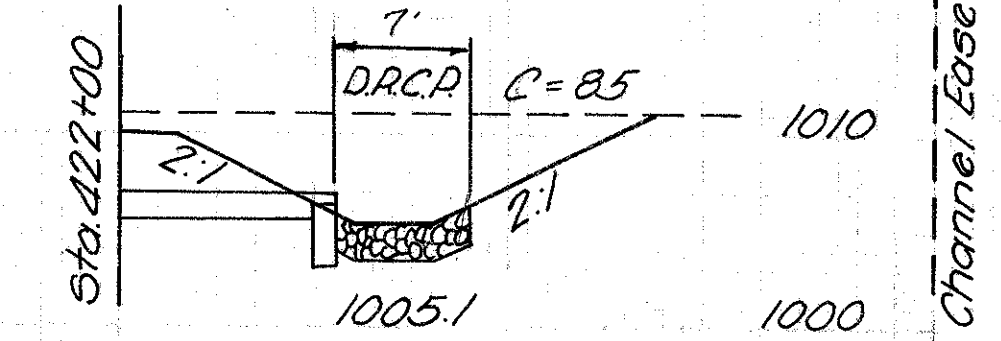
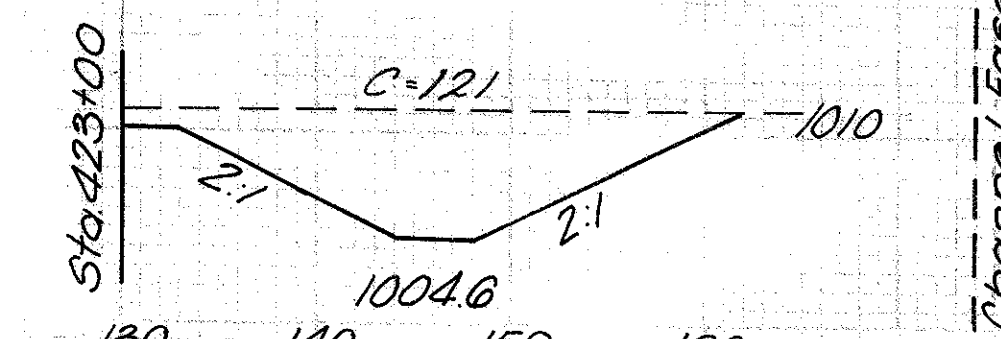
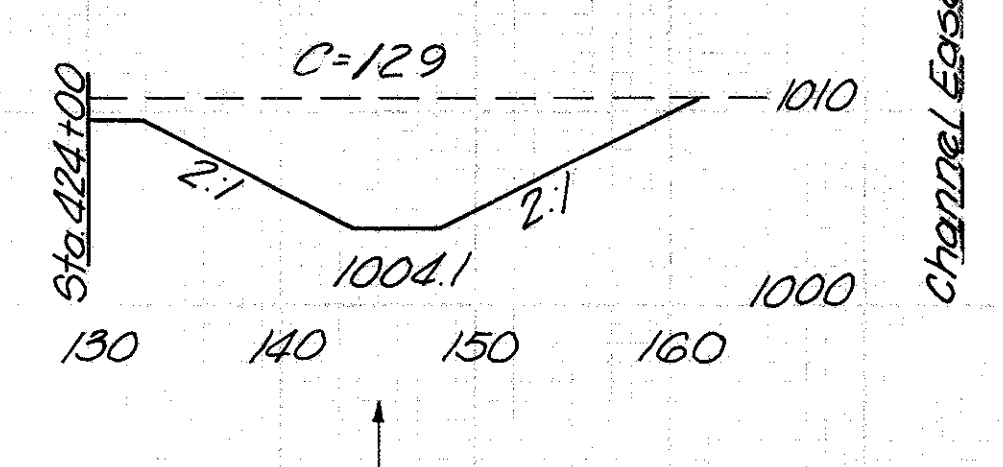
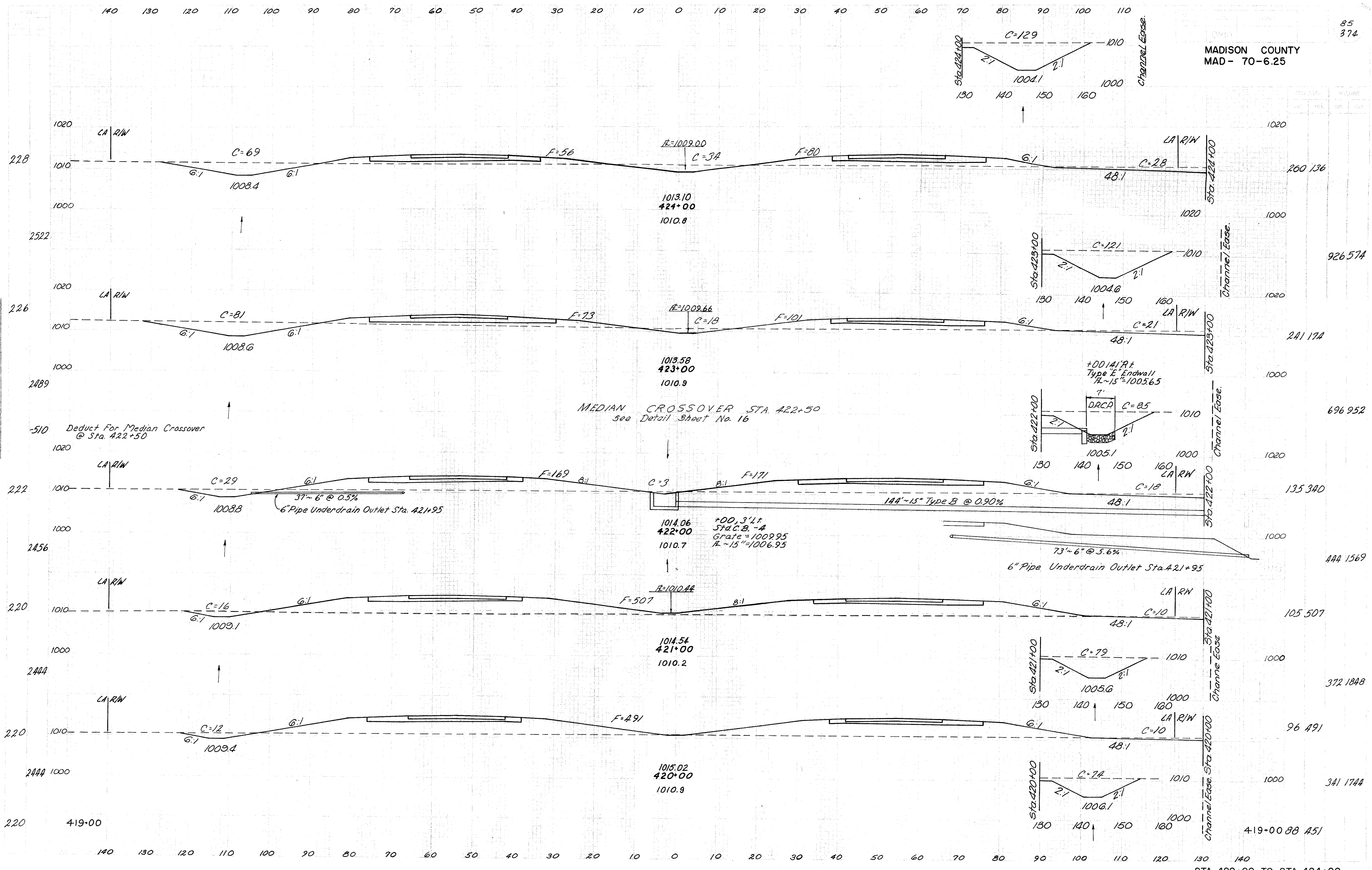
*00.8
Std. C.B.-A
Grate = 1015.32
R-15" = 1012.32

Ex. Ground	Proposed	Final
Profile	Profile	Profile
Plan	Plan	Plan
Grading	Grading	Grading
Drainage	Drainage	Drainage
Channel	Channel	Channel
Structure	Structure	Structure
Other	Other	Other



MADISON COUNTY
MAD - 70-6.25

Ex. Ground	Plotted	1/2" = 10'
Template	CSB	4:5
Plan	DLV	DLV
Endowed Gravel	DLV	DLV
Sealing Grout	DLV	DLV



926 574

241 174

696 952

135 340

444 1569

105 507

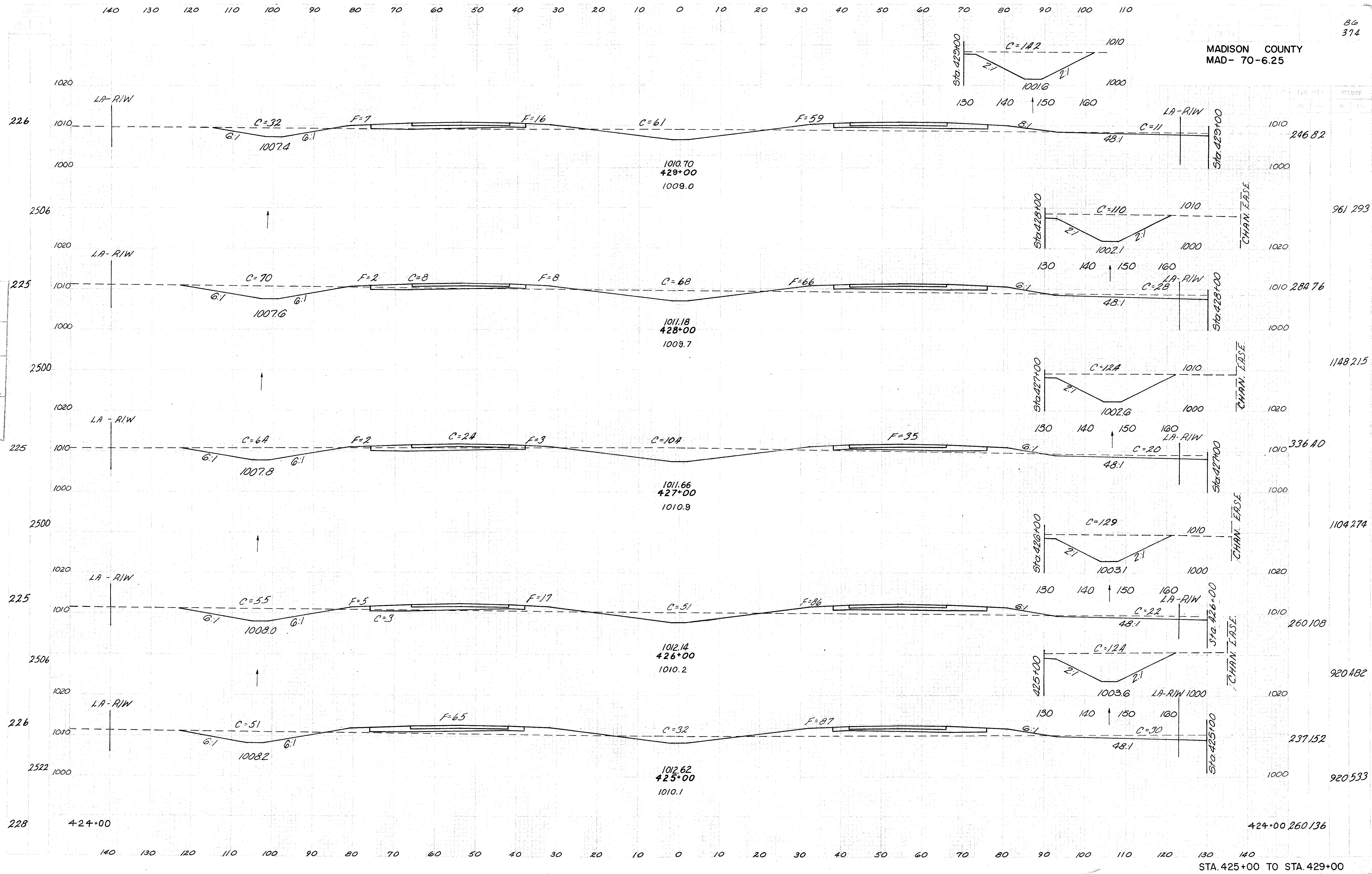
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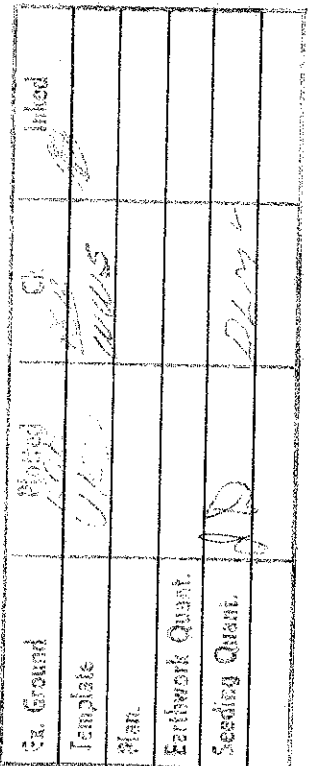
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419+00 88 451

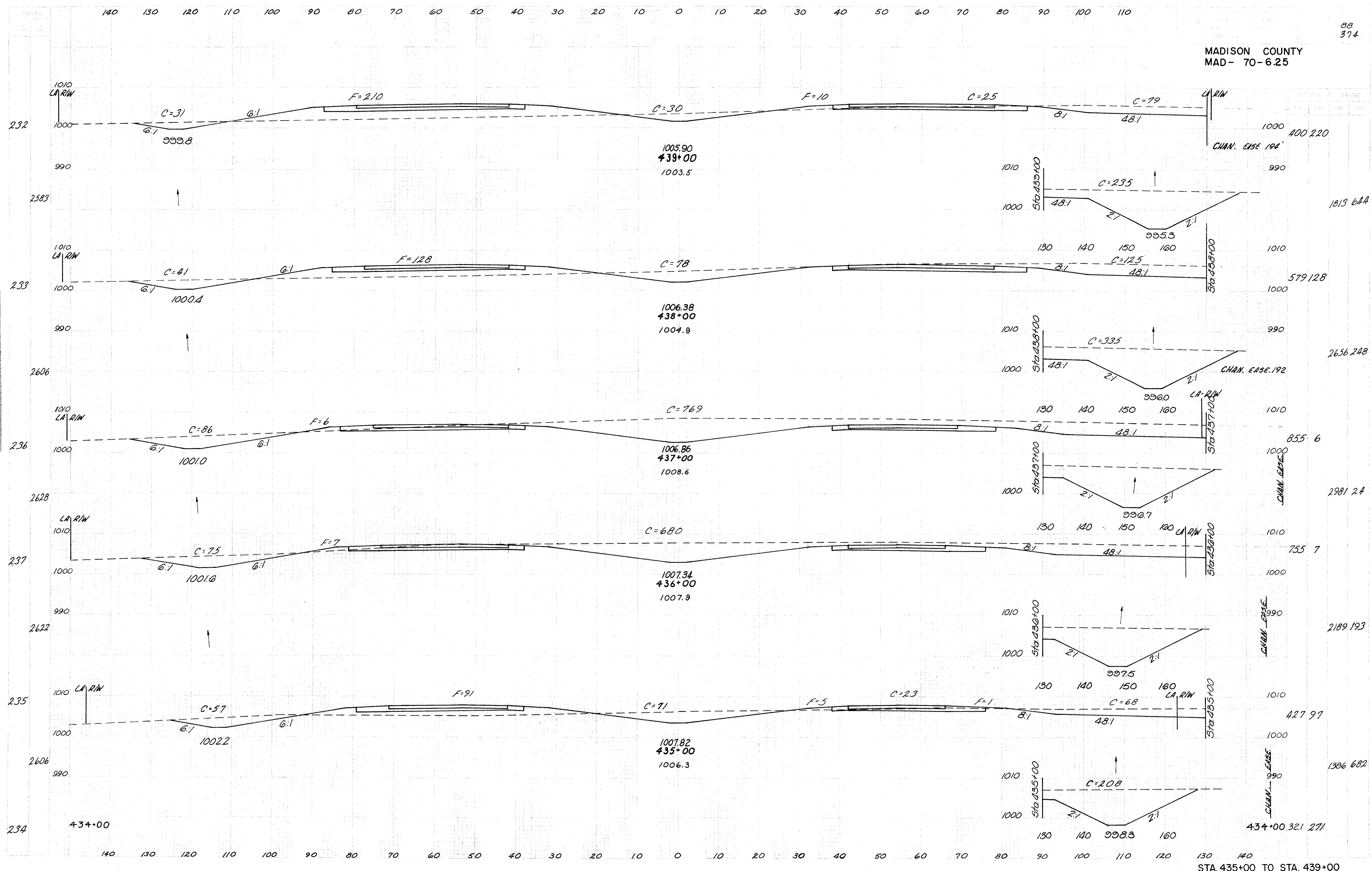
MADISON COUNTY
MAD- 70-6.25

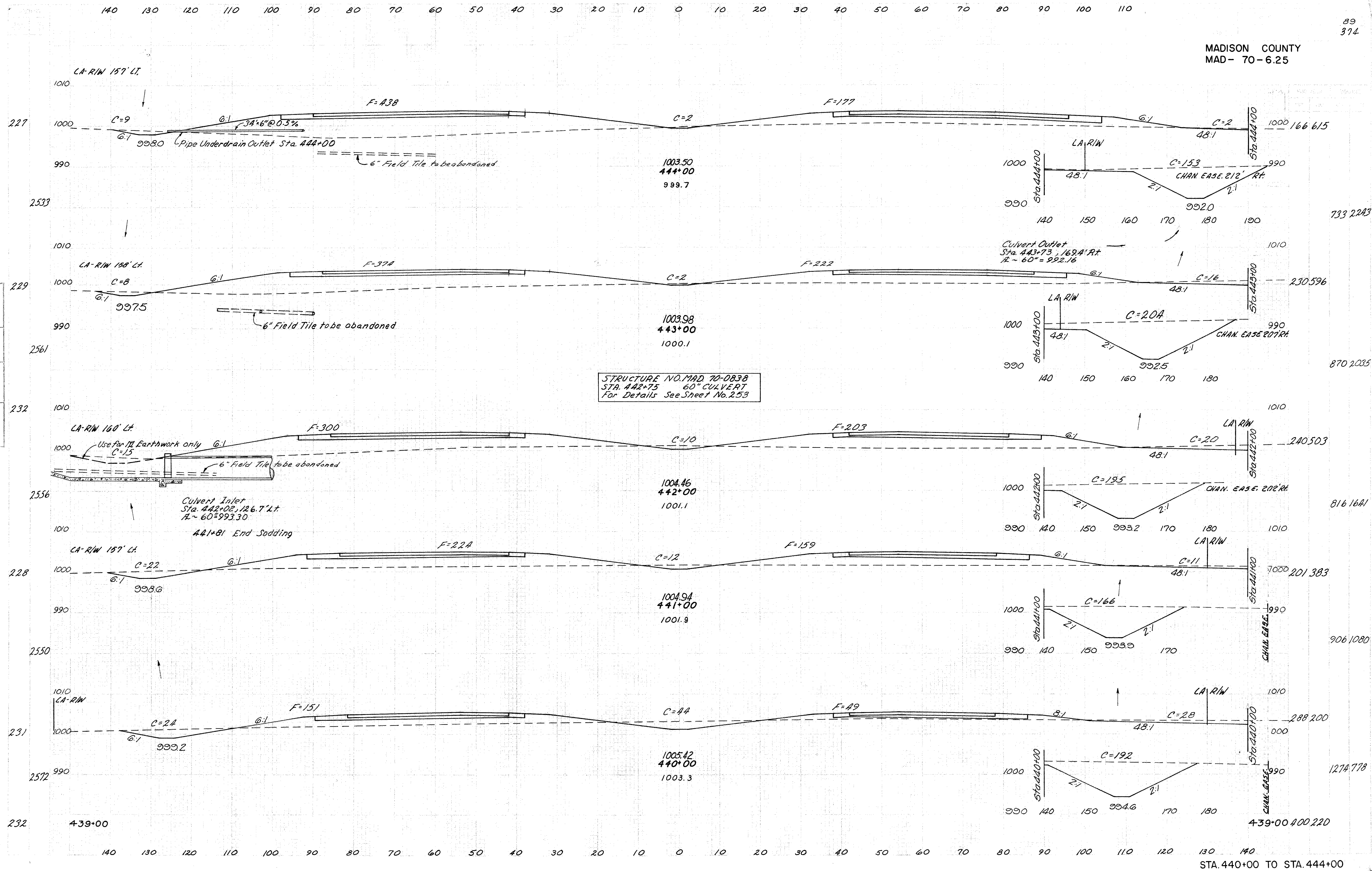


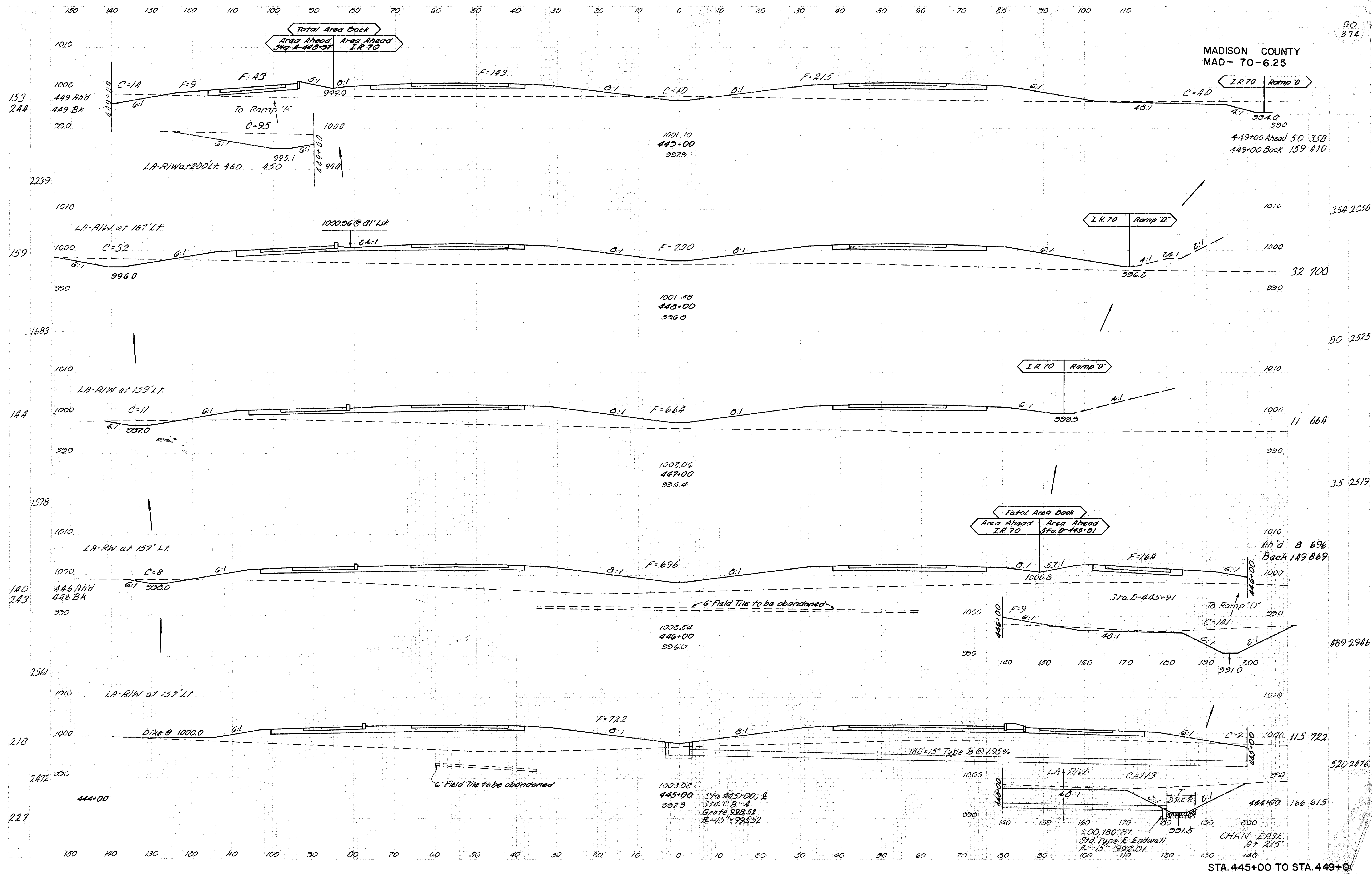


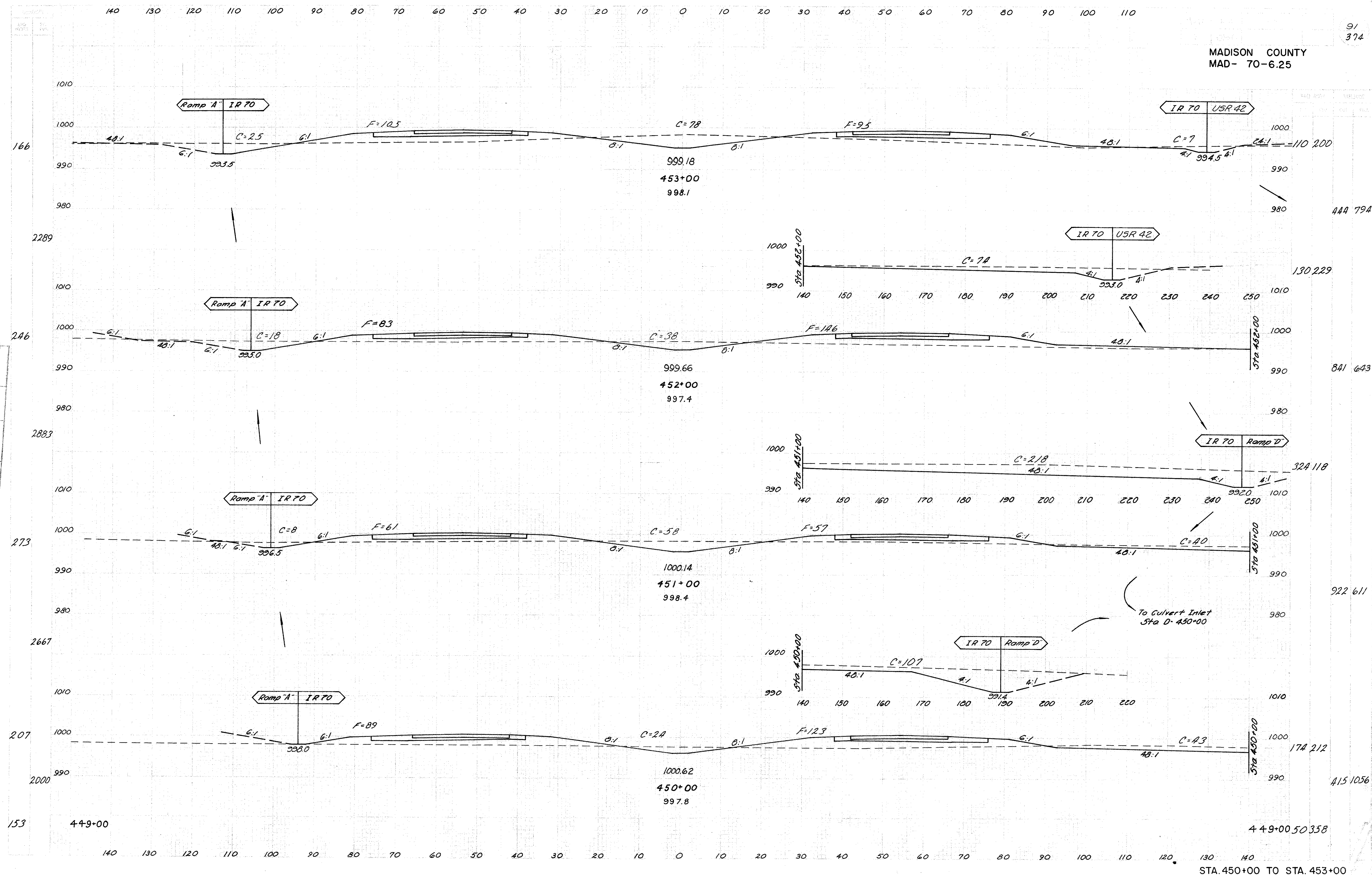
MADISON COUNTY
MAD- 70-6.25

As. Ground	MAILED	INDEXED
Template	5/2	4/10/8
Plan		
Earthwork Quant.		
Seeding Quant.		









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

MADISON COUNTY
MAD- 70-6.25

374

Culvert Inlet
Sta 456+27.69 123.3 L+
E-04"=992.18

456+19 End Sodding

Structure N^o MAD-70-0864
Sta 456+27.69 04" Culvert
For details See sheet N^o 254

STRUCTURE N^o MAD-70-0862+0863
USR 42 OVER I.R. 70

456+36 Begin Sodding

Culvert Outlet
Sta 456+27.69 110.7 R+
E-04"=991.95 To Culvert Under
Ramp C

456+00 Ahead 117 1455
456+00 Back 23 1455

Full Section Ahead
I.R. 70 U.S.R. 42
Back Back
C=10

Pipe Underdrain Outlet Sta. 456+00

End Guard Rail
455+92.00

I.R. 70 Ramp C

455+50 Begin Sodding

For Earthwork Only

NOTE: Transition from single ditch
to twin ditches between STA.
454+70 and STA 455+00.

Dike to elevation 995.8 @ STA 454+70

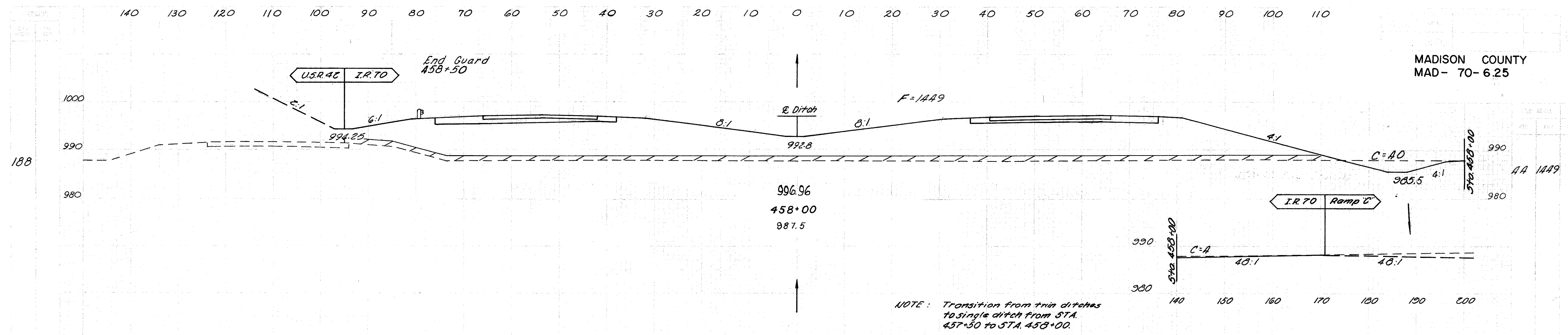
Begin Guard Rail
454+04.50

H/B STA. 454+50
Elev 995.75

Sta. 454+00
Begin Granular
Embankment
See Gen. Notes
See U.S.R. 42 Cross
Section Layout

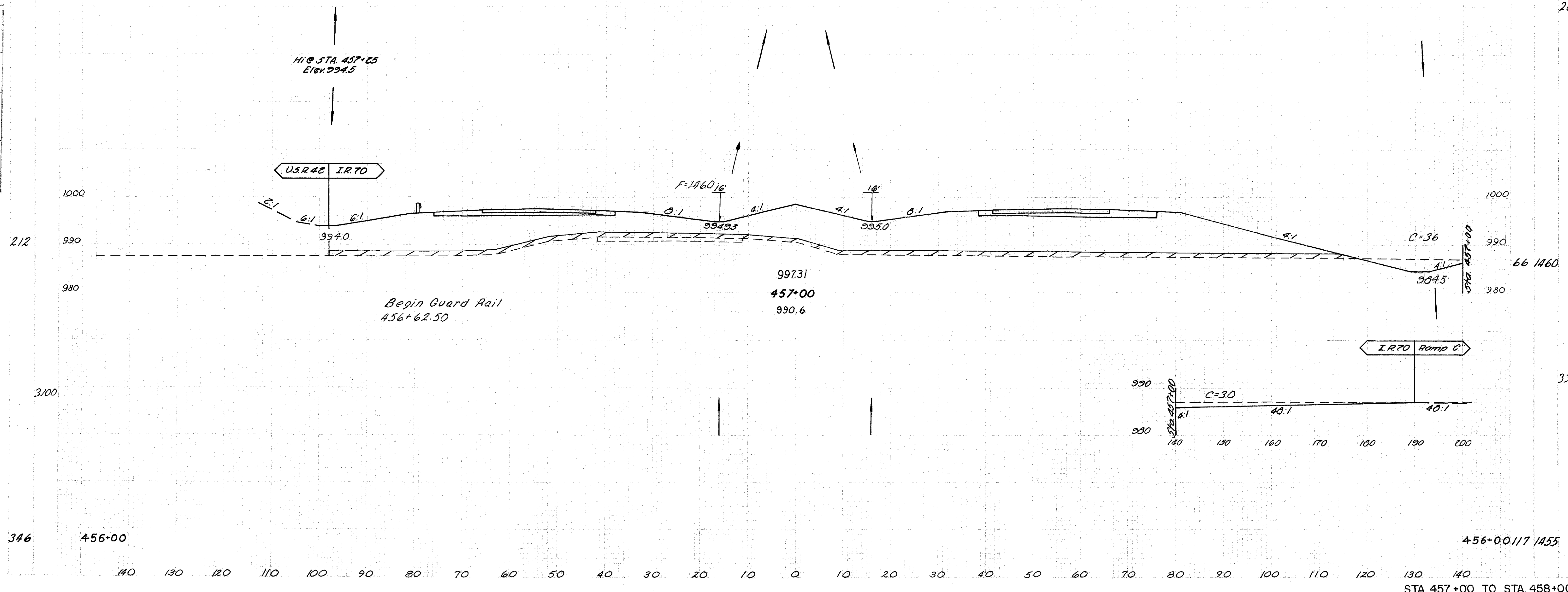
STA. 454+00 TO STA. 456+00

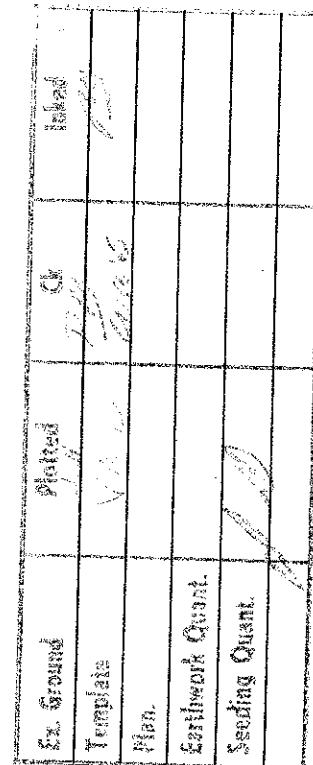
MADISON COUNTY
MAD- 70- 6.25



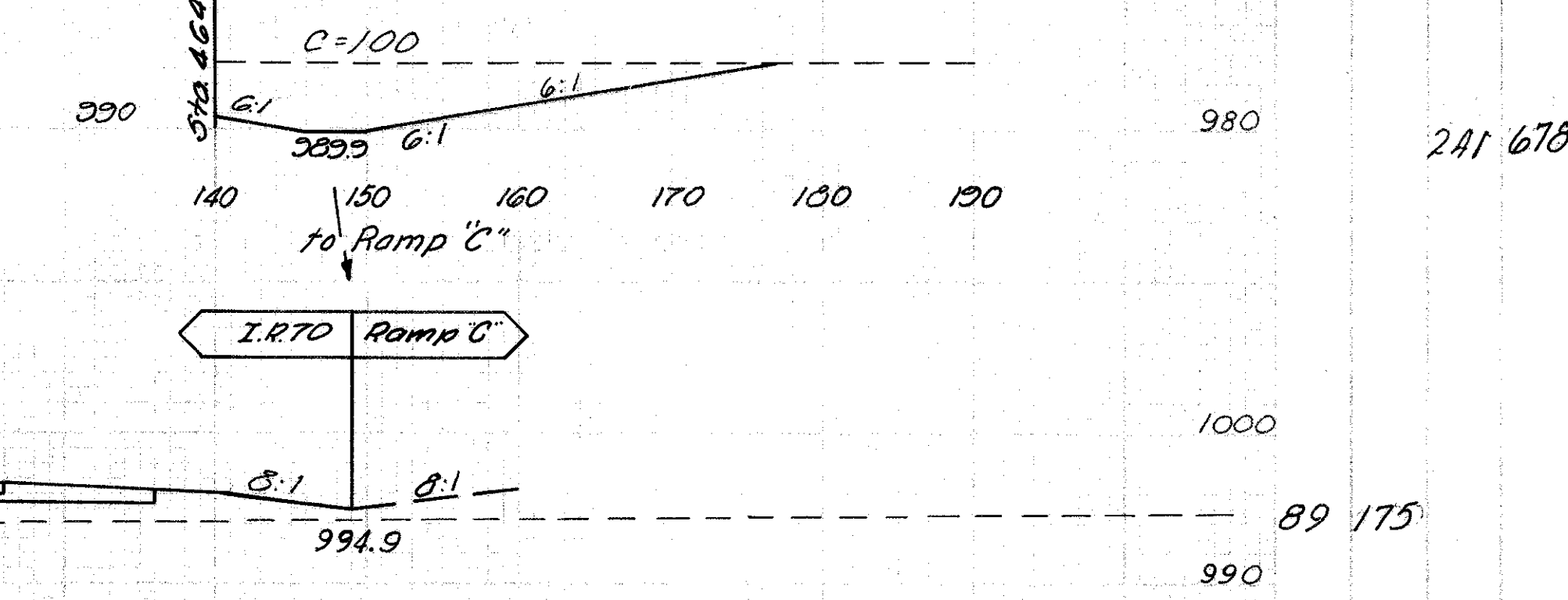
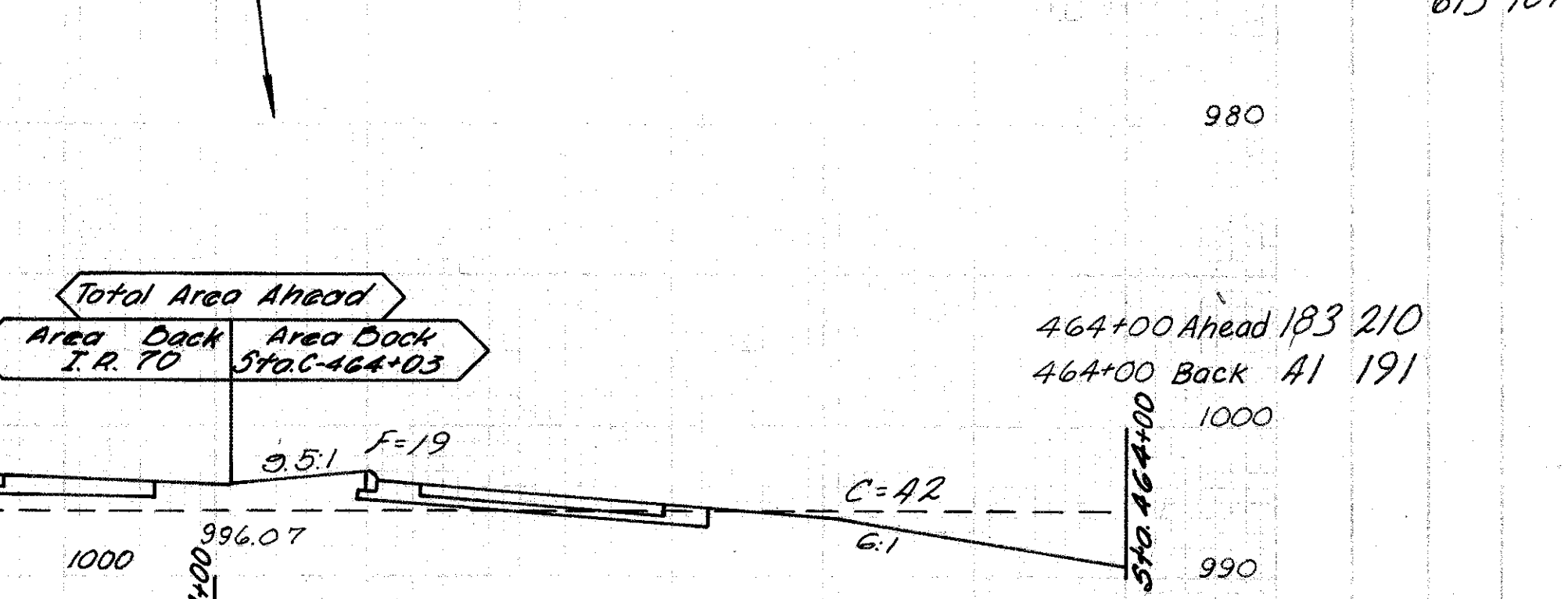
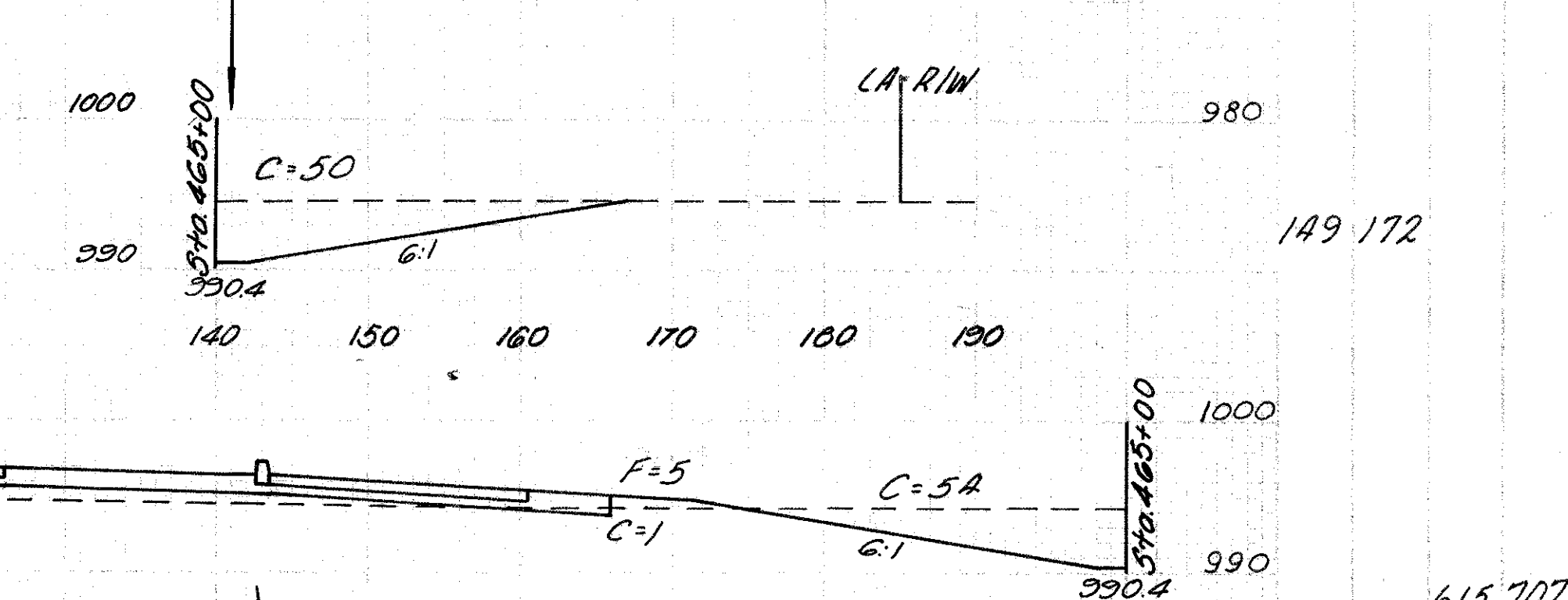
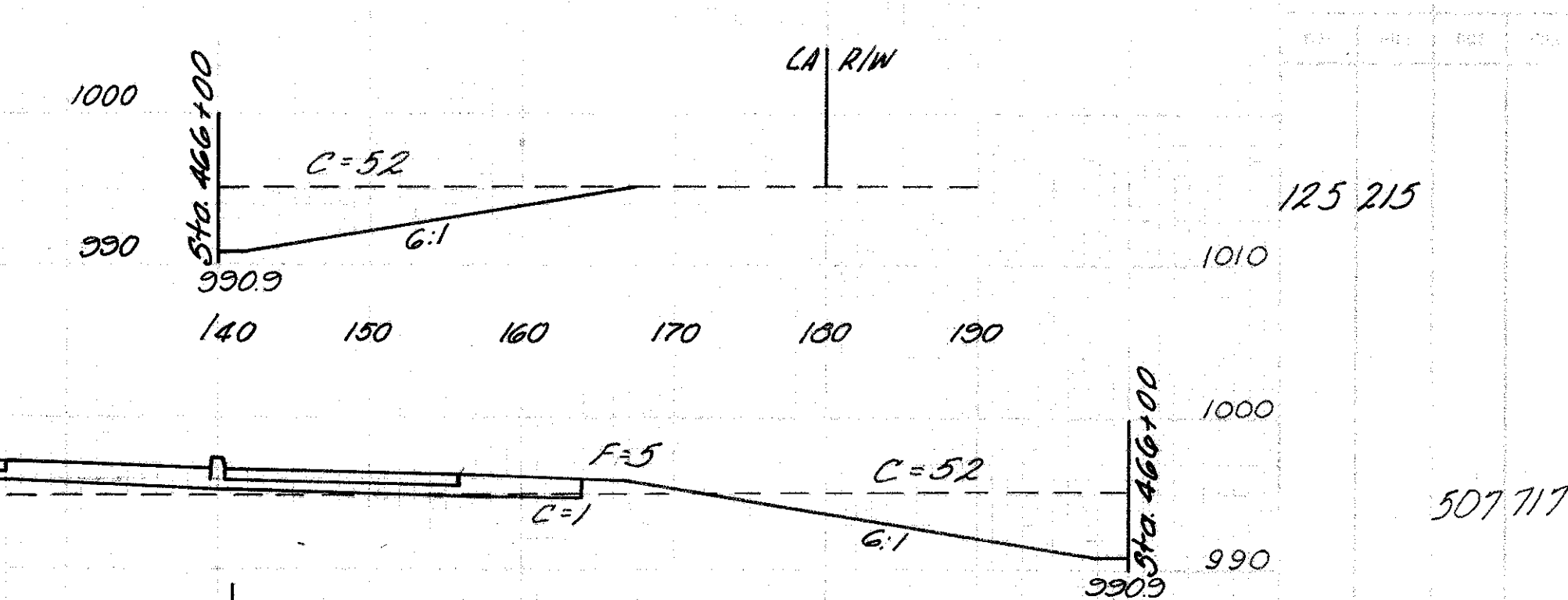
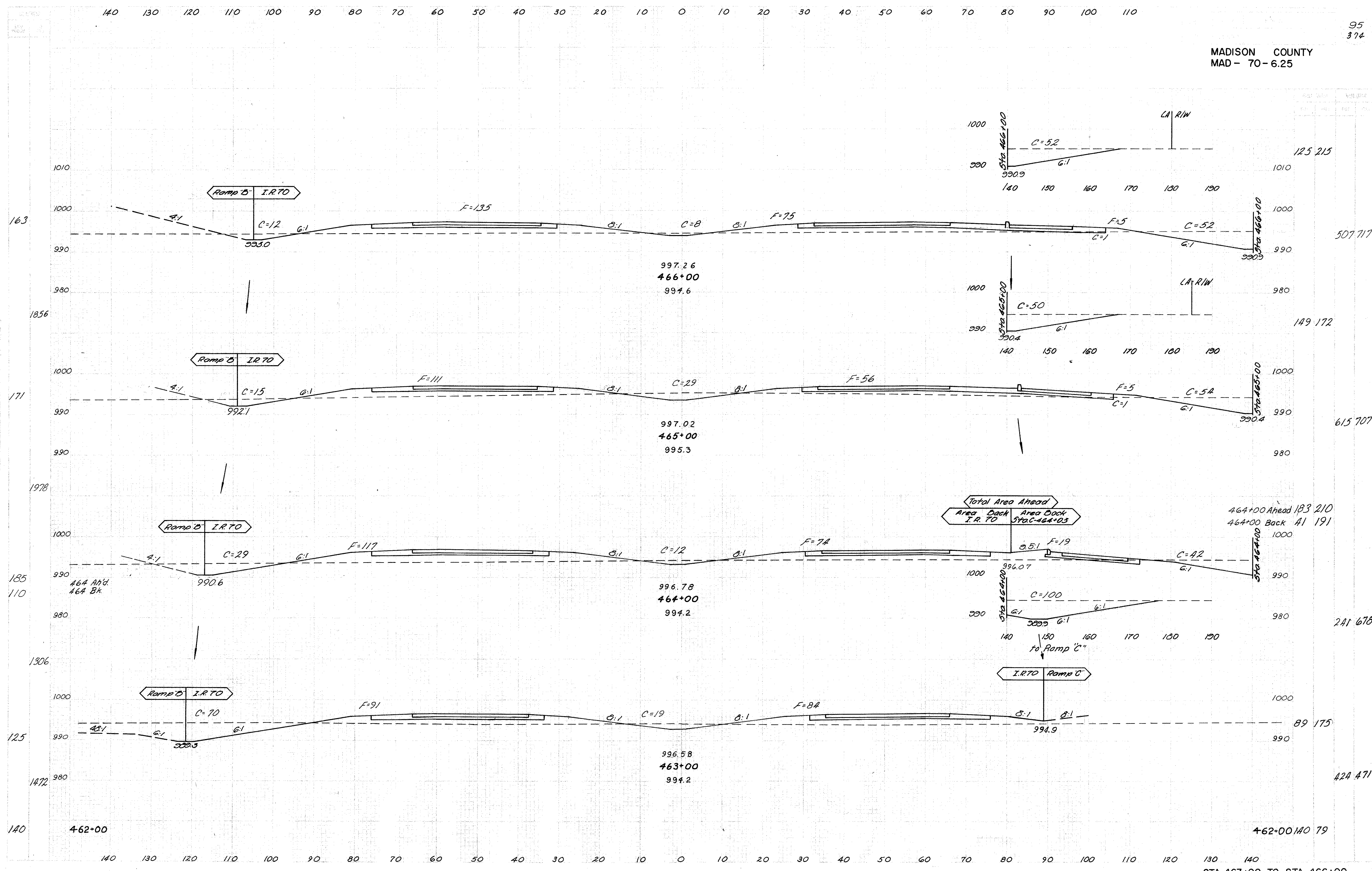
NOTE: Transition from twin ditches
to single ditch from STA.
457+50 to STA. 458+00.

Ex. Ground	Plotted	Q	Base
Temple	1000 S		
Plot			
Earthwork Quant.			
Seeding Quant.			



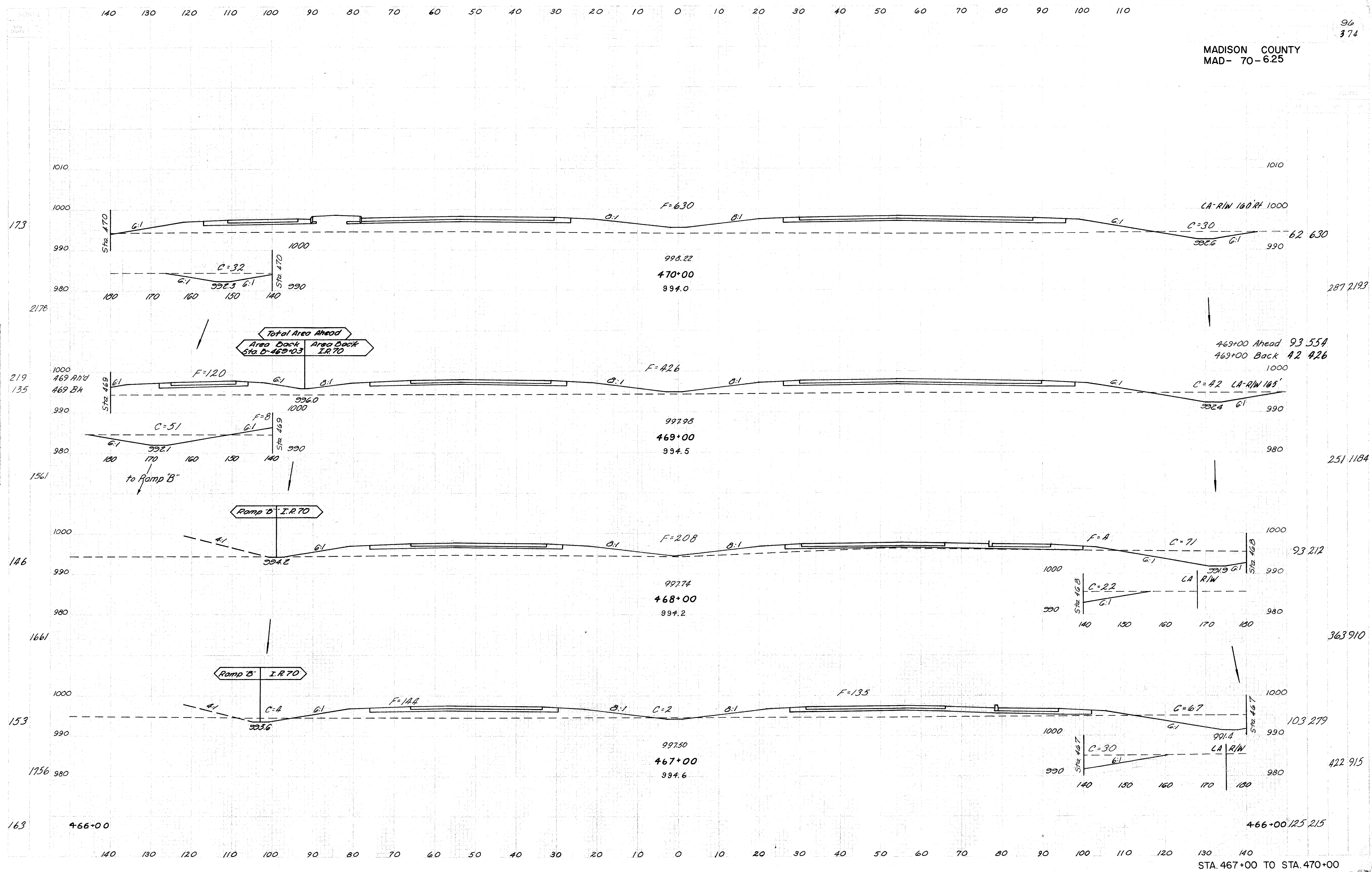


MADISON COUNTY
MAD - 70-6.25

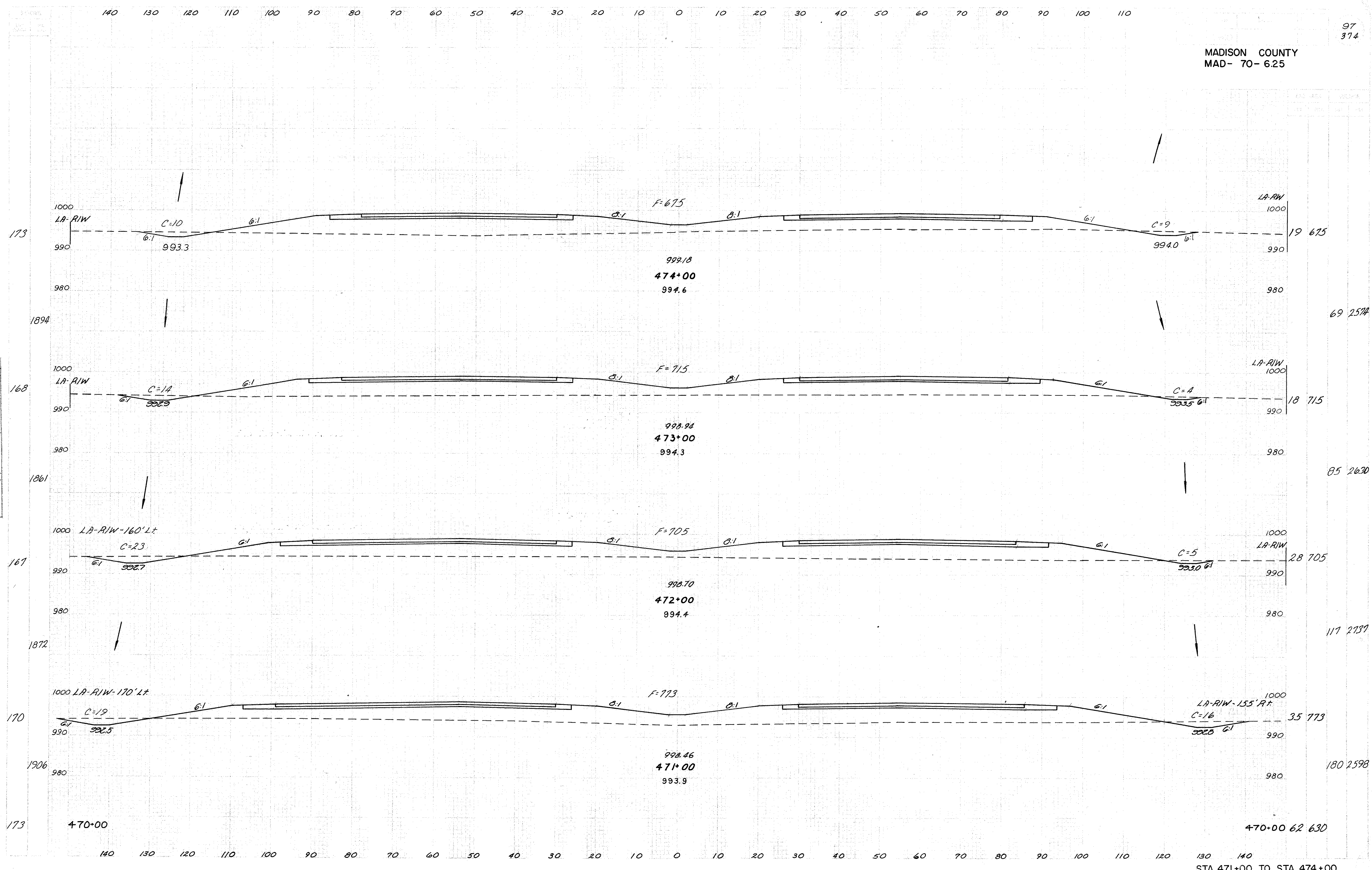


Ground	Profile	Station	Notes
140	130	120	110
100	90	80	70
60	50	40	30
20	10	0	10
20	30	40	50
60	70	80	90
100	110	120	130
140	150	160	170
180	190	200	210
220	230	240	250
260	270	280	290
300	310	320	330
340	350	360	370
380	390	400	410
420	430	440	450
460	470	480	490
500	510	520	530
540	550	560	570
580	590	600	610
620	630	640	650
660	670	680	690
700	710	720	730
740	750	760	770
780	790	800	810
820	830	840	850
860	870	880	890
900	910	920	930
940	950	960	970
980	990	1000	1010

MADISON COUNTY
MAD- 70-6.25

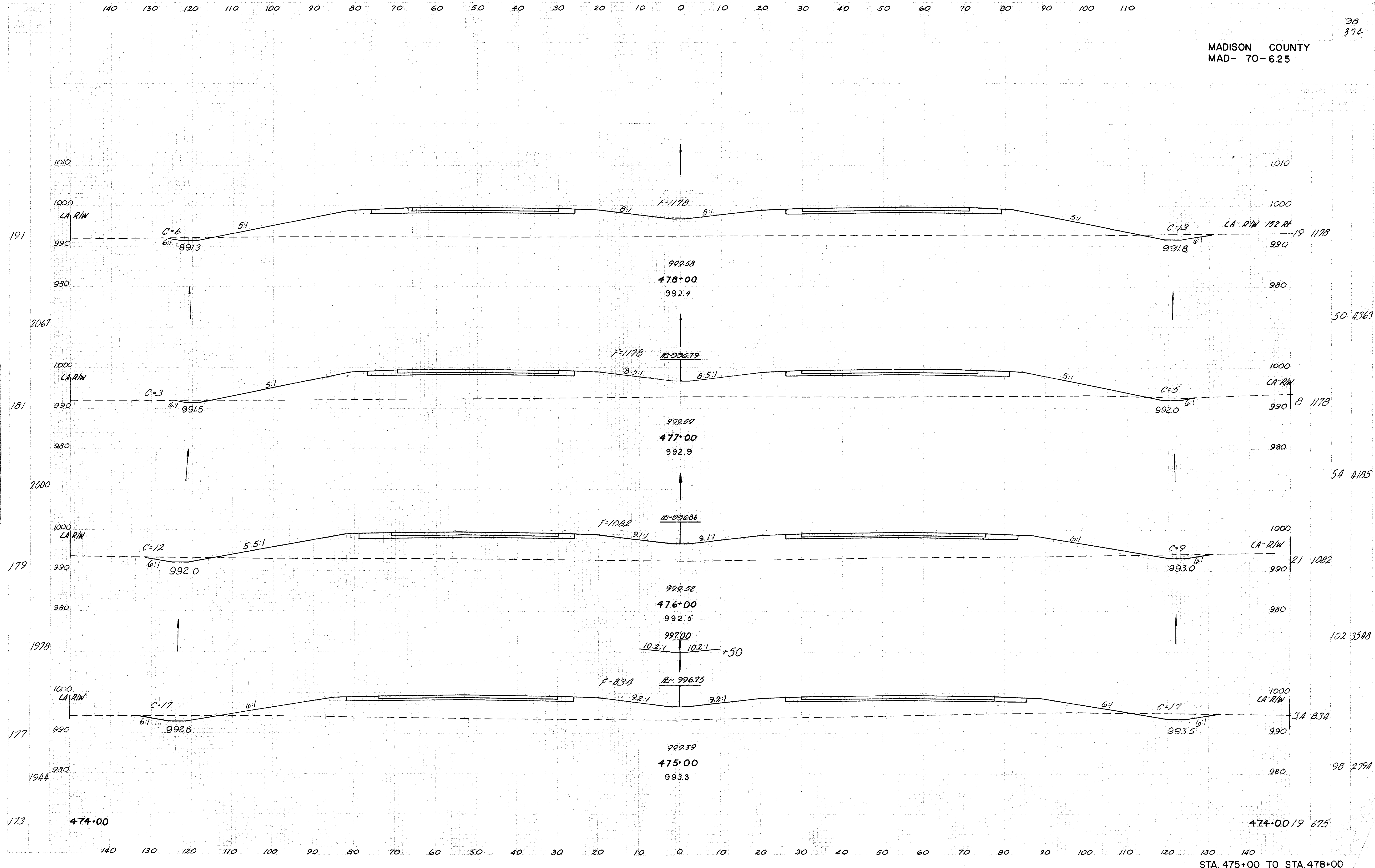


MADISON COUNTY
MAD- 70- 6.25

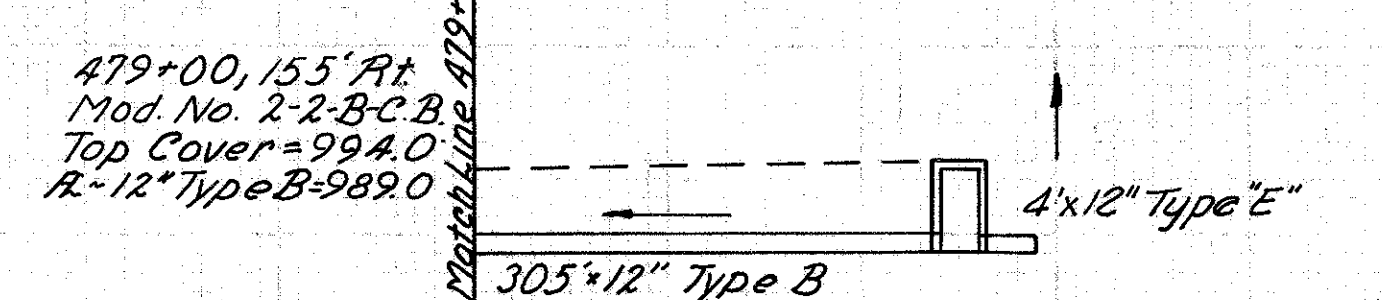
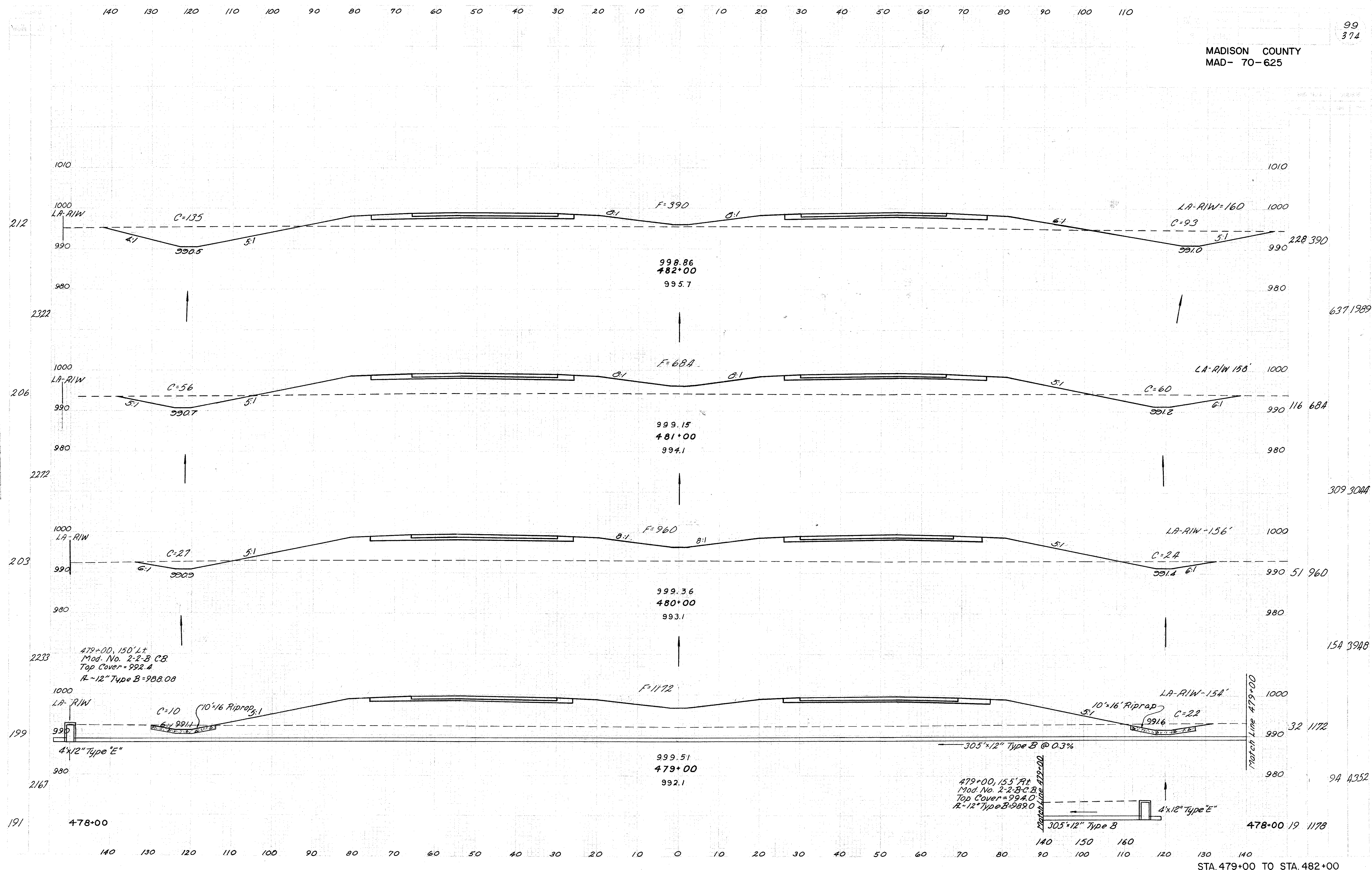


Sta. Ground	Plotted	Checked
Template	✓	✓
Plot	✓	✓
Endmark Quant.	✓	✓
Seeding Quant.	✓	✓

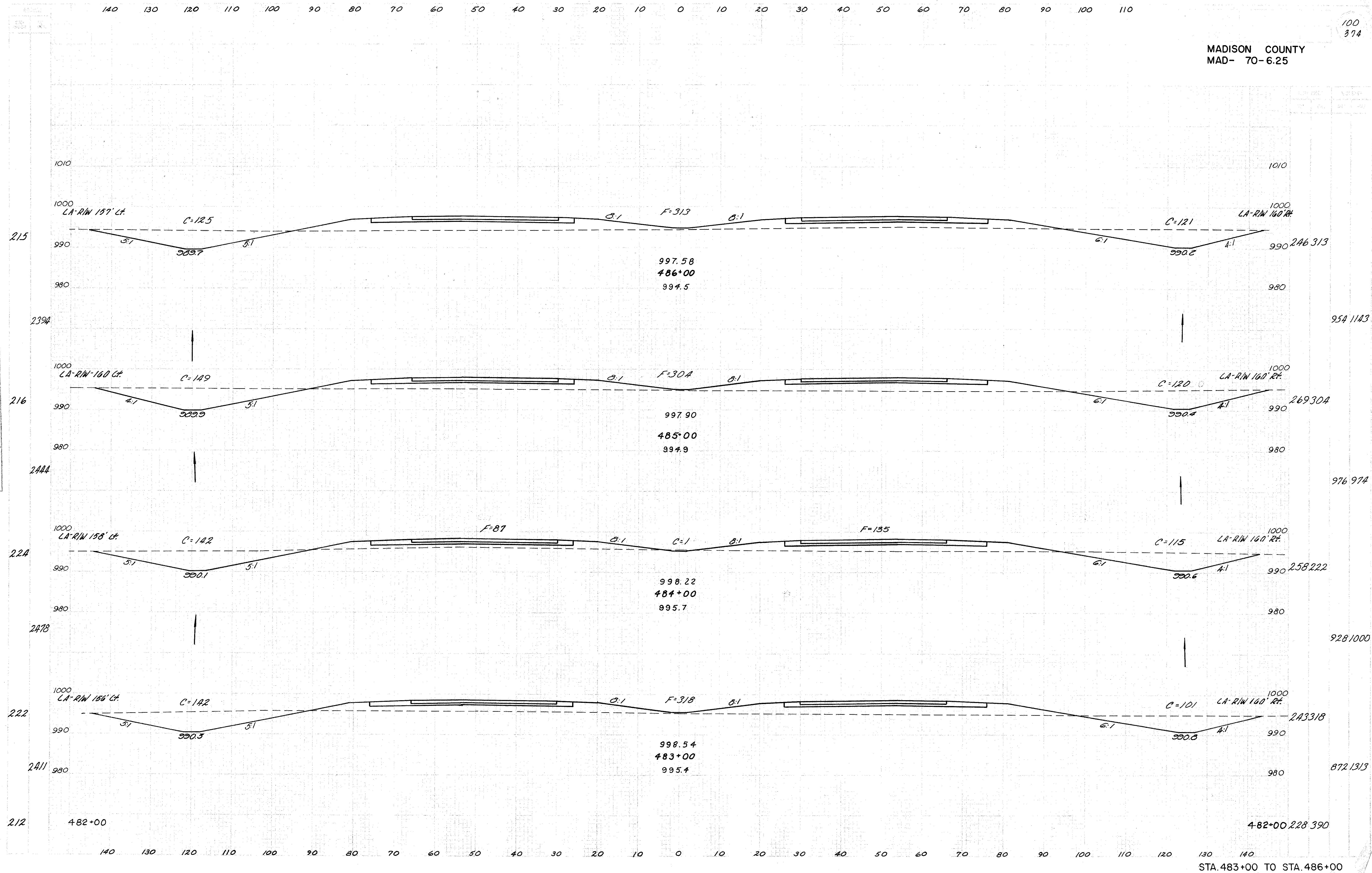
Ex. Ground	Plotted	Ch.	Island
Template	U.S.D.	4-15	
Plan.			
Earthwork Quant.			
Seeding Quant.			

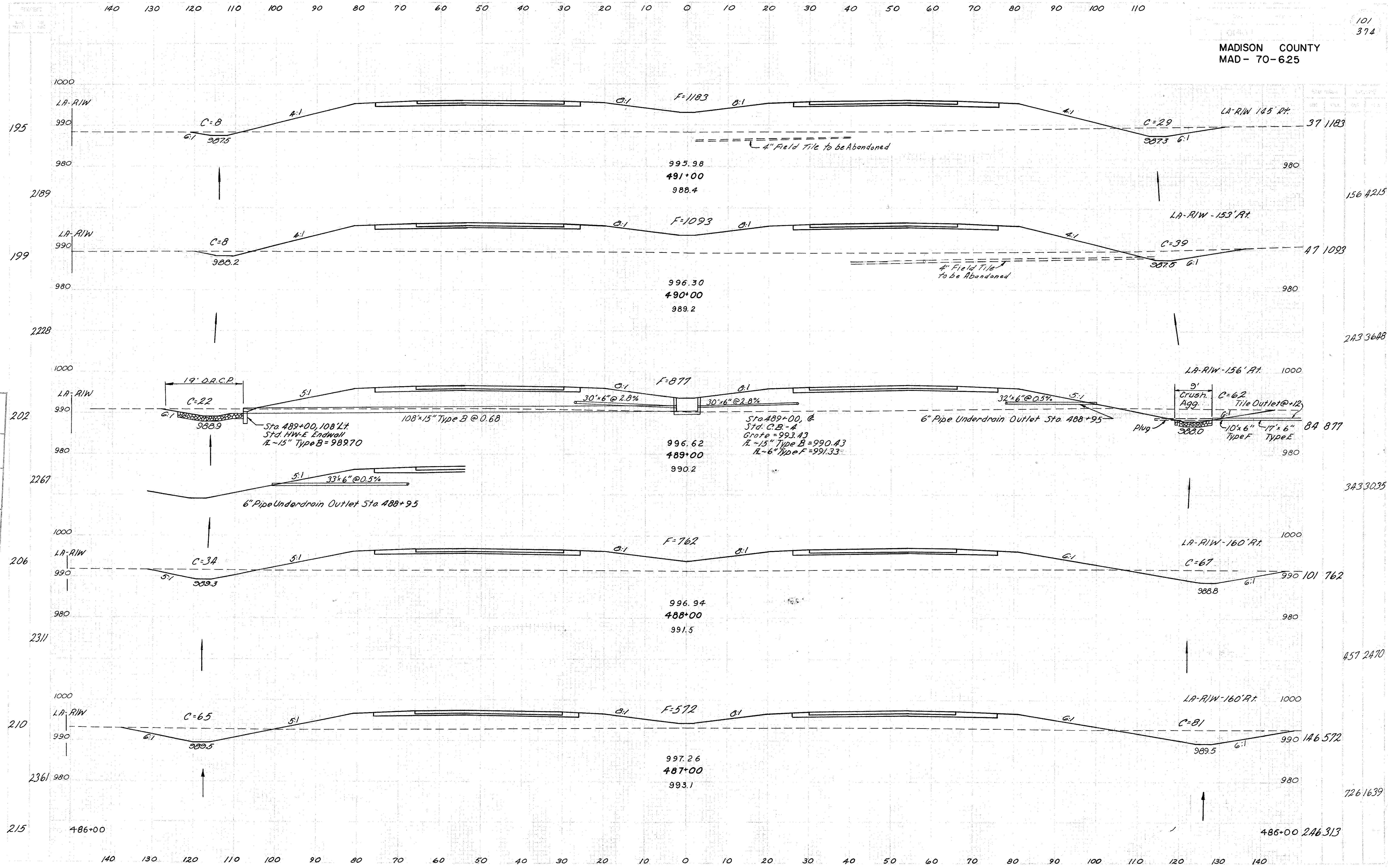


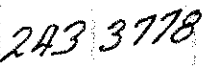
Plotted	Checked	Indexed
2322	206	203
2272	2233	199
2167	191	



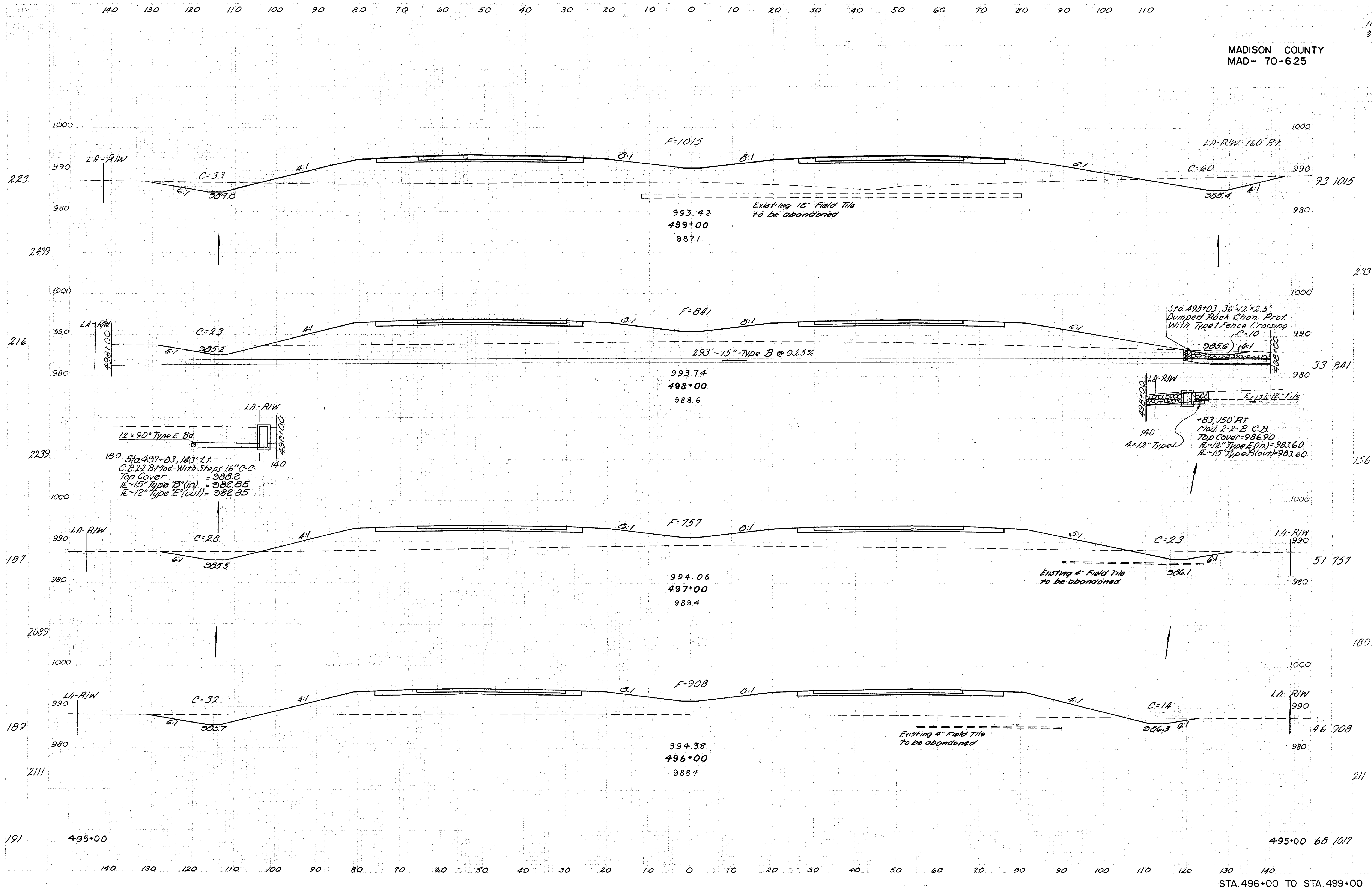
MADISON COUNTY
MAD- 70-6.25







Ex. Ground	Plotted	Ck	Infeed
Yamplate			
plan.			
Earthwork Quant.			
Seeding Quant.			



233 3437

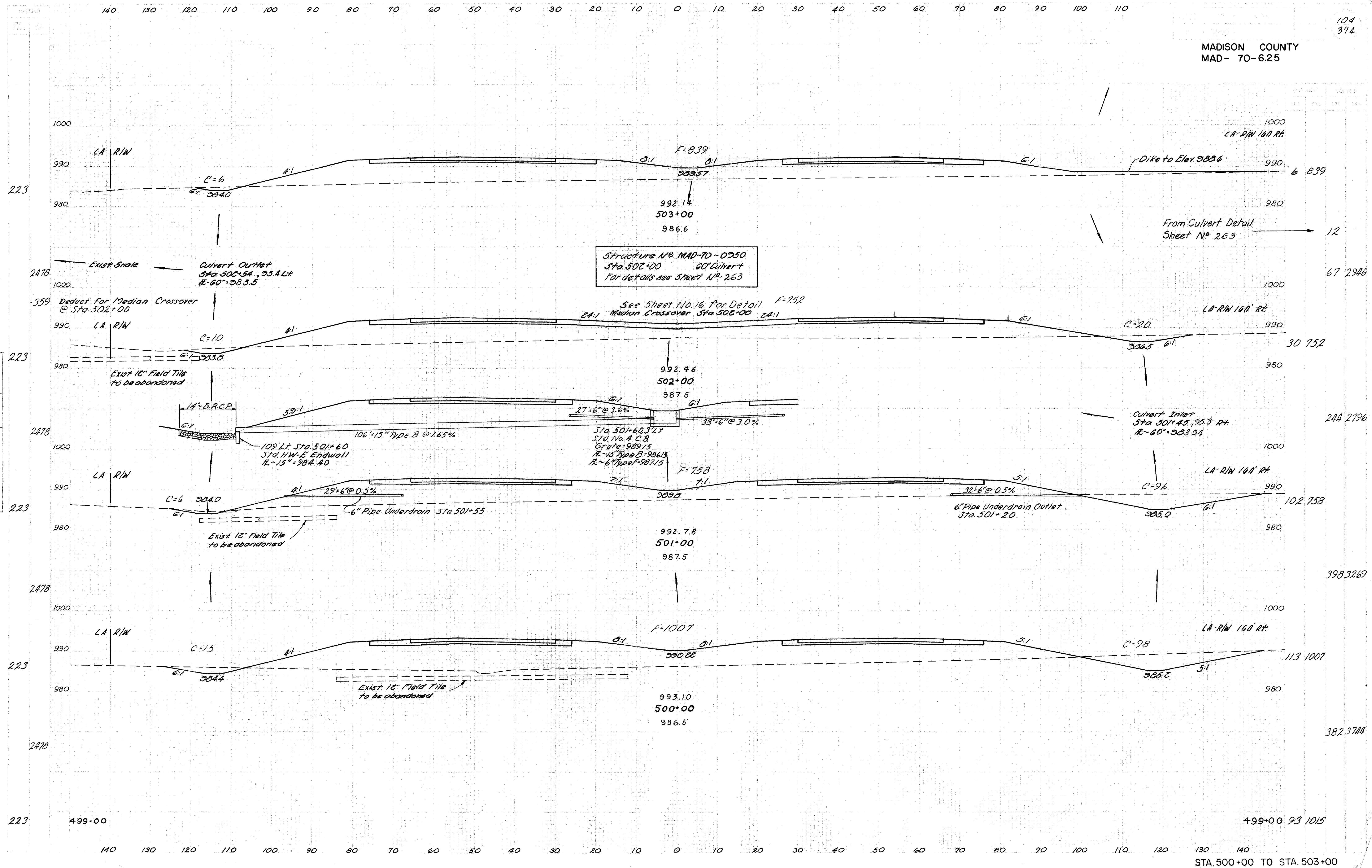
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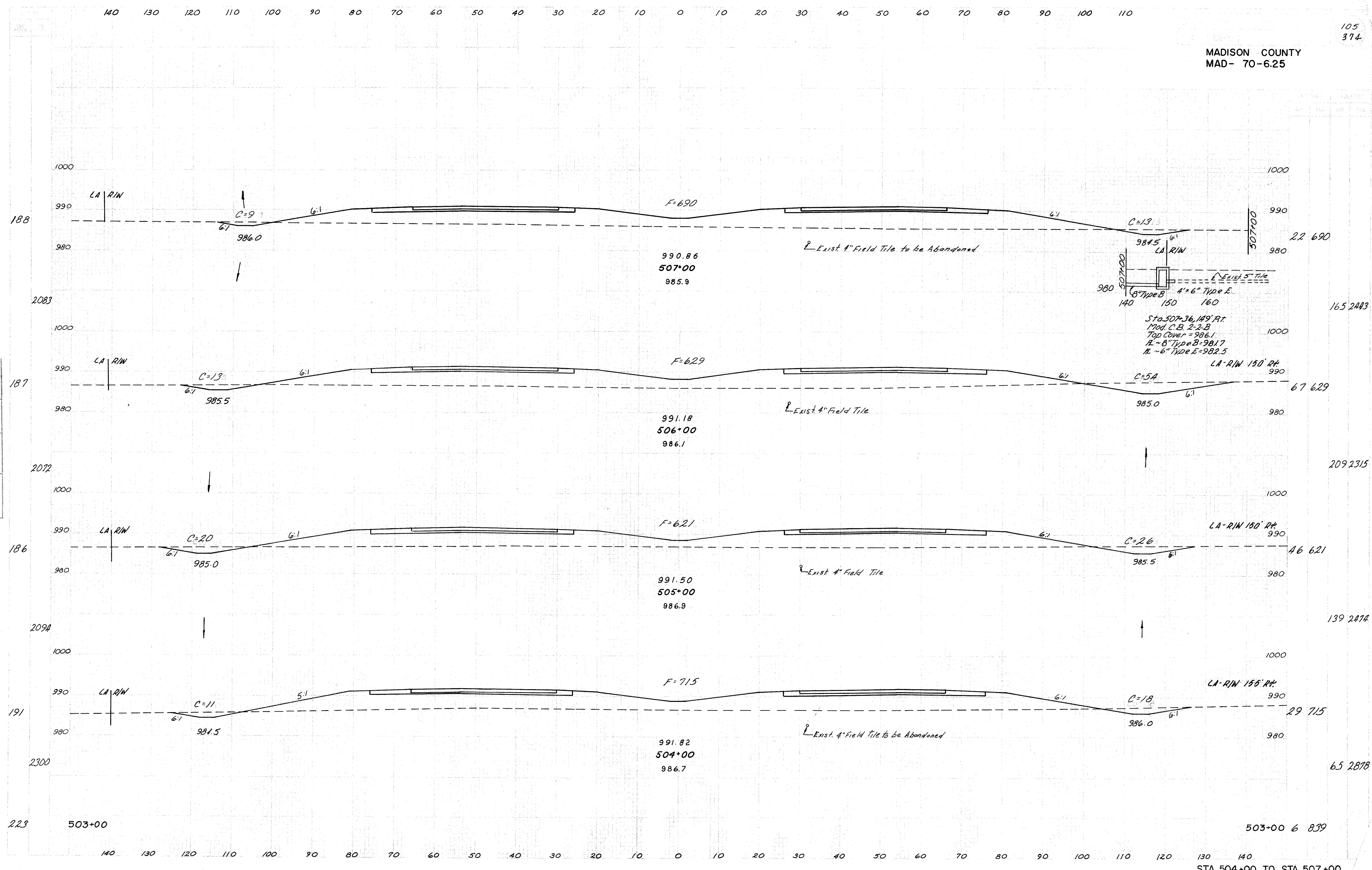
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180 3083

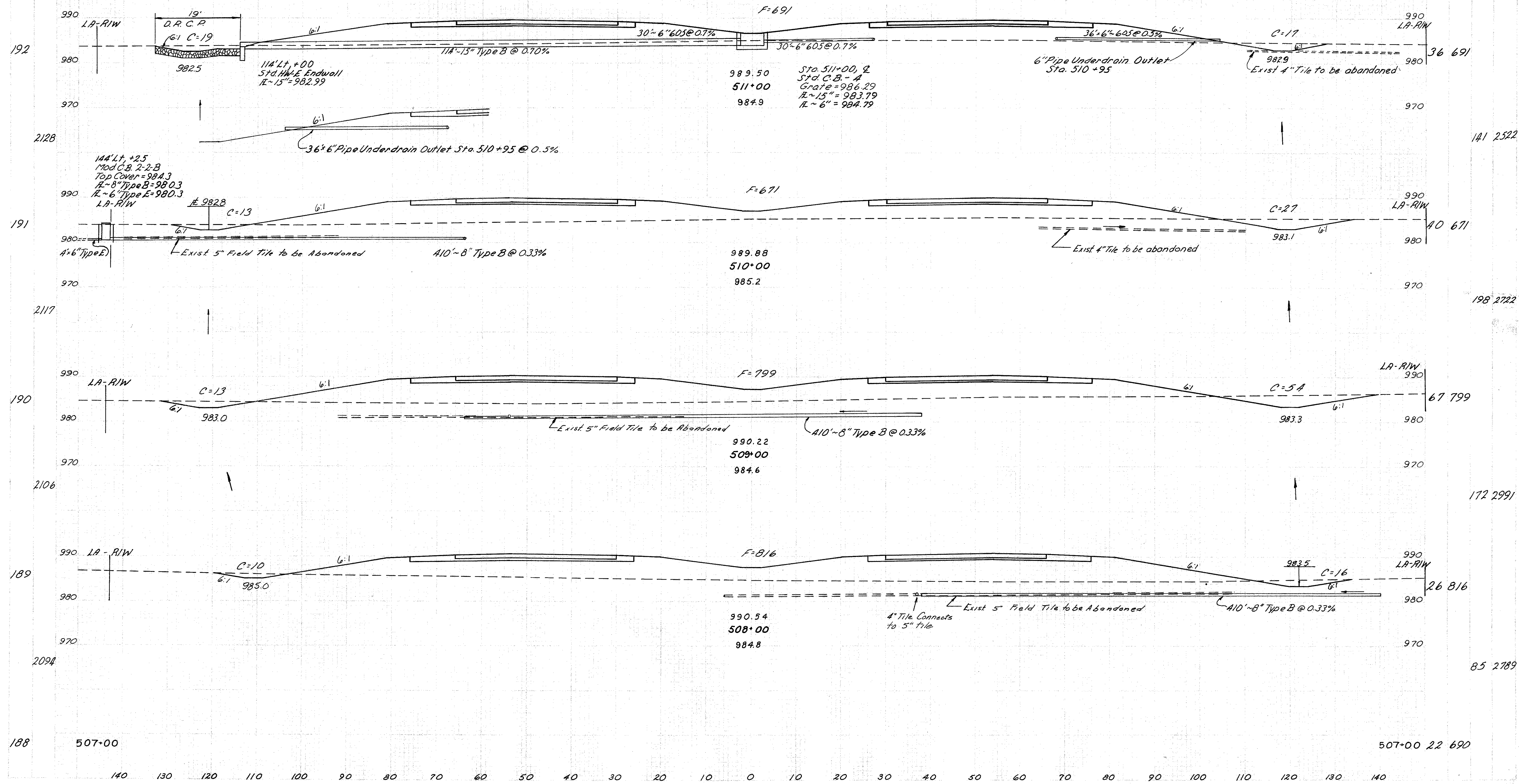
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495+00 68 1017



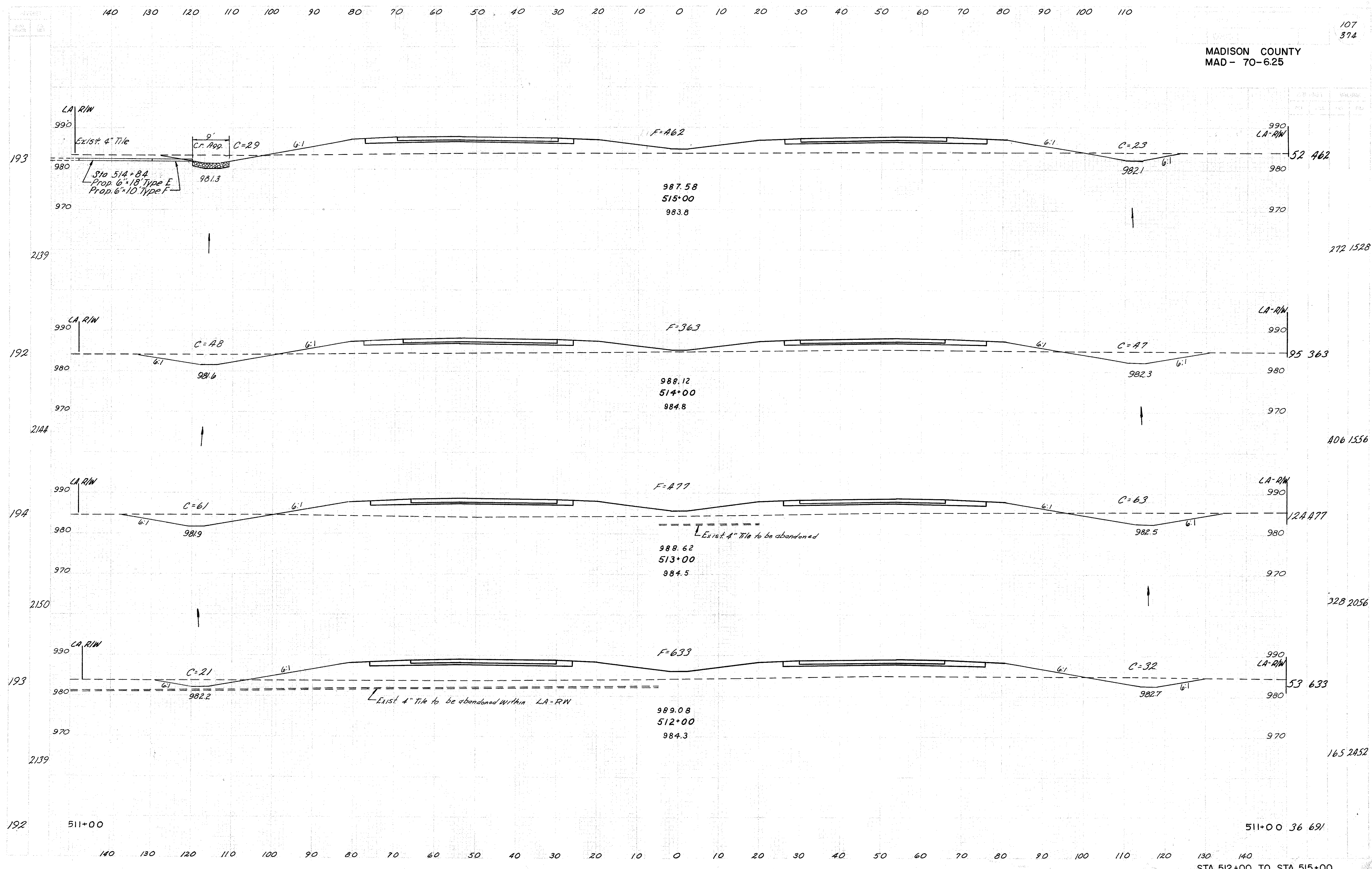


MADISON COUNTY
MAD- 70-6.25

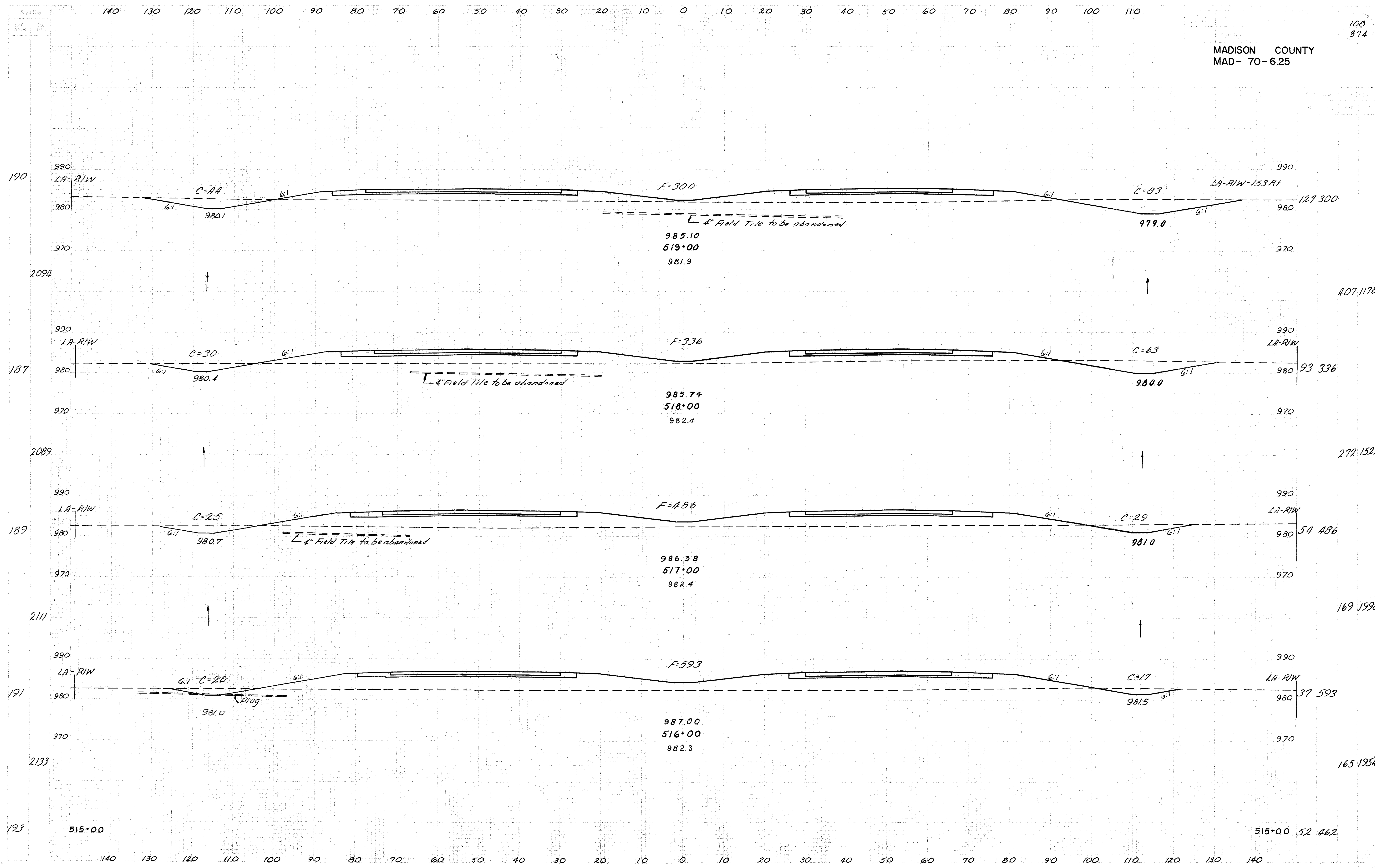


Ex. Grand	Plotted	Ch.	Inked
Complete			
Plan			
Section			
Detail			
Working			
Revised			

MADISON COUNTY
MAD - 70-625



Ex. Ground	Prop. Road	Prop. Drain	Prop. Culvert	Prop. Bridge	Prop. Structure	Prop. Other
Template	Template	Template	Template	Template	Template	Template
Plan	Plan	Plan	Plan	Plan	Plan	Plan
Earthwork Quant.	Earthwork Quant.	Earthwork Quant.	Earthwork Quant.	Earthwork Quant.	Earthwork Quant.	Earthwork Quant.
Seeding Quant.	Seeding Quant.	Seeding Quant.	Seeding Quant.	Seeding Quant.	Seeding Quant.	Seeding Quant.



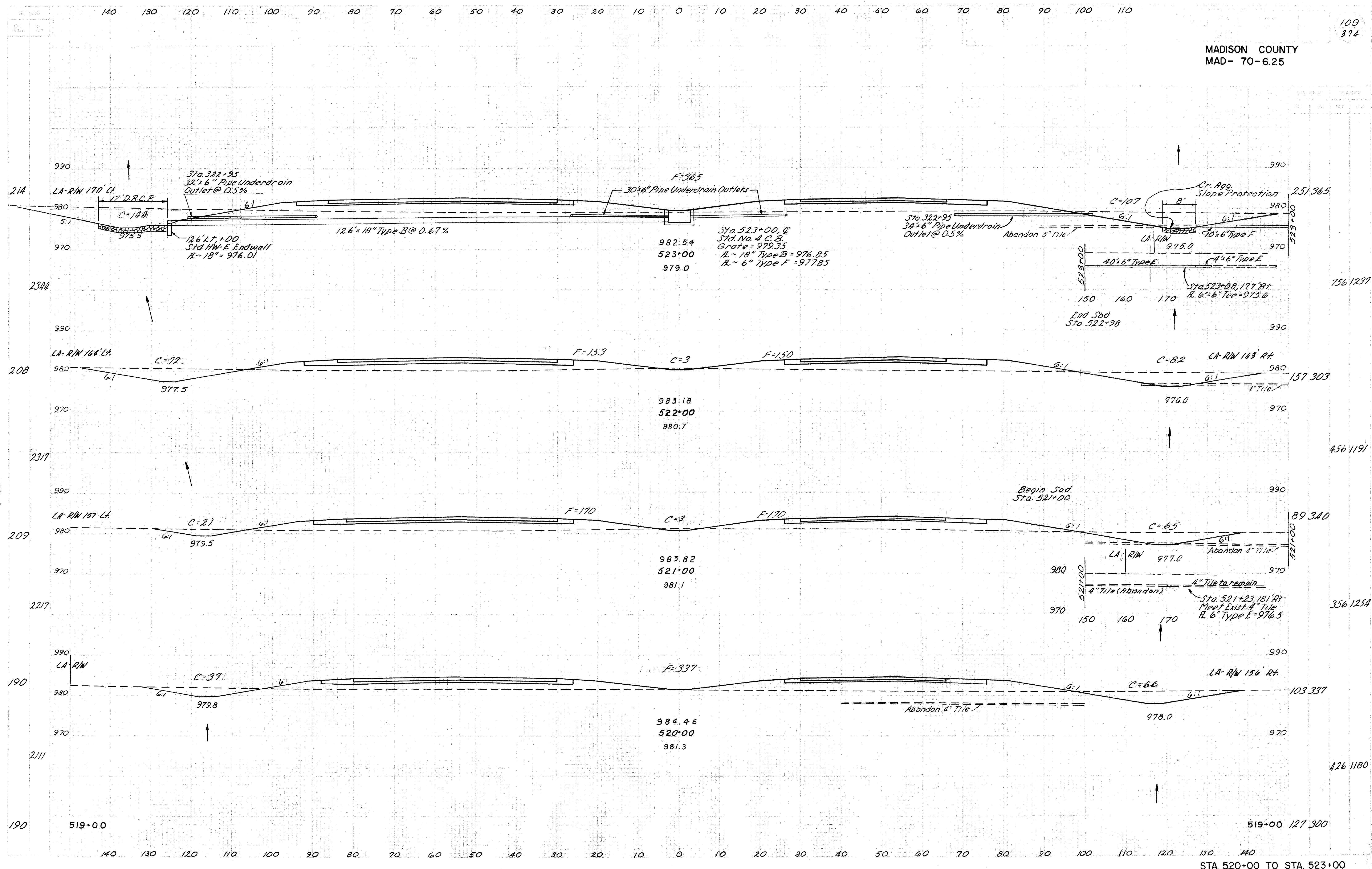
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407 1178

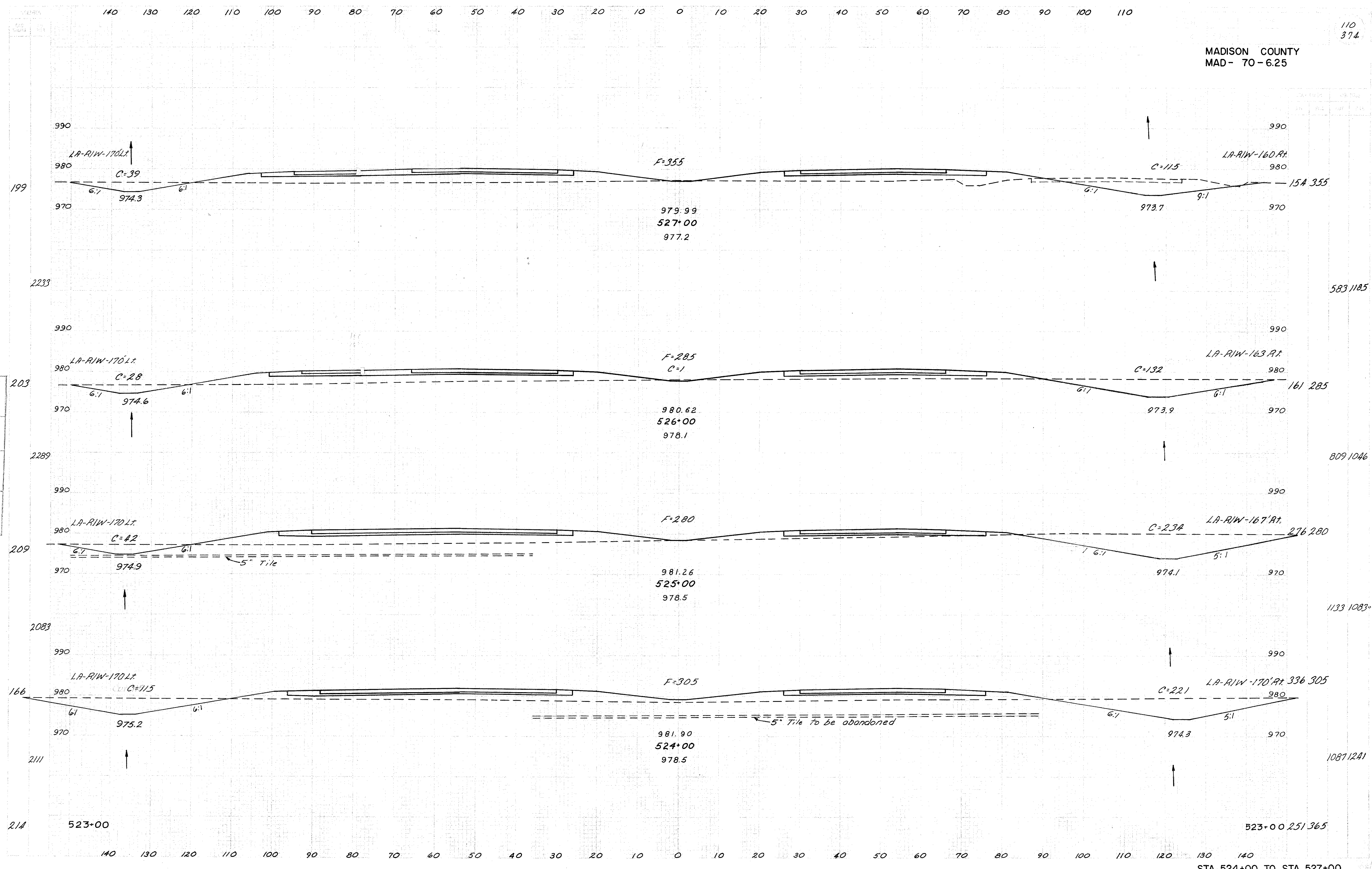
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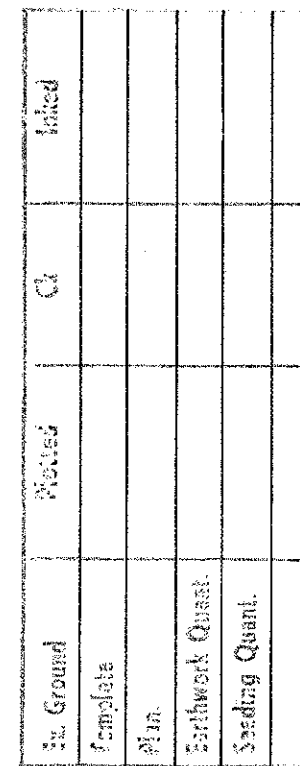
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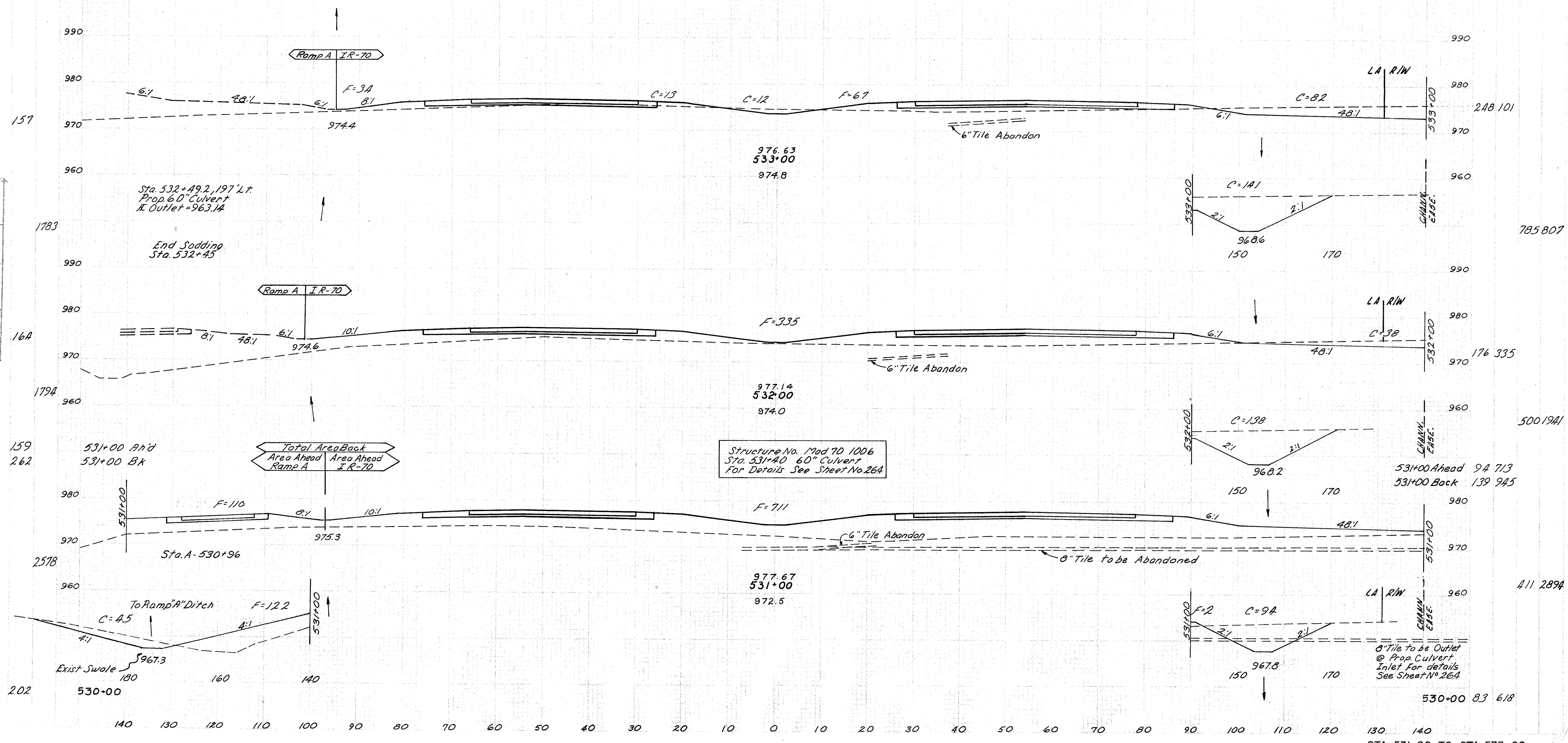


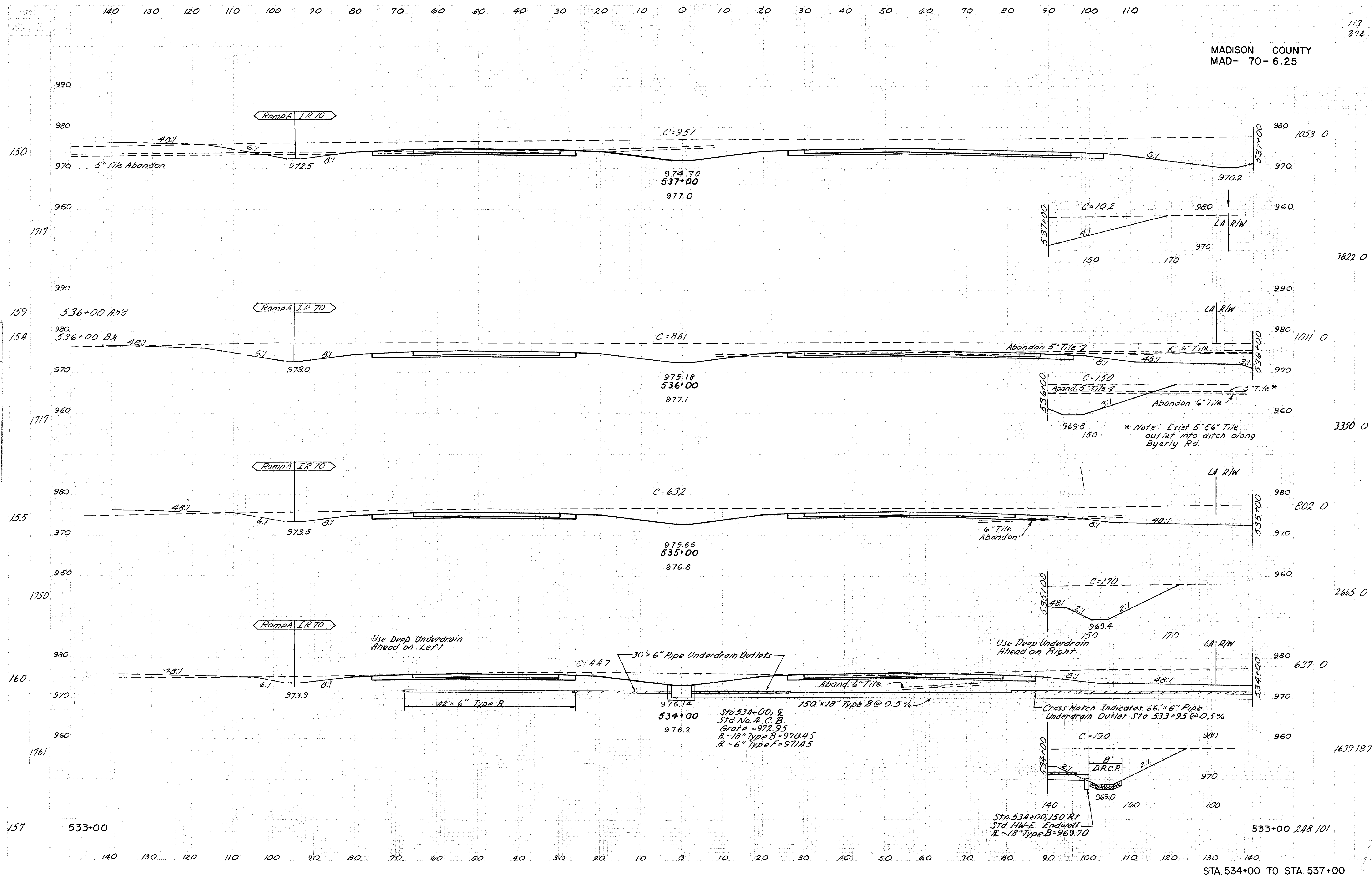
MADISON COUNTY
MAD- 70-6.25



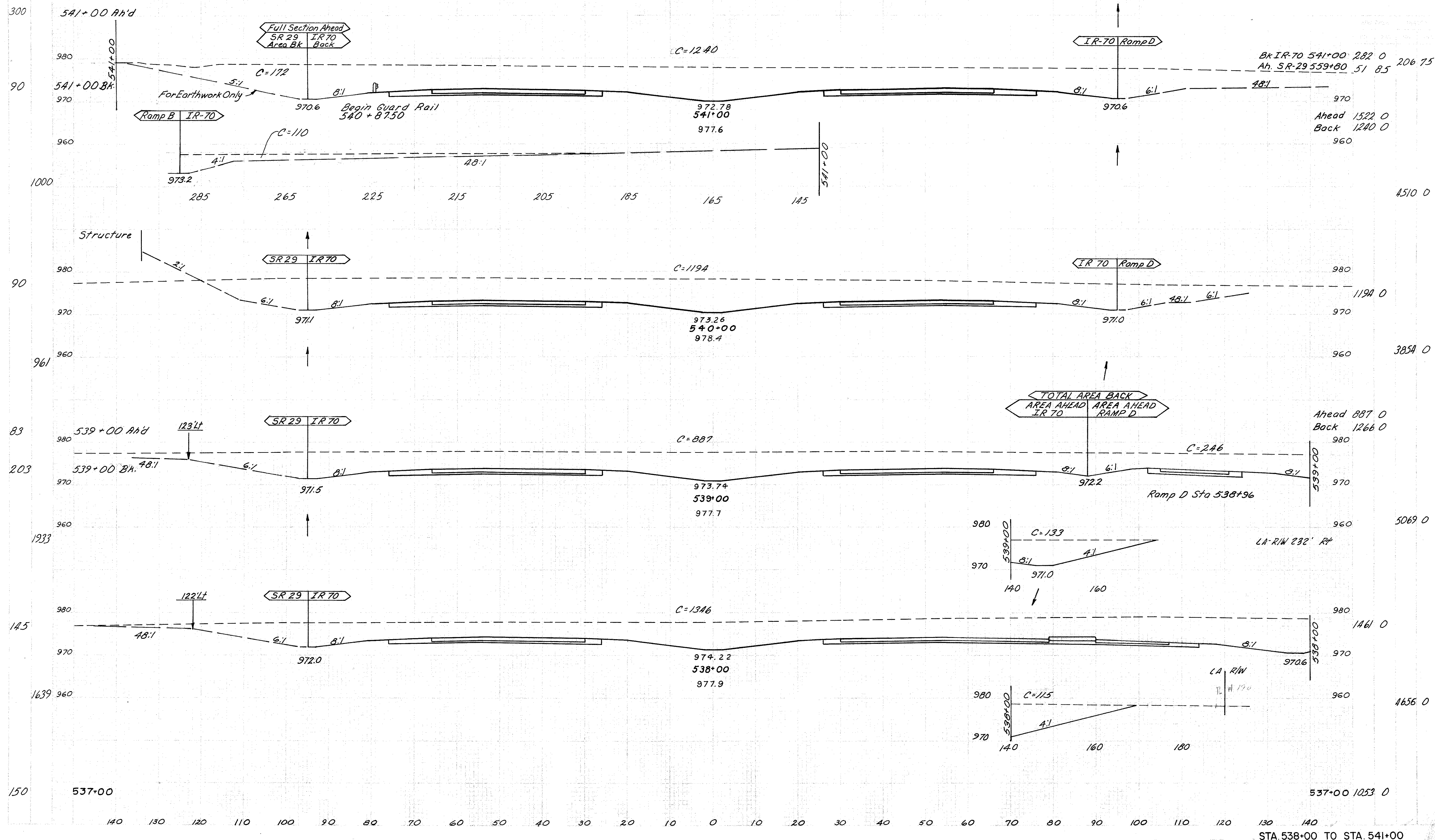


By	Checked	Plotted	Cl.	Head

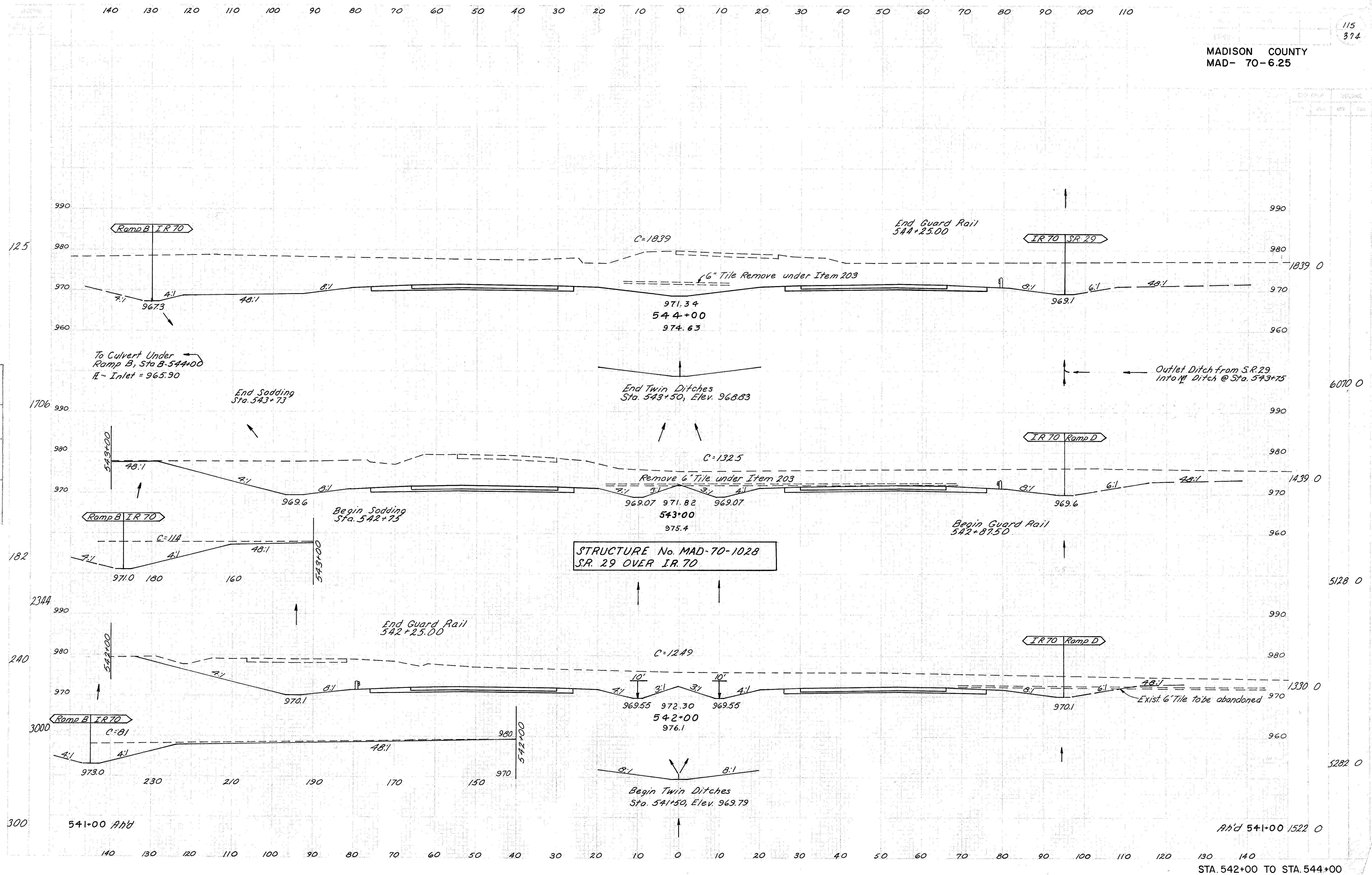


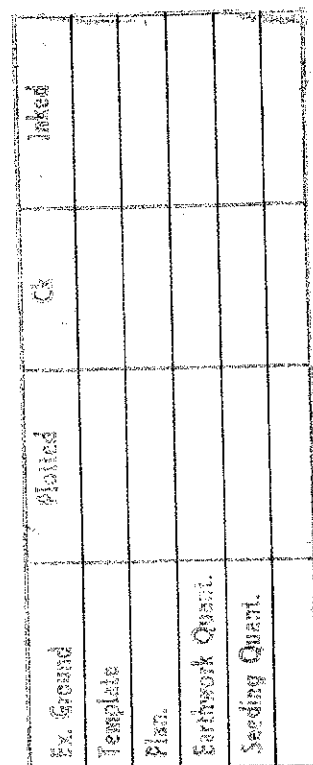


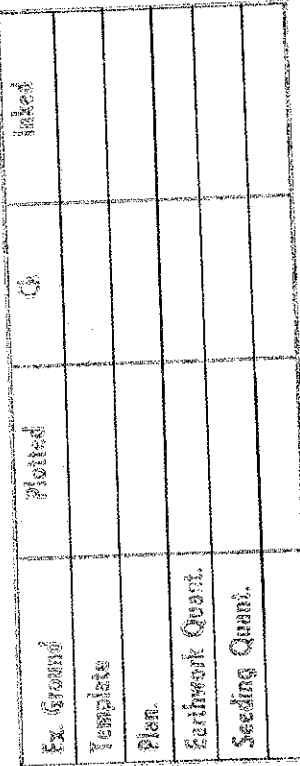
MADISON COUNTY
MAD- 70-6.25

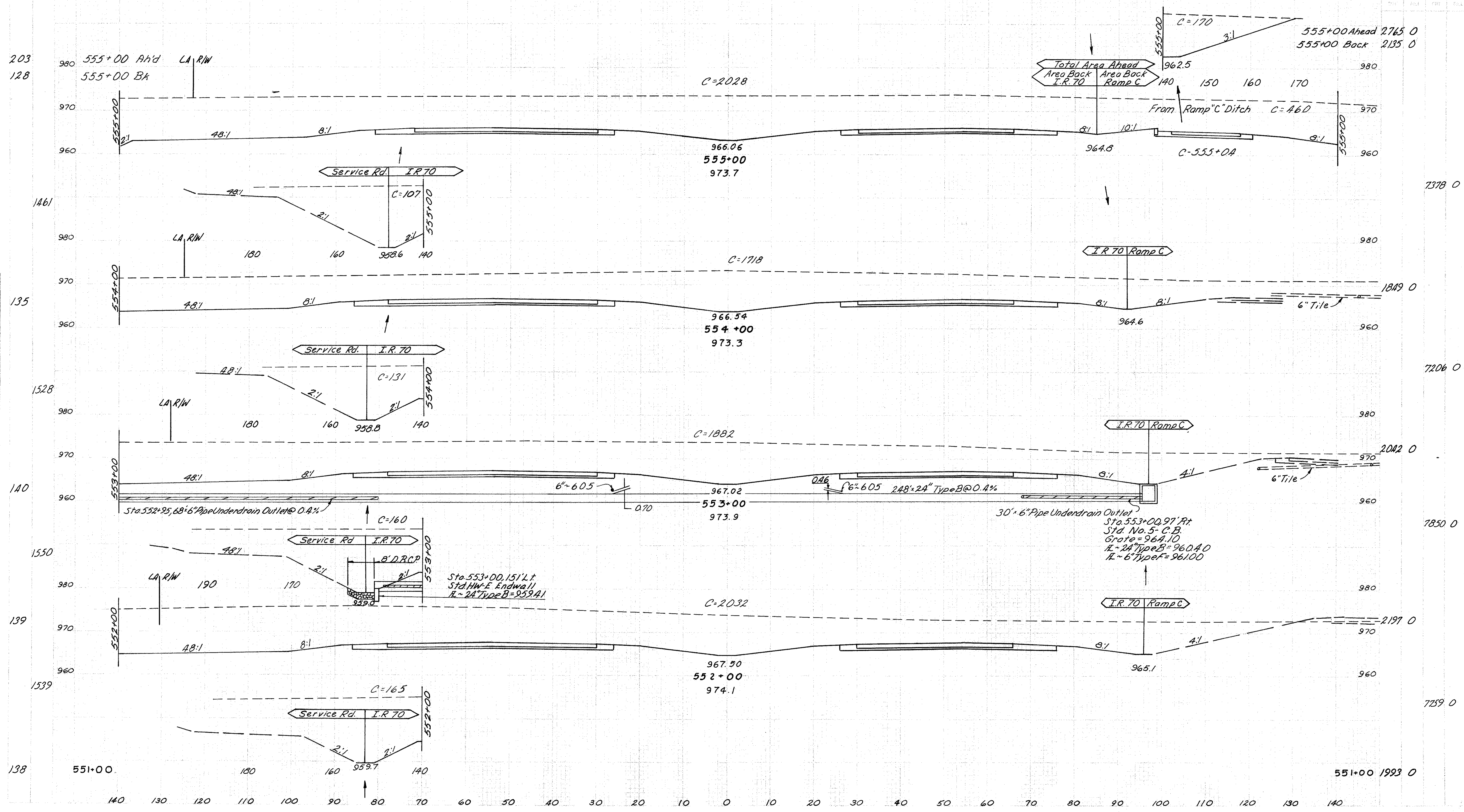


Ex. Ground	Station	Label
Template		
Plan		
Earthwork Quant.		
Sealing Quant.		

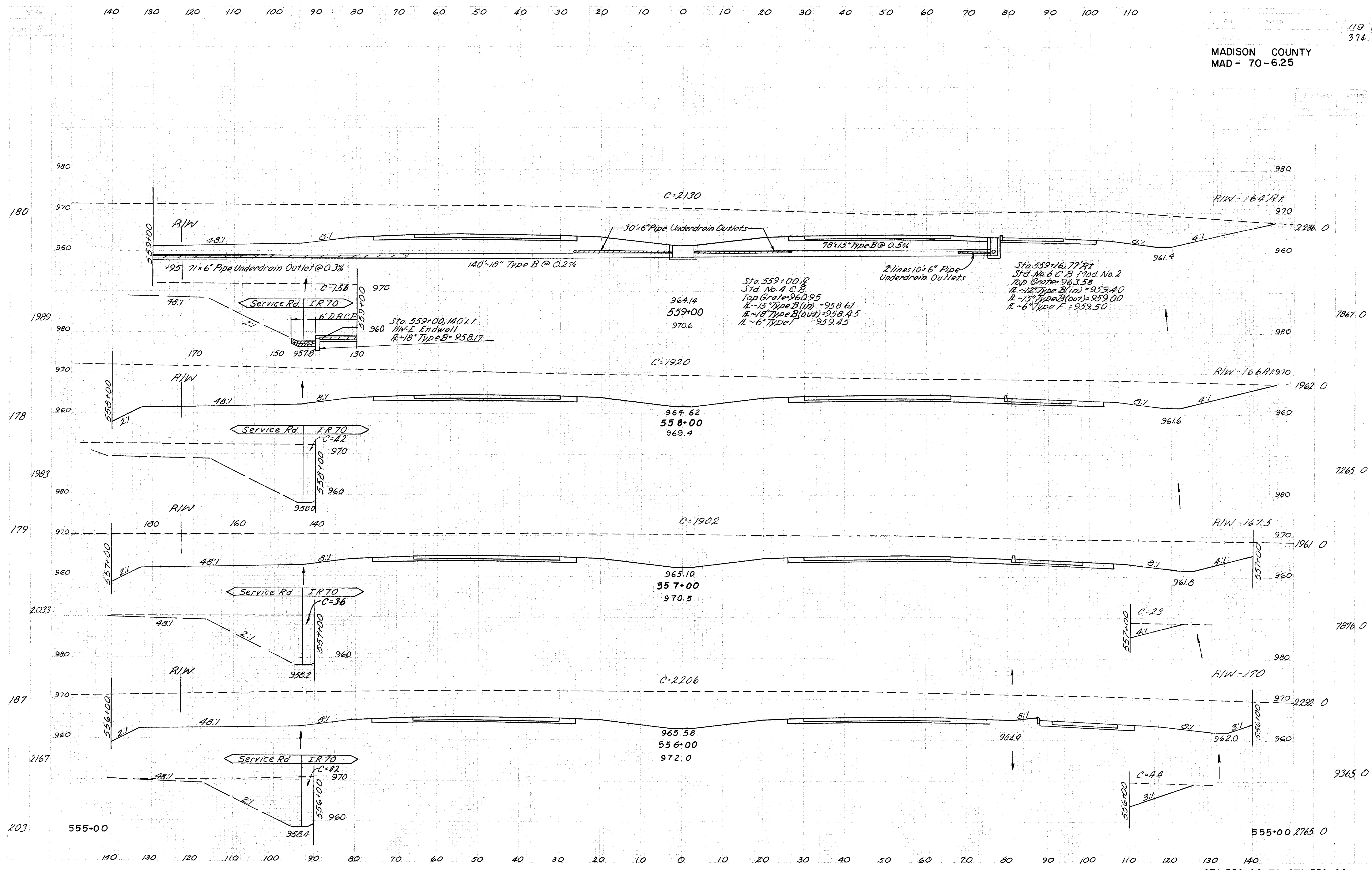




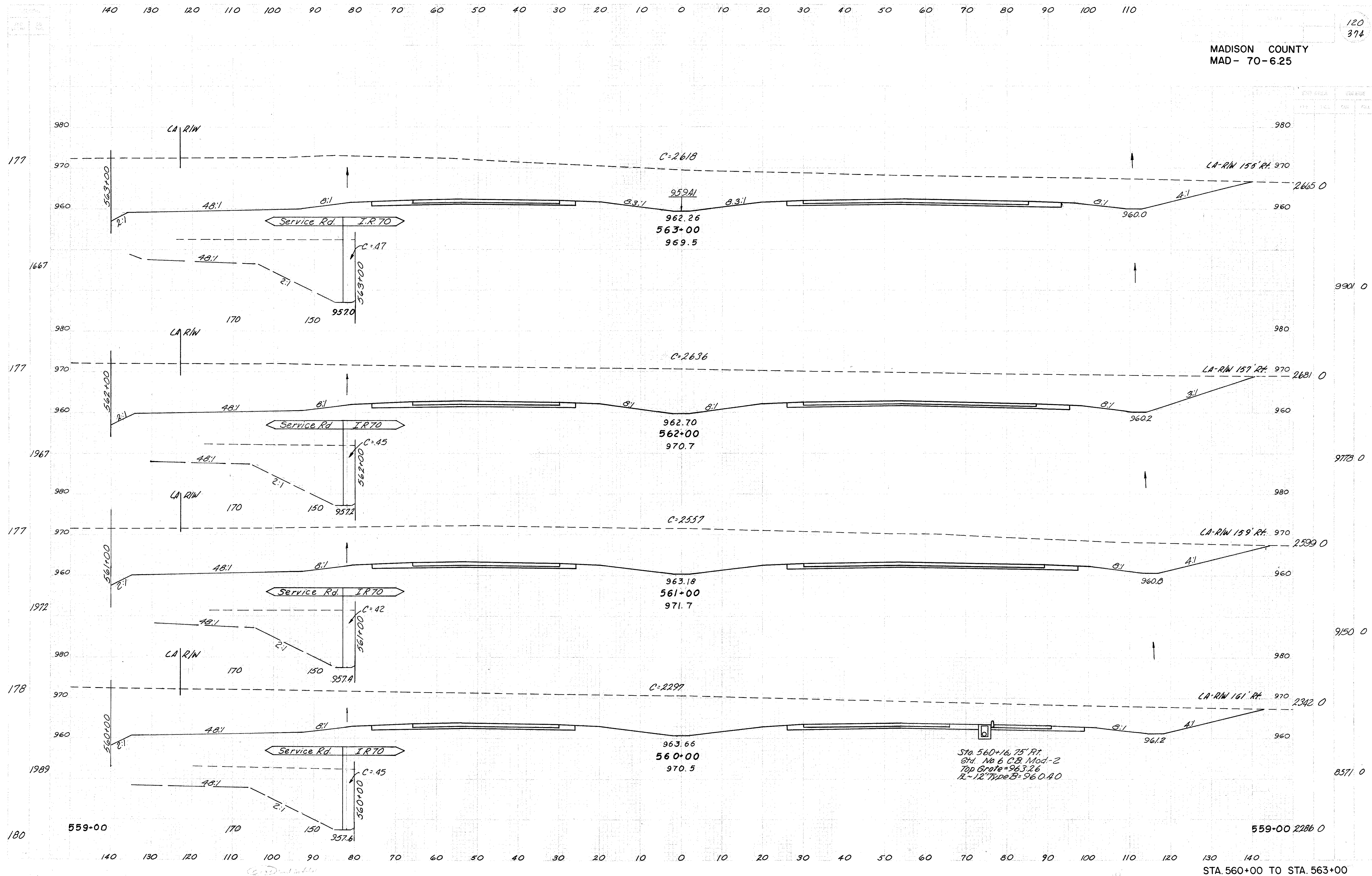




Ex. Ground	Plotted	Ch	Initial
Topog. Plan			
Earthwork Quant.			
Seeding Quant.			



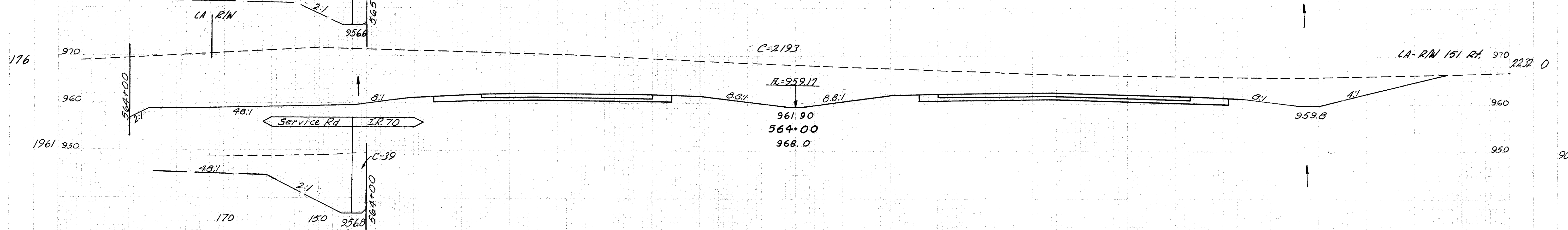
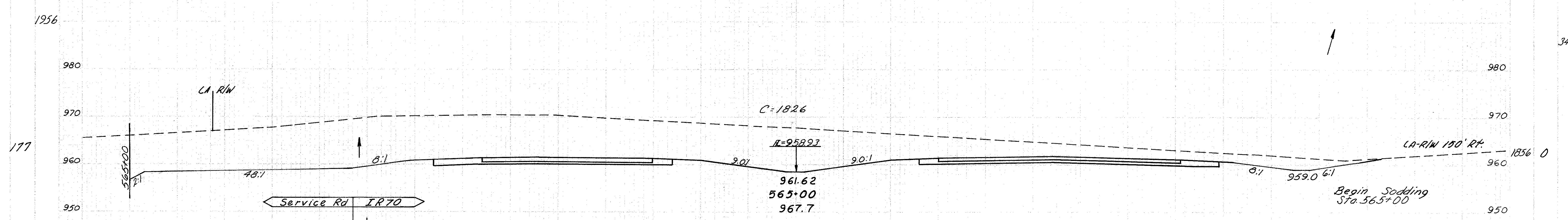
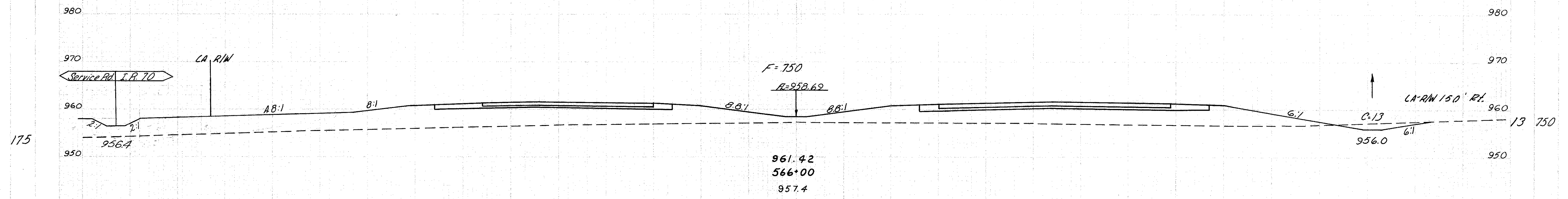
Ex. Ground	Plotted	Final
Plan		
Earthwork Quant.		
Sealing Quant.		



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

MADISON COUNTY
MAD- 70-6.25

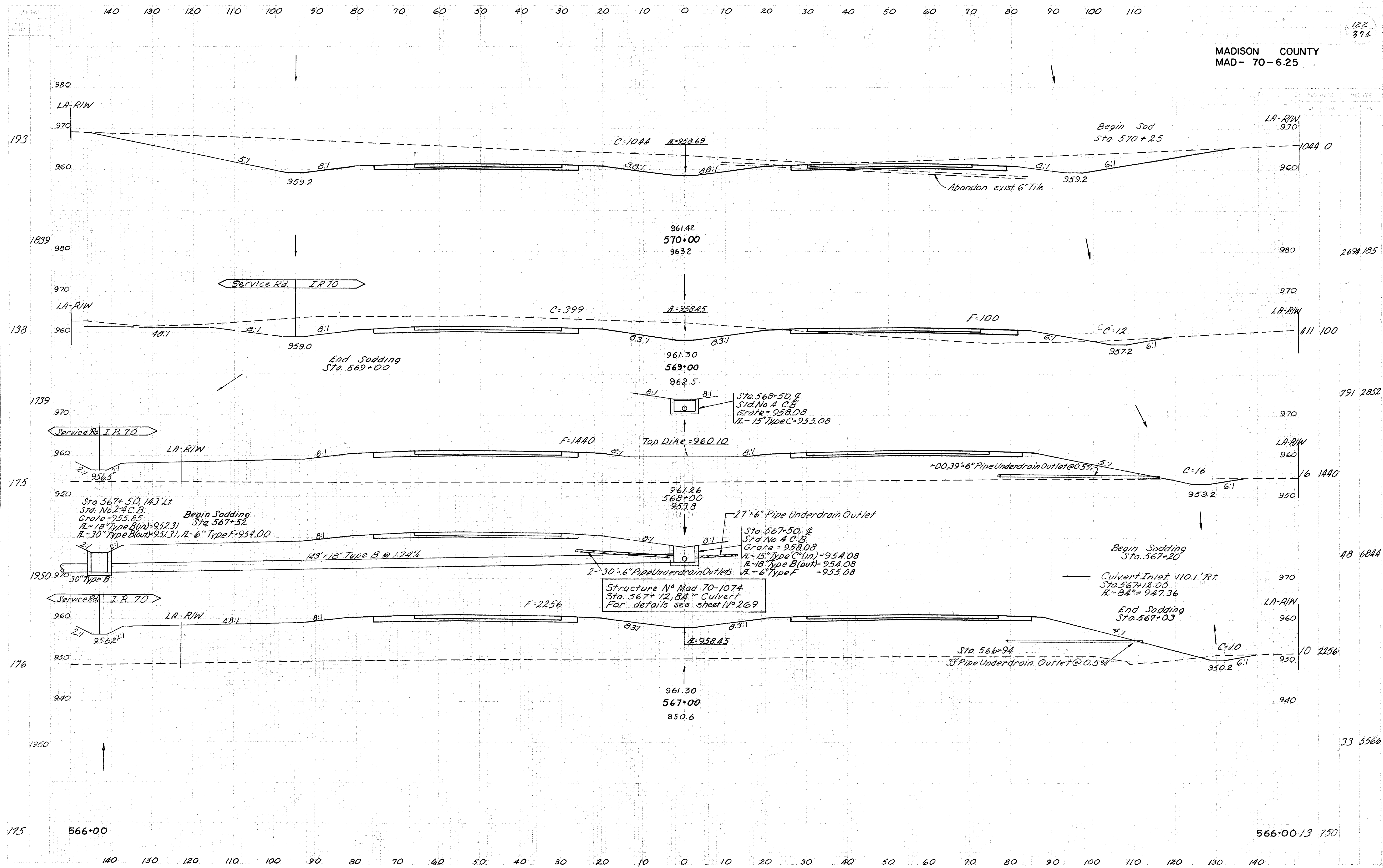
121
374



563+00 563+00 2665 0

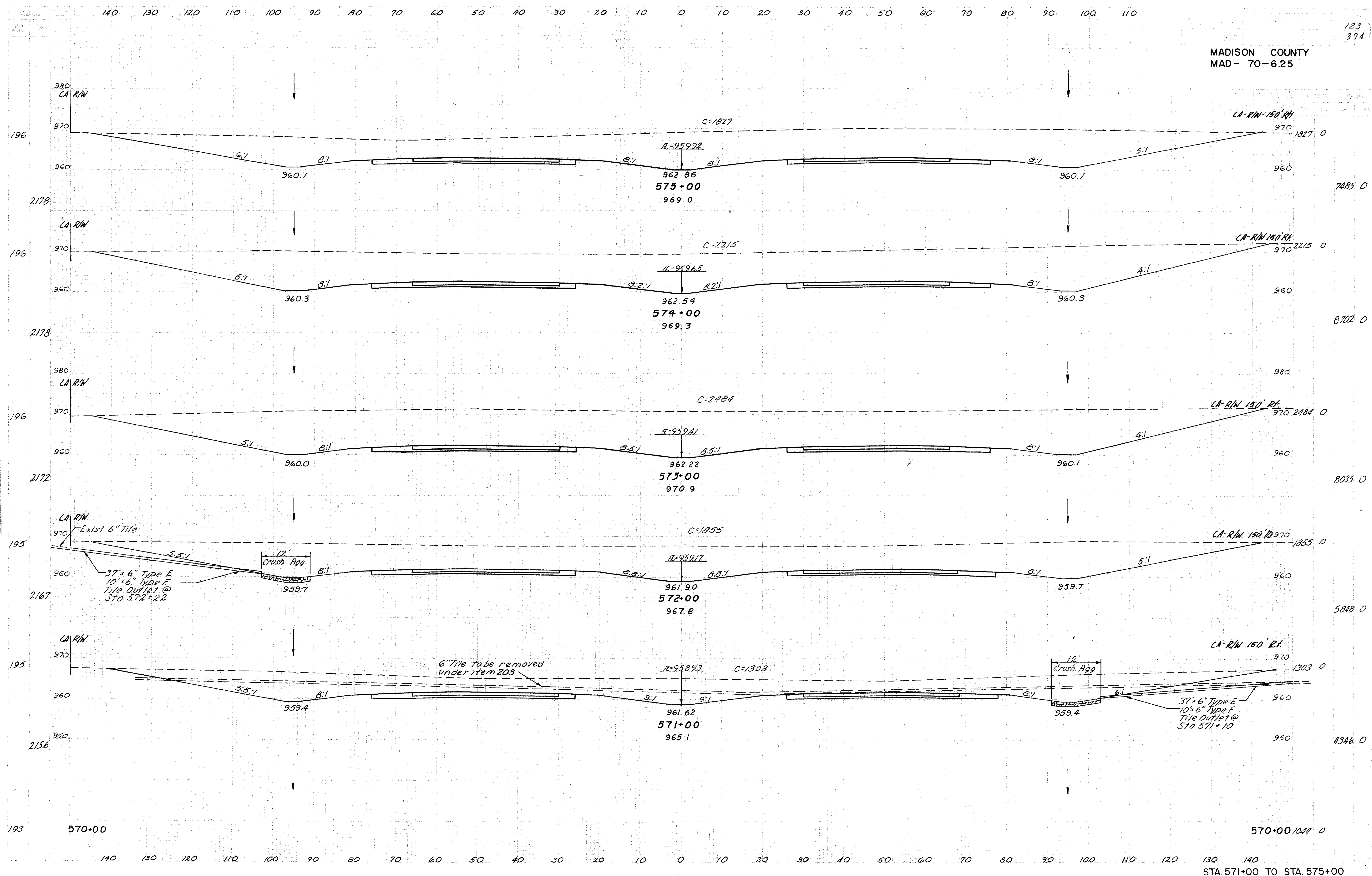
STA. 564+00 TO STA. 566+00

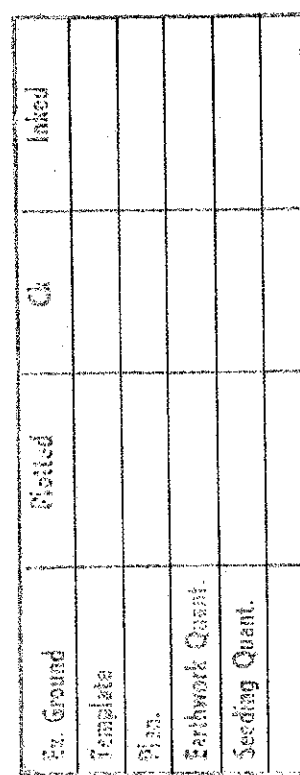
MADISON COUNTY
MAD- 70-6.25



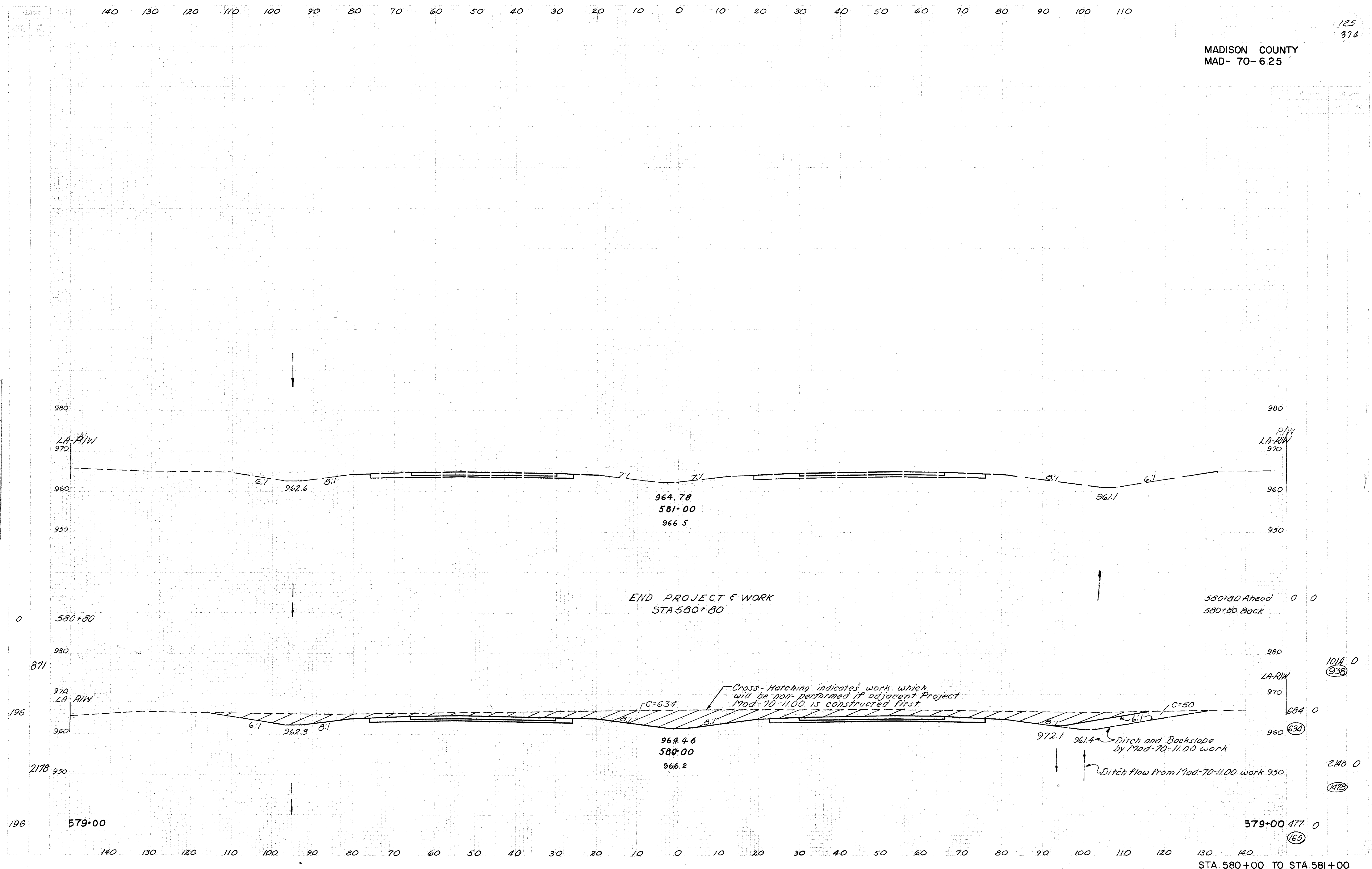
STA. 567+00 TO STA. 570+00

Est. Ground	Proposed	Initial
Template		
Plan		
Earthwork Quant.		
Seeding Quant.		



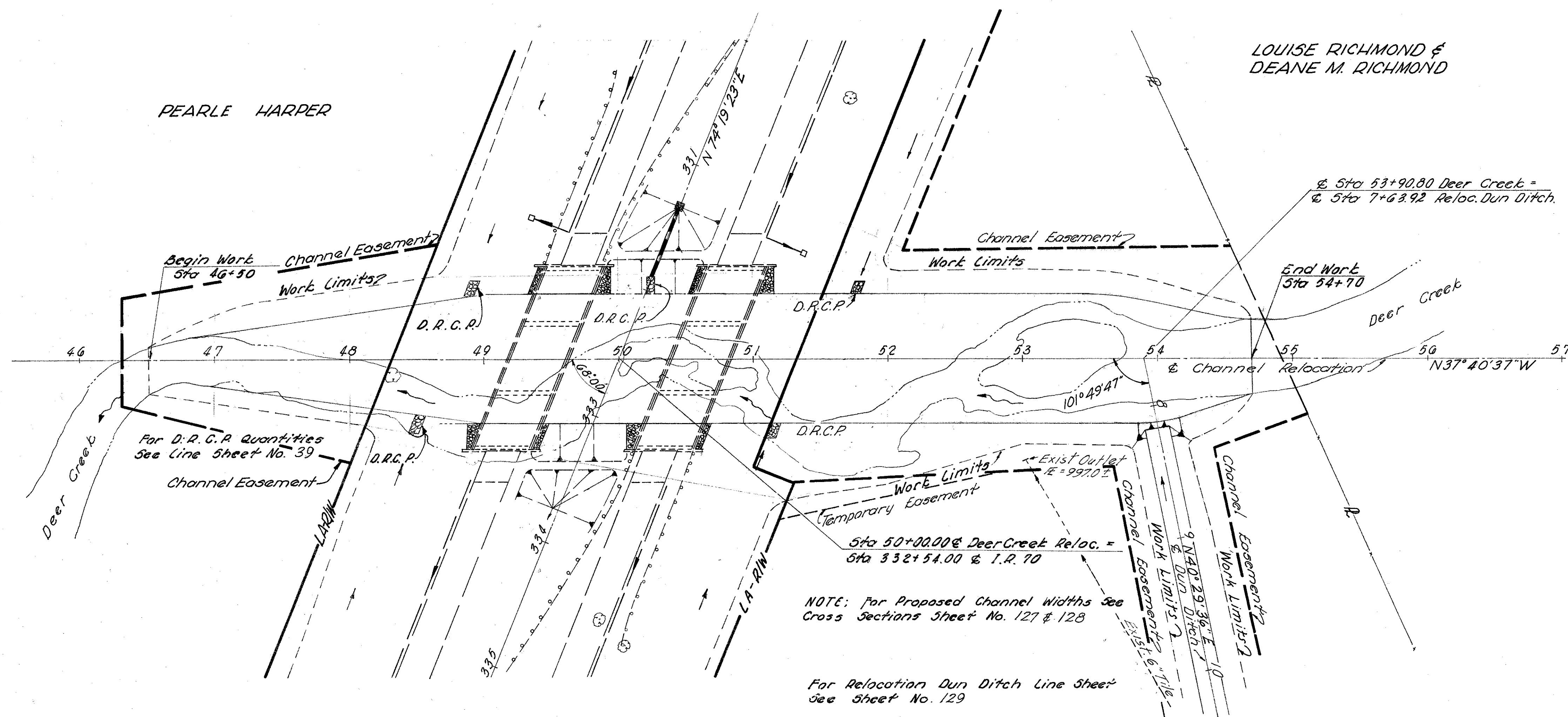


Ex. Ground	Platted	Ct.	Linked
Template			
Plan.			
Earthwork Quant.			
Seeding Quant.			



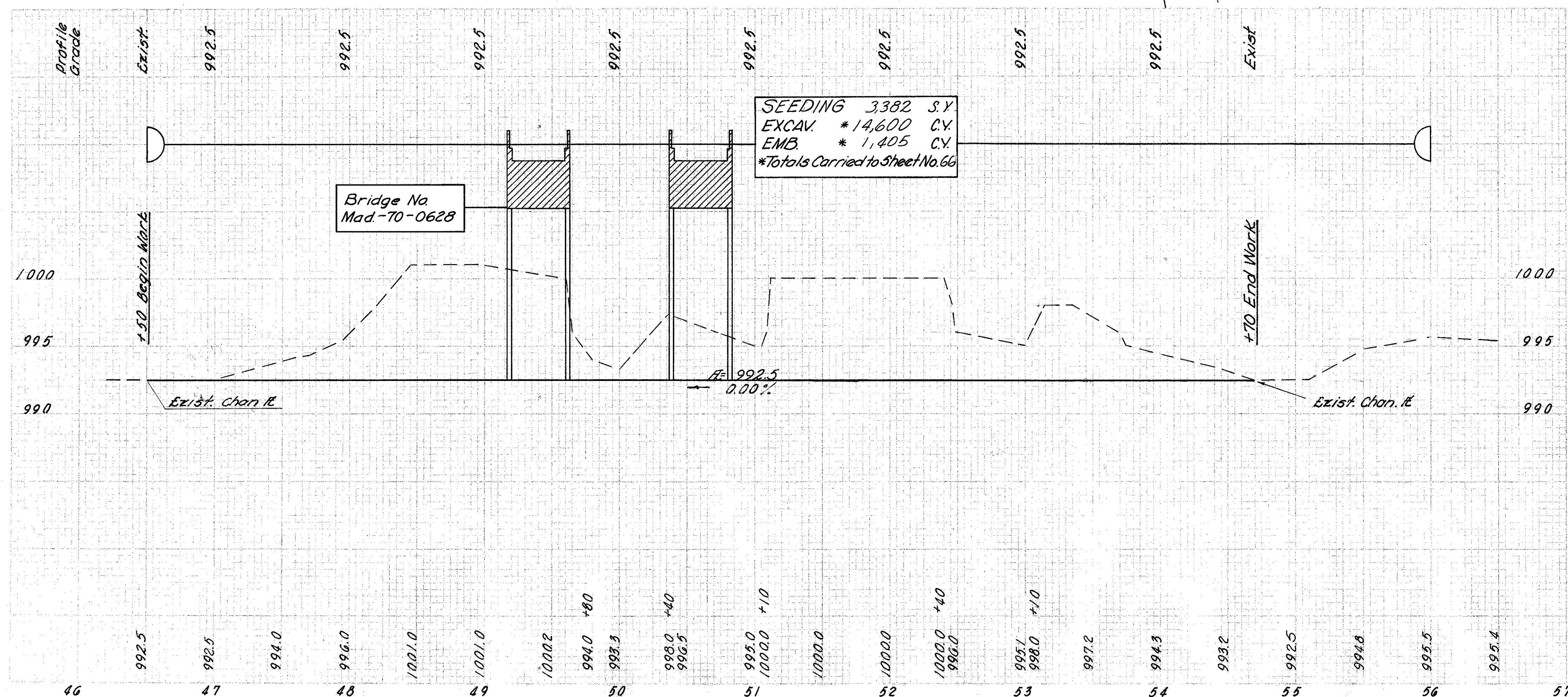
PEARLE HARPER

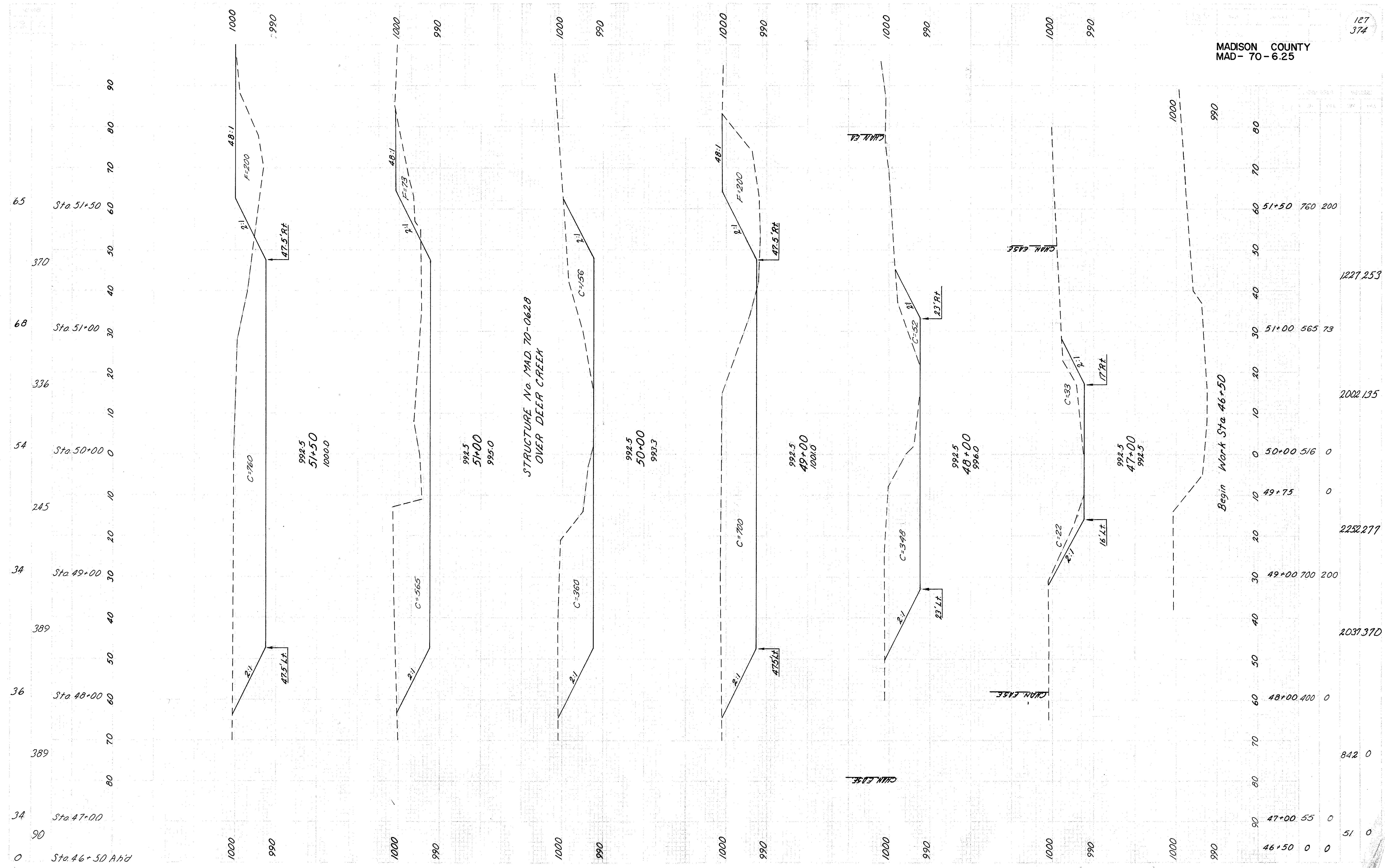
LOUISE RICHMOND &
DEANE M. RICHMOND

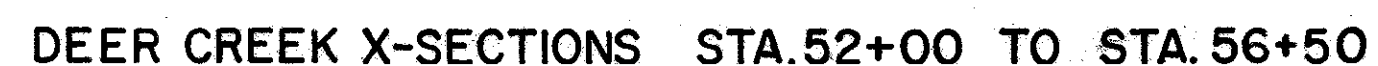


NOTE: For Proposed Channel Widths See Cross Sections Sheet No. 127 & 128

For Relocation Dun Ditch Line Sheet see Sheet No. 129

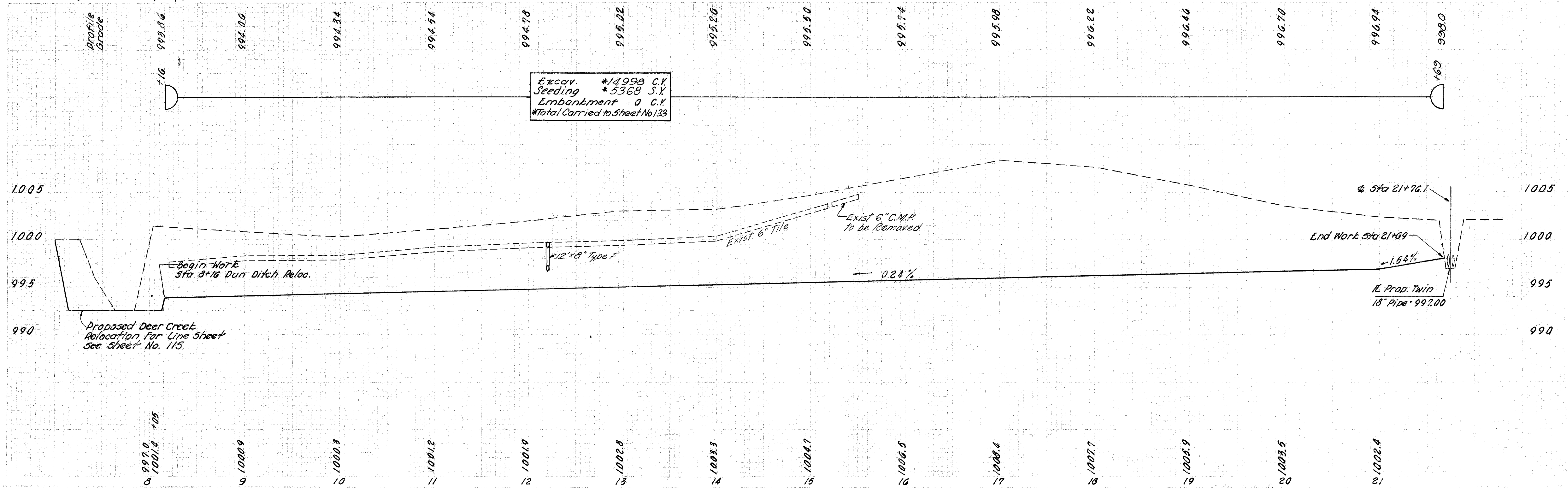
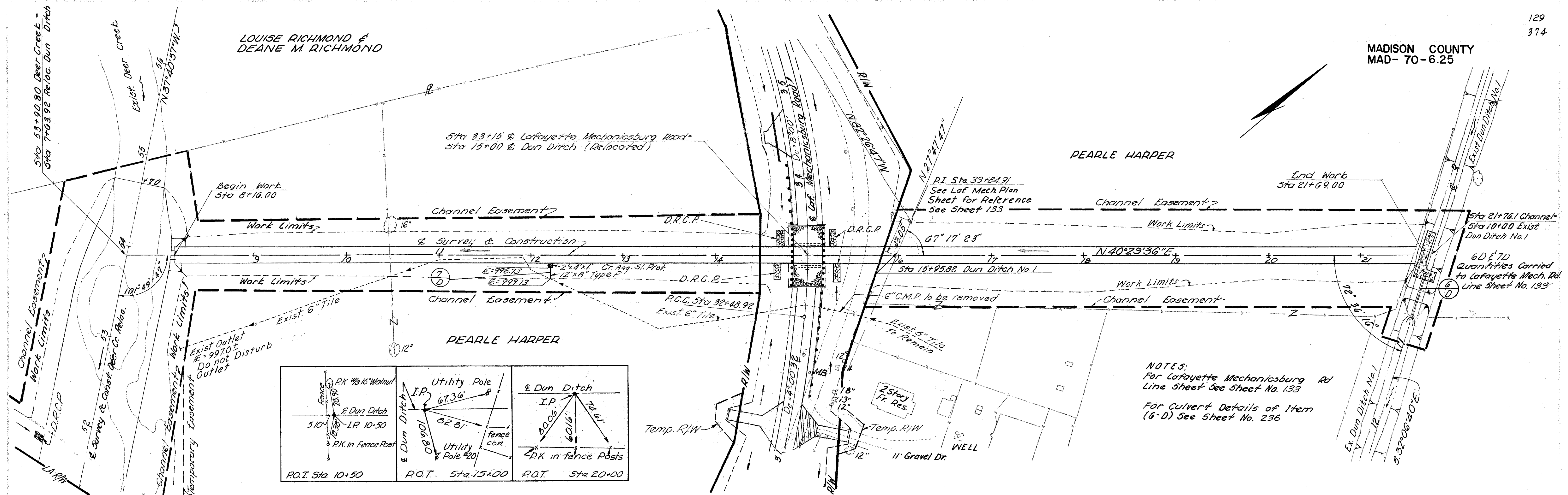






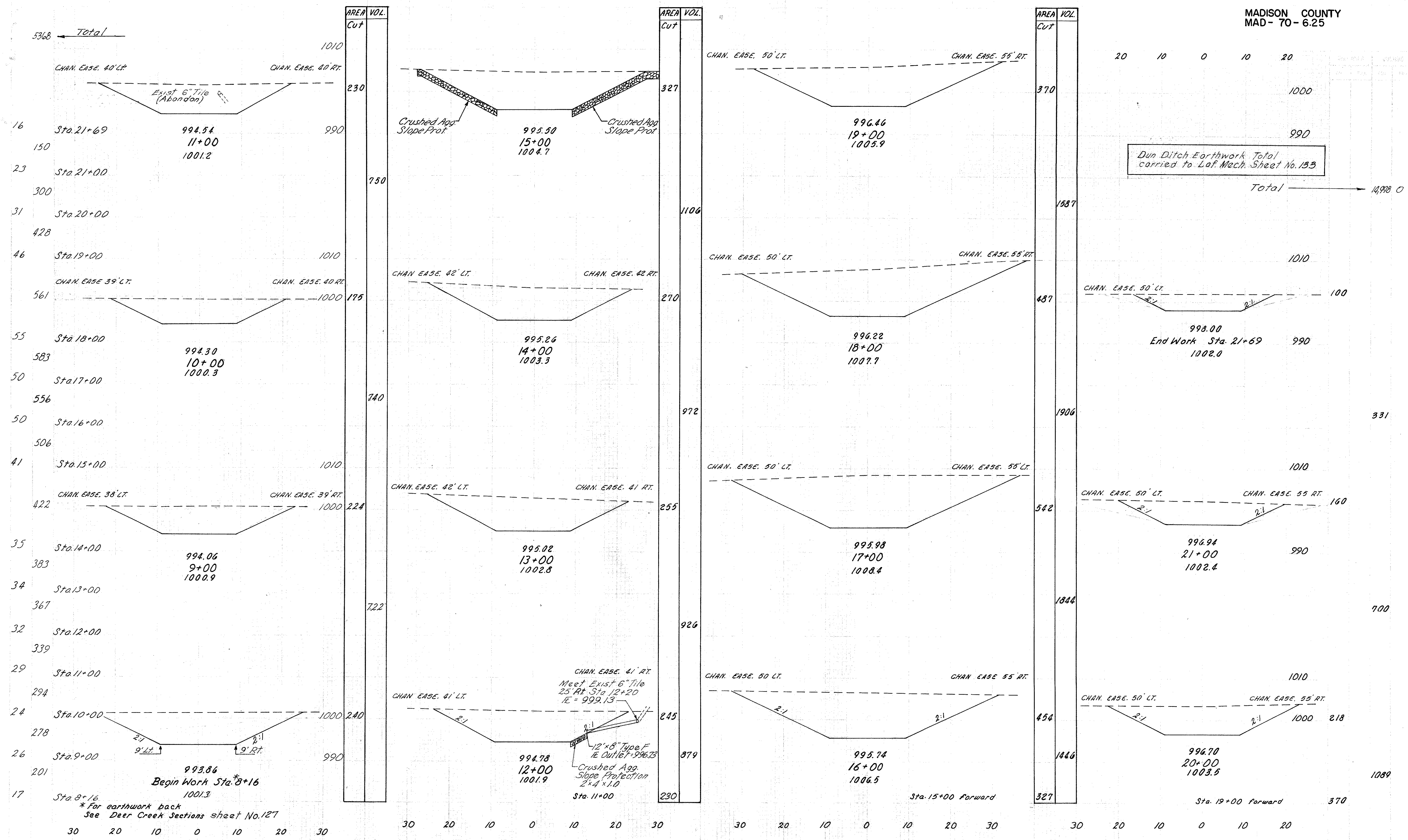
LOUISE RICHMOND &
DEANE M. RICHMOND

MADISON COUNTY
MAD- 70-6.25

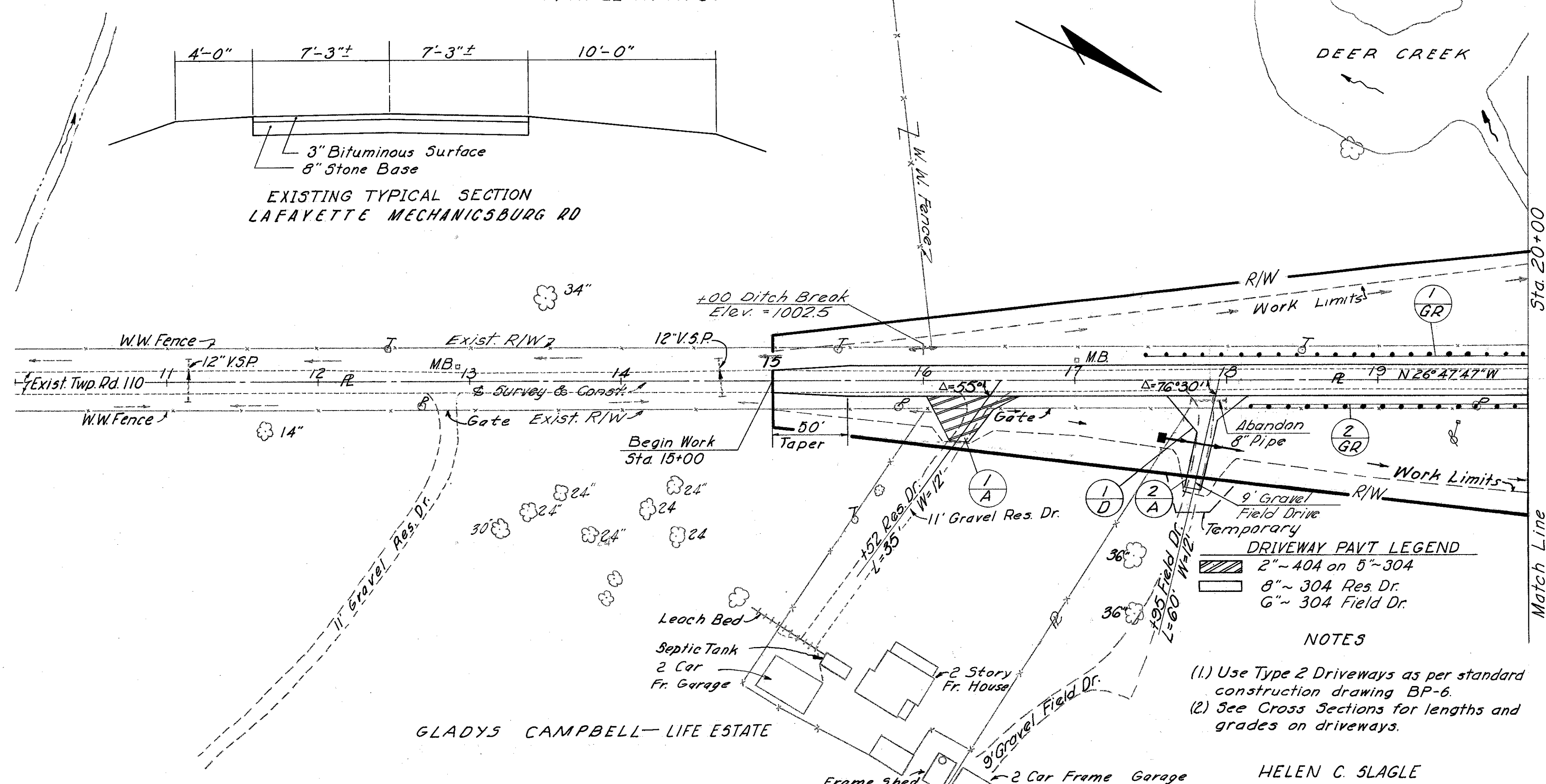


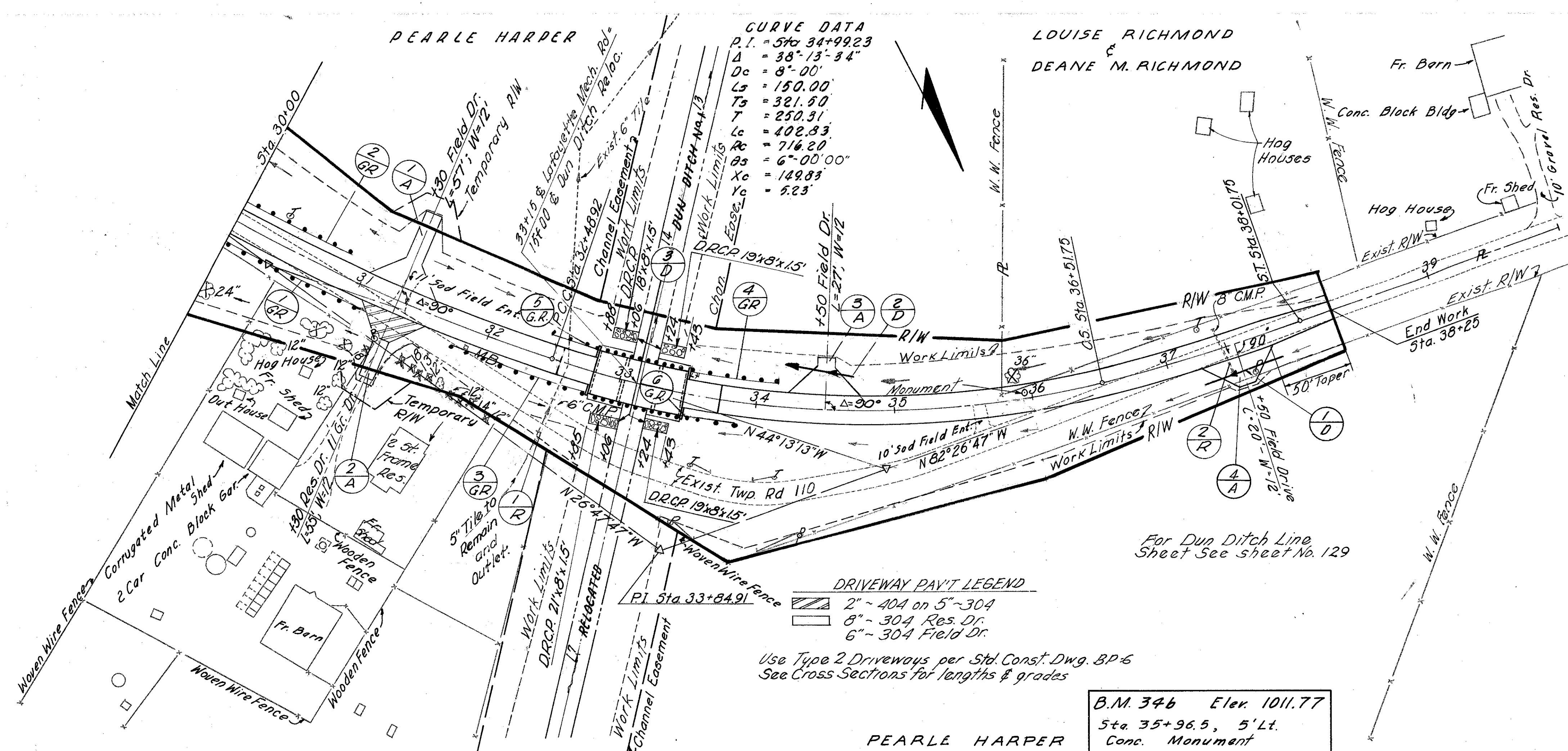
DUN DITCH N°.1 RELOCATED STA.7+63.92 TO STA. 21+76.10

MADISON COUNTY
MAD- 70- 6.25

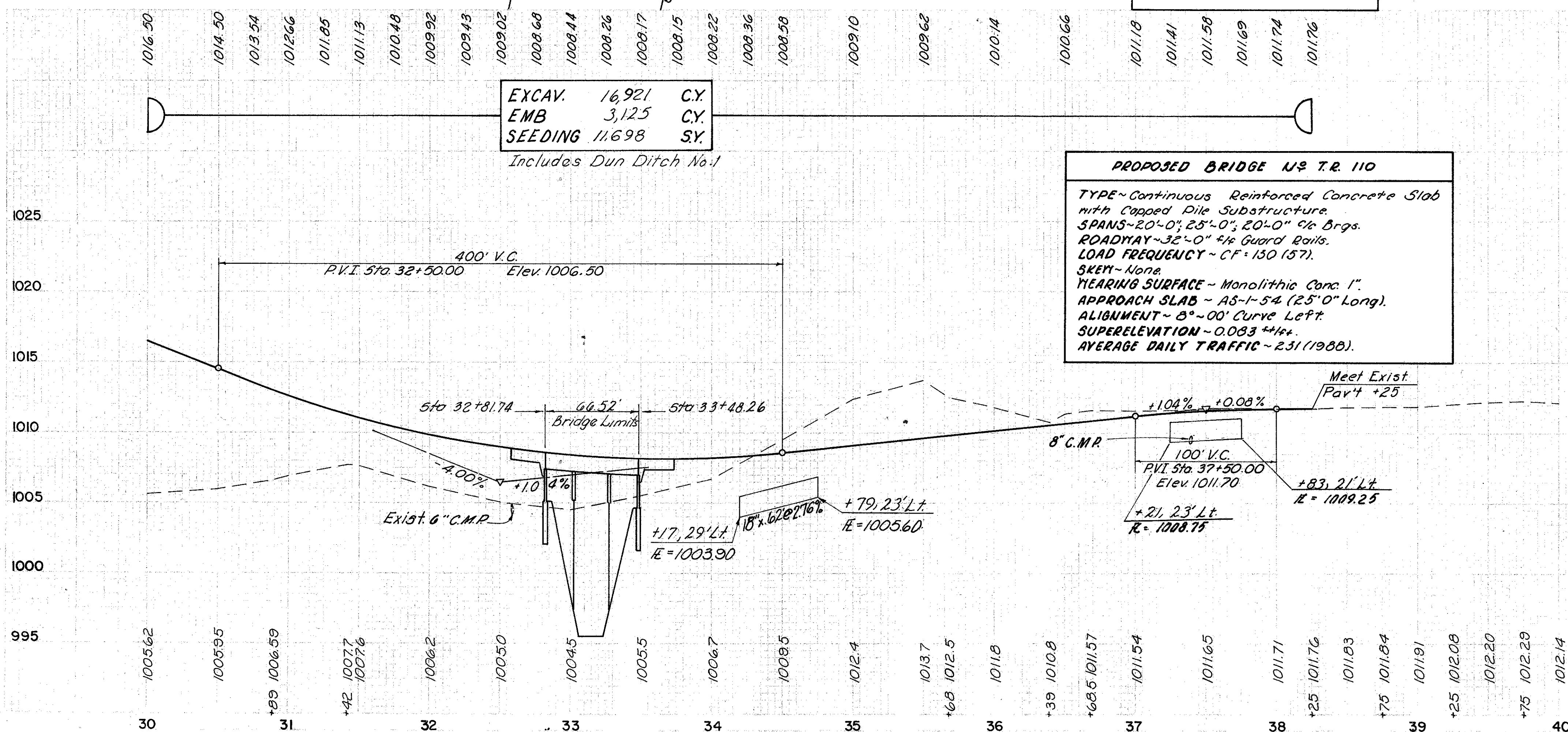


PEARLE HARPER



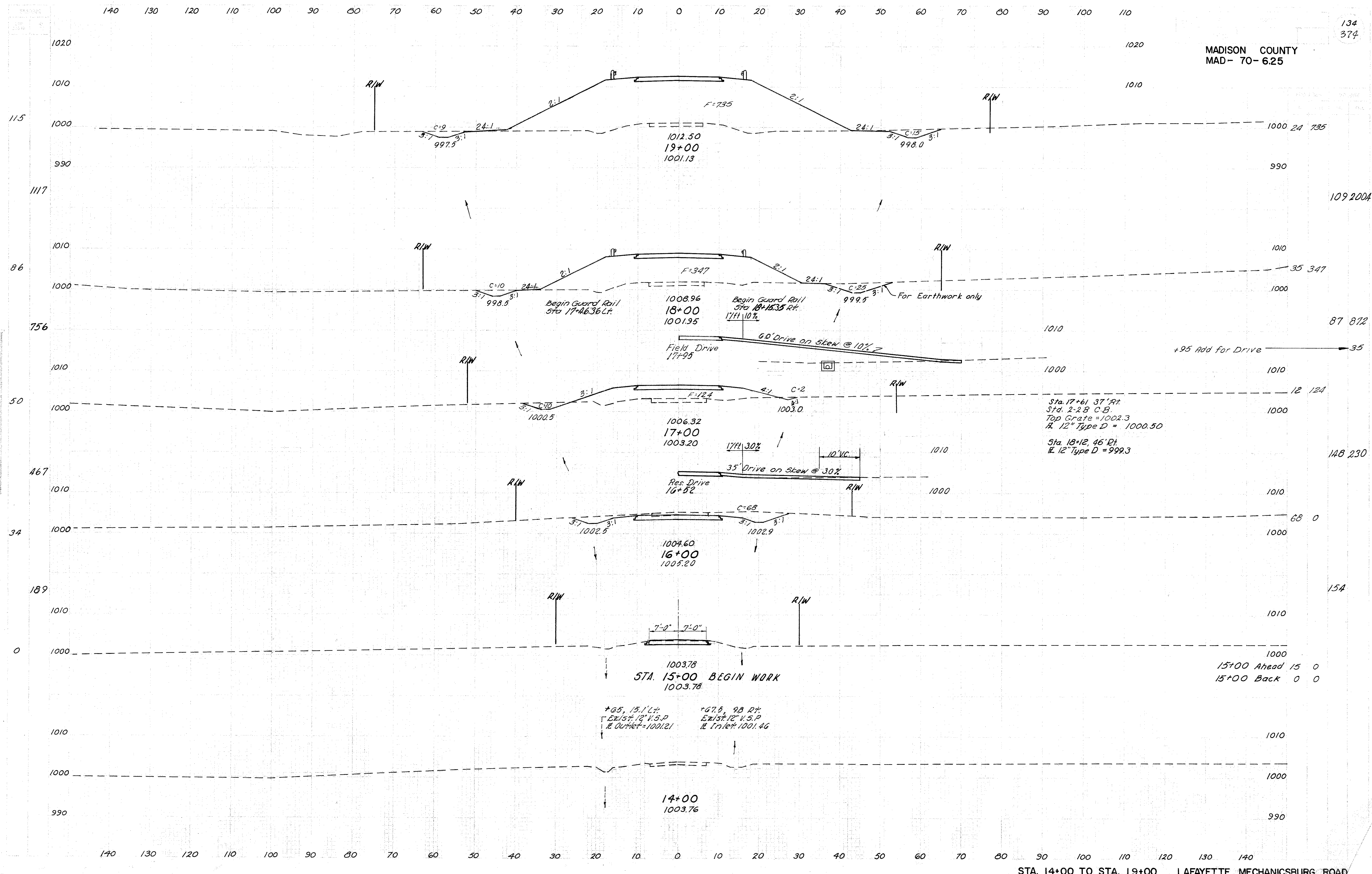


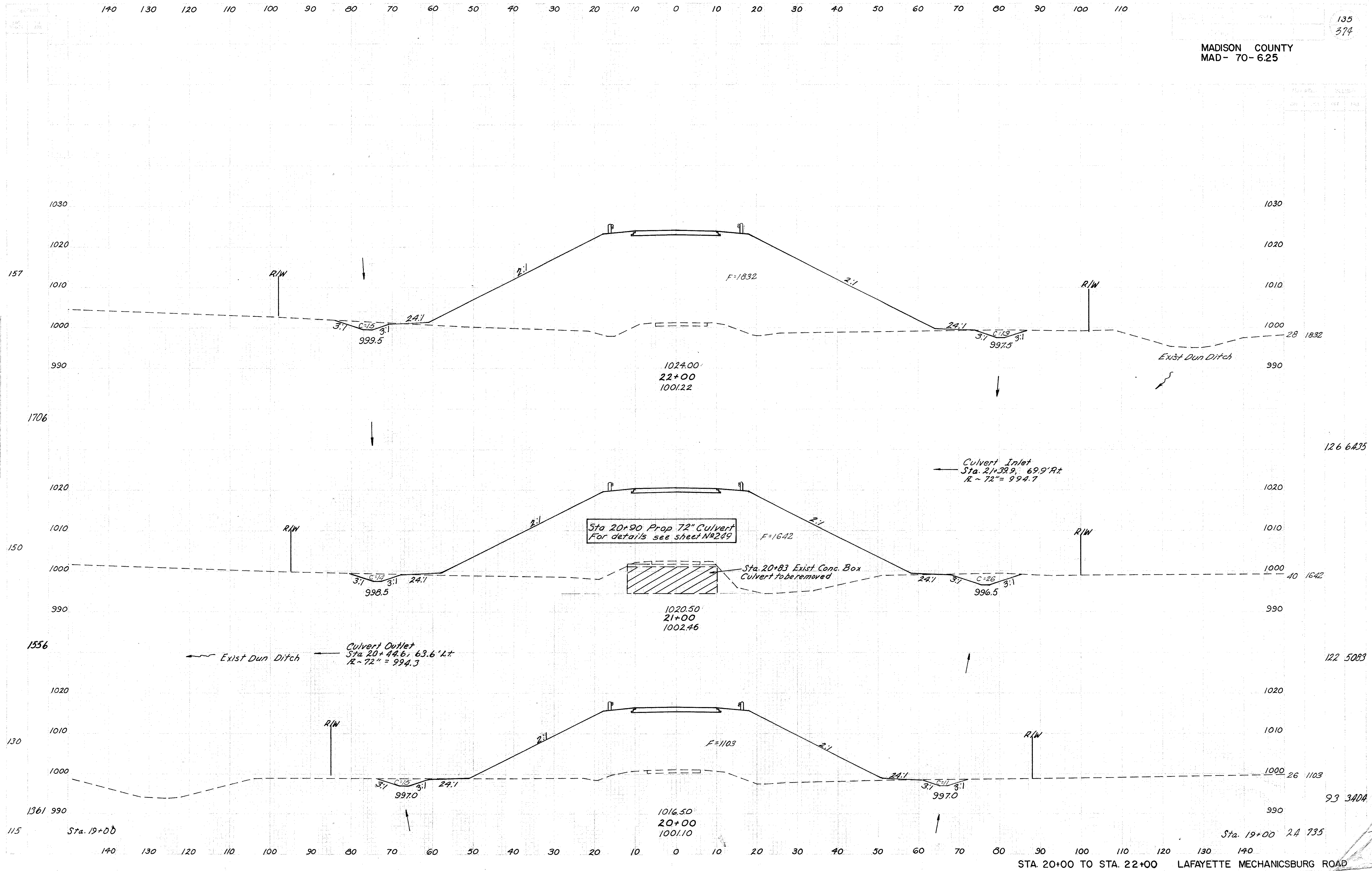
SUPERELEVATION TABLE							
Max. Super. 4° = 0.66 1/4%				Max. Super. 8° = 0.83 1/4%			
Sta.	Lt. Edge of Part.	Profile Grade of Part.	Rt. Edge of Part.	Sta.	Lt. Edge of Part.	Profile Grade of Part.	Rt. Edge of Part.
26+75	1026.81	1026.97	1026.81	32+50	1008.27	1009.02	1009.77
27+00	1026.34	1026.50	1026.40	32+75	1007.85	1008.68	1009.51
27+25	1025.81	1025.97	1025.93	33+00	Structure	1008.44	Structure
27+50	1025.22	1025.38	1025.46	33+25	Structure	1008.26	Structure
27+75	1024.52	1024.72	1024.92	33+50	1007.34	1008.17	1009.00
28+00	1023.69	1024.00	1024.31	33+75	1007.32	1008.15	1008.98
28+25	1022.79	1023.22	1023.65	34+00	1007.39	1008.22	1009.05
28+50	1021.83	1022.38	1022.93	34+25	1007.53	1008.36	1009.19
28+75	1020.80	1021.47	1022.14	34+50	1007.75	1008.58	1009.41
29+00	1019.83	1020.50	1021.17	35+00	1008.27	1009.10	1009.93
29+50	1017.83	1018.50	1019.17	35+50	1008.79	1009.62	1010.45
30+00	1015.83	1016.50	1017.17	36+00	1009.34	1010.14	1010.91
30+25	1013.83	1014.50	1015.17	36+50	1010.07	1010.66	1011.25
30+75	1012.87	1013.54	1014.21	37+00	1010.84	1011.18	1011.52
31+00	1011.99	1012.66	1013.33	37+25	1011.20	1011.41	1011.61
31+25	1011.18	1011.85	1012.52	37+50	1011.42	1011.88	1011.68
31+50	1010.46	1011.13	1011.80	37+75	1011.53	1011.69	1011.66
31+75	1009.81	1010.48	1011.15	38+00	1011.58	1011.74	1011.58
32+00	1009.25	1009.92	1010.59	38+25	1011.63(Ex)	1011.76(Ex)	1011.54(Ex)
32+25	1008.76	1009.43	1010.10				



* 706.01 OR 706.02, 14 GAGE									
REF. NO.	STATION TO STATION	SIDE	202 PIPE REMOV. 24" & UNDER	304 AGG. BASE COURSE	104 2" ASPHALT CONC.	601 D.R.C.P.	603 Type D	606 GUARD RAIL TYPE-4	FOR DETAILS SEE SHEET NO.
1-D	31+21 - 31+83	Rt.					62		139
2-D	34+17 - 34+79	Lt.					62		139
3-D	32+85 - 33+43	L&R				34.2			
1-A	31+30	Lt.		20.1	4.1				138
2-A	31+30	Rt.		20.4					138
3-A	34+50	Lt.		13.4					139
4-A	37+50	Rt.		11.8					139
1-G.R.	30+00 - 31+03.64	Rt.						103.64	
2-G.R.	30+00 - 30+84.65	Lt.						84.65	
3-G.R.	31+78.5 - 32+81.74	Rt.						104.24	
4-G.R.	33+48.26 - 34+15	Lt.						66.74	
5-G.R.	32+40.00 - 32+81.74	Lt.						41.74	
6-G.R.	33+48.26 - 33+90.00	Rt.						41.74	
1-R	32+60	Rt.	32						
2-R	37+42	L&R	35						
TOTALS			67	657	4.1	34.2	62	442.75	

MADISON COUNTY
MAD - 70-6.25





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

136
374

MADISON COUNTY
MAD- 70-625

Structure N^o Mad-70-0643
Over I.R. 70

Add 203 For a 21.5'x37x5'
Soil Replacement under
Each Pier Footer Total = 885
See Bridge Plans

1028.50
25+00 (Structure)
1001.82

24+03 Back 0 0

11 1684

Use Full Section Back
Use Partial Section Ahead

From High in M Ditch

23+60 Ahead
23+60 Back

Begin Ditch @ +70

23+60 Ahead 14 2115
23+60 Back 14 2341

1027.52
23+60 (Use for earthwork only)
1001.13

37 5002

End Guard Rail
23+46.36

End Guard Rail
23+40.35

F=2165

R/W

R/W

22+00

22+00 28 1832

1026.50
23+00
1001.47

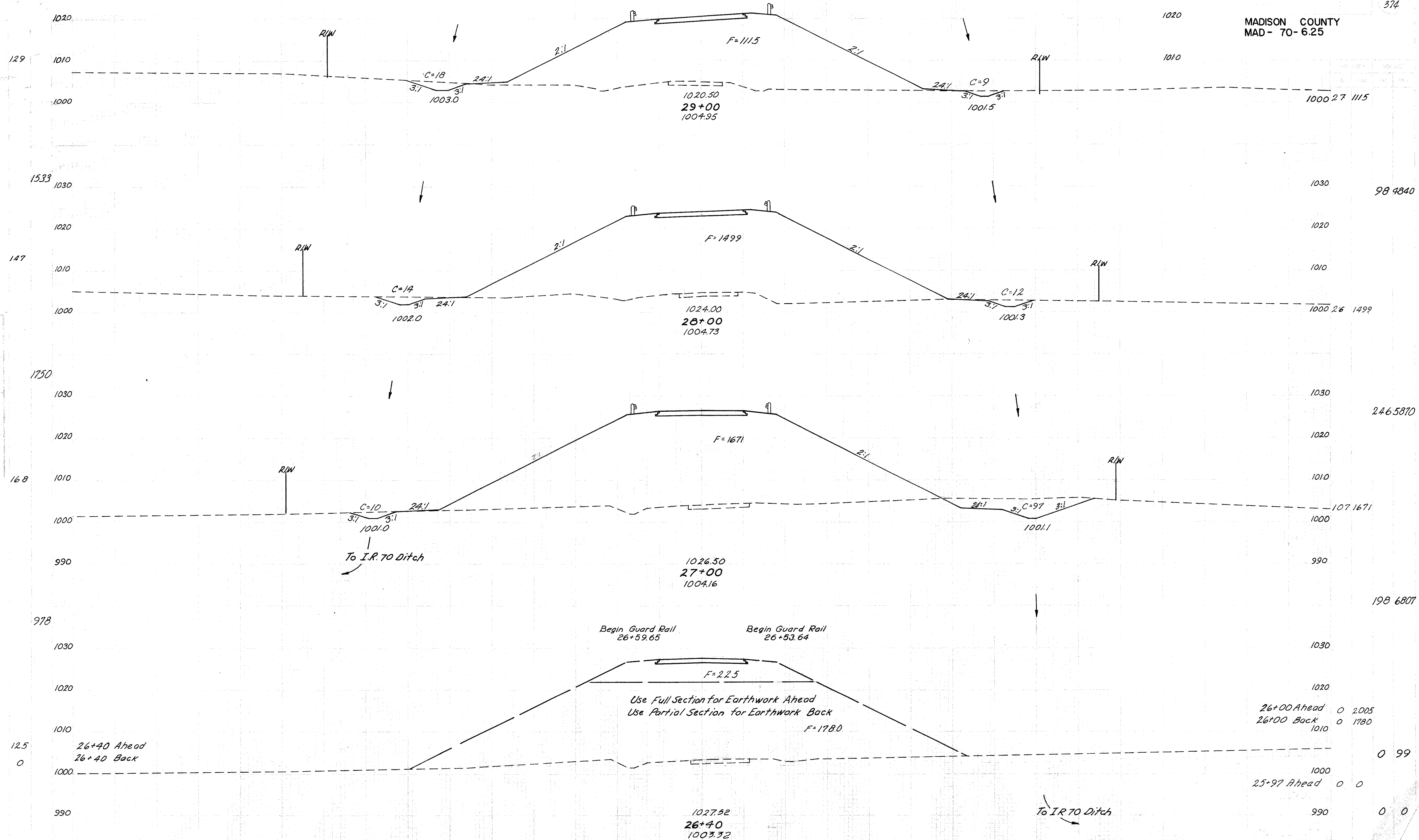
87 7402

STA. 23+00 TO STA. 25+00 LAFAYETTE MECHANICSBURG ROAD

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

137
374

MADISON COUNTY
MAD - 70-6.25



STA. 26+00 TO STA. 29+00 LAFAYETTE MECHANICSBURG ROAD

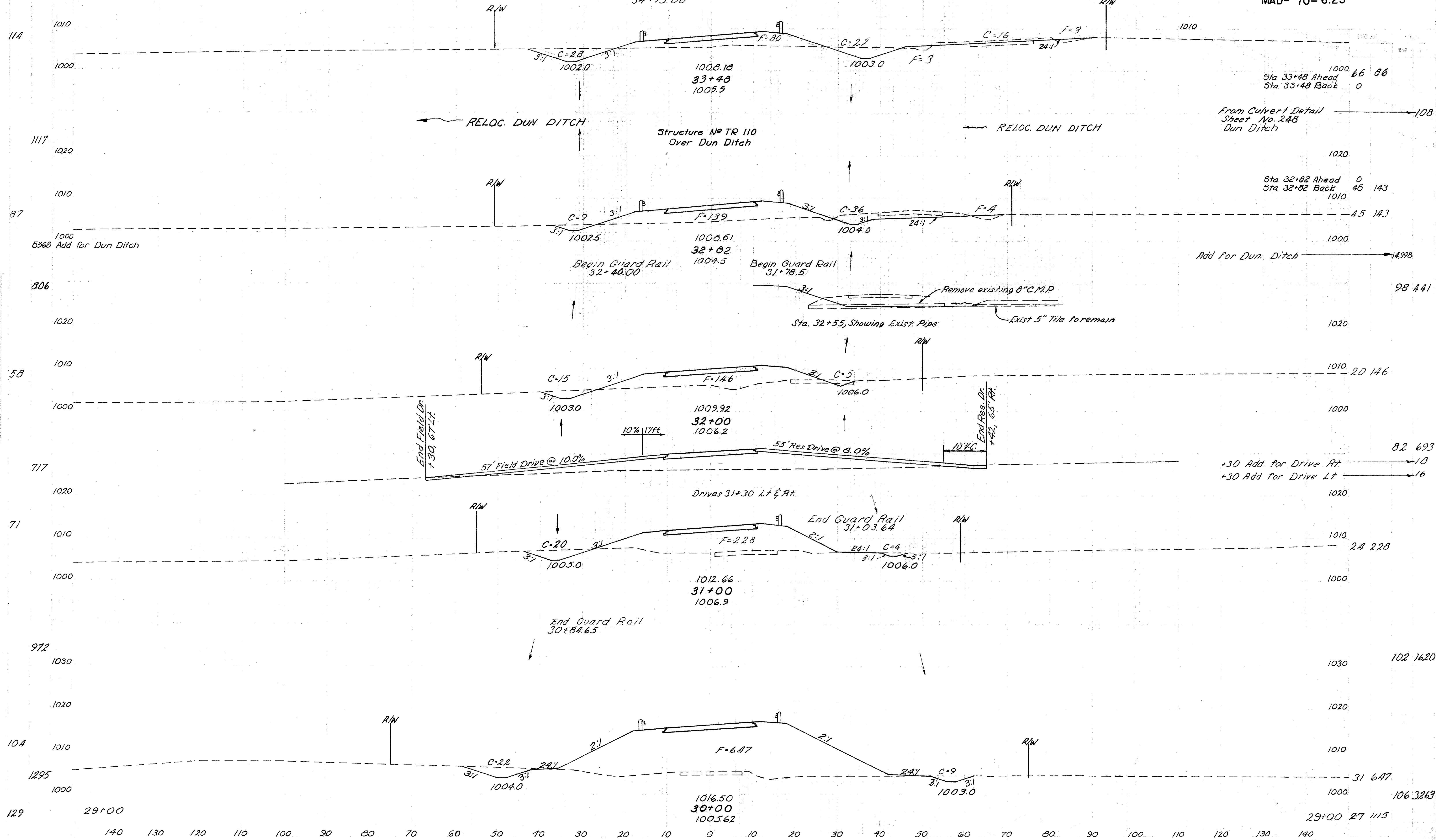
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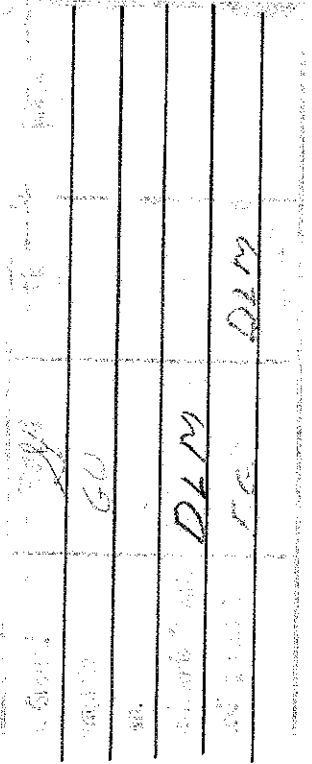
End Guard Rail
33+90.00

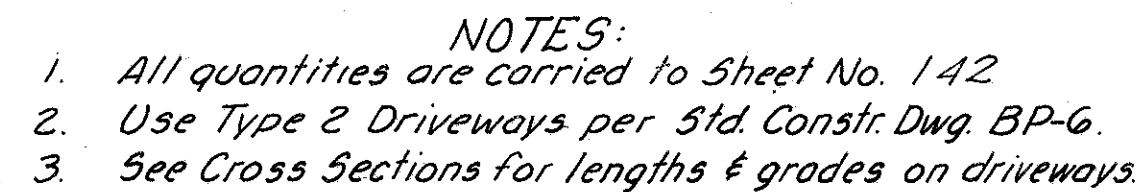
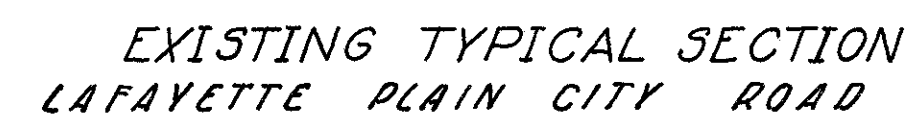
MADISON COUNTY
MAD- 70- 6.25

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374

End Guard Rail
34+15.00



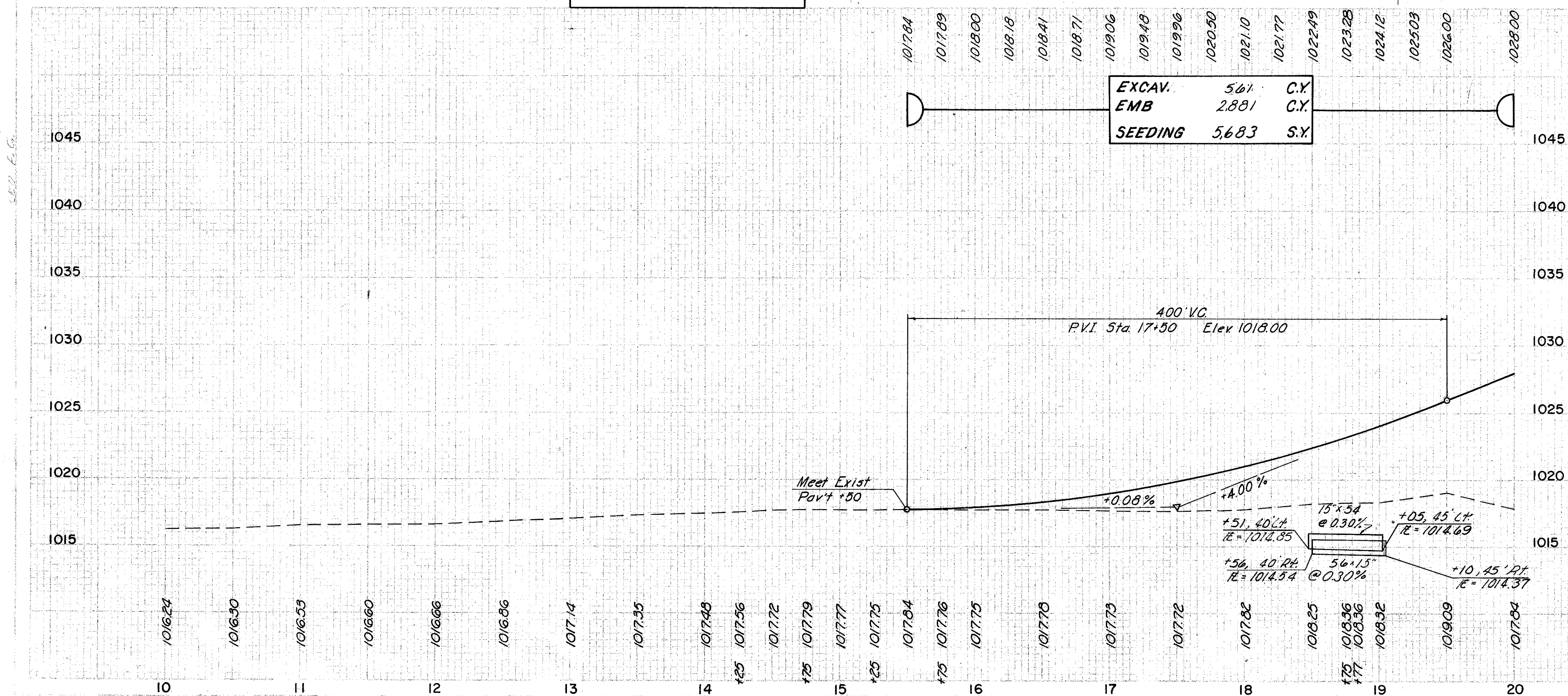


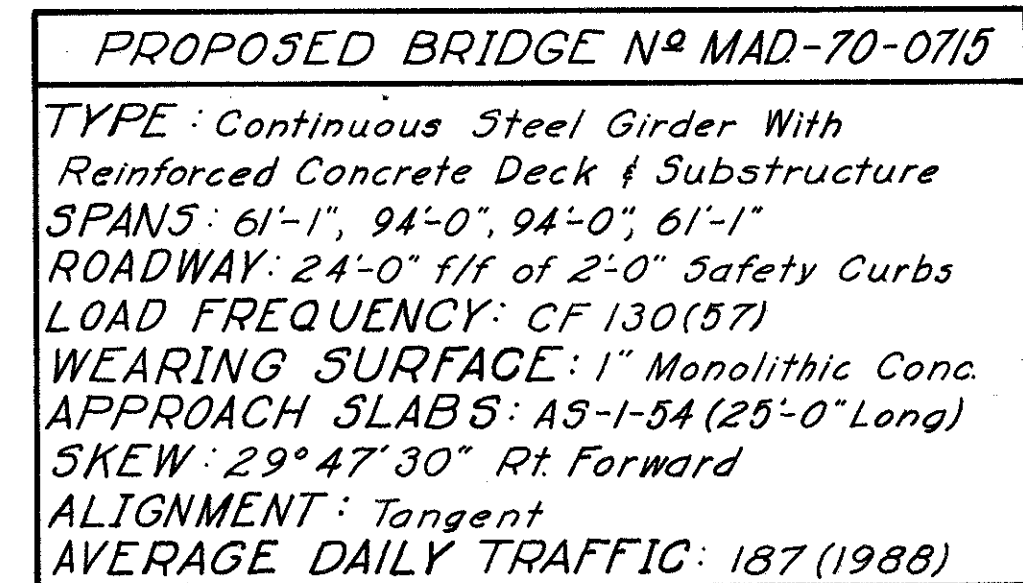
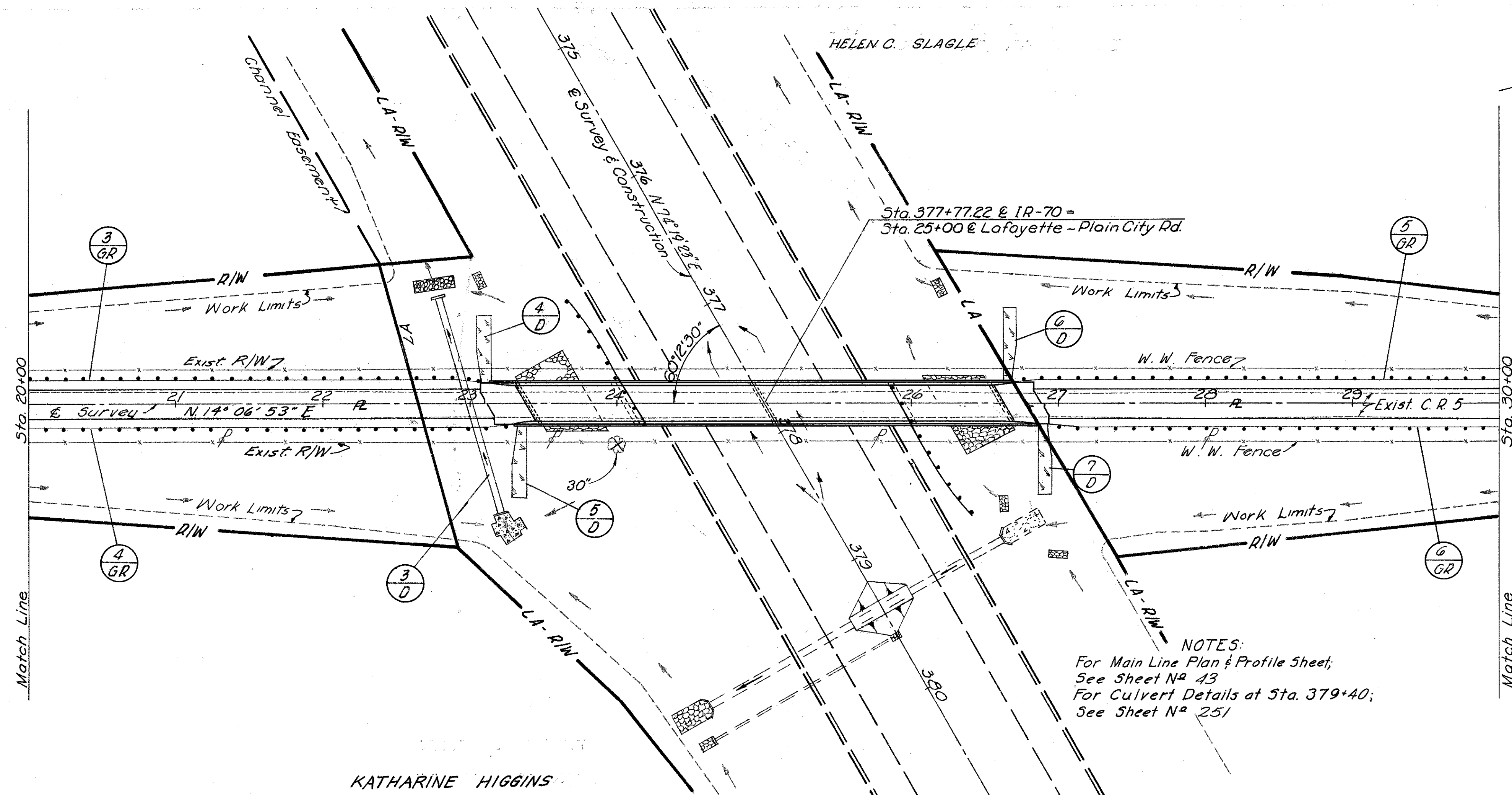


LEE SIDNER

B.M. 36b Elev. 1017.46
Sta. 14+41.7, 22.8' Rt.
R.R. spike in pole #142 GE9

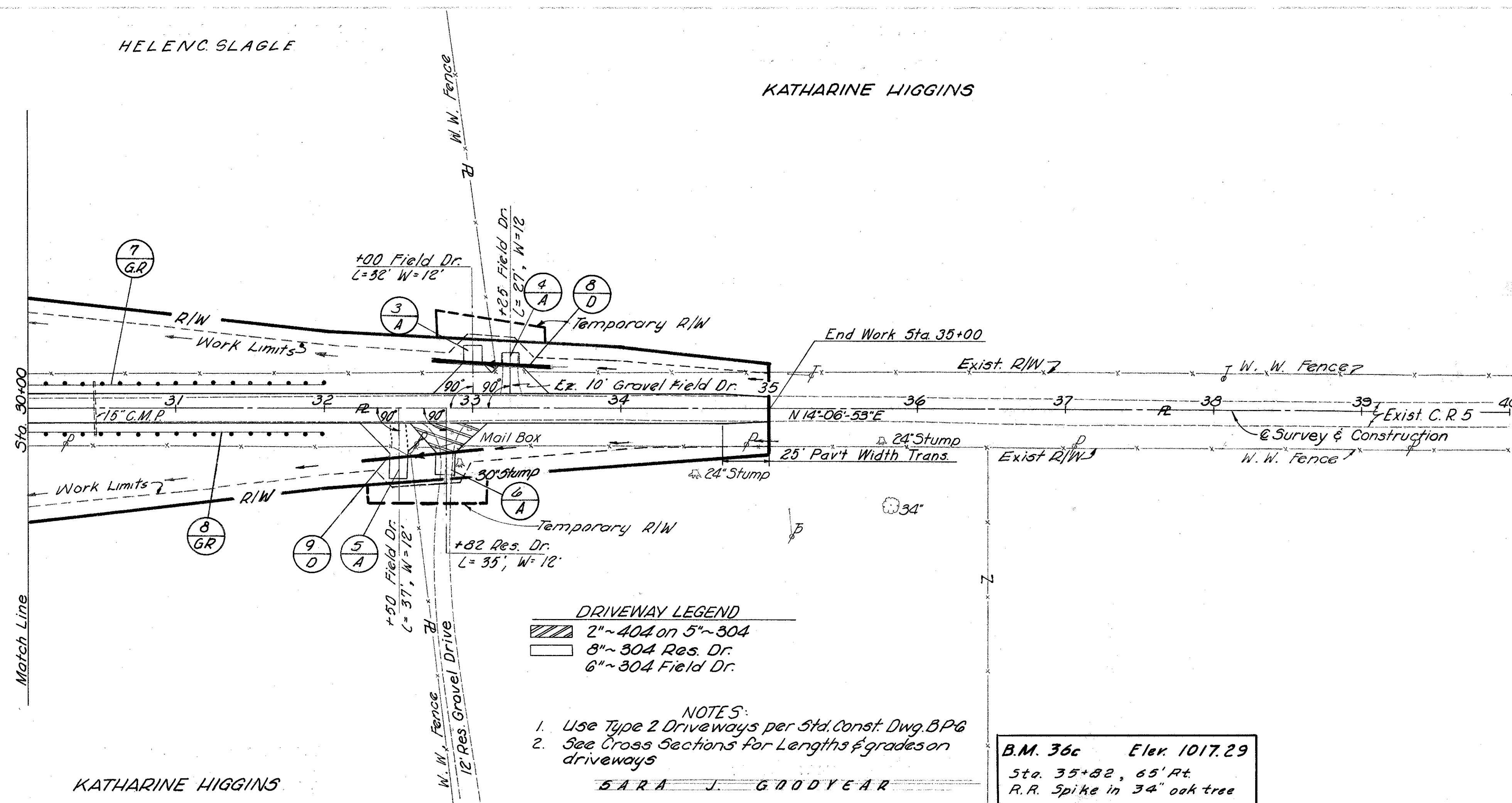
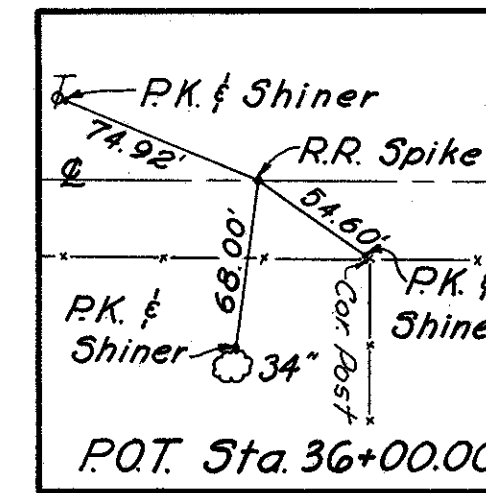
KATHARINE HIGGINS





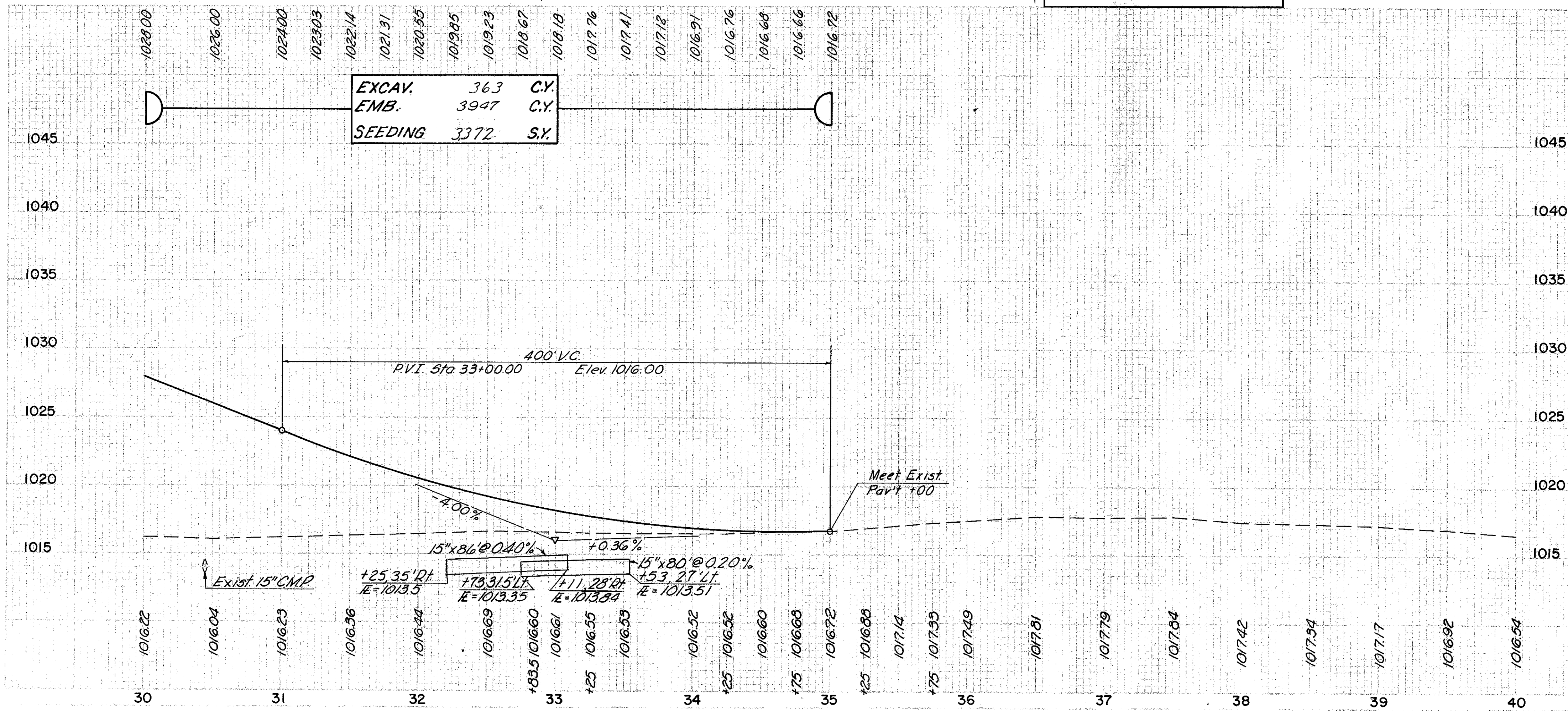
HELENE SLAGLE

KATHARINE HIGGINS



KATHARINE HIGGINS

BARA J. GOODYEAR

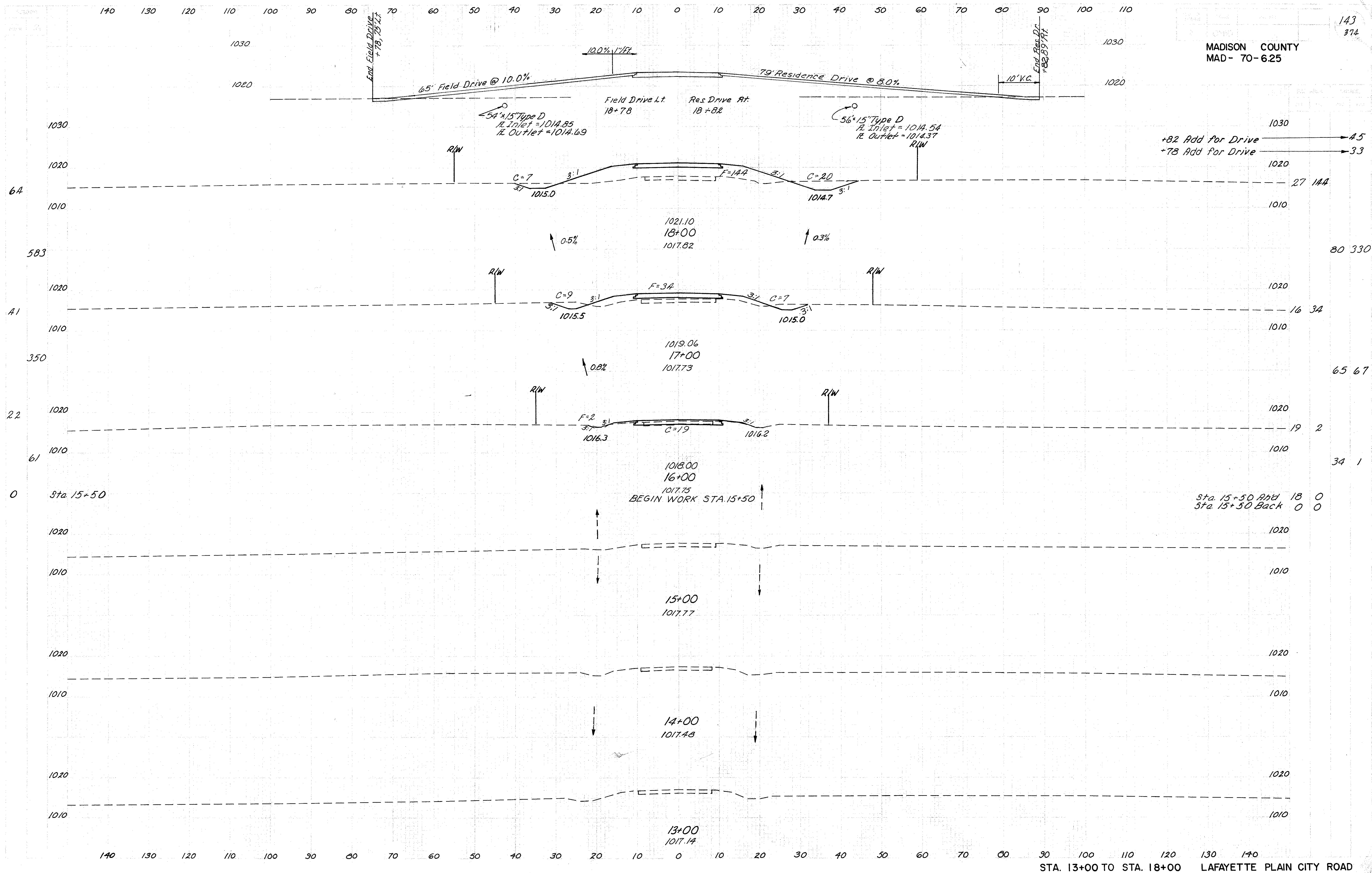


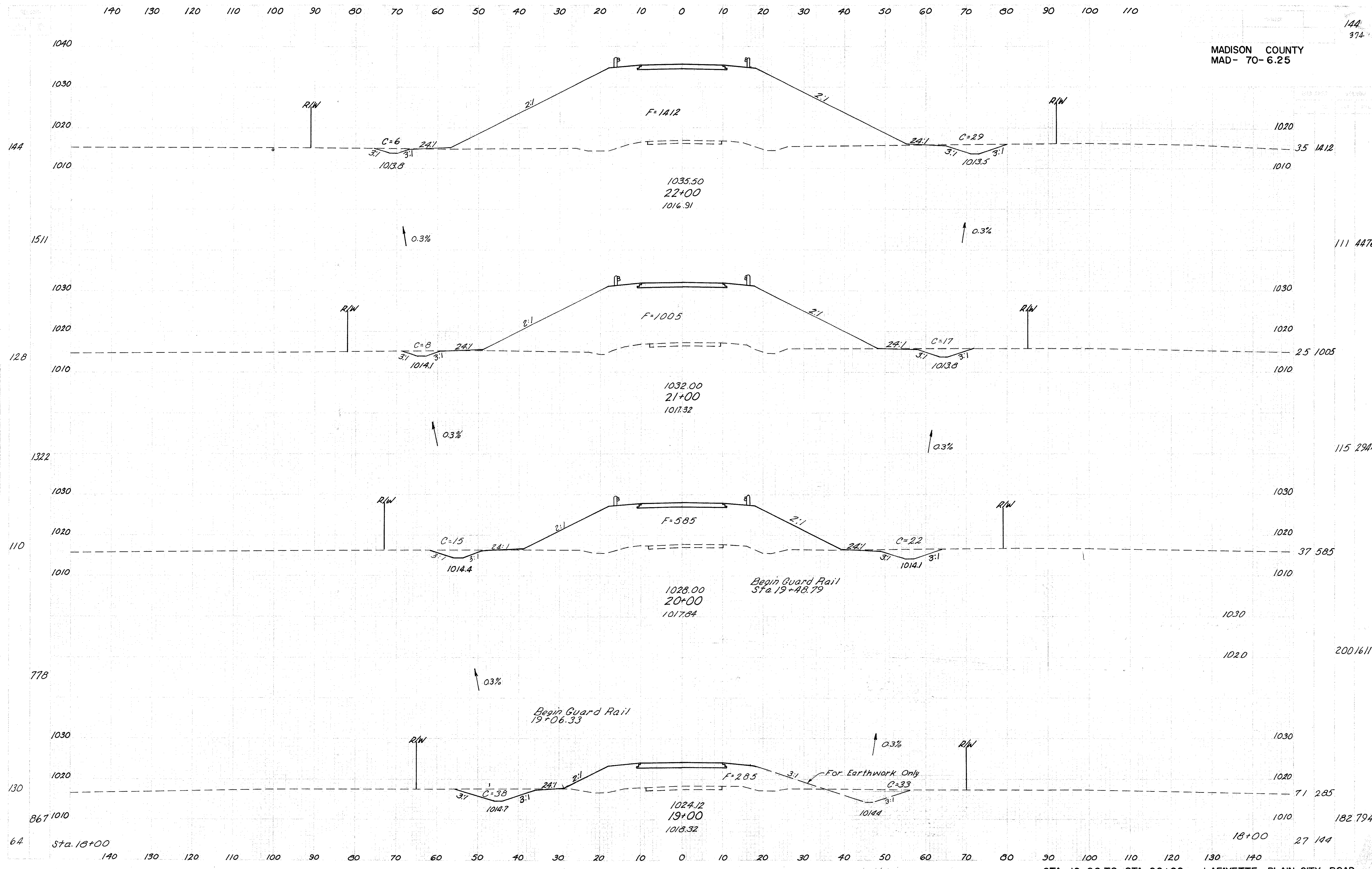
REF. NO.	STATION TO STATION	SIDE	304 AGGR. BASE	404 2" ASPHALT CONC.	600 GUARD RAIL TYPE 4	FOR DETAILS SEE SHEET NO.
1-A	18+78	Lt.	C.Y.	C.Y.	L.F.	143
2-A	18+82	Rt.	21.9	4.1		143
3-A	33+00	Lt.	14.5			147
4-A	33+25	Lt.	13.4			147
5-A	32+50	Rt.	15.6			147
6-A	32+82	Rt.	14.1	4.1		147
1-GR	19+06.33 - 20+00	Lt.			93.67	
2-GR	19+48.79 - 20+00	Rt.			51.21	
3-GR	20+00 - 23+18.83	Lt.			318.83	
4-GR	20+00 - 23+36.29	Rt.			336.29	
5-GR	26+63.71 - 30+00	Lt.			336.29	
6-GR	26+81.17 - 30+00	Rt.			318.83	
7-GR	30+00 - 32+01.21	Lt.			201.21	
8-GR	30+00 - 31+93.67	Rt.			193.67	
TOTALS			107.0	8.2	1850.00	

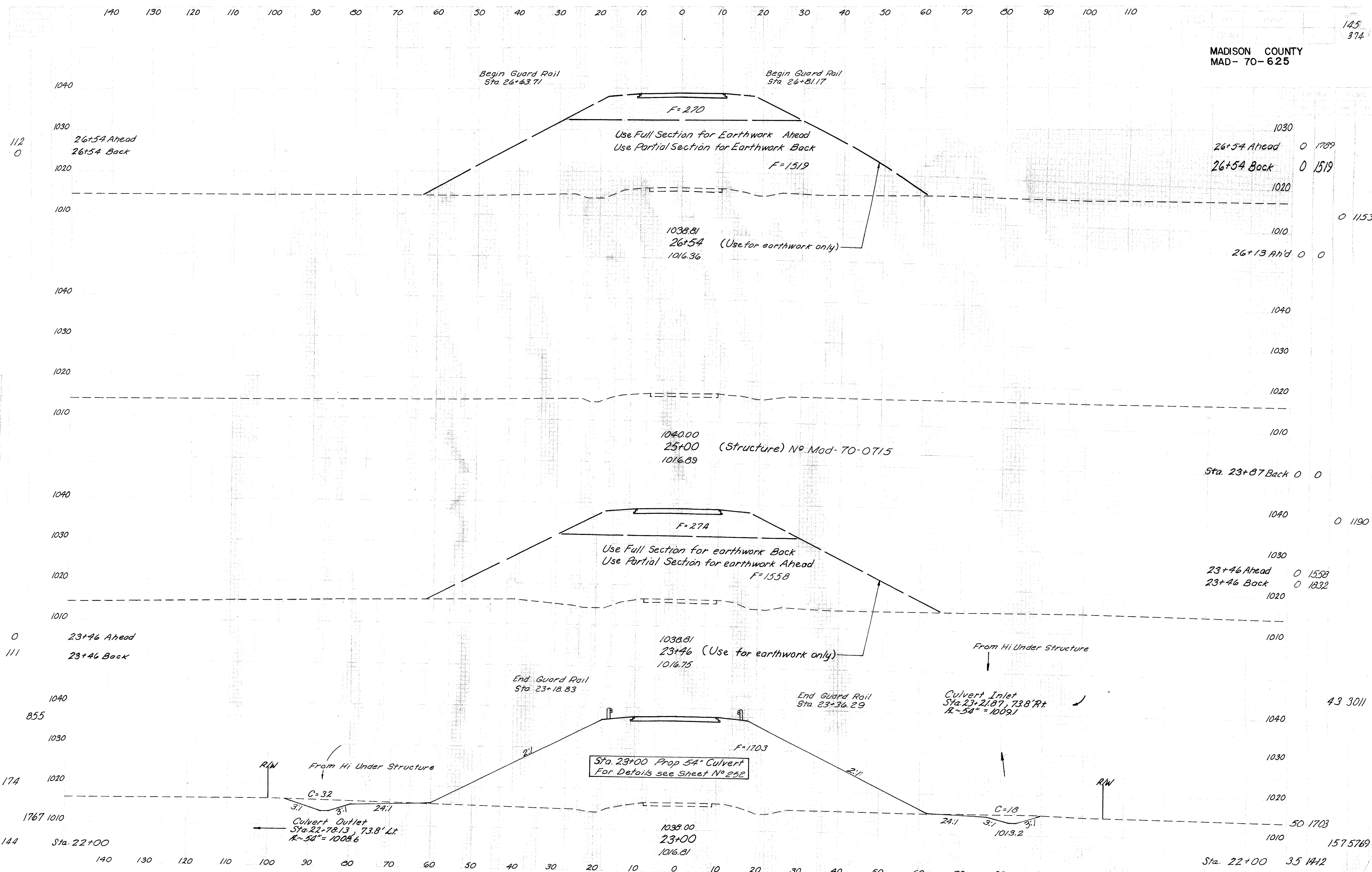
** Sodding for Special Slope & Berm Protection
* 706.02 Class I

REF. NO.	STATION TO STATION	SIDE	601 DUMP ROCK CHANN. PROT.	603 54" TYPE A W/CCL 3 BEDDING	602 15" TYPE D CONC. MASSING	640 SPECIAL SODDING **	FOR DETAILS SEE SHEET NO.
1-D	18+51 - 19+05	Lt.	C.Y.	S.Y.	L.F.	C.Y.	143
2-D	18+56 - 19+10	Rt.			54		143
3-D	23+00	E	20.9	36	154	1.92	252
4-D	23+19	Lt.					43
5-D	23+36	Rt.					46
6-D	26+64	Lt.					46
7-D	26+81	Rt.					44
8-D	32+73 - 33+53	Lt.			80		147
9-D	32+25 - 33+11	Rt.			86		147
TOTALS			20.9	36	154	276	1.92

Totals carried to Sheet No. 37



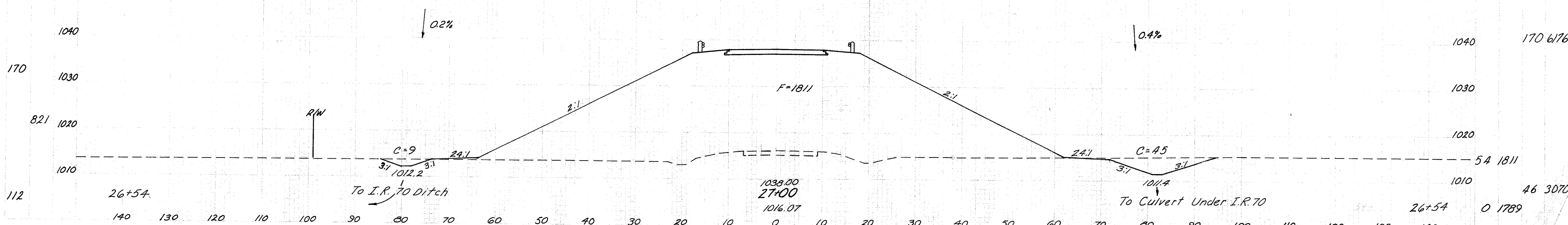
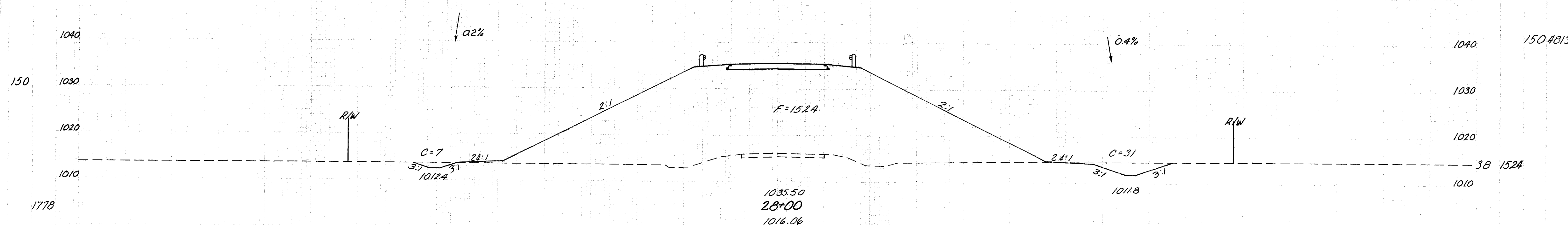
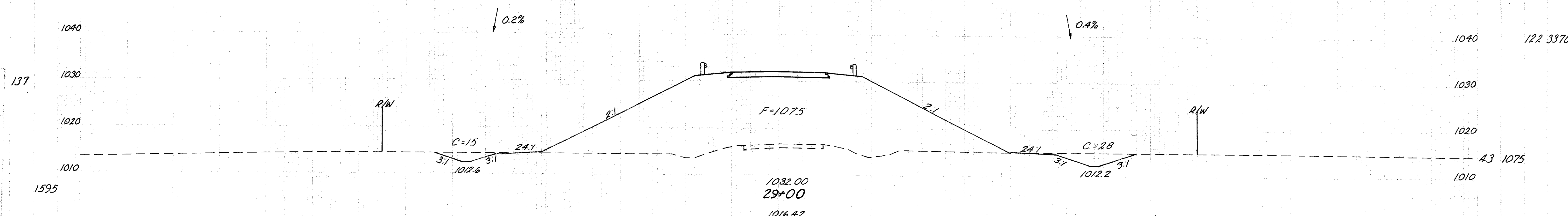
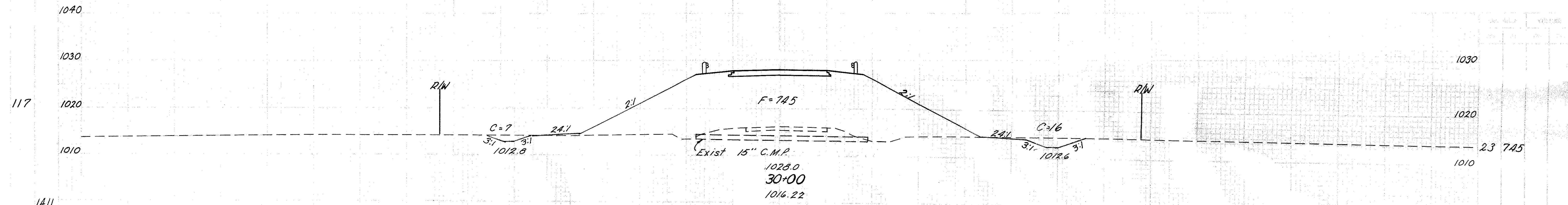




140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 120

MADISON COUNTY
MAD - 70-6.25

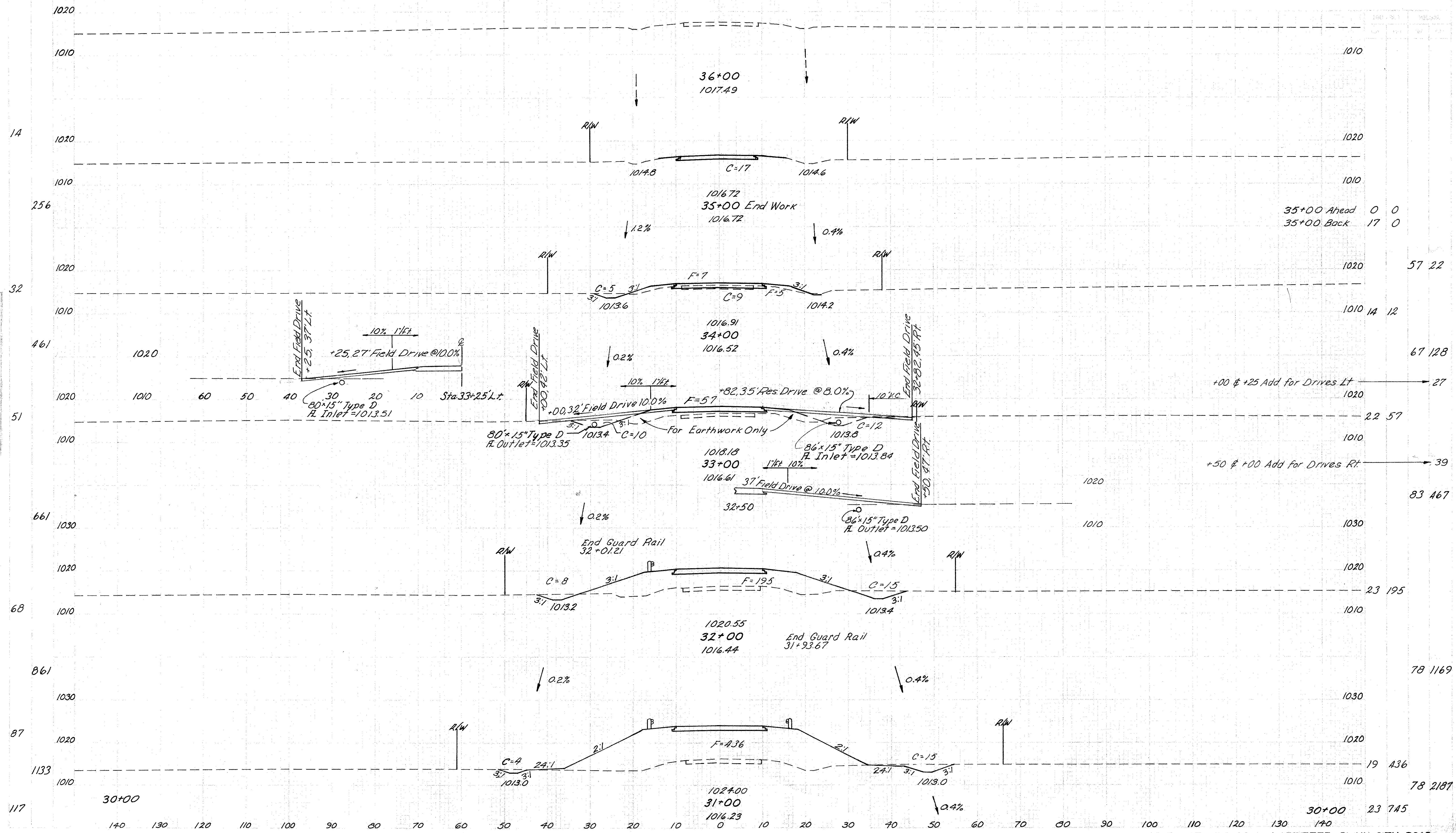
146
374



170 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

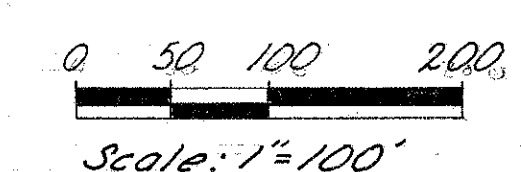
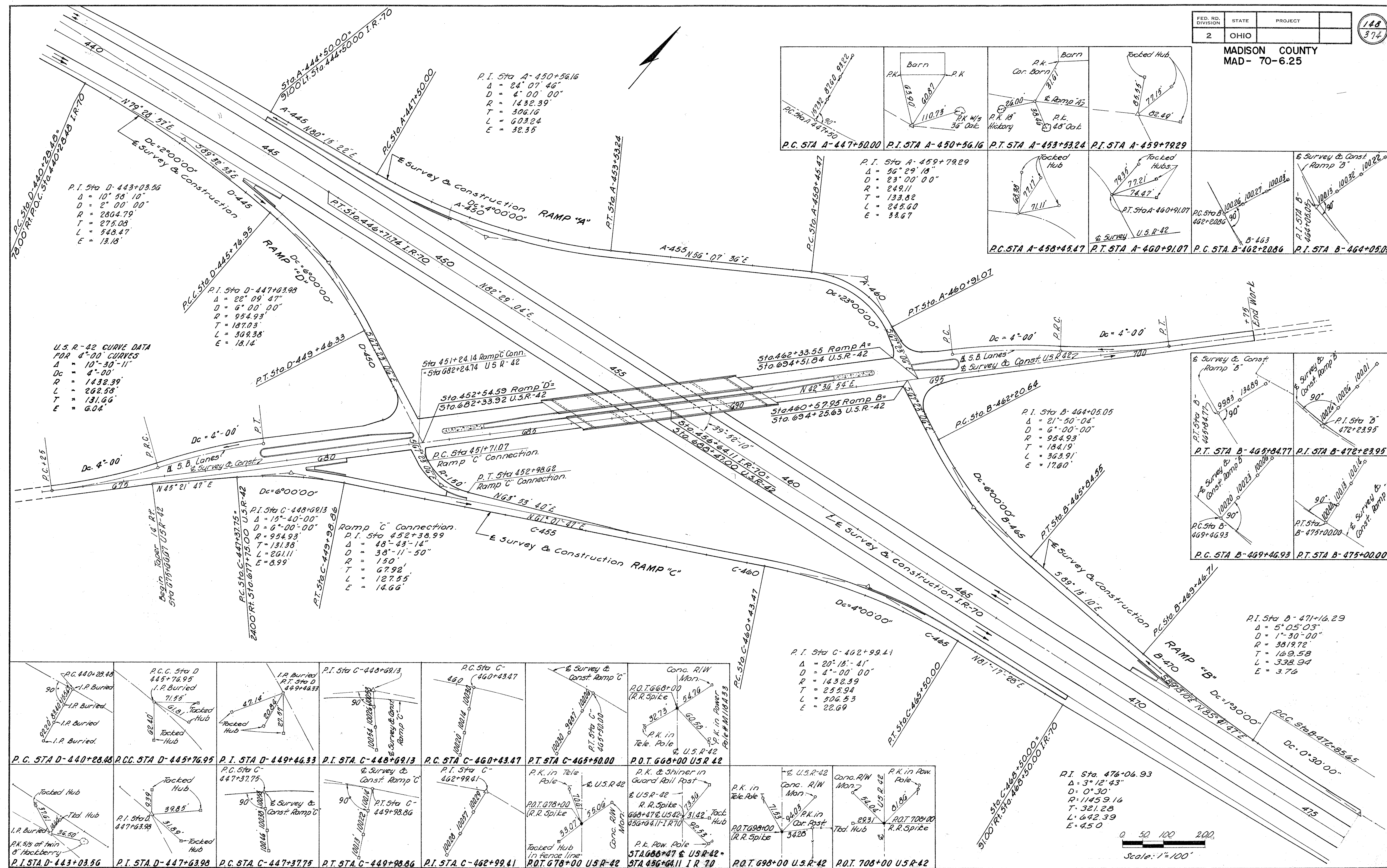
MADISON COUNTY
MAD - 70-6.25

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374



STA. 31+00 TO STA. 36+00 LAFAYETTE PLAIN CITY ROAD

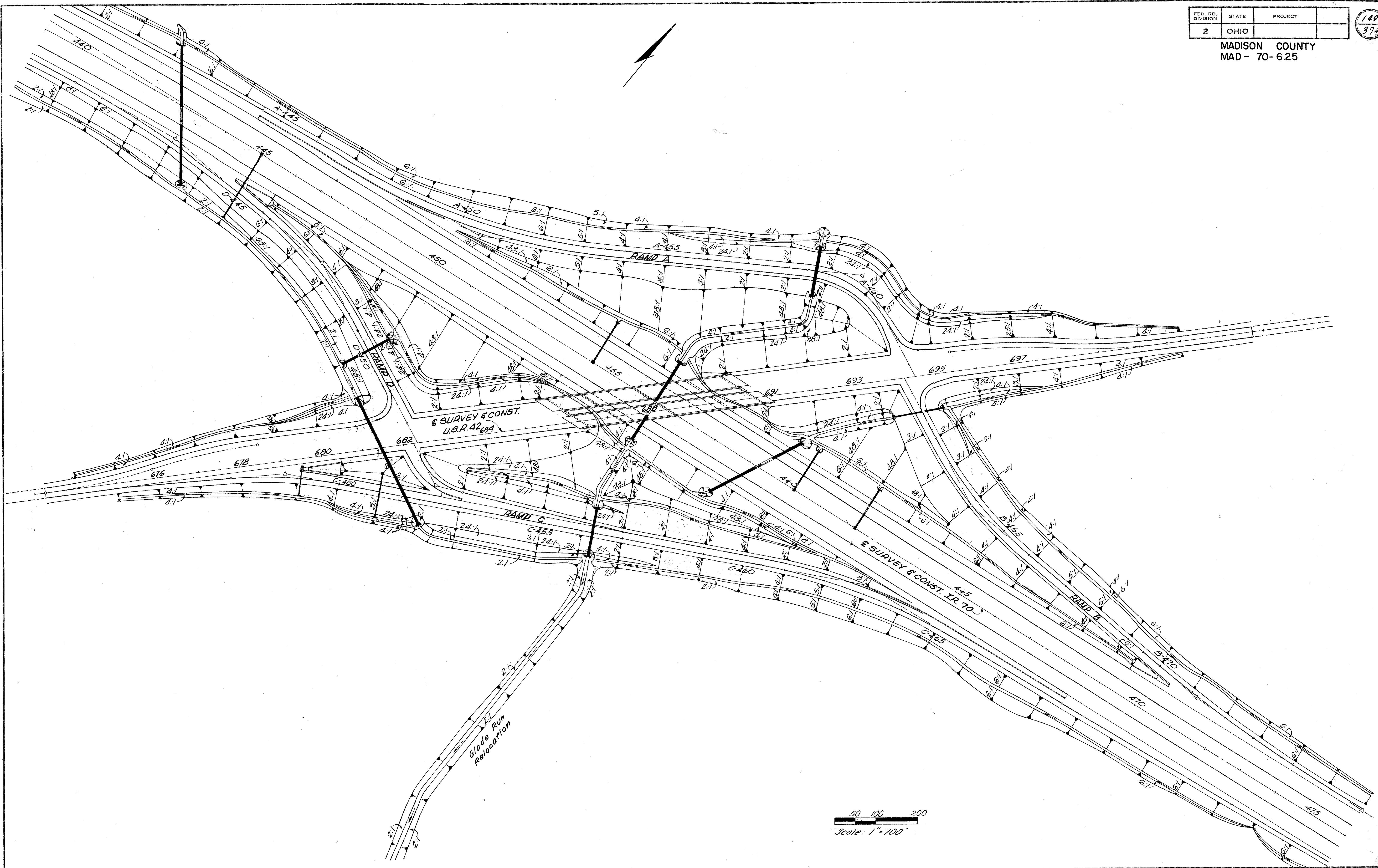
MADISON COUNTY
MAD- 70-6.25



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

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374

MADISON COUNTY
MAD - 70-625

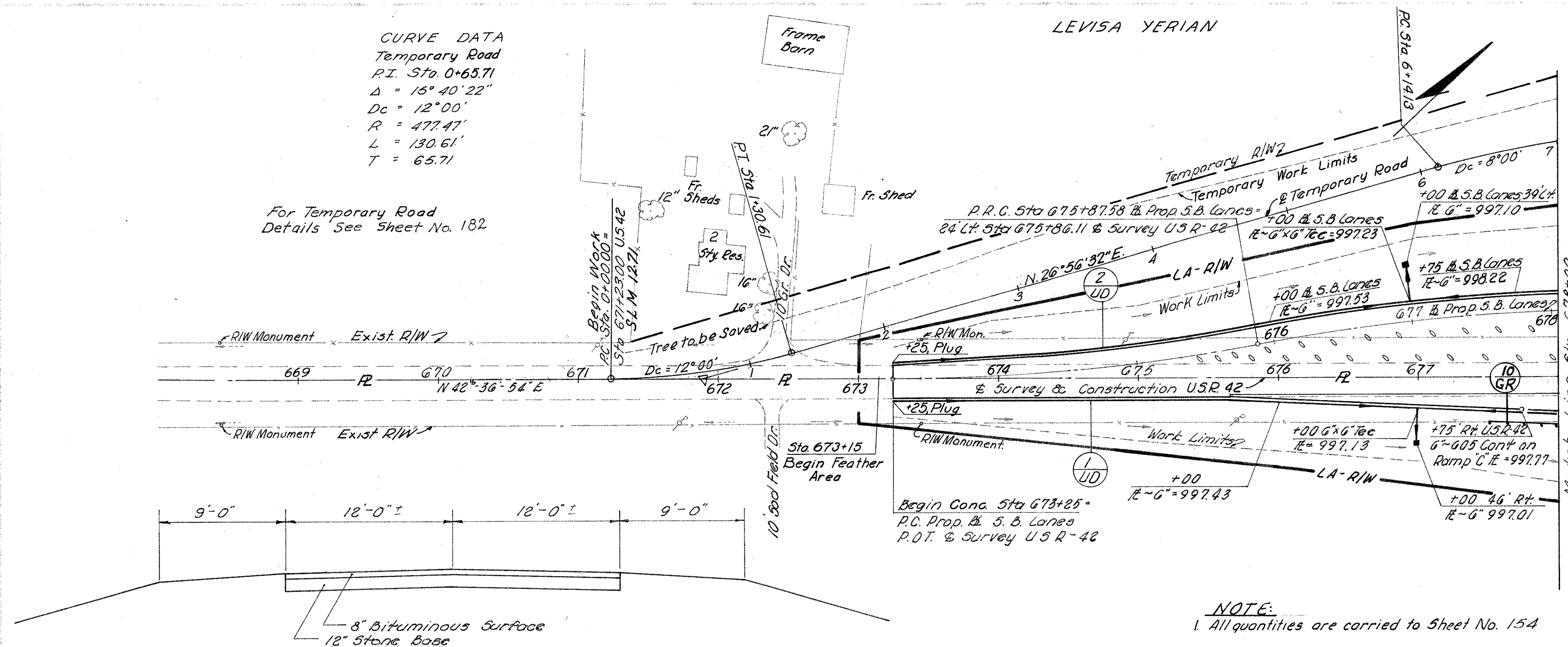


For Temporary Road
Details See Sheet No. 182

CURVE DATA
Temporary Road
RI Sta. 7+12.70
 $\Delta = 15^{\circ}40'22''$
 $D_c = 8^{\circ}00'$
 $R = 716.20'$
 $L = 195.91'$
 $T = 98.57'$

MADISON COUNTY
MAD - 70 - 6.25

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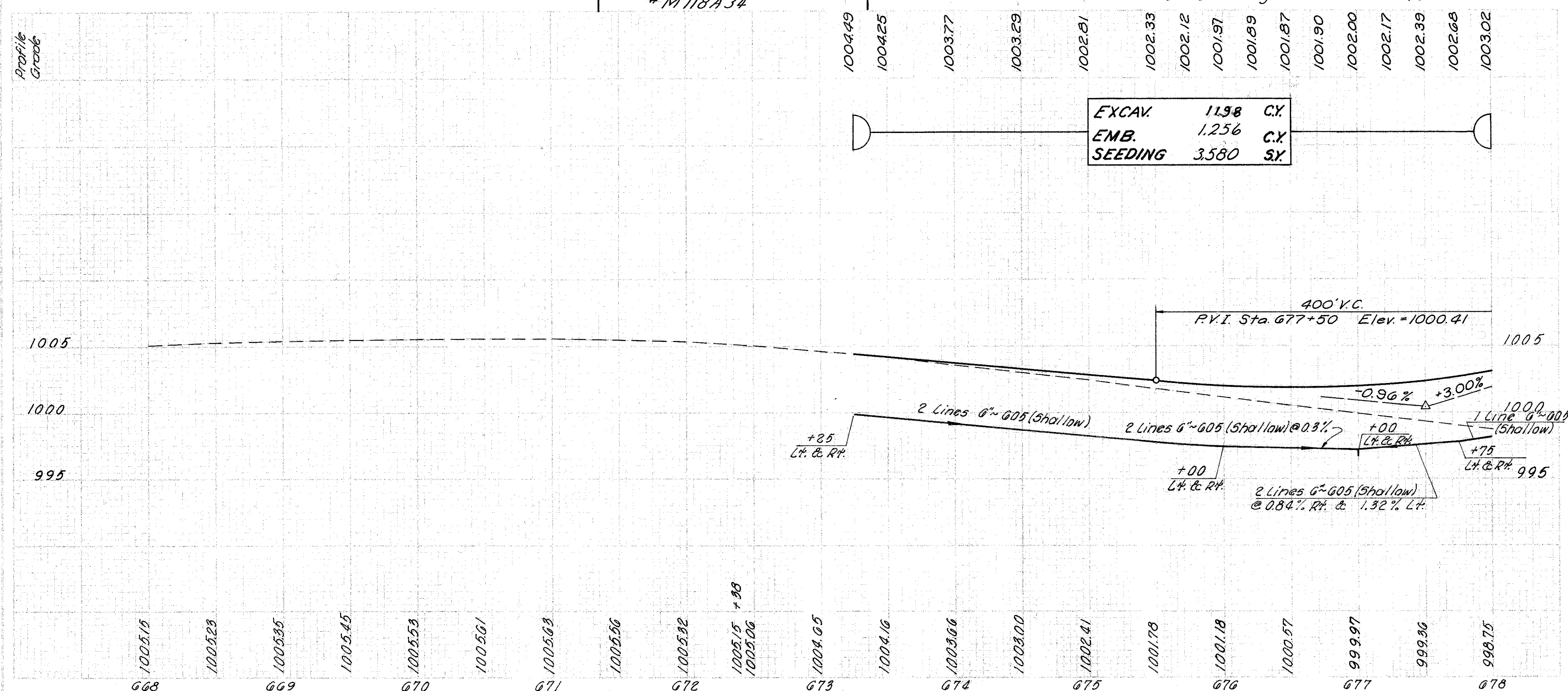
TYPICAL SECTION
EXISTING U.S.R. - 42

BM 44 d Elev. = 1005.21
Sta. 671+73, 31' Rt.
R.R. Spike in Power Pole
M 118A34

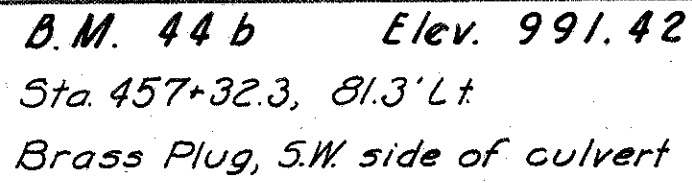
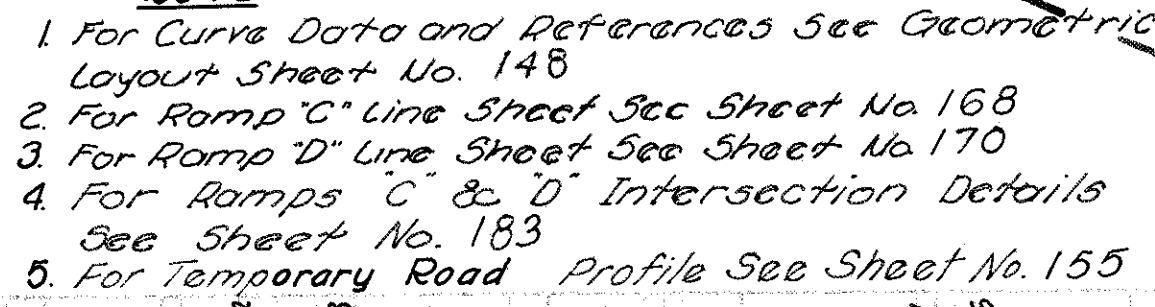
LEVISA YERIAN

NOTE:

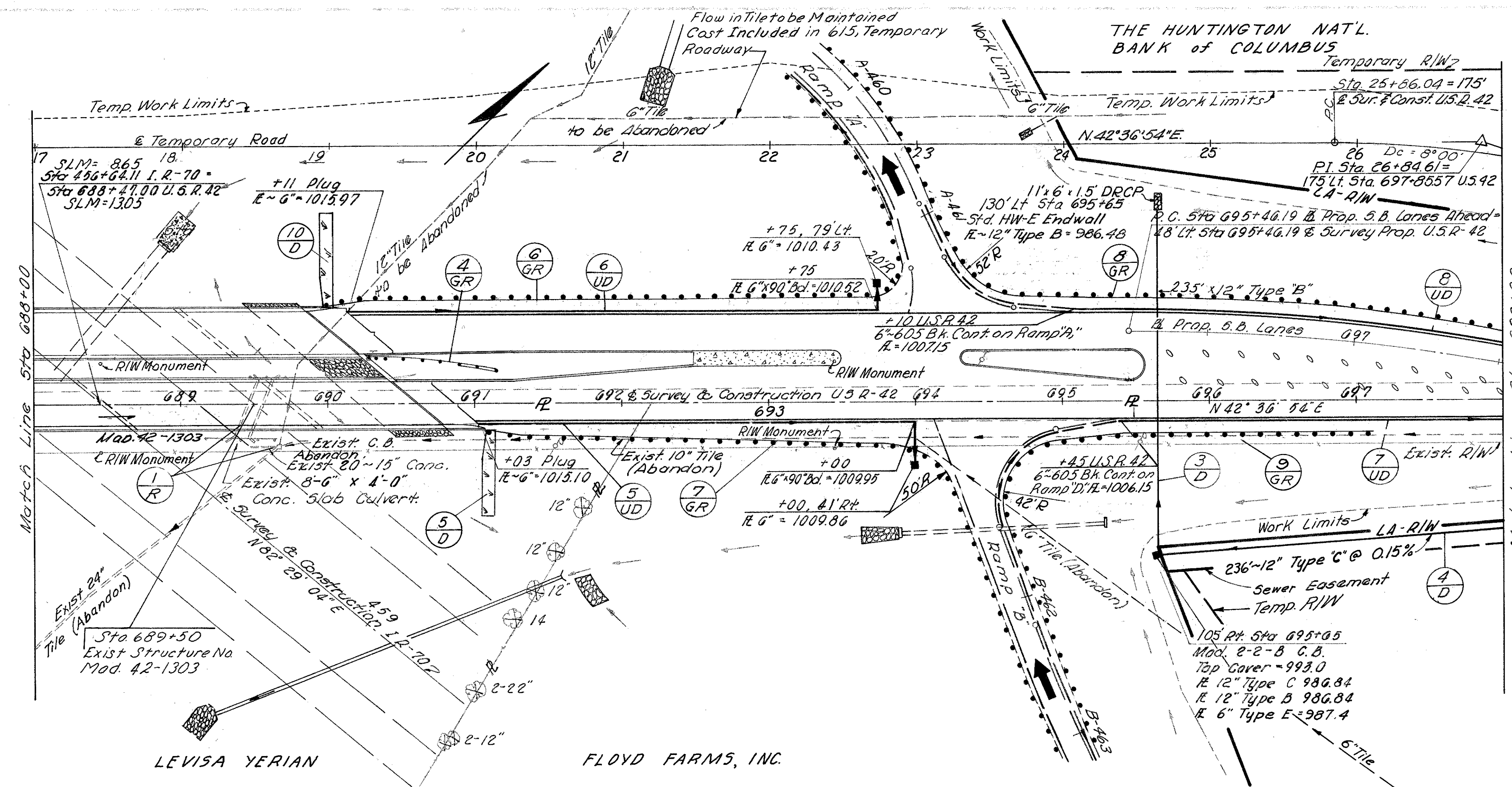
1. All quantities are carried to Sheet No. 154
2. For Temporary Road Profile See Sheet No. 155
3. For U.S.R-42 Pavement Details See Sheet No. 182
4. For Curve Data and References See Geometric layout Sheet No. 148



STA. 668+00 TO STA. 678+00 USR 42

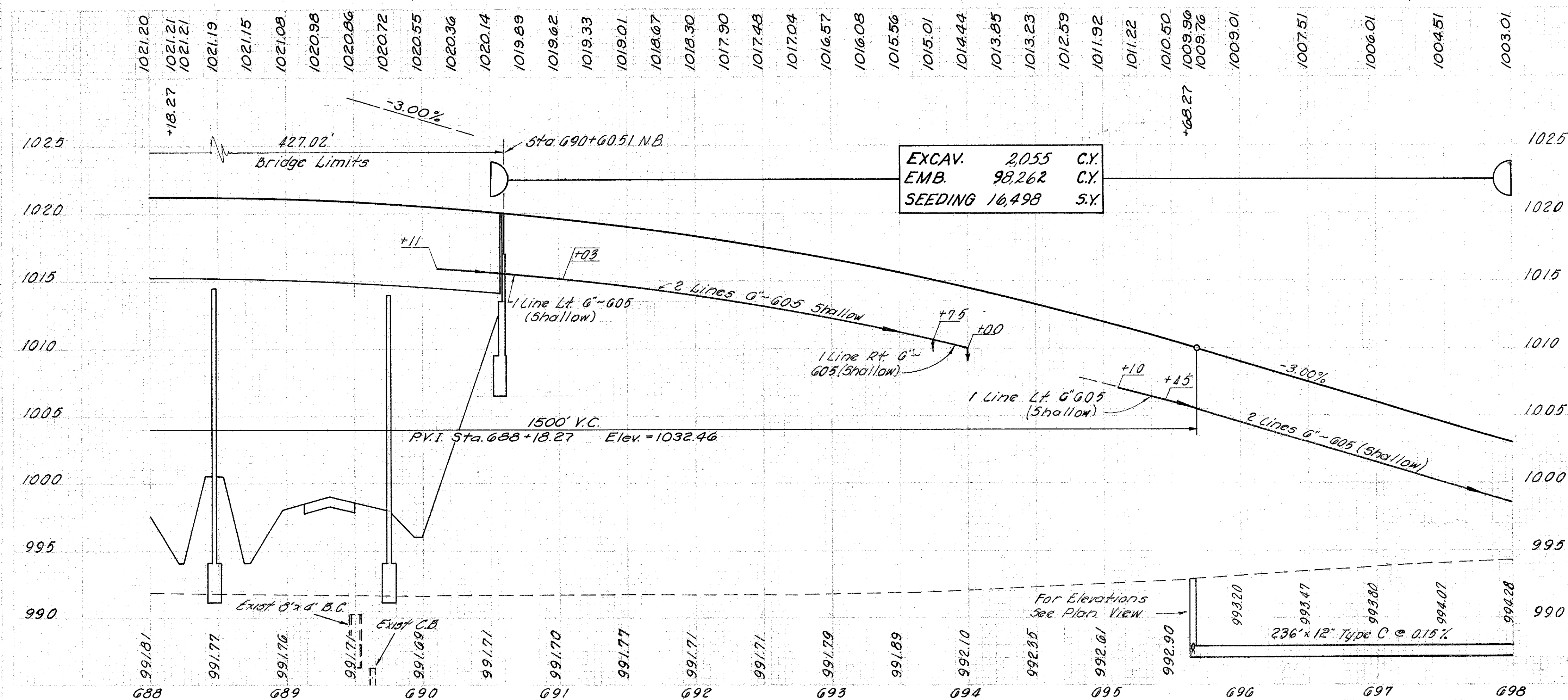


TYPE~Continuous Steel Plate Girder Bridge
with Reinforced Conc. Deck & Substructure.
SPANS~ 82'-9", 127'-3", 127'-3", 82'-9" 4/6 Brg.
ROADWAY~ 30'-0" f/w of 2'-0" Curbs.
LOAD FREQUENCY~ CF-2000 (57).
WEARING SURFACE~ 1" Monolithic Conc.
SKEN~ 50' 0" 7' 50" R.F.
APPROACH SLAB~ A5-1-54 Mod 25'-0" Long.
ALIGNMENT~ Tangent.
SUPERELEVATION~ None.
AVERAGE DAILY TRAFFIC~ 11,020 (1988).



- NOTE:**
1. For Ramps "A" and "B" Intersection
Details See Sheet No. 134
 2. For Curve Data and References See
Geometric Layout Sheet No. 148
 3. For Ramp "A" Line Sheet⁴ See Sheet No. 166
 4. For Ramp "B" Line Sheet See Sheet No. 167
 5. For Temporary Road Profile See Sheet No. 155
 6. For Quantities See Sheet No. 154

CURVE DATA
Temporary Road
P.I. Sta. 26+84.61
 $\Delta = 15^\circ 40' 22''$
 $D_c = 8^\circ 00'$
 $R = 716.20'$
 $L = 195.91'$
 $T = 98.57'$

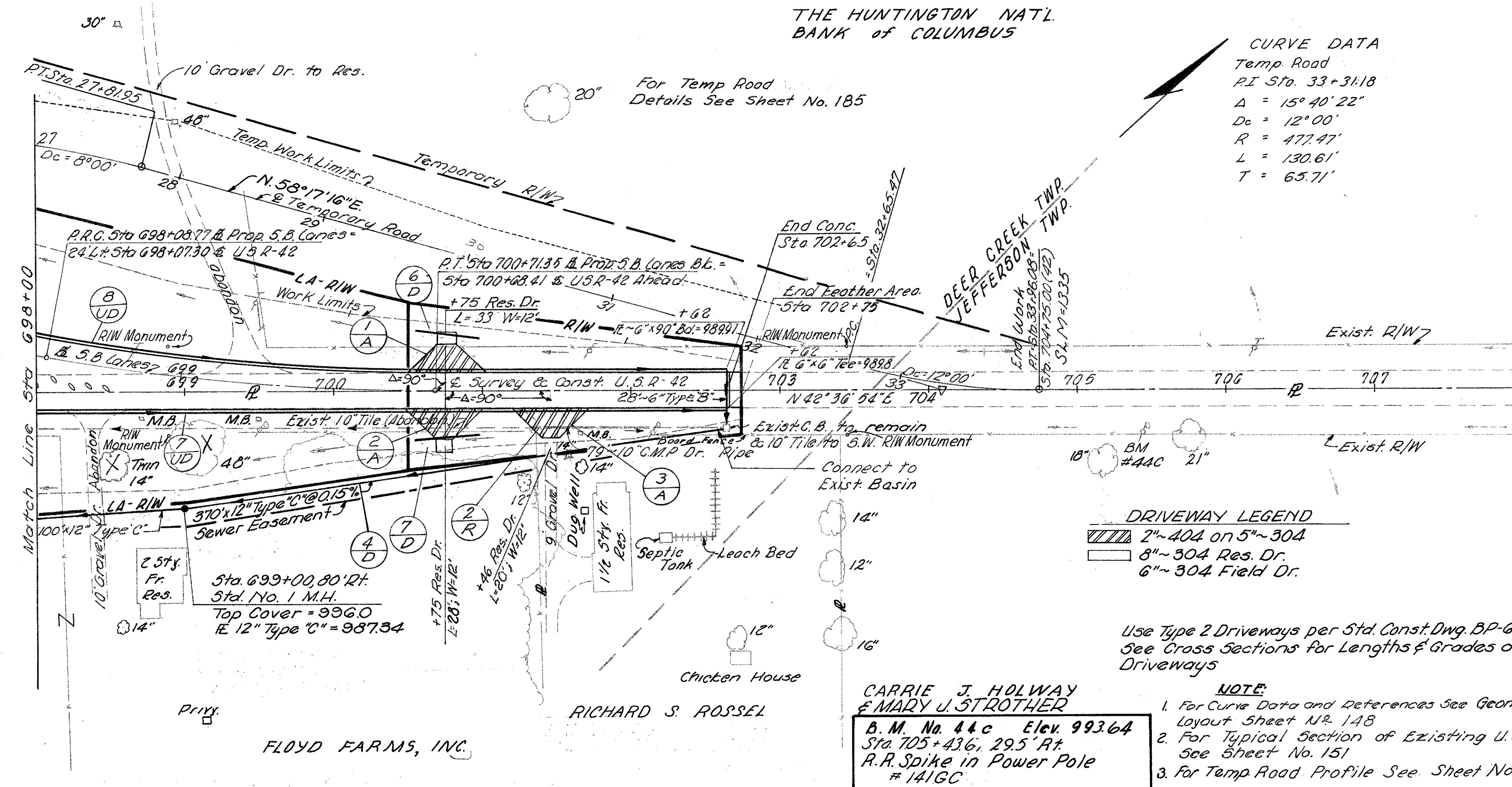


THE HUNTINGTON NATL.
BANK of COLUMBUS

CURVE DATA
Temp Road
PI Sta. 33+31.18
 $\Delta = 15^\circ 40' 22''$
 $D_c = 12^\circ 00'$
 $R = 477.47'$
 $L = 130.61'$
 $T = 65.71'$

MADISON COUNTY
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154
374



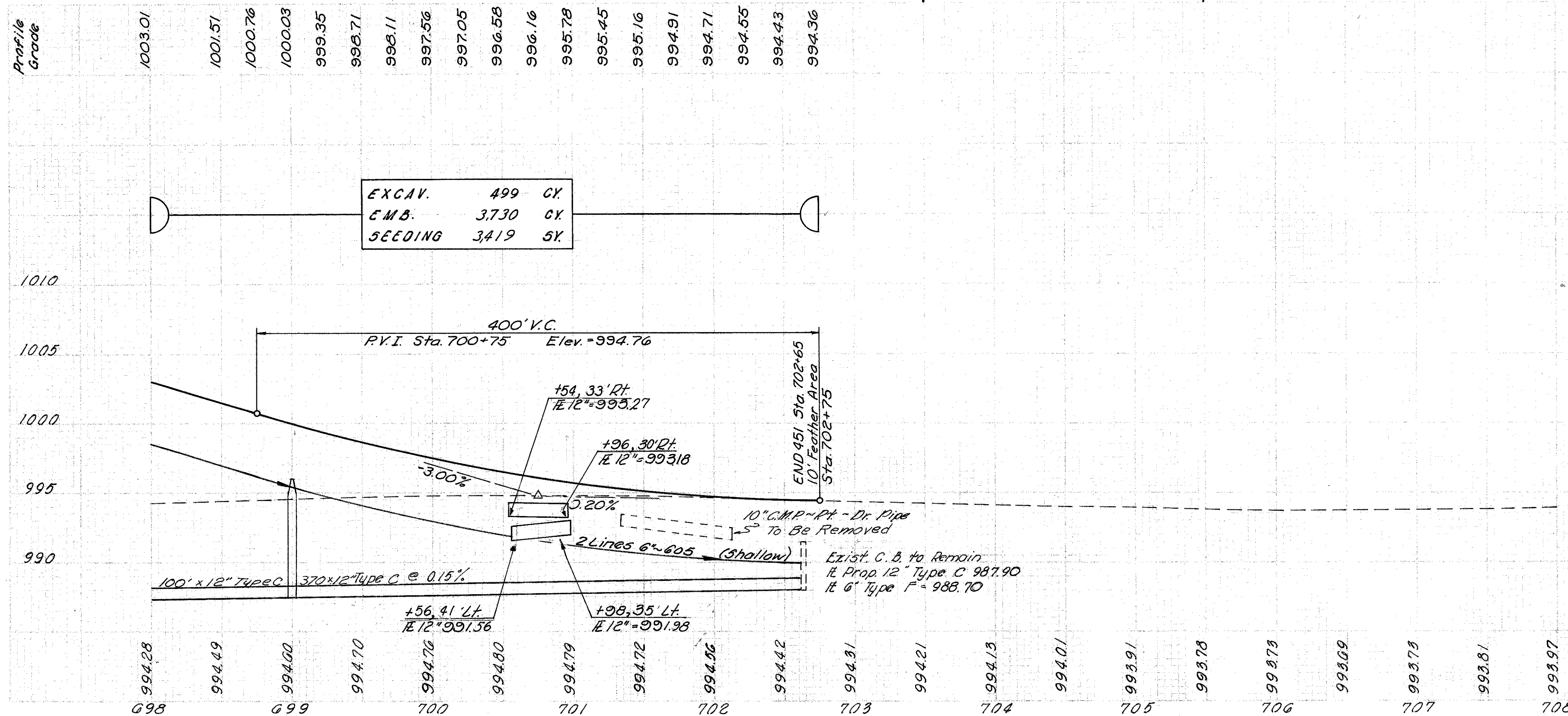
DRIVEWAY LEGEND
2"~404 on 5"~304
8"~304 Res. Dr.
6"~304 Field Dr.

Use Type 2 Driveways per Std. Const. Dwg. B.P.-6
See Cross Sections for Lengths & Grades on Driveways

CARRIE J. HOLWAY
& MARY J. STROTHER
B.M. No. 44c Elev. 993.64
Sta 705+436, 29.5' Rt.
R.R. Spike in Power Pole
#141GC

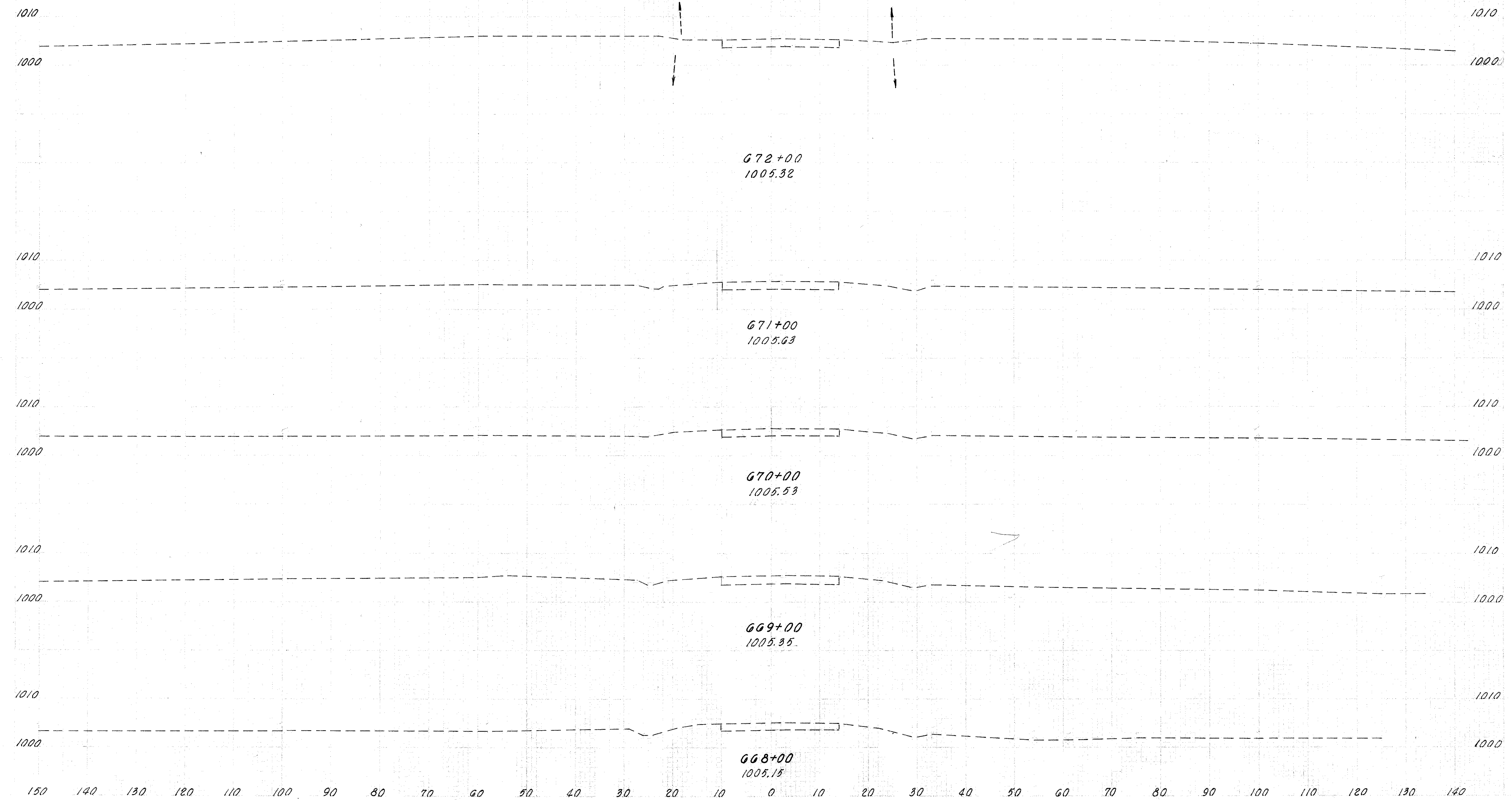
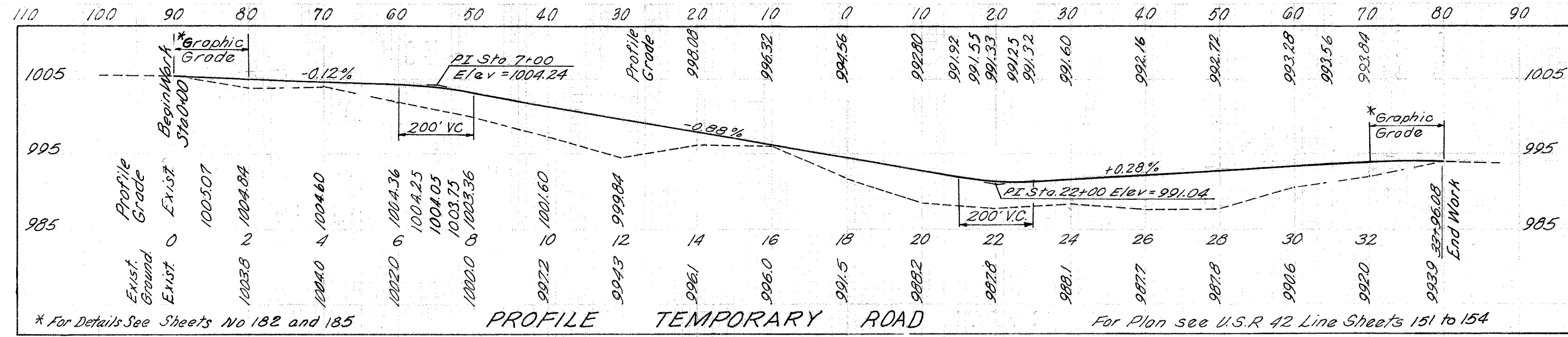
NOTE:
1. For Curve Data and References See Geometric Layout Sheet No. 148
2. For Typical Section of Existing U.S.R.-42 See Sheet No. 151
3. For Temp Road Profile See Sheet No. 155

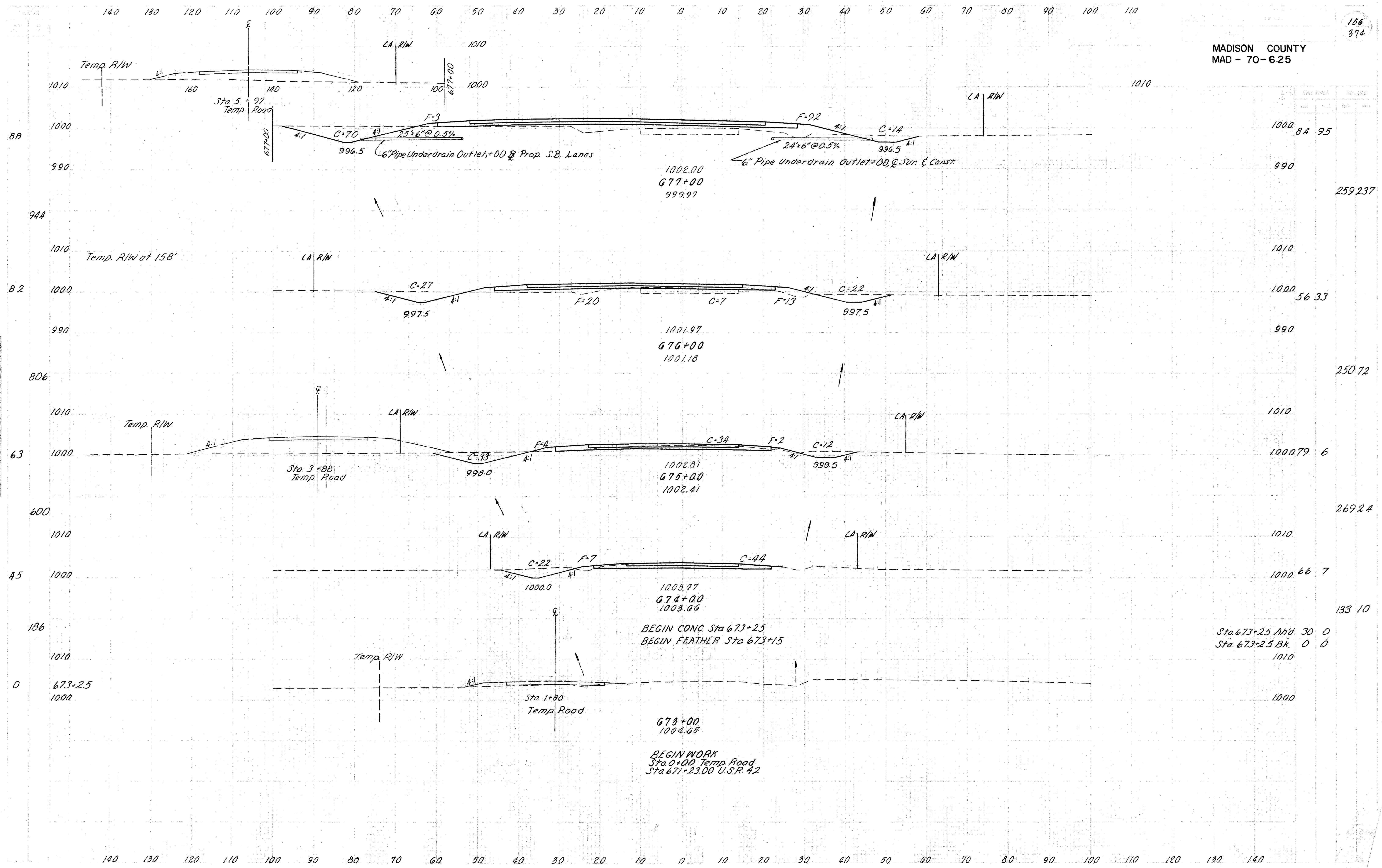
REF.	STATION TO STATION	SIDE	PIPE REMOV. 24" & UNDER Lin. Ft.	EXIST. STRUCT. REMOV. Lump	CATCH BASIN REMOV. Each	GUARD RAIL TYPE 4 Lin. Ft.	RAIL TYPE 4 BARR. Lin. Ft.
1-R	689+30 To 689+65	Lt.	20	1	1		
2-R	701+34 To 702+13	Lt.	79				
1-GR	680+00 To 680+87.5	Lt.				87.5	
2-GR	682+29.57 To 685+29.57	Lt.				300.0	
3-GR	685+23.36 To 686+10.86	Lt.				62.5	25
4-GR	690+25.63 To 691+13.18	Lt.				62.5	25
5-GR	682+50.08 To 686+37.58	Rt.				387.5	
6-GR	689+98.96 To 693+06.46	Rt.				387.5	
7-GR	691+06.97 To 694+06.97	Rt.				300.0	
8-GR	695+08.64 To 697+26.14	Rt.				287.5	
9-GR	695+46.19 To 697+02.69	Rt.				162.5	
10-GR	677+50 To 678+75	Rt.				125.0	
TOTALS			138	Lump	1	2162.5	50

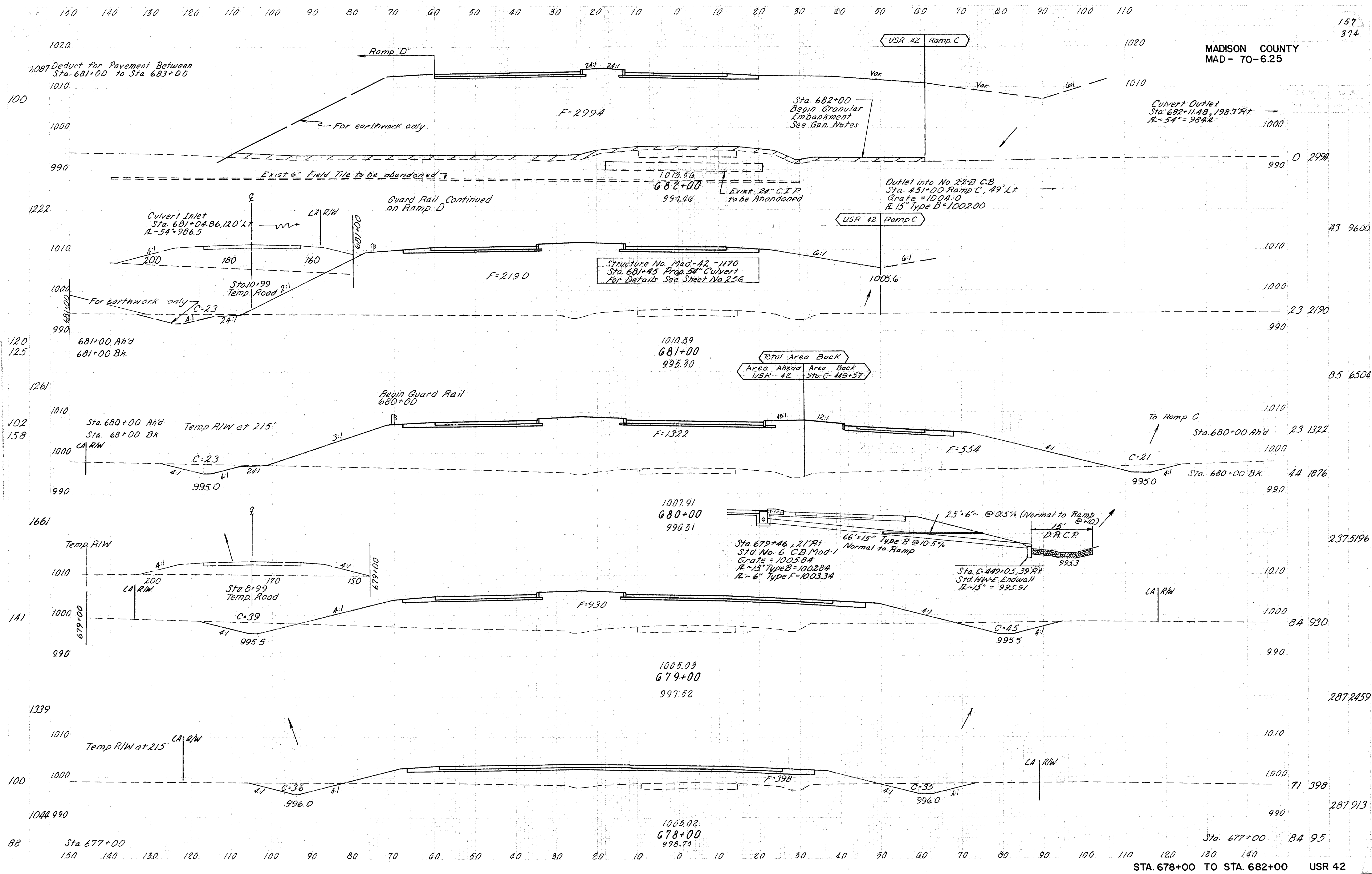


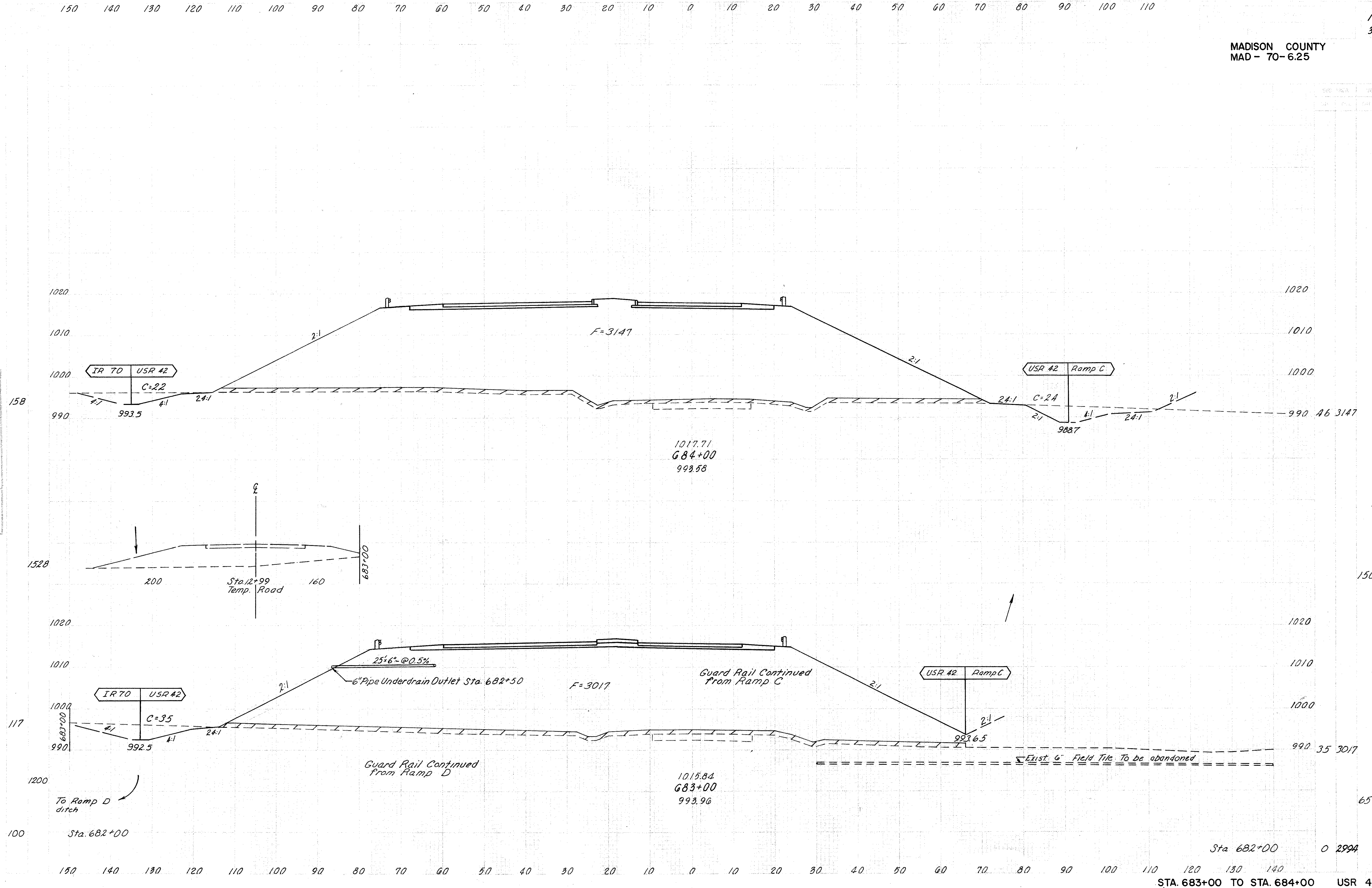
** TYPE A 706.02 CLASS V			* SPECIAL SODDING FOR SLOPE & BERM PROTECTION																
** TYPE B 706.02 CLASS V																			
REF.	STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO	601		602		603		604		605		606		607		608	
				DR.C.P.	RIPPRAP	MASONRY CONC.	*154* TYPE "A" W/C/B BEDDING	*155* TYPE "B" W/C/B BEDDING	12" TYPE "C"	12" TYPE "D"	MOD. 222 C.B.	MOD. 1 C.B.	MOD. 1 M.M.	SODDING + SODDING					
				C.Y.	S.Y.	Cu. Yds.	Lin. Ft.	Lin. Ft.	L.F.	L.F.	Ft.	Ft.	Ft.	Ft.	S.Y.	S.Y.			
1-D	679+46	Rt.	157	5		0.26			66					1					
2-D	681+45	Lt. & Rt.	256	57	36	1.92	336								4.3				
3-D	695+65	Lt. & Rt.	162	3.7		0.23			235			1							
4-D	695+65 To 702+62	Rt.	162-164							706				1					
5-D	691+07	Rt.														60			
6-D	700+56 To 700+98	Lt.	164							42									
7-D	700+54 To 700+96	Rt.	164							42									
8-D	685+30	Lt.														51			
9-D	686+38	Rt.														51			
10-D	690+26	Lt.														60			
TOTALS					657	36	2.41	336	235	66	706	84	1	1	1	4.3	222		

MADISON COUNTY
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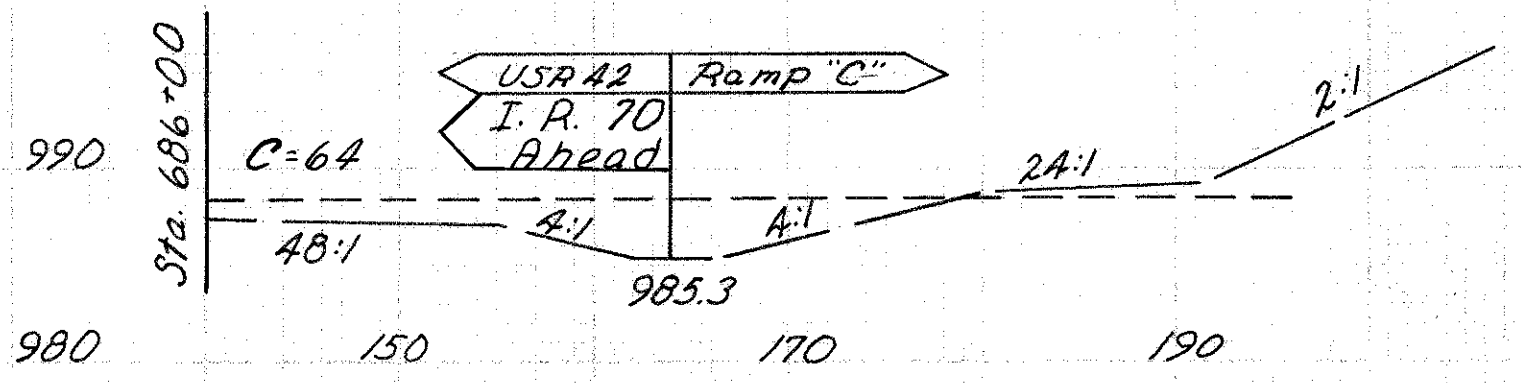






For Granular Embankment
in Structure Area See
IR-70 Cross Sections

Culvert Inlet
Sta C-456+25; 707Lt
Elev = 981.77
To Glade Run

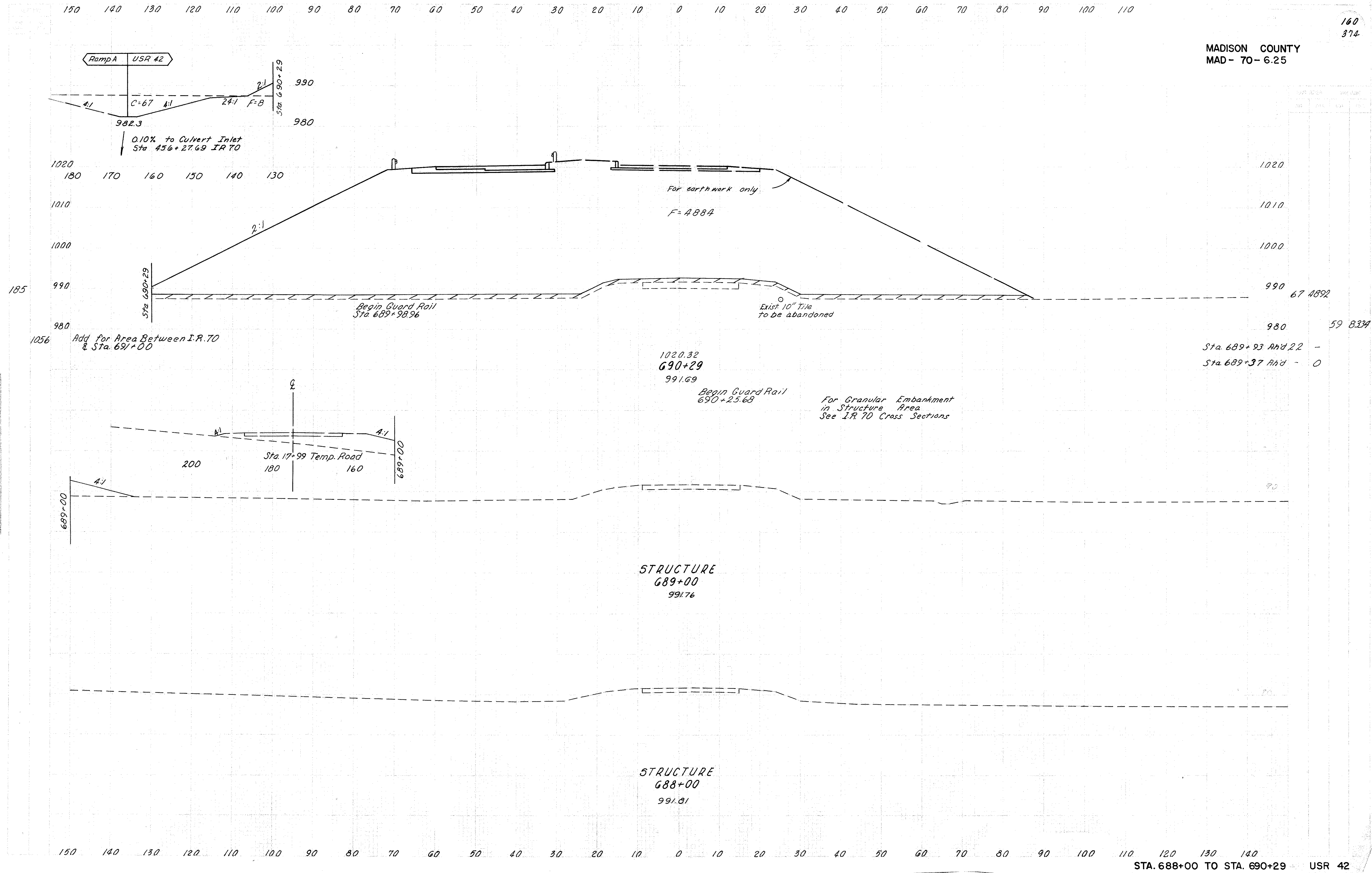


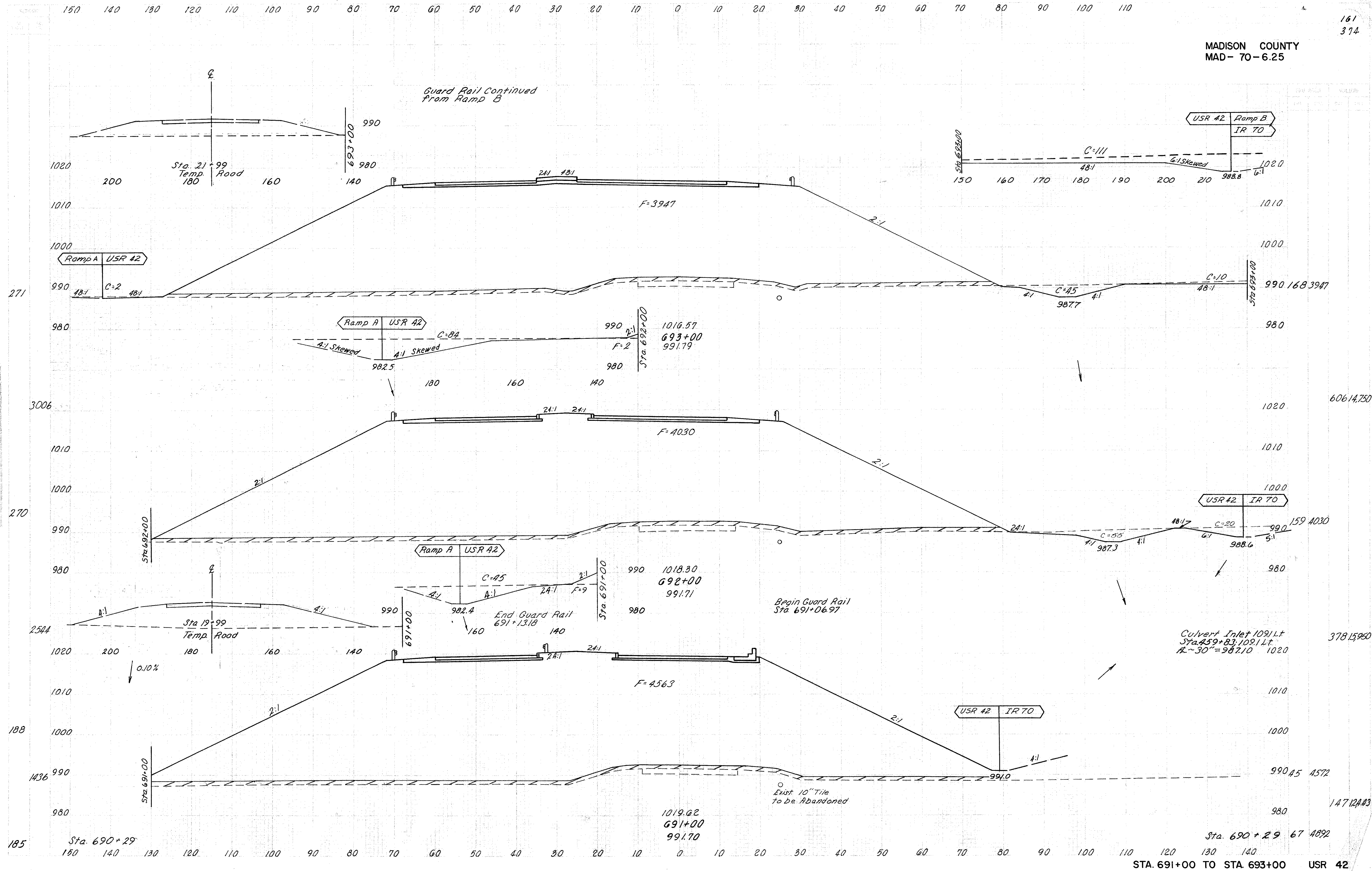
IR-70 456+00 Bk 105 -
Sta 686+80 Bk - 0

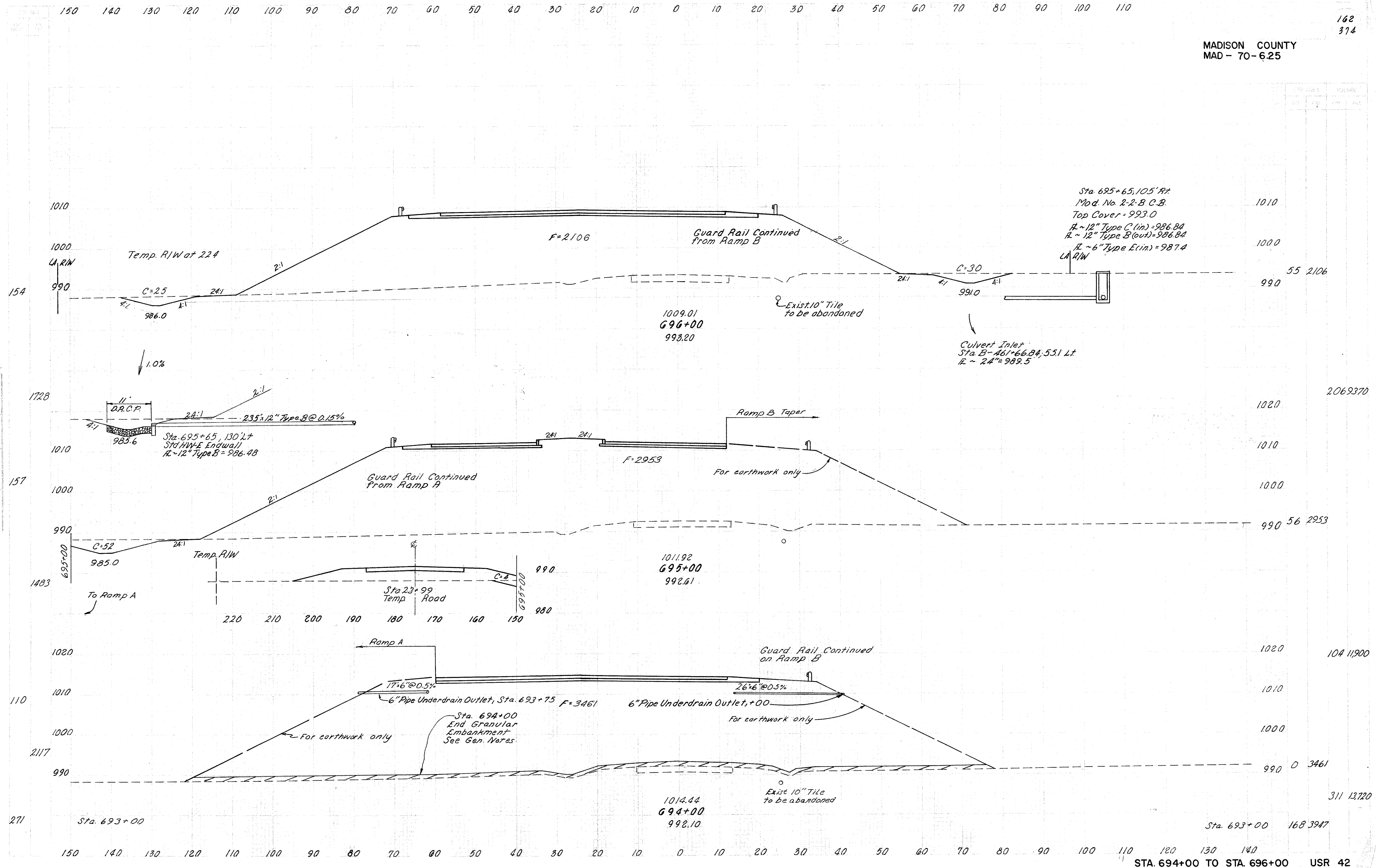
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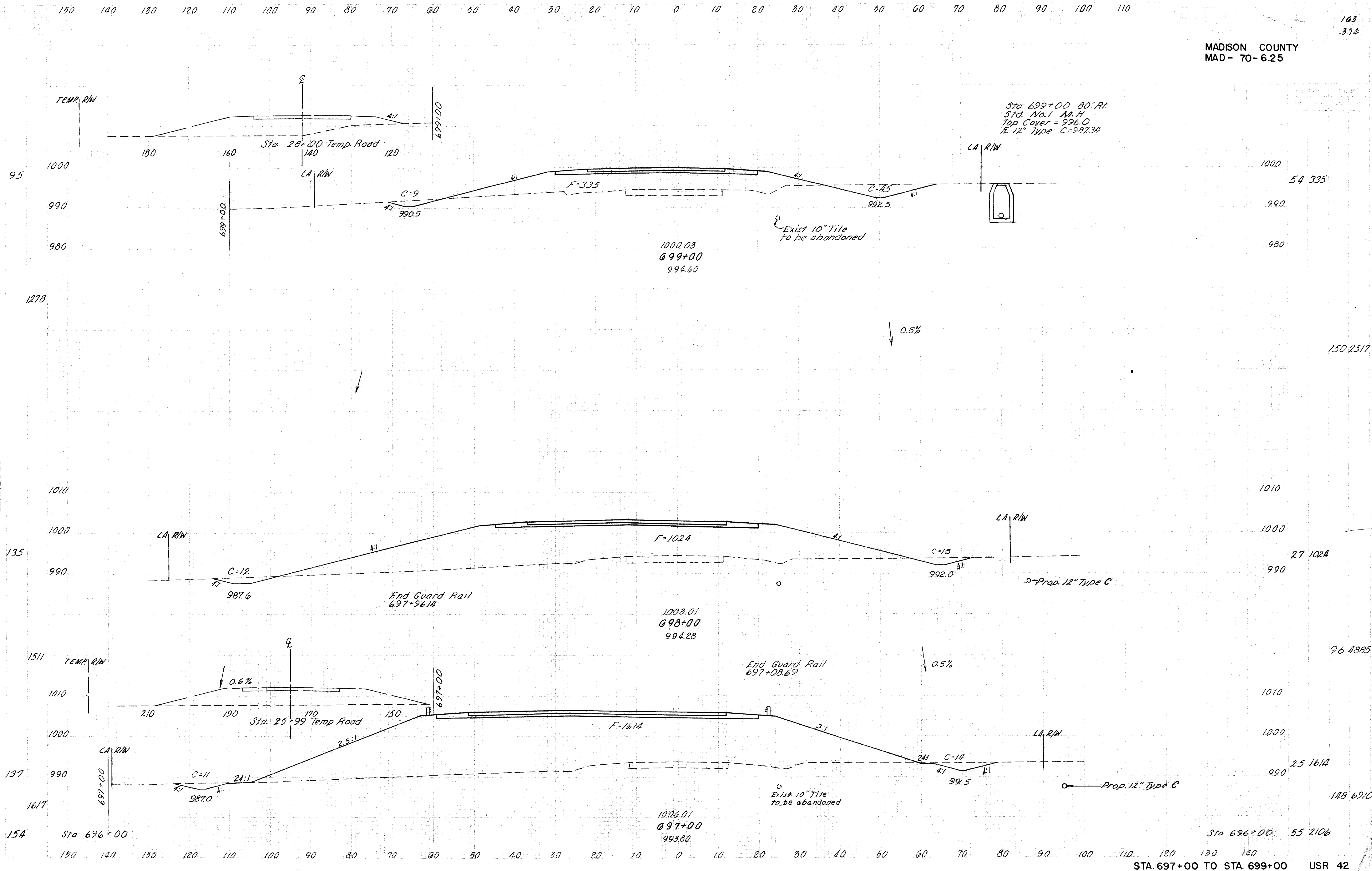
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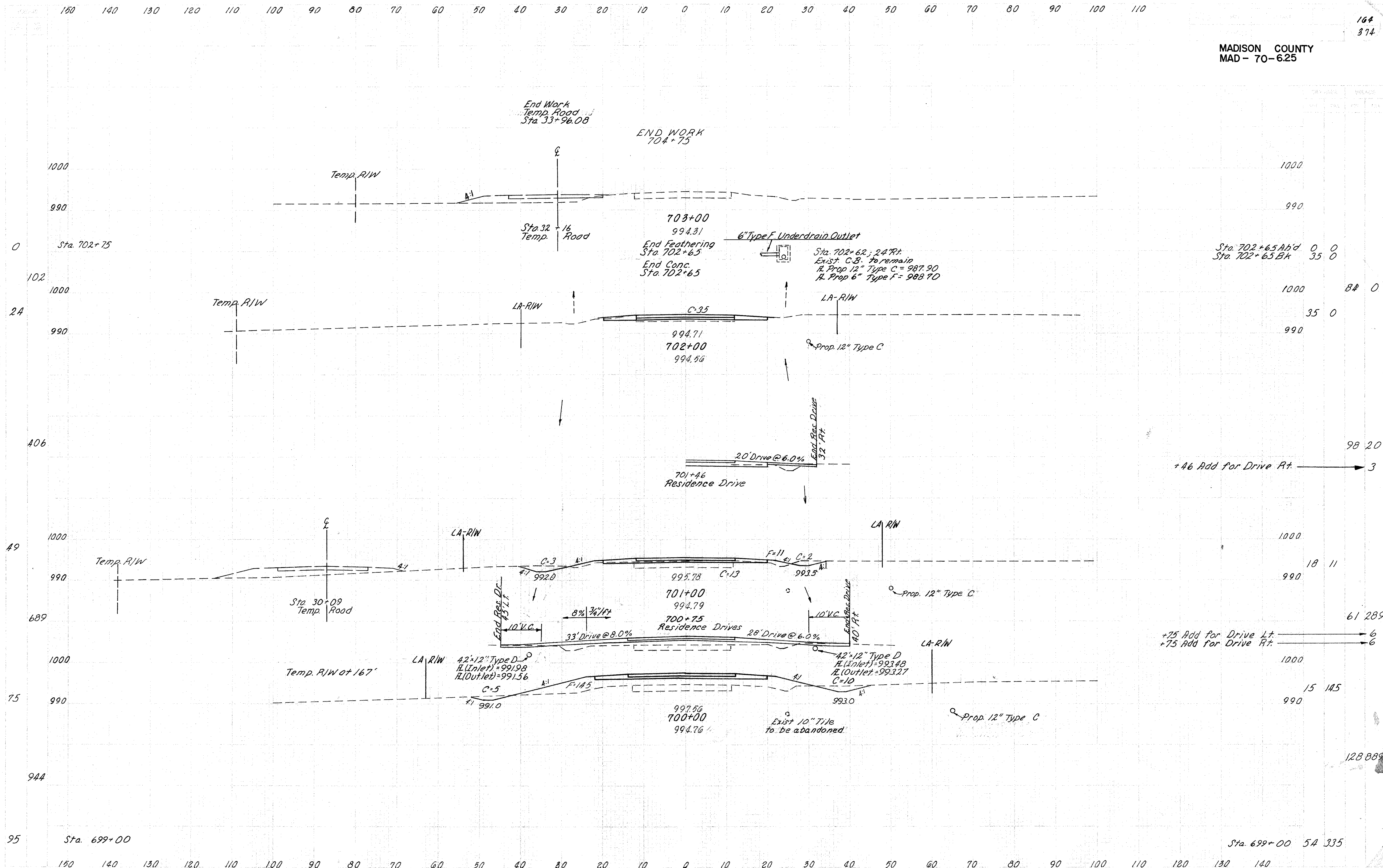
161 12400



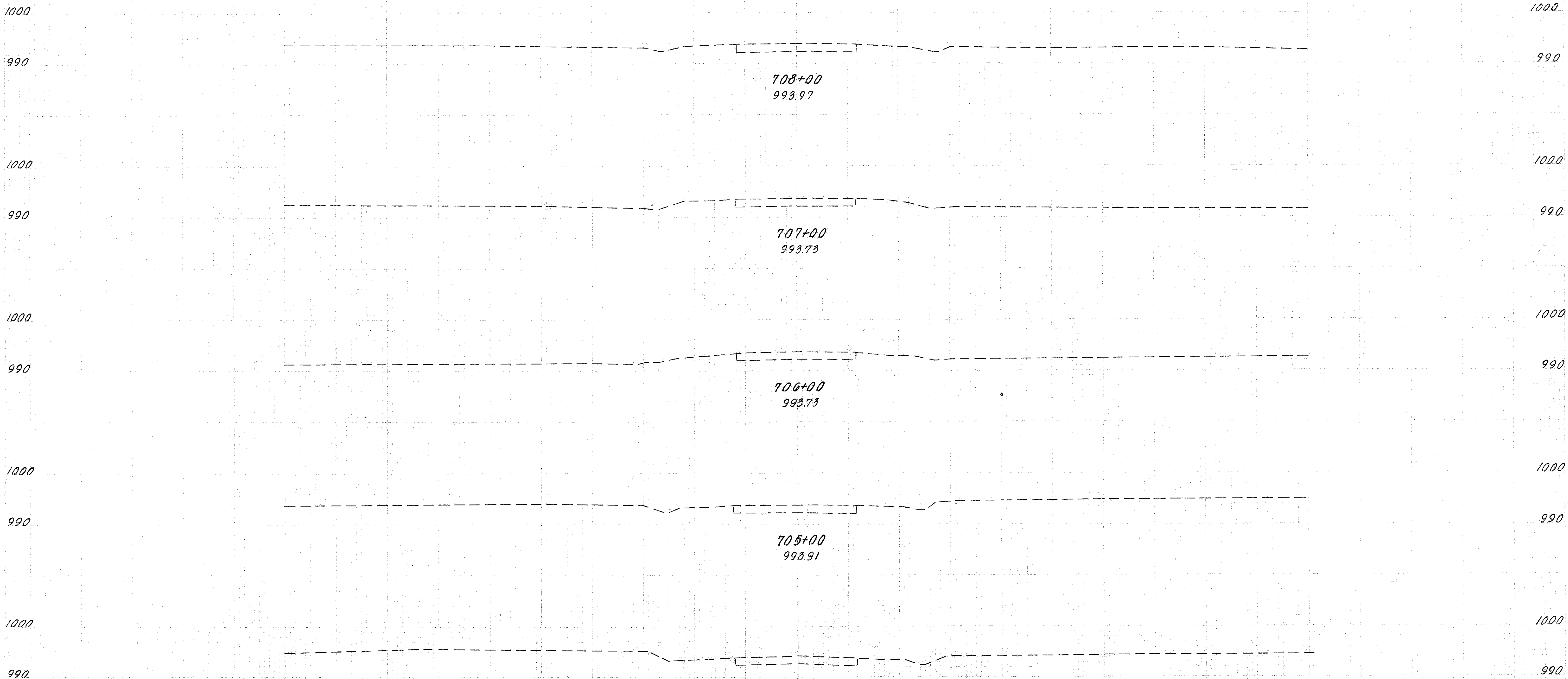








150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110



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

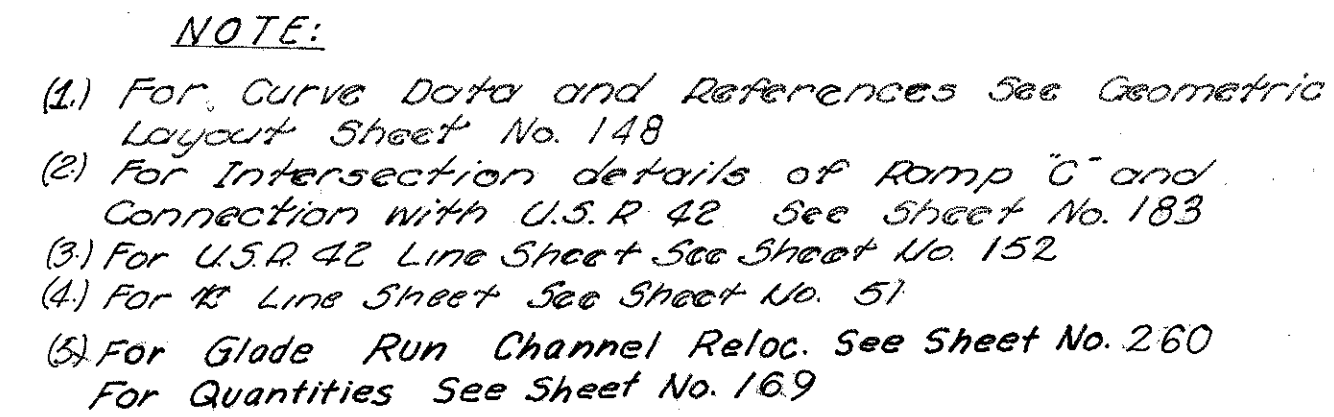
166
374

EXCAV.	6119	C.Y.
EMB.	37,589	C.Y.
SEEDING.	26,472	S.Y.

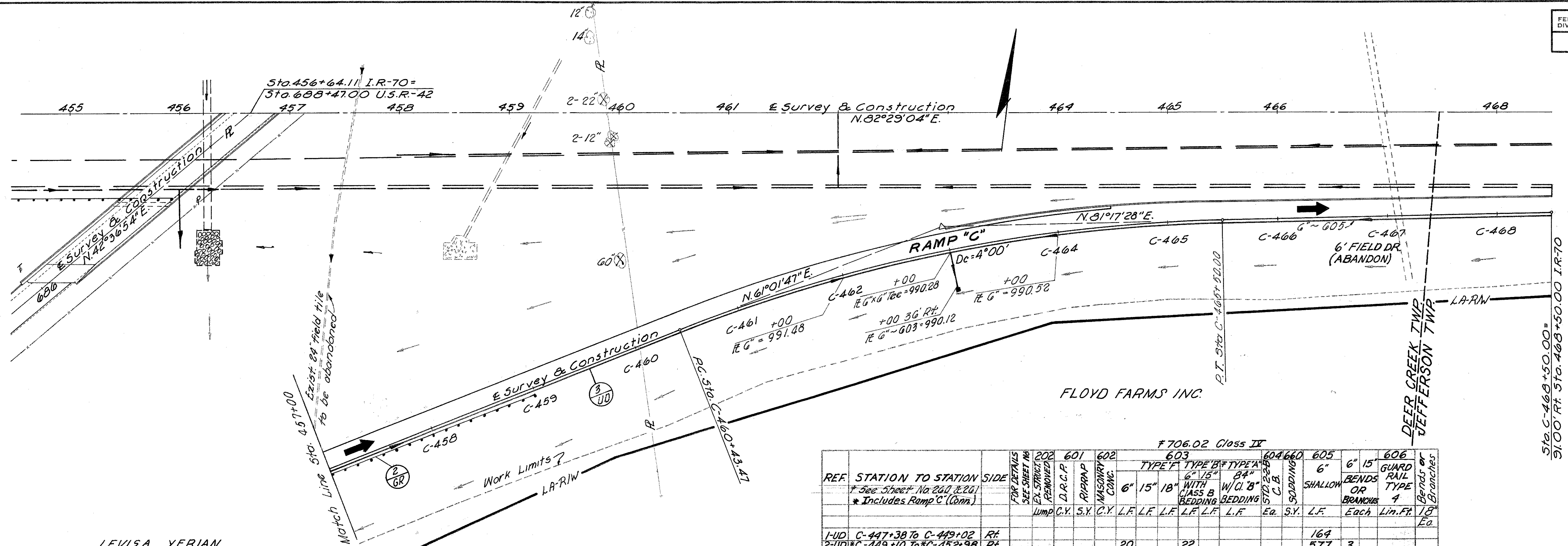
NOTE:

1. For Curve Data and References See Geometric Layout Sheet No. 148
2. For Ramp A Pavement Detail with I.R-70 See Sheet No. 186
3. For Ramp A Intersection Detail with U.S.R-42 See Sheet No. 184
4. For U.S.R 42 Line Sheet See Sheet No. 153
5. For 4th Line Sheet See Sheet No. 51
6. For Superlevation See Sheet No. 184





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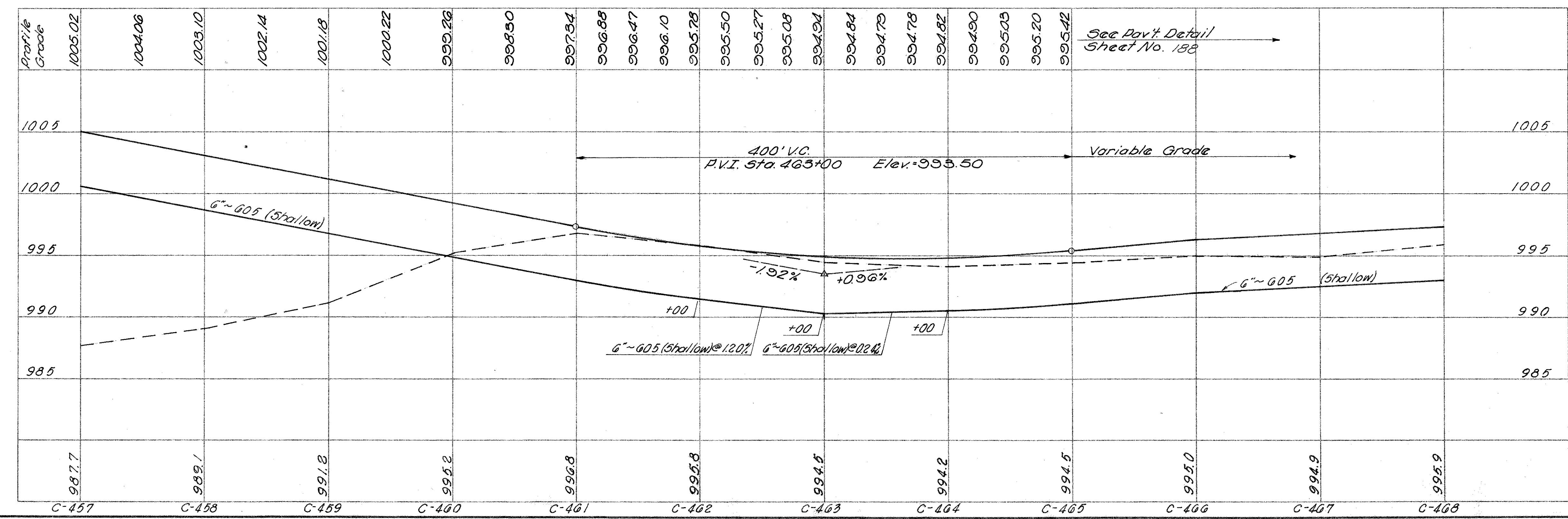
LEVISA YERIAN

NOTE:

1. For Curve Data and References See Geometric Layout Sheet No. 148
2. For Ramp "C" Pavement Detail with I.R-70 See Sheet No. 188
3. For R.L. Line Sheet See Sheet No. 52
4. For Superelevation See Sheet No. 183

REF.		STATION TO STATION		SIDE	FOR DETAILS SEE SHEET No. 202	601	602	603		604	605	606	607
					EX. STRUCT. REMOVED	D.R.C.P.	R.I.P.A.P.	MASONRY CONC.	TYPE "A"	TYPE "B"	TYPE "C"	TYPE "D"	TYPE "E"
					Lump	C.Y.	S.Y.	C.Y.	6"	15"	18"	6"	15"
									L.F.	L.F.	L.F.	L.F.	L.F.
									Ea.	S.Y.	L.F.	Each	Lin. Ft.
1-UD	C-447+38 To C-449+02	Rt											
2-UD	C-449+10 To C-452+98	Rt							20			164	
3-UD	C-453+00 To C-468+50	Rt							10			577	3
4-D	456+43	Rt										1573	1
1-D	C-451+00	L.F.R. 176				6.7	0.26		37		66	1	2
2-D	C-456+25	L.F.R. 259				602	499	7.98			126	10.1	
3-D	32+00 Glade Run Channel	Rt				260			14				1
4-R	36+16 Glade Run Channel	L.F.R.				Lump							
1-GR	682+50.08 (42) To 457+00	Lt											550
2-GR	450+00 To 459+00	Rt											900
3-D	22+00 Glade Run Channel	Rt				180.4							
TOTALS						Lump	70.9	230	38.24	30	37	14	22
									66	126	1	101	231/4
												1450	

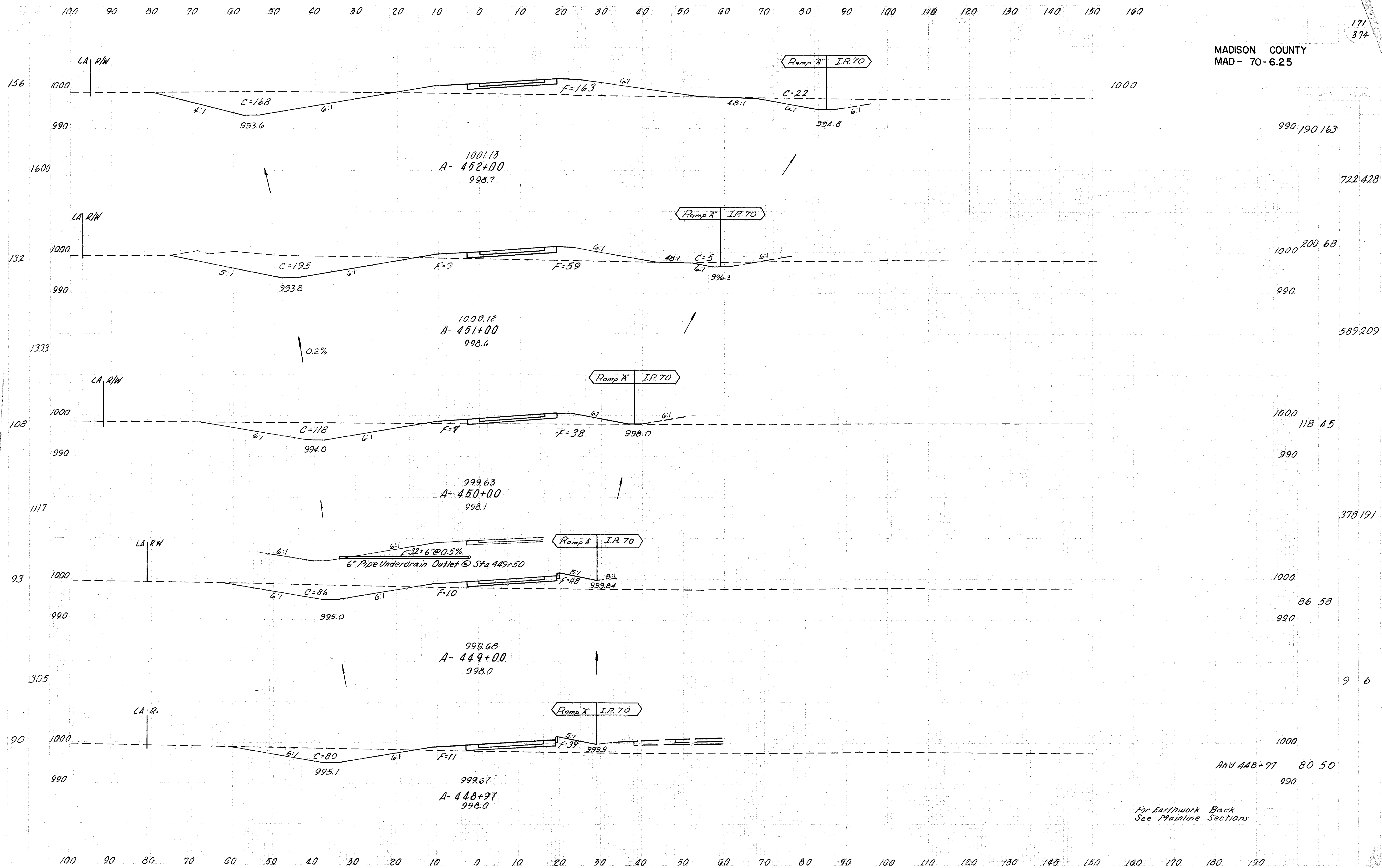
EXCAV. 14,663 C.Y.
EMB. 51,171 C.Y.
SEEDING 30,096 S.Y.



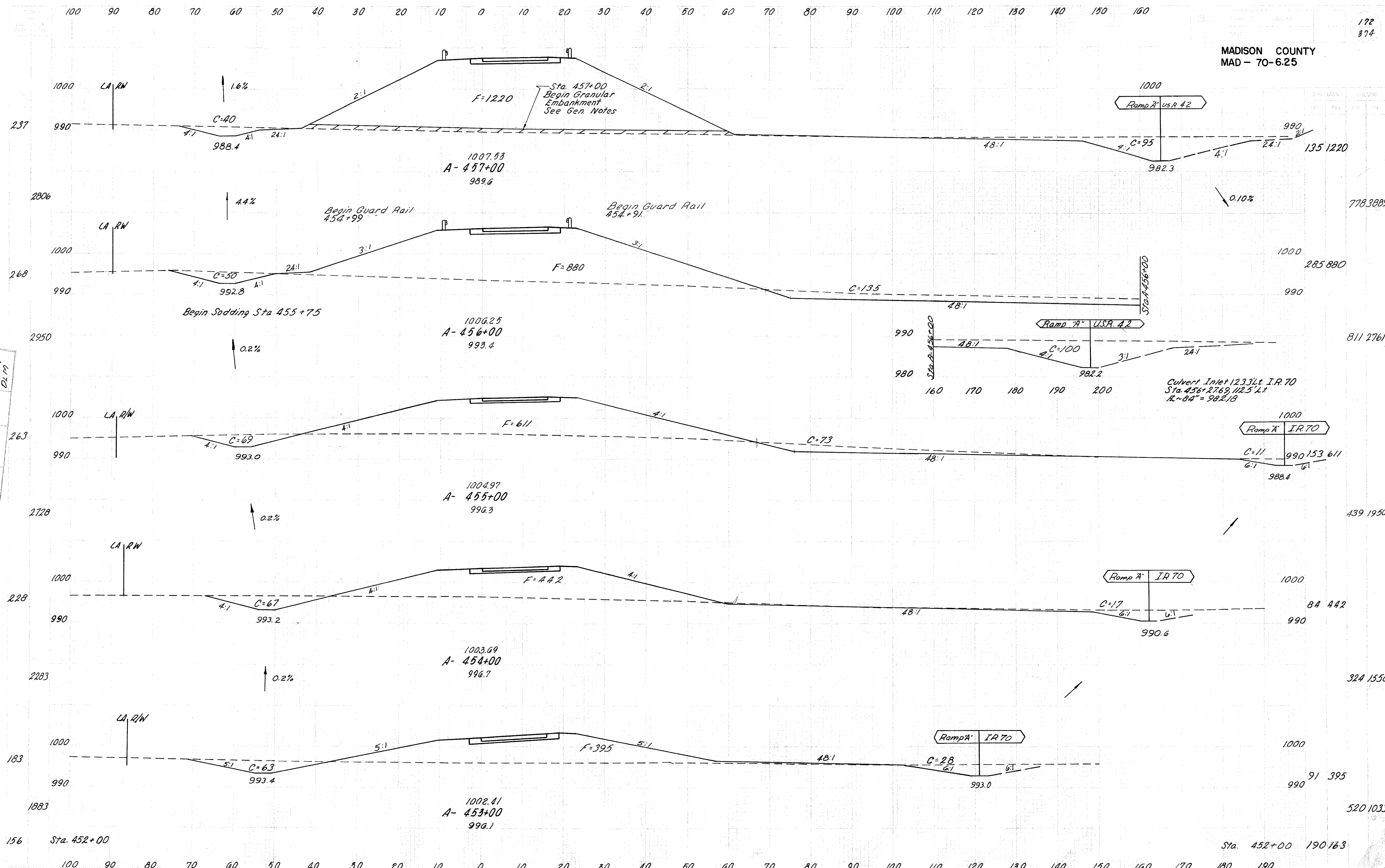
THE HUNTINGTON NAT'L. BANK
of COLUMBUS

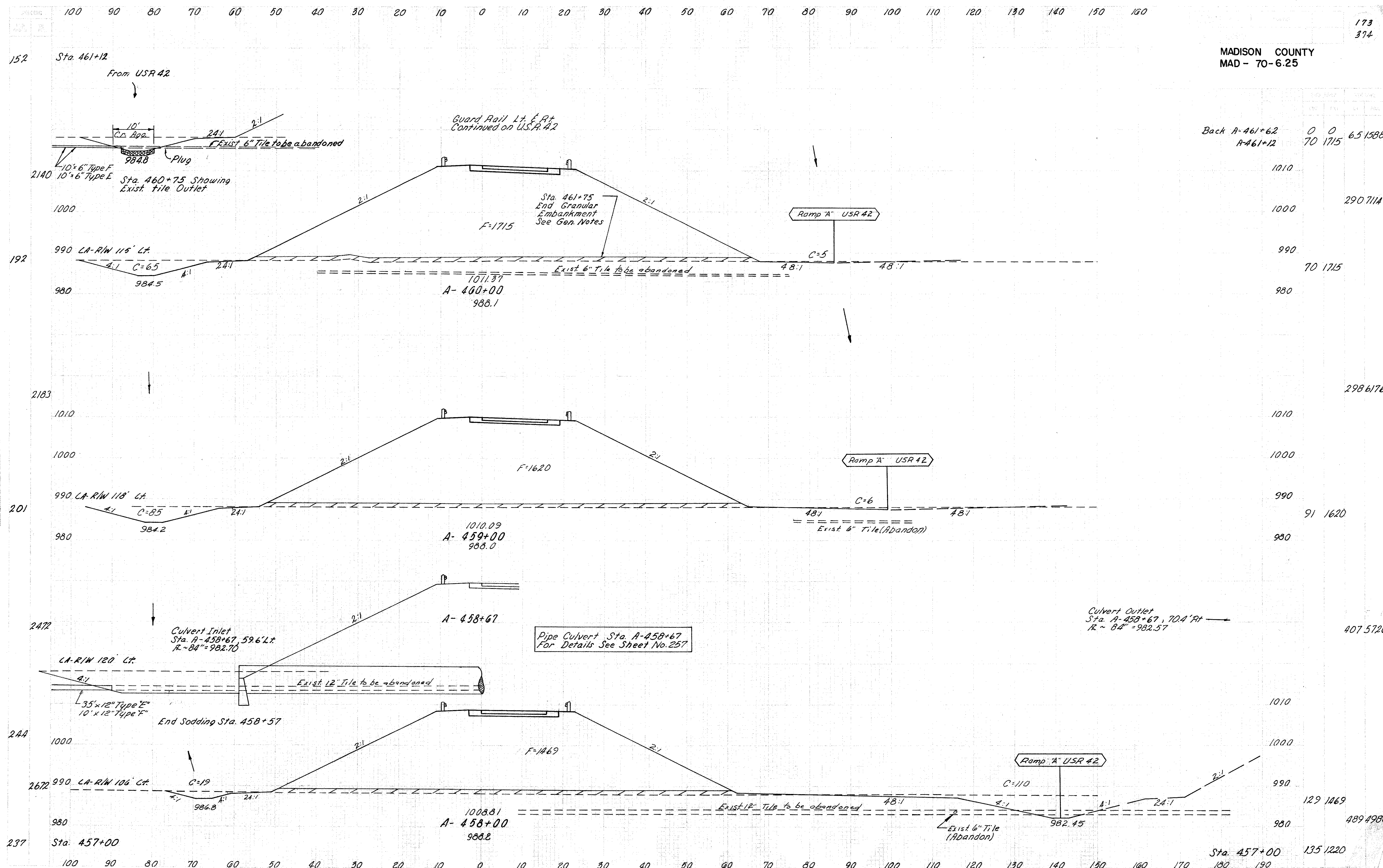


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For Earthwork Back
See Mainline Sections





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Back A-461+62 0 0 65 1588
A-461+12 70 1715

173
374

298.6176

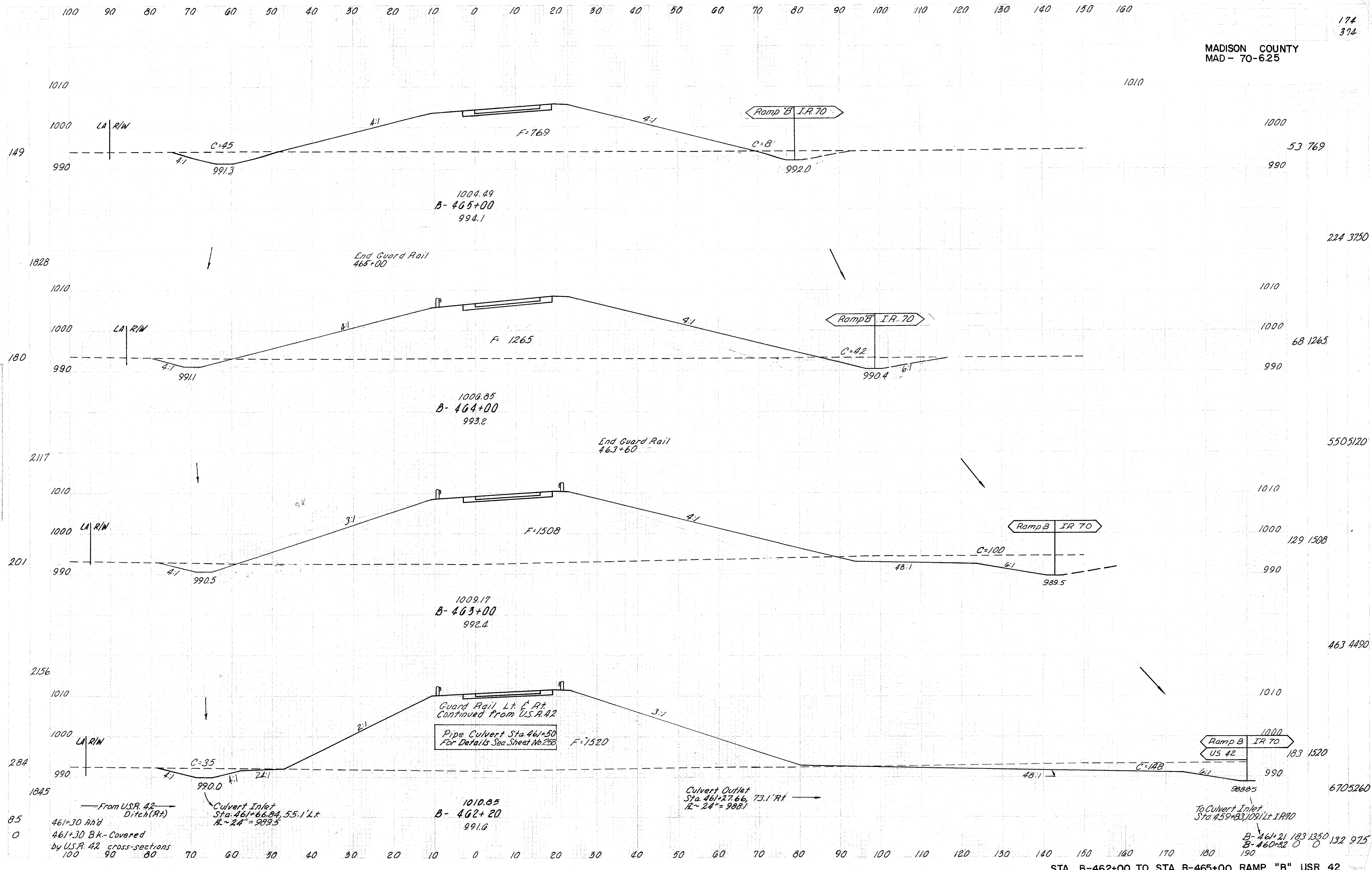
91 1620

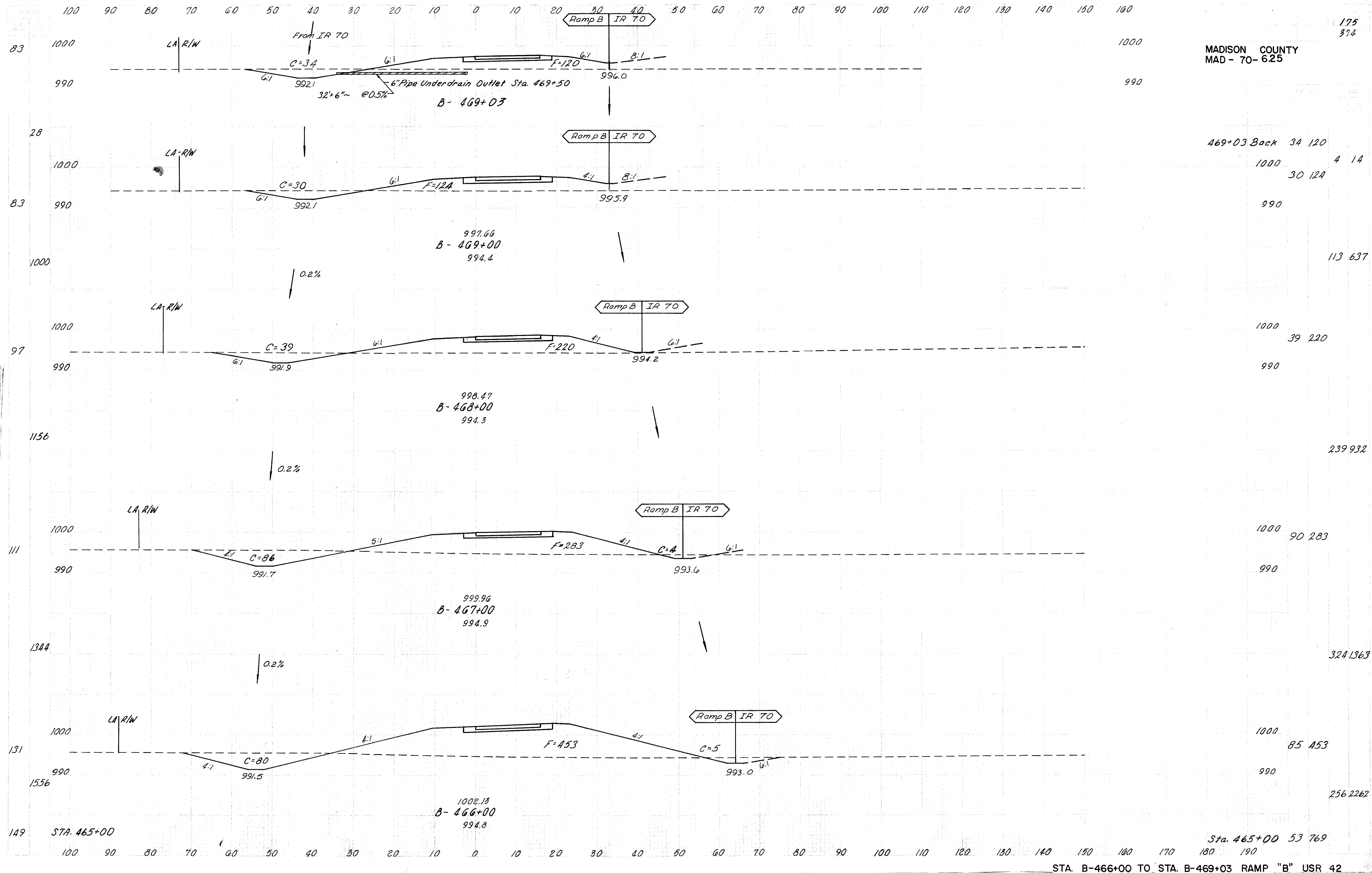
407.5720

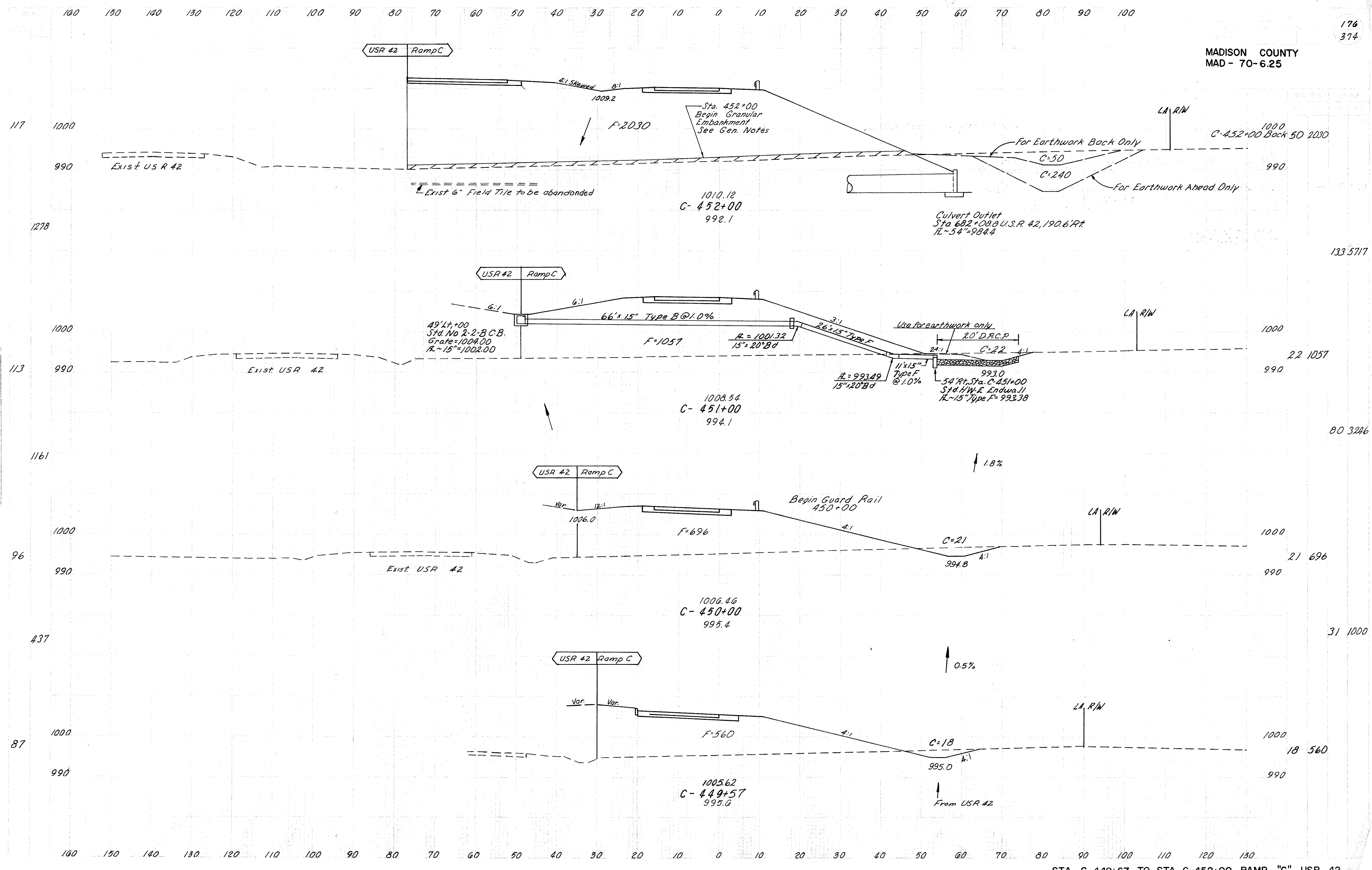
489.4980

135.1220

STA. A-458+00 TO STA. A-460+00 RAMP "A" USR 42



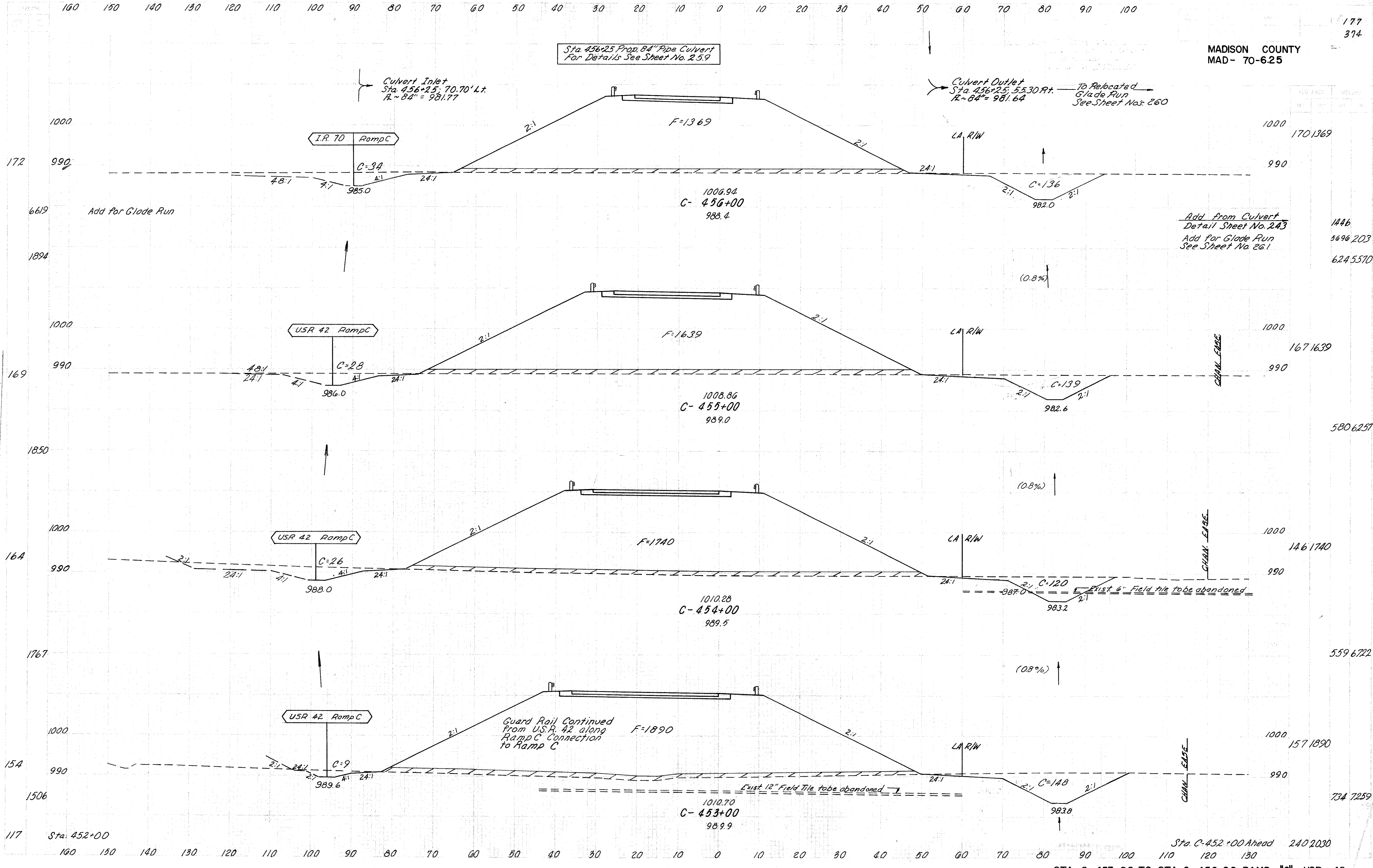


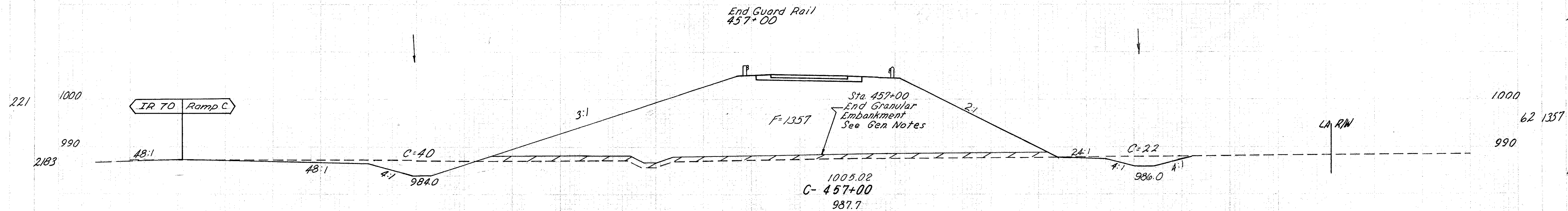
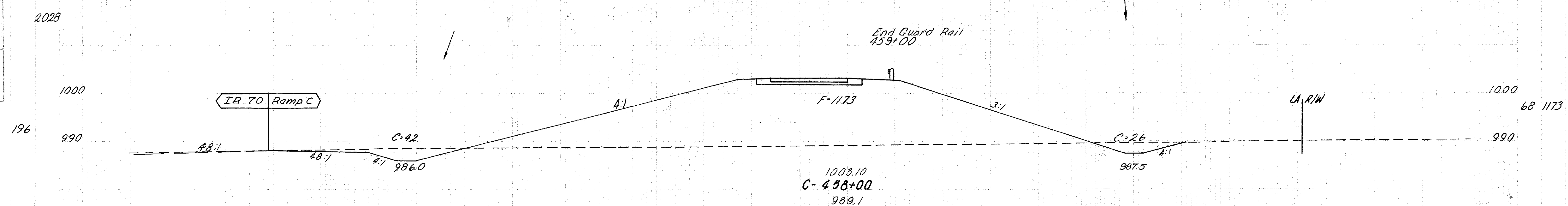
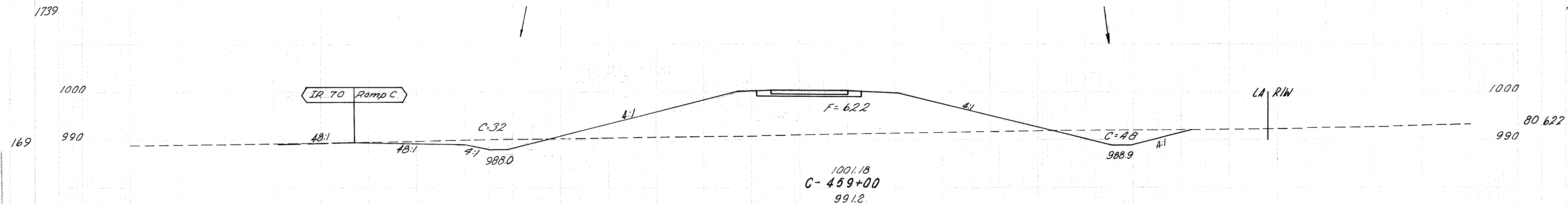
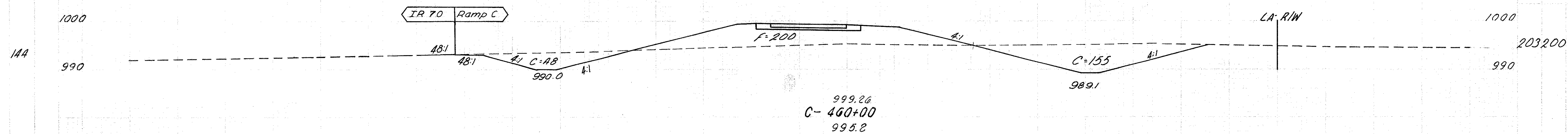


Sta. 456+25 Prop. 84" Pipe Culvert
For Details See Sheet No. 259

Culvert Inlet
Sta. 456+25 70.70' L+
R-84" = 981.77

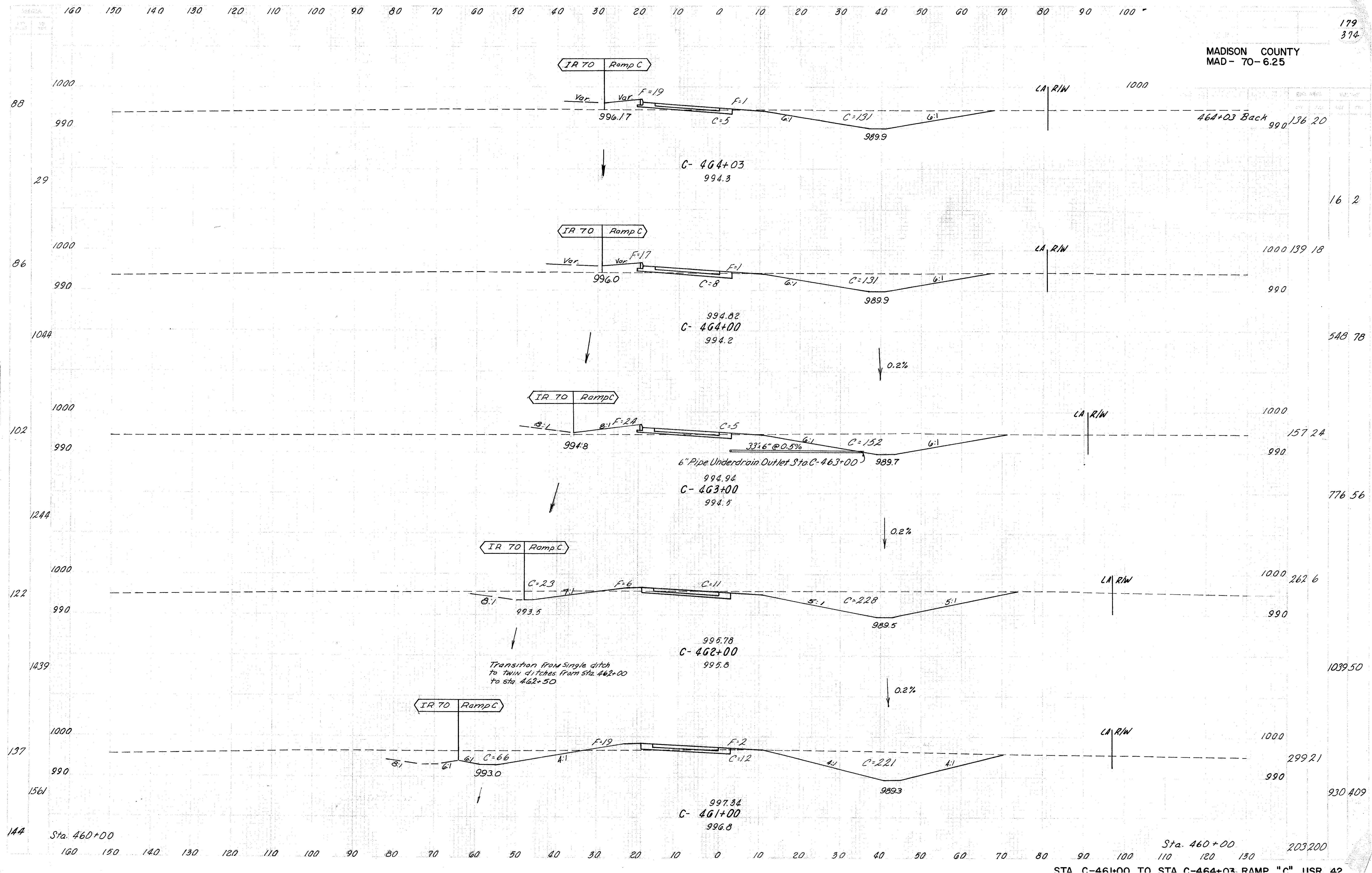
Culvert Outlet
Sta. 456+25 55.30 R+
R-84" = 981.64
To Relocated
Glade Run
See Sheet No. 260

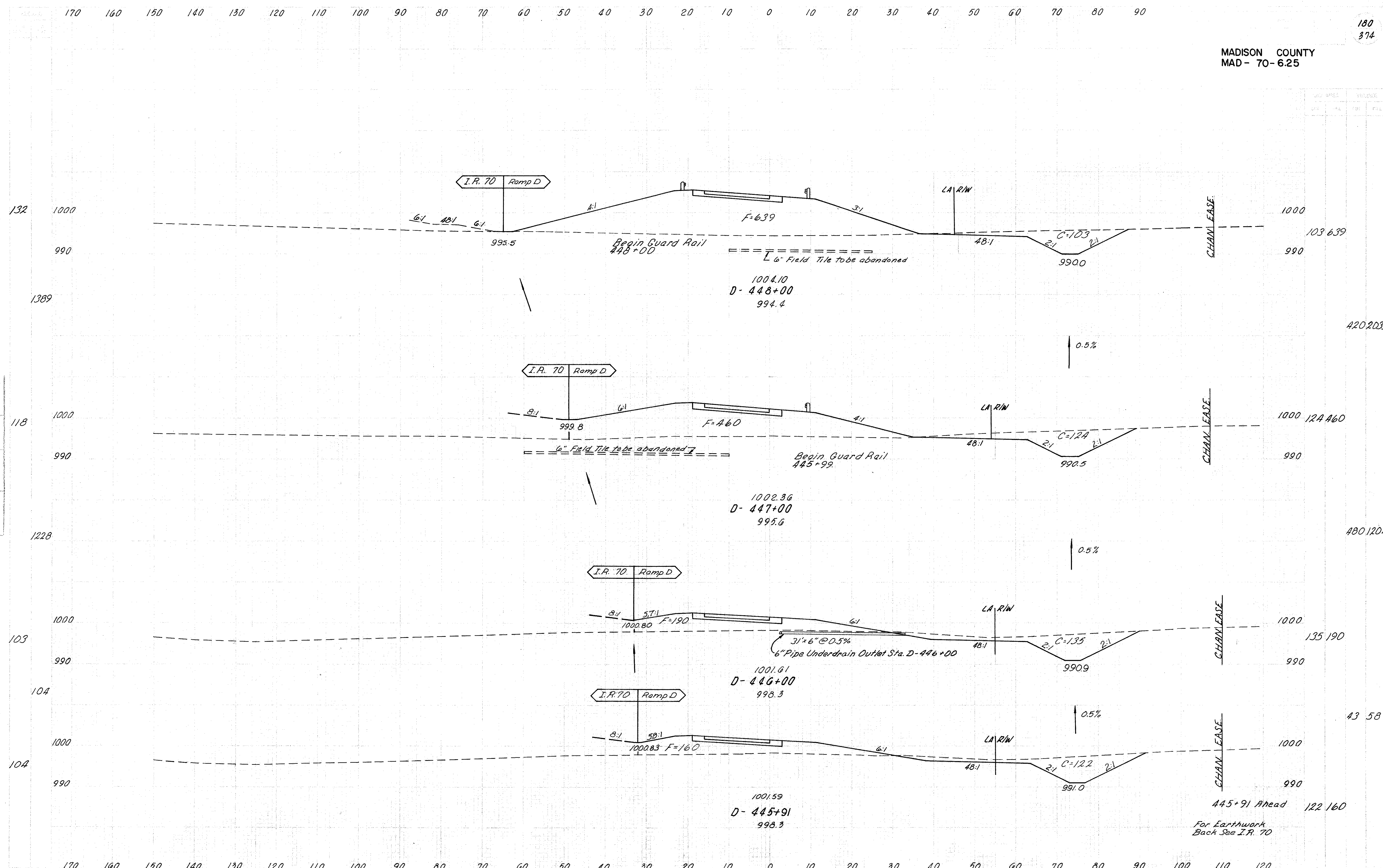


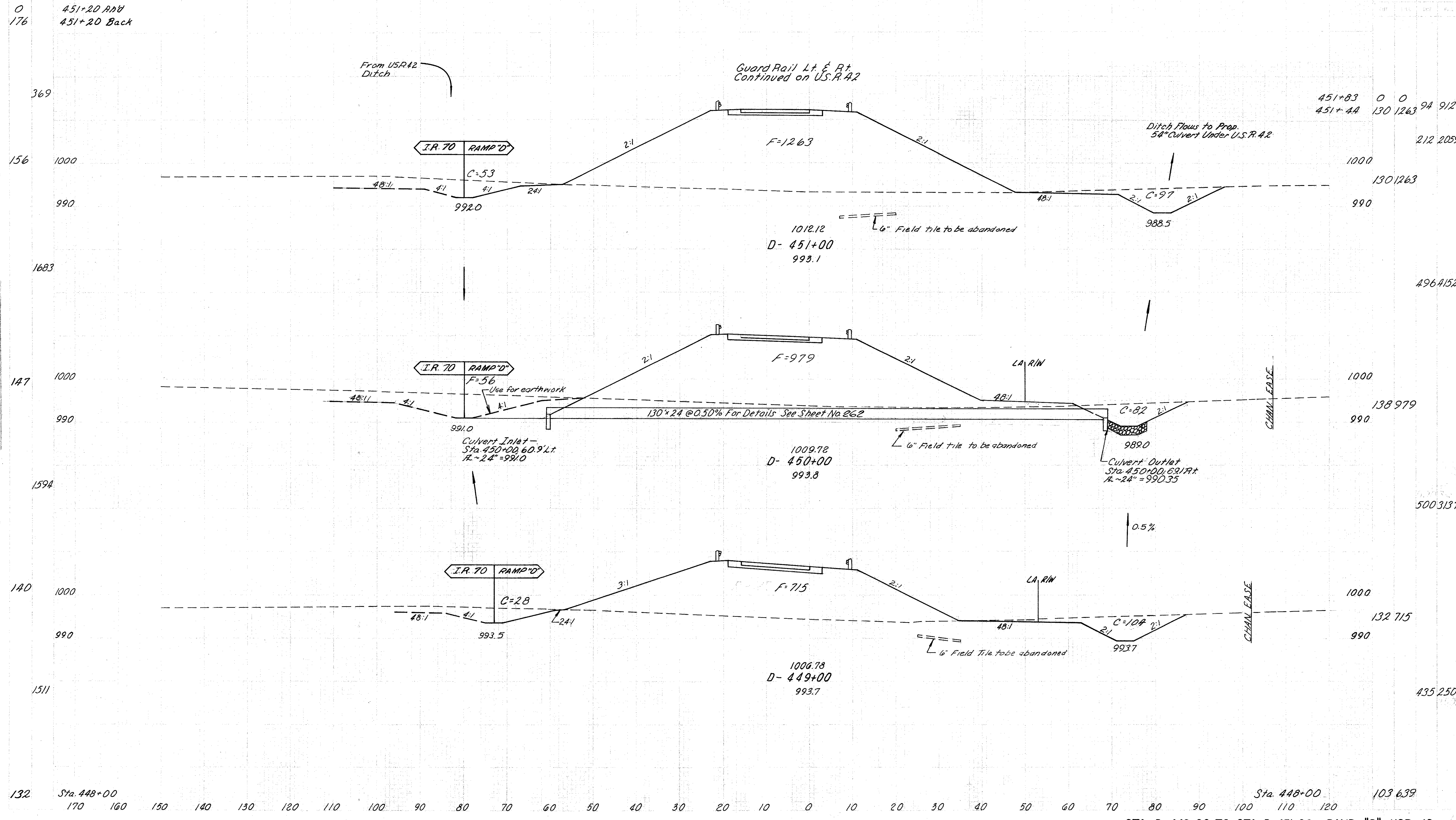


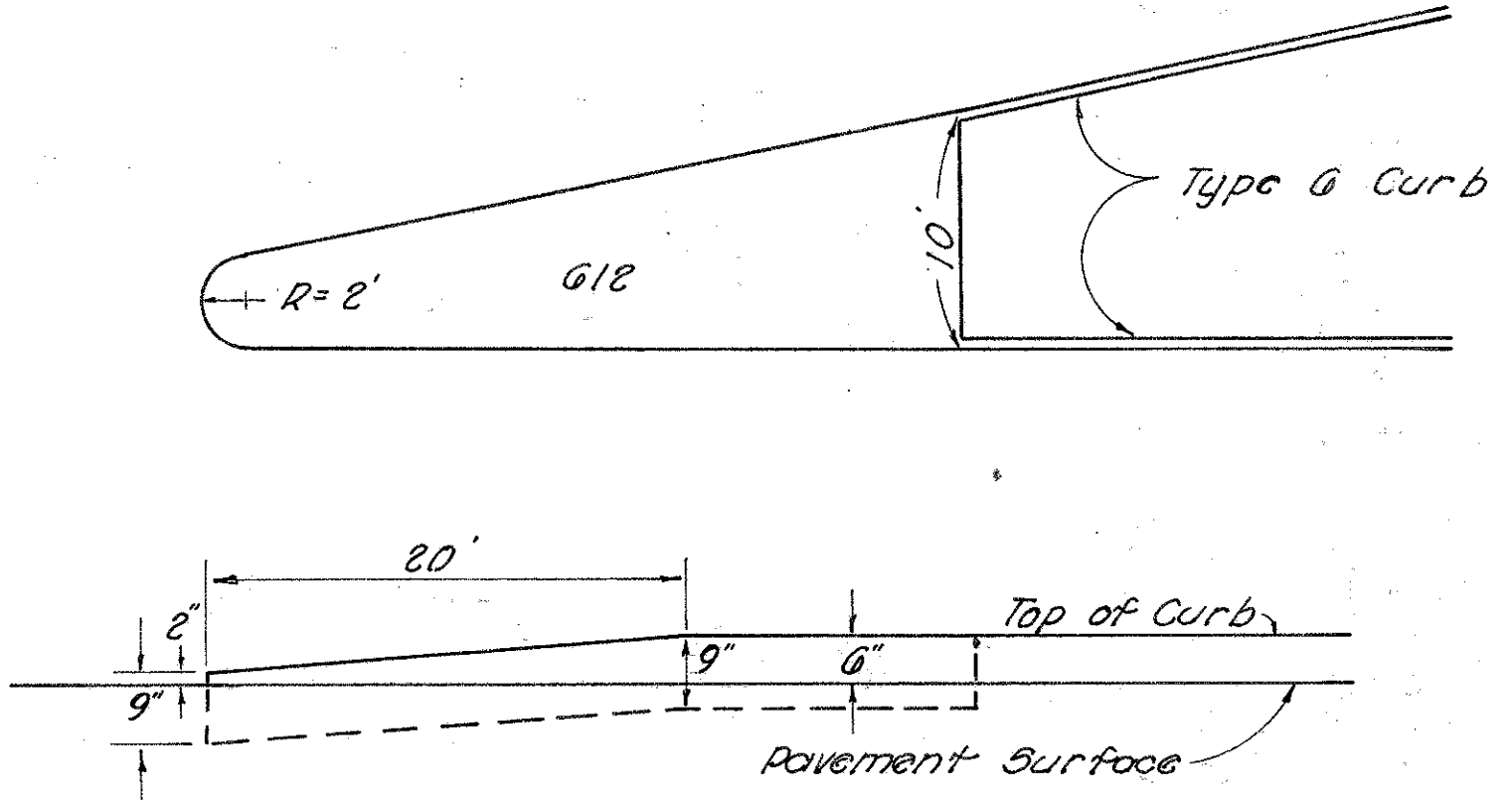
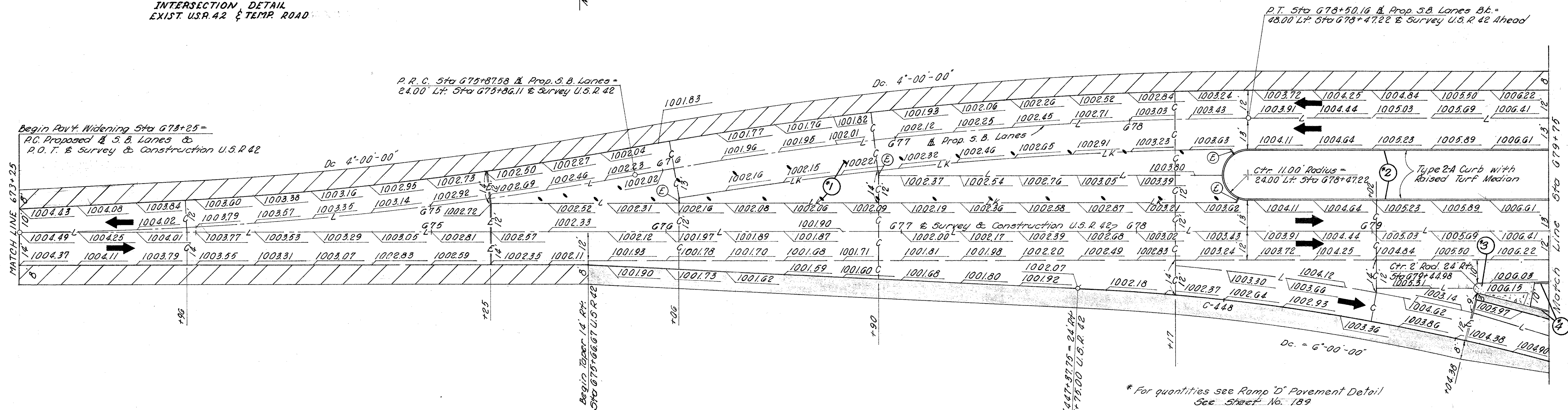
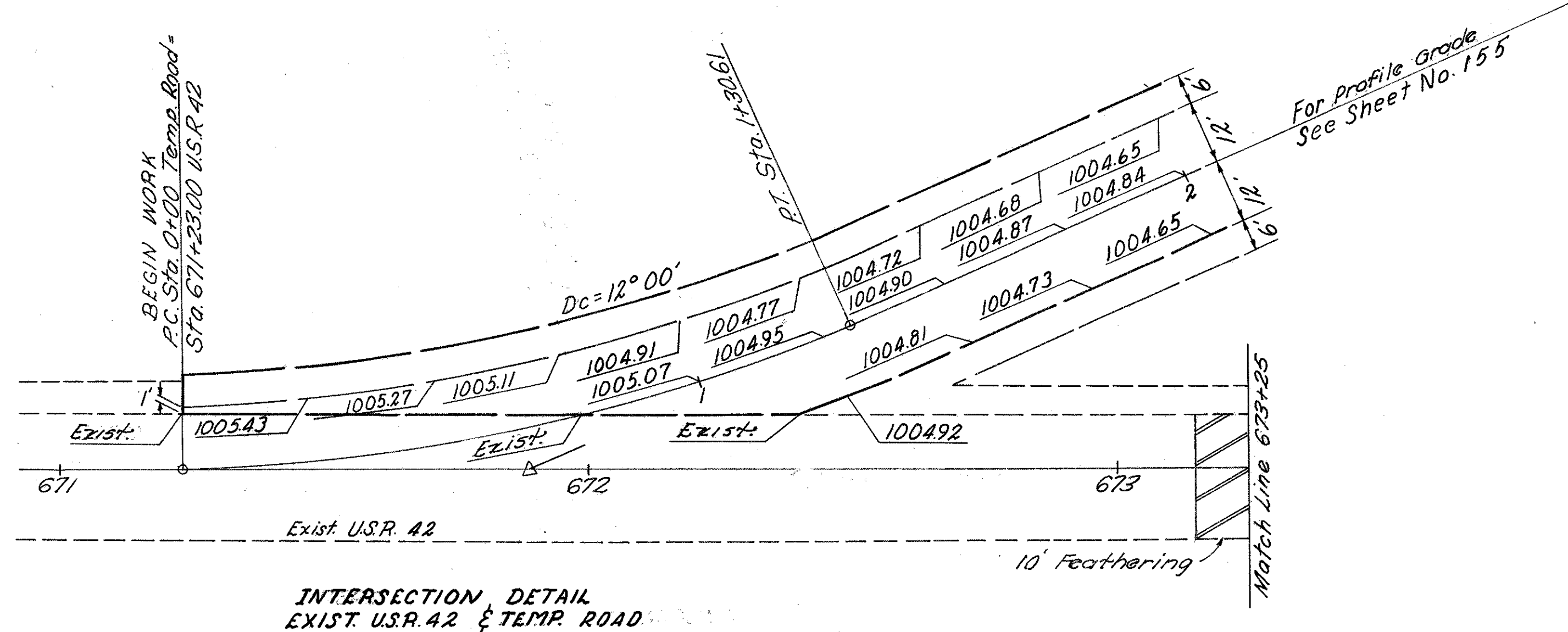
Sta. 456+00 172 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 Sta. 456+00 170 1369

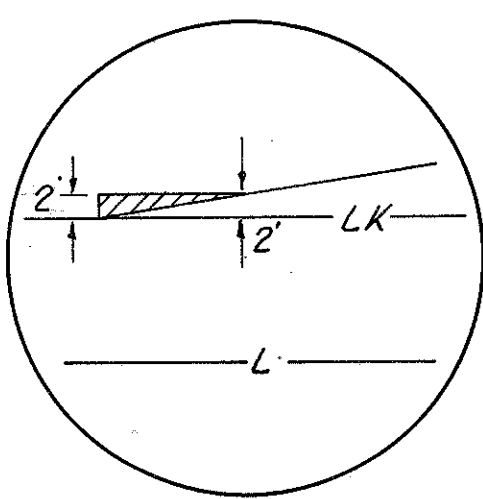
MADISON COUNTY
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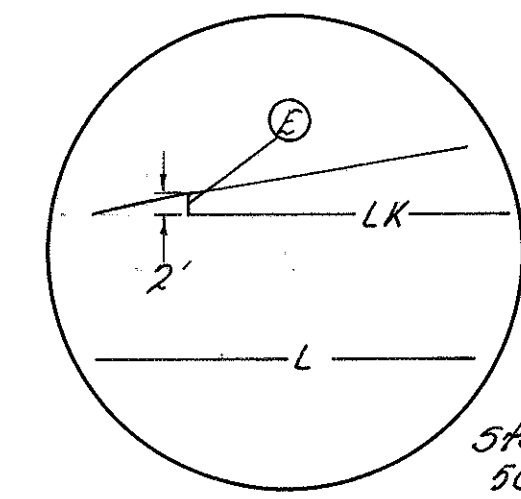








DETAIL - B



DETAIL - A

*NOTE: Contractor may use Joint Detail A or B at beginning of 50' Taper. Quantities are Calculated and to be paid for as Detail A.

*Begin 50' Taper Sta 680+95.89

DISTANCE BETWEEN & SURVEY AND FACE OF GUARD RAIL			
POST	OFFSET	POST	OFFSET
0	17.00	4	19.57
1/2	17.04	5	21.01
1	17.16	6	22.77
2	17.64	7	24.84
3	18.44		

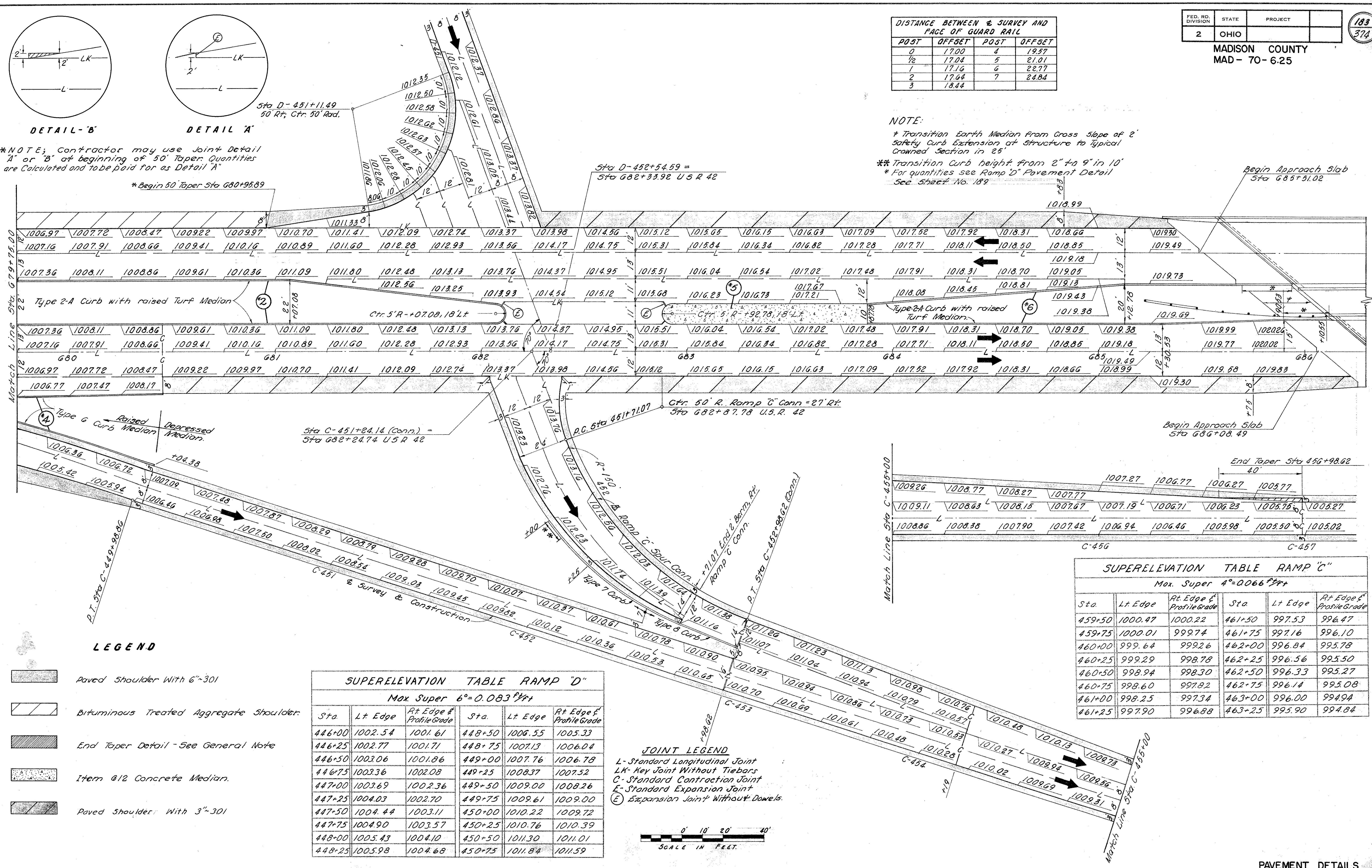
NOTE:

- * Transition Earth Median From Cross Slope of 2' Safety Curb Extension at Structure to Typical Crowned Section in 25'
- ** Transition Curb height from 2" to 9" in 10'
- * For quantities see Ramp "D" Pavement Detail See Sheet No. 189

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2	OHIO	

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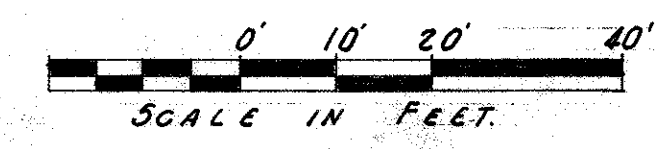
LEGEND

- Paved Shoulder With 6"-301
- Bituminous Treated Aggregate Shoulder
- End Taper Detail - See General Note
- Item #12 Concrete Median
- Paved Shoulder With 3"-301

SUPERELEVATION TABLE RAMP "D"					
Max Super 6"=0.083'ft					
Sta	Lt Edge	Rt Edge & Profile Grade	Sta	Lt Edge	Rt Edge & Profile Grade
446+00	1002.54	1001.61	448+50	1006.55	1005.33
446+25	1002.77	1001.71	448+75	1007.13	1006.04
446+50	1003.06	1001.86	449+00	1007.76	1006.78
446+75	1003.36	1002.08	449+25	1008.37	1007.52
447+00	1003.69	1002.36	449+50	1009.00	1008.26
447+25	1004.03	1002.70	449+75	1009.61	1009.00
447+50	1004.44	1003.11	450+00	1010.22	1009.72
447+75	1004.90	1003.57	450+25	1010.76	1010.39
448+00	1005.43	1004.10	450+50	1011.30	1011.01
448+25	1005.98	1004.68	450+75	1011.84	1011.59

SUPERELEVATION TABLE RAMP "C"					
Max Super 4"=0.066'ft					
Sta	Lt Edge	Rt Edge & Profile Grade	Sta	Lt Edge	Rt Edge & Profile Grade
459+50	1000.47	1000.22	461+50	997.53	996.47
459+75	1000.01	999.74	461+75	997.16	996.10
460+00	999.64	999.26	462+00	996.84	995.78
460+25	999.29	998.78	462+25	996.56	995.50
460+50	998.94	998.30	462+50	996.33	995.27
460+75	998.60	997.82	462+75	996.14	995.08
461+00	998.25	997.34	463+00	996.00	994.94
461+25	997.90	996.88	463+25	995.90	994.84

- JOINT LEGEND
- L- Standard Longitudinal Joint
 - LK- Key Joint Without Tiebars
 - C- Standard Contraction Joint
 - E- Standard Expansion Joint
 - (E) Expansion Joint Without Dowels



DISTANCE BETWEEN & SURVEY AND FACE OF GUARD RAIL			
POST	OFFSET	POST	OFFSET
0	31.0	4	28.43
1/2	30.96	5	26.99
1	30.84	6	25.23
2	30.36	7	23.16
3	29.56		

SUPERELEVATION TABLE RAMP "A"					
Max. Super 4° = 0.066 %/ft			Max. Super 23° = 0.083 %/ft		
Sta.	Lt. Edge f Profile Grade	Rt. Edge	Sta.	Lt. Edge f Profile Grade	Rt. Edge
449+50	999.59	1000.65	457+00	1007.53	1007.78
449+75	999.59	1000.55	457+25	10007.85	1008.07
450+00	999.63	1000.69	457+50	1008.17	1008.27
450+25	999.70	1000.76	457+75	1008.49	1008.44
450+50	999.81	1000.87	458+00	1008.81	1008.60
450+75	999.94	1001.00	458+25	1009.13	1008.78
451+00	1000.18	1001.18	458+50	1009.45	1008.94
451+25	1000.32	1001.38	458+75	1009.77	1009.15
451+50	1000.56	1001.62	459+00	1010.09	1009.43
451+75	1000.83	1001.89	459+25	1010.41	1009.75
452+00	1001.13	1002.19	459+50	1010.73	1010.07
452+25	1001.45	1002.51	459+75	1011.05	1010.39
452+50	1001.77	1002.83	460+00	1011.37	1010.76
452+75	1002.09	1003.10	460+25	1011.69	1011.21
453+00	1002.41	1003.34	460+50	1012.01	1011.71
453+25	1002.73	1003.51			
453+50	1003.05	1003.71			
453+75	1003.37	1003.88			
454+00	1003.69	1004.07			
454+25	1004.01	1004.30			
454+50	1004.33	1004.58			

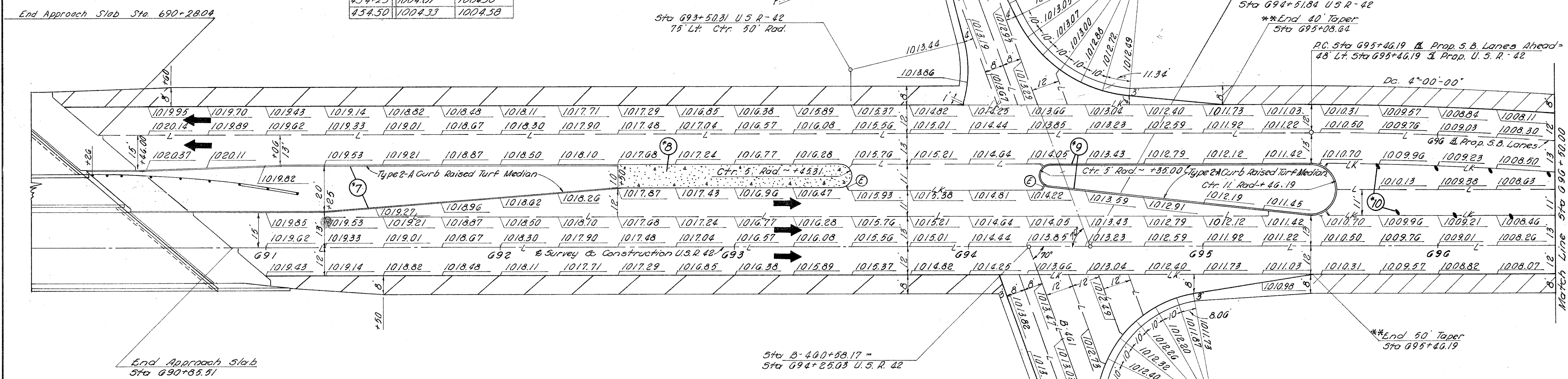
NOTE:

(1)* Transition Earth Median from cross slope of 2' Safety Curb Extension at Structure to Typical Crowned Section in 25'

(2)* For Curb, Concrete Median and Traffic Divider quantities see Ramp "D" Pavement Detail See Sheet No. 189

NOTE:

For location of Traffic Dividers see following detail sheet: No 185



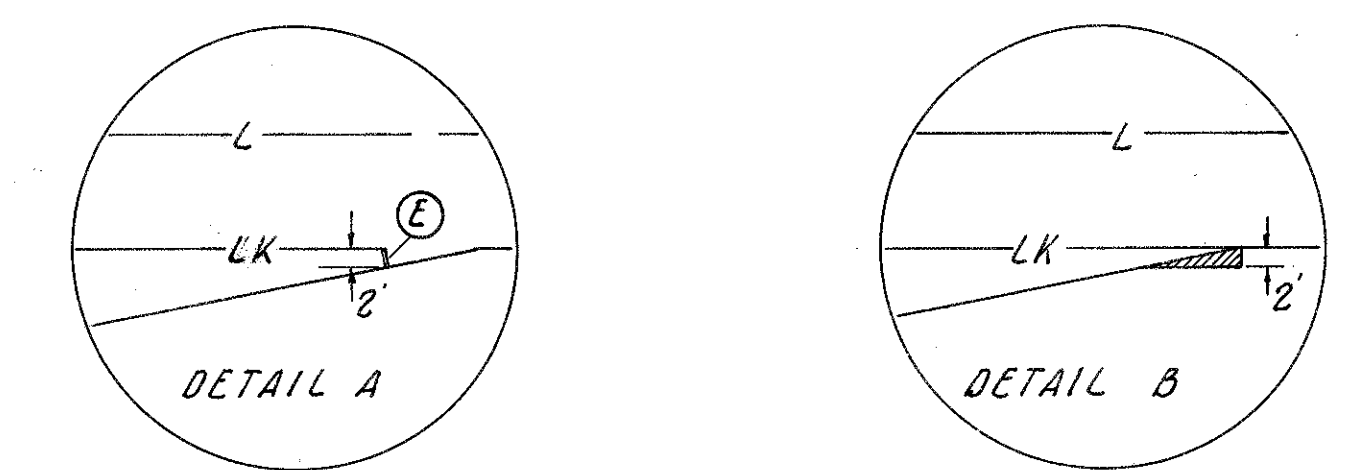
LEGEND

- Paved Shoulder With 6"-301
- Bituminous Treated Aggregate Shoulder
- End Taper Detail - See General Notes
- Item G/2 Concrete Median
- Item G/3 Traffic Dividers
- Paved Shoulder With 3"-301

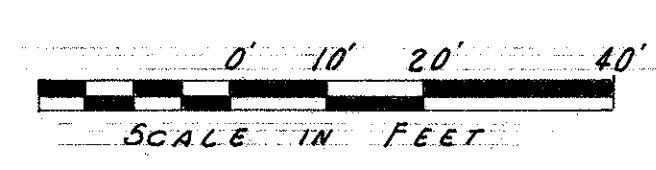
SUPERELEVATION TABLE RAMP "B"					
Max. Super 6° = 0.083 %/ft					
Sta.	Lt. Edge f Profile Grade	Rt. Edge	Sta.	Lt. Edge f Profile Grade	Rt. Edge
462+00	1011.23	1011.74	464+75	1005.08	1006.38
462+25	1010.75	1011.37	465+00	1004.49	1005.69
462+50	1010.24	1010.98	465+25	1003.90	1004.97
462+75	1009.72	1010.58	465+50	1003.31	1004.27
463+00	1009.17	1010.15	465+75	1002.72	1003.57
463+25	1008.61	1009.70	466+00	1002.13	1002.85
463+50	1008.03	1009.25	466+25	1001.54	1002.15
463+75	1007.44	1008.74	466+50	1000.97	1001.45
464+00	1006.85	1008.18	466+75	1000.45	1000.82
464+25	1006.26	1007.59	467+00	999.96	1000.26
464+50	1005.67	1007.00	467+25	999.53	999.78

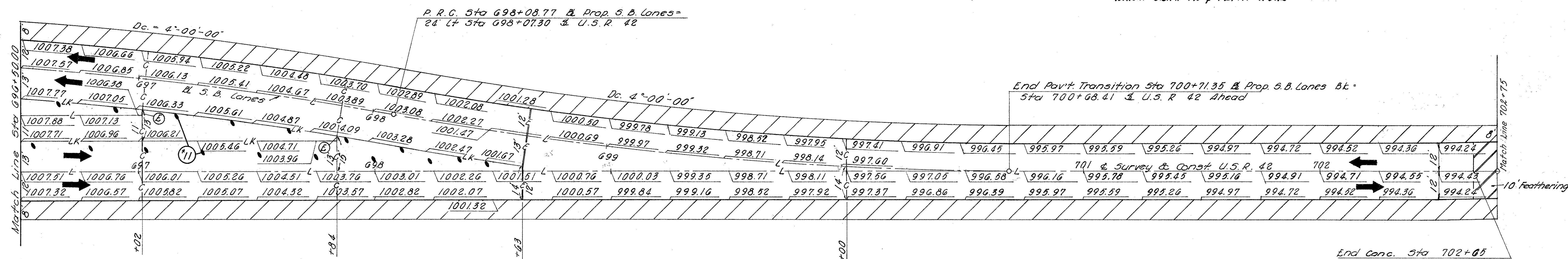
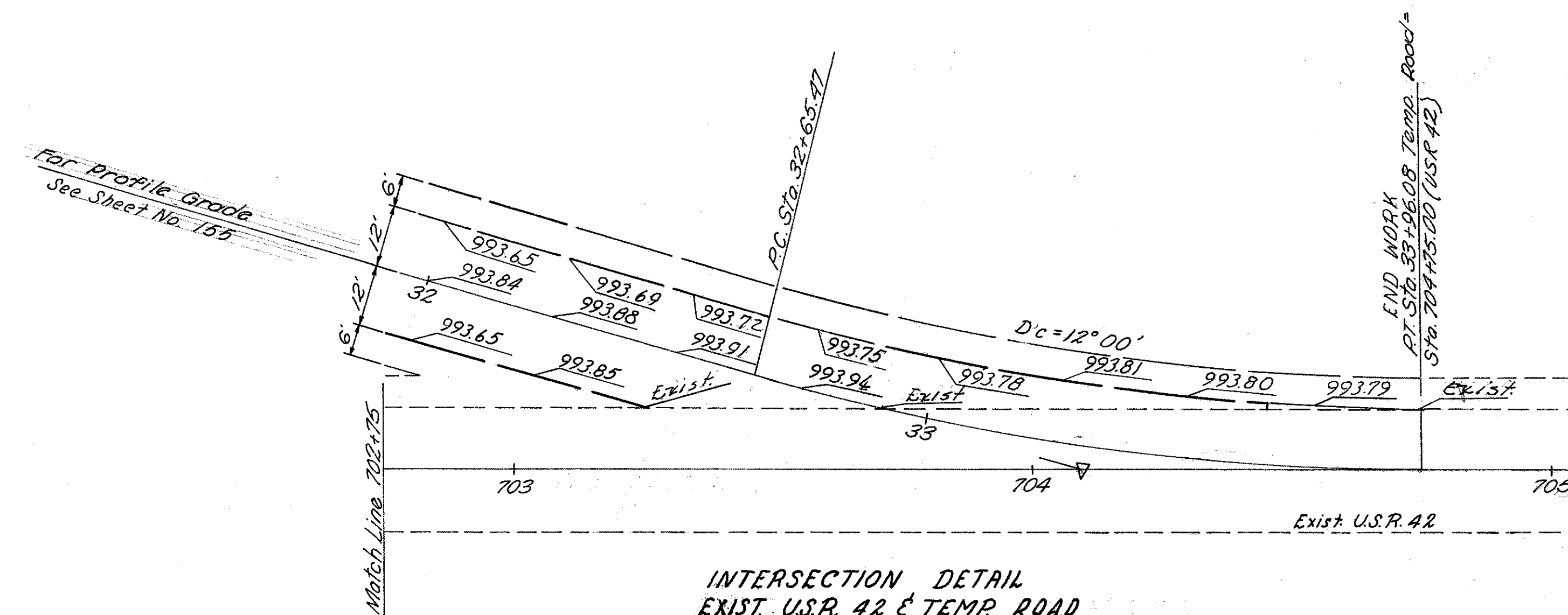
JOINT LEGEND

L-Standard Longitudinal Joint
LK-Key Joint Without Tiebars
E-Standard Expansion Joint
⊕ Expansion Joint Without Dowels



** Note; Contractor may use Joint Detail A or B at the end of Tapers. Quantities are Calculated and to be paid for as Detail "A"





*For quantities see Ramp "D" Pavement Detail
See Sheet No. 189

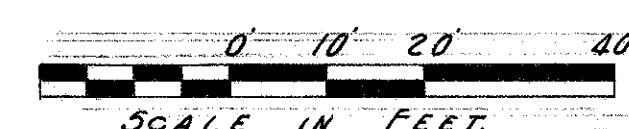
L-Standard Longitudinal Joint
LK-Key Joint Without Tiebars
C-Standard Contraction Joint
E-Standard Expansion Joint
⊕-Expansion Joint without dowels

LOCATION OF PRECAST CONCRETE TRAFFIC DIVIDERS

Station	Offset	Station	Offset
695+83.31	14'	695+75.52	14'
696+07.31	13'	695+99.52	14'
696+31.31	12'	696+23.52	14'
696+55.31	11'	696+47.52	14'
696+79.31	10'	696+71.52	14'
697+03.31	9'	696+95.52	14'
697+27.31	8'	697+19.52	14'
697+51.31	7'	697+43.52	14'
697+75.31	6'	697+67.52	14'
697+99.31	5'	697+91.52	14'
698+23.31	4'	698+15.52	14'
698+47.31	3'	698+39.52	14'
		698+51.52	14'

LEGEND

- Bituminous Treated Aggregate Shoulder
- Item 613 Traffic Dividers
- + Indicates that offset is to the center of divider



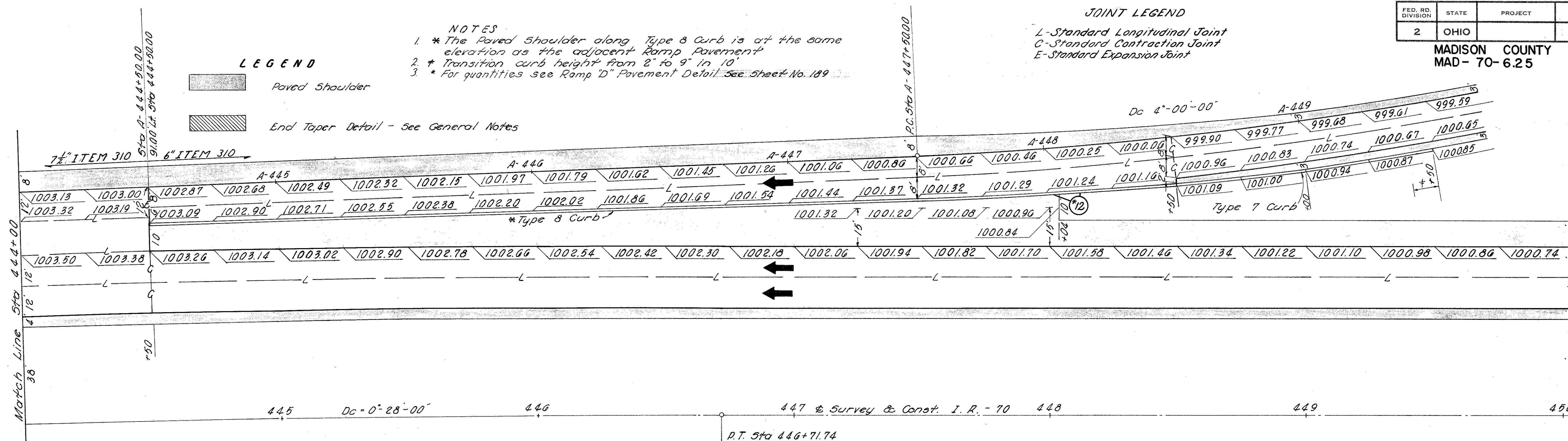
LEGEND

- Paved Shoulder
- End Taper Detail - See General Notes

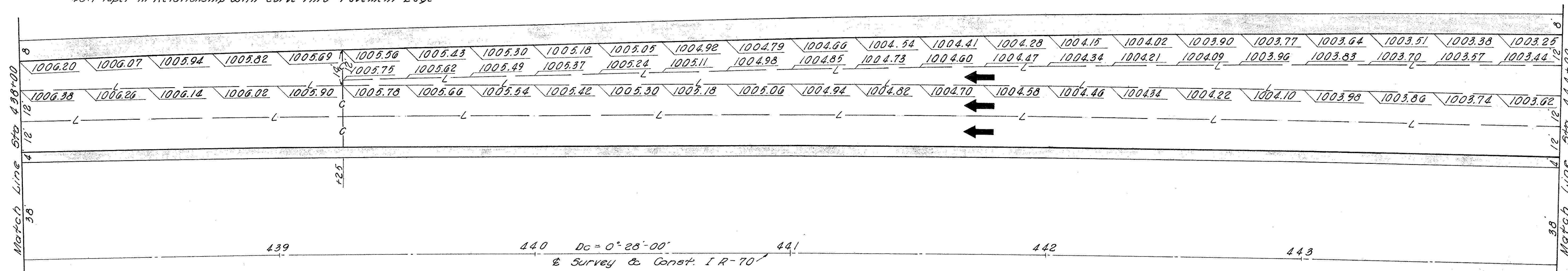
- NOTES
- * The Paved Shoulder along Type 8 Curb is at the same elevation as the adjacent Ramp Pavement
 - * Transition curb height from 8" to 9" in 10'
 - * For quantities see Ramp "D" Pavement Detail See Sheet No. 189

JOINT LEGEND

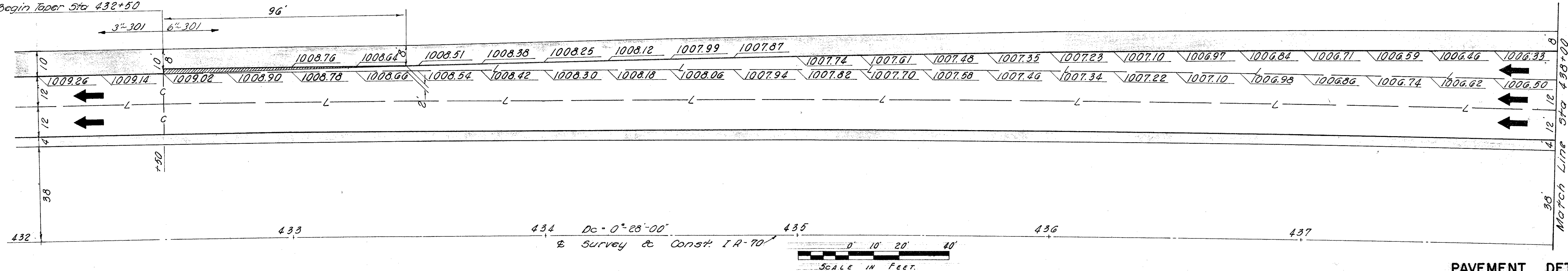
- L-Standard Longitudinal Joint
- C-Standard Contraction Joint
- E-Standard Expansion Joint



48:1 Taper in Relationship With Curve thru Pavement Edge



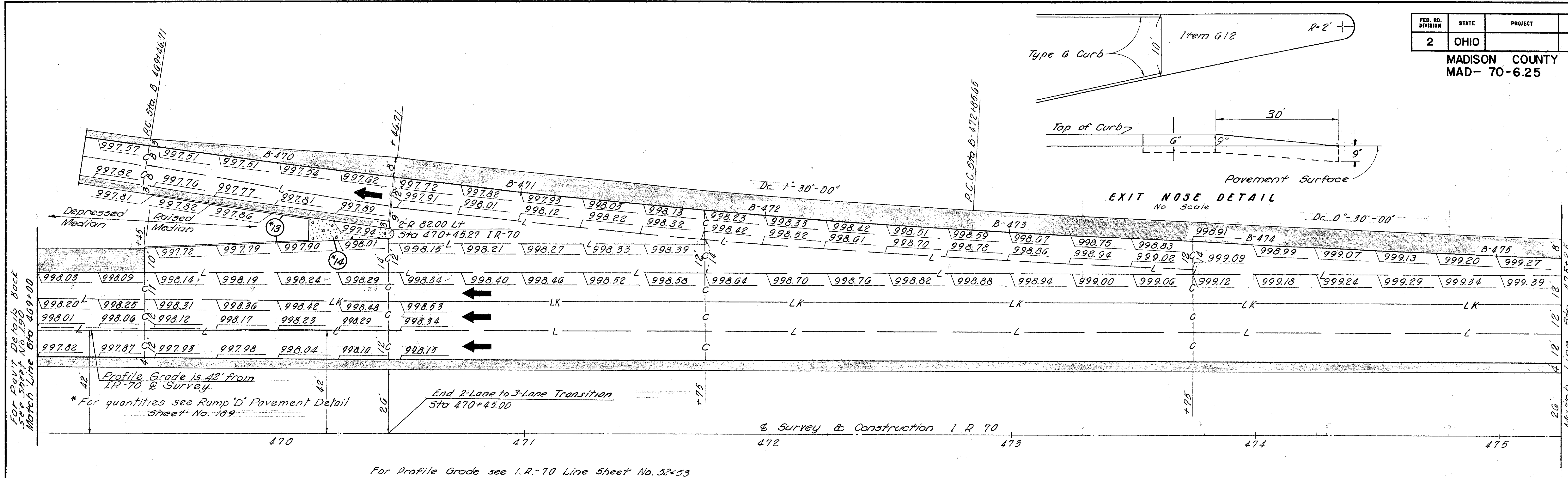
Begin Taper Sta 432+50



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2	OHIO	

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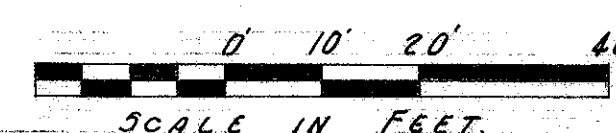
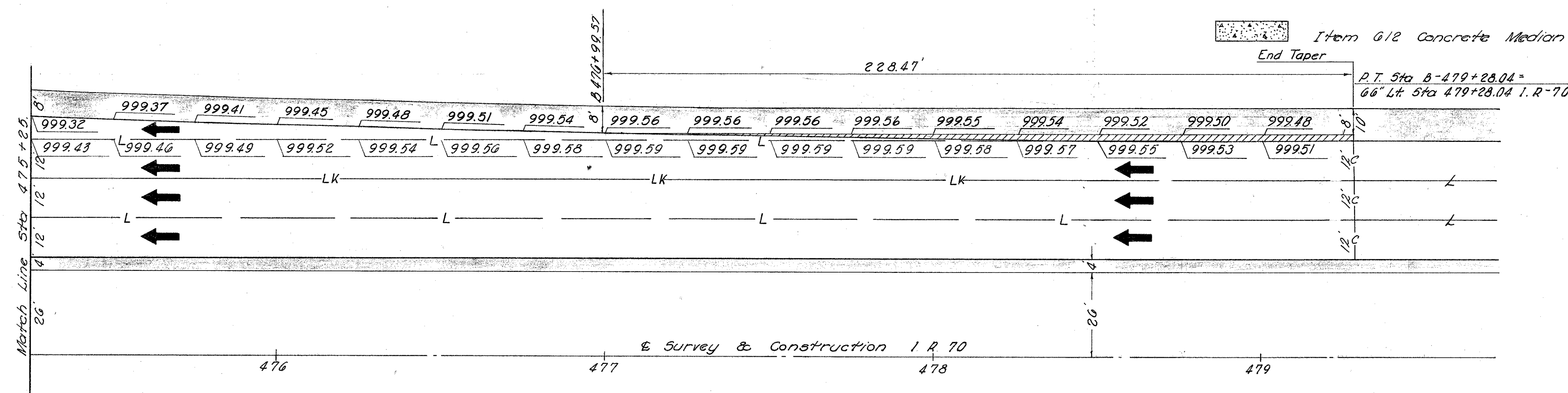


LEGEND

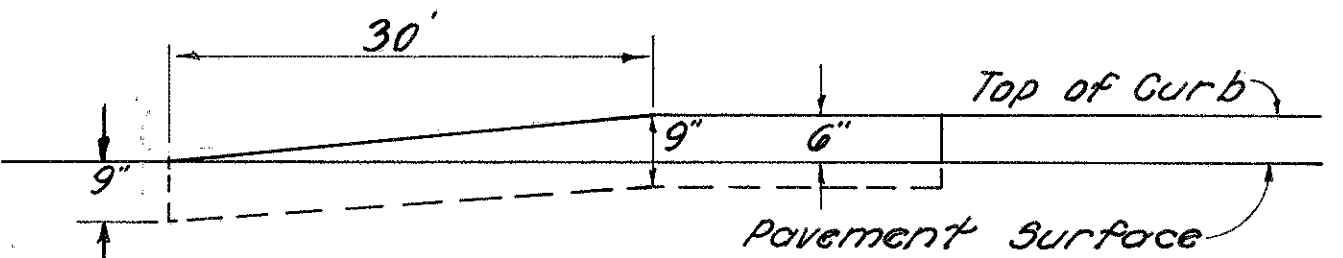
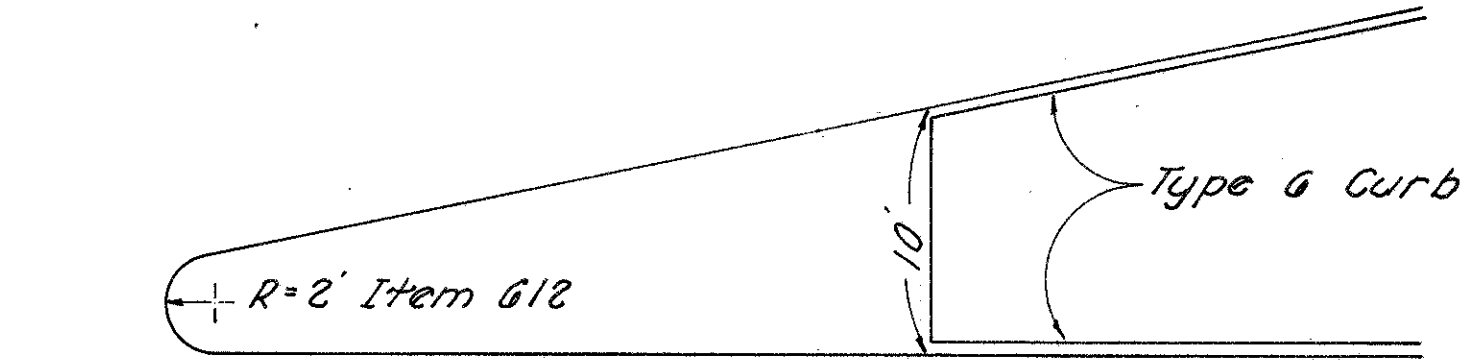
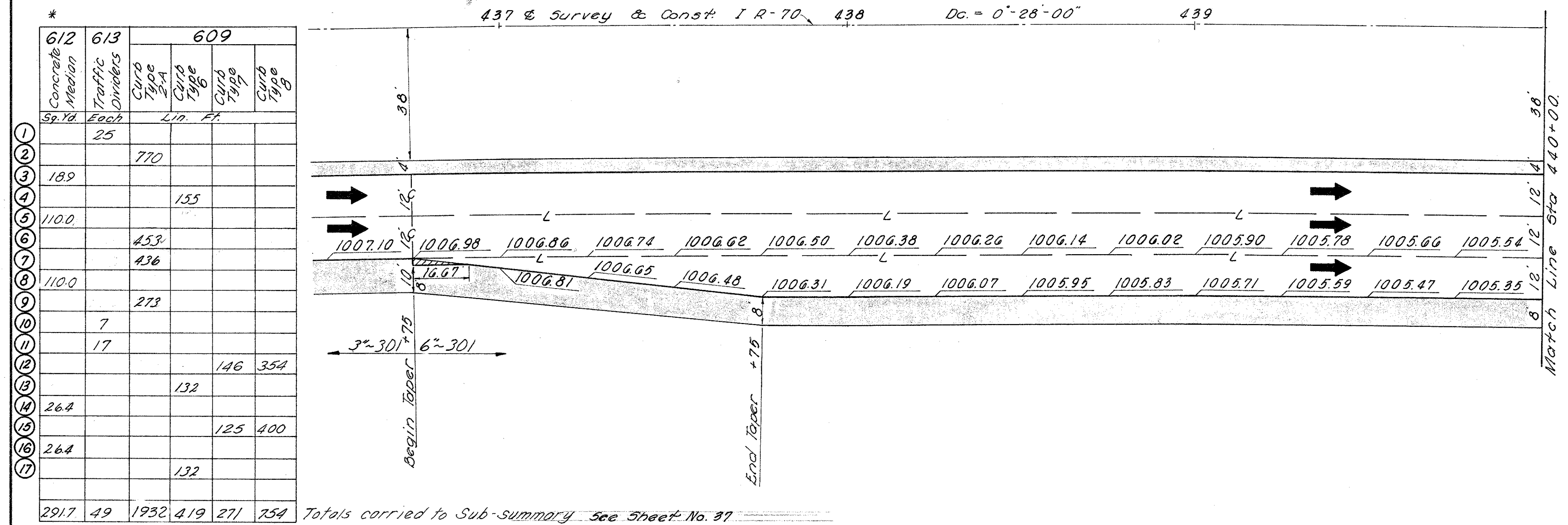
- Paved Shoulder
- End Taper Detail - See General Note
- Item G12 Concrete Median

JOINT LEGEND

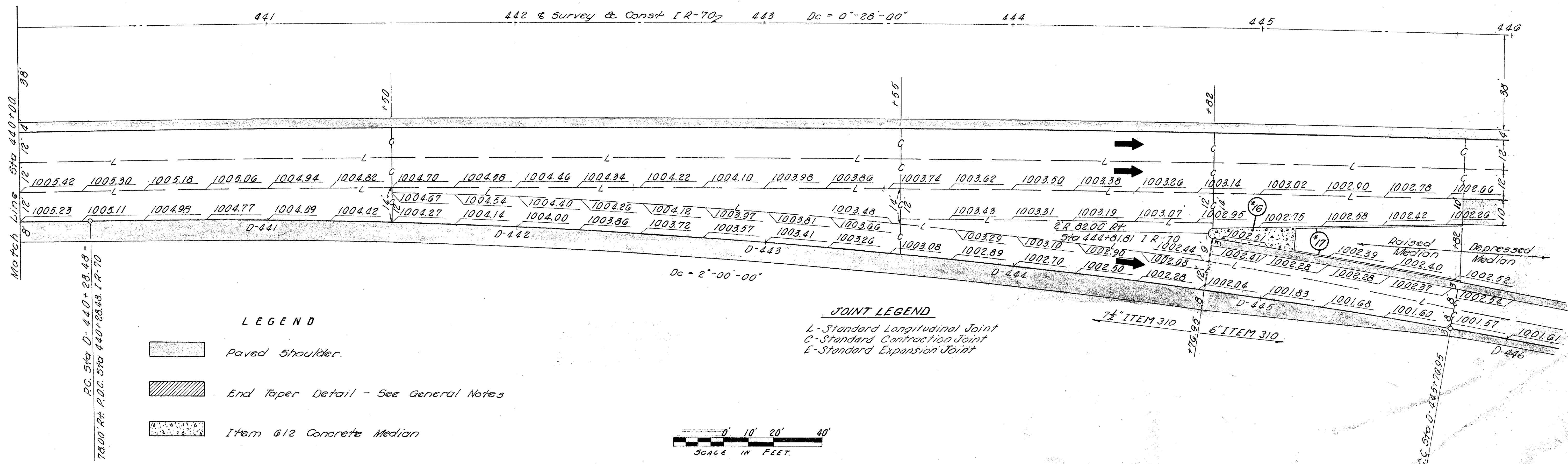
- L-Standard Longitudinal Joint
- LK-Key Joint Without Tiebars
- G-Standard Contraction Joint
- E-Standard Expansion Joint

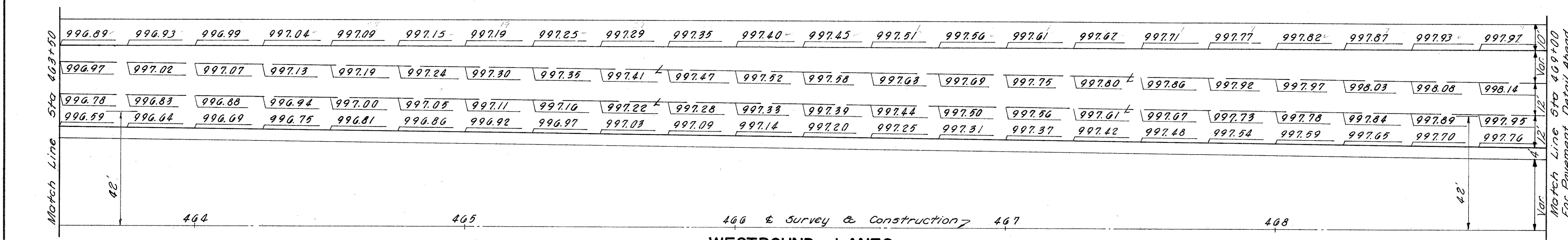
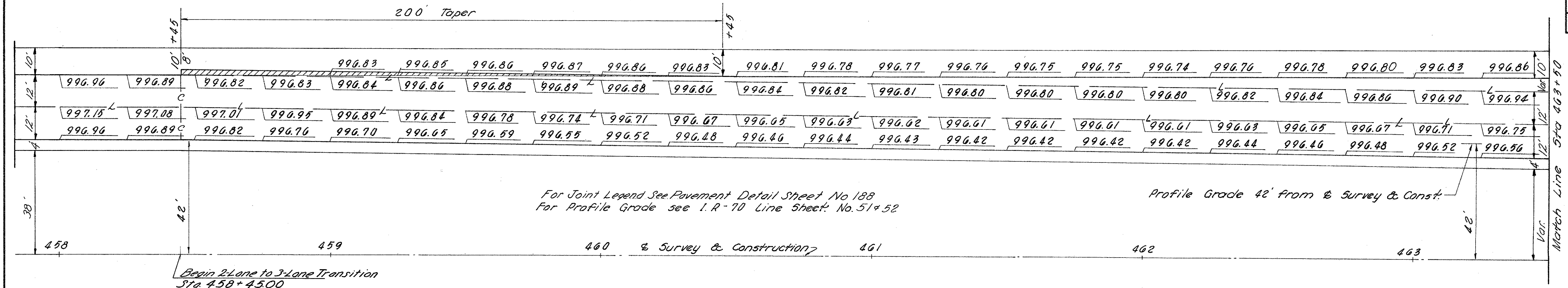


RAMP "C" USR-42

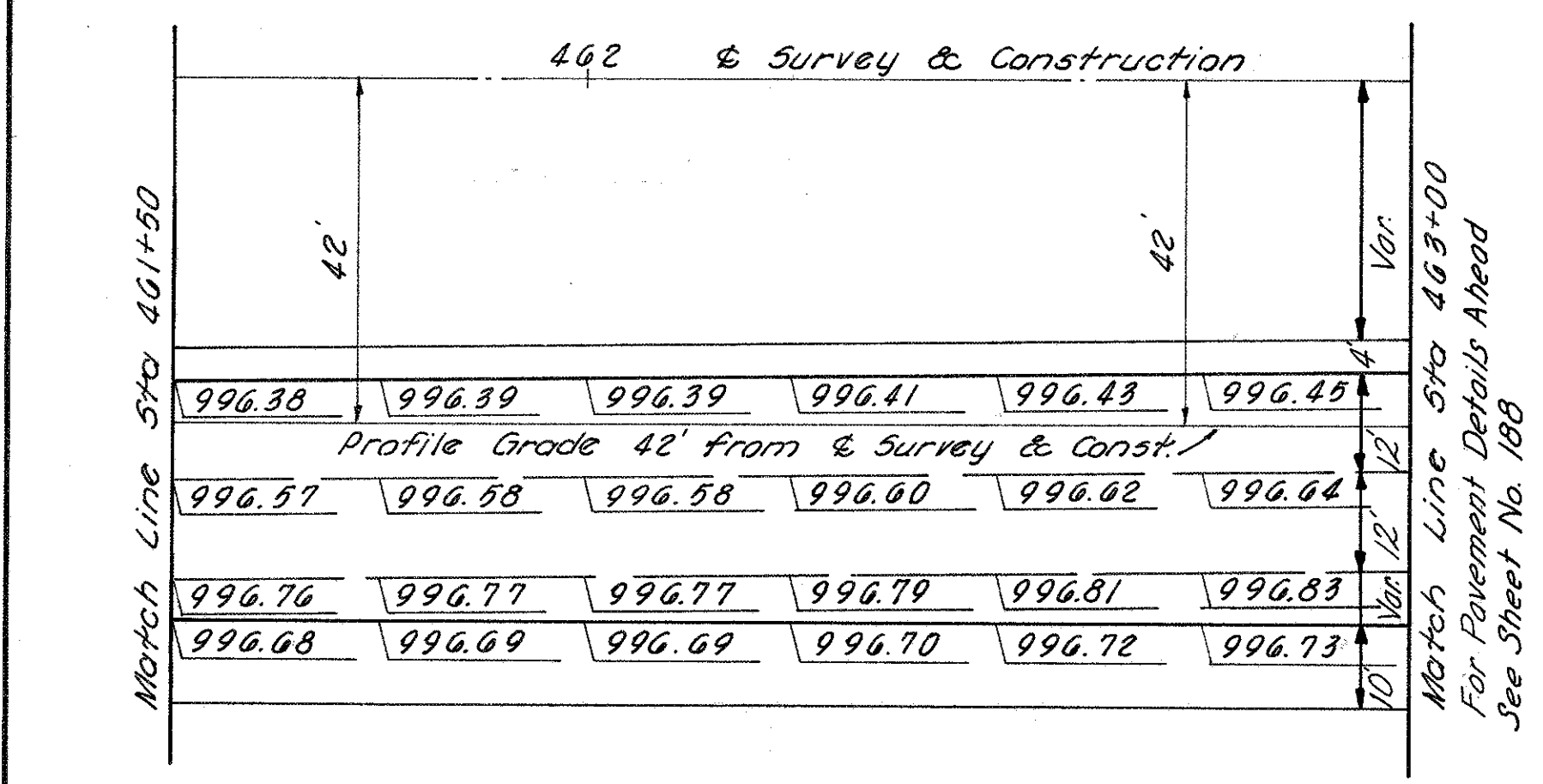
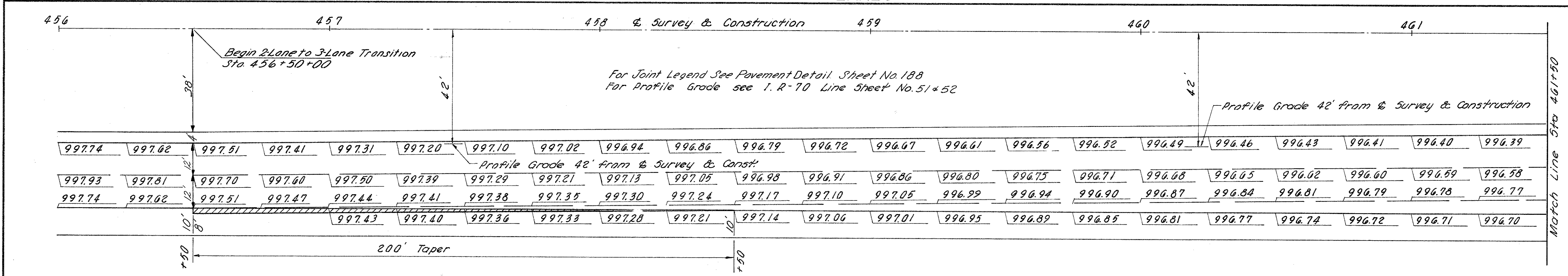


EXIT NOSE DETAIL
No Scale

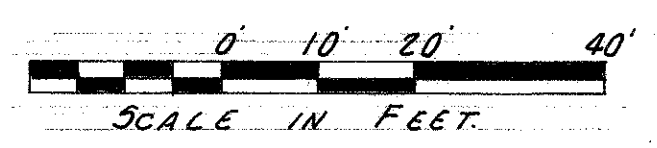




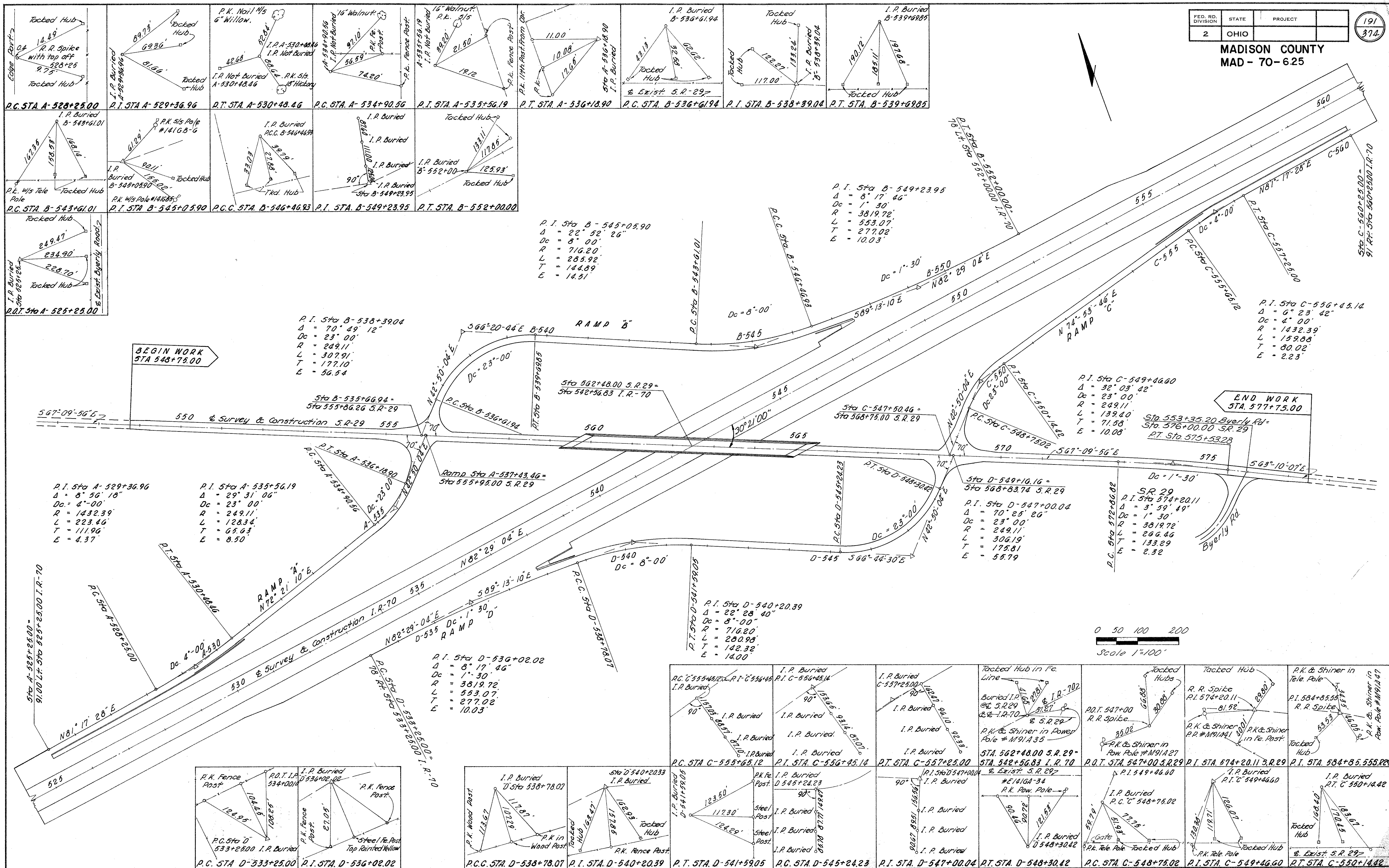
WESTBOUND LANES



EASTBOUND LANES



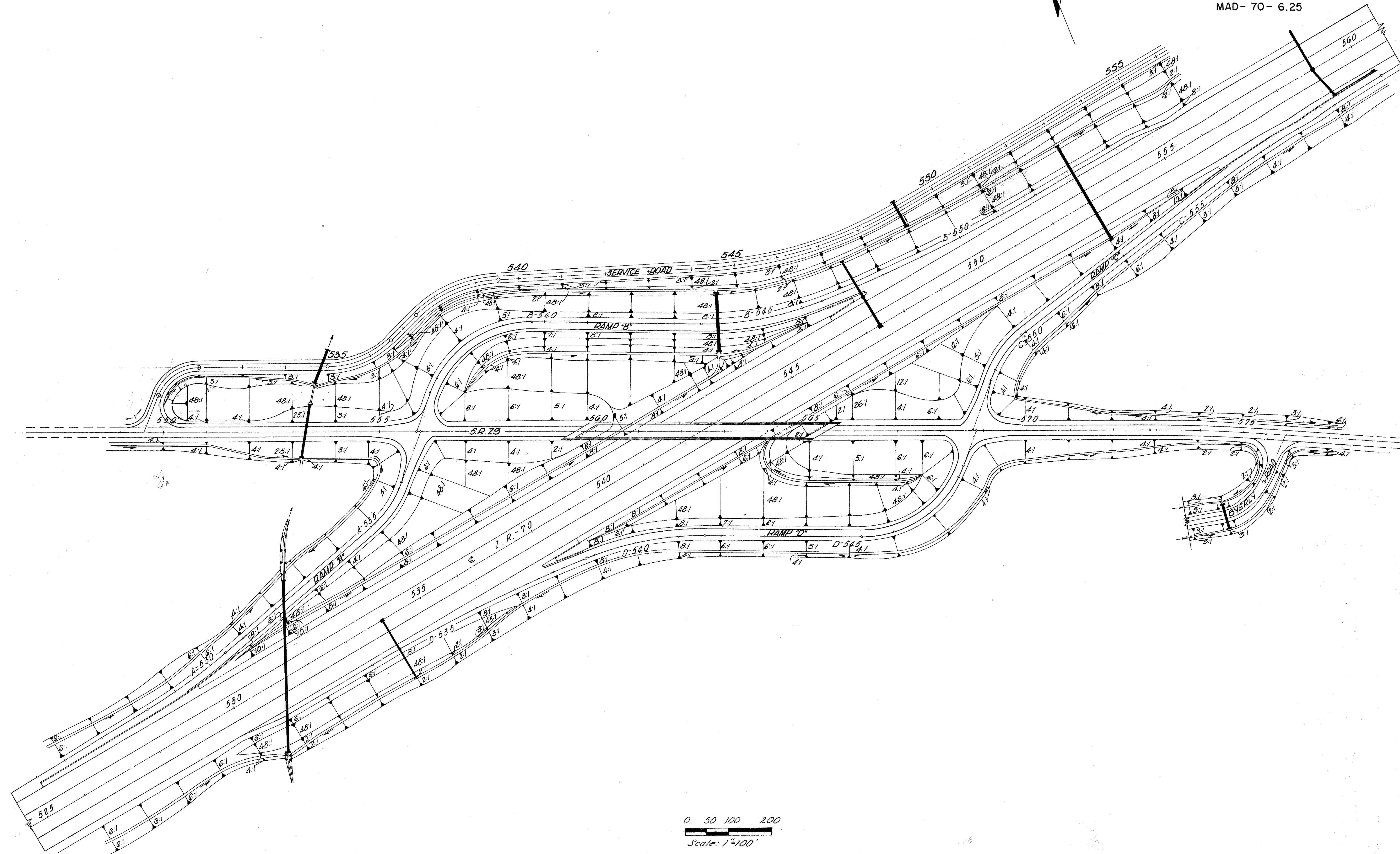
MADISON COUNTY
MAD - 70-625

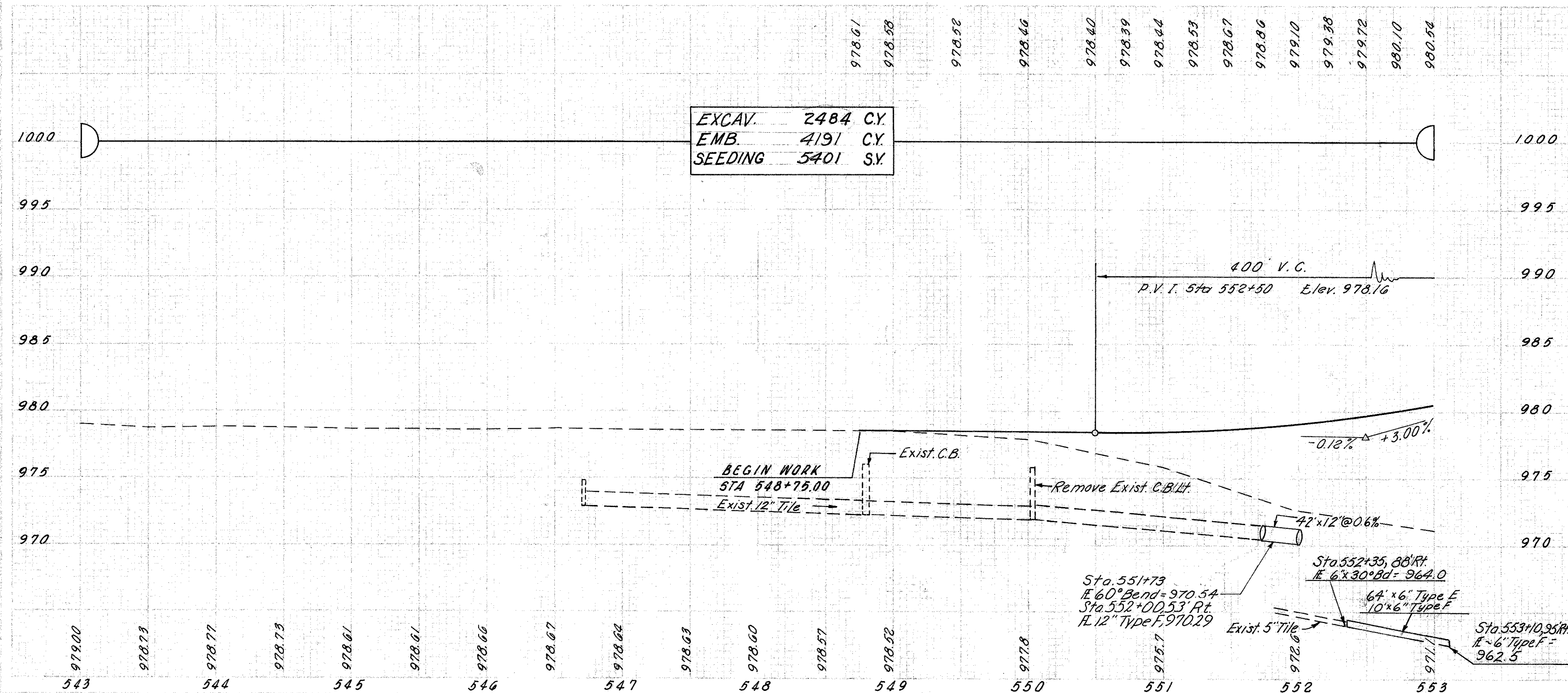
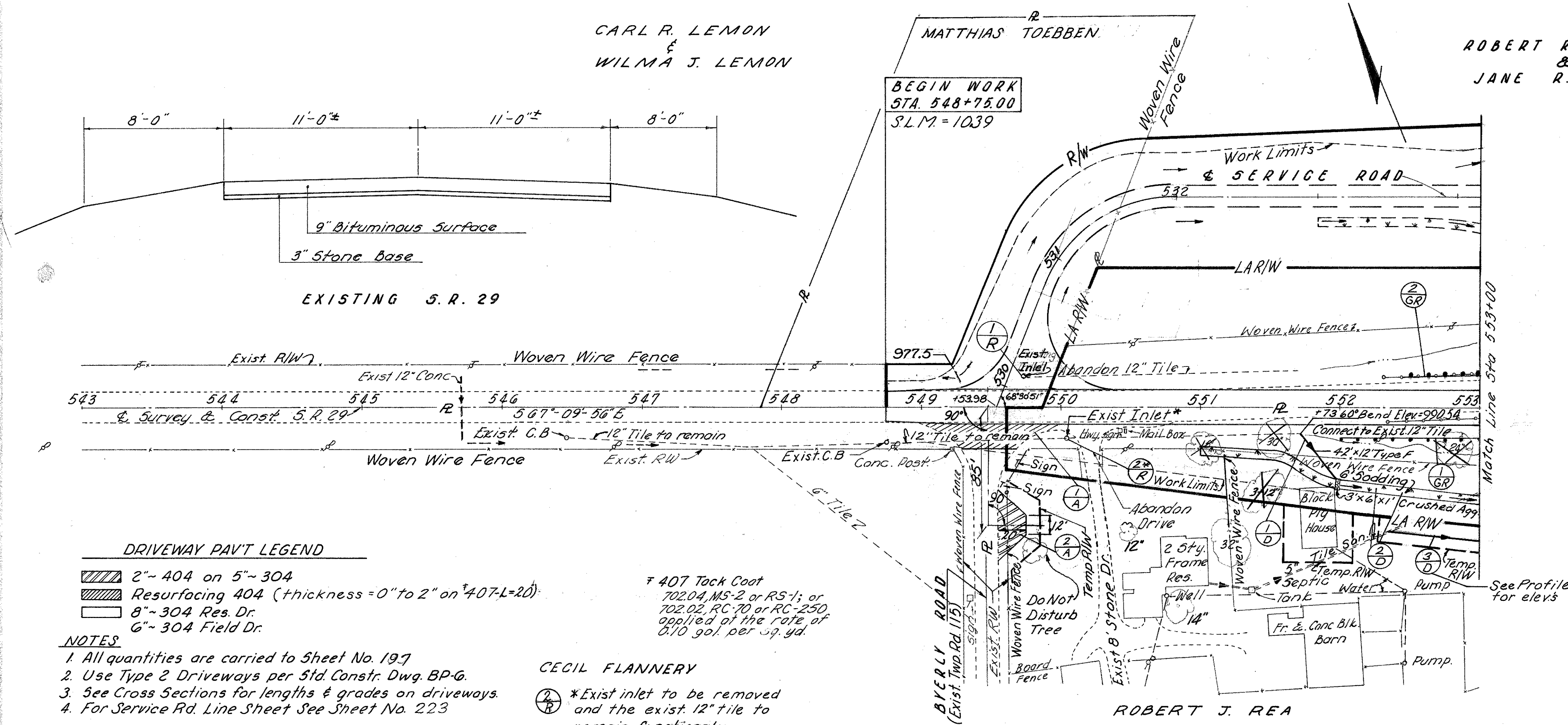


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

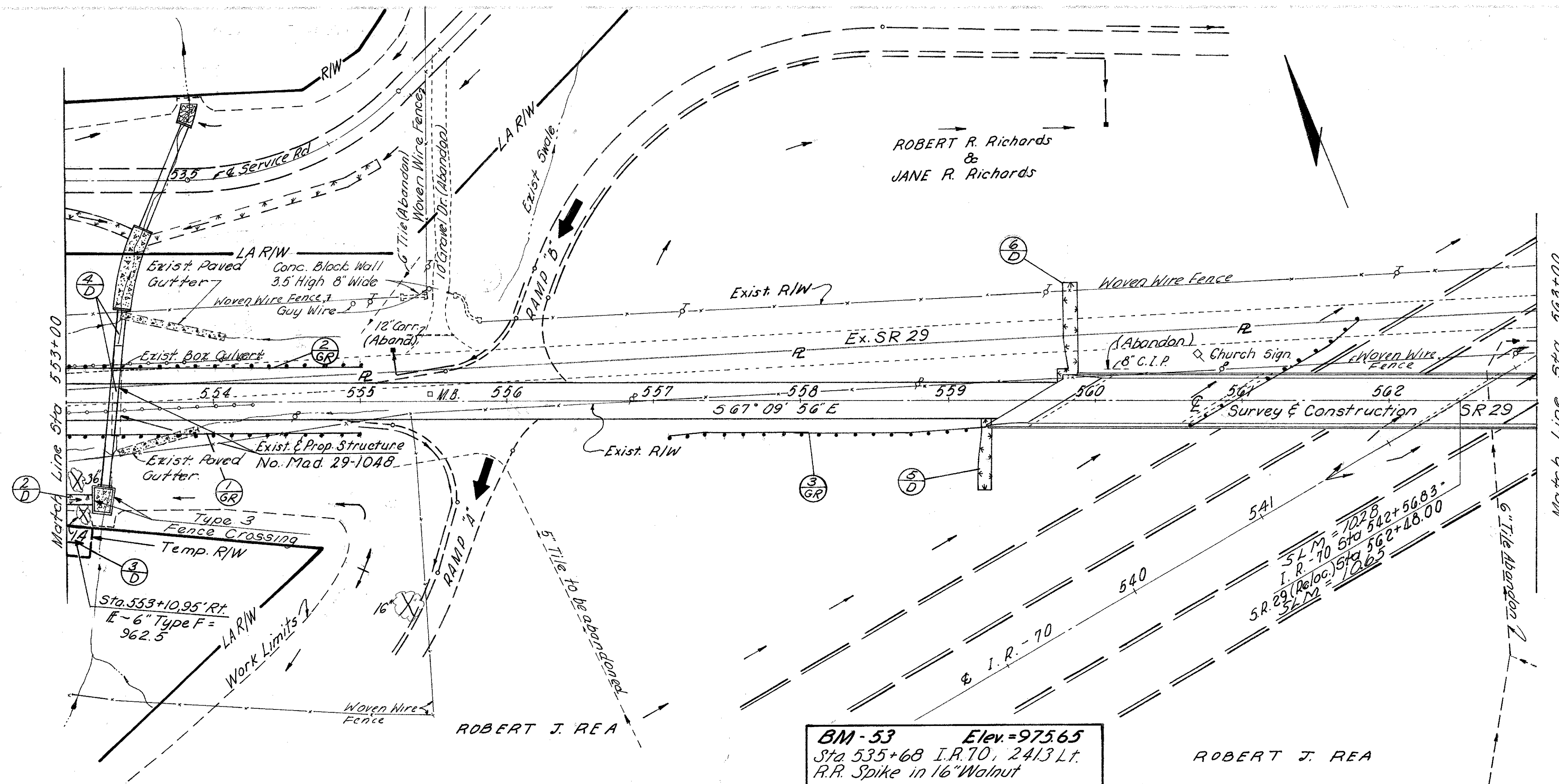
192
374

MADISON COUNTY
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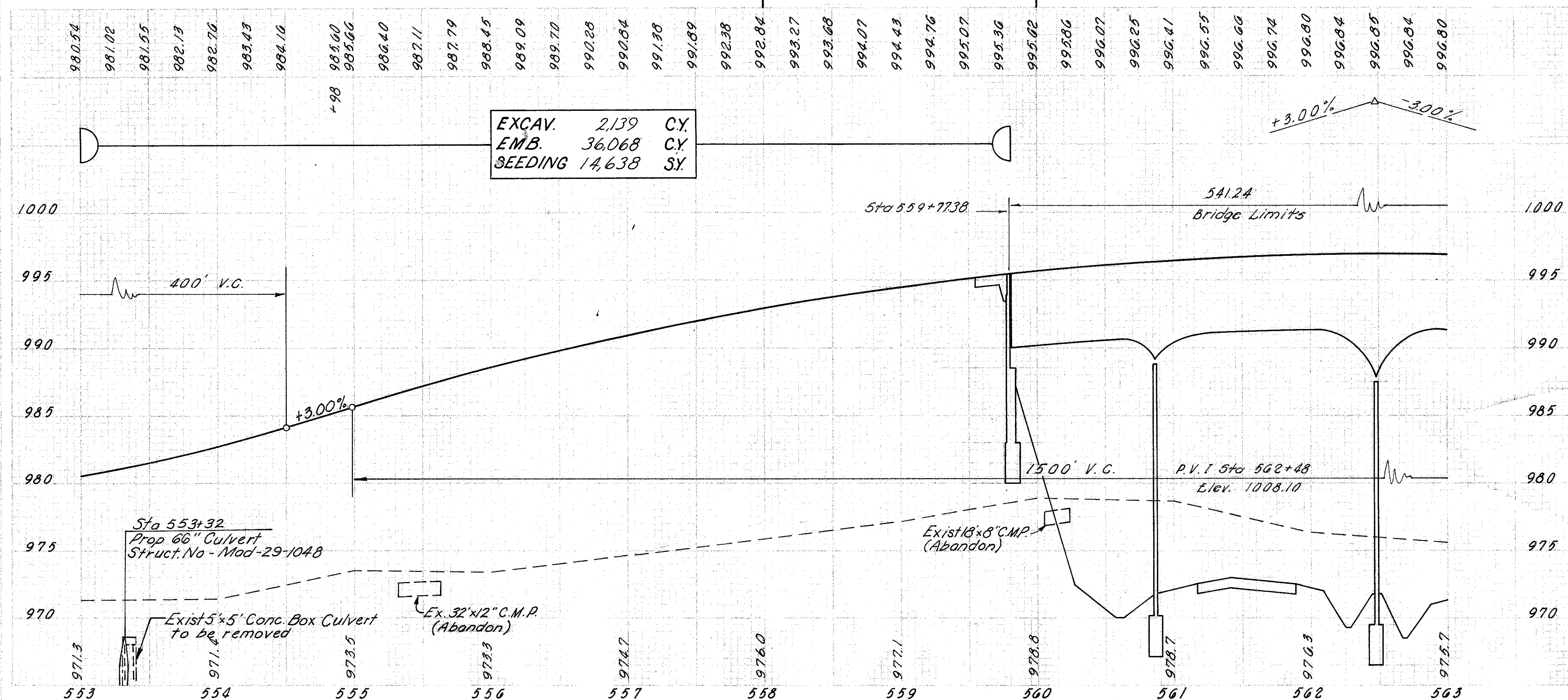
MADISON COUNTY
MAD- 70-625



NOTE:

1. For Ramp A See Sheet No. 206
2. For Ramp B See Sheet No. 207
3. For Service Road See Sheet No. 223
4. For I.R. 70 Line Sheet, See Sheet Nos. 59 & 60
5. For S.R. 29 Interchange Layout See Sheet No. 191

Quantities Carried to Sheet No. 197

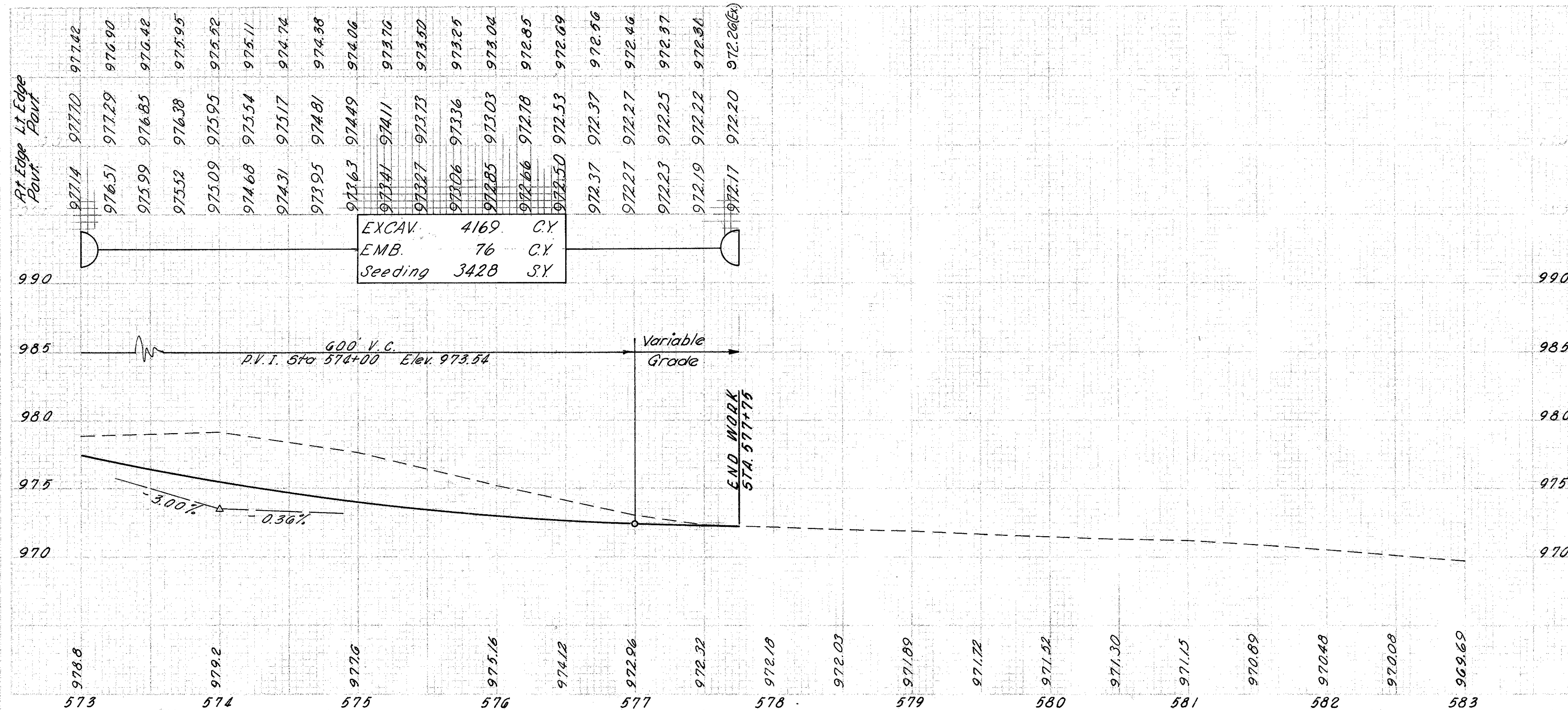
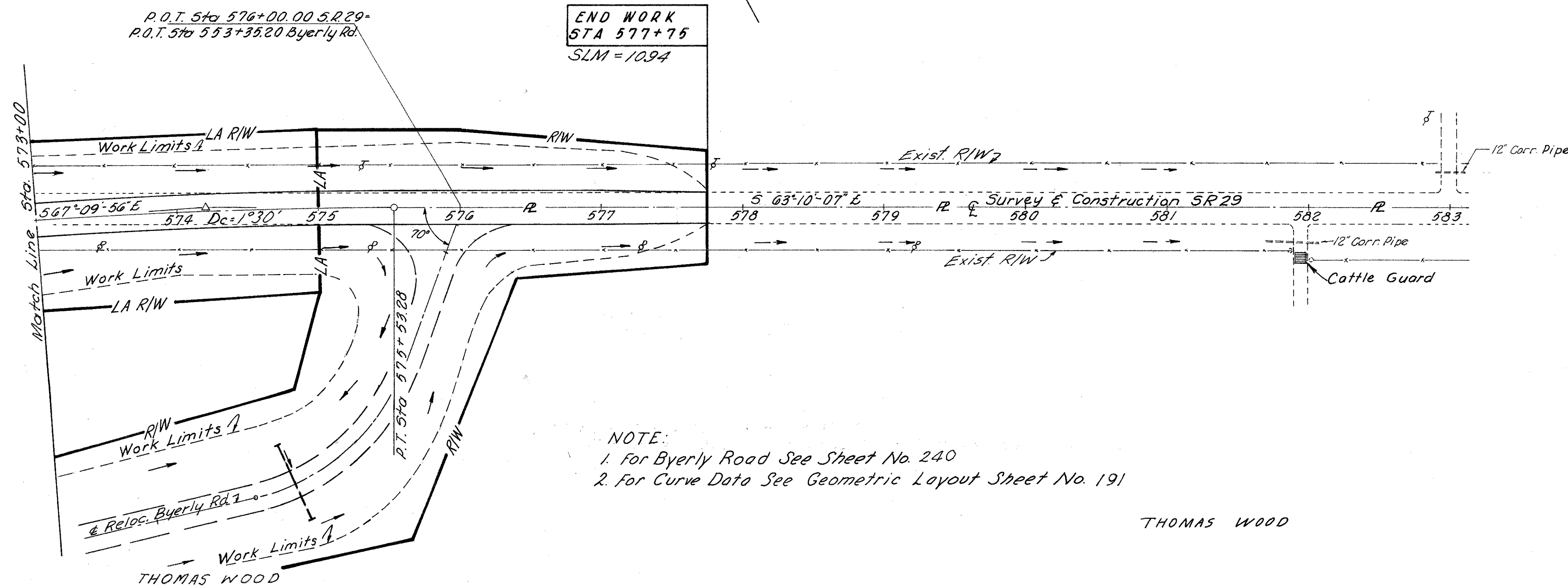


PROPOSED STRUCTURE

TYPE: Continuous Haunched Steel Girder Bridge
With Reinforced Conc. Deck & Substructure.
SPANS: 104'-10"; 161'-4"; 161'-4"; 104'-10" 96 Brgs.
ROADWAY: 30'-0" w/ 2'-0" Safety Curbs
LOAD FREQUENCY: C.F. 400 (57)
WEARING SURFACE: 1" Monolithic Conc.
SKEW: 59° 39' 00" L.F.
APPROACH SLAB: A5-1-54 Mod. (25'-0" Long)
ALIGNMENT: Tangent
SUPERELEVATION: None
AVERAGE DAILY TRAFFIC: 5,040 (1988)

Quantities Carried to Sheet No. 197



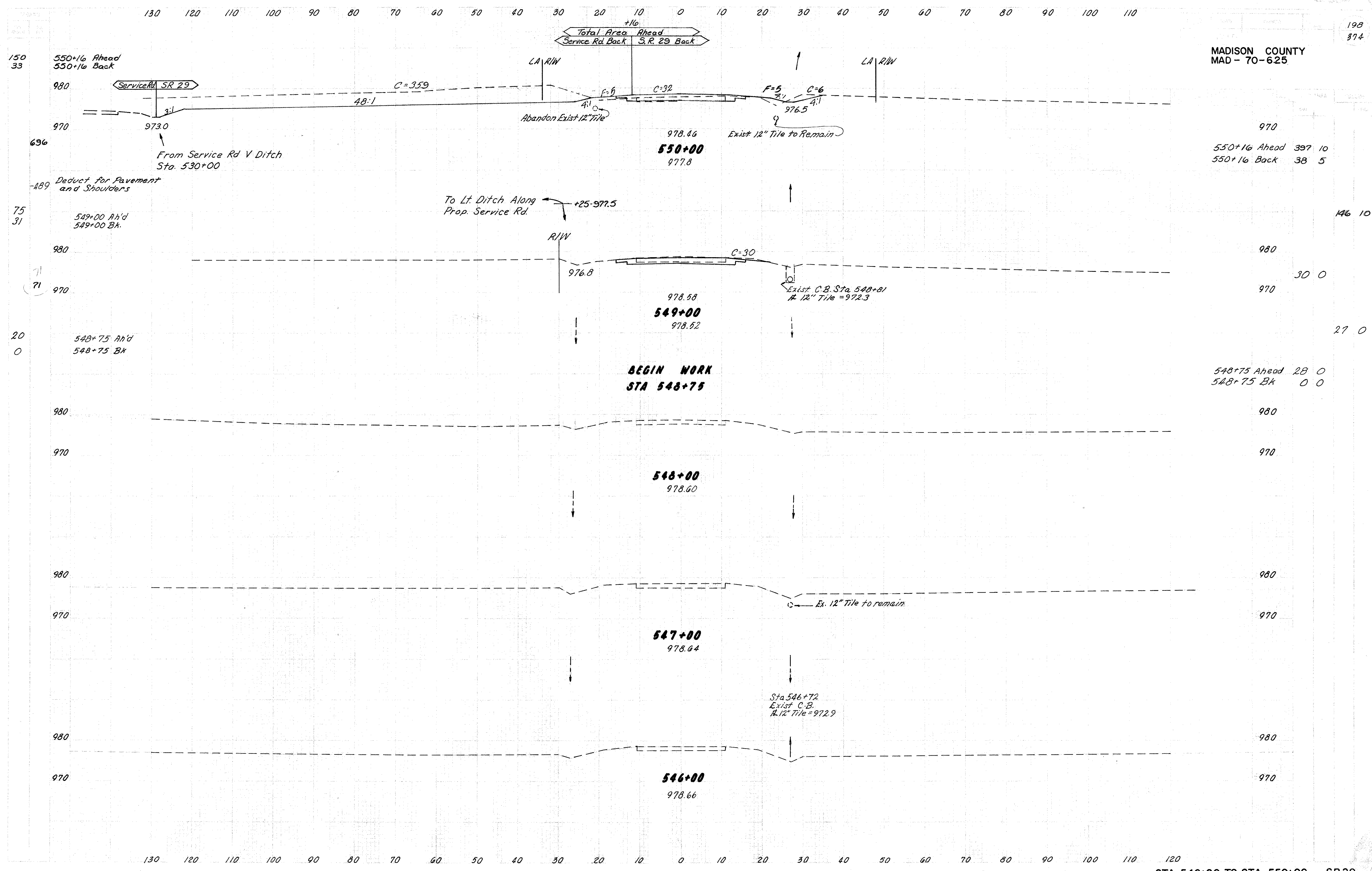


REF.	STATION TO STATION	SIDE	202 DROP INLET REMOVED	304 AGG. BASE	404 ASPHALT CONC.	407 TACK COAT	606 GUARD RAIL TYPE 4
1-R	549+73	Lt	Each	Cu Yds	Cu Yds	Gal.	Lin. Ft.
2-R	550+04	Rt	1				
3-R	564+30		1				
1-GR	552+00 to 555+00	Rt					300
2-GR	552+50 to 555+00	Lt					250
3-GR	557+04.08 to 559+16.58	Rt					212.5
4-GR	565+79.42 to 567+91.92	Lt					212.5
1-A	549+00 to 550+00	Rt			4.5	14	
2-A	549+54 to 549+74	Rt		10	4.1		
			3	10	8.6	14	975

** Special berm & Slope Protection

REF.	STATION TO STATION	SIDE	FOR DETAILS SEE SHEET NO.	* 706.02 C.I. II 601 Riprap Sq. Yds	602 Crush Agg. Cu. Yds	* 66" TYPE "A" W/C I B BEDDING Lin. Ft.	603 TYPE "F" TYPE "F" Lin. Ft.	604 TYPE "F" TYPE "F" Lin. Ft.	605 TYPE "F" TYPE "F" Lin. Ft.	606 SOODING SY.	607 SOODING SY.	608 202 EX. STRUCT. REMOVED BRANCHES Lump
1-D	551+73 to 552+00	Rt	199	2		42						1
2-D	551+00 to 553+20	Rt								147		1
3-D	552+35 to 553+10	Rt	199				64	10				
4-D	553+32	Lt	265	811	4.26	130				241		Lump
5-D	559+25	Rt										
6-D	559+86	Lt										
7-D	565+15	Rt										
8-D	565+80	Lt										
				81.1	2	4.26	130	42	64	10	171.1	241.0 Lump

Totals carried to Sheet No. 37



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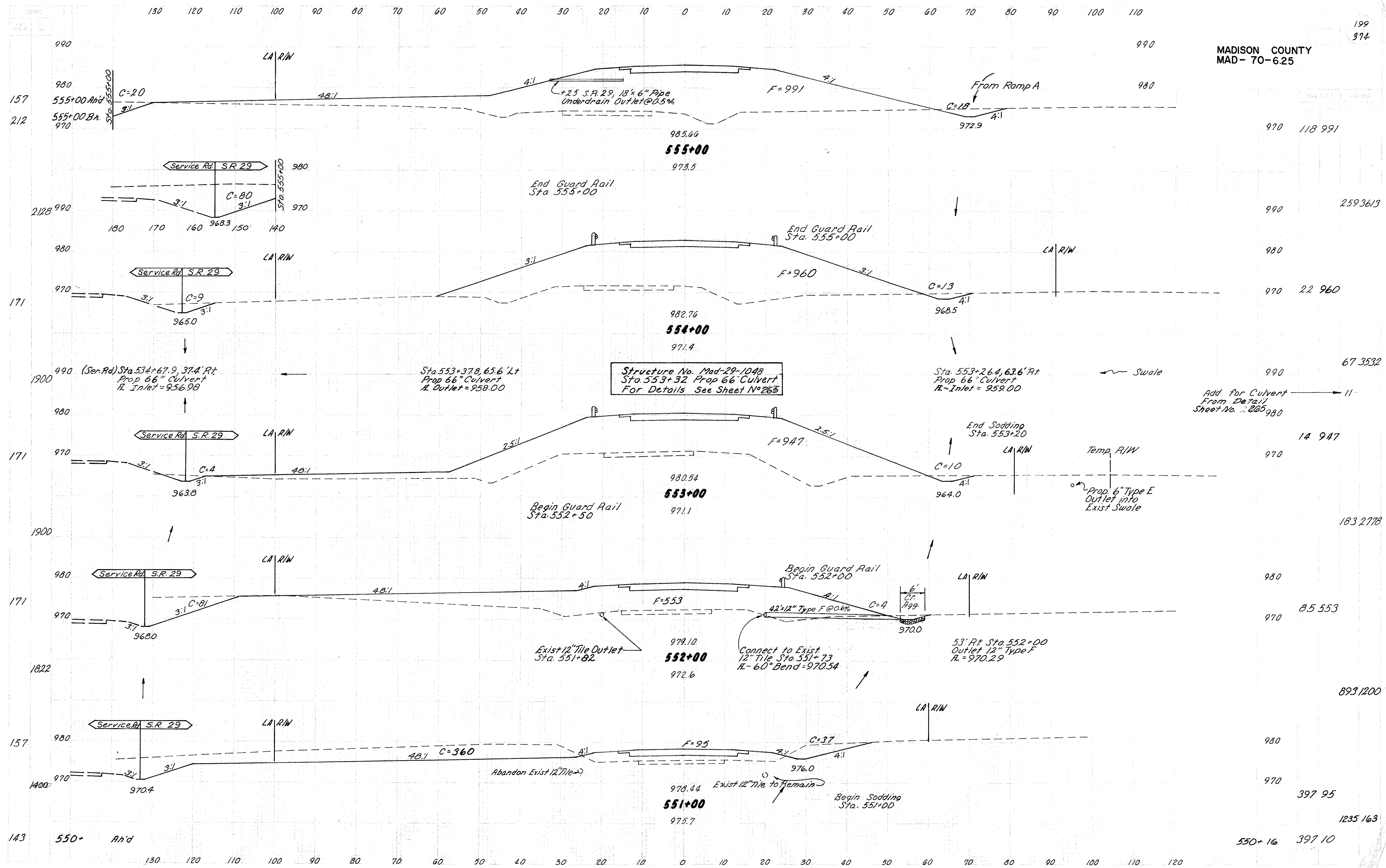
550+16 Ahead 397 10
550+16 Back 38 5

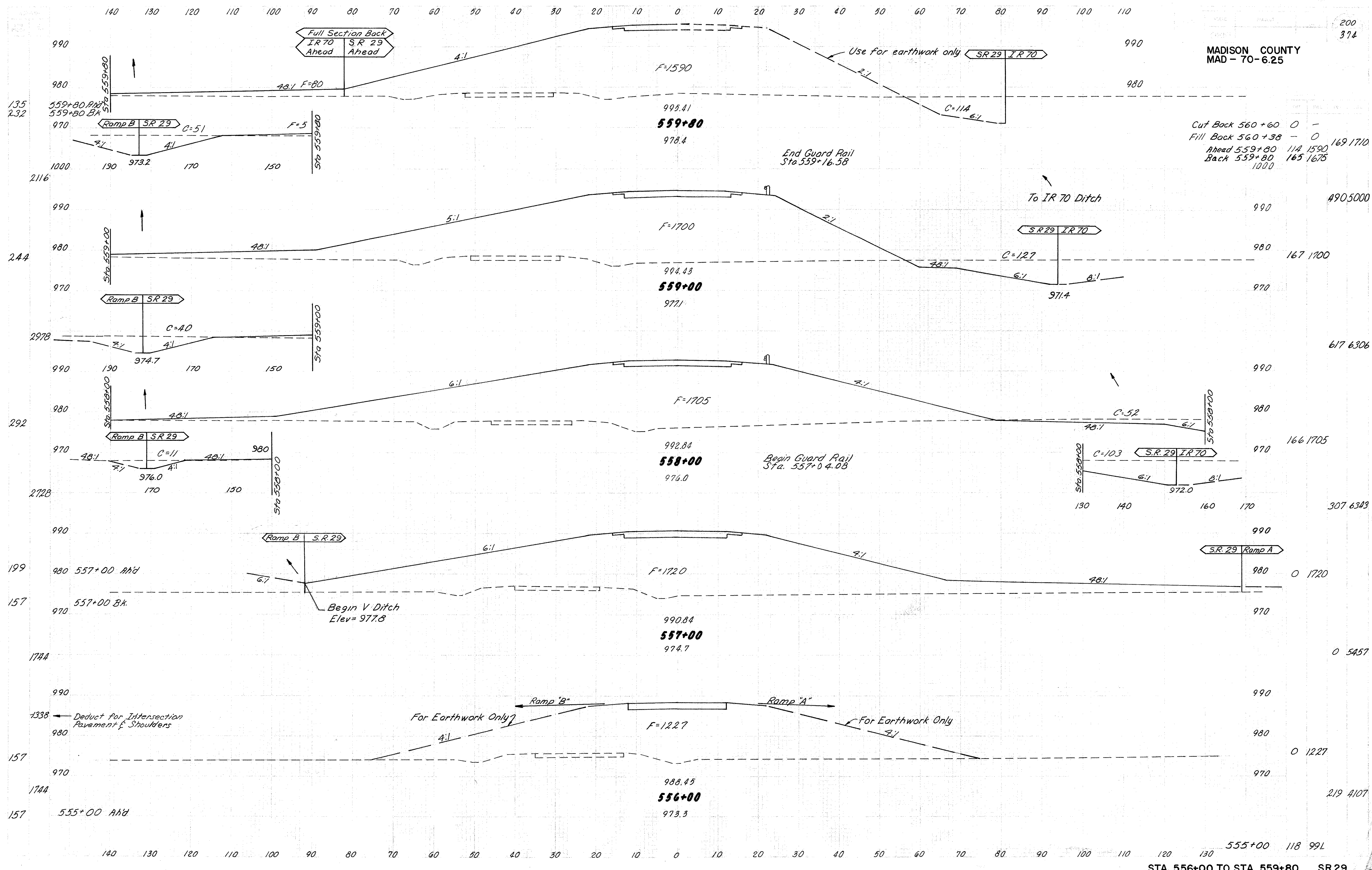
146 10

30 0

27 0

548+75 Ahead 28 0
548+75 Back 0 0





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Cut Back 560+60	0	-
Fill Back 560+38	-	0
Ahead 559+80	114	1590
Back 559+80	165	1675
	1000	

200
374

4905000

617 6306

166 1705

307 6343

0 1720

0 5457

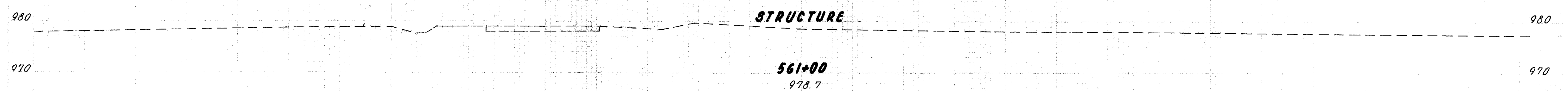
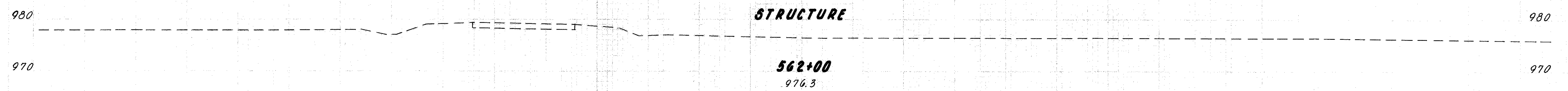
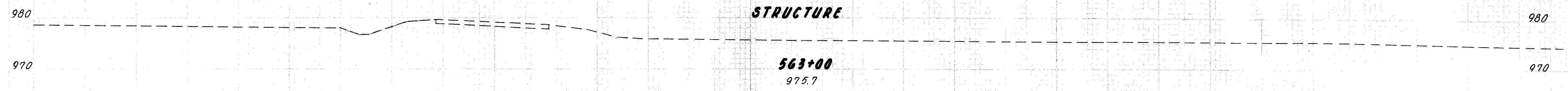
0 1227

219 4107

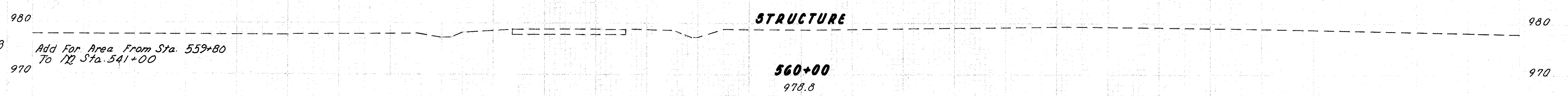
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

201
374

MADISON COUNTY
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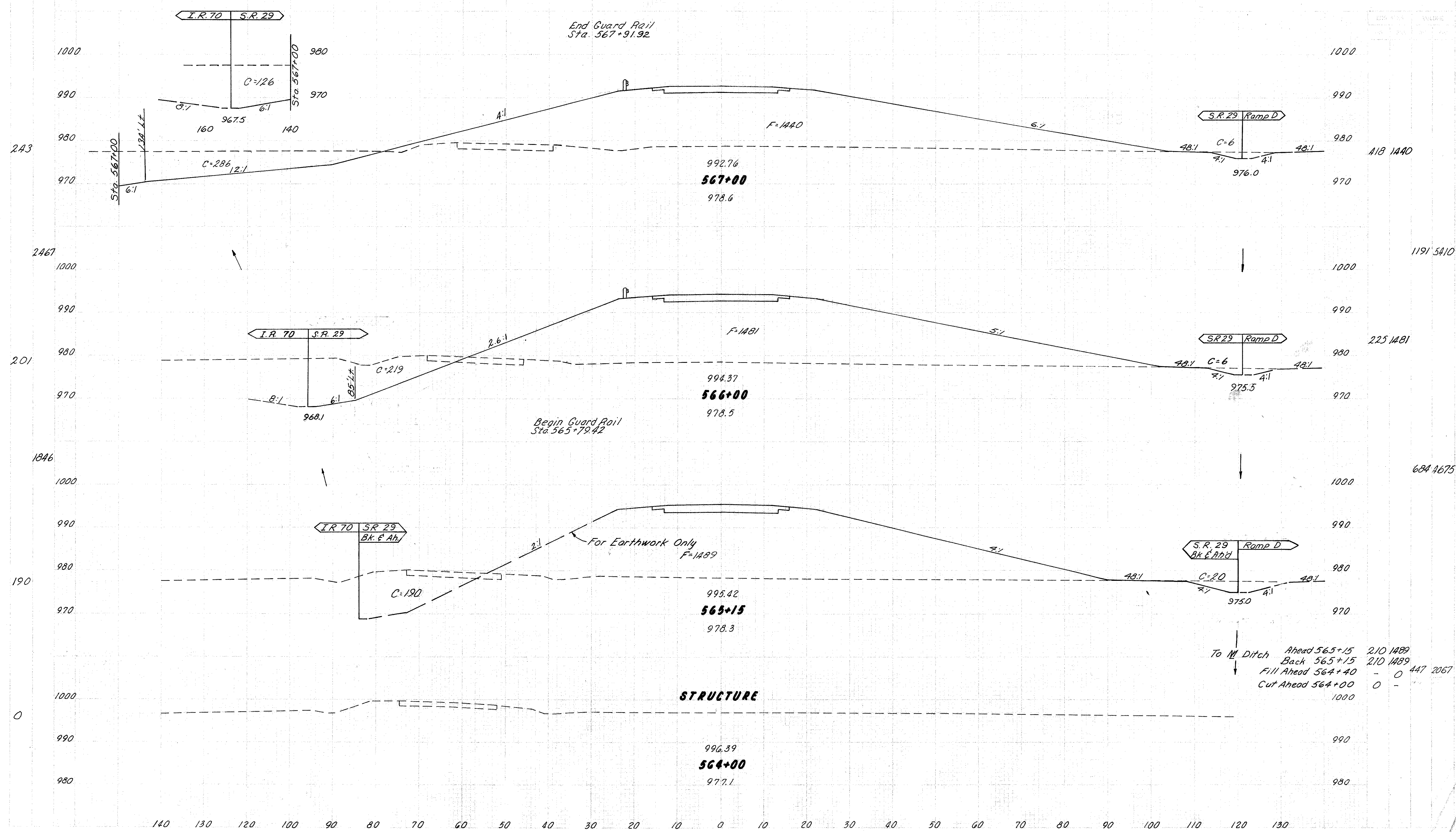


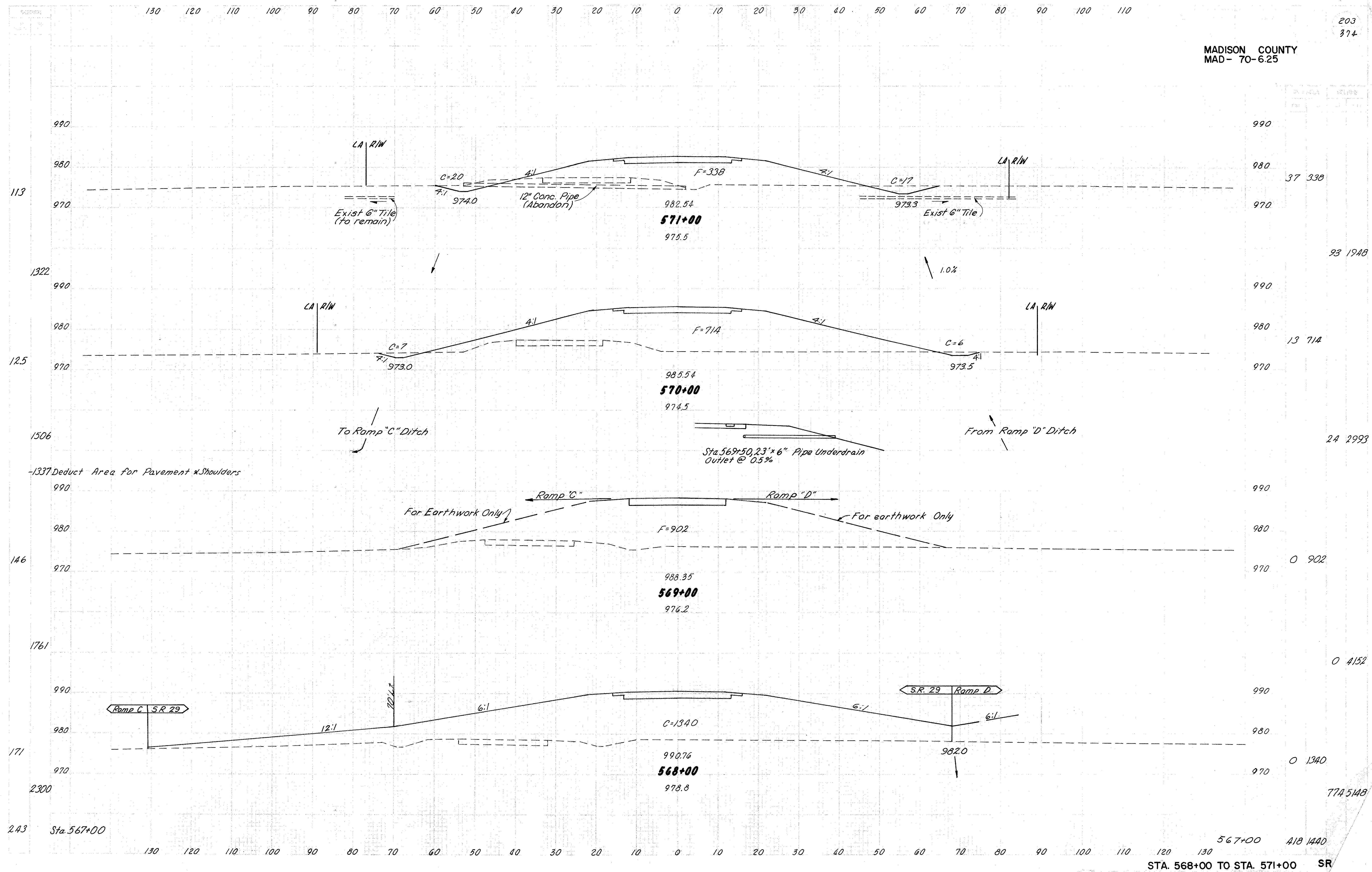
Sta. 560+65
Add For Area From Sta. 559+80
To Sta. 561+00

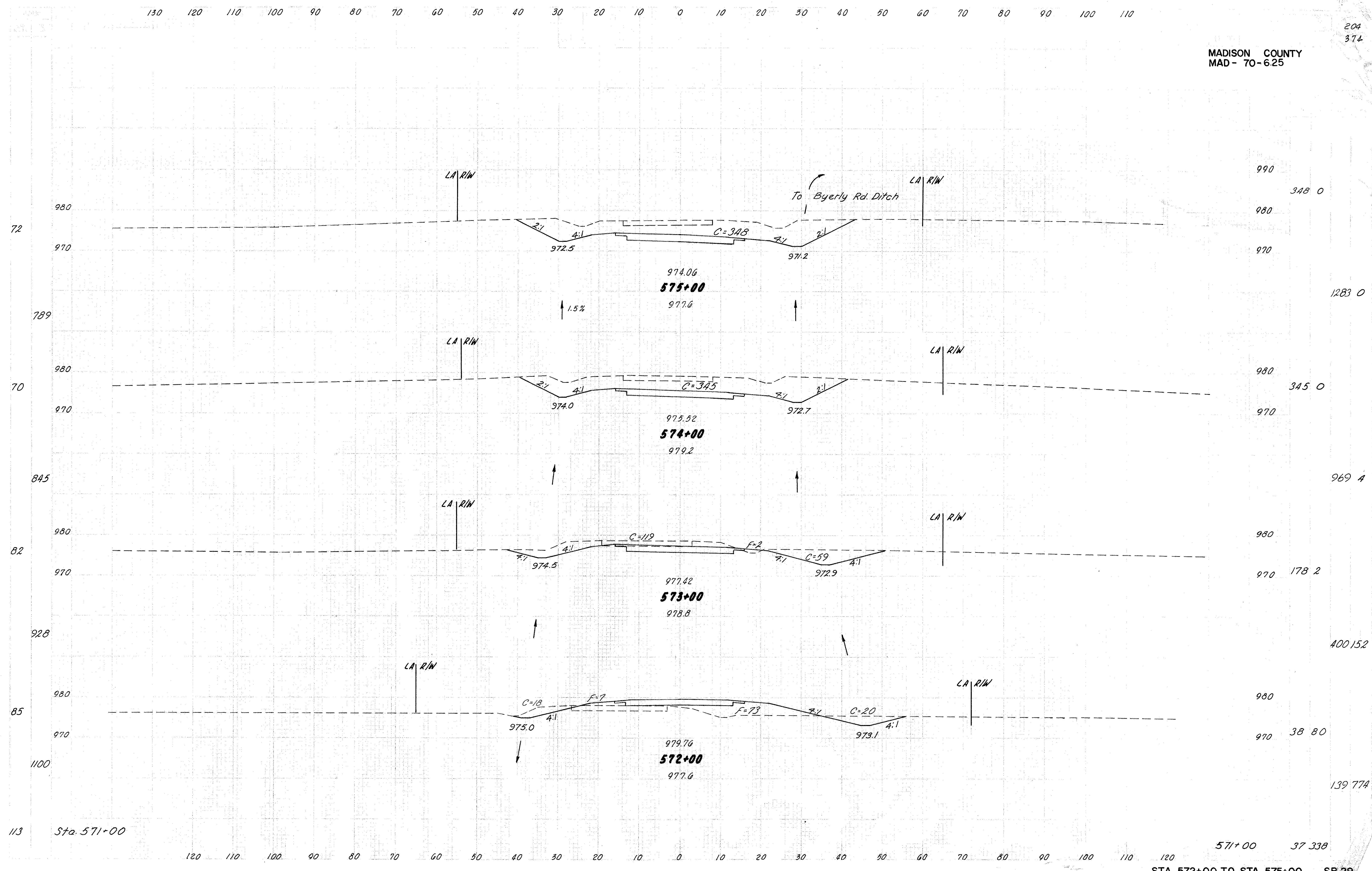


Sta. 559+80
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

MADISON COUNTY
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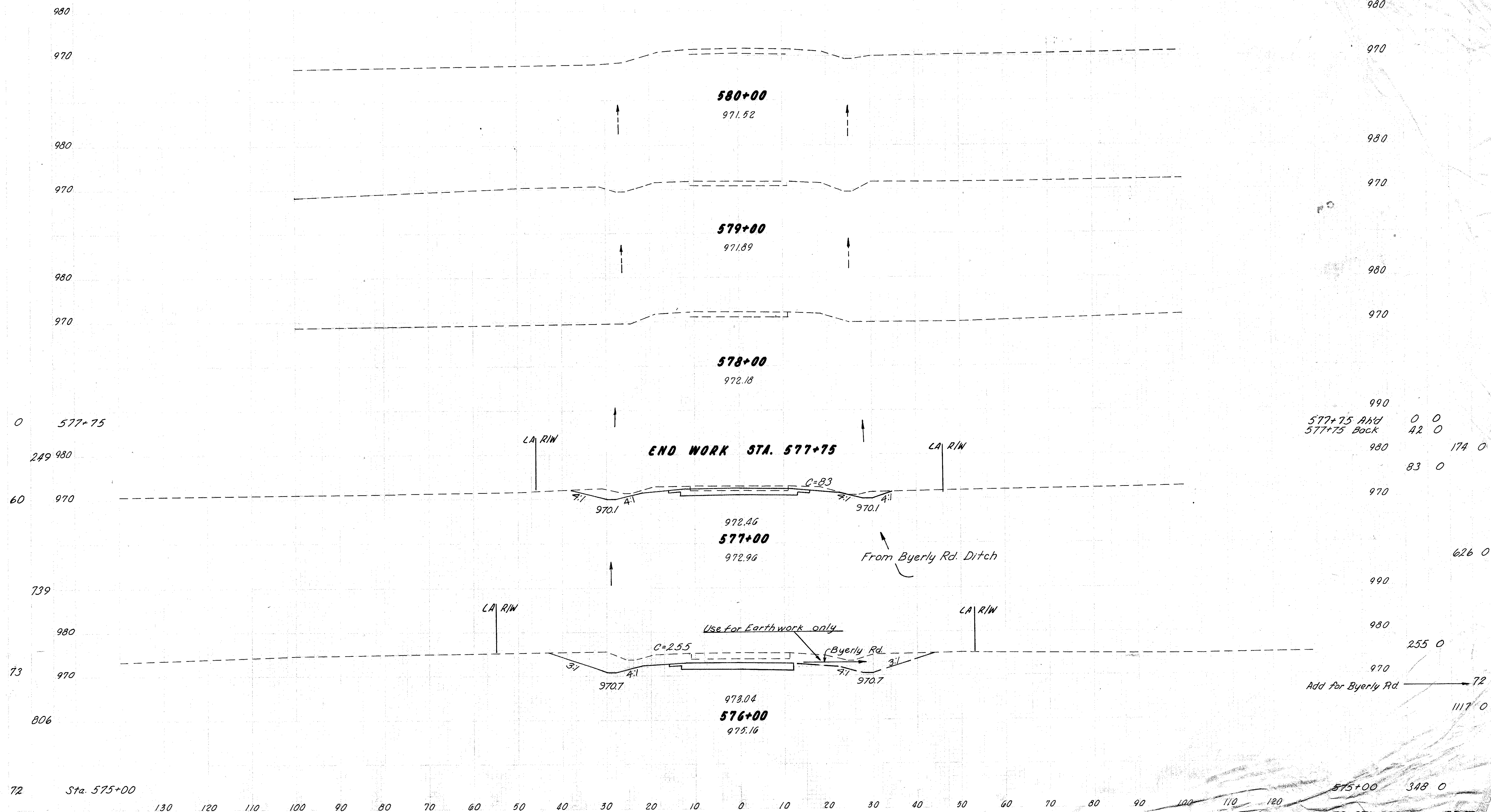




130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

205
212

MADISON COUNTY
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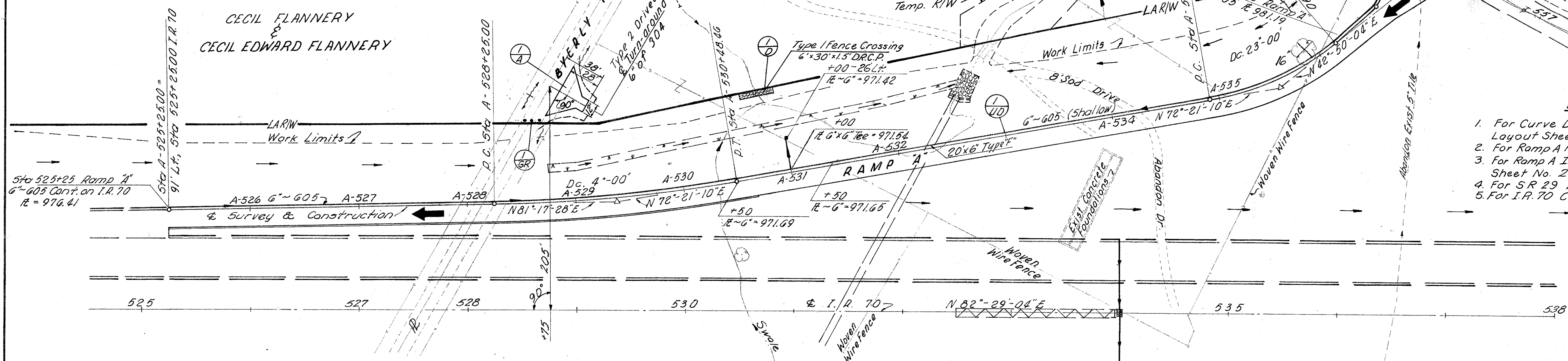


REF. STATION TO STATION	SIDE	FOR DETAILS SEE SHEET	601 DUMPED ROCK CHAN. PROT. C.Y.	606 GUARD POST EACH	603 6" TYPE F Lin. Ft.	605 6" SHALLOW F Lin. Ft.	BENDS & BRANCHES EACH	304 AGG. BASE Cu. Yd.
I-D A-530+87	Lt		10					
I-UD A-525+25 TO 555+00 SR 29	Lt				30	1227	1	
I-A Exist. Beverly Rd.	Lt			3				13.6
I-GR Exist. Beverly Rd.								
TOTALS			10	3	30	1227		13.6

Totals carried to Sheet No. 37

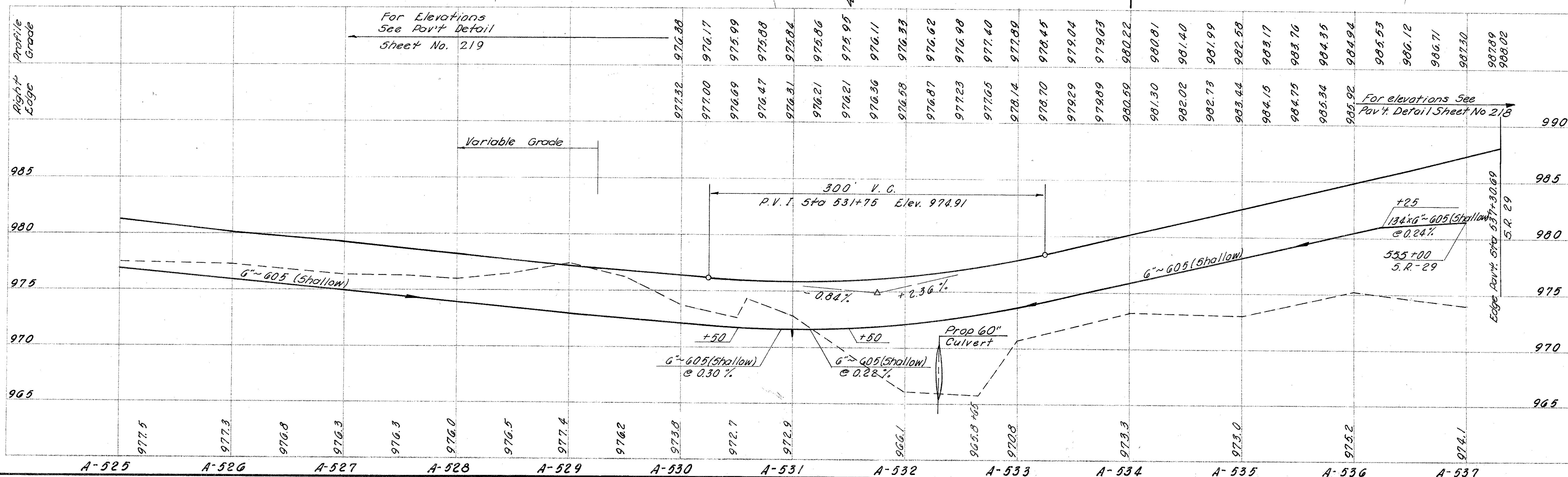
EXCAV. 894 CY.
EMB. 12,994 CY.
SEEDING 9786 SY.

CECIL FLANNERY
&
CECIL EDWARD FLANNERY



NOTES

1. For Curve Data & References see Geometric Layout Sheet No. 191
2. For Ramp A Pavement Details see Sheet No. 219
3. For Ramp A Intersection Details with SR 29 see Sheet No. 218
4. For SR 29 Line Sheet see sheet No. 195
5. For I.R. 70 Culvert Detail See Sheet No. 264



NOTES

1. For Curve Data & References See Geometric Layout Sheet No. 191
 2. For Ramp B Pavement Details See Sheet No. 220
 3. For Ramp B Intersection Detail with SR29
See Sheet No. 218
 4. For SR29 Line Sheet See Sheet No. 195
 5. For Service Rd Line Sheet see Sheet No. 223 & 224
- GLEN T. WELLS
ETAL.

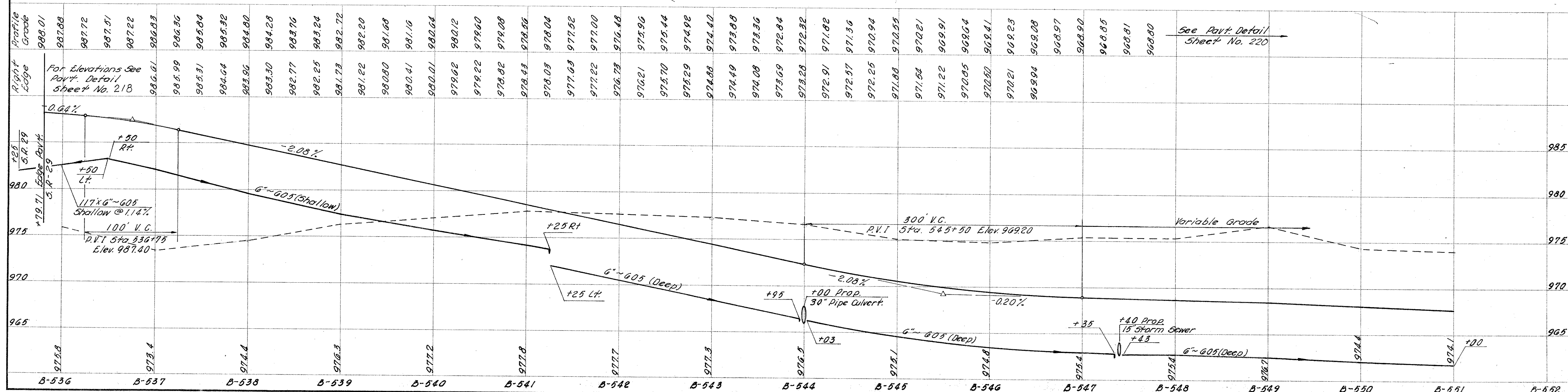
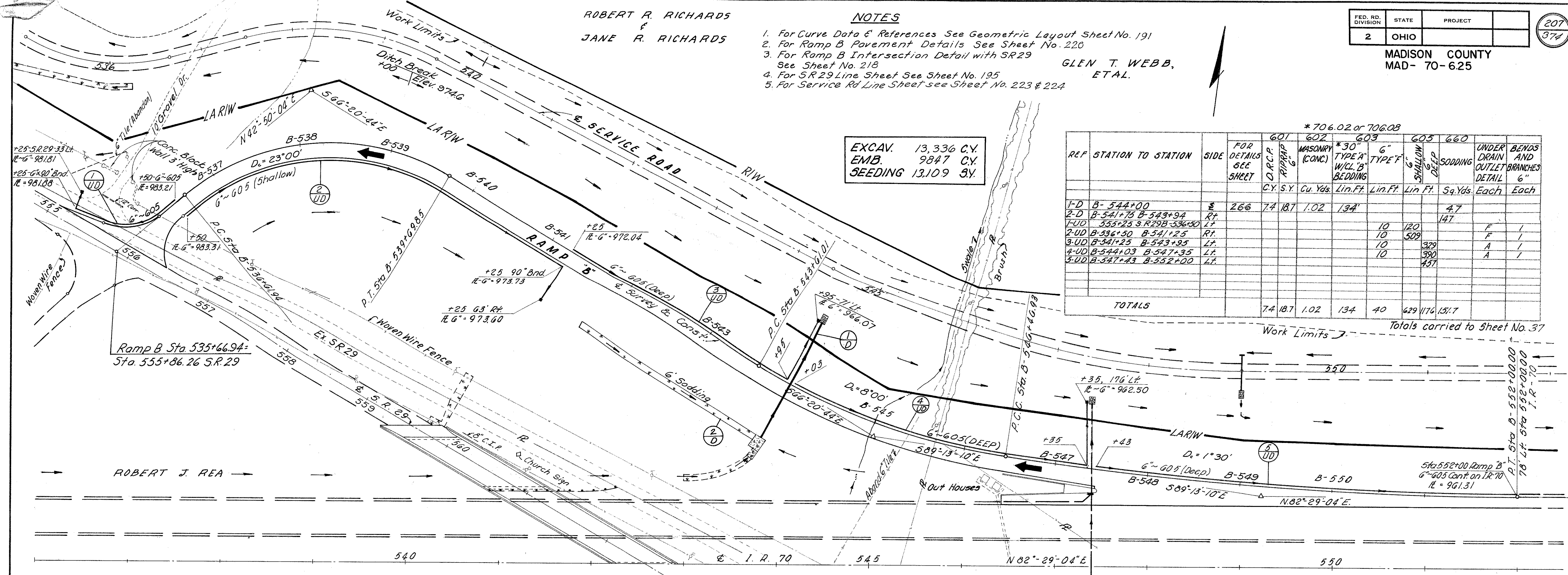
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

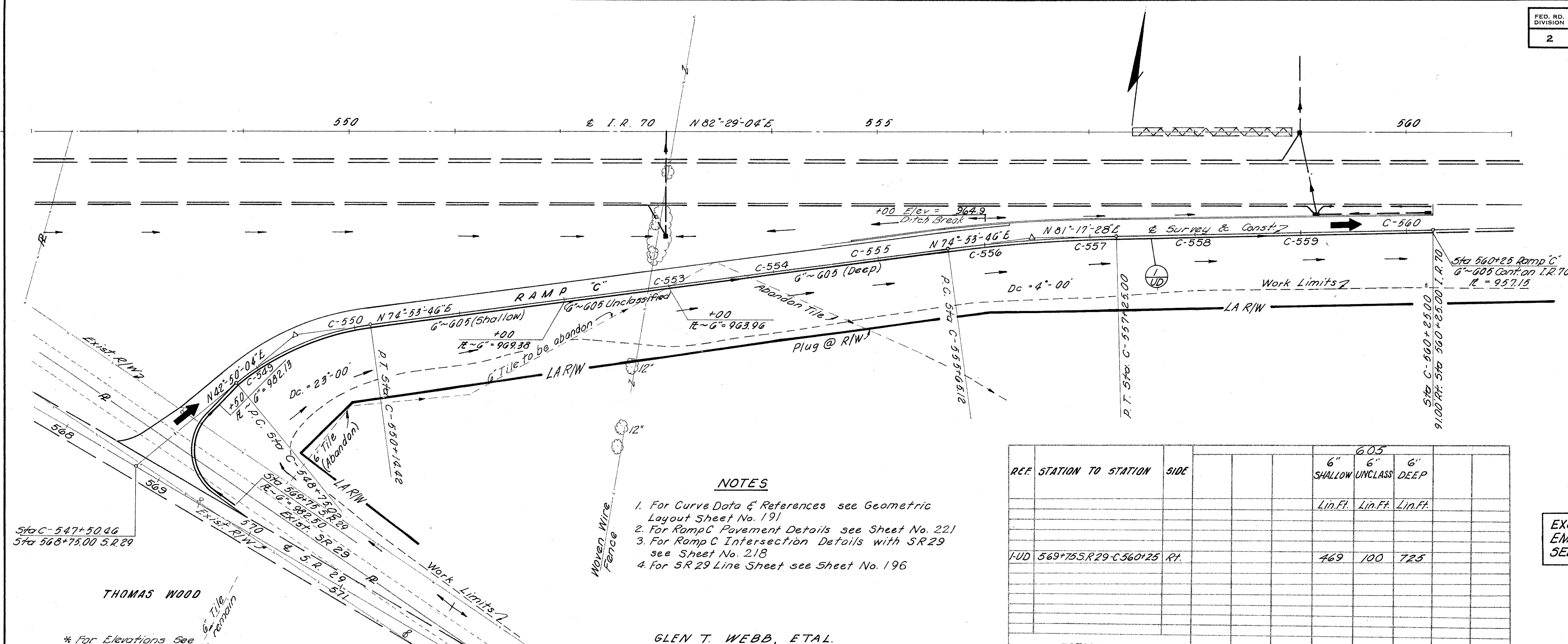
MADISON COUNTY
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374

* 706.02 or 706.08													
REF	STATION TO STATION	SIDE	FOR DETAILS SEE SHEET	601	602	603		605	660	UNDER DRAIN OUTLET DETAIL	BENDS AND BRANCHES 6"		
				D.R.C.P. R.P.A.P. 6	MASONRY (CONC)	*30 TYPE "A" W/C "B" BEDDING	6" TYPE "F"	6" SHALLOW DEEP	SODDING				
				C.Y.	S.Y.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Each	Each	
1-D	B-544+00	\$	266	7.4	187	1.02	134'			4.7			
2-D	B-541+75 B-543+94	Rt.											
1-U	553+25 S.R.29B-336+50	Lt.								147			
2-U	B-536+50 B-541+25	Rt.						10	120		F	1	
3-U	B-541+25 B-543+95	Lt.						10	509		F	1	
4-U	B-544+03 B-547+35	Lt.						10		329	A	1	
5-U	B-547+43 B-552+00	Lt.								590	A	1	
										437			
TOTALS					7.4	187	1.02	134	40	629	1176	151	7

Totals carried to Sheet No. 37





NOTES

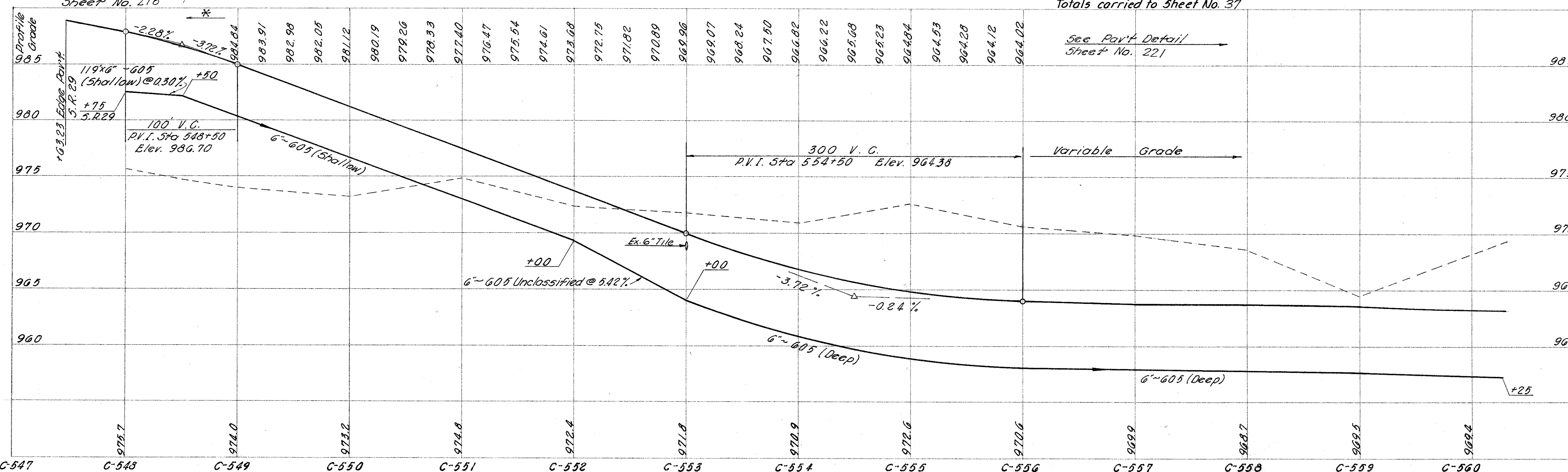
1. For Curve Data & References see Geometric Layout Sheet No. 191
2. For Ramp C Pavement Details see Sheet No. 221
3. For Ramp C Intersection Details with SR 29 see Sheet No. 218
4. For SR 29 Line Sheet see Sheet No. 196

GLEN T. WEBB, ETAL.

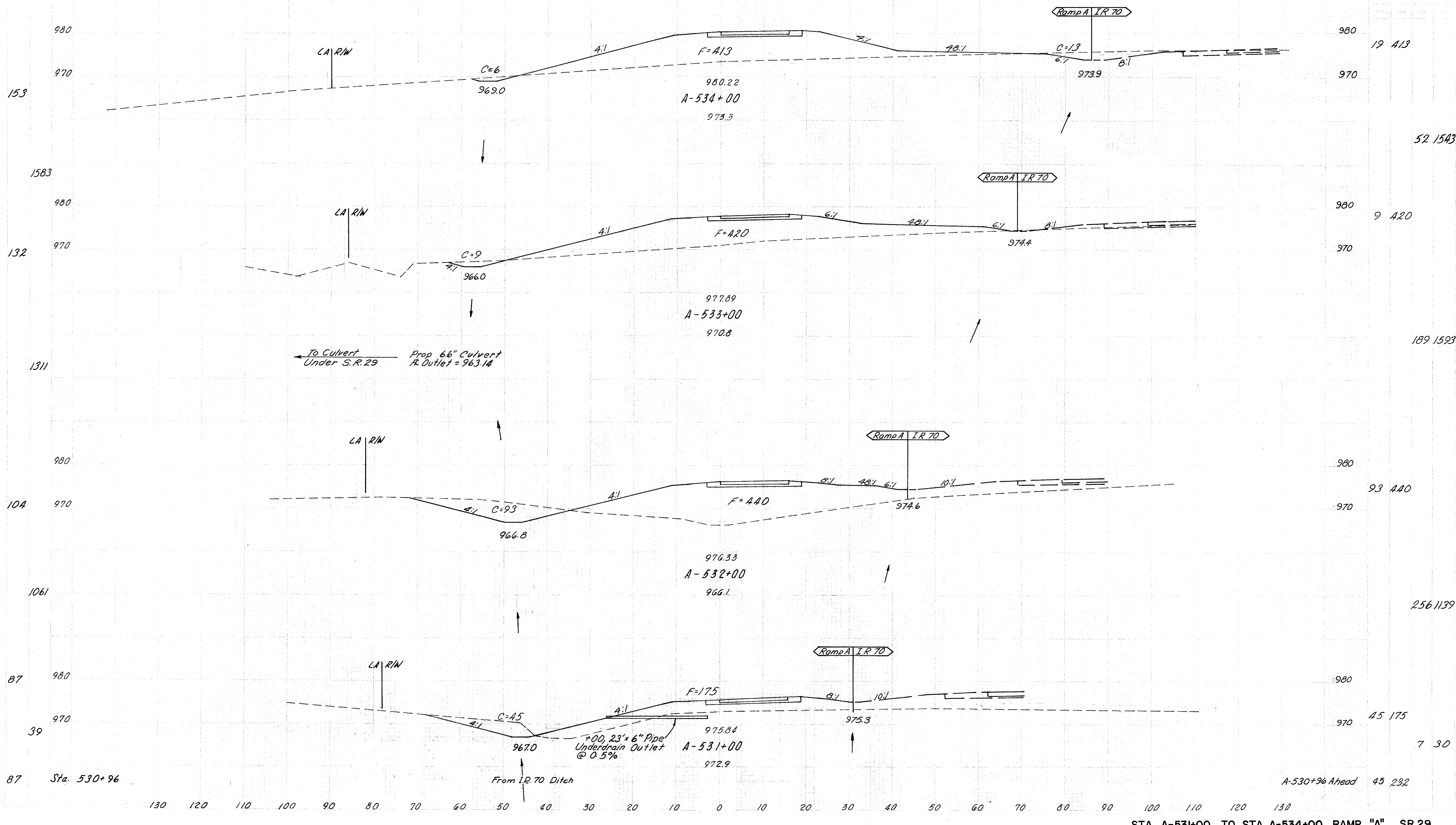
REF. STATION TO STATION	SIDE	6" 6" 6"		
		SHALLOW	UNCLASS	DEEP
		Lin.Ft.	Lin.Ft.	Lin.Ft.
I-UD 569+75.5 R29-C560+25 RT.		469	100	725
TOTALS		469	100	725

EXCAV. 7466 C.Y.
EMB. 8297 C.Y.
SEEDING 10094 S.Y.

Totals carried to Sheet No. 37

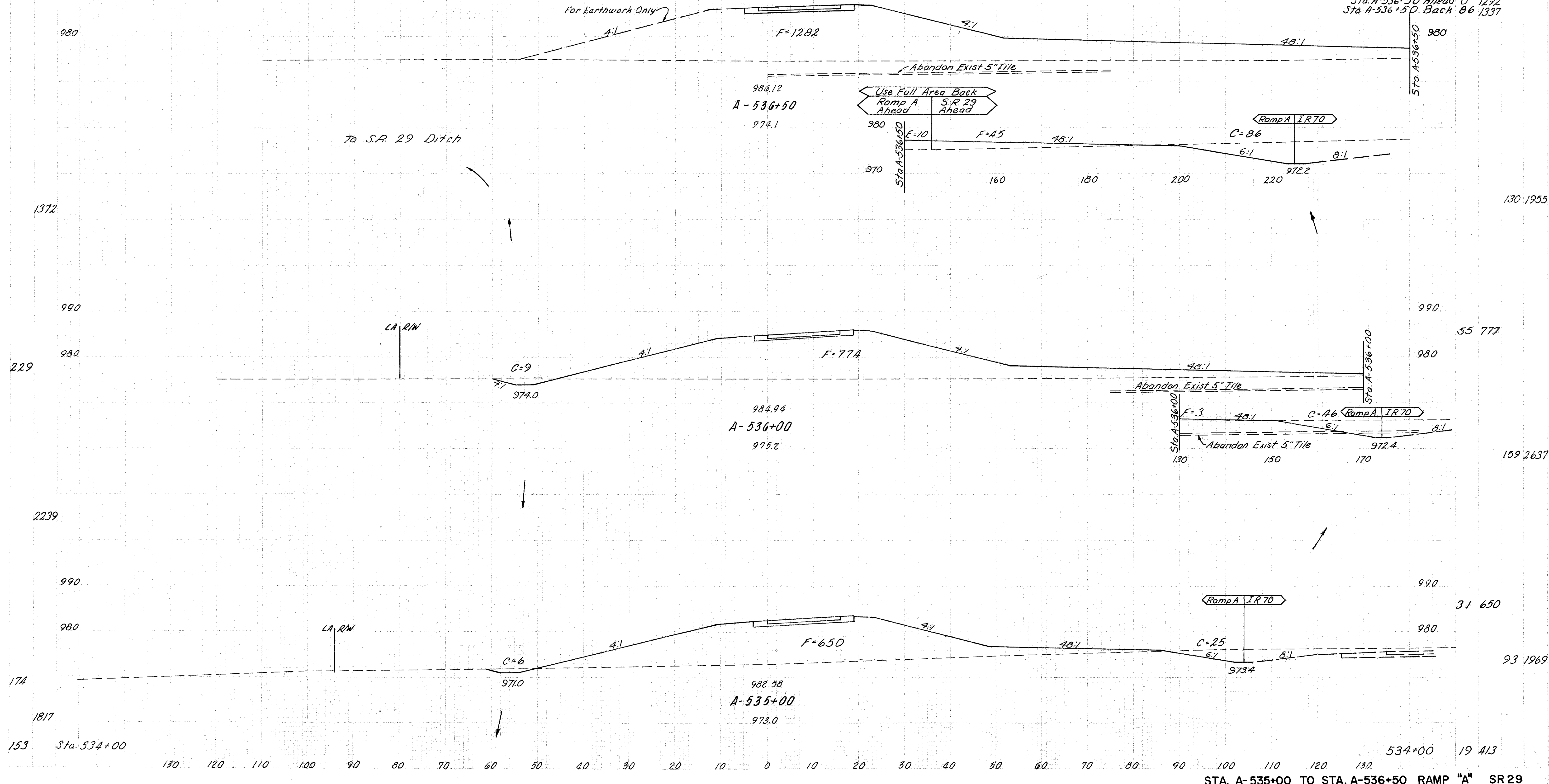


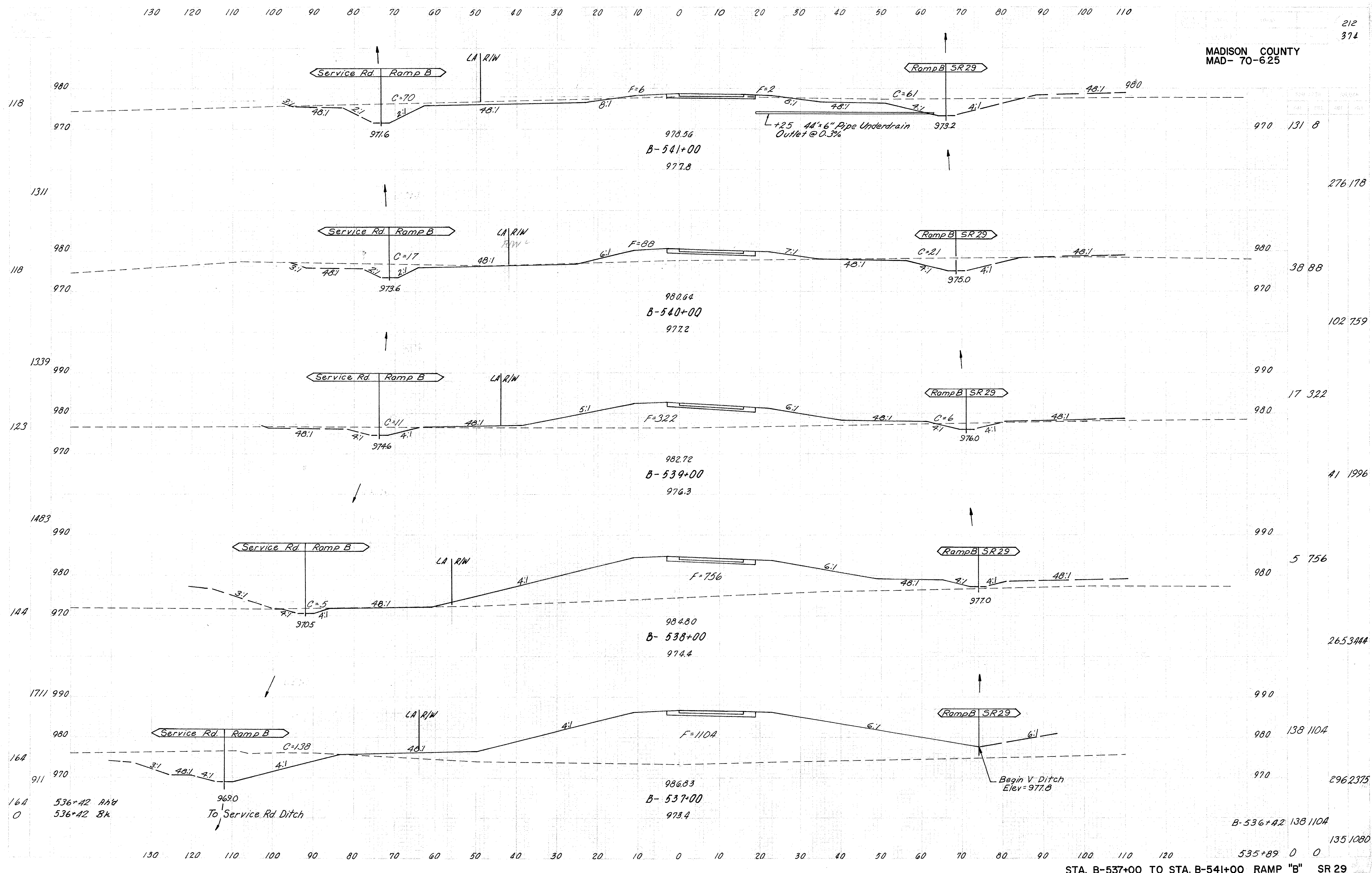
ELEVATIONS LT. EDGE PAV'T.			
STA.	ELEV.	STA.	ELEV.
C-549+00	985.81	C-552+50	972.07
C-549+25	984.90	C-552+75	971.14
C-549+50	983.97	C-553+00	970.21
C-549+75	983.03	C-553+25	969.32
C-550+00	981.99	C-553+50	968.49
C-550+25	980.93	C-553+75	967.75
C-550+50	979.87	C-554+00	967.07
C-550+75	978.82	C-554+25	966.47
C-551+00	977.77	C-554+50	965.93
C-551+25	976.73	C-554+75	965.49
C-551+50	975.79	C-555+00	965.20
C-551+75	974.86	C-555+25	965.01
C-552+00	973.93	C-555+50	964.89
C-552+25	973.00	C-555+75	964.84



0 A-536+68 Ahd
182 A-536+68 Bk.
182 364 536+50 Ahead
265 536+50 Back
990

A-537+21 0 0
A-536+68 0 1292
990 0 860
Sta. A-536+50 Ahead 0 1292
Sta. A-536+50 Back 86 1337





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212
374

276 178

38 88

102 759

17 322

41 1996

5 756

265 3444

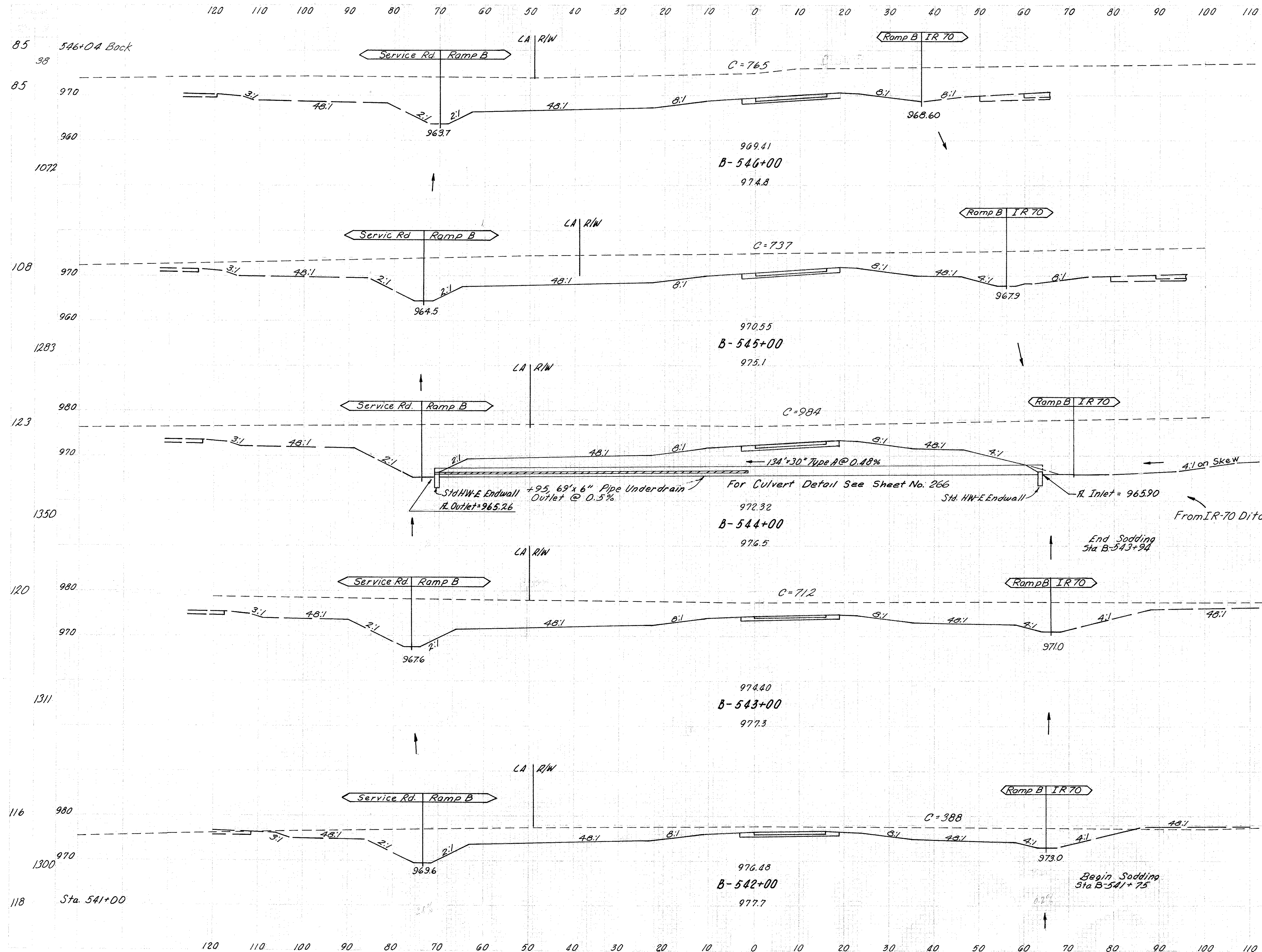
138 1104

296 2375

B-536+42 138 1104

135 1080

STA. B-537+00 TO STA. B-541+00 RAMP "B" SR 29



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213
374

B-546+04 Back 765 0
B-546+00 765 0 113 0

2782 0

737 0

3187 0

984 0

3141 0

712 0

2087 0

388 0

961 15

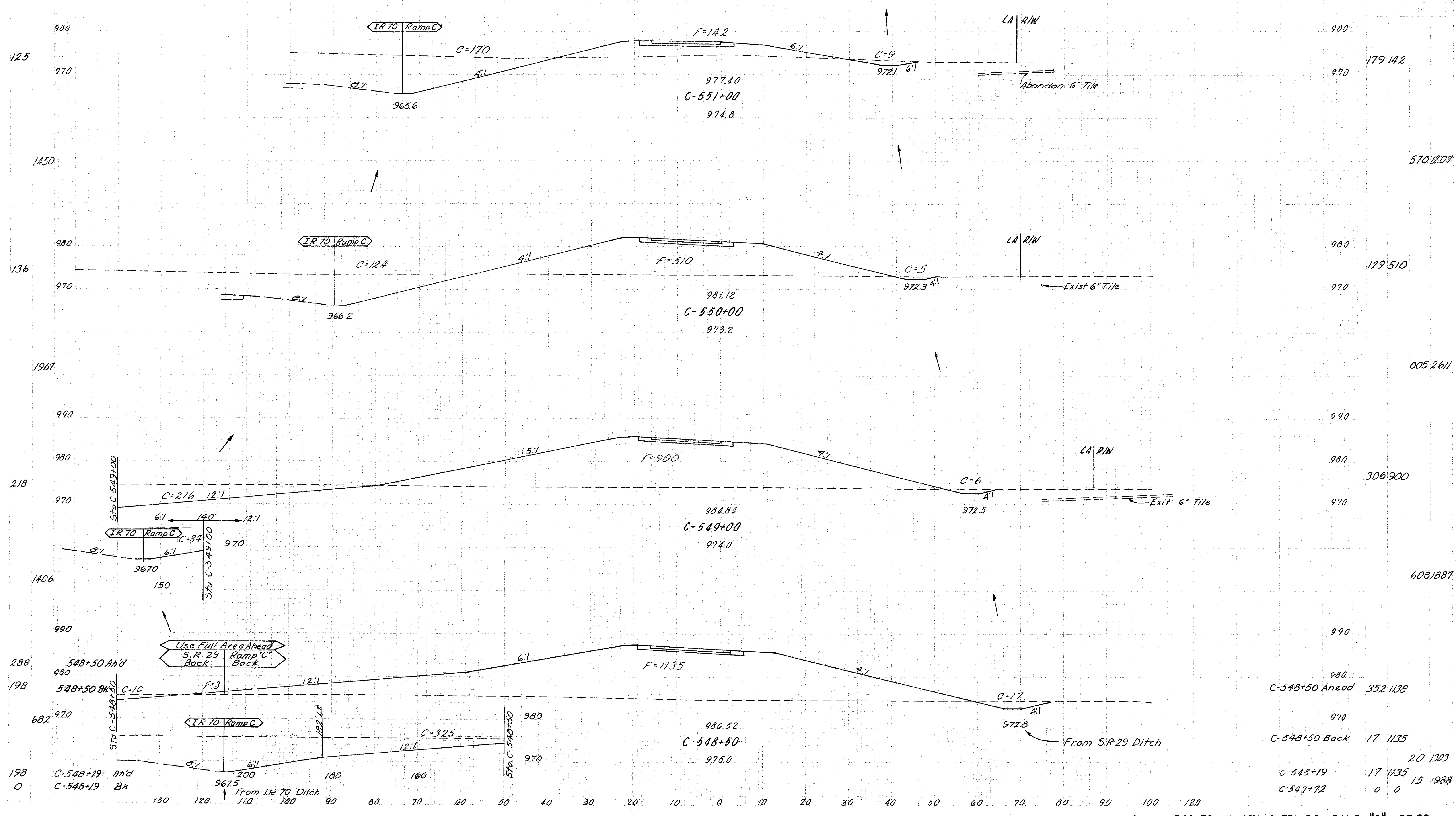
STA. B-541+00 131 8

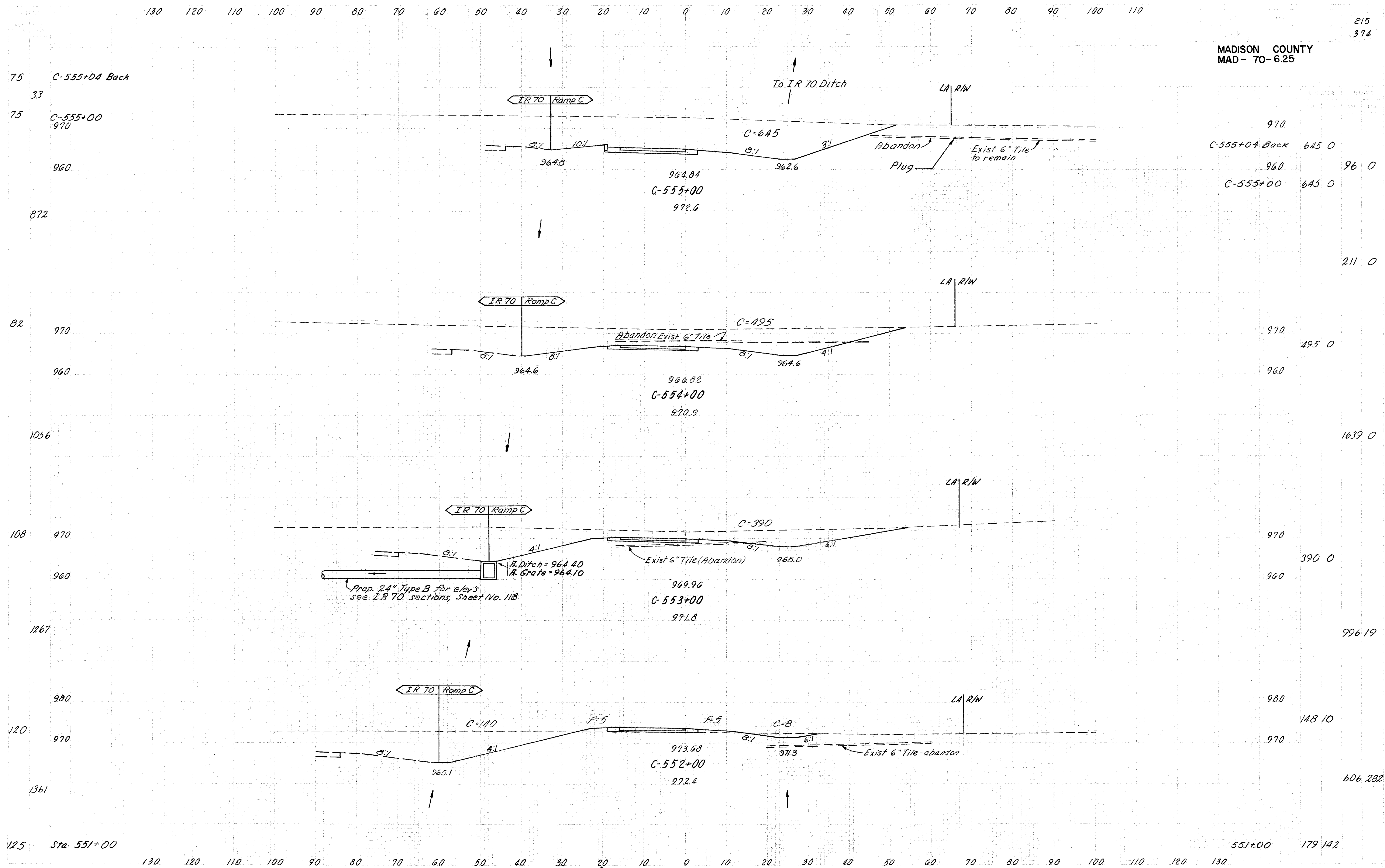
STA. B-542+00 TO STA. B-546+00 RAMP "B" SR 29

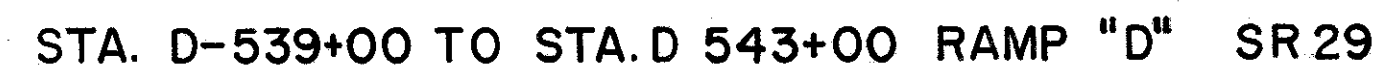
130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110

214
374

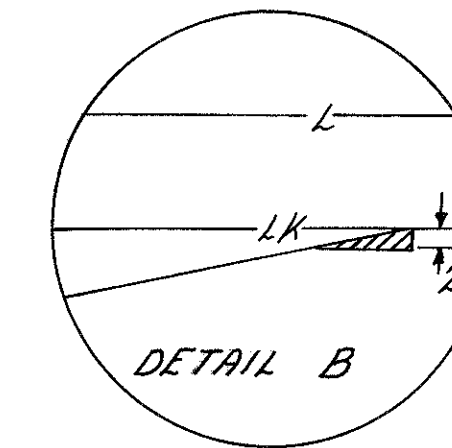
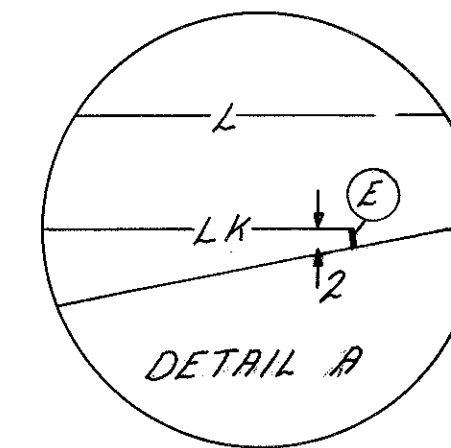
MADISON COUNTY
MAD- 70- 6 25



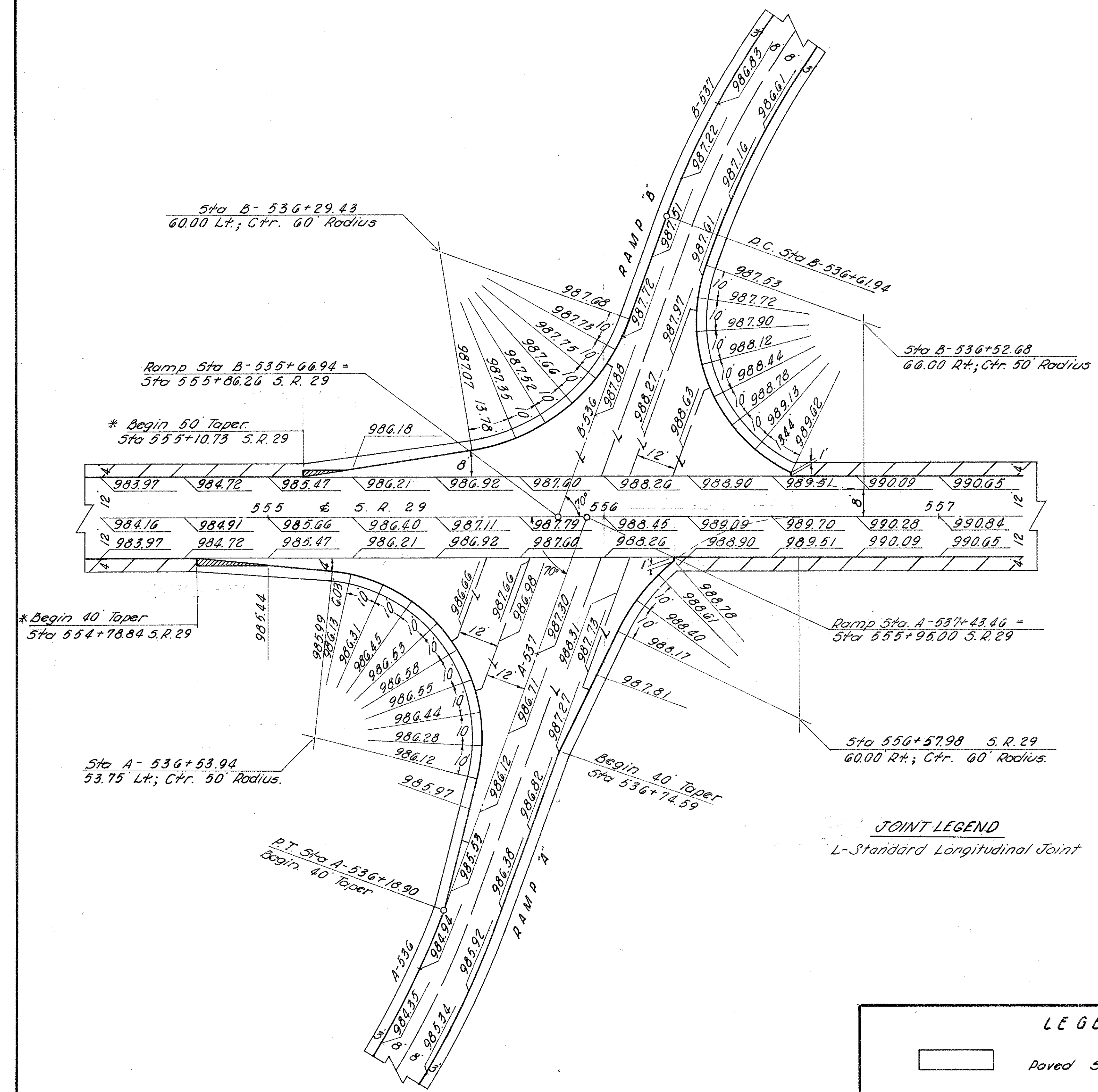




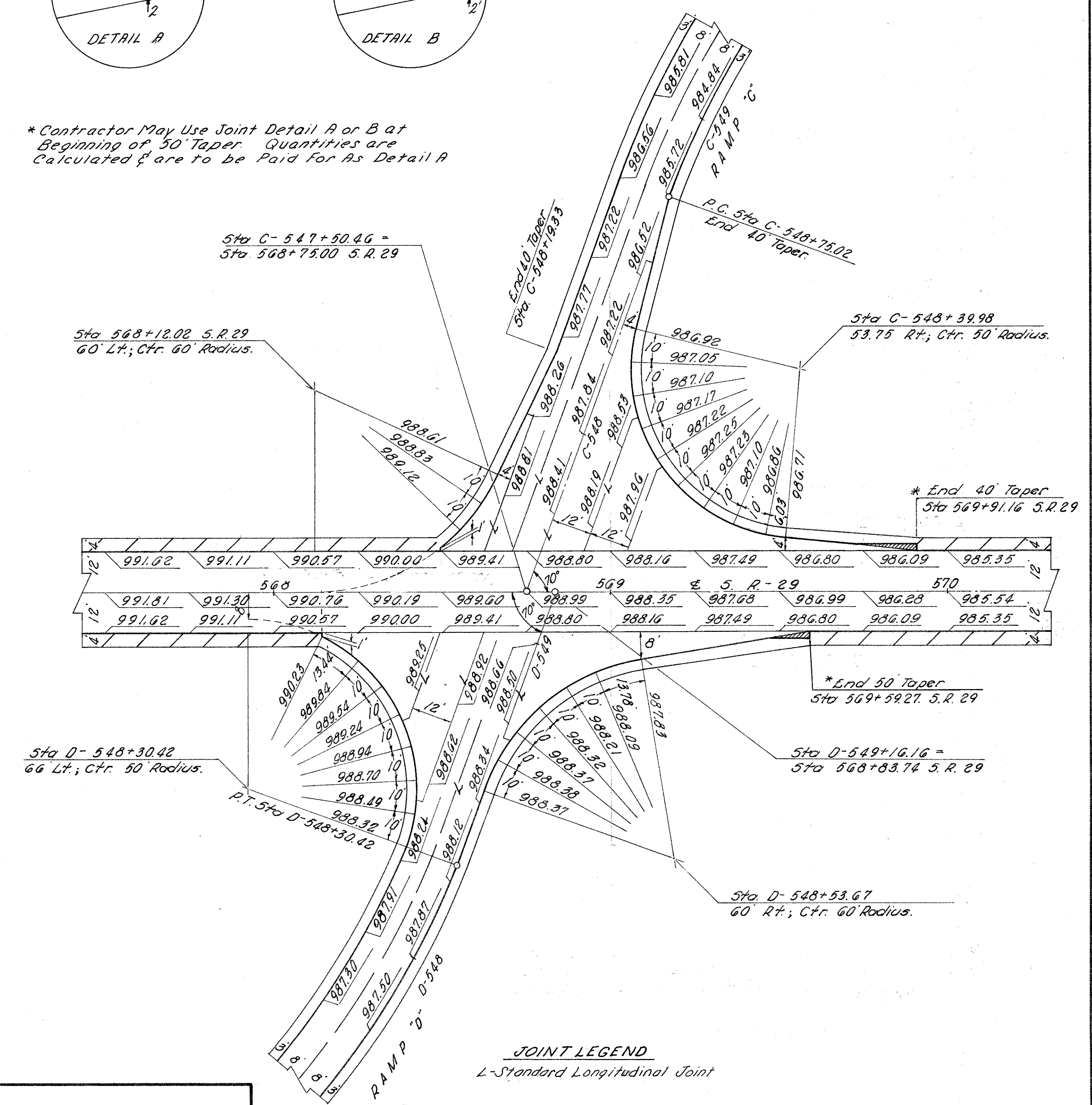
MADISON COUNTY
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* Contractor May Use Joint Detail A or B at Beginning of 50' Taper. Quantities are Calculated & are to be Paid for As Detail A



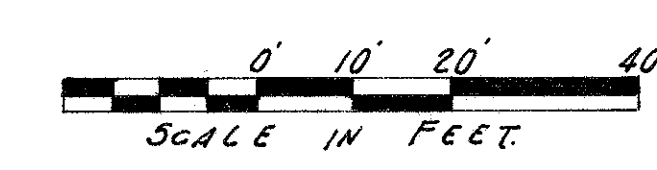
RAMP A & B



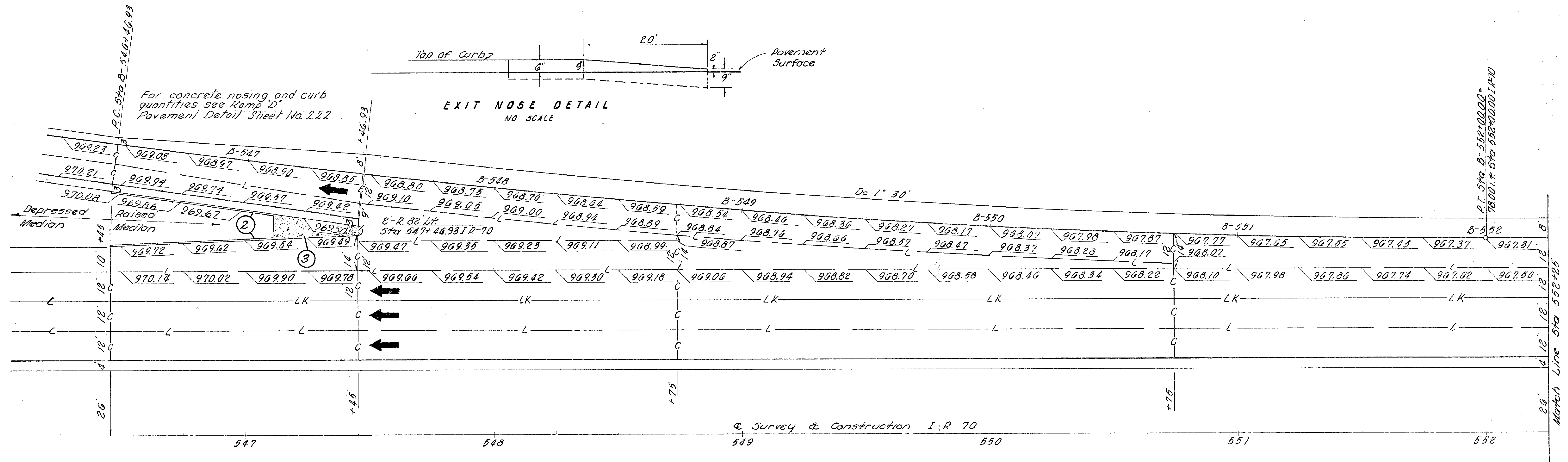
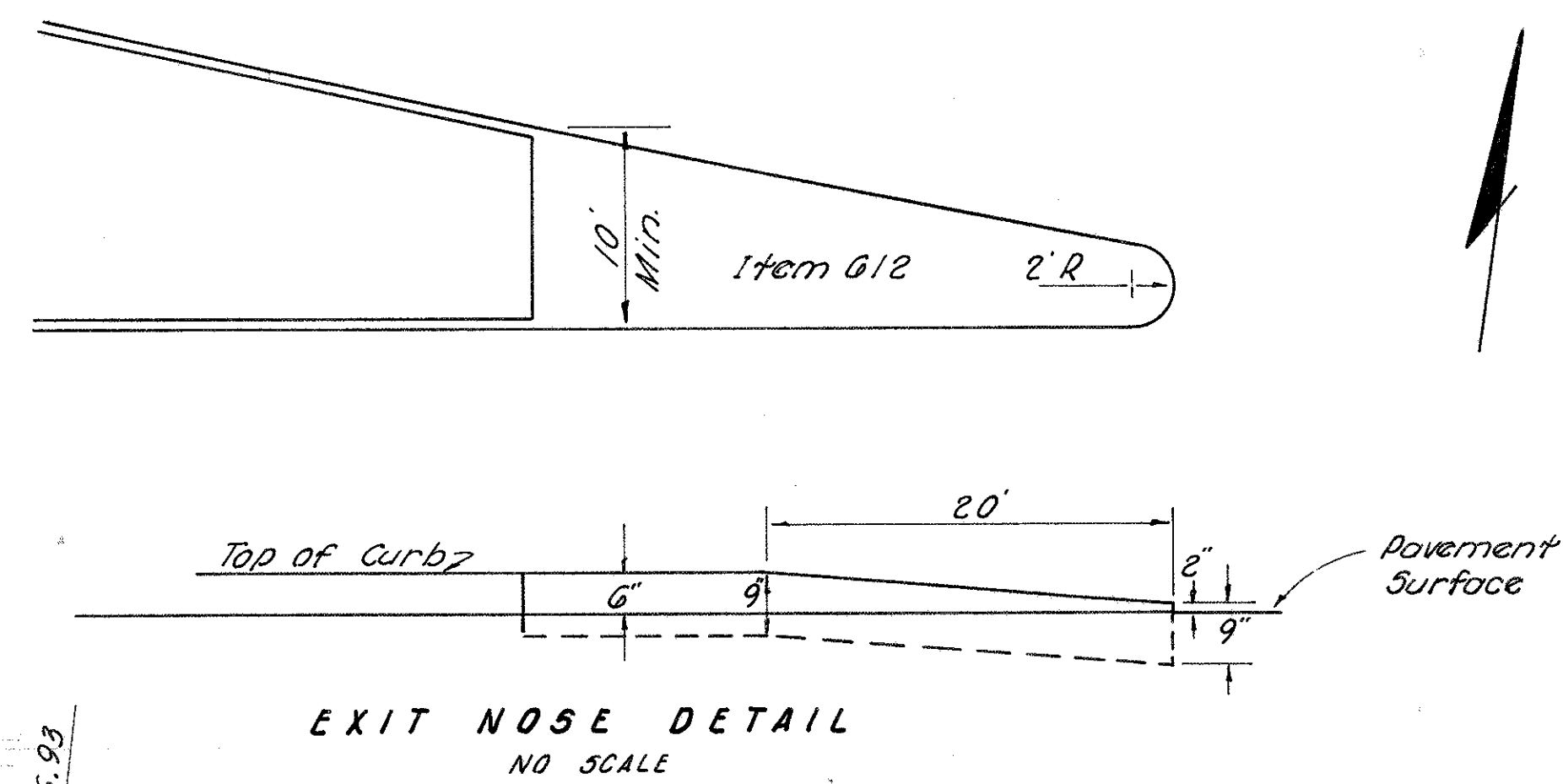
RAMP C & D

LEGEND




	Paved Shoulder With 6"~301
	Bituminous Treated Aggregate Shoulder
	End Taper Detail- See General Notes
	Paved Shoulders With 3"~301



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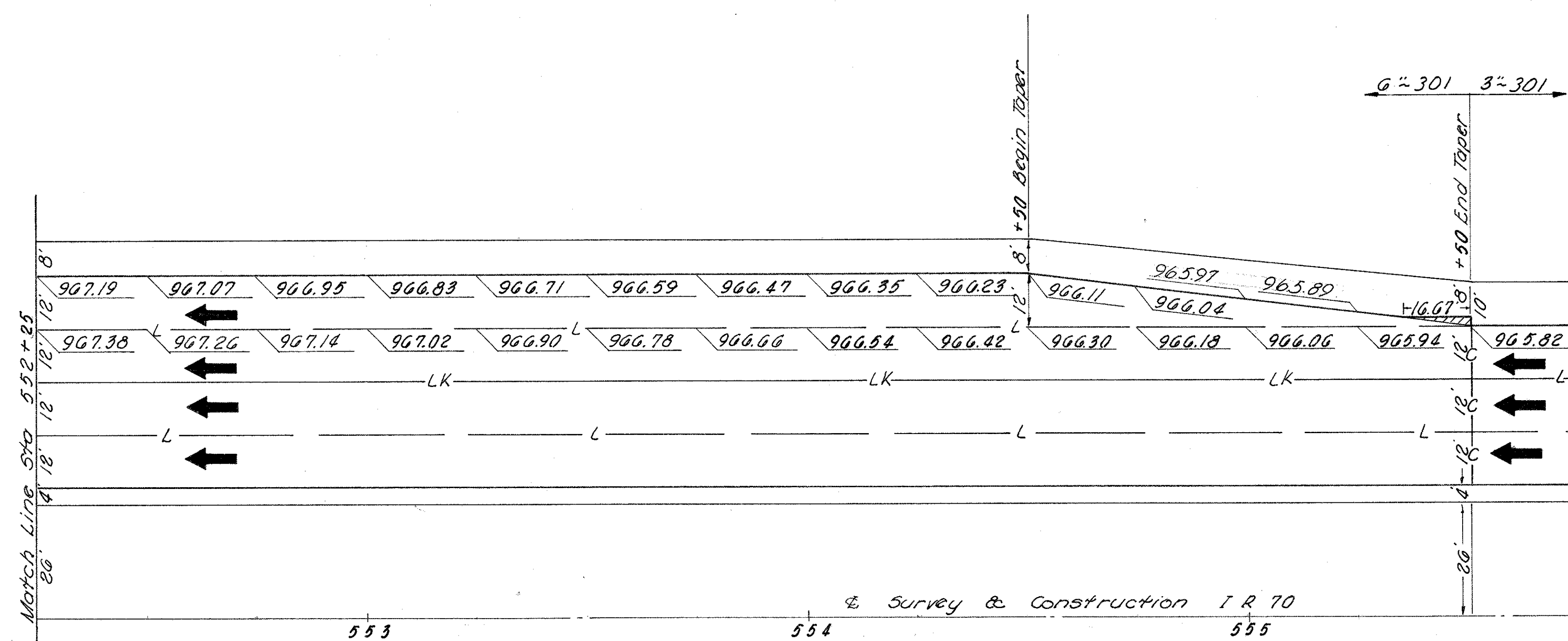


LEGEND


- | | |
|---|---|
|  | <i>Paved Shoulder</i> |
|  | <i>End Taper Detail - See General Notes</i> |
|  | <i>Item 612 Concrete Median</i> |

JOINT LEGEND

L-Standard Longitudinal Joint
LK-Key Joint Without Tiebars
C-Standard Contraction Joint
E-Standard Expansion Joint



0' 10' 20' 40'



SCALE IN FEET.

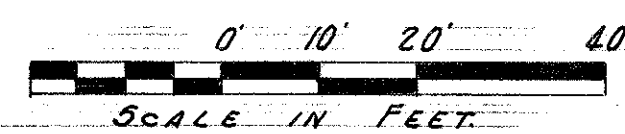
LEGEND



Paved Shoulder



End Taper Detail - See General Notes

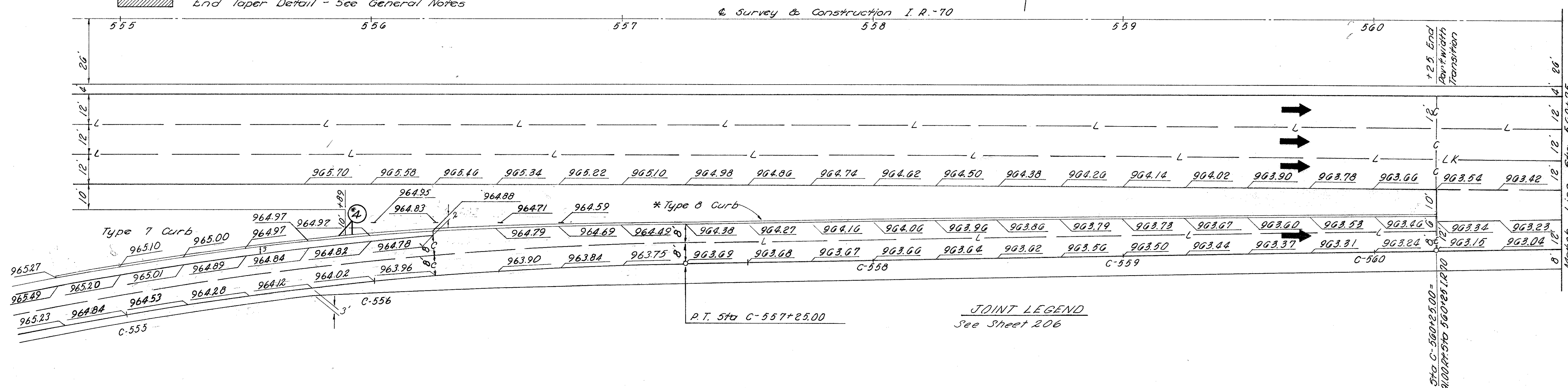


* NOTE:
The Paved Shoulder along the Type 8 Curb is at the same elevation as the adjacent Ramp pavement.
* For curb quantities see Ramp D Pavement Detail Sheet No. 222
For Joint Legend See Sheet No. 222

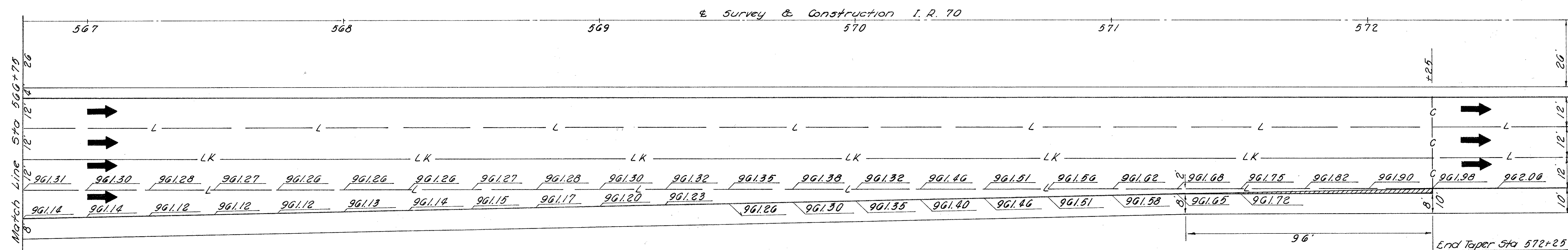
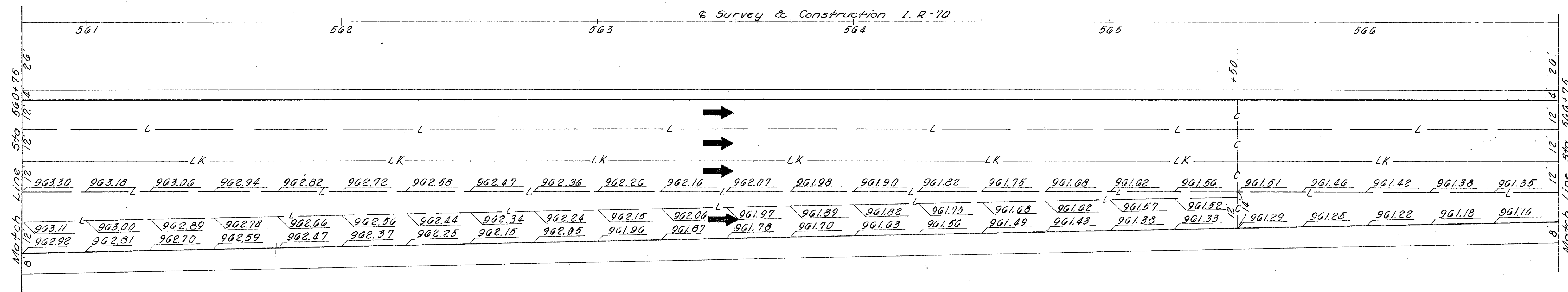
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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374



JOINT LEGEND
See Sheet 206

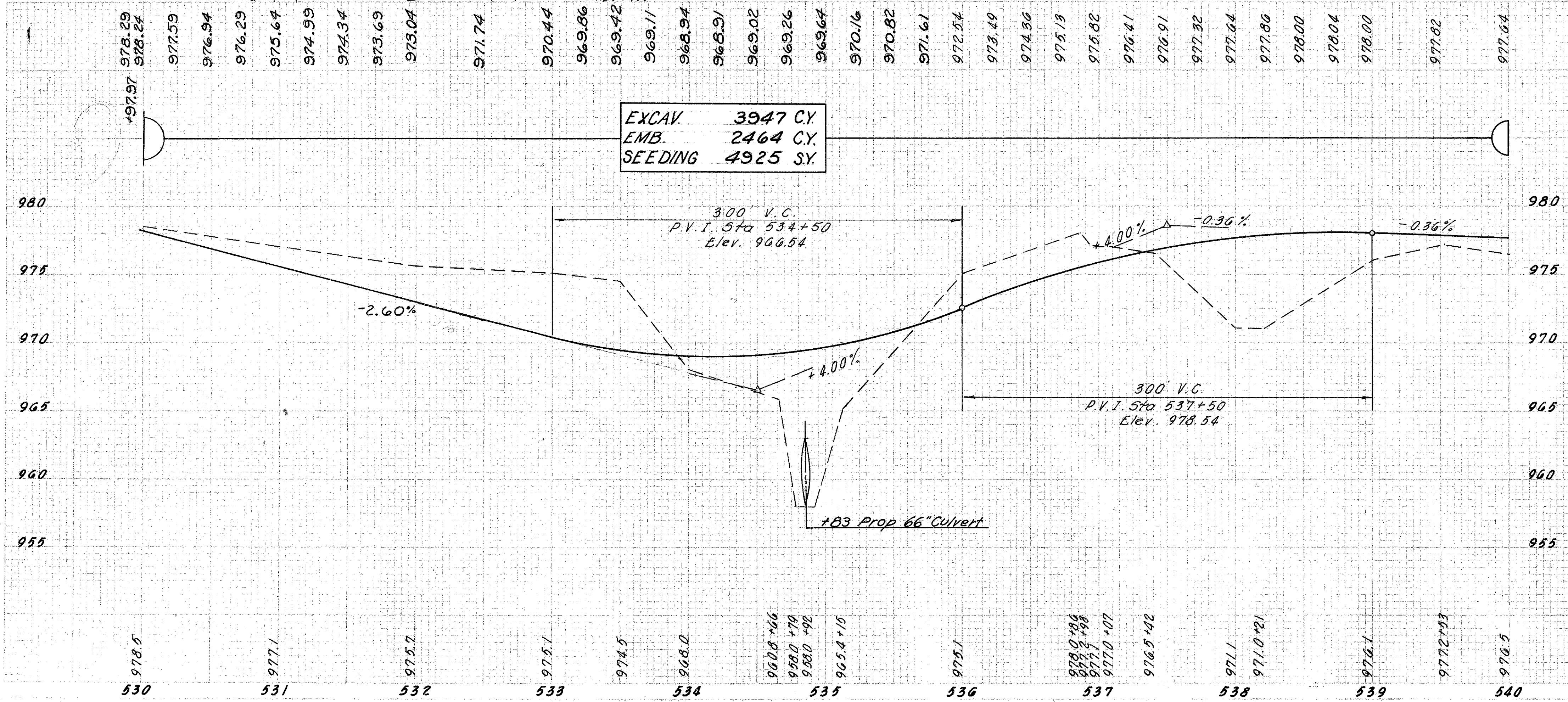
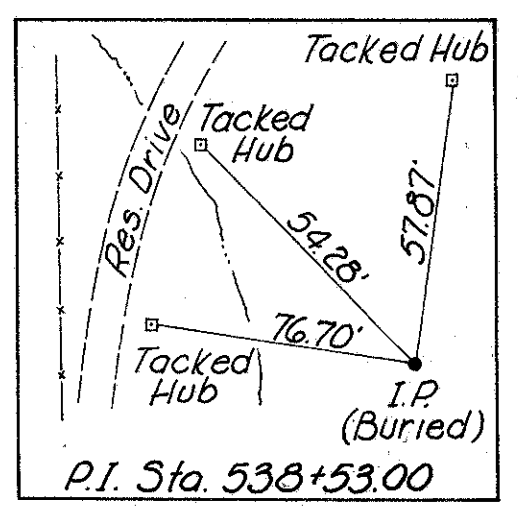
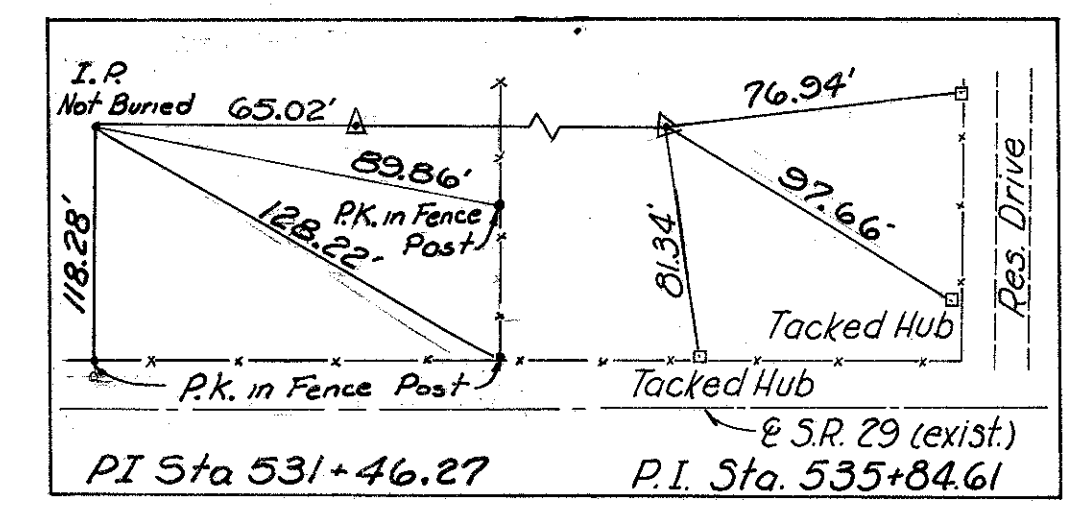
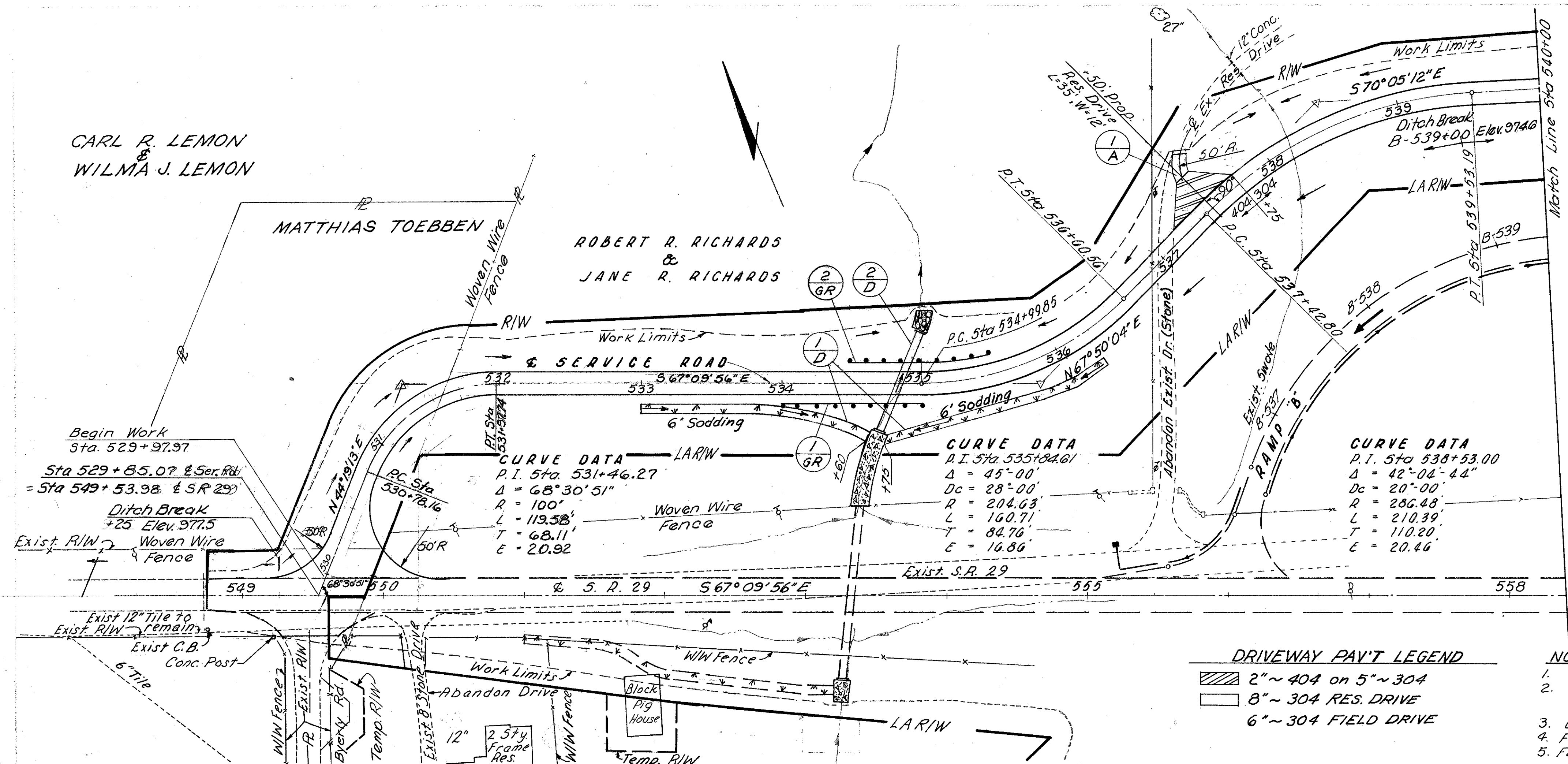


PAVEMENT DETAILS

RAMP "C" SR- 29

CARL R. LEMON

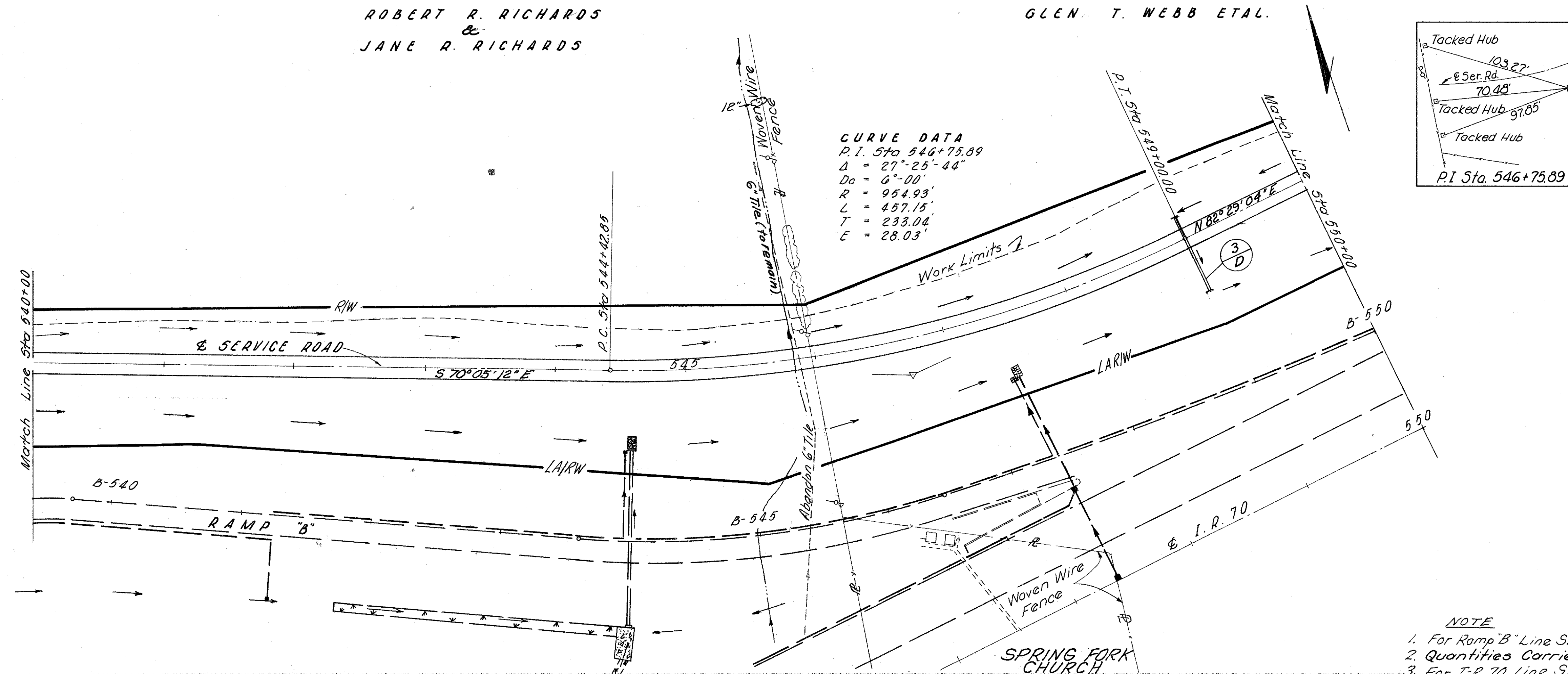
WILMA J. LEMON



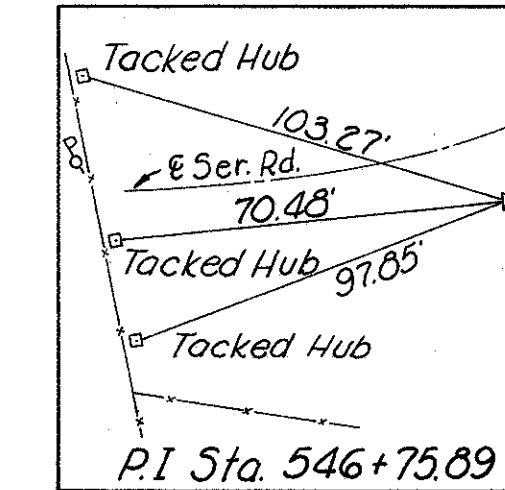
ROBERT R. RICHARDS
&
JANE R. RICHARDS

GLEN T. WEBB ETAL.

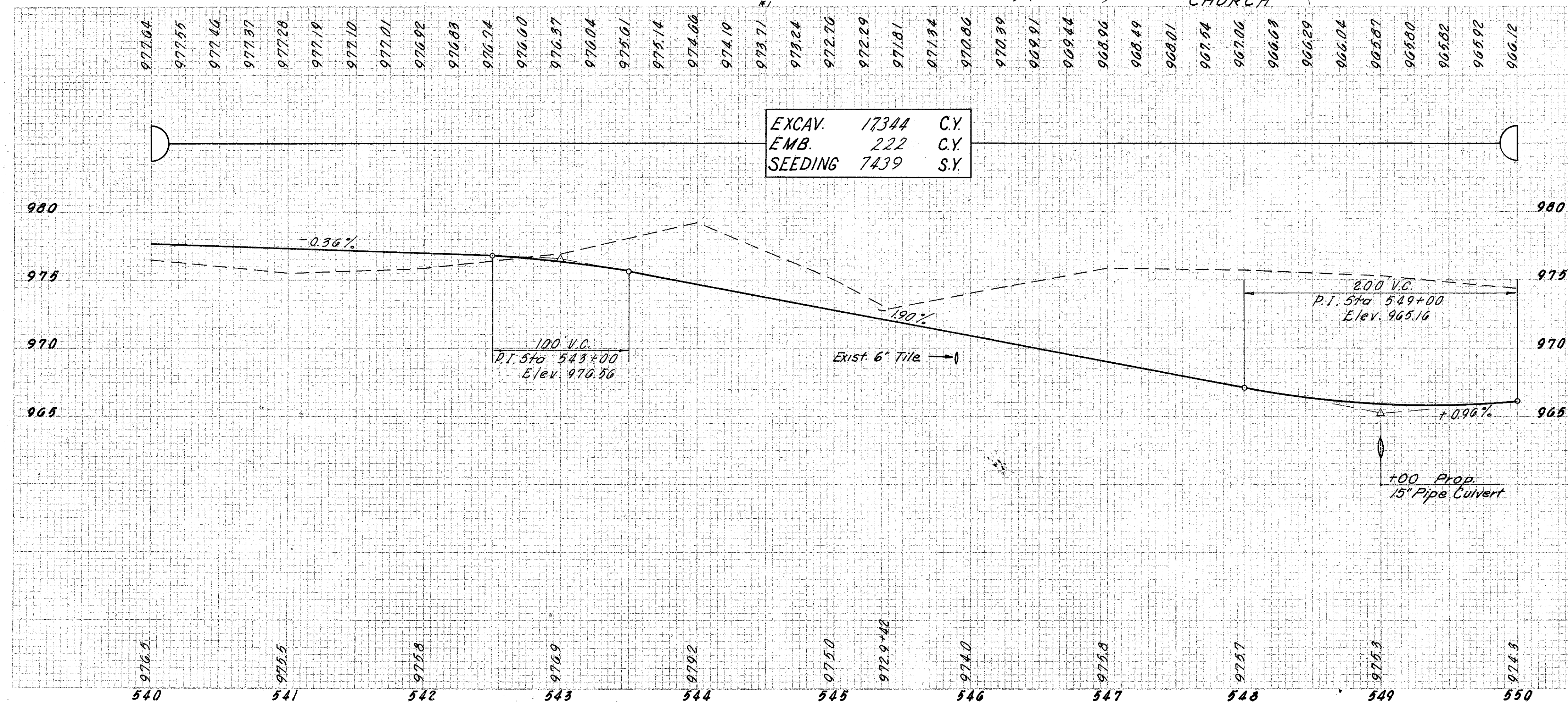
MADISON COUNTY
MAD- 70-625



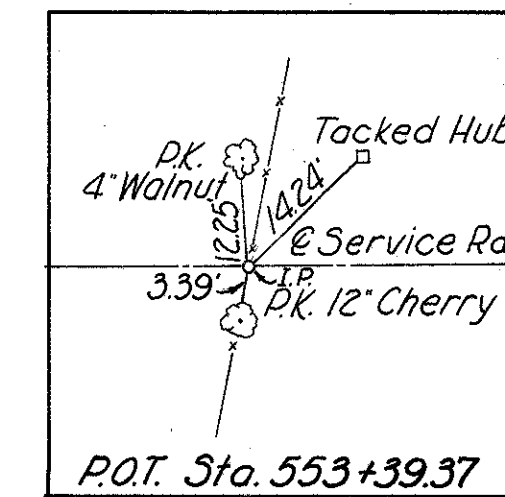
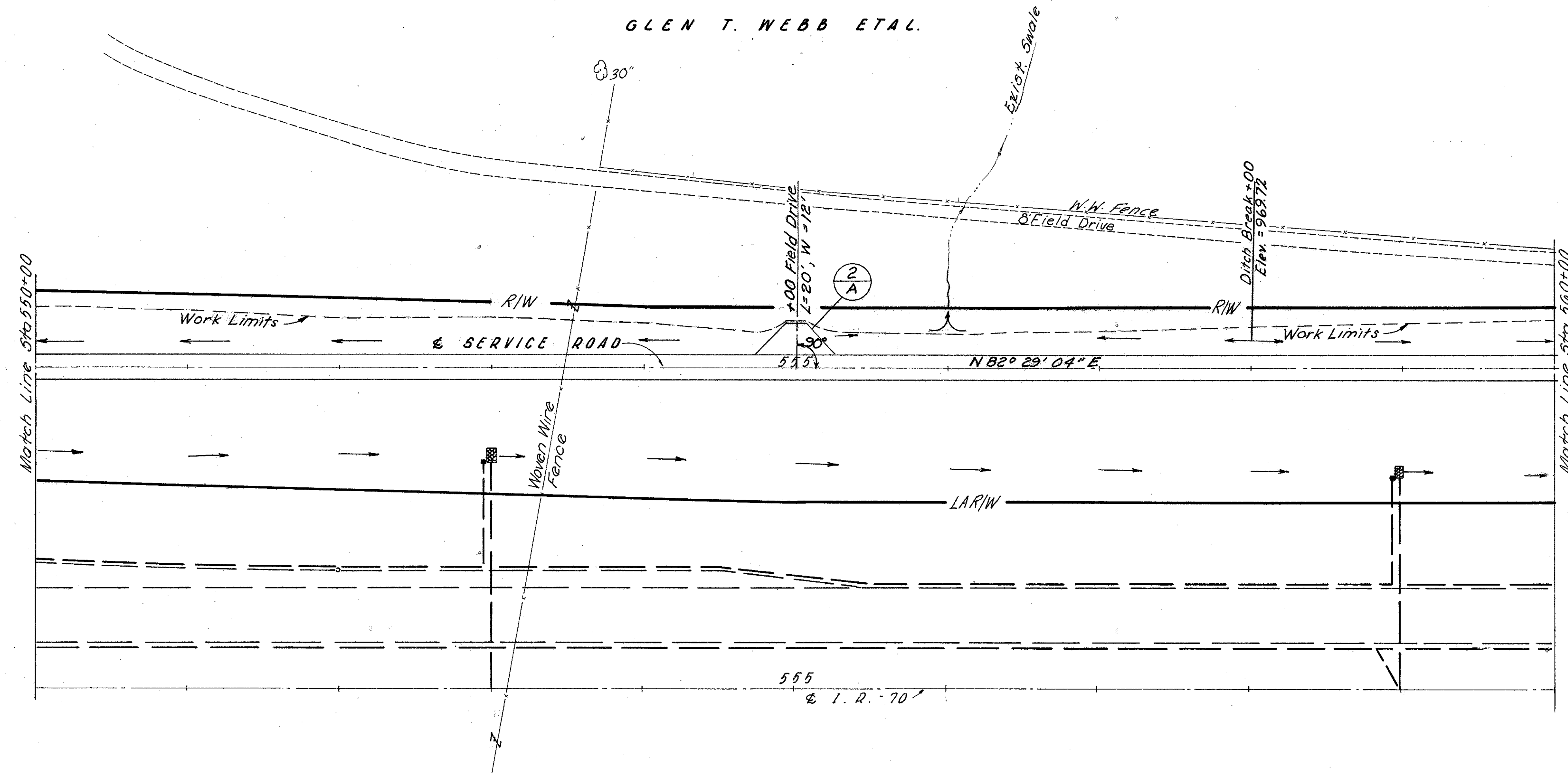
CURVE DATA
P.I. Sta 546+75.89
 $\Delta = 27^{\circ}25'44''$
 $D_0 = 6^{\circ}00'$
 $R = 954.93'$
 $L = 457.15'$
 $T = 233.04'$
 $E = 28.03'$



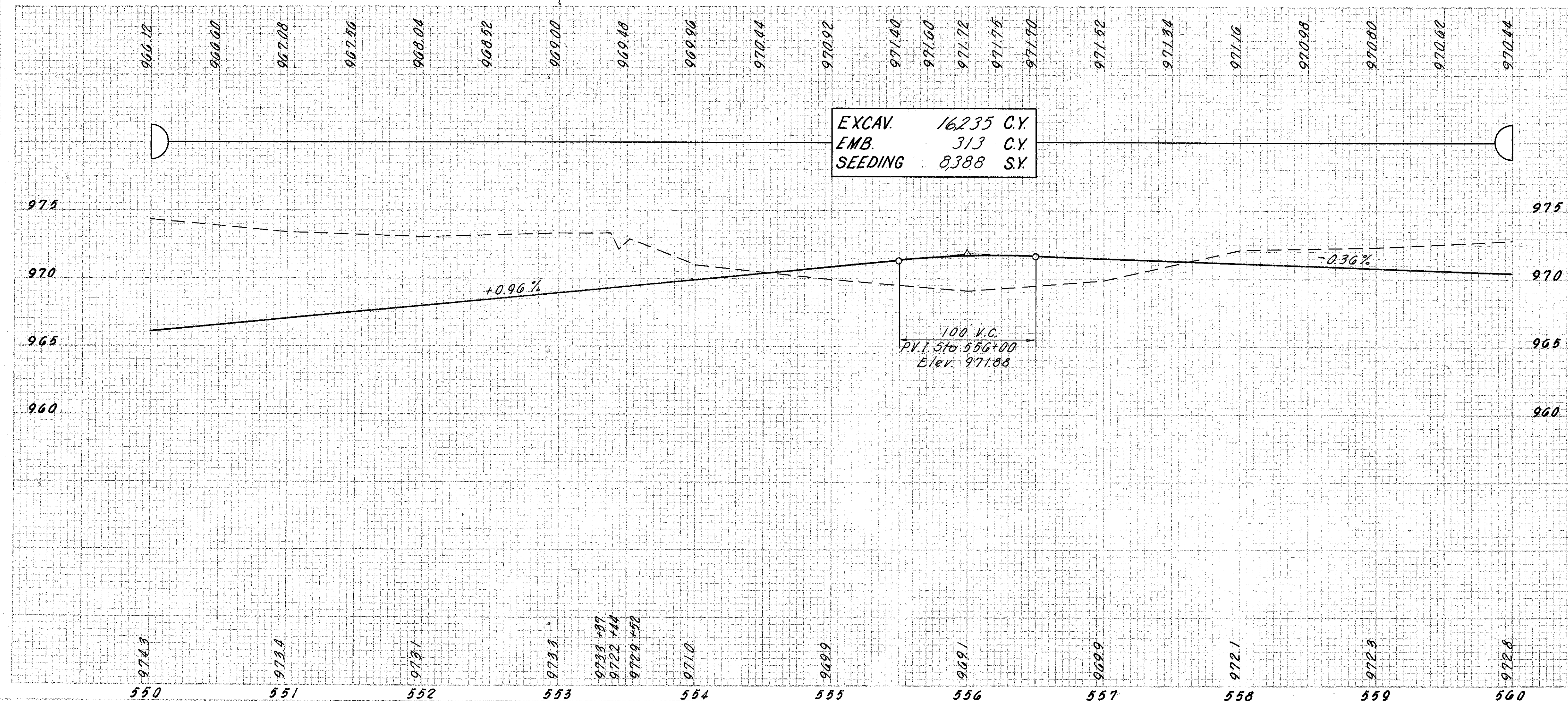
- NOTE
1. For Ramp "B" Line Sheet see Sheet No. 207
 2. Quantities Carried to Sheet No. 225
 3. For I-R 70 Line Sheet See Sheet No. 60



EXCAV. 17344 C.Y.
EMB. 222 C.Y.
SEEDING 7439 S.Y.




- NOTE
1. Quantities Carried to Sheet No. 226
 2. For Driveway Legend See Sheet No. 223
 3. For IR-70 Line Sheet See Sheet No. 61



Note:
Exist Drive is
Relocated to
Sta. 555+00

Ella Dun Ditch



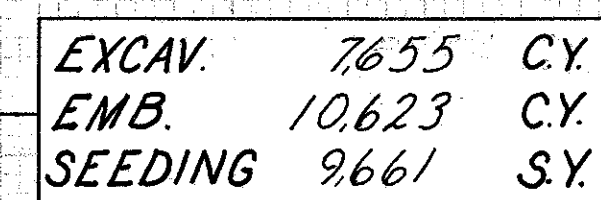
2 Strand Bark Wire Fence

Channel Easement.

Temporary Easement

NOTE

1. For Culvert Details See Sheet No. 269
2. For IR-70 Line Sheet See Sheet No. 62



300' V.C.
P.V.I. Sta 567+00
Elev. 959.76

200' V.C.
I. Sta 563+00
Elev. 969.36

$$+3.76\%$$

+12 Prop 84
Pipe Culvert

* 706.01, 706.02, or 706.03												** 706.02						
REF.	STATION TO STATION	SIDE	601		602		603				606		304		404		600	
			FOR	DUMPED			*15"	*66"			GUARD							
			DETAILS	ROCK	MASONRY	TYPE "A"	TYPE A			RAIL								
			SEE	CHANNEL	(CONC.)	W/C/B	W/C/B			TYPE								
			SHEETNO	PROT.	BEDDING	BEDDING												
				Cu. Yds.	Cu. Yds.	Lim. Ft.	Lim. Ft.	Lim. Ft.	C.Y.	C.Y.	S.Y.							
1-D	533+00 - 536+25	RT.																
2-D	534+83	LT/RT	258	16.6	4.26		82											207
3-D	549+00	LT/RT	258		0.52	40												
4-D	562+75 - 567+06	LT.																288
1-A	537+50	LT.	228											143.41				
2-A	555+00	LT.	233											11.9				
1-GR	534+00 to 535+00	RT										100						
2-GR	534+50 to 535+50	LT										100						
3-GR	564+50 to 568+75	LT										425						
TOTALS				16.6	4.78	40	82	625	262.41	499								

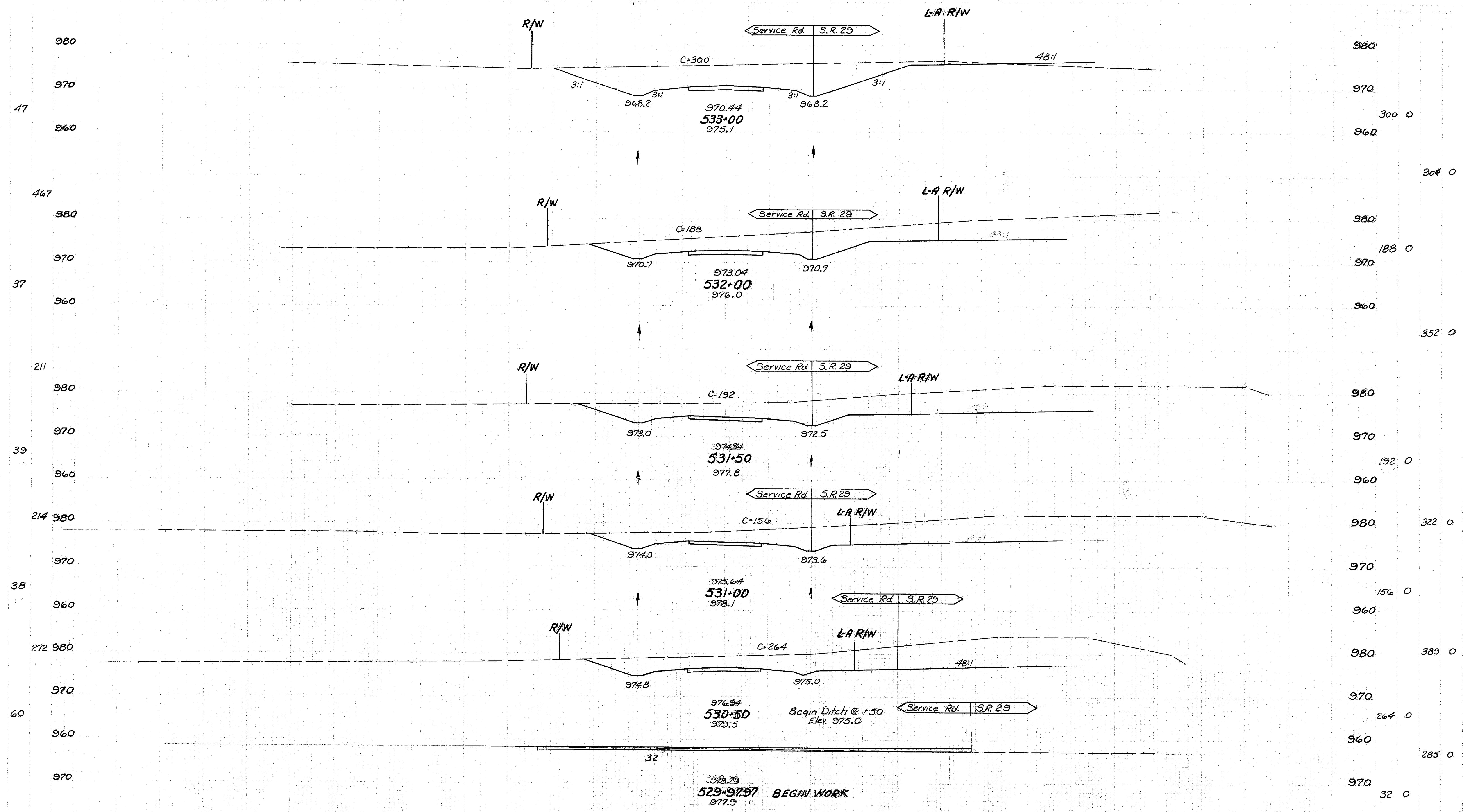
Totals carried to Sheet No. 37

STA.560+00 TO STA.569+65.63 SERVICE ROAD

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

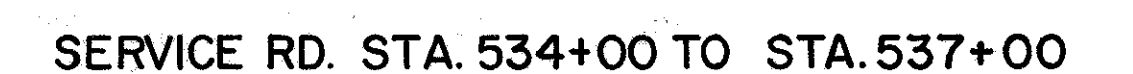
MADISON COUNTY
MAD-70-6.25

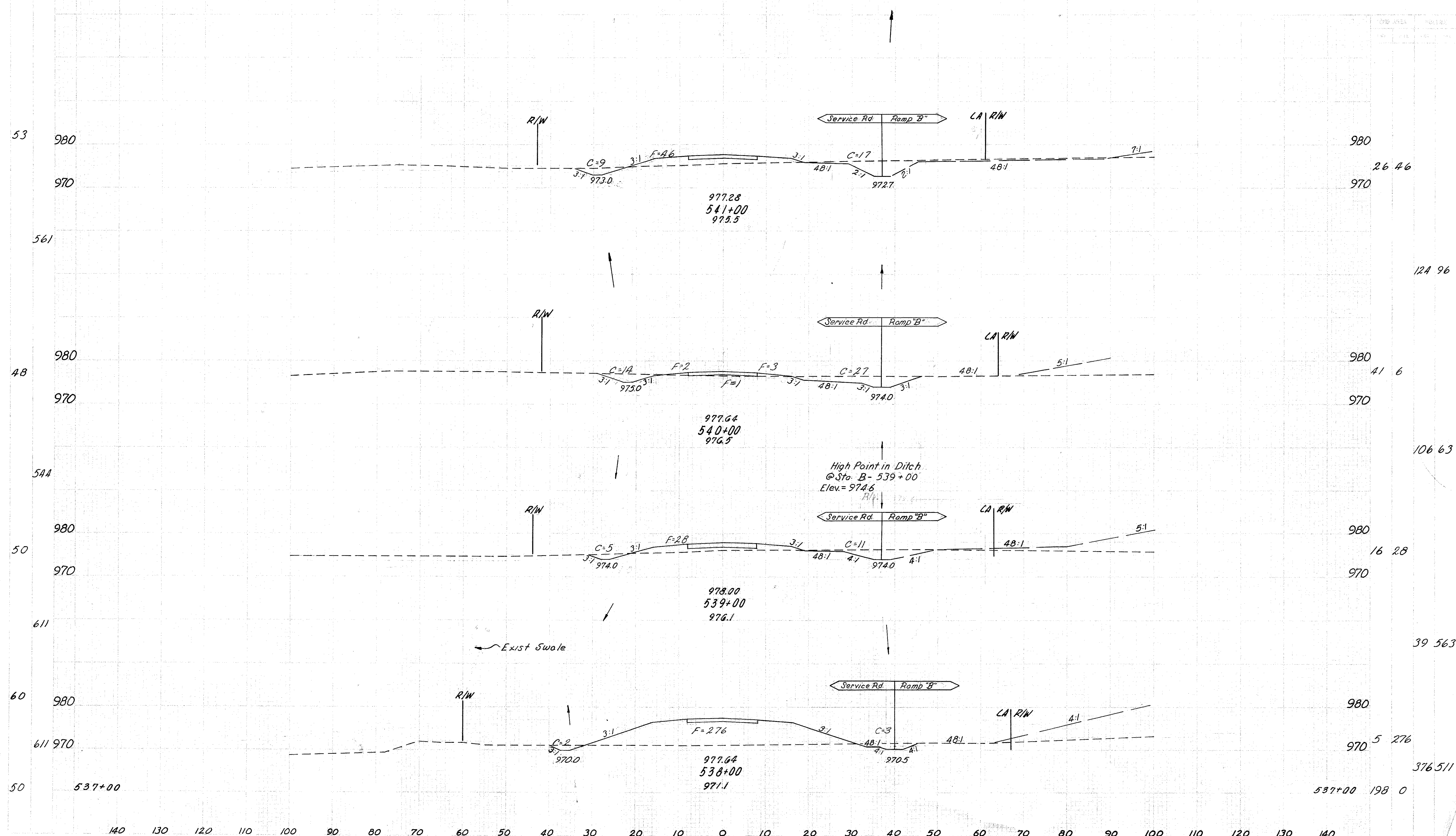
227
394



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

SERVICE RD STA 529+97.97 TO STA 533+00

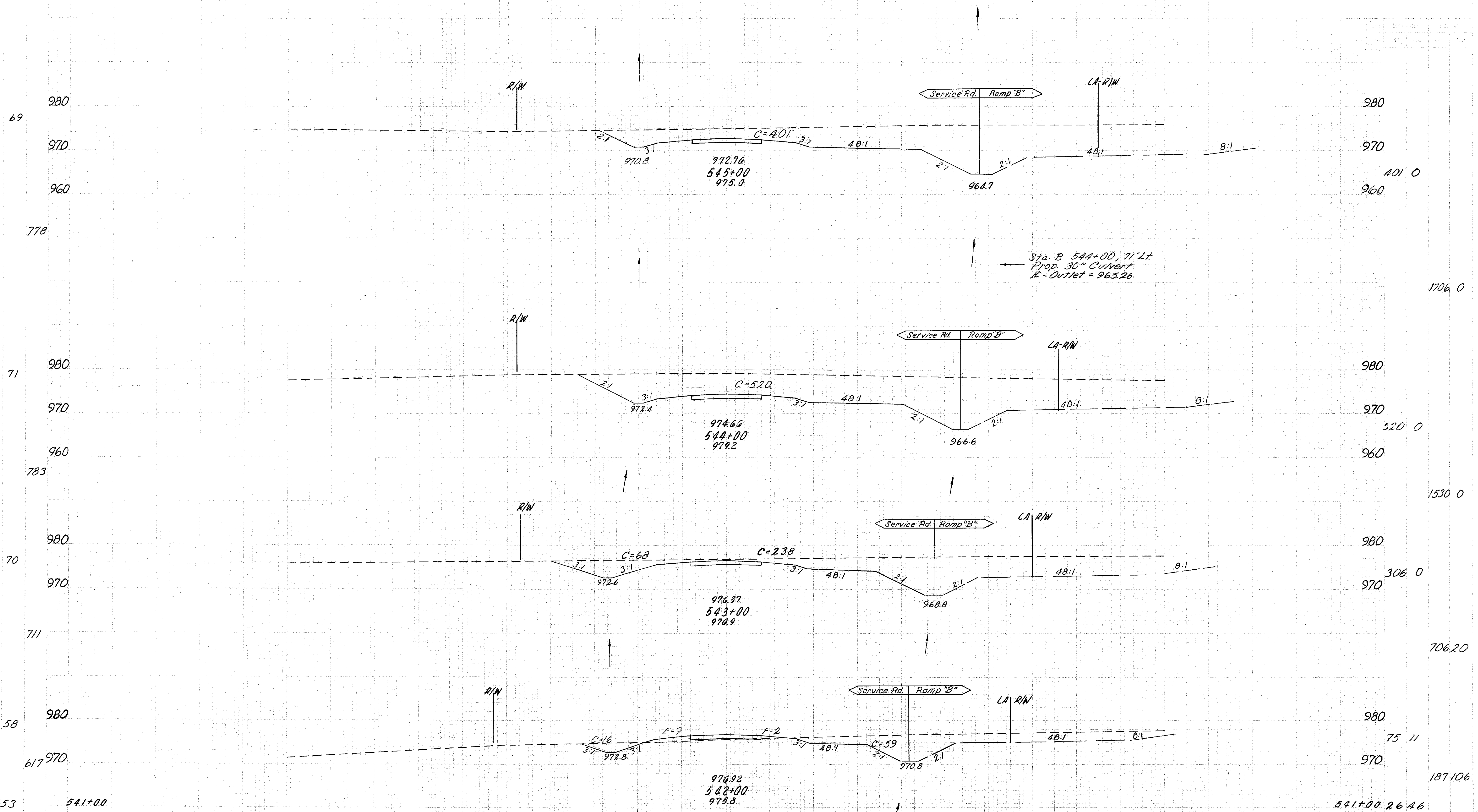




140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

230
374

MADISON COUNTY
MAD- 70-6.25

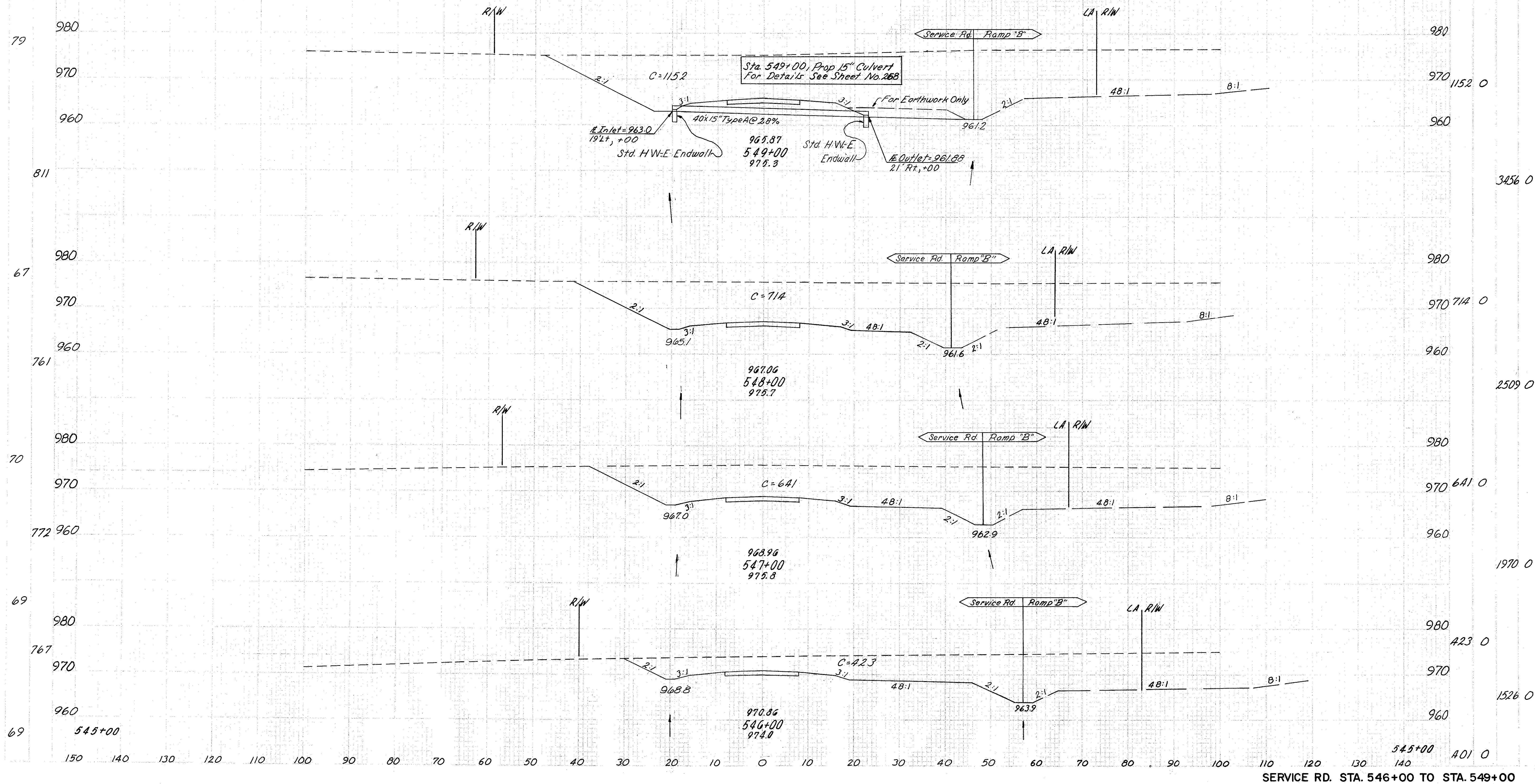


140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

MADISON COUNTY
MAD - 70-6.25

231

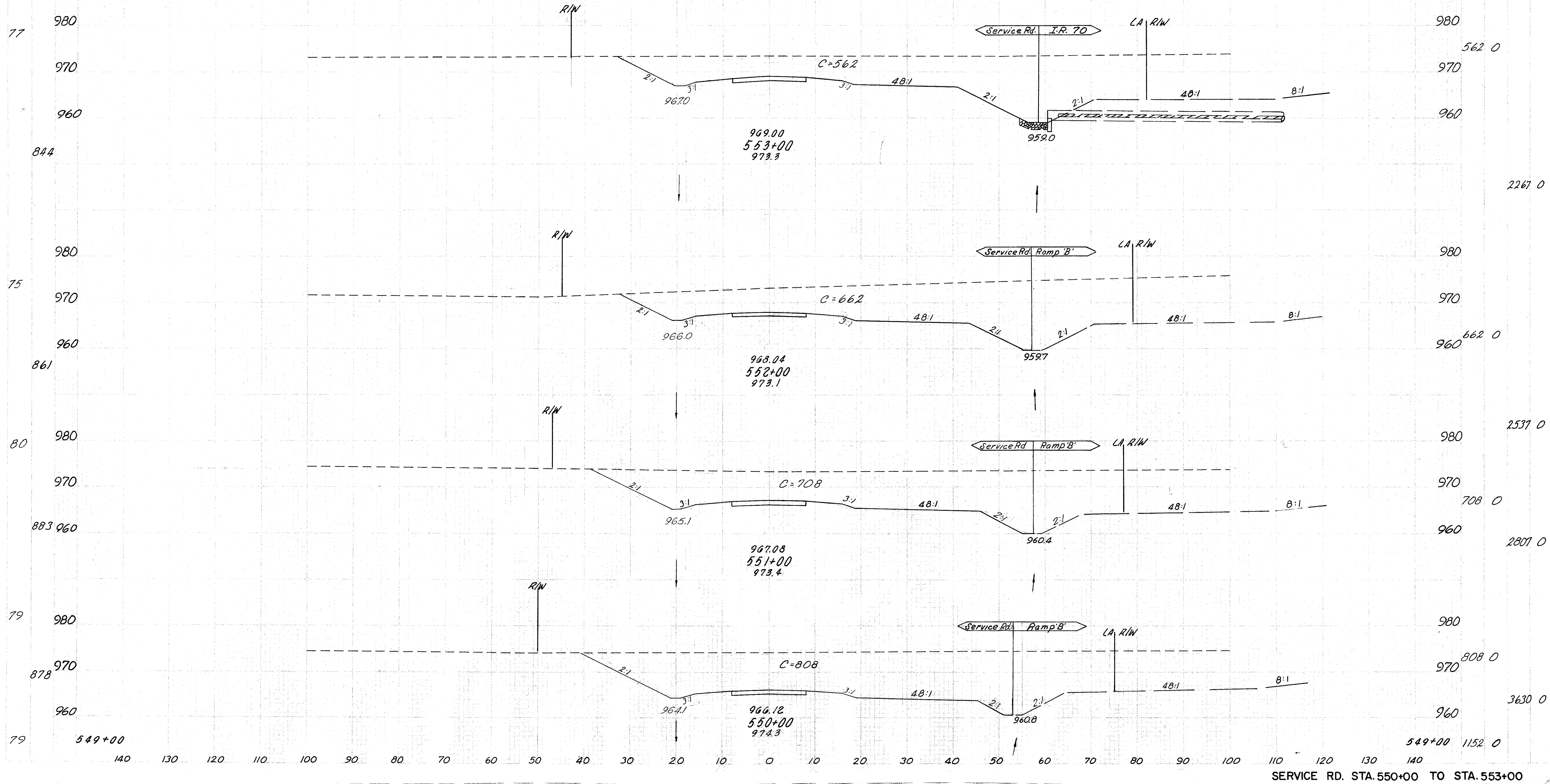
374

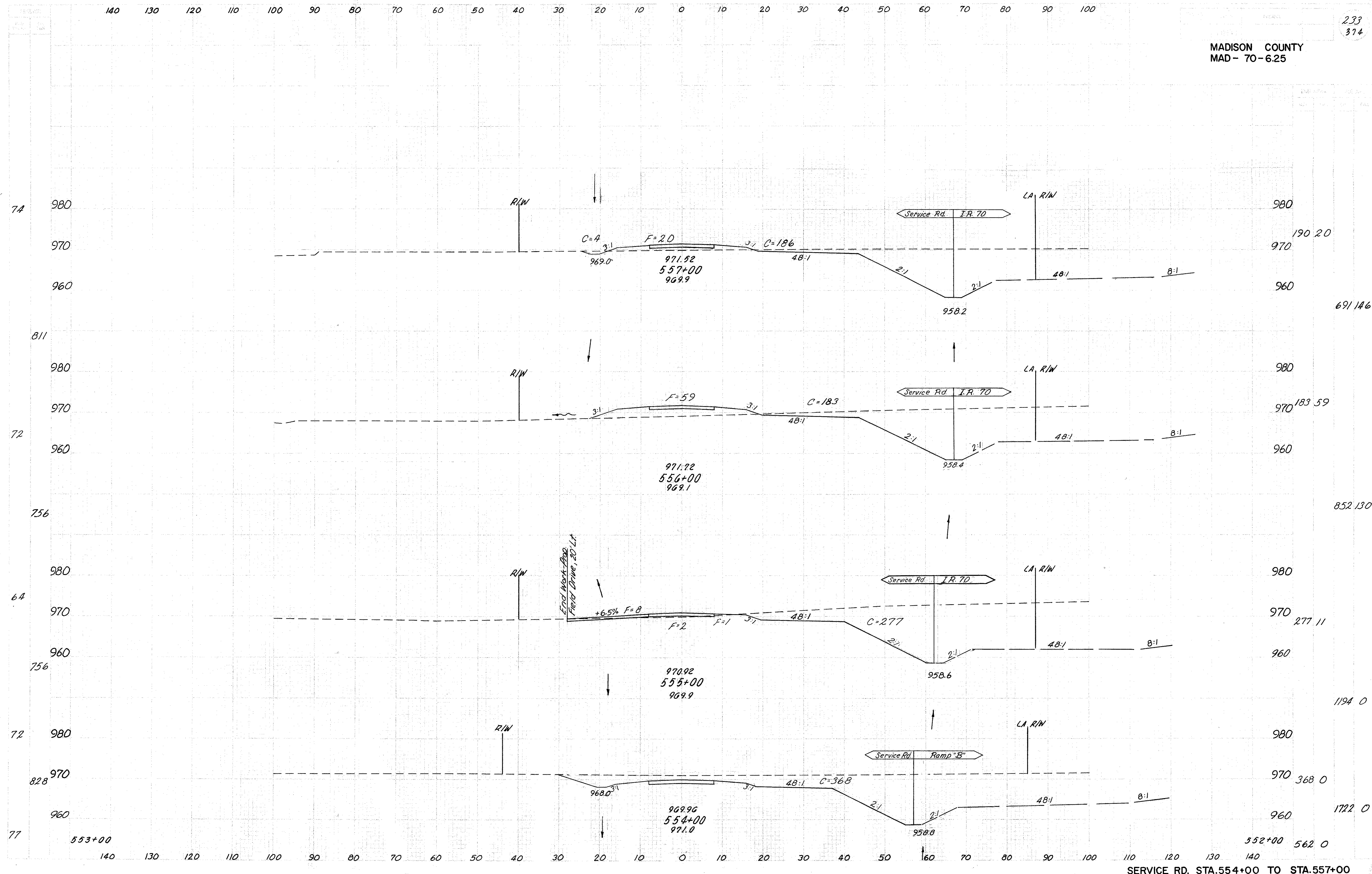


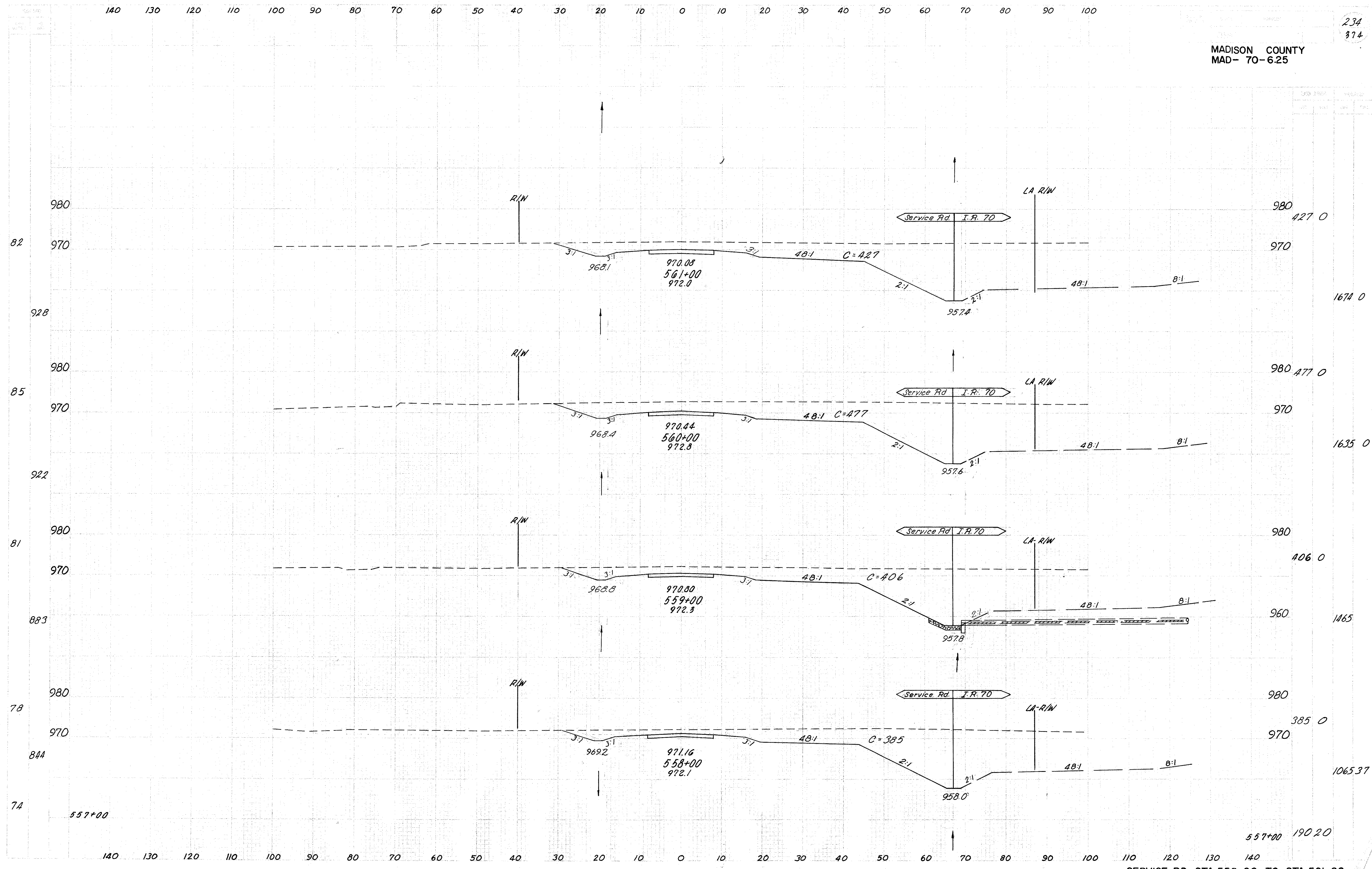
140 131 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

MADISON COUNTY
MAD- 70-625

232
374



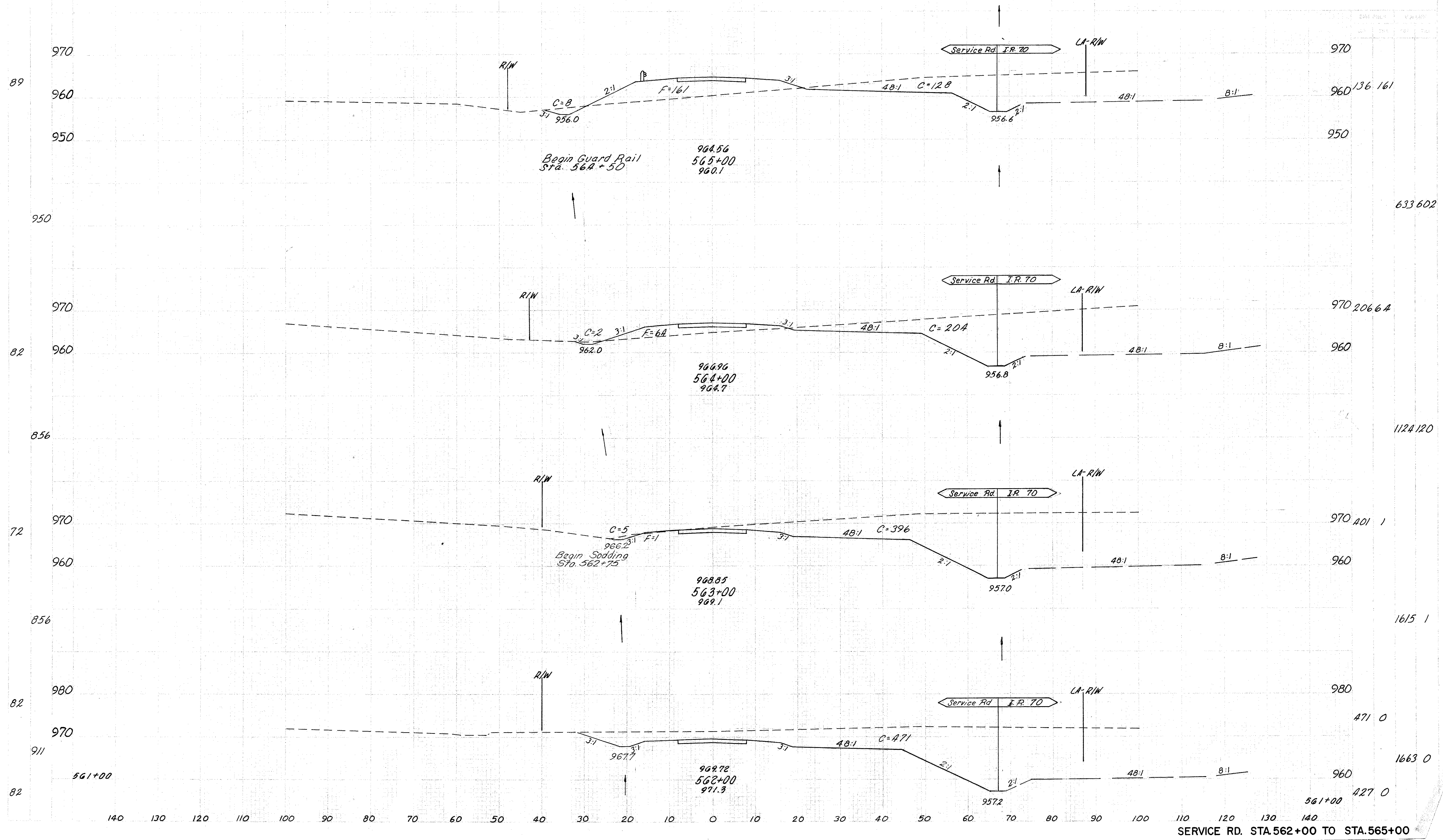




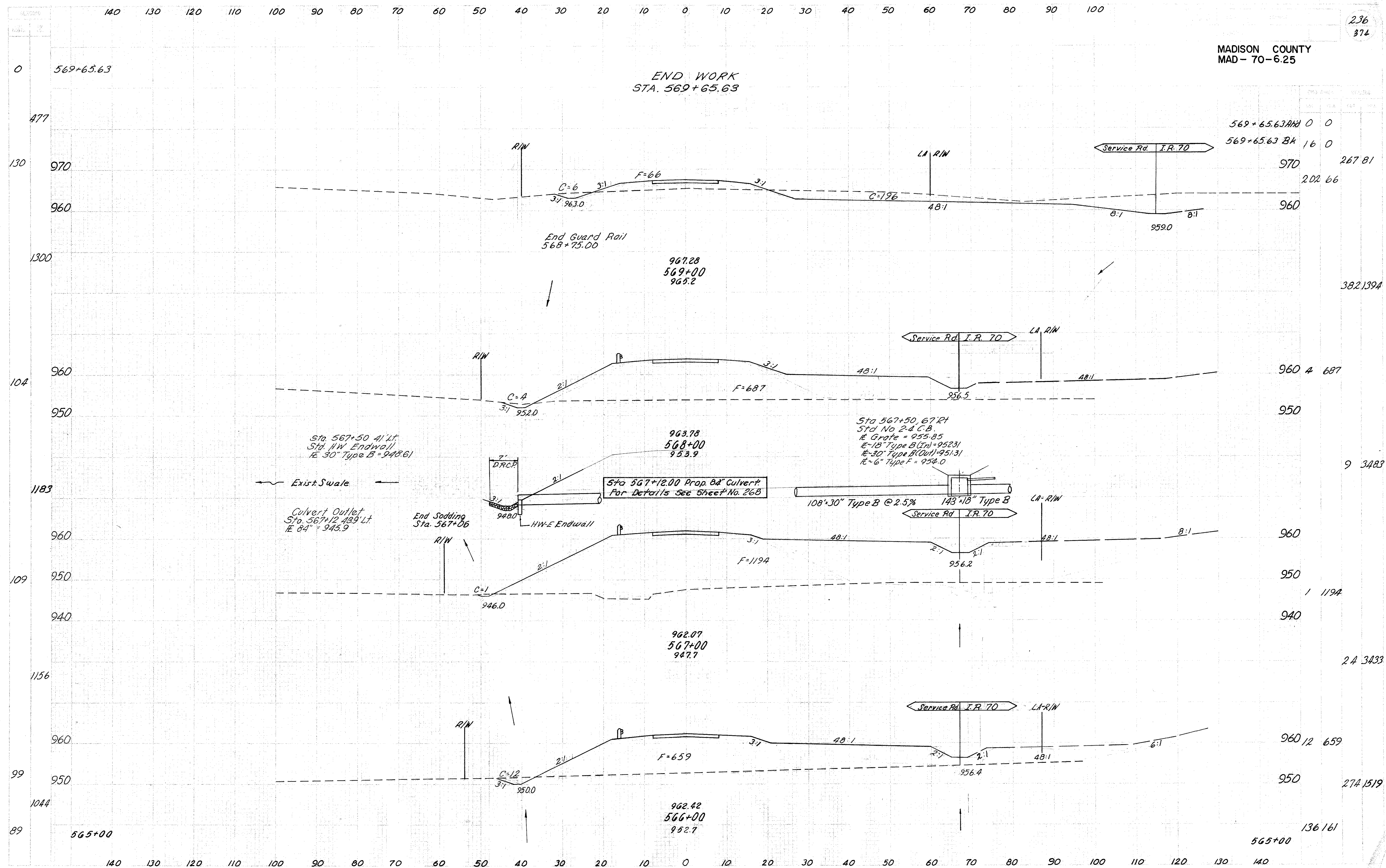
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

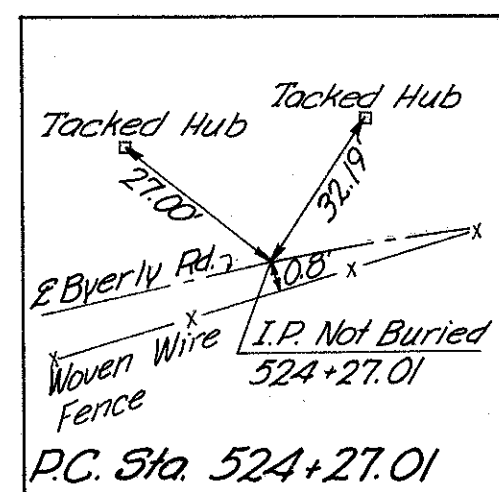
MADISON COUNTY
MAD - 70-6.25

235
374



MADISON COUNTY
MAD - 70-6.25



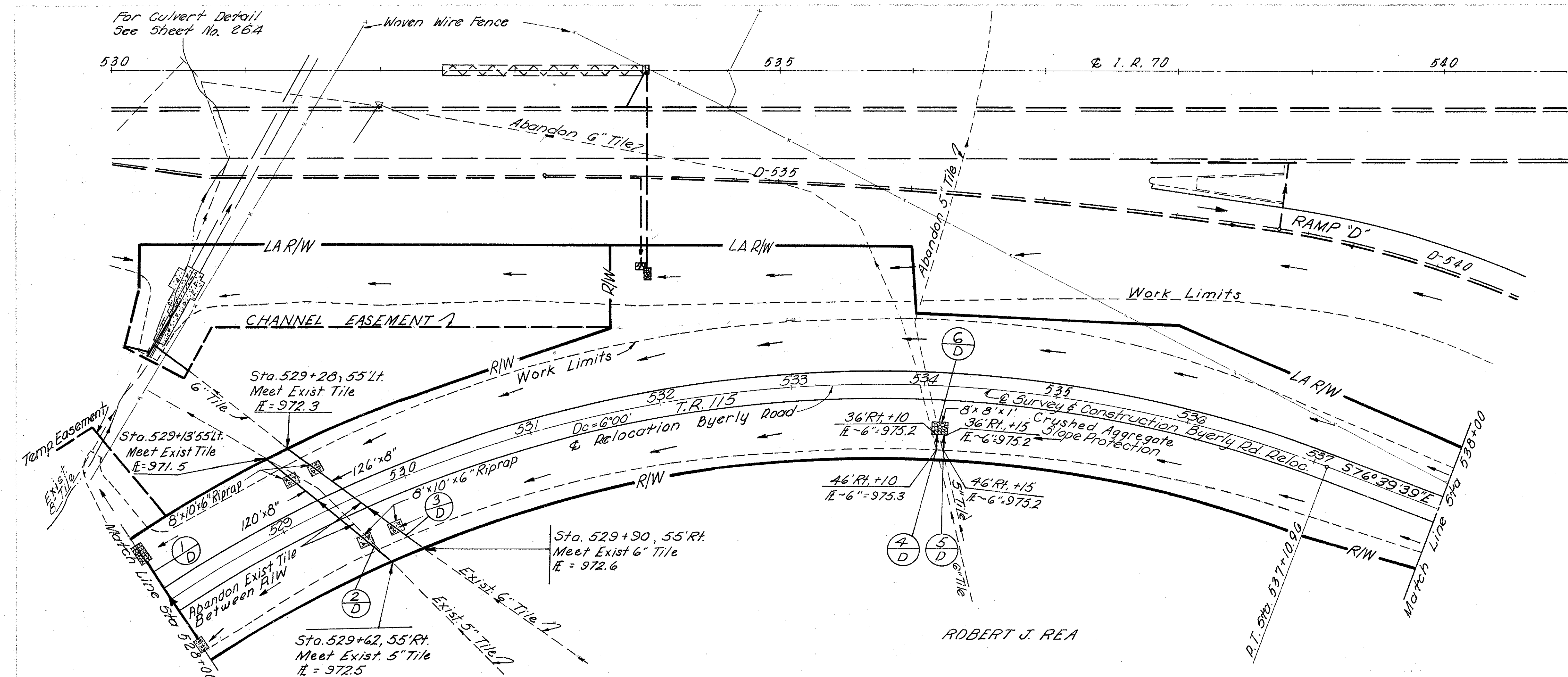


NOTES:

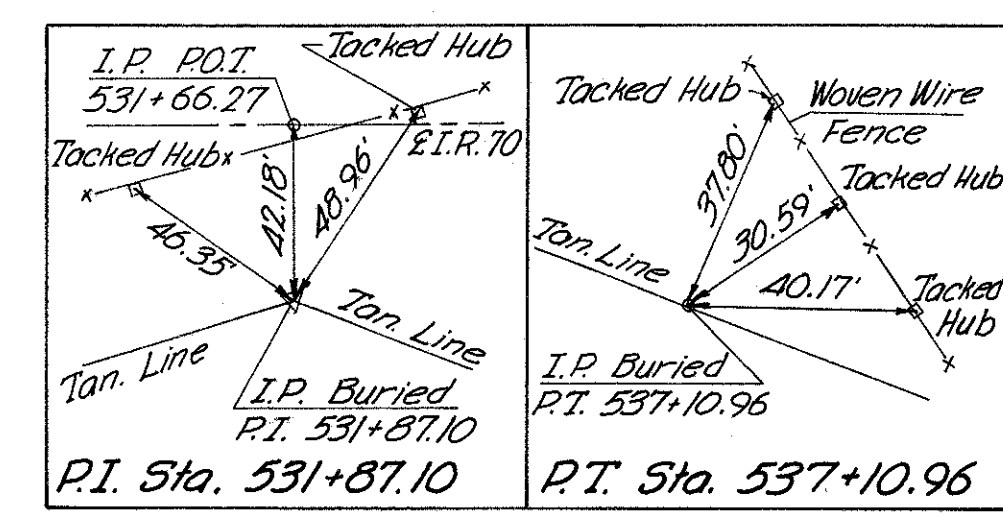
1. Use Type 2 Driveways per Std. Const. Dwg. B-P-6
2. See Cross Sections for length & grades
3. For Quantities See Sheet No. 240



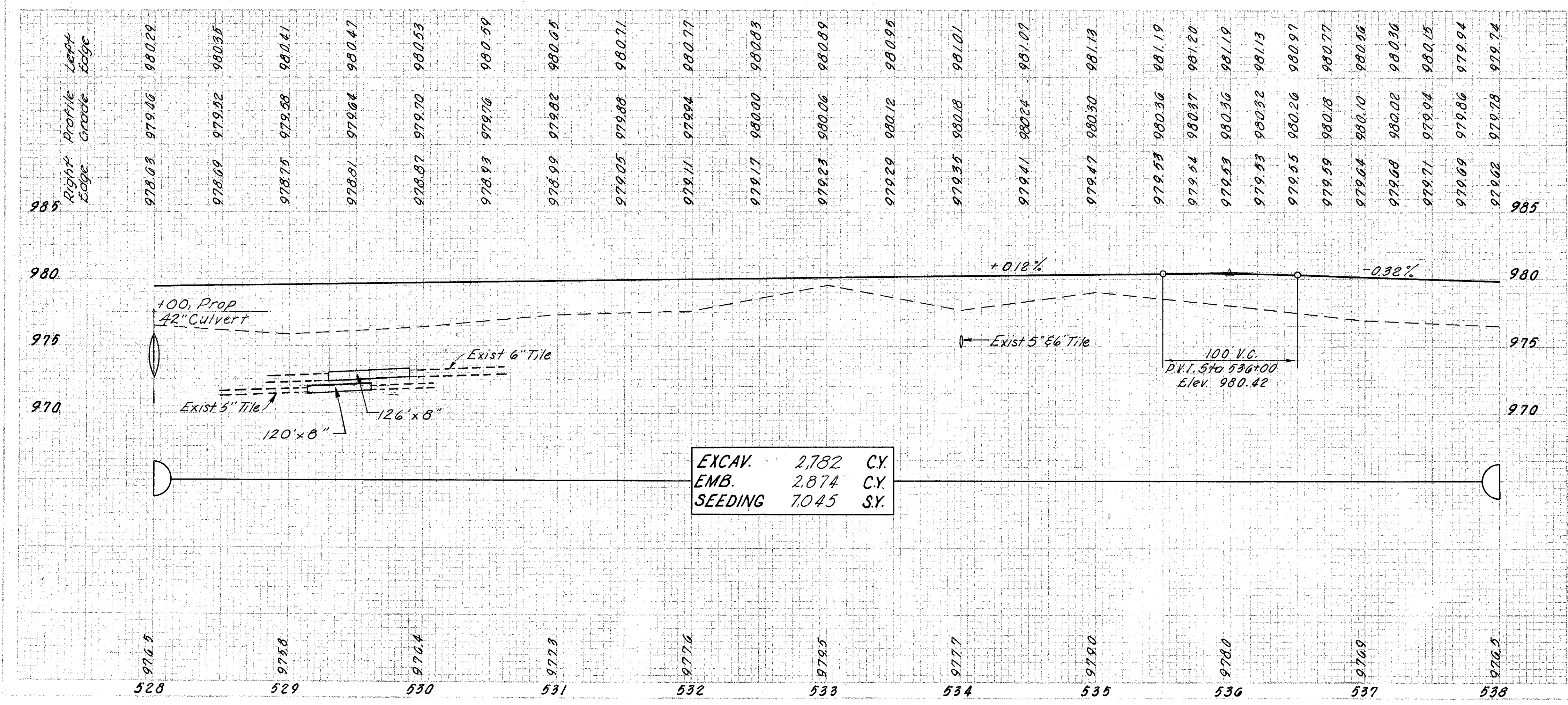
MADISON COUNTY
MAD- 70- 6.25



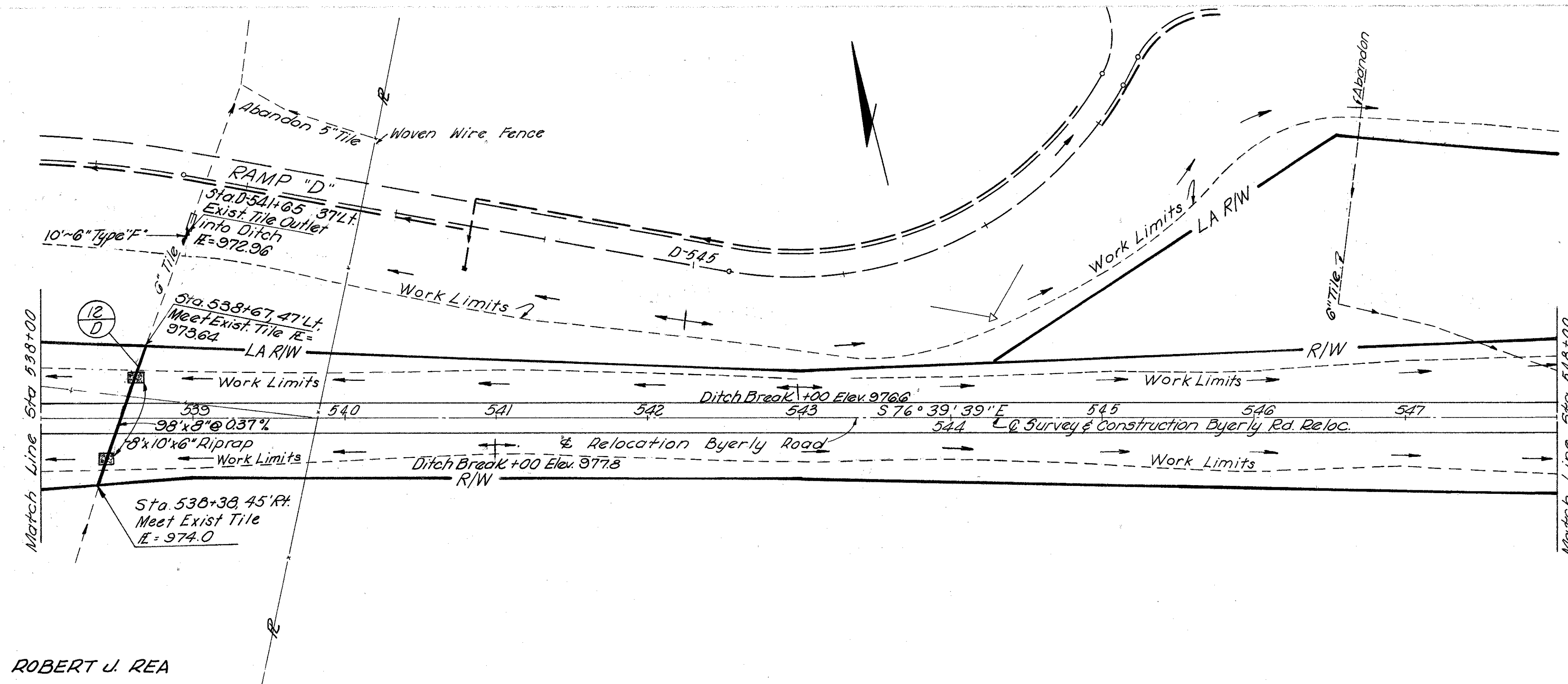
NOTES:
For Curve Data See Sheet No. 237
For Quantities See Sheet No. 240
For Ramp "D" See Sheet No. 197



ROBERT J. REA



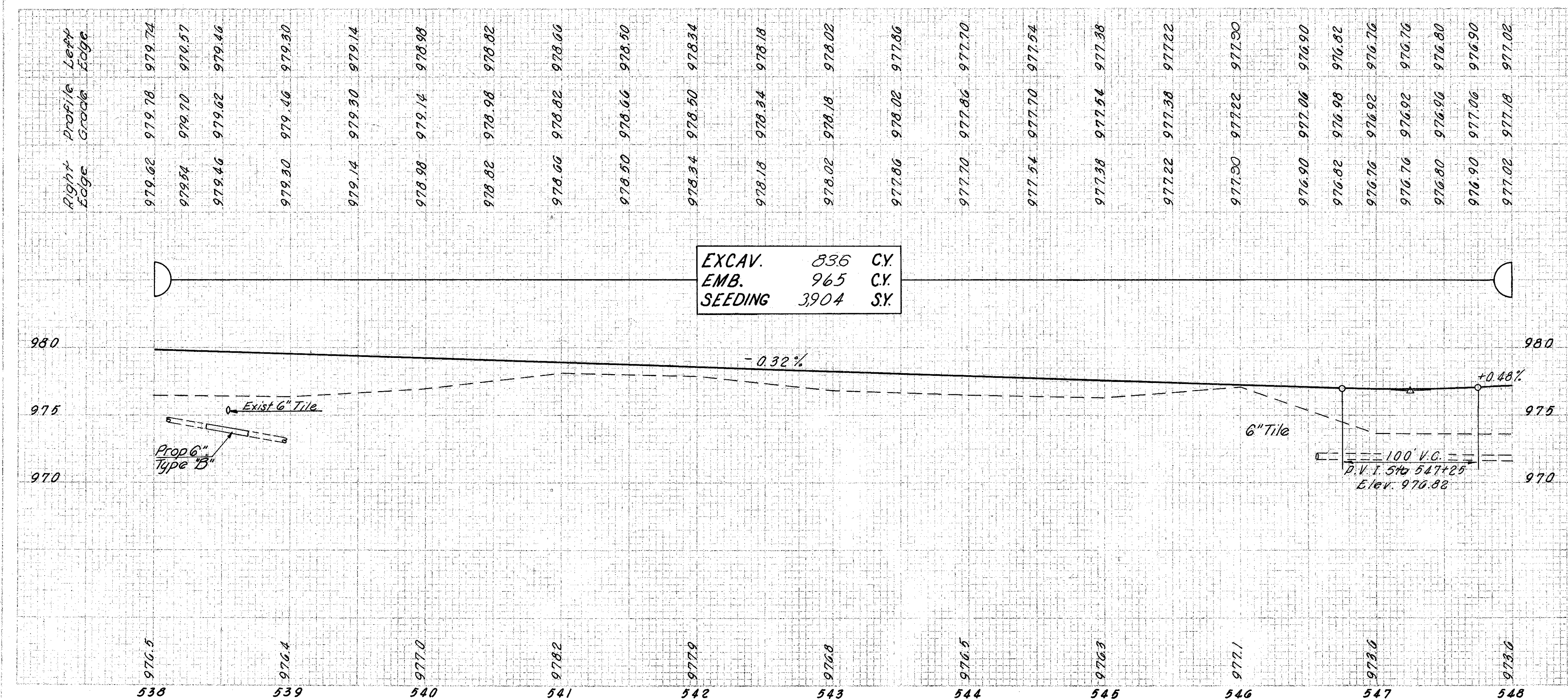
EXCAV.	2,782	C.Y.
EMB.	2,874	C.Y.
SEEDING	7,045	S.Y.



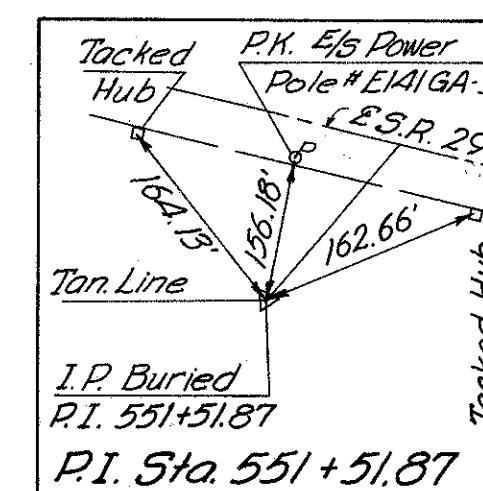
ROBERT J. REA

THOMAS WOOD

NOTES:
1. For Quantities See Sheet No. 240
2. For Ramp "D" Line Sheet See Sheet No. 209

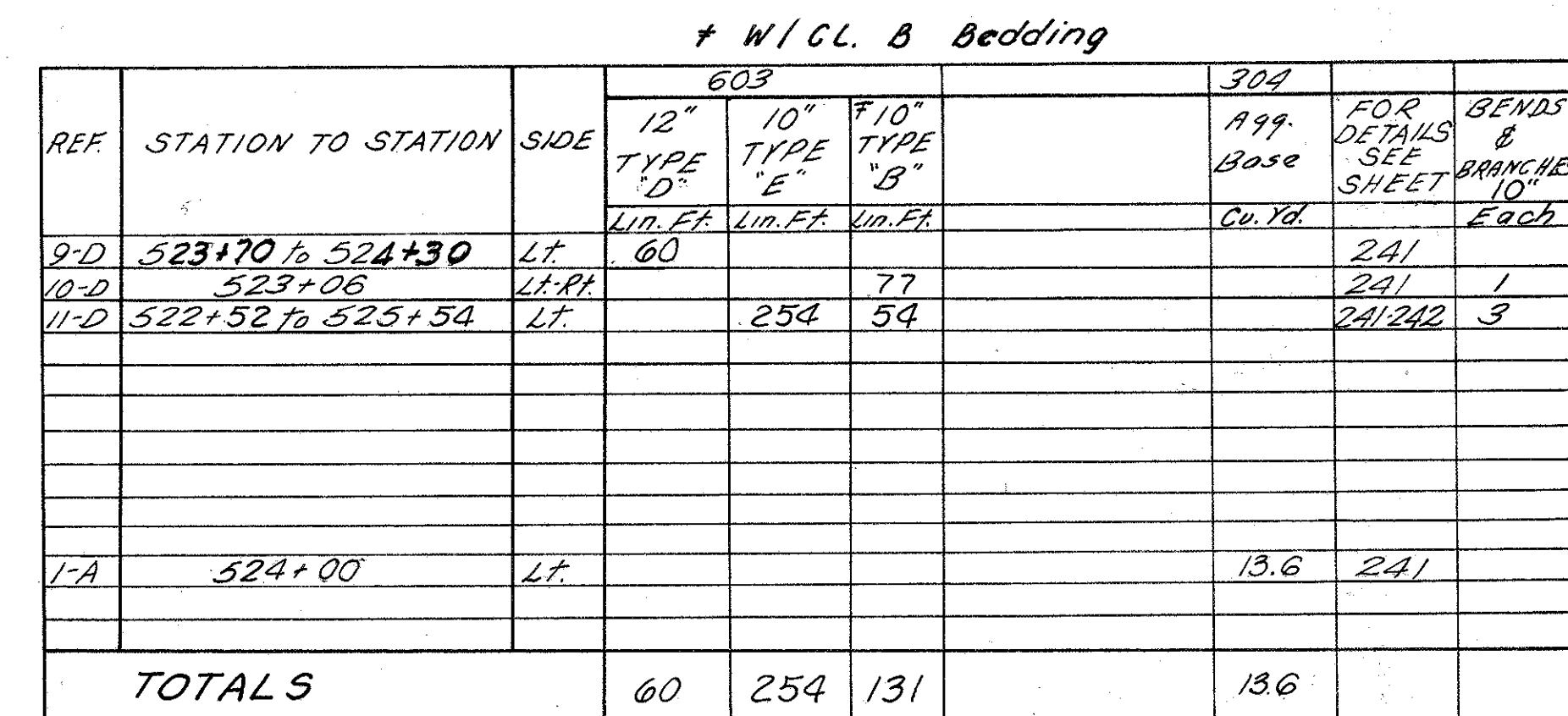


4



1. For SR 29 Line Sheet, See Sheet N^o 197

THOMAS WOOD

[illegible]

Totals carried to Sheet No. 37

STA.548+00 TO STA.553+35.20 BYERLY ROAD RELOC.

44

980

970

980

23 62

970

433

+00 Add for Drive Lt.

13

67 194

34

980

970

980

13 43

970

383

76 102

35

980

970

980

28 12

970

78 22

194

521+00 Ahead 14 0
521+00 Back 0 0

0

521+00 Ahead

980

970

980

970

979.25
521+00
979.25
BEGIN WORK
STA 521+00

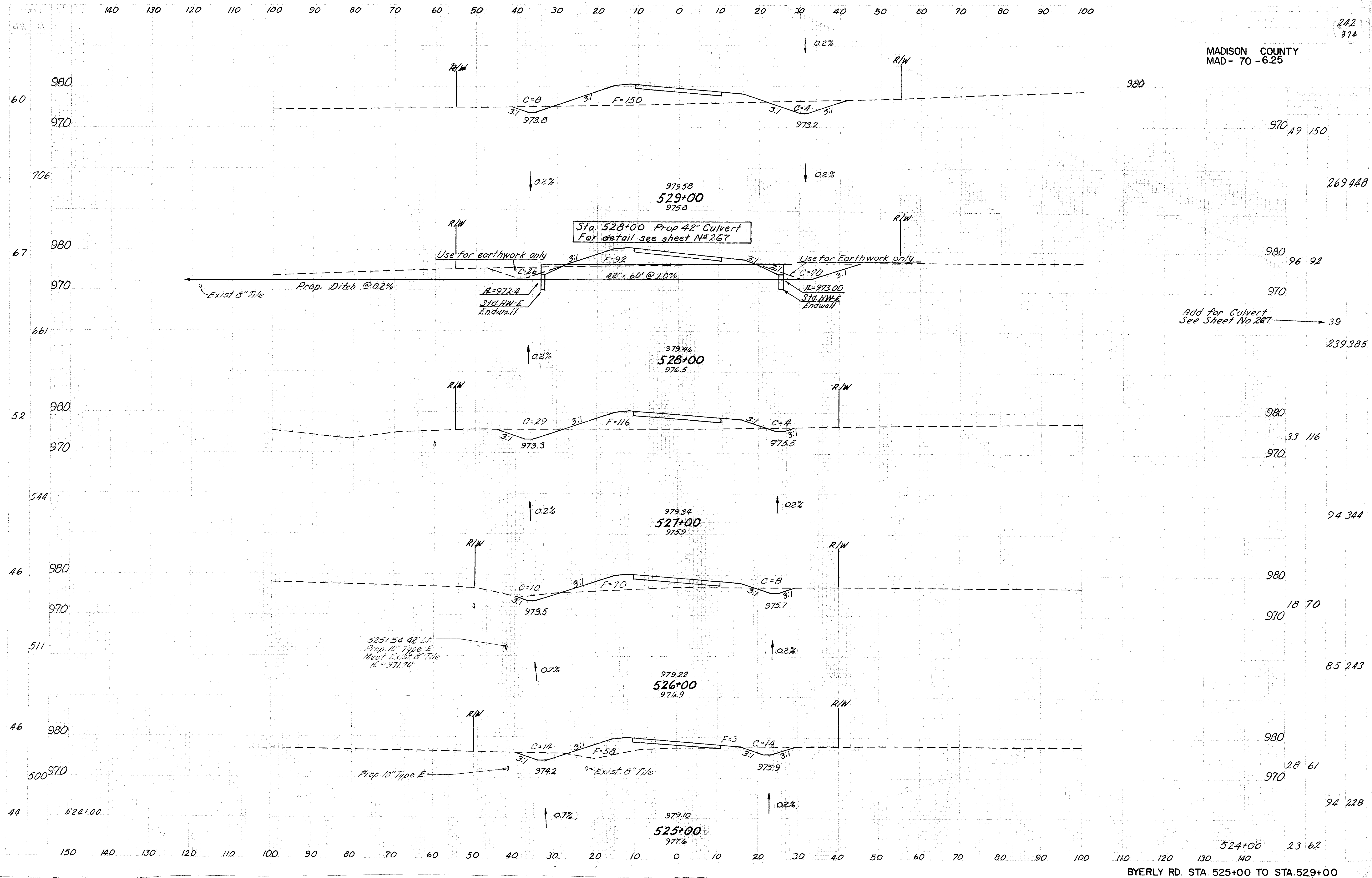
980

970

980

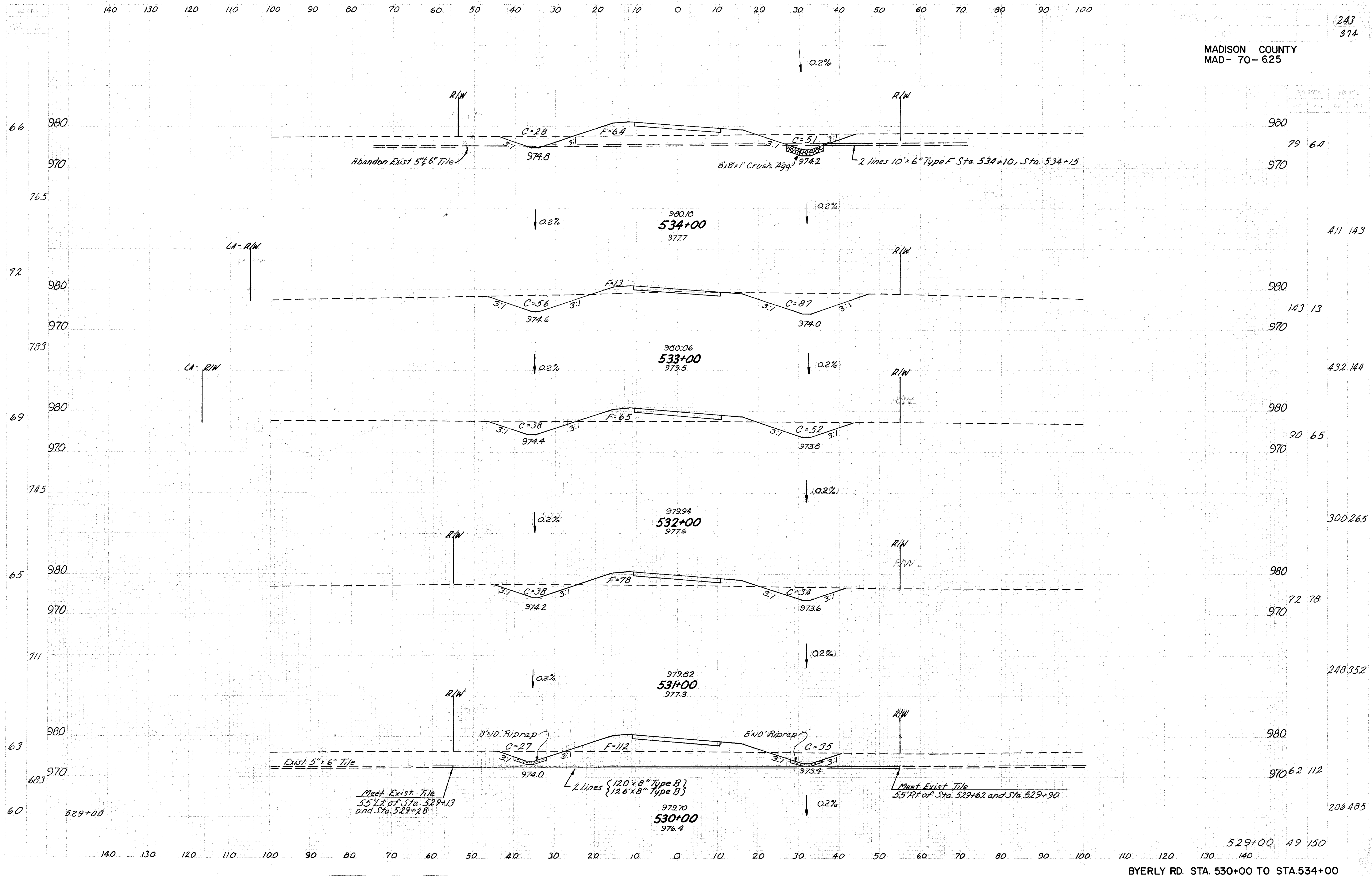
970

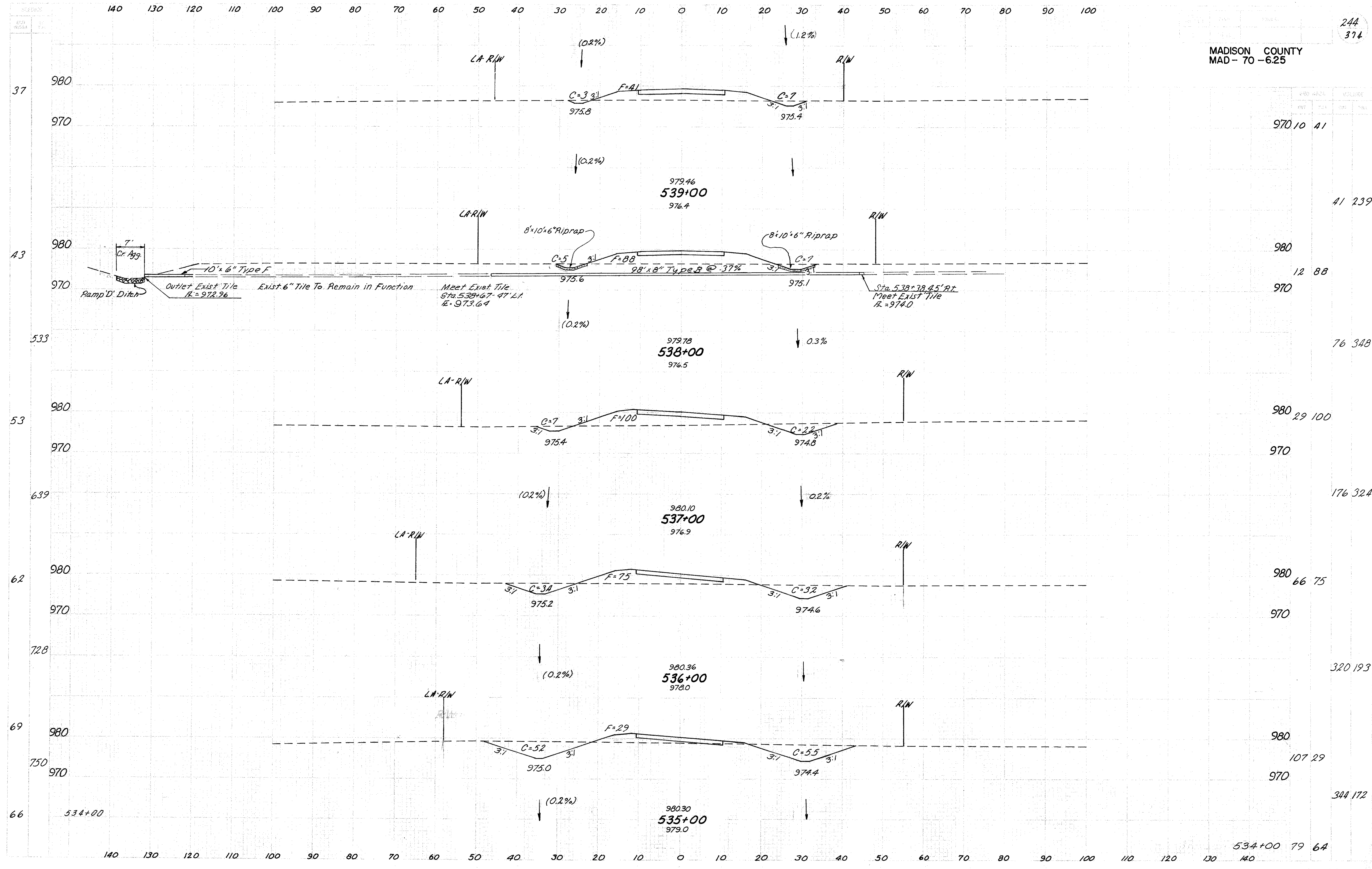
520+00
979.77



MADISON COUNTY
MAD- 70- 625

243
374





MADISON COUNTY
MAD - 70 - 625

244
374

970 10 41

41 239

12 88

76 348

29 100

176 324

66 75

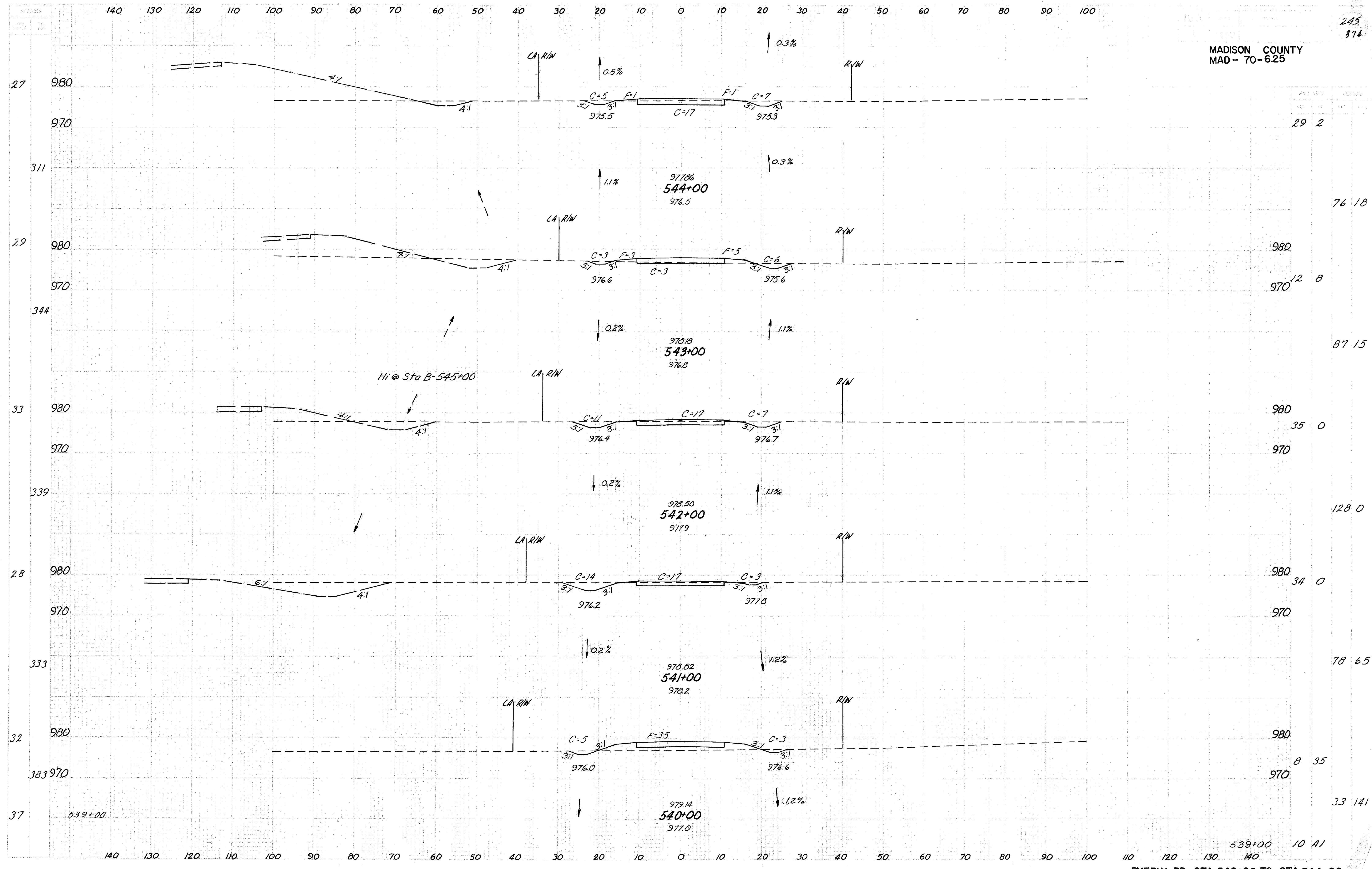
320 193

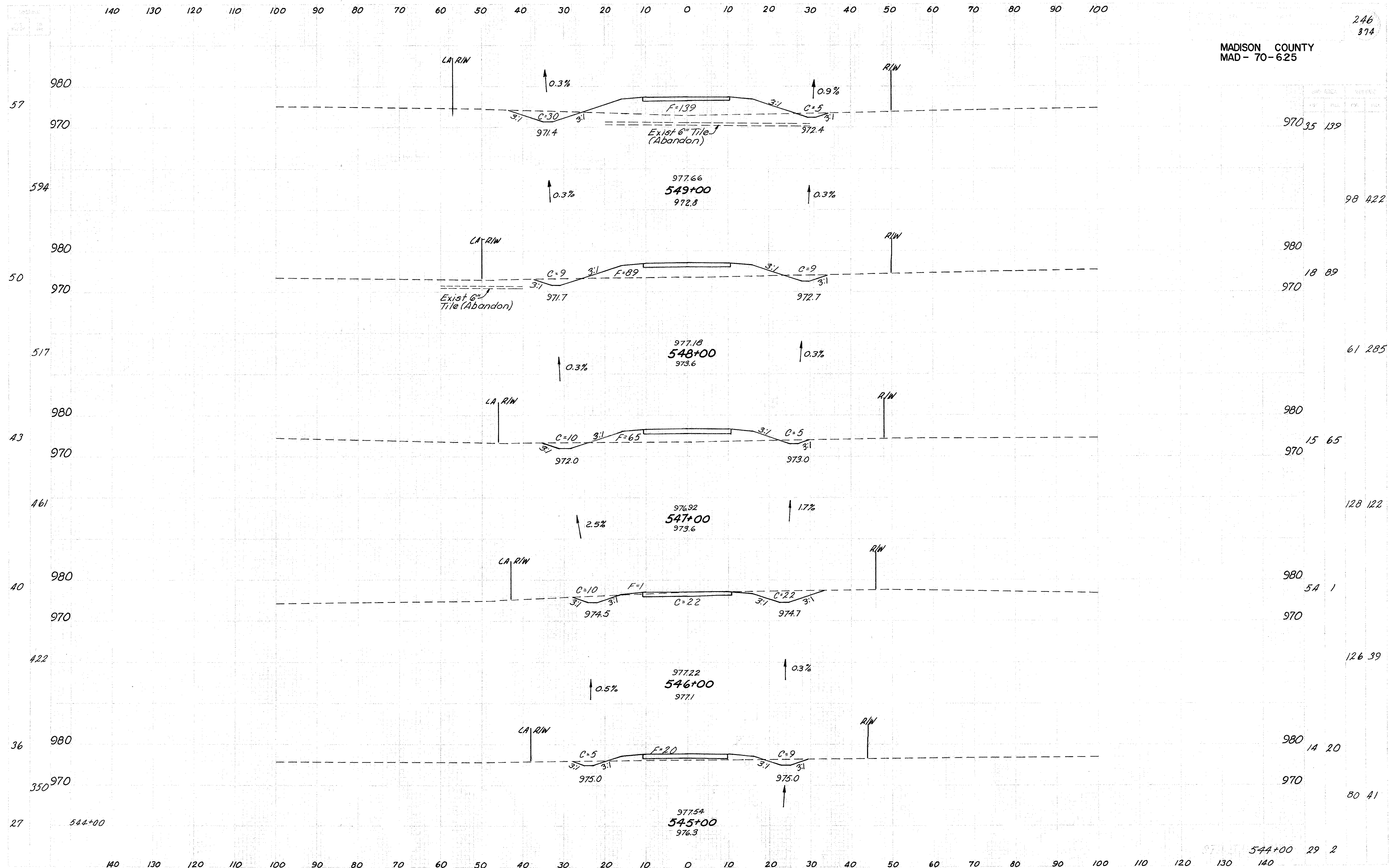
107 29

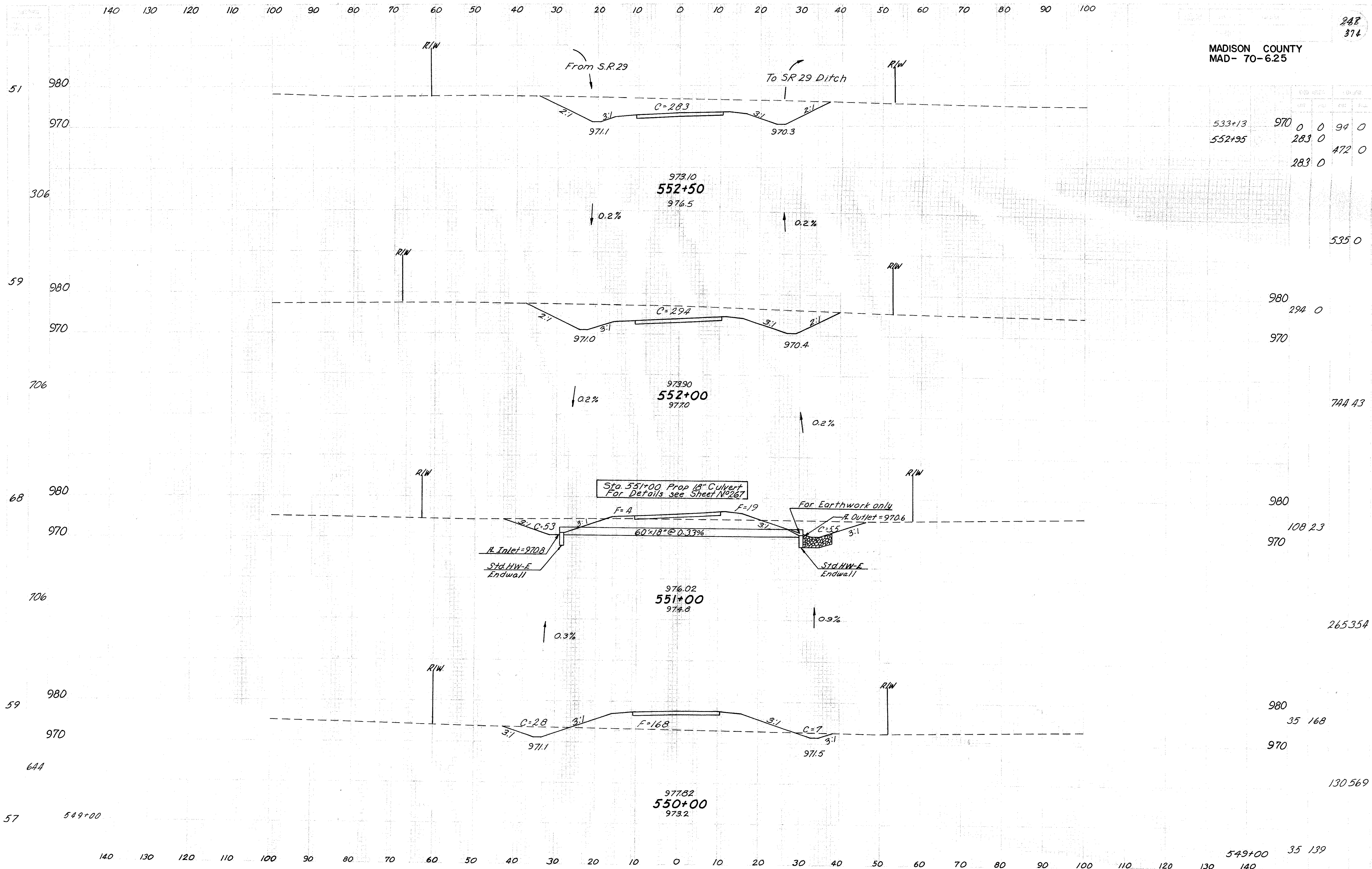
344 172

534+00 79 64

BYERLY RD. STA. 535+00 TO STA. 539+00







533+13	970	0	0	94	0
552+95	283	0		472	0
	283	0			

535 0

980
294 0

970

744 43

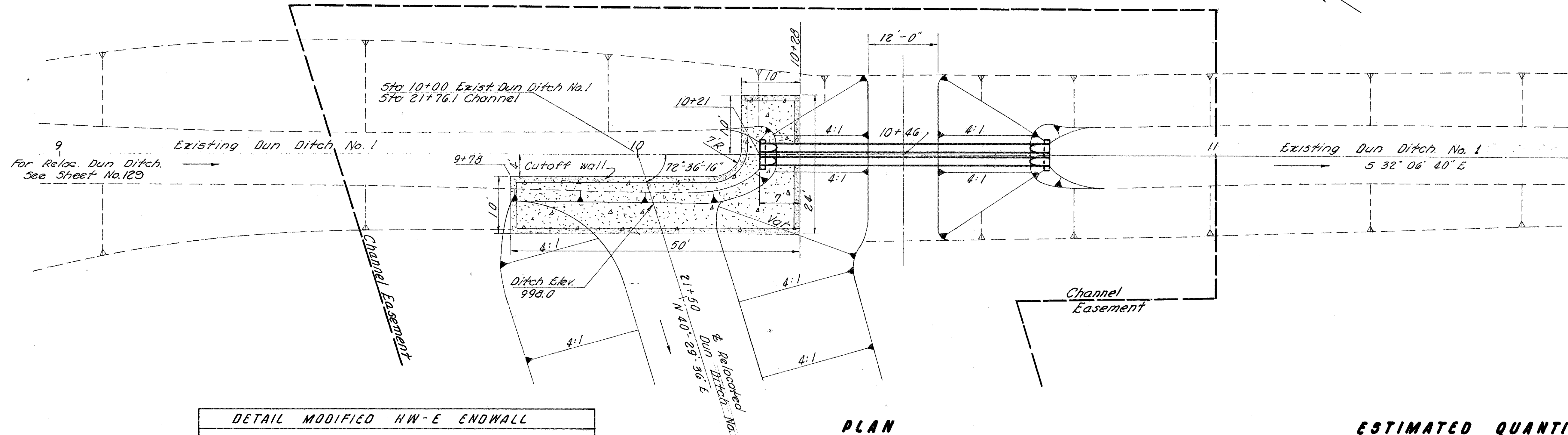
980
108 23
970

265 354

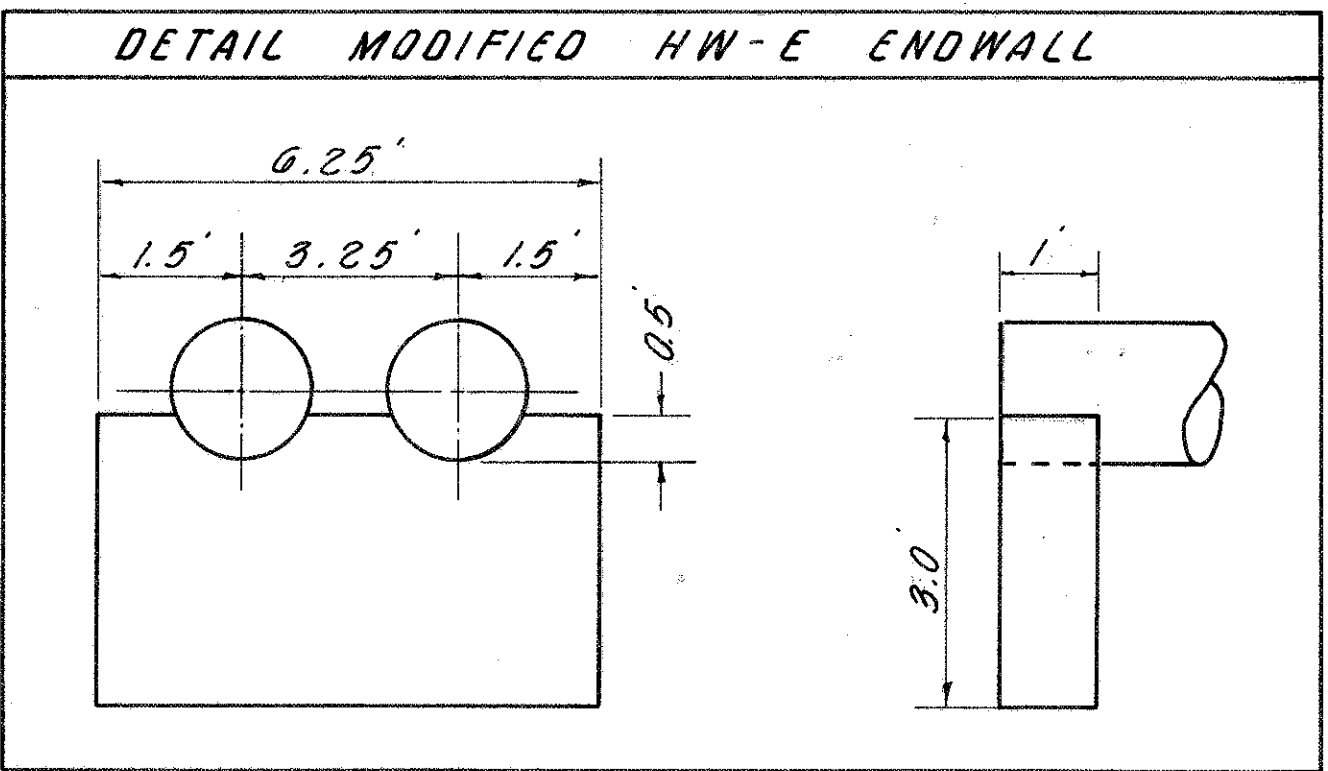
980
35 168
970

130 569

549+00 35 139



PLAN



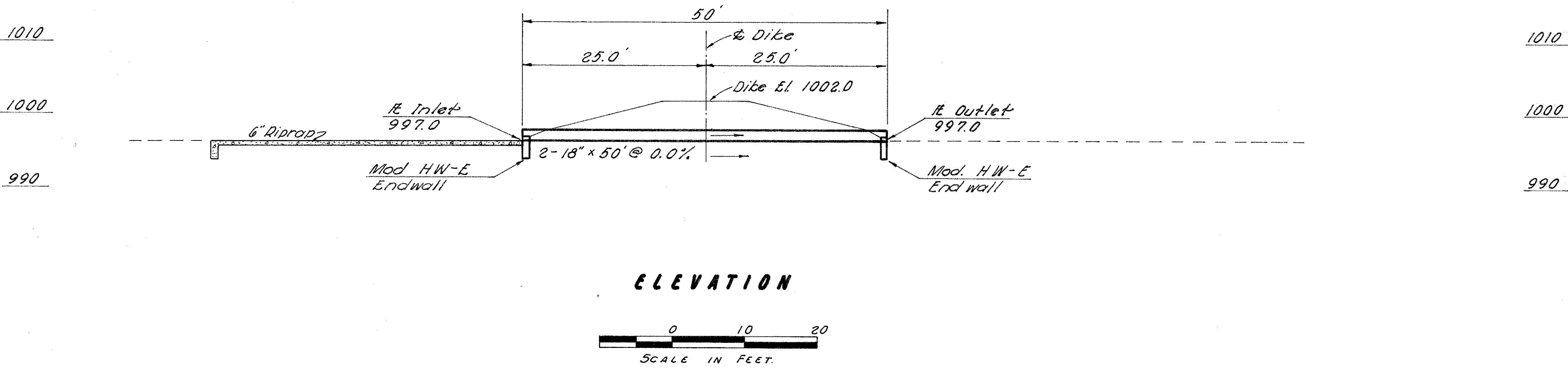
ESTIMATED QUANTITIES

601	Riprap 6" Reinforced Concrete	71.7 SY.
602	Concrete Masonry	1.13 CY.
603	18" Conduit, Type D2	100 L.F.

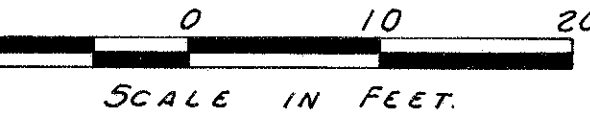
NOTE:
Quantities Carried to Lafayette Mechanicsburg Road Line Sheet No. 132

ESTIMATED EARTHWORK	END AREA	VOL.
Sta 10+71	0	33
1002.0	95	
Sta 10+52	997.0	42
1002.00	95	
Sta 10+40	997.0	33
Sta 10+21	0	
TOTAL FILL=		108 CY

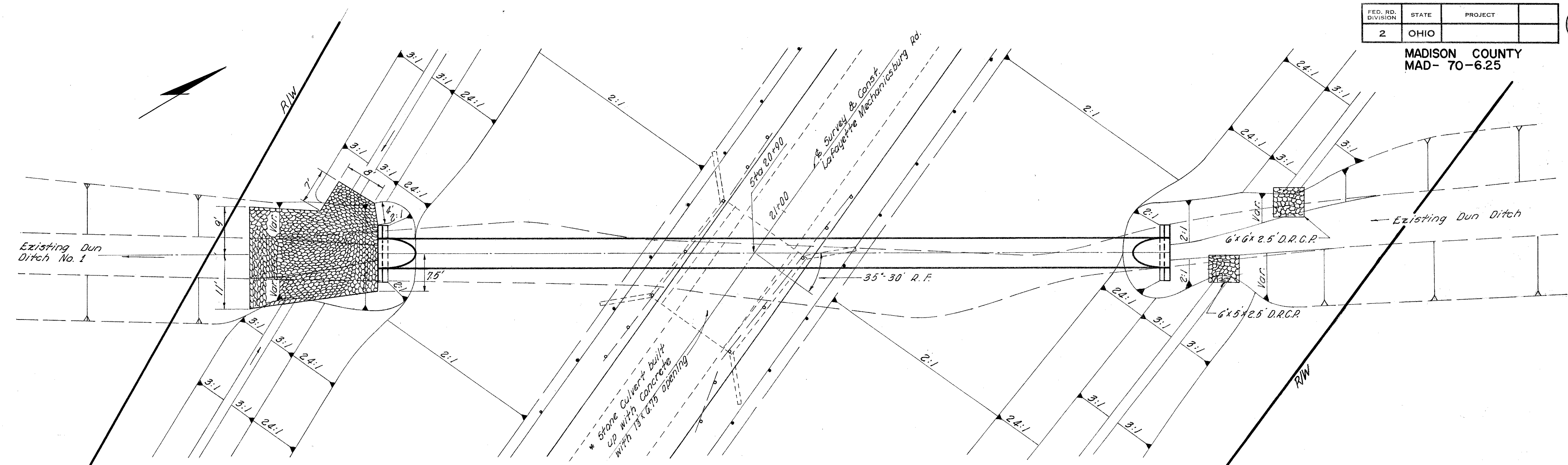
* Total of Item 203 is Carried to Lafayette Mechanicsburg Road Cross Section Sheet No 138



ELEVATION



MADISON COUNTY
MAD- 70-6.25



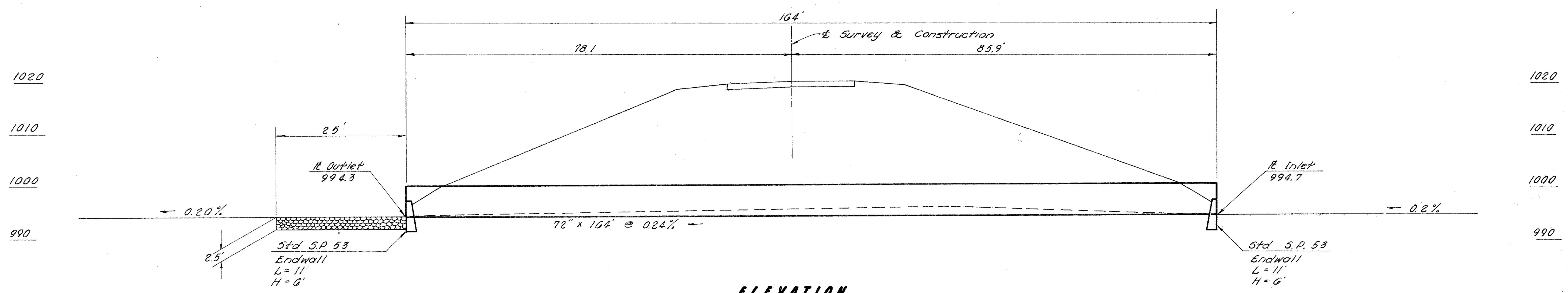
* Note: Existing Structure to be Removed under Item 202

PLAN

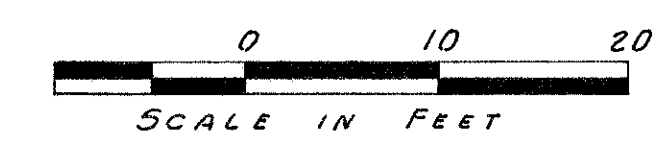
Drainage Area = 248 Ac.
Q 50 = 144 Cfs.

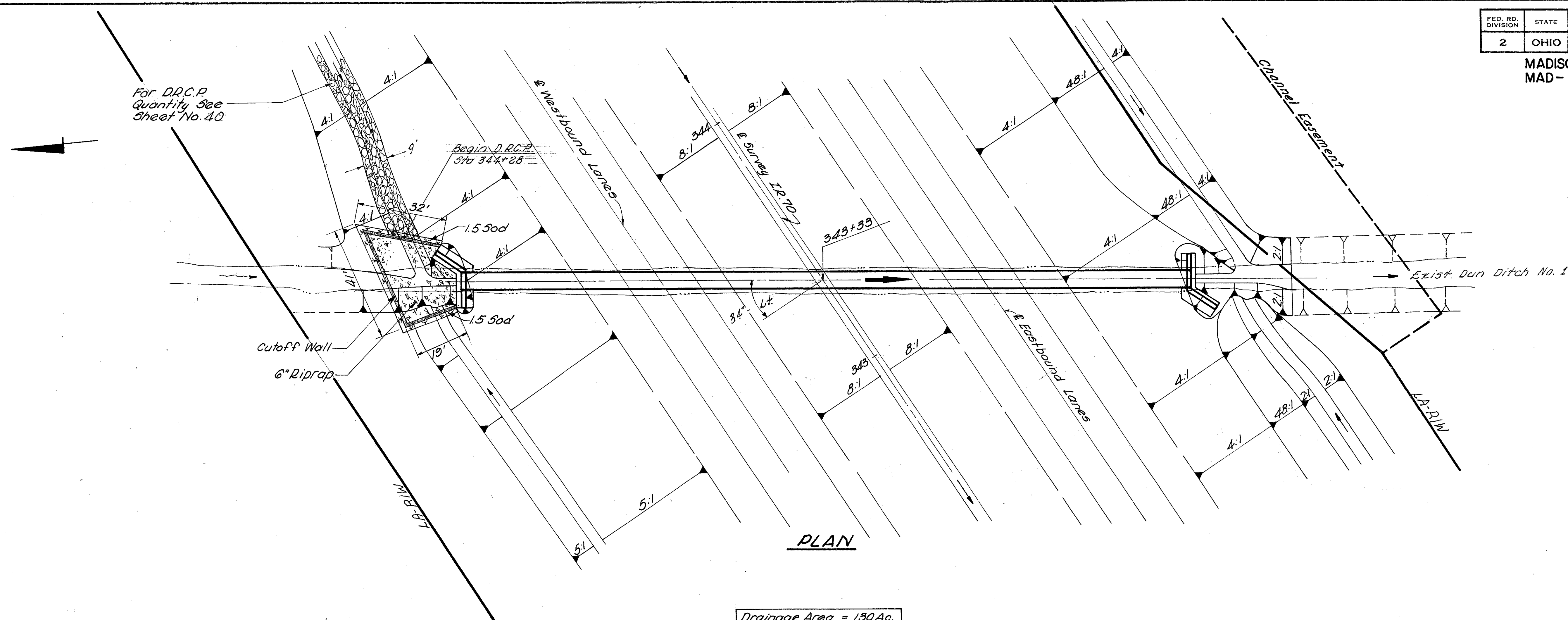
ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	51.0	C.Y.
602	Concrete Masonry	5.46	C.Y.
603	72" Conduit, Type A 706.02 Class IV, with Class B Bedding	164	L.F.
202	Existing Structures Removed		Lump.



ELEVATION

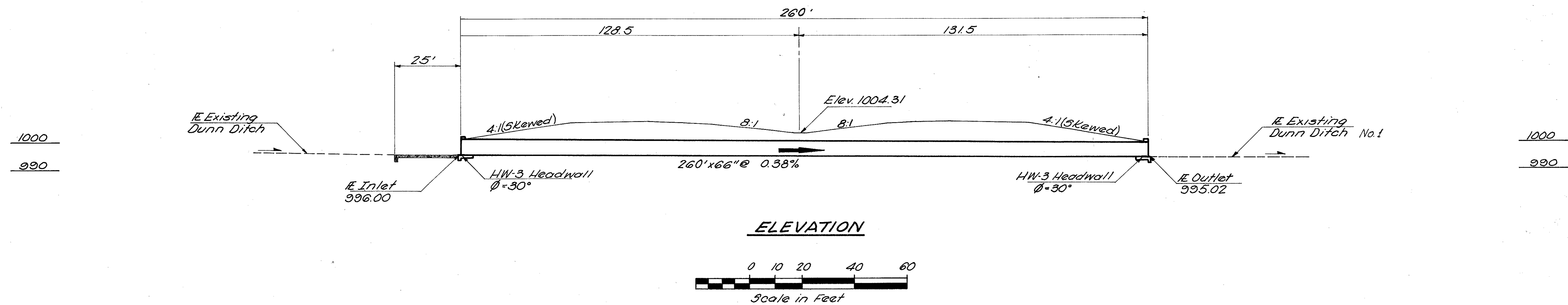


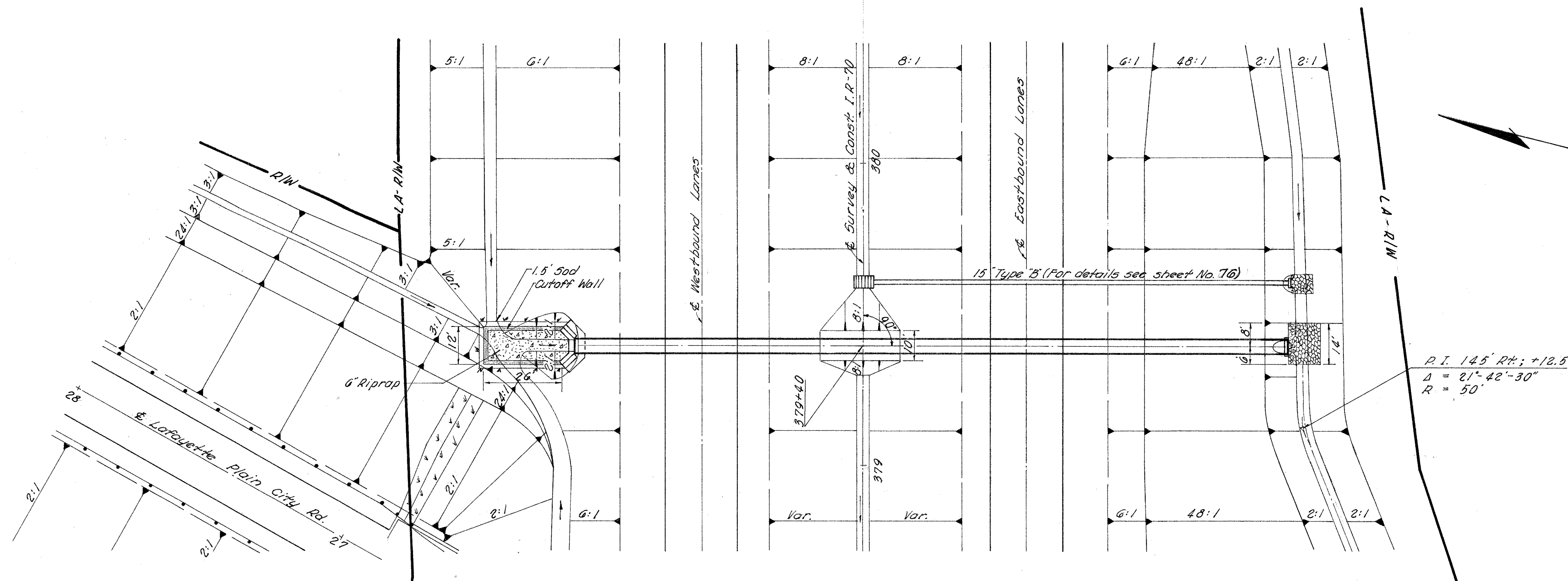


Drainage Area = 130 Ac.
Q₅₀ = 99 cfs.

ESTIMATED QUANTITIES

601 Riprap 6" Reinforced Concrete	72.7 SY
602 Concrete Masonry	28.8 CY
603 66" Conduit Type A 706.02 with Class B Bedding	260 LF
660 Sodding	15.3 SY



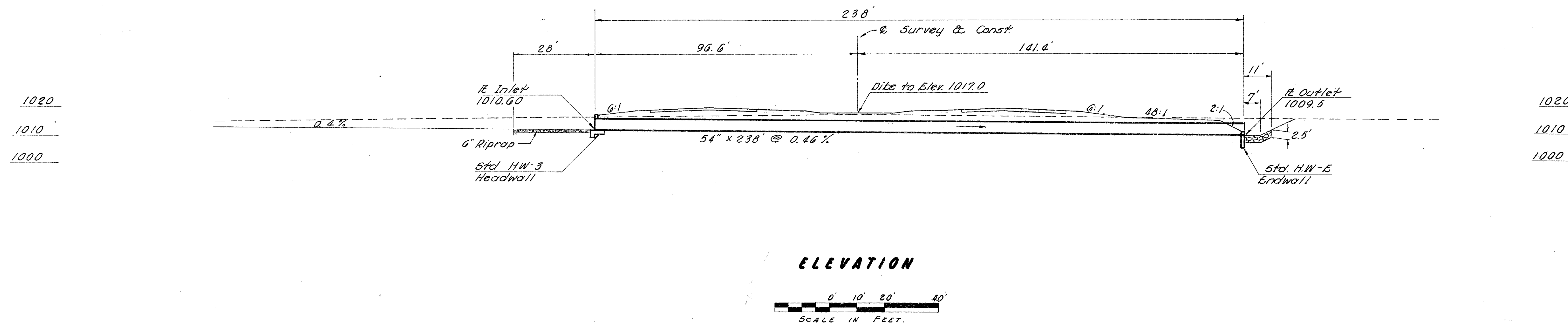


PLAN

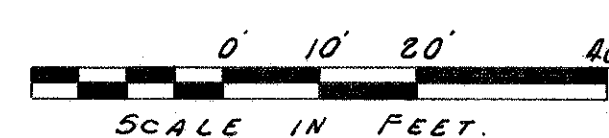
Drainage Area = 61 Ac.
Q₅₀ = 88 Cfs.

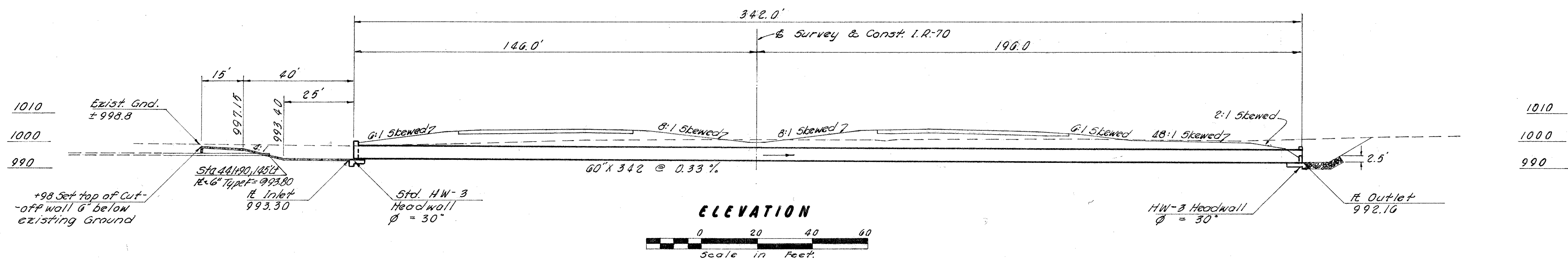
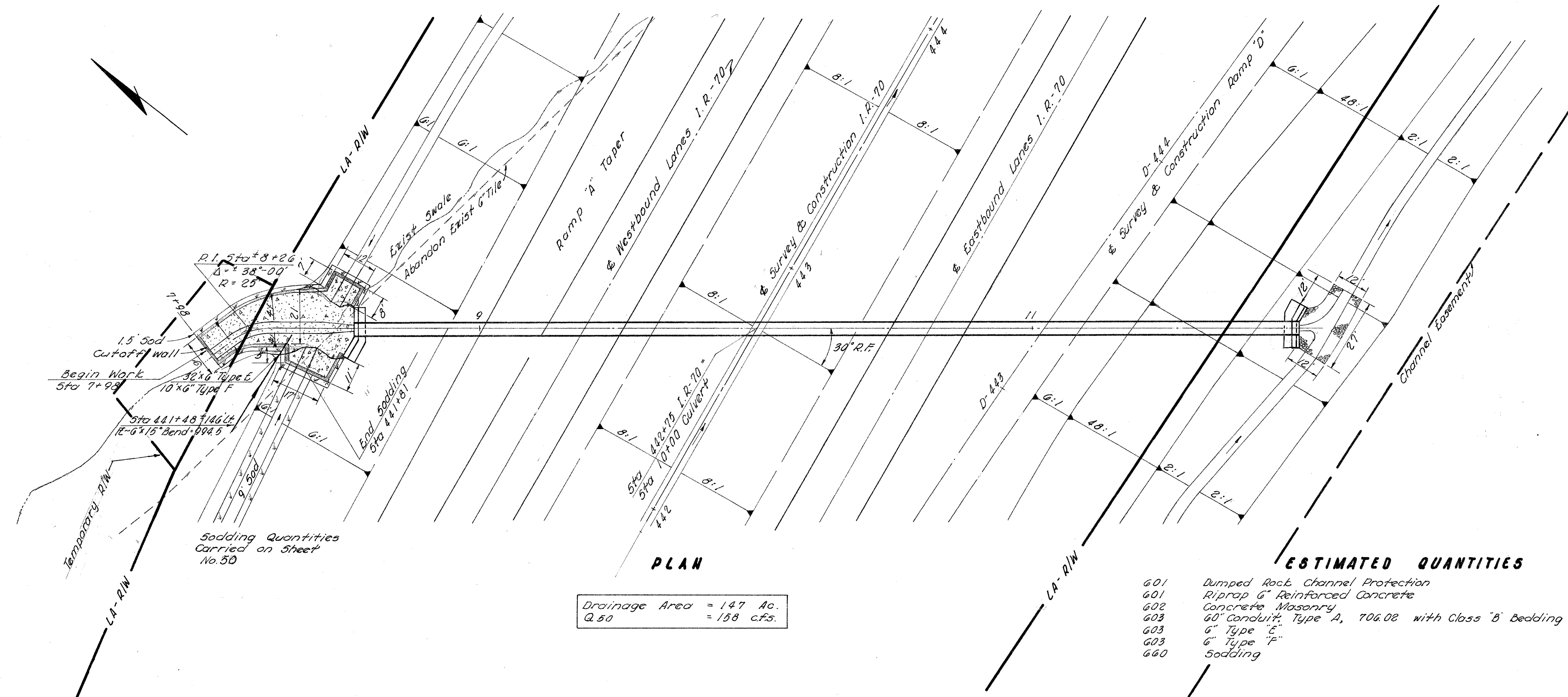
ESTIMATED QUANTITIES

601	6" Riprap, Reinforced Concrete	36.3	S.Y.
601	Dumped Rock Channel Protection	14.0	C.Y.
602	Concrete Masonry	10.96	C.Y.
603	54" Conduit, Type "A" 706.02, with Class "B" Bedding	238	L.F.
660	Sodding	10.2	S.Y.

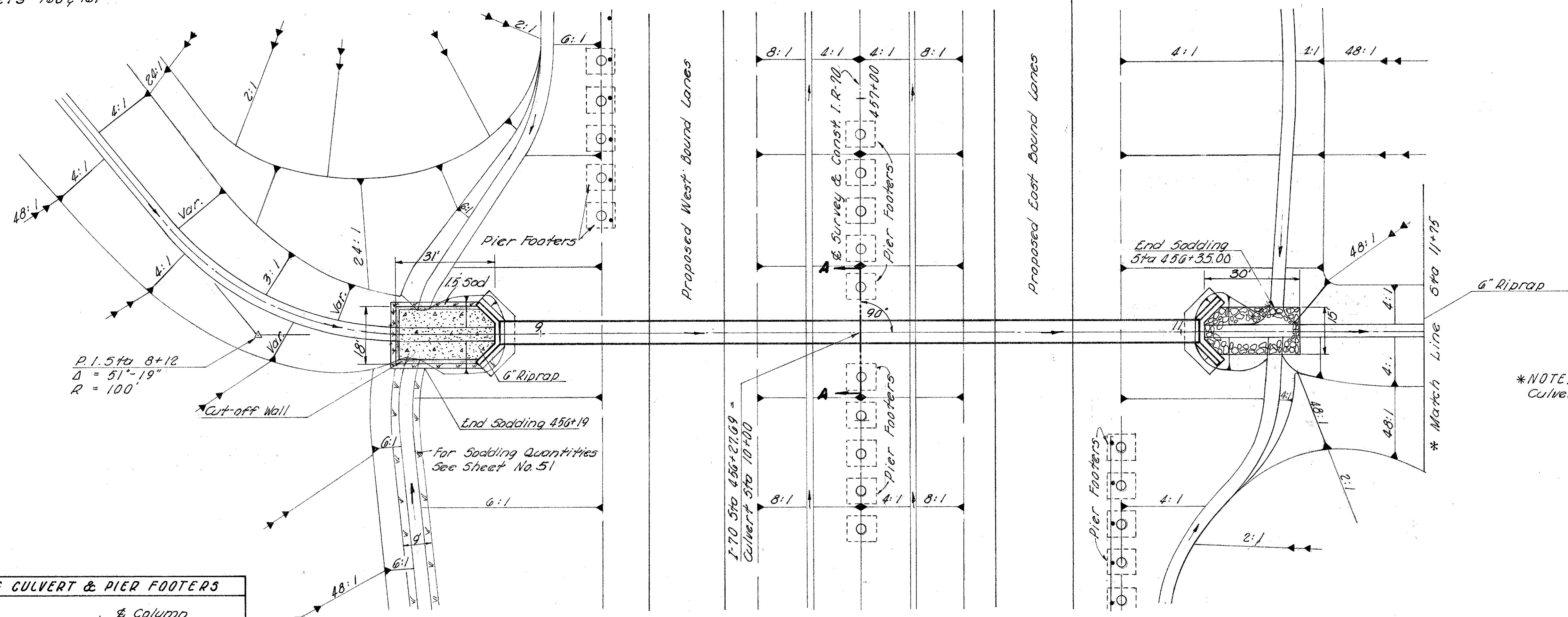


ELEVATION

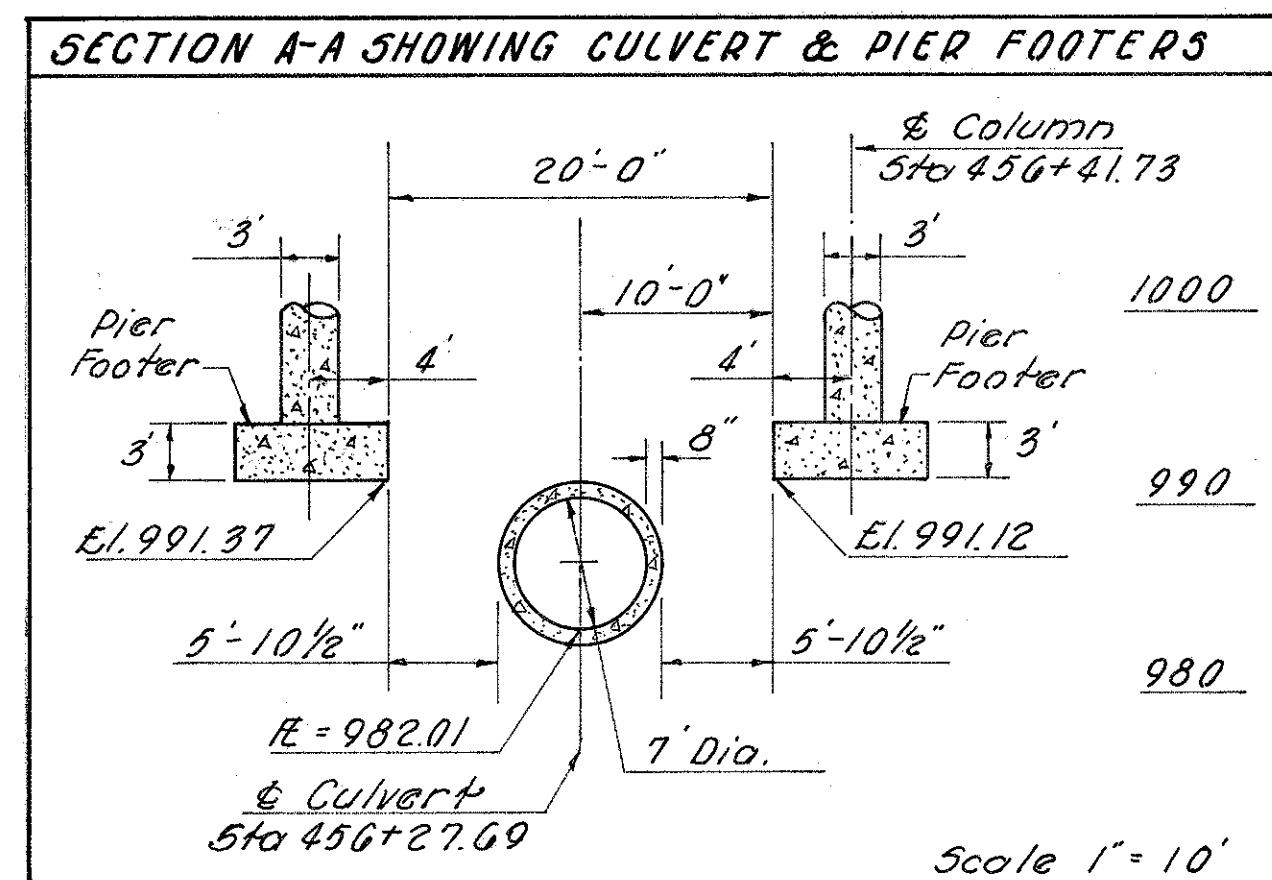




NOTE: For Ditch Location not shown on this sheet, refer to U.S.R-42
Cross-Sections Sheets 160 & 161



*NOTE: For Channel Work Ahead see Ramp "G" Culvert Detail Sheet No 253

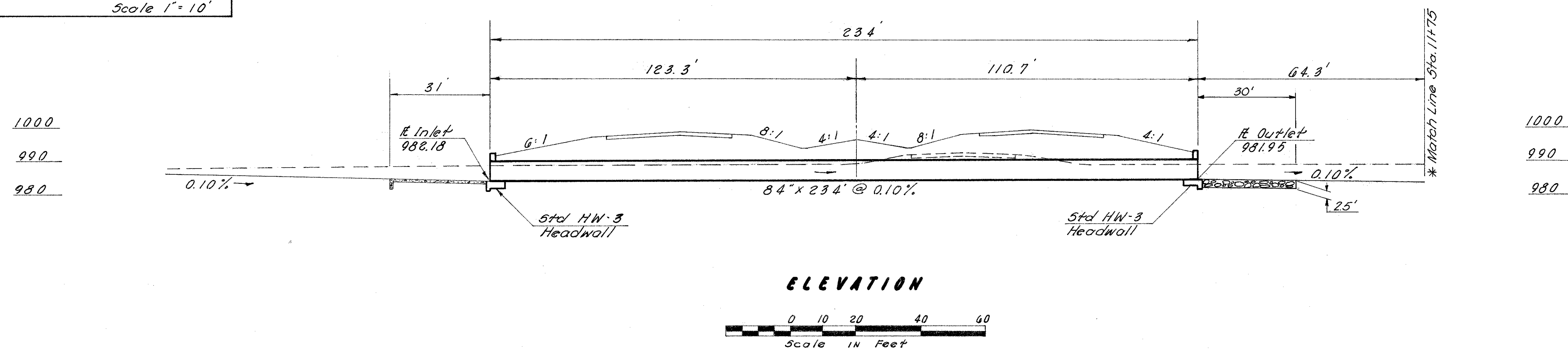


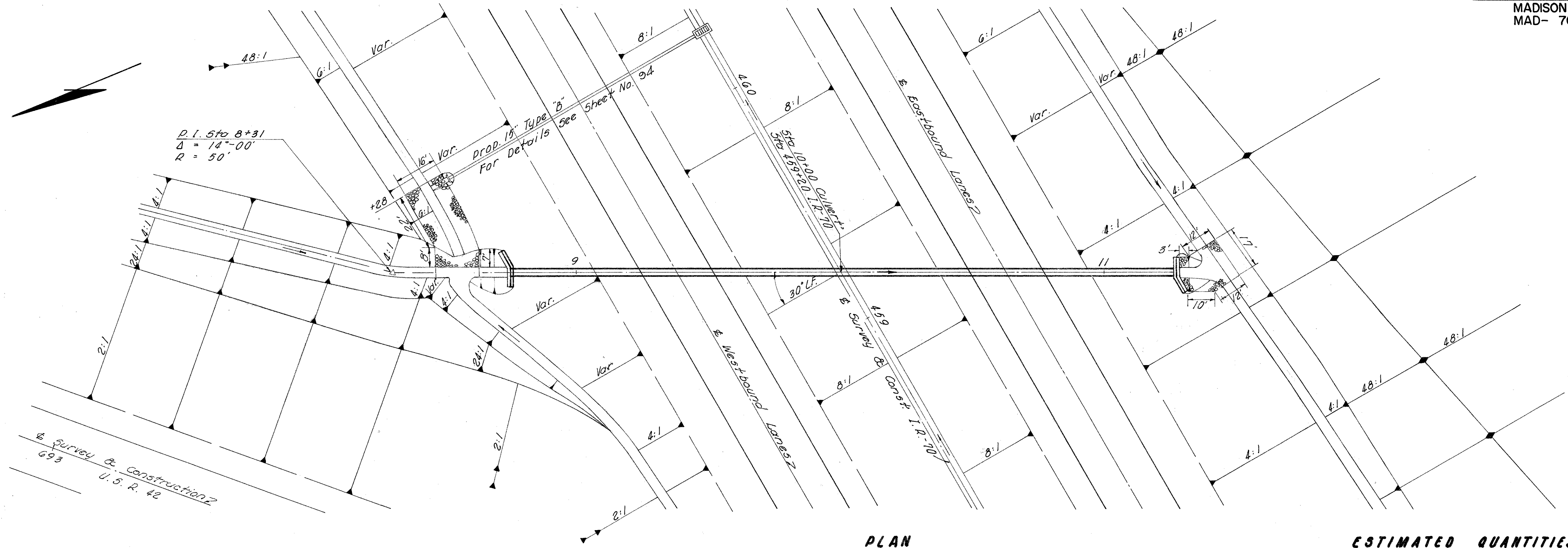
PLAN

Drainage Area = 140 Ac.
Q 50 = 151 c.f.s.

ESTIMATED QUANTITIES

601	Riprap 6" Reinforced Concrete	58.0	S.Y.
602	Concrete Masonry	45.6	C.Y.
603	84" Conduit, Type A, 706.02 with Type "B" Bedding	234	L.F.
660	Sodding	11.7	S.Y.
601	Dumped Rock Channel Protection	39.3	C.Y.



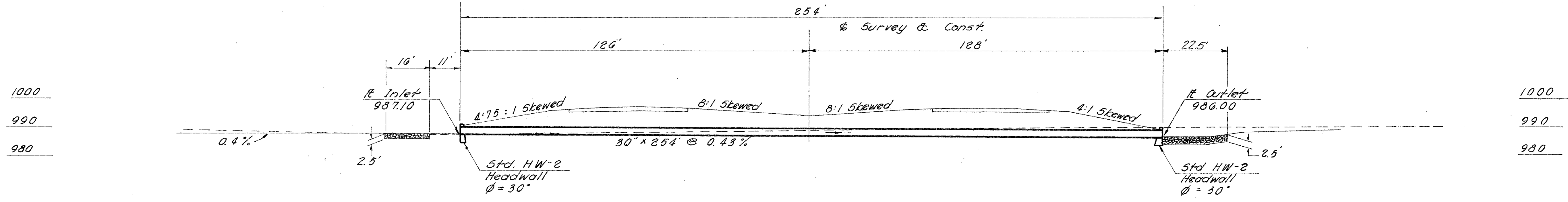


PLAN

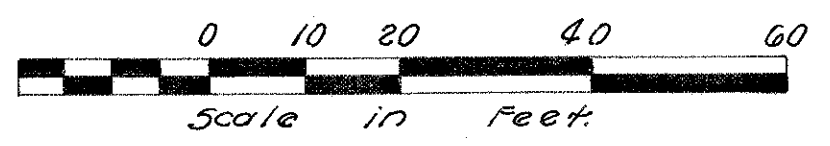
Drainage Area	= 15 Ac.
Q ₅₀	= 35 cfs.

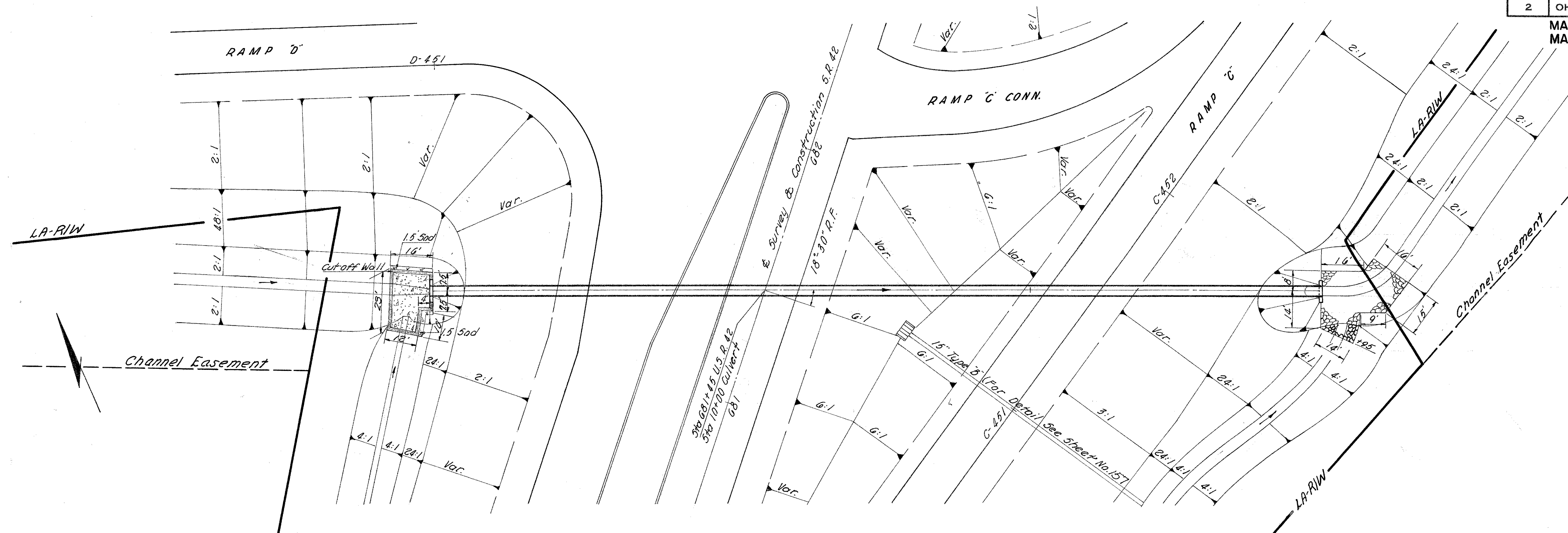
ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	76.6	C.Y.
602	Concrete Masonry	9.8	C.Y.
603	30" Conduit, Type A 706.02 or 706.03, with Class "B" Bedding	254	L.F.



ELEVATION



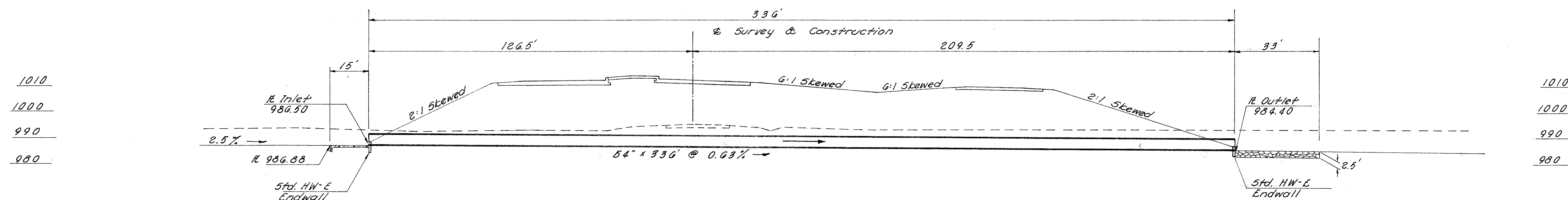


PLAN

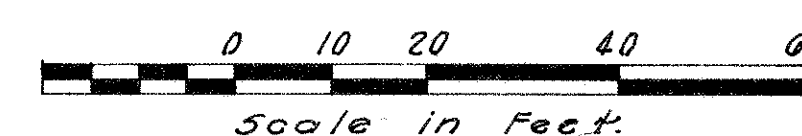
Drainage Area	= 190 Ac.
Q 50	= 183 cfs.

ESTIMATED QUANTITIES

601	Riprap 6" Reinforced Concrete	36	S.Y.
601	Dumped Rock Channel Protection	57.0	C.Y.
602	Concrete Masonry	1.92	C.Y.
603	54" Conduit, Type "A", 706.02 Class II with Class "B"	336	L.F.
660	Sodding	4.3	S.Y.

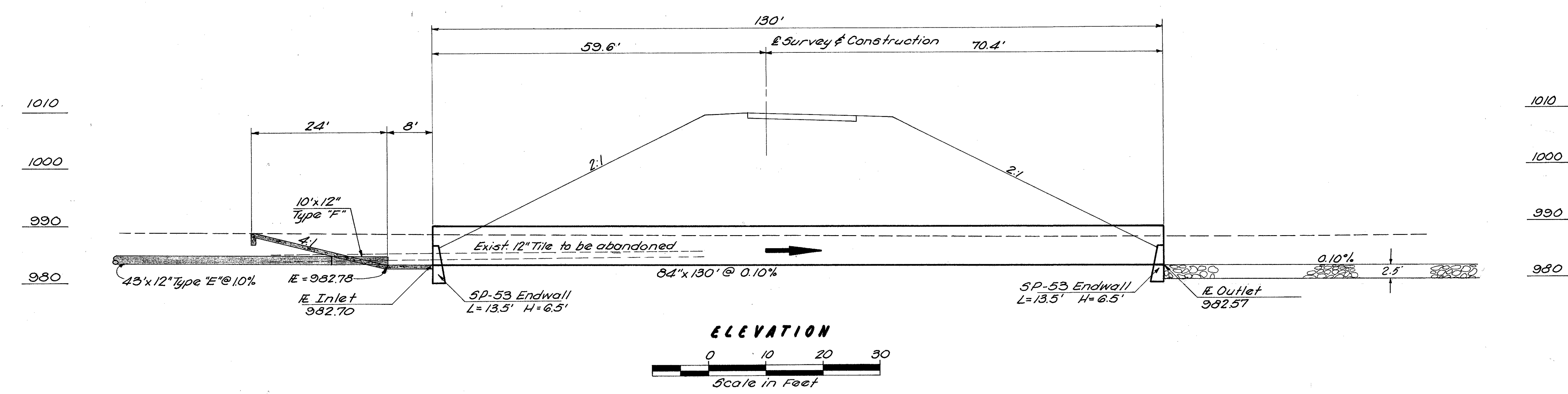
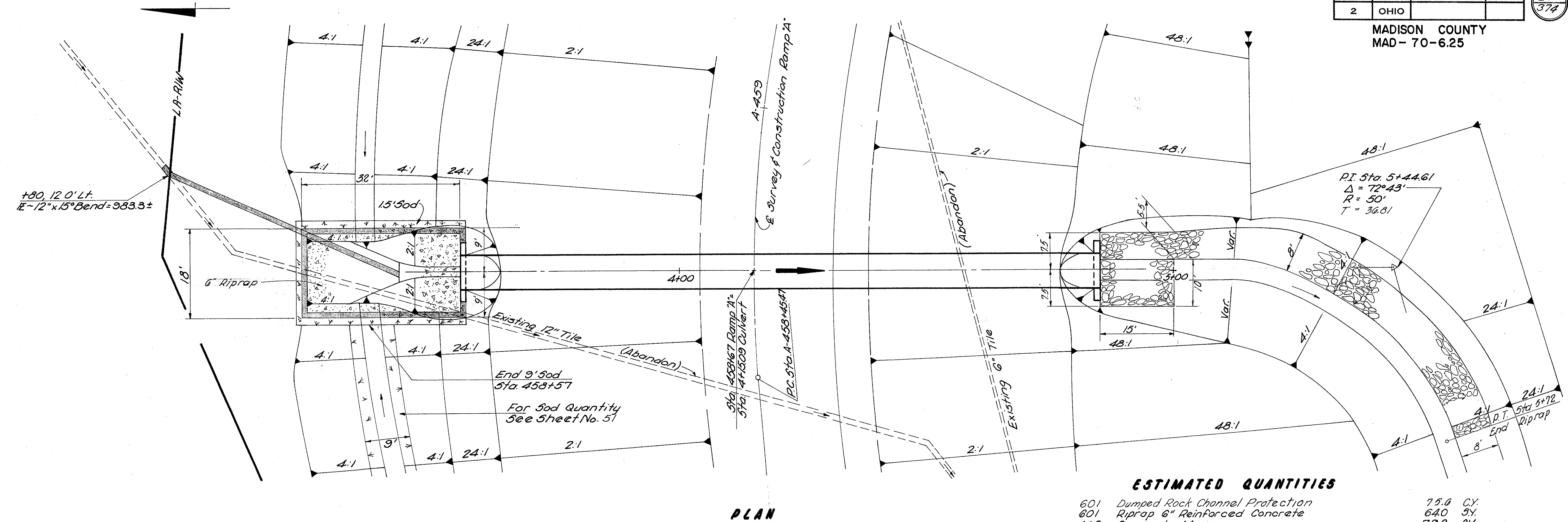


ELEVATION



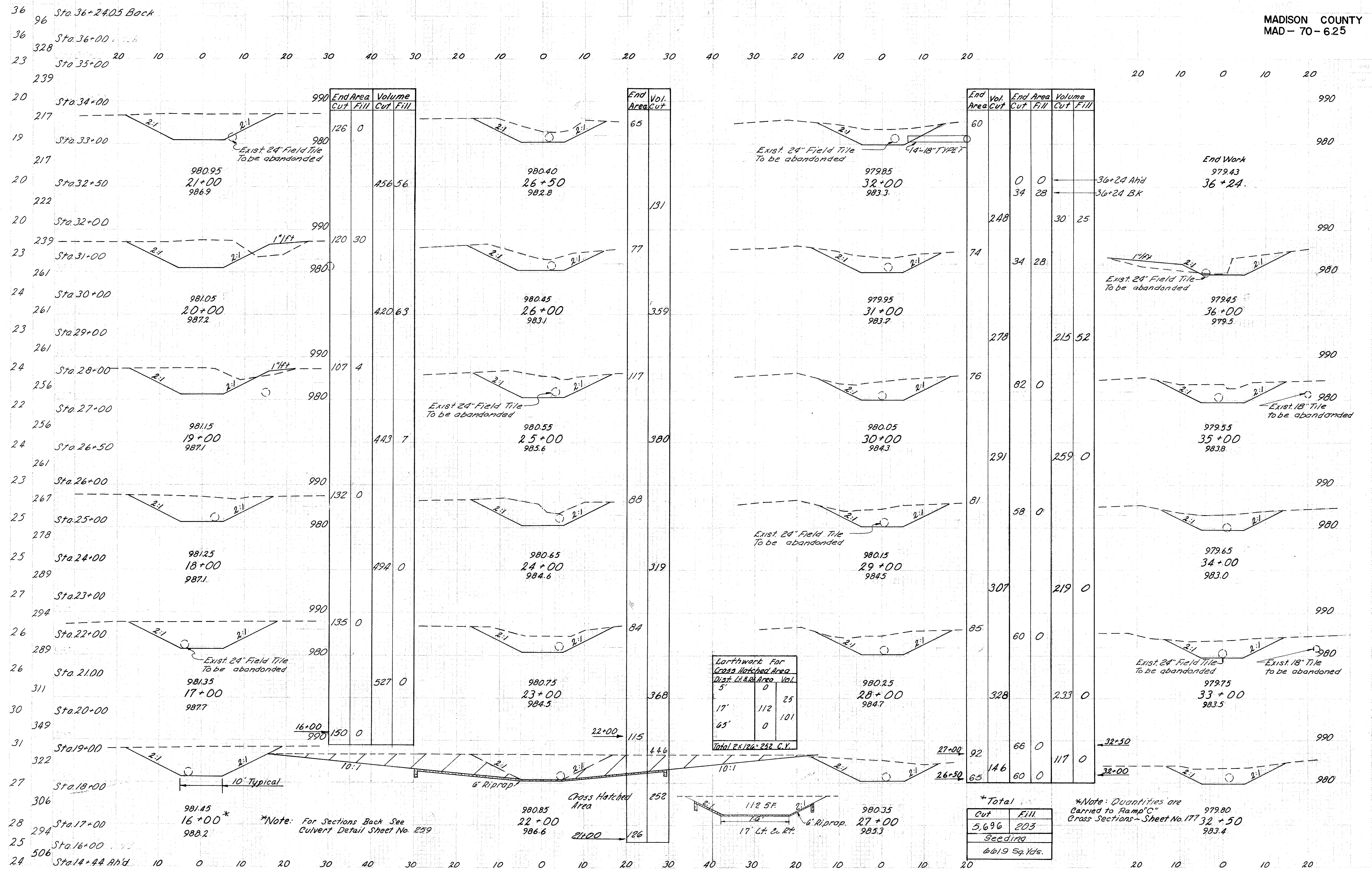
232-06-405

MADISON COUNTY
MAD-70-6.25



PIPE CULVERT STA. B-461+50

GLADE RUN RELOCATION



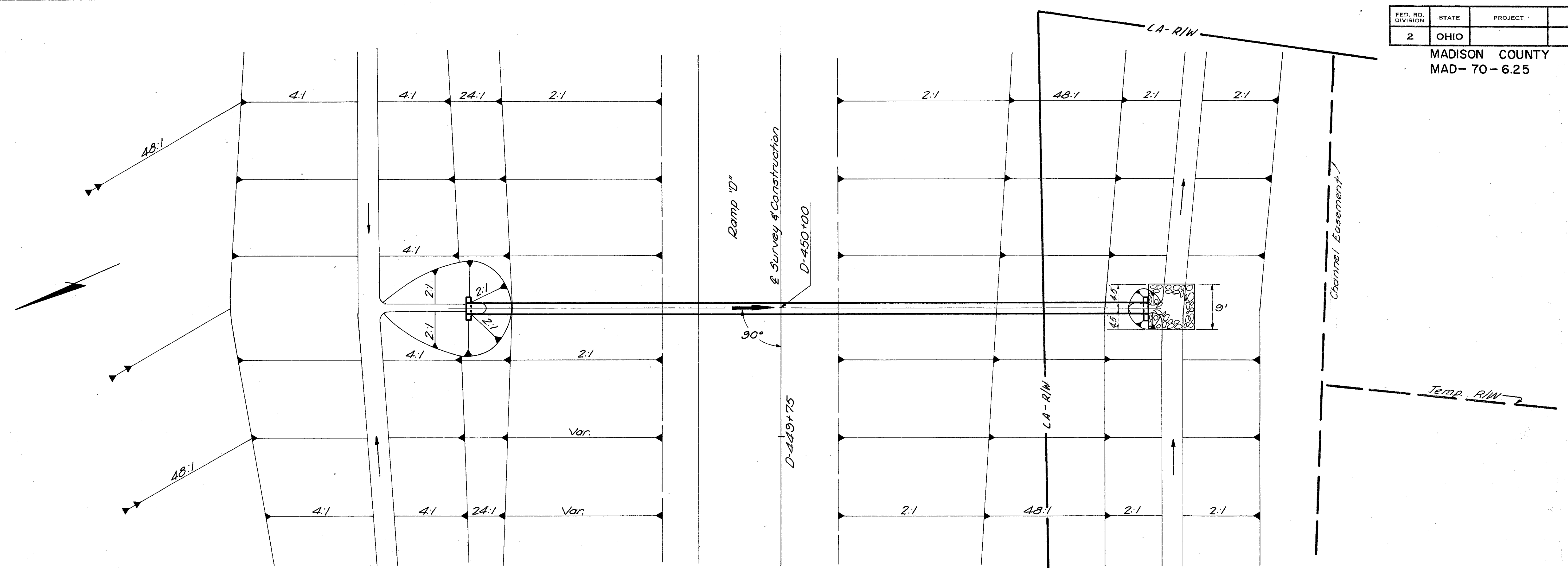
Earthwork for
Cross Hatched Area
Dist. Gr. Area Vol.

5'	0	25
17'	112	101
65'	0	101
Total 25126 = 252 C.Y.		

*Total

Cut	Fill
5,696	203
Seeding	
6619 Sq. Yds.	

*Note: Quantities are
Carried to Ramp "C"
Grass Sections - Sheet No. 177 32 + 50
983.4

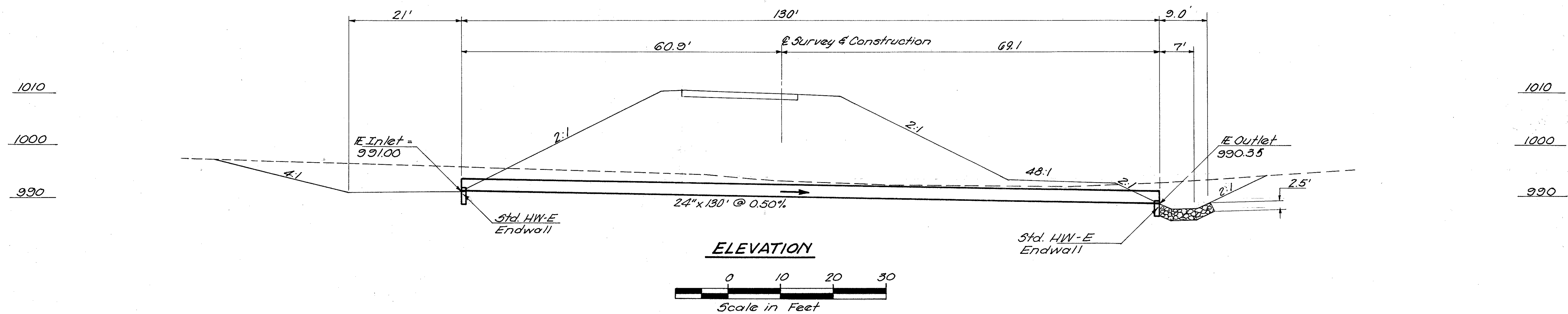


PLAN

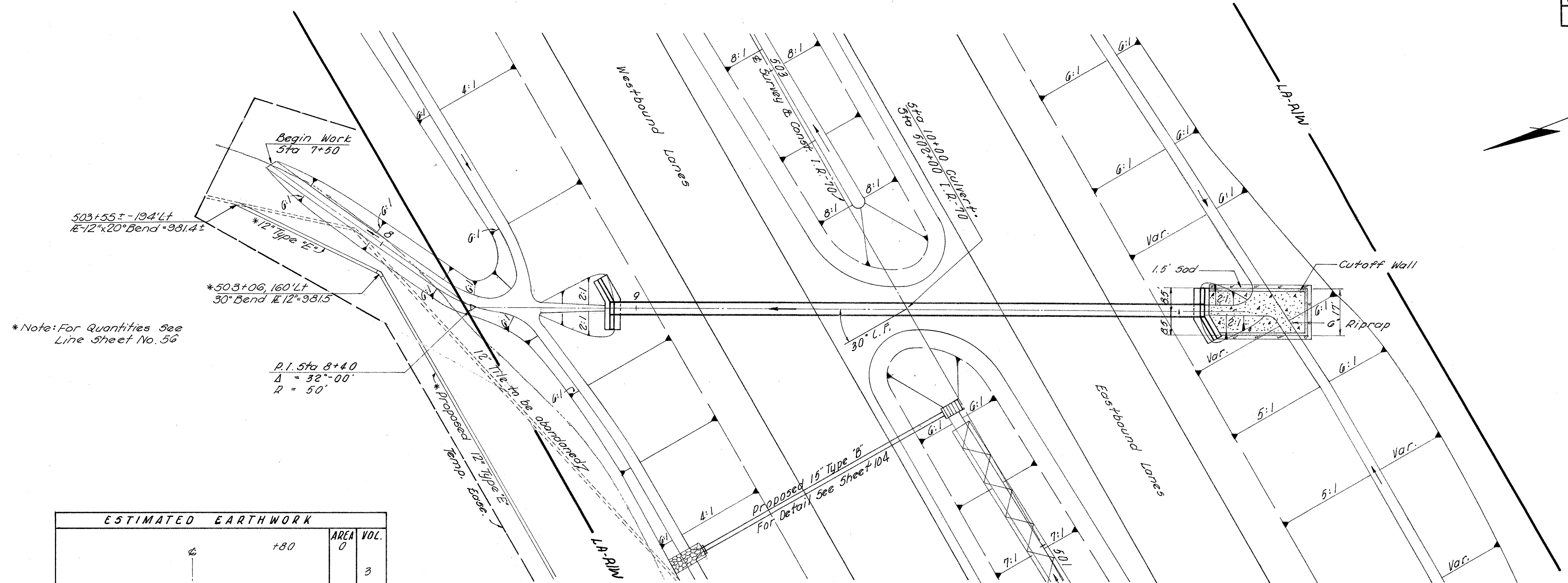
Drainage Area	=	4 Ac.
Q ₅₀	=	14 c.f.s.

ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	7.7	C.Y.
602	Concrete Masonry	0.82	C.Y.
603	24" Conduit Type A 706.02 Class IV with Class B Bedding	130	L.F.



ELEVATION



PLAN

Drainage Area = 90 Ac.
Q 50 = 110 c.f.s.

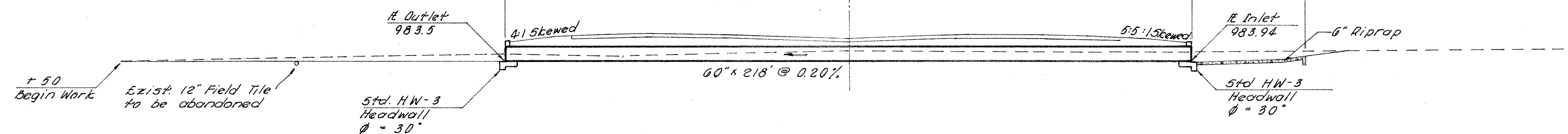
ESTIMATED QUANTITIES

601	6" Riprap Reinforced Concrete	67.9	S.Y.
602	Concrete Masonry	24.6	C.Y.
603	60" Conduit, Type A, 706.02, with Class B Bedding	218	L.F.
660	Sodding	14	S.Y.

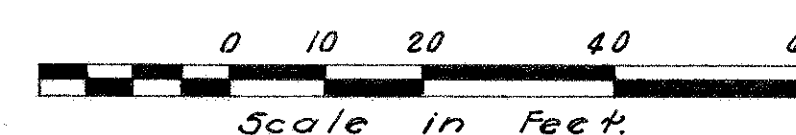
ESTIMATED EARTHWORK			
	AREA	VOL.	
+80	0	3	
980	5	7	
980	2	2	
980	0	0	
Total Cut		12	

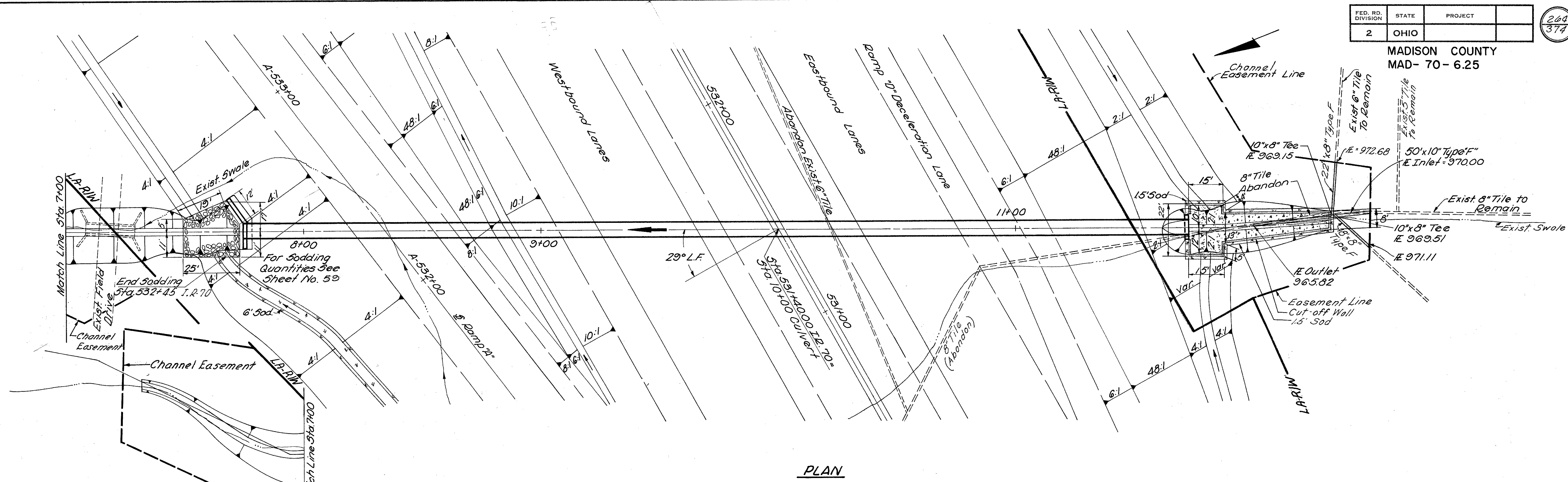
* Note: Total Cut is carried to Cross-Section Sheet No. 104

1000
990
980



ELEVATION





PLAN

ESTIMATED EARTHWORK

STA.	CUT AREA	VOL.
6+50	0	6
6+75	7	24
6+97	19	18
7+25	19	
Total Vol. Cut = 48*		

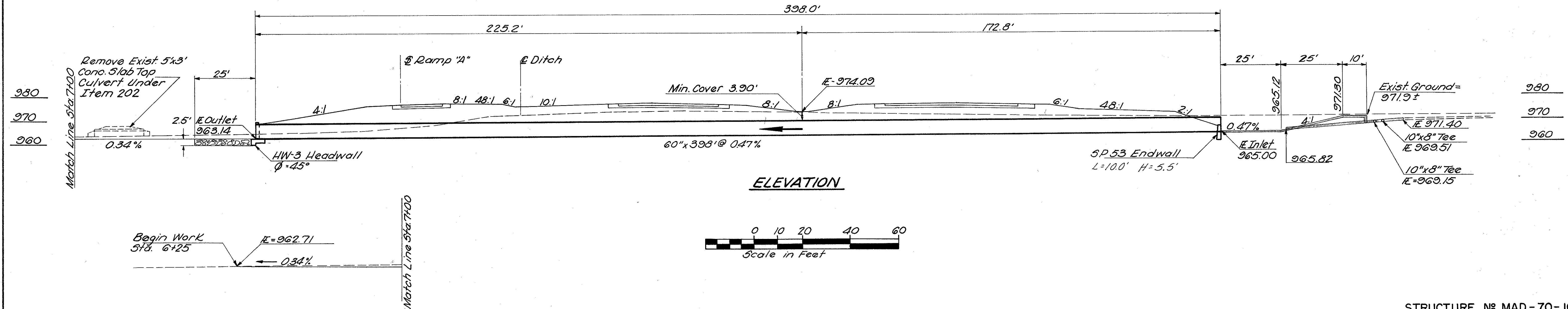
*Total to be carried to cross section Sheet No. 112

Drainage Area = 1680 Ac.

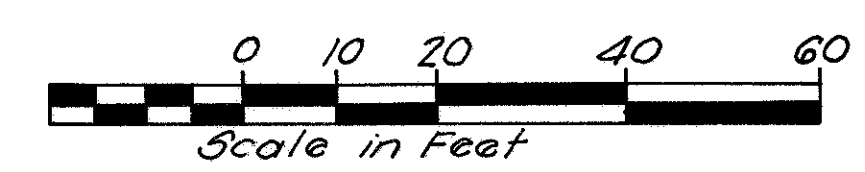
Q 50 = 170 c.f.s.

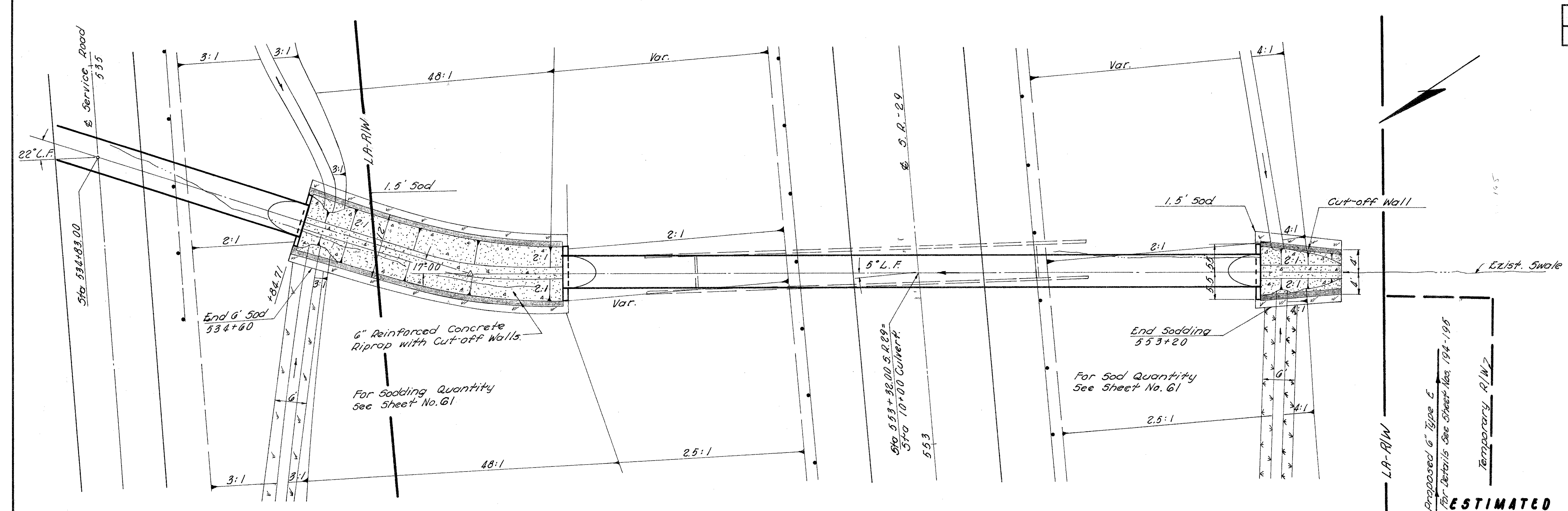
ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	45. C.Y.
601	Riprap 6" Reinforced Concrete	88.0 S.Y.
602	Concrete Masonry	14.80 C.Y.
603	60" Conduit Type "A" 706.02 with Class "B" Bedding	398 L.F.
603	8" Type "F"	40 L.F.
603	10" Type "F"	50 L.F.
660	Sodding	18.9 S.Y.
202	Existing Structure Removal	Lump



ELEVATION





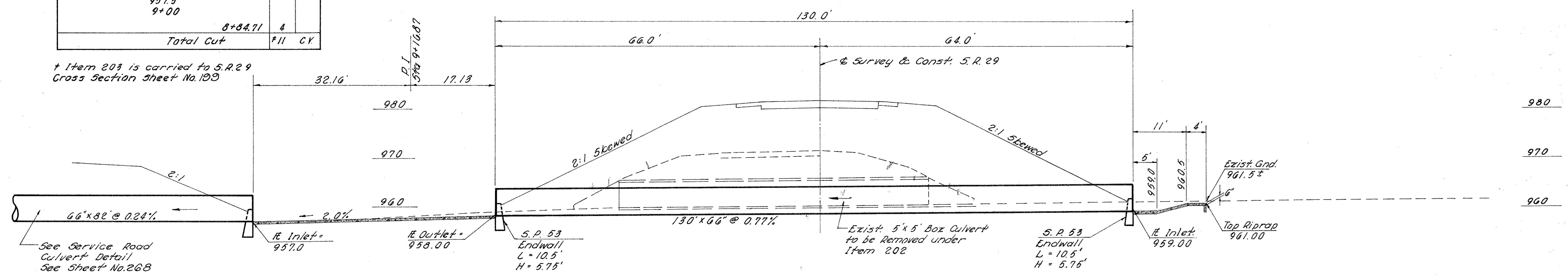
ESTIMATED QUANTITIES

202	Existing Structures Removed	Lump
601	Riprap 6" Reinforced Concrete	81.1 S.Y.
602	Concrete Masonry	4.26 C.Y.
603	66" Conduit, Type A, 706.02 Class II with Class B Bedding	130.0 L.F.
660	Sodding	24.1 S.Y.

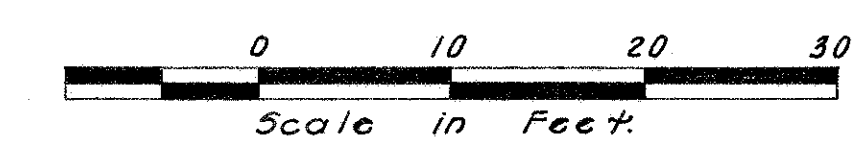
ESTIMATED EARTHWORK	END AREA	VOL.
+33.80	8	3
957.8 9+25	8	6
957.3 9+00	4	2
8+84.71	4	
Total Cut	11	C.Y.

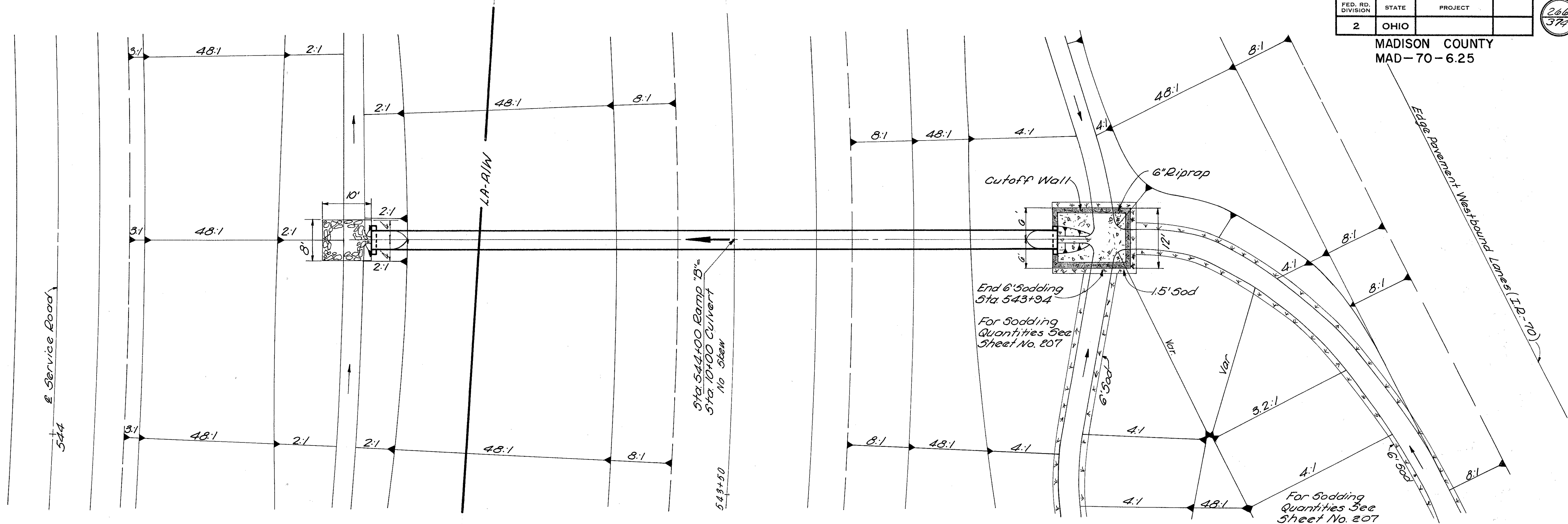
PLAN

Drainage Area 200 Ac.
Q 50 189 cfs.



ELEVATION



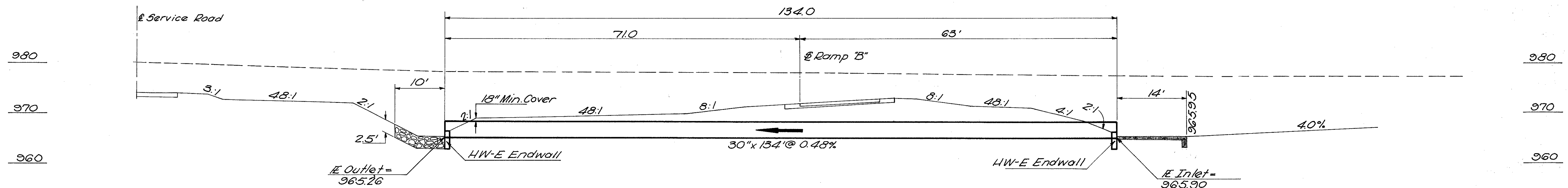


PLAN

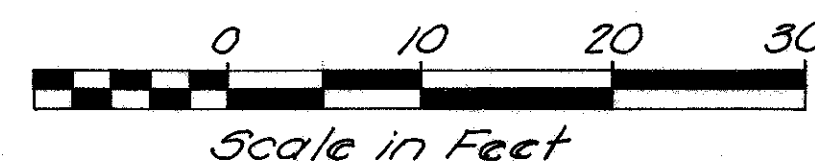
Drainage Area = 80 Ac.
Q₅₀ = 22 c.f.s.

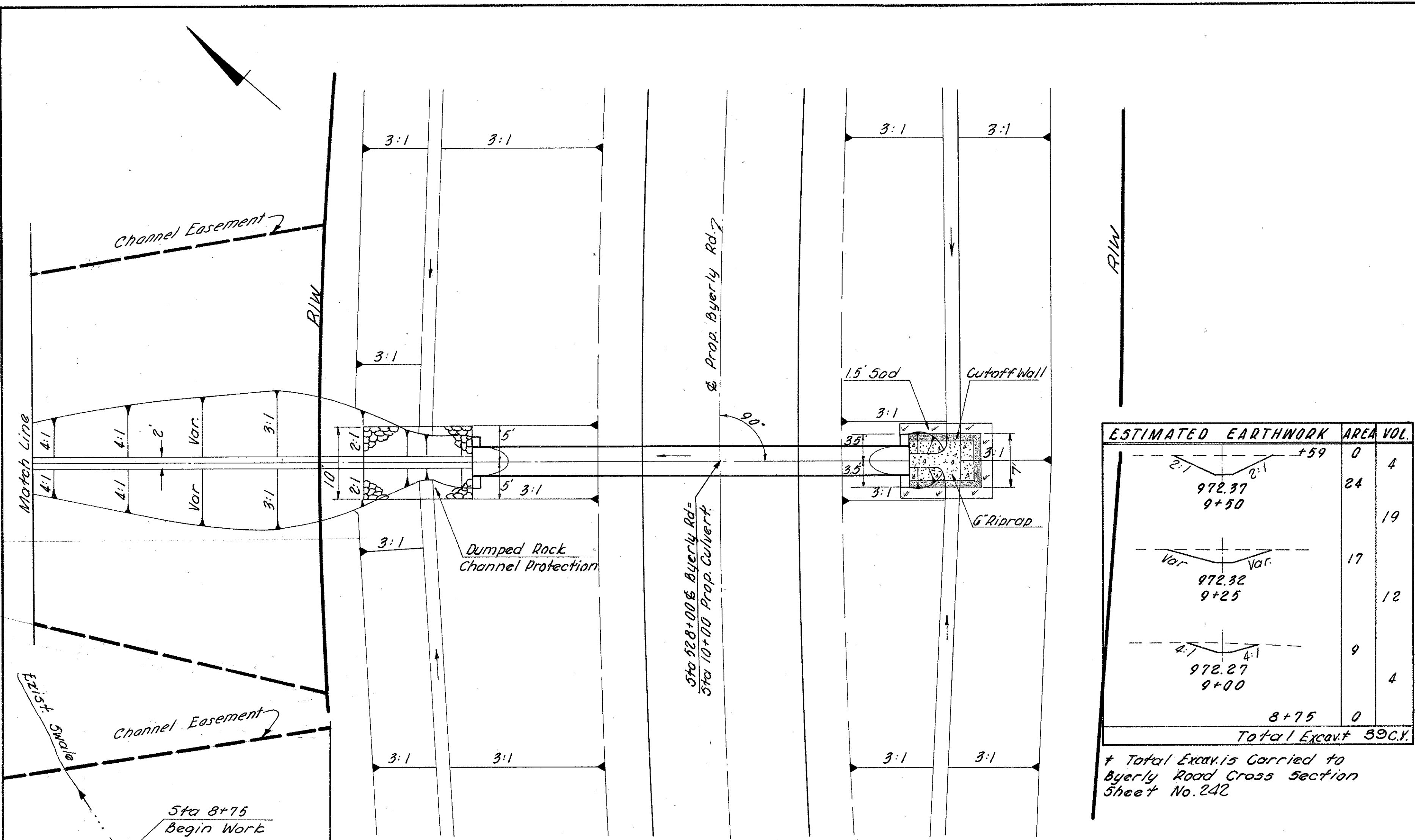
ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	7.4 C.Y.
601	Riprap 6" Reinforced Concrete	18.7 S.Y.
602	Concrete Masonry	1.02 C.Y.
603	30" Conduit Type "A" 706.02 or 706.08 With Class "B" Bedding	194 L.F.
660	Sodding	4.7 S.Y.



ELEVATION





ESTIMATED EARTHWORK	AREA	VOL.
972.97 9+50	24	4
972.82 9+25	17	19
972.27 9+00	9	12
8+75	0	4
Total Excav. 39 C.Y.		

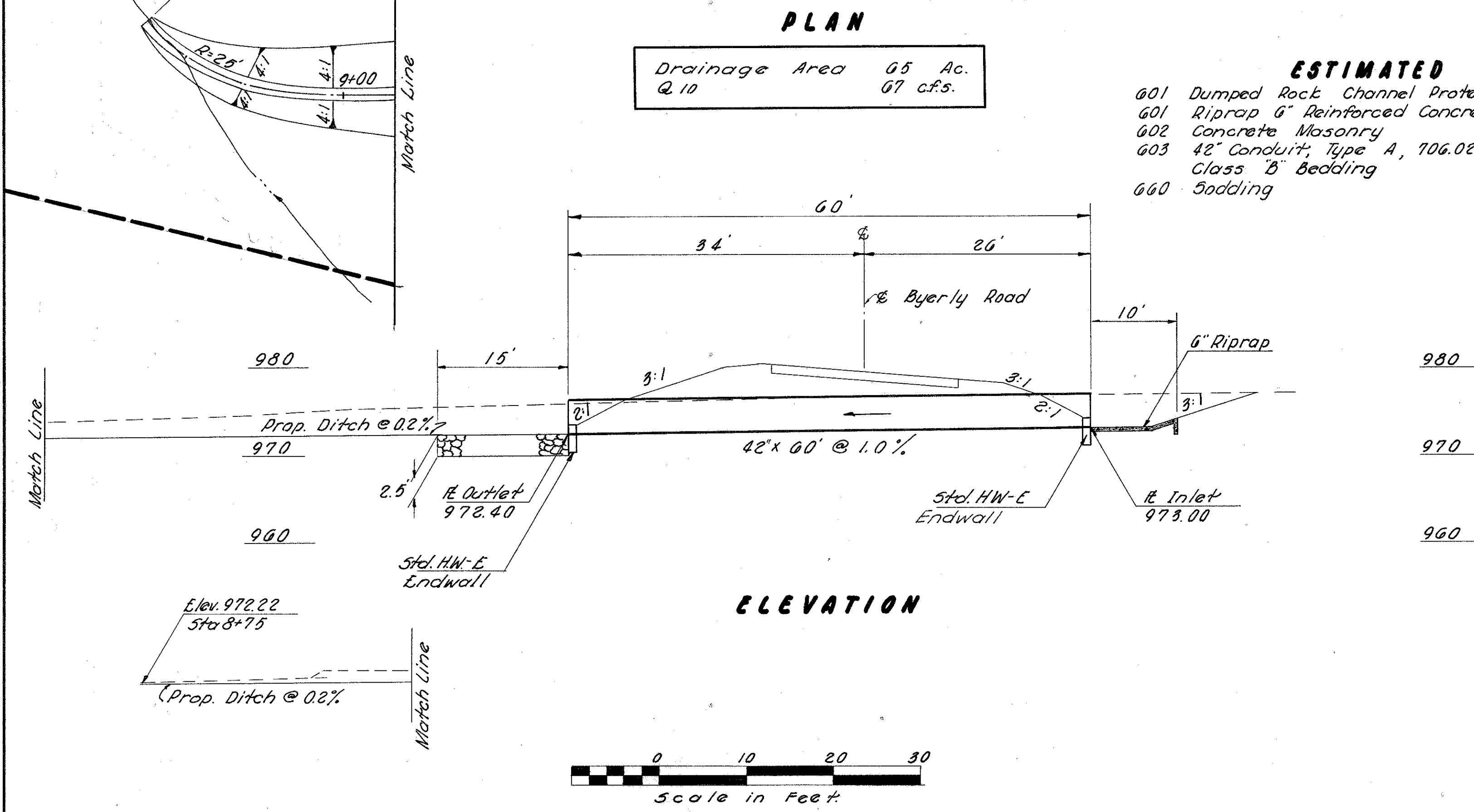
* Total Excav. is Carried to
Byerly Road Cross Section
Sheet No. 242

PLAN

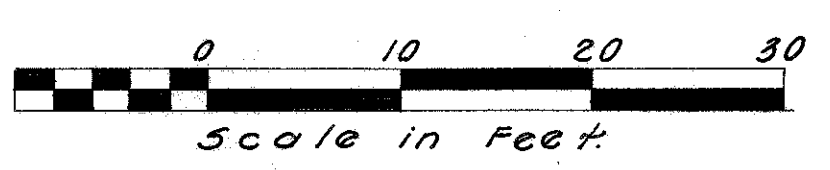
Drainage Area 65 Ac.
Q.10 67 cfs.

ESTIMATED QUANTITIES

601 Dumped Rock Channel Protection	13.9	C.Y.
601 Riprap 6" Reinforced Concrete	7.7	S.Y.
602 Concrete Masonry	1.52	C.Y.
603 42" Conduit, Type A, 706.02 with Class "B" Bedding	60.	L.F.
660 Sodding	5.0	S.Y.

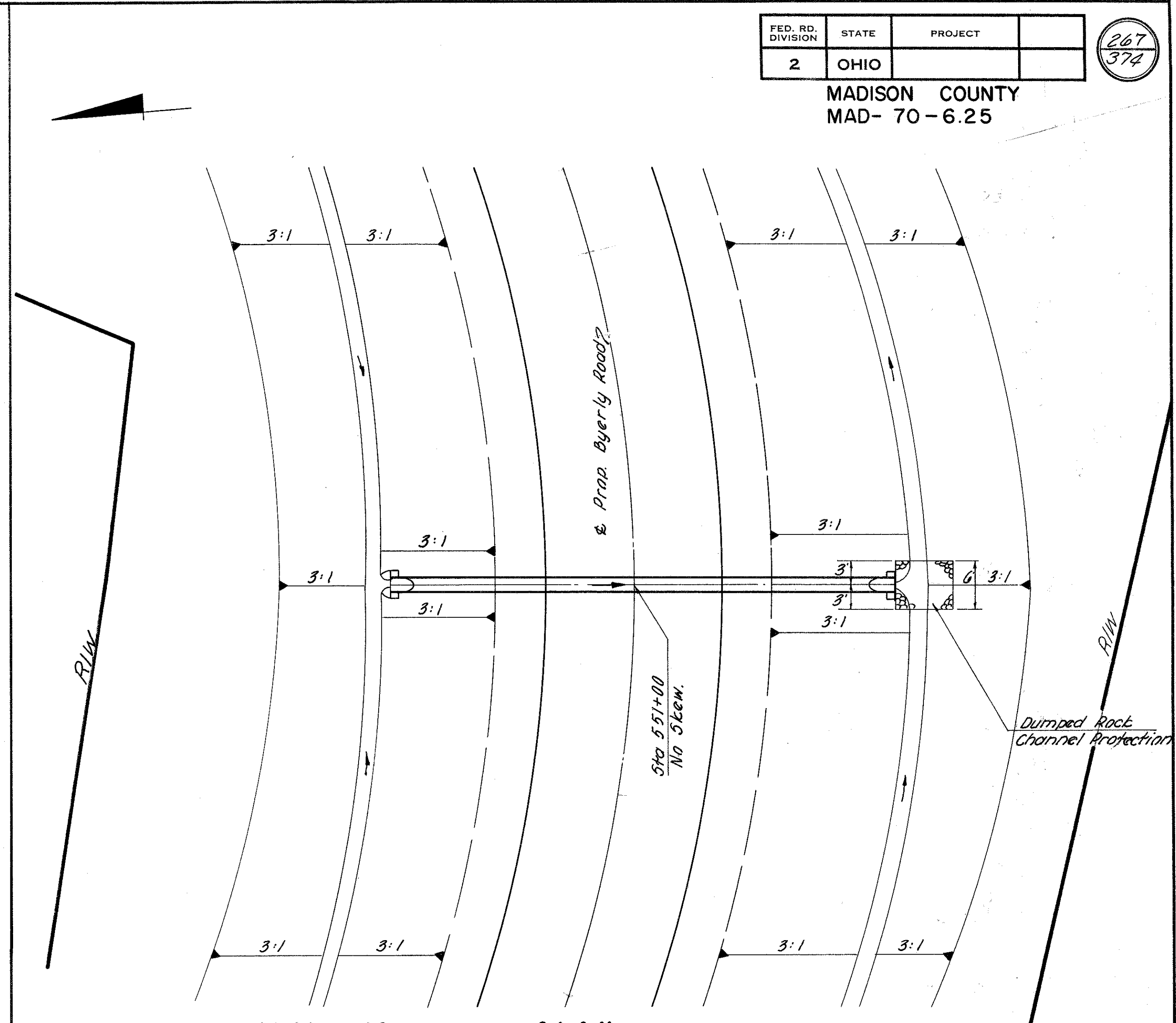


ELEVATION



BYERLY ROAD

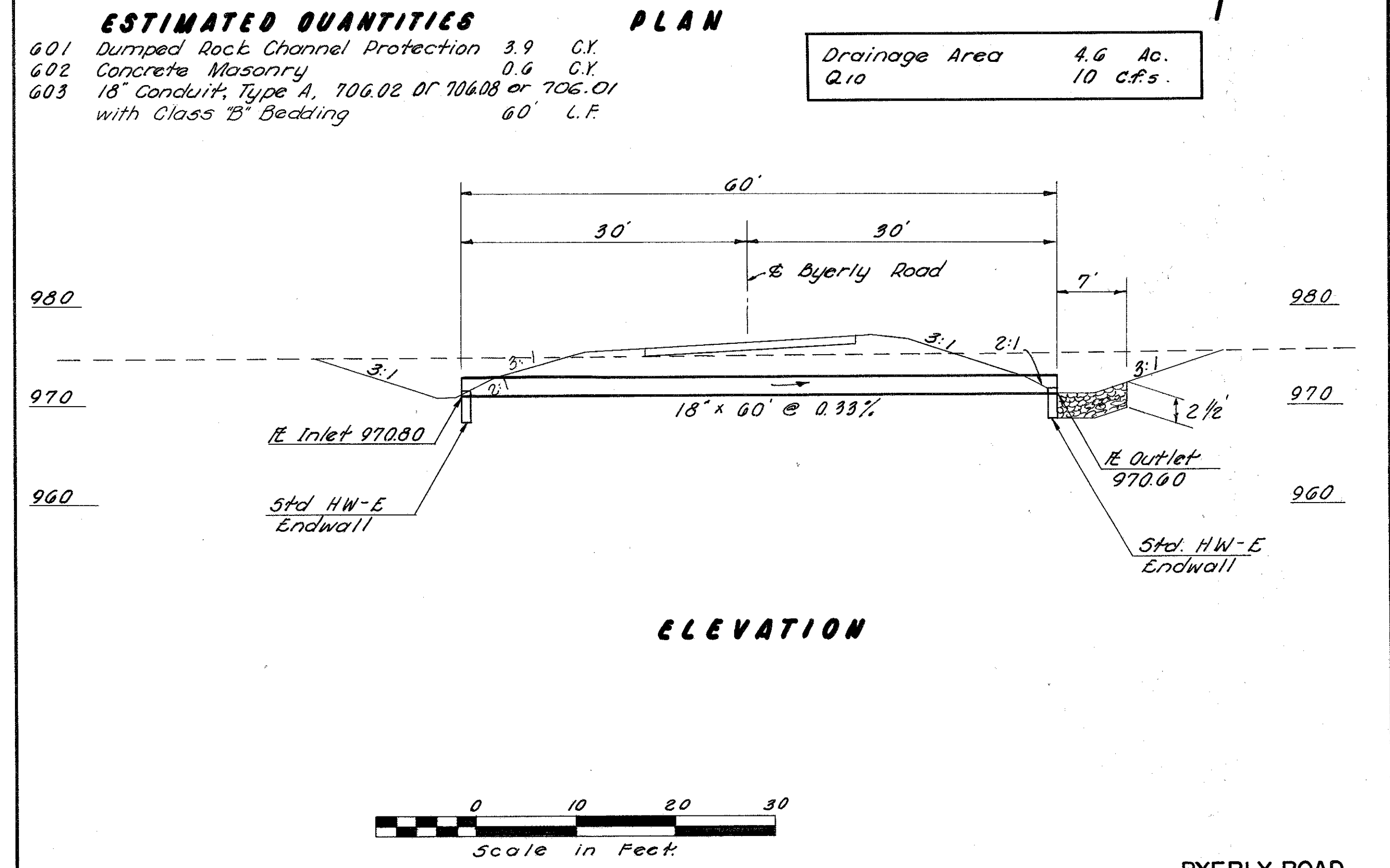
PIPE CULVERT STA. 528+00



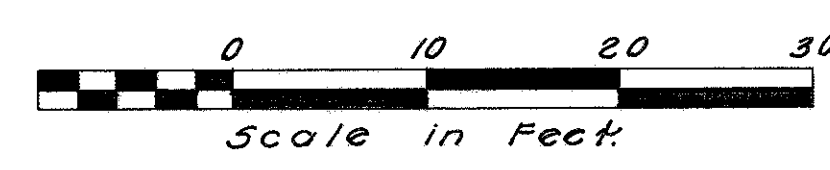
ESTIMATED QUANTITIES

601 Dumped Rock Channel Protection	3.9	C.Y.
602 Concrete Masonry	0.6	C.Y.
603 18" Conduit, Type A, 706.02 or 706.01 with Class "B" Bedding	60.	L.F.

Drainage Area 4.6 Ac.
Q.10 10 cfs.



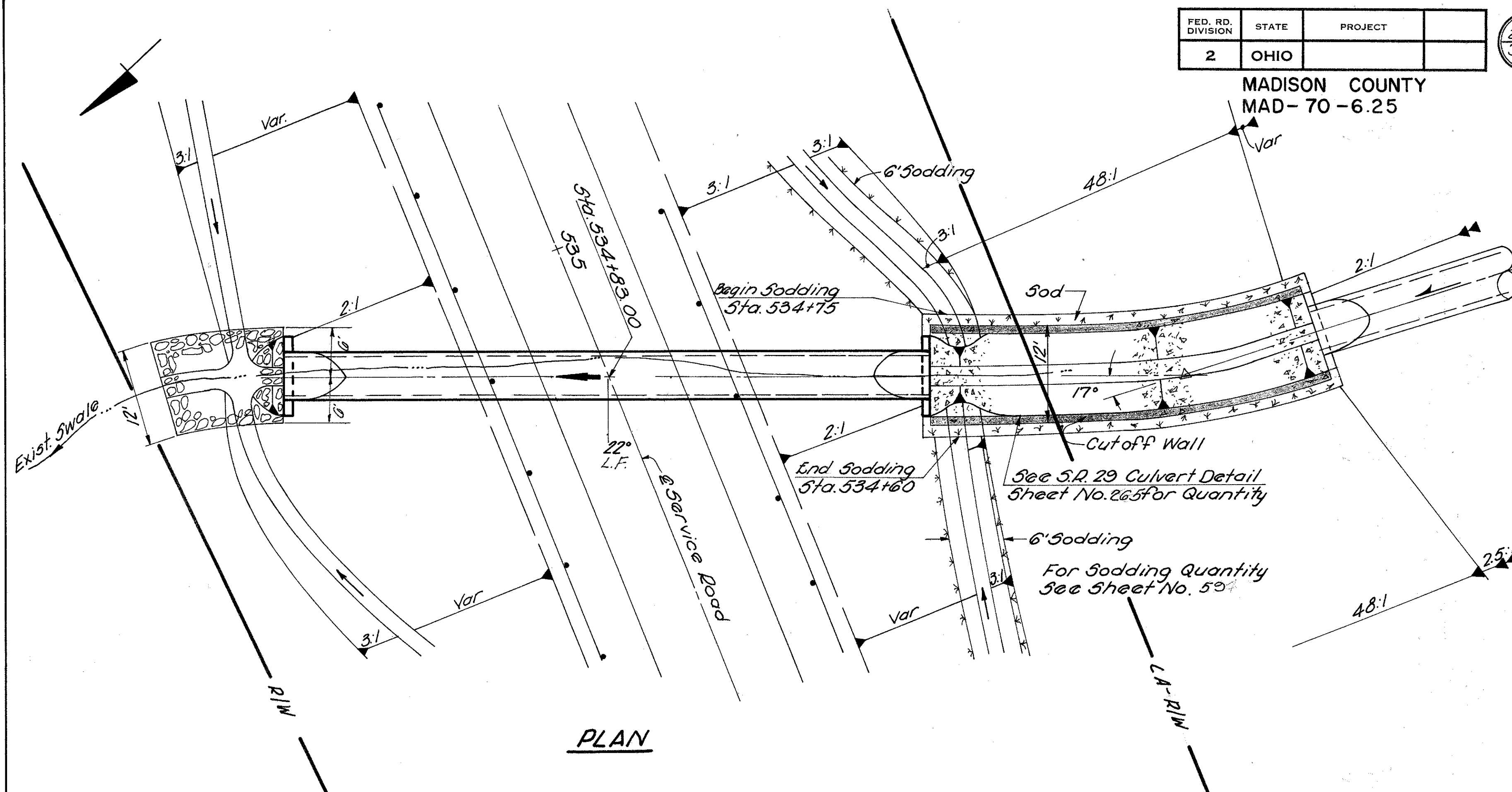
ELEVATION



BYERLY ROAD

PIPE CULVERT STA. 551+00

MADISON COUNTY
MAD-70-6.25



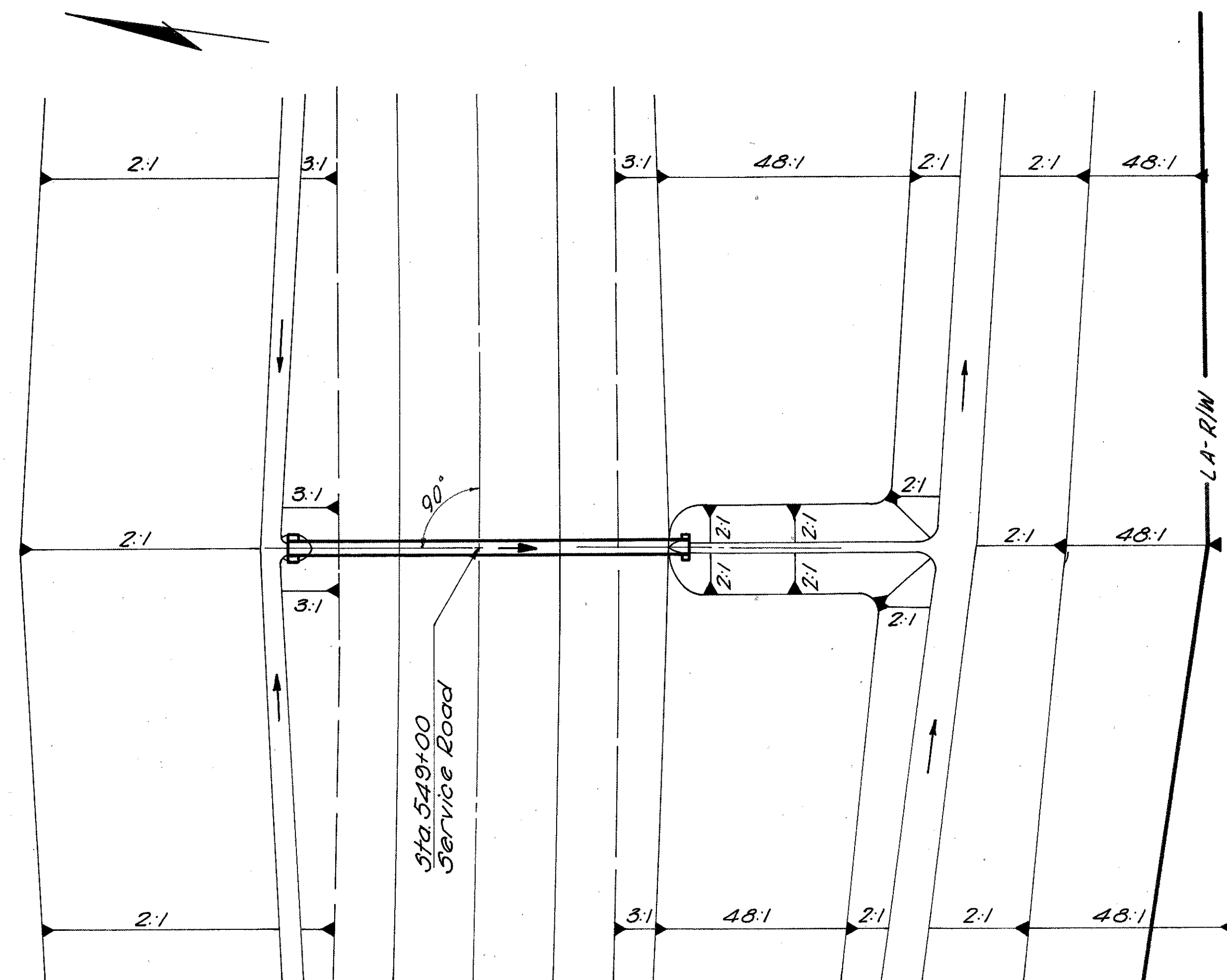
PLAN

Drainage Area = 202 Ac.
Q₅₀ = 189 c.f.s.

ESTIMATED QUANTITIES

601 Dumped Rock Channel Protection
602 Concrete Masonry
603 66" Conduit Type "A" 706.02 with Class
"B" Bedding

166 C.Y.
426 C.Y.
82 L.F.



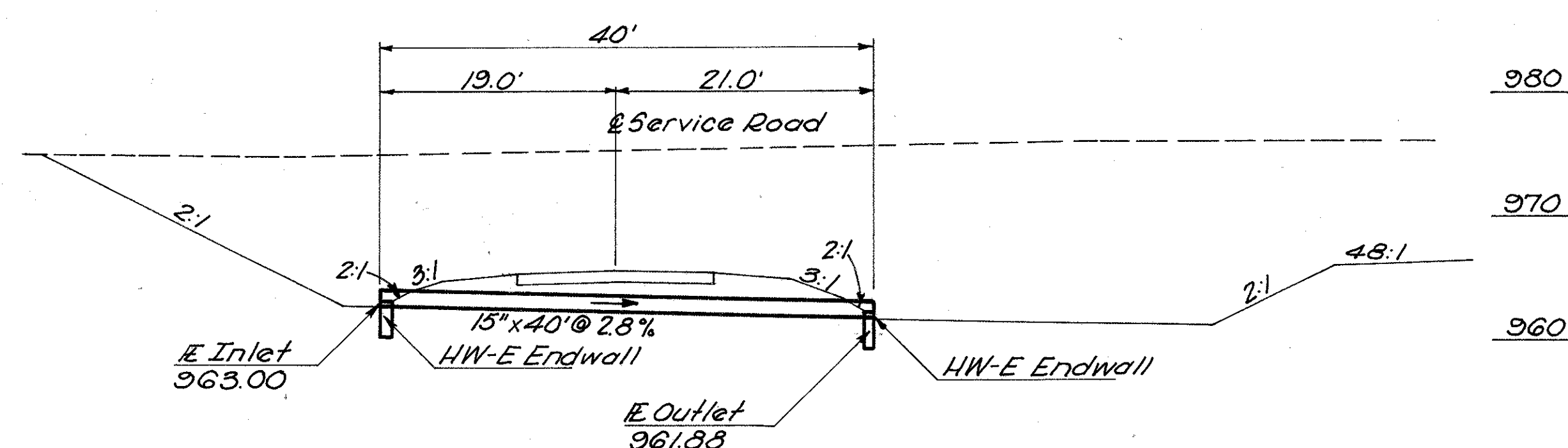
PLAN

Drainage Area = 0.8 Ac.
Q₁₀ = 3 c.f.s.

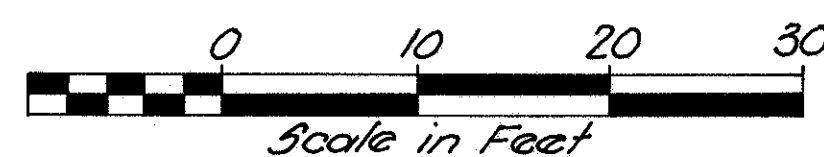
ESTIMATED QUANTITIES

602 Concrete Masonry
603 15" Conduit Type "A" 706.02, 706.08, or 706.01
with Class "B" Bedding

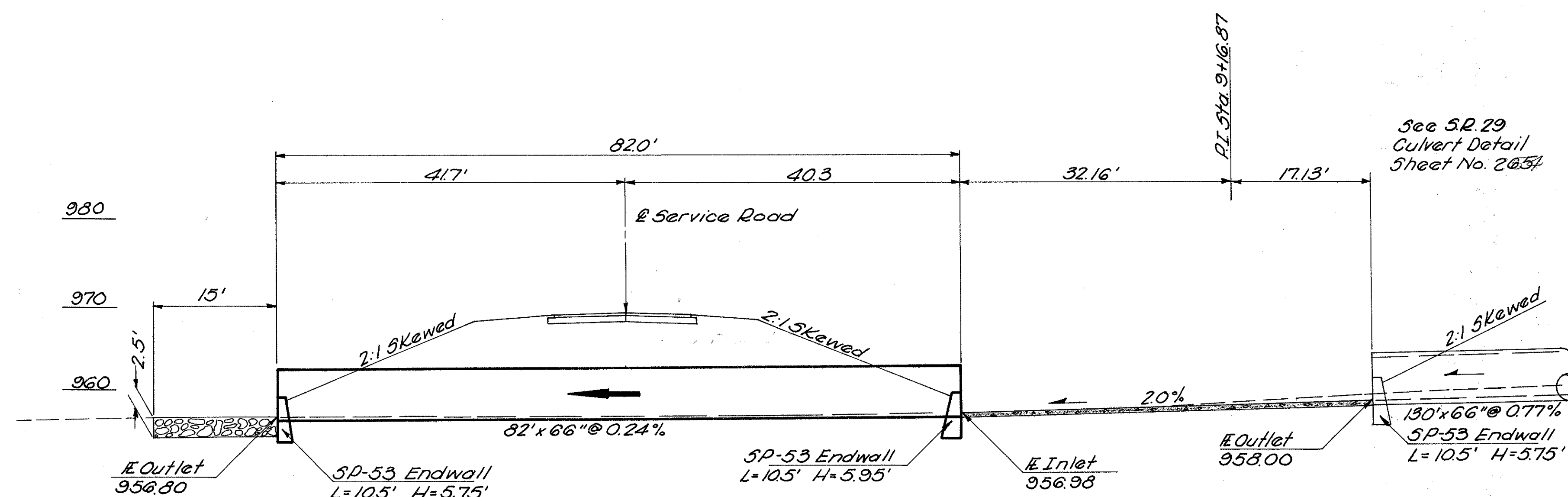
0.52 C.Y.
40 L.F.



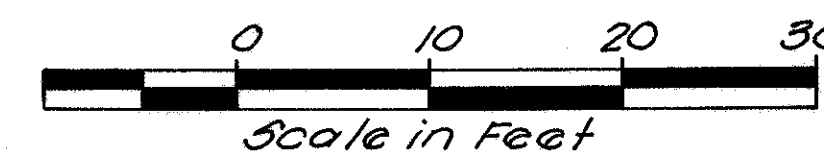
ELEVATION



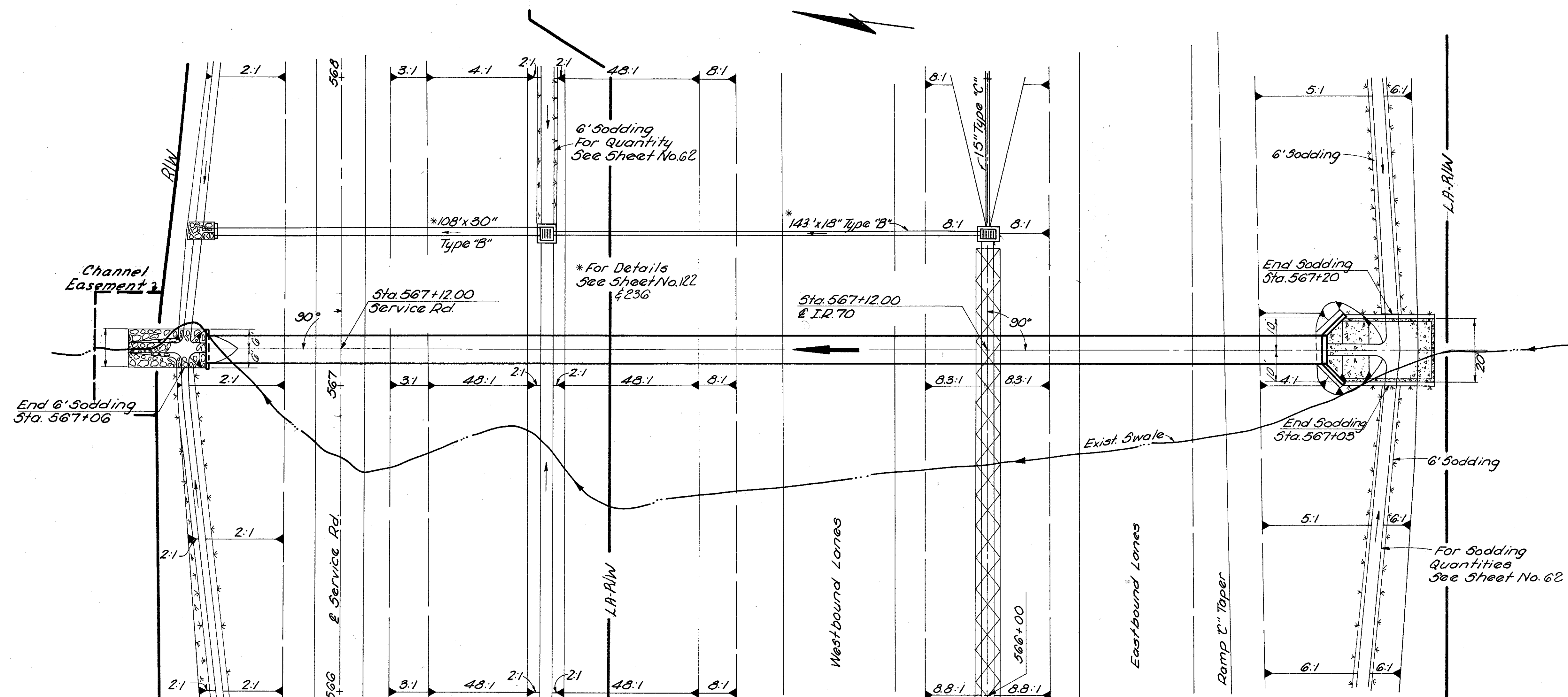
SERVICE ROAD
PIPE CULVERT STA 549+00



ELEVATION



SERVICE ROAD
PIPE CULVERT STA 534+83



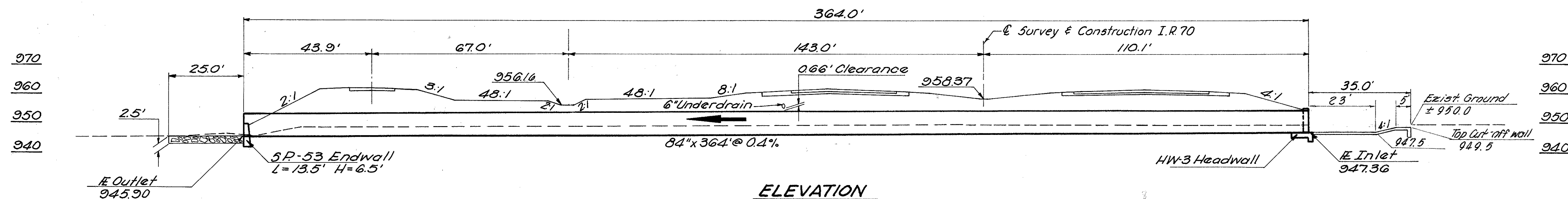
PLAN

Drainage Area = 795 Ac.
Q50 = 466 cfs.

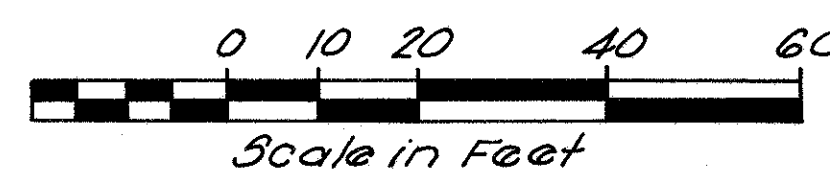
ESTIMATED QUANTITIES

601 Riprap 6" Reinforced Concrete
601 Dumped Rock Channel Protection
602 Concrete Masonry
603 84" Conduit Type "A" 70602 with Class "B" Bedding
660 Sodding

75.0 S.Y.
27.8 C.Y.
26.79 C.Y.
364 L.F.
12.4 S.Y.



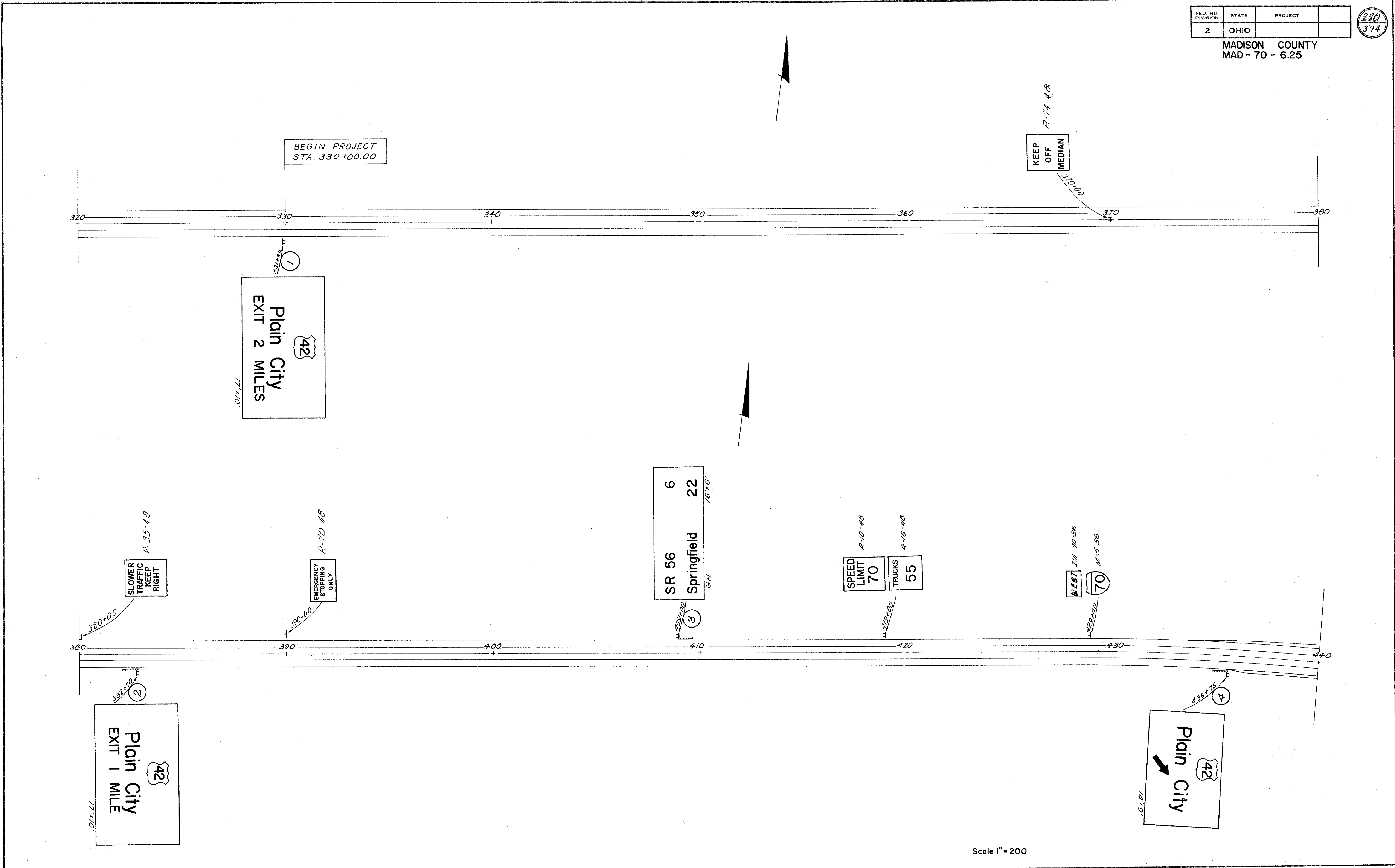
ELEVATION

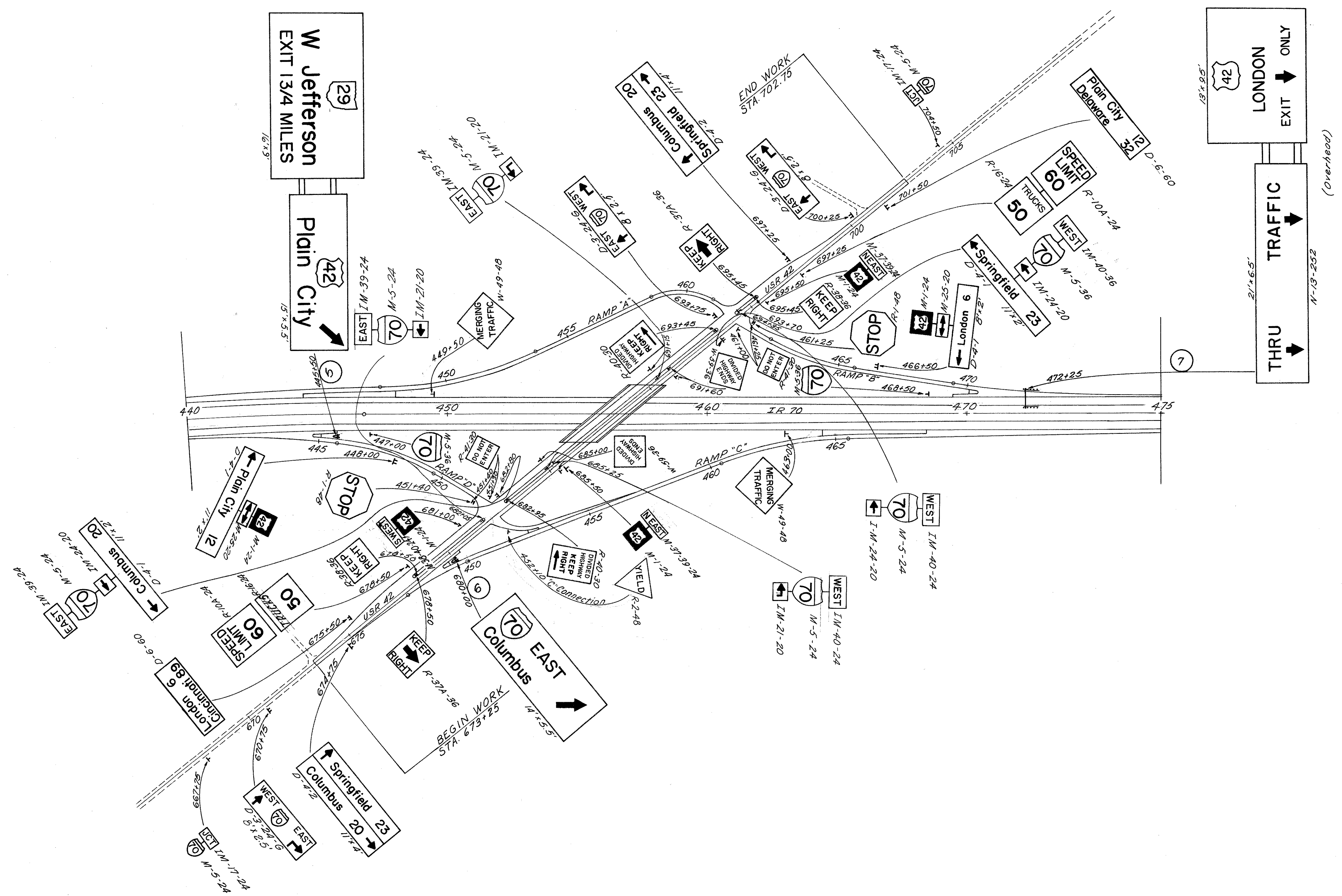


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD - 70 - 6.25

270
374



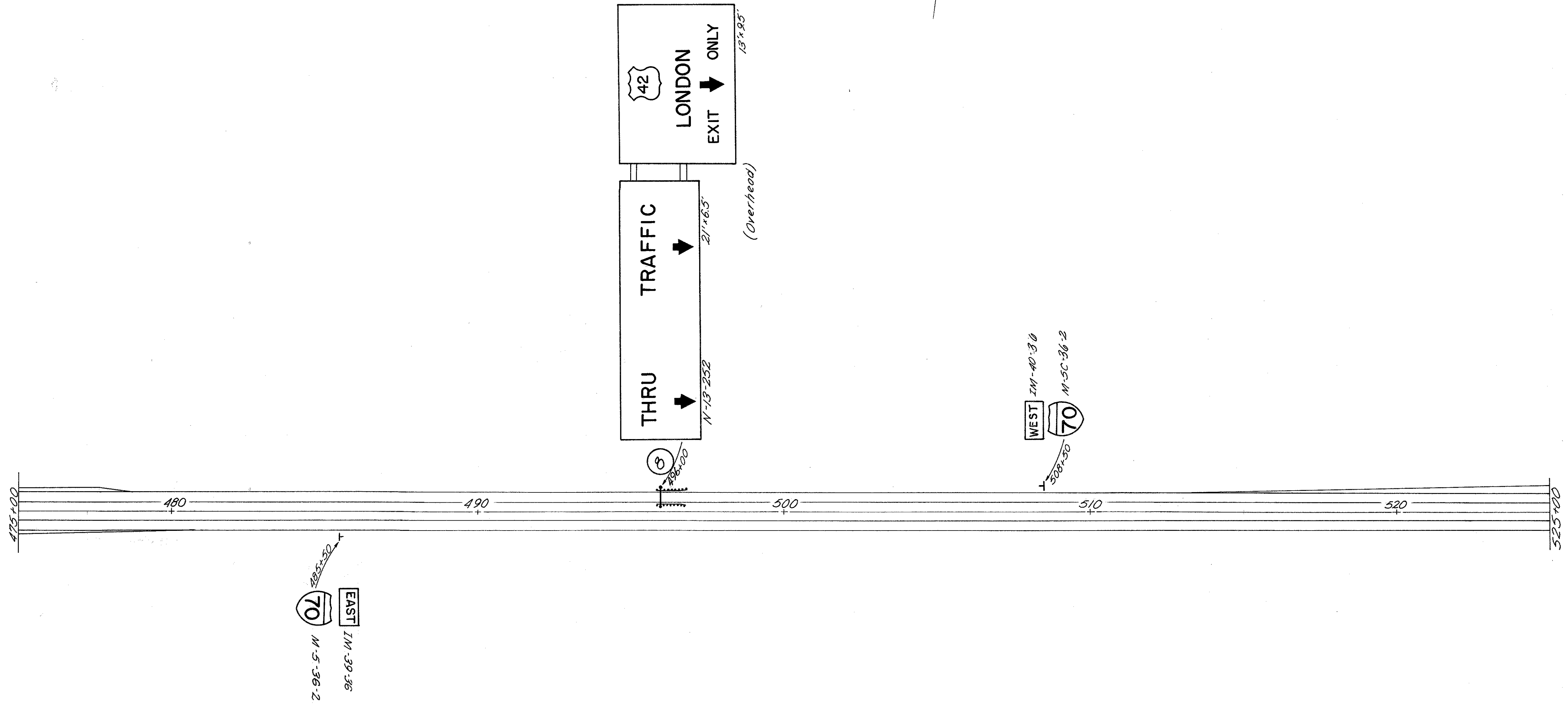


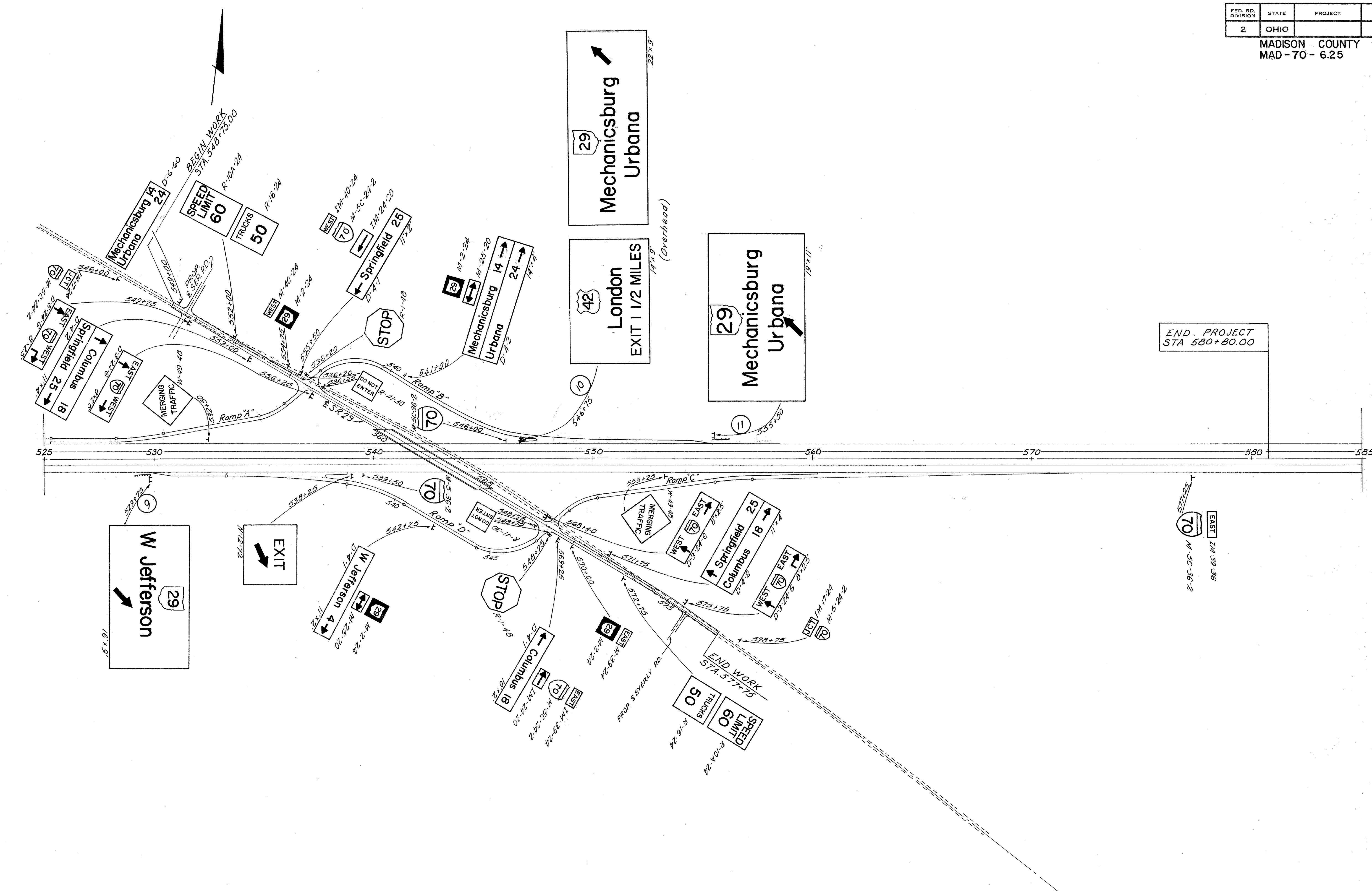
Scale 1"=200

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD-70-6.25

272
374





END PROJECT
STA 580+80.00

Scale 1" = 200

FED. NO. DIVISION	STATE	PROJECT
2	OHIO	

276
374

MAD-70-6.25

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 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" X 3" X 1/8" ANGLES WELDED TO GUSSET PLATES.

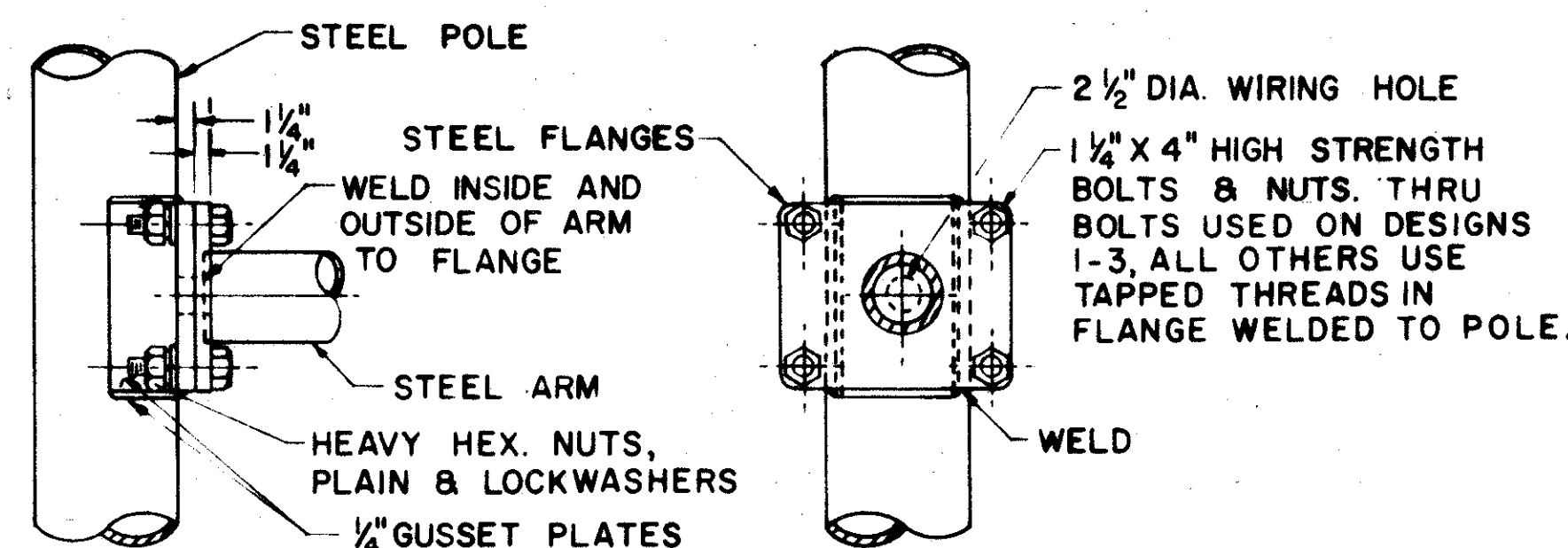
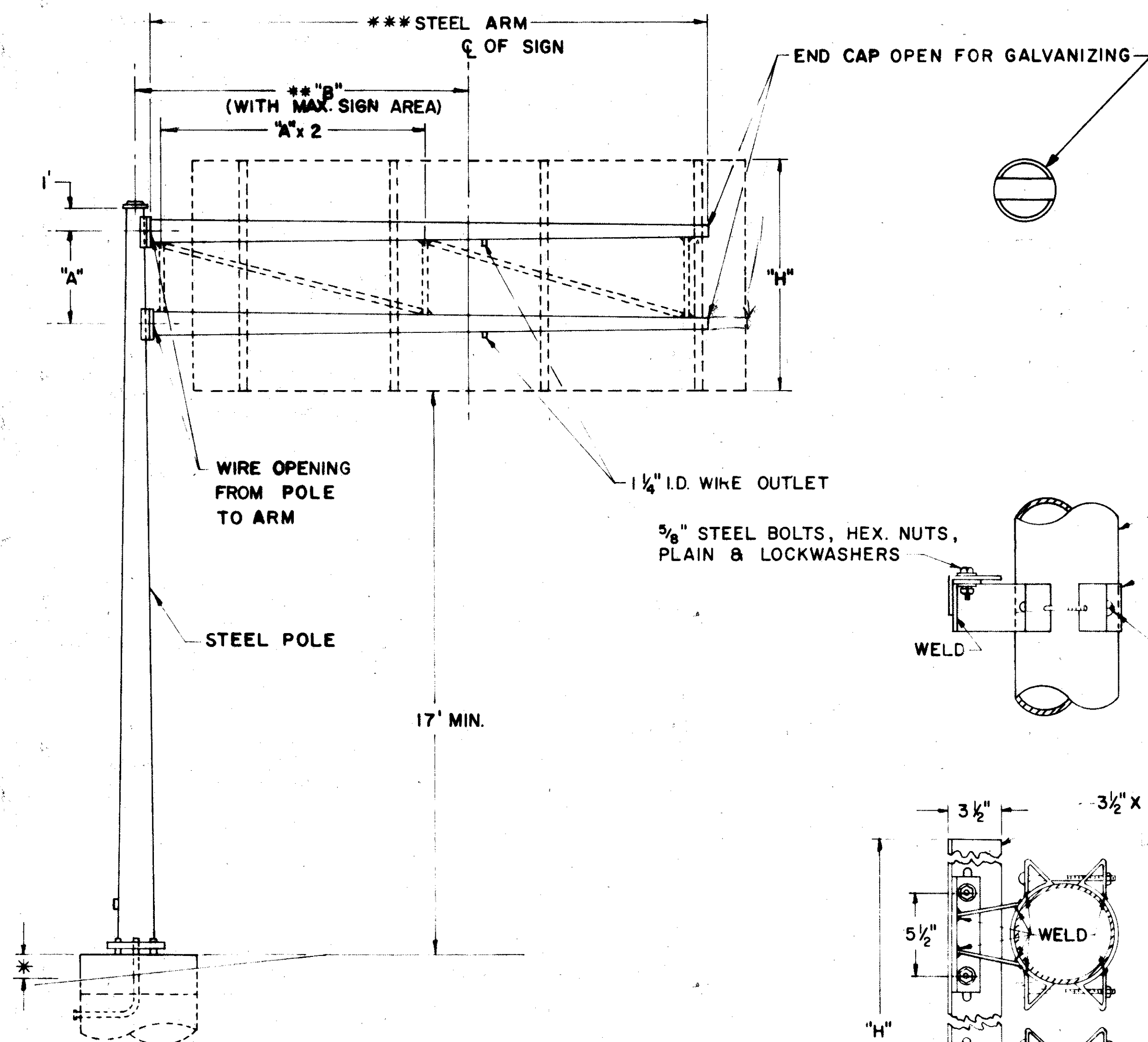
MATERIAL- STEEL POLE BASES, FLANGES, AND END CAPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 30 GRADE B. HIGH STRENGTH STEEL BOLTS SHALL CONFORM TO ASTM SPECIFICATION A193 GRADE B7. AFTER FABRICATION TAPERED POLES AND ARMS SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

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" 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.

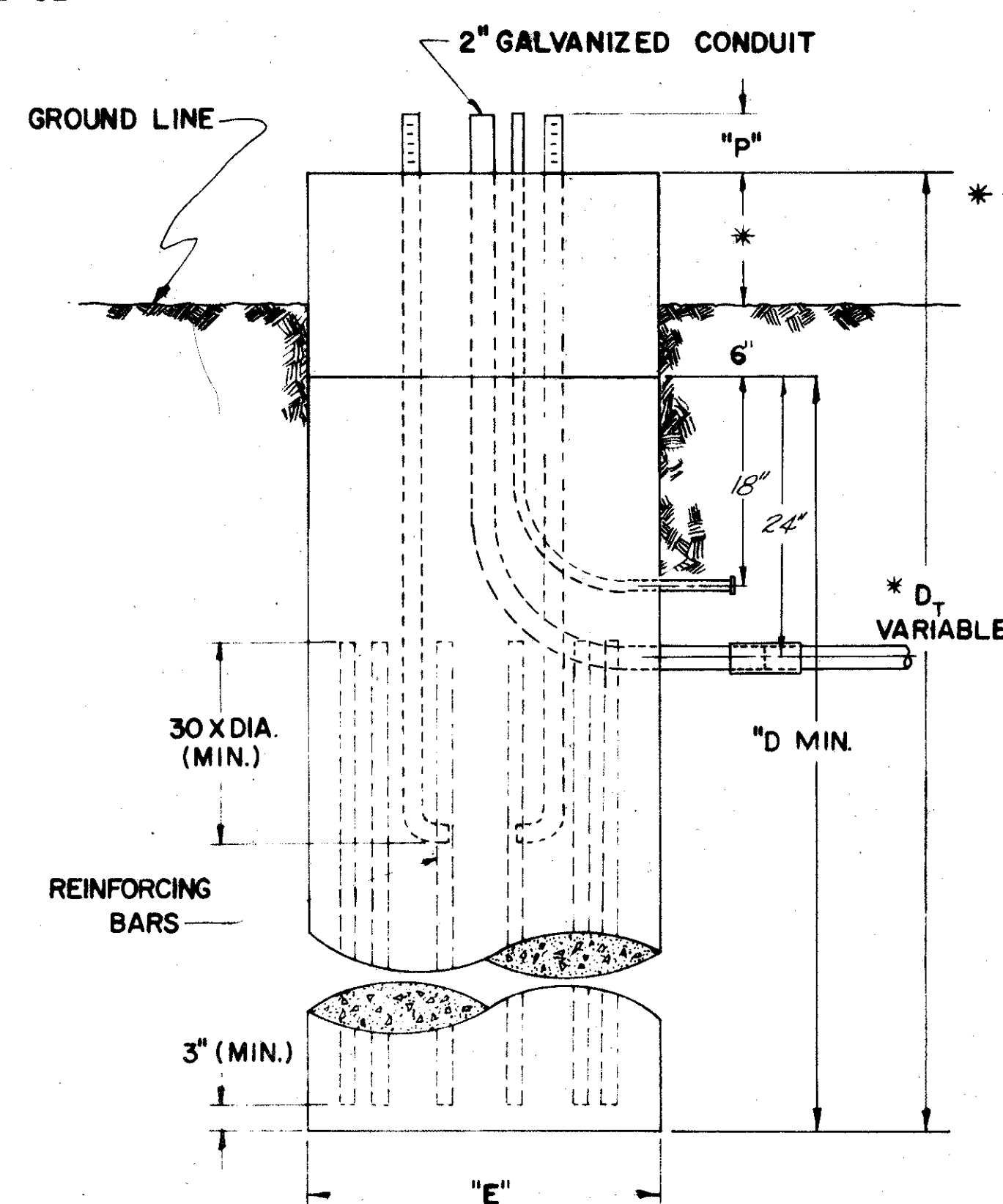
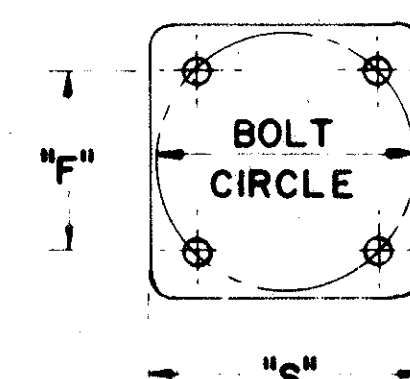
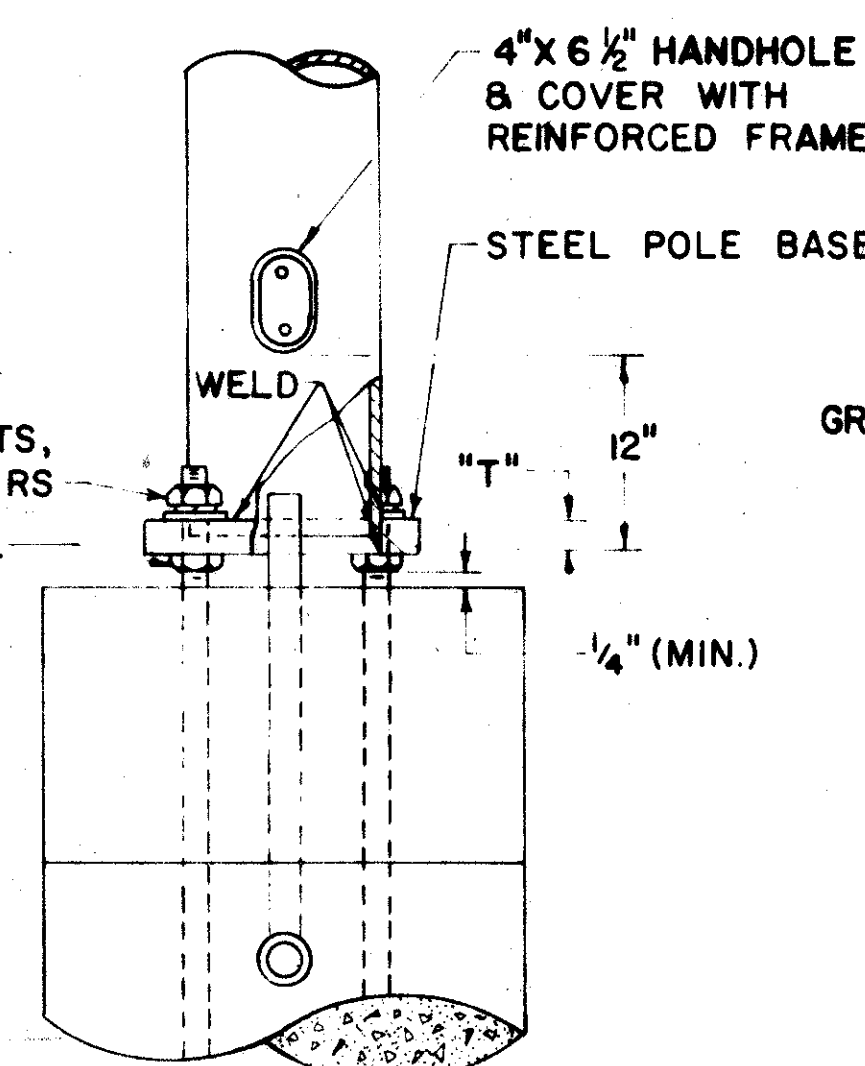
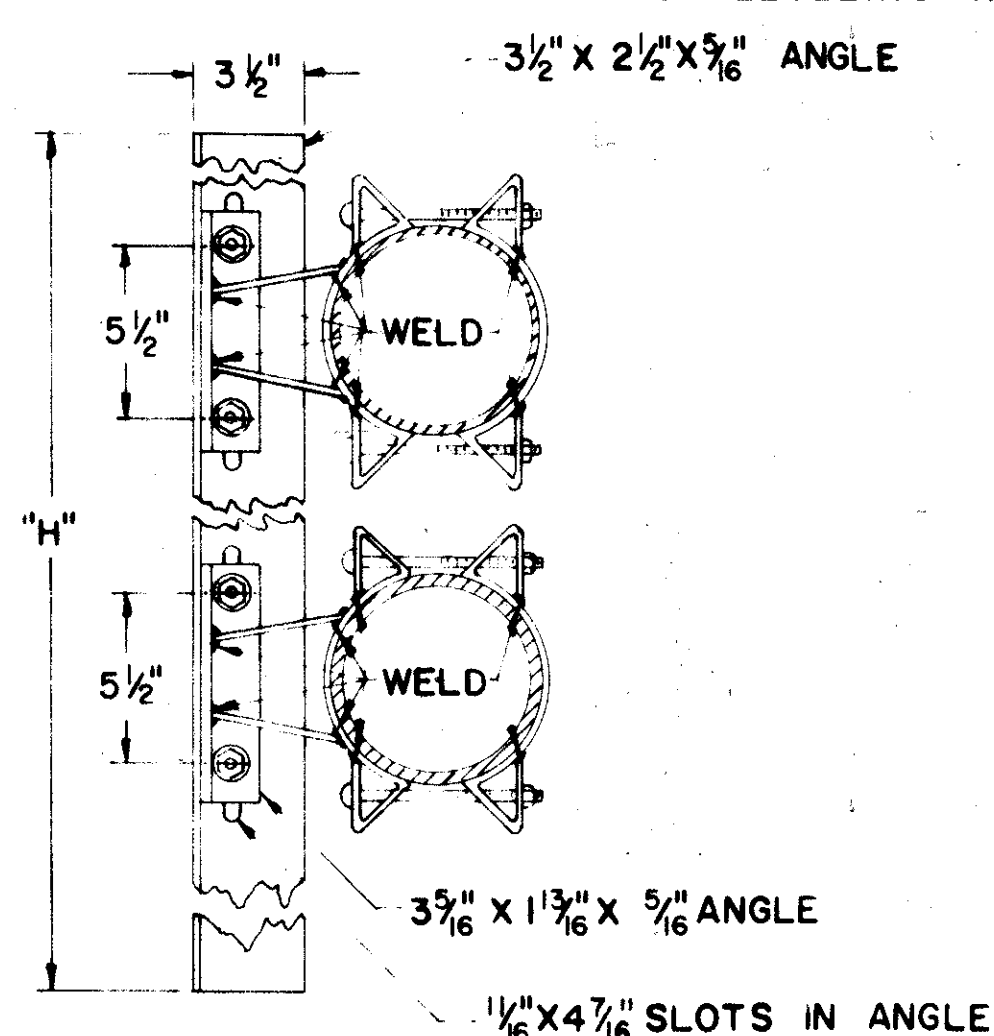
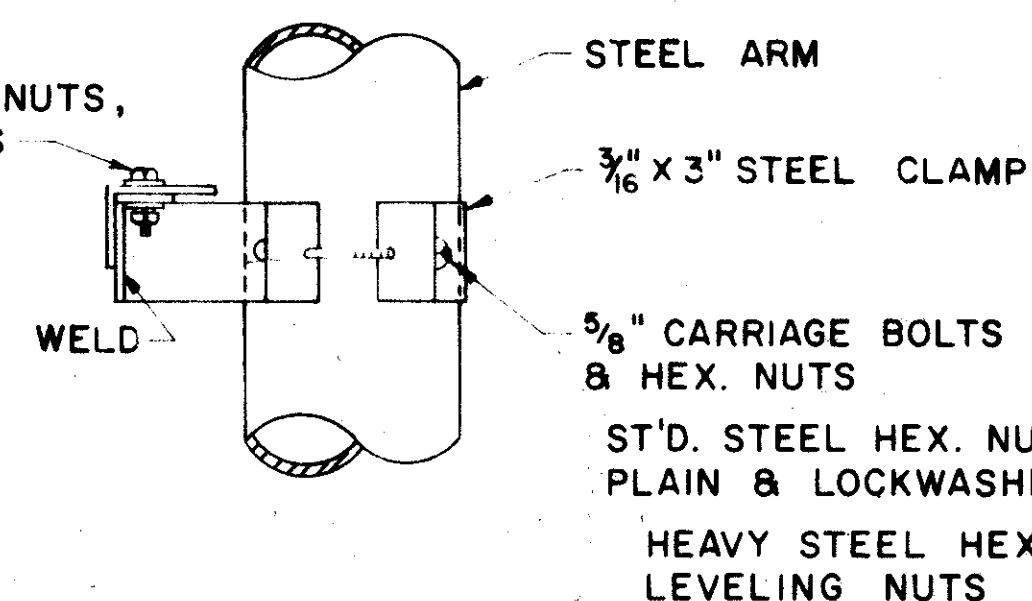
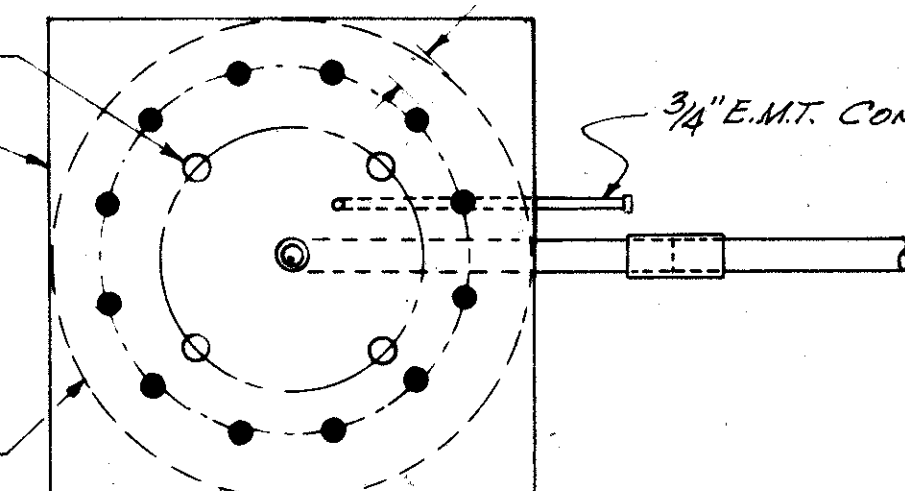
DESIGN

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.



ARM ATTACHMENT

STEEL ANCHOR BOLTS
CONCRETE BASE (TOP TO 6\"/>



DIRECTION OF TRAFFIC
FOUNDATION DETAIL

SIGN ATTACHMENT DETAIL

POLE 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 5/16"	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

DATE
6-10-61
4-1-62
2-24-67

APPROVED *Robert E. Comer*
ENGINEER OF TRAFFIC

MAD-70-6.25

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL. SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02 MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

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

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.

*FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF PAVEMENT AND SHOULDERS.

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.

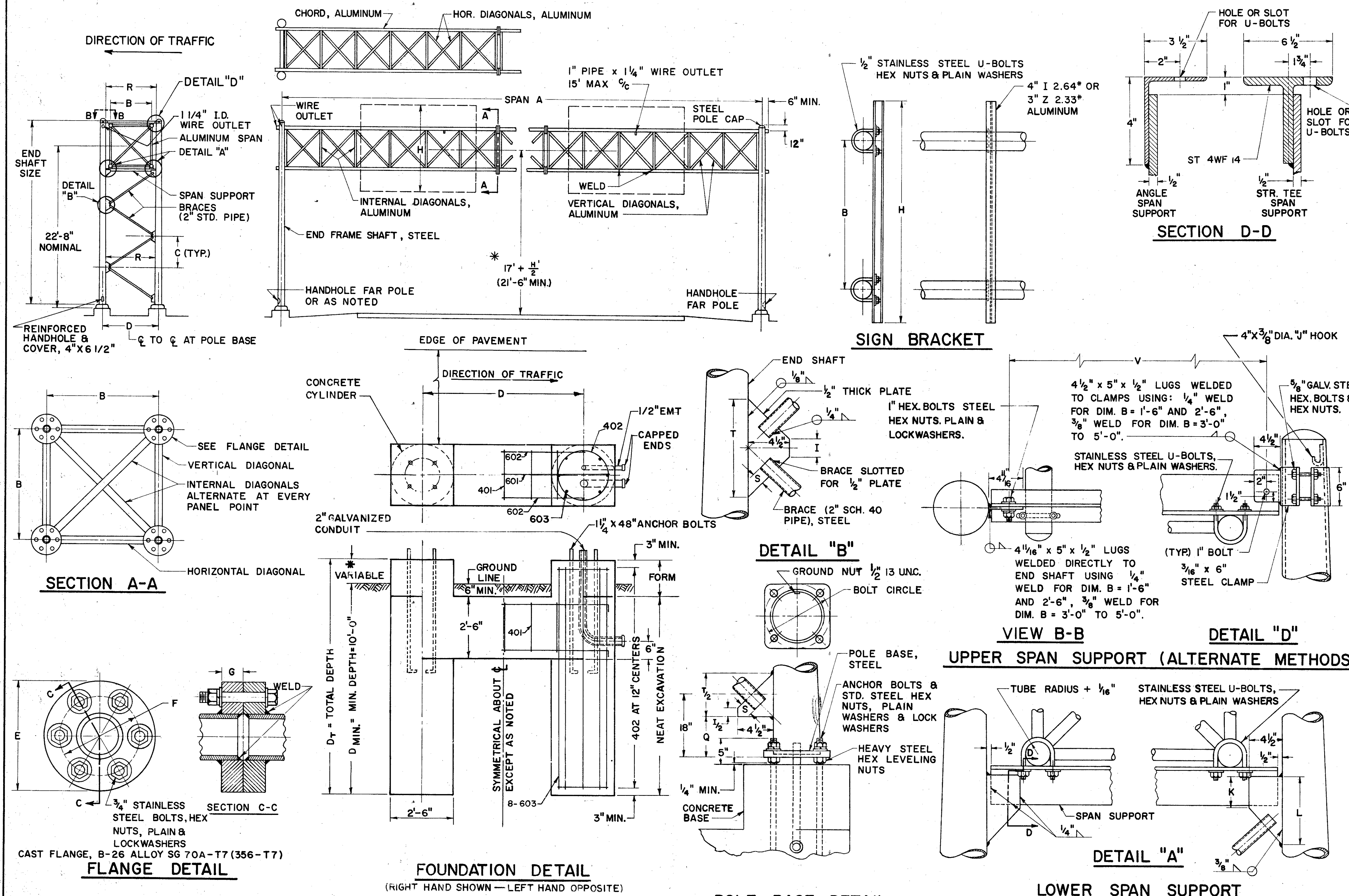
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD
SIGN SUPPORTS

816
No.7.5

DATE
5-2-62
7-25-62
4-29-64
6-20-66

APPROVED *Robert E. Comer*
ENGINEER OF TRAFFIC



DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL
1	50' THRU 70'	3'-0"	4'-11 3/4"	4'-5"	9 1/4"	8" X 4.5" X 25'-0", 3GA	5'-10 3/16"	7 7/16"	1 3/8"	3 1/2"	4 3/4"	8"	12"	6 5/8"	3'-9"	1 1/2"	10"	5 5/8"	3'-3 5/8"	11"	SPLIT TEE 3'-8"	4 3/4" X .188"	1.900" X .145"	1.660" X .140"
2	71' THRU 80'	4'-0"	4'-10 1/4"	5'-7"	9 1/4"	8" X 6.22" X 25'-6", 3GA	6'-7 1/8"	7 7/16"	1 3/8"	5 5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5 5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	4 3/4" X .188"	2" X .188"	1.900" X .145"
3	81' THRU 86'	4'-0"	4'-10 1/4"	5'-7"	11"	8" X 6.22" X 25'-6", 3GA	6'-7 1/8"	8 1/2"	1 1/2"	5 5/8"	4 3/8"	7 3/4"	12"	6 1/4"	4'-11"	1 1/2"	9 1/2"	5 5/8"	4'-5 5/8"	11"	SPLIT TEE 4'-10"	5 1/2" X .250"	2" X .188"	1.900" X .145"
4	86' THRU 110'	5'-0"	4'-8 1/2"	6'-7"	11"	8" X 6.18" X 26'-0", 3GA	7'-3 1/4"	8 1/2"	1 1/2"	—	3 1/2"	7 3/4"	12"	7 1/4"	5'-11"	1 3/4"	11 1/4"	5 5/8"	5'-5 5/8"	11"	SPLIT TEE 5'-10"	5 1/2" X .250"	2 1/2" X .188"	2 1/2" X .188"

REINFORCEMENT SCHEDULE			
MARK	NO.	LENGTH	TYPE
401	12"C/C	8'-6"	102
402	12"C/C	7'-6"	103
601	4	D+4'-0"	101
602	8	D+2'-0"	101
603	32	D-6"	STR

101

2'-0"

2'-0"

102

2'-0"

103

500 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, 816 NO.7.5

MAD-70-6-25

NOTES

MATERIALS

THE OVERHEAD SPAN TRUSS SHALL BE ALUMINUM AND THE END FRAMES SHALL BE STEEL.

SPAN TRUSS AND END FRAMES, INCLUDING HARDWARE, SHALL BE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 816 UNLESS OTHERWISE NOTED.

STEEL POLE BASES AND GUSSETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A-373.

AFTER FABRICATION THE TAPERED POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 48,000 PSI.

FABRICATION

THE ENTIRE STEEL END FRAME SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SEC. 711.02. MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD 1/4" OF CAMBER FOR EACH 5' OF INCREASE IN SPAN OVER 50'.

PAYMENT

PAYMENT FOR THE GALVANIZED CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OVERHEAD SIGN SUPPORTS.

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

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.

FOUNDATION ELEVATION

ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

DESIGN

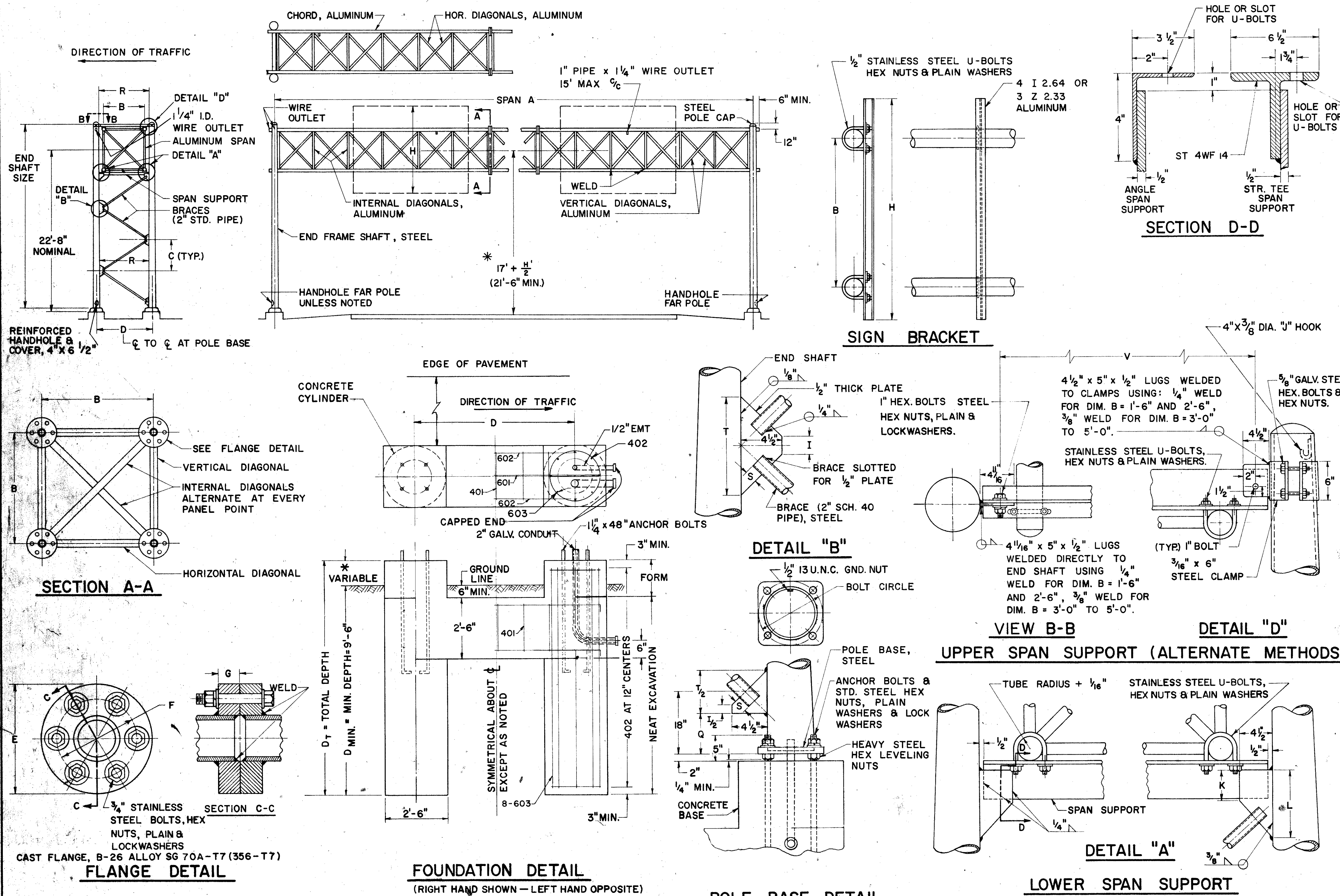
THE DESIGN OF OVERHEAD SUPPORTS IS IN ACCORDANCE WITH A.A.S.H.O. SPECIFICATION FOR THE DESIGN AND CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, ADOPTED JUNE 12, 1961.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD
SIGN SUPPORTS 816
No. 7.4

APPROVED *Robert E. Lerner*
ENGINEER OF TRAFFIC

DATE
5-2-62
7-2-62
5-8-62
6-20-62



DESIGN NO.	SPAN A	B	C	D	E	END SHAFT	BRACE LENGTH	F	G	I	K	L	P	Q	R	S	T	U BOLTS	V	BOLT CIRCLE	SPAN SUPPORT SECTION D-D	CHORDS	HORIZONTAL AND INTERNAL DIAGONAL	VERTICAL DIAGONAL	REINFORCEMENT SCHEDULE			101	
1	50' thru 75'	3'-0"	4'-11 ³ / ₄ "	4'-5"	9 ¹ / ₄ "	8"x4.5"x25'-0", 3 GA.	5'-10 ¹³ / ₁₆ "	7 ⁷ / ₁₆ "	1 ³ / ₈ "	3 ¹ / ₂ "	4 ³ / ₄ "	8"	12"	6 ⁵ / ₈ "	3'-9"	1 ¹ / ₂ "	10"	5 ⁵ / ₈ "	3'-3 ⁵ / ₈ "	11"	SPLIT TEE 3'-8"	4 ³ / ₄ " x .188"	1.900" x .145"	1.660" x .140"	MARK NO.	LENGTH	TYPE	2'-0"	2'-0"
2	76' thru 85'	4'-0"	4'-10 ¹ / ₄ "	5'-7"	9 ¹ / ₄ "	8"x6.22"x25'-6", 3 GA.	6'-7 ⁷ / ₈ "	7 ⁷ / ₁₆ "	1 ³ / ₈ "	5 ⁵ / ₈ "	4 ³ / ₈ "	7 ³ / ₄ "	12"	6 ¹ / ₄ "	4'-10"	1 ¹ / ₂ "	9 ¹ / ₂ "	5 ⁵ / ₈ "	4'-4 ⁵ / ₈ "	11"	SPLIT TEE 4'-10"	4 ³ / ₄ " x .188"	2" x .188"	1.900" x .145"	401	12"C/C	8'-6"	102	
3	86' thru 90'	4'-0"	4'-10 ¹ / ₄ "	5'-7"	11"	8"x6.22"x25'-6", 3 GA.	6'-7 ⁷ / ₈ "	8 ¹ / ₂ "	1 ¹ / ₂ "	5 ⁵ / ₈ "	4 ³ / ₈ "	7 ³ / ₄ "	12"	6 ¹ / ₄ "	4'-10"	1 ¹ / ₂ "	9 ¹ / ₂ "	5 ⁵ / ₈ "	4'-4 ⁵ / ₈ "	11"	SPLIT TEE 4'-10"	5 ¹ / ₂ " x .250"	2" x .188"	1.900" x .145"					
4	91' thru 110'	5'-0"	4'-8 ¹ / ₂ "	6'-7"	11"	8"x6.18"x26'-0", 3 GA.	7'-3 ¹ / ₄ "	8 ¹ / ₂ "	1 ¹ / ₂ "	—	3 ¹ / ₂ "	7 ³ / ₄ "	12"	7 ¹ / ₄ "	5'-10"	1 ³ / ₄ "	11 ¹ / ₄ "	3 ³ / ₄ "	5'-4 ⁵ / ₈ "	11"	SPLIT TEE 5'-10"	5 ¹ / ₂ " x .250"	2 ¹ / ₂ " x .188"	2 ¹ / ₂ " x .188"	601	4	D+4'-0"	101	
																									602	8	D+2'-0"	101	
																									603	32	D _T - 6"	STR.	103

400 SQ. FT. SIGN AREA

OVERHEAD SIGN SUPPORT, 816 NO. 7.4

NOTES

MATERIALS

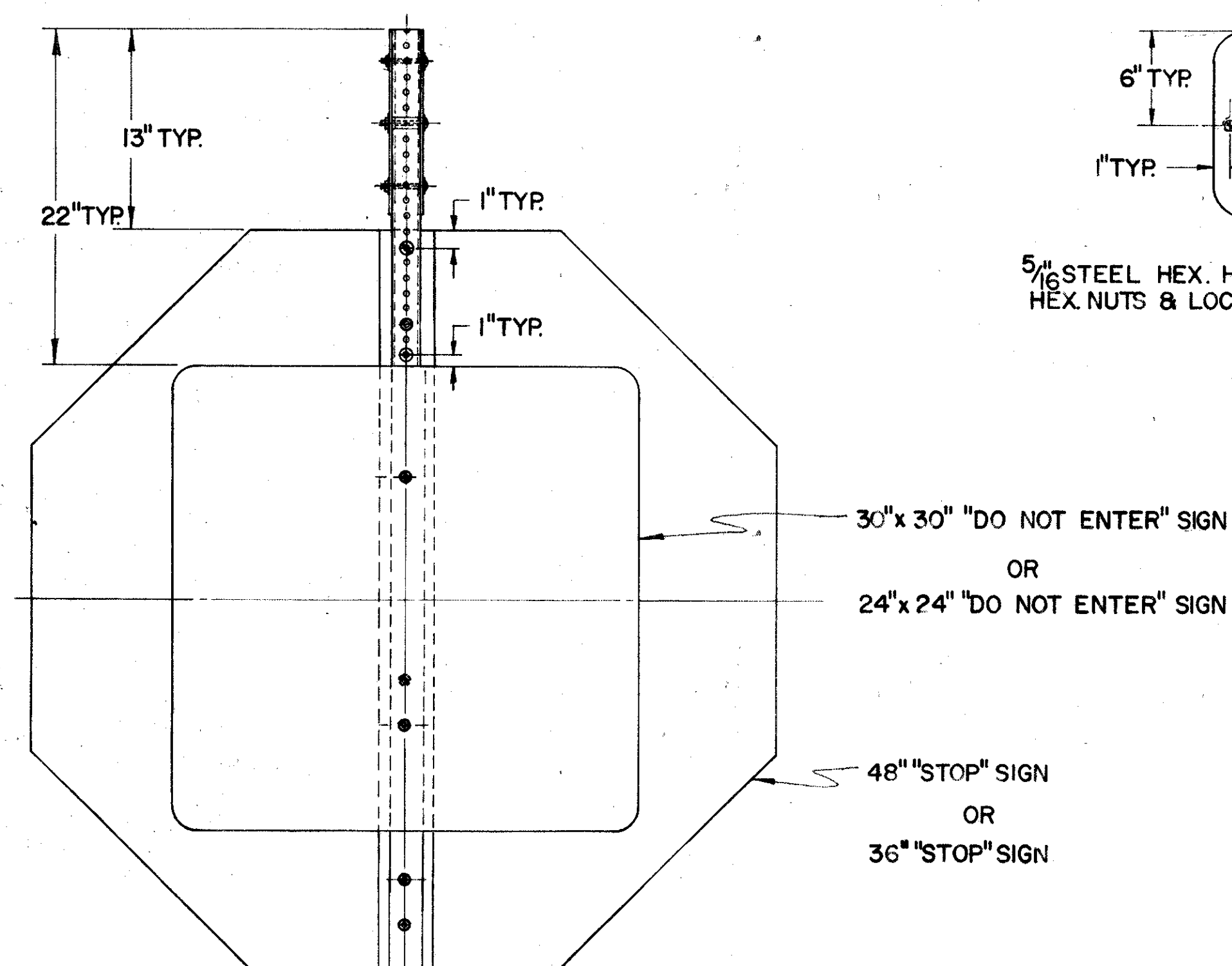
ALL SIGN MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 815.

ALL STRUCTURAL MATERIALS SHALL BE IN ACCORDANCE WITH SUPPLEMENT SPECIFICATION 816.

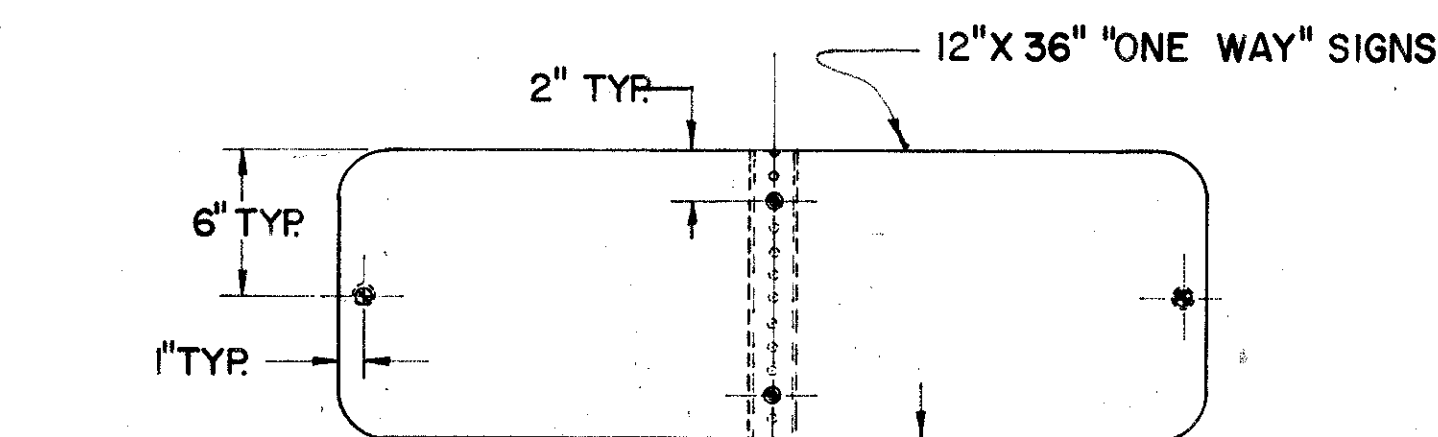
FOR SPECIFICATIONS FOR THE 2" & 1 3/4" SQUARE STEEL POST SEE GENERAL NOTES, SHEET NO. _____.

3/8" ID. ALUM. OR FIBER SPACER
(A)= 2" LG., (B)= 1 3/4" LG.

5/16" SLOTTED ALUM. TRUSS
HEAD BOLTS, HEX. NUTS
& LOCKWASHERS.



**"ONE WAY", "STOP", "DO NOT ENTER",
SIGN INSTALLATION.**



5/16" STEEL HEX. HEAD BOLTS
HEX. NUTS & LOCKWASHERS.

12" X 36" "ONE WAY" SIGNS

2" TYP.

6" TYP.

1" TYP.

1" TYP.

A

A

16" TYP.

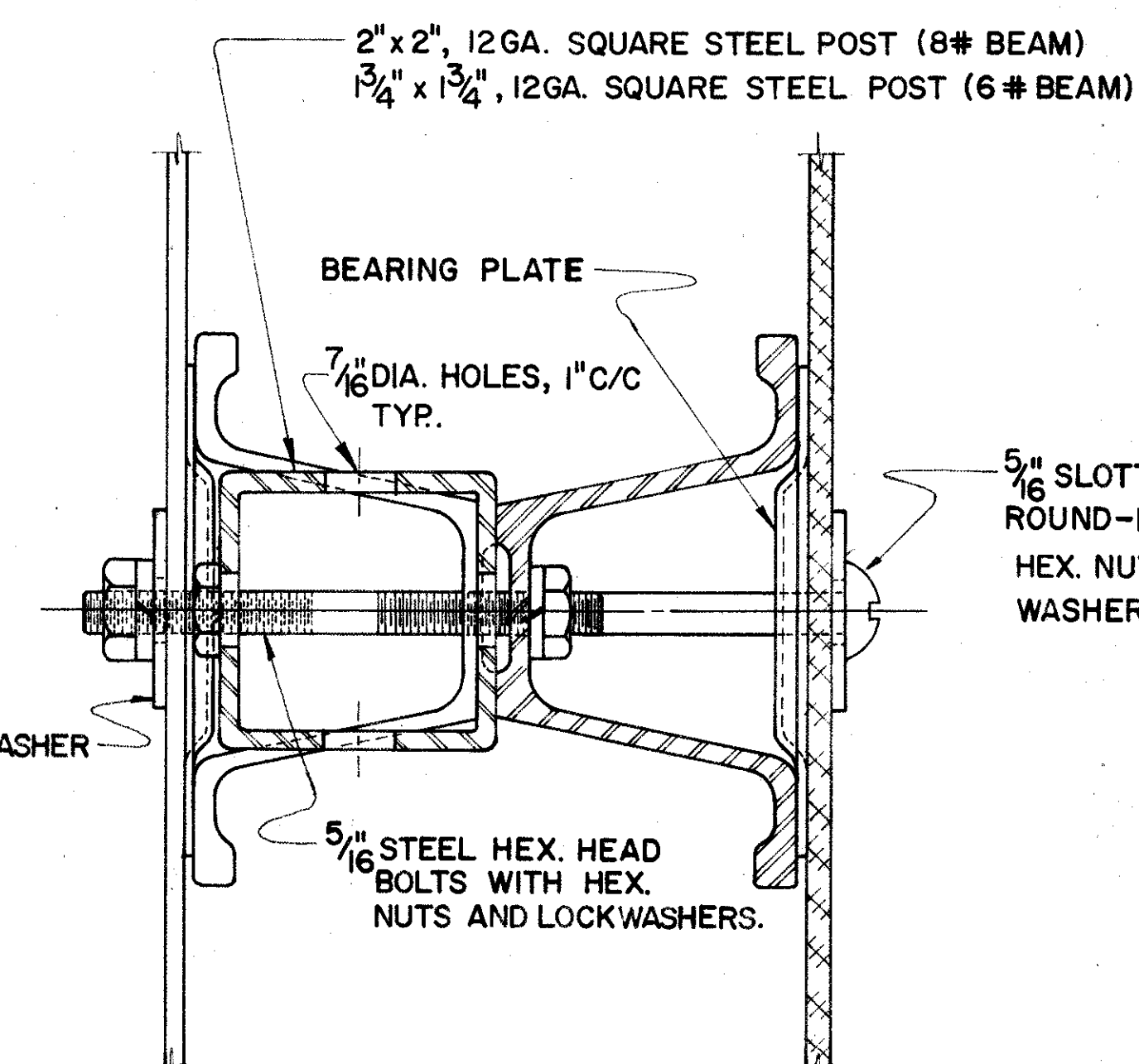
5/16" PLAIN WIDE WASHER
(TYP.)

5/16" GALVANIZED OR
CADMIUM PLATED HEX.
NUTS & LOCKWASHERS
(TYPICAL)

STRUCTURAL SUPPORT, 8 # BEAM
OR
STRUCTURAL SUPPORT, 6 # BEAM

16" C/C TYP.

SECTION A-A



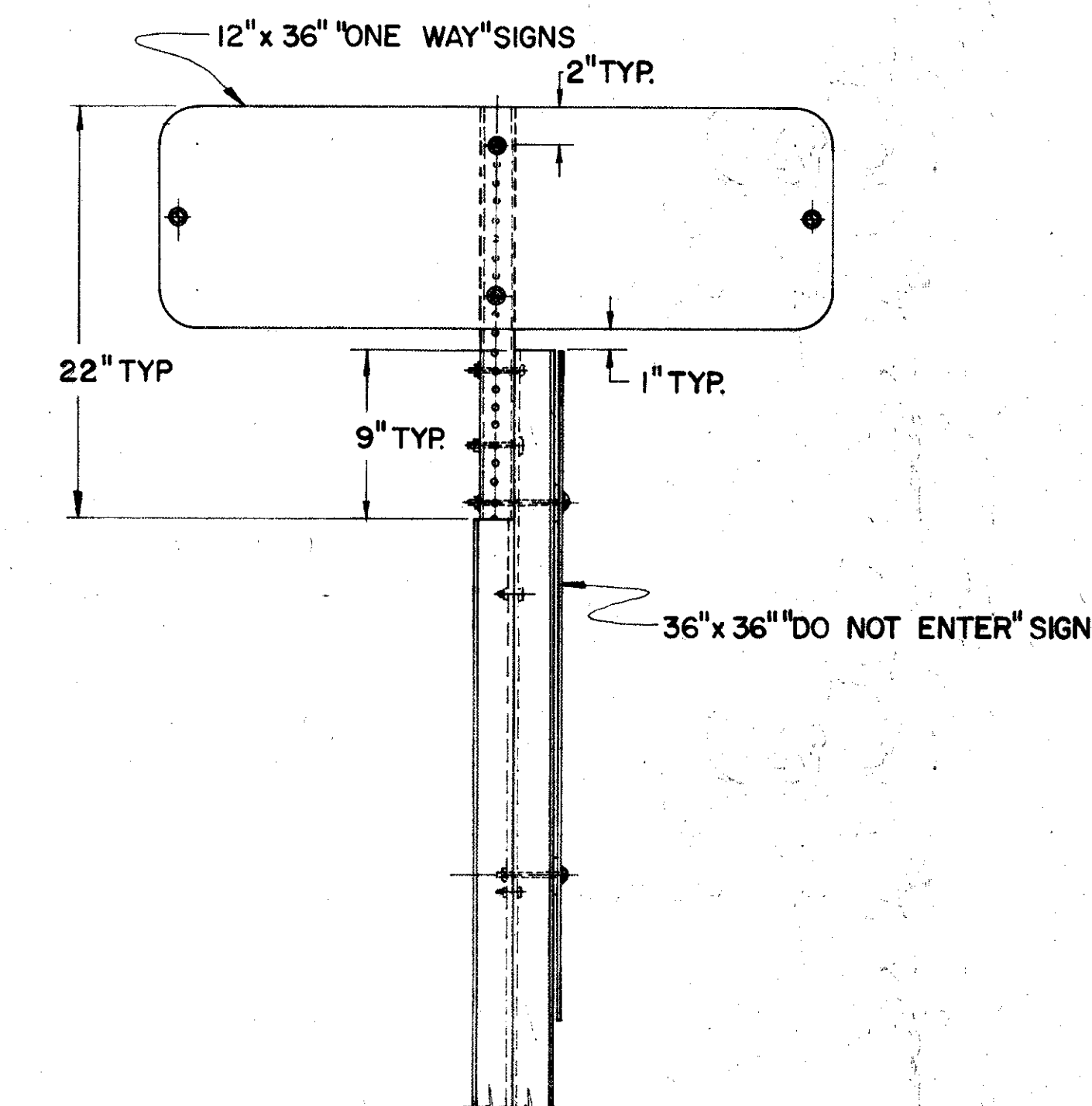
2" x 2", 12 GA. SQUARE STEEL POST (8 # BEAM)
1 3/4" x 1 3/4", 12 GA. SQUARE STEEL POST (6 # BEAM)

BEARING PLATE

7/16" DIA. HOLES, 1" C/C
TYP.

5/16" STEEL HEX. HEAD
BOLTS WITH HEX.
NUTS AND LOCKWASHERS.

5/16" SLOTTED ALUM.
ROUND-HEAD BOLTS
HEX. NUTS & LOCK-
WASHERS.



**"ONE WAY", "DO NOT ENTER"
SIGN INSTALLATION**

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

**SPECIAL
"ONE WAY" SIGN
SUPPORT DETAILS**

SOW

DATE
2-7-66
4-18-67

APPROVED _____
ENGINEER OF TRAFFIC

PAVEMENT MARKING AND DELINEATOR QUANTITIES

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

281
374

MADISON COUNTY
MAD-70-6.25

ITEM 621 PAVEMENT MARKING										
STATION		SIDE	4" EDGE LINE	4" LANE LINE	6" LANE LINE	8" CHANNEL LINE	BROAD TRANSVERSE STRIPES	CURB & ISLAND MARKING	BARRIER LINES	STOP LINES
FROM	TO									
I.R-70										
330+00	580+80	Lt & Rt	L.F.	L.F.	L.F.	L.F.	LUMP	LUMP	L.F.	LUMP
330+00	444+50	Lt	501.60							
330+00	440+28.48	Rt	114.50							
330+00	580+80	Lt &	1102.9							
330+00	580+80	Rt &			94.05					
330+00	580+80	Rt &			94.05					
439+00	442+00	Lt		113						
442+00	444+50	Lt			250					
439+25	409+45	Lt	3025							
440+06	442+47	Rt		89						
442+47	445+82	Rt			570	Lump				
445+82	473+00	Rt	2718							
469+45	472+80	Lt			570	Lump				
472+80	474+00	Lt		45						
468+50	471+00	Rt			250					
471+00	474+00	Rt		113						
468+50	533+25	Rt	6475							
475+00	525+25	Lt	5025							
462+50	580+80	Rt			4436					
464+45	580+80	Lt			4363					
U.S.R-42										
673+25	681+00	Lt	775							
673+25	677+75	Rt	450							
673+25	678+45	Median					Lump		1044	
675+00	699+50	Lt & Rt &		1800						
677+00	679+55	Rt		96						
678+47	681+07.08	Median	521							
680+45	682+00	Rt	155							
682+30	694+00	Lt	1170							
682+35	694+15	Rt	1180							
683+87.78	692+50	Median	1725							
694+35	695+46.19	Median	224							
694+70	702+75	Lt	805							
695+46.19	702+75	Median				Lump		1458		
695+50	702+75	Rt	725							
RAMP A (U.S.R-42)										
444+50	461+65	Lt	1715							
444+50	449+50	Rt					Lump			
448+50	461+65	Rt	1315							
RAMP B (U.S.R-42)										
460+70	475+00	Rt	1430							Lump
469+46.93	470+46.98	Lt					Lump			
460+70	470+46.98	Lt	1077							
RAMP C (U.S.R-42)										
449+04.08	454+00	Rt	496							
451+36.14(Conn)	470+50	Lt	1914							
451+36.14(Conn)	452+71.07(Conn)	Rt	135							
447+37.75	468+50	Rt	2113							
469+25	468+50	Lt					Lump			
RAMP D (U.S.R-42)										
444+76.95	451+90	Lt	714							
444+76.95	445+76.95	Lt					Lump			
440+28.48	451+90	Rt	1162							Lump
I.R-70										
519+75	522+75	Lt		113						
519+75	546+45	Lt	2670				250			
522+75	525+25	Lt								
533+04	535+44	Rt		89						
535+44	538+80	Rt			570	Lump				
538+80	560+25	Rt	2146							
546+45	549+80	Lt			570	Lump				
549+80	552+20	Lt		89						
552+00	580+80	Lt	2880							
560+20	562+75	Rt			250					
562+75	565+75	Rt		113						
560+25	580+80	Rt	2055							
RAMP A (S.R-29)										
525+25	537+31.46	Lt	1207							
525+25	530+75	Rt					Lump			
529+25	537+31.46	Rt	807							
RAMP B (S.R-29)										
535+78.94	552+00	Lt	2622							Lump
546+46.93	547+45	Lt					Lump			
535+78.94	547+45	Rt	1122							
RAMP C (S.R-29)										
547+38.46	556+25	Lt	877							
555+00	560+25	Lt					Lump			
547+38.46	560+25	Rt	1287							
RAMP D (S.R-29)										
537+78.07	549+28.16	Lt	1151							
537+78.07	538+78.07	Lt					Lump			
533+25	549+28.16	Rt	1604							Lump
S.R-29										
548+75	577+25	Lt	2614							
548+75	577+25	Rt	2613							
548+75	577+25	&							5228	
TOTAL LINEAL FEET			135,348	2660	27,609	3,280	Lump	Lump	7,730	Lump
TOTAL MILES			25.64	0.51	5.23	0.62	Lump	Lump	1.47	Lump

ITEM 620 DELINEATORS									
STATION		SIDE	INTERVAL	A-1		C-2	C-3		
FROM	TO			POST		POST	POST		
IR-70									
330+00	432+00	Lt	L.F.	EA		EA	EA		
434+00		Lt	200	51			1		
435+00	441+00	Lt	100			7			
449+00	469+00	Lt	200	11					
470+00	479+00	Lt	100			10			
480+00	512+00	Lt	200	17					
513+00		Lt					1		
514+00	526+00	Lt	100			13			
530+00	546+00	Lt	200	9					
549+00	556+00	Lt	100			8			
557+00	579+00	Lt	200	12					
330+00	434+00	Rt	200	53					
435+00	440+00	Rt	100			6			
446+00	464+00	Rt	200	24					
465+00	480+00	Rt	100			16			
481+00		Rt					1		
482+00	528+00	Rt	200	25					
529+75	534+75	Rt	100			6			
539+00	557+00	Rt	200	10					
560+00	571+00	Rt	100			12			
572+00		Rt					1		
573+00	579+00	Rt	200	4					
RAMP A (USR 42)									
442+00	449+00	Lt	100			8			
449+00	464+00	Rt	50			11			
464+00	458+00	Lt	100			5			
458+30	461+60	Lt	30			12			
RAMP B (USR 42)									
461+00	466+00	Rt	50			11			
466+00	469+00	Lt	100			4			
RAMP C (USR 42)									
448+00	457+00	Rt	100			10			
457+00		Lt					1		
458+00	460+00	Lt	100			3			
460+50	464+00	Lt	50			8			
RAMP C CONNECTION (USR 42)									
451+40	452+00	Rt	30			3			
452+00	456+00	Lt	100			5			
RAMP D (USR-42)									
441+00	446+00	Rt	100			6			
446+50	451+00	Lt	50			10			
RAMP A (SR-29)									
527+00	535+00	Lt	100			9			
535+00	537+00	Rt	50			5			
RAMP B (SR-29)									
536+10	540+00	Lt	30			14			
541+00	542+00	Lt	100			2			
542+00	546+00	Rt	50			9			
546+00	548+00	Lt	100			3			
RAMP C (SR-29)									
548+00	551+00	Lt	50			7			
552+00	554+00	Lt	100			3			
554+00	559+00	Rt	100			6			
RAMP D (SR-29)									
536+00	539+00	Rt	100			4			
539+00	542+00	Lt	50			7			
543+00	545+00	Lt	100			3			
545+00	548+60	Rt	30			13			
TOTALS							201	259	5

NOTES

816 Structural Supports, 4" or 6" Beam AS PER PLAN
This item shall consist of the furnishing, assembly, and installation of two (2) 3 1/2" or 4 1/2" per foot drive posts (6 or 8 lb beam) in combination with a square seamless tubular post extension spliced to the top of the beam. Detail are shown on sheet 202.

Square seamless tubular post material shall be mild steel conforming to A5A 1020 Steel, minimum yield strength 35,000 PSI, ultimate yield, 55,000 PSI.

Work shall include all labor, materials, equipment, tools, and hardware necessary to perform the required item of work. Basis of payment shall be for STRUCTURAL SUPPORTS, 6(8) LB BEAM, AS PER PLAN per lineal foot measured by total length of combination beam from end to end.

ERECTION OF OVERHEAD SPAN TYPE SIGN SUPPORTS (7 SERIES)
In all cases, span type overhead sign supports and signs shall be erected concurrently. At no time shall the box trusses be erected without the sign being in place within eight (8) hours.

ADJUSTMENTS
The changes made to the quantities by the adjustments column reflect a change from ground mounted to overhead guide signs. Necessary details will be provided by the Engineer.

GALVANIZED SUPPORTS
The structural steel beam supports including the 4", 6" and 8" beam and the 2", 3" and 4" drive post shall be galvanized (after punching) in accordance with ASTM A-123. All bolts, nuts and washers, both plain and lock, shall be galvanized in accordance with ASTM A-123, except where aluminum or stainless steel is required.

OVERHEAD SIGN SUPPORTS
All components of overhead sign supports, 816, shall be steel, except the truss spans and accessories to the 816 No. 7 series which shall be aluminum.
For specific details and material see sheet No.

STRUCTURAL SIGN SUPPORT QUANTITIES
Quantities for 816 structural beam supports appearing in the summary tables are approximate. The Contractor shall be responsible for determining exact support lengths prior to fabrication and galvanizing of supports.

TRAFFIC SIGN ERECTION
The contractor shall erect sign panels furnished by others as noted on the schematic signing layout sheet No. 2. The panels shall be mounted on the brackets or beam supports provided in the plans.
A schedule for sign erection shall be submitted to the Division Traffic Engineer and the Bureau of Traffic, 450 East Town Street, Columbus, Ohio 43216, 60 calendar days prior to the start of any scheduled erection work. The schedule shall include proposed dates, time, sign numbers and delivery point.

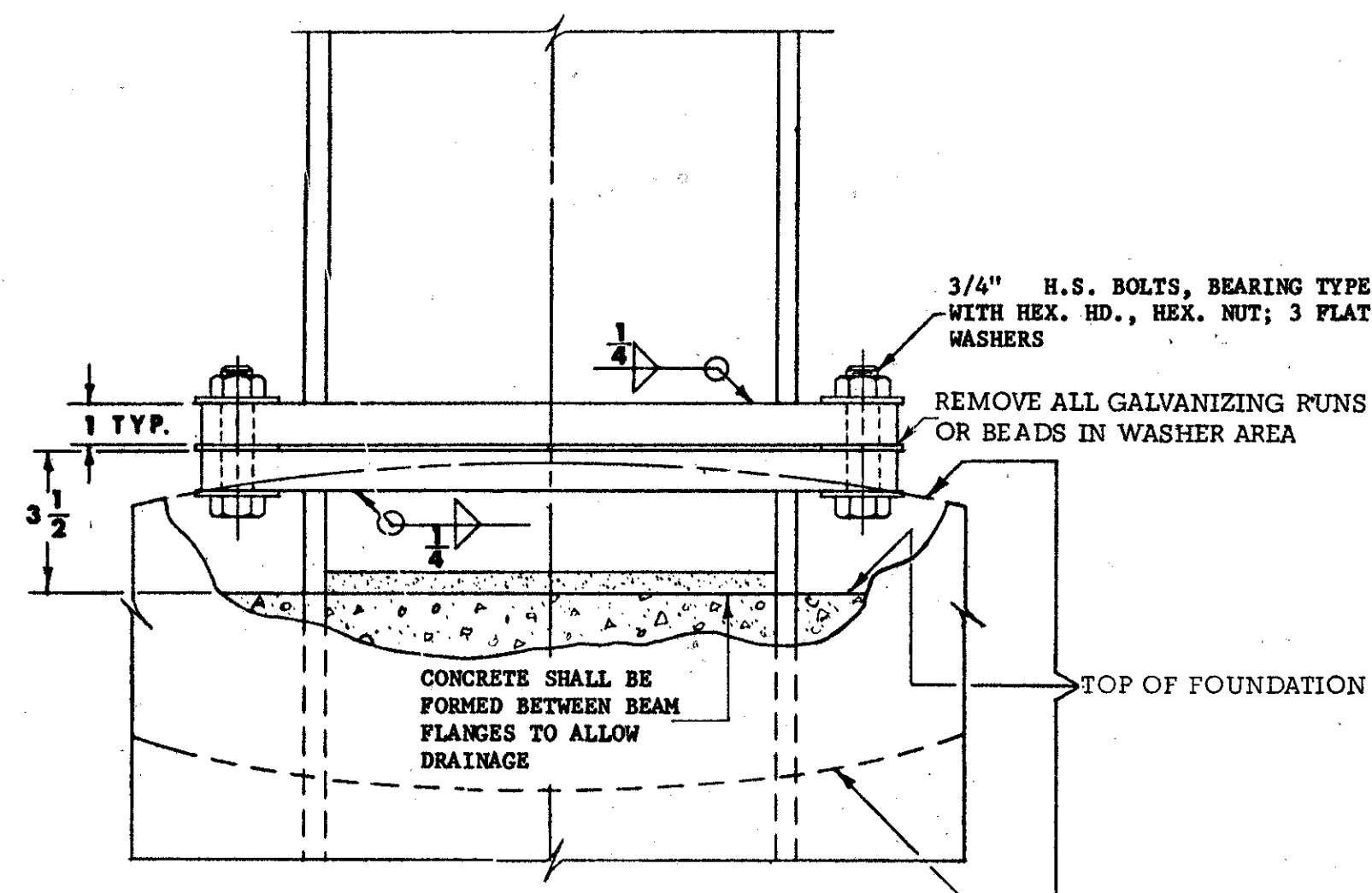
The price bid per square foot for "815 Sign Erection by Type" shall include all necessary equipment, labor, and tools to erect the signs. All sign material and accessories will be furnished and transported to a designated delivery point, on or near the project, by others.

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.

Any unused materials shall be returned to the State Highway Garage in Madison County at London, Ohio.

BREAKAWAY SIGN SUPPORT CONNECTION
This item shall include the cutting and drilling of the beam; the furnishing, welding, and assembly of the base and fuse plate for each beam.
The basis of payment for this item shall be per each (beam) at the contract unit price which shall include all labor, material, and equipment required to provide a complete breakaway beam in accordance with the plans and specifications.

MAD-70-6.25

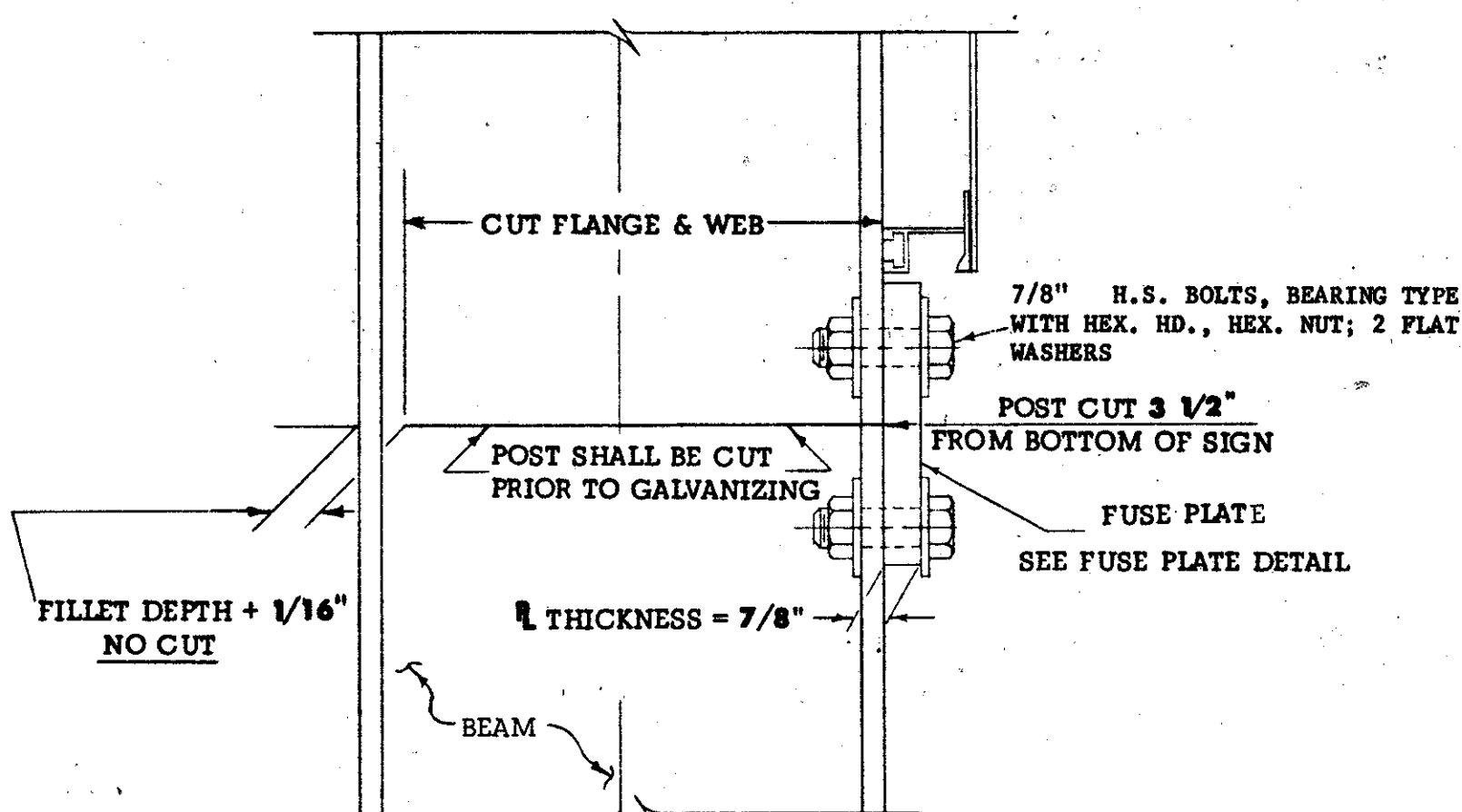


BOLTING PROCEDURE

1. ASSEMBLE POST TO STUB W/BOLTS & ONE FLAT WASHER ON EACH BOLT BETWEEN PLATES.
2. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE W/12" TO 15" WRENCH TO BED & TO CLEAN BOLT THREADS. LOOSEN EACH BOLT IN TURN & RE-TIGHTEN BOLTS IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE OF 750 IN. LBS.
3. BURR THREADS AT JUNCTION W/NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE: TIGHTEN THE H.S. BOLTS IN THE BASE CONNECTION ONLY TO GIVEN TORQUE DO NOT OVER TIGHTEN

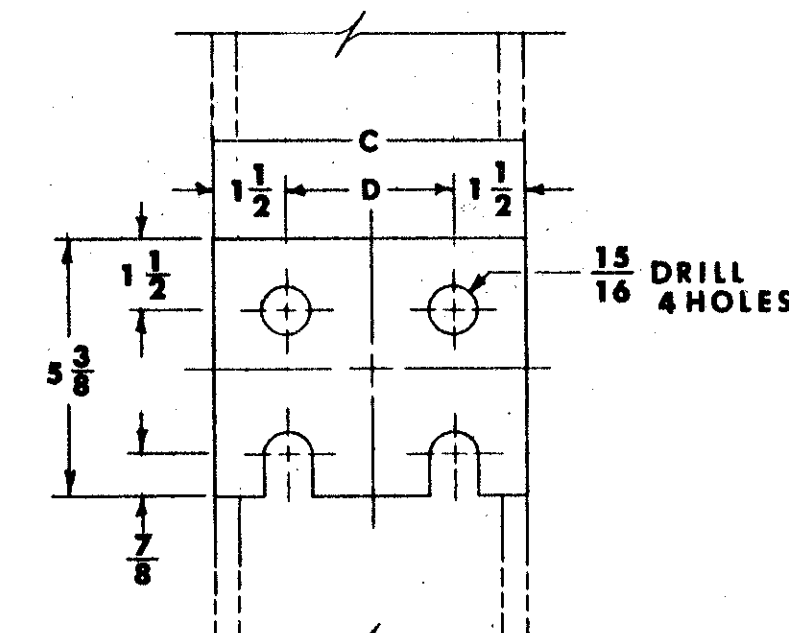
DETAIL 'A'



FABRICATOR NOTE: ALL FRICTION FUSE BOLTS SHALL BE TIGHTENED IN THE SHOP FOLLOWING A METHOD APPROVED BY THE ENGINEER. TIGHTENING SHALL BE TO SUCH A DEGREE AS TO OBTAIN MINIMUM RESIDUAL TENSION IN EACH BOLT OF 36,050 LBS.

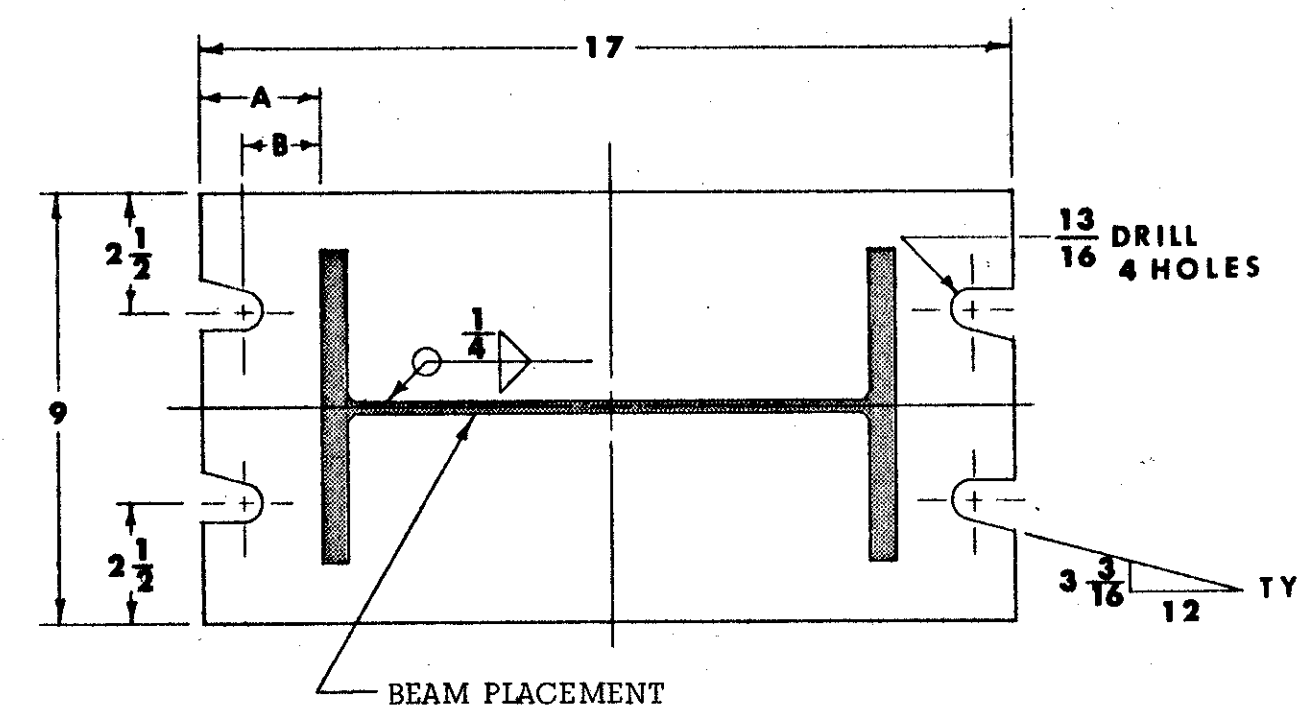
NOTE: INSTALL FUSE PLATE WITH NOTCHES TOWARD BASE

DETAIL B'



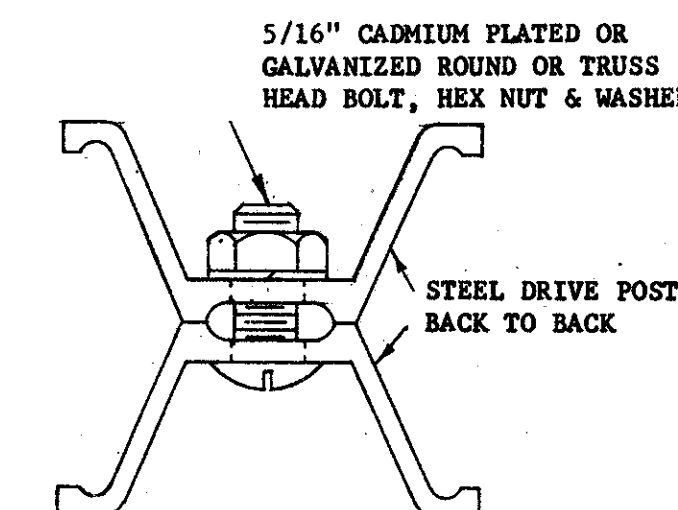
BEAM SIZE	C	D
10 WF 21	5 3/4	2 3/4
12 WF 31	6 1/2	3 1/2

FUSE PLATE DETAIL



BEAM SIZE	A	B
10 WF 21	3 1/2	2 5/8
12 WF 31	2 1/2	1 5/8

BASE PLATE DETAIL



DRIVE POST DETAIL

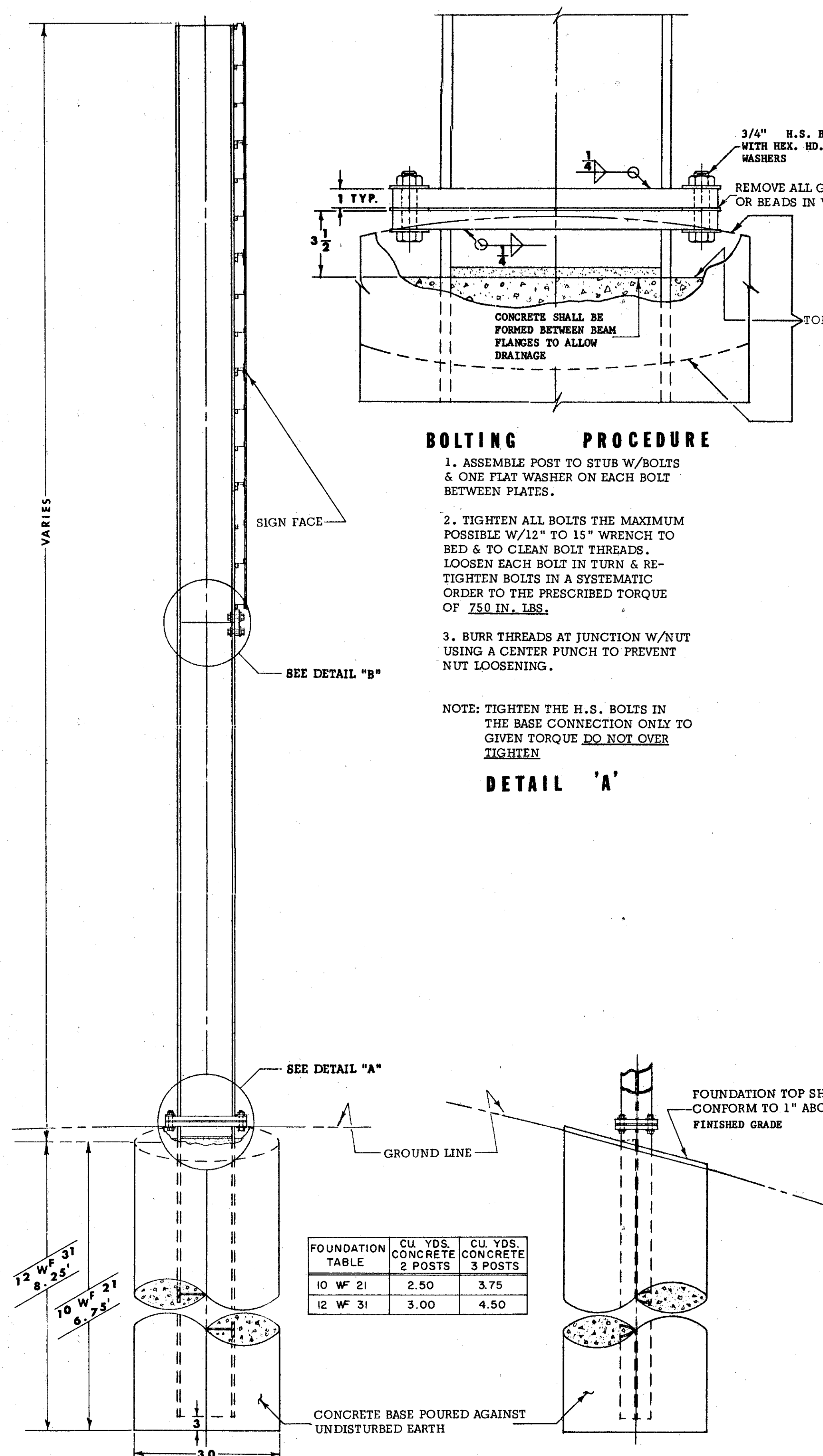
NOTE

THE FOUNDATION FOR 4# DRIVE POST IS SIMILAR TO THE FOUNDATION SHOWN FOR 6# & 8# BEAM.

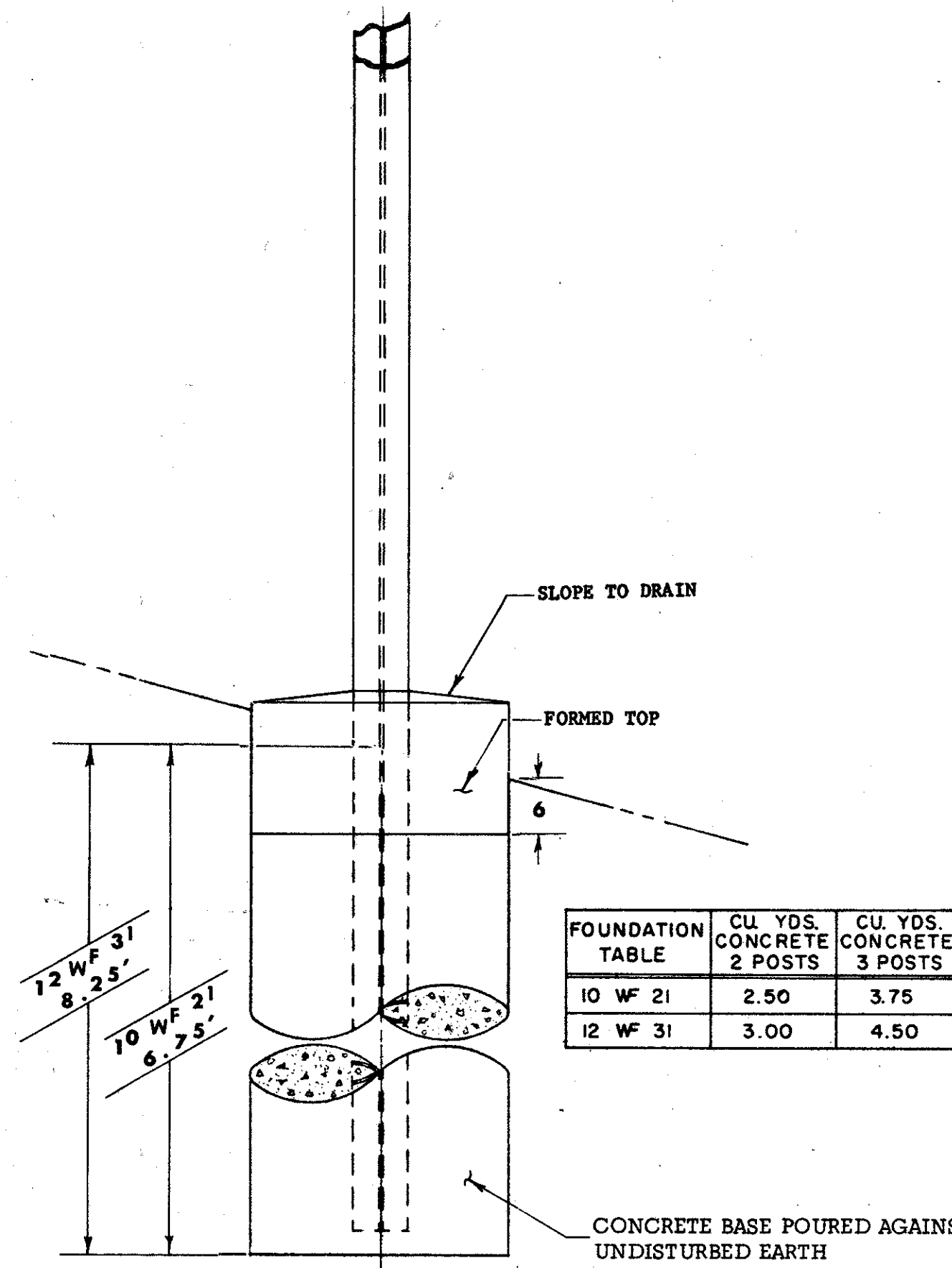
NOTE: ALL MATERIALS SHALL CONFORM TO THE STATE OF OHIO, CONSTRUCTION & MATERIALS SPECIFICATIONS OR AS OTHERWISE SPECIFIED

- 1) 511 FOUNDATIONS
- 2) 711.01 STRUCTURAL STEEL SHAPES & PLATES
- 3) 711.09 H.S. STEEL BOLTS, NUTS & WASHERS

NOTE: ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SHOWN

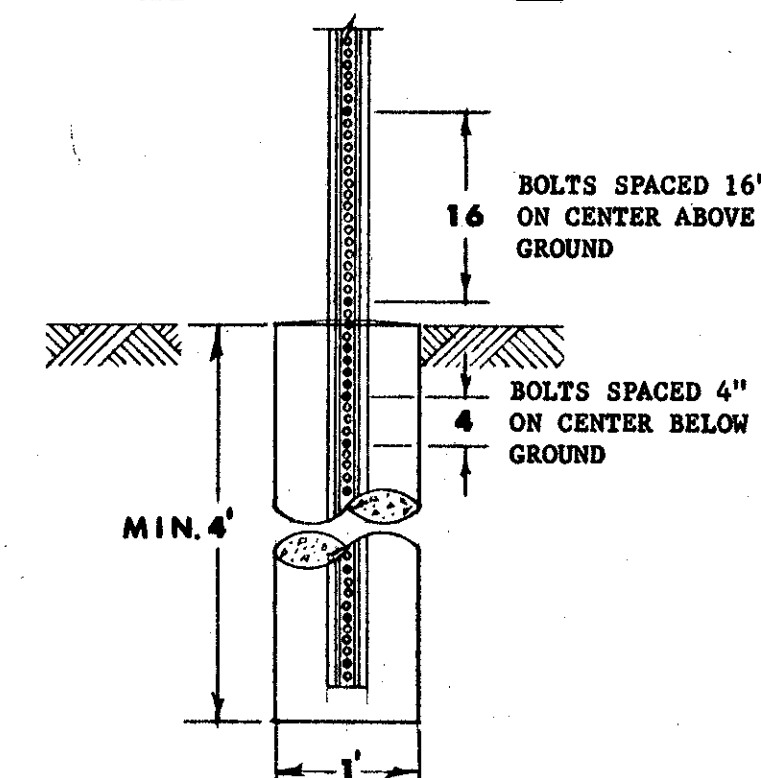


FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50



FOUNDATION TABLE	CU. YDS. CONCRETE 2 POSTS	CU. YDS. CONCRETE 3 POSTS
10 WF 21	2.50	3.75
12 WF 31	3.00	4.50

6# & 8# BEAM DETAIL



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

GROUND MOUNTED
SIGN SUPPORTS

DATE
8-22-67

APPROVED
ENGINEER OF TRAFFIC

STRUCTURAL SUPPORTS

NOTES

1. THE NEAR EDGE OF ALL MAIN LINE SIGNS, EXCEPT GORE INSTALLATIONS, SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION SHALL BE DETERMINED BY ROADWAY TYPICAL SECTION & USED WHETHER OR NOT GUARD RAIL IS PRESENT.

ON RAMP THE NEAR EDGE OF SIGNS SHALL BE LOCATED ONE FOOT (1') BACK OF GUARD RAIL FACE. THIS DIMENSION WILL BE DETERMINED AND USED AS FOR MAIN LINE ABOVE.

ON APPROACHES THE NEAR EDGE OF SIGNS SHALL BE

(A) ONE FOOT (1') BEHIND EXISTING GUARD RAIL

(B) TWO FEET (2') FROM THE EDGE OF PAVED OR TRAVELED SHOULDER WITH A MINIMUM OF 6' FROM EDGE OF ROADWAY PAVEMENT.

2. POSTS PLACED IN CONCRETE MEDIANS SHALL BE INSTALLED BY DRIVING THROUGH A 6" SLEEVE OR CORE DRILLED HOLE. THE HOLE SHALL BE FILLED WITH ASPHALT OR PORTLAND CONCRETE AFTER THE POST IS IN THE PROPER POSITION.

3. 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.

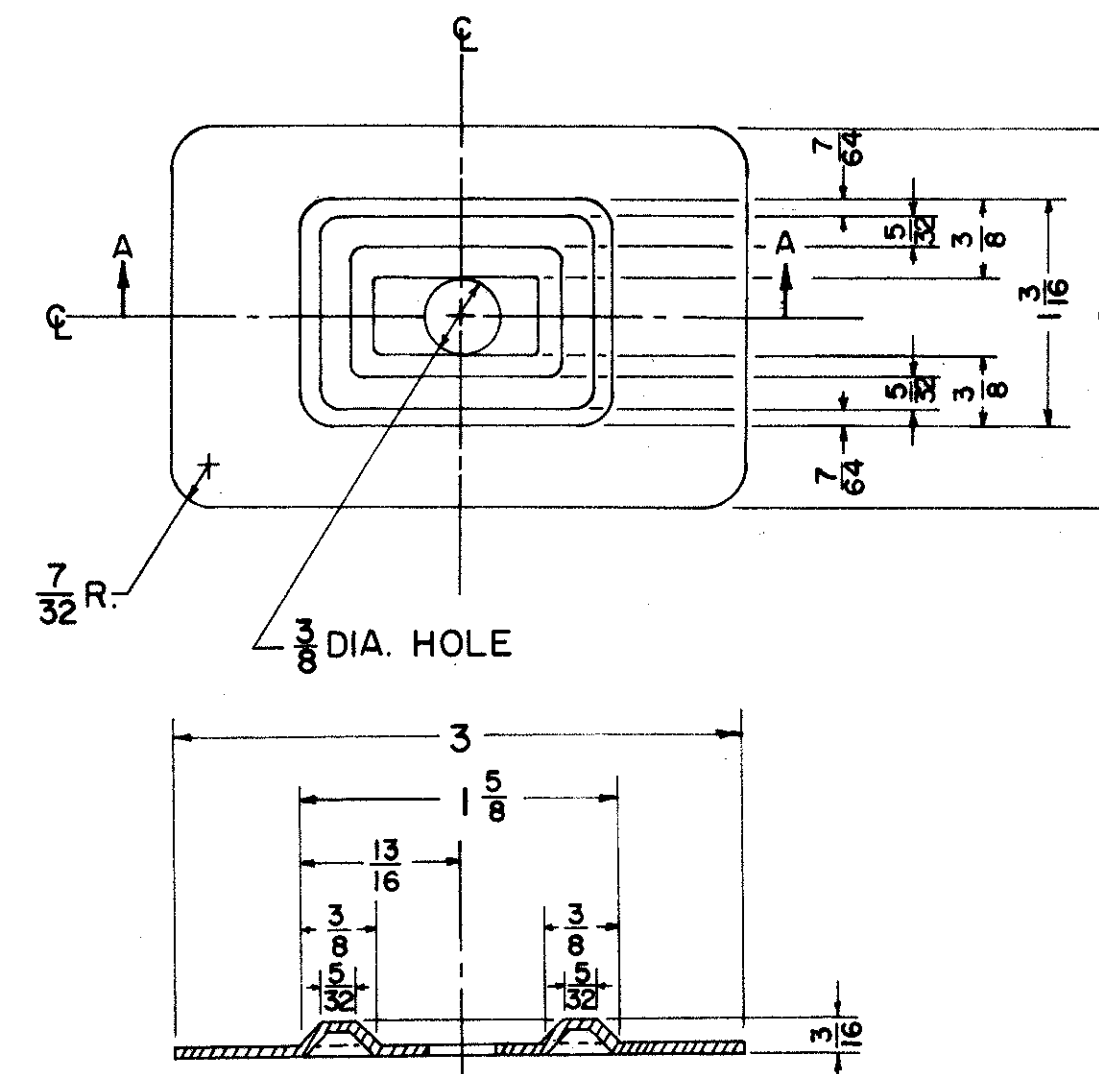
4. SCREWS, NUTS, AND WASHERS FOR SIGN ERECTION SHALL BE ALUMINUM EXCEPT AS NOTED ABOVE. 5/16" TRUSS HEAD SLOTTED MACHINE SCREWS WITH HEX. NUTS PLAIN AND LOCKWASHERS SHALL BE USED. PLAIN WASHERS SHALL BE 5/16" WIDE, USED ON SIGN FACE ONLY.

5. SIGN INSTALLATIONS SHALL BE PLACED SO THAT SUPPORTS ARE NOT PLACED IN DRAINAGE DITCHES.

6. HORIZONTAL CLEARANCES SHOWN PERTAIN TO NON-CURBED SECTIONS. SECTIONS WITH UNMOUNTABLE CURB SHALL HAVE A HORIZONTAL CLEARANCE OF 2'-0" MINIMUM FROM THE CURB FACE TO THE SIGN EDGE.

7. VERTICAL AND HORIZONTAL CLEARANCE BETWEEN SIGNS ON ONE ASSEMBLY SHALL BE A MAXIMUM OF 2" AND A MINIMUM OF 1".

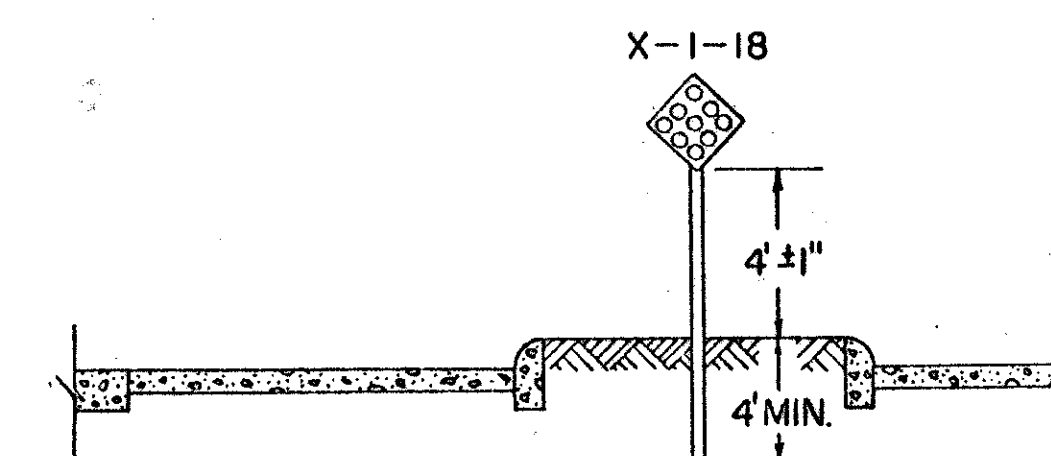
8. GALVANIZED STEEL BEARING PLATES SHALL BE INCLUDED BETWEEN ALL SHEET ALUMINUM SIGNS ATTACHED TO VERTICAL SUPPORTS AT EACH SIGN BOLT LOCATION.



SECTION AA

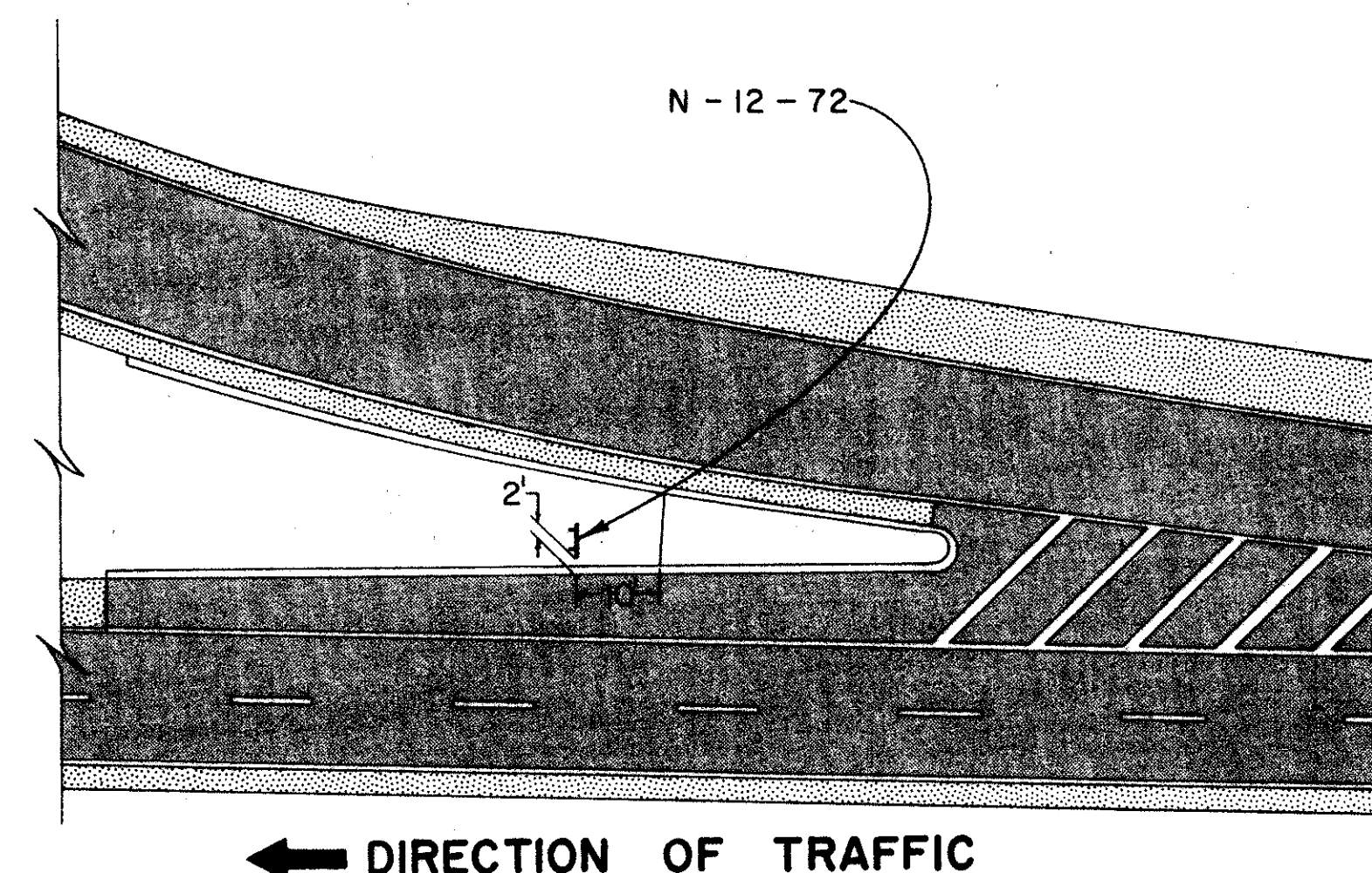
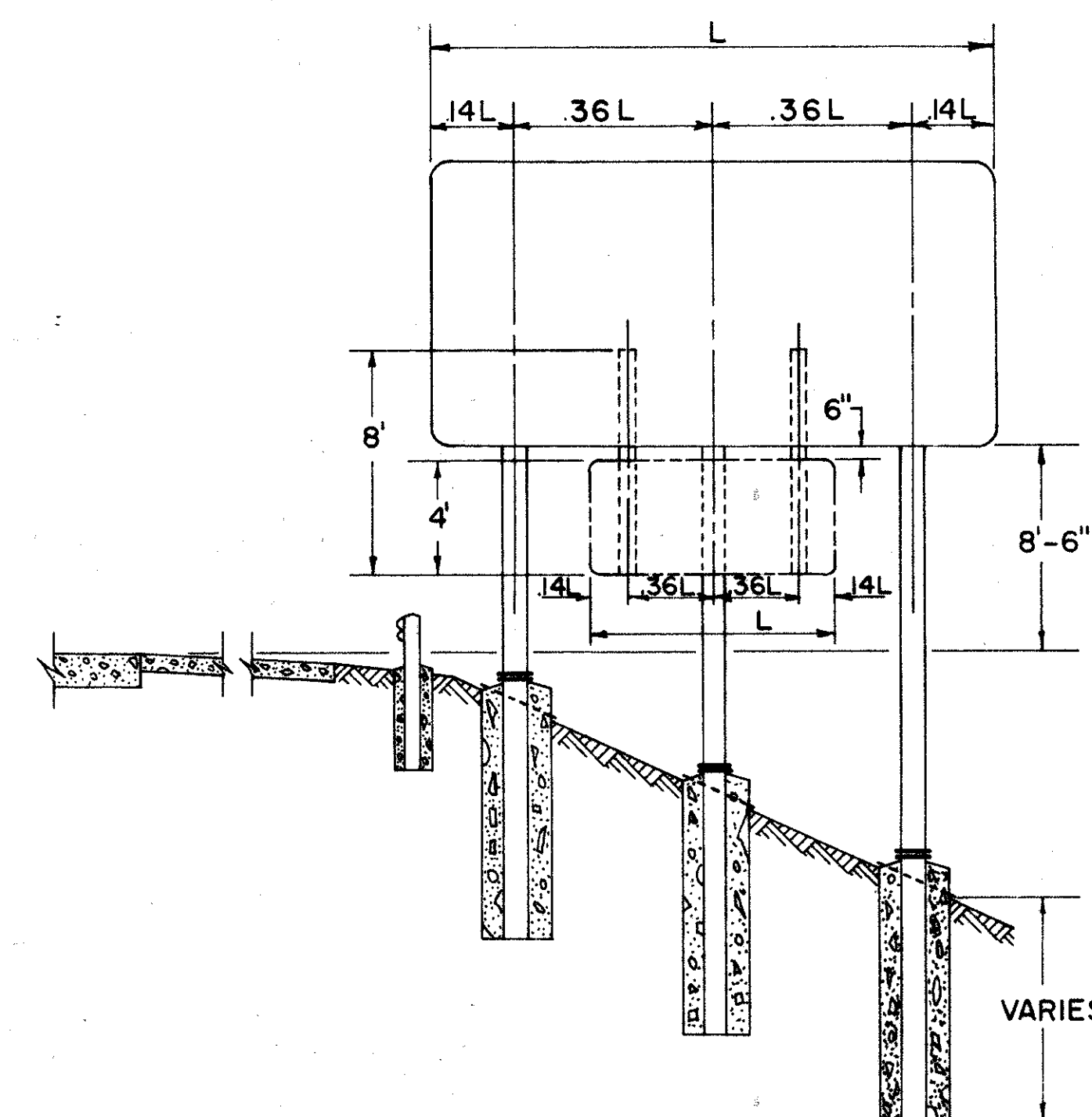
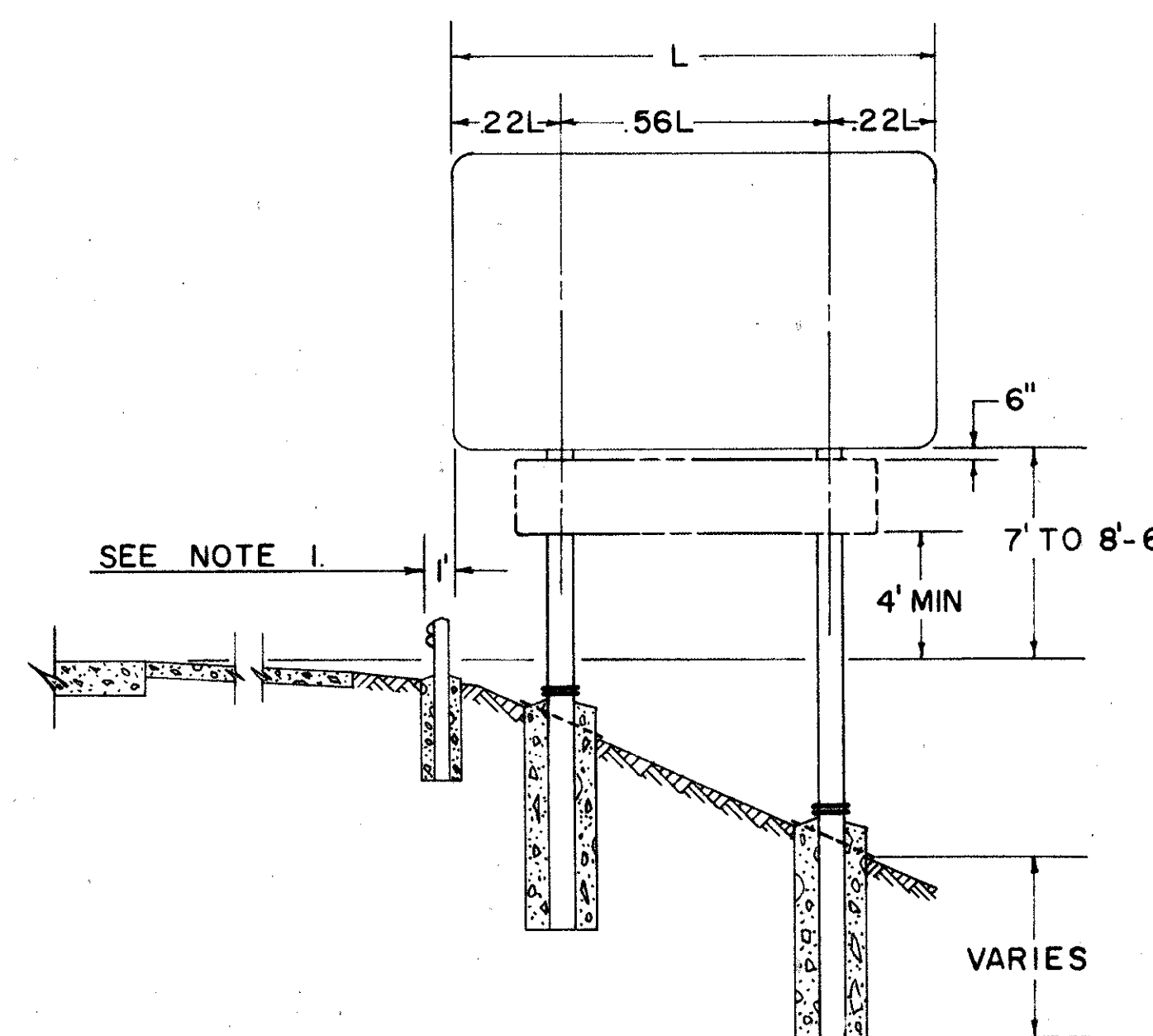
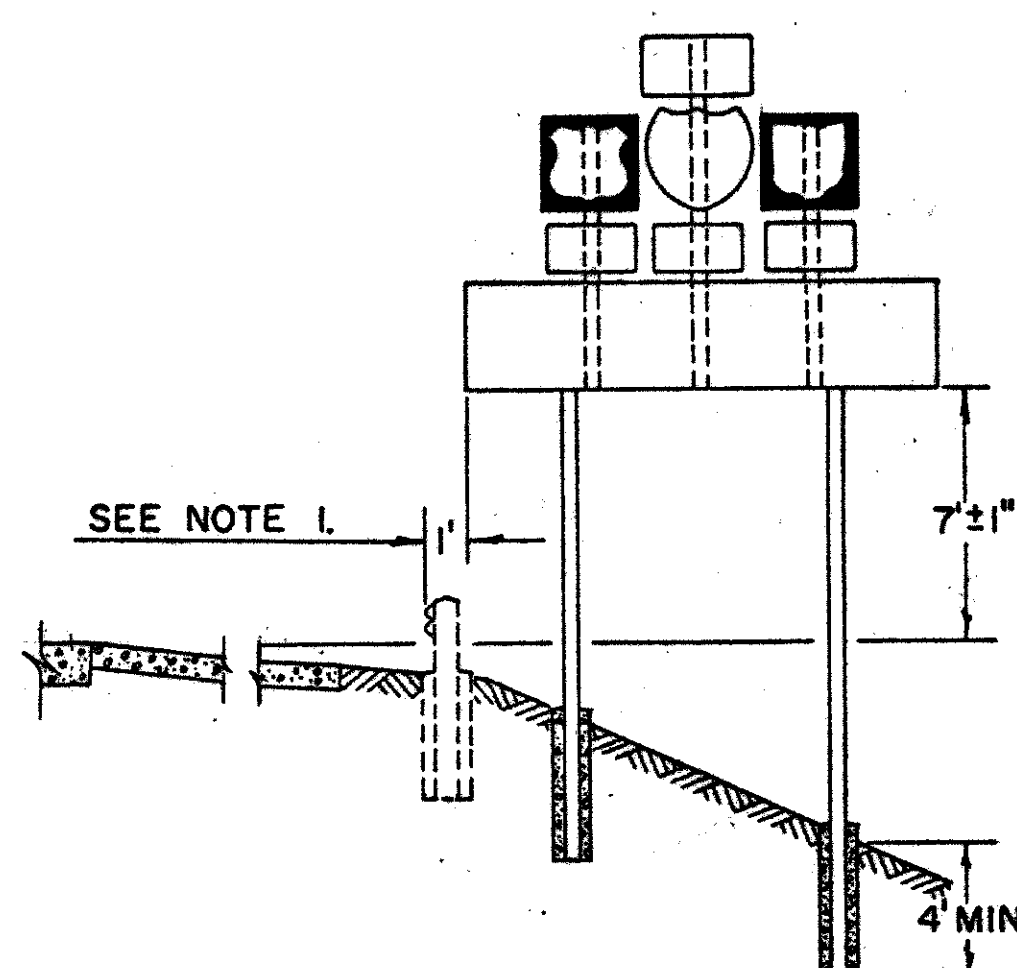
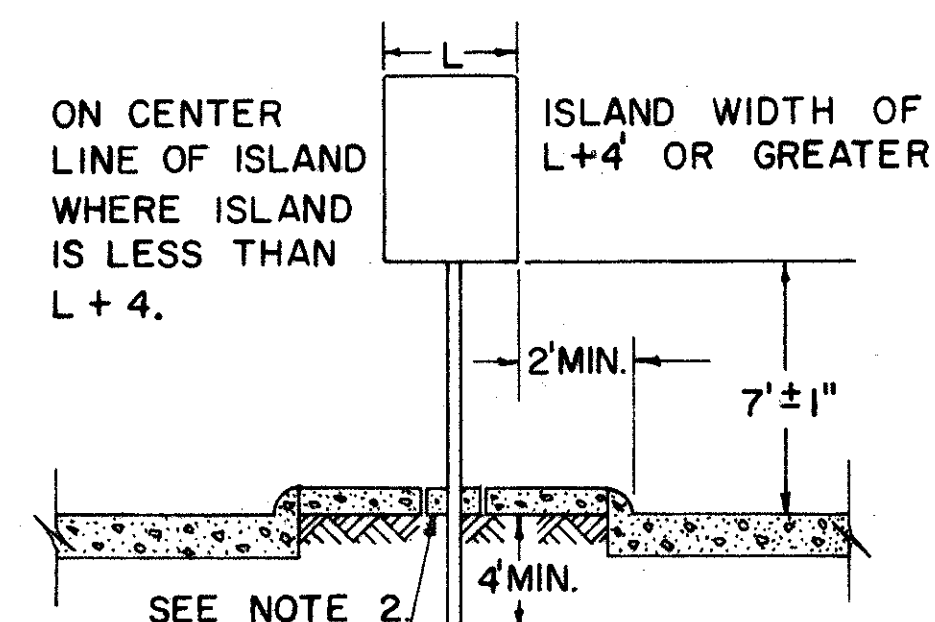
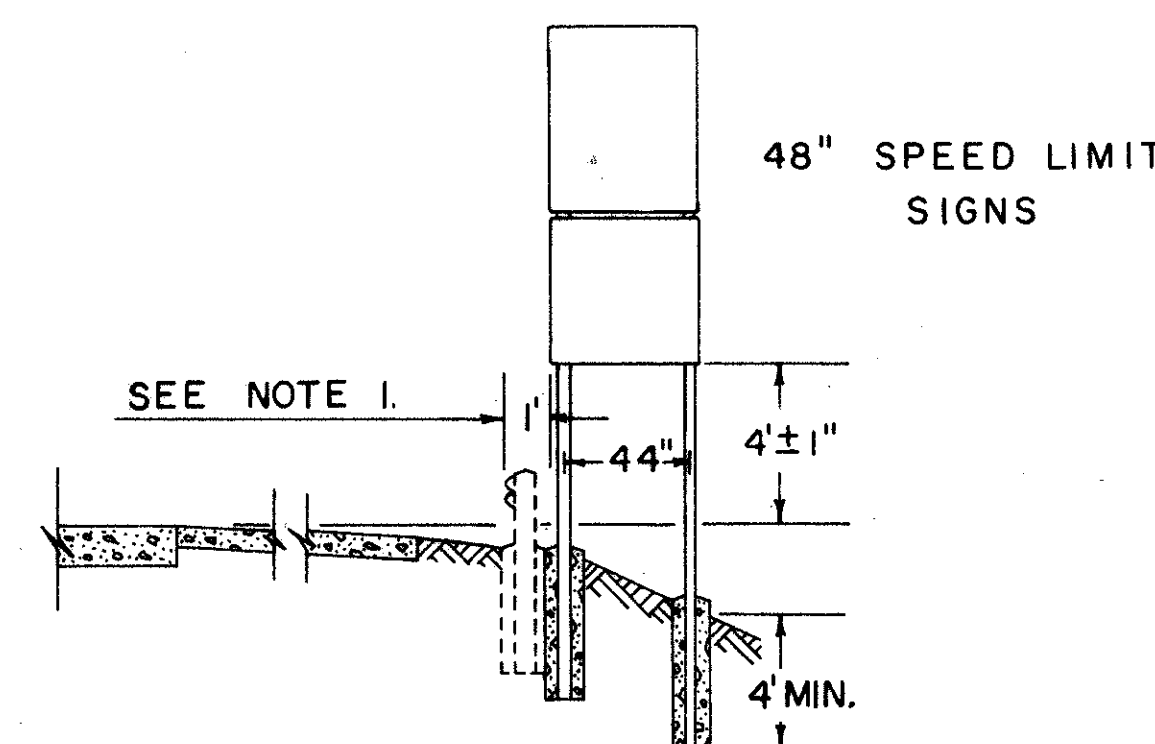
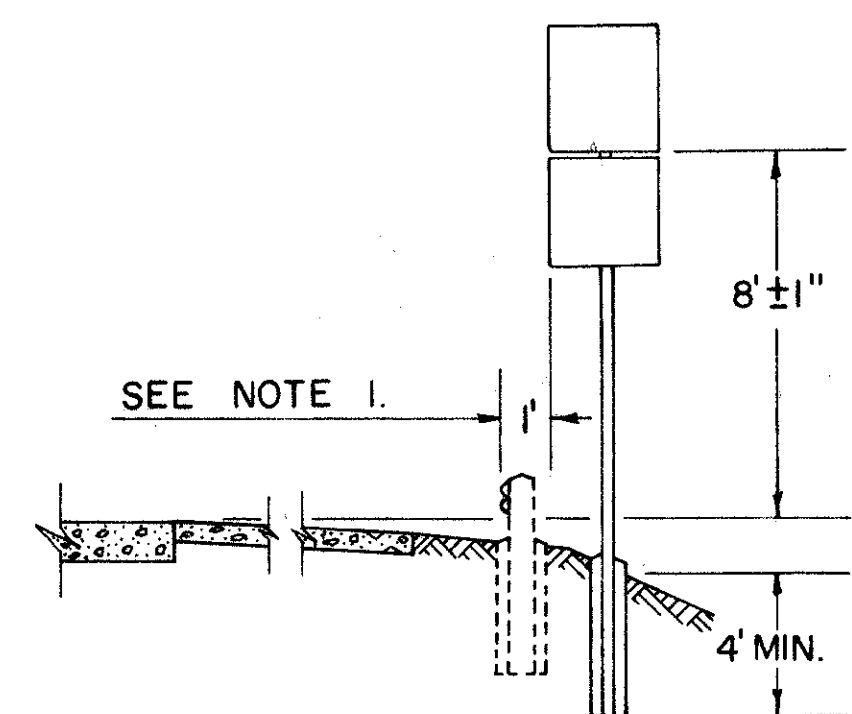
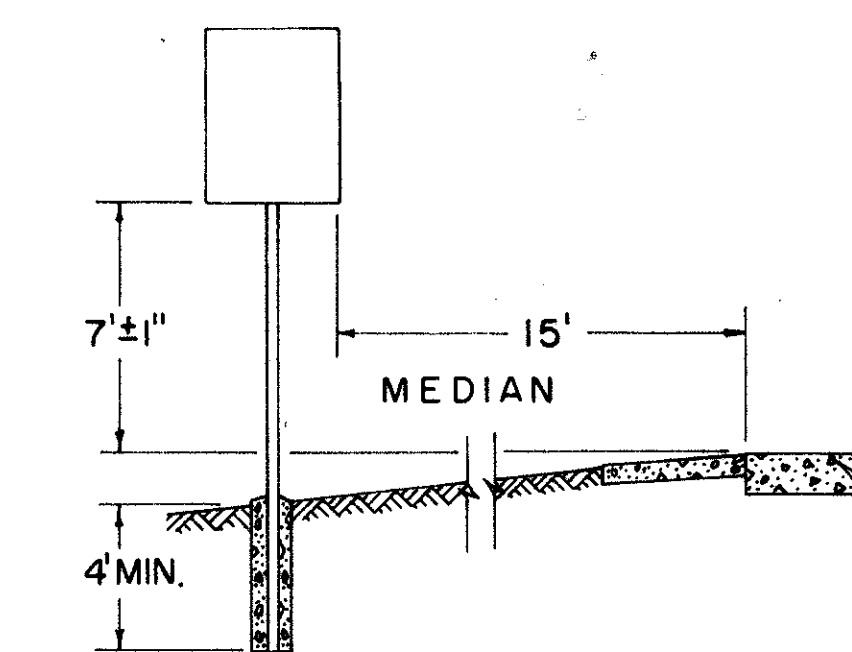
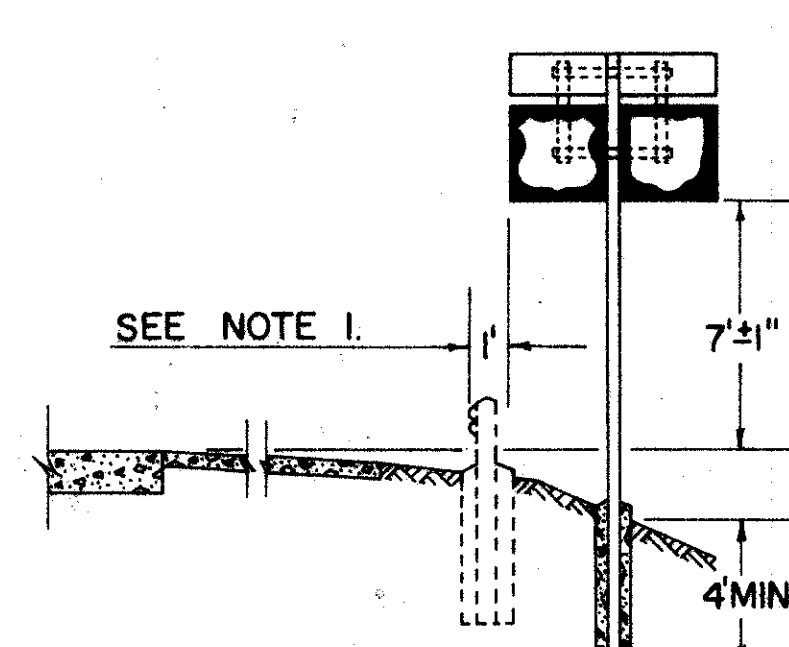
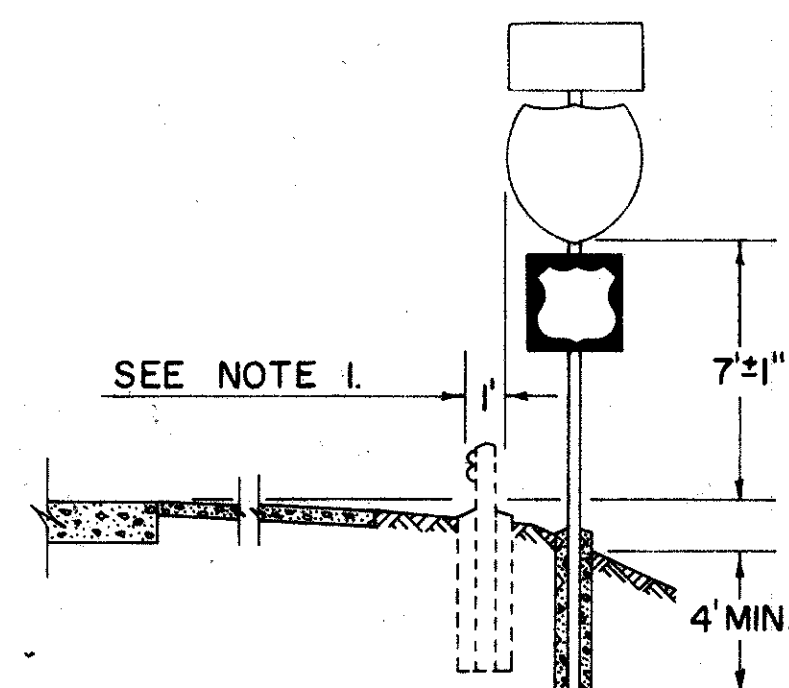
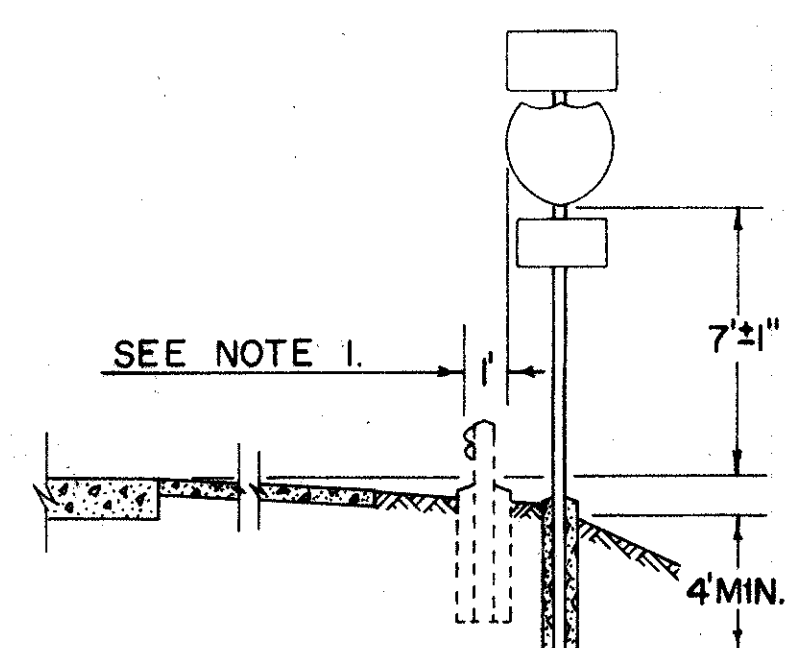
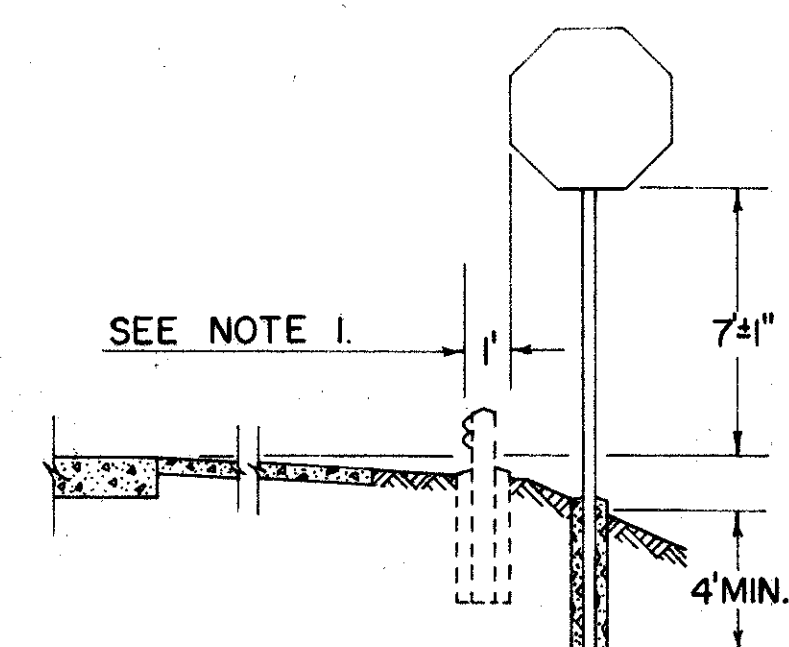
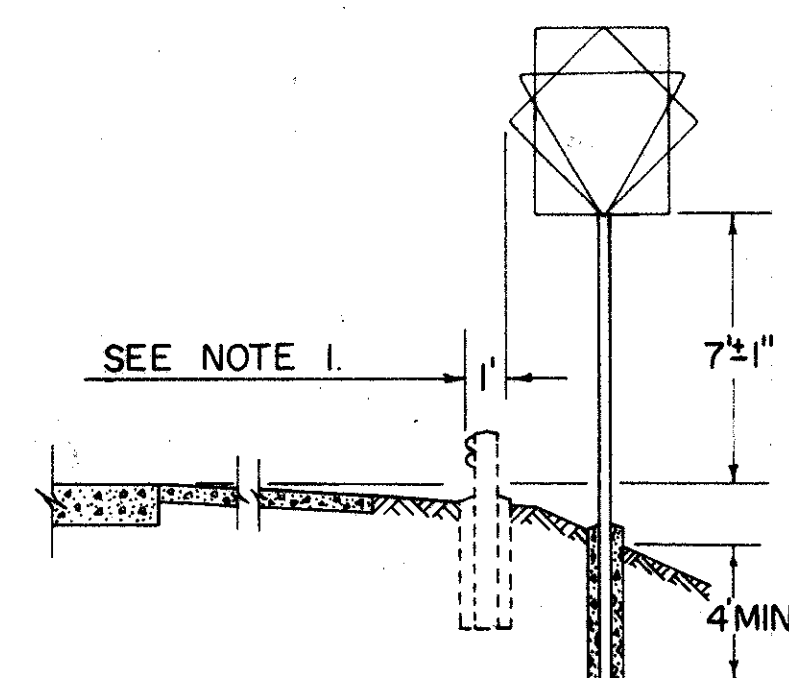
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



SIGN SUPPORT SPACING

L = FT	2 SUPPORTS				L = FT	3 SUPPORTS			
	.22	.56	.14	.36		.22	.56	.14	.36
5.0	1.10	2.80	0.70	1.80	17.0	3.74	9.52	2.38	6.12
6.0	1.32	3.36	0.84	2.16	18.0	3.96	10.08	2.52	6.48
7.0	1.54	3.92	0.98	2.52	19.0	4.18	10.64	2.66	6.84
8.0	1.76	4.48	1.12	2.88	20.0			2.80	7.20
9.0	1.98	5.04	1.26	3.24	21.0			2.94	7.56
10.0	2.20	5.60	1.40	3.60	22.0			3.08	7.92
11.0	2.42	6.16	1.54	3.96	23.0			3.22	8.28
12.0	2.64	6.72	1.68	4.32	24.0			3.36	8.64
13.0	2.86	7.28	1.82	4.68	25.0			3.50	9.00
14.0	3.08	7.84	1.96	5.04	26.0			3.64	9.36
15.0	3.30	8.40	2.10	5.40	27.0			3.78	9.72
16.0	3.52	8.96	2.24	5.76	28.0			3.92	10.08



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

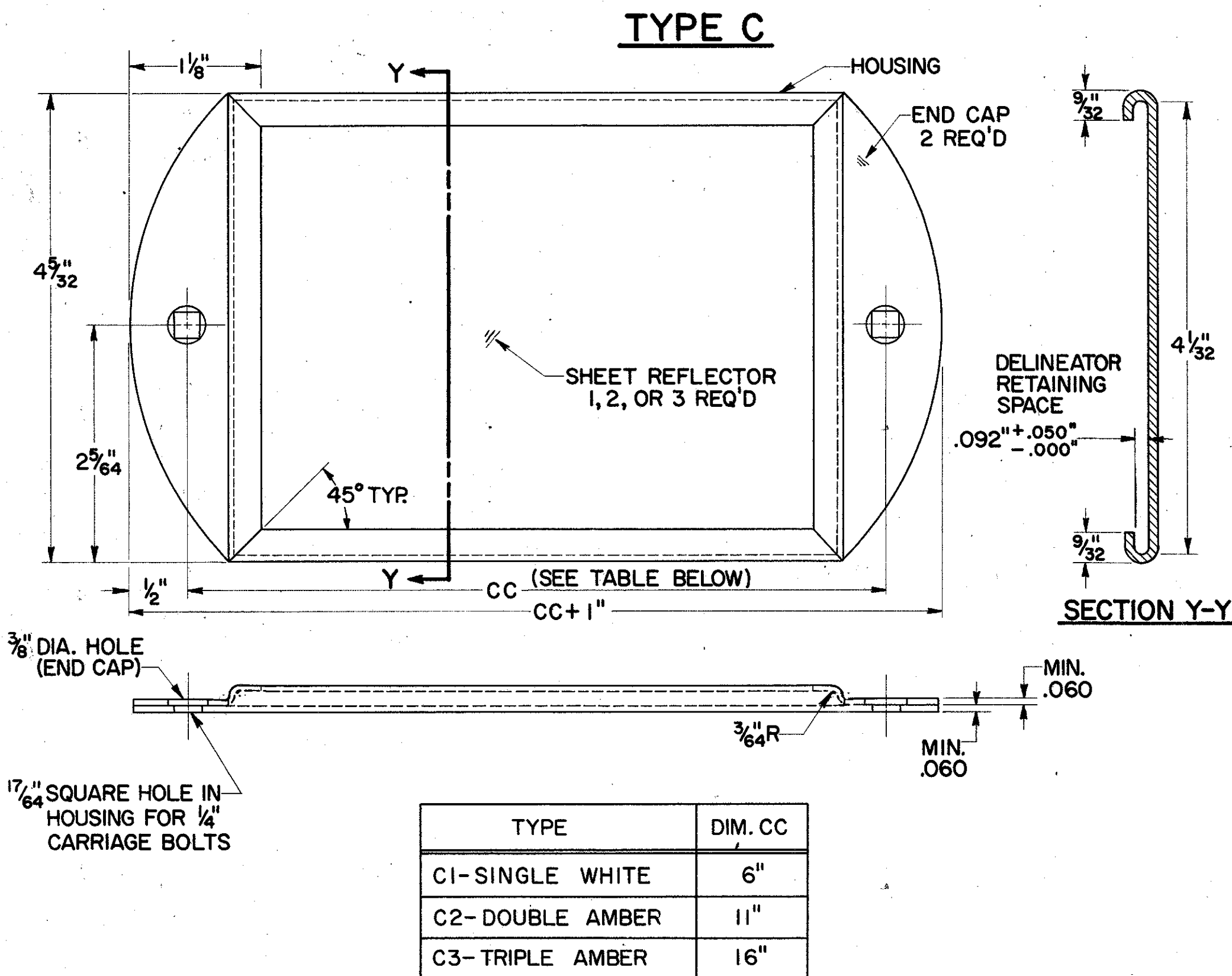
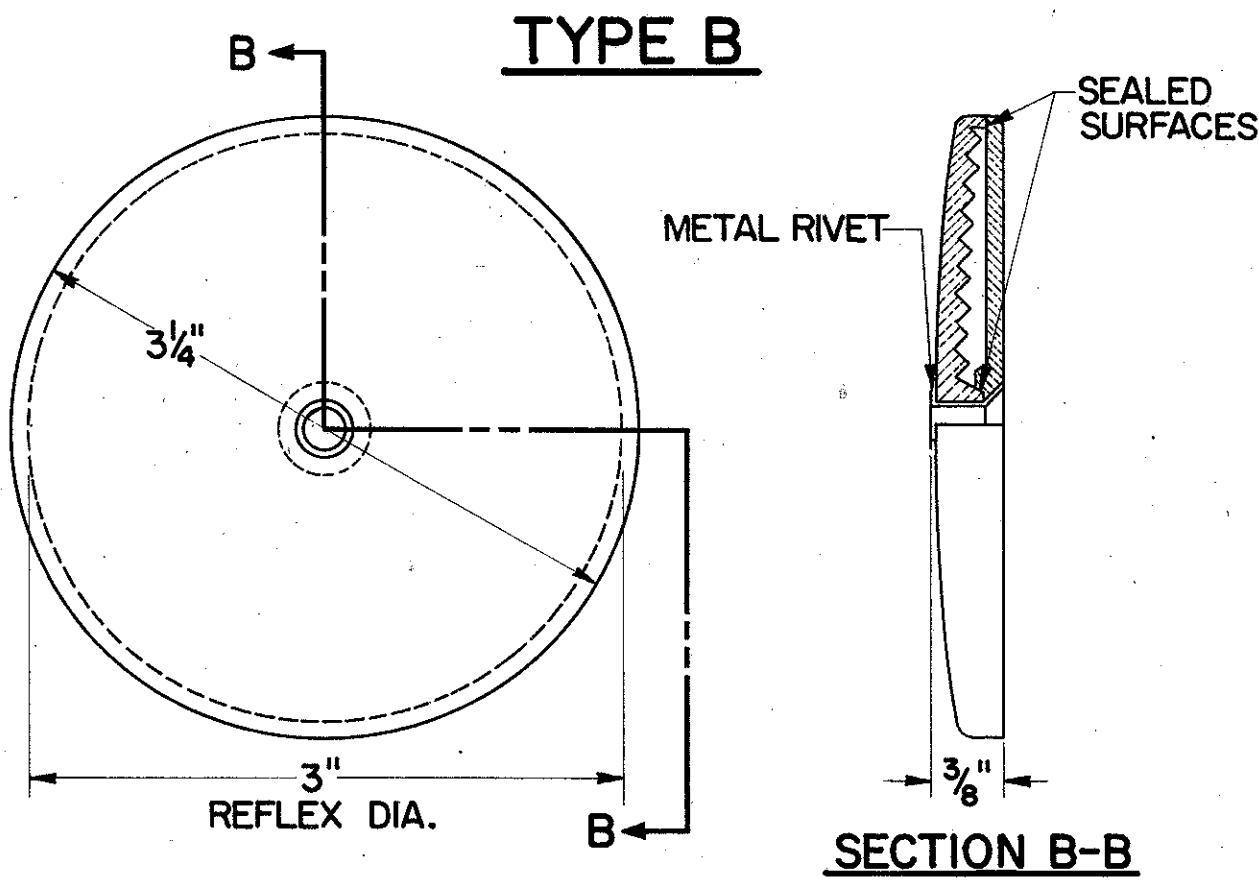
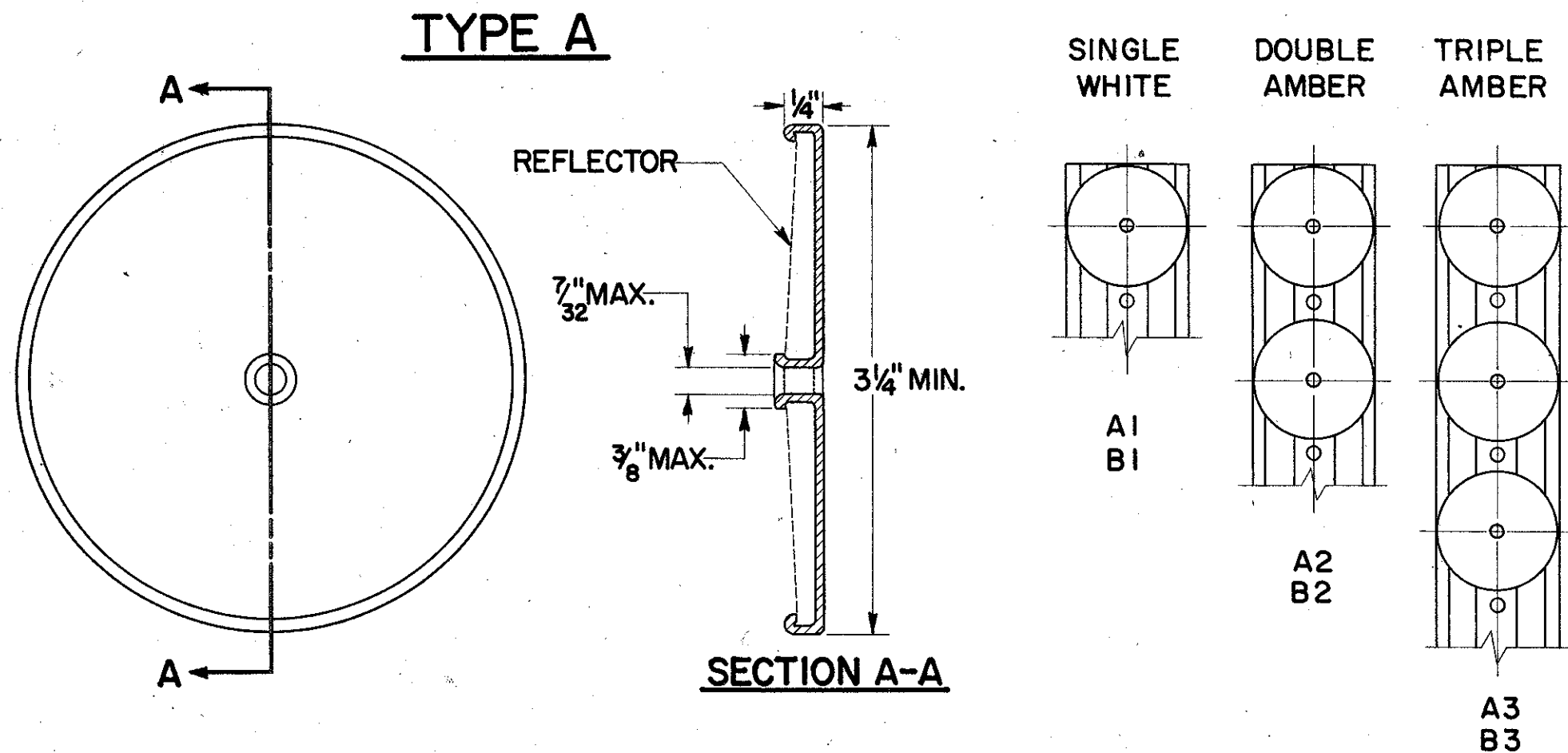
TYPICAL
PLACEMENT OF
SIGNS

DATE
9-27-67

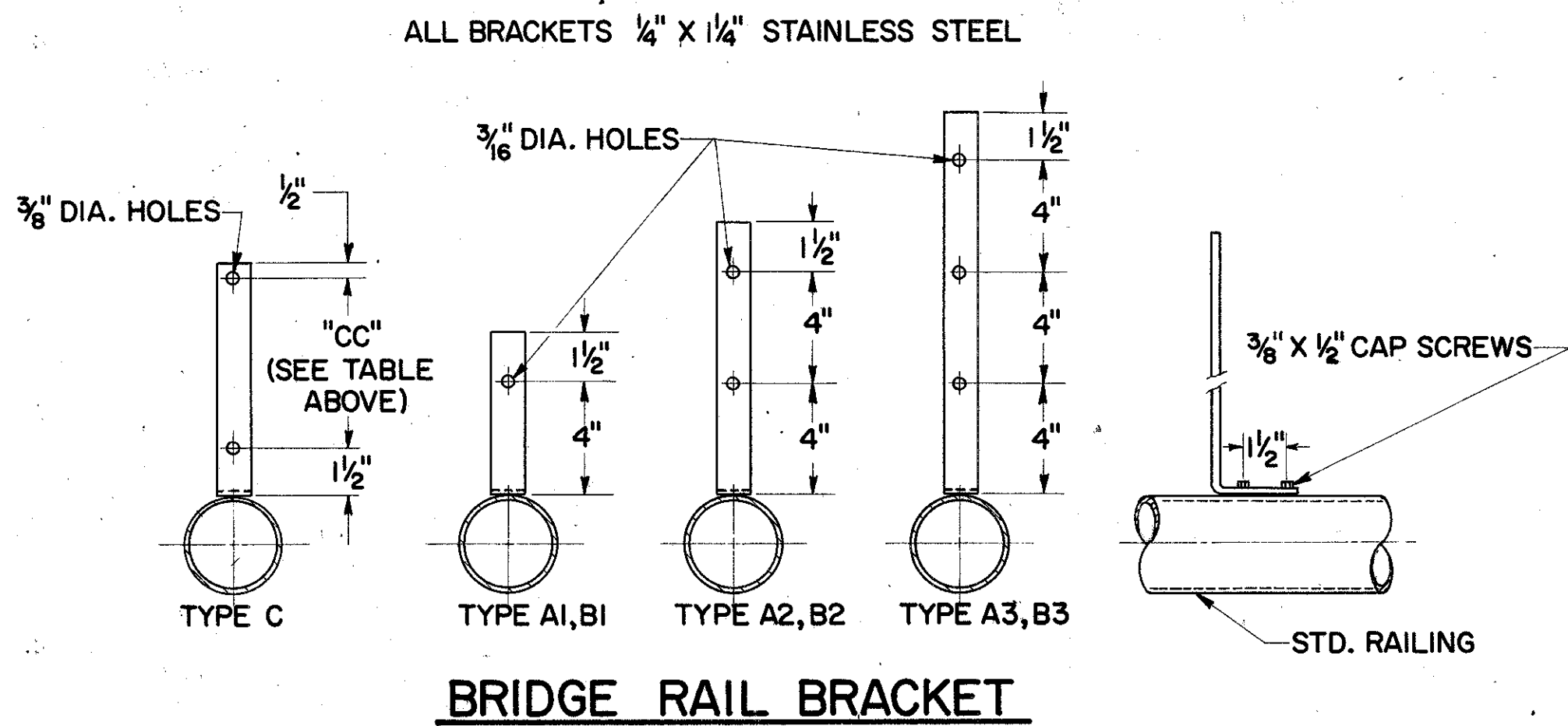
APPROVED
ENGINEER OF TRAFFIC

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 RAMP 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 RADI OF CURVE ON RAMP 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.



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

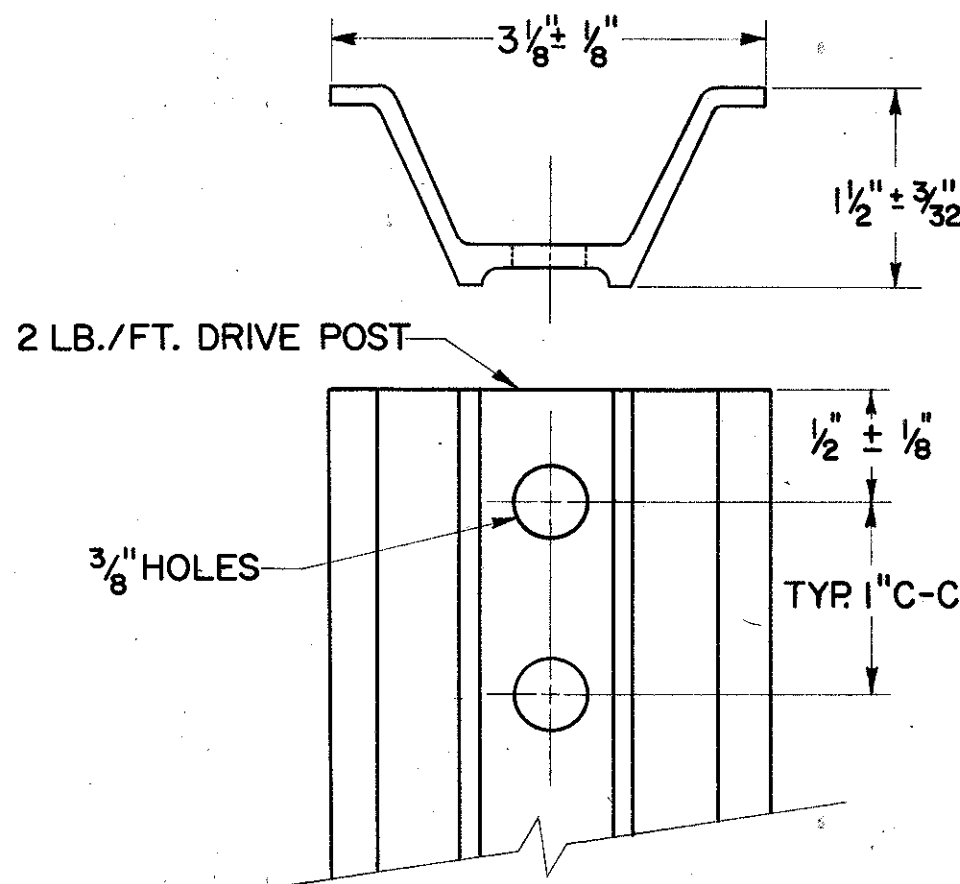


LATERAL PLACEMENT OF DELINEATORS

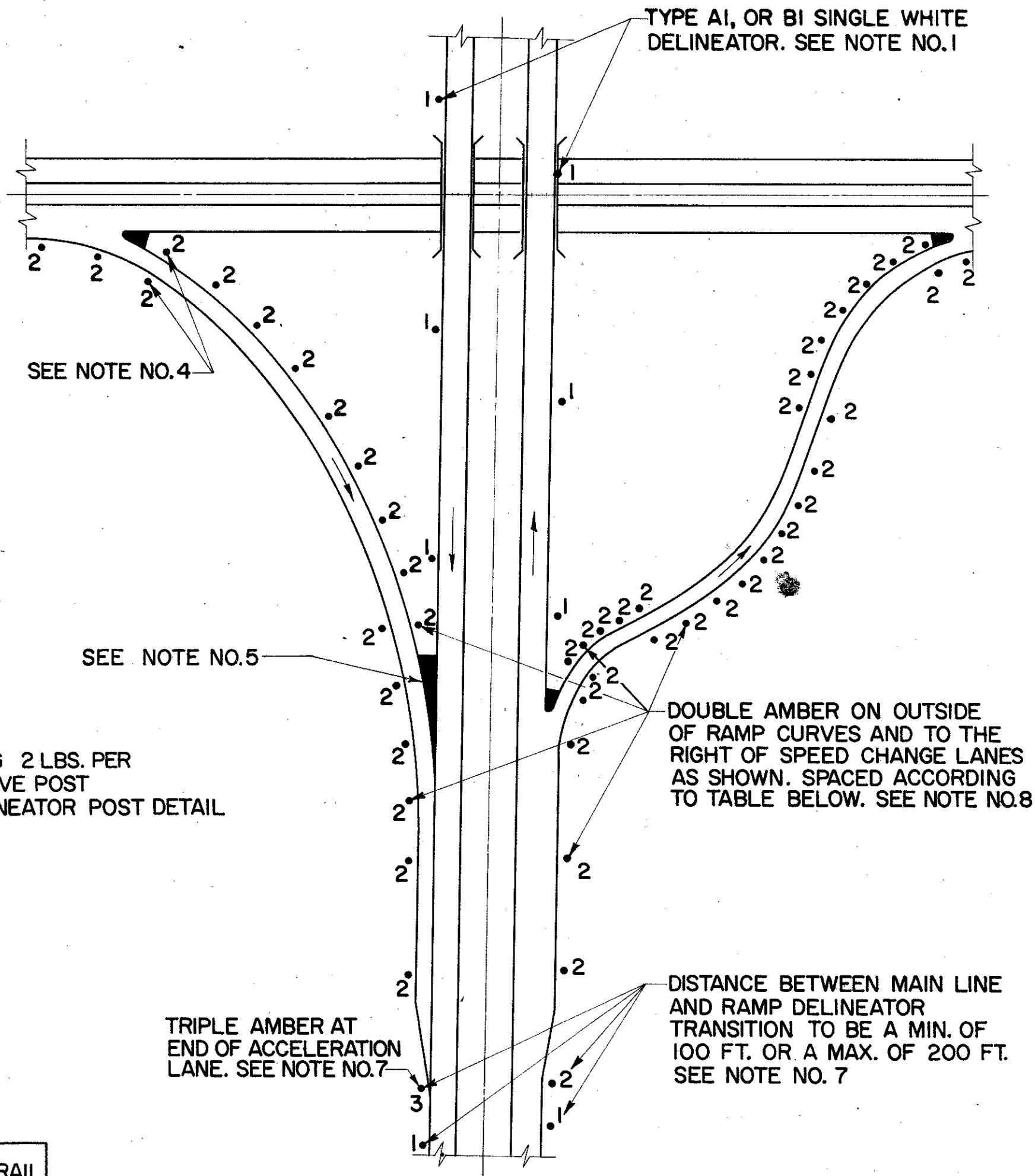
* TABLE

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

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



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADI, FT.	FROM TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	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.

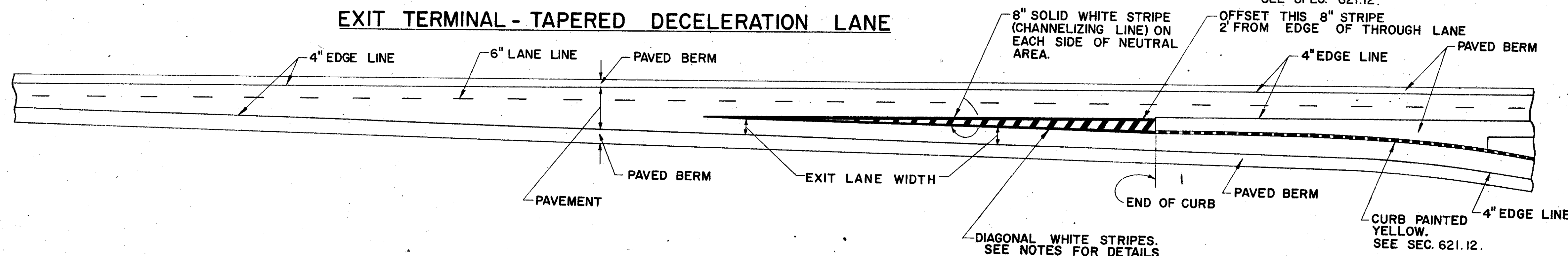
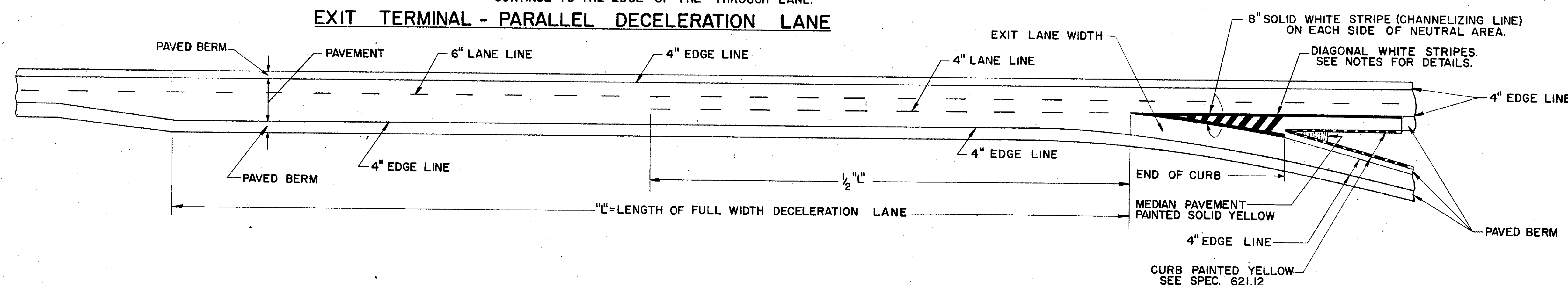
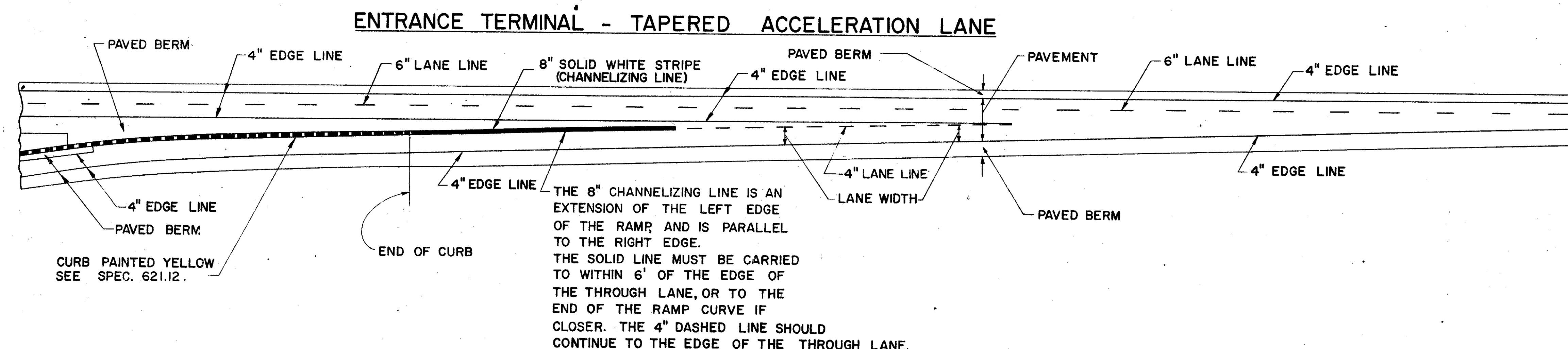
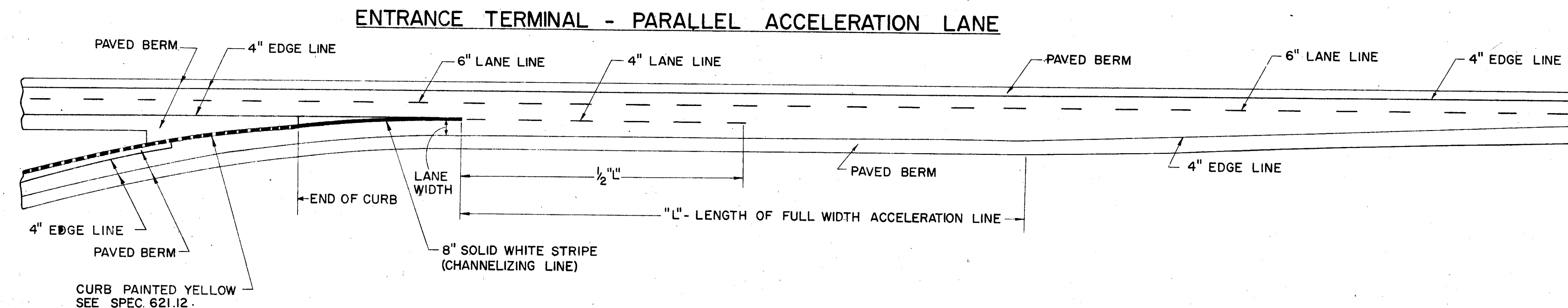
BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR
DETAILS

620

APPROVED *Robert C. Lamer*
ENGINEER OF TRAFFIC

DATE
9-25-62
5-24-65



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.

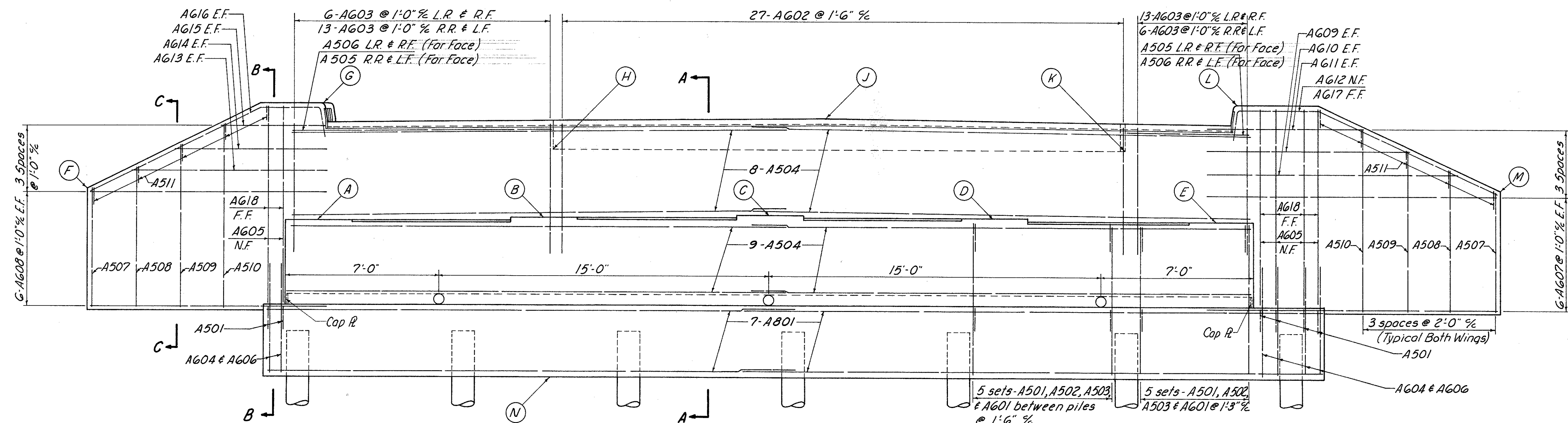
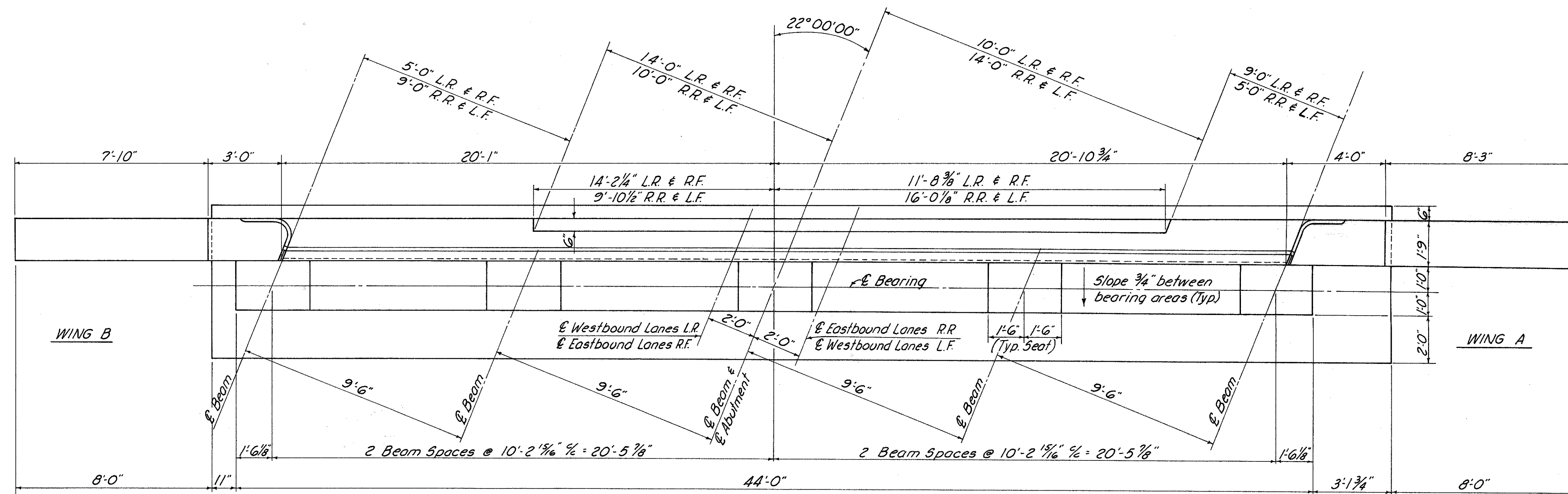
DIAGONAL STRIPES IN EXIT RAMP MARKINGS SHALL BE 2' WIDE WHITE BEADED STRIPES SET AT A 45° ANGLE TO THE CENTER LINE OF THE THROUGH PAVEMENT AND SLANTED IN THE DIRECTION OF THE FLOW OF TRAFFIC ON SAID PAVEMENT. SPACE BETWEEN THE 2' DIAGONAL STRIPES SHALL BE 6' AS MEASURED PARALLEL TO THE CENTER LINE OF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

APPROVED *Robert E. Lower*
ENGINEER OF TRAFFIC

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

ELEVATION

LEGEND:

L.R. ~ Left rear abutment
R.F. ~ Right forward abutment
R.R. ~ Right rear abutment
L.F. ~ Left forward abutment
E.F. ~ Each face
N.F. ~ Near face
F.F. ~ Far face

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MAR 1 1980

MAD. 70-G. 25

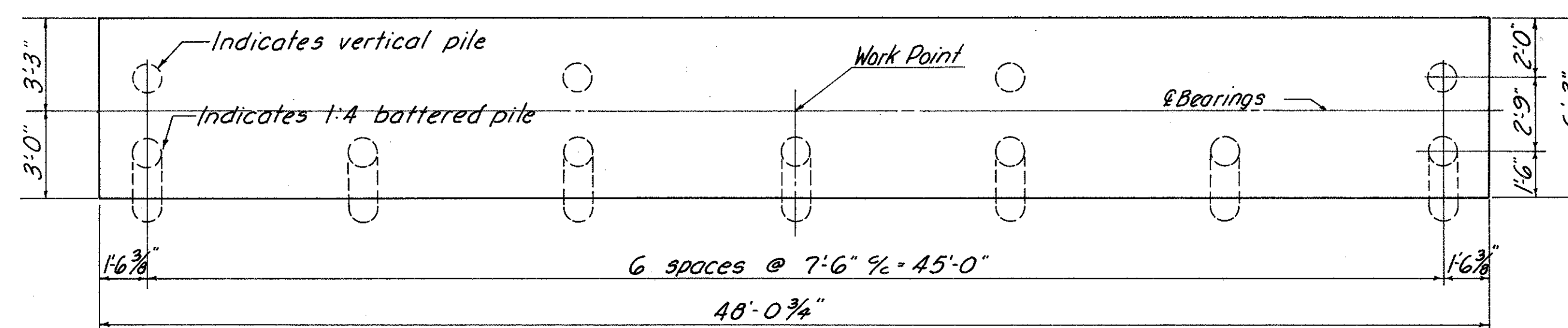
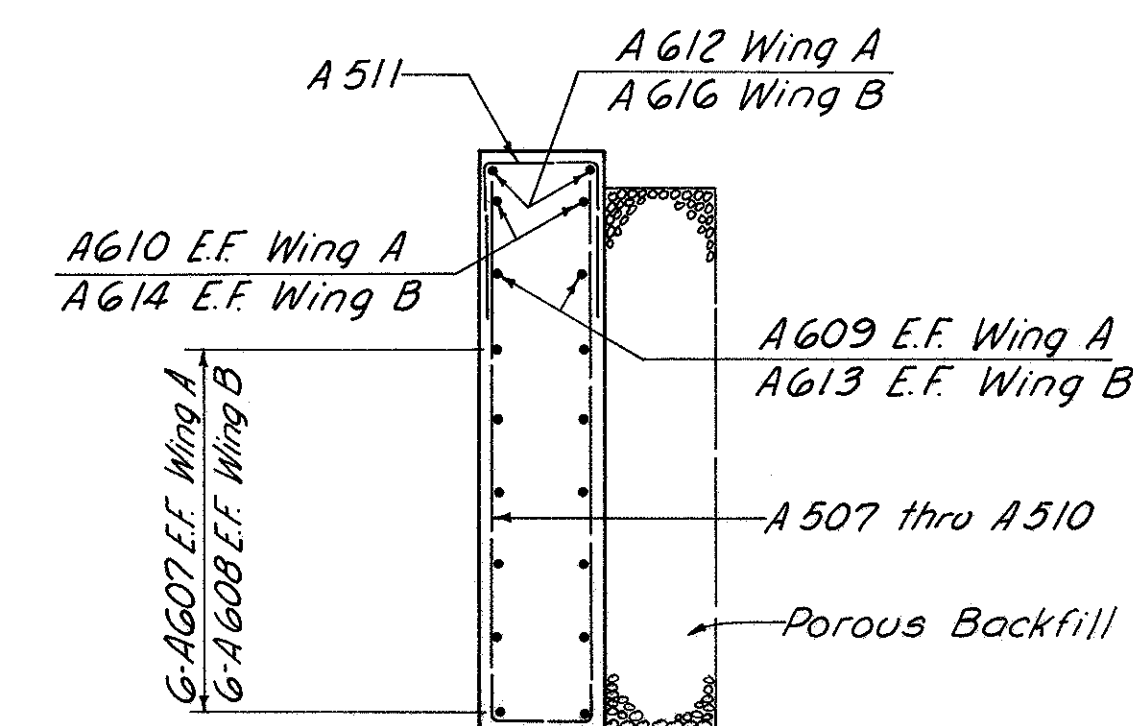
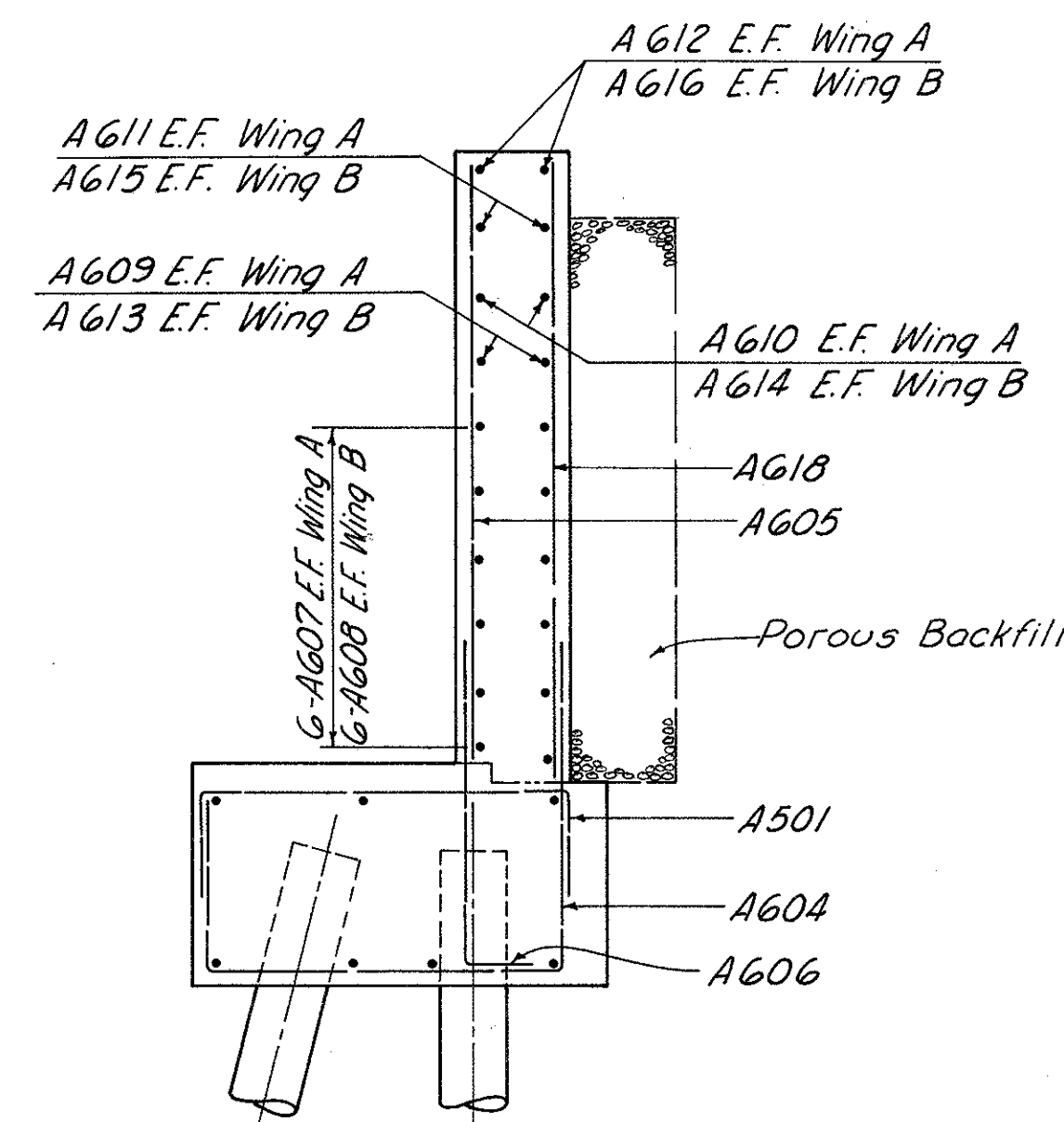
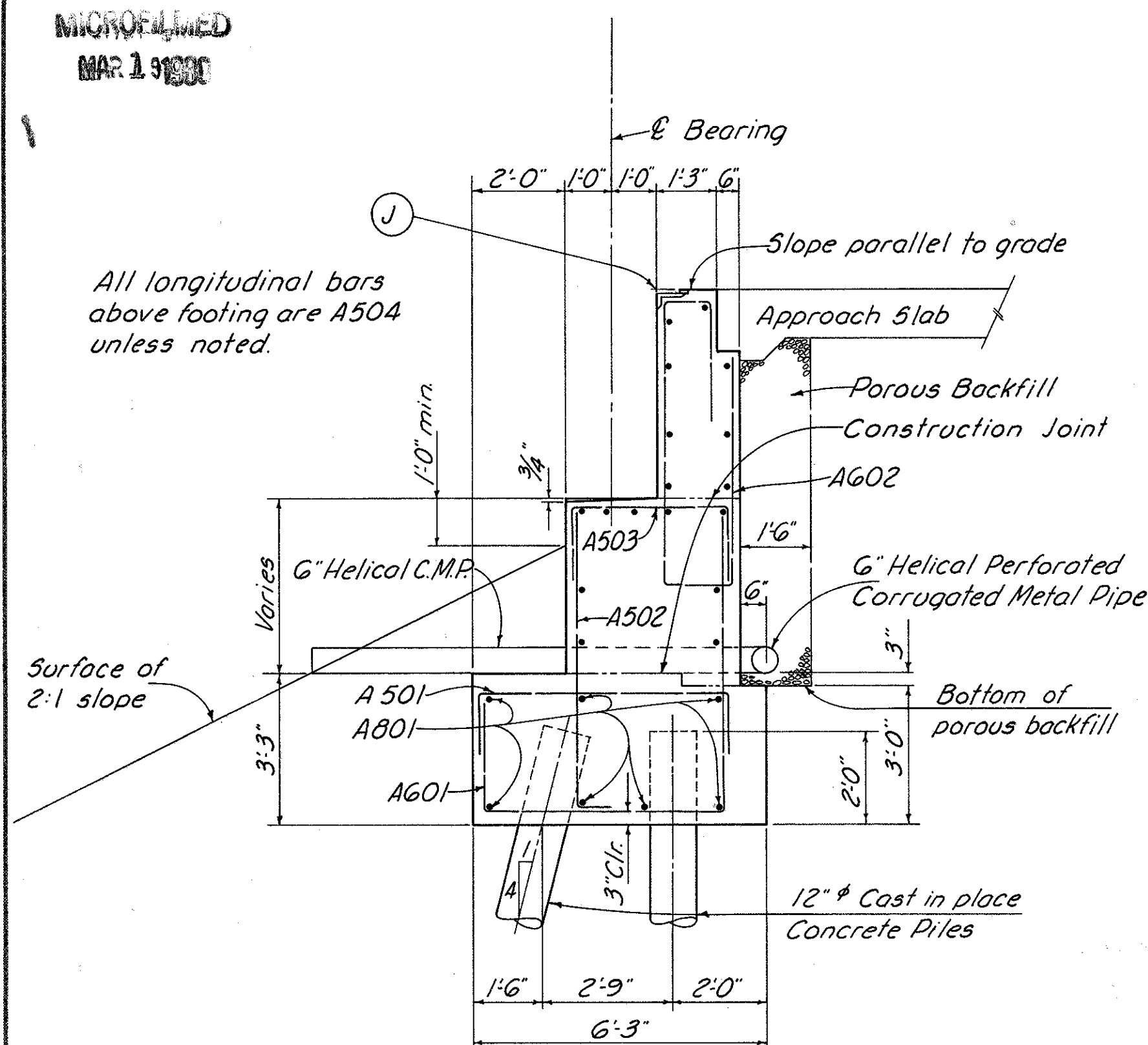


TABLE OF ELEVATIONS

POINT	A	B	C	D	E	F	G	H	J	K	L	M	N
Left Rear Abutment	1003.48	1003.64	1003.73	1003.60	1003.46	1004.83	1008.76	1006.68	1008.21	1006.70	1008.73	1004.83	996.43
Right Rear Abutment	1003.31	1003.47	1003.63	1003.55	1003.41	1004.68	1008.58	1006.57	1008.10	1006.60	1008.68	1004.68	996.28
Left Forward Abutment	1003.12	1003.26	1003.40	1003.31	1003.15	1004.49	1008.39	1006.36	1007.87	1006.34	1008.42	1004.49	996.09
Right Forward Abutment	1003.09	1003.24	1003.31	1003.16	1003.00	1004.37	1008.36	1006.27	1007.78	1006.25	1008.21	1004.37	995.97

NOTES:

CONCRETE: All abutment concrete shall be Class "E".

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefore in excess of that required for construction of the abutments, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

LEGEND:

L.R. ~ Left rear abutment
R.F. ~ Right forward abutment
R.R. ~ Right rear abutment
L.F. ~ Left forward abutment
E.F. ~ Each face

FRANKLIN ENGINEERING, LIMITED <i>Consulting Engineers</i>						OHIO
COLUMBUS,						
ABUTMENT 2						
BRIDGE No. MAD. 70-0628 L & R						
OVER DEER CREEK						
MADISON COUNTY						I.R. 70
Sta. 331+58.25						
Designed	Drawn	Traced	Checked	Reviewed	Date	Reviewed
ROB	ROB	S		JH	1/20/65	

MICROFILMED
MAR 1 1980

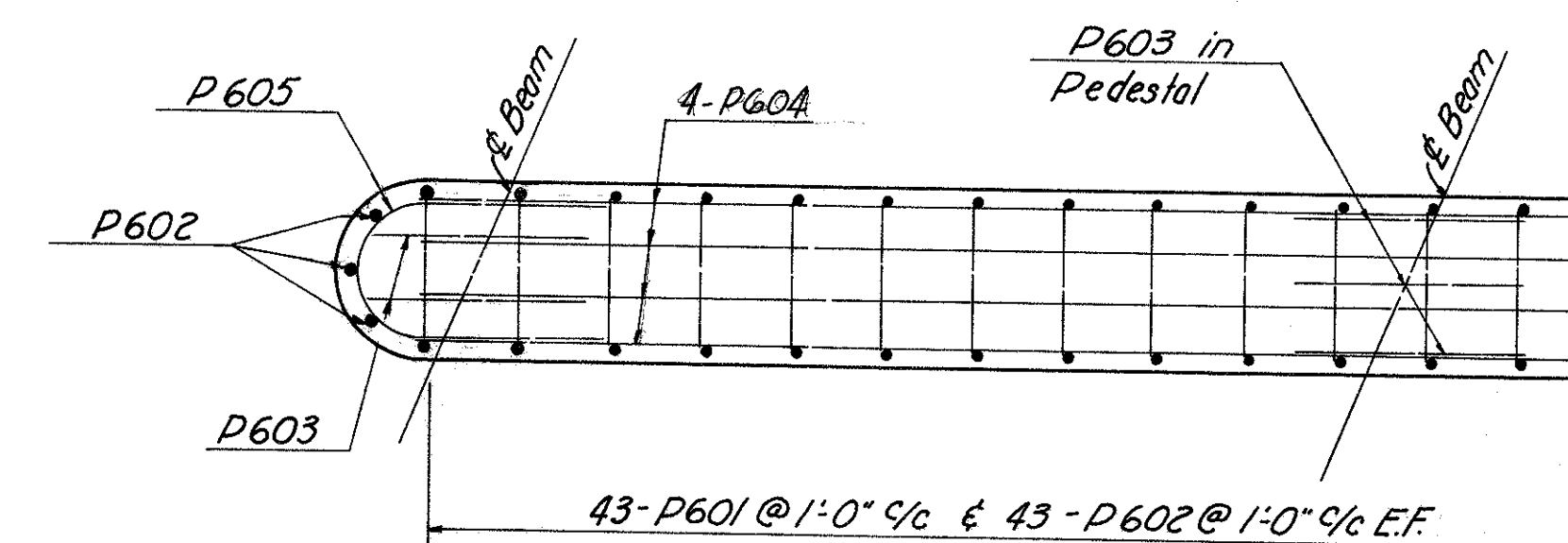
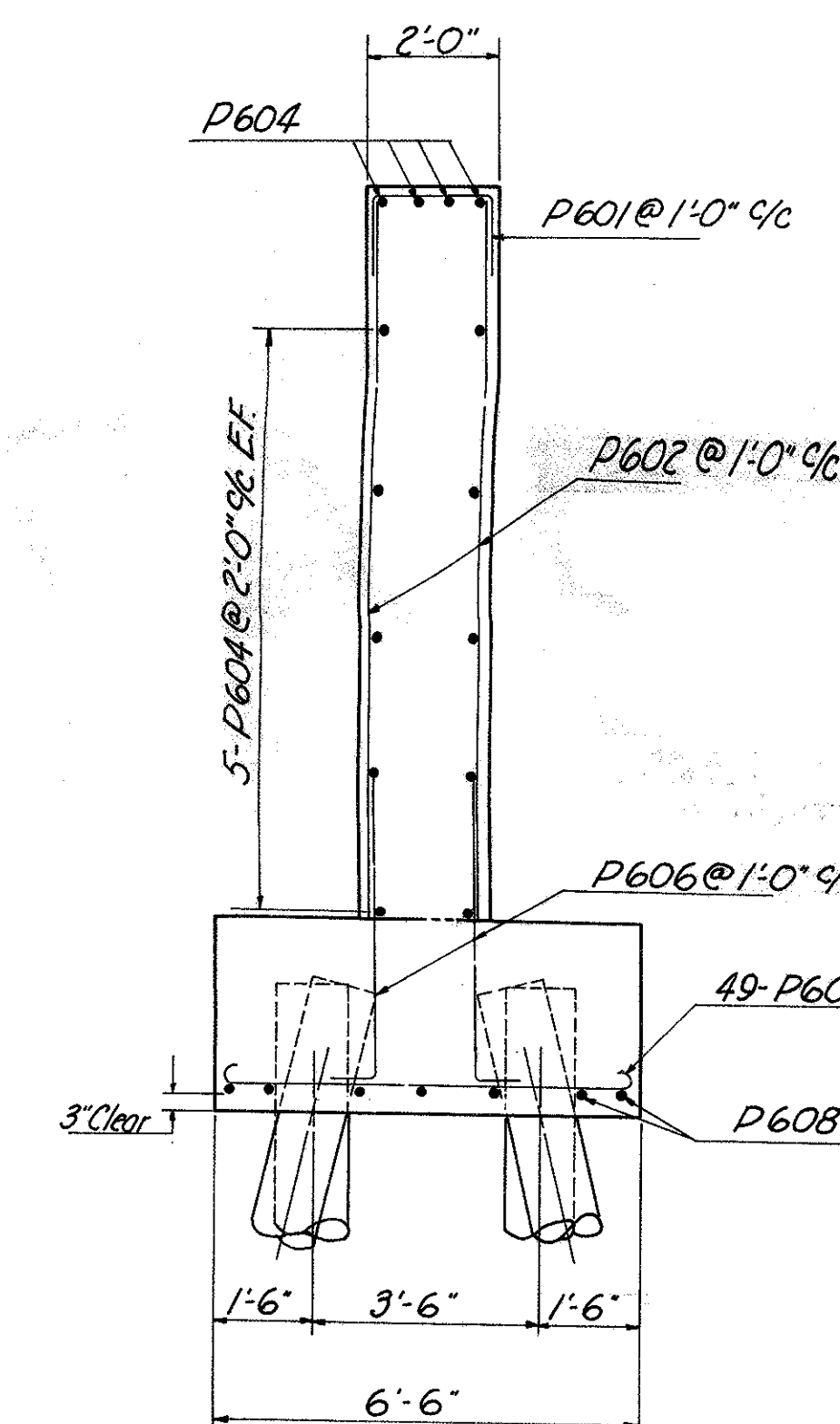
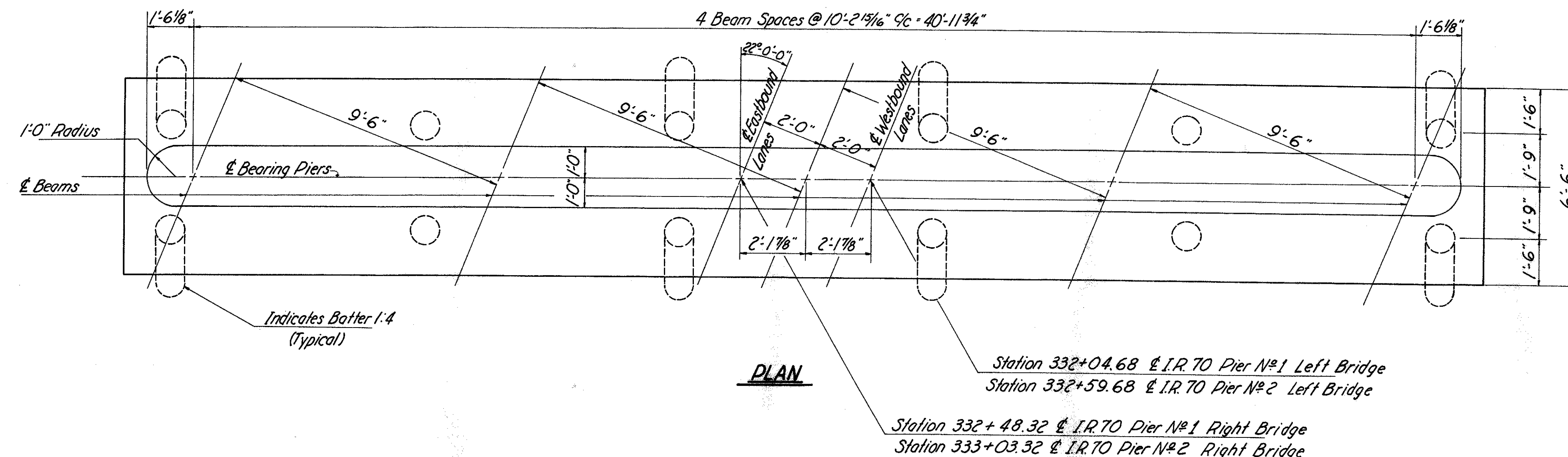
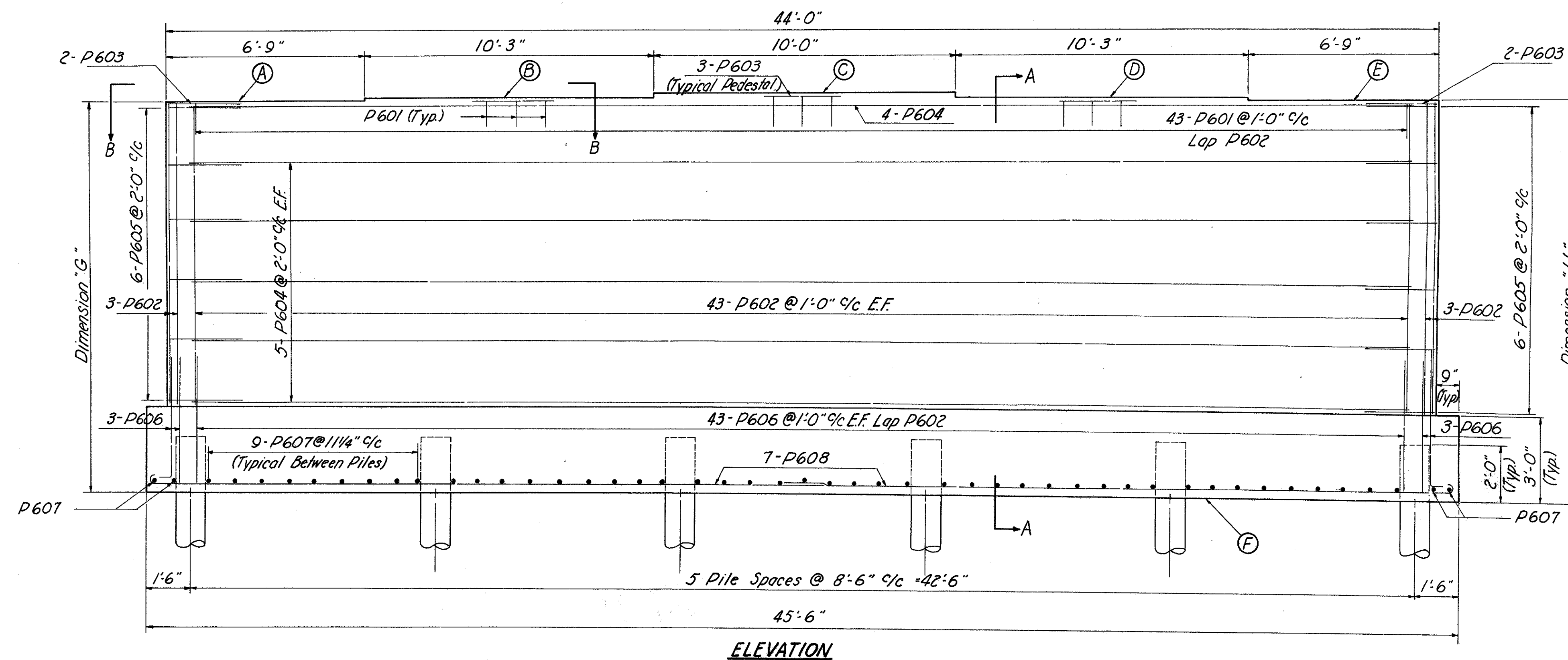


TABLE OF ELEVATIONS							DIMENSIONS	
	A	B	C	D	E	F	DIMENSION G	DIMENSION H
Pier No. 1 Left Bridge	1002.94	1003.08	1003.22	1003.13	1002.97	989.5	13'-5 1/4"	13'-5 3/8"
Pier No. 2 Left Bridge	1002.81	1002.95	1003.09	1003.00	1002.84	989.5	13'-3 3/4"	13'-4 1/8"
Pier No. 1 Right Bridge	1002.90	1003.04	1003.11	1002.96	1002.80	989.5	13'-4 3/4"	13'-3 3/8"
Pier No. 2 Right Bridge	1002.77	1002.91	1002.99	1002.84	1002.68	989.5	13'-3 1/4"	13'-2 1/8"

NOTES

CONCRETE: All stem and footing concrete shall be Class "E."

BRIDGE SEAT REINFORCING: Special care shall be taken in placing seat steel so as to avoid interference with the drilling of anchor bar holes. (Fixed pier only.)

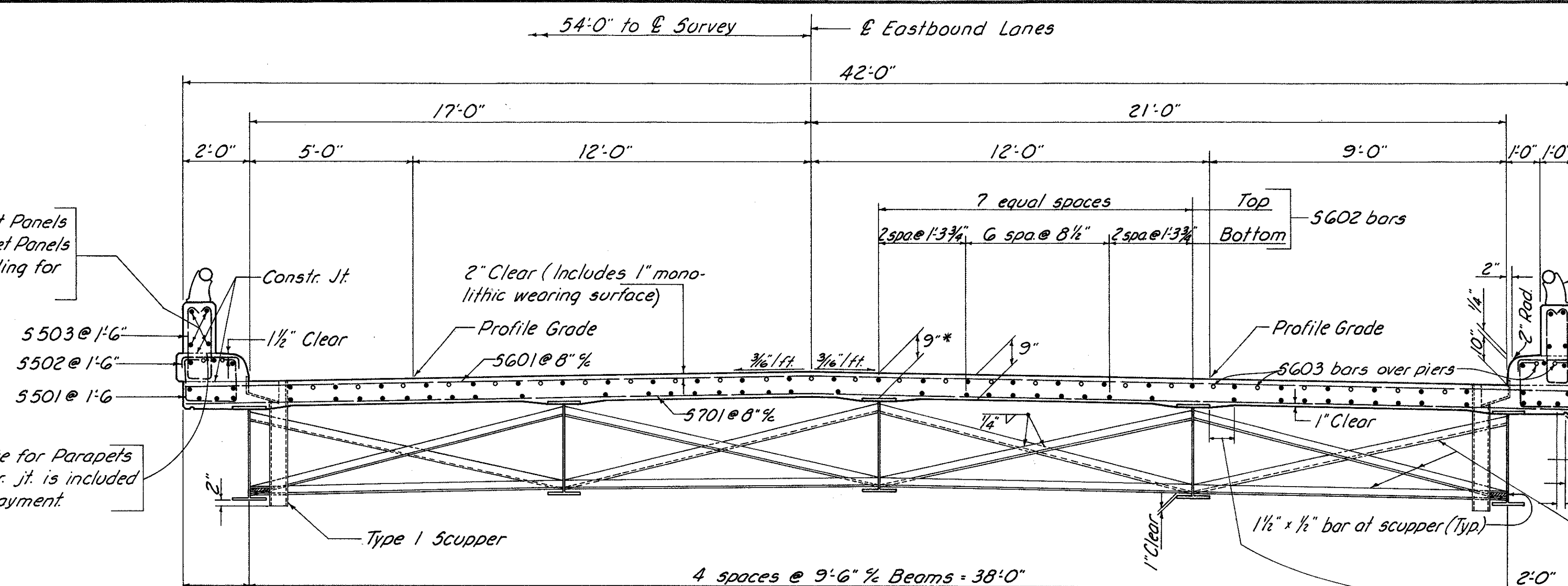
PILES: All piles to be 12" ϕ cast in place concrete piles. Min. bearing 40 tons.

FRANKLIN ENGINEERING, LIMITED Consulting Engineers						OHIO
PIERS						
BRIDGE No. MAD.-70-0628 L & R OVER DEER CREEK						
MADISON COUNTY Sta. 331+58.25 I.R. 70						
DESIGNED ROB	DRAWN ROB	TRACED NCF	CHECKED	REVIEWED JF	DATE 1/26/65	REVISED

NOTED
MAR 1 1966

R501 - Int. Parapet Panels
R502 - End Parapet Panels
Included with Railing for payment.

Class "C" Concrete for Parapets
above this constr. jt. is included
with railing for payment.



TRANSVERSE SECTION

Eastbound Lanes Shown ~ Westbound Lanes Opposite Hand

All longitudinal bars S602 except as otherwise shown.
Lap S602 bars 1'-11" minimum.

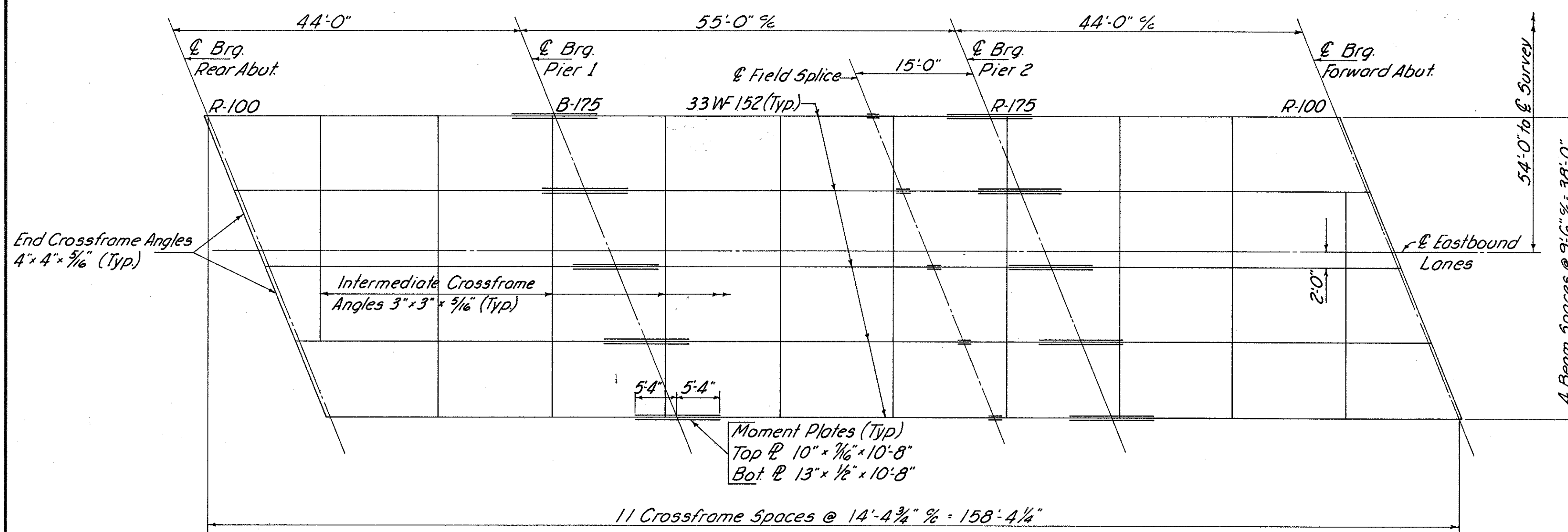
Type 1 Aluminum Railing.

* 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.

1" diameter half round drip groove.

Intermediate crossframe angles 3" x 3" x 5/8". Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" to 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" wide.



FRAMING PLAN

Rt. Structure Shown ~ Lt. Structure Symmetrical by Rotation of 180°

END CROSSFRAMES, END DAMS, SCUPPERS, CURB PLATE DETAILS AND SPLICE DETAILS: See 5D-1-G5 (11-8-65) sheets 1, 2 and 3 of 3.

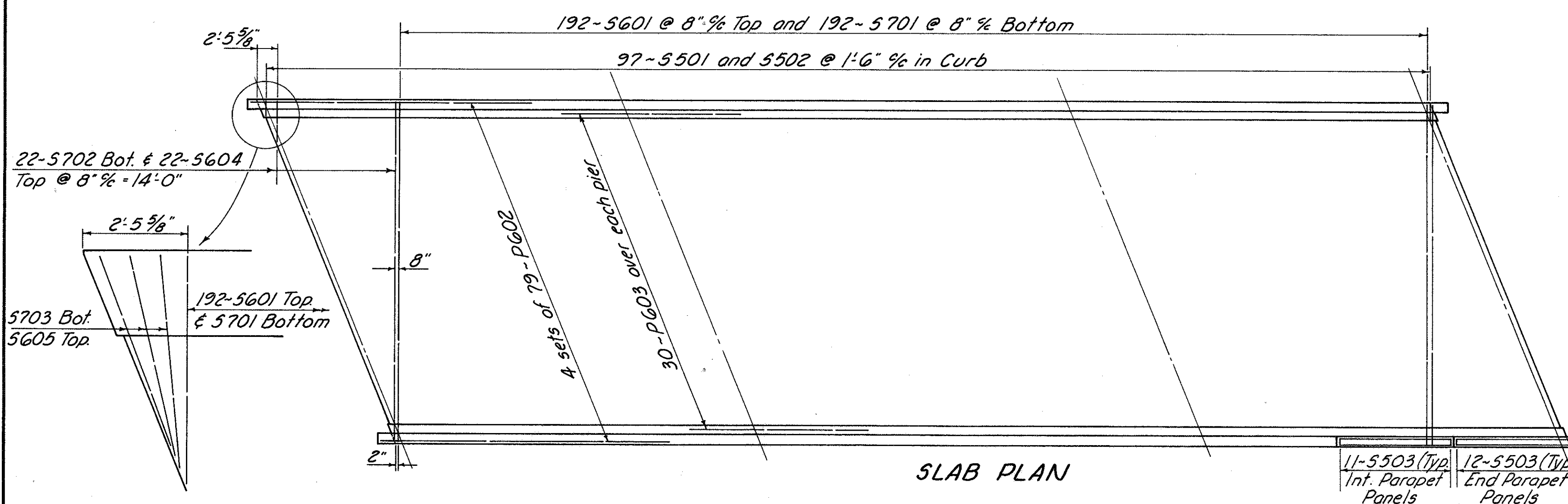
BEARINGS: See RB-1-55 (rev. 2-2-59) for the following:

Abutments ~ R-100
Piers 1 ~ B-175
Piers 2 ~ R-175

CONCRETE: All superstructure concrete shall be Class "C"

RAILING POST, PARAPET EXPANSION JOINT AND SCUPPER SPACING: See Sheet 286.

GENERAL NOTES: See Sheet 286.



SLAB PLAN

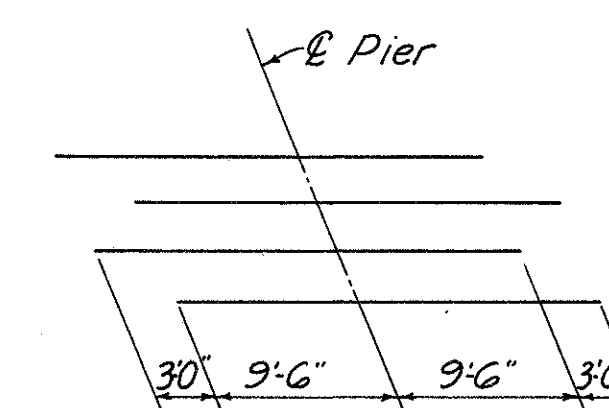
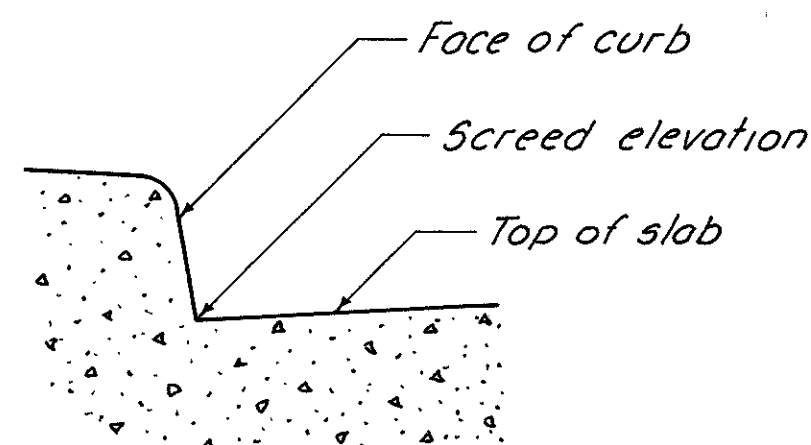
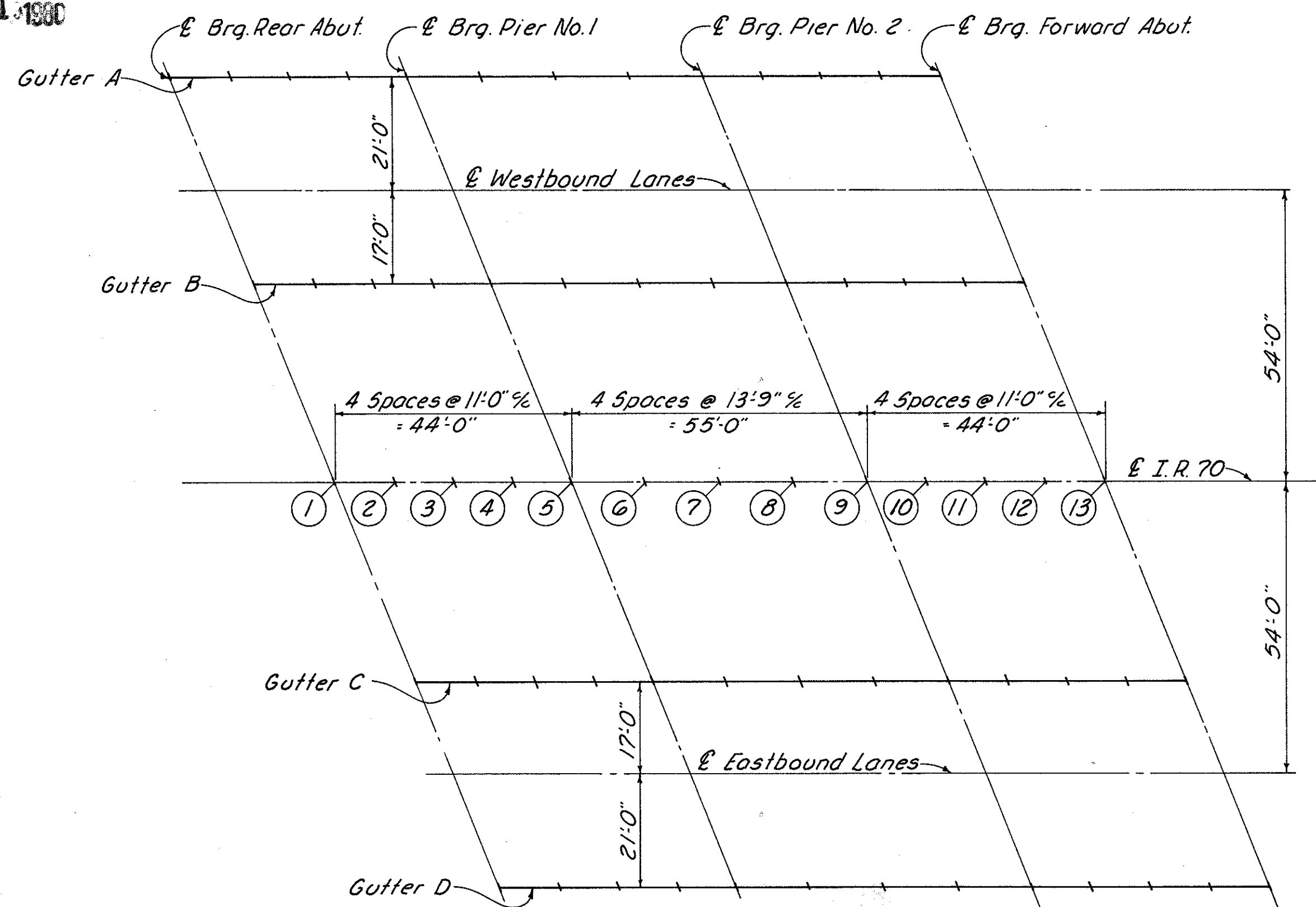


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

FRANKLIN ENGINEERING, LIMITED <i>Consulting Engineers</i>						
COLUMBUS,				OHIO		
SUPERSTRUCTURE 1 BRIDGE No. MAD.70-0628 L & R OVER DEER CREEK						
MADISON COUNTY				I.R. 70		
Sta. 331+58.25						
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
ROB	ROB	5		FA	11/20/65	

MICROFILMED
MAR 1 1980



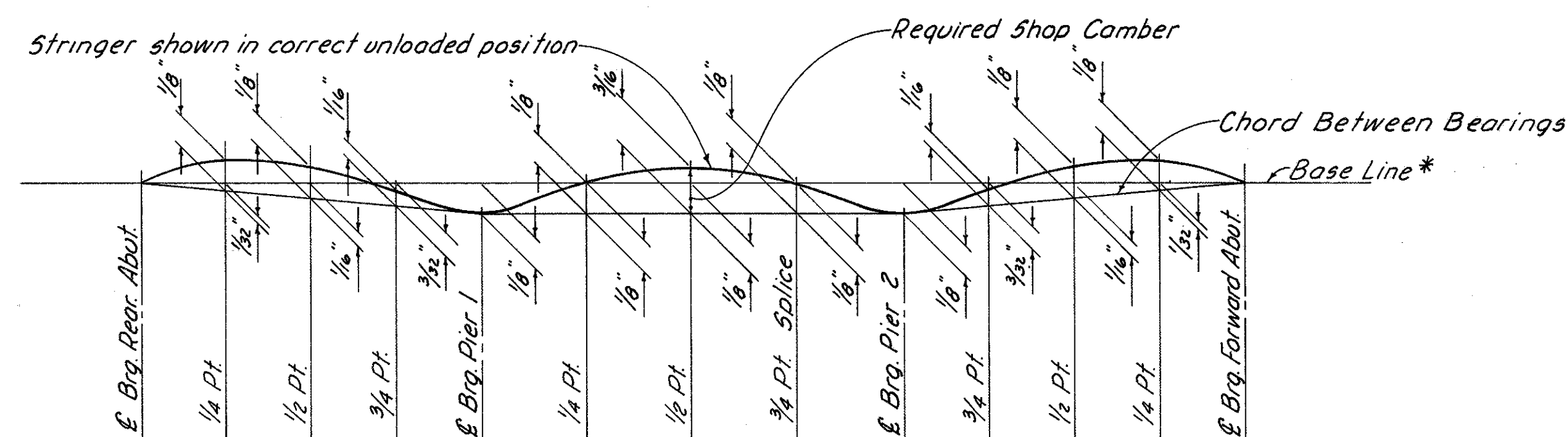
NOTE: Screed elevations are corrected for concrete dead load deflection.

TABLE OF SCREED ELEVATIONS

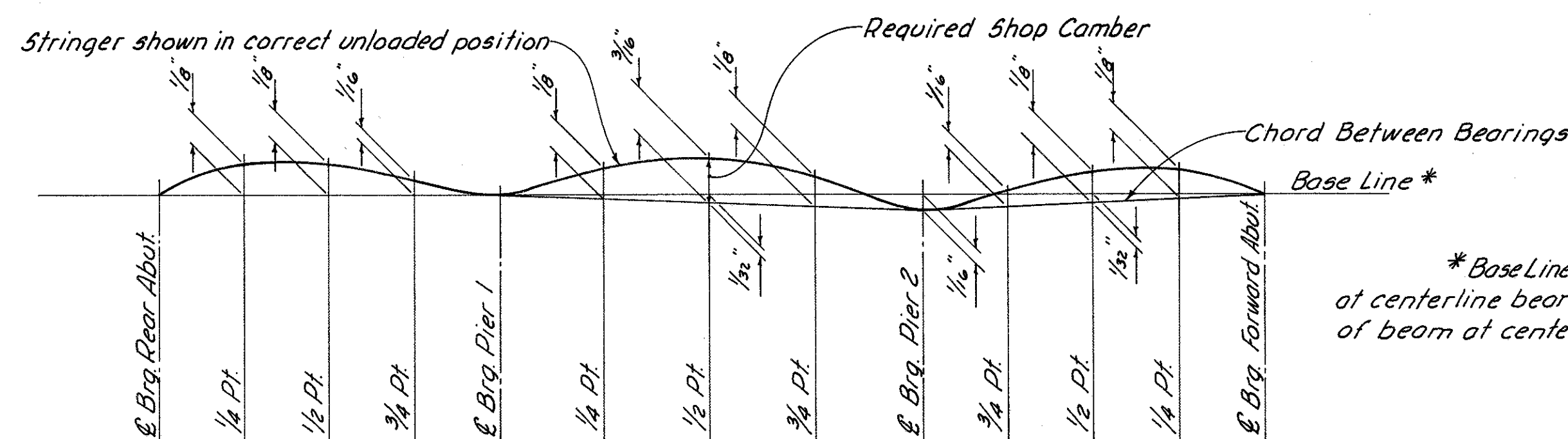
POINT	1	2	3	4	5	6	7	8	9	10	11	12	13
GUTTER A	1007.89	1007.88	1007.85	1007.82	1007.79	1007.76	1007.74	1007.70	1007.66	1007.64	1007.62	1007.59	1007.56
GUTTER B	1007.92	1007.90	1007.88	1007.85	1007.81	1007.79	1007.76	1007.72	1007.68	1007.66	1007.65	1007.62	1007.59
GUTTER C	1007.85	1007.83	1007.81	1007.77	1007.74	1007.72	1007.69	1007.66	1007.62	1007.60	1007.58	1007.56	1007.53
GUTTER D	1007.75	1007.73	1007.71	1007.67	1007.64	1007.62	1007.60	1007.56	1007.52	1007.51	1007.49	1007.47	1007.44

SCREED ELEVATIONS

MAD. 70-625



LAYOUT DIAGRAM - RIGHT BRIDGE



LAYOUT DIAGRAM - LEFT BRIDGE

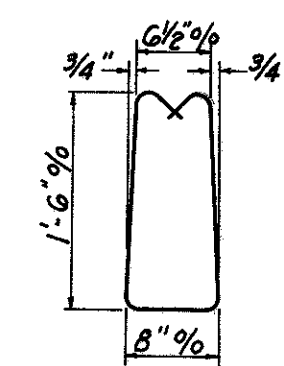
* Base Line is a line from bottom of beam at centerline bearing rear abutment to bottom of beam at centerline bearing forward abutment.

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

	DEFLECTION AND CAMBER								
	INTERIOR AND EXTERIOR BEAMS								
	SPAN 1			SPAN 2			SPAN 3		
	1/4 PT.	1/2 PT.	3/4 PT.	1/4 PT.	1/2 PT.	SPLICE 3/4 PT.	3/4 PT.	1/2 PT.	1/4 PT.
Deflection due to weight of steel.	0"	0"	0"	0"	0"	0"	0"	0"	0"
Deflection due to remaining dead load.	1/8"	1/8"	1/8"	1/8"	3/16"	1/8"	1/16"	1/8"	1/8"
Convexity required for vertical curve.	0"	0"	0"	0"	0"	0"	0"	0"	0"
Sum of deflection and convexity.	1/8"	1/8"	1/8"	1/8"	3/16"	1/8"	1/16"	1/8"	1/8"

FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO							
SUPERSTRUCTURE 2 BRIDGE No. MAD.70-0628 L & R OVER DEER CREEK MADISON COUNTY I.R.70 Sta. 331+58.25							
Designed ROB	Drawn ROB	Traced S	Checked JH	Reviewed JH	Date 1/20/65	Revised	

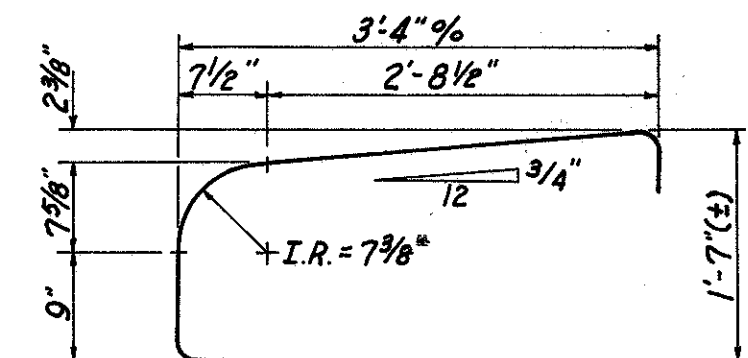
UNCLASSIFIED
MAR 1 1980



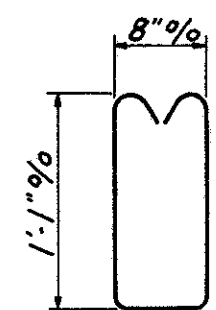
NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A 506 is a No.5 size bar and P1101 is a No.11 size bar.

* Included with railing for payment.

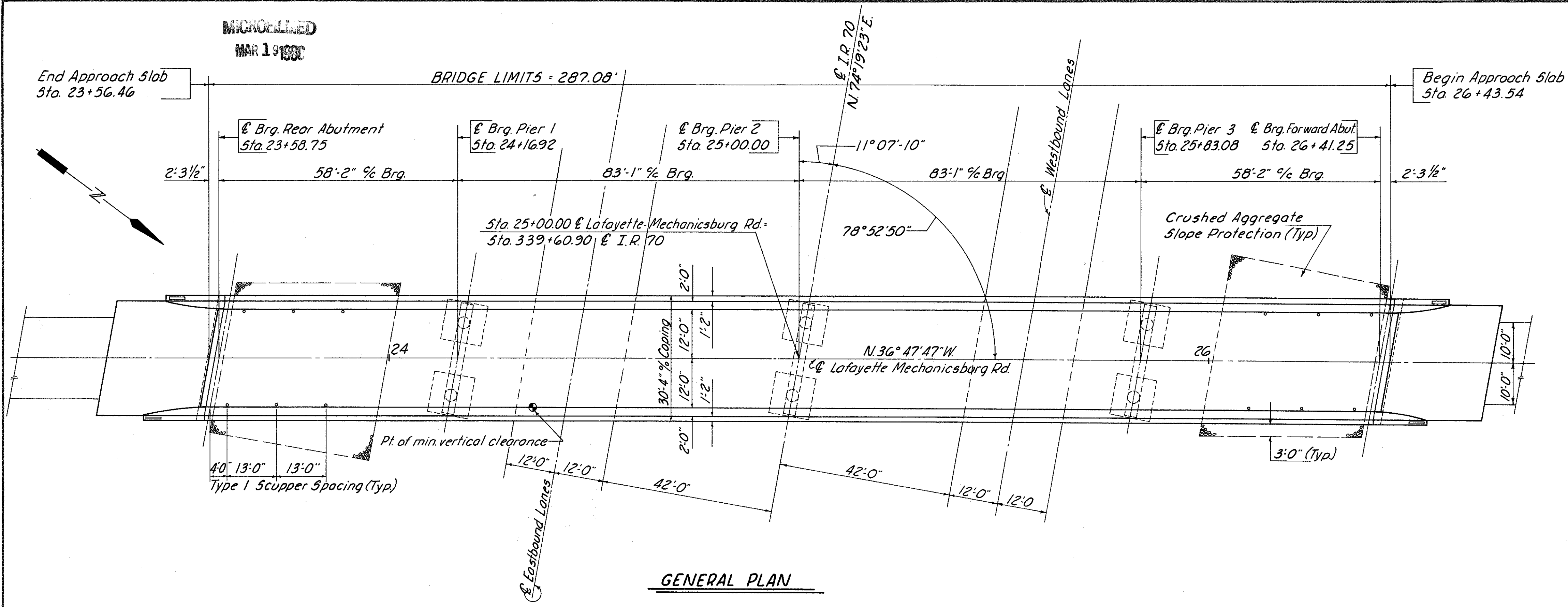


TYPE 12

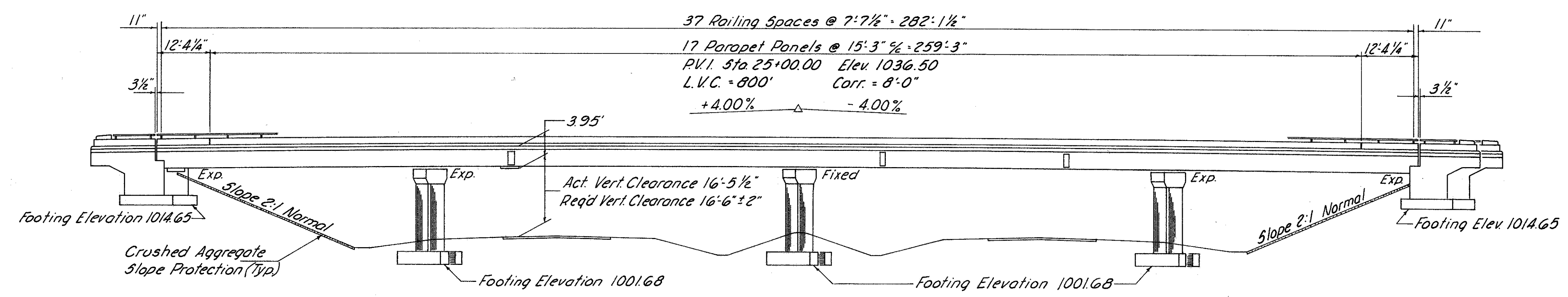


TYPE 13

MAD. 70-6.25



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES							
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUT'S	PIERS	GEN'L
503	365	Cu. Yds.	Unclassified Excavation		182	183	
511	268	Cu. Yds.	Class "C" Concrete, Superstructure	268			
511	55	Cu. Yds.	Class "C" Concrete, Piers above Footings			55	
511	92	Cu. Yds.	Class "E" Concrete, Pier Footings			92	
511	129	Cu. Yds.	Class "E" Concrete, Abutments		129		
509	95,002	Lbs.	Reinforcing Steel	67,680	6,827	20,495	
513	215,249	Lbs.	Structural Steel	215,249			
832	215,249	Lbs.	Field Painting of Structural Steel	215,249			
517	620.58	Lin. Ft.	Bridge Railing Type I	569.08	51.50		
518	12	Each	Scuppers including Supports	12			
518	25	Cu. Yds.	Porous Backfill		25		
518	49	Lin. Ft.	6" Helical C.M.P. (70706) non-perforated		49		
518	49	Lin. Ft.	6" Helical Perforated C.M.P. (70706) including specials		49		
808	268	Units	Water-reducing, set-retarding admixture	268			
601	427	Sq. Yds.	Crushed Aggregate Slope Protection				427
825	1129	Sq. Yds.	Concrete Surface Treatment				1129
828	49	Lin. Ft.	Joint Sealer	49			

GENERAL NOTES:
REFERENCE shall be made to Standard Drawings AS-1-G7 (rev 1-11-68), BR-1-G5 (11-24-65) sheets 1 of 2, RB-1-55 (rev 2-2-59), SD-1-G5 (11-8-65) sheets 1, 2, & 3 of 3, and Supplemental Specifications 808(1.13-67), 825(12-13-67), 828(1-1-67), and 811(1-1-67).
DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures", State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.
UNIT STRESSES: Design Loading ~ CF 130 (57)
Concrete Class "C" ~ basic unit stress 1,333 psi
Concrete Class "E" ~ basic unit stress 1,133 psi
Structural Steel ~ ASTM A36 basic unit stress 20,000 psi

Reinforcing Steel ~ ASTM A15, A16, A160, deformed, intermediate or hard grade. Basic unit stress 20,000 psi, except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 psi.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the sub-grade for a distance of 200 feet back of the abutments. After a waiting period of 60 days, excavations may be made for the abutments.

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

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the 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.
EXCAVATION QUANTITY includes the removal of fill material required for the construction of the abutments and piers. Excavation quantities for removal of subsoil under pier footings are included with Highway Quantities.
FOUNDATION BEARING PRESSURE: Abutment and pier footings are designed for a maximum bearing pressure of 2.0 tons per sq. ft.
REFERENCE shall be made to Supplemental Specifications 832 and 931 dated 5-25-67. SEE sheet 286 for notes titled: Welds, Painting and Welded Attachments.

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Consulting Engineers
COLUMBUS, OHIO

GENERAL PLAN, GENERAL NOTES
AND ESTIMATED QUANTITIES
BRIDGE No. MAD. 70-0643
UNDER LAFAYETTE- MECHANICSBURG RD.
MADISON COUNTY I.R. 70
Sta. 339+56.05

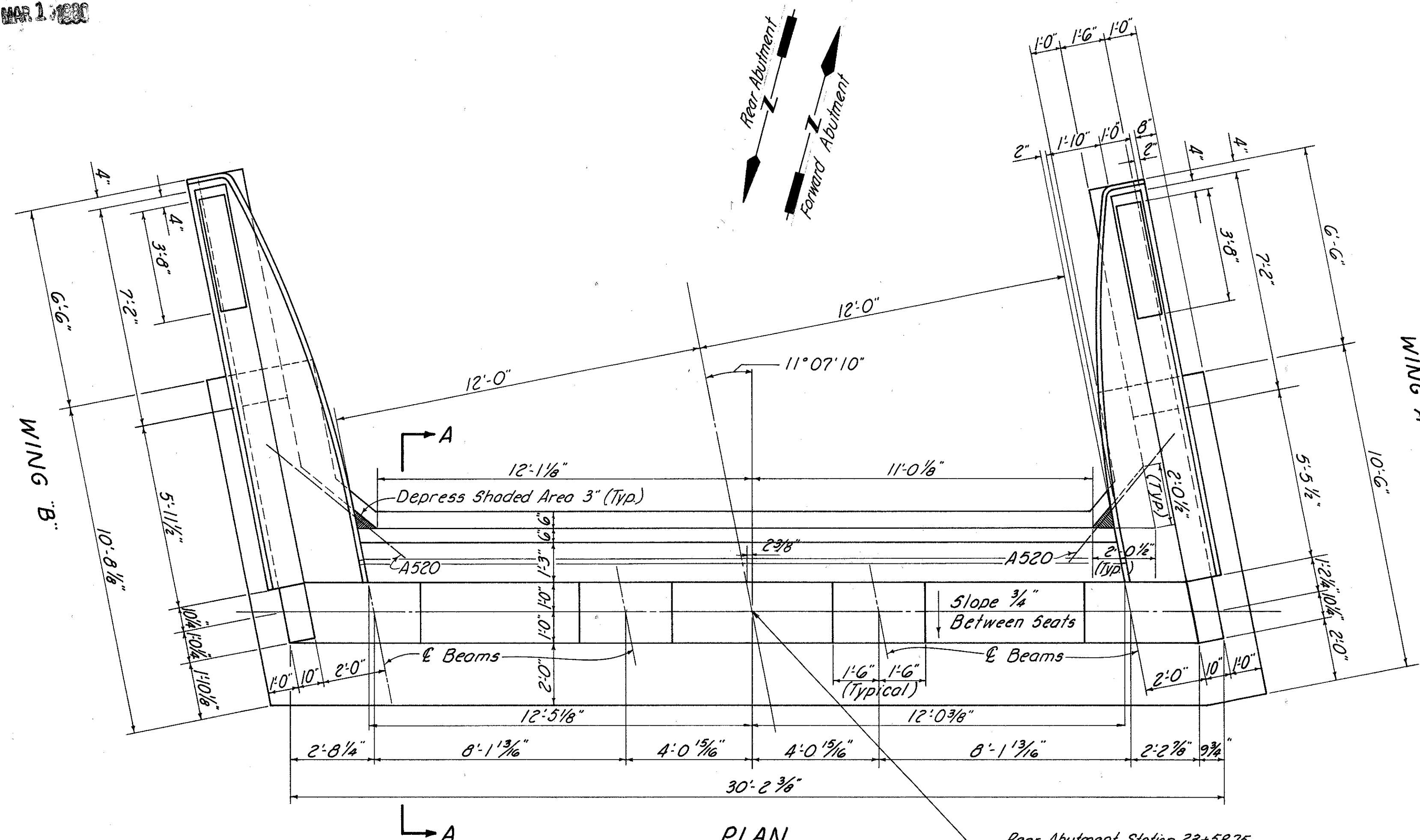
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised
ROB	SL	S	JK	JH	8/46	

RECEIVED
MAR 1 1966

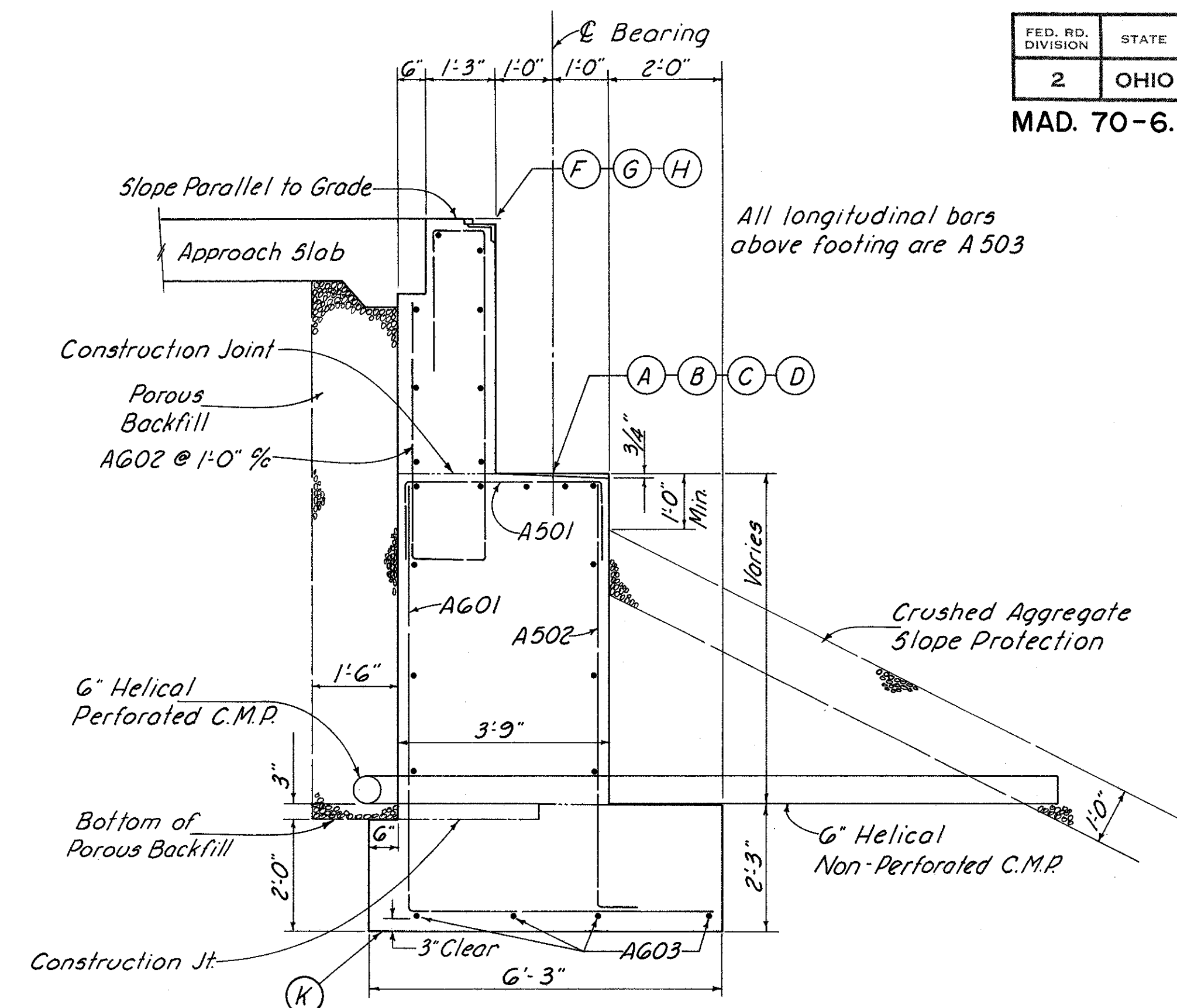
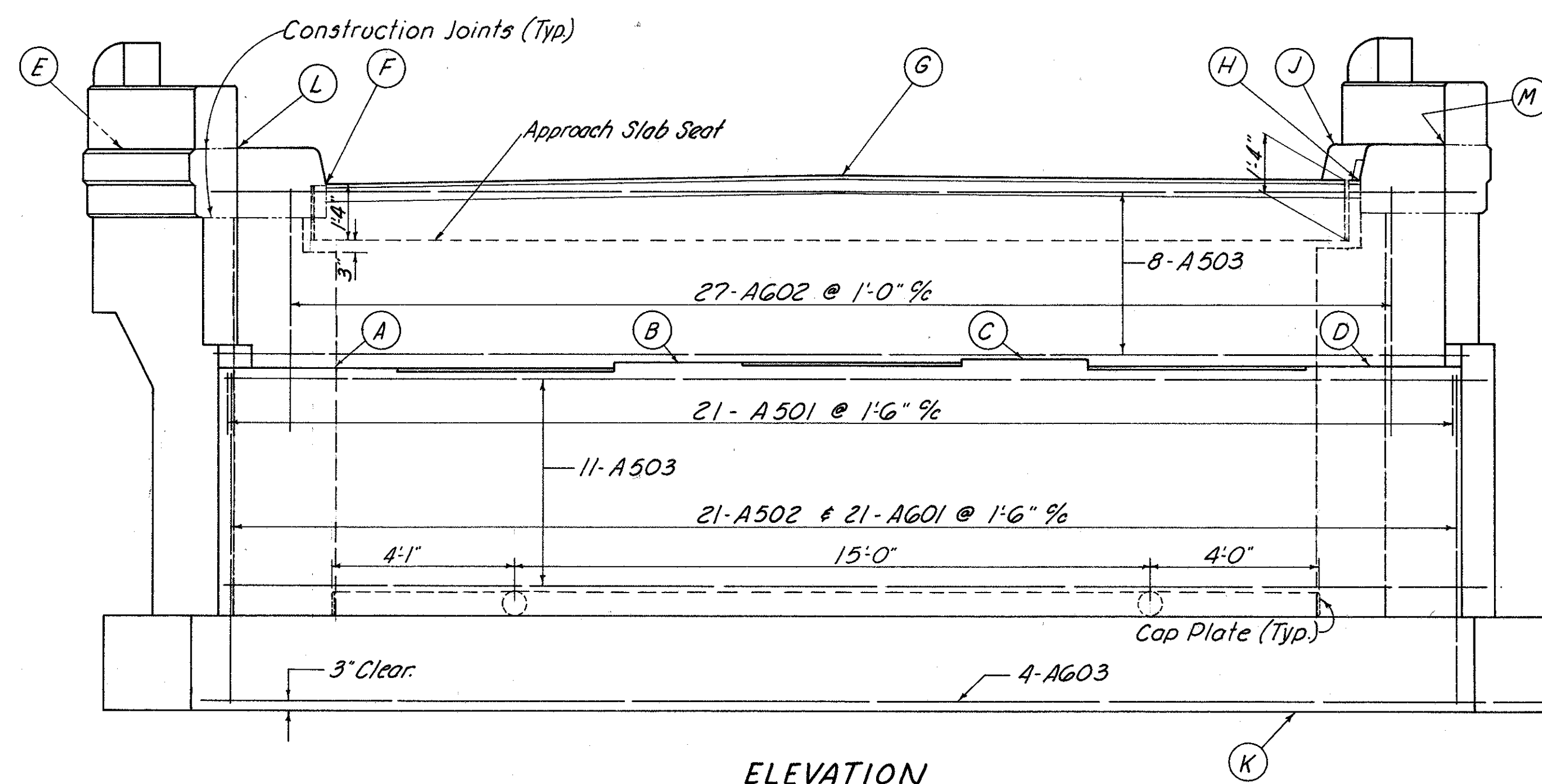
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MAD. 70-6.25

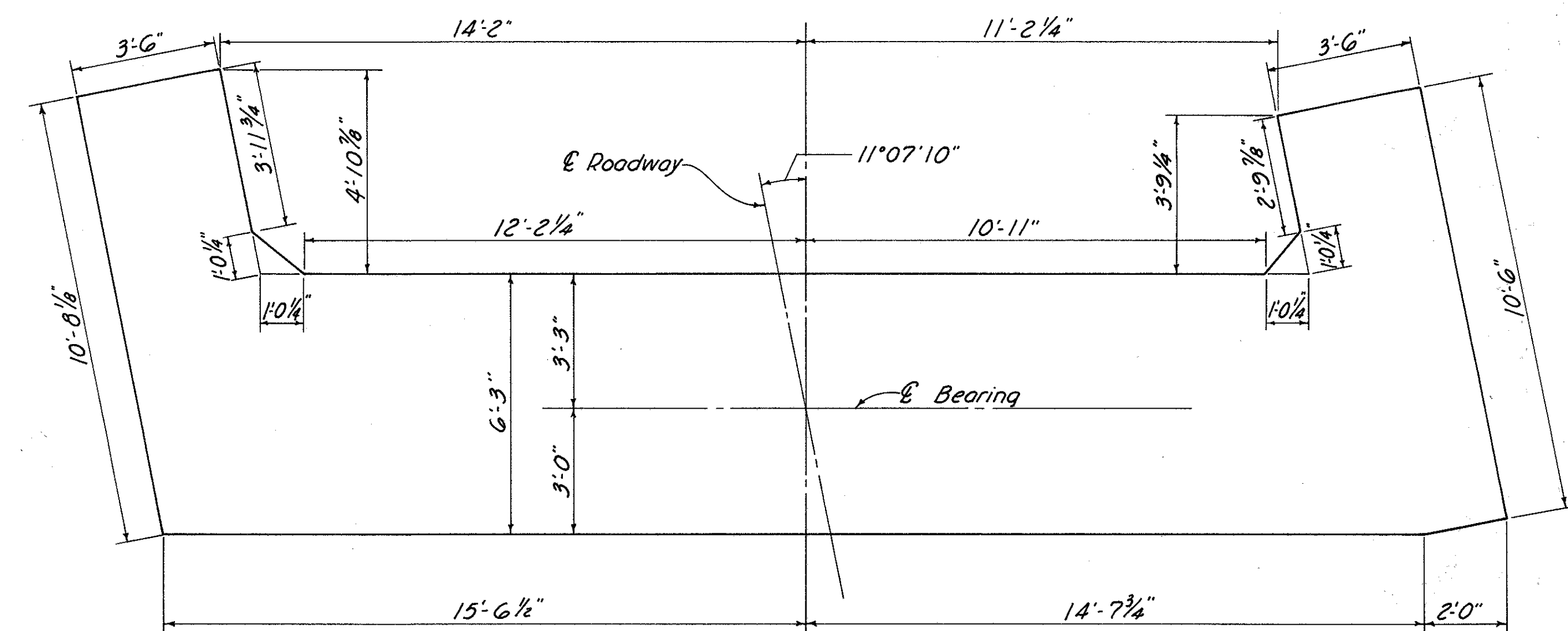
295



Rear Abutment Station 23+58.75
Forward Abutment Station 26+41.25



SECTION A-A



FOOTING PLAN

TABLE OF ELEVATIONS

POINT	A	B	C	D	E	F	G	H	J	K	L	M
ELEVATION	1022.80	1022.94	1022.97	1022.86	1027.93	1027.27	1027.49	1027.33	1028.02	1014.65	1028.13	1028.19

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Consulting Engineers

COLUMBUS, OHIO

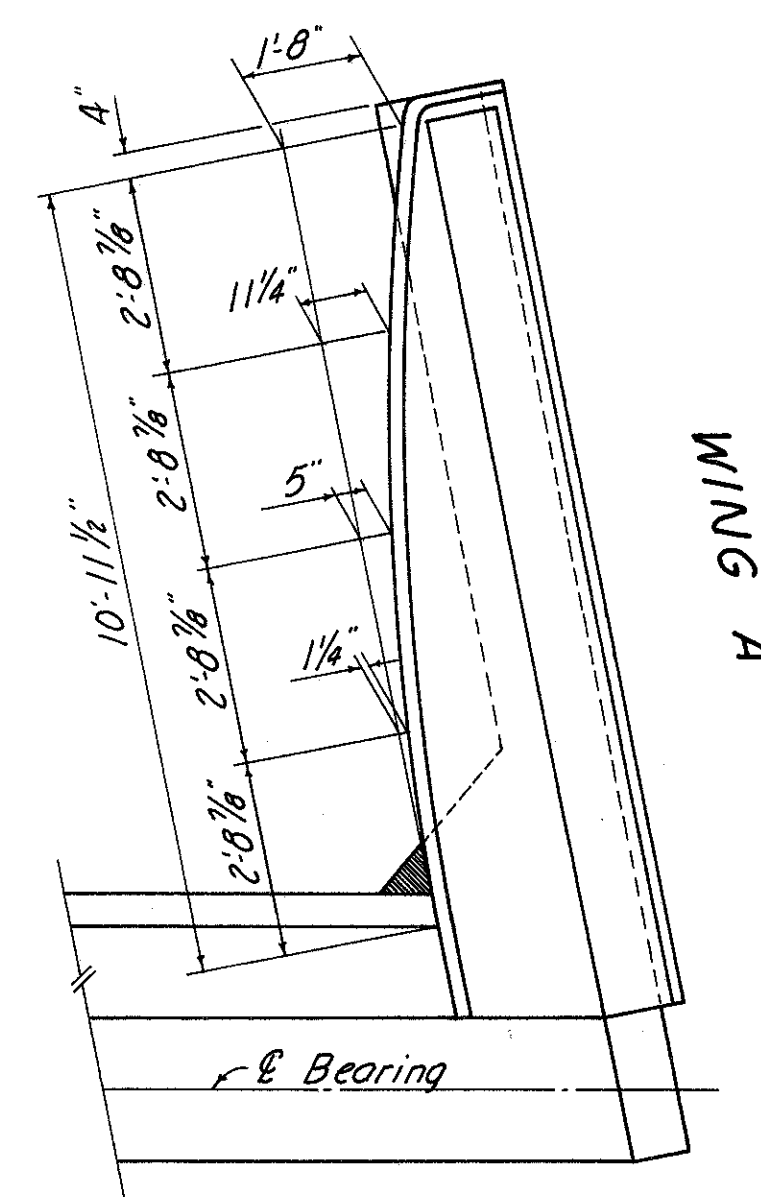
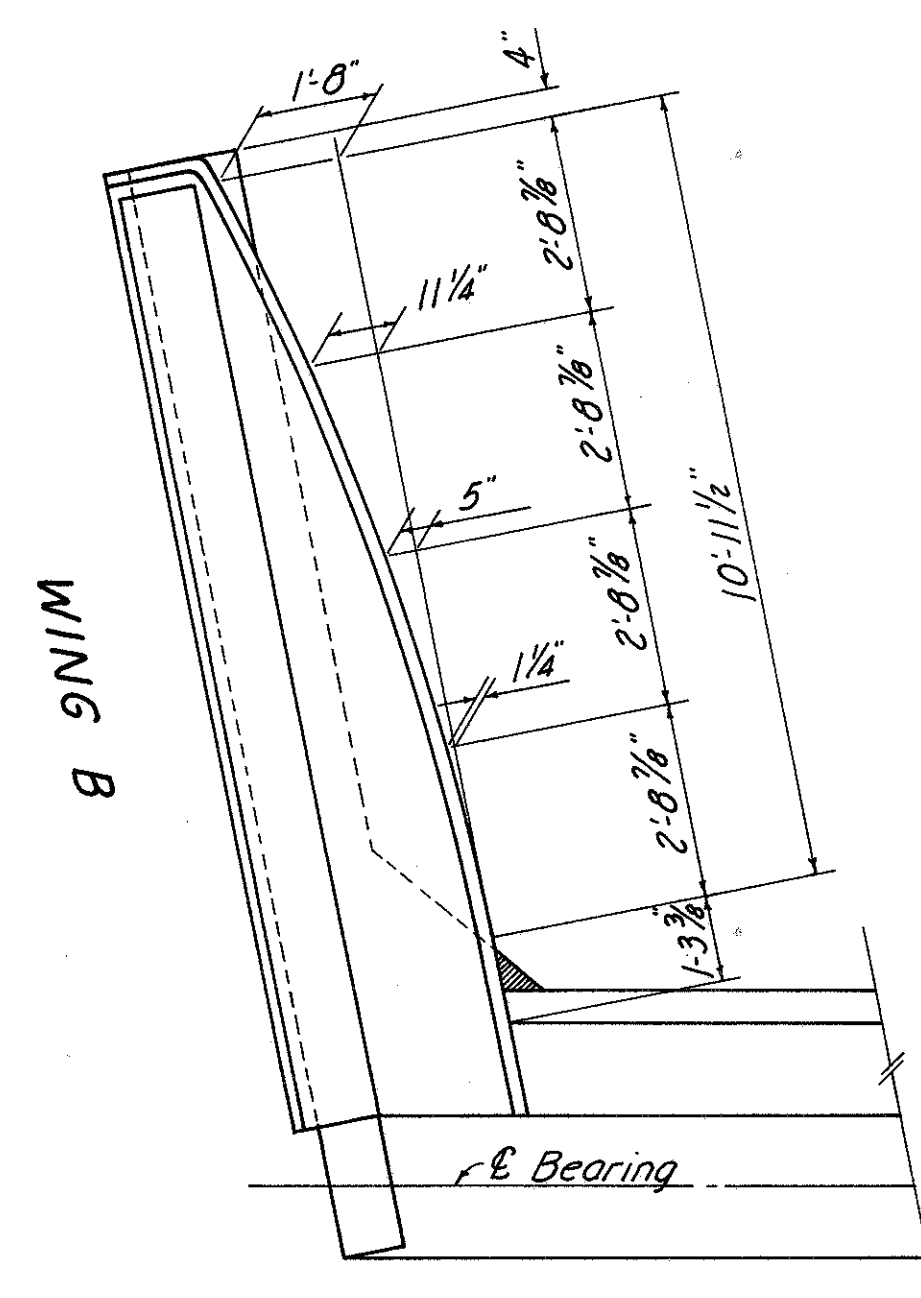
ABUTMENTS

BRIDGE No. MAD.70-0643
UNDER LAFAYETTE-MECHANICSBURG RD.

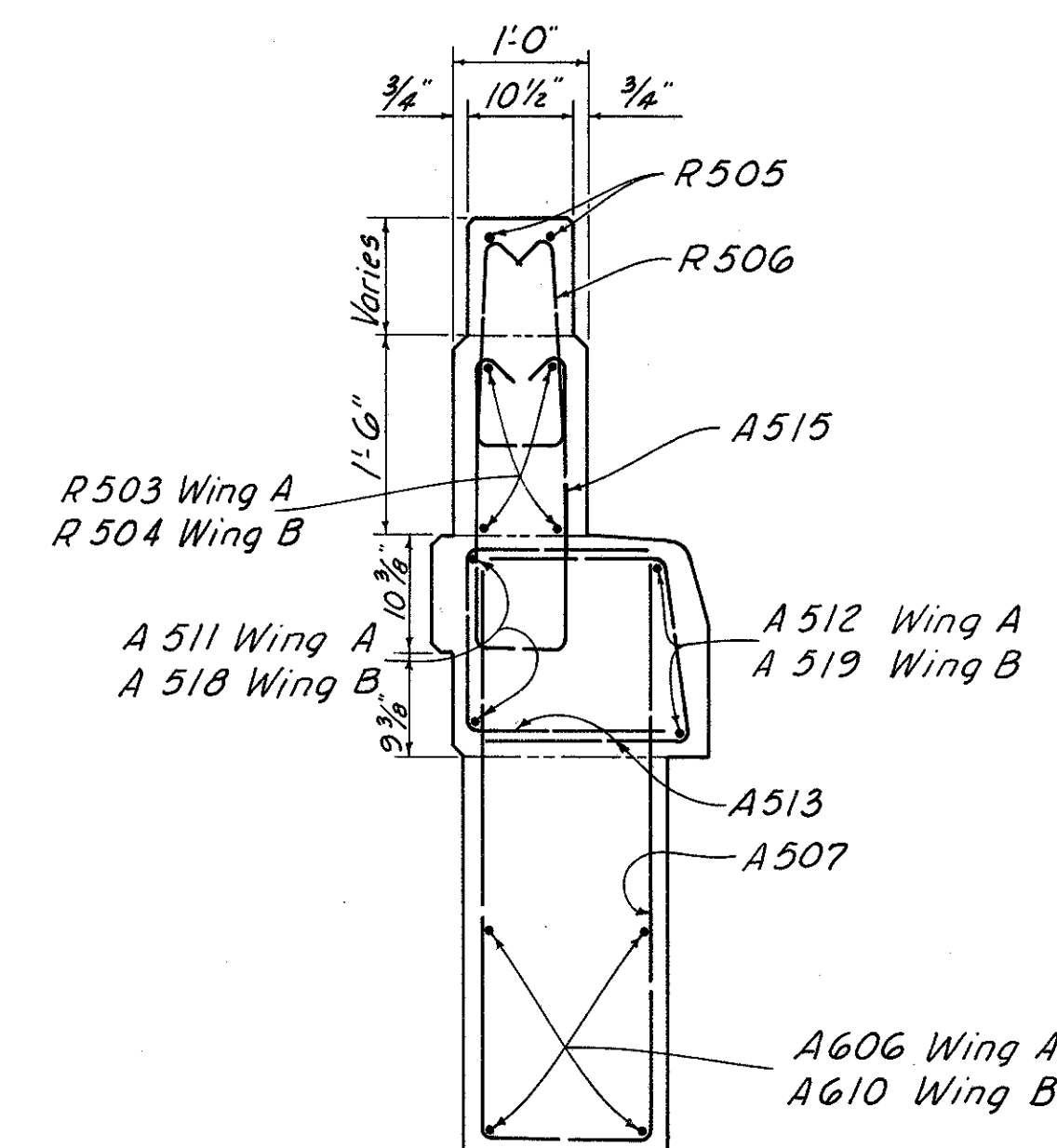
MADISON COUNTY I.R. 70

Sta. 339+56.05

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ROB	ROB	S	JA	JA	3/8-66	



CURB PLAN



SECTION C-C

NOTES:

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

POROUS BACKFILL 1'-6" thick shall extend upward to the approach slab for the full length of the abutment. 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. for porous backfill.

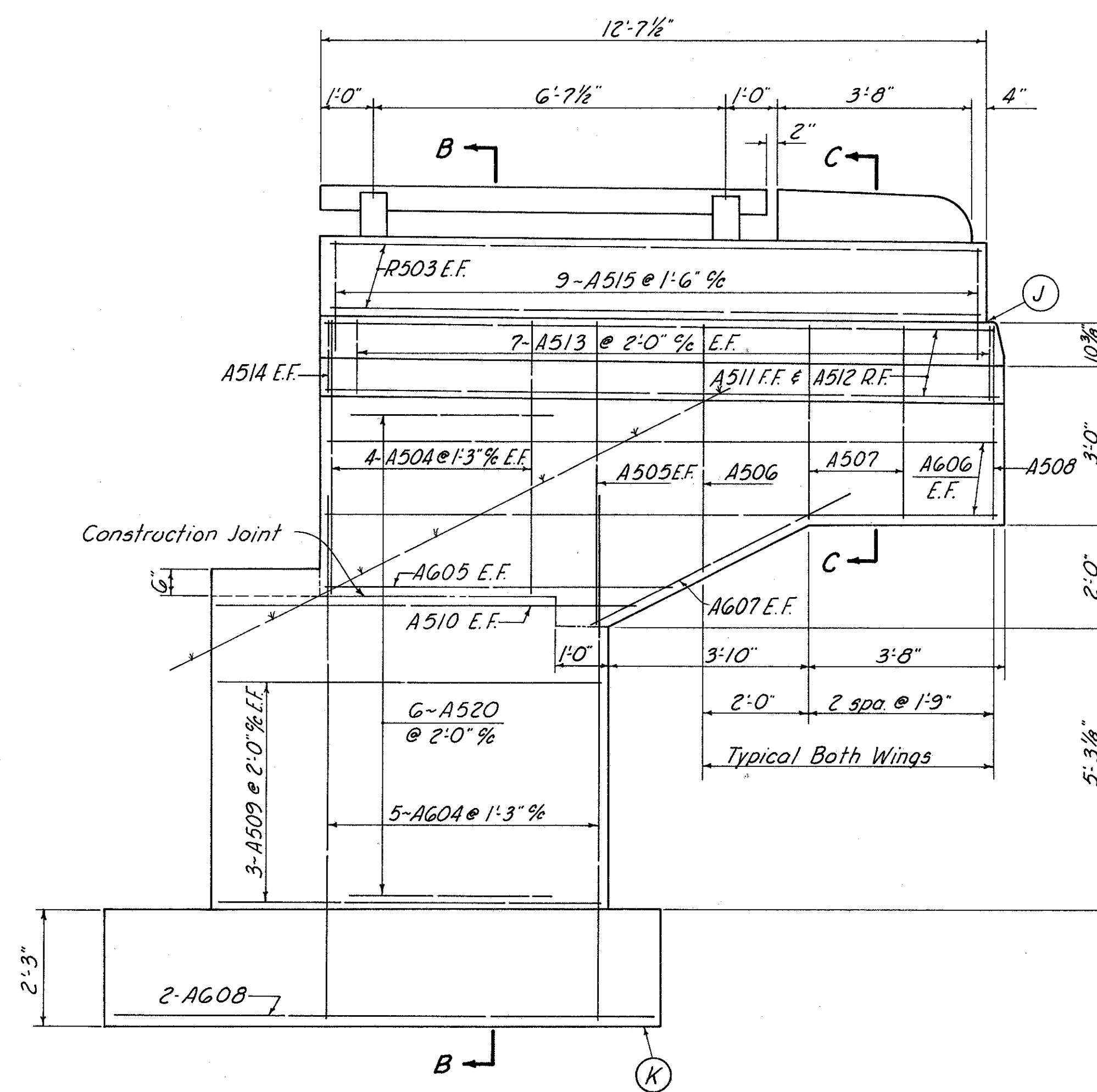
GENERAL NOTES: See "General Plan" Sheet.

LEGEND

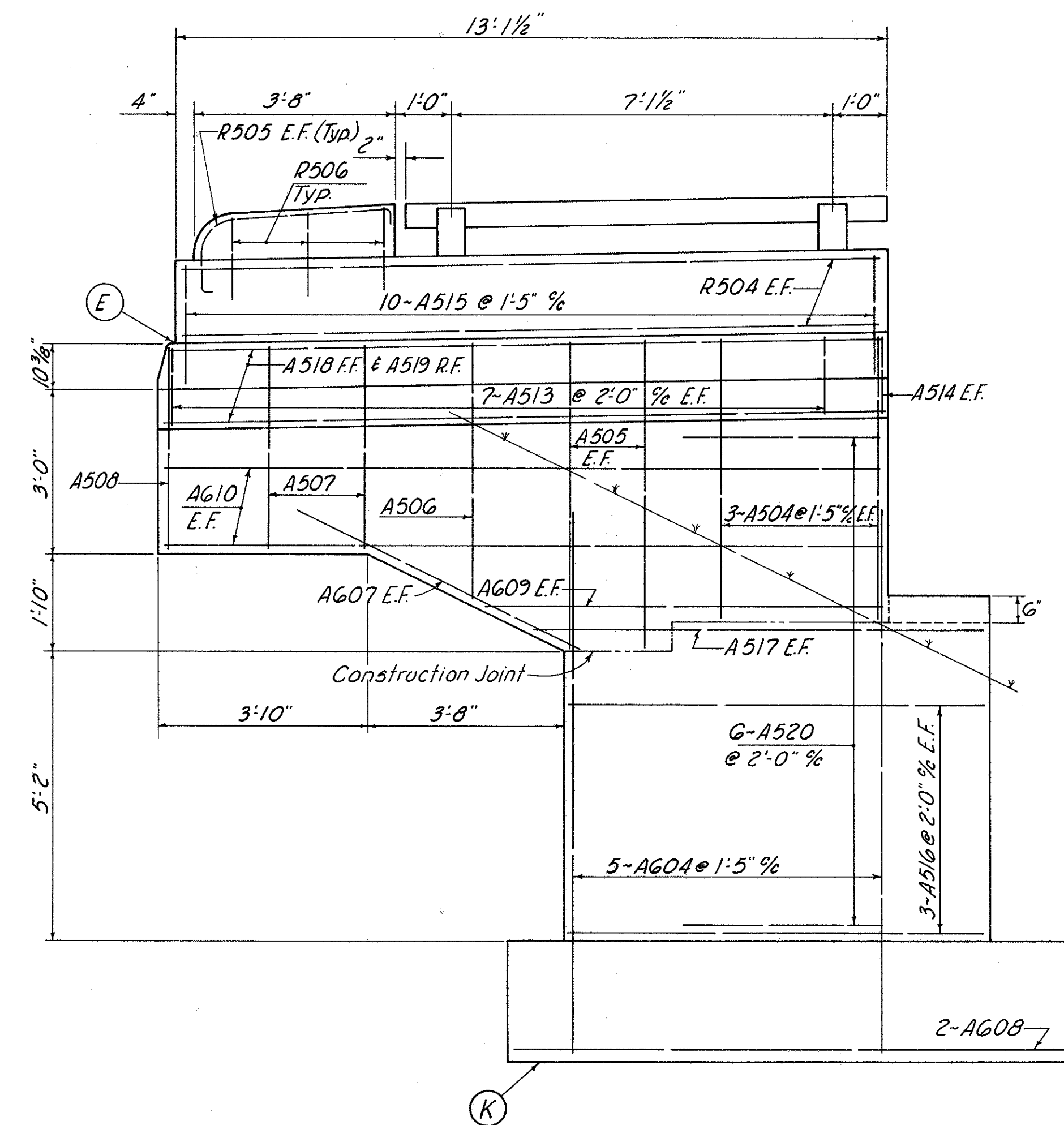
E.F. = Each Face

R.F. = Rear Face

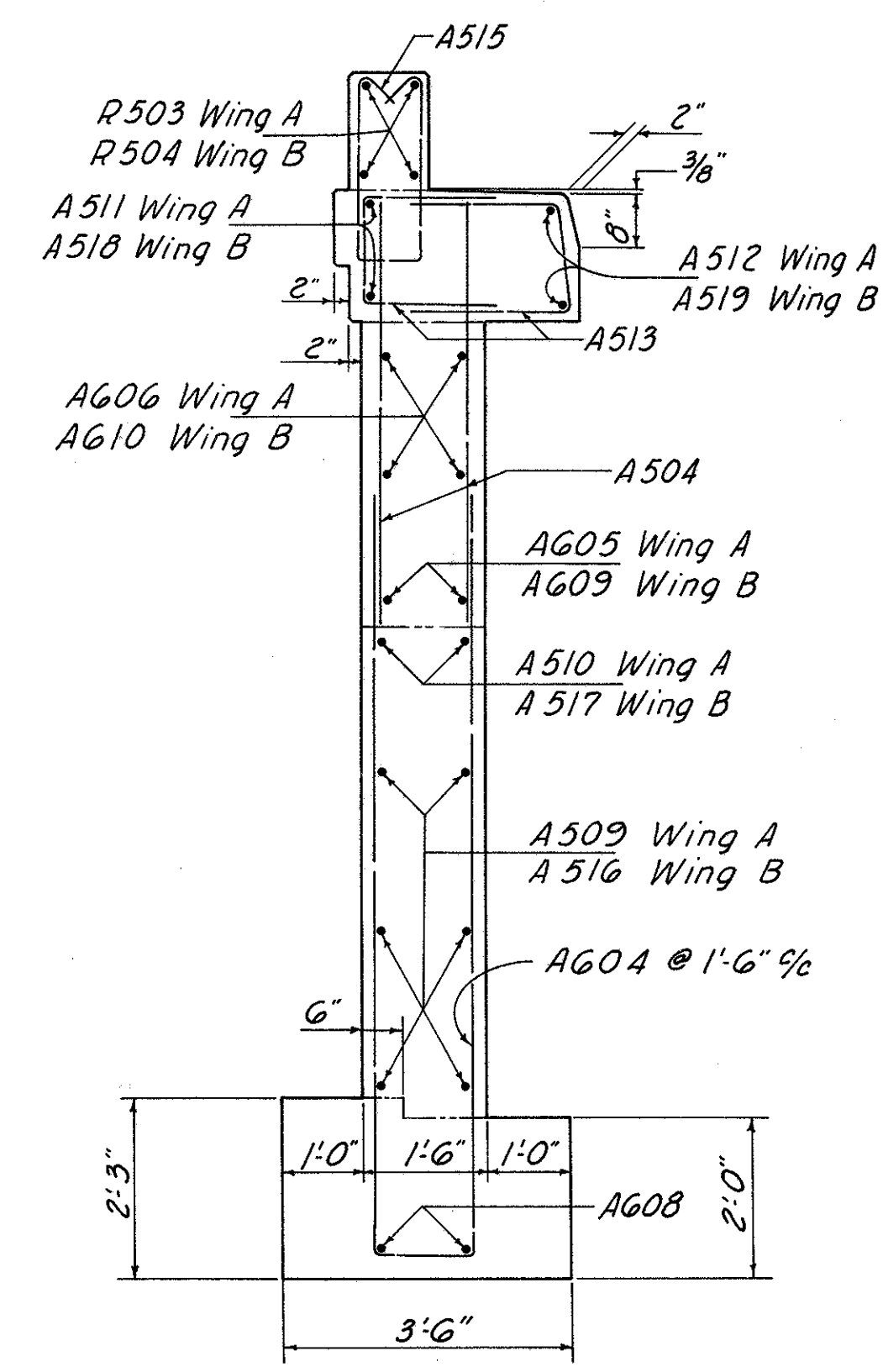
F.F = Front Face



WINGWALL A



WINGWALL B



SECTION B-B

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers

COLUMBUS, Consulting Engineers OHIO

WINGWALLS

BRIDGE No. MAD.70-0643
UNDER LAFAYETTE-MECHANICSBURG RD.

MADISON COUNTY I.R.70

Sta. 339+56.05

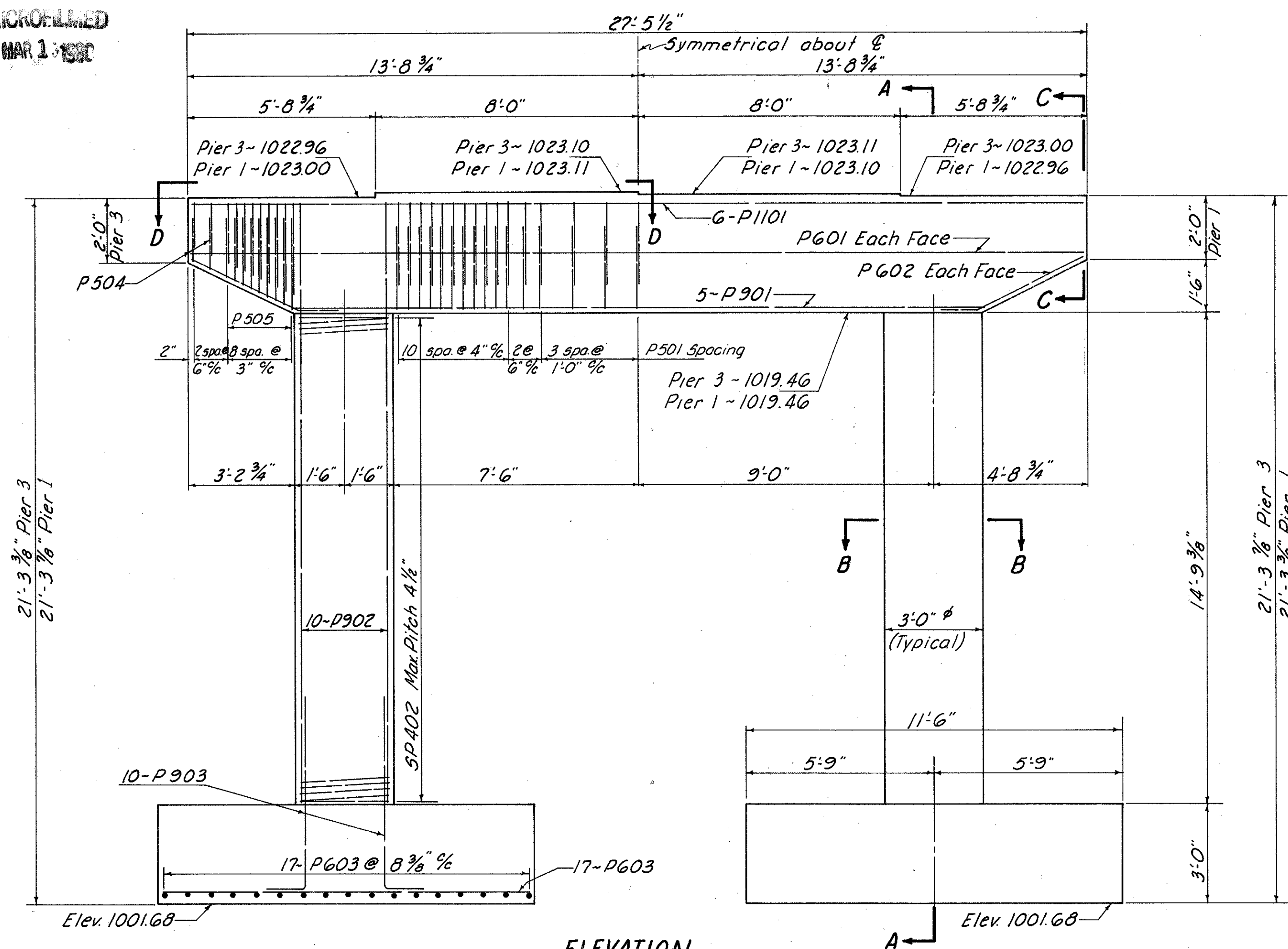
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MICROFILMED
MAR 1 1980

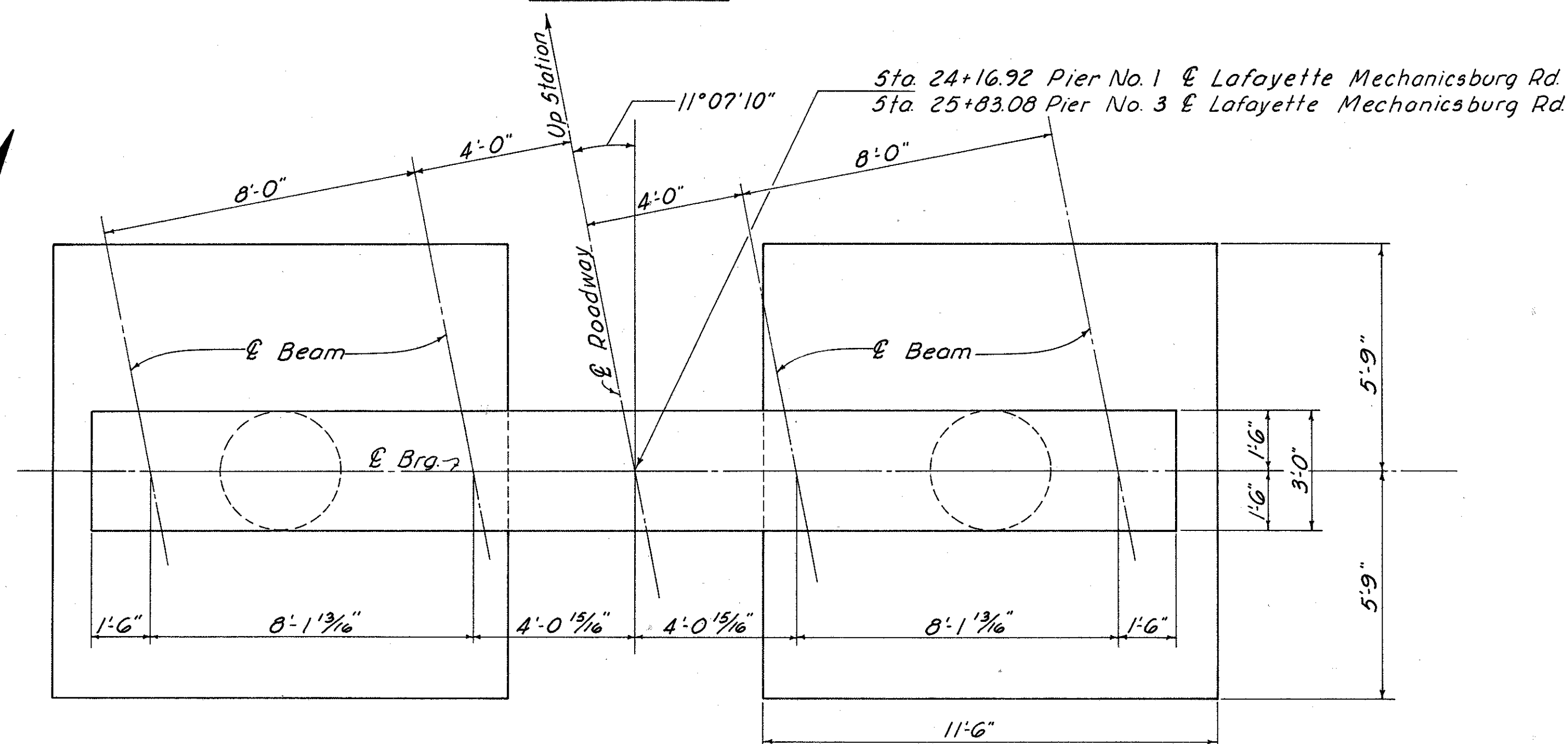
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MAD. 70-6.25

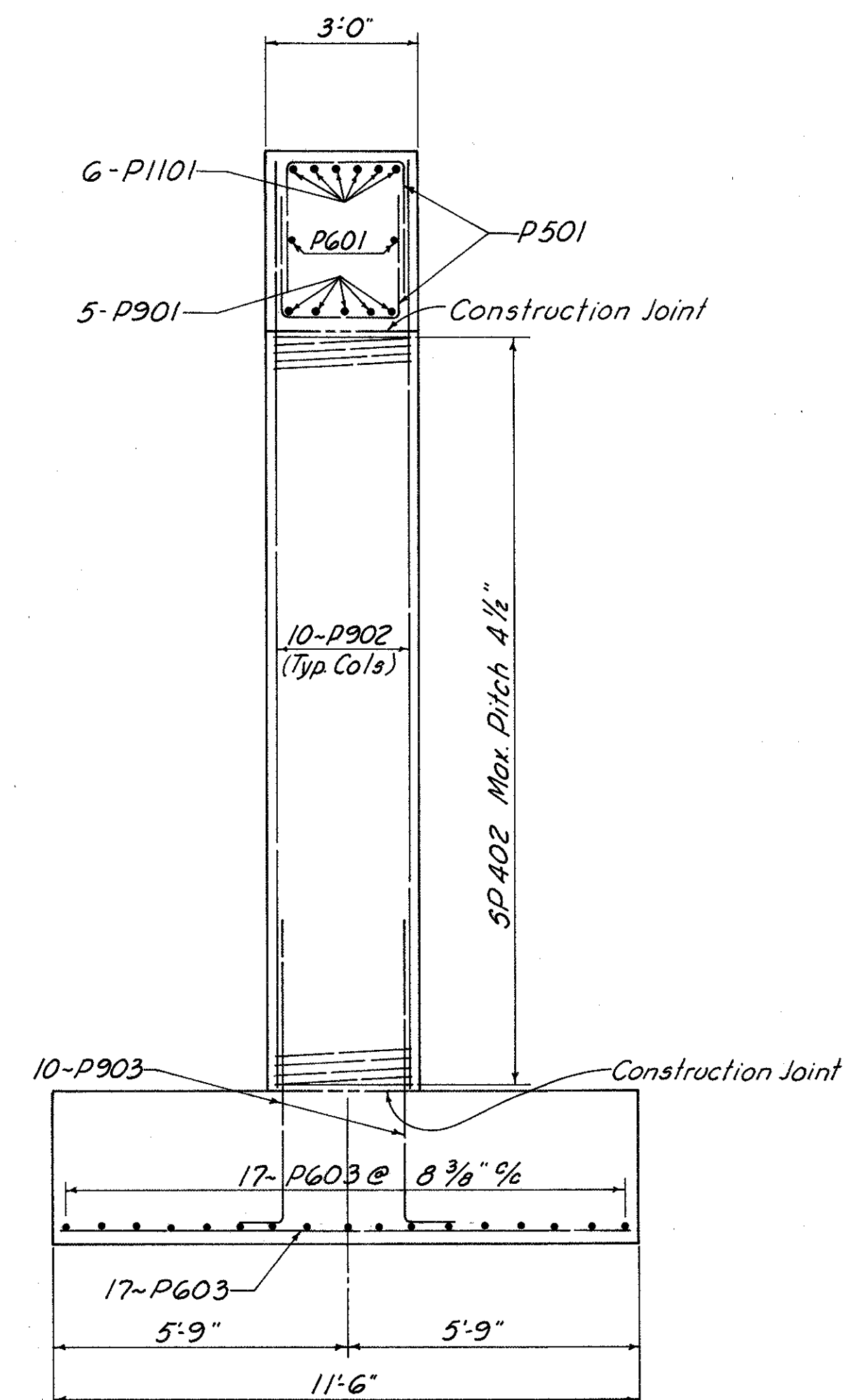
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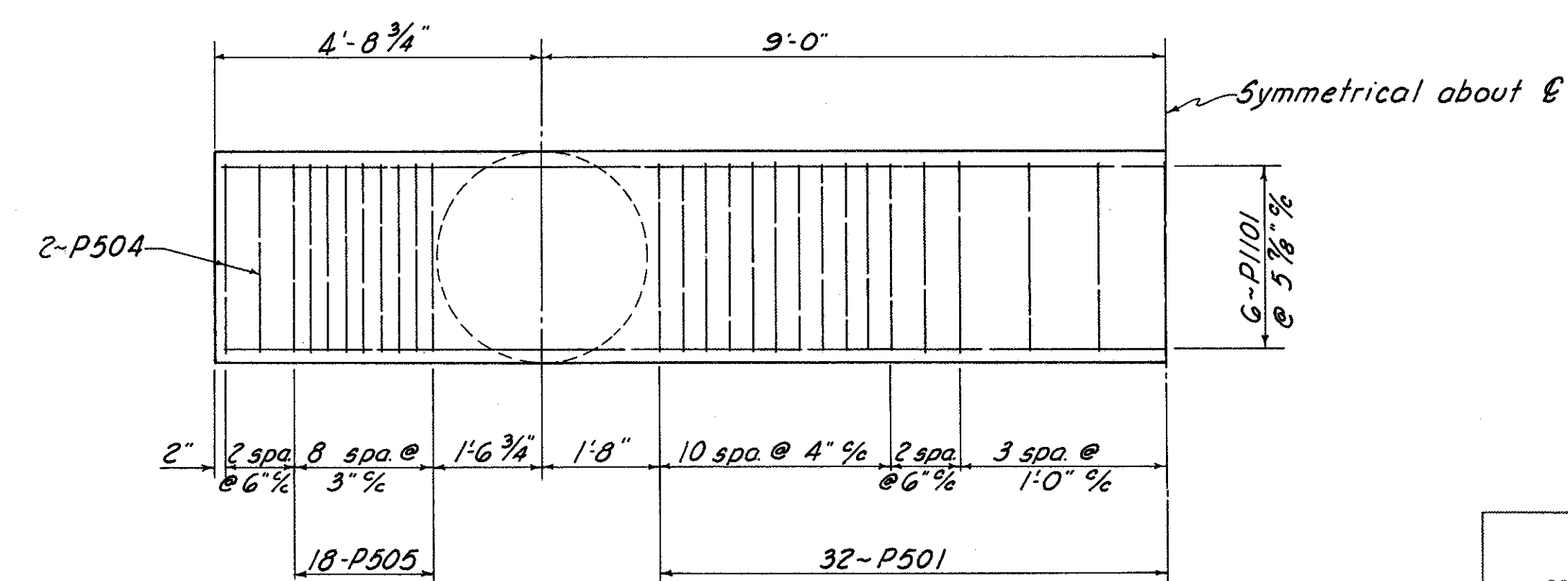
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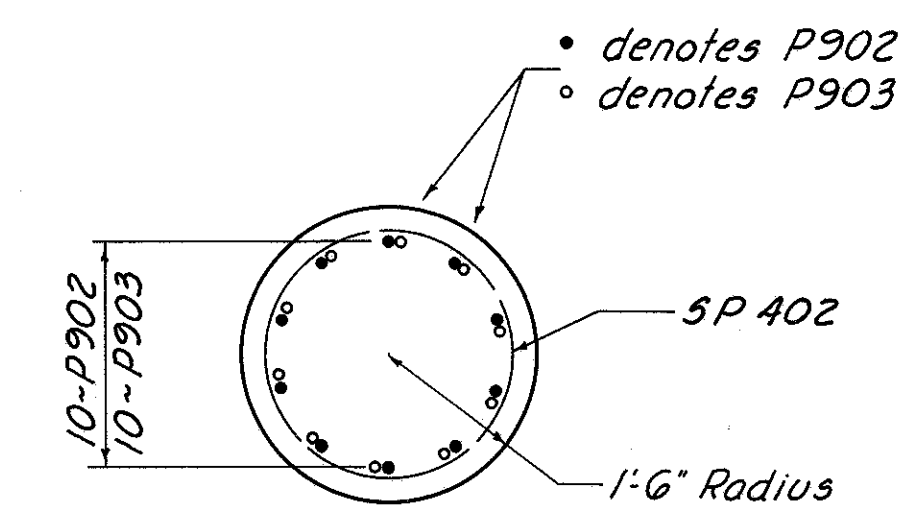
PLAN



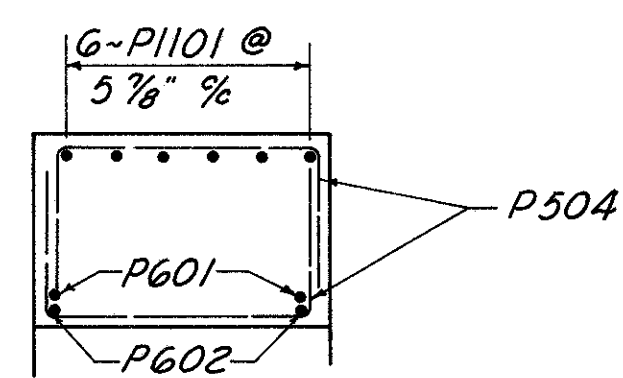
SECTION A-A



SECTION D-D



SECTION B-B



SECTION C-C

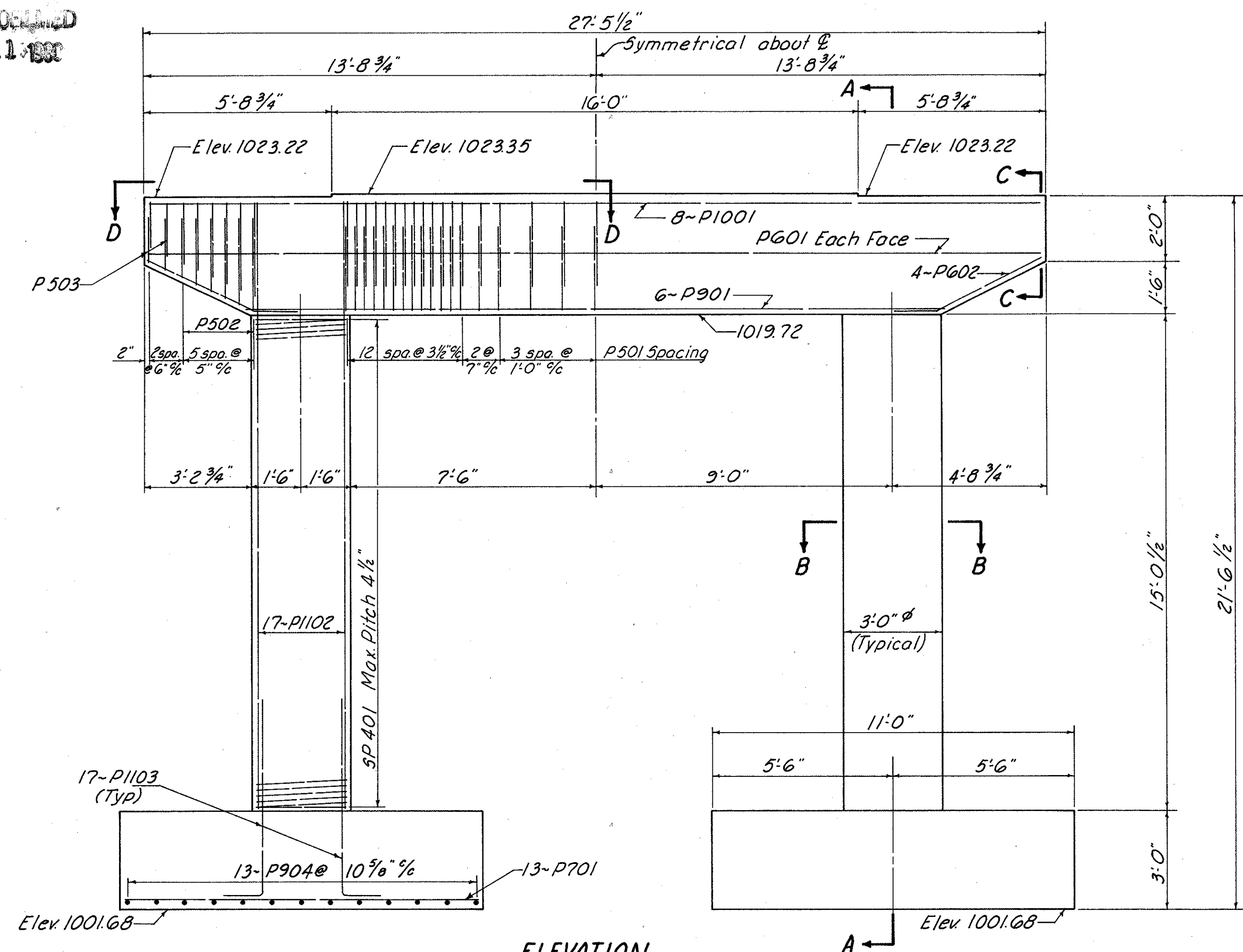
FRANKLIN ENGINEERING, LIMITED							
Consulting Engineers COLUMBUS, OHIO							
PIER No's 1 & 3							
BRIDGE No. MAD. 70-0643							
UNDER LAFAYETTE-MECHANICSBURG RD.							
MADISON COUNTY							
Sta. 339+56.05							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
ROB	ROB	g	JBG	g	3/86		

REVISION
MAR 1 1988

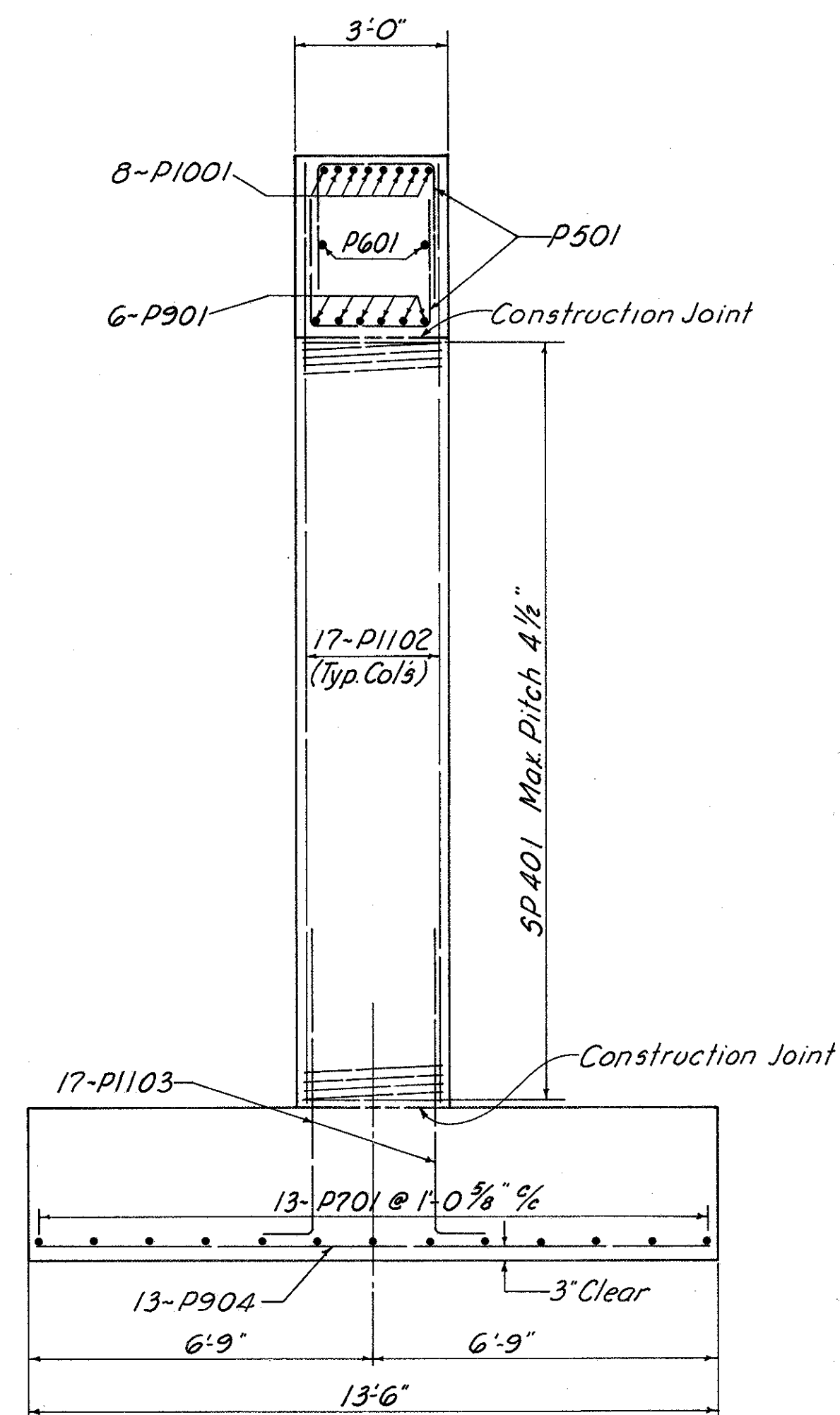
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MAD. 70-6.25

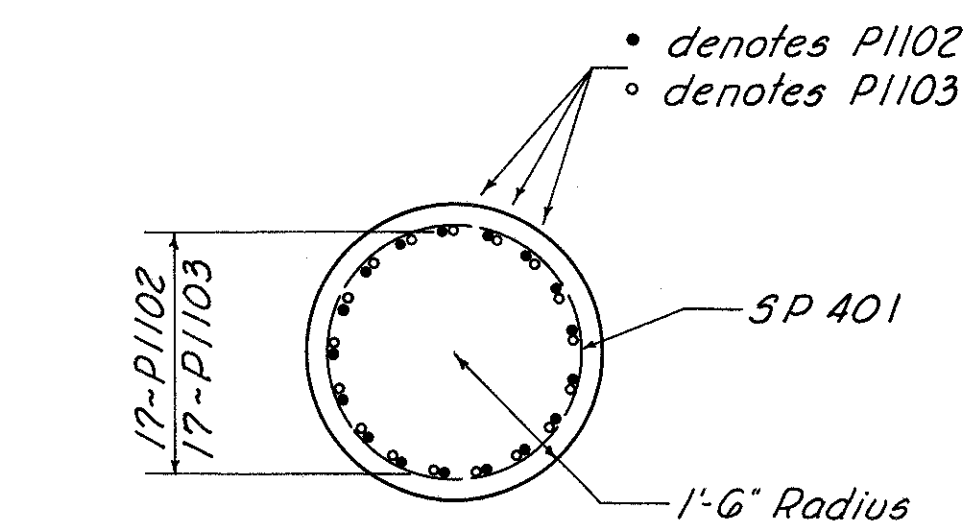
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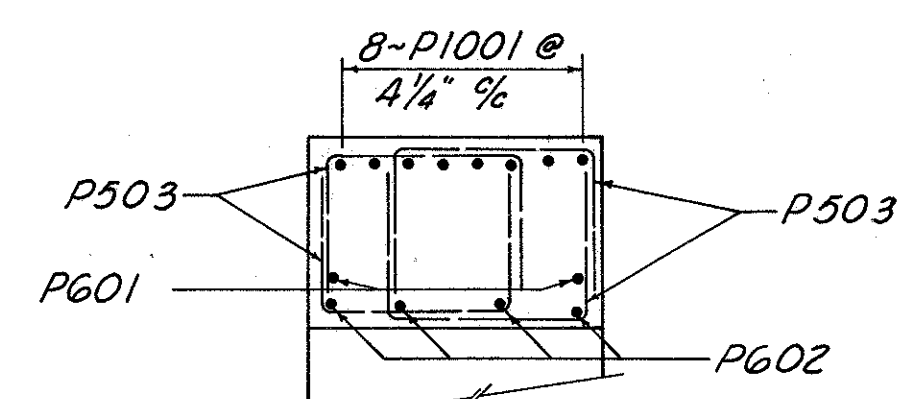
ELEVATION



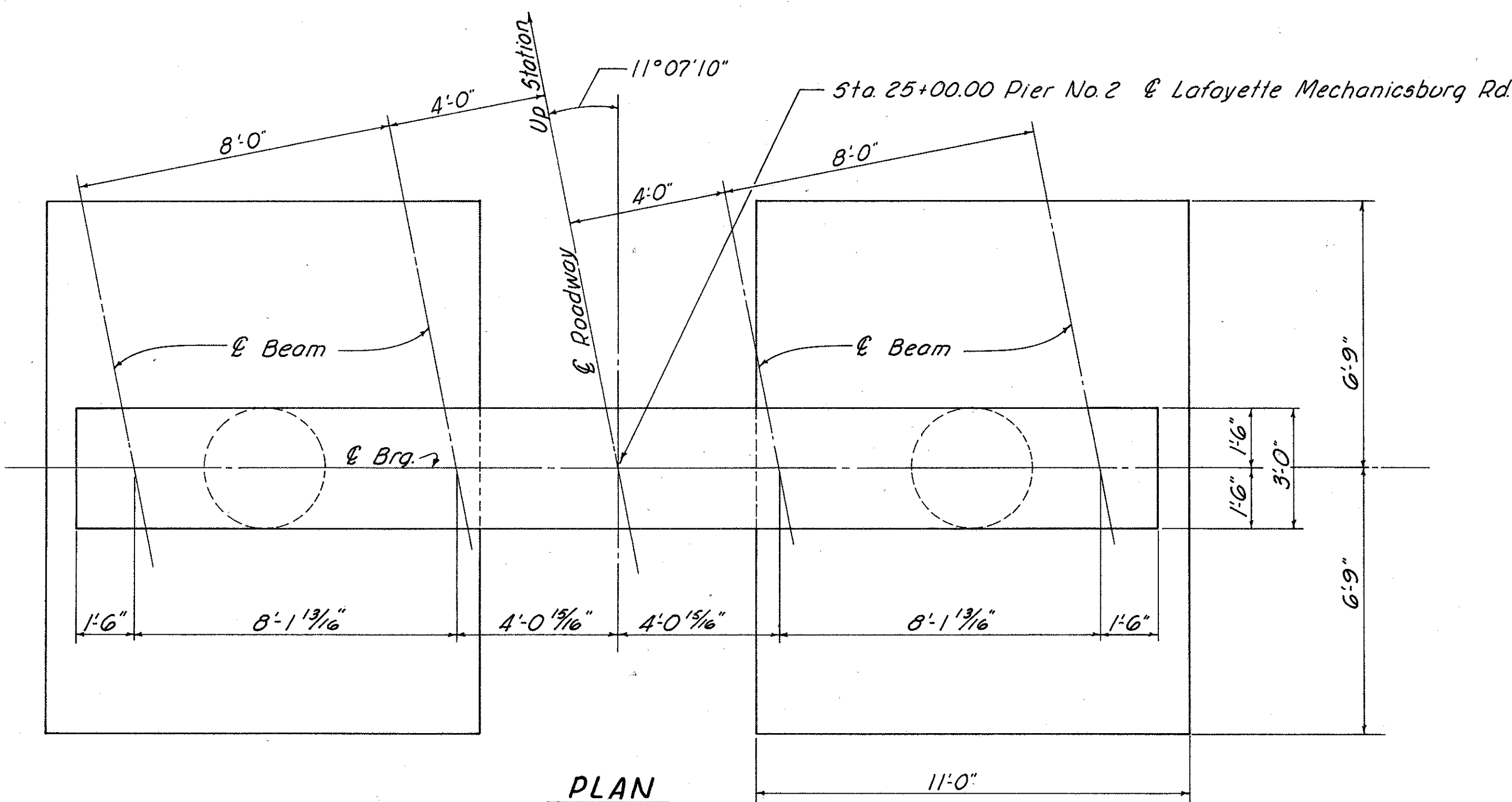
SECTION A-A



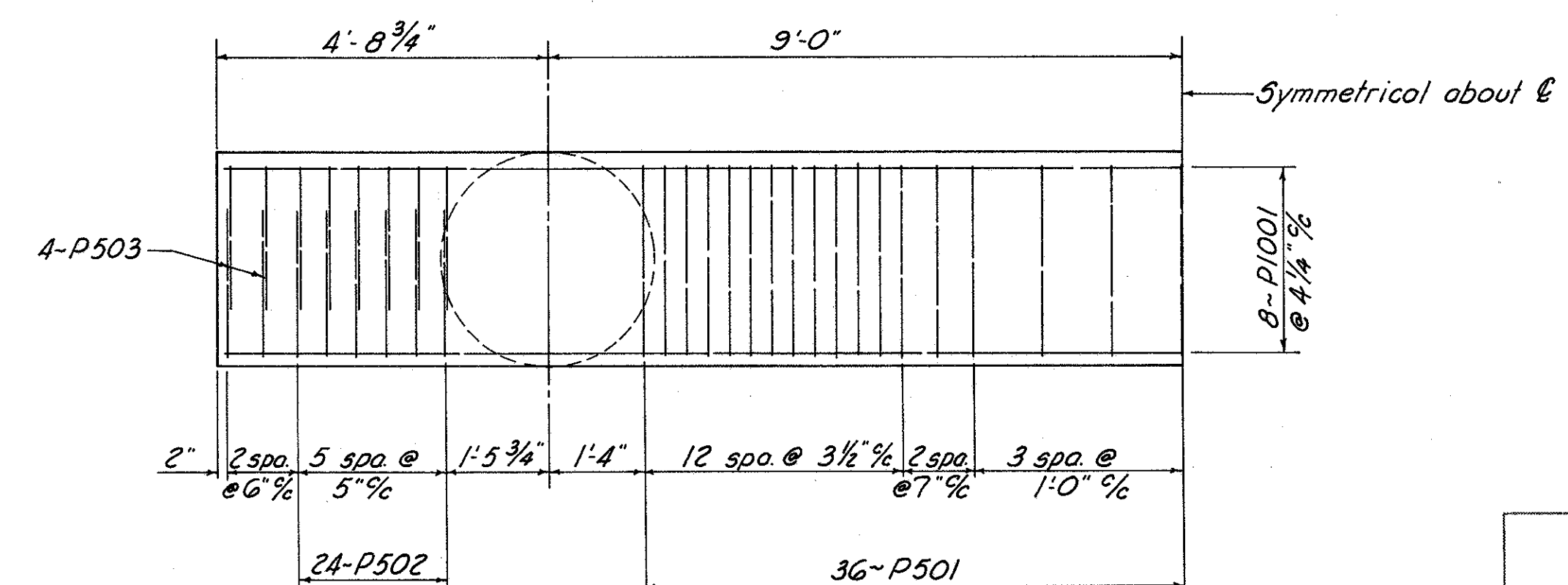
SECTION B-B



SECTION C-C



PLAN



SECTION D-D

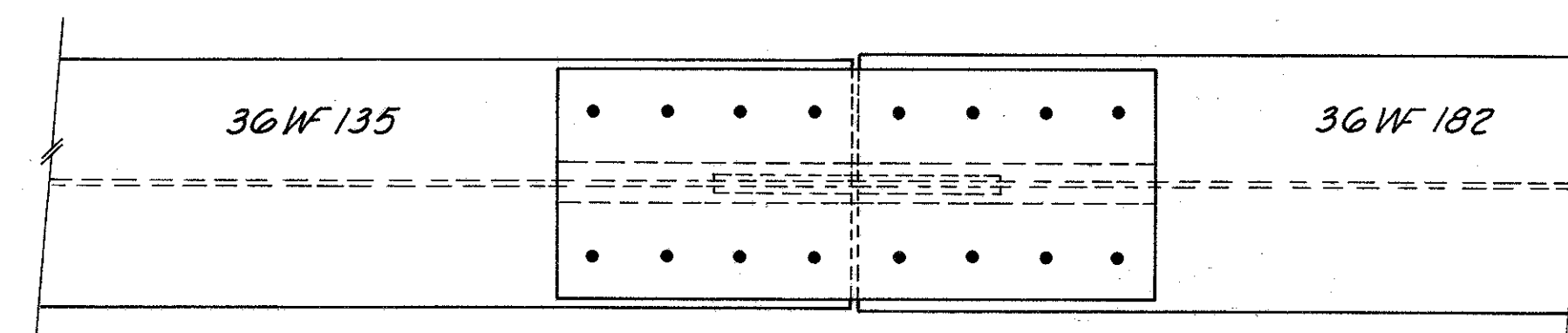
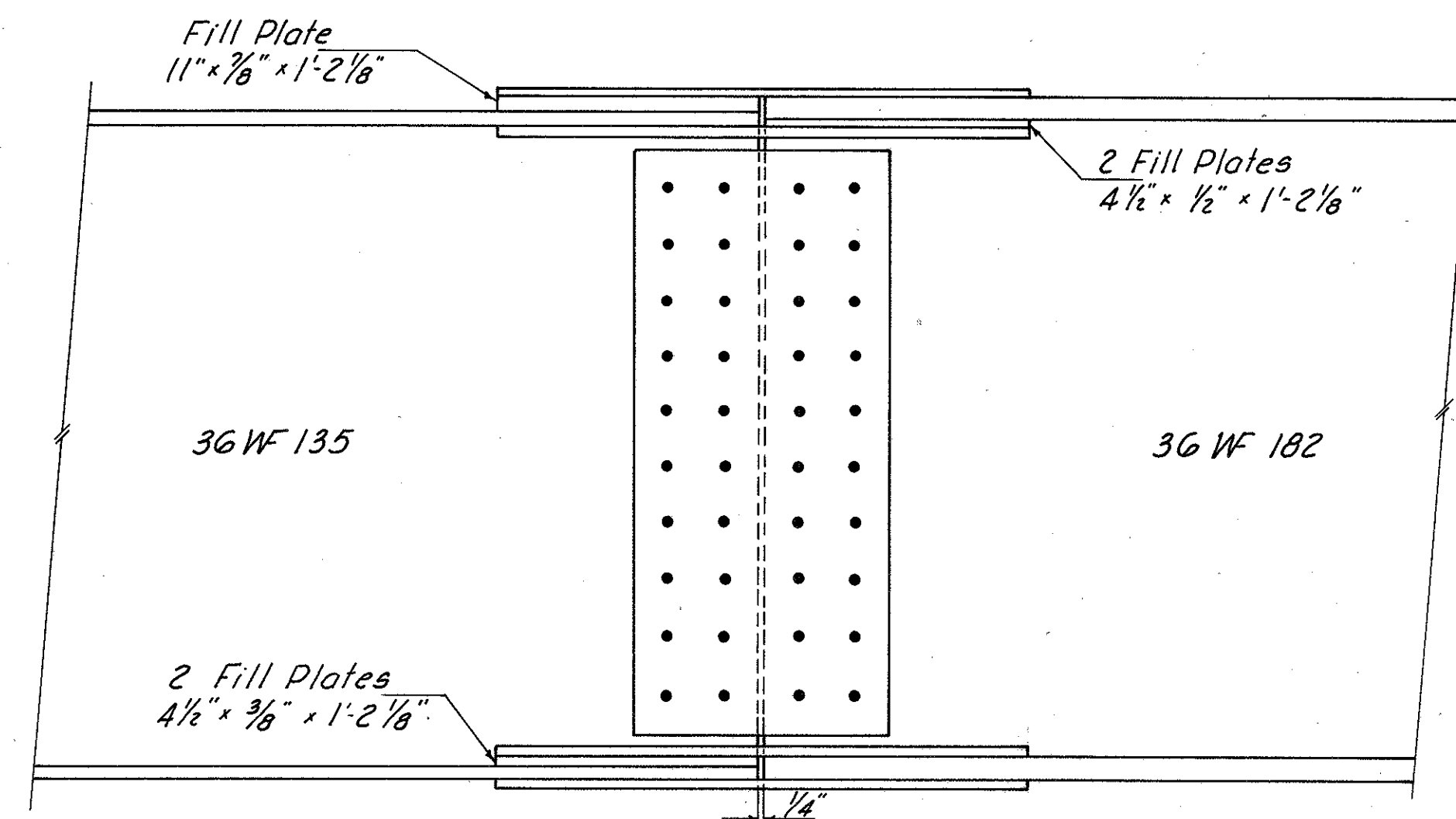
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Consulting Engineers OHIO						
COLUMBUS, OHIO						
PIER No. 2						
BRIDGE No. MAD.70-0643						
UNDER LAFAYETTE-MECHANICSBURG RD.						
MADISON COUNTY						
Sta. 339+56.05						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ROB	ROB	g	JBG	JF	3/8/86	

MODIFIED
MAR 1 1966

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

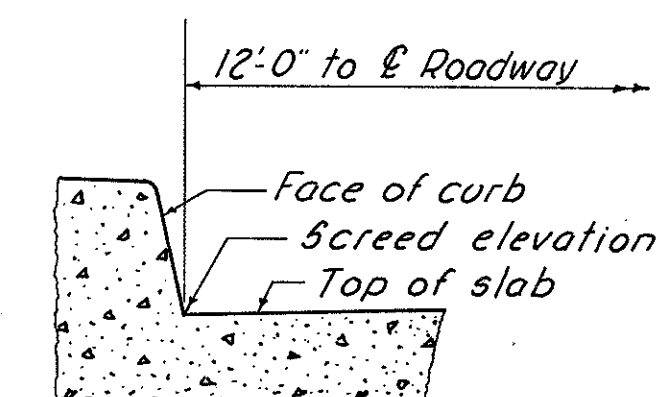
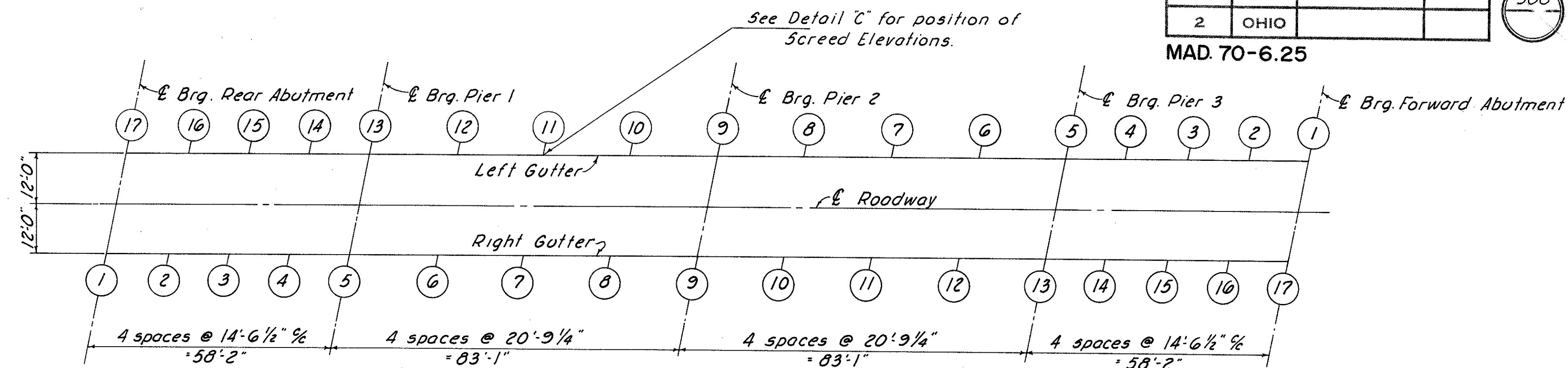
MAD. 70-6.25

300



STANDARD 36WF135 BEAM SPLICE
With Filler Plates

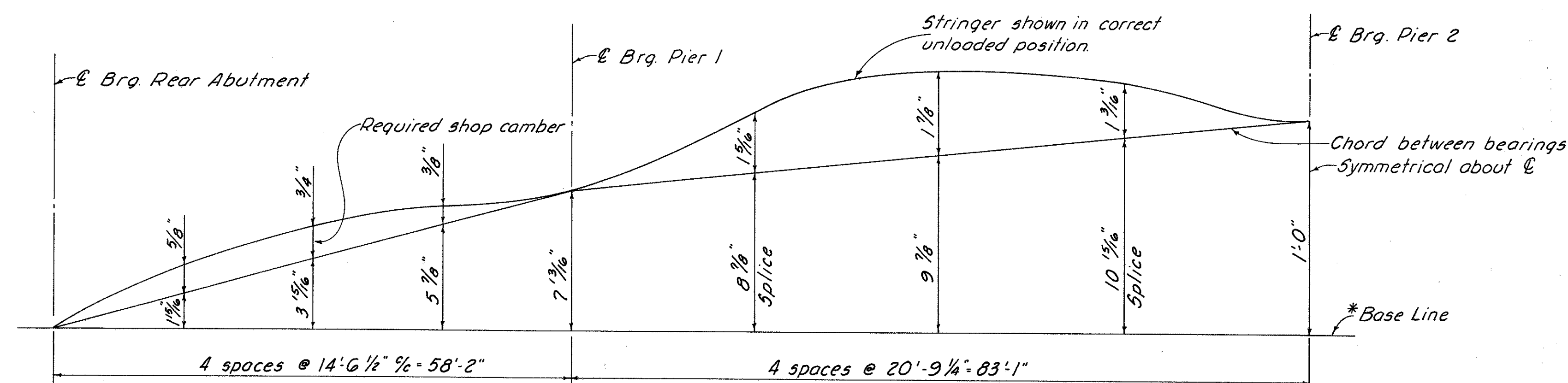
See SD-1-65, sheet 3 of 3 for Plate Sizes and Dimensions



DETAIL "C"

TABLE OF SCREED ELEVATIONS

POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
ELEVATION	1027.28	1027.50	1027.67	1027.81	1027.95	1028.14	1028.28	1028.32	1028.31	1028.33	1028.29	1028.17	1027.99	1027.86	1027.73	1027.56	1027.35

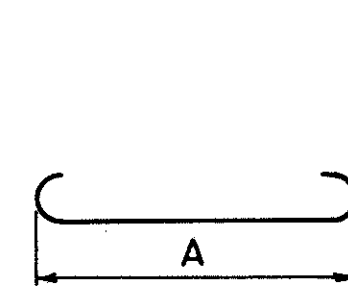


* Base Line is a line from bottom of beam at E bearing rear abutment to bottom of beam at E bearing forward abutment.

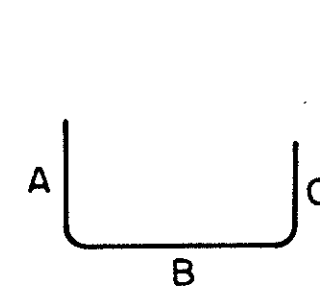
LAYOUT DIAGRAM

FRANKLIN ENGINEERING, LIMITED							
COLUMBUS,				Consulting Engineers			
				OHIO			
SUPERSTRUCTURE 2							
BRIDGE No. MAD.70-0643							
UNDER LAFAYETTE-MECHANICSBURG RD.							
MADISON COUNTY				I.R.70			
Sta. 339+56.05							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
ROB	ROB	5	JSC JH	JH	5-66		

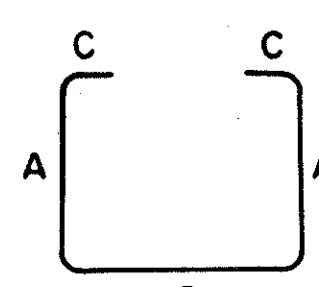
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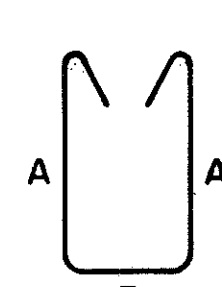
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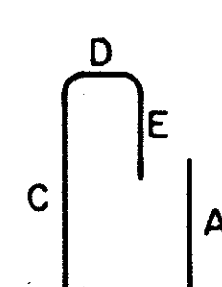
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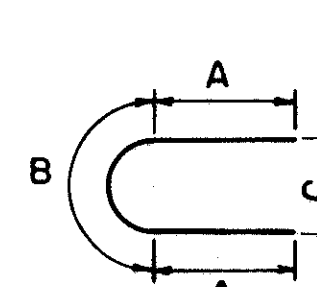
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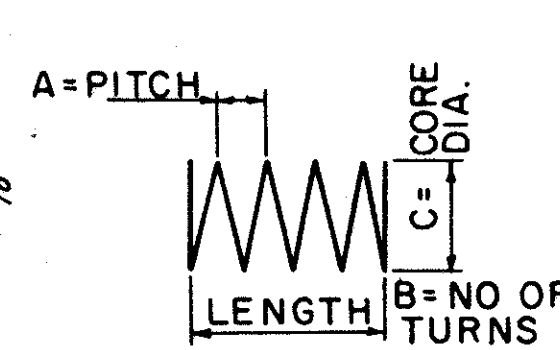
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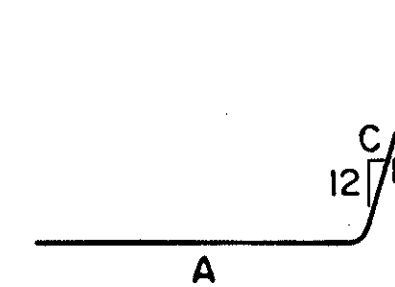
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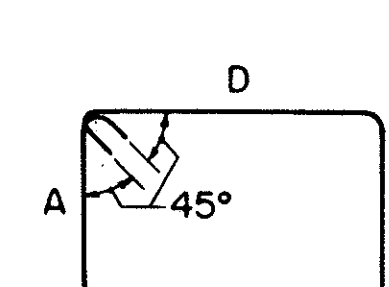
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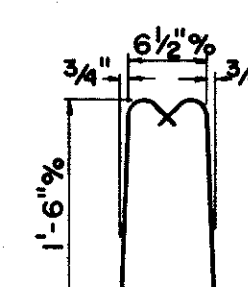
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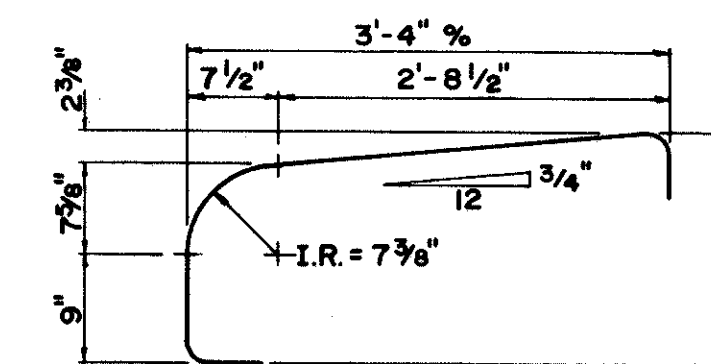
TYPE 8



TYPE 9



TYPE 10



TYPE II

ABUTMENTS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A 501	42	6'-4"	2	1'-7"	3'-5"	1'-7"			277
A 502	42	8'-2"	8	1'-8"	7½"	0"			358
A 503	38	29'-10"	Str						1182
A 504	28	5'-2"	Str						151
A 505	12	5'-7"	Str						70
A 506	4	9'-11"	2	4'-6"	1'-2"	4'-6"			41
A 507	8	7'-11"	2	3'-6"	1'-2"	3'-6"			66
A 508	4	6'-4"	2	3'-6"	1'-2"	1'-11"			26
A 509	12	7'-1"	Str						89
A 510	4	7'-6"	Str						31
A 511	4	12'-6"	Str						52
A 512	4	12'-4"	Str						51
A 513	56	(2)	2	①	1'-4"	①	(8 sets of 7 bars)		238
A 514	8	5'-1"	2	2'-0"	1'-4"	2'-0"			42
A 515	38	5'-7"	4	2'-2"	8"				221
A 516	12	7'-6"	Str						94
A 517	4	7'-11"	Str						33
A 518	4	12'-11"	Str						54
A 519	4	13'-5"	Str						56
A 520	24	5'-0"	Str						125
A 601	42	12'-11"	8	7'-8"	5'-5"	0"			815
A 602	54	14'-8"	5	6'-0"	1'-5"	4'-6"	11"	2'-6"	1190
A 603	8	31'-10"	Str						383
A 604	20	20'-0"	2	9'-7"	1'-2"	9'-7"			601
A 605	4	6'-5"	Str						39
A 606	8	12'-7"	Str						151
A 607	8	5'-9"	Str						69
A 608	8	10'-2"	Str						122
A 609	4	7'-2"	Str						43
A 610	8	13'-1"	Str						157
R 503	8	12'-3"	Str						*
R 504	8	12'-9"	Str						*
R 505	8	5'-4"	11 1/2	9"	3'-4"	1'-7"±			*
R 506	12	4'-2"	10	1'-6"	8"	6½"			*
								Total	6827
		①	Varies from 2'-0" to 1'-0" each by 2"						
		②	Varies from 5'-1" to 3'-1" each by 4"						

PIERS

MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
SP 401	2	15'-0"	7	2'-8"	43	4 1/2"			556
SP 402	4	14'-9"	7	2'-8"	42	4 1/2"			1094
P 501	194	7'-3"	2	2'-5"	2'-8"	2'-5"			1467
P 502	48	(2)	2	(1)	2'-0"	(1)	(8 sets of 6 bars)		309
P 503	16	(4)	2	(3)	2'-0"	(3)	(8 sets of 2 bars)		88
P 504	16	(7)	2	(3)	2'-8"	(3)	(8 sets of 2 bars)		99
P 505	72	(6)	2	(3)	2'-8"	(3)	(8 sets of 9 bars)		507
P 601	6	27'-1"	Str						244
P 602	16	5'-6"	8	3'-7"	1'-11"	6"			132
P 603	136	11'-2"	Str						2281
P 701	26	10'-8"	Str						567
P 901	16	21'-0"	Str						1142
P 902	40	18'-1"	Str						2459
P 903	40	6'-7"	8	5'-7"	1'-3"	0"			895
P 904	26	13'-2"	Str						1164
P 1001	8	27'-1"	Str						932
P 1101	12	27'-1"	Str						1727
P 1102	34	18'-4"	Str						3312
P 1103	34	8'-5"	8	6'-3"	1'-5 1/2"	0"			1520
								Total	20,495
		(1)	Varies from 2'-5" to 2'-0" each by 1"						
		(2)	Varies from 6'-7" to 5'-9" each by 2"						
		(3)	Varies from 1'-8" to 1'-10" each by 2"						
		(4)	Varies from 5'-1" to 5'-5" each by 4"						
		(5)	Varies from 2'-5" to 1'-11" each by 3/4"						
		(6)	Varies from 7'-3" to 6'-3" each by 1 1/2"						
		(7)	Varies from 5'-9" to 6'-1" each by 4"						

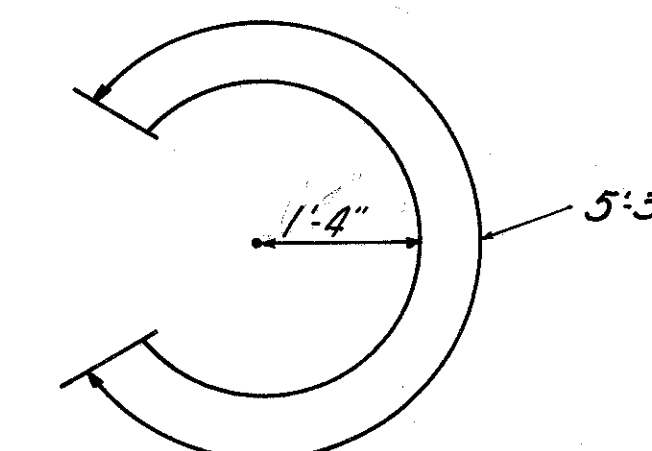
SUPERSTRUCTURE

[illegible]

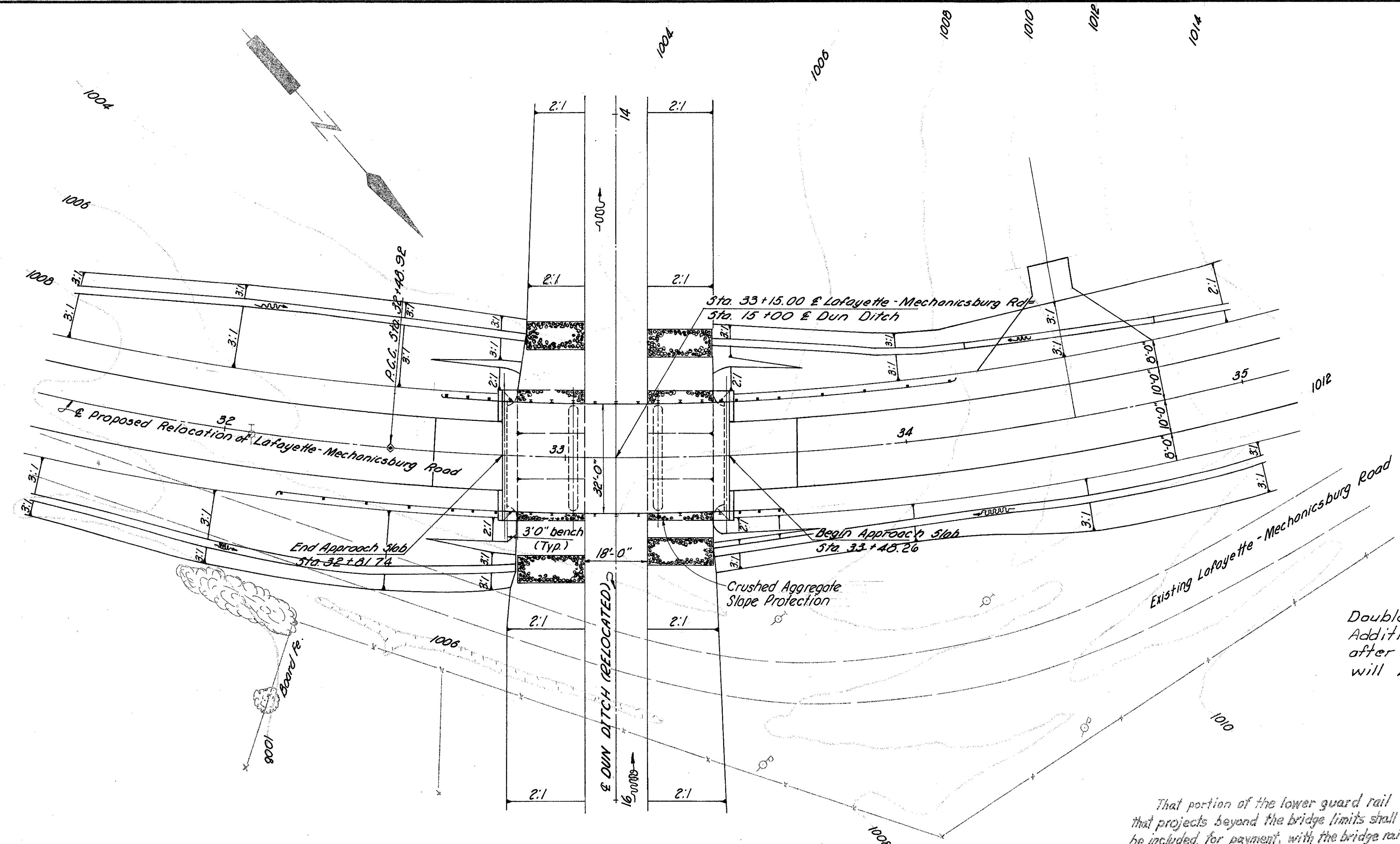
NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No.5 size bar and P1101 is a No.11 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation but shall in other respects conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.



RE401



PLAN

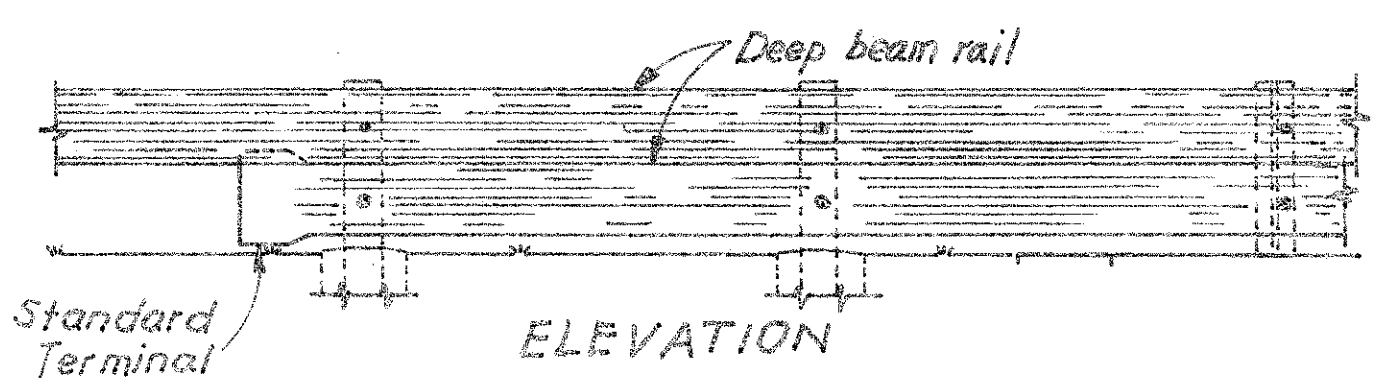
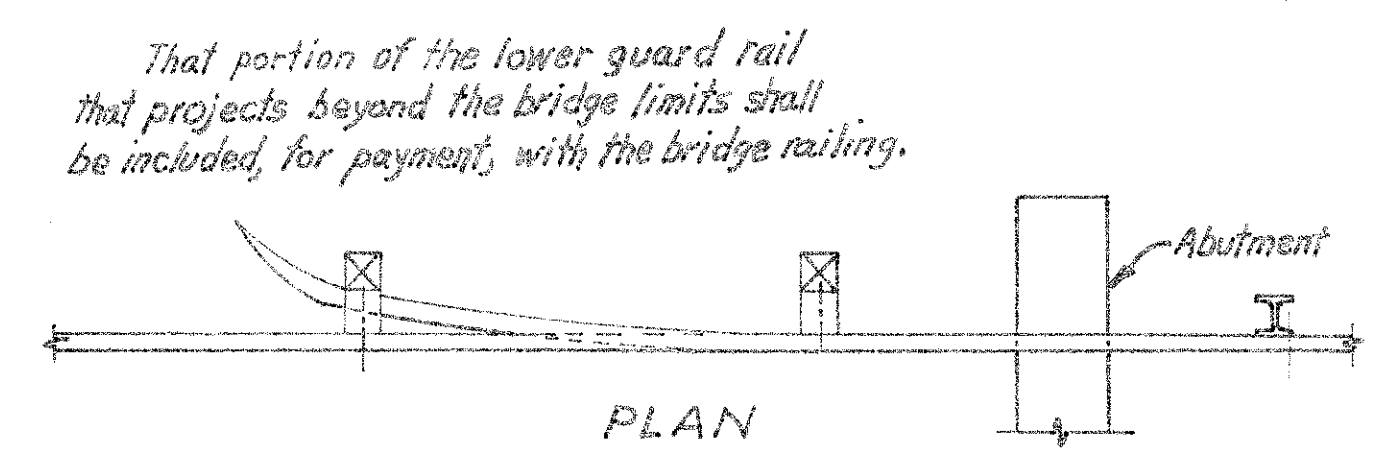
VERTICAL CURVE DATA

PI Sta. 32+50.00
Elev. 1006.50
L.V.C. 400'
Corr. 5.40'
-4.00% +1.04%

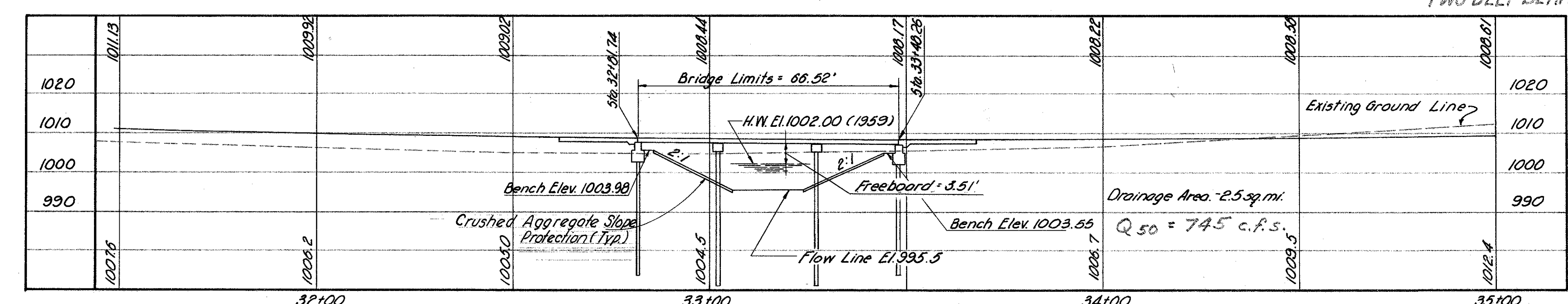
HORIZONTAL CURVE DATA

P.I. Sta. 34+99.23
$\Delta = 38^{\circ}13'34''$
$D_c = 8^{\circ}00'$
$L = 402.83'$
$L_g = 150.00'$
$T = 250.31'$
$T_g = 321.50'$
$E = 42.40'$
$P = 1.31'$

Double deep beam type railing shall be provided. Additional details will be furnished by the Engineer after the award of the contract and all pay quantities will be determined by final measurement.



TWO DEEP BEAM BRIDGE RAILING



PROFILE ALONG & RELOCATED LAFAYETTE-MECHANICSBURG ROAD

-PROPOSED STRUCTURE-

TYPE: Continuous Reinforced Concrete Slab With Capped Pile Substructure.

SPANS: 20'-0"; 25'-0"; 20'-0" 4c Brgs. (Along Ref.Chord)

ROADWAY: 32'-0" +/- Guard Rails.

LOAD FREQUENCY: CF=130 (57).

SKEW: None.

WEARING SURFACE: Monolithic Conc. 1"

APPROACH SLAB: A5-1'67" (20'-0" Long).

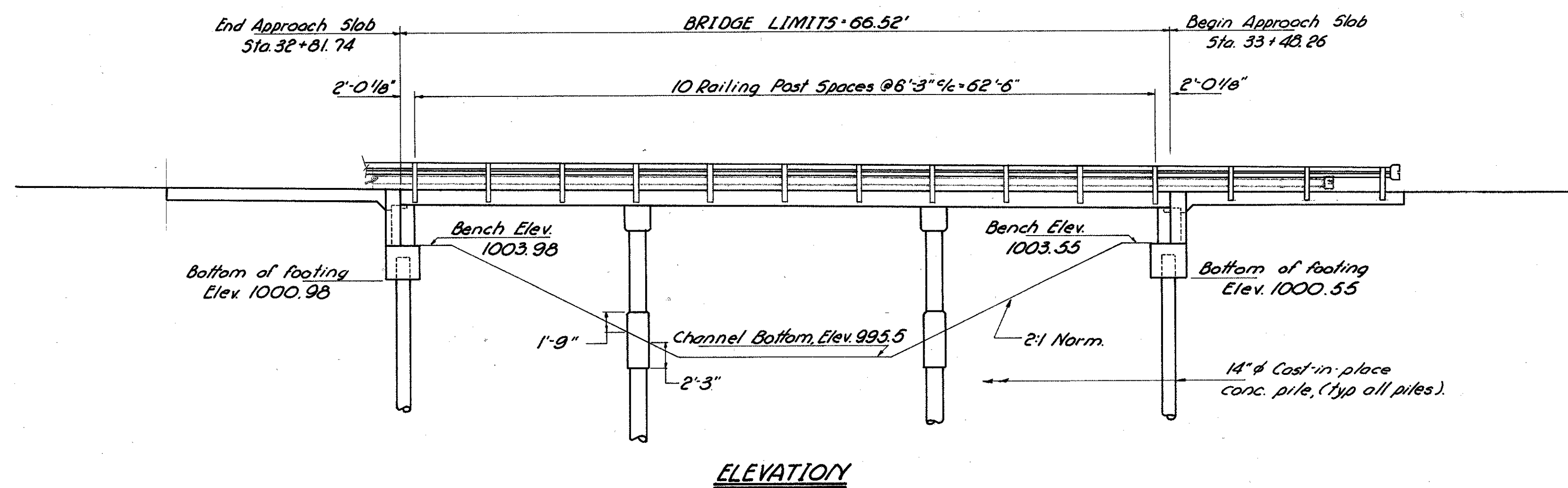
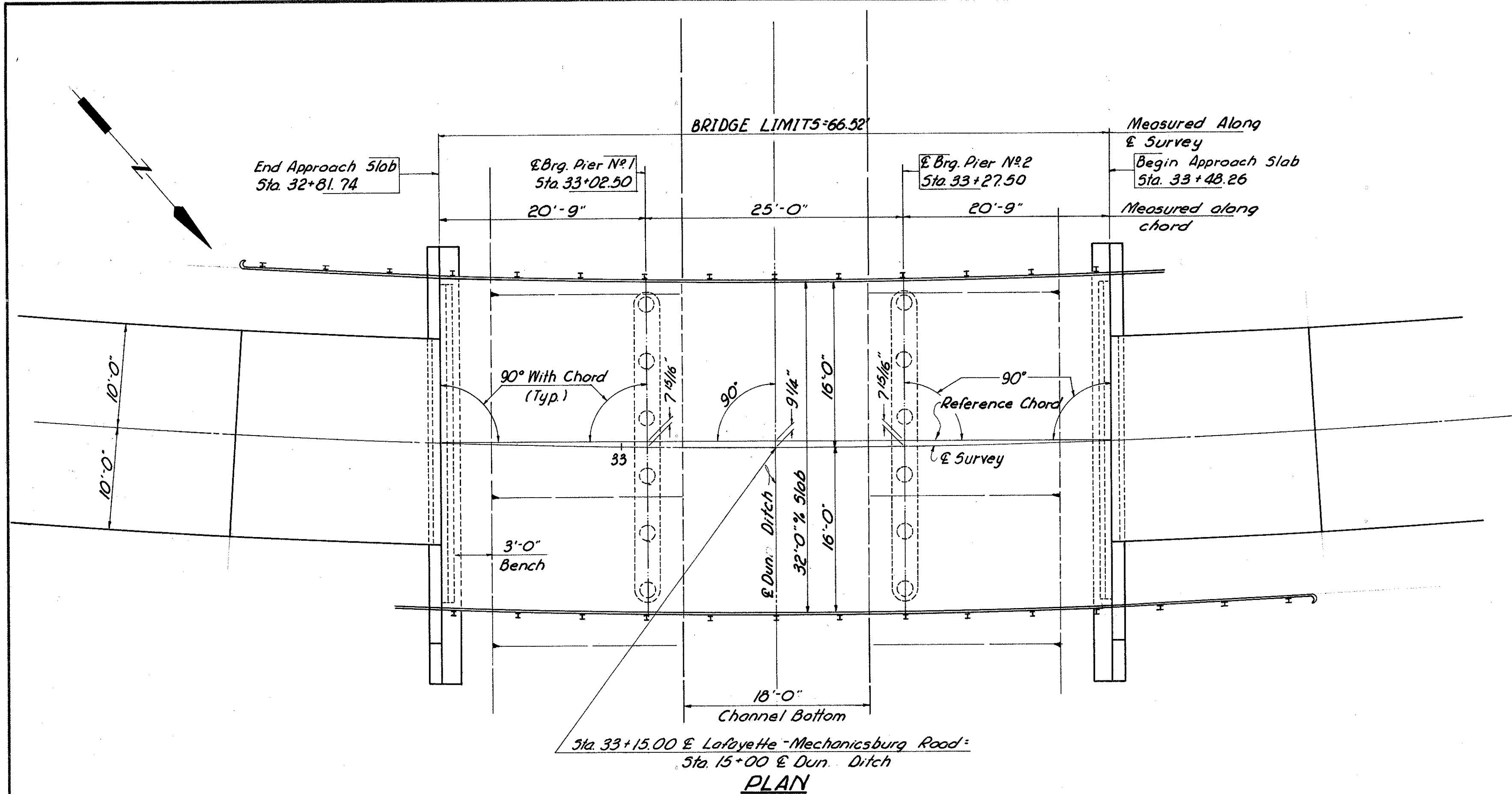
ALIGNMENT: 8°-00' Curve Left.

SUPERELEVATION: 0.083 H/H

AVERAGE DAILY TRAFFIC: 231 (1988)

FRANKLIN ENGINEERING, LIMITED Consulting Engineers						
COLUMBUS,					OHIO	
<div>SITE PLAN</div> <div>BRIDGE No. T.R.110</div> <div>OVER DUN DITCH</div> <div>MADISON COUNTY, LAFAYETTE-MECHANICSBURG ROAD</div> <div>STA. 32+81.70</div>						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.A.D.	V.A.D.	3/17/65	ROB	J.F.	5/20/65	5/14/68 6-10-68

TYPICAL PILE: 14" ϕ cast-in-place concrete piles. Est. average pay length 30'-0" for abutments, 35'-0" for piers.



REFERENCE shall be made to Standard Drawings: CS-1-65, sheets 1&2 of 2 (6-1-65), A-1-54 (rev. 11-8-65), P-1-54 (rev. 11-8-65), and AS-1-67 (rev. 1-11-68) and to Supplemental Specifications 808 (dated 1-13-67) and 825 (dated 12-19-67).

PILES shall be driven to a minimum bearing capacity of 25 tons per pile for piers and 22 tons per pile for abutments.

UNIT STRESSES: Design Loading - CF 130 (57).
Concrete Class "C" - basic unit stress 1,333 p.s.i.
Concrete Class "E" - basic unit stress 1,133 p.s.i.
Reinforcing Steel - ASTM A15, A16, A160, deformed, intermediate or hard grade. Basic unit stress 20,000 p.s.i.

SLAB THICKNESS is 12 1/4" which includes 1" monolithic wearing surface.

PIER PILE ENCASEMENT as shown on Std. Dwg. No. P-1-54 may be omitted provided that the tapered portion, if any, of all pier piles does not extend above the stream bed or the proposed surface of the ground. If the tapered portion of any pile extends above these limitations, the encasement will be required for all pier piles. If the encasement is omitted, the pile casings shall have a thickness of metal not less than No. 7 gauge, and the painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, the painting shall extend to at least one foot below the proposed surface of the ground.

PROCEDURE The embankment shall be placed and compacted up to the finished spill-through slope and to the level of the earth bench, after which excavation may be made for the abutments and piles driven.

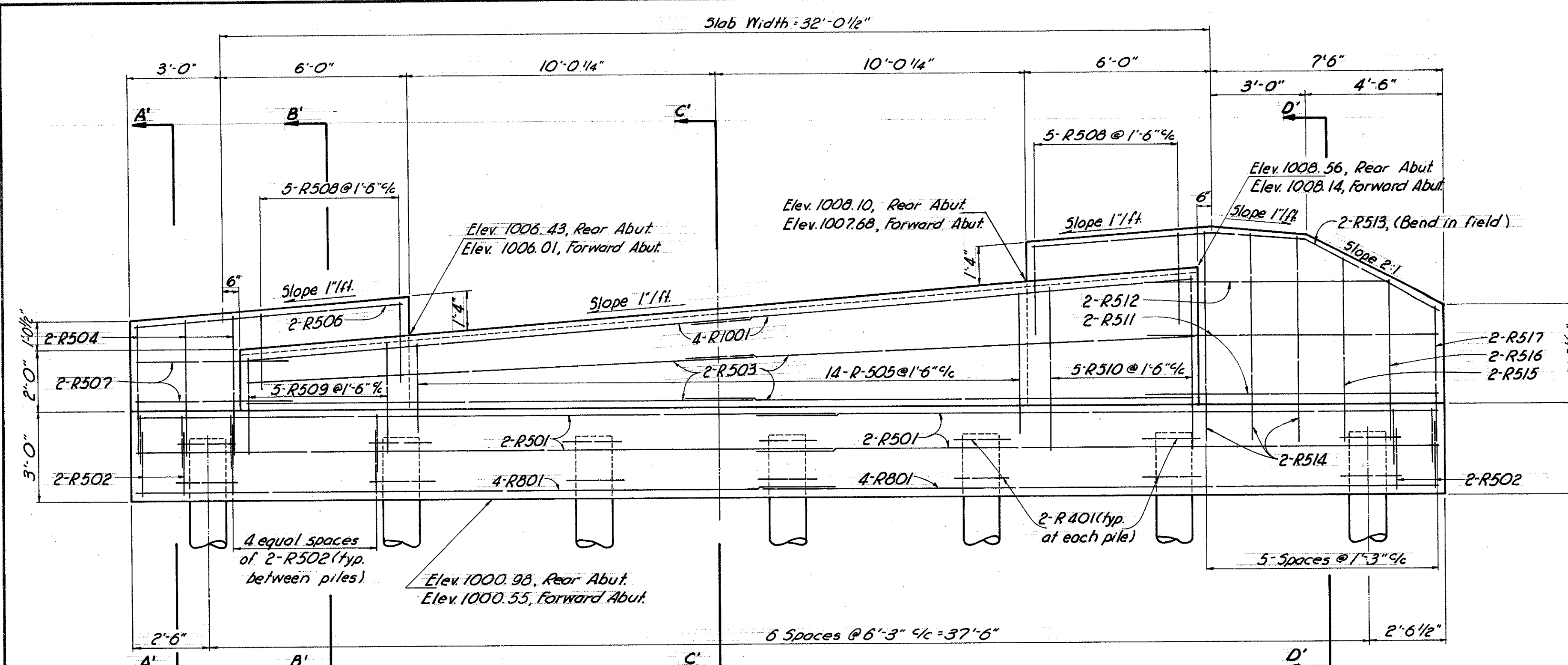
EXCAVATION QUANTITY includes the removal of fill material between the top of the earth bench and the bottom of the abutment crossbeam.

POROUS BACKFILL shall extend upward to the approach slab and to the surface of the earth shoulders, and outward to the surface of the embankment slopes. Excavation therefore in excess of that required for construction of the footing, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

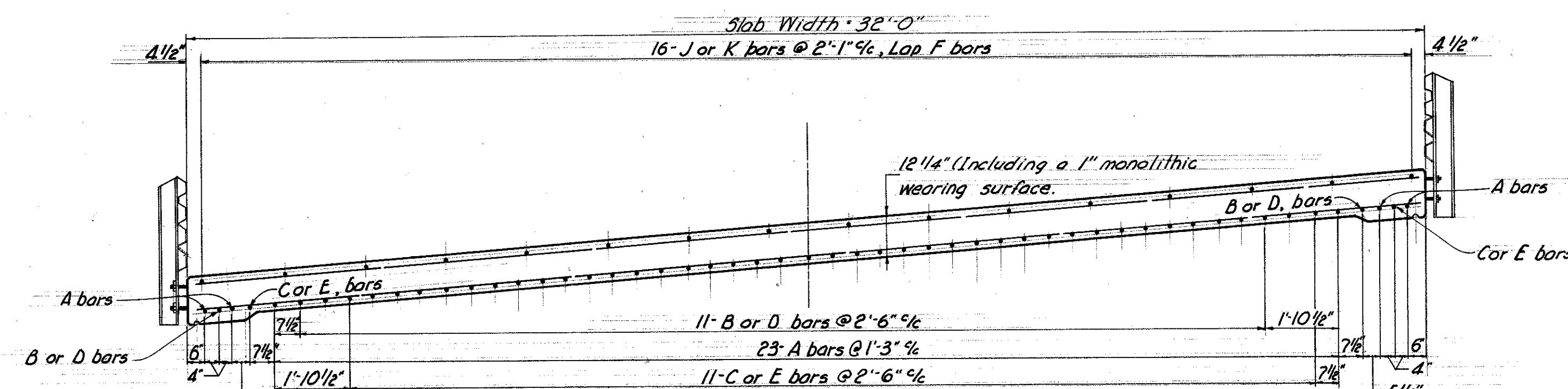
MACHINE FINISH: At the contractors option, the concrete deck may be finished by the use of a finishing machine.

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S.	PIERS	GEN'L	Revised	As-Built
503	50	Cu.Yds.	Unclassified Excavation		50				
505	Lump	Sum	First Test Pile				Lump		
511	96	Cu.Yds.	Class "C" Concrete, Superstructure and Pier Caps	84		12			
511	51	Cu.Yds.	Class "E" Concrete, Abutments		51				
509	27,113	Lbs.	Reinforcing Steel	18901	4948	3264			
517	133.04	Lin.Ft.	Railing (deep beam rail with steel posts and bolts)	13304					
517	133.04	Lin.Ft.	Railing (two deep beam rails with steel posts and bolts)						
601	78	Sq.Yds.	Crushed Aggregate Slope Protection				78		
518	16	Cu.Yds.	Porous Backfill		16				
507	840	Lin.Ft.	14" x 14" Cast-in-place Reinforced Concrete Piles		420	420			
808	96	Units	Water-reducing, Set-retarding Admixture	84		12			
825	258	Sq.Yds.	Concrete Surface Treatment	252	6				

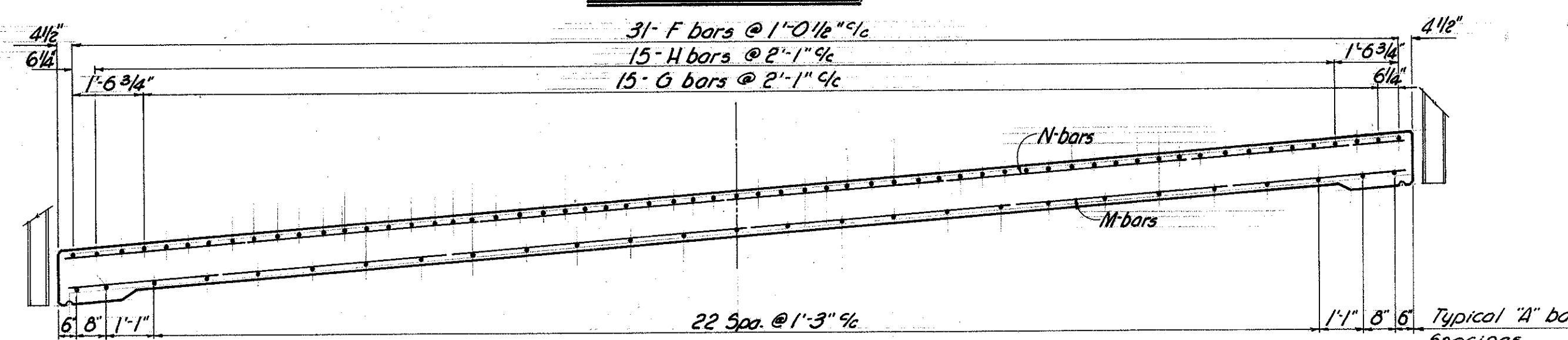
MAD.-70-6.25



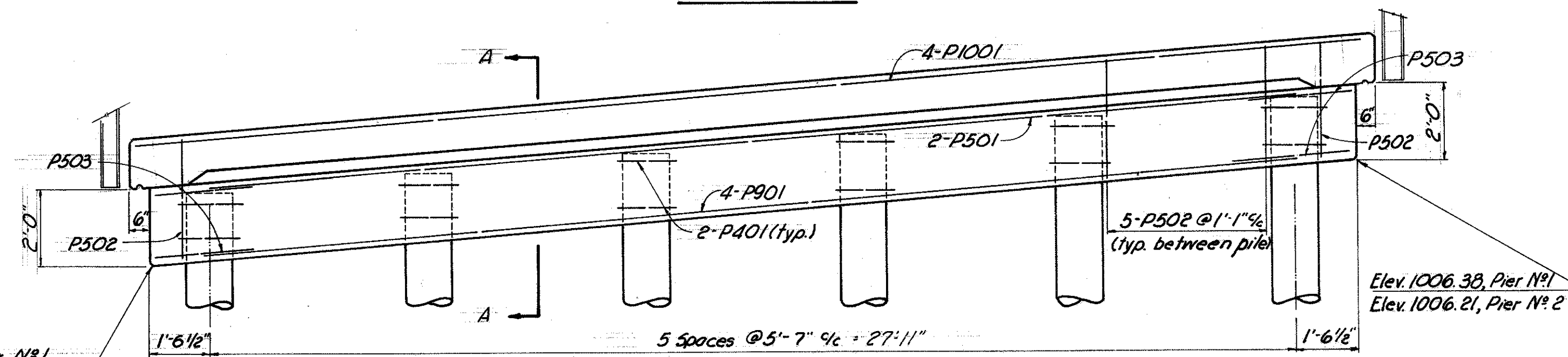
FRONT ELEVATION
FORWARD ABUTMENT SHOWN, REAR ABUTMENT OPPOSITE HAND



SECTION BB & DD



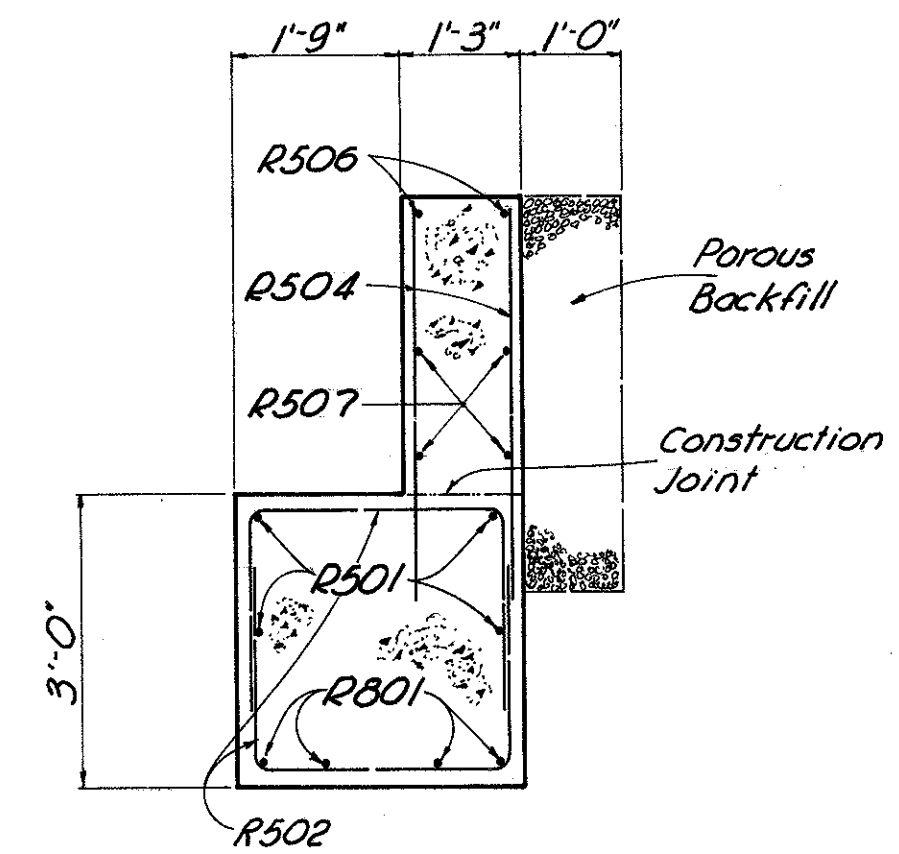
SECTION C-C



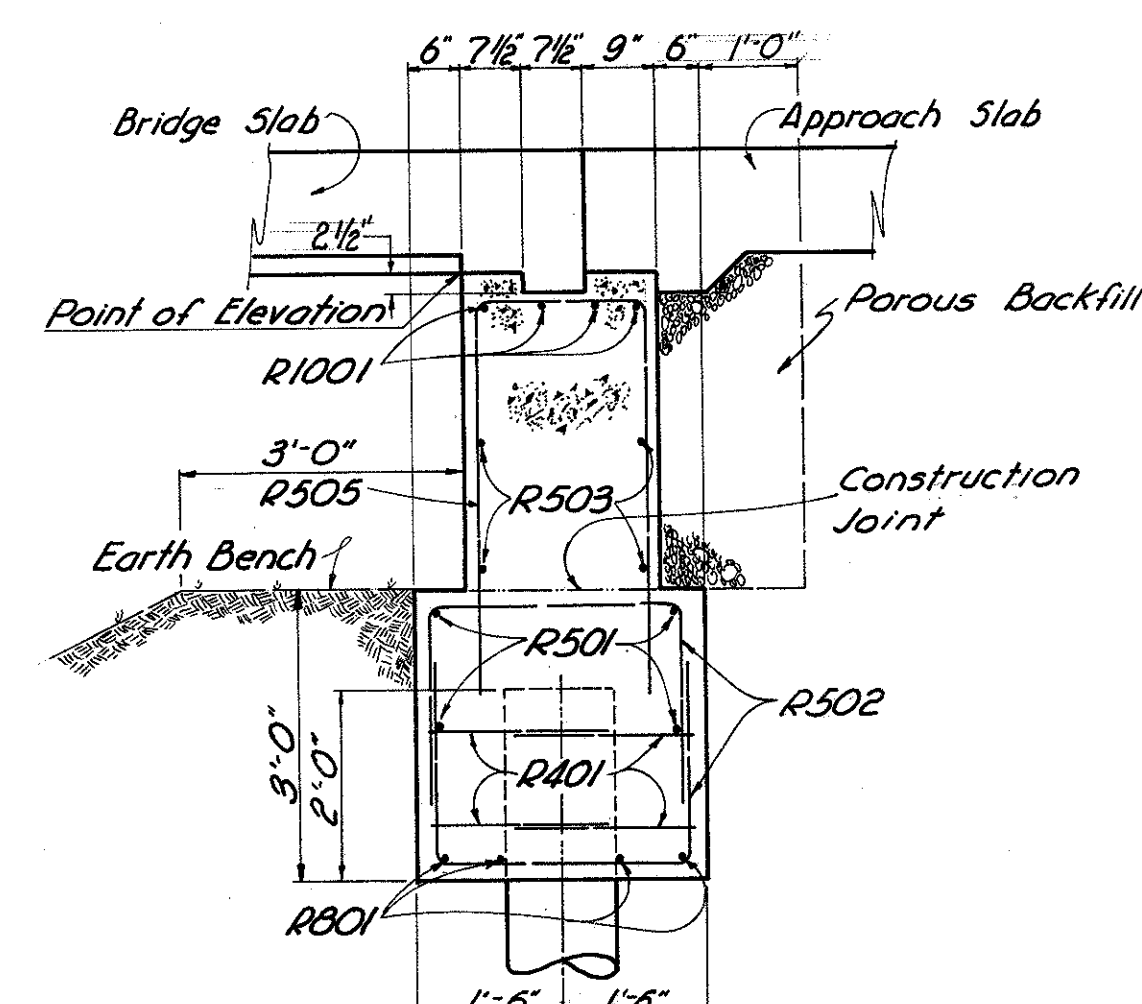
PIER ELEVATION

Elev. 1003.79, Pier N°1
Elev. 1003.63, Pier N°2

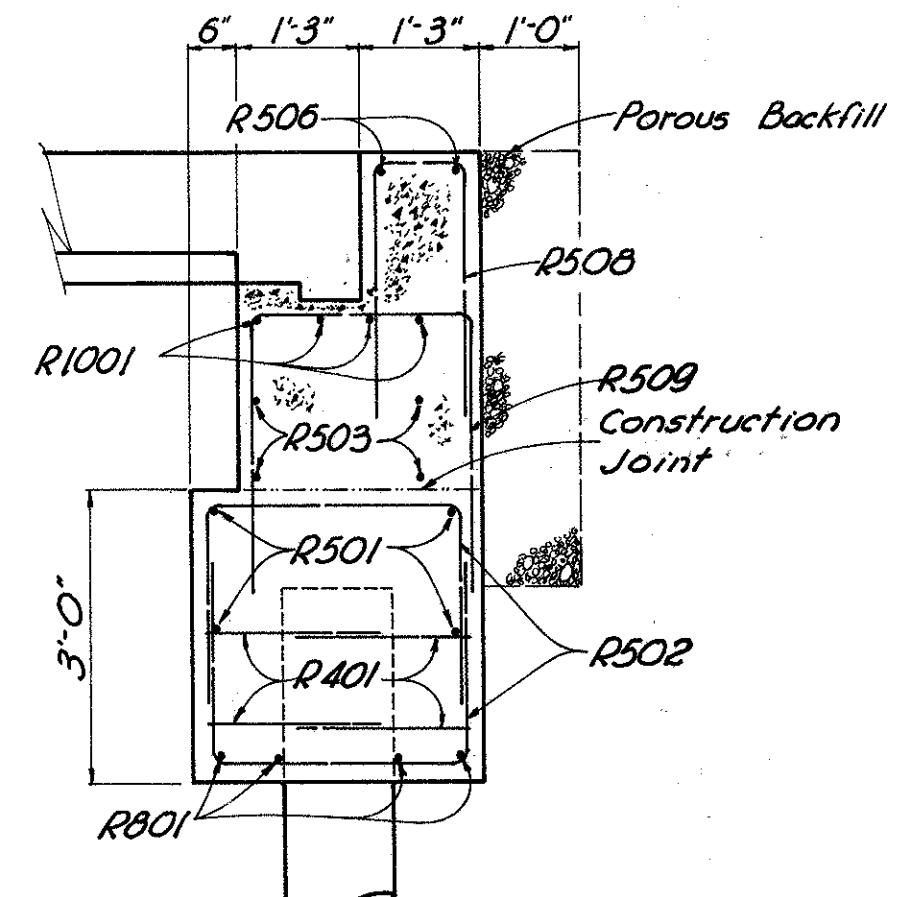
NOTE: For SEC. A-A, refer to Std. Dwg. P-1-54, (REV. 2-2-59).



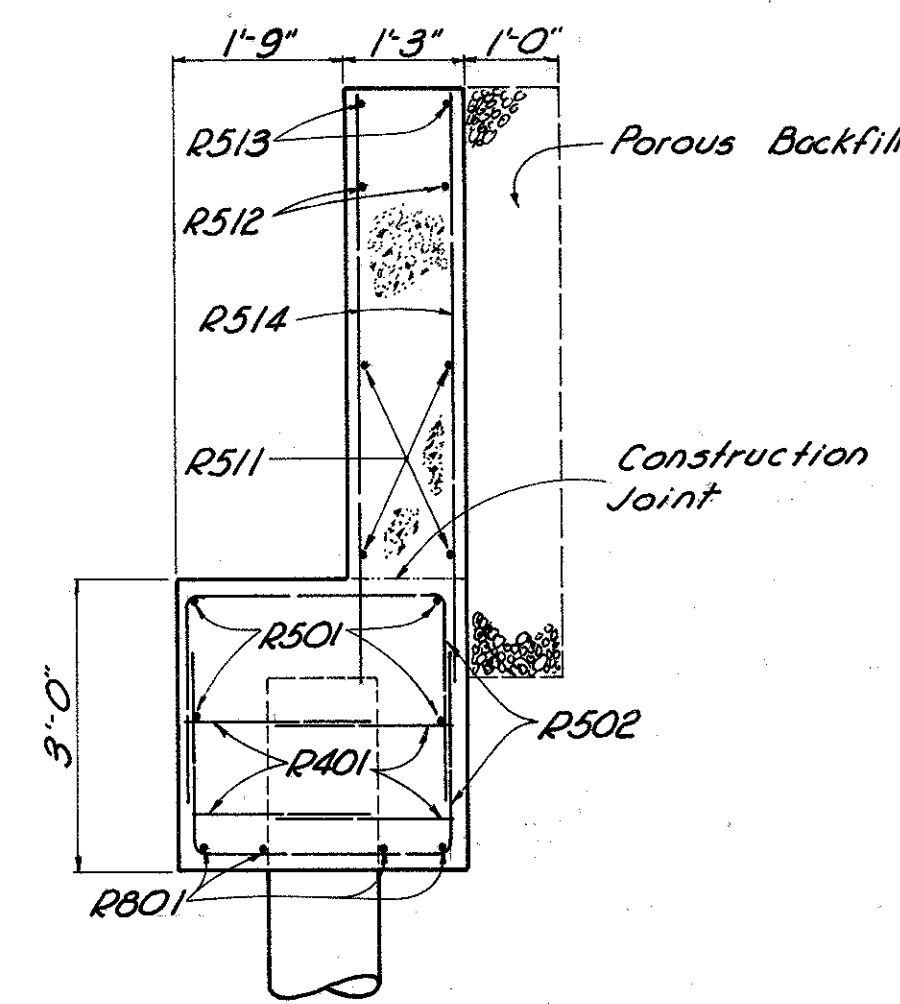
SECTION A-A'



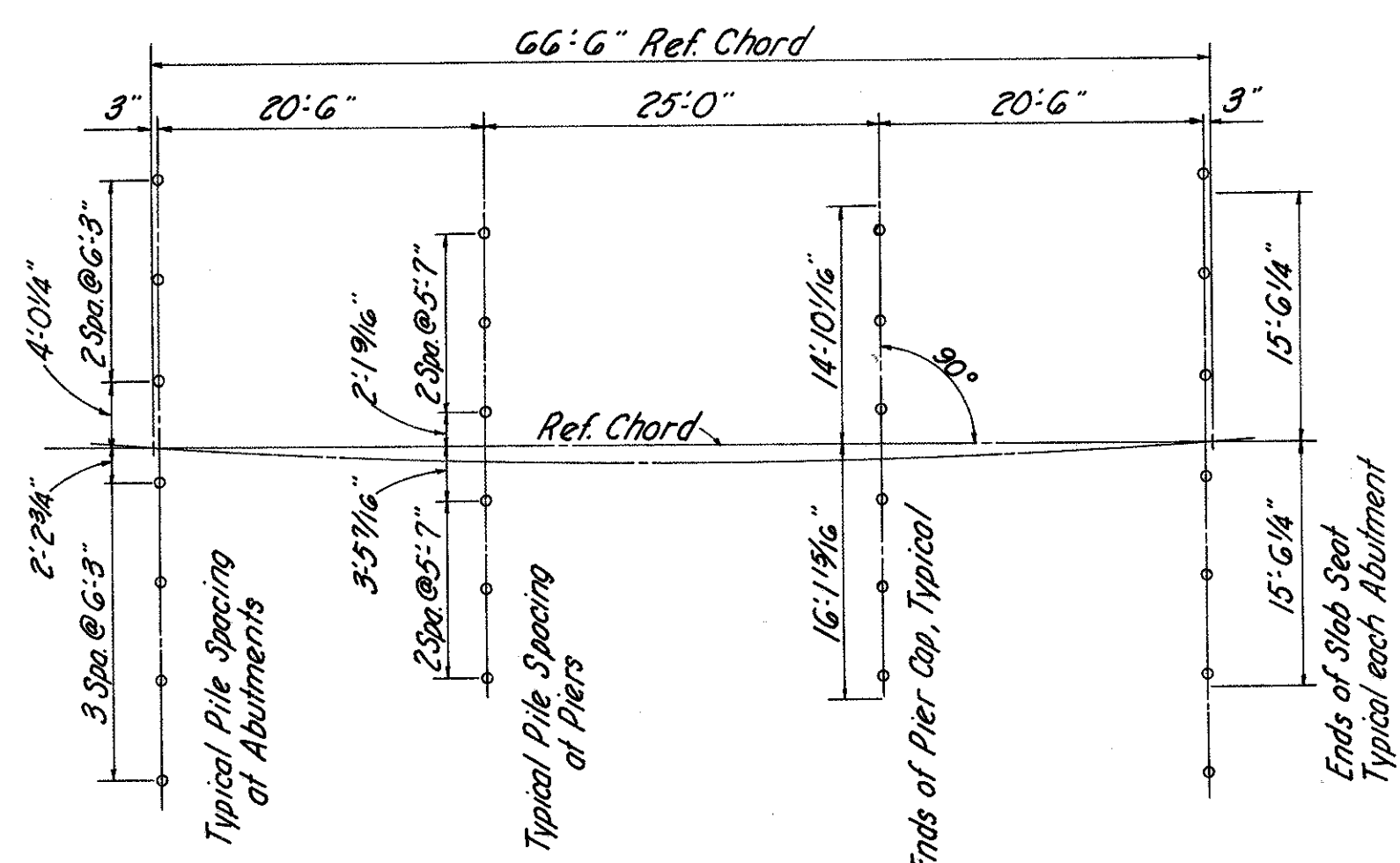
SECTION C-C'



SECTION B-B'

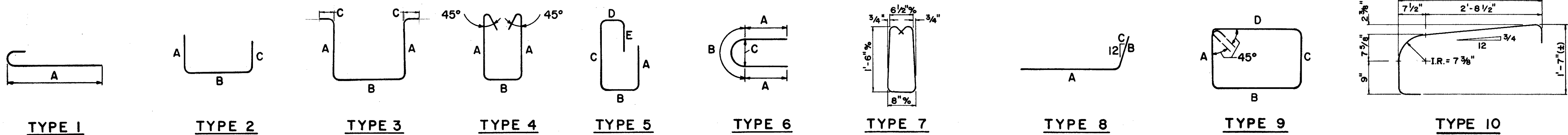


SECTION D-D'



PILE LAYOUT

FRANKLIN ENGINEERING, LIMITED					
COLUMBUS,			Consulting Engineers		
			OHIO		
SUPERSTRUCTURE, PIERS AND ABUTMENTS BRIDGE N ^o . T.R.-110 OVER DUN DITCH MADISON COUNTY LAFAYETTE-MECHANICSBURG ROAD					
STA. 32+81.70					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
ROB	ROB	JSL JSL	JBG	JF	1/31/66
					5-14-68



ABUTMENTS										PIERS										SUPERSTRUCTURE										
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	
R401	56	5'-5"	2	1'-11"	1'-9"	1'-11"			203	P401	48	5'-5"	2	1'-11"	1'-9"	1'-11"			174	A822	81	23'-9"	5tr.						5136	
								Total	203									Total	174	B822	26	18'-1"	1	17'-0"					1255	
R501	16	21'-11"	5tr.						366	P501	4	28'-7"	5tr.						119	C822	26	15'-10"	1	14'-9"					1099	
R502	136	6'-7"	2	2'-1"	2'-8"	2'-1"			934	P502	54	9'-0"	3	2'-10"	2'-2"	10"			507	D822	13	17'-10"	5tr.						619	
R503	16	16'-1"	5tr.						260	P503	8	9'-0"	3	2'-10"	2'-2"	10"			507	E822	13	13'-4"	5tr.						463	
R504	12	4'-4"	5tr.						54									53	F822	62	17'-1"	5tr.						2823		
R505	28	②	2	①	1'-8"	①	(2 Sets of 14 Bars)		309									Total	679	G822	30	8'-6"	5tr.						631	
R506	4	8'-8"	5tr.						36										679	H822	30	7'-6"	5tr.					Total	12682	
R507	8	5'-1"	5tr.						42	P701	72	4'-0"	5tr.						589											
R508	20	5'-6"	2	2'-5"	11"	2'-5"			115									Total	589	J601	32	13'-1"	5tr.						629	
R509	10	8'-9"	2	3'-5"	2'-2"	3'-5"			91										777	K601	16	13'-6"	5tr.						324	
R510	10	13'-7"	2	5'-10"	2'-2"	5'-10"			142	P901	8	28'-7"	5tr.						777	M601	64	31'-7"	5tr.						3036	
R511	8	9'-1"	5tr.						76									Total	777	N601	47	31'-7"	5tr.						2230	
R512	4	7'-6"	5tr.						31										1087									Total	6219	
R513	4	13'-8"	Bend in field							57	P1001	8	31'-7"	5tr.					1087											
R514	12	6'-10"	5tr.						86									Total	1087											
R515	4	6'-1"	5tr.						25																					
R516	4	5'-6"	5tr.						23																					
R517	4	4'-10"	5tr.						20									Total	3306									Total	18901	
								Total	2675																					
R801	16	22'-4"	5tr.						954																					
								Total	954																					
R1001	16	17'-0"	5tr.						1170																					
								Total	1170																					
								Total	5002																					
																				REPLACEMENT BARS										
																				RE-401	1	6'-3"	5tr.							
																				RE-501	1	6'-7"	5tr.							
																				RE-601	1	6'-11"	5tr.							
																				RE-701	1	7'-3"	5tr.							
																				RE-801	1	7'-6"	5tr.							
																				RE-901	1	7'-10"	5tr.							
																				RE-1001	1	8'-3"	5tr.							

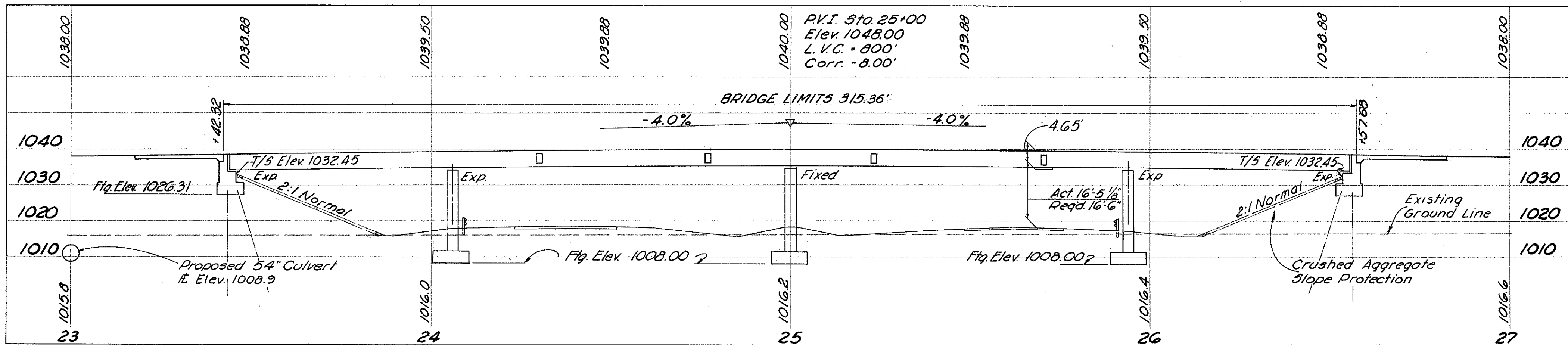
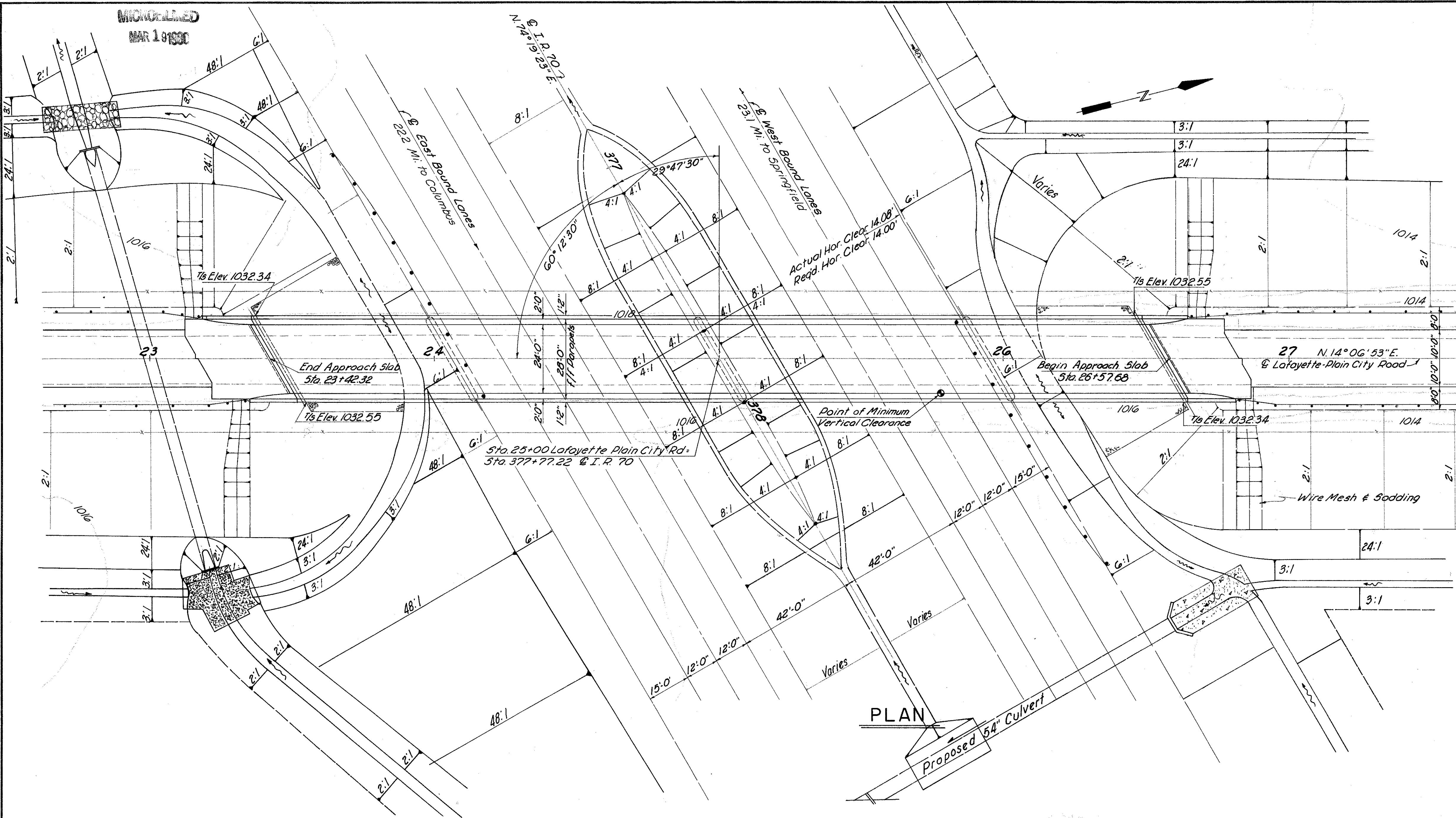
① Varies from 3'-9" to 5'-5", Each by 1 1/2".

② Varies from 8'-11" to 12'-3", Each by 3 1/4".

NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A 506 is a No. 5 size bar and P1101 is a No. 11 size bar.

MAD. 70-6.25



PROFILE - \odot LAFAYETTE-PLAIN CITY RD.

ABUTMENT PILES: 12" ϕ cast-in-place concrete piles
Min. allowable brg. 35 tons. Est. average
pay length 30'-0"

PROPOSED STRUCTURE

TYPE: Continuous Steel Girder With Reinforced Concrete Deck & Substructure
SPANS: 61'-1", 94'-0", 94'-0", 61'-1"
ROADWAY: 24'-0" f/f of 2'-0" Safety Curbs
LOAD FREQUENCY: CF 130 (57)
WEARING SURFACE: 1" Monolithic Concrete
APPROACH SLABS: 45'-1-67 (25'-0" Long)
SKEW: 29° 47' 30" Right Forward
ALIGNMENT: Tangent
AVERAGE DAILY TRAFFIC: 187 (1988)

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers

COLUMBUS, OHIO

SITE PLAN

BRIDGE No. MAD. 70-0715

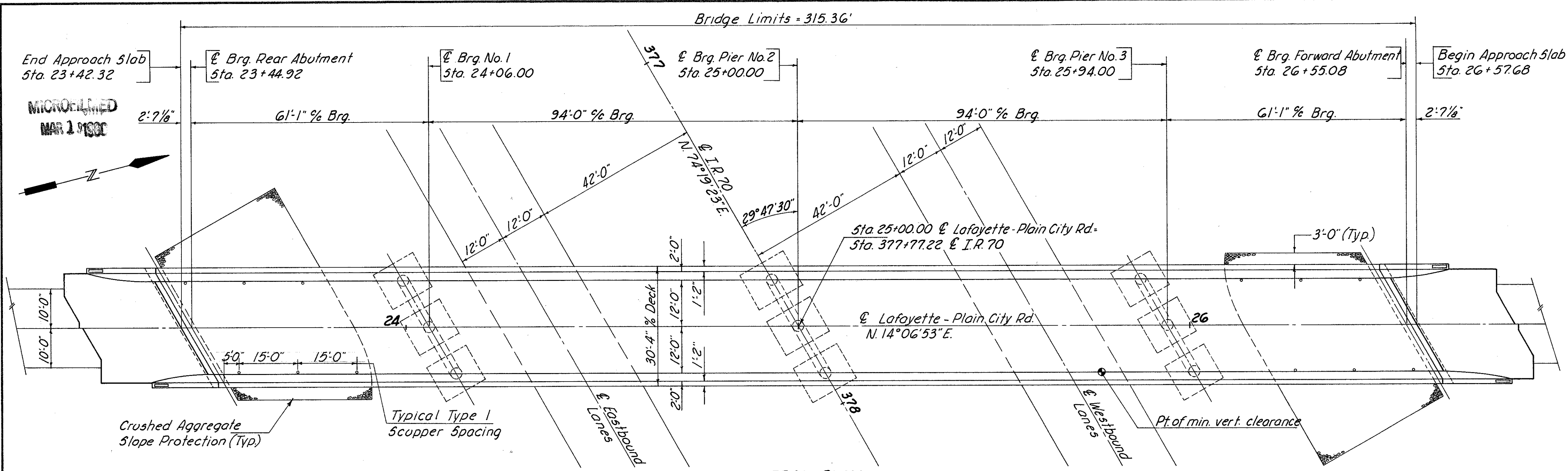
I-70 UNDER LAFAYETTE-PLAIN CITY RD.

MADISON COUNTY I.R.-70

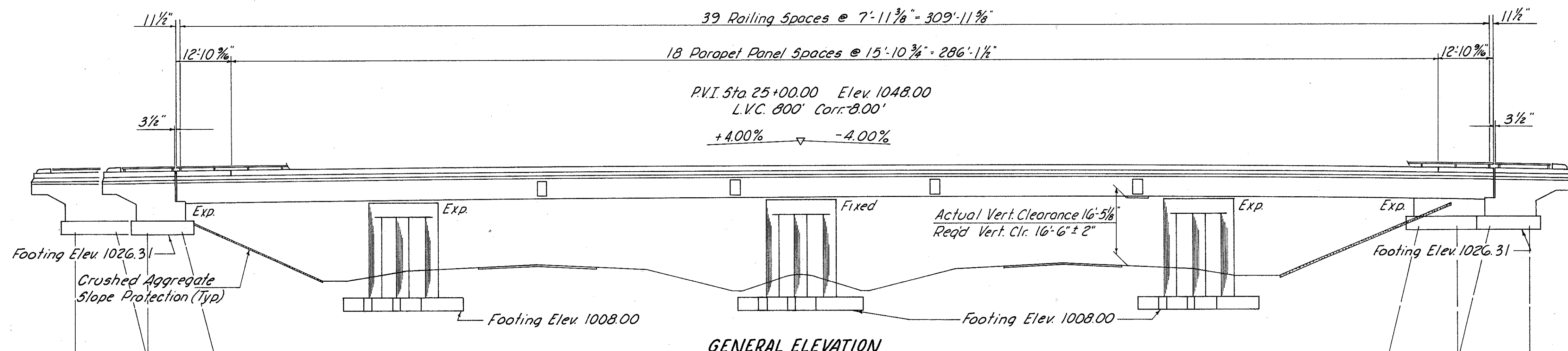
STA. 377 + 28.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBG	JBG	5	V.A.D.	Jf	5/20/65	

MAD. 70-6.25



GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S.	PIERS	GEN'L	Revised	As-Built
503	Lump Sum		Cofferdams, cribs and sheeting				Lump		
503	493	Cu.Yds.	Unclassified Excavation		213	280			
505	Lump Sum		First Test Pile				Lump		
511	290	Cu.Yds.	Class "C" Concrete, Superstructure	290					
511	82	Cu.Yds.	Class "C" Concrete, Piers above Footings			82			
511	120	Cu.Yds.	Class "E" Concrete, Pier Footings			120			
511	147	Cu.Yds.	Class "E" Concrete, Abutments		147				
509	113,427	Lbs.	Reinforcing Steel	73,899	10,348	29,180			
513	225,900	Lbs.	Structural Steel	225,900					
832	225,900	Lbs.	Field Painting of Structural Steel	225,900					
517	682.60	Lin.Ft.	Bridge Railing, Type 1	623.77	58.83				
518	12	Each	Scuppers including Supports	12					
518	26	Cu.Yds.	Porous Backfill		26				
518	33	Lin.Ft.	6" Helical C.M.P. (70706) non perforated		33				
518	57	Lin.Ft.	6" Helical Perforated C.M.P. (70706) incl. specials		57				
808	290	Units	Water-reducing, set retarding admixture	290					
601	448	Sq.Yds.	Crushed Aggregate Slope Protection				448		
507	600	Lin.Ft.	12" Cast in place Reinforced Concrete Piles		600				
825	1240	Sq.Yds.	Concrete surface treatment				1240		
828	45	Lin.Ft.	Joint sealer	45					

REFERENCE shall be made to Standard Drawings AS-1-G7 (rev. 1-11-68), BR-1-G5 (11-24-65) sheets 1 & 2 of 2, RB-1-55 (rev. 2-2-59), SD-1-G5 (11-8-65) sheets 1 & 2 of 3 and Supplemental Specifications 808 (1-13-67), 811 (1-1-67), 825 (12-19-67), 828 (1-1-67), 832 (5-25-67) and 931 (5-25-67).

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

UNIT STRESSES: Design Loading ~ CF 130 (57)
 Concrete Class "C" ~ basic unit stress 1,333 psi
 Concrete Class "E" ~ basic unit stress 1,133 psi
 Structural Steel ~ ASTM A36 ~ basic unit stress 20,000 psi

Reinforcing Steel ~ ASTM A15, A16, A160, deformed, intermediate or hard grade. Basic unit stress 20,000 psi, except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 psi.

SEE sheet 286 for notes titled: Welds, Painting and Welded Attachments.

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

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

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.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments after which excavations shall be made for the abutments and piles driven.

FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.0 tons per sq. ft.

FRANKLIN ENGINEERING, LIMITED							
Consulting Engineers COLUMBUS, OHIO							
GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES							
BRIDGE No. MAD.70-0715							
UNDER LAFAYETTE - PLAIN CITY ROAD							
MADISON COUNTY I.R. 70							
Sta. 377+28.82							
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED	
ROB	J.L.	5	2.10	JL	3-66		

GPJ. Revised As-Built 5-6-70

MICROFILMED
MAR 1 9 1980

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

308

MAD-70-6.25

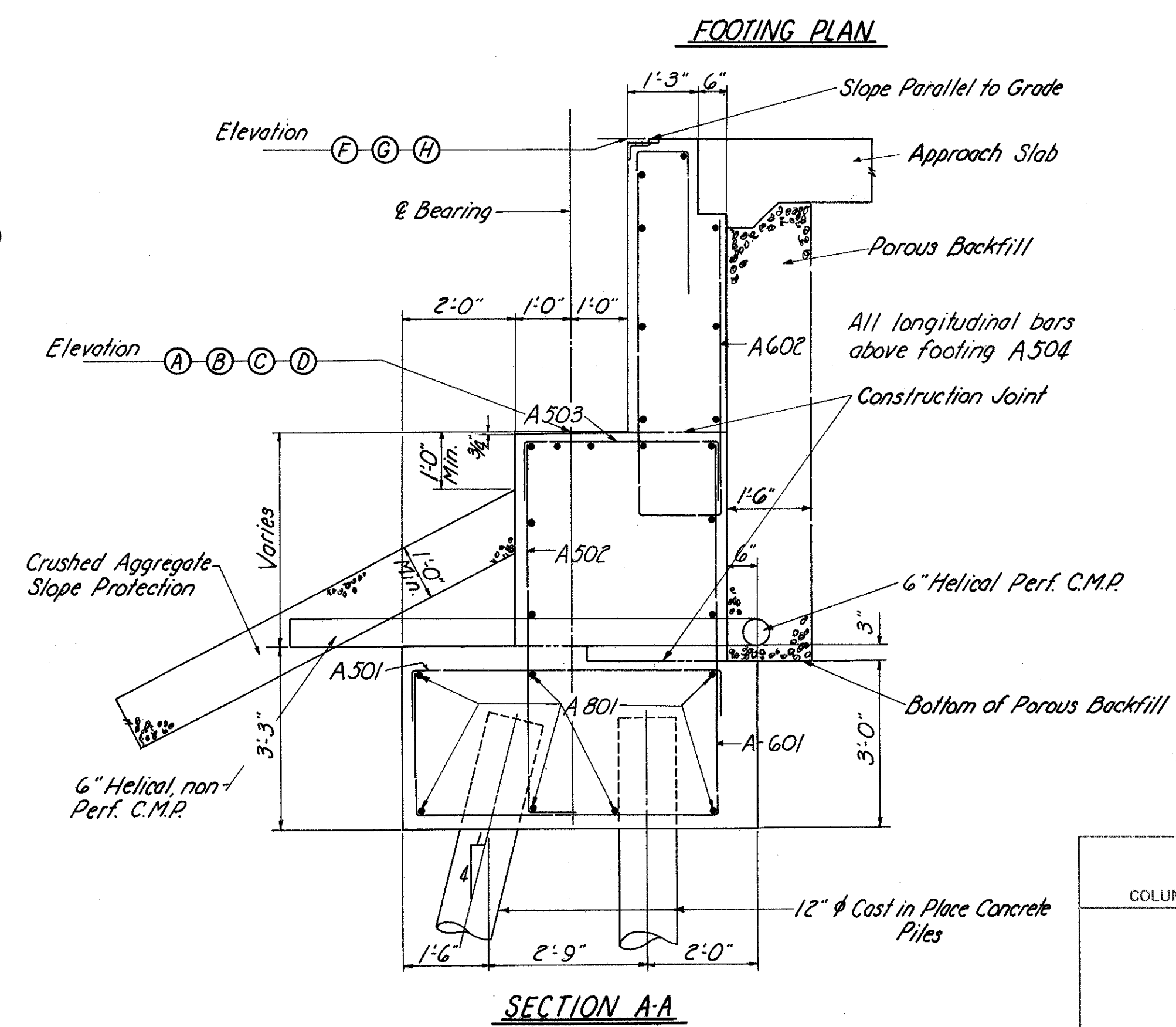
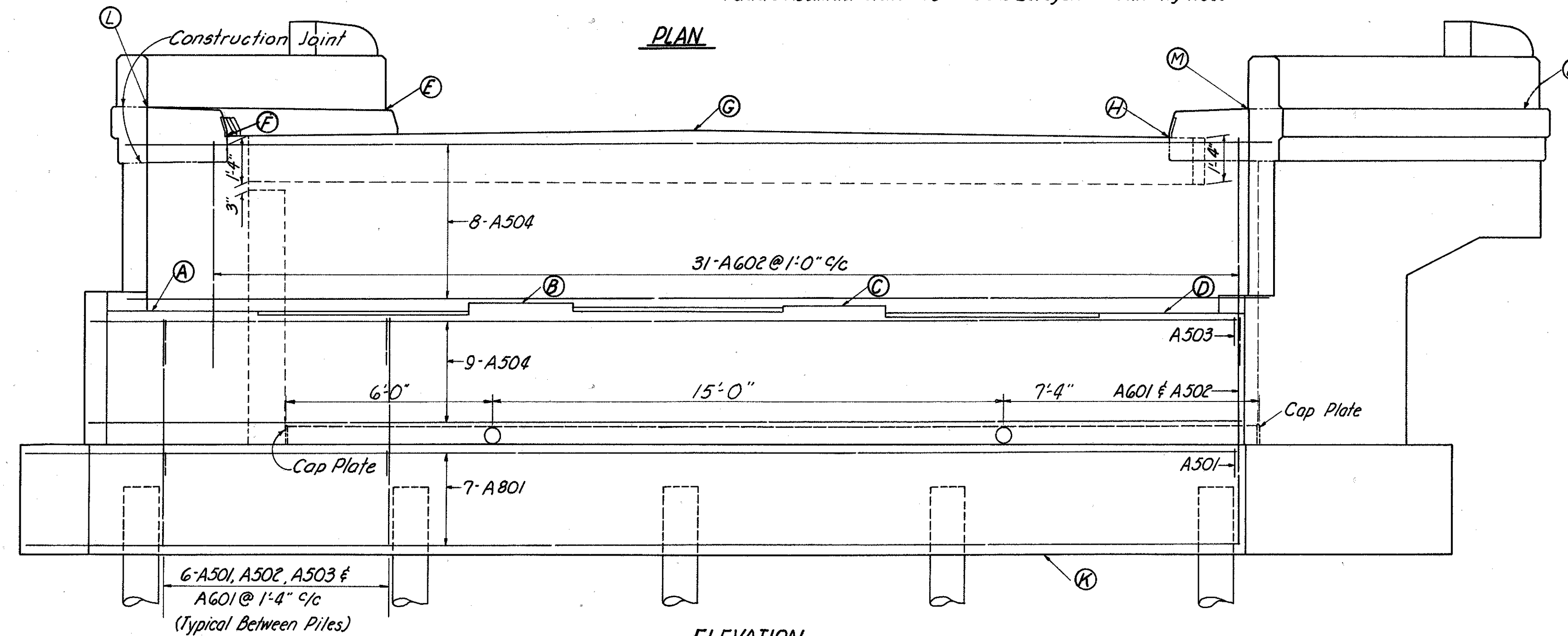
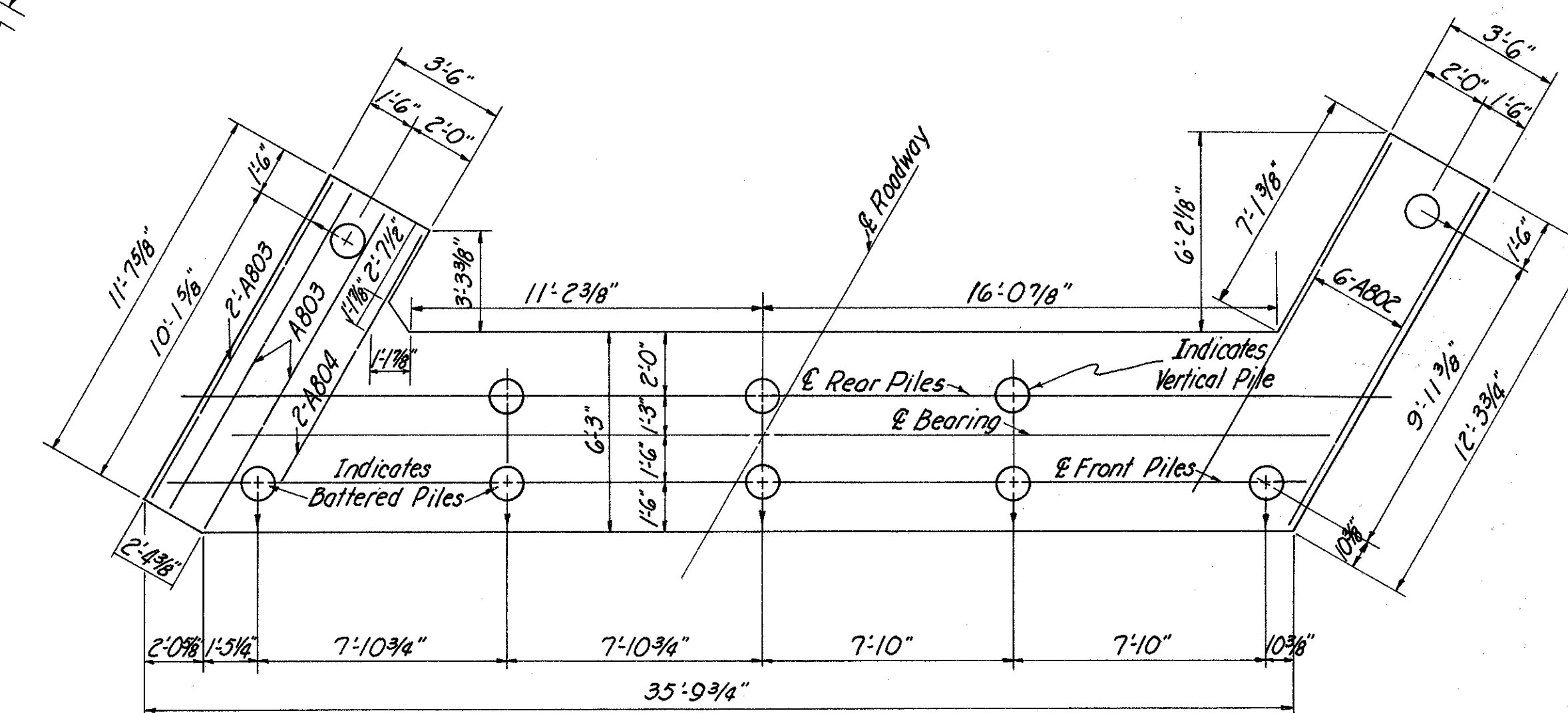
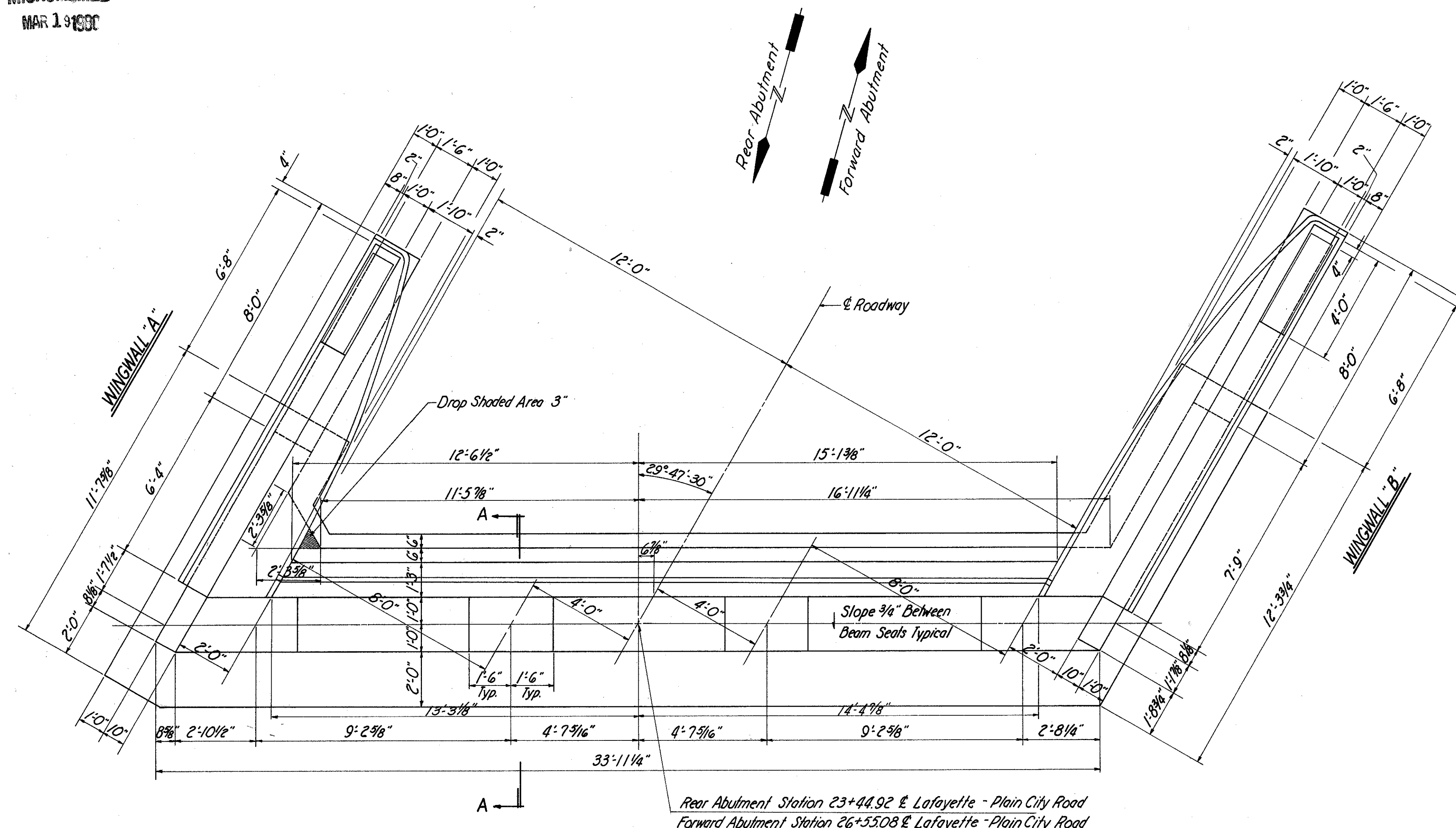


TABLE OF ELEVATIONS												
POINT	A	B	C	D	E	F	G	H	J	K	L	M
ELEVATION	1033.55	1033.61	1033.54	1033.34	1039.36	1038.70	1038.80	1038.48	1039.06	1026.31	1039.57	1039.33

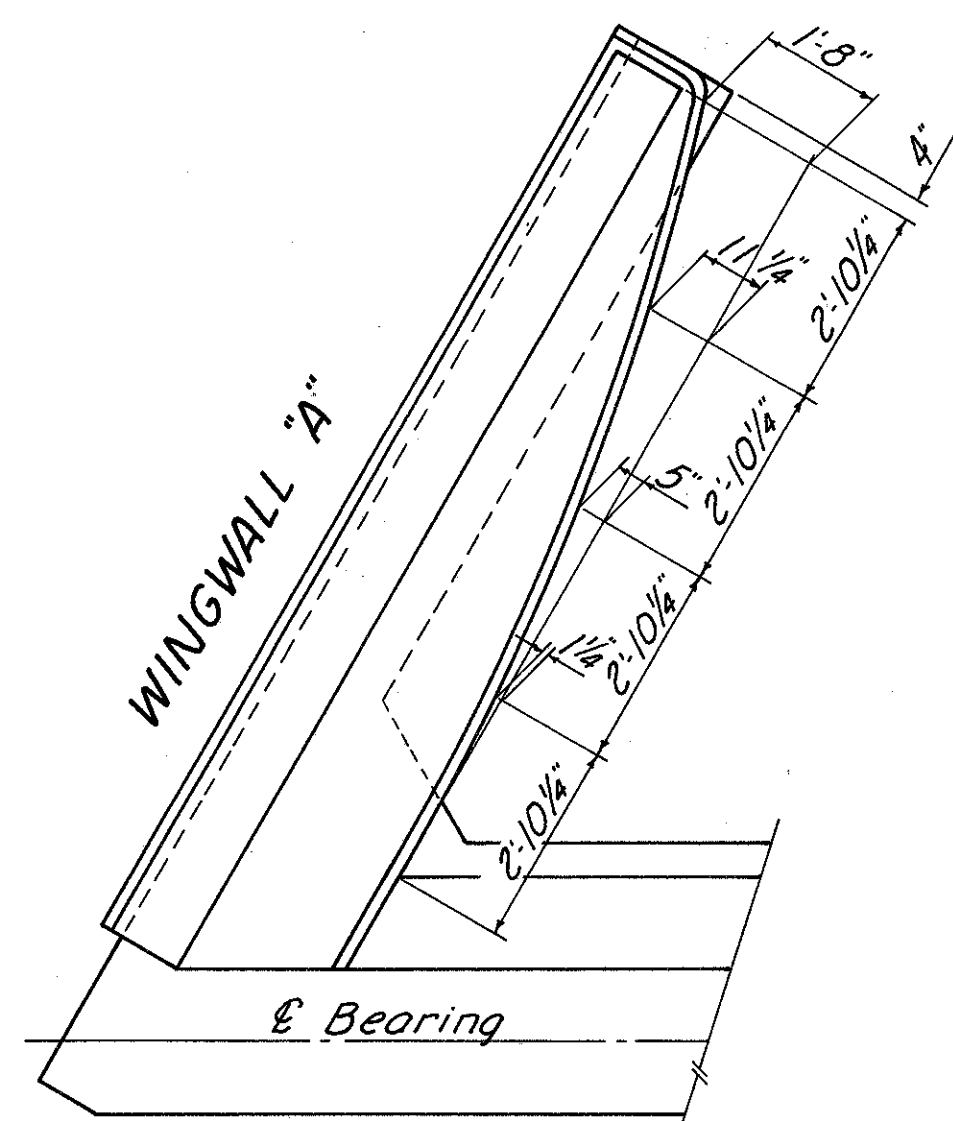
FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO							
ABUTMENT BRIDGE N° MAD-70-0715 UNDER LAFAYETTE-PLAIN CITY ROAD MADISON COUNTY Sta 377+28.82							
DESIGNED ROB	DRAWN ROB	TRACED NCF	CHECKED T.A.D.	REVIEWED JF	DATE 8-66	REVISED	

MICROFILMED
MAR 1980

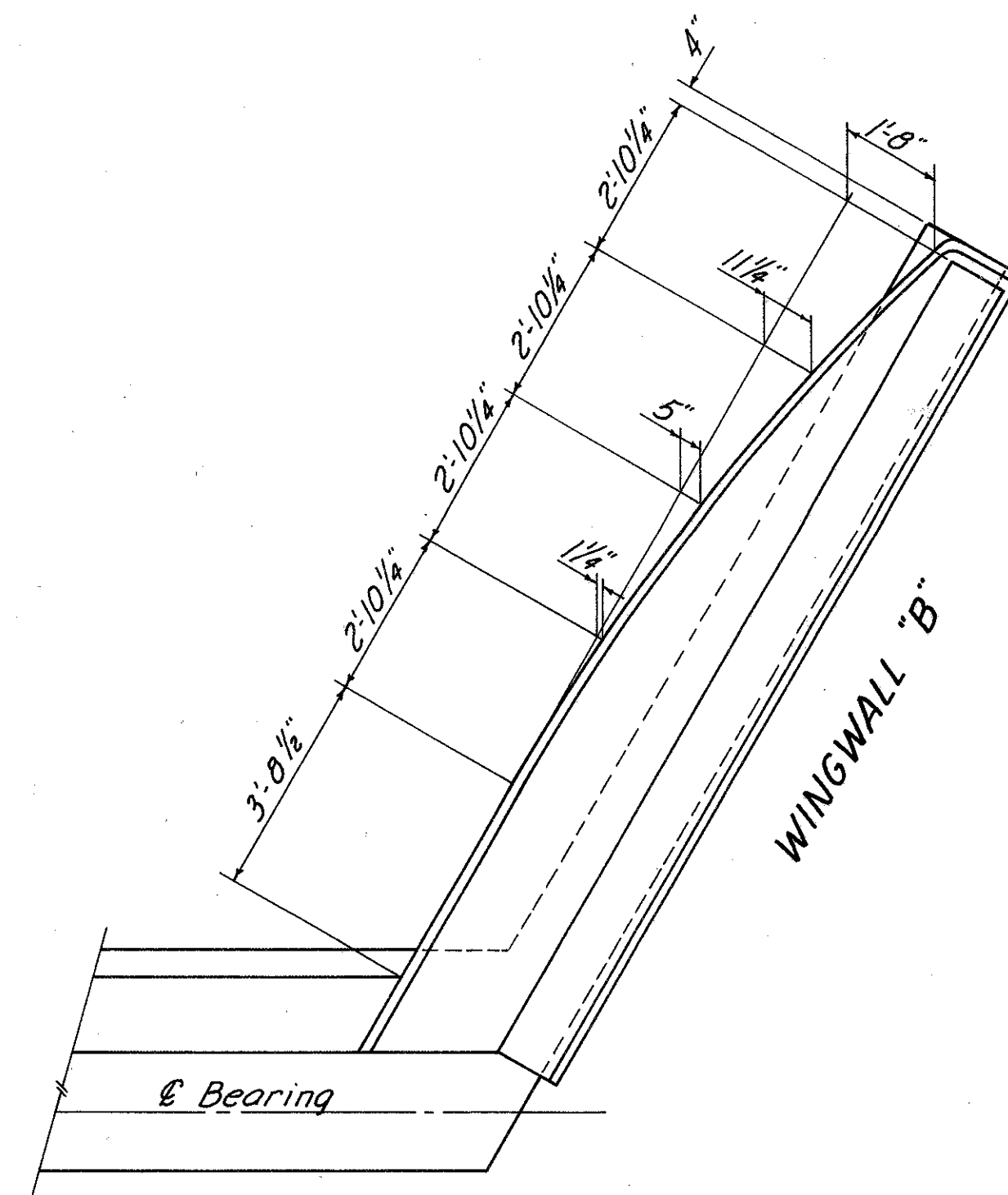
FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

309

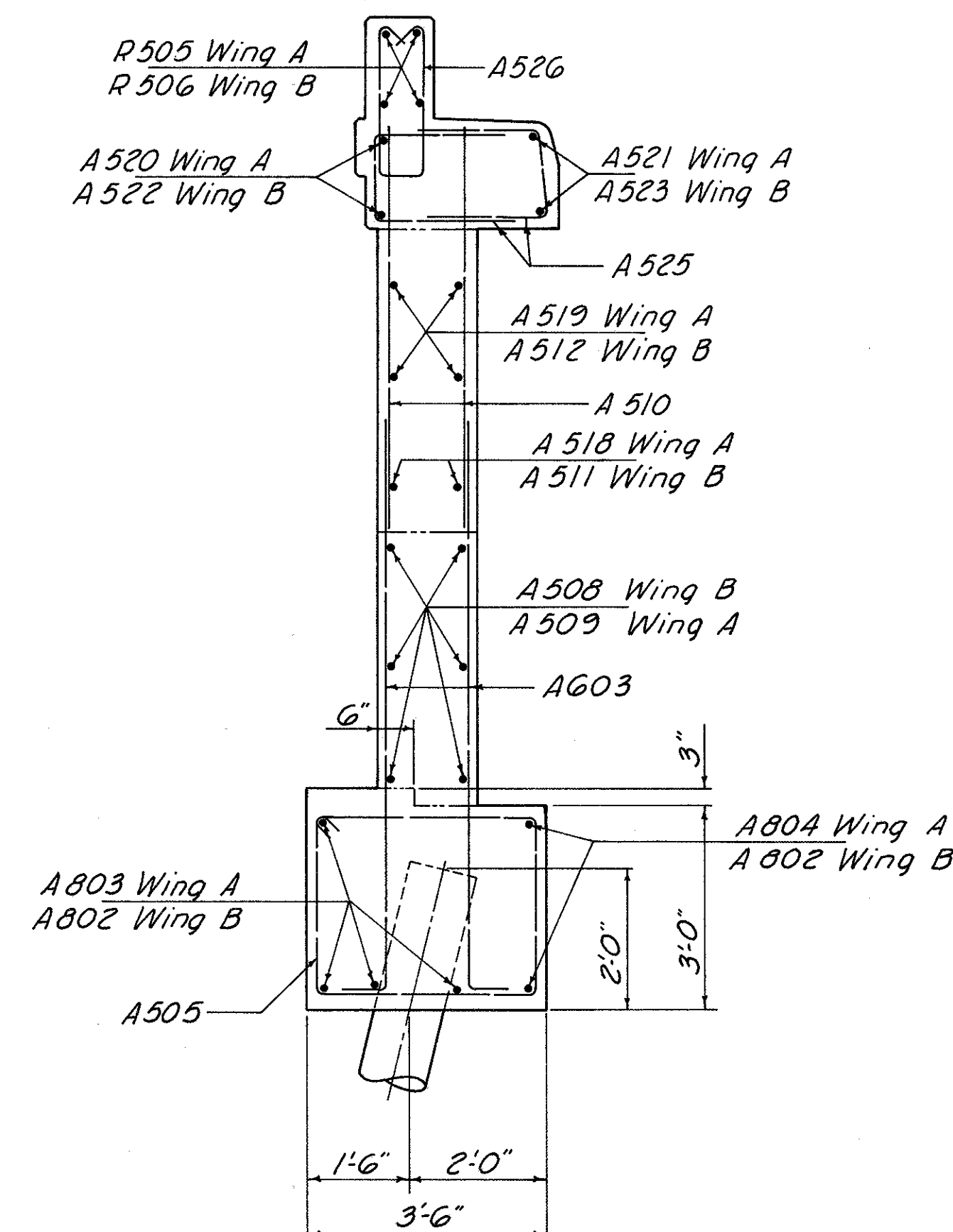
MAD. 70-6.25



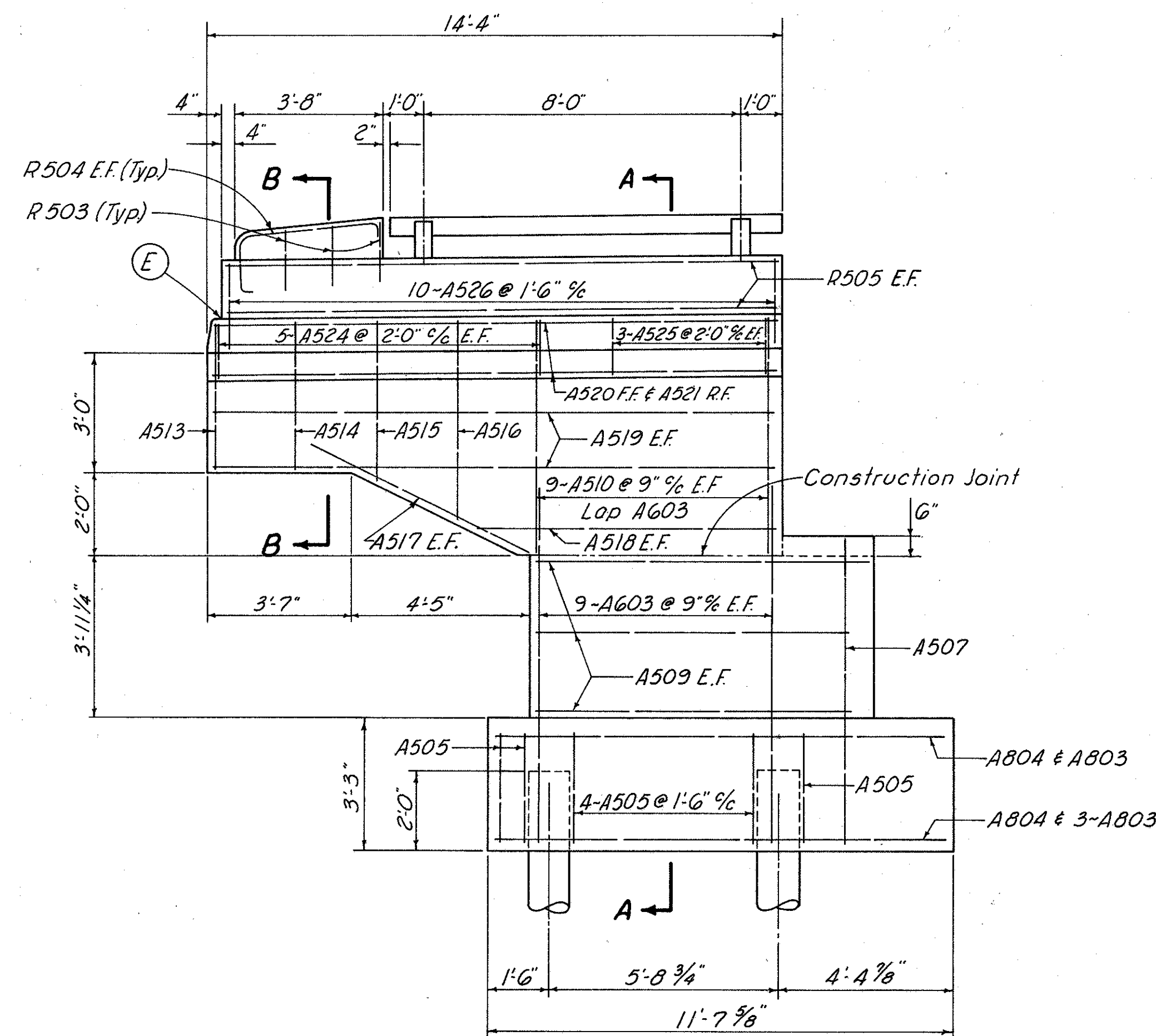
CURB PLAN



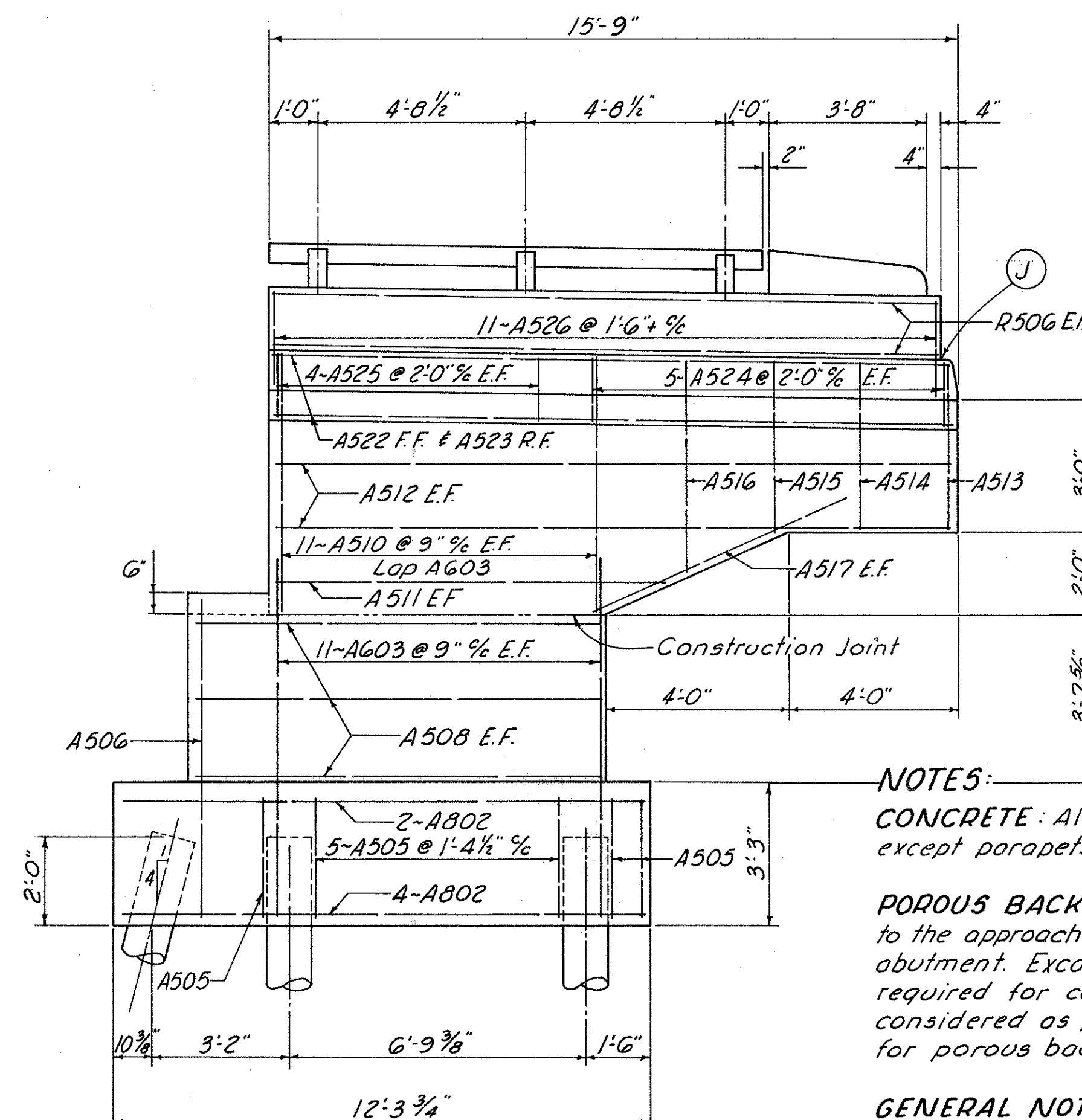
WINGWALL "B"



SECTION A-A



WINGWALL "A"



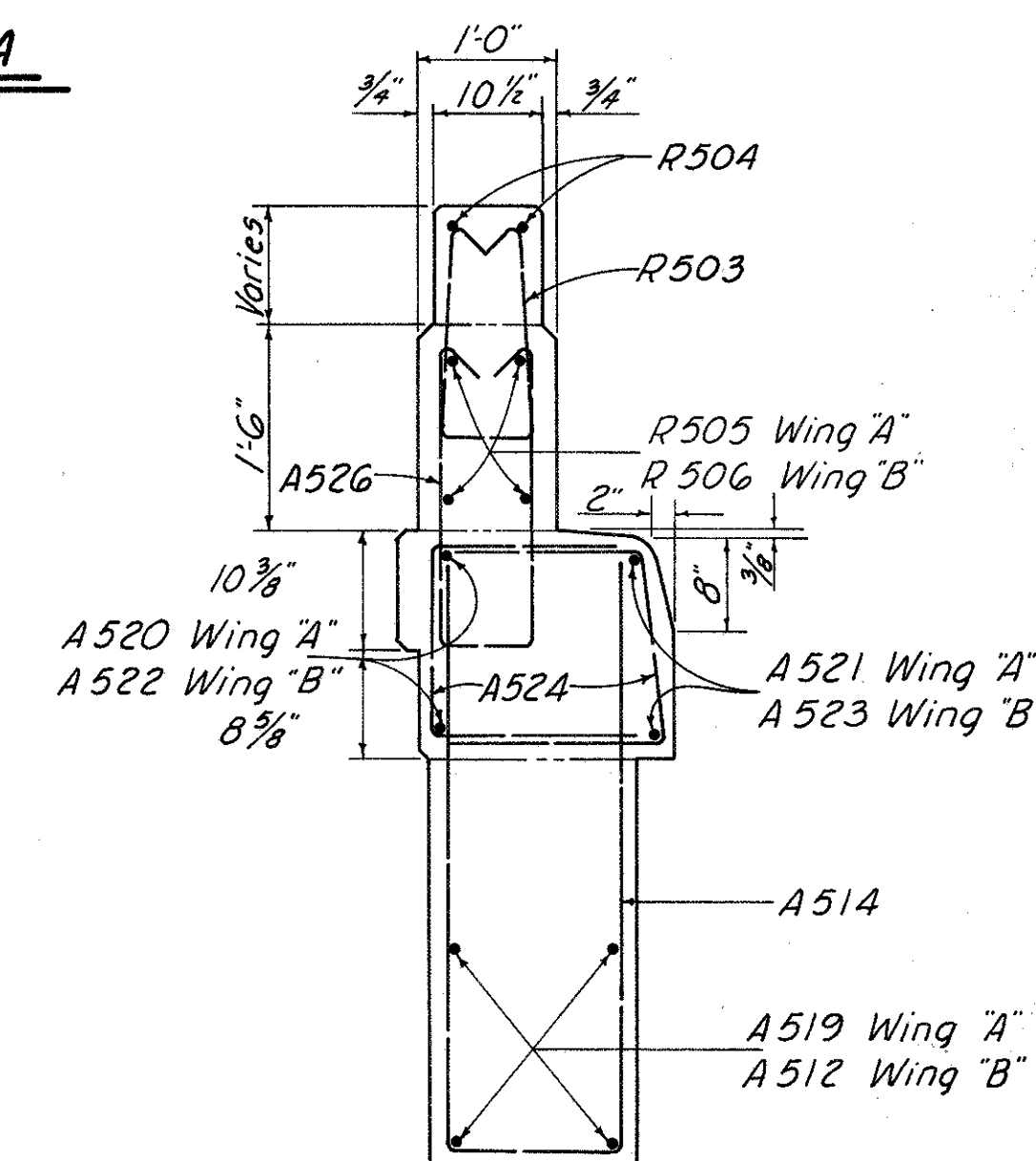
LEGEND
E.F. ~ Each Face
R.F. ~ Rear Face
F.F. ~ Front Face

NOTES:

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

POROUS BACKFILL 1'-6" thick shall extend upward to the approach slab for the full length of the abutment. 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. for porous backfill.

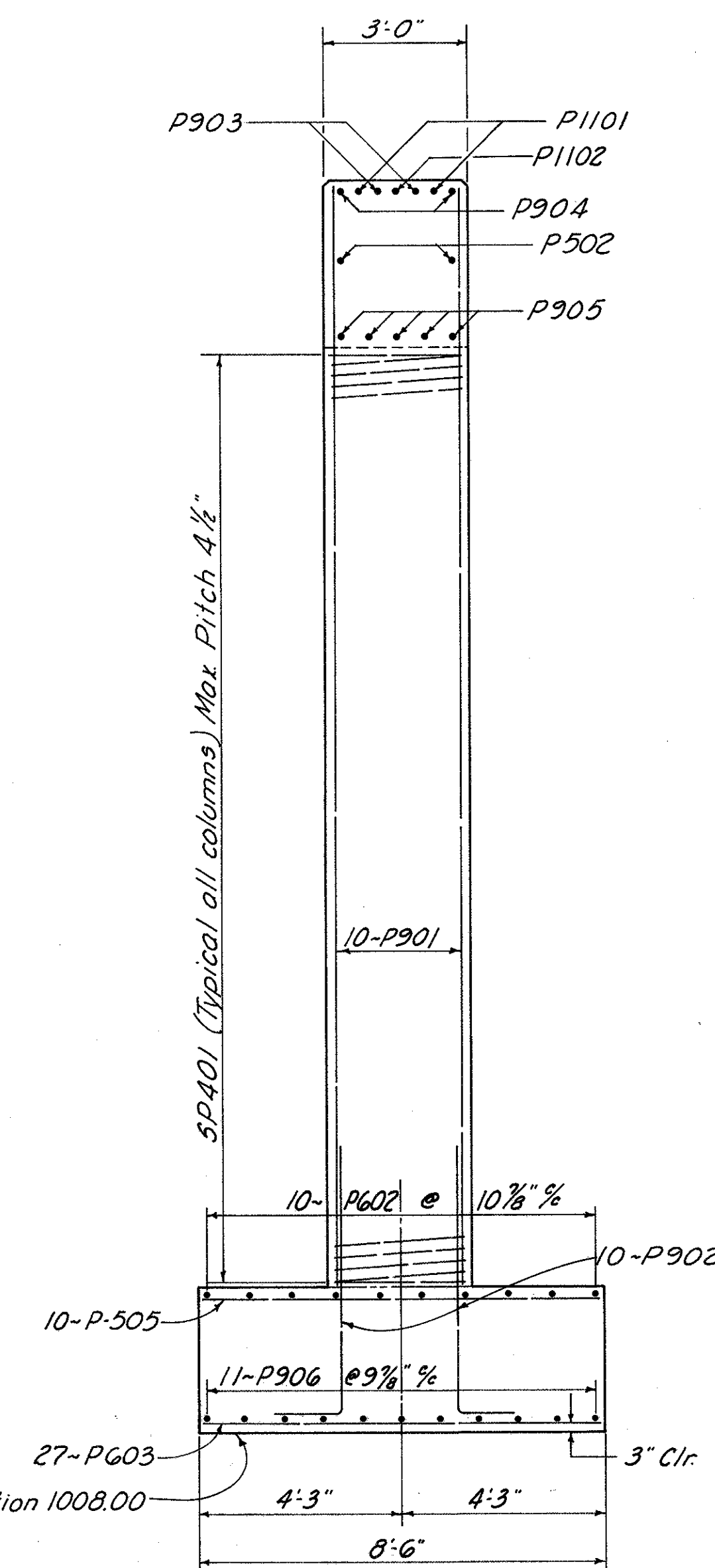
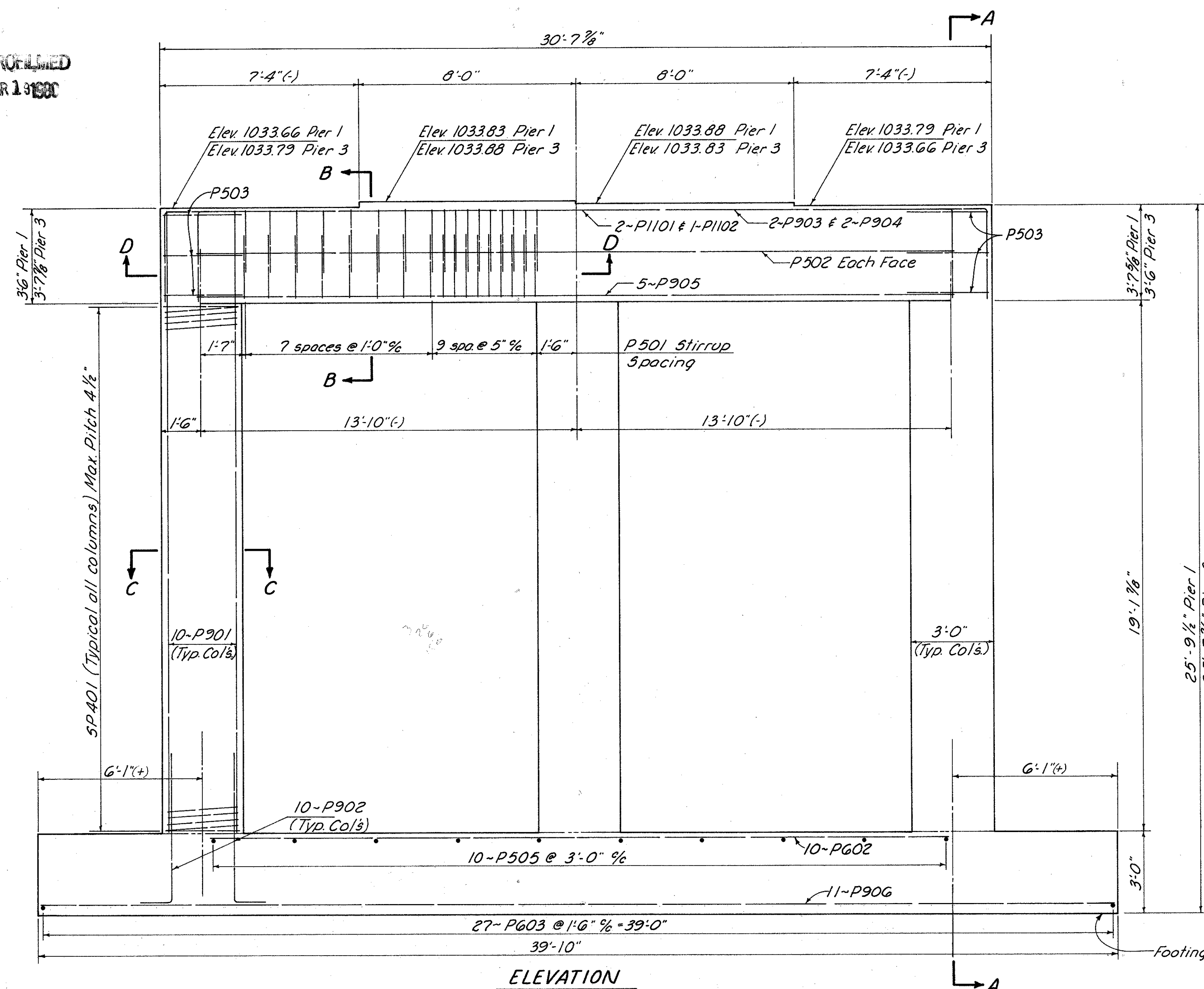
GENERAL NOTES: See "General Plan" sheet.



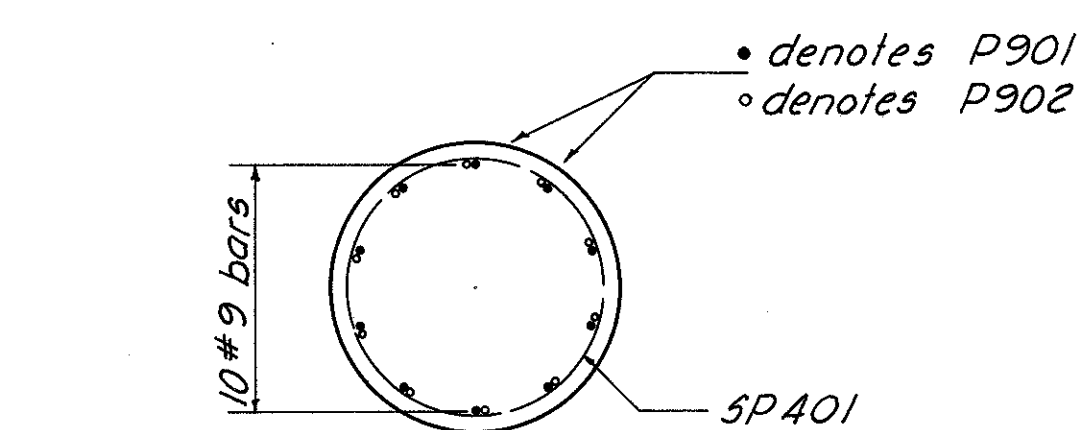
SECTION B-B

FRANKLIN ENGINEERING, LIMITED						
COLUMBUS,			Consulting Engineers		OHIO	
WINGWALLS						
BRIDGE No. MAD. 70-0715						
UNDER LAFAYETTE - PLAIN CITY ROAD						
MADISON COUNTY			Sta. 377+28.82		I.R. 70	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ROB	ROB	g	W.A.D.	sf	3/8/86	

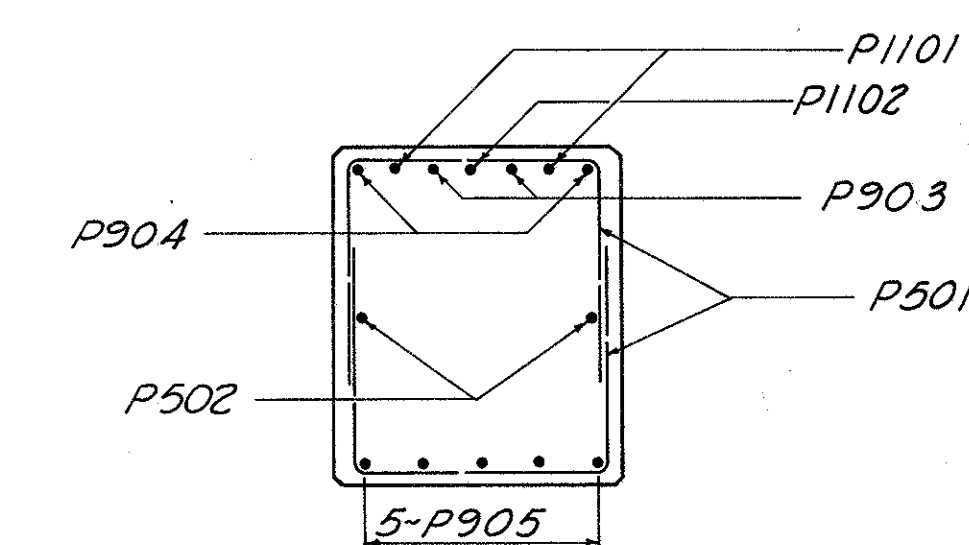
MAD. 70-6.25



SECTION A-A

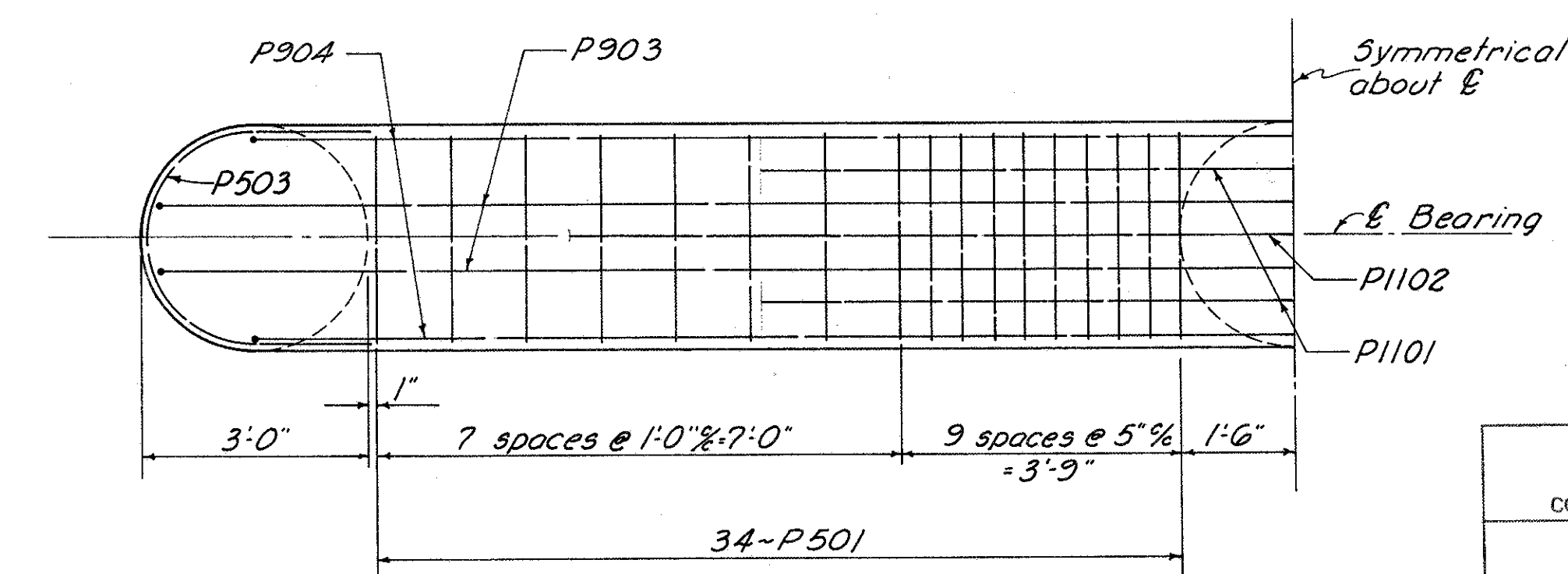
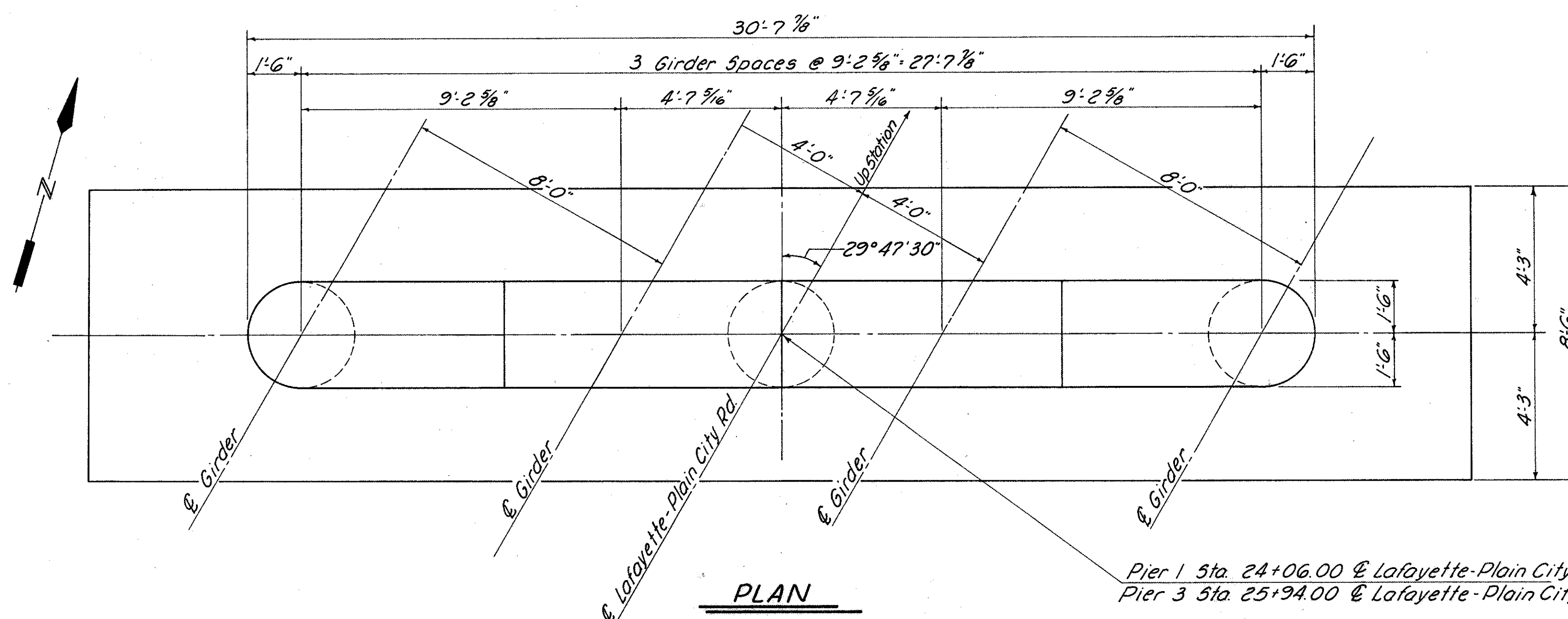


SECTION C-C



SECTION B-B

NOTES:
 CONCRETE: All concrete for pier footings shall be Class "E."
 All concrete above top of footings shall be Class "C."
 GENERAL NOTES: See sheet 307.



SECTION D-D

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers

PIER No's 1 & 3
BRIDGE No. MAD. 70-0715
UNDER LAFAYETTE - PLAIN CITY ROAD
MADISON COUNTY

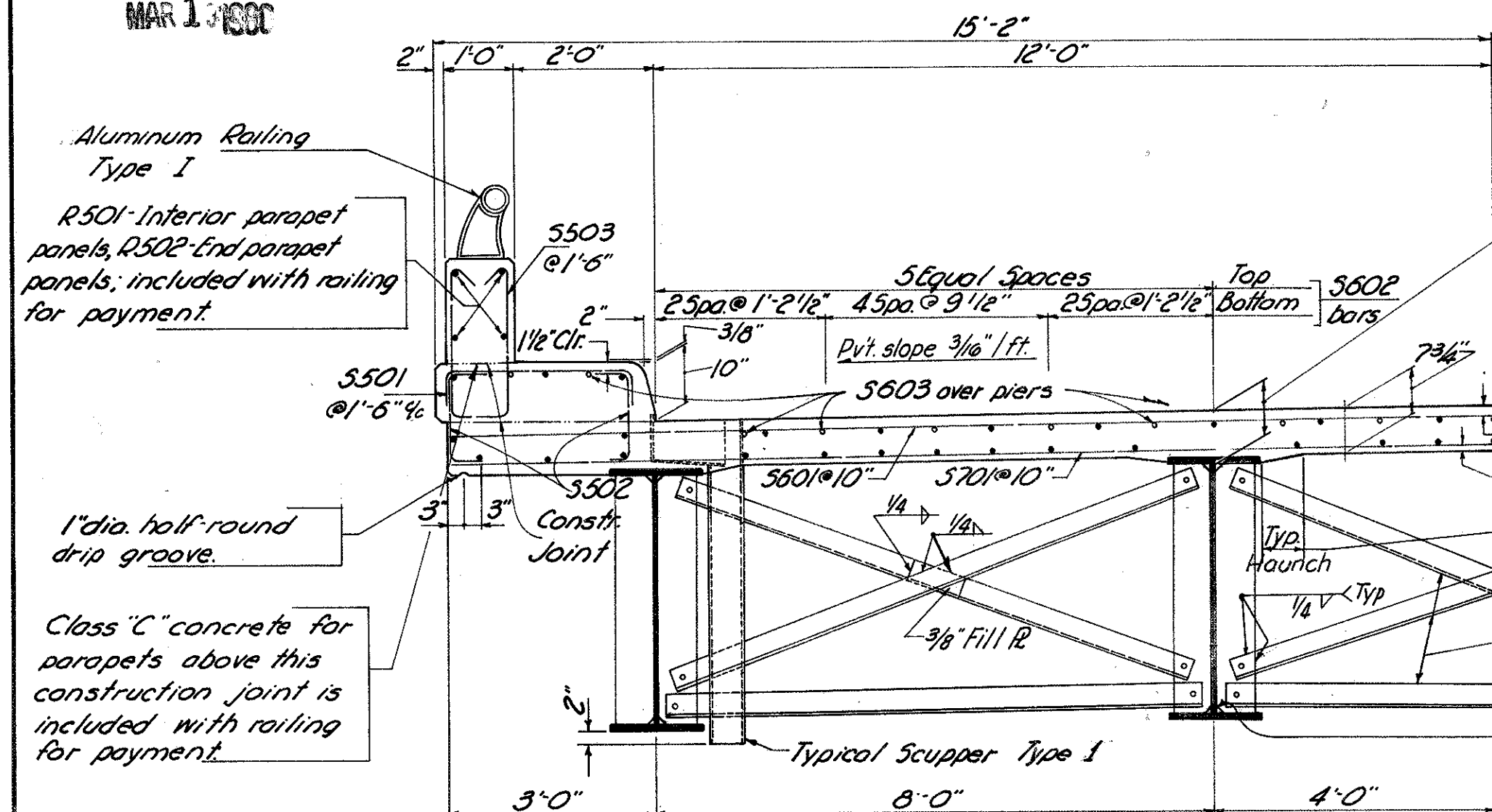
Sta. 377+28.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
ROB	ROB	E	V.A.D.	JF	3-66	

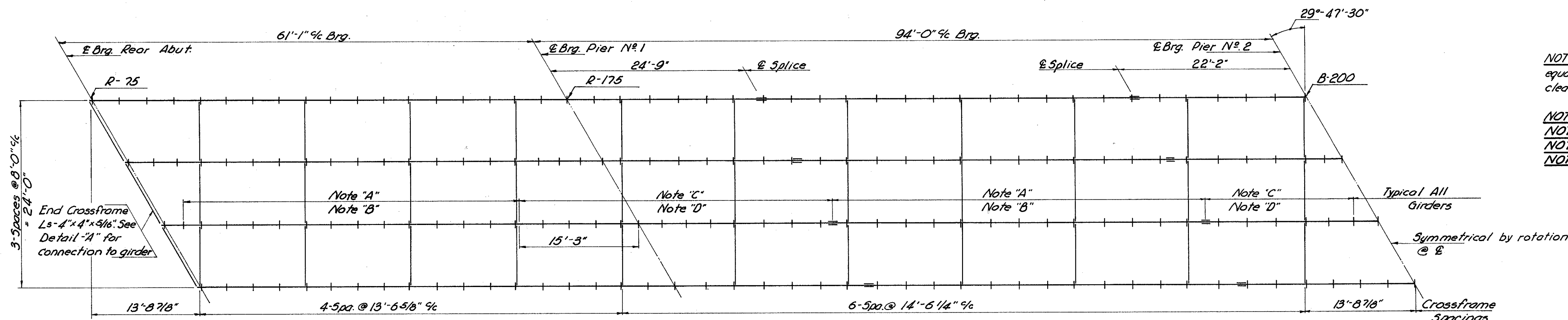
FRANKLIN ENGINEERING, LIMITED							
Consulting Engineers							
COLUMBUS,				OHIO			
PIER No. 2							
BRIDGE No. MAD. 70-0715							
UNDER LAFAYETTE - PLAIN CITY ROAD							
MADISON COUNTY				I.R.70			
Sta. 377+28.82							
DESIGNED	DRAWN	TRACED	CHECKED	REVISED	DATE	REVISED	
ROB	ROB	5	V.A.D.	JT	8-66		



RECORDED
MAR 1 1968

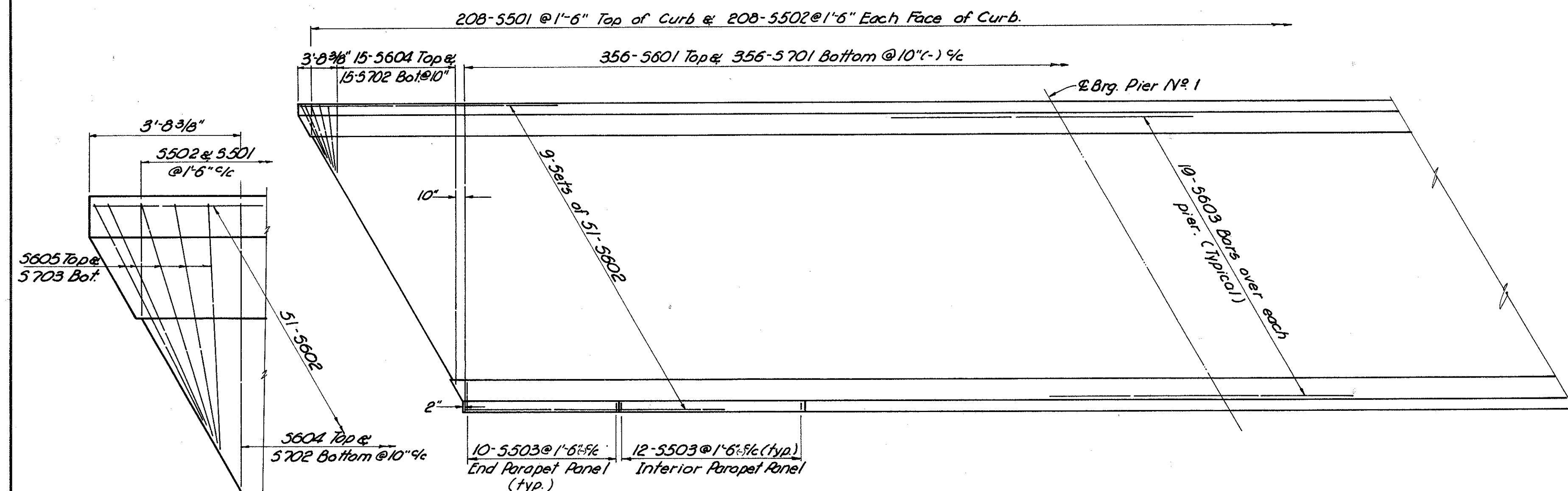


HALF TRANSVERSE SECTION



HALF FRAMING PLAN

NOTE: The contractor shall submit to the Director, for approval, three prints showing the proposed erection procedure.



HALF SLAB PLAN

NOTES

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

	DEFLECTION AND CAMBERING TABLES											
	INTERIOR GIRDERS			EXTERIOR GIRDERS								
	END SPAN		MIDDLE SPAN	END SPAN		MIDDLE SPAN	END SPAN		MIDDLE SPAN	END SPAN		MIDDLE SPAN
DEFL. DUE TO WEIGHT OF STEEL	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.
DEFL. DUE TO REMAINING D.L.	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"	0"
CONVEXITY REQ'D FOR VERT. CURVE	3/16"	3/16"	1/16"	1/16"	1/16"	1/16"	3/16"	3/16"	1/16"	1/16"	1/16"	1/16"
SUM OF CONVEXITY & DEAD LOAD	5/8"	3/4"	1/2"	15/16"	2 1/8"	1 9/16"	7/16"	9/16"	7/16"	1 1/16"	2 1/4"	1 9/16"

END CROSSFRAMES, END DAMS, SCUPPERS, CURB PLATE DETAILS: See SD-1-65 (11-8-65), sheets 1 & 2 of 3.

BEARINGS: See RB-1-55 for the following:

R-75-Abutments
R-175-Piers No. 1 & 3
B-200-Pier No. 2

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

RAILING POST, PARAPET EXPANSION JOINTS AND SCUPPER SPACINGS: See "GENERAL PLAN" sheet.

GENERAL NOTES: See "GENERAL PLAN" sheet.

NOTE: All transverse stiffeners are of equal spaces between crossframes and at equal spaces between crossframes and E bearings. Adjust transverse stiffeners to clear field splices by 2".

NOTE "A" - Top of web stiffeners shall have contact bearing.

NOTE "B" - Bottom of web stiffeners 1/8" open.

NOTE "C" - Top of web stiffeners 1/8" open.

NOTE "D" - Bottom of web stiffeners shall have contact bearing.

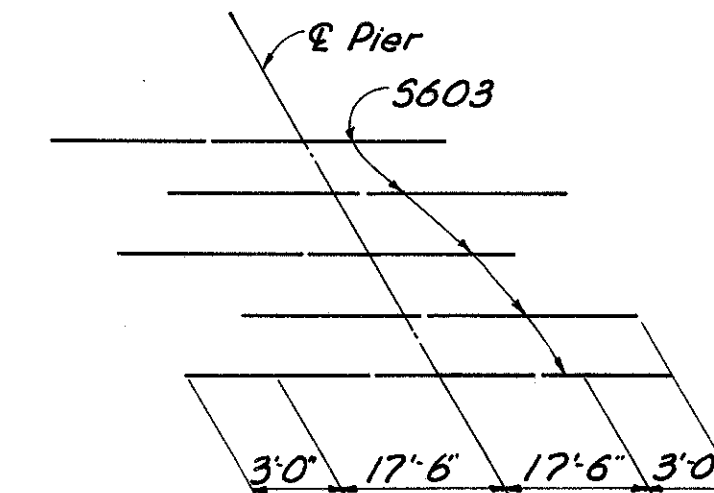
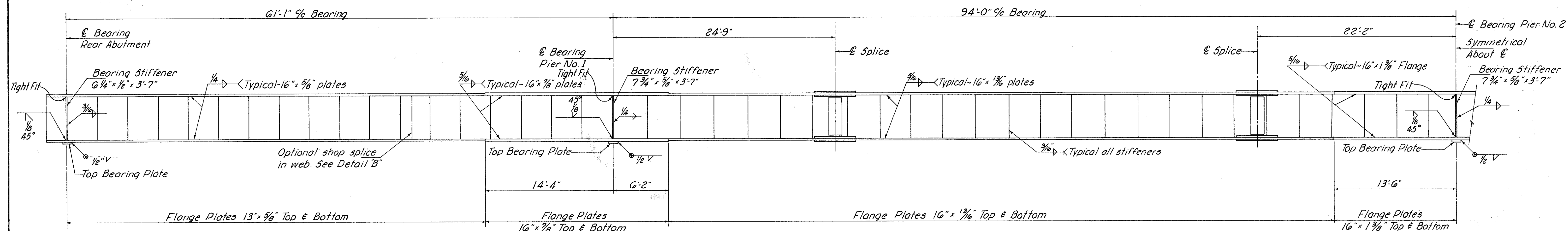


DIAGRAM SHOWING STAGGERING OF 5603 BARS OVER PIER (TYP)

FRANKLIN ENGINEERING, LIMITED					
Consulting Engineers			OHIO		
COLUMBUS,					
SUPERSTRUCTURE - I					
BRIDGE No. MAD. 70-0715					
UNDER LAFAYETTE - PLAIN CITY ROAD					
MADISON COUNTY			I.R. - 70		
STA. 377+28.82					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
ROB	ROB	454 12-65	JBG	84	3/8/66



NOTE: All web plates are $\frac{3}{8}$ " x 3'-7".
All web stiffeners are plates $4 \times \frac{3}{8}$ " x 3'-6", except at diaphragm connections where $6 \times \frac{3}{8}$ " x 3'-6" stiffeners shall be used.
All flange plates to be butt welded.
For butt welds, see Detail "B".
For spacing of stiffeners, see Framing Plan.

GIRDER ELEVATION

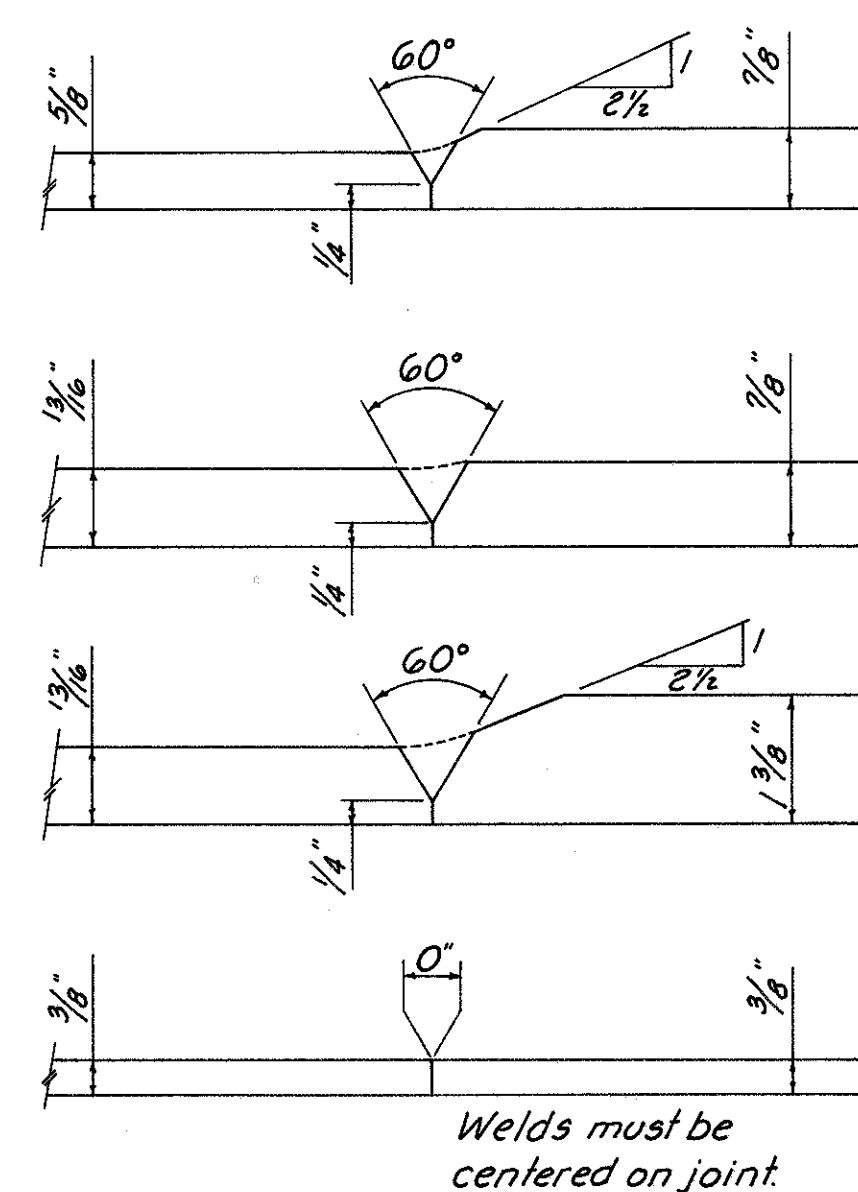
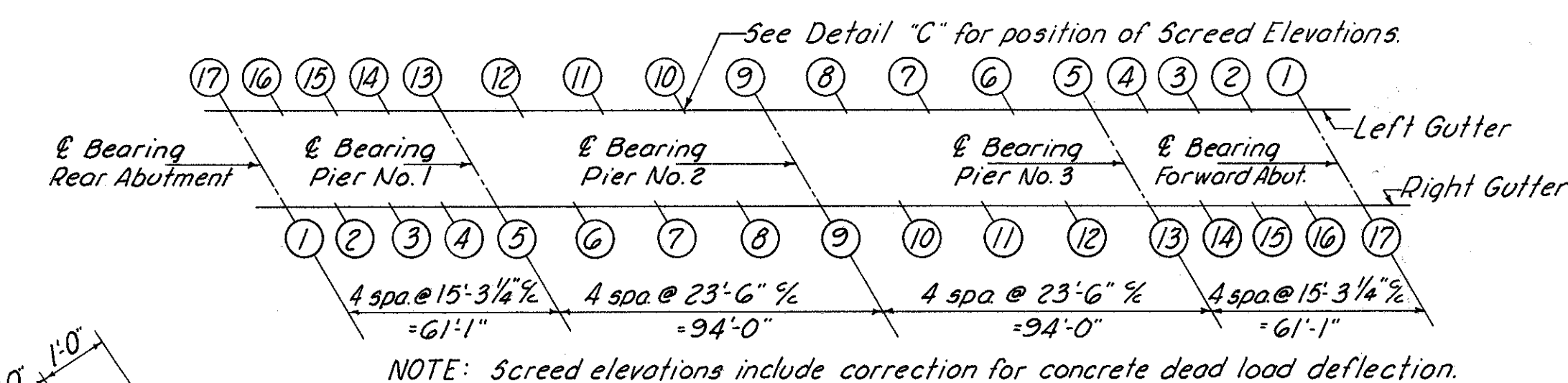
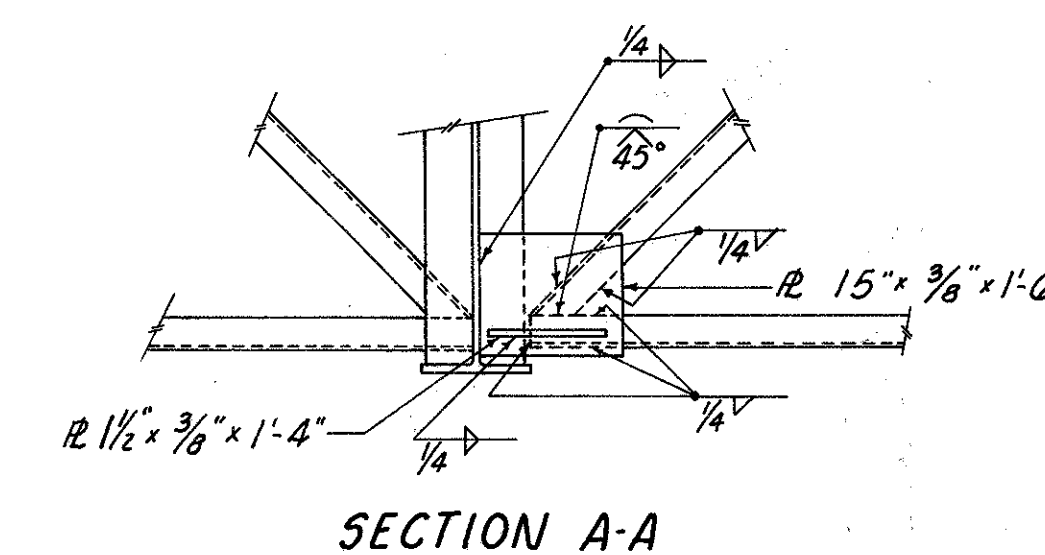
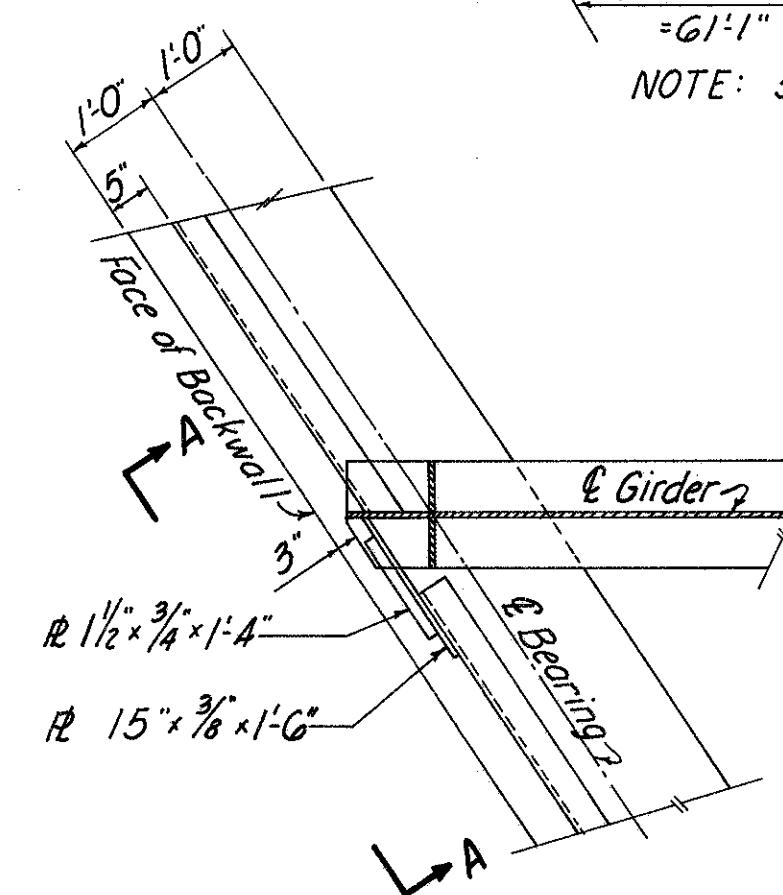


TABLE OF SCREED ELEVATIONS									
POINT	1	2	3	4	5	6	7	8	9
ELEVATION	1038.71	1038.95	1039.14	1039.29	1039.43	1039.65	1039.80	1039.83	1039.81
POINT	10	11	12	13	14	15	16	17	
ELEVATION	1039.80	1039.73	1039.56	1039.30	1039.14	1038.97	1038.76	1038.50	

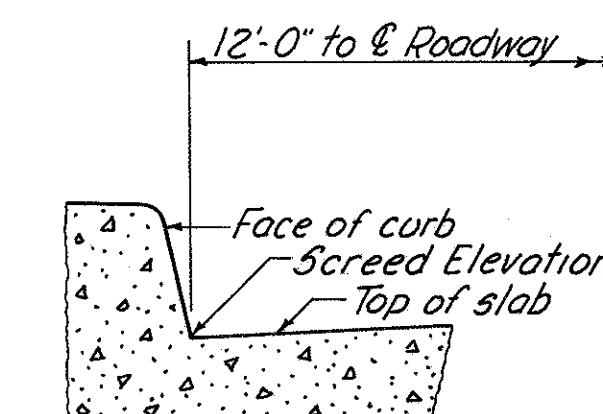


NOTE: Screed elevations include correction for concrete dead load deflection.

SCREED ELEVATIONS



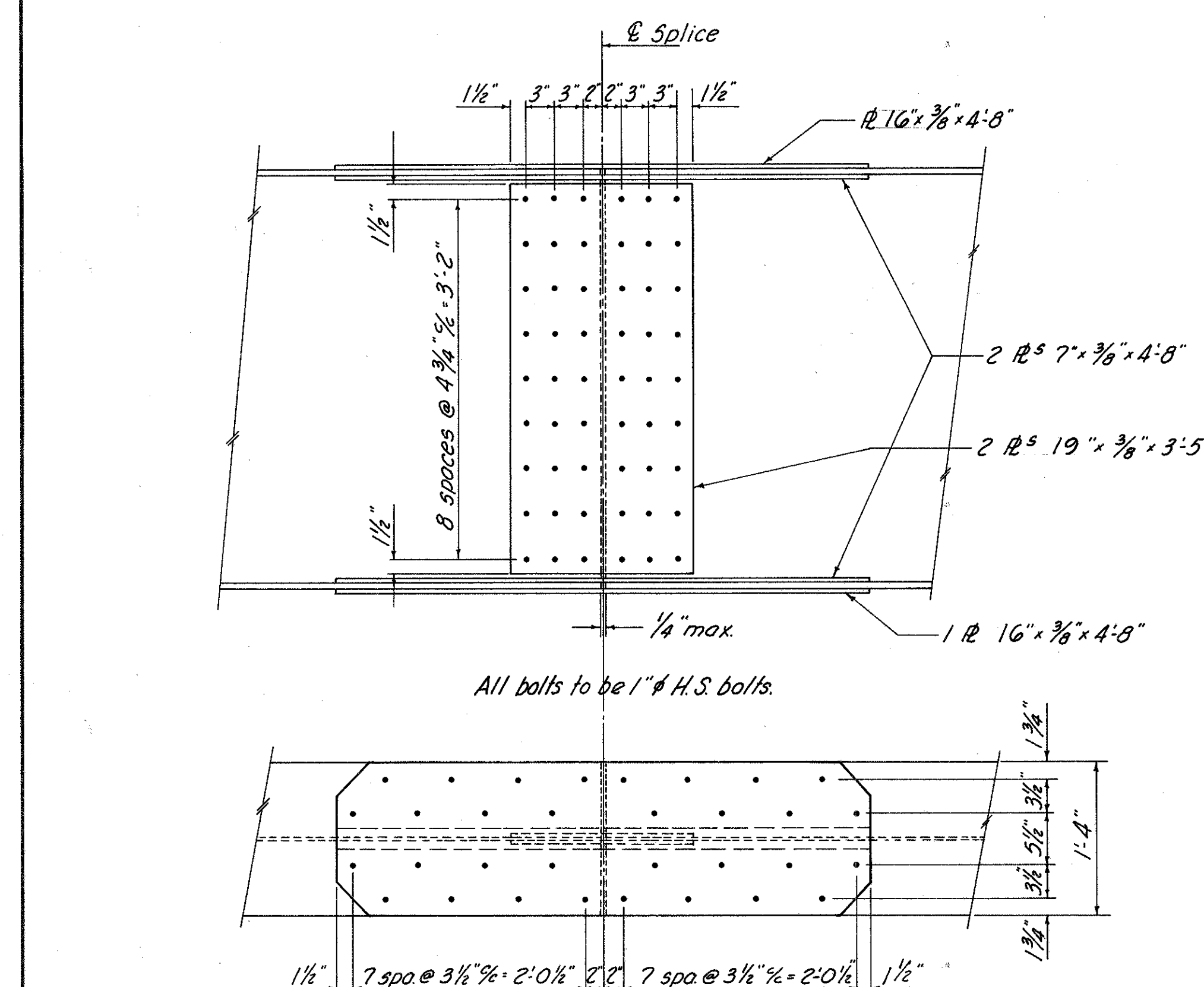
DETAIL "A"



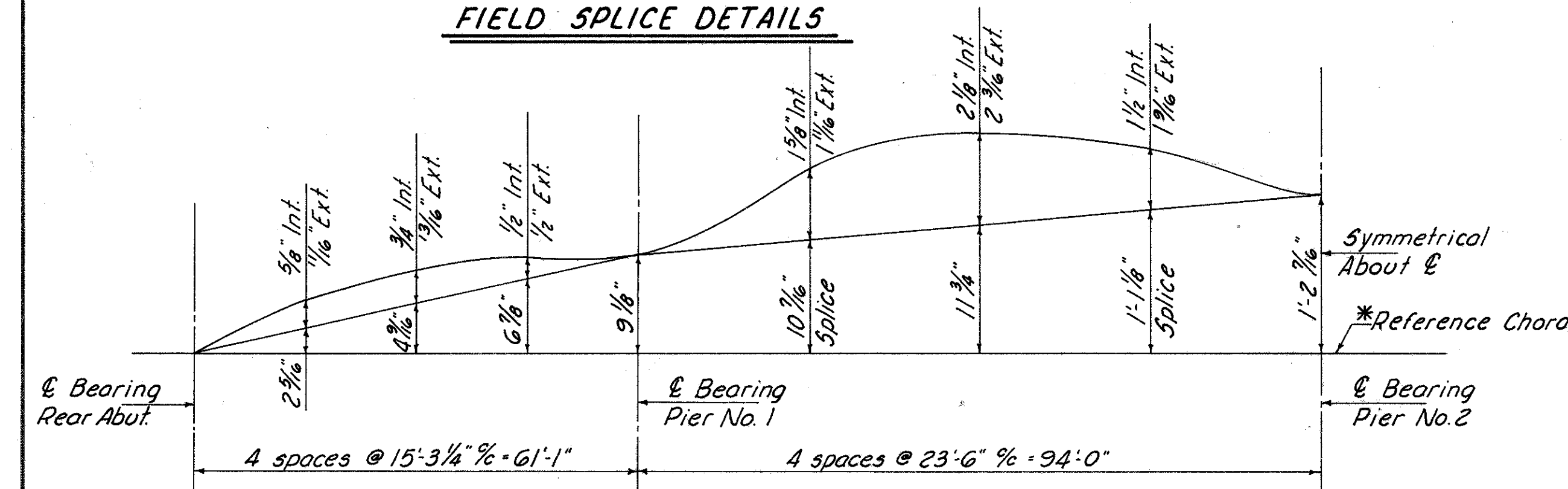
DETAIL "C"

DETAIL "B"

JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS
All of the above full penetration welds shall be back-gouged and welded after welding for side.
Butt welds on girder flange plates shall be ground flush, the finish grinding being parallel to the direction of stress.



FIELD SPLICE DETAILS

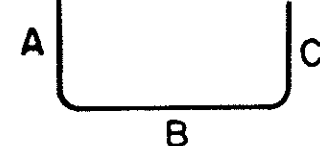


LAYOUT DIAGRAM

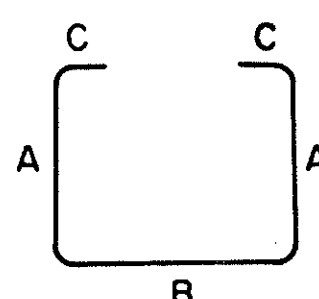
*Reference chord is a line from bottom of girder web at bearing rear abutment to bottom of girder web at bearing forward abutment.

FRANKLIN ENGINEERING, LIMITED						
Consulting Engineers				OHIO		
COLUMBUS,						
SUPERSTRUCTURE 2						
BRIDGE No. MAD.70-0715						
UNDER LAFAYETTE - PLAIN CITY ROAD						
MADISON COUNTY				I.R.7		
Sta. 377+28.82						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ROB	ROB	5	JBG	JF	3/8-86	

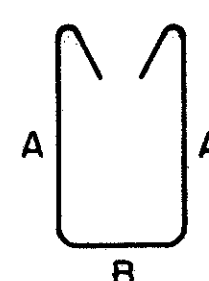
MICROFILMED
MAR 1 988



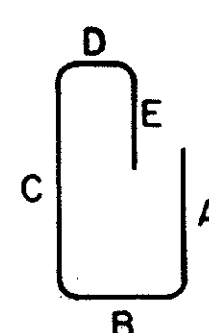
TYPE I



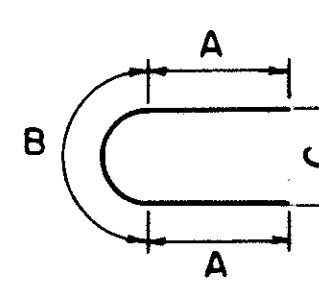
TYPE 2



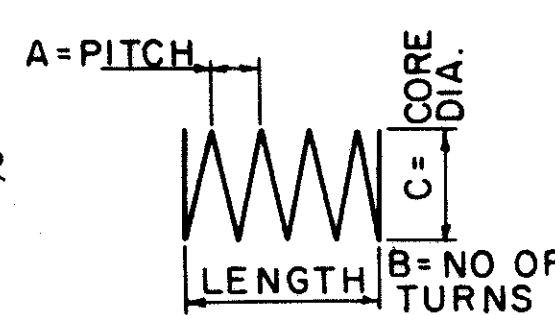
TYPE 4



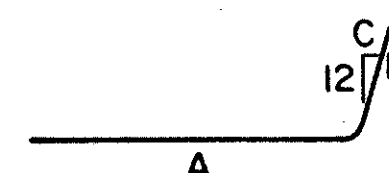
TYPE 5



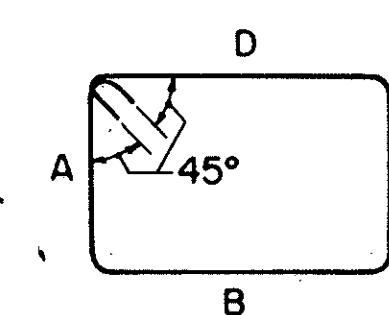
TYPE 6



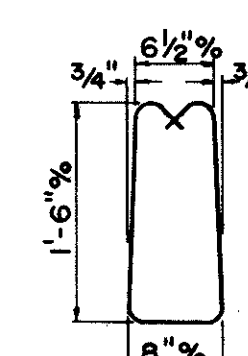
TYPE 7



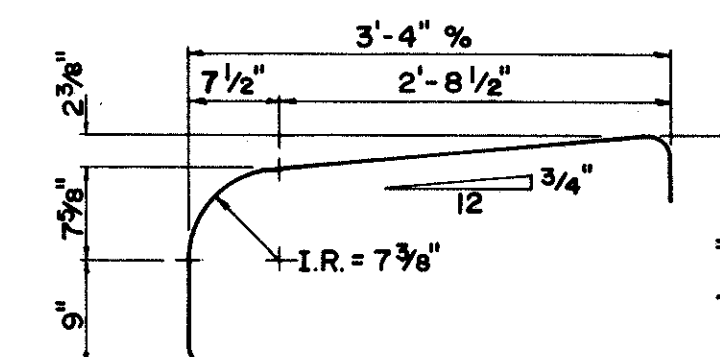
TYPE 8



TYPE 9



TYPE 10



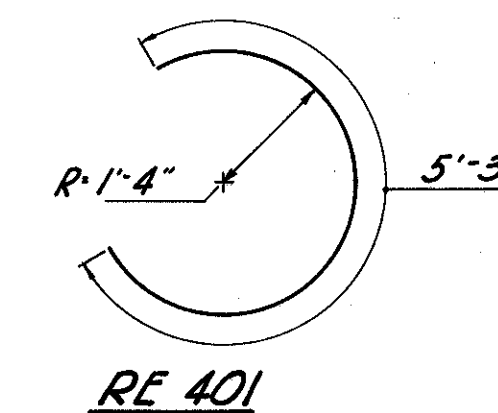
TYPE II

NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No.5 size bar and P1101 is a No.11 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation but shall in other respects conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

* Included with railing for payment.



RE 40.

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers

COLUMBUS, OHIO

REINFORCING STEEL

BRIDGE N°. MAD.-70-0715

UNDER LAFAYETTE - PLAIN CITY ROAD

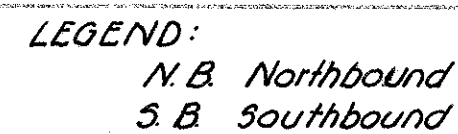
MADISON COUNTY I.R.-70

STA. 377 + 28.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
ROB	dsj	~	V.A.D.	JF	3/8-66	



Bridge Limits - 427.02'



NOTE:
ABUTMENTS: 12" ϕ cast-in-place concrete piles. Est. Aver. pay length 25'-0"
PIERS: 12" ϕ cast-in-place concrete piles. Est. Aver. pay length 25'-0"

* 6" curbs on Right side Northbound Lanes & Left side Southbound Lanes.

DESIGNED V.A.Q.	DRAWN L.B.L. 6-4-65	TRACED —	CHECKED ROB	REVIEWED JH	DATE 9/18-65	REVISED 5/14/68
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 MAR 13 1980



OHIO

1 .R.70

STA. 454+96.24						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
JBG	NCF JSL	NCF	ROB	JA	3/8-66	2/14/66

MICROFILMED
MAR 1 1968

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MAD.-70-6.25

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ESTIMATED QUANTITIES - TWO BRIDGES																	
ITEM	TOTAL TWO BRIDGES	TOTAL		UNIT	DESCRIPTION	SUPERSTRUCTURE		ABUTMENTS		PIERS		GENERAL					
		0862	0863			0862	0863	0862	0863	0862	0863	0862	0863	0862	0863	0862	0863
503	1554	777	777	Cu.Yds.	Unclassified Excavation			305	305	462	462					Revised As-Built	
505		Lump Sum			First Test Pile	498	498					Lump					
511	1032 996	516 498	516 498	Cu.Yds.	Class "C" Concrete, Superstructure	516	516										
511	149	75	74	Cu.Yds.	Class "C" Concrete, Piers above Footing					75	74						
511	372	186	186	Cu.Yds.	Class "E" Concrete, Pier Footing					186	186						
511	478	239	239	Cu.Yds.	Class "E" Concrete, Abutments	134,423	134,423	239	239								
509	369,866	184,844	185,022	Lbs.	Reinforcing Steel	196,396	196,396	15,482	15,482	33,056	33,234						
513	1,166,800	583,400	583,400	Lbs.	Structural Steel	583,400	583,400										
832	1,166,800	583,400	583,400	Lbs.	Field Painting of Structural Steel	583,400	583,400										
516	42	42	0	Sq.Ft.	1" Preformed Expansion Joint Filler (M-153)			42	0								
517	1782.38	891.19	891.19	Lin.Ft.	Bridge Railing Type 1	847.94	847.94	43.25	43.25								
512	24	24	0	Lin.Ft.	Premolded Sealing Strip			24	0								
518	20	10	10	Each	Scuppers including Supports (Type 1)	10	10										
518	138	69	69	Cu.Yds.	Porous Backfill			69	69								
518	144	72	72	Lin.Ft.	6" Helical C.M.P. (70706) Non-Perforated			72	72								
518	242	121	121	Lin.Ft.	6" Perf. Helical C.M.P. (70706) including spec.			121	121								
808	1032	516	516	Units	Water-reducing, Set-retarding Admixture	516	516										
601	1480	740	740	Sq.Yds.	Crushed Aggregate Slope Protection							740	740				
507	4850	2425	2425	Lin.Ft.	12" # Cast in Place Reinforcing Concrete Piles			700	700	1725	1725						
825	3,868	1,934	1,934	Sq.Yds.	Concrete Surface Treatment							1,934	1,934				
828	188	94	94	Lin.Ft.	Joint Sealer	94	94										

GENERAL NOTES

REFERENCE shall be made to Standard Drawings AS-1-67 (rev 1-11-68), BR-1-65 (11-24-65) sheets 1 of 2, RB-1-55 (rev 2-2-59), SD-1-65 (11-8-65) sheets 1 & 2 of 3 and Supplemental Specifications 808 (1-13-67), 811 (1-1-67), 825 (12-19-67), 828 (1-1-67), 832 (5-25-67) and 931 (5-25-67).
DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures," State of Ohio, Dept. of Highways, dated 9-1-57, together with current revisions thereof.

UNIT STRESSES: Design Loading - CF 2000 (57)
Concrete Class "C" - basic unit stress 1,333 p.s.i.
Concrete Class "E" - basic unit stress 1,133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A15, A16, A16Q, 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.

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

FIRST TEST PILE: Payment will be made for only one first test pile. It may be driven for either Southbound Bridge or Northbound Bridge.

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

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

UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owners. The contractor and owners are requested to co-operate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

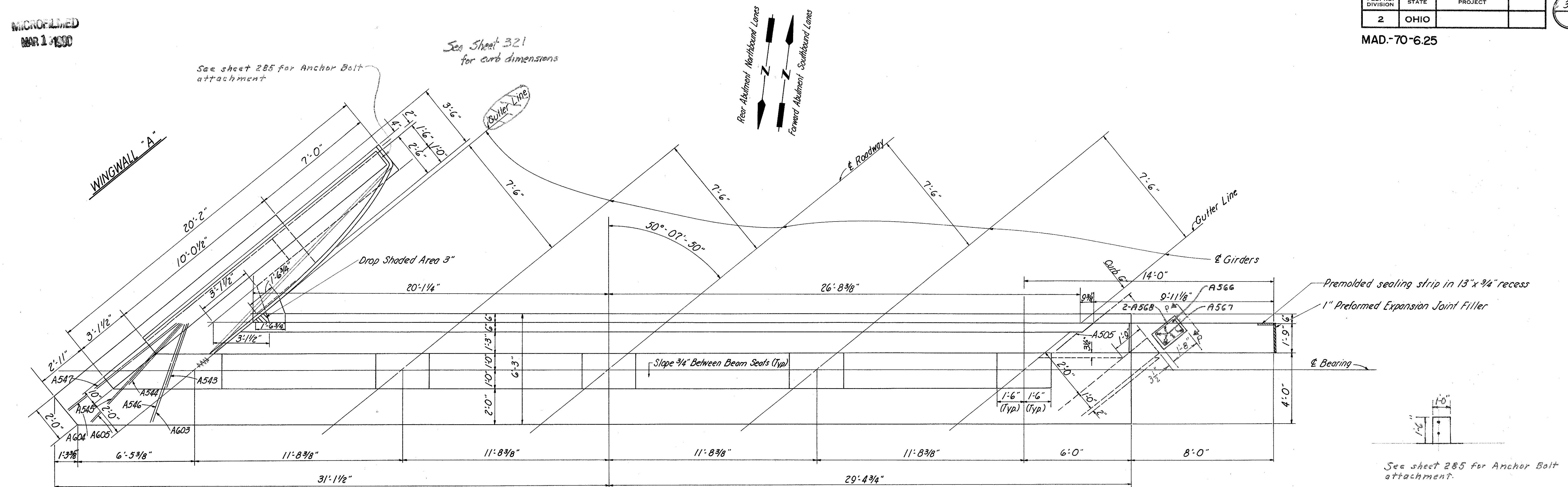
PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments and 45 tons per pile for the piers.

See sheet 286 for notes titled: Welds, Painting and Welded Attachments.

FRANKLIN ENGINEERING, LIMITED						
COLUMBUS,				Consulting Engineers		
				OHIO		
ESTIMATED QUANTITIES						
BRIDGE NO. MAD.-70-0862 & 0863						
UNDER U.S. 42						
MADISON COUNTY				STA. 454+96.24		I.R. 70
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBG	NCF	NCF	ROB	JF	8-66	5/14/68

Revised As-Built 5-6-70

MAD.-70-6.25



MICROFILMED
MAR 13, 1980

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

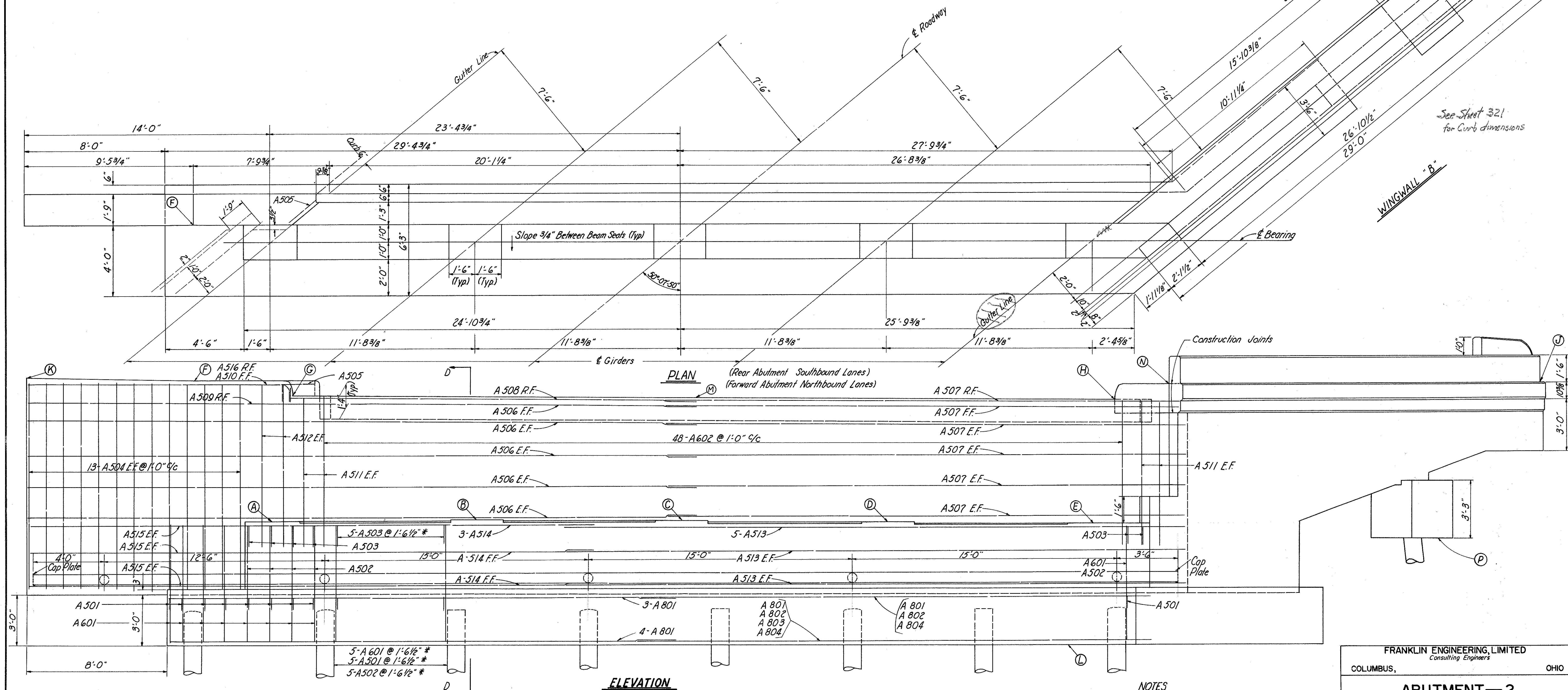
319

MAD.-70-6.25

TABLE OF ELEVATIONS															
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Rear Abutment Southbound Lanes	1013.80	1013.60	1013.40	1013.20	1012.99	1021.32	1020.46	1019.64	1020.19	1021.43	1005.96	1020.06	1020.48	1011.58	
Forward Abutment Northbound Lanes	1013.80	1013.60	1013.40	1013.20	1012.99	1021.32	1020.46	1019.64	1020.19	1021.43	1005.96	1020.06	1020.48	1011.58	

1019.62

Rear Abutment Southbound Lanes
Forward Abutment Northbound Lanes



* Typical Between Piles where
no bars are shown.

LEGEND - E.F. Each Face
R.F. Rear Face
F.F. Front Face
S.B. Southbound
N.B. Northbound

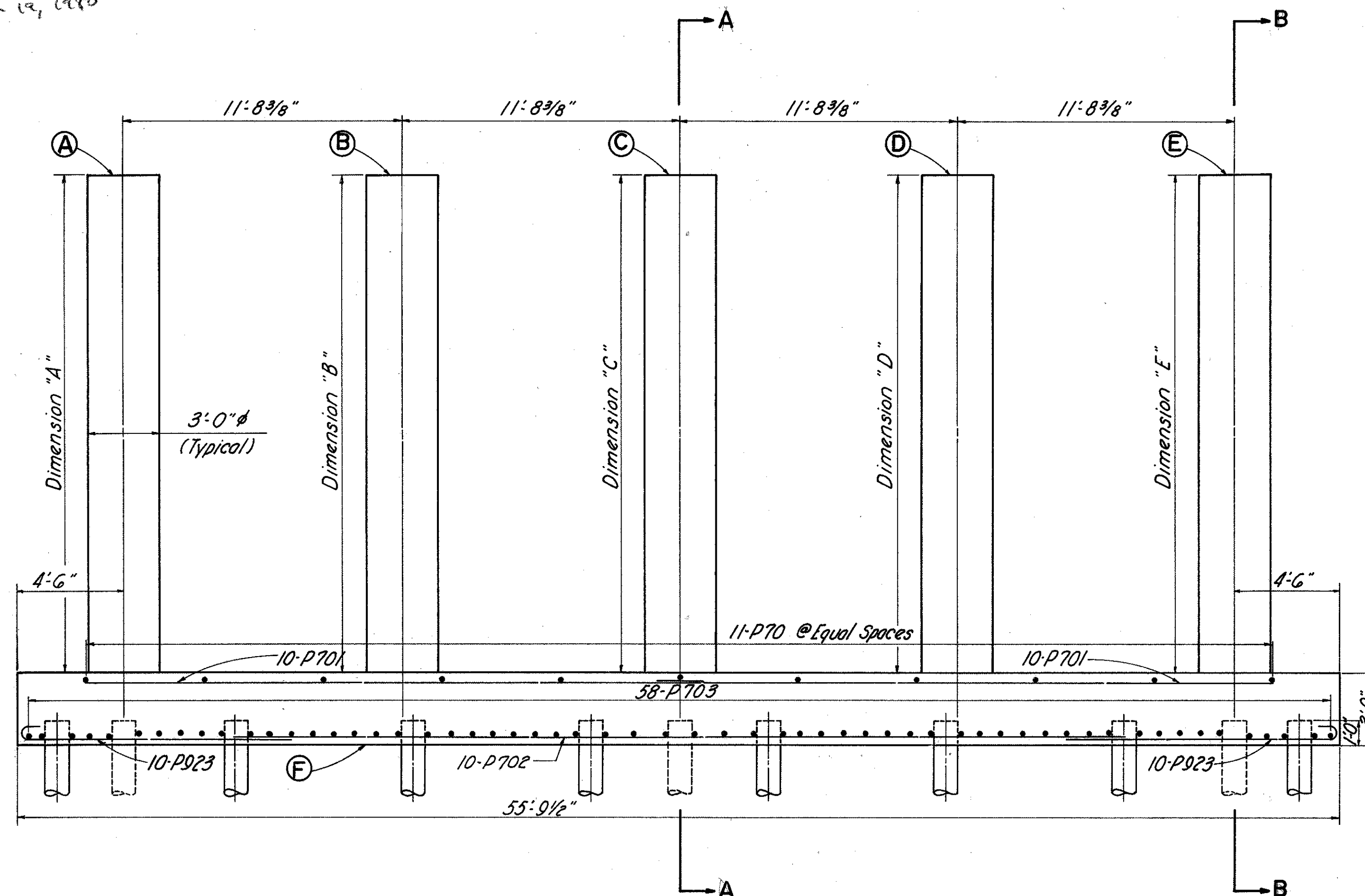
NOTES
CONCRETE: All abutment concrete shall be Class "E,"
except parapets which shall be Class "C."
POROUS BACKFILL: 1'6" thick shall extend upward to the approach
slab for the full length of the abutment. Excavation, therefore, in
excess of that required for construction of the abutment, shall be
considered as paid for in the bid price, per cu. yd. for porous backfill.
GENERAL NOTES: See Sheet 317.

Rev. 6/17/68

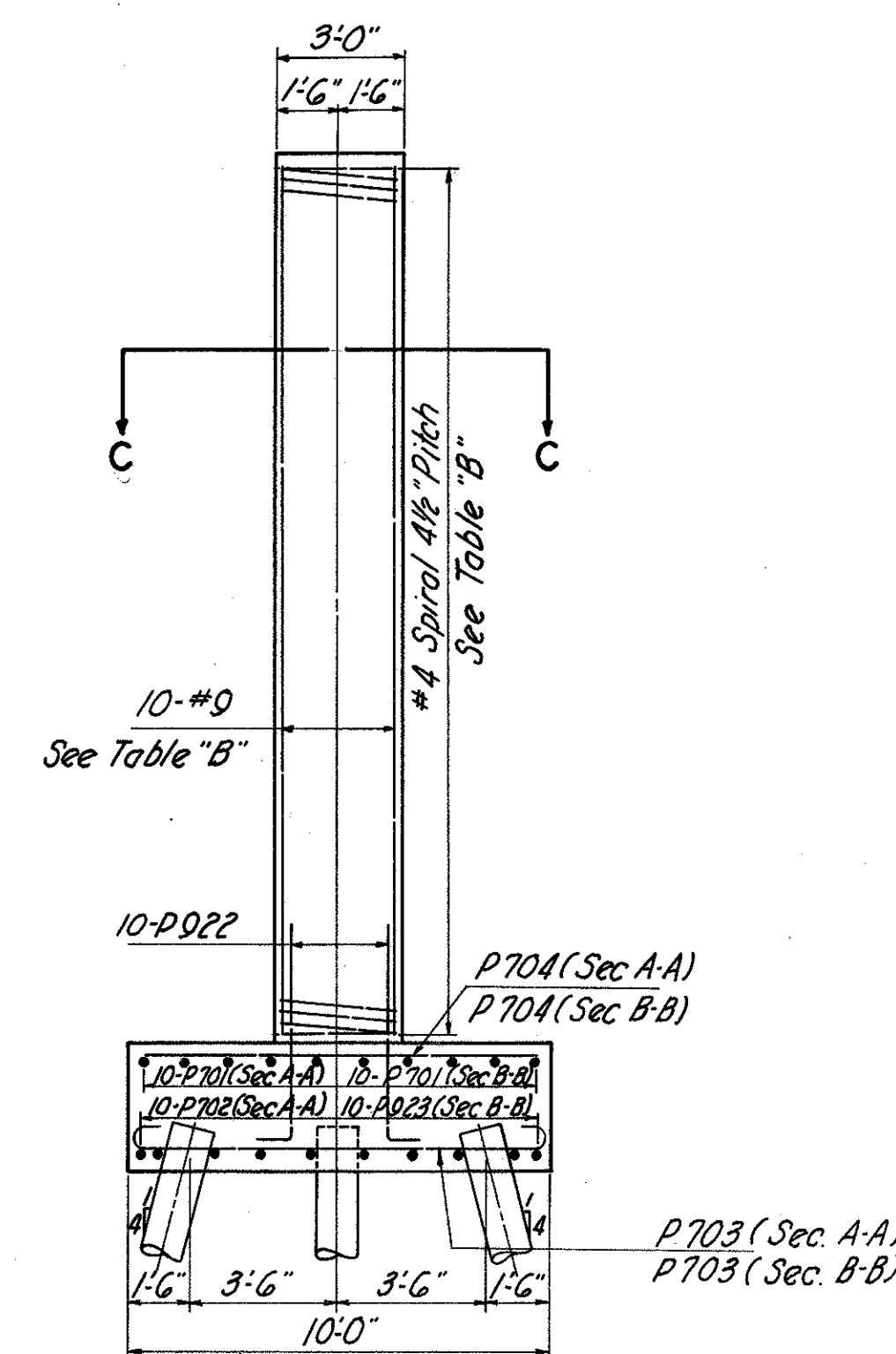
FRANKLIN ENGINEERING, LIMITED <i>Consulting Engineers</i>					
COLUMBUS,			OHIO		
ABUTMENT—2					
BRIDGE N ^o MAD.-70-0862 & 0863					
UNDER U.S. RT. 42					
MADISON COUNTY			I.R.7		
			STA. 454+96.24		
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
JBG	JBG	NCF	ROB	FF	8-66

321

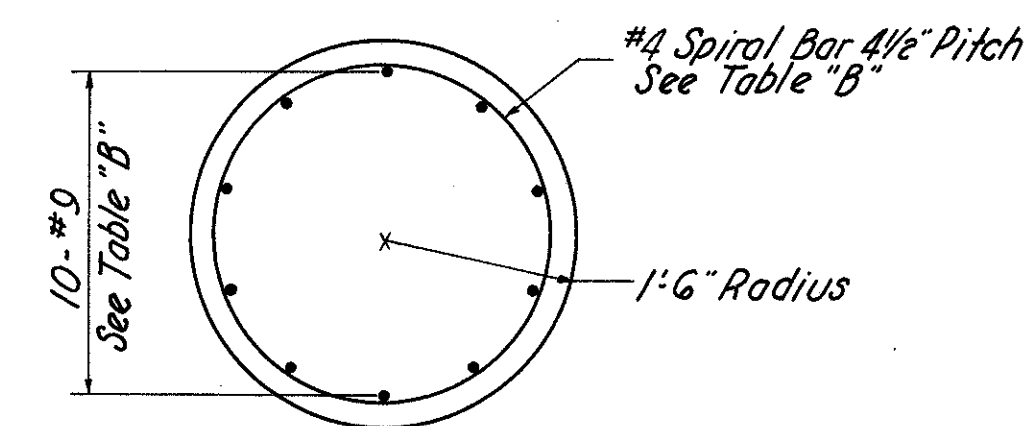
FRANKLIN ENGINEERING, LIMITED						
Consulting Engineers						
COLUMBUS,				OHIO		
ABUTMENT—4						
BRIDGE N ^o MAD.-70-0862 E 0863						
UNDER U.S. 42						
MADISON COUNTY			STA. 454+96.24		I. R. 70	
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBG	JBG	NCF	ROB	JF	2-66	5/14/66



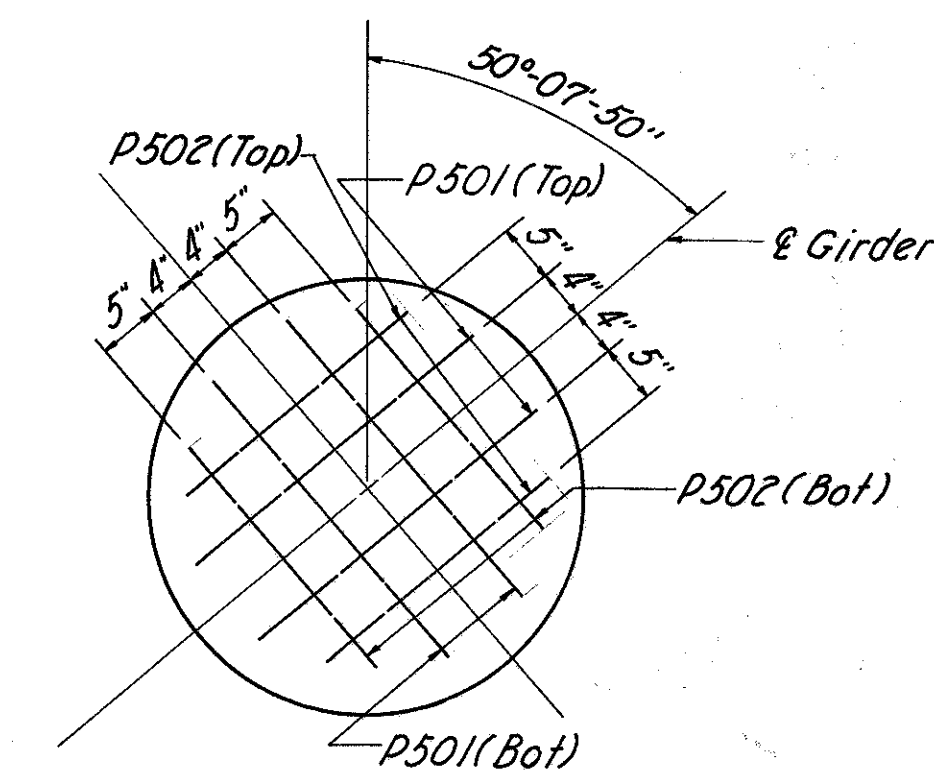
ELEVATION-PIERS I & 3



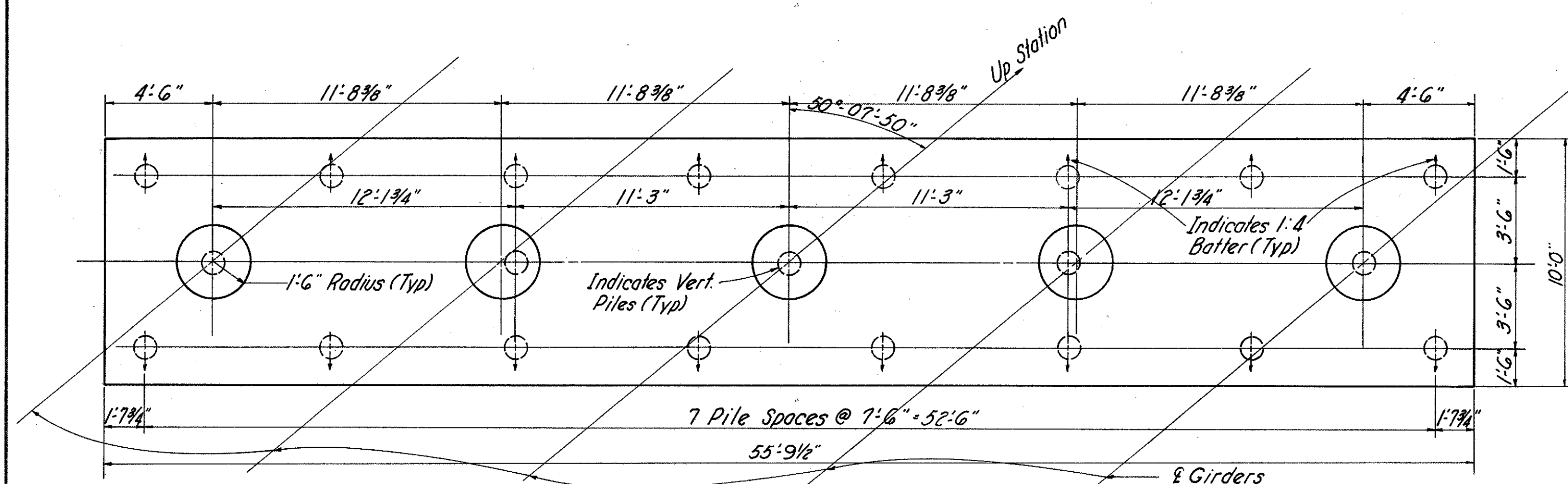
SECTION A-A & B-B



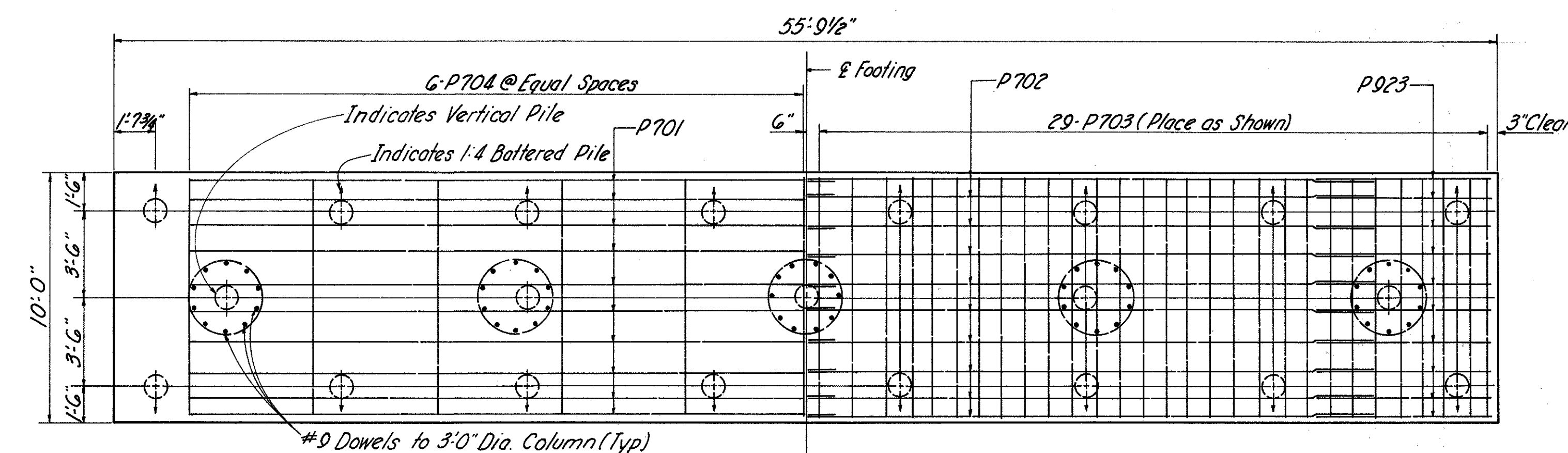
SECTION C-C



PLACEMENT OF BARS IN TOP OF COLUMN
TYPICAL SECTIONS FOR PIERS No. 1 & 3



PLAN-PIERS I § 3



STEEL IN TOP OF FOOTING

STEEL IN BOTTOM OF FOOTING

Note: Do not batter piles adjacent to the roadway embankment.

TABLE "B"

TABLE "B"																
PIER	ELEVATIONS						DIMENSIONS					SPIRAL LENGTH				
	A	B	C	D	E	F	A	B	C	D	E	A	B	C	D	E
Pier N ^o 1 Southbound Lanes	1013.12	1013.30	1013.47	1013.65	1013.81	992.22	17'-10 1/4"	18'-1"	18'-3"	18'-5 1/8"	18'-7 1/8"	SP401 & P901 17'-0"	SP402 & P902 17'-11"	SP403 & P903 18'-1"	SP404 & P904 18'-3"	SP405 & P905 18'-5"
Pier N ^o 3 Southbound Lanes	1013.60	1013.68	1013.77	1013.85	1013.92	991.37	19'-2 3/4"	19'-3 3/4"	19'-4 3/4"	19'-5 3/4"	19'-6 3/4"	SP411 & P911 19'-0"	SP408 & P908 19'-2"	SP409 & P909 19'-3"	SP410 & P910 19'-4"	SP412 & P912 19'-5"
Pier N ^o 1 Northbound Lanes	1013.92	1013.85	1013.77	1013.68	1013.60	992.06	18'-10 1/8"	18'-9 1/8"	18'-8 1/2"	18'-7 1/2"	18'-6 1/2"	SP413 & P913 18'-0"	SP414 & P914 18'-8"	SP415 & P915 18'-7"	SP416 & P916 18'-6"	SP405 & P905 18'-5"
Pier N ^o 3 Northbound Lanes	1013.81	1013.65	1013.47	1013.30	1013.12	991.12	19'-8 1/4"	19'-6 3/8"	19'-4 1/4"	19'-2 1/8"	19'-0"	SP418 & P918 10'-6"	SP408 & P908 10'-4"	SP407 & P907 10'-2"	SP411 & P911 10'-0"	SP419 & P919 18'-10"

NOTES

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

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

GENERAL NOTES: See Sheet 317.

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
LUMBUS.

PIERS 1&3

BRIDGE № MAD.-70-0862 & 0863

UNDER U.S.42

MADISON COUNTY STA: 454+96.24 I.R. 70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBG	JBG	NCF	HM	FL	3-66	

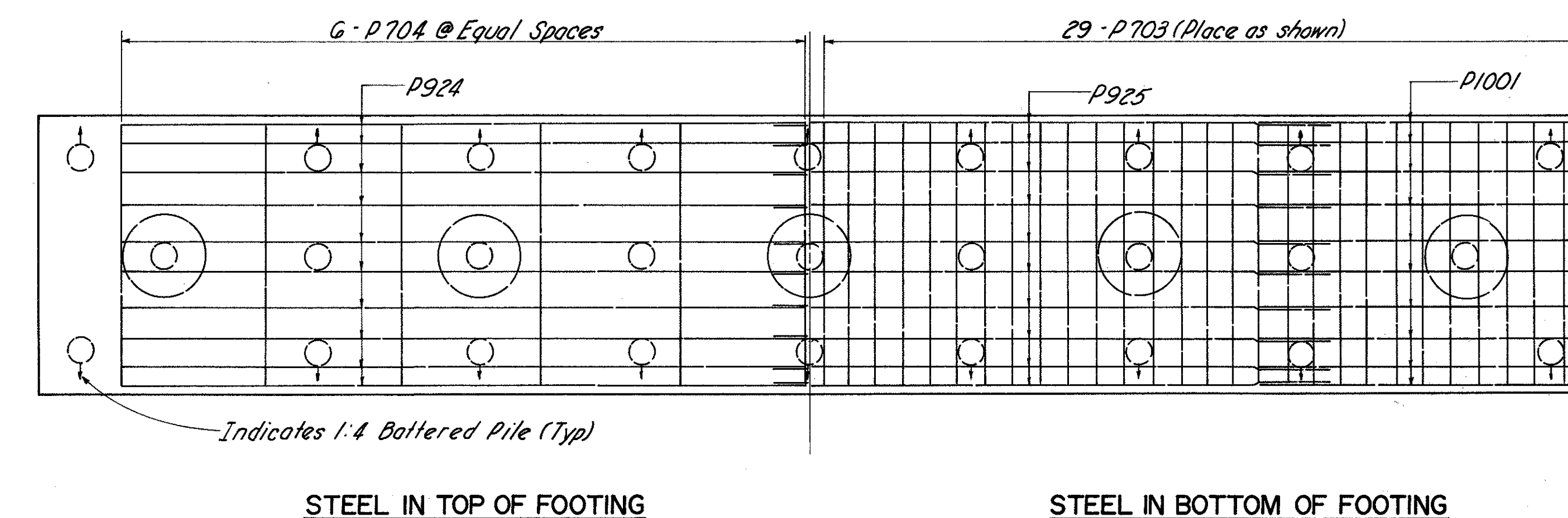
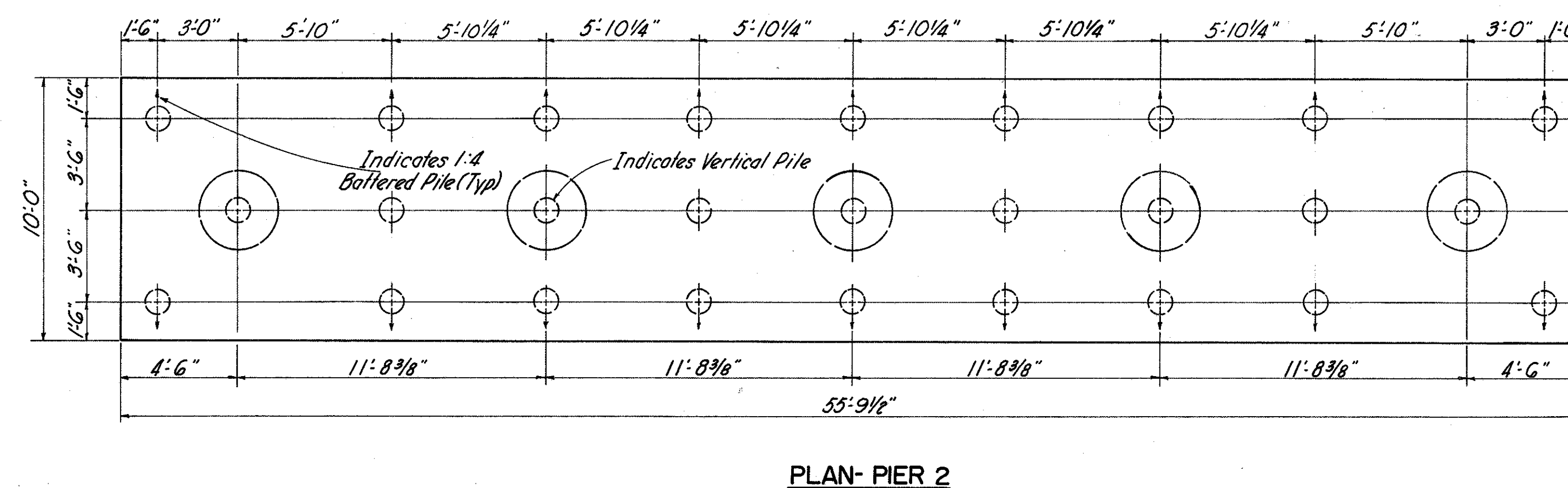
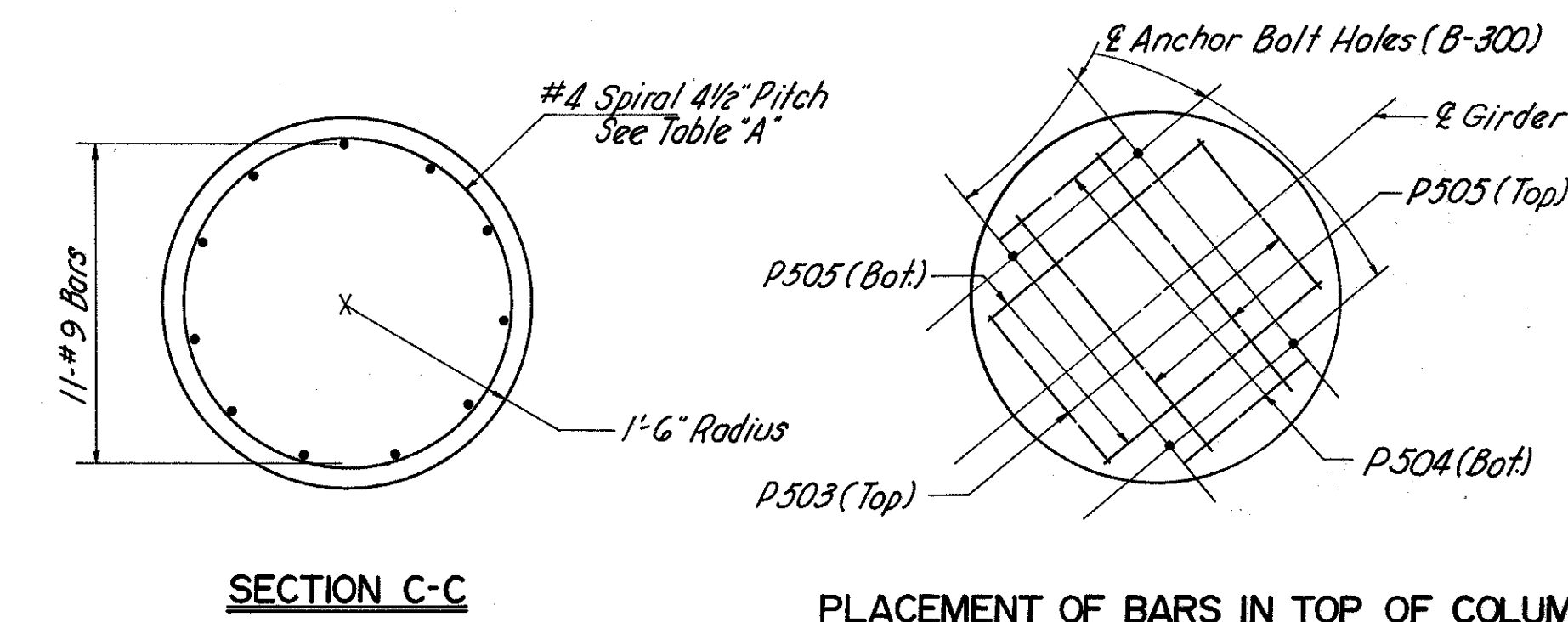
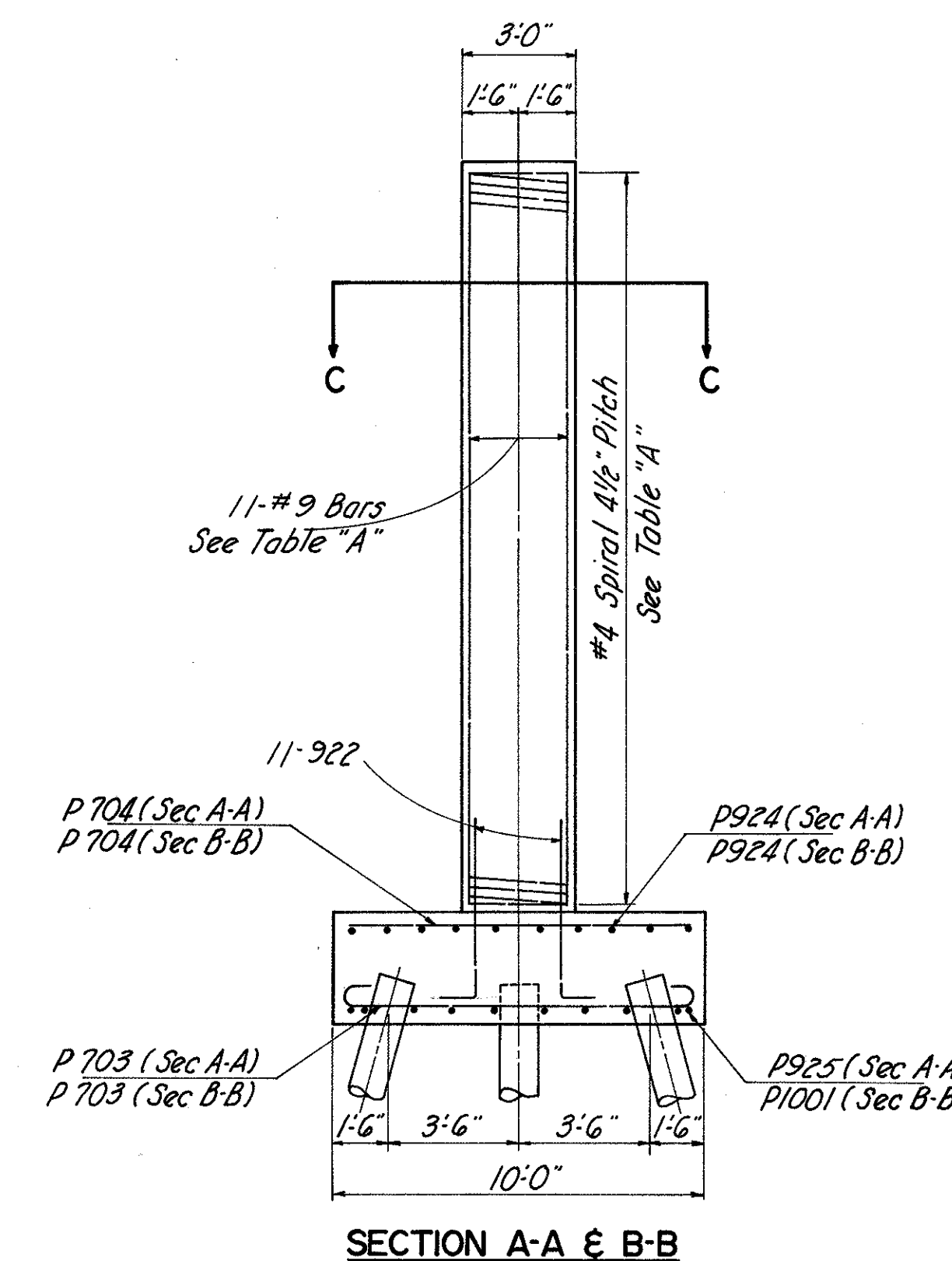
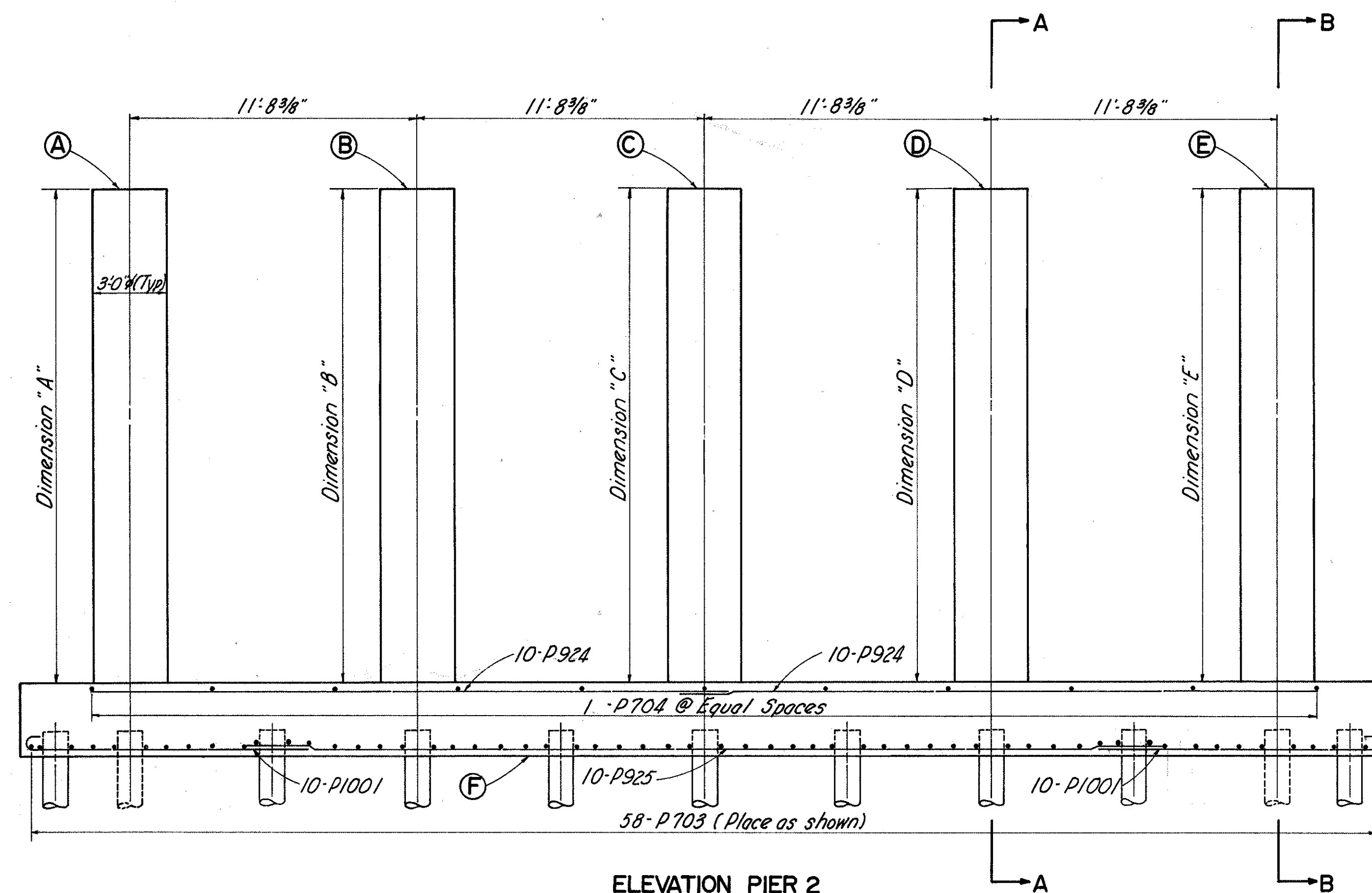


TABLE "A"

PIER	ELEVATIONS						DIMENSIONS					SPIRAL LENGTH				
	A	B	C	D	E	F	A	B	C	D	E	A	B	C	D	E
Pier No 2 Northbound Lanes	1014.07	1013.94	1013.82	1013.69	1013.56	991.12	19'-11 3/4"	19'-9 3/8"	19'-8 3/8"	19'-6 3/8"	19'-5 1/4"	SP420 & P920 19'-9"	SP406 & P906 19'-8"	SP418 & P918 19'-6"	SP410 & P910 19'-5"	SP408 & P908 19'-3"
Pier No 2 Southbound Lanes	1013.56	1013.69	1013.82	1013.94	1014.07	991.37	19'-2 1/4"	19'-3 3/8"	19'-5 3/8"	19'-6 3/8"	19'-8 3/8"	SP411 & P911 19'-0"	SP407 & P907 19'-2"	SP408 & P908 19'-3"	SP410 & P910 19'-5"	SP418 & P918 19'-6"

NOTES

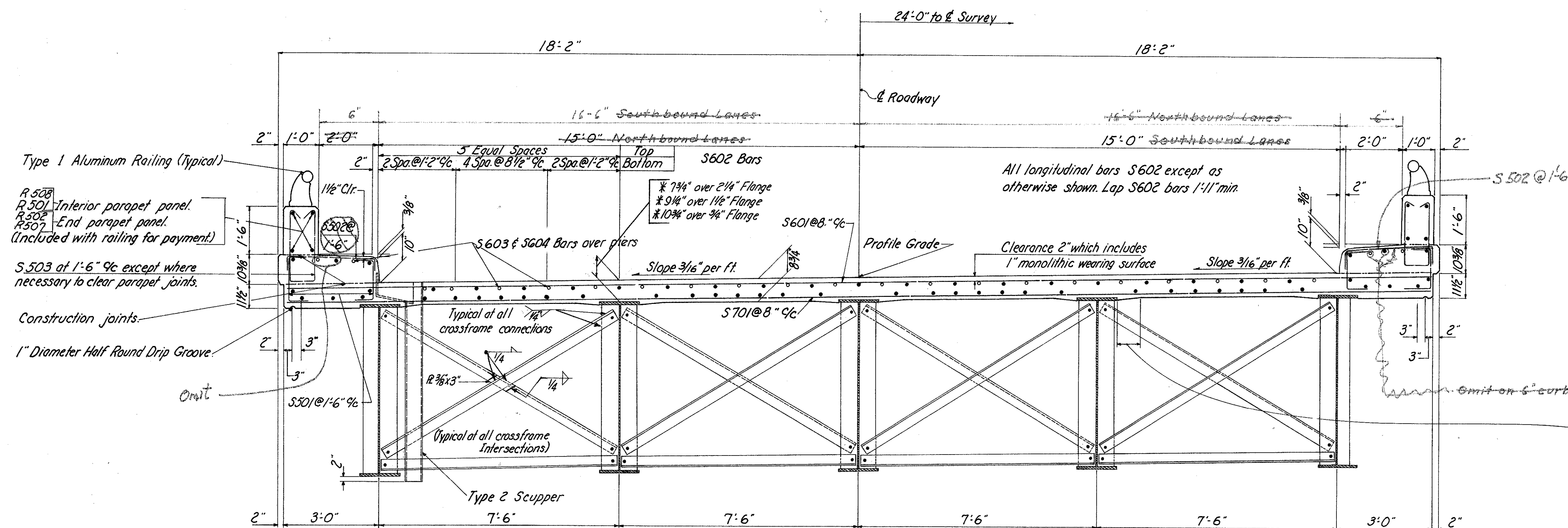
CONCRETE: All concrete for piers footings shall be Class "E." All concrete above top of footings shall be Class "C."

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

GENERAL NOTES: See sheet 317.

FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO					
PIER-2 BRIDGE No MAD-70-0862 & 0863 UNDER U.S. 42					
MADISON COUNTY	STA. 454+96.24	I.R.70			
DESIGNED JBG	DRAWN JBG	TRACED N.C.F.	CHECKED H.M.	REVIEWED J.F.	DATE 3-66

MAD.-70-6.25



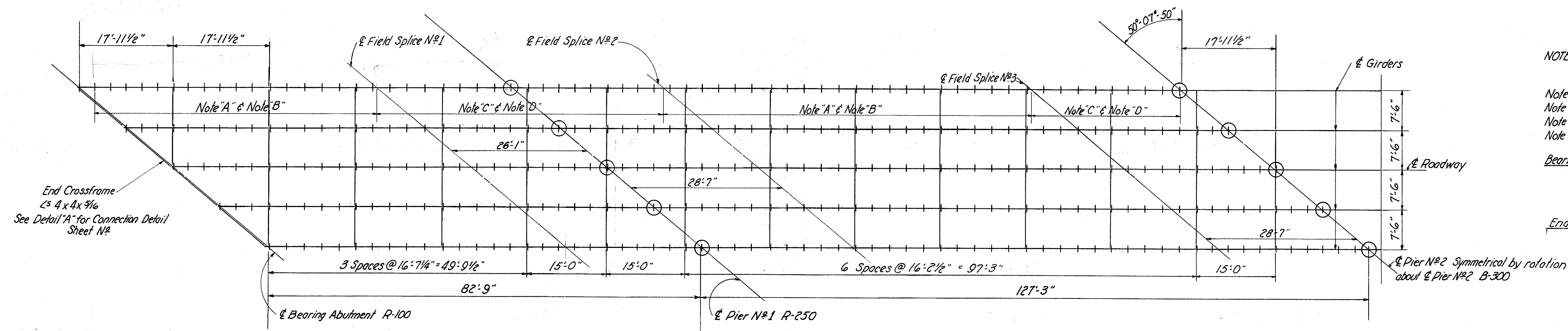
* These are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions even though deviation from them may be necessary because the top flange of the girder may not have the exact camber or conformation required to place it parallel to the finished grade. Deduction shall be made for volume of encased steel plates as per Sec. 511.19 of the Construction and Material Specifications."

Intermediate crossframe angles 3"x3"x 5/16". Use 7/8" ϕ H.S. Bolts for connection

All Intermediate Web Stiffeners are Plates 6" x 3/8" x 4'-9"
If 7/8" ϕ erection bolts are left in place tack weld nuts.

A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 6" to 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" wide.

TRANSVERSE SECTION



NOTE: All transverse stiffeners are placed at equal spacing between crossframes. Offset stiffeners where necessary to clear field splices.

Note A - Top of web stiffeners contact bearing

Note B - Bottom of web stiffeners $\frac{1}{8}$ " open.

Note C - Top of web stiffeners $1/8"$ open.

Note D- Bottom of web stiffeners contact bearing

Bearing: See RR-1-5.5 (2-2-50)

Quantity: See RD-755 (C)
R-100 - Abutments

R-250 - Piers No 1 & 3

B:300 - Pier N^o 2

End Crossframes, End Dams, Scuppers, Curb Plate Details:
Sec SD-1-65(11-8-65) sheets 162 of 3

rotation

HALF FRAMING PLAN

NOTE: The contractor shall submit to the Director, for approval, 3 prints showing the proposed erection procedure.

FRANKLIN ENGINEERING, LIMITED
Consulting Engineers
COLUMBUS.

SUPERSTRUCTURE-1

BRIDGE N° MAD.-70-0862 & 0863

UNDER U.S. RT. 42

MADISON COUNTY STA. 454+96.24

I.R. 70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JBG	JBG	NCF	V.A.W.	JF	3/8-66	5/14/68

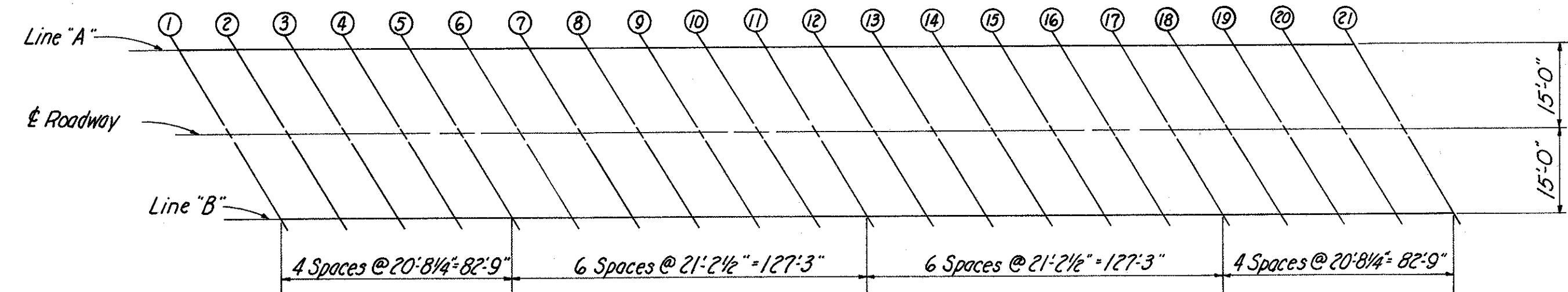
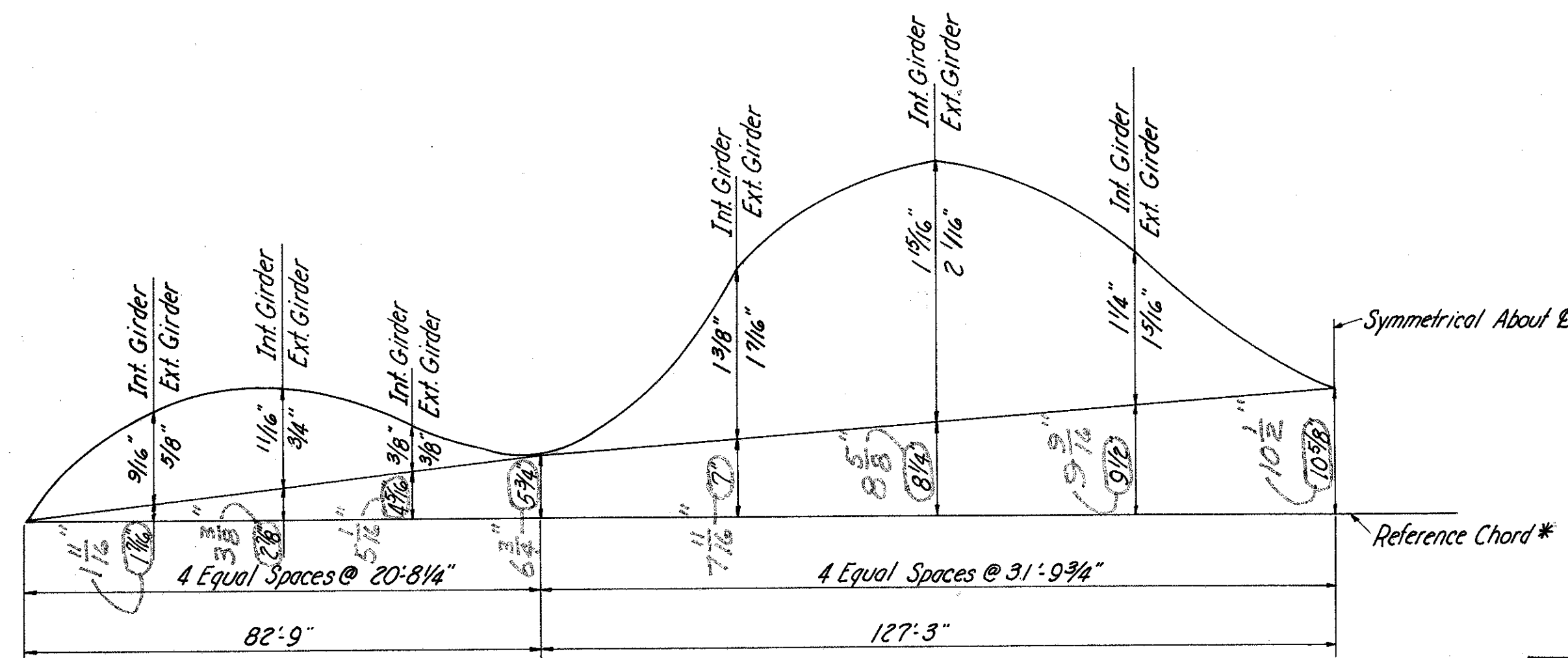
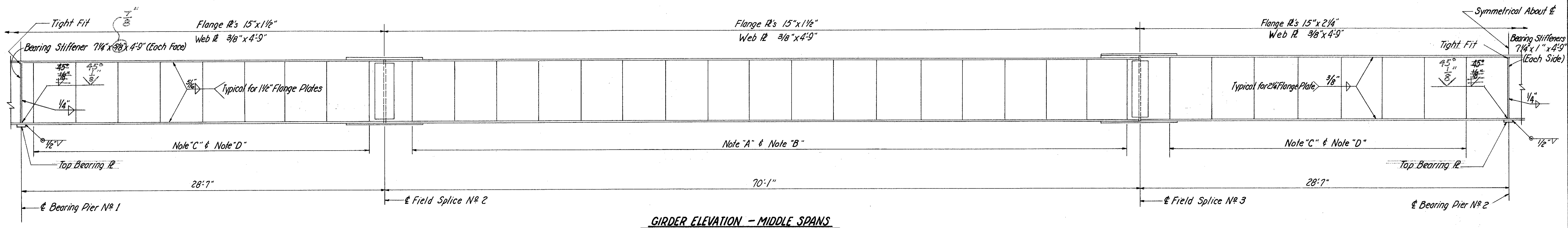
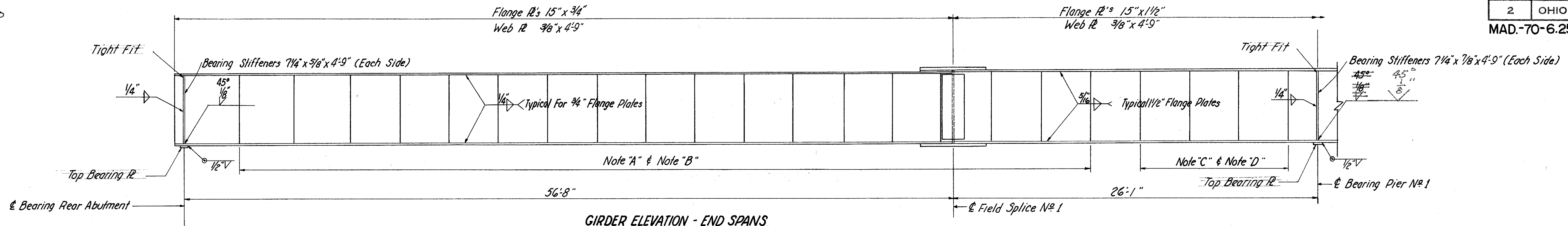
REV 6/17/68

MICROFILMED
MAR 13 1980

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MAD-70-6.25

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SCREED LOCATION DIAGRAM

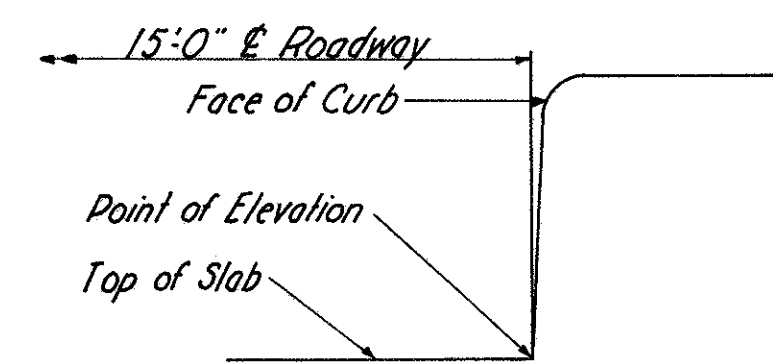
LAYOUT DIAGRAM

DEFLECTION AND CAMBER — NORTHBOUND AND SOUTHBOUND LANES												
	INTERIOR GIRDERS						EXTERIOR GIRDERS					
	END SPANS			MIDDLE SPANS			END SPANS			MIDDLE SPANS		
	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.	1/4 Pt.	1/2 Pt.	3/4 Pt.
Deflection due to Weight of Steel	0"	0"	0"	1/8"	3/16"	1/8"	0"	0"	0"	1/8"	3/16"	1/8"
Deflection due to Remaining Dead Load	1/4"	1/4"	1/16"	1/2"	3/4"	3/8"	3/16"	3/16"	1/16"	9/16"	7/8"	7/16"
Convexity Required for Vertical Curve	5/16"	7/16"	5/16"	3/4"	1"	3/4"	5/16"	7/16"	5/16"	3/4"	1"	3/4"
Sum of Deflection and Convexity	9/16"	1 1/16"	3/8"	1 3/8"	1 9/16"	1 1/4"	3/8"	3/4"	3/8"	1 7/16"	2 1/16"	1 5/16"

SCREED ELEVATIONS																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Screed Line "B" - Northbound	1019.66	1019.88	1020.07	1020.22	1020.37	1020.54	1020.69	1020.80	1020.87	1020.90	1020.93	1020.98	1021.03	1021.04	1021.01	1020.94	1020.85	1020.77	1020.70	1020.59	1020.44
Screed Line "A" - Southbound	1020.47	1020.66	1020.82	1020.94	1021.06	1021.21	1021.32	1021.40	1021.44	1021.44	1021.44	1021.46	1021.47	1021.45	1021.39	1021.29	1021.17	1021.07	1020.97	1020.83	1020.65

NOTE: Screed Elevations Corrected for Concrete Dead Load Deflection.

* Reference Chord is line from bottom of girder @ Bearing Rear Abutment to bottom of girder @ Bearing Forward Abutment.



DETAIL SHOWING POSITION OF SCREED ELEVATION

Note A - Top of web stiffeners contact bearing
Note B - Bottom of web stiffeners 1/8" open.
Note C - Top of web stiffeners 1/8" open.
Note D - Bottom of web stiffeners contact bearing

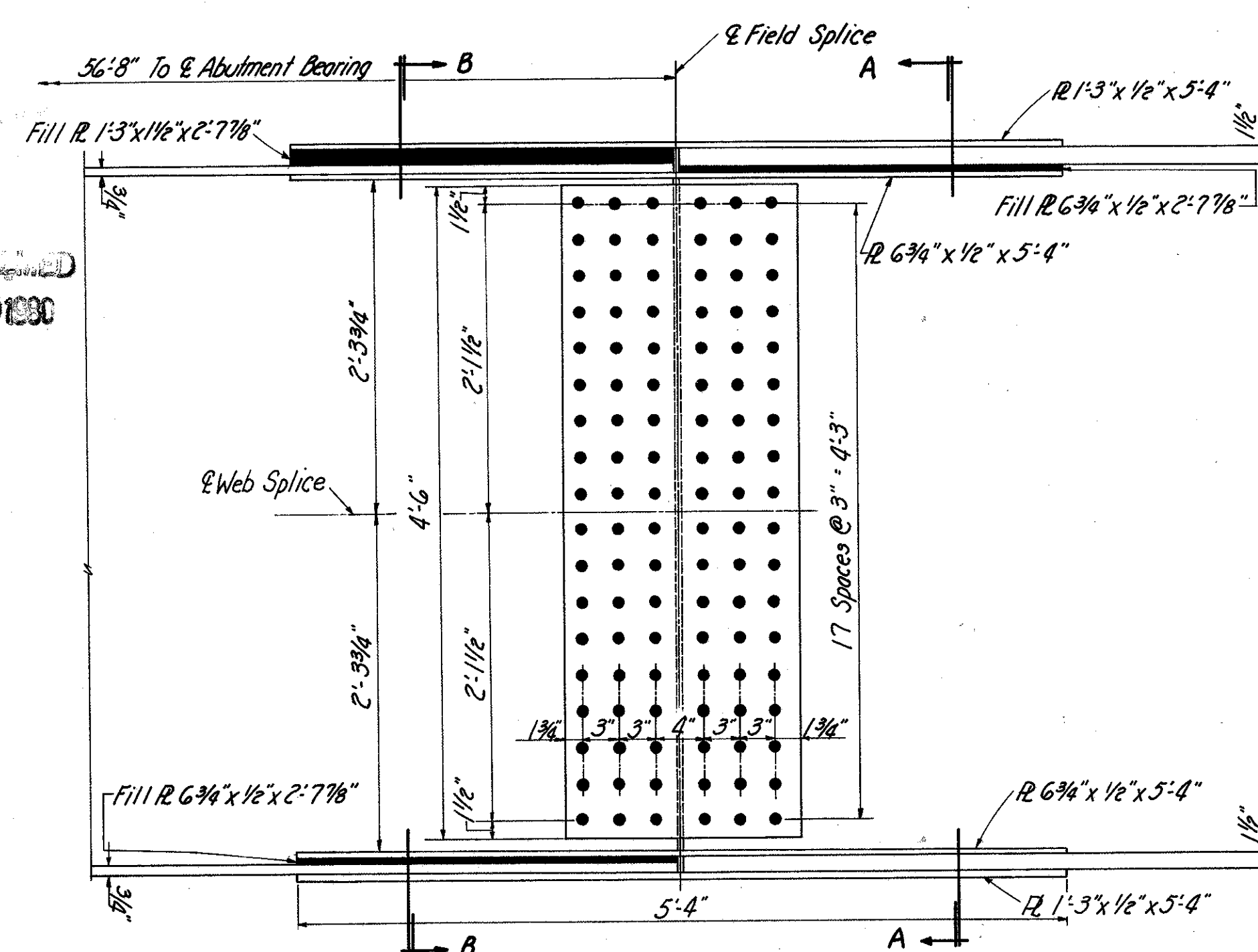
FRANKLIN ENGINEERING, LIMITED									
COLUMBUS,					OHIO				
SUPERSTRUCTURE-2									
BRIDGE N ^o MAD.-70-0862 & 0863									
UNDER U.S.42									
MADISON COUNTY					I. R. 70				
STA. 454+96.24									
DESIGNED	DRAWN	CHECKED	TRACED	REVIEWED	DATE	REVISOR	DATE	REVISOR	DATE
JBG	JBG	VAD	NCF	JF	7-8-66				

326

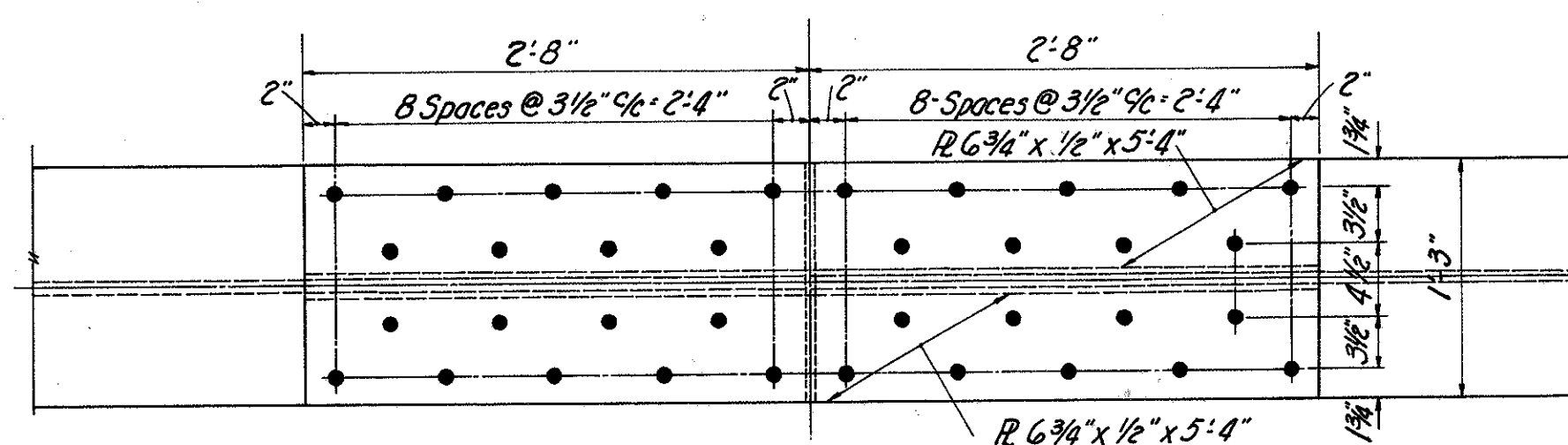
FRANKLIN ENGINEERING, LIMITED Consulting Engineers					
COLUMBUS,		OHIO			
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MADISON COUNTY				I.R. 7	
STA. 454+96.24					
DESIGNED JBG	DRAWN JBG	TRACED NCF	CHECKED J.A.D.	REVIEWED FJ	DATE 3-8-66

MAD-70-625

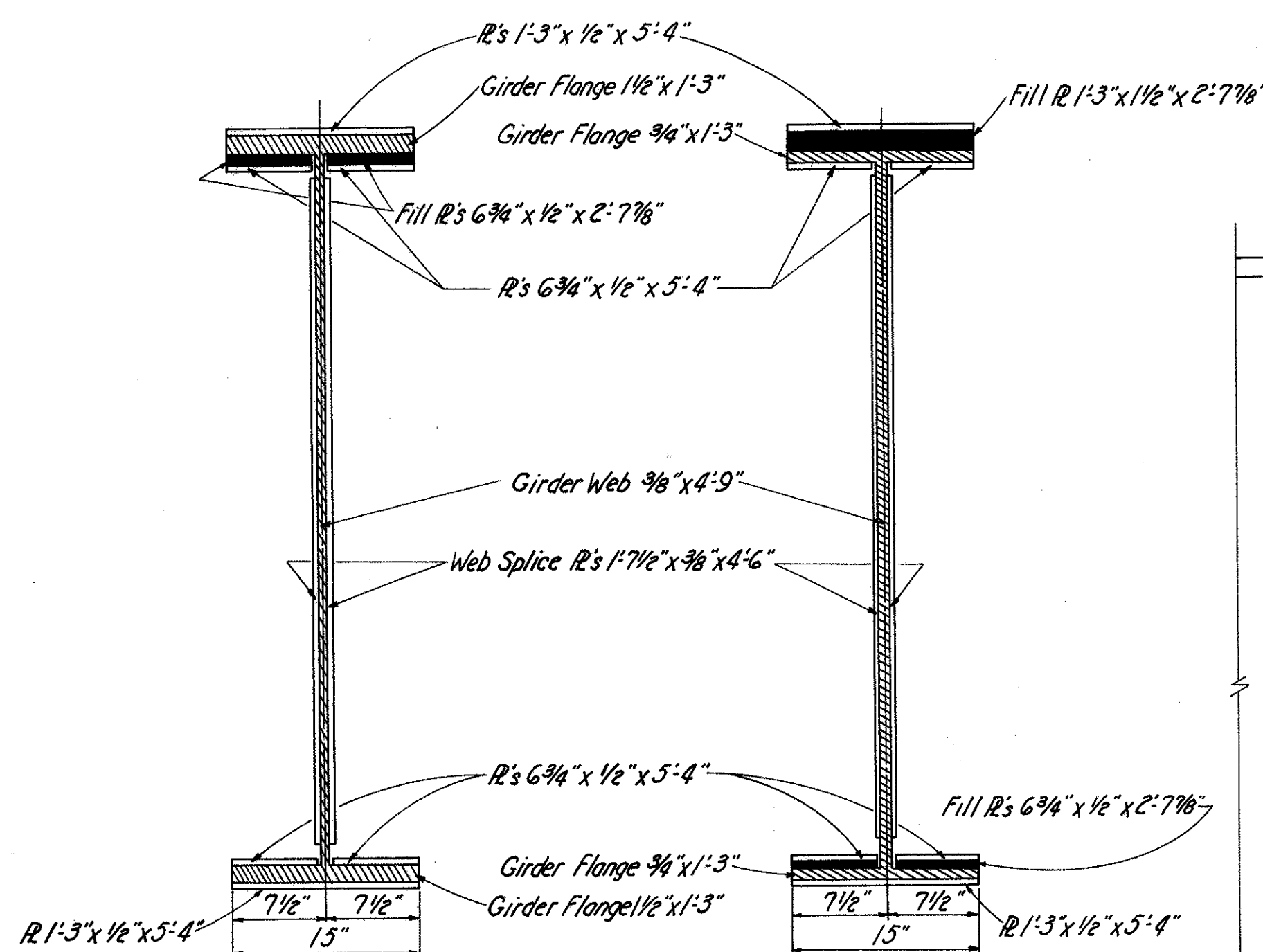
MAR 1 1960



ELEVATION
FIELD SPLICE N^o 1

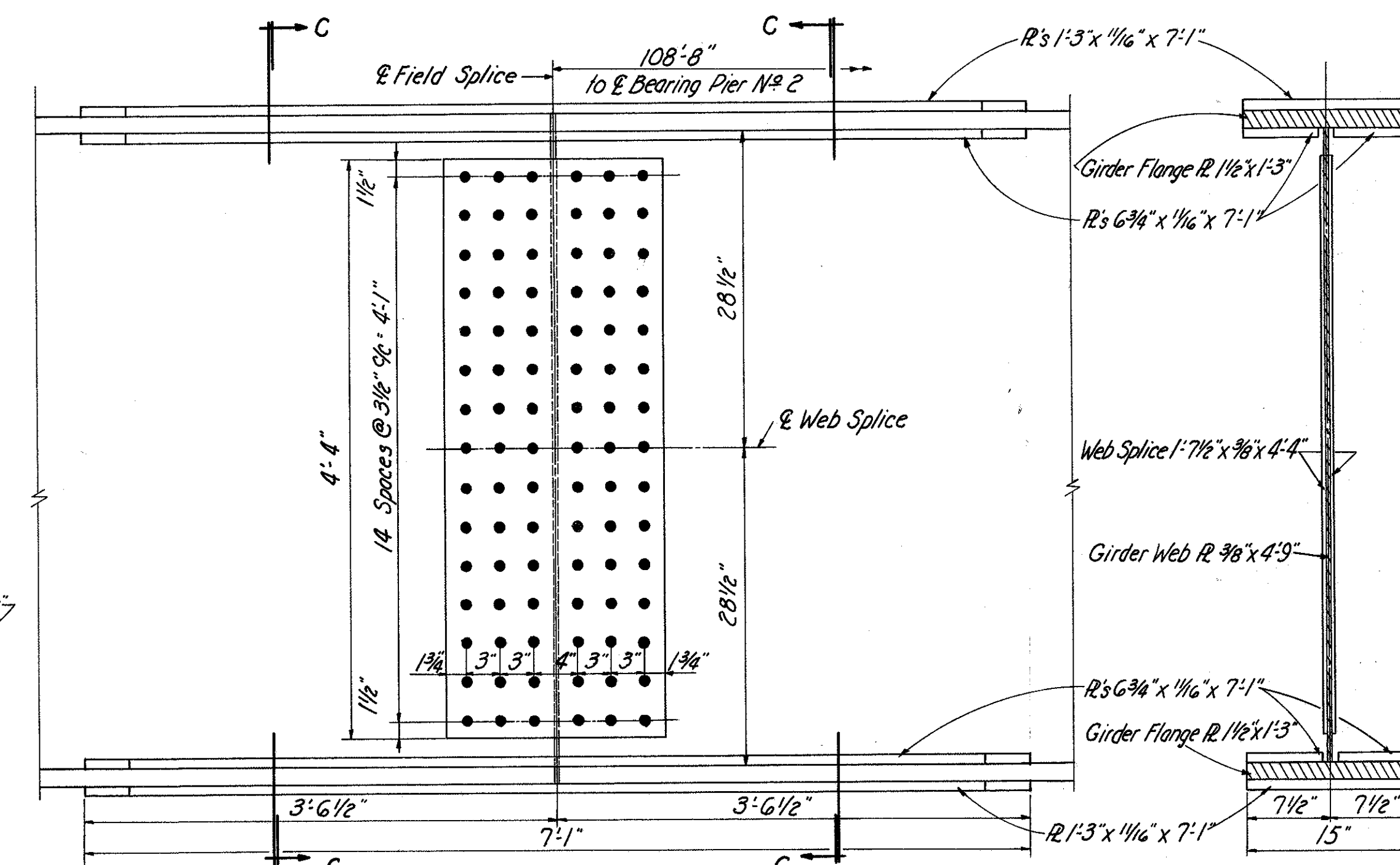


PLAN
FIELD SPLICE N^o 1

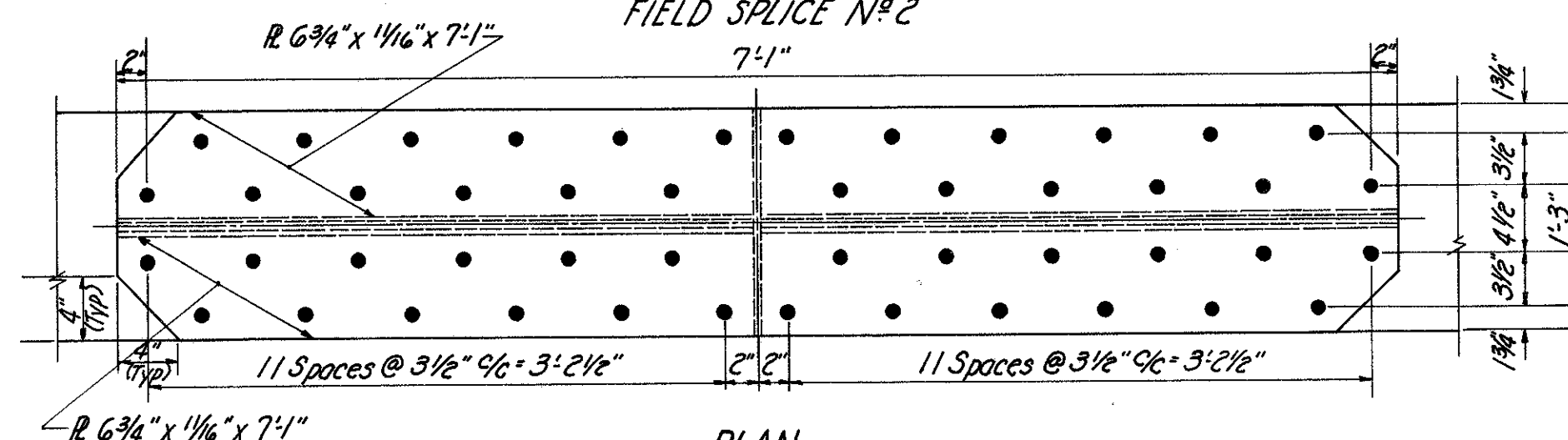


SECTION A-A

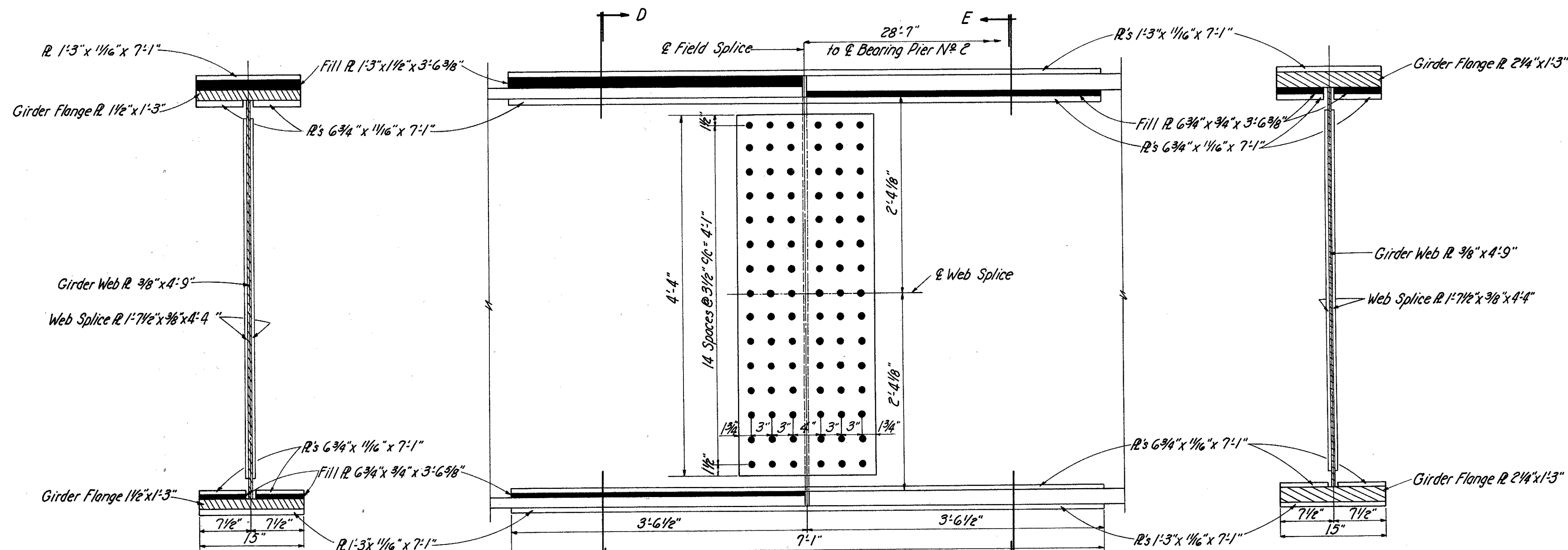
SECTION B-B



ELEVATION
FIELD SPLICE N^o 2



PLAN
FIELD SPLICE N^o 2
FIELD SPLICE N^o 3



SECTION D-D

SECTION E-E

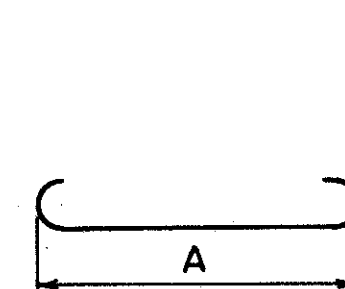
ELEVATION
FIELD SPLICE N^o 3

NOTE:

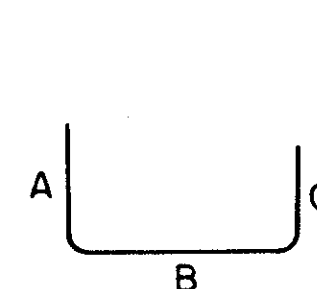
All holes 9/16" ϕ for 3/8" ϕ high strength bolts.

FRANKLIN ENGINEERING, LIMITED										
COLUMBUS,			Consulting Engineers		OHIO					
FIELD SPLICE DETAILS										
BRIDGE N ^o MAD- 70-0862 E 0863										
UNDER U.S. 42										
MADISON COUNTY			Sta. 454+96.24		I. R. 70					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED				
JBG	JBG	NCF	Y.A.D.	JG	7-8-66					

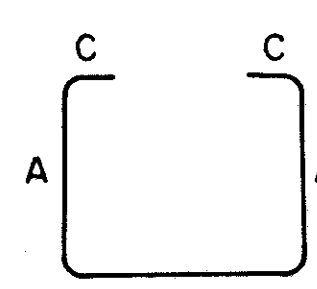
MAD.-70-6.25



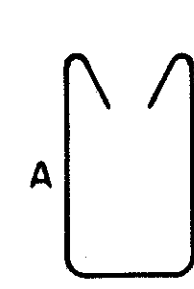
TYPE I



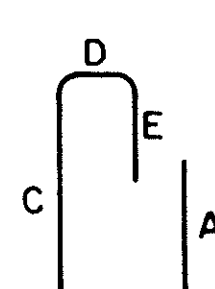
TYPE 2



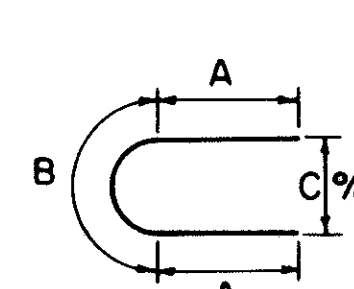
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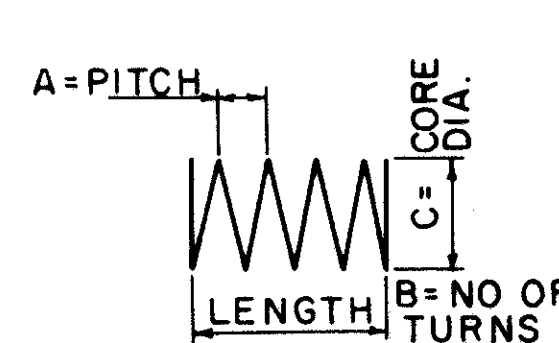
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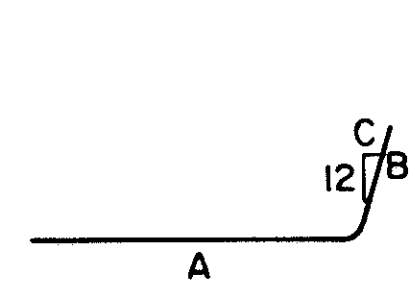
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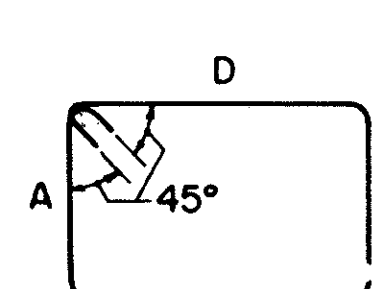
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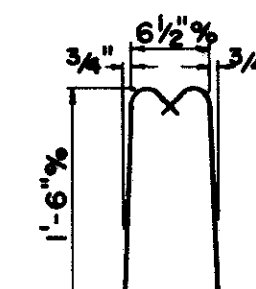
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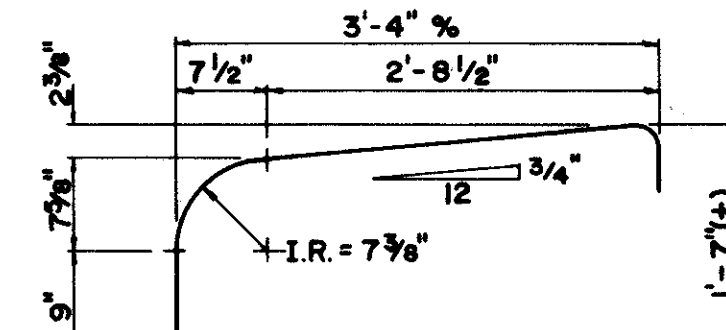
TYPE 8



TYPE 9



TYPE 10



TYPE II

REAR ABUTMENT SOUTHBOUND BRIDGE AND FORWARD ABUTMENT NORTHBOUND BRIDGE										REAR ABUTMENT NORTHBOUND BRIDGE AND FORWARD ABUTMENT SOUTHBOUND BRIDGE										SUPERSTRUCTURE NORTHBOUND AND SOUTHBOUND BRIDGES									
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT
A 501	78	8'-4"	2	1'-7"	5'-5"	1'-7"			678	A 501	84	8'-4"	2	1'-7"	5'-5"	1'-7"			730	S 501	2260	2'-4"	2	7 1/2"	1'-4"	7 1/2"			5500
A 502	70	7'-0"	8	6'-6"	8"	0"			512	A 502	78	7'-0"	8	6'-6"	8"	0"			570	S 502	551130	3'-6"	2	7 1/2"	2'-6"	7 1/2"			2063 4126
A 503	72	8'-0"	2	2'-5"	3'-5"	2'-5"			600	A 503	74	8'-0"	2	2'-5"	3'-5"	2'-5"			618	S 503	1172	5'-7"	4	2'-2"	8"				6824
A 504	52	12'-0"	Str.						650	A 505	2	3'-8"	2	1'-3"	1'-5"	1'-3"			8										
A 505	2	3'-8"	2	1'-3"	1'-5"	1'-3"			8	A 523	8	8'-7"	8	8'-1"	8"	0"			72	S 601	1146	35'-8"	Str.						61392
A 506	18	38'-0"	Str.						714	A 527	28	11'-10"	9	2'-7"	3'-2"	2'-7"	3'-2"		346	S 602	1964	31'-11"	Str.						83322 84564
A 507	20	29'-8"	Str.						618	A 528	2832	3'-3"	2	1'-10"	1'-6"	1'-10"		108 124	S 603	144	40'-0"	Str.						8391 8652	
A 508	2	21'-3"	Str.						44	A 529	4	5'-7"	2	2'-2"	1'-6"	2'-2"			24	S 604	144	13'-0"	Str.						2812
A 509	2	16'-9"	Str.						34	A 530	4	5'-5"	2	1'-4"	3'-0"	1'-4"			22	S 605	20	6'-0"	Str.						180
A 510	2	15'-11"	8	14'-10"	1'-3"	0"			34	A 531	2	9'-11"	2	4'-6"	1'-2"	4'-6"			20	S 606	204	(1)	Str.	(4 sets of 5/16 bars)					6256
A 511	16	7'-9"	Str.						130	A 532	4	7'-11"	2	3'-6"	1'-2"	3'-6"			34										
A 512	8	9'-1"	Str.						76	A 533	2	6'-4"	2	3'-6"	1'-2"	1'-11"			14	S 701	1146	35'-8"	Str.						83546
A 513	18	32'-5"	Str.						608	A 534	20	5'-7"	4	2'-2"	8"			116	S 702	204	(1)	Str.	(4 sets of 5/16 bars)						8514
A 514	10	20'-3"	Str.						212	A 535	2	13'-4"	8	12'-3"	1'-3"	0"			28	S 703	20	6'-0"	Str.						246
A 515	12	37'-3"	Str.						466	A 536	2	10'-10"	8	9'-9"	1'-3"	0"			22										
A 516	2	17'-3"	8	16'-2"	1'-3"	0"			36	A 537	48	11'-4"	Str.						568	R 501	200	15'-6"	Str.						*
A 517	8	26'-6"	Str.						222	A 538	18	38'-0"	Str.						714	R 502	16	12'-6"	Str.						*
A 518	4	20'-0"	Str.						84	A 539	20	26'-3"	Str.						548	R 503	12	4'-2"	10	1'-6"	8"	6 1/2"			*
A 519	12	13'-2"	Str.						164	A 540	18	35'-8"	Str.						670	R 504	8	5'-4"	11						*
A 520	4	11'-1"	Str.						46	A 541	10	19'-9"	Str.						206	R 505	8	3'-5"	4	1'-1"	8"				*
A 521	4	13'-0"	Str.						54	A 542	12	32'-3"	Str.						404	R 506	8	3'-0"	Str.						*
A 522	8	3'-9"	Str.						32	A 543	2	6'-7"	2	1'-7"	3'-8"	1'-7"			14	R 507	16	16'-6"	Str.						*
A 523	8	8'-7"	8	8'-1"	8"	0"			72	A 544	2	7'-5"	2	1'-7"	4'-6"	1'-7"			16	R 508	200	15'-4"	Str.						*
A 524	48	7'-1"	Str.						354	A 545	2	10'-6"	2	1'-7"	7'-7"	1'-7"			22										
A 525	4	26'-4"	Str.						110	A 546	2	8'-9"	2	1'-7"	5'-10"	1'-7"			18										
A 526	4	29'-0"	Bend in Field						120	A 547	2	10'-3"	2	1'-7"	7'-4"	1'-7"			22										
A 527	32	11'-10"	9	2'-7"	3'-2"	2'-7"	3'-2"		394	A 548	2	28'-7"	Str.						60										
A 528	28	(2)	2	(1)	1'-6"	(1)			124	A 549	12	5'-5"	Str.						68										
A 529	28	5'-7"	2	2'-2"	1'-6"	2'-2"			164	A 550	4	16'-4"	Str.						68										
A 530	4	5'-5"	2	1'-4"	3'-0"	1'-4"			22	A 551	4	14'-4"	Str.						60										
A 531	2	9'-11"	2	4'-6"	1'-2"	4'-6"			20	A 552	8	16'-1"	Str.						134										
A 532	4	7'-11"	2	3'-6"	1'-2"	3'-6"			34	A 553	4	5'-9"	Str.						24										
A 533	2	6'-4"	2	3'-6"	1'-2"	1'-11"			14	A 554	4	8'-3"	Str.						34										
A 534	36	5'-7"	4	2'-2"	8"				210	A 555	8	4'-9"	Str.						40										
A 564	2	11'-5"	2	5'-3"	1'-2"	5'-3"			24	A 556	8	8'-1"	Str.						68										
A 565	2	12'-5"	2	5'-9"	1'-2"	5'-9"			26	A 557	12	11'-3"	Str.						140										
										A 558	12	8'-0"	Str.						100										
A 601	78	14'-3"	2	6'-7"	5'-5"	2'-7"			1670	A 559	4	9'-2"	Str.						38										
A 602	96	19'-2"	5	6'-10"	1'-5"	8'-2"	11"	2'-6"	2764	A 560	36	7'-3"	Str.						272										
A 606	48	9'-1"	8	8'-5"	10"	0"			634	A 601	84	14'-3"	2	6'-7"	5'-5"	2'-7"			1798										
A 608	16	8'-8"	8	8'-0"	10"	0"			208	A 602	96	19'-2"	5	6'-10"	1'-5"	8'-2"	11"	2'-6"	2764										
A 609	16	2'-6"	Str.						60	A 603	2	14'-8"	2	6'-7"	5'-10"	2'-7"			44										
										A 604	2	16'-2"	2	6'-7"	7'-4"	2'-7"			48										
A 801	18	28'-10"	Str.						1386	A 605	2	16'-5"	2	6'-7"	7'-7"	2'-7"			50										
A 802	4	31'-2"	Str.						332	A 606	36	9'-1"	8	8'-5"	10"	0"			492										
A 803	2	33'-4"	Str.						178	A 607	12	10'-10"	8	10'-2"	10"	0"			196										
A 804	4	35'-11"	Str.						384	A 805	14	30'-6"	Str.						1140										
A 815	12	16'-4"	Str.						524	A 806	4	31'-2"	Str.						332										
										A 807	4	27'-2"	Str.						290										
R 503	6	4'-2"	10	1'-1"	8"	6 1/2"			*	A 808	2	25'-0"	Str.						134										
R 504	4	5'-4"	11						*	A 809	4	21'-9"	Str.						232										
R 510	8	26'-2"	Str.						*	A 810	6	15'-9"	Str.						252										
										A 814	4	14'-1"	Str.						150										
										A 816	2	13'-0"	Str.						70										
										A 817	4	4'-4"	8	2'-6"	1'-10"	8"			46										
										R 503	6	4'-2"	10	1'-1"	8"	6 1/2"			*										
										R 504	4	5'-4"	11						*										
										R 509	8	16'-4"	Str.						*										

NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No.5 size bar and P1101 is a No.11 size bar.

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

* Included with railing for payment.

TYPE 12

MAR 16 1960

A diagram of a rectangular loop. The vertices are labeled: the top-left corner is 'C', the top-right corner is 'C', the bottom-left corner is 'A', and the bottom-right corner is 'B'.

A diagram of a U-shaped container. The left vertical side is labeled 'A', the right vertical side is labeled 'A', and the bottom horizontal side is labeled 'B'.

A diagram of a U-shaped pipe. The horizontal sections are labeled 'A' and the curved section is labeled 'B'. The radius of the curve is labeled 'C'.

A diagram of a helical spring. The pitch is labeled 'A = PITCH'. The core diameter is labeled 'CORE DIA.'. The coil diameter is labeled 'C = COIL DIA.'. The length of the spring is labeled 'LENGTH'. The number of turns is labeled 'B = NO OF TURNS'.

Diagram of a beam with a horizontal section A and a vertical section B. A unit load is applied at the top of section B, and the distance from the support to the load is 12 units.

TYPE I

TYPE 2

TYPE 3

TYPE 4

TYPE 5

TYPE 6

TYPE 7

TYPE 8

TYPE 9

TYPE 10

TYPE II

NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No.5 size bar and P1101 is a No.11 size bar.

SPIRAL REINFORCING BARS: The "Length" shown in the steel list for the spiral bars is the distance from the top of the footing to the bottom of the pier cap. The "No. of Turns" shown is the "Length" divided by the pitch, plus 3 turns (total number of closed coils), expressed as the nearest whole number. Spiral reinforcing bars shall not have deformation but shall in other respects conform to Item 509. 1½ closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacers, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

97B.



NOTE:
ABUTMENTS: 12" ϕ cast-in-place concrete
piles. Est. average pay length
25'-0"

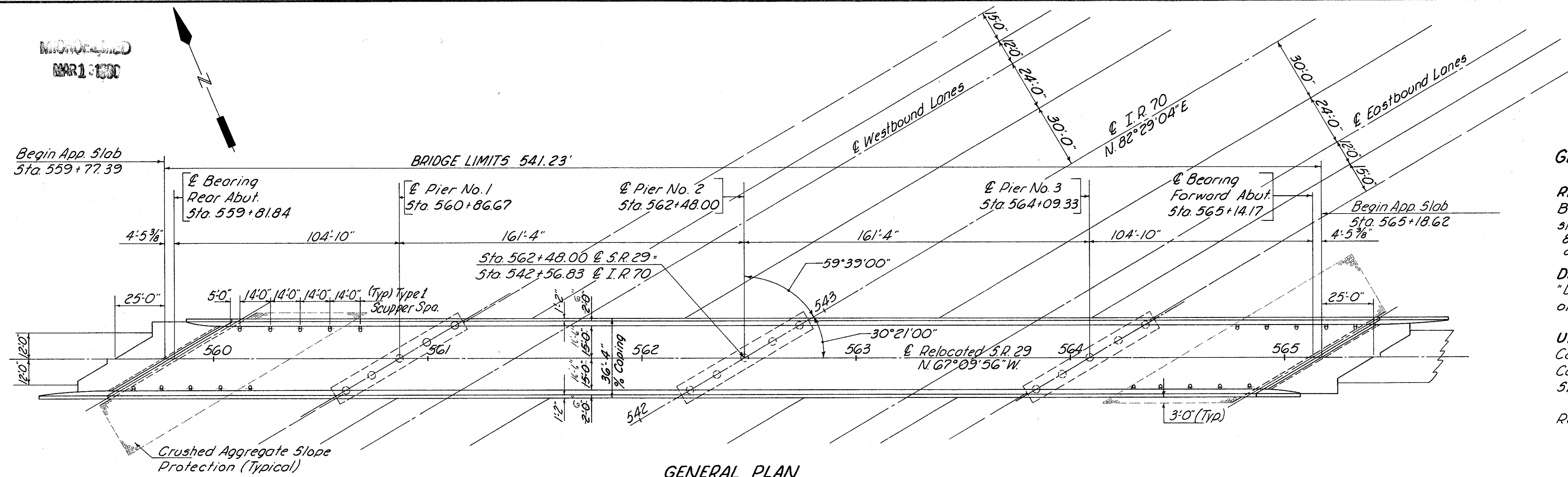
TYPE: *Continuous Haunched Steel Girder Bridge With Reinforced Conc. Deck & Substructure.*
SPANS: *104'-12"; 161'-4"; 161'-4"; 104'-10" ½ Brgs.*
ROADWAY: *30'-0" 4-Pc. Safety-Curbs. 33'-0" ½, 6"*
LOAD FREQUENCY: *CF 400 (57)*
WEARING SURFACE: *1" Monolithic Conc.*
SKEW: *59° 39' 00" L.F.*
APPROACH SLAB: *A5-1-67 Mod. (25'-0" Long)*
ALIGNMENT: *Tangent.*
SUPERELEVATION: *None.*
AVERAGE DAILY TRAFFIC: *5,040 (1988)*

SITE PLAN

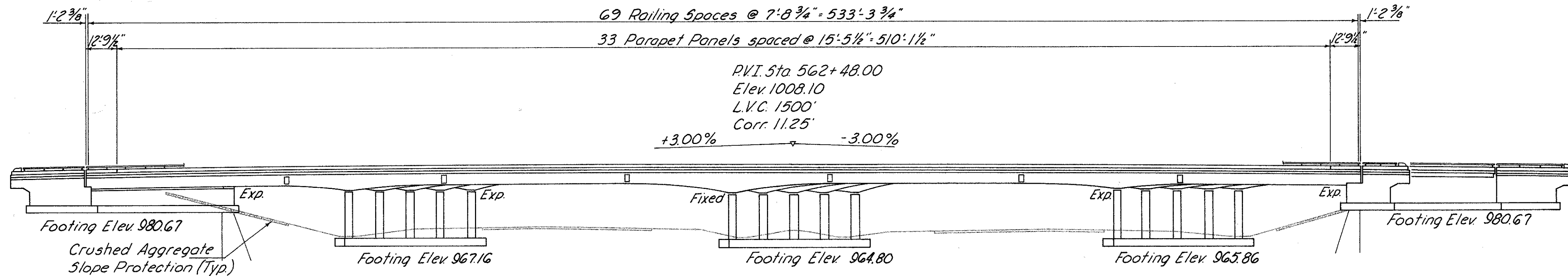
MADISON COUNTY I.R.-70

STA.-543+13.11

DESIGNED ROB	DRAWN ROB	TRACED J.S.L.	CHECKED V.A.D.	REVIEWED JF	DATE 6/18-65	REVISED 5/14/66
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GENERAL PLAN



GENERAL ELEVATION

ESTIMATED QUANTITIES									
ITEM	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT'S.	PIERS	GEN'L.	Revised	As-Built
503	555	Cu.Yds.	Unclassified Excavation		431	124		584.119	674.119
505	Lump	Sum	First Test Pile				Lump		
511	611.564	Cu.Yds.	Class "C" Concrete, Superstructure	611.564					
511	66	Cu.Yds.	Class "C" Concrete, Piers above Footings			66			
511	170	Cu.Yds.	Class "E" Concrete, Pier Footings			170			
511	329.325	Cu.Yds.	Class "E" Concrete, Abutments		329.325				
509	215,249	Lbs.	Reinforcing Steel	159,070	21,545				
513	780,650	Lbs.	Structural Steel	780,650					
832	780,650	Lbs.	Field Painting of Structural Steel	780,650					
517	1170.41	Lin.Ft.	Bridge Railing Type I	1072.58	97.83				
518	20	Each	Scuppers including Supports	20					
518	84	Cu.Yds.	Porous Backfill		84				
518	68	Lin.Ft.	6" Non-Perforated, Helical C.M.P., 707.06		68				
518	123	Lin.Ft.	6" Perforated, Helical C.M.P., including specials, 707.06		123				
828	119	Lin.Ft.	Joint Sealer	119				584.119	
808	611.564	Units	Water-reducing, set-retarding admixture	611.564					
825	2495	Sq.Yds.	Concrete Surface Treatment				2495		
601	584	Sq.Yds.	Crushed Aggregate Slope Protection				584		
507	1175	Lin.Ft.	12" Cast-in-place Reinforced Concrete Piles		1175			1175	885

GENERAL NOTES

REFERENCE shall be made to Standard Drawings A5-1-67 (rev. 1-11-68), BR-1-65 (11-24-65) sheet 1 of 2, RB-1-55 (rev. 2-2-59), SD-1-65 (11-8-65) sheets 1-2 and 3 of 3, and Supplemental Specifications 808(1-13-67), 811(1-1-67), 825(12-19-67), 828(1-1-67), 832(5-25-67) and 931(5-25-67).

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

UNIT STRESSES: Design Loading ~ CF 400 (57)
Concrete, Class "C" ~ basic unit stress 1,333 psi
Concrete, Class "E" ~ basic unit stress 1,133 psi
Structural Steel ~ ASTM A36 basic unit stress 20,000 psi

Reinforcing Steel ~ ASTM A-15, A16, A160, deformed, intermediate or hard grade. Basic unit stress 20,000 psi, except spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 psi.

See sheet 286 for notes titled: Welds, Painting and Welded Attachments.

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

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

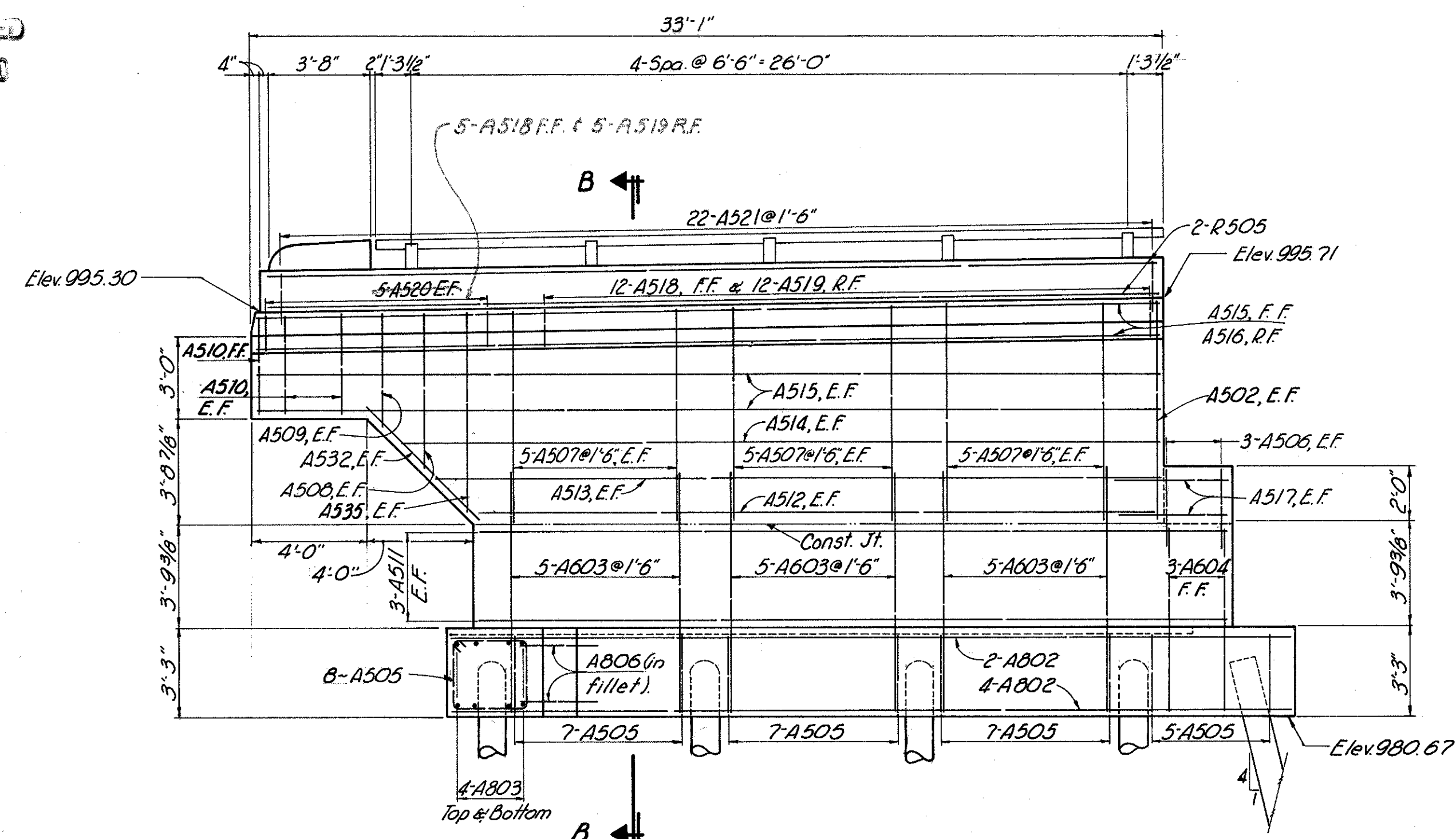
UTILITY LINES: All expense involved in relocating the affected utility lines shall be borne by the owners. The contractor and owners are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments.

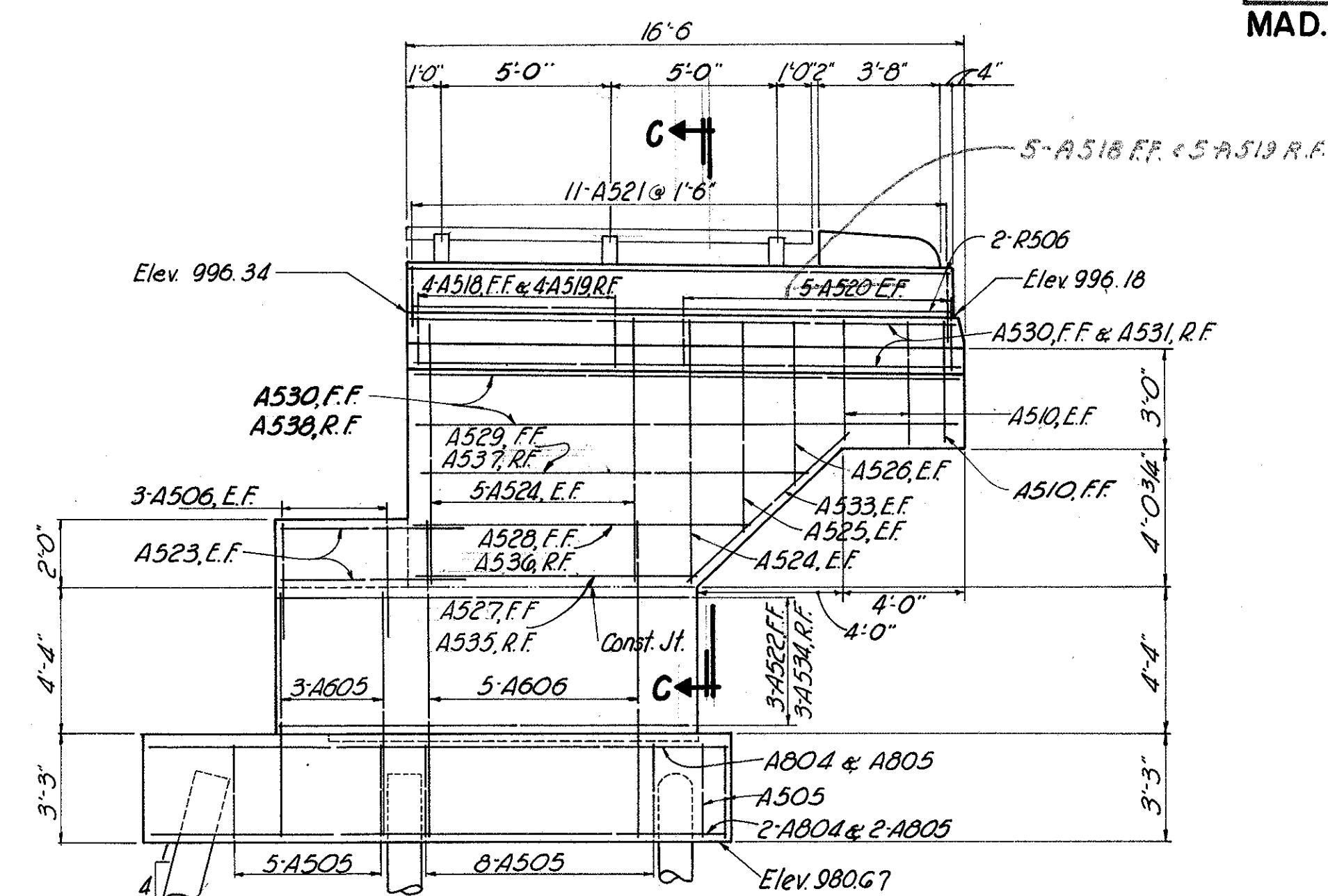
FOUNDATION BEARING PRESSURE: Pier footings are designed for a maximum bearing pressure of 2.5 tons per square ft.

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

FRANKLIN ENGINEERING, LIMITED Consulting Engineers							
COLUMBUS		OHIO					
GENERAL PLAN, GENERAL NOTES AND ESTIMATED QUANTITIES							
BRIDGE No. MAD. 70-1028 UNDER S.R. 29							
MADISON COUNTY				STA. 543+13.11			
Designed	Drawn	Traced	Checked	Reviewed	Date	Revised	
V.A.D.	E	~	JBG	67	8-66	5/14/68	



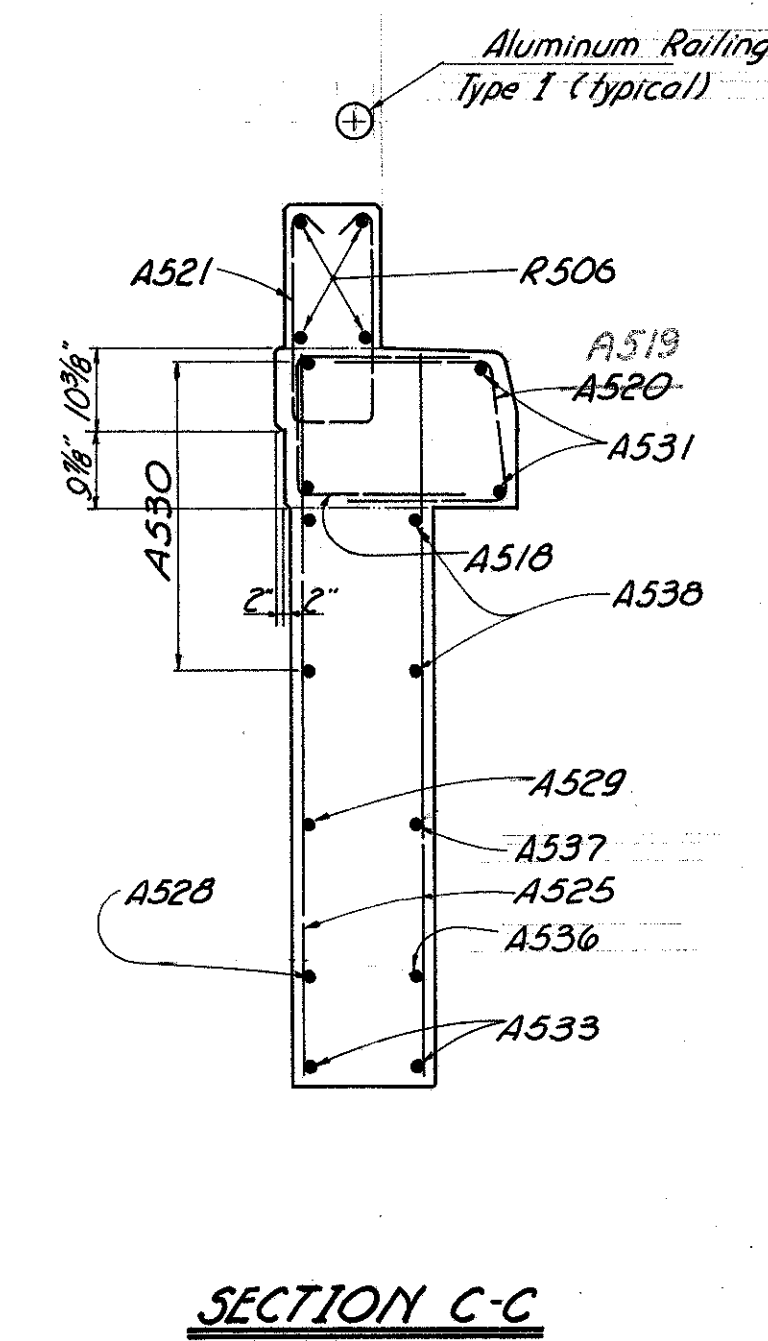
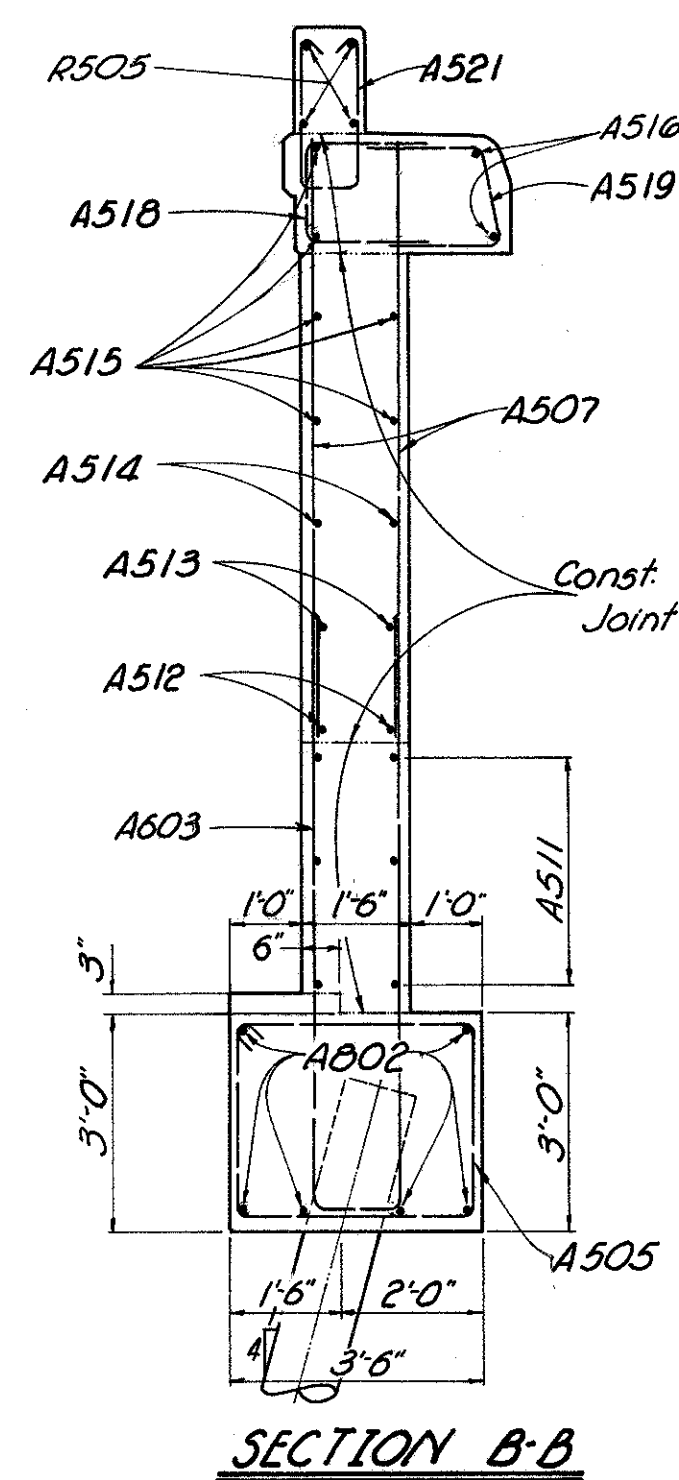
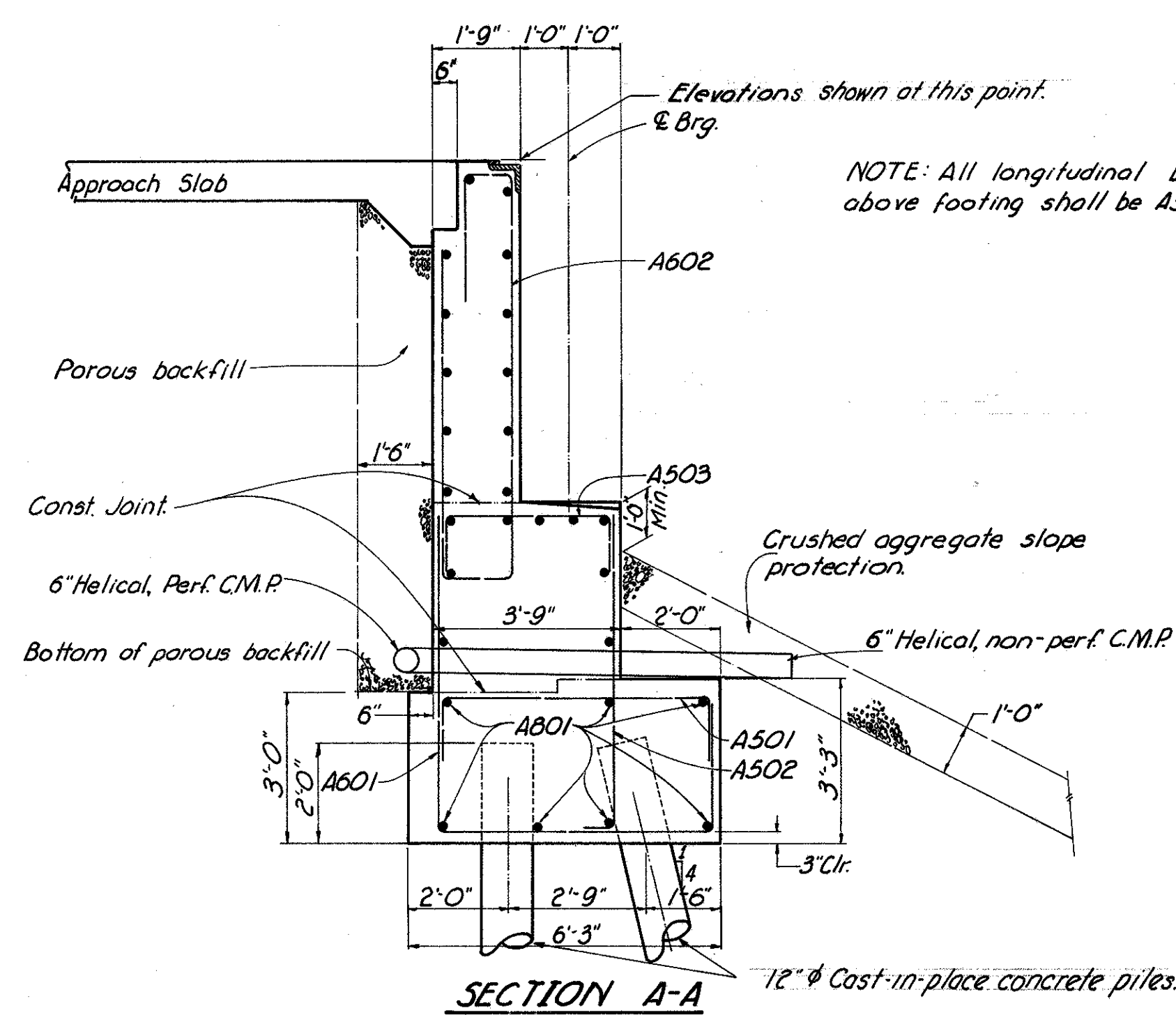
LEGEND
E.F. - Each face.
F.F. - Front face.
R.F. - Rear face.



See sheet 285 for Anchor Bolt attachment.

WINGWALL A

WING WALL-B



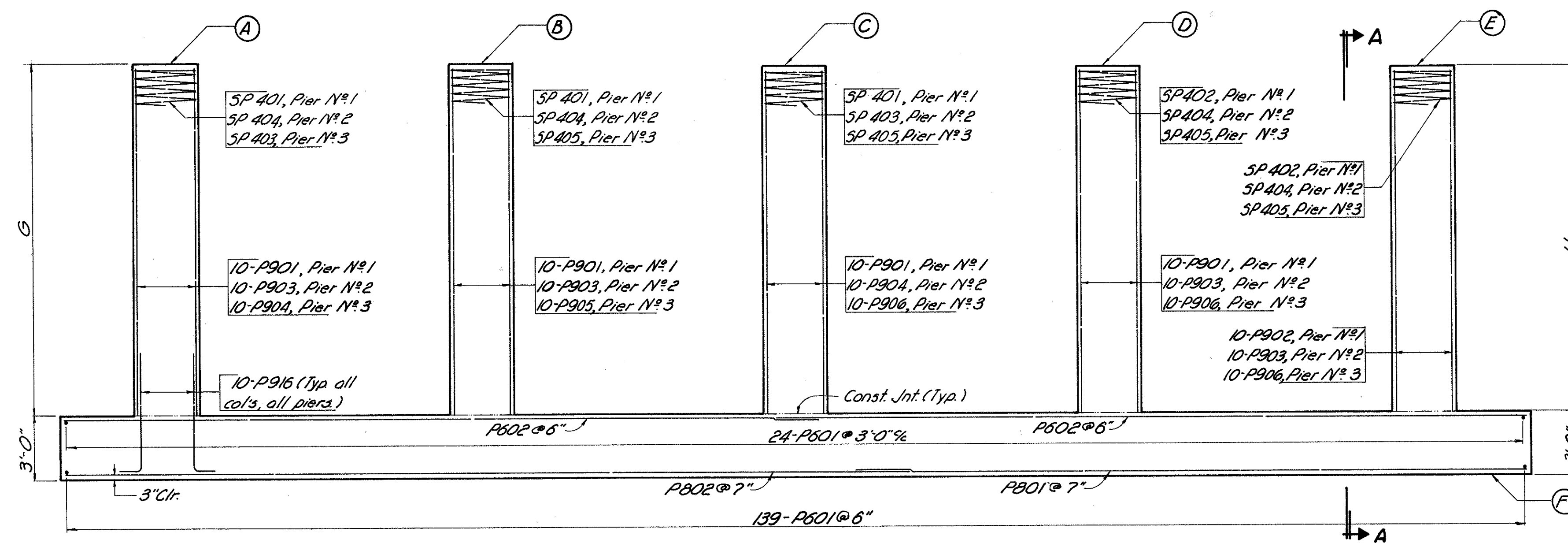
MODIFIED
MAR 1 1966

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

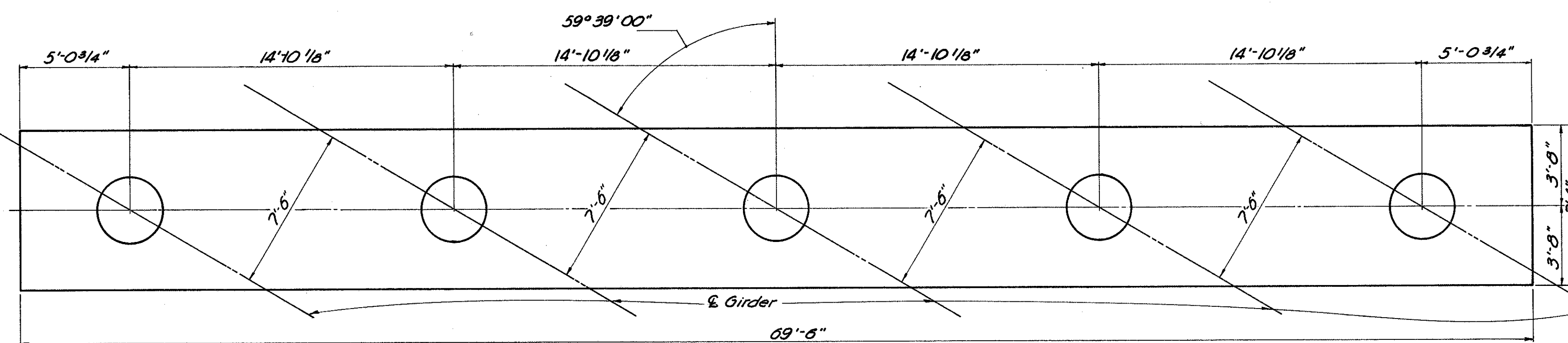
334

MAD-70-6.25

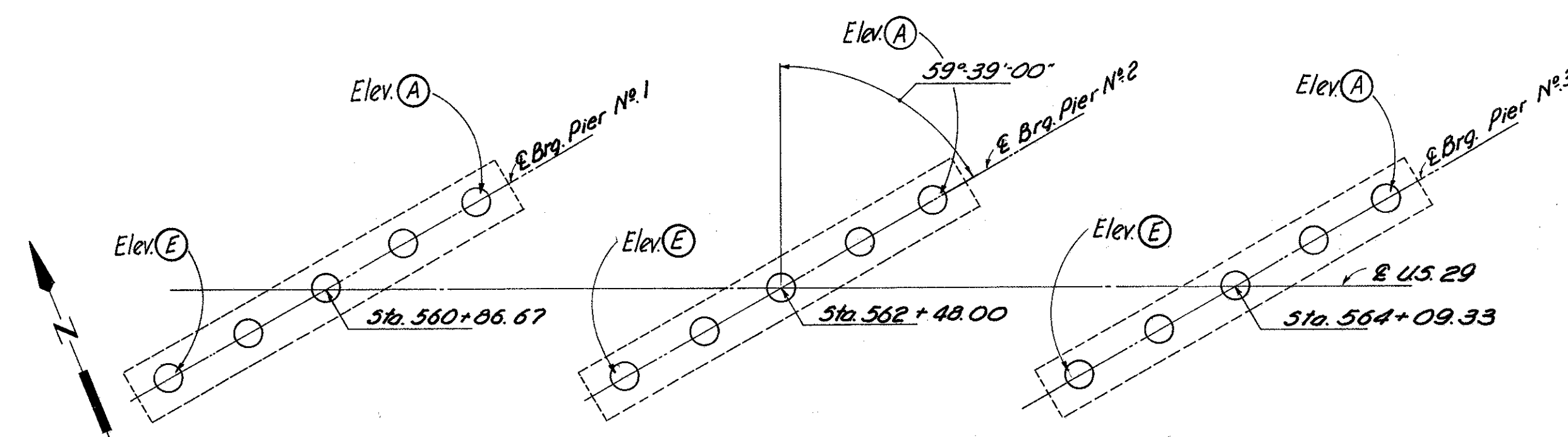
	A	B	C	D	E	F	G	H
PIER N° 1	986.79	986.83	986.87	986.67	986.46	967.10	16'-7 1/2"	16'-3 3/4"
PIER N° 2	985.06	985.19	985.31	985.19	985.06	964.80	17'-3 1/8"	17'-3 1/8"
PIER N° 3	986.46	986.67	986.87	986.83	986.79	965.86	17'-7 1/4"	17'-11 1/8"



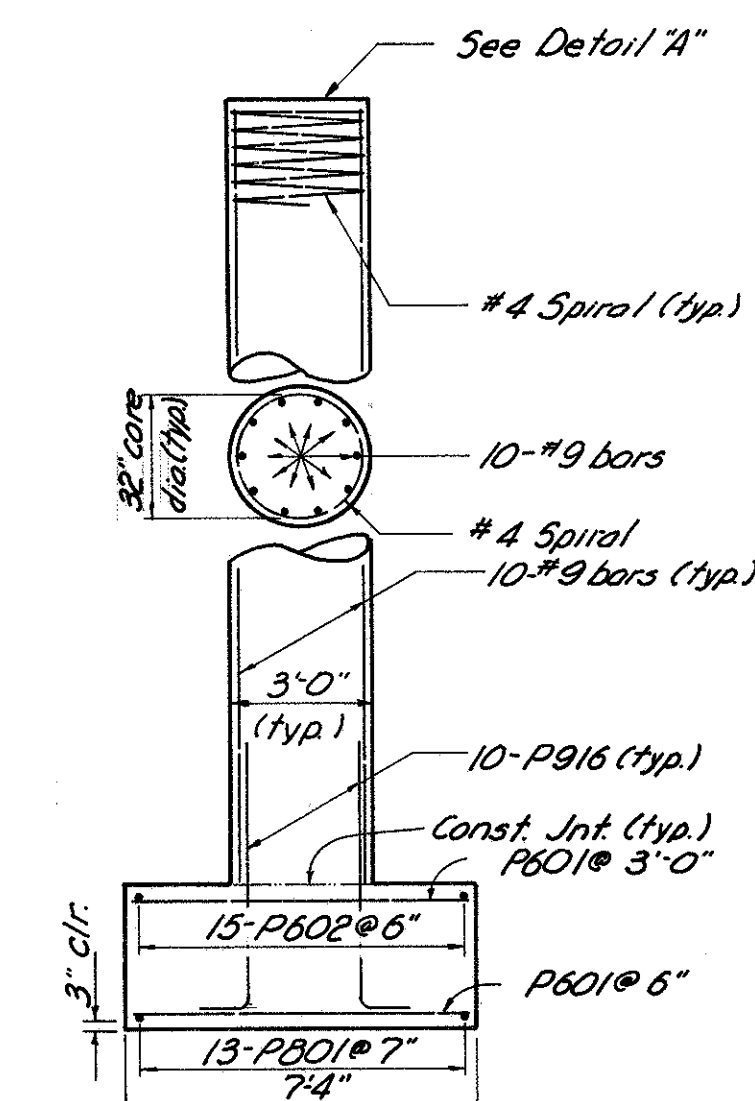
ELEVATION



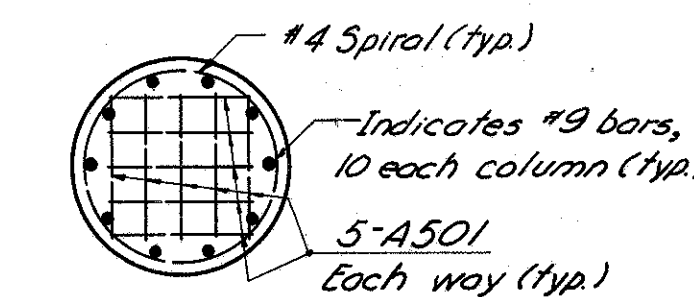
PLAN



LAYOUT PLAN

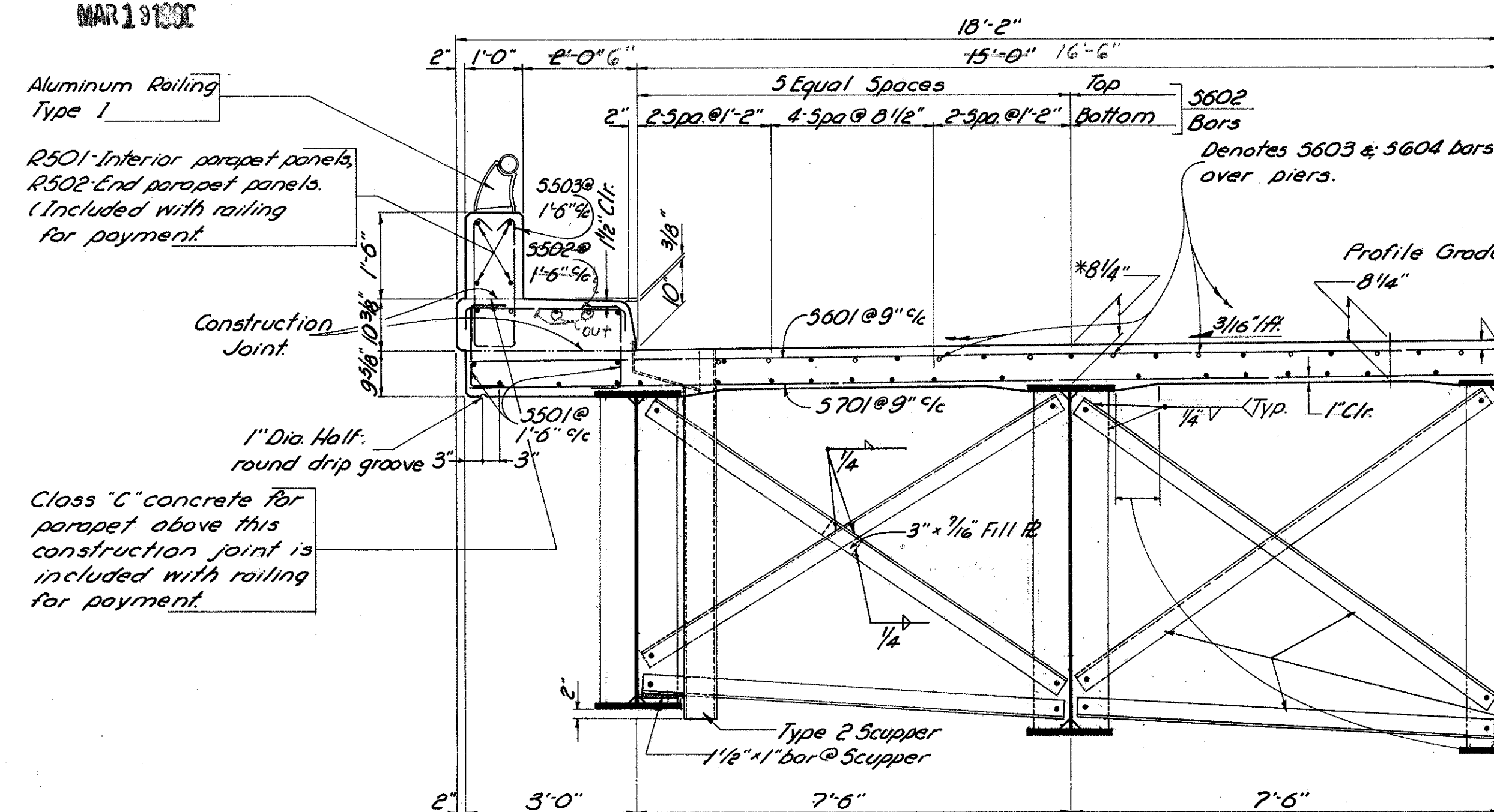


SECTION A-A



DETAIL A
(Showing beam seat reinforcing)

FRANKLIN ENGINEERING, LIMITED Consulting Engineers									
COLUMBUS, OHIO									
PIERS									
BRIDGE N°. MAD.-70-1028 I-70 UNDER S.R.-29									
MADISON COUNTY I.R.-70									
STA.-543+13.1									
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED			
V.A.D.	1/10/65	1/10/65	J.B.G.	J.F.	3/8/66				



HALF TRANSVERSE SECTION

Q 5.R.29
Symmetrical @ E Roadway

All longitudinal bars S602 except as otherwise noted. Lap S602 1'-11" min.

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

- 2" Clearance. (Includes 1" monolithic wearing surface.)
- Slab thickness shown includes 1" monolithic wearing surface.
- Chamber all stiffeners and bearing stiffeners to permit weld to pass thru.
- Intermediate crossframe angles 3"x3"x1/16" connected by 7/8" A5 bolts. If erection bolts are left in place, tack weld nuts.
- Atypical 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.

NOTES:

CAMBERING of girder is required according to the following table...

DEFLECTION AND CAMBER TABLE												
	INTERIOR GIRDERS						EXTERIOR GIRDERS					
	$1/4 L_1$	$1/2 L_1$	$3/4 L_1^*$	$1/4 L_2^*$	$1/2 L_2$	$3/4 L_2^*$	$1/4 L_1$	$1/2 L_1$	$3/4 L_1^*$	$1/4 L_2^*$	$1/2 L_2$	$3/4 L_2$
Deflection Due to Steel	"116"	"116"	- "116"	"116"	"716"	"316"	"116"	"116"	- "116"	"516"	"716"	"316"
Deflection Due to Remaining O.L.	"316"	"316"	"116"	"916"	"1"	"716"	"716"	"316"	"116"	"316"	"14"	"516"
Convexity Due to Vert. Curve	"12"	"116"	"12"	"1316"	"916"	"1316"	"12"	"116"	"12"	"1316"	"916"	"1316"
total Camber	"916"	"118"		"2116"	"3"	"1316"	"1"	"118"	"12"	"214"	"314"	"2"

END CROSSFRAMES, END DAMS, SCUPPERS, CURB PLATE DETAILS: See sheet 5D-1-65 sheets 1 and 2 of 3.

GIRDER SPLICE DETAILS: See sheet number 336.

BEARINGS: See RB-1-55, (Rev. 2-2-59), for the following:

R-125 - Abutments.

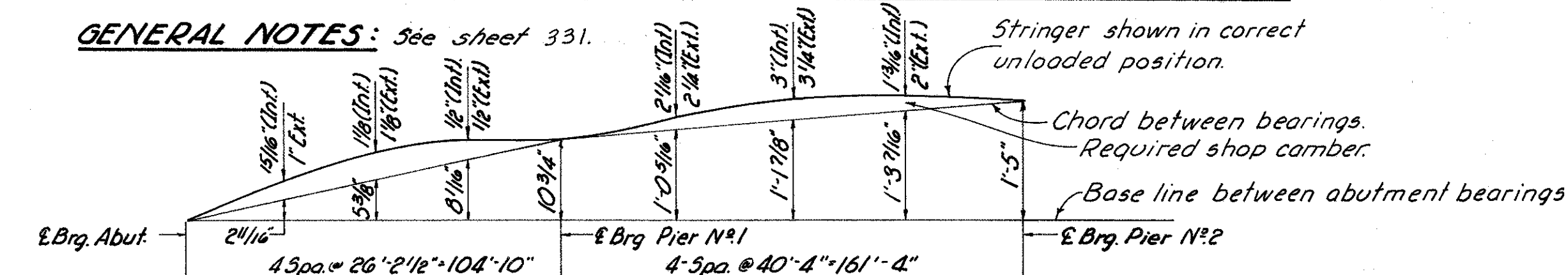
R-300 - Piers N^o 1 & 3

B-350-Pier N°2

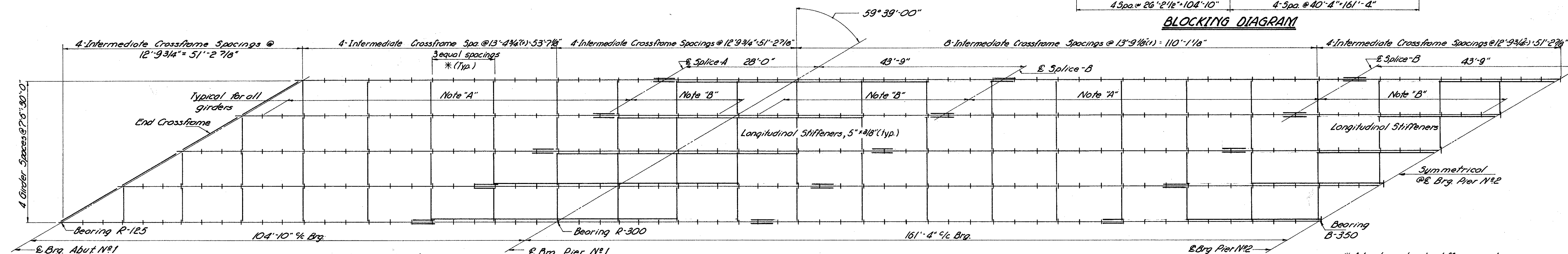
CONCRETE: All superstructure concrete shall be Class "C".

RAILING POSTS, PARAPET EXPANSION JOINTS AND SCUPPER SPACINGS: See sheet number 331.

GENERAL NOTES: See sheet 331.



BLOCKING DIAGRAM



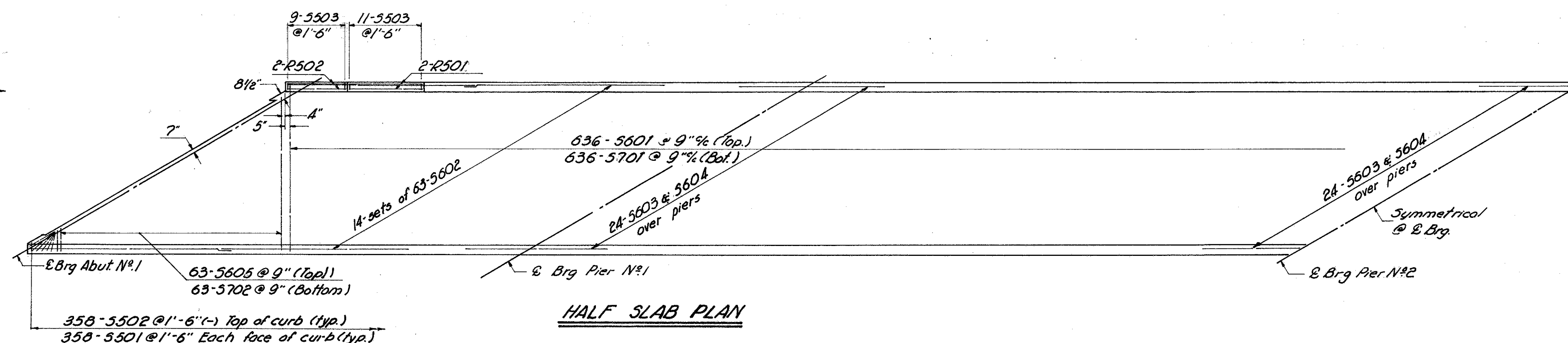
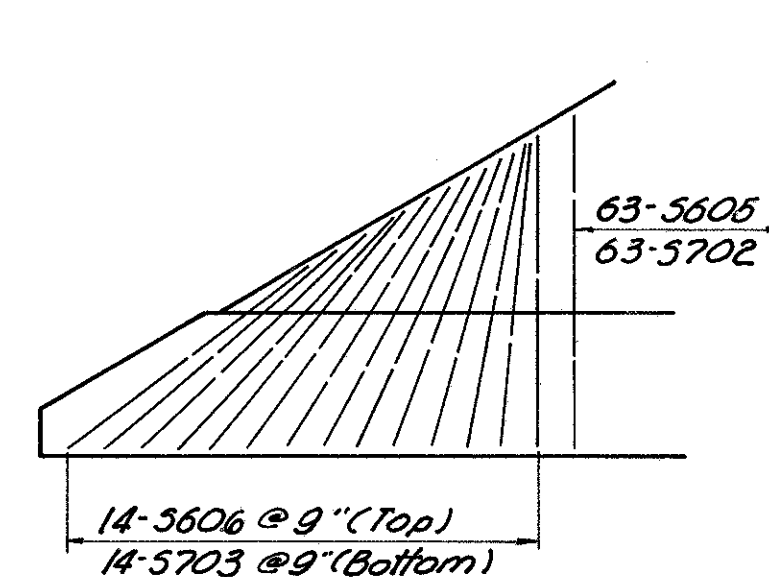
HALF FRAMING PLAN

NOTE "A": Top of stiffener shall be in contact bearing against compression flange and bottom of stiffener may have a maximum clearance of $1/8"$ from tension flange

NOTE "B": Bottom of stiffener shall be in contact bearing against compression flange and top of stiffener may have a maximum clearance of 1/8" from tension flange.

The contractor shall submit to the Director for approval, 3 prints showing the proposed erection procedure.



*Adjust vertical stiffeners where necessary to clear web splice by 3."



HALF SLAB PLAN



DIAGRAM SHOWING
S603 OVER PIERS

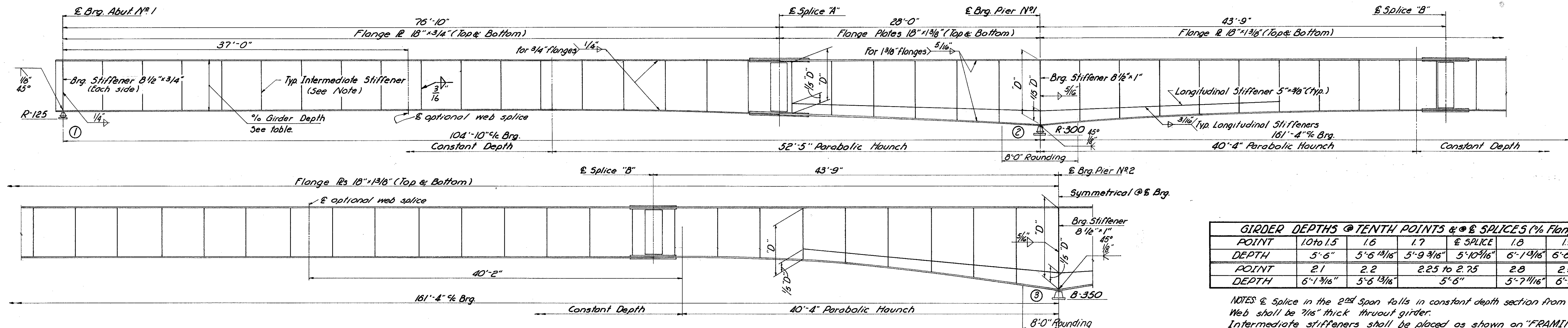
FRANKLIN ENGINEERING, LIMITED <i>Consulting Engineers</i> COLUMBUS, OHIO						
SUPERSTRUCTURE - I BRIDGE N ^o . MAD.-70-1028 I -70 UNDER S.R.-29						
MADISON COUNTY				I.R. -70		
STA. 543 +13.11						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
VAD	VAD	 JLB	JBG		3/8-66	5/14/66

NOTED
MAR 1988

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

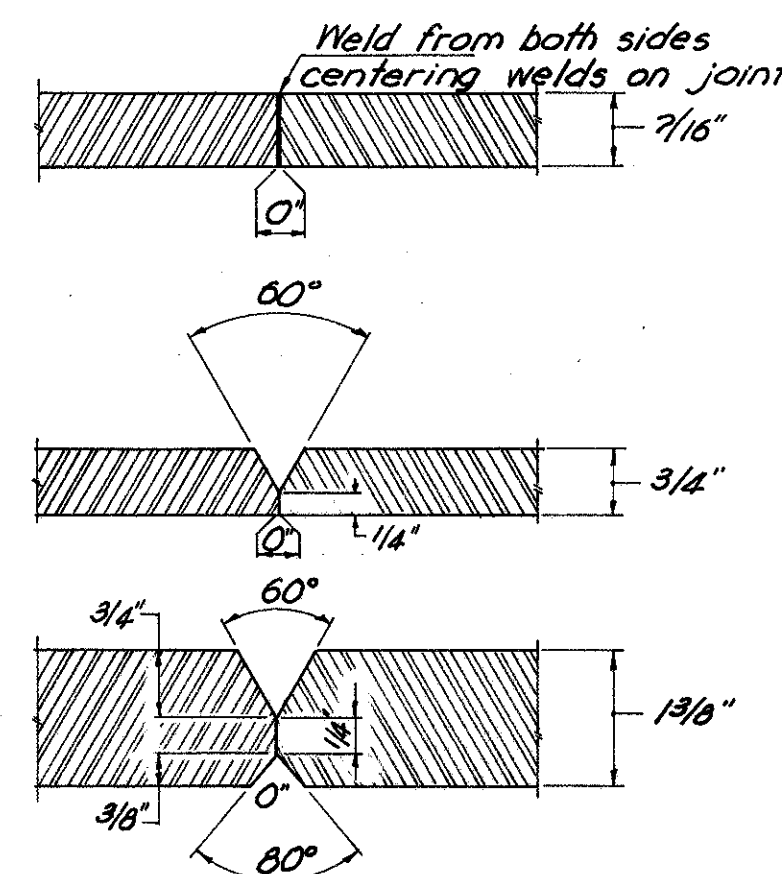
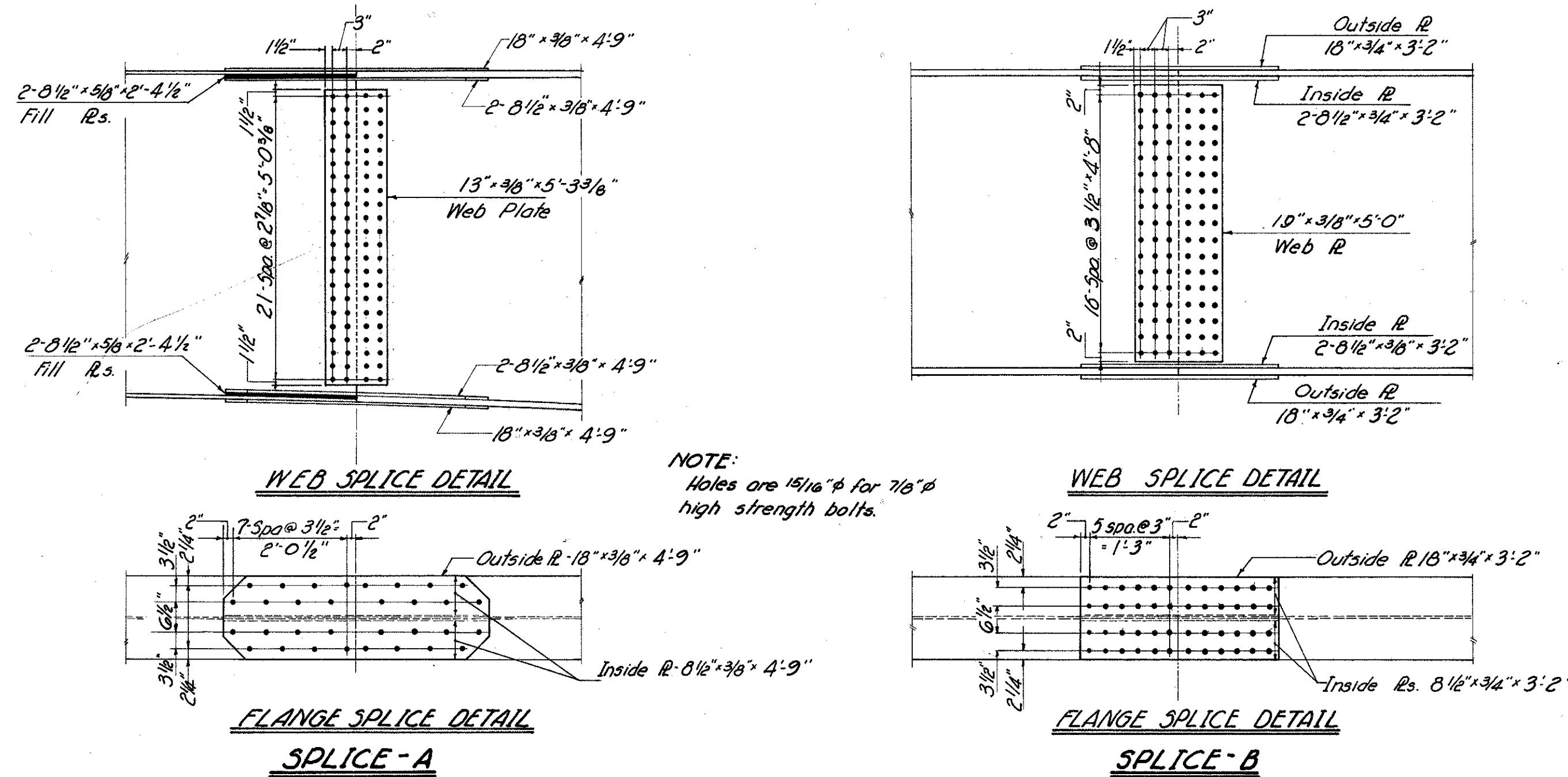
336

MAD.-70-6.25



GIRDER DEPTHS @ TENTH POINTS & @ SPLICES (% Flange Plate)						
POINT	10 to 15	16	17	@ SPLICE	18	19
DEPTH	5'-6"	5'-6 13/16"	5'-9 3/16"	5'-10 1/16"	6'-1 3/16"	6'-6 13/16"
POINT	21	22	22.5 to 2.75	2.8	2.9	3.0
DEPTH	6'-1 3/16"	5'-6 13/16"	5'-5"	5'-7 11/16"	6'-9 1/8"	9'-0"

NOTES: @ Splice in the 2nd span falls in constant depth section from Pt. 2.25 to Pt. 2.75. Web shall be 7/16" thick thruout girder. Intermediate stiffeners shall be placed as shown on "FRAMING PLAN". All intermediate stiffeners to be 7" x 3/8" plates.



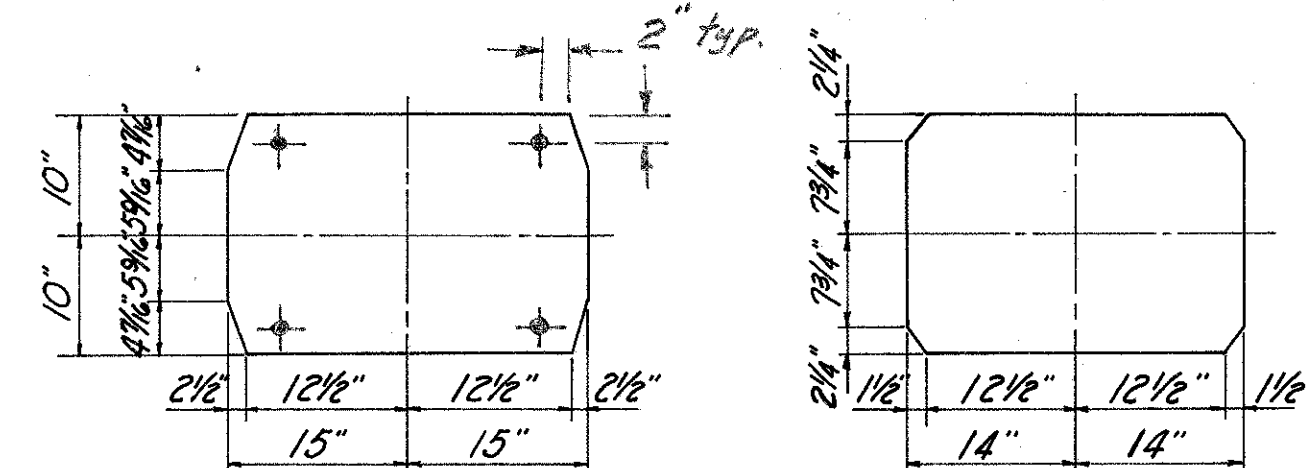
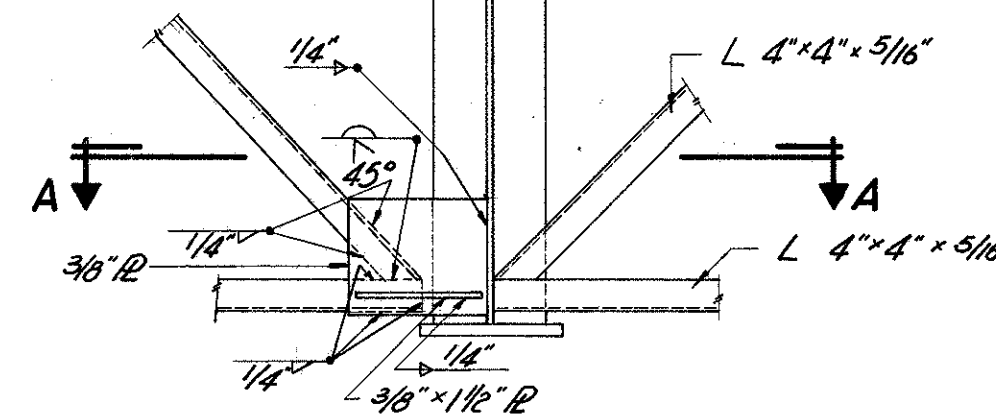
WELDING DETAILS

All of the above full penetration welds shall be back-gauged and welded after welding far side. Built welds on beam and girder flange plates shall be ground flush, the finish grinding being parallel to the direction of stress.

DIMENSIONS FOR BOLSTER-350

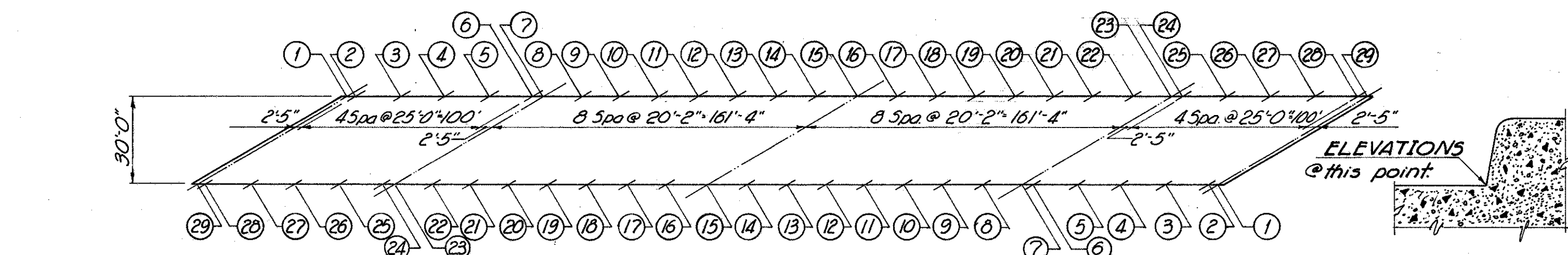
	A	B	C	F	H	K	L	R	T	Y	WEIGHT
B-350	4"	20"	4"	7/8"	22 1/8"	15"	30"	14 1/2"	3 1/2"	17/8"	1125

(For remaining details see Std Dwg. RB-1-55 (rev. 2-2-191).)



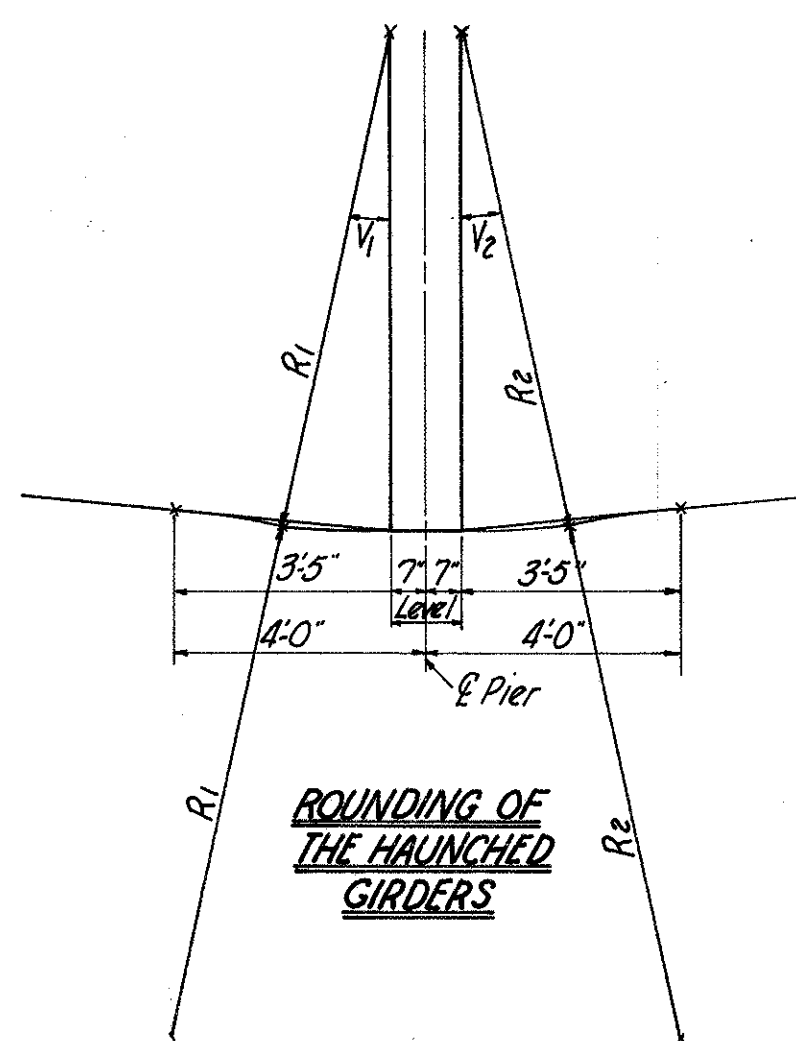
BASE PLATE FOR BEARING B-350

BASE PLATE FOR BEARING R-300



POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
ELEVATION	995.46	995.49	995.74	995.94	996.09	996.23	996.25	996.38	996.50	996.58	996.66	996.67	996.66	996.64	996.60
POINT	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
ELEVATION	996.60	996.58	996.55	996.49	996.38	996.25	996.09	995.92	995.90	995.70	995.50	995.25	994.94	994.91	

SCREED ELEVATIONS AND LOCATIONS



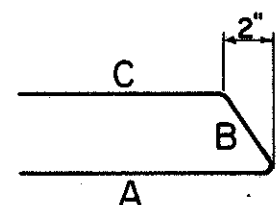
END CROSSFRAME CONNECTION

	R1	V1	R2	V2
Piers N ^o 1&3	18'-194"	7°-15'	14'-216"	9°-15'
Pier N ^o 2	6'-1184"	19°-53'	6'-1184"	19°-53'

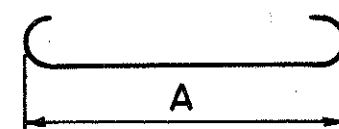
SECTION A-A

FRANKLIN ENGINEERING, LIMITED Consulting Engineers COLUMBUS, OHIO					
SUPERSTRUCTURE-2 BRIDGE N ^o MAD.-70-1028 I-70 UNDER S.R.-29					
MADISON COUNTY					
STA.-543+13.11					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
VAD	VAD	11-65	JBG	JF	3/8-66
REVISED					
11-65					

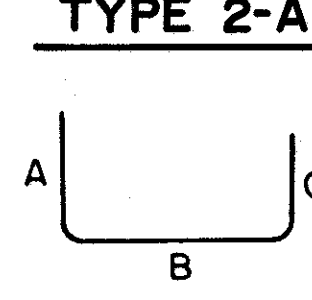
MAR 19 1968



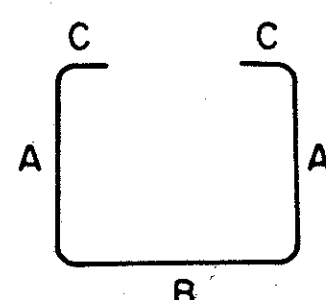
TYPE 2-A



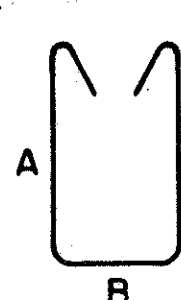
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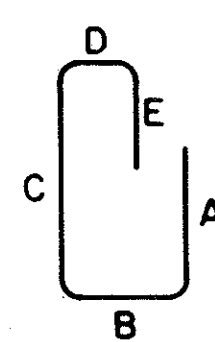
TYPE 2



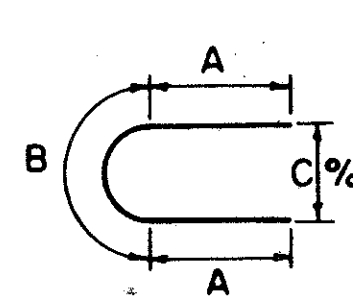
TYPE 3



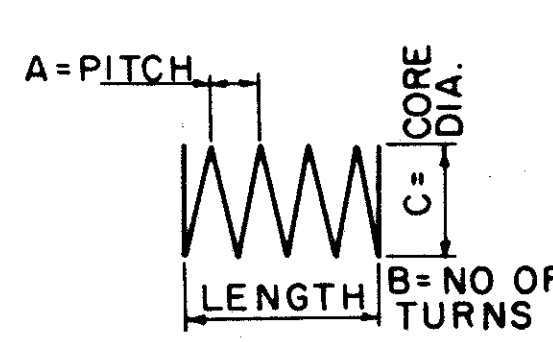
TYPE 4



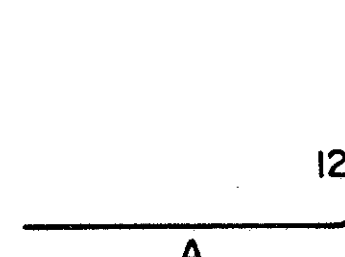
TYPE 5



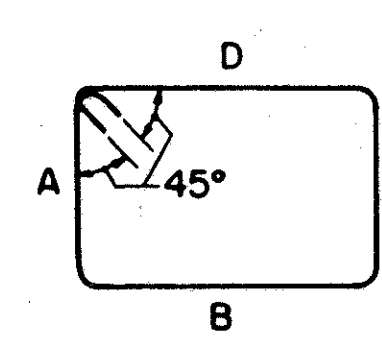
TYPE 6



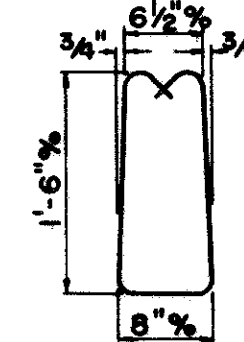
TYPE 7



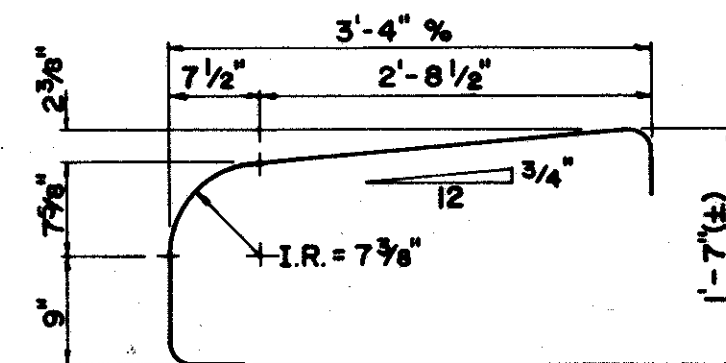
TYPE 8



TYPE 9



TYPE 10



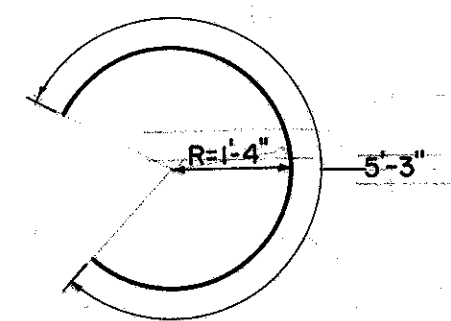
TYPE 11

NOTES:

BAR SIZE: The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is a No. 5 size bar and P101 is a No. 11 size bar.

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

* Included with railing for payment.



TYPE 12

(1) Varies from 34.4" to 7.2 1/2" in increments of 5 1/2"

REPLACEMENT BARS

RE 401	1	6.3"	12
RE 501	2	6.7"	5tr
RE 601	6	6.11"	5tr
RE 701	3	7.3"	5tr
RE 801	1	7.6"	5tr
RE 901	1	7.10"	5tr

ABUTMENTS										PIERS										SUPERSTRUCTURE													
MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT	MARK	NO.	LENGTH	TYPE	A	B	C	D	E	WEIGHT				
A 501	84	8'4"	2	1'2"	5'5"	1'7"			730	P 501	150	3'3"	2	9"	2'0"	9"			508	5 501	1432	2'4"	2	7 1/2"	1'4"	7 1/2"				3485			
A 502	90	7'0"	2	6'6"	7 1/2"	0"			657											5 502	716	3'6"	2	7 1/2"	2'6"	7 1/2"				2614			
A 503	84	7'6"	2	2'2"	3'5"	2'2"			657											5 503	762	5'7"	4	2'2"	8"	2'2"				4437			
A 504	84	33'10"	5tr						3139	P 601	489	7'0"	5tr						5141														
A 505	98	11'10"	9	2'7"	3'2"	2'7"	3'2"		1209	P 602	90	35'7"	5tr						4810														
A 506	24	3'7"	5tr						90																								
A 507	60	7'6"	5tr						469																								
A 508	4	5'8"	5tr						24	P 801	39	31'8"	5tr						3297	5 601	636	35'8"	5tr							34071			
A 509	4	4'3"	5tr						18	P 802	39	40'0"	5tr						4165	5 602	882	40'0"	5tr							51368			
A 510	20	3'6"	5tr						73											5 603	66 72	40'0"	5tr							3765			
A 511	12	27'2"	5tr						340											5 604	66 72	29'0"	5tr							2875			
A 512	4	24'9"	5tr						103	P 901	40	16'4"	5tr						2221	5 605	126	(1)	5tr							3930			
A 513	4	26'4"	5tr						110	P 902	10	16'1"	5tr						547	5 606	28	6'9"	5tr							284			
A 514	4	27'8"	5tr						115	P 903	40	17'1"	5tr						2323														
A 515	12	32'7"	5tr						408	P 904	20	17'4"	5tr						1179														
A 516	4	35'6"	Bend in field						148	P 905	10	17'7"	5tr						598														
A 517	8	4'2"	5tr						35	P 906	30	17'9"	5tr						1811														
A 518	52 32	5'3"-3'1"	2	2'4"-1'0"	1'4"	2'1"-1'0"			167 +95	P 907	150	6'7"	8	5'7"	1'3"	0			3357	5 701	636	35'8"	5tr							46366			
A 519	52 32	5'5"-3'3"	2-A	2'3"-1'2"	1'4"	2'1"-1'0"			176 +81											5 702	126	(1)	5tr							5349			
A 520	40	(2)	2	(1)	1'4"	(1) (8 sets of 5 bars)			170											5 703	28	6'9"	5tr							386			
A 521	66	5'7"	4	2'2"	8"	2'2"			384	5 P 401	3	16'6"	7	4 1/2	47	2'8"			912														
A 522	6	12'1"	5tr						76	5 P 402	2	16'1 1/2"	7	4 1/2	46	2'8"			595														
A 523	8	5'7"	5tr						47	5 P 403	2	17'3"	7	4 1/2	49	2'8"			634														
A 524	24	7'10"	5tr						196	5 P 404	4	16'10 1/2"	7	4 1/2	48	2'8"			1242														
A 525	4	6'4"	5tr						26	5 P 405	4	17'7 1/2"	7	4 1/2	50	2'8"			1294	R 501	264	15'2"	5tr							*			
A 526	4	4'11"	5tr						21											R 502	16	12'6"	5tr							*			
A 527	2	8'2"	5tr						17																								
A 528	2	10'2"	5tr						21																								
A 529	2	11'10"	5tr						25																								
A 530	8	16'0"	5tr						134																								
A 531	4	13'0"	Bend in field						54																								
A 532	4	5'9"	5tr						24																								
A 533	4	6'6"	5tr						27																								
A 534	6	11'1"	5tr						69																								
A 535	4	7'0"	5tr						29																								
A 536	2	9'0"	5tr						19																								
A 537	2	10'8"	5tr						22																								
A 538	4	15'0"	5tr						63																								
A 601	84	14'3"	2	6'7"	5'5"	2'7"			1798																								
A 602	132	20'2"	5	7'3"	1'5"	8'9"	11"	2'6"	3998																								
A 603	30	18'2"	2	8'8"	1'2"	8'8"			819																								
A 604	6	6'8"	5tr						60																								
A 605	6	7'2"	5tr						65																								
A 606	10	19'2"	2	9'2"	1'2"	9'2"			288																								
A 801	28	36'9"	5tr						2747																								
A 802	12	30'8"	5tr						983																								
A 803	16	6'8"	5tr						285																								
A 804	6	17'1"	5tr						274																								
A 805	6	14'8"	5tr						235																								
A 806	4	6'8"	1	4'6"					71																								
								TOTAL	21,728	21545																							
R 503	12	4'2"	10						*																								
R 504	8	5'4"	11						*																								
R 505	8	32'5"	5tr						*																								
R 506	8	15'10"	5tr						*																								
				(1) Varies from 2'-2" to 10" in increments of 4"																													
				(2) Varies from 5'-5" to 2'-9" in increments of 8"																													

(1) Varies from 2.2" to 10" in increments of 4"
(2) Varies from 5.5" to 2.9" in increments of .8"

CENTERLINE SURVEY PLAT

INTERSTATE ROUTE 70 SEC. 6.25

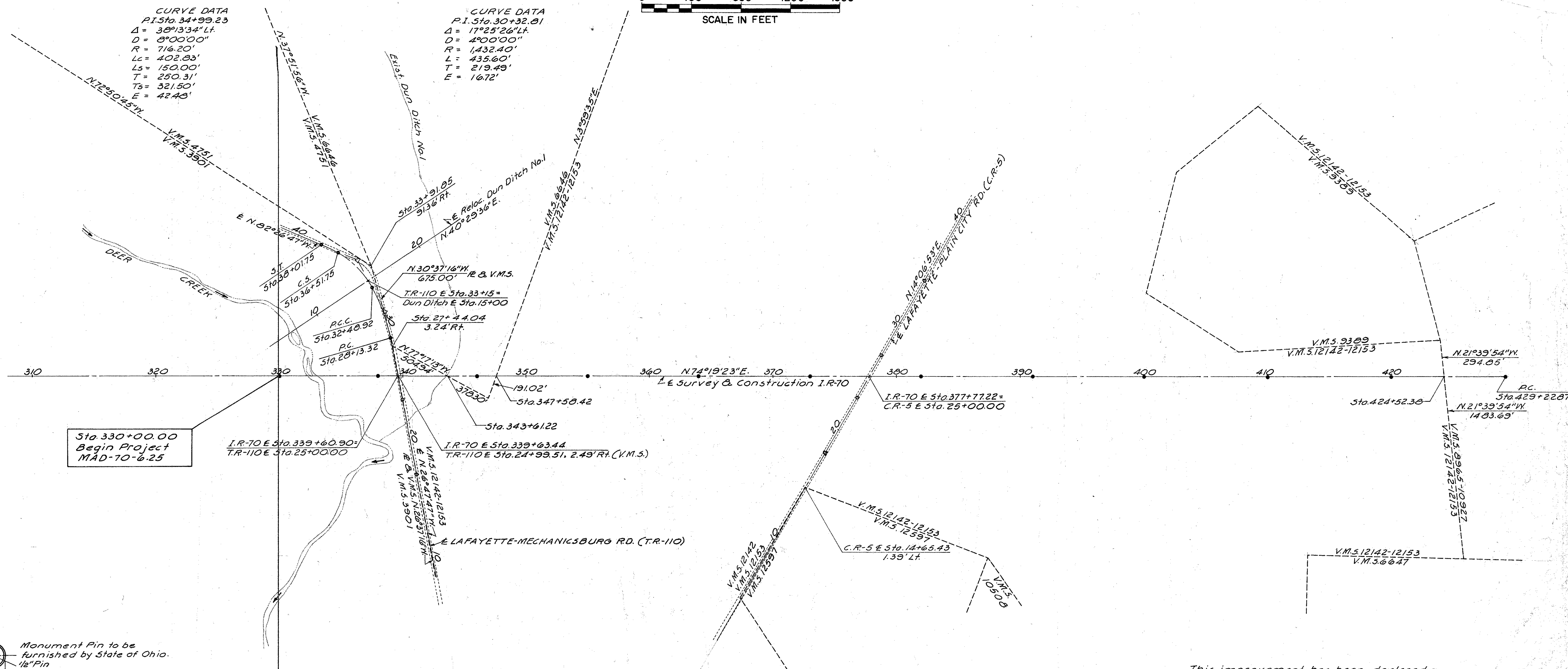
DEER CREEK TOWNSHIP, MADISON COUNTY, OHIO

VIRGINIA MILITARY SURVEY

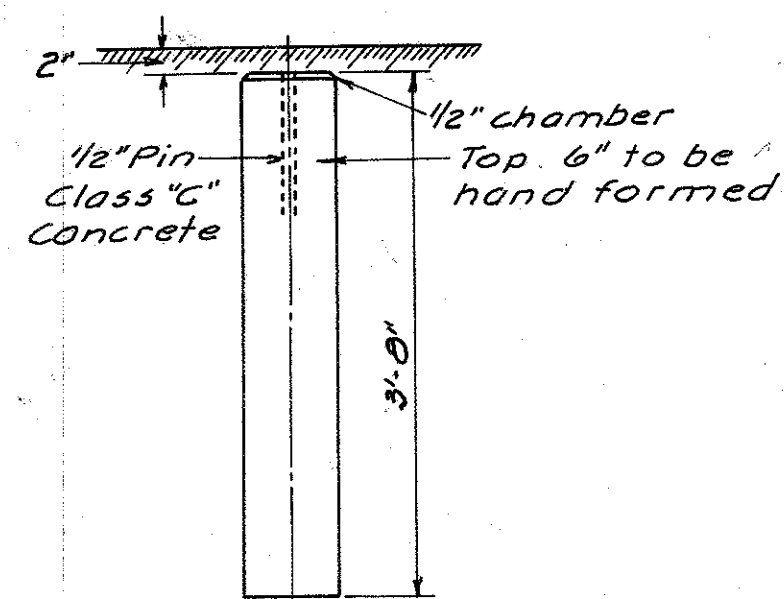
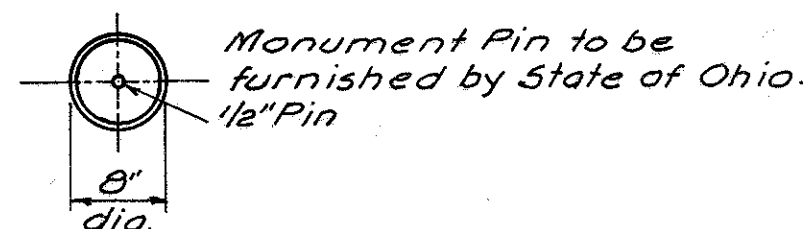
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

338
374

1
37



Sta. 330+00.00
Begin Project
MAD-70-6.25



DETAIL OF CONCRETE MONUMENT

LEGEND
 • - Concrete Monuments
 o - Monument Assemblies

CONCRETE MONUMENTS TO BE PLACED ON CENTERLINE AT FOLLOWING LOCATIONS DURING CONSTRUCTION (I.R-70)		MONUMENT ASSEMBLIES TO BE PLACED ON CENTERLINE AT FOLLOWING LOCATIONS DURING CONSTRUCTION (SIDE ROADS)	
P.O.T. Sta. 330+00.00	P.O.T. Sta. 382+00.00	TR-110	CR-5
P.O.T. Sta. 338+00.00	P.O.T. Sta. 391+00.00	P.O.T. Sta. 16+85.00	P.O.T. Sta. 17+84.53
P.O.T. Sta. 346+00.00	P.O.T. Sta. 400+00.00	P.O.T. Sta. 23+00.00	P.O.T. Sta. 23+00.00
P.O.T. Sta. 355+00.00	P.O.T. Sta. 410+00.00	P.C. Sta. 28+13.32	P.O.T. Sta. 27+00.00
P.O.T. Sta. 364+00.00	P.O.T. Sta. 420+00.00	P.C.C. Sta. 32+48.92	P.O.T. Sta. 34+00.00
P.O.T. Sta. 373+00.00		C.S. Sta. 36+51.75	
		S.T. Sta. 38+01.75	

This improvement has been declared a Limited Access Highway from Station 0+00.00 to Station 822+43.32 by action of the Director of Highways on Dec. 13, 1965 and Recorded in Volume 47, Page 1341 of the Directors Journal, Pursuant to Law.

I hereby certify that this Plat is a true Delineation of a Survey made for the Ohio Department of Highways in 1965 by Franklin Engineering Limited, Columbus, Ohio.

Benny L. Kump Date July 27, 1966
Reg. Sur. No. 5219

Signed Frank M. Williams
Date _____ Division Deputy Director

CENTERLINE SURVEY PLAT

INTERSTATE ROUTE 70 SEC. 6.25

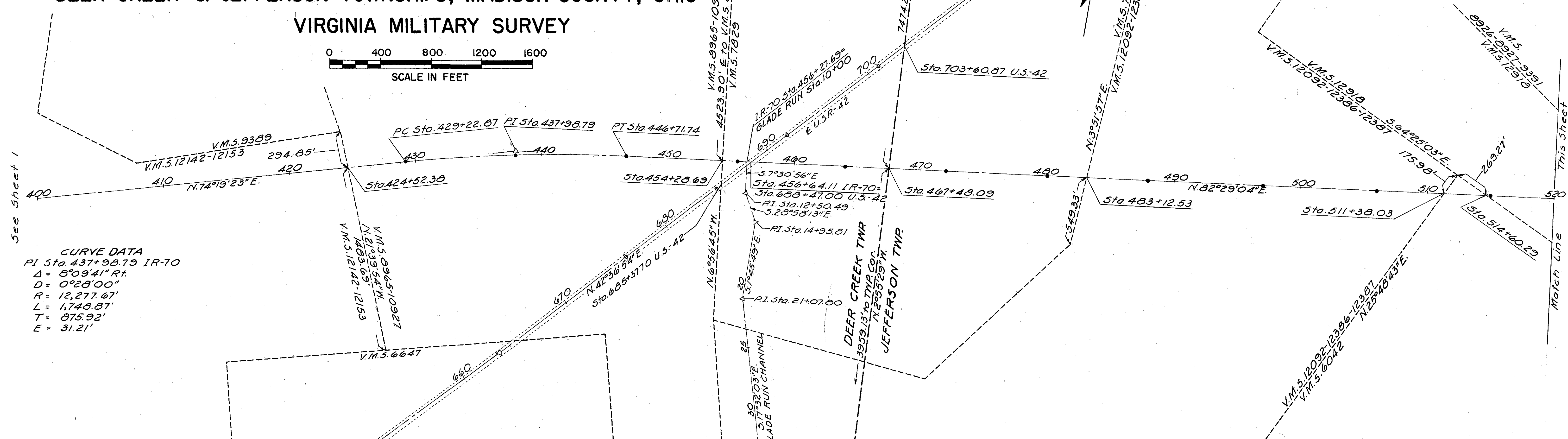
DEER CREEK & JEFFERSON TOWNSHIPS, MADISON COUNTY, OHIO

VIRGINIA MILITARY SURVEY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

339
374

2
37



CURVE DATA
 PI Sta. 437+98.79 IR-70
 $\Delta = 8^{\circ}09'41''$ R.
 $D = 0^{\circ}28'00''$
 $R = 12,277.67'$
 $L = 1,749.87'$
 $T = 875.92'$
 $E = 31.21'$

SER. RD. CURVE DATA
 PI Sta. 531+46.27
 $\Delta = 68^{\circ}30'51''$ R.
 $D = 57^{\circ}17'45''$
 $R = 100'$
 $L = 119.58'$
 $T = 68.11'$
 $E = 20.92'$
 PC Sta. 530+78.16
 PT Sta. 531+97.74

SER. RD. CURVE DATA
 PI Sta. 535+84.61
 $\Delta = 45^{\circ}00'00''$ L.
 $D = 28^{\circ}00'00''$
 $R = 204.63'$
 $L = 160.71'$
 $T = 84.76'$
 $E = 16.86'$
 PC Sta. 534+99.85
 PT Sta. 536+60.56

SER. RD. CURVE DATA
 PI Sta. 538+53.00
 $\Delta = 42^{\circ}04'44''$ R.
 $D = 20^{\circ}00'00''$
 $R = 286.48'$
 $L = 210.39'$
 $T = 110.20'$
 $E = 20.46'$
 PC Sta. 537+42.80
 PT Sta. 539+53.19

SER. RD. CURVE DATA
 PI Sta. 546+75.89
 $\Delta = 27^{\circ}25'44''$ L.
 $D = 6^{\circ}00'00''$
 $R = 954.93'$
 $L = 457.15'$
 $T = 233.04'$
 $E = 28.03'$
 PC Sta. 544+42.05
 PT Sta. 549+00.00

LEGEND
 • Concrete Monuments
 - Monument Assemblies

CONCRETE MONUMENTS TO BE PLACED ON CENTERLINE AT FOLLOWING LOCATIONS DURING CONSTRUCTION (I.R.-70)

PC Sta. 429+22.87	ROT Sta. 506+00.00
POC Sta. 437+97.30	ROT Sta. 515+00.00
PT Sta. 446+71.74	ROT Sta. 524+00.00
ROT Sta. 455+00.00	ROT Sta. 533+00.00
ROT Sta. 464+00.00	ROT Sta. 542+00.00
ROT Sta. 472+00.00	ROT Sta. 551+00.00
ROT Sta. 480+00.00	ROT Sta. 560+00.00
ROT Sta. 488+00.00	ROT Sta. 569+00.00
ROT Sta. 497+00.00	ROT Sta. 577+00.00

MONUMENT ASSEMBLIES TO BE PLACED ON CENTERLINE AT FOLLOWING LOCATIONS DURING CONSTRUCTION (SIDE ROADS)

U.S.R.-42	S.R.-29
ROT Sta. 676+00.00	ROT Sta. 550+00.00
ROT Sta. 685+00.00	ROT Sta. 558+00.00
ROT Sta. 692+00.00	ROT Sta. 566+00.00
ROT Sta. 701+00.00	PI Sta. 574+20.11
	ROT Sta. 577+00.00
Service Rd.	
PC Sta. 530+78.16	Byerly Rd. T.R.-115
PT Sta. 531+97.74	ROT Sta. 522+00.00
PC Sta. 534+99.85	PC Sta. 524+27.01
PT Sta. 536+60.56	ROT Sta. 530+68.98
PC Sta. 537+42.80	PT Sta. 537+10.96
PT Sta. 539+53.19	ROT Sta. 543+00.00
PC Sta. 544+48.85	PC Sta. 550+71.26
PT Sta. 549+00.00	PT Sta. 552+19.20
ROT Sta. 556+00.00	
ROT Sta. 562+00.00	
ROT Sta. 569+00.00	

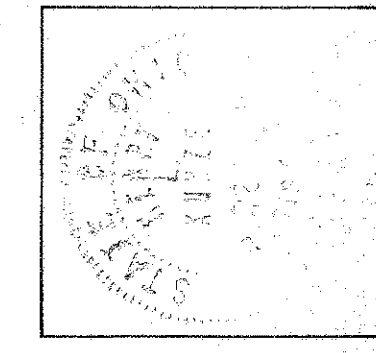
RECORDED IN PLAT BOOK 2 PAGE 89 DATE 9-15-66
 RE-RECORDED IN PLAT BOOK PAGE DATE

This improvement has been declared a Limited Access Highway from Station 0+00.00 to Station 822+43.32 by action of the Director of Highways on Dec. 13, 1962 and Recorded in Volume 47, Page 1341 of the Directors Journal, Pursuant to Law.

I hereby certify that this Plat is a true Delineation of a Survey made for the Ohio Department of Highways in 1966 by Franklin Engineering Limited, Columbus, Ohio.
 Henry L. Rung Date July 27, 1966
 Reg. Sur. No. 5219

Signed Frank M. Williams
 Date _____ Division Deputy Director

10-26-67 Revised curve data on service road at P.I. station 531+46.27.



[illegible]

PROPERTY MAP

0 400 800 1200 1600
SCALE IN FEET

FED. RD. DIVISION 2
STATE OHIO
PROJECT MAD-70-6.25
LIMITED ACCESS

340
374
37

DEER CREEK
LAFAYETTE-MECHANICSBURG RD.
MARIE BROWN CAREN
PEARLE HARPER Res.-111.56 Ac.
KATHARINE HIGGINS Res.-59.450 Ac.
HELEN C. SLAGLE Res.-80.25 Ac.
LOUISE & DEANE M. RICHMOND Res.-47.35 Ac. in 2nd Tract
Res.-25.51 Ac.
Res.-10.75 Ac.
Res.-29.51 Ac.
Res.-11.650 Ac.
GLADYS CAMPBELL (Life Estate) Res.-49.906 Ac.
LOUISE & DEANE M. RICHMOND (Life Estate) Res.-73.80 Ac.
PEARLE HARPER Res.-183.52 Ac.

Sta. 315+33.83
End Acquisition for CLA-70-29.19
MAD-70-0.00
I-70-3(8) RIW & RE

Sta. 315+33.83
Begin Acquisition for MAD-70-6.25
I-70-3(8) RIW & RE

Sta. 330+00
End Project for CLA-70-29.19
MAD-70-0.00
I-70-3(25)69

Sta. 330+00
Begin Project for MAD-70-6.25
I-70-3(9)75

SEE SHEETS 9, 34 FOR RECORDED DATA
SEE SHEETS 9, 10, 35 FOR RECORDED DATA

TR 110

PROPERTY MAP

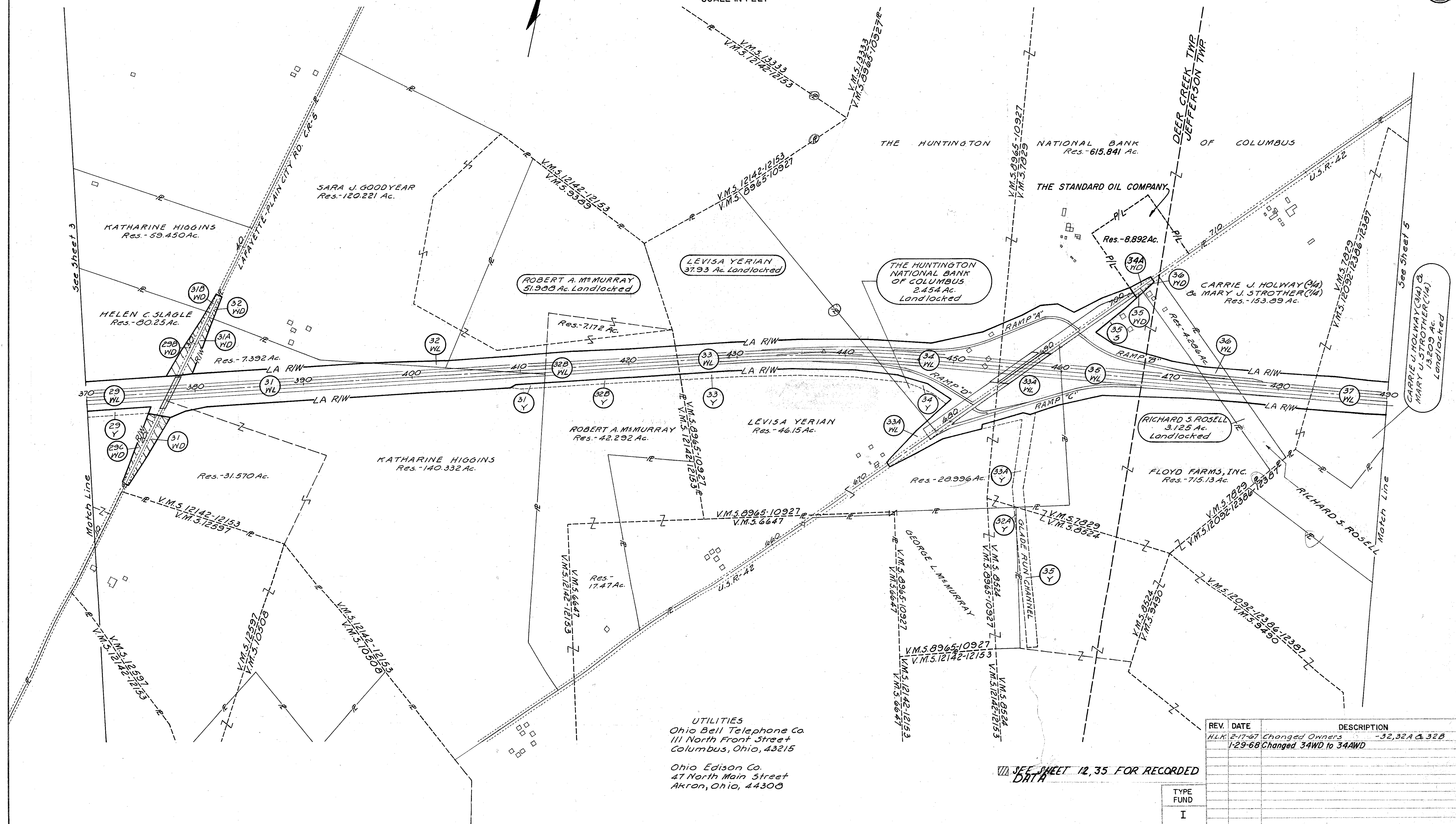
0 400 800 1200 1600
SCALE IN FEET

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

341
374

4
37



PROPERTY MAP

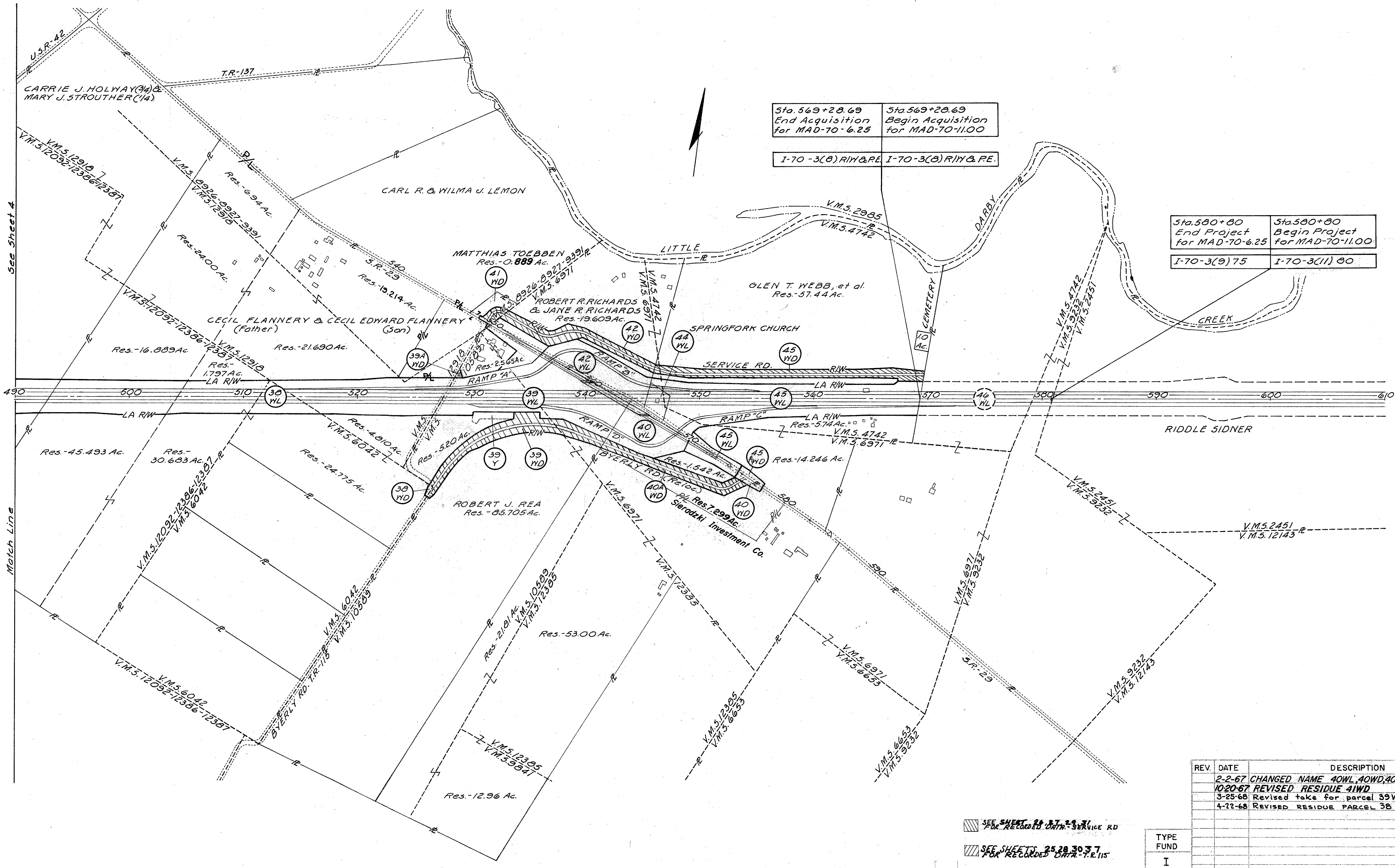


FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

342
374

5
37



SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

343
374

6
37

NO. OF BUILDINGS--- 4
NO. OF PROPERTIES-- 19
NO. OF PARCELS---- 85

PARCEL NO.	OWNER	TYPE FUND	RECORDED		DEED AREA	TOTAL P.R.O.	TOTAL TAKE	P.R.O. IN TAKE	NET TAKE		NET RESIDUE		SHEET NO.	REMARKS
			BOOK	PAGE					LAND	BLDG.	LEFT	RIGHT		
26 WL	Louise & Deane M. Richmond	I	131	231	160.00	6.51	6.615	0.000	6.615	-	23946	121.23	8,9	
26 WD	" " " " "	I					0.245	0.114	0.131	-			33,34	
26A-WD	" " " " "	I					1.568	-	1.568	-			8,9	
27 WL	Pearle Harper	I	1	16,77	210.43	4.85	8.976	0.143	8.833	-	10.349	183.53	9	Registered Land
27 WD	" "	I	80	201			1.460	0.390	1.070	-			9,33	
27 WD-1	" "	I					1.889	0.442	1.447	-			9,33,34	
27 X	" "	I					2.440	-	2.440	-			9,33,34	
27 Y	" "	I					0.571	-	0.571	-			9	
27 T	" "	I					0.048	-	0.048	-			9	Field Drive
27T-1	" "	I					0.022	-	0.022	-			33,34	
27WD-3	" "	I					0.401	-	0.401	-			9	
27 WL-1	Pearle Harper	I	158	259	116.20	0.81	2.979	0.000	2.979	-	111.561	-	10	
27 WD-2	" "	I	114	392			1.381	0.531	0.850	-			10,33,34	
27X-1	" "	I					1.549	-	1.549	-			33,34	
27 T-2	" "	I					0.020	-	0.020	-			33,34	Residence Drive
29 WL	Helen C. Slagle	I	165	345	188.00	2.08	2.557	0.143	2.414	-	80.25	82.478	9,10	
29 A-WL	" " "	I	153	139			19.138	0.232	18.906	-			10,11,12	
29 WD	" " "	I					1.155	0.258	0.897	-			10,33	
29 A-WD	" " "	I					0.111	0.036	0.075	-			9,10	
29 B-WD	" " "	I					1.145	0.374	0.771	-			12,35	
29 C-WD	" " "	I					1.027	0.408	0.619	-			12,35	
29 X	" " "	I					0.524	-	0.524	-			10	
29 Y	" " "	I					3.715	-	3.715	-			10,11,12,35	
29 T	" " "	I					0.019	-	0.019	-			35	Field Drive
29 B-T	" " "	I					0.015	-	0.015	-			35	Field Drive
29 C-T	" " "	I					0.037	-	0.037	-			35	Field Drive
30 WD	Gladys Campbell (Life Estate)	I	166	202	63.00	1.29	0.284	0.130	0.154	-	61.556		33	
31 WL	Katharine Higgins	I	169	81	203.21	1.85	20.897	0.237	20.660	-	7.392	171.902	12,13,14	
31 WD	" "	I					1.138	0.412	0.726	-			12,35	
31 A-WD	" "	I					1.010	0.330	0.680	-			12,35	
31 Y	" "	I					0.299	-	0.299	-			14	
31 T	" "	I					0.051	-	0.051	-			35	Field & Residence Drives
31 A-T	" "	I					0.010	-	0.010	-			35	Field Drive
31 B-WD	" "	I	169	81	60.00	0.493	0.161	0.104	0.057	-	59.450	-	35	
31 B-T	" "	I					0.012	-	0.012	-			35	Field Drive
32 WL	Sara J. Goodyear	I	143	307	122.50	1.57	0.563	0.000	0.563	-	120.221		13,14	
32 WD	" "	I					0.223	0.077	0.146	-			35	
32 T	" "	I					0.019	-	0.019	-			35	Residence Drive
32 A-Y	George L. M ^{rs} Murray	I	143	308	34.24	0.03	0.078	-	0.078	-	34.21		36	
33 WL	Levisa Yerion	I	160	129	135.66	2.93	11.272	0.000	11.272	-	37.93 (L.L.)	75.146	15,16	
33 A-WL	" "	I					10.160	1.678	8.482	-			17,18,20,21	
33 Y	" "	I					2.640	-	2.640	-			15,16	
33 A-Y	" "	I					2.585	-	2.585	-			18,36	
33 T	" "	I					0.867	-	0.867	-			18,21	Temporary U.S.R.-42
33A-T	" "	I					0.062	-	0.062	-			36	Build Drive (Crossing Glade Run)
32B-WL	Robert A. M ^{rs} Murray	I	143	309	122.50	0.60	10.150	0.000	10.150	-	51.988 (L.L.)	59.762	14,15	
32B-Y	" " "	I					1.381	-	1.381	-			14,15	

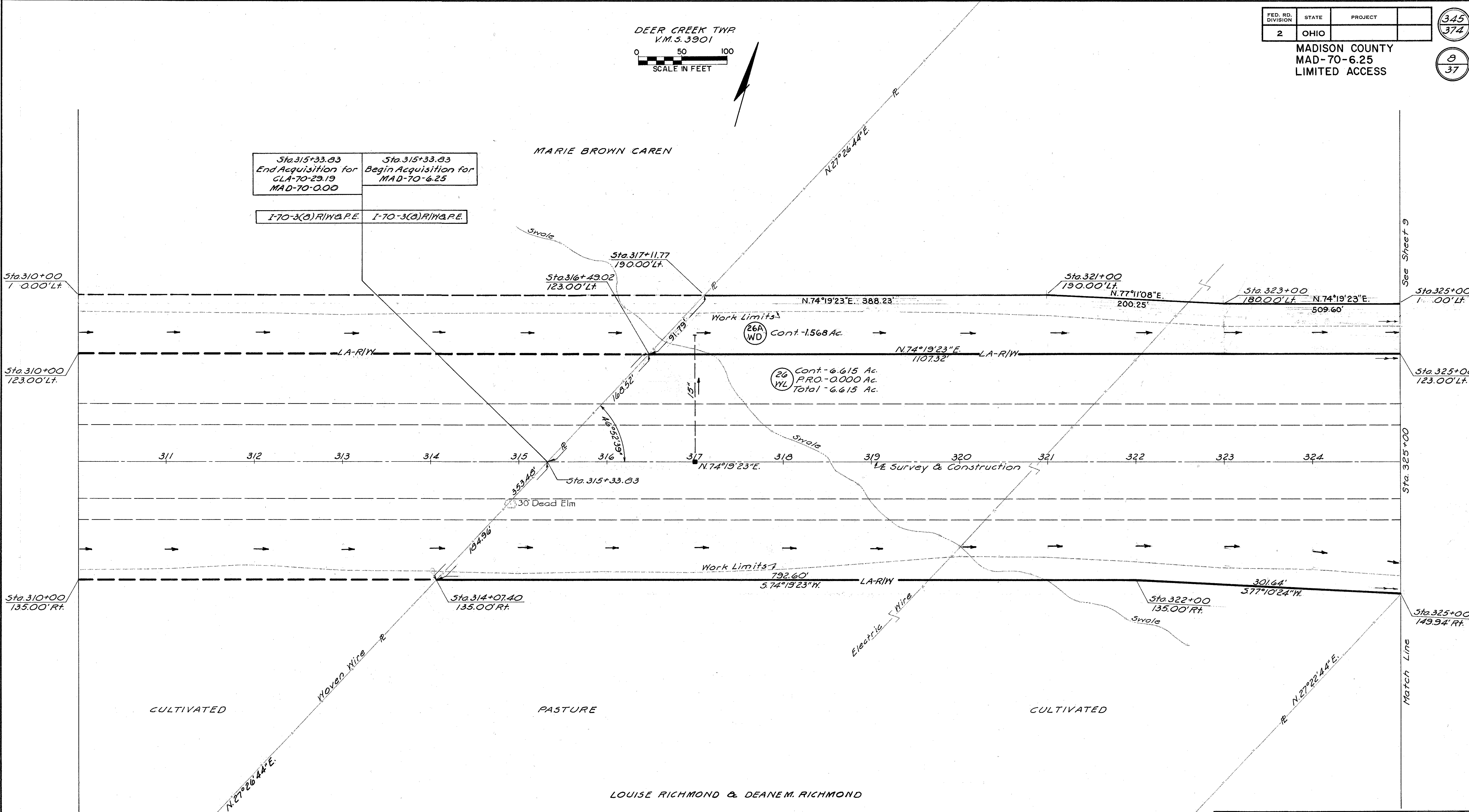
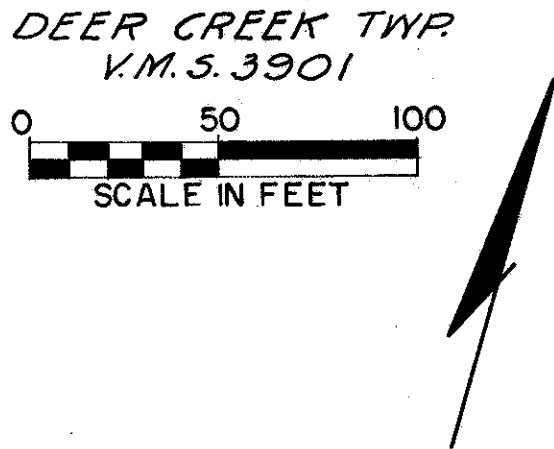
REV.	DATE	DESCRIPTION
HLK	2-17-67	Added Parcel 33A-T
HLK	2-17-67	Changed Parcel Series 32
HLK	2-17-67	Added Parcel 32B-WL, 32B-Y
LMT	5-22-67	Added Parcel 27B-WD
LMT	5-22-67	Changed 26X & 27X
	7-21-67	Revised parcel series 28 to 27

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

NO. OF BUILDINGS---
NO. OF PROPERTIES---
NO. OF PARCELS---

PARCEL NO.	OWNER	TYPE FUND	RECORDED		DEED AREA	TOTAL P.R.O.	TOTAL TAKE	P.R.O. IN TAKE	NET TAKE		NET RESIDUE		SHEET NO.	REMARKS
			BOOK	PAGE					LAND	BLDG.	LEFT	RIGHT		
34 WL	The Huntington National Bank of Columbus	I	149	497	649.002	9.77	22.470	1.533	20.937	Yes	615.841	2.454(L.L.)	16,17,18,19,21	
34 Y	" " " " " "	I					0.757	-	0.757	-			16,18	
34 T	" " " " " "	I					0.421	-	0.421	-			18	Temporary Run around U.S.R. 42
34 T-1	" " " " " "	I					1.123	-	1.123	-			19,21	" " " "
34 T-2	" " " " " "	I					0.043	-	0.043	-			16	Clean out ditch.
34AWD	THE STANDARD OIL COMPANY	I	178	356	9.398	0.430	0.231	0.155	0.076	-	8.892		21	
34AT	" " "	I					0.507	-	0.507	-			21	Temporary runaround for U.S.R. 42
35 WL	Floyd Farms, Inc.	I	155	623	743.06	7.45	14.928	0.575	14.353	-	6.086	715.13	17,19,20,21	
35 WD	" " "	I					0.096	0.059	0.037	-			19,21	
35 Y	" " "	I					2.990	-	2.990	-			36	
35 S	" " "	I					0.193	-	0.193	-			19,21	
35 T	" " "	I					0.033	-	0.033	-			19	Field Tile
35T-1	" " "	I					1.857	-	1.857	-			20	DREDGE GLADE RUN CHANNEL
36 WL	Richard S. Rosell	I	173	294	9.359	0.141	1.784	0.000	1.784	-	4.286	3.125(L.L.)	19,20,22	
36 WD	" " "	I					0.119	0.096	0.023	-			21	
36 S	" " "	I					0.026	-	0.026	-			21	
37 WL	Carrie J. Holway (3/4) & Mary J. Strother (1/4)	I	157 155 176	368 123 439	182.63	3.61	11.919	0.000	11.919	-	153.89	13.209(L.L.)	22,23	
38 WL	Cecil Flannery (Father) & Cecil Edward Flannery (Son)	I	157	289	222.654	2.29	24.184	0.174	24.010	-	90.53	105.761	23,24,25	2 OUT SALES D.B. 183 Pg. 168 & D.B. 181
38 WD	" " " " " " " "	I					0.135	0.072	0.063	-			37	Pg. 250
38 T	" " " " " " " "	I					0.441	-	0.441	-			23	Field Tile & Clean out ditch.
38 T-1	" " " " " " " "	I					0.123	-	0.123	-			25	Field Tile
39 WL	Robert J. Rea	I	116	389	116.27	3.323	16.335	1.237	15.098	Yes	2.565	90.905	25,26,27,28	(1.38 Ac.) Non-B.P.R. Port. in LA
39 WD	" " "	I					4.474	0.131	4.343	-			25,28,37	
39 A-WD	" " "	I					0.072	0.036	0.036	-			25	
39 Y	" " "	I					0.520	-	0.520	-			25,37	
39 T	" " "	I					0.048	-	0.048	-			27	Remove Hog House
39 T-1	" " "	I					0.022	-	0.022	-			27	Residence Drive
39 T-2	" " "	I					0.020	-	0.020	-			25	Clean out ditch.
39 T-3	" " "	I					0.095	-	0.095	-			25,37	Clean out ditch.
39 T-4	" " "	I					0.040	-	0.040	-			27	Replace Tile from Septic System
40 WL	SIERADZKI INVESTMENT CO.	I	176	234	17.717	1.138	5.571	0.784	4.787	-	8.841		28,30	(0.971 Ac.) Non-B.P.R. Port. in LA
40 WD	" "	I					0.316	0.189	0.127	-			30	
40 A-WD	" "	I					2.824	-	2.824	-			28,30	
41 WD	Matthias Toeppen	I	172	274	1.281	0.138	0.334	0.080	0.254	-	0.889		27	
42 WL	Robert R. Richards & Jane R. Richards	I	161 163	184,185 48	29.50	1.271	6.169	1.271	4.898	-	19.609		26,27,28	(1.080 Ac.) Non-B.P.R. Port. in LA.
42 WD	" " " " " " "	I					3.722	0.000	3.722	-			26,27	
44 WL	Trustees of Springfork Church Enterprise Association of Regular Baptist	I	154	533	1.000	0.141	1.000	0.141	0.859	Yes			26,28	
45 WL	Glen T. Webb et al.	I	159 163	101 449	102.21	1.290	17.014	0.547	16.467	Yes	57.439	19.986	26,28,29,30,31	(0.592 Ac.) Non-B.P.R. Port. in LA
45 WD	" " " " "	I					6.900	0.000	6.900	-			26,29,31	
45 A-WD	" " " " "	I					0.317	0.189	0.128	-			30	
45 T	" " " " "	I					0.020	-	0.020	-			31	Clean out ditch.

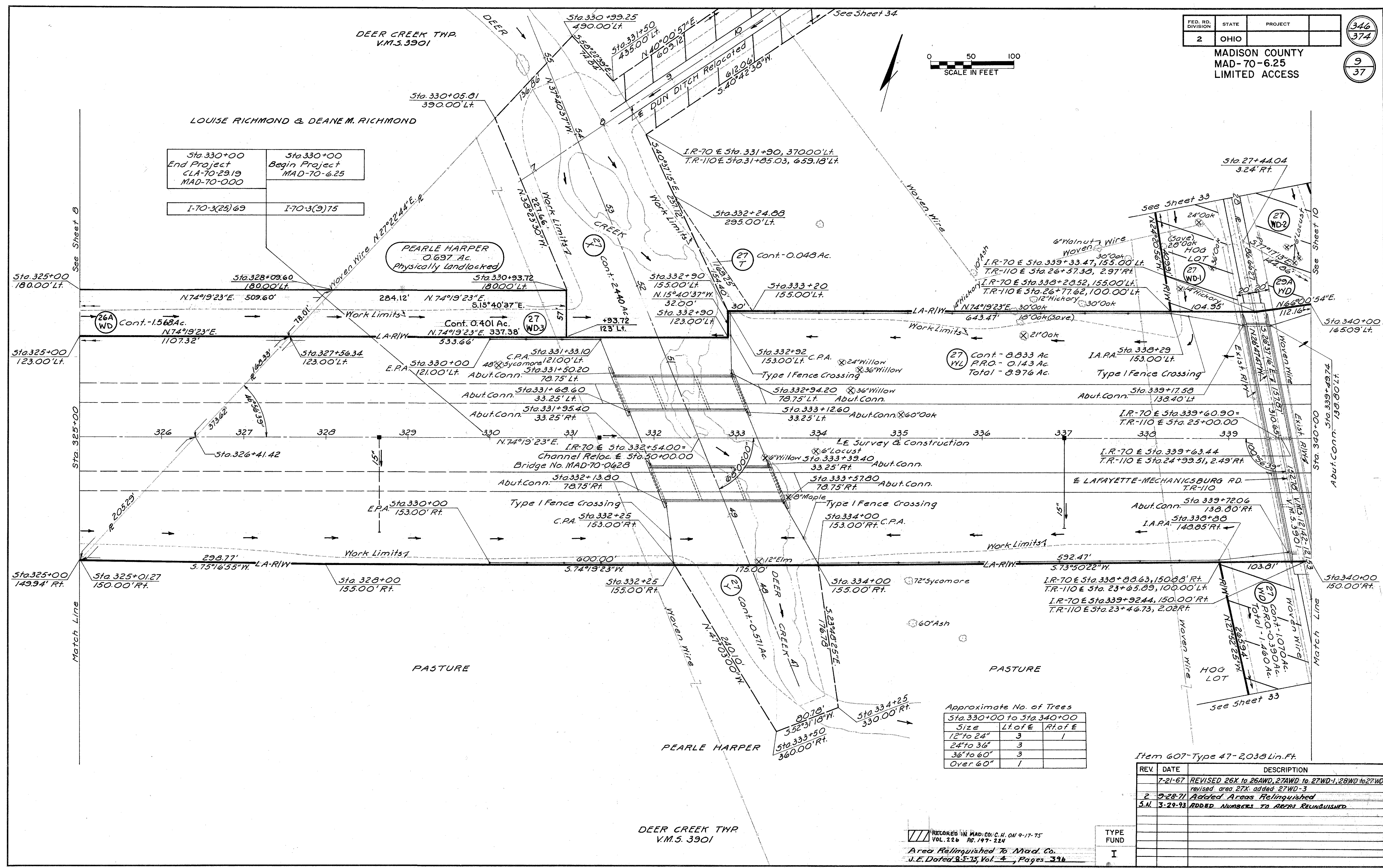
REV.	DATE	DESCRIPTION
	2-2-67	Revised name & residue 40WL
	10-20-67	REVISED AREA 41WD
	1-29-68	Changed 34WD to 34AWD
	1-29-68	Revised 34T-1, added 34AT
	3-25-68	Revised 39WL, 39T-2 & 39T-4
	4-22-68	REVISED DEED & RESIDUE AREAS 38
	1-29-68	Added 35T-1



																								QUANTITIES													
SHEET																								ITEM	QUANTITY	UNIT	DESCRIPTION										
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32														
2038	3,075	3,000	2,971	3,000	3,008	3,000	3,037	1,610	2,327	2,378	1,519	811	3,001	3,117	3,000	2,790	1,416	1,120	1,779	1,500	2,288	3,032	160		607	54,977	Lin.Ft.	Type 47 Fence									

REV	DATE	DESCRIPTION
7-21-67		REVISED 26X TO 26AWD
3-25-68		Revised fence quantities sheets 25, 26 & 27 total

TYPE	FUND
I	



Approximate No. of Trees

Size	Lt. of E	Rt. of E
12" to 24"	3	1
24" to 36"	3	
36" to 60"	3	
Over 60"	1	

Item 607-Type 47-2038 Lin.Ft.

REV.	DATE	DESCRIPTION
7-21-67		REVISED 26X TO 26AWD, 27AWD TO 27WD-1, 28WD TO 27WD-2
2	9-28-71	revised area 27X added 27WD-3
3	3-29-93	Added Areas Relinquished
		Added Numbers to Areas Relinquished

RECORDED IN MAD. CO. C.H. ON 9-17-75
VOL. 226 PG. 197-224
Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 396

TYPE
FUND
I

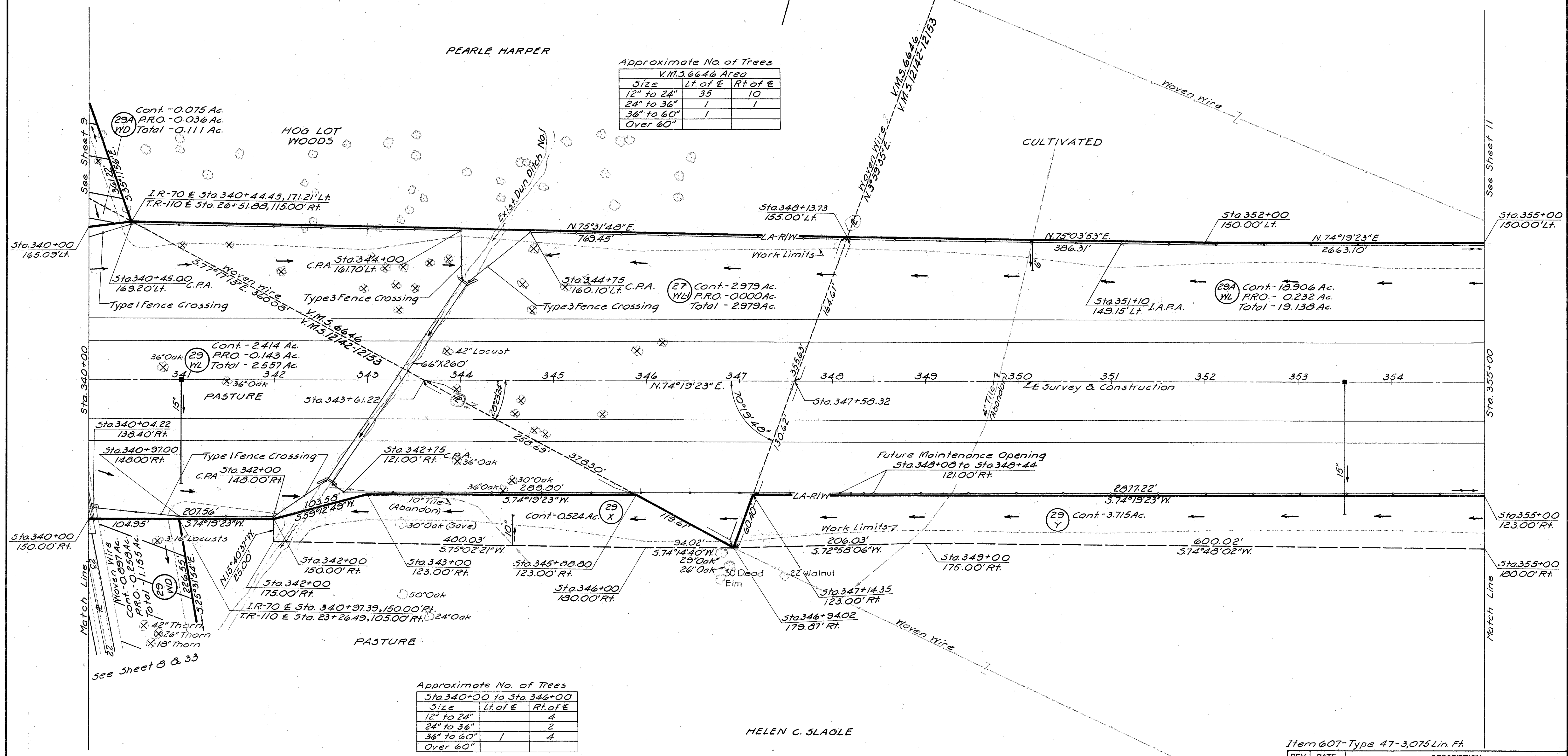
DEER CREEK TWP
V.M. 5.6646

0 50 100
SCALE IN FEET

DEER CREEK TWP
V.M. 5.12142-12153

Approximate No. of Trees

Size	Lt. of E	Rt. of E
12" to 24"	35	10
24" to 36"	1	1
36" to 60"	1	
Over 60"		



Approximate No. of Trees

Size	Lt. of E	Rt. of E
12" to 24"	4	
24" to 36"	2	
36" to 60"	1	4
Over 60"		

Item 607-Type 47-3,075 Lin. Ft.

REV.	DATE	DESCRIPTION
1	1-21-67	Revised 28WL to 27WL-I
2	9-28-71	Added Areas Relinquished
3	3-29-93	Added Numbers to AREAS RELINQUISHED

RECORDED IN MAD. CO. C.H. ON 9-17-75
Vol. 226 P.G. 197-224
Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 396

TYPE
FUND
I

DEER CREEK TWP
V.M. 5.12142-12153

DEER CREEK TWP.
V.M. 3.12142-12153

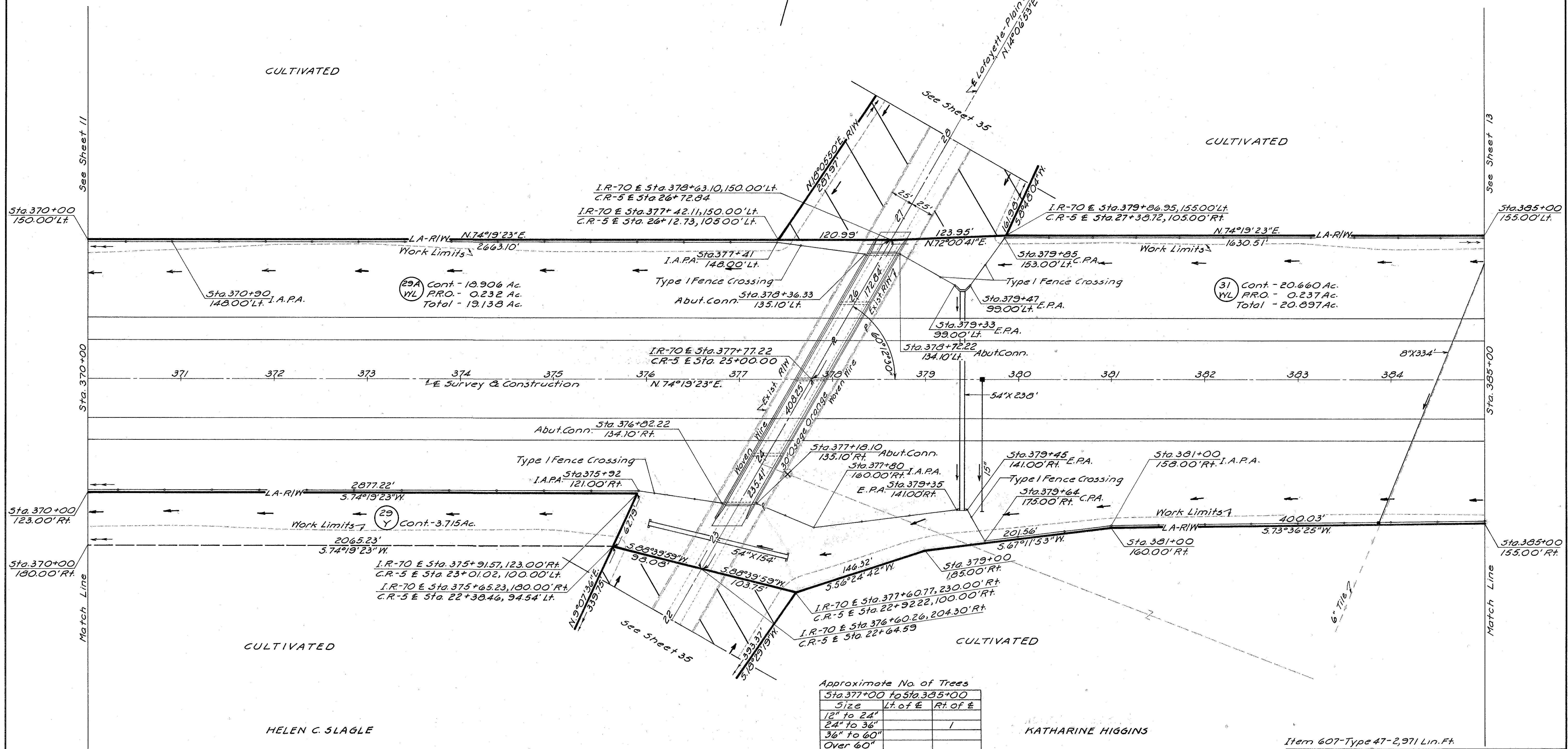
0 50 100
SCALE IN FEET

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

349
374

12
37



Approximate No. of Trees		
Size	Lt of E	Rt of E
12" to 24"		
24" to 36"		1
36" to 60"		
Over 60"		

Item 607-Type 47-2,971 Lin. Ft.

REV.	DATE	DESCRIPTION
1	3-29-71	Added Areas Relinquished
S.N.	3-29-93	ADDED NUMBERS TO AREAS RELINQUISHED

RECORDED IN MAD. CO. CH. ON 9-17-75
VOL. 226 PG. 197-224
Area Relinquished To Mad. Co.
J.E. Dated 8-8-76, Vol. 4, Pages 336

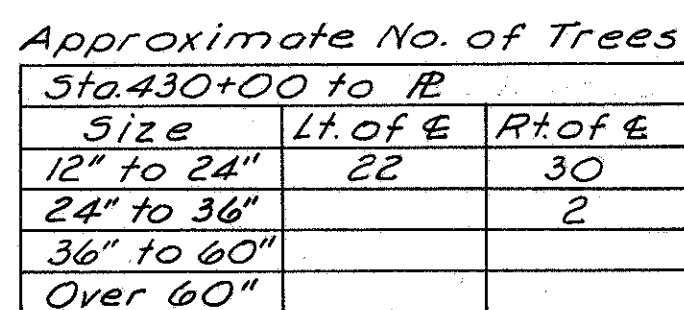
TYPE
FUND
I

STA. 370+00 TO STA. 385+00 R/W



THE HUNTINGTON NATIONAL BANK
OF COLUMBUS

Size	Lt of E	Rt of
12" to 24"		4
24" to 36"		
36" to 60"		
Over 60"		



CURVE DATA
PI Sta. 437+98.79
 $\Delta = 80^{\circ}09'41''$ Rt.
 $D = 0^{\circ}28'00''$
 $R = 12,277.67'$
 $L = 1,748.87'$
 $T = 875.92'$
 $E = 31.21'$

Item 607-Type 47-3,037 Lin. Ft.

[illegible]

THE HUNTINGTON NATIONAL BANK
OF COLUMBUS

PARTIALLY CULTIVATED

CULTIVATED

Approximate No. of Trees

Sta. 445+00 to 450		
Size	Lt. of E	Rt. of E
12" to 24"	1	
24" to 36"	1	
36" to 60"	5	
Over 60"		

Item 607-Type 47- 1,610 Lin.Ft.

DEER CREEK TWP
V.M.S. 7029
THE HUNTINGTON NATIONAL BANK
OF COLUMBUS
PARTIALLY CULTIVATED

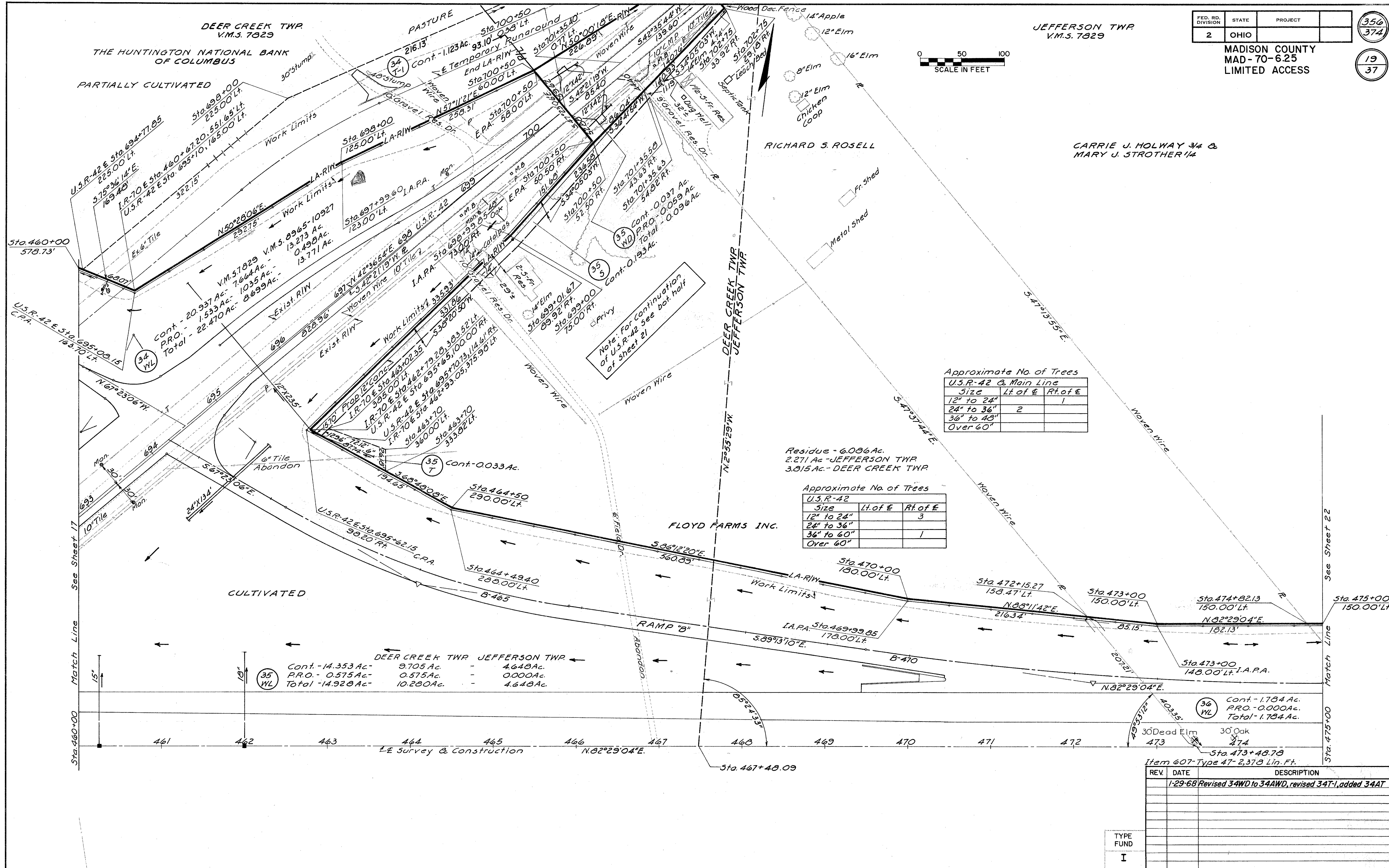
JEFFERSON TWP
V.M.S. 7029

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

356
374

19
37



Approximate No. of Trees
U.S.R-42 & Main Line

Size	Lt. of E	Rt. of E
12" to 24"		1
24" to 36"	2	
36" to 48"		
Over 60"		

Approximate No. of Trees
U.S.R-42

Size	Lt. of E	Rt. of E
12" to 24"		3
24" to 36"		
36" to 60"		1
Over 60"		

DEER CREEK TWP JEFFERSON TWP

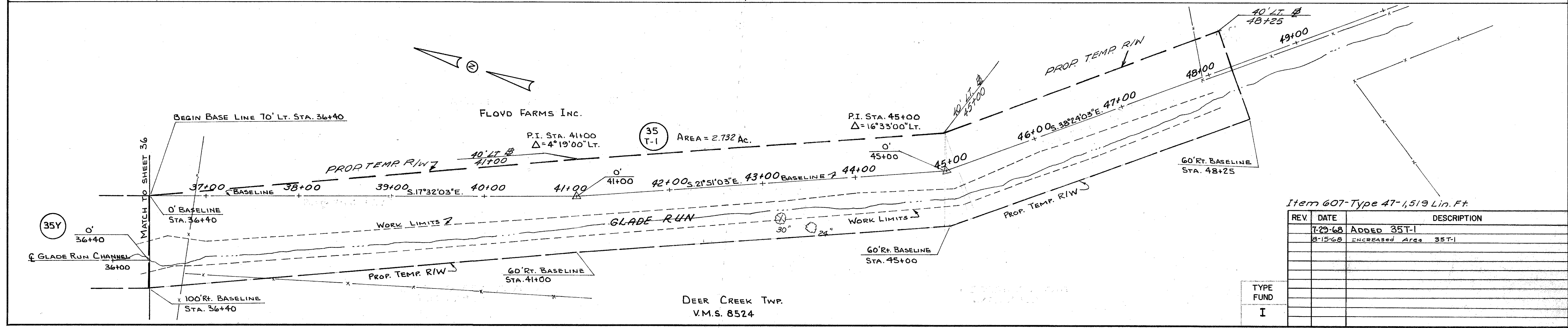
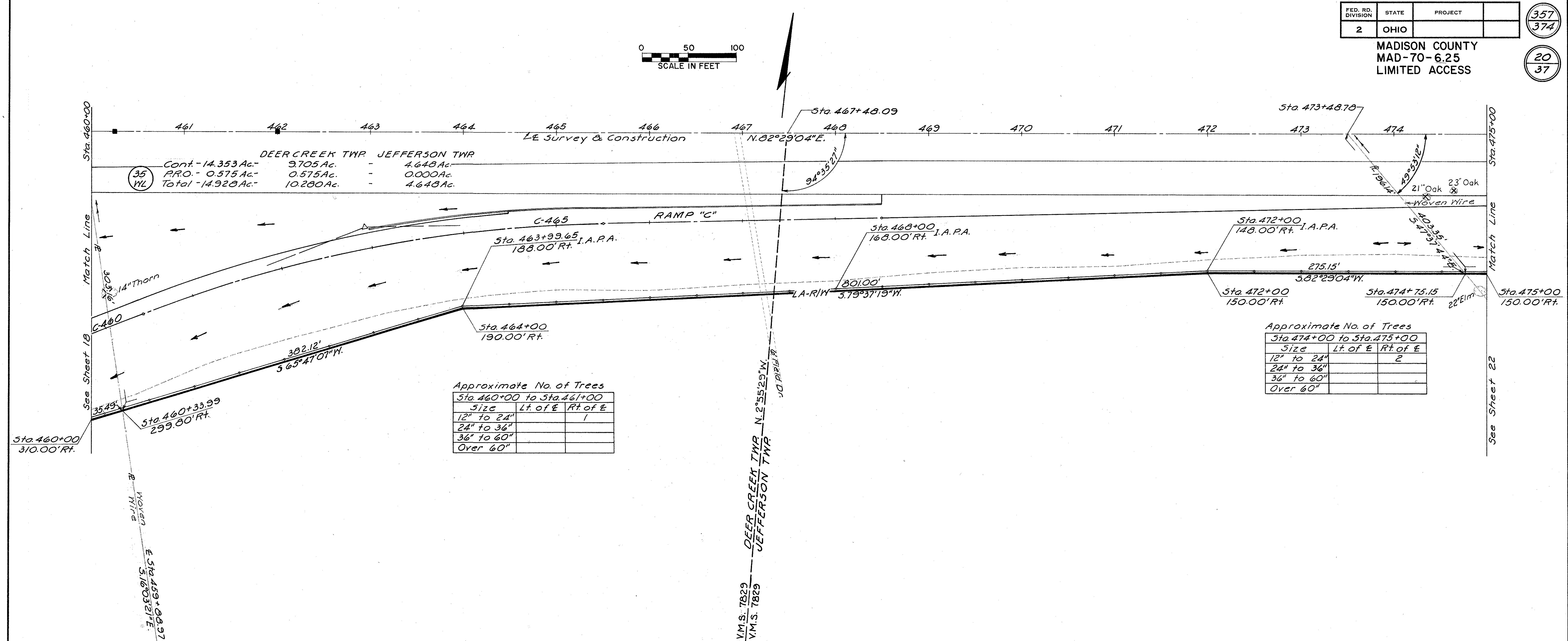
	DEER CREEK TWP	JEFFERSON TWP
Cont.	14.353 Ac.	9.705 Ac.
P.R.O.	0.575 Ac.	0.575 Ac.
Total	14.928 Ac.	10.280 Ac.

36 WL

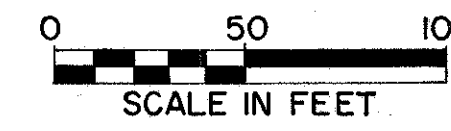
Cont.	1.784 Ac.
P.R.O.	0.000 Ac.
Total	1.784 Ac.

Item 607-Type 47- 2,378 Lin. Ft.

REV.	DATE	DESCRIPTION
1	29-68	Revised 34WD to 34AWD, revised 34T-1, added 34AT



JEFFERSON TWP
V.M.S. 7829



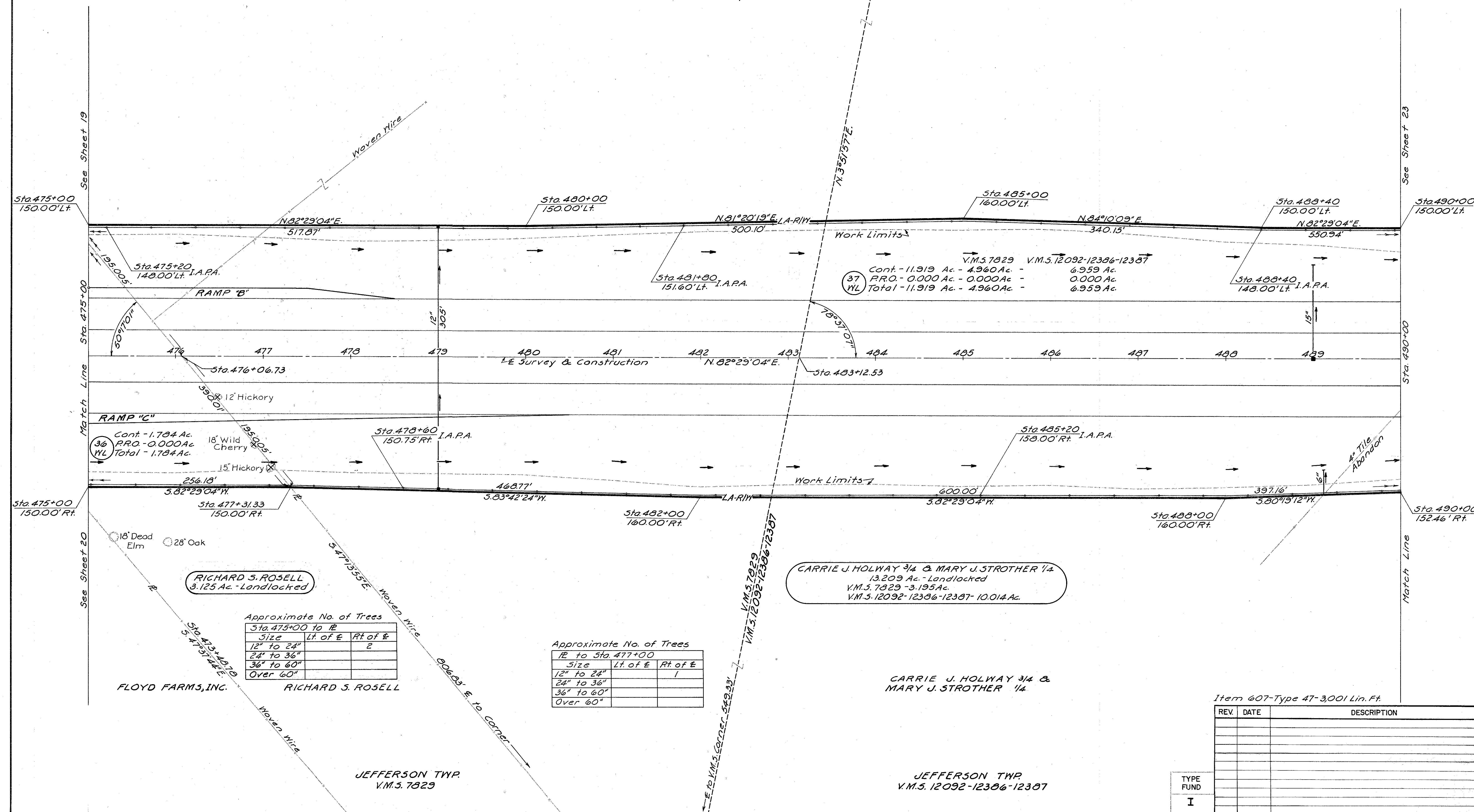
JEFFERSON TWP
V.M.S. 12092-12386-12387

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

359
374

22
37



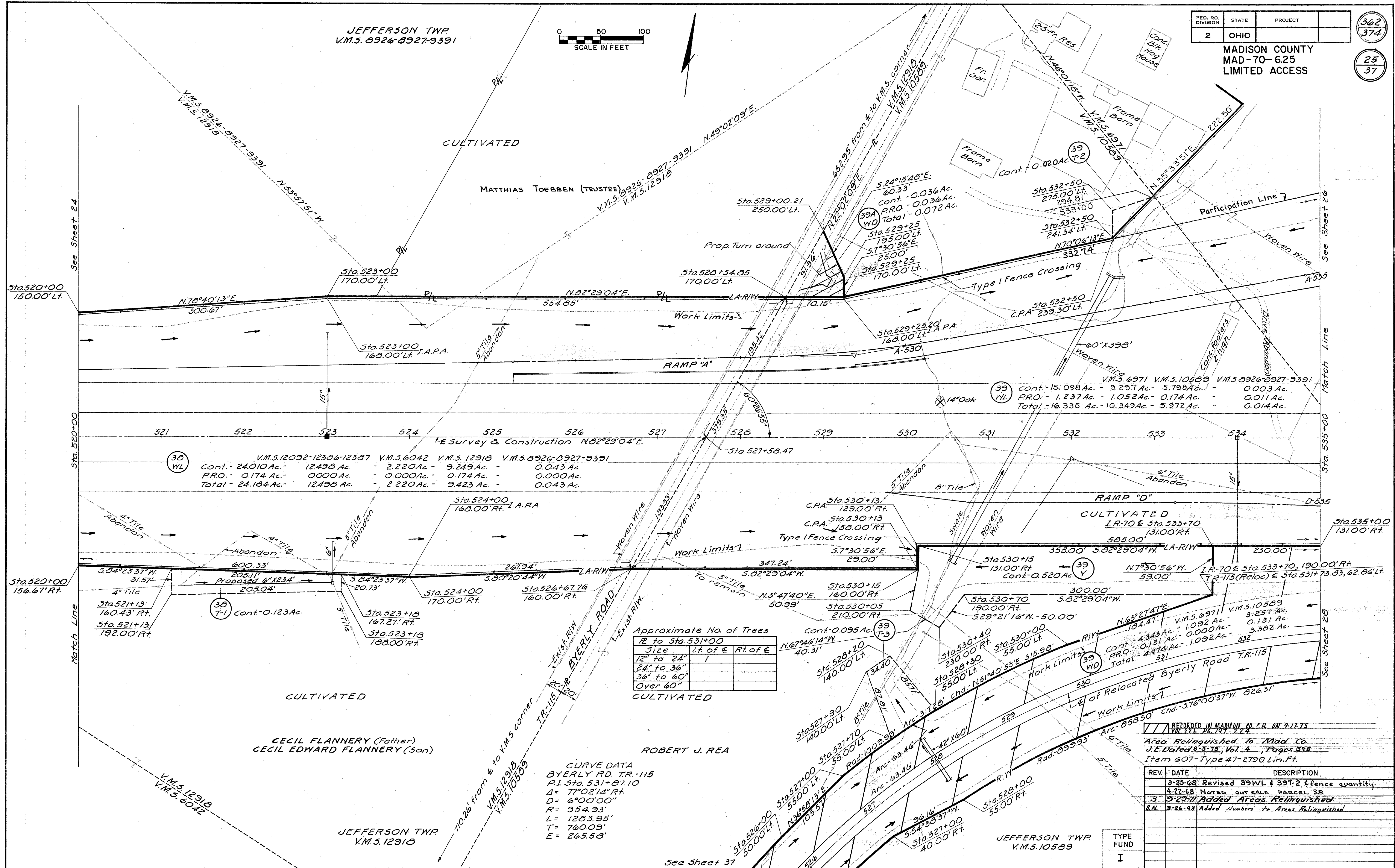
Item 607-Type 47-3,001 Lin. Ft.

REV.	DATE	DESCRIPTION

TYPE FUND
I

[illegible]

R/W



RECORDED IN MADISON CO. CL. ON 9-17-75
 Vol. 226 Pgs. 191-224

Area Relinquished To Mad. Co.
 J.E. Dated 8-3-75, Vol. 4, Pages 398
 Item 607-Type 47-2790 Lin. Ft.

REV.	DATE	DESCRIPTION
3-25-68		Revised 39WL & 39T-2 & fence quantity.
4-22-68		NOTED OUT SALE PARCEL 38
5-22-77		Added Areas Relinquished
8-26-93		Added Numbers to Areas Relinquished

JEFFERSON TWP
V.M.S. 6971

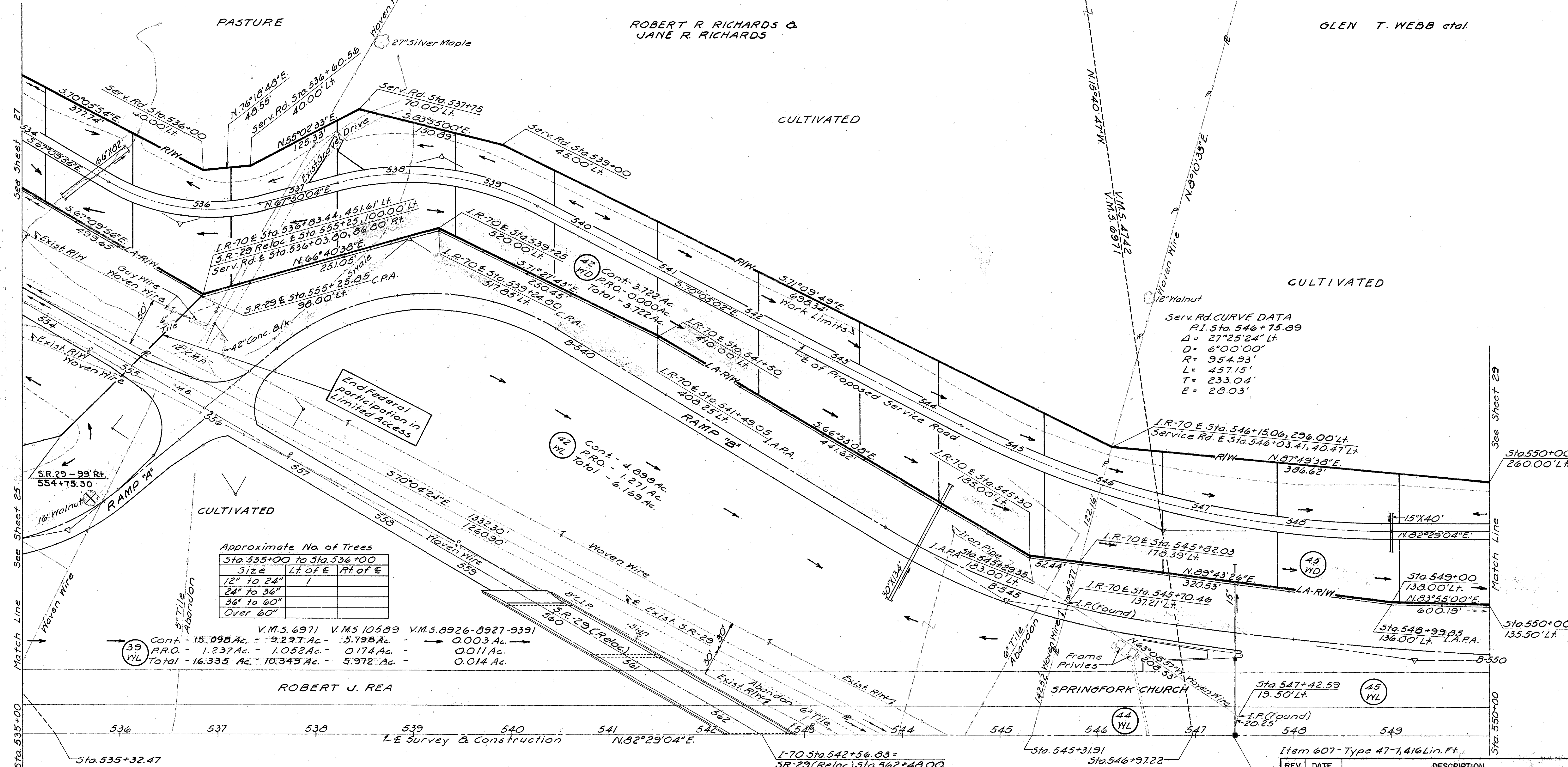
JEFFERSON TWP
V.M.S. 4742

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

363
374

26
37



Approximate No. of Trees

Size	Lt. of E	Rt. of E
12" to 24"	1	
24" to 36"		
36" to 60"		
Over 60"		

V.M.S. 6971	V.M.S. 10589	V.M.S. 8926-8927-9391
Cont. - 15.098 Ac.	9.297 Ac.	5.798 Ac.
P.R.O. - 1.237 Ac.	1.052 Ac.	0.174 Ac.
Total - 16.335 Ac.	10.349 Ac.	5.972 Ac.
		0.014 Ac.

Item 607 - Type 47-1, 416 Lin. Ft.

REV	DATE	DESCRIPTION
3-25-68		Revised take parcel 39WL & fence quantity
2-9-77		Added Areas Relinquished
3-29-93		ADDED NUMBERS TO AREAS RELINQUISHED

RECORDED IN MAD. CO. C.H.D.N. 9-17-75
Vol. 116 Pg. 191-224
Area Relinquished To Mad. Co.
J.E. Dated 8-7-75, Vol. 4, Pages 396

JEFFERSON TWP
V.M. 5. 8926-8927-9391



JEFFERSON TWP
V.M. 5. 6971

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

364
374
27
37

PASTURE

CARL R. & WILMA J. LEMON

ROBERT R. RICHARDS &
JANE R. RICHARDS

PASTURE

SERVICE ROAD
Curve Data
P.I. Sta. 538+53.00
Δ = 42°04'44"
D = 20°00'00"
R = 286.48'
T = 210.39'
E = 20.46'

SERVICE ROAD
Curve Data
P.I. Sta. 535+84.61
Δ = 45°00'00"
D = 28°00'00"
R = 204.63'
T = 160.71'
E = 16.86'

SERVICE ROAD
Curve Data
P.I. Sta. 531+46.27
Δ = 68°30'51" Rt.
R = 100'
T = 119.58'
E = 30.72'

Cont. - 0.254 Ac.
P.R.O. - 0.080 Ac.
WD Total - 0.334 Ac.

Ch. N. 82°17'28"E, 113.43'
R = 110'
Arc = 119.17'

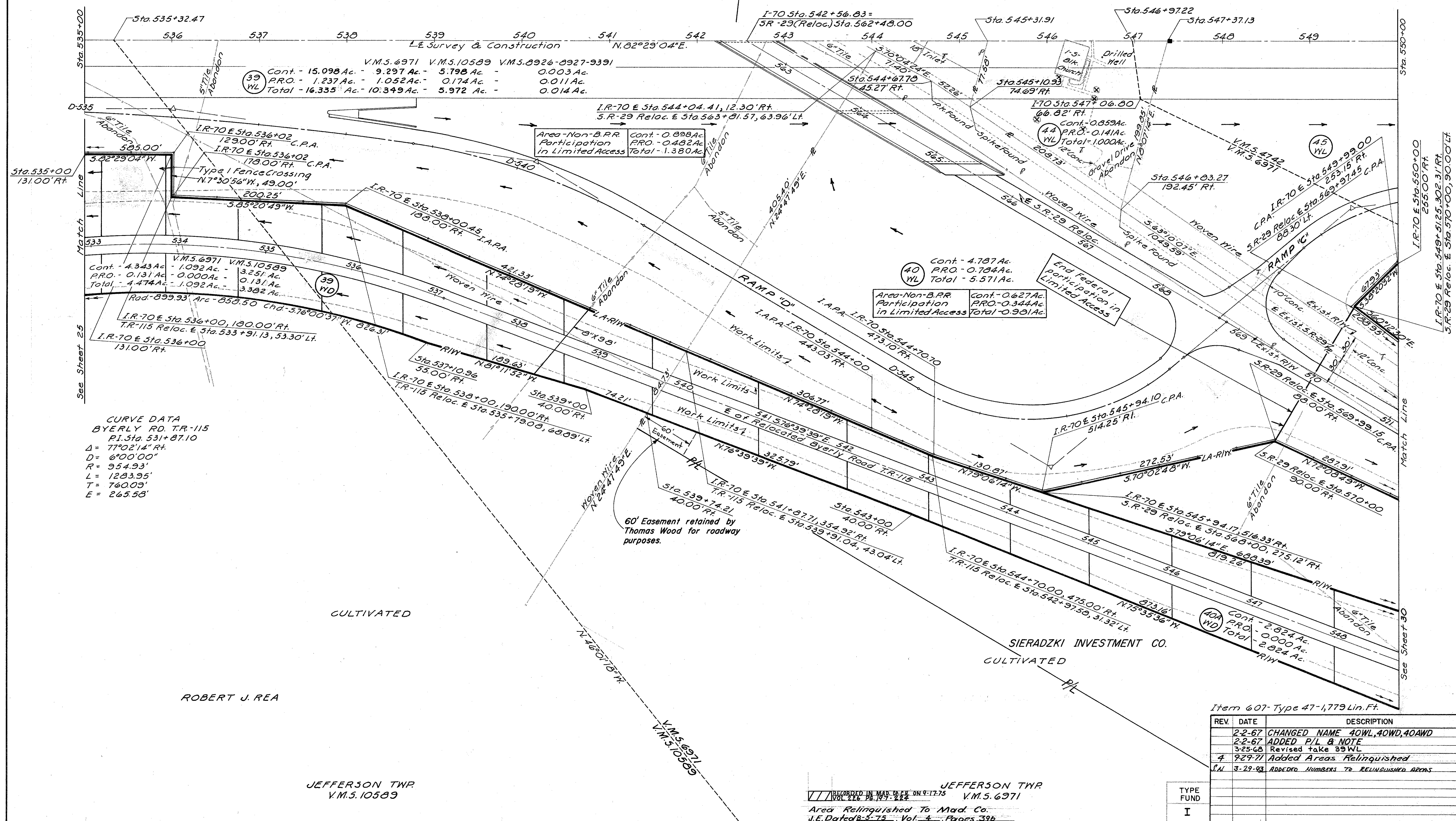
Cont. - 3.722 Ac.
P.R.O. - 0.000 Ac.
WD Total - 3.722 Ac.

Area-Non-B.P.R.
Participation
in Limited Access
Cont. - 0.495 Ac.
P.R.O. - 0.585 Ac.
Total - 1.080 Ac.

Approximate No. of Trees		
Size	Lt. of E	Rt. of E
12" to 24"	5	5
24" to 36"	2	2
36" to 60"	1	1
Over 60"		

EXIST. S.R. 29
Curve Data
P.I. Sta. 551+22.29
Δ = 2°59'00"
D = 1°00'00"
R = 5729.58'
T = 149.21'
L = 298.33'
E = 1.95'

S.R. 29 Sta. 549+63.53
N. 22°02'09"E
45.00'
S.R. 29 Sta. 549+64.00
43.00' Rt.
S.R. 29 Sta. 549+64.16
45.00' Rt.
S.R. 29 Sta. 549+64.30
55.00' Rt.
S.R. 29 Sta. 549+65.13
115.00' Rt.



CURVE DATA
BYERLY RD. T.R-115
P.I. Sta. 531+87.10
Δ = 77°02'14" Rt.
D = 6°00'00"
R = 954.93'
L = 1283.95'
T = 760.03'
E = 265.53'

ROBERT J. REA

JEFFERSON TWP.
V.M.S. 10589

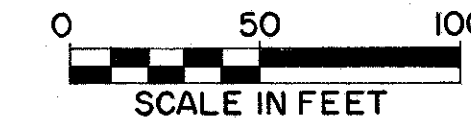
RECORDED IN MAD. CO. ON 9-17-75
Vol. 116, Pg. 104-222
JEFFERSON TWP.
V.M.S. 6971
Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 336

Item 607- Type 47-1,779 Lin.Ft.

REV.	DATE	DESCRIPTION
2-2-67		CHANGED NAME 40WL, 40WD, 40AWD
2-2-67		ADDED P/L & NOTE
3-25-68		Revised take 39WL
4	9-29-71	Added Areas Relinquished
S.M.	3-29-83	ADDED NUMBERS TO RELINQUISHED AREAS

TYPE	FUND
I	

JEFFERSON TWP
V.M.S. 4742



GLEN T. WEBB et al.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

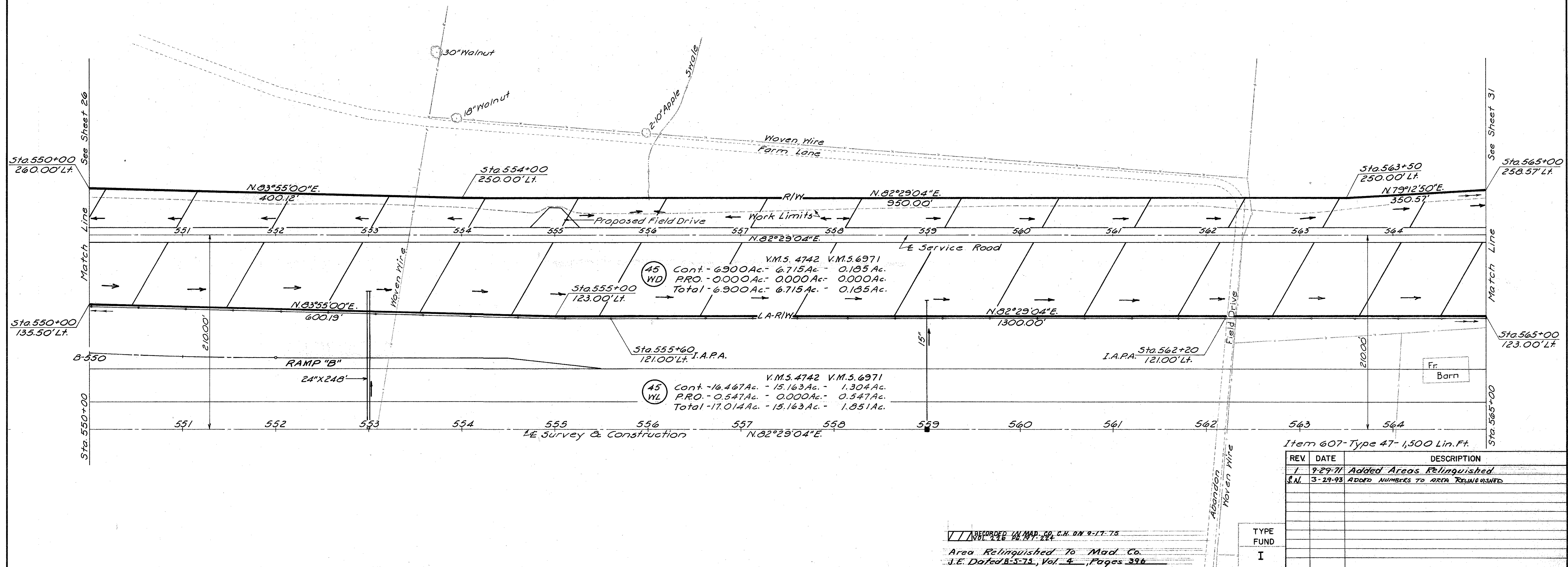
MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

366
374

29
37

CULTIVATED

CULTIVATED



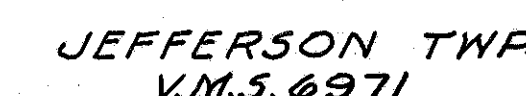
RECORDED IN MAP CO. C.H. ON 9-17-75
Vol. 176 P. 191-224

Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 396

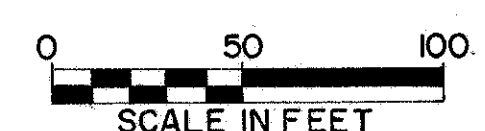
TYPE
FUND
I

Item 607-Type 47-1,500 Lin. Ft.		
REV.	DATE	DESCRIPTION
1	9-29-71	Added Areas Relinquished
J.M.	3-29-93	Added Numbers To Area Relinquished

STA. 550+00 TO STA. 565+00 LT. R/W

[illegible]

STA. 550+00 TO STA. 565+00 RT. R/W



DEER CREEK TWP
V.M.S. 3901

DEER CREEK TWP
V.M.S. 4751

DEER CREEK TWP
V.M.S. 6646

0 50 100
SCALE IN FEET

DEANE M. & LOUISE RICHMOND

PEARLE HARPER

CURVE DATA
P.I. Sta. 34+99.23
 $\Delta = 30^{\circ}13'34''$
 $D = 8^{\circ}00'00''$
 $R = 716.20'$
 $Lc = 402.83'$
 $Ls = 150.00'$
 $Ts = 250.31'$
 $E = 42.48'$

T.R.-110 Reloc. E Sta. 33+15+
Dun Ditch Reloc. E Sta. 15+00

T.R.-110 Reloc. E Sta. 33+59.03, 97.66' R.T.
Dun Ditch Reloc. E Sta. 15+96.12, 50.00' L.T.

E Reloc. Lafayette-Mechanicsburg Rd (T.R.-110)

T.R.-110 Reloc. Sta. 32+64.49, 64.33' R.T.
Dun Ditch Reloc. E Sta. 15+62.39, 55.00' R.T.

CURVE DATA
P.I. Sta. 30+32.81
 $\Delta = 17^{\circ}25'26''$
 $D = 4^{\circ}00'00''$
 $R = 1,432.40'$
 $L = 435.60'$
 $T = 213.49'$
 $E = 16.72'$

PEARLE HARPER

DEER CREEK TWP
V.M.S. 3901

PEARLE HARPER

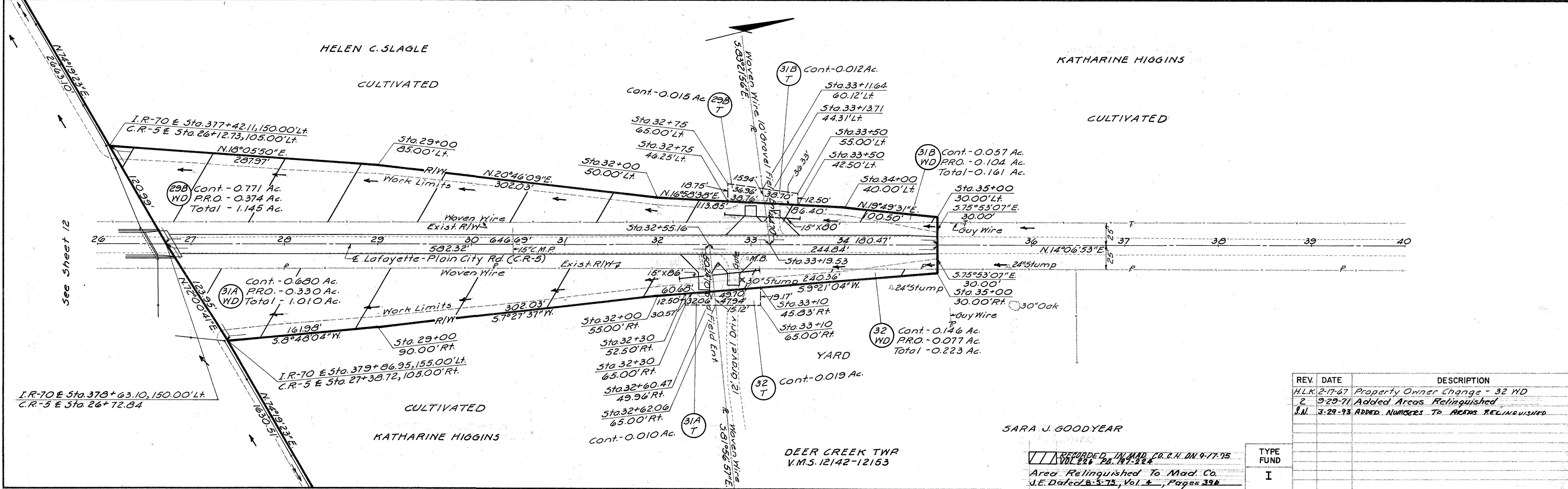
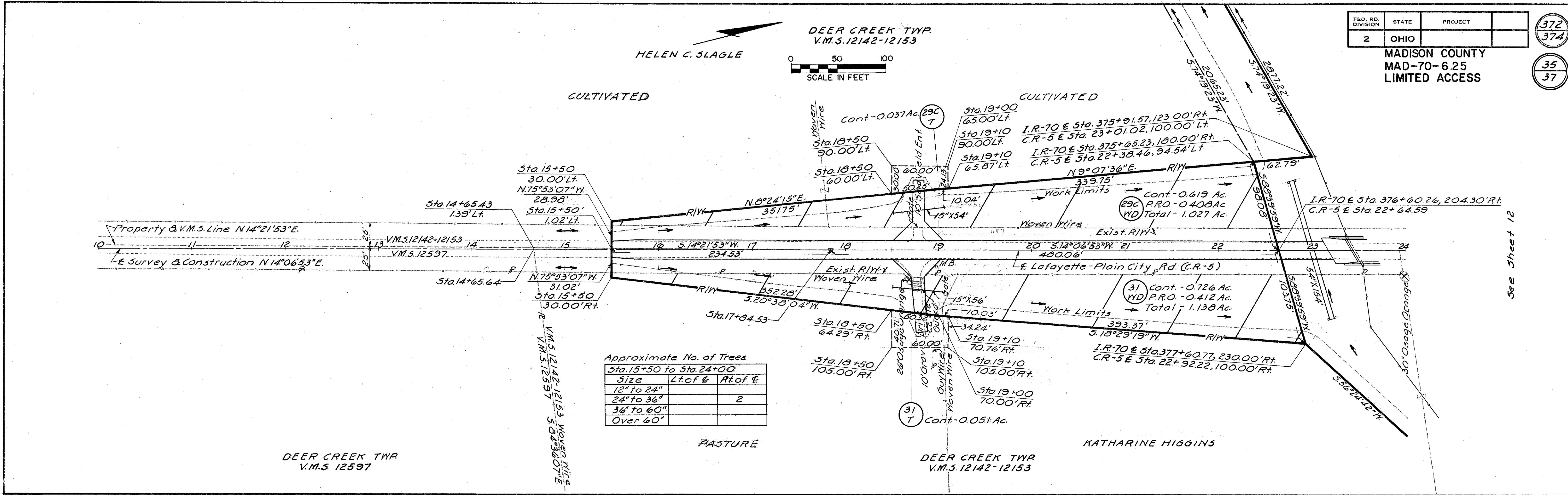
DEER CREEK TWP
V.M.S. 6646

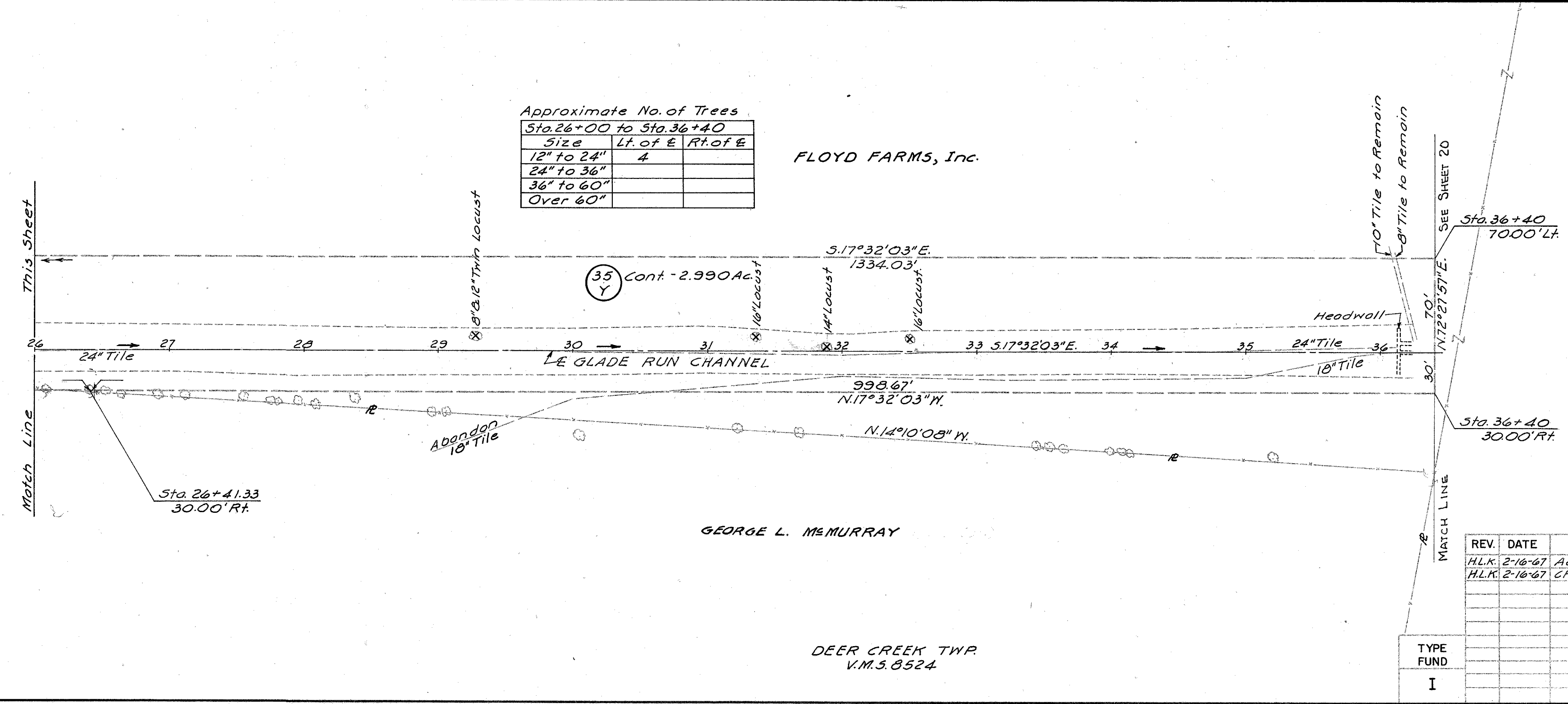
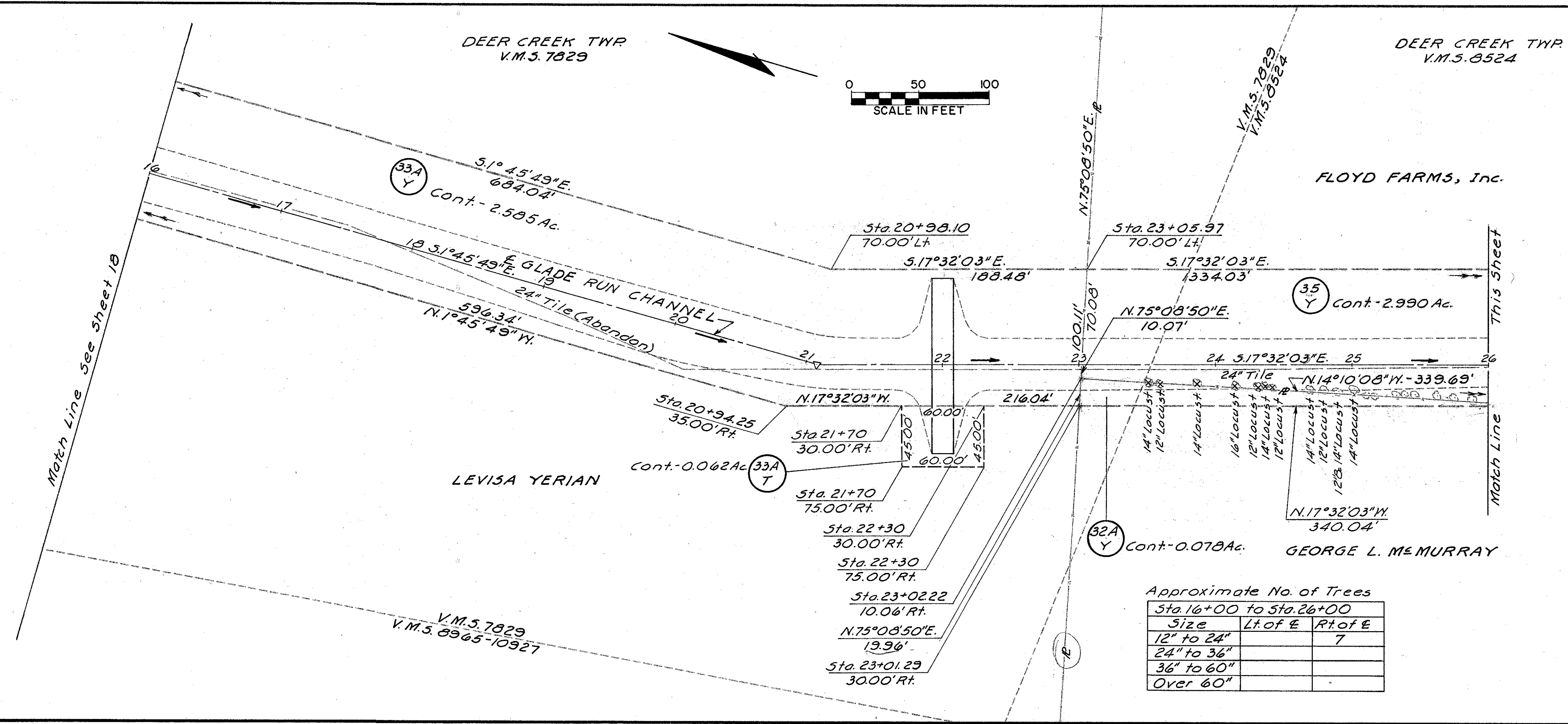
RECORDED IN MAD. CO. C.H. ON 9-17-75
VOL. 226, PG. 197-224

Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 396

REV.	DATE	DESCRIPTION
7-21-67	REVISED	27X added 27WD-3, changed 27AT to 27T-1, 27AWD to 27WD-1, 28WD to 27WD-2, 28T to 27T-2 & 28X to 27X-1
7-28-71	ADDED	AREAS RELINQUISHED
3-29-93	ADDED	NUMBERS TO AREA RELINQUISHED

TYPE
FUND
I





JEFFERSON TWP
V.M.S. 6042

JEFFERSON TWP
V.M.S. 12918

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

MADISON COUNTY
MAD-70-6.25
LIMITED ACCESS

374
374

37
37

0 50 100
SCALE IN FEET

CECIL FLANNERY (Father)
CECIL EDWARD FLANNERY (Son)

CULTIVATED

CULTIVATED

CULTIVATED

ROBERT J. REA

JEFFERSON TWP
V.M.S. 10589

CURVE DATA
BYERLY RD. T.R. 115
P.I. Sta. 531+87.10
 $\Delta = 77^{\circ}02'14''$ Rt.
 $D = 6^{\circ}00'00''$
 $R = 954.93'$
 $L = 1203.35'$
 $T = 760.09'$
 $E = 265.58'$

REV.	DATE	DESCRIPTION
1	9-29-71	Added Areas Relinquished
J.M.	3-29-93	Added ARRS REUNQUISHED WITH NUMBERS

TYPE
FUND

I

RECORDED IN MAD. CO. O.H. ON 9-17-75
Vol. 226 Pg. 17-22

Area Relinquished To Mad. Co.
J.E. Dated 8-5-75, Vol. 4, Pages 396

RELOC. T.R. 115-BYERLY ROAD R/W

GENERAL INFORMATION

INTRODUCTION

The project consists of the construction of 4.7 miles of IR 70, beginning 250 feet west of Deer Creek, approximately 0.7 mile north of USR 40, extending eastward, terminating 0.7 mile east of SR 29, approximately 1.3 miles north of USR 40. Included in this report are soil profiles of the USR 42 and SR 29 Interchanges.

For maximum proposed cuts and fill embankments, see the Project Index on this sheet.

GEOLOGY OF THE PROJECT

The alignment traverses a relatively flat to gently rolling portion of the glaciated Mississippi Valley Plain, in an area where moderately deep to deep morainal deposits overlie dolomite bedrock, of Devonian and Silurian ages.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger and hand auger (in areas of difficult access), between August 20 and 23, 1964, and between April 4 and 6, 1966. Included in this report are logs of borings made for the structure foundation investigations on this project.

INVESTIGATIONAL FINDINGS

Materials encountered on the project were predominantly comprised of sandy silts (A-4a), silt clays (A-6a) and clays (A-7-6), with occasional gravels (A-1-a) and sandy gravels (A-1-b and A-2-4), generally having low moisture contents and moisture contents in the lower portions of the plastic range.

Wet and/or organic materials were encountered at IR 70 stations 333+40 and 566+20. Wet materials were encountered at the following USR 42 Interchange locations: USR 42 stations 692+00, 697+00, and 702+00, Ramp A stations 458+75 and 461+25, Ramp B station 471+00, Ramp C station 453+00, and Ramp D station 452+00. Wet materials were also encountered at SR 29 Interchange Ramp C station 556+75 and Ramp D station 533+50.

LEGEND FOR PROJECT GRADE RESULTS OF TESTS 268 SAMPLES TESTED

DESCRIPTION	H.R. CLAY	AST	% AGG	% C SAND	% F. SAND	% SGT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	ST. VALUE
Gravel	A-1-a(0)	A-1-a	66	19	7	-	8	NP	NP	13	15
Gravel with sand	A-1-b(0)	A-1-b	51	22	11	9	7	NP	NP	11	12
Coarse and fine sand	-----	A-3a	9	16	53	14	9	NP	NP	17	1
Gravel or stone fragments with sand and silt	A-2-4(0)	A-2-4	52	10	9	16	13	25	5	15	15
Gravel with sand, silt, and clay	A-2-6(0)	A-2-6	67	3	4	16	10	31	12	20	1
Sandy silt	A-4(4)	A-4a	25	8	4	30	23	21	6	14	81
Silt	A-4(8)	A-4b	2	6	9	60	23	25	2	16	8
Silt and clay	A-6(7)	A-6a	13	7	11	32	32	29	12	16	77
Silty clay	A-6(11)	A-6b	10	5	9	36	40	36	17	20	11
Clay	A-7-6(17)	A-7-6	1	3	7	37	52	48	29	24	47
Various other materials											

VISUAL CLASSIFICATION

Soil and/or Topsoil = X' = Approximate depth.

Berm material.

Auger boring-plan view.

Drive sample boring-plan view.

Auger boring plotted to vertical scale only.

NOTE: Figures beside borings indicate water content in percent, e.g., 15.

Drive sample boring plotted to vertical scale only.

Water content nearly equal to or greater than liquid limit.

Indicates a non-plastic material with a high water content.

Free water.

Static water level.

Number of blows for "Standard Penetration" test.
X=number of blows for first 6 inches.
Y=number of blows for second 6 inches.

SOIL PROFILE

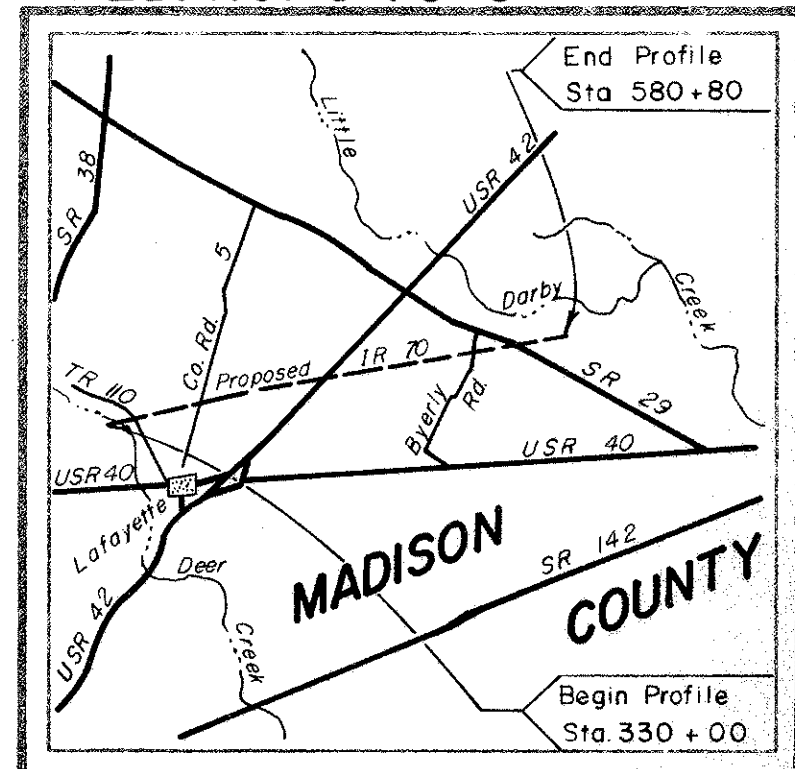
MADISON COUNTY

MAD-IR 70-6.25

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. 1-70-3



LOCATION MAP

Recon - W.C.J. 8/14/64

Drilling - Auger - T.R.S.

8/21/64 to 8/28/64

Drafting - A.D.B. 10/14/64

REVISION

Recon - W.C.J. 3/3/66

Drilling - Auger - C.M.C.

4/4/66 to 4/6/66

Drafting - A.F., C.V.G., L.N.L. 5/3/66

PROJECT INDEX

STATIONS FROM	TO	PLAN VIEW SHEET	PROFILE SHEET	CUT MAX.	FILL EMB. MAX.
PROPOSED IR 70					
330+00	356+00	3	3	-	14'
356+00	383+00	4	4	-	7'
383+00	401+00	5	5	-	7'
401+00	433+00	6	6	2'	5'
433+00	465+00	7	7	2'	10'
465+00	497+00	8	8	-	8'
497+00	529+00	9	9	-	8'
529+00	561+00	10	10	9'	7'
561+00	580+80	11	11	9'	12'
USR 42 INTERCHANGE					
USR 42					
673+00	705+00	12	13	-	30'
RAMP A					
448+00	462+34	12	13	-	25'
RAMP B					
460+53	471+00	12	13	-	22'
RAMP C					
447+33	465+00	12	14	-	21'
RAMP D					
443+00	452+55	12	14	-	21'
SR 29 INTERCHANGE					
SR 29					
543+00	573+00	10	15	4'	21'
RAMP A					
528+00	537+43	10	15	-	15'
RAMP B					
535+70	551+00	10	16	8'	15'
RAMP C					
547+50	560+25	10	16	8'	12'
RAMP D					
534+00	549+03	10	16	4'	12'

SUMMARY OF SOIL TEST DATA
NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
Penetration taken at or near grade.

SOIL PROFILE

MADISON COUNTY

MAD-IR 70-6.25

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

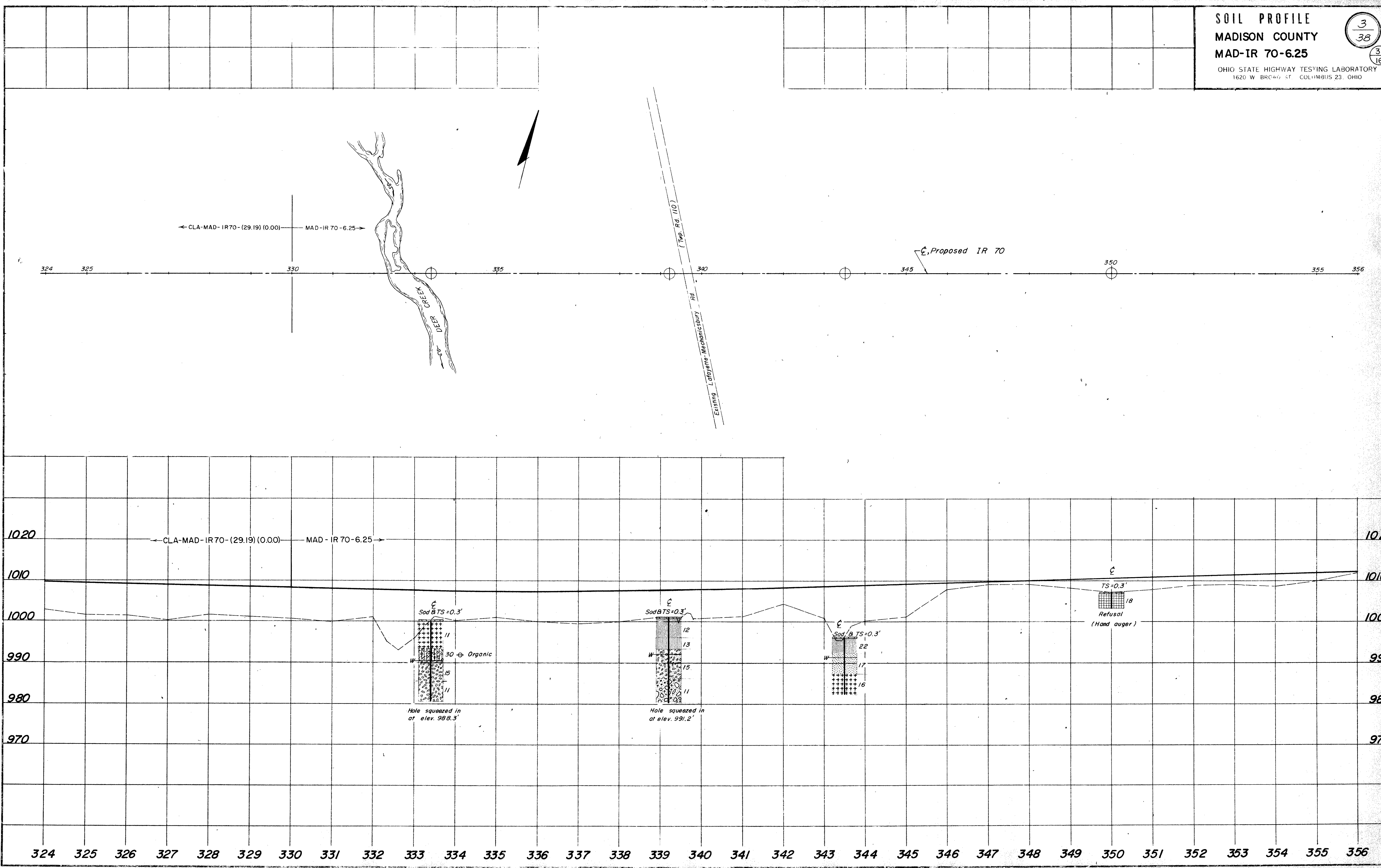
STATION & OFFSET	DEPTH FROM - TO	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	CLASS.	SHTL
333+40	CL	0.3-7.0	0	4	4	66	26	28	6	11	A-4b
		7.0-10.0	32	22	12	17	16	NP	NP	30	A-2-4
		10.0-15.0	57	22	10	11	NP	NP	15	15	A-1-a
		15.0-20.0	71	16	6	7	NP	NP	11	11	A-1-a
339+20	CL	0.3-5.0	16	10	11	33	30	27	11	12	A-6a
		5.0-8.0	21	10	13	27	29	25	13	13	A-4a
		8.0-15.0	61	29	4	6	NP	NP	15	15	A-1-a
		15.0-21.0	46	39	7	9	NP	NP	11	11	A-1-b
343+50	CL	0.3-4.0	36	4	11	23	21	30	11	22	A-6a
		4.0-9.0	0	16	53	14	3	NP	NP	17	A-3a
		9.0-14.0	0	10	10	69	11	NP	NP	16	A-4b
350+00	CL	0.3-4.0	0	4	9	42	45	41	13	13	A-7-6
361+00	50' Rt	0.5-3.0	0	0	12	43	36	29	11	13	A-6a *
		3.0-7.0	25	7	10	38	20	24	7	13	A-4a
		7.0-12.0	55	24	11	10	NP	NP	11	11	A-1-a
366+00	CL	0.3-4.0	0	2	3	33	52	45	16	18	A-7-6
370+00	CL	0.5-2.0	0	2	6	44	43	47	26	22	A-7-6
		2.0-4.0	0	3	5	44	43	47	24	17	A-7-6
377+00	CL	0.3-2.5	24	9	11	33	23	26	7	9	A-4a *
		2.5-5.0	18	10	12	35	26	23	6	12	A-4a
		5.0-7.0	19	9	12	32	28	23	6	14	A-4a
		7.0-9.0	0	10	14	43	33	21	6	12	A-4a
		9.0-12.0	32	25	27	8	9	NP	NP	12	A-1-b
		12.0-15.0	57	6	9	17	11	NP	5	3	A-2-4
385+00	CL	0.3-4.0	0	1	8	49	42	38	15	20	A-6a
394+00	CL	0.3-6.0	0	7	11	43	34	26	11	17	A-6a
		6.0-9.0	29	11	17	31	12	22	7	17	A-4a
		9.0-11.0	0	1	6	56	37	25	7	20	A-4b
402+00	CL	0.3-6.0	16	9	12	36	27	25	11	8	A-6a *
		6.0-11.0	17	9	3	50	21	22	6	14	A-4b
410+00	CL	0.3-5.0	14	9	10	46	27	26	12	8	A-6a
		5.0-9.0	12	9	11	36	25	26	14	6	A-4a
		9.0-12.0	36	29	27	8	NP	NP	14	14	A-1-b
412+50	CL	0.3-3.0	0	1	5	45	49	48	23	23	A-7-6
		3.0-6.0	20	2	12	35	25	25	8	16	A-4a
		6.0-12.0	26	20	22	22	10	NP	NP	13	A-2-4
417+50	CL	0.3-6.0	0	1	5	44	50	48	27	11	A-7-6
		6.0-12.0	23	10	11	29	27	25	7	11	A-4a
424+50	CL	0.3-6.0	19	6	10	34	31	24	11	9	A-6a *
		6.0-12.0	21	6	12	35	26	24	5	10	A-4a
430+50	CL	0.3-6.0	24	8	10	27	31	26	7	15	A-4a *
		6.0-12.0	0	11	44	38	27	11	11	11	A-6a
434+25	CL	0.3-2.0	0	3	9	39	49	49	27	17	A-7-6 *
		2.0-10.0	25	8	10	33	24	26	11	12	A-6a
442+45	CL	0.4-5.0	16	10	11	34	29	27	9	7	A-4a
		5.0-12.0	21	9	12	32	26	25	8	7	A-4a
448+00	CL	0.3-4.0	0	2	9	35	54	48	26	14	A-7-6
452+00	CL	0.3-6.0	21	6	5	40	28	27	12	9	A-6a *
		6.0-11.0	0	7	22	51	20	NP	NP	16	A-4a
		11.0-13.0	19	12	14	30	25	NP	8	11	A-4a
458+20	CL	0.3-6.0	16	4	3	47	30	36	13	29	A-6a
		6.0-13.0	54	32	6	6	NP	NP	14	14	A-1-a
		13.0-21.0	53	26	5	9	7	NP	NP	11	A-1-b
467+00	CL	0.3-4.0	0	3	9	39	49	41	15	16	A-7-6 *
475+00	CL	0.3-8.0	16	8	9	36	31	26	11	12	A-6a
		8.0-11.0	25	7	12	36	20	26	3	12	A-4a
		11.0-13.0	33	16	24	21	6	NP	NP	17	A-2-4
483+00	CL	0.3-4.0	0	2	6	48	44	46	20	19	A-7-6 *
491+00	CL	0.3-4.0	0	3	9	48	40	35	11	14	A-6a
497+00	CL	0.3-4.0	0	7	10	35	48	37	13	12	A-6a
501+80	CL	0.3-4.0	0	2	8	42	48	38	13	16	A-6a
504+25	CL	0.3-5.0	0	4	8	45	43	40	18	16	A-6b
		5.0-12.0	23	10	14	33	20	21	6	10	A-4a
511+50	CL	0.3-6.0	19	9	12	33	27	27	10	14	A-4a
		6.0-12.0	14	9	11	41	25	22	5	14	A-4a
517+00	125' Rt	0.3-6.0	0	1	4	40	55	47	24	22	A-7-6
		6.0-10.0	25	6	10	34	25	24	7	13	A-4a
		10.0-12.0	18	0	15	34	23	21	6	10	A-4a
522+40	CL	0.3-4.0	28	7	8	33	24	37	17	9	A-6b *
530+50	CL	3.0-4.0	0	3	8	37	52	48	26	23	A-7-6
534+60	CL	0.3-3.0	25	7	11	35	22	26	8	10	A-4a *
		3.0-9.0	21	9	12	34	24	24	7	13	A-4a *
		9.0-12.0	23	8	11	36	22	21	5	14	A-4a
545+40	CL	0.3-6.0	17	7	14	36	26	23	7	12	A-4a
		6.0-13.0	19	9	10	46	16	24	8	14	A-4a *
		13.0-16.0	23	6	6	36	29	24	11	11	A-6a
		16.0-24.0	48	39	6	7	NP	NP	12	12	A-1-b
553+25	CL	0.0-6.0	11	7	7	49	31	26	11	14	A-6a
562+15	CL	0.0-5.0	0	10	8	38	44	34	14	13	A-6a
		5.0-11.0	65	12	5	12	6	NP	NP	8	A-1-b *

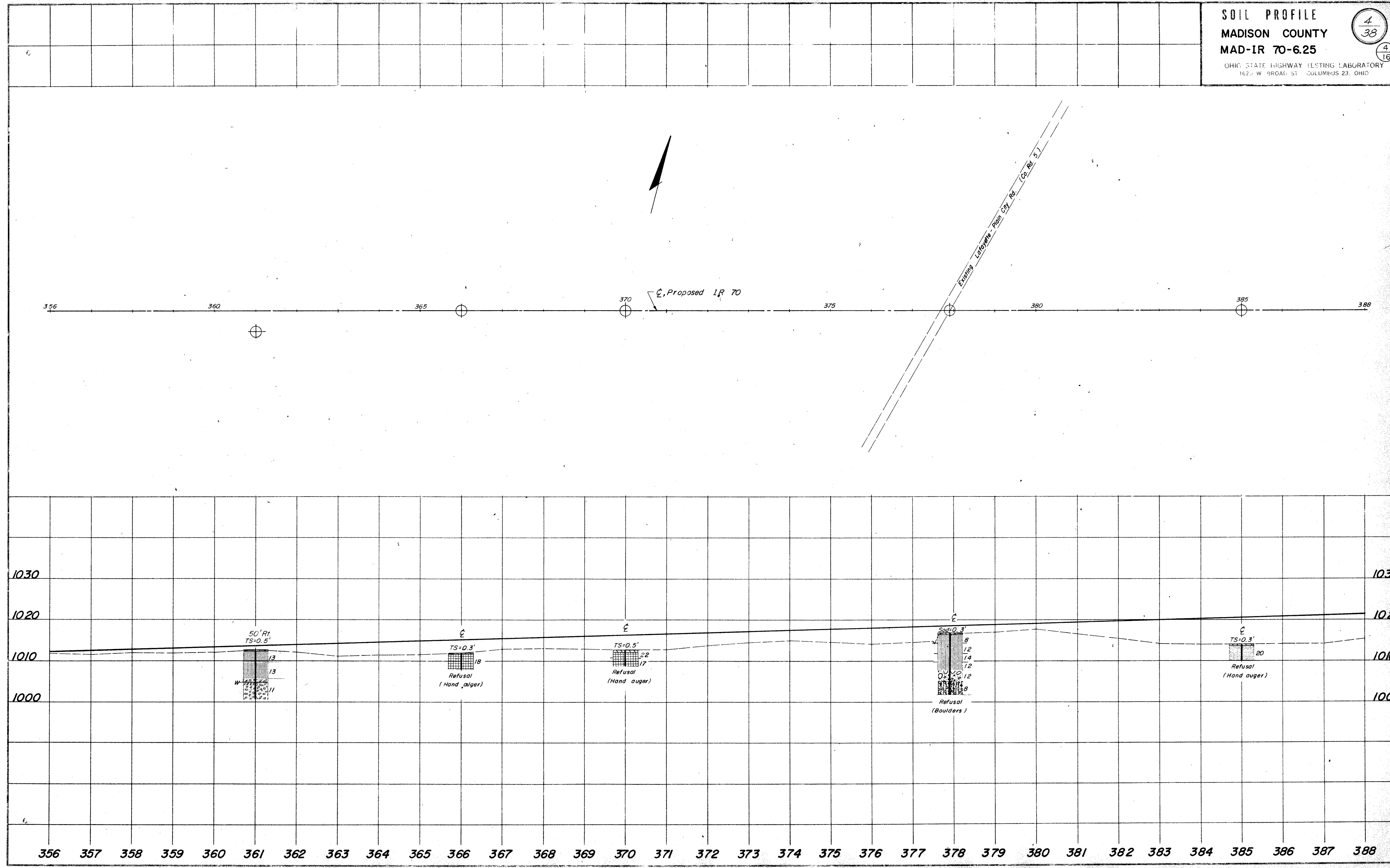
STATION & OFFSET		DEPTH	%	AGG.	C.S.	F.S.	SILT	CLAY	L.L.	P.I.	W.C.	CLASS	SHTL
		FROM - TO											
566+20	CL	0.3-2.0	0	4	10	52	34	32	13	30		A-6a	
		2.0-6.0	20	11	15	33	21	21	5	10		A-4a	
		6.0-11.0	46	24	10	11	9	NP	NP	8		A-1-b	
		11.0-16.0	46	21	12	12	9	NP	NP	12		A-1-b	
569+50	CL	0.3-4.0	37	7	9	26	21	31	12	7		A-6a	
577+00	CL	0.3-4.0	0	4	7	37	52	43	21	18		A-7-6 *	
USR 42 Interchange													
Proposed USR 42													
674+00	13' Lt	0.4-4.0	26	0	11	28	26	25	3	13		A-4a *	
		4.0-8.0	21	10	12	31	26	25	0	14		A-4a	
		8.0-10.0	0	2	33	42	18	NP	NP	20		A-4a	
682+00	22' Rt	0.4-2.0	0	3	9	34	55	49	26	23		A-7-6	
		2.0-5.0	0	3	10	34	53	57	32	28		A-7-6	
		5.0-7.0	0	2	3	33	56	51	23	32		A-7-6	
		7.0-11.0	27	6	11	29	23	24	9	12		A-4a	
		11.0-16.0	9	6	15	40	33	30	14	13		A-6a	
683+60	17' Lt	0.6-2.0	0	0	10	35	47	44	25	36		A-7-6	
		2.0-4.0	0	1	3	36	50	53	29	34		A-7-6	
		4.0-6.0	0	2	3	31	64	59	34	24		A-7-6	
		6.0-8.0	0	0	2	56	42	37	19	19		A-6b	
		8.0-14.0	0	7	67	24	20	2	15	15		A-4b	
		14.0-17.0	43	21	13	3	NP	NP	12	12		A-1-b	
		17.0-20.0	25	9	13	27	26	25	11	17		A-6a	
692+00	18' Lt	0.6-2.0	0	10	12	41	37	33	13	36		A-6a	
		2.0-4.0	0	3	6	33	53	56	28	28		A-7-6	
		4.0-7.0	0	2	6	40	32	52	32	22		A-7-6	
		7.0-9.0	55	10	4	26	10	22	1	15		A-4a	
		9.0-14.0	75	10	3	3	4	NP	NP	13		A-1-a	
		14.0-18.0	33	9	3	6	NP	NP	20	20		A-1-a	
697+00	16' Lt	0.5-4.0	0	2	3	36	54	42	13	17		A-7-6	
		4.0-9.0	23	9	14	33	22	25	7	11		A-4a	
		9.0-15.0	24	8	13	29	26	23	7	25		A-4a	
702+00	16' Lt	0.5-2.0	0	2	4	46	43	40	20	14		A-7-6 *	
		2.0-7.0	31	9	10	30	21	21	3	12		A-4a	
		7.0-10.0	24	8	11	28	29	26	3	24		A-4a	
Ramp A													
443+00	3L	0.5-2.0	0	2	3	29	60	56	30	26		A-7-6 *	
		2.0-7.0	22	9	12	31	26	21	5	14		A-4a	
		7.0-11.0	41	7	9	25	19	21	7	12		A-4a	
453+00	3L	0.5-3.0	0	3	9	54	34	41	18	27		A-7-6	
		3.0-9.0	32	6	12	23	27	25	19	19		A-4a	
		9.0-12.0	15	5	41	26	13	NP	NP	15		A-2-4	
		12.0-15.0	47	9	16	19	11	NP	NP	13		A-2-4	
457+00	3L	0.6-2.0	0	1	6	42	51	54	31	27		A-7-6	
		2.0-5.0	0	9	20	49	22	NP	NP	20		A-4a	
		5.0-6.5	63	7	7	10	7	22	8	9		A-2-4	
		6.5-11.0	24	9	13	26	23	26	12	13		A-6a	
		11.0-15.0	0	10	16	38	36	24	11	13		A-6a	
453+75	10' Lt	0.5-4.0	0	1	2	40	57	50	27	30		A-7-6	
		4.0-6.0	72	6	3	9	5	19	1	10		A-1-a	
		6.0-12.0	0	5	13	57	25	NP	NP	20		A-4b	
		12.0-15.0	29	9	16	24	22	NP	7	14		A-4a	
461+25	3L	0.6-3.0	0	2	6	33	59	53	20	29		A-7-6	
		3.0-5.0	0	1	6	45	48	48	29	15		A-7-6	
		5.0-8.0	21	10	12	33	24	23	11	11		A-4a	
		8.0-11.0	20	8	14	30	28	34	11	11		A-6a	
		11.0-15.0	0	11	36	34	19	19	4	23		A-4a	
Ramp B													
461+00	3L	0.5-4.0	23	6	11	29	25	27	11	15		A-6a	
		4.0-9.0	27	4	15	23	21	23	8	12		A-4a	
		9.0-15.0	23	7	14	25	31	25	11	10		A-6a	
		15.0-17.0	0	5	27	47	21	NP	NP	14		A-4a	
		17.0-20.0	0	10	20	36	34	26	11	10		A-6a	
466+00	3L	0.6-5.0	0	3	5	33	59	33	15	18		A-6a	
		5.0-10.0	27	8	13	28	24	24	11	20		A-6a	
		10.0-14.0	29	10	16	25	20	22	11	16		A-6a	
471+00	3L	0.6-5.0	26	4	7	34	29	33	15	25		A-6a	
		5.0-6.5	32	7	9	28	24	22	5	19		A-4a	
		6.5-9.0	28	9	10	28	25	21	5	14		A-4a	
		9.0-11.0	53	7	8	16	16	23	8	16		A-2-4	
Ramp C													
449+00	3L	0.6-5.0	60	6	7	13	14	23	10	13		A-2-4	
		5.0-9.0	25	9	16	30	20	21	6	16		A-4a	
		9.0-14.0	40	6	9	26	19	21	7	12		A-4a	
453+00	3L	0.5-4.0	0	2	7	36	55	56	36	25		A-7-6	
		4.0-6.0	27	5	10	35	22	26	11	25		A-6a	
		6.0-9.0	34	9	13	24	20	20	4	13		A-4a	
		9.0-13.0	23	9	14	28	26	24	3	11		A-4a	
456+00	3L	0.5-2.0	0	1	4	35	60	52	23	26		A-7-6	
		2.0-5.0	0	0	2	36	62	64	40	35		A-7-6	
		5.0-7.0	0	0	1	54	45	41	19	31		A-7-6	
		7.0-12.0	6	6	3	68	18	NP	NP	19		A-4b	
		12.0-17.0	73	15	7	5	NP	NP	NP	11		A-1-a	
459+00	3L	0.5-4.0	59	4	7	16	14	20	10	19		A-2-4	
		4.0-8.0	32	7	12	28	21	22	7	13		A-4a	
		8.0-9.5	35	7	11	26	21	20	5	14		A-4a	
		9.5-15.0	40	6	10	23	21	19	5	10		A-4a	
464+00	3L	0.6-4.0	0	3	7	50	40	43	20	24		A-7-6 *	
		4.0-9.0	41	8	11	21	19	25	7	10		A-4a	
		9.0-10.0	35	6	16	30	13	NP	NP	17		A-4a	

SOIL PROFILE
MADISON COUNTY
MAD-IR 70-6.25

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST. COLUMBUS 23, OHIO

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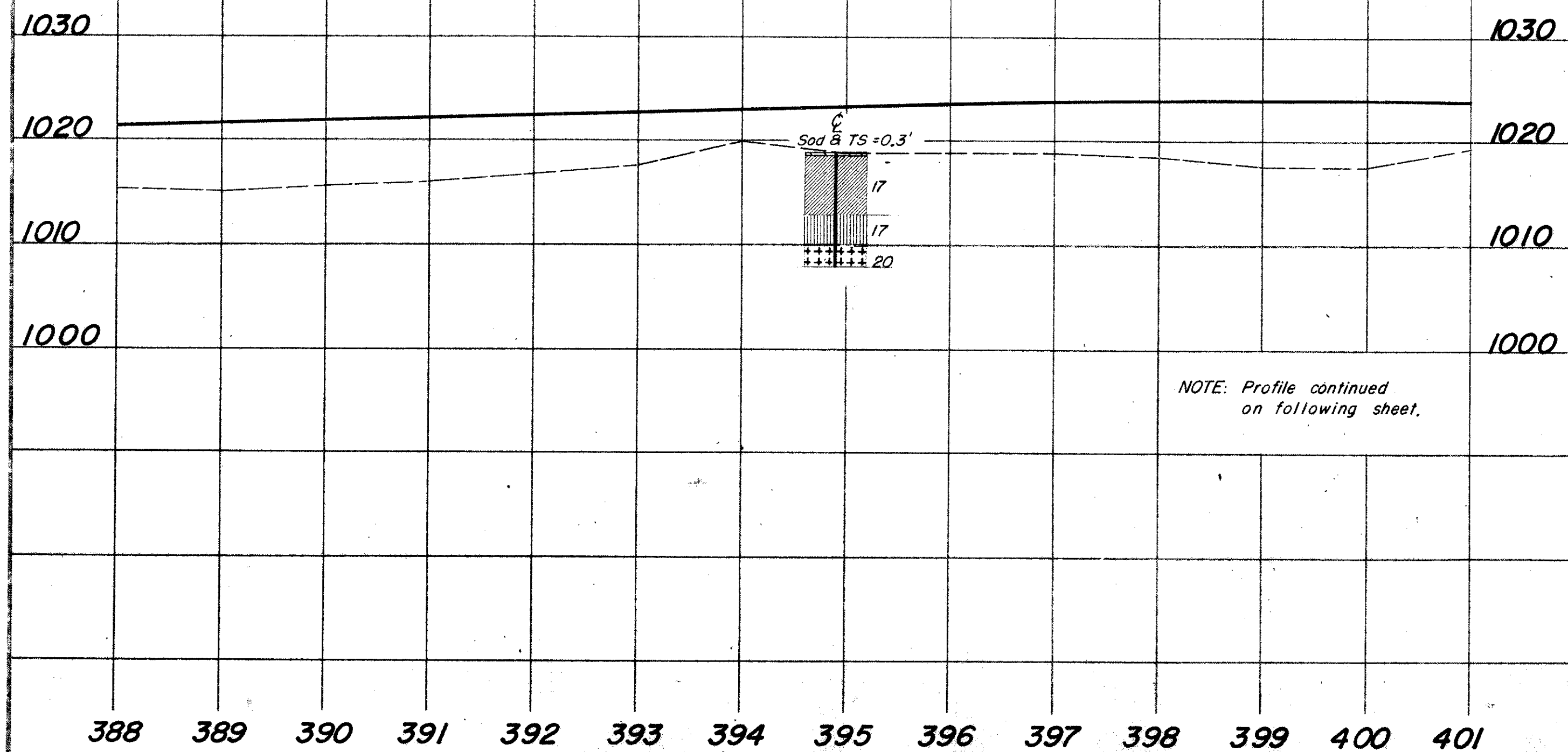
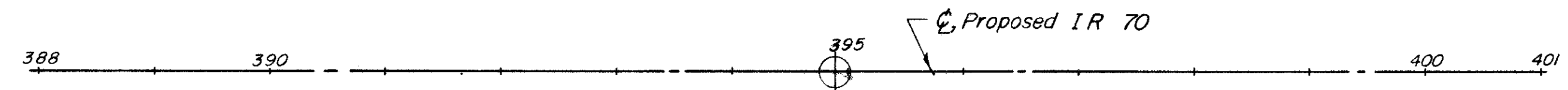


SOIL PROFILE
MADISON COUNTY
MAD-IR 70-6.25

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 22 OHIO

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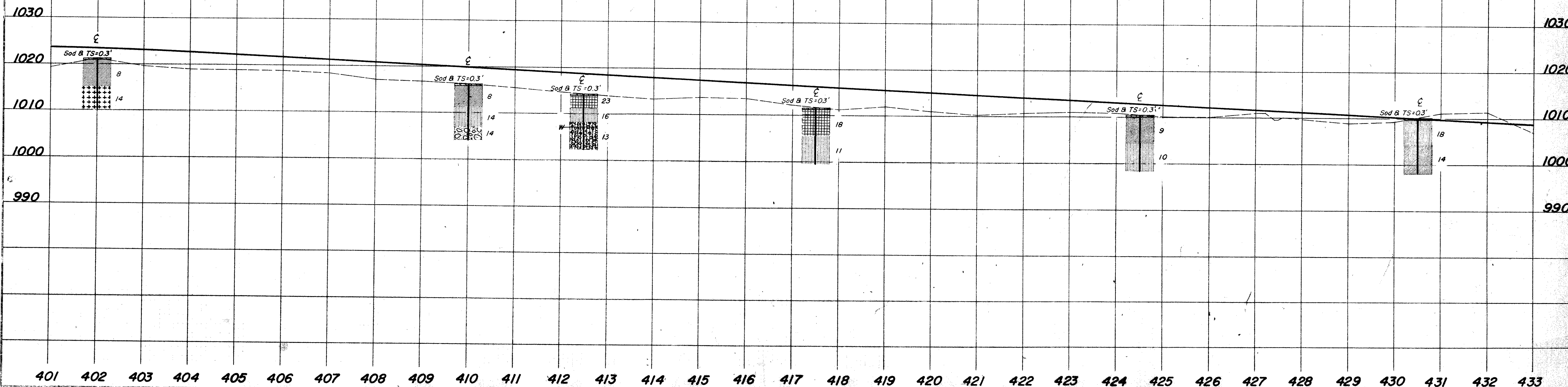
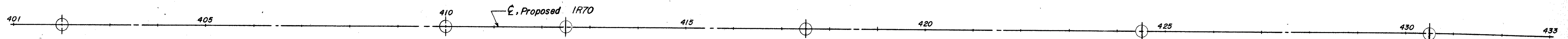


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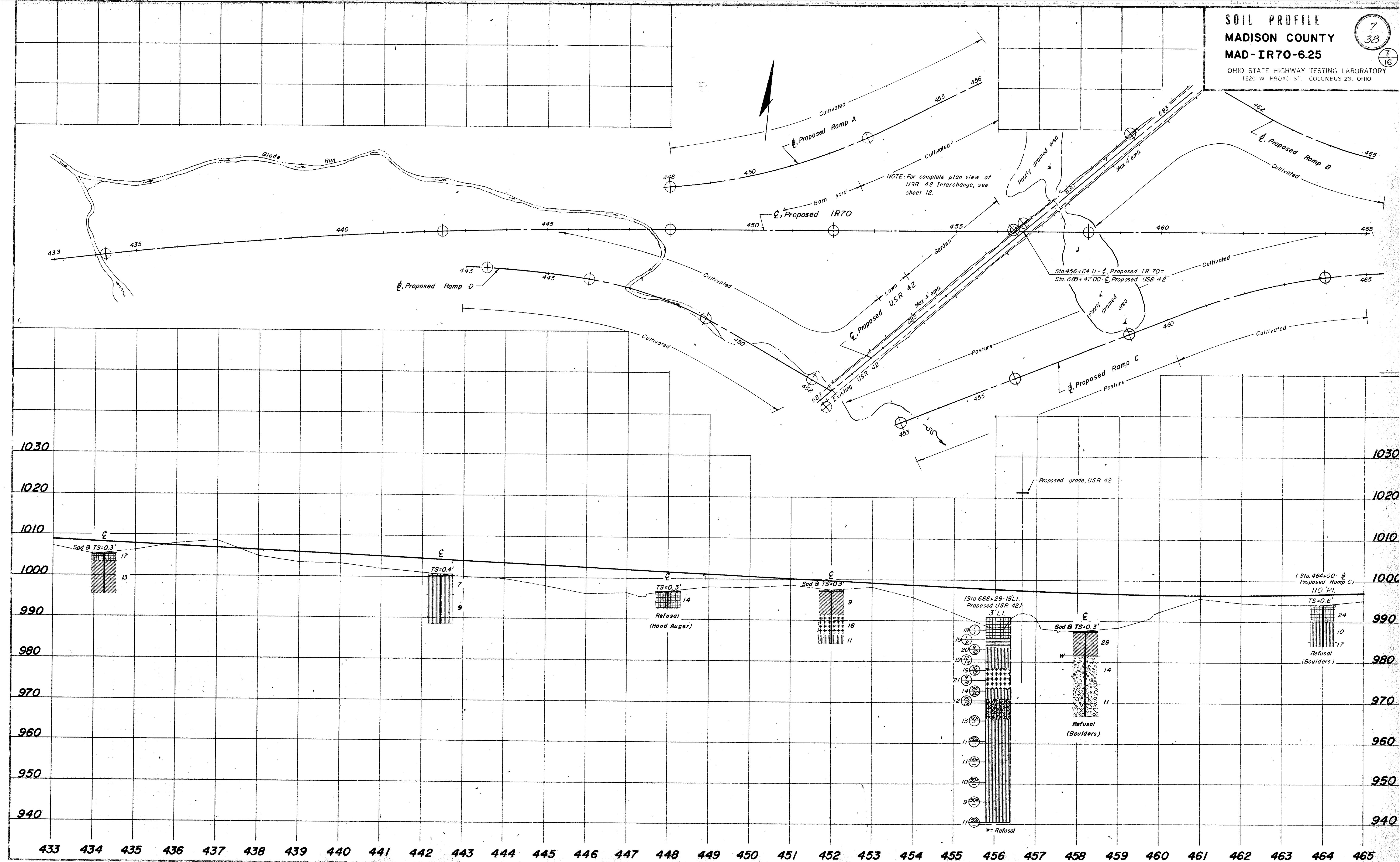
MADISON COUNTY
MAD-IR70-6.25

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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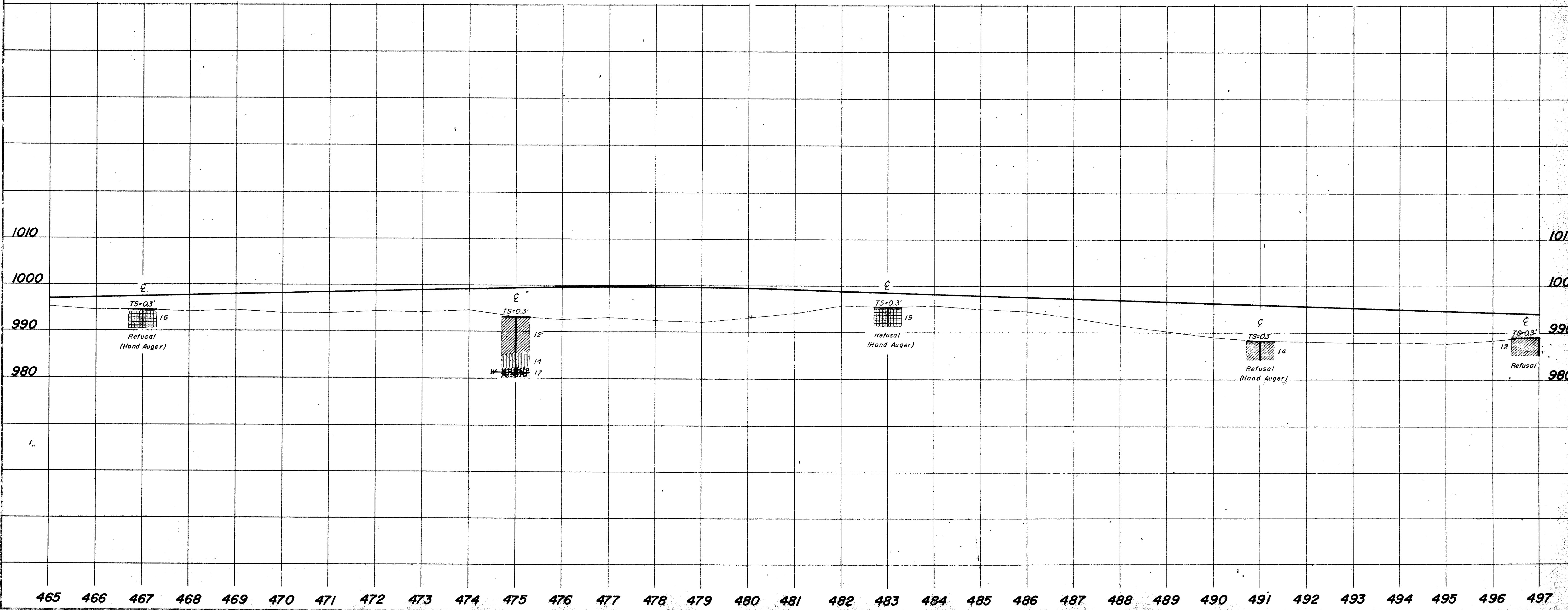
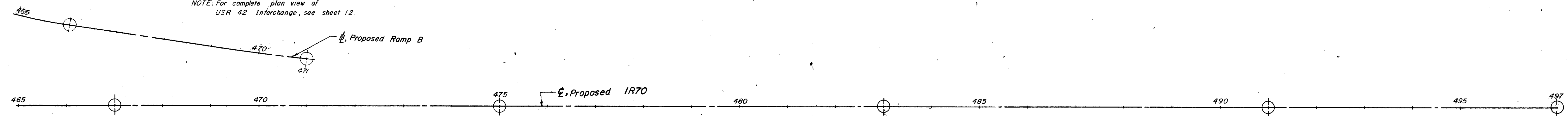


OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO





NOTE: For complete plan view of
USR 42 Interchange, see sheet 12.



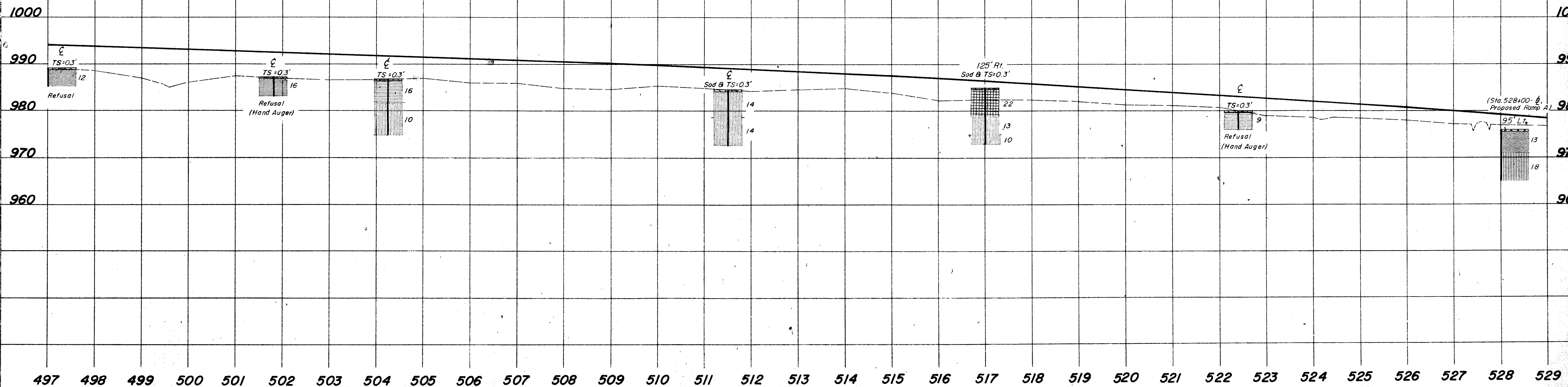
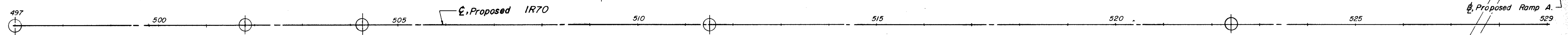
SOIL PROFILE
MADISON COUNTY
MAD-IR70-6.25

OHIO STATE HIGHWAY TESTING LABORATORY
1620 V. L. RAY ST. COLUMBUS 23, OHIO

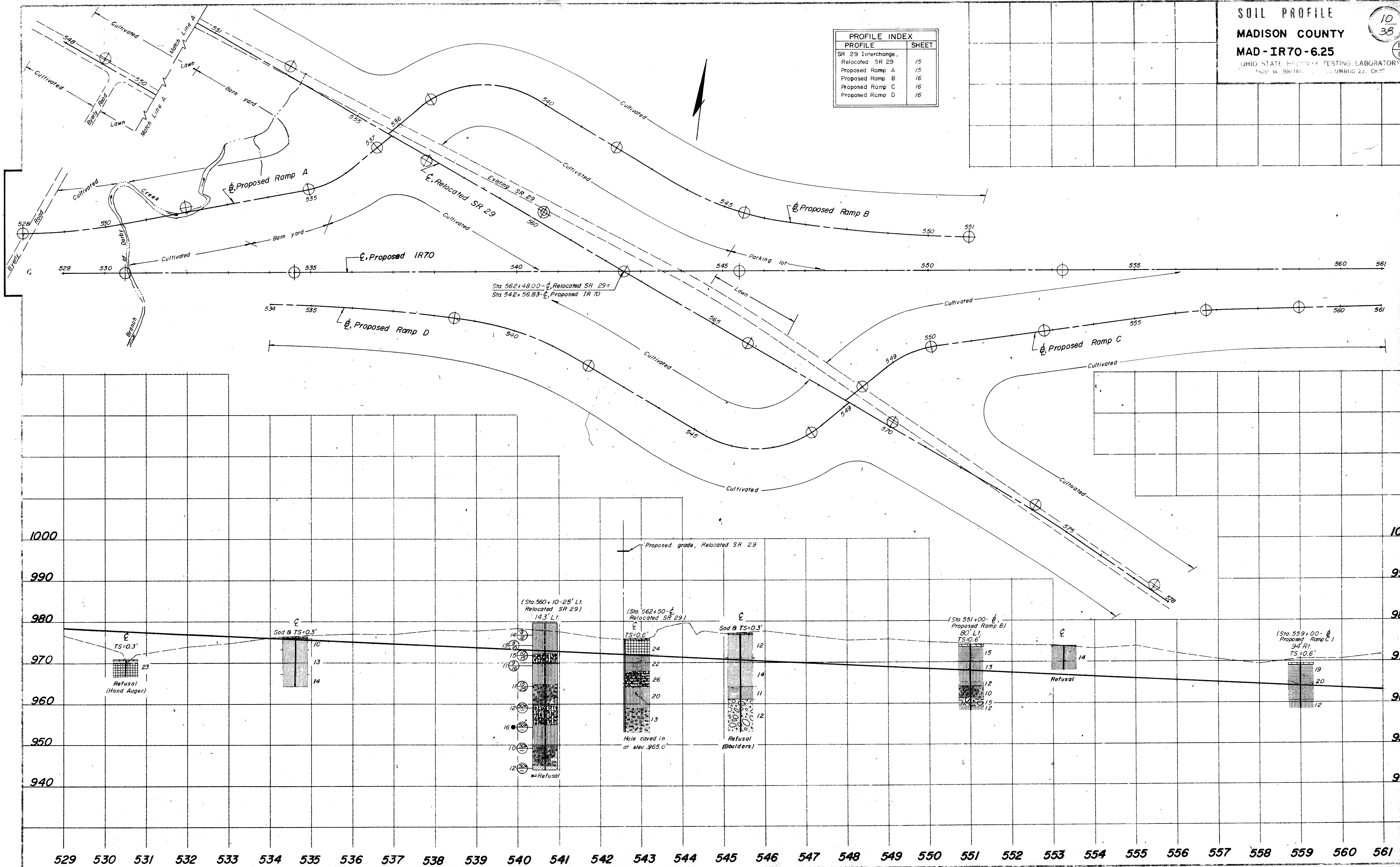
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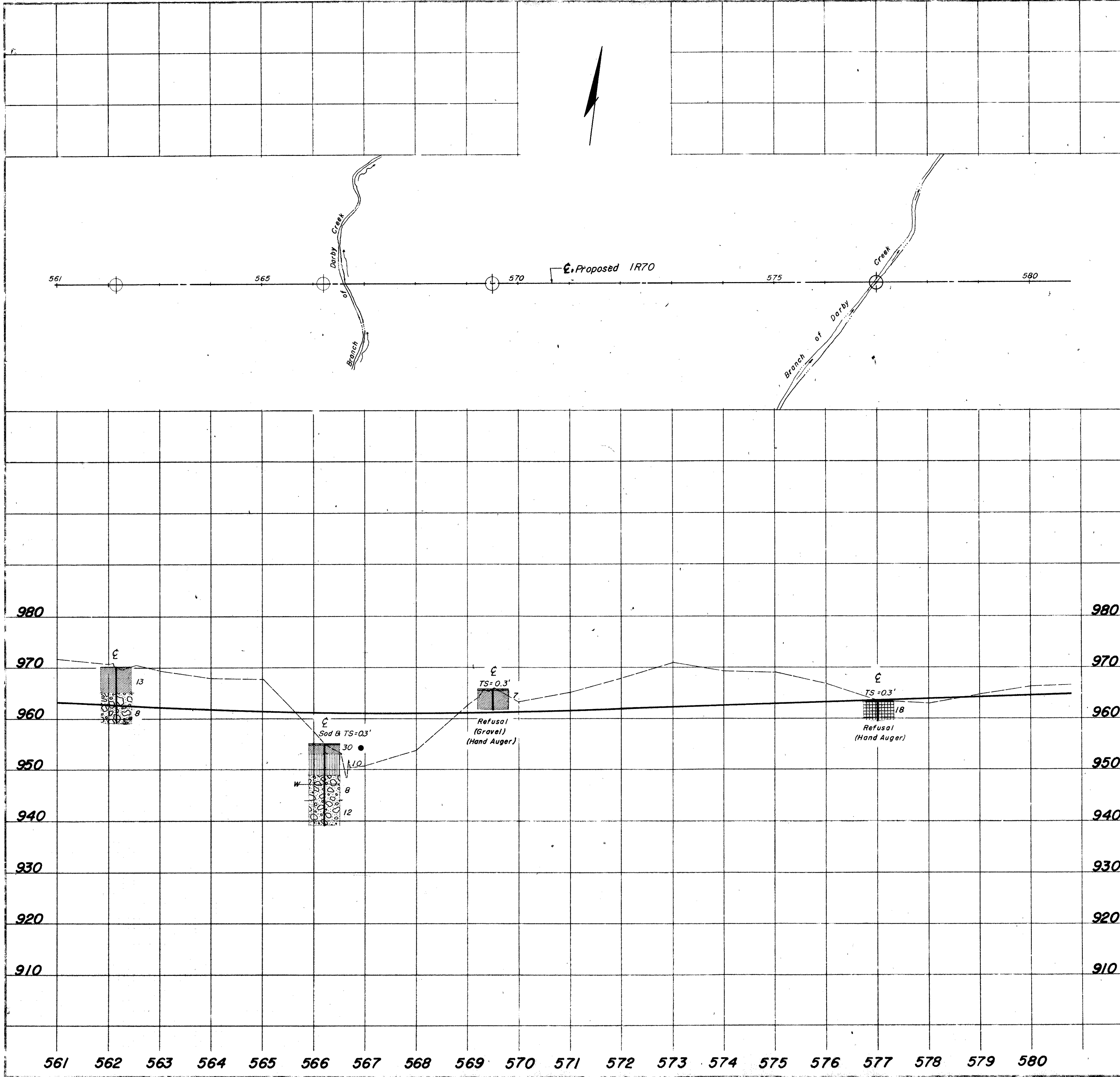
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NOTE: For complete plan view of SR 29
Interchange, see sheet 10.

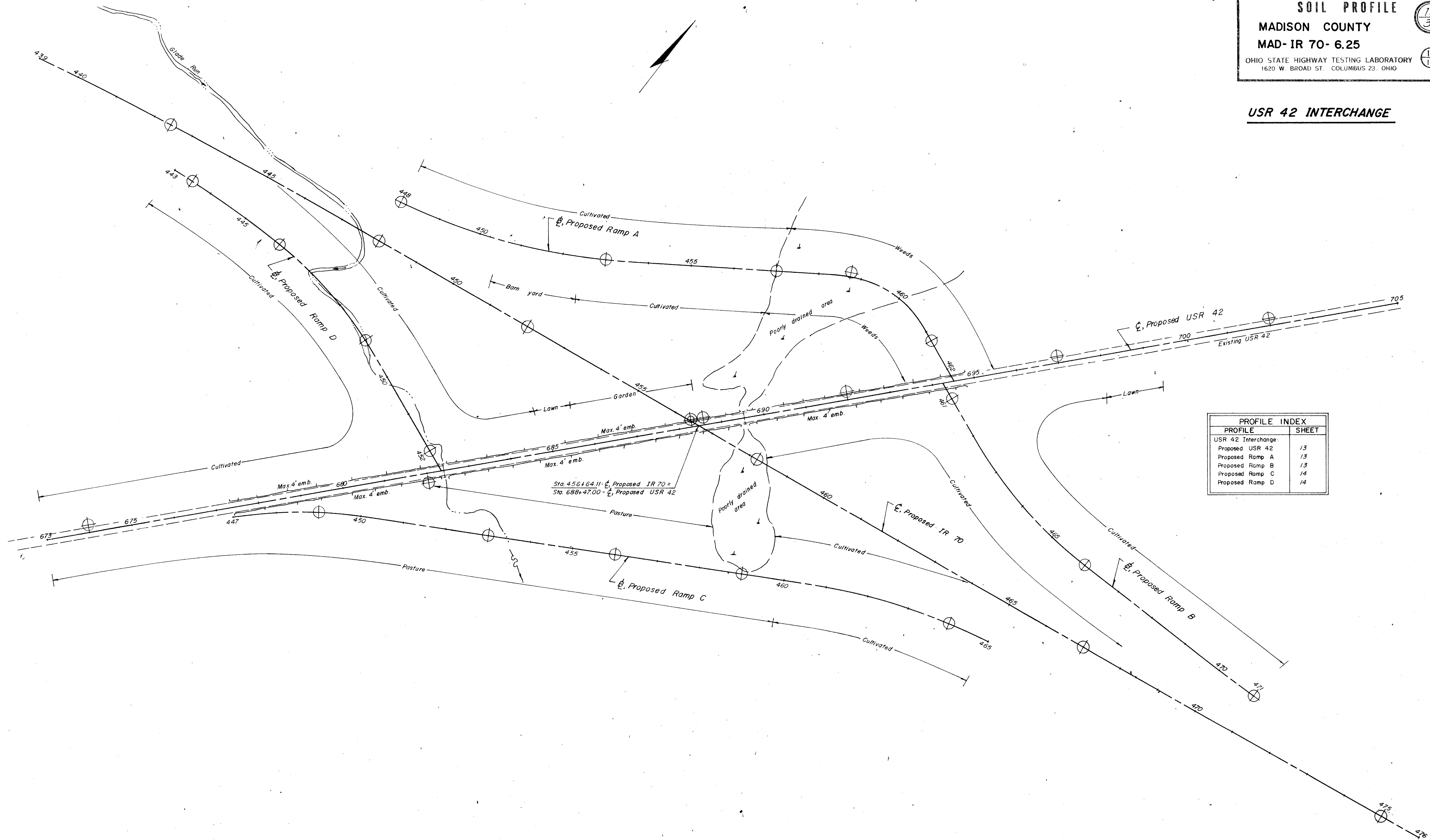


PROFILE INDEX	
PROFILE	SHEET
SR 29 Interchange	
Relocated SR 29	15
Proposed Ramp A	15
Proposed Ramp B	16
Proposed Ramp C	16
Proposed Ramp D	16



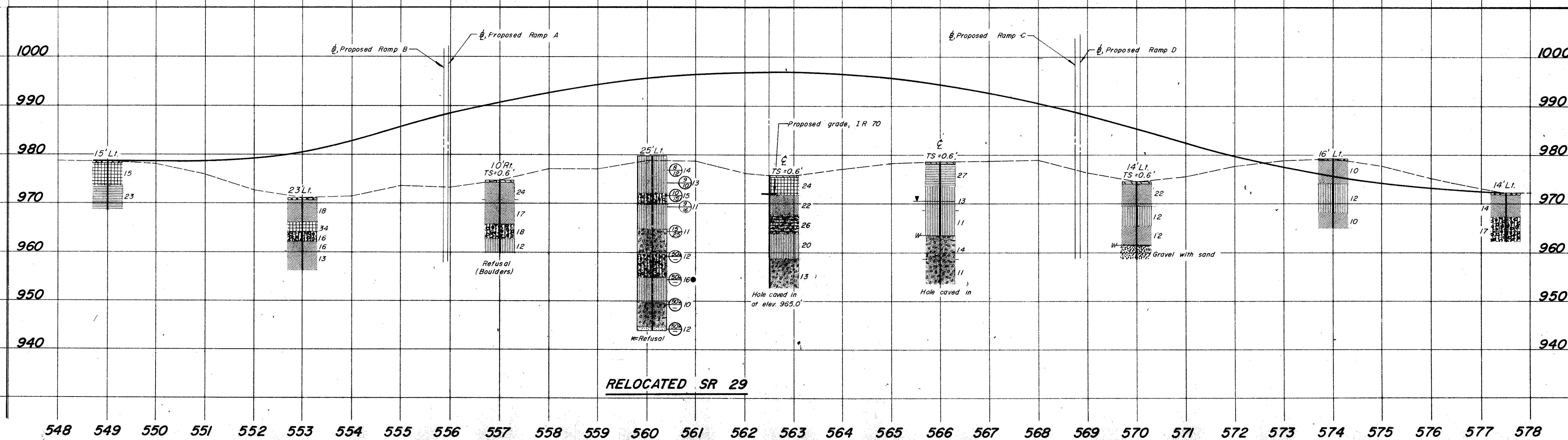
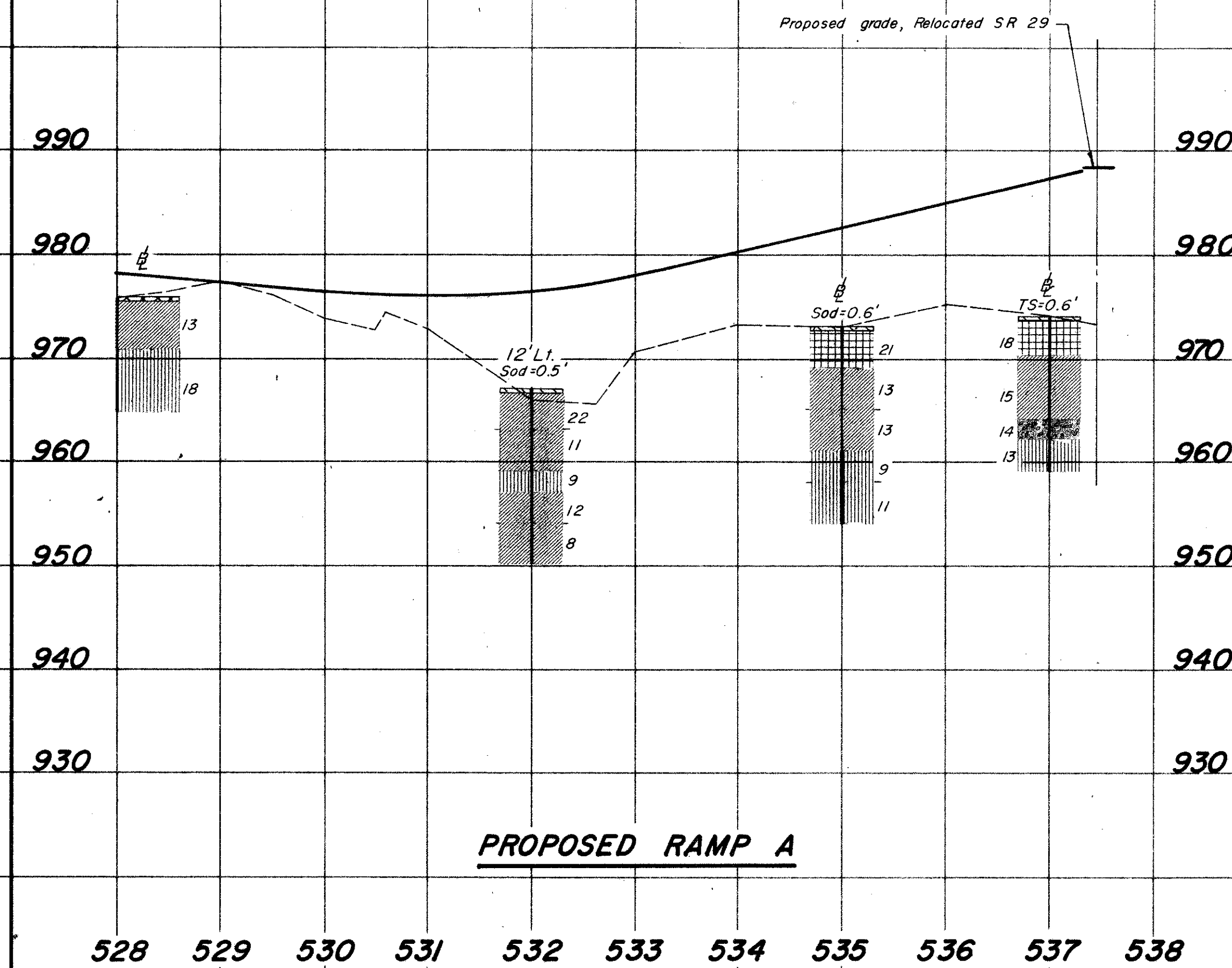


USR 42 INTERCHANGE

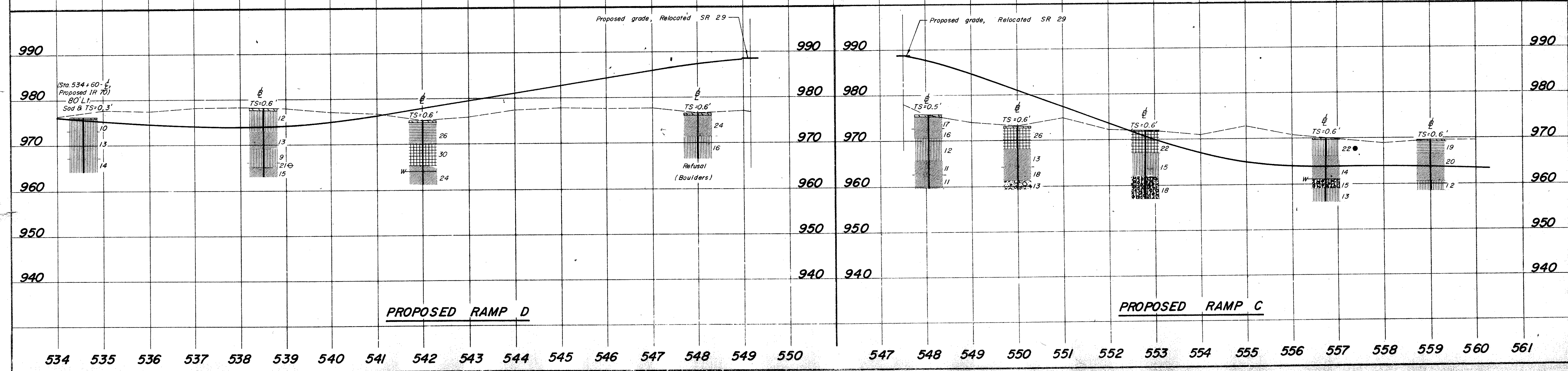
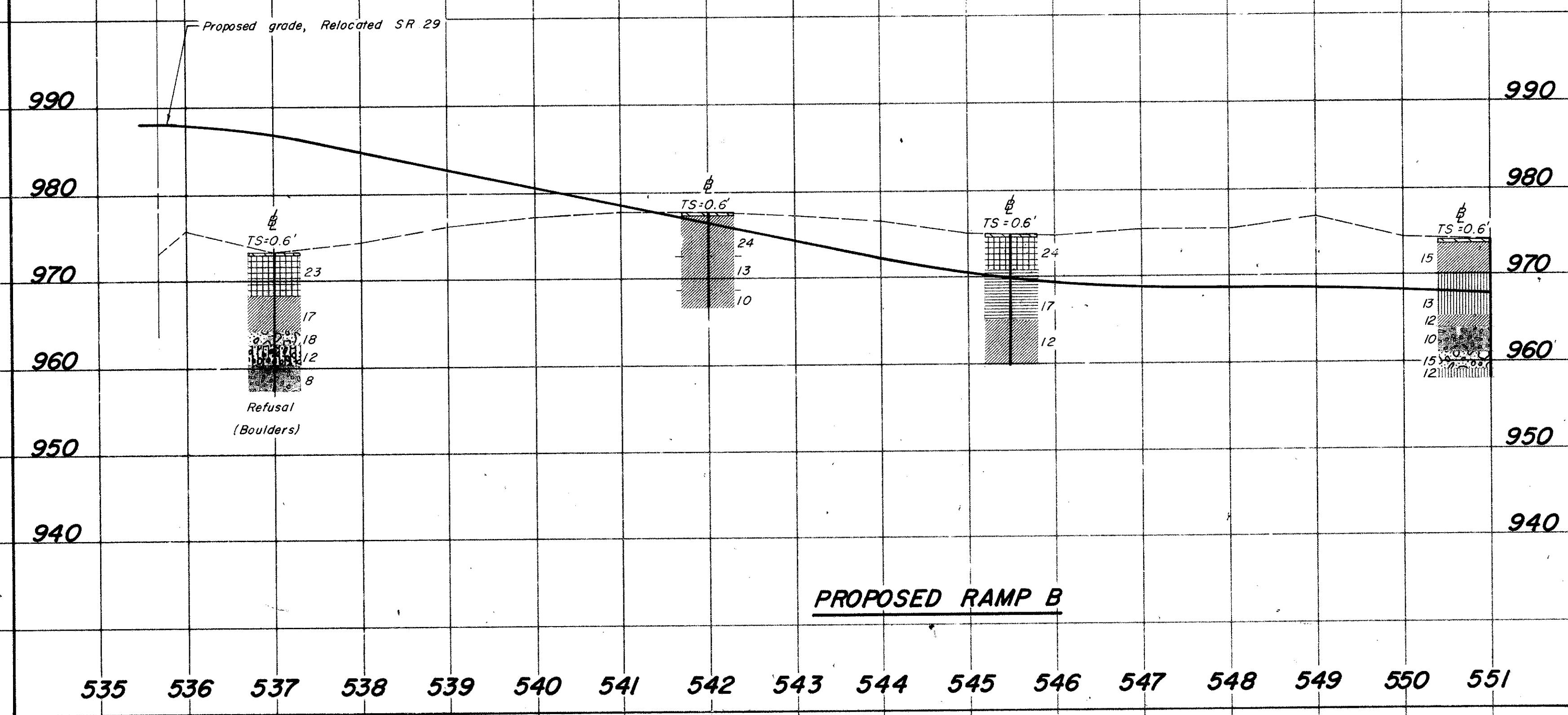


PROFILE INDEX	
PROFILE	SHEET
USR 42 Interchange	13
Proposed USR 42	13
Proposed Ramp A	13
Proposed Ramp B	13
Proposed Ramp C	14
Proposed Ramp D	14

SR 29 INTERCHANGE



SR 29 INTERCHANGE



MAR 1 1966

MADISON COUNTY
MAD-70-6.25

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LEGEND

- Auger Boring Location - Plan View.
 Press and / or Drive Sample and / or Core Boring Location - Plan View.
 Drive Rod Penetration Resistance Sounding Location - Plan View.
 Capped Pile
 Footing
 Footing on Pile
 Top of Rock
 Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
 Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.

X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.

 Drive Rod Penetration Resistance Sounding Log - Profile
 Casing

Resistance "R" < 10,000 lbs.
Resistance "R" > 10,000 lbs.

 Indicates Final Measurement of Penetration, in Inches.
 Indicates Free Water Elevation.
 Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
 Weathered Indurated Clay
 Indurated Clay
 Weathered Shale
 Shale
 Weathered Sandstone
 Sandstone
 Leached Dolomite
 Dolomite
 Leached Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

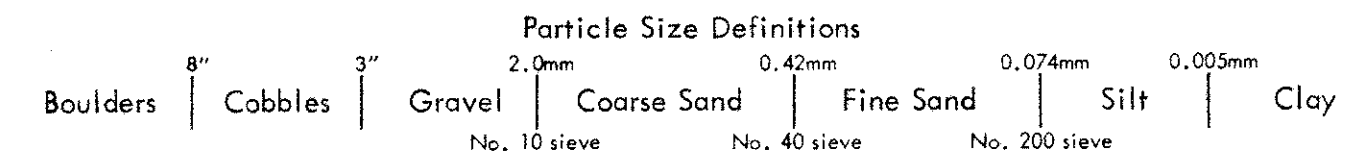
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING															
Date Started <u>8-4-65</u>		Sampler Type <u>SS</u>		Dia. <u>1 3/8"</u>		Water Elev. _____									
Date Completed <u>8-5-65</u>		Casing Length <u>30'</u>		Dia. <u>3 1/2"</u>											
Boring No. <u>B-1</u>		Station & Offset <u>331+53.75' Lt. (Rear Abutment)</u>				Surface Elev. <u>1000.0'</u>									
Elev.	Depth	Std. Pen.	Rec.	Loss	Description	Sample	Physical Characteristics								SHTL
	(ft.)	(N)	ft.	ft.		No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	Class.
1000.0	0														
	2														
	4														
995.0	6	1/2			Brown and Gray Gravelly Sandy Clay	1	21	7	17	35	20	29	11	26	
992.5	8	20/30			Brown Silty Sandy Gravel	2	54	11	12	17	6	PL	15	19	
990.0	10	25/25			Brown Silty Sandy Gravel	3	66	17	6	-11	-	NP	NP	11	
	12														
985.0	14	23/13			Brown Gravel	4	82	13	2	-3	-	NP	NP	3	
	16														
	18														
980.0	20	15/15			Brown Silty Sandy Gravel	5	60	18	8	-14	-	NP	NP	9	
	22														
	24														
975.0	26	20/28			Gray Silty Sandy Gravel	6	43	23	12	16	6	NP	NP	13	
	28														
970.0	30	12/19			Gray Sandy Gravelly Silt	7	32	6	14	27	21	19	5	12	
	32														
	34														
965.0	36	15/20			Gray Gravelly Sandy Silt	8	19	9	17	28	27	20	7	18	
	38														
	40														
960.0															
959.0	1 1/2				Gray Sandy Silt	9	0	25	26	27	22	PL	11	14	

LOG OF BORING																	
Date Started 8-2-65		Sampler Type SS		Dia. 1 3/8"		Water Elev. _____											
Date Completed 8-3-65		Casing Length 40'		Dia. 3 1/2"													
Boring No. B-16		Station & Offset 333+75.74' Rt. (Forward Abutment)		Surface Elev. 1001.3'													
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics										SHTL Class.
1001.3	0						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.			
	2																
	4																
996.3	6	3/3			Dark-Brown Clay, Slightly Organic	1	V	I	S	U	A	L	49	25	26		
993.8	8	3/2			Dark-Brown Silt and Clay, Slightly Organic	2	V	I	S	U	A	L	33	15	21		
991.3	10	2/1			Brown Silty Gravelly Sand	3	34	38	11	-17	-	NP	NP	14			
	12																
	14																
986.3	16	19/20			Brown Silty Sandy Gravel	4	50	22	10	12	6	NP	NP	10			
	18																
981.3	20	14/20			Gray Sandy Gravel	5	55	38	2	-5	-	NP	NP	9			
	22																
	24																
976.3	26	14/18			Gray Sandy Gravelly Silt	6	27	10	14	29	20	18	5	9			
	28																
971.3	30	14/23			Gray Silty Gravelly Sand	7	31	17	12	24	16	18	5	9			
	32																
	34																
966.3	36	50/*			Gray Silty Sandy Gravel	8	31	15	15	22	17	16	4	6			
	38																
961.3	40																
	42	20/20			Gray Sandy Silt	9	12	8	15	36	29	22	10	10			
	44																
956.3	46	20/20			Gray Gravelly Sandy Silt	10	18	7	16	31	28	20	7	11			
	48																
BOTTOM OF BORING																	

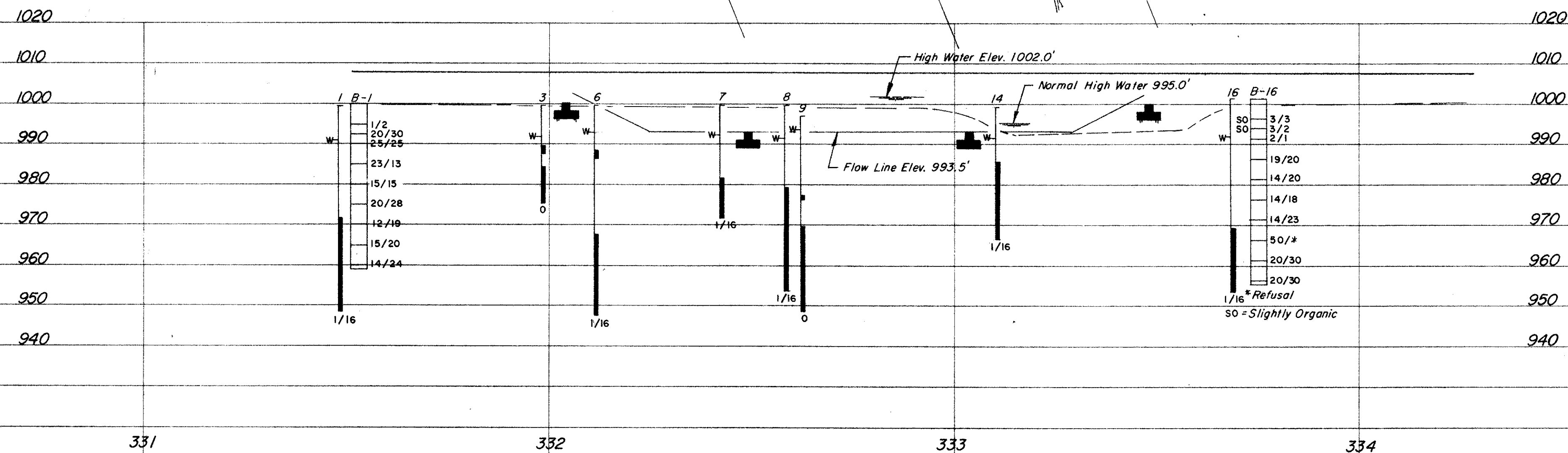
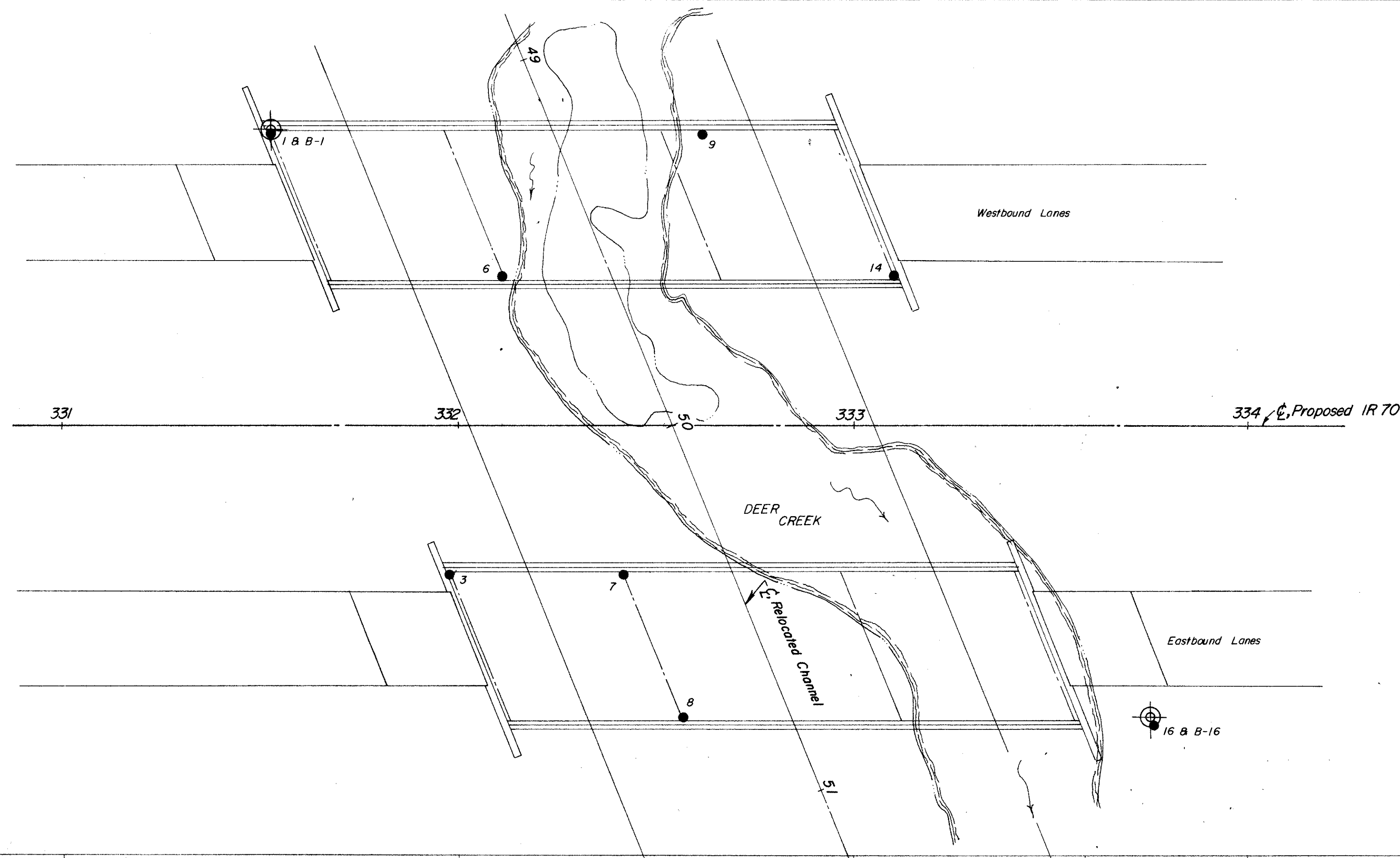
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
 TESTING LABORATORY
 1620 WEST BROAD STREET, COLUMBUS 23, OHIO
 STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. MAD-IR 70-0628 L/R
 OVER DEER CREEK
 SEC. MAD-70-6.25
 CHECKED BY R. H. P. REVIEWED BY R. D. R. DATE 9/8/65

1001-01

MAD-70-625

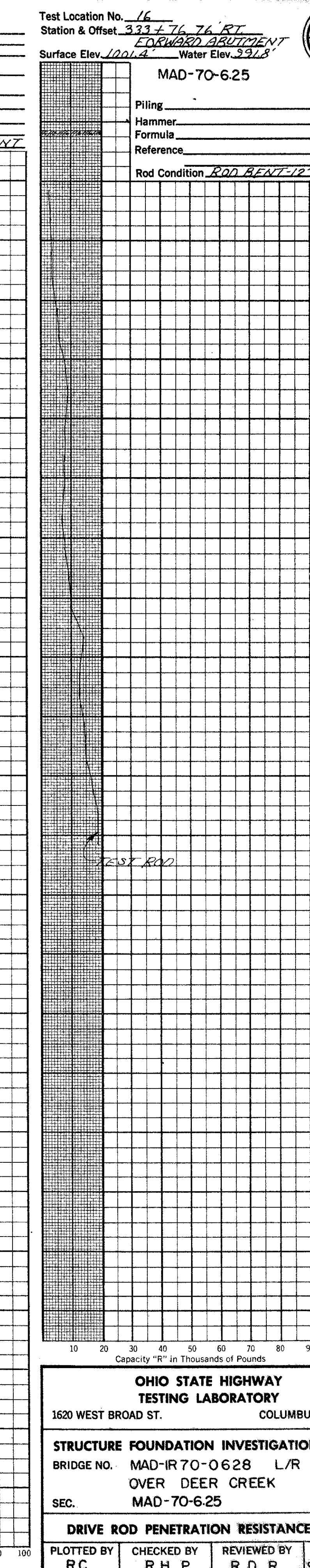
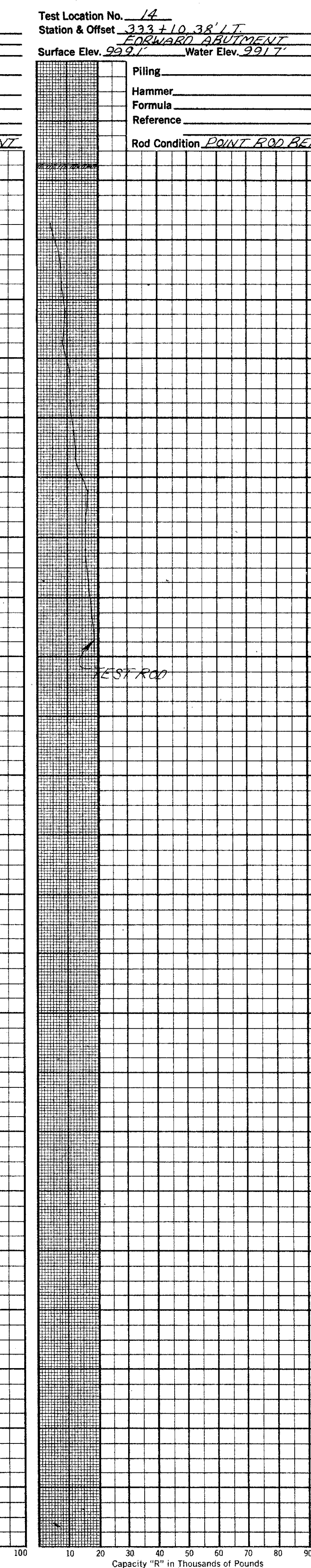
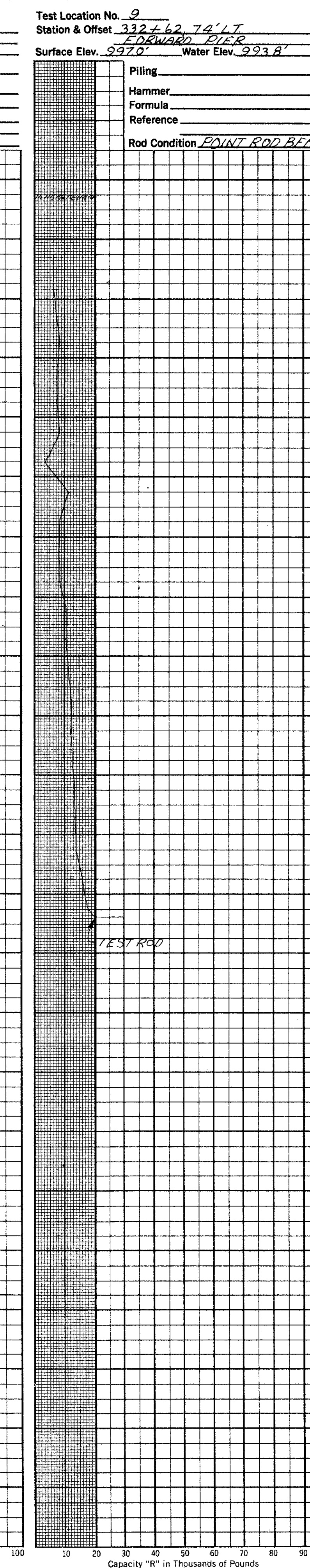
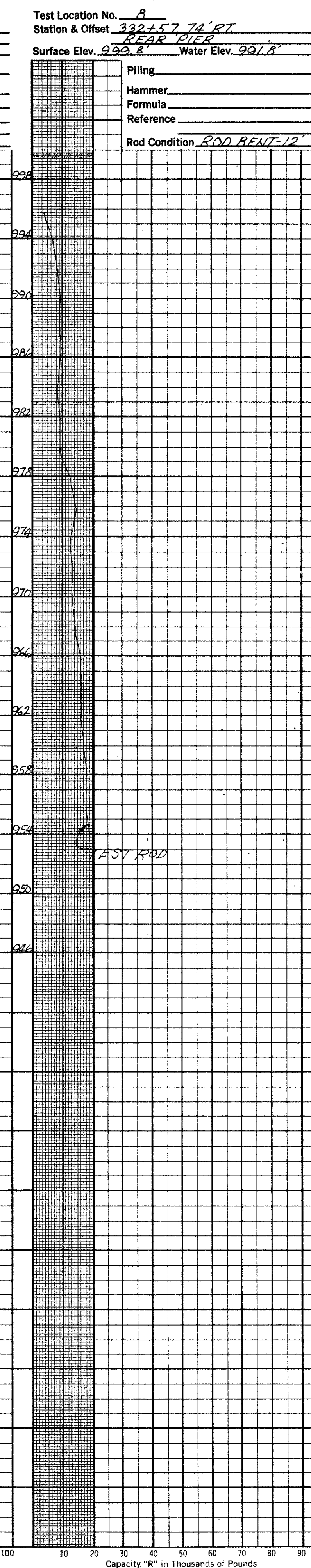
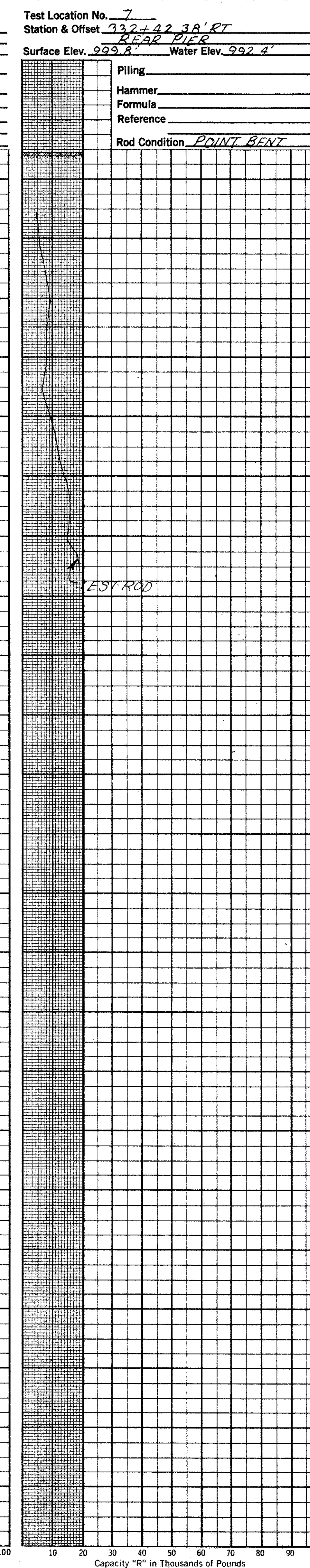
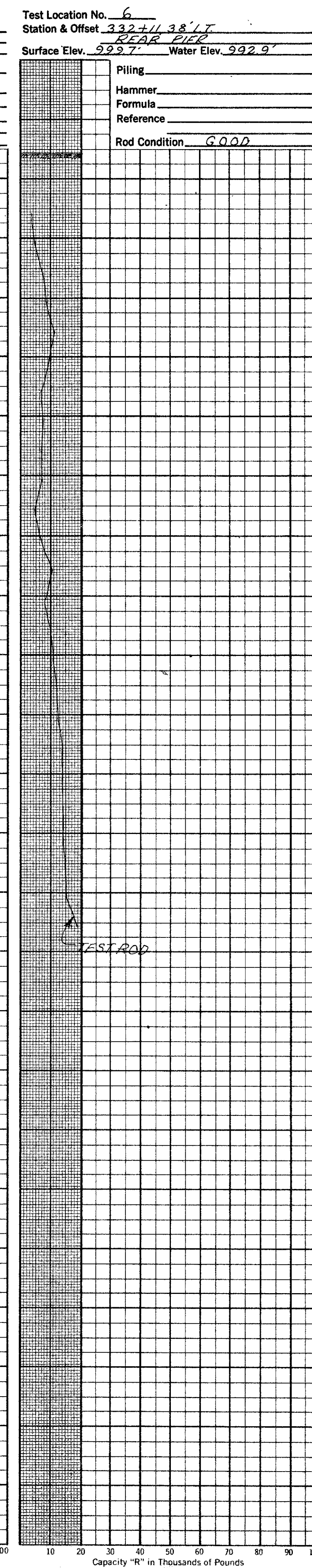
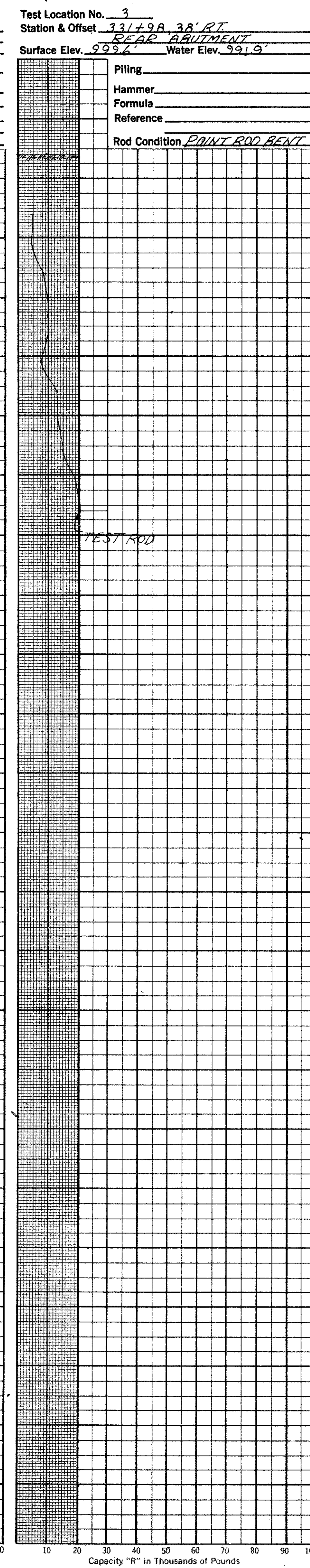
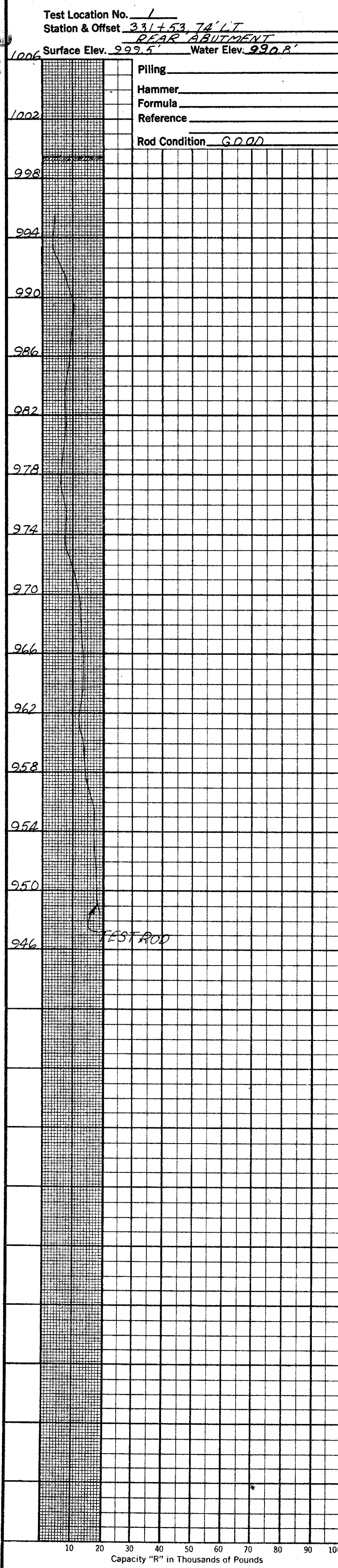
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SCALE: 1" = 20'

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION			
BRIDGE NO.	MAD-IR 70-0628 L/R OVER DEER CREEK		
SEC.	MAD-70-6.25		
PLAN AND PROFILE			
DRAWN BY R.L.F.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 9/8/65

MAR 1 1965



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MAD-70-625

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-IR70-0628 L/R
OVER DEER CREEK
SEC. MAD-70-625

DRIVE ROD PENETRATION RESISTANCE DATA
PLOTTED BY RC CHECKED BY R.H.P. REVIEWED BY R.D.R. DATE 9/8/65

MAR 1 1966

MADISON COUNTY
MAD-70-6.25

20
38
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GEOLOGY OF THE SITE

The structure site is located in the glaciated Mississippi Valley Plain, on the flood plain of Deer Creek, in an area where moderately deep glacial-derived soils overlie dolomitic bedrock, of Silurian age.

EXPLORATION

The exploration consisted of two drive sample borings and five drive rod penetration tests, made between June 17 and 25, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered silt, generally dense to very dense gravels, sands, silts, and boulders. The borings were terminated at 45 and 81-foot depths, elevations 956 and 920 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test. Boring B-3 encountered extensive artesian condition below approximately elevation 946 feet.

Rod soundings penetrated to greater depths than the borings, and encountered gradual, occasionally erratic, increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance to penetration at 82 to 90-foot depth, elevation 919 to 913 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings at higher elevations.

Free water was encountered in the majority of the rod sounding holes between elevations 993 and 990 feet.

No test penetrated to bedrock surface.

LEGEND

- Auger Boring Location - Plan View.
- Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- Capped Pile
- Footing
- Footing on Pile
- TR Top of Rock

- 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

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale

- 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.

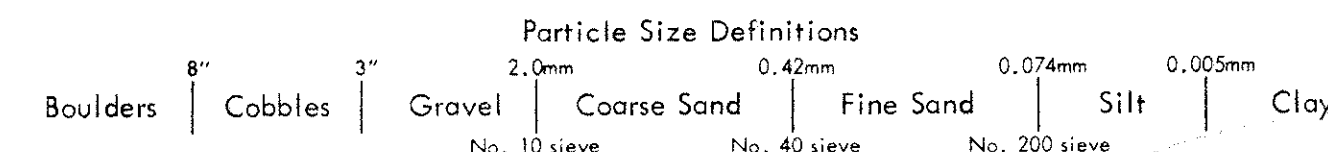
Drive Sample Borings - Drive-Press Sample Borings

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.



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OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

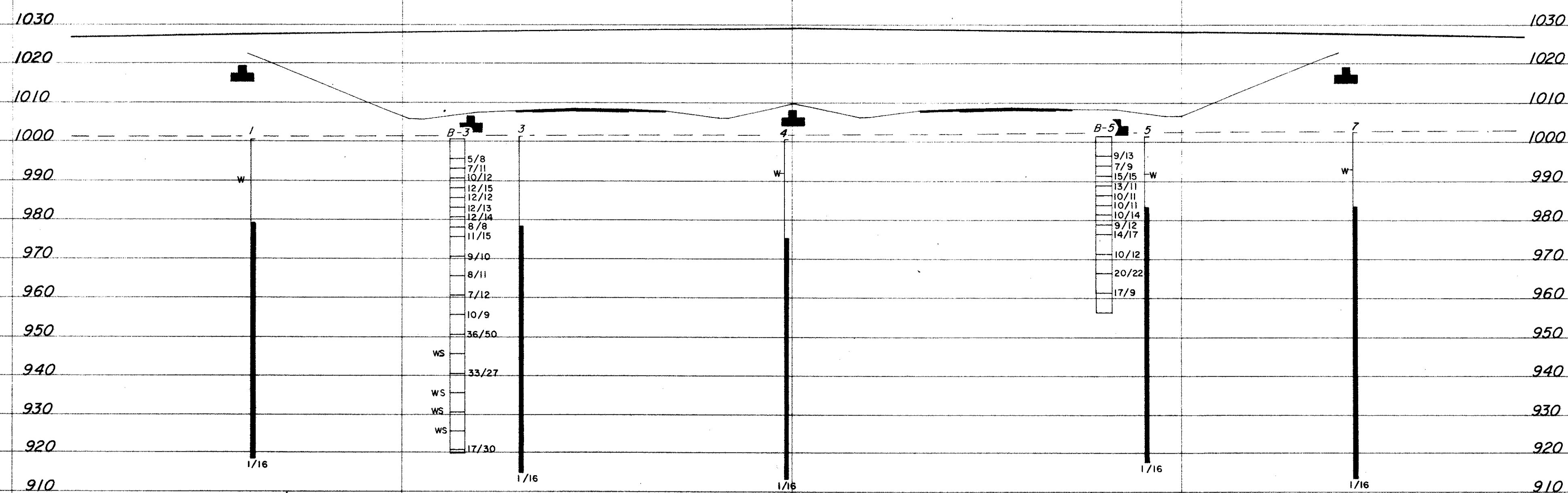
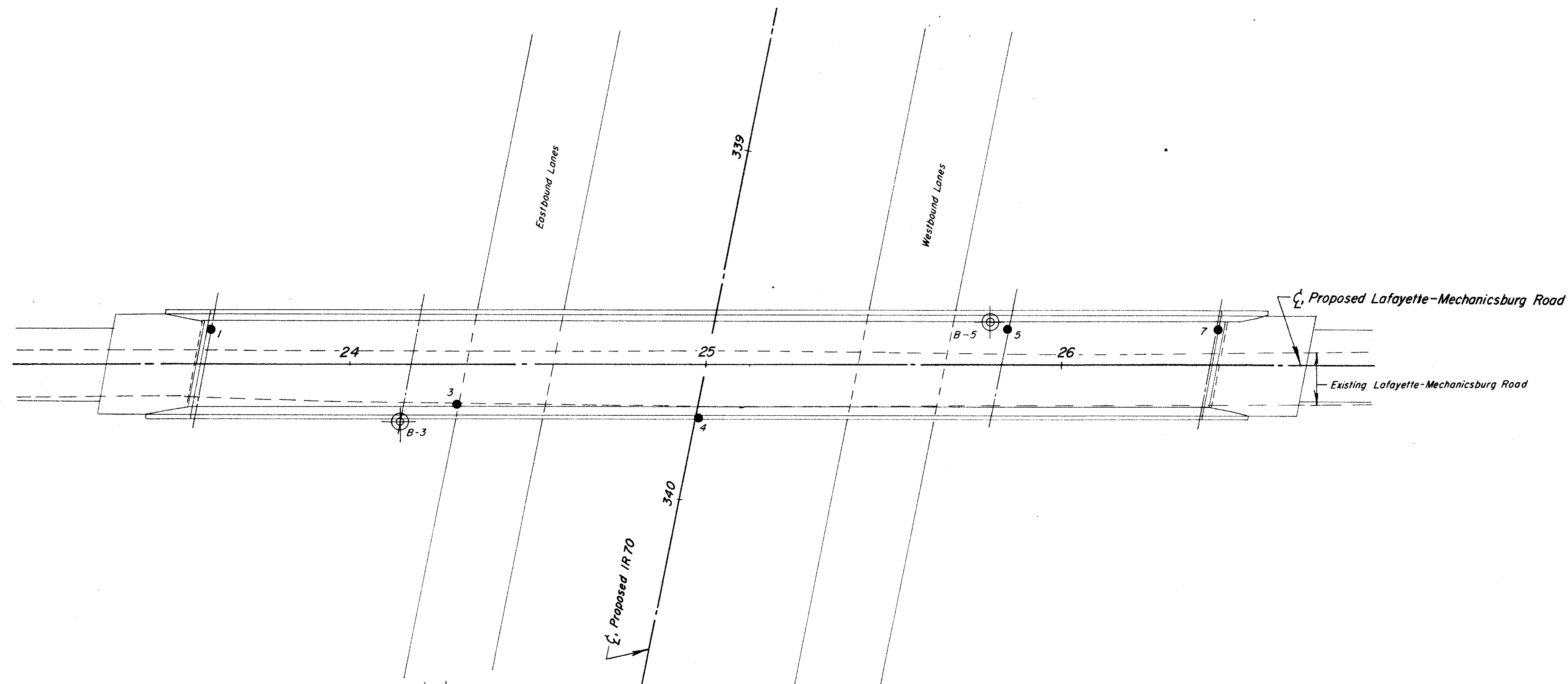
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-1R70-0643
UNDER LAFAYETTE-MECHANICSBURG ROAD
SEC. MAD-70-6.25

CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 7/28/65
----------------------	-----------------------	-----------------

MAR 1965

MAD-70-6.25

21
38
2
4



WS = Wash Sample

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD-IR 70-0643 UNDER LAFAYETTE-MECHANICSBURG ROAD SEC. MAD-70-6.25			
PLAN AND PROFILE			
DRAWN BY R.L.C.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 7/28/65

SCALE: 1" = 20'

MADE 1973

LOG OF BORING																						
Date Started <u>6-21-65</u>			Sampler Type <u>SM</u>			Dia. <u>1 1/2"</u>			Water Elev. _____				Date Completed <u>6-24-65</u>									
Boring No. <u>B-3</u>			Casing Length <u>89'</u>			Dia. <u>3 1/2"</u>			Station & Offset <u>25+14.16' RT. (NEAR PIER)</u>				Surface Elev. <u>1000.6'</u>									
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description								Sample No.	Physical Characteristics				SHTL Class.				
													% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.		
1000.6	0																					
	2																					
	4																					
995.6	6	5/8											1	11	11	7	45	26	22	4	13	
993.1	8	7/11											2	53	9	11	28	29	25	7	15	
990.6	10												3	17	9	14	36	24	22	6	12	
988.1	12	10/12																				
	14	12/15											4	54	21	7	12	6	NP	NP	9	
985.6	16	12/12											5	47	18	13	14	8	NP	NP	10	
983.1	18	12/13											6	35	8	11	28	18	NP	NP	10	
980.6	20	12/14											7	38	9	12	25	18	NP	NP	11	
978.1	22																					
	24	8/8											8	16	10	13	35	26	NP	NP	11	
975.6	26	11/15											9	48	24	9	-19	-	NP	NP	13	
	28																					
970.6	30	9/10											10	23	11	12	29	25	NP	NP	12	
	32																					
	34																					
965.6	36	8/11											11	14	10	14	36	26	20	6	12	
	38																					
960.6	40	7/12											12	23	9	15	34	19	NP	NP	11	
	42																					
	44																					
955.6	46	10/9											13	29	38	22	5	6	NP	NP	14	
	48																					
950.6	50	36/50											14	69	22	4	-5	-	NP	NP	9	
	52																					
	54																					
945.6	56												15	V		I		S	U	A	L	
	58																					
940.6	60	33/27											16	25	36	17	14	8	NP	NP	11	
	62																					
	64																					
935.6	66												17	V		I		S	U	A	L	
	68																					
930.6	70												18	V		I		S	U	A	L	
	72																					
	74																					
925.6	76												19	V		I		S	U	A	L	
	78																					
920.6	80	17/30											20	6	6	17	34	39	27	12	14	
919.6																						

LOG OF BORING																		
Date Started <u>6-24-65</u>			Sampler Type <u>SM</u>			Dia. <u>1 1/2"</u>			Water Elev. _____			Date Completed <u>6-25-65</u>						
Boring No. <u>B-5</u>			Casing Length <u>40'</u>			Dia. <u>3 1/2"</u>			Station & Offset <u>25+30.12' RT. (FORWARD PIER)</u>			Surface Elev. <u>1001.4'</u>						
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description								Sample No.	Physical Characteristics				SHTL Class.
						% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.					
1001.4	0																	
	2																	
	4																	
996.4	6	9/13			Brown Gravelly Sandy Silt	1	21	10	11	30	28	26	8	14				
993.9	8	7/9			Gray Gravelly Sandy Silt	2	V		I	S	U	A	L	13				
991.4	10	15/15			Brown and Gray Silty Sandy Gravel	3	51	25	10	8	6	HP	HP	12				
988.9	12	13/11			Gray Sandy Gravel with Boulders	4	63	22	7	-8		HP	HP	10				
986.4	14	10/11			Gray Sandy Silt with Boulders	5	9	28	15	18	19	17	3	12				
983.9	16	10/11			Gray Sandy Gravelly Silt	6	35	7	13	24	21	20	6	12				
981.4	18	10/14			Gray Sandy Silt	7	14	12	16	33	23	20	6	11				
978.9	20	9/12			Gray Sandy Gravelly Silt	8	31	10	12	25	22	20	5	10				
976.4	22	14/17			Gray Silty Sandy Gravel	9	V	I	S	U	A	L	13					
	24																	
971.4	26	10/12			Gray Sandy Gravelly Silt	10	21	10	9	38	22	21	6	9				
	28																	
	30																	
966.4	32	20/22			Gray Gravelly Sandy Silt	11	16	16	16	28	24	19	4	15				
	34																	
	36																	
961.4	38	17/9			Gray Silty Sandy Gravel with Boulders	12	38	12	11	22	17	21	6	11				
	40																	
	42																	
956.4	44				Sand and Gravel (Driller's Description)													

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD-IR 70-0643 UNDER LAFAYETTE - MECHANICSBURG ROAD SEC. MAD-70-625			
BORING DATA			
TYPED BY S.A.J.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 7/28/65

MAR 1965

Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____
Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____
Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____
Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____
Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____
Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____
Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____
1003							
1002							
1001							
997							
993							
989							
985							
981							
977							
973							
969							
965							
961							
957							
953							
949							
945							
941							
937							
933							
929							
925							
921							
917							
913							

REAR ABUTMENT
 REAR PIER
 FORWARD PIER
 FORWARD ABUTMENT

POINT ROD BENT
 POINT ROD BENT
 POINT ROD BENT
 POINT ROD BENT

MAD-70-6.25

OHIO STATE HIGHWAY
 TESTING LABORATORY
 1620 WEST BROAD ST. COLUMBUS 23, OHIO
 STRUCTURE FOUNDATION INVESTIGATION
 BRIDGE NO. MAD-1R70-0643
 UNDER LAFAYETTE-MECHANICSBURG ROAD
 SEC. MAD-70-6.25
 DRIVE ROD PENETRATION RESISTANCE DATA
 PLOTTED BY R.C. CHECKED BY R.H.P. REVIEWED BY R.D.R. DATE 7/28/65

23
38
4
4

GEOLOGY OF THE SITE

The structure site is located on a gently rolling portion of the Mississippi Valley plain, on the edge of the flood plain of Deer Creek. Moderately deep glacial drift and valley fill, found to be at least 88 feet deep, overlies carbonate bedrock, of the Monroe formation.

EXPLORATION

The exploration consisted of two drive sample borings and four drive rod penetration tests, made between June 14 and 18, 1965.

INVESTIGATIONAL FINDINGS

Borings disclosed moist, medium-dense to dense sandy and gravelly silts to 30 and 40-foot depths, elevations 974 and 966 feet; below this, very moist, generally dense gravels with some sand. Boring B-1 was terminated at 76-foot depth, elevation 928 feet, after penetrating 30 feet of material requiring at least 30 blows per foot in the standard penetration test. Boring B-4 was discontinued at 46-foot depth, elevation 960 feet.




Rod soundings met gradually increasing resistance to penetration with increasing depth to 38 to 44-foot depths, elevations 968 to 960 feet; below this, medium-high, somewhat erratic resistance to penetration, to approximate 80-foot depths, elevations 926 to 924 feet. Penetration resistance increased below elevations 926 to 924 feet to refusal or near refusal to penetration at 87 and 89-foot depths, elevations 918 to 916 feet, where the soundings were terminated, possibly on or near bedrock surface. The abrupt flexures in the penetration resistance curves are considered to be indicative of intervals of cobbles and boulders.





Free water level was noted in the rod sounding holes at 2 to 4-foot depths, elevations 1002 to 1001 feet.







It is noted that a slight artesian condition was encountered in boring B-1 at 65-foot depth, elevation 939 feet.


No test penetrated to bedrock surface.


LEGEND


-  Auger Boring Location - Plan View.
-  Press and / or Drive Sample and / or Core Boring Location - Plan View.
-  Drive Rod Penetration Resistance Sounding Location - Plan View.


-  Capped Pile
-  Footing
-  Footing on Pile
-  Top of Rock

-  Coal
-  Weathered Indurated Clay
-  Indurated Clay
-  Weathered Shale
-  Shale
- 

 Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.


 Figures Beside the Boring Log in Profile Indicate the Number of Blows for Standard Penetration Test.
X = Number of Blows for First 6 inches.
Y = Number of Blows for Second 6 inches.


 Drive Rod Penetration Resistance Sounding Log - Profile


 Casing

Resistance "R" < 10,000 lbs.







Resistance "R" > 10,000 lbs.

 Indicates Final Measurement of Penetration, in Inches.

 Indicates Free Water Elevation.

 Indicates Static Water Elevation.

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.

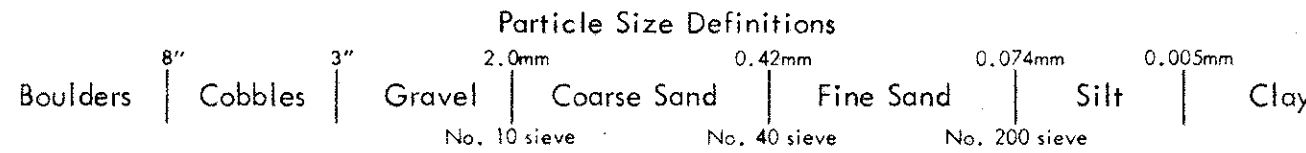
Drive Sample Borings - Drive-Press Sample Borings

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.

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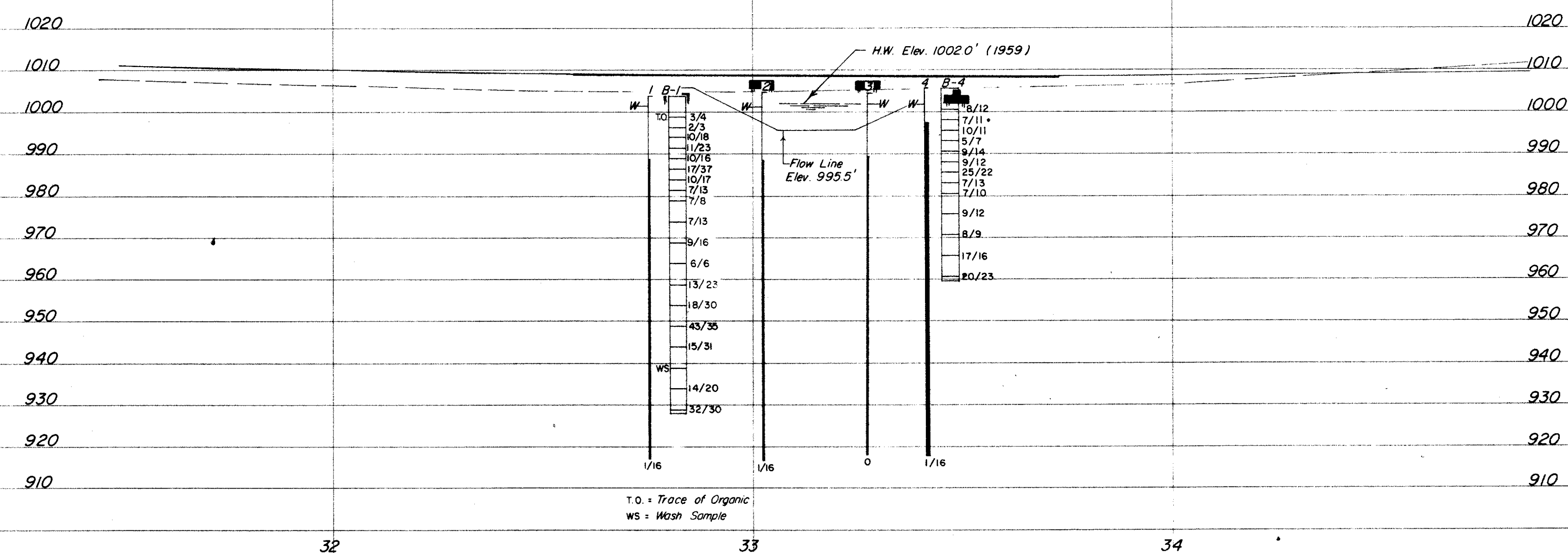
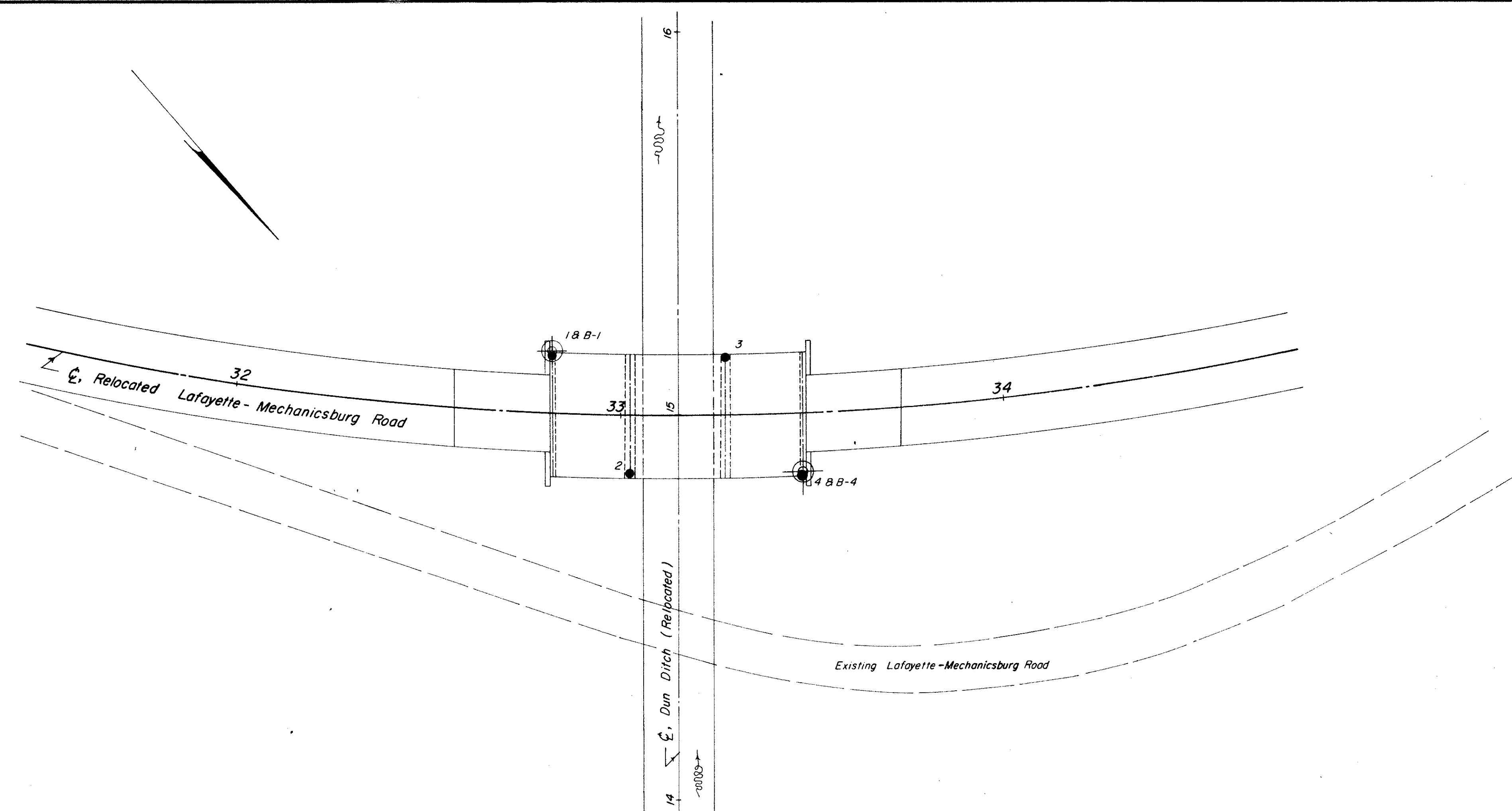
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OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-1R 70-
TWP. ROAD 110 OVER DUN DITCH
SEC. MAD-70-6.25

CHECKED BY R.H.P.	REVIEWED BY G.P.H.	DATE 7/12/65
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OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION			
BRIDGE NO.		MAD-1R 70-	
TWP. ROAD		110 OVER DUN DITCH	
SEC.		MAD-70-625	
PLAN AND PROFILE			
DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	R.H.P.	G.P.H.	7/12/65

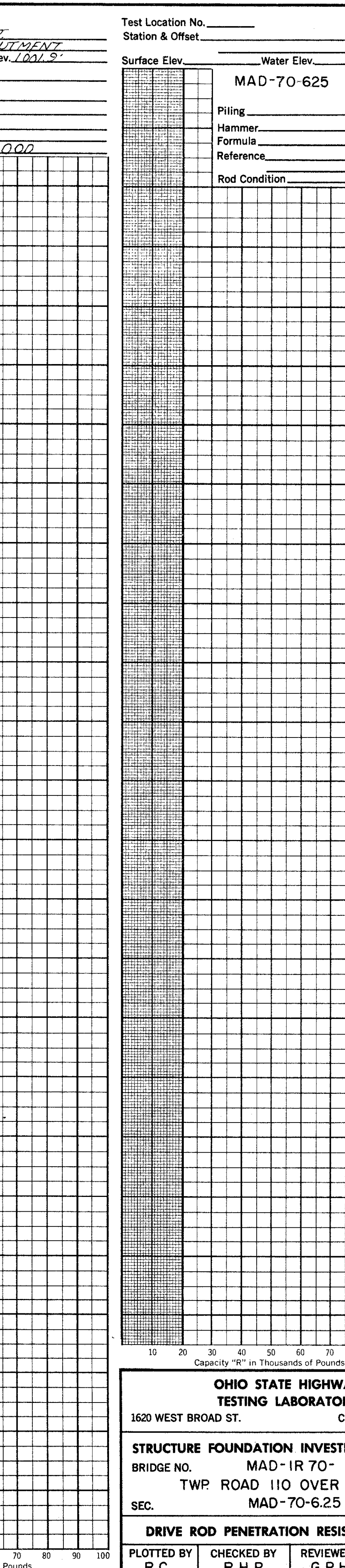
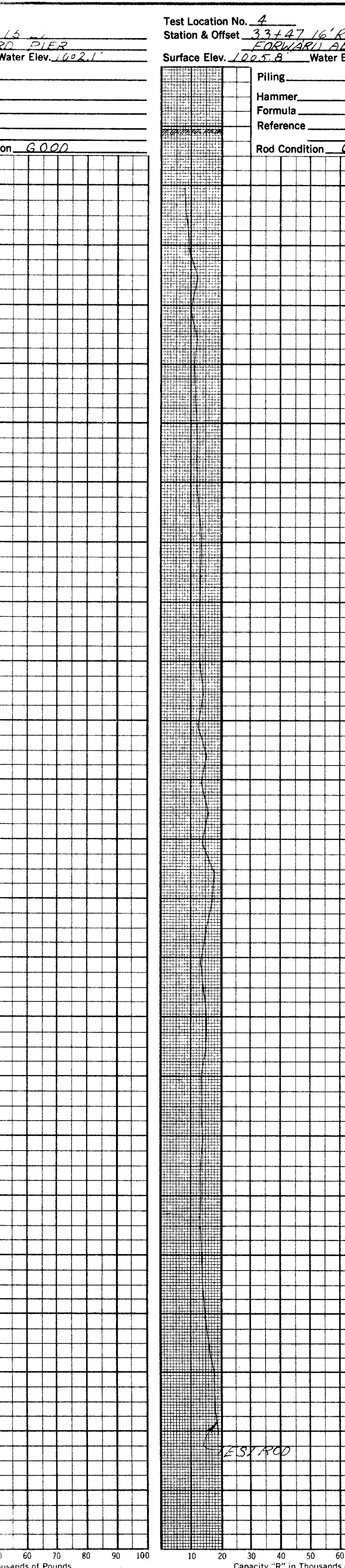
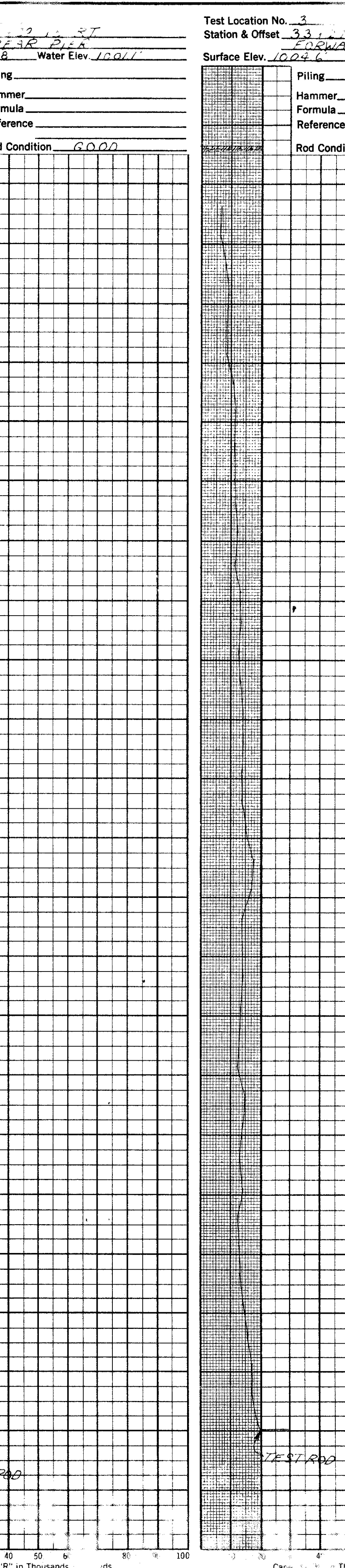
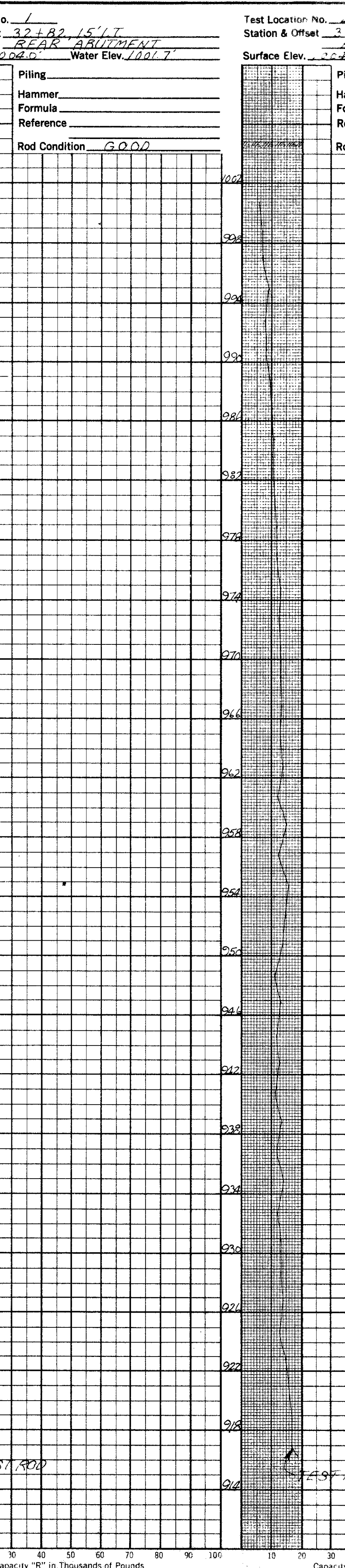
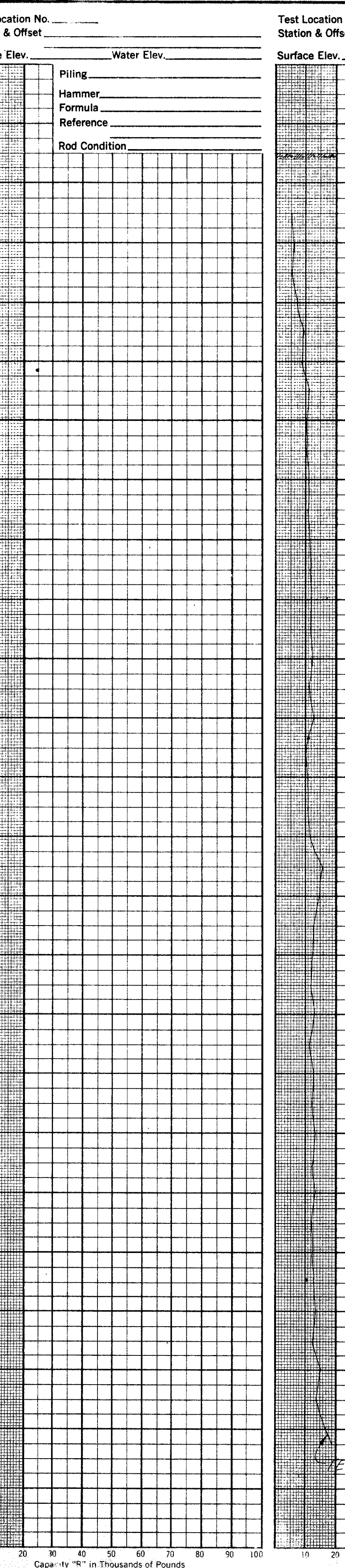
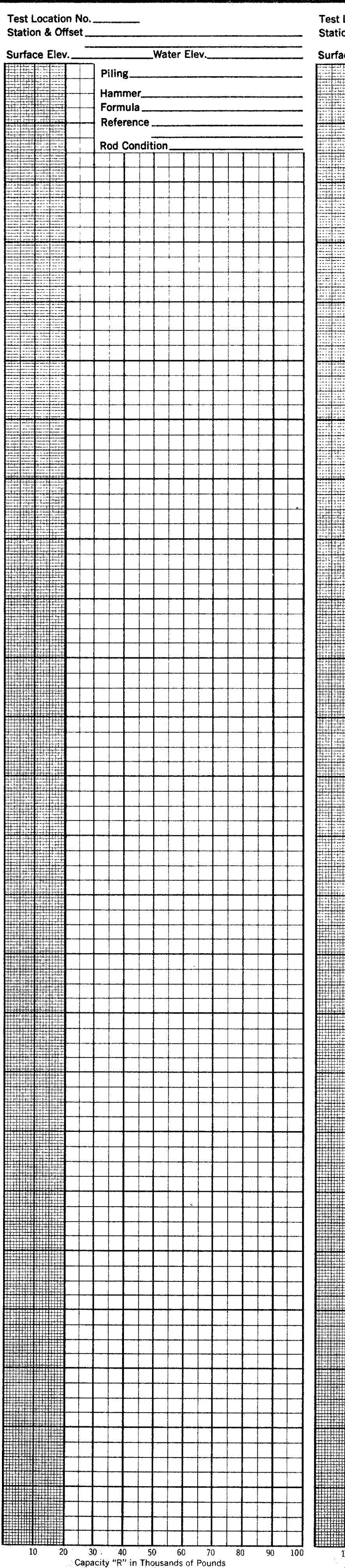
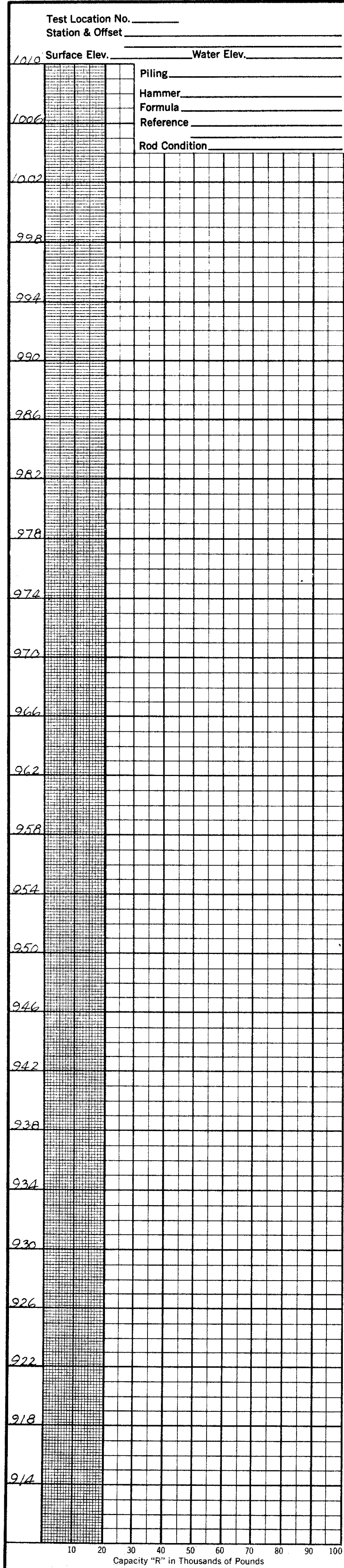


SCALE: 1" = 20'

LOG OF BORING															
Date Started <u>6-14-65</u>		Sampler Type <u>SS</u>		Dia. <u>1 1/8"</u>		Water Elev. _____									
Date Completed <u>6-17-65</u>		Casing Length <u>75.7'</u>		Dia. <u>3 1/2"</u>											
Boring No. <u>B-1</u>		Station & Offset <u>32+02, 15' 1 1/2" (REAR ABUTMENT)</u>		Surface Elev. <u>1004.0'</u>											
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
1004.0	0														
	2														
	4														
999.0	6	3/4			Brown Clay	1	0	3	8	44	45	42	21	31	
996.5	8	2/3			Brown and Gray Gravelly Clay	2	38	5	8	26	23	33	14	14	
994.0	10	10/18			Brown and Gray Sandy Silt	3	11	10	38	29	12	NP	NP	15	
991.5	12	11/23			Gray Sandy Gravelly Silt	4	28	8	13	35	16	18	2	10	
989.0	14	10/16			Gray Sandy Gravelly Silt	5	33	8	11	32	16	22	7	11	
986.5	16	17/37			Gray Silty Sandy Gravel	6	38	14	10	24	14	19	3	8	
984.0	18	10/17			Gray Sandy Gravelly Silt	7	31	9	15	30	15	19	4	11	
981.5	22	7/13			Gray Sandy Gravelly Silt	8	24	9	13	33	21	20	5	11	
979.0	26	7/8			Gray Sandy Gravelly Silt	9	28	10	14	29	19	20	6	13	
	28														
974.0	30	7/13			Gray Silty Sandy Gravel	10	43	8	10	23	16	21	4	10	
	32														
969.0	34	9/16			Gray Silty Sandy Gravel	11	40	11	12	24	13	18	2	9	
	36														
964.0	38														
	40	6/6			Gray Silty Sandy Gravel	12	44	11	13	19	13	21	5	9	
	42														
959.0	44	13/23			Brown Silty Sandy Gravel	13	40	29	12	12	7	NP	NP	11	
	46														
954.0	48	18/30			Gray Sandy Gravel	14	73	16	6	5	NP	NP	8		
	50														
949.0	52	13/35			Gray Gravel	15	84	7	5	4	NP	NP	10		
	54														
944.0	56	15/31			Gray Sandy Gravel	16	56	29	8	5	NP	NP	10		
	58														
939.0	60														
	62														
934.0	64														
	66				Brownish-Gray Sand (Wash Sample)-Heaved 3' in casing	17	V I S U A L								
	68														
929.0	70	14/20			Gray Sandy Gravel	18	75	15	5	5	NP	NP	9		
	72														
924.0	74														
924.0	76	30/30			Gray Silty Sandy Gravel	56	21	10		13	NP	NP	3		
					BOTTOM OF BORING										

LOG OF BORING															
Date Started <u>6-17-65</u>		Sampler Type <u>SS</u>		Dia. <u>1 3/8"</u>		Water Elev. _____									
Date Completed <u>6-18-65</u>		Casing Length <u>85'</u>		Dia. <u>3 1/2"</u>											
Boring No. <u>B-4</u>		Station & Offset <u>33+47, 15' 1/2" (FORWARD ABUTMENT)</u>		Surface Elev. <u>1005.8'</u>											
Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
1005.8	0														
	2														
	4														
1000.8	6	8/12			Brown Gravelly Sandy Silt	1	15	9	11	38	27	27	9	29	
998.3	8	7/11			Brown Gravelly Sandy Silt	2	18	9	13	36	24	24	7	17	
995.8	10	10/11			Brown Silty Sandy Gravel	3	41	15	16	19	9	NP	NP	11	
993.3	12	5/7			Gray Sandy Gravelly Silt	4	29	8	12	34	17	22	7	12	
990.8	14	9/14			Gray Silty Sandy Gravel	5	35	14	13	17	21	20	5	34	
988.3	16	9/12			Gray Sandy Gravelly Silt	6	28	9	10	39	14	21	4	10	
985.8	20	25/22			Gray Sandy Gravelly Silt	7	24	9	14	30	23	22	7	9	
983.3	22	7/13			Gray Sandy Gravelly Silt	8	26	8	12	33	21	21	5	10	
980.8	24	7/10			Gray Gravelly Sandy Silt	9	23	11	15	30	21	21	6	11	
	26														
	28														
975.8	30	9/12			Gray Gravelly Sandy Silt	10	16	12	16	33	23	23	9	11	
	32														
970.8	34	8/9			Gray Gravelly Sandy Silt	11	25	10	16	29	20	20	5	12	
	36														
965.8	38	17/16			Gray Silty Sandy Gravel	12	45	7	9	26	13	19	4	13	
	40														
960.8	42														
959.8	44														
	46	20/23			Gray Sandy Gravel	13	75	13	5	5	NP	NP	11		
					BOTTOM OF BORING										

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD - 1R 70 - TWP. ROAD 110 OVER DUN DITCH SEC. MAD -70-6.25			
BORING DATA			
TYPED BY R.C.	CHECKED BY R.H.P.	REVIEWED BY G.P.H.	DATE 7/12/65



27
38
4
4

MAD-70-625

Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-1R 70-
TWP. ROAD 110 OVER DUN DITCH
SEC. MAD-70-6.25

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R.C. CHECKED BY R.H.P. REVIEWED BY G.P.H. DATE 7/12/65

MAR 1 1966

MADISON COUNTY
MAD-70-625

28
38
1
3

GEOLOGY OF THE SITE

The structure site is located in the glaciated Mississippi Valley Plain, in an area where moderately deep glacial-derived soils overlie dolomitic bedrock, of Silurian age.

EXPLANATION

The exploration consisted of two drive sample borings, made on June 17 and 18, and July 22 and 23, 1965, and five drive rod penetration tests, made on June 29 and 30, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered moist, generally dense to very dense gravels, sands, and silts. The borings were terminated at 41 and 55-foot depths, elevations 975 and 961 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

Rod soundings encountered gradual, occasionally erratic, increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance and refusal to penetration at 22 to 33-foot depths, elevations 992 to 982 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings.

No free water was encountered in any of the rod sounding holes.

No test penetrated to bedrock surface.



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

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.



Indicates Final Measurement of Penetration, in Inches.



Indicates Free Water Elevation.



Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES



Coal



Weathered Indurated Clay



Indurated Clay



Weathered Shale



Shale



Weathered Sandstone



Sandstone

LOG OF BORING
Date Started 7-22-65 Sampler Type SS Dia. 1 3/8"
Date Completed 7-23-65 Casing Length 15' Dia. 3 1/2"
Boring No. B-2 Station & Offset 24+00, 16' 14" (Rear Pier) Surface Elev. 1015.5'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1015.5	0														
1013.0	2														
1010.5	4	1/1			Dark-Brown Organic Clay	1	0	8	11	39	42	45	24	35	
1008.0	6	1/3			Brown Sandy Silt	2	11	12	12	36	29	28	10	31	
1005.5	8	50 *			Brown Silty Sandy Gravel	3	63	18	7	8	4	NP	NP	12	
1003.0	10	50* (0.8)			Brown Silty Sandy Gravel	4	65	16	9	6	4	NP	NP	8	
1000.5	12	12/19			Gray Silty Sandy Gravel	5	47	30	6	11	6	17	3	14	
998.0	14	13/18			Gray Silty Sandy Gravel	6	35	14	12	25	14	20	8	13	
995.5	16	15/18			Gray Sandy Gravel	7	67	25	4	-4	-	NP	NP	14	
990.5	18	23/23			Gray Sandy Gravelly Silt	8	26	10	12	30	22	20	7	10	
985.5	20														
980.5	22														
975.5	24														
974.5	26	50* (0.7)			Gray Gravelly Sandy Silt	9	22	12	16	32	18	20	7	11	
	28														
	30	50* (0.6)			Gray Sandy Gravelly Silt	10	32	6	12	28	22	19	7	10	
	32														
	34	50* (0.7)			Gray Gravelly Sandy Silt	11	17	7	15	33	28	21	7	11	
	36														
	38														
	40	28/30			Gray Gravelly Sandy Clay	12	18	9	12	33	28	26	12	10	

BOTTOM OF BORING

*Refusal

LOG OF BORING
Date Started 6-17-65 Sampler Type SS Dia. 1 3/8"
Date Completed 6-18-65 Casing Length 45' Dia. 3 1/2"
Boring No. B-6 Station & Offset 26+01, 14' 14" (FORWARD PIER) Surface Elev. 1016.0'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
1016.0	0														
1013.5	2														
1011.0	4	7/14			Brown and Gray Sandy Silt	1	12	9	14	39	26	24	6	13	
1008.5	6	7/10			Brown Sandy Gravelly Silt	2	31	9	10	36	20	22	5	17	
1006.0	8	7/13			Brown Sandy Gravelly Silt	3	31	9	10	32	18	22	4	15	
1003.5	10	15/27			Gray Sandy Gravelly Silt	4	26	11	12	34	17	22	5	10	
1001.0	12	12/12			Gray Sandy Gravelly Silt	5	31	9	15	32	14	19	3	8	
998.5	14	7/14			Gray-Brown Gravelly Sandy Silt	6	24	11	13	36	16	20	4	12	
996.0	16	7/15			Gray Gravelly Sandy Silt	7	16	8	10	42	24	22	7	12	
991.0	18	12/17			Gray Sandy Silt	8	12	10	15	38	25	22	6	11	
988.5	20														
986.0	22														
981.0	24	22/23			Gray Sandy Silt	9	11	7	13	51	18	22	7	12	
976.0	26	50* (0.4')													
971.0	28	50* (0.4')			Gray Sandy Gravel	10	V	I	S	U	A	L	11		
966.0	30														
961.0	32														
956.0	34	28/44			Gray Sandy Silt	11	0	8	17	41	34	23	8	10	
951.0	36														
946.0	38														
941.0	40	25/45			Gray Silty Gravelly Sand	12	V	I	S	U	A	L	9		
936.0	42														
931.0	44														
926.0	46	25/32			Gray Gravelly Sandy Silt	13	V	I	S	U	A	L	9		
921.0	48														
916.0	50	50*			Gray Sandy Gravelly Silt	14	31	11	10	25	23	28	11	15	
911.0	52														
906.0	54	50* (0.4')			Gray Sandy Gravelly Silt	15	V	I	S	U	A	L	27	18	13

BOTTOM OF BORING

*Refusal

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

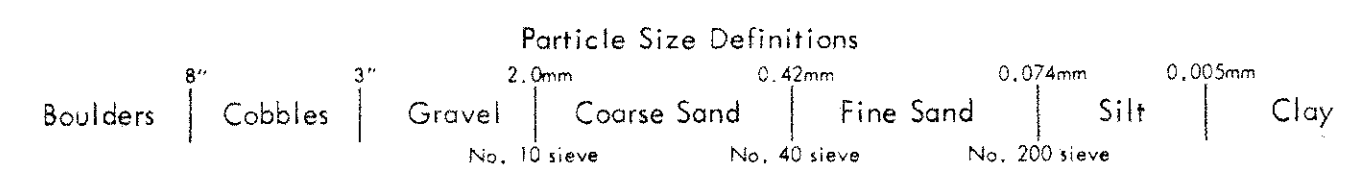
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system-and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



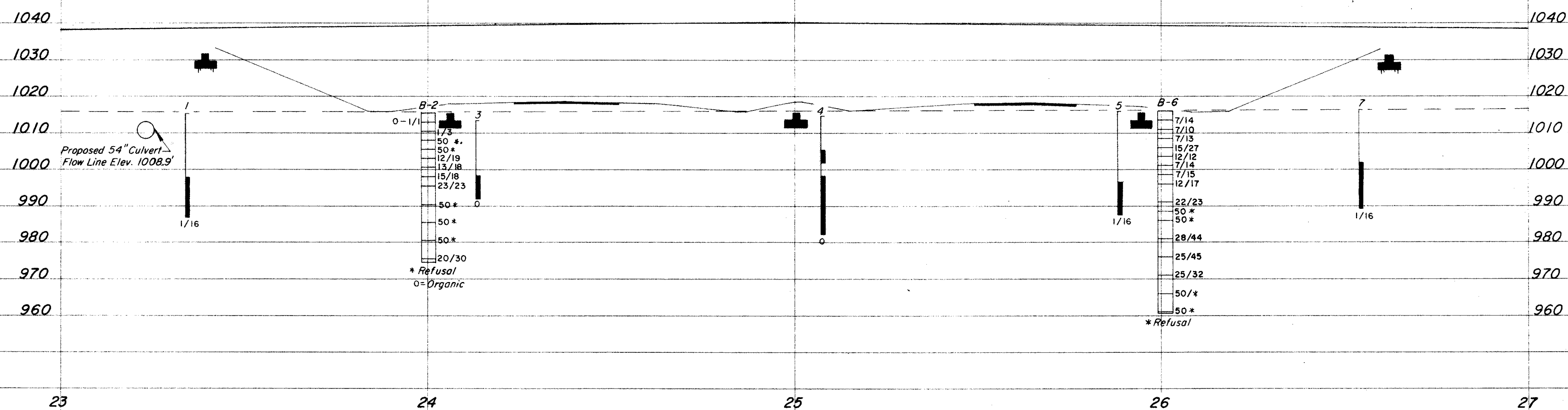
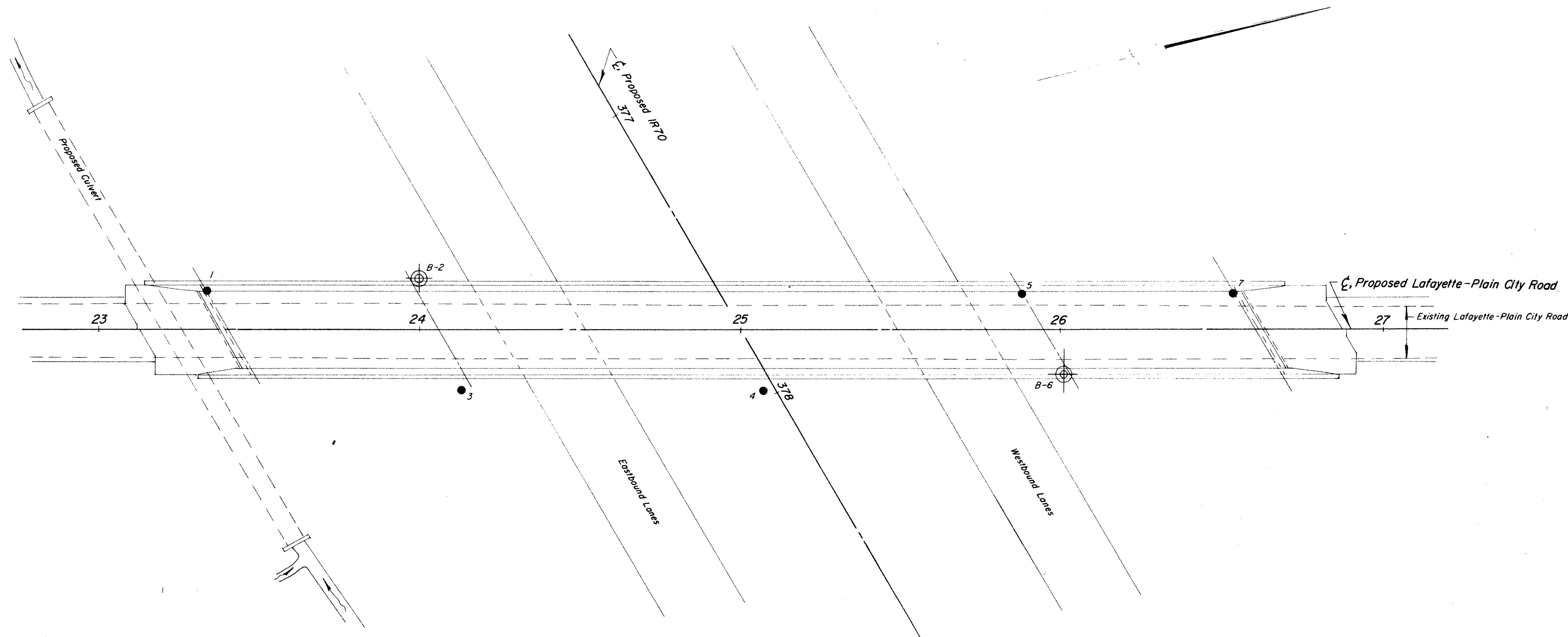
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO		
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD-1R70-0715 UNDER LAFAYETTE-PLAIN CITY ROAD SEC. MAD-70-625		
CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 8/25/65

WAR1-103

MAD-70-6.25

29
38
2
3



OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD-1R70-0715 UNDER LAFAYETTE-PLAIN CITY ROAD SEC. MAD-70-6.25			
PLAN AND PROFILE			
DRAWN BY R.L.C.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 8/25/65

SCALE: 1" = 20'

MAR 19 1966

Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____	Test Location No. _____ Station & Offset _____
Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____	Surface Elev. _____ Water Elev. _____
Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____	Piling _____
Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____	Hammer _____
Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____	Formula _____
Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____	Reference _____
Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____	Rod Condition _____
1028	1028	1028	1028	1028	1028	1028	1028
1020	1020	1020	1020	1020	1020	1020	1020
1016	1016	1016	1016	1016	1016	1016	1016
1012	1012	1012	1012	1012	1012	1012	1012
1008	1008	1008	1008	1008	1008	1008	1008
1004	1004	1004	1004	1004	1004	1004	1004
1000	1000	1000	1000	1000	1000	1000	1000
996	996	996	996	996	996	996	996
992	992	992	992	992	992	992	992
988	988	988	988	988	988	988	988
984	984	984	984	984	984	984	984
980	980	980	980	980	980	980	980
Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds	Capacity "R" in Thousands of Pounds

30
38
3
3

MAD-70-6.25
 Closed at El. 1006.5

Test Location No. 1
 Station & Offset 23+34.12 LT
 REAR ABUTMENT
 Surface Elev. 1015.3 Water Elev. DRY Hole Closed at El. 1007.3
 Rod Condition GOOD

Test Location No. 3
 Station & Offset 24+13.19 RT
 REAR PIER
 Surface Elev. 1013.5 Water Elev. DRY Hole Closed at El. 1009.5
 Rod Condition GOOD

Test Location No. 4
 Station & Offset 25+07.19 RT
 CENTER PIER
 Surface Elev. 1014.8 Water Elev. DRY Hole Closed at El. 998.8
 Rod Condition GOOD

Test Location No. 5
 Station & Offset 25+88.11 LT
 FORWARD PIER
 Surface Elev. 1016.0 Water Elev. DRY Hole Closed at El. 1009.0
 Rod Condition GOOD

Test Location No. 7
 Station & Offset 26+59.11 LT
 FORWARD ABUTMENT
 Surface Elev. 1016.5 Water Elev. DRY Hole Closed at El. 1006.5
 Rod Condition GOOD

TEST ROD

TEST ROD

TEST ROD

TEST ROD

TEST ROD

RECEIVED
MAR 1 1965

MADISON COUNTY
MAD - 70-6.25

31
38
5

GEOLOGY OF THE SITE

The structure site is located in the glaciated Mississippi Valley Plain, in an area where moderately deep glacial-derived soils overlie dolomitic bedrock, of Silurian age.

EXPLORATION

The exploration consisted of three drive sample borings, made between July 14 and 22, 1965, and ten drive rod penetration tests, made between July 2 and 8, 1965.

INVESTIGATIONAL FINDINGS








The borings encountered moist, generally dense to very dense gravels, sands, silts, and boulders. The borings were terminated at 46 and 51-foot depths, elevations 945 and 941 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test.










Rod soundings encountered gradual, occasionally erratic, increase in penetration resistance with increase in depth and were terminated upon encounter with medium-high and high resistance to penetration at 21 to 41-foot depths, elevations 970 to 945 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings.

Free water was encountered in the majority of the rod sounding holes between elevations 986 and 983 feet.




No test penetrated to bedrock surface.

LEGEND

-  Auger Boring Location - Plan View.
-  Press and / or Drive Sample and / or Core Boring Location - Plan View.
-  Drive Rod Penetration Resistance Sounding Location - Plan View.
-  Capped Pile
-  Footing
-  Footing on Pile
-  TR Top of Rock

-  Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
-  X/Y
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

-  Coal
-  Weathered Indurated Clay
-  Indurated Clay
-  Weathered Shale
-  Shale
-  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.

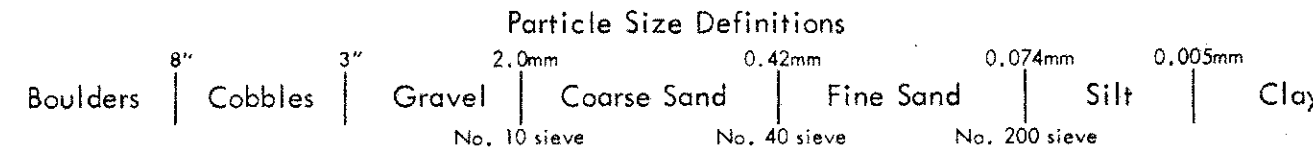
Drive Sample Borings - Drive-Press Sample Borings

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.



NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO.

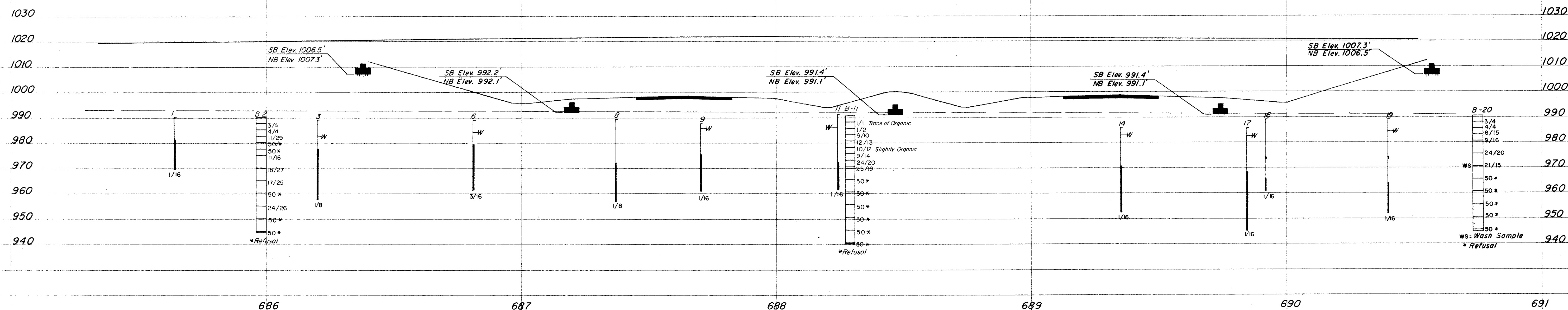
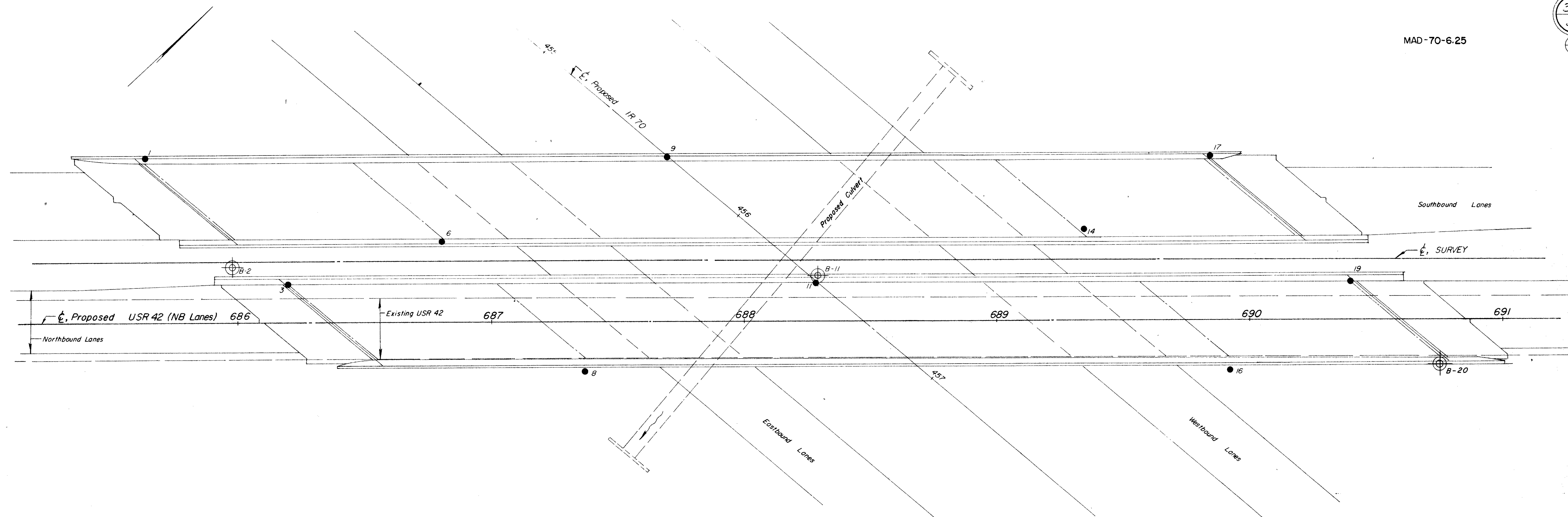
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-IR 70-0862 & 0863
IR 70 UNDER USR 42
SEC. MAD-70-6.25

CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 8/25/65
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0001:000

MAD-70-6.25

32
38
2
5



OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION BRIDGE NO. MAD-IR 70-0862 & 0863 IR 70 UNDER USR 42 SEC. MAD-70-6.25			
PLAN AND PROFILE			
DRAWN BY R.L.F.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 8/25/65

LOG OF BORING
Date Started 7-16-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 7-22-65 Casing Length 45' Dia. 3 1/2"
Boring No. B-2 Station & Offset 685+98, 22' Lt. (RD) (Rear Abutment) Surface Elev. 990.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
990.2	0														
987.7	2 3/4				Brown Gravelly Silt	1	16	5	8	47	24	24	7	17	
985.2	4 4/4				Brownish-Gray Clayey Silt	2	0	4	12	56	28	25	7	18	
982.7	8 11/29				Brown silty Sandy Gravel	3	49	17	9	15	10	21	5	16	
980.2	12 50/*				Brown Sandy Silt	4	12	2	14	46	26	25	5	14	
977.7	14 50* (0.3)				Gray Silty Sandy Gravel	5	44	28	14	-14	-	NP	NP	17	
975.2	16 11/16				Gray Gravelly Sandy Silt	6	15	11	15	32	27	22	6	12	
	18														
970.2	20 15/27				Gray Silty Gravelly Sand	7	27	33	15	14	11	NP	NP	21	
	22														
965.2	24 17/25				Gray Gravelly Sandy Silt	8	20	12	12	35	21	21	7	11	
	26														
960.2	30 50* (0.0)				No Sample Recovered - Boulders (Driller's Description)										
	32														
955.2	34 24/26				Gray Sandy Gravel	9	66	23	5	-6	-	NP	NP	11	
	36														
950.2	40 50* (0.8)				Gray Sandy Gravel	10	56	28	6	-10	-	NP	NP	7	
	42														
945.2	44				BOTTOM OF BORING										
944.5	46 50* (0.7)				Gray Sandy Gravel	11	65	20	6	6	3	NP	NP	8	

LOG OF BORING
Date Started 7-21-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 7-22-65 Casing Length 35' Dia. 3 1/2"
Boring No. B-11 Station & Offset 688+29, 18' Lt. (Center Pier) Surface Elev. 990.9'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
990.9	0														
988.4	2 1/1				Brown and Gray Clay, Trace of Organic	1	0	1	3	54	42	45	22	19	
985.9	4 1/2				Mottled Brown Silty Clay	2	0	0	3	58	39	39	17	19	
983.4	6 9/10				Brownish-Gray Sandy Silt	3	0	11	31	46	12	NP	NP	20	
980.9	8 12/13				Brownish-Gray Gravelly Sandy Silt	4	21	4	22	42	11	NP	NP	19	
978.4	10 12														
975.9	12 10/12				Gray Sandy Silt, Slightly Organic	5	0	3	17	60	20	NP	NP	19	
	14 9/14				Gray Gravelly Sandy Silt	6	15	1	15	55	14	NP	NP	21	
973.4	16 24/20				Gray Gravelly Sandy Silt	7	22	17	13	30	18	20	6	14	
970.9	18 25/19				Grayish-Brown Silty Sandy Gravel	8	38	21	11	18	12	22	7	12	
	20														
965.9	22 50* (0.8)				Gray Gravelly Sandy Silt	9	19	9	11	36	25	23	7	13	
	24														
960.9	26 50* (0.6)				Gray Gravelly Sandy Silt	10	19	9	15	33	24	23	9	11	
	28														
955.9	30 50* (0.6)				Gray Sandy Silt	11	12	12	19	30	27	22	6	11	
	32														
950.9	34 50* (0.7)				Gray Sandy Silt	12	8	10	16	40	26	26	10	10	
	36														
945.9	38 50* (0.3)				Gray Sandy Silt	13	0	44	12	27	17	19	3	9	
	40														
940.9	42 50* (0.4)				Gray Sandy Gravelly Silt	14	28	16	6	30	20	24	8	11	
940.5	44				BOTTOM OF BORING										
	46														
	48														
	50														
					*Refusal										

LOG OF BORING
Date Started 7-14-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____
Date Completed 7-16-65 Casing Length 45' Dia. 3 1/2"
Boring No. B-20 Station & Offset 690+75, 18' Rt. (RD) (Forward Abutment) Surface Elev. 990.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics								SHTL Class.
							% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	
990.7	0														
988.2	2 3/4				Mottled Brown and Gray Clay	1	0	3	2	41	54	54	36	7	
985.7	4 4/4				Mottled Brownish-Gray Clay	2	0	1	2	51	46	46	28	19	
983.2	6 8/15				Brown Sandy Gravel	3	60	17	18	-5	-	NP	NP	13	
980.7	8 9/16				Brown Silty Sandy Gravel	4	64	20	3	-13	-	NP	NP	11	
	10														
975.7	12 24/20				Brown Sandy Gravel	5	78	15	3	-4	-	NP	NP	9	
	14														
970.7	16 21/15				Brown and Gray Sand	6	8	82	7	-3	-	NP	NP	21	
	18														
965.7	20 50* (0.6)				Brownish-Gray Silty Sandy Gravel	7	V	I	S	U	A	L	6		
	22														
960.7	24 50* (0.7)				Gray Silty Sandy Gravel	8	40	24	13	-23	-	NP	NP	15	
	26														
955.7	28 50* (0.8)				Gray Silty Sand	9	14	3	61	5	17	NP	NP	17	
	30														
950.7	32 50* (0.7)				Gray Gravelly Sand	10	19	24	52	1	4	NP	NP	8	
	34														
945.7	36 50* (0.7)				Gray Sandy Gravel	11	50	27	16	-7	-	NP	NP	6	
945.5	38				BOTTOM OF BORING										
	40														
	42														
	44														
	46														

Test Location No. 1
Station & Offset 685+64 65' LT
Surface Elev. 990.2 Water Elev. 982.8
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT 12'

Test Location No. 2
Station & Offset 686+20.15' LT
Surface Elev. 989.8 Water Elev. 982.8
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT 12'

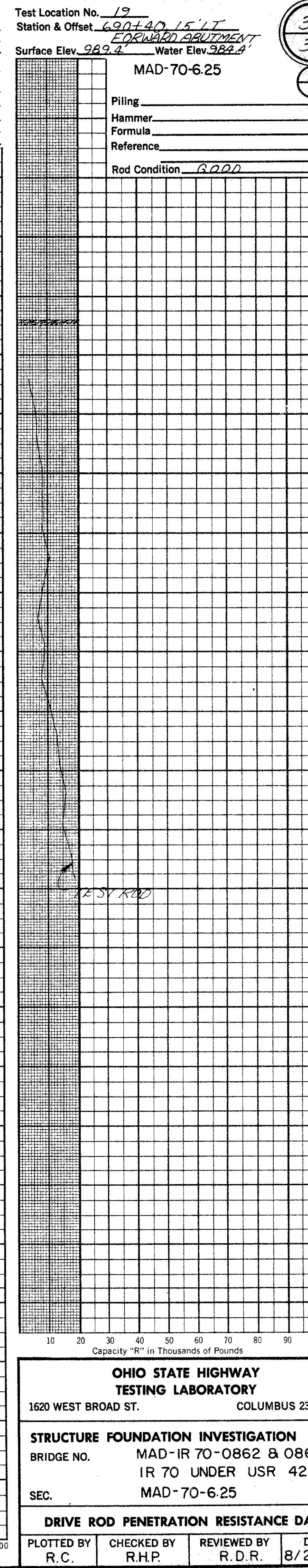
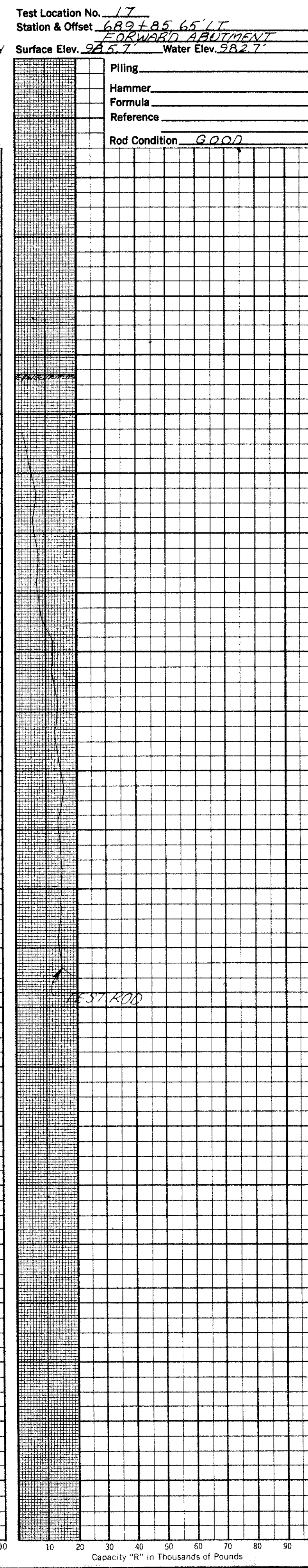
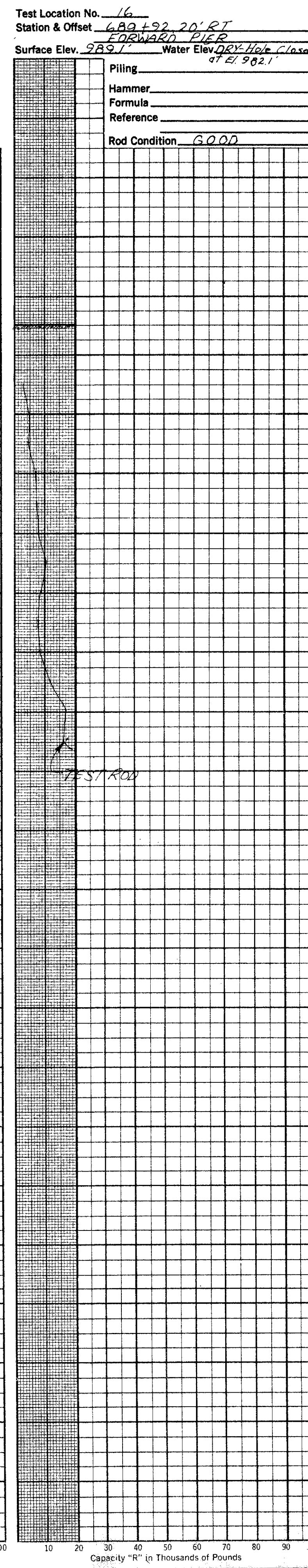
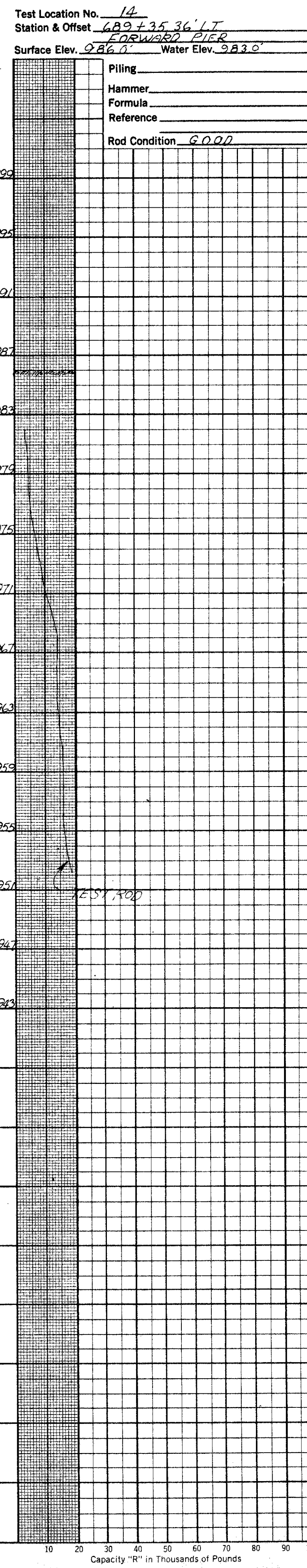
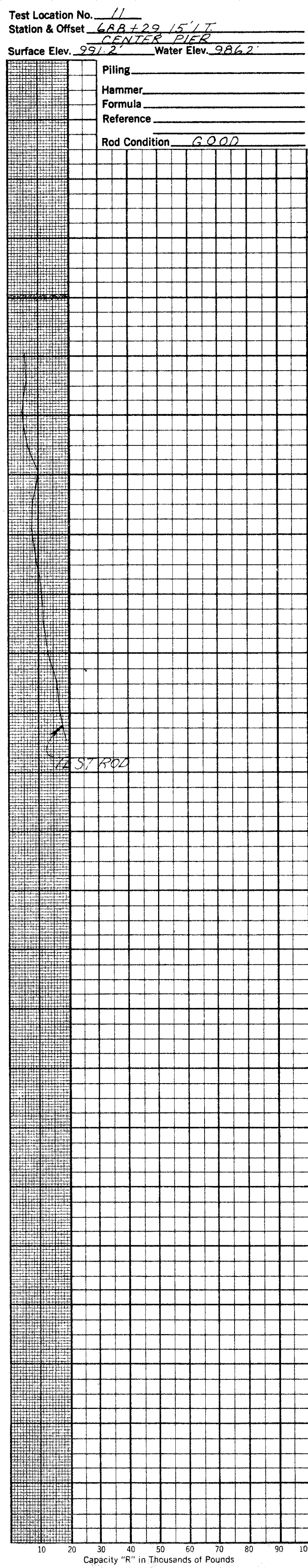
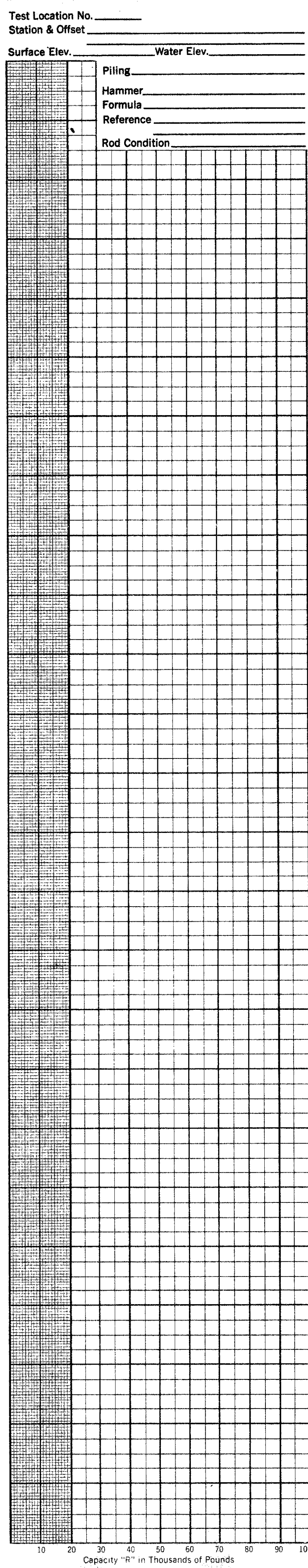
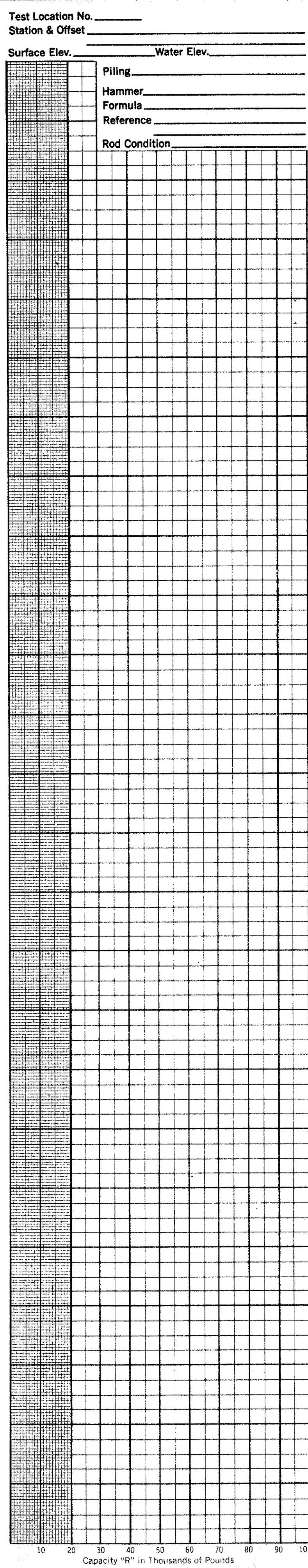
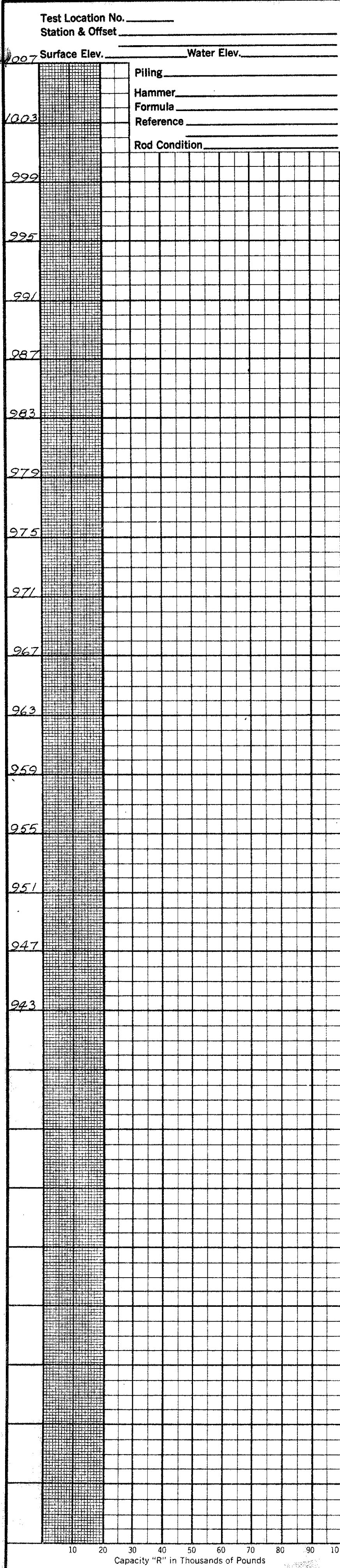
Test Location No. 6
Station & Offset 686+81.32' LT
Surface Elev. 989.3 Water Elev. 984.3
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT 12'

Test Location No. 8
Station & Offset 687+37.20' RT
Surface Elev. 989.8 Water Elev. 984.3
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT 8'

Test Location No. 9
Station & Offset 687+70.65' LT
Surface Elev. 988.0 Water Elev. 986.0
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-1R 70-0862 & 0863
IR 70 UNDER USR 42
SEC. MAD-70-6.25
DRIVE ROD PENETRATION RESISTANCE DATA
PLOTTED BY R.C. CHECKED BY R.H.P. REVIEWED BY R.D.R. DATE 8/25/65

BR1-100



35
38
5
5

**OHIO STATE HIGHWAY
TESTING LABORATORY**
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-IR 70-0862 & 0863
IR 70 UNDER USR 42
SEC. MAD-70-6.25

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY R.C.	CHECKED BY R.H.P.	REVIEWED BY R.D.R.	DATE 8/25/65
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0001-100

MADISON COUNTY
MAD-70-6-25

36
38
1
3

GEOLOGY OF THE SITE

The structure site is located in the glaciated Mississippi Valley Plain, in an area where moderately deep glacial-derived soils overlie dolomitic bedrock, of Silurian age.

EXPLORATION

The exploration consisted of two drive sample borings, made between July 26, and 27, 1965, and five drive rod penetration tests, made between July 7 and 14, 1965.

INVESTIGATIONAL FINDINGS

The borings encountered moist, generally dense to very dense gravels, sands, silts, and boulders. The borings were terminated at 36 and 41-foot depths, elevation 944 and 937 feet, after penetrating in excess of 30 feet of material requiring in excess of 30 blows per foot in the standard penetration test.

Rod soundings encountered gradual, occasionally erratic, increase in penetration resistance with increase in depth and were terminated upon encounter with high resistance and refusal to penetration at 27 to 37-foot depths, elevation 951 to 940 feet, considered to be in very dense gravels, sands, and silts, as revealed by the borings. Rod sounding number 4, was cased to proposed footing elevation as shown on the site plan.

No free water was encountered in any of the rod sounding holes.

No test penetrated to bedrock surface.

- ⊕ Auger Boring Location - Plan View.
- ⊕ Press and / or Drive Sample and / or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- ▬ Capped Pile
- ▬ Footing
- ▬ Footing on Pile
- TR Top of Rock

LEGEND

- ⊥ Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y 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

- Coal
- ▨ Weathered Indurated Clay
- ▨ Indurated Clay
- ▨ Weathered Shale
- ▨ Shale
- ▨ Weathered Sandstone
- ▨ Sandstone
- ▨ Leached Dolomite
- ▨ Dolomite
- ▨ Leached Limestone
- ▨ Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value "R" against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

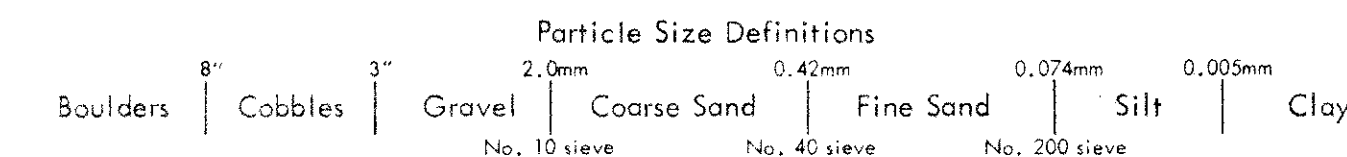
Drive Sample Borings - Drive-Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and / or 5-foot depth intervals, driven by means of a 140 - pound drop-hammer with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing, if performed, appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.



LOG OF BORING

Date Started 7-26-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____

Date Completed 7-28-65 Casing Length 35' Dia. 3 1/2" Surface Elev. 979.8'

Boring No. B-2 Station & Offset 560+10, 25' 14" (Rear Abutment)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
979.8	0														
977.3	2														
974.8	4	8/12			Brown Silty Gravelly Sand	1	30	22	9	21	18	28	9	14	
972.3	6	9/10			Brownish-Gray Sandy Gravelly Silt	2	27	9	11	31	22	28	10	13	
969.8	8	10/15			Brown Silty Gravelly Sand	3	35	27	10	14	14	20	4	15	
964.8	10	9/16			Brown Sandy Silt	4	0	10	15	40	35	25	9	11	
959.8	16	15/25			Brown Gravel	5	83	7	2	-8		NP	NP	11	
954.8	22	50* (0.6)			Brown Silty Sandy Gravel	6	45	10	11	21	13	22	6	12	
949.8	28	50* (0.4)			Gray Sandy Gravelly Silt	7	27	7	18	32	16	17	3	16	
944.8	30	50* (0.4)			Gray Sandy Gravel	8	61	19	10	7	3	NP	NP	10	
944.8	36	50* (0.8)			Gray Gravelly Sand	9	26	57	7	5	5	NP	NP	12	

*Refusal

LOG OF BORING

Date Started 7-28-65 Sampler Type SS Dia. 1 3/8" Water Elev. _____

Date Completed 7-29-65 Casing Length 35' Dia. 3 1/2" Surface Elev. 977.5'

Boring No. B-8 Station & Offset 564+35, 41' 14" (Forward Pier)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTL Class.
977.5	0														
975.0	2	2/8			Brownish-Gray Sandy Silt	1	12	13	13	32	30	26	9	8	
972.5	4	10/15			Brownish-Gray Sandy Silt	2	12	9	13	37	29	24	8	11	
970.0	6	16/20			Brown Silty Gravelly Sand	3	23	43	10	15	9	NP	NP	13	
967.5	8	16/26			Brown Sandy Gravelly Silt	4	22	9	11	30	28	25	7	12	
965.0	10				No sample recovered - boulders (Driller's Description)										
962.5	12														
960.0	14	19/31			Brown Silty Sandy Gravel	5	67	15	6	-12		NP	NP	9	
957.5	16	17/20			Brown Sandy Gravel	6	60	25	8	-7		NP	NP	11	
952.5	22	18/22			Brownish-Gray Sandy Gravel	7	57	25	9	-9		NP	NP	9	
947.5	28	50* (0.9)			Gray Silty Sandy Gravel	8	58	17	14	-11		NP	NP	9	
942.5	34	50*			Gray Silty Sandy Gravel	9	67	17	5	-11		NP	NP	10	
937.5	40	50*			Gray Sandy Clay	10	11	9	17	33	30	26	11	9	
937.5	40	50*			Gray Sandy Gravelly Silt	11	24	8	13	29	26	22	8	9	

BOTTOM OF BORING

*Refusal

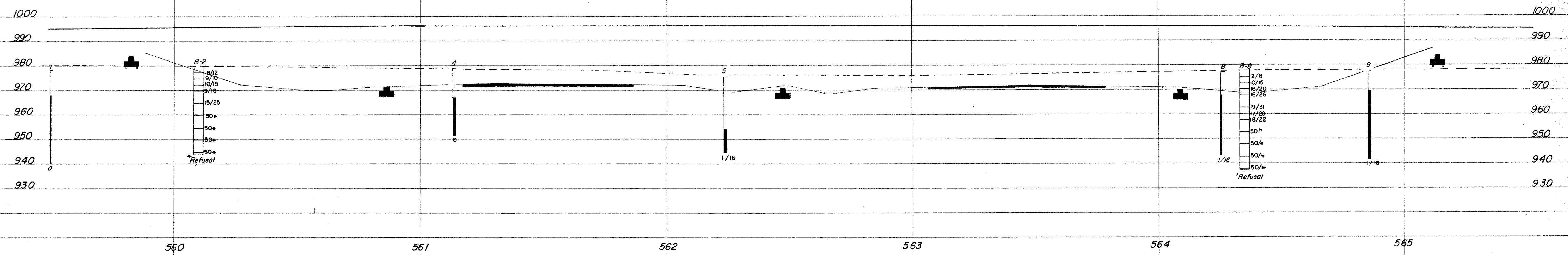
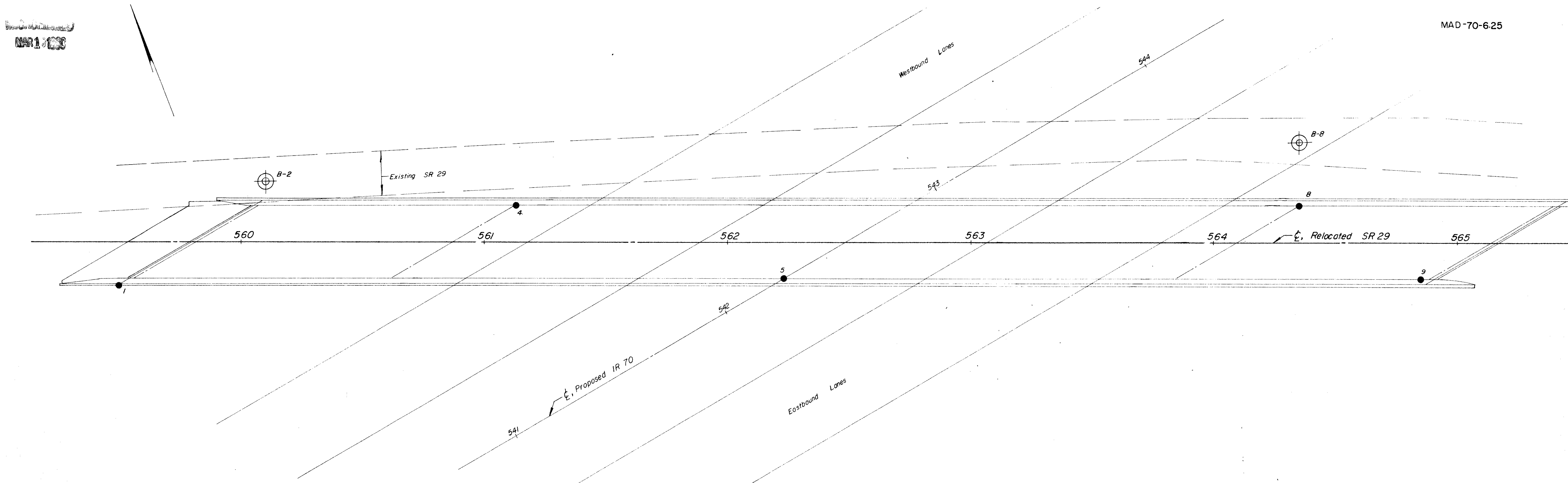
NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO DEPARTMENT OF HIGHWAYS
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-IR 70-1028
IR 70 UNDER SR 29
SEC. MAD-70-6-25

CHECKED BY R.H.P. REVIEWED BY R.D.R. DATE 9/8/

MAD-70-6.25



OHIO DEPARTMENT OF HIGHWAYS TESTING LABORATORY 1620 WEST BROAD STREET, COLUMBUS 23, OHIO			
STRUCTURE FOUNDATION INVESTIGATION			
BRIDGE NO.	MAD-IR 70-1028		
	IR 70 UNDER SR 29		
SEC.	MAD-70-6.25		
PLAN AND PROFILE			
DRAWN BY	CHECKED BY	REVIEWED BY	DATE
RLF	RHP	R.D.R.	9/8/65

SCALE: 1" = 20'

MAR 1 1968

Test Location No. _____ Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

Test Location No. _____ Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

Test Location No. 1 Station & Offset 559+50.18' RT REAR ABUTMENT
Surface Elev. 978.3 Water Elev. DRY-Hole Closed at El. 968.3
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT-16"

Test Location No. 4 Station & Offset 561+13.15' LT REAR PIER
Surface Elev. 979.0 Water Elev. DRY-Hole Closed at El. 963.0
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT-12"

Test Location No. 5 Station & Offset 562+23.15' RT CENTER PIER
Surface Elev. 975.6 Water Elev. DRY-Hole Closed at El. 968.1
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT-12"

Test Location No. 8 Station & Offset 564+35.15' LT FORWARD PIER
Surface Elev. 977.2 Water Elev. DRY-Hole Closed at El. 968.2
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition ROD BENT-16"

Test Location No. 9 Station & Offset 564+85.15' RT FORWARD ABUTMENT
Surface Elev. 977.8 Water Elev. DRY-Hole Closed at El. 963.1
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

MAD-70-6.25

Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. MAD-IR70-1028
IR70 UNDER SR 29
SEC. MAD-70-6.25

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY RC CHECKED BY RHP REVIEWED BY R.D.R.