I-271-6(15)229

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

1/196

SUMMIT COUNTY
SUM-271-0.83

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
SUM-271-0.83
SUMMIT COUNTY
RICHFIELD TOWNSHIP

CONVENTIONAL SIGNS

COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
CENTER LINE
FENCE LINE
POWER POLES
TELEPHONE POLES
GUARD RAIL - EXISTING
GUARD RAIL - PROPOSED
SOD DITCHES
PAVED DITCHES
SEED & MULCH DITCHES
DUMPED ROCK
JUTE MATTING
RIGHT OF WAY WITH LIMITED ACCESS — LA R/W
RIGHT OF WAY WITHOUT LIMITED ACCESS — R/W
EXISTING RIGHT OF WAY
EXISTING STREAMS
CONSTRUCTION LIMIT LINE

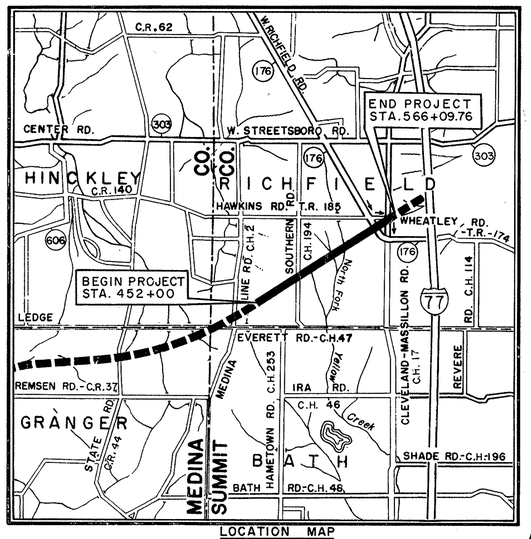
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SHEET 155 NOT USED ; SHEETS NOS. 162 & 164 DELETED FROM PLAN
Sheet No's 13, 184, 185, 186, 187, 188, 189 & 190 revised 10-30-67 C.E.H
Sheet No's. 184S, 185S, 186S, 187S, 188S, 189S & 190S added 10-30-67 C.E.H

LINE DATA

Begin Project — Sta. 452+00
End Project — Sta. 566+09.76
No Deductions
Net Length Of Project — 11,409.76 Lin. Ft. or 2.160 Mi.
Add For Approaches:
C.H. 194 Sta. 34+10 to 43+10 — 900.00
C.H. 17 Sta. 53+20 to 67+41 — 1,421.00
North Approach Sta. 566+09.76 to 573+46 — 736.24
Hawkins Rd. T.R. 185 Sta. 6+48 to 18+90 — 1242.00
Total Length of Work — 15,709.00 Lin. Ft. or 2.975 Mi.



LOCATION MAP

DELIVERY POINT
PENINSULA-B&O. R.R.

AVERAGE HAUL
6.8 MILES

0 1 2 3
SCALE IN MILES

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
OTHER CONTRACTS
DETOUR

SCALES

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

LIMITED ACCESS

THIS IMPROVEMENT 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, AND IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC.

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 NECESSARY 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 THE PLANS AND ESTIMATES.

APPROVED: Clifford M. Kimball
DATE 6-23-66 DIVISION DEPUTY DIRECTOR

APPROVED: C. H. Abbott
DATE 8-30-66 ENGINEER OF BRIDGES

APPROVED: R. D. Rickett
DATE 8-30-66 ENGINEER OF LOCATION & DESIGN

APPROVED: D. E. Shultz
DATE 8-30-66 DEPUTY DIRECTOR, DESIGN & CONSTRUCTION

APPROVED: T. H. Bonsall
DATE 9-12-66 DEPUTY DIRECTOR, RIGHT OF WAY

APPROVED: F. W. Wilson
DATE 9-12-66 DEPUTY DIRECTOR, PLANNING & PROGRAMMING

APPROVED:
DATE FIRST ASSISTANT DIRECTOR

APPROVED: P. E. Mashuta
DATE 9-12-66 DIRECTOR OF HIGHWAYS

PLANS PREPARED BY
J. E. GREINER COMPANY
CONSULTING ENGINEERS -- BALTIMORE, MARYLAND

Revised 7-20-67

Drawing No	Date	STANDARD CONSTRUCTION DRAWINGS							
F-5	10-1-66	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
F-6	10-1-66	BP-1	6-1-65	CB-3A	6-1-65	GR-2A	1-1-67	MC-5	6-1-65
HL-1	11-1-65	BP-2	1-10-67	CB-4	6-1-65	GR-6	6-1-65	SP-53	6-30-61
HL-2	11-1-65	BP-3	1-10-67	CB-5	6-1-65	CB-3	6-1-65	MH-2	6-1-65
HL-3	11-1-65	BP-4	1-10-67	CB-6	6-1-65	HW-3	6-1-65	L-1	6-1-65
MC-6	6-1-65	BP-5	6-1-65	F-2	6-1-65	HW-E	6-1-65	L-2	6-1-65
RRH-2	6-1-65	BP-6	6-1-65	F-3	10-1-66	MC-1	6-1-65	AS-1-54	8-10-65
RRH-3	6-1-65	BP-7	1-1-66	FACI-1	6-1-65	MC-3	5-1-66	FSB-1-62	1-15-63
CB 2-2 HEB	6-1-65	F-4	6-1-65	FACI-2	6-1-65	MC-4	6-1-65	SD-1-65,	11-8-65
F-1	6-1-65	GR-1	1-1-67	MH-1A	8-1-66	MC-7	3-1-66	BR-1-65, Sh. 1	11-24-65

SUPPLEMENTAL SPECIFICATIONS			
NUMBER	DATE	NUMBER	DATE
801	1-1-67	1001	3-21-66
806	1-1-67		
808	1-13-67		
811	1-1-67		
815	1-1-67		
816	8-6-65		
825	1-1-67		
828	1-1-67		

DEPARTMENT OF TRANSPORTATION
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER — DATE

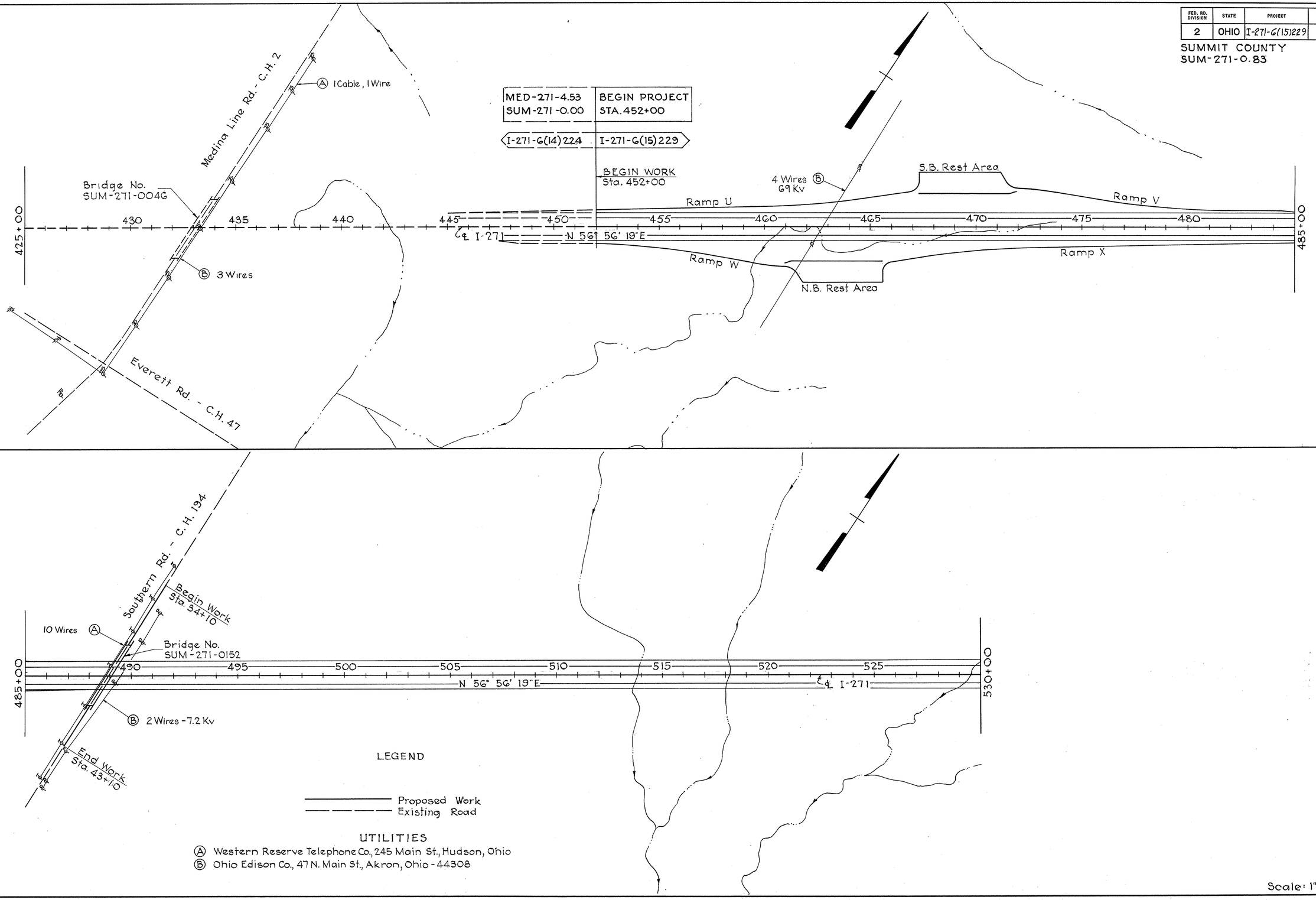
Rev. June 6, 1967
Rev Jan 23, 1967

FILE NO.	SUM-271-0.83
	DATE OF LETTING 19
	CONTRACT NO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

2
196

SUMMIT COUNTY
SUM-271-0.83



LEGEND

Proposed Work
Existing Road

UTILITIES

Ⓐ Western Reserve Telephone Co., 245 Main St., Hudson, Ohio
Ⓑ Ohio Edison Co., 47 N. Main St., Akron, Ohio - 44308

Scale: 1" = 200'

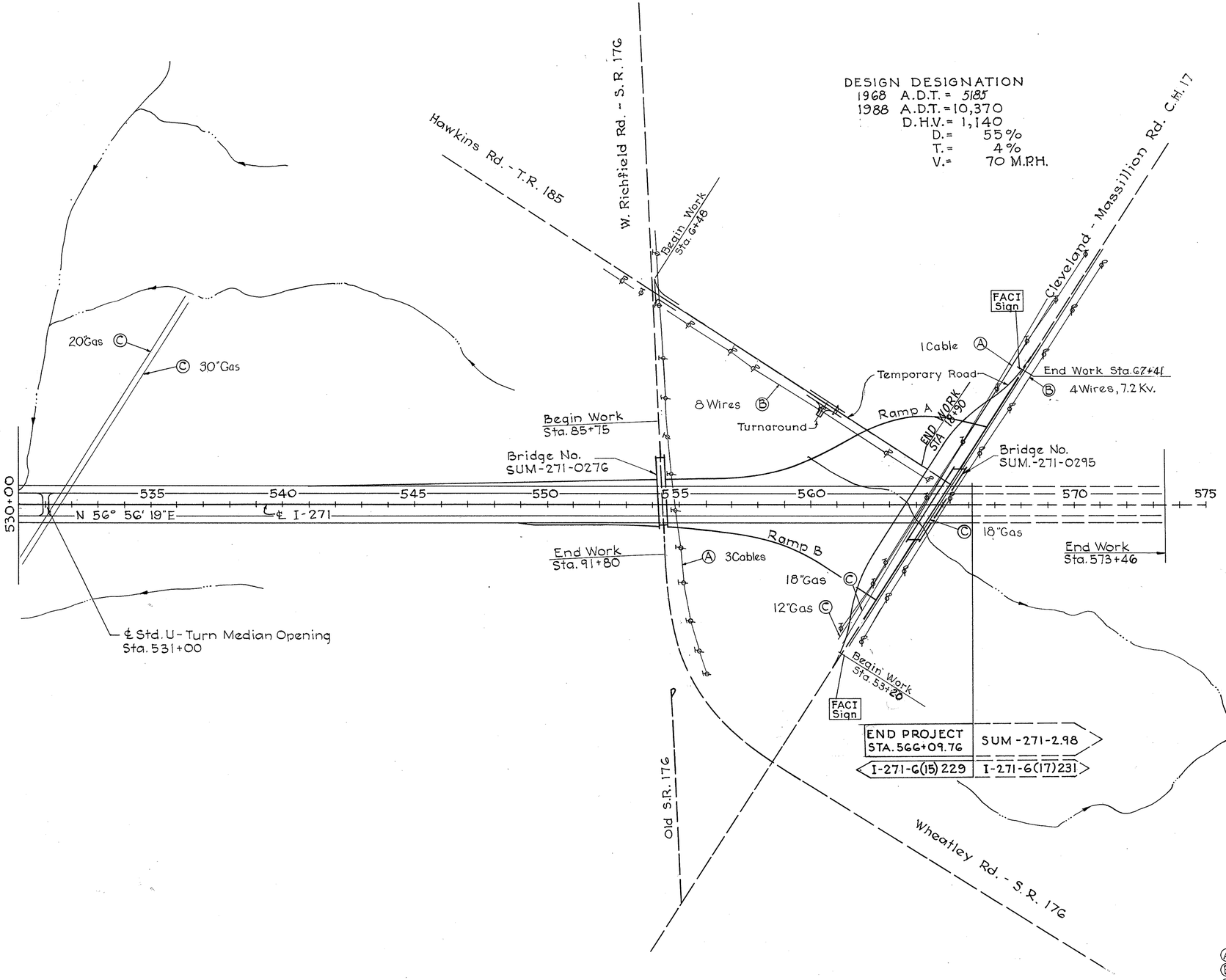
SCHEMATIC LAYOUT PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

3
196

SUMMIT COUNTY
SUM-271-0.83

DESIGN DESIGNATION
1968 A.D.T. = 5185
1988 A.D.T. = 10,370
D.H.V. = 1,140
D. = 55%
T. = 4%
V. = 70 M.P.H.



LEGEND

——— Proposed Work
— — — — Existing Road

UTILITIES

Ⓐ Western Reserve Telephone Co., 245 Main St., Hudson, Ohio.
Ⓑ Ohio Edison Co., 47 N. Main St., Akron, Ohio - 44308
Ⓒ The East Ohio Gas Co., East Ninth at Superior, Cleveland, Ohio - 44101

Scale: 1" = 200'

Limit of Work for C.H. 17

SCHEMATIC LAYOUT PLAN

TYPICAL SECTIONS

84' DEPRESSED MEDIAN

TYPE 451

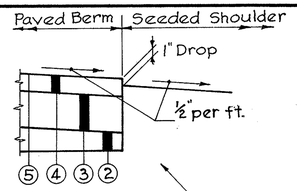
Scale: 3/16" = 1'-0"

SUMMIT COUNTY
SUM-271-0.83

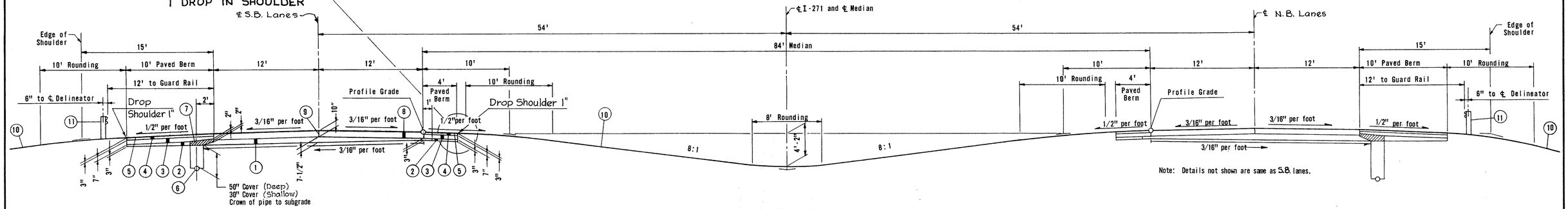
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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CODE TYPE 7221

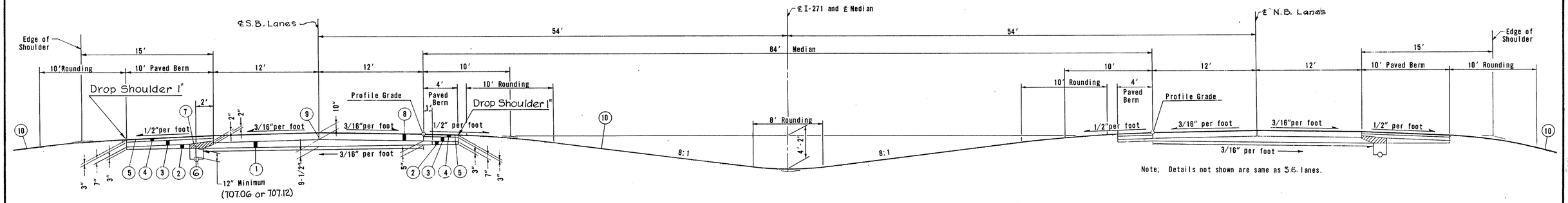


TYPICAL DETAIL
1" DROP IN SHOULDER



NORMAL SECTION

LIMITING STATIONS
Sta. 452+00 to 566+09.76 except
where shown below in rock.



ROCK SECTION

APPROX. LIMITING STATIONS

Sta. 454+00 to 455+50 S.B. Lanes
Sta. 455+50 to 459+50 N.B. & S.B. Lanes
Sta. 471+50 to 491+00 N.B. Lanes
Sta. 550+00 to 559+50 N.B. & S.B. Lanes

NOTES:
All slopes shown are typical unless otherwise shown on cross sections.
For slope treatment of side slopes, see sheet No.5

Sequence of operations: (1) install pipe underdrain on outside shoulder. Installation of underdrain in median may be deferred until 451 is placed, (2) place subbase out to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present, (3) construct 451, (4) remove subbase and any contaminated backfill over drain and replace with No.8 aggregate as shown by (7), (5) complete shoulder construction.

LEGEND

① Item 310 Subbase, Grading A or B, as per plan (See note on Sheet 10)
② Item 310 Subbase Regular Grading
③ Item 304 7" (unless otherwise shown) Aggregate Base
④ Item 301 3" Bituminous Aggregate Base (See Note in Proposal) 702.01(85-100) or 702.09, RT-12
⑤ Item 409 Seal Coat using 0.008 Cu. Yds. No. 8 Cover Aggregate per Sq. Yd. and 0.30 Gal. Bituminous Material per Sq. Yd. (See note in Proposal)
⑥ Item 605 6" Pipe Underdrain
⑦ Item Special Drainage Connection using No. 8 Aggregate (See note in Proposal)
⑧ Item 451 10" Reinforced Portland Cement Concrete Pavement
⑨ Standard Longitudinal Joint
⑩ Item 659 Seeding and Mulching (See General Notes)
⑪ Item 606 Guard Rail, Type 4

Rev. Jan-23, 1967

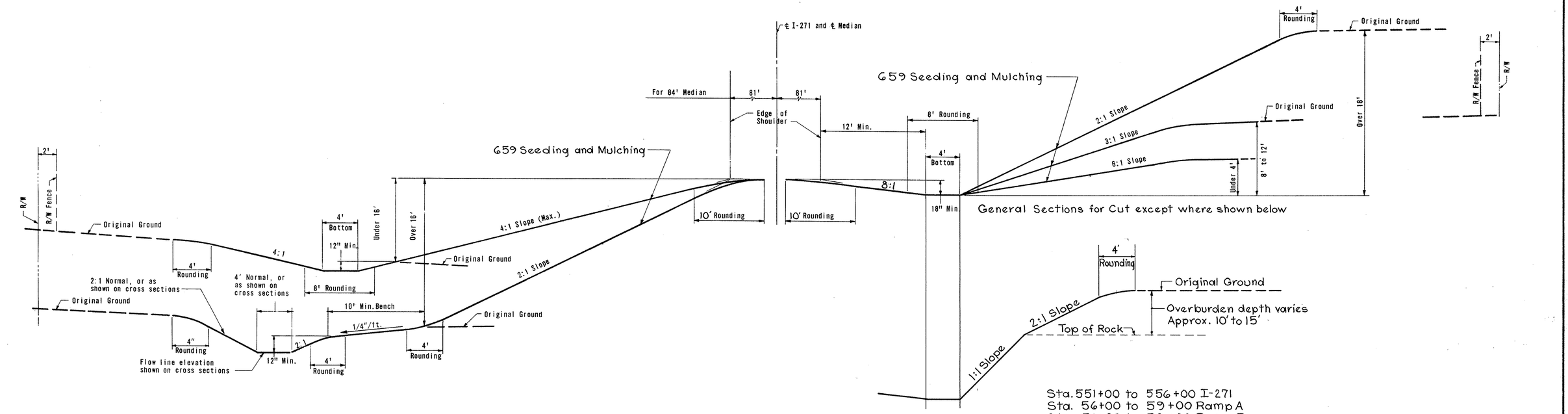
TYPICAL SECTIONS

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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196

Scale : 3/16" = 1'-0"

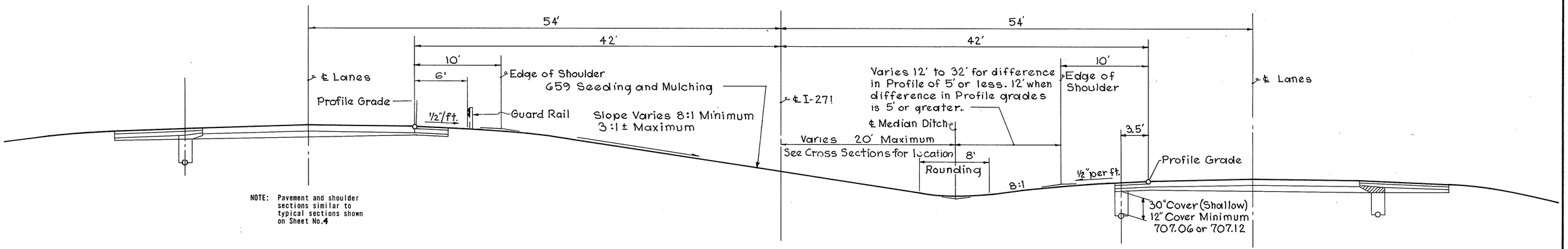


Sta. 551+00 to 556+00 I-271
Sta. 56+00 to 59+00 Ramp A
Sta. 56+00 to 59+00 Ramp B

CUT SECTIONS

FILL SECTION

SLOPE TREATMENT



NOTE: Pavement and shoulder sections similar to typical sections shown on Sheet No. 4

MEDIAN TREATMENT
FOR
VERTICALLY SEPARATED ROADWAYS
(84' Median)

SUMMIT COUNTY
SUM-271-0.83

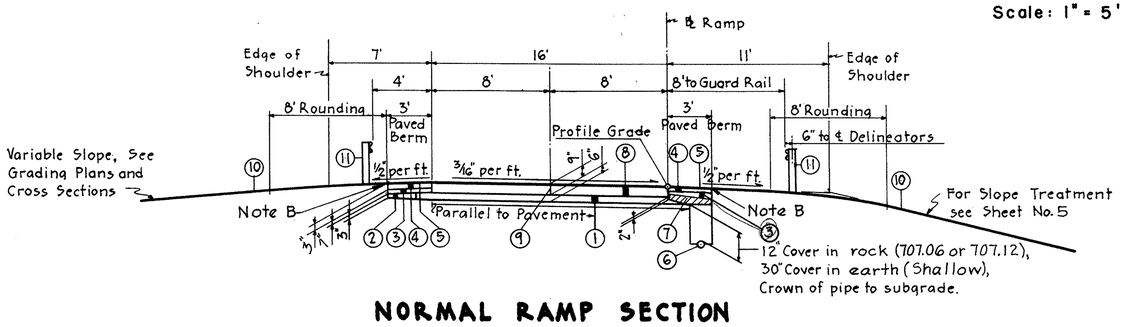
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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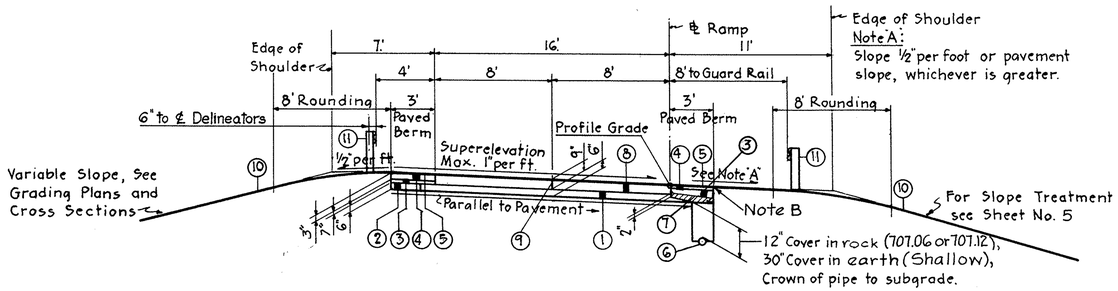
TYPICAL SECTIONS

TYPE 451

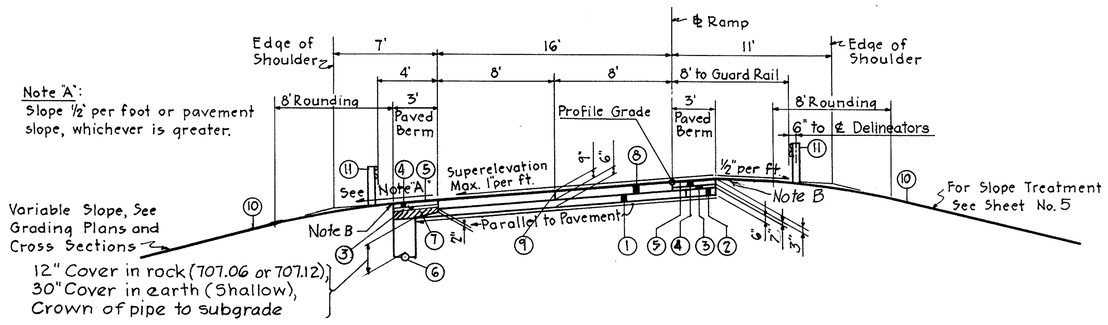
Scale: 1" = 5'



NORMAL RAMP SECTION



SUPERELEVATED RIGHT RAMP SECTION



SUPERELEVATED LEFT RAMP SECTION

Note B : Drop shoulder 1"
See detail on Sheet No. 4

LEGEND

① Item 310 Subbase, Grading A or B (See note on Sheet 10)
② Item 310 Subbase Regular Grading
③ Item 304 7" Aggregate Base (Unless Otherwise Shown)
④ Item 301 3" Bituminous Aggregate Base. (See Note in Proposal)
702.01(85-100) or 702.09 RT-12
⑤ Item 409 Seal Coat using 0.008 cu. yd. No.8 cover aggregate per sq. yd. and 0.30 gal. bituminous material per sq. yd. (See note in proposal).
⑥ Item 605 6" Pipe Underdrain (707.06 or 707.12 in rock subgrade)
⑦ Item Special Drainage connection, using No. 8 aggregate (See note in proposal).
⑧ Item 451 9" Reinforced Portland Cement Concrete Pavement.
Standard Longitudinal Joint.
⑨
⑩ Item 659 Seeding and Mulching (See General Note.)
⑪ Item 606 Guard Rail, Type 4

Seaeuence of Operations
1. Install pipe underdroin. Installation of shallow underdrain in embankment areas may be deferred until 451 is placed.
2. Place subbase out to outside edge of underdrain or to one foot beyond edge of pavement where no underdrain is present.
3. Construct 451.
4. Remove subbase and any contaminated backfill over underdrain and replace with No. 8 aggregate as shown by ⑦.
5. Complete shoulder construction.

Notes.
Sections are shown looking in the direction of traffic.
All slopes shown are typical unless shown otherwise on cross section.

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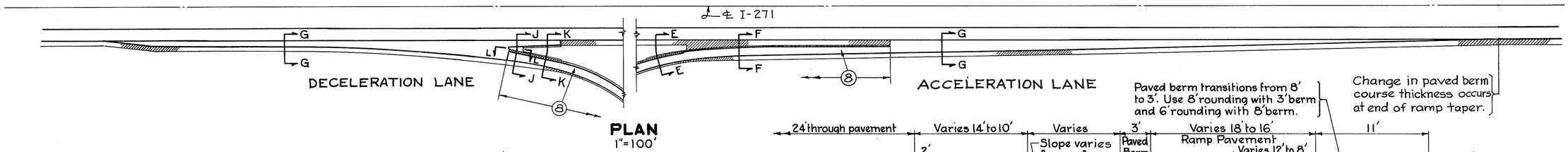
TYPICAL SECTIONS - ONE WAY RAMPS

TYPICAL SECTIONS
TYPE 451

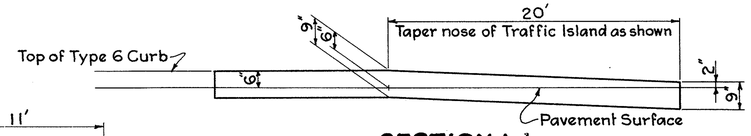
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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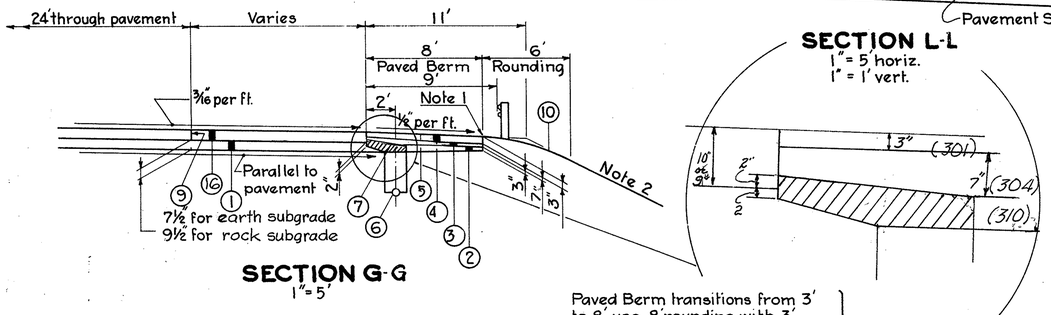
SUMMIT COUNTY
SUM-271-0.83



PLAN
1"=100'

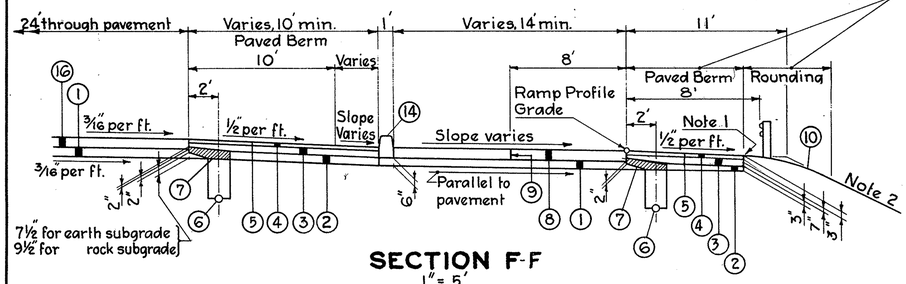


SECTION L-L
1" = 5' horiz.
1" = 1' vert.

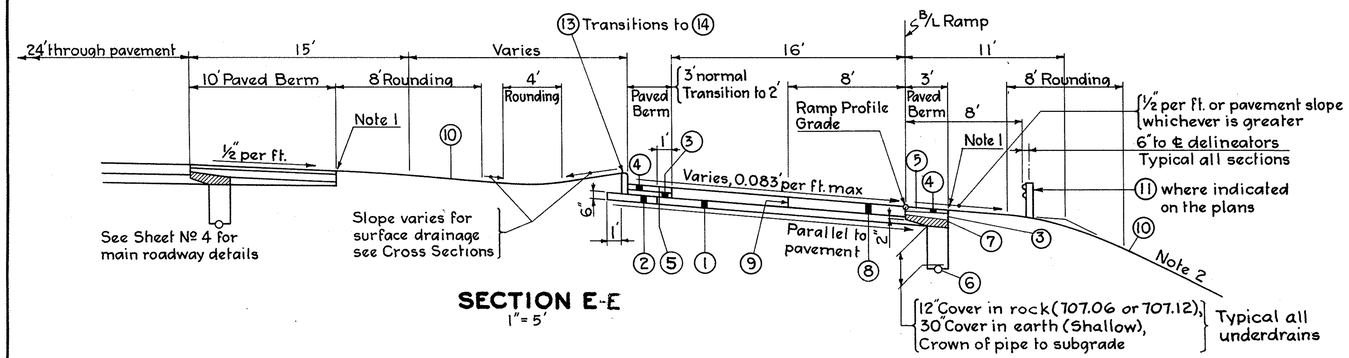


SECTION G-G
1"=5'

Paved Berm transitions from 3' to 8', use 8' rounding with 3' berm, and 6' rounding with 8' berm



SECTION F-F
1"=5'

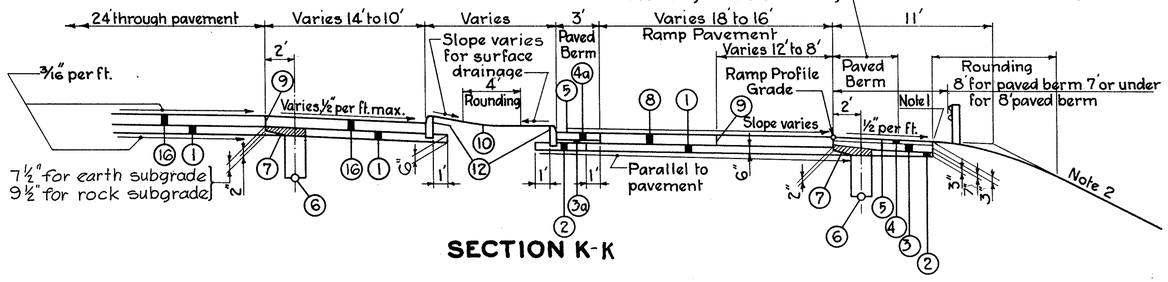


SECTION E-E
1"=5'

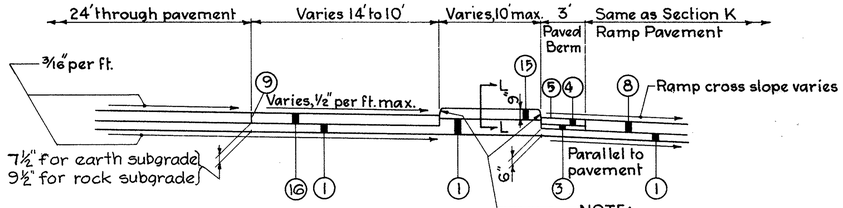
* Construction of concrete traffic island shall conform to the Concrete Median detailed on Std. Dwg MC-6

Paved berm transitions from 8' to 3'. Use 8' rounding with 3' berm and 6' rounding with 8' berm.

Change in paved berm course thickness occurs at end of ramp taper.



SECTION K-K



SECTION J-J
1"=5'

(1)	Item 310	Subbase, Grading A or B (See note on Sheet 10)
(2)	Item 310	Subbase Regular Grading
(3)	Item 304	7" (unless otherwise shown) Aggregate Base
(4)	Item 301	3" Bituminous Aggregate Base } 702.01 (85-100) or 702.09, RT 12. (See note in Proposal)
(5)	Item 409	Seal Coat using 0.008 cu. yds. No 8 Cover Aggregate per sq. yd. and 0.30 gal. Bituminous Material per sq. yd. (see note in Proposal)
(6)	Item 605	6" Pipe Underdrain
(7)	Item Special	Drainage Connection using No 8 aggregate (see note in Proposal)
(8)	Item 451	9" Reinforced Portland Cement Concrete Pavement
(9)		Standard Longitudinal Joint
(10)	Item 659	Seeding and Mulching (See General Note)
(11)	Item 606	Guard Rail, Type 4
(12)	Item 609	Curb, Type 6
(13)	Item 609	Curb, Type 7
(14)	Item 609	Curb, Type 8
* (15)	Item 612	Concrete Traffic Island
(16)	Item 451	10" Reinforced Portland Cement Concrete Pavement

NOTES
1 Drop earth shoulder 1" below surface of all paved berms, unless otherwise shown (See Sh #4)
2 For side slopes see Sheet No 5 and cross sections
3 See large scale detail drawings for transition details of the various roadway elements
4 See Sheet No 6 for sequence of operations

Rev. Jan 23, 1967

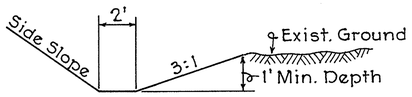
TYPICAL SECTIONS-RAMP TERMINALS

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

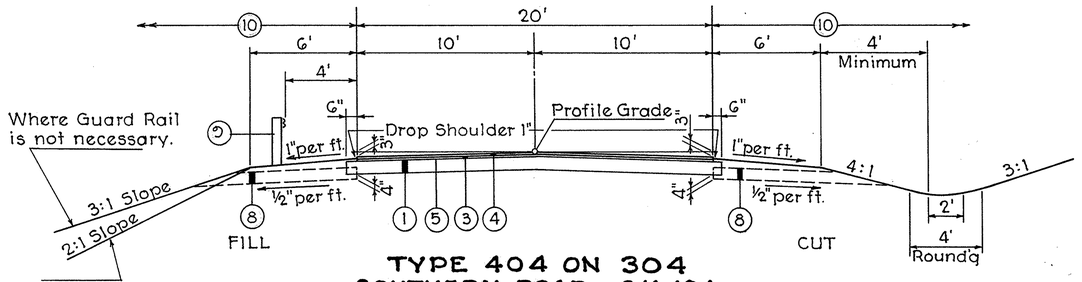
8
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SUMMIT COUNTY
SUM-271-0.83



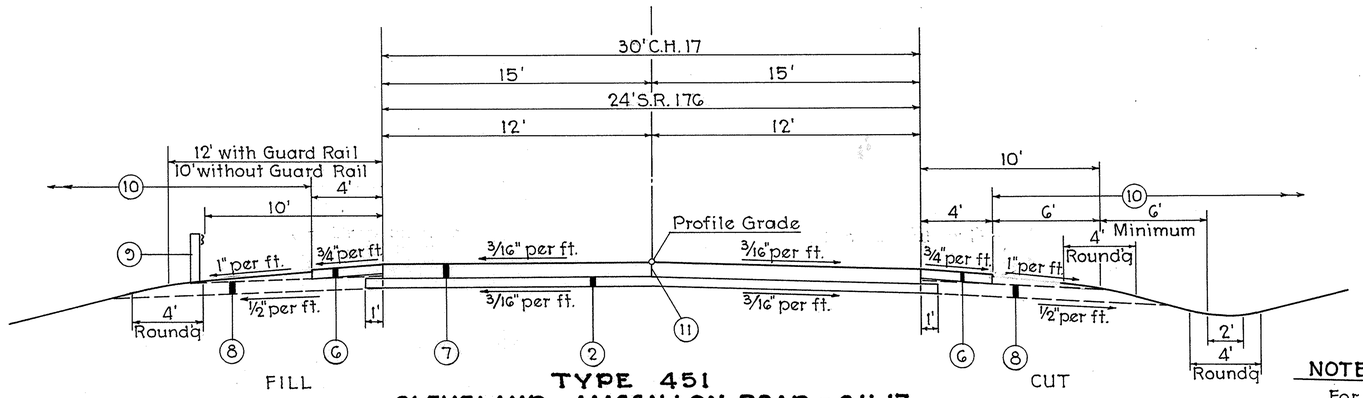
DETAIL
TOE OF FILL DITCH
FOR C.H.194

Scale 1/4" = 1'-0"



TYPE 404 ON 304
SOUTHERN ROAD - C.H. 194

Sta. 34+10 to 37+09.05 (Begin Approach Slab) Length of Work = 299.05
Sta. 40+96.43 (End Approach Slab) to 43+00 Length of Work = 203.57'
Total Length of Work = 502.62



TYPE 451
CLEVELAND - MASSILLON ROAD - C.H. 17

Sta. 55+25 to 58+77.27 (Begin Approach Slab) Length of Work = 352.27'
Sta. 62+63.13 (End Approach Slab) to 65+25 Length of Work = 261.87'
Total Length of Work = 614.14'

RICHFIELD ROAD - S.R. 176

Sta. 86+50 to 86+85.85 (Begin Approach Slab) Length of Work = 35.85'
Sta. 90+88.35 (End Approach Slab) to 91+27 Length of Work = 38.65'
Total Length of Work = 74.50'

LEGEND

(1)	Item 304	8" Aggregate Base
(2)	Item 310	6" Subbase, Grading A or B, as per plan *
(3)	Item 403	1" Asphalt Concrete (85-100)
(4)	Item 404	1" Asphalt Concrete (85-100)
(5)	Item 408	Bituminous Prime Coat 702.09 RT-2 or RT-3, applied at the rate of 0.40 Gal. per Sq. Yd.
(6)	Item 411	6" Stabilized Crushed Aggregate
(7)	Item 451	9" Reinforced Portland Cement Concrete Pavement
(8)	Item 605	Aggregate Drains
(9)	Item 606	Guard Rail, Type 4
(10)	Item 659	Seeding and Mulching (See General Notes)
(11)		Standard Longitudinal Joint

* (See General Notes)

NOTES

For details of shoulder slopes and ditches not shown see Standard Drawing MC-1.

For C.H. 194:
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. Aggregate drains shall be placed at the low point of each sag vertical curve.

For C.H. 17 and S.R. 176:
Aggregate drains shall be placed at the transverse joints.

For typical section of existing side roads see pertinent line sheets.

TYPICAL SECTIONS - INTERSECTING HIGHWAYS

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GENERAL NOTES

DESIGN SPEED: The geometrics for this project have been planned for a design speed of 70 miles per hour.

ELEVATION DATUM: All elevations are based on U.S.G.S. datum.

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 constuction of this project. The Contractor shall also provide and maintain sanitary provisions as per 107.06. All the above is included in the Lump sum price bid for Field Office.

SANITARY FLOW INTO HIGHWAY DRAINAGE SYSTEMS: This plan makes no provision for connecting, nor shall the Engineer or Contractor connect, any existing or new drainage into the highway drainage system when such drains carry flow from any plumbing fixtures including floor drains and sink drains or drains from livestock lots or barns or polluted water of any kind. Existing pipe carrying flow which comes within the category outlined above shall be plugged with class E concrete at the right-of-way line. Payment for said plugging shall be included in the unit price bid for Item 203 Excavation.

CONSTRUCTION LAYOUT STAKES: See note in Proposal describing the work included in this lump sum item.

TEMPORARY CONSTRUCTION: The Contractor's attention is directed to the fact that at the beginning and end of this contract it may be necessary to provide temporary drainage ditches, underdrain outlets and other temporary construction until such items on adjacent contracts are constructed. Payment for the above will be included in the pertinent items affected.

The Contractor is futher advised that embankments will be constructed from Sta. 452+00 to Sta. 454+00 by the Contractor on the MED-271-4.53, SUM-271-0.00 project while construction work on this project is in progress. The Contractor on this project will schedule his construction operations in a manner which will result in a minimum of interference to the Contractor on the adjacent project.

No additional payment will be allowed for this inconvenience.

ITEM 651 TOPSOIL, STOCKPILED

The material to be stockpiled for placement under Item 652 on this project shall be obtained under Items 651, 661 & 662 from areas within the limits of the proposed right-of-way.

Provisions of this separate 651 item shall, in no way, be construed as a waiver of the provisions of 201.04 and sod and incidental topsoil removed elsewhere on this project shall be salvaged and used as described in Item 203.04 (c) with payment therefor included in the unit price bid for 203 Excavation Not Including Embankment Construction.

BIG 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 Street, Columbus, Ohio 43215.

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

LOCATION AND SIZE OF PIPES: The location, type, depth and size of all existing pipes are shown as near exact as the available information will permit. The State will not be responsible for any variations found during construction.

CONNECTIONS TO EXISTING PIPE: At places where the plans provide for proposed drainage pipe to be connected to existing pipes, 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.

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 makes no guarantees as to their accuracy or completeness.

EXPANSION AND CONTRACTION JOINTS: Although specific locations of certain expansion and contraction joints have been detailed on this plan, no waiver of the specifications is intended and the maximum distance between contraction joints and the location of expansion joints in all cases shall be in accordance with Standard Drawing BP-4.

COOPERATION - TRAFFIC CONTROL DEVICES: A separate Traffic-Control-Device Contractor may be required to install or erect Traffic-Control-Devices within contract work limits prior to completion of work by the Contractor.

The Contractor shall cooperate with the separate Contractor to arrange a suitable work schedule, subject to the approval of the Engineer, to permit the separate contractor to work and operate necessary equipment within work limits to carry out the provisions of his contract. The Engineer shall notify the Contractor a minimum of thirty (30) days prior to any scheduled work by the separate Contractor.

Each Contractor shall be held responsible for any damage by him, or his agents, to the work performed by the other Contractor.

Compensation for the above cooperation shall be incidental to the various pay items included within this construction project.

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 and stumps 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 inch	1,300	30
30 inch	11	1
48 inch	—	1
60 inch	—	—

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.

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GENERAL NOTES

601 PAVED GUTTERS

The provisions of 203.13 are hereby expanded to the extent that the subgrade under 601 Paved Gutters shall be compacted to a depth of 6 inches below the surface of the subgrade and to the full width of the paved gutter. No waiver of the specifications is intended and for paved gutter placed contiguously with the paved portion of the roadway, the six-inch compaction shall apply beyond the limits of normal subgrade preparation.

The cost of compacting subgrade to a depth of six inches shall be included in the pertinent unit price bid for 203.

ROUNDING OF CORNERS ON CROSS-SECTIONS: The rounded corners, shown on Standard Drawing MC-1 apply to all cross sections unless otherwise shown on the typical sections.

SEEDING AND MULCHING: Quantities for seeding are calculated for the soil areas defined as follows:

Interstate Highway - between the right-of-way lines and within the work limits for areas outside the right-of-way lines covered by work aggrement or slope easement.

S. R. 176 - between lines ten feet outside of the work limits, or to the right-of-way lines if such lines are less than ten feet from the work limits.

Other Highways - between the work limits.

ITEM 203 PROOF ROLLING, AS PER PLAN: 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.

SPRING DRAINS: Reference is made to the detailed drawing on Sheet No. 154 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 50 L.F.
Item 605 - Aggregate Drains for Springs, as per plan 12 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.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS: The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following locations:

1. C.H. 17 Sta. 53+68, Rt.
2. C.H. 17 Sta. 66+78, Lt.

Sign details shall be as specified on Standard Drawing FACI-1, N-55(1)-120(2), modified by replacing the word "Commerce" with "Transportation" and the signs shall be erected in accordance with Standard Drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

FARM DRAINS: All farm drains which are encountered during construction shall be provided with unobstructed outlets under the direction of the Engineer. Existing collectors which are located below the roadway ditch elevations and which cross the roadway shall be replaced within the right-of-way limits by 603 Conduit, Type B with Class B Bedding, and one size larger than exist. 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 Conduit, Type F. 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 Conduit, Type E 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 quantites have been included in the general summary for the work noted above:

601 Dumped Rock Channel Protection		20 Cu.Yd
603 Conduit, Type B with Class B Bedding	10"	300 Lin.Ft.
603 Conduit, Type E	6"	100 Lin.Ft.
	8"	100 Lin.Ft.
	10"	100 Lin.Ft.
603 Conduit, Type F	6"	20 Lin.Ft.
	8"	10 Lin.Ft.
	10"	10 Lin.Ft.

All necessary Pipe Specials shall be included for payment in the pertinent conduit item.

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

EROSION CONTROL AT HEADWALLS: An eighteen (18) inch wide strip of sod shall be placed along the back of each headwall to prevent erosion.

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. No such quantities shall be ordered until approved by the Engineer. Materials to be used as directed by the Engineer shall not be delivered until requested by the Engineer.

CENTERLINE REFERENCE MONUMENTS: Monuments shall be constructed of Class "C" concrete poured in a circular hole eight (8) inches in diameter and forty-four (44) inches in depth. Top of concrete shall be finished at a depth of two (2) inches below ground level and the upper six (6) inch portion of the concrete shall be formed. A one-half (½) inch Steel Rod six (6) inches long shall be embedded in the wet concrete as directed by the Engineer to mark the centerline and station. For locations see Sheet No. 183.

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.

EROSION CONTROL AT BRIDGES: Special Berm & Slope Protection shall be provided at ends of bridges where required by the plans in accordance with the details shown on *Standard Drawing* MC-7. Cost of all work necessary to complete the item shall be included in the unit price bid per square yard for "Item 660, Sodding for Special Berm and Slope Protection, as per plan."

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GENERAL NOTES

TRAFFIC MAINTENANCE

1. MINIMUM PROVISIONS FOR THE MAINTENANCE OF TRAFFIC ON PUBLIC HIGHWAYS AFFECTED BY THIS PROJECT SHALL BE AS FOLLOWS:

a. C.H.194 (SOUTHERN ROAD) C.H.194 MAY BE CLOSED TO THRU TRAFFIC FOR A PERIOD NOT TO EXCEED 120 CALENDAR DAYS.

b. SR 176 (WEST RICHFIELD ROAD): * SEE NOTE BELOW.

c. C.H.17 (CLEVELAND-MASSILLON ROAD): TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EITHER THE EXISTING PAVEMENT, THE PROPOSED PAVEMENT, OR A TEMPORARY ROAD USING CLASS A PAVEMENT.

d. T.R.185 (HAWKINS ROAD): TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES BY USE OF EITHER THE EXISTING ROAD IMPROVED WITH CLASS A TEMPORARY PAVEMENT OR THE TEMPORARY ROAD CONSTRUCTED FOR C.H. 17 OR UNTIL SR 176 IS OPEN TO TRAFFIC.

2. TRAFFIC COMPACTED SURFACE, TYPE A OR B, AND WATER OR CALCIUM CHLORIDE SHALL BE APPLIED ON TEMPORARY ROADWAYS FOR THE MAINTENANCE OF LOCAL TRAFFIC AS DIRECTED, AND IN AMOUNTS REQUESTED BY THE ENGINEER.

ESTIMATED QUANTITIES ARE AS FOLLOWS:

ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE A OR B	200 CU.YD.
ITEM 410 TRAFFIC COMPACTED SURFACE, TYPE C	200 CU.YD.
ITEM 616 CALCIUM CHLORIDE	8 TONS
ITEM 616 WATER	10 M.GAL.

3. THE LIMITS AND DURATION OF USE OF TEMPORARY ROADWAYS SHALL BE HELD TO AN ABSOLUTE MINIMUM, AND IN ALL CASES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

4. BARRICADES AND GATES SHALL BE AS DETAILED ON STANDARD CONSTRUCTION DRAWING NO. MC-3.

5. THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF ITEM 614 ON THIS PROJECT, PERFORM THE FOLLOWING:

PROVIDE, ERECT, AND MAINTAIN STANDARD 48" x 30" SIZE "ROAD CLOSED" SIGNS, SIGN SUPPORTS, AND LIGHTS AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

(a). C.H. 194 (SOUTHERN ROAD): AT THE INTERSECTIONS WITH C.H. 47 (EVERETT ROAD) AND T.R. 185 (HAWKINS ROAD).

(b). S.R. 176 (WEST RICHFIELD ROAD): AT THE INTERSECTIONS WITH C.H. 17 (CLEVELAND-MASSILLON ROAD) AND T.R. 185 (HAWKINS ROAD).

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

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

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

*1.,b.- S.R.176 WILL BE CLOSED DURING CONSTRUCTION. TRAFFIC WILL BE DETOURED ON IMPROVED T.R.185 TO THE TEMPORARY ROAD CONSTRUCTED FOR C.H.17.

ITEM SPECIAL - CLEANING AND DISPOSING OF SEPTIC TANKS:

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

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

WHEN THE SEPTIC TANKS ARE LOCATED ABOVE THE FINISHED PAVEMENT OR GROUND LINES, THEY SHALL BE ENTIRELY REMOVED AND DISPOSED OF IN ACCORDANCE WITH ITEM 202.

WHEN THE TANKS ARE LOCATED BELOW THE FINISHED PAVEMENT OR GROUND LINES, THE TOPS OF THE TANKS SHALL BE REMOVED AND THE WALLS SHALL BE REMOVED TO A DEPTH OF 3 FEET BELOW THE FINISHED SUBGRADE OR GROUND LINES. THE REMOVED MATERIAL SHALL BE DISPOSED OF AS EXPLAINED ABOVE. THE TANKS SHALL BE BACKFILLED WITH SUITABLE SOIL OR GRANULAR MATERIAL IN ACCORDANCE WITH ITEM 208.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER EACH FOR "ITEM SPECIAL - CLEANING AND DISPOSING OF SEPTIC TANKS" WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR CLEANING, REMOVING AND DISPOSING OF EXCESS MATERIALS, BACKFILLING AND FOR LABOR, TOOLS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM INCLUDING INCIDENTAL EXCAVATION.

ITEM SPECIAL - 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 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.

PRIVY VAULTS
Privy vaults shall be cleaned and removed or filled as conditions require and included for payment in the price bid for 203 Excavation.

GUARD RAIL:-

Subsequent to the completion of the plans for this project several modifications to the design and location details of guard rail have become necessary in order to comply with recently inaugurated safety concepts as follows:

TYPE 4-

(1) The post spacing for all Type 4 guard rail shall be at 6'-3" intervals with spacer blocks attached beteen the post 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. 158A. 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 Standard Drawing GR-2A.

(3) Type 4 guard rail terminals approaching existing bridges shall be located in the field so that the face of the rail will be in alignment with the face of the safety curb on the structure, unless otherwise detailed on the plans. Rail at exit end of existing structures shall be located so that the face of the rail will be in alignment with the bridge parapet, unless otherwise detailed on the plans.

(4) Type 4 guard rail located on two-lane, two directional highway 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. 158A. Exceptions to this will occur where the median guard rail consists of a combination of Type 4 and barrier design as shown on Standard Drawing GR-5A and GR-5B.

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.

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GENERAL SUMMARY

Item	Sheet Number 9	11	16	17	19	20	21	23	24	25	26	27	29	30	31	82	85	88	89	93	105	139	160	185	15	ITEM	QUANTITIES Y005	7221	Y021	Y022	GRAND TOTAL	UNIT	Description
																																	ROADWAY
201	Lump																									201		Lump			Lump	Lump	Clearing and Grubbing.
201																					Lump					201			Lump		Lump	Lump	Clearing and Grubbing In Rest Areas, as per plan.
202															Lump											202		Lump			Lump	Lump	Existing structures removed.
202																20										202		20			20	Lin. Ft.	Pipe removed 15" and under.
202																	877	1,917	1,417							202		4,211			4,211	Sq. Yd.	Existing Pavement Removed and Disposed Of.
202																		58								202		58			58	Lin. Ft.	Existing Gutter Removed and Disposed Of.
202																		83	83							202		166			166	Sq. Yd.	Existing Wearing Course Removed and Disposed Of.
203																									1,101,850	203		1,096,256	5,594		1,101,850	Cu. Yd.	Excavation, Not including Embankment Construction, as per plan.
203																									875,891	203		859,911	15,980		875,891	Cu. Yd.	Embankment.
203																									100,117	203		84,259	15,858		100,117	Sq. Yd.	Subgrade Preparation.
203																									47	203		39	8		47	Hours	Proof Rolling.
410		200																								410		200			200	Cu. Yd.	Traffic Compacted Surface, Type A or B.
410		200																								410		200			200	Cu. Yd.	Traffic Compacted Surface, Type C.
604																									7	604		7			7	Each	Standard Monument Assembly.
604																									15	604		15			15	Each	Centerline Reference Monument, as per plan.
606				400	37.5	750	900	325	250	1,440	2,000	2,000	1,300	500	350	212.5	250	125	125		100	25				606		10,990	100		11,090	Lin. Ft.	Guard Rail, Type 4, Modified, as per plan
607																								2		607		2			2	Each	12' Gate, Type 47
607																								25,084		607		25,084			25,084	Lin. Ft.	Fence, Type 47.
607																					184					607			184		184	Lin. Ft.	Fence, Type CL.
607																					2					607			2		2	Each	6' Gate, Type CL.
607																					2					607			2		2	Each	3' Gate, Type CL.
608																					5,226					608			5,226		5,226	Sq. Ft.	4" Concrete Walk.
608																					2,295					608			2,295		2,295	Sq. Ft.	7" Concrete Walk.
615																				6,590						615		6,590			6,590	Sq. Yd.	Class A, Temporary Pavement.
615																				Lump						615		Lump			Lump	Lump	Temporary roads, as per plan.
616		8																								616		8			8	Tons	Calcium Chloride.
616		10																								616		10			10	M. Gals.	Water
651																					1,100					651			1,100		1,100	Cu. Yd.	Topsoil Stockpiled
652																					1,063					652			1,063		1,063	Cu. Yd.	Placing Stockpiled Topsoil, as per plan
656																					934					656			934		934	M. Sq. Ft.	Roadside cleanup, as per plan.
659																									384,016	659	384,016				384,016	Sq. Yd.	Seeding and Mulching
659																					116,528					659			116,528		116,528	Sq. Yd.	Seeding and Mulching Rest Areas, as per plan.
659																					10.55				34.77	659	34.77		10.55		45.32	Tons	Commercial Fertilizer (12-12-12)
659																					52.71				173.85	659	173.85		52.71		226.56	Tons	Agricultural liming
660				322	44					144	13	15	802								590					660	1,340		590		1,930	Sq. Yd.	Sodding
660																40	28	120	205							660	393				393	Sq. Yd.	Sodding for Special Berm and Slope Protection, as per plan.
661																					300					661			300		300	Each	Pachysandra terminalis - Japanese Spurge, 2 years from 3" pots.
662																					220					662			220		220	Each	Aronia arbutifolia - Red Chokeberry, 18" to 24". - B & B 10"
662																					8					662			8		8	Each	Taxus media hicks) - Hicks Yew, 24" to 30", B and B 13".
662																					8					662			8		8	Each	Taxus nana compacta - Compact Japanese Yew, 18" to 24", B and B 12".
662																					120					662			120		120	Each	Symphoricarpos chenaulti - Improved Carolberry, 18" to 24". - B & B 10"
662																					540					662			540		540	Each	Ligustrum ibota regalianum - Regal Privet, 18" to 24". B-B-10"
663																					15					663			15		15	Each	Acer rubrum - Red Maple, 3½" to 4", B and B 40".
663																					6					663			6		6	Each	Quercus palustrus - Pin Oak, 3½" to 4", B and B 40".
663																					24					663			24		24	Each	Liquidambar styracifula - Sweet Gum, 1¾" to 2", B and B 24".
664																					14					664			14		14	Each	Fraxinus americana - White Ash, 3" to 4", B and B 40"
664																					5					664			5		5	Each	Pinus sylvestris - Scotch Pine, 4" to 5", B and B 45".
664																					5					664			5		5	Each	Pinus strobus - White Pine, 4" to 5", B and B 45".
664																					5					664			5		5	Each	Picea abies excelsa ~ Norway Spruce, 3" to 4", B and B 40".
666																					Lump					666			Lump		Lump	Lump	Pruning Existing Trees, as per plan.
667				42		416	430		983	750	250	125	125		459						601					667	3,580		601		4,181	Sq. Yd.	Jute Matting.
Special																					Lump					Special			2		2	Each	Cleaning [illegible] Wells.
Special																					2					Special				2	2	Each	Roadside Toilet and Storage Unit
Special																					2					Special				2	2	Each	Pressure Water System
Special																					20					Special				20	20	Each	Picnic Table with concrete slab.
Special																					2					Special				2	2	Each	Sewage Treatment Plant.
Special																					10					Special				10	10	Each	Charcoal Grill and Serving Table.
Special																					2					Special				2	2	Each	Incinerator
Special								1				1														Special		2			2	Each	Cleaning and disposing of Septic Tank.
Special												1														Special		1			1	Each	Drilled Well Abandoned.

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ITEM	SHEET NUMBERS 10	17	19	20	21	23	24	25	26	27	29	30	31	82	88	105	139	15	ITEM	QUANTITIES Y005	7221	Y021	FARM DRAINS	GRAND TOTAL	UNIT	DESCRIPTION
																										DRAINAGE
601	20		4					2	24	111	2					12	20		601	183		12		195	Cu.Yd.	Dumped Rock Channel Protection.
601		162														315			601	162		315		477	Lin.Ft.	Paved Gutter Standard Type 1-4.
601																26			601			26		26	Sq.Yd.	Riprap using 6" Reinforced Concrete Slab, as per plan
602			1.1					0.3	38.0	18.9	0.3					18.9			602		58.6	18.9		77.5	Cu.Yd.	Concrete Masonry.
603									266										603		266			266	Lin.Ft.	72" Conduit, Type A with Class B Bedding 706.02 Class V.
603										424									603		424			424	Lin.Ft.	96" Conduit, Type A with Class B Bedding 707.03 7-5 Gage.
603					55											21			603		55	21		76	Lin.Ft.	6" Conduit, Type B with Class B Bedding.
603	300																		603		300		300	300	Lin.Ft.	10" Conduit, Type B with Class B Bedding.
603							272									474			603		272	474		746	Lin.Ft.	12" Conduit, Type B with Class B Bedding.
603			208					122	90	90	120					110	286		603		916	110		1,026	Lin.Ft.	15" Conduit, Type B with Class B Bedding.
603				204															603		204			204	Lin.Ft.	18" Conduit, Type B with Class B Bedding. 706.08 or 706.02 Class III
603					92								190						603		282			282	Lin.Ft.	21" Conduit, Type B with Class B Bedding.
603				148													222		603		370			370	Lin.Ft.	27" Conduit, Type B with Class B Bedding.
603			316																603		316			316	Lin.Ft.	30" Conduit, Type B with Class B Bedding 706.02 Class III or 706.08.
603																72			603			72		72	Lin.Ft.	36" Conduit, Type B with Class B Bedding.
603																102			603			102		102	Lin.Ft.	54" Conduit, Type B with Class B Bedding.
603									100							114			603		100	114		214	Lin.Ft.	12" Conduit, Type C with Class B Bedding.
603			152		500											38			603		652	38		690	Lin.Ft.	15" Conduit, Type C with Class B Bedding.
603				300	200														603		500			500	Lin.Ft.	24" Conduit, Type C with Class B Bedding.
603				500															603		500			500	Lin.Ft.	27" Conduit, Type C with Class B Bedding.
603													522						603		522			522	Lin.Ft.	30" Conduit, Type C with Class B Bedding.
603			400	100															603		500			500	Lin.Ft.	48" Conduit, Type C with Class B Bedding.
603														68	58				603		126			126	Lin.Ft.	12" Conduit, Type D.
603	100																		603		100			100	Lin.Ft.	6" Conduit, Type E.
603	100																		603		100			100	Lin.Ft.	8" Conduit, Type E.
603	100																		603		100			100	Lin.Ft.	10" Conduit, Type E.
603	20	20	40	40	40			20	30	30	20		60			110	50		603		370	110		480	Lin.Ft.	6" Conduit, Type F.
603	10																		603		10			10	Lin.Ft.	8" Conduit, Type F.
603	10																		603		10			10	Lin.Ft.	10" Conduit, Type F.
603									52	40									603		92			92	Lin.Ft.	15" Conduit, Type F.
603				24															603		24			24	Lin.Ft.	18" Conduit, Type F.
604			1	1															604		2			2	Each	Standard No. 2 Manhole, as per plan.
604							2									2			604		2	2		4	Each	Standard No. 2-2B Catch Basin.
604																4			604			4		4	Each	Standard No. 3 Catch Basin.
604																2			604			2		2	Each	Standard No. 3A Catch Basin.
604			1					1	2	1	1		1				1		604		8			8	Each	Standard No. 4 Catch Basin.
604			1	3	3								3			1	1		604		11	1		12	Each	Standard No. 5 Catch Basin.
604			1													1			604		1	1		2	Each	Standard No. 6 Catch Basin.
604																	1		604		1			1	Each	Standard No. 5 Catch Basin, Modified as per plan.
605		175	1,229	709	2,011	1,917						1,350	780			1,291	1,441		605		9,612	1,291		10,903	Lin. Ft.	6" Pipe Underdrain 707.06 or 707.12.
605		540	1,478	2,240	1,036	828	828	1,418	2,008	2,006	2,282	840				3,582	625		605		16,129	3,582		19,711	Lin. Ft.	6" Shallow Pipe Underdrain.
605							1,100	681					874						605		2,655			2,655	Lin. Ft.	6" Deep Pipe Underdrain.
605	50																		605		50			50	Lin. Ft.	6" Unclassified Pipe Underdrain, 707.06 or 707.12, as per plan.
605			200	100		100							200						605		600			600	Lin. Ft.	6" Unclassified Pipe Underdrain, 707.06 or 707.12.
605							100									100	521		605		621	100		721	Lin. Ft.	6" Unclassified Pipe Underdrain.
605																		466	605		466			466	Lin. Ft.	Aggregate Drains.
605	12																		605		12			12	Lin. Ft.	Aggregate Drains For Springs, as per plan.

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GENERAL SUMMARY

ITEM	SHEET NUMBERS 16	82	85	88	89	105	139	160	15	ITEM	QUANTITIES 7221	Y021	GRAND TOTAL	UNIT	DESCRIPTION
															PAVEMENT
301									3161	301	2802	359	3,161	Cu.Yd.	Bituminous Aggregate Base: 702.01(85-100) or 702.09 RT-12, as per plan
304		36		73	85		19		7274	304	6829	658	7487	Cu.Yd.	Aggregate Base
310									18,801	310	18,801		18,801	Cu.Yd.	Subbase Grading 'A' or 'B', as per plan.
310									3,347	310	3,347		3,347	Cu.Yd.	Subbase
403				3	3					403	6		6	Cu.Yd.	Asphalt Concrete (70-85)
403									31	403	31		31	Cu.Yd.	Asphalt Concrete (85-100)
404				3	3					404	6		6	Cu.Yd.	Asphalt Concrete (70-85)
404		5.0		6.0	7.0		7.0		31.0	404	56		56	Cu.Yd.	Asphalt Concrete (85-100)
408							54		447	408	501		501	Gal.	Bituminous Prime Coat 702.09, RT-2 or RT-3.
409									11,496	409	11,496		11,496	Gal.	Sealcoat Bituminous Material, as per plan.
409									307	409	307		307	Cu.Yd.	Seal Coat Cover Aggregate No. 8.
411									109	411	109		109	Cu.Yd.	Stabilized Crushed Aggregate.
451									69,501	451	69,501		69,501	Sq.Yd.	10" Reinforced Portland Cement Concrete Pavement.
451									19,496	451	19,496		19,496	Sq.Yd.	9" Reinforced Portland Cement Concrete Pavement.
609						1,052	124			609	124	1,052	1,176	Lin.Ft.	Concrete Curb, Standard Type 6.
609						3,362	79			609	79	3,362	3,441	Lin.Ft.	Concrete Curb, Standard Type 7.
609						1,032	467			609	467	1,032	1,499	Lin.Ft.	Concrete Curb, Standard Type 8.
611		133	171	123	123					611	550		550	Sq.Yd.	Reinforced Concrete Approach Slabs (t=13").
612						50	25			612	25	50	75	Sq.Yd.	Concrete Traffic Island.
Special									1,889	Special	1,889		1,889	Cu.Yd.	Drainage Connection Using No. 8 Aggregate.
															BUILDING REMOVALS
202															
202															
202										202	Lump		Lump	Lump	Removal of One 2 Story Frame Residence - Parcel No. 79 WL.
202										202	Lump		Lump	Lump	Removal of One Frame Barn and One 1 Story Brick Residence ~ Parcel No. 88 WL
															TRAFFIC CONTROL
620	79									620	79		79	Each	Mono-directional delineator, Type A-1, Post Mounted
620	115									620	115		115	Each	Mono-directional delineator, Type C-2, Post Mounted
620	2									620	2		2	Each	Mono-directional delineator, Type C-3, Post Mounted
621	10.62									621	10.62		10.62	Miles	Edge lines
621	0.11									621	0.11		0.11	Miles	4" Lane lines and centerlines
621	1.62									621	1.62		1.62	Miles	6" Lane lines and centerlines
621	2,442									621	2,442		2,442	Lin.Ft.	Channelizing lines
621	Lump									621	Lump		Lump	Lump	Broad transverse stripes
621	Lump									621	Lump		Lump	Lump	Curb and island marking
621	Lump					Lump				621		Lump	Lump	Lump	Parking lot stall marking
816								3.3		816	3.3		3.3	Cu.Yd.	Concrete for Ground Mounted Sign Support Foundation,
816								16.0		816	16.0		16.0	Cu.Yd.	Concrete for Overhead Sign Support Foundation,
815								180		815	180		180	Sq.Ft.	Sign Erection, Ground Mounted Sign Support,
815								713		815	713		713	Sq.Ft.	Sign Erection, Overhead Sign Support, as per plan
816								1		816	1		1	Each	Overhead Sign Support No. 7.4 Design 1, 48' Span.
816								1		816	1		1	Each	Overhead Sign Support No. 7.4 Design 1, 63' Span
816								51		816	51		51	Lin.Ft.	Structural Support, Steel Beam 14 WF 30
															STRUCTURES OVER 20' SPAN
															For Estimated Quantities:
															SUM-271-0152 See Sheet No. 166
															SUM-271-0276 See Sheet No. 172
															SUM-271-0295 See Sheet No. 178
															REST AREA LIGHTING (Type Code Y022)
															For Estimated Quantities: See Sheet No. 137
											Lump		Lump	Lump	Field Office
614										614	Lump		Lump	Lump	Maintaining Traffic
											Lump	Lump	Lump	Lump	Construction Layout Stakes

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Rev. June 6, 1967
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EARTHWORK CU. YDS.

LINE FROM	SHEET TO	EXCAVATION	EMBANKMENT		659 SEEDING AND MULCHING SQ. YD.
445+00	455+00	6,088	2,132		4,121
455+00	465+00	91,520	33,009		31,189
465+00	475+00	35,324	24,510		27,147
475+00	485+00	307,425	0		34,365
485+00	495+00	164,811	167		27,740
495+00	505+00	50,269	3,488		23,634
505+00	515+00	6,440	171,445		32,879
515+00	525+00	2,975	219,910		36,659
525+00	535+00	2,081	304,255		37,953
535+00	546+00	13,241	91,760		31,568
546+00	557+00	196,354	4		26,838
557+00	567+00	112,902	723		21,238
567+00	577+00	12,700			4,716
Extended Sections					
N.B.L. Rest Area		2,217	4,890		1,556
S.B.L. Rest Area		3,377	11,090		3,940
Southern Rd. C.H. 194		465	1,017		1,685
Richfield Rd.S.R. 176		222	49		393
Cleveland - Massillion Rd. C.H. 17		1,104	7,396		4,320
C.H. 17 Interchange					
Ramp A		61,020	46		20,365
Ramp B		31,315	0		11,710
TOTALS		1,101,850	875,891		384,016

203 SUBGRADE PREPARATION:

I-77 - Area of Items 451 and 409 60,852 + 30,456 = 91,308 Sq. Yd.
Deduct areas on rock = -17,150
= 74,158 Sq. Yd.

Rest Areas = 15,858
C.H. 17 Interchange = 4,979
C.H. 17 664.14 Lin. Ft. x 38 Ft. ÷ 9 = 2,804
S.R. 176 126.50 Lin. Ft. x 32 Ft. ÷ 9 = 450
C.H. 194 552.62 Lin. Ft. x 20 Ft. ÷ 9 = 1,228
Hawkins Road Turnaround = 132
U-Turn Median Opening = 508

Total 100,117 Sq. Yd.

203 PROOF ROLLING:

I-77 74,158 Sq. Yd. ÷ 2,000 = 37 hrs.
Rest Areas = 8
C.H. 17 Interchange = 2

Total 47 hrs.

301 BITUMINOUS AGGREGATE BASE:

I-77 17,675.79 Lin. Ft. x (4 + 10) Ft. = 247,461 Sq. Ft.
5,145 Lin. Ft. x 4 Ft. = 20,580

0.25 Ft. x 268,041 Sq. Ft. ÷ 27 = 2,482 CU. Yd.

Rest Areas = 359
C.H. 17 Interchange = 278
U - Turn Median Opening (Sh. 105 / Sh. 139) 508 Sq. Yd. x 3/36 Yd. = 42

Total 3161 CU. Yd.

304 AGGREGATE BASE:

I-77 Normal Section 15,536.36
Rock Section 2,139.43
17,675.79 Lin. Ft. x 7.90 Sq. Ft. ÷ 27 = 5,172 CU. Yd.
Adjacent to ramp terminals 5,145 L.F. x 2.42 Sq. Ft. ÷ 27 = 842
Rest Area = 658
C.H. 17 Interchange = 209
U - Turn Median Opening = 106
C.H. 194 552.62 Lin. Ft. x 21 Ft. x 0.67 Ft. ÷ 27 = 287

Total 7274 CU. Yd.

310 SUBBASE GRADING "A" or "B" as per plan:

I-77 Normal Sections 15,536.36 Lin.Ft.x 14.40 Sq.Ft. ÷ 27 = 8,286 CU. Yd.
Rock Sections 2,139.43 Lin.Ft.x 18.96 Sq.Ft. ÷ 27 = 1,502
Normal Section adjacent to ramps 2,483.16 L.F.x 12.99 S.F. ÷ 27 = 1,195
Rock Section adjacent to ramps 2,661.57 L.F.x 17.17 S.F. ÷ 27 = 1,693
Rest Areas = 4,017
C.H. 17 Interchange = 1,653
C.H. 17 664.14 Lin. Ft. x 32 Ft. x 0.5 Ft. ÷ 27 = 394
S.R. 176 126.50 Lin. Ft. x 26 Ft. x 0.5 Ft. ÷ 27 = 61

Total 18,801 CU. Yd.

310 SUBBASE:

I-77 Normal Sections 15,536.36 Lin. Ft. x 3.65 Sq. Ft. ÷ 27 = 2,100 CU. Yd.
Rock Sections 2,139.43 Lin. Ft. x 4.41 Sq. Ft. ÷ 27 = 349
Normal Section adjacent to ramps 2,483.16 L.F. x 0.75 S.F. ÷ 27 = 69
Rock Section adjacent to ramps 2,661.57 L.F. x 0.93 S.F. ÷ 27 = 92
Rest Areas = 413
C.H. 17 Interchange = 276
U - Turn Median Opening = 48

Total 3,347 CU. Yd.

403 ASPHALT CONCRETE (85-100)

C.H. 194 502.62 Lin. Ft. x 20 Ft. x 1/12 Ft. ÷ 27 = 31 CU. Yd.

404 ASPHALT CONCRETE (85-100)

C.H. 194 502.62 Lin. Ft. x 20 Ft. x 1/12 Ft. ÷ 27 = 31 CU. Yd.

408 BITUMINOUS PRIME COAT 702.09. RT-2 OR RT-3

C.H. 194 502.62 Lin. Ft. x 20 Ft. ÷ 9 x 0.40 Gal./Sq.Yd. = 447 Gal.

409 SEAL COAT BITUMINOUS MATERIAL, as per plan:

I-77 268,041 Sq. Ft. x 0.30 Gal./Sq.Yd. ÷ 9 = 8935 Gal.
Rest Area = 1372
C.H. 17 Interchange = 1037
U-Turn Median Opening 508 Sq. Yd. x 0.30 Gal./Sq.Yd. = 152

Total 11,496 Gal.

409 SEAL COAT COVER AGGREGATE NO. 8

I-77 268,041 Sq. Ft. x 0.008 Cu.Yd./Sq.Yd. ÷ 9 = 238 CU. Yd.
Rest Area = 37
C.H. 17 Interchange = 28
U-Turn Median Opening 508 Sq. Yd. x 0.008 Cu.Yd./Sq.Yd. = 4

Total 307 CU. Yd.

411 STABILIZED CRUSHED AGGREGATE

C.H. 17 664.14 Lin. Ft. x 8 Ft. 0.5 Ft. ÷ 27 = 98 CU. Yd.
S.R. 176 76.50 Lin. Ft. x 8 Ft. 0.5 Ft. ÷ 27 = 11

Total 109 CU. Yd.

451 - 10" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT:

I-77 Sta. 452+00.00 to 566+09.76 = 11,409.76 Lin. Ft.
11,409.76 Lin.Ft. x 2 x 24 Ft. ÷ 9 = 60,852 Sq. Yd.
Rest Areas = 5,396
C.H. 17 Interchange = 3,253

Total 69,501 Sq. Yd.

451 - 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

Rest Areas = 13,320 Sq. Yd.
C.H. 17 Interchange = 3,925
C.H. 17 614.14 Lin. Ft. x 30 Ft. ÷ 9 = 2,047
S.R. 176 76.50 Lin. Ft. x 24 Ft. ÷ 9 = 204

Total 19,496 Sq. Yd.

604 MONUMENT ASSEMBLIES:

SHEET No.	NUMBER
183	7

604 CENTERLINE REFERENCE MONUMENTS.

as per plan:

SHEET No.	NUMBER
183	15

605 AGGREGATE DRAINS:

C.R. 194 10 x 8.2 Lin. Ft. = 82
C.H. 17 26 x 12 Lin. Ft. = 312
S.R. 176 6 x 12 Lin. Ft. = 72

Total 466 Lin. Ft.

607 FENCE, TYPE 47:

SHEET No.	QUANTITY
185	25,084

659 COMMERCIAL FERTILIZER (12-12-12)

(384,016 + 1927 + 393) x 9 x 0.01 ÷ 1000 = 34.77 Tons.

659 AGRICULTURAL LIMING

(384,016 + 1927 + 393) x 9 x 0.05 ÷ 1000 = 173.85 Tons.

ITEM SPECIAL DRAINAGE CONNECTION USING NO 8 AGGREGATE

I-77 = 1,292 CU. Yd.
Rest Area = 321
C.H. 17 Interchange = 276

Total 1,889 CU. Yd.

FOR PURPOSE OF QUANTITY ESTIMATES, ROCK AT SUBGRADE ELEVATION IS ESTIMATED TO BE LOCATED AS FOLLOWS:

SOUTHBOUND LANE
Sta. 454 + 00 to Sta. 459 + 50
Sta. 550 + 00 to Sta. 559 + 50

NORTHBOUND LANE
Sta. 455 + 50 to Sta. 459 + 50
Sta. 471 + 50 to Sta. 491 + 00
Sta. 550 + 00 to Sta. 559 + 50

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CALCULATIONS

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271- 6(15)229	

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620 DELINEATORS

STATION FROM	STATION TO	SIDE	INTERVAL (Ft.)	TYPE A-1 POST MOUNTED	TYPE C-2 POST MOUNTED	TYPE C-3 POST MOUNTED
I-271				Mono-directional		
457+00	469+00	Rt.	200	7		
463+00	475+00	Lt.	200	7		
487+00		Lt.		1		
489+00	539+00	Lt.&Rt.	200	52		
541+00	547+00	Rt.	200	4		
559+00	565+00	Lt.&Rt.	200	8		
Ramp W						
52+40	58+40	Rt.	100		7	
59+40	60+70	Rt.	80, 50		3	
Ramp X						
65+90	86+90	Rt.	100		22	
487+90	I-271	Rt.	—			1
Ramp U						
53+00	67+00	Lt.	100		15	
Ramp V						
72+15	73+45	Lt.	50, 80		3	
74+45	84+45		100		11	
Ramp A						
541+10	I-271	Lt.	—			1
42+10	55+10	Lt.	100		14	
56+10	57+40	Lt.	80, 50		3	
57+90		Lt.	—		1	
57+90	58+40	Rt.	50		2	
58+90	60+20	Rt.	50, 80		3	
60+20	61+20	Lt.	100		2	
62+20	63+30	Lt.	70, 40		3	
63+70	66+50	Lt.	40		8	
Ramp B						
49+60	57+60	Rt.	100		9	
57+60	58+90	Lt.	80, 50		3	
59+40	60+40	Lt.	50		3	
60+40	62+40	Rt.	100		3	
TOTALS				79	115	2

621 PAVEMENT MARKINGS

LOC.	SIDE	STATION FROM	STATION TO	EDGE LINES	LANE LINES AND CENTER LINES 4"	LANE LINES AND CENTER LINES 6"	CHANNELIZING LINES	BROAD TRANSVERSE STRIPES	CURB AND ISLAND MARKING
I-77	Center	452+00	566+09.76			8,557			
	Med. Ed.	452+00	566+09.76	22,820					
	Rt.	456+45	552+05	9,560					
	Rt.	557+60	566+09.76	850					
	Lt.	452+00	476+45	2,445					
	Lt.	482+00	566+09.76	8,410					
Ramp W	Rt.	52+00	55+43	343					
	Lt.&Rt.	55+43	60+98	1,110					
	Lt.	50+75	52+00		47				
	Lt.	52+00	53+05		39				
	Lt.	53+05	56+40				575		
	Lt.	53+05	56+43					Lump	Lump
Ramp X	Lt.&Rt.	65+99	71+90	1,182					
	Rt.	71+90	81+20	930					
	Lt.	78+30	81+20		109				
	Lt.	75+90	78+30				240		
	Lt.	69+15	75+90						Lump
Ramp U	Lt.	52+00	61+00	900					
	Lt.&Rt.	61+00	66+91	1,182					
	Rt.	51+70	52+00		11				
	Rt.	52+00	54+60		98				
	Rt.	54+60	57+00				240		
	Rt.	57+00	63+75						Lump
Ramp V	Lt.&Rt.	71+92	77+47	1,110					
	Lt.	77+47	82+00	453					
	Rt.	79+85	82+15		86				
	Rt.	76+50	79+85				575		
	Rt.	76+47	79+85					Lump	Lump
Ramp A	Lt.	47+81	57+07	926					
	Lt.&Rt.	57+07	67+20	2,048					
	Rt.	47+80	50+70		109				
	Rt.	50+70	53+07				237		
	Rt.	53+07	58+55						Lump
Ramp B	Rt.	52+05	56+58	453					
	Lt.&Rt.	56+58	63+10	1,338					
	Lt.	51+90	54+20		86				
	Lt.	54+20	57+55				575		
	Lt.	54+20	57+58					Lump	Lump
TOTALS - Lin. Ft.				56,060	585	8,557	2,442	Lump	Lump
TOTALS - Miles				10.62	0.11	1.62	—	—	—

B.M. # E-43 Elev. 1074.70
Mine Spike in Base of 14" Elm
200' Rt. of I-271 ℄ Sta. 452+10

Ref. P.O.T. Sta. 451+00
18" Ash — 23.06' — 8" Beach Nut Hub — 27.80' — 34.04' — 12" Pig Nut
℄ I-271

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Note: Typical Section of adjoining project same as shown for this project on Sheets No.4 and No.5.

I-271-G(14) 224 — BEGIN PROJECT STA. 452+00

SUM-271-0.00
MED-271-4.53 — I-271-G(15)229

BEGIN WORK
STA. 452+00
S.L.M. = 7.95

L.A.℄R/W

Fence, Type 47, under Contract MED-271-4.53 SUM-271-0.00

Type I-4 paved gutter

15" Conduit Type B ℄ F

4-D

1-D 1-R W=6'

1-D

Ramp U taper

For Ramp U details see Sheets No. 112 ℄ 121.

Begin Sheet, Sta. 445+00

Southbound Lane

W=7.5' 3-D

G

450

N 56°-56'-19"E

℄ I-271

Northbound Lane

End Sheet, Sta. 455+00

53

54 ℄ B Ramp W

2-D 2-R 2-D

For Ramp W details see Sheets No. 106 ℄ 119.

P.O.T. 450+90.00 ℄ I-271, 78' Rt.
= P.C. 50+90.00 ℄ Ramp W

5-D W=8'

L.A.℄R/W

Fence, Type 47, under Contract MED-271-4.53 SUM-271-0.00

(D-1), (G) See Detail Sheet No. 153

See Profile on Next Sheet.


ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Paved Gutter Type I-4 Lin. Ft.	603 6" Conduit Type F Lin. Ft.	6" Shallow Pipe Underdrain Lin. Ft.	605 6" Pipe Underdrain 707.06er/702.02 Lin. Ft.	606 Guard Rail Type 4 Lin. Ft.	660 Sodding Sq. Yd.	667 Jute Matting Sq. Yd.	Bends and Branches 6"
1-D	452+00 to 455+00	Lt.		10	187	175				1
2-D	452+00 to 455+00	Rt.		10	353					1
3-D	452+00 to 452+50	Med.							42	
4-D	452+00 to 453+50	Lt.	162					53		
5-D	452+00 to 455+00	Rt.						269		
1-R	452+00 to 453+00	Lt.					100			
2-R	452+00 to 455+00	Rt.					300			
TOTALS			162	20	540	175	400	322	42	

SEE SHEET NO.

PLAN Sta. 445+00 to 455+00

SUMMIT COUNTY
SUM-271-0.83



PROFILE Sta. 445+00 to 455+00

B.M. E-44 Elev. 1119.61
M.S. in Base of 26" Maple
140' Rt. of I-271 & Sta. 459+50

P.O.T. 457+00.00 & I-271, 91' Lt. =
P.O.T. 57+00.00 B/L Ramp U

Ref. P.O.T. Sta. 461+50
N.C. in 20" Oak Stump — 9.95' — ℄ I-271 — 8.41' — N.C. in 12" Oak
18.38' — N.C. in 24" Oak

Cultivated Field

L A ℄ R/W

For Ramp U Details see S.B.
Roadside Rest Area, Sheets No. 112 & 121

For Location & Quantities see Sheet No. 112

P.O.T. 457+00.00

P.C. 60+00.00

P.T. 64+51.65

L B/L Ramp U

Southbound Lane

N 56° 56' 19" E

460

℄ I-271

Fr. Shed

Northbound Lane

Begin Sheet, Sta. 455+00

End Sheet, Sta. 465+00

B/L Ramp W

P.C. 59+86.05

P.T. 60+98.05

W=4' t=18"

W=8'7

W=4' t=18"

Fence, Type 47 under Contract MED-271-0.83 SUM-271-0.00

℄ L A R/W

P.T. 57+62.00

For Ramp W Details see N.B.
Roadside Rest Area, Sheets No. 106 & 119

See Sheet No. 106

For Cont. of Storm Sewer see Sheet No. 123

N.B. Rest Area
See Sheet No. 106

(G), (D), (B) see Detail Sheet No. 153

NOTE: Elevation of wires of Ohio Edison Co. is 1163'±

N.B.L. 1109.05 1110.53 1112.02 1113.50 1114.99 1116.47 1117.96 1119.44 1120.93 1122.41 1123.96 1125.38 1126.87 1128.35 1129.84 1131.32 1132.81 1134.29 1135.78 1137.26 1138.75

S.B.L. 1107.71 1109.69 1111.68 1113.66 1115.65 1117.63 1119.62 1121.60 1123.59 1125.57 1127.56 1129.54 1131.53 1133.51 1135.50 1137.48 1139.47 1141.45 1143.44 1145.42 1147.41

1140 1130 1120 1110

Sta. 455+00, 3.5' Lt.
Std. C.B. No. 4, Top of Grate = 1103.79
F.L. 15" Conduit Type B = 1101.25 (out)
F.L. 6" Conduit Type F = 1102.00 (in)

Sta. 455+50, 79' Rt.
Std. C.B. No. 6, Top of Grate = 1110.22
F.L. 15" Conduit Type C = 1107.0 (in)
F.L. 15" Conduit Type B = 1106.5 (out)
F.L. 6" Conduit Type F = 1107.18 (in)

Sta. 458+00, 77' Lt.
Std. C.B. No. 6
Top of Grate = 1119.10
F.L. 12" Conduit Type B = 1116.0
F.L. 6" Conduit Type F = 1116.3

Sta. 461+00, 145' Rt.
Std. MH No. 2
Top of Grate = 1122.41
F.L. 48" Conduit Type C = 1113.66 (in)
F.L. 54" Conduit Type B = 1113.06 (out)
F.L. 12" Conduit Type C = 1116.50 (in)
F.L. 30" Conduit Type B = 1116.18 (in)

Sta. 465+00
F.L. 1142.90, 68' Lt.

Sta. 465+00
F.L. 1134.63, 38.5' Rt.
F.L. 1134.24, 68' Rt.

+3.97% S.B.L.

+2.97% N.B.L.

Sta. 57+00 Ramp W, 37' Lt.
Std. C.B. No. 5
Top of Grate = 1112.11
F.L. 15" Conduit Type C = 1109.6

Unclassified U.D.

Sta. 455+24, F.L. 1106.97, 38.5' Rt.
Begin 707.06 or 707.12

Sta. 55+48 Ramp W
F.L. 1106.90, 2.5' Rt.

-1.73%

15" Conduit Type C

707.06 or 707.12

Sta. 455+00
F.L. 1104.22, 88' Lt.
Begin 707.06 or 707.12 - Sta. 55+00 Ramp W, F.L. 1103.97

Sta. 457+00, 93' Lt.
F.L. 1112.09
For Continuation see Profile Ramp U, Sheet No. 113

Sta. 458+00
F.L. 1116.45, 68' Lt.
Begin 707.06 or 707.12

Sta. 459+50
F.L. 1122.40, 68' Lt.
F.L. 1119.62, 38.5' Rt.
F.L. 1119.24, 68' Rt.

Sta. 460+00
F.L. 1123.04, 60' Lt.

Sta. 460+25, End 707.06 or 707.12
F.L. 1120.52, 38.5' Rt.
F.L. 1120.14, 68' Rt.

-2.96%

F.L. 48" Conduit Type C

30" Conduit, F.L. 1119.00 Lt.
F.L. 1116.18 Rt.

455 456 457 458 459 460 461 462 463 464 465

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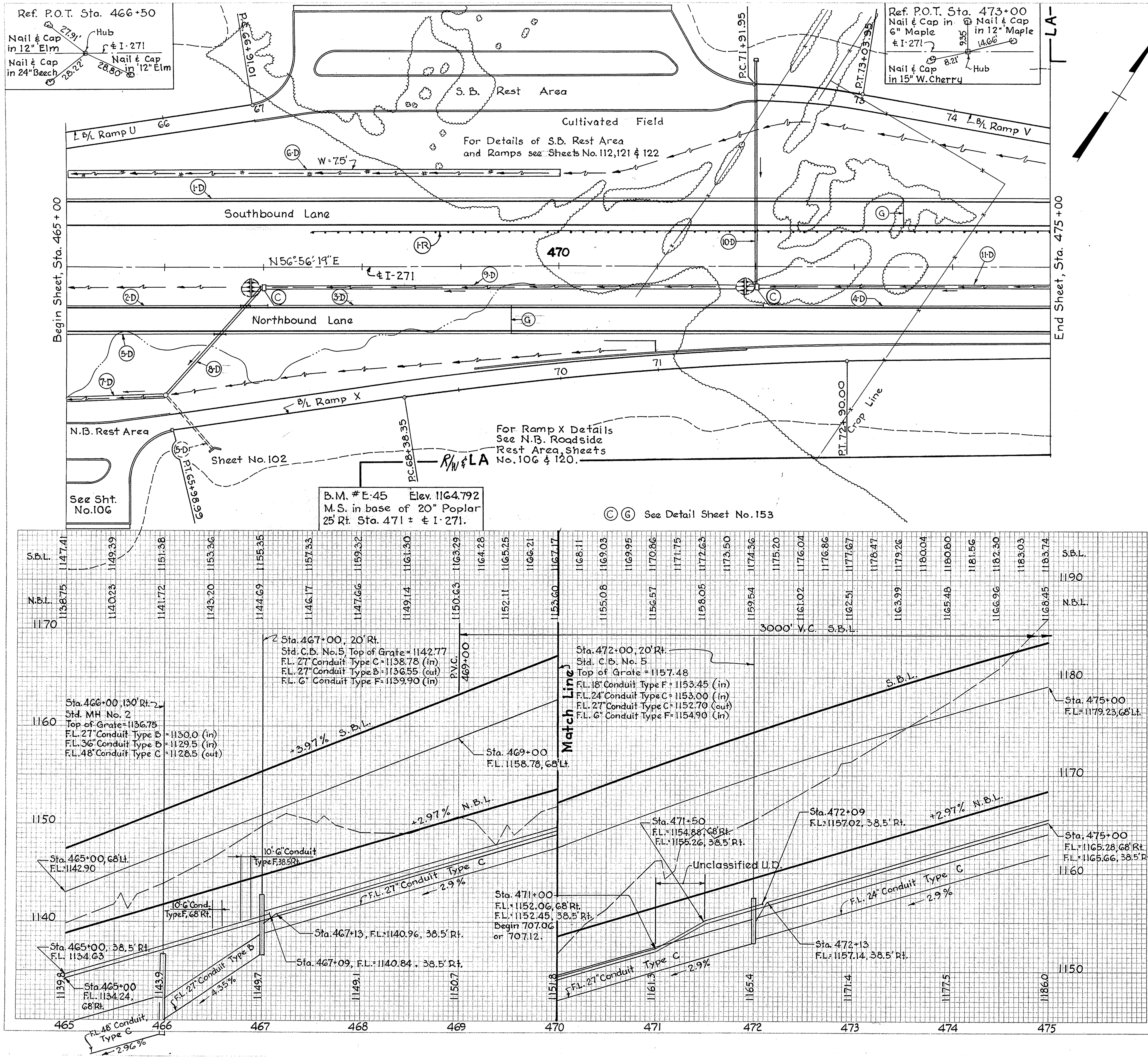
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ESTIMATED QUANTITIES

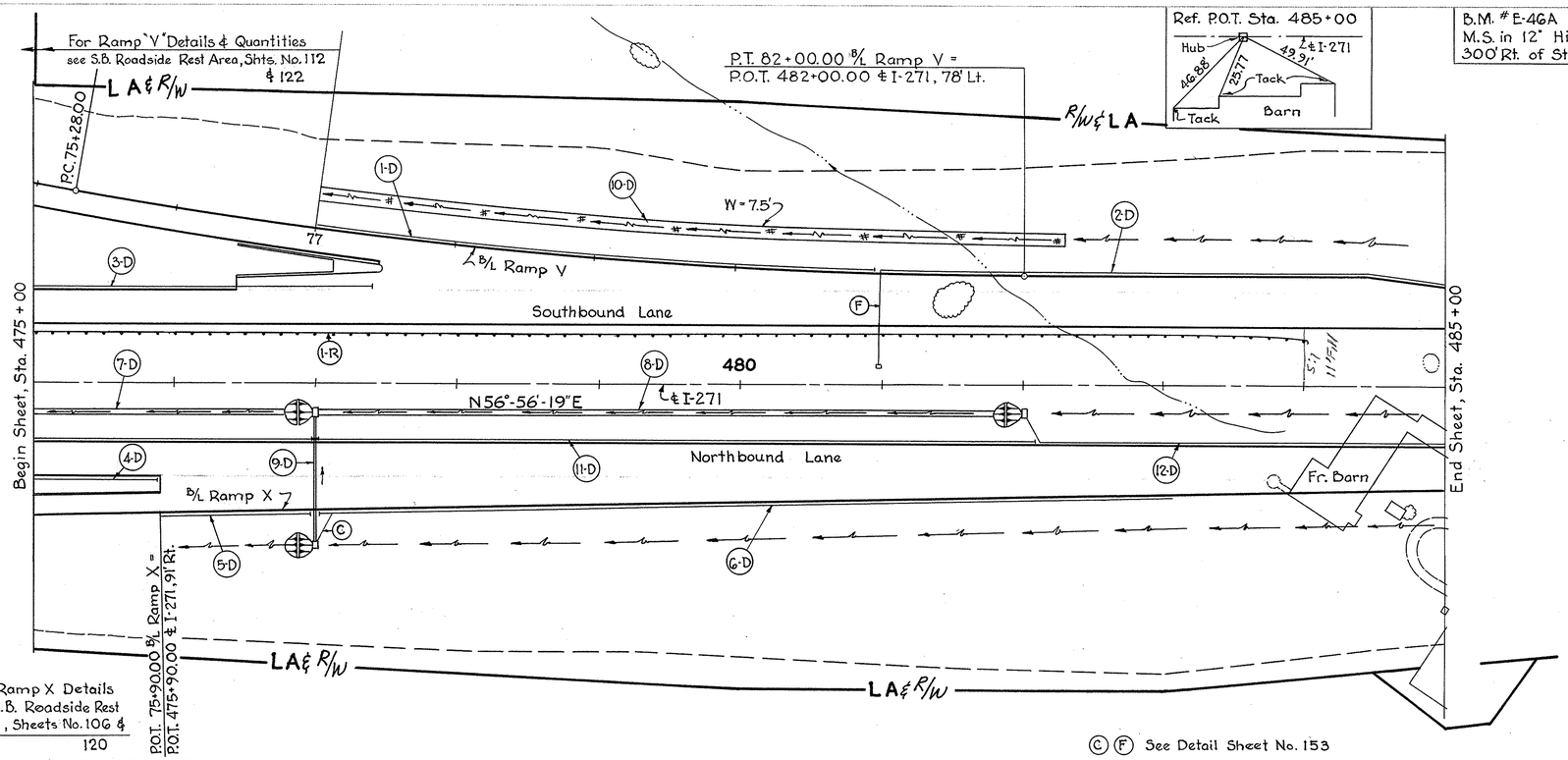
REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection Cu. Yd.	602 Concrete Masonry Cu. Yd.	603 6" Conduit, Type F Lin. Ft.	603 15" Conduit, Type C with C1.B Bedding Lin. Ft.	603 15" Conduit, 30" Conduit, Type B with C1.B Bedding, 706.02 Class III or 706.08 Lin. Ft.	603 48" Conduit Type C with C1.B Bedding 707.06 or 707.12 Lin. Ft.	605 6" Pipe U.D. 707.06 or 707.12 Lin. Ft.	605 6" Shallow Pipe Underdrain Lin. Ft.	605 6" Unclass. Pipe U.D. 707.06 or 707.12 Lin. Ft.	606 Bands and Branches 6" Each	606 Guard Rail Type 4 L.F.	607 Sodding Sq. Yd.	604 Std. M.H. No. 2 4'6"x4'6" Bottom Each	604 Catch Basins Std. No. 4 Each	604 Catch Basins Std. No. 5 Each	604 Catch Basins Std. No. 6 Each	SEE SHEET NO.
1-D	455+00 to 457+00	Lt.							200					1					
2-D	458+00 to 465+00	Lt.			10				140	500									
3-D	455+50 to 465+00	Rt.			10				390	505	50	1							
4-D	55+00 to 55+48 Ramp W	Rt.			10				38		75	1							
5-D	455+50 to 457+00	Rt.	2	0.3		152		400					37.5	1	1				37
6-D	461+26	-		0.5												1			
7-D	461+00 to 465+00	Rt.					60	316									1		150
8-D	455+00 to 455+50	Rt.			10				461	475	75	1		41	1				37
9-D	455+00 to 465+00	Rt.					148									1			
10-D	455+00	-	2	0.3										1					
1-R	455+00 to 455+37.5	Rt.																	
	TOTALS		4	1.1	40	152	208	316	1,229	1,476	200	44	37.5	400	1	1	1	1	37.5

Sta. 455+00 to 465+00



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 6" Conduit Type F (Lin. Ft.)	603 18" Conduit Type F (Lin. Ft.)	603 18" Conduit Type B with Cl. B Bedding (Lin. Ft.)	603 24" Conduit Type C with Cl. B Bedding (Lin. Ft.)	603 27" Conduit Type B with Cl. B Bedding (Lin. Ft.)	603 27" Conduit Type C with Cl. B Bedding (Lin. Ft.)	603 48" Conduit Type C with Cl. B Bedding (Lin. Ft.)	604 Standard Catch Basin No. 5 (Each)	604 Std. M.H. No. 2 4'-6"x4'-6" Bottom (Each)	605 6" Pipe U.D. 707.06 or 707.12 (Lin. Ft.)	605 6" Shallow Pipe Underdrain (Lin. Ft.)	667 Jute Matting (Sq. Yd.)	Bends and Branches 6"	Bends and Branches 18"	606 Guard Rail, Type 4 (Lin. Ft.)	605 6" Uncl. Pipe U.D. 707.06 or 707.12 (Lin. Ft.)	SEE SHEET NO.
1-D	465+00 to 475+00	Lt.											1028						
2-D	465+00 to 467+09	Rt.	10										199						
3-D	467+00 to 472+09	Rt.	10									59	397		1			50	
4-D	472+00 to 475+00	Rt.	10									300			1				
5-D	465+00 to 475+00	Rt.	10									350	616					50	
6-D	465+00 to 470+00	Lt.												416					
7-D	465+00 to 466+00	Rt.							100		1								
8-D	466+00 to 467+00	Rt.					148			1									44
9-D	467+00 to 472+00	Rt.						500		1									
10-D	472+00	Lt.		24	204					1						1			46
11-D	472+00 to 475+00	Rt.				300													
1-R	467+50 to 475+00	Lt.															750		
	TOTALS		40	24	204	300	148	500	100	3	1	709	2,240	416			750	100	



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ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 6" Conduit Type F Lin. Ft.	603 6" Conduit Type B with Cl. b Bedding Lin. Ft.	603 15" Conduit Type C with Cl. b Bedding Lin. Ft.	603 21" Conduit Type B with Cl. B Bedding Lin. Ft.	603 24" Conduit Type C with Cl. b Bedding Lin. Ft.	604 Standard Catch Basin No. 5 Each	605 6" Pipe U.D. 707.06 or 707.12 Lin. Ft.	605 6" Shallow Pipe Underdrain Lin. Ft.	667 Jute Matting Sq. Yd.	609 Bends and Branches 6"	606 Guard Rail, Type 4 Lin. Ft.	SEE SHEET NO.
1-D	77+00 to 80+96 Ramp Y	Lt.								396		2		
2-D	81+00 Ramp Y to 485+00	Lt.	10	55						400				
3-D	475+00 to 477+40	Lt.								240				
4-D	475+00 to 475+90	Rt.							90					
5-D	475+90 to 476+58	Rt.							108					
6-D	477+02 to 485+00	Rt.	10				200		812		430		900	51 48
7-D	475+00 to 477+00	Rt.			500			1				1		
8-D	477+00 to 482+00	Rt.				92		2						
9-D	477+00	Rt.												
10-D	477+00 to 482+25	Lt.												
11-D	475+00 to 482+09	Rt.	10						699					
12-D	482+00 to 485+00	Rt.	10						302					
HR	475+00 to 484+00	Lt.												
	TOTALS		40	55	500	92	200	3	2,011	1,036	430	3	900	

PROFILE ON NEXT SHEET

PLAN • Sta. 475+00 to 485+00

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S.B.L. 1183.74 1184.45 1185.14 1185.83 1186.50 1187.16 1187.81 1188.44 1189.07 1189.68 1190.28 1190.87 1191.45 1192.01 1192.57 1193.11 1193.64 1194.16 1194.67 1195.16 1195.65 1196.12 1196.58 1197.03 1197.47 1197.89 1198.31 1198.71 1199.10 1199.48 1199.84 1200.20 1200.54 1200.88 1201.20 1201.51 1201.80 1202.09 1202.36 1202.62 1202.87 S.B.L.

N.B.L. 1168.45 1169.93 1171.42 1172.90 1174.39 1175.87 1177.36 1178.84 1180.33 1181.07 1181.79 1182.50 1183.20 1183.86 1184.55 1185.21 1185.85 1186.48 1187.10 1187.71 1188.30 1188.88 1189.44 1189.99 1190.53 1191.06 1191.57 1192.07 1192.56 1193.03 1193.50 1193.94 1194.38 N.B.L.

1250
1240
1230
1220
1210
1200
1190
1180
1170
1160

3000' V.C. (S.B.L.)

2200' V.C. (N.B.L.)

+3.97% S.B.L.

-1.64%

P.V.I. 484+00.00 (S.B.L.)
Elev. 1222.84
V.C. 3000'

P.V.C. 479+00 (N.B.L.)

2 Sta. 477+00, 20' Rt.
Std. C.B. No. 5, Top of Grate = 1172.47
F.L. 15" Conduit, Type C = 1168.56 (in)
F.L. 21" Conduit, Type B = 1168.16 (in)
F.L. 24" Conduit, Type C = 1167.91 (out)

2 Sta. 477+00, 113.7' Rt.
Std. C.B. No. 5, Top of Grate = 1171.83
F.L. 21" Conduit, Type B = 1169.3
F.L. 6" Conduit, Type F = 1171.0

Sta. 80+96 Ramp V
F.L. = 1192.86, 2' Lt.

Sta. 77+00 Ramp V
F.L. = 1184.09, 2.5' Lt.

Sta. 81+00 Ramp V
F.L. = 1192.94, 2' Lt.
F.L. = 1192.5, 67' Rt.

Sta. 485+00
F.L. = 1198.33, 71' Lt.

Sta. 485+00
F.L. = 1191.59, 38.5' Rt.
F.L. = 1191.12, 70' Rt.

For Continuation Ramp V→
Profile see Sheet No. 113

Sta. 477+40
F.L. = 1184.93, 68' Lt.

Sta. 482+13
F.L. = 1185.90, 38.5' Rt.

Sta. 482+09
F.L. = 1185.81, 38.5' Rt.

10'-6" Conduit, Type F, 38.5' Rt.

+2.97% (N.B.L.)

F.L. 15" Conduit, Type C

-3.07%

Sta. 475+00
F.L. = 1179.23, 68' Lt.

Sta. 476+98
F.L. = 1170.81, 90.8' Rt.

Sta. 479+00
F.L. = 1176.83, 86.5' Rt.
F.L. = 1177.54, 38.5' Rt.

2 Sta. 482+00, 20' Rt.
Std. C.B. No. 5
Top of Grate = 1186.23
F.L. 15" Conduit, Type C = 1183.88
F.L. 6" Conduit, Type F = 1184.63

Sta. 477+13, F.L. = 1171.26, 90.7' Rt.

Sta. 477+02, F.L. = 1171.76, 90.8' Rt.

F.L. 24" Conduit, Type C

-2.90%

Sta. 475+90, F.L. = 1167.56, 93' Rt., For Cont. see Ramp X - Sheet No. 107
F.L. = 1167.95, 68' Rt. - End 707.06 or 707.12

Sta. 475+00
F.L. = 1165.28, 68' Rt.
F.L. = 1165.66, 38.5' Rt.

1186.0 1193.2 1200.1 1206.3 1210.5 1217.5 1222.5 1226.8 1231.1 1235.3 1234.9

475 476 477 478 479 480 481 482 483 484 485

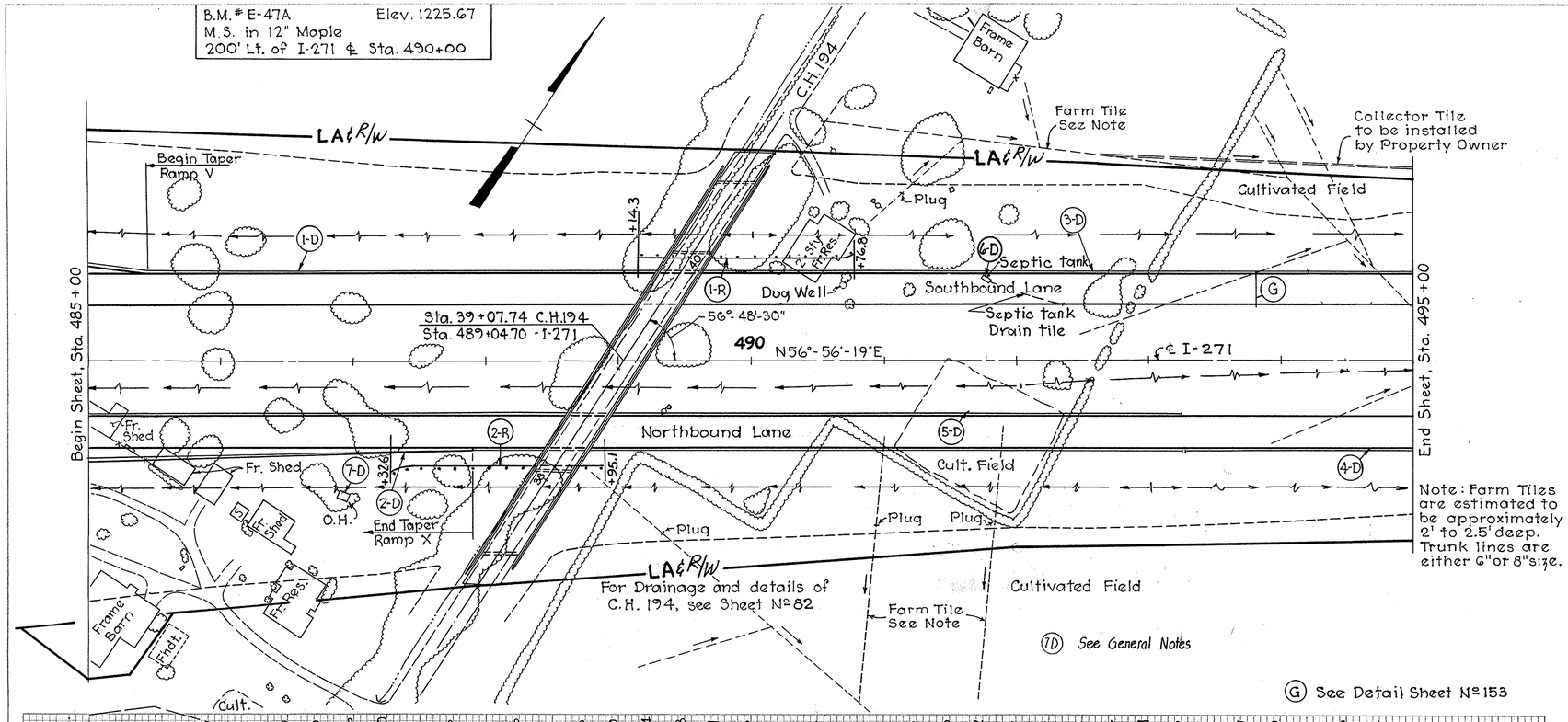
PROFILE • Sta. 475+00 to 485+00

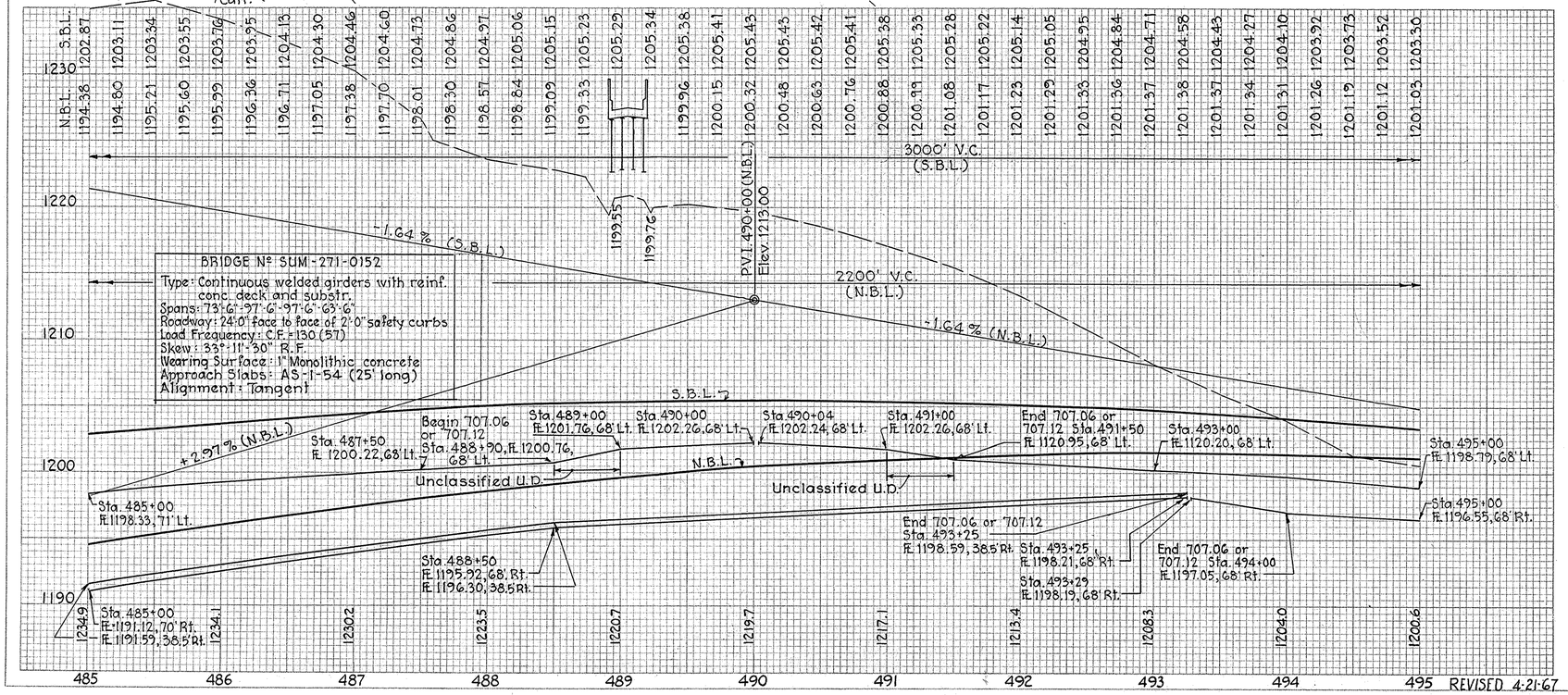
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B.M. # E-47A Elev. 1225.67
M.S. in 12" Maple
200' Lt. of I-271 ℄ Sta. 490+00





ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 6" Shallow Pipe U.D.	605 6" Pipe U.D. 707.06 or 707.12	606 Guard Rail Type 4	Bends and Branches 6"	Special Cleaning and Disposal of Septic Tank	605 6" Uncl. Pipe U.D. 707.06 or 707.12	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.	
1-D	485+00 to 490+00	Lt.	350	100		1		50	
2-D	485+00 to 493+25	Rt.		825					
3-D	490+04 to 495+00	Lt.	378	96				50	
4-D	493+29 to 495+00	Rt.	100	71					
5-D	485+00 to 493+25	Rt.		825					
6-D	491+77	Lt.					1		
7-D	486+95	Rt.							
1-R	489+04.3 to 490+76.8	Lt.			162.5				
2-R	487+32.6 to 488+95.1	Rt.			162.5				
	TOTALS		828	1,917	325	1	1	100	

Revised 7-20-67

Sta. 485+00 to 495+00

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B.M. E-48A Elev. 1197.84
M.S. in G" Twin Cherry 175'Lt. of I-271 & Sta. 504+25.

Ref. P.O.T. Sta. 505+00
N.C. in 4" W. Cherry
N.C. in G" W. Cherry
N.C. in 24" W. Cherry
79.68'
Ga460. 93.05'
℄ I-271

Farm Tile See Note
Collector Line to be installed by Property Owner
Cultivated Field
Evergreen Nursery
LA℄ R/W
1-D
4-D
W = 11'
Southbound Lane
Begin Sheet, Sta. 495+00
End Sheet, Sta. 505+00
Farm Tile See Note
90°
+40
℄ I-271
500
N56°-56'-19"E
3-D
W = 7.5'
Northbound Lane
G
Plug
Plug
2-D
1-R
Cultivated Field
Outlet to be installed by Property Owner
6-D Final plan location and F.L. elevations are to be established by the Engineer. Catch Basins to be placed between R/W line and R/W fence.
LA℄ R/W
Note: Farm tiles are estimated to be at approximately 2' to 2.5' deep. Trunk lines are either 6" or 8" size.
Evergreen Nursery
Ⓖ See Detail Sheet No. 153

S.B.L. 1203.30 1203.08 1202.83 1202.58 1202.32 1202.04 1201.76 1201.46 1201.15 1200.82 1200.49 1200.14 1199.79 1199.42 1199.04 1198.64 1198.24 1197.82 1197.42 1197.51 1197.18 1196.85 1196.50 1196.13 1195.75 1195.36 1194.96 1194.14 1193.32 1192.50 1191.68 1190.86 1190.04 1189.22 1188.40
N.B.L. 1201.03 1200.93 1200.81 1200.68 1200.54 1200.39 1200.22 1200.04 1199.84 1199.64 1199.42 1199.18 1198.94 1198.68 1198.41 1198.12 1197.82 1197.51 1197.18 1196.85 1196.50 1196.13 1195.75 1195.36 1194.96
2200' V.C. (N.B.L.)
3000' V.C. (S.B.L.)
P.V.T. 499+00 (S.B.L.)
P.V.T. 501+00 (N.B.L.)
1210
1200
1190
S.B.L.
N.B.L.
Sta. 495+50 F.L.= 1196.30, 68' Rt.
Sta. 495+00 F.L.= 1198.79, 68' Lt.
Sta. 495+00 F.L.= 1196.55, 68' Rt.
Sta. 499+00 F.L.= 1193.73, 68' Lt. F.L.= 1193.31, 68' Rt.
Sta. 499+50 F.L.= 1191.21, 68' Lt. F.L.= 1190.97, 68' Rt.
Unclassified U.D.
-1.64 %
Sta. 501+00 F.L.= 1188.75, 68' Lt. & Rt.
Sta. 505+00 F.L.= 1182.19, 68' Lt. & Rt.
1200.6 1198.2 1196.8 1196.5 1197.2 1199.2 1203.1 1205.0 1202.8 1199.7 1195.7
495 496 497 498 499 500 501 502 503 504 505

REVISED 4-21-67

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 6" Deep Pipe Underdrain	605 6" Shallow Pipe Underdrain	607 Jute Matting	Bends and Branches 6"	606 Guard Rail	605 6" Unclassif. Underdrain	603 12" Conduit, Type 1S w/ Class B Bedding	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Sq. Yds.		Lin. Ft.	Lin. Ft.	Lin. Ft.	
1-D	495+00 to 505+00	Lt.	550	400				50		5&6
2-D	495+00 to 505+00	Rt.	550	428		1		50		5&6
3-D	502+00 to 505+00	Med. Lt.			250 733					5&6
4-D	499+00 to 505+00								272	5&6
6-D	496+40	-								5&6
1-R	502+00 to 503+25	Rt. & Med.					250			5&6
TOTALS			1100	828	983	2	250	100	272	

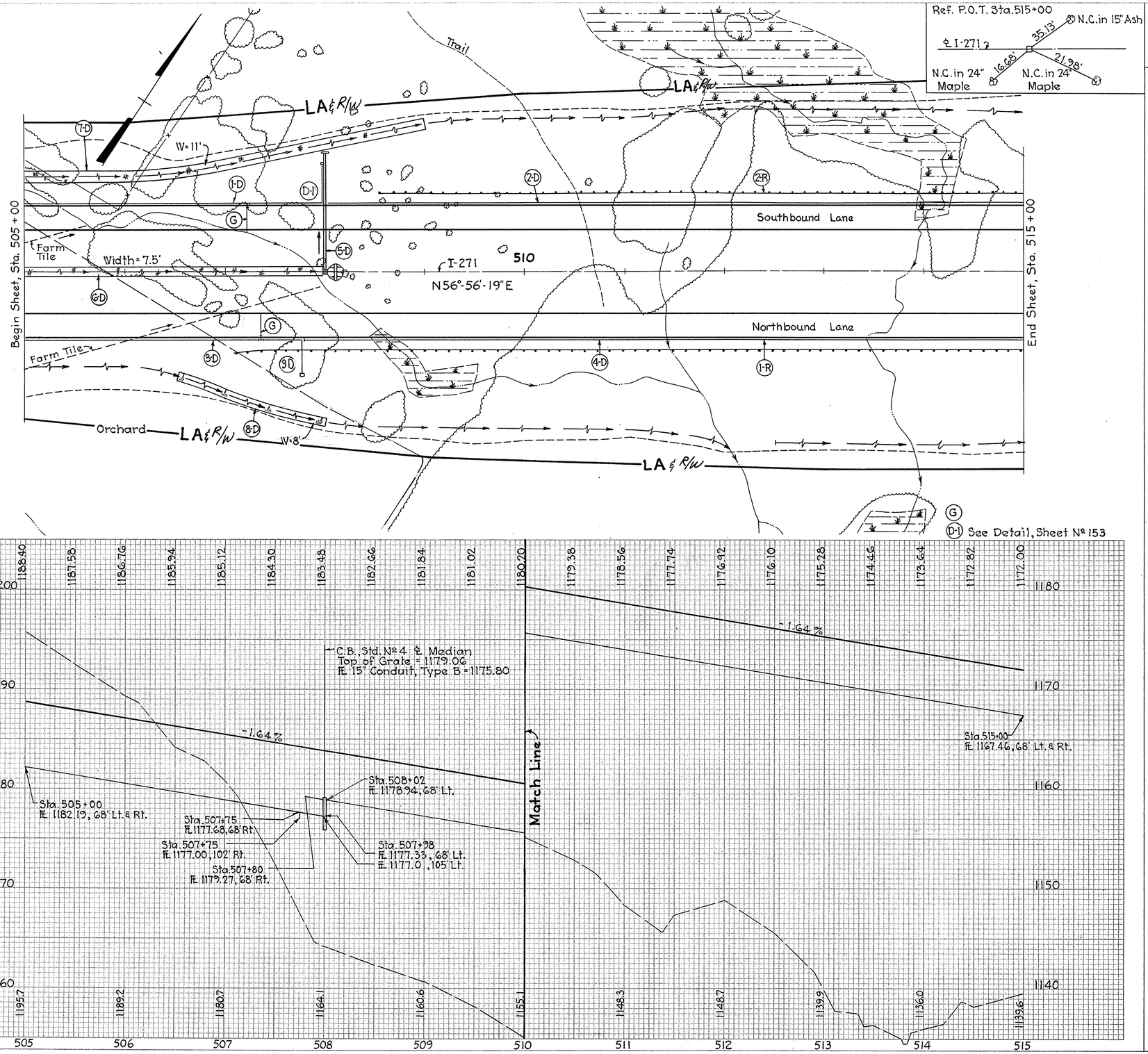
Revised 7-20-67

Sta. 495+00 to 505+00 Jan. 23, 1967
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ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection Cu. Yds.	602 Concrete Masonry Cu. Yds.	603 6" Conduit Type F Lin. Ft.	603 15" Conduit Type B with Bedding Lin. Ft.	604 Catch Basin Std. Nº 4 Each	605 6" Shallow Pipe U. D. Lin. Ft.	605 6" Deep Pipe U. D. Lin. Ft.	606 Guard Rail Type 4 Lin. Ft.	660 Sodding Sq. Yds.	667 Jute Matting Sq. Yds.	Bends and Branches 6"	SEE SHEET NO.
1-D	505+00 to 507+98	Lt.			10			698	356				2	58
2-D	508+02 to 515+00	Lt.												
3-D	505+00 to 507+75	Rt.			10			720	325				2	
4-D	507+80 to 515+00	Rt.				122	1							
5-D	508+00	Lt.	2	0.3							2	250		
6-D	505+00 to 508+00	Med.										500		
7-D	505+00 to 509+00	Lt.												
8-D	506+50 to 508+00	Rt.									142			
1-R	507+05 to 515+00	Rt.								795				
2-R	508+55 to 515+00	Lt.								645				
TOTALS			2	0.3	20	122	1	1,418	681	1,440	144	750		

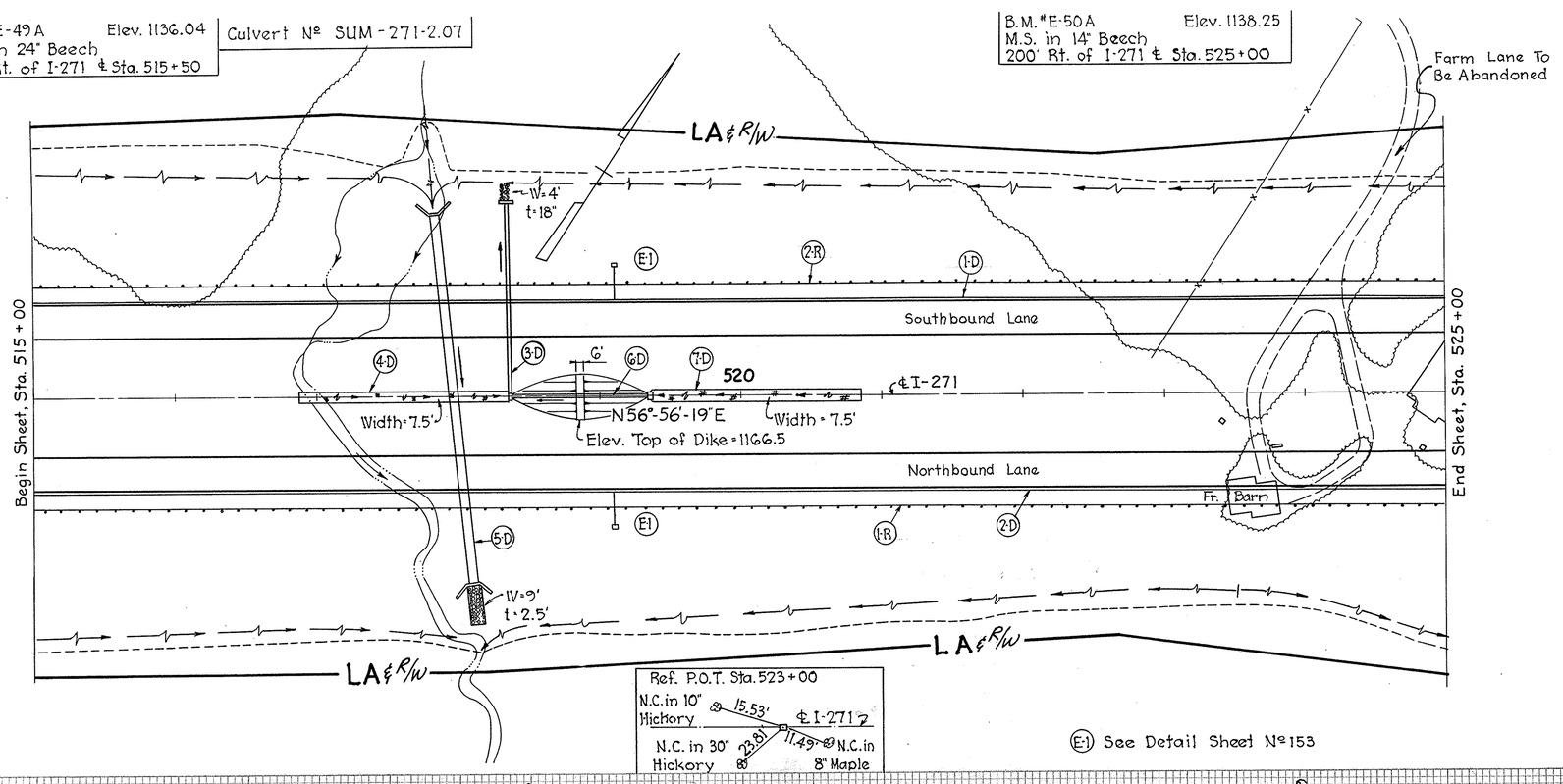
Sta. 505+00 to 515+00

B.M.# E-49A Elev. 1136.04
M.S. in 24" Beech
200' Rt. of I-271 ℄ Sta. 515+50

Culvert Nº SUM-271-2.07

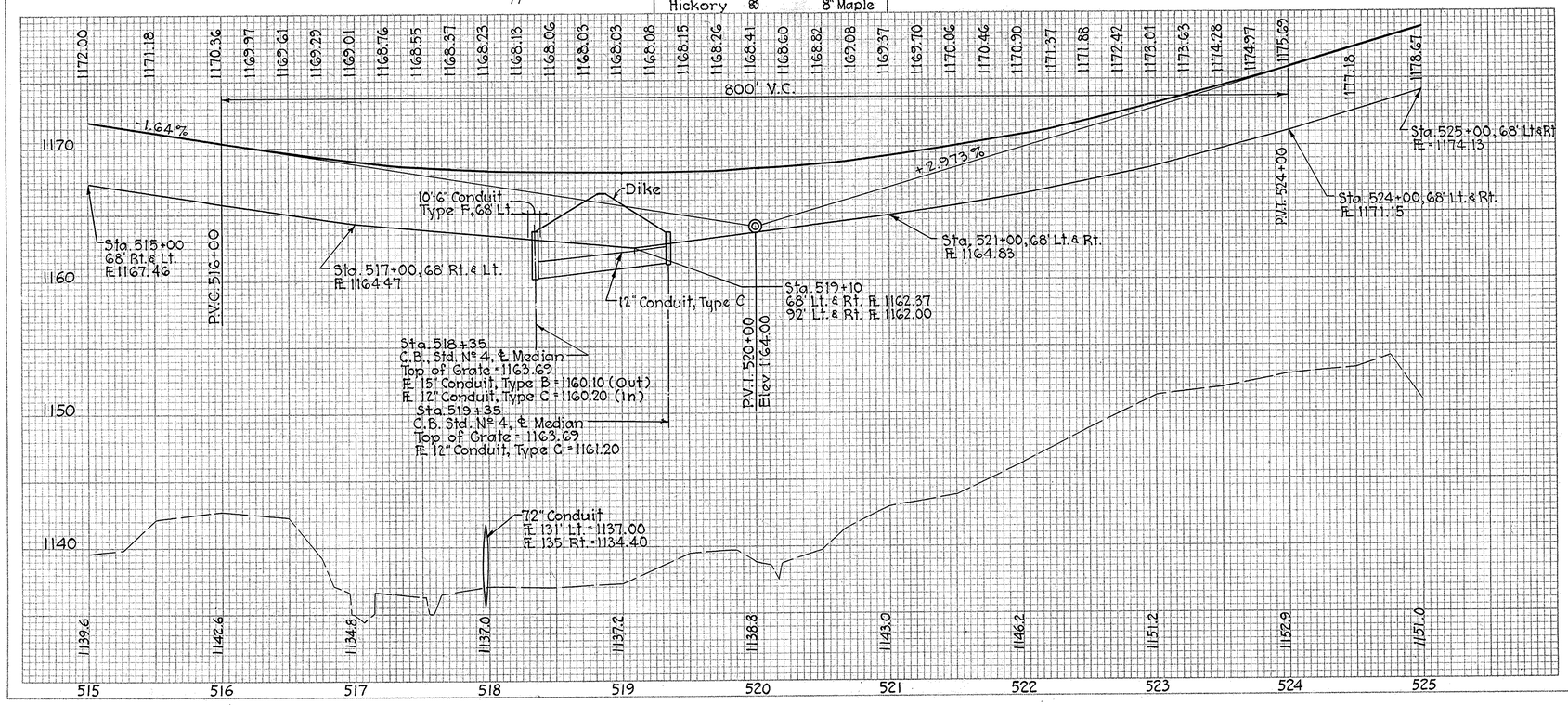
B.M.# E-50A Elev. 1138.25
M.S. in 14" Beech
200' Rt. of I-271 ℄ Sta. 525+00

Farm Lane To Be Abandoned



Ref. P.O.T. Sta. 523+00
N.C. in 10" Hickory — 15.53' — ℄I-271 — 11.49' — N.C. in 8" Maple
N.C. in 30" Hickory — 23.81'

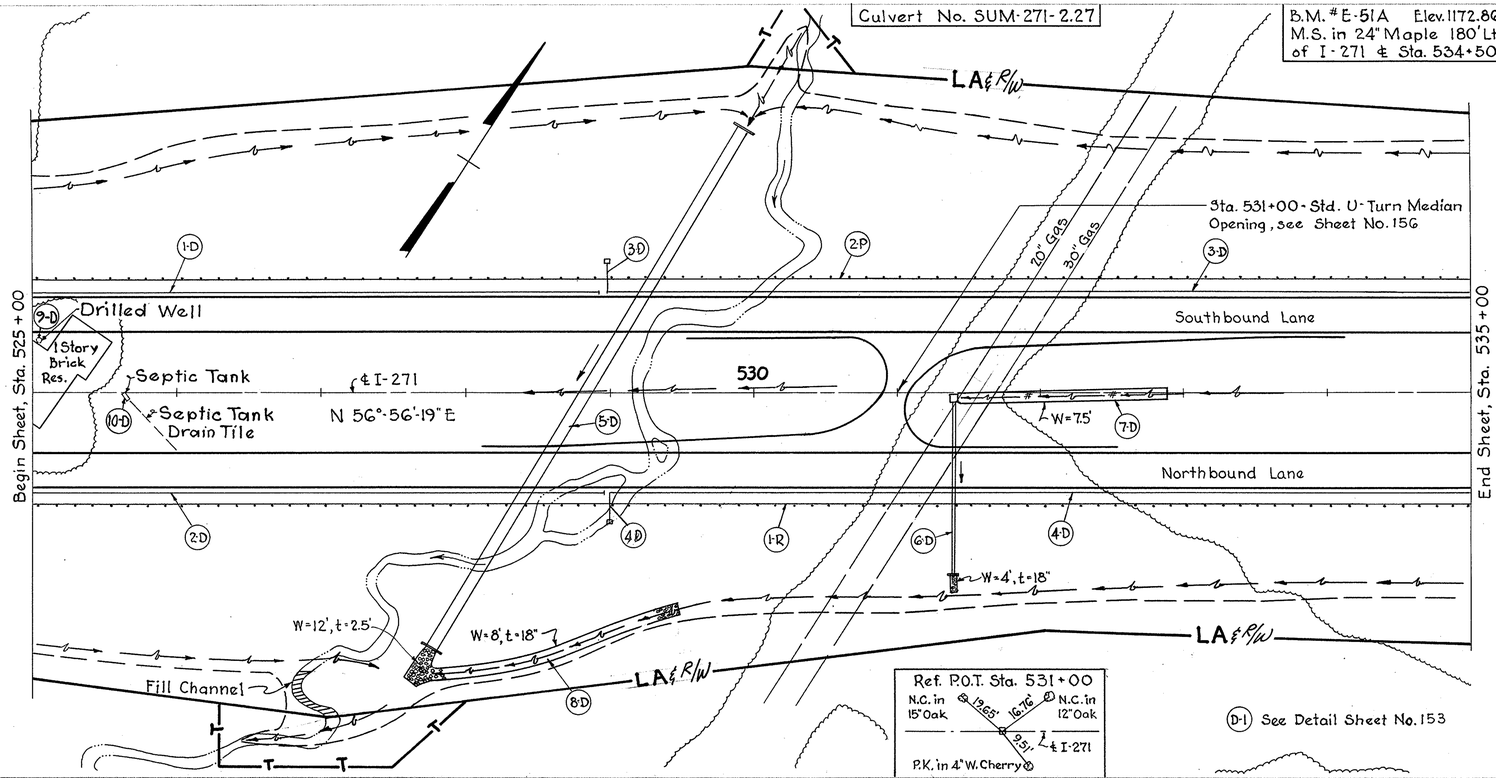
(E-1) See Detail Sheet Nº 153



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection Cu. Yds.	602 Concrete Masonry Cu. Yds.	603 6" Conduit Type F Lin. Ft.	603 15" Conduit Type B with C.I. & Bedding Lin. Ft.	603 12" Conduit Type C with C.I. & Bedding Lin. Ft.	603 12" Conduit Type A with C.I. & Bedding per 706.02 Class 'A' Lin. Ft.	604 Catch Basin Std. Nº 4 Each	605 6" Slow Pipe U.D. Lin. Ft.	606 Guard Rail Type 4 Lin. Ft.	660 Sodding Sq. Yds.	667 Jute Matting Sq. Yds.	Bends & Branches 6"	SEE SHEET NO.
1-D	515+00 to 525+00	Lt.			20					924				1	65
2-D	515+00 to 525+00	Rt.			10					1014				1	
3-D	518+35 to 525+00	Lt.	3	0.3	52	90			1			2	125		151
4-D	516+85 to 518+35	Med.													
5-D	517+97 to 519+35	—	21	37.7				266	1			11	125		
6-D	518+35 to 519+35	Med.					100				1000				
7-D	519+35 to 520+85	Med.									1000				
1-R	515+00 to 525+00	Rt.													
2-R	515+00 to 525+00	Lt.													
TOTALS			24	38.0	30	52	90	100	2	2,008	2,008	13	250		

Sta. 515+00 to 525+00



PROFILE ON NEXT SHEET

SUMMIT COUNTY
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ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection (Cu. Yds.)	602 Concrete Masonry (Cu. Yds.)	603 6" Conduit Type F (Lin. Ft.)	603 15" Conduit Type F (Lin. Ft.)	603 15" Conduit Type D with Cl. B Bedding (Lin. Ft.)	603 36" Conduit Type A with Cl. B Bedding 707.63, 756.66 (Lin. Ft.)	604 Catch Basin Std. No. 4 (Each)	605 6" Shallow Pipe Underdrain (Lin. Ft.)	606 Guard Rail Type 4 (Lin. Ft.)	660 Sodding (Sq. Yds.)	667 Jute Matting (Sq. Yds.)	Bends & Branches 6"	Bends & Branches 15"	Special Cleaning and Disposal of Septic Tank (Each)	Special Drilled Well Abandoned (Each)	SEE SHEET NO.
1-D	525+00 to 528+96	Lt.								396								
2-D	525+00 to 528+96	Rt.								396								
3-D	529+00 to 535+00	Lt.			10					612				1				
4-D	529+00 to 535+00	Rt.			20					602				1				
5-D	528+85	-	26	18.6				424	1			15			2		1	151
6-D	531+40	-	3	0.5		40	90					2	125			1		72
7-D	531+40 to 532+90	Med.									1,000							
8-D	527+75 to 529+50	Rt.	82								1,000							
9-D	525+04	Rt.														1	1	
10-D	525+65	Rt.																
1-R	525+00 to 535+00	Rt.																
2-R	525+00 to 535+00	Lt.																
	TOTALS		111	18.9	30	40	90	424	1	2,006	2,000	15	125			1	1	

PLAN • Sta. 525+00 to 535+00

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1178.67 1180.15 1181.64 1183.13 1184.61 1186.10 1187.59 1189.07 1190.56 1192.05 1193.53 1195.02 1196.51 1197.99 1199.48 1200.97 1202.45 1203.94 1205.43 1206.91 1208.40

1220
1210
1200
1190
1180
1170
1160
1150
1140
1130

Catch Basin - Std. No. 4, 4' Rt. & Median
Top of Grate = 1193.79
F.L. 15" Conduit, Type B = 1190.00

10'-6" Conduit
Type F, 68' Rt.

+2.9733%

Sta. 535+00
F.L. = 1203.86, 68' Lt. & Rt.

Sta. 529+00
F.L. = 1186.02, 68' Lt. & Rt.
F.L. = 1185.50, 90' Lt. & Rt.

Sta. 528+96
F.L. = 1185.90, 68' Lt. & Rt.

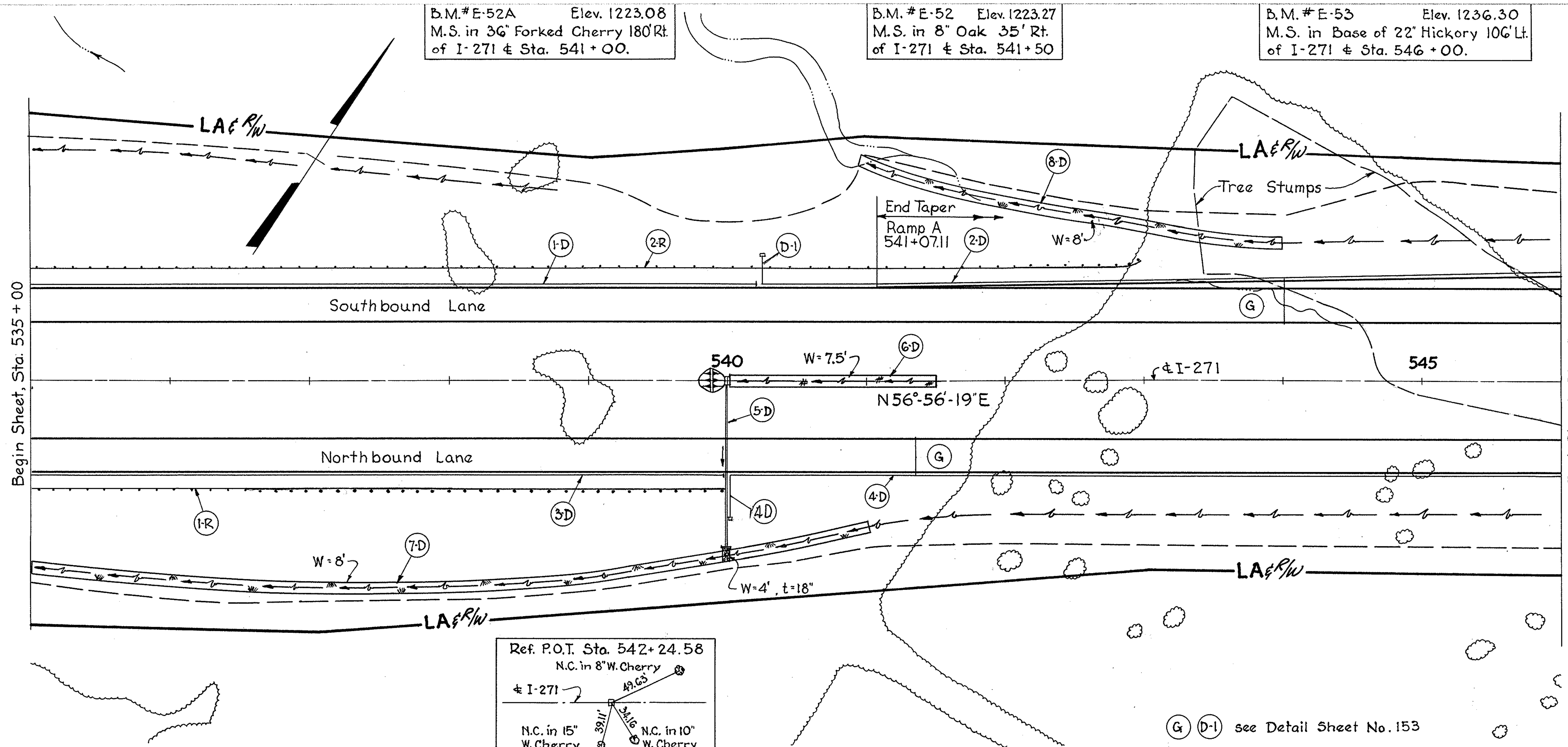
Sta. 525+00
F.L. = 1174.13, 68' Lt. & Rt.

96" Conduit, Type A
F.L. = 1140.05 Lt.
F.L. = 1135.80 Rt.

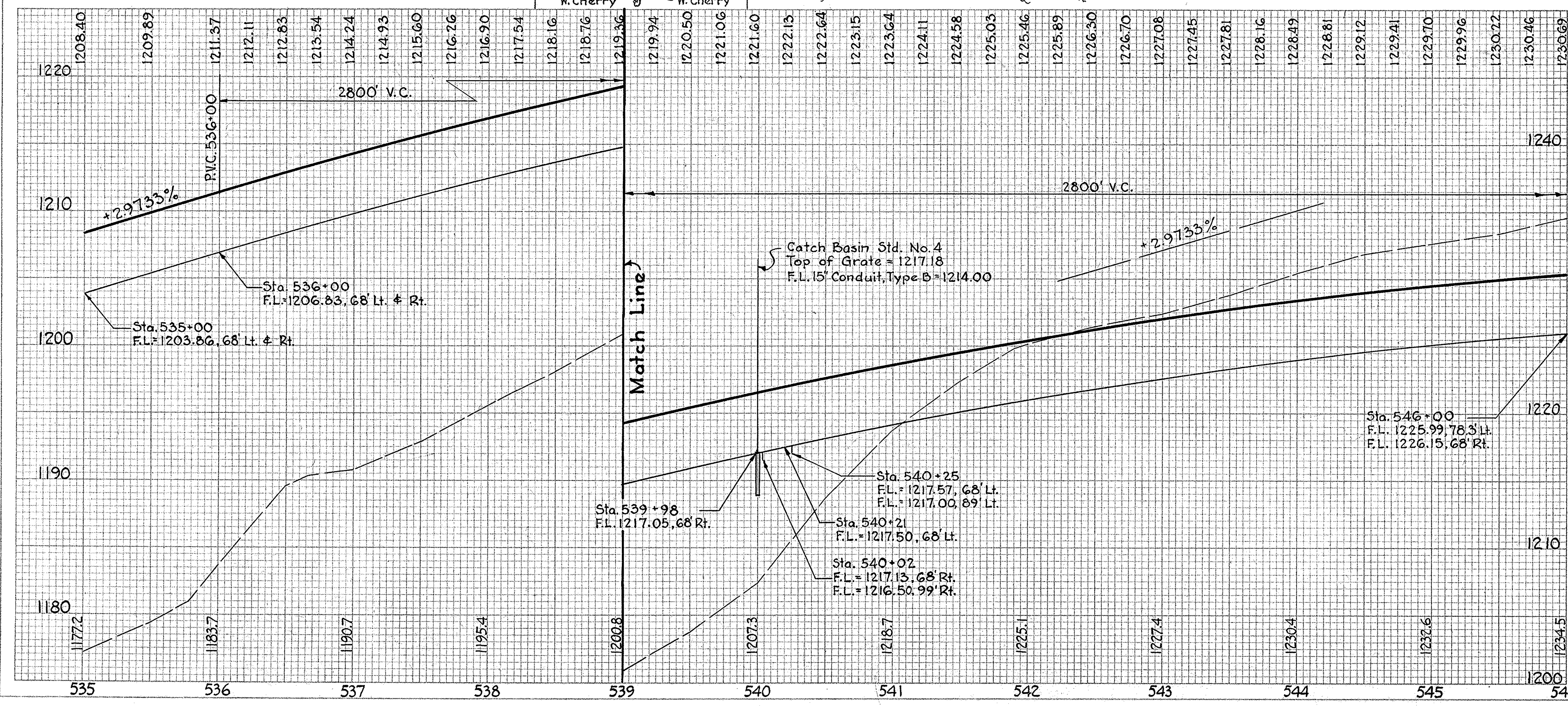
1151.0 1144.5 1140.7 1141.3 1142.4 1141.7 1166.2 1173.4 1176.3 1174.3 1177.2

525 526 527 528 529 530 531 532 533 534 535

PROFILE • Sta. 525+00 to 535+00



(G) (D-1) see Detail Sheet No. 153



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection (Cu. Yds.)	602 Concrete Masonry (Cu. Yds.)	603 6" Conduit Type F (Lin. Ft.)	603 15" Conduit Type B with Cl.B Bedding (Lin. Ft.)	604 Catch Basin Std. No. 4 (Each)	605 6" Shallow Pipe Underdrain (Lin. Ft.)	606 Guard Rail Type 4 (Lin. Ft.)	660 Sodding (Sq. Yds.)	667 Jute Matting (Sq. Yds.)	Bends & Branches 6"	SEE SHEET NO.
1-D	535+00 to 540+21	Lt.						521					
2-D	540+25 to 546+00	Lt.			10			619				2	
3-D	535+00 to 539+98	Rt.						498					
4-D	540+02 to 546+00	Rt.			10			644				2	
5-D	540+00	Rt.	2	0.3		120	1			2			75
6-D	540+00 to 541+50	Med.									125		
7-D	535+00 to 541+00	Rt.								533			
8-D	541+00 to 544+00	Lt.								267			
1-R	535+00 to 540+00	Rt.							500				
2-R	535+00 to 543+00	Lt.							800				
	TOTALS		2	0.3	20	120	1	2282	1300	802	125		

Revised 7-20-67

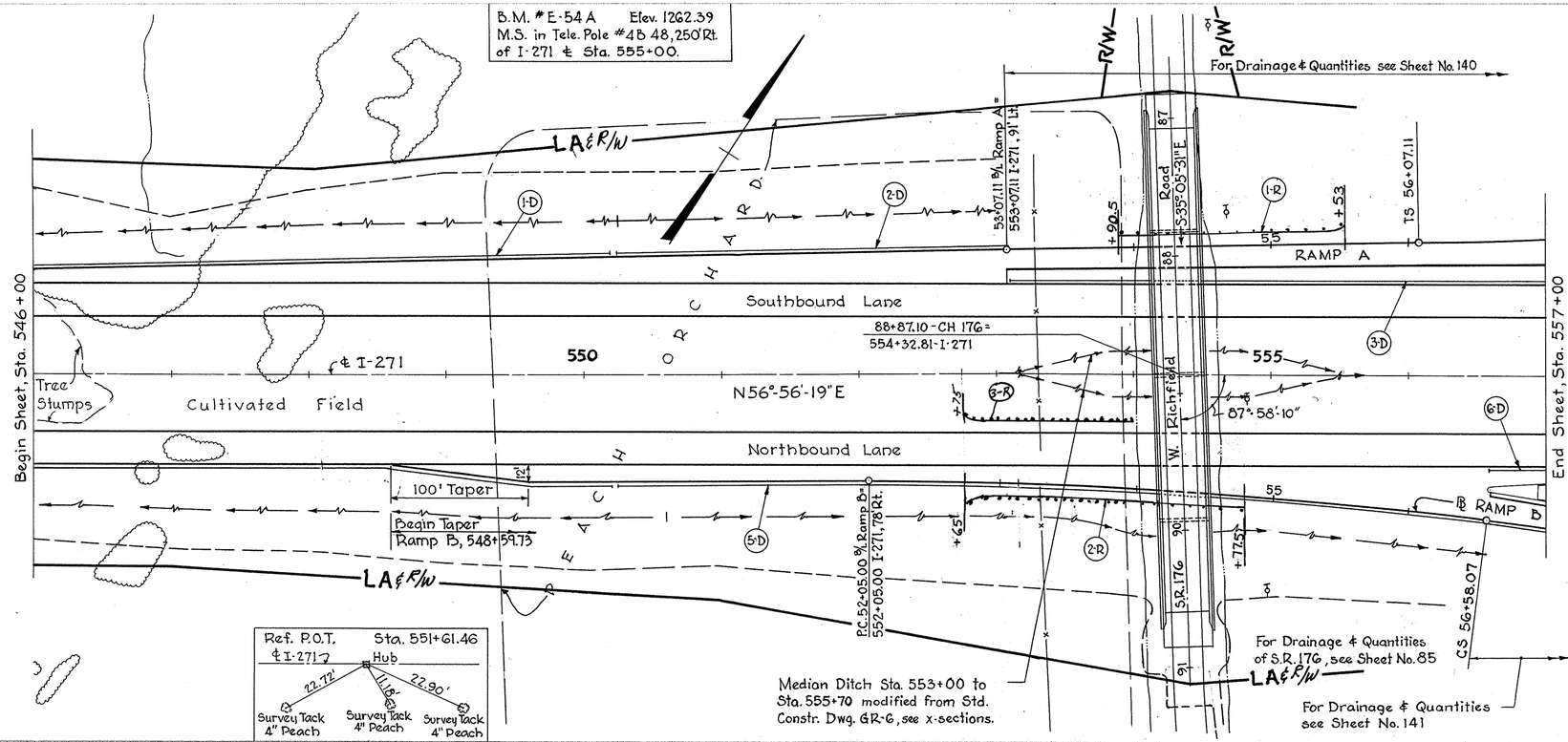
Sta. 535+00 to 546+00

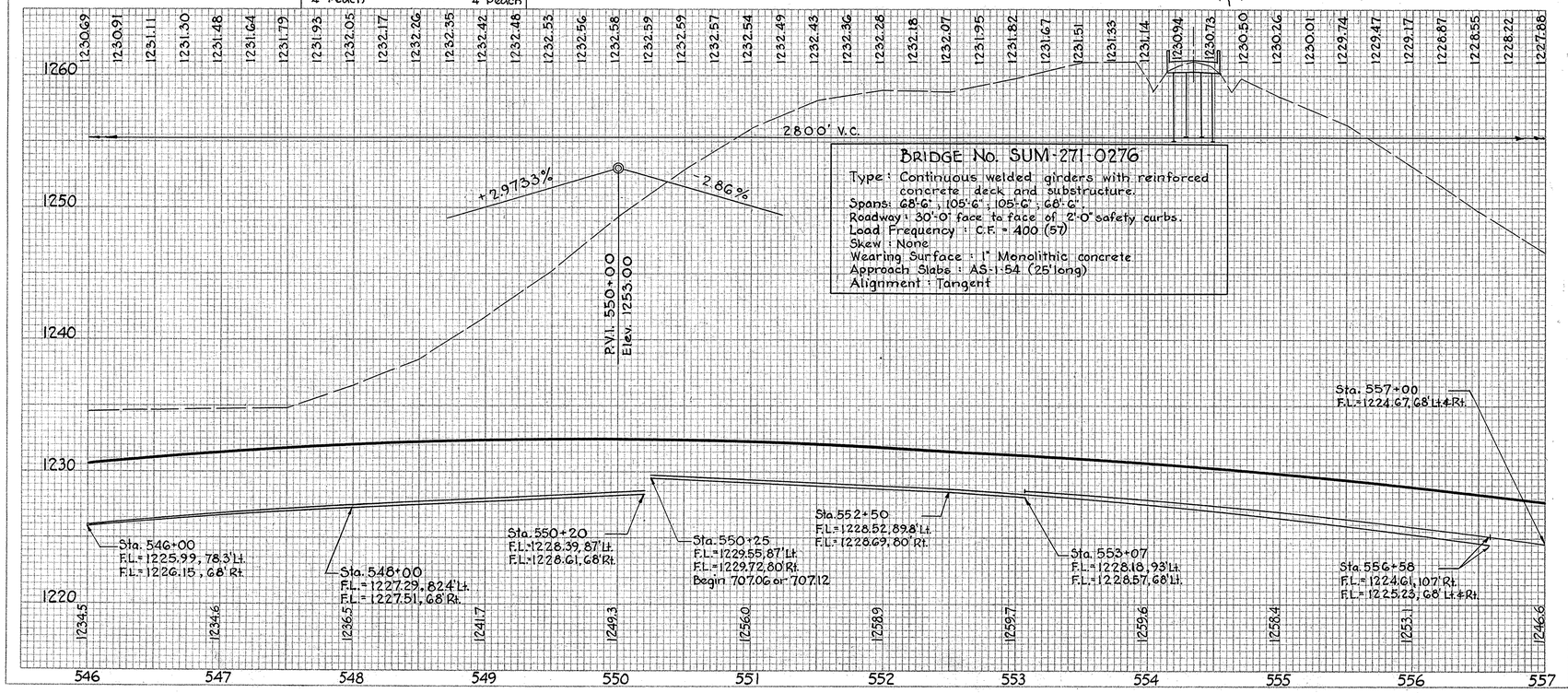
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
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B.M. # E-54 A Elev. 1262.39
M.S. in Tele. Pole #48 48,250' Rt.
of I-271 & Sta. 555+00.





BRIDGE No. SUM-271-0276

Type: Continuous welded girders with reinforced concrete deck and substructure.
Spans: 68'-0", 105'-0", 105'-0", 68'-0".
Roadway: 30'-0" face to face of 2'-0" safety curbs.
Load Frequency: C.F. = 400 (57)
Skew: None
Wearing Surface: 1" Monolithic concrete
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	605 6" Pipe Underdrain 707.06 or 707.12 Lin. Ft.	605 6" Shallow Pipe Underdrain Lin. Ft.	606 Guard Rail Type 4 Lin. Ft.
1-D	546+00 to 550+20	Lt.		420	
2-D	550+25 to 553+07	Lt.	282		
3-D	553+07 to 557+00	Lt.	395		
4-D	546+00 to 550+20	Rt.		420	
5-D	550+25 to 556+58	Rt.	633		
6-D	556+58 to 557+00	Rt.	42		
1-R	553+90.5 to 555+53	Lt.			162.5
2-R	552+65 to 554+77.5	Rt.			212.5
3-R	552+75 TO 554+00	MED			12.50
	TOTALS		1,350	840	500.0

SEE SHEET NO.

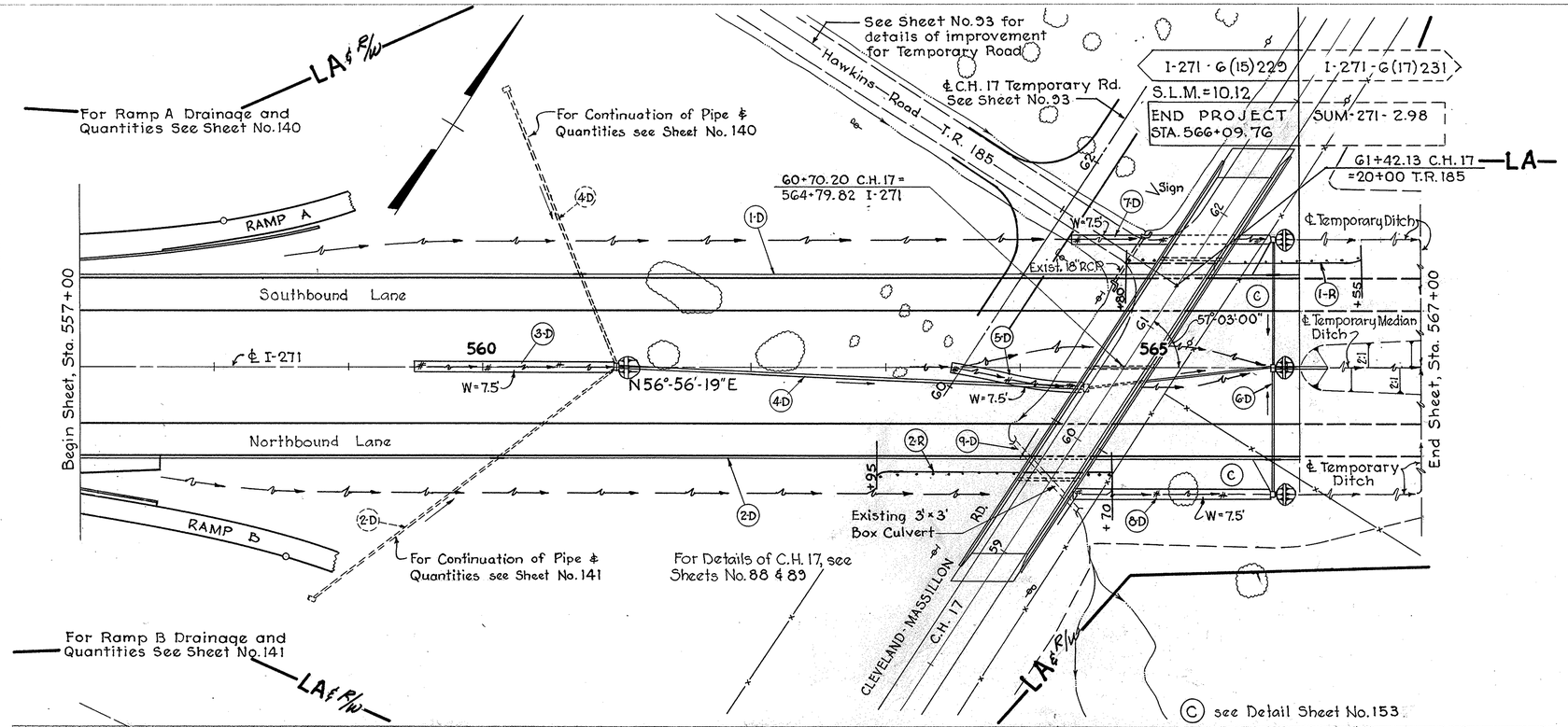
Revised 7-20-67

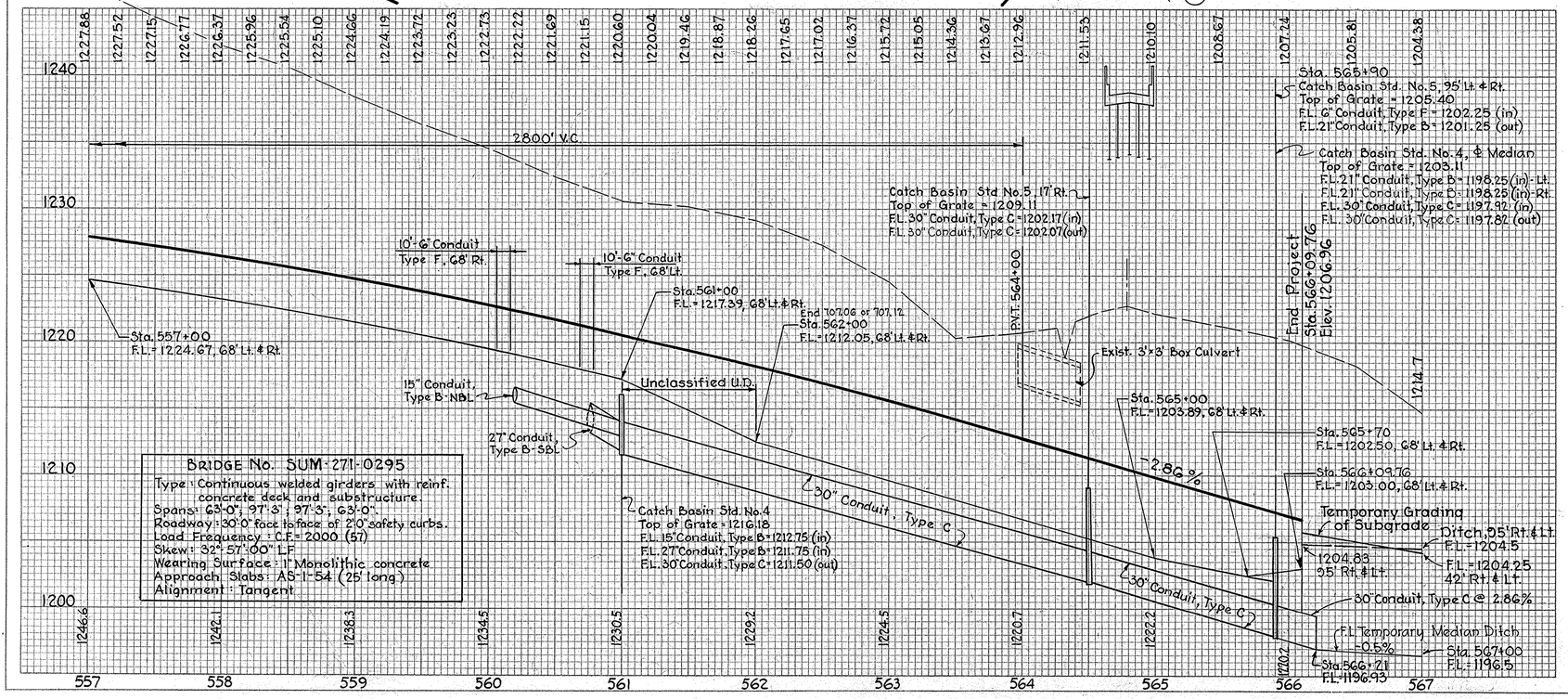
Sta. 546+00 to 557+00

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BRIDGE No. SUM-271-0295
Type: Continuous welded girders with reinf. concrete deck and substructure
Spans: 63'-0", 97'-3", 97'-3", 63'-0"
Roadway: 30'-0" face to face of 2'-0" safety curbs.
Load Frequency: C.F. = 2000 (57)
Skew: 32°-57'-00" L.F.
Wearing Surface: 1" Monolithic concrete
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Existing Structures Removed	603 6" Conduit Type F	603 21" Conduit Type B with Cl. B Bedding	603 30" Conduit Type C with Cl. B Bedding	604 Catch Basins Std. No.4	604 Catch Basins Std. No.5	605 6" Pipe U.D. 707.06 or 707.12	606 Guard Rail Type 4	607 Jute Matting	Bends & Branches 6"	605 6" Unclass. Pipe U.D. 707.06 or 707.12	SEE SHEET NO.
			Lump	Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Sq. Yds.		Lin. Ft.	
1-D	557+00 to 566+00	Lt.		30					390	437		1	100	80,81
2-D	557+00 to 566+00	Rt.		30					390	437		1	100	
3-D	559+50 to 561+00	Med.									125			81
4-D	561+00 to 566+10	Med.				522		1			84			
5-D	563+50 to 564+50	—					1	2			125			
6-D	565+90				190						125			
7-D	564+40 to 565+90	Lt.								175				164
8-D	564+40 to 565+90	Rt.								175				
9-D	563+46 to 564+44	Rt.	Lump											
	TOTALS		Lump	60	190	522	3	780	874	350	459		200	

Rev'sed 7-20-67

Sta. 557+00 to 567+00 Jan. 23, 1967 REV.

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Ref. P.O.T. Sta. 568+88.22
℄ I-271 Hub
69.71' N.C. in 15" Walnut
80.62' N.C. in Post
55.67' N.C. in 15" Walnut

2 Sty. F.F. Res. & Barn
Fr. Corn Crib

Note: Typical Section of adjoining project same as shown for this project on Sheets No. 4 & 5.

LA ℄ R/W
END WORK STA. 573+46
Begin Sheet, Sta. 567+00
End Sheet, Sta. 577+00
℄ Temporary Ditch
570
℄ I-271 N56°56'-19"E
575
Field Drive To Be Abandoned
LA ℄ R/W
LA ℄ R/W
LA

Quantities Sta. 567+00 to 573+46 carried forward to Calculation Sheet, Sheet No. 15
Excavation = 12,700 C.Y.
Seeding = 4,716 S.Y.

296 C.Y.
322 S.Y.
20 Ft. — Ft. 1194.0 — 25 S.F.
1197.4 572+00
67 C.Y.
200 S.Y.
16 Ft. — Ft. 1193.5 — 11 S.F.
1195.7 573+00
8 C.Y.
89 S.Y.
0 Ft. — 0 S.F.
1193.3 573+46

4,089 C.Y.
1100 S.F.
Ft. 1195.5
1218.9 569+00
2945 C.Y.
490 S.F.
Ft. 1195.0
1210.0 570+00
1159 C.Y.
136 S.F.
Ft. 1194.5
1202.7 571+00
1195 S.Y.
105 Ft.
990 S.Y.
74 Ft.
622 S.Y.
39 Ft.

717 S.F.
Ft. 1196.4
1215.7 567+27
2,466 C.Y.
1108 S.F.
Ft. 1196.0
1218.3 568+00
90 Ft.
788 S.Y.
110 Ft.

Scale: 1"=20'

1204.38 1202.95 1201.52 1200.09 1198.66 1197.23 1195.80 1194.37 1192.94 1191.51 1190.08 1188.65 1187.22 1185.79 1184.36 1182.93 1181.50 1180.07 1178.64 1177.21 1175.78
1210 1200 1190 1180 1170 1160
2:1
1204.25
0.50%
Ft. 1196.5
℄ Temporary Median Ditch
℄ MATCH LINE
Grade Line adjoining contract
1214.7 1218.3 1218.9 1210.0 1202.7 1197.4 1195.7 1190.9 1186.6 1180.3
567 568 569 570 571 572 573 574 575 576 577

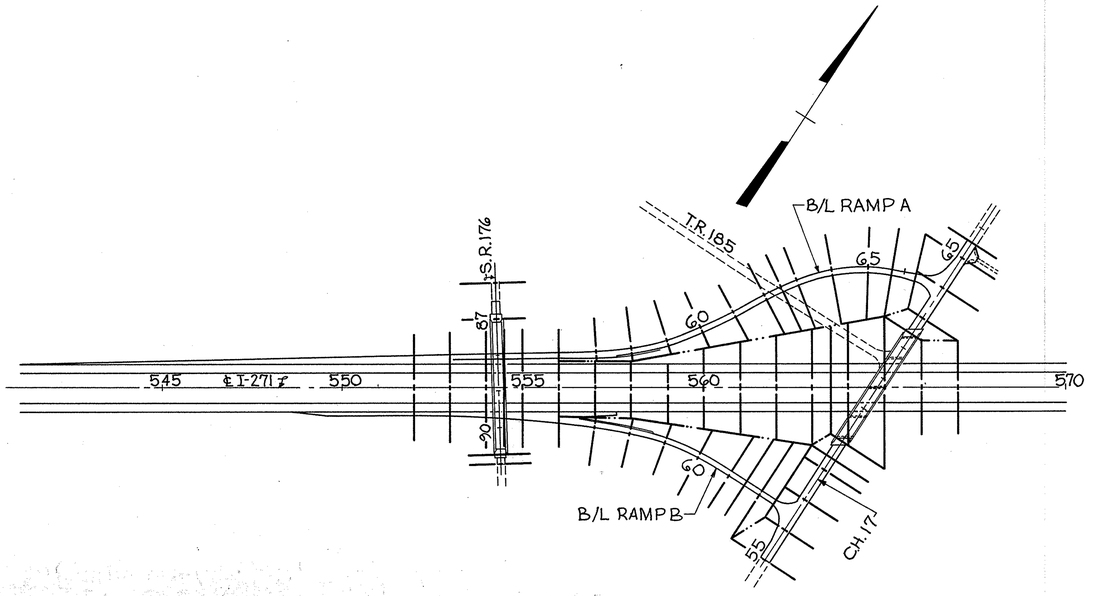
Sta. 567+00 to 577+00

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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CROSS SECTION LAYOUT

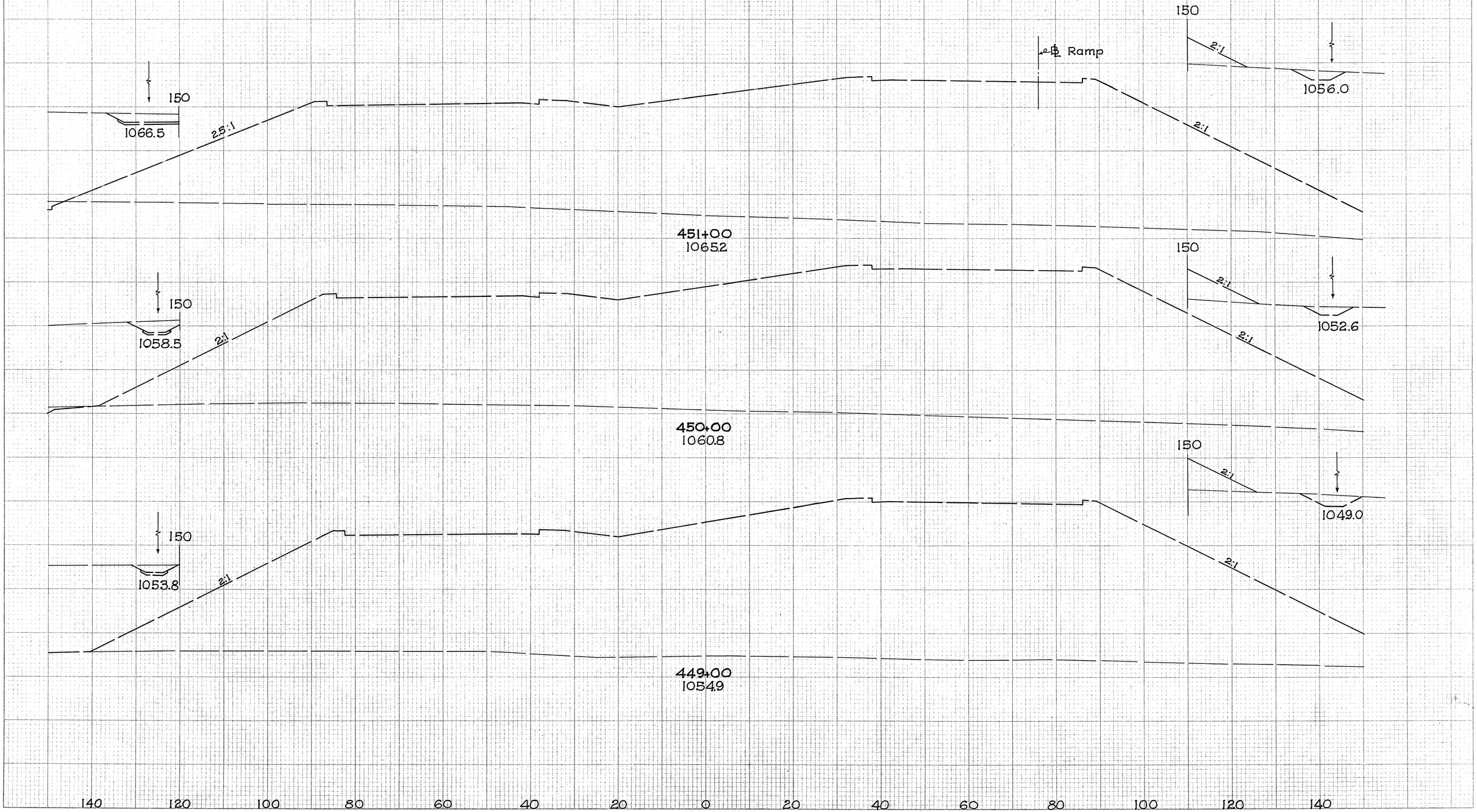


C.H. 17 INTERCHANGE
Scale: 1"=200'

FED. RD. DIVISION	STATE	PROJECT	
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Sta. 449+00 to 451+00

FED. RD. DIVISION	STATE	PROJECT
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Seeding		End Area Cu. Yds.			
End Width	Sq. Yds.	Cut	Fill	Cut	Fill
	222				
40				0	50
	222	0	27		
				0	50
40					
0		0	27		
		0	0		

End Jute Matting
Sta. 452+50, 12' Lt.

Begin Paved Gutter, Type I-4
Sta. 452+00 Lt.
W=6'

Begin Jute Matting
Sta. 452+00, 14' Lt., W=7.5

BEGIN WORK } STA. 452+00
BEGIN PROJECT }

Begin Sod Ditch
Sta. 452+00 Rt., W=8'

Ramp
Ramp W

452+50
1077.9

452+00
1072.6

451+50
1067.7

1085.0
1097.78
1101.62
1064.0
1076.8
1095.90
1100.14
1060.5
1070.5
1058.0

4:1
3:1
2:1
35:1

Ahead
Back

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

Sta. 451+50 to 452+50

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Seeding End Width	Seeding Sq. Yds.
	1636
293	
40	
	222
40	
	222
40	

Ahead Sta. 454+00
Back

3:1
1103.44
1106.08
454+00
1104.2
150
3:1
℄ Ramp W
2:1
150
1080.5

End Paved Gutter
Begin Sod Ditch
Sta. 453+50 Lt.
W = 9'

3:1
2:1
2:1
1099.0
1101.75
1104.59
453+50
1097.0
℄ Ramp W
2:1
150
2:1
1074.4

3:1
2:1
2:1
1094.0
4:1
1099.77
1103.11
453+00
1083.0
℄ Ramp W
2:1
150
2:1
1069.0

End Area Cu. Yds			
Cut	Fill	Cut	Fill
		380	298
0	27		
		0	50
0	27		
		0	50
0	27		

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

Sta. 453+00 to 454+00

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SEEDING	
END WIDTH	SQ. YDS.
	1,528
	1,526
	1,597

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		7,586	111
3,687	0		
		5,842	60
		2,622	64
		3,836	586
		1,872	1,048
		1,370	1,047

Sta. 455+50, 79' Rt.
Standard C.B. No. 6
Top of Grate = 1110.22
F.L. 15" Conduit, Type C = 1107.00 (in)
F.L. 6" Conduit, Type F = 1107.18 (in)
F.L. 15" Conduit, Type B = 1106.50 (out)

End Sod Ditch
Sta. 455+50 Rt.

℄ Ramp U

℄ Ramp W

6.0'
W-4'
T-18"

2:1

6:1

1109.69

1110.53

15" Conduit, Type B, 1.5 %

Standard HW-E
F.L. = 1105.60

455+50
1121.6

150

270

279

296

Sta. 455+00, 3.5' Lt.
Standard C.B. No. 4
Top of Grate 1103.79
F.L. 15" Conduit, Type B = 1101.25
F.L. 6" Conduit, Type F = 1102.0

ESTIMATED QUANTITIES

Item		
602	0.3 C.Y.	Concrete Masonry
603	60 L.F.	15" Conduit, Type B, With Class B Bedding
604	1 Ea.	Catch Basin Standard No. 6
601	2 C.Y.	Dumped Rock Channel Protection
2' 606	1 S.Y.	Sodding

A-1

Begin Sod Ditch
Sta. 455+00 Lt.
W=8'

4:1

4.5'
W-4
T-18"

1107.71

1109.5

455+00
1112.2

15" Conduit, Type B, 1.5 %

ESTIMATED QUANTITIES

Item		
601	2 C.Y.	Dumped Rock Channel Protection
602	0.3 C.Y.	Concrete Masonry
603	148 L.F.	15" Conduit, Type B, With Class B Bedding
660	1 S.Y.	Sodding
664	1 Ea.	Catch Basin Standard No. 4

Standard HW-E
F.L. = 1099.1

1099.0

3:1

2:1

2:1

1086.5

1105.72

454+50
1108.0

1107.56

Sta. 454+15

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 454+50 to 455+50

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
150	1,573				
150	280			12,373	0
150	1,571			6,294	0
150	285			11,048	0
150	1,570			5,638	0
150	280			2,393	111
140	120	100	80	60	40	20	4,506	0

457+00
1133.8
℄

1115.65

1114.99

1112.36

Sta. 457+00 Ramp W, 37' Lt.
Standard C.B. No. 5
Top of Grate = 1112.11
ℓ 15" Conduit, Type C = 1109.60

456+50
1131.0

1113.66

1113.50

456+00
1127.7
℄

1111.68

1112.02

ESTIMATED QUANTITIES

Item	
604	1 Ea. Catch Basin Standard No. 5

Sta. 456+00 to 457+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING END WIDTH	SEEDING Sq. Yds.
	1845
323	
	1783
319	
	1759
314	
	1666
286	

2:1

150

℄ Ramp U

End Sod Ditch
Sta. 459+00 Lt.

1123.59

459+00
1137.7

℄ Ramp W

1120.93

8:1

1118.4

1121.60

458+50
1140.1

1119.44

Sta. 458+00 77' Lt.
Standard Catch Basin No. 6
Top of Grate = 1119.10
F.L. 12" Conduit, Type B = 1116.0
F.L. 6" Conduit, Type F = 1116.3

1115.5

Standard HW-E
F.L. = 1115.6

1119.62

1117.96

ESTIMATED QUANTITIES

Item		
601	2 C.Y.	Dumped Rock Channel Protection
602	0.3 C.Y.	Concrete Masonry
603	48 L.F.	12" Conduit, Type B, With Class B Bedding
604	1 Each	Catch Basin, Standard No. 6
660	1 S.Y.	Sodding

458+00
1135.7

1114.8

1117.63

457+50
1136.8

1116.47

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		6,088	192
4931	0		
		10,651	0
6,572	0		
		12,787	0
7,238	0		
		13,247	0
7,069	0		

Sta. 457+50 to 459+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	465				
				8	1,182
259					
				12	1,900
	2,465				
				183	4,415
269					
				106	939
	1,695				
				1,621	1,061
	341				
				1,644	207

Sta. 459+50 to 460+84

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
745				56	1,610
267					
1499		52	1,787		
				85	3,679
272					
				39	2,186
1077					
				44	2,986
266					
				28	2,222
412					
				11	1,135
264					
				17	2,088

462+00
1125.3

1122.5
150
Begin Sod Ditch
Sta. 461+72, Lt.
W=8'
℄ Ramp U
4:1
1135.50
1129.84
8:1
See N.B. Rest Area Extended Sections

1119.2
150
℄ Ramp U
4:1
1133.51
1128.35
8:1

461+50
1121.6

4:1
4:1
1121.2
150
℄ Ramp U
4:1
12:1
1132.09
1127.29
8:1

461+14
1115.9

4:1
1122.1
150
℄ Ramp U
4:1
12:1
1131.53
1126.87
8:1

Sta. 461+00, 145' Rt.
Standard M.H. No. 2
Top of Grate = 1122.41
Ft. 48" Conduit Type C : 1113.66 (in)
30" Conduit Type B : 1116.18 (in)
12" Conduit Type C : 1116.50 (in)
54" Conduit Type B : 1113.06 (out)

See N.B. Rest Area Extended Sections

12" Conduit
54" Conduit
30" Conduit

461+00
1118.1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 461+00 to 462+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
				132	2,532
		38	1,473		
				48	2,062
		14	1,726		
				30	3,333
		18	1,873		
				88	3,370
		76	1,766		
		67	1,601		
		68	1,692		

464+00
1136.1

463+50
1131.6

463+00
1127.5

462+50
1120.6

462+25
1120.9

1143.44 — 1135.78
1141.45 — 1134.29
1139.47 — 1132.81
1137.48 — 1131.32
1136.49 — 1130.58

1,450 — 1132.5 — 150 — 284
1,564 — 1129.5 — 150 — 279
1,520 — 1128.0 — 150 — 267
1497 — 1124.5 — 150 — 271
751 — 1123.5 — 150 — 269

Ramp U

4:1 / 5:1 / 8:1

See N.B. Rest Area Extended Sections

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 462+25 to 464+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
207	1,160			179	1,820
203	1,138	46	1,182		
1,128		41	1,359	81	2,352
1,228		37	1,490	72	2,638
239		105	1,327	132	2,609

See S.B. Rest Area Extended Sections

5:1

8:1

1151.38

466+00
1143.9

1141.72

Sta. 466+00 130' Rt.
Standard M.H. No. 2, (Bottom 4'6"x4'6")
Top of Grade = 1136.75
℄ 27" Conduit, Type B = 1130.0 (in)
℄ 36" Conduit, Type B = 1129.5 (in)
℄ 48" Conduit, Type C = 1128.5 (out)

See N.B. Rest Area Extended Sections

27" Conduit, Type B

36" Conduit Type B

For Continuation of Storm Sewer See Sheet No. 44

℄ Ramp U

4:1

8:1

1149.39

465+50
1141.7

1140.23

150

Item	ESTIMATED QUANTITIES
601	2 C.Y. Dumped Rock Channel Protection
602	0.3 C.Y. Concrete Masonry
603	110 L.F. 15" Conduit, Type B, with Class B Bedding
604	1 Ea. Standard Catch Basin No. 5
660	1 S.Y. Sodding

Sta. 65+00 Ramp U - 45' Rt.
Standard Catch Basin No. 5
Top of Grate = 1145.00
℄ 15" Conduit Type B = 1142.50

15" Conduit, Type B

For Continuation Storm Sewer See Sheet No. 114

Begin Jute Matting
Sta. 465+00 Lt. W = 7.5

1147.41

465+00
1139.8

1138.75

See S.B. Rest Area Extended Sections

See N.B. Rest Area Extended Sections

1145.42

464+50
1138.6

1137.26

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 464+50 to 466+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(151)229	

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Seeding End Width	Seeding Sq. Yds.
	1,495
	268
	1,468
	260
	1,305
	210
	1,168
	210

See S.B. Rest Area Extended Sections

See S.B. Rest Area Extended Sections

8:1

1159.32

468+00
1149.1

1157.23

467+50
1150.4

1155.35

467+00
1149.7

1153.36

466+50
1146.5

8:1 2:1 1142.5 150

℄ Ramp X

8:1 1147.66 150

8:1 2:1 1139.6 150

℄ Ramp X

8:1 1146.17 150

Sta. 467+00, 20' Rt.
Standard Catch Basin No. 5
Top of Grate = 1142.77
F.L. 27" Conduit, Type C = 1138.78 (in)
F.L. 27" Conduit, Type B = 1136.55 (out)
F.L. 6" Conduit, Type F = 1139.90 (in)

27" Conduit Type B 4.35%

1144.69

8:1

See N.B. Rest Area Extended Sections

For Continuation of Storm Sewer See Sheet No. 43

8:1 1143.20

See N.B. Rest Area Extended Sections

8:1

ESTIMATED QUANTITIES

Item		
603	148 L.F.	27" Conduit, Type B, With Class B Bedding
604	1 Each	Catch Basin Standard No. 5

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		578	1,528
242	789		
		374	1,551
163	887		
		344	1,532
209	767		
		331	1,430
147	784		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 466+50 to 468+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

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Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
				1,296	2,046
258	1,632	461	1,131		
	1,428			718	1,885
256					
	1,400	314	905		
248					
				377	1,505
	1,420	93	720		
260					
				130	1,668
	1,472				
		48	1,081		
270					
				415	1,798
				400	862

See S.B. Rest Area Extended Sections

8:1

1169.03

End Jute Matting Sta. 470+00 Lt.

470+50
1156.3

3:1

℄ Ramp X2

150

1155.08

8:1 8:1

3:1

4:1

470+00
1151.8

1167.17

1153.60

6:1

℄ Ramp X1

1165.25

1152.11

End Standard Paved Gutter, Type 1-4
Sta. 469+25 Rt.

Begin Jute Matting
Sta. 469+25 Rt.
W=7.5

469+50
1149.9

½" per ft.

1146.2

℄ Ramp X2

1150.63

469+00
1150.7

2:1

1144.2

℄ Ramp X1

1163.29

1149.14

468+50
1149.0

1161.30

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 468+50 to 470+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING END WIDTH	SEEDING SQ. YDS.
1,382	
1,400	
254	
1,452	
269	
1,309	
266	

See S.B. Rest Area Extended Sections

250

1176.04

472+50
1168.2

1161.02

150

℄ Ramp X

2:1

150

1,573 147

End Jute Matting
Sta. 472+50 Rt.

ESTIMATED QUANTITIES

Item	
603	204 L.F. 18" Conduit, Type B, With Class B Bedding
603	24 L.F. 18" Conduit, Type F
604	2 Each Standard No. 5 C.B.

← Standard Catch Basin No. 5, 20' Rt. 150
Top of Grate = 1157.48
F.L. 18" Conduit, Type F = 1153.45 (in)
F.L. 24" Conduit, Type C = 1153.00 (in)
F.L. 27" Conduit, Type C = 1152.70 (out)
F.L. 6" Conduit, Type F = 1154.90 (in)

℄ Ramp X

2,645 328

8:1

706.02(III) or 706.08 204'-18" Conduit, Type B 3.0%

Concrete Collar

For Continuation of Storm Sewer See Sheet No. 117

15° Bend 24'-18" Conduit Type F

1174.36

472+00
1165.4

1159.40

2:1

150

1,284 207

1172.63

1158.05

℄ Ramp X

3:1

150

2,140 693

471+50
1164.6

1,027 542

150

℄ Ramp X

8:1 8:1

3:1

150

1,479 1,127

788 842

See S.B. Rest Area Extended Sections

12:1

471+06
1161.3

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		3,246	292
1,573	147		
		2,645	328
1,284	207		
2,140	693		
1,027	542		
1,479	1,127		
788	842		

Sta. 471+06 to 472+50

FED. RD. DIVISION	STATE	PROJECT	
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Seeding End Width	Seeding Sq. Yds.
1,326	
1,340	
1,355	
1,369	

See S.B. Rest Area Extended Sections

See S.B. Rest Area Extended Sections

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		6,588	4
		3,277	5
		5,666	16
		2,843	12
		4,754	74
		2,290	67
		3,911	217
		1,932	168

474+50
1180.9

240
8:1
1182.30
150
℄ Ramp X
2:1
150
1166.96

241
8:1
1180.80
150
℄ Ramp X
2:1
150
1165.48

474+00
1177.5

245
8:1
1179.26
150
℄ Ramp X
2:1
150
1163.99

473+50
1174.5

247
8:1
1177.67
150
℄ Ramp X
2:1
150
1162.51

473+00
1171.4

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 473+00 to 474+50

FED. RD. DIVISION	STATE	PROJECT	
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SUMMIT COUNTY
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ESTIMATED QUANTITIES

Item		
603	92 L.F.	21" Conduit, Type B, With Class B Bedding
604	2 Each	Standard Catch Basin No. 5

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	3,278				
289				24,782	0
	3,282			6,265	0
				21,371	0
302					
	1,482			5,276	0
231				8,220	0
	1,301			4,434	0
237				7,658	0
				3,838	0

477+00
1200.1

Sta. 477+00, 20' Rt.
Standard No. 5 Catch Basin
Top of Grate = 1172.47
FE 15" Conduit, Type C = 1168.56 (in)
FE 21" Conduit, Type B = 1168.16 (in)
FE 24" Conduit, Type C = 1167.91 (out)

Sta. 477+00 113.7' Rt.
Standard No. 5 Catch Basin
Top of Grate = 1171.83
FE 21" Conduit, Type B = 1169.3
FE 6" Conduit, Type F = 1171.0

1189.07
1174.39
1.21%
21" Conduit, Type B
3:1
8:1
2:1
150

476+00
1193.2

1186.50
1171.42
6:1
8:1
2:1
150

See S.B. Rest Area Extended Sections

475+50
1190.2

1185.14
1169.93
2'
8:1
2:1
150

475+00
1186.0

1183.74
1168.45
4'
8:1
2:1
150

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 475+00 to 477+00

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING Sq. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	3609				
					30402
	316				
				7,882	0
	3429				
					27,778
	301				
				7,117	0

3:1 150 2:1 150

1193.64 1180.33 Edge of Ramp X Taper 150

479+00
1211.8

3:1 150 2:1 150

1191.45 1177.36 Edge of Ramp X Taper 150

478+00
1206.3

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 478+00 to 479+00

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	Cu. Yds. CUT	Cu. Yds. FILL
	3,636				
		150			
		2:1			
				35,570	0
331					
		2:1			
		1197.47			
		481+00			
		1222.5			
		1185.85			
		Edge of Ramp 'X' Taper			
		2:1			
		150			
				2,434	0
	3,694				
		150			
		2:1			
				33,284	0
334					
		2:1			
		1195.65			
		480+00			
		1217.5			
		1183.20			
		Edge of Ramp 'X' Taper			
		2:1			
		150		8,539	0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 480+00 to 481+00

FED. RD. DIVISION	STATE	PROJECT	
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Seeding End Width	Sq. Yds.
3578	
329	
3625	
323	

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			40,112 0
		10,636	0
		31,815	0
		9,789	0

2:1

150

1200.54

483+00
1231.1

1190.53

Edge of Ramp X Taper

2:1

150

2:1

150

End Jute Matting
Sta. 482+25 Lt.

Item 604 1 Each ESTIMATED QUANTITIES Standard No. 5 Catch Basin

Sta. 482+00, 20' Rt.
Standard No. 5 Catch Basin
Top of Grate = 1186.38
F.L. 15" Conduit Type C = 1183.88 (out)
F.L. 6" Conduit Type F = 1184.23 (in)

2:1

1199.10

482+00
1226.8

1188.30

Edge of Ramp X Taper

2:1

150

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

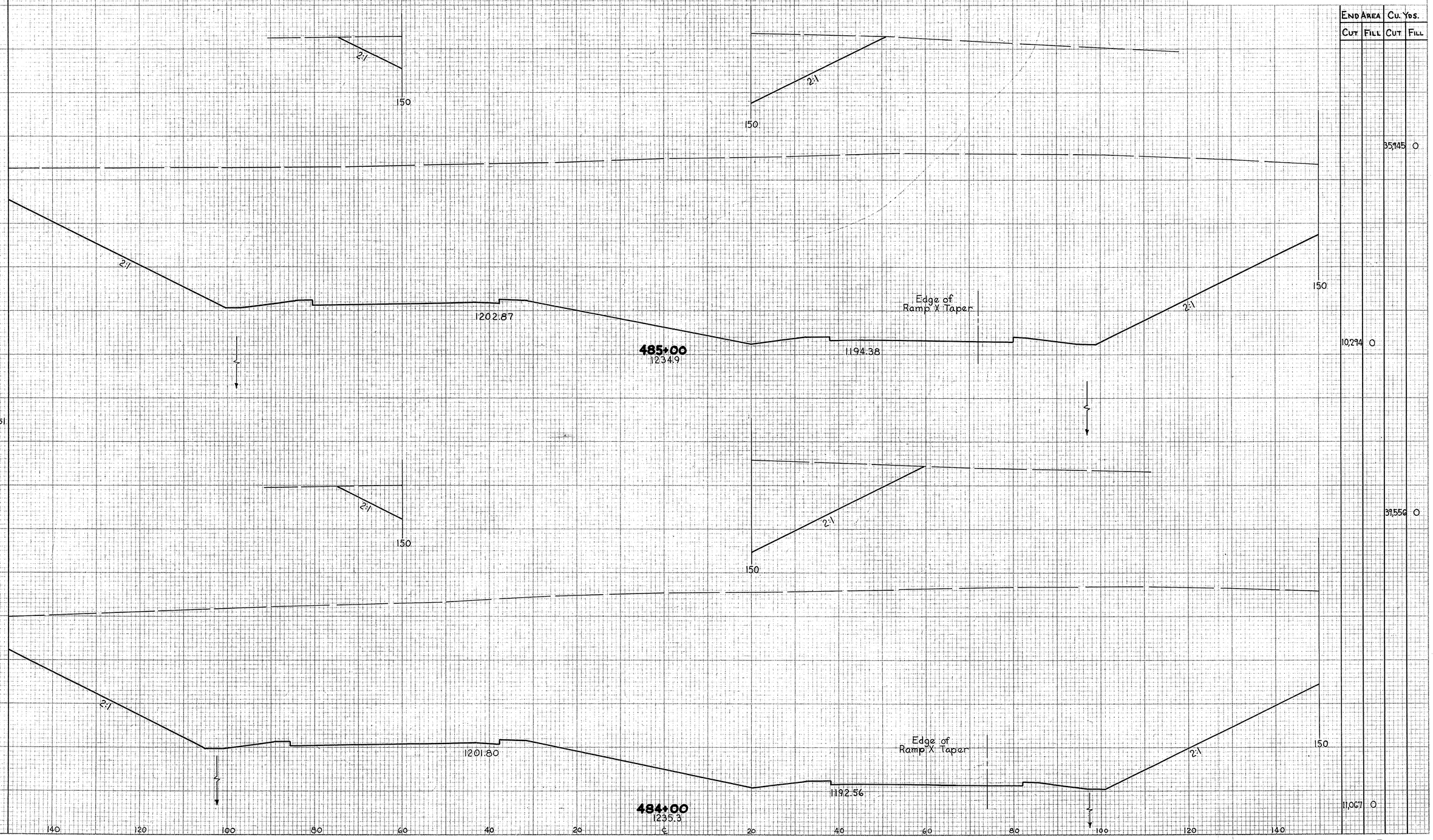
Sta. 482+00 to 483+00

FED. RD. DIVISION	STATE	PROJECT	
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Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	3,357				
306				35,145	0
	3,451				
315				39,556	0
				11,067	0



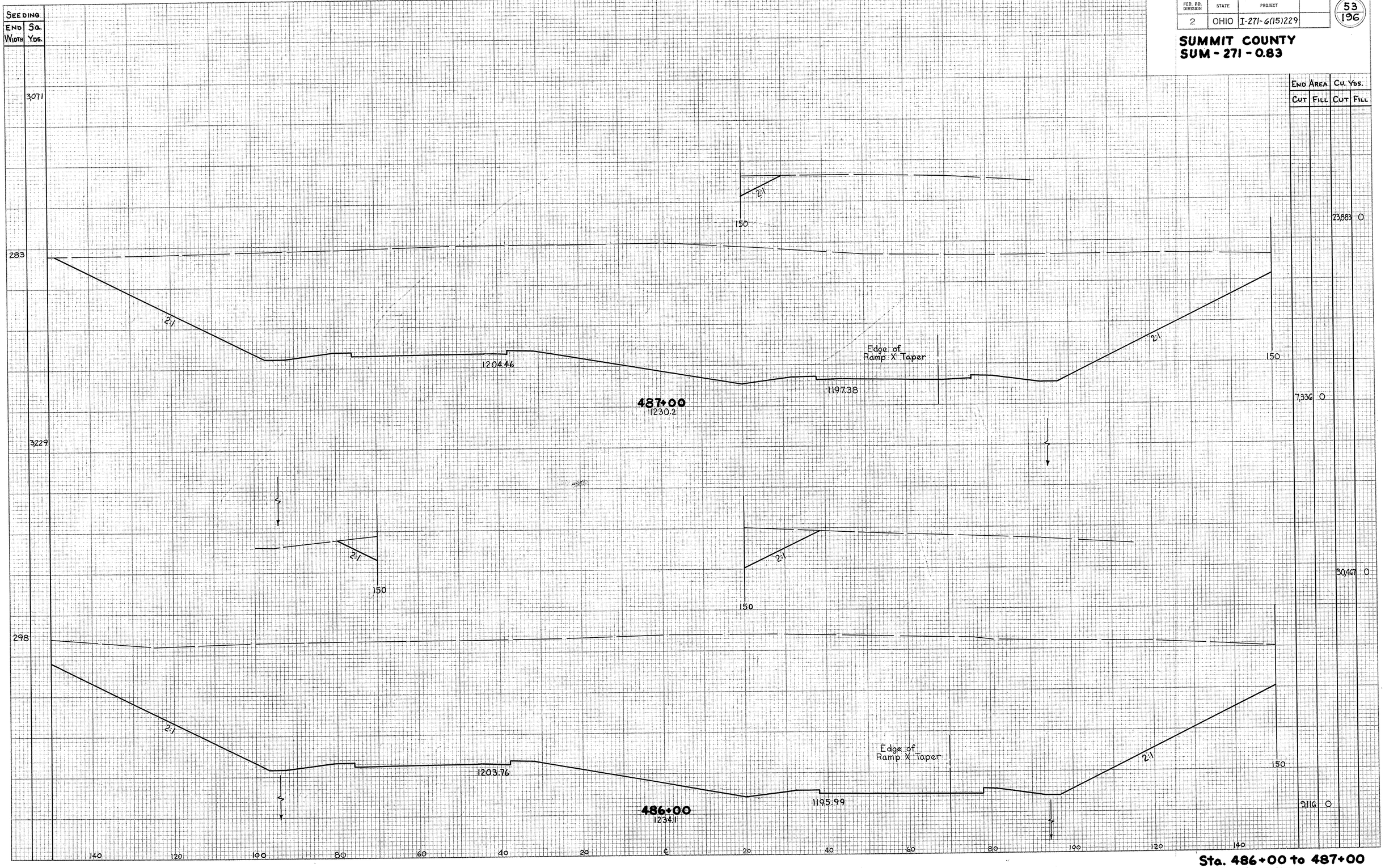
Sta. 484+00 to 485+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
	3071				23,883 0
283					
	3229				7,336 0
					30,467 0
298					
					2,116 0



Sta. 486+00 to 487+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

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Seeding End Width	Seeding Sq. Yds.
248	1,371
	1,388
251	
	1,420
259	
269	1,469

489+50
1220.2
1205.38
1199.96
2:1
2:1

489+00
1220.7
1205.29
1199.55
2:1
2:1

488+50
1222.7
1205.15
1199.09
2:1
2:1

488+00
1223.5
1204.7
1198.57
2:1
2:1

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		7,208	0
4,324	0		
		8,190	0
4,521	0		
		8,848	0
5,036	0		
		9,812	0
5,561	0		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 488+00 to 489+50

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	2,257				
206		645	0	1,522	167
	2,393				
224				4,027	0
	2,507	1,528	0		
227				7,163	0
	2,587				
239		2,610	0		
	2,691			11,789	0
245		3,757	0		
		4,217	0	14,767	0

494+00
1204.0
℄ Med. 1198.5
6:1 — 1204.10 — 1201.31 — 1198.90 — 4:1

493+00
1208.3
℄ Med. 1198.9
6:1 — 1202.33 — 1204.71 — 1201.37 — 1199.24 — 3:1

492+00
1213.4
℄ Med. 1199.3
3:1 — 1202.68 — 1205.14 — 1201.23 — 1198.90 — 2:1

491+00
1217.1
℄ Med. 1198.85
2:1 — 1203.03 — 1205.38 — 1200.88 — 1198.55 — 2:1

490+00
1219.7
℄ Med. 1198.4
2:1 — 1205.43 — 1200.32 — 2:1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 490+00 to 494+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING END WIDTH	SEEDING SQ. YDS.
235	2,666
227	2,565
216	2,460
187	2,242
181	2,050
193	2,082
200	2,184

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		10,647	0
2,451	0		
		6,587	0
1,106	0		
		2,686	22
344	12		
		793	352
85	177		
		2.00 1,081	
24	408		
		89	1,311
25	300		
		374	722
177	90		

3:1

1194.96

501+00

1203.1

6:1 1196.60 1196.50 8:1 4:1 1193.5

500+00

1199.2

6:1 8:1 1195.5 1198.24 FL Med.= 1193.9 1197.82 8:1 4:1 1194.0

Begin Jute Matting
Sta. 499+00, Lt. W= 11'

499+00

8:1 1196.0 1199.79 FL Med. 1195.2 1198.94 8:1 1194.5

498+00

1196.5

8:1 1196.5 1201.15 FL Med. 1196.3 1199.84 8:1 1195.0

497+00

1196.8

Sta. 496+40, 141' Lt.
Std. C.B. 2-2-B
Top of Grate = 1198.00
℄ = 1195.50

8:1 1197.4 1202.32 ℄ Med. 1197.3 8:1 1197.2

Sta. 496+40, 131' Rt.
Std. C.B. 2-2-B
Top of Grate = 1197.00
℄ = 1194.14

496+00

1198.2

0.5% 1200.54 12" Conduit, Type B at Sta. 496+40

ESTIMATED QUANTITIES

603 12" Conduit, Type B with Class B Bedding = 272 L.F.
604 Standard No. 2-2-B Catch Basins = 2 Each

8:1 1200.0 1203.30 FL Med. 1198.0 1201.03 6:1 1198.55

495+00

1200.6

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 495+00 to 501+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

Seeding End Width	Seeding Sq. Yds.	Station	Elevation	Cut	Fill	Cu. Yds. Cut	Cu. Yds. Fill
	1,103						
201							1,478 GO
	1,125		1187.58				
		505+50		972	7		
			1192.4				
203							2,472 G
			1188.40				
	2,314	505+00		1,699	0		
			1195.7				
							7,707 O
213			1190.04				
		504+00		2,463	0		
			1199.7				
	2,449						
							9,818 O
228							
	2,627		1191.68				
		503+00		2,840	0		
			1202.8				
245							11,368 O
		Begin Jute Matting Sta. 502+00 ℄ Median W=7.5'					
			1193.32				
		502+00		3,299	0		
			1205.0				

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 502+00 to 505+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. Yds.
286	1,602
270	1,546
257	1,465
247	1,403
196	1,232

ESTIMATED QUANTITIES

Item		
601	2 C.Y.	Dumped Rock Channel Protection
602	03 C.Y.	Concrete Masonry
603	122 L.F.	15" Conduit, Type B with C.I.B. Bedding
604	1 Ea.	Catch Basin Std. No. 4
660	2 S.Y.	Sodding

C.B., Std. No. 4
Top of Grate = 1179.06
FL 15" Conduit Type B = 1175.80

10'
W = 4'
t = 18"

4:1

3.5:1

1172.2
Std. Type "E" Hdwl.
FL = 1172.25

122' - 15" Conduit, Type @ 3.0%

End Jute Matting
Sta. 508+00 ℄ Median

1165.0

1183.48
508+00
1164.1

Begin 6' Bottom Ditch
Sta. 508+00, Rt.
End Sod Ditch
Sta. 508+00, Rt.

5:1

4:1

1178.0

1184.30
507+50
1172.4

1170.0

4:1

6:1

6:1

1181.6

1178.2

1185.12
507+00
1180.7

Begin Sod Ditch
Sta. 506+50, Rt. W = 8'

7:1

6:1

1183.2

1183.0

1185.94
506+50
1184.1

6:1

6:1

1186.76
506+00
1189.2

END AREA Cut	END AREA Fill	CU. YDS. Cut	CU. YDS. Fill
		68	6,778
38	3,340		
		55	4,044
22	1,999		
		54	2,538
37	743		
		163	927
139	258		
		707	223
625	58		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 506+00 to 508+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	2,423			242	14,263
307					
		77	5,264		
1,710					
				166	9,370
308					
		103	4,856		
1,667					
		131	8,593		
291					
		39	4,425		
1,616					
		69	7,782		
290					
		35	3,980		

2.5:1
1180.20
510+00
1155.1
2:1
1155.0
150
150 1148.5
3:1
1181.02
509+50
1158.3
2:1
1158.5
150
150 1149.5
3.5:1
1163.0
Begin 6' Bottom Ditch
Sta. 509+00, Lt.
End Jute Matting
Sta. 509+00, Lt.
1181.84
509+00
1160.6
2.5:1
150 1155.0
4:1
1169.0
3:1
1182.66
508+50
1162.3
150 1159.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 508+50 to 510+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				83	11,824
1,775					
327		67	6,666		
433					
				28	2,990
322					
		57	6,796		
1,340					
				74	9,145
312					
		48	6,199		
1,047					
				88	6,632
316					
		102	5,740		

2:1

1177.74
511+50
1147.4

1145.0 150

150 1142.0

1177.94
511+38
1145.7

1146.0 150

150 1143.0

1178.56
511+00
1148.3

1148.0 150

150 1146.0

1179.05
510+70
1151.6

1148.5 150

150 1147.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 510+70 to 511+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	1,897				
				43	15,284
339					
		21	8,055		
	1,888			52	14,034
340					
		35	7,100		
	1,811				
				53	12,226
312					
		22	6,103		

2:1 1140.5 150 1175.28 **513+00** 1139.9 150 1133.7 2:1

2:1 1141.5 150 1176.10 **512+50** 1145.6 150 1135.0 2:1

2:1 1142.0 150 1176.92 **512+00** 1148.7 150 End 6" Bottom Ditch Sta. 512+00 Rt. 2:1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 512+00 to 513+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	C.Y. CUT	C.Y. FILL
	1,955				
					243
	351				
				104	
	1,931				
					122
	344				
					28
	1,910				
					49
	344				
					26

13,482
7,559
14,724
8,342
15,550
8,451

1138.3
150
2:1
1172.82
514+50
1138.2
1132.7
150
2:1

1138.5
150
2:1
1173.64
514+00
1136.0
1132.8
150
2:1

1139.0
150
2:1
1174.46
513+50
1136.4
1133.0
150
2:1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 513+50 to 514+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
1,956					
				463	10,453
353					
				246	5,671
1,958					
				412	11,024
353					
				199	6,227
1,959					
				333	12,250
353					
				153	7,002

1137.7 150 2:1 1132.4 150 2:1

1170.36
516+00
1142.6

1137.9 150 2:1 1132.5 150 2:1

1171.18
515+50
1142.1

1138.1 150 2:1 1132.6 150 2:1

1172.00
515+00
1139.6

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 515+00 to 516+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	1,749			48	12,132
305					
		17	6,587		
	1,761			47	12,508
329					
		34	6,922		
	1,865			141	12,973
342					
		118	7,089		
	1,929			346	11,760
352					
		255	5,610		

1137.5 150 2:1

1168.23
518+00
1137.0

150 2:1

150 1132.1

1137.1 150 2:1

1168.55
517+50

150 2:1

150 1132.2

1137.3 150 2:1

1169.01
517+00
1134.8

Begin Jute Matting
Sta. 516+85 ℄ Median
W=7.5'

150 2:1

150 1132.3

1137.5 150 2:1

1169.61
516+50
1142.2

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 516+50 to 518+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	1-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. YDS.
324	1,779
318	1,783
320	1,774
324	1,792

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		145	11,283
89	6,096		
		125	11,329
46	6,139		
76	11,640		
36	6,435		
66	11,992		
36	6,516		

1168.41
520+00
1138.8

Catch Basin, Std. No.4 Sta. 519+35 ℄ Median
Top of Grate = 1163.69
FL 12" Conduit, Type C = 1161.20

1135.0
150
Begin 6' Bottom Ditch
Sta. 520+00, Rt.

2:1

1139.0
150

1134.0
150

Item

1168.15
519+50
1139.5

Begin Jute Matting
Sta. 519+35 ℄ Median
W = 7.5'

Dike

Qc = 12" Conduit, Type C

1138.5
150

1133.5
150

1168.03
519+00
1137.2

End Jute Matting
Sta. 518+65 ℄ Median

Catch Basin Std. No.4, Sta. 518+35, ℄ Median
Top of Grate = 1163.69
FL 12" Conduit, Type C (In) = 1160.20
FL 15" Conduit, Type B (Out) = 1160.10

Conc. Collar

25° Bend

90'-15" Conduit, Type B @ 1.0%

1138.0
150

1133.0
150

10'
W = 4"
t = 18"

52'-15" Conduit Type F

Std. Type E Headwall
FL 1138.20

1168.06
518+50
1137.0

ESTIMATED QUANTITIES

Item		
601	3 C.Y.	Dumped Rock Channel Protection
602	03 C.Y.	Concrete Masonry
603	90 L.F.	15" Conduit, Type B, with C.L.B. Bedding
603	52 L.F.	15" Conduit, Type F
604	1 Ea.	Catch Basin Std. No. 4
660	2 S.Y.	Sodding

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 518+50 to 520+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
				81	8,964
38	5,049				
				92	9,667
60	5,391				
112	10,107				
60	5,523				
119	10,753				
68	6,090				

1638
298
150
2:1
1141.5
1170.90
522+00
1146.2
150
2:1
1145.0

1677
306
150
2:1
1141.0
1170.06
521+50
1143.8
150
2:1
1142.0

1710
310
150
2:1
1140.5
1169.37
521+00
1143.0
End Jute Matting
Sta. 520+85 ℄ Median
150
2:1
1139.0

1740
317
150
2:1
1140.0
1168.82
520+50
1139.7
150
2:1
1137.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 520+50 to 522+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
302	2706				
				90	14,287
		25	4,613		
				55	8,334
293	1654				
		35	4,381		
				72	8,121
290	1620				
		42	4,381		
				85	8,340
292	1616				
		47	4,632		

1175.69
524+00
1152.9

1174.28
523+50
1151.9

1173.01
523+00
1151.2

1171.88
522+50
1148.9

1149.0 — 2:1 — 2:1 — 1149.0

1148.0 — 2:1 — 2:1 — 1150.0

1147.0 — 2:1 — 2:1 — 1148.0

1144.0 — 2:1 — 2:1 — 1147.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 522+50 to 524+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING	
END WIDTH	SQ. YDS.
220	
390	
296	
351	
199	
338	

1147.0
150
2:1
1134.5
150
2:1
1181.64
526+00
1144.5
1154.0
1136.0
150
2:1
150
2:1
1179.50
525+28
1147.1
1138.0
150
2:1
150
2:1
1177.95
524+76
1154.2
1151.0

End 6" Bottom Ditch
Sta. 525+00, Rt.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL
		92	17822
44		9,112	
		98	21,365
31		6,711	
67		11,987	
38		5,538	

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 524+76 to 526+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
2140				118	21,374
395					
2149				102	20,411
379					
2177				79	19,268
404					

2:1 — 1143.7 — 150 — 150 — 1133.5 — 2:1

1186.10
527+50
1141.0

1144.0 — 150 — 150 — 80 — 11,370 — 150

2:1 — 2:1

1184.61
527+00
1140.7

1144.8 — 150 — 150 — 30 — 10,673 — 1134.0

2:1 — 2:1

1183.13
526+50
1142.3

150 — 55 — 10,135

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 40

Sta. 526+50 to 527+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	2101				
				87	20,769
	387				
			35	11,540	
	2159				24
				238	
				70	21,600
	390				
			41	11,787	
	2126				
				83	21,758
	375				
			47	11,714	

2:1
1141.8
150
1155.0
150
150
1190.56
529+00
1142.4
1143.2
150
1141.0
150
STA. 528+85
EMBANKMENT
(CHANNEL)
Sta. 528+85
From Conduit
2:1
2:1
1189.07
528+50
1142.2
1143.5
150
150
1137.0
Begin Dumped Rock Channel Prot.
W. 8', T. 18'
Sta. 527+75 Rt.
2:1
2:1
1187.59
528+00
1141.3
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 528+00 to 529+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA Cut	END AREA Fill	CU. YDS. Cut	CU. YDS. Fill
353	1928	54	8,770	102	14,750
356	1971	68	10,242	113	17,604
369	2017	59	10,810	117	19,567

2:1

1142.0

150

1195.02
530+50
1163.0

1169.0

2:1

1141.0

150

1193.53
530+00
1141.7

1167.0

2:1

1141.5

150

1192.05
529+50
1140.5

1163.0

Begin 6' Bottom Ditch
Sta. 529+70, Rt.

End Dumped Rock Channel Prot.
Sta. 529+50, Rt.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 529+50 to 530+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING Sq. Yds.
1766	322
1827	335
1880	341

1157.0 — 150 — 2:1 — 2:1 — 1176.5

1199.48
532+00
1173.4

ESTIMATED QUANTITIES

Item		
601	3 C.Y.	Dumped Rock Channel Protection
602	0.3 C.Y.	Concrete Masonry
603	90 L.F.	15" Conduit, Type B With Cl. B Bedding
603	40 L.F.	15" Conduit, Type F
604	1 Ea.	Catch Basin, Std., No. 4
660	2 S.Y.	Sodding

1151.0 — 150 — 2:1 — 2:1 — 1174.0

C.B. Std. No. 4 Sta. 531+40 4' Rt.
Top of Grate: 1193.79
R.: 15" Conduit, Type B: 1190.00

Conc. Collar
90'-15" Conduit, Type B @ 1.0%
25° Bend
40'-15" Conduit Type F
10'
W-4'
T-18"
Std. Type E Headwall
R. 1174.20

1197.99
531+50
1171.0

Begin Jute Matting
Sta. 531+40 ℄ Median
W-7.5

1147.0 — 150 — 2:1 — 2:1 — 1171.0

1196.51
531+00
1166.2

	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			86	10,333
	41	5,734		
			89	11,101
	54	6,254		
			102	12,421
	55	7,160		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 531+00 to 532+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING Sq. Yds.		END AREA: CUT	END AREA: FILL	CU. YDS. CUT	CU. YDS. FILL
		1185.0				
	3393	2:1				
303		1169.0			192	22,578
		1205.43 **534+00** 1174.3				
		1183.0				
	1698	2:1	45	6,061	105	11,022
308		1167.0				
		1203.94 **533+50** 1174.1				
		1181.0				
		2:1				
1714		1164.0	112	10,440		
309		1202.45 **533+00** 1176.3	53	5,432		
		End Jute Matting Sta 532+90 ℄ Median				
		1179.0				
		2:1				
1729		1161.2	96	10,052		
13		1200.97 **532+50** 1176.0	51	5,426		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 532+50 to 534+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	3341	End 6' Bottom Ditch Sta. 538+00 Lt.				
300		1191.0			143	14,388
		1216.90 **538+00** 1195.4	40	4,009		
	3373	1184.5			152	16,129
306		1214.24 **537+00** 1190.7	42	4,700		
	3459	1176.0			180	19,186
316		1211.37 **536+00** 1183.7	55	5,661		
	3468	1171.0			211	21,858
308		1208.40 **535+00** 1177.2	58	6,142		

Begin Sod Ditch
Sta. 535+00, Rt. W-8'

End 6' Bottom Ditch
Sta. 535+00, Rt.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 535+00 to 538+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. Yds.
210	2463
	2376
217	
	2530
237	
	2535
219	
	2557
241	
	3011
300	

End Sod Ditch
Sta. 544+00, Lt.

6:1 8:1 1226.3

1228.49
544+00
1230.4

6:1 1221.5

1227.08
543+00
1227.4

4:1 1213.5

1225.46
542+00
1225.1

End Jute Matting
Sta. 541+50 ℄ Median

Begin Sod Ditch
Sta. 541+00, Lt. W=8'

3:1 6:1 1219.6

CB, Std. No. 4
Top of Grate = 1217.18
℄ 15" Conduit, Type B, 1214.00

1223.64
541+00
1218.7

2:1 4:1

15" Conduit, Type B @ 2.4% →

10'
W=4'
T=18'

Std. HW-E Headwall
℄ 1211.10

1211.0

1221.60
540+00
1207.3

Begin Jute Matting
Sta. 540+00 ℄ Median
W=7.5'

2:1 4:1 1198.0 1204.0

1219.36
539+00
1200.8

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

ESTIMATED QUANTITIES

Item		
601	2 C.Y.	Dumped Rock Channel Protection
602	0.3 C.Y.	Concrete Masonry
603	120 L.F.	15" Conduit, Type B, With Cl. B. Bedding
604	1 Ea.	Catch Basin, Std. No. 4
660	2 S.Y.	Sodding

End Sod Ditch
Sta. 541+00, Rt.

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		2,992	47
594	25		
		2,137	315
560	144		
		1,897	894
464	338		
		933	1,947
40	713		
		93	5,676
10	2,352		
		87	11,320
36	3,761		

Sta. 539+00 to 544+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.
22.1	2467
	2382
208	
	2289
204	
	2392
226	
	2555
234	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		13,070	0
2,640	0		
		7,670	0
1,502	0		
		4,670	2
1021	1		
		4,415	2
1363	0		
		4,416	0
		1,022	0

Sta. 545+00 to 549+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.
255	2993
242	2757
229	2616
223	2514

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		24,942	0
7,535	0		
		24,930	0
7,007	0		
		24,137	0
6,027	0		
		19,344	0
4419	0		

2:1
1:1
1229.2
1231.82
553+00
1259.7
1229.4
1229.6
1232.28
552+00
1258.9
1229.8
1230.0
F.L. 1238.0
1232.54
551+00
1256.0
550+25
1230.2
1230.2
F.L. 1238.3
1232.58
550+00
1249.3
550+50
1230.2
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 550+00 to 553+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	2629				
197				24813	0
	1339			6058	0
285				13,446	0
	1581			8,466	0
				15,461	0
284				8,232	0

2:1 1:1 150 2:1 3:1 3:1 2:1

Ft. Med. 1226.7 — 1230.26 — **555+00** — 1258.4 — Ft. Med. 1226.7 — 1227.6

Ft. Med. 1227.0 — 1230.73 — **554+50** — 1260.5 — Ft. Med. 1227.0 — 1227.8

Ft. Med. 1227.3 — 1231.14 — **554+00** — 1259.6 — Ft. Med. 1227.3 — 1228.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 554+00 to 555+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
	1,523				
120				10,849	0
	1,147				
		2,857	0		
86				10,318	0
	919				
		2,714	0		
80				10,878	0
	879				
				3,160	0
78					
276				13,197	0
		Ahead	3,962	0	
		Back	7,340	0	

See Ramp A

Begin Jute Matting
Sta. 559+50 ℄ Median
W.= 7.5'

See Ramp B

1224.66
559+00
1238.3

See Ramp A

See Ramp B

1226.37
558+00
1242.1

See Ramp A

See Ramp B

1227.88
557+00
1246.6

Main Line Back
Ramp A Ahead Main Line Ahead

Main Line Back
Main Line Ahead Ramp B Ahead

2:1

150

Ahead
Back

2:1

1:1

2:1

1:1

150

1229.17
556+00
1253.1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 556+00 to 559+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	1-271-6(15)229	

80
196

SUMMIT COUNTY
SUM-271-0.83

SEEDING		END AREA		CU. YDS.	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL
	1,337				
251					
	2,629			5,577	0
222				11,776	0
	2,271				
				3,195	0
187				11,707	0
	1,891				
				3,127	0
153				11,347	0
				3,001	0

See Ramp A

See Ramp B

1215.72
563+00
1224.5

1218.26
562+00
1229.2

C.B., Std. No. 4
Top of Grate = 1216.18
℄ 15" Conduit, Type B (in) 1212.75
℄ 27" Conduit, Type B (in) 1211.75
℄ 30" Conduit, Type C (out) 1211.50

27" Conduit

15" Conduit

1220.60
561+00
1230.5

End Jute Matting
Sta. 561+00 ℄ Median

1222.73
560+00
1234.5

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

Sta. 560+00 to 563+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

END WORK STA. 573+46
END PROJECT STA. 566+09.76

SEEDING END WIDTH	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
90	510				
250					
	2,500				
		567+27 7.17	0	1,670	0
199		Sta. 567+00 26.23	0		
					11,177 0
	2530			3413	0
257					12416 0
	3,044			3291	0
291					11504 482
	1447			2921	260
230					5353 241
				2860	0

Sta. 567+27

2:1

1204.5

1204.25

See Sheet No. 32 for Continuation of median ditch

℄ Temporary Ditch = 1196.5

For continuation of temporary ditch see Sheet No. 32

567+00
1214.7

C.B. Std. No. 5, 95' Lt. Sta. 565+90
Top of Grate = 1205.40
℄ 21" Conduit, Type B = 1201.25
℄ 6" Conduit, Type F = 1202.25

C.B., Std. No. 4 Sta. 565+90
Top of Grate = 1203.11
℄ 21" Conduit Type B (in) Rt. ℄ Lt. = 1198.25
℄ 30" Conduit Type C (in) = 1197.92
℄ 30" Conduit Type C (out) = 1197.82

C.B., Std. No. 5, 95' Rt. Sta. 565+90
Top of Grate = 1205.40
℄ 21" Conduit, Type B = 1201.25
℄ 6" Conduit, Type F = 1202.25

3:1

21" Conduit

End Jute Matting
Sta. 565+90

1207.24
566+00
1220.2

Item		ESTIMATED QUANTITIES
603	190 L.F.	21" Conduit, Type B With Class B Bedding
604	1 Ea.	Catch Basin, Std. No. 4
604	2 Ea.	Catch Basin, Std. No. 5

See Ramp A

150

C.B., Std. No. 5, 17' Rt. Sta. 564+50
Top of Grate = 1209.11
℄ 30" Conduit, Type C (in) = 1202.17
℄ 30" Conduit, Type C (out) = 1202.07

4:1

See C.H. 17

Begin Jute Matting
Sta. 564+40
W = 7.5

1210.10
565+00
1222.2

End Jute Matting
Sta. 564+50, 17' Rt.

1212.96
564+00
1220.7

Begin Jute Matting
Sta. 563+50 ℄ Median
W = 7.5'

1214.36
563+50
1220.4

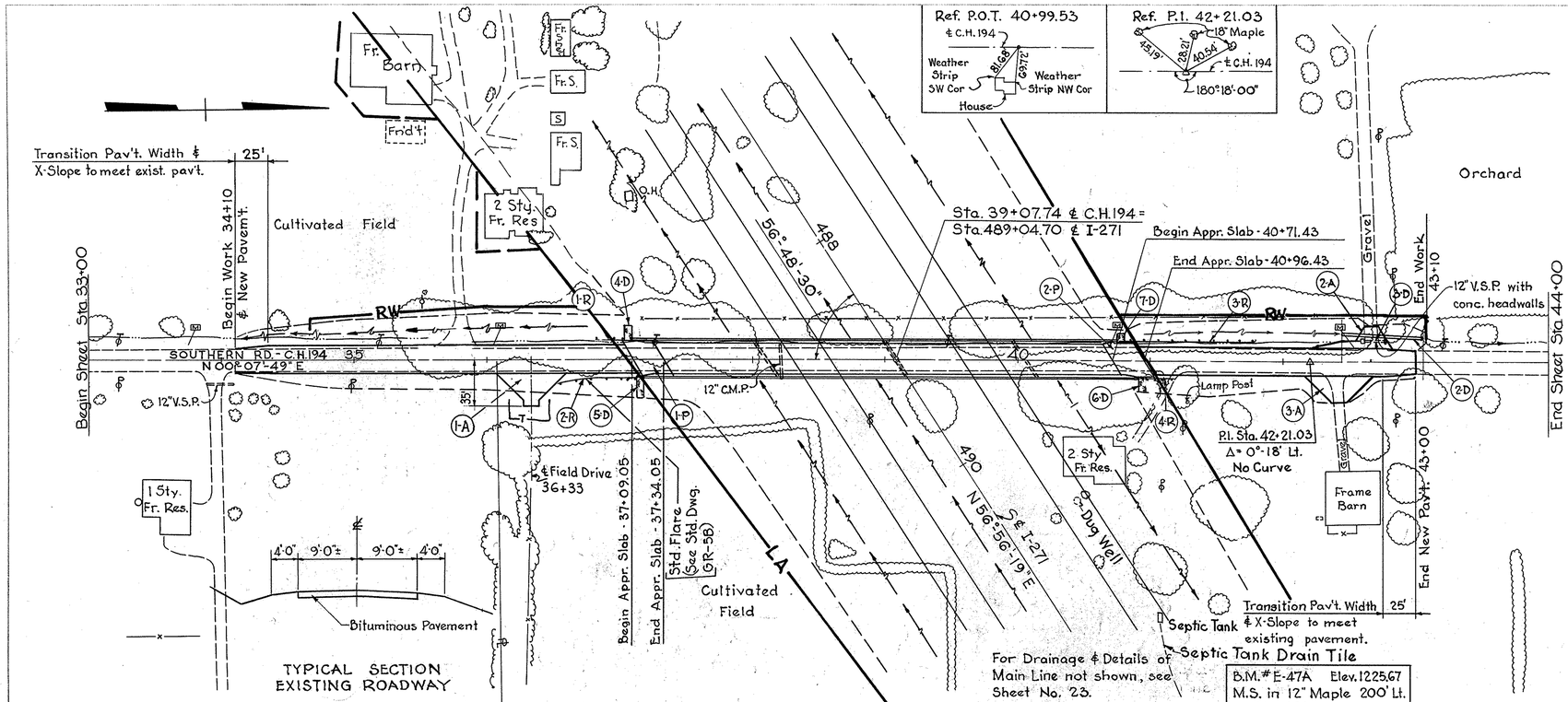
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

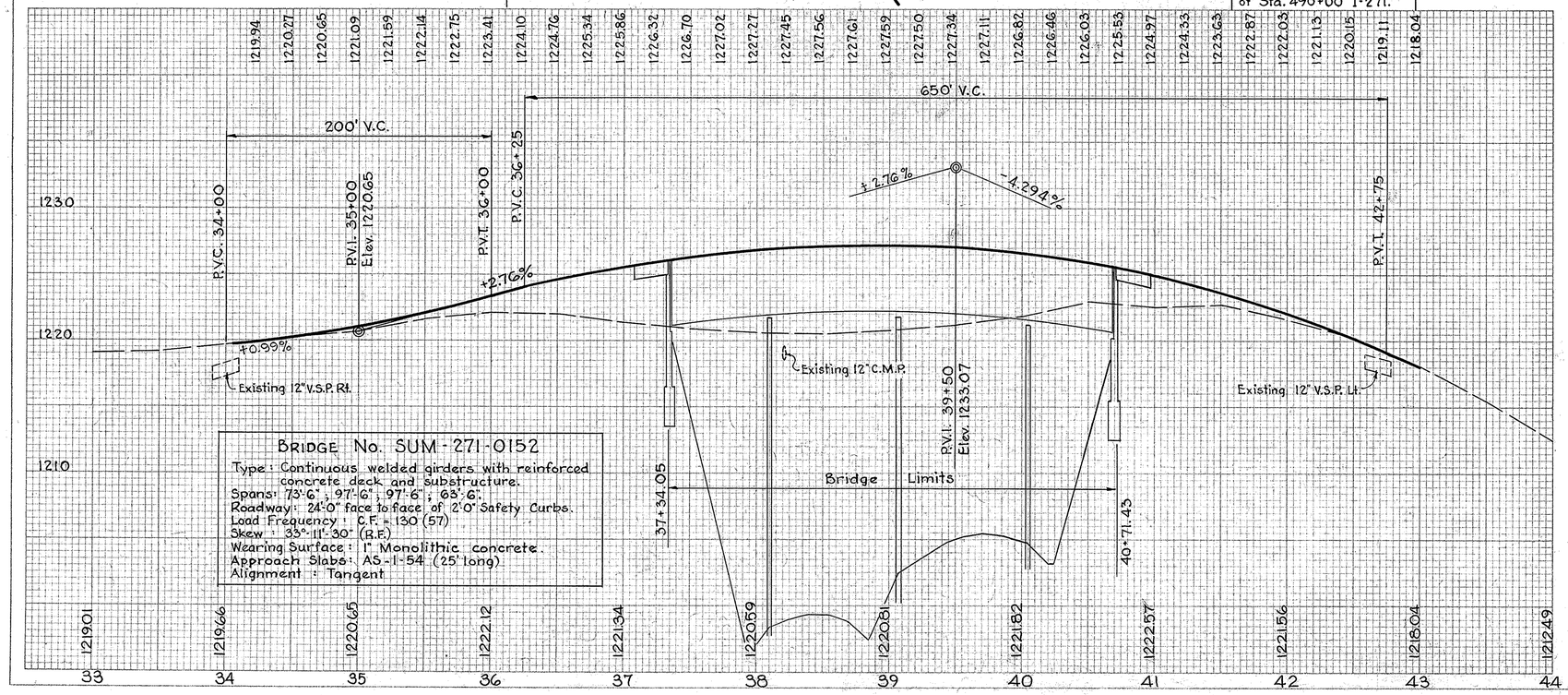
Sta. 563+50 to 567+00

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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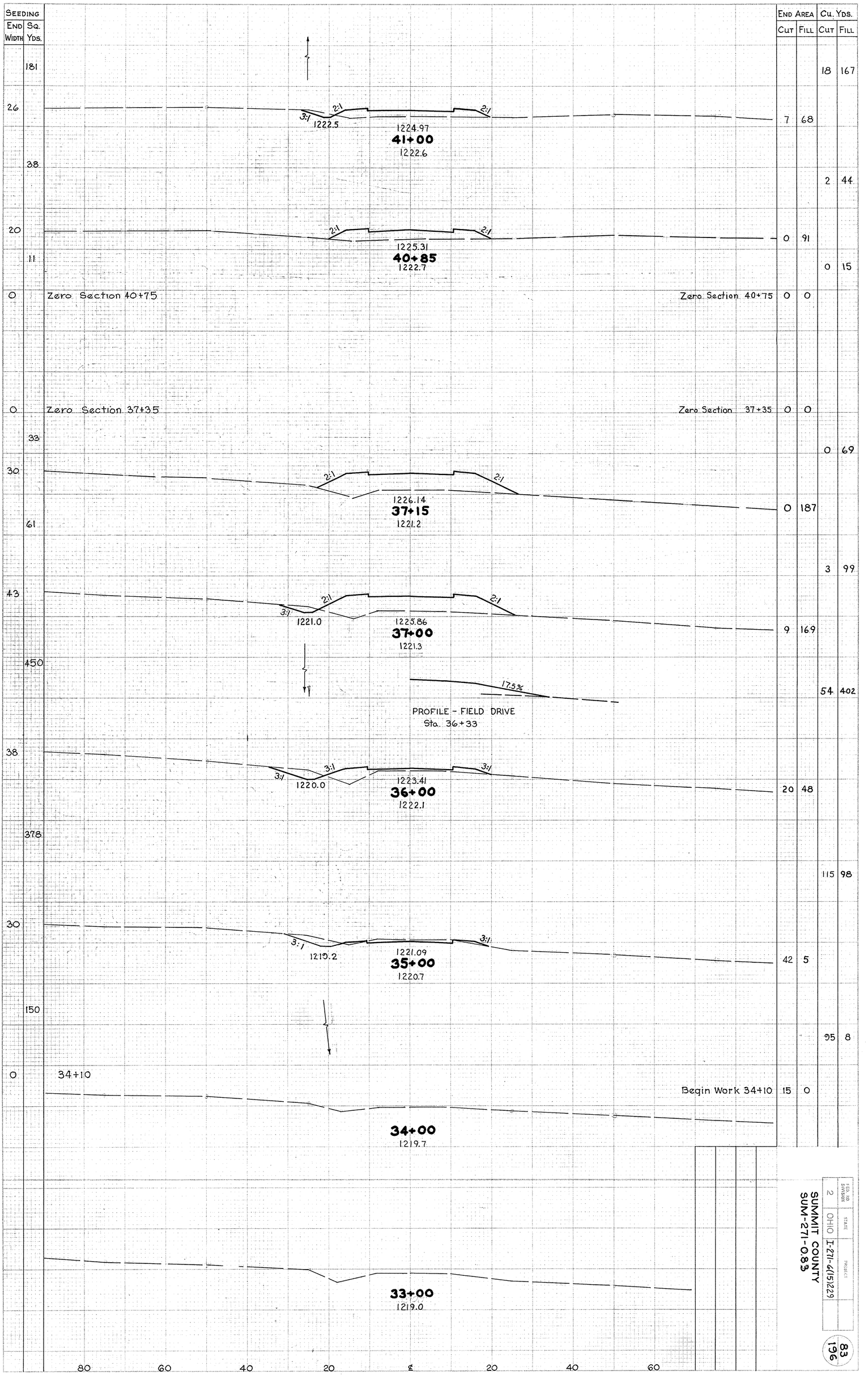




ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	202 Pipe Removed 15"ϕ & Under Lin. Ft.	304 Aggregate Base t=5" Cu. Yds.	404 Asphalt Concrete (SS-100) 2-1" Courses Cu. Yds.	608 12" Conduit Type D Lin. Ft.	606 Guard Rail Type 4 Lin. Ft.	611 Reinf. Conc. Appr. Slabs (t=15") Sq. Yds.	660 Sodding for Special Berm & Slope Protection Sq. Yds.	SEE SHEET NO.
2-D	42+67	Lt.								
3-D	42+59 to 42+79	Lt.	20							
4-D	37+08	Lt.				68				
5-D	37+15	Rt.							12	
6-D	40+95	Rt.							14	
7-D	40+79	Lt.							6	
									6	
1-P	37+09.05 to 37+34.05	-						66.7		
2-P	40+71.45 to 40+96.45	-						66.7		
1-R	36+84 to 37+09	Lt.					25			
2-R	36+18 to 37+18	Rt.					62.5			
3-R	40+76 to 41+76	Lt.					100			
4-R	40+93 to 41+18	Rt.					25			
1-A	36+33	Rt.								
2-A	42+77	Lt.		11.4	30					
3-A	42+40	Rt.								
	TOTALS		20	11.4	5.0	68	212.5	133.4	40	24.9

SOUTHERN RD. - C.H.194 Sta. 33+00 to 44+00



SOUTHERN RD.-C.H.194 Sta.33+00 to 41+00

SUMMIT COUNTY
SUM-271-0.83

2	OHIO	I-271-4(151229)	
DIST. NO.	STATE	PROJECT	

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Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill

45+00
1207.0

44+00
1212.5

29' Lt.
End Drive

3:1

3:1

20' Lt

68' Conduit Type D

DRIVE SECTIONS
42+77 Lt.

0

End Work 43+10

1218.04

43+00
1218.0

		15	0		

183

Existing 12" V.S.P.

6.0%

-5.3%

12" Conduit Type D

DRIVE PROFILE
42+77 Rt.

DRIVE PROFILE
42+00 Rt.

				119	7

33

3:1

1220.2

1222.03

42+00
1221.6

		48	4		

200

				59	108

39

2:1

3:1

2.5:1

1222.0

1226.03

41+50
1222.8

		12	113		

80 60 40 20 ℄ 20 40 60

SOUTHERN RD. - C.H.194 Sta. 41+50 to 45+00

FED. ROAD DIV. 2 | STATE OHIO | PROJECT I-271-6(115)23 9

SUMMIT COUNTY
SUM-271-0.83

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196

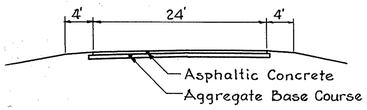
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

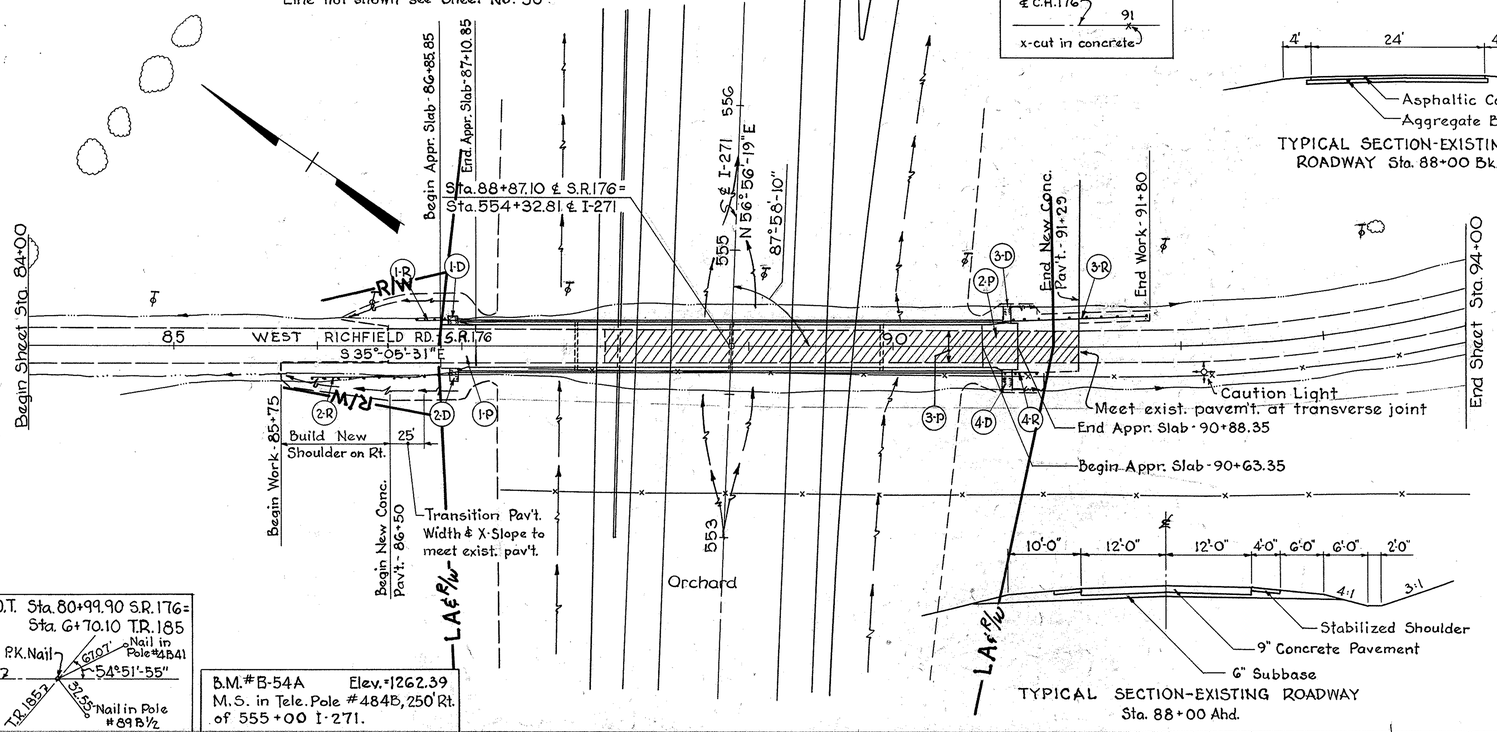
85/196

For Drainage and Details of Main Line not shown see Sheet No. 30.

Ref. P.O.T. Sta. 91+00
℄ C.H. 176 — 91
x-cut in concrete



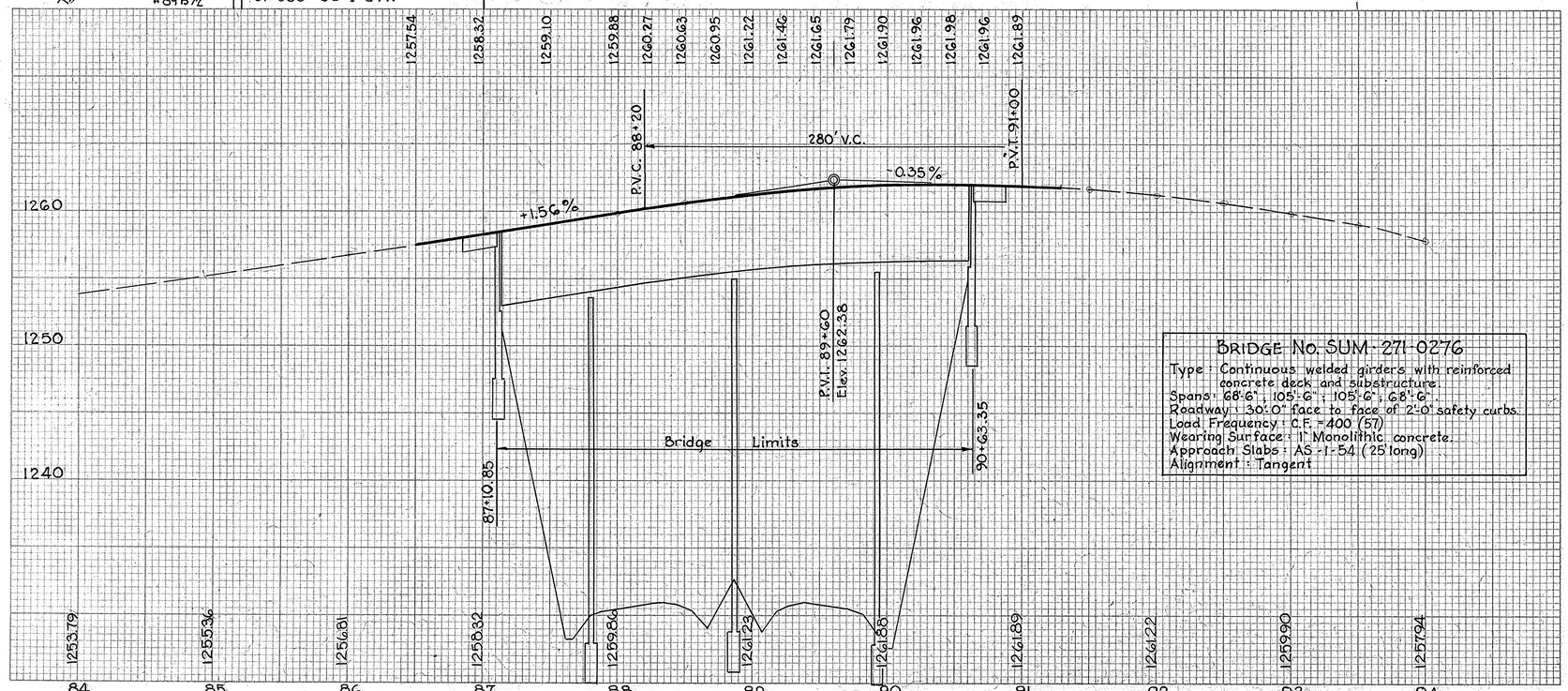
TYPICAL SECTION-EXISTING ROADWAY Sta. 88+00 Bk.



TYPICAL SECTION-EXISTING ROADWAY Sta. 88+00 Ahd.

Ref. P.O.T. Sta. 80+99.90 S.R. 176 = Sta. 6+70.10 T.R. 185
P.K. Nail
S.R. 1767
67.07'
Nail in Pole #4841
54°-51'-55"
T.R. 1852
37.55'
Nail in Pole #89 B½

B.M. #B-54A Elev. = 1262.39
M.S. in Tele. Pole #4845, 250' Rt. of 555+00 I-271.

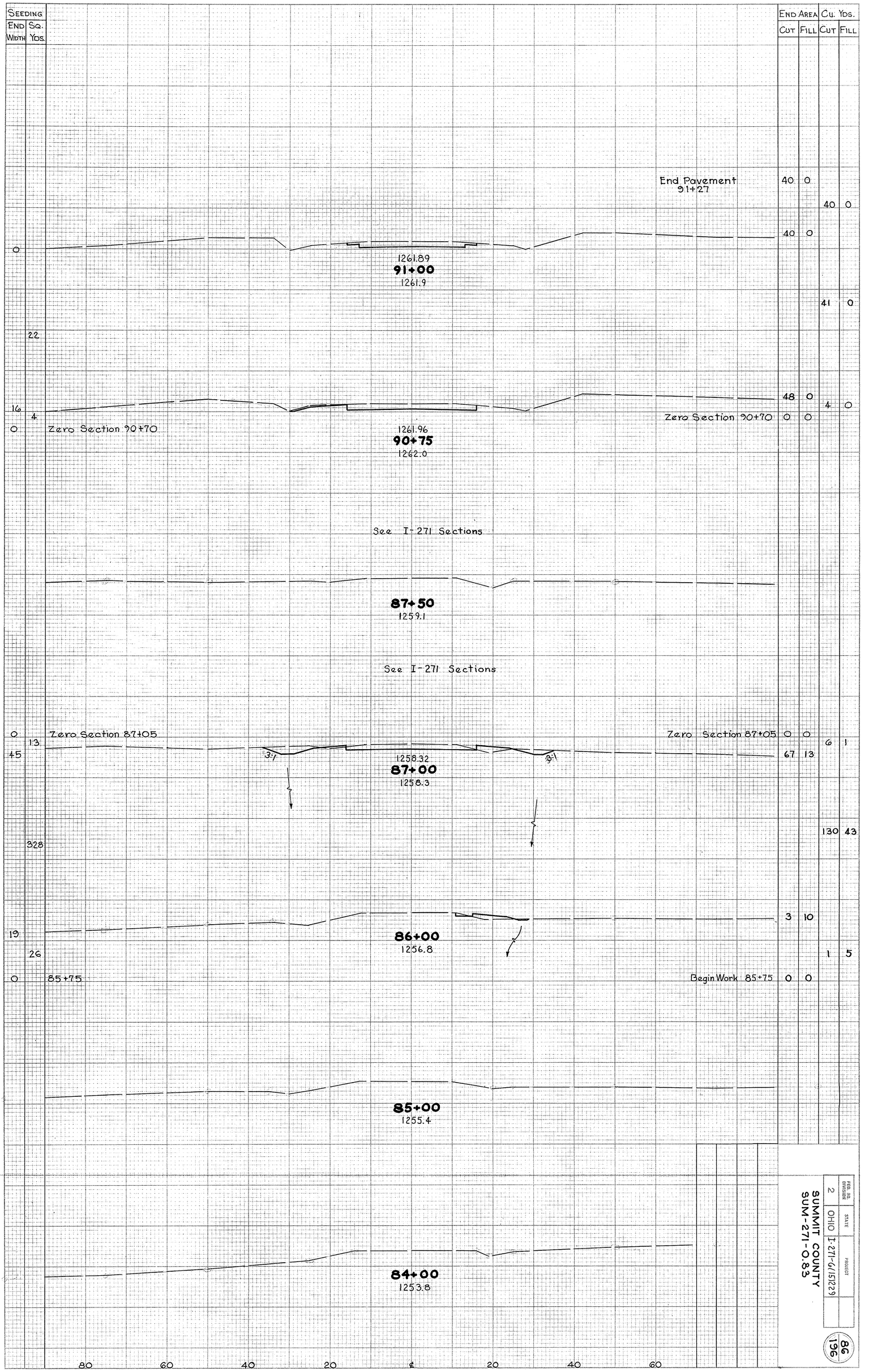


BRIDGE No. SUM-271-0276
Type: Continuous welded girders with reinforced concrete deck and substructure.
Spans: 68'-6" ; 105'-6" ; 105'-6" ; 68'-6".
Roadway: 30'-0" face to face of 2'-0" safety curbs.
Load Frequency: C.F. = 400 (57)
Wearing Surface: 1" Monolithic concrete.
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	606 Guard Rail Type 4 Lin. Ft.	611 Reinf. Conc. Appr. Slabs (t=13") Sq. Yds.	660 Sodding for Special Berm & Slope Protection Sq. Yds.	202 Existing Pavement Removed & Disposed of Sq. Yds.	SEE SHEET NO.
1-D	86+95	Lt.			5		
2-D	86+95	Rt.			6		
3-D	90+80	Lt.			9		
4-D	90+80	Rt.			10		
1-R	86+73 to 86+98	Lt.	25				
2-R	85+98 to 86+98	Rt.	100				
3-R	90+76 to 91+76	Lt.	100				
4-R	90+76 to 91+01	Rt.	25				
1-P	86+86 to 87+11	-		85.6			
2-P	90+63 to 90+88	-		85.6			
3-P	88+00 to 91+29	-				877	
TOTALS			250	171.2	28	877	

WEST RICHFIELD RD.-S.R.176 Sta. 84+00 to 94+00



WEST RICHFIELD RD.- S.R.176 Sta. 84+00 to 91+00

FED. ROAD DIV.	STATE	PROJECT	
2	OHIO	I-271-6(151)229	

SUMMIT COUNTY
SUM-271-0.83

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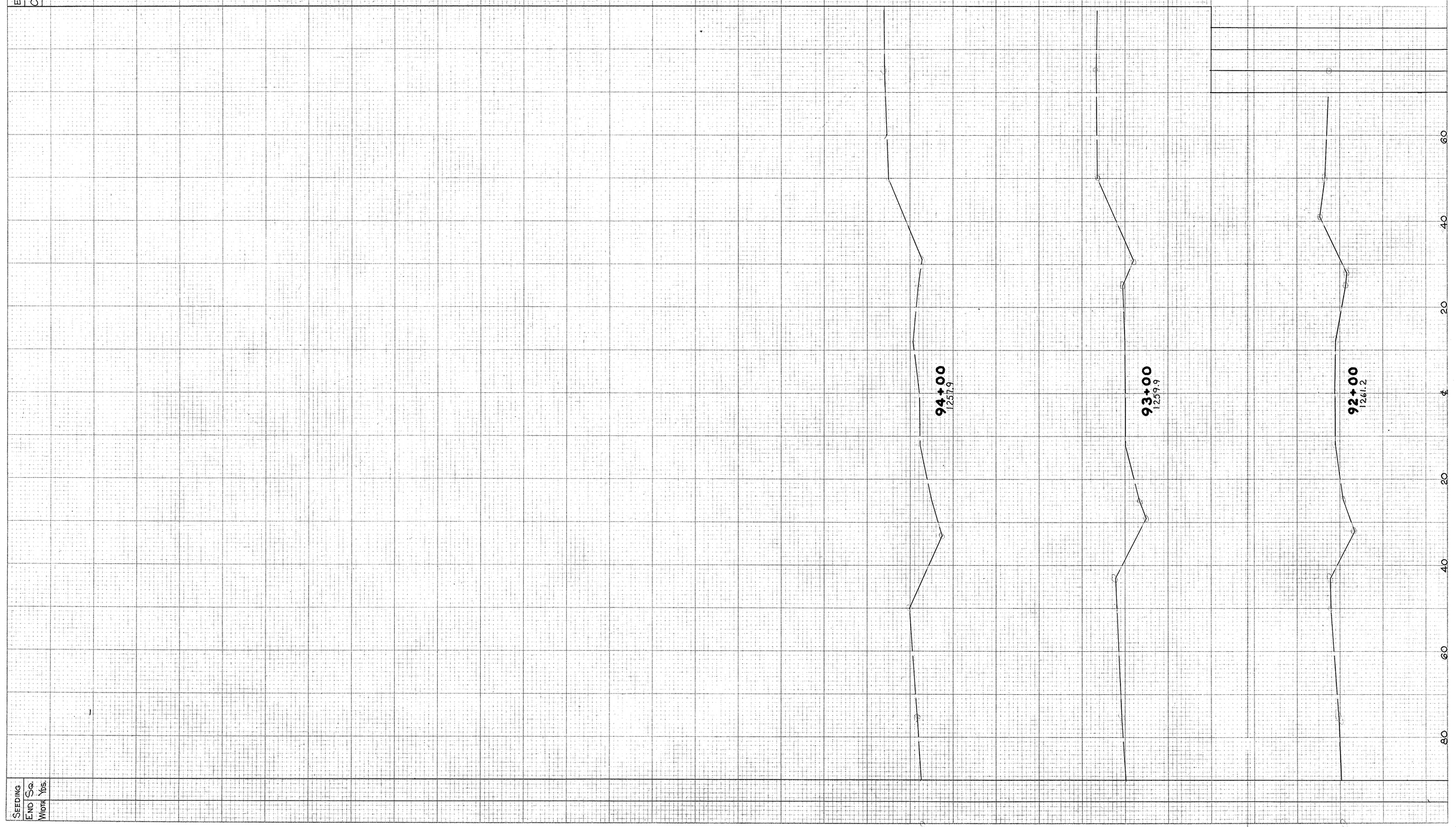
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

END AREA	CU. YDS.
CUT	FILL
CUT	FILL

SEEDING	
END	SQ.
WIDTH	YDS.



WEST RICHFIELD RD.-S.R.176 Sta. 92+00 to 94+00

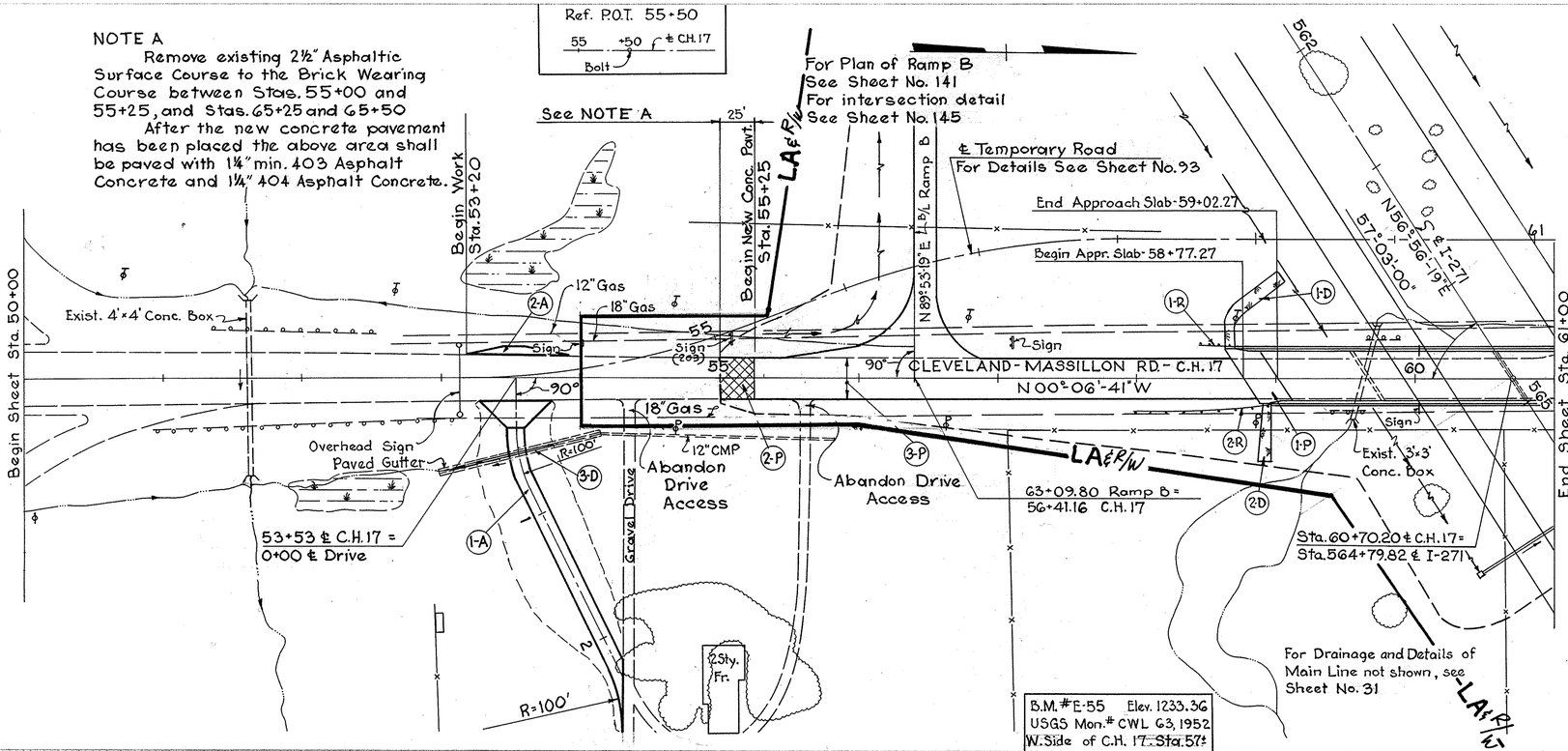
SUMMIT COUNTY
SUM-271- 0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

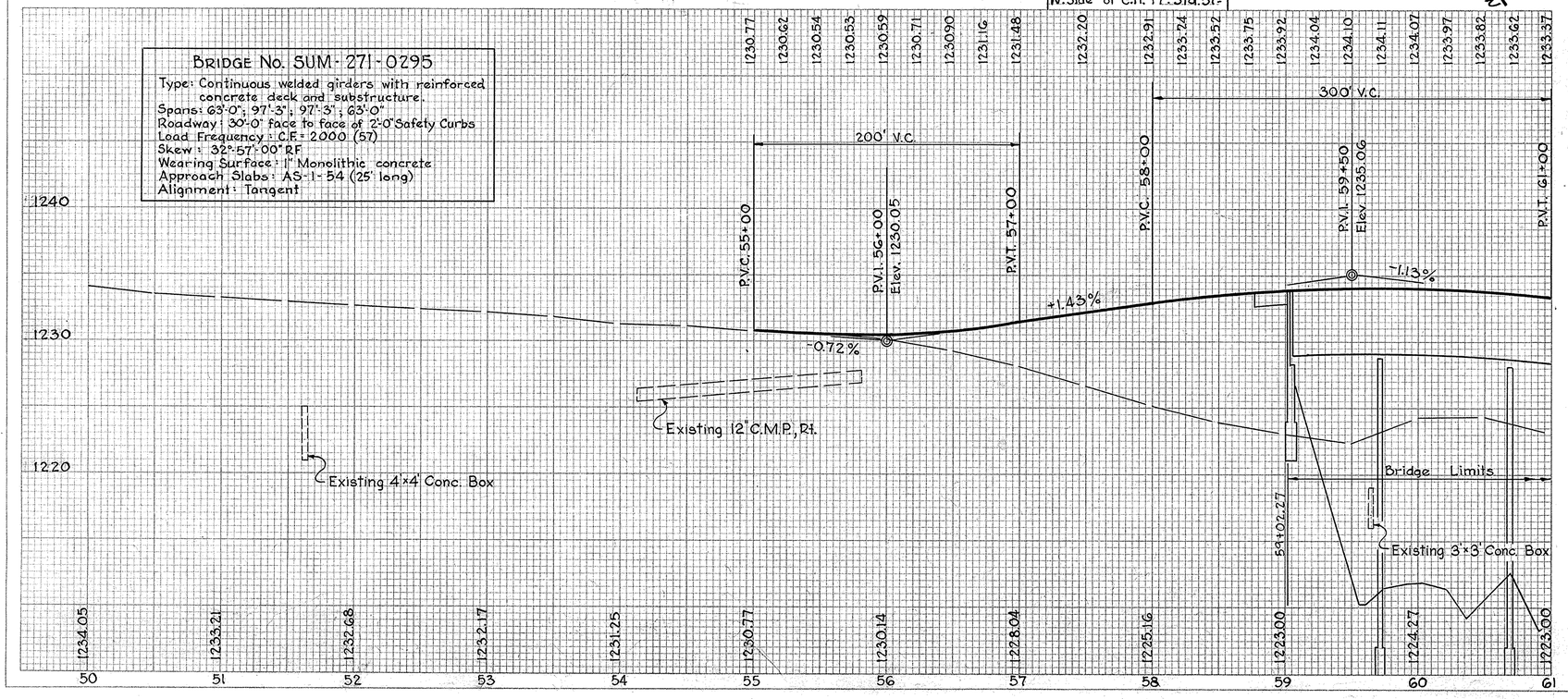
88
196

NOTE A
Remove existing 2½" Asphaltic Surface Course to the Brick Wearing Course between Stas. 55+00 and 55+25, and Stas. 65+25 and 65+50
After the new concrete pavement has been placed the above area shall be paved with 1¼" min. 403 Asphalt Concrete and 1¼" 404 Asphalt Concrete.

Ref. P.O.T. 55+50
55 +50 ℄ CH.17
Bolt



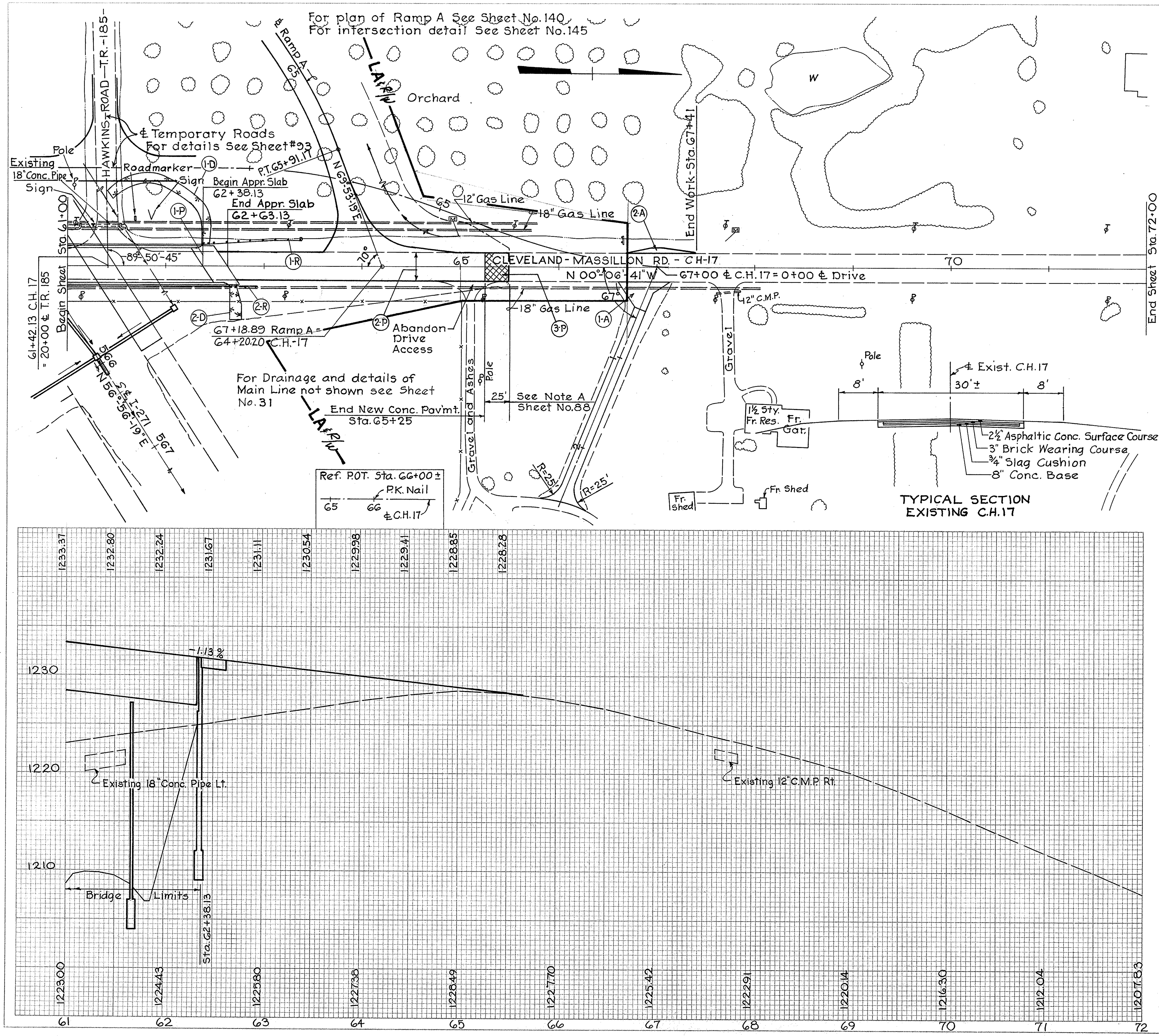
B.M. #E-55 Elev. 1233.36
USGS Mon.# CWL 63, 1952
W. Side of C.H. 17. Sta. 57±



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	404 Asphalt Concrete (Ø.5-100) 2½" Courses Cu. Yds.	606 Guard Rail Type 4 Lin. Ft.	611 Reinf. Conc. Appr. Slabs t=13" Sq. Yds.	603 12" Conduit Type D Lin. Ft.	660 Sodding for Special Beam & Slope Protect Sq. Yds.	202 Exist. Wearing Course Removed & Disposed Of Sq. Yd.	202 Existing Pavement Removed & Disposed of Sq. Yds.	SEE SHEET NO.
1-D	58+70	Lt.								
2-D	58+95	Rt.					72			
3-D	53+25 to 53+83	Rt.				58	48			
1-R	58+46 to 58+71	Lt.		25						
2-R	57+97 to 58+97	Rt.		100						
1-P	58+77.27 to 59+02.27	-			123			83	1,917	
2-P	55+00 to 55+25	-								
3-P	55+25 to 61+00	-								
1-A	53+53	Rt.	4.2							
2-A	53+20 to 53+90	Lt.	1.8							
TOTALS			6.0	125	125	58	120	83	1,917	

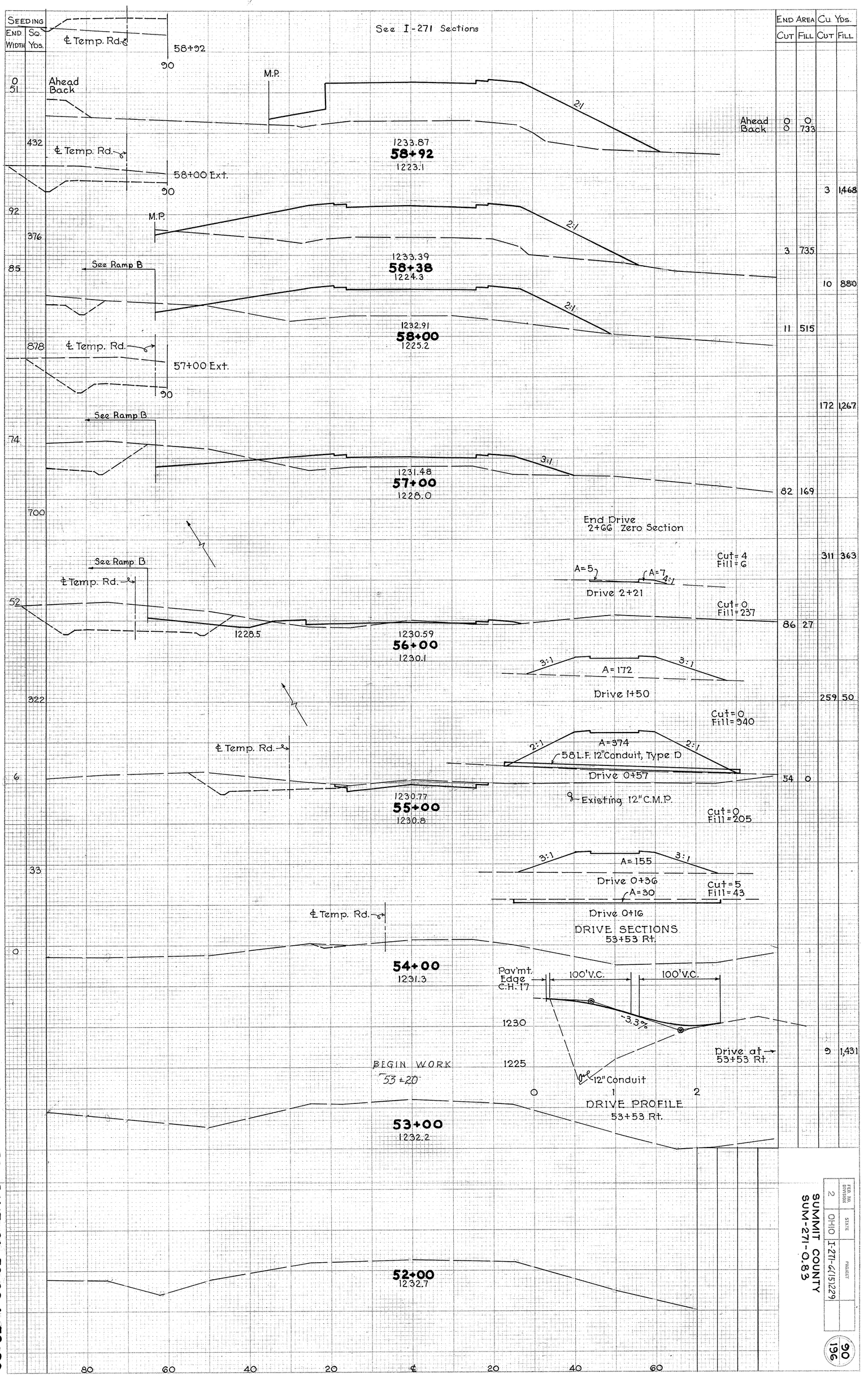
CLEVELAND-MASSILLON RD.-C.H.17 Sta. 50+00 to 61+00



ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	404 Asphalt Concrete (85-100) 2-1" Course Cu.Yds.	606 Guard Rail Type 4 Lin.Ft.	611 Reinf. Conc. Appr. Slabs t = 13" Sq.Yds.	202 Exist. Wearg. Crse. Removed & Disposed of Sq.Yds.	660 Sodding for Special Berm & Slope Protection Sq.Yds.	202 Exist. Pavement Removed & Disposed of Sq.Yds.	403 Asphalt Concrete (70-85) 1¼" Min. Crse. Cu.Yds.	404 Asphalt Concrete (70-85) 1¼" Crse. Cu.Yds.	304 Aggregate Base t = 5" C.Y.	304 Aggregate Base t = 8" C.Y.	SEE SHEET NO.
1-D	62+40	Lt.					172						
2-D	62+67	Rt.					33						
1-R	62+36 to 63+36	Lt.		100									
2-R	62+65 to 62+90	Rt.		25									
1-P	62+38.13 to 62+63.13				123								
2-P	61+00 to 65+25							1417					
3-P	65+25 to 65+50					83			3	3			
1-A	67+00	Rt.	5.2								12.6	68	
2-A	66+71 to 67+41	Lt.	1.8								4.4		
	TOTALS		7.0	125	123	83	205	1417	3	3	17	68	

CLEVELAND - MASSILLON RD. CH-17 Sta. 61+00 to 72+00

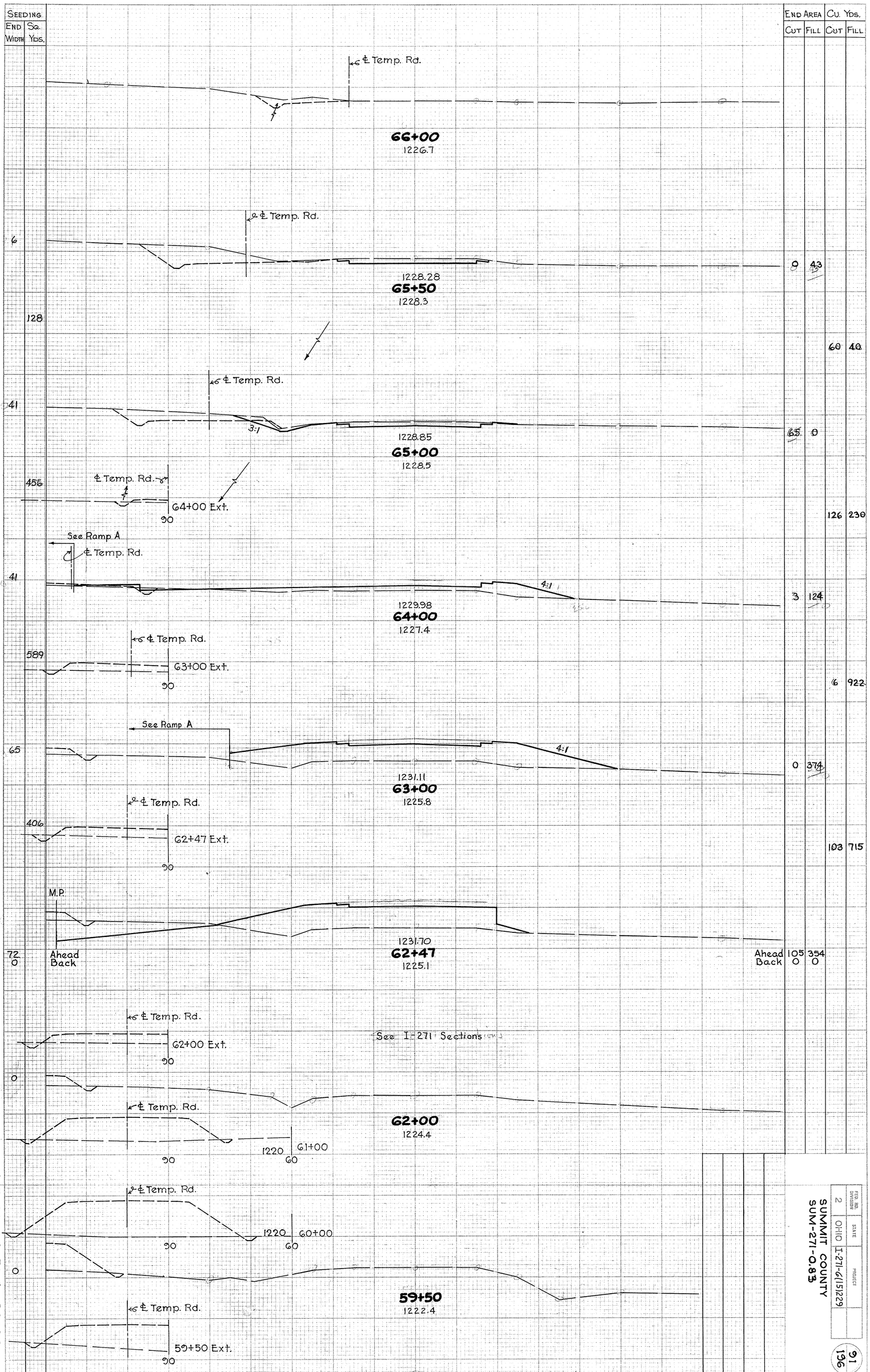


CLEVELAND-MASSILLON RD.- C.H.17 Sta. 52+00 to 59+00

FED. ROAD DIVISION	STATE	PROJECT
2	OHIO	I-271-6(15)229

SUMMIT COUNTY
SUM-271-0.83

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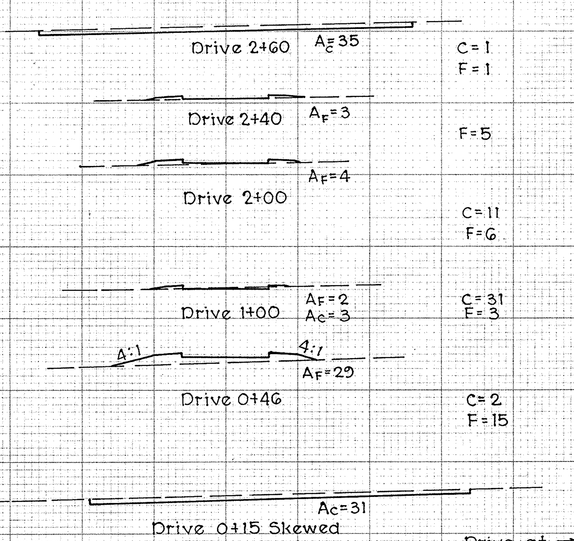
CLEVELAND-MASSILON RD.-C.H.17 Sta. 59+50 to 66+00

FED. ROD. DIVISION 2 | STATE OHIO | PROJECT I-271-6(151)229

SUMMIT COUNTY
SUM-271-0.83

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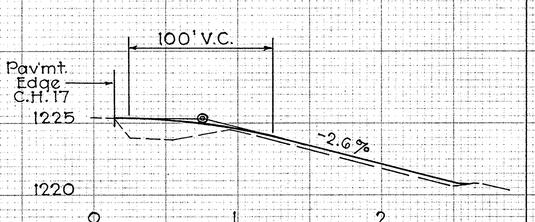
Seeding End Width	Seeding Sq. Yds.	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill



Drive at → G7+00 Rt.

		45	30

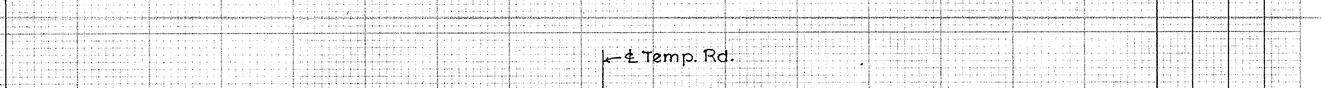
DRIVE SECTIONS
G7+00 Rt.



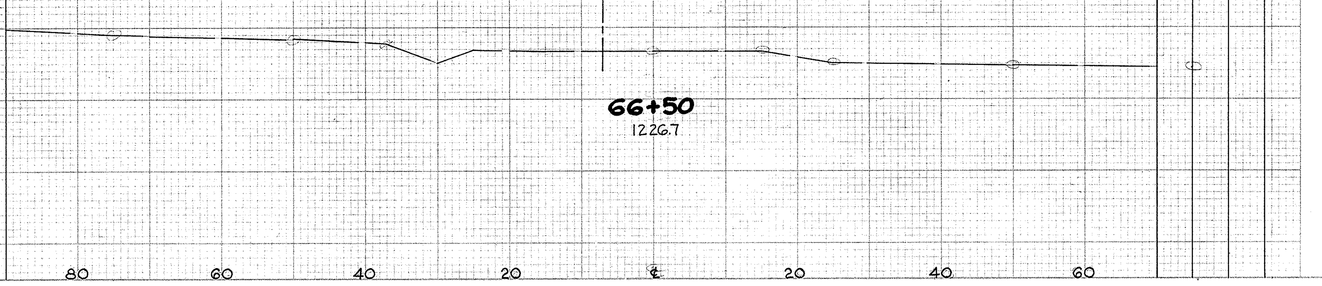
DRIVE PROFILE
G7+00 Rt.



67+00
1225.4



66+50
1226.7



CLEVELAND-MASSILLON RD.-C.H.17 Sta. 66+50 to 67+00

SUMMIT COUNTY
SUM-271-0.83

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2	OHIO	I-271-6(151)229

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SUM-271- 0.83

FED NO DIVISION	STATE	PROJECT	
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Ref. G+70.10 T.R.185

P.K. Nail
T.R.185
67.07'
S.R.176
32.55'

Nail in Pole #898½
Nail in Pole #4841

Remove existing headwall and approx. 4 L.F. exist. 18" V.C.P. Extend culvert with 20 L.F. 18" Conduit, Type A and add new HW-E. New entrance F.L. = 1247.00

Construct field drive entrance as shown using 6" thick 304 Aggregate Base. Remove existing 12" C.M.P. and construct 30 L.F. 12" Conduit, Type D. Entrance F.L. = 1247.6, outlet F.L. = 1247.2

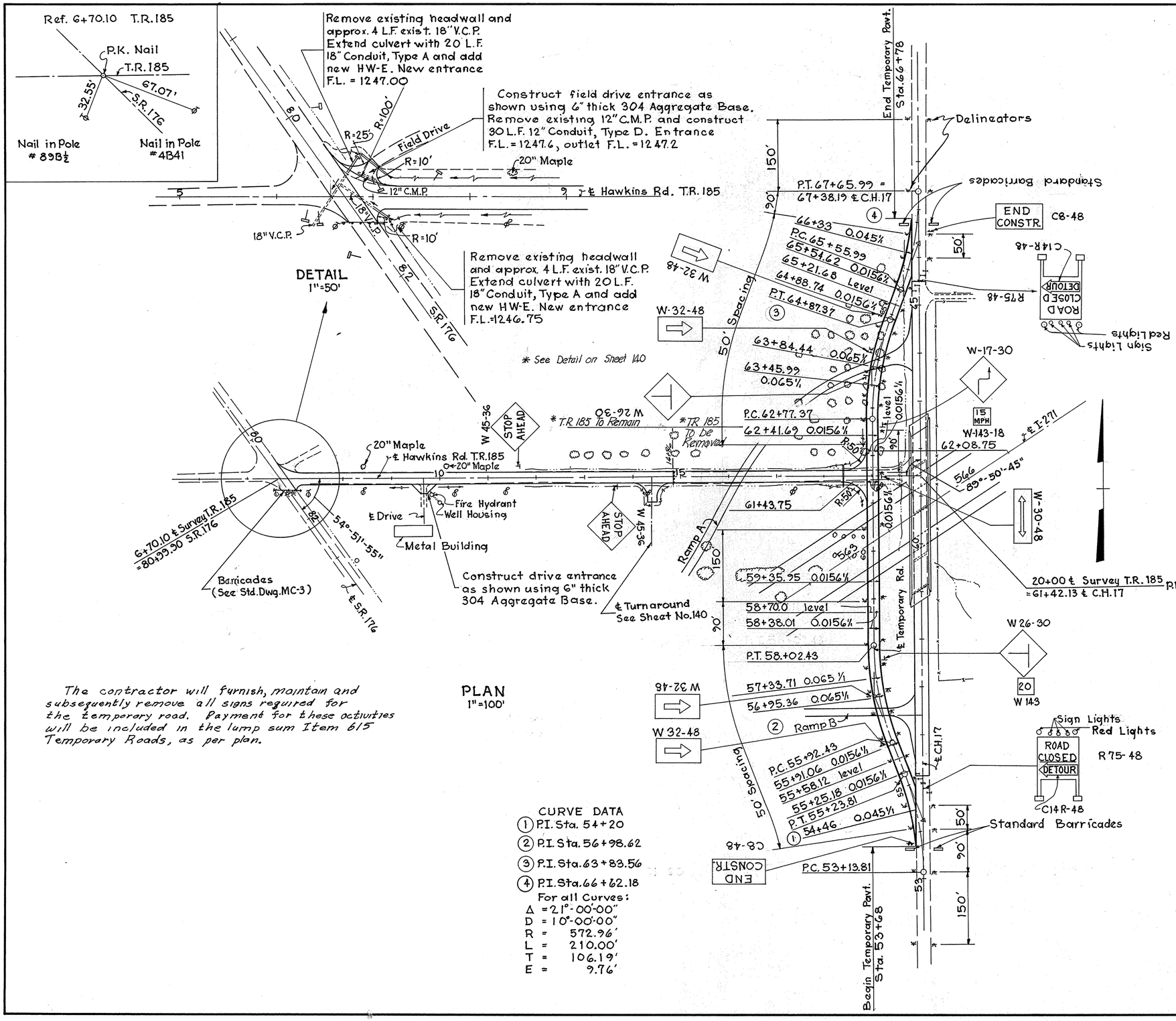
Remove existing headwall and approx. 4 L.F. exist. 18" V.C.P. Extend culvert with 20 L.F. 18" Conduit, Type A and add new HW-E. New entrance F.L. = 1246.75

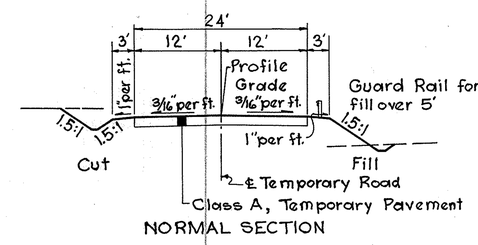
DETAIL
1"=50'

PLAN
1"=100'

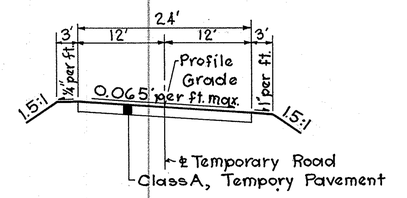
The contractor will furnish, maintain and subsequently remove all signs required for the temporary road. Payment for these activities will be included in the lump sum Item 615 Temporary Roads, as per plan.

CURVE DATA
(1) P.I. Sta. 54+20
(2) P.I. Sta. 56+98.62
(3) P.I. Sta. 63+83.56
(4) P.I. Sta. 66+62.18
For all Curves:
Δ = 21°-00'-00"
D = 10°-00'-00"
R = 572.96'
L = 210.00'
T = 106.19'
E = 9.76'



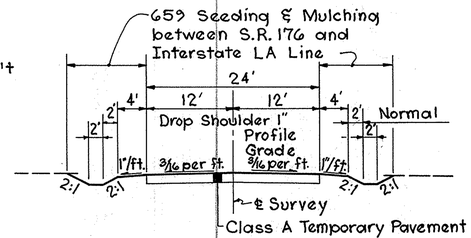


NORMAL SECTION



SUPERELEVATION SECTION

TYPICAL SECTIONS
C.H.17 TEMPORARY ROAD
Scale: 1"=10'



TYPICAL SECTION
T.R.185 TEMPORARY ROAD
Scale: 1"=10'

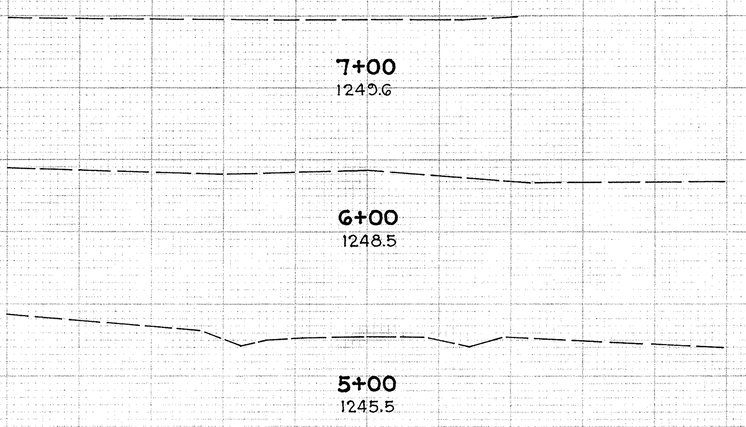
ESTIMATED QUANTITES

615	Temporary Roads, as per plan	Lump Sum
615	Class A, Temporary Pavement 6,590	Sq. Yds.

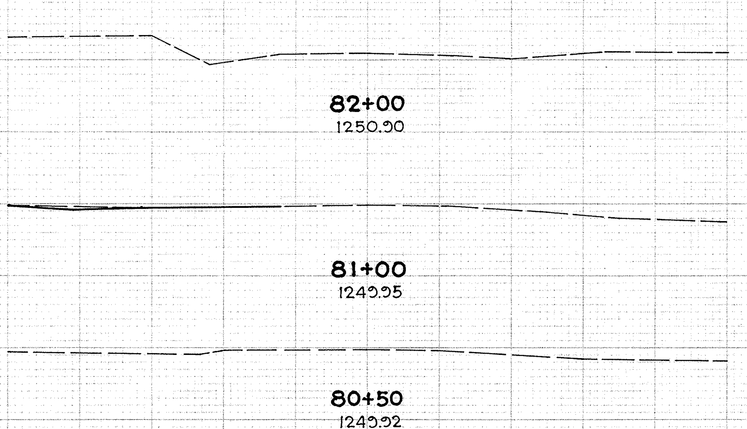
Note:
The Lump Sum Item 615 Temporary Roads, as per plan shall include construction of the drive entrances from T.R.185, grading required for the Turnaround, seeding and mulching the specified portion of T.R.185 Temporary Road, drainage facilities including extension of existing conduits shown on the plan, and the restoration to original ground condition of temporary roads outside of proposed right of way lines in accordance with 615.08.
The portion of T.R.185 Temporary Road between S.R.176 and Sta. 14+91 shall not be removed.
For Profiles of Temporary Roads and Cross-Sections of T.R.185, see Sheets No. 94 and 95. For Cross-Sections of C.H.17 Temporary Road, see Sheets No. 90, 91, and 92.

Revised 7-20-67

TEMPORARY ROADS

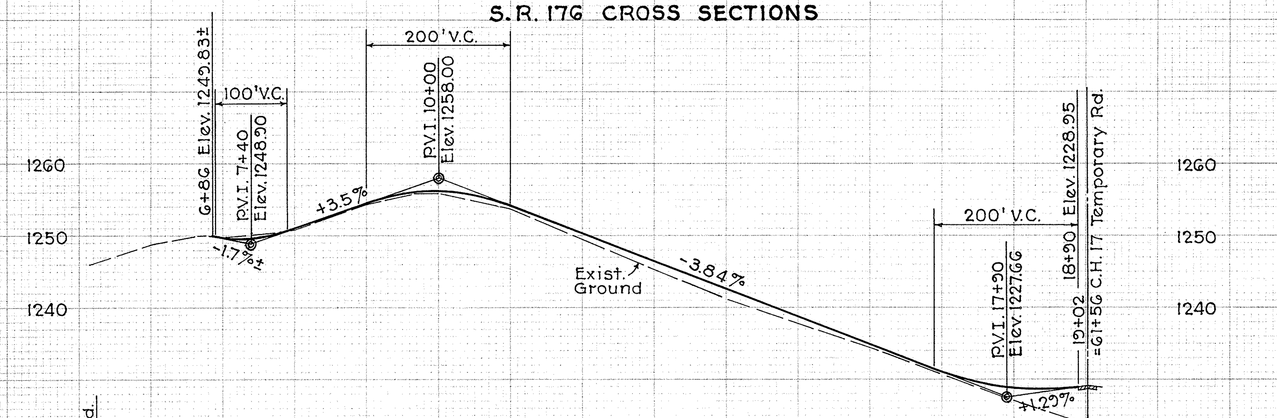


T.R. 185 CROSS SECTIONS

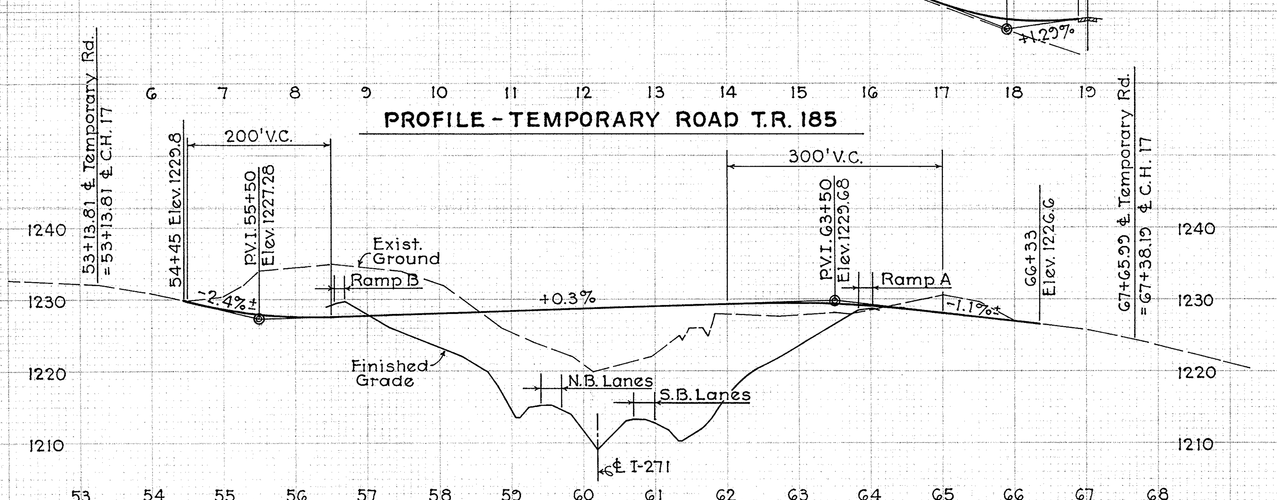


60 40 20 ℄ 20 40 60

S.R. 176 CROSS SECTIONS



PROFILE - TEMPORARY ROAD T.R. 185



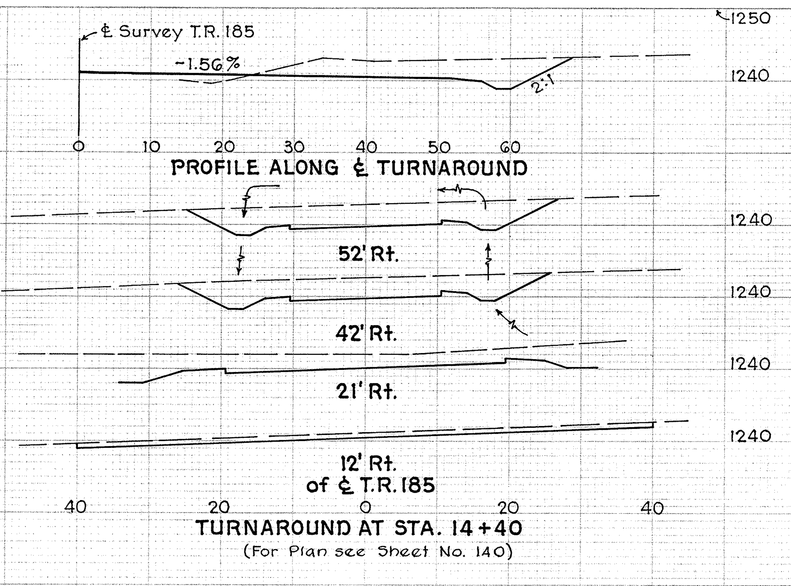
PROFILE - TEMPORARY ROAD FOR C.H. 17

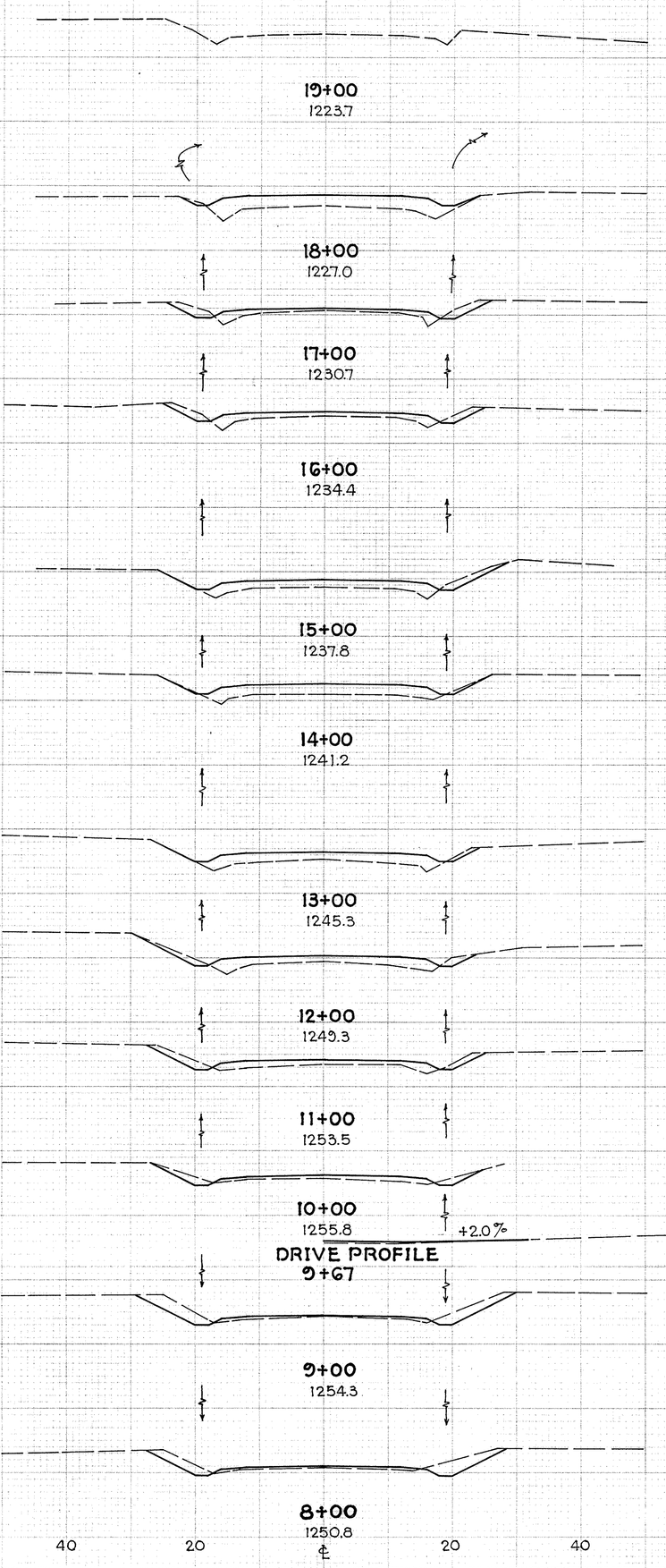
TEMPORARY ROADS-T.R. 185 CROSS SECTIONS

SUMMIT COUNTY
SUM-271-0.83

					2
					OHIO
					I-271-0(55)23

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TEMPORARY ROADS - T.R. 185 CROSS SECTIONS

SUMMIT COUNTY
SUM-271-0.83

NO. SHEETS	STATE	PROJECT
2	OHIO	I-271-6(15)220

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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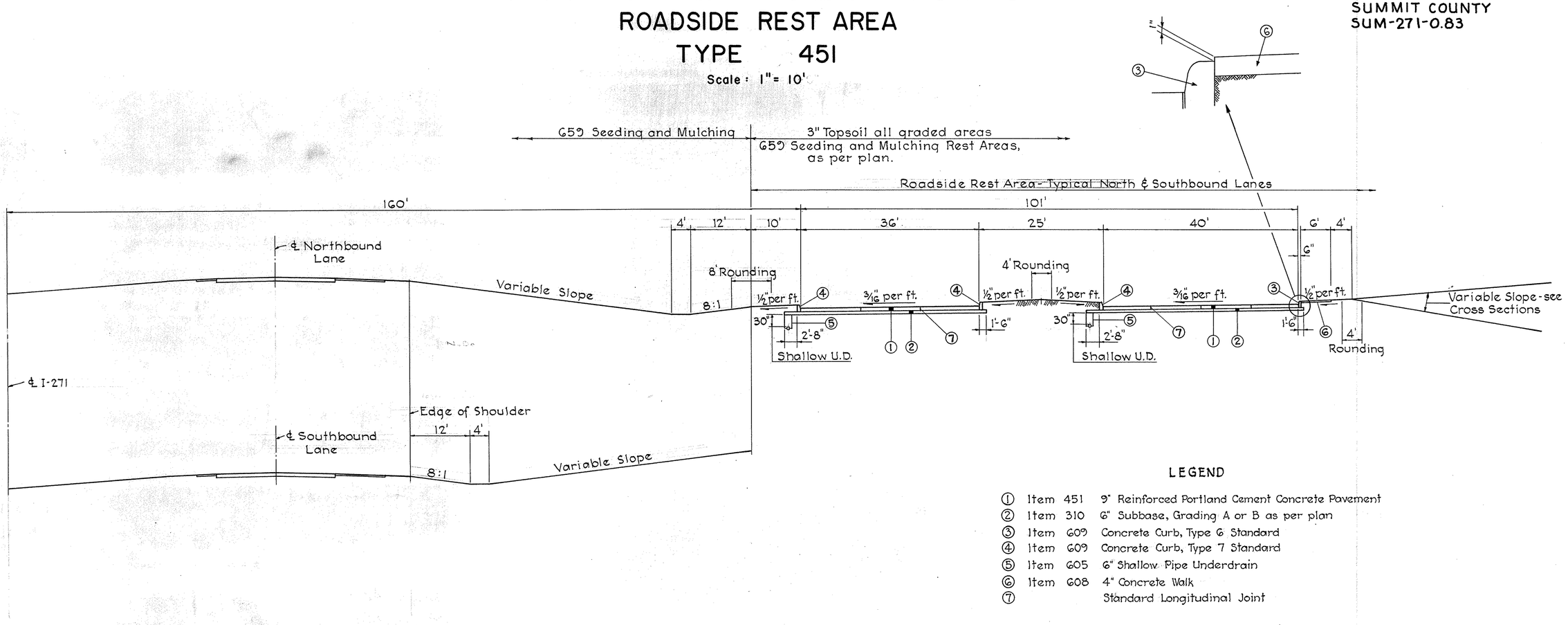
SUMMIT COUNTY
SUM-271-0.83

TYPICAL SECTIONS

ROADSIDE REST AREA

TYPE 451

Scale : 1" = 10'



LEGEND

① Item 451 9" Reinforced Portland Cement Concrete Pavement
② Item 310 6" Subbase, Grading A or B as per plan
③ Item 609 Concrete Curb, Type 6 Standard
④ Item 609 Concrete Curb, Type 7 Standard
⑤ Item 605 6" Shallow Pipe Underdrain
⑥ Item 608 4" Concrete Walk
⑦ Standard Longitudinal Joint

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271- 6(15)229	

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SUMMIT COUNTY
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REST AREAS GENERAL NOTES

REST AREA TREE PROTECTION

AREAS OTHER THAN THE PARKING LOTS SHALL NOT BE USED FOR STORAGE OF MATERIALS, PARKING OF EQUIPMENT, OR VEHICLES OR FOR THE LOCATION OF CONSTRUCTION BUILDINGS OF ANY KIND DURING CONSTRUCTION. EQUIPMENT SHALL NOT BE OPERATED OVER TREE ROOT AREAS WHEN THE GROUND IS SOFT THEREBY AVOIDING DEEP RUTTING, SOIL COMPACTION AND DESTRUCTION OF ROOT SYSTEMS. TREES THAT ARE TO BE REMOVED WILL BE MARKED. ALL OTHERS SHALL BE SAVED. TREES TO BE SAVED THAT ARE DAMAGED BEYOND REPAIR BY DESTRUCTION OF MORE THAN 50 PER CENT OF ROOT AREAS OR 30 PER CENT OF THE CIRCUMFERENCE OF BARK AREAS ON INDIVIDUAL TREES SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. REPLACEMENTS SHALL BE IN QUANTITY SUFFICIENT TO COMPENSATE FOR SHADED AREAS LOST AND SHALL BE COMPLETED AS PER 66.5 WITH THE CONTRACTOR FURNISHING AND PLANTING TREES OF THE SIZE AND VARIETY DIRECTED BY THE ENGINEER.
IN LIEU OF BOXING FOR TREE PROTECTION AS REQUIRED BY STANDARD DRAWING LA-1, SNOW FENCE SHALL BE USED TO PROHIBIT ACCESS TO TREE ROOT AREAS OF INDIVIDUAL TREES AND TREE GROUPS. THE ROOT AREAS ARE EQUAL IN SIZE TO THE SPREAD OF THE TREE BRANCHES.

ITEM SPECIAL

PARK TABLES, ROADSIDE TOILET AND STORAGE UNIT, CHARCOAL GRILL AND SERVING TABLE SHALL INCLUDE ALL EXCAVATION AND BACK-FILL, FURNISHING, HAULING AND PLACING ALL MATERIALS AND ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE ITEMS AS DETAILED ON THE PLAN OR SHOWN ON THE PERTINENT STANDARD CONSTRUCTION DRAWINGS AND GENERAL NOTES.
THEY SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

TOPSOIL FOR ROADSIDE ITEMS

THIS SHALL BE OBTAINED FROM STOCKPILES PROVIDED BY 651, 661 AND ITEMS 662 AREAS INDICATED ON THE PLANS FOR THESE ITEMS SHALL BE PREPARED AS PLANTING BEDS, EXCAVATED TO A DEPTH OF 12 INCHES AND BACK-FILLED WITH A MIXTURE 1/3 OF SOIL, 1/3 SAND AND 1/3 PEAT MOSS. THIS MIXTURE SHALL BE USED FOR 663 AND 665 ITEMS ALSO.

201 REMOVAL OF TREES AND STUMPS IN REST AREAS

TREES, STUMPS AND CLUMPS OF BRUSH THAT ARE NOT MARKED TO BE SAVED ARE TO BE REMOVED, APPROXIMATELY 60 PER CENT OF THE TREES EXISTING IN THE AREA WILL BE REMOVED. THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATION FOUND DURING CONSTRUCTION. WITHIN THE REST AREAS ONLY THOSE TREES INDICATED BY THE ENGINEER SHALL BE REMOVED. CARE SHALL BE EXERCISED BY THE CONTRACTOR IN PERFORMANCE OF THIS WORK SO THAT NO DAMAGE IS DONE TO TREES TO BE SAVED. CLEARING AND GRUBBING SHALL BE DONE IN ACCORDANCE WITH 201 EXCEPT IN AREAS WHERE TREES OR STUMPS ARE TO BE REMOVED WITHIN THE TREE ROOT AREAS OF TREES THAT ARE TO REMAIN, IN SUCH AREAS REMOVAL SHALL BE BY CUTTING TO A MINIMUM DEPTH OF 8 INCHES BELOW FINISH GRADE WITH A STUMP CHIPPER OR SIMILAR EQUIPMENT. THE LUMP SUM BID FOR 201, REMOVAL OF TREES AND STUMPS IN REST AREAS, SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM.

666 PRUNING EXISTING TREES, AS PER PLAN

ALL TREES WITHIN THE REST AREAS THAT ARE TO BE SAVED SHALL BE PRUNED IN ACCORDANCE WITH 666 AND IN ADDITION TO 666 REQUIREMENTS, LOW LIMBS SHALL BE REMOVED TO OBTAIN SEVEN (7) FOOT CLEARANCE ABOVE THE GROUND AS DIRECTED. THE NUMBER AND SIZE OF TREES TO BE PRUNED MAY BE ESTIMATED FROM INFORMATION SHOWN RELATIVE TO EXISTING TREES AND THE PERCENTAGE TO BE REMOVED.
THE STATE WILL NOT BE RESPONSIBLE FOR ANY VARIATION FOUND DURING CONSTRUCTION. THE LUMP SUM BID FOR 666, PRUNING EXISTING TREES AS PER PLAN SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

659 SEEDING AND MULCHING REST AREAS AS PER PLAN

THE SEED BED SHALL BE PREPARED TO PROVIDE A SMOOTH SURFACE FOR A GOOD LAWN. FINE GRADING IS TO ELIMINATE HUMPS OR DEPRESSIONS THAT WOULD INTERFERE WITH MOWING WITH A 24 INCH MOWER. ALL STONE AND DEBRIS LARGER THAN 1 INCH IN DIAMETER SHALL BE REMOVED FROM THE SURFACE AND THE AREAS SHALL BE LOOSENED TO A DEPTH OF 2 INCHES BEFORE SEEDING.
TOP SOIL SALVAGED AS PER 651 SHALL BE USED IN FINISH GRADING OVER THE TREE ROOT AREAS TO AVOID DAMAGE BY GRADING OR TILLAGE EQUIPMENT. IT SHALL BE USED AS DIRECTED TO FILL DEPRESSIONS TO OBTAIN EXTRA SMOOTH FINE GRADING AND TO PROVIDE A MINIMUM DEPTH OF 3 INCHES OF TOP-SOIL FOR THE REST AREA LOANS. WHERE IT IS NOT NECESSARY TO CHANGE GRADES, TOPSOIL PLACEMENT WILL NOT BE REQUIRED. PLACING TOPSOIL WILL BE PAID FOR UNDER 652.
THE SEED MIXTURE SHALL BE AS FOLLOWS:

45 PER CENT KENTUCKY BLUEGRASS 35 PER CENT JILLAHEE FESCUE 20 PER CENT REDTOP

656 ROADSIDE CLEANUP, AS PER PLAN

THIS ITEM IS ESTIMATED FOR PERFORMANCE ON ALL EARTH AREAS OUTSIDE THE EXCAVATED OR FILLED AREAS WITHIN THE REST AREAS AS DIRECTED. TREE PRUNING AND REMOVAL OF TREES AND STUMPS WILL BE DONE UNDER OTHER ITEMS. IN ADDITION TO THE SPECIFIED REQUIREMENTS OF 656, THE FOLLOWING WORK SHALL BE PERFORMED.
AREAS OUTSIDE THE TREE ROOT AREAS SHALL BE PLOWED, FITTED AND GRADED TO OBTAIN DRAINAGE AWAY FROM ALL STRUCTURES AND TO PREVENT PONDING AT ANY POINT. ALL ROUGH UNEVEN AREAS INCLUDING FENCE ROWS SHALL BE GRADED TO ELIMINATE HUMPS OR DEPRESSIONS THAT WOULD INTERFERE WITH A 24 INCH MOWER.
FENCE SHALL BE REMOVED FROM TREES AND THE TREE TRUNKS REPAIRED. BOULDERS SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET. STONE PILES SHALL BE REMOVED AND DISPOSED OF OR BURIED TO A MINIMUM DEPTH OF 2 FEET.
THE M/SQ FT PRICE BID FOR 656, ROADSIDE CLEANUP AS PER PLAN, SHALL CONSTITUTE FULL PAYMENT FOR THIS ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

652 PLACING STOCKPILED TOPSOIL AS PER PLAN

THE TOPSOIL SHALL BE PLACED TO A DEPTH OF 3 INCHES ON ALL AREAS WHERE GRADING IS REQUIRED IN REST AREAS AS SHOWN ON THE CROSS SECTIONS AND BY THE CONTOUR ON THE PLANS.
IT SHALL BE PLACED AT VARIABLE DEPTHS NECESSARY TO OBTAIN SMOOTH GRADES OVER THE TREE ROOT AREAS AND AREAS WHERE TREES, STUMPS, BOULDERS AND STONE PILES ARE REMOVED. MAXIMUM DEPTH OVER TREE ROOT AREAS SHALL BE 3 INCHES.
FERTILIZER FOR THIS ITEM IS INCLUDED IN 659 QUANTITIES.

661, 662, 663 AND 664 MULCHING MATERIAL

GROUND CORN COBS OR WOOD CHIPS SHALL BE PLACED AROUND THE PLANTS WITHIN 24 HOURS AFTER ANY PLANTING AND SHALL BE APPLIED UNIFORMLY TO COVER THE PLANTING AREA WITH GROUND CORN COBS TO A DEPTH OF 3 INCHES, OR WITH WOOD CHIPS TO A DEPTH OF 4 INCHES, LOOSE MEASUREMENT AND SHALL EXTEND 6 INCHES BEYOND THE EXCAVATION FOR PLANTING. COST OF MULCHING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEMS 661, 662, 663 AND 664.

GROUND CORN COBS MUST PASS A 1" INCH SIEVE.

WOOD CHIPS SHALL BE A COMBINATION OF WOOD SLIVERS WITH GROUND WOOD OR SAWDUST. AT LEAST 85 PER CENT BY WEIGHT OF THE MATERIAL SHALL PASS A 1-INCH SCREEN AND 90 PER CENT BY WEIGHT OF THE MATERIAL WILL NOT BE OVER 6 INCHES IN LENGTH.

PLANT SPRAY FOR PREVENTION OF WATER LOSS

ALL PLANT MATERIAL SHALL BE SPRAYED IN THE STORAGE AREA, BEFORE THEY ARE PLANTED, WITH AN APPROVED ANTI-DESICCANT AT THE RATE OF ONE PART ANTI-DESICCANT TO 5 PARTS WATER.

THE SPRAY APPLICATION COVERAGE SHALL BE COMPLETE ON BOTH THE UPPER AND LOWER SURFACES OF THE BRANCHES AND FOLIAGE TO THE POINT OF RUN-OFF. SPRAY NOZZLES SHALL BE THE TYPE TO PRODUCE A FINE SPRAY MIST.

THE ENGINEER WILL MARK ALL PLANTS WHICH HAVE BEEN SPRAYED.

DECIDUOUS TREES, SHRUBS OR VINES, WHICH NORMALLY SHED THEIR LEAVES DURING THE FALL SEASON, NEED NOT BE SPRAYED WITH THE ABOVE DESCRIBED MATERIAL IF PLANTED DURING THE NORMAL FALL PLANTING SEASON, OCTOBER 1 TO DECEMBER 15. WHEN PLANTED DURING ANY OTHER SEASON THE DECIDUOUS MATERIAL SHALL BE SPRAYED AS DESCRIBED.

STAIN FOR BUILDINGS

ALL BUILDINGS SHALL BE STAINED. THE EXTERIOR WALLS AND EXPOSED SUPPORTING POSTS SHALL BE TREATED BY APPLYING ONE HEAVY BRUSH COAT OF THE FOLLOWING STAINED MIXTURE:

3 parts - 5% pentachlorophenol, a light oil solvent
or 3 parts - 5% water repellant pentachlorophenol solution; and
1 part - boiled linseed oil
1/2 to 1 part - burnt umber ground in linseed oil

START WITH 1/2 PART OF THE BURNT UMBER GROUND IN LINSEED OIL AND INCREASE AMOUNT UNTIL THE DESIRED RUSTIC BROWN COLOR IS ACHIEVED.

PAYMENT FOR THE ABOVE SHALL BE INCLUDED IN THE PRICES BID FOR THE PERTINENT BUILDING ITEMS.

ALTERNATE MATERIALS

WHERE THE REST AREA DETAILS INDICATE TWO BRAND NAMES ONLY FOR SPECIFIC COMPONENTS OF THE VARIOUS REST AREA APPURTENANCES, SUCH LIMITED ALTERNATE MATERIAL REFERENCES SHALL BE CONSIDERED TO READ THAT "AN APPROVED EQUAL" IS ALSO ACCEPTABLE.

Revised 7-20-67

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REST AREAS GENERAL NOTES

INCINERATOR

GENERAL: FURNISH AND INSTALL FACTORY BUILT INCINERATORS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS STATED HEREIN.

1. CAPACITY - 125 LBS. PER HOUR
2. DIMENSIONS - 5'-1" LONG X 2'-8" WIDE X 4'-3"
3. CHARGING DOOR - HEAVY FABRICATED STEEL WITH 3" REFRACTORY LINING. COUNTERWEIGHTED FOR EASE OF OPERATION 24" X 15".
4. STEEL CASING - 12 GAUGE STEEL STIFFENED WITH 2" ANGLES FOR STIFFNESS.
5. REFRACTORY LINING - 1" HIGH TEMPERATURE BLOCK INSULATION, 3" ABRASION RESISTANT LIGHT WEIGHT INSULATING CASTABLE ANCHORED TO STEEL CASING.
6. STACK - 12 GAUGE STEEL CASING WITH 2" REFRACTORY LINING 14'-0" HIGH.
7. CLEANOUT DOORS AND GRATES - HEAVY CAST IRON DOORS AND GRATES, FIREBOX CLEANOUT DOOR AND FRAME 22" X 18", CYCLONE CHAMBER DOOR AND FRAME 14" X 11".
8. SECONDARY CHAMBER - A CYCLONE CHAMBER WITH STAINLESS STEEL SLEEVE.
9. BURNER - 50,000 to 600,000 B.T.U. CAPACITY POWER BURNER WITH SPARK IGNITION AND SAFETY CONTROLS, 90 DAY WARRANTY.
10. PAINTING - ONE PRIMER COAT AND ONE SECONDARY COAT OF HEAT RESISTANT PAINT.
11. A WELDED STEEL CONTAINER SHALL BE PROVIDED ON THE SIDE OF THE INCINERATOR TO ENCLOSE THE POWER BURNER AND A 100 LB. PROPANE TANK. THE CONTAINER SHALL BE EQUIPPED WITH A LOCKABLE DOOR.
12. TIMER - A SPRING ACTUATED TIMING DEVISE TO AUTOMATICALLY SHUT OFF BURNER AT THE END OF A 60 MINUTE PERIOD.

METHOD OF MEASUREMENT

THE INCINERATOR AND ALL APPURTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPERATELY, COMPLETE AND ACCEPTED.

BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM SPECIAL - INCINERATOR COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, HAULING AND PLACING ALL MATERIALS AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM, INCLUDING ALL ELECTRICAL DEVICES, CONDUIT AND WIRING REQUIRED FOR SERVICE TO AND OPERATION OF THE INCINERATOR.

AEROBIC SEWAGE TREATMENT PLANT

GENERAL: FURNISH AND INSTALL ONE FACTORY BUILT WASTE TREATMENT PLANT, COMPLETE, AND READY FOR OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN AND ACCEPTABLE TO THE OHIO DEPARTMENT OF HEALTH. THE PLANT SHALL BE AN AER-O-FLO MODEL PGW-60-33-3 OR A YEO-WAVE SYSTEM A-60. THE WASTE TREATMENT PLANT SHALL BE OF THE ACTIVATED SLUDGE TYPE, SPECIFICALLY KNOWN AS "AEROBIC DIGESTION", CAPABLE OF TREATING 6000 GALLONS PER DAY DOMESTIC SEWAGE OF 210 PARTS PER MILLION 5 DAY B.O.D. FROM COMPOSITE SAMPLES OF AVERAGE DAILY FLOW. THE COMPLETE PLANT SHALL INCLUDE SCREENING, AERATION AND SECONDARY SEDIMENTATION.

SCREENING: ALL RAW WASTE TRIBUTARY TO THE PLANT SHALL PASS THROUGH A 600 GAL. TRASH ACCUMULATOR.

AIR SUPPLY: DIFFUSER AIR SHALL BE SUPPLIED BY A POSITIVE DISPLACEMENT BLOWER OF AMPLE SIZE TO PROVIDE A MINIMUM OF 2100 CUBIC FEET OF AIR FOR EACH POUND OF B.O.D. APPLIED, AND A MINIMUM OF 3 CUBIC FEET OF AIR PER LINEAR FOOT OF AERATION TANK LENGTH. ITS RATED CAPACITY SHALL BE BASED UPON THE HOURLY RATE OF B.O.D. APPLICATION AND TANK SIZE TO MAINTAIN CLEANSING VELOCITIES. THE BLOWER SHALL HAVE A 24 HOUR TIME CLOCK TO VARY THE AIR SUPPLY WITH THE DEMAND AND SHALL DELIVER 54 CFM @ 4 PSI.

DIFFUSERS: THERE SHALL BE A MINIMUM OF ONE NON-CLOG DIFFUSER FOR EVERY 6" OF AERATION TANK LENGTH. THESE DIFFUSERS SHALL BE PARALLEL TO AND NEAR THE BASE OF THE FILLET AND AT AN ELEVATION WHICH WILL PROVIDE THE OPTIMUM ROLL OF THE TANK CONTENT. A VERTICAL UPDRAFT TYPE AERATOR IS ACCEPTABLE.

AERATION TANK: THE AERATION TANK SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE A 24 HOUR PERIOD OF RETENTION AND A MINIMUM VOLUME OF 80 CUBIC FEET PER POUND OF B.O.D. THE BOTTOM OF THE TANK SHALL BE FILLETED ON TO SIDES TO PREVENT SLUDGE ACCUMULATION.

BLOWER AND MOTOR DRIVE: UNIT SHALL CONSIST OF 3 HP, 1750 RPM, 220 VOLT, 1 PHASE, 60 CYCLE, MOTOR WITH V-BELT DRIVE. BLOWER AND MOTOR SHALL BE MOUNTED IN A WEATHER-PROOF ENCLOSURE EQUIPPED WITH LOCKING DEVICE.

CONTROL PANEL: THE CONTROL PANEL SHALL CONSIST OF THE NECESSARY MAGNETIC STARTERS, TIME CLOCKS AND SWITCHES, TO AUTOMATICALLY CONTROL ALL ELECTRIC MOTORS ON THE PLANT. THE BLOWER AND FROTH CONTROL PUMP MOTORS SHALL BE CONTROLLED BY A HAND-OFF-AUTO SELECTOR SWITCH IN CONJUNCTION WITH A MAGNETIC STARTER AND ONE OR TWO TIMERS AS DETERMINED BY THE WEEKLY FLOW RATE. THE SECOND TIMER SHALL BE USED TO CONTROL BLOWER EQUIPMENT WHERE OFF-PEAK FLOW PERIODS OCCUR. ALL ELECTRIC EQUIPMENT AND CIRCUITRY SHALL BE PROTECTED BY A PROPERLY SIZED CIRCUIT BREAKER.

FINAL SETTLING AND SLUDGE RETURN: THE FINAL TANK SHALL BE OF AMPLE SIZE TO PROVIDE A MINIMUM OF FOUR HOURS RETENTION, BASED UPON THE SAME FLOW RATES GOVERNING THE AERATION TANK AND SHALL HAVE PROPER BAFFLING. THE TOTAL SETTLING VOLUME SHALL INCLUDE THE VOLUME OF THE UPPER 1/3 OF THE SLUDGE HOPPER. THE SLOPE OF THE HOPPER WALLS SHALL NOT BE LESS THAN 1.7 VERTICAL TO 1.0 HORIZONTAL. SETTLED SLUDGE SHALL BE RETURNED FROM THE FINAL SETTLING TANK TO THE AERATION CHAMBER BY DUPLICATE AIR LIFT ASSEMBLIES CONSISTING OF TWO AIR LIFT PUMPS ACTUATED BY THE BLOWER. EACH AIR LINE SUPPLYING AIR TO THE SLUDGE PUMP SHALL BE EQUIPPED WITH A NEEDLE VALVE TO VARY THE CAPACITY OF THE AIR LIFT PUMPS. EACH PUMP SHALL HAVE A MINIMUM CAPACITY OF 15 GPM.

AEROBIC SEWAGE TREATMENT PLANT CON'T.

SKIMMING DEVICE: AN AIR LIFT SKIMMING DEVICE SHALL BE LOCATED NEAR THE OUTLET WEIR TO RETURN FLOATING MATERIAL TO THE AERATION TANK. THE AIR LINE SUPPLYING AIR TO THE SKIMMING DEVICE SHALL BE EQUIPPED WITH A NEEDLE VALVE TO REGULATE THE AMOUNT OF RETURN.

FROTH CONTROL: A 1/3 HP, 220 VOLT, 1 PHASE, 20 GPM FROTH CONTROL PUMP SHALL BE PROVIDED IN CLARIFIER AND SUFFICIENT SPRAYS ATTACHED TO THE DISCHARGE SIDE OF THE PUMP TO INSURE CONTROL OF FROTHING OR FOAMING IN THE AERATION CHAMBER. THE SPRAY NOZZLES SHALL HAVE A MINIMUM 1/4" OPENING TO PREVENT CLOGGING AND SHALL PRODUCE A SHARP SPRAY PATTERN ALONG ENTIRE LENGTH OF AERATION TANK. A HOSE BIB SHALL BE FURNISHED BETWEEN THE DISCHARGE SIDE OF PUMP AND SPRAY NOZZLES SHUT OFF VALVE TO PROVIDE WASH UP WATER IF REQUIRED.

PRECAST CONCRETE TANKS: THE PRECAST CONCRETE TANKS SHALL BE COMPRISED OF 6" THICK, REINFORCED CONCRETE SECTIONS, BOLTED TOGETHER AT THE JOINTS. JOINTS SHALL BE WATER TIGHT TONGUE AND GROOVE AND SEALED BY COMPRESSION OF TONGUE AND GROOVE FILLED WITH MASTIC. STRUCTURAL INTEGRITY SHALL BE OBTAINED BY USE OF ADEQUATE REINFORCING, HOT DIP GALVANIZED BOLTS, MINIMUM DIAMETER 3/4", AND 1/2" MINIMUM THICKNESS STRUCTURAL STEEL CLIPS ANCHORED TO PRECAST SECTIONS. ALL CONCRETE SHALL HAVE A 5000 LB. 28 DAY COMPRESSION STRENGTH AND BE REINFORCED WITH CONTINUOUS SPECIAL WELDED WIRE FABRIC CONSISTING OF NO. 3 BARS @ 6" CTS. LONGITUDINALLY AND NO. 3 BARS @ 12" CTS. TRANSVERSELY. TWO PRECAST CONCRETE SLIDE RAILS SHALL BE PROVIDED TO FORM THE BASE FOR THE TANKS.

METAL GRATING: EXPANDED METAL GRATING PANELS SHALL BE PROVIDED FOR ALL TANK OPENINGS. THESE PANELS SHALL CONSIST OF 3/4" X NO. 9 EXPANDED METAL GRATING (NOT FLATTENED) WELDED TO 1-1/2" X 1-1/2" X 3/16" ANGLE FRAMES.

EXCAVATION AND BACKFILL: EXCAVATION SHALL BE HELD TO THE MINIMUM REQUIRED TO ACCOMMODATE THE STRUCTURE EXCEPT THAT THE DEPTH OF EXCAVATION SHALL BE SUCH AS TO PERMIT A MINIMUM OF SIX INCHES OF COMPACTED SAND TO BE PLACED BENEATH FOR UNIFORM BEARING. BACKFILL SHALL BE OF NO. 34 AGGREGATE.

METHOD OF MEASUREMENT

THE AEROBIC SEWAGE TREATMENT PLANT AND ALL APPURTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY. COMPLETE AND ACCEPTED.

BASIS OF PAYMENT

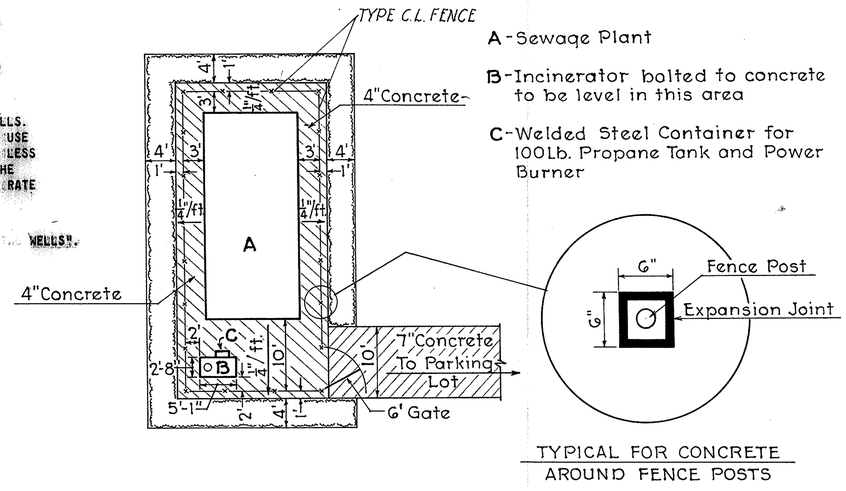
THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH ITEM SPECIAL - AEROBIC SEWAGE TREATMENT PLANT COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR ALL EXCAVATION, BACKFILL AND FOR FURNISHING, HAULING AND PLACING ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM, INCLUDING ALL ELECTRICAL DEVICES, CONDUIT AND WIRING REQUIRED FOR SERVICE TO AND OPERATION OF THE SEWAGE TREATMENT PLANT.

ITEM SPECIAL - CLEANING *Wells*

BEFORE PUMPS ARE INSTALLED WELL DRILLING EQUIPMENT SHALL BE SET UP OVER THE WELLS. WATER IN THE WELLS SHALL BE SURGED AND THE WELLS CLEANED BY FAST BAILING OR BY USE OF A SWAB. AFTER COMPLETION OF A CLEANING THE TOTAL DEPTH OF EACH SHALL NOT BE LESS THAN 90 FEET FOR THE WELL ON THE LEFT AND 62 FEET FOR THE WELL ON THE RIGHT. THE FOLLOWING DATA SHALL BE FURNISHED TO THE PROJECT ENGINEER FOR EACH WELL: FIELD RATE (BAILING) IN GALLONS PER MINUTE AND DEPTH TO STATIC WATER LEVEL.

BASIS OF PAYMENT

PAYMENT FOR ABOVE WORK SHALL BE *Contract Unit Price Per Each* "ITEM SPECIAL - CLEANING ... WELLS".



TYPICAL PLAN FOR AEROBIC SEWAGE TREATMENT PLANT AND INCINERATOR

Jan. 23, 1967

REST AREAS GENERAL NOTES

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REST AREAS ROADSIDE TOILETS AND STORAGE UNIT

ROADSIDE TOILET AND STORAGE UNIT

GENERAL NOTES CONCERNING THE BUILDINGS

THE BUILDINGS ARE TO BE CONSTRUCTED AT THE LOCATIONS AND ELEVATIONS SHOWN ON THE PLANS. EXCAVATING AND BACKFILLING SHALL BE AS SPECIFIED UNDER 203. AGGREGATE FOR SUBGRADE UNDER FLOORS SHALL BE AS SPECIFIED UNDER ITEM 304 EXCEPT THAT 100 PERCENT SHALL PASS THROUGH A 1" SIEVE.

CONCRETE WORK

CONCRETE WORK

NOTE: "A" THE CONTRACTOR FOR THIS WORK IS REFERRED TO INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS AS A PART OF THIS CONTRACT.

1. EXTENT OF WORK

(A) THIS CONTRACTOR SHALL FURNISH ALL EQUIPMENT, MATERIAL, LABOR AND SERVICES NECESSARY TO FORM, PLACE, FINISH AND CURE ALL PLAIN AND REINFORCED CONCRETE REQUIRED FOR THE COMPLETION OF THE BUILDING, AS SHOWN ON THE PLANS AND AS HEREINAFTER SPECIFIED. DRIVES ARE NOT INCLUDED IN THIS WORK.

2. GENERAL

A. ALL CONCRETE CONSTRUCTION, EXCEPT WHERE OTHERWISE SPECIFIED HEREINAFTER, SHALL BE IN ACCORDANCE WITH ITEM 511.

B. CONCRETE MAY BE EITHER READY-MIXED OR JOB-MIXED. ALL READY-MIXED CONCRETE SHALL BE IN STRICT ACCORDANCE WITH SPECIFICATIONS FOR CLASS "C" CONCRETE EXCEPT AS HEREINAFTER MODIFIED AND SPECIFIED.

C. NO CONCRETE SHALL BE PLACED BEFORE CONDUITS, SLEEVES, INSERTS, etc. ARE IN PLACE TO THE SATISFACTION OF THE ENGINEER OR BEFORE FORMS, REINFORCING AND AFFECTED WORK OF OTHER TRADES HAVE BEEN APPROVED BY THE ENGINEER.

3. MATERIALS

A. CONCRETE SHALL BE CLASS C.

B. STEEL REINFORCEMENT SHALL MEET THE REQUIREMENTS OF ITEM 509.

CONCRETE WORK (CONTINUED)

4. REINFORCEMENT

A. FLOOR SLABS SHALL BE REINFORCED THROUGHOUT WITH BAR MATS OR MESH AS REQUIRED FOR ITEM 451. ADJACENT SHEETS SHALL BE LAPPED AT LEAST 6", SIDES AND ENDS, WITH LAPPED EDGES SECURELY WIRED OR CLIPPED TOGETHER ON NOT OVER 48" CENTERS. FABRIC SHALL BE BROUGHT INTO POSITION IN APPROXIMATELY THE CENTER OF THE SLAB THICKNESS, AS CONCRETE IS PLACED.

B. FOOTINGS SHALL BE REINFORCED THROUGHOUT AND CONTINUOUS WITH TWO (2) NO. 5 BARS PLACED 4" UP FROM BOTTOM AND 3" IN FROM EACH SIDE.

C. OIL, SCALE, RUST, DIRT, OR OTHER COATINGS THAT WOULD DESTROY OR REDUCE THE BOND SHALL BE REMOVED.

5. CONSTRUCTION JOINTS

A. ALL FLOOR SLAB SECTIONS SHALL BE COMPLETED IN ONE POUR.

B. IF AN EMERGENCY JOINT MUST BE MADE, IT SHALL BE KEYED AND DOWELLED TO THE SATISFACTION OF THE ENGINEER. IMMEDIATELY PRIOR TO RESUMING POURING, THE JOINT SURFACE OF CONCRETE IN PLACE SHALL BE CLEANED OF ALL SOIL AND LAITANCE, THOROUGHLY WETTED AND SLUSHED WITH A COAT OF NEAT-CEMENT GROUT.

6. FLOOR SLABS, PLATFORMS, ETC.

A. CONCRETE FLOOR SLABS AND EXTERIOR APRON AND PLATFORM SHALL BE OF THICKNESS SHOWN ON DRAWINGS AND REINFORCED AS SPECIFIED OR NOTED ON DRAWINGS.

B. INTERIOR SLABS SHALL BE PLACED ON POROUS FILL AS PROVIDED FOR UNDER "GENERAL" HEADING. FILL SHALL BE THOROUGHLY SOAKED WITH WATER AND RECOMPACTED AND RE-SHAPED AS MAY BE REQUIRED IMMEDIATELY BEFORE CONCRETE IS POURED.

7. FINISHING CONCRETE

A. FLOOR SHALL BE FINISHED INTEGRALLY BY SCREEDING, FLOATING AND STEEL TROWELING. THE FRESH CONCRETE SHALL BE SCREEDED AND FLOATED WITH WOOD FLOATS OR MECHANICAL FLOATING MACHINES TO TRUE AND EVEN SURFACES AT THE REQUIRED FINISH LEVELS AND UNTIL ONLY ENOUGH MORTAR FOR TROWELING IS BROUGHT TO THE SURFACE. TROWELING SHALL NOT BEGIN UNTIL ALL WATER AND WATER SHEEN HAVE DISAPPEARED FROM THE SURFACE. WATER RISING TO THE SURFACE SHALL BE REMOVED IN

CONCRETE WORK (CONTINUED)

7. FINISHING CONCRETE (CONTINUED)

A. A MANNER APPROVED BY THE ENGINEER. NO SAND-CEMENT DUST COAT SHALL BE USED. THE FINISHED SURFACES SHALL BE SMOOTH, EVEN AND FREE FROM BLEMISHES OF ANY KIND. FINISH THE TOP OF DOOR SILLS WITH FLOOR.

B. EXTERIOR APRON AND PLATFORM SHALL BE FINISHED SMOOTH AND EVEN WITH WOOD FLOATS AND WITHOUT THE USE OF SAND-CEMENT DUST COAT.

8. PATCHING

A. ALL NECESSARY PATCHING OF CONCRETE SHALL BE DONE AFTER OTHER CONTRACTORS' WORK IS IN PLACE. POINT CAREFULLY AROUND ALL PIPING ETC.

9. VAPOR BARRIER

A. PROVIDE A ONE (1) INCH THICK SAND CUSHION AND CONTINUOUS MOISTURE VAPOR BARRIER UNDER THE FLOOR SLAB.

B. MOISTURE-VAPOR BARRIER TO BE 6 MIL (.006") THICK PURE POLYETHYLENE PLASTIC FILM, AS MADE BY MEADOWS, SISALCRAFT, VISKING, WASCO OR EQUAL; OR A POLYETHYLENE-FACED LAMINATE EQUAL TO "MOISTOP" BY AMERICAN SISALCRAFT CORPORATION. USE WIDEST PRACTICAL WIDTH, LAP AT LEAST SIX (6) INCHES AT JOINTS, AND SEAL.

10. PERIMETER INSULATION

A. PRIOR TO FINAL SHAPING AND COMPACTION OF EARTH SUBGRADES INSIDE THE BUILDING, INSTALL VERTICAL AND HORIZONTAL PERIMETER INSULATION CONTINUOUSLY AROUND THE EXTERIOR WALLS, AS INDICATED ON THE DRAWINGS AND HEREIN SPECIFIED.

B. MATERIAL TO BE ONE (1) INCH THICK "STYROFOAM" 22 OR "SCORBORD", RIGID PLASTIC INSULATION INSULATING BOARD BY DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN.

11. WELL PIT AND RESERVOIR MANHOLE FRAME & COVER

A. PROVIDE AND INSTALL CAST IRON MANHOLE COVER AND FRAME OVER WELL PIT AND STORAGE RESERVOIR (SEE DRAWING)

B. MANHOLE FRAME AND COVER TO BE TYPE-R-1737, LIGHT DUTY, ROUND, LOCK-TYPE "H" CAM LUG-ECCENTRIC DEVICE, 1'-19¼" DIAMETER, WEIGHT 115 LBS. BY NEENAH FOUNDRY COMPANY, NEENAH, WISCONSIN, OR SIMILAR TYPE BY FLOCKHART FOUNDRY COMPANY OR APPROVED EQUAL.

REST AREAS ROADSIDE TOILETS AND STORAGE UNIT

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CONCRETE WORK (CONTINUED)

11. WELL PIT AND RESERVOIR MANHOLE FRAME AND COVER

C. WELL PIT AND STORAGE RESERVOIR SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. A SIX (6) INCH TRANSITE OR PLASTIC CONDUIT SHALL BE PLACED UNDERGROUND AS SHOWN TO PERMIT PLACING OF PIPE AND ELECTRICAL WIRING TO CONNECT THE STORAGE RESERVOIR PUMP AND PRESSURE TANK. CONCRETE WELL PIT COVER TO HAVE NO. 2 REINFORCING BARS PLACED AT FOUR (4) INCHES O.C. EACH-WAY. REINFORCING FOR RESERVOIR SHALL BE AS SHOWN ON PLANS.

ROOFING AND SHEET METAL WORK

1.EXTENT OF WORK

A. INSTALL BUILT-UP ROOFING, SHEET METAL WORK, FLASHINGS, (INCLUDING VENT PIPE FLASHING) GRAVEL STOPS AND SKYLIGHT GRAVITY ROOF VENT UNITS.

2. BUILT-UP ROOFING AND FLASHINGS

A. INSTALL GRAVEL-SURFACED "20 YEAR BOND" TYPE ROOF, EITHER:

(1) BARRETT'S 120W "SPECIFICATION" ROOF, OR CAREY'S "SPECIFICATION NO. 1-BZ", KOPPER'S "SPECIFICATION NO. 1 ROOF.

(2) JOHN-MANSVILLE'S (SPEC NO. 600) ROOF, OR CAREY'S 1-AZ AND GRAVEL SURFACED, OR, BARRETT'S 220W.

B. GRAVEL STOPS AND OTHER MOPPED-IN METAL FLASHING SHALL BE INSTALLED AFTER ALL ROOFING PLIES ARE IN PLACE AND SHALL HAVE ROOF LEG COATED WITH BITUMINOUS PAINT BEFORE BEING PLACED. APPLY AT LEAST 2-PLY MEMBRANE FLASHINGS OVER SAME BEFORE APPLYING THE FINAL FLOOD COAT OF BITUMINOUS.

3. GRAVEL STOP

A. GRAVEL STOP TO BE EXTRUDED ALUMINUM, TYPE F, STANDARD THICKNESS, BY ALCOA NO. 84968, 7-3/4" FACE OR SIMILAR DESIGN BY REYNOLDS OR KAISER OR APPROVED EQUAL.

4. SKYLIGHT VENTILATORS, FORCED AIR, FAN DRIVEN

A. PLASTIC DOMED SKYLIGHT VENTILATORS TO BE STANDARD SKYDOMES WASCO NO. LV 5252 AS MANUFACTURED BY THE WASOLITE, WASCO PRODUCTS, INC., CAMBRIDGE, MASS., OR VANCO DOMELITE, E. VAN NOORDEN COMPANY, BOSTON, MASS. SIZE 46½"x 46½", OR EQUAL.

ROOFING AND SHEET METAL WORK (CONTINUED)

4. SKYLIGHT VENTILATORS, FORCED AIR, FAN DRIVEN (CONTINUED)

B. SKYLIGHT VENTILATORS TO BE FACTORY ASSEMBLED UNITS, EACH CONSISTING OF AN ACRYLIC PLASTIC DOME, EXTRUDED ALUMINUM FRAME AND CURB FRAME WITH CONDENSATION AND WEEPAGE GUTTERS. DOMES TO BE "WHITE TRANSLUCENT" PLASTIC, A 110 VOLT, 60 CY 67 WATTS, 8" FAN, HEAVY-DUTY SHALL BE USED WITH CFM OF 425, CONTINUOUS OPERATION.

WINDOWS

ALUMINUM WINDOWS

1. EXTENT OF WORK

A. FURNISH AND INSTALL ALL ALUMINUM WINDOWS REQUIRED TO COMPLETE THE BUILDING IN ACCORDANCE WITH THE ARCHITECT'S DRAWINGS AND AS HEREINAFTER SPECIFIED.

B. NO GLAZING OR CAULKING OF WINDOWS IS REQUIRED UNDER THIS BRANCH OF WORK.

C. FURNISH FOUR COPIES OF SHOP DRAWINGS FOR APPROVAL, PRIOR TO SHIPPING.

2. ALUMINUM WINDOWS

A. WINDOWS SHALL BE OF SIZES SHOWN ON THE DRAWINGS AND OF "COMMERCIAL PROJECTED" CONSTRUCTION, OUTSIDE GLAZED.

B. WINDOWS FURNISHED SHALL BE THOSE OF WILLIAM BAYLEY COMPANY, LUDMAN, MESKER BROTHERS OR TRUSCON STEEL COMPANY AND SHALL MEET SPECIFICATION PV-2 OF THE ALUMINUM WINDOW MFRS. ASSOCIATION.

C. WINDOWS SHALL BE PROPERLY CLEANED AFTER FABRICATION.

D. HARDWARE SHALL BE SOLID CAST WHITE BRONZE AND IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD PRACTICE.

E. ALL BOLTS, CLAMPS, ANCHORS ETC., REQUIRED FOR INSTALLATION SHALL BE FURNISHED.

F. WINDOWS SHALL BE CAUSTIC ETCHED AND SPRAY LACQUERED IN THE SHOP.

3. ERECTION

A. WINDOWS SHALL BE SET PLUMB AND TRUE IN OPENINGS AND SHALL BE SUBSTANTIALLY ANCHORED.

ALUMINUM WINDOWS (CONTINUED)

3. ERECTION (CONTINUED)

B. PROPER PROVISION SHALL BE MADE FOR CAULKING, BY OTHERS.

C. ALL VENTILATORS SHALL BE ADJUSTED SO AS TO OPERATE SMOOTHLY.

CARPENTRY AND MISCELLANEOUS

1. EXTENT OF WORK

A. FURNISH ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE ALL ROUGH AND FINISHED CARPENTRY REQUIREMENTS OF THE BUILDING AND ALL MISCELLANEOUS ITEMS OF WORK SPECIFIED HEREINAFTER, ALL AS SHOWN ON THE PLANS AND/OR HEREIN SPECIFIED.

B. INCLUDE MISCELLANEOUS WORK AS FOLLOWS:
(1) GLASS AND GLAZING
(2) CAULKING
(3) FINISH HARDWARE

C. FURNISH ALL BOLTS, ANCHORS, INSERTS, ETC., REQUIRED TO BE BUILT INTO THE WORK OF OTHERS FOR SECURING WOOD PARTS, AND SUPERVISE THEIR INSTALLATION.

2. ROUGH CARPENTRY

A. ALL LUMBER, SIDING, TRIM, THROUGHOUT: EXCEPT OTHERWISE NOTED, SHALL BE S4S STD. K.D. NO 1 COMMON OR BETTER, SOUTHERN YELLOW PINE OF SIZE INDICATED ON DRAWINGS. ALL LUMBER TO BE PENTACHLOROPHENOL TREATED-SEE PAR. C.

B. ALL DOORS TO BE FLUSH PANEL, SOLIDCORE, BIRCH, SELECT OF SIZES INDICATED ON DOOR SCHEDULE AND WITH METAL "AIROLITE" LOUVERS AND ALUMINUM SCREENING BY AIROLITE CORPORATION OR CONSTRUCTION SPECIALTIES, INC., OR ELLISON. LOUVERS TO BE MILL INSTALLED.

C. PENTACHLOROPHENOL TREATED LUMBER SHALL BE USED THROUGHOUT THE ENTIRE JOB AND SHALL BE TREATED TO 6 LBS. RETENTION IN ACCORDANCE WITH THE REQUIREMENT FOR PENTACHLOROPHENOL TREATMENT, ITEM 712.06 OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS "CONSTRUCTION AND MATERIAL SPECIFICATIONS." THE TREATING SOLUTION SHALL MEET THE REQUIREMENTS OF ITEM 712.06.

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REST AREAS ROADSIDE TOILETS AND STORAGE UNIT

CARPENTRY AND MISCELLANEOUS (CONTINUED)

3. WALL PANELING

A. FOR MEN'S AND WOMEN'S TOILETS ONLY, PROVIDE AND INSTALL WALLS AND CEILINGS OF 48"x96"x5/32" DELUXE HI GLOSS PANELS APPLIED TO 5/8" EXTERIOR PLYWOOD SHEATHING AND FINISHED AT CEILING AND BASE WITH ALUMINUM MOLDING: AT CORNER WALL INTERSECTIONS WITH ALUMINUM MOULDING.

WALL PANELS TO BE APPLIED VERTICALLY WITH A MOULDING AS INDICATED ON THE DRAWINGS. ENTIRE INSTALLATION TO BE EXECUTED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PANEL COLOR: WILLOW GREEN

HIGH GLOSS PANELING SHALL BE "MARLITE" AS MANUFACTURED BY MARSH WALL PRODUCTS, INC., OR "BARCLAY BOARD" BY BARCLAY MANUFACTURING CO. OR "WALLITE" BY WALLACE MANUFACTURING CO MASTIC, AND MOULDING SHALL BE THAT AS MANUFACTURED AND RECOMMENDED BY THE SAME COMPANY.

4. INSULATION

A. PROVIDE AND INSTALL 4" FIREPROOF MINERAL WOOL ENCASED BLANKET IN ENTIRE CEILING OF BUILDING AND 2" FIREPROOF MINERAL WOOL ENCASED BLANKET ON ALL WALLS AND PARTITIONS OF THE BUILDING. ACCEPTABLE MANUFACTURERS: CELOTEX CORP., CHICAGO, ILLINOIS, ARMSTRONG AND JOHNS-MANVILLE OR APPROVED EQUAL.

5. INSULATION VENTS

A. ROOF JOIST SPACE VENTILATION WILL DISCHARGE INTO ROOF VENTS - SEE DETAIL.

6. TOILET PARTITIONS

A. PROVIDE AND INSTALL ALL OVERHEAD-BRACED METAL TOILET PARTIONS COMPLETE WITH HARDWARE. PARTITIONS TO BE GALVANIZED AND BONDERIZED PANELS AT LEAST 1" THICK WITH A BAKED-ON ENAMEL FINISH, COLOR TO BE SELECTED. ACCEPTABLE MANUFACTURERS: MILLS COMPANY, CLEVELAND, OHIO, HENRY WEIS MANUFACTURING CO., ELKHART, INDIANA, FIAT METAL MFG. CO., CHICAGO, ILLINOIS, OR SANYMETAL PRODUCTS CO.,INC , CLEVELAND, OHIO

7. TOILET ROOM ACCESSORIES

A. FURNISH AND INSTALL FOUR (4) 16" x 24" CHROME EDGED MIRRORS AS INDICATED ON DRAWINGS, PARKER CO., MIAMI CAREY OR HALLMACK OR APPROVED EQUAL.

CARPENTRY AND MISCELLANEOUS (CONTINUED)

8. GLAZING

A. GLAZE ALL WINDOWS, FURNISHING GLAZING CLIPS FOR WINDOWS.

B. TOILET ROOM WINDOWS SHALL HAVE 1/8" HAMMERED GLASS. GLASS SHALL BE EITHER "L.O.F." OR"BLUE RIDGE" OR "MISSISSIPPI GLASS CO." OR "J. MERRILL RICHARDS", BOSTON, MASS.

C. ALL GLAZING SHALL BE DONE WITH APPROVED GLAZING COMPOUND AS MANUFACTURED BY DICKS-PONTIUS, KUHLS, PERCORA, PITTSBURGH OR TREMCO.

D. GLASS IN METAL WINDOWS SHALL BE BEDDED, CLIPPED AND FACE GLAZED.

E. LEAVE ALL GLASS UNBROKEN AND CLEAN AT COMPLETION OF STRUCTURE.

9. CAULKING

A. CAULK AROUND METAL WINDOWS AND EXTERIOR DOOR FRAMES IN A THOROUGH MANNER, USING THE FIRST QUALITY GUN-GRADE COMPOUND OF THEMCO, PERCORA, KUHL'S OR EQUAL. FOLLOW GUN WITH HAND PRESSURE TOOL WHEREVER NECESSARY FOR FIRST CLASS JOB.

B. REMOVE ALL STAINS FROM CAULKING AT ONCE, FROM SILLS, FRAMES ETC.

10. FINISH HARDWARE

A. SEE "DOOR HARDWARE SCHEDULE" ON PLANS.

B. HARDWARE AS MANUFACTURED BY: STANLEY, GLYNN-JOHNSON, RUSSELL AND ERWIN, CORBIN, SARGENT, YALE AND TOWNE, MCKINNEY, HAGER OR EQUAL WILL BE ACCEPTABLE.

C. ALL LOCK CYLINDERS SHALL BE KEYED ALIKE, AND MASTERKEYED. FURNISH 2 KEYS FOR EACH LOCK.

D. FINISH FOR LOCKSETS SHALL BE AS SHOWN.

E. INSTALL FINISH HARDWARE NEATLY AND ACCURATELY AND SO THAT IT OPERATES EASILY, QUIETLY AND PROPERLY.

F. LOCKS, TRIM, ETC. SHALL BE FITTED PRIOR TO START OF PAINTER'S WORK, BUT SHALL NOT BE PERMANENTLY INSTALLED UNTIL PAINTER'S WORK IS COMPLETED.

G. DOOR LOCKS TO TOILET ROOMS SHALL BE LOCKED BY OUTSIDE KEY ONLY. STORAGE ROOM SHALL BE LOCKED BY KEY AND SAFETY BUTTON.

ELECTRICAL

1. NOTES

A. THE CONTRACTOR FOR THIS WORK IS REFERRED TO "INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS" AS A PART OF THIS CONTRACT.

B. THIS CONTRACTOR SHALL CAREFULLY READ THE SPECIFICATIONS OF ALL BRANCHES OF WORK PERTAINING TO THE BUILDING SO THAT HE MAY BE FULLY INFORMED AS TO THE WORK TO BE DONE BY EACH CONTRACTOR.

C. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THE WORK OF THE OTHER CONTRACTORS IN ORDER TO AVOID DELAY AND INTERFERENCE IN CARRYING OUT THE GENERAL CONSTRUCTION OF THE PROJECT.

D. THE SUBMISSION OF A BID FOR THIS BRANCH OF WORK SIGNIFIES THAT THE CONTRACTOR HAS EXAMINED THE DRAWINGS AND SPECIFICATIONS FOR ALL BRANCHES OF WORK FOR THE PROJECT AND HAS VISITED THE SITE AND IS ACQUAINTED WITH ALL CONDITIONS WHICH MAY IN ANY WAY WHATSOEVER AFFECT THE EXECUTION OF THE WORK.

E. WHERE A MATERIAL OR METHOD IS DESCRIBED BY PERFORMANCE DATA ONLY, ANY PRODUCT OR METHOD MEETING SUCH REQUIREMENTS MAY BE USED. WHERE MORE THAN ONE BRAND NAME IS SPECIFIED, THE FIRST NAME IS THE PRODUCT WHOSE DIMENSIONS AND PERFORMANCE CHARACTERISTICS WERE USED IN THE DESIGN. THE OTHER NAMED PRODUCTS MAY BE USED BUT WITH THE UNDERSTANDING THAT IF CHANGES TO THE BUILDING ARE REQUIRED BECAUSE OF DIMENSIONS OR CHARACTERISTICS OF THAT PRODUCT, ANY ADDITIONAL COST SHALL BE A PART OF THE BID.

F. IN CASE ANY CONFLICT DEVELOPS BETWEEN DRAWINGS AND SPECIFICATIONS, SAME SHALL BE REFERRED BY THE CONTRACTOR TO THE ENGINEER FOR DECISION AS TO METHOD AND/OR MATERIAL.

2. EXTENT OF WORK

A. THE CONTRACTOR FOR THIS WORK SHALL FURNISH ALL LABOR, MATERIALS AND EQUIPMENT AND INSTALL COMPLETE ALL ELECTRIC WORK AS HEREINAFTER SPECIFIED AND AS SHOWN ON THE PLANS.

B. ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND SPECIAL REGULATIONS OF THE STATE FIRE MARSHALL AND THE STATE DEPT. OF INDUSTRIAL RELATIONS, DIVISION OF FACTORY AND BUILDING INSPECTION.

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EXTENT OF WORK (CONTINUED)

C. ALL MATERIAL SHALL BE NEW AND CONFORM WITH THE STANDARDS OF THE UNDERWRITER'S LABORATORIES, INC. WHEREVER SUCH STANDARDS HAVE BEEN ESTABLISHED AND SHALL FULFILL THE NORMAL REQUIREMENTS FOR SATISFACTORY WORKMANSHIP.

3. INSPECTION

A. ALL WORK SHALL BE INSPECTED BY THE STATE OF OHIO, DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF FACTORY AND BUILDING INSPECTION.

B. UPON COMPLETION OF THE WORK IT SHALL BE CERTIFIED APPROVED BY SAID AGENCY BEFORE FINAL PAYMENT ON CONTRACT WILL BE ALLOWED.

C. THE CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN WORK IS READY FOR INSPECTION. THE ENGINEER WILL NOTIFY THE DIVISION OF FACTORY AND BUILDING INSPECTION TO MAKE THE REQUIRED INSPECTION.

4. SERVICE

A. SERVICE SHALL BE SINGLE PHASE, 60 CYCLES, 120/240 VOLTS A.C., 3 TO 2 WIRE DISTRIBUTION FOR LIGHTS & SMALL MOTORS AND 220 VOLTS FOR HEATING UNITS.

5. SERVICE ENTRANCE

A. SERVICE SHALL START FROM THE PULL BOX AT THE REAR OF THE TOILET BUILDING, CONNECTIONS TO THE CABLE THEREIN, AND BE RUN UNDER GROUND IN CONDUIT TO A 200 AMP. SWITCH ON PANEL-BOARD IN BUILDING AND BE CONNECTED TO SAME.

B.

C.

D. SIZE OF SERVICE FEEDER AND SIZE OF CONDUIT SHALL BE AS PER PLAN.

6. PANELBOARD

A. PANELBOARD SHALL BE DESIGNED FOR 3 to 2 WIRE DISTRIBUTION, HAVE NEUTRAL BAR ACROSS THE TOP, A 200 AMP. 2P. CIRCUIT BREAKER IN MAINS.

ELECTRICAL (CONTINUED)

B. BOARD SHALL CONTAIN 10-15 AMP. SINGLE POLE CIRCUIT BREAKERS AND 6 DOUBLE POLE, 220 VOLTS, 30 AMP. BREAKERS, ONE FOR HEATING UNITS, WELL PUMP MOTOR, SEWAGE TREATMENT PLANT MOTORS, AND RESERVOIR PUMP MOTOR. BREAKERS FOR WELL PUMP AND RESERVOIR PUMP MOTORS SHALL HAVE PADLOCKABLE HANDLE LOCK-OFF DEVICES.

C. CABINET SHALL BE SINGLE DOOR TYPE AND PANEL OF SQUARE D, GENERAL ELECTRIC OR BULLDOG MAKE.

D. CABINET SHALL BE OF SURFACE TYPE, CONSTRUCTED OF CODE GAGE STEEL AND GALVANIZED OR PAINTED WITH AN APPROVED PROTECTIVE PAINT OR LACQUER. CABINET SHALL BE PROVIDED WITH WIRING GUTTERS AT TOP, BOTTOM AND SIDES. FRONT SHALL HAVE CODE GAGE METAL TRIM AND DOOR.

E. DOOR SHALL BE PROVIDED WITH CYLINDER TYPE LOCK AND THREE KEYS SHALL BE DELIVERED TO THE ENGINEER.

7. HEATING UNITS AND CONTROLS

A. THIS CONTRACTOR SHALL PROVIDE AND INSTALL WHERE SHOWN, 3 ELECTRIC HEATING UNITS FOR EACH TOILET ROOM.

B. EACH UNIT SHALL HAVE A RATING OF 2 KW AND BE TYPE H AS MADE BY CHROMALOX , OR NO. 690-32 INDEECO FOR 220 VOLTS, SINGLE PHASE, 60 CYCLES, A.C.

C. THE GROUP OF THREE IN EACH TOILET ROOM SHALL BE CONTROLLED BY A PROPER TYPE THERMOSTAT AND CONTACTOR BOTH LOCATED WHERE SHOWN. THERMOSTATS AND CONTACTORS SHALL BE MADE BY MANUFACTURERS OF HEATING UNITS SUPPLIED.

8. PHOTOELECTRIC CONTROL SWITCH

A. THE LIGHTS IN BOTH TOILET ROOMS, VESTIBULES, AND EXTERIOR LOBBY SHALL BE ON ONE CIRCUIT AND CONTROLLED BY PHOTOELECTRIC CONTROL SWITCH.

B. CONTROL SWITCH SHALL BE A G.E. CATALOG NO. C420G200 OR FISHER PIERCE OR TABET. WITH CONDUIT MOUNTING TYPE ADAPTOR.

C. SWITCH SHALL BE MOUNTED ON ROOF AT POINT DIRECTED.

9. WIRE AND WIRING

A. WIRE SHALL BE RUBBER COVERED GRADE RHW NON-METALLIC SHEATH CABLE OF TYPE NMC AND BEAR UNDERWRITER'S LABEL.

B. ALL WIRING SHALL BE RUN CONCEALED.

C. WIRE SHALL NOT BE SPLICED ANYWHERE EXCEPT IN OUTLET BOXES. ALL SPLICE JOINTS SHALL BE CAREFULLY MADE WITH WIRE CONNECTORS AND TAPED WITH VINYL PLASTIC ELECTRICAL TAPE.

ELECTRICAL (CONTINUED)

9. WIRE AND WIRING (CONTINUED)

D. NO WIRE LESS THAN NO. 12 AWG SHALL BE USED. WIRE SIZE FOR LONG RUNS SHALL BE SUCH SIZE THAT THE DROP IN POTENTIAL TO THE FARTHEST OUTLET SHALL NOT EXCEED 2% UNDER MAXIMUM LOAD.

E. NO JOISTS OR BEAMS SHALL BE NOTCHED TO RUN WIRES.

F. RUNS OF CABLES BETWEEN OUTLET BOXES SHALL BE PROPERLY SUPPORTED OR STRAPPED IN PLACE.

G. CABLE SHALL ENTER BOXES THROUGH A KNOCKOUT AND SHALL BE CLAMPED TO THE BOX IF NOT SUPPORTED WITHIN 8" OF BOX.

10. OUTLET BOXES AND FITTINGS

A. ALL LIGHT AND SWITCH OUTLET BOXES SHALL BE OF HEAVY PRESSED GALVANIZED STEEL OF A STANDARD MAKE AND OF SIZE, SHAPE, USAGE, AND CONNECTIONS.

B. OUTLETS FOR LIGHT FIXTURES SHALL BE 4" SQUARE OR OCTAGONAL.

C. WHERE TWO OR MORE SWITCHES ARE SHOWN AT ONE POINT, GANG OUTLET BOXES SHALL BE USED.

11. SWITCHES

A. ALL SWITCHES SHALL BE FLUSH TYPE TUMBLE SWITCHES, GENERAL ELECTRIC NO. 2842 OR APPROVED EQUAL AS MADE BY ARROW-HART AND HEGMAN, PASS AND SEYMOUR, BRYANT OR HUBBELL.

11A CONDUIT

A ALL WIRING SHALL BE HOUSED IN CONDUIT. CONDUIT SHALL BE THINWALL TYPE EMT, SIZED AS DETAILED AND REQUIRED BY CODE.

12. PLATES

A. ALL SWITCH PLATES SHALL BE .06" THICK METAL, NICKEL PLATED OR STAINLESS STEEL.

B. AT POINTS WHERE TWO OR MORE SWITCHES ARE LOCATED, GANG OUTLET BOXES SHALL BE USED.

13. GROUNDING

A. SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH REQUIREMENTS OF NATIONAL ELECTRICAL CODE.

REST AREAS ROADSIDE TOILETS AND STORAGE UNIT

ELECTRICAL (CONTINUED)

14. FIXTURE SCHEDULE

A. THIS CONTRACTOR SHALL FURNISH AND INSTALL COMPLETE, INCLUDING LAMPS, ALL LIGHTING FIXTURES FOR THE BUILDING. THE STYLE OF FIXTURE BY A LETTER AND NUMBER RESPECTIVELY.

B. STYLE "A" SHALL BE AN ART METAL #15-1115 C.H.
STYLE "B" SHALL BE AN ART METAL #10-1119 C.H.
STYLE "C" SHALL BE AN ART METAL #10-1110 A.A.
STYLE "D" SHALL BE A PORCELAIN OUTLET BOX RECEPTACLE.

C. SIMILAR FIXTURE AS MADE BY PRESCOLITE OR VIRDEN WILL BE ACCEPTABLE SUBJECT TO ENGINEER'S APPROVAL.

15. SEWAGE TREATMENT PLANT

A. THIS CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY ELECTRICAL DEVICES AND WIRING REQUIRED FOR SERVICE TO AND THE OPERATION OF THE SEWAGE TREATMENT PLANT AS HEREIN DESCRIBED IN SPECIFICATIONS FOR SEWAGE TREATMENT PLANT.

16. A. VENT FAN WITH SKYDOME -SEE DRAWING.

PLUMBING

NOTES:

1. A. THE CONTRACTOR FOR THIS WORK IS REFERRED TO"INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS" AS PART OF THIS CONTRACT.

B. THIS CONTRACTOR SHALL CAREFULLY READ THE SPECIFICATIONS OF ALL BRANCHES OF WORK PERTAINING TO THE BUILDING SO THAT HE MAY BE FULLY INFORMED AS TO THE WORK TO BE DONE BY EACH CONTRACTOR.

C. THIS CONTRACTOR SHALL CO-ORDINATE HIS WORK WITH THE WORK OF THE OTHER CONTRACTORS IN ORDER TO AVOID DELAY AND INTERFERENCE IN CARRYING ON THE GENERAL CONSTRUCTION OF THE PROJECT.

D. THE SUBMISSION OF A BID FOR THIS BRANCH OF WORK SIGNIFIES THAT THE CONTRACTOR HAS EXAMINED THE DRAWINGS AND SPECIFICATIONS FOR ALL BRANCHES OF WORK FOR THE PROJECT AND HAS VISITED THE SITE AND IS ACQUAINTED WITH ALL CONDITIONS WHICH MAY IN ANY WAY WHATSOEVER EFFECT THE EXECUTION OF THE WORK.

PLUMBING (CONTINUED)

NOTES: (CONTINUED)

E. WHERE A MATERIAL OR METHOD IS DESCRIBED BY PERFORMANCE DATA ONLY, ANY PRODUCT OR METHOD MEETING SUCH REQUIREMENTS MAY BE USED. WHERE MORE THAN ONE BRAND NAME IS SPECIFIED THE FIRST NAMED IS THE PRODUCT WHOSE DIMENSIONS AND PERFORMANCE CHARACTERISTICS WERE USED IN THE DESIGN. THE OTHER NAMED PRODUCTS MAY BE USED BUT WITH THE UNDERSTANDING THAT IF CHANGES TO THE BUILDING ARE REQUIRED BECAUSE OF DIMENSIONS OR CHARACTERISTICS OF THAT PRODUCT, ANY ADDITIONAL COST SHALL BE A PART OF THE BID.

F. IN CASE ANY CONFLICT DEVELOPS BETWEEN DRAWINGS AND SPECIFICATIONS, SAME SHALL BE REFERRED BY THIS CONTRACTOR TO THE ENGINEER FOR A DECISION AS TO METHOD AND FOR MATERIAL.

2. EXTENT OF WORK

A. THE CONTRACTOR FOR THIS WORK SHALL FURNISH ALL LABOR, MATERIAL AND EQUIPMENT AND INSTALL COMPLETE, ALL WORK AS HEREINAFTER SPECIFIED, INCLUDING ALL 6" CAST IRON SEWER PIPE TO A MINIMUM DISTANCE OF 100' FROM WATER WELL OR AS SHOWN ON THE PLANS.

3. INSPECTION

A. ALL WORK SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE OHIO STATE PLUMBING CODE AND HAVE STATE PLUMBING INSPECTION.

B. THE CONTRACTOR SHALL TAKE OUT A PERMIT WITH THE DIVISION OF STATE PLUMBING INSPECTION BEFORE STARTING ANY WORK.

C. WHEN WORK IS COMPLETED, THE CONTRACTOR SHALL FURNISH TO THE ENGINEER, A CERTIFICATE OF APPROVAL FROM THE STATE DEPARTMENT OF HEALTH BEFORE FINAL PAYMENT WILL BE ALLOWED.

4. ROUGHING-IN

A. ALL PLUMBING FIXTURES SHALL BE LOCATED AND "ROUGHED-IN" AS SHOWN BY PLANS AND PLUMBING DIAGRAMS.

B. CLEANOUTS SHALL BE PROVIDED WHERE SHOWN AND CALLED FOR BY THE STATE PLUMBING CODE AND BE INSTALLED IN SUCH A MANNER AS TO BE EASILY ACCESSIBLE FOR RODDING.

PLUMBING (CONTINUED)

4. ROUGHING-IN (CONTINUED)

C. ALL WASTE AND VENT LINES ABOVE THE FLOOR SHALL BE STANDARD WEIGHT GALVANIZED STEEL PIPE. FITTINGS FOR WASTE LINES SHALL BE BLACK CAST IRON DRAINAGE TYPE. FITTINGS FOR VENT LINES SHALL BE GALVANIZED MALLEABLE IRON.

D. ALL EXPOSED WORK SHALL BE RUN IN A NEAT MANNER ACCEPTABLE TO THE ENGINEER.

5. BUILDING DRAIN

A. THE BUILDING DRAIN SHALL BE OF EXTRA HEAVY CAST IRON SOIL PIPE AND FITTINGS AND RUN AS SHOWN ON THE PLANS, AS TO LOCATION, SIZE AND CONNECTIONS, TO A MINIMUM DISTANCE OF 100 FEET FROM THE WELL AS SHOWN ON THE PLANS.

B. ALL JOINTS SHALL FIRST BE CAULKED WITH OAKUM AND THEN WELL CAULKED WITH LEAD NOT LESS THAN 1" DEEP.

C. LINES SHALL HAVE A FALL OF NOT LESS THAN 1/8" PER FOOT.

6. EXCAVATION AND BACKFILL

A. TRENCHES NECESSARY FOR LAYING OF DRAINS, OR ANY OTHER LINES UNDER THIS CONTRACT, SHALL BE EXCAVATED AND BACKFILLED BY THE PLUMBER.

B. ANY EXCAVATION WITHIN FIVE FEET OF THE EDGE OF ANY FOOTING AND BELOW THE ELEVATION OF BOTTOM OF SAME, SHALL BE BACKFILLED WITH CLASS "E" CONCRETE TO LEVEL OF BOTTOM OF FOOTING.

C. ALL TRENCHES SHALL BE BACKFILLED BY TAMPING IN THIN LAYERS OF CLEAN DIRT AND PUDDLING.

D. NO TRENCH SHALL BE BACKFILLED UNTIL THE LINE IN SAME HAS BEEN INSPECTED AND APPROVED BY THE PROPER INSPECTOR.

E. THE SURFACE OF BACKFILLED TRENCH SHALL BE RESTORED TO A CONDITION AS GOOD AS THE ORIGINAL SURFACE.

7. WATER PIPING

A. MAIN SHALL START FROM THE STORAGE TANK OF WATER SYSTEM WHICH WILL BE FURNISHED LATER BY OTHERS AND BE RUN AS SHOWN ON THE PLANS AS TO SIZES, LOCATIONS AND VALVING.

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PLUMBING (CONTINUED)

7. WATER PIPING (CONTINUED)

B. EACH BRANCH SHALL BE PROVIDED WITH AN ALL BRASS GATE VALVE, 125 LBS. CLASS.

C. PIPE SHALL BE GALVANIZED STEEL, FITTINGS GALVANIZED MALLEABLE IRON.

D. TWO BRASS HOSE FAUCET DRAINS SHALL BE PROVIDED AND INSTALLED WHERE SHOWN AND THE LINES SHALL BE RUN SO AS TO DRAIN AT THESE POINTS.

8. CUTTING AND PATCHING

A. THE CUTTING OF NEW CONCRETE, MASONRY OR ANY OTHER WORK SHALL BE AVOIDED BY THE USE OF SLEEVES INSTALLED AS THE WORK PROGRESSES.

B. IN CASE IT IS NECESSARY TO CUT INTO THE WORK OF ANOTHER CONTRACTOR IT SHALL BE DONE BY THAT CONTRACTOR AT THIS CONTRACTOR'S EXPENSE OR BY THIS CONTRACTOR WITH THE PERMISSION OF THE OTHER CONTRACTOR.

C. ANY REPAIRING OF PATCHING MADE NECESSARY BY SUCH CUTTING SHALL BE EXECUTED ON THE SAME BASIS, ALL TO THE SATISFACTION OF THE ENGINEER.

9. FLOOR DRAINS

A. SHALL BE ZURN FIG. 2N-215V OR APPROVED EQUAL AS MADE BY JOSAM WADE, BOOSEY OR ASCO.

B. CAST IRON 1/2 "S" TRAPS SHALL BE USED WITH EACH FLOOR DRAIN.

10. WATER CLOSETS

A. SHALL BE COMPLETE AS AMERICAN STANDARD F-2495-8 EXCEPT SEAT SHALL BE WHITE OLSONITE NO. 1000, OR APPROVED EQUAL AS MADE BY CHURCH OR STASCO, WITH SLOAN NO. 152 FLUSH VALVE.

B. EQUAL CLOSETS AS MADE BY CRANE, KOHLER OR ELJER WILL BE ACCEPTABLE SUBJECT TO ENGINEER'S APPROVAL.

PLUMBING (CONTINUED)

11. URINALS

A. IN MEN'S TOILET ROOM SHALL BE COMPLETE AS AMERICAN STANDARD F-6235-5 OR APPROVED EQUAL AS MADE BY CRANE, KOHLER OR ELJER. WITH SLOAN NO.152 FLUSH VALVE.

B. THE ONE IN THE WOMEN'S TOILET ROOM SHALL BE COMPLETE AS AMERICAN STANDARD F-5835-5 OR APPROVED EQUAL AS MADE BY CRANE, KOHLER OR ELJER. WITH SLOAN NO. 152.

12. LAVATORIES

A. SHALL BE 20" x 18" AND COMPLETE AS PER AMERICAN STANDARD P-3867-40 EXCEPT COLD WATER FAUCET SHALL BE R-2213 OR CHICAGO NAIAD, SHALL BE NO HOT WATER FAUCET BUT A R-2560, FAUCET HOLD COVER FOR SAME, SUPPLY PIPE R-2607 AND TRAP R-7003-45.

B. EQUAL LAVATORIES AS MADE BY CRANE, KOHLER OR ELJER WILL BE ACCEPTABLE SUBJECT TO THE ENGINEER'S APPROVAL.

13. DRINKING FOUNTAIN

A. SHALL BE A CRANE 6-590 OR APPROVED EQUAL AS MADE BY AMERICAN STANDARD, KOHLER OR ELJER EQUIPPED WITH MODERN KELLY PUSH BUTTON AUTOMATIC FREEZE PROOF WATER AND DRAIN ASSEMBLY AND CABINET.

14. SUPPORTS FOR WATER CLOSETS AND URINALS

A. WATER CLOSETS SHALL BE SUPPORTED BY ZURN Z-1205 SERIES FIXTURES SUPPORTS.

B. WOMEN'S URINALS SHALL BE SUPPORTED BY SIMILAR TYPE SUPPORT.

C. EQUAL SUPPORTS MADE BY JOSAM AND CRANE WILL BE ACCEPTABLE

15. CLEANING AND PAINTING

A. AFTER ALL PIPING HAS BEEN APPROVED, ALL SHALL BE CLEANED AND LEFT IN A FIRST CLASS CONDITION FOR PAINTING.

METHOD OF MEASUREMENT

THE ITEM SPECIAL, "ROADSIDE TOILETS AND STORAGE UNIT" AND ALL APPERTENANCES AS DETAILED AND SPECIFIED ON THE PLANS SHALL BE CONSIDERED AS ONE UNIT. THE NUMBER OF UNITS TO BE PAID FOR SHALL BE THE NUMBER OF EACH UNIT, LISTED AND ESTIMATED SEPARATELY, COMPLETE AND ACCEPTED.

BASIS OF PAYMENT

THE WORK INCLUDED IN THIS ITEM SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR EACH "ITEM SPECIAL, ROADSIDE TOILETS AND STORAGE UNIT" COMPLETED AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PREPARING, PLACING AND INSTALLING ALL MATERIALS, AND FOR ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM AS SHOWN AND SPECIFIED ON THE PLANS.

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451-10" REINFORCED P.C. CONCRETE PAVEMENT

RAMP U	1,100	Sq.Yds.
RAMP V	1,589	
RAMP W	1,040	
RAMP X	1,667	
TOTAL	5,396	Sq.Yds.*

451-9" REINFORCED P.C. CONCRETE PAVEMENT

RAMP U	1,740	Sq.Yds.
RAMP V	998	
RAMP W	998	
RAMP X	1,740	
REST AREAS (2)	7,844	
TOTAL	13,320	Sq.Yds.*

310-SUBBASE: GRADING A or B, as per plan

RAMP U	659	Cu.Yds.
RAMP V	578	
RAMP W	440	
RAMP X	878	
REST AREAS (2)	1,462	
TOTAL	4,017	Cu.Yds.*

310-SUBBASE

RAMP U	109	Cu.Yds.
RAMP V	81	
RAMP W	46	
RAMP X	177	
TOTAL	413	Cu.Yds.*

304-AGGREGATE BASE

RAMP U	201	Cu.Yds.
RAMP V	171	
RAMP W	107	
RAMP X	179	
TOTAL	658	Cu.Yds.*

652-PLACING STOCKPILED TOPSOIL

N.B. Rest Area	5,009	Sq.Yds.
S.B. Rest Area	7,741	
TOTAL	12,750	Sq.Yds. $\times \frac{3}{36}$ = 1,063 Cu.Yds.

652-COMMERCIAL FERTILIZER (12-12-12)

(389 + 116,528) Sq.Yds. $\times 9 \times \frac{20}{1,000} \times \frac{1}{2,000}$ = 10.55 Tons

656-ROADSIDE CLEANUP (as per plan)

N.B. Rest Area	579	M.Sq.Ft.
S.B. Rest Area	355	
TOTAL	934	M.Sq.Ft.

659-SEEDING AND MULCHING REST AREAS, as per plan

Topsoil		12,750 Sq.Yds.
Roadside Cleanup	934,000 $\times \frac{1}{9}$ =	103,778
TOTAL		116,528 Sq.Yds.

659-SEEDING AND MULCHING

Sta. 459+50	to	Sta. 461+00	=	811 Sq.Yds.
Sta. 466+00	to	Sta. 467+50	=	745
Sta. 464+00	to	Sta. 466+50	=	1,739
Sta. 472+00	to	Sta. 476+00	=	2,201
		TOTAL		5,496 Sq.Yds.*

659-AGRICULTURAL LIMING

(389+ 116,528) Sq.Yds. $\times 9 \times 0.05 \div 1,000$ = 52.71 Tons

301-BITUMINOUS AGGREGATE BASE

RAMP U	110	Cu.Yds.
RAMP V	93	
RAMP W	58	
RAMP X	98	
TOTAL	359	Cu.Yds.*

409-SEAL COAT BITUMINOUS MATERIAL, as per plan

RAMP U	176	Gals.
RAMP V	326	
RAMP W	362	
RAMP X	279	
TOTAL	1,143	Gals.*

409-SEAL COAT COVER AGGREGATE No. 8

RAMP U	6	Cu.Yds.
RAMP V	10	
RAMP W	12	
RAMP X	9	
TOTAL	37	Cu.Yds.*

203-SUBGRADE PREPARATION

AREA 451 & 409	23,288	Sq.Yds.
Deduct Areas on rock	7,430	
TOTAL	15,858	Sq.Yds.*

203-PROOF ROLLING

15,858 Sq.Yds. ÷ 2000 = 8 Hrs.*

ITEM SPECIAL-DRAINAGE CONNECTION USING No.8 AGGREGATE

RAMP U	68	Cu.Yds.
RAMP V	80	
RAMP W	53	
RAMP X	120	
TOTAL	321	Cu.Yds.*

* Note: Totals carried forward to Calculation Sheet, Sheet No. 15

SUB-SUMMARY OF QUANTITIES

SHEET NO. 105	106	112	123	124	126	Item	QUANTITIES		Grand Total	Unit	DESCRIPTION
											ROADWAY
					Lump	201			Lump	Lump	Clearing and Grubbing In Rest Areas, as per plan
	100					606			100	Lin.Ft.	Guard Rail, Type 4, Modified, as per plan
					184	607			184	Lin.Ft.	Fence, Type CL
					2	607			2	Each	6' Gate, Type CL
					2	607			2	Each	3' Gate, Type CL
			2262	2244	720	608			5226	Sq.Ft.	4" Concrete Walk
					2295	608			2295	Sq.Ft.	7" Concrete Walk
			Lump	Lump		621			Lump	Lump	Parking Lot Stall Marking
1100						651			1100	Cu.Yd.	Top Soil Stockpiled
1063						652			1063	Cu.Yd.	Placing Stockpiled Top Soil
1055						652			1055	Ton	Commercial Fertilizer (12-12-12)
934						656			934	M.Sq.Ft.	Roadside Cleanup, as per plan
116528						659			116,528	Sq.Yd.	Seeding and Mulching Rest Areas, as per plan
52.71						659			52.71	Ton	Agricultural Liming
	118	470		1	1	660			590	Sq.Yd.	Sodding
					300	661			300	Each	Pachysandra Terminalis - Japanese Spurge 2 years from 3" pots
					220	662			220	Each	Aronia Arbutifolia - Red Chokberry 18" to 24" B&B-10"
					8	662			8	Each	Taxus media hicksi - Hicks Yew 24" to 30" B and B 13"
					8	662			8	Each	Taxus nana compacta - Compact Japanese Yew 18" to 24" B and B 12"
					120	662			120	Each	Symphoricarps chenaulti - Improved Coralberry 18" to 24" B&B-10"
					540	662			540	Each	Ligustrum ibota regalianum - Regal Privet 18" to 24" B&B-10"
					15	663			15	Each	Acer rubrum - Red Maple 3½" to 4" B and B 40"
					6	663			6	Each	Quercus palustris - Pin Oak 3½" to 4" B and B 40"
					24	663			24	Each	Liquidambar styraciflua - Sweet Gum 1¾" to 2" B and B 24"
					14	664			14	Each	Fraxinus americana - White Ash 3" to 4" B and B 40"
					5	664			5	Each	Pinus sylvestris - Scotch Pine 4' to 5' B and B 45"
					5	664			5	Each	Pinus strobus - White Pine 4' to 5' B and B 45"
					5	664			5	Each	Picea abies excelsa - Norway Spruce 3' to 4' B and B 40"
					Lump	666			Lump	Lump	Pruning Existing Trees, as per plan
	188	413				667			601	Sq.Yd.	Jute Matting
					2	Spec.			2	Each	Roadside Toilet and Storage Unit
					2	Spec.			2	Lump	Cleaning Wells
					2	Spec.			2	Each	Pressure Water System, as per plan
					20	Spec.			20	Each	Picnic Table with Concrete Slab
					2	Spec.			2	Each	Sewage Treatment Plant
					10	Spec.			10	Each	Charcoal Grill and Serving Table
					2	Spec.			2	Each	Incinerator
											DRAINAGE
315						601			315	Lin.Ft.	Paved Gutter Standard Type 1-4
	4			8		601			12	Cu.Yd.	Dumped Rock Channel Protection
26						601			26	Sq.Yd.	Rip Rap using 6" Reinforced Concrete Slab
17.8	0.6			0.3	0.2	602			18.9	Cu.Yd.	Concrete Masonry
30	50	20	10			603			110	Lin.Ft.	6" Conduit, Type F
21						603			21	Lin.Ft.	6" Conduit, Type B with Class B Bedding
	48	328	98			603			474	Lin.Ft.	12" Conduit, Type B with Class B Bedding
	110					603			110	Lin.Ft.	15" Conduit, Type B with Class B Bedding
72						603			72	Lin.Ft.	36" Conduit, Type B with Class B Bedding
102						603			102	Lin.Ft.	54" Conduit, Type B with Class B Bedding
		24		90		603			114	Lin.Ft.	12" Conduit, Type C with Class B Bedding
			38			603			38	Lin.Ft.	15" Conduit, Type C with Class B Bedding
	1					604			1	Each	Standard No. 5 Catch Basin
	1					604			1	Each	Standard No. 6 Catch Basin
		1	1			604			2	Each	Standard No. 3A Catch Basin
		2	2			604			4	Each	Standard No. 3 Catch Basin
		1		1		604			2	Each	Standard No. 2-2-B Catch Basin
536	1351	833	862			605			3582	Lin.Ft.	6" Shallow Pipe Underdrain
976	315					605			1291	Lin.Ft.	6" Pipe Underdrain, 707.06 or 707.12
50	50					605			100	Lin.Ft.	6" Unclassified Pipe Underdrains
											PAVEMENT
139	139	387	387			609			1052	Lin.Ft.	Concrete Curb, Standard Type 6
161	161	1520	1520			609			3362	Lin.Ft.	Concrete Curb, Standard Type 7
516	516					609			1032	Lin.Ft.	Concrete Curb, Standard Type 8
25	25					612			50	Sq.Yd.	Concrete Traffic Island

Revised 7-20-67
Rev. Jan 23, 1967

ROADSIDE REST AREAS SUB-SUMMARY

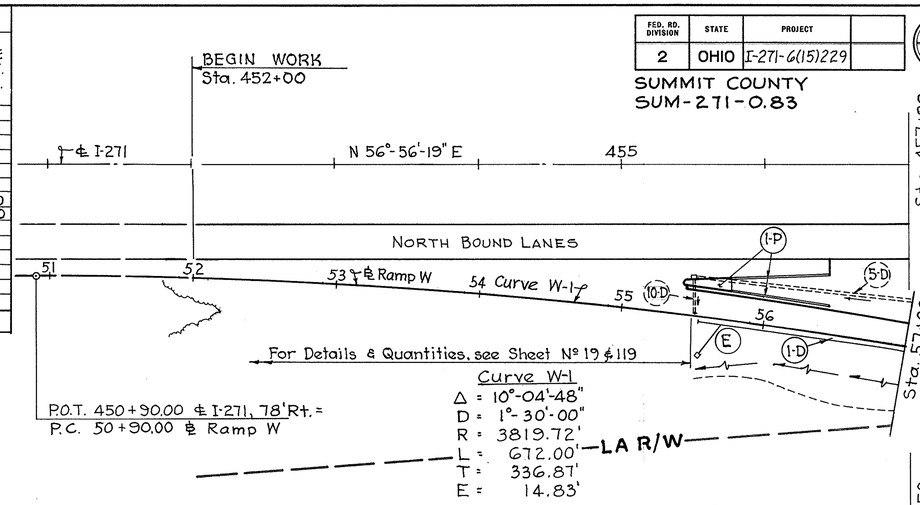
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

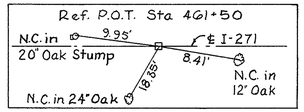
106
196

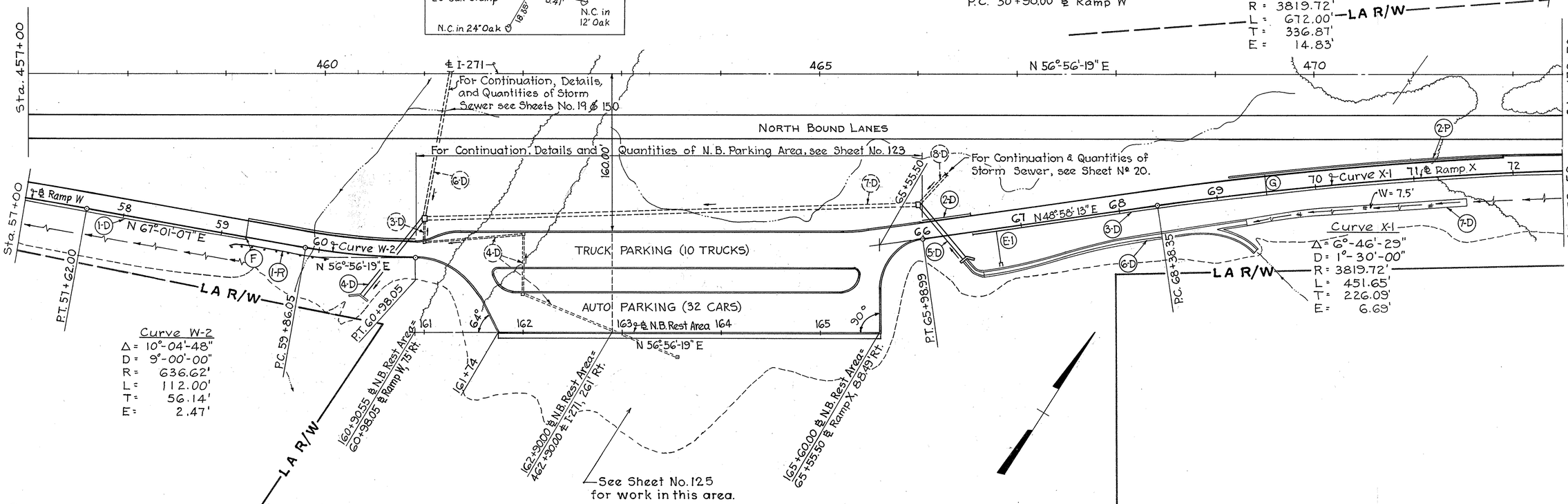
SUMMIT COUNTY
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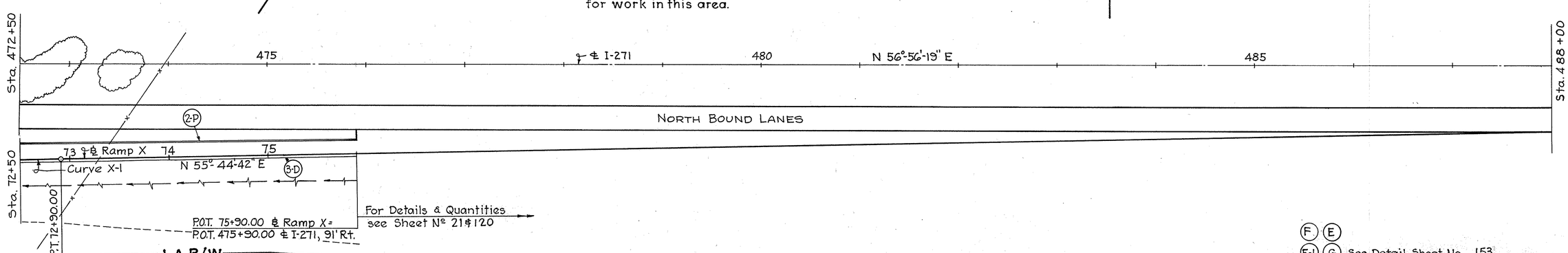
ESTIMATE OF QUANTITIES

REF. No.	STATION TO STATION	SIDE	G01 Paved Gutter Std Type 1-4	G01 Riprap Using 6" Reinf. Conc. Slab	G02 Conc. Masonry	G03 6" Type F.	G03 6" Conduit Type B with Class B Bedding	G03 36" Conduit Type B with Class B Bedding	G03 54" Conduit Type B with Class B Bedding	G05 6" U.D. 707.06 or 707.12	G05 6" Shallow Pipe U.D.	G09 Concrete Curb Standard Type 6	G09 7	G09 8	G12 Concrete Traffic Island	G60 Sodding	G67 Jute Matting	Bends and Branches 6"	G06 Guard Rail, Type 4	G05 6" Unclass. Pipe U.D.	SEE SHT. No.
			Lin. Ft.	Sq. Yd.	Cu. Yd.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.	Sq. Yd.	Sq. Yd.	Sq. Yd.		Lin. Ft.	Lin. Ft.	
1-D	55+52 to 60+98 Ramp W	Lt&Rt				10	21			536								2			
2-D	65+99 to 66+50 Ramp X	Lt.				10					41										
3-D	66+50 to 75+90 Ramp X	Rt.				10				440	495							1		50	
4-D	60+75 Ramp W	"			10.5				102							5					150
5-D	66+20 Ramp X	"		26	7.3			72								14					150
6-D	66+60 to 69+25 Ramp X	Rt.	315													99					
7-D	69+25 to 71+50 Ramp X	Rt.															188				
1-P	55+43 to 56+43 Ramp W	Lt.										139			25						
2-P	69+15 to 75+90 Ramp X	Lt.											161	516							
1-R	59+07 to 60+07 Ramp W	Rt.																	100		
	TOTALS		315	26	17.8	30	21	72	102	976	536	139	161	516	25	118	188		100	50	









F E
E-1 G See Detail, Sheet No. 153

Revised 7-20-67

NORTHBOUND ROADSIDE REST AREA PLAN

FED. RD. DIVISION	STATE	PROJECT	
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N.B. ROADSIDE REST AREA-PROFILE RAMP W & X

RAMP W

RAMP X

Sta 450+90.00 ℄ I-271, 91' Lt. =
Sta. 50+90.00 ℄ Ramp W

Ramp Elevations fixed by profile and cross slope of I-271

Elev. 1096.68

P.V.C. Sta. 51+00

P.V.I. Sta. 53+25
Elev. 1103.64

+2.962%

+2.77%

P.V.C. Sta. 55+50

I-271 Sta. 455+50, 79' Rt.
Std. Catch Basin No. 6
Top of Grate = 1110.22
F.L. 15" Conduit, Type C = 1107.00 (in)
F.L. 15" Conduit, Type B = 1106.50 (out)
F.L. 6" Conduit, Type F = 1107.18 (in)

Sta. 55+70
F.L. = 1107.6, 2.5' Rt.

Sta. 55+57
F.L. = 1107.0, 2.5' Rt.

Sta. 55+52
F.L. = 1107.8, 2.5' Rt.

Sta. 57+00 Ramp W, 37' Lt.
Std. Catch Basin No. 5
Top of Grate = 1112.11
F.L. 15" Conduit, Type C = 1109.6

P.V.I. Sta. 57+25
Elev. 1114.72

+2.236%

P.V.R.C. Sta. 59+00

Sta. 59+25
F.L. = 1116.58, 18.5' Lt.
F.L. = 1116.36, 2.5' Rt.

350' V.C.

200' V.C.

P.V.I. Sta. 60+00
Elev. 1120.87

+3.00%

(P.V.T. Sta. 61+00)
Elev. 1123.81

10'-6" Conduit, Type F, 18.5' Lt.

Sta. 60+98.05 ℄ Ramp W =
Sta. 60+90.55 ℄ N.B. Rest Area, 75' Lt.

Sta. 60+98.05
F.L. = 1119.24, 18.5' Lt.
End 707.06 or 707.12
For Continuation see N.B.L.
Rest Area Sheet No. 123

54" Conduit, Type B
F.L. = 1113.06 Lt.
F.L. = 1112.24 Rt.

450' V.C.

P.V.C. Sta. 65+75

Elev. 1137.68

Sta. 65+60.00 ℄ N.B. Rest Area 88.49' Lt. =
Sta. 65+55.50 ℄ Ramp X

10'-6" Conduit, Type F, 18.5' Lt.

P.V.I. Sta. 66+75
Elev. 1141.27

+3.004%

P.V.T. Sta. 67+75

For Continuation see N.B.L.
Rest Area Sheet No. 123

Sta. 65+99
F.L. = 1134.42, 18.5' Lt.

36" Conduit, Type B
F.L. = 1132.00 Rt.
F.L. = 1129.5 Lt.

Sta. 66+75, F.L. = 1137.02, 2.5' Rt.
F.L. = 1136.5, 37' Rt.

Sta. 66+50, F.L. = 1136.24, 18.5' Lt.
F.L. = 1137.5, 2.5' Rt.

200' V.C.

P.V.C. Sta. 72+00

P.V.I. Sta. 72+95
Elev. 1161.61

+2.92%

P.V.R.C. Sta. 73+90
Elev. 1164.38

3.28%

6" Uncloss. Pipe U.D.

Sta. 71+50
F.L. = 1154.03, 2.5' Rt.

Sta. 71+00
F.L. = 1150.89, 2.5' Rt.
Begin 707.06 or 707.12

190' V.C.

P.V.I. Sta. 74+50
Elev. 1166.13

+3.40%

P.V.R.C. Sta. 75+10
Elev. 1168.17

P.V.I. Sta. 75+50
Elev. 1169.53

+3.00%

P.V.T. Sta. 75+90
Elev. 1170.73

80' V.C.

Sta. 75+90
F.L. = 1167.56, 2.5' Rt.
For Continuation see Main Line Sheet No. 21

Ramp Elevations fixed by profile and cross slope of I-271

Sta. 75+90.00 ℄ Ramp X =
Sta. 475+90.00 ℄ I-271, 91' Rt.

Sta. 75+10
F.L. = 1165.35, 2.5' Rt.

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SEEDING END WIDTH	SEEDING SQ. YDS.
	294
90	
	600
125	
	320
36	
	60
37	
	64
34	
	531
79	
	216
0	

659 Seeding & Mulching, as per plan and 3" Topsoil

659 Seeding & Mulching

8:1 — 8:1 — 462+00 — 1120

8:1 — 8:1 — 461+50 — 1120

8:1 — 8:1 — 461+14 — 1120

Storm Sewer Outlet → Sta. 60+75 Ramp W

8:1 — 8:1 — 461+00 — 1120

℄ Ramp W — 8:1 — 460+84 — 1110

℄ Ramp W — 4:1 — 460+00 — 1100

Zero Section 459+50

END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		178	33
112	53		
		165	191
67	153		
		45	295
0	68		
		25	-
		0	45
0	104		
		0	60
0	100		
		0	1,282
0	725		
		0	670
Zero Section 459+50	0	0	

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 460+00 to 462+00

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	CU YDS. CUT	CU YDS. FILL
	389				24	570
68		464+50	2	358		
	505				39	543
114		464+00	40	229		
	672				102	352
129		Toilet & Storage Building				
		463+50	70	151		
	717				296	152
129		463+00	250	13		
	689				459	17
120		462+50	247	5		
	336				240	11
122		462+25	272	20		

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 462+25 to 464+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.
65	350
17	228
32	138
73	289

659 Seeding & Mulching

659 Seeding & Mulching, as per plan and 3" Topsoil

℄ Ramp X

4:1 2:1 2:1 1132.5

End Riprap, Using 6" Reinf. Conc. Slabs
Sta. 66+60, Rt. Ramp X
W= 8'
Begin Standard Paved Gutter
Type L-4

Begin Riprap, Using 6" Reinf. Conc. Slabs
Sta. 66+36, Rt. Ramp X
W= 6'

466+50

466+00

465+50

465+00

	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
			278	104
	200	56		
	1130		185	100
	0	52		
	1130		33	111
	37	67		
	1130		55	302
	23	258		
	1130			

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 465+00 to 466+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SEEDING	
END WIDTH	SQ. YDS.

END AREA		CU. YDS.	
CUT	FILL	CUT	FILL

468+00

1150

0 0

467+50

1140

93 52

167

100 56

℄ Ramp X

8:1 2:1 2:1 3:1

1137.5

60

467+00

1140

0

150 160 180 200 220 240 260 280 300 320 340 360 380 400 420 440

N.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 467+00 to 468+00

ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection	602 Conc. Masonry	605 6" Unclass Pipe U.D.	603 6" Conduit Type F	603 12"Conduit Type B with Cl. B Bedding	603 15"Conduit Type B with Cl. B Bedding	604 Standard Catch Basin №5	604 Standard Catch Basin №6	605 6"Pipe U.D. 707.06 or 707.12	605 6"Shallow Pipe U.D.	609 Conc. Curb Std. Type 6	609 Conc. Curb Std. Type 7	609 Conc. Curb Std. Type 8	612 Conc. Traffic Island	660 Sodding	667 Jute Matting	Bends and Branches 6"	See Sht No.
			Cu.Yd.	Cu.Yd.	Lin. Ft.	Lin.Ft.	Lin. Ft.	Lin. Ft.	Each		Lin. Ft.	Lin. Ft.	Lin. Ft.			Sq.Yd.	Sq.Yd.	Sq.Yd.		
1-D	57+00 to 57+98 Ramp U	Lt.									98									
2-D	58+02 to 66+50 Ramp U	Lt.			50	30					217	630							1	
3-D	66+50 to 66+91 Ramp U	Rt.				10						63							1	
4-D	72+00 to 77+00 Ramp V	Lt.				10						500							1	
5-D	71+92 to 73+50 Ramp V	Rt.										158								
6-D	58+00 Ramp U	–	2	0.3			48			1							1			39
7-D	65+00 Ramp U	–	2	0.3				110	1								1			43
8-D	72+00 to 77+00 Ramp V	Lt.																413		
9-D	61+72 to 64+95 Ramp U	Lt.															278			
10-D	55+00 to 59+00 Ramp U	Lt.															190			
1-P	57+00 to 63+75 Ramp U	Rt.												161	516					
2-P	76+47 to 77+47 Ramp V	Rt.											139							
3-P	77+16 to 77+47 Ramp V	Rt.														25				
	TOTALS		4	0.6	50	50	48	110	1	1	315	1351	139	161	516	25	470	413		

P.O.T. 457+00 ℄ I-271, 91' Lt. =
P.O.T. 57+00 ℄ Ramp U
LA R/W

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For Details and Quantities See Sheet No. 19 & 121

Begin Work Sta. 452+00

W = 4' t = 18"
W = 9'
N 55°-44'-42" E
℄ Ramp U 58 59
SOUTH BOUND LANES
N 56°-56'-19" E 455 ℄ I-271
Sta. 460+00

2G7+30 ℄ S.B. Rest Area = G7+34.50 ℄ Ramp U, 88.49' Lt.
See Sheet No. 127 for work in this area.
270+00 ℄ S.B. Rest Area = 470+00 ℄ I-271, 261' Lt.
271+16
271+39.45 ℄ S.B. Rest Area = 71+91.95 ℄ Ramp V, 75' Lt.

N 56°-56'-19" E
268 269 ℄ S.B. Rest Area 271
90°
AUTO PARKING (32 CARS)
TRUCK PARKING (10 TRUCKS)
G7+34.50
64°
P.C. 71+91.95
P.T. 73+03.95
P.C. 75+28.00
N 56°-56'-19" E
N 67°-01'-07" E
Curve V-2
℄ Ramp V
W = 7.5'

Curve V-1
Δ = 10°-04'-48"
D = 9°-00'-00"
R = 636.62'
L = 112.00'
T = 56.14'
E = 2.47'

Curve U-1
Δ = 6°-46'-29"
D = 1°-30'-00"
R = 3819.72'
L = 451.65'
T = 226.09'
E = 6.69'
LA R/W
P.C. 60+00.00
P.T. 64+51.65
P.C. 66+91.65
W = 8'
W = 4' t = 18"
N 48°-58'-13" E
61 Curve U-1 62 63 ℄ Ramp U 64 65 66 67
For Continuation, Details and Quantities of S.B. Parking Area See Sheet No. 124
160.00'
72 Curve V-1 73 74 ℄ Ramp V 75
For Continuation of Storm Sewer and Quantities See Sheet No. 20
Sta. 75+50
SOUTH BOUND LANES
Sta. 460+00
465 ℄ I-271 470 N 56°-56'-19" E 475
Sta. 475+50
For Continuation of Storm Sewer and Quantities See Sheets No. 19 & 150

For Details and Quantities See Sheet No. 21 & 122

Curve V-2
Δ = 10°-04'-48"
D = 1°-30'-00"
R = 3819.72'
L = 672.00'
T = 336.87'
E = 14.83'

P.T. 82+00.00 ℄ Ramp V =
P.O.T. 482+00.00 ℄ I-271, 78' Lt.

LA R/W
Sta. 75+50
W = 7.5'
76 ℄ Ramp V 77 78 ℄ Curve V-2 79 80 81
SOUTH BOUND LANES
Sta. 475+50
℄ I-271 480 N 56°-56'-19" E 485

(D-1) (B) See Detail Sheet No. 153

SOUTHBOUND ROADSIDE REST AREA PLAN

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200' V.C. | 300' V.C. | 500' V.C.

1200
1190
1180
1170
1150
1140
1130
1120
1110

1172.74 1173.26 1173.85 1174.49 1175.19 1175.96 1176.78 1177.66 1178.60 1179.56 1180.49 1181.40 1182.28 1183.13 1183.96 1184.77 1185.55 1186.30 1187.03 1187.73 1188.41 1189.07 1189.71 1190.34 1190.96 1191.56 1192.15 1192.72 1193.28 1193.83 1194.36 1194.88 1195.38 1195.87 1196.35 1196.81 1197.26 1197.69 1198.11 1198.52 1198.91

Sta. 71+91.95 ℄ Ramp V =
Sta. 271+91.95 ℄ S.B. Rest Area, 75' Rt.

Elev. 1172.58
P.V.C. Sta. 72+00
P.V.I. Sta. 73+00
Elev. 1174.72
P.V.R.C. Sta. 74+00
P.V.C.C. Sta. 77+00
P.V.I. Sta. 75+50
Elev. 1184.42
P.V.I. Sta. 79+50
Elev. 1195.06
P.V.T. Sta. 82+00

+1.98%
+3.86%
+2.66%
+1.54%

Sta. 74+00
F.L. = 1174.28, 2.5' Lt.

Sta. 73+50
F.L. = 1172.45, 2.5' Lt. & 18.5' Rt.

Sta. 77+00
F.L. = 1184.09, 2.5' Lt.
For Continuation see Main Line Sheet No. 21.

Sta. 71+92
F.L. = 1168.01, 18.5' Rt.
For Continuation see S.B.L. Rest Area Sheet No. 124

Sta. 72+30
F.L. = 1169.08, 2.5' Lt.

1199.0 1205.6 1210.1 1214.5 1219.3 1223.8
77 78 79 80 81 82

RAMP V

Sta. 82+00.00 ℄ Ramp V =
Sta. 482+00.00 ℄ I-271, 78' Lt.

Ramp Elevations fixed by profile and cross slope of I-271

1145.96 1148.60 1151.24 1153.79 1154.96 1156.06 1157.09 1158.04 1158.93 1159.74

200' V.C.

P.V.C. Sta. 65+10
Elev. 1151.77
P.V.I. Sta. 66+10
Elev. 1157.05
P.V.T. Sta. 67+10
Elev. 1160.05
+2.96%

Sta. 67+34.50 ℄ Ramp U
Sta. 267+30.00 ℄ S.B. Rest Area, 88.47' Rt.
Elev. 1160.78

10'-6" Conduit Type F, 2.5' Lt.

Sta. 66+91
F.L. = 1154.93, 18.5' Rt.
For Continuation see S.B.L. Rest Area Sheet No. 124

Sta. 66+50
F.L. = 1153.72, 2.5' Lt. & 18.5' Rt.
F.L. = 1153.5, 50' Rt.

Sta. 65+10
F.L. = 1147.45, 2.5' Lt.

Sta. 65+00, 45' Rt.
Std. Catch Basin No. 5
Top of Grate = 1145.00
F.L. 15" Conduit, Type B = 1142.50

1136.2 1139.0 1146.6 1152.8
64 65 66 67

I-271 Sta. 472+00, 211' Lt.
Std. Catch Basin No. 5
Top of Grate = 1170.53
F.L. 18" Conduit, Type B = 1167.00
F.L. 6" Conduit, Type F = 1168.50

1170.8 1175.8
72 73

1115.26 1116.23 1117.17 1118.08 1118.96 1119.85 1120.77 1121.72 1122.71 1124.72 1126.73 1128.74 1129.76 1130.83 1131.93 1133.08 1134.26 1135.48 1136.74 1138.04 1140.68 1143.32

100' V.C. | 100' V.C. | 200' V.C.

P.V.C. Sta. 57+00
P.V.I. Sta. 57+50
Elev. 1117.22
P.V.R.C. Sta. 58+00
P.V.I. Sta. 58+50
Elev. 1120.70
P.V.T. Sta. 59+00
P.V.C. Sta. 60+50
P.V.I. Sta. 61+50
Elev. 1132.76
P.V.T. Sta. 62+50

+3.32%
+3.48%
+4.02%
+5.28%

Sta. 451+00.00 ℄ I-271, 91' Lt. =
Sta. 57+00.00 ℄ Ramp U

Ramp Elevations fixed by profile and cross slope of I-271

6" Unclass. Pipe U.D.

10'-6" Conduit Type F, 2.5' Lt.

30" Conduit, Type B
F.L. = 1119.0, Lt.

Sta. 62+00
F.L. = 1131.10, 2.5' Lt.
F.L. = 1130.5, 29' Lt.

Sta. 61+96
F.L. = 1130.95, 2.5' Lt.

Sta. 60+00
F.L. = 1122.41, 2.5' Lt.
End 707.06 or 707.12

Sta. 59+50
F.L. = 1121.90, 2.5' Lt.

Sta. 58+02
F.L. = 1116.0, 25' Lt.
F.L. = 1115.8, 31' Lt.

Sta. 57+98
F.L. = 1115.9, 2.5' Lt.

Sta. 57+00
F.L. = 1112.09, 2' Lt.
For Continuation see Main Line Sheet No. 19

I-271 Sta. 458+00, 77' Lt.
Std. Catch Basin No. 6
Top of Grate = 1119.10
F.L. 12" Conduit, Type B = 1116.0
F.L. 6" Conduit, Type F = 1116.3

1142.2 1145.3 1138.2 1127.2 1122.8 1124.5 1132.2
57 58 59 60 61 62 63

RAMP U

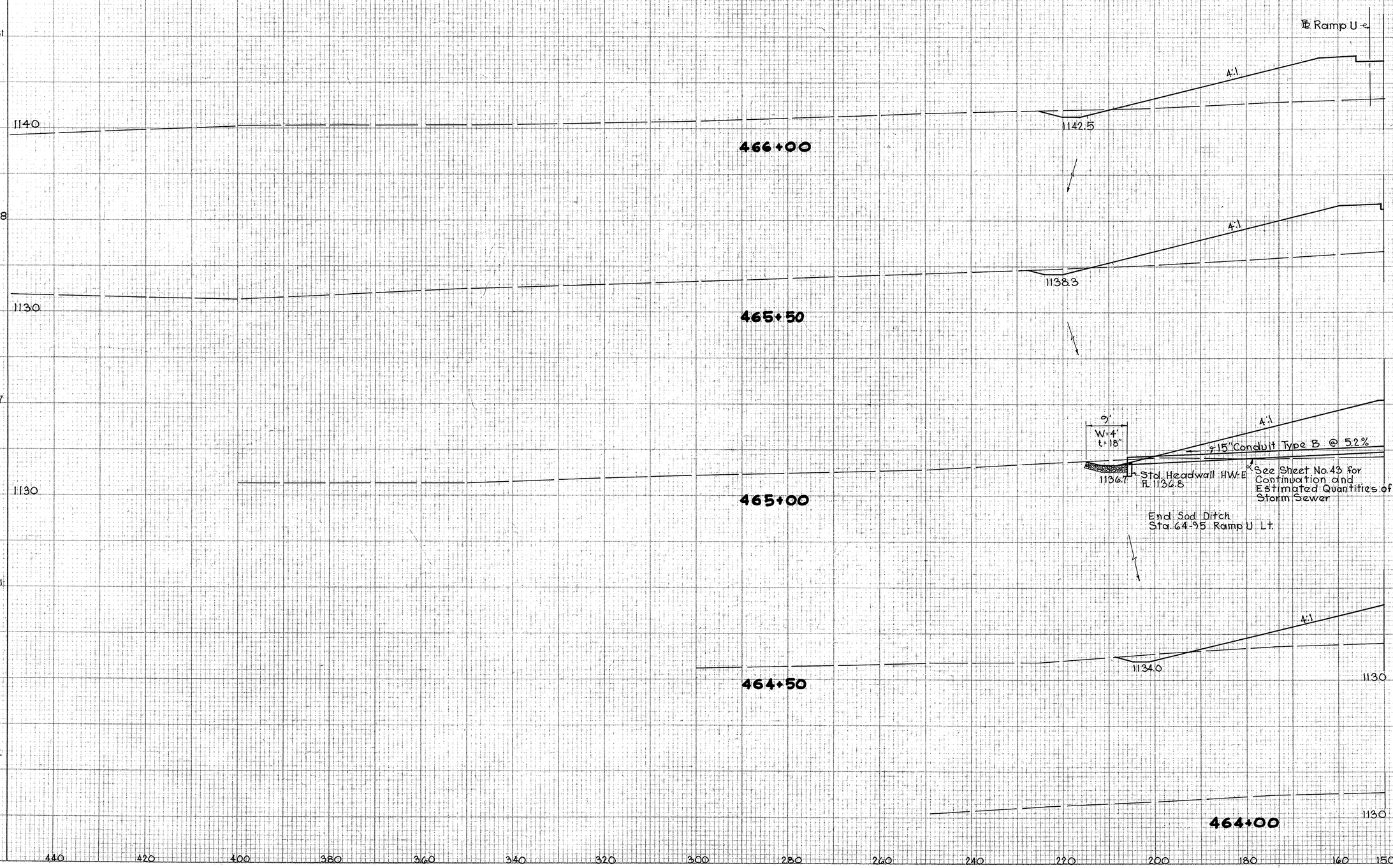
S.B. ROADSIDE REST AREA - PROFILE RAMP U & V

FED. RD. DIVISION	STATE	PROJECT	
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SUMMIT COUNTY
SUM - 271 - 0.83

SEEDING END WIDTH	SEEDING SQ. YDS.
	361
72	
	428
81	
	417
69	
	361
62	
	172
0	



END CUT	END FILL	CU. YDS. CUT	CU. YDS. FILL
			24 604
16	340		
			24 681
10	395		
			18 672
		10	330
			24 469
		15	175
			15 161
		0	0

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 464+50 to 466+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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196

SUMMIT COUNTY
SUM - 271 - 0.83

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CU. YDS. CUT	END AREA CU. YDS. FILL	CUM. CU. YDS. CUT	CUM. CU. YDS. FILL
	939					150 444
177		1160		64 358		
		469+00				
	967					59 761
172		1160		0 464		
		468+50				
	894				0 1124	
150		1150		0 749		
		468+00				
	728				0 1524	
112		1150		0 897		
		467+50			0 1831	
	822					
184		1150		0 1081		
		467+00				9 1289
	672					
58		1140		10 312		
		466+50				

G29 Seeding & Mulching
G29 Seeding & Mulching Rest Areas, as per plan and 3" Topsoil

4:1 4:1 1148.0

440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 150

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 466+50 to 469+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	228				15	213
27		1160	0	183		
		471+50				
	264				8	349
82		1160	10	246		
		471+06				
	660				31	485
130		1160	20	221		
		470+50				
	739				115	265
137		1160	105	66		
		470+00				
	828				189	174
161		1160	99	122		
		469+50				

440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 150

S.B. ROADSIDE REST AREA - EXTENDED SECTIONS Sta. 469+50 to 471+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(151)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING Sq. Yds.		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
	250					
41		1180			470	0
		474+00		233	0	
	233				374	0
44		1170		170	0	
		473+50				
	267				265	0
51		1170		115	0	
		473+00				
	317				217	0
64		1170		120	0	
		472+50				
	328				125	44
55		1170		16	48	
		472+00				

659 Seeding & Mulching

659 Seeding & Mulching Rest Areas, as per plan and 3" Topsoil

Ramp V

3:1 6:1 8:1

Standard Catch Basin CB.5, 211 Ft. Lt.
Top of Grate = 1170.53
FL 18" Conduit, Type B = 1167.00
FL 6" Conduit, Type F = 1168.50

18" Conduit, Type B 3.0 % →

Begin Jute Matting
Sta. 472+00 Lt.
W = 7.5'

For Continuation & Quantities of Storm Sewer See Sheet No. 46

440 420 400 380 360 340 320 300 280 260 240 220 200 180 160 150

S.B. ROADSIDE REST AREA—EXTENDED SECTIONS Sta. 472+00 to 474+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

SEEDING END WIDTH	SEEDING SQ. YDS.		END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
0		Zero Section 476+00	Zero Section 476+00 0	0		
	167				205	0
60			221	0		
		475+50				
	333				494	0
61			313	0		
		475+00				
	306				546	0
49			276	0		
		474+50				

1180
1180
3:1
3:1
℄ Ramp V-2
3:1

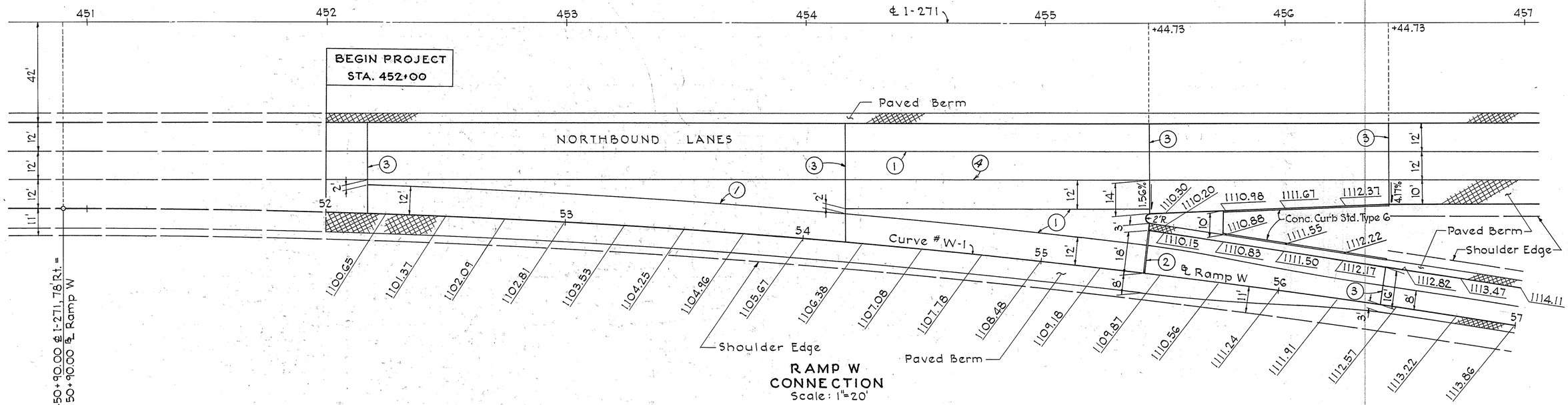
440 420 400 380 360 340 320 300 280 260 240 20 200 180 140 150

S.B. ROADSIDE REST AREA~EXTENDED SECTIONS Sta. 474+50 to 475+50

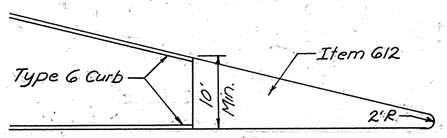
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

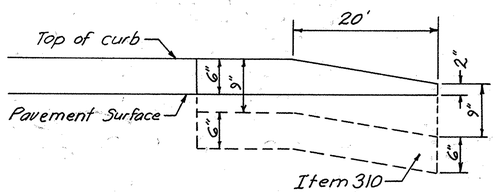
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SUMMIT COUNTY
SUM-271-0.83



RAMP W
CONNECTION
Scale: 1"=20'





NOSE DETAIL

PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp Edge
57+25	1114.49	1114.74
+50	1115.11	1115.36
+75	1115.72	1115.97
58+00	1116.32	1116.57
+25	1116.91	1117.16
+50	1117.50	1117.75
+75	1118.07	1118.32
59+00	1118.63	1118.81
+25	1119.20	1119.26
+50	1119.80	1119.73
+75	1120.42	1120.23
60+00	1121.06	1120.81'
+25	1121.73	1121.48
+50	1122.42	1122.17
+75	1123.13	1122.88

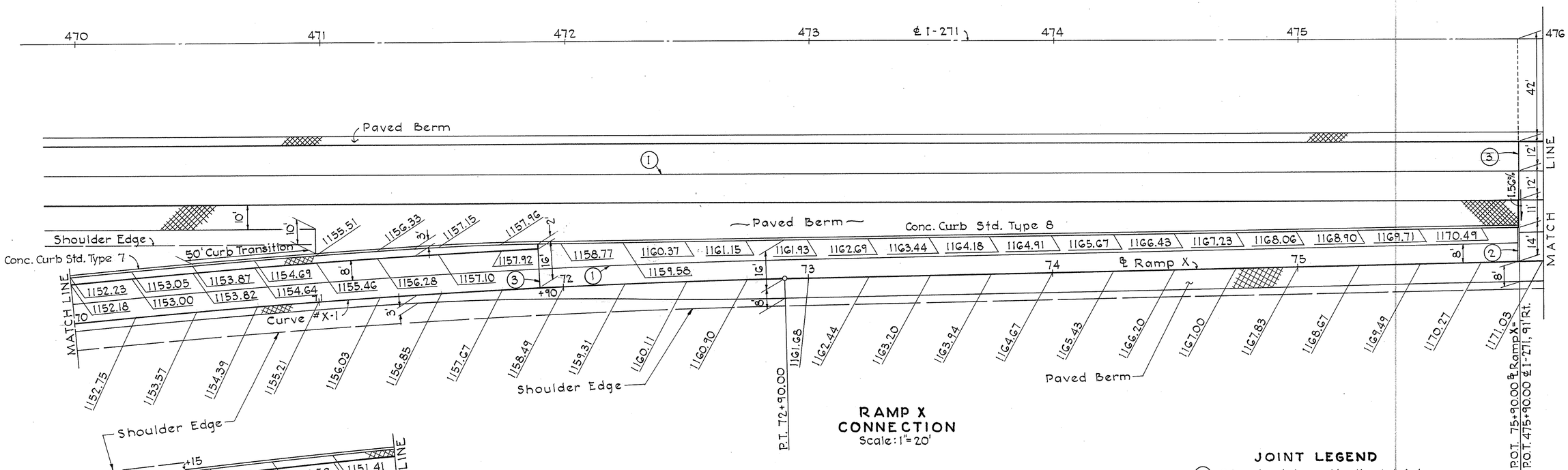
JOINT LEGEND
(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint
(4) *Standard Longitudinal Key Joints without Tie Bars.*

N.B. ROADSIDE REST AREA - RAMP DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(151)229	

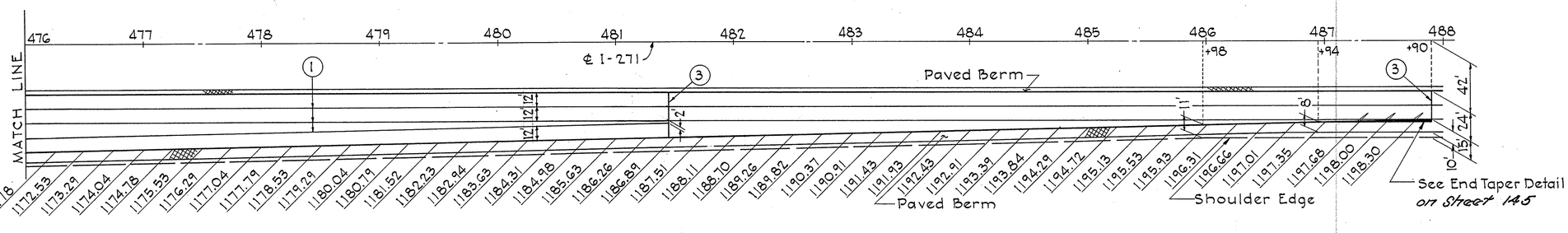
120
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SUMMIT COUNTY
SUM-271-0.83



JOINT LEGEND
(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint

PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp.Edge
GG	1139.02	1138.77
+25	1139.79	1139.67
+50	1140.56	1140.56
+75	1141.34	1141.47
G7	1142.13	1142.38
+25	1142.93	1143.18
+50	1143.73	1143.98
+75	1144.55	1144.80
G8	1145.37	1145.62
+25	1146.19	1146.44
+50	1147.01	1147.26



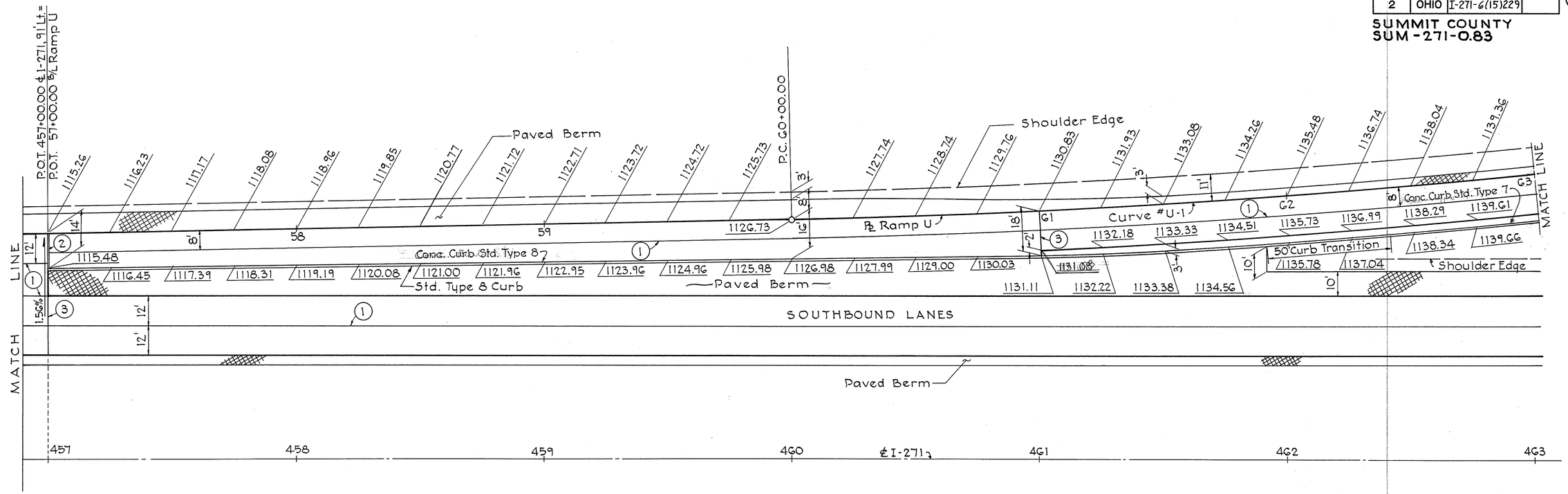
RAMP X
ACCELERATION LANE & TAPER
Scale: 1"=50'

N.B. ROADSIDE REST AREA - RAMP DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(151)229	

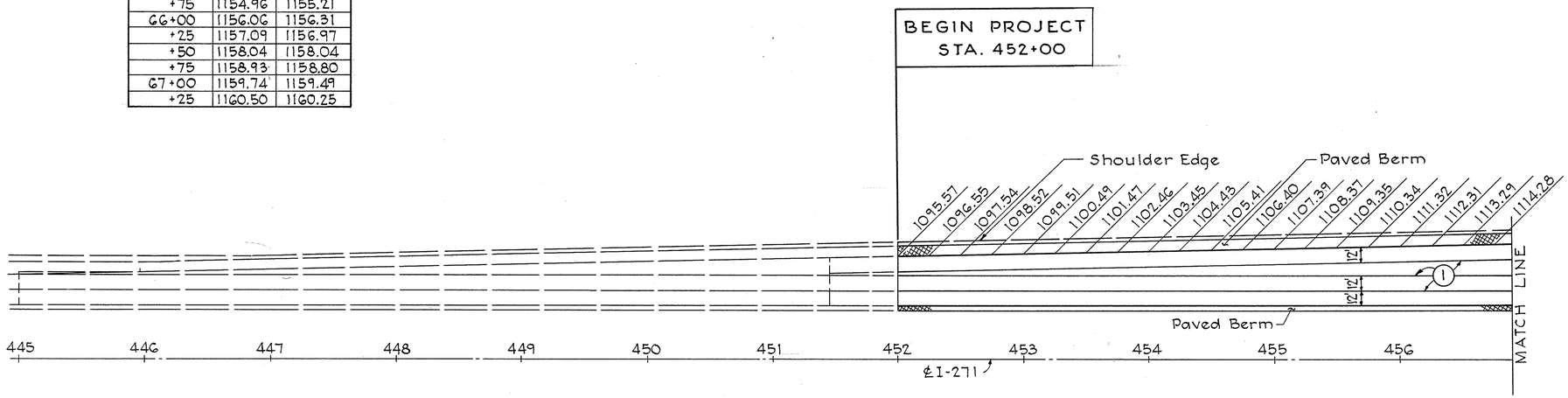
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SUMMIT COUNTY
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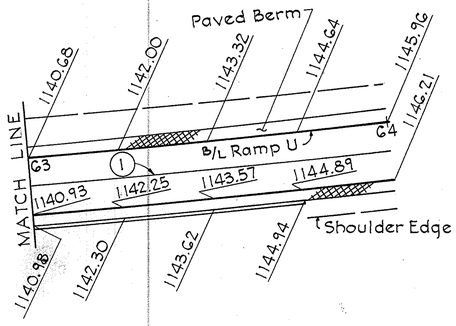


RAMP U
CONNECTION
Scale: 1"= 20'

PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp. Edge
64+25	1147.28	1147.53
+50	1148.50	1148.85
+75	1149.92	1150.17
65+00	1151.24	1151.49
+25	1152.55	1152.80
+50	1153.79	1154.04
+75	1154.96	1155.21
66+00	1156.06	1156.31
+25	1157.09	1156.97
+50	1158.04	1158.04
+75	1158.93	1158.80
67+00	1159.74	1159.49
+25	1160.50	1160.25



RAMP U
ACCELERATION LANE
Scale: 1"= 50'



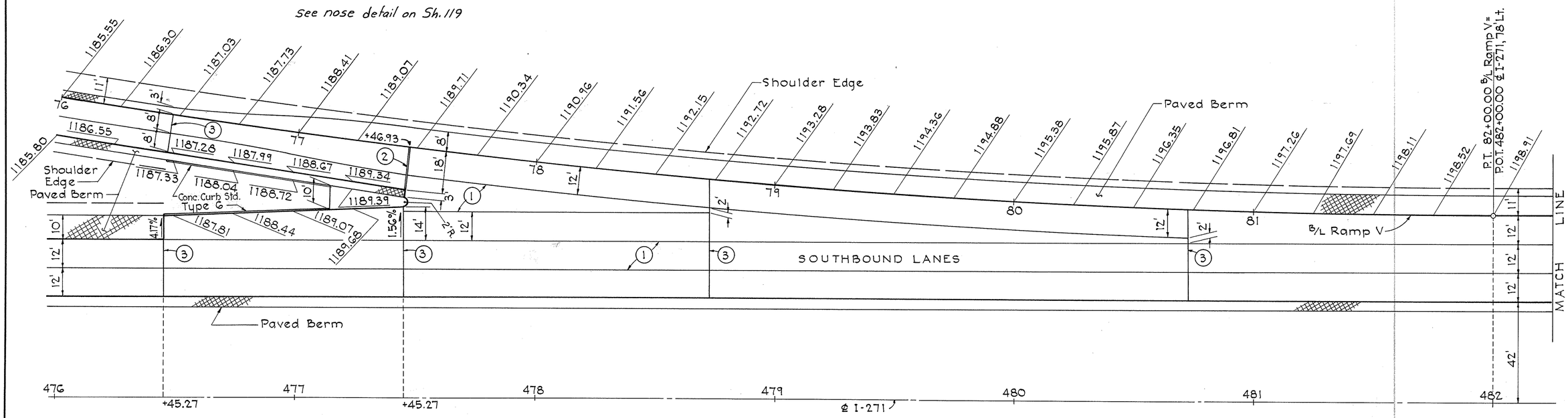
JOINT LEGEND
(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint

S.B. ROADSIDE REST AREA - RAMP DETAILS

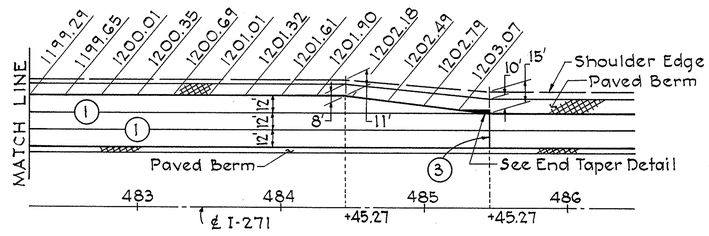
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83



RAMP V
CONNECTION
Scale: 1"=20'



RAMP V
DECELERATION LANE & TAPER
Scale: 1"=50'

PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp. Edge
72+00	1172.74	1172.49
+25	1173.26	1173.01
+50	1173.85	1173.60
+75	1174.49	1174.24
73+00	1175.19	1174.94
+25	1175.96	1175.82
+50	1176.78	1176.76
+75	1177.66	1177.77
74+00	1178.60	1178.83
+25	1179.56	1179.81
+50	1180.49	1180.74
+75	1181.40	1181.65
75+00	1182.28	1182.53
+25	1183.13	1183.38
+50	1183.96	1184.21
+75	1184.77	1185.02

JOINT LEGEND
(1) Standard Longitudinal Joint
(2) Standard Expansion Joint
(3) Standard Contraction Joint

S.B. ROADSIDE REST AREA - RAMP DETAILS

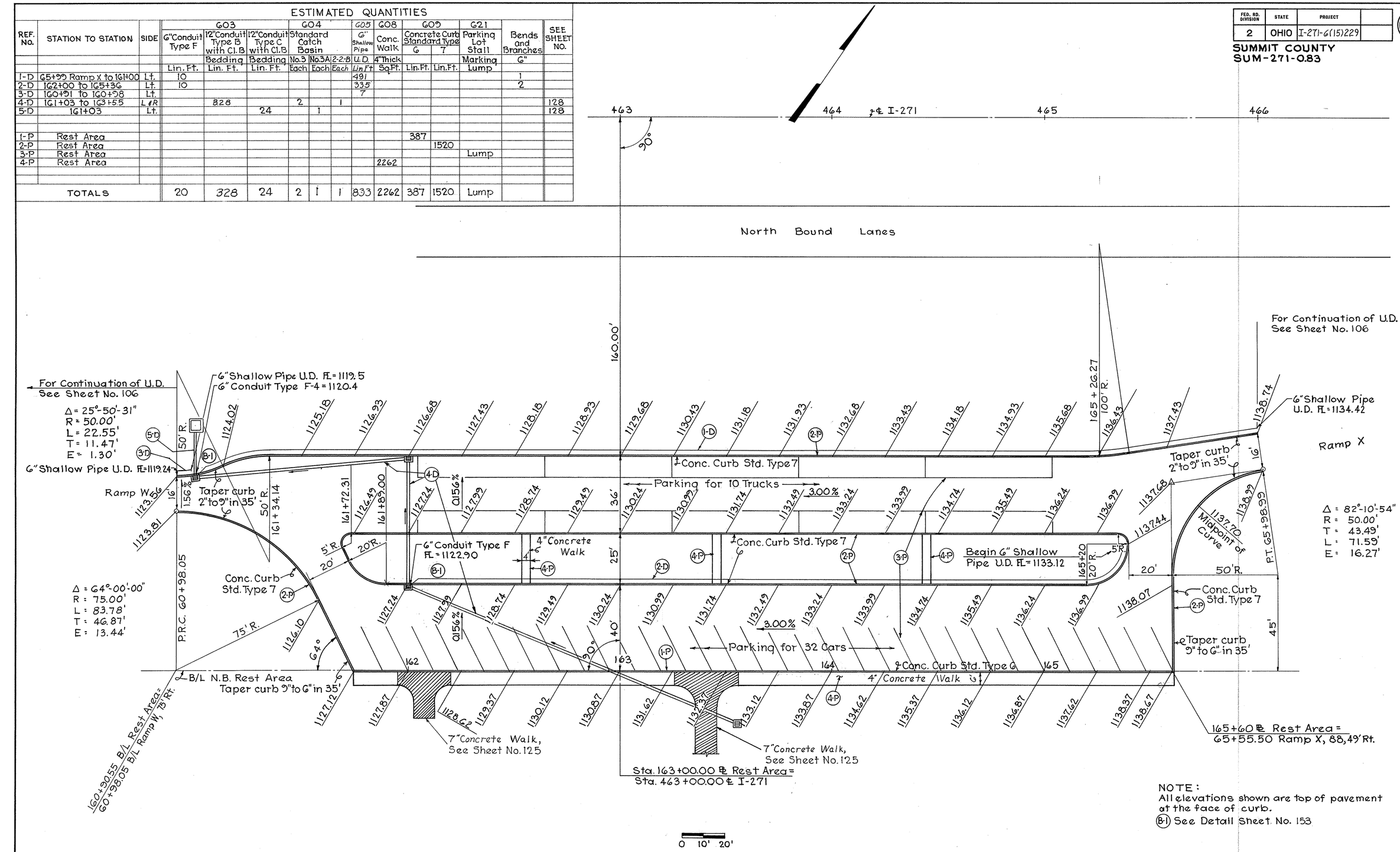
ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	603 6"Conduit Type F	603 12"Conduit Type B with Cl. B Bedding	603 12"Conduit Type C with Cl. B Bedding	604 Standard Catch Basin No. 3 Each	604 Standard Catch Basin No. 3A Each	604 Standard Catch Basin 2-2-B Each	605 6" Shallow Pipe U.D. Lin. Ft.	608 Conc. Walk 4" Thick Sq. Ft.	609 Concrete Curb Standard Type 6 Lin. Ft.	609 Concrete Curb Standard Type 7 Lin. Ft.	621 Parking Lot Stall Marking Lump	Bends and Branches 6"	SEE SHEET NO.
			Lin. Ft.	Lin. Ft.	Lin. Ft.	Each	Each	Each	Lin Ft	Sq. Ft.	Lin. Ft.	Lin. Ft.	Lump		
1-D	G5+99 Ramp X to 1GH00	Lt.	10						491					1	
2-D	1G2+00 to 1G5+36	Lt.	10						335					2	
3-D	1G0+91 to 1G0+98	Lt.							7						
4-D	1G1+03 to 1G3+55	L & R		828		2		1							128
5-D	1G1+03	Lt.			24		1								128
1-P	Rest Area										387				
2-P	Rest Area											1520			
3-P	Rest Area												Lump		
4-P	Rest Area									2262					
TOTALS			20	328	24	2	1	1	833	2262	387	1520	Lump		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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NOTE:
All elevations shown are top of pavement at the face of curb.
(B-1) See Detail Sheet No. 153

N.B. ROADSIDE REST AREA - PARKING AREA DETAILS

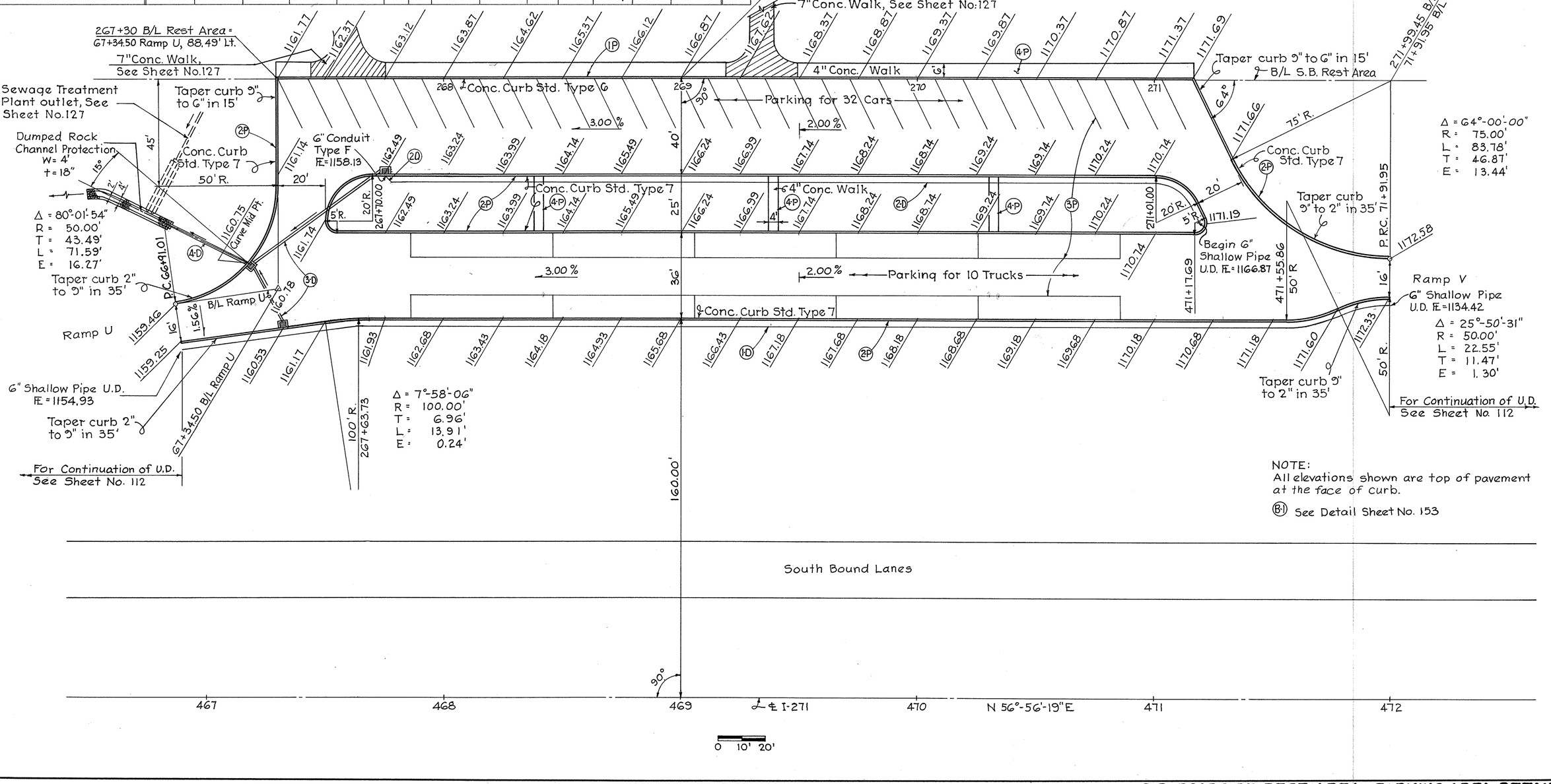
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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ESTIMATED QUANTITIES

REF. NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection Cu.Yd.	602 Concrete Masonry Cu.Yd.	603 6" Conduit Type F Lin.Ft.	603 12" Conduit Type B with Cl. B Bedding Lin.Ft.	603 15" Conduit Type C with Cl. B Bedding Lin.Ft.	604 Standard Catch Basin No.3A Each	604 Standard Catch Basin No.3 Each	605 6" Shallow Pipe Underdrain Lin.Ft.	608 Concrete Walk 4" Thick Sq.Ft.	609 Concrete Curb Standard Type 6 Lin.Ft.	609 Concrete Curb Standard Type 7 Lin.Ft.	621 Parking Lot Stall Marking Lump	660 Sodding Sq.Yd.	Bends and Branches	SEE SHEET NO.
1-D	266+89 to 271+99.45	Rt.								512							
2-D	267+75 to 271+20	Rt.			10					350						2	
3-D	267+21 to 267+75	Rt.				98			2								128
4-D	67+24 ℄ Ramp U	Lt.	8	0.3			38	1							1		128
1-P	Rest Area											387					
2-P	Rest Area												1520				
3-P	Rest Area													Lump			
4-P	Rest Area										2244						
TOTALS			8	0.3	10	98	38	1	2	862	2244	387	1520	Lump	1		



NOTE:
All elevations shown are top of pavement at the face of curb.

(B-1) See Detail Sheet No. 153

S.B. ROADSIDE REST AREA—PARKING AREA DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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4G1 | 4G3 ℄ I-271 | 4G5

270 Ligustrum I Regelianum 3' Spacing Double Row

160.00'

3 Liquidamber | 3 Quercus Palustris | 3 Liquidamber

8' | 8' | 8'

12' | 12' | 12'

P.R.C. 60+98.05

4" Conc. Walk (Quantities on Sht. No.123)

3 Liquidamber

3 Liquidamber

4' | 10' | 10' | 10' | 10' | 10' | 10'

(4-D) Sheet No.123

Place as Directed:
4 Taxus Media Hicksi
4 Taxus Nana Compacta
150 Pachysandra 1' Spacing
60 Symphoricarpos Chenaulti 2' Spacing

7" Conc. Walk | 4G3 7" Conc. Walk | B/L N.B. Rest Area | 4G5

4" Conc. Walk (Quantities on Sheet No.123)

P.T. 65+98.22

1125

CLERMONT

10' R. | 10' | 10' R.

6' Gate

Sewage Treatmt. Plant | Fence, Type CL | Trash Trap

Incinerator

4 Acer Rubrum

3 Acer Rubrum

14" Ft. | 10' | 10' R.

Well Location
4G8+61, 321' Rt.

4G3+35.5
32' Rt.

8'

2" Well Pit Drain

4" Overflow Drain

Roadside Toilet & Storage Unit

Floor Elev. 1134.0

Cleanout

3' Gate

Cleanout

Reinf. Conc. Reservoir

Fence Type CL

110 Aronia Arbutifolia
3' Spacing Double Row

1115 | 1120 | 1125 | 1130 | 1135 | 1140 | 1145 | 1150

0 10' 20'

LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Key Joint without Tie Bars
5. Expansion Joint without Tie Bars

Notes:
For quantities, see Sheet No.126.
For profile of sanitary disposal system, see Sheet No.129.

N.B. ROADSIDE REST AREA SITE PLAN

SUMMIT COUNTY
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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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ESTIMATED QUANTITIES

SHEET No. 127	SHEET No. 125	ITEM	QUANTITY	UNIT	DESCRIPTION
Lump	Lump	201	Lump	Lump	Clearing and Grubbing In Rest Areas, as per plan
	0.2	602	0.2	Cu. Yds.	Concrete Masonry
90		603	90	Lin. Ft.	12" Conduit, Type C with Class B Bedding
	1	604	1	Each	Standard Catch Basin No. 2-2-B
92	92	607	184	Lin. Ft.	Fence, Type CL
1	1	607	2	Each	6' Gate, Type CL
1	1	607	2	Each	3' Gate, Type CL
360	360	608	720	Sq. Ft.	4" Concrete Walk
1104	1191	608	2,295	Sq. Ft.	7" Concrete Walk
1		660	1	Sq Yd	Sodding
150	150	661	300	Each	Pachysandra Terminalis - Japanese Spurge 2 years from 3" pots
110	110	662	220	Each	Aronia Arbutifolia - Red Chokeberry 18" to 24" - B & B-10"
4	4	662	8	Each	Taxus Media Hicksi - Hicks Yew 24" to 30" B and B 13"
4	4	662	8	Each	Taxus Nana Compacta - Compact Japanese Yew 18" to 24" B and B 12"
60	60	662	120	Each	Symphoricarpos Chenaulti - Improved Coralberry 18" to 24" B & B-10"
270	270	662	540	Each	Ligustrum Ibota Regalianum - Regal Privet 18" to 24" B & B-10"
8	7	663	15	Each	Acer Rubrum - Red Maple 3½" to 4" B and B 40"
3	3	663	6	Each	Quercus Palustris - Pin Oak 3½" to 4" B and B 40"
12	12	663	24	Each	Liquidambar Styraciflua - Sweet Gum 1¾" to 2" B and B 24"
14		664	14	Each	Fraxinus Americana - White Ash 3" to 4" B and B 40"
5		664	5	Each	Pinus Sylvestris - Scotch Pine 4" to 5" B and B 45"
5		664	5	Each	Pinus Strobus - White Pine 4" to 5" B and B 45"
5		664	5	Each	Picea Abies Excelsa - Norway Spruce 3" to 4" B and B 40"
Lump	Lump	666	Lump	Lump	Pruning Existing Trees (as per plan)
1	1	Spec.	2	Each	Roadside Toilet and Storage Unit
10	10	Spec.	20	Each	Picnic Table with Concrete Slab
1	1	Spec.	2	Each	Sewage Treatment Plant
5	5	Spec.	10	Each	Charcoal Grill and Serving Table
1	1	Spec.	2	Each	Incinerator
1	1	Spec.	2	Each	Cleaning Wells
1	1	Spec.	2	Each	Pressure Water System, as per plan

Above quantities carried to Sheet 105

Rev. Jan. 23, 1967

N.B. & S.B. ROADSIDE REST AREAS SITE PLAN QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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LEGEND

1. Standard Longitudinal Joint
2. Standard Expansion Joint
3. Standard Contraction Joint
4. Key Joint without Tie Bars
5. Expansion Joint without Tie Bars

A. Ash
B. Scotch Pine
C. White Pine
D. Norway Spruce

1150 1155 1160 1165 1170 1145

Fence, Type CL
Raint Conc.
Reservoir

4" Drain
2" Well Pit Drain
Well Location
469+25, 350' Lt.
3' Gate
Cleanout
Roadside Toilet
℄ Storage Unit
Floor Elev. 1169.5
8'
Quantities-Sht. No. 126
Detail-Sht. No. 128
469+39
315.5' Lt.
12" Conduit
3 Acer Rubrum
5 Acer Rubrum
10'R.
¼"/ft
10'

Cleanout
Sewage Treatment Plant
Incinerator
110 Aronia Arbutifolia
3' Spacing Double Row

℄ 4" Conc. Walk (Quantities on Sheet No. 124)

7" Conc. Walk 268 269 270 271 B/L S.B. Rest Area

Place as Directed:
4 Taxus Media Hicksi
4 Taxus Nana Compacta
150 Pachysandra 1' Spacing
60 Symphoricarpos Chenaulti 2' Spacing

4" Conc. Walk (Quantities on Sheet No. 124)
3 Liquidamber
Liquidamber
3 Liquidamber

P.C. 69+21.10
P.R.C. 71+91.95
Sheet No. 124

3 Liquidamber
3
Quercus Palustris
3 Liquidamber
(270 Liqustrum I Regelianum 3' Spacing Double Row)
1600'

467 469 ℄ I-271 471

0 10' 20'

Existing 20" Hickory

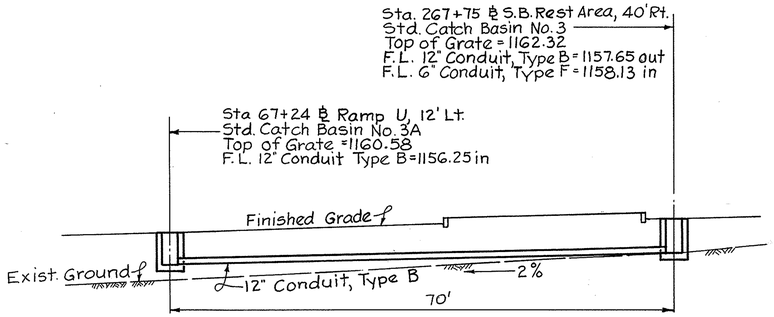
Notes:
For quantities, see Sheet No. 126.
For profile of sanitary disposal system, see Sheet No. 129.

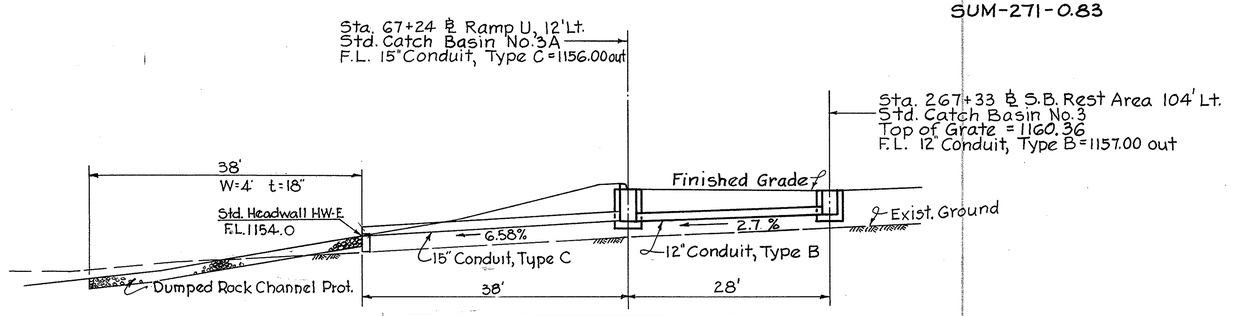
S.B. ROADSIDE REST AREA SITE PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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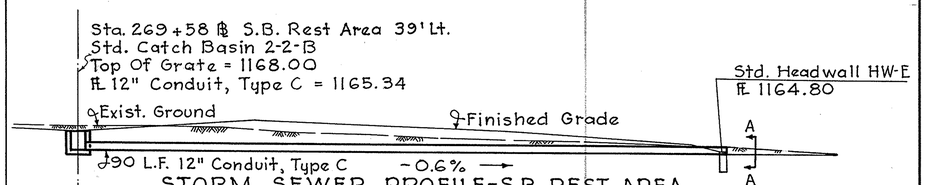


STORM SEWER PROFILE-S.B. REST AREA

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

ESTIMATED QUANTITIES

Item		
601	6 C.Y.	Dumped Rock Channel Protection
602	0.3 C.Y.	Concrete Masonry
603	98 L.F.	12" Conduit, Type B with Class B Bedding
603	38 L.F.	15" Conduit, Type C with Class B Bedding
604	1 Each	Standard Catch Basin No. 3A
604	2 Each	Standard Catch Basin No. 3
660	1 S.Y.	Sodding

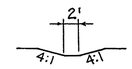


STORM SEWER PROFILE-S.B. REST AREA

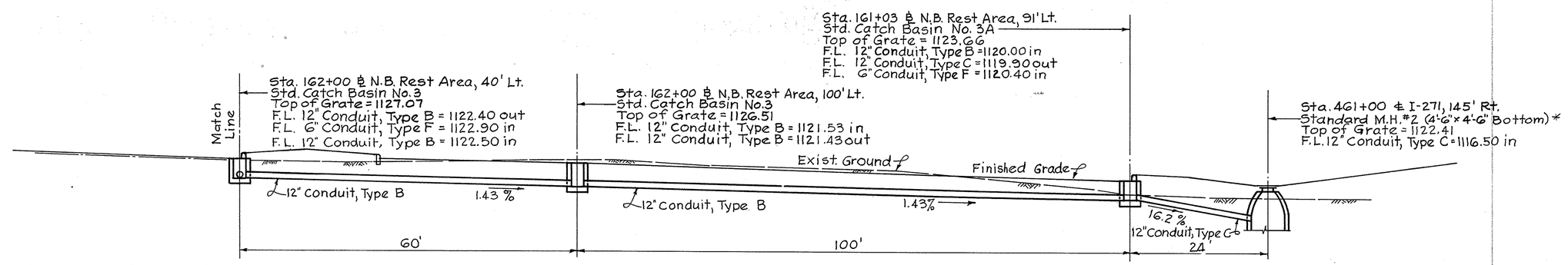
Scale : 1"=10' Hor. & Vert.

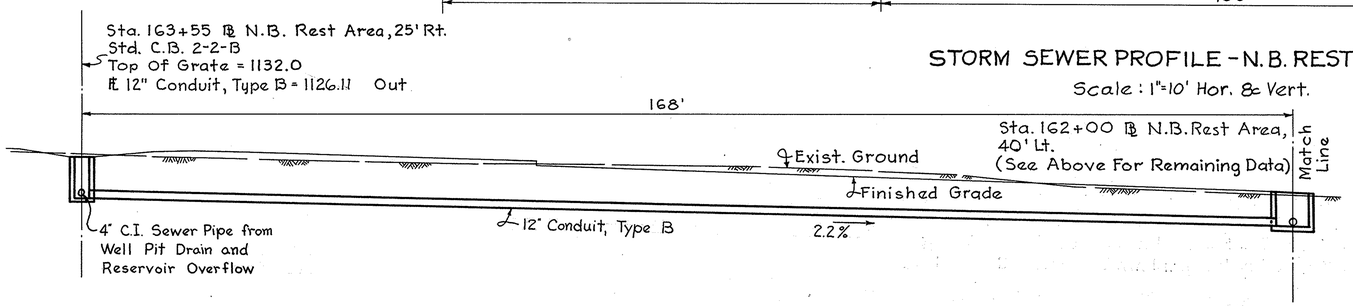
ESTIMATED QUANTITIES

Item		
602	0.2	C.Y. Concrete Masonry
603	90	L.F. 12" Conduit, Type C With Class B Bedding
604	1	Each Standard Catch Basin No. 2-2-B
660	1	S.Y. Sodding



SECTION A-A





STORM SEWER PROFILE - N.B. REST AREA

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

ESTIMATED QUANTITIES

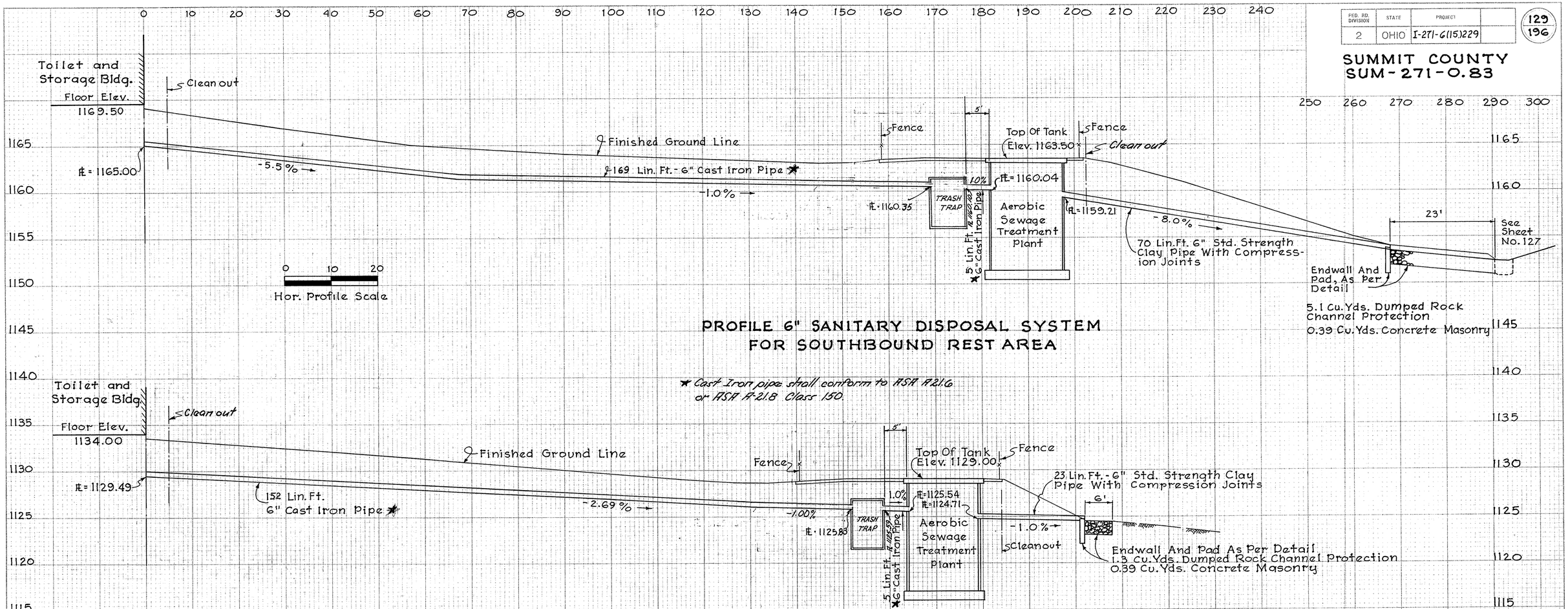
Item		
603	328 L.F.	12" Conduit Type B With Class B Bedding
603	24 L.F.	12" Conduit Type C With Class B Bedding
604	1 Each	Standard Catch Basin No. 3A
604	2 Each	Standard Catch Basin No. 3
604	1 Each	Standard Catch Basin No. 2-2-B

ROADSIDE REST AREA - STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(115)229	

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SUMMIT COUNTY
SUM-271-0.83

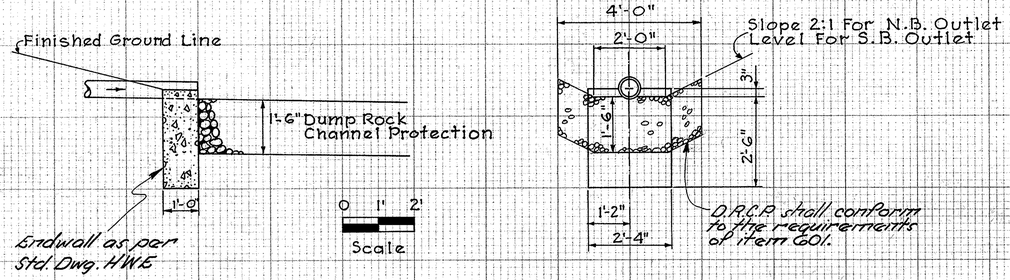


PROFILE 6" SANITARY DISPOSAL SYSTEM FOR SOUTHBOUND REST AREA

★ Cast Iron pipe shall conform to ASA A21.6 or ASA A-21.8 Class 150.

PROFILE 6" SANITARY DISPOSAL SYSTEM FOR NORTHBOUND REST AREA

NOTE:
Payment for Cast Iron and Clay Pipe, Endwall and Dumped Rock shall be included in the lump price bid per each for Sewage Treatment Plant.



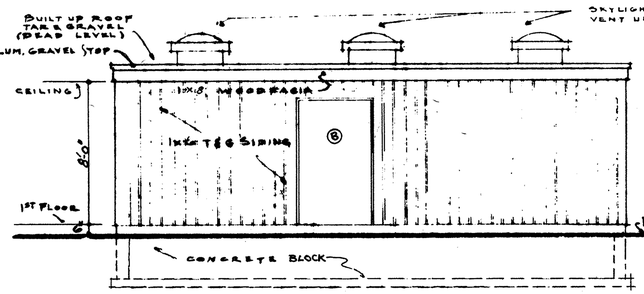
ENDWALL AND DUMPED ROCK CHANNEL PROTECTION PAD DETAIL (2 Required)

SANITARY DISPOSAL SYSTEMS
ROAD SIDE REST AREAS

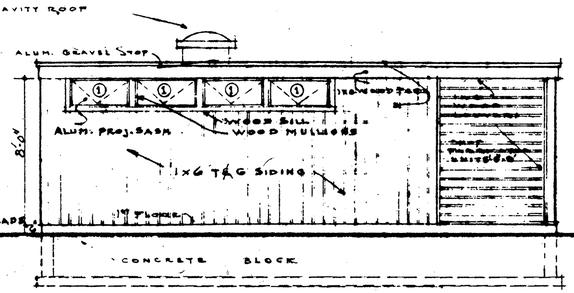
NOTE: ALL LUMBER, SIDING, ETC. TO BE PRESSURE TREATED - SEE SPECS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(5)229	

SUMMIT COUNTY
SUM-271-0.83

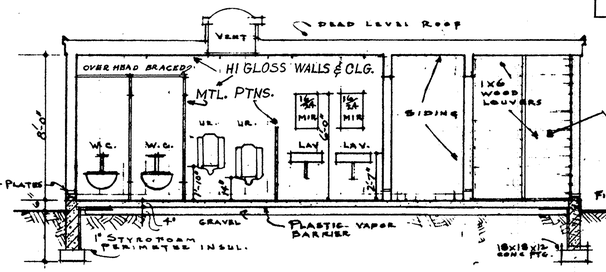


REAR ELEVATION

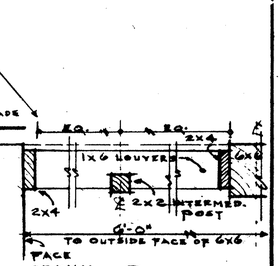


LEFT SIDE ELEVATION - SCALE 1/4" = 1'-0"

(RIGHT SIDE ELEVATION SAME OPPOSITE HAND)

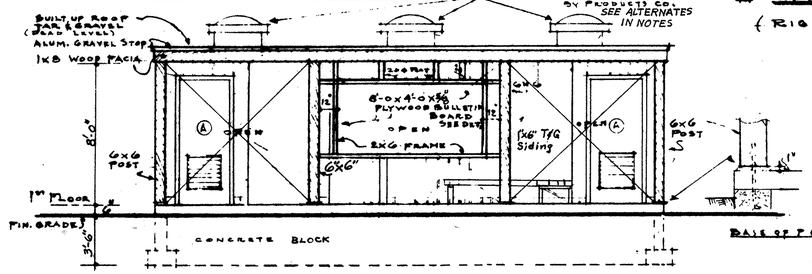


SECTION A-A - SCALE 1/4" = 1'-0"

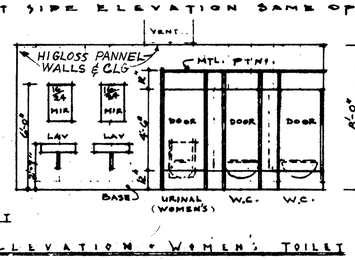


PLAN

SEE DETAILS OF LOUVERS
SCALE 1½" = 1'-0"
(5'-6" x 8'-0" (AUXILIARY SHEET.)



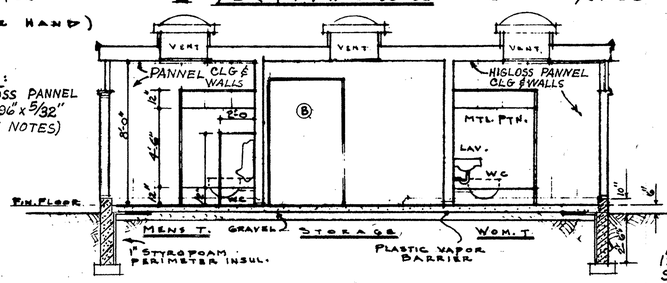
FRONT ELEVATION - SCALE 1/4" = 1'-0"



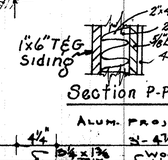
BASE OF POST

ELEVATION - WOMEN'S TOILET

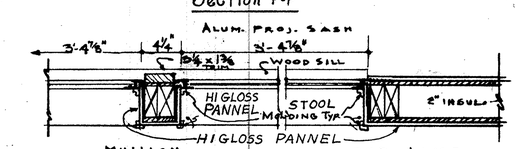
NOTE:
HIGLOSS PANNEL
48"x96"x5/32"
(SEE NOTES)



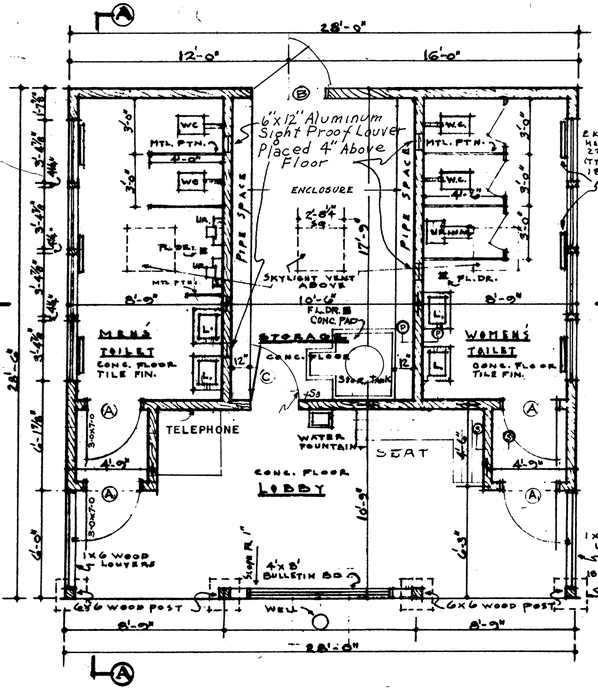
SECTION - B-B - SCALE 1/4" = 1'-0"



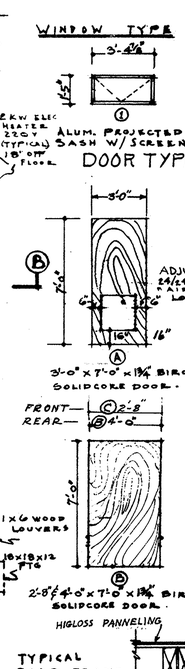
Section P-P



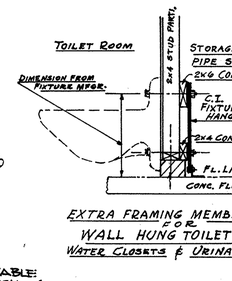
WINDOW DETAIL
SCALE 1½" = 1'-0"



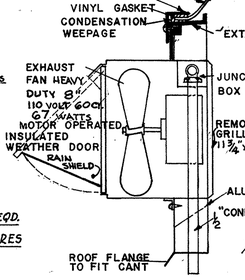
PLAN - SCALE - 1/4" = 1'-0"

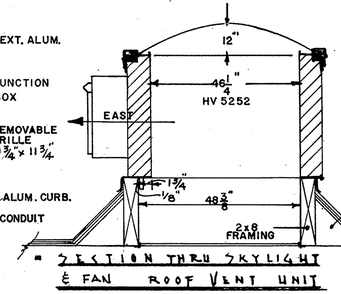


SCALE 1½" = 1'-0"



EXTRA FRAMING MEMBERS REQD. FOR WALL HUNG TOILET FIXTURES WATER CLOSETS & URINALS.





SECTION THRU SKYLIGHT & FAN ROOF VENT UNIT
SCALE 1" = 1'-0"

INTERIOR FINISH

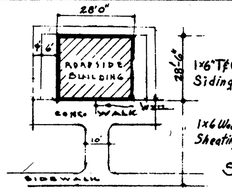
ROOM	FLOOR	WALLS	CEILING
LOBBY	CONCRETE	WOOD SIDING	WOOD SIDING
STORAGE	CONCRETE	" "	" "
MEN'S T.	*	PANNELING (SEE NOTES)	PANNELING (SEE NOTES)
WOM. T.	*	" "	" "

* UNGLAZED CERAMIC MOSAIC TILE FLOOR, 1"x1"

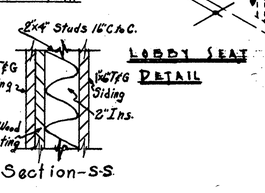
DOOR HARDWARE - SCHEDULE -

DOORS	A	B	C	A1
4½" BUTTS 1½ PR. STSDB881	x		x	x
LOCK 77-22 AN				x
KICK PLATE 12" 16GA. 34" U.S. 28	x			x
CLOSER 44V EN	x			x
THRESHOLD #60 36X4 US10				x
PUSH PLATE 893 AN	x			x
DOOR PULL 1890 MA AN	x			x
LOCK 77-0 4 GA.-AN AN		x	x	
KICK PLATE 16GA. 46X12 US 28		x		
THRESHOLD #80 4.8X4¼ US10		x		
CLOSER 44V W 90° HOLDOPEN EN			x	
6½" BUTTS 1½ PR STSDB8180		x		
KICK PLATE 16GA. 30X12 US 28			x	
THRESHOLD #60 32X5 US10			x	
NUMBER REQUIRED	2	1	1	2

THE ABOVE ARE USED AS STANDARDS; EQUAL PRODUCTS ARE ACCEPTABLE. BUTTS - STANLEY, LOCKS - SARGENT, CLOSERS - SARGENT, PLATES AND PULLS - SARGENTS THRESHOLD - ZERO.

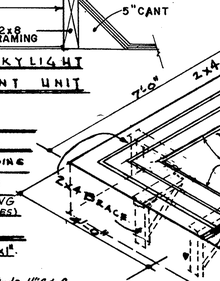


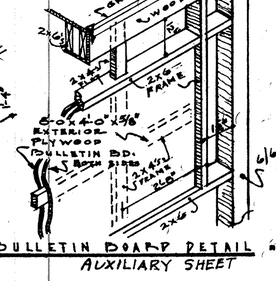
SITE PLAN
SCALE 1" = 30'-0"



Section S-S

LOBBY SEAT DETAIL





SEE BULLETIN BOARD DETAIL
AUXILIARY SHEET

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS.

ROADSIDE TOILET AND STORAGE UNIT

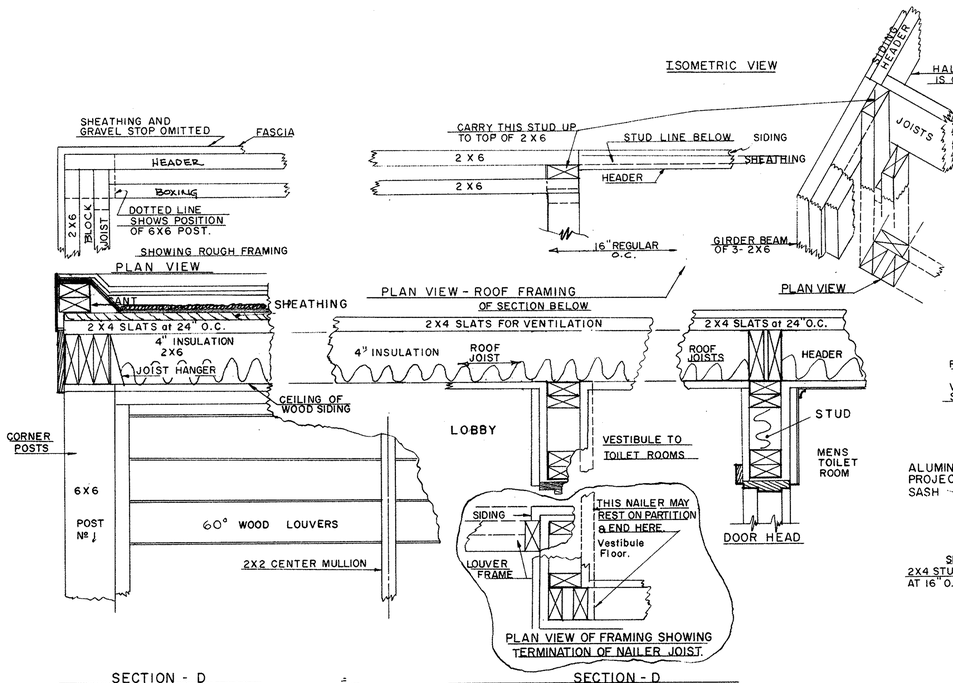
DATE
5-24-62
7-17-62
1-1-66

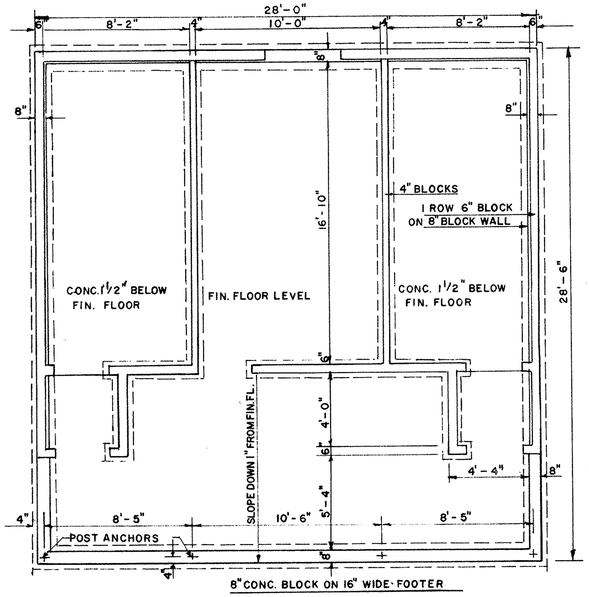
STANDARD CONSTRUCTION DRAWING
APPROVED ENGR. OF DESIGN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271- 6(15)229	

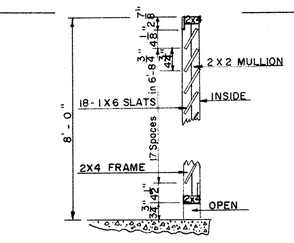
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SUMMIT COUNTY
SUM-271-0.83

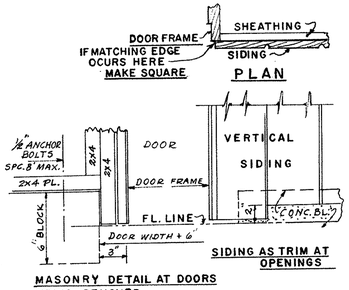




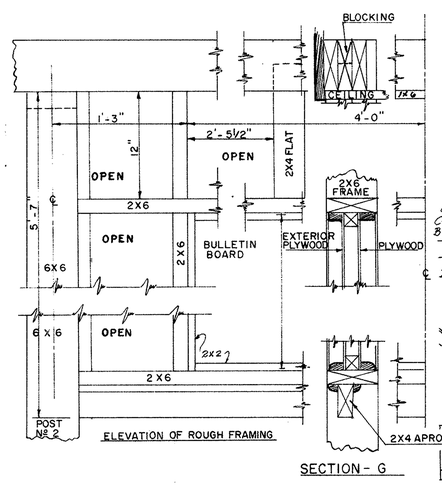
FOUNDATION PLAN
SCALE 1/4" = 1'-0"



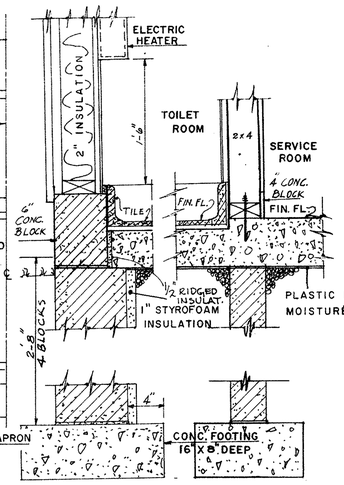
DETAIL OF LOUVERS - SECTION - F
Use 2X4 Frame with a 2X2 MULLION in center.
Louvers will be 1X6 set at 60° as shown.



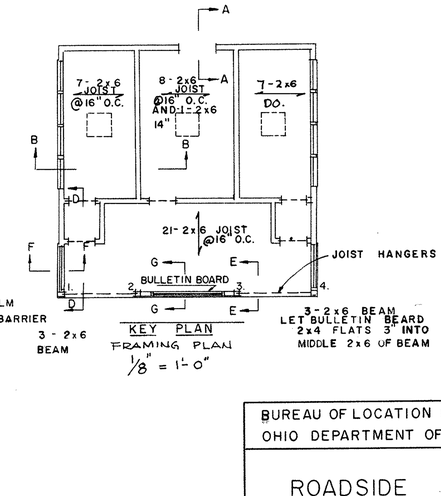
MASONRY DETAIL AT DOORS
SIDING REMOVED
COMBINED DOORWAY DETAILS



DETAIL OF FRAMING AROUND BULLETIN BOARD



SECTION - B



BUREAU OF LOCATION & DESIGN
OHIO DEPARTMENT OF HIGHWAYS

ROADSIDE TOILET & STORAGE UNIT

5-24-62
6-11-62
7-16-62

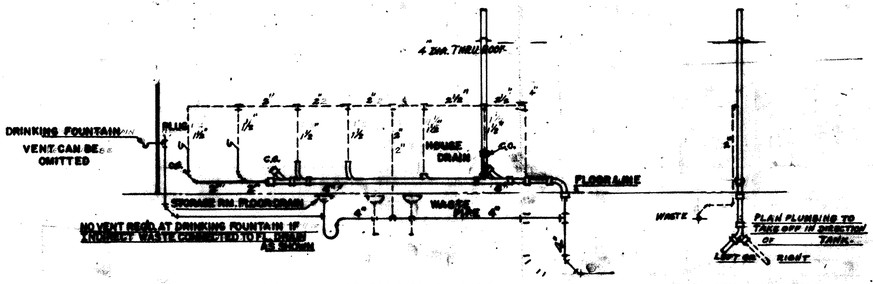
AUXILIARY
CONSTRUCTION DRAWING

APPROVED _____ ENGINEER L&D

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
SUM-271-0.83

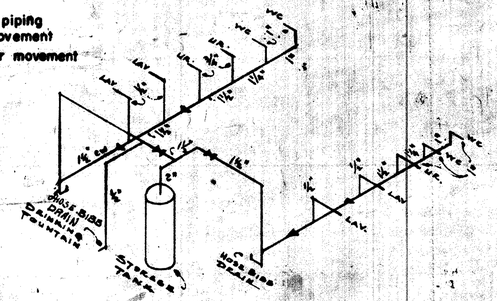


ELEVATION OF PLUMBING STACK
TWO REQUIRED

END VIEW ONE STACK

ALL DRAINAGE AND PLUMBING PIPE SHALL BE RIGIDLY SECURED OR SUPPORTED TO KEEP THEIR ALIGNMENT AND ALL CHANGES OF DIRECTION EITHER VERTICAL OR HORIZONTAL SHALL BE MADE WITH THE APPROPRIATE USE OF 45° FITTINGS, BENDS, ETC.

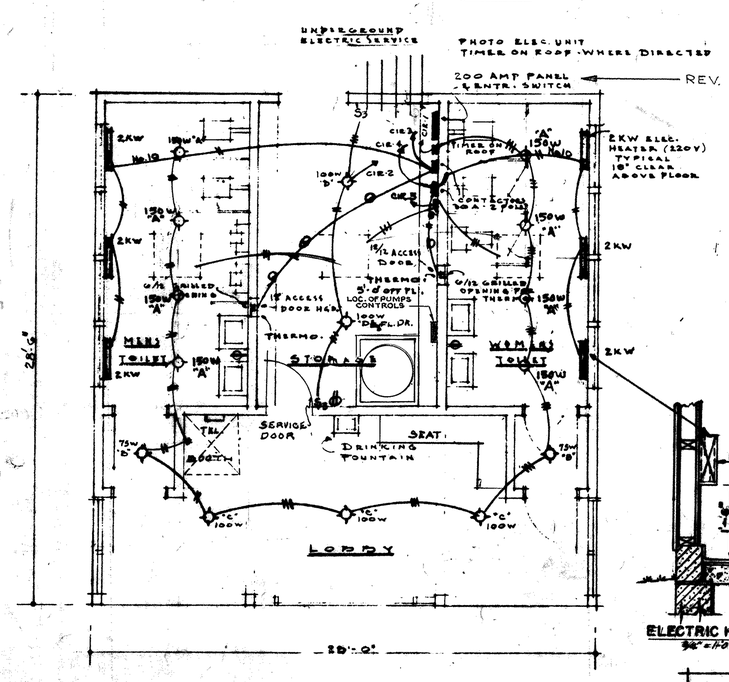
NOTE: Locate piping to enable free movement of Service door movement by the Engineer.

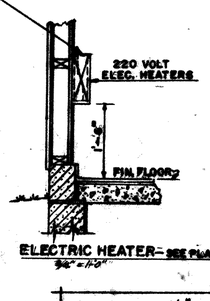


COLD WATER PIPING DIAGRAM
NO SCALE

ALL CONDUITS TO SERVICES OUTSIDE OF BUILDING WILL GO THROUGH FLOOR WITH "FACTORY ELLS" FROM PANEL BOARD AND POINT IN DIRECTION OF THE SERVICE TO BE SUPPLIED UNDER FLOOR
THESE "ELLS" MUST BE PLACED AND EXTENDED THROUGH WALL FORMS TO OUTSIDE OF WALLS BEFORE CONCRETE IS POURED
KEEP UPPER END VERTICAL
SEWAGE TREAT. PLANT
SERVICE 2"-3" TO SEWAGE TREAT. PLANT
PANEL BOARD
TELEPHONE

DIAGRAMATIC-CONDUIT PLACING

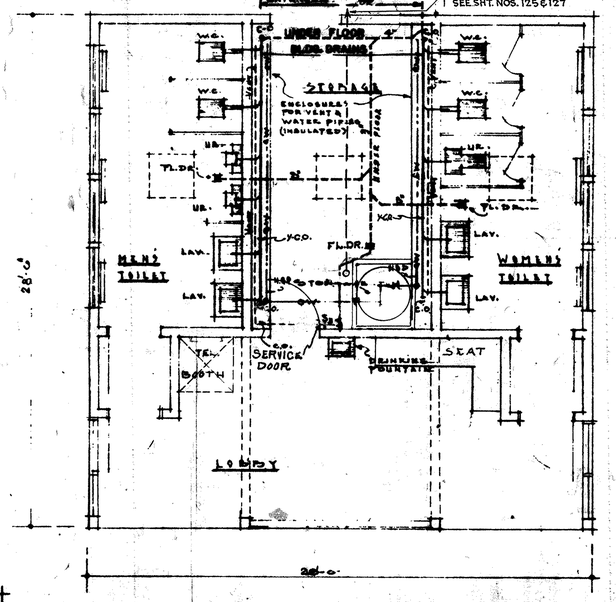




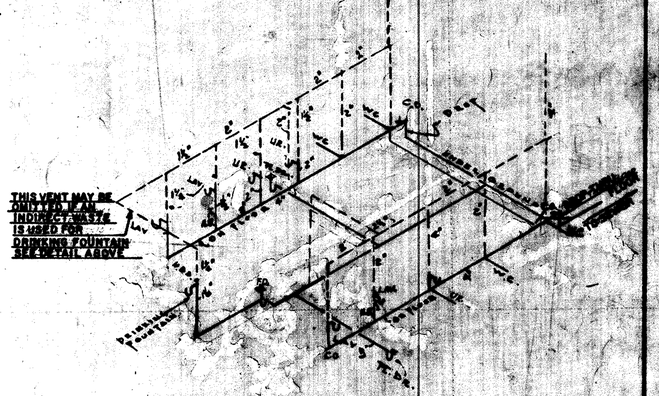
SCALE- 1/4" = 1'-0"

HEATING & ELECTRIC PLAN

ALTERNATE
PLUMBING SHOULD BE DESIGNED SO THAT DRAIN NEAREST THE CENTRAL UNIT IS EXTENDED OR
SEWER
SEWER
6" TRANSITE OR PLASTIC CONDUIT UNDGD. to STORAGE RESERVOIR SEE SHT. NOS. 125 & 127



PLUMBING PLAN



PLUMBING DIAGRAM
NO SCALE — SEE EXPLANATION OF PLUMBING ABOVE

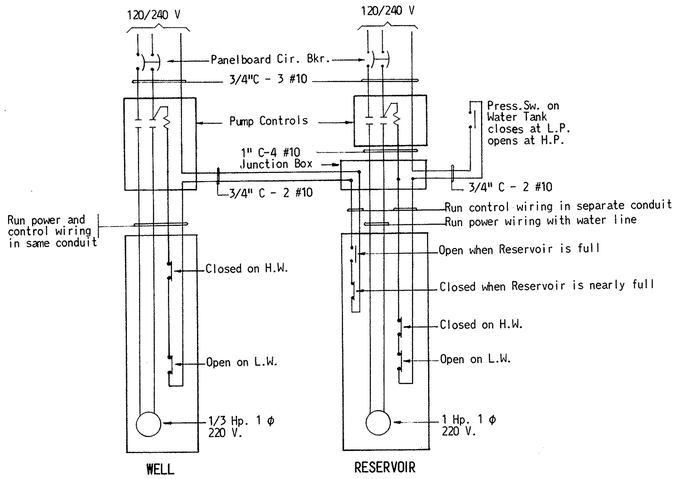
BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

ROADSIDE TOILET AND STORAGE UNIT

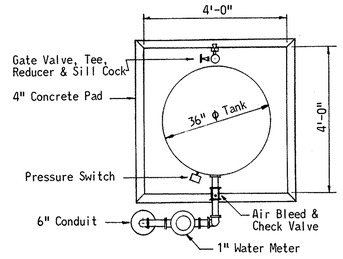
DATE 5-24-62
7-16-62

STANDARD CONSTRUCTION DRAWING

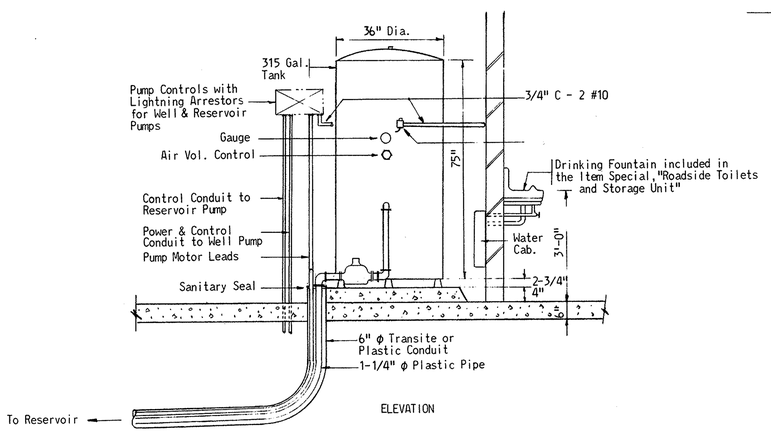
APPROVED _____ ENGR. LAD



SCHEMATIC DIAGRAM

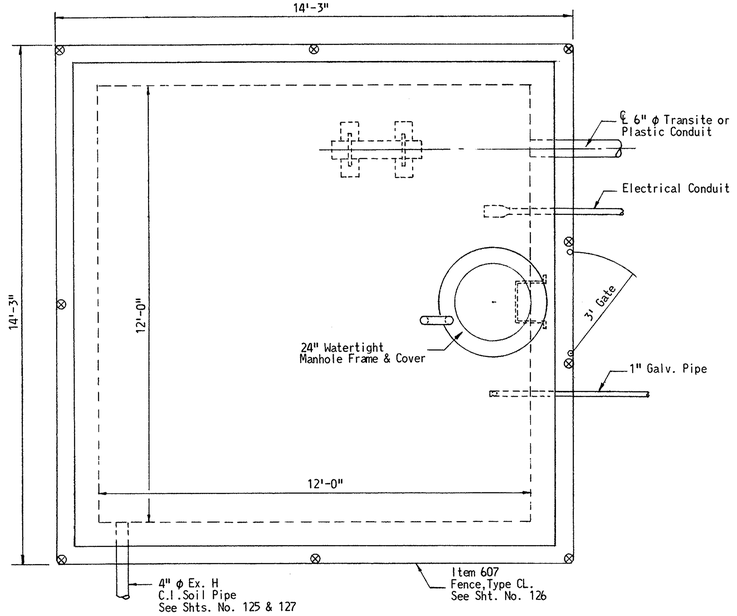


PLAN

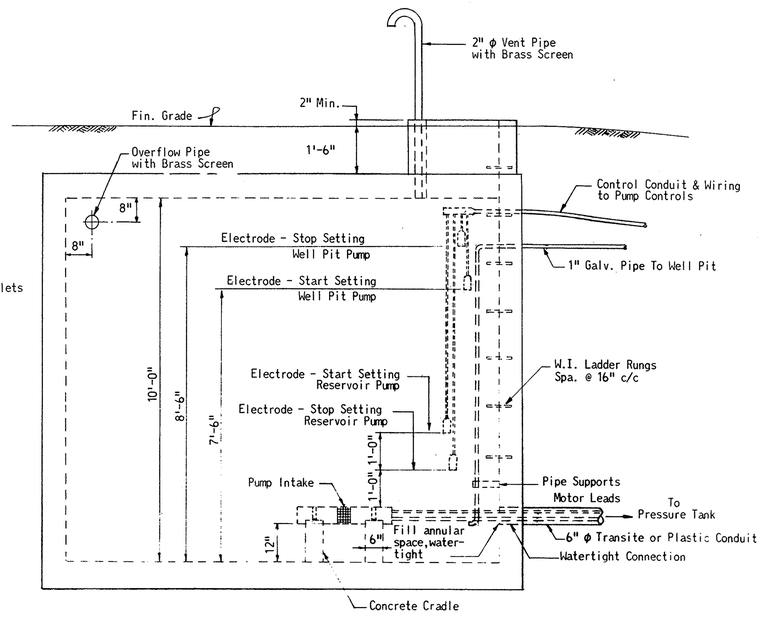


ELEVATION

PRESSURE TANK



PLAN



ELEVATION

REINF. CONCRETE RESERVOIR

ITEM SPECIAL - PRESSURE WATER SYSTEM. AS PER PLAN

GENERAL: FURNISH AND INSTALL ONE COMPLETE PRESSURE WATER SYSTEM READY FOR OPERATION AND IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN AND ACCEPTABLE TO THE OHIO DEPARTMENT OF HEALTH. THE SYSTEM SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

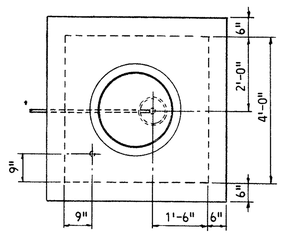
1. SUBMERSIBLE PUMP, COMPLETE, MYERS SD 3A-21, 1/3 H.P. 230 Volt, SINGLE PHASE, OR DEMING 2 ALF4, 1/3 H.P. 230 VOLT, SINGLE PHASE, OR APPROVED EQUAL AS MANUFACTURED BY FAIRBANKS MORSE COMPANY, INSTALLED IN THE WELL.
2. SUBMERSIBLE PUMP, COMPLETE, MYERS SE 10A-21, 1 H.P. 230 VOLT, SINGLE PHASE OR DEMING 7AMF4, 2 H.P., 230 VOLT, SINGLE PHASE, OR APPROVED EQUAL AS MANUFACTURED BY FAIRBANKS MORSE COMPANY, INSTALLED IN THE RESERVOIR.
3. 315 GALLON VERTICAL GALVANIZED PRESSURE TANK, 36" DIAMETER, WEIGHT 460 LBS., 2" INLET AND OUTLET.
4. WATER METER SHALL BE 1-INCH DISC BADGER SC-10T OR APPROVED EQUAL AS MANUFACTURED BY NEPTUNE METER CO. OR GAMON WATER DIV., WORTHINGTON CORP.
5. SANITARY WELL SEAL WITH WELL VENT, GALVANIZED PIPE AND FITTINGS FROM PUMP TO CONCRETE RESERVOIR AND PLASTIC PIPE FROM CONCRETE RESERVOIR TO PRESSURE TANK.
6. LIQUID LEVEL CONTROL SET, WITH ELECTRODES SET TO STOP WELL PUMP 2 FEET ABOVE SUBMERSIBLE PUMP, AND TO START WELL PUMP 15 FEET ABOVE SUBMERSIBLE PUMP IN WELL.
7. LIQUID LEVEL CONTROL SET WITH ELECTRODES SET TO STOP PUMP 1 FOOT ABOVE PUMP INTAKE AND START PUMP 2 FEET ABOVE PUMP INTAKE IN CONCRETE RESERVOIR.
8. LIQUID LEVEL CONTROL SET WITH ELECTRODES SET TO STOP PUMP WHEN CONCRETE RESERVOIR IS FULL AND START WHEN WATER LEVEL DROPS 1 FOOT.
9. SIX-INCH UNDERGROUND CONDUIT AND FITTINGS FROM THE CONCRETE STORAGE RESERVOIR TO THE PRESSURE TANK.
10. CONCRETE STORAGE RESERVOIR AS PER PLAN INCLUDING MANHOLE FRAME AND COVER, LADDER, PUMP SUPPORT, PIPE SUPPORTS, AND 4" OVERFLOW DRAIN LINE AS SHOWN.
11. CONCRETE PUMP PIT AS PER PLAN INCLUDING MANHOLE FRAME AND COVER, PIPE SUPPORTS AND 2" PIT DRAIN LINE AS SHOWN.
12. FOUR-INCH CONCRETE PAD FOR THE PRESSURE TANK WHICH MAY BE POURED INTEGRALLY WITH THE CONCRETE FLOOR.
13. SHORTENING OR EXTENDING THE EXISTING WELL CASING.
14. ELECTRICAL WIRING INCLUDING CONDUIT, SWITCHES, RELAYS AND ALL APPURTENANCES NECESSARY FOR A COMPLETE SYSTEM FOR PUMP POWER AND CONTROLS.

METHOD OF MEASUREMENT

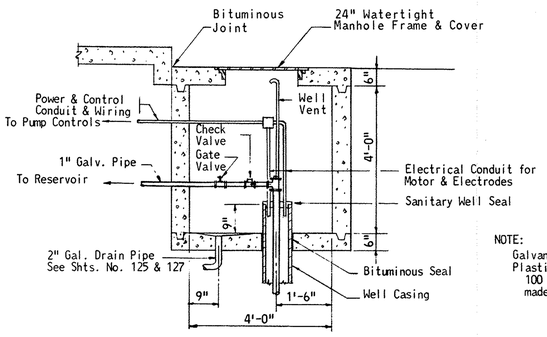
THE PRESSURE WATER SYSTEM AS PER PLAN AND ALL APPURTENANCES AS DETAILED AND SPECIFIED SHALL BE CONSIDERED AS ONE UNIT.

BASIS OF PAYMENT

THE WORK INCLUDED SHALL BE PAID FOR AT THE CONTRACT PRICE BID FOR EACH ITEM SPECIAL - PRESSURE WATER SYSTEM, AS PER PLAN, COMPLETE AND ACCEPTED, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING, PREPARING, PLACING, AND INSTALLING ALL MATERIALS, AND FOR ALL MATERIALS, ALL LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE PRESSURE WATER SYSTEM AS SHOWN AND SPECIFIED.



PLAN



SECTION

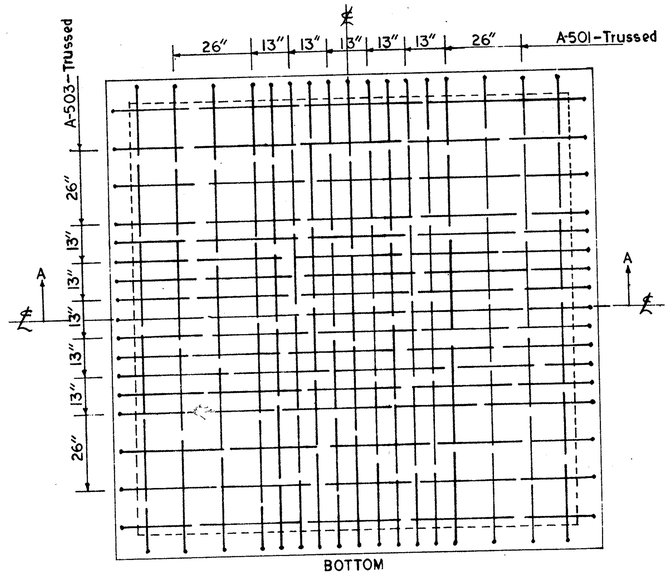
WELL PIT

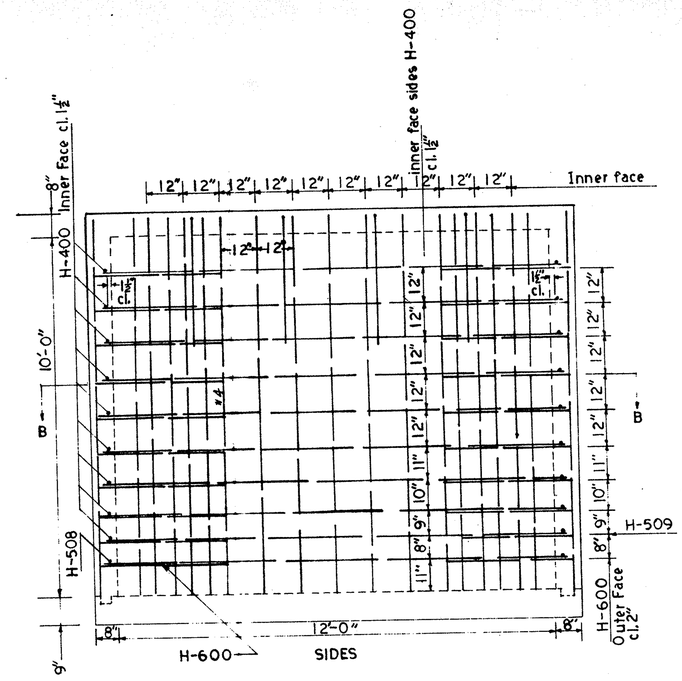
NOTE:
Galvanized pipe shall be schedule 40 grade A-53. Plastic pipe shall be NSF Approved Type III PE, 100 pound working pressure, 3306 Material made to commercial standards CS 255-63.

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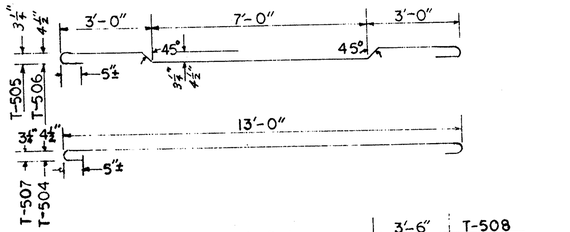


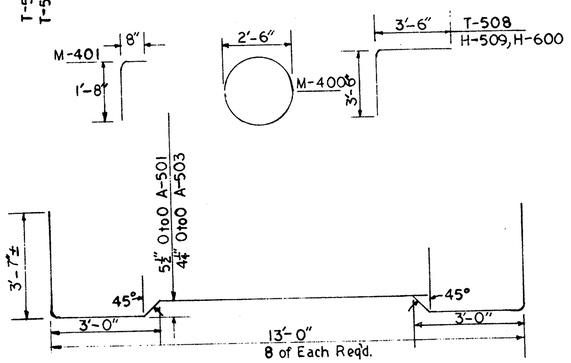


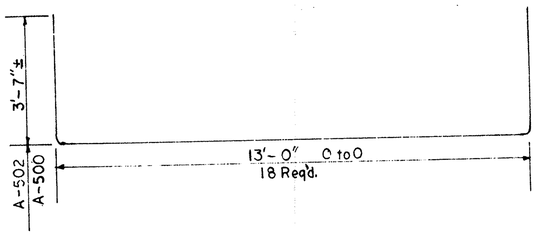
STEEL LIST

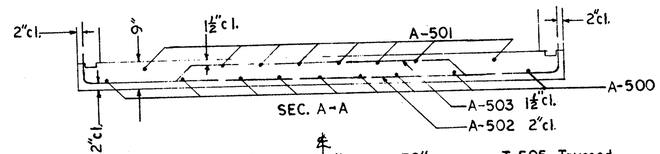
Mark	Size	Shape	Spacing	No. Reqd.	Length	Weight
A-500	5/8" ϕ			9	20'-2"	189.34
A-501				8	20'-6"	171.05
A-502				9	20'-2"	189.34
A-503				8	20'-6	171.05
T-504				5	13'-7½"	71.03
T-505				4	13'-9½"	57.53
T-506				4	13'-11½"	58.16
T-507				5	13'-6¾"	70.72
M-400	½"	Bent		3	7'-10"	13.69
M-401	½"	Bent		8	2'-4"	12.47
H-400	½"	Strt		36	12'-8"	304.69
H-508	⅝"	Strt		4	12'-8"	52.86
V-400	½"	Strt		76	10'-6"	533.06
H-509	⅝"	Bent		36	6'-11½"	261.33
H-600	¾"	Bent		4	6'-11½"	41.81
T-508	⅝"	Bent		16	7'-0"	116.82
* Reinforcing Steel						23171 lbs.
* Concrete Class "C"						22 C.Y.

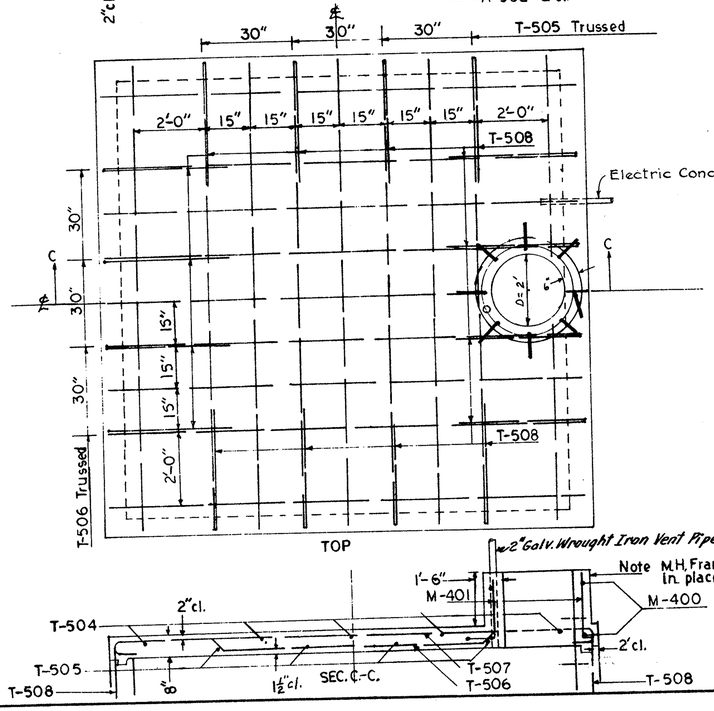
* Included in Item Special, Pressure Water System

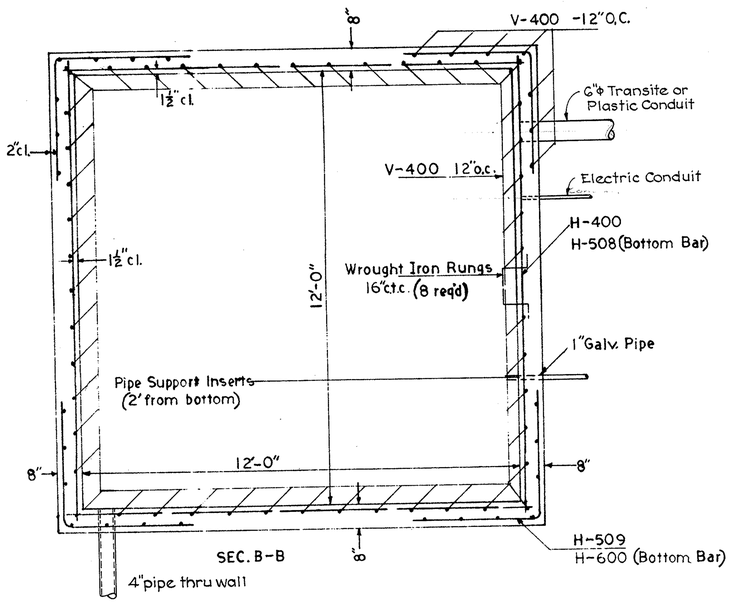










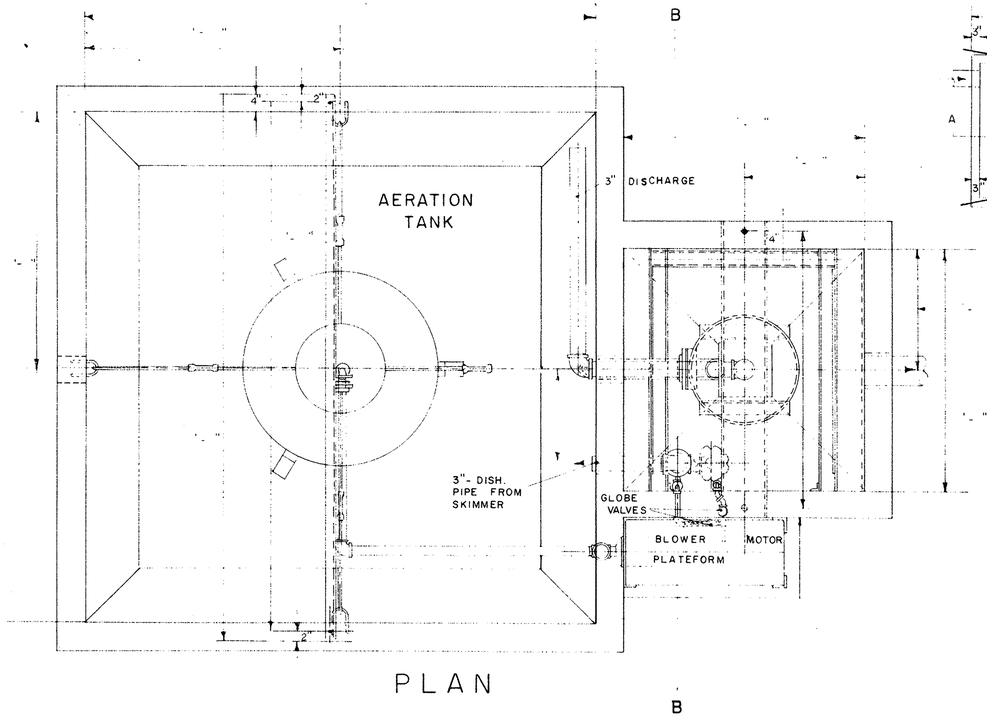


REST AREAS - WATER STORAGE RESERVOIR RE-STEEL DETAIL

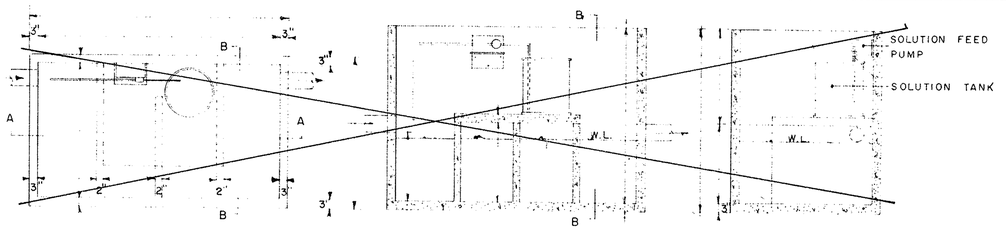
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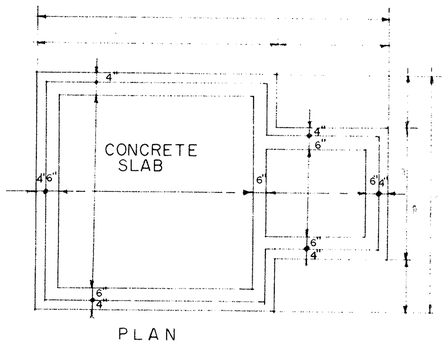


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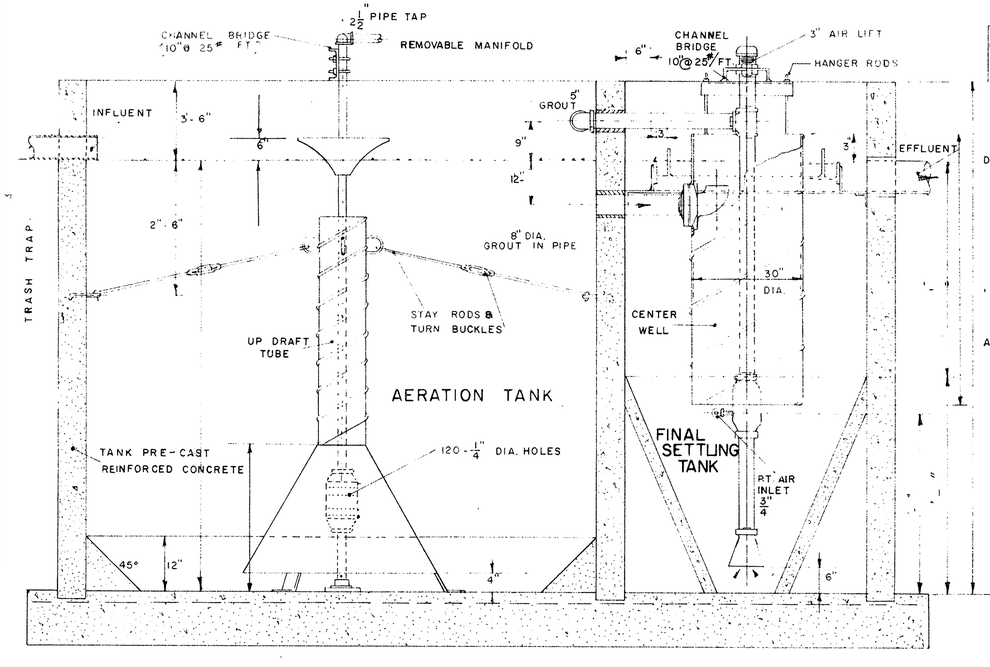
PLAN SECTION A-A SECTION B-B

~~PRECAST CHLORINE CONTACT TANK~~

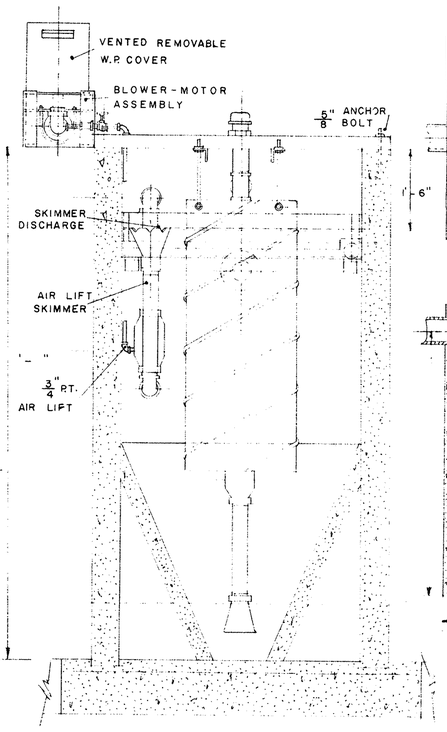


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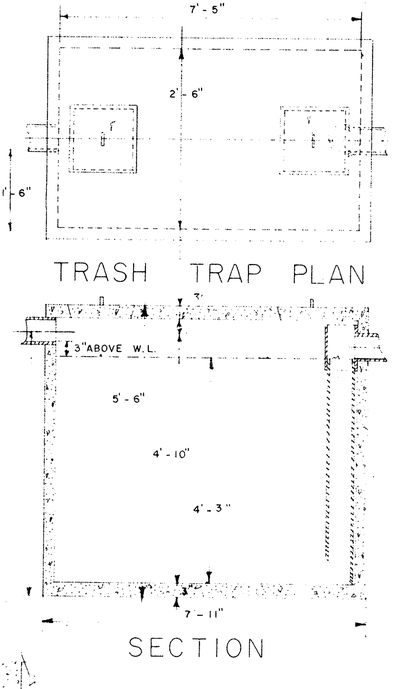
24" RISER OF PRECAST CONCRETE OR VITRIFIED TILE WITH CAP SHALL EXTEND 36" ABOVE TANK TOP



SECTION "A"-"A"



SECTION "B"-"B"



YEO-WAVE AEROBIC SEWAGE TREATING PLANT

GENERAL: FURNISH AND INSTALL ONE FACTORY BUILT WASTE TREATMENT PLANT COMPLETE AND READY FOR OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN. THE PLANT SHALL CONSIST OF YEO-WAVE MODEL A-60 AS MANUFACTURED BY YEOMANS BROTHERS COMPANY, OF MELROSE PARK, ILLINOIS, AND PRE-CAST AERATION, AND SETTLING TANKS AS MANUFACTURED BY ASHLAND VAULT INC., OF ASHLAND, OHIO. THE WASTE TREATMENT PLANT SHALL BE OF THE ACTIVATED SLUDGE TYPE, SPECIFICALLY KNOWN AS "AEROBIC DIGESTION", CAPABLE OF TREATING 6000 GALLONS PER DAY DOMESTIC SEWAGE OF 210 PARTS PER MILLION 5 DAY B.O.D. FROM COMPOSITE SAMPLES OF THE AVERAGE DAILY FLOW. THE COMPLETE PLANT SHALL INCLUDE SCREENING, AERATION, AND SECONDARY SEDIMENTATION.

SCREENING: ALL RAW WASTE TRIBUTARY TO THE PLANT SHALL PASS THROUGH A 600 GALLON TRASH TRAP.

PLANT CONSTRUCTION AND ERECTION: FURNISH AND COMPLETELY INSTALL ON THE REINFORCED CONCRETE BASE POURED BY CONTRACTOR, A PREFABRICATED REINFORCED CONCRETE TANK, CONSISTING OF AN AERATION CHAMBER AND A FINAL SETTLING CHAMBER. TANK TO BE CONSTRUCTED OF PRE-CAST REINFORCED CONCRETE PANELS, SIX INCHES THICK, WITH SEALING GASKET IN HORIZONTAL TONGUE AND GROVE JOINTS, GASKETS AND GALVANIZED PLATES IN VERTICAL JOINTS, KEYED INTO BASE.

AERATION TANK: THE AERATION TANK SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE A 24 HOUR PERIOD OF RETENTION AND A MINIMUM VOLUME OF 50 CUBIC FEET PER POUND OF B.O.D. THE BOTTOM OF THE TANK SHALL BE FILLETED AROUND THE PERIMETER OF THE WALLS TO PREVENT SLUDGE ACCUMULATION.

AERATION EQUIPMENT: SHALL CONSIST OF MODEL A-60 YEO-WAVE SURFACE AERATOR AS MANUFACTURED BY YEOMANS BROTHERS COMPANY. THE SURFACE AERATOR SHALL BE OF THE VERTICAL UPDRAFT TYPE, AND SHALL HAVE SUFFICIENT AERATION CAPACITY TO TURN OVER THE ENTIRE CONTENTS OF THE TANK AT LEAST FOUR TIMES PER HOUR. THE AERATOR SHALL CONSIST OF AN UPDRAFT TUBE, MANIFOLD AND AIR LINE, DEFLECTOR AND ALL NECESSARY APPURTENANCES. THE UPDRAFT TUBE SHALL BE SUPPORTED BY VERTICAL LEGS, RESTING ON THE TANK FLOOR AND ANCHORED WITH ADJUSTABLE GUY RODS AND TURNBUCKLES. THE DEFLECTOR SHALL BE CENTERED OVER THE UPDRAFT TUBE, AT A LEVEL IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, TO INSURE MAXIMUM AERATION. IT SHALL BE SUSPENDED FROM A BRIDGE ACROSS THE AERATION TANK.

BLOWER, MOTOR DRIVE AND CONTROLS: UNIT SHALL CONSIST OF ROTARY POSITIVE BLOWER, POWERED BY A 1½ H.P., 1750 R.P.M., 220 VOLT, 1 PHASE, 60 CYCLE 40° C RISE MOTOR, WITH V-BELT DRIVE, MAGNETIC STARTER IN NEMA 1 ENCLOSURE. AIR SUPPLY FOR THE PUMPING ACTION OF THE YEO-WAVE SURFACE AERATOR, THE AIR-LIFT SLUDGE PUMP, AND THE AIR-LIFT SKIMMING DEVICE, WILL BE SUPPLIED FROM THIS BLOWER. THE BLOWER UNIT, WITH STARTER SHALL BE MOUNTED ON TANK ABOVE GROUND LEVEL, AND EQUIPPED WITH WEATHER TIGHT COVER.

FINAL SETTLING TANK: THE FINAL SETTLING TANK SHALL BE OF AMPLE SIZE TO PROVIDE FOUR HOURS RETENTION, BASED UPON THE SAME FLOW RATES GOVERNING THE AERATION TANK. IT SHALL BE EQUIPPED WITH A YEOMANS CENTER WELL, TO FACILITATE SEPARATION OF THE SOLIDS FROM THE LIQUID. THE SETTLED SOLIDS TO BE RETURNED TO THE AERATION TANK BY AN AIR-LIFT SLUDGE PUMP. AIR FOR THE AIR-LIFT SLUDGE PUMP WILL BE SUPPLIED BY THE BLOWER, CONTROLLED BY A NEEDLE VALVE. THE YEOMANS CENTER WELL AND AIR-LIFT SLUDGE PUMP SHALL BE SUSPENDED FROM A BRIDGE ACROSS THE FINAL SETTLING CHAMBER.

SKIMMING DEVICE: THE FINAL SETTLING TANK SHALL BE EQUIPPED WITH A MANUALLY CONTROLLED AIR-LIFT SKIMMING DEVICE TO RETURN SOLIDS TO AERATION TANK. THE AIR SUPPLY IS FROM THE BLOWER THROUGH A MANUALLY OPERATED VALVE.

FROTH CONTROL: A FROTH CONTROL PUMP OF 20 GPM CAPACITY SHALL BE PROVIDED IN CLARIFIER AND SUFFICIENT SPRAYS ATTACHED TO THE DISCHARGE SIDE OF THE PUMP TO INSURE CONTROL OF FROTHING OR FOAMING IN THE AERATION CHAMBERS. THE SPRAY NOZZLE SHALL HAVE MINIMUM OPENING OF ¼" TO PREVENT CLOGGING AND SHALL PRODUCE A SHARP SPRAY PATTERN ALONG ENTIRE LENGTH OF AERATION TANK. A HOSE BIB SHALL BE FURNISHED BETWEEN THE DISCHARGE SIDE OF PUMP AND SPRAY NOZZLES SHUT OFF VALVE TO PROVIDE WASH UP WATER IF REQUIRED.

TANK COVER GRATING: EXPANDED METAL GRATING PANELS SHALL BE PROVIDED FOR ALL TANK OPENINGS. THESE PANELS SHALL CONSIST OF 3/4" X NUMBER 9 EXPANDED METAL GRATING (NOT FLATENED), WELDED TO 1½" X 1½" x 3/16" ANGLE IRON FRAMES. THE UNIT SHALL BE HOT DIP GALVANIZED AFTER MILL SCALE AND GREASE IS REMOVED.

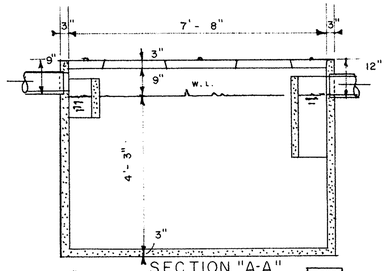
FIELD SERVICE: A FACTORY TRAINED REPRESENTATIVE SHALL BE PROVIDED TO START THE PLANT, INSTRUCT THE OPERATOR, AND MAKE PERIODIC INSPECTIONS FOR A PERIOD OF ONE YEAR.

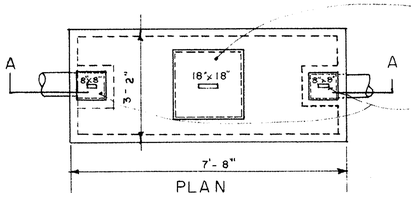
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TRASH TRAP

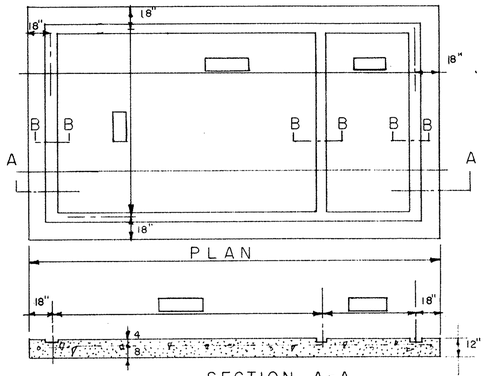


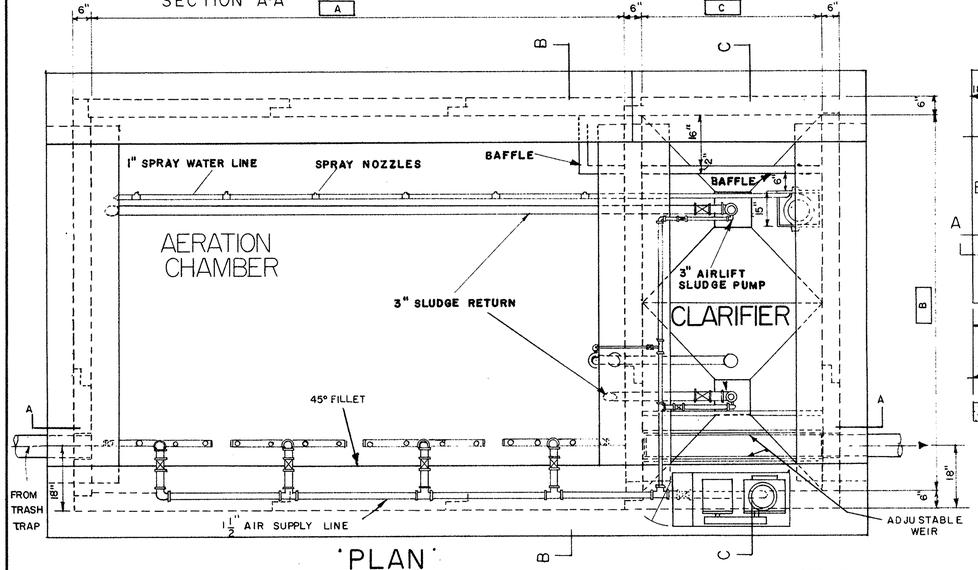


24" ID RISER OF PRECAST CONCRETE OR VITRIFIED TILE WITH CAP SHALL EXTEND 36" ABOVE FLOW LINE.

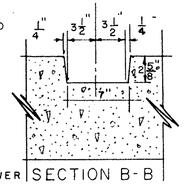
CLEAN OUT RISERS 36" ABOVE FLOW LINE.

CONCRETE SLAB

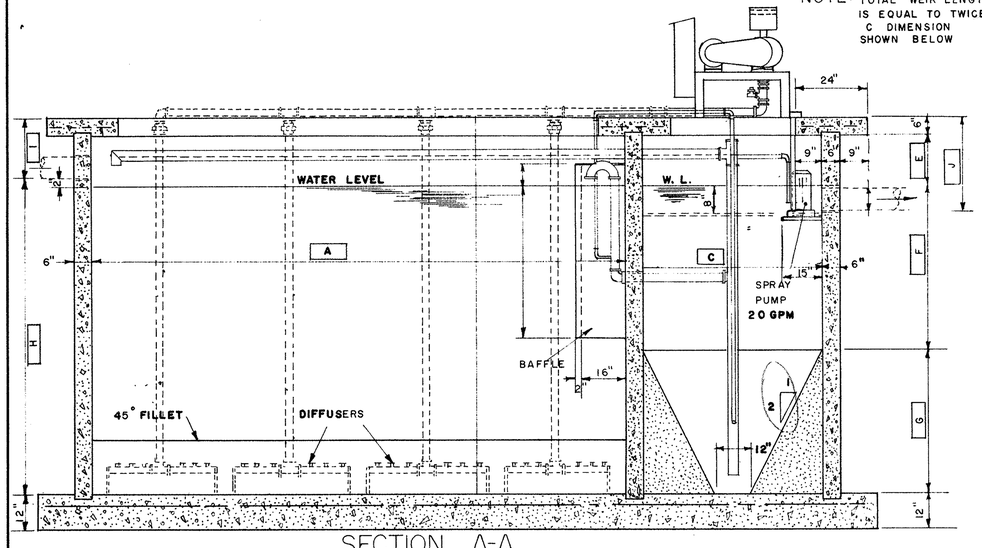




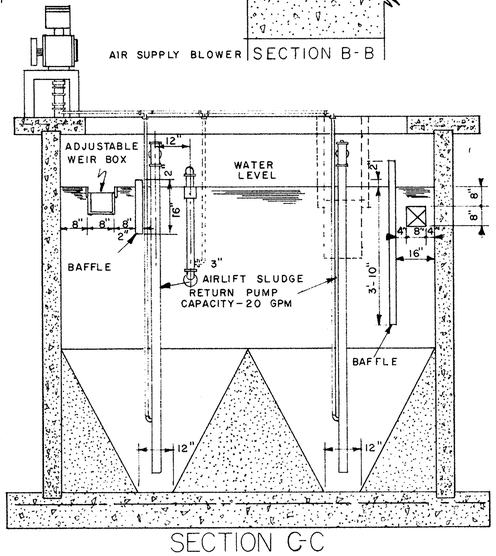
NOTE: TYPE "A" MESH OR "B" BAR MESH AS PER STANDARD DRAWING B-T-71R



NOTE: TOTAL WEIR LENGTH IS EQUAL TO TWICE C DIMENSION SHOWN BELOW



AIR SUPPLY BLOWER



MODEL NO.	DESIGN FLOW GPD	AERATION VOL. GAL.	CLARIFIER VOL. GAL.	BLOWER CFM	BLOWER HP	DIMENSIONS A	B	C	D	E	F	G	H	I	J	K
RCW-60 33-3		6000	1500	40	·	9'-9"	10'-0"	4'-9"	8'-6"	3'-1⅝"	4'-6"	4'-0"	8'-8"	3'-5⅝"	4'-3½"	—

AER-O-FLO AEROBIC SEWAGE TREATING PLANT

GENERAL: FURNISH AND INSTALL ONE FACTORY BUILT WASTE TREATMENT PLANT, COMPLETE AND READY FOR OPERATION IN ACCORDANCE WITH PLANS AND SPECIFICATIONS STATED HEREIN. THE PLANT SHALL BE AN AER-O-FLO MODEL PCW-60-33-3 AS MANUFACTURED BY AER-O-FLO CORP. THE WASTE TREATMENT PLANT SHALL BE OF THE ACTIVATED SLUDGE TYPE, SPECIFICALLY KNOWN AS "AEROBIC DIGESTION," CAPABLE OF TREATING 6000 GALLONS PER DAY DOMESTIC SEWAGE OF 210 PARTS PER MILLION 5 DAY B.O.D. FROM COMPOSITE SAMPLES OF THE AVERAGE DAILY FLOW. THE COMPLETE PLANT SHALL INCLUDE SCREENING, AERATION, AND SECONDARY SEDIMENTATION.

SCREENING: ALL RAW WASTE TRIBUTARY TO THE PLANT SHALL PASS THROUGH A 600 GALLON TRASH TRAP.

AIR SUPPLY: DIFFUSER AIR SHALL BE SUPPLIED BY A POSITIVE DISPLACEMENT BLOWER OF AMPLE SIZE TO PROVIDE A MINIMUM OF 2100 CUBIC FEET OF AIR FOR EACH POUND OF B.O.D. APPLIED, AND A MINIMUM OF 3 CUBIC FEET OF AIR PER LINEAR FOOT OF AERATION TANK LENGTH. ITS RATED CAPACITY SHALL BE BASED UPON THE HOURLY RATE OF B.O.D. APPLICATION AND TANK SIZE TO MAINTAIN CLEANSING VELOCITIES. THE BLOWER SHALL HAVE A 24 HOUR TIME CLOCK TO VARY THE AIR SUPPLY WITH THE DEMAND AND SHALL DELIVER 40 CFM @ 4 PSI.

DIFFUSERS: THERE SHALL BE A MINIMUM OF ONE AER-O-FLO NON-CLOG DIFFUSER FOR EVERY 6" OF AERATION TANK LENGTH. THESE DIFFUSERS SHALL BE PARALLEL TO AND NEAR THE BASE OF THE FILLET AND AT AN ELEVATION WHICH WILL PROVIDE THE OPTIMUM ROLL OF THE TANK CONTENT.

AERATION TANK: THE AERATION TANK SHALL BE OF SUFFICIENT CAPACITY TO PROVIDE A 24 HOUR PERIOD OF RETENTION AND A MINIMUM VOLUME OF 80 CUBIC FEET PER POUND OF B.O.D. THE BOTTOM OF THE TANK SHALL BE FILLETED ON TWO SIDES TO PREVENT SLUDGE ACCUMULATION.

BLOWER, MOTOR DRIVE AND CONTROLS: UNIT SHALL CONSIST OF ONE 3 HP, 1750 RPM, 220 VOLT, 1 PHASE, 60 CYCLE, WEATHERPROOF MOTOR, WITH WEATHERPROOF V-BELT DRIVE, MAGNETIC STARTER WITH H.O.A. SELECTOR SWITCH. CONTROLS SHALL BE MOUNTED IN WEATHERPROOF ENCLOSURE EQUIPPED WITH LOCKING DEVICE.

FINAL SETTLING AND SLUDGE RETURN: THE FINAL TANK SHALL BE OF AMPLE SIZE TO PROVIDE A MINIMUM OF FOUR HOURS RETENTION, BASED UPON THE SAME FLOW RATE GOVERNING THE AERATION TANK AND SHALL HAVE PROPER BAFFLING. THE TOTAL SETTLING VOLUME SHALL INCLUDE THE VOLUME OF THE UPPER 1/3 OF THE SLUDGE HOPPER. THE SLOPE OF THE HOPPER WALLS SHALL NOT BE LESS THAN 1.5 VERTICAL TO 1.0 HORIZONTAL. SETTLED SLUDGE SHALL BE RETURNED FROM THE FINAL SETTLING TANK TO THE AERATION CHAMBER BY DUPLICATE AIR LIFT ASSEMBLIES CONSISTING OF TWO AIR LIFT PUMPS ACTUATED BY THE BLOWER. EACH AIR LINE SUPPLYING AIR TO THE SLUDGE PUMP SHALL BE EQUIPPED WITH A NEEDLE VALVE TO VARY THE CAPACITY OF THE AIR LIFT PUMPS. EACH PUMP SHALL HAVE A MINIMUM CAPACITY OF 20 GPM.

SKIMMING DEVICE: AN AIRLIFT SKIMMING DEVICE SHALL BE LOCATED NEAR THE OUTLET WEIR TO RETURN FLOATING MATERIAL TO THE AERATION TANK. THE AIR LINE SUPPLYING AIR TO THE SKIMMING DEVICE SHALL BE EQUIPPED WITH A NEEDLE VALVE TO REGULATE THE AMOUNT OF RETURN.

FROTH CONTROL: A ½ HP, 220 VOLT, 1 PHASE, 20 GPM FROTH CONTROL PUMP SHALL BE PROVIDED IN CLARIFIER AND SUFFICIENT SPRAYS ATTACHED TO THE DISCHARGE SIDE OF THE PUMP TO INSURE CONTROL OF FROTHING OR FOAMING IN THE AERATION CHAMBER. THE SPRAY NOZZLES SHALL HAVE A MINIMUM ¼" OPENING TO PREVENT CLOGGING AND SHALL PRODUCE A SHARP SPRAY PATTERN ALONG ENTIRE LENGTH OF AERATION TANK. A HOSE BIB SHALL BE FURNISHED BETWEEN THE DISCHARGE SIDE OF PUMP AND SPRAY NOZZLES SHUT OFF VALVE TO PROVIDE WASH UP WATER IF REQUIRED.

PREFABRICATED CONCRETE TANKS: THE PREFABRICATED CONCRETE TANKS SHALL BE COMPRISED OF 6" MINIMUM THICKNESS REINFORCED CONCRETE SLABS, BOLTED AT THE JOINTS AND KEYED INTO THE POURED CONCRETE FOUNDATION SLAB. JOINTS SHALL BE GASKETED AND SEALED AND BE MINIMUM IN NUMBER TO PROVIDE WATERTIGHT WALLS. STRUCTURAL STABILITY SHALL BE OBTAINED BY USE OF PRECAST, KEYED, WALL CAP BEAMS AND STRUTS AS REQUIRED. THE POURED AND KEYED FOUNDATION SLAB SHALL BE PROVIDED IN THE FIELD. ALL PREFABRICATED CONCRETE SHALL HAVE A 5000 LBS. 28 DAY COMPRESSION STRENGTH AND BE REINFORCED WITH CONTINUOUS SPECIAL WELDED WIRE FABRIC CONSISTING OF NO. 3 BARS @ 6" CTS. LONGITUDINALLY AND NO. 3 BARS @ 12" CTS. TRANSVERSELY. WITH ADDITIONAL NO. 6 BARS WHERE REQUIRED.

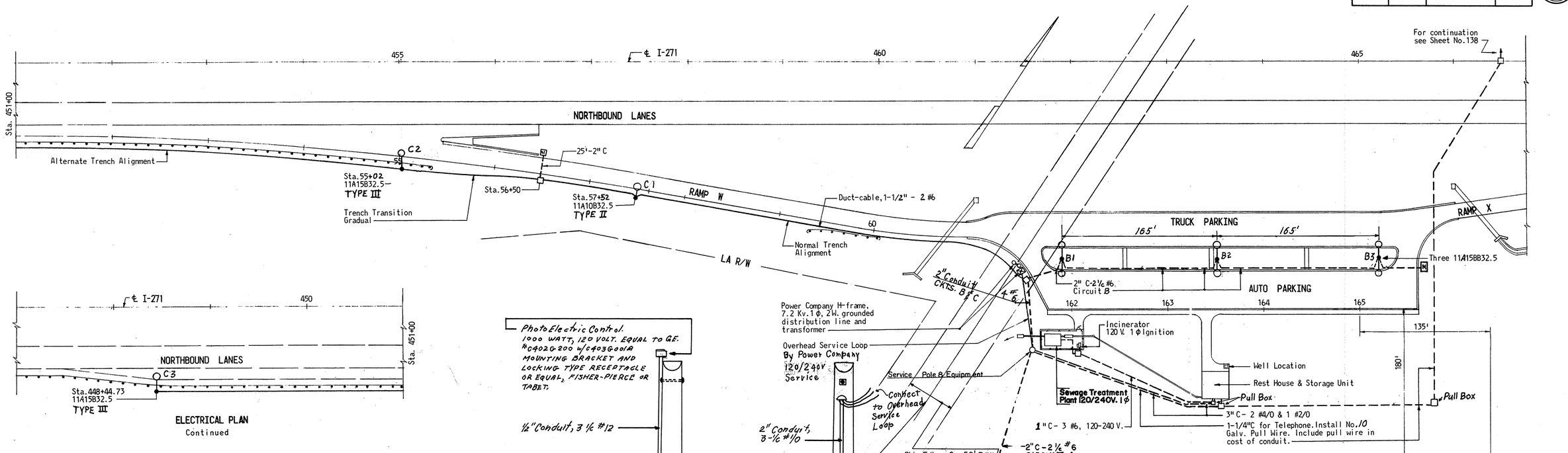
TANK COVER GRATING: EXPANDED METAL GRATING PANELS SHALL BE PROVIDED FOR ALL TANK OPENINGS. THESE PANELS SHALL CONSIST OF 3/4" X NO. 9 EXPANDED METAL GRATING (NOT FLATENED) WELDED TO 1½" X 1½" X 3/16" ANGLE FRAMES. THE UNIT SHALL BE HOT DIP GALVANIZED AFTER MILL SCALE AND GREASE IS REMOVED.

FIELD SERVICE: A FACTORY TRAINED REPRESENTATIVE SHALL BE PROVIDED TO START THE PLANT, INSTRUCT THE OPERATOR, AND MAKE PERIODIC INSPECTIONS FOR A PERIOD OF ONE YEAR.

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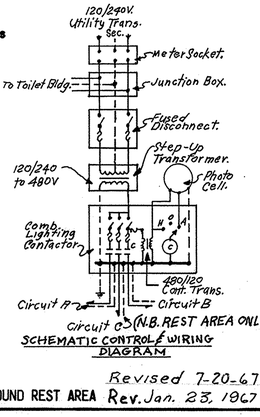
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ELECTRICAL PLAN
Scale: 1" = 50'

LEGEND

A1 Circuit Letter and POLE Number
11A15B32.5 Lighting Standard Design Number
Ground Mounted Lighting Unit — Single-Arm
Ground Mounted Lighting Unit — Double-Arm
Ground Mounted Lighting Unit — Post Top
Pull Box, 18" Diameter
M Marker
Duct Cable — 1 1/2"-2 #6
Underground Conduit and Cable-Sizes noted on Plans



SCHEMATIC CONTROL & WIRING DIAGRAM

* 1¼" Rigid Ferrous Metal Conduit, Trench, Pull Wire & Associated Pull Boxes & Markers Are 100% State.

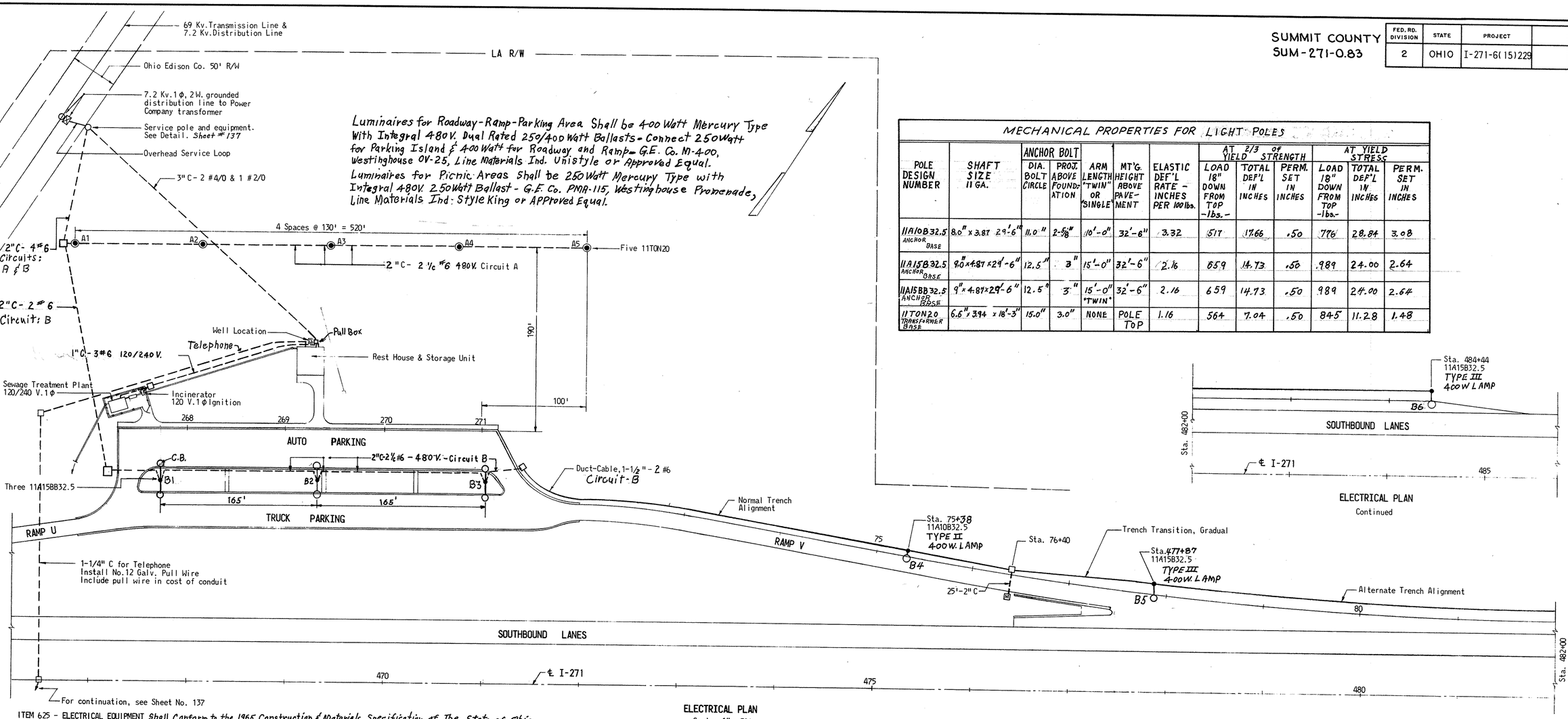
Code Y022 LIGHTING QUANTITIES

LINE NO.	ITEM	QUANT.	UNIT	DESCRIPTION
1	625	2	Ea.	Light Pole with 10'-0" Bracket Arm - Design 11A10B32.5
2	625	4	Ea.	Light Pole with 15'-0" Bracket Arm - Design 11A15B32.5
3	625	6	Ea.	Light Pole with 15'-0" Bracket Arms, Twin - Design 11A15BB32.5
4	625	10	Ea.	Light Pole with Tenon for Post Top Luminaires - Design 11TON20
5	625	22	Ea.	Light Pole Foundation, 24" x 24" x 6' deep
6	625	16	Ea.	Luminaire, Type III 400 Watt Mercury with 480 Volt, 250/400 Watt Ballast
7	625	2	Ea.	Luminaire, Type II 400 Watt Mercury with 480 Volt, 250/400 Watt Ballast
8	625	10	Ea.	Luminaire, Mercury, Type V, Post Top with 250 Watt Ballast
9	625	6	Ea.	Mercury Vapor Lamp, 400 Watt, ASA Code H33-1-CD
10	625	22	Ea.	Mercury Vapor Lamp, 250 Watt, ASA Code H37-5-KB
11	625	22	Ea.	Ground Rod Units
12	625	12	Ea.	Pull Boxes, Round Fiber, 18" I.D. including covers
13	625	4	Ea.	Markers
14	625	10	Ea.	Connector Kits, Type I
15	625	22	Ea.	Connector Kits, Type II
16	625	22	Ea.	Connector Kits, Type III
17	625	4	Ea.	Connector Kits, Type IV
18	625	5600	L.F.	Trench, 24" deep
19	625	1500	L.F.	Trench, 4'-6" deep
20	625	550	L.F.	Conduit, 3" Rigid Ferrous Metal, Type II or III
21	625	3050	L.F.	Conduit, 2" Rigid Ferrous Metal, Type II or III
22	625	325	L.F.	Conduit, 1" Rigid Ferrous Metal, Type II or III
23	625	7000	L.F.	No. 6 Circuit Cable, Stranded, 600 V. Single Conductor
24	625	560	L.F.	No. 2/0 Feeder Cable, Stranded, 600 V. Single Conductor
25	625	1120	L.F.	No. 4/0 Feeder Cable, Stranded, 600 V. Single Conductor
26	625	1020	L.F.	No. 10 Pole and Bracket Cable, 600 V. Single Conductor
27	625	2800	L.F.	Duct-Cable, 600 Volt, 1 ½"- 2 #6
28	625	Lump	Lump	Service Pole & Control Center — Northbound Area
29	625	Lump	Lump	Service Pole & Control Center — Southbound Area
30	625	Lump	Lump	Circuit and Light Pole Identification
31	625	1400	L.F.	Telephone Conduit, 1-1/4" Rigid Ferrous Metal, Type II or III *
32	625	4	Ea.	Aluminum Transformer Base AT-A for Light Poles, as per plan

Revised 7-20-67
ELECTRICAL PLAN NORTHBOUND REST AREA Rev. Jan. 23, 1967

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MECHANICAL PROPERTIES FOR LIGHT POLES

POLE DESIGN NUMBER	SHAFT SIZE 11 GA.	ANCHOR BOLT DIA. BOLT CIRCLE	ANCHOR BOLT PROJ. ABOVE FOUNDATION	ARM LENGTH "TWIN" OR "SINGLE"	MT'G. HEIGHT ABOVE PAVEMENT	ELASTIC DEF'L RATE - INCHES PER 100 lbs.	AT 2/3 of YIELD STRENGTH: LOAD 18" DOWN FROM TOP -lbs.-	AT 2/3 of YIELD STRENGTH: TOTAL DEF'L IN INCHES	AT 2/3 of YIELD STRENGTH: PERM. SET IN INCHES	AT YIELD STRESS: LOAD 18" DOWN FROM TOP -lbs.-	AT YIELD STRESS: TOTAL DEF'L IN INCHES	AT YIELD STRESS: PERM. SET IN INCHES
11A10B32.5 ANCHOR BASE	8.0" x 3.87 29'-6"	11.0"	2-5/8"	10'-0"	32'-6"	3.32	517	17.66	.50	776	28.84	3.08
11A15B32.5 ANCHOR BASE	9.0" x 4.87 x 29'-6"	12.5"	3"	15'-0"	32'-6"	2.16	659	14.73	.50	989	24.00	2.64
11A15BB32.5 ANCHOR BASE	9" x 4.87 x 29'-6"	12.5"	3"	15'-0" "TWIN"	32'-6"	2.16	659	14.73	.50	989	24.00	2.64
11TON20 TRANSFORMER BASE	6.6" x 3.94 x 18'-3"	15.0"	3.0"	NONE	POLE TOP	1.16	564	7.04	.50	845	11.28	1.48

ELECTRICAL PLAN
Continued

ITEM 625 - ELECTRICAL EQUIPMENT Shall Conform to the 1965 Construction & Materials Specification of The State of Ohio Department of Highways.

Item 625 is amended as follows:

625.05 - Lighting Standards. Lighting standards on deceleration lanes and ramps shall be circular cross-section, with single bracket arm and Anchor base. Lighting standards in parking areas shall be with double bracket arms and Anchor base. Lighting standards in picnic areas shall be with transformer base. Standards Shall be Aligned With Galv. Steel Shims.

625.08 - Lamps. Lamps for use on deceleration lanes and ramps shall be 400 watt, BT-37, ASA Designation H33-1CD. Lamps for use in parking areas and picnic areas shall be 250 watt, BT-28, ASA Designation H37-5KB.

625.13 - Conduit. Conduit for direct burial shall be Type II or III, sized as shown on the Plans.

625.18 - Service Pole. Service pole shall be ASA Class 4, 35'-0", southern yellow pine, full "Penta" treated, 8 pounds per cubic foot. AWPA Spec.

Service Pole Equipment: Conduit shall be as specified above (625.13) Type II or III. Electrical Cable shall be as specified in 625.14. (Ammended This Sheet) Control Equipment shall be as detailed and specified on plans.

Aluminum Transformer Bases for Light Poles: Cast aluminum transformer bases, type AT-A, as detailed on sheet 138-A, shall be provided for lighting units C-1, B-4, B-5, and B-6.

ELECTRICAL PLAN
Scale: 1" = 50'

WIRE - CABLE - DUCT-CABLE IDENTIFICATION

All circuit and ground cables (except structure grounding system wires) and duct-cable shall be identified in each pull box, manhole, parapet or curb junction box (Type "A" or "B" Bridge Raceway Boxes), etc. Tags shall be circular in shape, 1 3/8" to 1 1/2" nominal diameter and not less than .031" thick copper or brass. Use steel lettering dies, 1/4" minimum size, or the equivalent engraving process to mark the tag. It shall be securely attached with an AWG #16 or larger bare copper wire. Marking of tags shall consist of an abbreviation for the ground wires "Gnd." and circuit with number or letter "Ckt-A", etc.

Identification by an approved banding method will be considered as an alternate; also approved plastic tags in lieu of above metal tags.

Cables in circuit breaker and safety switch enclosures shall be tagged with plastic tags or banded in an appropriate manner so as not to reduce electrical clearances from live conductors and live parts to ground. Cost shall be included with bid item for wire, cable or duct-cable.

625.11 & 713.08-09: Pull Boxes shall be 18" diameter, 0.31" minimum wall thickness (circular bituminous fiber) with 19" diameter x 0.315" minimum thickness cast iron cover. Cover shall be checkered, rib-reinforced, asphaltum paint finish with the word "ELECTRIC" cast in 1" to 2" high letters.

625.14 & 713.02: The specification for cable is hereby amended for this project to reads "All service cable and circuit cable in conduit and duct-cable shall be stranded and shall be General Electric Co. cable No. 81-58073 or approved equivalents as manufactured by Rome, Gimplex, Phelps-Dodge, Kaiser.

Cable shall be in continuous lengths without splices except in pull boxes and lighting units.

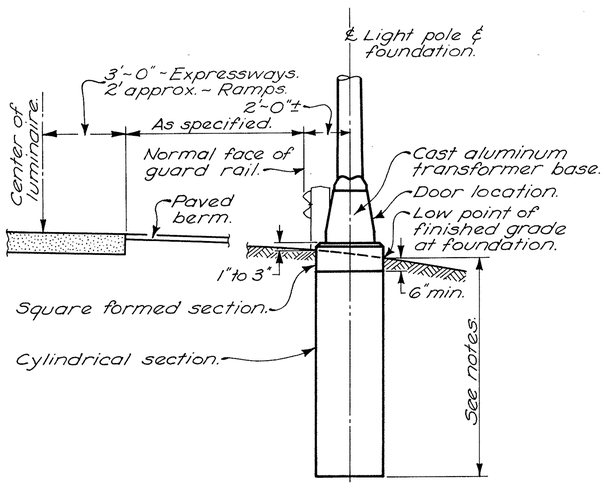
Pole and Bracket cable shall be stranded, plastic insulated nylon-jacketed, U.L. approved type THHN.

625.08 & 713.14 b: All lamps for this project shall be First Line Mercury Vapor type and shall be General Electric Bonus Line, Westinghouse Lifeguard, Sylvania Banner Line or approved equal.

625.12 Trenching Item, 2'-0" deep, shall be for all widths encountered. Conduits, where possible, shall be placed in a common trench, both lighting services and telephone.

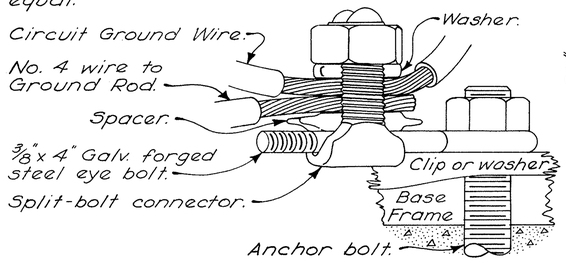
Revised 7-20-67
Rev. Jan. 23, 1967

ELECTRICAL PLAN SOUTHBOUND REST AREA

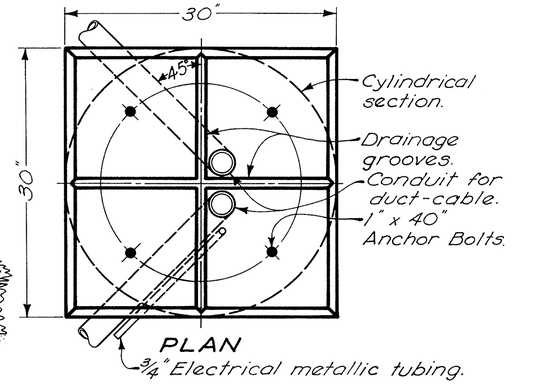


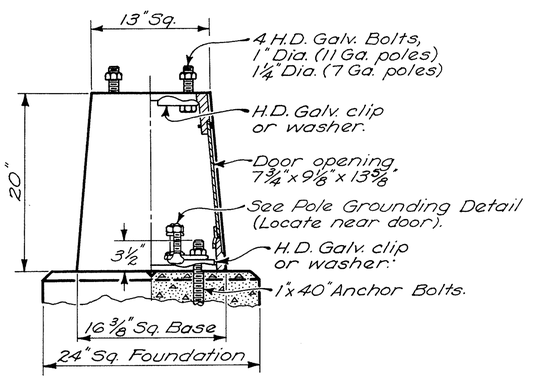
LOCATION OF POLE WITH ALUMINUM TRANSFORMER BASE

NOTE: Split-bolt Connector shall be made of tin plated copper alloy with tin plated spacer. Acceptable models are: Blackburn #10HPS, Burndy #KSU-25, Line Material #DK-5B-10, Kearney #118109-02 or an approved equal.

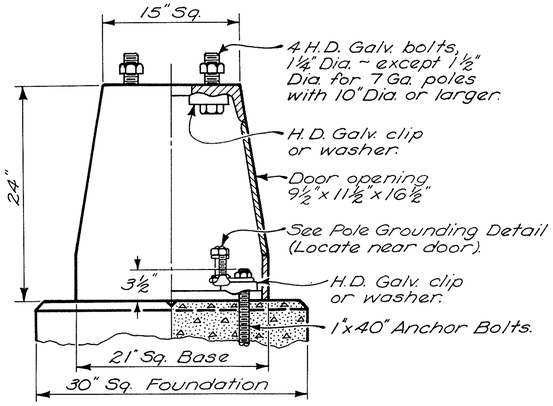


POLE GROUNDING DETAIL

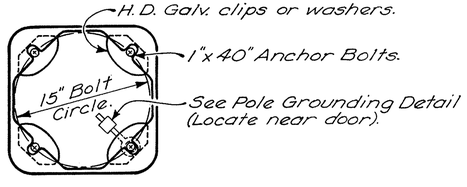




ELEVATION

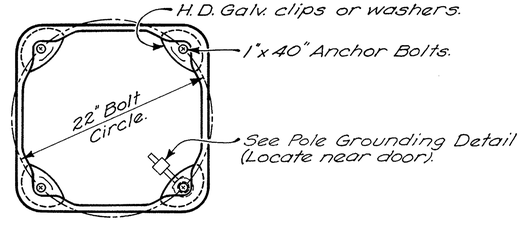


ELEVATION



BASE FRAME

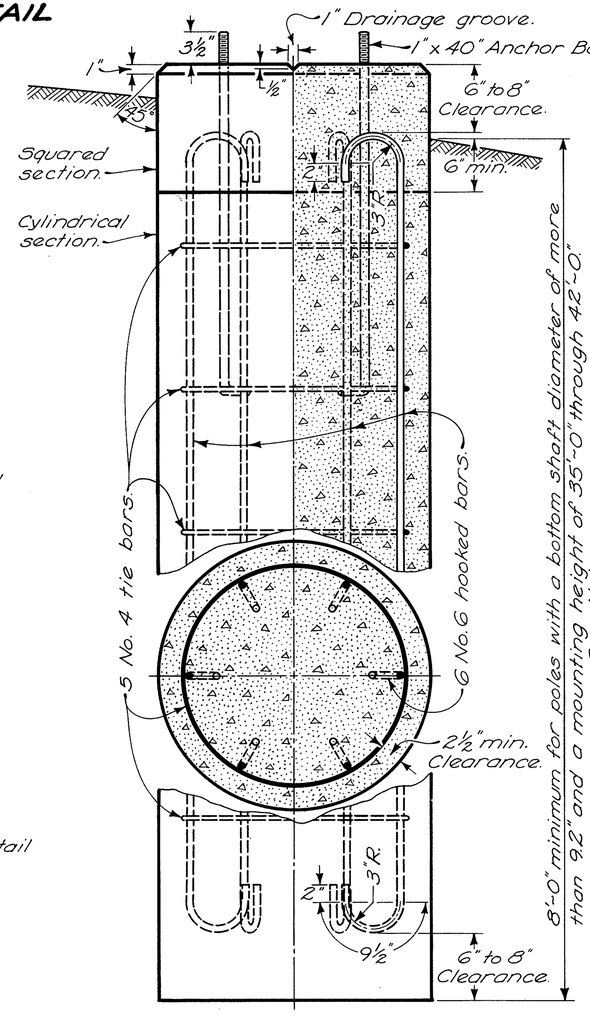
BASE AT-A



BASE FRAME

BASE AT-B

CAST ALUMINUM TRANSFORMER BASES



ELEVATION

30" FOUNDATION

NOTES

FOUNDATION: Foundations for light poles shall be poured-in-place concrete (vibrated and spaded 511.09). Each foundation must meet minimum depths as specified, but additional depth may be required by the Engineer because of existing soil conditions. The 30" foundation (detailed hereon) shall be used for light poles having a bottom shaft diameter of more than 9.2" through 11". The 24" foundation (detailed on Standard Drawing HL-1) shall be used for all light poles having a bottom shaft diameter of 6.0" through 9.2".

Rotate reinforcing bars to clear conduit.

Drainage grooves on foundation top, as detailed hereon, shall be required on all foundations even though they do not appear on Standard Drawing HL-1.

ALUMINUM TRANSFORMER BASES: All bases shall be cast from ASTM B-26 or B-108 Alloy SG 70A-T6.

Base AT-A shall be used with anchor base poles of 6" through 9.2" diameter inclusive. Base AT-B shall be used for anchor base poles above 9.2" through 11" diameter. A pole with 37'-6" shaft and 18' arm is max. size for use with Base AT-B.

The transformer bases shall be capable of resisting the following moments in foot pounds applied to the top of the base without collapsing or rupturing.

Base Height	Moment-Foot Pounds
20"	40,000
24"	52,000

Both the bottom of the cast steel pole base and the top of the aluminum transformer base shall be coated or painted with a heavy film of zinc rich paint (Federal Specification TT-P-641-Type II) to reduce galvanic action between the two dissimilar metals.

PAYMENT: 30" Light Pole Foundations shall be paid for at the unit price bid per each foundation.

Aluminum base complete with hardware, eye bolt and connector, zinc rich paint, and installation shall be paid for at the unit price bid for each transformer base.

Issued: 3-29-67

Design Services Sketch No. RL-SK-153

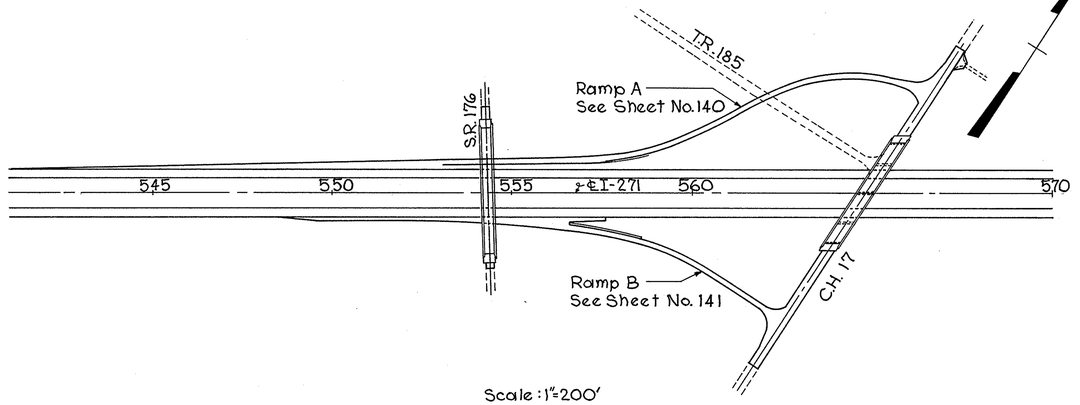
ALUMINUM TRANSFORMER BASE DETAILS

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INTERCHANGE AT C. H. 17



Scale: 1"=200'

203 - SUBGRADE PREPARATION
Area 451 & 409 10,636 Sq. Yds
Deduct area on rock -5,657
TOTAL 4,979 Sq. Yds *

203 - PROOF ROLLING
4,979 Sq. Yds. ÷ 2,000 = 2 Hrs. *

301 - BITUMINOUS AGGREGATE BASE
RAMP A 178 Cu. Yds.
RAMP B 100
TOTAL 278 Cu. Yds. *

304 - AGGREGATE BASE
RAMP A 149 Cu. Yds.
RAMP B 60
TOTAL 209 Cu. Yds. *

310 - SUBBASE: Grading A or B as per plan.
RAMP A 971 Cu. Yds.
RAMP B 682
TOTAL 1,653 Cu. Yds. *

310 - SUBBASE
RAMP A 178 Cu. Yds.
RAMP B 98
TOTAL 276 Cu. Yds. *

409 - SEAL COAT COVER AGGREGATE No. 8
RAMP A 18 Cu. Yds.
RAMP B 10
TOTAL 28 Cu. Yds. *

409 - SEAL COAT BITUMINOUS MATERIAL, as per plan.
RAMP A 566 Gals.
RAMP B 298
TOTAL 864 Gals. *

451 - 9" REINFORCED P.C. CONCRETE PAVEMENT
RAMP A 2,630 Sq. Yds.
RAMP B 1,295
TOTAL 3,925 Sq. Yds. *

451 - 10" REINFORCED P.C. CONCRETE PAVEMENT
RAMP A 1,667 Sq. Yds.
RAMP B 1,586
TOTAL 3,253 Sq. Yds. *

ITEM SPECIAL - DRAINAGE CONNECTION USING No. 8 AGGREGATE
RAMP A 180 Cu. Yds.
RAMP B 96
TOTAL 276 Cu. Yds. *

Note: Totals carried forward to Calculation Sheet, Sheet No. 15

INTERCHANGE SUB-SUMMARY

SHEET No. 140	SHEET No. 141	ITEM	QUANTITIES			TOTAL	UNIT	DESCRIPTION
								ROADWAY
25		606				25	Lin. Ft.	Guard Rail, Type 4
								DRAINAGE
20		601				20	Cu. Yds.	Dumped Rock Channel Protection
30	20	603				50	Lin. Ft.	6" Conduit, Type F
	286	603				286	Lin. Ft.	15" Conduit, Type B, with Class B Bedding
222		603				222	Lin. Ft.	27" Conduit, Type B, with Class B Bedding
1		604				1	Each	Standard C.B. No. 4
	1	604				1	Each	Standard C.B. No. 5
1		604				1	Each	Standard C.B. No. 5, Modified as per plan.
625		605				625	Lin. Ft.	6" Shallow Pipe Underdrain
746	695	605				1,441	Lin. Ft.	6" Pipe Underdrain, 707.06 or 707.12
521		605				521	Lin. Ft.	6" Unclassified Pipe Underdrain
								PAVEMENT
19		304				19	Cu. Yds.	Aggregate Base
7.0		404				7	Cu. Yds.	Asphalt Concrete (85-100)
	124	609				124	Lin. Ft.	Concrete Curb, Standard Type 6
79		609				79	Lin. Ft.	Concrete Curb, Standard Type 7
467		609				467	Lin. Ft.	Concrete Curb, Standard Type 8
	25	612				25	Sq. Yds.	Concrete Traffic Island
54		408				54	Gal	Bituminous Prime Coat 702.09 RT 2 or RT 3

Above Quantities Carried to General Summary

Rev. Jan. 23, 1967

C.H.17 INTERCHANGE SUB - SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

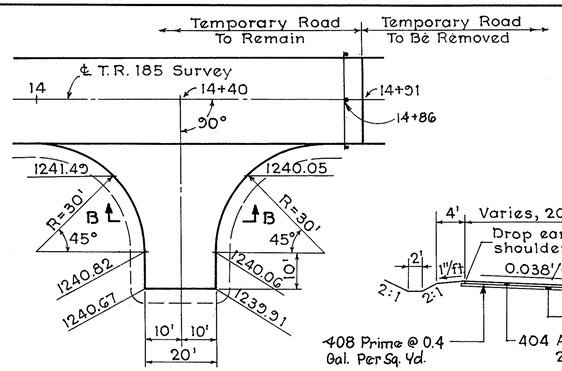
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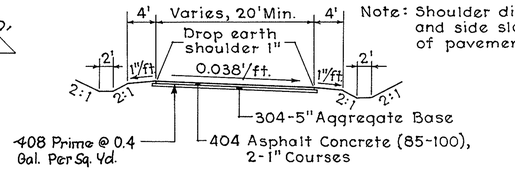
ESTIMATED QUANTITIES

REF NO.	STATION TO STATION	SIDE	601 Dumped Rock Channel Protection	603 2"T"Conduit Type B with Class B Bedding	603 6" Conduit Type F	604 Catch Basin Std. No 4	604 Catch Basin Std. No 5 Modified as per plan	605 6" Pipe U.D. 707.06 or 707.12	605 6" Shallow Pipe U.D.	609 Concrete Curb Standard Type 7	609 Concrete Curb Standard Type 8	Bends and Branches 6"	605 6" Unclass. Pipe U.D.	606 Guard Rail Type 4	304 Aggr. Base t=5"	404 Asphalt Concrete (85-100) 2-1" Courses	SEE SHEET NO.	408 Bituminous Prime Coat
			Cu.Yds.	Lin. Ft.	Lin. Ft.	Each	Each	Lin. Ft.	Lin. Ft.	Lin. Ft.	Lin. Ft.		Lin. Ft.	Lin. Ft.	Cu.Yds.	Cu.Yds.		Gal.
1-D	53+07 to 60+42	Lt.			10			746				1						
2-D	61+47 to 66+82	Rt.			10				625			1						
3-D	60+42	—		222		1	1										152 & 154	
4-D	62+05	Lt.	20															
5-D	60+42 to 65+50	Lt.			10								521					
6-D	14+86 *	Lt.												25				
1-P	53+07 to 57+74	Rt.									467							
2-P	57+74 to 58+53	Rt.								79								
1-A	Turnaround	—													19	7.0		54
TOTALS			20	222	30	1	1	746	625	79	467		521	25	19	7.0		54

* Sta on T.R. 185

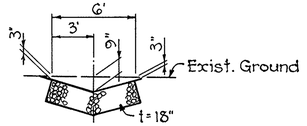


PLAN
1"=20'

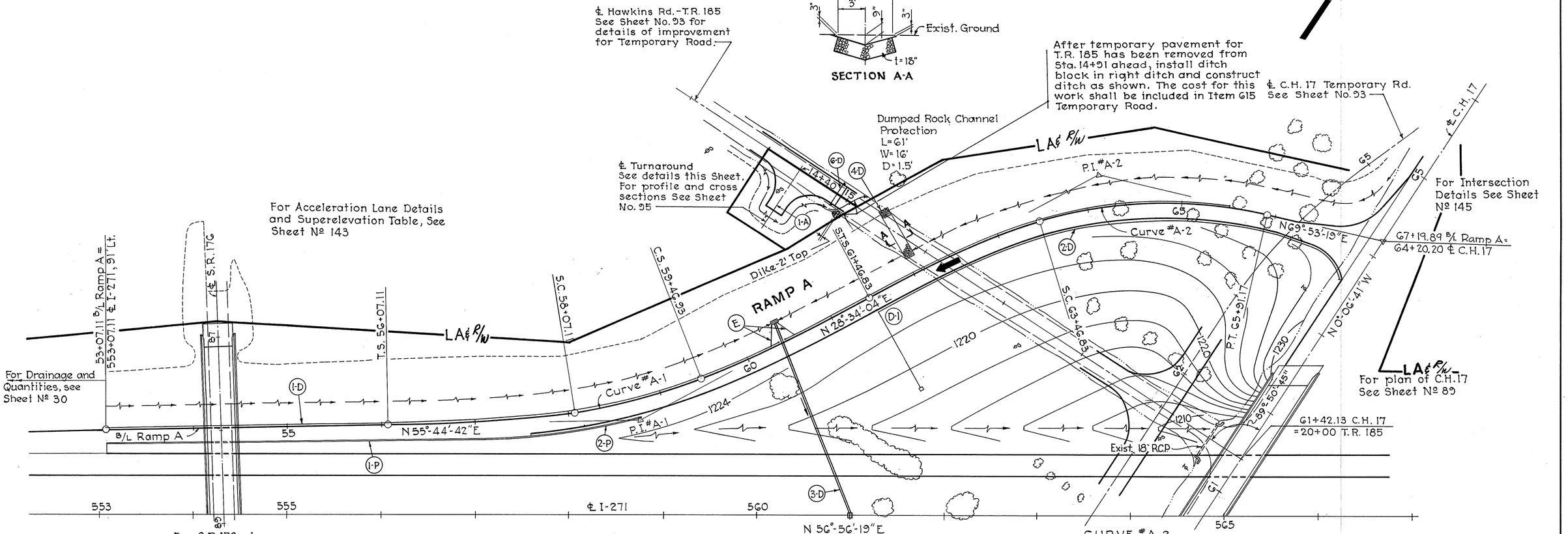


Note: Shoulder dimension and shoulder and side slopes normal to edge of pavement.

TYPICAL SECTION B-B
1"=10'



SECTION A-A



CURVE #A-1

Δ = 27° 10' 38"		p = 2.33'	
Δc = 11° 10' 38"		k = 99.44	
D = 8° 00' 00"		Xc = 199.61'	
R = 716.20'		Yc = 9.30'	
Lc = 139.72'		L.T. = 133.47'	
Tc = 70.08'		S.T. = 66.79'	
Ec = 3.42'		Ts = 273.61'	
Ls1 = Ls2 = 200.00'		Es = 23.02'	
Θs = 8° 00' 00"			

CURVE #A-2

Δ = 41° 19' 15"		p1 = 3.49'	
Δc = 29° 19' 15"		k1 = 99.85'	
D = 12° 00' 00"		Xc1 = 199.12'	
R = 477.46'		Yc1 = 13.92'	
Lc = 244.34'		L.T. = 133.64	
Tc = 124.91'		S.T. = 66.95'	
Ec = 16.07'		Ts1 = 275.93'	
Ls1 = 200.00'		Ts2 = 185.32'	
Θs = 12° 00' 00"			

D-1 E See Detail Sheet Nº 153
For Ramp A Profile See Sheet Nº 142

C.H. 17 INTERCHANGE - RAMP A

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO	I-271-6(15)229		

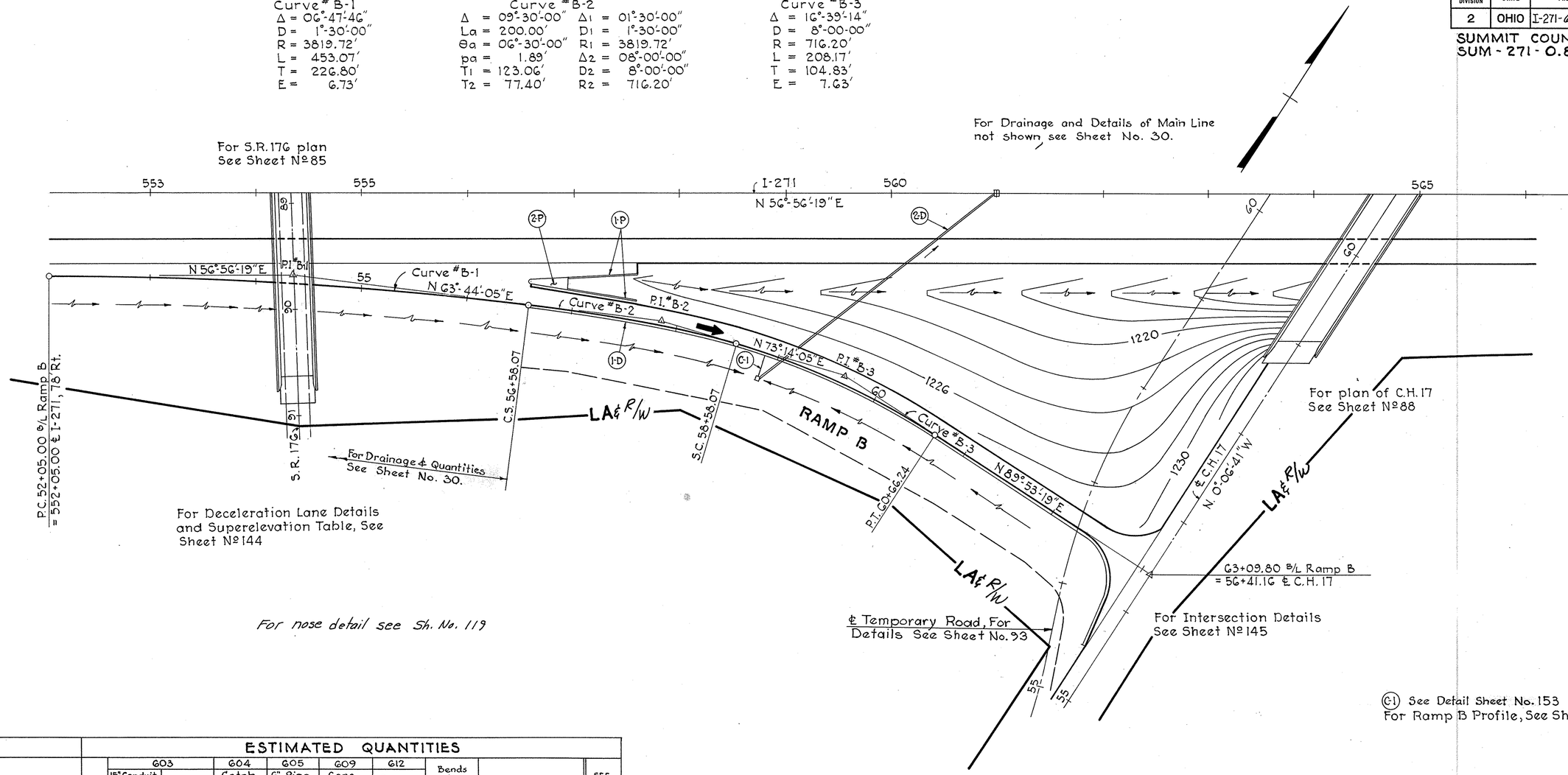
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Curve # B-1
Δ = 06°-47'-46"
D = 1°-30'-00"
R = 3819.72'
L = 453.07'
T = 226.80'
E = 6.73'

Curve # B-2
Δ = 09°-30'-00" Δ1 = 01°-30'-00"
La = 200.00' D1 = 1°-30'-00"
Θa = 06°-30'-00" R1 = 3819.72'
pa = 1.89' Δ2 = 08°-00'-00"
T1 = 123.06' D2 = 8°-00'-00"
T2 = 77.40' R2 = 716.20'

Curve # B-3
Δ = 16°-39'-14"
D = 8°-00-00"
R = 716.20'
L = 208.17'
T = 104.83'
E = 7.63'



For Deceleration Lane Details and Superelevation Table, See Sheet Nº144

For nose detail see Sh. No. 119

(C-1) See Detail Sheet No. 153
For Ramp B Profile, See Sheet Nº142

ESTIMATED QUANTITIES

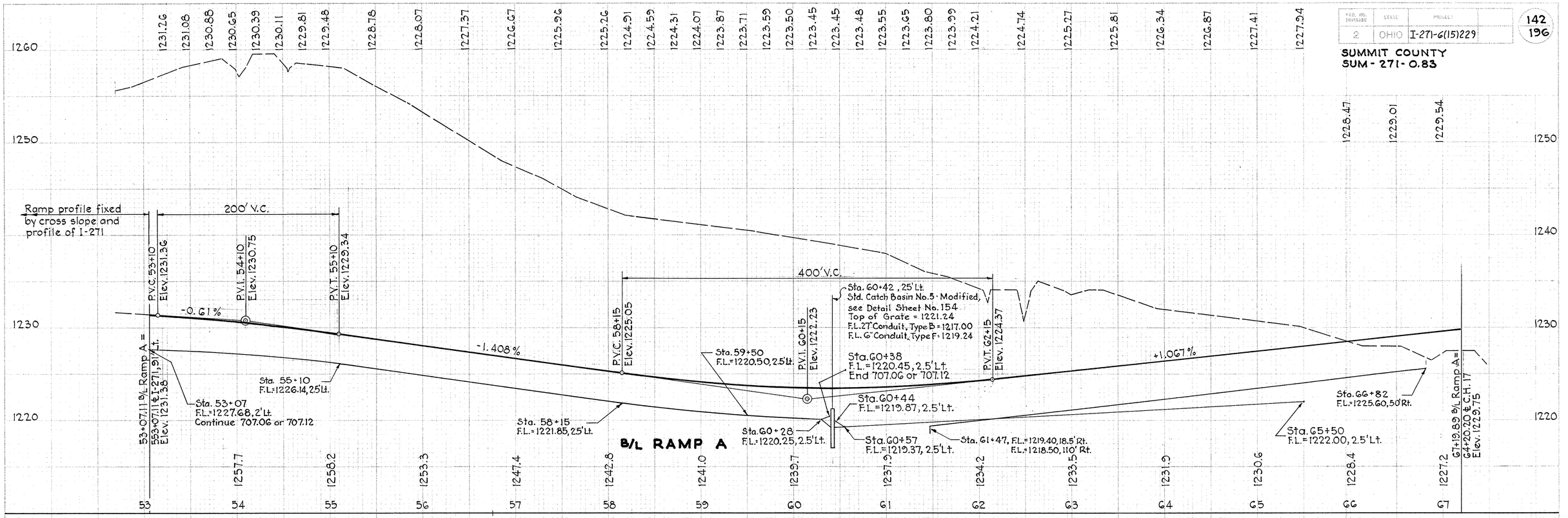
REF. No.	STATION TO STATION	SIDE	603 15" Conduit Type B with Class B Bedding (Lin. Ft.)	603 6" Conduit Type F (Lin. Ft.)	604 Catch Basin Std. No. 5 (Each)	605 6" Pipe Underdrain 707.06 or 707.12 (Lin. Ft.)	609 Conc. Curb Std. Type G (Lin. Ft.)	612 Conc. Traffic Island (Sq. Yd.)	Bends & Branches 6"		SEE SHEET NO.
1-D	56+58 to 62+90	Rt.		20		695			1		
2-D	58+87	-	286		1						152
1-P	557+00 to 557+61	Rt.					124				
2-P	556+59 to 557+00	Rt.						25			
	TOTALS		286	20	1	695	124	25			

C.H. 17 INTERCHANGE - RAMP B

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C.H.17 INTERCHANGE - PROFILES - RAMPS A & B

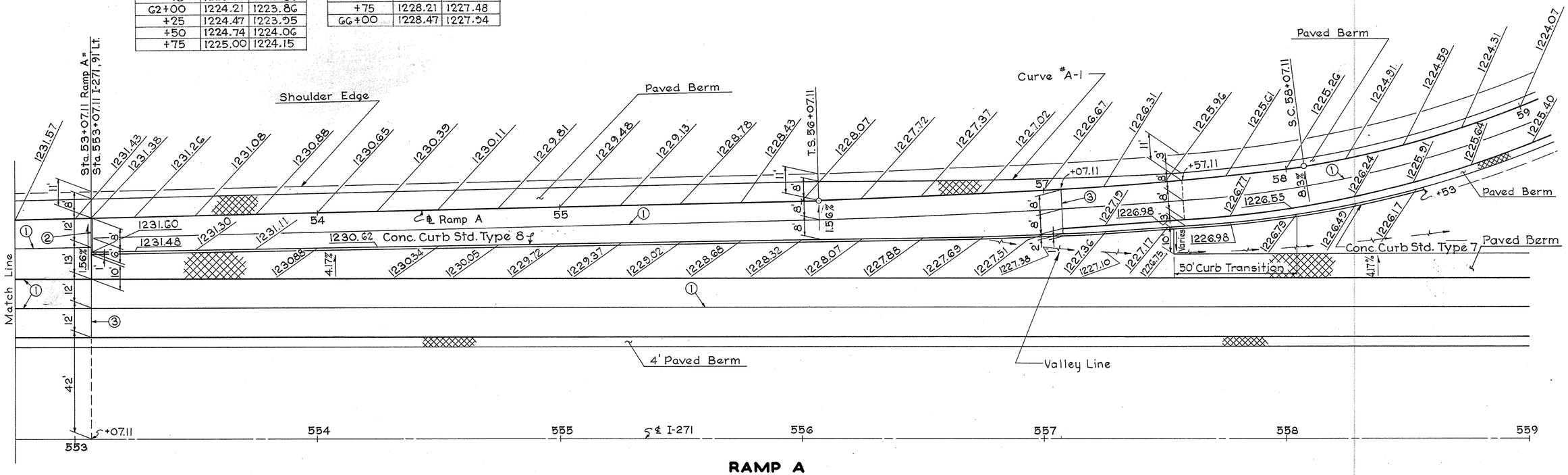
PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp. Edge
59+25	1223.87	1225.20
+50	1223.71	1225.02
+75	1223.59	1224.73
60+00	1223.50	1224.47
+25	1223.45	1224.26
+50	1223.45	1224.09
+75	1223.48	1223.96
61+00	1223.55	1223.86
+25	1223.65	1223.80
+50	1223.80	1223.78
+75	1223.99	1223.80
62+00	1224.21	1223.86
+25	1224.47	1223.95
+50	1224.74	1224.06
+75	1225.00	1224.15

PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp. Edge
63+00	1225.27	1224.25
+25	1225.54	1224.36
+50	1225.80	1224.47
+75	1226.07	1224.74
64+00	1226.34	1225.01
+25	1226.60	1225.27
+50	1226.87	1225.54
+75	1227.14	1225.81
65+00	1227.41	1226.16
+25	1227.67	1226.62
+50	1227.94	1227.09
+75	1228.21	1227.48
66+00	1228.47	1227.94

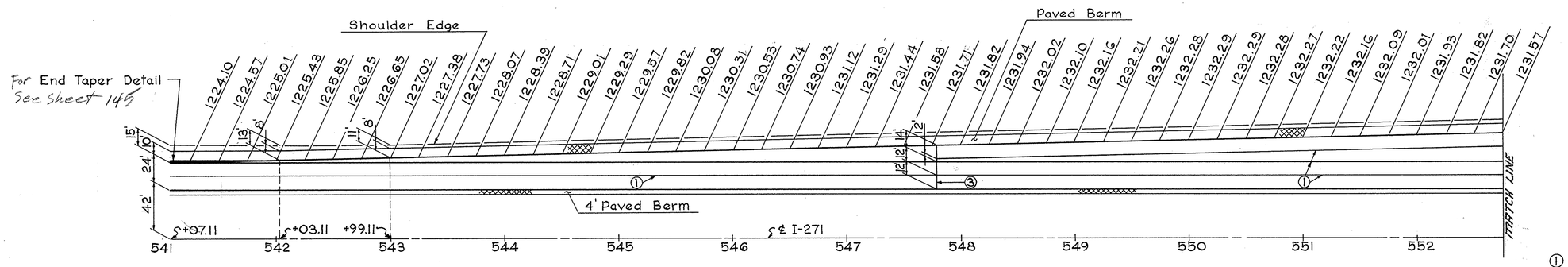
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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RAMP A
CONNECTION
Scale: 1"=20'



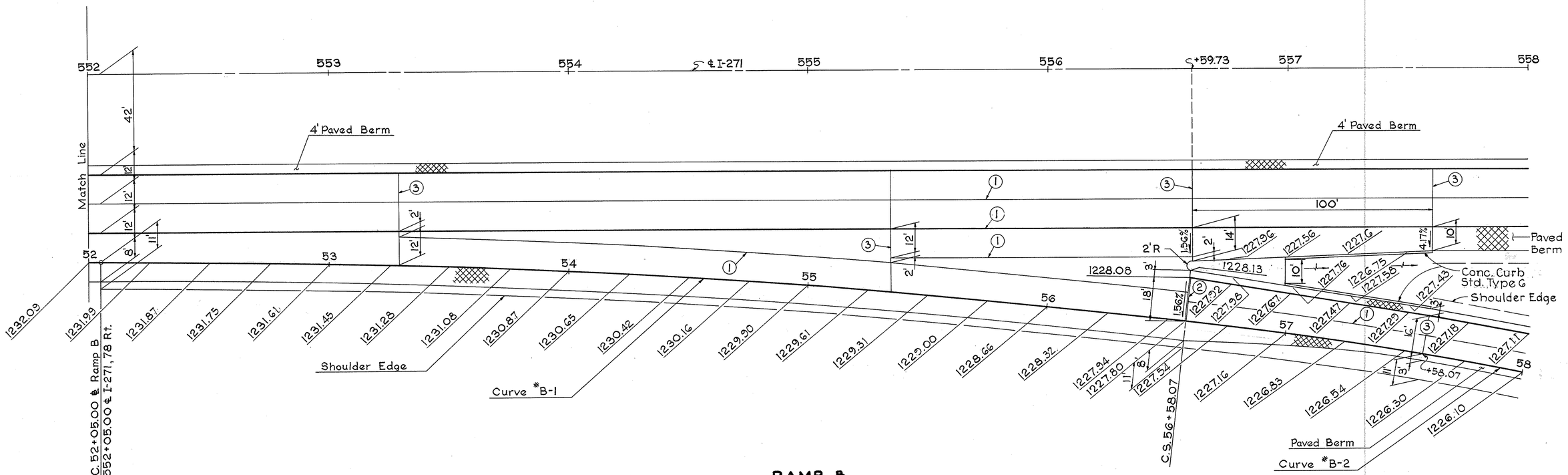
RAMP A
ACCELERATION LANE & TAPER
Scale: 1"=50'

JOINT LEGEND
① Standard Longitudinal Joint
② Standard Expansion Joint
③ Standard Contraction Joint

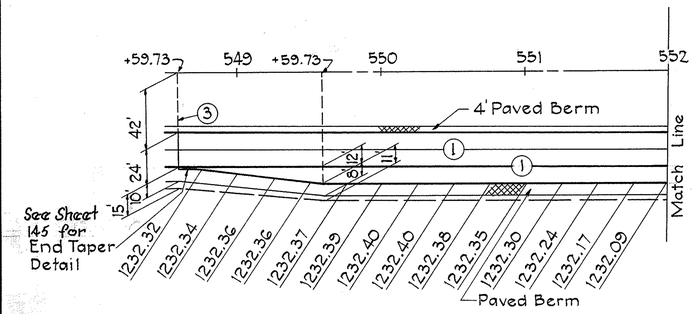
FED. RD. DIVISION	STATE	PROJECT	
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RAMP B CONNECTION
Scale : 1"= 20'



RAMP B DECELERATION LANE & TAPER
Scale : 1"= 50'.

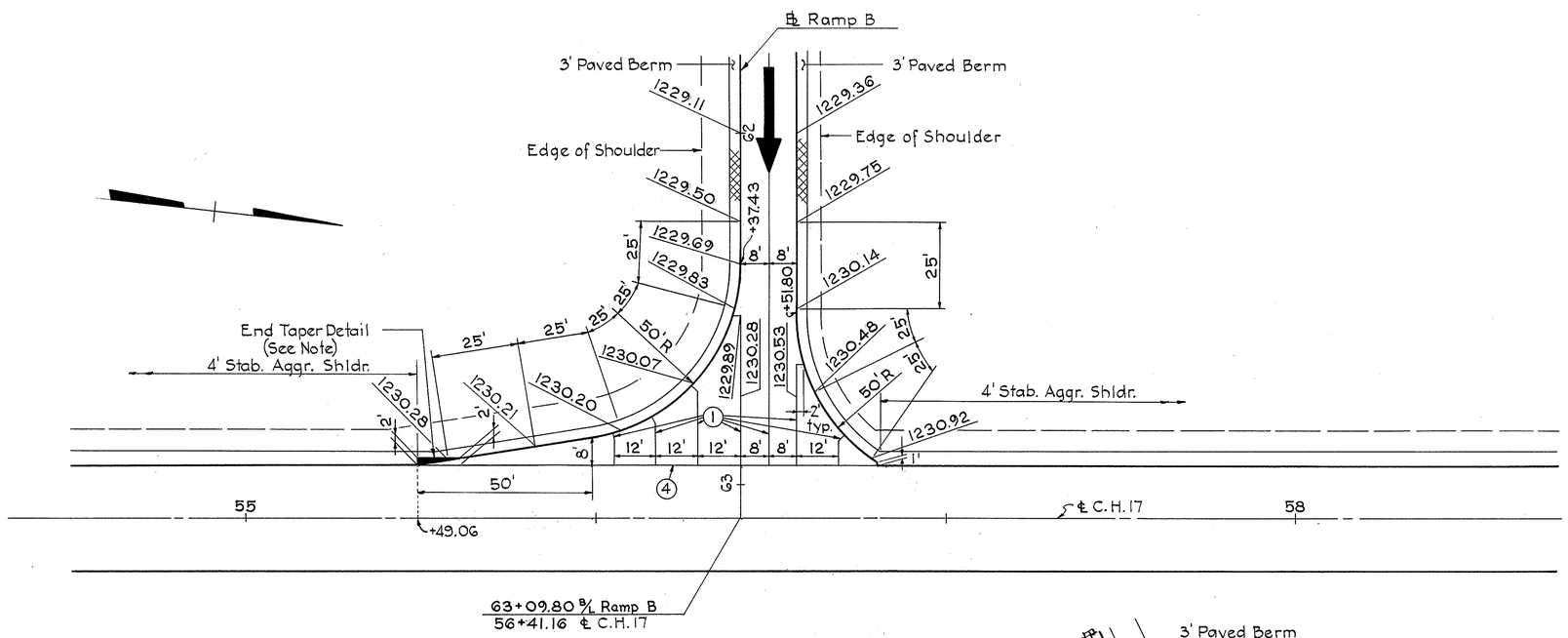
PAVEMENT EDGE ELEVATIONS		
Station	B/L	Opp. Edge
58+25	1225.96	1227.11
+50	1225.86	1227.14
+75	1225.82	1227.15
59+00	1225.82	1227.15
+25	1225.86	1227.19
+50	1225.96	1227.29
+75	1226.11	1227.44
60+00	1226.30	1227.63
+25	1226.54	1227.67
+50	1226.83	1227.76
+75	1227.16	1227.89
61+00	1227.55	1228.08
+25	1227.94	1228.27
+50	1228.33	1228.58
+75	1228.72	1228.97
62+00	1229.11	1229.36

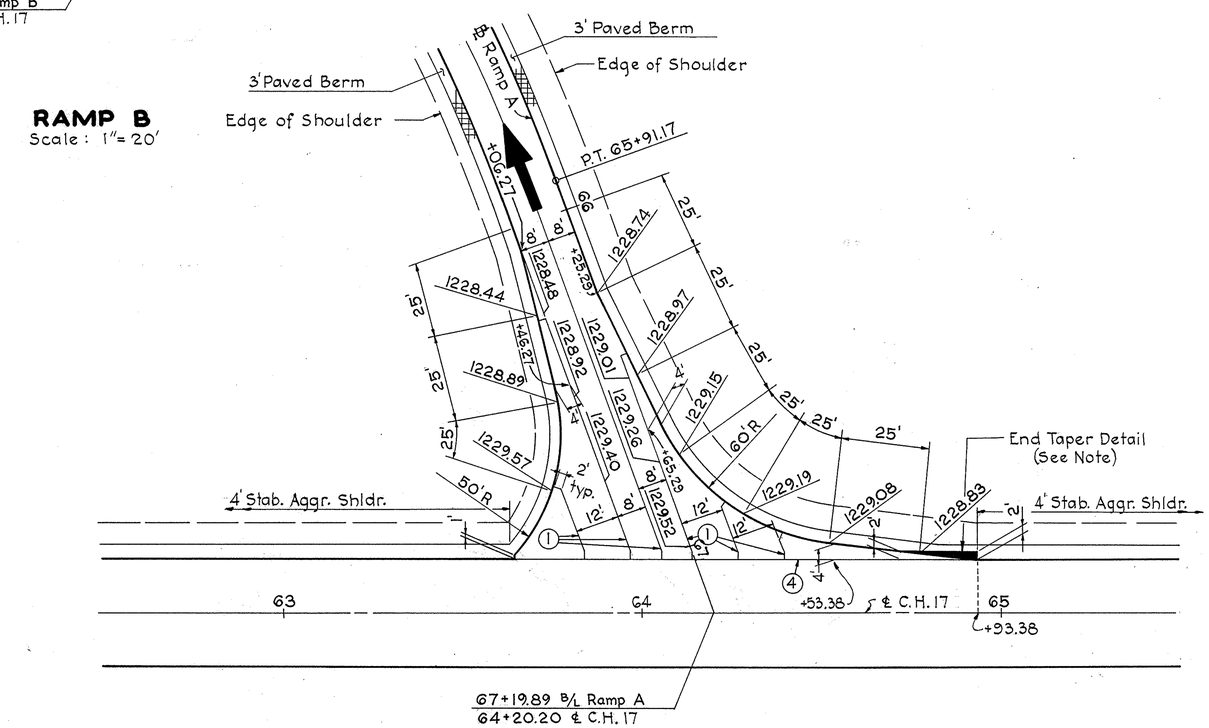
JOINT LEGEND
① Standard Longitudinal Joint
② Standard Expansion Joint
③ Standard Contraction Joint

FED. RD. DIVISION	STATE	PROJECT	
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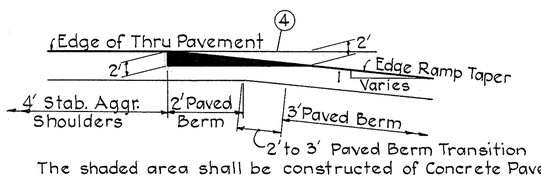
SUMMIT COUNTY
SUM-271-0.83





RAMP B
Scale: 1"= 20'

RAMP A
Scale: 1"= 20'.



The shaded area shall be constructed of Concrete Pavement to an elevation one half inch lower than the adjacent pavement and surfaced with 40S, using No. 8 Aggregate as the maximum size. The shaded area shall be paid for as full depth 451 and the surface treatment as 40S.

END TAPER DETAIL
Scale: 1"= 10'

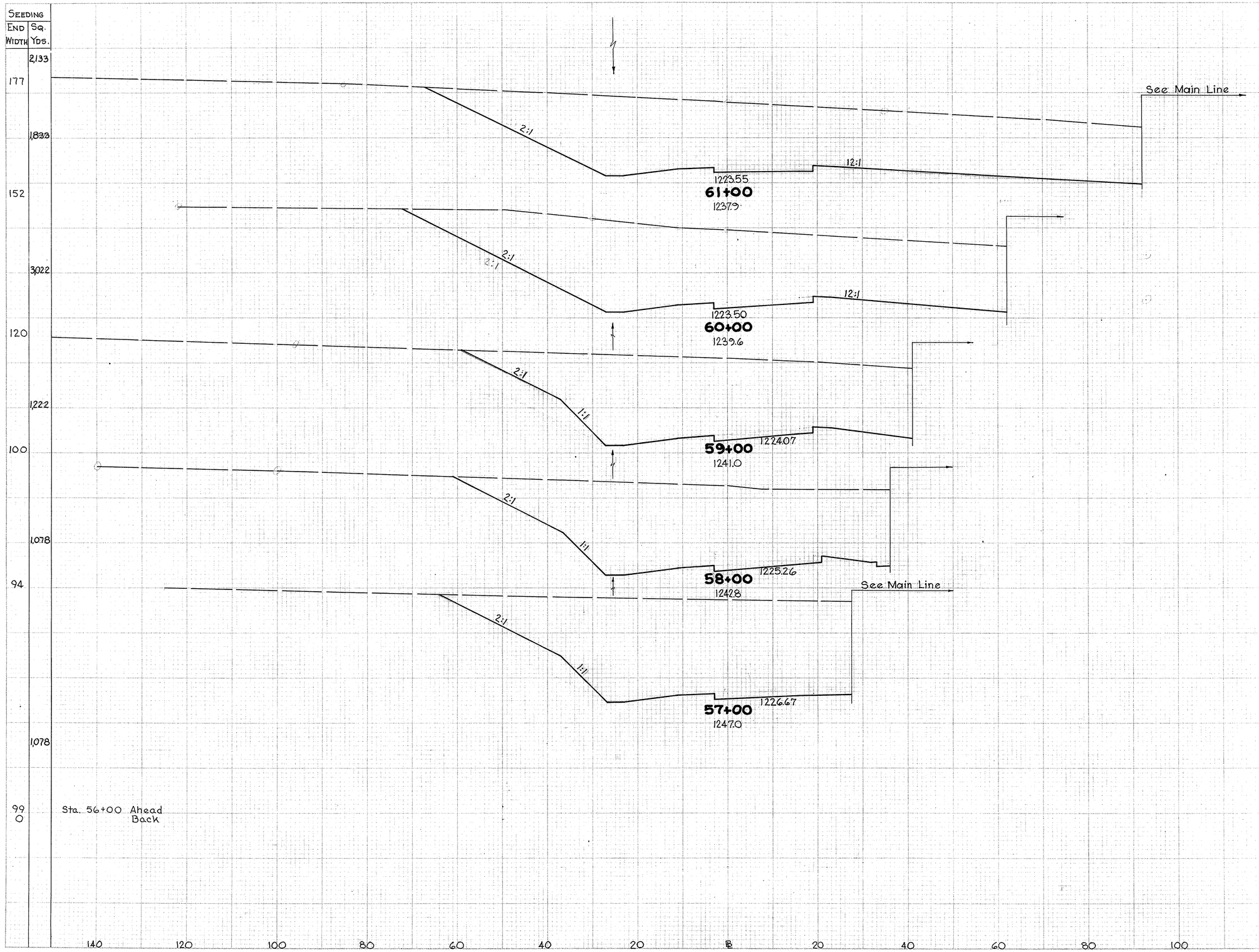
JOINT LEGEND
(1) Standard Longitudinal Joint
(4) Key Joint without Tie-bars
(5) Expansion Joint without Dowels

C.H.17 INTERCHANGE - DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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Seeding End Width	Seeding Sq. Yds.
	2133
177	
	1833
152	
	3022
120	
	1222
100	
	1078
94	
	1078
99 0	

	End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
			7552	0
	2024	0		
			7285	0
	1910	0		
			6206	0
	1441	0		
			5320	0
	1432	0		
			5580	0
	1581	0		
			6230	0
Sta. 56+00 Ahead	1782	0		
Back	0	0		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

C.H.17 INTERCHANGE RAMP A STA. 56+00 TO STA. 61+00

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING Sq. Yds.
192	
	1,452
204	
	1,519
204	
	2,289
208	
	2,367
218	
	1,200
215	
	1,172
207	

ML

See C.H. 17

4:1 5.8:1 12:1

1225.8

66+33
1228.0

See Main Line & C.H. 17

3.3:1 6.8 12:1

1225.5

65+67
1229.4

See Main Line

3:1 8:1 12:1

1225.1

1227.41
65+00
1230.6

3:1 8:1 12:1

1224.6

1226.34
64+00
1231.9

3:1 12:1

1225.27
63+00
1233.5

3:1 12:1

Dumped Rock Channel Protection
Sta. 62+05 Lt.
L = 61'
W = 6'
D = 18"

1224.74
62+50
1230.7

See Main Line

3:1 12:1

1224.21
62+00
1234.2
℄

END AREA	CUT	FILL	CU. YDS. CUT	FILL
Sta 66+33 Ahead	0	0		
Back	82	38		
			871	46
	631	0		
			2352	0
	1265	0		
			5498	0
	1704	0		
			6656	0
	1890	0		
			3659	0
	2062	0		
			3811	0
	2054	0		

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

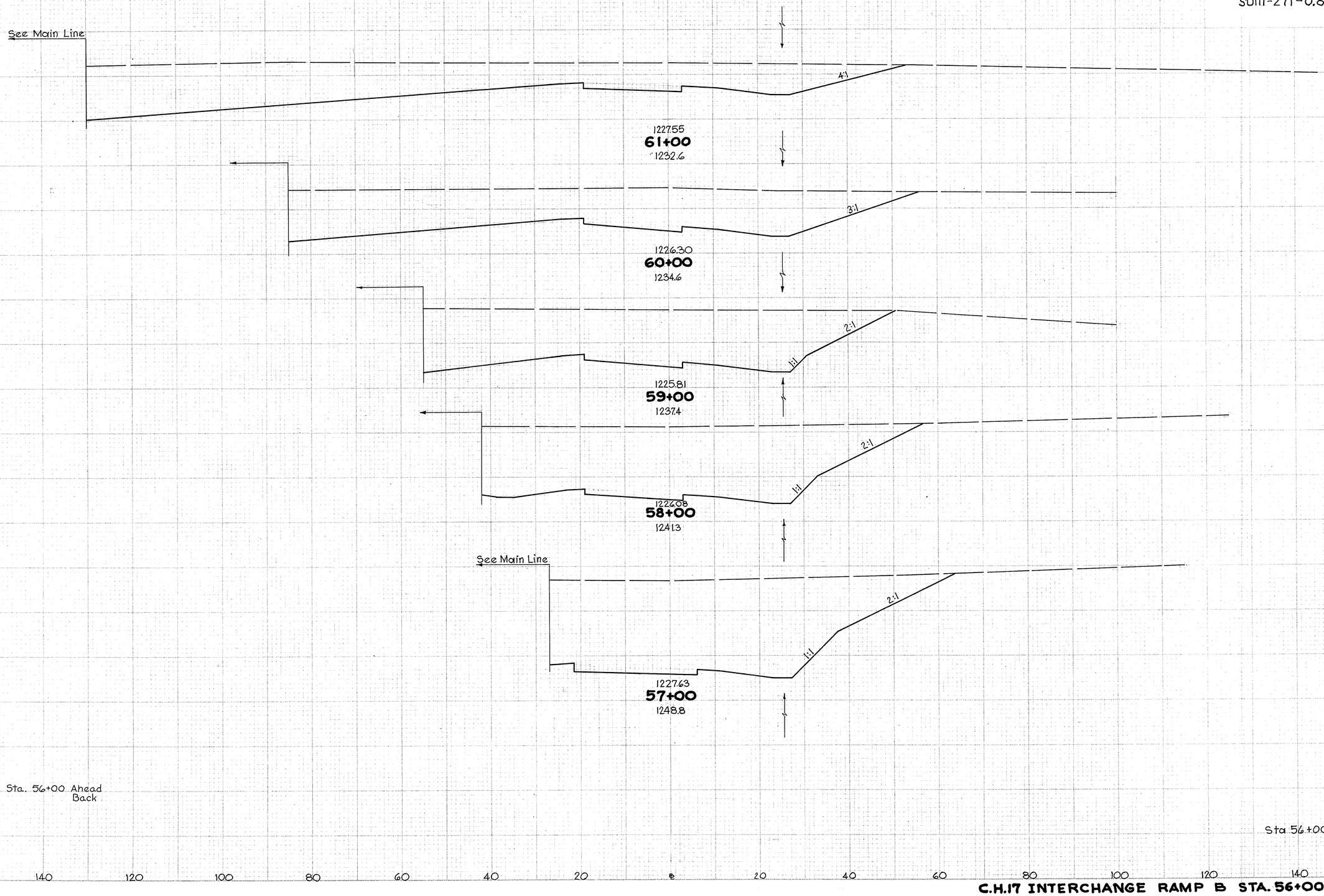
C.H.17 INTERCHANGE RAMP A STA. 62+00 TO STA. 66+33

FED. RD. DIVISION	STATE	PROJECT	
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SEEDING END WIDTH	SEEDING SQ. YDS.
	1,272
221	
	2,200
175	
	1,711
132	
	1,322
105	
	1,189
110	
	1,200
107 0	



END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
		2,691	0
1,337	0		
		4,640	0
1,170	0		
		4,333	0
1,170	0		
		4,620	0
1,326	0		
		5,180	0
1,472	0		
		4,617	0
Sta 56+00 Ahead 1021	0		
Back 0	0		

C.H.17 INTERCHANGE RAMP B STA. 56+00 TO STA. 61+00

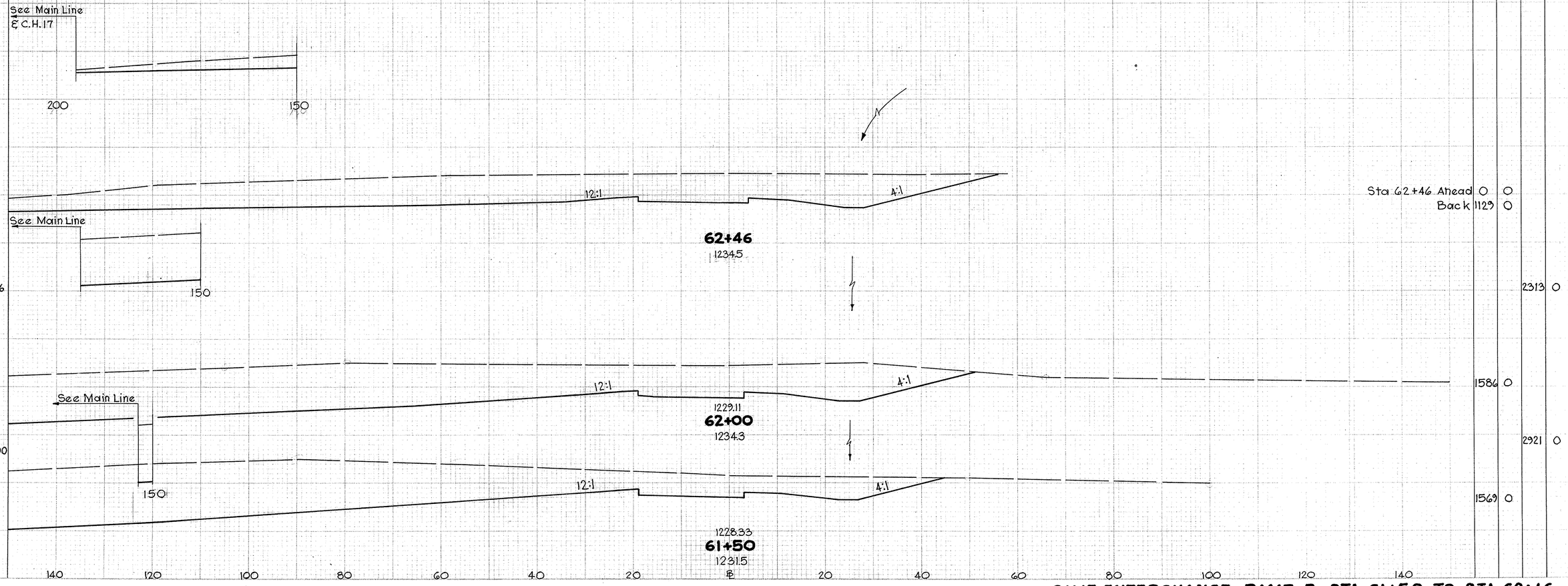
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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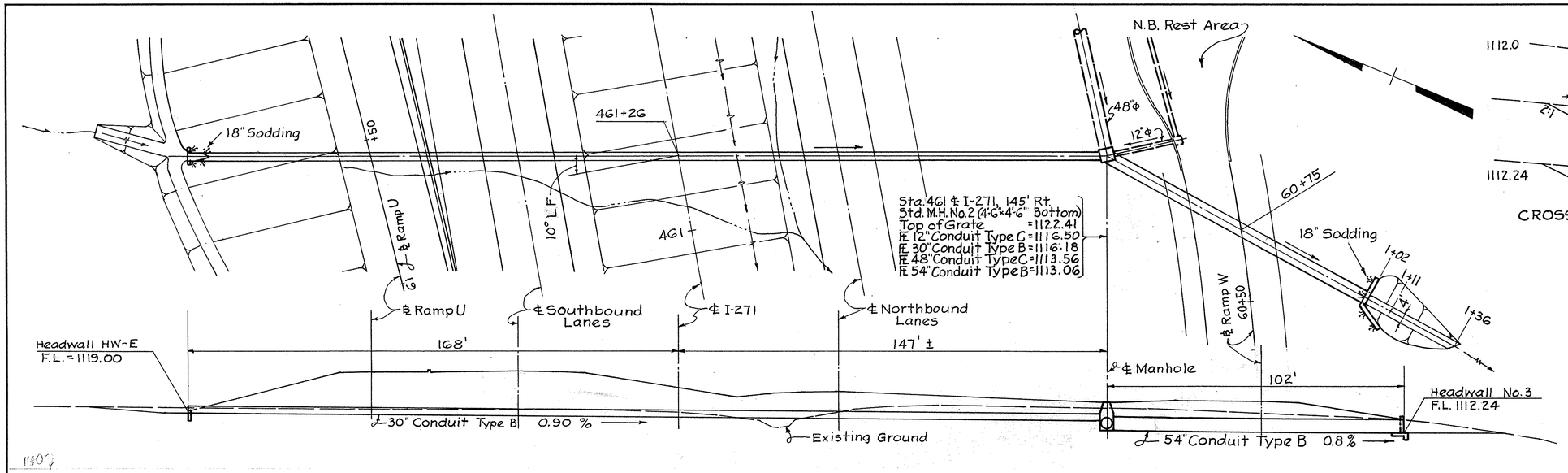
SUMMIT COUNTY
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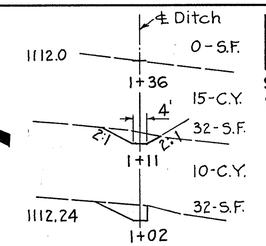
Seeding	
End Width	Sq. Yds.
289	
1416	
266	
1400	
237	

End Area		Cu. Yds.	
Cut	Fill	Cut	Fill
Sta 62+46 Ahead	0	0	
Back	1129	0	
		2313	0
	1586	0	
		2921	0
	1569	0	



C.H.17 INTERCHANGE RAMP B STA. 61+50 TO STA. 62+46





CROSS SECTIONS

FED. RD. DIVISION	STATE	PROJECT	
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ESTIMATED QUANTITIES

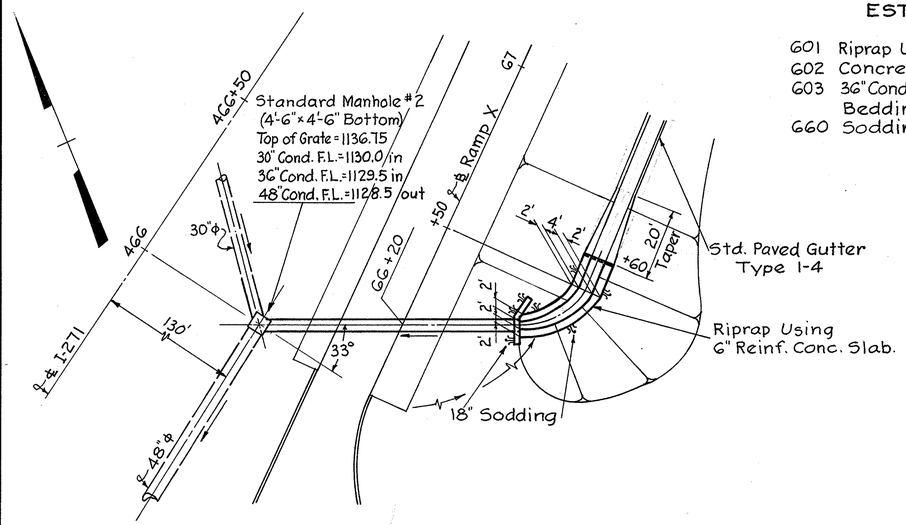
203	Excavation Not Incl. Embkm't. Constr.*	25	C.Y.
602	Concrete Masonry	11.0	C.Y.
603	30" Conduit, Type B, with Cl. B Bedding 706.02, Class III or 706.08	316	L.F.
603	54" Conduit, Type B, with Cl. B Bedding	102	L.F.
660	Sodding	6	S.Y.

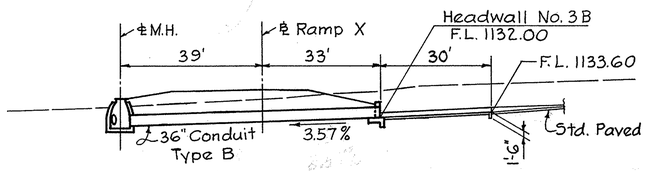
* To Cross Section Sheet No. 108

STORM SEWER STA. 461+26 ℄ I-271 & STA. 60+75 RAMP W
Scale: 1"=20'

ESTIMATED QUANTITIES

601	Riprap Using 6" Reinf. Conc. Slab	26	S.Y.
602	Concrete Masonry	7.3	C.Y.
603	36" Conduit, Type B, with Cl. B Bedding	72	L.F.
660	Sodding	14	S.Y.





Area	36 Ac.
Q50	83 c.f.s.

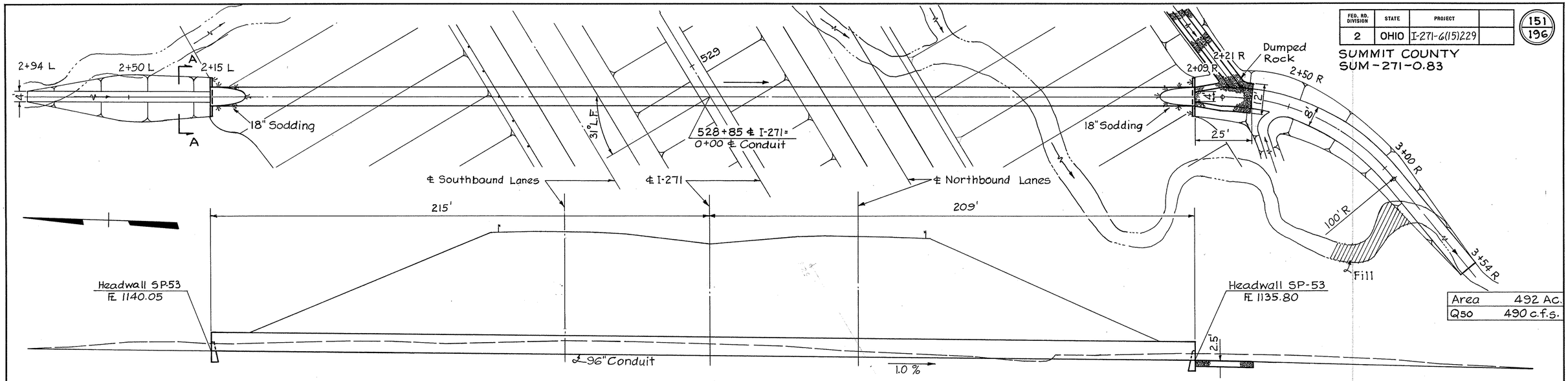
STORM SEWER STA. 66+20 ℄ RAMP X
Scale: 1"= 20'

STORM SEWERS STA. 461+26 ℄ I-271, 60+75 RAMP W & 66+20 RAMP X

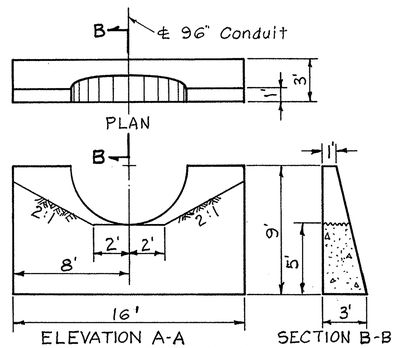
FED. RD. DIVISION	STATE	PROJECT	
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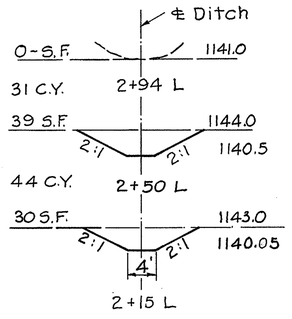
SUMMIT COUNTY
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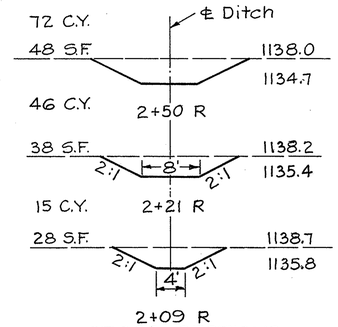


Area	492 Ac.
Q50	490 c.f.s.

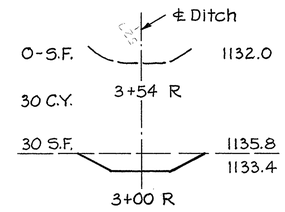


HEADWALL SP-53
Scale: 1" = 5'





CROSS SECTIONS
Scale: 1" = 10'

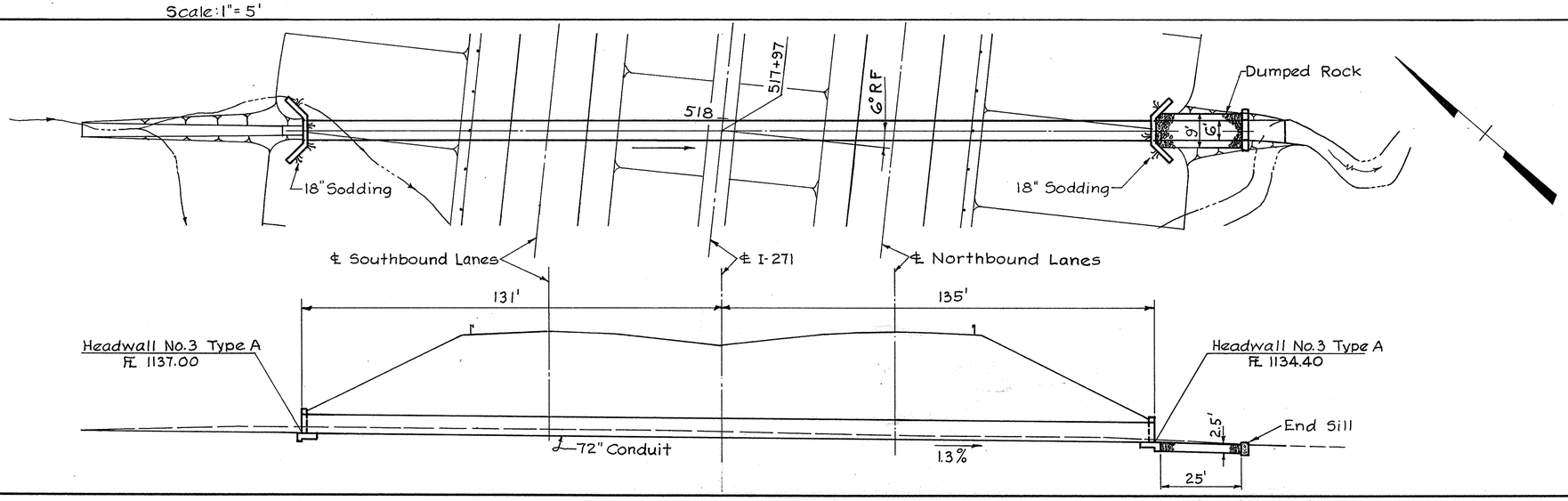


ESTIMATED QUANTITIES

203	Excavation Not Incl. Embkm't. Constr.*	238	C.Y.
601	Dumped Rock Channel Protection	26	C.Y.
602	Concrete Masonry	18.6	C.Y.
603	96" Conduit, Type A, with Cl. B Bedding 707.03, 7-5 Gauge	424	L.F.
660	Sodding	13	S.Y.
	Embankment (Channel)*	24	C.Y.

* To Cross Section Sheet No. 70

CULVERT NO. SUM-271-2.27
Scale: 1" = 20'



ESTIMATED QUANTITIES

601	Dumped Rock Channel Protection	21	C.Y.
602	Concrete Masonry	37.7	C.Y.
603	72" Conduit Type A, with Cl. B Bedding 706.03 Class V	266	L.F.
660	Sodding	11	S.Y.

Area	202 Ac.
Q50	261 c.f.s.

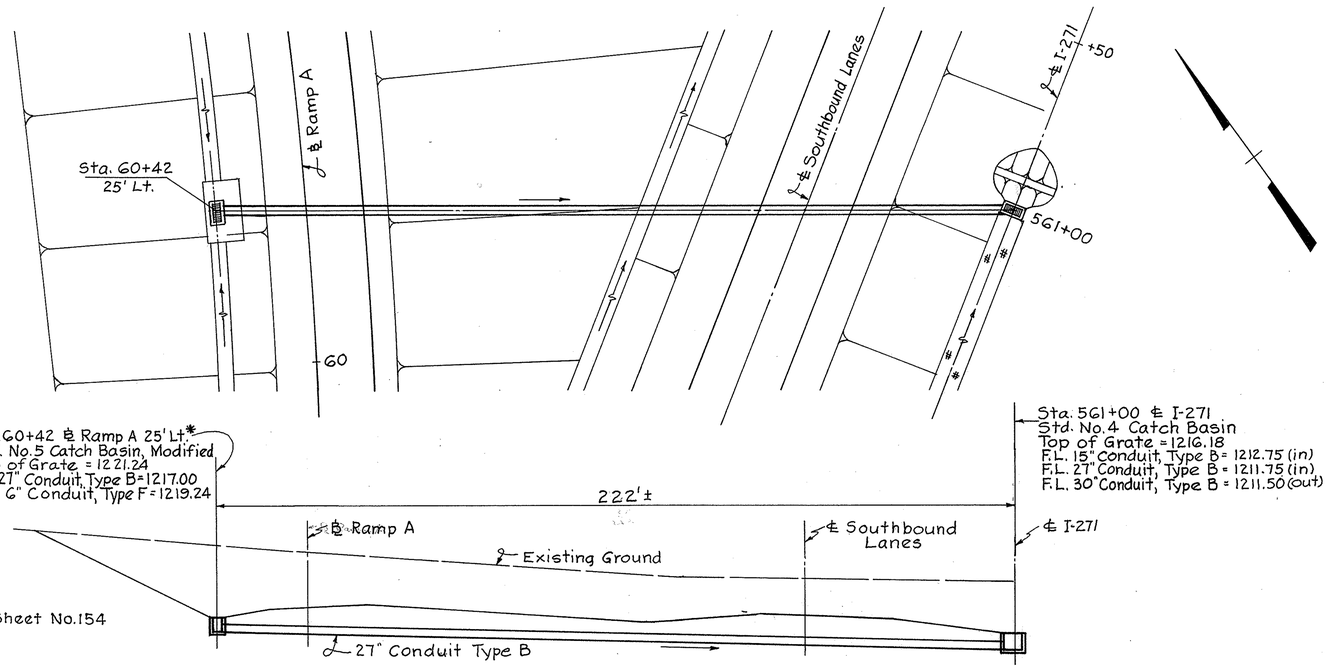
CULVERT NO. SUM-271-2.07
Scale: 1" = 20'

PIPE CULVERTS - STA. 528+85 & 517+97

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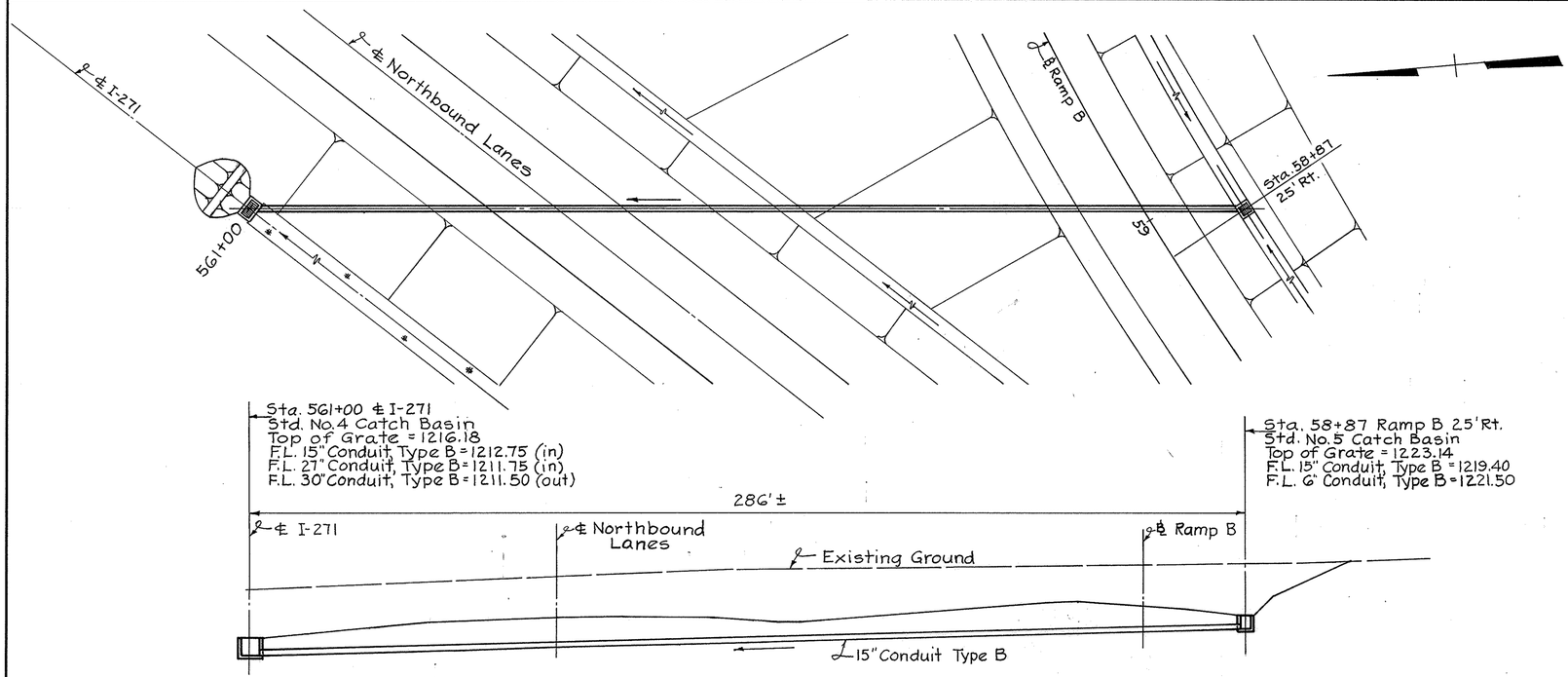
SUMMIT COUNTY
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ESTIMATED QUANTITIES

603	27" Conduit, Type B, with Class B Bedding	222	L.F.
604	Catch Basin, Standard No. 4	1	Each
604	Catch Basin, Standard No. 5 Modified as per plan	1	Each

STORM SEWER STA. 60+42 RAMP A to 561+00 I-271
Scale: 1" = 20'



ESTIMATED QUANTITIES

603	15" Conduit, Type B, with Class B Bedding	286	L.F.
604	Catch Basin Standard No. 5	1	Each

STORM SEWER STA. 58+87 RAMP B to 561+00 I-271
Scale: 1" = 20'

STORM SEWER STA. 60+42 RAMP A, STA. 58+87 RAMP B

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)22.9	

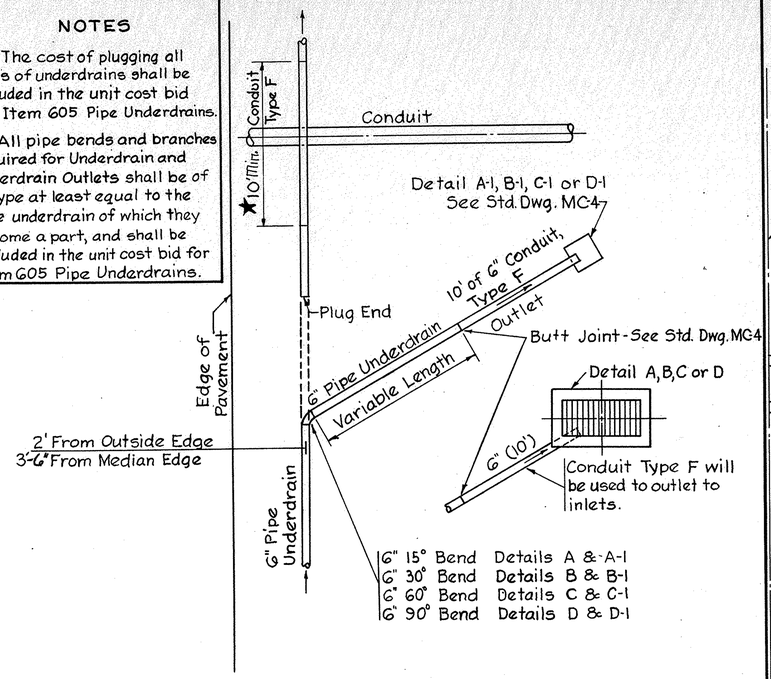
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SUMMIT COUNTY
SUM-271-0.83

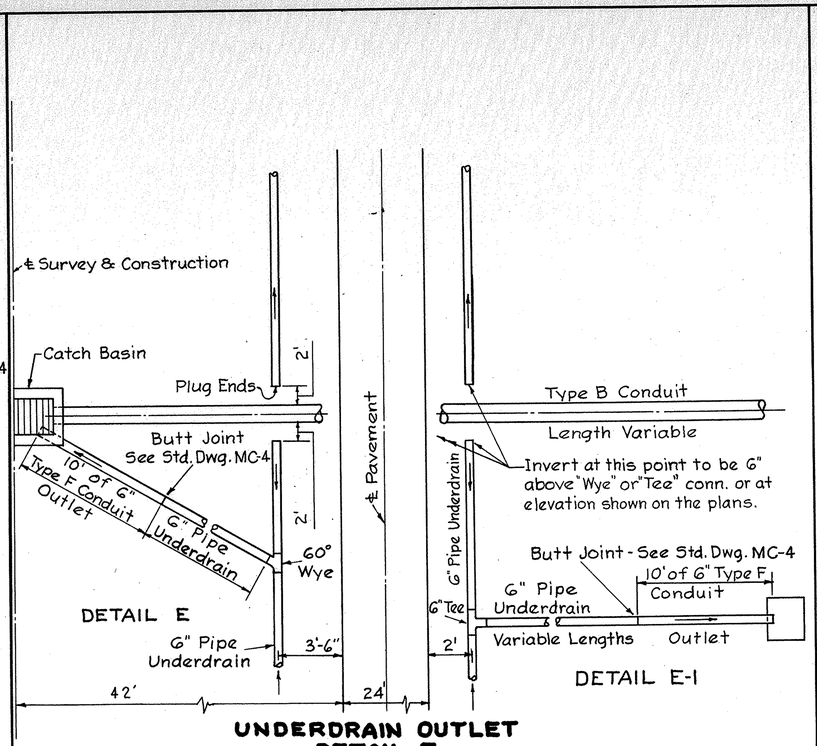
NOTES

The cost of plugging all ends of underdrains shall be included in the unit cost bid for Item 605 Pipe Underdrains.

All pipe bends and branches required for Underdrain and Underdrain Outlets shall be of a type at least equal to the pipe underdrain of which they become a part, and shall be included in the unit cost bid for Item 605 Pipe Underdrains.



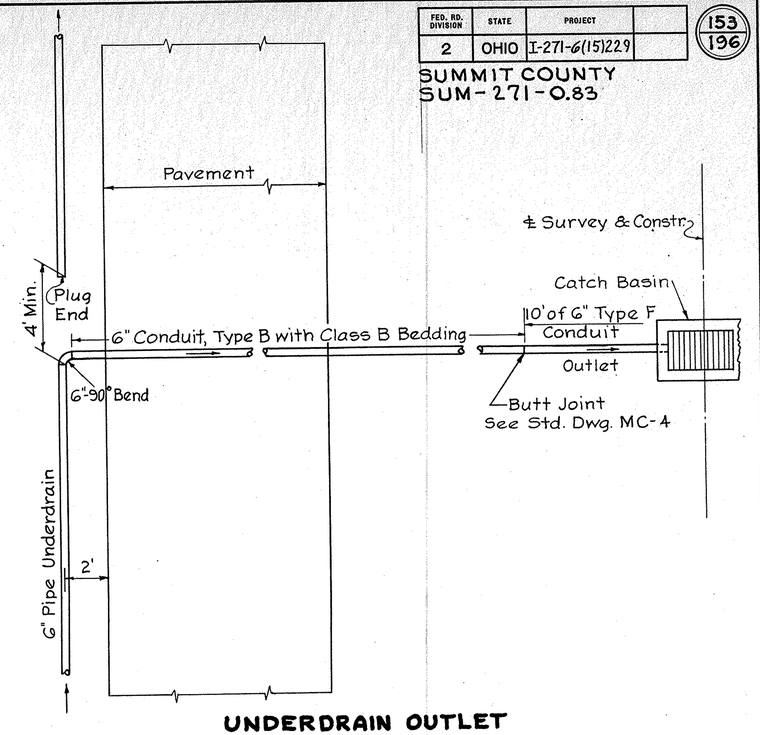
UNDERDRAIN OUTLET
DETAIL A, B, C & D



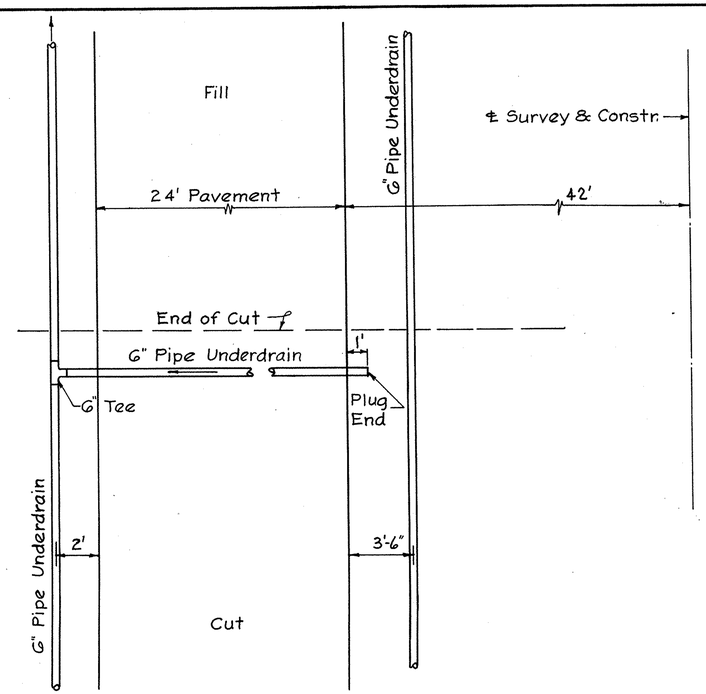
DETAIL E

DETAIL E-1

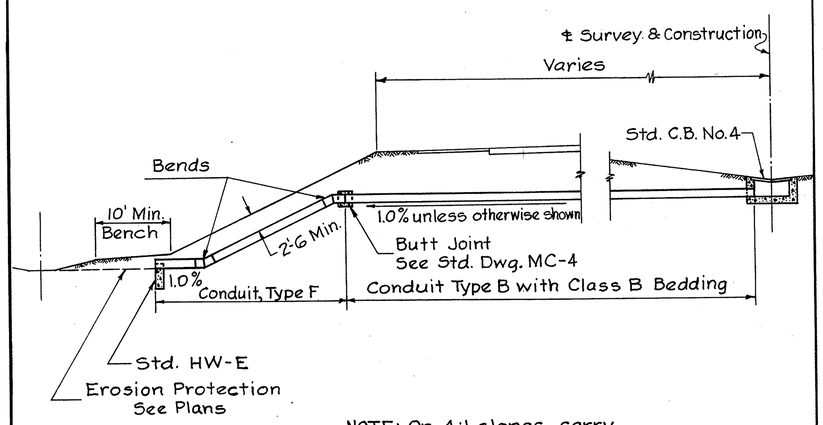
UNDERDRAIN OUTLET
DETAIL E



UNDERDRAIN OUTLET
DETAIL F



UNDERDRAIN INTERCEPTOR
DETAIL G



NOTE: On 4:1 slopes, carry pipe out to ditch.

MEDIAN OUTLET
DETAIL IN HIGH FILL

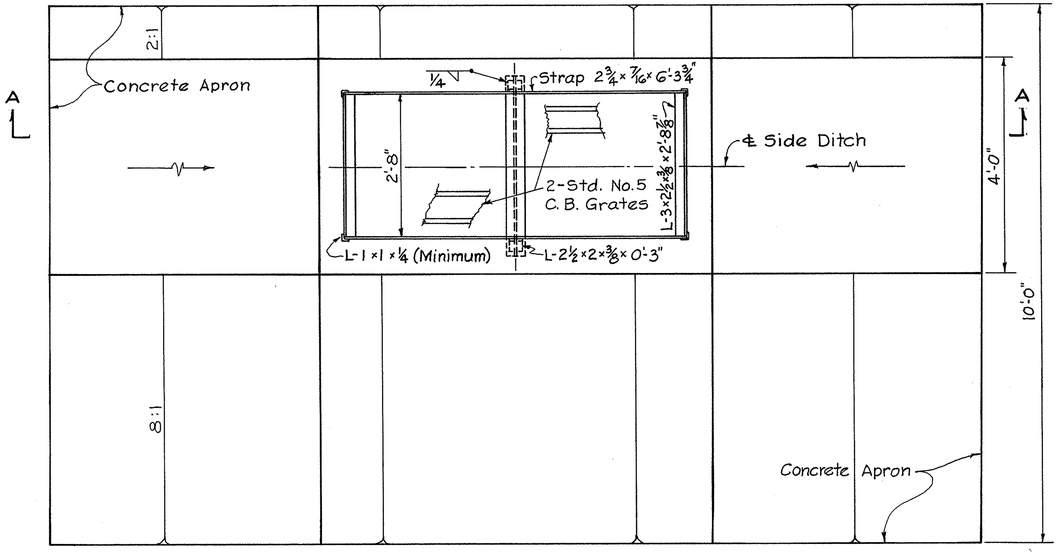
★ F Pipe should be used to span the trench unless such crossing is above the area of granular backfill in which case 605 conduit as used in adjacent run may be installed.

MISCELLANEOUS DETAILS

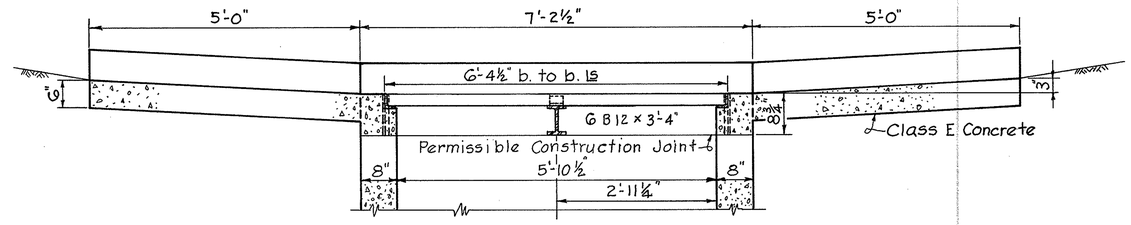
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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SUMMIT COUNTY
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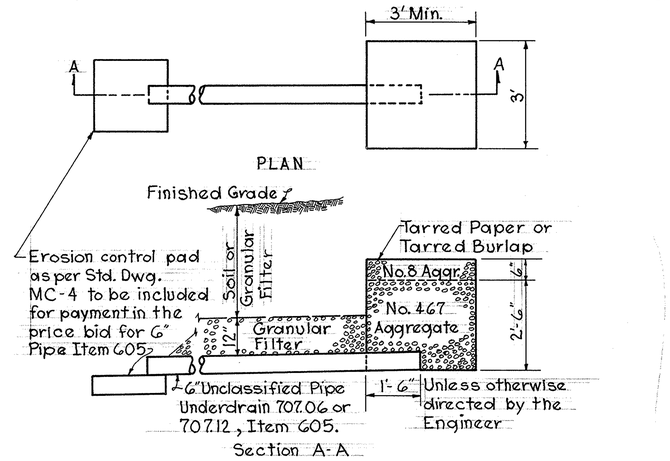


PLAN



SECTION A-A

MODIFIED CB-5
C.H.17 INTCHG.-RAMP A Sta. 60+42 Lt.
Scale: ¾"=1'-0"



Section A-A

Note:

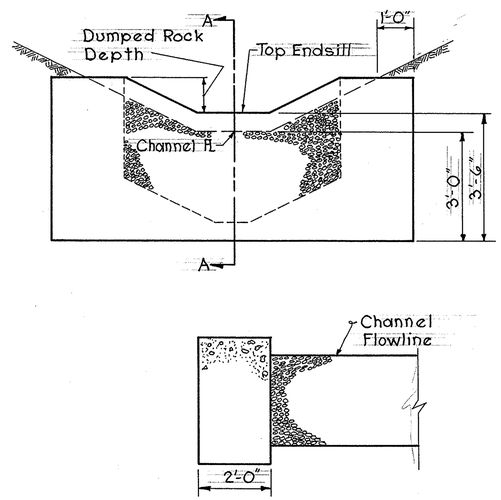
Aggregates, tarred paper or tarred burlap, and necessary excavation for spring drains shall be included for payment in the unit price bid per Lin. Ft. for "Item 605, Aggregate Drains for Springs, as per plan."

The 6" pipe 707.06 or 707.12 shall be covered with granular filter material [605.03(c)] to a height of one (1) foot above the top of the pipe. The remainder of the back fill for this item shall be soil or granular filter backfill placed in accordance with 603.08.

Spring drains shall be built in reasonably close conformity with the detail shown above. The lengths and exact locations of the drains shall be determined by the Engineer.

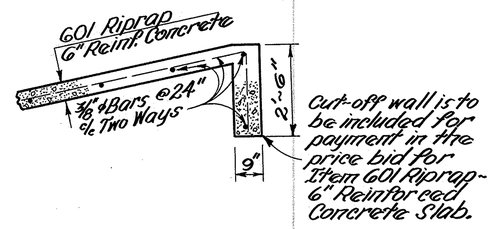
See note on sheet No.11

SPRING DRAIN DETAIL



SECTION A-A

END SILL DETAIL



DETAIL & CUT-OFF WALL

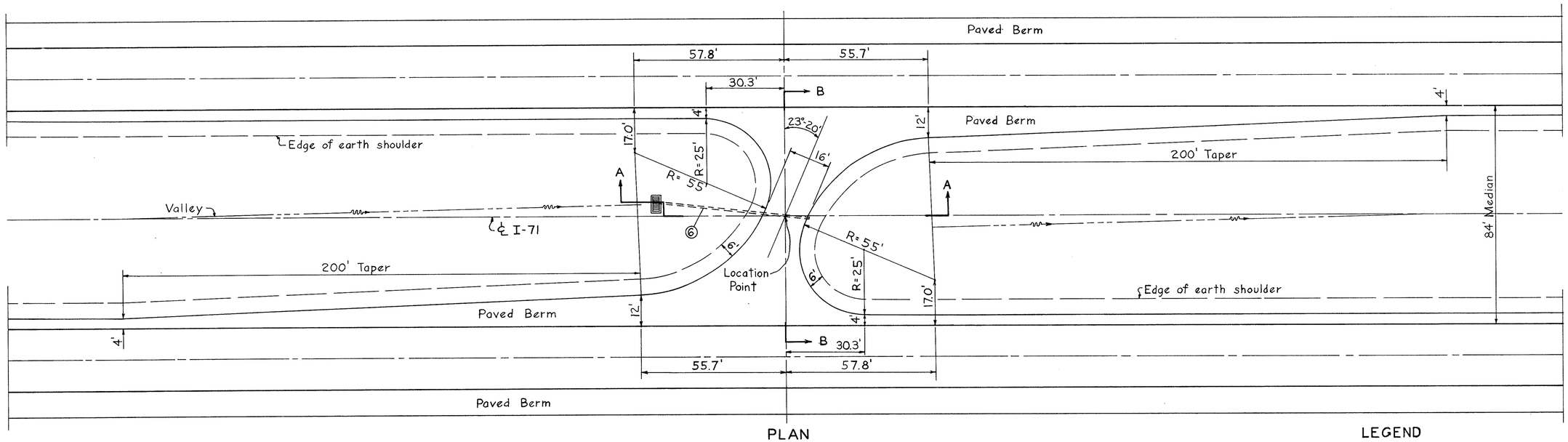
MISCELLANEOUS DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

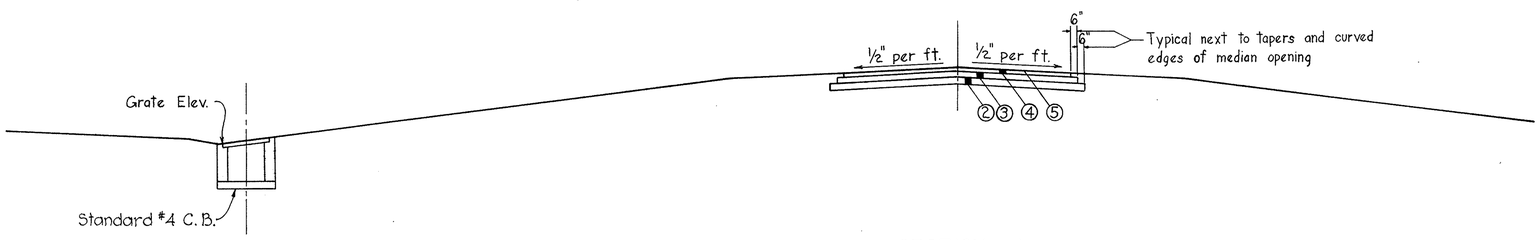
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SUMMIT COUNTY
SUM-271-0.83

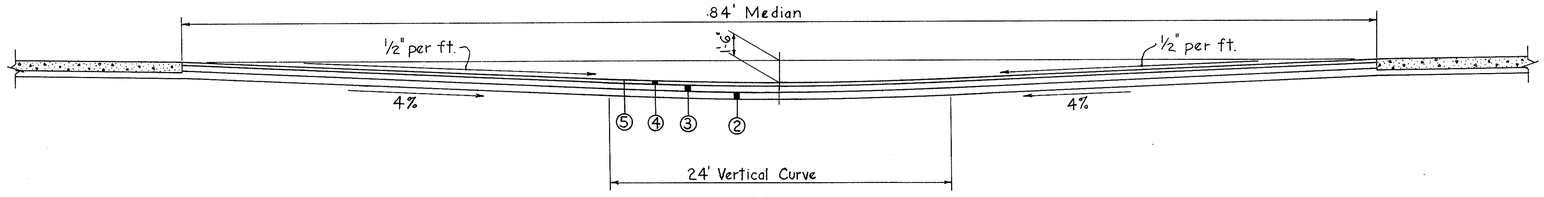
STANDARD U-TURN MEDIAN OPENINGS



PLAN
1"=20'



SECTION A
1"=5'



SECTION B
1"=5'

LEGEND

② Item 310 — 3" Subbase
③ Item 304 — 7" Aggregate Base
④ Item 301 — 3" Bituminous Aggregate Base 702.01 (85-100) or 702.09, RT-12 (See note in Proposal).
⑤ Item 409 — Seal Coat using 0.008 Cu. Yd. No. 8 Cover Aggregate per Sq. Yd. and 0.30 Gal. Bituminous Material per Sq. Yd. (See note in Proposal).

Quantities req'd. for one U-Turn Median Opening between the normal 4'-0" paved berms for the through roadways:

Item 310	48 C.Y.
Item 304	106 C.Y.
Item 301, Item 409	508 S.Y. - carry to Calculation Sheet for conversion to Proposal units.

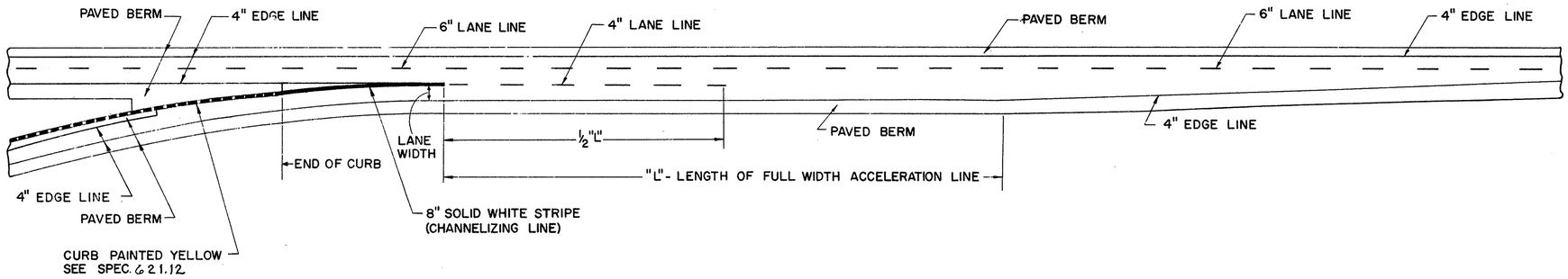
LOCATION POINT
Station 531+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

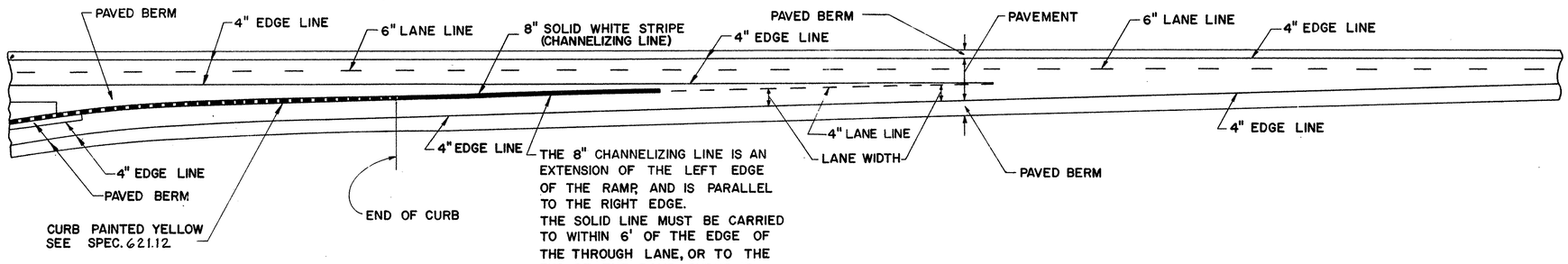
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SUMMIT COUNTY
SUM-271-0.83

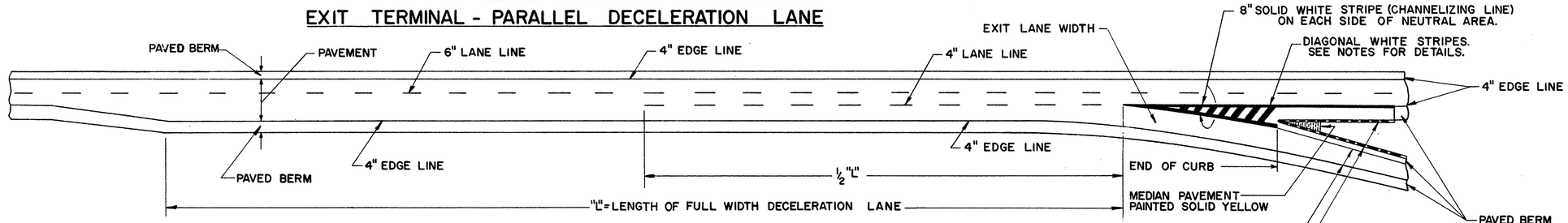
ENTRANCE TERMINAL - PARALLEL ACCELERATION LANE



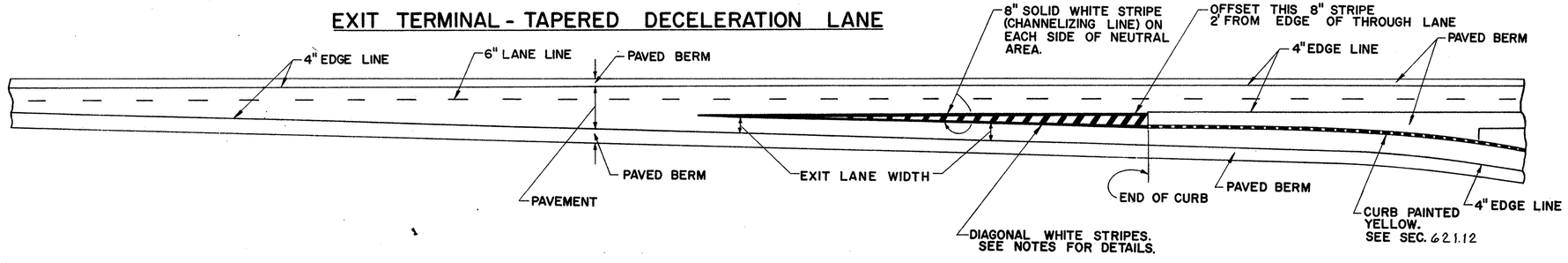
ENTRANCE TERMINAL - TAPERED ACCELERATION LANE



EXIT TERMINAL - PARALLEL DECELERATION LANE



EXIT TERMINAL - TAPERED DECELERATION LANE



NOTES

EDGE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ITEM 621 AND DEFINED IN SECTION 621.06

LANE LINES SHALL BE PLACED IN THE LOCATIONS AS SHOWN TO CONFORM TO ITEM 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 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 RAMPS AS SHOWN TO CONFORM TO ITEM 621 AND DEFINED IN SECTION 621.11

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

PAVEMENT MARKING

621

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

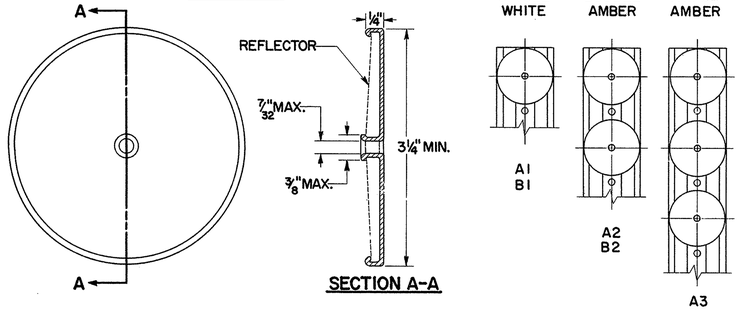
APPROVED Robert E. Lower
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

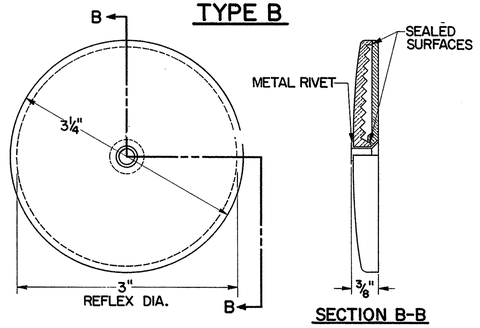
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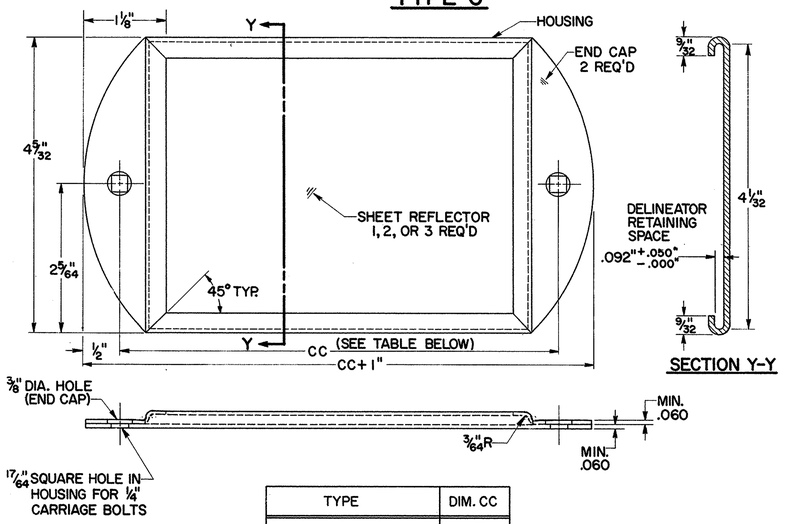
TYPE A



TYPE B

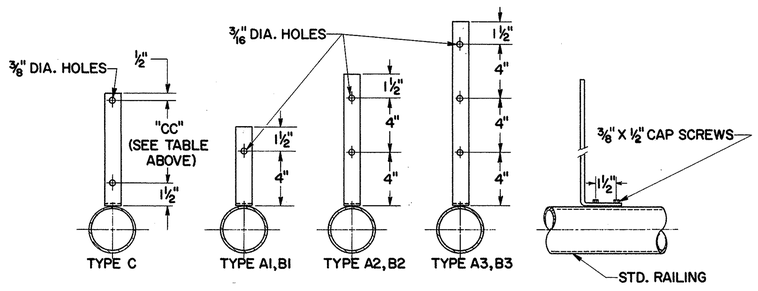


TYPE C

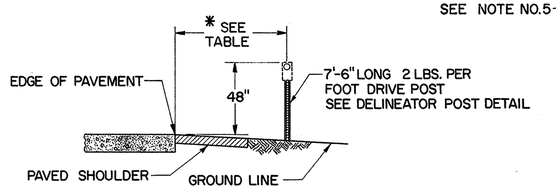


TYPE	DIM. CC
C1-SINGLE WHITE	6"
C2-DOUBLE AMBER	11"
C3-TRIPLE AMBER	16"

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



BRIDGE RAIL BRACKET

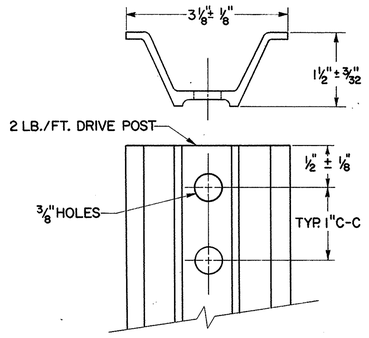


LATERAL PLACEMENT OF DELINEATORS

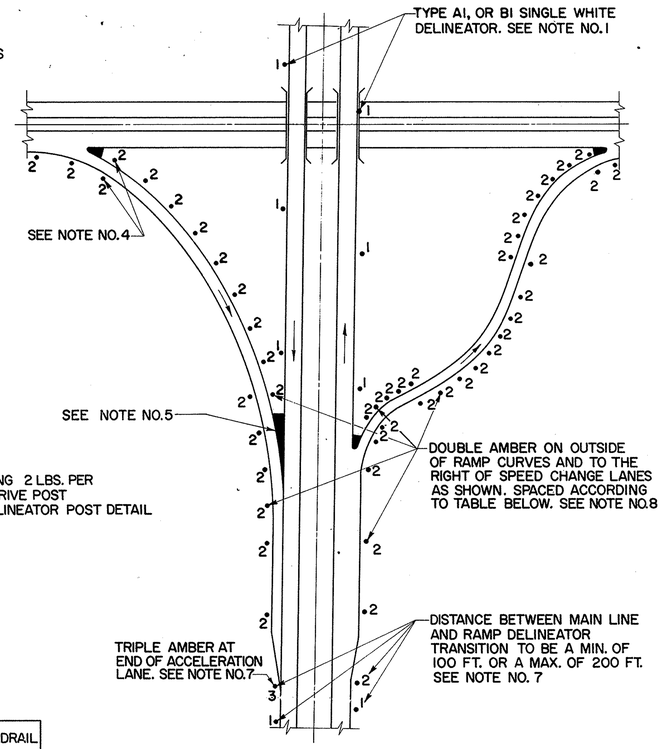
* TABLE

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

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

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

NOTES

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

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OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS

620

DATE
9-25-62
10-2-63
5-24-65

APPROVED Robert L. Comer
ENGINEER OF TRAFFIC

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

158-A
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SUMMIT COUNTY
SUM-271-0.83

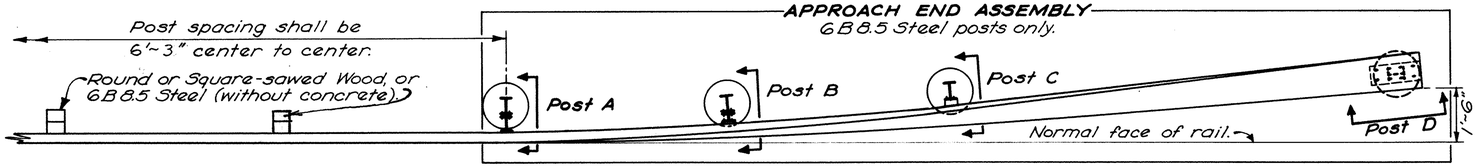
NOTES

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.

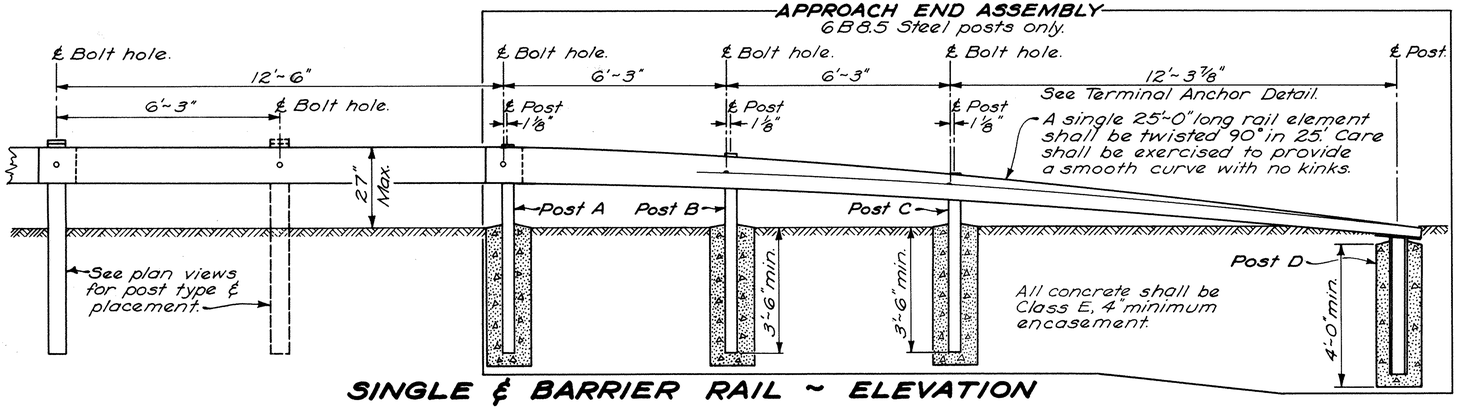
This drawing shall govern where a conflict arises.

APPROACH END ASSEMBLY
6 B 8.5 Steel posts only.



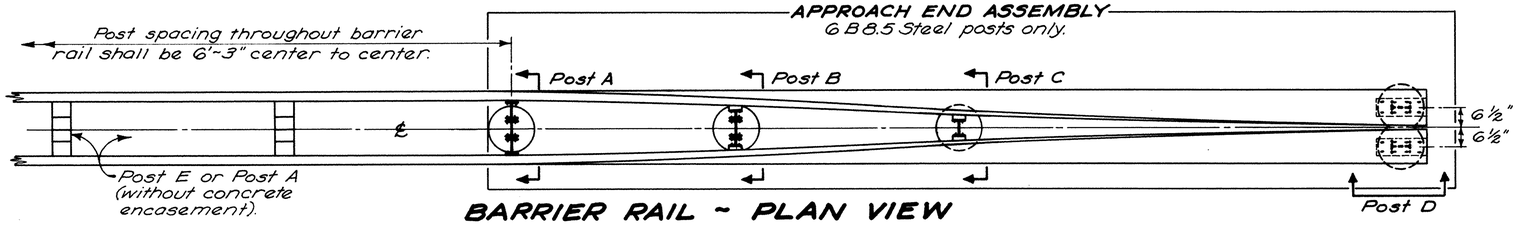
SINGLE RAIL ~ PLAN VIEW

APPROACH END ASSEMBLY
6 B 8.5 Steel posts only.

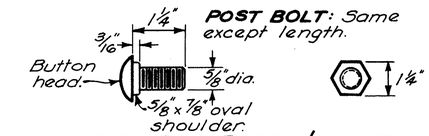


SINGLE & BARRIER RAIL ~ ELEVATION

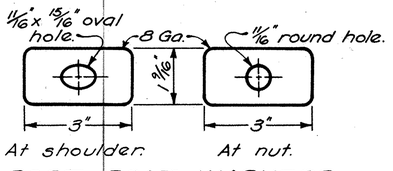
APPROACH END ASSEMBLY
6 B 8.5 Steel posts only.



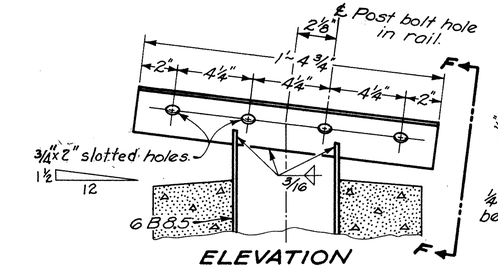
BARRIER RAIL ~ PLAN VIEW

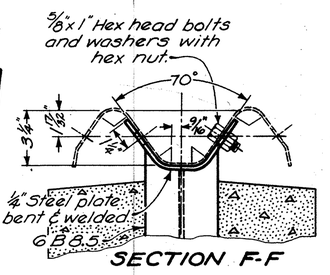


SPLICE BOLT & NUT

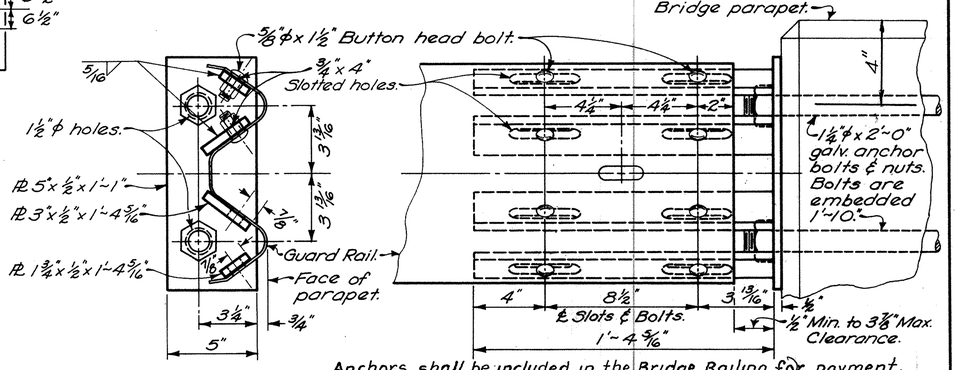


POST BOLT WASHERS



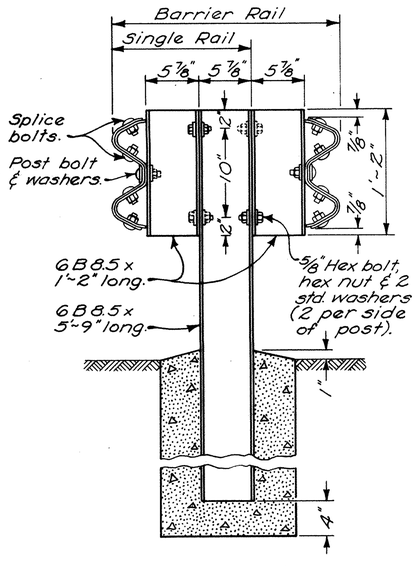


TERMINAL ANCHOR DETAIL

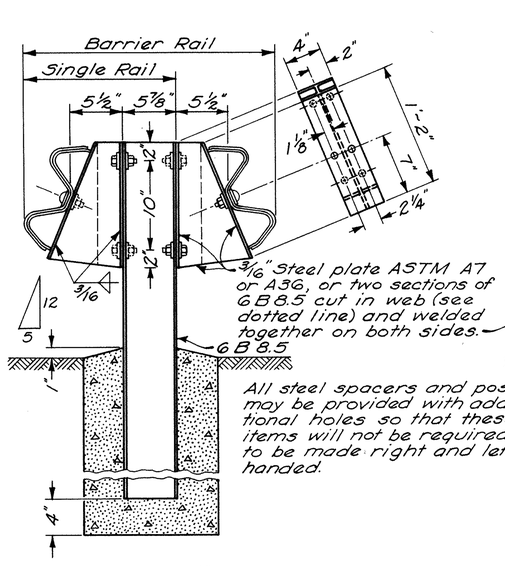


Anchors shall be included in the Bridge Railing for payment.

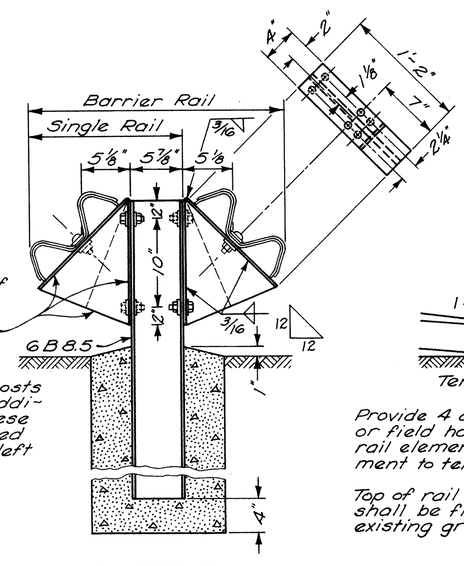
GUARD RAIL ~ BRIDGE CONNECTOR



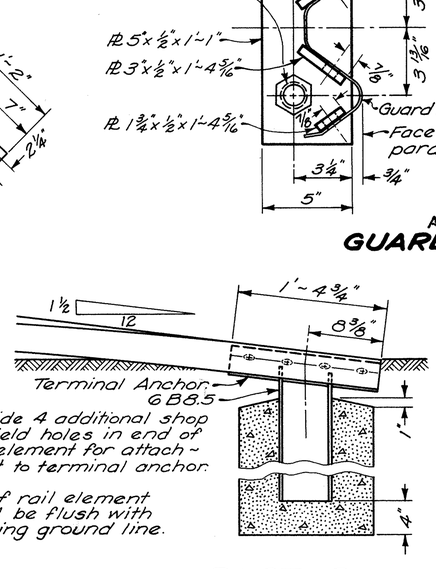
POST A



POST B



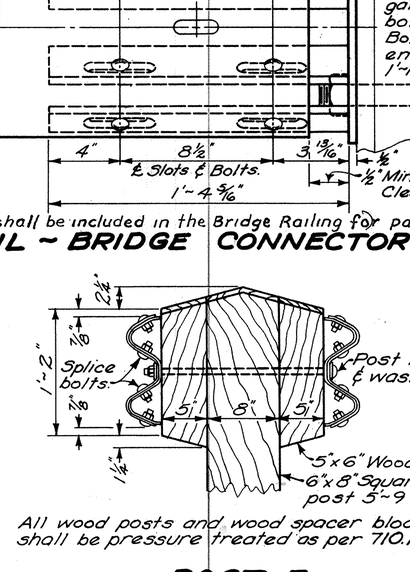
POST C



Provide 4 additional shop or field holes in end of rail element for attachment to terminal anchor.

Top of rail element shall be flush with existing ground line.

POST D



All wood posts and wood spacer blocks shall be pressure treated as per 710.14.

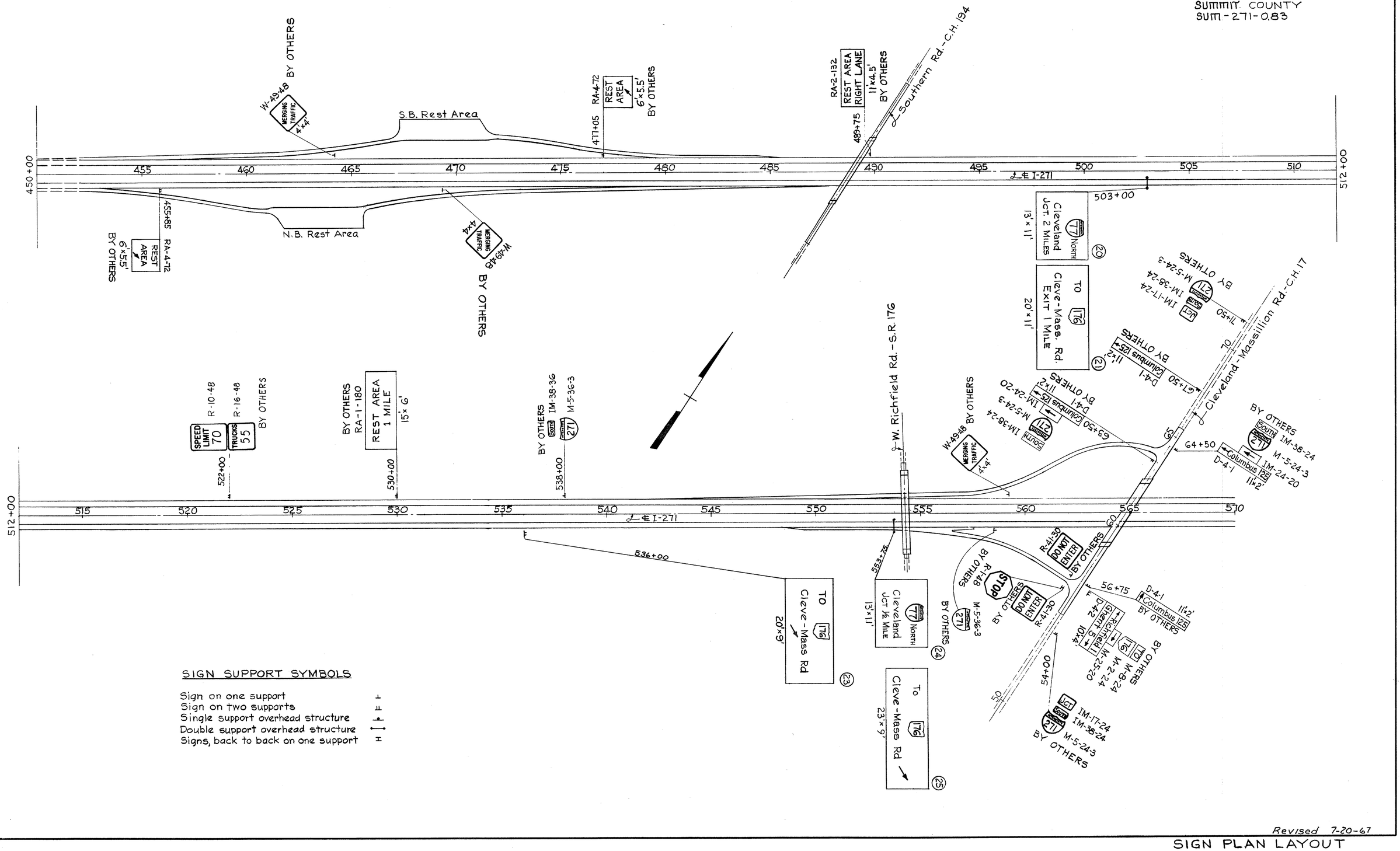
POST E

GUARD RAIL ~ APPROACH END ASSEMBLY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-4(15)229	

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SIGN SUPPORT SYMBOLS

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

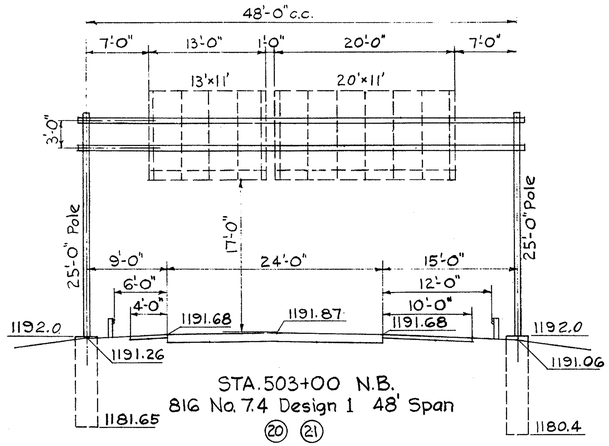
Revised 7-20-67

SIGN PLAN LAYOUT

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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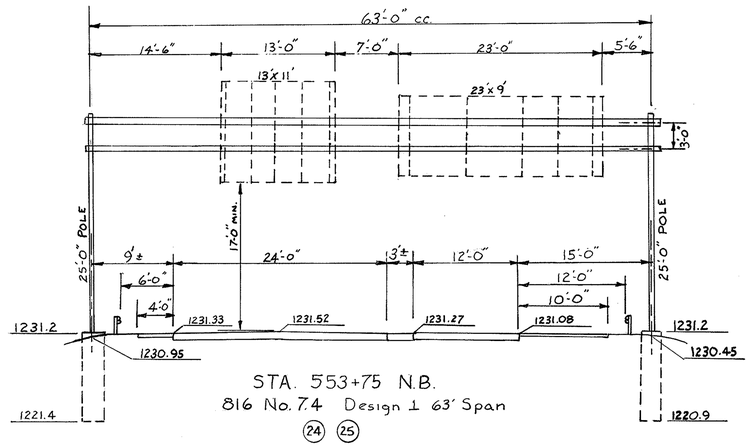
SUMMIT COUNTY
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STA. 503+00 N.B.
816 No. 7.4 Design 1 48' Span
(20) (21)

13'x11' = 143 Sq. Ft.
Spacing: 6", 36", 36", 36", 36", 6"
No. of Brk. = 5 ; Hgt. = 11' ; Type Ya

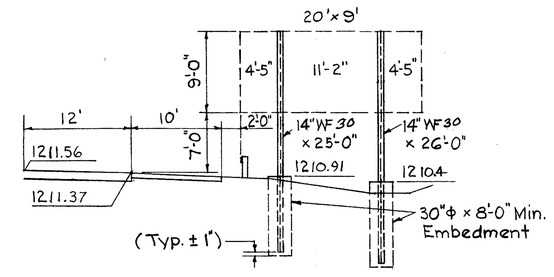
20'x11' = 220 Sq. Ft.
Spacing: 7", 38", 38", 38", 37⅜", 37⅜", 37⅜", 6⅞"
No. of Brk. = 7; Hgt. = 11'; Type Ya



STA. 553+75 N.B.
816 No. 7.4 Design 1 63' Span
(24) (25)

13'x11' = 143' Sq. Ft.
Spacing: 6", 36", 36", 36", 36", 6"
No. of Brk = 5 ; Hgt = 11'; Type Ya

23'x9' = 207 SQ.F.t.
Spacing: 13", 75⅜", 75⅜", 50", 49⅜", 12⅞"
No. of Brk = 5; Hgt. = 9'; Type Ya



STA. 536+00 N.B.
(23)

GENERAL SUMMARY TRAFFIC CONTROL

INSTALLATION 20-21	NUMBER 23	NUMBER 24-25	GRAND TOTAL	UNIT	ITEM NO.	DESCRIPTION
	3.3		3.3	Cu.Yd.	816	Concrete for ground mounted sign support fdn.
8.0		8.0	16.0	Cu.Yd.	816	Concrete for overhead sign support fdn.
	180		180	Sq.Ft.	815	Sign erection, ground mounted sign support,
363		350	713	Sq.Ft.	815	Sign erection, overhead sign support, as per plan
1			1	Each	816	Overhead sign supports No. 7.4 Design 1, 48' Span
		1	1	Each	816	Overhead sign supports No. 7.4 Design 1, 63' Span
	51		51	Lin.Ft.	816	Structural supports, steel beam, 14"WF 30#

IDENTIFICATION OF TRAFFIC SIGNS.

IDENTIFICATION OF ALL TRAFFIC SIGNS IS BY CODE NUMBER. NUMBERS REFER TO THE SIGN DESIGN BEARING THE SAME NUMBER.

ORIENTATION OF SIGN FACES

SIGNS SHALL BE ERECTED SO THAT THE FACE OF THE SIGN IS VERTICAL AND AT A RIGHT ANGLE TO THE CENTER OF THE LANE WHICH THE SIGN SERVES EXCEPT WHERE OTHERWISE NOTED. WHERE LANES DIVIDE AND ON SHARP HORIZONTAL CURVES, SIGN FACES SHALL BE PLACED PERPENDICULAR TO THE TANGENT POINT OF THE CURVE AT THE STATION LOCATION, SO AS TO BE MOST EFFECTIVE BOTH DAY AND NIGHT.

DIMENSIONS

DIMENSIONS OF SIGNS ARE INDICATED ON THE PLANS WITH THE HORIZONTAL WIDTH DIMENSION SHOWN FIRST, THEN THE VERTICAL DIMENSION.

816 STRUCTURAL SUPPORTS STEEL BEAM (TYPE), AS PER PLAN

THE STRUCTURAL STEEL BEAM SUPPORTS SHALL BE GALVANIZED (AFTER PUNCHING) IN ACCORDANCE WITH ASTM A-123. QUANTITIES FOR ITEM 816 "STRUCTURAL SUPPORTS, STEEL BEAM (TYPE), AS PER PLAN" APPEARING IN THE QUANTITY TABLES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVANIZING OF SUPPORTS. PAYMENT SHALL BE AT THE CONTRACT UNIT PRICE BID PER LIN. FOOT WHICH PRICE AND PAYMENT SHALL INCLUDE ALL COSTS IN CONNECTION WITH THE EMBEDMENT OF THE SUPPORTS. THE COST OF THE CONCRETE USED FOR EMBEDMENT WILL BE A SEPARATE PAY ITEM.

816 OVERHEAD SIGN SUPPORT, BY TYPE, AS PER PLAN

ALL COMPONENT PARTS OF THE OVERHEAD SIGN SUPPORTS SHALL BE STEEL, EXCEPT FOR THE TRUSS AND COMPONENTS FOR THE NUMBER 7 SERIES WHICH SHALL BE ALUMINUM. FOR SPECIFIC DETAILS AND MATERIALS SEE SHEET NUMBERS

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR EACH "OVERHEAD SIGN SUPPORT, BY TYPE, AS PER PLAN" INSTALLED IN PLACE AND ACCEPTED, WHICH PRICE SHALL BE FULL COMPENSATION FOR FURNISHING ALL ANCHOR BOLTS (FOR INSTALLATION UNDER ITEM 816 "CONCRETE FOR OVERHEAD SIGN SUPPORT FOUNDATIONS"), AND FOR FURNISHING AND INSTALLING EACH OVERHEAD SIGN SUPPORT STRUCTURE SHOWN ON SHEET NUMBERS 161 AND 162 INCLUDING SIGN BRACKETS, AND ALL COMPONENT PARTS NECESSARY TO MAKE A COMPLETE WORKABLE INSTALLATION READY FOR SIGN ERECTION.

ERECTION OF THESE SUPPORTS SHALL BE ACCOMPLISHED IN A MANNER MEETING THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION NUMBER 816.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS, BY TYPE, AS PER PLAN

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

PAYMENT FOR FURNISHING AND INSTALLING REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD OF CONCRETE FOR OVERHEAD SIGN SUPPORT FOUNDATIONS IN LIEU OF BEING A SEPARATE PAY ITEM AS CALLED FOR IN SUPPLEMENTAL SPECIFICATION NO. 816.

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

815 SIGN ERECTION, BY TYPE, AS PER PLAN

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED ON THE SCHEMATIC SIGNING LAYOUT SHEET NUMBER 159 . 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 ENGINEER, BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, SIXTY CALENDAR DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE SHALL INCLUDE PROPOSED DATES, TIME, SIGN NUMBERS AND DELIVERY POINT.

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

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.

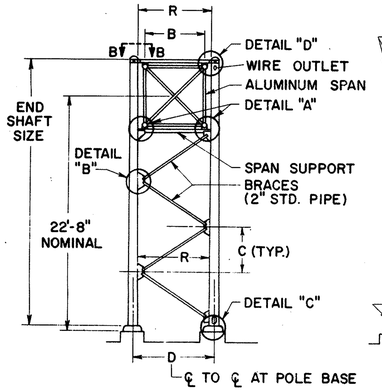
Revised 7-20-67
Rev. Jan-23-1967

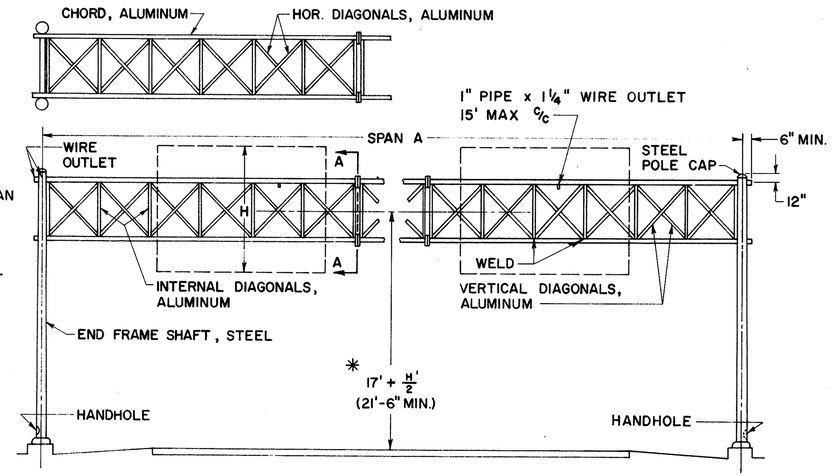
SIGN SUPPORT DETAILS, QUANTITIES, NOTES

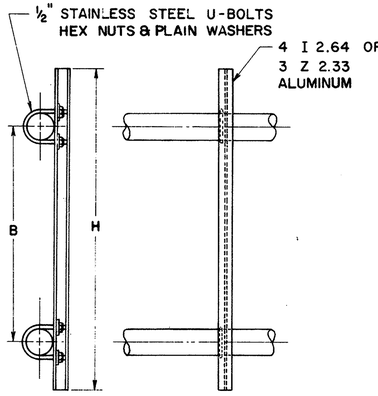
FED. RD. DIVISION	STATE	PROJECT	
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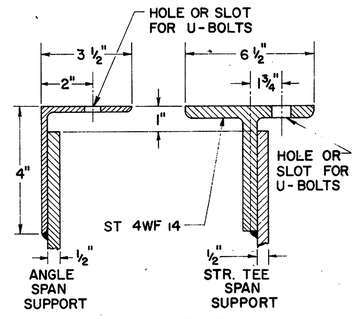
SUMMIT COUNTY
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SIGN BRACKET



SECTION D-D

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. M-7.4(d).

MAXIMUM LENGTH OF SPAN SECTIONS IS 30 FT.

ERECTION

USE A MINIMUM OF 1" CAMBER IN SPAN TRUSS MEMBER FOR A 50' SPAN; ADD ¼" 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

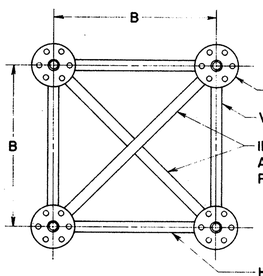
COST OF REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS. BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR SIZE NUMBER.

*FOUNDATION ELEVATION

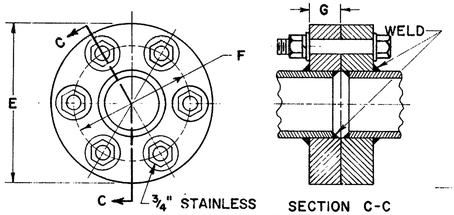
ELEVATION OF TOPS OF FOUNDATIONS SHALL BE BUILT UP SO THAT 17' CLEARANCE IS MAINTAINED OVER THE ENTIRE WIDTH OF THE PAVEMENT AND SHOULDERS.

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.

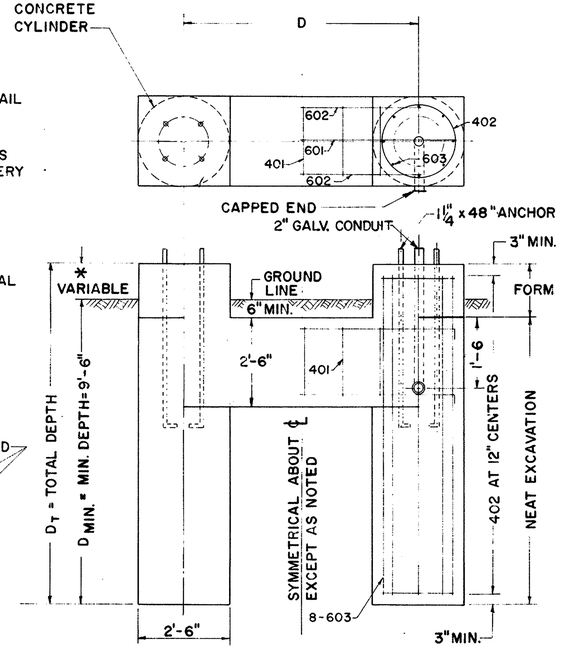


SECTION A-A

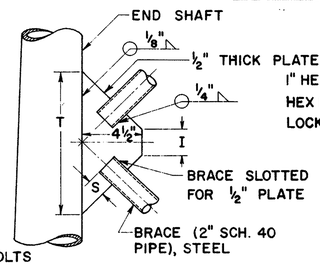


CAST FLANGE, B-26 ALLOY SG 70A-T7 (356-T7)

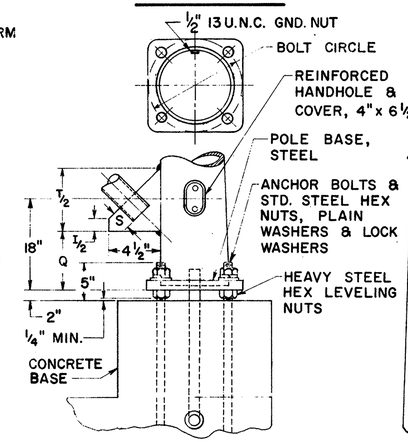
FLANGE DETAIL



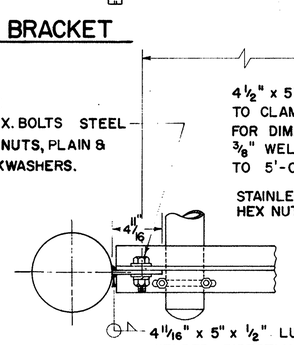
FOUNDATION DETAIL
(RIGHT HAND SHOWN — LEFT HAND OPPOSITE)



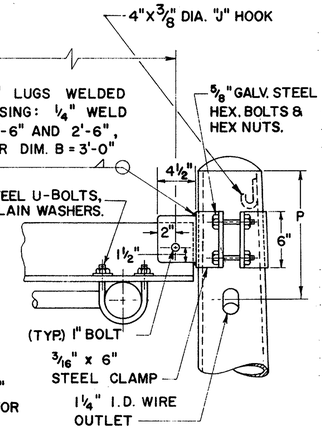
DETAIL "B"



DETAIL "C"
POLE BASE DETAIL

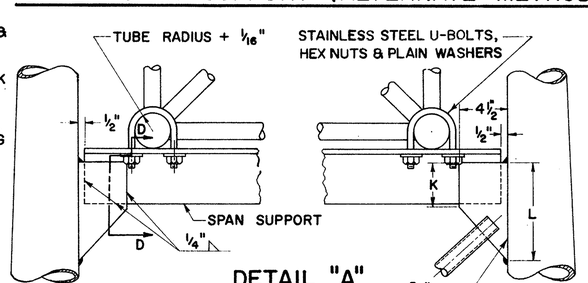


VIEW B-B



DETAIL "D"

UPPER SPAN SUPPORT (ALTERNATE METHODS)

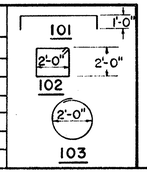


DETAIL "A"

LOWER SPAN SUPPORT

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 75'	3'-0"	4'-11¾"	4'-5"	9¼"	8"x4.5"x25'-0", 3 GA.	5'-10 13/16"	7 7/16"	1⅜"	3½"	4⅜"	8"	12"	6⅝"	3'-9"	1½"	10"	⅝"	3'-3⅝"	11"	SPLIT TEE 3'-8"	4¾" x .188"	1.900" x .145"	1.660" x .140"
2	76' thru 85'	4'-0"	4'-10¼"	5'-7"	9¼"	8"X6.22"x25'-6" 3GA.	6'-7⅛"	7 7/16"	1⅜"	⅝"	4⅜"	7¾"	12'	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	4¾" x .188"	2" x .188"	1.900" x .145"
3	86' thru 90'	4'-0"	4'-10¼"	5'-7"	11"	8"X6.22"x25'-6" 3GA.	6'-7⅛"	8½"	1½"	⅝"	4⅜"	7¾"	42"	6¼"	4'-10"	1½"	9½"	⅝"	4'-4⅝"	11"	SPLIT TEE 4'-10"	5½" x .250"	2" x .188"	1.900" x .145"
4	91' thru 110'	5'-0"	4'-8½"	6'-7"	11"	8"X6.18"x26'-0" 3GA.	7'-3¼"	8½"	1½"	—	3½"	7¾"	12"	7¼"	5'-10"	1¾"	11¼"	¾"	5'-4⅝"	11"	SPLIT TEE 5'-10"	5½" x .250"	2½" x .188"	2½" 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_T - 6"	STR.



BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

OVERHEAD SIGN SUPPORTS

816 No.7.4

DATE 5-2-62 7-25-62 5-6-64

APPROVED Robert E. Conner
ENGINEER OF TRAFFIC

400 SQ. FT. SIGN AREA — OVERHEAD SIGN SUPPORT, 816 NO.7.4

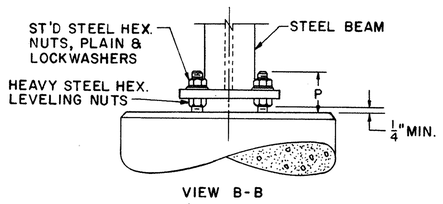
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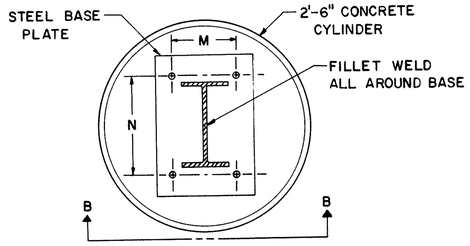
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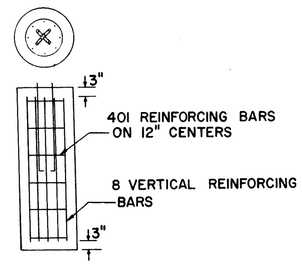
BEAM SIZE	ANCHOR BOLTS DIA.	ANCHOR BOLTS LENGTH	BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST
10 B11.5	3/4"	3'-0"	7/8"x6"x18"	7/8"	3 1/2"	14"	3 1/2"	1/4"	5.25'	2'-6"	1.9
10 B17	1"	3'-6"	7/8"x6"x18"	1 1/8"	3 3/4"	14"	4 1/4"	1/4"	6.0'	2'-6"	2.2
12 B22	1"	4'-0"	1"x9"x19"	1 1/8"	5 1/2"	15"	4 1/4"	1/4"	6.75'	2'-6"	2.5
12 WF 27	1 1/4"	4'-0"	1"x9"x19"	1 3/8"	5 1/2"	15"	5 1/4"	1/4"	8.0'	2'-6"	2.9
14 WF 30	1 1/4"	4'-0"	1"x11"x20"	1 3/8"	7 1/2"	16"	5 1/4"	5/16"	8.25'	2'-6"	3.0
14 WF 34	1 1/4"	4'-0"	1"x12"x22"	1 3/8"	9"	18"	5 1/4"	5/16"	9.0'	2'-6"	3.3
16 WF 36	1 1/2"	5'-0"	1 1/4"x14"x23"	1 5/8"	10"	19"	6"	5/16"	9.75'	2'-6"	3.5
16 WF 40	1 1/2"	5'-6"	1 1/4"x14"x24"	1 5/8"	10"	20"	6"	5/16"	10.0'	2'-6"	3.6
16 WF 45	1 1/2"	6'-0"	1 1/4"x14"x24"	1 5/8"	10"	20"	6"	5/16"	10.5'	2'-6"	3.8
18 WF 50	1 3/4"	7'-6"	1 1/2"x14"x26"	1 7/8"	10"	22"	6 3/4"	5/16"	11.5'	2'-6"	4.2

MARK	TYPE	NO.	LENGTH	WEIGHT FOR 1 POST
401	101	6	7'-6"	45
402	STR.	8	5'-0"	
401	101	7	7'-6"	52
403	STR.	8	5'-9"	
401	101	8	7'-6"	61
404	STR.	8	7'-0"	
401	101	9	7'-6"	94
501	STR.	8	8'-0"	
401	101	10	7'-6"	101
502	STR.	8	8'-6"	
401	101	10	7'-6"	103
503	STR.	8	9'-9"	
401	101	11	7'-6"	145
601	STR.	8	9'-3"	
401	101	11	7'-6"	148
602	STR.	8	9'-6"	
401	101	11	7'-6"	155
603	STR.	8	10'-0"	
401	101	12	7'-6"	164
604	STR.	8	10'-6"	



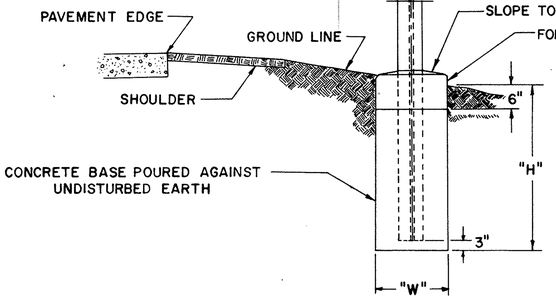


ALTERNATE ANCHOR BASE DETAILS



REINFORCING FOR ALTERNATE ANCHOR BASE

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



FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS

NOTES

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

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

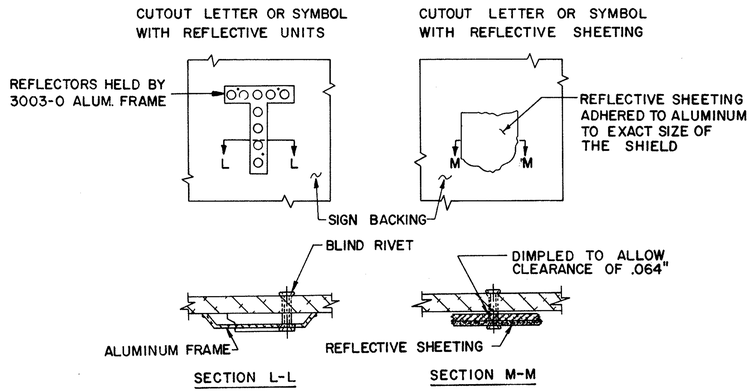
WHERE ANCHOR BASES ARE USED, THE BEAM SIZE SHALL DETERMINE THE ANCHOR BOLT AND BASE PLATE SIZE.

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

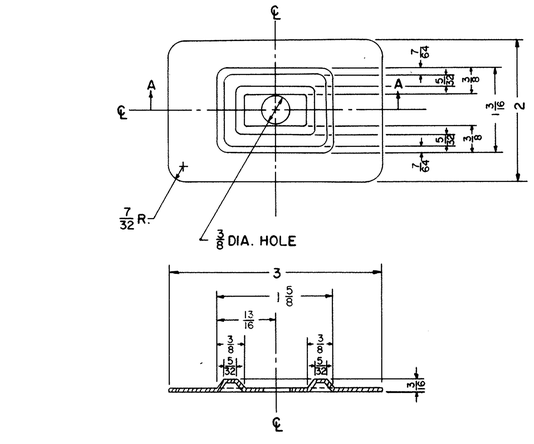
DEMOUNTABLE SHEILDS SHALL BE AFFIXED TO THE BACKING UTILIZING 5/16" TRUSS HEAD BOLTS, PLAIN AND LOCKWASHERS.

FOR HOLE LOCATION DETAILS SEE SHEET NO. ——.

IN LIEU OF THE .040" THICK FRAME SPECIFIED IN SUPPLEMENTAL SPECIFICATION 815.08, THE FRAMES FOR THE REFLECTIVE UNITS IN THE SIGN OUTLINES ONLY, MAY BE .032" THICK ALUMINUM. (A.S.T.M. B209GSIIA-T6)



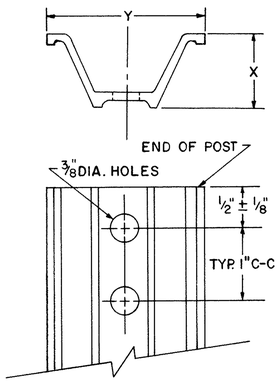
DEMOUNTABLE LETTERS & SYMBOLS



SECTION AA

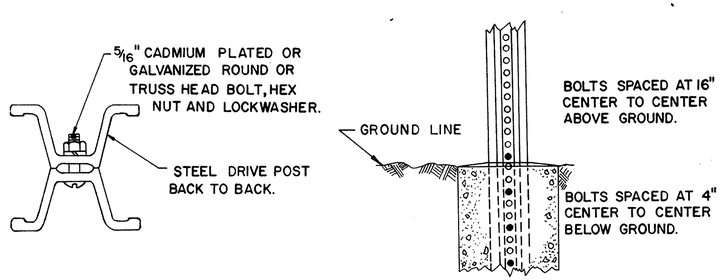
NOTE:
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.
METAL SHALL BE 16 GAUGE STEEL.
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



WEIGHT PER FOOT	X ± 3/32"	Y ± 1/8"
2.00 #	1 15/32"	3 1/16"
3.00 #	1 7/8"	3 1/2"
4.00 #	2 "	3 5/8"

DRIVE POST DETAILS



4#, 6# & 8# BEAM DETAILS

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

MISCELLANEOUS SIGNING ITEMS

MSI

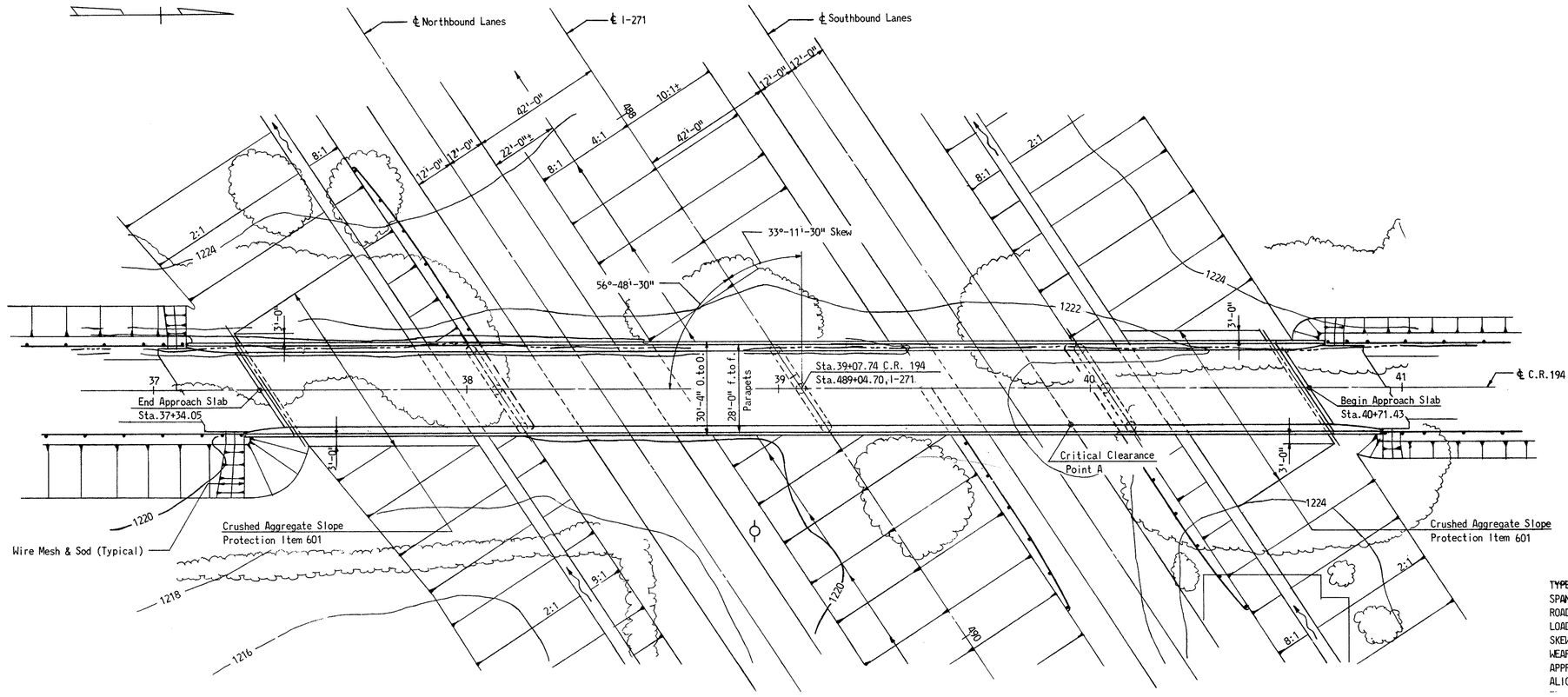
DATE
10-29-63
8-19-64
10-13-65

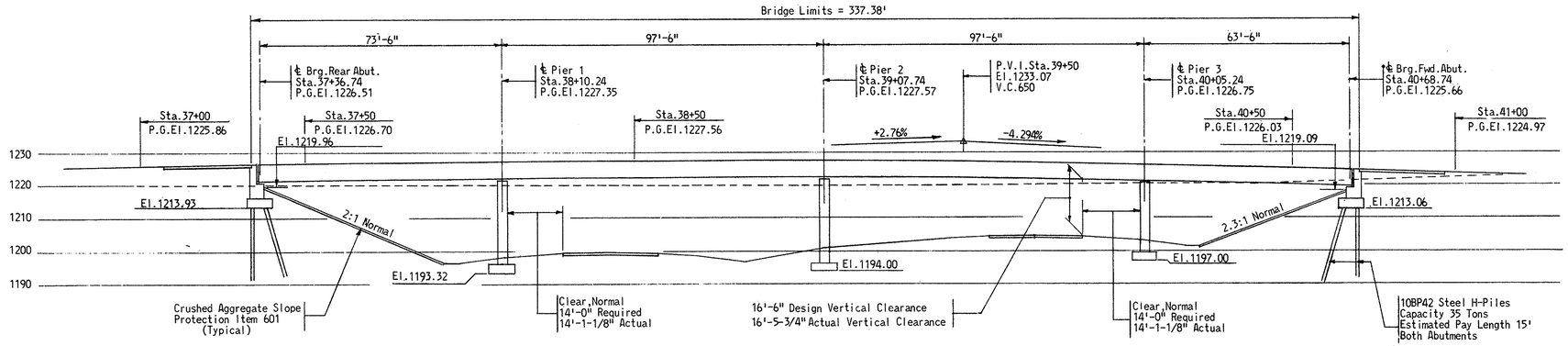
APPROVED Fred C. Tarbox
ENGINEER OF TRAFFIC

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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PROPOSED STRUCTURE

TYPE: Continuous welded girders with reinforced concrete deck and substructure.
SPANS: 73'-6"; 97'-6"; 97'-6"; 63'-6".
ROADWAY: 24'-0" face to face of 2'-0" safety curbs.
LOAD FREQUENCY: C.F. = 130 (57).
SKEW: 33°-11'-30" (R.F.).
WEARING SURFACE: 1" Monolithic concrete.
APPROACH SLABS: AS-1-54 (25' Long).
ALIGNMENT: Tangent.

J.E. GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN

BRIDGE NO. SUM-271-0152
INTERSTATE HIGHWAY #271 UNDER
SUMMIT COUNTY ROAD NO. 194

SUMMIT CO. **STA. 489+04.70**

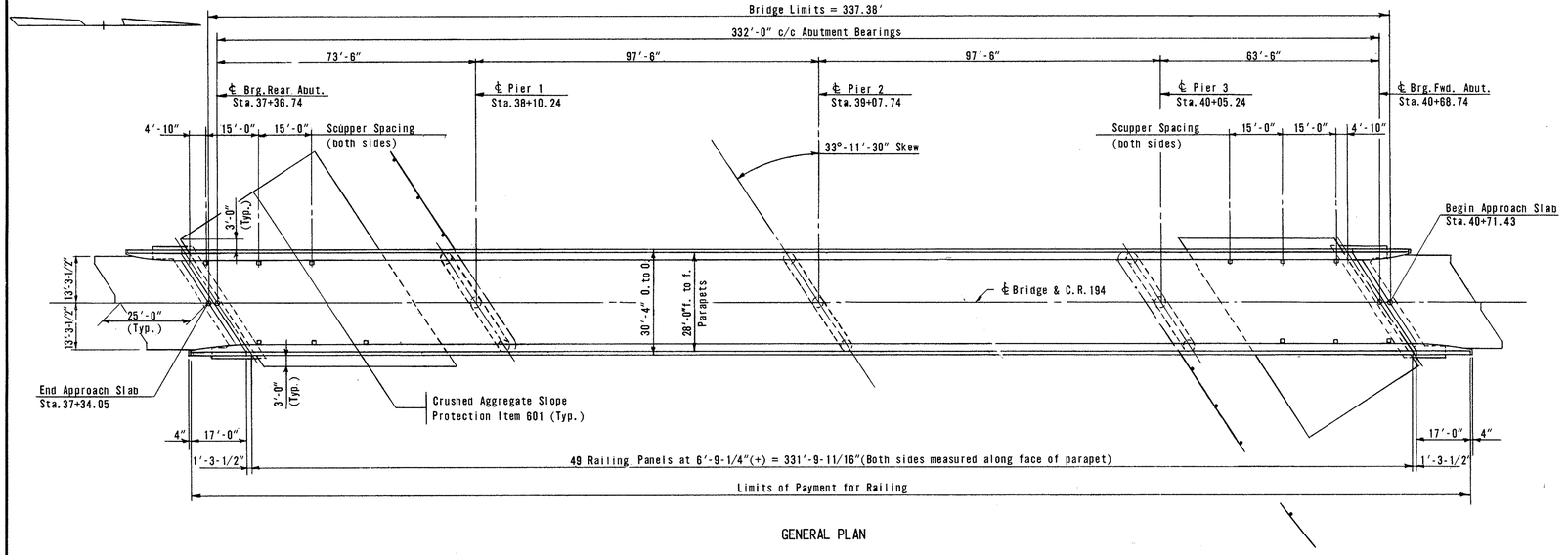
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEYS CORP.	SHERMAN	WALTER	GREIMANN	MUDD

02698

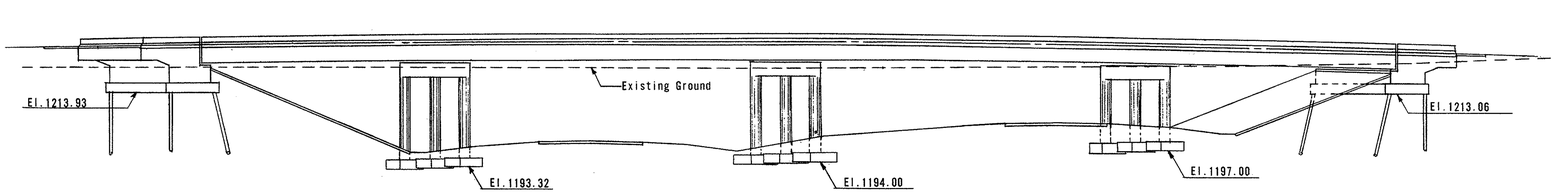
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof. 2

REFERENCE should be made to:

Standard Drawing FSB-1-62, revised 1-15-63, and AS-1-54, revised 8-10-65
" " SD-1-65, dated 11-8-65
" " BR-1-65, Type 1, Sheet 1, Rev. 11-24-65

Supplemental Specifications:

808, dated 2-7-66 825 dated 9-22-65
811, dated 3-29-65 828 dated 3-21-66

ALL PIER FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

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

For the abutment piles:

35 tons per pile using an 11,000 ft. lb. hammer
35 tons per pile using a 15,000 ft. lb. hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation.

The design load is 35 tons per pile for the abutment piles.

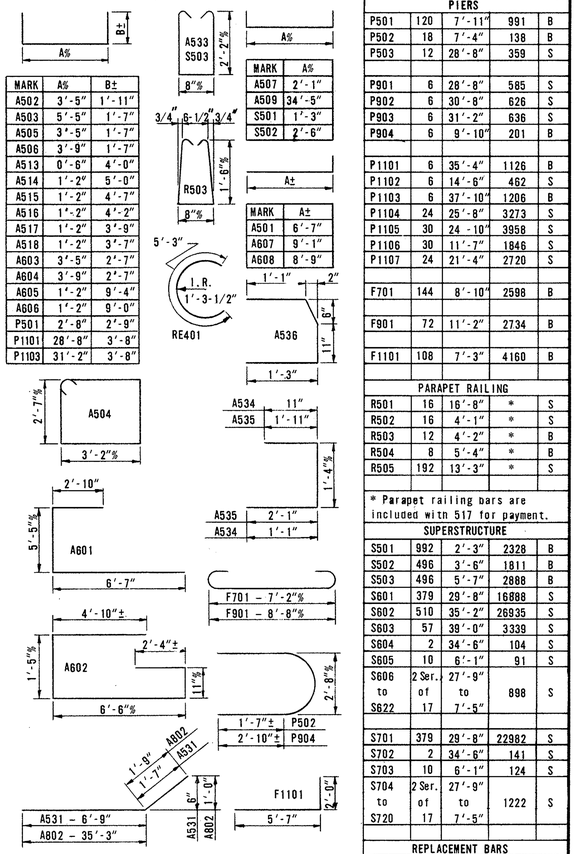
ESTIMATED QUANTITIES

Item	Total	Unit	DESCRIPTION	Super.	Abuts.	Piers	General		
503	273	Cu.Yds.	Unclassified excavation		235	38			
511	327	Cu.Yds.	Class "C" concrete, superstructure	327					
511	91	Cu.Yds.	Class "C" concrete, piers above footings			91			
511	95	Cu.Yds.	Class "E" concrete, abutments above footings		95				
511	121	Cu.Yds.	Class "E" concrete, footings		67	54			
509	123,617	Lbs.	Reinforcing Steel	79,751	12,943	30,923			
513	296,700	Lbs.	Structural Steel	296,700					
514	296,700	Lbs.	Field painting of structural steel	296,700					
517	736.78	Lin.Ft.	Railing(Type 1 aluminum rail and supports and concrete parapet)	668.78	68.00				
503	117	Cu.Yds.	Rock excavation			117			
505	Lump	Sum	First test pile						
507	491	Lin.Ft.	Steel piles, 10 BP 42						
518	59	Lin.Ft.	6" Helical perforated CMP, 707.06 including specials		59				
518	54	Lin.Ft.	6" Helical CMP, 707.06 non-perforated		54				
518	12	Each	Scuppers, including supports	12					
518	29	Cu.Yds.	Porous backfill		29				
808	327	Units	Water-reducing, set-retarding admixture	327					
601	581	Sq.Yds.	Crushed aggregate slope protection				581		
825	1300	Sq.Yds.	Concrete Surface Treatment						
825	58	Lin.Ft.	Joint sealer (end dam)						

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	52	7'-1"	384	B
A502	50	7'-0"	365	B
A503	52	8'-4"	452	B
A504	36	11'-11"	447	B
A505	2	6'-4"	13	B
A506	2	6'-8"	14	B
A507	48	3'-1"	154	B
A508	6	35'-0"	219	S
A509	20	35'-5"	739	B
A510	20	33'-10"	706	S
A511	20	5'-3"	110	S
A512	94	5'-7"	547	S
A513	12	8'-3"	103	B
A514	4	10'-11"	46	B
A515	4	10'-1"	42	B
A516	4	9'-3"	39	B
A517	4	8'-5"	35	B
A518	16	8'-1"	135	B
A519	10	11'-4"	118	S
A520	10	7'-2"	75	S
A521	10	10'-10"	113	S
A522	10	9'-1"	95	S
A523	2	14'-3"	30	S
A524	2	10'-1"	21	S
A525	2	14'-0"	29	S
A526	2	12'-3"	26	S
A527	4	19'-4"	81	S
A528	4	15'-2"	63	S
A529	4	18'-10"	79	S
A530	4	17'-1"	71	S
A531	8	8'-4"	71	B
A532	16	4'-0"	67	S
A533	48	5'-7"	280	B
A534	16	3'-1"	51	B
A535	34	5'-1"	180	B
A536	50	3'-5"	178	B
⊕ A537	16	16'-10"	281	S
A538	8	14'-6"	121	S
A601	50	14'-3"	1070	B
A602	68	15'-5"	1575	B
A603	2	8'-3"	25	B
A604	2	8'-7"	26	B
A605	16	19'-6"	469	B
A606	26	18'-10"	735	B
A607	16	9'-9"	234	B
A608	6	9'-5"	85	B
A801	10	37'-5"	999	S
A802	4	37'-0"	395	B
A803	16	10'-6"	449	S
A804	4	14'-8"	157	S
A805	4	13'-6"	144	S

BENDING DIAGRAMS



SPIRAL BARS						
MARK	NO.	CORE DIA & SPIRAL	LENGTH	PITCH	NO. TURNS	WEIGHT
SP401	3	32"	21'-11"	4-1/2"	61	1187
SP402	3	32"	21'-1"	4-1/2"	59	1147
SP403	3	32"	17'-7"	4-1/2"	50	970

MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS				
P501	120	7'-11"	991	B
P502	18	7'-4"	138	B
P503	12	28'-8"	359	S
P901	6	28'-8"	585	S
P902	6	30'-8"	626	S
P903	6	31'-2"	636	S
P904	6	9'-10"	201	B
P1101	6	35'-4"	1126	B
P1102	6	14'-6"	462	S
P1103	6	37'-10"	1206	B
P1104	24	25'-8"	3273	S
P1105	30	24'-10"	3958	S
P1106	30	11'-7"	1846	S
P1107	24	21'-4"	2720	S
F701	144	8'-10"	2598	B
F901	72	11'-2"	2734	B
F1101	108	7'-3"	4160	B
PARAPET RAILING				
R501	16	16'-8"	*	S
R502	16	4'-1"	*	S
R503	12	4'-2"	*	B
R504	8	5'-4"	*	B
R505	192	13'-3"	*	S

* Parapet railing bars are included with 517 for payment.

SUPERSTRUCTURE				
S501	992	2'-3"	2328	B
S502	496	3'-6"	1811	B
S503	496	5'-7"	2888	B
S601	379	29'-8"	16888	S
S602	510	35'-2"	26935	S
S603	57	39'-0"	3339	S
S604	2	34'-6"	104	S
S605	10	6'-1"	91	S
S606 to S622	2 Ser. of 17	27'-9" to 7'-5"	898	S
S701	379	29'-8"	22982	S
S702	2	34'-6"	141	S
S703	10	6'-1"	124	S
S704 to S720	2 Ser. of 17	27'-9" to 7'-5"	1222	S
REPLACEMENT BARS				
RE401	1	5'-3"	–	B
RE501	1	5'-7"	–	S
RE601	3	5'-11"	–	S
RE701	2	6'-3"	–	S
RE801	1	6'-8"	–	S
RE901	1	6'-10"	–	S
RE1101	1	7'-7"	–	S

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 deformations but shall in other respects conform to Item 509 1-1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb. per lin. ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.

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, A701 is a No. 7 size bar and P1002 is a No. 10 size bar.

⊕ Cost of field bending and cutting to be included with Item 509 for payment.

Design Loading - CF-13(57)
Concrete Class "C" - basic unit stress 1333 p.s.i.
Concrete Class "E" - basic unit stress 1133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

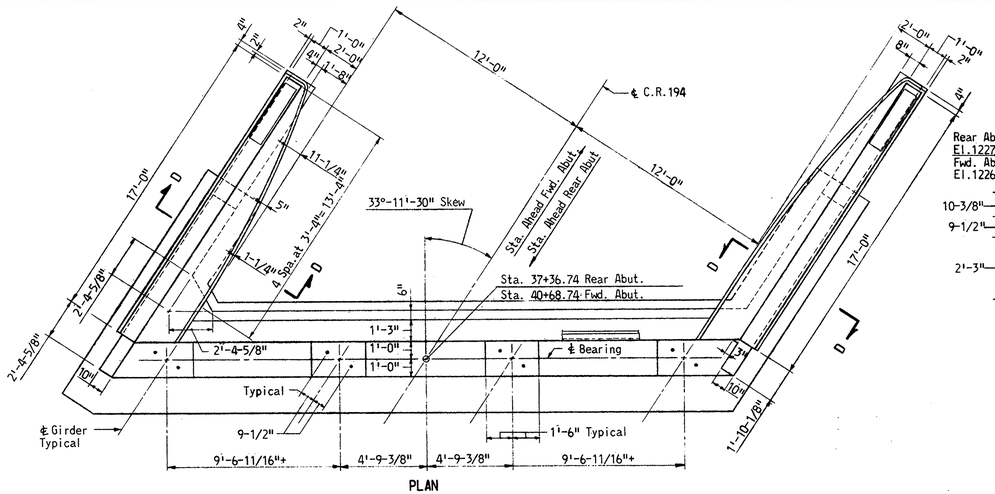
GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST
BRIDGE NO. SUM-271-0152
I.R. 271 UNDER SUMMIT CO. RD. NO. 194
SUMMIT CO. STA. 489+04.70

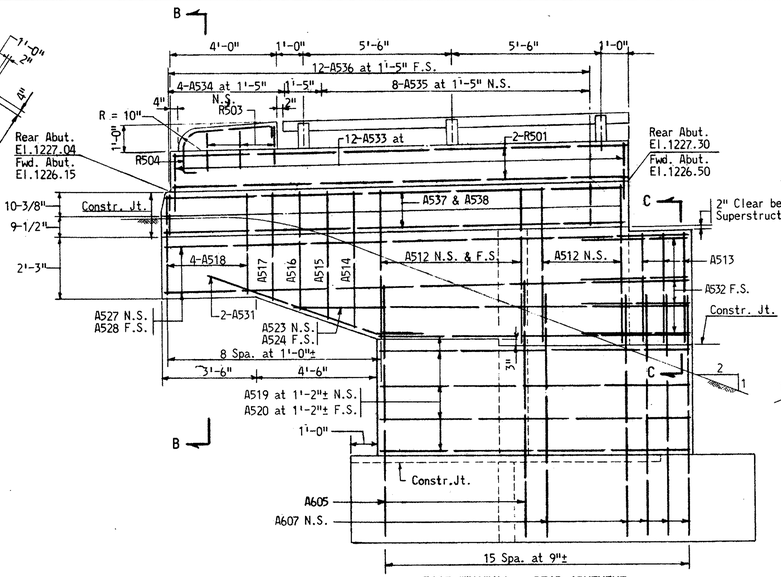
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
SHERMAN	WALTER	WALTER	PAHL	MUDD	4-15-66	

SUMMIT COUNTY
SUM-271-0.83

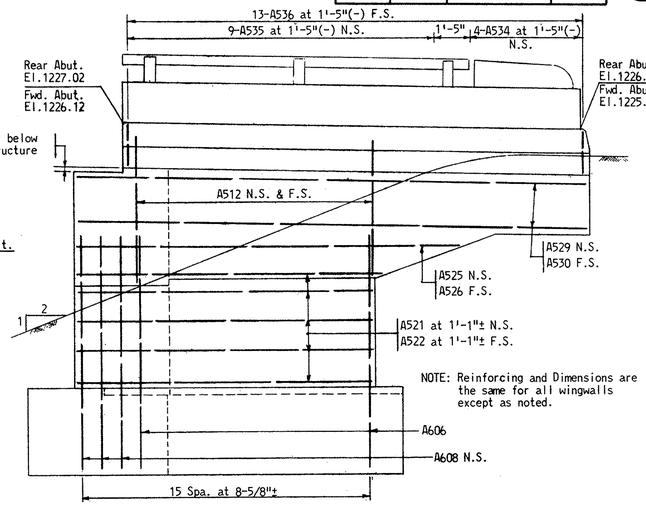
FED. RD. DIVISION	STATE	PROJECT	
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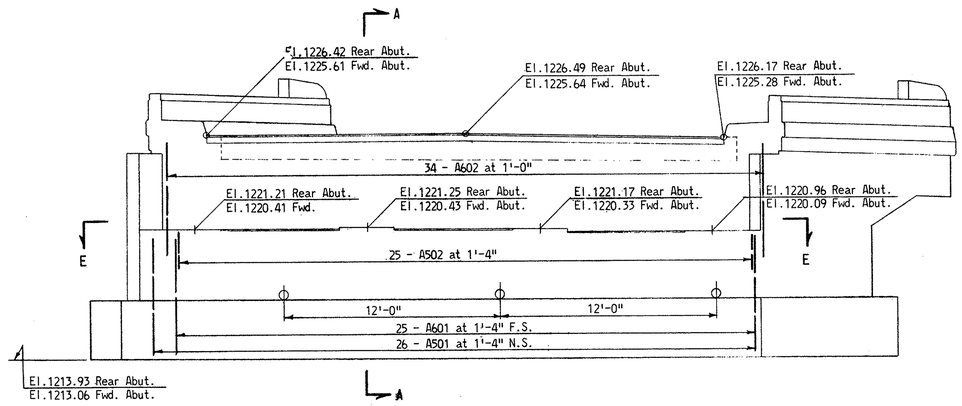


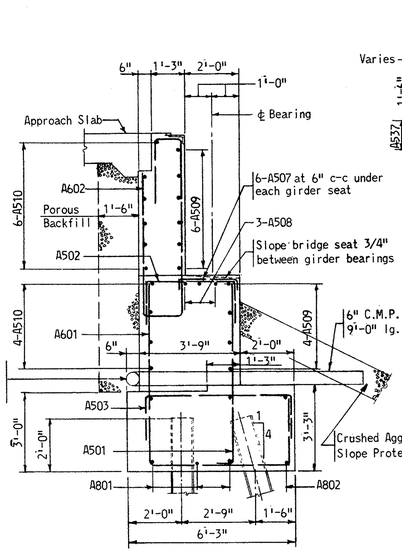
EAST WINGWALL - REAR ABUTMENT
WEST WINGWALL - FORWARD ABUTMENT



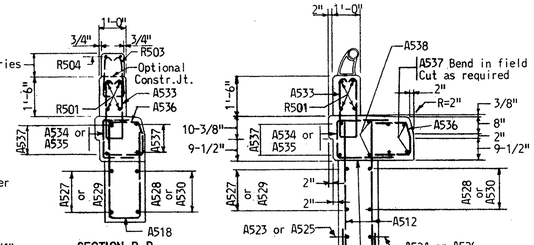
WEST WINGWALL - REAR ABUTMENT
EAST WINGWALL - FORWARD ABUTMENT

NOTE: Reinforcing and Dimensions are the same for all wingwalls except as noted.

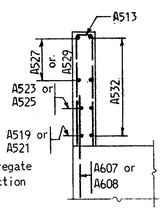




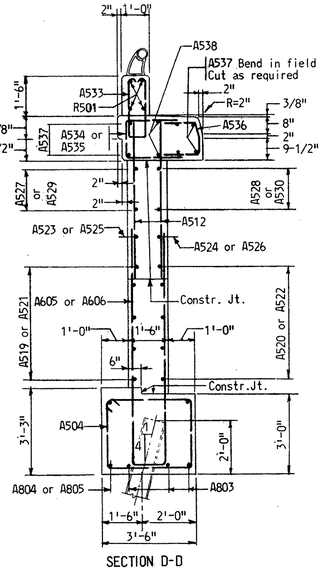
SECTION A-A



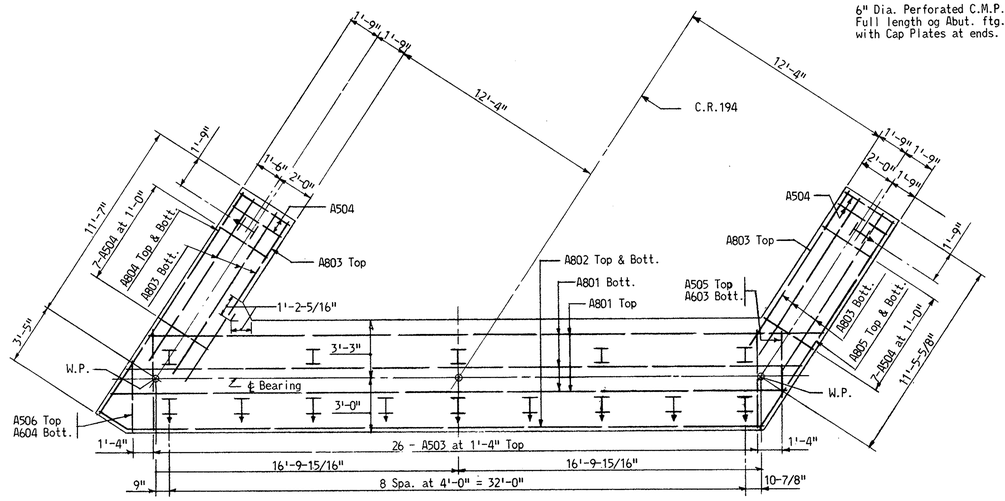
SECTION B-B



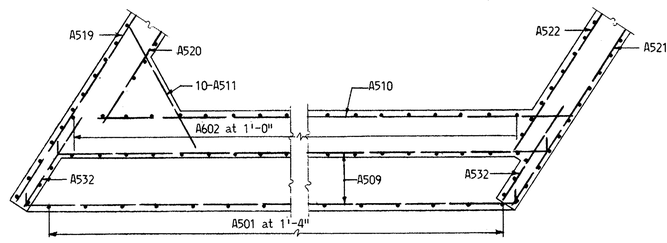
SECTION C-C



SECTION D-D



FOOTING PLAN



SECTION E-E

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1-1/2" in parapet and safety curb and 2" elsewhere.

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

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

CONCRETE shall be Class E.

LEGEND:
N.S. - Near Side
F.S. - Far Side

For details of roadway end finish see Standard Drawing SD-1-65.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS
BRIDGE NO. SUM-271-0152
I.R. 271 UNDER SUMMIT CO. RD. NO. 194

SUMMIT CO. STA. 489+04.70

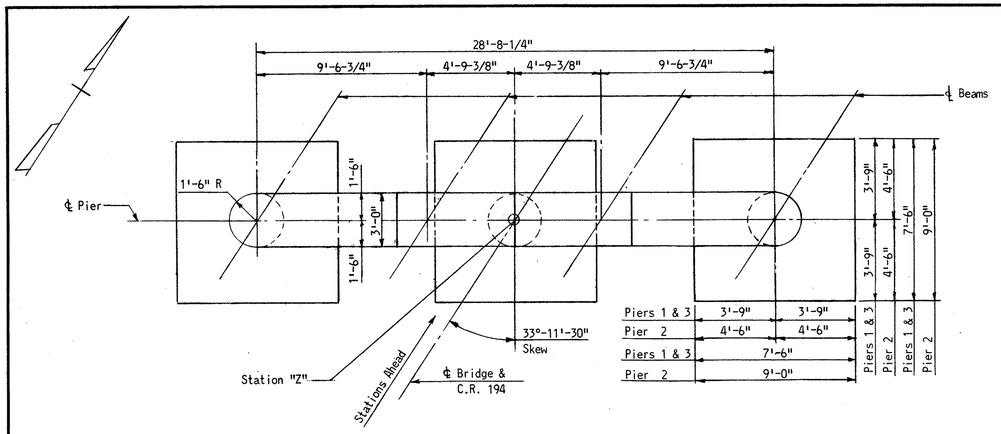
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
GREIMANN	GREIMANN	GREIMANN	SHERMAN	MUDD	4-15-66	

Rev. Jan. 23, 1967

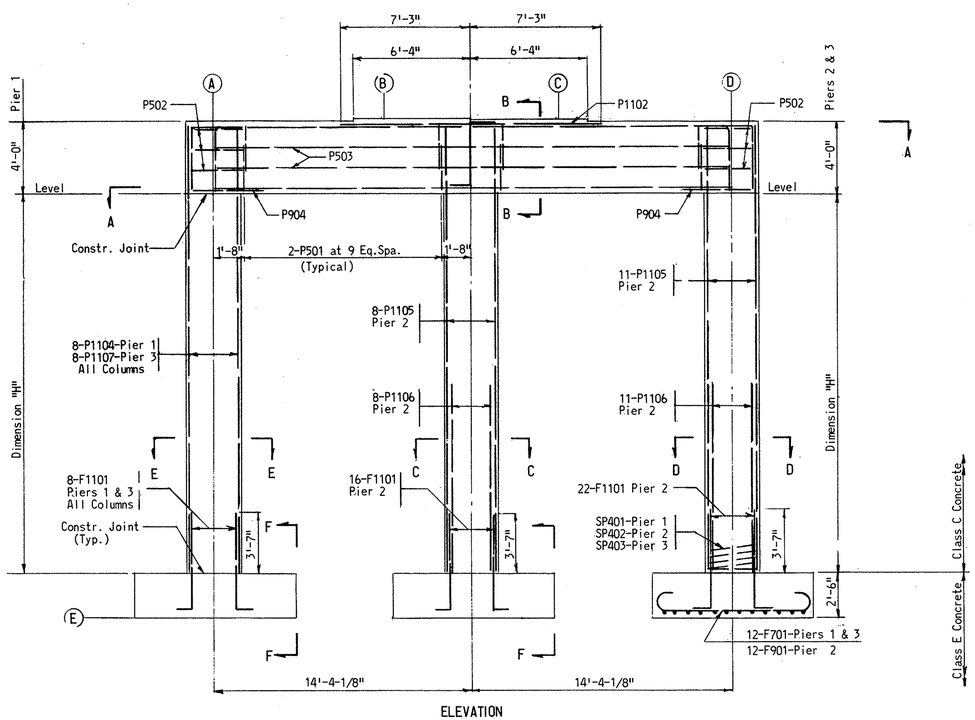
SUMMIT COUNTY
SUM-271-0.83

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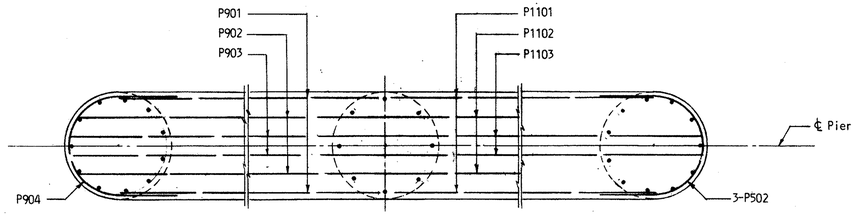


PLAN

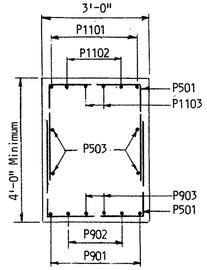


ELEVATION

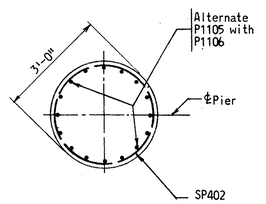
	STATION Z	ELEVATIONS A	B	C	D	E	DIMENSION H
PIER 1	38+10.24	1221.75	1221.92	1221.96	1221.87	1193.32	21'-11-3/16"
PIER 2	39+07.74	1221.71	1221.82	1221.81	1221.66	1194.00	21'-1-3/4"
PIER 3	40+05.24	1221.32	1221.38	1221.31	1221.11	1197.00	17'-7-5/16"



SECTION A-A

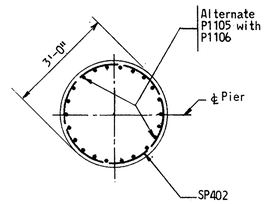


SECTION B-B

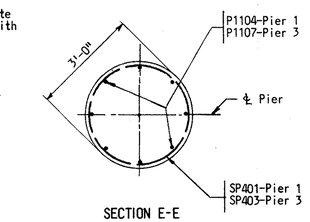


SECTION C-C
INTERIOR COLUMN

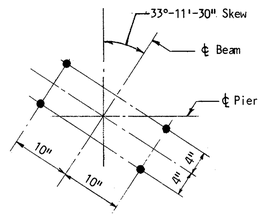
PIER 2



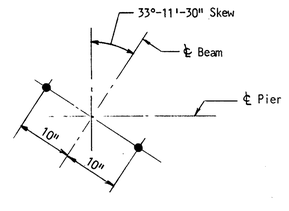
SECTION D-D
EXTERIOR COLUMNS



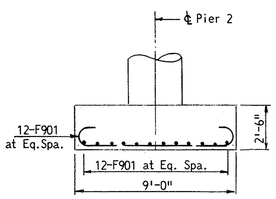
SECTION E-E
ALL COLUMNS
PIERS 1 & 3



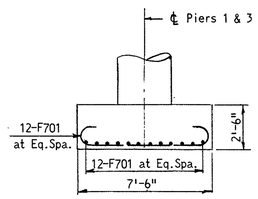
LOCATION OF ANCHOR RODS
FIXED BEARINGS F-250
PIER 2



LOCATION OF ANCHOR RODS
EXPANSION BEARINGS E-250
PIERS 1 & 3



SECTION F-F
PIER 2



SECTION F-F
PIERS 1 & 3

PIER NOTES

FOUNDATION BEARING PRESSURE: Pier Footings are designed for a maximum bearing pressure of 5 Tons per Sq.Ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

For details of Fixed and Sliding Bearings see Std. Dwg. No.FSB-1-62.

CONCRETE shall be Class E in Footings and Class C above Footings.

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

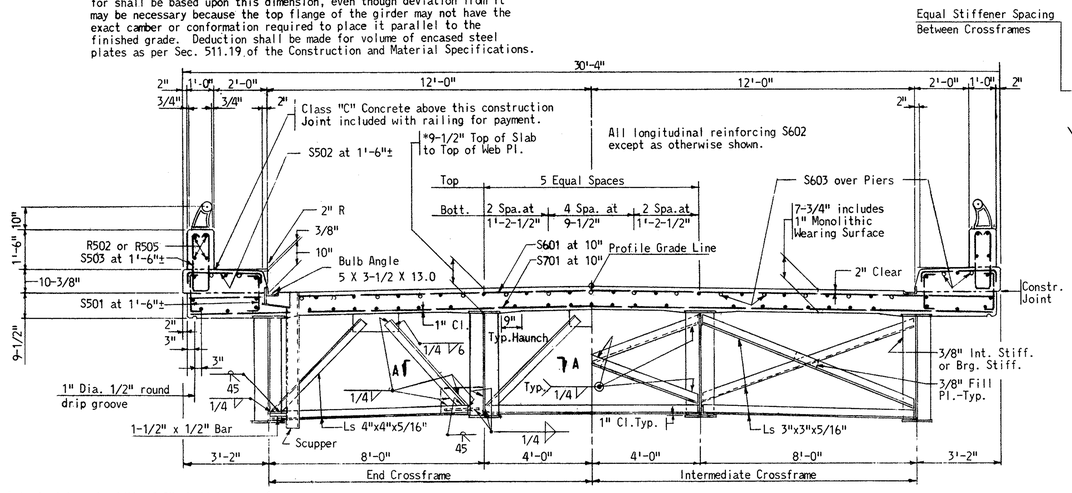
J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
BRIDGE NO. SUM-271-0152
I.R. 271 UNDER SUMMIT CO. RD. NO. 194

SUMMIT CO. **STA. 489+04.70**

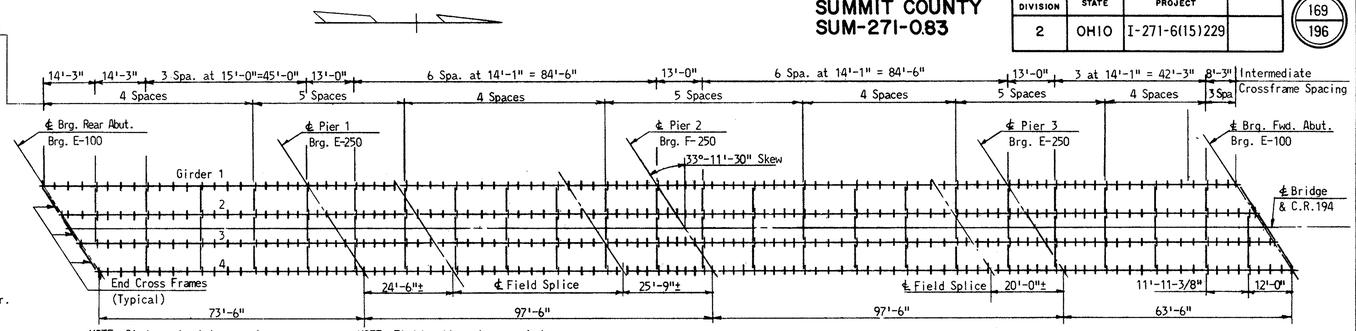
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RYNA-RZEWSKI	RYNA-RZEWSKI	RYNA-RZEWSKI	PAHL	MUDD	4-15-66	

This is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the 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.



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

TRANSVERSE SECTION

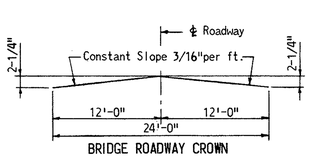


NOTE: Girder web plates may be shop spliced as required by lengths of plates obtainable. Location of shop splices shall be submitted to the Director for approval.

NOTE: Field splices in any girder shall be moved to clear intermediate crossframes and/or stiffeners.

STEEL FRAMING PLAN

All full penetration welds shall back-gouged and welded after welding far side. Butt welds on beam and girder flange and web plates shall be ground flush, the finish grinding being parallel to the direction of streets.



BRIDGE ROADWAY CROWN

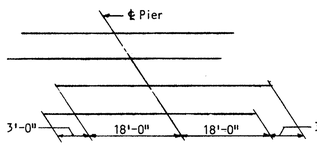
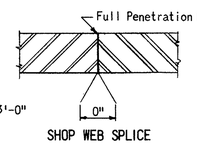
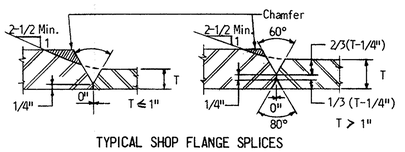


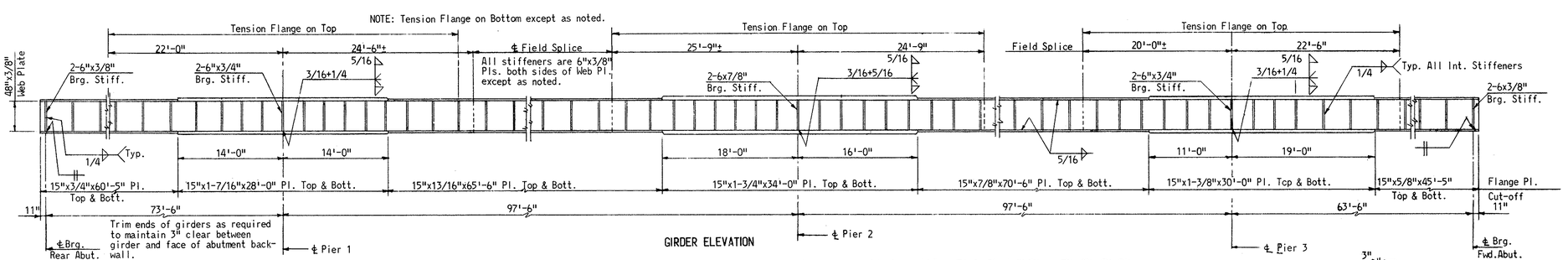
DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS



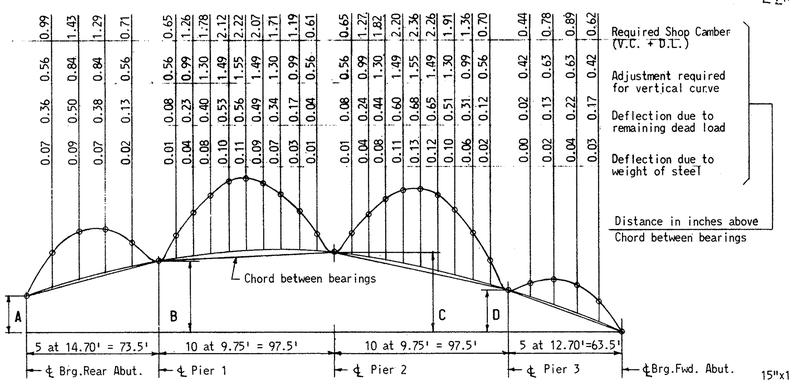
SHOP WEB SPLICE



TYPICAL SHOP FLANGE SPLICES



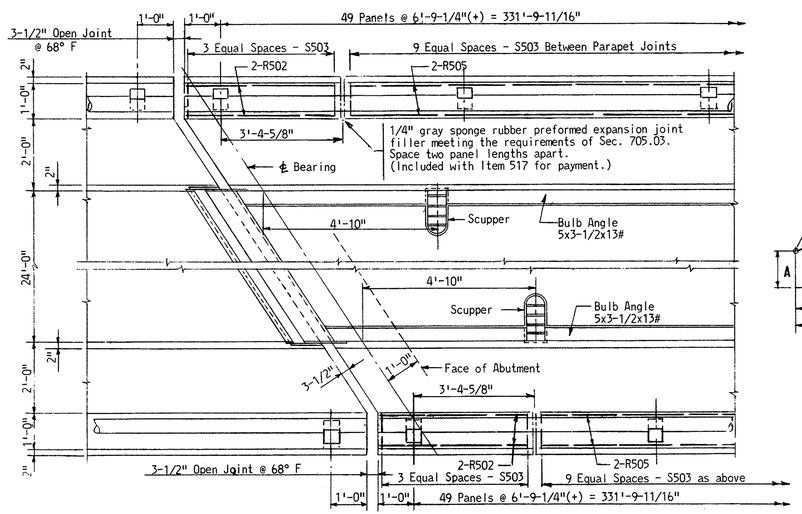
GIRDER ELEVATION



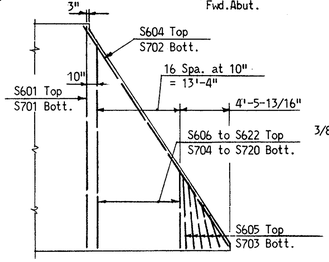
CAMBER DIAGRAM

	A	B	C	D
Girder 1	6.73	17.61	21.19	12.39
Girder 2	8.99	19.37	22.29	12.82
Girder 3	11.26	21.14	23.39	13.26
Girder 4	13.52	22.90	24.48	13.69

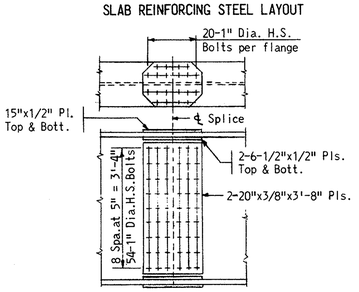
Above dimension in inches



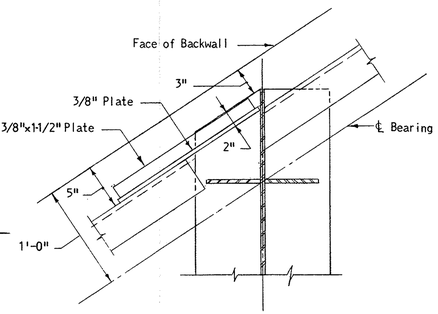
PART PLAN AT ABUTMENTS



SLAB REINFORCING STEEL LAYOUT



TYPICAL FIELD SPLICE DETAIL



SECTION A-A

SUPERSTRUCTURE NOTES

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

For details of roadway end-finish, beam cutoff at backwall, and welded butt joint in end finish angles at centerline of roadway, see Standard Drawing SD-1-65

For details of scuppers, curb plates, and gutter supports, see Standard Drawing SD-1-65

For details of fixed and sliding bearings see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing BR-1-65, Type 1.

For Scupper spacing see Sheet No. 166.

REINFORCING STEEL shall be 1-1/2' clear of surfaces in parapets and safety curbs. Place transverse reinforcing normal to center line of roadway.

PROCEDURE: The Contractor shall submit to the Director, for approval, 3 prints showing his proposed erection procedure.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS

BRIDGE NO. SUM-271-0152
I.R.*271 UNDER SUMMIT CO. RD. NO. 194

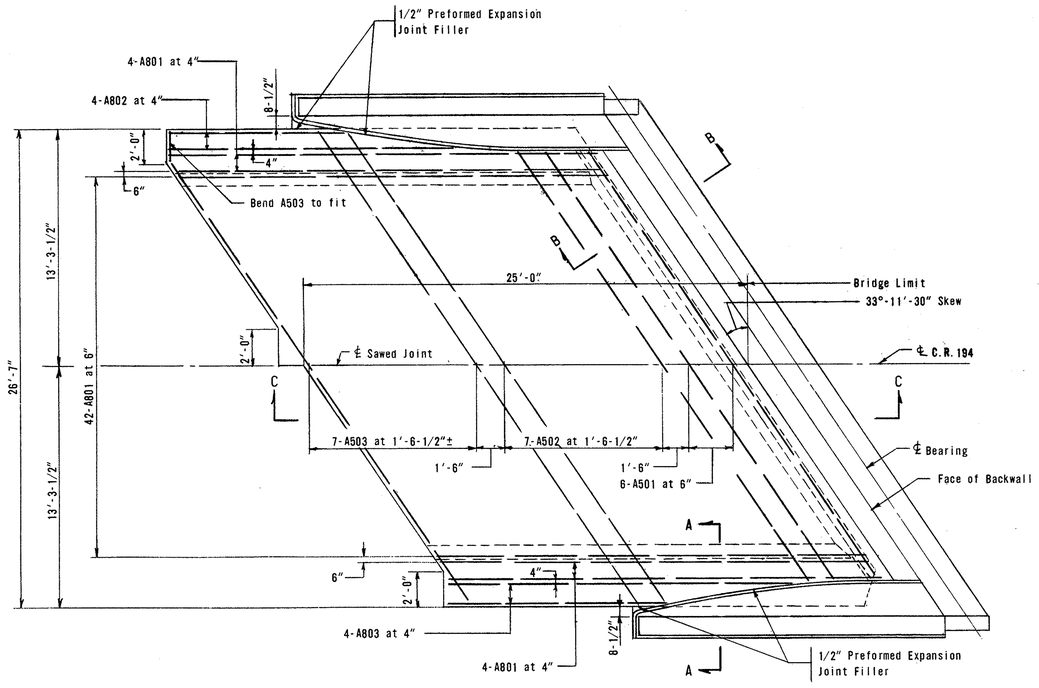
SUMMIT CO. STA. 489+04.70

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
POLDEMANN	ALKEMA	ALKEMA	SHERMAN	MUDD	4-15-66	

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHP.
A801	100	25'-7"	6831	B
A802	2 Series of 4 Bars 1'-6" Incr.	9'-9" to 14'-3"	256	S
A803	2 Series of 4 Bars 1'-6" Incr.	12'-3" to 16'-9"	310	S
A501	12	28'-0"	350	S
A502	2 Series of 7 Bars 6" Incr.	28'-1" to 31'-1"	432	S
A503	14	31'-2"	462	S

A801 — 24'-6"

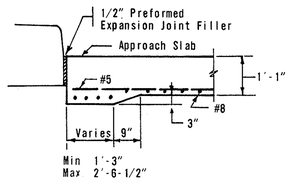
Quantities are for 2 Approach Slabs.

NOTES:
1/2" Preformed Expansion Joint Filler shall be included in Item 611 "Reinforced Concrete Approach Slab" for payment.

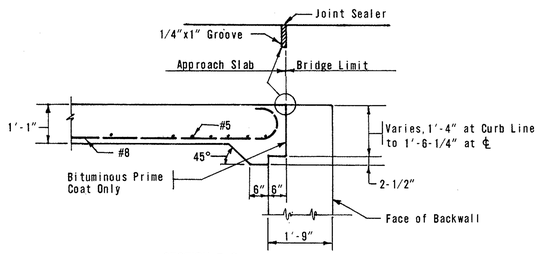
Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example: A801 is a No. 8 Bar Size.

Work this sheet with Standard Drawing No. AS-1-54

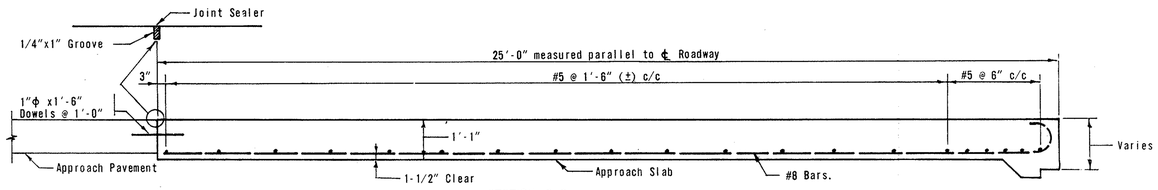
Concrete in Approach Slabs shall be Class C.



SECTION A-A



SECTION B-B



SECTION C-C

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS
BRIDGE NO. SUM-271-0152
I.R. 271 UNDER SUMMIT CO. RD. NO. 194

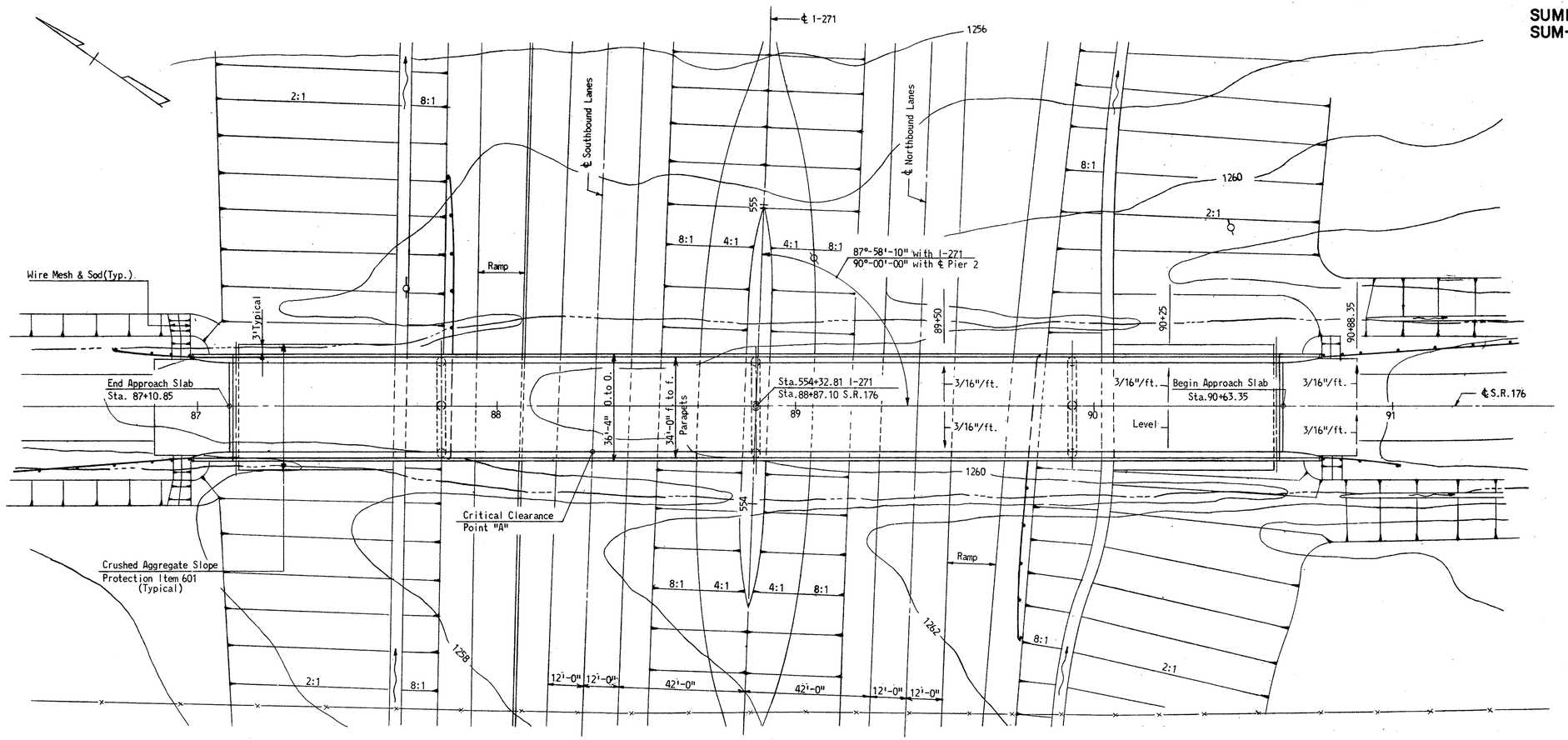
SUMMIT CO. **STA. 489+04.70**

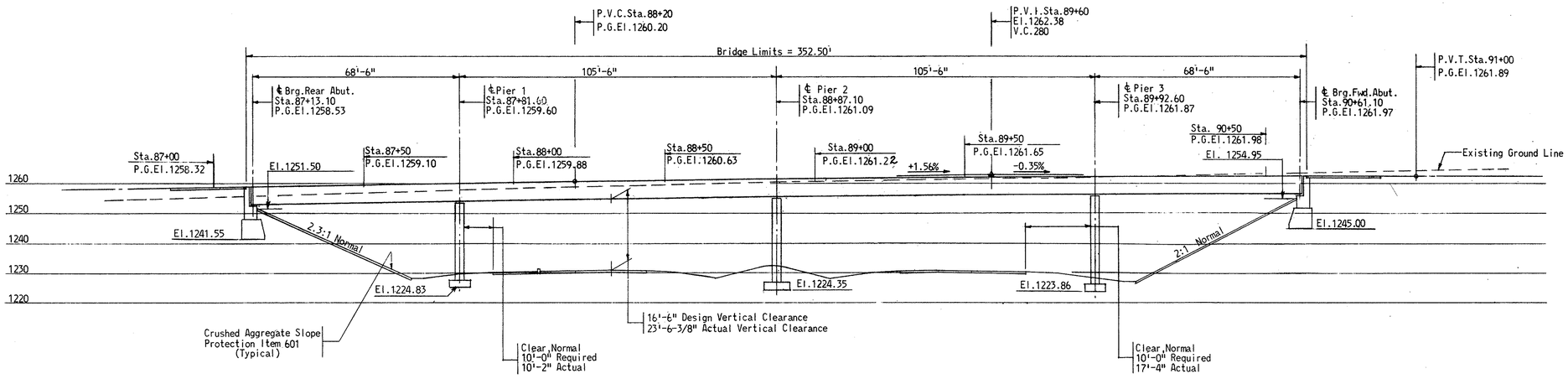
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RYNA-RZEWSKI	RYNA-RZEWSKI	RYNA-RZEWSKI	GREIMAN	MUDD	4-15-66	

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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PROPOSED STRUCTURE

TYPE: Continuous welded girders with reinforced concrete deck and substructure.

SPANS: 68'-6"; 105'-6"; 105'-6"; 68'-6".

ROADWAY: 30'-0" face to face of 2'-0" safety curbs.

LOAD FREQUENCY: C.F. = 400(57).

SKEW: 2°-06-15.75"

WEARING SURFACE: 1" Monolithic concrete.

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

ALIGNMENT: Tangent.

J.E.GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SITE PLAN
BRIDGE NO. SUM-271-0276
INTERSTATE HIGHWAY*271 UNDER STATE ROUTE NO. 176

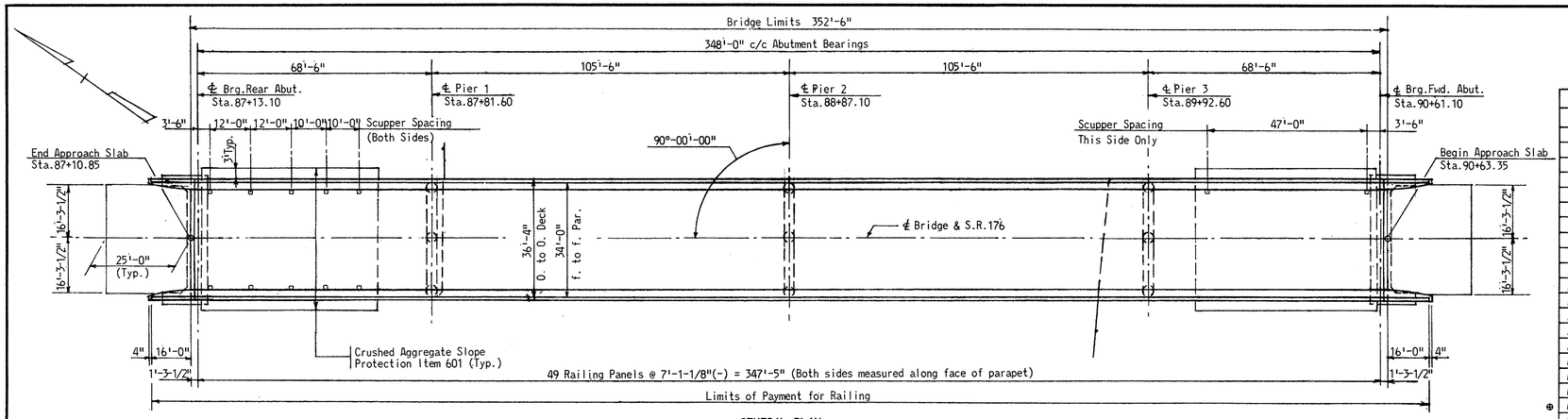
SUMMIT CO. **STA.554+32.81**

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP	PAHL	WALTER	SHERMAN	MUDD

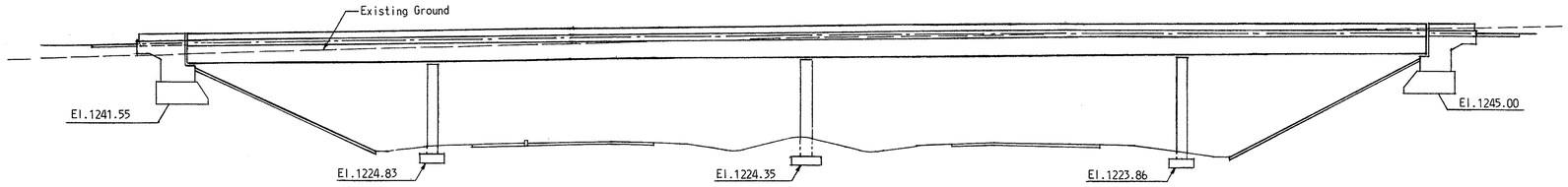
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.
REFERENCE should be made to:
Standard Drawing FSB-1-62, revised 1-15-63, and AS-1-54, revised 8-10-65.
" " SD-1-65, dated 11-8-65
" " BR-1-65, Type 1, Sheet 1, Rev. 11-24-65

Supplemental Specifications:
808, dated 2-7-66 825 dated 4-22-65
811, dated 3-29-65 828 dated 3-21-66.

EXCAVATION QUANTITY includes the removal of fill material between the surface of the proposed embankment and the bottom of the abutment.

ALL FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

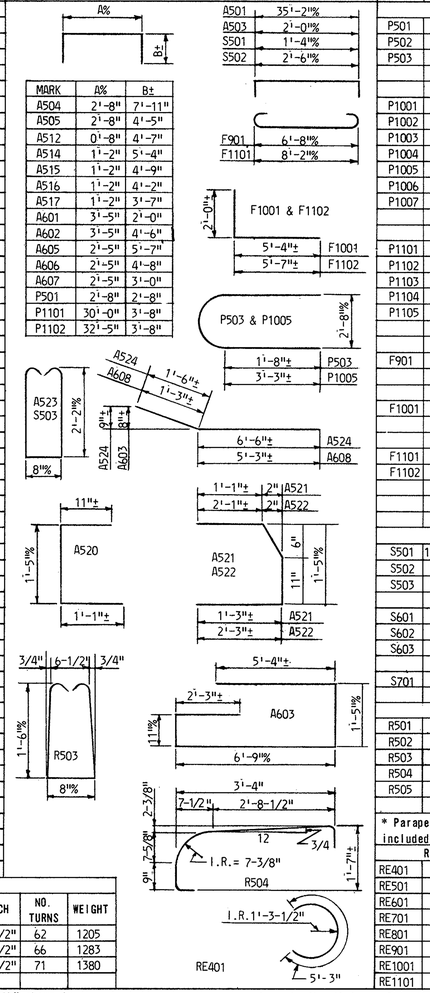
ESTIMATED QUANTITIES

Item	Total	Unit	DESCRIPTION	Super.	Abuts.	Piers	General		
503	284	Cu.Yds.	Unclassified excavation		284				
511	412	Cu.Yds.	Class "C" concrete, superstructure	412					
511	100	Cu.Yds.	Class "C" concrete, piers above footings			100			
511	108	Cu.Yds.	Class "E" concrete, abutments above footings		108				
511	104	Cu.Yds.	Class "E" concrete, footings		56	48			
509	155,660	Lbs.	Reinforcing Steel	105,888	14,046	35,726			
513	408,430	Lbs.	Structural Steel	408,430					
514	408,430	Lbs.	Field painting of structural steel	408,430					
517	764.00	Lin.Ft.	Railing(Type 1 aluminum rail and supports and concrete parapet)	700.00	64.00				
503	192	Cu.Yds.	Rock excavation		39	153			
518	58	Lin.Ft.	6" Helical perforated CMP, 707.06 including specials		58				
518	54	Lin.Ft.	6" Helical CMP, 707.06 non-perforated		54				
518	12	Each	Scuppers, including supports	12					
518	33	Cu.Yds.	Porous backfill		33				
808	412	Units	Water-reducing, set-retarding admixture	412					
601	555	Sq.Yds.	Crushed aggregate slope protection				555		
825	1615	Sq.Yds.	Concrete Surface Treatment						
828	60	Lin.Ft.	Joint Sealer (end dam)						

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	16	36'-2"	604	B
A502	16	33'-3"	555	S
A503	60	3'-0"	188	B
A504	40	18'-3"	761	B
A505	40	11'-3"	469	B
A506	20	10'-0"	209	S
A507	20	6'-6"	136	S
A508	4	12'-3"	51	S
A509	4	8'-9"	37	S
A510	8	18'-0"	150	S
A511	8	14'-6"	121	S
A512	12	9'-7"	120	B
A513	16	3'-7"	60	S
A514	4	11'-7"	48	B
A515	4	10'-5"	43	B
A516	4	9'-3"	39	B
A517	20	8'-1"	169	B
A518	16	15'-11"	266	S
A519	8	13'-0"	108	S
A520	48	3'-2"	159	B
A521	20	3'-6"	73	B
A522	28	5'-6"	161	B
A523	48	5'-7"	280	B
A524	8	8'-0"	67	B
A525	32	6'-3"	209	S
A601	46	7'-1"	489	B
A602	46	12'-1"	835	B
A603	68	16'-0"	1634	B
A604	176	4'-0"	1057	S
A605	68	13'-3"	1353	B
A606	8	11'-5"	137	B
A607	8	8'-1"	97	B
A608	16	6'-6"	156	B
A609	84	11'-0"	1388	S
A610	12	6'-7"	119	S
A801	18	35'-4"	1698	S
PIERS				
P501	132	7'-9"	1067	B
P502	12	30'-0"	375	S
P503	18	7'-6"	141	B
P1001	6	30'-0"	775	S
P1002	6	31'-10"	822	S
P1003	6	32'-5"	837	S
P1004	6	32'-8"	843	S
P1005	6	10'-8"	275	B
P1006	24	25'-10"	2668	S
P1007	24	29'-1"	3003	S
P1101	6	36'-8"	1169	B
P1102	6	39'-1"	1246	B
P1103	9	18'-0"	861	S
P1104	31	27'-4"	4502	S
P1105	31	12'-9"	2100	S
F901	108	9'-2"	3366	B
F1001	48	7'-0"	1446	B
F1101	66	11'-4"	3974	B
F1102	62	7'-3"	2388	B
SUPERSTRUCTURE				
S501	1088	2'-4"	2648	B
S502	544	3'-6"	1986	B
S503	544	5'-7"	3168	B
S601	467	35'-8"	25018	S
S602	630	36'-8"	34696	S
S603	72	40'-0"	4326	S
S701	467	35'-8"	34046	S
PARAPET RAILINGS				
R501	16	15'-9"	*	S
R502	16	4'-3"	*	S
R503	12	4'-2"	*	B
R504	8	5'-4"	*	B
R505	192	13'-11"	*	S
REPLACEMENT BARS				
RE401	1	5'-3"	–	B
RE501	1	5'-7"	–	S
RE601	4	5'-11"	–	S
RE701	2	6'-3"	–	S
RE801	1	6'-6"	–	S
RE901	1	6'-10"	–	S
RE1001	1	7'-3"	–	S
RE1101	0	7'-7"	–	S

* Parapet railing bars are included with 517 for payment



MARK	A%	B±
A504	2'-8"	7'-11"
A505	2'-8"	4'-5"
A512	0'-8"	4'-7"
A514	1'-2"	5'-4"
A515	1'-2"	4'-9"
A516	1'-2"	4'-2"
A517	1'-2"	3'-7"
A601	3'-5"	2'-0"
A602	3'-5"	4'-6"
A605	2'-5"	5'-7"
A606	2'-5"	4'-8"
A607	2'-5"	3'-0"
P501	2'-8"	2'-8"
P1101	30'-0"	3'-8"
P1102	32'-5"	3'-8"

SPIRAL BARS

MARK	NO.	CORE DIA & SPIRAL	LENGTH	PITCH	NO. TURNS	WEIGHT
SP401	3	32"	22'-1"	4-1/2"	62	1205
SP402	3	32"	23'-7"	4-1/2"	66	1283
SP403	3	32"	25'-4"	4-1/2"	71	1380

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 deformations but shall in other respects conform to Item 509 1-1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb.per lin.ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.
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, A701 is a No. 7 size bar and P1002 is a No. 10 size bar.
⊕ Cost of field bending and cutting to be included with Item 509 for payment

Design Loading - CF-400(57)
Concrete Class "C" - basic unit stress 1333 p.s.i.
Concrete Class "E" - basic unit stress 1133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

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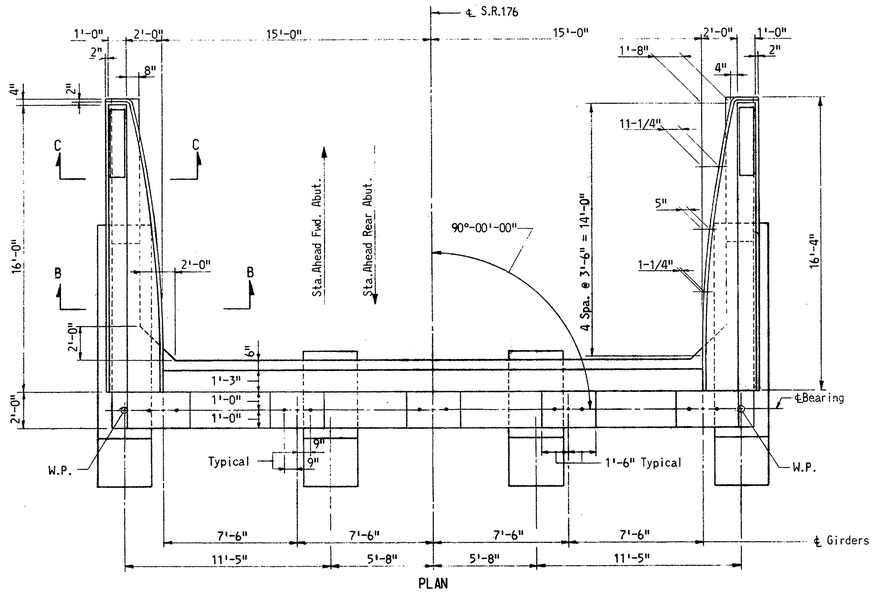
GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST
BRIDGE NO. SUM-271-0276
I.R.*271 UNDER S.R. 176
SUMMIT CO. STA.554+32.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAHL	BERGER	WALTER	SHERMAN	MUDD	4-15-66	

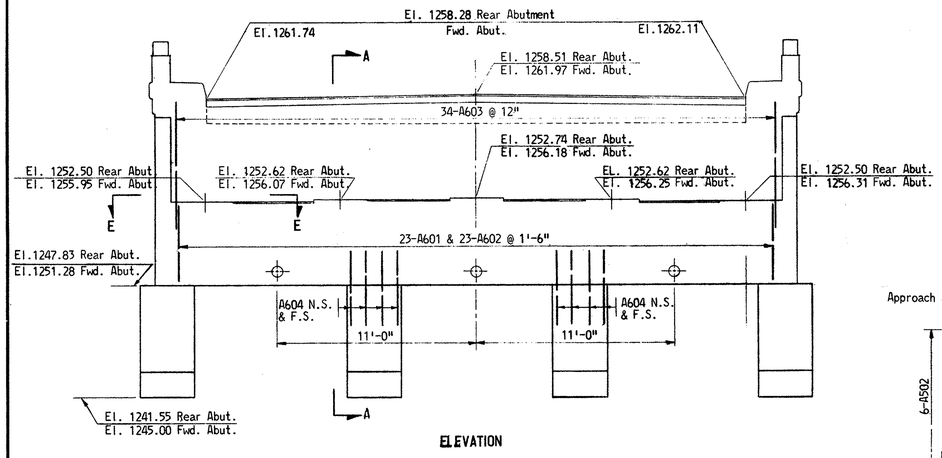
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

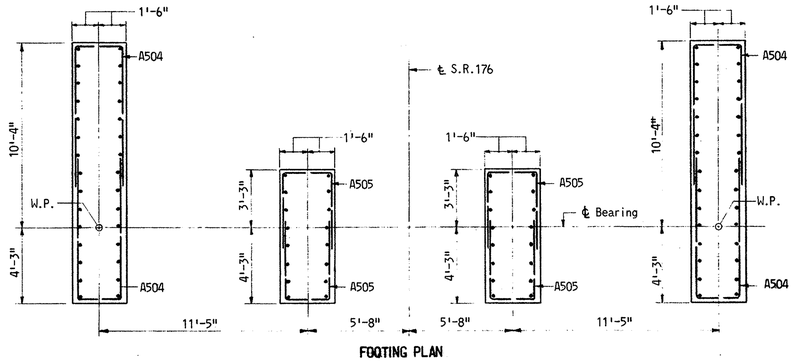
173
196



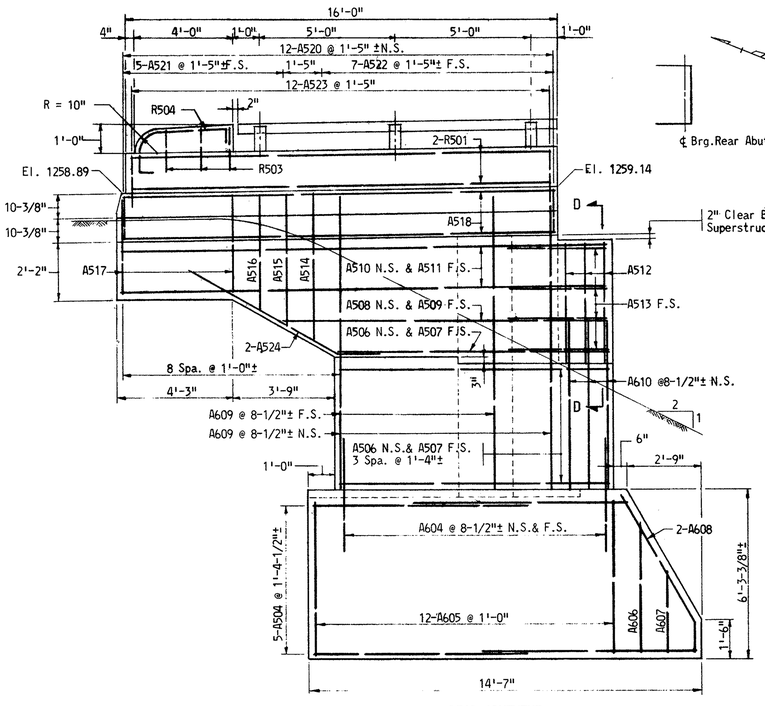
PLAN



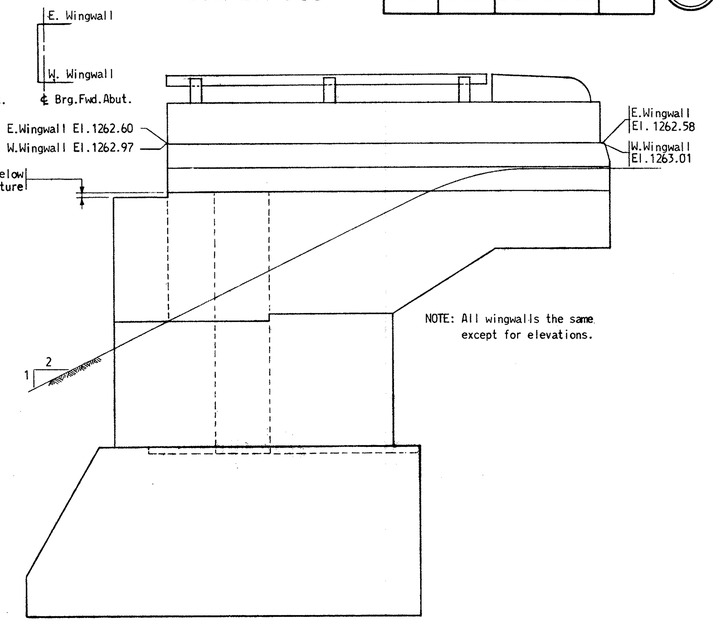
ELEVATION



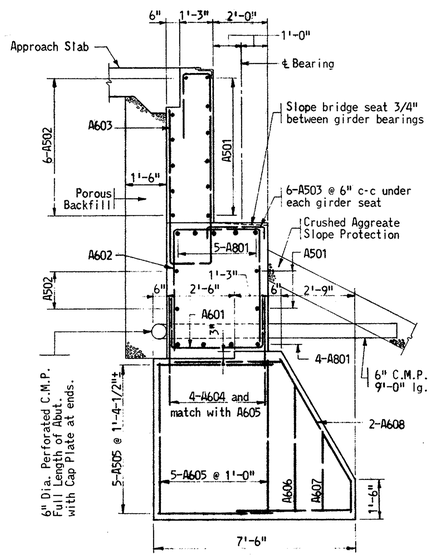
FOOTING PLAN



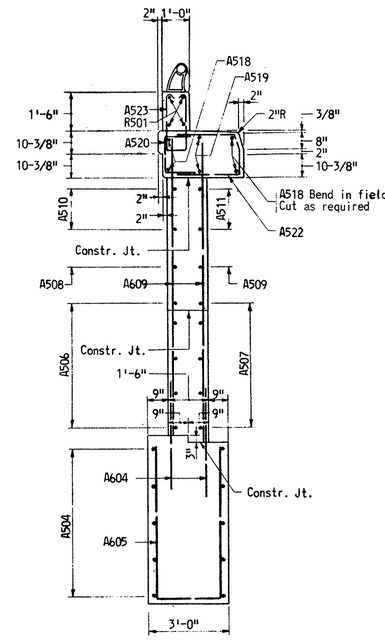
REAR ABUTMENT



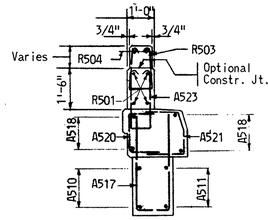
FORWARD ABUTMENT



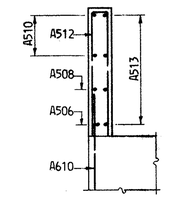
SECTION A-A



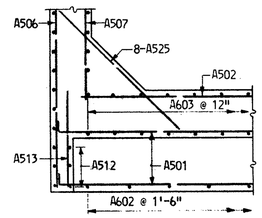
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

FOUNDATION BEARING PRESSURE: Abutment footings are designed for a maximum bearing pressure of 5 Tons per Sq.Ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1-1/2" in parapet and safety curb and 2" elsewhere.

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

PROCEDURE: After the pedestals have been constructed the earth fill shall be placed and compacted up to the height of the earth bench or finished spill-thru slope and to the level of the subgrade after which excavation shall be made for the crossbeam.

Abutment backwalls above the bridge seat shall not be placed until all steel is erected. Abutment backwalls shall be completed prior to placing bridge deck slab.

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

CONCRETE shall be Class E.

LEGEND:
N.S. - Near Side
F.S. - Far Side

For details of roadway end finish see Standard Drawing SD-1-65.

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CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS
BRIDGE NO. SUM-271-0276
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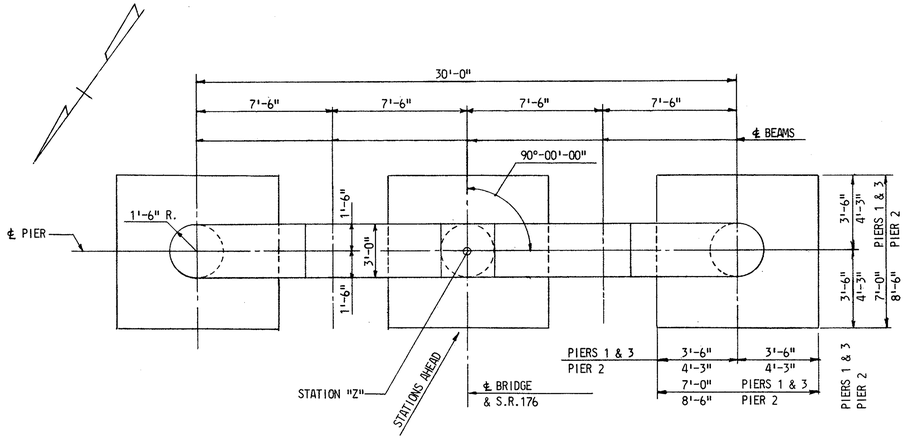
SUMMIT CO. STA.554+32.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HUANG	GREIMAN	GREIMAN	SHERMAN	MUDD	4-15-66	

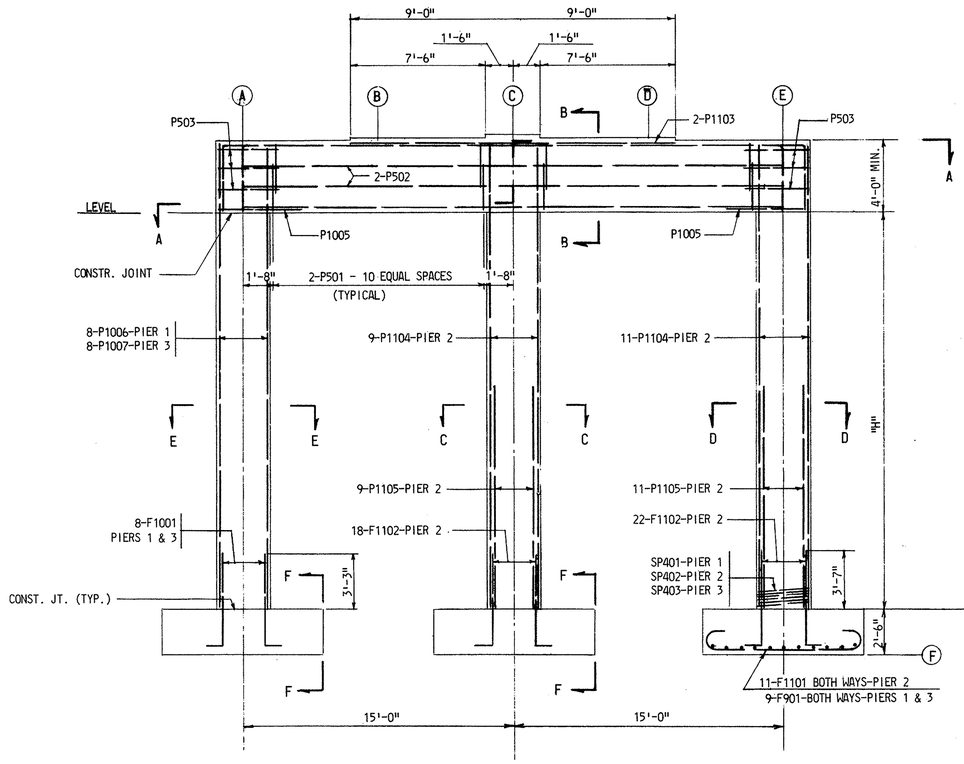
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
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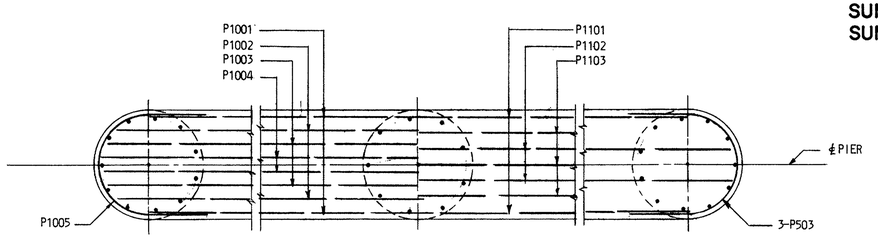


PLAN

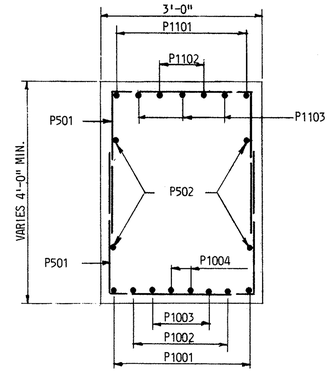


ELEVATION

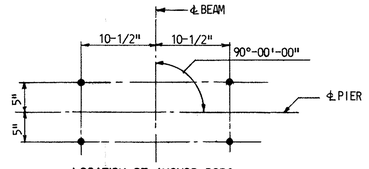
	STATION Z	ELEVATIONS						DIMENSION H
		A	B	C	D	E	F	
PIER 1	87+81.60	1253.44	1253.55	1253.67	1253.55	1253.44	1224.83	22'-1-5/16"
PIER 2	88+87.10	1254.50	1254.62	1254.73	1254.62	1254.50	1224.35	23'-7-13/16"
PIER 3	89+92.60	1255.71	1255.83	1255.95	1255.89	1255.84	1223.86	25'-4-3/16"



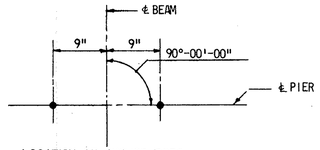
SECTION A-A



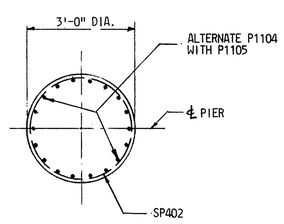
SECTION B-B



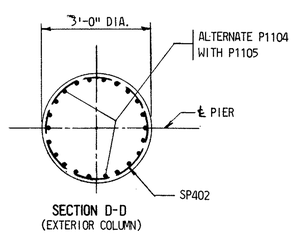
LOCATION OF ANCHOR RODS
FIXED BEARING F-300
PIER 2



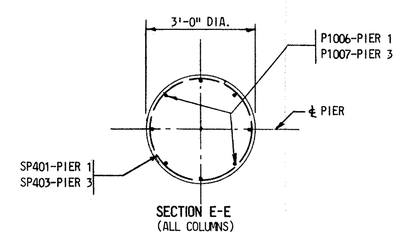
LOCATION OF ANCHOR RODS
EXPANSION BEARING E-250
PIERS 1 & 3



SECTION C-C
(INTERIOR COLUMN)

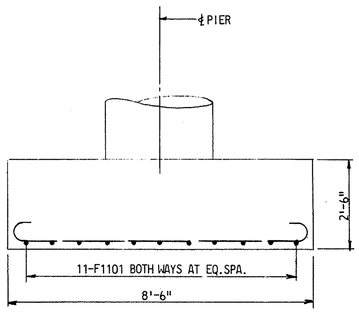


SECTION D-D
(EXTERIOR COLUMN)

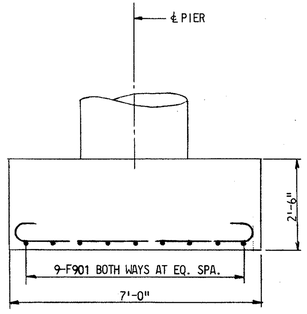


SECTION E-E
(ALL COLUMNS)
PIERS 1 & 3

PIER 2



SECTION F-F
PIER 2



SECTION F-F
PIERS 1 & 3

PIER NOTES

FOUNDATION BEARING PRESSURE: Pier Footings are designed for a maximum bearing pressure of 8 Tons per Sq.Ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

For details of Fixed and Sliding Bearings see Std.Dwg. No.FSB-1-62.

CONCRETE shall be Class E in Footings and Class C above Footings.

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

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
BRIDGE NO. SUM-271-0276
I.R.-271 UNDER S.R. 176

SUMMIT CO. **STA.554+32.81**

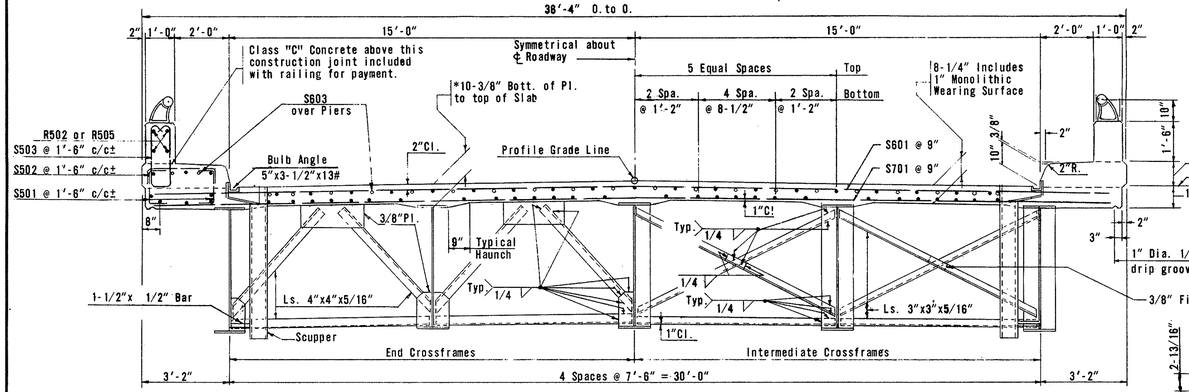
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RYNA-RZEWSKI	WALTER	WALTER	PAHL	MUDD	4-15-66	

SUMMIT COUNTY
SUM-271-0.83

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All longitudinal reinforcing S602 except as otherwise shown.



TRANSVERSE SECTION

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

*This is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the 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.

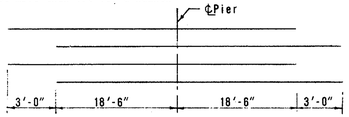
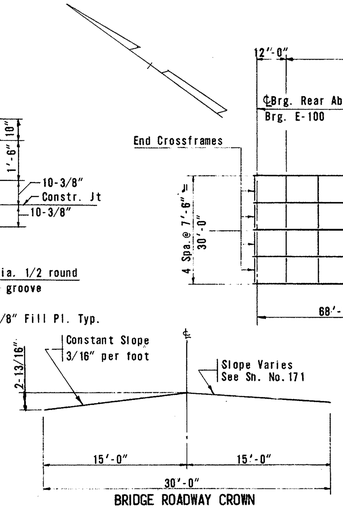
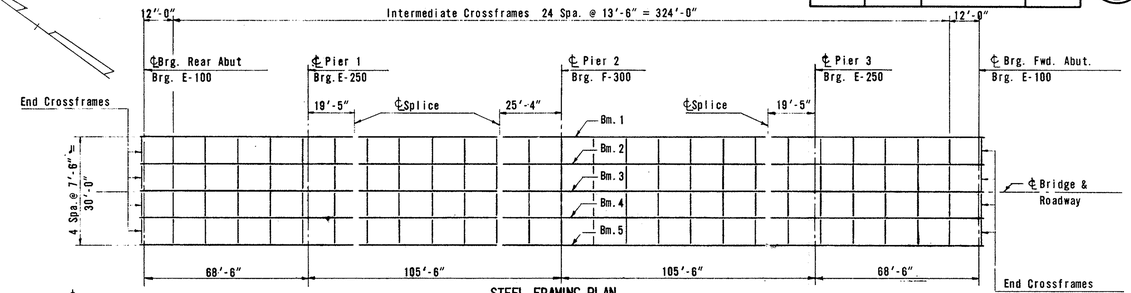


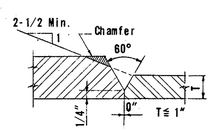
DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

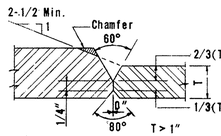


BRIDGE ROADWAY CROWN



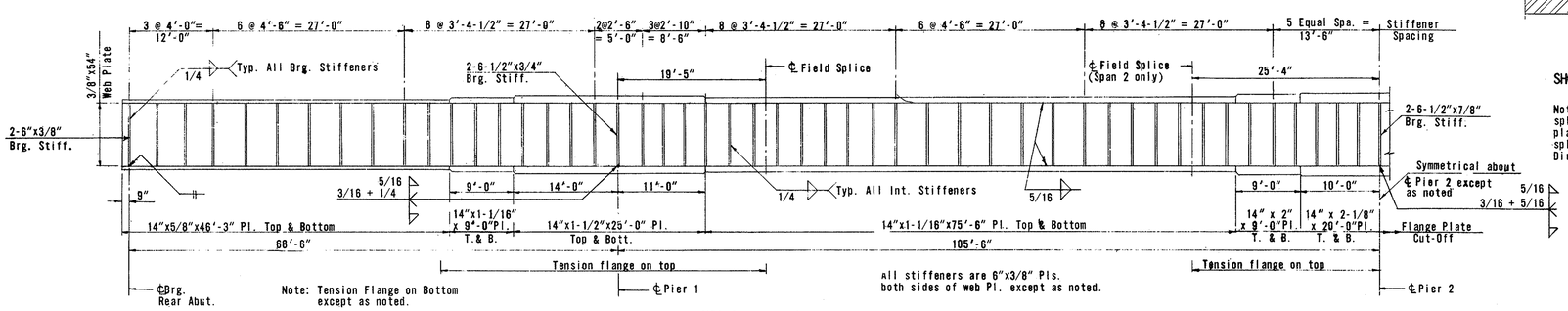
STEEL FRAMING PLAN





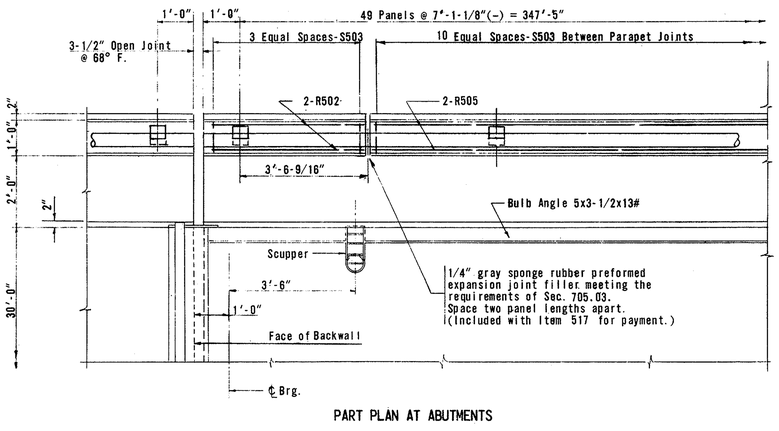
TYPICAL FLANGE SHOP SPLICES

All full penetration welds shall be back-gouged and welded after welding far side. Butt welds on beam and girder flange and web plates shall be ground flush, the finish grinding being parallel to the direction of stress.

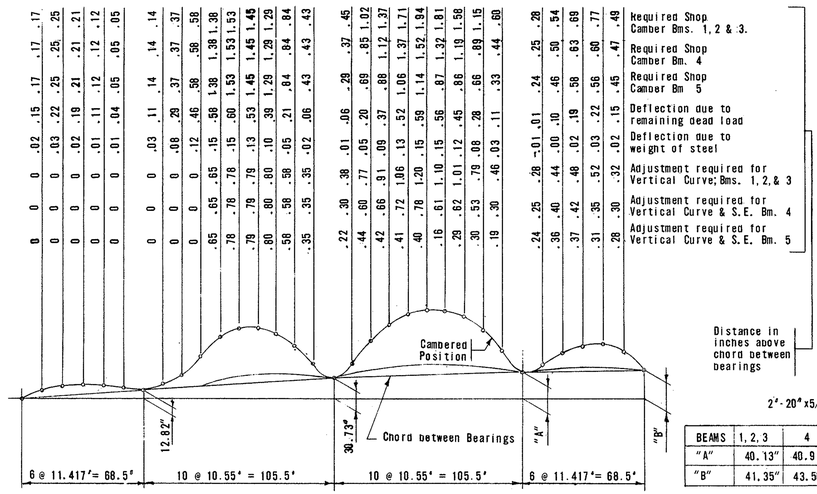


GIRDER ELEVATION

Trim ends of girders as required to maintain 3" clear between girder and face of abutment backwall.



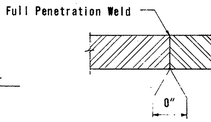
PART PLAN AT ABUTMENTS



CAMBER DIAGRAM

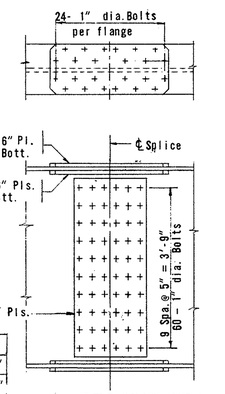
Distance in inches above chord between bearings

BEAMS	1, 2, 3	4	5
"A"	40.13"	40.91"	41.72"
"B"	41.35"	43.50"	45.72"



SHOP WEB SPLICE

Note: Girder web plates may be shop spliced as required by lengths of plates obtainable. Location of shop splices shall be submitted to the Director for approval.



FIELD SPLICE DETAIL

SUPERSTRUCTURE NOTES

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

For details of roadway end-finish, beam cutoff at backwall, and welded butt joint in end finish angles at centerline of roadway, see Standard Drawing SD-1-65.

For details of scuppers, curb plates and gutter supports see Standard Drawing SD-1-65.

For details of fixed and sliding bearings see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing BR-1-65, Type 1.

For Scupper spacing see Sheet No. 172.

REINFORCING STEEL shall be 1-1/2" clear of surfaces in parapets and safety curbs. Place transverse reinforcing normal to center line of roadway.

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

1" Dia. High-strength bolts shall be used for all Field Splices.

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BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS
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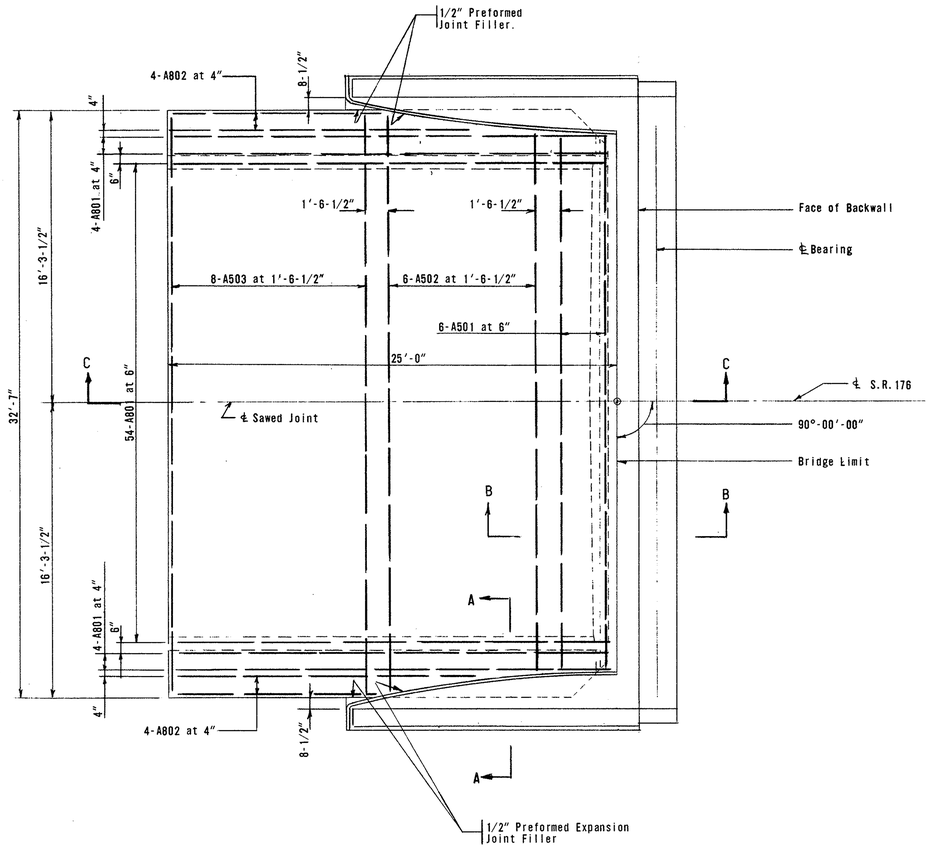
SUMMIT CO. STA. 554+32.81

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAHL	HUANG	WALTER	SHERMAN	MUDD	4-1566	

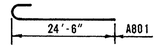
SUMMIT COUNTY
SUM-271-0.83

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REINFORCING STEEL LIST				
MARK	NO	LENGTH	WEIGHT	SHP.
A801	124	25'-7"	8470	B
A802	4 Series of 4 Bars 2'-0" Incr.	10'-9" to 16'-9"	587	S
A501	12	29'-6"	369	S
A502	2 Series of 6 Bars 6" Incr.	29'-10" to 32'-4"	389	S
A503	16	32'-1"	535	S



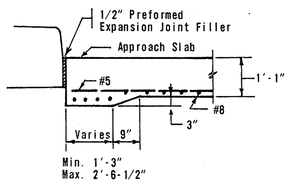
Quantities are for 2 Approach Slabs

NOTES:
1/2" Preformed Expansion Joint Filler shall be included in Item 611 "Reinforced Concrete Approach Slab" for payment.

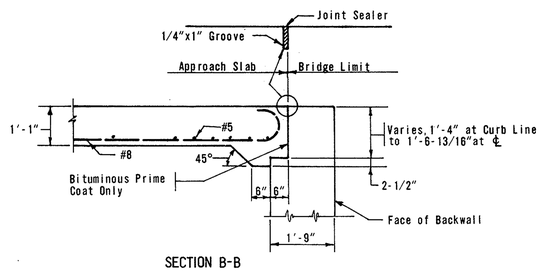
Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example: A801 is a No. 8 Bar Size.

Work this sheet with Standard Drawing No. AS-1-54

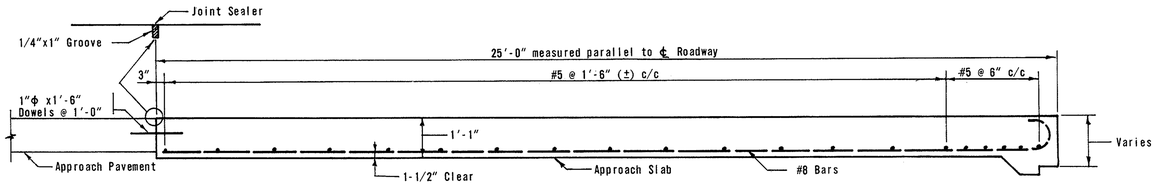
Concrete in Approach Slabs shall be Class C.



SECTION. A-A



SECTION B-B



SECTION C-C

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS
BRIDGE NO. SUM-271-0276
I.R.-271 UNDER S.R. 176

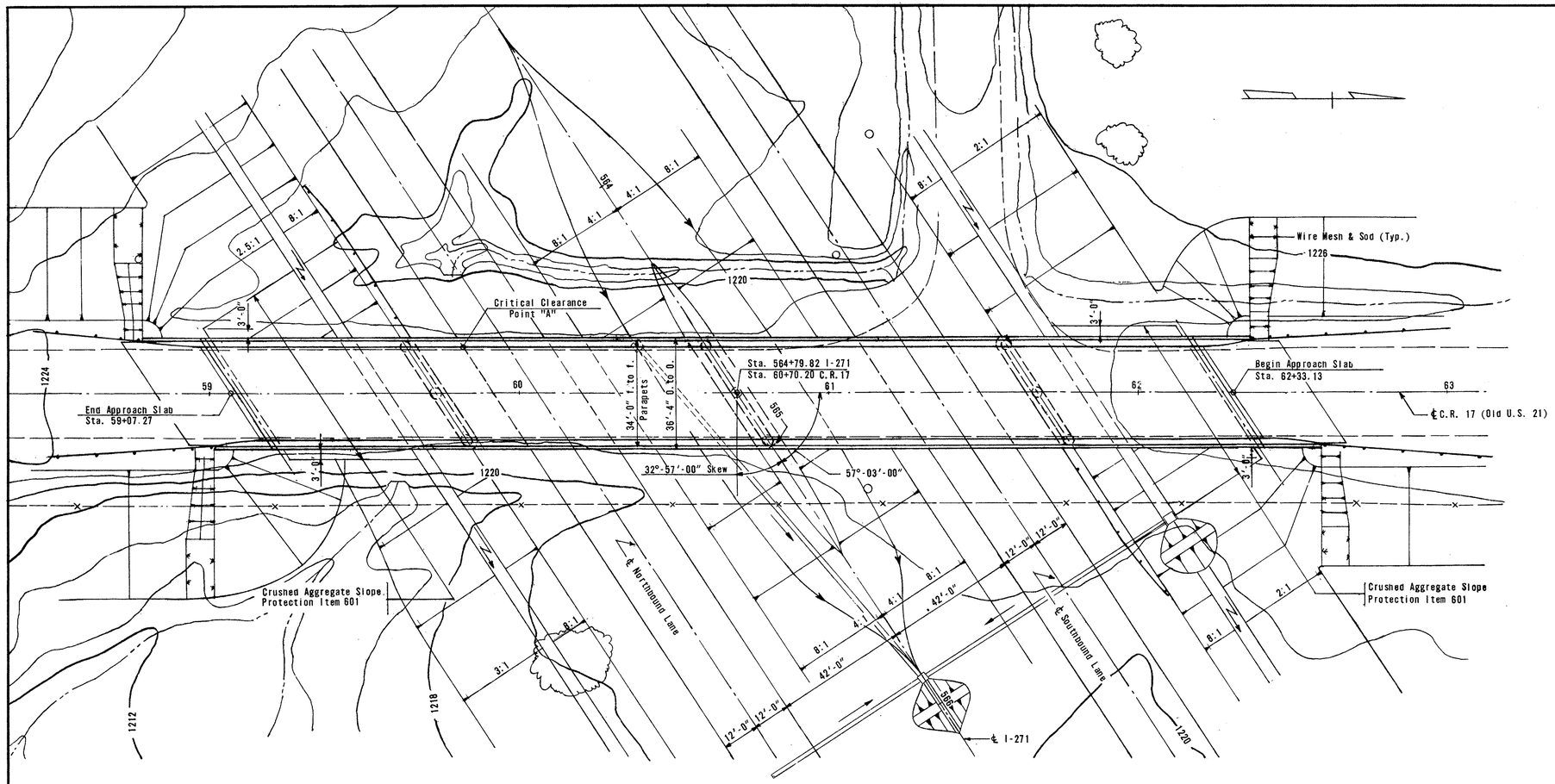
SUMMIT CO. **STA. 554+32.81**

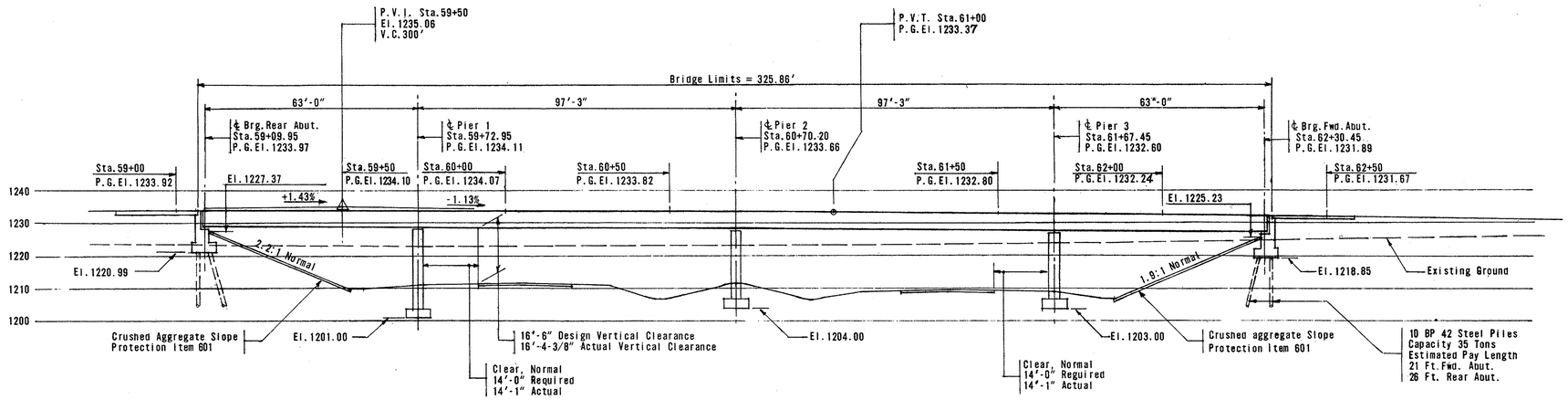
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RYNA-RZEWSKI	RYNA-RZEWSKI	RYNA-RZEWSKI	SHERMAN	MUDD	4-15-66	

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

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196





PROPOSED STRUCTURE

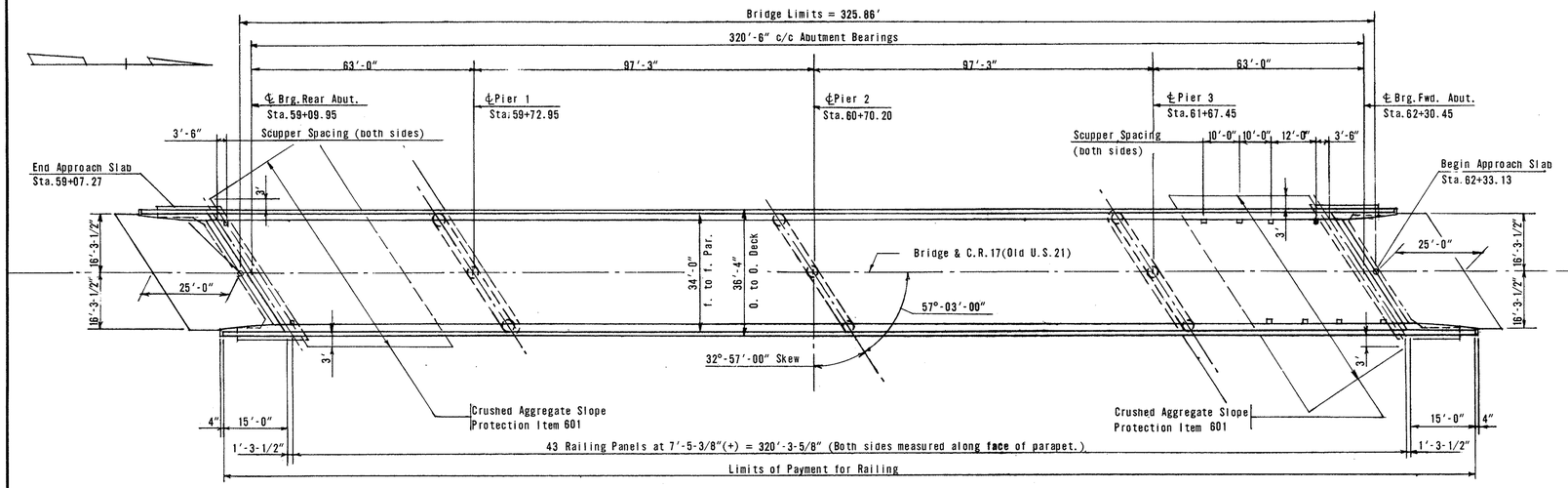
TYPE: Continuous welded girders with reinforced concrete deck and substructure.
SPANS: 63'-0"; 97'-3"; 97'-3"; 63'-0"
ROADWAY: 30'-0" face to face of 2'-0" safety curbs.
LOAD FREQUENCY: C.F. = 2,000(57).
SKEW: 32°-57'-00"(R.F.)
WEARING SURFACE: 1" Monolithic concrete.
APPROACH SLABS: AS-1-54 (25' long).
ALIGNMENT: Tangent.

J.E.GREINER CO.
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

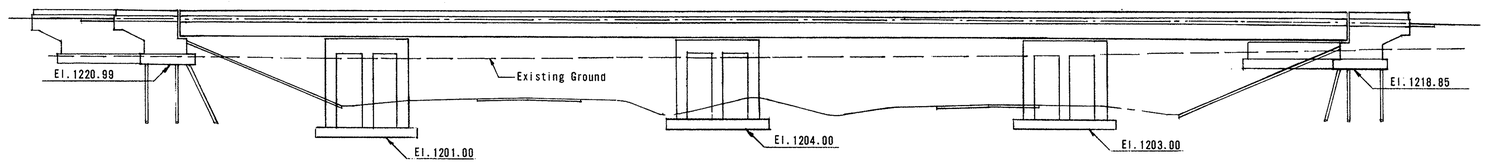
SITE PLAN
BRIDGE NO. SUM-271-0295
INTERSTATE HIGHWAY #271 UNDER SUMMIT COUNTY ROAD NO.17

SUMMIT CO. **STA.564+79.82**

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
HENRY	AIR SURVEY CORP.	PAHL	~~BERGER~~	SHERMAN	MUDD



GENERAL PLAN



ELEVATION

GENERAL NOTES

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57, together with current revisions thereof.
REFERENCE should be made to:
Standard Drawing FSB-1-62, revised 1-15-63, and AS-1-54, revised 8-10-65
" " SD-1-65, dated 11-8-65
" " BR-1-65, Type 1, Sheet 1, Rev. 11-24-65

Supplemental Specifications:
808, dated 2-7-66 825 dated 4-22-65
811, dated 3-29-65 828 dated 3-21-66

PIER FOOTINGS shall extend a minimum of 3" into undisturbed rock or to the elevation shown, whichever is lower.

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

For the abutment piles:
50 tons per pile using an 11,000 ft. lb. hammer
43 tons per pile using a 15,000 ft. lb. hammer

If the energy rating of the hammer is between the ratings as shown above, the required formula capacity shall be determined by interpolation. The design load is 35 tons per pile for the abutment piles.

ESTIMATED QUANTITIES

Item	Total	Unit	DESCRIPTION	Super.	Abuts.	Piers	General
503	538	Cu.Yds.	Unclassified excavation		255	283	
511	397	Cu.Yds.	Class "C" concrete, superstructure	397			
511	96	Cu.Yds.	Class "C" concrete, piers above footings			96	
511	98	Cu.Yds.	Class "E" concrete, abutments above footings		98		
511	166	Cu.Yds.	Class "E" concrete, footings		74	92	
509	163,314	Lbs.	Reinforcing Steel	104,400	13,776	45,138	
513	368,000	Lbs.	Structural Steel	368,000			
514	368,000	Lbs.	Field painting of structural steel	368,000			
517	705.77	Lin.Ft.	Railing(Type 1 aluminum rail and supports and concrete parapet)	645.77	60.00		
505	LUMP	SUM	First test pile.				Lump Sum
507	932	Lin.Ft.	Steel piles, 10BP42		932		
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump Sum
518	73	Lin.Ft.	6" Helical perforated CMP, 707.06 including specials		73		
518	48	Lin.Ft.	6" Helical CMP, 707.06 non-perforated		48		
518	10	Each	Scuppers, including supports	10			
518	35	Cu.Yds.	Porous backfill		35		
808	397	Units	Water-reducing, set-retarding admixture	397			
601	544	Sq.Yds.	Crushed aggregate slope protection				544
825	1490	Sq.Yds.	Concrete Surface Treatment				
828	72	Lin.Ft.	Joint Sealer (end dam)				

SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

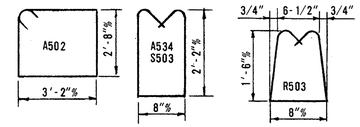
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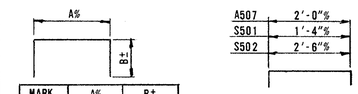
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.
ABUTMENTS				
A501	64	8'-4"	556	B
A502	30	12'-0"	375	B
A503	4	7'-10"	33	B
A504	4	6'-4"	26	B
A505	60	7'-5"	464	B
A506	60	7'-2"	448	B
A507	60	3'-0"	188	B
A508	14	8'-5"	123	B
A509	68	6'-0"	426	S
A510	4	11'-9"	49	B
A511	4	10'-11"	46	B
A512	4	10'-1"	42	B
A513	4	9'-1"	38	B
A514	4	8'-3"	34	B
A515	20	8'-1"	169	B
A516	8	8'-0"	67	B
A517	10	9'-4"	97	S
A518	20	6'-6"	136	S
A519	4	17'-4"	72	S
A520	8	14'-0"	117	S
⊕ A521	16	14'-10"	248	S
A522	12	4'-0"	50	S
A523	10	8'-10"	92	S
A524	4	16'-10"	70	S
A525	14	4'-3"	62	S
A526	36	20'-9"	779	S
A527	18	23'-1"	433	B
⊕ A528	18	22'-11"	430	B
A529	12	21'-3"	266	S
A530	44	3'-3"	149	B
A531	12	3'-2"	40	B
A532	32	5'-4"	178	B
A533	8	14'-4"	120	S
A534	44	5'-7"	256	B
A601	60	14'-7"	1314	B
A602	82	17'-11"	2207	B
A603	82	9'-9"	1201	B
A801	4	25'-0"	267	B
A802	4	24'-2"	258	B
A803	20	23'-7"	1259	S
A804	4	12'-4"	132	S
A805	4	11'-7"	124	S
A806	16	7'-10"	335	S
PARAPET RAILING				
R501	16	14'-9"	*	S
R502	16	4'-5"	*	S
R503	12	4'-2"	*	B
R504	8	5'-4"	*	B
R505	168	14'-7"	*	S

* Parapet railing bars are included with 517 for payment.

BENDING DIAGRAMS

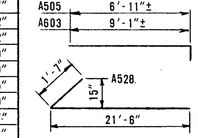


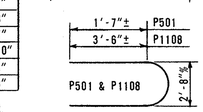


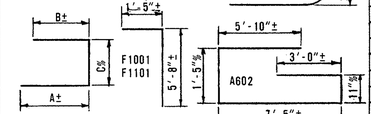
MARK	A±	B±
A501	5'-5"	1'-7"
A503	3'-9"	2'-2"
A504	2'-3"	2'-2"
A506	3'-5"	2'-0"
A508	0'-8"	4'-0"
A510	1'-2"	5'-5"
A511	1'-2"	5'-0"
A512	1'-2"	4'-7"
A513	1'-2"	4'-1"
A514	1'-2"	3'-8"
A515	1'-2"	3'-7"
P502	2'-8"	2'-10"
P1101	35'-9"	3'-8"
P1102	36'-11"	3'-8"

A507 2'-0"±
S501 1'-4"±
S502 2'-6"±

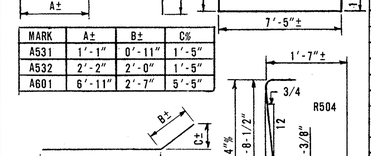
A505 6'-11"±
A603 9'-1"±



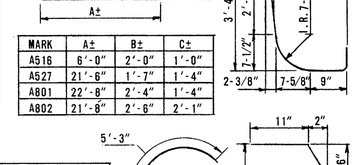




MARK	A±	B±	C%
A531	1'-1"	0'-11"	1'-5"
A532	2'-2"	2'-0"	1'-5"
A601	6'-11"	2'-7"	5'-5"



MARK	A±	B±	C±
A516	6'-0"	2'-0"	1'-0"
A527	21'-6"	1'-7"	1'-4"
A801	22'-8"	2'-4"	1'-4"
A802	21'-8"	2'-6"	2'-1"



SPIRAL BARS

MARK	NO.	CORE DIA % SPIRAL	LENGTH	PITCH	NO. TURNS	WEIGHT
SP401	3	32"	20'-8"	4-1/2"	58	1127
SP402	3	32"	16'-8"	4-1/2"	47	913
SP403	3	32"	17'-0"	4-1/2"	48	932

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 deformations but shall in other respects conform to Item 509. 1-1/2 closed coils shall be provided at the ends of each spiral unit. Four steel channel, tee or angle spacers, weighing approximately 0.68 lb. per lin. ft. of spacer, shall be provided for each spiral unit. They shall be equally spaced along the periphery of the coil. The number of pounds of these spacers, based on 0.68 lb.per lin.ft., will be paid for as reinforcing steel and is included in the tabulated quantity of spiral bars.
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, A701 is a No. 7 size bar and P1002 is a No. 10 size bar.
⊕ Cost of field bending and cutting to be included with Item 509 for payment.

MARK	NO.	LENGTH	WEIGHT	SHP.
PIERS				
P501	18	7'-4"	138	B
P502	156	8'-1"	1315	B
P503	12	35'-9"	447	S
P1001	24	24'-4"	2513	S
P1002	24	20'-8"	2134	S
P1101	6	42'-5"	1352	B
P1102	6	43'-8"	1392	B
P1103	12	21'-0"	1339	S
P1104	6	35'-9"	1140	S
P1105	6	37'-5"	1193	S
P1106	6	38'-1"	1214	S
P1107	6	38'-3"	1219	S
P1108	6	11'-2"	356	B
P1109	28	20'-4"	3025	S
P1110	20	10'-2"	1080	S
F601	180	5'-8"	1532	S
F602	104	8'-2"	1276	S
F1001	48	6'-9"	1394	B
F1002	64	23'-5"	6449	S
F1003	64	14'-1"	3878	S
F1004	64	22'-0"	6059	S
F1101	48	6'-9"	1721	B
SUPERSTRUCTURE				
S501	896	2'-4"	2180	B
S502	448	3'-6"	1635	B
S503	448	5'-7"	2609	B
S601	451	35'-8"	24161	S
S602	567	37'-6"	31936	S
S603	72	39'-0"	4218	S
S604	4	22'-10"	137	S
S605	6	6'-0"	54	S
S606 to S633	2 Ser of 28	33'-0" to 6'-3"	1651	S
S701	451	35'-8"	32879	S
S702	4	23'-0"	188	S
S703	6	6'-0"	74	S
S704 to S731	2 Ser of 28	33'-0" to 6'-3"	2246	S
REPLACEMENT BARS				
RE401	1	5'-3"	- -	B
RE501	1	5'-7"	- -	S
RE601	4	5'-11"	- -	S
RE701	2	6'-3"	- -	S
RE801	1	6'-6"	- -	S
RE1001	2	7'-3"	- -	S
RE1101	1	7'-7"	- -	S

Design Loading - CF-2000(57)
Concrete Class "C" - basic unit stress 1333 p.s.i.
Concrete Class "E" - basic unit stress 1133 p.s.i.
Structural Steel - ASTM A36 - basic unit stress 20,000 p.s.i.

Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i. Except, spiral reinforcement may be plain, Structural Grade with basic unit stress of 18,000 p.s.i.

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

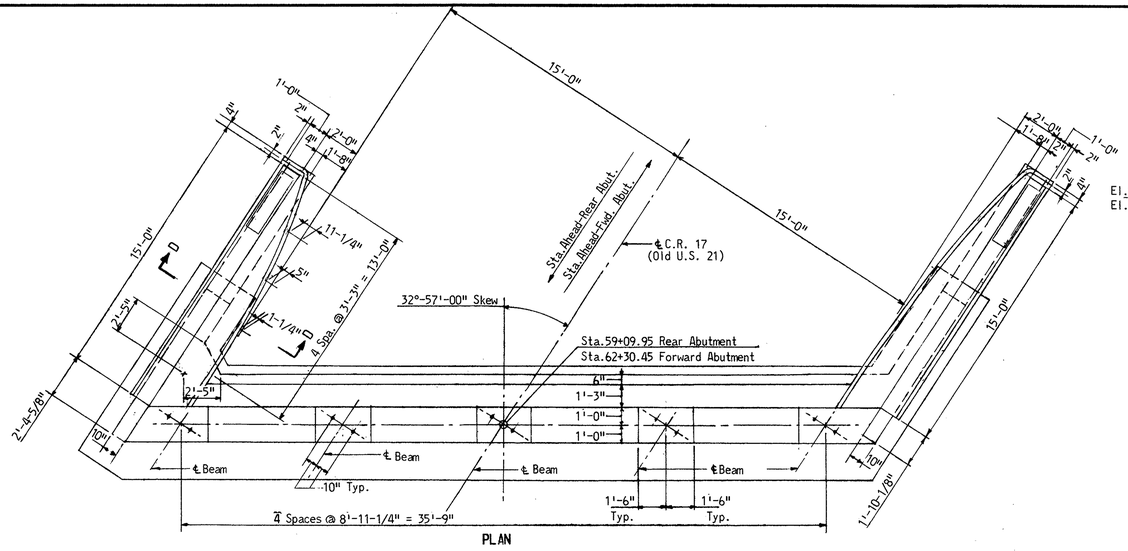
GENERAL PLAN AND ELEVATION, NOTES, ESTIMATED QUANTITIES AND REINFORCING STEEL LIST
BRIDGE NO. SUM-271-0295
I.R. 271 UNDER SUMMIT CO. RD. NO. 17
SUMMIT CO. STA. 564+79.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LAMBERT	BERGER	BERGER	PAHL	MUDD	4-15-66	

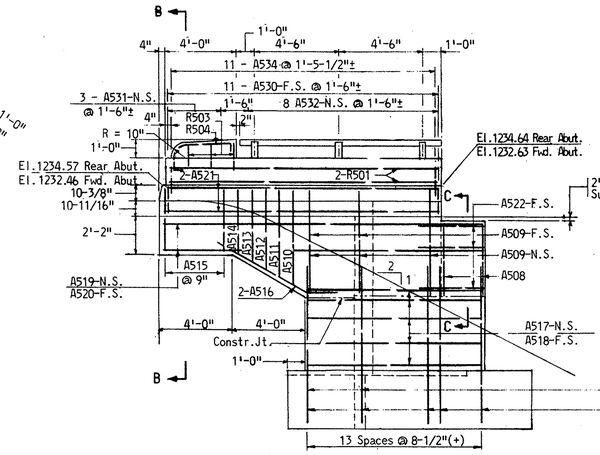
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

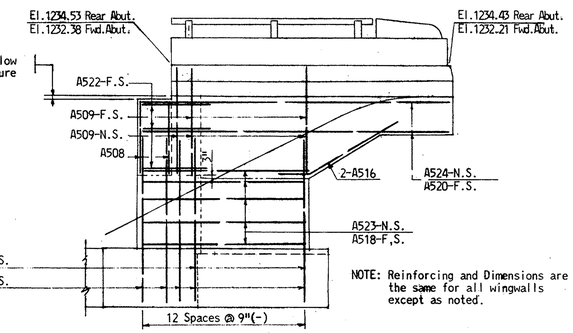
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PLAN

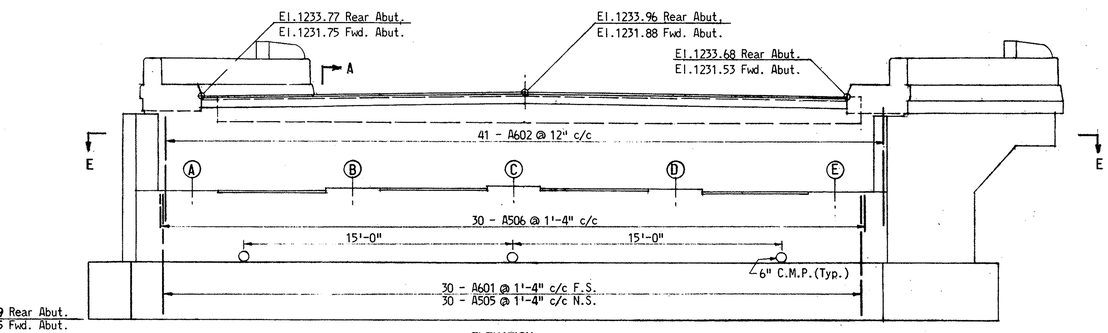


EAST WINGWALL - REAR ABUTMENT
WEST WINGWALL - FORWARD ABUTMENT

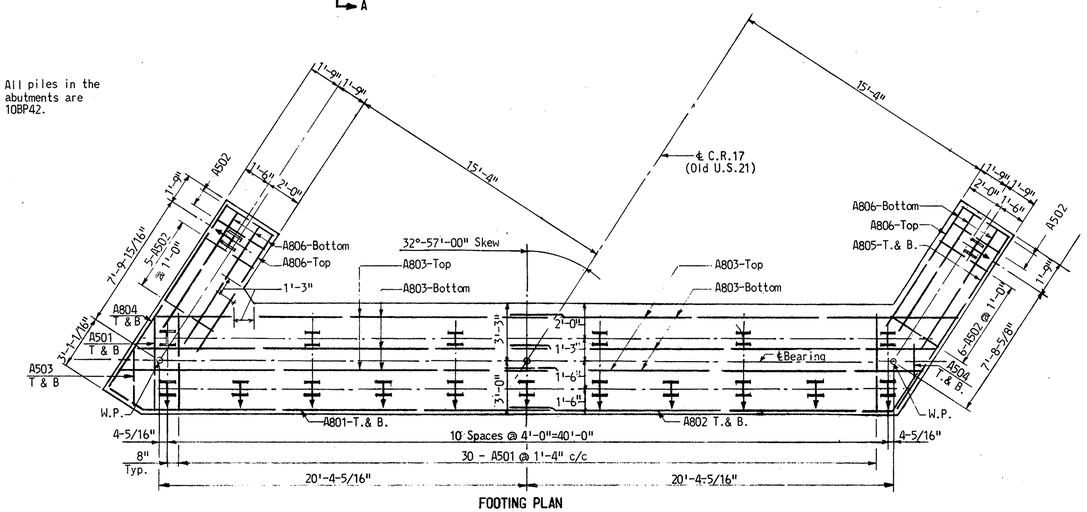


WEST WINGWALL - REAR ABUTMENT
EAST WINGWALL - FORWARD ABUTMENT

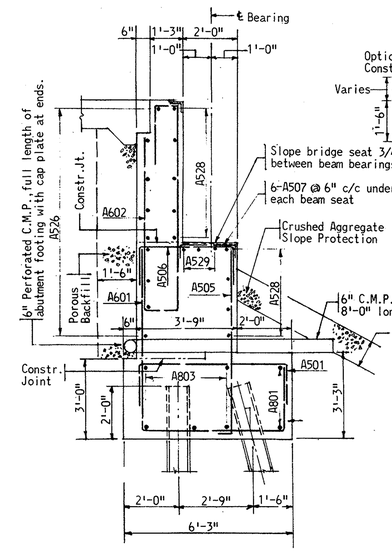
NOTE: Reinforcing and Dimensions are the same for all wingwalls except as noted.



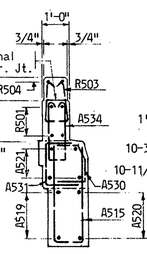
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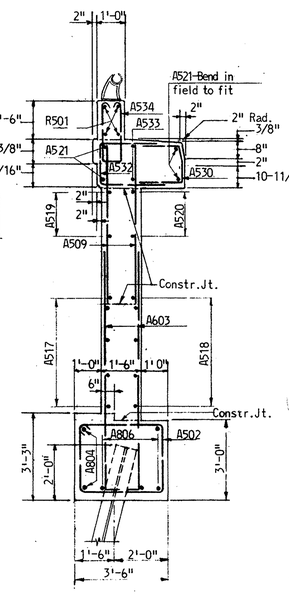
FOOTING PLAN



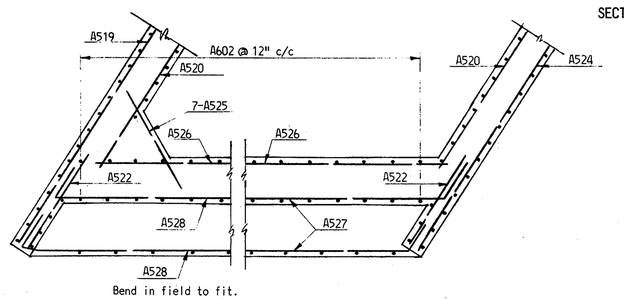
SECTION A-A



SECTION C-C



SECTION D-D



Bend in field to fit.

SECTION E-E

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footing, 1-1/2" in parapet and safety curb and 2" elsewhere.

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

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

CONCRETE shall be Class E.

LEGEND:
N.S. - Near Side
F.S. - Far Side

For details of roadway end finish see Standard Drawing SD-1-65.

	ELEVATIONS				
	A	B	C	D	E
REAR ABUTMENT	1228.46	1228.56	1228.65	1228.51	1228.37
FORWARD ABUTMENT	1226.45	1226.51	1226.57	1226.40	1226.23

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

ABUTMENT DETAILS
BRIDGE NO. SUM-271-0295
I.R. 271 UNDER SUMMIT CO. RD. NO. 17

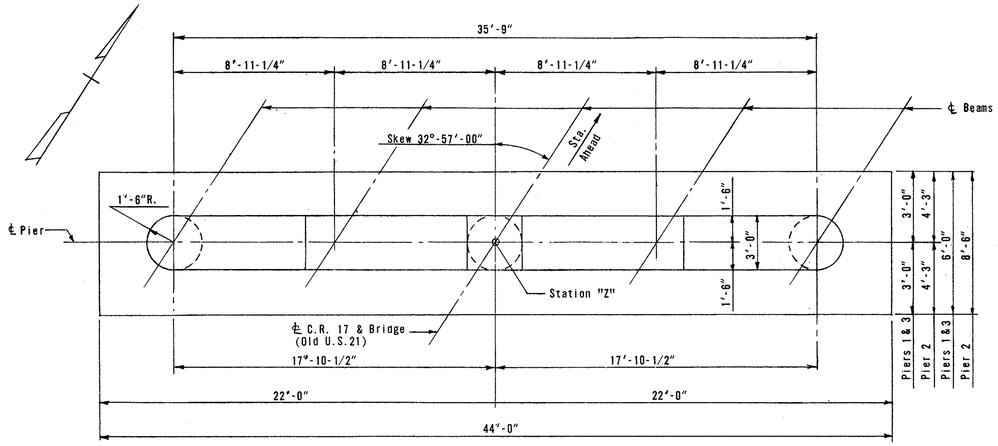
SUMMIT CO. STA. 564+79.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HUANG	BERGER	WALTER	PAHL	MUDD	4-15-66	

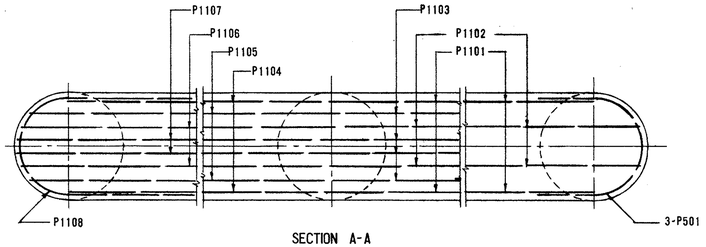
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

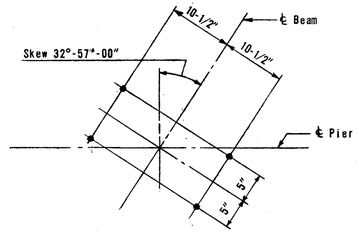
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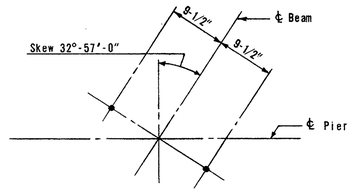
PLAN



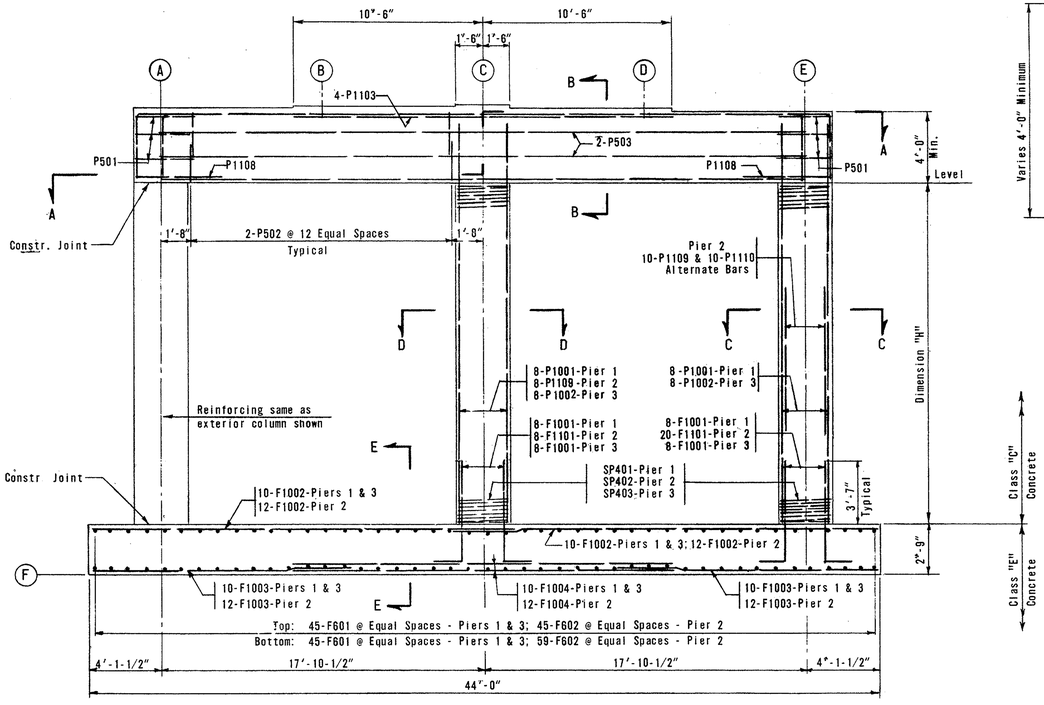
SECTION A-A



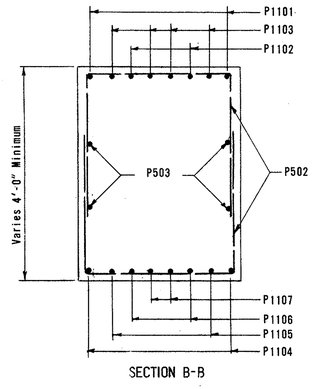
LOCATION OF ANCHOR RODS - FIXED BEARING F-300
PIER 2



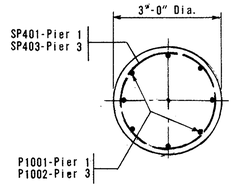
LOCATION OF ANCHOR RODS - EXPANSION BEARINGS E-250
PIERS 1 & 3



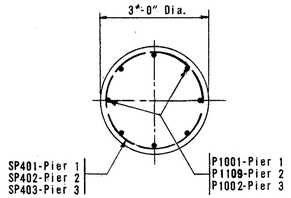
ELEVATION



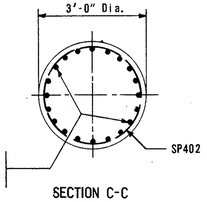
SECTION B-B



SECTION C-C
PIERS 1 & 3



SECTION B-D
ALL PIERS



SECTION C-C
PIER 2

	STATION "Z"	ELEVATIONS						DIMENSION
		A	B	C	D	E	F	H
PIER 1	59+72.95	1228.43	1228.56	1228.66	1228.54	1228.42	1201.00	20'-8-1/16"
PIER 2	60+70.20	1227.65	1227.72	1227.80	1227.64	1227.48	1204.00	16'-8-3/4"
PIER 3	61+67.45	1227.03	1227.09	1227.15	1226.98	1226.81	1203.00	17'-0-3/4"

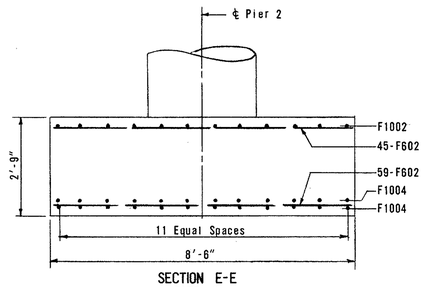
FOUNDATION BEARING PRESSURE: Pier Footings are designed for a maximum bearing pressure of 4 Tons per Sq.Ft.

CLEARANCE of reinforcing steel from face of concrete shall be 3" in bottom of footings and 2" elsewhere.

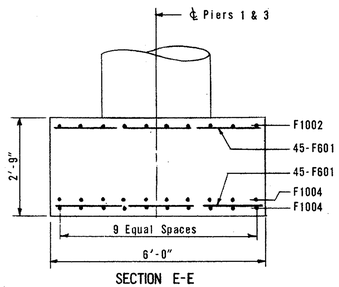
For details of Fixed and Sliding Bearings see Std.Dwg. No.FSB-1-62.

CONCRETE shall be Class E in Footings and Class C above Footings.

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



SECTION E-E
PIER 2



SECTION E-E
PIERS 1 & 3

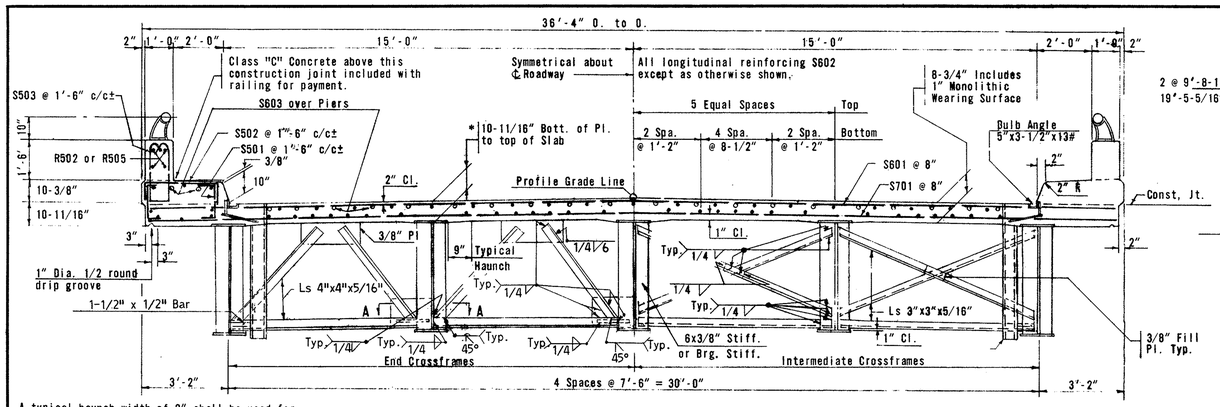
J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

PIER DETAILS
BRIDGE NO. SUM-271-0295
I.R. 271 UNDER SUMMIT CO.RD. NO.17

SUMMIT CO. STA. 564+79.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
HUANG	ALKEMA	WALTER	PAHL	MUDD	4-15-66	

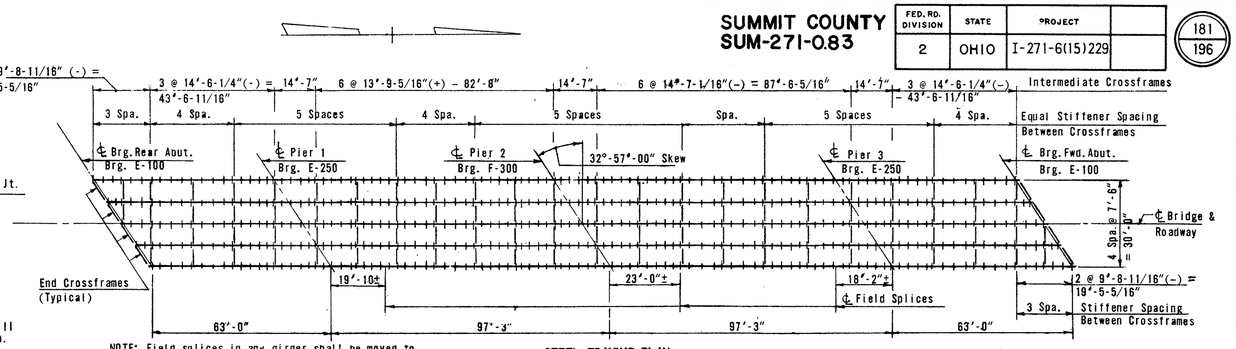
SUMMIT COUNTY SUM-271-0.83	FED. RD. DIVISION	STATE	PROJECT	
	2	OHIO	I-271-6(15)229	



A typical haunch width of 9" shall be used for computing quantity of concrete. However, the haunch width may vary between 8" and 12" provided that the slope shall be not more than 1:4 for a haunch less than 9" in width.

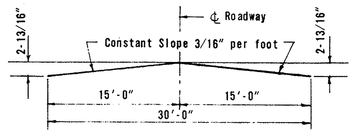
TRANSVERSE SECTION

* This is the nominal dimension. The quantity of deck concrete to be paid for shall be based upon this dimension, even though deviation from it may be necessary because the top flange of the 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.



NOTE: Field splices in any girder shall be moved to clear intermediate crossframes and/or stiffeners.

STEEL FRAMING PLAN



BRIDGE ROADWAY CROWN

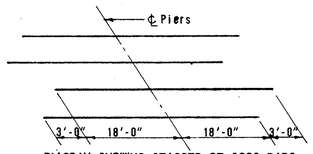
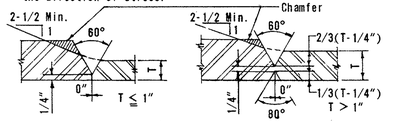
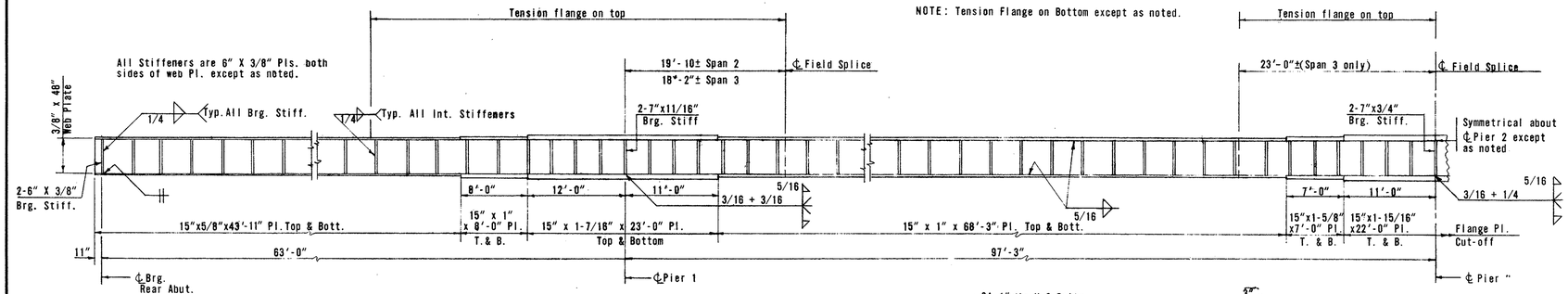


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

All full penetration welds shall be back-gouged and welded after welding far side. Butt welds on beam and girder flange and web plates shall be ground flush, the finish grinding being parallel to the direction of stress.

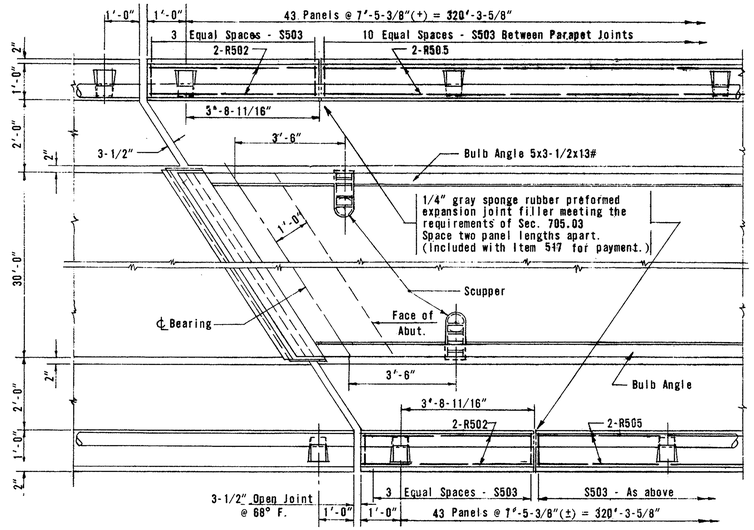


TYPICAL FLANGE SHOP SPLICES

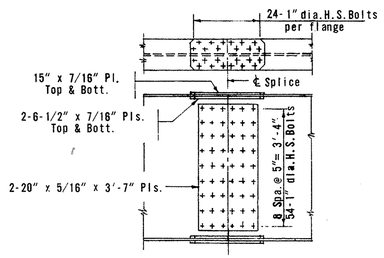


Trim ends of girders as required to maintain 3" clear between girder and face of abutment backwall.

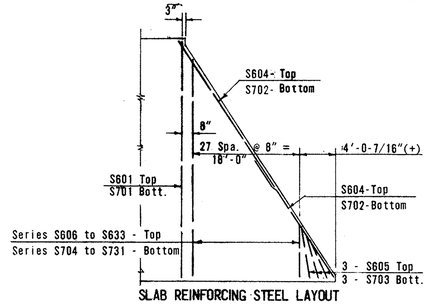
GIRDER ELEVATION



PART PLAN AT ABUTMENTS

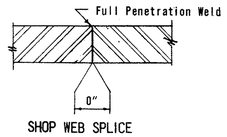


TYPICAL FIELD SPLICE DETAIL

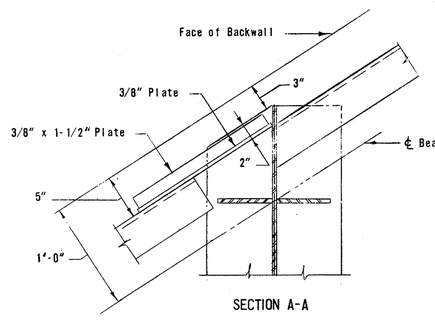


SLAB REINFORCING STEEL LAYOUT

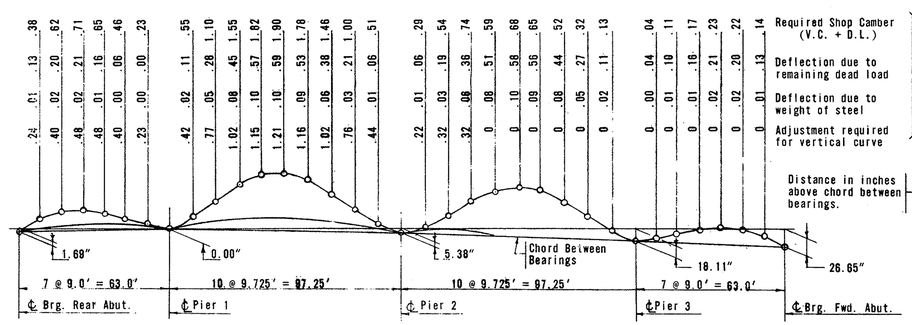
NOTE: Girder web plates may be shop spliced as required by lengths of plates obtainable. Location of shop splices shall be submitted to the Director for approval.



SHOP WEB SPLICE



SECTION A-A



CAMBER DIAGRAM

SUPERSTRUCTURE NOTES

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

For details of roadway end-finish, beam cutoff at backwall, and welded butt joint in end finish angles at centerline of roadway, see Standard Drawing SD-1-65

For details of scuppers, curb plates and gutter supports see Standard Drawing SD-1-65.

For details of fixed and sliding bearings see Standard Drawing FSB-1-62.

For details of aluminum railing see Standard Drawing BR-1-65, Type 1.

For Scupper spacing see Sheet No. 178.

REINFORCING STEEL shall be 1-1/2" clear of surfaces in parapets and safety curbs. Place transverse reinforcing normal to center line of roadway.

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

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

SUPERSTRUCTURE DETAILS
BRIDGE NO. SUM-271-0295
I.R.*271 UNDER SUMMIT CO. RD. NO. 17

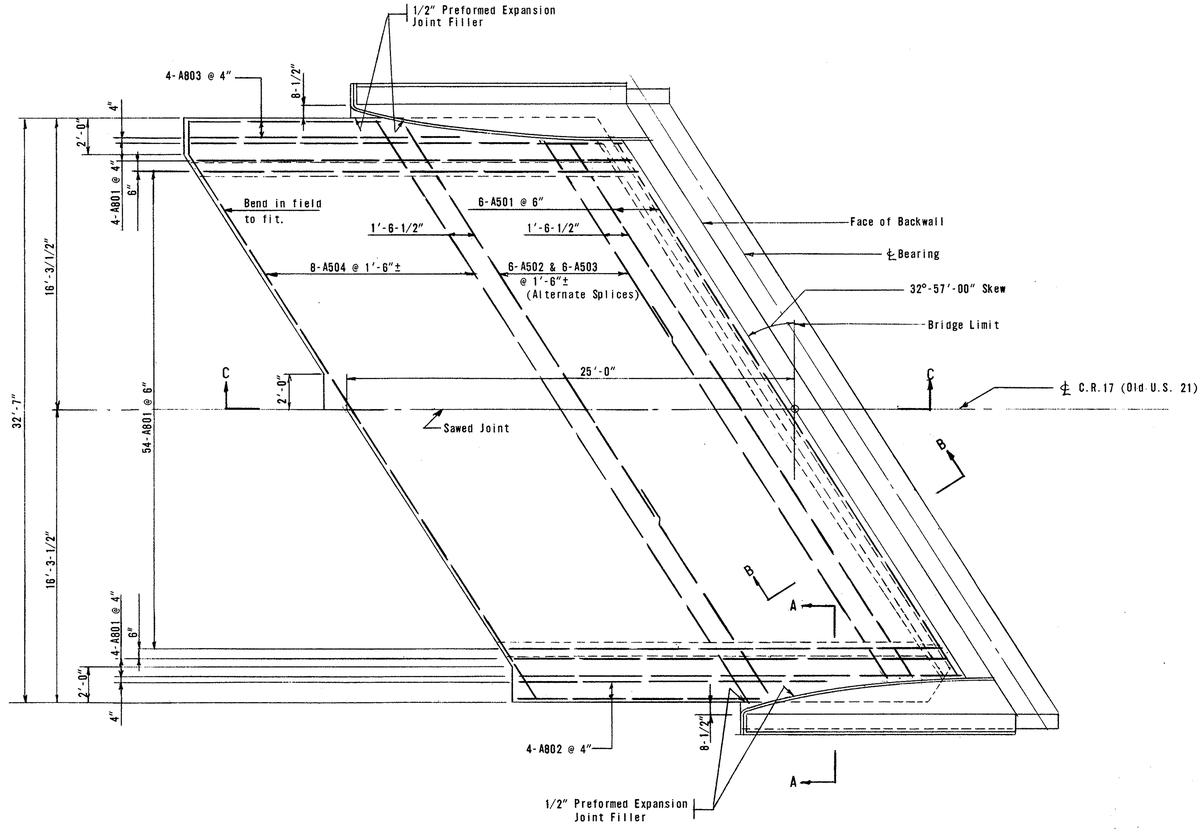
SUMMIT CO. STA. 564+79.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
LAMBERT	HAYDEN	HAYDEN	PAHL	MUDD	4-15-66	

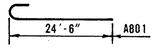
SUMMIT COUNTY
SUM-271-0.83

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

182
196



REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHP.
A801	124	25'-7"	8470	B
A802	2 Series of 4 Bars 1'-3" Incr.	13'-7" to 17'-4"	330	S
A803	2 Series of 4 Bars 1'-3" Incr.	11'-2" to 14'-11"	288	S
A501	12	35'-4"	442	S
A502	12	14'-0"	175	S
A503	12	25'-8"	321	S
A504	16	38'-5"	841	S



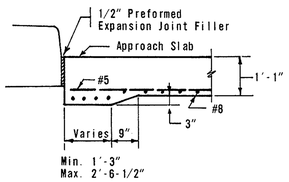
Quantities are for 2 Approach Slabs

NOTES:
1/2" Preformed Expansion Joint Filler shall be included in Item 611 "Reinforced Concrete Approach Slab" for payment.

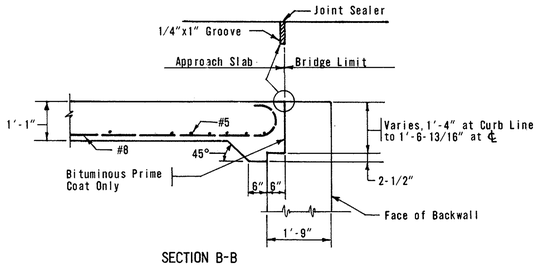
Bar Size is indicated in the Bar Mark. The first digit indicates the Bar Size Number. For example: A801 is a No. 8 Bar Size.

Work this sheet with Standard Drawing No. AS-1-54

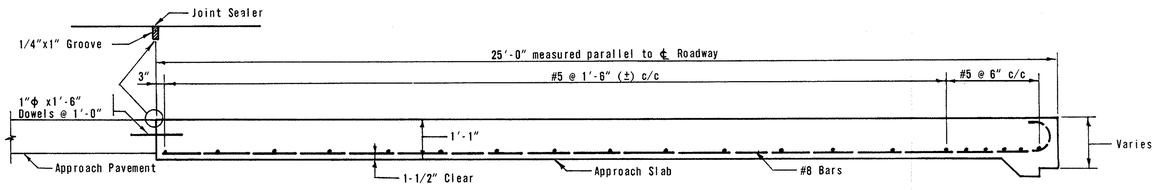
Concrete in Approach Slabs shall be Class C.



SECTION A-A



SECTION B-B



SECTION C-C

J.E GREINER COMPANY
CONSULTING ENGINEERS
BALTIMORE, MARYLAND

APPROACH SLAB DETAILS
BRIDGE NO. SUM-271-0295
I.R. 271 UNDER SUMMIT CO. RD. NO. 17

SUMMIT CO. STA. 564+79.82

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
PAHL	RYNA-RZEWSKI	RYNA-RZEWSKI	SHERMAN	MUDD	4-15-66	

CENTER LINE SURVEY PLAT
OHIO INTERSTATE 271
SUM-271-0.83 (formerly 0.50)
SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP
T-4N R-12W
TRACT 2, LOT 1,2,16,17,18; FRACTION 4; TRACT 3, LOT 1,2,3,7

0 400 800 1200
SCALE IN FEET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

183/196

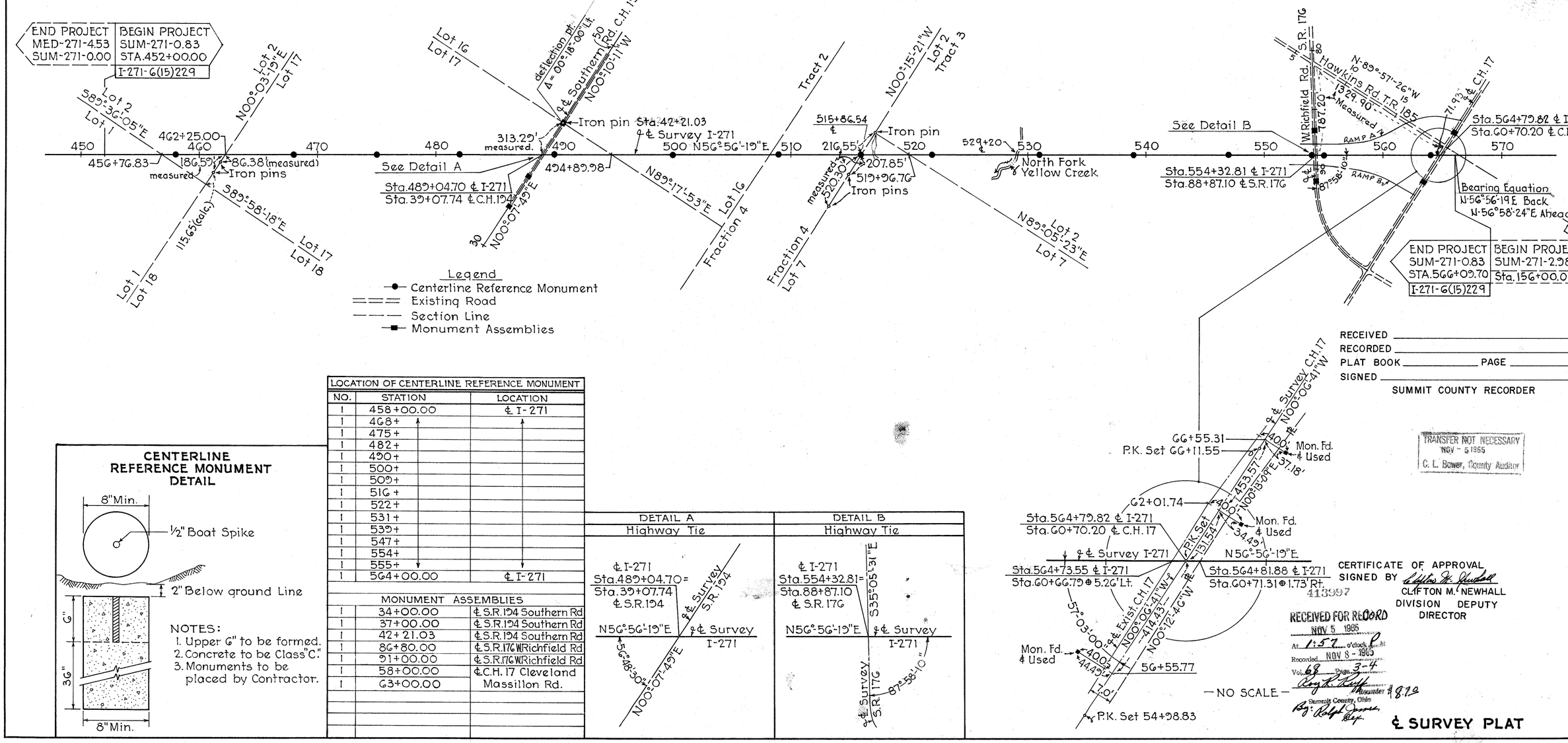
SUMMIT COUNTY
SUM-271-0.83 (0.50)
LIMITED ACCESS

1/14

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 452+00.00 TO STATION 566+09.82 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 1226, OF THE DIRECTOR'S JOURNAL, PURSUANT TO LAW.

TUN 11-5-65

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN SUMMIT COUNTY.
BY K. J. Nelson
DATE OCT. 19, 1965
REGISTERED SURVEYOR NO. 4629



LOCATION OF CENTERLINE REFERENCE MONUMENT		
NO.	STATION	LOCATION
1	458+00.00	℄ I-271
1	468+	
1	475+	
1	482+	
1	490+	
1	500+	
1	509+	
1	516+	
1	522+	
1	531+	
1	539+	
1	547+	
1	554+	
1	555+	
1	564+00.00	℄ I-271
MONUMENT ASSEMBLIES		
1	34+00.00	℄ S.R.194 Southern Rd
1	37+00.00	℄ S.R.194 Southern Rd
1	42+21.03	℄ S.R.194 Southern Rd
1	86+80.00	℄ S.R.176 W.Richfield Rd
1	91+00.00	℄ S.R.176 W.Richfield Rd
1	58+00.00	℄ C.H. 17 Cleveland Massillon Rd.
1	63+00.00	

CENTERLINE REFERENCE MONUMENT DETAIL

NOTES:
1. Upper 6" to be formed.
2. Concrete to be Class "C."
3. Monuments to be placed by Contractor.

DETAIL A
Highway Tie

DETAIL B
Highway Tie

— NO SCALE —

RECEIVED _____
RECORDED _____
PLAT BOOK _____ PAGE _____
SIGNED _____
SUMMIT COUNTY RECORDER

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DIVISION DEPUTY DIRECTOR

413997
RECEIVED FOR RECORD
NOV 5 1965
At 1:57 o'clock P.M.
Recorded NOV 8 - 1965
Vol. 68 Page 3-4
Alwyn K. Ruff Recorder #8.12
Summit County, Ohio
By: Ralph Thomas Dep.

℄ SURVEY PLAT

Ohio Highway Dept. Div. R/W, ENGR. & ADMIN. SEC. WAVERNY, OHIO
AUG 24 1965
APPROVED
Chief, Bureau of Right of Way

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

184
196

2
14

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=400'

SUMMIT COUNTY
Tract 2. Lot 1,2,16,17,18, Fraction 4
T-4N R-12W
RICHFIELD TWP.

END ACQUISITION
MED-SUM-271-4.53

BEGIN ACQUISITION
SUM-271-0.83
Sta. 456+76.83

I-271-6(14)224

I-271-6(15)229
BEGIN PROJECT
Sta. 452+00

J.J. & F.L. Strickler
T.C. Jr. & A.M. Kehoe
T.R.51
W.A. Jr. & L.C. Robb
D.L. & J.R. Griggs
J. & B. Szereto
F.F. Hess
E.A. Hess
K.J. & M.J. Taucher
P. & M. Shroba
Medina County
Summit County
Richfield Twp
Medina Line Rd. - C.H.2
E.C. McCormick
J.H. Cauffield
A. & J. Nitti
F.E. Cass
J.R. & R. Fox
F. Domain
J.R. & A.B. Wajda
S.J. & V.T. Wargo
A. Hoppe Cemetery
Everett Rd. - C.H.47
M. Bayus
G.D. & L.F. Stobbe
L.E. & W.D. Rubright
J.D. & M.C. Clark
J.D. & C.M. Clark
R.M. McClellan
L.W. & O.I. Remmy
T. & M.F. Przeworski
F. Zodnik
G. Felker
C.J. Jr. & A.H. Geraci
J.V. Nesbit
A.M. Keslar
J. Bigelow
Jennie Bigelow
D.D. & D.R. Hallick
L.E. & B.E. Wybel
Southern Rd. - C.H.194
A.J. & H.M. Smith
J. Kern
A.M. Horn
V.W. Gore
E.S. Norris
V.D. & M.B. Kniss
W.L. & F.M. Fry
O.E. Cover
Corporation line of Richfield Village
Bernard Construction Co. an Ohio Corp.
R.L. & M.L. Grant
W.L. & R.I. Knotts
J.J. & J. Mayer
J.C. Lehky
A.J. & A.M. Chopka
W.A. & A.M. Feaver
J.C. Garman, Deceased
J.M.G. Garman
A. Repp
A.S. & T.A. Blasko
W.B. & M.M. Kirby
Rest Area
LA
LA R/W
℄ I-271
Bath Twp.
Tract 2
Tract 3
Fraction 4
Village
Lot-1
Lot-2
Lot-3
Lot-15
Lot-16
Lot-17
Lot-18
420
430
440
450
460
470
480
490
500
510
62
62A
63
65
66
67
68
69
70
71
72
73
73A
74
74 WS
75
78
79
80
81
82
59
60

0 400 800 1200
SCALE IN FEET

SUMMIT COUNTY
Lot 1,2,3,7 Tract 3
T-4N R-12W
RICHFIELD TWP.

END PROJECT
Sta- 566+09.82
SUM-271-2.98
I-271-6(15) 229

Legend
Residence ▪
Barn etc. ▫
Landlocked (L)

Hawkins Rd. - T.R.185
West Richfield Rd. - S.R.176
Cleveland - Massillon Rd. - C.H.17
R.N. Babb
W.J. Shoenbeck
Fraction
ROLLING ACRES SUB. PB-46 P-69, 70
J.D. & J.L. Strong
W.W. Davis
J.R. Wajda
E.M. Adams
R.A. Gerries
F.E. & D.L. Wilkeman
F.E. & M.J. Wyman
R.D. & N.A. Young
R.D. & N. Young
J.T. & M.F. Palomberg
R.S. & J.C. Egnatuk
T.S. & J.B. Herron
G.B. & S.C. Miethmiller
G.C. & M.E. Smith
C.R. & N.E. Kuntz
R.E. & F.L. Trottnow
R.F. & F.C. Marietta
J.T. & M.R. Osterling
R.D. & M.J. Mohn
Ramp A
Ramp B
Turnaround
℄ Temp. Runaround
Corporation line
E.L. & F.A. Harpfer
E.M. & K.E. Wiltshire
℄ I-271
℄ I.R.77
Tract 3
Lot-1
Lot-2
Lot-7
Lot-8
520
530
540
550
560
86
88
90
91
92
93
94
(L)
30"
20"
The B & L Realty Co.
H.A. Newton
A. & J.A. Burman
H. Strnad Jr.
G.M. Blauman
H. Bystranowski
Bernard Construction Co., an Ohio Corp.
D.F. & E.H. Greisinger
H.C. Hunt
V.B. Stouffer
Pemco Inc
Wheatley Rd. T.R 174
Corporation line of Richfield Village

UTILITIES
(A) Western Reserve Telephone Co. 245 Main St. Hudson, Ohio
(B) Ohio Edison Co. 47 N. Main St. Akron, Ohio.
(C) East Ohio Gas Co. East Ninth St. at Superior Cleveland, Ohio

Revised Area & Pcl. Limits for Pcls. 73-WS, 74-WS, & 75-WS BY L&D
9-7-67 Added Corporation line R.A.W

Date	REVISIONS	By
10-12-66	ADDED R To Pcl 66	W.I
10-19-66	Pcl. 77-WD Deleted	G.F.
2-7-67	NAME CHANGE Pcl 82-WL	G.Z.
	Added Pcls. 72-WS, 72-A-WS, 73-WS	
	73-A-WS, 74-WS, 74-WS-1, & 75-WS	L&D
	Deleted Pcl 73-A-WS	L&D

R/W PLAN PROPERTY MAP

State Highway Dept. Div. 4
R/W - ENGR. & ADMIN. SHEET
AKRON, OHIO
AUG 24 1966
LOGGED
Date
Init.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

185
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

3
14

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

Number of Owners _____
Number of Owners with Buildings 4

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS	TYPE OF FUNDS
72 WS	Arthur & John Nitti	3304	584	28.69	3.83	No	17.06		4,6,7		LSI
72A-WS	" " "				0.74	No		7.06	6		LSI
73 WL	Jane H. Cauffield	2325	232	72.95	4.17	No	64.16		4,6,7		I
73 WL-RP1	" "				0.70	No			4,6,7	Roadside Park	I
73 WS	" "				3.92	No			4,6		LSI
74 WL	W.B. & Mildred M. Kirby	2049	417	88.28	19.85	Yes	43.44	7.96	4,5,6,7,8	PRO 0.27 Ac±	I
74 WL-RP1	" " "				11.97	No			4,5,6,8	Roadside Park	I
74 WL-RP2	" " "				1.54	No			5,7	Roadside Park	I
74 WL-RP3	" " "				0.40	No			5,8	Roadside Park	I
74 WA-1	" " "					No			8	Structure Removal	I
74 WA-2	" " "					No			8	Structure Removal	I
74 WD	" " "				0.02	No			8	P.R.O. 0.09 Ac±	I
74 AWD	" " "				0.03	No			8	P.R.O. 0.16 Ac±	I
74 WS	" " "				2.53	No			5,6		LSI
74 WS-1	" " "				0.02	No			5		LSI
75 WL-1	Jennie Bigelow	3576	666	94.98	0.61	No		84.46	4,5,7		I
75 WL-2	" "				0.64				6,7		I
75 WL-RP1	" "				6.78				4,5,7	Roadside Park	I
75 WL-RP2	" "				0.34				5,7	Roadside Park	I
75 WS	" "				2.15	No			5,7		LSI
78	Arlene M. Horn	3247	494	12.002		No			8	No R/W Required	
79 WL	Walter L. & Frieda M. Fry	3315	56	53.88	11.44	Yes	9.75	32.42	8,9	P.R.O. 0.27 Ac±	
79 T	" " "				0.01	No			8	Field Drive Constr.	
80	Oscar E. Cover	2650	42	6.001					8	No R/W Required	
81 WL	Charles & Theodore Garman	4558	526	58.13	8.04	No	48.54	1.55(L)	9,10		
82 WL	Bernard Construction Company, an Ohio Corporation	3782 3786	369 229	128.55	0.01	No		128.54	10		
83	Not Used									No R/W Required	
84 WL	Henry Bystranowski, Rose B. Turner & Lauretta Kurtzhals.	4397 2882 4330	123, 127 192 246	40	2.06	No		37.94	10		
85 WL	Gustave M. Blauman	4343 3308	590 341	15	1.42	No		13.58	10		
86 WL	J.T. & M.H. Osterling			133,031 Sq.Ft	1,096 Sq.Ft.	No	131,935 Sq.Ft.		11	Lot 10, Rolling Acres Subd.	
87 WL	B & L Realty Co.	3906	672	16.0	0.21	No		15.79	11		
87 T	" " "				0.07	No			11	Drainage course	
88 WL	Robert D. & Mary I. Mohn	3164	510	12.69	6.71	Yes	5.14	0.84(L)	10,11		
88 T	" " "				0.05	No			11	Drainage Course	
88A WL	" " "				132,680 Sq.Ft.	37,275 Sq.Ft	No	95,405 Sq.Ft.		Lot 9, Rolling Acres Subdiv.	
89	Not Used									No R/W Required	
90 WL	Helen A. Newton	2818	1	35.73	7.85	No	1.10(L)	26.78	11,12		
90 T	" "	1764	100		0.04				11	Drainage Course	

INTERSTATE

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS	TYPE OF FUNDS
* 91 WL	Rexford N. Babb	606	307,8	159.90	11.98	No	69.35	17.20	12	P.R.O. 0.49 Ac±	
91 AWD	" "	"	"		0.01	No			12	P.R.O 0.07 Ac±	
91 BWD	" "	"	"		0.10	No			13	P.R.O 0.07 Ac±	
91 CWD	" "	"	"		0.023	No			13	P.R.O 0.079 Ac±	
91 T	" "	"	"		0.01	No			13	Temporary Runaround	
91 T-1	" "	"	"		0.06	No			14	Temp. Runaround	
92	Not Used									No R/W Required	
* 93 WL	Pemco Inc.	4031	249	26978	7.18	No	4.33	15.008	13,14	P.R.O. 0.46 Ac±	
94 WL	Vernon B. & Gordon A. Stouffer	3113	500	421.97	0.60	No	0	420.86	13	P.R.O. 0.51 Ac.±	
94 T	" " " "	"	"		0.40				14	Field Drive Constr.	
93 T	Pemco Inc.				0.27	No			13,14	Drive Construction	
91 AWL	Rexford N. Babb.	606	307,8		9.99	No	5.26	9.55	12,13	P.R.O 1.50 Ac.±	
91 BWL	" "	"	"		1.97	No	31.40	—	13	P.R.O 0.87 Ac±	
91 WD	" "	"	"		0.02	No			12	P.R.O. 0.07 Ac±	
73A	E.C. McCormick	3389	391	221.0595	No TAKE				6		

INTERSTATE

SUMMARY - Estimated Quantities

Item 607 Fence Type 47			607-GATE
Sh. No.	STATION TO STATION	L.F.	EA.
4	453+74 - 463+71	997	
5	467+98 - 480+00	1705	
6	S.B. Rest Area	1769	1
7	N.B. Rest Area	1757	1
8	480 - 495	2980	
9	495 - 510	3015	
10	510 - 525	2090	
11	525 - 540	1786	
12	540 - 555	3013	
13	555 - 570	3639	1
14	160 - 170	1310	
	TOTAL	24,061	3

RP = Roadside Park Parcel
(L) = Landlocked

Note: T.B.A. does not include P.R.O.
* Indicates parcel listed at end of summary.

SUMMARY OF OWNERS

Deleted Structure in Parcel 73 WL By Sam 3-30-67
REVISED AREA & PCL. LIMITS PCLS. 73-WS, 74-WS, & 75-WS BY L&D
PCL. 73-A-WS DELETED BY L&D
PCLS. 72-WS, 72A-WS, 73-WS, 73A-WS, 74-WS, 74-WS-1, & 75-WS ADDED BY L&D

Name Change Pcl. P.R. WL 2-7-67 G.Z.
Name Change Pcl. 81 WL 12-30-66 Sam BWL
Changed Deed Area & Residue Pcl. 82-WL 11-29-66 L.F.
Pcl. TT-WP Deleted & PER. STAG. 10-19-66 G.F.
Changed Deed Area & Residue Pcl. 72-WS 10-12-66 L.F.
T.B.A. Change Pcl. 75WL-RP-2 9-16-66 L.F.
REVISED RESIDUE PARCEL 79-WD 9-15-66 L.F.
Changed Residue on Pcls 74 WL & 93 WL 9-13-66 BY W.I.

State Highway Dept. Ohio 4
Bridge & Grade Sep. Sect.
Engineer & Admin. Sect.
Columbus, Ohio
AUG 2 4 1966
LOGGED
Grade
Str.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(05)229	

186/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

4/14

SUMMIT COUNTY
TRACT 2, LOTS 1,2,17,18
T-4N R-12W
RICHFIELD TWP

73 WL — T.B.A.=4.17 Ac.± P.R.O.=0.00 Ac.± Cont.=4.17 Ac.±

73 WL RP-1 — T.B.A.=0.70 Ac.± P.R.O.=0.00 Ac.± Cont.=0.70 Ac.±

RP Parcels = Roadside Park Parcels

For Details of Southbound Rest Area See Sheet No. 6

For Details of Northbound Rest Area See Sheet No. 7

ARTHUR & JOHN NITTI (72A WS) T.B.A. = 0.74 Ac.

JANE H. CAUFFIELD (73 WS) T.B.A. 3.92 Ac.

W.B. & MILDRED M. KIRBY (74 WL)

JENNIE BIGELOW (75)

ARTHUR & JOHN Nitti (72 WS) T.B.A. = 3.83 Ac.

State of OHIO — ACQUIRED UNDER MED/SUM-271-4.53/0.00 (72 WL)

Ohio Edison Co.

Cultivated

LOT-1 · LOT-2 · LOT-17 · LOT-18

I-271-6(14)224 | I-271-6(15)

MED-271-4.53 BEGIN PROJECT STA. 452+00

END ACQUISITION MED-271-4.53 | BEGIN ACQUISITION SUM-271-0.83 Sta. 456+76.83

Limit of Constr.

Existing R/W Fence

C.P.A. 450+02 298.01' N 56°03'26" E 217.84'

452+17.82 303.35' N 56°03'26" E 782.27

450+00 300' · 445+00 185.0 · N 33°03'34" W 106.42' · 450+00 193.58

N-55°-57'-18"E 374.26' · S 89°36'05" E 187.45' · 453+74.20 200.0' · 454+19.60 170.0'

325.95' N55°10'50"E · 281.11' S52°51'34"W · 54.42' · C.P.A. 450+02 193.6'

457+00.0 210.0 · 457+00.0 190.0 · 460+00 315.38 N 38°17'36" E 591.41

G71.33' N56°05'06"E · G38.29' S58°44'01"W · I.A.P.A. 458+70 210.55'

463+71.26 220.0' · C.P.A. 463+71.26 218.58' N 00°33'19" E 341.58' · 463+38.02 170.0' · 60.04' · 5°16'39"

N57°48'15"E G62.05' · N 00°33'19" E 908.82' 204.14' · 62 · 61

Ramp U 58 · 60 · SOUTH BOUND LANE

445 · 455 · 460 · 461+26 · +25.00 · 461+77.18 71.93' · 86.38'

+76.83 ℄ I-271 Survey N 56°56'19"E · 583.20' · 459+70.09 55.41'

NORTH BOUND LANE

Ramp W 55 · 58

452+50 211.50' · Limit of Constr. 501.23' S 52°56'04" W

452+00.00 215.00' · S 52° 56' 04" W 451.10' · 457+00.00 180.00'

364.78 S 68°16'22" W · 459+06.15 151.55' · 459+50.71 181.0'

460+57.67 251.69' · N 89°11'17" W 697.04'

MATCH LINE ARTHUR & JOHN NITTI (72 WS) · 458+28.73 600' Rt. · 416.81' LA · C.P.A. 458+30.30 597.67' · 50' Easement Ohio Edison Co. · LOT 18 · LOT 17

MATCH LINE · 416.81' LA · ℄ N 00°15'19" E · 50' Easement Ohio Edison Co.

S89°-36'-05"E 181.60' · N00°-33'-19"E 115.46' · 75 WL-1 · N 89°39'37" E 100.21' · Iron pins 0

461+21.70 155.38' · 75 WL-1 · 179.56' · 463+27.59 170.0' · N55°-21'-05"E 541.61'

N55°-16'-00"E 377.04' · 53.41' · 128.21' · 102'x54"ø · 115.56' (dented) · C.P.A.

S89°-57'-24"E 445.95' · 74 WL RP-2

S89°-58'-18"E · JENNIE BIGELOW (75) · Limit of Constr.

Begin Sheet, Sta. 450+00 · End Sheet, Sta. 465+00

ITEM 607 - FENCE	SIDE	TYPE 47
453+74.0 To 463+71.0	LT.	997 L.F.
SHEET TOTAL		997 L.F.

TYPE OF FUNDS
Interstate = All parcels except WS parcels.
LSI Fund = WS parcels.
Revised LA Line in Par. 72 WS - 6-19-67

Date	REVISIONS	By
10-12-66	ADDED PL. TO Pcl 72 WL	WI
3-30-67	Deleted Structure in	
	Pcl 73 WL.	S.S.
	Added Pcl. 72-WS, 72-AWS, & 73-WS	L&D
	Revised Area & Pcl Limits for	
	Pcl. 73-WS & 72-WS	L&D

R/W PLAN Sta. 450+00 to 465+00

State Highway Dept. Div. 4 RAY ENGR. & ADMIN. SECT. HAVERHILL, OHIO
AUG 29 1968
LOGGED Chkd. BH.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

187/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

5/14

SUMMIT COUNTY
LOT - 17
T-4N R-12W TRACT 2
RICHFIELD TWP.

For Details of Southbound Rest Area See Sheet No.6

Limit of Constr.

Rest Area

74 W. B. & MILDRED M. KIRBY

74WL RP-1

470+00.0 60.0

N57°-48'-15"E

662.05'

N58°-05'-03"E 500.10'

℄ Ramp U 66

Cultivated Field

74 WS T.B.A. 2.53 Ac.

S 81°-04'-27"E 672.68

S33°-03'-41"E 440.0'

475+00.0 210.0'

LA

N58°-05'-03"E 500.10'

480+00.0 200.0'

C.P.A. 474+98 208.0'

IAPA 480+00 198.0'

N54°-38'-51"E 500.40'

℄ Ramp V 75

475+00.0 150.0'

76

78

480+00.0 170.0'

Begin Sheet, Sta. 465+00

End Sheet, Sta. 480+00

74 WL

469+71.37 Iron pin 2.73' Left

470

℄ I-271 Survey

N 56°56'19"E

SOUTH BOUND LANE

475

74 WL

NORTH BOUND LANE

℄ Ramp X

75

71

227.40'

75 WL-2

468+68.99 155.0'

188.04'

472+20.31 160.0'

74WL RP-3

475+00.0 170.0'

67

S55°-21'-05"W 541.61'

C.P.A. 467+98 198

S57°-45'-14"W 351.36'

75WL RP-2

S58°-59'-11"W 279.87'

S60°-22'-13"W

Limit of Constr.

480+00.0 200.0'

40.16' 52.97'

LA

S56°-07'-13"W 431.08'

S56°-07'-13"W 228.82'

S59°-48'-04"W LA

500.90'

500.62'

468+00.0 200.0'

61.29'

73.75

468+40.16 199.43

74WL RP-2

475+00.0 190.0'

IAPA 479+00 208.0'

480+00.0 215.0'

468+00.0 261.29'

74 WS-1 T.B.A. = 0.02 Ac.

75 WS T.B.A. 2.15 Ac.

472+71.20 193.26'

IAPA 472+70.12 191.3'

N89°-53'-20"W

JENNIE BIGELOW

Rest Area

S89°-57'-24"E 445.95'

S00°-04'-27"E 181.55'

75WL RP-1

467+01.15 413.56'

S33°-03'-41"E

S16°-08'-16"W 622.47

R.P. Parcels = Roadside Park Parcels

For Details of Northbound Rest Area See Sheet No.7

ITEM 607 - FENCE	SIDE	TYPE 47
467+98 TO 480+00	RT.	1203 L.F.
474+98 TO 480+00	LT.	502 L.F.
SHEET TOTAL		1705 L.F.

TYPE OF FUNDS

Interstate Fund = All parcels except WS parcels
LSI Fund = WS parcels

Date	REVISIONS	By
10-15-68	Added Pcls, 74-WS, 74-WS-1 & 75-WS	L&D
	Revised Area & Pcl Limits for Pcls. 74-WS & 75-WS	L&D

R/W PLAN Sta. 465+00 to 480+00

State Highway Department of Ohio
RIGHT OF WAY ADMIN. SECT.
CINCINNATI, OHIO
AUG 24 1966
LOCATED
Chief Engr.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-0(15)229	

188
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

6
14

SUMMIT COUNTY
RICHFIELD TWP.
LOT 2
T-4N R-12W TRACT 2

SUMMIT COUNTY
RICHFIELD TWP.
LOT 17
T-4N R-12W
TRACT 2

W. B. & MILDRED M. KIRBY

ESTIMATED QUANTITIES	
ITEM 607 FENCE	L.F.
463+71.26 to 466+58.20	517
466+58.20 to 474+98 (648.92' LT.)	812
474+98 (648' LT.) to 474+98 (208' LT.)	440
TOTAL	1769
ITEM 607 GATE	EA
467+10	1

E.C. McCORMICK
73A No Take

℄ S 89°-36-05" E

466+57.13
650.0'

C.P.A.-466+58.2
648'

℄ LOT 2 ℄ LOT 17 464.47'

OHIO EDISON CO.
50' EASEMENT

12' GATE

℄ LA N 56°-56'-19" E 842.87'

I.A.P.A. - 471+00
648'

475+0000
650.0'

C.P.A. 474+98
648.00'

S 81°04'27" E 672.68

Brush

JANE H. CAUFFIELD
73 WS
T.B.A. 3.92 Ac.

465+60.37
504.46'

50'
50'

℄

74 WS

74WL RP-1

N 38°-17'-36" E 591.41

N 00°-33'-19" E 341.58'

Lot 2 ℄ Lot 17

Pine Trees

Pine Trees

Limit of Constr.

Woods

S 33°-03'-41" E 440.0'

74 W.B. & MILDRED M. KIRBY

PARCEL	T.B.A.	P.R.O.	Cont.
74 WL	19.85 Ac.	0.27 Ac.	20.12 Ac.
74 WL-RP1	11.97 Ac.	0.00 Ac.	11.97 Ac.
74 WL-RP2	1.54 Ac.	0.00 Ac.	1.54 Ac.
74 WL-RP3	0.40 Ac.	0.00 Ac.	0.40 Ac.
74 WD	0.02 Ac.	0.09 Ac.	0.11 Ac.
74 A-WD	0.03 Ac.	0.16 Ac.	0.19 Ac.
74 WS	2.53 Ac.	0.00 Ac.	2.53 Ac.
74 WS-1	0.02 Ac.	0.00 Ac.	0.02 Ac.

73 WS

C.P.A. - 463+71.26
218'

463+71.26
220.0'

S 76°-39' Lot 17

N 56°-05'-06" E 671.33

73-WL RP-1

662.05' S 57°-48'-15" W

463+38.02
170.0'

℄ Ramp U
65

908.00'
N 00°-33'-19" E
204.14'

73 WL

74 WL

CPA. 474+98
208.01'

475+00
210'

℄ LA
500.10' N 58°-05'-03" E

℄ Ramp V

500.40' S 54°-38'-51" W

470+00.00
160.0'

500.10'
S 58°-05'-03" W

475+00
150.00'
75

74 WL

TYPE OF FUNDS
Interstate Fund:
All parcels except
WS parcels
LSI Fund = WS parcels

Iron Pin

469+71.37
2.73'

465 ℄ Survey I-271 470 475

+25.0

MATCH LINE

N 56°-56-19 E

NOTE:
For Northbound Rest Area See Sh. 7
For Mainline Parcels See Sh. 5

75 WL-2
JENNIE BIGELOW

Date	REVISIONS	By
	Added Pcls. 73-WS, 73-A-WS &	
	74-WS	L&D
	Revised Area & Pcl. Limits For	
	Pcls. 73-WS, & 74-WS	L&D
	Deleted Pcl. 73-A-WS	L&D

R/W PLAN SOUTHBOUND REST AREA

State Highway Dept. of Ohio
R/W ENGINEERING DIVISION SECT.
RANDOM, OHIO
AUG 29 1955
LOGGED
Drawn
Checked

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

189
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

7
14

SUMMIT COUNTY
RICHFIELD TWP
LOTS 1, 2, 17, 18
TRACT 2 T-4N R-12W

Note:
For Southbound Rest Area See Sh. 6
For Mainline Parcels See Shs. 4, 5

JANE H. CAUFFIELD

W.B. & MILDRED M. KIRBY
Note: See Sheet 6 For Parcel Acreage

℄ Survey I-271

N 56°-56'-19" E

Iron Pin

469+71.37
2.73'

297.40'

N 89°-53'-20" W

65

188.04'

N 57°-45'-14" E

472+20.31
160.0'

N 56°-07'-13" E

431.08'

468+00.00
200.0'

468+40.16
199.43'

40.16'

529'

468+68.95
155.0'

351.36'

61

463+27.59
170.0'

541.61'

N 55°-21'-05" E

462+25.00

460

459+70.09
55.41'

461+77.18
71.93'

N 00°-33'-19" E
86.38'

179.56'

100.21'

461+21.70
155.38'

377.04'

N 55°-16'-00" E

459+06.15
151.55'

459+50.11
187.0'

128.21'

102"x 54"ø

53.41'

60

115.46' N 00°-33'-56" E

181.60' S 89°-39'-37" E

LOT 2
LOT 1

LOT 2
LOT 17

℄ Ramp X

℄ Ramp X

LA

MEET EXIST. FENCE
C.P.A. - 460+60.37 -250.3

460+57.67
251.69'

Limit of Constr.

445.95'

S 89°-57'-24" E

LOT 17
LOT 18

468+00.00
261.29'

S 00°-04'-27" E

181.55'

467+01.15
413.56'

S 33°-03'-41" E

338.77'

S 16°-08'-16" W 622.47'

N 16°-08'-16" E 416.81'
N 00°-15'-19" E

50'

58'

Ohio Edison Co.
EASEMENT

C.P.A. 458+32.44
598'

I.A.P.A.-463+00
598'

LA

S 56°-56'-19" W 971.27'

C.P.A. - 467+98
598'

468+0
600

12' GATE

Power Line 4 Wires

ARTHUR & JOHN NITTI

72 WS
T.B.A. = 3.83 Ac.
P.R.O. 0.00 Ac.
3.83 Ac.

73 WL

72 WL

75 WL-1

74 WL

75 WL-2

74WL RP-2

75WL RP-2

74 WS-1

75 WS
TBA 2.15 Ac.

75WL RP-1

JENNIE BIGELOW

75 WL-1	75 WL-2	75WL RP-1	75WL RP-2
T.B.A.=0.61 Ac±	T.B.A=0.64 Ac±	T.B.A.=6.78 Ac.±	T.B.A=0.34 Ac±
Lot 2 0.35 Ac± Lot 17 0.26 Ac± Cont.=0.61 Ac±	Cont.=0.64 Ac±	Cont. 6.78 Ac.±	Cont.=0.34 Ac±

ITEM 607 FENCE	TYPE 47
460+60.37 TO 458+30.3	417 L.F.
458+30.3 TO 467+98	940 L.F.
467+98 (598' TO 198' RT)	400 L.F.
SHEET TOTAL	1,757 L.F.

ITEM 607 GATE	
	1 EA.

TYPE OF FUNDS
Interstate Fund=
All parcels except
WS parcels
LSI Fund = WS parcels

Date	REVISIONS	By
1	Revised Bearings & Distances 3-13-66	Jam
	Added Pcls. 72-WS, 74-WS-1, & 75-WS	L&D
	Revised Area & Pcl. Limits For	
	Pcls. 72-WS & 75-WS	L&D
P-P-75	REVERSED BEARING ON LA LINE OF 75WS	R.S.

R/W PLAN NORTHBOUND REST AREA

Ohio Highway Dept. - Div. 4
ENGR. & ADMIN. SECT.
RAVENNA, OHIO
AUG 24 1966
PROCESSED
Init. Bk.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

190
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

8
14

SUMMIT COUNTY
LOT 16,17
T-4N R-12W TRACT 2
RICHFIELD TWP.

W.B. & MILDRED M. KIRBY

74 WL

Note: See Sheet 6 For Parcel Acreage

ANDREW S. & THERESA A. BLASKO Orchard

2 Wagon Wheels at Entrance-Exist.

LOT 16
LOT 17

N 00°-10'-17"W 44'

30' Exist. R/W

END WORK Sta. 43+10.00

42+20.52
35.00'

74 WD

490+02.37 @ 160.0' Lt. & I-271
40+98.93 & C.H. 194

489+68.34 @ 161.21' Lt. & I-271
40+77.48 @ 35.00' Lt. & C.H. 194

N 00°-07'-49"E 143.04'

C.H. 194 Exist. R/W

122.10'

Wall

Frame Barn

Δ = 00°-18'-00" Lt.
No Curve

WALTER L. & FRIEDA M. FRY

79 WL

432+53.25
150.0'

Cultivated Field

Collector Tile by others.

495+00
140.0'

480+00.0
200.0'

74WL RP-1

N-59°-48'-02"E 500.62'

485+00.0
175.0'

N-58°-37'-32"E 509.59'

LA

LA R/W

S-56°-21'-56"W 500.03'

480+00.0
170.0'

Limit of Constr.

IAPA 485+00
173.0'

Fields

C.P.A. 489+63
159.21'

E.P.A. 489+83
145.0'

Sta. 39+07.74 & C.H. 194 =
Sta. 489+04.70 & I-271

Southern Rd.

40

145.0'

E.P.A. 490+19

2 Sty. Fr. Res.

N 59°-17'-12"E 244.08'

S 1°-04'-48"E 210.03'

C.P.A. 490+43
15.4' Rt.

Plug

Septic Tank & Drain Tile

Dug Well

Southbound Lane

246.35'

N-59°-15'-31"E

N-89°-17'-53"E Farm Tile

Begin Sheet, Sta. 480+00

End Sheet, Sta. 495+00

74 WL

℄ I-271 Survey

485

490

N 56°-56'-19"E

79 WL

494+89.98

Cultivated

Frame Barn & Sheds

Ft. 5

Ft. 5

Ft. 5

485+55.00
140.83'

O.H.

486+13.00

486+46

56°-48'-30"

39°-53'

12"C.M.P.

203.14'

Shrubs

Shrubs

Cult. Field

Hedge

Plug

Plug

IAPA 492+00
138.0'

Limit of Constr.

480+00.0
200.0'

74 WL RP-3

IAPA 482+00
215.0'

Limit of Constr.

484+50.0
201.32'

S-59°-48'-05"W 300.37'

S-56°-56'-19"W LA 300.00'

S-51°-43'-41"W 495.54'

2 Sty. Fr. Res.

486+90.0
179.44'

E.P.A. 487+90
158.0'

E.P.A.
488+20 @ 163.0'

400.13' S-55°-30'-22"W

492+00.00
140.0'

LA

407.61' S-52°-43'-03"W

Farm Tile Trunk lines are 6" or 8".

Cultivated Field

480+00.0
215.0'

74 WA-1

74 WA2

Frame Barn

Fr. Shed

483+00.0
215.0'

485+00.0
242.0'

485+35.00
238.0'

487+42.66 @ 165.36' Rt. & I-271
36+72.89 @ 40.00' Lt. & C.H. 194

74 AWD

T2.89'
N 00°-07'-49"E

R/W

LA

IAPA 487+00
169.0'

487+93.49 @ 170' Rt. & I-271
37+04.60 & C.H. 194

486+65.0
221.0'

36+00.00
40.0'

N-4°-06'-22"W
135.37'

35' T.S.

30.0'

Exist. R/W

36+07.66

45.0'

36+46.46

45.0'

& Additional Field Drive
Sta. 36+33

N 89°-07'-49"E

79 T

WALTER L. & FRIEDA M. FRY

79 WL

T.B.A. 11.44 Ac±
P.R.O. 0.27 Ac±
Cont. 11.71 Ac±
Residue Rt. 32.42 Ac±
Residue Lt. 9.75 Ac±

79 T

Cont. 450 Sq.Ft.

34+65.00
30.0'

W.B. & MILDRED M. KIRBY

74 WL

Note: See Sheet 6 for Parcel Acreage

OSCAR E. COVER

80

No Take

Estimated Quantities
Item 607 Fence, Type 47 - 2980 L.F.

Exist. R/W

N 00°-07'-49"E

Begin Work
Sta. 34+00

N 89°-07'-49"E

A

B

33'

12"C.M.P.

1 Sty. Frame Res.

ARLENE M. HORN

Ⓐ Western Reserve Telephone Co.

Ⓑ Ohio Edison Co.

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
10-19-66	Rel. 77-WD Deleted Per SAG	GF

R/W PLAN Sta. 480+00 to 495+00

State Highway Dept. of Ohio
R/W, Engr. & Admin. Bldg.
Division Area Engr.
AUG 24 1965
LOCATED
Cnty. Sht. No.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

191
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

9
14

SUMMIT COUNTY
LOTS 16 & 17
FRACTION 4
T-4N R-12W TRACT 2
RICHFIELD TWP

WALTER L. & FRIEDA M. FRY.
79 WL

CHARLES GARMAN & THEODORE GARMAN
81 WL

℄ N-89°-13'-19"E

IAPA 495+00
138.0'

435+00
140.0'

Collector Line by others.

Cultivated Fields

650.07'

N-56°-03'-26"E

501+50.00
150.0'

224.97' N-56°-56'-19"E

503+74.97
150.0'

506+00.00
150.0'

225.03' N-56°-56'-19"E

401.12'

N-52°-38'-59"E

510+90.00
180.0'

LA

Limit of Constr.

IAPA 501+50
148.0'

280.82'

IAPA 506+00
148.0'

Begin Sheet, Sta. 495+00

End Sheet, Sta. 510+00

500

79 WL

℄ I-271 Survey
N56°56'19"E

505

81 WL

+12.40

346.37'

Limit of Constr.

IAPA 496+00
128.0'

Plug

105.97

Plug

IAPA 501+50
163.0'

Pine Trees in Rows

IAPA 505+00 @ 143.0'

Town-

Vill-

400.13' S-55°-30'-22"W

496+00.00
130.0'

497+05.76
136.73'

551.11' S-60°-34'-46"W

350.57' S-53°-40'-05"W

407.20' S-62°-34'-31"W

394.90' S-58°-23'-24"W

CHARLES GARMAN & THEODORE GARMAN
(LL)

501+50.00
165.0'

505+00
145.0'

509+05.23
185.0'

IAPA 509+05
183.0'

Field Drain Tile

Richfield Lot 16 Fraction 4

Richfield

Lot 16
Lot 17

Estimated Quantities
Item 607 Fence, Type 47 - 3015 L.F.

WALTER L. & FRIEDA M. FRY
79 WL

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
1	NAME CHANGE Pcl. 81 WL 12-30-66	SAVO
5/17/67	Added Tree Line (as per	DICK
	H. STRAHL) Parcel 79 WL	
9-7-67	Added Corporation line	RAW

R/W PLAN Sta. 495+00 to 510+00

State Highway Dept. Ohio
R/W ENGR. & SURVEYS SECT.
TAVERNA, OHIO

AUG 24 1966

LOGGED
Date
By

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

192
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE : 1" = 50'

10
14

SUMMIT COUNTY
LOTS 2 & 7
FRACTION 4
T-4N R-12W TRACT 2 & 3
RICHFIELD TWP

CHARLES GARMAN &
THEODORE GARMAN
81 WL
T.B.A. 8.04 Ac±
P.R.O. 0.00 Ac±
Cont. 8.04 Ac±
Residue
Lt. 48.54 Ac±
Rt. 1.55 Ac± (LL)

ROBERT D. & MARY I. MOHN
88 WL

Roberts Drive
Ohio Edison Co.
Western Reserve Tele. Co.
Cultivated
Pasture
Gravel
Woods
Limit of Constr.
Iron Pipe Found
North Fork
To Be Abandoned Drive
Ft. Barn
Lot 2
Lot 7
Tract 2
Tract 3
Tract 4
Begin Sheet, Sta. 510+00
End Sheet, Sta. 525+00

510+00.00
180.0'
714.48'
N-55°-20'-03"E
517+14.20
200.0'
C.P.A. 517+14.20
198.0'
517+03.05
182.53'
237.27'
216.55'
110.81'
516+46.16
93.40'
+86.54 ℄
515
I.A.P.A. 512+00
183.6'
E.P.A. 517+
136.2'
E.P.A. 517+82.5
138.3'
C.P.A. 518+50
190.5'
N-60°-08'-35"E
536.64'
LA
522+50.00
170.0'
345.17' N-52°-42'-34"E
I.A.P.A. 522+50
168.0'
175.51'
+94.76 ℄
I-271 Survey
N56°56'19"E
343.00'
+93.46 ℄
520
319.46
338.25'
2-72" x 266'ϕ
SUM-271-2.07
I.A.P.A. 522+64
168.0'
514+74.71
175.20'
I.A.P.A. 513+00
193.0'
231.34'
207.85'
Lot 7
E.P.A. 518+01.9
142.3'
E.P.A. 518+21.8
140.2'
C.P.A. 518+51.5
190.3'
C.P.A. 517+70
193.0'
I.P.
37.21'
293.79' S-56°-56'-19" W
281.54' S-53°-53'-00"W
183.06'
S-53°48'-30"W
440.74' S-64°-06'-24"W
(L.L.)
S-58°-23'-24"W
394.90'
162.07' S-56°-56'-19"W
44.14'
513+00.00
195.0'
515+06.21
195.0'
514+62.07
195.0'
518+00.00
195.0'
520+81.14
180.0'
522+63.93
170.0'
Creek
288.95'
N-00°-30'-41"W
N-89°-13'-19"E
474.76'
513+06.60
438.57'
Iron Pipe Found
N-89°-05'-23"E
N-89°-05'-23"E
N-89°-05'-23"E

CHARLES GARMAN &
THEODORE GARMAN

WALTER L. & FRIEDA M. FRY
79 WL

BERNARD CONSTRUCTION COMPANY, AN OHIO CORP.
82 WL
T.B.A. 0.01 Ac±
P.R.O. 0.00 Ac±
Cont. 0.00 Ac±
Residue Rt. 39.99 Ac±

HENRY BYSTRANOWSKI,
ROSE B. TURNER & LAURETTA KURTZHALS
84 WL
T.B.A. 2.06 Ac±
P.R.O. 0.00 Ac±
Cont. 2.06 Ac±
Residue Rt. 37.94 Ac±

Estimated Quantities
Item 607 Fence, Type 47 - 3129 L.F.

GUSTAVE M. BLAUMAN
85 WL
T.B.A. 1.42 Ac±
P.R.O. 0.00 Ac±
Cont. 1.42 Ac±
Residue Rt. 13.58 Ac±

ROBERT D. & MARY I. MOHN

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
1	NAME CHANGE Pcl. 81 WL 8-30-66	SS.
2	NAME CHANGE Pcl. 84 WL 1-18-67	BILL
3	NAME CHANGE PCL. 82-WL 2-7-67	G.Z.

R/W PLAN Sta. 510+00 to 525+00

State Highway Dept. Div. R/W ENGR. & ADMIN. SECT. RAVENNA, OHIO
AUG 24 1965
LOGGED
Cross Sec. Bill Bk.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

193 / 196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

11 / 14

J. T. & M. H. OSTERLING

86 WL — T.B.A. 0.025 Ac±, P.R.O. 0.000 Ac±, Cont. 0.025 Ac±

Residue Lt. 3.025 Ac±

SUMMIT COUNTY
LOT 2
T-4N R-12W
TRACT 3 RICHFIELD TWP

ACRES SUB. PB Page Vol. 46 63-70

ROBERT D. & MARY I. MOHN

88 T — Cont. 0.05 Ac±

88 WL — T.B.A. 6.71 Ac±, P.R.O. 0.00 Ac±, Cont. 6.71 Ac±

Residue Lt. 5.14 Ac±
Residue Rt. 0.84 Ac± (L.L.)

88A WL — T.B.A. 0.85 Ac±, P.R.O. 0.00 Ac±, Cont. 0.85 Ac±
Residue Lt. 2.20 Ac± (Lot 9, Subdivision)

REXFORD N. BABB

91 WL — Note: See Sheet 12 For Parcel Acreage

Easement held by E. Ohio Gas Co. width and location unspecified

HELEN A. NEWTON (L.L.)

90 T

Lot 10

Lot 9

Limit of Constr.

Rolling

Dry

LA

Woods

Creek

Yellow Fork North

20" Gas Line ℄

30" Gas Line ℄

℄ I-271 Survey
N 56°56'19"E

Begin Sheet, Sta. 525+00

End Sheet, Sta. 540+00

1 Stv. Bk. Res.

Septic Tank

Drain Tile

Iron Pipe Found

Iron Pipe Found +47.49

Fence Post

ROBERT D. & MARY I. MOHN (L.L.)

GUSTAVE M. BLAUMAN

85 WL

B & L REALTY CO.

87 WL — T.B.A. 0.21 Ac±, P.R.O. 0.00 Ac±, Cont. 0.21 Ac±

87 T — Cont. 0.07 Ac±

Residue Rt. 15.79' Ac±

HELEN A. NEWTON

90 WL — T.B.A. 7.85 Ac±, P.R.O. 0.00 Ac±, Cont. 7.85 Ac±

90 T — Cont. 0.04 Ac±

Residue: Lt. 1.10 Ac± (L.L.)
Rt. 26.78 Ac±

© East Ohio Gas Co.

Estimated Quantities
Item 607 Fence, Type 47-2688 L.F.

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By

R/W PLAN Sta. 525+00 to 540+00

State Highway Dept. Div. V
New Since 6 Mo. Sect.
Akron, Ohio
AUG 21 1968
Cks. Logged Bill by

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

194
196

SUMMIT COUNTY
LOT 2
T-4N R-12W TRACT 3
RICHFIELD TWP

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

12
14

REXFORD N. BABB
91 WL

HELEN A. NEWTON
90 WL

Begin Sheet Sta. 540+00

End Sheet Sta 555+00

Dry

Woods

Trees

Scattered

Orchard

Lot 2

Limit of Constr.

℄ I-271 Survey

℄ WEST RICHFIELD ROAD S.R. 176

200.56' N-52°-38'-55"E

541+00.00
173.0'

IAPA 541+00
173.0'

700.45'

LA

N-58°-59'-03"E

548+00.00
150.0'

IAPA 548+00
148.0'

627.96' N-51°-54'-49"E

267.60' S-52°-39'-03"W

543+00.00
135.0'

IAPA 543+00
133.0'

400.03' S-57°-39'-16"W

547+00.00
140.0'

IAPA 547+00
138.0'

400.78' S-60°-30'-52"W

540+33.15
135.01'

S 89°03'00" W

551+00.00
165.0'

IAPA 551+00
163.0'

346.03' S-66°-55'-27"W

N5C°5C'19"E

545

550

N5C°5C'19"E
Sta. 554+32.81 ℄ I-271 =
Sta. 88+87.10 ℄ S.R.176

N 54°54'29"E
85+75 @ 30.0'

N 54°54'29"E
30.00'

554+25.54 @ 205.0' ℄ I-271
86+81.97 ℄ S.R. 176

553+95.62 @ 202.36' ℄ I-271 =
86+83.54 @ 30.0' Rt. ℄ S.R. 176

86+84.59 @ 50' Rt. ℄ S.R. 176
553+75.67 @ 200.60' Lt.

53+07.11 B/L Ramp A =
553+07.11 I-271 @ 91 Lt.

C.P.A. 553+95.62 @ 200.36'

C.P.A. 553+96.33 @ 182.37'

87+31
30.0'

87+31 @ 30.0'

87+ B/L R/W
51.0' Rt.

87°58'-10"

S 35°05'31"E
25.00'

BEGIN WORK
STA. 85+75.00
86+00 @ 30.0'

554+55.62 @ 203.40'
86+84.64 @ 30.0'

86+86.42 @ 50' Lt.
554+75.67 @ 202.32'

C.P.A. 86+88.42 @ 50' Lt.

C.P.A. 87+13 @ 50.0'

87+31 @ 30.0'

S 35°05'31"E

89+00 @ 70.0'

(To be abandoned)
Exist Access Drive

C.P.A. 555+09.28
181.14'

C.P.A. 555+10.70
219.11'

C.P.A. 553+82.30
184.91'

C.P.A. 553+83.36
212.89'

553+83.36 @ 214.89 Rt. ℄ I-271
30+99.92 @ 57' Rt. ℄ S.R. 176

554+40.79 @ 225.0'
91+12.24 ℄ S.R. 176

P.C. R/W
91+57.62

P.C. 91+57.62
70.0'

END WORK STA.
91+80

Caution Lights

Caution Signals

Exist. R/W

℄ Exist. R/W

111.40' N 22°44'58" W

106.97'

60'

29'

57'

39'

49'

70'

59'

62'

63'

18'

90' S 35°05'31" E

225.14'

205.13'

60.00'

50.00'

P.C. 91+57.62
Δ = 16°-00
R = 955.81'
T = 134.33'
L = 266.91'
E = 9.39'

Estimated Quantities
Item 607 Fence, Type 47 - 3013 L.F.

91 WL	91 AWL	91 BWL	91 WD
T.B.A. 11.98 Ac±	T.B.A. 9.99 Ac±	T.B.A. 1.97 Ac±	T.B.A. 0.02 Ac±
P.R.O. 0.49 Ac±	P.R.O. 1.50 Ac±	P.R.O. 0.87 Ac±	P.R.O. 0.07 Ac±
Cont. 12.47 Ac±	Cont. 11.49 Ac±	Cont. 2.84 Ac±	Cont 0.09 Ac±

91A WD	91B WD	91C WD	91 T	91 T-1
T.B.A 0.01 Ac±	TBA 0.10 Ac±	T.B.A. 0.023 Ac±	Cont. 0.01 Ac±	Cont. 0.06 Ac±
P.R.O 0.07 Ac±	PRO 0.07 Ac±	P.R.O. 0.079 Ac±		
Cont. 0.08 Ac±	Cont. 0.17 Ac±	Cont 0.102 Ac±		

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By

R/W PLAN Sta. 540+00 to 555+00

Ohio Highway Dept. Div. 4
ROBERT K. JOHN SECT.
AKRON, OHIO

AUG 24 1966

LOGGED
Date
By

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

195
196

13
14

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

SUMMIT COUNTY
LOTS 1,2 & 3
T-4N R-12W
RICHFIELD TWP
TRACT 3

REXFORD N. BABB
91A WL

MATCH Sta. 13+00 This Sheet

560+12.64
390.47'
N-89°-57'-26"W
115.00'
N-27°-02'-23"E
562+00.00
380.00'
564+25
415.01'
N-48°-05'-46"E
227.70'
214.77' N-69°-02'-03"E
LA
TAPA 564+25
414.'
TAPA 562+00
379'
91B WD
91B WL
Apple Orchard
8" to 10"
5GG+35.0 - 37.0 Lt.
G4+65.08 - 71.03 Lt. of Survey C.H.17
Exist R/W
MATCH See Sh. 14
CPA 5GG+35
369'
559+68.95
323.46'
S-89°-57'-26"E
S-00°-02'-34"W
80.00'
14.24'
R/W
L/A R/W
15+10.59 ℄ T.R.185
561+08.97 @ 327.66
T.R.185
61+46.83
125.70'
N-27°-02'-23"E
89.78'
558+00.00
185.0'
215.41'
N-35°-08'-16"E
TAPA 565+00-264'
565+00.00
265.0'
560+31.14
282.91'
S-89°-57'-26"E
HAWKINS RD.
491.02'
Exist. 60' R/W
P.T. 65+91.17
PEMCO INC.
93 WL
61+59.46'E
61+18.89 Ramp A =
61+20.20 C.H. 17
202.42'
S-09°-13'-09"E
N-00°-13'-09"E
156+55.0
155.0
Cistern
Septic Drain
Sty
Tr Res.
Barn
NOTE.
SHED FOR BARN SHOWN ON SHEET 14 of 14
778.32'
N-57°-31'-50"E
LA
Limit of Constr.
CPA 156+55
153'
375.00'
N-59°-59'-45"E
LA
Limit of Constr.
T.S. 56+07.11
56+58+07.11
TAPA 558+00
184'
RAMP A
564+79.82 ℄ I-271
60+70.20 ℄ Survey C.H.17
20+00 B/L T.R.108
61+43.00 ℄ C.H.17
565+20.28 - 59.47' Lt.
61+42.13 - 1.59' Rt ℄ Survey
93 WL
91A WL
℄ I-271 Survey
N-56°-56'-19"E
560
564+73.55 ℄ I-271
564+81.88 ℄ I-271
57°-03'-00"
Bearing
N-56°56'-19"E
Back
Equation
N-56°-58'-24"E
Ahd
154+70.44
2.70 Rt.
272.43'
N-89°-16'-37"E
Lot 1
Lot 3
Limit of Constr.
Richfield Township
Richfield Apple Orchard
End Sheet Sta. 160+00
Begin Sheet, Sta. 555+00
RAMP B
60
℄ Limit of Constr.
T.S. 56+58.07
S.C. 58+58.07
359.77'
S-53°-45'-05"W
LA
558+00.00
205.0'
TAPA 558+00
203'
213.32' S-81°-09'-58"W
94 WL
C.PA. 154+70
153'
230.80'
154+70.00
155.00'
16' GATE
799.64'
S-55°-18'-21"W
LA
S-55°-18'-17"W
157+00.70
148.28'
Easement held by Ohio Edison Co.
Width & Location unspecified.
N-89°-16'-37"E
(L)
91A WL
REXFORD N. BABB
91 CWD
REXFORD N. BABB
Exist. Field Drive
Exist. 60' R/W
℄ Hawkins Rd. T.R-185
N-89°-57'-26"W
Hydrant
Well
Barn
Match Sta. 13+00
Exist. R/W
30'
80+39.90
87.80'
N-65°-31'-40"W
7+40.10
7+40.10
70.0'
60.0'
S-35°-05'-31"W (E0)
80+99.90 ℄ SR 176
6+70.10 ℄ T.R.185
Exist. 60' R/W
561+48.92 @ 429.05' ℄ I-271
55+30.18 @ 4+32.74' ℄ Surv. C.H.17
N-81°-04'-07"W
200.36'
560+00.00
235.0'
P.T. 60+64.24
TAPA 560+00
283'
55+35.68
18.88
55+32.07
56.17
55+07.6
60.68'
91 T
C.PA.
63+09.80 B/L Ramp B
=56+41.16 ℄ C.H.17
152+43.52 - 414.06'
55+99.99 - 35.56 Rt. ℄ Surv. C.H.17
TAPA 152+41
412.'
A MATCH See Sh. 14
560+78.40
538.26'
LINE
N-00°-12'-46"W
130.00'
E.P.A.
℄ Survey C.H.17
N-89°-53'-33"E
47.00'
E.P.A.
N-00°-12'-46"E
200.0'
151+08.38 - 564.20'
Old ℄ C.H.17 (093)E
N-00°-12'-46"W
55' ℄ C.H.17 (093)E
N-00°-12'-46"W
℄ Exist. R/W
CLEVELAND - MASSILLON ROAD
N-00°-06'-41"W
℄ Limit of Constr. (Temp. Runaround
℄ Temp. Runaround
MON. USED FD.
343.47'
S-08°-01'-00"W
60' Break in L/A at Station 561+53 as per Journal Entry Vol. 25 Page 486 Recorded Nov 8, 1956
END PROJECT
SUM-271-0.50
EQ. Sta. 566+09.70
= Sta. 156+00
BEGIN PROJECT
SUM-271-2.98
Sta. 156+00
A - Western Reserve Telephone Co
B - Ohio Edison Co.
C - E. Ohio Gas Co.
Estimated Quantities
Item 607 Fence, Type 47 3,639 L.F.
Item 607 Gate 1 Ea.
GORDON A. STOUFFER &
VERNON B. STOUFFER
94 WL
T.B.A. 0.60 Ac±
P.R.O. 0.51 Ac±
Cont. 1.11 Ac±
94 T
Cont. 0.40 Ac.±
Residue Rt 421.37 Ac±
Residue Lt 0.0 Ac.
TYPE OF FUNDS
Interstate Fund
R/W PLAN Sta. 555+00 to 570+00

Date	REVISIONS	By
4/7/67	Shed Remove From Pcl. 93WL	IRICK
9-7-67	Corporation line added	RAW
4-7-98	ADD. BREAK IN L/A PCL 94	

State Highway Department
RIGHT-OF-WAY ENGINEER & ADMIN. SECRET.
RAVENNA, OHIO
AUG 2 4 1966
LOCATED
Bill Beck

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15) 229	

196/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

14/14

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
R-12W T-4N

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE

N-89°-16'-37" E

Cistern 5'x5'
Septic Drain
1½ Sty Fr Hse
Barn
Shed
93'
67'

PEMCO INC.

6"-10" Cherries
10" Apple

END ACQUISITION
SUM-271-0.50
I-271-G(15) 229

BEGIN ACQUISITION
SUM-271-2.98
STA. 166+66.45

164+33.28
147.43'

778.32'
LA
N-57°31'-50" E
266.83'
167+00.00
145.01'

Limit of Constr.
EPA
Drive to be Abandoned

516.29'

Apple Orchard
8" To 10"

Field Drive - To be abandoned

℄ Survey I-271
N-56°-58'-24" E
32°-18'-13"
165
170

93 WL
3 WL

Begin Sheet Sta. 160+00

End Sheet Sta. 170+21.70

IAPA
165+00
125.0'
EPA

Limit of Constr.

799.64'
S-55°-18'-17" W
LA
369.67'
S-57°-30'-45" W
LA
230.63'

168+69.66
128.48'

Apple Orchard

(L)

N-89°-16'-37" E

LOT 1
LOT 3

GORDON A. STOUFFER
AND
VERNON B. STOUFFER

PEMCO INC.
A CORPORATION

93 WL

T.B.A. 7.18 Ac±
P.R.O. .46 Ac±
Cont. 7.64 Ac±

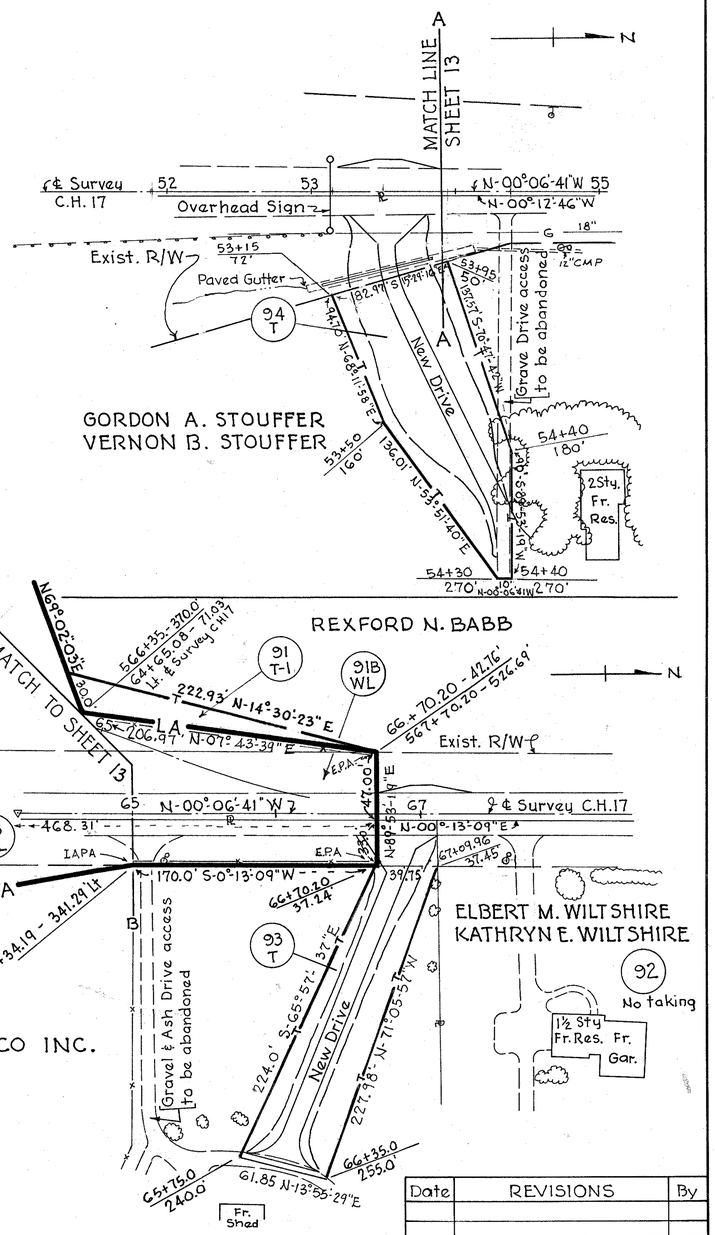
93 T

Cont. 0.27 Ac±

Residue Rt. 15.16 Ac± (L)
Residue Lt. 4.33 Ac±

Estimated Quantities
Item 607 Fence, Type 47 - 1310. L.F.

PEMCO INC.



Date	REVISIONS	By

R/W PLAN STA. 160+00 to STA. 170+21.70

State Highway Dept. Div. 4
RIGHT OF WAY ADMIN. SECT.
RAVENNA, OHIO
AUG 24 1965
Cmb. LOGGED Bill Bk.

I-271-6(15)229

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

(1/196)

SUMMIT COUNTY
SUM-271-0.83

1/14

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
SUM-271-0.83
SUMMIT COUNTY
RICHFIELD TOWNSHIP

CONVENTIONAL SIGNS

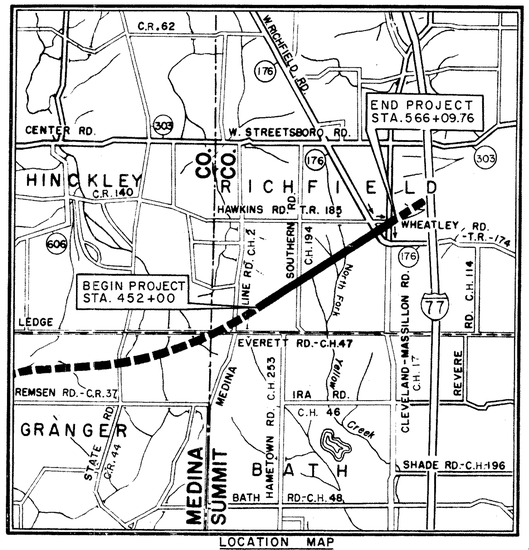
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CORPORATION LINE
CENTER LINE
FENCE LINE
POWER POLES
TELEPHONE POLES
GUARD RAIL -- EXISTING
GUARD RAIL -- PROPOSED
SOD DITCHES
PAVED DITCHES
SEED & MULCH DITCHES
DUMPED ROCK
JUTE MATTING
RIGHT OF WAY WITH LIMITED ACCESS — LA
RIGHT OF WAY WITHOUT LIMITED ACCESS — R/W
EXISTING RIGHT OF WAY
EXISTING STREAMS
CONSTRUCTION LIMIT LINE

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LINE DATA

Begin Project — Sta. 452+00
End Project — Sta. 566+09.76
No Deductions
Net Length Of Project — 11,409.76 Lin. Ft. or 2.161 Mi.
Add For Approaches:
C.H. 194 Sta. 34+10 to 43+00 — 890.00
C.H. 17 Sta. 53+20 to 67+41 — 1,421.00
North Approach Sta. 566+09.76 to 573+40 — 730.24
Total Length of Work — 14,451.00 Lin. Ft. or 2.737 Mi.



LOCATION MAP

DELIVERY POINT
PENINSULA-B&O. R.R.

AVERAGE HAUL
6.8 MILES

0 1 2 3
SCALE IN MILES

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS
OTHER CONTRACTS
DETOUR

SCALES

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

LIMITED ACCESS

THIS IMPROVEMENT 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, AND IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC.

1965 SPECIFICATIONS

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

THE RIGHT-OF-WAY NECESSARY 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 REQUIRE THE PART TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEET 11, DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREON. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED: _____
DATE — DIVISION DEPUTY DIRECTOR

APPROVED: _____
DATE — ENGINEER OF BRIDGES

APPROVED: _____
DATE — ENGINEER OF LOCATION & DESIGN

APPROVED: _____
DATE — DEPUTY DIRECTOR, DESIGN & CONSTRUCTION

APPROVED: _____
DATE — DEPUTY DIRECTOR, RIGHT OF WAY

APPROVED: _____
DATE — DEPUTY DIRECTOR, PLANNING & PROGRAMMING

APPROVED: _____
DATE — FIRST ASSISTANT DIRECTOR

APPROVED: _____
DATE — DIRECTOR OF HIGHWAYS

PLANS PREPARED BY
J. E. GREINER COMPANY
CONSULTING ENGINEERS -- BALTIMORE, MARYLAND

STANDARD CONSTRUCTION DRAWINGS

DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE	DRAWING NO.	DATE
BP-1	6-1-65	CB-3A	6-1-65	GR-2A	9-1-65	MC-5	6-1-65
BP-2	6-1-65	CB-4	6-1-65	GR-6	6-1-65	SP-53	6-30-61
BP-3	6-1-65	CB-5	6-1-65	CB-3	6-1-65	MH-2	6-1-65
BP-4	6-1-65	CB-6	6-1-65	HW-3	6-1-65	L-1	6-1-65
BP-5	6-1-65	F-2	6-1-65	HW-E	6-1-65	L-2	6-1-65
BP-6	6-1-65	F-3	6-1-65	MC-1	6-1-65	AS-1-54	7-5-62
BP-7	6-1-65	FACI-1	6-1-65	MC-3	6-1-65	FSB-1-62	1-15-63
		FACI-2	6-1-65	MC-4	6-1-65	SD-1-63 Sh. 2,3,4	11-12-63
						BR-1-65, Sh. 1	2-1-65

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
801	9-2-65		
808	7-14-65		
811	3-29-65		

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED: _____ _____
DIVISION ENGINEER — DATE

FILE NO.	SUM-271-0.83
	DATE OF LETTING ____ 19
	CONTRACT NO. _____

State Highway Dept. Div. 4
R/W-ENGR & ADMIN SECT.
HAVERHILL OHIO
AUG 24 1966
Rec'd ..... Dist ....
Cpd. ..... Dist ....

CENTER LINE SURVEY PLAT
OHIO INTERSTATE 271
SUM-271-0.83 (formerly 0.50)
SUMMIT COUNTY, OHIO

RICHFIELD TOWNSHIP
T-4N R-12W
TRACT 2, LOT 1,2,16,17,18; FRACTION 4; TRACT 3, LOT 1,2,3,7

0 400 800 1200
SCALE IN FEET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15)229	

183/196

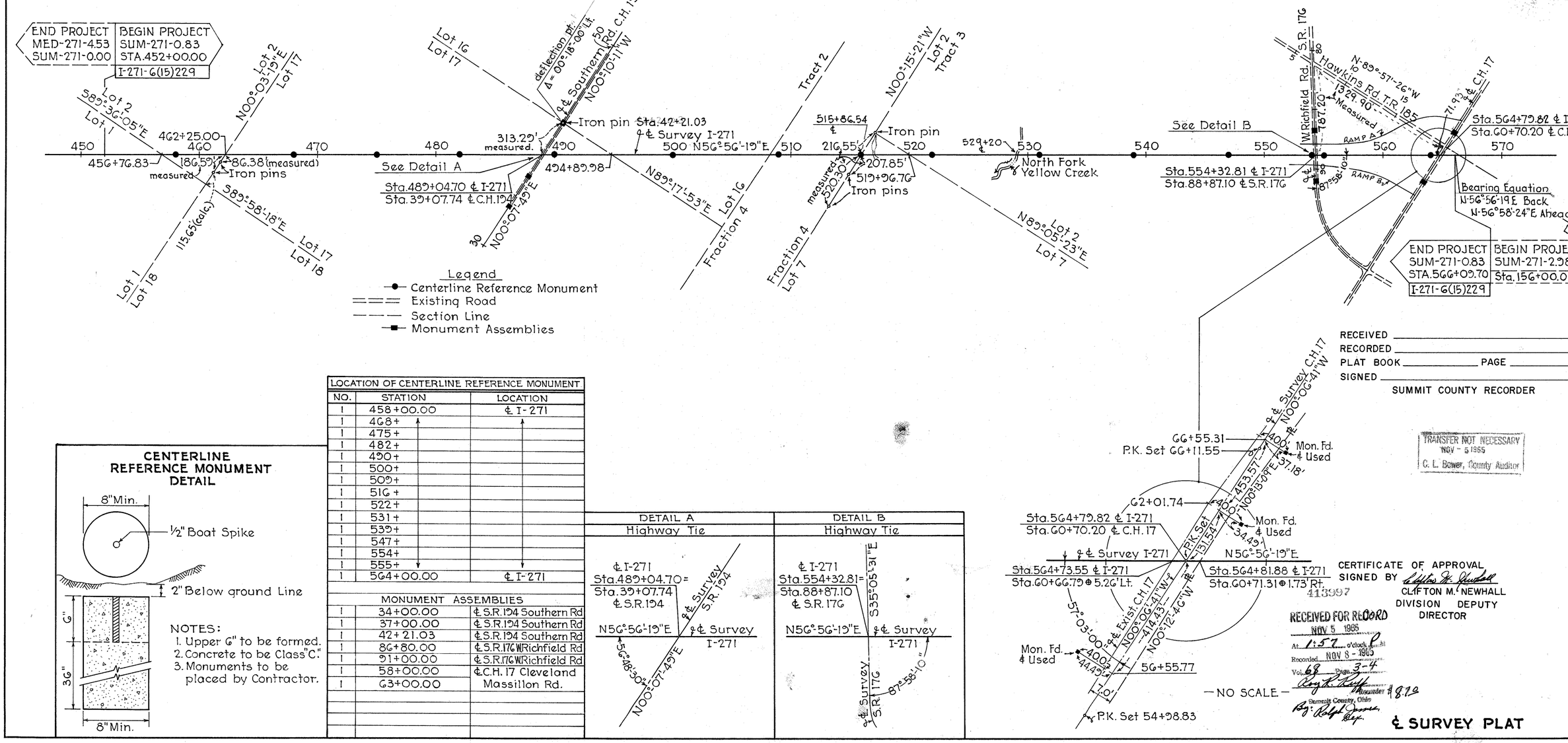
SUMMIT COUNTY
SUM-271-0.83 (0.50)
LIMITED ACCESS

1/14

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 452+00.00 TO STATION 566+09.82 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 1226, OF THE DIRECTOR'S JOURNAL, PURSUANT TO LAW.

TUN 11-5-65

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS IN SUMMIT COUNTY.
BY K. J. Nelson
DATE OCT. 19, 1965
REGISTERED SURVEYOR NO. 4629



LOCATION OF CENTERLINE REFERENCE MONUMENT		
NO.	STATION	LOCATION
1	458+00.00	℄ I-271
1	468+	
1	475+	
1	482+	
1	490+	
1	500+	
1	509+	
1	516+	
1	522+	
1	531+	
1	539+	
1	547+	
1	554+	
1	555+	
1	564+00.00	℄ I-271
MONUMENT ASSEMBLIES		
1	34+00.00	℄ S.R.194 Southern Rd
1	37+00.00	℄ S.R.194 Southern Rd
1	42+21.03	℄ S.R.194 Southern Rd
1	86+80.00	℄ S.R.176 W.Richfield Rd
1	91+00.00	℄ S.R.176 W.Richfield Rd
1	58+00.00	℄ C.H. 17 Cleveland Massillon Rd.
1	63+00.00	

CENTERLINE REFERENCE MONUMENT DETAIL

NOTES:
1. Upper 6" to be formed.
2. Concrete to be Class "C."
3. Monuments to be placed by Contractor.

DETAIL A
Highway Tie

DETAIL B
Highway Tie

— NO SCALE —

RECEIVED _____
RECORDED _____
PLAT BOOK _____ PAGE _____
SIGNED _____
SUMMIT COUNTY RECORDER

TRANSFER NOT NECESSARY
NOV - 5 1965
C. L. Bower, County Auditor

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DIVISION DEPUTY DIRECTOR

413997
RECEIVED FOR RECORD
NOV 5 1965
At 1:57 o'clock P.M.
Recorded NOV 8 - 1965
Vol. 68 Page 3-4
Lloyd K. Ruff Recorder #8.12
Summit County, Ohio
By: Ralph Thomas Dep.

℄ SURVEY PLAT

Ohio Highway Dept. Div. R/W, ENGR. & ADMIN. SEC. WAVERNA, OHIO
AUG 24 1965
APPROVED
Chief, Bureau of Right of Way

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

184
196

2
14

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=400'

SUMMIT COUNTY
Tract 2. Lot 1,2,16,17,18, Fraction 4
T-4N R-12W
RICHFIELD TWP.

END ACQUISITION
MED-SUM-271-4.53

BEGIN ACQUISITION
SUM-271-0.83
Sta. 456+76.83

I-271-6(14)224

I-271-6(15)229
BEGIN PROJECT
Sta. 452+00

J.J. & F.L. Strickler
T.C. Jr. & A.M. Kehoe
T.R.51
W.A. Jr. & L.C. Robb
D.L. & J.R. Griggs
J. & B. Szereto
F.F. Hess
E.A. Hess
K.J. & M.J. Taucher
P. & M. Shroba
Medina County
Summit County
Richfield Twp
Medina Line Rd. - C.H.2
E.C. McCormick
J.H. Cauffield
A. & J. Nitti
F.E. Cass
J.R. & R. Fox
F. Domain
J.R. & A.B. Wajda
S.J. & V.T. Wargo
A. Hoppe Cemetery
Everett Rd. - C.H.47
M. Bayus
G.D. & L.F. Stobbe
L.E. & W.D. Rubright
J.D. & M.C. Clark
J.D. & C.M. Clark
R.M. McClellan
L.W. & O.I. Remmy
T. & M.F. Przeworski
F. Zodnik
G. Felker
C.J. Jr. & A.H. Geraci
J.V. Nesbit
A.M. Keslar
J. Bigelow
Jennie Bigelow
D.D. & D.R. Hallick
L.E. & B.E. Wybel
Southern Rd. - C.H.194
A.J. & H.M. Smith
J. Kern
A.M. Horn
V.W. Gore
E.S. Norris
V.D. & M.B. Kniss
W.L. & F.M. Fry
O.E. Cover
Corporation line of Richfield Village
Bernard Construction Co. an Ohio Corp.
R.L. & M.L. Grant
W.L. & R.I. Knotts
J.J. & J. Mayer
J.C. Lehky
A.J. & A.M. Chopka
W.A. & A.M. Feaver
J.C. Garman, Deceased
J.M.G. Garman
A. Repp
A.S. & T.A. Blasko
W.B. & M.M. Kirby
Rest Area
LA
LA R/W
℄ I-271
Bath Twp.
Tract 2
Tract 3
Fraction 4
Village
Lot-1
Lot-2
Lot-3
Lot-15
Lot-16
Lot-17
Lot-18
420
430
440
450
460
470
480
490
500
510
62
62A
63
65
66
67
68
69
70
71
72
73
73A
74
74 WS
75
78
79
80
81
82
59
60

0 400 800 1200
SCALE IN FEET

SUMMIT COUNTY
Lot 1,2,3,7 Tract 3
T-4N R-12W
RICHFIELD TWP.

END PROJECT
Sta- 566+09.82
SUM-271-2.98
I-271-6(15) 229

Legend
Residence ▪
Barn etc. ▫
Landlocked (L)

Hawkins Rd. - T.R.185
West Richfield Rd. - S.R.176
Cleveland - Massillon Rd. - C.H.17
R.N. Babb
W.J. Shoenbeck
Fraction
ROLLING ACRES SUB. PB-46 P-69, 70
J.D. & J.L. Strong
W.W. Davis
J.R. Wajda
E.M. Adams
R.A. Gerries
F.E. & D.L. Wilkeman
F.E. & M.J. Wyman
R.D. & N.A. Young
R.D. & N. Young
J.T. & M.F. Palomberg
R.S. & J.C. Egnatuk
T.S. & J.B. Herron
G.B. & S.C. Miethmiller
G.C. & M.E. Smith
C.R. & N.E. Kuntz
R.E. & F.L. Trottnow
R.F. & F.C. Marietta
J.T. & M.R. Osterling
R.D. & M.J. Mohn
Ramp A
Ramp B
Turnaround
℄ Temp. Runaround
Corporation line
E.L. & F.A. Harpfer
E.M. & K.E. Wiltshire
℄ I-271
℄ I.R.77
Tract 3
Lot-1
Lot-2
Lot-7
Lot-8
520
530
540
550
560
86
88
90
91
92
93
94
(L)
30"
20"
The B & L Realty Co.
H.A. Newton
A. & J.A. Burman
H. Strnad Jr.
G.M. Blauman
H. Bystranowski
Bernard Construction Co., an Ohio Corp.
D.F. & E.H. Greisinger
H.C. Hunt
V.B. Stouffer
Pemco Inc
Wheatley Rd. T.R 174
Corporation line of Richfield Village

UTILITIES
(A) Western Reserve Telephone Co. 245 Main St. Hudson, Ohio
(B) Ohio Edison Co. 47 N. Main St. Akron, Ohio.
(C) East Ohio Gas Co. East Ninth St. at Superior Cleveland, Ohio

Revised Area & Pcl. Limits for Pcls. 73-WS, 74-WS, & 75-WS BY L&D
9-7-67 Added Corporation line R.A.W

Date	REVISIONS	By
10-12-66	ADDED R To Pcl 66	W.I
10-19-66	Pcl. 77-WD Deleted	G.F.
2-7-67	NAME CHANGE Pcl 82-WL	G.Z.
	Added Pcls. 72-WS, 72-A-WS, 73-WS	
	73-A-WS, 74-WS, 74-WS-1, & 75-WS	L&D
	Deleted Pcl 73-A-WS	L&D

R/W PLAN PROPERTY MAP

State Highway Dept. Div. 4
R/W - ENGR. & ADMIN. SHEET
AKRON, OHIO
AUG 24 1966
LOGGED
Date
Init.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

185
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

3
14

SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED

Number of Owners _____
Number of Owners with Buildings 4

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS	TYPE OF FUNDS
72 WS	Arthur & John Nitti	3304	584	28.69	3.83	No	17.06		4,6,7		LSI
72A-WS	" " "				0.74	No		7.06	6		LSI
73 WL	Jane H. Cauffield	2325	232	72.95	4.17	No	64.16		4,6,7		I
73 WL-RP1	" "				0.70	No			4,6,7	Roadside Park	I
73 WS	" "				3.92	No			4,6		LSI
74 WL	W.B. & Mildred M. Kirby	2049	417	88.28	19.85	Yes	43.44	7.96	4,5,6,7,8	PRO 0.27 Ac±	I
74 WL-RP1	" " "				11.97	No			4,5,6,8	Roadside Park	I
74 WL-RP2	" " "				1.54	No			5,7	Roadside Park	I
74 WL-RP3	" " "				0.40	No			5,8	Roadside Park	I
74 WA-1	" " "					No			8	Structure Removal	I
74 WA-2	" " "					No			8	Structure Removal	I
74 WD	" " "				0.02	No			8	P.R.O. 0.09 Ac±	I
74 AWD	" " "				0.03	No			8	P.R.O. 0.16 Ac±	I
74 WS	" " "				2.53	No			5,6		LSI
74 WS-1	" " "				0.02	No			5		LSI
75 WL-1	Jennie Bigelow	3576	666	94.98	0.61	No		84.46	4,5,7		I
75 WL-2	" "				0.64				6,7		I
75 WL-RP1	" "				6.78				4,5,7	Roadside Park	I
75 WL-RP2	" "				0.34				5,7	Roadside Park	I
75 WS	" "				2.15	No			5,7		LSI
78	Arlene M. Horn	3247	494	12.002		No			8	No R/W Required	
79 WL	Walter L. & Frieda M. Fry	3315	56	53.88	11.44	Yes	9.75	32.42	8,9	P.R.O. 0.27 Ac±	
79 T	" " "				0.01	No			8	Field Drive Constr.	
80	Oscar E. Cover	2650	42	6.001					8	No R/W Required	
81 WL	Charles & Theodore Garman	4558	526	58.13	8.04	No	48.54	1.55(L)	9,10		
82 WL	Bernard Construction Company, an Ohio Corporation	3782 3786	369 229	128.55	0.01	No		128.54	10		
83	Not Used									No R/W Required	
84 WL	Henry Bystranowski, Rose B. Turner & Lauretta Kurtzhals.	4397 2882 4330	123, 127 192 246	40	2.06	No		37.94	10		
85 WL	Gustave M. Blauman	4343 3308	590 341	15	1.42	No		13.58	10		
86 WL	J.T. & M.H. Osterling			133,031 Sq.Ft	1,096 Sq.Ft.	No	131,935 Sq.Ft.		11	Lot 10, Rolling Acres Subd.	
87 WL	B & L Realty Co.	3906	672	16.0	0.21	No		15.79	11		
87 T	" " "				0.07	No			11	Drainage course	
88 WL	Robert D. & Mary I. Mohn	3164	510	12.69	6.71	Yes	5.14	0.84(L)	10,11		
88 T	" " "				0.05	No			11	Drainage Course	
88A WL	" " "				132,680 Sq.Ft.	37,275 Sq.Ft	No	95,405 Sq.Ft.		Lot 9, Rolling Acres Subdiv.	
89	Not Used									No R/W Required	
90 WL	Helen A. Newton	2818	1	35.73	7.85	No	1.10(L)	26.78	11,12		
90 T	" "	1764	100		0.04				11	Drainage Course	

INTERSTATE

PARCEL NO.	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET NO.	REMARKS	TYPE OF FUNDS
* 91 WL	Rexford N. Babb	606	307,8	159.90	11.98	No	69.35	17.20	12	P.R.O. 0.49 Ac±	
91 AWD	" "	"	"		0.01	No			12	P.R.O 0.07 Ac±	
91 BWD	" "	"	"		0.10	No			13	P.R.O 0.07 Ac±	
91 CWD	" "	"	"		0.023	No			13	P.R.O 0.079 Ac±	
91 T	" "	"	"		0.01	No			13	Temporary Runaround	
91 T-1	" "	"	"		0.06	No			14	Temp. Runaround	
92	Not Used									No R/W Required	
* 93 WL	Pemco Inc.	4031	249	26978	7.18	No	4.33	15.008	13,14	P.R.O. 0.46 Ac±	
94 WL	Vernon B. & Gordon A. Stouffer	3113	500	421.97	0.60	No	0	420.86	13	P.R.O. 0.51 Ac.±	
94 T	" " " "	"	"		0.40				14	Field Drive Constr.	
93 T	Pemco Inc.				0.27	No			13,14	Drive Construction	
91 AWL	Rexford N. Babb.	606	307,8		9.99	No	5.26	9.55	12,13	P.R.O 1.50 Ac.±	
91 BWL	" "	"	"		1.97	No	31.40	—	13	P.R.O 0.87 Ac±	
91 WD	" "	"	"		0.02	No			12	P.R.O. 0.07 Ac±	
73A	E.C. McCormick	3389	391	221.0595	No TAKE				6		

INTERSTATE

SUMMARY - Estimated Quantities

Item 607 Fence Type 47			607-GATE
Sh. No.	STATION TO STATION	L.F.	EA.
4	453+74 - 463+71	997	
5	467+98 - 480+00	1705	
6	S.B. Rest Area	1769	1
7	N.B. Rest Area	1757	1
8	480 - 495	2980	
9	495 - 510	3015	
10	510 - 525	2090	
11	525 - 540	1786	
12	540 - 555	3013	
13	555 - 570	3639	1
14	160 - 170	1310	
	TOTAL	24,061	3

RP = Roadside Park Parcel
(L) = Landlocked

Note: T.B.A. does not include P.R.O.
* Indicates parcel listed at end of summary.

SUMMARY OF OWNERS

Deleted Structure in Parcel 73 WL By Sam 3-30-67
REVISED AREA & PCL. LIMITS PCLS. 73-WS, 74-WS, & 75-WS BY L&D
PCL. 73-A-WS DELETED BY L&D
PCLS. 72-WS, 72A-WS, 73-WS, 73A-WS, 74-WS, 74-WS-1, & 75-WS ADDED BY L&D

Name Change Pcl. P.R. WL 2-7-67 G.Z.
Name Change Pcl. 81 WL 12-30-66 Sam BWL
Changed Deed Area & Residue Pcl. 82-WL 11-29-66 L.F.
Pcl. TT-WP Deleted & PER. STAG. 10-19-66 G.F.
Changed Deed Area & Residue Pcl. 72-WS 10-12-66 L.F.
T.B.A. Change Pcl. 75WL-RP-2 9-16-66 L.F.
REVISED RESIDUE PARCEL 79-WD 9-15-66 L.F.
Changed Residue on Pcls 74 WL & 93 WL 9-13-66 BY W.I.

State Highway Dept. Ohio 4
Bridge & Grade Sep. Sect.
Engineer & Admin. Sect.
Columbus, Ohio
AUG 2 4 1966
LOGGED
Grade
Str.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(05)229	

186/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

4/14

SUMMIT COUNTY
TRACT 2, LOTS 1,2,17,18
T-4N R-12W
RICHFIELD TWP

73 WL — T.B.A.=4.17 Ac.± P.R.O.=0.00 Ac.± Cont.=4.17 Ac.±

73 WL RP-1 — T.B.A.=0.70 Ac.± P.R.O.=0.00 Ac.± Cont.=0.70 Ac.±

RP Parcels = Roadside Park Parcels

For Details of Southbound Rest Area See Sheet No. 6

For Details of Northbound Rest Area See Sheet No. 7

ARTHUR & JOHN NITTI (72A WS) T.B.A. = 0.74 Ac.

JANE H. CAUFFIELD (73 WS) T.B.A. 3.92 Ac.

W.B. & MILDRED M. KIRBY (74 WL)

JENNIE BIGELOW (75)

ARTHUR & JOHN Nitti (72 WS) T.B.A. = 3.83 Ac.

State of OHIO — ACQUIRED UNDER MED/SUM-271-4.53/0.00 (72 WL)

Ohio Edison Co.

Cultivated

LOT-1 · LOT-2 · LOT-17 · LOT-18

I-271-6(14)224 | I-271-6(15)

MED-271-4.53 BEGIN PROJECT STA. 452+00

END ACQUISITION MED-271-4.53 | BEGIN ACQUISITION SUM-271-0.83 Sta. 456+76.83

Limit of Constr.

Existing R/W Fence

C.P.A. 450+02 298.01' N 56°03'26" E 217.84'

452+17.82 303.35' N 56°03'26" E 782.27

450+00 300' · 445+00 185.0 · N 33°03'34" W 106.42' · 450+00 193.58

N-55°-57'-18"E 374.26' · S 89°36'05" E 187.45' · 453+74.20 200.0' · 454+19.60 170.0'

325.95' N55°10'50"E · 281.11' S52°51'34"W · 54.42' · C.P.A. 450+02 193.6'

457+00.0 210.0 · 457+00.0 190.0 · 460+00 315.38 N 38°17'36" E 591.41

G71.33' N56°05'06"E · G38.29' S58°44'01"W · I.A.P.A. 458+70 210.55'

463+71.26 220.0' · C.P.A. 463+71.26 218.58' N 00°33'19" E 341.58' · 463+38.02 170.0' · 60.04' · 5°16'39"

N57°48'15"E G62.05' · N 00°33'19" E 908.82' 204.14' · 62 · 61

Ramp U 58 · 60 · SOUTH BOUND LANE

445 · 455 · 460 · 461+26 · +25.00 · 461+77.18 71.93' · 86.38'

+76.83 ℄ I-271 Survey N 56°56'19"E · 583.20' · 459+70.09 55.41'

NORTH BOUND LANE

Ramp W 55 · 58

452+50 211.50' · Limit of Constr. 501.23' S 52°56'04" W

452+00.00 215.00' · S 52° 56' 04" W 451.10' · 457+00.00 180.00'

364.78 S 68°16'22" W · 459+06.15 151.55' · 459+50.71 181.0'

460+57.67 251.69' · N 89°11'17" W 697.04'

MATCH LINE ARTHUR & JOHN NITTI (72 WS) · 458+28.73 600' Rt. · 416.81' LA · C.P.A. 458+30.30 597.67' · 50' Easement Ohio Edison Co. · LOT 18 · LOT 17

MATCH LINE · 416.81' LA · ℄ N 00°15'19" E · 50' Easement Ohio Edison Co.

S89°-36'-05"E 181.60' · N00°-33'-19"E 115.46' · 75 WL-1 · N 89°39'37" E 100.21' · Iron pins 0

461+21.70 155.38' · 75 WL-1 · 179.56' · 463+27.59 170.0' · N55°-21'-05"E 541.61'

N55°-16'-00"E 377.04' · 53.41' · 128.21' · 102'x54"ø · 115.56' (dented) · C.P.A.

S89°-57'-24"E 445.95' · 74 WL RP-2

S89°-58'-18"E · JENNIE BIGELOW (75) · Limit of Constr.

Begin Sheet, Sta. 450+00 · End Sheet, Sta. 465+00

ITEM 607 - FENCE	SIDE	TYPE 47
453+74.0 To 463+71.0	LT.	997 L.F.
SHEET TOTAL		997 L.F.

TYPE OF FUNDS
Interstate = All parcels except WS parcels.
LSI Fund = WS parcels.
Revised LA Line in Par. 72 WS - 6-19-67

Date	REVISIONS	By
10-12-66	ADDED PL. TO Pcl 72 WL	WI
3-30-67	Deleted Structure in	
	Pcl 73 WL.	S.S.
	Added Pcl. 72-WS, 72-AWS, & 73-WS	L&D
	Revised Area & Pcl Limits for	
	Pcl. 73-WS & 72-WS	L&D

R/W PLAN Sta. 450+00 to 465+00

State Highway Dept. Div. 4 RAY ENGR. & ADMIN. SECT. HAVERHILL, OHIO
AUG 29 1968
LOGGED Chkd. BH.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

187/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

5/14

SUMMIT COUNTY
LOT - 17
T-4N R-12W TRACT 2
RICHFIELD TWP.

For Details of Southbound Rest Area See Sheet No.6

Limit of Constr.

Rest Area

74 W. B. & MILDRED M. KIRBY

74WL RP-1

470+00.0 60.0

N57°-48'-15"E

662.05'

N58°-05'-03"E 500.10'

℄ Ramp U 66

Cultivated Field

74 WS T.B.A. 2.53 Ac.

S 81°-04'-27"E 672.68

S33°-03'-41"E 440.0'

475+00.0 210.0'

LA

N58°-05'-03"E 500.10'

480+00.0 200.0'

C.P.A. 474+98 208.0'

IAPA 480+00 198.0'

N54°-38'-51"E 500.40'

℄ Ramp V 75

475+00.0 150.0'

76

78

480+00.0 170.0'

Begin Sheet, Sta. 465+00

End Sheet, Sta. 480+00

74 WL

469+71.37 Iron pin 2.73' Left

470

℄ I-271 Survey

N 56°56'19"E

SOUTH BOUND LANE

475

74 WL

NORTH BOUND LANE

℄ Ramp X

75

71

227.40'

75 WL-2

468+68.99 155.0'

188.04'

472+20.31 160.0'

74WL RP-3

475+00.0 170.0'

67

S55°-21'-05"W 541.61'

C.P.A. 467+98 198

S57°-45'-14"W 351.36'

75WL RP-2

S58°-59'-11"W 279.87'

S60°-22'-13"W

Limit of Constr.

480+00.0 200.0'

40.16' 52.97'

LA

S56°-07'-13"W 431.08'

S56°-07'-13"W 228.82'

S59°-48'-04"W LA

500.90'

500.62'

468+00.0 200.0'

61.29'

73.75

468+40.16 199.43

74WL RP-2

475+00.0 190.0'

IAPA 479+00 208.0'

480+00.0 215.0'

468+00.0 261.29'

74 WS-1 T.B.A. = 0.02 Ac.

75 WS T.B.A. 2.15 Ac.

472+71.20 193.26'

IAPA 472+70.12 191.3'

N89°-53'-20"W

JENNIE BIGELOW

Rest Area

S89°-57'-24"E 445.95'

S00°-04'-27"E 181.55'

75WL RP-1

467+01.15 413.56'

S33°-03'-41"E

S16°-08'-16"W 622.47

R.P. Parcels = Roadside Park Parcels

For Details of Northbound Rest Area See Sheet No.7

ITEM 607 - FENCE	SIDE	TYPE 47
467+98 TO 480+00	RT.	1203 L.F.
474+98 TO 480+00	LT.	502 L.F.
SHEET TOTAL		1705 L.F.

TYPE OF FUNDS

Interstate Fund = All parcels except WS parcels
LSI Fund = WS parcels

Date	REVISIONS	By
10-15-68	Added Pcls, 74-WS, 74-WS-1 & 75-WS	L&D
	Revised Area & Pcl Limits for Pcls. 74-WS & 75-WS	L&D

R/W PLAN Sta. 465+00 to 480+00

State Highway Department of Ohio
RIGHT OF WAY ADMIN. SECT.
CINCINNATI, OHIO
AUG 24 1966
LOCATED
Chief Engr.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-0(15)229	

188
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

6
14

SUMMIT COUNTY
RICHFIELD TWP.
LOT 2
T-4N R-12W TRACT 2

SUMMIT COUNTY
RICHFIELD TWP.
LOT 17
T-4N R-12W
TRACT 2

W. B. & MILDRED M. KIRBY

ESTIMATED QUANTITIES	
ITEM 607 FENCE	L.F.
463+71.26 to 466+58.20	517
466+58.20 to 474+98 (648.92' LT.)	812
474+98 (648' LT.) to 474+98 (208' LT.)	440
TOTAL	1769
ITEM 607 GATE	EA
467+10	1

E.C. McCORMICK
73A No Take

℄ S 89°-36-05" E

466+57.13
650.0'

C.P.A.-466+58.2
648'

℄ LOT 2 ℄ LOT 17 464.47'

OHIO EDISON CO.
50' EASEMENT

12' GATE

℄ LA N 56°-56'-19" E 842.87'

I.A.P.A. - 471+00
648'

475+0000
650.0'

C.P.A. 474+98
648.00'

S 81°04'27" E 672.68

Brush

JANE H. CAUFFIELD
73 WS
T.B.A. 3.92 Ac.

465+60.37
504.46'

50'
50'

℄

74 WS

74WL RP-1

N 38°-17'-36" E 591.41

N 00°-33'-19" E 341.58'

Lot 2 ℄ Lot 17

Pine Trees

Pine Trees

Limit of Constr.

Woods

S 33°-03'-41" E 440.0'

74 W.B. & MILDRED M. KIRBY

PARCEL	T.B.A.	P.R.O.	Cont.
74 WL	19.85 Ac.	0.27 Ac.	20.12 Ac.
74 WL-RP1	11.97 Ac.	0.00 Ac.	11.97 Ac.
74 WL-RP2	1.54 Ac.	0.00 Ac.	1.54 Ac.
74 WL-RP3	0.40 Ac.	0.00 Ac.	0.40 Ac.
74 WD	0.02 Ac.	0.09 Ac.	0.11 Ac.
74 A-WD	0.03 Ac.	0.16 Ac.	0.19 Ac.
74 WS	2.53 Ac.	0.00 Ac.	2.53 Ac.
74 WS-1	0.02 Ac.	0.00 Ac.	0.02 Ac.

73 WS

C.P.A. - 463+71.26
218'

463+71.26
220.0'

S 76°-39' Lot 17

N 56°-05'-06" E 671.33

73-WL RP-1

662.05' S 57°-48'-15" W

463+38.02
170.0'

℄ Ramp U
65

908.00'
N 00°-33'-19" E
204.14'

73 WL

74 WL

CPA. 474+98
208.01'

475+00
210'

℄ LA
500.10' N 58°-05'-03" E

℄ Ramp V

500.40' S 54°-38'-51" W

470+00.00
160.0'

500.10'
S 58°-05'-03" W

475+00
150.00'
75

74 WL

TYPE OF FUNDS
Interstate Fund:
All parcels except
WS parcels
LSI Fund = WS parcels

Iron Pin

469+71.37
2.73'

465 ℄ Survey I-271 470 475

+25.0

MATCH LINE

N 56°-56-19 E

NOTE:
For Northbound Rest Area See Sh. 7
For Mainline Parcels See Sh. 5

75 WL-2
JENNIE BIGELOW

Date	REVISIONS	By
	Added Pcls. 73-WS, 73-A-WS &	
	74-WS	L&D
	Revised Area & Pcl. Limits For	
	Pcls. 73-WS, & 74-WS	L&D
	Deleted Pcl. 73-A-WS	L&D

R/W PLAN SOUTHBOUND REST AREA

State Highway Dept. of Ohio
R/W ENGINEERING DIVISION SECT.
RANDOM, OHIO
AUG 29 1955
LOGGED
Drawn
Checked

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

189
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

7
14

SUMMIT COUNTY
RICHFIELD TWP
LOTS 1, 2, 17, 18
TRACT 2 T-4N R-12W

Note:
For Southbound Rest Area See Sh. 6
For Mainline Parcels See Shs. 4, 5

JANE H. CAUFFIELD

W.B. & MILDRED M. KIRBY
Note: See Sheet 6 For Parcel Acreage

℄ Survey I-271

N 56°-56'-19" E

Iron Pin

469+71.37
2.73'

297.40'

N 89°-53'-20" W

65

188.04'

N 57°-45'-14" E

472+20.31
160.0'

N 56°-07'-13" E

431.08'

468+00.00
200.0'

468+40.16
199.43'

40.16'

529'

468+68.95
155.0'

351.36'

61

463+27.59
170.0'

541.61'

N 55°-21'-05" E

462+25.00

460

459+70.09
55.41'

461+77.18
71.93'

N 00°-33'-19" E
86.38'

179.56'

100.21'

461+21.70
155.38'

377.04'

N 55°-16'-00" E

459+06.15
151.55'

459+50.11
187.0'

128.21'

102"x 54"ø

53.41'

60

115.46' N 00°-33'-56" E

181.60' S 89°-39'-37" E

LOT 2
LOT 1

LOT 2
LOT 17

℄ Ramp X

℄ Ramp X

LA

MEET EXIST. FENCE
C.P.A. - 460+60.37 -250.3

460+57.67
251.69'

Limit of Constr.

445.95'

S 89°-57'-24" E

LOT 17
LOT 18

468+00.00
261.29'

S 00°-04'-27" E

181.55'

467+01.15
413.56'

S 33°-03'-41" E

338.77'

S 16°-08'-16" W 622.47'

N 16°-08'-16" E 416.81'
N 00°-15'-19" E

50'

58'

Ohio Edison Co.
EASEMENT

C.P.A. 458+32.44
598'

I.A.P.A.-463+00
598'

LA

S 56°-56'-19" W 971.27'

C.P.A. - 467+98
598'

468+0
600

12' GATE

Power Line 4 Wires

ARTHUR & JOHN NITTI

72 WS
T.B.A. = 3.83 Ac.
P.R.O. 0.00 Ac.
3.83 Ac.

73 WL

72 WL

75 WL-1

74 WL

75 WL-2

74WL RP-2

75WL RP-2

74 WS-1

75 WS
TBA 2.15 Ac.

75WL RP-1

JENNIE BIGELOW

75 WL-1	75 WL-2	75WL RP-1	75WL RP-2
T.B.A.=0.61 Ac±	T.B.A=0.64 Ac±	T.B.A.=6.78 Ac.±	T.B.A=0.34 Ac±
Lot 2 0.35 Ac± Lot 17 0.26 Ac± Cont.=0.61 Ac±	Cont.=0.64 Ac±	Cont. 6.78 Ac.±	Cont.=0.34 Ac±

ITEM 607 FENCE	TYPE 47
460+60.37 TO 458+30.3	417 L.F.
458+30.3 TO 467+98	940 L.F.
467+98 (598' TO 198' RT)	400 L.F.
SHEET TOTAL	1,757 L.F.

ITEM 607 GATE	
	1 EA.

TYPE OF FUNDS
Interstate Fund=
All parcels except
WS parcels
LSI Fund = WS parcels

Date	REVISIONS	By
1	Revised Bearings & Distances 3-13-66	Jam
	Added Pcls. 72-WS, 74-WS-1, & 75-WS	L&D
	Revised Area & Pcl. Limits For	
	Pcls. 72-WS & 75-WS	L&D
P-P-75	REVERSED BEARING ON LA LINE OF 75WS	R.S.

R/W PLAN NORTHBOUND REST AREA

Ohio Highway Dept. - Div. 4
ENGR. & ADMIN. SECT.
RAVENNA, OHIO
AUG 24 1966
PROCESSED
Init. Bk.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

190
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

8
14

SUMMIT COUNTY
LOT 16,17
T-4N R-12W TRACT 2
RICHFIELD TWP.

W.B. & MILDRED M. KIRBY

74 WL

Note: See Sheet 6 For Parcel Acreage

ANDREW S. & THERESA A. BLASKO Orchard

2 Wagon Wheels at Entrance-Exist.

LOT 16
LOT 17

N 00°-10'-17"W 44'

30' Exist. R/W

END WORK Sta. 43+10.00

42+20.52
35.00'

74 WD

490+02.37 @ 160.0' Lt. & I-271
40+98.93 & C.H. 194

489+68.34 @ 161.21' Lt. & I-271
40+77.48 @ 35.00' Lt. & C.H. 194

N 00°-07'-49"E 143.04'

C.H. 194 Exist. R/W

122.10'

Wall

Frame Barn

Δ = 00°-18'-00" Lt.
No Curve

WALTER L. & FRIEDA M. FRY

79 WL

432+53.25
150.0'

Cultivated Field

Collector Tile by others.

495+00
140.0'

480+00.0
200.0'

74WL RP-1

N-59°-48'-02"E 500.62'

485+00.0
175.0'

N-58°-37'-32"E 509.59'

LA

LA R/W

S-56°-21'-56"W 500.03'

480+00.0
170.0'

Limit of Constr.

IAPA 485+00
173.0'

Fields

C.P.A. 489+63
159.21'

E.P.A. 489+83
145.0'

Sta. 39+07.74 & C.H. 194 =
Sta. 489+04.70 & I-271

Southern Rd.

40

145.0'

E.P.A. 490+19

2 Sty. Fr. Res.

N 59°-17'-12"E 244.08'

S 1°-04'-48"E 210.03'

C.P.A. 490+43
15.4' Rt.

Plug

Septic Tank & Drain Tile

Dug Well

Southbound Lane

246.35'

N-59°-15'-31"E

N-89°-17'-53"E Farm Tile

Begin Sheet, Sta. 480+00

End Sheet, Sta. 495+00

74 WL

℄ I-271 Survey

485

490

N 56°-56'-19"E

79 WL

494+89.98

Cultivated

Frame Barn & Sheds

Ft. 5

Ft. 5

Ft. 5

485+55.00
140.83'

O.H.

486+13.00

486+46

56°-48'-30"

39°-53'

12"C.M.P.

203.14'

Shrubs

Shrubs

Cult. Field

Hedge

Plug

Plug

IAPA 492+00
138.0'

Limit of Constr.

480+00.0
200.0'

74 WL RP-3

IAPA 482+00
215.0'

Limit of Constr.

484+50.0
201.32'

S-59°-48'-05"W 300.37'

S-56°-56'-19"W LA 300.00'

S-51°-43'-41"W 495.54'

2 Sty. Fr. Res.

486+90.0
179.44'

E.P.A. 487+90
158.0'

E.P.A.
488+20 @ 163.0'

400.13' S-55°-30'-22"W

492+00.00
140.0'

LA

407.61' S-52°-43'-03"W

Farm Tile Trunk lines are 6" or 8".

Cultivated Field

480+00.0
215.0'

74 WA-1

74 WA2

Frame Barn

Fr. Shed

483+00.0
215.0'

485+00.0
242.0'

485+35.00
238.0'

487+42.66 @ 165.36' Rt. & I-271
36+72.89 @ 40.00' Lt. & C.H. 194

74 AWD

T2.89'
N 00°-07'-49"E

R/W

LA

IAPA 487+00
169.0'

487+93.49 @ 170' Rt. & I-271
37+04.60 & C.H. 194

486+65.0
221.0'

36+00.00
40.0'

N-4°-06'-22"W
135.37'

35' T.S.

30.0'

Exist. R/W

36+07.66

45.0'

36+46.46

45.0'

& Additional Field Drive
Sta. 36+33

N 89°-07'-49"E

79 T

WALTER L. & FRIEDA M. FRY

79 WL

T.B.A. 11.44 Ac±
P.R.O. 0.27 Ac±
Cont. 11.71 Ac±
Residue Rt. 32.42 Ac±
Residue Lt. 9.75 Ac±

79 T

Cont. 450 Sq.Ft.

34+65.00
30.0'

W.B. & MILDRED M. KIRBY

74 WL

Note: See Sheet 6 for Parcel Acreage

OSCAR E. COVER

80

No Take

Estimated Quantities
Item 607 Fence, Type 47 - 2980 L.F.

Exist. R/W

N 00°-07'-49"E

Begin Work
Sta. 34+00

N 89°-07'-49"E

A

B

33'

12"C.M.P.

1 Sty. Frame Res.

ARLENE M. HORN

Ⓐ Western Reserve Telephone Co.

Ⓑ Ohio Edison Co.

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
10-19-66	Rel. 77-WD Deleted Per SAG	GF

R/W PLAN Sta. 480+00 to 495+00

State Highway Dept. of Ohio
R/W, Engr. & Admin. Bldg.
Division Area Engr.
AUG 24 1965
LOCATED
Cnty. Sht. No.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

191
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

9
14

SUMMIT COUNTY
LOTS 16 & 17
FRACTION 4
T-4N R-12W TRACT 2
RICHFIELD TWP

WALTER L. & FRIEDA M. FRY.
79 WL

CHARLES GARMAN & THEODORE GARMAN
81 WL

℄ N-89°-13'-19"E

IAPA 495+00
138.0'

435+00
140.0'

Collector Line by others.

Cultivated Fields

650.07'

N-56°-03'-26"E

501+50.00
150.0'

224.97' N-56°-56'-19"E

503+74.97
150.0'

506+00.00
150.0'

225.03' N-56°-56'-19"E

401.12'

N-52°-38'-59"E

510+90.00
180.0'

LA

Limit of Constr.

IAPA 501+50
148.0'

280.82'

IAPA 506+00
148.0'

Begin Sheet, Sta. 495+00

End Sheet, Sta. 510+00

500

79 WL

℄ I-271 Survey
N56°56'19"E

505

81 WL

+12.40

346.37'

Limit of Constr.

IAPA 496+00
128.0'

Plug

105.97

Plug

IAPA 501+50
163.0'

Pine Trees in Rows

IAPA 505+00 @ 143.0'

Town-

Vill-

400.13' S-55°-30'-22"W

496+00.00
130.0'

497+05.76
136.73'

551.11' S-60°-34'-46"W

350.57' S-53°-40'-05"W

407.20' S-62°-34'-31"W

394.90' S-58°-23'-24"W

CHARLES GARMAN & THEODORE GARMAN
(LL)

501+50.00
165.0'

505+00
145.0'

509+05.23
185.0'

IAPA 509+05
183.0'

Field Drain Tile

Richfield Lot 16 Fraction 4

Richfield

Lot 16
Lot 17

Estimated Quantities
Item 607 Fence, Type 47 - 3015 L.F.

WALTER L. & FRIEDA M. FRY
79 WL

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
1	NAME CHANGE Pcl. 81 WL 12-30-66	SAVO
5/17/67	Added Tree Line (as per	DICK
	H. STRAHL) Parcel 79 WL	
9-7-67	Added Corporation line	RAW

R/W PLAN Sta. 495+00 to 510+00

State Highway Dept. Ohio
R/W ENGR. & SURVEYS SECT.
TAVERNA, OHIO

AUG 24 1966

LOGGED
Date
By

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

192
196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE : 1" = 50'

10
14

SUMMIT COUNTY
LOTS 2 & 7
FRACTION 4
T-4N R-12W TRACT 2 & 3
RICHFIELD TWP

CHARLES GARMAN &
THEODORE GARMAN
81 WL
T.B.A. 8.04 Ac±
P.R.O. 0.00 Ac±
Cont. 8.04 Ac±
Residue
Lt. 48.54 Ac±
Rt. 1.55 Ac± (LL)

ROBERT D. & MARY I. MOHN
88 WL

Roberts Drive
Ohio Edison Co.
Western Reserve Tele. Co.
Cultivated
Pasture
Gravel
Woods
Limit of Constr.
Iron Pipe Found
North Fork
To Be Abandoned Drive
Ft. Barn
Lot 2
Lot 7
Tract 2
Tract 3
Tract 4
Begin Sheet, Sta. 510+00
End Sheet, Sta. 525+00

510+00.00
180.0'
714.48'
N-55°-20'-03"E
517+14.20
200.0'
C.P.A. 517+14.20
198.0'
517+03.05
182.53'
237.27'
216.55'
110.81'
516+46.16
93.40'
+86.54 ℄
515
I.A.P.A. 512+00
183.6'
E.P.A. 517+
136.2'
E.P.A. 517+82.5
138.3'
C.P.A. 518+50
190.5'
N-60°-08'-35"E
536.64'
LA
522+50.00
170.0'
345.17' N-52°-42'-34"E
I.A.P.A. 522+50
168.0'
175.51'
+94.76 ℄
I-271 Survey
N56°56'19"E
343.00'
+93.46 ℄
520
319.46
338.25'
2-72" x 266'ϕ
SUM-271-2.07
I.A.P.A. 522+64
168.0'
514+74.71
175.20'
I.A.P.A. 513+00
193.0'
231.34'
207.85'
Lot 7
E.P.A. 518+01.9
142.3'
E.P.A. 518+21.8
140.2'
C.P.A. 518+51.5
190.3'
C.P.A. 517+70
193.0'
I.P.
37.21'
293.79' S-56°-56'-19" W
281.54' S-53°-53'-00"W
183.06'
S-53°48'-30"W
440.74' S-64°-06'-24"W
(L.L.)
S-58°-23'-24"W
394.90'
162.07' S-56°-56'-19"W
44.14'
513+00.00
195.0'
515+06.21
195.0'
514+62.07
195.0'
518+00.00
195.0'
520+81.14
180.0'
522+63.93
170.0'
Creek
288.95'
N-00°-30'-41"W
N-89°-13'-19"E
474.76'
513+06.60
438.57'
Iron Pipe Found
N-89°-05'-23"E
N-89°-05'-23"E
N-89°-05'-23"E

CHARLES GARMAN &
THEODORE GARMAN

WALTER L. & FRIEDA M. FRY
79 WL

BERNARD CONSTRUCTION COMPANY, AN OHIO CORP.
82 WL
T.B.A. 0.01 Ac±
P.R.O. 0.00 Ac±
Cont. 0.00 Ac±
Residue Rt. 39.99 Ac±

HENRY BYSTRANOWSKI,
ROSE B. TURNER & LAURETTA KURTZHALS
84 WL
T.B.A. 2.06 Ac±
P.R.O. 0.00 Ac±
Cont. 2.06 Ac±
Residue Rt. 37.94 Ac±

Estimated Quantities
Item 607 Fence, Type 47 - 3129 L.F.

GUSTAVE M. BLAUMAN
85 WL
T.B.A. 1.42 Ac±
P.R.O. 0.00 Ac±
Cont. 1.42 Ac±
Residue Rt. 13.58 Ac±

ROBERT D. & MARY I. MOHN

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By
1	NAME CHANGE Pcl. 81 WL 8-30-66	SS.
2	NAME CHANGE Pcl. 84 WL 1-18-67	BILL
3	NAME CHANGE PCL. 82-WL 2-7-67	G.Z.

R/W PLAN Sta. 510+00 to 525+00

State Highway Dept. Div. R/W ENGR. & ADMIN. SECT. RAVENNA, OHIO
AUG 24 1965
LOGGED
Cross Sec. Bill Bk.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

193 / 196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

11 / 14

J. T. & M. H. OSTERLING

86 WL — T.B.A. 0.025 Ac±, P.R.O. 0.000 Ac±, Cont. 0.025 Ac±

Residue Lt. 3.025 Ac±

SUMMIT COUNTY
LOT 2
T-4N R-12W
TRACT 3 RICHFIELD TWP

ACRES SUB. PB Page Vol. 46 63-70

ROBERT D. & MARY I. MOHN

88 T — Cont. 0.05 Ac±

88 WL — T.B.A. 6.71 Ac±, P.R.O. 0.00 Ac±, Cont. 6.71 Ac±

Residue Lt. 5.14 Ac±
Residue Rt. 0.84 Ac± (L.L.)

88A WL — T.B.A. 0.85 Ac±, P.R.O. 0.00 Ac±, Cont. 0.85 Ac±
Residue Lt. 2.20 Ac± (Lot 9, Subdivision)

REXFORD N. BABB

91 WL — Note: See Sheet 12 For Parcel Acreage

Easement held by E. Ohio Gas Co. width and location unspecified

HELEN A. NEWTON (L.L.)

90 T

Lot 10

Lot 9

Limit of Constr.

Rolling

Dry

LA

Woods

Creek

Yellow Fork North

20" Gas Line ℄

30" Gas Line ℄

℄ I-271 Survey
N 56°56'19"E

Begin Sheet, Sta. 525+00

End Sheet, Sta. 540+00

1 Stv. Bk. Res.

Septic Tank

Drain Tile

Iron Pipe Found

Iron Pipe Found +47.49

Fence Post

ROBERT D. & MARY I. MOHN (L.L.)

GUSTAVE M. BLAUMAN

85 WL

B & L REALTY CO.

87 WL — T.B.A. 0.21 Ac±, P.R.O. 0.00 Ac±, Cont. 0.21 Ac±

87 T — Cont. 0.07 Ac±

Residue Rt. 15.79' Ac±

HELEN A. NEWTON

90 WL — T.B.A. 7.85 Ac±, P.R.O. 0.00 Ac±, Cont. 7.85 Ac±

90 T — Cont. 0.04 Ac±

Residue: Lt. 1.10 Ac± (L.L.)
Rt. 26.78 Ac±

© East Ohio Gas Co.

Estimated Quantities
Item 607 Fence, Type 47-2688 L.F.

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By

R/W PLAN Sta. 525+00 to 540+00

State Highway Dept. Div. V
New Since 6 Mo. Sect.
Akron, Ohio
AUG 21 1968
Cks. Logged Bill by

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

194
196

SUMMIT COUNTY
LOT 2
T-4N R-12W TRACT 3
RICHFIELD TWP

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

12
14

REXFORD N. BABB
91 WL

HELEN A. NEWTON
90 WL

Begin Sheet Sta. 540+00

End Sheet Sta 555+00

Dry

Woods

Trees

Scattered

Orchard

Lot 2

Limit of Constr.

℄ I-271 Survey

℄ WEST RICHFIELD ROAD S.R. 176

200.56' N-52°-38'-55"E

541+00.00
173.0'

IAPA 541+00
173.0'

700.45'

LA

N-58°-59'-03"E

548+00.00
150.0'

IAPA 548+00
148.0'

627.96' N-51°-54'-49"E

267.60' S-52°-39'-03"W

543+00.00
135.0'

IAPA 543+00
133.0'

400.03' S-57°-39'-16"W

547+00.00
140.0'

IAPA 547+00
138.0'

400.78' S-60°-30'-52"W

540+33.15
135.01'

S 89°03'00" W

551+00.00
165.0'

IAPA 551+00
163.0'

346.03' S-66°-55'-27"W

N5C°5C'19"E

545

550

N5C°5C'19"E
Sta. 554+32.81 ℄ I-271 =
Sta. 88+87.10 ℄ S.R.176

N 54°54'29"E
85+75 @ 30.0'

N 54°54'29"E
30.00'

554+25.54 @ 205.0' ℄ I-271
86+81.97 ℄ S.R. 176

553+95.62 @ 202.36' ℄ I-271 =
86+83.54 @ 30.0' Rt. ℄ S.R. 176

86+84.59 @ 50' Rt. ℄ S.R. 176
553+75.67 @ 200.60' Lt.

53+07.11 B/L Ramp A =
553+07.11 I-271 @ 91 Lt.

C.P.A. 553+95.62 @ 200.36'

C.P.A. 553+96.33 @ 182.37'

87+31
30.0'

87+31 @ 30.0'

87+ B/L R/W
51.0' Rt.

87°58'-10"

S 35°05'31"E
25.00'

BEGIN WORK
STA. 85+75.00
86+00 @ 30.0'

554+55.62 @ 203.40'
86+84.64 @ 30.0'

86+86.42 @ 50' Lt.
554+75.67 @ 202.32'

C.P.A. 86+88.42 @ 50' Lt.

C.P.A. 87+13 @ 50.0'

87+31 @ 30.0'

S 35°05'31"E

89+00 @ 70.0'

(To be abandoned)
Exist Access Drive

C.P.A. 555+09.28
181.14'

C.P.A. 555+10.70
219.11'

C.P.A. 553+82.30
184.91'

C.P.A. 553+83.36
212.89'

553+83.36 @ 214.89 Rt. ℄ I-271
30+99.92 @ 57' Rt. ℄ S.R. 176

554+40.79 @ 225.0'
91+12.24 ℄ S.R. 176

P.C. R/W
91+57.62

P.C. 91+57.62
70.0'

END WORK STA.
91+80

Caution Lights

Caution Signals

Exist. R/W

℄ Exist. R/W

111.40' N 22°44'58" W

106.97'

60'

29'

57'

39'

49'

70'

59'

62'

63'

18'

90' S 35°05'31" E

225.14'

205.13'

60.00'

50.00'

P.C. 91+57.62
Δ = 16°-00
R = 955.81'
T = 134.33'
L = 266.91'
E = 9.39'

Estimated Quantities
Item 607 Fence, Type 47 - 3013 L.F.

91 WL	91 AWL	91 BWL	91 WD
T.B.A. 11.98 Ac±	T.B.A. 9.99 Ac±	T.B.A. 1.97 Ac±	T.B.A. 0.02 Ac±
P.R.O. 0.49 Ac±	P.R.O. 1.50 Ac±	P.R.O. 0.87 Ac±	P.R.O. 0.07 Ac±
Cont. 12.47 Ac±	Cont. 11.49 Ac±	Cont. 2.84 Ac±	Cont 0.09 Ac±

91A WD	91B WD	91C WD	91 T	91 T-1
T.B.A 0.01 Ac±	TBA 0.10 Ac±	T.B.A. 0.023 Ac±	Cont. 0.01 Ac±	Cont. 0.06 Ac±
P.R.O 0.07 Ac±	PRO 0.07 Ac±	P.R.O. 0.079 Ac±		
Cont. 0.08 Ac±	Cont. 0.17 Ac±	Cont 0.102 Ac±		

TYPE OF FUNDS
Interstate Fund

Date	REVISIONS	By

R/W PLAN Sta. 540+00 to 555+00

Ohio Highway Dept. Div. 4
ROBERT K. JOHN SECT.
AKRON, OHIO

AUG 24 1966

LOGGED
Date
By

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-6(15)229	

195
196

13
14

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1"=50'

SUMMIT COUNTY
LOTS 1,2 & 3
T-4N R-12W
RICHFIELD TWP
TRACT 3

REXFORD N. BABB
91A WL

MATCH Sta. 13+00 This Sheet

560+12.64
390.47'
N-89°-57'-26"W
115.00'
N-27°-02'-23"E
562+00.00
380.00'
564+25
415.01'
N-48°-05'-46"E
227.70'
214.77' N-69°-02'-03"E
LA
TAPA 564+25
414.'
TAPA 562+00
379'
91B WD
91B WL
Apple Orchard
8" to 10"
5GG+35.0 - 37.0 Lt.
G4+65.08 - 71.03 Lt. of Survey C.H.17
Exist R/W
MATCH See Sh. 14
CPA 5GG+35
369'
559+68.95
323.46'
S-89°-57'-26"E
S-00°-02'-34"W
80.00'
14.24'
R/W
L/A R/W
15+10.59 ℄ T.R.185
561+08.97 @ 327.66
T.R.185
61+46.83
125.70'
N-27°-02'-23"E
89.78'
558+00.00
185.0'
215.41'
N-35°-08'-16"E
TAPA 565+00-264'
565+00.00
265.0'
560+31.14
282.91'
S-89°-57'-26"E
HAWKINS RD.
491.02'
Exist. 60' R/W
P.T. 65+91.17
PEMCO INC.
93 WL
61+59.46'E
61+18.89 Ramp A =
61+20.20 C.H. 17
202.42'
S-09°-13'-09"E
N-00°-13'-09"E
156+55.0
155.0
Cistern
Septic Drain
Sty
Tr Res.
Barn
NOTE.
SHED FOR BARN SHOWN ON SHEET 14 of 14
778.32'
N-57°-31'-50"E
LA
Limit of Constr.
CPA 156+55
153'
375.00'
N-59°-59'-45"E
LA
Limit of Constr.
T.S. 56+07.11
56+58+07.11
TAPA 558+00
184'
RAMP A
564+79.82 ℄ I-271
60+70.20 ℄ Survey C.H.17
20+00 B/L T.R.108
61+43.00 ℄ C.H.17
565+20.28 - 59.47' Lt.
61+42.13 - 1.59' Rt ℄ Survey
93 WL
91A WL
℄ I-271 Survey
N-56°-56'-19"E
560
564+73.55 ℄ I-271
564+81.88 ℄ I-271
57°-03'-00"
Bearing
N-56°56'-19"E
Back
Equation
N-56°-58'-24"E
Ahd
154+70.44
2.70 Rt.
272.43'
N-89°-16'-37"E
Lot 1
Lot 3
Limit of Constr.
Richfield Township
Richfield Apple Orchard
End Sheet Sta. 160+00
Begin Sheet, Sta. 555+00
RAMP B
60
℄ Limit of Constr.
T.S. 56+58.07
S.C. 58+58.07
359.77'
S-53°-45'-05"W
LA
558+00.00
205.0'
TAPA 558+00
203'
213.32' S-81°-09'-58"W
94 WL
C.PA. 154+70
153'
230.80'
154+70.00
155.00'
16' GATE
799.64'
S-55°-18'-21"W
LA
S-55°-18'-17"W
157+00.70
148.28'
Easement held by Ohio Edison Co.
Width & Location unspecified.
N-89°-16'-37"E
(L)
91A WL
REXFORD N. BABB
91 CWD
REXFORD N. BABB
Exist. Field Drive
Exist. 60' R/W
℄ Hawkins Rd. T.R-185
N-89°-57'-26"W
Hydrant
Well
Barn
Match Sta. 13+00
Exist. R/W
30'
80+39.90
87.80'
N-65°-31'-40"W
7+40.10
7+40.10
70.0'
60.0'
S-35°-05'-31"W (E0)
80+99.90 ℄ SR 176
6+70.10 ℄ T.R.185
Exist. 60' R/W
561+48.92 @ 429.05' ℄ I-271
55+30.18 @ 4+32.74' ℄ Surv. C.H.17
N-81°-04'-07"W
200.36'
560+00.00
235.0'
P.T. 60+64.24
TAPA 560+00
283'
55+35.68
18.88
55+32.07
56.17
55+07.6
60.68'
91 T
C.PA.
63+09.80 B/L Ramp B
=56+41.16 ℄ C.H.17
152+43.52 - 414.06'
55+99.99 - 35.56 Rt. ℄ Surv. C.H.17
TAPA 152+41
412.'
A MATCH See Sh. 14
560+78.40
538.26'
LINE
N-00°-12'-46"W
130.00'
E.P.A.
℄ Survey C.H.17
N-89°-53'-33"E
47.00'
E.P.A.
N-00°-12'-46"E
200.0'
151+08.38 - 564.20'
Old ℄ C.H.17 (093)E
N-00°-12'-46"W
55' ℄ C.H.17 (093)E
N-00°-12'-46"W
℄ Exist. R/W
CLEVELAND - MASSILLON ROAD
N-00°-06'-41"W
℄ Limit of Constr. (Temp. Runaround
℄ Temp. Runaround
MON. USED FD.
343.47'
S-08°-01'-00"W
60' Break in L/A at Station 561+53 as per Journal Entry Vol. 25 Page 486 Recorded Nov 8, 1956
END PROJECT
SUM-271-0.50
EQ. Sta. 566+09.70
= Sta. 156+00
BEGIN PROJECT
SUM-271-2.98
Sta. 156+00
A - Western Reserve Telephone Co
B - Ohio Edison Co.
C - E. Ohio Gas Co.
Estimated Quantities
Item 607 Fence, Type 47 3,639 L.F.
Item 607 Gate 1 Ea.
GORDON A. STOUFFER &
VERNON B. STOUFFER
94 WL
T.B.A. 0.60 Ac±
P.R.O. 0.51 Ac±
Cont. 1.11 Ac±
94 T
Cont. 0.40 Ac.±
Residue Rt 421.37 Ac±
Residue Lt 0.0 Ac.
TYPE OF FUNDS
Interstate Fund
R/W PLAN Sta. 555+00 to 570+00

Date	REVISIONS	By
4/7/67	Shed Remove From Pcl. 93WL	IRICK
9-7-67	Corporation line added	RAW
4-7-98	ADD. BREAK IN L/A PCL 94	

State Highway Department
RIGHT-OF-WAY ENGINEER & ADMIN. SECRET.
RAVENNA, OHIO
AUG 2 4 1966
LOCATED
Bill Beck

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	I-271-G(15) 229	

196/196

SUMMIT COUNTY
SUM-271-0.83
LIMITED ACCESS
SCALE: 1" = 50'

14/14

SUMMIT COUNTY
RICHFIELD TOWNSHIP
LOT 1 TRACT 3
R-12W T-4N

ELBERT M. WILTSHIRE &
KATHRYN E. WILTSHIRE

N-89°-16'-37" E

Cistern 5'x5'
Septic Drain
1½ Sty Fr Hse
Barn
Shed
93'
67'

PEMCO INC.

6"-10" Cherries
10" Apple

END ACQUISITION
SUM-271-0.50
I-271-G(15) 229

BEGIN ACQUISITION
SUM-271-2.98
STA. 166+66.45

164+33.28
147.43'

778.32'
LA
N-57°31'-50" E
266.83'
167+00.00
145.01'

Limit of Constr.
EPA
Drive to be Abandoned

516.29'

Apple Orchard
8" To 10"

Field Drive - To be abandoned

℄ Survey I-271
N-56°-58'-24" E
32°-18'-13"
165
170

93 WL
3 WL

Begin Sheet Sta. 160+00

End Sheet Sta. 170+21.70

IAPA
165+00
125.0'
EPA

Limit of Constr.

799.64'
S-55°-18'-17" W
LA
369.67'
S-57°-30'-45" W
LA
230.63'

168+69.66
128.48'

Apple Orchard

(L)

N-89°-16'-37" E

LOT 1
LOT 3

GORDON A. STOUFFER
AND
VERNON B. STOUFFER

PEMCO INC.
A CORPORATION

93 WL

T.B.A. 7.18 Ac±
P.R.O. .46 Ac±
Cont. 7.64 Ac±

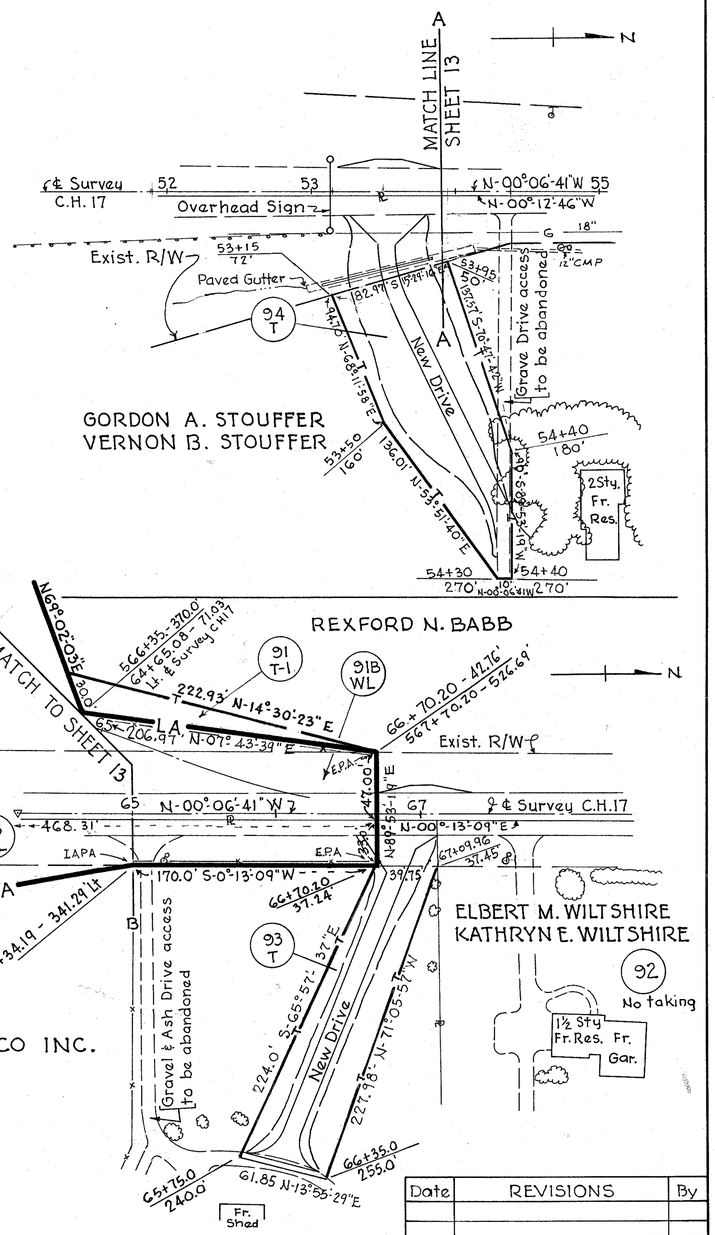
93 T

Cont. 0.27 Ac±

Residue Rt. 15.16 Ac± (L)
Residue Lt. 4.33 Ac±

Estimated Quantities
Item 607 Fence, Type 47 - 1310. L.F.

PEMCO INC.



Date	REVISIONS	By

R/W PLAN STA. 160+00 to STA. 170+21.70

State Highway Dept. Div. 4
RIGHT OF WAY ADMIN. SECT.
RAVENNA, OHIO
AUG 24 1965
Cmb. LOGGED Bill Bk.

TE-95
400-1-63

GENERAL INFORMATION

INTRODUCTION

The project consists of the construction of 2.2 miles of IR 271, beginning 1600 feet east of Medina Line Rd., 1800 feet north of Everett Rd., extending northeastward, and terminating 700 feet east of the USR 21 - Hawkins Rd. junction. Included in the report are profiles of West Richfield Road (SR 176) and the USR 21 Interchange.

Proposed grades indicate the following maximum proposed cuts and fill embankments:

	CUTS (MAX.)	FILL EMBANKMENTS (MAX.)
IR 271	40'	50'
W. Richfield Rd. (SR 176)	1'	1'
USR 21	-	2'
Ramp A	30'	2'
Ramp 3	32'	2'

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses rolling, dissected uplands, on the western edge of the glaciated Allegheny Plateau. Shallow to moderately deep glacial drift overlies indurated clays, shales, and sandstone, of Lower Pennsylvanian or Upper Mississippian age. A stratigraphic rock section was made in the vicinity of station 455+00.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger, hand auger (in areas of difficult access), and rotary type drill rig, between August 31 and September 28, and on October 28 and 29, 1964. Included in the report is a log of a boring made for the SR 176 structure investigation.

INVESTIGATIONAL FINDINGS

Materials occurring immediately below proposed grades consist predominantly of silts (A-4a and A-4b) and silt clays (A-6a), having low moisture contents, and moisture contents generally below the plastic range, as well as sandstone, indurated clay, and shale bedrock.

Bedrock is anticipated in the excavations at the following stations:

Stations 452+25 to 454+00 - sandstone in the left ditch and lower portion of the left backslope.

Stations 454+00 to 455+50 - sandstone at left grade and in the left ditch and lower portions of the left backslope.

Stations 455+50 to 459+50 - sandstone at both grades and in the ditches and lower portions of the backslopes.

Stations 471+50 to 477+00 - sandstone at right grade and in the right ditch and backslope.

Stations 477+00 to 484+50 - sandstone at right grade and lower and mid-portions of the right backslope.

Stations 484+50 to 491+00 - sandstone at right grade and in the right ditch and lower portion of the right backslope; sandstone possibly in the left ditch between stations 489+00 and 491+00.

Stations 550+00 to 550+50 - sandstone at both grades. See Ramps below for rock in backslopes.

Ramp A - Stations 51+00 to 62+50 - sandstone at grade and in the ditches and lower and mid-portions of the backslopes, with little shale in the mid-portions of the backslopes.

Ramp 3 - Stations 51+00 to 60+50 - sandstone at grade and in the ditches and lower and mid-portions of the backslopes, with little shale in the mid-portions of the backslopes.

Frost susceptible silts were encountered within three feet below proposed grade at stations 454+50, 464+50, 468+50, 542+00, and 560+00.

Embankment foundation materials comprise sandy gravels (A-1-b and A-2-4), sandy silts (A-4a), and silt clays (A-6a), having low moisture contents, and moisture contents generally below the plastic range.

Wet and/or organic materials were encountered right of station 509+00 and left of station 514+25.

LEGEND FOR PROJECT AVERAGE RESULTS OF TESTS -- 78 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C SAND	% F SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	45	6	26	12	11	NP	NP	9	3
Coarse and fine sand	-----	A-3a	23	9	50	8	10	NP	NP	15	1
Gravel and/or stone fragments with sand and silt	A-2-4(0)	A-2-4	29	12	29	15	15	18	2	9	7
Gravel with sand, silt and clay	A-2-6(1)	A-2-6	26	12	30	7	25	33	12	35	1
Sandy silt	A-4(5)	A-4a	20	7	19	30	24	24	5	12	20
Silt	A-4(8)	A-4b	12	6	6	51	25	22	3	12	5
Silt and clay	A-6(8)	A-6a	15	5	11	33	36	31	12	16	30
Silty clay	A-6(11)	A-6b	0	6	15	36	43	38	18	11	1
Clay	A-7-6(17)	A-7-6	0	1	1	44	54	59	27	20	1
Weathered indurated clay				VISUAL CLASSIFICATION							2
Weathered sandstone				VISUAL CLASSIFICATION							7
Weathered shale	Various other materials			VISUAL CLASSIFICATION							

Sod or Topsoil 'X' = Approximate depth.

Auger boring - plan view.

Drive sample and core boring - plan view.

Auger boring plotted to vertical scale only.

NOTE Figures beside borings indicate water content in percent. e.g.

● Water content nearly equal to or greater than liquid limit.

Drive sample and core boring plotted to vertical scale only.

W 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

SUMMIT COUNTY

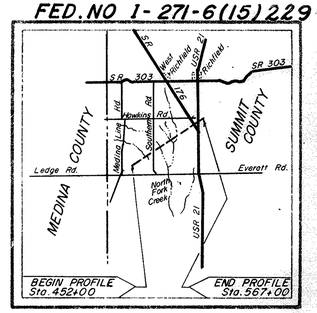
SUM- 271-0.83

1 / 19

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 1-271-6(15)229



LOCATION MAP

Recon - J.S.M. 8/27/64
Drilling - Auger
A.J.P. 8/31/64, 9/18/64
C.M.C. 8/31/64 to 9/2/64, 9/28/64
Core
D.W.B. 10/28/64 to 10/29/64
Drafting - A.F. 11/19/64

SUMMARY OF SOIL TEST DATA

NOTE: NP shown in Liquid Limit and Plasticity Index columns indicates that the material is non-plastic.
*Denotes sample taken at or near grade.

MAINLINE (IR 271)

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
454+50	CL	0.5-4.0	0	8	9	50	33	27	5	11	A-4b *
458+35	35'Rt	0.0-6.0	18	5	8	34	35	30	11	13	A-6a
		6.0-10.0	12	6	10	28	44	32	11	18	A-6a
		10.0-13.0	23	2	9	40	26	33	11	16	A-6a
461+00	CL	0.0-2.0	17	4	13	43	23	NP	NP	11	A-4a
464+50	CL	0.0-3.0	18	7	9	37	29	NP	NP	13	A-4a *
468+50	CL	0.0-2.5	19	3	6	50	22	NP	NP	9	A-4b *
474+00	CL	0.6-6.0	45	7	25	12	11	NP	NP	5	A-1-b
479+00	CL	0.6-5.0	0	6	10	26	58	39	15	16	A-6a
		5.0-9.0	0	10	31	35	24	19	4	13	A-4a
		9.0-14.0	23	20	31	10	16	NP	NP	7	A-2-4 *
489+25	CL	0.6-4.0	29	7	12	26	26	28	11	16	A-6a
		4.0-8.0	13	2	3	50	32	26	6	19	A-4b
		8.0-13.0	16	6	31	26	21	19	4	12	A-4a *
		13.0-17.0	43	7	28	10	12	NP	NP	9	A-1-b
		17.0-19.5	Brown Weathered Sandstone							6	Visual *
495+00	CL	0.6-5.5	18	9	14	26	33	28	11	14	A-6a *
		5.5-10.0	33	13	12	23	19	24	6	12	A-4a
499+30	CL	0.6-4.0	11	4	14	34	37	34	13	19	A-6a *
		4.0-8.0	20	7	12	32	29	26	6	14	A-4a
		8.0-10.0	23	10	13	28	26	21	5	12	A-4a
501+70	CL	0.6-4.0	13	4	11	38	34	33	12	13	A-6a
		4.0-10.0	28	8	15	30	19	25	6	15	A-4a
		10.0-13.0	0	12	14	14	60	35	12	26	A-6a
		13.0-18.0	32	6	6	36	20	24	11	14	A-6a
		18.0-23.0	31	4	7	42	16	18	3	11	A-4a
506+10	CL	0.6-4.0	16	3	2	48	31	29	11	13	A-6a *
		4.0-8.0	18	4	8	53	17	18	3	10	A-4b
		8.0-12.0	11	10	6	53	20	18	3	10	A-4b
509+00	100'Rt	0.6-3.0	9	2	12	48	29	29	11	23	A-6a
		3.0-7.0	27	7	22	20	14	NP	3	13	A-4a
		7.0-10.0	47	5	24	14	10	NP	NP	13	A-1-b
		10.0-13.5	31	6	28	19	16	18	5	9	A-2-4
514+15	CL'	0.6-5.0	0	5	11	33	51	31	11	18	A-6a
		5.0-10.0	30	10	31	16	13	NP	NP	9	A-2-4
		10.0-14.5	24	5	5	36	30	28	5	11	A-4a
514+25	85'Lt	0.6-2.0	26	12	30	7	25	33	12	35	A-2-6
		2.0-6.0	20	8	14	30	28	23	7	13	A-4a
		6.0-9.0	Brown Gravel								Visual
		9.0-11.0	35	9	23	17	16	19	4	10	A-2-4
518+00	CL	0.3-4.5	Brown Weathered Indurated Clay							6	Visual
523+50	CL	0.4-5.0	24	5	19	22	30	25	9	10	A-4a
		5.0-10.0	26	5	17	23	29	25	7	11	A-4a
527+00	CL	0.3-5.0	0	4	25	41	30	29	5	13	A-4a
529+00	CL	0.4-4.5	Brown Weathered Indurated Clay							8	Visual
534+00	CL	0.6-4.0	0	2	5	54	39	37	14	15	A-6a
538+00	CL	0.6-3.5	0	6	15	36	43	38	18	11	A-6b
542+00	CL	0.6-3.0	14	6	21	29	30	27	8	13	A-4a *
		3.0-6.0	16	4	40	21	19	NP	NP	12	A-4a
		6.0-10.0	Gray Weathered Sandstone							10	Visual
547+50	CL	0.6-6.0	26	10	22	19	23	27	9	12	A-4a *
		6.0-10.0	26	15	30	15	14	NP	NP	13	A-2-4
555+00	CL	0.6-5.0	16	4	11	36	33	36	14	14	A-6a
		5.0-10.0	26	7	13	26	28	28	11	13	A-6a
		10.0-14.0	Gray Weathered Sandstone							11	Visual
		14.0-17.0	Gray Weathered Sandstone							10	Visual
		17.0-19.0	Brown Weathered Sandstone							19	Visual
		19.0-21.0	Brown Weathered Sandstone							14	Visual
560+00	CL	0.5-5.0	13	9	18	22	38	34	13	14	A-6a
		5.0-10.0	11	4	9	43	33	27	11	13	A-6a
		10.0-13.0	12	6	14	38	30	24	6	14	A-4a *
		13.0-15.5	11	2	4	38	45	37	14	15	A-6a *
563+50	CL	0.4-4.0	23	4	12	31	30	36	12	17	A-6a
		4.0-9.0	12	8	15	34	31	28	11	17	A-6a
		9.0-14.0	10	6	15	33	36	25	11	12	A-6a
		14.0-16.0	30	2	5	34	29	31	11	—	A-6a

USR 21 INTERCHANGE

Ramp A

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
61+00	BL	0.6-4.0	18	10	21	21	30	30	12	17	A-6a
		4.0-8.0	19	5	11	31	34	31	11	16	A-6a
		8.0-11.0	19	4	13	32	32	30	11	15	A-6a
		11.0-17.0	Brown Weathered Sandstone							14	Visual *
66+00	BL	0.6-5.0	13	4	10	35	38	31	11	13	A-6a *
		5.0-10.0	14	5	10	36	35	29	11	14	A-6a

Ramp 3

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
61+50	BL	0.5-5.5	0	1	1	44	54	50	27	20	A-7-6 *

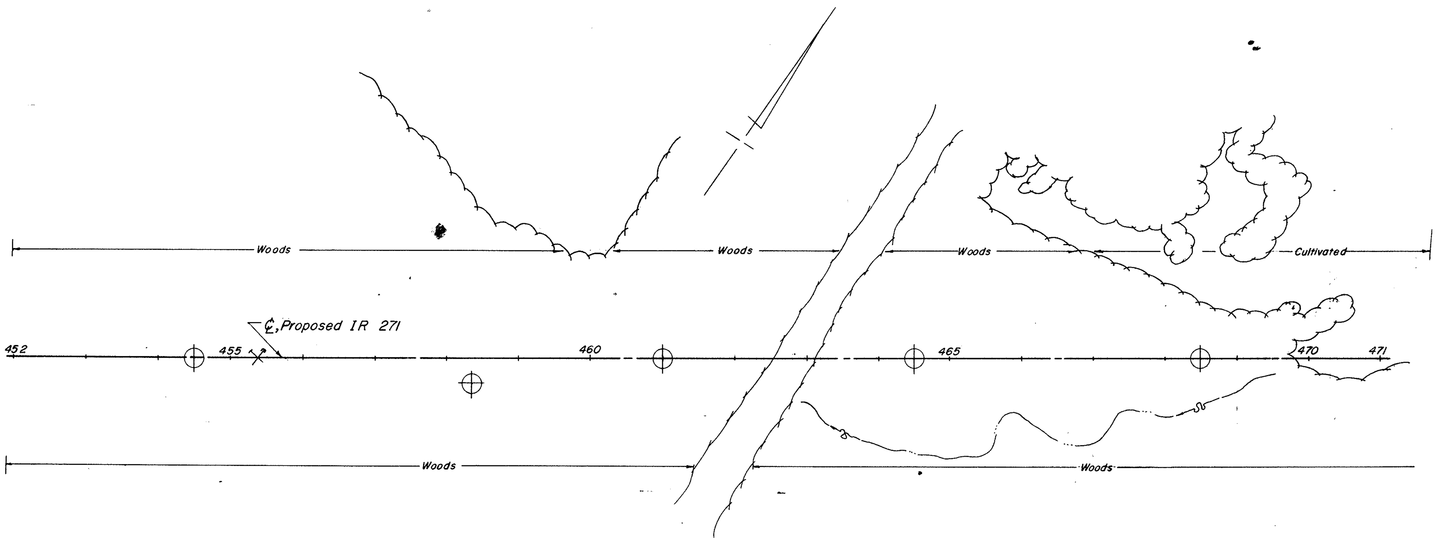
DRIVE SAMPLE SOIL TEST DATA

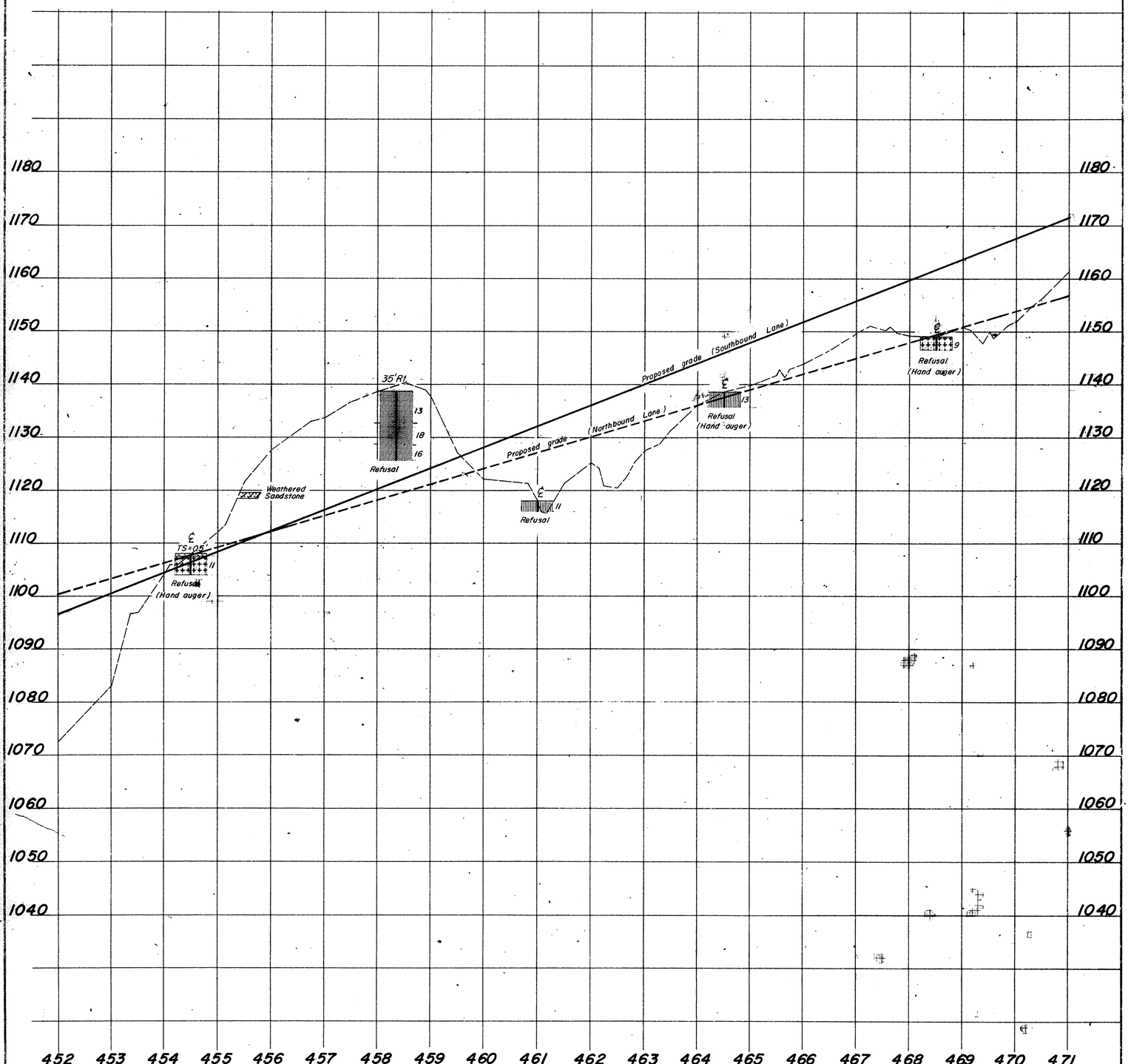
MAINLINE (IR 271)

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
485+00	CL	5.0-6.0	0	7	15	33	45	27	11	20	A-6a
		10.0-11.0	13	3	9	20	55	33	11	25	A-6a
		15.0-16.0	37	5	11	31	16	17	3	11	A-4a
		20.0-21.0	45	5	24	13	13	NP	NP	10	A-2-4
		25.0-26.0	23	9	50	8	10	NP	NP	15	A-3a
		30.0-31.0	51	3	19	19	8	NP	NP	11	A-2-4

West Richfield Road (SR 176)

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
89+94	18'Rt	5.0-6.0	16	8	15	28	33	25	6	13	A-4a
		10.0-11.0	30	6	26	17	21	21	6	13	A-4a
		15.0-16.0	Brown Extremely Weathered Shale							11	Visual





SOIL PROFILE
SUMMIT COUNTY
SUM- 271-0.83

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

2
19

SOIL PROFILE
SUMMIT COUNTY
SUM - 271-0.83
STATE HIGHWAY TESTING LABORATORY
[illegible] W BROAD ST COLUMBUS [illegible] OHIO

3
19

Brush | Cultivated | Pasture | Residential | Cultivated | Nursery

Woods | Cultivated | Residential | Southern Rd. (Co. Rd. 194) | Cultivated | Nursery

℄ Proposed IR 271

471 475 480 485 490 495 500 503

1240 1230 1220 1210 1200 1190 1180 1170 1160 1150 1140 1130 1120

℄ Sod=0.6'
16 13 7
Refusal (Boulders)

℄ Sod=0.6'
5
Refusal

℄
7/5 20
12/10 25
14/25 11
31/25 10
50/5 18
Top of Rock-In-Place
A.
B.

℄ Sod=0.6'
16 19 12 9 6
Refusal

℄ Sod=0.6'
14 12

℄ Sod=0.6'
19 14 12

℄ Sod=0.6'
13 15 26 14 11

Proposed grade (Southbound lane)

Proposed grade (Northbound lane)

STATION 485+00, ℄:

A. Sandstone conglomerates, brown, coarse-grained, with 1/8" sub-rounded quartz pebbles, slightly weathered and broken. Core loss 24%.

B. Sandstone, brown, fine-grained, firm, with few thin conglomeratic seams, broken and slightly weathered. No core loss.

471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503

SOIL PROFILE

SUMMIT COUNTY

SUM- 271-0.83

4/19

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

Scattered brush | Nursery | ℄, Proposed IR 271 | Scattered brush | Woods | Pasture | Residential | Woods | Woods

503 505 510 515 520 525 530 535

Nursery | Woods | Woods | Cultivated | Woods

1210 1200 1190 1180 1170 1160 1150 1140 1130 1120 1110 1100

℄ Sod=0.6' 13 10 10

100' Rt. Sod=0.6' 23 Slightly organic 13 13 9 Refusal (Boulders)

℄ Sod=0.6' 18 9 11 Refusal (Boulders)

85' Lt. Swamp Sod=0.6' 35 ● Organic 13 Brown gravel 10 Refusal (Boulders)

℄ TS=0.3' 6 Refusal (Hand auger)

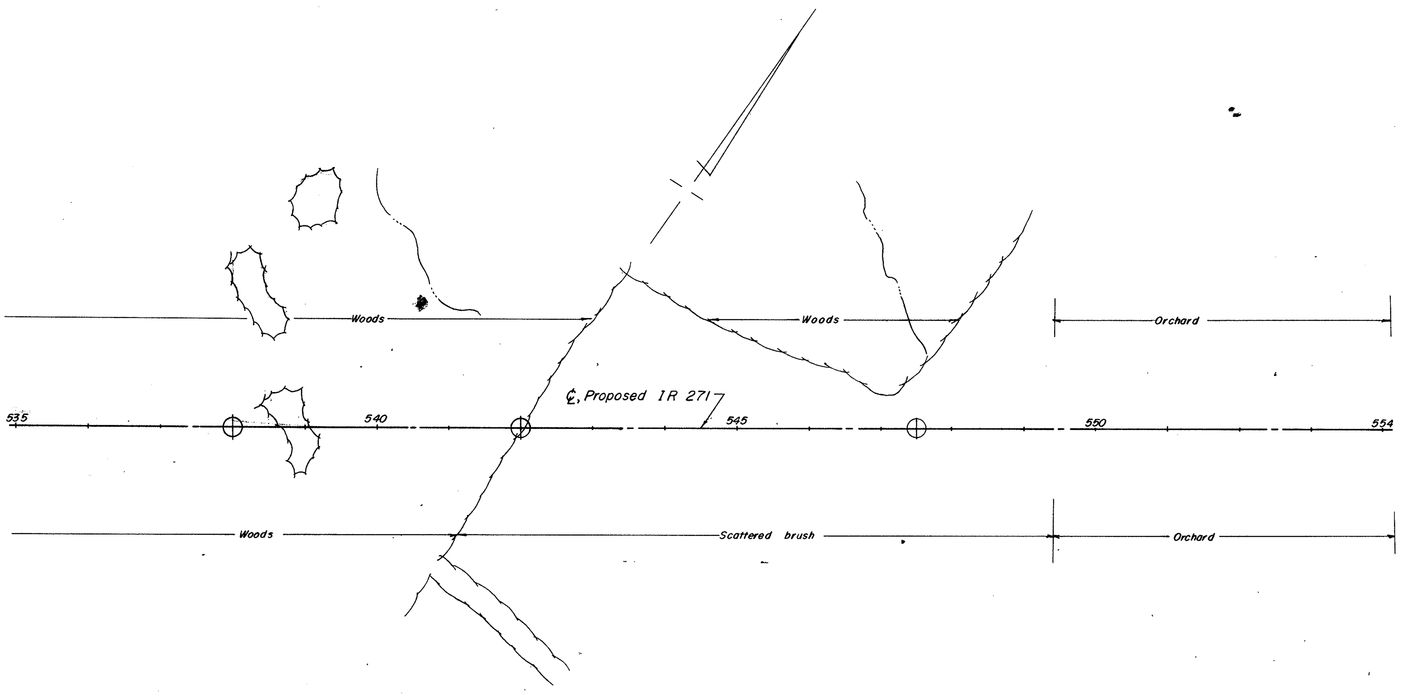
℄ TS=0.4' 10 11

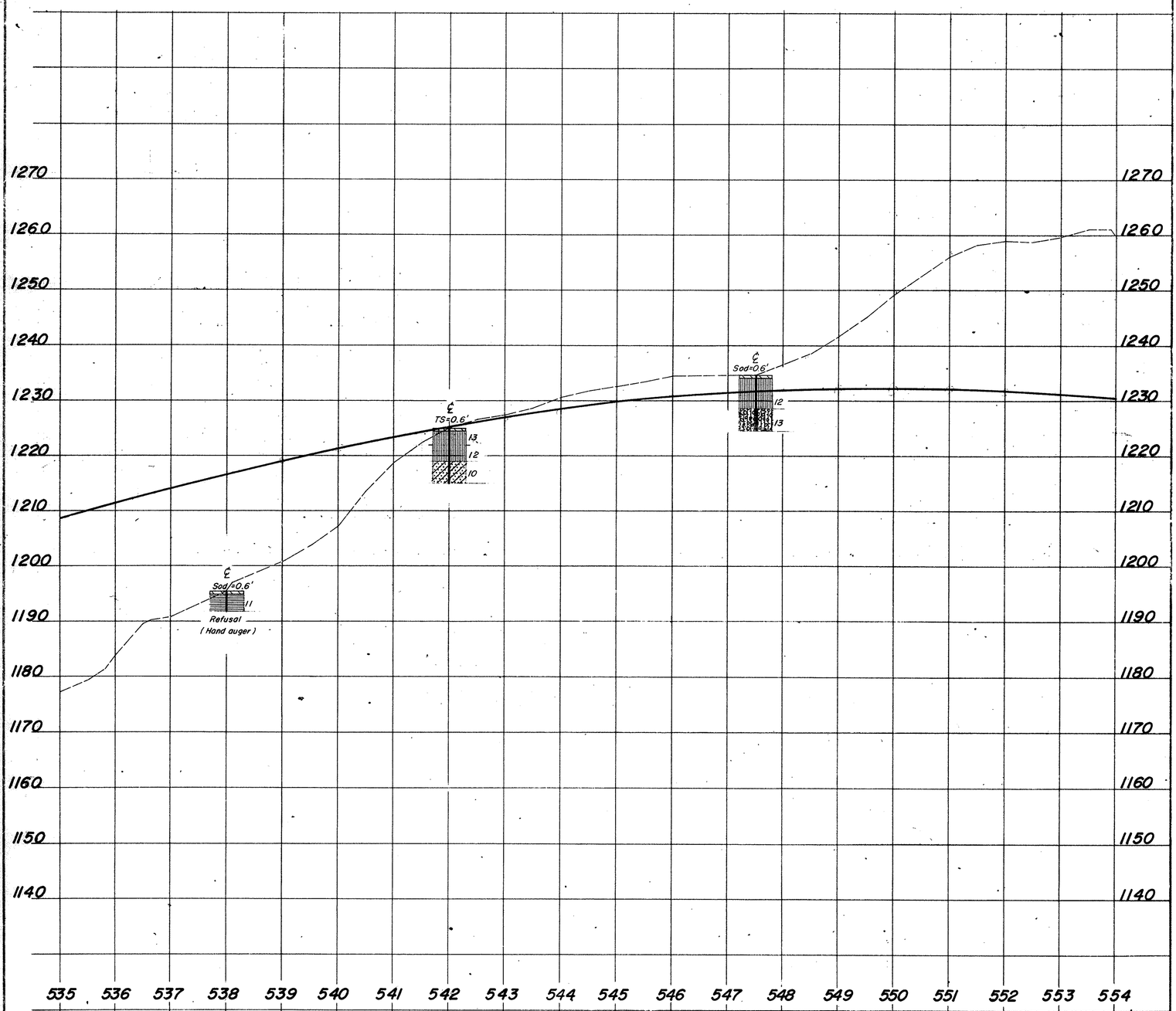
℄ TS=0.3' 13 Refusal (Boulders) (Hand auger)

℄ TS=0.4' 8 Refusal (Hand auger)

℄ Sod=0.6' 15 Refusal (Hand auger)

503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535





SOIL PROFILE
SUMMIT COUNTY
SUM- 271-0.83
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO
5
19

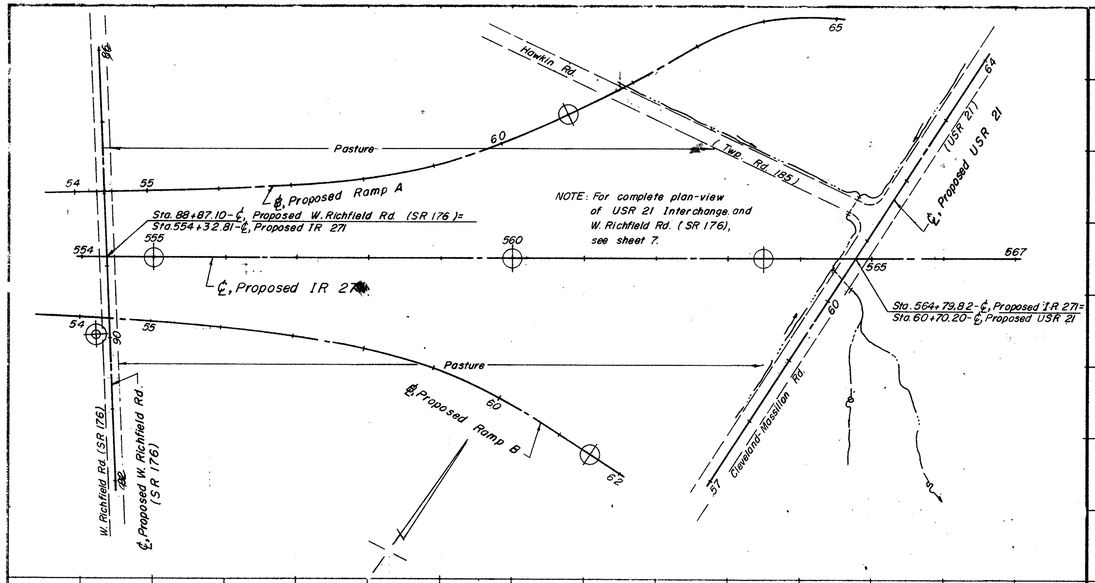
SOIL PROFILE

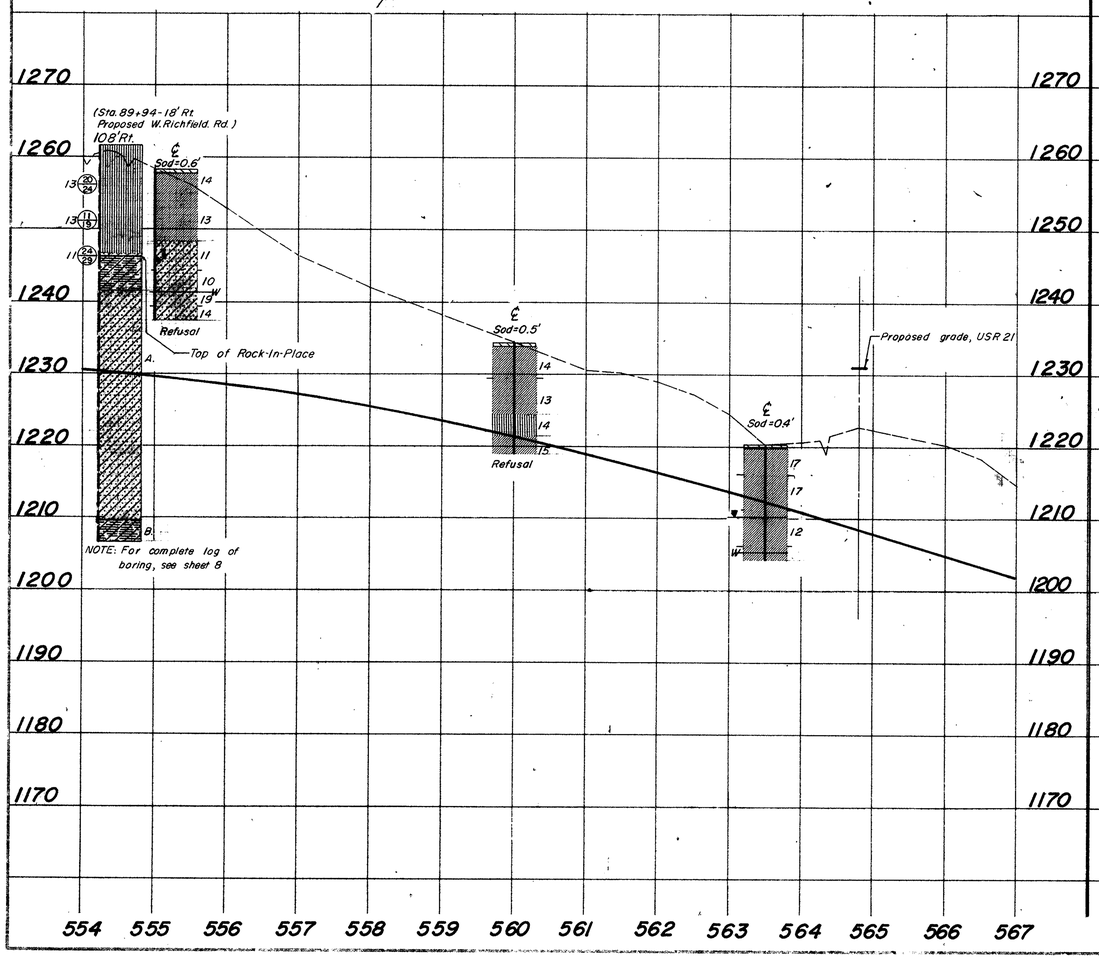
SUMMIT COUNTY

SUM- 271-0.83

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 2, OHIO

6/19



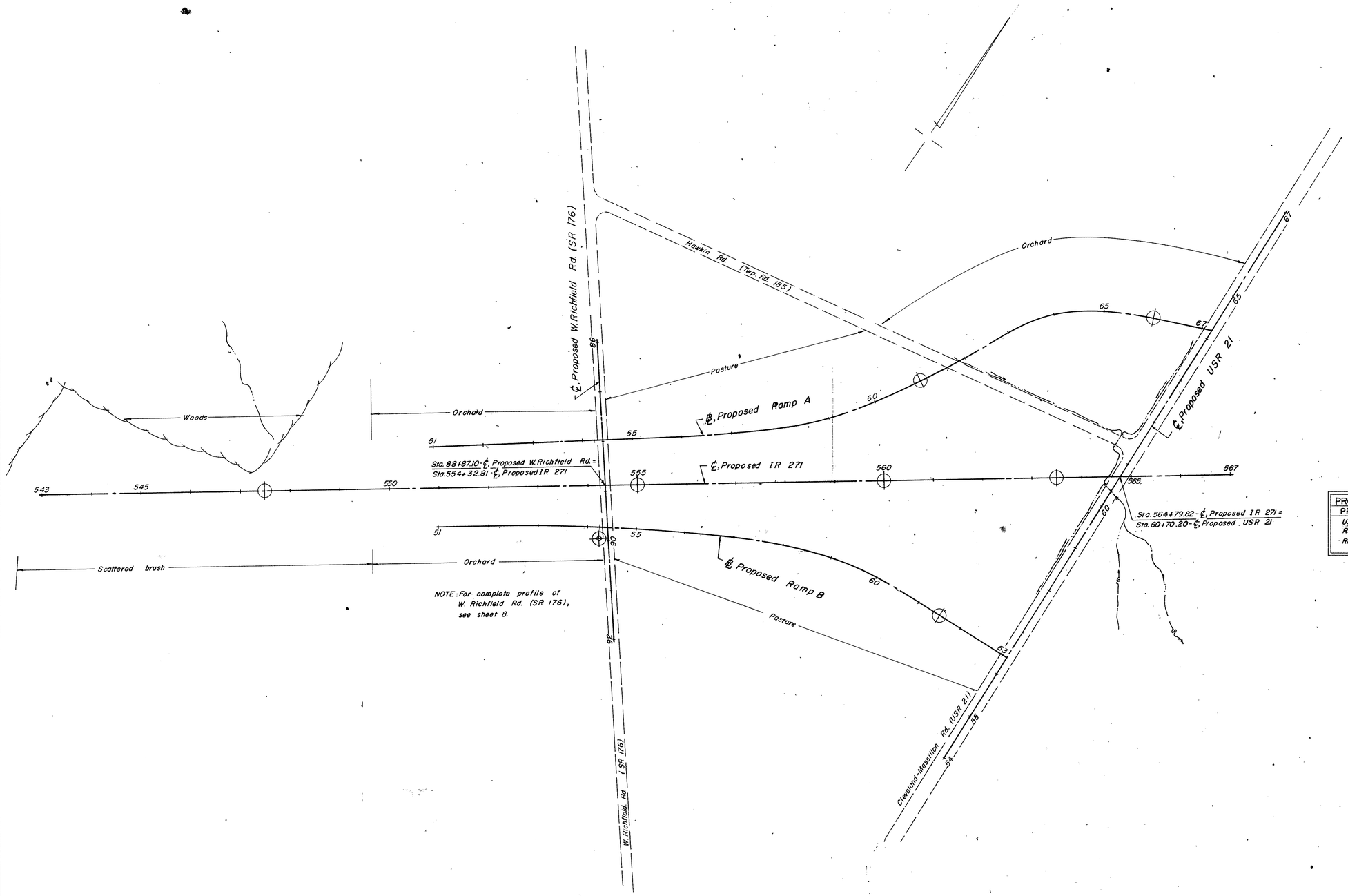


TE-95
400-1-62

SOIL PROFILE
SUMMIT COUNTY
SUM- 271-0.83
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

7
19

USR 21 INTERCHANGE



NOTE: For complete profile of W. Richfield Rd. (SR 176), see sheet 8.

PROFILE INDEX	
PROJECT	SHEET
USR 21	9
Ramp A	9
Ramp B	9

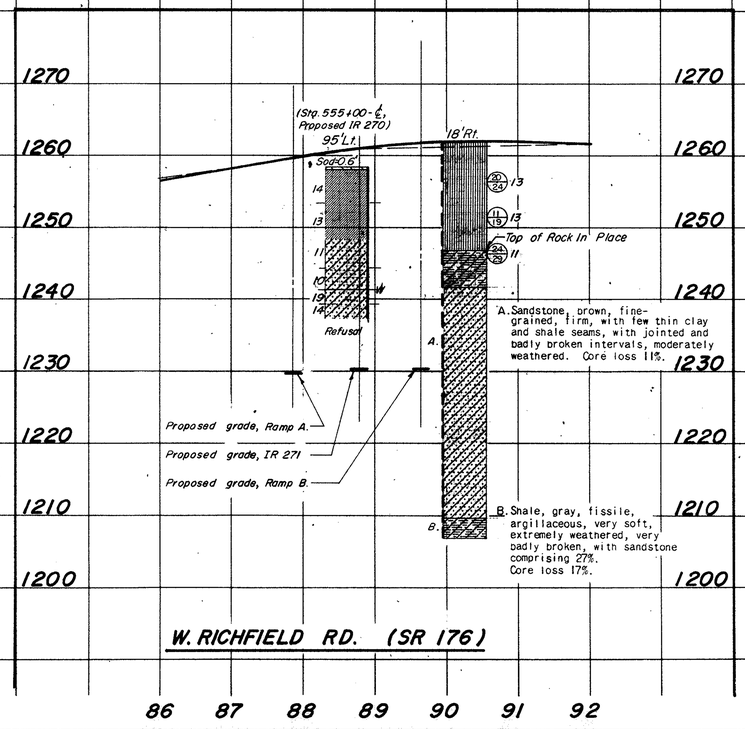
SOIL PROFILE

SUMMIT COUNTY

SUM- 271-0.83

8/19

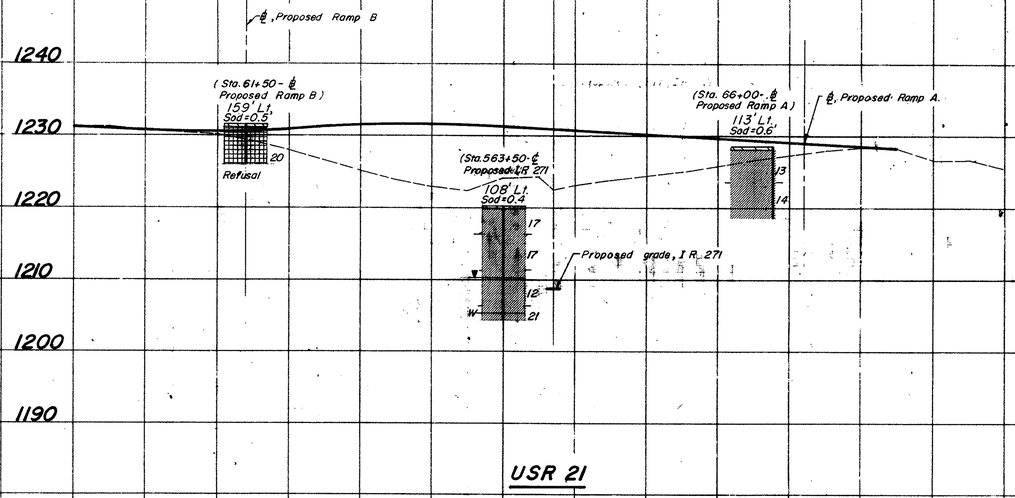
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W BROAD ST COLUMBUS 23, OHIO

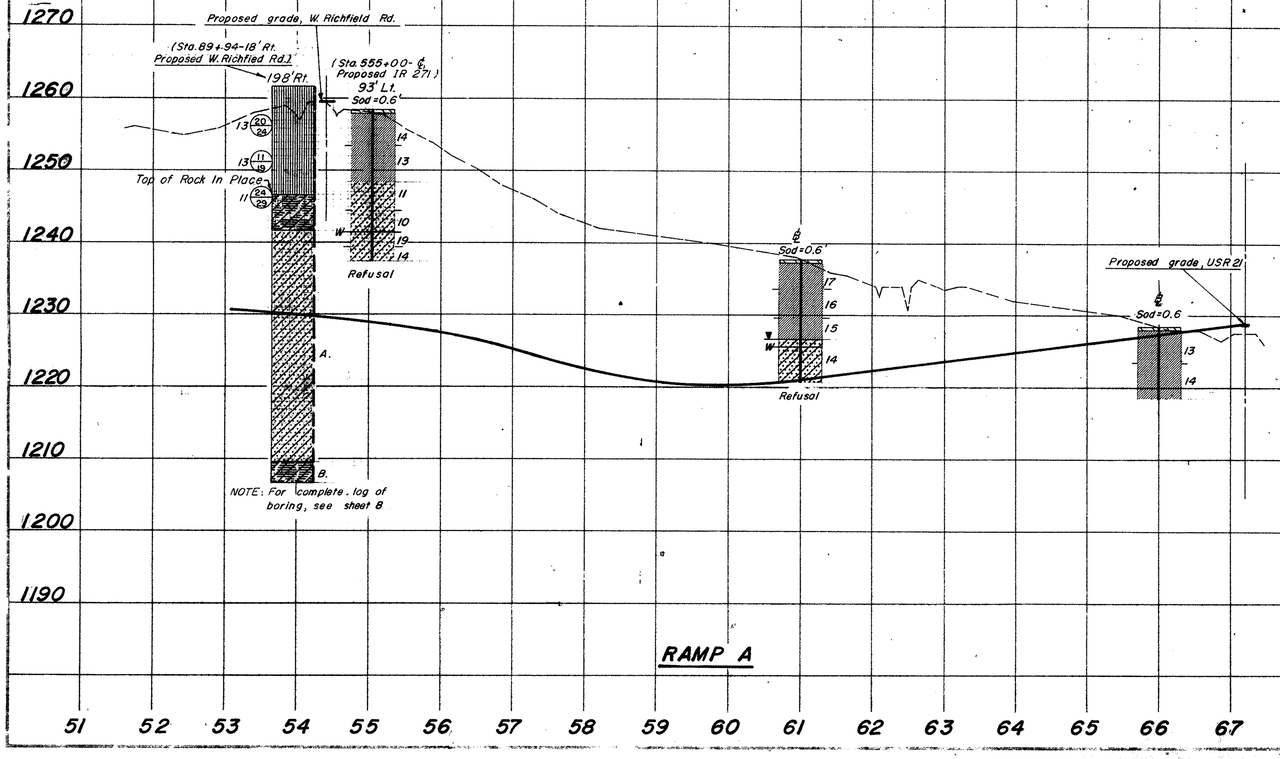


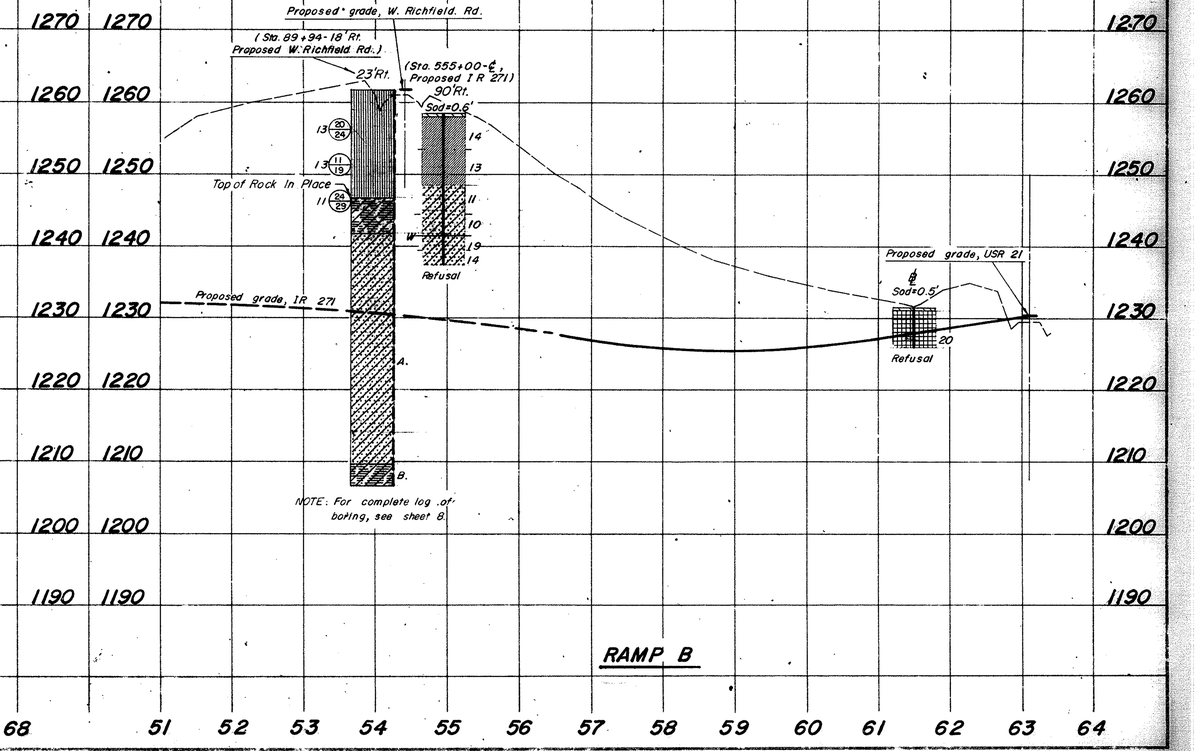
SOIL PROFILE
SUMMIT COUNTY
SUM- 271-0.83
OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

9
19

USR 21 INTERCHANGE







GEOLOGY OF THE SITE

The structure site is located in the dissected portion of the glaciated Allegheny Plateau, in an area where moderately deep glacial-derived soils overlie bedrock, of Pennsylvanian and Mississippian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings and five drive rod penetration tests, made between October 26 and November 4, 1964.

INVESTIGATIONAL FINDINGS

Borings disclosed that very dense gravels, sands, and silts overlie gently sloping bedrock surface, encountered at 15-foot depth, elevations 1247 and 1243 feet. The borings were terminated at 45 and 55-foot depths, elevations 1213 and 1207 feet, after penetrating 30 and 40 feet below bedrock surface.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated because of high resistance and refusal to penetration between 17 and 23-foot depths, elevations 1240 and 1246 feet, considered to be on or below bedrock surface, as revealed by the borings.

Free water was observed in rod sounding hole number 5 at elevation 1239 feet.

If it is the intention to found the abutments on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar weathered sandstone bedrock indicates a crushing strength on the order of 150 tons per square foot.

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 — 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.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8" – 3"	3" – 2.0mm	2.0mm – 0.42mm	0.42mm – 0.074mm	0.074mm – 0.005mm	
			No. 10 sieve	No. 40 sieve	No. 200 sieve	

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0276
UNDER SR 176
SEC. SUM-IR 271-0.83

CHECKED BY	REVIEWED BY	DATE
R. H. P.	R. D. R.	11/18/64

SUMMIT COUNTY
SUM- 271-0.83

11/19

1/3

GEOLOGY OF THE SITE

The structure site is located in the dissected portion of the glaciated Allegheny Plateau, in an area where moderately deep glacial-derived soils overlie bedrock, of Pennsylvanian and Mississippian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings, made between November 4 and 10, 1964, and seven drive rod penetration tests, made between October 22 and 27, 1964.

INVESTIGATIONAL FINDINGS

Borings disclosed that dense and extremely dense gravels, sands, and silts overlie gently sloping bedrock surface, encountered at 20 and 28-foot depths, elevations 1198 and 1194 feet. The borings were terminated at 35 and 40-foot depths, elevations 1183 and 1182 feet, after penetrating 12 and 15 feet below bedrock surface.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated because of high resistance and refusal to penetration between 11 and 20-foot depths, elevations 1210 and 1202 feet, considered to be above bedrock surface, as revealed by the borings.

No free water was observed in any of the rod sounding holes.

If it is the intention to found the pier locations on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavations have been extended to rock throughout the entire founding area.

Unconfined compression tests on similar weathered sandstone bedrock indicates a crushing strength on the order of 150 tons per square foot.

LEGEND

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- Footing
- Footing on Pile
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- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
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- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" ≥ 10,000 lbs.
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- W — Indicates Free Water Elevation.
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SYMBOLS OF ROCK TYPES

- Weathered Sandstone
- Sandstone
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- Dolomite
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- Limestone

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GENERAL INFORMATION

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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 11-6-64 — Sampler Type SS — Dia 1 3/8"
Date Completed 11-10-64 — Casing Length 20' — Dia 3 1/2"
Boring No. B-4 — Station & Offset 38+18, 18' Rt (REAR PIER) — Water Elev. —
Surface Elev. 1218.3'

Elev.	Depth	Std. Pen. (N)	Rec ft.	Loss ft.	Description	Sample No.	% Agg	% CS	% FS	% Silt	% Clay	LL	PI	W	AHT. Class
1218.3	0														
	2														
	4														
1213.3	6	11/11			Brown Silt and Clay	1	0	5	13	30	52	34	13	25	
	8														
1208.3	10	26/50			Brown Silty Gravelly Sand	2	26	7	37	16	14	NP	NP	9	
	12														
	14														
1203.3	16	50# (0.7')			Brown Silty Gravelly Sand	3	16	11	41	18	14	NP	NP	8	
	18														
1198.3	20				TOP OF ROCK										
	22		0.5	2.0											
	24		2.4	0.1	Sandstone, brown, coarse-grained, firm, broken intervals, slightly weathered. Core loss 13%.										
	26														
	28		4.6	0.4											
	30														
	32														
	34		4.9	0.1											
1183.8					BOTTOM OF BORING										

SURFACE

LOG OF BORING

Date Started 11-4-64 — Sampler Type SS — Dia 1 3/8"
Date Completed 11-5-64 — Casing Length 30' — Dia 3 1/2"
Boring No. B-10 — Station & Offset 40+78, 14' Rt (FORWARD ABUTMENT) — Water Elev. —
Surface Elev. 1221.5'

Elev.	Depth	Std. Pen. (N)	Rec ft.	Loss ft.	Description	Sample No.	% Agg	% CS	% FS	% Silt	% Clay	LL	PI	W	AHT. Class
1221.5	0														
	2														
	4														
1216.5	6	19/22			Brown Silty Sandy Gravel	1	45	7	9	18	21	29	8	11	
1214.0	8	12/16			Brown Sandy Gravelly Silt	2	36	6	11	25	22	23	5	13	
1211.5	10	15/15			Brown Silty Sandy Gravel	3	34	9	17	20	20	20	3	14	
1209.0	12	16/19			Brown Sandy Gravelly Silt	4	19	5	10	26	40	27	8	18	
1206.5	14	15/19			Reddish-Brown Sandy Gravelly Silt	5	26	4	15	20	35	28	9	26	
1204.0	16	16/18			Brown Silty Sandy Gravel	6	43	7	22	14	14	NP	NP	13	
1201.5	18	50/6			Brown Silty Sandy Gravel	7	42	5	17	18	18	23	6	11	
1199.0	20	26/46			Brown Silty Sandy Gravel	8	44	6	20	14	16	18	2	10	
1196.5	22	50/6			Brown Silty Sand	9	0	14	58	9	19	NP	NP	6	
1194.0	24	50# (0.4')			TOP OF WEATHERED ROCK										
1191.5	26				Brown Weathered Sandstone		V	I	S	U	A	L		16	
1189.5	28	15/34			Brown Weathered Sandstone		V	I	S	U	A	L		16	
	30				TOP OF ROCK										
	32		2.1	0.9	Sandstone, brown, medium-grained, firm, with jointed and broken intervals, slightly weathered, with 0.1 conglomeratic seam at 39.0' (with 1/2" rounded quartz pebbles). Core loss 11%.										
	34														
	36														
	38		5.0	0.0											
1181.5	40				BOTTOM OF BORING										

SURFACE

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

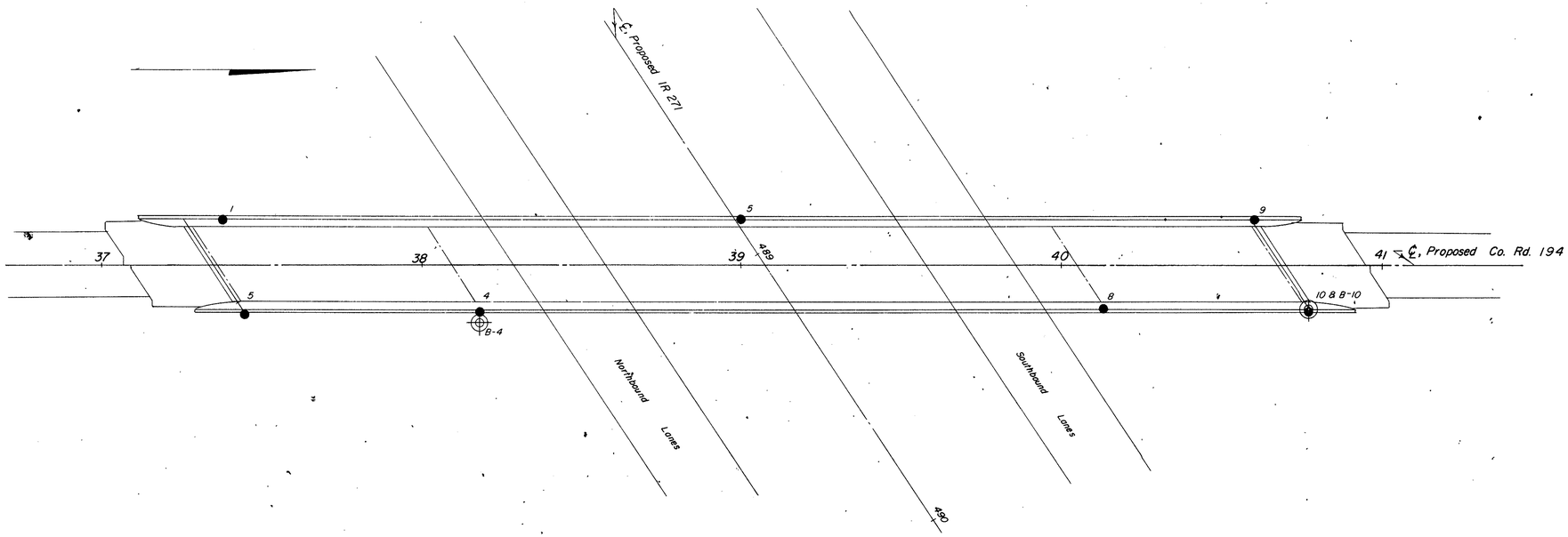
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

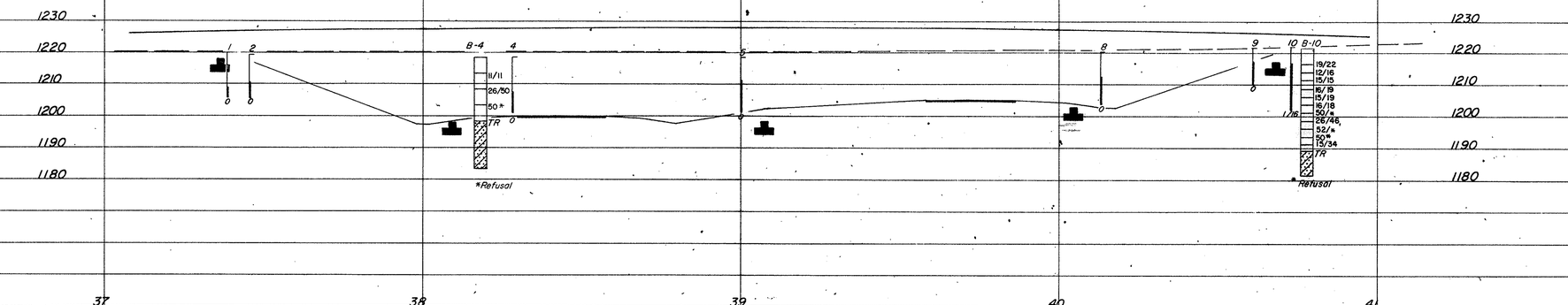
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0152
IR 271 UNDER CO. RD. 194
SEC. SUM-IR 271-0.83

CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	11/25/64

SUM- 271-0.83

12/19





OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0152
IR 271 UNDER CO. RD. 194
SEC. SUM-IR 271-0.83

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	L.N.L.	R.D.R.	11/25/64

SCALE: 1"=20'

TE-114
200-1-64

13
19
3
3

SUM- 271-0.83

Test Location No. —
Station & Offset —
Surface Elev. — Water Elev. —
Piling —
Hammer —
Formula —
Reference —
Rod Condition —

Test Location No. —
Station & Offset 37+38 19' LT
REAR ABUTMENT
Surface Elev. 1219 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition GOOD

Test Location No. —
Station & Offset 37+45 16' RT
REAR ABUTMENT
Surface Elev. 1219.5 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition GOOD

Test Location No. 4
Station & Offset 39+19 15' RT
REAR PIER
Surface Elev. 1218.8 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition GOOD

Test Location No. 5
Station & Offset 39+20 19' LT
CENTER PIER
Surface Elev. 1218.8 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition GOOD

Test Location No. 8
Station & Offset 40+13 14' RT
FORWARD PIER
Surface Elev. 1220.2 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition GOOD

Test Location No. 9
Station & Offset 40+61 12' LT
FORWARD ABUTMENT
Surface Elev. 1221.1 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition POINT SLIGHTLY BENT

Test Location No. 10
Station & Offset 40+78.5 27'
FORWARD ABUTMENT
Surface Elev. 1221.1 Water Elev. DRY
Piling —
Hammer —
Formula —
Reference —
Rod Condition POINT BENT-B

Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0152
IR 271 UNDER CO. RD. 194
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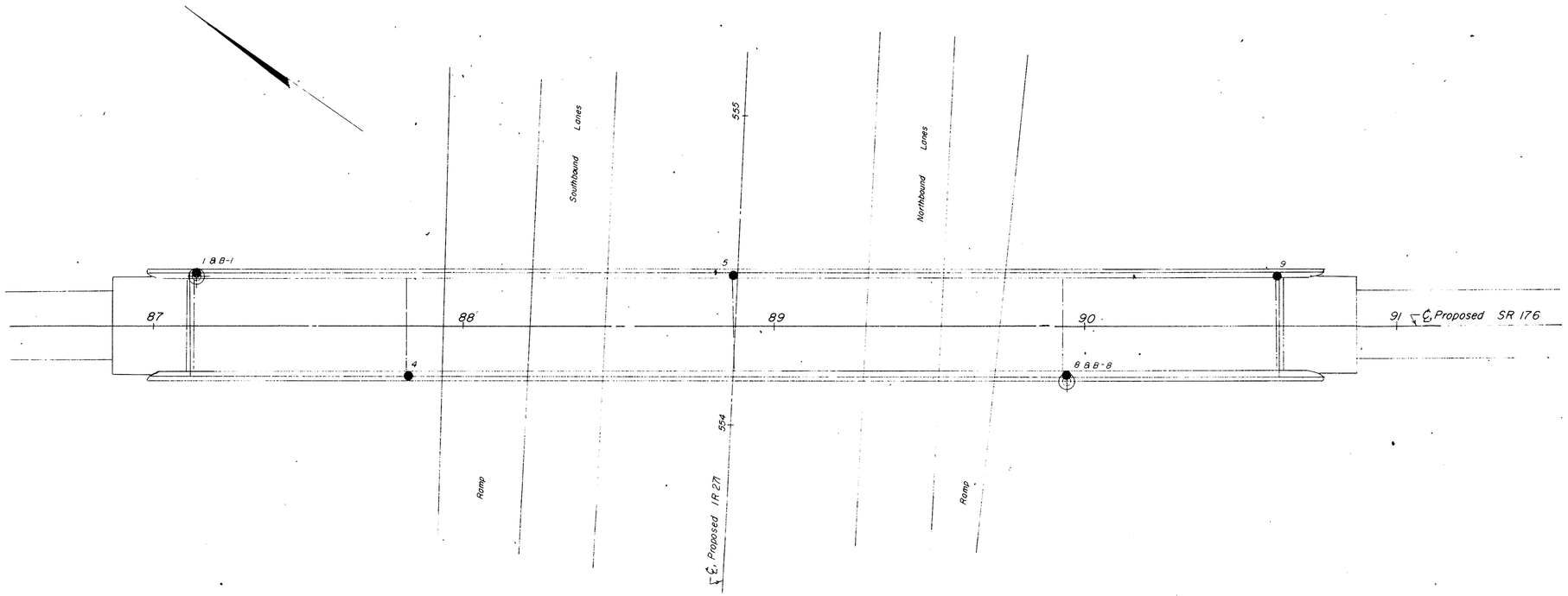
DRIVE ROD PENETRATION RESISTANCE DATA

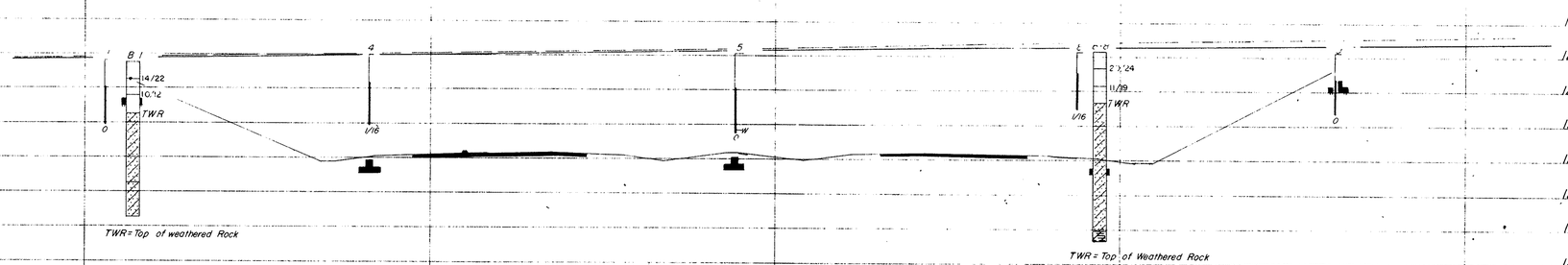
PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	11/25/64

SUM- 271-0.83

14/19

2/4





SCALE: 1" = 20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0276
UNDER SR 176
SEC. SUM-IR 271-0.83

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R. L. F.	R.H.P.	R.D.R.	11/18/64

LOG OF BORING

Date Started 11-4-64 Sampler Type SS Dia. 1 3/8"
Date Completed 11-4-64 Casing: Length 15' Dia. 3 1/2"
Boring No. B-1 Station & Offset 87+14, 16' Lt (REAR ABUTMENT)

Water Elev. ____
Surface Elev. 1257.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
1257.7	0														
	2														
1252.7	4														
	6	14/22			Brown and Gray Gravelly Silt	1	17	5	7	30	41	32	9	14	
	8														
1247.7	10	10/12			Brown Silty Sandy Gravel	2	36	5	25	16	18	17	2	13	
	12														
1242.7	14														
	16				TOP OF SLIGHTLY WEATHERED ROCK										
	18		1.3	3.7											
	20				Sandstone, brown to gray, fine-grained, firm, with many shale and clay seam intervals, with jointed and broken intervals, slightly weathered. Core loss 32%.											
	22														
	24		2.2	3.8											
	26														
	28		5.0	0.0											
	30														
	32		5.0	0.0											
1222.7	34														
	36														
	38		4.9	0.1											
	40														
	42		5.0	0.0	Sandstone, gray, fine-grained, firm, jointed, slightly weathered. Core loss 1%.										
1212.7	44				BOTTOM OF BORING										

LOG OF BORING

Date Started 11-3-64 Sampler Type SS Dia. 1 3/8"
Date Completed 11-3-64 Casing: Length 19' Dia. 3 1/2"
Boring No. B-8 Station & Offset 89+96, 18' Rt (FORWARD PIER)

Water Elev. ____
Surface Elev. 1261.7'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
1261.7	0														
	2														
	4														
1256.7	6	20/24			Brown Gravelly Sandy Silt	1	16	8	15	28	33	25	6	13	
	8														
1251.7	10	11/19			Brown Silty Gravelly Sand	2	30	6	26	17	21	21	6	13	
	12														
1246.7	14														
	16				TOP OF WEATHERED ROCK										
	18														
	20														
	22														
	24		4.0	0.0	Sandstone, brown, fine-grained, firm, with few thin clay and shale seams, with jointed and badly broken intervals, moderately weathered. Core loss 11%.										
	26														
	28		5.0	0.0											
	30														
	32		5.0	0.0											
	34														
	36														
	38		4.6	0.4											
	40														
	42		3.3	1.7											
	44														
	46														
	48		4.9	0.1											
	50														
1209.7	52														
	54		4.4	0.6	Shale, gray, fissile, argillaceous, very soft, extremely weathered, very badly broken, with sandstone comprising 27%. Core loss 17%.										
1206.7					BOTTOM OF BORING										

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0276
UNDER SR 176
SEC. SUM-IR 271-0.83

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
J.A.G.	R.C.	R.D.R.	11/18/64

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 87+14.7 T
BEAR ABUTMENT
Surface Elev. 1258.3 Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset B1+82.1 Rt
REAR PIER
Surface Elev. 1253.0 Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset B2+87.6 T
CENTER PIER
Surface Elev. 1260.6 Water Elev. 1238.0
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset B3+94.1 6 Rt
FORWARD PIER
Surface Elev. 1260.6 Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 90+62.1 6 T
FORWARD ABUTMENT
Surface Elev. 1261.3 Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition POINT REACTS B

TEST ROD

Capacity "R" in Thousands of Pounds

16/19

SUM- 271-0.83

4/4

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0276
UNDER SR 176
SEC. SUM-IR 271-0.83

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R C	R.H. P.	R.D.R.	11/18/64

SUMMIT COUNTY
SUM- 271-0.83

GEOLOGY OF THE SITE

The structure site is located in the dissected portion of the glaciated Allegheny Plateau, in an area where moderately deep glacial-derived soils overlie bedrock, of Pennsylvanian and Mississippian ages.

EXPLORATION

The exploration consisted of two drive sample-core borings, made on November 10 and 11, 1964, and five drive rod penetration tests, made between October 28 and 29, 1964.

INVESTIGATIONAL FINDINGS

Borings disclosed that dense and extremely dense gravels, sands, and silts overlie gently sloping bedrock surface, encountered at 21 and 25-foot depths, elevations 1202 and 1198 feet. The borings were terminated at 35 and 40-foot depths, elevations 1188 and 1183 feet, after penetrating 10 and 20 feet below bedrock surface.

Rod soundings met rapid increase in penetration resistance with increase in depth and were terminated because of high resistance and refusal to penetration between 18 and 22-foot depths, elevations 1204 and 1202 feet, considered to be on or above bedrock surface, as revealed by the borings.

Free water was observed in the majority of the rod sounding holes at elevations 1211 and 1210 feet.

If it is the intention to found the forward pier on bedrock, it is considered advisable that the open excavation be inspected in the field in order to insure that the excavation has been extended to rock throughout the entire founding area.

Unconfined compression tests on similar weathered shale bedrock indicates a crushing strength on the order of 100 tons per square foot.

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.
- 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

- 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.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
8"	3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

Date Started 11-10-64
Date Covered 11-10-64
Boring No. B-1
Sampler Type SS — 1 3/8"
Casing Length 15' — 3 1/2"
Station & Offset 58+93, 20' Lt (REAR ABUTMENT)
Water Elev. —
Surface Elev. 1223.1'

Elev.	Depth	Sample No.	Blows per 6 in.	Description	Sample No.	Gravel %	Coarse Sand %	Fine Sand %	Silt %	Clay %	Plasticity Index	Moisture Content %
1223.1	0											
	4											
1216.1	7	12/15		Brown and Gray Clayey Silt	1	0	3	10	42	45	31	10	15
1215.6	8	12/16		Brown Sandy Silt	2	0	5	18	31	46	30	7	20
1213.1	10	3/3		Brown Silty Gravelly Sand	3	25	8	37	15	15	NP	NP	19
1210.6	12	4/4		Brown Silty Sandy Gravel	4	47	15	11	17	10	25	6	11
1208.1	15	35/20		Brown and Gray Silty Sandy Gravel	5	43	10	13	20	14	22	4	15
1205.6	18	50* (0.7')		Gray and Brown Gravelly Silt	6	37	4	7	30	22	29	7	12
1203.1	20	50* (0.3')		Gray Gravelly Silt	7	42	3	3	32	20	33	10	12
1200.6	22	50* (0.4')		Gray Gravelly Silt	8	37	2	3	35	23	29	7	11
1198.1	24			TOP OF ROCK									
	28			Gray Extremely Weathered Shale.									
1193.1	30												
	32			Sandstone, gray, fine-grained, firm, slightly weathered with few clay seams.									
	34	4.8	0.2	Core loss 4%.									
1188.1				BOTTOM OF BORING									

*REFUSAL

Date Started 11-11-64
Date Covered 11-11-64
Boring No. B-2
Sampler Type SS — 1 3/8"
Casing Length — —
Station & Offset 61+00, 19' Rt (FORWARD PIER)
Water Elev. —
Surface Elev. 1222.8'

Elev.	Depth	Sample No.	Blows per 6 in.	Description	Sample No.	Gravel %	Coarse Sand %	Fine Sand %	Silt %	Clay %	Plasticity Index	Moisture Content %
1222.8	0											
	4											
1217.8	5	4/9		Brown and Gray Gravelly Silt	1	30	3	6	32	29	30	9	16
	8											
1212.8	10	13/13		Brown Sandy Gravelly Silt	2	27	6	14	25	28	27	8	14
	12											
1207.8	15	10/12		Brown and Gray Gravelly Silt	3	34	4	7	29	26	35	10	16
	18											
1202.8	20	59/6		Gray Gravelly Silt	4	45	3	3	39	19	31	9	9
1202.3	21			TOP OF ROCK									
	24		0.0	1.4									
	26		1.7	1.3									
	28			Shale, gray, arenaceous and argillaceous, fissile, soft to firm, with sandstone and clay seams, jointed and broken, moderately weathered. Core loss 46%.									
	30		2.4	2.6									
	32												
1189.3	34		4.0	1.0									
	36			Sandstone, gray, fine-grained, firm, slightly weathered. No core loss.									
1184.3	38		5.0	0.0									
1182.8	40			Shale, gray, fissile, arenaceous, soft to firm, jointed and broken, moderately weathered. No core loss.									
				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.

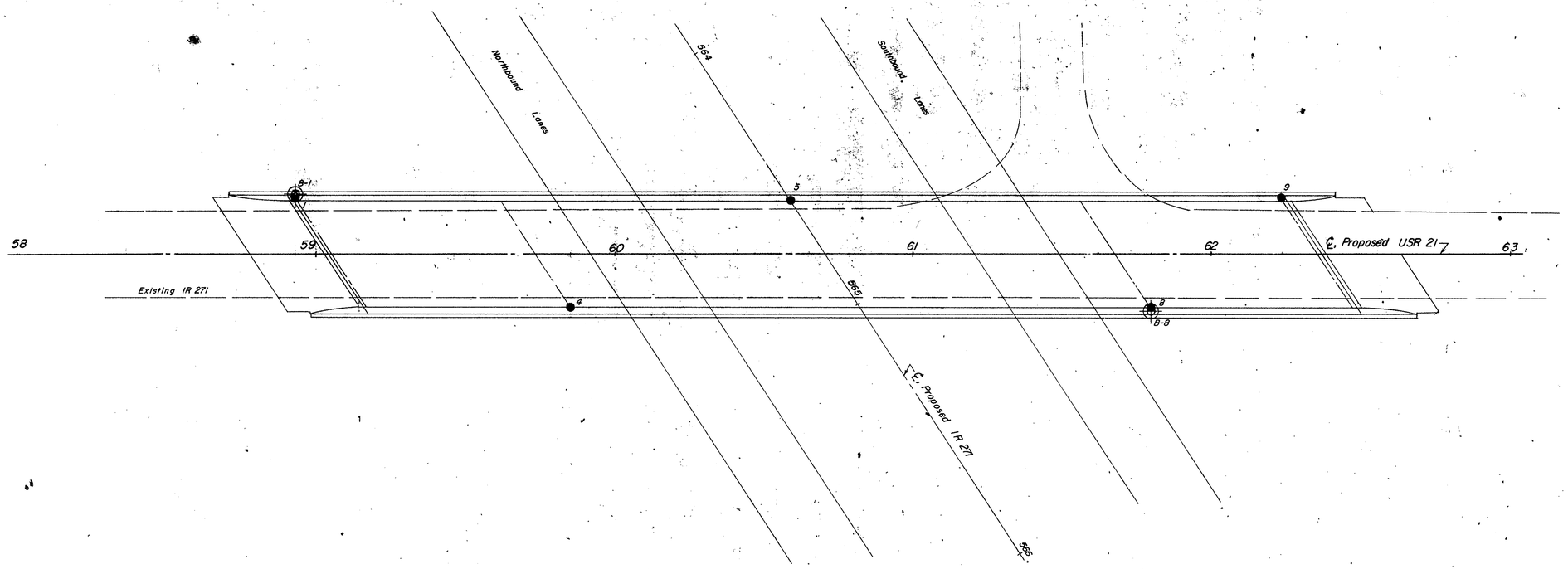
OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

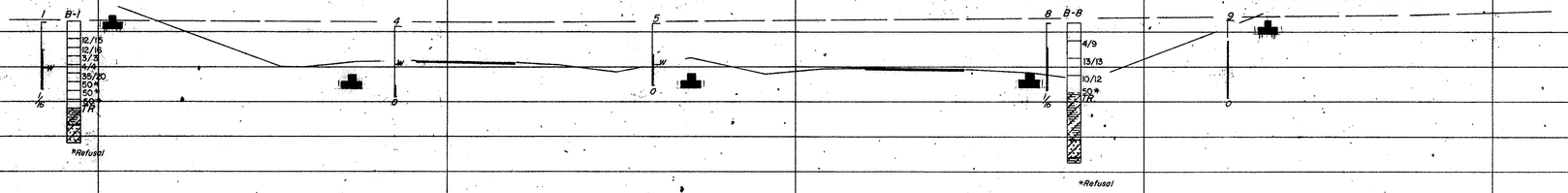
STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0295
IR 271 UNDER USR 21
SEC. SUM-IR 271-0.83

CHECKED BY	REVIEWED BY	DATE
R.H.P.	R.D.R.	11/25/64

SUM- 271-0.83

18
19
23





SCALE: 1"=20'

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST., COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0295
IR 271 UNDER USR 21
SEC. SUM-IR 271-0.83

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	R.H.P.	R.D.R.	11/25/64

TT-114
100C-1-64

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

1230 1226 1222 1218 1214 1210 1206 1202 1198

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. ____
Station & Offset ____
Surface Elev. ____ Water Elev. ____
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition ____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 1
Station & Offset 58+93, 19'LT REAR ABUTMENT
Surface Elev. 1222.9' Water Elev. 1209.9'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

1222 1218 1214 1210 1206 1202 1198

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 59+85, 18'RT REAR PIER
Surface Elev. 1221.1' Water Elev. 1210.1'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

1222 1218 1214 1210 1206 1202 1198

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 60+59, 18'LT CENTER PIER
Surface Elev. 1222.5' Water Elev. 1210.5'
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 8
Station & Offset 61+80, 18'RT FORWARD PIER
Surface Elev. 1222.8' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 62+94, 19'LT FORWARD ABUTMENT
Surface Elev. 1223.5' Water Elev. DRY
Piling ____
Hammer ____
Formula ____
Reference ____
Rod Condition POINT RENTER

1222 1218 1214 1210 1206 1202 1198

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

19
19
3
3

SUM - 271-0.83

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-IR 271-0295
IR 271 UNDER USR 21
SEC. SUM-IR 271-0.83

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	R.H.P.	R.D.R.	11/25/64