FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	STATE	

1 / 209

TRU-82-12.67

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
TRU-82-12.67
TRUMBULL COUNTY
HOWLAND & VIENNA TOWNSHIPS
CITY OF WARREN

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director of Highways in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio

657

CONVENTIONAL SIGNS

STATE LINE
CENTER LINE
FENCE LINE
GUARD RAIL (EXISTING)
GUARD RAIL (PROPOSED)
POWER POLES
TELEPHONE POLES
COUNTY LINE
TOWNSHIP LINE
CORPORATION LINE
STEAM RAIL ROAD

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RIGHT OF WAY	192-209
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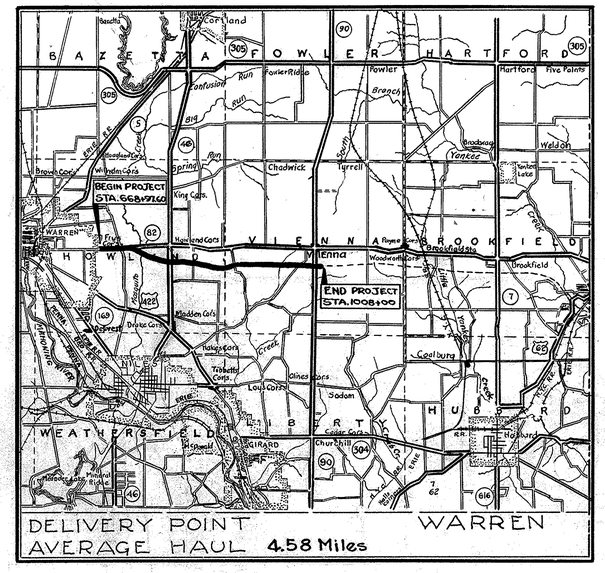
LINE DATA

BEGIN PROJECT	STA.	668+97.60
END PROJECT	STA.	1008+00
NET LENGTH OF PROJECT		33902.40 L.F.
	OR	6.420 MILES
BEGIN WORK	STA.	663+97.76
END WORK	STA.	1008+00
NET LENGTH OF WORK		34402.24 L.F.
	OR	6.515 MILES
S.R. 46		
BEGIN WORK	STA.	0+68
END WORK	STA.	19+47
NET LENGTH OF WORK		1879.00 L.F.
	OR	0.355 MILES
S.R. 90		
BEGIN WORK	STA.	341+73
END WORK	STA.	362+72
NET LENGTH OF WORK		2099.00 L.F.
	OR	0.397 MILES
TOTAL LENGTH WORK		38380.24 L.F.
	OR	7.268 MILES

508



LOCATION PLAN

Scale 1" = 2 Mile

PORTION TO BE IMPROVED
STATE HIGHWAYS
OTHER ROADS

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 to traffic of the highway, and that provisions for the maintenance and safety of traffic shall be as set forth in the Plans and Estimates.

APPROVED Earl L. Campbell
DATE 4-11-56 DIVISION DEPUTY DIRECTOR

APPROVED John J. Heer ept.
DATE 6-15-56 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED D.H. Overman
DATE 6-11-56 ENGINEER OF BRIDGES

APPROVED E.S. Preston
DATE 6-15-56 ENGINEER OF LOCATION & DESIGN

APPROVED H F Jewell
DATE 6-15-56 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED W.P. Chamblin
DATE 6-16-56 FIRST ASSISTANT DIRECTOR

APPROVED S.O. Vinyard
DATE 6-16-56 DIRECTOR OF HIGHWAYS

PLAN 1"=50' PROFILE-HOR. 1"=50' PROFILE-VERT. 1"=5' CROSS SECTIONS 1"=10'

STANDARD DRAWINGS

G 7.07	6-1-56	L-3-A	4-1-50
I-14 G	1-22-52	B-T-71R	3-2-53
L.J. No. 1	7-1-55	T-35	1-2-56
T J.	5-1-56	I-8 C.B. No. 7	5-1-52
I-15 No. 1	8-1-55	I-8 C.B. 2-3 & 2-4	5-1-52
DR-1	1-3-55	BT 50-70-71E No.1	10-1-47
RI-1	1-3-55	S-27 PC-4	1-4-54
I-8 M.H. No. 1	5-1-52	LBC-45 Shts. 1 & 2	9-18-47
I-8 M.H. No. 1-A	1-3-55	SBC-45 Shts. 1 & 2	9-18-47
I-21-23	10-17-55	I-8 C.B. 1-3 & I-4	5-1-52
I-8-I No. 2	12-1-54	S-27 P.C. 3	2-20-45
I-15 No. 2	12-1-54	I-1, 2, 3, 4, & 5	2-20-45
I-12	7-1-54	SP-53	7-21-53
L-1	4-1-50	AS-1-54	12-1-54
		S-27 PC-1	5-1-52
L-3	4-1-50	C5-2-54 (2 Shts)	12-1-54

SUPPLEMENTAL SPECIFICATIONS

G	12-28-55
5	6-8-55
L-209.12	7-17-54
B-119 R.	12-14-55
S-114	8-30-55
M-106.6(d)	11-30-54
M-110.27	9-9-52
18 R	9-7-55

DRIVES REVISED ON SHEETS 30 & 200 7-31-57 A.W.G.

Revised As-Built

CONSTRUCTION BUREAU SEP 14 1956 GROUND PHOTOLAB

Rev. 7-31-57 A.W.G.

TITLE SHEET

FIELD BOOKS- T-742 T-743

TYPICAL SECTIONS

TYPE T-71 & T-35

SCALE 3/16"=1'-0"

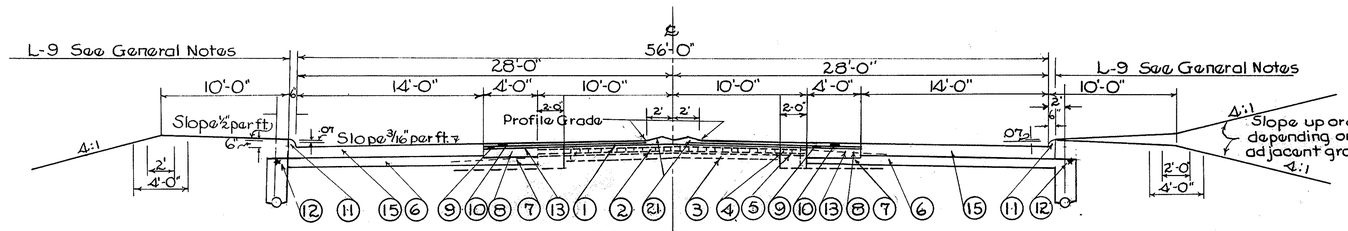
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

2 / 209

DESIGN SPEED 60 M.P.H. TRU 82 - 12.67

UTILITIES AFFECTED

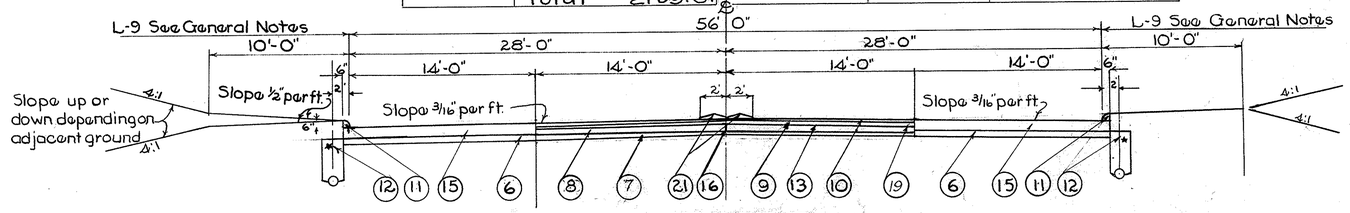
Buckeye Pipe Line Lima, Ohio
City of Warren Water Department
City of Warren Division of Sanitation
East Ohio Gas Company Warren, Ohio
Ohio Edison Company Akron, Ohio
The Ohio Bell Telephone Co. Cleveland, Ohio
Warren Telephone Company Warren, Ohio
City of Niles



SECTION A

From Station	To Station	Distance
668+97.60	669+50	52.40
675+90.00	678+86.65	296.65
682+95.74	696+98.62	1402.88
** 698+87.68	702+45.56	357.88
	Total	2109.81

	From Station	To Station	Distance
Intersection	696+98.62	698+87.68	189.06
		Total	189.06

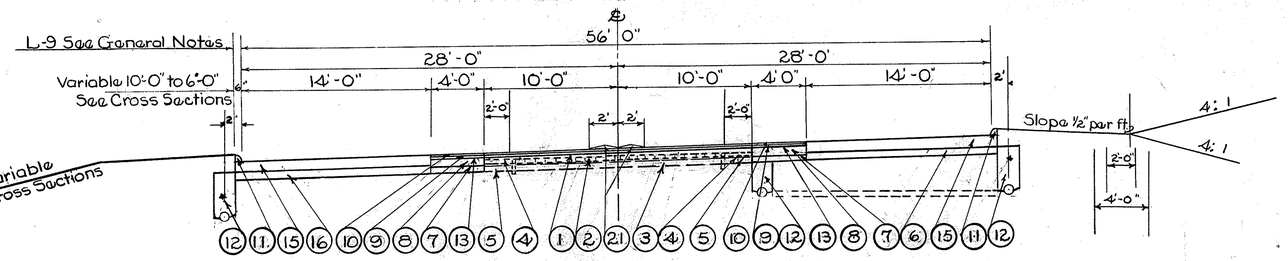


SECTION B

From Station	To Station	Distance
670+40	674+62	422.00
	Total	422.00

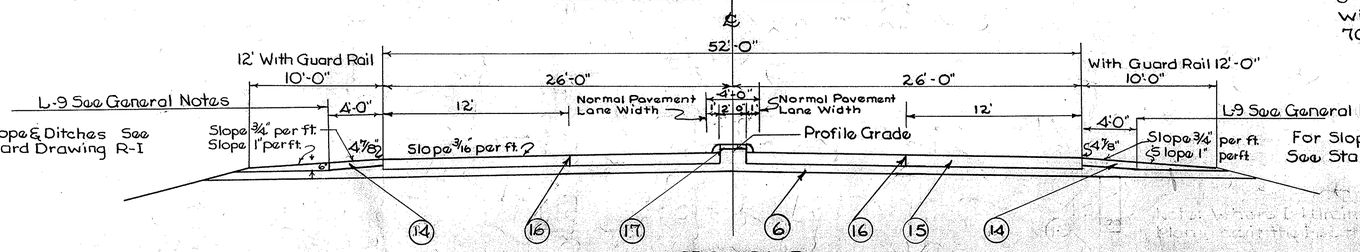
Transition	From Station	To Station	Distance
Sec. A to Sec. B	669+50	670+40	90.00
Sec. B to Sec. A	674+62	675+90	128.00
		Total	218.00

See paving Detail Sheet No. 4



SECTION C

From Station	To Station	Distance
678+86.65	682+95.74	409.09
** 702+45.56	703+50	104.44
	Total	513.53



SECTION D

From Station	To Station	Distance
740+81.83	757+12.08	1630.25
773+41.52	774+61.83	120.31
777+04.17	780+00.47	296.30
	Total	2046.86

Transition	From Station	To Station	Distance
4 to 50 Median	780+00.47	794+71.07	1470.60
Approach Slab	774+61.83	774+81.83	20
Bridge	774+81.83	776+84.17	202.34
Approach Slab	776+84.17	777+04.17	20
		Total	1712.94

LEGEND

(6) Item I-22 6" Subbase, Permitting Gran. Slag, M3:13
(7) Item I-22 4½" Subbase, Permitting Gran. Slag, M3:13
(8) Item B-70-8" Portland Cement Concrete Base Course
(9) Item B-35-1¼ Asphaltic Concrete Leveling Course (70-28)
(10) Item T-35 1¼" Asphaltic Concrete Surface Course, Type "1" (70-30)
(11) Item I-12 Standard Concrete Curb Type 2A
(12) Item I-4-6" Pipe Underdrain (Variable depth)
(13) Item T-30 Bituminous Tack Coat (.1 Gal. per sq. yd.) Sec. M5.5-MS.-2 or RS-1 or Sec. M-5.2 RC-1 or RC-2
(14) Item I-18 6" Stabilized Crushed Aggregated Shoulders & Approaches
(15) Item-T-71 9" Reinforced Portland Cement Conc. Pave.
(16) Standard Longitudinal Joint
(17) Item I-21 Concrete Median Pavement Type I

(19) Item B-35-2" Max. Asph. Concrete Leveling Course (70-28)
(20) Item I-22 Variable (3"-7½"-7½") Subbase with 6" thickness thru berm, permitting Gran. Slag, M 3:13
(21) Item I-23 Precast Concrete Traffic Dividers
(22) Item I-12 Standard Concrete Curb Type 2B

Existing
(1) Existing 2¼" Cold mixed, cold laid Surface & Level Course & variable thickness (1" at edge) Binder Course # 46.
(2) Existing 4" Br. Wear Course with T-30 Bit. Prime Coat on 1" Gran. Slag Cushion.
(3) Existing 6" Slag Base
(4) Existing B 34-2-3" Courses Bituminous Macadam (Premixed)
(5) Existing I-19 1" Insulation Course

Note: See Sheet No. 4 for location of Courses 18 and 19.

** Note: Section A: From Sta. 698+87.68 to Sta. 700+00 omit the 4'-0" widening on the right. On the left the widening varies from 8'-0" at 698+87.68 to 7'-0" at 700+00.
Sect A & C: On the right the widening area varies from 0'-0" at Sta. 700+00 to 4'-6" at 703+50. On the left the widening varies from 7'-0" at Sta. 700+00 to 3'-6" at 703+50.

★ Note: Where I-4 drains are called for on the Plans, omit the I-22 drain through the berm.

R.F. # 190 E.A.T.

FIELD BOOKS - T-742 T-743

TYPICAL SECTIONS

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

3 / 209

TRU 82 - 12.67

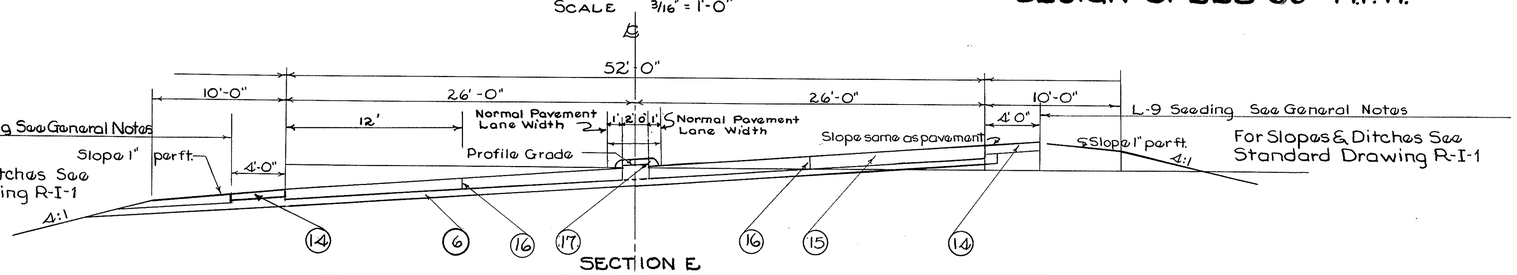
TYPE T-71 & T-35

SCALE 3/16" = 1'-0"

DESIGN SPEED 60 M.P.H.

LEGEND

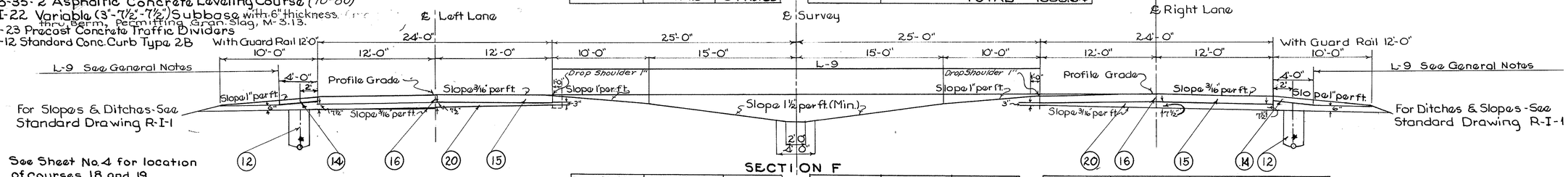
(6) Item I-22 6" Subbase, Permitting Gran. Slag M 3.13
(7) Item I-22 4½" Subbase, Permitting Gran. Slag M 3.13
(8) Item B-70 8" Portland Cement Conc. Base Course
(9) Item B-35-1¼" Asphaltic Conc. Leveling Course (70-80)
(10) Item T-35-1¼" Asphaltic Conc. Surface Course Type "A" (70-80)
(11) Item I-12 Standard Conc. Curb Type 2 A
(12) Item I-4-6" Pipe Underdrain (Variable depth)
(13) Item T-30 Bituminous Tack Coat (0.1 Gal per sq. yd.) Sec. M 5.5-MS-2 or RS-1 or Sec. M 5.2-RC-1 or RC-2
(14) Item I-18-6" Stabilized Crushed Aggregated Shoulders & Approaches
(15) Item T-71 9" Reinforced Portland Cement Concrete Pavement
(16) Standard Longitudnal Joint
(17) Item I-21 Concrete Median Pavement, Type 1
(19) Item B-35-2" Asphaltic Concrete Leveling Course (70-80)
(20) Item I-22 Variable (3"-7½"-7½") Subbase with 6" thickness thru Berm, Permitting Gran. Slag, M-3.13.
(21) Item I-23 Precast Concrete Traffic Dividers
(22) Item I-12 Standard Conc. Curb Type 2B



SECTION E

From Station	To Station	Distance
720+63.74	725+84.42	520.68
727+59.32	740+81.83	1322.51
757+12.08	773+41.52	1629.44
	TOTAL	3472.63

	From Station	To Station	Distance
Intersection	703+50	720+63.74	1713.74
Approach Slab	725+84.42	726+04.42	20.00
Bridge	726+04.42	727+39.32	134.90
Approach Slab	727+39.32	727+59.32	20.00
		TOTAL	1888.64



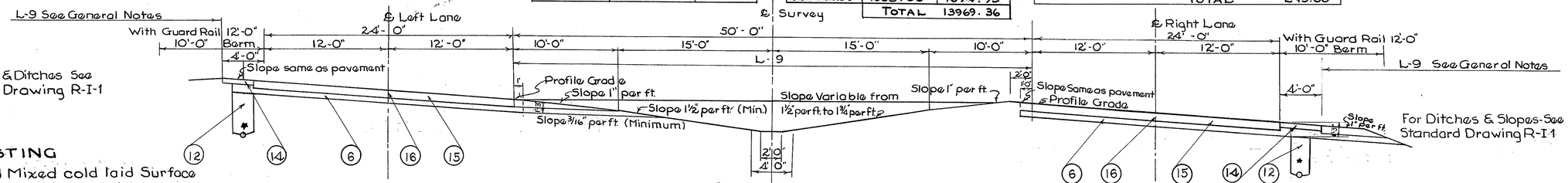
NOTE: See Sheet No. 4 for location of courses 18 and 19.

SECTION F

From Station	To Station	Distance
794+71.07	809+88.04	1516.97
824+30.71	828+73.27	442.56
843+59.95	849+38.62	578.67
861+13.62	873+23.14	1209.52

From Station	To Station	Distance
887+25.36	956+08.50	6883.14
965+02.94	978+21.00	1318.06
985+36.56	988+62.05	325.49
991+05.05	1008+00	1694.95
	TOTAL	13969.36

BRIDGE	From Station	To Station	Distance
Approach Slab	988+62.05	988+87.05	25.00
Bridge	988+87.05	990+80.05	193.00
Approach Slab	990+80.05	991+05.05	25.00
	TOTAL		243.00



EXISTING

1. Existing 2¼ Cold Mixed cold laid Surface & Level Course & variable thickness (1" at edge) Binder Course #4/6
2. Existing 4" Br. Wear. Course with T-30 Bit. Prime Coat on 1" Gran. Slag Cushion
3. Existing 6" Slag Base
4. Existing B-34-2-3 Courses Bituminous Macadam (Premixed)
5. Existing I-19 1" Insulation Course

* Superelevation in this area to be made by building left edges of lanes at same elevations and right edges of lanes at same elevation. See Cross Section Sheets.

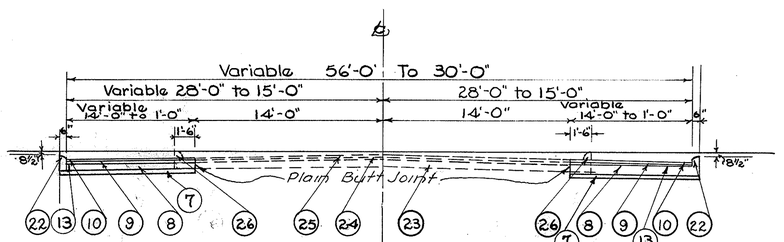
SECTION G

From Station	To Station	Distance
809+88.04	824+30.71	1442.67
828+73.27	843+59.95	1486.68
849+38.62	861+13.62	1175.00

From Station	To Station	Distance
873+23.14	887+25.36	1402.22
956+08.50	965+02.94	894.44
978+21.00	985+36.56	715.56
	TOTAL	7116.57

ADJOINING PAVEMENT

23. Existing 7" Concrete Base
24. Existing T-60 1¼" Binder Course No. 4
25. Existing T-60 1" Wearing Surface
26. Existing Combination Curb & Gutter
8. Item B-70 8" Portland Cement Concrete Base Course
9. Item B-35 1¼" Asphaltic Concrete Leveling Course
10. Item T-35 1¼" Asphaltic Concrete Surface Course
22. Item I-12 Standard Concrete Curb Type 2B



ADJOINING PAVEMENT & TRANSITION WIDENING

Sta. 668+97.60 To Sta. 663+98 Lt.
Sta. 668+97.60 To Sta. 664+40 Rt.

* Note: Where I-4 Drains are called for on the Plans, omit the I-22 drain through the berm.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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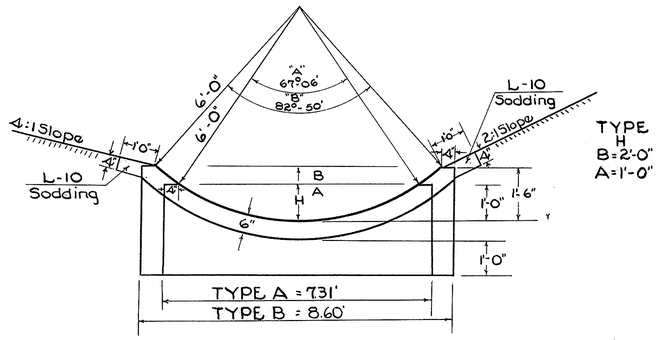
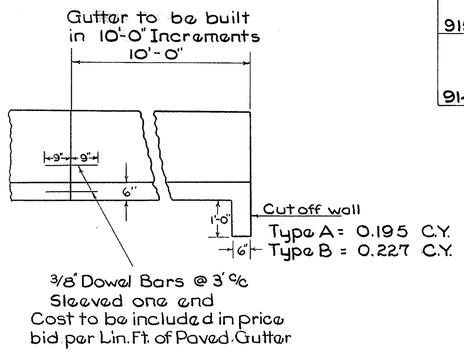
TRU. 82 12.67

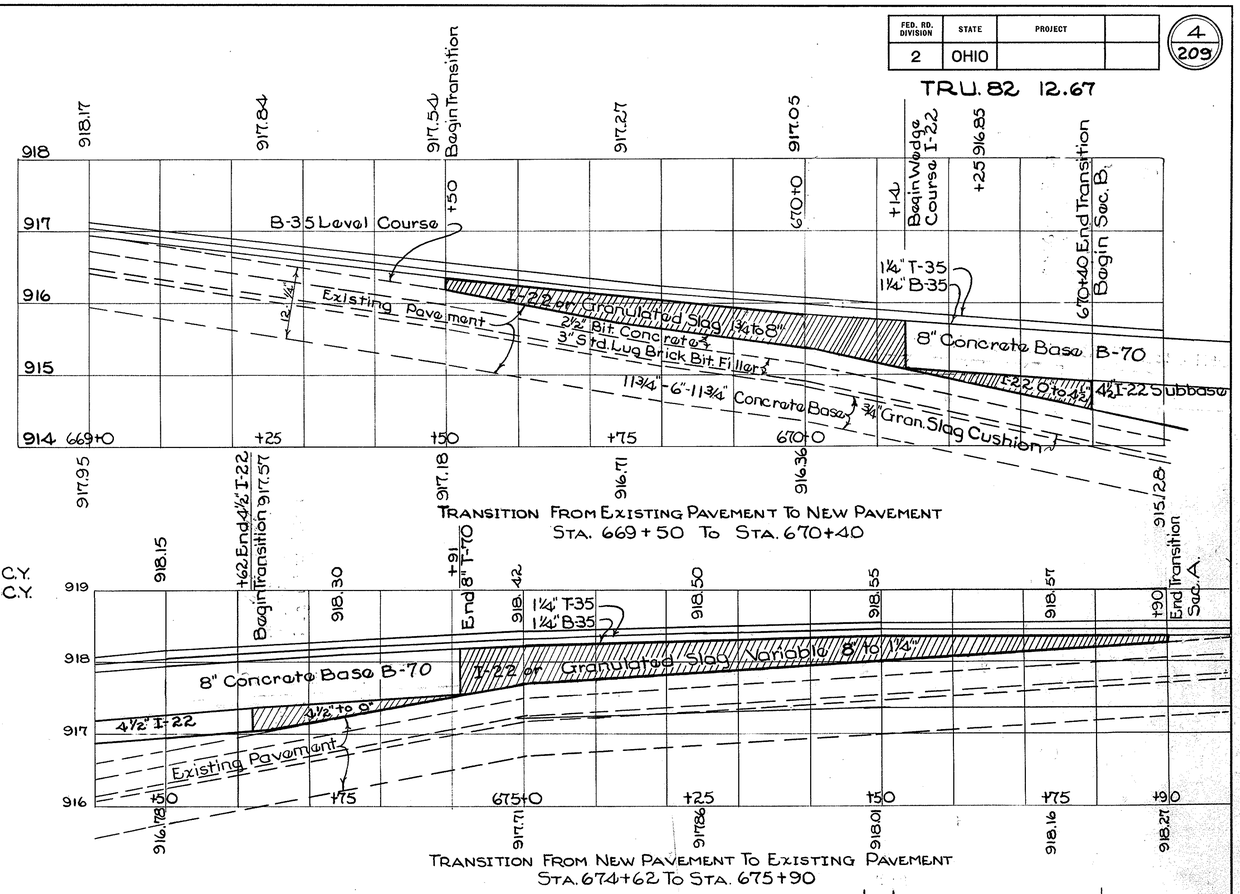
SPECIAL PAVED GUTTER DETAIL

SCALE 1" = 2'



TYPE H
B=2'-0"
A=1'-0"

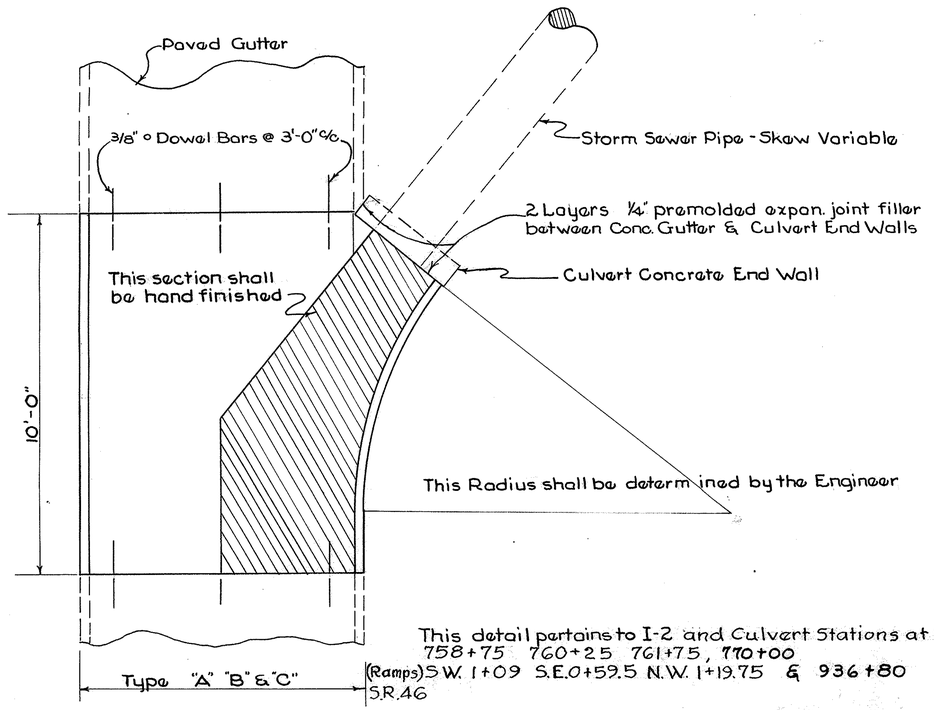




TRANSITION FROM EXISTING PAVEMENT TO NEW PAVEMENT
STA. 669+50 TO STA. 670+40

TRANSITION FROM NEW PAVEMENT TO EXISTING PAVEMENT
STA. 674+62 TO STA. 675+90

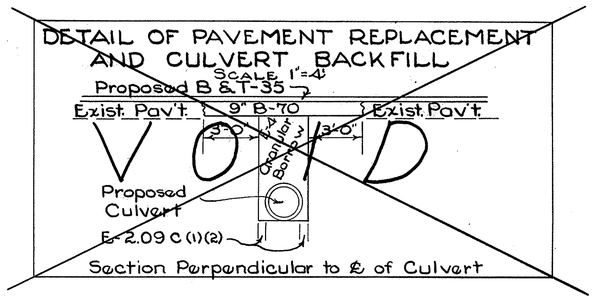
I-14 SPECIAL INLET TO THE PAVED GUTTER FROM THE CULVERTS



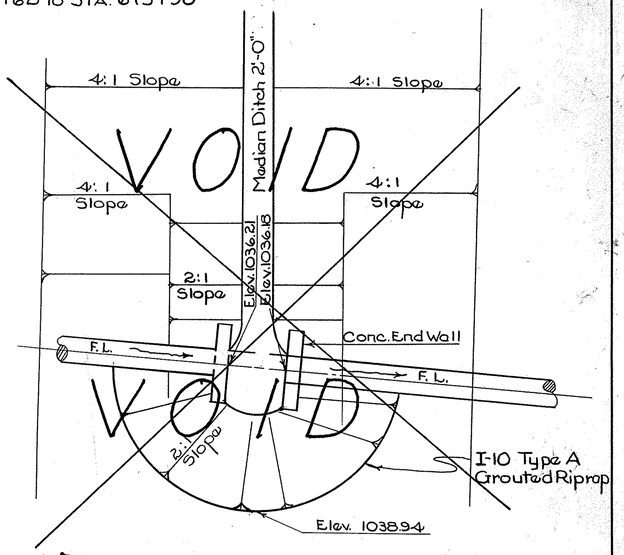
This detail pertains to I-2 and Culvert Stations at their Outlets
758+75 760+25 761+75, 770+00
(Ramps) S.W. 1+09 S.E. 0+59.5 N.W. 1+19.75 & 936+80
S.R. 46

DETAIL OF PAVEMENT REPLACEMENT AND CULVERT BACK FILL

SCALE 1"=4'



MARK	STATION	E-1 RDY. Exc. C.Y.	E-8 REM. Exist. Pvt. S.Y.	E-4 Gran. Borrow C.Y.	B-70 9" Conc. Base Course S.Y.



This detail pertains to Culvert at Sta. 795+00 at the Median Ditch

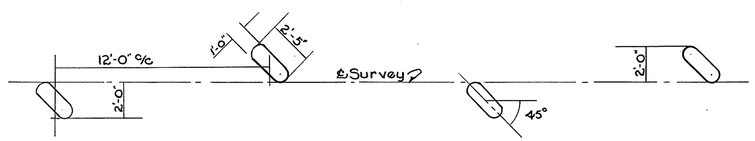
SCALE 1" = 5'-0"

SPECIAL CONSTRUCTION DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

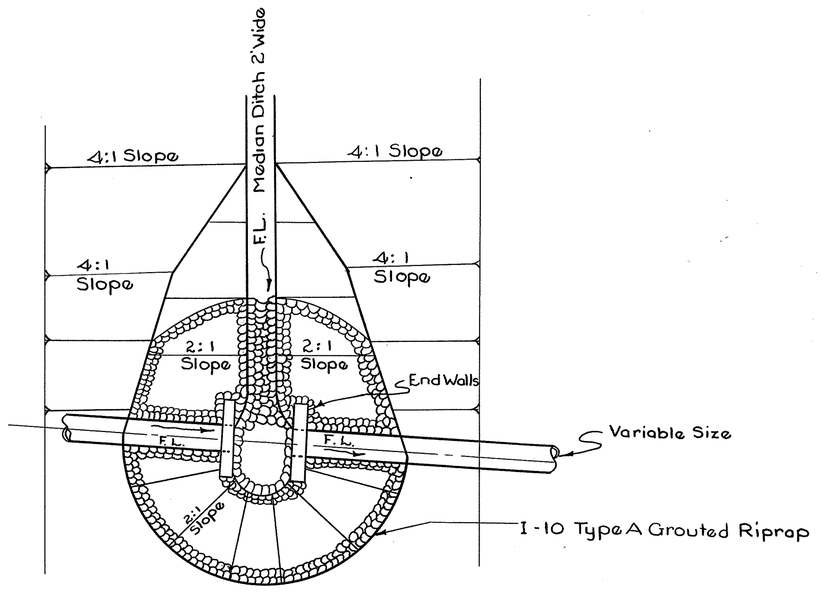
TRU. 82 12.67

5
209



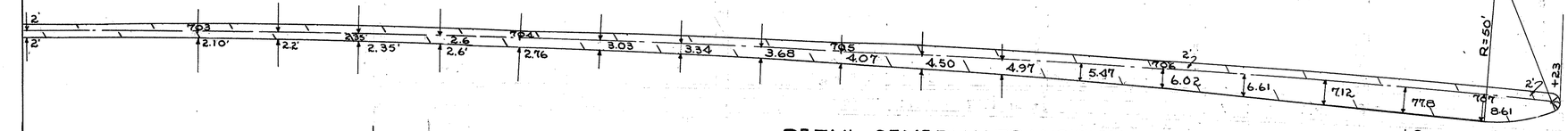
SPACING OF STD. PRECAST CONCRETE TRAFFIC DIVIDERS
Scale 1/4" =1'-0"

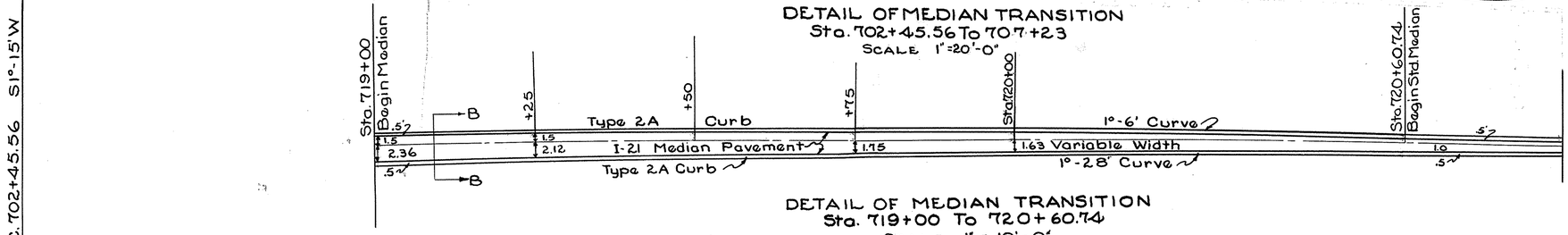
I-10 TYPE "A" GROUT FILLED RIPRAP SLOPE PROTECTION



This detail pertains to Culverts at Stations 810+34, 831+00, & 964+58.

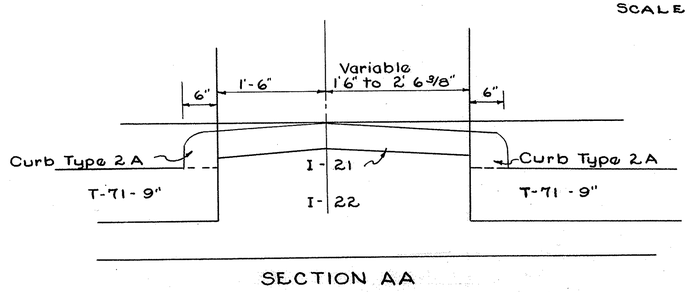
SCALE 1" = 5'-0"



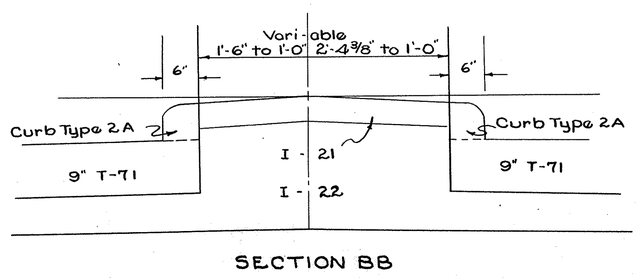


DETAIL OF MEDIAN TRANSITION
Sta. 702+45.56 To 707+23
SCALE 1" =20'-0"

DETAIL OF MEDIAN TRANSITION
Sta. 719+00 To 720+60.74
SCALE 1" = 10'-0"



SECTION AA



SECTION BB

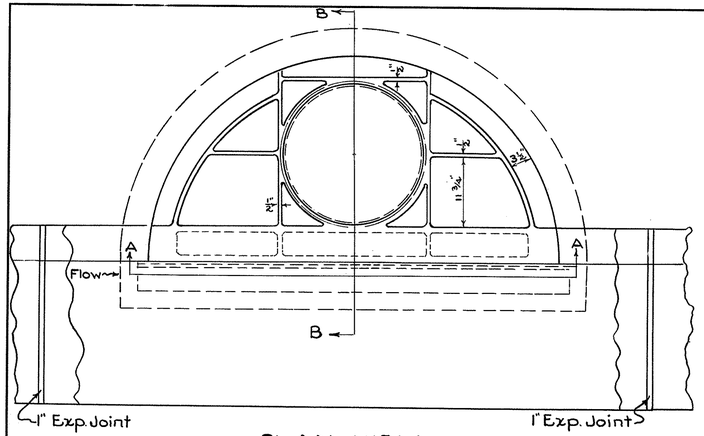
CONSTRUCTION DETAILS

RAISED CURB INLET

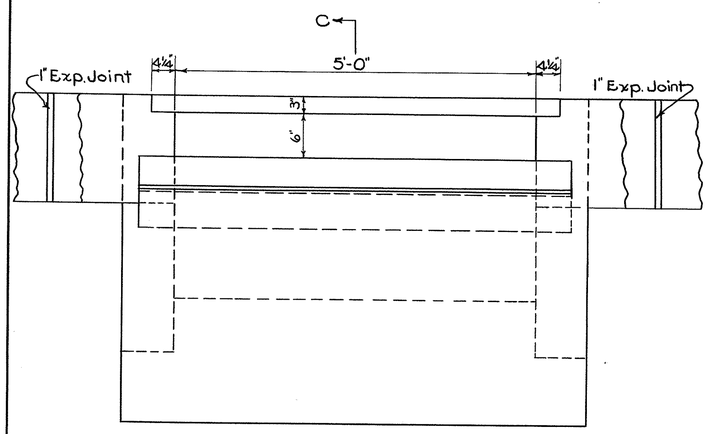
SCALE 1" = 1'

FED. RD. DIVISION	STATE	PROJECT		6 / 209
2	OHIO			

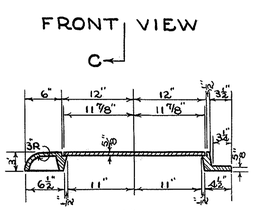
TRU. 82 12.67



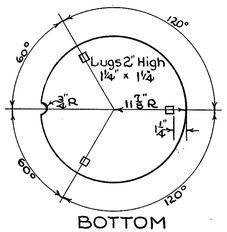
PLAN VIEW



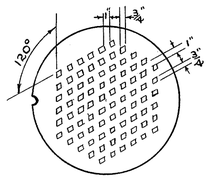
FRONT VIEW



SECTION B-B

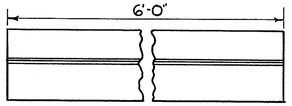


BOTTOM



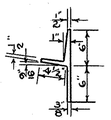
TOP

COVER DETAILS

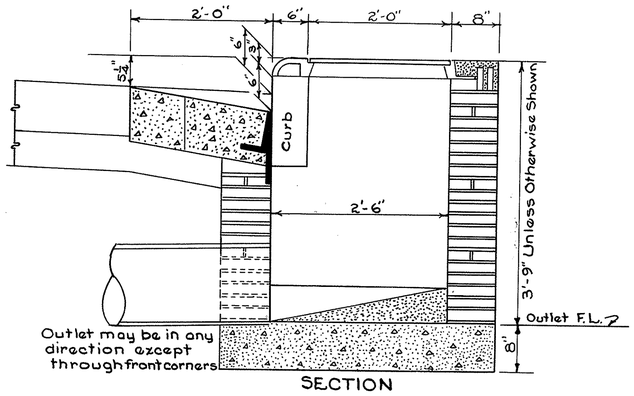


FRONT VIEW

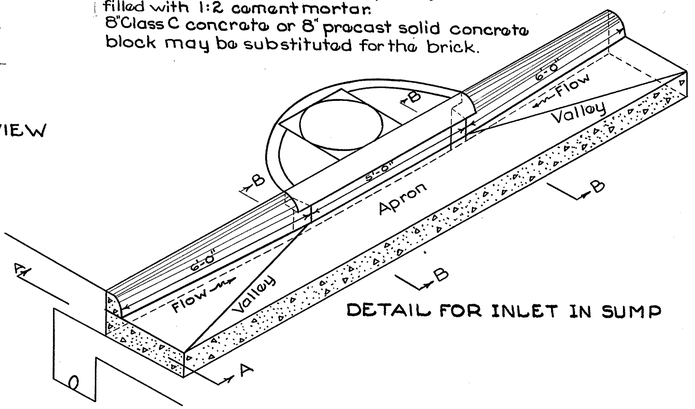
DETAIL OF PAVEMENT SUPPORT FOR OPENINGS
Approximate Weight 160 lbs.



SIDE VIEW



SECTION



DETAIL FOR INLET IN SUMP

NOTES

Castings shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon, and shall be given one coat of asphaltum paint as per specifications. Weight approximately 645 pounds.

CONSTRUCTION

Inlets shall be constructed of 8" brick using Portland Cement mortar, with every sixth course a stretcher course.

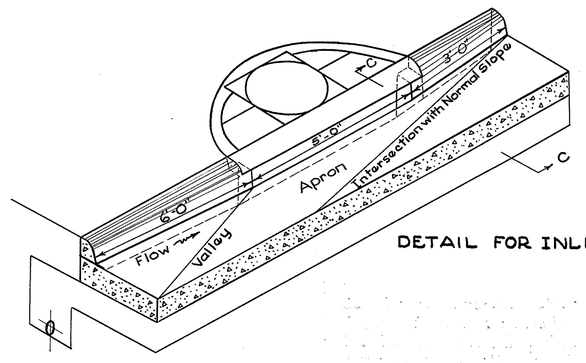
All inside joints to be struck and the outside walls will be plastered with ½" 1:2 cement mortar. Bottom of inlet to be shaped to outlet pipe.

Drain tile incorporated in the inlet, when or as directed by the Engineer, shall be included in the unit cost, price per inlet.

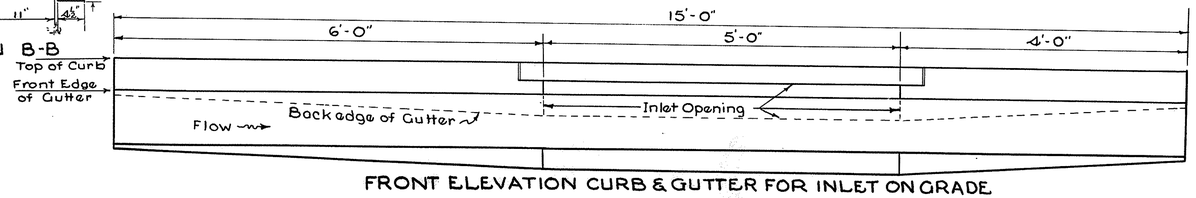
After casting has been set, the spacing between the webs shall be filled with 1:2 cement mortar.

8" Class C concrete or 8" precast solid concrete block may be substituted for the brick.

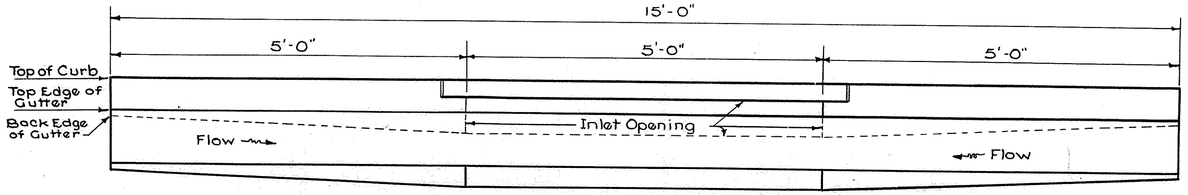
NOTE:~
1" Expansion Joint shall be placed at each end of warped gutter section.



DETAIL FOR INLET ON GRADE



FRONT ELEVATION CURB & GUTTER FOR INLET ON GRADE



FRONT ELEVATION CURB & GUTTER FOR INLET IN SUMP

INLET AND GUTTER DETAILS

SPECIAL DITCH INLET

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU. 82 12.67

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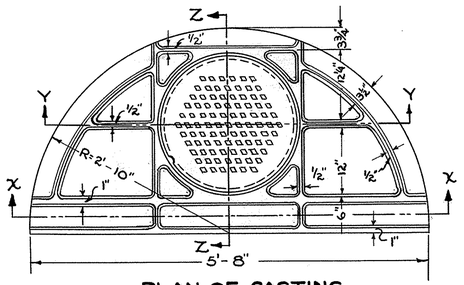
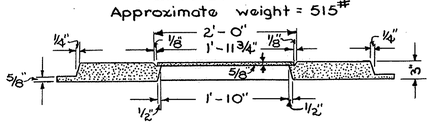
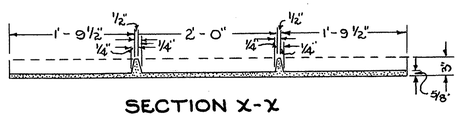


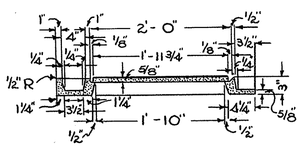
PLAN OF CASTING
Approximate weight = 515#



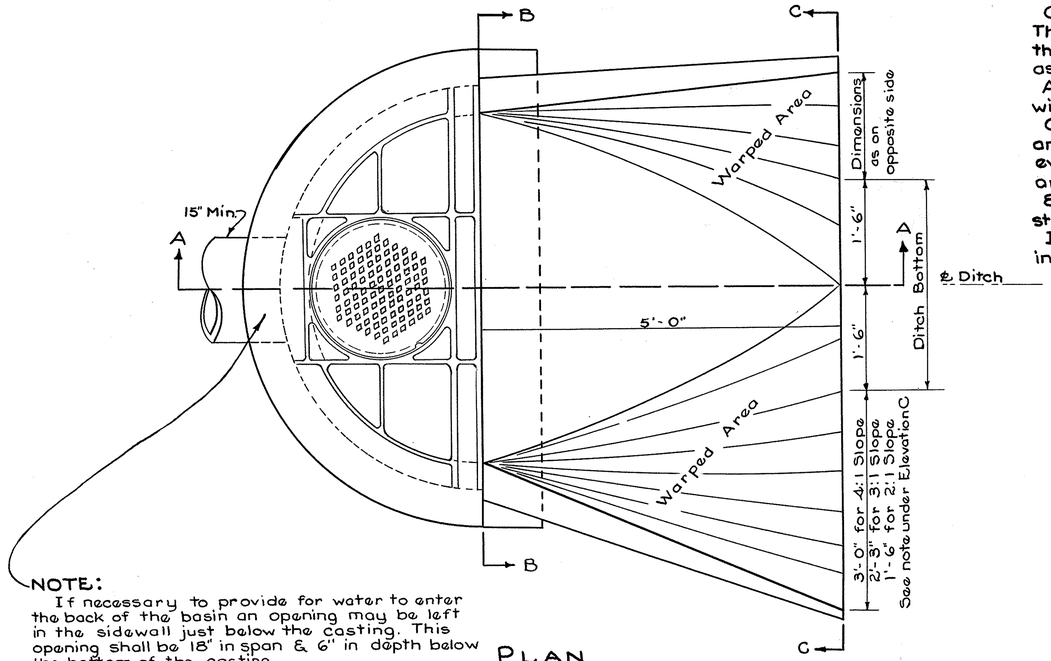
SECTION Y-Y



SECTION X-X

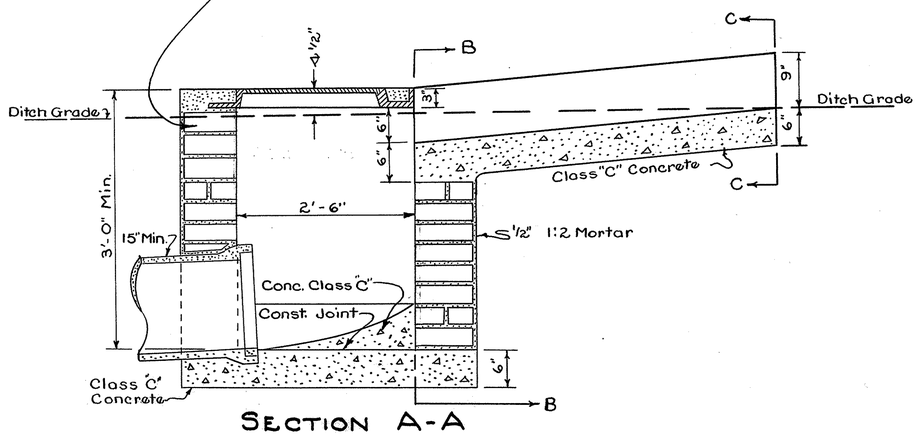


SECTION Z-Z

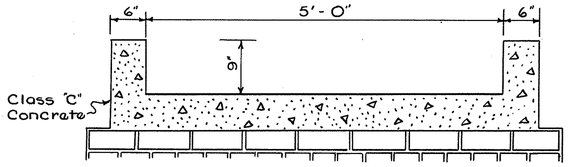


PLAN

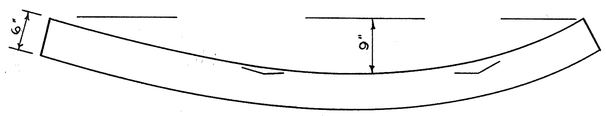
NOTE:
If necessary to provide for water to enter the back of the basin an opening may be left in the sidewall just below the casting. This opening shall be 18" in span & 6" in depth below the bottom of the casting.



SECTION A-A



SECTION B-B



ELEVATION C-C
Approach at C-C shall be warped to fit the typical ditch or paved gutter section.

NOTES

Castings shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of asphaltum paint as per specifications. Casting weight shall be approximately 515 lbs.

After casting has been set the space between the webs shall be filled with 1:2 cement mortar.

Construction: Inlets shall be constructed of a 6" Class "C" concrete base and 8" brick sidewalls, laid in portland cement concrete mortar with every sixth course a stretcher course. The inside joints to be struck and the outside walls to be plastered with ½" of 1:2 cement mortar.

8" Class "C" concrete may be substituted for brick sidewall construction.

In case of through pipe or side pipe connections, the bottom of the inlet shall be shaped accordingly.

MEDIAN DITCH INLETS

Scale 3/4"=1'

FED. E. DIVISION	STATE	PROJECT	FUNDS
2	OHIO		

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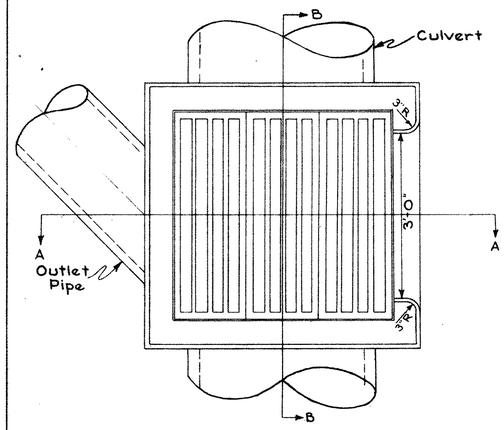
TYPE A & B



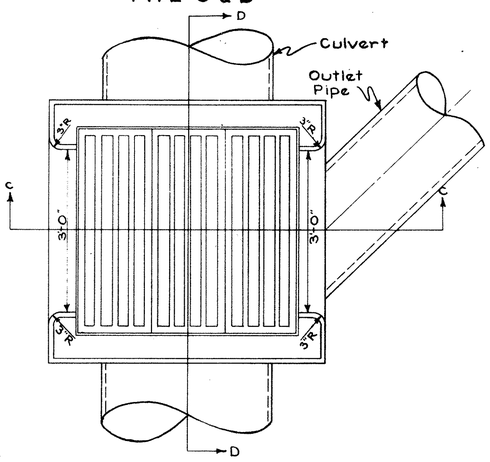
NOTE:
Finish bottom in accordance with Standard Drawing I-8 M.H. No.1 when culvert structure passes through basin. Otherwise shape bottom to drain towards outlet pipe.

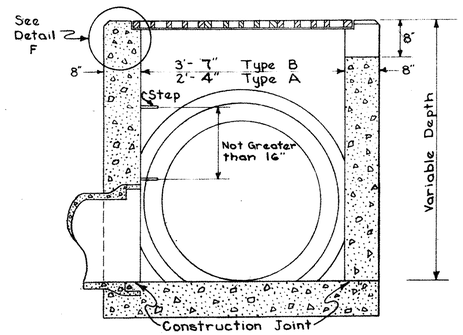
NOTE:
Outlet pipe to be placed at the direction of the Engineer.

NOTE:
Flowline to be 4" to 6" below normal ditch returning to normal 10' each side of basin.

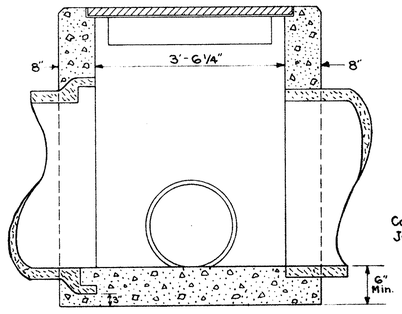
NOTE:
The Median ditch on the low side of a basin on a down grade shall rise at a rate of 1½" per ft. to a point that places it 18" below the profile grade, and then sloped back down to meet the proposed ditch elevation.

TYPE C & D

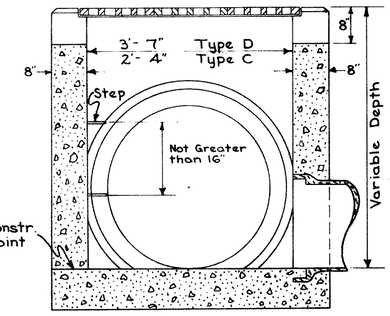




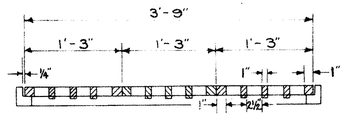
SECTION A-A

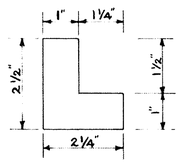


SECTION B-B & D-D

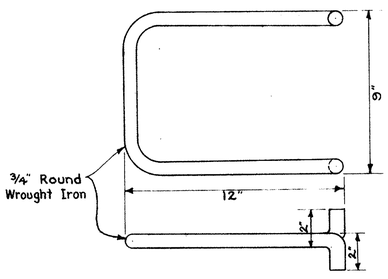


SECTION C-C





SECTION OF FRAME
Scale 6" = 1'



DETAIL OF INLET STEP
Scale 3" = 1'

CASTINGS:

Castings shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of asphaltum paint as per specifications.

Weights; minimum are :~

Grate	104 lbs. each
Frame (A or C)	149 lbs. each
Frame (B or D)	179 lbs. each

BEARING AREAS:

Bearing areas of frame and grate shall be so fitted and finished as to provide a firm and even seat for all portions of the grate in the frame. No projections shall exist on bearing areas of either casting and the grate shall seat in its frame without rocking. Frame and grate shall be fitted, matched, and marked before delivery to the project.

CONCRETE:

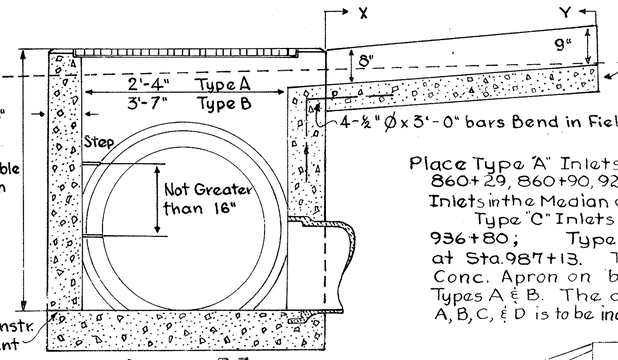
Concrete to be class "C".

BRICK:

Brick side walls, when used in place of concrete, shall be 8 inches in thickness. Every sixth course shall be a stretcher course.

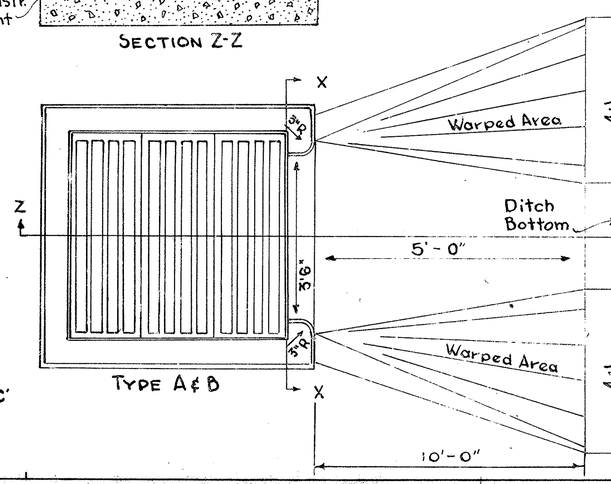
STEPS:

Steps shall be ¾" round wrought iron free from cracks and painted with one coat of asphaltum paint as per specifications, spaced not greater than 16 inches center to center.

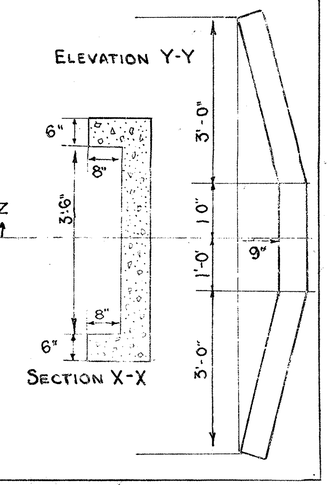


SECTION Z-Z

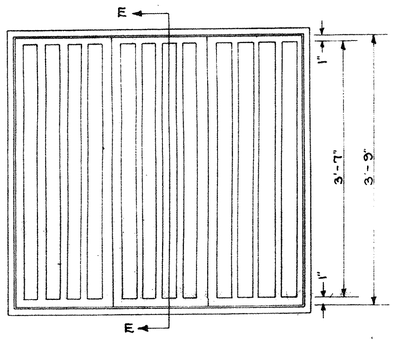
Place Type "A" Inlets in the Median at Sta. 790+75, 860+29, 860+90, 924+00 & 967+50; Type B Inlets in the Median at Sta. 795+00, 975+00 & 998+46; Type "C" Inlets in the Median at Sta. 935+31 & 936+80; Type "D" Inlet in side ditch on left. at Sta. 987+13. Type C & D inlets shall have a Conc. Apron on both sides, the same as that shown for Types A & B. The cost of the Conc. Aprons for Types A, B, C, & D is to be included in the unit cost of the inlet.



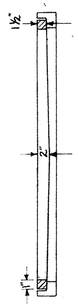
TYPE A & B



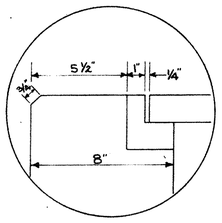
SECTION X-X



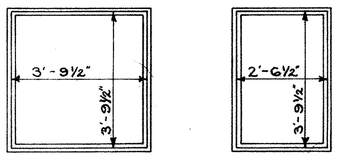
DETAIL OF CASTING
Scale 1" = 1'



SECTION E-E



DETAIL F
Scale 3" = 1'



TYPES "B" & "D" TYPES "A" & "C"

GRATING FRAMES
Scale ½" = 1"

MEDIAN DITCH INLET & MONUMENT BOX DETAILS

R/W FENCE DETAIL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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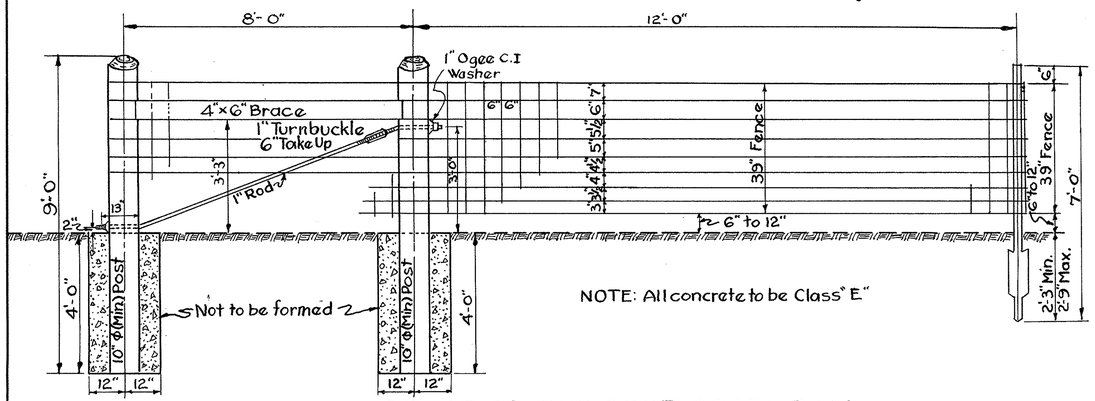
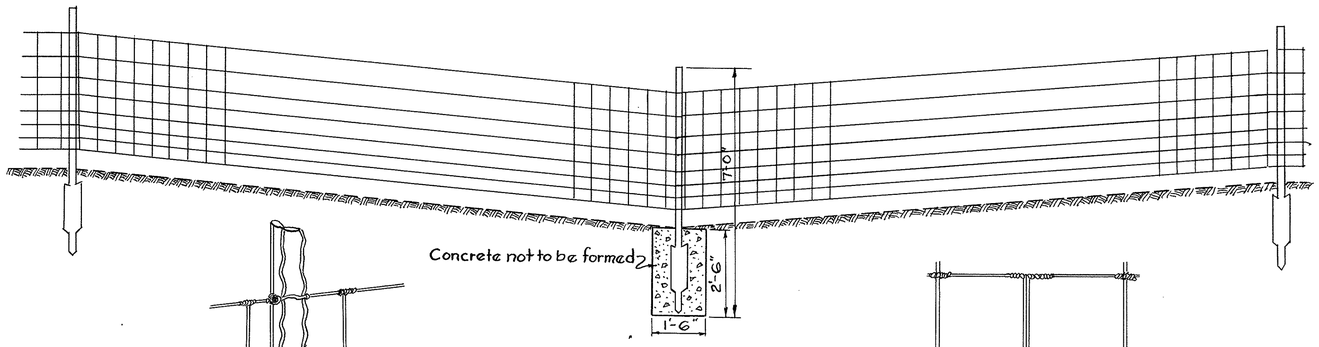
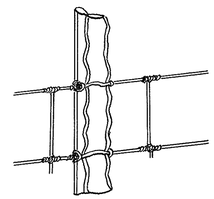


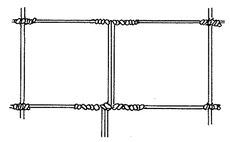
CORNER OR END POST ASSEMBLY



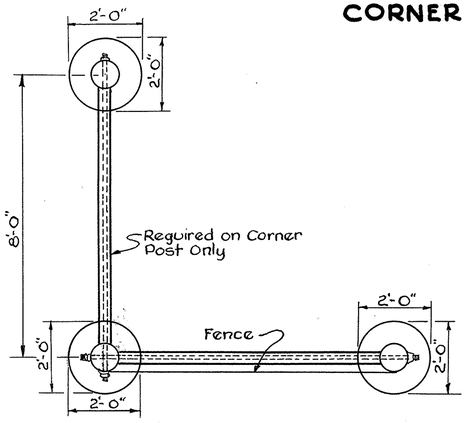
LINE POST IN DIP SECTION



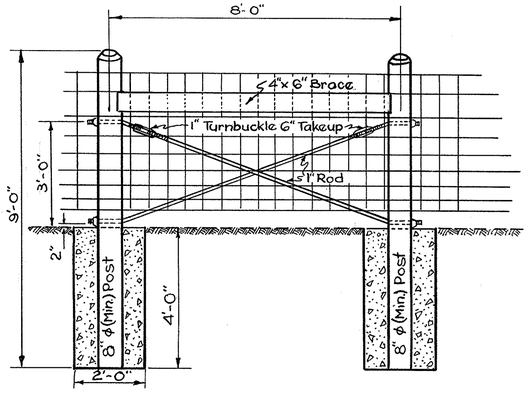
METHOD OF FASTENING FENCE AT LINE POST



SPLICE DETAIL

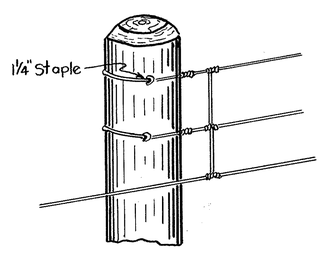


PLAN OF CORNER OR END POST ASSEMBLY

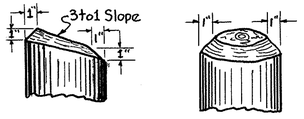


To be placed at locations shown on plan or shifted if directed by the Engineer.

INTERMEDIATE ANCHOR POST ASSEMBLY

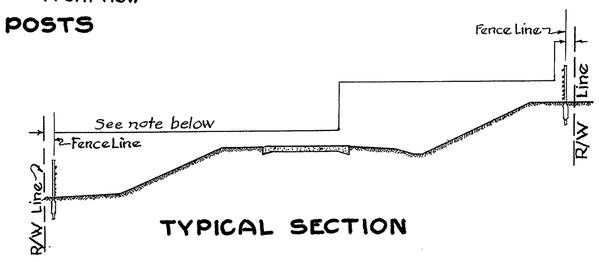


METHOD OF FASTENING FENCE AT END, CORNER POST AND ONE POST OF INTERMEDIATE ANCHOR POST ASSEMBLY

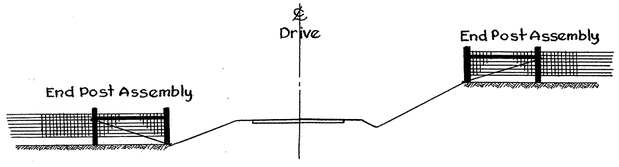


Side View Front View

TOP OF POSTS



TYPICAL SECTION



R/W FENCE TREATMENT AT DRIVES

R/W FENCE TREATMENT AT CULVERTS

Notes

Maximum spacing between intermediate anchor post assemblies or between end post assemblies and intermediate post assemblies shall be 660 Lin. Ft.

At points where individual spans of fence change alignment in excess of 4 degrees and less than 30 degrees, an intermediate anchor post assembly shall be built. If the change in alignment is 30 degrees or more a corner post assembly shall be built at the point of change.

In lieu of the requirement of Supplemental Specification No. 18. the End Posts, Corner Posts, and Intermediate Anchor Posts or Pull Posts shall be placed so that the side of the posts toward the highway is two feet from the Right-of-Way line.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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TRU-82-12.67

GENERAL NOTES

UTILITY ADJUSTMENT
Any and all work required for removing, relocating and construction of new facilities for private or public utilities will be done by and at the expense of the respective owners unless otherwise noted on the plans.

BERMS & SLOPES ÷
Berms and slopes shall be finished in accordance with the Standard Drawing RI-1 except where otherwise shown on the cross sections. All transitions from cut to fill slopes shall be blended with the surrounding terrain as directed by the Engineer.

PROPERTY MARKERS ÷
All iron pipes or markers within the limits of the project shall be saved and adjusted to the new grade by the Contractor as directed by the Engineer. Cost of adjusting or resetting markers shall be included in the price bid for E-1 Roadway Excavation.

FIELD OFFICE ÷
The Contractor shall provide a suitable "Field Office for the exclusive use of the Engineers and Inspectors assigned to this project. This office shall have a minimum of 400 square feet of floor space and be so arranged, equipped and lighted that the State employees will have a convenient place for making the necessary records, etc., and have a safe place for storage of equipment, plans and necessary supplies. The Contractor shall have a telephone installed and maintained during construction of the project. When work is in progress during cold weather the office shall be heated to a temperature of at least (70°) seventy degrees Fahrenheit.

SMALL DRAINS ÷
Where field drains are encountered and not shown on the plans, they shall be given an unobstructed outlet at the direction of the Engineer.
No drains carrying domestic waste shall be connected to any proposed drainage facility.

EXISTING PIPE ÷
The location, type, depth and size of all existing pipe; gas, water, sewer, etc., are shown as accurately as available information permits. The State of Ohio will not be responsible for any variation found during construction.

SUPER-ELEVATION ÷
Super elevated curves shall be built without crown. The crown shall be worked out of the pavement in the portion between the beginning of the transition and the point where the super elevation equals twice the crown.

TREE AND STUMP REMOVAL:
All trees and stumps within the limits of the construction, which are 12" or over as measured per Item E-9.01 shall be removed by the Contractor and paid for under Item E-9 Tree. Rem. if marked for removal by the Engineer. All other clearing shall be included in the price bid for E-1 Roadway Excavation. Due to the heavily wooded areas with border line trees along the construction limits the number of trees of the various sizes called for is approximate and may be slightly more or less than the actual number indicated to be removed.

ITEM L-9 SEEDING & PROTECTING: L-9 (12-12-12)
COMMERCIAL FERTILIZER AND L-9 AGRICULTURAL LIMING MATERIALS:
Quantities for the wide median are calculated for the soil area between the inside pavement edges of the two lanes. Quantities outside of the pavements are calculated for the soil area between the outside edge of the stabilized berm and a line ten (10) feet outside of the *construct* limits as shown on the Cross Sections or to the R/W Line, if such line is less than 10' from the work limits. Any other areas disturbed by the Contractor shall be seeded by the Contractor at his own expense.

CUTTING INTO EXISTING STRUCTURES ÷
Whenever the plans call for connecting a storm sewer or ditch drain to an existing structure, either a manhole or a pipe, the Contractor shall take the utmost precaution to cut the hole, set the pipe and grout it in place in such a manner that no damage results to the existing structure.
Payment for the above operation shall be included in the price bid per linear foot for *the pertinent pipe Item.*

FILLING MAJOR DEPRESSIONS ON RESURFACING
Major depressions in existing pavement shall be filled and compacted with bituminous concrete leveling material in advance of placing the regular leveling course. These depressions shall be filled in layers not to exceed three inches (3") in depth when compacted.

UNSUITABLE FOUNDATION MATERIAL ÷
Unstable Foundation conditions will be encountered at the following locations ÷

Sta. 713+50± to Sta. 717+50±
Sta. 737+50± to Sta. 738+50±
Sta. 890+00± to Sta. 893+00±

At the direction of the Engineer the unsuitable top material will be excavated and backfilled with granular material E1.02 modified to require 75% to be retained on a No. 200 sieve. Where the narrow median is in effect the lateral limits of the excavation shall be from the outside shoulder edge of the East bound lane to the outside shoulder edge of the West bound lane. Where the full median occurs, the lateral limits of the excavation shall be from the outside shoulder edge to the inside shoulder edge of each pair of lanes, thus eliminating any unsuitable excavation in the median area. The depth of the material to be excavated and the length of the excavation should be as directed by the Engineer.
Back filling by end dumping will be allowed to 2 feet above the water table and normal E-1 requirements will apply above the granular fill.
In addition to the quantities for the above stations, an additional quantity of 2500 cubic yards of granular material E-1.02 modified as above is provided to be used where and as directed by the Engineer.

To Calculations - Granular Borrow 2500 C.Y.

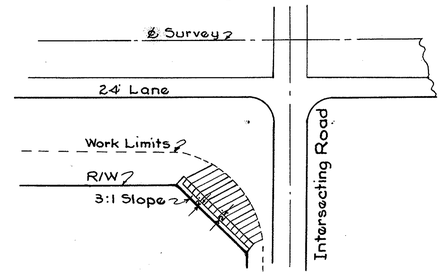
TRANSVERSE I-4 DRAINS:
To provide drainage for springs and field drains which are not located on the plan but which may be encountered in construction a quantity of I-4 is hereby provided to be used where and as directed by the Engineer.

To Recap: I-4 6" Pipe Underdrains 500 L.F.
I-4 6" Pipe Underdrains Sec. M 6.4 (h) 500 L.F.

SCALPING:
Top soil from the scalping operation shall be used in the final operation necessary for finishing shoulders, slopes and ditches.

ITEM L-10 SODDING:
Areas to be sodded shall be loosened to a depth of two (2) inches just prior to laying the sod. This work shall be included for payment in the price bid per sq. yd. of sodding.

SIGHT DISTANCE EXCAVATION AND CLEARING:
Excavation for sight distance shall be the quantity of earth above given elevations, as shown on the Line Sheet, bounded by an area that is 2 feet from the R/W Line and extending to the proposed work limits. See Sketch.
At other intersection quadrants where excavation is not necessary, all obstructions and vegetal growth shall be removed above given sight distance elevations. Cost is to be included in price bid per cubic yard for Item E-1 Roadway Excavation.



E-1
The unit price bid for Item E-1 shall include the removal of all pavement unless otherwise noted on the plans. The removal of all small pipe and miscellaneous masonry not specifically mentioned shall be removed and paid for under Item E-1 Roadway Excavation.

ACCESS:
Access to the properties which is provided for on this plan shall be maintained at all times by the Contractor.

BITUMINOUS TACK COAT
For Tack Coat bituminous materials see note in proposal.

ITEM I-10 DUMPED ROCK FILL, AS PER PLAN:
The cost of any additional excavation required for placing Dumped Rock Fill shall be included in the unit price bid for Item Item I-10, Dumped Rock Fill, as per plan.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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GENERAL NOTES

ELEVATIONS:
Elevations shown on side road returns are to be used as a guide only. Actual elevations shall be determined by the Engineer.

TRAFFIC Notes:
During the process of construction of that portion of this project which lies along the center line of existing S.R. 82 (Sta. 668+97.60 to Sta. 710+00) until such time as the new pavement on this portion of the Contract is open to traffic, existing S.R. 82 shall remain open and two way traffic shall be maintained at all times, excepting within a specific working area previously agreed upon by the Engineer where one way traffic may be used with full compliance to *Section* G-7.07 "Barricades, Danger and Warning Signs." Such one way traffic areas shall be held to a minimum in both length and duration of time of use.
Quantities of material under *Items T-10 and M-10 are supplied elsewhere in this plan.*

The Contractor shall so conduct his work that localized widening of berm areas may be performed to facilitate the safe movement of traffic.

It shall be further understood that no portland cement concrete mixer shall be operated on the existing pavement in the process of mixing the concrete on this project.
All provisions of the above note will also apply to the construction on S.R. 46 and S.R.90 where these roads pass under the new alignment of S.R. 82.

INTERSECTING COUNTY ROADS:
In addition to the requirements of Sec. G-4.05, traffic shall be maintained on County Highway 54, County Highway 155, County Highway 161 and County Highway 56 where these four highways intersect and cross over this proposed new construction of S.R. 82.

Quantities of materials under Items T-10 and M-10 are provided elsewhere in the plan for use where and as directed by the Engineer at these intersections. Payment for maintaining and removing temporary traffic lanes at these intersections is included in the Lump Sum bid for Maintaining Traffic.

TEMPORARY RUN AROUND ROADS:
On S.R. 82 the Temporary Run Around Road shall be at least 20 feet wide, 16 feet of which will be on the existing pavement with the adjacent 4 feet composed of Traffic Bound Surface Course, except that between Sta. 669+50 and Sta. 675+90 where the proposed grade is considerably above the existing pavement, the full 20' may be composed of Traffic Bound Surface Course. The temporary run around may be on only one side of the existing pavement or may vary from one side to the other as the work progresses, and as agreed to by the Engineer and the Contractor. The estimate of quantities is based upon 150 cubic yards of aggregate per 100 lin. ft. of temporary road with one ton of Calcium Chloride or Calcium Magnesium Chloride for each 50 cubic yards of aggregate.
On S.R. 46 and S.R. 90 on the full width section of all new pavement and 100 feet on either end; the run around road shall be at least 20 feet wide, 8 feet of which will be on the existing pavement with the adjacent 12 feet composed of Traffic Bound Surface Course. The run around road may be on only one side of the existing pavement or may vary from one side to the other as the work progresses, and as agreed to by the Engineer and the Contractor. On the wedge sections of both S.R. 46 and S.R. 90 where the existing pavement is widened and resurfaced, the Contractor shall so arrange his work that traffic may use the existing pavement without the necessity of a run around. The estimated quantities are based on 150 cubic yards of aggregate for each 100 lineal feet of temporary road, 20 feet wide, with one ton of Calcium Chloride or Calcium Magnesium Chloride for each 50 cubic yards of aggregate.
At the intersection of all County Highways with the proposed location of SR 82, the temporary run around shall be placed where and as directed by the Engineer. Estimated quantities are based on 75 cubic yards of aggregate for each 100 lineal feet of temporary road, 20 feet wide, with one ton of Calcium Chloride or Calcium Magnesium Chloride for each 50 cubic yards of aggregate.

For Estimated Quantities see Calculations Sheet 14

ADDITIONAL NOTE ON TREES AND STUMPS:
Trees or stumps shall be removed or preserved as indicated on the plans by the following symbols:

Trees or stumps to be removed ⊗
Trees to be preserved ⊙

In the heavily wooded areas the number of trees called for between various stations is the total number of trees between the R/W Limits. Only the trees between the work limits are to be removed. The trees between the work limits and the R/W line are to be preserved.

AGGREGATE SIDEWALK, AS PER PLAN, ITEM I-13:
Aggregate used in this item shall be as specified in Sec. I-22.02.

TILE FOR SUBGRADE DRAINAGE:
Six inch (6") drain tile shall be furnished and placed by the Contractor, in manholes, catch basins and inlets for subgrade drainage, where and as directed by the Engineer. Payment for same shall be included in the price bid per "Each" for man holes, catch basins and inlets.

CONNECTING EXISTING DOWN SPOUT DRAINS:
Whenever an existing down spout drain, not carrying domestic waste, is cut off or whenever the outlet to such a drain is destroyed because of this improvement, the Contractor shall either connect the drain to a storm sewer or provide another suitable outlet.
In order to provide for down spout drains, an estimated quantity of I-5 12"x 6"Y's and I-2 6" Pipe is included in the Estimate of Quantities to be used where and as directed by the Engineer. The cost of making the connection and completing this operation is to be included in the unit price bid for I-5 12"x6"Y" and I-2 6" Pipe

I-5 - 12"x6"Y" - 10 Each To Recap.
I-2 - 6" Class "B" Storm Sewers 400 L.F. to Gen. Sum.
I-5 15"x6"Y" 5 Each To Recap

CASTINGS:
All castings from abandoned inlets, and catch basins and all manhole castings that are replaced by a heavier casting, shall be carefully removed and stock piled. The castings will be removed from the project by and become the property of the State of Ohio.

WORK AT ABANDONED SITES:
The following work within the Right of Way shall be performed by the Contractor at locations where buildings have been removed from the Right of Way. Foundations, Buildings, Cisterns, Wells and Septic Tanks shall be removed to a line two (2) feet below the finished grade and any concrete floors broken up into pieces whose areas do not exceed one (1) square foot and the entire hole filled with acceptable earth according to E 1.08 as directed by the Engineer. All foundations, cisterns, etc. cut up and extending beyond the Right of Way shall be completely filled. All the work described above is included in the unit price bid per cubic yard for E-1 Roadway Excavation.

SUBBASE COURSE:
In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed edge of the subbase course will be left free of earth cover that would impede free drainage.

COMPACTION FOR DRIVES:
The subgrade for drives and mail box turnouts paved with T-35 on I-22, I-22 or T-10 on I-22 shall be compacted to a depth of 6 inches to the density requirements of Table III, Item E-1. Payment for subgrade compaction as specified above shall be included in the unit price bid for Item E-1, Roadway Excavation.

TEMPORARY ROADWAYS:
Payment for the construction, maintenance and subsequent removal, where necessary, of temporary roadways, except for the furnishing and placing of T-10 and M-10 materials, shall be included in the Lump Sum bid for "Maintaining Traffic."

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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TRU-82-12.67

RELOCATION PLAN
TRU-82-12.67
WARREN-SHARON RD.
TRUMBULL COUNTY
HOWLAND & VIENNA TOWNSHIPS

Scale- 1"=1200'-0"

LIMITED ACCESS HIGHWAY

CURVE No. 1

Δ =	3°-50'	Ls=	200'
Δc =	0°-10'	Ts=	204.60'
Dc =	1°-50'	Xc=	199.98
Rc =	3125.23'	Yc=	2.14'
T.S.=	678+86.65	θs=	1°-50'
S.C.=	680+86.65	φc=	0°-36'-40"
P.I.=	680+91.25	L.T.=	133.34'
C.S.=	680+95.74	S.T.=	66.67'
S.T.=	682+95.74	L.C.=	199.99'
L.C.=	9.09'	Es=	2.28'
k =	100'	p =	0.53'

CURVE No. 3

P.I.=STA.765+52.75

Δ =	38°-23' Lt.	Ls.=	350.00'
Δc.=	27°-53'	Ts.=	840.67'
Dc.=	3°-0'	Xc.=	349.71'
Rc.=	1909.86'	Yc.=	10.68'
T.S.=	Sta.757+12.08	θs.=	5°-15'
S.C.=	Sta.760+62.08	φc.=	1°-45'
C.S.=	Sta.769+91.52	L.T.=	233.44'
S.T.=	Sta.773+41.52	S.T.=	116.76'
L.c.=	929.44'	L.C.=	349.87'
Es.=	115.3'	k =	174.95'

p = 2.67'

CURVE No.6.

P.I.=STA. 836+18.78

Δ =	25°-44' Lt.	Ls.=	200.00'
Δc.=	21°-44'	Ts.=	754.51'
Dc.=	2°-0'	Xc.=	199.98'
Rc.=	2864.79'	Yc.=	2.33'
T.S.=	Sta. 828+73.27	θs=	2°-0'
S.C.=	Sta. 830+73.27	φc =	0°-40'
C.S.=	Sta. 841+59.95	LT =	133.34'
S.T.=	Sta. 843+59.95	ST =	66.67'
L.c.=	1086.67'	LC =	199.99'
Es.=	74.4'	k =	100.00'

p = 0.58'

CURVE No 7

P.I.= STA. 855+30.99

Δ =	19°-30' Lt.	Ls.=	200.00'
Δc.=	15°-30'	Ts.=	592.37'
Dc.=	2°-0'	Xc.=	199.98'
Rc.=	2864.79	Yc.=	2.33'
T.S.=	Sta.849+38.62	θs =	2°-0'
S.C.=	Sta.851+38.62	φc =	0°-40'
C.S.=	Sta. 859+13.62	L.T.=	133.34'
S.T.=	Sta.861+13.62	ST =	66.67'
L.c.=	775.00'	L.C.=	199.99
Es.=	42.6'	k =	100.00

p = 0.58'

CURVE No 10

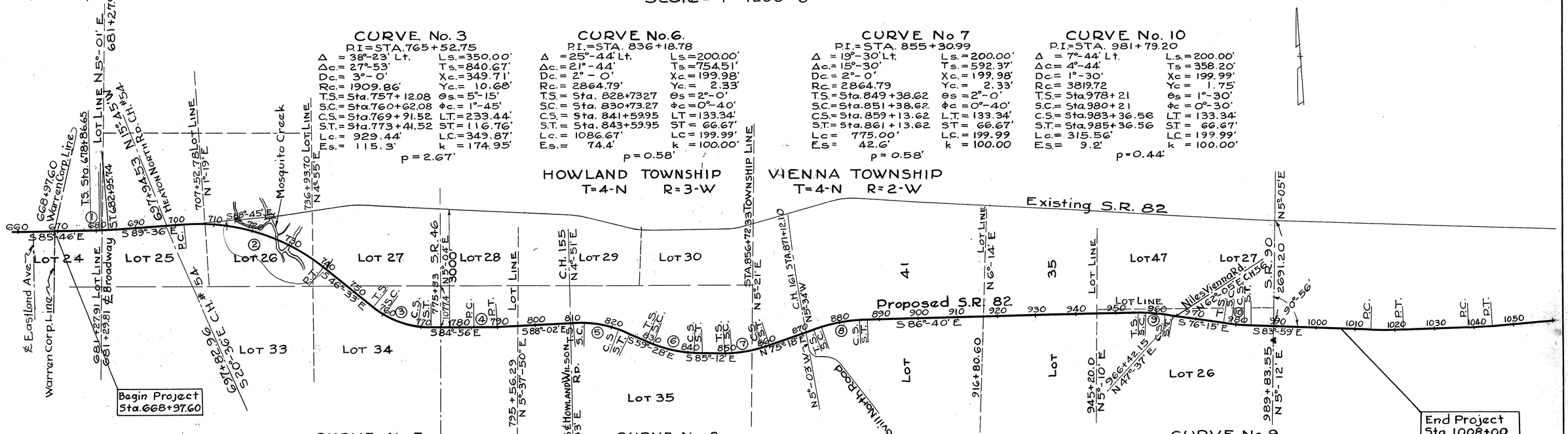
P.I.=STA. 981+79.20

Δ =	7°-44' Lt.	Ls.=	200.00'
Δc.=	4°-44'	Ts =	358.20'
Dc.=	1°-30'	Xc =	199.99'
Rc.=	3819.72	Yc =	1.75'
T.S.=	Sta.978+21	θs =	1°-30'
S.C.=	Sta.980+21	φc =	0°-30'
C.S.=	Sta.983+36.56	L.T.=	133.34'
S.T.=	Sta.985+36.56	S.T.=	66.67'
L.c.=	315.56'	L.C.=	199.99'
Es.=	9.2'	k =	100.00'

p=0.44'

HOWLAND TOWNSHIP T=4-N R=3-W

VIENNA TOWNSHIP T=4-N R=2-W



CURVE No.2

P.I.=	STA.722-55.43
Δ =	42°-12' Rt.
D =	1°-06'
R =	5208.71'
T =	2009.87'
E =	374.32'
L =	3836.37
P.C.=	Sta.702+45.56
P.T.=	Sta.740+81.93

CURVE No. 4

P.I. =	STA.787+35.85
Δ =	3°-06' Lt.
D =	0°-30'
R =	11459.16'
T =	310.08'
E =	4.19'
L =	620.00'
P.C.=	Sta.784+25.77
P.T.=	Sta.790+45.77

CURVE No. 5

P.I.=STA.817+21.92

Δ =	28°-34' Rt.	Ls =	300.00'
Δc.=	21°-04'	Ts =	733.88'
Dc.=	2°-30'	Xc =	299.87'
Rc.=	2291.83'	Yc =	6.54'
T.S.=	Sta.809+88.04	θs =	3°-45'
S.C.=	Sta.812+88.04	φc =	1°-15'
C.S.=	Sta.821+30.71	L.T. =	200.04'
S.T.=	Sta.824+30.71	S.T. =	100.04'
L.c.=	842.67'	L.C.=	299.94'
Es.=	74.8'	k =	149.98'

p=1.63'

CURVE No. 8

P.I. = STA. 880+29.33

Δ =	18°-02' Rt.	Ls.=	200.00'
Δc.=	15°-02'	Ts.=	706.19'
Dc.=	1°-30'	Xc.=	199.99'
Rc.=	3819.72'	Yc.=	1.75'
T.S.=	Sta.873+23.14	θs =	1°-30'
S.C.=	Sta.875+23.14	φc =	0°-30'
C.S.=	Sta.885+25.36	L.T.=	133.34'
S.T.=	Sta.887+25.36	S.T.=	66.67'
L.c.=	1002.22'	L.C.=	199.99'
Es.=	48.3'	k =	100.00'

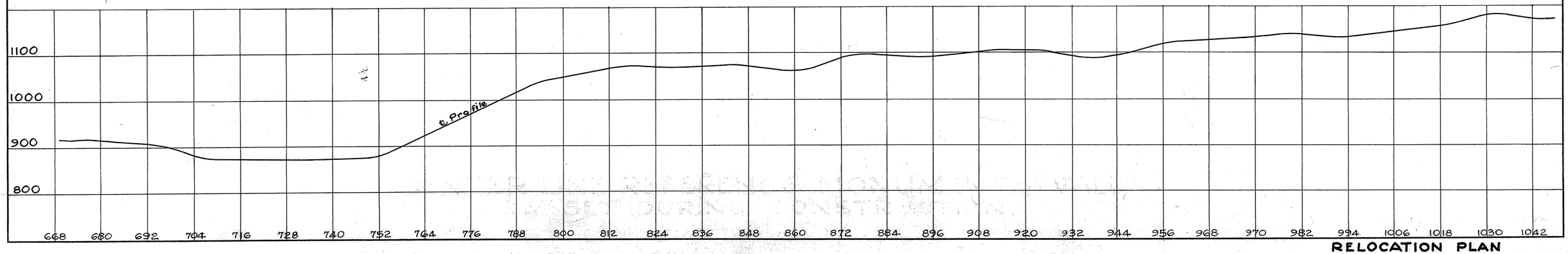
p=0.44'

CURVE No. 9

P.I.=STA.960+56.73

Δ =	10°-25' Rt.	Ls.=	200.00'
Δc.=	7°-25'	Ts.=	448.23'
Dc.=	1°-30'	Xc.=	199.99'
Rc.=	3819.72'	Yc.=	1.75'
S.T.=	Sta.956+08.50	θs =	1°-30'
S.C.=	Sta.958+08.50	φc =	0°-30'
C.S.=	Sta.963+02.94	L.T.=	133.34'
S.T.=	Sta.965+02.94	S.T.=	66.67'
L.c.=	494.44	L.C.=	199.99'
Es.=	61.29	k =	100.00'

p=0.44



RELOCATION PLAN

GENERAL SUMMARY

ITEM NO.	QUANTITY	UNIT	DESCRIPTION
			ROADWAY
E-1	593067	C.Y.	Roadway Excavation, *Suitable Material*
E-1	*218992*	S.Y.	Compacted Subgrade
E-4	114004	C.Y.	Borrow
E-4	10481	C.Y.	Granular Borrow, as per Plan
E-8	5824	S.Y.	Removal & Disposal of Existing Pavement
E-8	341	L.F.	Removal & Disposal of Existing Curb
E-8	1203	L.F.	Removal & Disposal of Existing Curb & Gutter
E-9	Lump	Lump	Removal of Trees and Stumps
E-11	3367	M Gal.	Water
E-12	1853	L.F.	Pipe Removed, 15" and Under
E-12	722	L.F.	Pipe Removed for Storage, 15" and Under
E-12	248	L.F.	Pipe Removed, over 15"
E-12	40	L.F.	Pipe Removed for Storage, over 15"
E-1	*6139*	*C.Y.*	*Roadway Excavation, Unsuitable Material*
I-8	44	Ea	Standard Monument Assemblies
I-13	350	S.F.	4" Concrete Sidewalk
I-13	24	L.F	Concrete Steps
I-13	1688	S.F.	6" *Aggregate* Sidewalk, as per Plan
I-15	124	L.F.	Guard Rail Removed & Disposed of
I-15	*9067.10*	L.F.	Guard Rail *Steel Beam Type (Deep)*
I-18	4466	C.Y.	Stabilized Crushed Aggregate Shoulders & Approaches
L-9	437974	S.Y.	Seeding & Protecting
L-9	*42.88*	Tons	Commercial Fertilizer (12-12-12)
L-9	*214.38*	Tons	Agricultural Liming Materials
L-10	38435	S.Y.	Sodding
T-10	4300	C.Y.	*Traffic Compacted Surface Course for Maintaining Traffic*
M-1.0	86	Tons	*Calcium Chloride or Calcium Magnesium Chloride Furnished and Applied for Maintaining Traffic.*
SS-18	57436	L.F.	Fence, Type "A"
			DRAINAGE
I-5	*1*	*Ea.*	*18" Pipe Special for Storm Sewers, Class "B" Under Pavement or Approaches*
E-2	3038	C.Y.	Excavation for Structure
E-3	678	C.Y.	Channel Excavation
SPECIAL	*16*	*Ea.*	*Expansion Anchor Bolts.*
I-1	138	L.F.	12" Pipe for Driveways, Sec. M-6.4 (a)
I-1	98	L.F.	18" Pipe for Driveways, Sec. M-6.4 (a)
I-1	44	L.F.	36" Pipe for Driveways
I-5	*1*	*Each*	*12" Pipe Special for Storm Sewers, Class "B" Under Pavement or Approaches*
I-2	400	L.F.	6" Class "B" Storm Sewer
I-2	*2730*	L.F.	12" Class "B" Storm Sewer
I-2	1062	L.F.	12" Class "B" Storm Sewer Under Pavement or Approaches
I-2	1521	L.F	15" Class "B" Storm Sewer
I-2	268	L.F.	15" Class "B" Storm Sewer Under Pavement or Approaches
I-2	2435	L.F	18" Class "B" Storm Sewer
I-2	428	L.F.	18" Class "B" Storm Sewer Under Pavement or Approaches
I-2	288	L.F.	21" Class "B" Storm Sewer
I-2	57	L.F.	21" Class "B" Storm Sewer Under Pavement or Approaches
I-2	488	L.F.	24" Class "B" Storm Sewer
I-2	45	L.F.	24" Class "B" Storm Sewer Under Pavement or Approaches
I-2	217	L.F.	27" Class "B" Storm Sewer
I-2	*226*	*L.F.*	*12" Class "B" Storm Sewer With Shallow Cover*
I-4	42723	L.F.	6" Underdrains
I-4	500	L.F.	6" Underdrains, Sec. M 6.4 (h)
I-4	*1148*	L.F.	8" Outlets for Underdrains, *Sec. M-6.4(a)*
I-5	66	Ea.	6" Pipe Specials for Underdrains
I-5	16	Ea.	12" Pipe Specials for Storm Sewers, *Class "B"*
I-5	6	Ea.	15" Pipe Specials for Storm Sewers, *Class "B"*
I-5	5	Ea.	18" Pipe Specials for Storm Sewers, *Class "B"*
I-5	2	Ea.	24" Pipe Specials for Storm Sewers, *Class "B"*
I-8	47	Ea.	Special Raised Curb Inlet, as per Plan
I-8	1	Ea.	Special Ditch Inlet, as per Plan
I-8	1	Ea.	Standard No. 1-3 Catch Basin
I-8	4	Ea.	Standard No. 2-4 Catch Basin
I-8	5	Ea.	Special Median Ditch Inlet Type "A", as per Plan
I-8	3	Ea.	Special Median Ditch Inlet Type "B", as per Plan
I-8	2	Ea.	Special Median Ditch Inlet Type "C", as per Plan
I-8	1	Ea.	Special Median Ditch Inlet Type "D", as per Plan
I-8	1	Ea.	Catch Basin Adjusted to Grade
I-8	1	Ea.	Man Hole Adjusted to Grade, *as per plan*
I-8	33	Ea.	Standard No. 1 Manhole
I-8	15	Ea.	Standard No. 7 Side Ditch Catch Basin
I-8	11	Ea.	Standard No. 2-6 Inlet
I-8	2	Ea.	Standard No. 2-10 Inlet
I-10	91	C.Y.	Dumped Rock Fill, *as per plan*
I-10	202	S.Y.	Rip Rap Type "A", Grout Filled
I-14	3215	L.F.	Special Paved Gutter Type "A", as per Plan
I-14	2751	L.F.	Special Paved Gutter Type "B", as per Plan
I-14	735	L.F.	Standard Paved Gutter Type 1
I-16	3	Ea.	Catch Basin Abandoned
I-16	2	Ea.	Man Hole Abandoned
S-27	306	L.F.	*36" Pipe for Roadway Culverts, Sec. M-106.6(d) or Sec. M-6.4(d).*
S-1	278.1	C.Y.	Concrete for Structures, Class "C"
S-1	70.3	C.Y.	Concrete for Structures, Class "E"
S-4	40699	Lbs.	Reinforcing Steel
S-22	3	C.Y.	Removal of Portions of Existing Structures
S-23	50	L.F.	Dowel Holes
S-24	Lump	Lump	Removal of Existing Structures
S-27	12	L.F.	12" Pipe for Roadway Culverts, Sec. M-6.6 (b) or Sec. M-6.8 (b)
S-27	*449*	L.F.	15" Pipe for Roadway Culverts, Sec. M-6.6 (b) or Sec. M-6.8 (b)
S-27	*500*	L.F.	18" Pipe for Roadway Culverts, Sec. M. 6.6 (b) or Sec. M-6.8 (b)
S-27	157	L.F.	21" Pipe for Roadway Culverts, Sec. M. 6.6(b) or Sec. M 6.8 (b)
S-27	231	L.F.	24" Pipe for Roadway Culverts, Sec. M 6.6 (b) or Sec. M 6.8 (b)
S-27	1558	L.F.	30" Pipe for Roadway Culverts, Sec. M 6.6 (b) or Sec. M 6.8 (b)
S-27	*544*	L.F.	36" Pipe for Roadway Culverts
S-27	108	L.F.	48" Pipe for Roadway Culverts
S-28	180	L.F.	7'-3" x 5'-3" Sectional Corrugated Metal Structure, Sec. M 6.4(g)(10-8)Ga.
S-28	142	L.F.	7'-3" x 5'-3" Sectional Corrugated Metal Structure, Sec. M 6.4(g)(10-10)Ga.
S-28	170	L.F.	9'-6" x 6'-5" Sectional Corrugated Metal Structure, Sec. M-6.4(g)(8-7)Ga.
			PAVEMENT
B-35	857	C.Y.	Asphaltic Concrete Leveling Course (70-80)
B-35	265	C.Y.	Asphaltic Concrete Base Course (70-80)
B-70	5573	S.Y.	8" Portland Cement Concrete Base Course
B-119	1403	C.Y.	Crushed Aggregate Base Course
I-7	*427*	S.Y.	Reinforced Concrete Approach Slab *(T=11½")*
I-7	*267*	S.Y.	Reinforced Concrete Approach Slab *(T=13")*
I-12	31472	L.F.	Standard Concrete Curb Type 2A
I-12	1621	L.F.	Standard Concrete Curb Type 2B
I-21	1400	S.Y.	Portland Cement Concrete Median Pavement, *Standard Type I*
I-22	51549	C.Y.	Subbase, as per Plan
I-23	320	Ea.	Precast White Portland Cement Concrete Traffic Dividers
T-30	2938	Gal.	Bituminous Prime Coat, Sec. M-5.2, R.C.-1 or R.C.-2 ; Sec. M 5-3, MC-0 or MC-1
T-30	*557*	Gal.	Bituminous Tack Coat, as per Plan
T-35	1146	C.Y.	Asphaltic Concrete Surface Course Type "A" (70-80)
T-70	190	S.Y.	7" Portland Cement Concrete Pavement
T-71	217053	S.Y.	9" Reinforced Portland Cement Concrete Pavement
			For Quantities for Structure No. Tru. 82-13 75 See Sheet No. 177
			For Quantities for Structure No. Tru. 82-14 67 See Sheet No. 180
			For Quantities for Structure No. Tru. 82-18 73 See Sheet No. 187

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	TRU. 82-12.67

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FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU. 82 12.67

CALCULATIONS

I-22 6" Subbase or 6" Granulated Slag M 3.13

Sec. A	2298.87 × 2 × 15.0 ÷ 9	=	7662.90	
Sec. B	422.00 × 2 × 15.0 ÷ 9	=	1406.67	
Trans.	218.00 × 2 × 15.0 ÷ 9	=	726.67	
Sec. C	513.53 × 2 × 15.0 ÷ 9	=	1711.77	
Sec. D	3557.46 × 77.84 (Av.) ÷ 9	=	30768.08	
Sec. E	3512.63 × 66.00 (Av.) ÷ 9	=	25759.29	
Sec. G	7116.57 × 66.15 (Av.) ÷ 9	=	52313.91	
			120349.29	S.Y.
	120349.29 × 6/36	=	20058.22	C.Y.

I-22-3" - 7½" - 7½" - 6" Thru Berm

Sec. F 14019.36 × 62.32 (Av. W) × 5175 (Av. D) ÷ 27 = 16745.66 C.Y.

I-22 4½"

Sec. A	1940.99 × 4 × 2 ÷ 9	=	1725.32	S.Y.
	112.33 × (7+8)/2 ÷ 9	=	93.61	S.Y.
	245.56 × (0+3.2)/2 ÷ 9	=	43.65	S.Y.
	245.56 × (7+2.5)/2 ÷ 9	=	129.60	S.Y.
			1992.18	S.Y.
	1992.18 × 4.5/36	=	249.02	C.Y.
Sec. B	422.00 × 28 ÷ 9	=	1312.89	S.Y.
	1312.89 × 4.5/36	=	164.11	C.Y.
Trans.	36 × 28 × (0+.375)/2 ÷ 27	=	7.00	C.Y.
Trans.	29 × 28 × (0+.375)/2 ÷ 27	=	5.64	C.Y.
Sec. C	409.09 × 4 × 2 ÷ 9	=	363.64	S.Y.
	104.44 × (0+4.5)/2 ÷ 9	=	26.11	S.Y.
	104.44 × (7+3.5)/2 ÷ 9	=	60.92	S.Y.
			450.67	S.Y.
	450.67 × 4.50/36	=	56.33	C.Y.
Median	Sec. D 2511.39 × 2 × .92 ÷ 27		171.15	C.Y.
Median	Sec. E 3512.63 × 2 × 9X ÷ 27		239.38	
	Sub Total		37696.51	C.Y.
Trans.	64 × 28 × (17+67)/2 ÷ 27		27.88	C.Y.
Trans.	99 × 28 × (67+17)/2 ÷ 27		43.12	C.Y.
	Sub. Total		71.00	C.Y.

From Recap

4½"	165.2		165.20 C.Y.
5"	2785.85 S.Y.	2785.8 × 5 ÷ 36 =	386.90 C.Y.
6"	7663.4 S.Y.	7663.4 × 6 ÷ 36 =	1277.23 C.Y.
7"	191 S.Y.	191 × 7 ÷ 36 =	37.14 C.Y.
Median	420 C.Y.		420.00 C.Y.
	Total		51549.07 C.Y.
	To General Summary		51549 C.Y.

B-70 Portland Cement Conc. Base Course

Sec. A	1940.99 × 4 × 2 =	15527.92	S.F.
(Lt)	112.32 × (7+8)/2 =	842.40	S.F.
(Rt)	245.56 × (0+3.2)/2 =	392.90	S.F.
(Lt)	245.56 × (7+4.5)/2 =	1411.97	S.F.
		18175.19	S.F. ÷ 9 = 2019.46 S.Y.
Sec. B	422.00 × 28 =	11816.00	
Trans.	55.00 × 28 =	1540.00	
		13356.00	S.F. ÷ 9 = 1484.00 S.Y.
Sec. C.	409.09 × 4 × 2 =	3272.72	S.F.
(Rt)	104.44 × (3.2+4.5)/2 =	402.09	S.F.
	104.44 × (4.5+3.2)/2 =	417.76	S.F.
		4092.57	S.F. ÷ 9 = 454.73
	Total	3958.19	S.Y.
	From Recap	1614.7	
	Total	5572.89	
	To General Summary	5573	S.Y.

Item T-71 9" Reinforced Portland Cement Concrete Pavement

Sec. A	2298.87 × 14.5 × 2 =	66667.23	S.F.
Sec. B	640.00 × 14.5 × 2 =	18560.00	S.F.
Sec. C	513.53 × 14.5 × 2 =	14892.37	S.F.
Sec. D	2046.86 × 50.0 =	102343.00	S.F.
	425.30 × (50+56)/2 =	22540.90	S.F.
	620.00 × 53 =	32860.00	S.F.
	425.30 × 48 =	20414.40	S.F.
Sec. E	3472.63 × 50 =	173631.50	S.F.
Sec. F	13969.36 × 48 =	670529.28	S.F.
Sec. G	7116.57 × 48 =	341595.36	S.F.
	1464034.04 S.F. ÷ 9 =	162670.45	S.Y.
	From Recap	54382.6	S.Y.
	Total	217053.05	S.Y.
	To General Summary	217053	S.Y.

B-35 Asphaltic Conc. Leveling Course

Leveling Course @ 250 C.Y. per mile per 20' width

3452.40 / 52.80 × 250.00 = 162.50 C.Y.

1¼" Leveling Course

Sec. A	2298.87 × 28 =	64368.36	S.F.
Sec. B	640.00 × 28 =	17920.00	S.F.
Sec. C	513.53 × 28 =	14378.84	S.F.
		96667.20	S.F.
	96667.20 ÷ 9 × 1.25/36 =	372.94	C.Y.
	Total	535.44	C.Y.
	From Recap 924958 × 1.25/36 =	321.17	C.Y.
	To Total	856.61	C.Y.
	To General Summary	857	C.Y.

T-35 1¼ Asphaltic Concrete Surface Course

Sec. A	2298.87 × 28 =	64368.36	S.F.
Sec. B	640.00 × 28 =	17920.00	S.F.
Sec. C	513.53 × 28 =	17378.84	S.F.
		96667.20	S.F. ÷ 9 × 1.25/36 = 372.94 C.Y.
	From Recap 461.39 + 329.77 + 12 =		773.46 C.Y.
	Total		1146.40 C.Y.
	To General Summary	1146	C.Y.

I-18 Stabilized Shoulders

From	To	Side			
720+60.74	726+04.42	L&R	543.68	× 4 × 2 ÷ 9 =	483.27 S.Y.
727+39.62	766+06.52	L	3866.90	× 4 × 1 ÷ 9	1718.62 S.Y.
727+39.62	767+16.52	R	3976.90	× 4 × 1 ÷ 9	1767.51 S.Y.
771+00	774+81.23	L&R	381.23	× 4 × 2 ÷ 9	338.87 S.Y.
776+84.17	778+00	L&R	115.83	× 4 × 2 ÷ 9	991.85 S.Y.
793+00	808+99	L	1599.00	× 4 × 1 ÷ 9	710.67 S.Y.
794+00	808+70.33	R	1470.33	× 4 × 1 ÷ 9	653.48 S.Y.
809+88.44	870+91.41	L	6102.97	× 4 × 1 ÷ 9	2712.43 S.Y.
809+57.63	870+48±	R	6090.37	× 4 × 1 ÷ 9	2706.83 S.Y.
871+74.80	966+91.46	L	9516.66	× 4 × 1 ÷ 9	4229.63 S.Y.
871+32.03	964+62.21	R	9330.18	× 4 × 1 ÷ 9	4146.75 S.Y.
968+57.06	976+28.78	L	771.72	× 4 × 1 ÷ 9	342.99 S.Y.
966+12.44	977+45	R	1132.56	× 4 × 1 ÷ 9	503.36 S.Y.
983+36.56	988+86.88	L&R	550.32	× 4 × 2 ÷ 9	489.18 S.Y.
990+80.22	1000+00	L&R	919.78	× 4 × 2 ÷ 9	817.58 S.Y.
1005+25	1008+00	L	275.00	× 4 × 1 ÷ 9	122.22 S.Y.
1007+25	1008+00	R	75.00	× 4 × 1 ÷ 9	33.33 S.Y.
			Total		22768.57 S.Y.
	22769 × 6 ÷ 36 =				3794.8 C.Y.
	From Recap				671. C.Y.
	Total				4465.8 C.Y.
	To Water Calc.				4466 C.Y.
	To General Summary				4466 C.Y.

Sheet No.	E-1 Exc.	Exc. Unsuit. Fd. C.Y.	Emb. C.Y.	Seeding S.Y.	Gran. Bor. (E 1.02 Mod) C.Y.
17	852		1373	3061	
18	807		1773	4749	
19	916		976	4251	
20	4312		3818	7709	
21	490	4000	31345	13945	4000
22	1247		33572	12813	
23	1164	1071	26329	13624	1071
24	1332		30788	12565	
25	1511		138077	22163	
26	111333		91806	32130	
27	207636		104	22208	
28	1094		8060	15635	
29	4561		3677	14605	
30	20342		1381	16368	
31	1425		11403	16094	
32	4340		9315	17316	
33	1562		22386	13734	
34	1426		583	13407	
35	29670		1632	16741	
36	6827	1068	7478	14523	1068
37	10817		92	14009	
38	15279		741	13771	
39	16749		7849	13918	
40	11071		6337	12386	
41	31182		126	12976	
42	12986		1901	11372	
43	26959		16659	18530	
44	17664		76492	37040	
45	20581		6	13822	
143	4835		2582	6605	
144	5915		2876	8024	
145	1343		170	1668	
147	2532		27	5318	
148	3666		1016	5540	
154	487		137	2190	
155	7077		732	9616	
156	748		103	1983	
143-144 RT	269		187		
Totals	593067	6139	543909	476409	6139

E-4 Embankment +30% = 707071 C.Y.

Excavation 593067 C.Y.

Borrow 114004 C.Y.

Granular Borrow

Sta. 713+50-717+00 = 4000 × 1.30	5200.00	C.Y.
Sta. 737+50-738+50 = 1071 × 1.30	1392.30	C.Y.
Sta. 890+00-893+00 = 1068 × 1.30	1388.40	C.Y.
From Sheet 10	2500.00	C.Y.
Total	10480.70	C.Y.
To General Summary	10481.00	C.Y.

E-11 Water

Embankment × 5 Gal. per Cu. Yd.

543909 × 5 = 2719545 Gal.

In Cut 8000 × (2 × 24) ÷ 9 = 42667 S.Y.

42667 × 6 × 5 ÷ 36 = 35556 Gal.

B-119 From Calc. 1403 C.Y. @ 5 Gal. = 7015 Gal.

I-18 From Calc. 4466 C.Y. @ 20 Gal. = 89320 Gal.

I-22 From Calc. 51538 C.Y. @ 10 Gal. = 515380 Gal.

Total 3366816 Gal.

To General Summary 3367 M. Gal.

Temporary Run Around

T-10 Aggregate

S.R. 82	6.924 × 150 =	1038.60	C.Y.
	1.10 × 12/20 × 150 =	99.00	C.Y.
	26.30 × 4/20 × 150 =	789.00	C.Y.
		1926.60	C.Y.
S.R. 46 & S.R. 90	21.31 × 12/20 × 150 =	1917.90	C.Y.
Co. Highways	3 × 2 × 75 =	450.00	C.Y.
	Total	4294.50	C.Y.
T-10 Aggregate To Gen. Sum.		4300	C.Y.

M-10 Calcium Chloride or Calcium Mag. Chloride

4300 × 1/50 = 86 Tons

To General Summary 86 Tons

L-9 Fertilizer (12-12-12)

Fertilizer @ 20 Lbs. per 1000 S.F.

476409 × 9 × 20 ÷ (1000 × 2000) = 42.88 Tons

To General Summary 42.88 Tons

L-9 Limestone

Limestone @ 100 Lbs per 1000 S.F.

476019 × 9 × 100 ÷ (1000 × 2000) = 214.39 Tons

To General Summary 214.38 Tons

L-9 Seeding

Gross Area -	Sodded Area =	Net Area
476409	- 38435	= 437974 S.Y.

To General Summary 437974 S.Y.

B-35 Asphaltic Concrete Base Course

From Recap 3" = 3184 S.Y.

3184 × 3 ÷ 36 = 265.33 C.Y.

To General Summary 265 C.Y.

T-30 Bituminous Tack Coat (.1 Gal per S.Y.)

B-70 From Calculations = 5573 S.Y.

5573 × .1 = 557.1 Gal.

To General Summary 557 Gal.

E-1 Compacted Sub Grade

From Calc.	T-71 =	217053 S.Y.
From Calc.	B-70 =	5573 S.Y.
S.R. 46 & SR 90	B-35 3" =	3184 S.Y.
Approach Slabs		694 S.Y.
Total		226504 S.Y.
Less Rock Cut 780+00.47 - 793+00		
425.30 × (50+56)/2 ÷ 9 =		2504.54 S.Y.
619.94 × 53 ÷ 9 =		3651.11 S.Y.
254.29 × 48 ÷ 9 =		1356.21 S.Y.
Total in Rock =		7511.86 S.Y.
Compacted Subbase		218,992 S.Y.
To General Summary		218,992 S.Y.

B-119 Crushed Aggregate Base

From Recap (4½") =	3380	S.Y.
From Recap (7") =	5043	S.Y.
3380 × 4.5 ÷ 36 =	422.50	C.Y.
5043 × 7 ÷ 36 =	980.6	C.Y.
Total	1403.1	C.Y.
To Water Calc	1403	C.Y.
To General Summary	1403	C.Y.

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RECAPITULATION

ROADWAY

PAVEMENT

SHEET No.	E-8 Rem & Dispose Curb L.F.	E-8 Rem. & Dis. Exist Curb & Gut L.F.	E-8 Rem. & Dis. Exist Pav't. S.Y.	E-12 Rem & Dis Pipe 15" & Under L.F.	E-12 Rem & Dis Pipe Over 15" L.F.	E-12 Rem & St. Pipe 15" & Under L.F.	E-12 Rem & St. Pipe Over 15" L.F.	I-8 Mon. Bdr. Ass'y. Ea.	I-15 Guard Rail L.F.	I-15 Guard Rail (R & D) L.F.	I-18 Stab. Shoulder For Drives 6" C.Y.	L-10 Sodding S.Y.	SS-18 R/W Fence L.F.	I-7 Conc. Approach Slab 20'(11½") S.Y.	I-7 Conc. Approach Slab 25'(13") S.Y.	I-12 Concrete Curb Type 2A L.F.	I-12 Concrete Curb Type 2B L.F.	I-13 4" Conc. Sidewalk S.F.	I-13 6" Aggr. Sidewalk S.F.	I-21 Conc. Steps L.F.	I-21 Conc. Med Pav't. S.Y.	I-21 Median 2'x11½" C.Y.	I-22 Subbase 4½" S.Y.	I-22 Subbase 5" S.Y.	I-22 Subbase 6" S.Y.	I-22 Subbase 7" S.Y.	I-23 Precast Conc. Traf. Div Ea.	B-35 Asph. Conc Level Course 1¾" S.Y.	B-35 Asph. Conc Level Course 3" Base Crs. S.Y.	B-70 8" Conc. Base S.Y.	B-119 Crushed Agg. Base 7" S.Y.	B-119 Crushed Agg. Base 4½" S.Y.	T-35 Asph. Conc. Surf. Course 2" S.Y.	T-35 Asph. Conc. Surf. Course 1¼" S.Y.	T-35 Asph. Conc. Surf. Course Variable Feather C.Y.	T-70 7" S.Y.	T-71 9" Reinf. Conc. Pav't. S.Y.	T-30 Bit. Prime Coat Gal.	
11																																						11
17		9756			215			1	300							899.1	926.6		1500					106.24	137			37	685.58		743.7			91.6	685.58	4				17
18				29		49		3	375							2286.2			187.5						65.5	45		89						65.5						18
19				66		62	40	1								2122.7									99.0			89						96.1						19
20	108		1556	297				1	100	124						949.4									324		191	74						525.0			53			20
21			1099										1400			272.5						30.3	9.7																21
22									554.60				2208	213.3		2085.0						230.1	73.6																22
23								1					2400			2326.0						257.3	82.3																23
24								1	751.96			313	2401			2384.7						264.1	84.5																24
25								2	2400			1083	2400			2362.0						261.0	83.0																25
26								1	2478.7			1254	1916	213.3		1994.1						22.12	70.9																26
27								3	597.34			67	2412			440.0						49.0	16.0																27
28												2611	2449																										28
29				246				2				1432	2377																										29
30								3					2400																										30
31								2				133	2399																										31
32								3				2200	2400																										32
33								2				3652	2401																										33
34								2				2129	2496																										34
35								2				655	2400																										35
36												3690	2400																										36
37								1				1933	2400																										37
38								1				2110	2400																										38
39												2516	2368												102.3	112														39
40								1				3045	2401																										40
41								3				2778	2400																										41
42								2				909	2125												72									71						42
43								4	267.40			321	2405																										43
44								1	158.26			3159	2072		266.68																										44
45								1				2302	2006																										45
133	74	152	70													57	140	22		24			8		186			186			186			186		59			133
134		75															188								258			250			250			250	5				134
135	159		224	43	12	36											366						51					960			435			960					135
136																495									1728											1675			136
137																1648					15.7				4783											4438.4			137
138											28					2824					30				4320										3	4079			138
139											68					595					34				3300											2526			139
140			2875								139					2900					7				24598			3472	1550		3207	1650	3079	3539			16119	1688	140
143				180																				642									642						143
144				465																				495	86								417			78			144
146				201												569.2									2343											1843.2			146
147					21											448								83	2746								83			2130			147
149																1164									4280											3520			149
151											436					2650									27552			3696	1634		1836	1730	1763	3848			18052	1250	151
154				243																				279									279						154
155				15		240						143												289			31						289						155
156				28		335												328						198									198						156
157				40																					294									152					157
TOTALS	341	1202.6	5824	1853	248	722	40	44	9067.10	124	671	38435	57436	4266	266.68	31471.9	16206	350	1687.5	24	1399.7	420	165.2	27858	76634	191	320	9249.58	3184		1614.7	5043	3380	7833.5	946858	12		190	54382.6	2938	
To Calc.											671	38435										420	165.2	27858	76634	191		9249.58	3184		1614.7	5043	3380	4363.0	329.71 CY	12 C.Y.		190		2938	
To Summary	341	1203	5824	1858	248	722	40	44	9067.10	124		38435	57436	427	267	31472	1621	350	1688	24	1400						320													

RECAPITULATION

DRAINAGE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

16/209

TRU. 82 12,67

| SHEET NO. | I-1 PIPE for DRIVES 12" L.F. | 18" L.F. | 36" L.F. | I-2 CLASS B STORM SEWERS 12" L.F. | 12" U.A. L.F. | 15" L.F. | 15" U.A. L.F. | 18" L.F. | 18" U.A. L.F. | 21" L.F. | 21" U.A. L.F. | 24" L.F. | 24" U.A. L.F. | 27" L.F. | I-4 6" Hel Rail Cor. Mo L.F. | 6" U.D. L.F. | 8" Outlet Pipe L.F. | I-5 for I-2 12"x6" WYE Ea. | 12"x45° Bend Ea. | 12"x12" WYE Ea. | 15"x6" WYE Ea. | 15"x12" WYE Ea. | 15"x15" WYE Ea. | 18"x12" WYE Ea. | 12"x 6" Double Tee Ea. | 24"x12" WYE Ea. | I-5 for I-4 6"x45° Bend Ea. | I-2, 1½-Ct, 8" with S/A Coup. L.F. | 6"x90° Bend Ea. | 6"x6" Tee Ea. | 6"x6" WYE Ea. | 6"x6" Double WYE Ea. | 6"x6" Double Tee Ea. | I-8 TYPE C Inlet Ea. | Spec. Inlet TYPE A Ea. | No 7 S.D. C.B Ea. | TYPE B Inlet Ea. | Spec. R.C. Inlet Ea. | Adjust M.H. to Grade Ea. | No 1 M.H Ea. | Adjust C.B. to Grade Ea. | I-B-1 2-6 Ea. | 2-10 Ea. | I-10 RIP RAP TYPE A S.Y. | DUMP ROCK FILL C.Y. | I-14 PAVED GUTTER TYPE "1" L.F. | TYPE "A" L.F. | TYPE "B" L.F. | S-1 Conc. Class "E" C.Y. | I-16 C.B. Abnd. Ea. | I-16 MH Abnd. Ea. | |
|---|---|---|---

TRU-82 12.67

For Typical Section Adjoining Pavement See Sheet No. 3

BEGIN SHEET - STA. 662+00

END SHEET - STA. 674+00

CITY OF WARREN

TOWNSHIP HOWLAND

EASTLAND

Brick Walls 6' x 10"

1 Sty. Br. House

1 Sty. Fr.

Fr. Gar.

2 Sty. Br. Hse.

Nail in E. side of 24" Poplar

T 3.61'

53.19' ⊙

Sta. 670+00 P.O.T.

Δ = 108° 41' 50" Rt

R = 41.5'

T = 57.86'

L = 78.73

T.E.E

C-1

See Detail Sheet No. 160 & 161

Slope Easement

Lake

Foot Bridge 5'-2.63"

Green 8'

Sand Trap

N 22° 55' 50" E

Exist R/W

Golf Drive

Δ = 69° 48' 56" Lt.

R = 46'

T = 32.10'

L = 56.05

Note: Lower MH. cover to fit the proposed Grade of Roadway.

Adjust C.B. to Grade

D-1

D-1A

D-2 See Detail Sheet No. 133

D-3

6' Sidewalk

5' Sidewalk (6" Aggregate)

St. Sign

Existing Telephone Conduit

Existing 4" Gas Main

Existing 10" C.I. Water Main

27" Storm Sewer @ 0.55%

28 Drop Curb

17.68'

16.65'

663

664

665

666

667

668

669

670

671

672

673

674

C.B.

M.H.

Meters

10" Valves

F.H.

Conc. Steps

Conc. Walk

Drive Bank

Sta. 664+42

± Drive

± 97.6 Corp. Line

BEGIN WORK STA. 663+97.76

150.00'

P/L

BEGIN LIMITED ACCESS

BEGIN PROJECT STA. 668+97.60

STA. 668+97.60 = Straight Line Mileage 12.67

R.C. Inlet

S 87° 15' 20" E

600' ± 21" Storm Sewer @ 2%

End of 27" V.S.P.

#1 M.H.

S 85° 46' E

Existing 4" Gas Main

TR-82-127

I-2 15" Walk

Concrete Apron Spillway Steel Bridge

Telephone Conduit (Walk)

Evergreen Hedge

Lake

Begin Traffic Dividers

669+62

+97.6 Corp. Line

+105 ℄ Drive Asphalt

B.M. (U.S.G.S. Z-151) On East wing wall of small dam on South side No. 1 S.R. 82-6' North of walk over spillway. Elev. 915.460

Furnish Heavy M.H. Cover (I-8) and Adjust to proposed Grade.

Exist C.B.

M.H.

27" Storm Sewer @ 0.5% S.

27" x 600'± @ 2.00%

917.45

No. 1 M.H. & R.C. Inlet Lt. & Rt.

Abandon Existing Telephone M.H. R.C. Inlet Lt. No. 1 M.H. Lt.

+50 R.C.I. L. & R. #1 M.H. (Lt.)

+84 R.C.I. Lt.

+50 R.C.I. R. & L. & M.H. (Lt.)

+00 End 27" I-2 58' Lt.

+18 End 15" I-2 58' Lt.

+50 R.C.I. R. & L.

+15 M.H. Lt.

1.07% +0.80%

Exist. 4" Gas Main, Approx. 4' Cover.

Exist. C.I. Water Main, Approx. 45 Cover

Pl. Sta. 671+00 Elev. 915.37

400' V.C.

P.I. STA. 671+00 Elev. 915.37

930

925

920

915

910

662 663 664 665 666 667 668 669 670 671 672 673 674

927.56 927.29 927.03 926.73 926.33 925.91 925.50 925.01 924.52 924.06 923.57 923.11 922.60 922.16 921.68 921.21 920.79 920.44 920.06 919.70 919.40 919.05 918.67 918.31 917.95 917.57 917.18 916.71 916.36 914.21 913.32 914.17 915.84

918.17 917.84 917.54 917.27 917.05 916.85 916.69 916.56 916.47 916.41 916.39 916.40 916.45 916.52 916.64 916.79 916.97 917.37 917.77

STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHEET No.
C-1	672+10	Std. Pipe Culvert	48" x 108'	160-161

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
668+97.60	℄	1
Total		1

I-23 PRECAST CONC TRAFFIC DIVIDERS		
STATION FROM	TO	Ea.
669+62	674+00	37
TOTAL		37

DRIVES & APPROACHES								
MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.
D-1	665+99	Res.	Lt.	12	29	45.8		45.8
D-2	668+05	Res.	Rt.	See Detail Sheet 133				
D-3	673+05	Res.	Rt.	16	21.5	45.4		
D-1A	666+38	Res.	Rt.	12	29	45.8		45.8
TOTALS						137.0		91.6

DRAINAGE														
STATION From	STATION To	SIDE	I-2 CLASS "B" 12" UA	I-2 CLASS "B" 12"	I-2 CLASS "B" 15" UA	I-2 CLASS "B" 15"	I-2 CLASS "B" L.F. 27" UA	I-2 CLASS "B" L.F. 27"	I-8 R.C. INLET EACH	I-8 M.H. No.1 EACH	I-8 ADJUST C.B. Ea.	S-1 CONC. CLASS "E" C.Y.	E-12 OVER 15" RCP L.F.
668+50		Lt.			11				1	1			
668+50		Rt.			13				1				
669+86		Lt.	14		13				1	1			
669+86	671+50	Lt.					160						160
671+50		Lt.			5					1			
671+50		Lt.							1				
671+50	672+00	Lt.					57					0.47	55
671+50		Rt.							1				
671+50	672+06	Rt.				62						0.26	
672+00	672+01	Rt.		4									
672+50		Lt.							1				
672+50	672+18	Lt.				40						0.26	
672+50		Rt.							1				
672+50	672+18	Rt.				42							
663+96		Lt.									1		
TOTALS			14	4	42	144	217	7	3	1	0.73	21.5	

★ Connect to 10" C.I.P.

ESTIMATED QUANTITIES				
STATION FROM	STATION TO	SIDE	I-12 TYPE 2 ACURB L.F.	
668+97.6	671+42.5	R	24.99	
671+52.5	672+47.5	R	95.0	
672+52.5	674+00	R	147.5	
669+78.3	669+81.5	L	3.2	
669+86.5	671+47.5	L	161.0	
671+52.5	672+47.5	L	95.0	
672+52.5	674+00	L	147.5	
TOTAL			899.1	

TRANSITION STA. 663+97 To 668+97.60										
STATION From	STATION To	SIDE	E-8 Ram & Dis Curb & Gut L.F.	I-16 C.B. Aban Ea.	I-12 St. Conc. Curb Type 2-B L.F.	I-22 4½ Sub Base C.Y.	B-70 8" Conc. Pav't. S.Y.	B-35 Asp. Conc. Lev. Co. 1¼ S.Y.	T-35 1½ Asp. Conc. Sur. Co. S.Y.	T-35 Feather C.Y.
663+97	668+97.60	L				55.62	389.36	356.54	356.54	
663+97	668+66.8	L	520		464.80					
664+42	668+97.6	R	455.6		451.75	50.62	354.36	329.04	329.04	
668+50		R & L		2						
669+84		L		1						
668+78	668+98									4
TOTAL			975.6	3	926.55	106.24	743.72	685.58	685.58	4

I-15 GUARD RAIL				
STATION From	STATION To	SIDE	℄ Curb to F.G.R.	L.F.
671+00	674+00	Lt.	7.5	300
TOTAL				300

I-13 (d) SIDEWALK			5" Wide 6" Deep Cr. Aggr.
STATION From	STATION To	Side	S.F
671+00	674+00	Lt.	1500
TOTAL			1500

DRAINAGE			
STATION	SIDE	I-8 ADJ. M.H. Ea.	I-16 M.H. ABAND. Ea.
★ 666+14	L	1	
669+83	R		1
670+36	R		1
TOTALS		1	2

★ Adjusting Manhole to grade including furnishing and installing Heavy Manhole Frame and Cover.

Excavation	852	CY
Embankment	1373	CY
Seeding	3061	SY

LINE SHEET - STA. 662+00 TO STA. 674+00

TRU-82-12.67

BEGIN SHEET - STA. 674+00

℄ CURVE DATA

Δ = 3°-50'	Ls	=	200'
Δc = 0°-10"	Ts	=	204.60'
Dc 1°-50'	Xc	=	199.98'
Rc = 3125.23'	Yc	=	2.14'
TS 678+86.65	Θs	=	1°-50'
SC 680+86.65	Φc	=	0°36'-40"
PI 680+91.25	LT	=	133.34'
CS 680+95.74	ST	=	66.67'
ST 682+95.74	LC	=	199.99'
LC 9.09'	Es	=	2.28'
K = 100'	P	=	0.53'

EXTG. CURVE DATA
P.I. = 680+85.86
Δ = 3°-53'-30" Lt.
D = 3°-0'
R = 1909.86'
T = 64.89'
L = 129.72'
E = 2.28'

N 10°-41' E, 174.23

5' Sidewalk 6" Aggregate

℄ Country Club Drive

TS 678+86.65

SC 680+86.65

CS 680+95.74

ST 682+95.74

N 5°-01' E

℄ 84" Reinf. Conc. Storm Sewer

Ornamental Iron Fence 6' High

6" I-4 | 6" I-4 | 230' | 226' | 12" I-2

+00 R.C. Inlet | +30 R.C. Inlet | 5-12" I-2

222 15" I-2 | +55 I-8 R.C. Inlet | 29-15" V.S.P. | +75 I-8 R.C. Inlet

+55 I-8 No.7 S.D.C.B. | +60 I-8 No.1 M.H. | +80 I-8 No.1 M.H.

+1100 I-5-6"x6" Y | Δ = 86°0.4' | L = 100' | T = 151.24'

D-5 | D-6

Existing 4" Gas Pipe | Existing 10" C.I. Water Pipe

48.5-12" Conc. Pipe

6" I-4 | Telephone Conduit | (846') | Existing 10 C.I. Water Pipe

Storm M.H. | Mon. | M.H. | Mon.

End Evergreen Hedge.

WALCOTT ST (Vacated)

D-4

Δ = 90° | R = 100' | T = 157.25'

℄ 84" Reinf. Conc. Storm Sewer

Cut into Existing M.H. See General Notes

Bottom Brick at S.E. corner of Brick Fence Post

57.93 | S.R. 82 S 85°-56' E | 59.92

Δ = 3°-50' Lt.

Nail W.S. Telphone Pole

P.I. Sta. 680+91.25

El. top of M.H. at curb Elev. or as directed by the Engineer

BROADWAY AVE.

I-8 S.D. T.H. C.B. #7

Storm Sewer 15"

Water Line

℄ N 5°-01' E

Sta. 680+66

For Intersection Detail See Sheet 134

℄ 84" Reinf. Concrete Storm Sewer (225') 223' 12"-I-2 6"-I-4

Existing 4" Gas Line

Telephone Conduit

683+90 No.7 C.B. 10"-12" I-2

+75 Begin I-4 Rcl.

Connect I-4 to Rcl.

END SHEET - STA. 686+00

ESTIMATED QUANTITIES

STATION From	STATION To	SIDE	I-12 TYPE 2-A CURB L.F.
674+00	678+10.5	R.	410.5
678+15.5	680+85.03	R.	269.5
681+68.78	683+90.5	R.	221.7
683+95.5	686+00.	R.	204.5
674+00	677+97.5	L.	397.5
678+02.5	680+27.5	L.	225.0
680+32.5	682+52.5	L.	220.0
682+57.5	684+72.5	L.	215.0
684+77.5	686+00	L.	122.5
TOTAL			2286.2

B.M. No. 2-8" Square 6" high on Concrete gate stop on Driveway gate 50'± Left, Sta. 683+34 Elev. 912.742

DRAINAGE

STATION From	STATION To	Side	I-2 L.F. Class "B" 12"	15"	18"	I-8 R.C.I. F.& G. Ea.	I-8 #MH. F.& G. Ea.		I-5 for I-2 12"x8"15"x8" WYE Ea.	I-5 for I-2 15"x15" WYE Ea.	E-12 15" CUNDER & REM STORE L.F.	E-12 15" REM & DISP L.F.
678+00		L				1						
678+00	678+05	L	3									
678+05		L					1					
678+05	680+35	L	226									
678+13		R				1						
678+13	678+20	R	5									
678+20		R					1					
678+20	680+66	R	242									
680+30		L				1						
680+30	680+35	L	5									
680+35		L					1					
680+35	682+60	L		221								
681+00		R					1					
681+08	681+56	R									49	
682+55		L				1						
682+55	682+60	L	6									
682+60		L					1					
682+60	684+80	L		216								
683+93		R				1						
683+93	683+98	R	4									
683+98		R					1					
683+98	686+00	R	200									
684+75	684+80	L	4			1						
684+80	685+00	L			18							
684+80		L.F.					1					
682+55	682+60	L	4									
682+55		L					1					
683+31	683+61	L										29
683+90		R				1						
683+90	683+98	R	10									
TOTALS			709	437	18	6	3	6			49	29

NOTE: Top of M.H.'s to be at curb grade unless otherwise directed by the Engineer
All I-4 pipe to be connected to manholes unless otherwise noted.

Lot & Gutter 917.73 | Rt. Gutter 917.73

Begin I-4 R&L 4.5' below top of curb

Note: 6" I-4 outlets into each C.B.

218' Rt 203 Lt 4.5 Below Curb

Existing 4" Gas Line Approx. 4' Cover

Existing 10" C.I. Water Line Approx. 5.5' Cover

300' V.C. P.I. Sta. 675+75 Elev. 919.17 NPSD 605'

(11" Rt) @ 2'9" below base 575.00 L.F. 6" I-4

240' @ 0.80% - 238'-12" I-2 (Rt)

230' @ 0.80% - 226'-12" I-2 (Lt)

-0.80%

16 @ 0.40% 3-12" I-2

I-8 No.7 S.D. Inlet

Cut into Existing M.H. See General Notes

6" I-4 (Rt) @ 4.5 Below Curb

445' @ 0.80% 43'-15" I-2 (Lt)

-0.60%

+80 (Lt) Connect I-4 to M.H.

223' @ 0.60% 221'-15" I-2 (Rt)

120'± @ 15% 18'-18" I-2 (Lt)

200' V.C. P.I. Sta. 684+00 Elev. 911.57

I-8 S.D. M.H. F.L. Elev. 911.00 M.H. F.L. Elev. 912.00

84" Storm Sewer @ 0.50%

I-8 No.1 M.H. F.L. Elev. 903.16

Elev. 910.00

84" Storm Sewer @ 0.56%

I-8 No.1 M.H. F.L. Elev. 906.48

Cut into 84" Storm Sewer See General Notes

Excavation 807
Embankment 1773
Seeding 4749 SQ YDS

Exist. MH. +66

915.84 | 917.71 | 918.32 | 917.96 | 917.07 | 916.29 | 915.57 | 914.67 | 913.95 | 913.04 | 912.30 | 911.71 | 911.18

674 | 675 | 676 | 677 | 678 | 679 | 680 | 681 | 682 | 683 | 684 | 685 | 686

LINE SHEET - STA. 674+00 TO STA. 686+00

DRAINAGE

STATION From	STATION To	Side	I-4 Under Drain 6" L.F.	I-4 Outlet Pipe 8 L.F.	I-5 for I-4 8"x6" 'WYE' Each	I-5 for I-4 45° Bend 6" Each
676+00	678+05	L	203			
676+00	678+20	R	218			
678+10	680+35	L	223			
678+20	680+66	R	244			
678+00	683+93	R	600			
680+35	682+60	L	223			
		R				
681+75	683+98	R	216			
682+60	684+80	L	218			
684+80	686+00	L	120			
683+98	686+00	R	202			
TOTALS			2467			

DRIVES

MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	I-35 2" S.Y.
D-4	676+42	Field Dr.	R	215	16	1	45	
D-5	683+41	Res.	L	165	16	365		365
D-6	685+42	Field Dr.	L	165	12	29		29
TOTALS						655	45	655

I-23 PRECAST CONC. TRAFFIC DIVIDERS

STATION FROM	STATION TO	Ea.
674+00	678+74	40
679+57	680+88	13
681+66	685+97	36
TOTAL		89

I-15 GUARD RAIL

STATION From	STATION To	SIDE	F. CURB TO F.G.R.	L.F.
674+00	674+37.5	Lt.	7.5	37.5
TOTAL				37.5

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH
678+86.65	℄	1
680+91.25	P.I.	1
682+95.75	℄	1
TOTAL		3

I-13(d) SIDEWALK 5" WIDE & 6" DEEP

STATION From	STATION To	Side	6" Aggr. S.F.
674+00	674+37.5	Lt.	187.5
TOTAL			187.5

TRU-82-12.67

DRAINAGE							
STATION		SIDE	I-2	I-8	E-12 (L.F)		
FROM	TO		Class B 12" L.F.	7'S.D. C.B. EA.	15" & UNDER REM & STORE	15" REM & DISP	
686+18		R		1			
686+18	686+20	R	4				
686+22	686+84	R			62		
687+78		L		1			
687+78	687+80	L	6				
688+43		R		1			
688+43	688+45	R	4				
690+68		R		1			
690+68	690+70	R	8				
692+28		L		1			
692+28	692+30	L	4				
TOTALS			26	5	62		

DRAINAGE									
STATION		SIDE	I-2	I-5	I-8	E-12 (L.F)			
FROM	TO		Class B 12" L.F.	18"x12" WYE EA.	7'S.D. C.B. EA.	15" & UNDER REM & STORE	15" REM & DISP	OVER 15" REM & STORE	OVER 15" REM & DISP
694+67	695+07	R						40	
694+94	695+30	L					36		
694+72		R			1				
694+72	694+74	R	8						
694+74				1					
696+73		L			1				
696+73	696+75	L	5						
696+77	697+06	L					30		
TOTALS			13	1	2		66	40	
					5				
				TOTAL	7				

ESTIMATED QUANTITIES			
STATION		S-I-D-E	I-12 Type 2A Curb L.F.
FROM	TO		
686+00	686+17	R	17.0
686+86	688+37.5	R	151.5
688+42.5	690+62.5	R	220.0
690+67.5	692+87.5	R	220.0
692+92.5	695+12.5	R	220.0
695+17.5	697+36.1	R	218.6
686+00	687+72.5	L	172.5
687+77.5	689+97.5	L	220.0
690+02.5	692+22.5	L	220.0
692+27.5	694+47.5	L	220.0
694+52.5	696+72.5	L	220.0
696+77.5	698+98.6	L	211
TOTAL			2122.7

I-23 PRECAST CONC. TRAFFIC DIVIDERS		
STATION		Ea.
FROM	TO	
686+00	686+09	2
686+85	697+20	87
TOTAL		89

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
697+94.53	℄	1
TOTAL		1

DRIVES				
MARK	STATION	TYPE	I-22 5" S.Y.	T-35 2" S.Y.
D-7	694+86	Res.	37.6	36.5
D-8	695+18	Res.	30.7	29.8
D-9	696+93	Res.	30.7	29.8
TOTAL			99.0	96.1

DRAINAGE																
STATION		SIDE	I-2 Class 'B'			I-8			I-2 -Class 'B'			I-4	I-5 for 18"x12" WYE EACH
FROM	TO		12" L.F.	15" L.F.	18" L.F.	R.C. INLET EA.		#1 M.H. EA.	12" U.A. L.F.	15" U.A. L.F.	18" U.A. L.F.	6" U.D. L.F.	
686+00	687+75	L										174	
686+00	686+15	R										14	
686+00	686+20	R	18										
686+195		R				1							
686+153	686+20	R	5										
686+20		R						1					
686+20	688+45	R		177						44			
686+86	688+40	R										153	
687+75		L				1							
687+75	687+80	L	5										
687+75	690+00	L										223	
687+80		L						1					
687+80	690+05	L	221										
688+40		R				1							
688+40	690+65	R										223	
688+40	688+45	R	5										
688+45		R						1					
688+45	690+70	R		221									
690+00		L				1							
690+00	690+05	L	5										
690+00	692+25	L										223	
690+05		L						1					
690+05	692+30	L		221									
690+65		R				1							
690+65	690+70	R	5										
690+65	692+90	R										223	
690+70		R						1					
690+70	695+20	R		438									
692+25		L				1							
692+25	692+30	L	5										
692+25	694+50	L										223	
692+30		L						1					
692+30	696+75	L		437									
692+90		R				1							
692+90	692+95	R	5										
692+90	695+15	R										223	
692+95		R											1
694+50		L				1							
694+50	694+55	L	5										
694+50	696+75	L										223	
694+55		L											1
695+15		R				1							
695+15	695+20	R	5										
695+15	697+33	R										221	
695+20		R						1					
695+20	697+38	R		219									
696+70		L				1							
696+70	696+75	L	5										
696+80		L						1					
696+75	698+00	L		39								80	
697+33		R				1							
697+33	697+43	R	5										
697+43		R						1					
697+43	698+00	R		19								36	
697+52	697+66	L			1						60		1
TOTAL			294	398	1373	12		9	60	44	116	2123	3
			13										1
TOTAL			333									TOTAL	4

BEGIN SHEET - STA. 686+00

END SHEET - STA. 698+00

LINE SHEET - STA. 686+00 TO STA. 698+00

NOTE: Top of M.H.s to be at curb grade unless otherwise directed by the Engineer
All I-4 pipe to be connected to manholes unless otherwise noted.

E.I. top of M.H. at curb Elev. or as directed by the Engineer

B.M. No. 3 - Spike in North root of 48" Oak, 67' Right of Sta. 693+63 Elev. 905.222

Sta. 697+94.53 Δ = 0°51' Rt.

(Iron Fence around house., Locked.)

Intersection Traffic Light Controlled

INTERSECTION C.H. 54 STA 697+94.53

Excavation 916 C.Y.
Embankment 976 C.Y.
Seeding 4251 S.Y.

200' V.C. P.I. STA. 690+00 Elev. 908.97

200' V.C. P.I. STA. 694+00 Elev. 904.97

250' V.C. P.I. STA. 697+70 N.P.S.D. 625 Elev. 899.81

TRU 82 - 12.67

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
702+45.56	℄	1
TOTAL		1

I-23 PRECAST CONC. TRAFFIC DIVIDERS		
STATION		E.a.
FROM	TO	
698+67	707+22.	74
TOTAL		74

E-8 PAVEMENT REMOVAL		
STATION		S.Y.
FROM	TO	
703+50	710+00	1444.
TOTAL		1444
FROM DRIVE TABLE		112
TOTAL		1556

DRIVES

MARK	STATION	TYPE	SIDE	I-22 5" S.Y.	I-22 7" S.Y.	T-70 CONC. PAVEMENT 7" S.Y.	T-35 2" S.Y.	I-12 Type 2 L.F.	E-8 REM. & DISP. EXISTING PAVT S.Y.	E-8 REM. & DISP. EXISTING CURB L.F.
D-10	700+44	Res.	Lt.	30			31			
D-11	701+46	Res.	Lt.	30			31			
-	702+94	Res.	Lt.			53			52	54
D-13	702+94	Res.	Lt	34			35			
D-14	704+15	Res.	Lt.	39			40			
D-15	705+38	Res	Lt.	42			43			
D-16	706+41	Res.	Rt.	43			44			
D-17	706+53	Res.	Lt.	61			62			
D-18	706+82	Res.	Lt.	45			46			
D-19	707+22	Com.	Lt.		80		81			
D-20	709+05	Com	Lt.		111		112			
	704+15	Res.	Lt.						60	54
TOTAL				324	191	53	525		112	108

DRAINAGE

STATION From	STATION To	SIDE	I-2 Class B 12" LA LF.	12" LF.	15" LF.	24" LF.	I-8 18" LA LF.	I-8 M.H. EA.	I-8 R.C. Inlet EA.	I-2.18 SH. CONV. L.F.	I-4 Under Drain 6" L.F.	I-4 Outlet 8" L.F.	I-5 6"45° Bend EA.	I-5 12"Wye EA.	I-5 12"Wye EA.	I-5 6"90° Bend EA.
698+00	698+45	L					19	24								
698+00	699+05	R					35	68								
698+45		L							1	1						
698+45	701+88	L					335									
699+05		R							1							
699+05	702+21	R					312									
699+00		R	4						1							
700+80	703+50	L									269		1			
701+18		L	5						1			1				
701+88		L							1							
701+88	702+21	L&R						69								
702+21		R							1							
702+21	702+38	R					34									
703+90	703+95	L	6						1	1						
703+90	707+15	L	314													
703+40	704+50	R									109					
703+50	703+95	L										46				
704+00	706+75	L									273					
706+75	706+80	L&R										73				
702+10		R	8						1							
706+75		R														1
704+50		L&R										44				
704+50		R							1							
704+55	706+80	R									223					
704+50	704+55	R	5													
704+55		R							1							
704+55	706+85	R								226						
705+20		L											1			
705+20	705+30	L	11													
705+30		L														1
706+40		L							1							
706+40	706+45	L	14													
706+45		L														1
706+80		R							1							
706+80	706+85	R	5													
706+85		R							1							
706+85	709+15	R	222													
707+15	707+25	L	10						1	1						
708+35		℄							1							
708+35	708+62	R		49												
708+62		R														1
709+10		R							1							
709+10	709+15	R	5													
709+15		R							1							
709+15	710+00	R				83										
TOTAL				49	83	83	34	701	161	4	9	8	226	874	163	-	-	1	1

ROADWAY STATION FROM	TO	SIDE	E-12 Remove Disp. L.F.	I-15 GUARD RAIL Remove & Dispose L.F.	L.F.
700+33	700+50	L	17		
701+37	701+53	L	16		
702+07	703+22	L	115		
702+17	703+41	R		124	
702+21	703+21	R			100
704+04	704+27	L	23		
705+26	705+43	L	17		
706+37	706+88	L	47		
706+33	706+50	R	17		
706+72	707+17	L	45		
TOTALS			297	124	100

★ 15° & Under

I-12 CURB (To STA 703+50) STATION From	To	SIDE	TYPE 2-A L.F.
698+87.68	698+97.5	R	9.82
699+02.5	702+07.5	R	305.00
702+12.5	703+50	R	137.50
698+47.94	701+15.5	L	267.56
701+20.5	703+50	L	229.50
TOTAL			949.38

For Curb from 703+50 See Sheet No. 136

CURVE DATA
Δ = 15°-57'
R = 200'
T = 28.02'
L = 55.68'

BEGIN SHEET — STA. 698+00

END SHEET — STA. 710+00

Elev. top of M.H. at curb Elev. or as directed by the Engineer

136-137

For Detail of Intersection Sta. 701+00 To Sta. 721+00 See Sheets 138 & 139

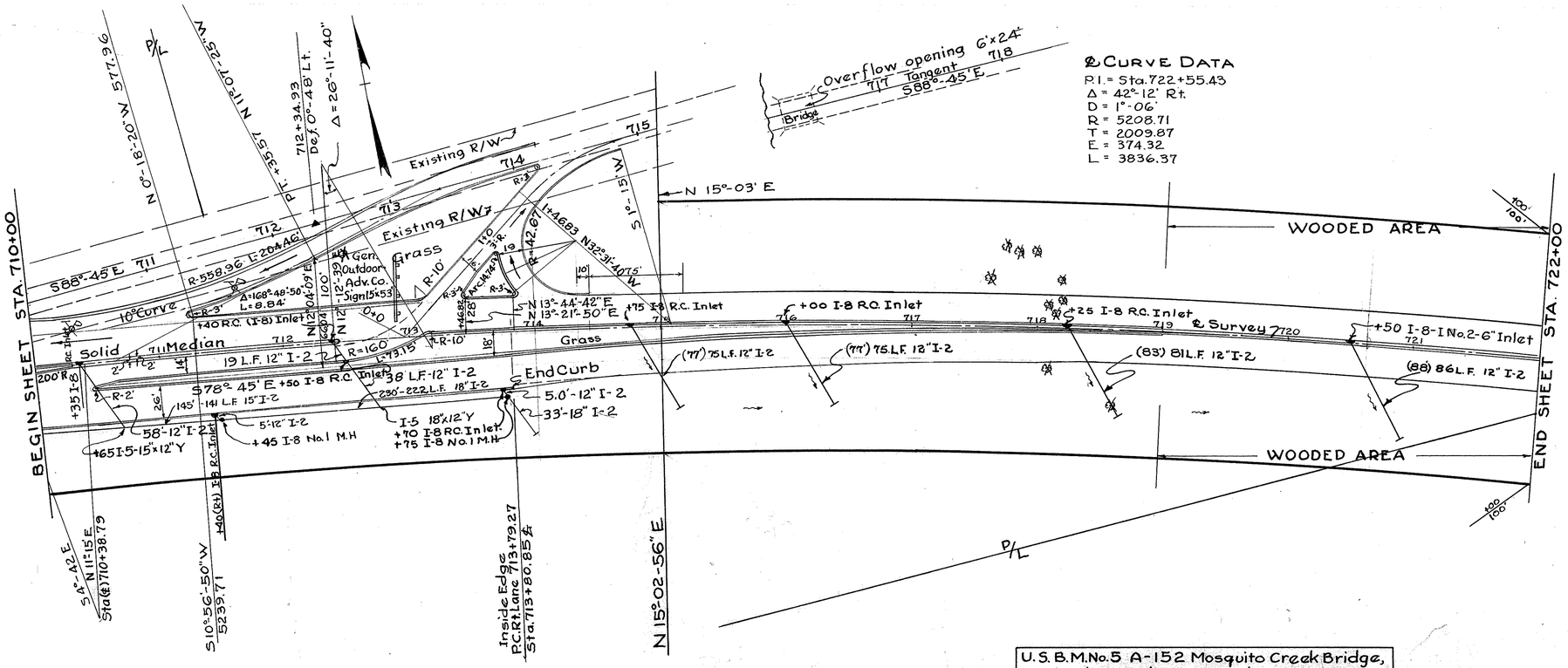
B.M. No. 4 - Cut on City Service Pump Island 54'± Left of Sta. 708+55 Elev. 872.650

For Gutter Grades thru Intersection (Sta. 702+45.56 to Sta. 721+00) See Sheets 136-137

Excavation 4312 C.Y.
Embankment 9818 C.Y.
Seeding 7709 S.Y.

LINE SHEET — STA. 698+00 TO STA. 710+00

TRU-82 - 12.67



DRAINAGE

STATION From	STATION To	SIDE	I-2 Class B 12" L.F.	I-2 Class B 12" LA L.F.	I-2 Class B 15" L.F.	I-2 Class B 18" L.F.	I-8 *I.M.H. EA.	I-8 R.C. Inl. EA.	I-5 for I-2 15"x12" W/e EA.	I-5 for I-2 18"x12" W/e EA.	S-1 Classe Cono. C.Y.
710+00	711+45	R			139						
710+35		C						1			
710+35	710+65	R		58							
710+65		R							1		
711+40		R						1			
711+40	711+45	R	5								
711+45		R					1				
711+45	713+75	R				222					
712+40		C						1			
712+40	712+50	C		19							
712+50		R						1			
712+50	712+72	R		38							
712+72		R							1		
713+70		R						1			
713+70	713+75	R	5								
713+75		R					1				
713+75	714+00	R				33					0.30
714+75		R						1			
714+75	715+14	R	20	55							0.23
716+00		R						1			
716+00	716+37	R	24	51							0.23
718+25		R						1			
718+25	719+63	R	36	45							0.23
720+50		R						1			
720+50	720+93	R	43	42							0.23
TOTAL	To REC.		134	306	139	255	2	9	1	1	1.22

R/W FENCE SS-18

STATION From	STATION To	Side	Dist From ℄		SS-18 R/W Fence L.F.
715+00	722+00	L	99	99	700
715+00	722+00	R	99	99	700
TOTAL					1400

E-8 PAVEMENT REMOVAL

STATION FROM	STATION TO	S.Y.
710+00	714+94.42	1099
TOTAL		1099

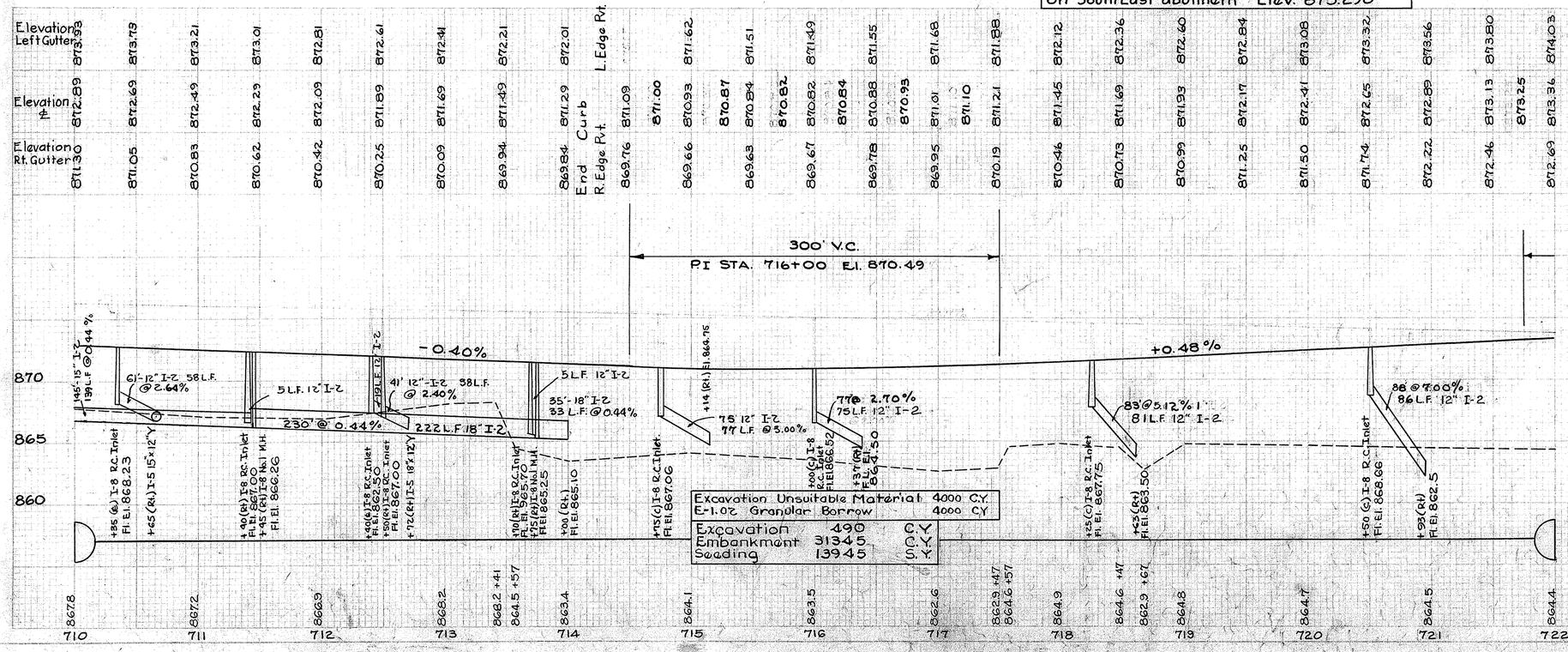
For Estimated Quantities in this section, see Intersection Detail Sheets 136-137-138-139

CONCRETE MEDIAN

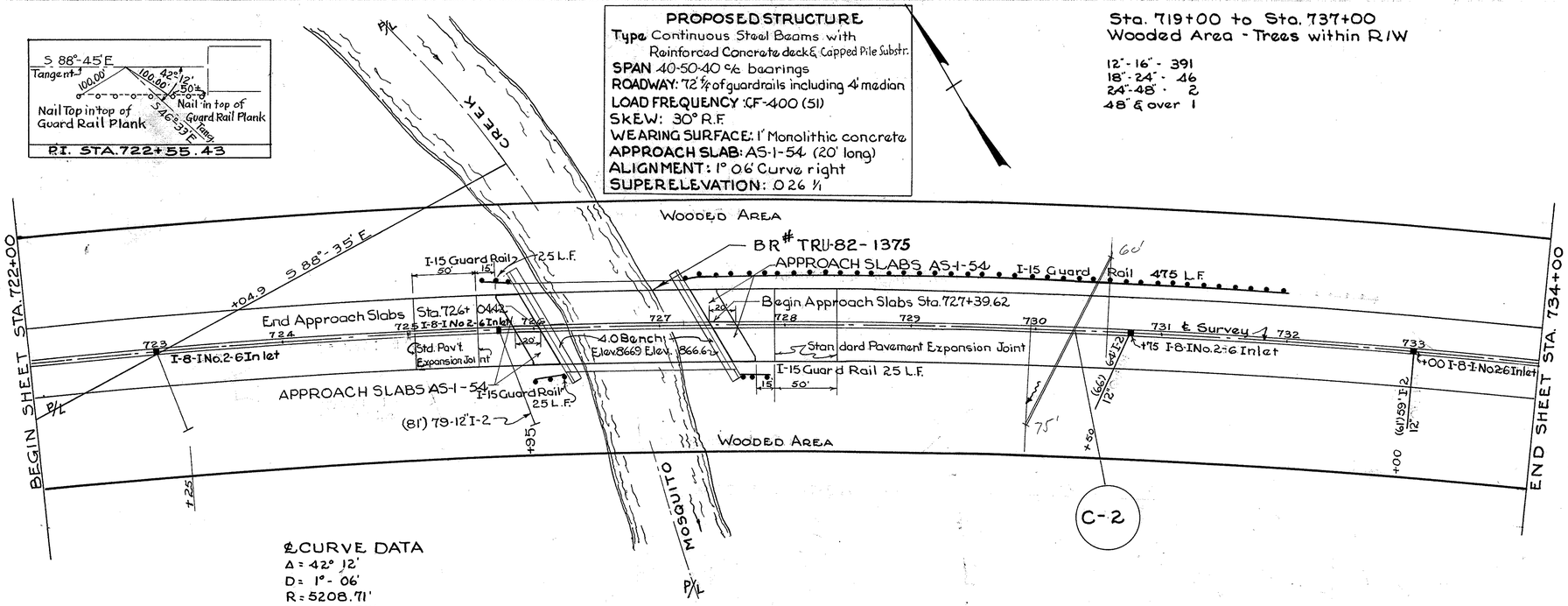
STATION FROM	STATION TO	I-12 TYPE 2A CURB L.F.	I-21 CONC. MED. PAVT S.Y.	I-22 SUB-BASE C.Y.
720+63.74	722+00	272.52	30.28	9.69
TOTALS		272.52	30.28	9.69

DRAINAGE

STATION	SIDE	I-8-IN No.2-6 INLET
720+50	C	1
TOTAL		1



LINE SHEET STA. 710+00 TO STA. 722+00



Structures 20' Span & Under				
Mark	Station	Type	Size	Sheet No.
C-2	730+30.5	Std. Pipe Culvert	30" x 150'	158

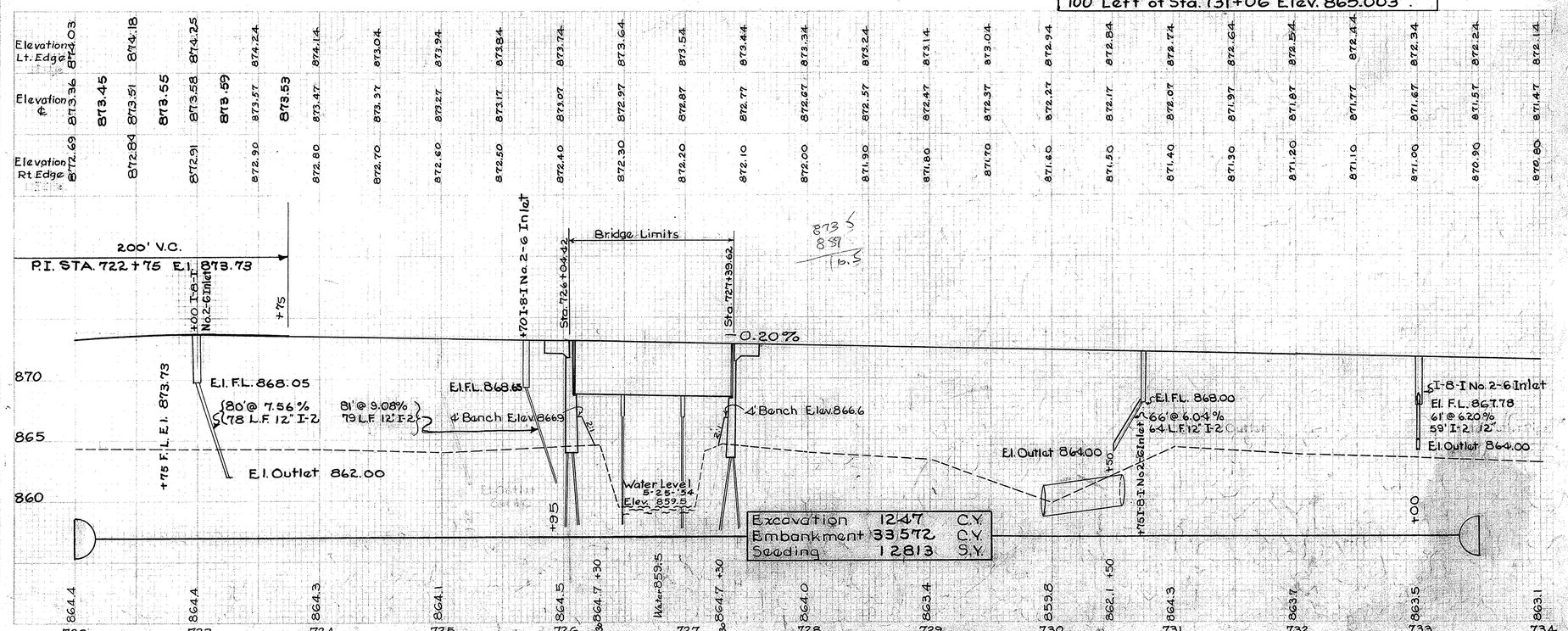
CONCRETE MEDIAN				
STATION		I-12 TYPE 2A CURB L.F.	I-21 CONC. MED. PAVT S.Y.	I-22 SUB-BASE C.Y.
FROM	TO			
722+00	726+04.42	786.98	86.61	27.72
727+39.62	734+00	1298.10	143.49	45.92
TOTALS		2085.08	230.10	73.64

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
722+00	725+71	L	99	99	378.09
726+63	734+00	L	99	99	741.24
722+00	726+63	R	99	99	454.12
727+53	734+00	R	99	99	634.55
TOTAL					2208

DRAINAGE							
STATION		SIDE	I-2 Class B		I-8	I-8-I
FROM	TO		12" L.F.	12" UA L.F.	18" L.F.	No. 1 MH EA.	No. 2-6 Inlet EA.
725+70		℄					1
725+70	725+95	R	43	36			
730+75		℄					1
730+75	730+50	R	24	40			
733+00		℄					1
733+00		R	25	34			
723+00		℄					1
723+00	723+25	R	43	35			
TOTAL			135	145			4

I-15 GUARD RAIL			
STATION		SIDE	L.F.
725+58	725+83.64	L	25.64
725+99	726+25.20	R	26.20
727+18.84	731+95.84	L	476.66
727+60.40	727+86.5	R	26.10
TOTAL			554.60

B.M. No. 6A Spike in South West Root of 18" Pin Oak 100' Left of Sta. 731+06 Elev. 865.003



Excavation	1247	C.Y.
Embankment	33572	C.Y.
Seeding	12813	S.Y.

I-7 Reinforced Concrete Approach Slab (T-11½")				
Station to Station		Side	Length	S.Y.
725+84.42	726+04.42	L	20	53.33
725+84.42	726+04.42	R	20	53.33
727+39.62	727+59.62	L	20	53.33
727+39.62	727+59.62	R	20	53.33
TOTAL				213.32

Note: To permit the construction of Type I Standard Concrete Median Pavement Type 2A Curb will be constructed on the inside of center line of each Approach Slab.

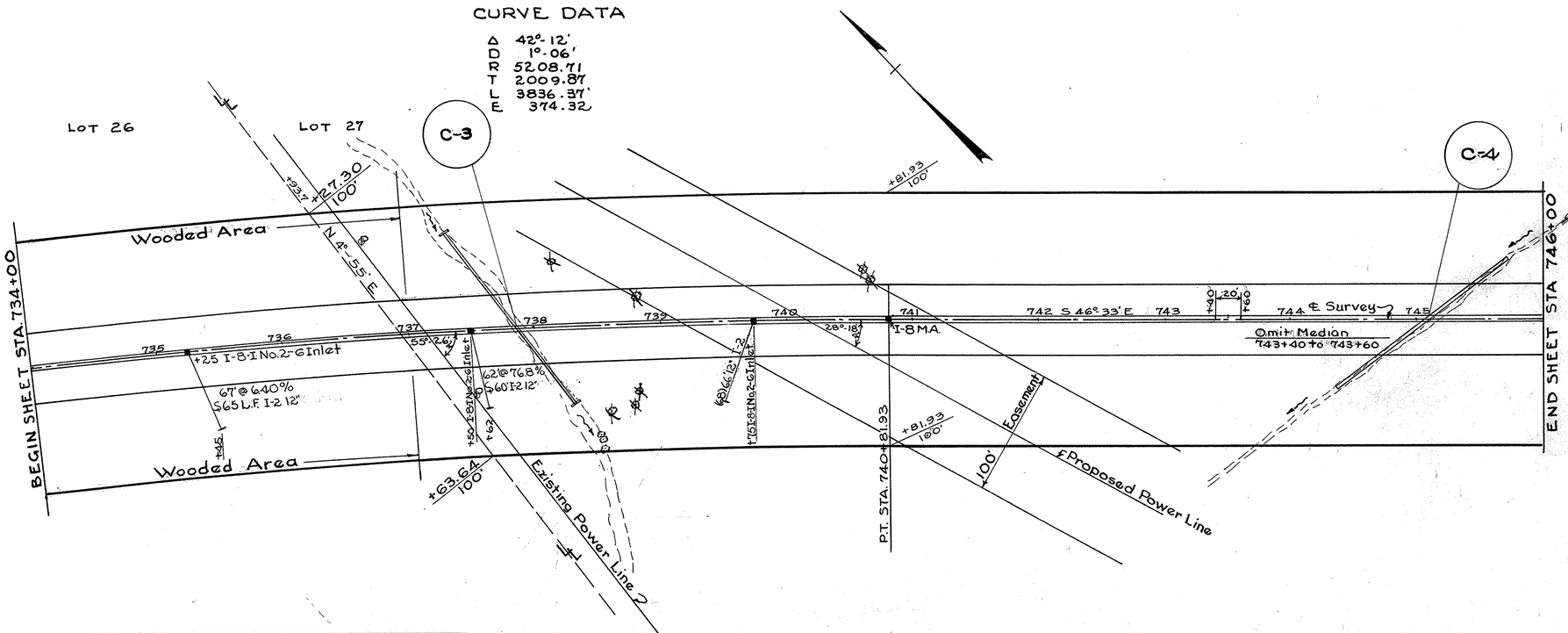
LINE SHEET STA. 722+00 TO STA. 734+00

2	OHIO			23 / 209

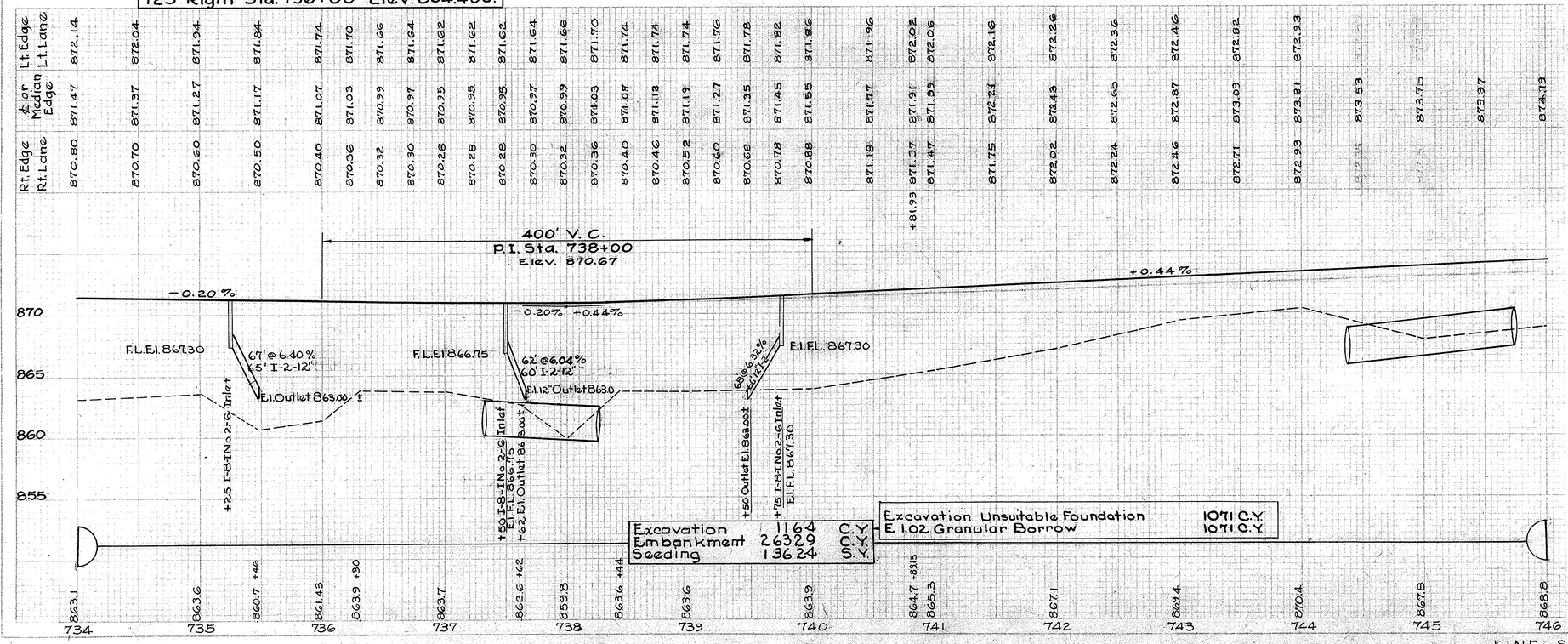
TRU-82-12.67

CURVE DATA

Δ 42°-12'
DD 1°-06'
R 5208.71
T 2009.87
L 3836.37'
E 374.32



B.M. No. 6B. Spike in South East root of 20" Oak
125' Right Sta. 736+00 Elev. 864.400.



Structures 20' Span & Under				
Mark	Station	Type	Size	Sheet No.
C-3	737+86	Std. Pipe Culvert	30"x 145	158
C-4	745+12	Std. Pipe Culv.	36"x 157	158

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
740+81.93	℄	1
TOTAL		1

R/W FENCE					
STATION		Side	Dist. From ℄		55-18 R/W Fence L.F.
From	To				
734+00	740+81.93	L	99	99	695.02
740+81.93	746+00	L	"	"	518.07
734+00	740+81.93	R	"	"	668.84
740+81.93	746+00	R	"	"	518.07
TOTAL					2400

DRAINAGE								
STATION			I-2 Class "B"		I-8-I		S-1	
FROM	To	SIDE	12" L.F.	12" UA L.F.	18" L.F.	No. 26 INLET EA.		Class B C.Y.
735+25		℄				1		
735+25	735+45	R	25	40				0.23
737+50		℄				1		
737+50	737+62	R	22	38				0.23
739+75		℄				1		
739+75	739+50	R	28	38				0.23
TOTAL			75	116		3		0.69

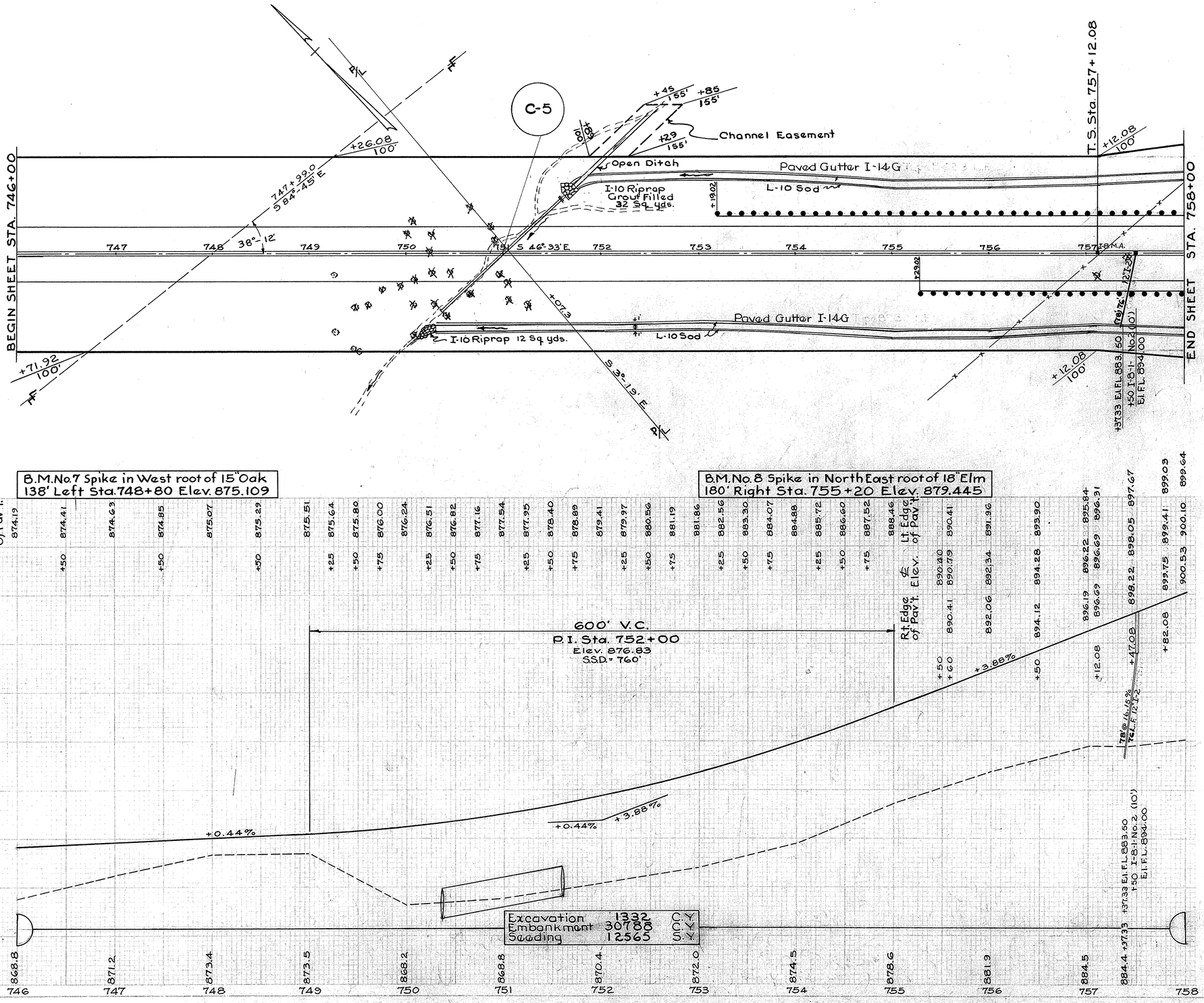
CONCRETE MEDIAN				
STATION		I-12 TYPE 2A CURB L.F.	I-21 CONC. MED. PAVT. S.Y.	I-22 SUB-BASE C.Y.
FROM	TO			
734+00	743+40	1846.01	204.00	65.28
743+60	746+00	480.00	53.33	17.07
TOTALS		2326.01	257.33	82.35

LINE SHEET - STA. 734+00 TO STA. 746+00

2	OHIO			

24
209

TRU-82-12.67



LINE SHEET - STA. 746+00 TO STA. 758+00

Structures 20' Span & Under				
Mark	Station	Type	Size	Sheet No.
C-5	751+00	Std. Pipe Culvert	36"x169'	158

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
757+12.08	℄	1
TOTAL		1

SODDING & PAVED GUTTER*						
STATION		SIDE	L-10 1'WIDE S.Y.	MOD. I-14G PAVED GUTTER TYPE A L.F.	TYPE B L.F.	TYPE C L.F.
FROM	TO					
750+17	758+00	Rt.			783	
750+17	758+00	Rt.	174			
751+77	758+00	Lt.			623	
751+77	758+00	Lt.	139			
TOTALS			313		1406	

* See Detail Sheet No. 4

I-15 GUARD RAIL			
STATION		SIDE	I-15 L.F.
FROM	TO		
753+19.02	758+00	Lt.	480.98
755+29.02	758+00	Rt.	270.98
TOTAL			751.96

DRAINAGE						
STATION		SIDE	I-2 CLASS "B"		I-8-1 No. 2/0 Inlet E.A.	S-1 Class E C.Y.
FROM	TO		12" L.F.	12" U.A. L.F.		
757+50		℄			1	
757+50	757+37	R	50	26		0.23
TOTALS			50	26	1	0.23

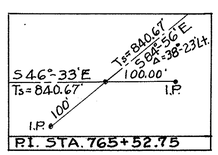
R/W FENCE				
STATION		Side	Dist From ℄	SS-18 R/W Fence L.F.
From	To			
746+00	757+12.08	L	99'	1112.08
757+12.08	758+00	L	99' 111.70'	88.83
746+00	757+12.08	R	99'	1112.08
757+12.08	758+00	R	99' 106.37'	88.23
TOTAL				2401

CONCRETE MEDIAN				
STATION		I-12 TYPE 2 ACURB L.F.	I-21 CONC. MED. PAV'T. S.Y.	I-22 SUB-BASE C.Y.
FROM	TO			
746+00	758+00	2384.67	264.13	84.52
TOTAL		2384.67	264.13	84.52

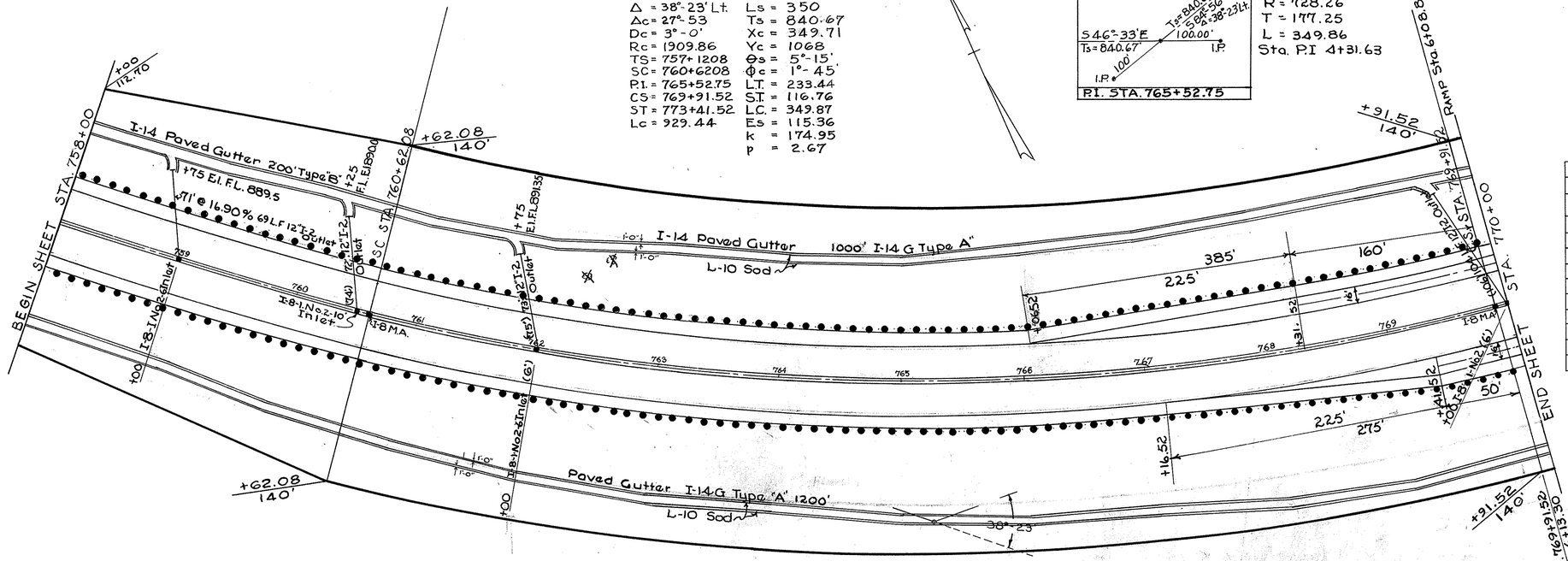
TRU-82-12.67

CURVE DATA

Δ = 38°-23' Lt.		Ls = 350	
Δc = 27°-53		Ts = 840.67	
Dc = 3°-0'		Xc = 349.71	
Rc = 1909.86		Yc = 1068	
TS = 757+1208		θs = 5°-15'	
SC = 760+6208		φc = 1°-45'	
P.I. = 765+52.75		L.T. = 233.44	
CS = 769+91.52		S.T. = 116.76	
ST = 773+41.52		L.C. = 349.87	
Lc = 929.44		Es = 115.36	
		k = 174.95	
		p = 2.67	



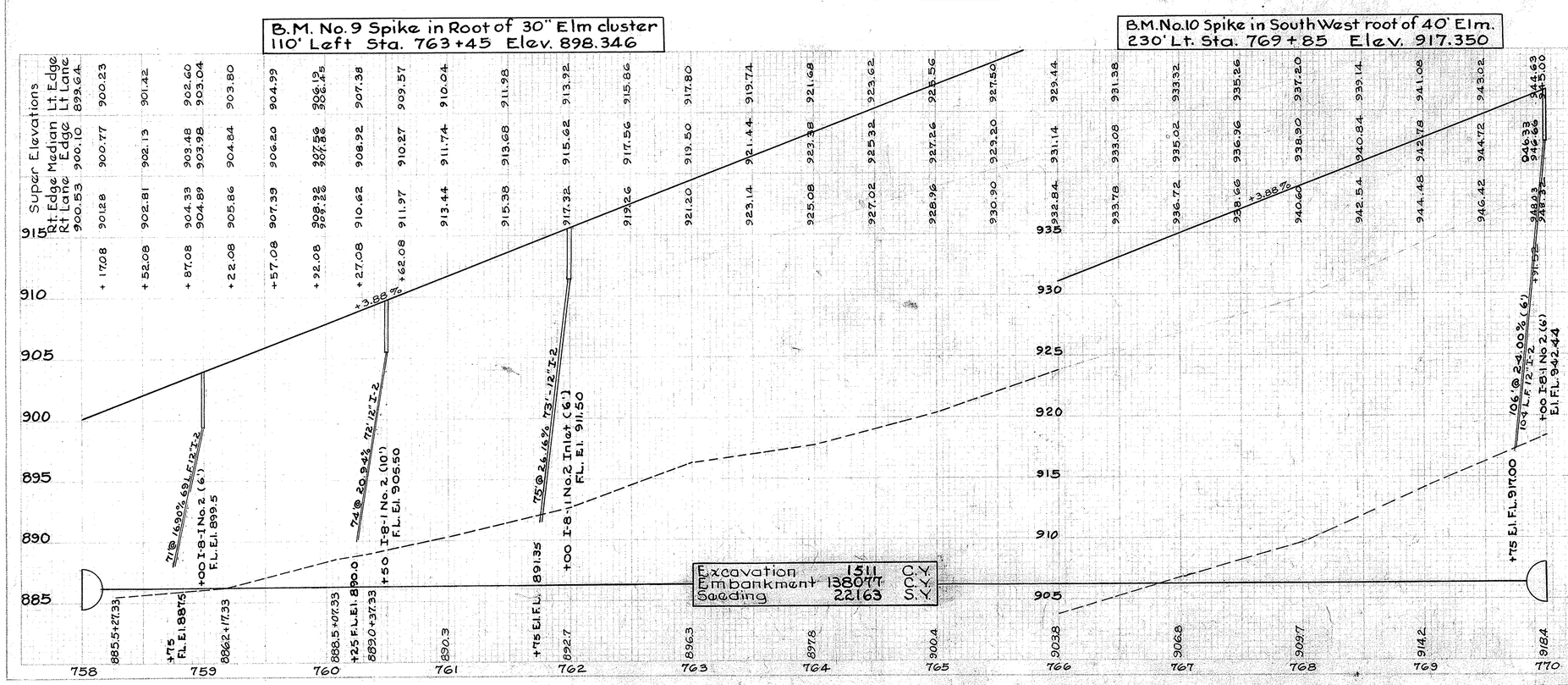
Ramp Data
Δ = 27°-31' 30"
D = 7°-52'
R = 728.26
T = 177.25
L = 349.86
Sta. P.I 4+31.63



DRAINAGE						
STATION		Side	I-2 CLASS B 12" L.F.	I-2 CLASS B 12" U/A L.F.	I-8-1 No 2-10 Inlet Each	I-8-1 No 2-6 Inlet Each	S-1 Class 'C' Conc C.Y.
From	To						
758+75	759+00	Lt.	29	40			0.23
759+00	℄					1	
760+25	760+50	Lt.	32	40			0.23
760+50	℄				1		
761+75	762+00	Lt.	35	38			0.23
762+00	℄					1	
769+75	770+00	Lt.	52	52			0.23
770+00	℄					1	
TOTALS			148	170	1	3	0.92

GUTTERS *						
STATIONS		Side	L-10 1'Wide S.Y.	I-14G Type A L.F.	I-14G Type B L.F.	L-10 Sod Sq. Yds
From	To					
758+00	770+00	Lt.				27.4
758+00	770+00	Rt.				26.7
758+00	760+00	Lt.	44		200	
760+00	770+00	Lt.	229	1032		
758+00	770+00	Rt.	269	1200		
Totals			542	2232	200	541

* See Detail Sheet No. 4



MONUMENT ASSEMBLY		
STA.	Side	I-8 Each
760+62.08	℄	1
769+91.52	℄	1
Total		2

R/W FENCE				
STATION		Side	Dist. From ℄	SS-18 R/W Fence L.F.
From	To			
758+00	760+62.08	Lt.	11270	140	262.08
760+62.08	770+00	Lt.	140	140	937.92
758+00	760+62.08	Rt.	10637	140	262.08
760+62.08	770+00	Rt.	140	140	937.92
TOTAL					2400.00

I-15 GUARD RAIL			
STATION		SIDE	L.F.
From	To		
758+00	770+00	L	1200
758+00	770+00	R	1200
TOTAL			2400

CONCRETE MEDIAN				
STATION		I-12 TYPE 2A CURB L.F.	I-21 CONC MED. PAV'T. S.Y.	I-22 SUB-BASE C.Y.
FROM	TO			
758+00	770+00	2362	261	83
TOTAL		2362	261	83

LINE SHEET STA. 758+00 TO STA 770+00

TRU 82 ~ 12.67

℄ CURVE DATA

Δ = 38°-23'	Ls =	350'
Δc = 27°-23'	Ts =	840.67'
Dc = 3°-0'	Xc =	349.71'
Rc = 1909.86'	Yc =	10.68'
T.S. = 757+12.08	θs =	5°-15'
S.C. = 760+62.08	ϕc =	19-45'
P.I. = 765+52.75	LT =	233.44'
C.S. = 769+91.52	ST =	116.76'
S.T. = 773+41.52	LC =	349.67'
Lc = 329.44'	Es =	115.3'
	k =	174.95'
	P =	2.67'

BEGIN SHEET STA. 770+00

END SHEET STA. 782+00

RAMP DATA
Δ = 17°-12'
D = 3°52'-10"
R = 1480.73'
T = 223.94'
L = 444.51
STA. P.I. 3+89.36

End L.A.

End Fence

R = 125' INSIDE EDGE
Δ = 65°08'-30"
R = 125.00'
T = 79.85'
L = 142.12

Δ = 7°33'-10"
R = 180.00'
L = 23.94'

Δ = 84°17'
R = 125.00'
T = 113.11'
L = 183.88'

Δ = 37°19'-15"
R = 125.00'
T = 42.18'
L = 81.42

Δ = 22°-30'
R = 100.00'
T = 19.89'
L = 39.27'

Δ = 22°16'-30"
R = 100.00'
T = 19.76'
L = 38.88'

Δ = 22°16'-30"
R = 108.00'
T = 21.36'
L = 41.99'

Δ = 17°40'-50"
R = 140.00'
T = 21.78'
L = 43.20'

Δ = 10°-30'
R = 175.00'
T = 16.08'
L = 32.07'

Δ = 35°-12'
R = 90'
T = 28.56'
L = 55.23'

Δ = 22°-27'
R = 85.00'
T = 16.87'
L = 33.30'

Δ = 22°-49'
R = 125.00'
T = 25.59'
L = 49.77'

S 84°-56'E 1+0 S 84°-56'E 2+0 S 84°-56'E 3+0 S 84°-56'E 4+0 S 84°-56'E 5+0 S 84°-56'E 6+0 S 84°-56'E

N 72°-47'-30" E
N 89°-39'-40" E
N 89°-08'-30" E
N 5°-16'-40" E
N 5°-04' E
N 79°-41' W
S 62°-29' E

End Approach Slab 774+81.83
Begin Approach Slab 776+84.17
℄ Survey

Begin ℄ Fence
No. 1 M.H.
No. 2 M.H.
No. 3 M.H.
No. 4 M.H.
No. 5 M.H.
Ditch Inlet
P.O.T. STA. 782+00
I-8 M.A.
B.M. No. 11 North end of West headwall Culvert on S.R. 46 STA. 14+81 Elev. 948.661
Tower
Ohio Edison Co.
Drive
1-Sty. Fr. Gar.
Boat Spk.
W. Side
24 Oak
1.5 up.
Fence Placed
Footing Elev. 944±
Footing Elev. 938.2
3' Bench Elev. 868.5±
3' Bench Elev. 960.9±
Elev. 936.30
Median Edge
Inside Edge Lt. Lane
Inside Edge Rt. Lane
Rt. Edge
Lt. Edge
Rt. Lane
Lt. Lane
Super Elevation

C-6 C-7 C-8 C-9 C-10 C-11 C-12 C-13 C-14

S.R. 46 ℄ Sta. 773+41.52
S.R. 46 ℄ Sta. 775+83
S.R. 46 ℄ Sta. 776+76

L-10 Sod 1' Wide
L-10 Sod Ditch
7' Wide
6' Wide
5' Wide
I-14 Paved Gutter Type A
I-14 Std. Paved Gutter Type I
250 L.F. 6"-I-4
I-5-6" 45° Bend
I-5-6" 45° Bend-24"-I-4-8"
2-6"-I-4, 250 L.F. (Rt.)
6"-I-4 322 L.F. (Lt.)
8"-I-4 24 L.F.
Std. Pavement Gutter & 6"-I-4
Sta. 776+84.17 to Sta. 782+00 Lt. Lane
Sta. 782+00 to Sta. 776+84.17 Rt. Lane
Sta. 776+84.17 to Sta. 782+00 (S.R. 46 to P.I.)
1273.80'

PROPOSED STRUCTURE

Type: Continuous reinf. conc. slab with reinf. conc. substructure
Spans: 44'-55'-55'-44' ℄ Brgs.
Roadway: 56 ft. face to face of 2'-0" Safety curbs, including 4 ft. median
Load Frequency: CF = 400(51)
Skew: None
Wear Surf.: 1" Monolithic
Appr. Slabs: As-1-54 (20' Long)
Alignment: Tangent.
Bridge Limits: Sta. 774+81.83 to Sta. 776+84.17

Excavation	111,333	C.Y.
Embankment	91,806	C.Y.
Seeding	32,130	S.Y.

Super Elevation	Rt. Edge	Rt. Lane	Lt. Edge	Lt. Lane
+ 26.52	949.22	947.69	947.68	946.15
+ 61.52	950.41	949.05	949.05	947.68
+ 96.52	951.60	951.41	950.54	949.30
+06.78	951.92	951.76	950.78	949.62
+ 31.52	952.78	952.78	951.76	950.72
+ 66.52	953.97	953.12	952.12	952.24
+36.78	955.00	954.30	953.30	953.57
+01.52	955.16	954.48	953.48	953.77
+36.52	956.35	955.84	955.04	955.38
+ 71.52	957.54	957.20	956.20	956.82
+06.52	958.72	958.55	958.55	958.17
+16.78	959.07	958.95	958.95	958.57
+ 41.52	960.21	960.24	959.24	959.38

Station	Elevation
770	918.4
+46.76	919.1
771	923.5
+06.78	926.9
772	932.7
+86.78	934.4
+41.78	939.1
773	945.3
774	950.8
+69	950.86
+70.05	950.78
+88	951.76
+88	951.7
775	946.27 (Lt.)
776	(Rt.) 947.30 (Lt.) 947.50 (Rt.)
777	964.9
778	974.1
+25	978.9
779	988.8
780	1002.3
781	1013.2
782	1025

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH
773+41.52	℄	1
TOTAL		1

STRUCTURE 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHT. NO.
C-6	S.R. 46 Sta. 2+12 Extension	Std. Pipe Culv.	12" x 15' L. 18" x 13' R.	158
C-7	SR. 46 Sta. 5+47	Std. Pipe Culv.	15" x 79'	158
C-8	SR 46 Sta. 8+00	Std. Pipe Culv.	30" x 185'	158
C-9	S.W. Ramp	Std. Pipe Culv.	18" x 84	158
C-10	S.E. Ramp	Std. Pipe Culv.	21" x 102	158
C-11	N.W. Ramp	Std. Pipe Culv.	15" x 74.	158
C-12	N.E. Ramp	Std. Pipe Culv.	18" x 67'	158
C-13	SR. 46 Sta. 12+00 Extension	Std. Pipe Culv.	24" x 112' 30" x 153'	158
C-14	SR 46 Sta. 14+81 Extension	Std. Pipe Culv.	24" x 26' L. 24" x 38' R.	158
C-14A	SR. 46 19+15 Extension	Std. Pipe Culv.	18" x 17' 18" x 5'	159

I-15 GUARD RAIL

STATION From	STATION To	SIDE	L.F.
772+29.83	774+79.83	L	250.00
772+54.83	774+79.83	R	225.00
6+06	1+11.98	RAMP	494.02
6+06	1+26.98	RAMP	479.02
776+86.17	782+00	L	513.83
776+86.17	782+00	R	513.83
TOTAL			2475.70

PAVED GUTTER & SODDING

STATION From	STATION To	SIDE	I-14 Type A L.F.	I-14 Type 1 L.F.	L-10 1' Wide S.Y.	L-10 VRB LEFT S.Y.
770+00	774+81	R	496			
770+00	774+77	L	487			
770+00	774+81	R	"		110	
770+00	774+77	L			108	
771+96	774+76	R				197
773+00	774+81	L				130
776+45	780+00	R				276
776+52	780+00	L				270
776+65	780+75	R		410	91	
777+50	780+75	L		325	72	
TOTAL			983	735	381	873
					1254	

CONCRETE MEDIAN

STATION FROM	STATION TO	I-22 2A CURB L.F.	I-22 TYPE I CURB MED. PVMT. S.Y.	SUBBASE C.Y.
770+00	774+81	962.46	106.94	34.22
770+00	774+81	1091.66	114.29	36.68
776+84.17	782+00	1094.12	122.23	70.90
TOTALS				

DRAINAGE

STATION From	STATION To	SIDE	I-4 6" Under Drain L.F.	I-4 8" Outlet Pipe L.F.	I-5 FOR I-4 45° 6" Bends EACH	I-8 R.C.P. EA.	I-2 12" CL "B" L.F.	I-2 18" CL BUA L.F.
776+31.5	779+50	L	322					
776+90	777+00	R		24				
775+41	774+81	L				1	62	
776+45		R				1	6	
776+24	776+32	L				1	30	32
777+00	779+50	R	250					
777+00		R			1			
776+50	776+30	L				1	38	
TOTAL			572	24	1	4	136	32

R/W FENCE

STATION FROM	STATION TO	SIDE	DIST. FROM ℄	DIST. ℄	SS-18 L.F.
770+00	773+41.52	Lt.	139	164	342.40
773+41.52	774+46.84	Lt.	164	209	115.20
776+93	782+00	Lt.	215.6	215	507.00
770+00	774+50	Rt.	139	199	463.80
777+15	782+00	Rt.	211.83	161.5	487.60
TOTAL					1916.00

I-7 Reinforced Concrete Approach Slab (T11½)

Station to Station		Side	Length	S.Y.
774+61.83	774+81.83	L	20	53.33
774+61.83	774+81.83	R	20	53.33
776+84.17	777+04.17	L	20	53.33
776+84.17	777+04.17	R	20	53.33
TOTAL				213.32

NOTE: To permit the construction of Type 1 Standard Concrete Median Pavement, Type 2A curbs will be constructed on the inside or center line edge of each Approach Slab.

LINE SHEET STA. 770+00 TO STA. 782+00

Sta. 789+00 to 796+00
Trees within R/W
12" - 18" - 95
18" - 24" - 8
24" - 30" - 4

Curve Data - Inside Lt. Lane
Δ = 3° 06'
D = 0° 30'
R = 11457.16
I = 310.02
L = 619.89
E = 4.19

℄ Curve Data
Δ = 3° 06' Lt.
D = 0° 30'
R = 11459.16
T = 310.08
L = 620.00
E = 4.19
P.I. = 787+35.85

Ramp Data
Δ = 8° 21'
R = 1909.86
D = 3°
L = 278.83
T = 139.41
P.I. = 12+18.61

Curve Data - Inside Edge Rt. Lane
Δ = 3° 06' Lt.
D = 0° 30'
R = 11461.16'
T = 310.13
L = 620.11
E = 4.19

Sq. Spk. W. Side 12" Maple 2' up.
Sq. Spk. E. Side 16" Oak 1.5 up
77.66
110.01
139.49
787+35.85
℄ 787
788 SR 82
S 84°-56' E
S 88°-02' E
P.I. STA. 787+35.85

+91.26 216.10'
S 71°-28'-45" E
+25.77 160'
S 82°-17'-50" E
S 83°-31' E
+45.71 115.16'
360'
225'
L-10 6' wide
225'
450'
0.5% Gn
Proposed Channel
BEGIN SHEET STA. 782+00
END SHEET STA. 794+00
P.C. (℄) Sta. 784+25.77
P.I. (Inside edge left lane) Sta. 786+20.40
P.C. Sta. 10+79.20
P.I. (Inside edge right lane) Sta. 788+51.44
P.I. Ramp Sta. 13+57.53
℄ St. Hwy. 788+38.91
P.T. (℄) Sta. 790+45.77
S 84°-56' E
I-8 M.A. 784
785
786
787
788
789
Curb
790
I-8 M.A. 791 S 88°-02' E
792
℄ Survey 793
℄ Type "A" C.B. I-8
S 76' 74 L.F. 12" I-2
P.I. ℄ Sta. 787+35.85
7+00
8+00
9+00
10+00
11+00
12+00
13+00
14+00
15+00
16+00
N 89°-39'-40" E
Wooded Area
Stone
+14.87
101.31'
+00
162.50'
N 89°-08'-30" E
S 84°-44'-30" E
℄ Ohio Edison Co. R/W
+60.77
108.95'
11+46.30 P.C.
CURVE DATA (RAMP)
Δ = 4°-50'-07"
D = 2°-0'
R = 2864.79
T = 120.95
L = 241.70
P.I. = 12+67.25
13+88.00 P.R.C.
789+65.39
P/L
Exist. Channel
50'
50'

B.M. No. 12 Spike in North root 42" Black Oak
119' Right of Sta. 786+06 Elev. 1037.759

For detail of transition see Sheet No. 157

333.22 335.16 337.10 339.04 1000.98 1002.92 1004.86 1006.80 1006.74 1010.68 1012.62 1014.56 1016.50 1018.44 1020.38 1022.32 1024.26 1026.20 1028.14 1028.10 1030.03 1030.93 1031.81 1032.67 1033.49 1034.30 1035.07 1035.82 1036.55 1037.25 1037.92

1035
1030
1025
1020
1015
1010
1005
1000
995
990

1025.0 1028.4 1032.5 1032.9 1034.3 1035.7 1036.7 1035.5 1034.9 1034.9 1035.3 1036.0 1036.2 1035.7

782 783 784 785 786 787 788 789 790 791 792 793 794

+3.88%

74 L.F. 12" I-2
76' @ 0.4%
I-8 Type "A" C.B.
600' V.C.
P.I. Sta. 794+00
Elev. 1039.78
+45 (Rt) FL. El. 1022.30
+75 (℄) FL. El. 1022.60
Top C.B. El. 1024.91

Excavation	207636	C.Y.
Embankment	104	C.Y.
Seeding	22208	S.Y.

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
784+25.77	℄	1
787+35.85	℄	1
790+45.77	℄	1
TOTAL		3

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
782+00	784+25.77	L	215'10	159	232.64
784+25.77	790+45.77	L	159	114'16	621.62
790+45.77	794+00	L	114'16	117	354.23
782+00	787+60.77	R	161'50	107'33	563.72
787+60.77	794+00	R	107'33	141'37	640.14
TOTAL					2412.35

L-10 SODDING

STATION From	STATION To	Side		Sodding S.Y.
792+00	793+00	L		67
TOTAL				67

I-15 GUARD RAIL

STATION FROM	STATION TO	SIDE	L.F.
782+00	785+48.67	L	348.67
782+00	784+48.67	R	248.67
TOTAL			597.34

DRAINAGE

STATION From	STATION To	I-2 12" Class "B" L.F.	I-8 12" W.A. L.F.	I-8 TYPE "A" C.B. EACH	S-1 Class E C.Y.
790+75				1	
790+75	790+45	5	69		0.23
TOTAL		5	69	1	0.23

CONCRETE MEDIAN

STATION FROM	STATION TO	I-12 TYPE 2A CURB L.F.	I-21 CONC. MED. PAVT S.Y.	I-22 SUB-BASE C.Y.
782+00	784+20	440	49	16
TOTAL		440	49	16

LINE SHEET STA. 782+00 TO STA. 794+00

FED. RD. DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO		

28
209

TRU 82 - 12.67

Sq. Spk. E. Side 12" Ash 2' up
148.40'
795 ℄ 795 SR. 82 796
S 88°-02' E
155.82
Sq. Spk. E. Side 12" Oak 2' up.
P.O.T. STA. 795+00

BEGIN SHEET STA. 794+00
P.T. (Inside Edge) Rt. Lane 794+71.07
Exist. Channel
+00 148.82
+25 148.68
+50 148.68
+75 148.68
+85 119.02
Z 5°-37'-50" E
+63.94 119.35
+56.29
2.0% Gr.
Proposed Channel
Riprap
796 797 798 799 S 88°-02' E 800 801 802 803 804 805
TYP. E "B" C.B. 13' Sod Ditch
0.12 Gr.
15
+49.89 100'
0.5% Gr.
Riprap
9' Sod Ditch
9' Sod Ditch
Proposed Channel
+46.58 151.92
P/L
+40.84 241.35
I.P.
S 88°-31' E
S 85°-33' E
P/L
L-10 6' Sod Ditch
+00 128.06'
L-10 Sod Ditch
END SHEET STA. 806+00

B.M. No. 13 Spike in South Root 24" Ash 147' Left of Sta. 795+60 Elev. 1041.610

B.M. #14 Spike in 18" Wild Cherry 131' Right of Sta. 802+85 Elev. 1051.056

1037.92 1038.57 1039.19 1039.78 1040.35 1040.90 1041.41 1041.91 1042.37 1042.81 1043.23 1043.62 1043.98 1044.68 1045.38 1046.08 1046.78 1047.48 1048.18 1048.54 1048.90 1049.27 1049.65 1050.04 1050.44 1050.85 1051.26 1052.10 1052.94 1053.78 1054.62 1055.46 1056.30 1057.14 1057.98

200' V.C.
P.I. Sta. 801+00
Elev. 1049.58
+1.68%
+1.40%
+1.40% +1.68%
+1.40%
600' V.C.
P.I. Sta. 794+00
Elev. 1039.78

1055 1050 1045 1040 1035 1030 1025 1020 1015

1037.8 1039.1 1040.0 1041.7 1043.7 1045.5 1047.2 1049.7 1050.7 1051.7 1058.5 1055.3

794 795 796 797 798 799 800 801 802 803 804 805 806

Excavation	1094	C.Y.
Embankment	8060	C.Y.
Seeding	15635	S.Y.

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHT. No.
C-15	795+00	Std. Pipe Culv.	30" x 148'	158

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
794+00	795+63.94	L	117	118.33	163.94
795+63.94	806+00	L	118.33	127.06	1036.06
794+00	795+45.60	R	141.97	150.92	145.60
795+45.60	795+48.90	R	150.92	99	51.92
795+48.90	806+00	R	99	99	1051.10
TOTAL					2449

L-10 SODDING

STATION FROM	STATION TO	SIDE	S.Y.
802+00	803+00	L	67
795+00	805+00	℄	1444
795+00	806+00	R	1100
	TOTAL		2611

LINE SHEET STA. 794+00 To STA. 806+00

DIST.	STATE	PROJ.	YEAR
2	OHIO		

29
209

TRU-82-12.67

CURVE DATA — ℄ SURVEY

Δ = 28° 34' Rt	Ls =	300.00
Δc = 21° 04'	Ts =	733.88
Dc = 2° -30'	Xc =	299.87
Rc = 2291.83	Yc =	6.54
T.S. = 809+88.04	Θs =	3° 45'
S.C. = 812+88.04	Φc =	1° 15'
P.I. = 817+21.92	LT. =	200.04
C.S. = 821+30.71	S.T. =	100.04
S.T. = 824+30.71	LC =	299.94
Lc. = 842.67	Es =	74.8
	k =	149.98
	p =	1.63

5φ. Spk. E. Side 18" Oak 2' up
5φ. Spk. N. Side 10" Oak 2' up.
Tran. Rod
EXTERNAL STA. 817+09.28

BEGIN SHEET STA. 806+00

END SHEET STA. 818+00

B.M. No. 15 Spike in 15" Hickory West Side of C.H. 155 300' South of ℄ of New S.R. 82 Elev. 1063.375

INTERSECTION C.H. 155 STA. 809+28.25

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHEET No.
C-15A	11+72 C.H. 155	Std. Pipe Culvert	24" x 55'	158
C-16	810+34	Std. Pipe Culvert	18" x 77'	158
C-17	808+93.77 809+48.71	Std Pipe Culvert	18' x 55'	158

DEEP LONGITUDINAL DRAINAGE

STATION FROM	STATION TO		Distance from ℄	I-4 6" UNDER DRAIN	I-4 8" Outlet	I-5 6" Bend 45°
				Lin. Ft.	Lin. Ft.	Each
809+90	810+06	Lt.	82-51		22	
810+06		Lt.	51			1
810+06	818+00	Lt.	51	792		
809+40	809+54	Rt.	80-95		18	
809+40		Rt.	80			1
809+40	818+00	Rt.	80-51	878		
809+15		Lt.				
TOTAL				1670	40	2

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH	
809+8804	℄	1	
812+8804	℄	1	
TOTAL		2	

L-10 SODDING

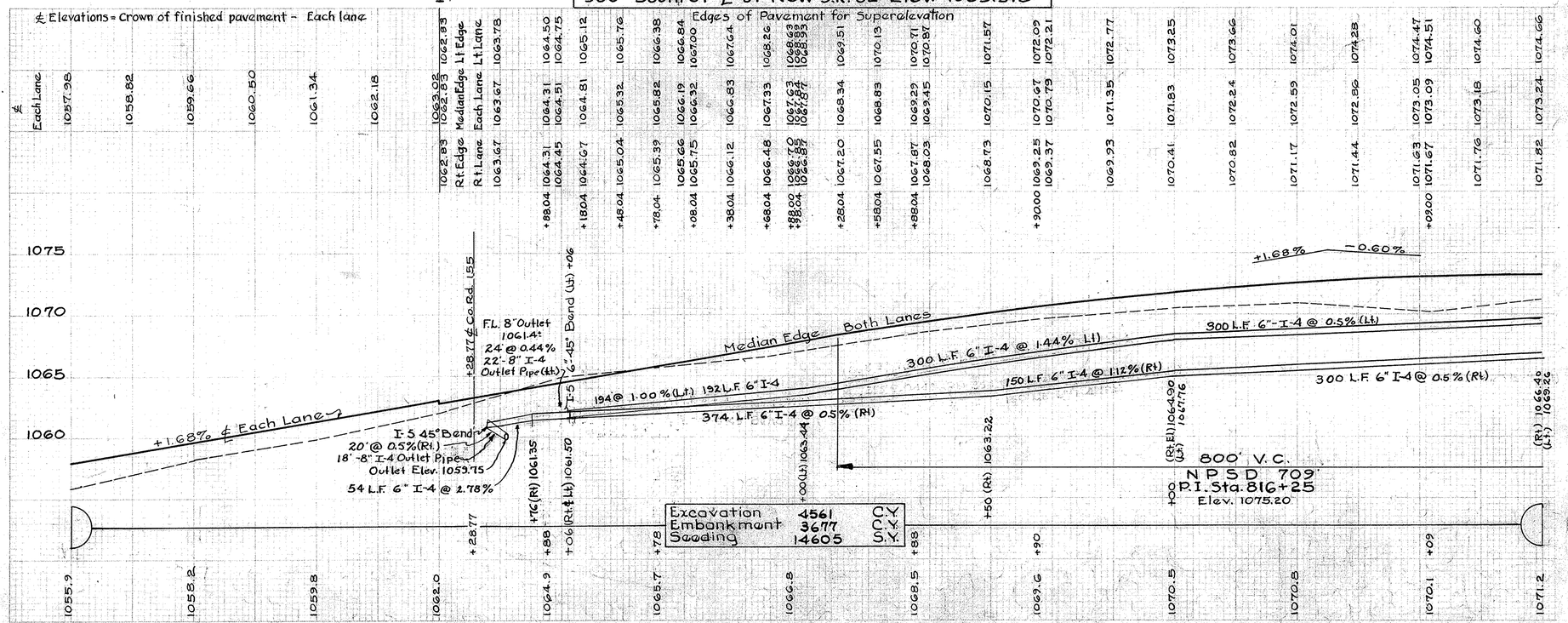
STATION FROM	STATION TO	SIDE	S.Y.
809+60	814+00	L	416
810+34	813+00	℄	266
806+00	814+00	R	750
TOTAL			1432

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
806+00	808+19	L	127[96]	122	219.06
808+19	809+10	L	122	207	125.17
809+65	811+38.04	L	219	99	210.58
811+38.04	818+00	L	99	99	684.29
806+00	807+35	R	99	99	135
807+35	808+92	R	99	217	191.84
809+66.70	812+88.04	R	100[84]	108[69]	321.34
812+88.04	814+61.48	R	108[69]	99	166.00
814+61.48	818+00	R	99	99	373.75
TOTAL					2377.03

DRAINAGE

STATION FROM	STATION TO	SIDE	Dist. from ℄ Lt.	Rt.	E-12 18" Culvert Rct. Conc. L.F.	I-2 Class "B" 12" L.F.
809+15		L	67		20	
809+41	809+51	L & R	91	135	226	
809+41	809+53	R		115		36
TOTAL					246	36



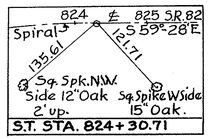
LINE SHEET STA. 806+00 To STA. 818+00

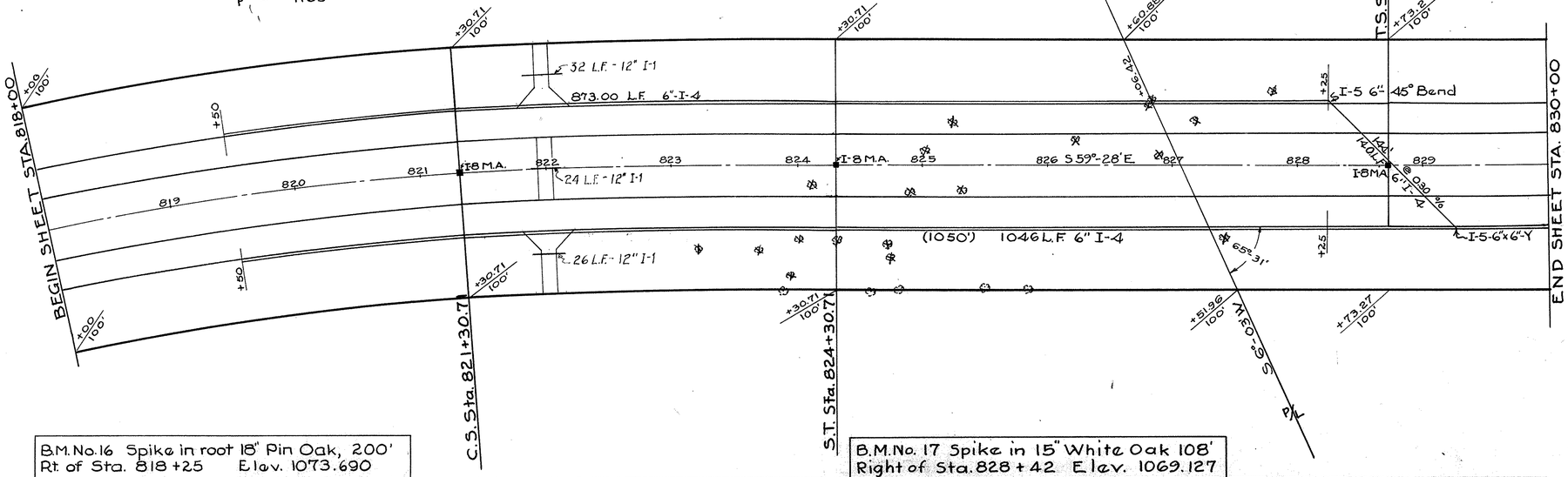
DIV. NO.	STATE	PROJECT	YEAR	SHEET	TOTAL
2	OHIO			30	209

TRU-82-12.67

CURVE DATA & SURVEY

Δ	= 28°-34' Rt	Ls	= 300.00
Δc	= 21°-04'	Ts	= 733.88
Dc	= 2°-30'	Xc	= 299.87
Rc	= 2291.83	Yc	= 6.58
T.S.	= 809+88.04	θs	= 3°-45'
S.C.	= 812+88.04	φc	= 1°-15'
P.I.	= 817+21.92	LT	= 200.04
C.S.	= 821+30.71	ST	= 100.04
S.T.	= 824+30.71	LC	= 299.94
L.C.	= 842.67	Es	= 74.8
		k	= 149.98
		p	= 1.63





B.M. No. 16 Spike in root 18" Pin Oak, 200' Rt. of Sta. 818+25 Elev. 1073.690

B.M. No. 17 Spike in 15" White Oak 108' Right of Sta. 828+42 Elev. 1069.127

DEEP LONGITUDINAL DRAINAGE

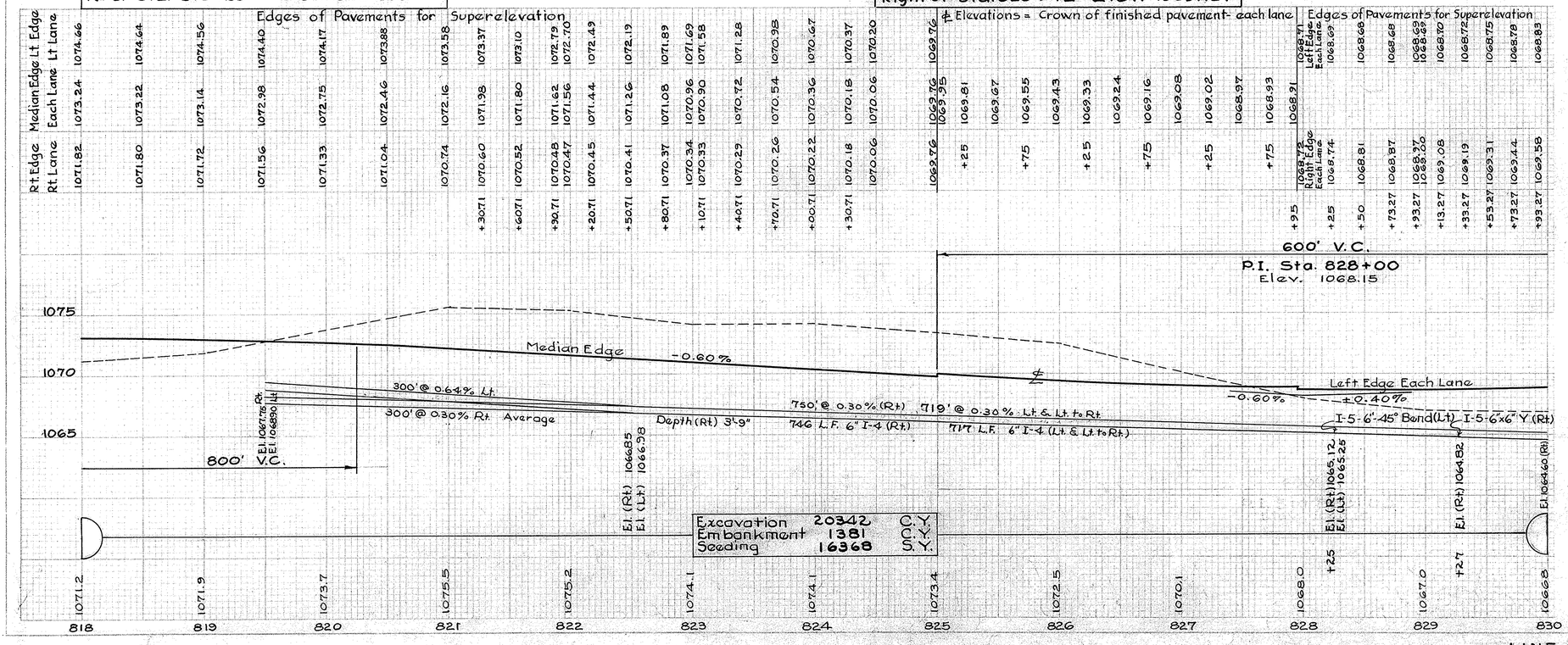
STATION FROM	STATION TO	Side	Distance from ℄	I-4 6" UNDER DRAIN	I-4 8" Outlet	I-5 to I-4 6"x45° Bend	I-5 to I-4 6"x6" "Wye"
				Lin. Ft.	Lin Ft.	Ea.	Ea.
819+50	828+25	Lt.	51	873			
819+50	830+00	Rt.	51	1046			
828+25		Lt.	51			1	
828+25	829+27	Lt. to Rt.	51-51	140			
829+27		Rt.	51				1
TOTAL				2059		1	1

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH
821+30.71	℄	1
824+30.71	℄	1
828+73.27	℄	1
TOTAL		3

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
818+00	830+00	L	99	99	1200.00
818+00	830+00	R	99	99	1200.00
TOTAL					2400.00



Excavation	20342	C.Y.
Embankment	1381	C.Y.
Seeding	16368	S.Y.

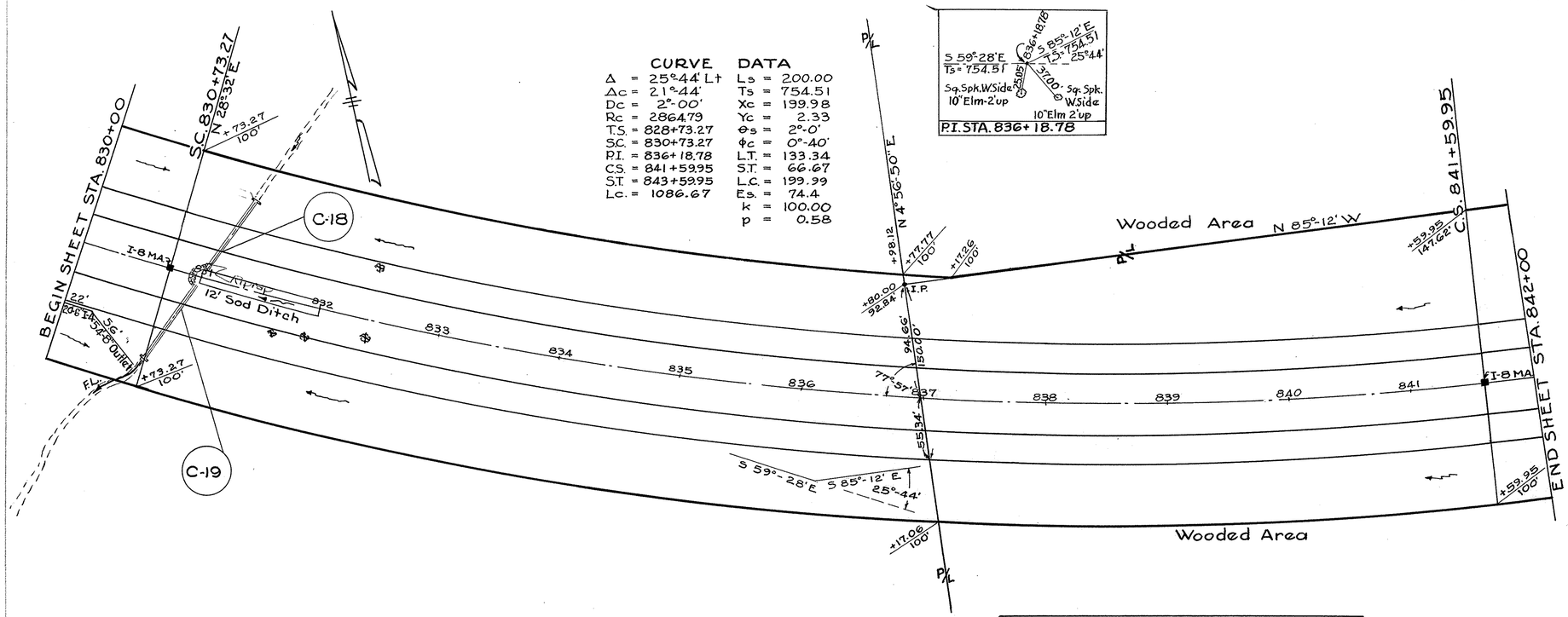
Rev. 7-31-57 A.W.G.

LINE SHEET STA. 818+00 To STA. 830+00

REGION DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

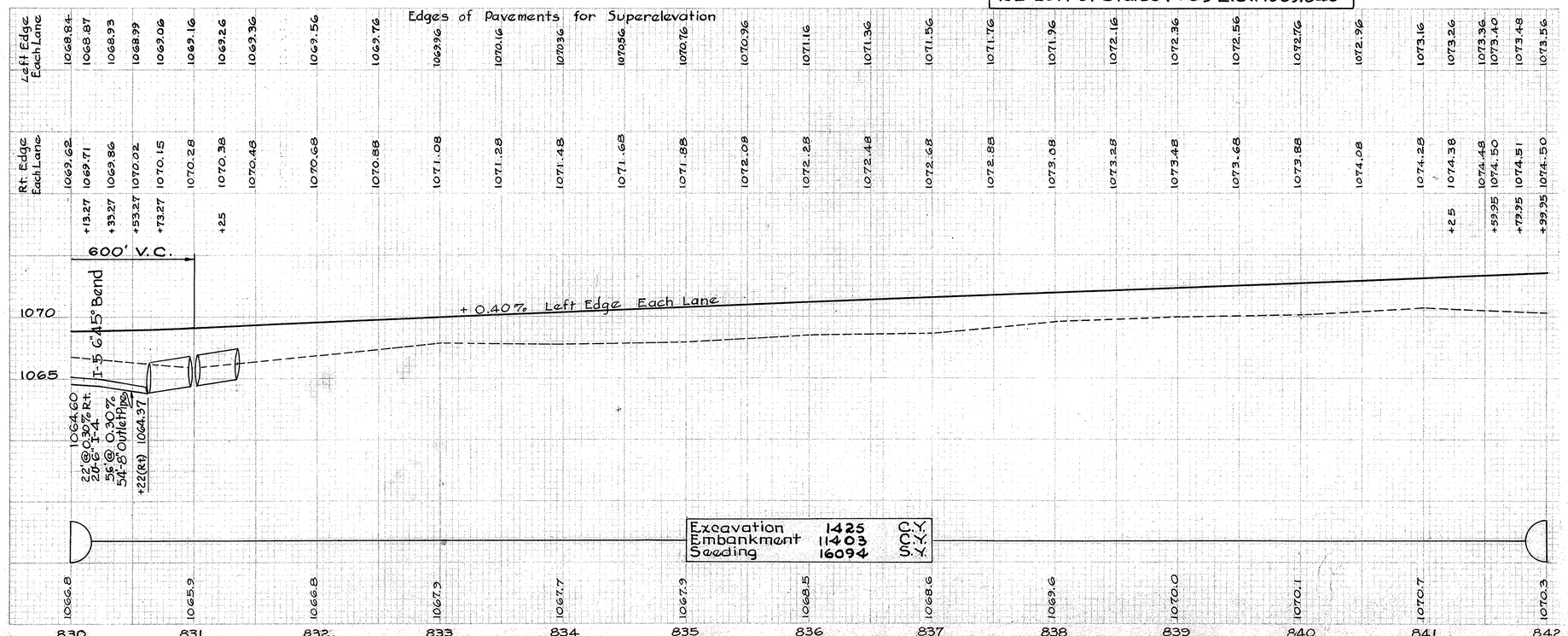
31
209

TRU-82-12.67



CURVE DATA			
Δ =	25°-44' Lt	Ls =	200.00
Δc =	21°-44'	Ts =	754.51
Dc =	2°-00'	Xc =	199.98
Rc =	2864.79	Yc =	2.33
T.S. =	828+73.27	θs =	2°-0'
S.C. =	830+73.27	φc =	0°-40'
P.I. =	836+18.78	L.T. =	133.34
C.S. =	841+59.95	S.T. =	66.67
S.T. =	843+59.95	L.C. =	199.99
Lc. =	1086.67	Es. =	74.4
		k =	100.00
		p =	0.58

B.M. No. 18 Spike in root of 28" Elm
132' Left of Sta. 837+09 Elev. 1069.640



STRUCTURES 20' SPAN & UNDER				
Mark	Station	Type	Size	Sheet No.
C-18	831+00	Twin Pipe Std. Pipe Culv.	30" x 68'	158
C-19	831+00	Twin Pipe Std. Pipe Culv.	30" x 73'	158

DEEP LONGITUDINAL DRAINAGE						
STATION FROM	STATION TO	SIDE	Distance from ℄	I-4 6" UNDER DR. Lin. Ft.	I-4 8" Outlet Lin. Ft.	I-5 6" Bend-45° Each
830+00	830+22	Rt.	51	20		
830+22		Rt.	51			1
830+22	830+70	Rt.	51-83		54	
TOTAL				20	54	1

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
830+73.27	℄	1
841+59.95	℄	1
TOTAL		2

L-10 SODDING			
STATION FROM	STATION TO	SIDE	S.Y.
831+00	832+00	℄	133
	TOTAL		133

R/W FENCE					
STATION From	STATION To	Side	Dist From ℄		SS-18 R/W Fence L.F.
830+00	837+17.26	L	99	99	694.78
837+17.26	841+59.95	L	99	146.62	425.80
841+59.95	842+00	L	146.62	146.62	4005
830+00	842+00	R	99	99	1237.98
TOTAL					2398.55

LINE SHEET STA. 830+00 To STA. 842+00

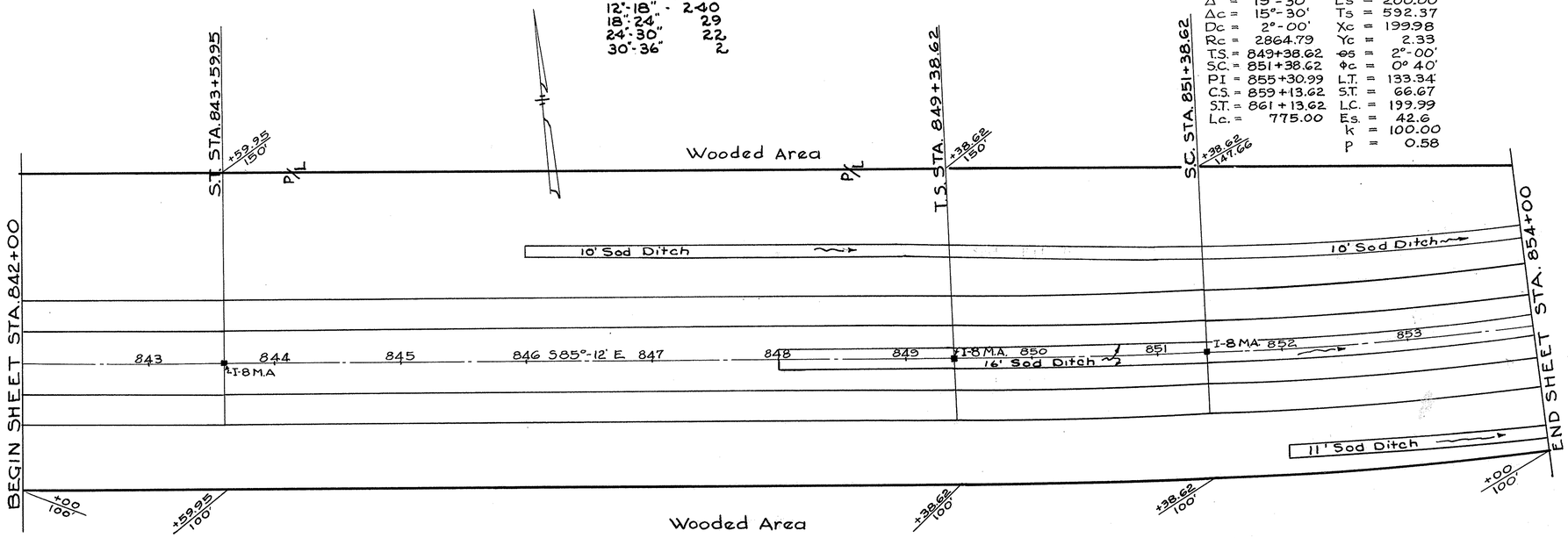
FED. ROAD DIST. NO.	STATE	PROJECT		SHEET NO.
2	OHIO			32
				TOTAL SHEETS 209

TRU-82-12.67

Sta. 837+00 to 856+00
Trees within R/W
12"-18" - 240
18"-24" 29
24"-30" 22
30"-36" 2

CURVE DATA

Δ =	19°-30'	Ls =	200.00
Δc =	15°-30'	Ts =	592.37
Dc =	2°-00'	Xc =	199.98
Rc =	2864.79	Yc =	2.33
T.S. =	849+38.62	θs =	2°-00'
S.C. =	851+38.62	θc =	0° 40'
PI =	855+30.99	L.T. =	133.34
C.S. =	859+13.62	S.T. =	66.67
S.T. =	861+13.62	L.C. =	199.99
Lc. =	775.00	Es. =	42.6
		k =	100.00
		p =	0.58



I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
843+59.95	℄	1
849+38.62	℄	1
851+38.62	℄	1
TOTAL		3

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18R/W Fence L.F.
From	To				
842+00	849+38.62	L	149	199	738.62
849+38.62	851+38.62	L	149	146.66	200.00
851+38.62	854+00	L	146.66	126	252.26
842+00	854+00	R			1209.12
TOTAL					2400.00

L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
846+00	854+00	L	889
848+00	854+00	℄	1067
852+00	854+00	R	244
TOTAL			2200

B.M. No. 19 Spike in 24" Oak-161'
Left of Sta. 843+65 Elev. 1070.838

B.M. No. 20 Spike in 20" Maple 143'
Right of Sta. 850+25 Elev. 1068.350

Edges of Pavement for Superelevation

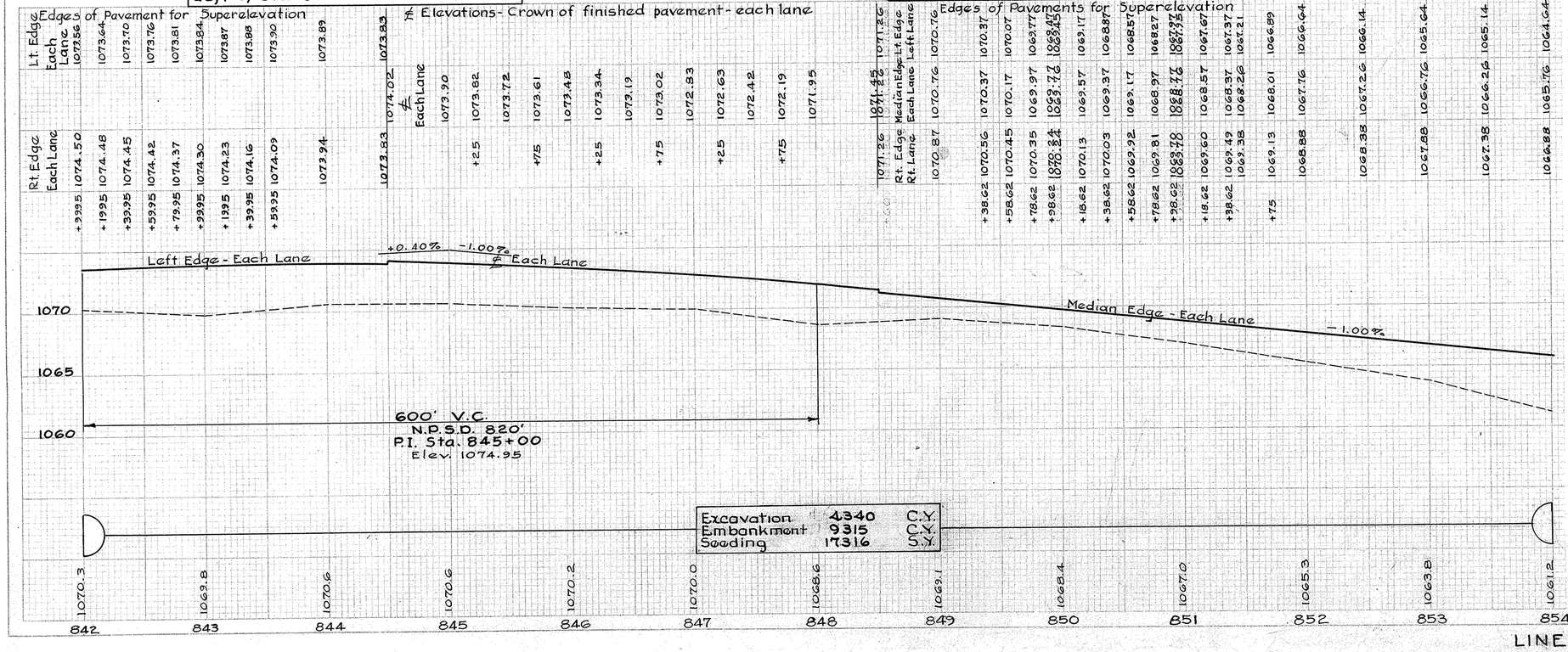
Station	Lt. Edge Each Lane	Rt. Edge Each Lane
+59.95	1073.56	1074.50
+19.95	1073.64	1074.48
+39.95	1073.70	1074.45
+59.95	1073.76	1074.42
+79.95	1073.81	1074.37
+99.95	1073.84	1074.30
+19.95	1073.87	1074.23
+39.95	1073.88	1074.16
+59.95	1073.90	1074.09
	1073.89	1073.94

℄ Elevations - Crown of finished pavement - each lane

Station	℄ Each Lane
	1073.83
	1074.02
	1073.83
	1073.90
+25	1073.82
+75	1073.72
	1073.61
	1073.48
+25	1073.34
	1073.19
+75	1073.02
	1072.83
+25	1072.63
	1072.42
+75	1072.19
	1071.95

Edges of Pavements for Superelevation

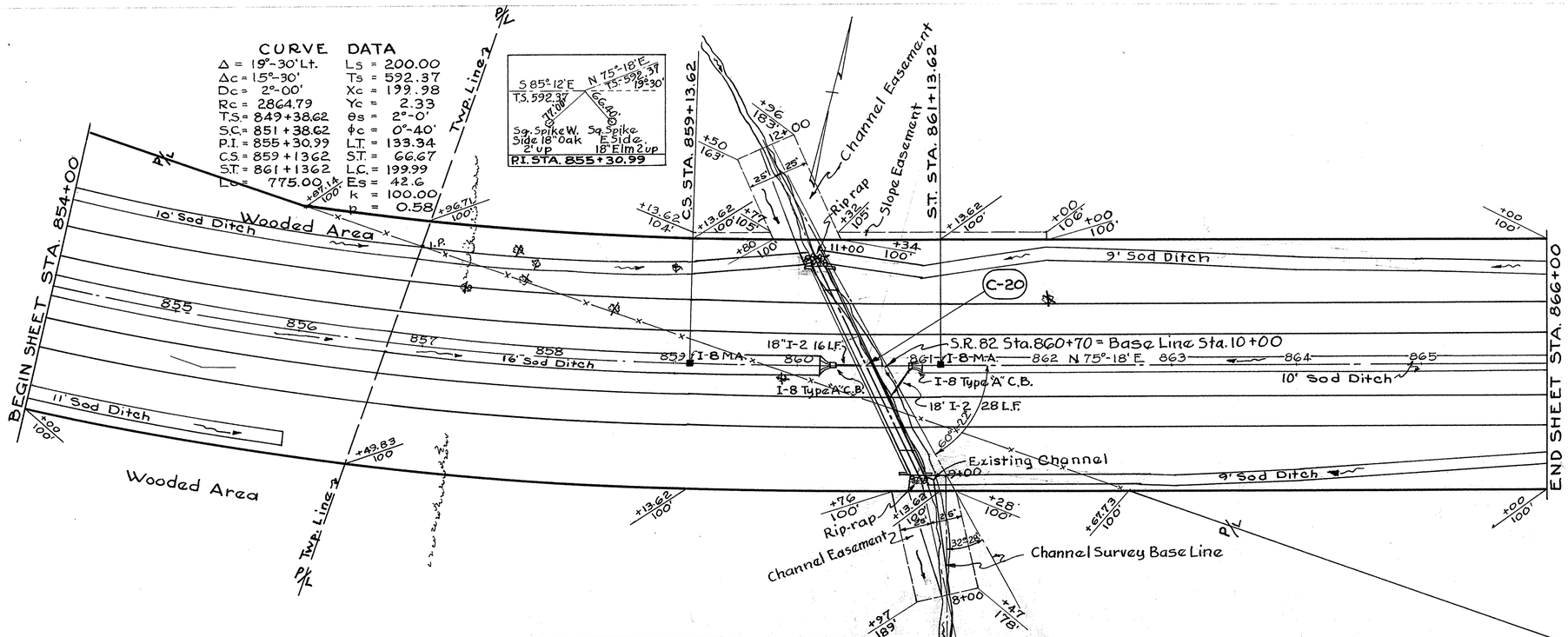
Station	Lt. Edge Left Lane	Median Edge Each Lane	Rt. Edge Rt. Lane
	1071.26	1071.26	1071.26
	1071.45	1071.45	
	1070.76	1070.76	1070.87
+38.62	1070.37	1070.37	1070.56
+58.62	1070.07	1070.17	1070.45
+78.62	1069.77	1069.97	1070.35
+98.62	1069.48	1069.78	1070.24
	1069.45	1069.76	
+18.62	1069.17	1069.57	1070.13
+38.62	1068.87	1069.37	1070.03
+58.62	1068.57	1069.17	1069.92
+78.62	1068.27	1068.97	1069.81
+98.62	1067.97	1068.78	1069.78
	1067.97	1068.76	
+18.62	1067.67	1068.57	1069.60
+38.62	1067.37	1068.37	1069.49
	1067.21	1068.28	1069.38
+75	1066.89	1068.01	1069.13
	1066.64	1067.76	1068.88
	1066.14	1067.26	1068.38
	1065.64	1066.76	1067.88
	1065.14	1066.26	1067.38
	1064.64	1065.76	1066.88



LINE SHEET STA. 842+00 To STA. 854+00

FED. DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO		

TRU 82 12.67



I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
859+13.62	℄	1
861+13.62	℄	1
TOTAL		2

R/W FENCE					
STATION		Side	Dist From ℄		SS-18 R/W Fence L.F.
From	To				
854+00	855+87.14	L	146.66	99	187.14
855+87.14	859+13.62	L	99	99	315.08
859+13.62	866+00	L	99	99	686.38
854+00	859.13.62	R	99	99	525.61
859+13.62	866+00	R	99	99	686.38
TOTAL					2400.59

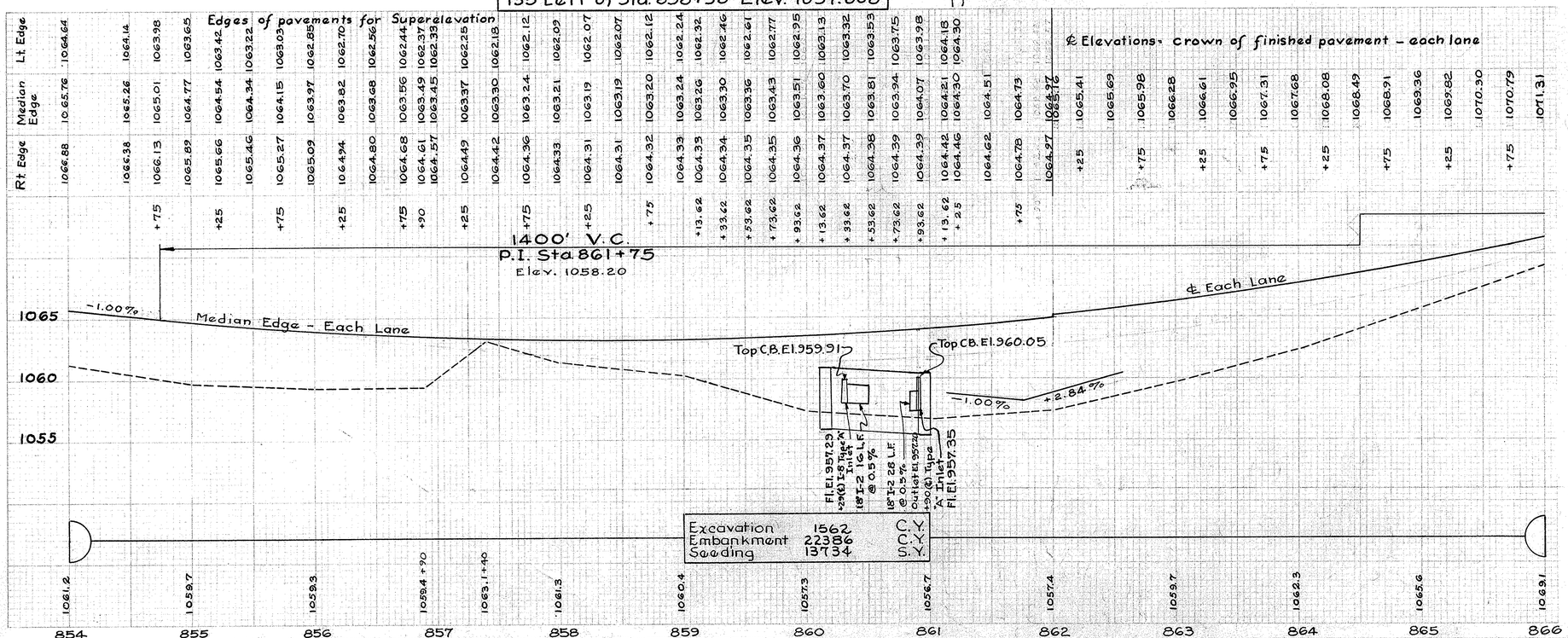
L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
854+00	860+00	L	667
860+15	866+00	L	585
854+00	860+17	℄	1100
861+00	866+00	℄	556
854+00	856+00	R	244
861+00	866+00	R	500
TOTAL			3652

DRAINAGE				
STATION		SIDE	I-2	I-8
FROM	TO		18" Class B L.F.	C.B.* TYPE "A" Ea.
860+29		℄		1
860+29	860+45	℄	16	
860+90	860+75	℄	28	
860+90		℄		1
TOTAL			44	2

* With Conc. Apron See Detail Sht. No. 8

STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHEET
C-20	860+55	LARGE CONCRETE BOX CULV.	10'x5'x184'-7½"	No. 158

B.M. No. 21. Spike in root of 36" Oak
135 Left of Sta. 858+38 Elev. 1057.808

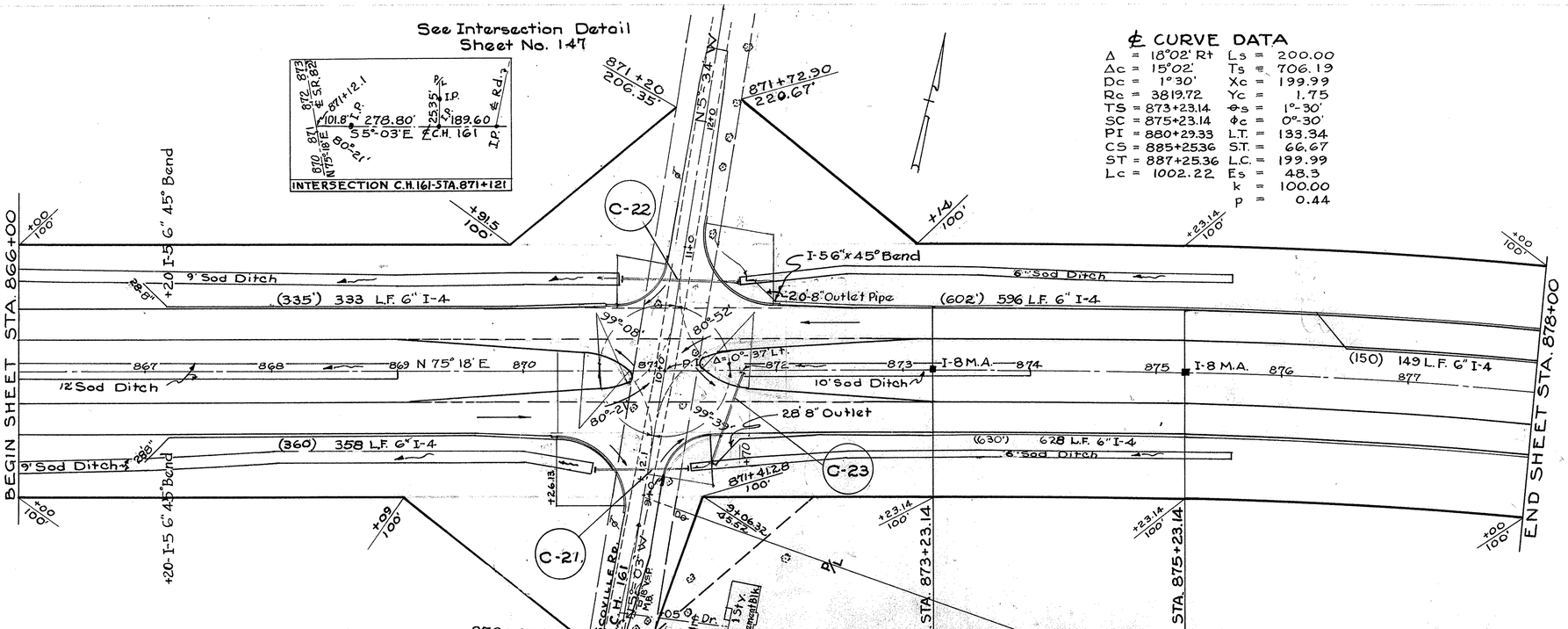


LINE SHEET STA. 854+00 TO STA. 866+00

See Intersection Detail Sheet No. 147

℄ CURVE DATA

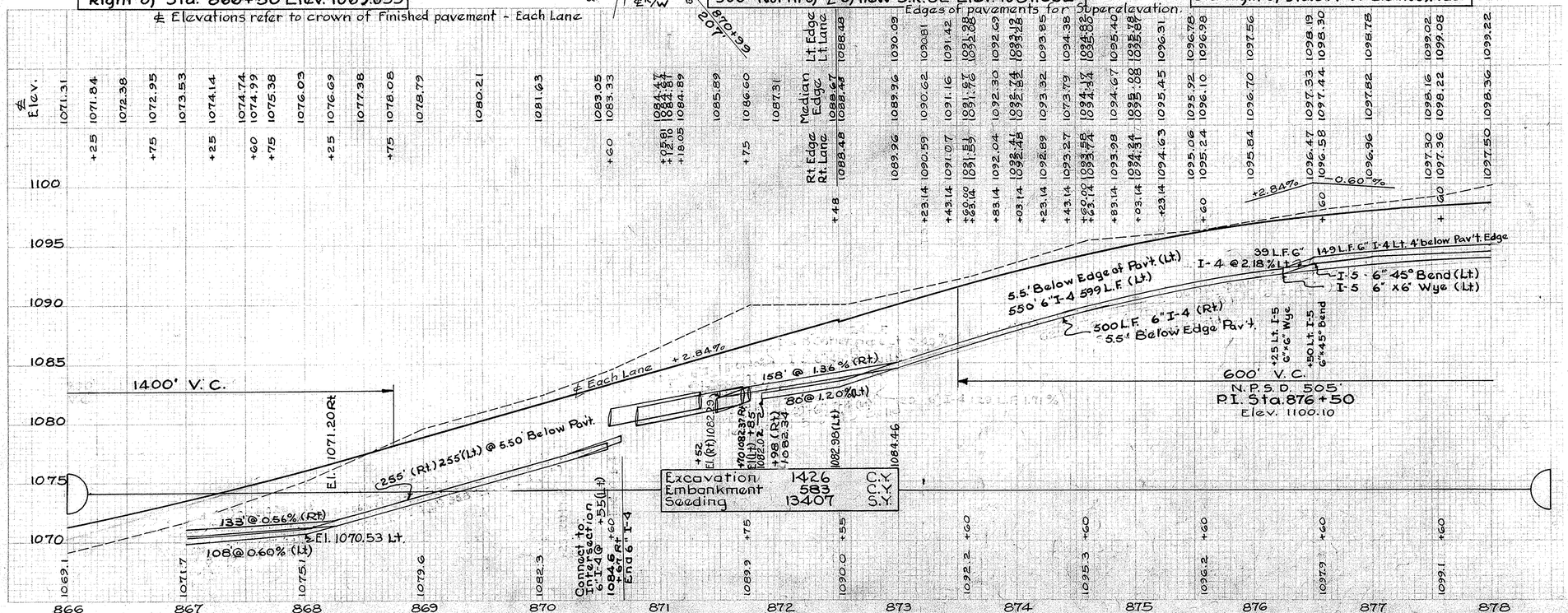
Δ	= 18°02' Rt	Ls	= 200.00
Δc	= 15°02'	Ts	= 706.19
Dc	= 1°30'	Xc	= 199.99
Rc	= 3819.72	Yc	= 1.75
TS	= 873+23.14	ϕs	= 1°-30'
SC	= 875+23.14	ϕc	= 0°-30'
PI	= 880+29.33	L.T.	= 133.34
CS	= 885+25.36	S.T.	= 66.67
ST	= 887+25.36	L.C.	= 199.99
Lc	= 1002.22	Es	= 48.3
		k	= 100.00
		p	= 0.44



B.M. No. 22 Spike in root of 40" Elm 200' Right of Sta. 866+50 Elev. 1069.053

B.M. No. 23 Spike in root 18" Maple East side C.H. 161 300' North of ℄ of new S.R. 82 Elev. 1087.632

B.M. No. 24 Spike in root of 18" Maple 315' Right of Sta. 877+00 Elev. 1089.423



STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHEET No.
C-21	870+56 871+38	Std. Pipe Culvert	15" x 76'	158
C-22	870+79.5 871+71.75	Std. Pipe Culvert	18" x 92'	158
C-23	871+75	Std. Pipe Culvert	18" x 75'	158

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH
873+23.14	℄	1
875+23.14	℄	1
TOTAL		2

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18-R/W Fence L.F.
866+00	869+91.50	L	99	99	391.50
869+91.50	871+20	L	99	205.35	166.80
871+72.90	873+14	L	219.67	99	185.66
873+14	878+00	L	99	99	486.00
866+00	869+09	R	99	99	309.00
869+09	870+49.02	R	99	216.57	182.83
870+99	871+41.28	R	206	99	115.05
871+41.28	878+00	R	99	99	658.72
TOTAL					2495.56

L-10 SODDING

STATION FROM	STATION TO	SIDE	S.Y.
866+00	870+78	L	478
871+72	875+60	L	259
866+00	869+00	℄	400
871+75	874+00	℄	250
866+00	870+56	R	456
871+31	875+60	R	286
TOTAL			2129

DRAINAGE

STATION FROM	STATION TO	SIDE	I-4 L.F. 6" UNDER DRAIN	I-4 L.F. 8" OUTLET PIPE	I-5 for I-4 6"x6" WYE Eq.	I-5 for I-4 6"-45° BEND Eq.
867+00	867+20	L&R		52		2
867+20	870+65	L	333			
871+83	871+98	L		20		1
871+98	878+00	L	596			
876+25	876+50	L	35		1	1
876+50	878+00	L	148			
867+20	870+69	R	358			
871+52	871+70	R		28		1
871+70	878+00	R	628			
TOTALS			2098	100	1	5

LINE SHEET STA. 866+00 TO STA. 878+00

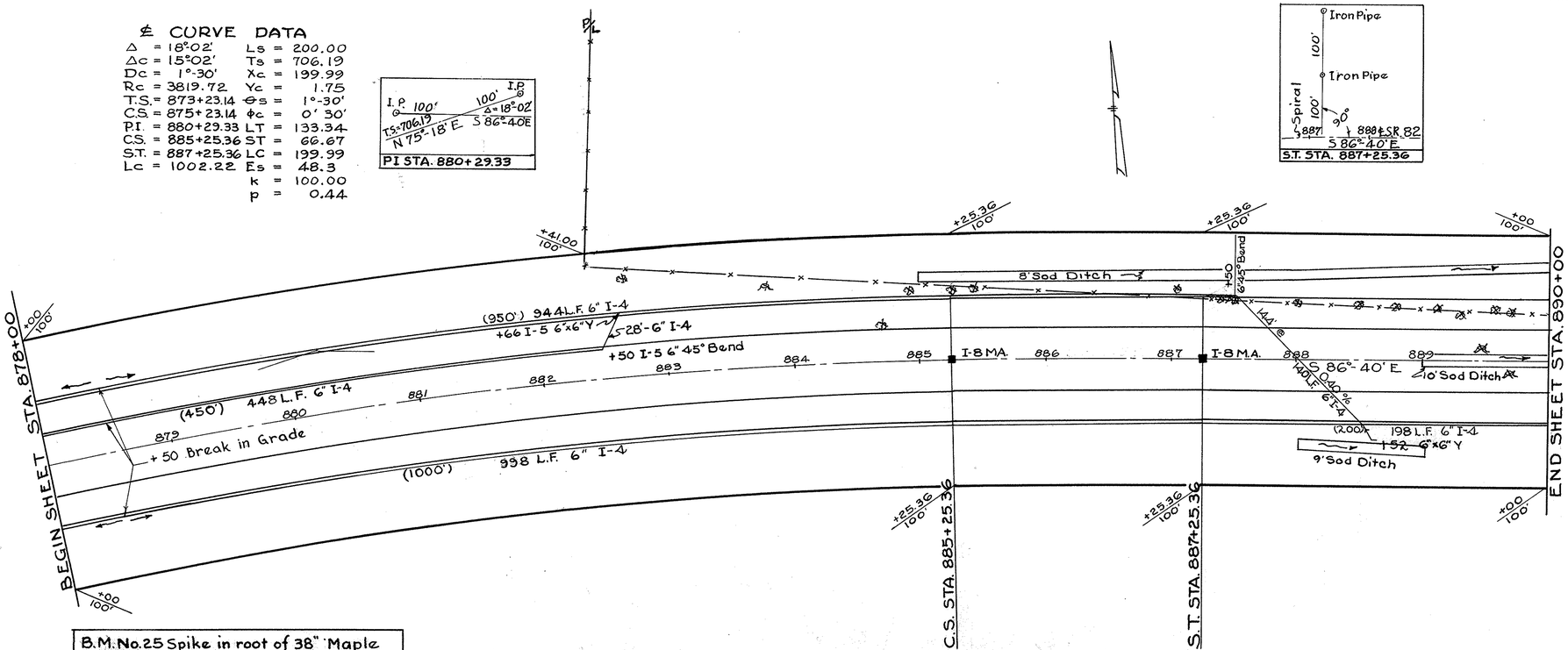
FED. RD. REVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

35
209

TRU-82-12.67

℄ CURVE DATA

Δ	= 18°02'	Ls	= 200.00
Δc	= 15°02'	Ts	= 706.19
Dc	= 1°-30'	Xc	= 199.99
Rc	= 3819.72	Yc	= 1.75
T.S.	= 873+23.14	ϴs	= 1°-30'
C.S.	= 875+23.14	ϕc	= 0° 30'
P.I.	= 880+29.33	LT	= 133.34
C.S.	= 885+25.36	ST	= 66.67
S.T.	= 887+25.36	LC	= 199.99
Lc	= 1002.22	Es	= 48.3
		k	= 100.00
		p	= 0.44



B.M. No. 25 Spike in root of 38" Maple
425' Right of Sta. Elev. 1096.119

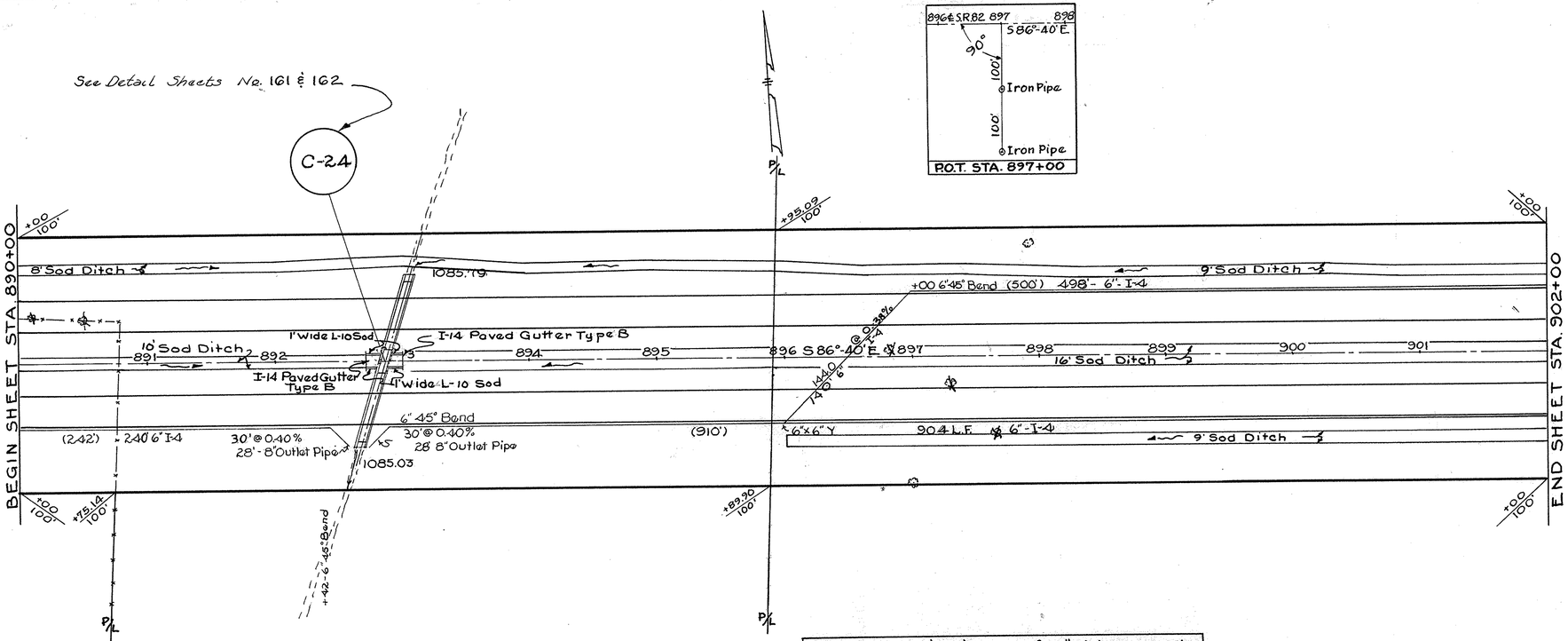
Edges of Pavements for Superelevation

| | | |

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

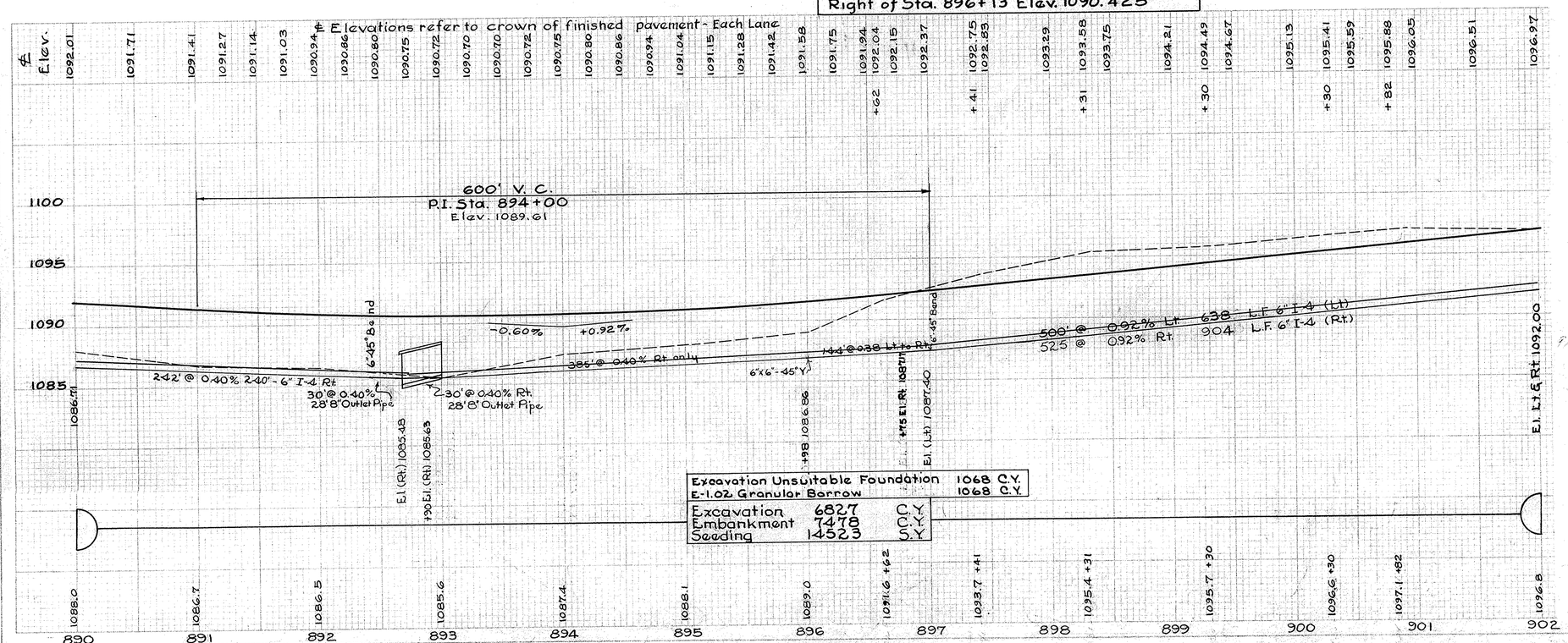
36
209

TRU-82-12.67



B.M. No. 26 Spike in root of 24" Hickory 205' Right of Sta. 896+13 Elev. 1090.425

¢ Elevations refer to crown of finished pavement - Each Lane



Excavation Unsuitable Foundation	1068	C.Y.
E-1.02 Granular Borrow	1068	C.Y.
Excavation	6827	C.Y.
Embankment	7478	C.Y.
Seeding	14523	S.Y.

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHEET No.
C-24	892+86.	Conc. Box Culv.	6'-0" x 2'-6" x 141'-3"	158

R/W FENCE

STATION From	STATION To	Side	Dist. From ¢		SS-18 R/W Fence L.F.
890+00	902+00	L	99	99	1200.00
890+00	902+00	R	"	"	1200.00
TOTAL					2400.00

L-10 SODDING

STATION FROM	STATION TO	SIDE	S.Y.
890+00	892+65	L	236
892+65	902+00	L	935
890+00	892+72.13	¢	306
892+99.87	902+00	¢	1609
896+00	902+00	R	600
TOTAL			3686

DRAINAGE

STATION FROM	STATION TO	SIDE	I-4 L.F. 6" UNDER DRAIN	8" OUTLET PIPE	I-5 for I-4 6"x6" WYE Ea.	6"x45° BEND Ea.
890+00	892+42	R	240			1
892+42	892+63	R		28		
892+69	892+90	R		28		1
892+90	902+00	R	904		1	
895+98	897+00	R to L	140			1
897+00	902+00	L	498			
TOTALS			1782	56	1	3

I-14 PAVED GUTTER & L-10 SOD

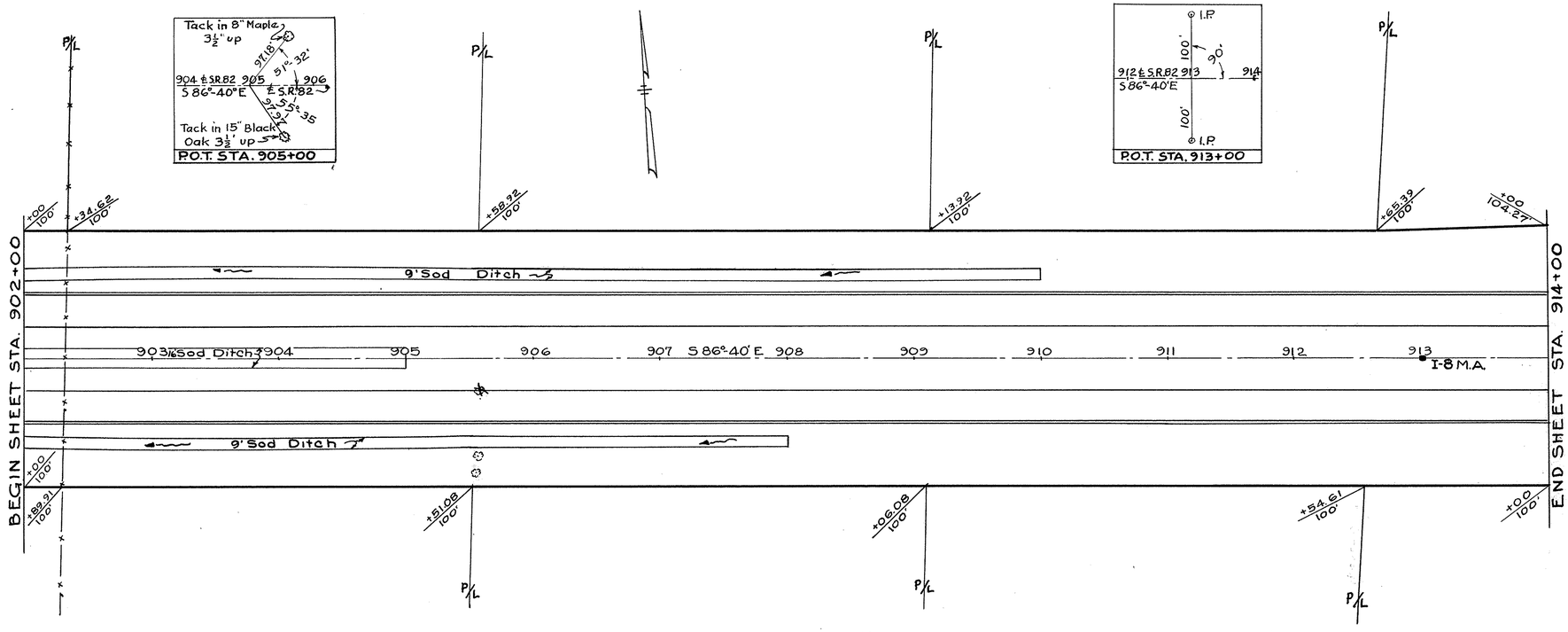
STATION From	STATION To	SIDE	TYPE B L.F.	SOD 1' WIDE S.Y.
892+72.13	892+82.13	C	10	2
892+89.87	892+99.87	C	10	2
TOTAL			20	4

LINE SHEET STA. 890+00 TO STA. 902+00

P.D. 10 DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

37
209

TRU-82-12.67



I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
913+00	℄	1
TOTAL		1

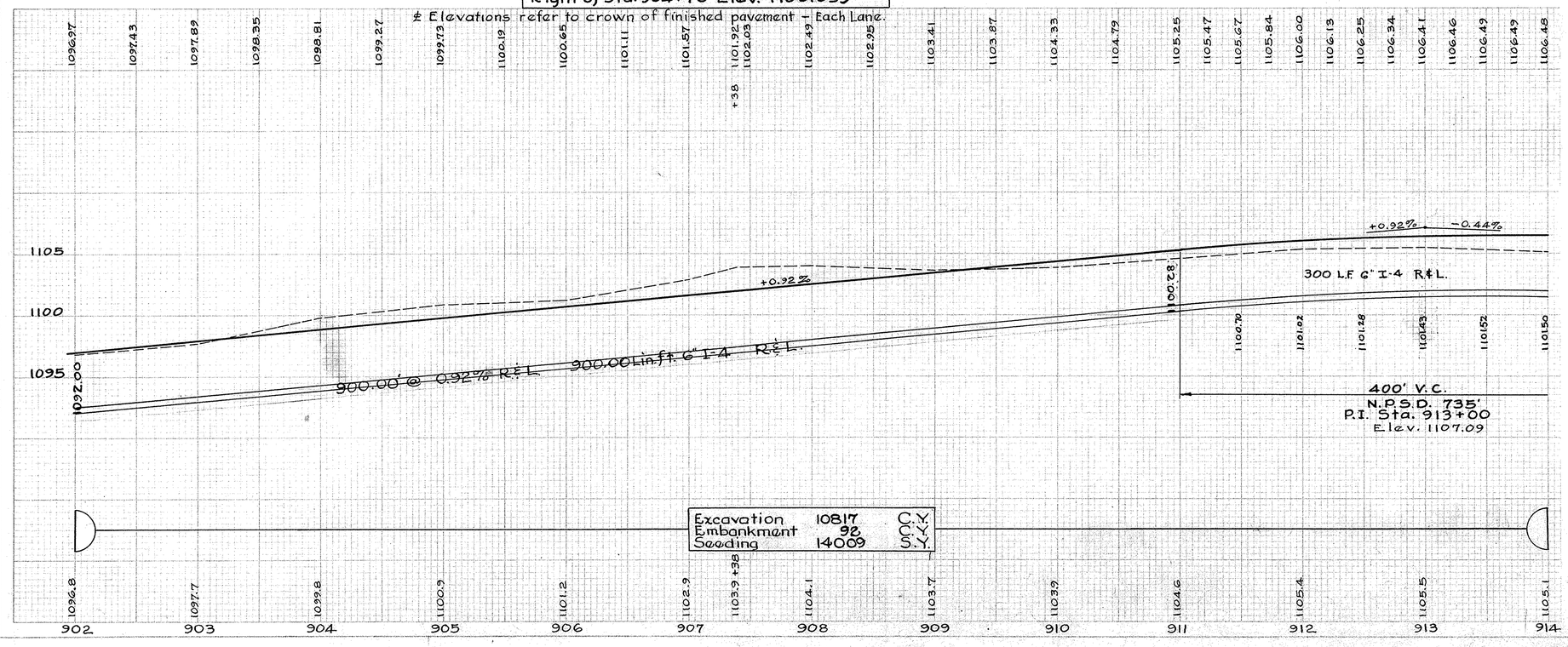
R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
902+00	912+65.39	L	99	99	1065.39
912+65.39	914+00	L	99	103.29	134.68
902+00	914+00	R	99	99	1200.00
TOTAL					2400.

L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
902+00	910+00	L	800
902+00	905+00	℄	533
902+00	908+00	R	600
TOTAL			1933

DRAINAGE						
STATION		SIDE	I-4 L.F		I-5 for I-4	
FROM	TO		6" UNDER DRAIN	8" OUTLET PIPE	6"x6" WYE Eq.	6"x45° BEND Eq.
902+00	914+00	L & R	2400			
TOTALS			2400			

B.M. No. 27 Spike in root of 18" Elm 153' Right of Sta. 904+70 Elev. 1100.639

℄ Elevations refer to crown of finished pavement - Each Lane.



LINE SHEET STA. 902+00 To STA. 914+00

SEC. OF DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

38
209

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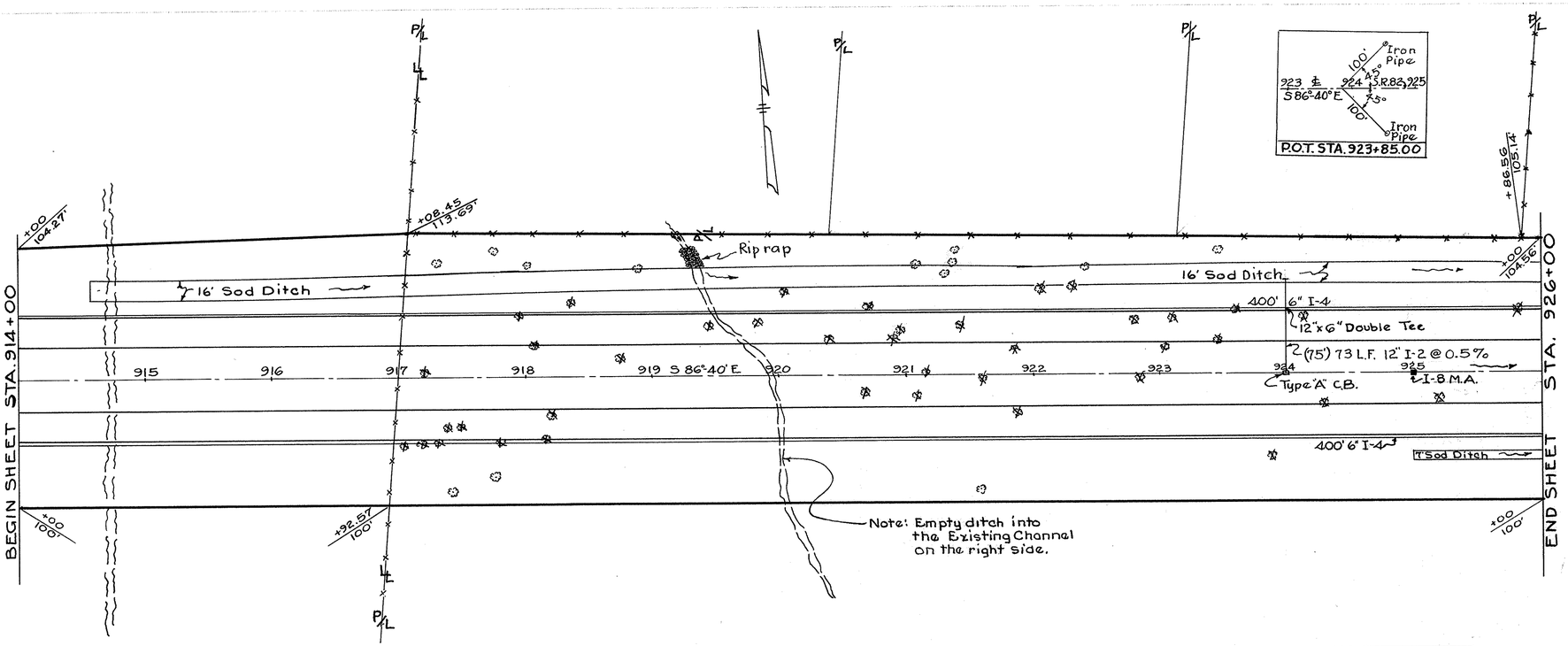
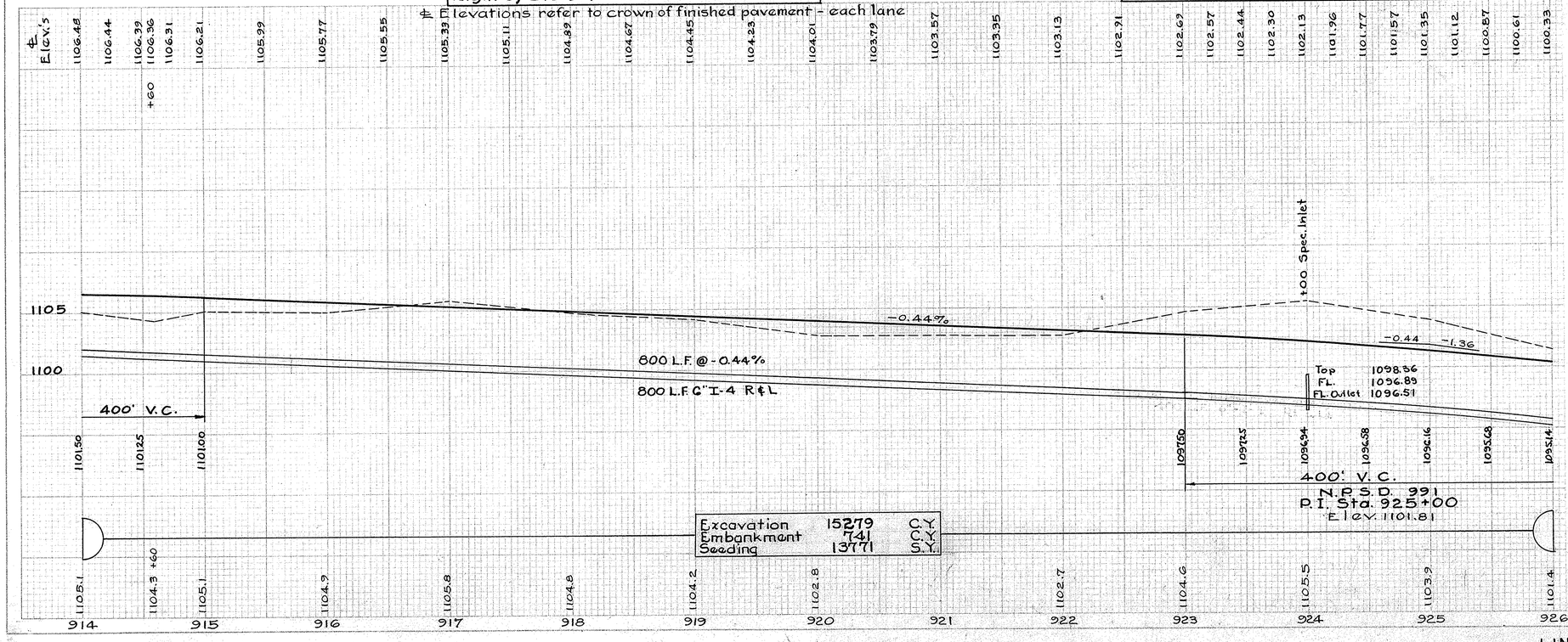


B.M. No. 28 Spike in root of 30" Oak 78' Right of Sta. 917+65 Elev. 1105.779

B.M. No. 29 Spike in root of 15" Ash 111' Left of Sta. 925+38 Elev. 1104.223

℄ Elevations refer to crown of finished pavement - each lane



I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
925+00	℄	1
TOTAL		1

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
914+00	917+08.45	L	103.57	112.69	308.59
917+08.45	925+86.56	L	112.69	104.14	878.16
925+86.56	926+00	L	104.14	103.54	13.44
914+00	926+00	R	99	99	1200.00
TOTALS					2400.

DRAINAGE			
STATION		SIDE	I-4 L.F. 6" UNDER DRAIN
FROM	TO		
914+00	926+00	L&R	2400
TOTAL			2400

L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
914+57	926+00	L	2032
925+00	926+00	R	78
TOTAL			2110

I-10 RIP RAP		
STATION	SIDE	TYPE "A" S.Y.
919+35	L	28
TOTAL		28

DRAINAGE					
STATION	SIDE	I-2 12" U/A Cl. "B" L.F.	I-8 Special TYPE 'A' C.B. Each	I-5 for I-2 12"x6" Double Tee Each	S-1 Class 'E' C.Y.
924+00	L	73	1	1	0.23
TOTALS		73	1	1	0.23

LINE SHEET STA. 914+00 To STA. 926+00

FED. HWY. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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209

TRU-82-12.67

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHEET NO.
C-25	936+34	Sect. Plate Culv.	9'-6"x6'-5"x170	158

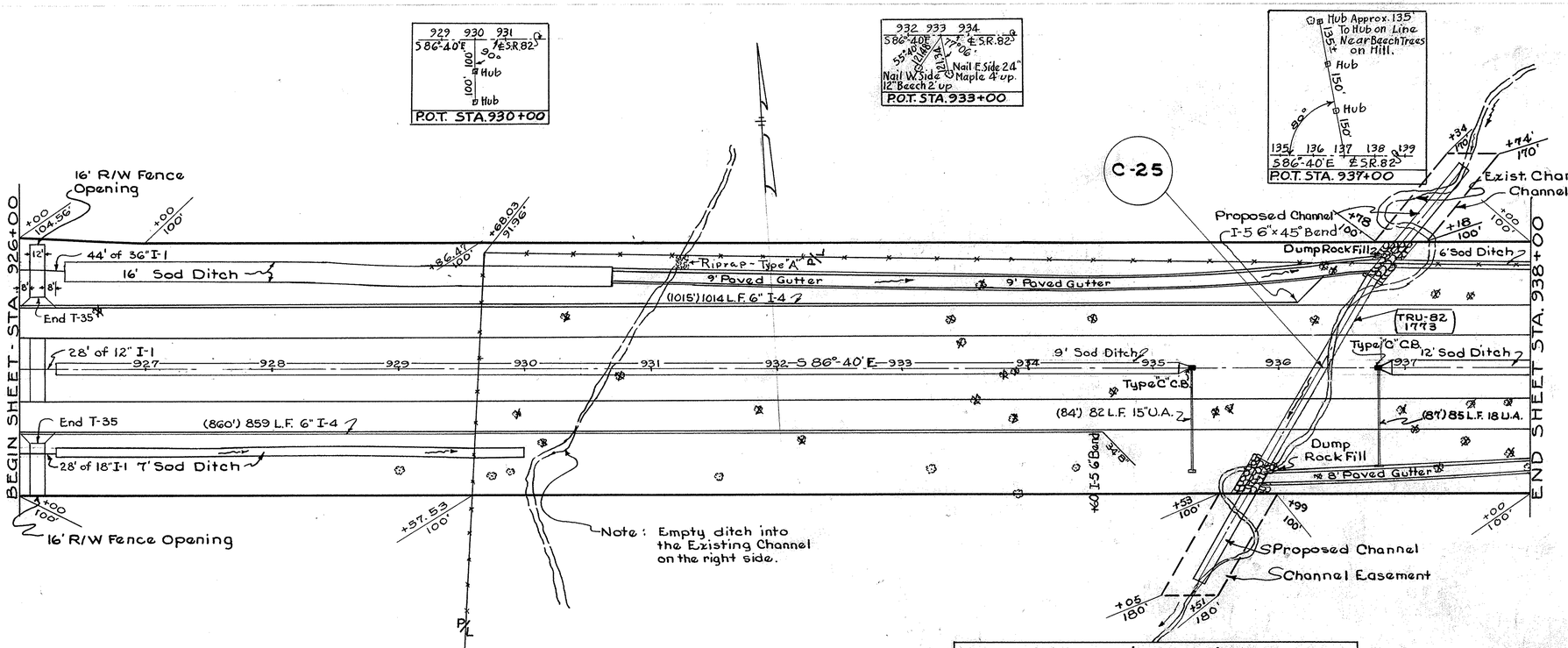
R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
926+00	926+08	L	103.56	103.47	8.00
926+24	927+00	L	102.66	99.00	76.00
927+00	938+00	L	99.00	99.00	1100.00
926+00	926+08	R	99.00	99.00	8.00
926+24	938+00	R	99.00	99.00	1176.00
TOTAL					2368.00

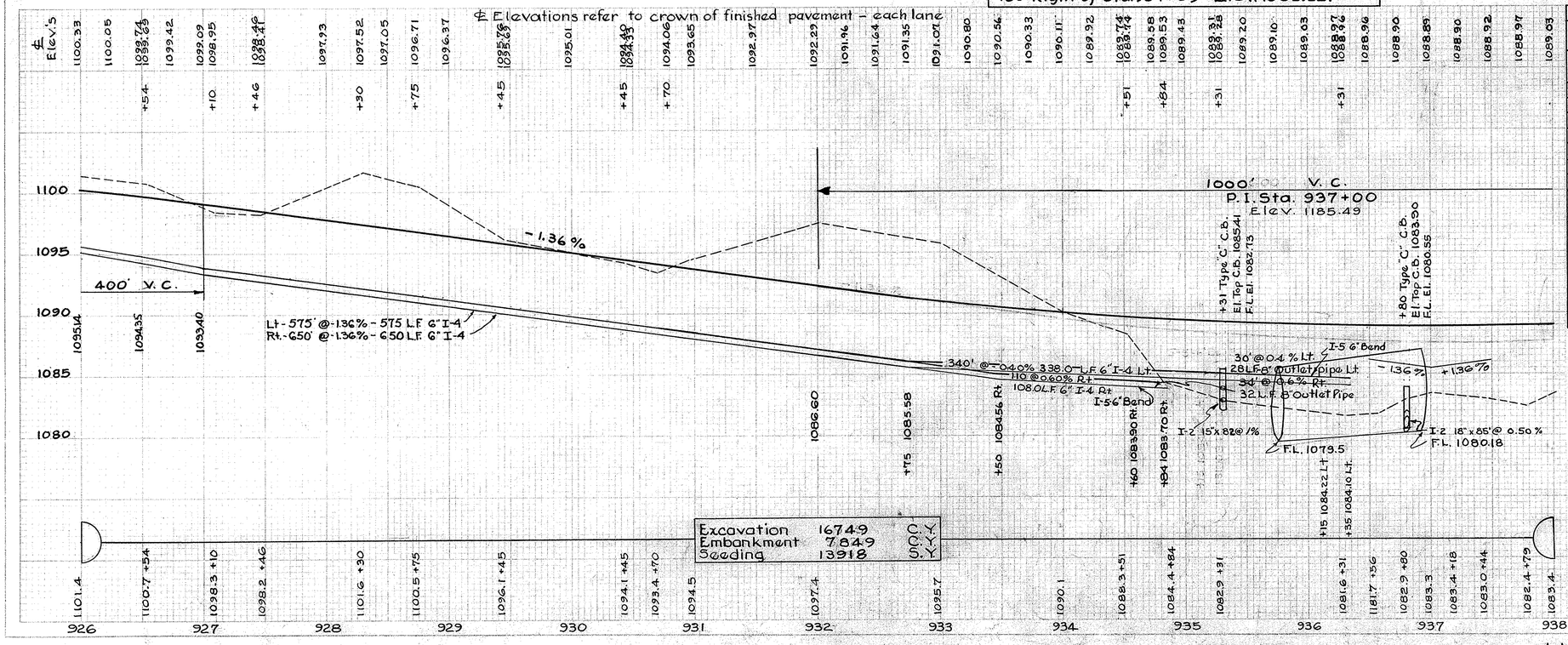
SODDING & PAVED GUTTER★

STATION FROM	STATION TO	SIDE	L-10 SOD S.Y.	MODIFIED I-14G PAVED GUTTER TYPE "A" L.F.	TYPE "B" L.F.	
926+38	930+70	L	768			
930+70	936+94	L	139		624	
937+03	938+00	L	65			
926+28	935+28	℄	900			
934+00	935+20	℄	160			
936+91	938+00	℄	145			
926+28	930+00	R	289			
935+74	938+00	R	50		226	
TOTALS			2516		850	

★ See Detail Sheet No. 4



B. M. No. 30 Spike in root of 18" White Oak 180' Right of Sta. 934+09 Elev. 1082.227



Excavation 1674 C.Y.
Embankment 784 C.Y.
Seeding 1391 S.Y.

DRAINAGE

STATION FROM	STATION TO	SIDE	I-1 12" L.F.	I-1 18" L.F.	I-1 36" L.F.	I-4 6" Under Drain L.F.	I-4 8" Outlet Pipe L.F.	I-5 I-4 6"-45° Bend EA.	I-2 Class 'B' 15" U.A. L.F.	I-8 18" U.A. L.F.	I-8 Type "C" C.B. Ea.	S-1 Class "E" Conc. C.Y.
925+94	926+38	L			44							
926+00	936+15	L				1013						
936+15		L						1				
936+15	936+37	L					28					
926+00	926+28	℄	28									
935+31		℄									1	
935+31		℄ & R							82			
935+31		R										0.26
936+80		℄									1	
936+80		℄ & R								85		
936+80		R										0.30
926+00	926+28	R		28								
926+00	934+60	R				858						
934+60		R						1				
934+60	934+84	R					32					
TOTALS			28	28	44	1871	60	2	82	85	2	0.56

DRIVES

MARK	STATION	TYPE	SIDE		WIDTH	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.
D-37	926+16	Field	R		12'	17.8	56.0	17.8
D-38	926+16	Field	℄		12'	66.7		66.7
D-39	926+16	Field	L		12'	17.8	56.0	17.8
TOTALS						102.3	112.0	102.3

RIPRAP

STATION FROM	STATION TO	SIDE	I-10 Type "A" S.Y.	
931+20	931+30	L	10	
TOTAL			10	

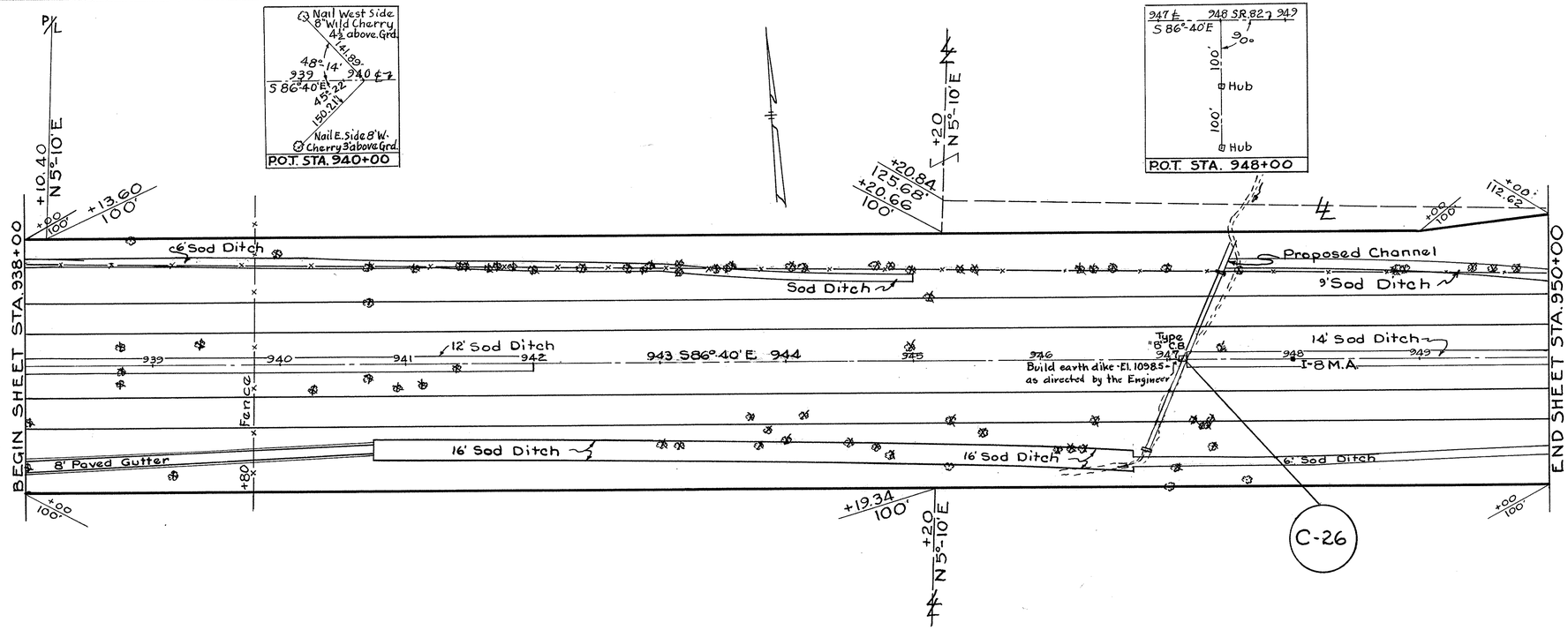
LINE SHEET STA. 926+00 To STA. 938+00

FED. HY. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

40
209

TRU-82 - 12.67

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
948+00.0	℄	1
TOTAL		1

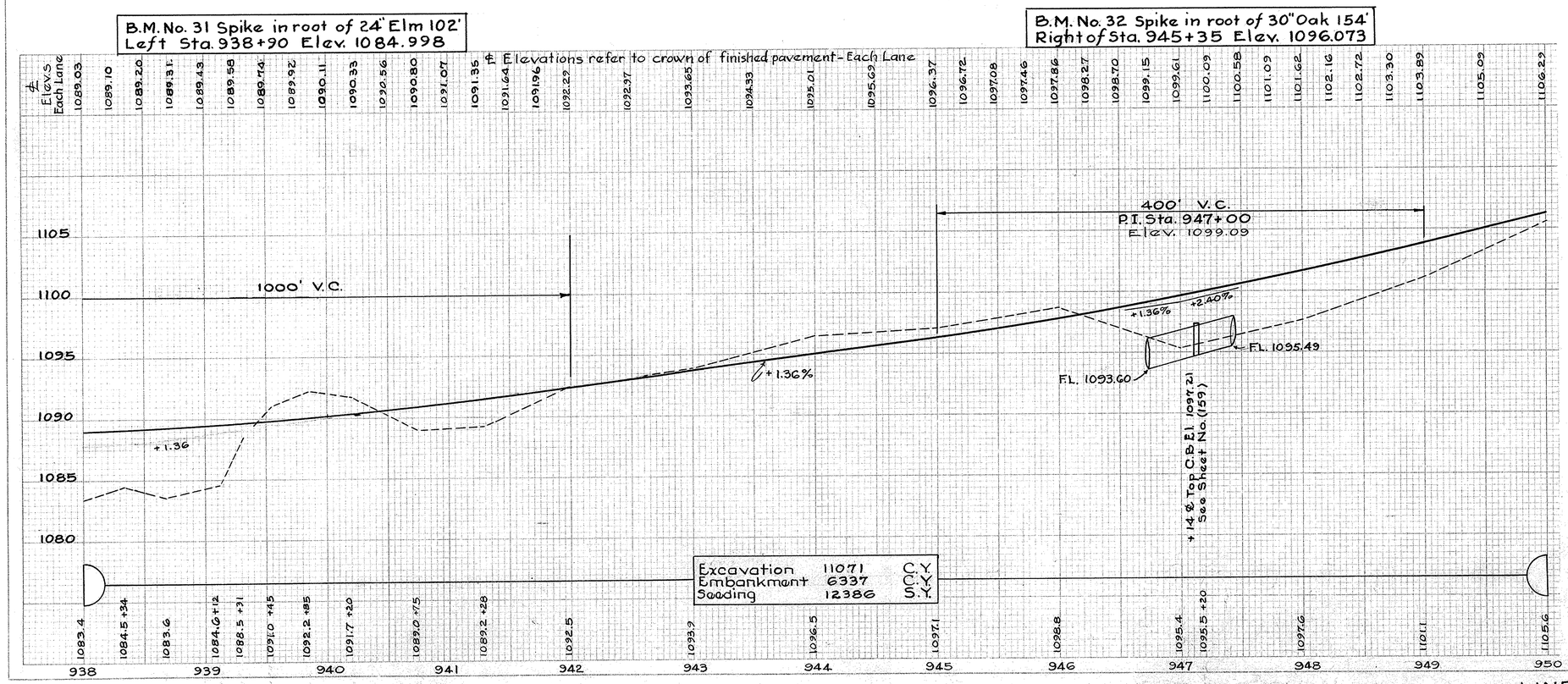


STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHEET No.
C-26	947+14	Std. Pipe Culv.	30" x 147	159

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F
From	To				
938+00	949+00	L	99	99	1100.00
949+00	950+00	L	99	111.62	100.79
938+00	950+00	R	99	99	1200.00
TOTAL					2401.

SODDING & PAVED GUTTER ★						
STATION		SIDE	L-10 SOD	MODIFIED I-14G PAVED GUTTER		
FROM	TO		S.Y.	TYPE "A" L.F.	TYPE "B" L.F.	TYPE "C" L.F.
938+00	945+00	L	467			
947+43	950+00	L	257			
938+00	942+00	℄	533			
947+14	950+00	℄	445			
938+00	940+75	R	61		275	
940+75	946+74	R	1065			
946+74	950+00	R	217			
TOTALS			3045		275	

★ See Detail Sheet No. 4



LINE SHEET STA. 938+00 TO STA. 950+00

FED. RD. DIVISION	STATE		SHEET YEAR
2	OHIO		

41
209

TRU-82-12.67

Nail SW Side 20" Black Oak 2½' above Ground
Nail S.E. root 20" Wild Cherry
Nail S.E. Side 15" Black Oak 1' above ground
148.30'
146.35'
141.46'
48°-17'
T.S. 86+14
S 86°-40' E 956
Spiral 957
℄ S.R. 82
S.C. 958
139.29'
T.S. STA. 956+08.50 SC. STA. 958+08.50

CURVE DATA

Δ = 10°-25' Rt.		Ls =	200.00
Dc =	7°-25'	Ts =	448.23
Dc =	1°-30'	Xc =	199.99
Rc =	3819.72	Yc =	1.75
Ts =	956+08.50	θs =	1°-30'
SC =	958+08.50	θc =	0°-30'
P.I. =	960+56.73	L.T. =	133.34
CS =	963+02.94	S.T. =	66.67
ST =	965+02.94	L.C. =	199.99
Lc =	494.44	Es =	16.29
		k =	100.00
		p =	0.44

Spike in 15" W. Cherry S.W. Side 1' above ground
129.87'
103.34'
61°-03'
82°-03'
T.S. = 448.23
S 86°-40' E
T.S. 448.23
S 76°-15' E
P.I. STA. 960+56.73

I-8 MONUMENT ASSEMBLY

STATION	LOCATION	EACH
956+08.50	℄	1
958+08.50	℄	1
960+56.73	16.29' Lt ℄	1
TOTAL		3

R/W FENCE

STATION From	STATION To	Side	Dist. From ℄		SS-18 R/W Fence L.F.
950+00	950+24.77	L	111.62	114.75	24.77
950+24.77	956+08.50	L	114.75	103.07	583.89
956+08.50	958+08.50	L	103.07	100.85	200.01
958+08.50	960+32.41	L	100.85	109.92	224.06
960+32.41	962+00	L	109.92	101	167.78
950+00	962+00	R	99	99	1200.00
TOTAL					2400

L-10 SODDING

STATION FROM	STATION TO	SIDE	S.Y.
950+00	960+00	L	1000
950+00	958+00	℄	1244
950+00	958+00	R	534
TOTAL			2778

DRAINAGE

STATION FROM	STATION TO	SIDE	I-4 6" UNDER DRAIN	I-4 L.F. 8" OUTLET PIPE	I-5 for I-4 6"x6" WYE Ea.	I-5 for I-4 6"x45° BEND Ea.
953+00	953+14	L&R		36		2
953+14	962+00	L&R	1768			
TOTALS			1768	36		2

BEGIN SHEET - STA. 950+00
+00 112.62
+24.77 115.75
℄ P/L ℄ R/W
N 85°-31'-20" W
+08.50 104.07'
+08.50 101.83'
+32.41 110.02'
P.I. Sta. 960+56.73
N 0°-29' W
+39.19
END SHEET STA. 962+00
N 5°-10' E
+61
18'0" 8" Outlet Pipe
6" Bend I-5
(886') 884 L.F. 6" I-4
9' Sod Ditch
Ditch
14' Sod Ditch
951 952 953 954 S 86°-40' E 955 956 957 958 959 960 961
I-8 M.A.
6" Sod Ditch
+00 100'
+08.50 100'
T.S. 956+08.50
SC. 958+08.50
+45.75 100'
150.0'

B.M. No. 33 Spike in root of 42" Oak - 111' Left of Sta. 951+15 Elev. 1109.559

B.M. No. 34 Spike in root of 26" W. Cherry - 104' Left of Sta. 956+74 Elev. 1129.008

B.M. No. 35 Spike in root of 24" Black Oak 120' Left of Sta. 961+94 Elev. 1134.228

℄ Elevations refer to crown of finished pavement - each lane

Edges of pavements for superelevation

Station	℄ Elev.	Rt. Edge Median Lane	Lt. Edge Median Lane	Rt. Edge Lt. Lane	Lt. Edge Lt. Lane
950	1106.29				
951	1107.49				
952	1108.69				
953	1109.89				
954	1111.09				
955	1112.29				
956	1113.49				
957	1114.69				
958	1115.89				
959	1117.09				
960		1118.23	1118.23	1118.69	1118.69
		1118.69	1118.69	1119.25	1119.25
		1119.25	1119.27		
		1120.23	1120.30	1120.30	1120.45
		1120.44	1120.46	1120.46	1120.65
		1120.76	1120.85	1120.85	1121.11
		1121.05	1121.22	1121.22	1121.54
		1121.31	1121.57	1121.57	1121.96
		1121.57	1121.91	1121.91	1122.37
		1121.71	1122.10	1122.10	1122.60
		1121.81	1122.24	1122.24	1122.77
		1122.02	1122.54	1122.54	1123.19
		1122.23	1122.83	1122.83	1123.42
		1122.41	1123.10	1123.10	1123.82
		1122.59	1123.36	1123.36	1124.13
		1122.65	1123.50	1123.50	1124.33
		1122.76	1123.60	1123.60	1124.40
		1122.93	1123.79	1123.79	1124.62
		1123.19	1124.05	1124.05	1124.91
		1123.43	1124.29	1124.29	1125.15
		1123.64	1124.50	1124.50	1125.36
		1124.04	1124.90	1125.76	
		1124.44	1125.30	1126.16	
		1124.84	1125.70	1126.56	
		1125.24	1126.10	1126.96	
		1125.64	1126.50	1127.36	
962		1126.04	1126.90	1127.76	

+2.40% +0.80% Median Edge Each Lane
+0.80%
1122.26
1120.54
1119.86 Outside edge Lt. Lane
1118.14 Outside edge Rt. Lane
700'-L.Ft.-6" I-4-Lt.
700'-L.Ft.-6" I-4-Rt.
700'@ 5.5' below Lt. Pavement Edge of Lt. Lane
700'@ 5.5' below Rt. Pavement Rt. Lane
El. 1112.60 Both Lanes
+2.40% ℄ Each Lane
6"-45° Bend R&L
El. 1111.86
1860' @ 040% R&L
El. 1110.75 R&L
18400 L.F. 6" I-4 R&L
18 L.F. 8" Outlet Pipe R&L
400' V.C.
N.P.S.D. 655'
P.I. Sta 957+00
Elev. 1123.09

Excavation	31182	C.Y.
Embankment	126	C.Y.
Seeding	12976	S.Y.

1105.6 1107.5 1110.3 1112.9 1115.8 1119.4 1124.4 1127.9 +88.5 1129.6 +68.5 1130.2 +08.5 1131.8 1132.5 1132.0 1132.5

950 951 952 953 954 955 956 957 958 959 960 961 962

LINE SHEET STA. 950+00 TO STA. 962+00

DIST.	STATE	ROUTE	SECT.
2	OHIO		

42
209

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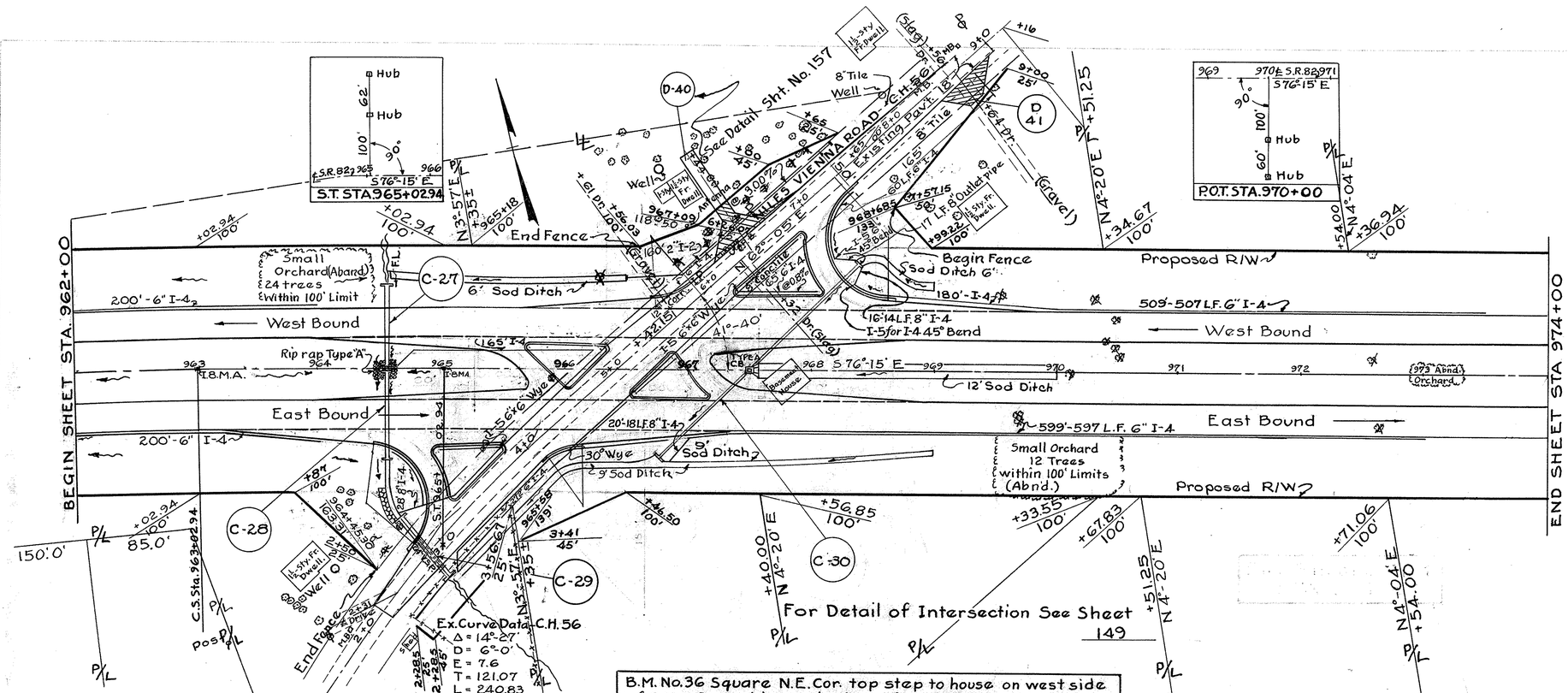


STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHEET No.
C-27	964+58	Std. Pipe Culvert	30" x 66'	159
C-28	964+58	Std. Pipe Culvert	30" x 80'	159
C-29	964+65 25 / 965+07.00	Std. Pipe Culvert	30" x 64'	159
C-30	967+50	Std. Pipe Culvert	15" x 22.7'	159

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
963+02.94	℄	1
965+02.94	℄	1
TOTAL		2

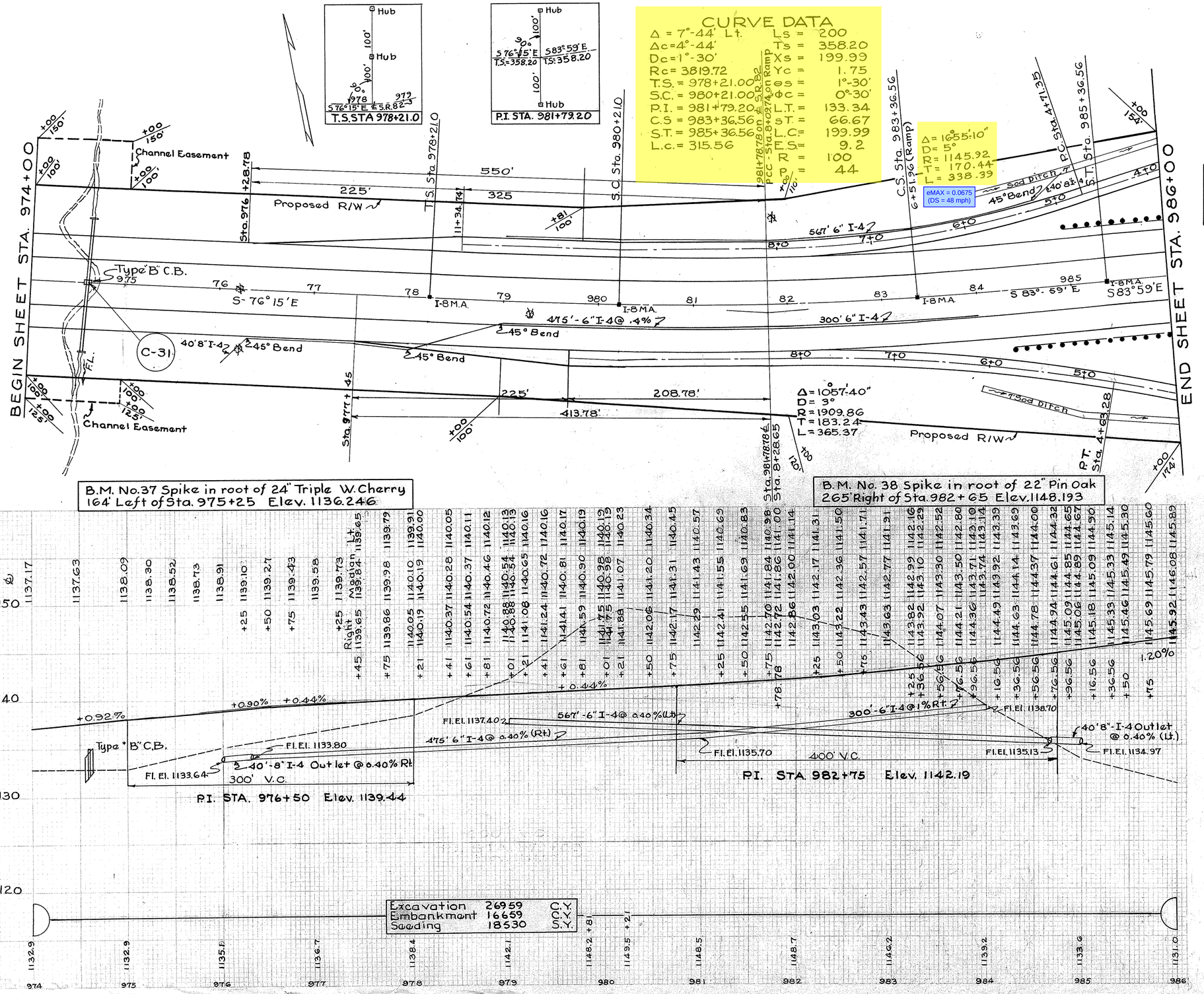
R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
962+00	966+36	L	99	99	456.00
968+68.50	968+99.22	L	132	99	45.08
968+99.22	974+00	L	99	99	500.78
962+00	963+87	R	99	99	187.00
963+87	964+45.30	R	99	162.31	86.07
965+58	966+46.50	R	138	99	96.71
966+46.50	974+00	R	99	99	753.50
TOTAL					2125.14

DRAINAGE						
STATION		SIDE	I-4	L.F.	I-5 for I-4	
FROM	TO		6" UNDER DRAIN	8" OUTLET PIPE	6"x6" WYE Ea.	6"x45 BEND Ea.
962+00	964+00	L & R	400			
964+65	964+78	L		14		1
964+78	966+25	L	145			
966+85	967+01	R		18		1
967+01	973+00	R	597			
968+35	968+41	L		14		1
968+35	973+50	L	507			
968+18	968+33	L	60			
968+18	968+35	L		17		1
TOTALS			1709	63		4

L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
964+63	966+50	L	125
968+35	969+00	L	47
967+62	970+00	℄	317
965+17	969+00	R	420
TOTAL			909

DRIVES								
MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	T-35 2" S.Y.	I-1 L.F.
D-40	6+44 C.H.56	Comb.	Lt.	See Sht. No. 157				
D-41	8+64 C.H.56	Res.	Rt.	20	12	72	71	
TOTAL						72	71	

LINE SHEET STA. 962+00 TO STA. 974+00



STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHEET No
C-31	974+60	Std. Pipe Culvert	30" x 142'	159

I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
978+21	℄	1
980+21	℄	1
983+36.56	℄	1
985+36.56	℄	1
TOTAL		4

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
974+00	979+81	L	99	99	581.00
979+81	982+00	L	99	109	219.00
982+00	986+00	L	109	153	397.00
974+00	979+00	R	99	99	500.00
979+00	982+00	R	99	119	300.00
982+00	986+00	R	119	173	408.00
TOTAL					2405.00

I-15 GUARD RAIL			
STATION		SIDE	I-15 L.F.
FROM	TO		
984+96.68	986+00	Lt	103.32
984+35.92	986+00	Rt	164.08
TOTAL			267.40

DRAINAGE						
STATION		SIDE	I-4 (L.F.)			I-5 for I-4
FROM	TO		6" UNDER DRAIN	8" PIPE	OUTLET 6"x45° BEND Eq.	
976+00	976+30	R		40		
976+30	984+00	R	772		3	
979+00	984+67	L	566		1	
984+67	985+00	L		40		
TOTALS			1338	80	4	

L-10 SODDING			
STATION		SIDE	S.Y.
FROM	TO		
984+05	986+00	L	158
983+98	986+00	R	163
TOTAL			321

TRU. 82-12.67

Channel Data
Δ = 27°-30'
R = 81.73'
T = 20'
L = 39.23'

BEGIN SHEET STA. 986+00

END SHEET STA. 998+00

End Fence
Channel Ease.
Prop. R/W
Begin Fence
R/W
9' Sod Ditch
495'6" I-4
Proposed Channel
45° Bend
Channel Easement
23'8" I-4 - 44'8 I-4 Outlet
235'6" I-4
9' Sod Ditch
Double T
10'6" I-4
Exist. Channel
215'-6" I-4
10'6" I-4
108'-6" I-4 @ 2%
N 82°-57'-50" E
6" Sod Ditch
Type "D" C.B.
Sta. 989+83.55 ℄ S.R. 82
Sta. 352+38.42 ℄ S.R. 90
S 83°-59' E
End Approach Slab 988+86.88
Begin Approach Slab 990+80.22
I-8 M.A.
14' Sod Ditch
S 83°-59' E
10'6" I-4
215'6" I-4
16'8" I-4
See Intersection Detail Sheet No. 150-151
C-32
C-33
C-34
C-35
C-36
C-37
C-38
12' Sod Ditch
14' Sod Ditch
10' Sod Ditch
S 69°-09'-20" E
N 81°-30'-10" E
45° Bend
160'-6" I-4
245'-8" I-4
265'6" I-4
210'-6" I-4
Begin Fence
60° Bend
35'-8" I-4
30'-8" I-4
Channel Easement
R/W
End Fence
B.M.
Fl. Line 1124.65
B.M. No. 39 S.E. Corner Bottom Step ± 12.5'
Lt. ℄ Sta. 348+85 on S.R. 90.
Bridge Limits
Sta. 988+86.88 to Sta. 990+80.22
400' V.C.
P.I. Sta. 998+00 Elev. 1136.33
1.20%
-1.76%
Bench Elev. 1143.1±
Bench Elev. 1143.0
800' V.C.
N.P.S.D. 628'
P.I. STA. 989+83.55
Elev. 1150.69
PROPOSED STRUCTURE
Type: Continuous reinforced concrete slab with reinforced concrete substructure.
Spans: 42'- 52.5'-52.5'- 42' c/c Brgs.
Roadways: 2@28'-0" f/f of 2'-0" safety curbs.
Load Frequency: CF = 400 (51)
Skew: 00°-56' R.F.
Wearing Surface: 1" Monolithic Concrete
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent
El. F.L. 1136.00
El. F.L. 1133.70
El. F.L. 1132.14
F.L. El. 1127.35
F.L. 1133.65
1131.55
1131.20
F.L. 1130.00
215'6" I-4 @ 1.0% Rt.
10'6" I-4 @ 1.0%
16'8" I-4 @ 1.0%
235'6" I-4 @ 0.4% Lt.
23' @ 0.4%
44' @ 1.3%
8" I-4 Outlet
10'6" I-4 @ 1%
265' 6" I-4 @ 1.0% Rt.
495' 6" I-4 @ 80% Lt.
210'-6" I-4 @ 0.4% Rt.
160'6" I-4 @ 1.20% Rt.
30'-8" I-4 @ 1.20% Rt.
45°-8" I-4 Outlet @ 1.0%
6" I-4 @ 2% Lt.
110'
6" I-4 Connects into a Dble. Wye on S.R. 90 here
Elev. 1122.5±
Elev. 1124.5
Elev. 1122.5
See Sht. No. 155
6" I-4 from Intersection SR 90 Connects here
35'-8" I-4 @ 0.4%

Excavation	17664	C.Y.
Embankment	76492	C.Y.
Seeding	37040	S.Y.

LINE SHEET STA. 986+00 TO STA. 998+00

L-10 SODDING

STATION FROM	TO	SIDE	S.Y.
986+00	986+77	L	56
986+00	987+00	L	67
986+92	989+28	L	203
990+43	995+49	L	570
995+57	998+00	L	247
989+17		Lt to R	170
994+00	998+00	℄	622
986+00	987+98	R	133
987+98	989+26	R	173
988+53	988+63	R	27
986+00	988+39	R	160
988+43	988+88	R	33
990+79	992+81	R	295
990+59	991+36	R	70
995+20	998+00	R	333
TOTAL			3159

I-T REINF. CONC. APPR. SLAB. (T-13)

STA. to STA.	SIDE	LENGTH	S.Y.
986+61.88	L	2.5	66.67
986+61.88	R	2.5	66.67
990+80.22	L	2.5	66.67
990+80.22	R	2.5	66.67
TOTAL			266.68

R/W FENCE

STATION From	To	Side	Dist. From ℄		55-18 R/W Fence L.F
986+00	987+00	L	153	186	105.30
987+00	988+00	L	186	189	100.00
988+00	989+06	L	189	260	127.58
990+63	991+00	L	264	239	44.65
991+00	998+00	L	239	141	706.83
986+00	988+00	R	174	229	207.42
988+00	988+72	R	229	239.24	72.73
991+00	998+00	R	249	149	707.83
TOTAL					2072

I-15 GUARD RAIL

STATION FROM	TO	SIDE	I-15 L.F.
986+00	988+84.18	Lt.	284.18
986+00	988+85.92	Rt.	285.92
990+81.18	995+43.68	Lt.	462.50
990+82.92	995+32.92	Rt.	450.00
Median Area @ Bridge Ends			100.00
TOTAL			1582.60

I-8 MONUMENT ASS'Y.

STATION	LOCATION	EA.
996+00	℄	1
TOTAL		1

DRAINAGE

STATION FROM	TO	SIDE	I-4 (L.F.) 6" UNDERDRAIN	8" OUTLET PIPE	I-5 for I-4 6"x45° BEND Ea.	6"x6" TEE Ea.	6"x6" DBL. T Ea.
988+00	989+10	L	108				
990+54	995+37	L	494		1		
995+56	998+00	L	242				1
995+75	998+00	L	224			1	
997+90		L		64			
990+85	992+85	R	209		1		
992+85	993+11	R		35			
993+25	993+33	R		29			
993+33	994+93	R	160				
995+10	995+37	R		43	1		
995+37	998+00	R	265				
995+75	998+00	R	224			1	
997+90		R		14			
TOTALS			1926	185	3	2	1

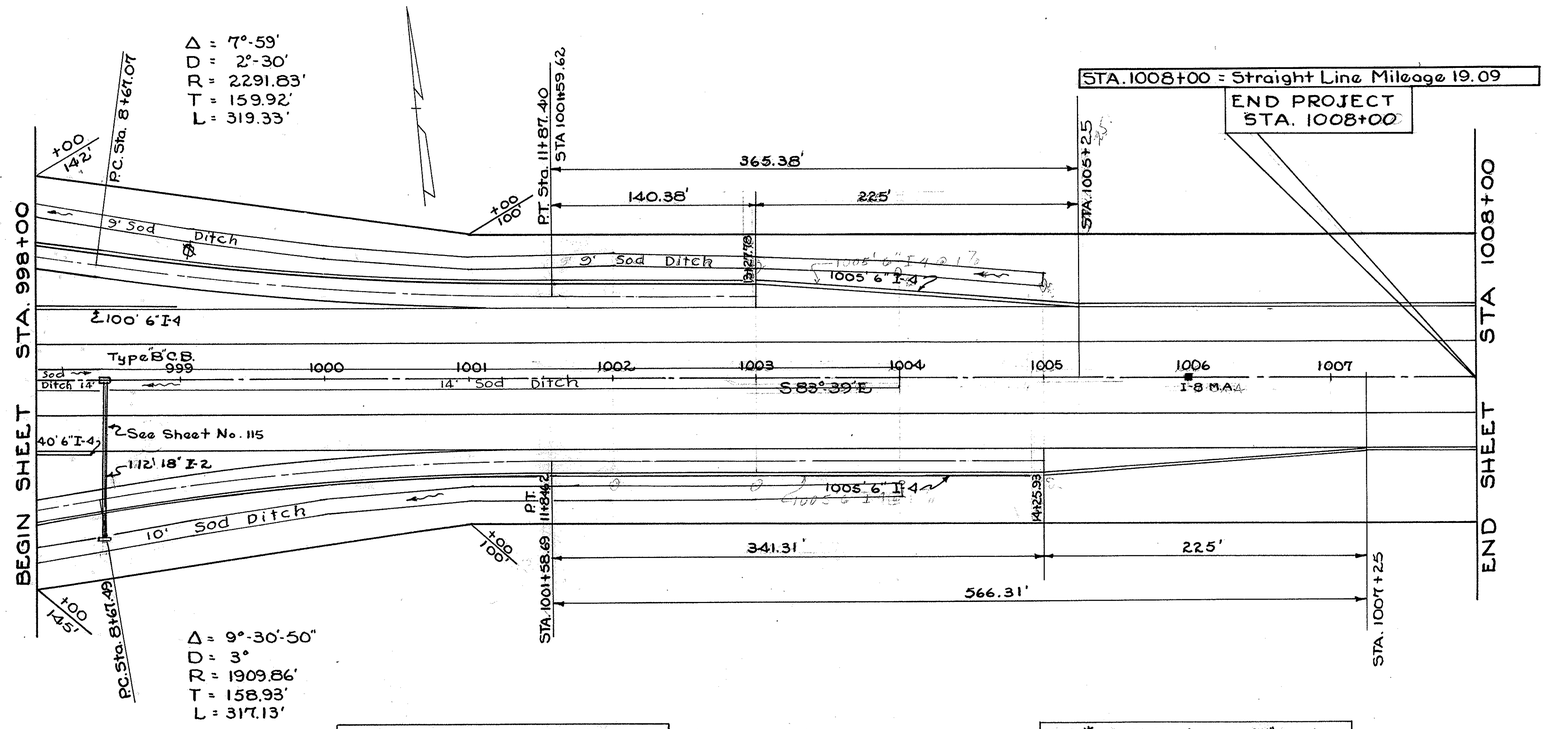
STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHEET NO.
C-32	987+50	STD. PIPE CULV.	36" x 306'	159
C-33	S.R. 90 351+00	STD. PIPE CULV.	36" x 131'	159
C-34	S.W. RAMP 1+38.42	STD. PIPE CULV.	21" x 55'	159
C-35	S.E. RAMP 3+50	STD. PIPE CULV.	36" x 87'	159
C-36	N.E. RAMP 5+58	MULTI-PLATE	7'-3"x5'-3"x65'	159
C-37	995+15	MULTI-PLATE	7'-3"x5'-3"x181'	159
C-38	995+00	MULTI-PLATE	7'-3"x5'-3"x77'	159

FED. AID DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

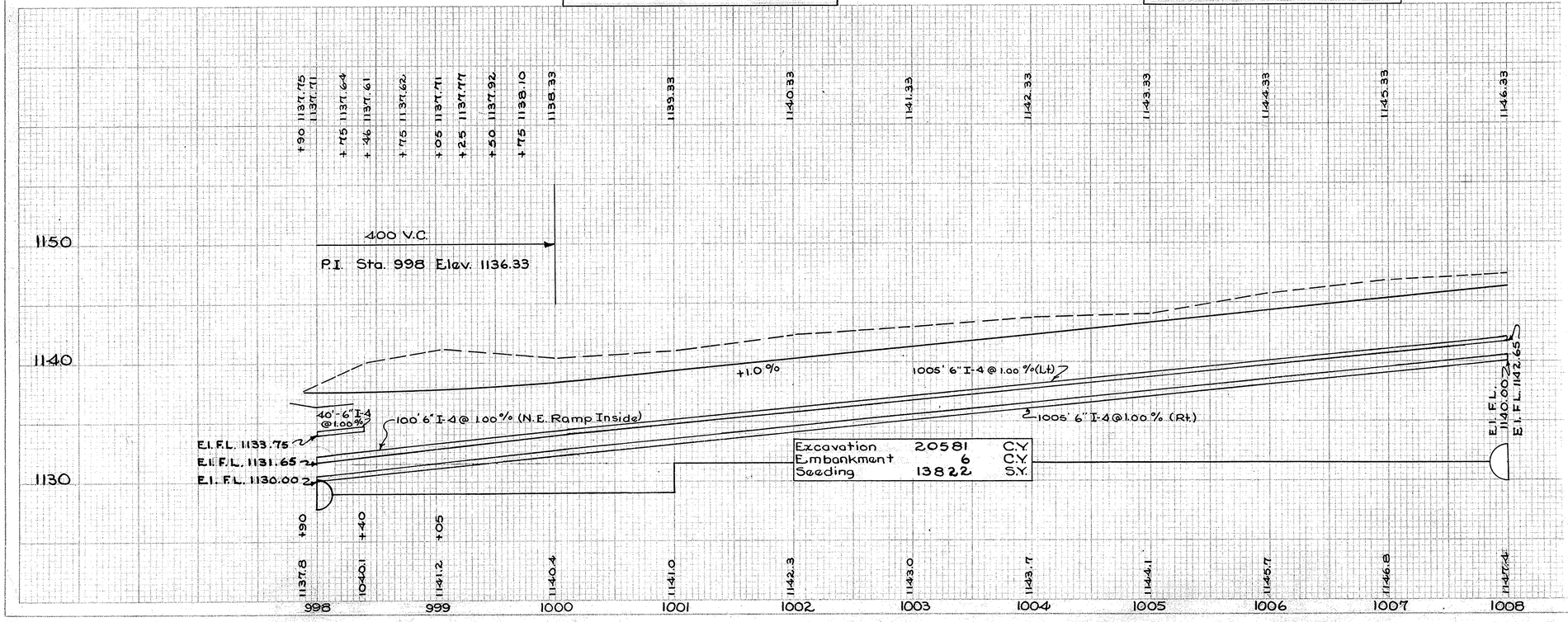
45
209

TRU. 82 - 12.67



B.M.#40 Spike in root 21" Wild Cherry
215' Rt. Sta. 1002+15 Elev.: 1138.214

B.M.#41 Spike in root 24" Maple
136' Lt. Sta. 1008+85 Elev.: 1151.260



I-8 MONUMENT ASSEMBLY		
STATION	LOCATION	EACH
1006+00	℄	1
TOTAL		1

R/W FENCE					
STATION		Side	Dist. From ℄		SS-18 R/W Fence L.F.
From	To				
998+00	1001+00	L	141	99	302.93
1001+00	1008+00	L	99	99	700.00
998+00	1001+00	R	144	99	303.36
1001+00	1008	R	99	99	700.00
TOTAL					2006.29

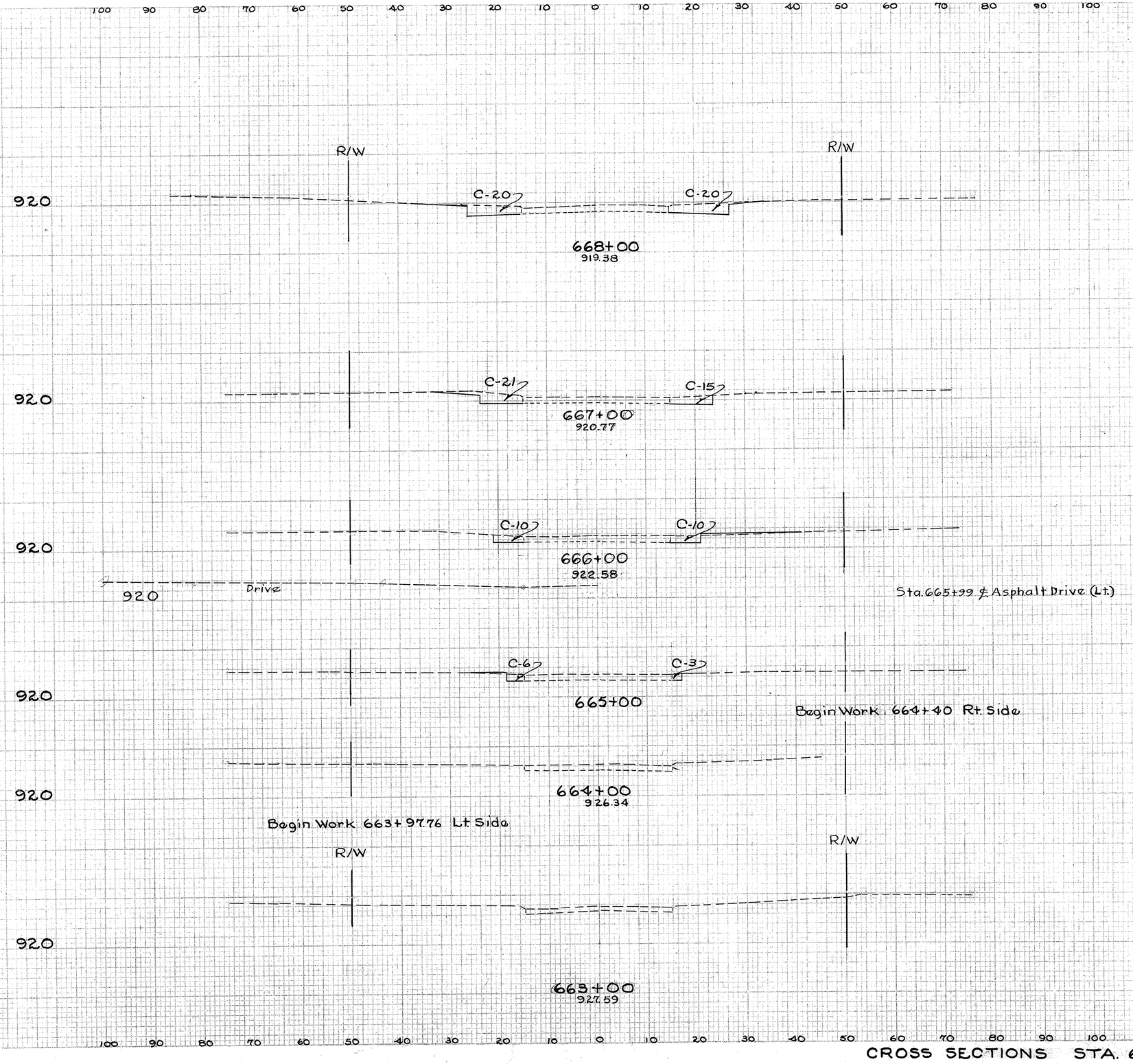
DRAINAGE			
STATION			I-4 (L.F.) 6" UNDER DRAIN
FROM	TO	SIDE	
998+00	1008+00	L	1005
998+00	998+40	R	40
998+00	1008+00	R	1005
998+00	999+00	L	100
TOTAL			2150

L-10 SODDING			
STATION			
FROM	TO	SIDE	S.Y.
998+00	1005+00	L	700
998+00	1004+00	℄	933
998+00	1004+00	R	669
TOTAL			2302

DRAINAGE					
STATION		I-2 Class "B"		I-8 Type B Inlet EA.	S-1 Class E C.Y.
From	To	18" L.F.	18"A L.F.		
998+46		44	66	1	0.30
TOTAL		44	66	1	0.30

LINE SHEET STA. 998+00 TO 1008+00

TRU. 82 12.67



Seeding		End Area		C.u. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
27		40	0		
	233			141	0
15		36	0		
	222			104	0
25		20	0		
	261			54	0
22		9	0		

CROSS SECTIONS STA. 663+00 TO 668+00

TRU-82-12.67

50 40 30 20 10 0 10 20 30 40 50

+96 14" WCH

R/W R/W R/W

915

C-21 C-42

917.27
669+75
916.71

915

C-53

917.54
669+50
917.18

+27 -24" Maple

915

C-78 4:1

Intersection Golf Drive
See Detail Sheet No. 133

917.84
669+25
917.57

915

R/W

F-11 C-12 C-67 4:1

918.17
669+00
917.95

+77-18" Elm

915

C-12 C-66

BEGIN PROJECT
STA. 668+97.60

R/W R/W

668+75
918.31

915

C-17 C-64

668+50
918.67

+28-24" Tulip

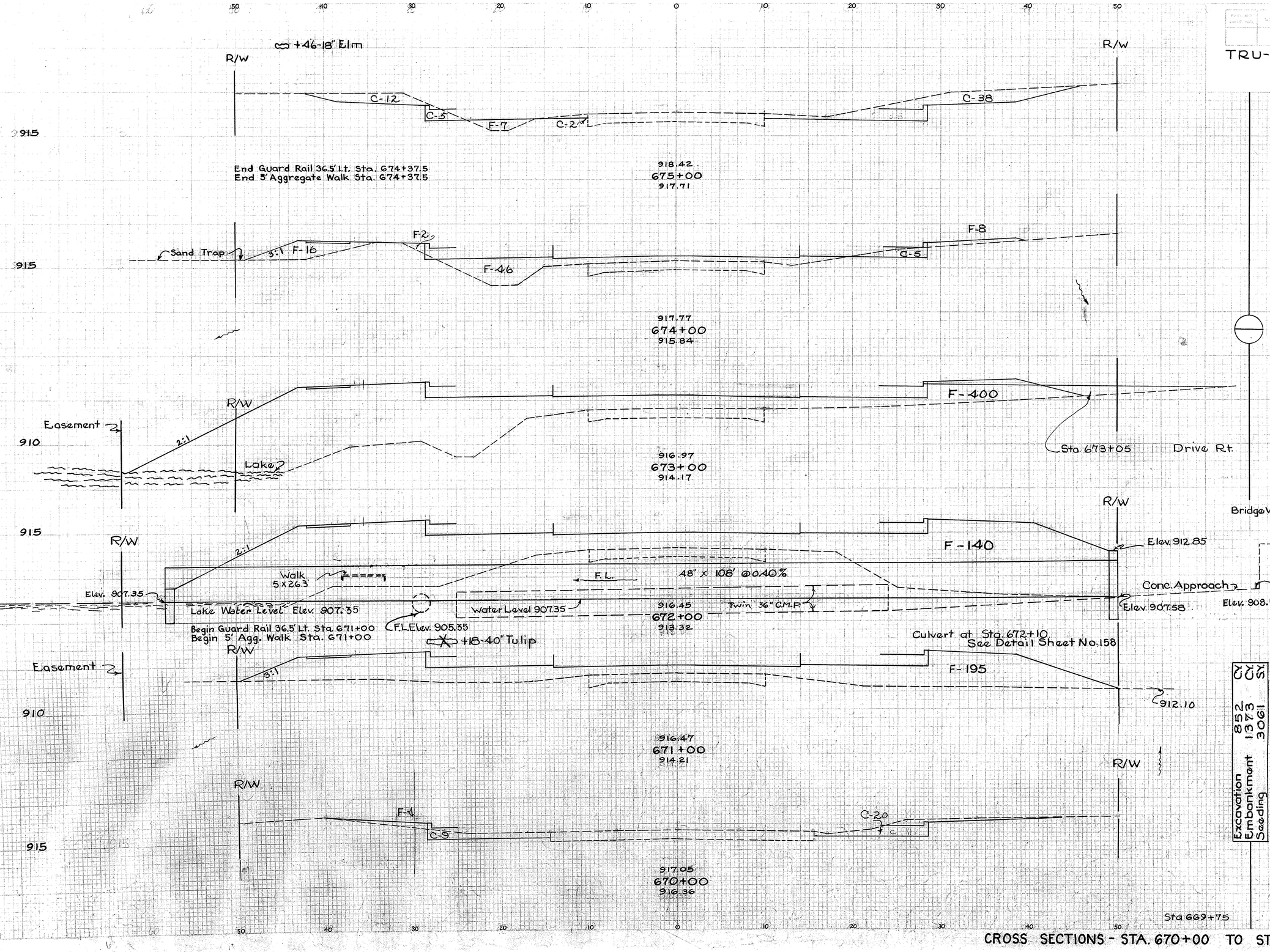
Sta. 668+00

50 40 30 20 10 0 10 20 30 40 50

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
37		63	0		
	83			54	0
23		53	0		
	67			61	0
25		78	0		
	97			73	5
44		79	11		
	235			93	5
47		78	0		
	129			74	0
46		81	0		
	203			122	0
27		40	0		

CROSS SECTIONS - STA. 668+50 TO STA. 669+75

TRU-82-12.67

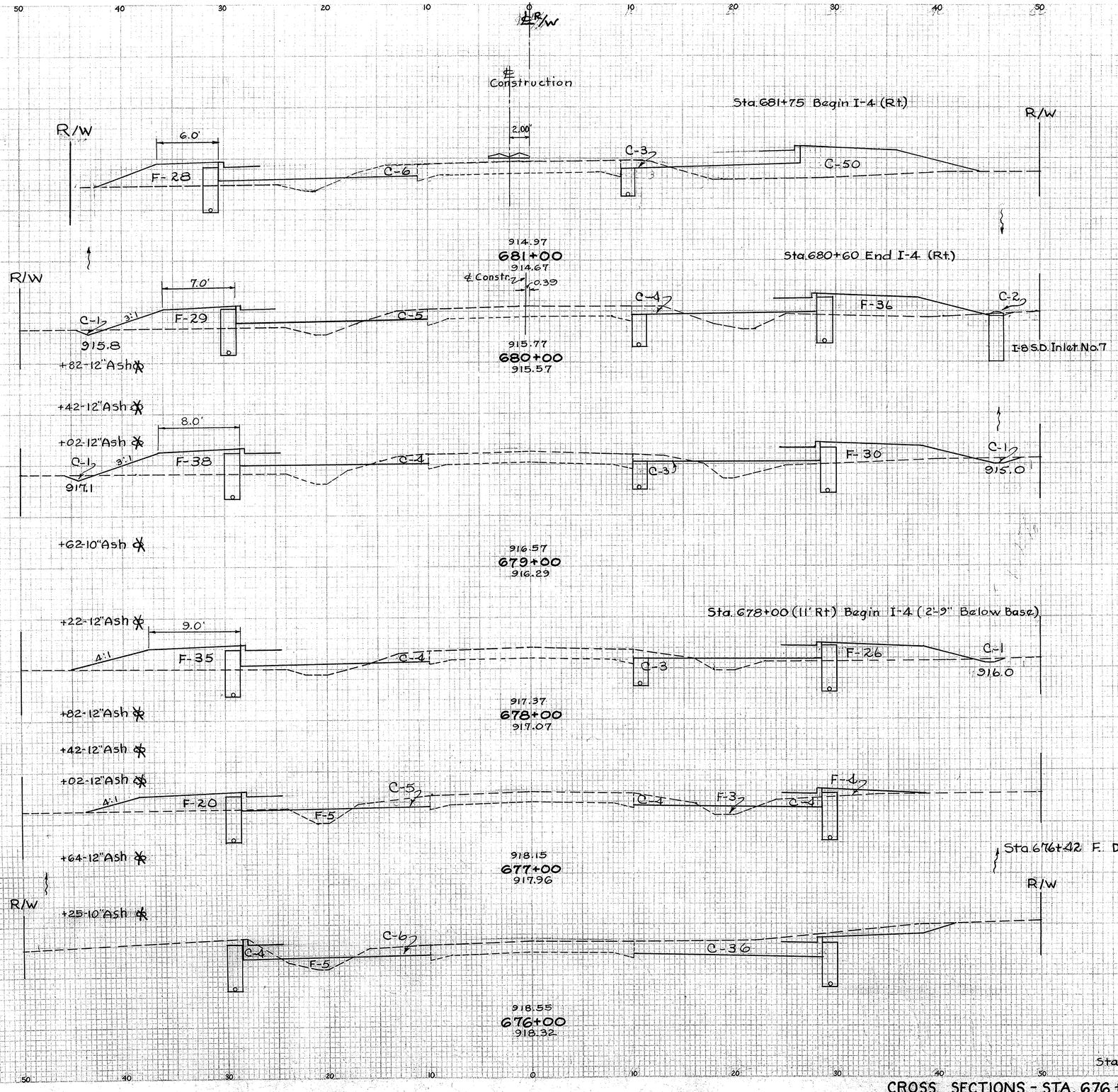


Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
42		57	7		
	444			115	146
38		5	72		
79		0	400		
	1000			0	1000
101		0	140		
40		0	195		
	428			54	361
37		29	4		
	103			42	2
37		63	0		

	CY	CY	SY
Excavation	852		
Embankment		1373	
Seeding			3061

CROSS SECTIONS - STA. 670+00 TO STA. 675+00

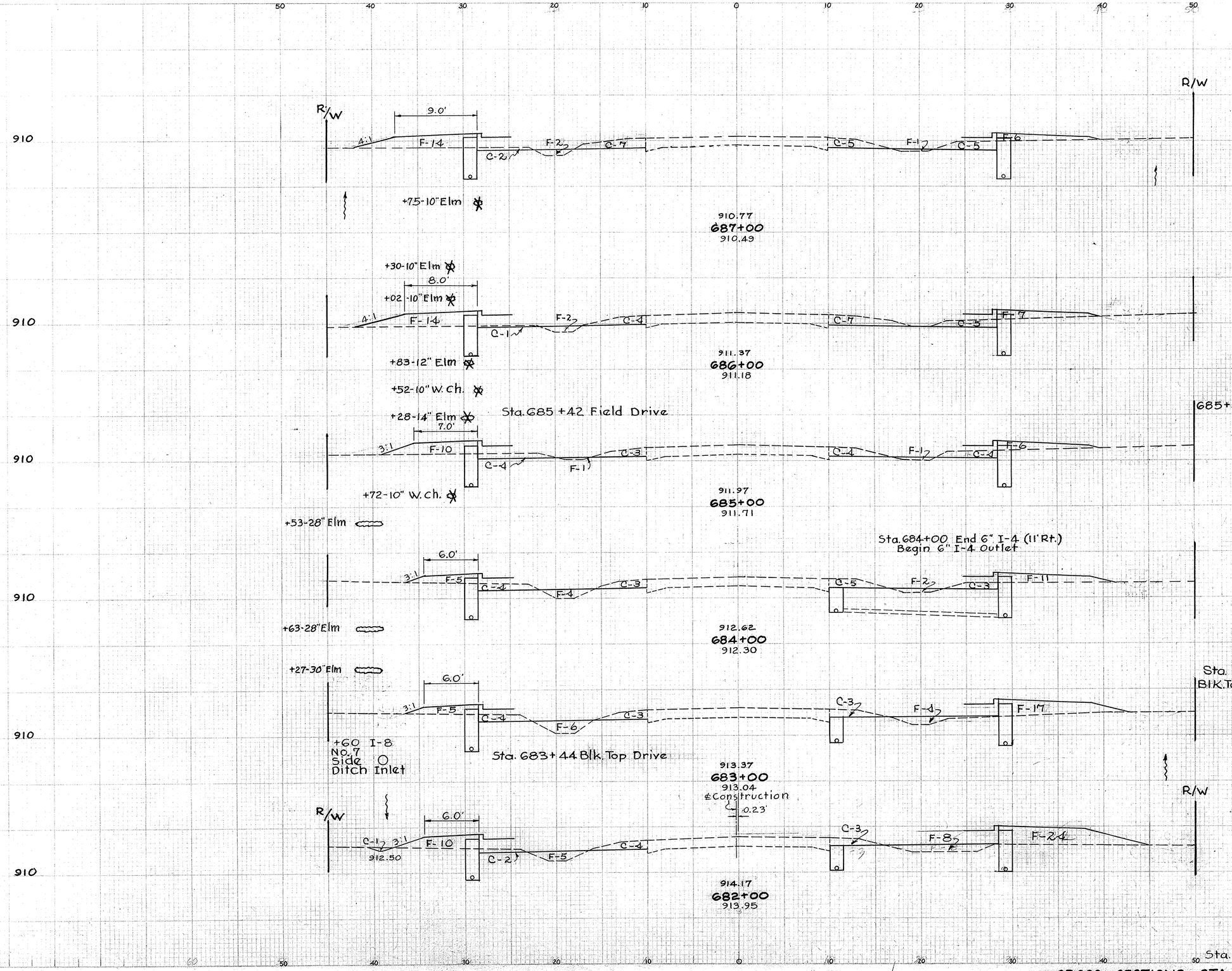
TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
38		9	78		
	456			39	265
44		12	65		
	489			39	246
44		9	68		
	489			31	239
44		8	61		
	444			39	172
36		13	32		
	333			109	69
24		46	5		
	339			202	9
37		63	0		

CROSS SECTIONS - STA. 676+00 TO STA. 681+00

TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
34		19	23		
	367			67	85
32		17	23		
	361			59	76
33		15	18		
	350			56	74
30		15	22		
	333			46	100
30		10	32		
	333			37	146
30		10	47		
	378			35	231
38		9	78		

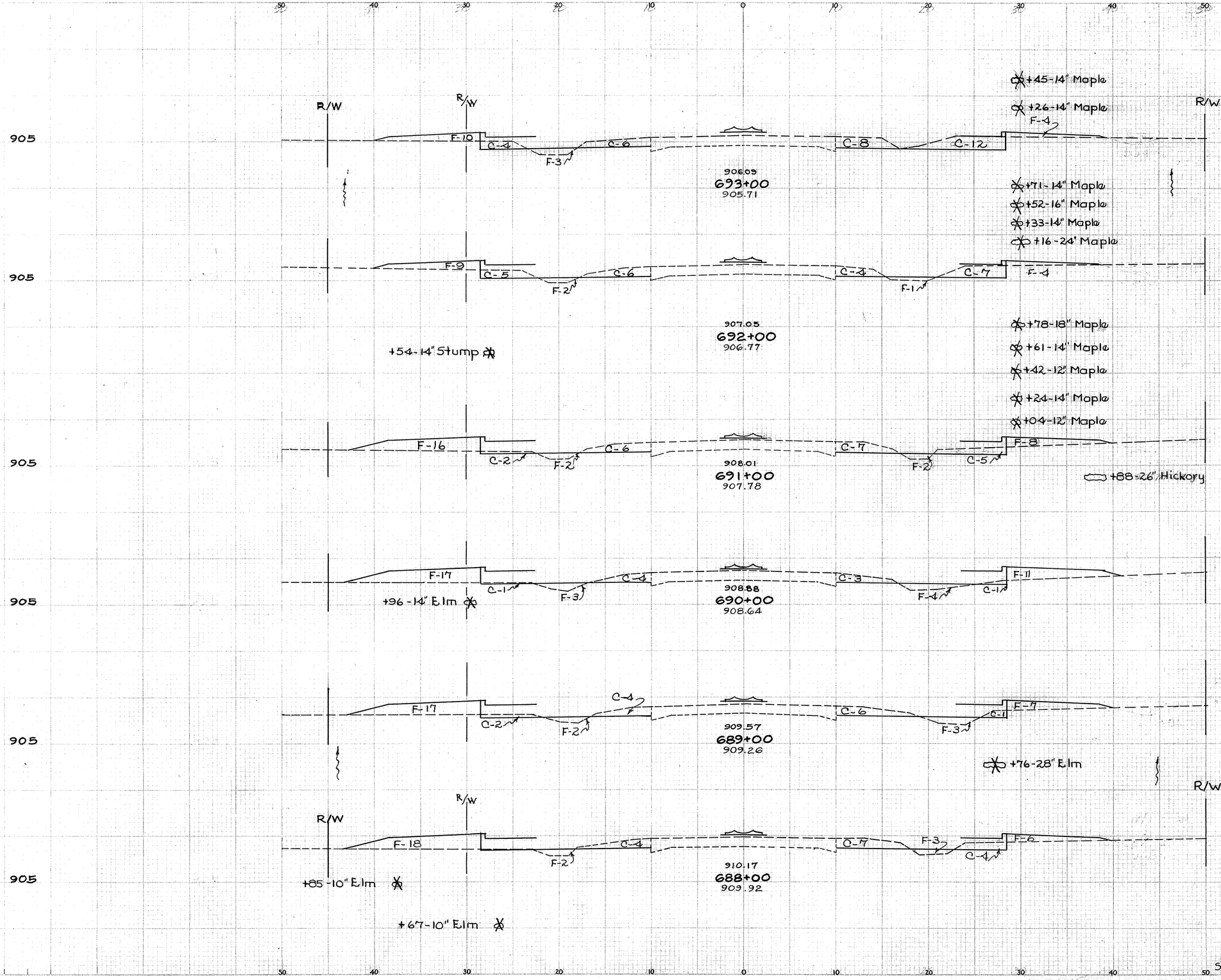
Excavation 807 CY
Embankment 1773 CY
Seeding 4749 SY

CROSS SECTIONS - STA. 682+00 TO STA. 687+00

FED. RD. DIVISION	STATE	PROJECT	YEAR
.2	OHIO		

51
209

TRU-82-12.67



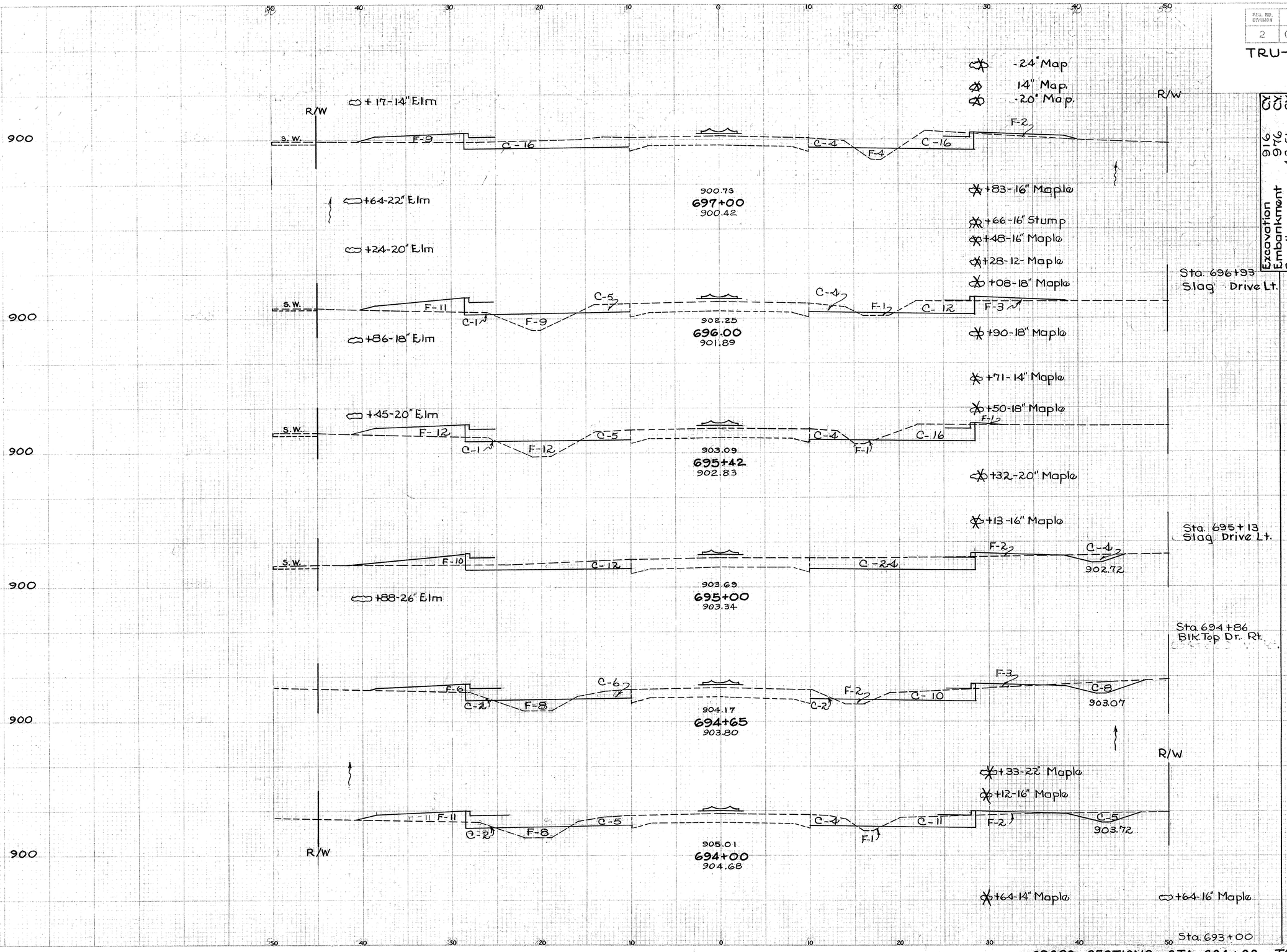
Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
33		30	17		
	361			96	61
32		22	16		
	367			78	81
34		20	28		
	394			54	117
37		9	35		
	406			41	119
36		13	29		
	383			52	107
33		15	29		
	372			63	96
34		19	23		

CROSS SECTIONS - STA. 688+00 TO STA. 693+00

FED. RD. DIVISION	STATE	PROJECT	FISC. YEAR
2	OHIO		

52
209

TRU-82-12.67



	CY	CY	SY
Excavation	916		
Embankment	976		
Seeding			42.51

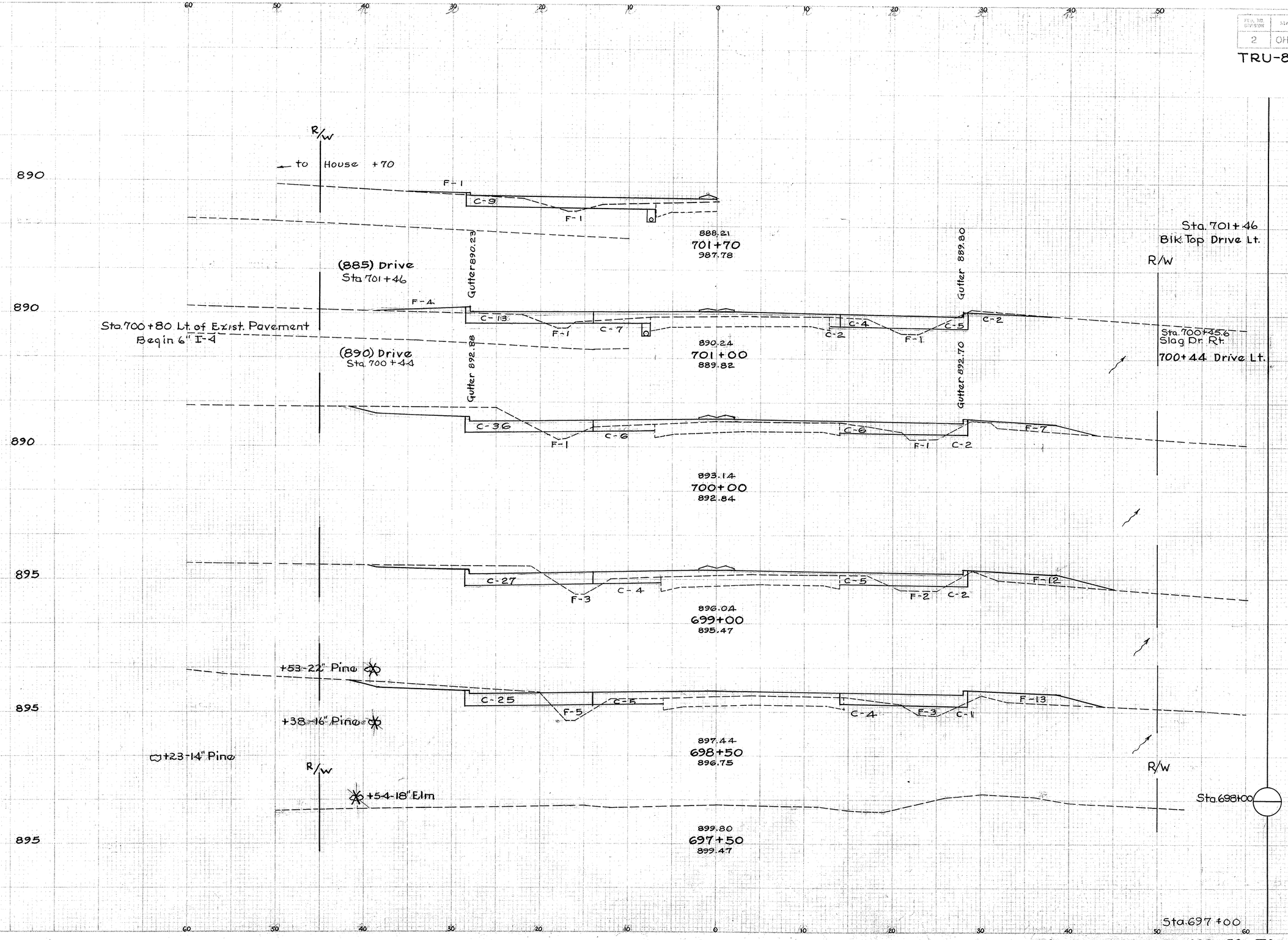
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
33		36	15		
	356			107	72
31		22	24		
	184			52	54
26		26	26		
	154			51	29
40		40	12		
	155			44	20
40		28	19		
	293			66	49
41		27	22		
	439			111	72
38		33	17		

CROSS SECTIONS - STA. 694+00 TO STA. 697+00

PERS. TRD. DIVISION	STATE	PROJECT
2	OHIO	

53
209

TRU-82-12.67



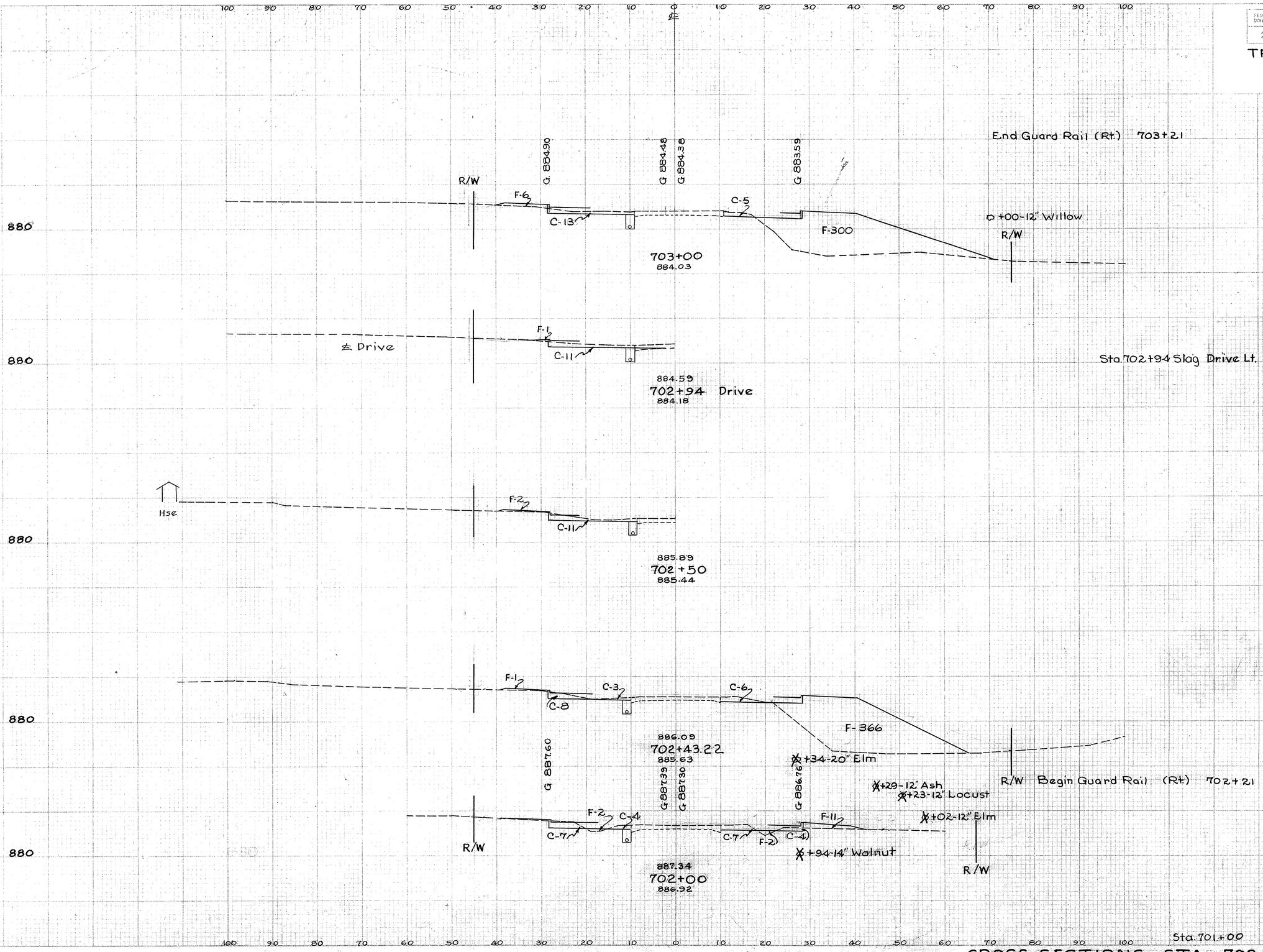
	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
890	30		33	6		
		383			154	28
890	39		50	9		
		428			219	48
895	38		38	17		
		214			68	35
895	39		35	21		
		217			65	39
895	0		0	0		
		20			34	14
	33		36	15		

CROSS SECTIONS - STA. 697+50 TO STA. 701+00

FED. RD. DIVISION	STATE	PROJECT	YEAR
2	OHIO		

54
209

TRU-82-12.67

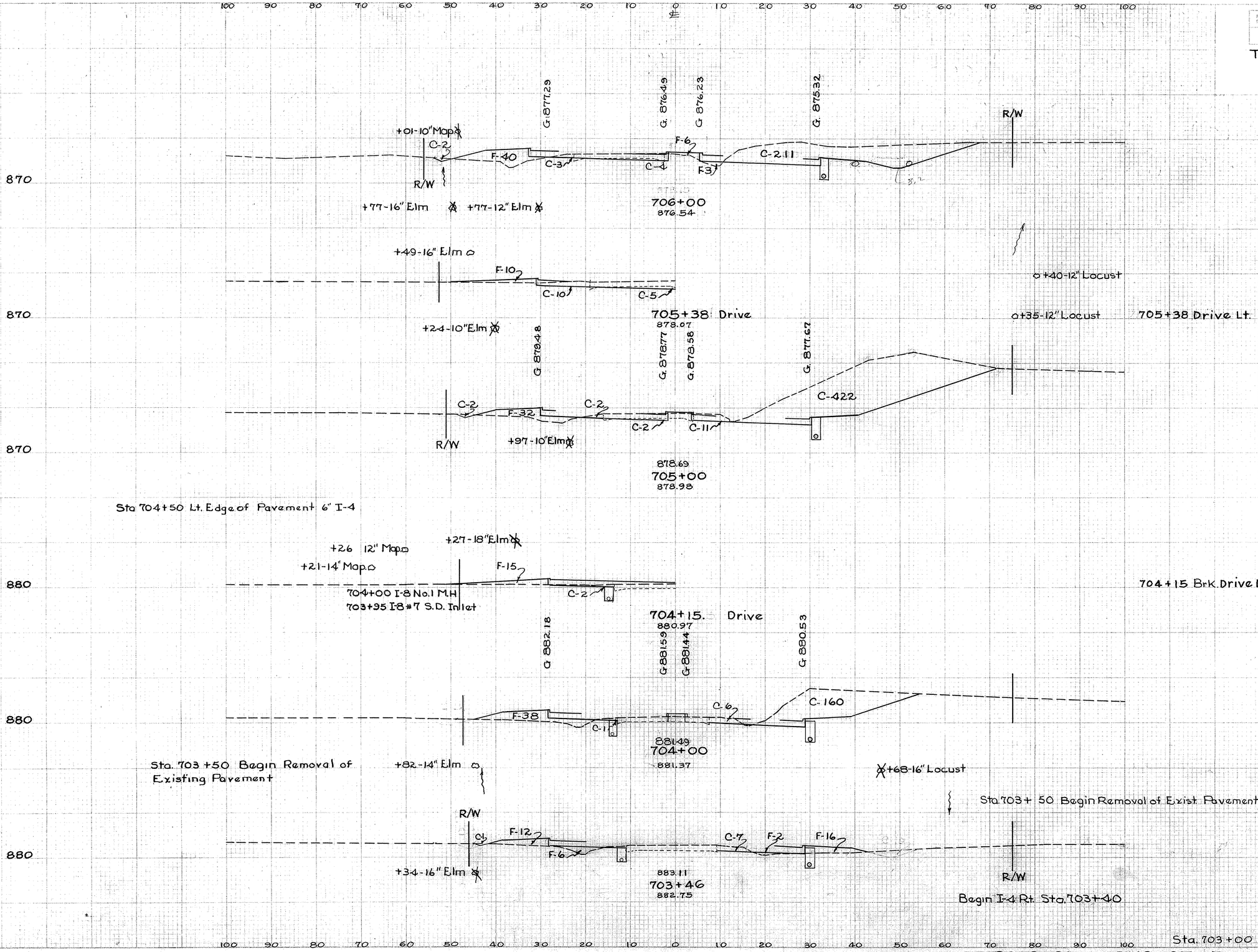


Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
67		18	306		
430				37	707
69		17	367		
247				31	305
34		22	15		
356				102	39
30		33	6		

CROSS SECTIONS STA. 702+00 TO STA. 703+00

FED. RD. DIVISION	STATE	PROJECT	SHEET NO. / TOTAL SHEETS
2	OHIO		55 / 209

TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
80		220	49		
	856			1220	150
74		439	32		
	733			1122	130
58		167	38		
	303			195	74
43		8	36		
	281			22	291
67		18	306		

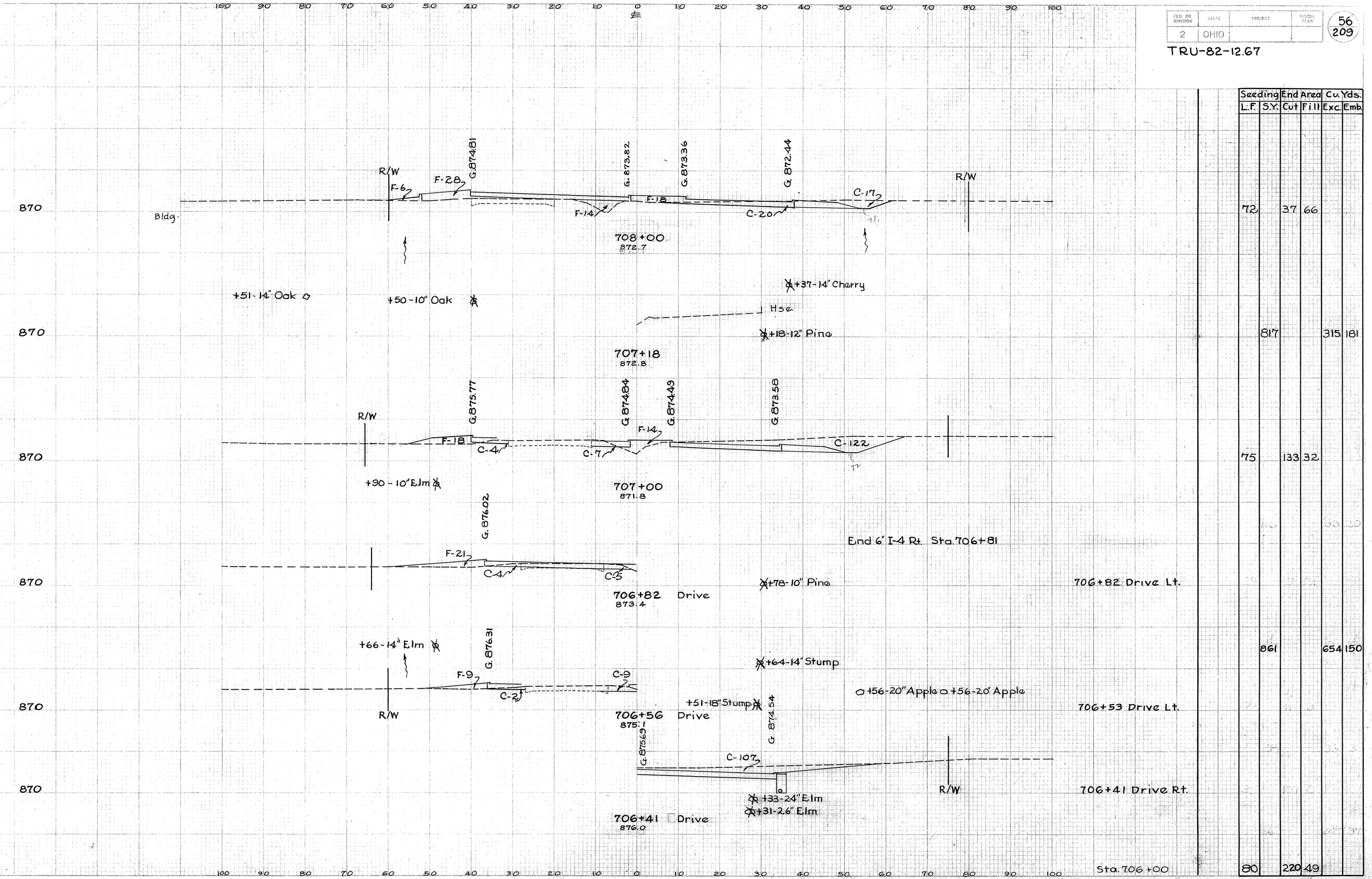
CROSS SECTIONS STA. 703+46 TO STA. 706+00

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

56
209

TRU-82-12.67

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
72		37	66		
	817			315	181
75		133	32		
	861			654	150
80		220	49		

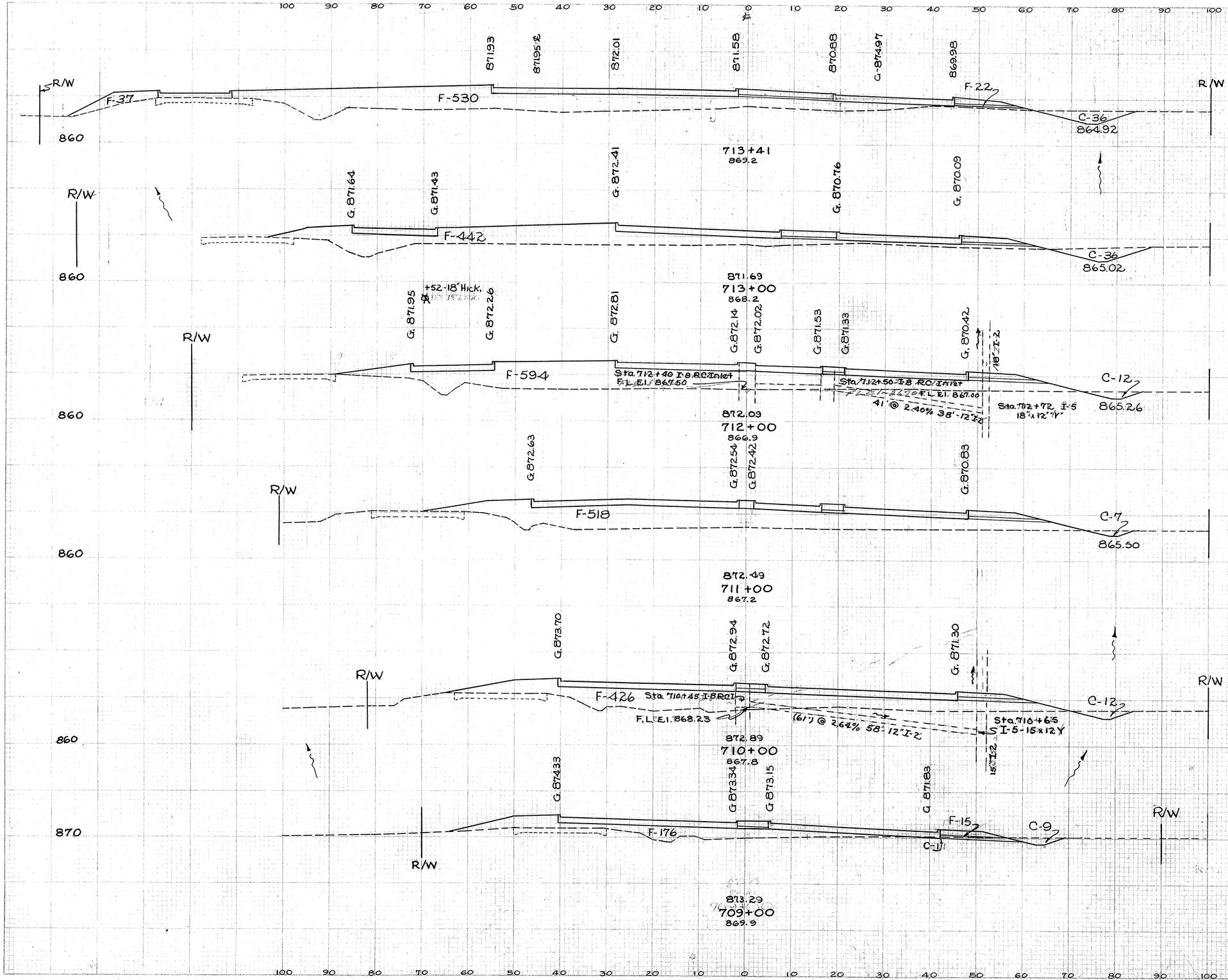


CROSS SECTIONS STA. 706+41 TO STA. 708+00

PRO. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

57
209

TRU-82-12.67



Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
147		36	589		
	686			55	783
132		36	442		
	1383			89	1919
117		12	594		
	1122			35	2059
85		7	518		
	911			35	1770
79		12	438		
	811			41	1165
67		10	191		
	772			87	476
72		37	66		

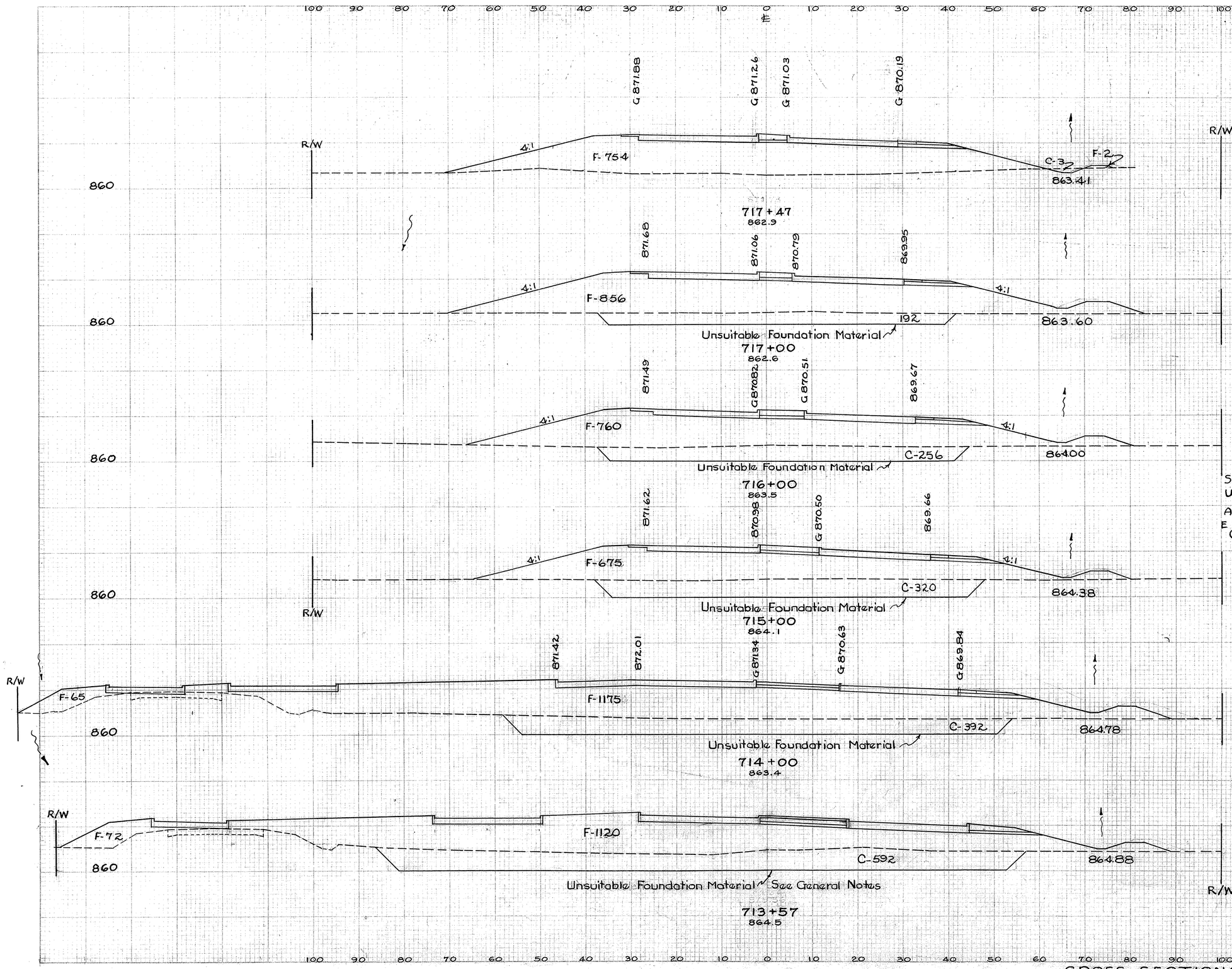
	CY	CY	SY
Excavation	4312		
Embankment	3818		
Seeding	7709		

CROSS SECTIONS - STA. 709+00 TO STA. 713+41

FED. RD. DIVISION	STATE	PROJECT	YEAR
2	OHIO		

58
209

TRU-82-12.67



Sta. 713+50 to 717+00
Unsuitable Foundation
Additional Excavation 4000 cu C.Y.
E 1.02 Borrow
(Granular Material) 4000 cu C.Y.

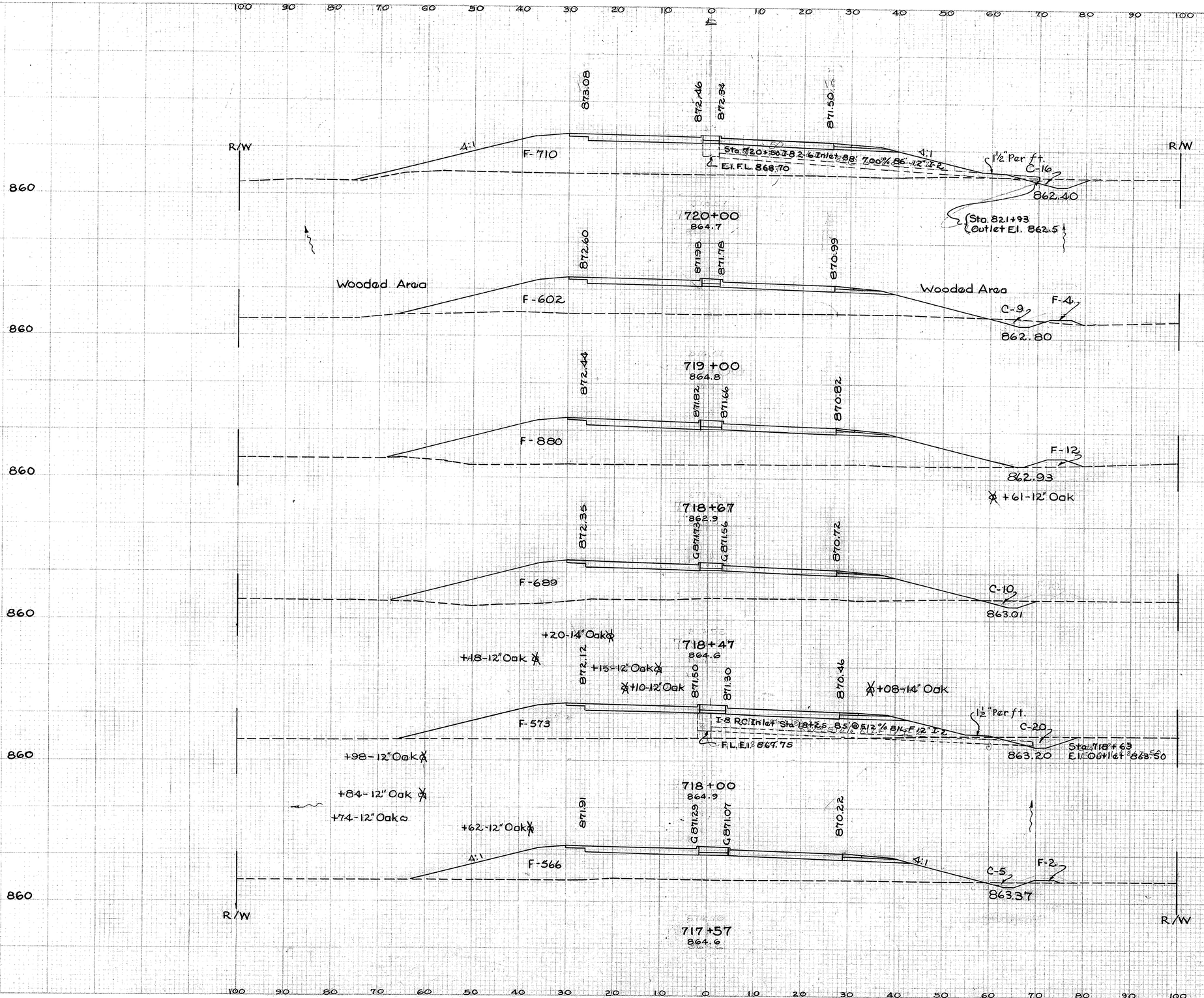
Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
102		3	757		
	530			3	1404
101		0	856		
	1072			0	2993
92		0	760		
	1017			0	2656
91		0	675		
	1233			0	3426
131		0	1175		
	652			0	1827
142		0	1120		
	257			11	483
147		36	589		

CROSS SECTIONS STA. 713+57 TO STA. 717+47

FED. RD DIVISION	STATE	PROJECT	F. YEAR
2	OHIO		

59
209

TRU-82-12.62



Excavation Unsuitable Foundation 4000 CY
Granular Borrow 4000 CY

Excavation	490	CY
Embankment	31345	CY
Seeding	139.45	SY

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
109		16	710		
	1139			46	2437
96		9	606		
	357			6	915
99		0	892		
	208			4	586
88		10	689		
	478			26	1098
95		20	573		
	435			20	909
87		5	568		
	109			2	245
109		3	756		

CROSS SECTIONS - STA. 717+57 TO STA. 720+00

FED. HIGHWAY DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

60
209

TRU-82-12.67

End Guard Rail (Lt.) Sta. 725+81.64

Begin Guard Rail (Lt.) Sta. 725+56.64

End Approach Slab - Begin Bridge Sta. 726+04.42

End Guard Rail (Rt.) Sta. 726+23.2

Begin Guard Rail (Rt.) Sta. 725+98.20

$\frac{98\times21+81\times14+81\times8}{2.7} = 142$

Wooded Area

R/W

Edge of Creek

873.74 | G 873.12 | G 873.02 | 872.40

F-914 | 4:1 | 4:1 | C-42 | 860.10

873.07 | 726+00 | 864

873.94 | G873332 | G873230 | 872.60

F-878 | 4:1 | 725+70 I-B-1-No.2 Inlet (6') | C-48 | 860.40

873.27 | 725+00 | 864

874.14 | G873352 | G873-42 | 872.80

F-870 | 4:1 | C-48 | 860.8

873.47 | 724+00 | 864.3

874.25 | G873468 | G873530 | 872.91

F-869 | C-20 | 861.2

873.67 | 723+00 | 864.4

874.03 | G873341 | G873-31 | 872.69

F-850 | C-29 | 861.6

873.87 | 722+00 | 864.4

873.56 | G873234 | G873284 | 872.22

F-795 | 4:1 | 4:1 | C-20 | 862.00

874.07 | 721+00 | 864.5

Wooded Area

Wooded Area

R/W

R/W

860

860

860

860

860

Sta. 720+00

Bridge	Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
	135		42	914		
		1394			167	3319
	116		48	878		
		1300			178	3237
	118		48	870		
		1278			126	3221
	112		20	869		
		1222			91	3183
	108		29	850		
		1200			91	3046
	108		20	795		
		1206			67	2787
	109		16	710		

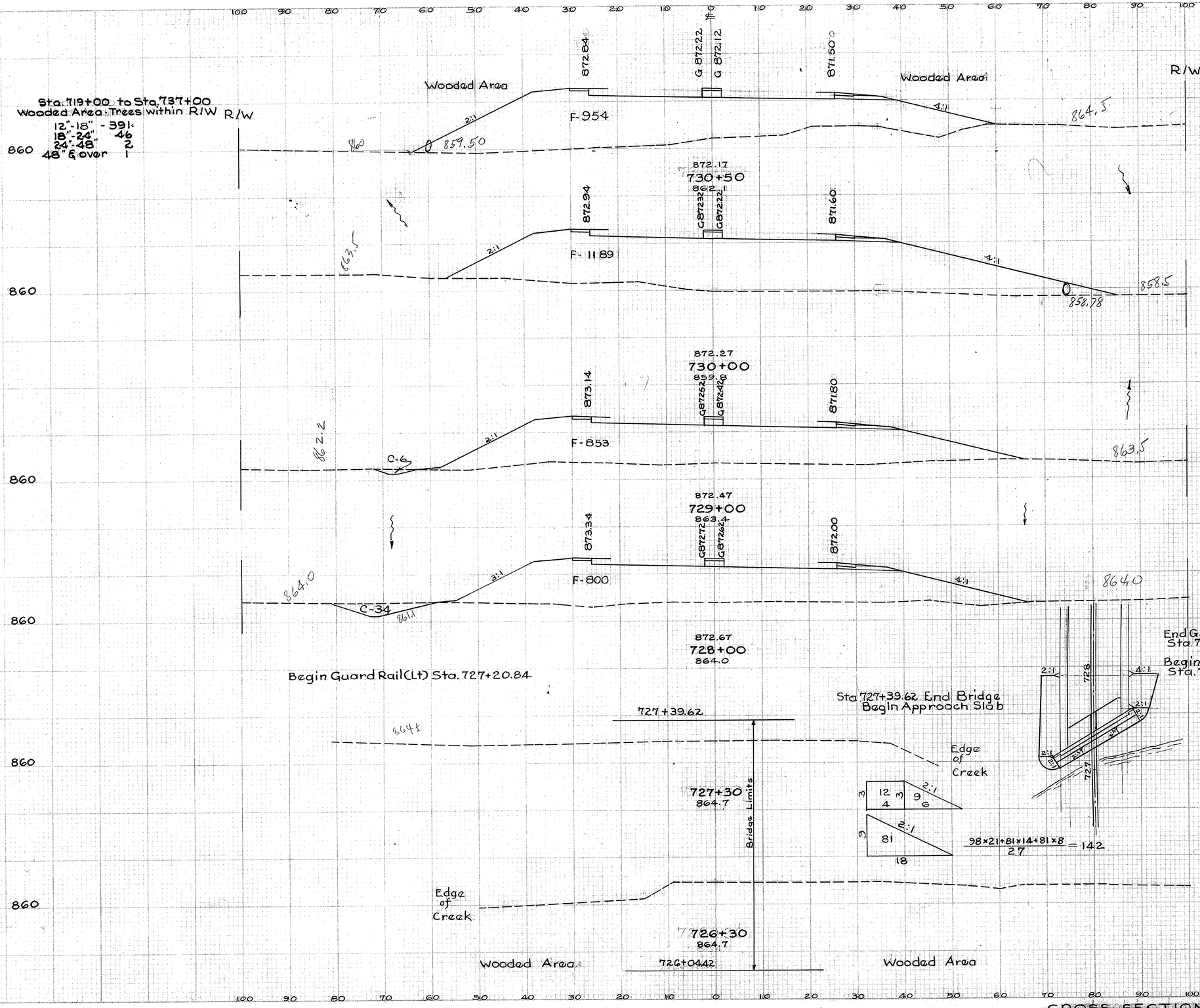
CROSS SECTIONS STA. 721+00 TO STA. 726+00

FED. RD. DIVISION	STATE	PROJECT	YEAR
2	OHIO		

61
209

TRU-82-12.67

Sta. 719+00 to Sta. 737+00
Wooded Area Trees within R/W
12"-18" - 391
18"-24" 46
24"-48" 2
48" & over 1



Seeding L.F.	S.Y.	Cut	Fill	Exc.	Emb.
77		0	954		
	480			0	1984
96		0	1189		
	1033			11	3782
90		6	853		
	1061			74	3061
101		34	800		
				76	1789
		34	800		
Bridge					142
135		42	914		

CROSS SECTIONS STA. 726+30 TO STA. 730+50

FED. RD. DIVISION	STATE	PROJECT	YEARS
2	OHIO		

TRU 82-12.67

62
209

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

℄

R/W — Wooded Area — 871.85 — G-871.23 — G-871.13 — 870.51 — Wooded Area — R/W

F-918 — 4:1 — 4:1 — C-31 — 861.00 — C-12 — 861.18

871.18
735+46

871.94 — G 871.32 — 860.7 — G 871.22 — 870.60

F-700 — 735+25 I-81 No.2 Inlet (L) — 4:1 — 4:1 — C-21 — 860.89 — C-10 — 861.5

871.27
735+00

872.14 — G 871.52 — 863.1 — G 871.42 — 870.80

F-820 — 4:1 — 4:1 — C-19 — 860.65 — C-12 — 862.0

871.47
734+00

872.34 — G 871.72 — 863.1 — G 871.62 — 871.00

F-750 — 733+70 I-81 No.2 Inlet (L) — 4:1 — C-27 — 860.41 — C-12 — 862.5

871.67
733+00

872.54 — G 871.92 — 863 — G 871.82 — 871.20

F-742 — 4:1 — 4:1 — C-48 — 860.17 — C-8 — 863.0

871.87
732+00

End Guard Rail Left Sta. 731+95.84

872.74 — G 872.12 — 863.7 — G 872.02 — 871.40

R/W — F-693 — 3:1 — 4:1 — R/W — C-41 — 859.93

872.07
731+00
864.3

Wooded Area — Wooded Area

860 860 860 860 860 860

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 730+50

Excavation	12.47	CY.
Embankment	33572	CY.
Seeding	12.813	SY

Seeding L.F	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
125		43	918		
	626			63	1378
120		31	700		
	1361			115	2815
125		31	820		
	1389			130	2908
125		39	750		
	1389			176	2763
125		56	742		
	1267			180	2658
103		41	693		
	1000			38	1525
77		0	954		

CROSS SECTIONS STA. 731+00 TO STA. 735+46

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

63
209

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

+82 14" Oak +82 16" Oak +80 12" Oak +60 18" Oak +53 14" Oak +55 14" Oak +87 12" Oak

871.72 G 871.10 G 871.00 870.38

R/W C-14 4:1 F-720 4:1 R/W

860 861.0 C-432

Unsuitable 871.05 738+44 Foundation Material

863.6

871.66 G 871.04 G 871.94 870.32

860 C-42 4:1 F-1005 4:1 C-11

860.35 860.24

Unsuitable Foundation Material C-178

Sta. 737+50± to Sta. 738+50±
(Unsuitable Foundation)

Additional Excavation 1071 C.Y.
E-102 Borrow
(Granular Material 1071 C.Y.

+15 14" Oak

870.99 738+00 859.8

871.63 G 871.01 G 871.09 870.29

737+50 I-87 No.2 Inlet(6)

860 F-864 4:1 4:1 C-20

C-368 860.19

Unsuitable Foundation 870.96 737+62 See General Notes

862.6

871.62 G 871.00 G 870.90 870.28

Wooded Area 4:1 F-718 4:1 Wooded Area

860 C-25 860.5

870.95 737+00 863.7

871.69 G 871.07 G 870.97 870.35

4:1 F-691 4:1

860 C-39 860.63

871.02 736+30 863.9

871.74 G 871.12 G 871.02 870.40

R/W 4:1 F-1020 4:1 R/W

860 C-5 8610

871.07 736+00 861.4

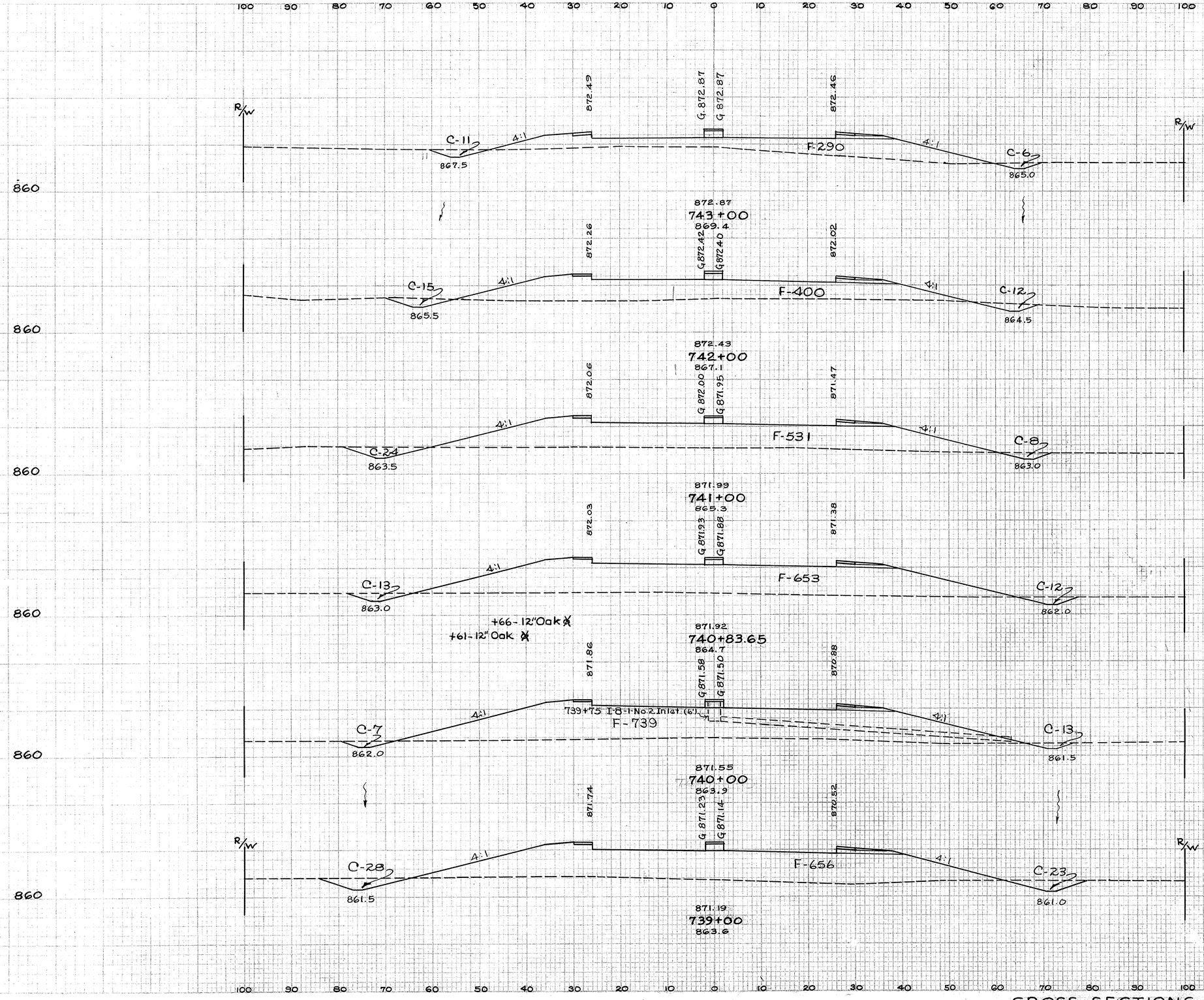
Wooded Area Wooded Area

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 735+46

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc	Cu. Yds. Emb
107		14	720		
	572			55	1406
127		53	1005		
	515			51	1315
117		20	864		
	771			51	1817
107		25	718		
	898			83	1826
124		39	691		
	397			24	951
114		5	1020		
	717			48	1938
125		43	918		

CROSS SECTIONS STA. 736+00 TO STA. 738+44



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
84		17	290		
	978			81	1278
92		27	400		
	1089			109	1724
104		32	531		
	1660			17	358
109		25	653		
	1004			59	2156
107		13	739		
	1244			119	2583
117		51	656		
	647			67	1427
107		14	720		

CROSS SECTIONS STA. 739+00 TO STA. 743+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

65
209

TRU 82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

℄ +49 - 14" W. Cherry

℄ +26 - 12" Oak

R/W

870

C-9 87.2.00

F-106

C-6 871.00

875.51
749+00
873.5

R/W

870

C-3 870.7

F-69

C-22 869.8

875.07
748+00
873.4

870

C-2 869.4

F-206

C-36 868.6

874.63
747+00
871.2

860

C-8 868.0

F-355

C-11 867.5

874.19
746+00
868.8

Std. Pipe Culv. 36" x 157' at Sta. 745+12 53°30' L.F. Skew

860

C-14 868.2 869.75

F-422

C-11 866.25

873.75
745+00
867.8

R/W

870

C-8 869.5

F-162

C-9 865.5

R/W

873.31
744+00
870.4

Sta 743+00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CROSS SECTIONS STA. 744+00 TO STA. 749+00

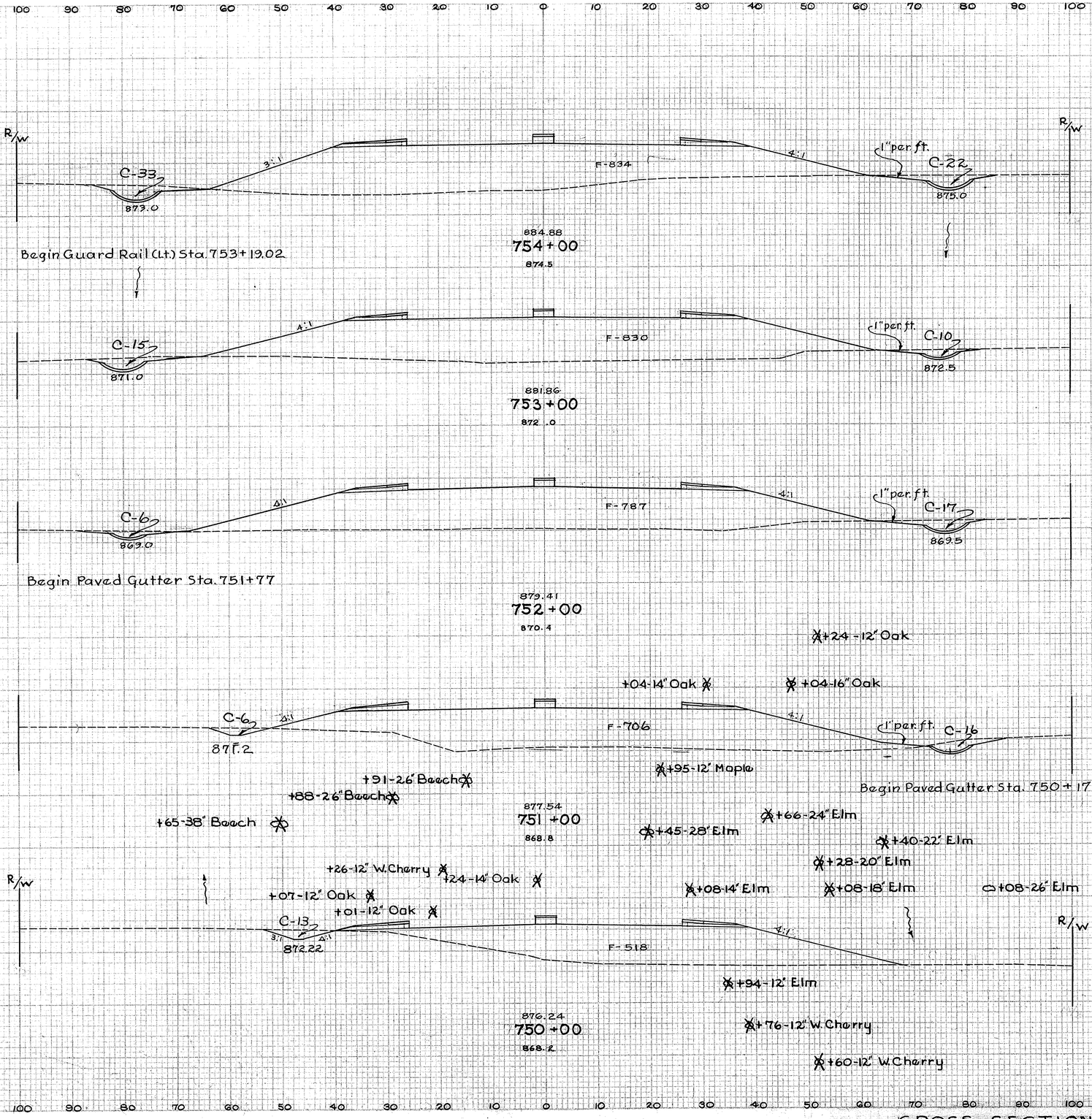
Excavation Unsuitable Foundation	1071 C.Y.
Granular Borrow	1071 C.Y.
Excavation	1164 C.Y.
Embankment	26329 C.Y.
Seeding	13624 S.Y.

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
55		15	106		
	672			74	324
66		25	69		
	756			117	509
70		38	206		
	839			106	1039
81		19	355		
	906			81	1439
82		25	422		
	861			78	1081
73		17	162		
	872			63	837
84		17	290		

FED. RD. DIST. NO. | STATE | PROJECT | FISCAL YEAR

66
209

TRU 82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb
109		55	834		
	1194			1483	3082
106		25	830		
	1200			69	2995
110		23	787		
1144				83	2765
96		22	706		
944				45	2267
74		13	518		
717				28	1156
55		15	106		

CROSS SECTIONS STA. 750+00 TO STA. 754+00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

903.46 905.77

R/W C-9 885.5 2:1 71' @ 1.690% 759+10 I-81 No.2 Inlet (6') 2:1 C-12 884.0 R/W

880

F-1953

904.65
759+17.33
886.2

900.36 901.84

R/W C-28 884.0 2:1 2:1 C-11 882.75 R/W

880

F-1616

901.16
758+27.33
885.5

897.26 897.68

Sta. 758+00

+40-12" Elm

R/W C-18 882.5 2:1 757+50 I-8-1 No.2 (10) FL. E.I. 894.00 63 L.F. @ 16.15% 2:1 1 per ft. C-12 881.5 R/W

880

F-1242

897.67
757+37.33
884.4

895.81 896.28

+10-12" Cherry

R/W C-18 882.0 2:1 1 per ft. C-18 881.0

880

F-1062

896.22
757+00
884.5

891.93 892.17

R/W C-12 879.0 2:1 3:1 C-29 879.0

880

F-954

892.34
756+00
881.9

Begin Guard Rail (Rt) Sta. 755+29.02

R/W C-13 876.0 2:1 4:1 1 per ft. C-25 877.0 R/W

880

F-877

888.46
755+00
878.6

Sta. 754+00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Excavation	13332	CY.
Embankment	30788	CY.
Seeding	12565	S.Y.

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc	Cu. Yds. Emb
123		21	1953		
	1215			1005	5949
120		39	1616		
	1140			115	4764
108		30	1242		
	437			46	1593
103		36	1062		
	1161			143	3734
106		41	954		
	1172			146	3391
105		38	877		
	1189			172	3169
109		55	834		

CROSS SECTIONS STA. 755+00 TO STA. 759+17.33

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

R/W

C-19 897.0

2:1

921.54

925.22

2:1

F-3149

R/W 140'

894.50 C-9

923.38
764+00
897.8

917.66

890

921.34

F-2749

R/W 140'

894.0 C-15

892.0 C-39

919.50
763+00
896.3

913.78

917.46

890

+48-12" Oak

+30-12" Oak

I-8 No 2 (6")

(77') 75 L.F. 12" I-2 @ 2.61% 0/6

F-2666

R/W 140'

C-18 892.0

C-14 889.5

915.62
762+00
892.7

909.90

913.58

890

F-2421

R/W 140'

C-16 890.0

C-18 887.0

911.74
761+00
890.3

907.58

911.16

S 760+50 I-8.1 No 2 (10')
E.I. F.L. 885.50

74' @ 2.09% 701 L.F. I-2 Outlet

F-2245

R/W 135'

C-7 888.5

C-18 886.0

909.31
760+37.33
889.0

906.55

909.11

880

F-2153

R/W

C-16 887.7

C-15 885.5

908.14
760+07.33
888.5

880

Sta. 759+17.33

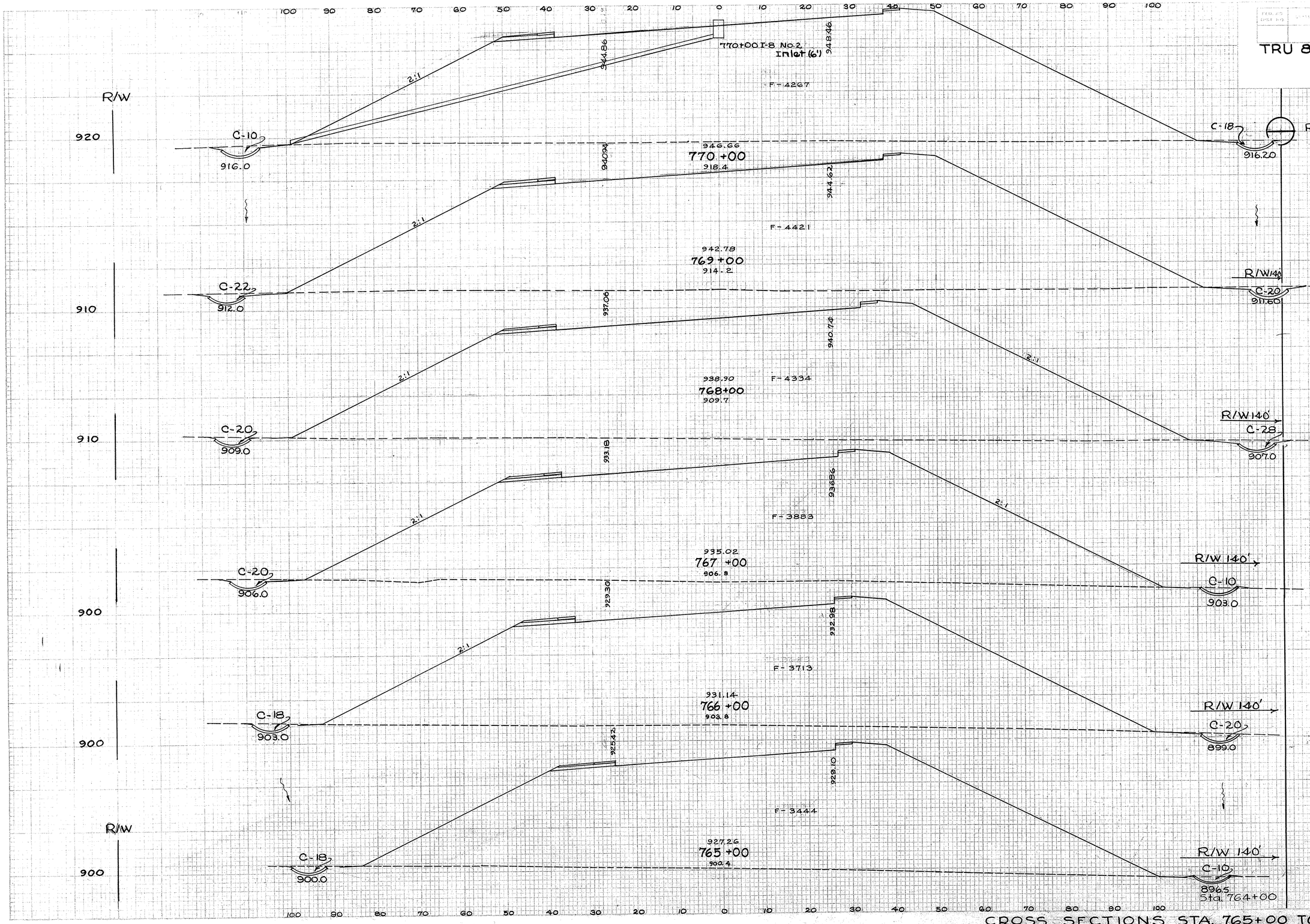
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
170		28	3149		
	1911			152	10923
174		54	2749		
	1833			159	10029
156		32	2666		
	1717			122	9421
153		34	2421		
	1048			68	5415
148		25	2245		
	487			31	2443
144		31	2153		
	1335			86	6844
123		21	1953		

Excavation 1511 C.Y.
Embankments 138077 C.Y.
Seeding 22163 S.Y.

CROSS SECTIONS STA. 760+07.33 TO STA. 764+00

TRU 82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb
187		28	4267		
	2139			130	16090
198		42	4421		
	2200			167	16214
198		48	4334		
	2150			144	15218
189		30	3883		
	2094			126	14067
188		38	3713		
	2067			122	13254
184		28	3444		
	1967			104	12210
170		28	3149		

CROSS SECTIONS STA. 765+00 TO STA. 770+00

TRU 82 - 12.67

End Approach Slab 774+81.83
End Guard Rail (Rt.) Sta. 774 + 79.83

End Guard Rail (Lt) Sta. 774+79.83

F-3609

F-336

F-110

F-4517

F-45

F-4568

Begin Guard Rail (Lt.) For S.R. 82
Sta. 772+29.83

Sta. 773+00 Begin Sod ditch 772+80 Left

Begin Guard Rail (Rt) S.R. 82
Sta. 772+55.00

F-66

F-4653

772+00 Begin Sod Ditch Right

F-54

F-4381

F-4263

C-6 C-110 C-15 C-20 C-14 C-15 C-19 C-18 C-25 C-18 C-19 C-17

R/W 187' R/W 175' R/W 170' R/W 160' R/W 147' R/W 140'

	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
775+20	150		0	0		
774+82	300		26	4055		
774+0	300	2733	26	4055	79	12316
		2594			85	13280
	261		29	4562		
		842			35	5109
	244		34	4634		
		2305			129	15568
	217		43	4707		
		2075			133	16147
	198		37	4381		
		1930			118	14487
	188		34	4263		
		350			19	2651
Sta. 770+00	187		28	4267		

CROSS SECTIONS STA. 770+16.78 TO STA. 774+00

TRU-82-12.67

C-619 (970) 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 "E" 2:1 190 180 170 160 150 R/W 216' 959.8 "E"

(980) "E" 110 120 130 140 150 160 170 180 C-1088 R/W 188' +60-12" Beech +61-14" Beech "E" 966.17 3+68.63

"E" 980 C-1362 964.22 3+68.54 961.80 "D" 970 C-1168 R/W 216' "D" 962.67 3+43.44 960.30

983.52 779+50 989.8 C-1456 "E" "D"

200 190 180 170 160 150 (970) C 520 "D" 959.00

F-264

"D" 110 120 130 140 150 160 170 180 C-579 982.55 779+25 978.90 C-750 (970) R/W 192' "D" "D" 964.62 3+43.52 961.90

Spring 18" Tile +35

+08-12" Oak +06-16" Locust +99-26" Oak

F-616

"C" 970 C-920 "C" 961.06 3+18.34

"C" 120 130 140 150 160 170 180 C-504 +83-20" Oak +71-20" Oak +69-14" Oak R/W 195' "C" 981.58 779+00 974.4 +66-18" Oak "C" (970) C-576 +66-10" Oak +66-16" Oak +62-10" Oak +62-16" Oak +62-12" Oak +60-16" Oak "C" 963.07 3+18.41

(970) "C" C-368 R/W 216' 200 190 180 170 160 150 "C" 958.40

+30-10" Locust +24-10" Locust +01-10" Locust +50-12" Oak +45-20" Oak +20-28" Oak

F-1440

"B" 960 C-480 "B" 954.83 2+17.91 "B" (960) C-272 200 190 180 9525 170 160 "B" 150

977.70 778+00 964.6

"B" 130 140 150 160 170 C-128 "B" 956.89 2+17.97 954.00 +82-12" Oak C-190 R/W 223' 954.00 "B" +73-24" Hickory

R/W 216' Begin Std. Paved Gutter Sta. 777+50 3½:1

F-1775

+26-36" Maple +04-24" Maple

"A" 950 C-303 "A" 949.80 1+17.49 947.00 R/W 215' C-256 (950) "A" 210 200 190 180 170 "A"

973.82 777+00 959.0

Begin Std. Paved Gutter Sta. 776+65 "A" 130 140 150 160 170 180 190 C-152 949.00 "A" C-232 (950) R/W 235' "A" 950.89 1+17.52 947.00

Begin Guard Rail (Lt) Sta. 776+86.17

Begin Approach Slab 776+84.17

Begin Guard Rail (Rt) 776+86.17

950

969.94 776+00 951.7

3½:1 70 3:1 2:1 2:1 3:1 3:1 3:1 4:1 4:1 19 38 20 40

Sta. 775+89

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CROSS SECTIONS STA. 776+00 TO STA. 779+50

	C.Y.	S.Y.
Excavation	111,333	
Embankment	91,801	
Seeding	32130	

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
333		4525	0		
	901			3492	122
316		3017	264		
	876			2493	408
315		2368	616		
	3487			6367	3888
309		1070	1440		
	3539			3726	5952
328		943	1775		
	583			559	1052
776+84	328	943	1775		
	797			524	986
776+54	150	0	0		

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

72
209

TRU-82-12.67

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
316		11536	0		
	3583			42683	0
329		11512	0		
	1839			21390	0
333		11589	0		
	1858			18020	0
336		7872	0		
	1858			11479	0
333		4525	0		

"D" 1020 R/W 216' "D" 160 170 C-48 1020) "D" 1½:1 "D"

"C" 1010 "C" 160 170 180 (1010) R/W 216' C-160 "C" "C"

"B" 1010 "B" 160 170 180 190 R/W 216' (1010) C-373 "B" "B"

"A" 1000 "A" 160 170 180 R/W 216' (990) C-280 "A"

"H" 120 130 140 150 160 R/W 162.50' (1020) C-712 "H"

"G" 130 140 150 160 R/W 172' (1010) C-592 "G"

"F" 130 140 150 160 R/W 178' (1010) C-584 "F"

"E" 130 140 150 160 R/W 183' (1000) C-776 "E"

C-10776

C-10760

C-10632

C-6816

End Std. Paved Gutter Sta. 780+75
End Sod Ditch Lt. Sta. 780+00

End Std. Paved Gutter Sta. 780+75
End Sod Ditch Rt. Sta. 780+00

+96 - 12" Pop.
+96 - 14" Beach
+94 - 12" Beech
+91 - 18" Oak

979.74 6+19.60
993.22 782+00 1025.0
981.64 6+19.75
973.51 5+19.18
970.0
989.34 781+00 1019.1
975.45 5+19.30
968.82 4+68.58
968.0
987.40 780+50 1013.2
972.32 4+68.58
970.0
967.28 4+18.75
964.5
985.46 780+00 1002.3
969.26 4+18.86 Sta. 779+50
965.80

CROSS SECTIONS STA. 780+00 TO STA. 782+00

TRU-82-12.67

R/W 1030 — 2:1 — R/W 125'

C-4726

1012.62
787+00
1036.7

1011.37
11+21.99

+00-12" Beech

1010.77
11+21.70

+81-14" Oak

C-6283

R/W 1030 — 2:1 — 1½:1 — R/W 124'

1008.74
786+00
1035.7

End Guard Rail (Lt) 785+48.67

1006.33 — 1006.21 — 1006.09

+03-12" W.Ch.

1004.64
10+21.28

+95-12" W.Ch.

1006.21
10+21.99

R/W 156 — 1030 — 2:1 — 1½:1

1004.86
785+00
1034.3

End Guard Rail (Rt) 784+48.67

+88-12" W.Cherry

+39-12" W.Ch.

C-7980

2:1 — R/W 132'

1½:1

+02-14" Map

R/W 166' 1030

998.41
9+20.86

1000.20
9+21.09

R/W 143'

C-9309

1000.98
784+00
1032.5

992.19
8+20.44

994.01
8+20.64

R/W 190' "A" — 1020 — "A"

C-32

"A" — "A"

(1020) 170 160 150

997.10
783+00
1029.4

+65-12" Gum

C-10340

"B" — "B"

+94-12" Poplar

C-270

R/W 153'

(1020)

+80-12" W.Cherry

120 130 140 150

"B" — "B"

"B" 987.82
7+20.20

Sta. 782+00

985.96
7+20.02

1½:1

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb
169		4726	0		
	2078			20888	0
205		6283	0		
	2472			26413	0
240		7980	0		
	2756			32017	0
256		9309	0		
	3039			36947	0
291		10642	0		
	3372			41072	0
316		11536	0		

CROSS SECTIONS STA. 783+00 TO STA. 787+00

TRU-82-12.67

Sta. 789+00 to 796+00
Trees within R/W
12" - 18" - 95
18" - 24" - 8
24" - 30" - 4

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Wooded Area

Wooded Area

R/W

1030

C-1040

1031.81
792+00
1036.0

Begin Sod Ditch Sta. 792+00

R/W 133'

R/W

1030

2:1 1½:1

C-1460

1028.14
791+00
1035.3

2:1 ½:1 2:1

R/W

1030

2:1 1½:1

C-1780

Top of Curb

1026.04
790+45.77
1035.1

1022.3

R/W

1030

2:1 1½:1

C-2060

1024.26
790+00
1034.9

2:1 ½:1 2:1

R/W

Wooded Area

Wooded Area

1030

2:1 1½:1

C-2734

1019.86
13+18.62

1020.38
789+00
1034.9

+92-12 Beech

+87-14" Gum

+74 16" Oak

+90 16" Oak

+91-14" Gum

R/W

R/W

1030

2:1 1½:1

C-3620

+64-12" Maple

1016.50
788+00
1035.5

+94-14" Beach

2:1 ½:1 2:1

1015.75
12+18.37

Sta. 787+00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

R/W

R/W

R/W

R/W

R/W

Excavation	207636 C.Y.
Embankment	104 C.Y.
Seading	22,208 S.Y.

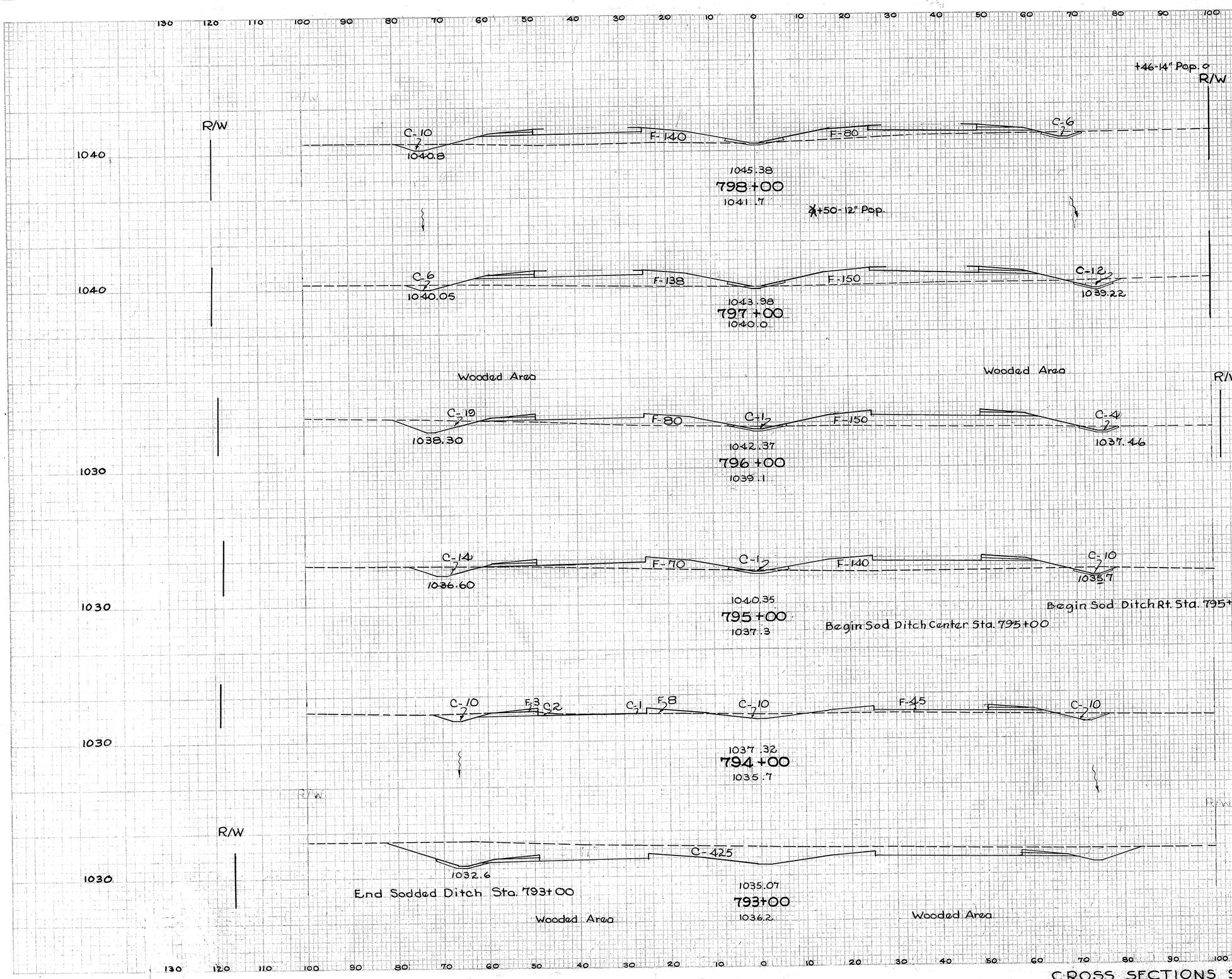
Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
138		1040	0		
	1461			4630	0
125		1460	0		
	747			3253	0
123		1780	0		
	683			3255	0
126		2060	0		
	1422			8877	0
130		2734	0		
	1478			11767	0
136		3620	0		
				15456	0
169		4726	0		

CROSS SECTIONS STA. 788+00 TO STA. 792+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

75
209

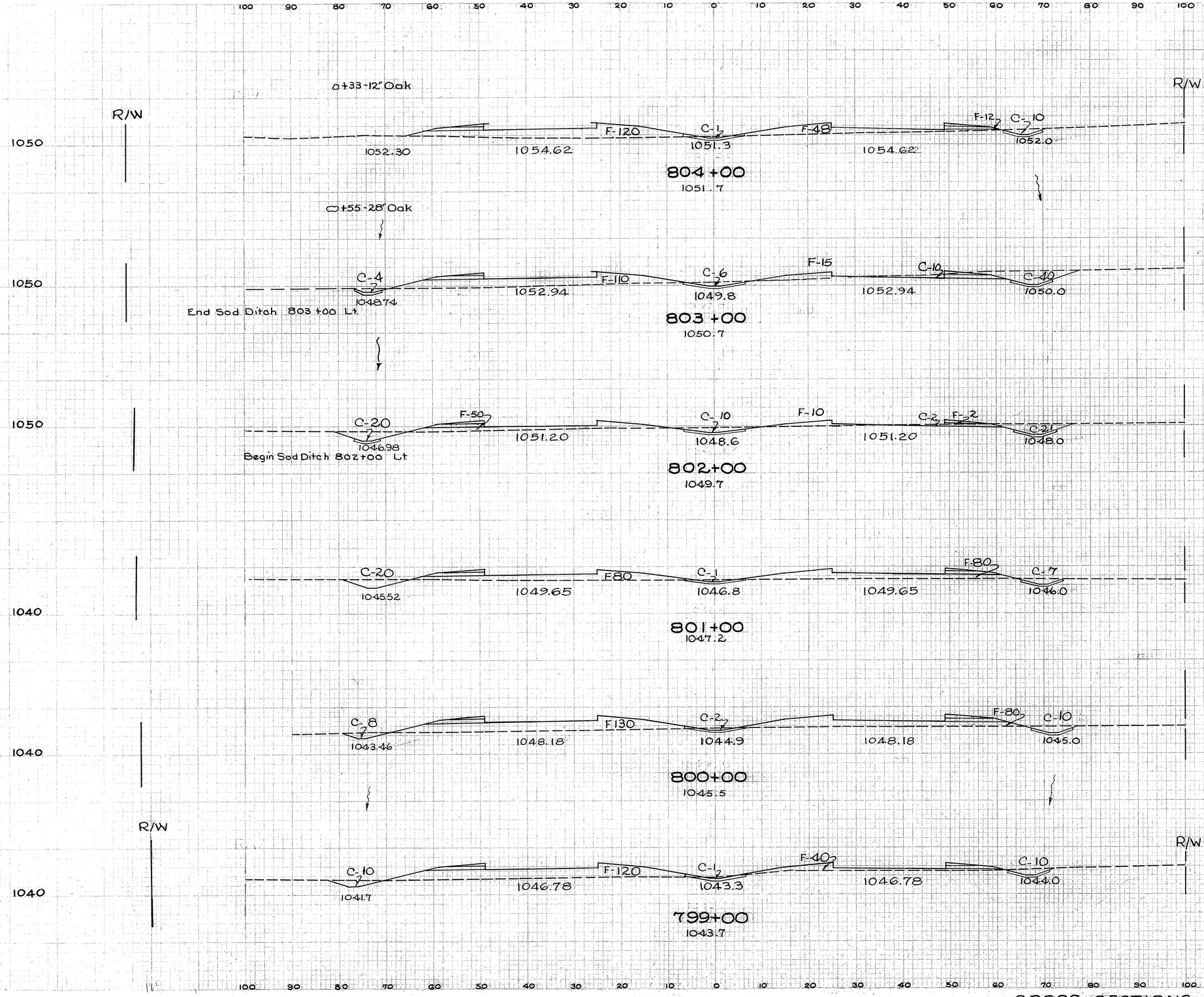
TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
117		16	220		
	1328			63	941
122		18	288		
	1372			78	959
125		24	230		
	1367			91	815
121		25	210		
	1300			107	493
113		33	56		
	1306			848	104
122		425	0		
	1444			2718	0
138		1040	0		

CROSS SECTIONS STA. 793+00 TO STA. 798+00

TRU-82-12.67



Excavation CY.	Embankment CY.	Seeding SY.
10940	8060	1563

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
103		11	180		
	1289			131	565
119		60	125		
	1339			209	365
122		53	72		
	1333			150	430
118		28	160		
	1328			89	685
121		20	210		
	1339			76	685
120		21	160		
	1317			69	704
117		16	220		

CROSS SECTIONS STA. 799+00 TO STA. 804+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

77
209

TRU 82 - 12.67

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
55		128	0		
	861			298	130
100		33	70		
	1183			119	272
113		31	77		
	1211			35	402
105		4	140		
	1167			9	672
105		1	223		
	1156			22	746
103		11	180		

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

1060

Back Match Line

C-16 1061.05 — 1062.83 — C-80 1063.02 — 1062.83 — 1062.83 — C-16 — C-16 Match Line Back

809+00
1062.0

R/W

1060

1061.15 — F-40 — 1061.15 — C-18 1058.4 — 1061.15 — 1061.15 — F-30 — C-15 1058.01 — R/W 150'

1059.50

808+00
1059.8

1050

R/W

1059.47 — F-7 — C-1 1057.55 — 1059.47 — F-40 — C-20 1056.8 — 1059.47 — 1059.47 — F-30 — C-10 1056.82 — R/W

+87-28" Oak

807+00
1058.2

1050

R/W

1057.79 — F-60 — 1057.79 — C-3 1055.2 — 1057.79 — F-70 — 1057.79 — C-1 1055.06 — F-10 — R/W

1055.80

+90-12" Map

806+00
1055.9

End Sod Ditch Center Sta. 805+00

1050

R/W

1056.11 — 1056.11 — F-100 1053.5 — 1056.11 — F-115 — 1056.11 — C-1 1053.30 — F-8 — R/W

1054.05

+94-16" Oak

805+00
1053.5

Sta. 804+00

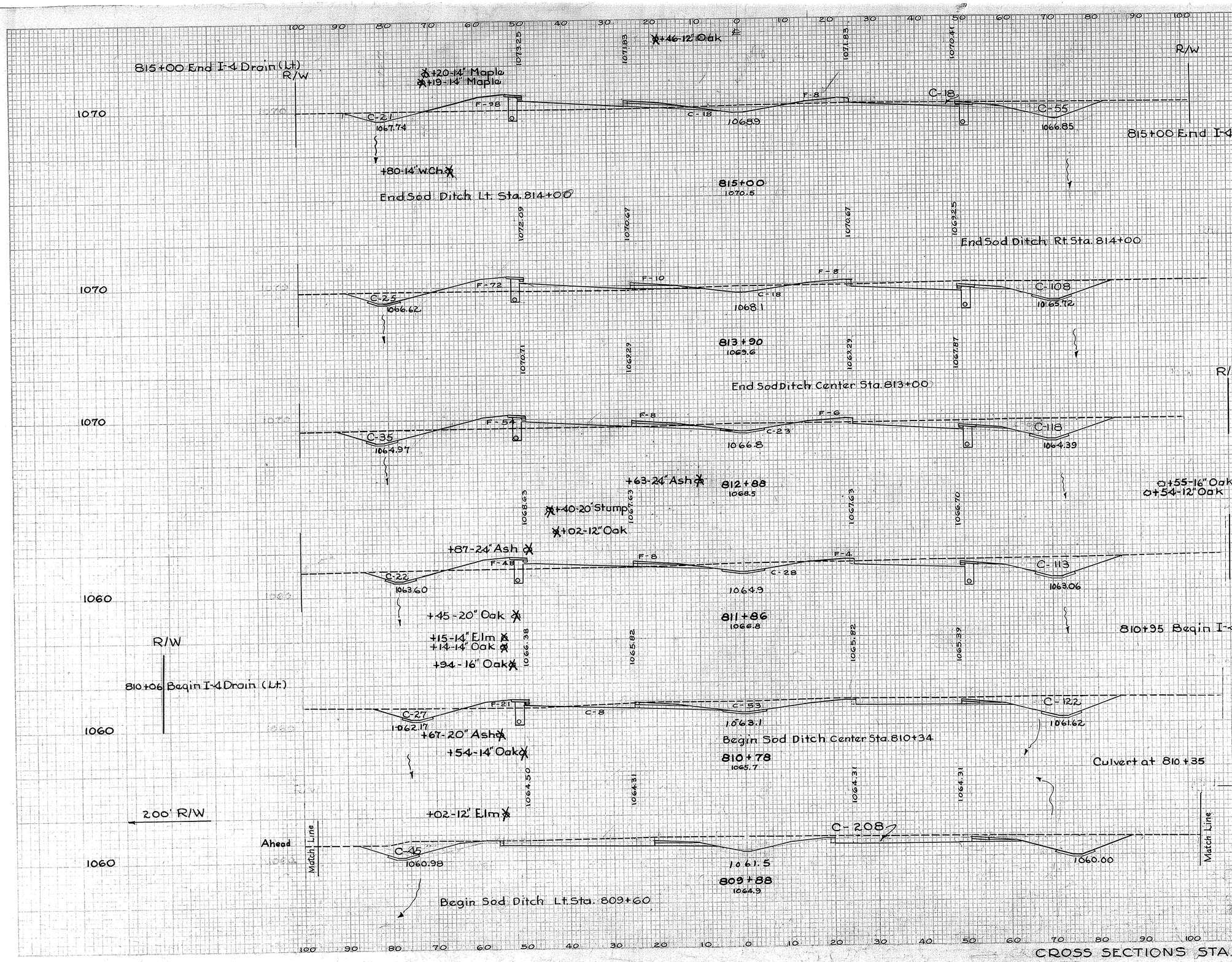
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CROSS SECTIONS STA. 805+00 TO STA. 809+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

78
209

TRU 82 - 12.67



Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
129		112	106		
	1589			536	399
131		151	90		
	1501			618	299
134		176	68		
	1490			641	242
129		163	60		
	1536			746	162
124		210	21		
	1225			780	35
118		253	0		

CROSS SECTIONS STA. 809+88 TO STA. 815+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

79
209

TRU 82-12.67

Seeding L.F.	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb.
139		759	0		
	1478			2,132	0
127		392	0		
	1289			831	115
105		57	62		
	1139			128	391
100		30	149		
	1087			127	602
115		45	208		
	1483			280	690
130		94	134		
	1439			381	444
129		112	106		

	CY.	CY.	SY.
Excavation	4561		
Embankment	3677		
Seeding	1460	5	

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

R/W — 1073.58 — 1072.16 — 1072.16 — 1070.74 — R/W

1070

1069.34 — C-759 — 1069.7 — 1068.41

821+00
1075.5

1074.17 — 1072.75 — 1072.75 — 1071.33

1070

C-93 — 1069.80 — 1/4"/Ft. — C-299 — 1/4"/Ft. — 1069.9 — 1068.84

Sta. 819+50 (Lt) Begin 6"-I-4

820+00
1073.7

1074.56 — 1073.14 — 1073.14 — 1071.72

Sta. 819+50 Begin 6" I-4 (Rt.)

1070

C-18 — 1070.26 — F-34 — F-11 — 1 3/4"/Ft. — C-13 — 1070.77 — 1 3/4"/Ft. — F-17 — C-8 — C-18 — 1069.27

819+00
1071.9

1074.66 — 1073.24 — 1073.24 — 1071.82

1070

F-122 — 1070.72 — C-2 — 1070.7 — F-27 — C-9 — C-19 — 1069.70

818+00
1071.2

1074.51 — 1073.09 — 1073.09 — 1071.67

1070

C-5 — 1069.17 — F-208 — 1070.5 — +09-12" Oak — C-6 — C-34 — 1068.85

+65-14" Oak

+47-12" Oak

817+09
1070.1

1074.01 — 1072.59 — 1072.59 — 1071.17

R/W

1070

C-14 — 1068.72 — F-118 — C-6 — F-16 — C-16 — 1070.2 — C-56 — 1067.79 — R/W

+88-24" W. Cherry

+73-16" Ash

+55-24" Oak

+51-22" Oak

816+00
1070.8

Sta. 815+00

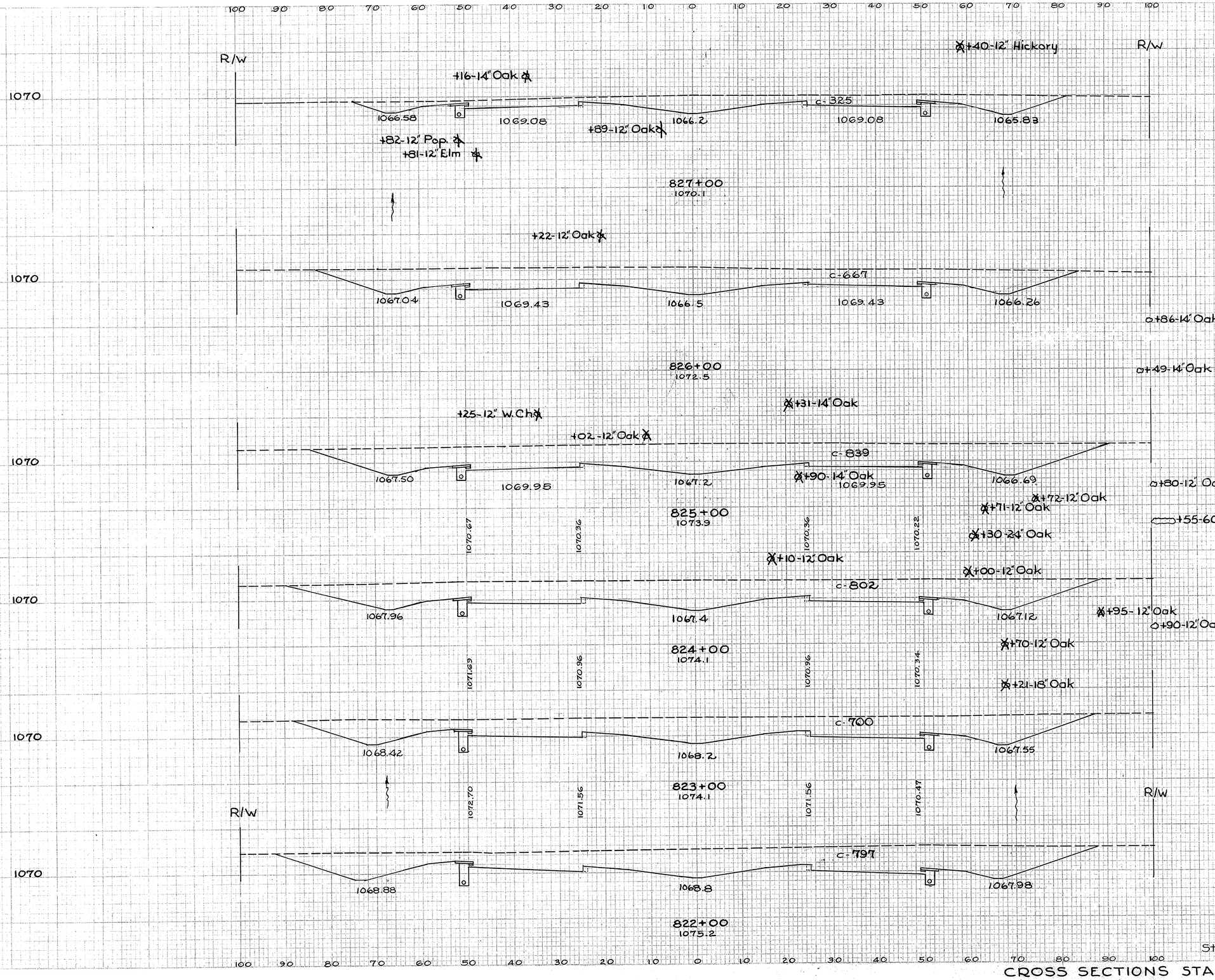
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CROSS SECTIONS STA. 816+00 TO STA. 821+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

80
209

TRU-82-12.67



Seeding		End Area		Cu.Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
112		325	0		
	1306			1837	0
123		667	0		
	1406			2789	0
130		839	0		
	1472			3039	0
135		802	0		
	1489			2782	0
133		700	0		
	1494			2712	0
136		797	0		
	1528			2882	0
139		759	0		

CROSS SECTIONS STA. 822+00 TO STA. 827+00

TRU 82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

R/W

1069.96 1071.08 1069.96 1071.08

C-23 1065.64 — F-102 — 1/8"/Ft. — C-6 1066.96 — 3/8"/Ft. — F-114 — C-36 1065.01

1060

833+00
1067.9

1069.56 1070.68 1069.56 1070.68

+38-14" Oak +38-12" Oak

End Sod Ditch Center Sta. 832+00

C-10 1065.18 — F-122 — 2 1/2"/Ft. — C-8 1065.56 — 2 1/2"/Ft. — F-160 — C-18 1064.54

1060

+91-14" Maple

+66-12" Maple

832+00
1066.8

1069.16 1070.28 1069.16 1070.28

F-342

1060

Inlet Elev. 1064.93 — Elev. 1064.38 — -0.40% — Elev 1064.36 — Twin 30" Std. Pipe Culv. — Outlet 1063.92

Begin Sod Ditch Center Sta. 831+00

1068.84 1069.62 1068.84 1069.62

831+00
1065.9

+22 End 6" I-4 Underdrain Rt.

1060

C-16 1065.22 — F-48 — 2 1/2"/Ft. — C-16 1064.84 — 2"/Ft. — F-165 — C-20 1064.51 — F-8

830+00
1066.8

1068.69 1069.00 1068.69 1069.00

1060

F-6 — C-14 1065.66 — F-26 — 2"/Ft. — C-16 1065.35 — 2"/Ft. — F-75 — C-4 1064.97 — F-3

Sta. 828+25 End 6" I-4 (Lt.)
Begin 6" I-4 Lt. to Rt.

R/W

829+00
1067.0

1068.71 1068.72 1068.71 1068.72

R/W

1060

F-2 — C-10 1066.12 — C-10 — F-2 — 1 3/4"/Ft. — C-40 1065.72 — 1 3/4"/Ft. — C-13 — F-2 — F-3 — C-24 1065.40

+80-12" Walnut

828+00
1068.0

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 827+00

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
132		65	216		
	1428			187	922
125		36	282		
	1222			69	1156
95		0	342		
	1217			63	1026
124		34	212		
	1322			126	617
114		34	121		
	1228			243	241
107		97	9		
	1217			781	17
112		325	0		

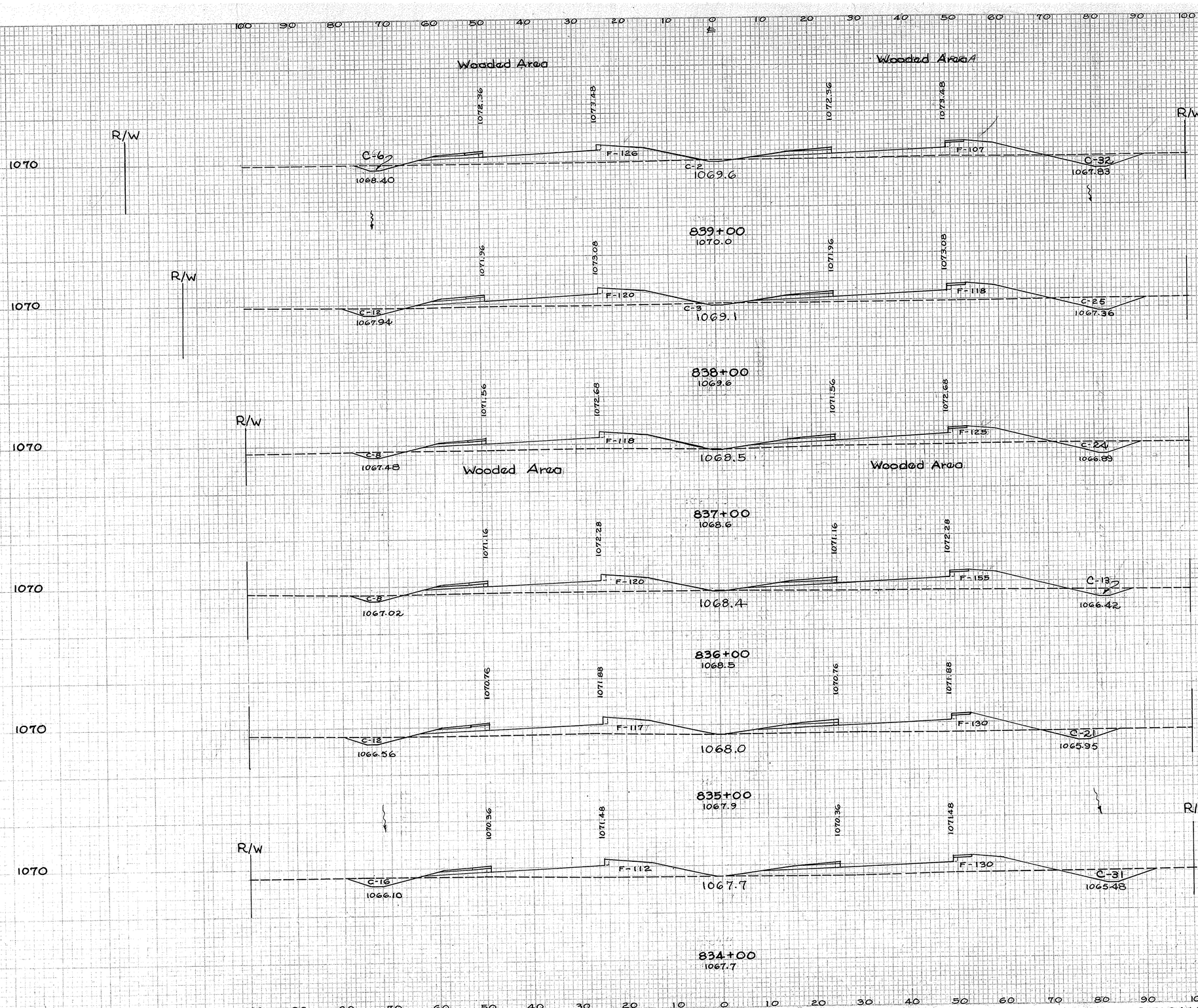
Excavation 20342 C.Y.
Embankment 13181 C.Y.
Seeding 16368 S.Y.

CROSS SECTIONS STA. 828+00 TO STA. 833+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

82
209

TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
123		40	233		
	1383				148872
126		40	238		
	1383			133	891
123		32	243		
	1356			98	959
121		21	275		
	1339			100	967
120		33	247		
	1372			148	906
127		47	242		
	1439			207	848
132		65	216		

CROSS SECTIONS STA. 834+00 TO STA. 839+00

FED. RD. DIST. NO.	STATE	PROJECT	SHEET NO.

83
209

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Wooded Area

Wooded Area

R/W

1070

Sta. 837+00 to 856+00
Trees within R/W
12" - 18" - 240
18" - 24" - 29
24" - 30" - 22
30" - 36" - 2

R/W

1070

R/W

1070

R/W

1070

R/W

1070

R/W

1070

C-6 9
1066.32

1073.90

F-122

1070.7

1073.90

F-130

C-7
1069.30

845+00
1070.6

1073.89 1073.94 1073.89 1073.94

C-4 5
1067.07

F-155

1071.1

F-138

1070.18

844+00
1070.6

1073.84 1074.30 1073.84 1074.30

C-11 7
1067.82

F-197

1071.3

F-206

1069.71

843+00
1069.8

1073.56 1074.50 1073.56 1074.50

C-7 2
1068.60

F-172

1070.9

F-161

C-3
1069.24

842+00
1070.3

1073.16 1074.28 1073.16 1074.28

C-9 2
1069.32

F-118

C-2
1070.5

F-128

C-15
1068.77

841+00
1070.7

1072.76 1073.88 1072.76 1073.88

C-5
1068.86

F-130

1070.1

F-112

C-15
1068.30

Wooded Area

Wooded Area

840+00
1070.1

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 839+00

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
135		76	252		
	1411			224	1009
119		45	293		
	1317			115	1289
118		17	403		
	1261			61	1363
109		16	333		
	1294			78	1072
124		26	246		
	1333			85	904
116		20	242		
	1328			111	880
123		40	233		

Excavation	1425 CY
Embankment	11403 CY
Seeding	16094 SY

CROSS SECTIONS STA. 840+00 TO STA. 845+00

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

R/W 1060

1067.95 1068.76 1068.76 1067.70

Wooded Area Wooded Area R/W

F-4 F-20 F-80

C-112 C-9 C-3

1061.82 1066.0 1065.5

851+00
1067.0

1069.45 1069.76 1069.76 1070.24

1070 F-6 F-10 F-10 F-32

C-148 C-17 C-17

1062.57 1067.00 1066.1

850+00
1068.4

1070.76 1070.76 1070.76 1070.87

1070 F-16 F-9 F-50

C-131 1070.95 C-9 1070.95 C-18

1063.32 1068.1 1066.7

849+00
1069.1

1070 F-8 F-43 F-80

C-138 1071.95 C-4 1071.95 C-17

1064.07 1069.0 1067.3

Begin Sod Ditch Center Sta. 848+00

848+00
1069.6

1070 $1\frac{3}{4}$"/1 Ft. $1\frac{3}{4}$"/Ft. F-100 F-30

C-116 C-1 C-19

1064.82 1072.83 1069.64 1072.83 1067.9

847+00
1070.0

R/W 1070 $1\frac{3}{4}$"/Ft. $1\frac{3}{4}$"/Ft. R/W

F-123 F-123

C-81 C-1 C-14

1065.57 1073.48 1070.29 1073.48 1068.5

Wooded Area Wooded Area

Begin Sod Ditch Lt. Sta. 846+00

846+00
1070.2

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 845+00

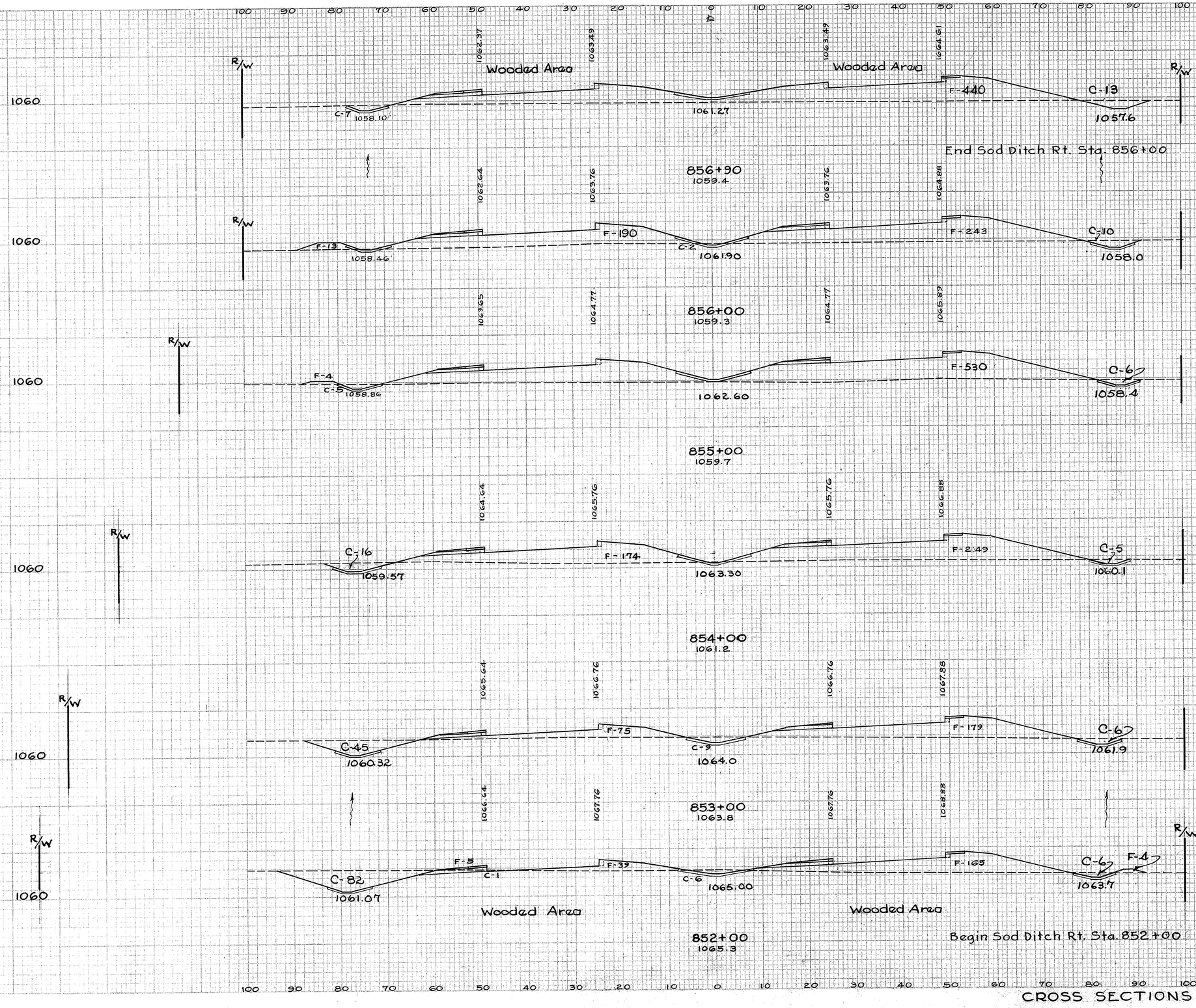
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
135		130	104		
	1539			578	300
142		182	58		
	1567			630	246
140		158	75		
	1561			587	230
141		159	49		
	1589			546	443
145		136	190		
	1589			430	807
141		96	246		
	1533			319	922
135		76	252		

CROSS SECTIONS STA. 846+00 TO STA. 851+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

85
209

TRU-82-12.67

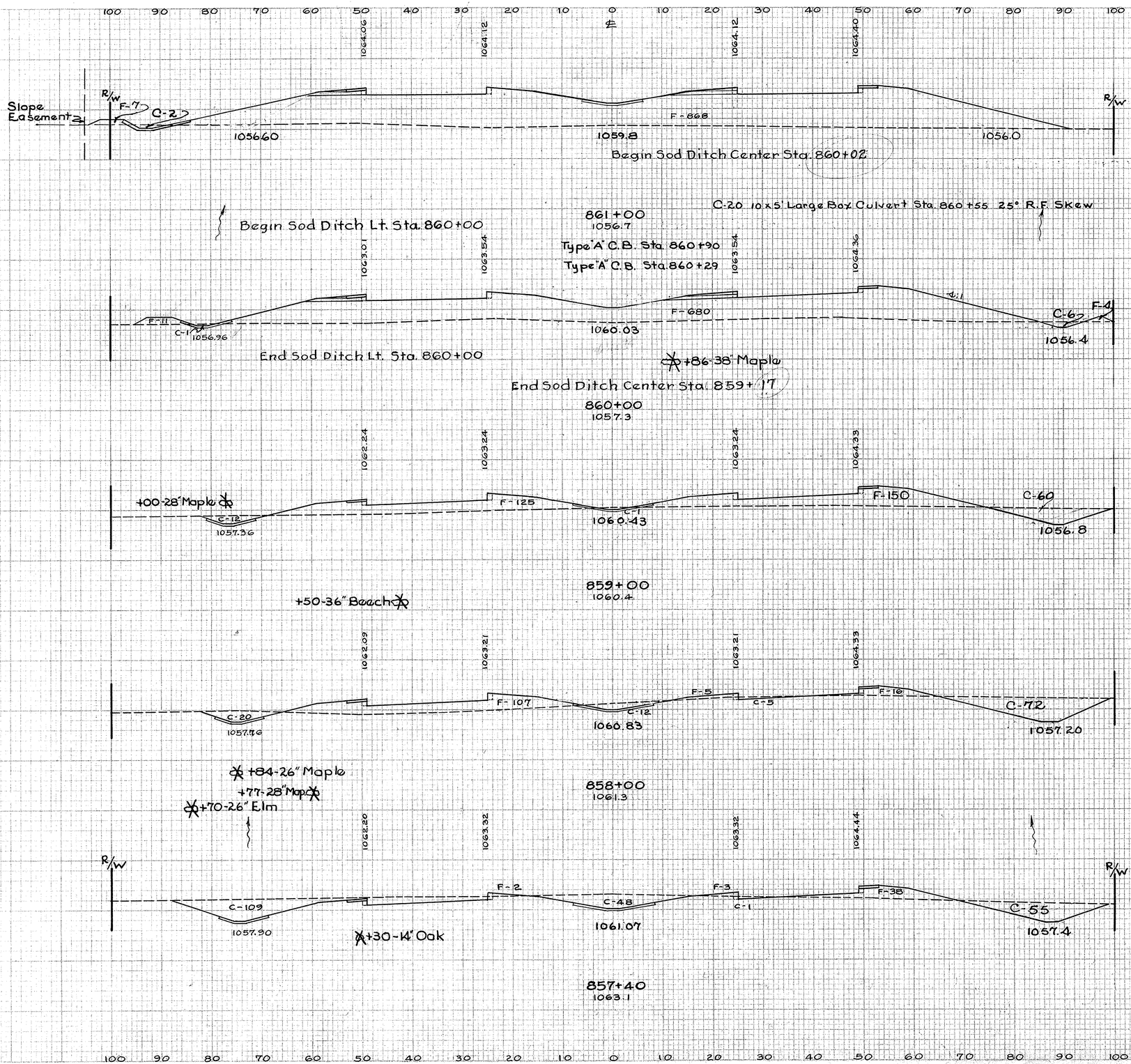


Excavation	4340	CY
Embankment	9315	CY
Seeding	17316	SY

Seeding L.F	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc	Cu. Yds. Emb.
101		20	440		
	1000			53	1477
99		12	446		
	1100			43	1815
99		11	534		
	1083			59	1772
96		21	423		
	1083			150	1254
99		60	254		
	1533			287	865
105		95	213		
	1333			413	587
135		130	104		

CROSS SECTIONS STA. 852+00 TO STA. 856+90

TRU-82-12.67



Seeding		EndArea		Cu.Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
92		2	875		
	1178			17	2928
120		7	695		
	1261			148	1796
107		73	275		
	1200			337	746
109		109	128		
	743			358	190
114		213	43		
	597			216	447
101		20	440		

CROSS SECTIONS STA. 857+40 TO STA. 861+00

FED. RT. DIST. NO.	STATE	PROJECT	FISCAL YEAR

87
209

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

1070

R/W C-24 1069.0 F-24 1073.53 F-9 1070.6 C-10 F-37 1073.53 C-17 1070.0 R/W

867+00
1071.7

1070

C-17 1066.4 1071.31 F-75 1068.6 C-1 F-74 1071.31 C-11 1066.4

866+00
1069.1

1060

C-18 1063.8 1069.36 1066.0 F-341 1069.36 C-11 1062.8

865+00
1065.6

1060

C-7 1061.2 1067.68 1064.0 F-568 1067.68 C-10 1059.2

864+00
1062.3

1060

C-12 1058.8 1066.28 1061.4 F-717 1066.28 C-10 1057.20

Dr. +50-20" Elm.

863+00
1059.7

1060

R/W F-5 C-2 1057.00 1065.16 1060.3 F-885 1065.16 C-10 1056.8 R/W

862+00
1057.4

Begin Sod Ditch, Rt. Sta. 861+50

Sta. 861+00

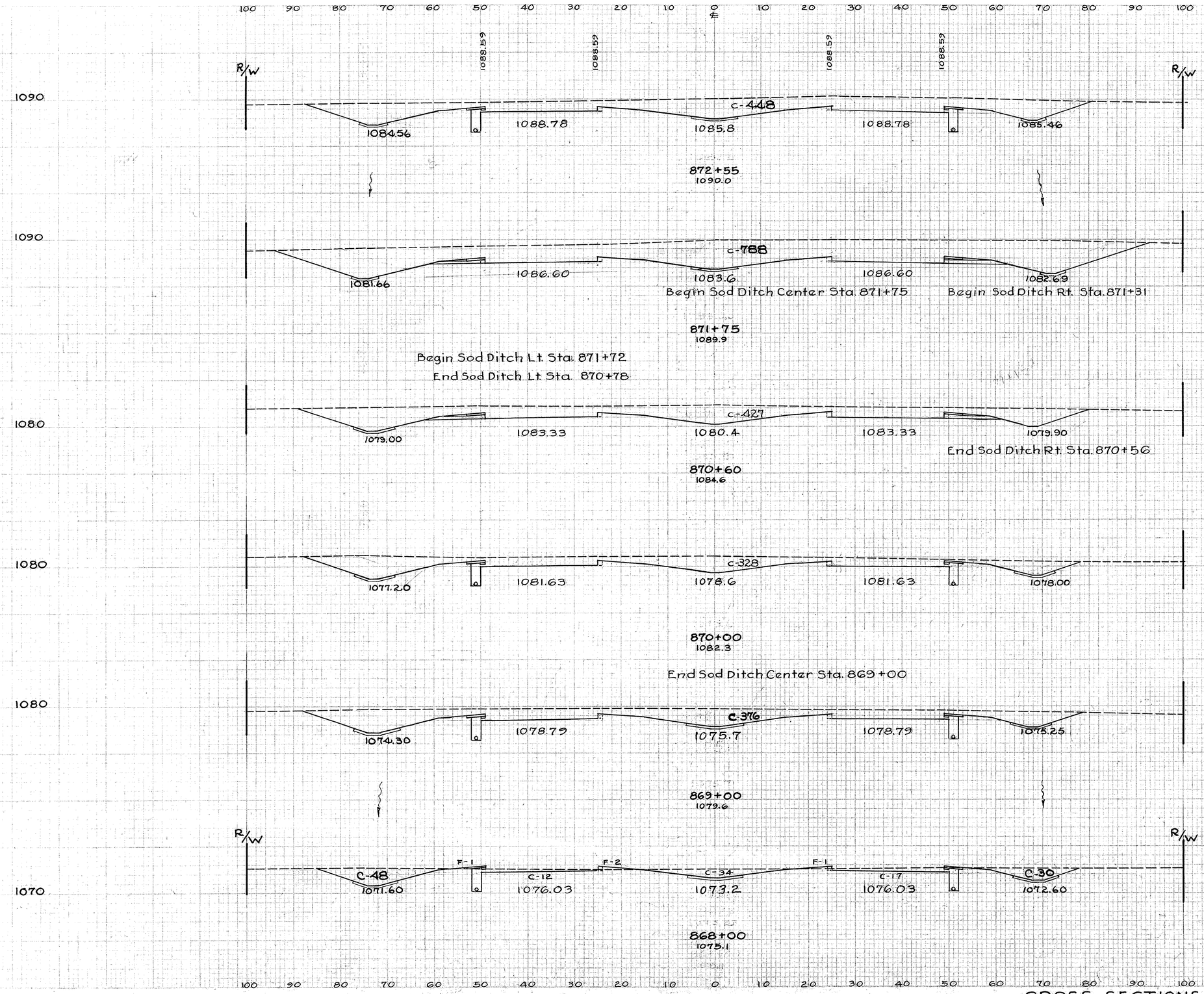
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

CROSS SECTIONS STA. 862+00 TO STA. 867+00

	C.Y.	C.Y.	S.Y.
Excavation	1562		
Embankment	22386		
Seeding	13734		

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
83		51	70		
	956			148	406
89		29	149		
	989			96	907
89		23	341		
	1072			74	1683
104		17	568		
	1156			72	2380
104		22	717		
	1211			63	2976
114		12	890		
	1144			26	3269
92		2	875		

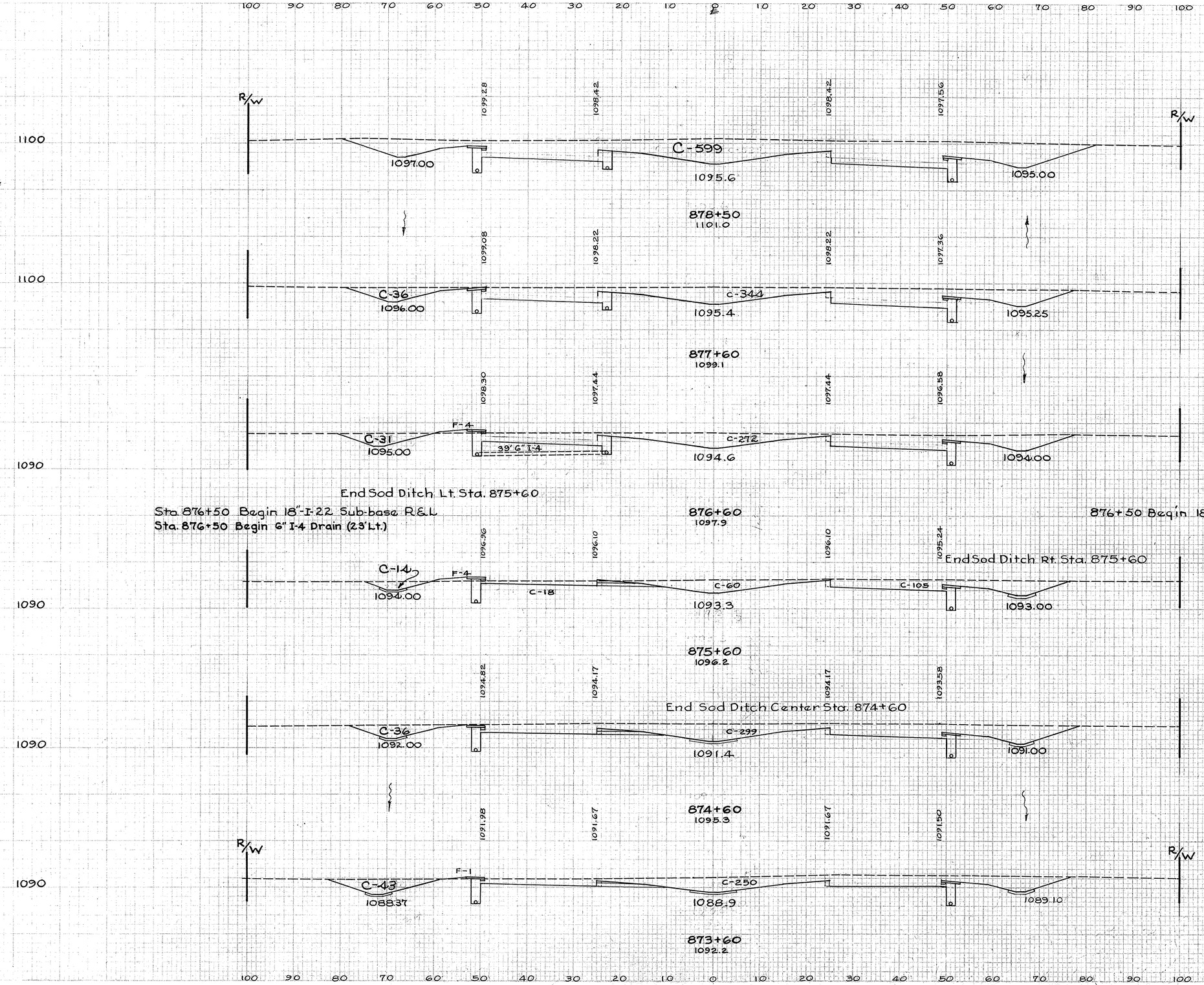
TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
102		448	0		
	982			2289	0
119		788	0		
	1418			2588	0
103		427	0		
	690			839	0
104		328	0		
	1078			1304	0
90		376	0		
	983			957	7
87		141	4		
	944			356	137
83		51	70		

CROSS SECTIONS STA. 868+00 TO STA. 872+55

TRU-82-12.67



Sta. 878+00

Excavation 14261 C.Y.
Embankment 583 C.Y.
Seeding 13407 S.Y.

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
117		599	0		
	1145			1632	0
112		380	0		
	1250			1265	7
113		303	4		
	1217			926	15
106		197	4		
	1217			985	7
113		335	0		
	1272			1163	2
116		293	1		
	1400			1441	2
124		448	0		

CROSS SECTIONS STA. 873+00 TO STA. 878+50

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

1100

R/W

1096.28 1095.42 1095.42 1094.56

C-1138

1094.25 1092.7 1092.25

+80-24" Stump

+68-12" Elm

884+00
1101.5

1096.88 1096.02 1096.02 1095.16

1100

C-943

1094.75 1093.2 1092.75

Sta. 882+50 End 18" I-22 Sub-base R&L
Sta. 882+50 End 6" I-4 Drain (23' Lt.)

31' 6" I-4

1096.62 1096.62 1095.76

1100

C-902

1095.25 1093.8 1093.25

883+00
1100.8

Sta. 882+50 End 18" I-22 Subbase (Rt. & Lt.)

1098.08 1097.22 1097.22 1096.36

1100

C-748

1095.75 1094.4 1093.75

882+00
1100.7

1098.01 1097.82 1097.82 1096.96

1100

C-670

1096.25 1095.0 1094.25

881+00
1100.1

1098.20 1098.34 1098.34 1097.48

1100

C-620

1096.50 1095.5 1094.75

880+00
1100.2

879+00
1101.0

Sta. 878+50

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

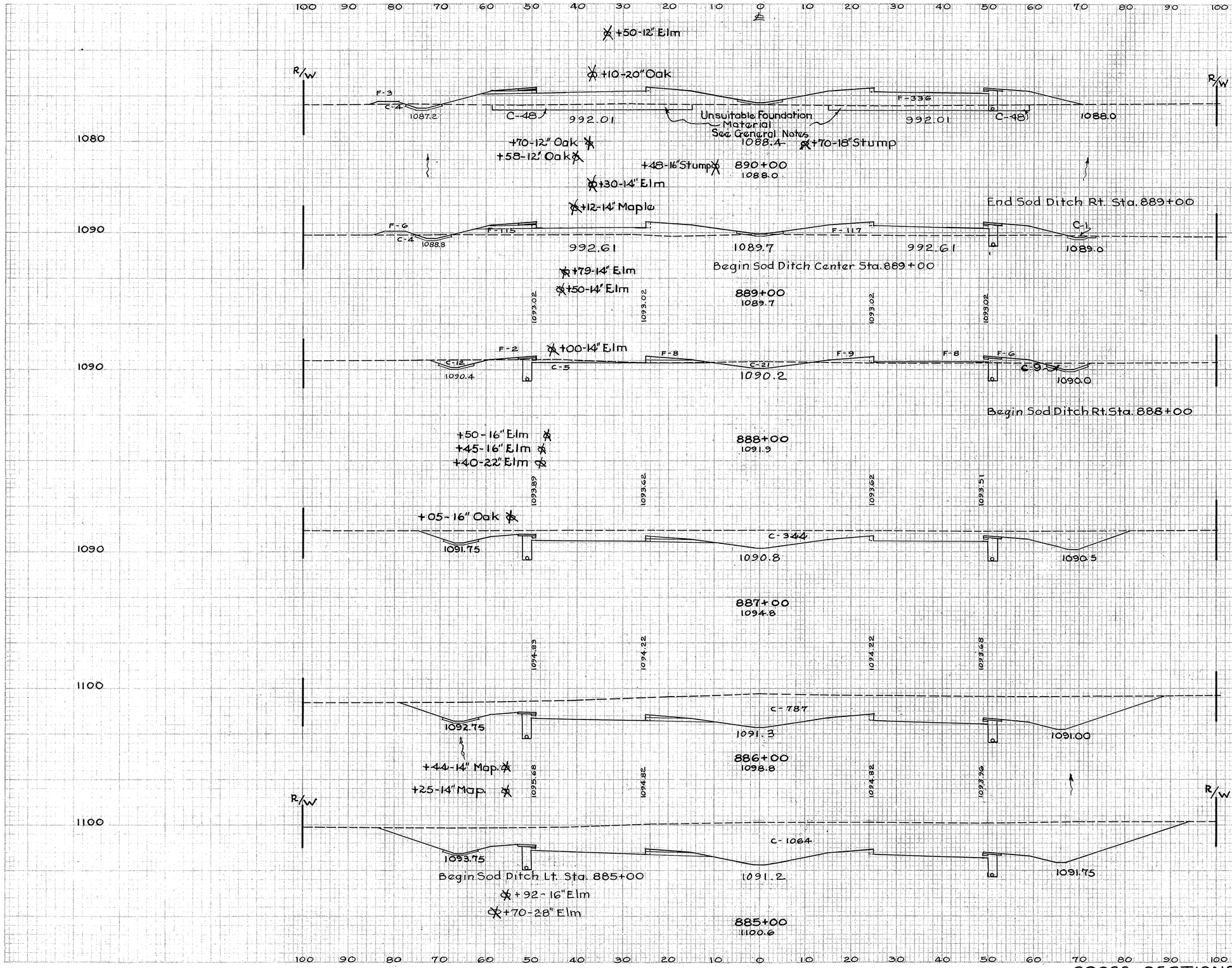
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
136		1138	0		
	1424			3854	0
133		943	0		
	1456			3417	0
129		902	0		
	1433			3056	0
129		748	0		
	1411			2626	0
125		670	0		
	1372			2389	0
122		620	0		
	664			2258	0
117		599	0		

CROSS SECTIONS STA. 879+00 TO STA. 884+00

FED. ROAD DIST. NO.	STATE	PROJECT	FISCAL YEAR

91
209

TRU-82-12.67



Excavation CY 29670
Embankment CY 16321
Seeding SY 16741

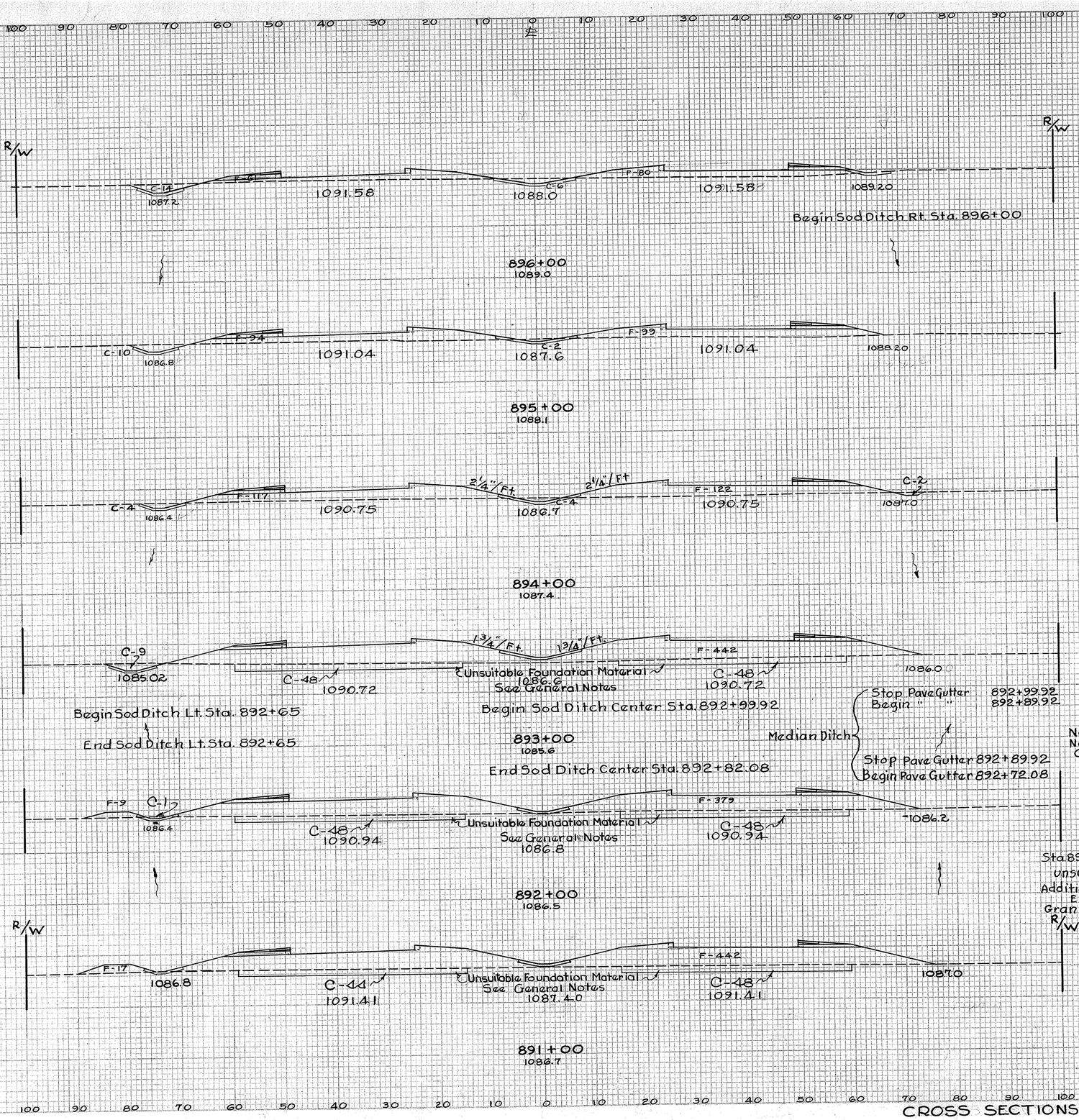
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
110		4	339		
	1222			17	1069
110		5	238		
	1167			96	502
100		47	33		
	1167			724	61
110		344	0		
	1294			2095	0
123		787	0		
	1422			3428	0
133		1064	0		
	1494			4078	0
136		1138	0		

CROSS SECTIONS STA. 885+00 TO STA. 890+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

92
209

TRU-82-12.67

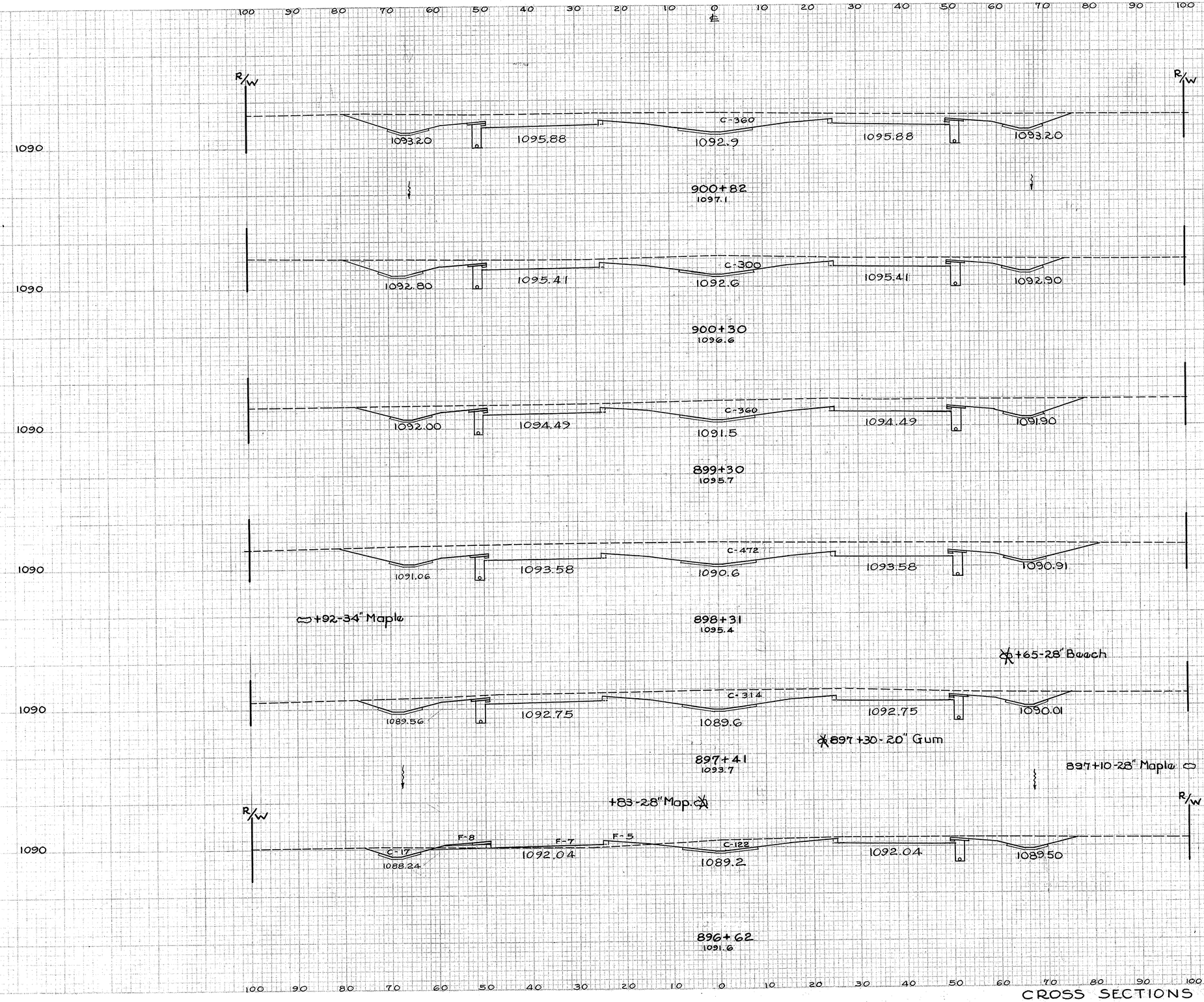


Seeding		EndArea		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb
96		20	141		
	1089			59	619
100		12	193		
	1106			41	800
99		10	239		
1200		35	1261		
117	9	442			
1300		6	1537		
117	1	388			
1322		2	1569		
121	0	459			
1283		7	1478		
110	4	339			

CROSS SECTIONS STA. 891+00 TO STA. 896+00

FED. NO. PROJ. NO.	STATE	PROJECT	SHEET NO. TOTAL SHEETS
			93 209

TRU-82-12.67



Excavation Unsuitable Foundation	1068 C.Y.
Granular Borrow	1068 C.Y.

Excavation	6827	C.Y.
Embankment	7478	C.Y.
Seeding	14523	S.Y.

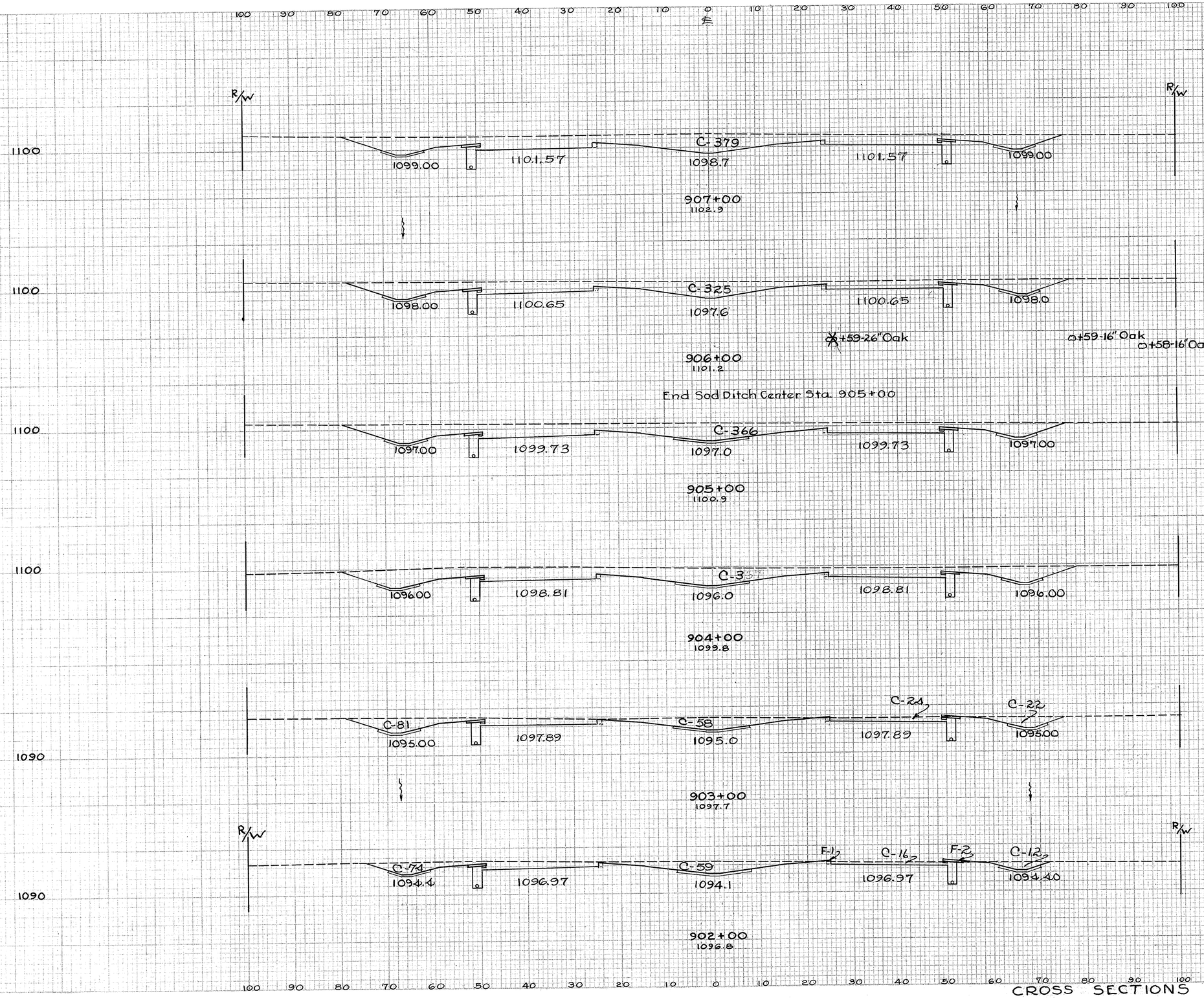
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb
110		360	0		
	633			635	0
109		300	0		
	1217			1222	0
110		360	0		
	1243			1526	0
116		472	0		
	1115			1310	0
107		314	0		
	939			663	29
107		139	20		
	699			182	185
96		20	141		

CROSS SECTIONS STA. 896+62 TO STA. 900+82

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

94
209

TRU-82-12.67

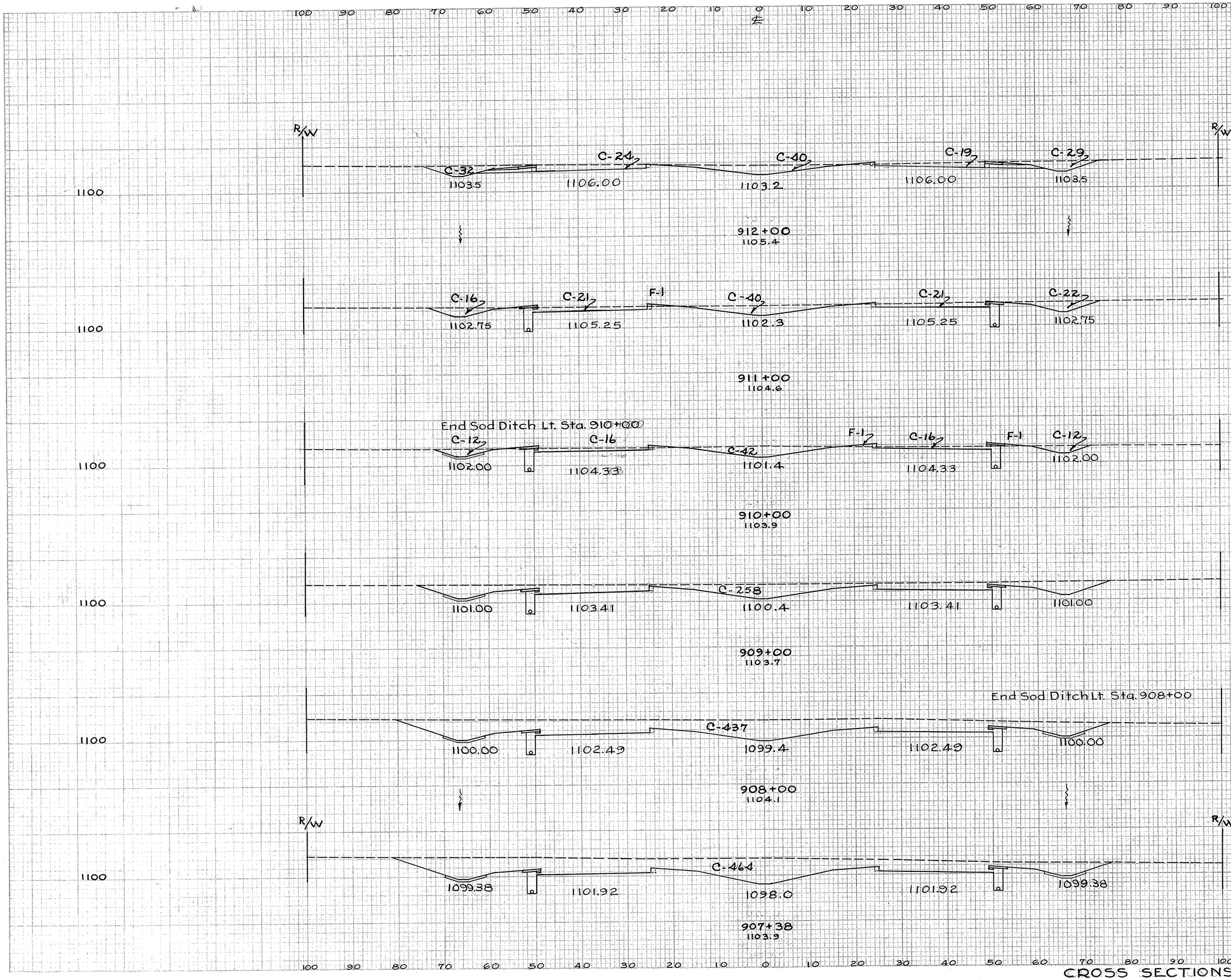


Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
109		379	0		
	1217			1304	0
110		325	0		
	1217			1280	0
109		366	0		
	1228			1357	0
112		367	0		
	1222			1022	0
108		185	0		
	1156			641	6
100		161	3		
	1377			1139	0
110		360	0		

CROSS SECTIONS STA. 902+00 TO STA. 907+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR	95 209

TRU-82-12.67



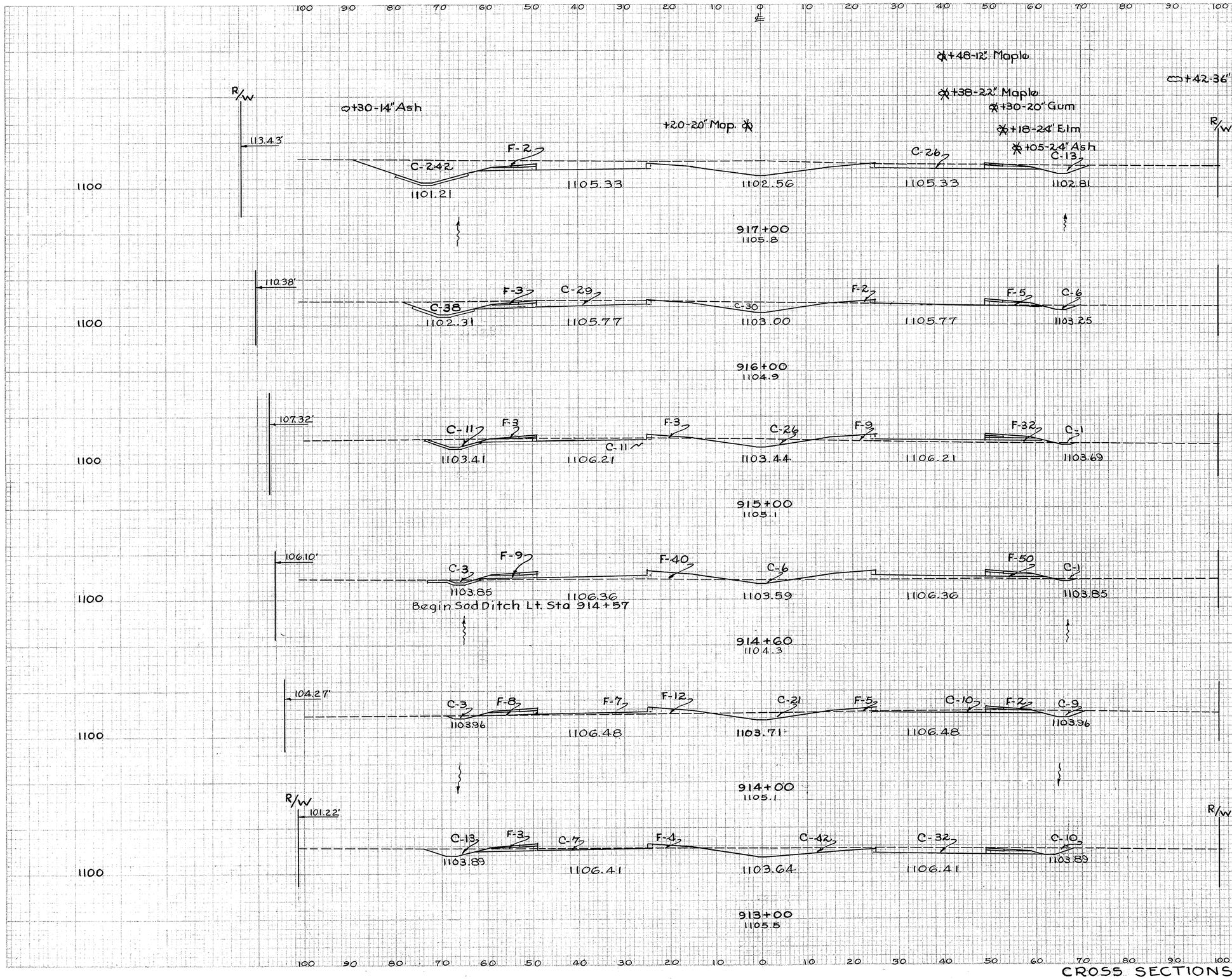
	C.Y.	C.Y.	S.Y.
Excavation	10817		
Embankment		92	
Seeding			14009

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
102		144	0		
	1133			489	0
102		120	1		
	1106			404	6
97		98	2		
	1122			659	4
105		258	0		
	1200			1287	0
111		437	0		
	775			1035	0
114		464	0		
	471			593	0
109		379	0		

CROSS SECTIONS STA. 907+38 TO STA. 912+00

PROJECT NO.	STATE	PROJECT	SHEET NO.
			96 209

TRU-82-12.67



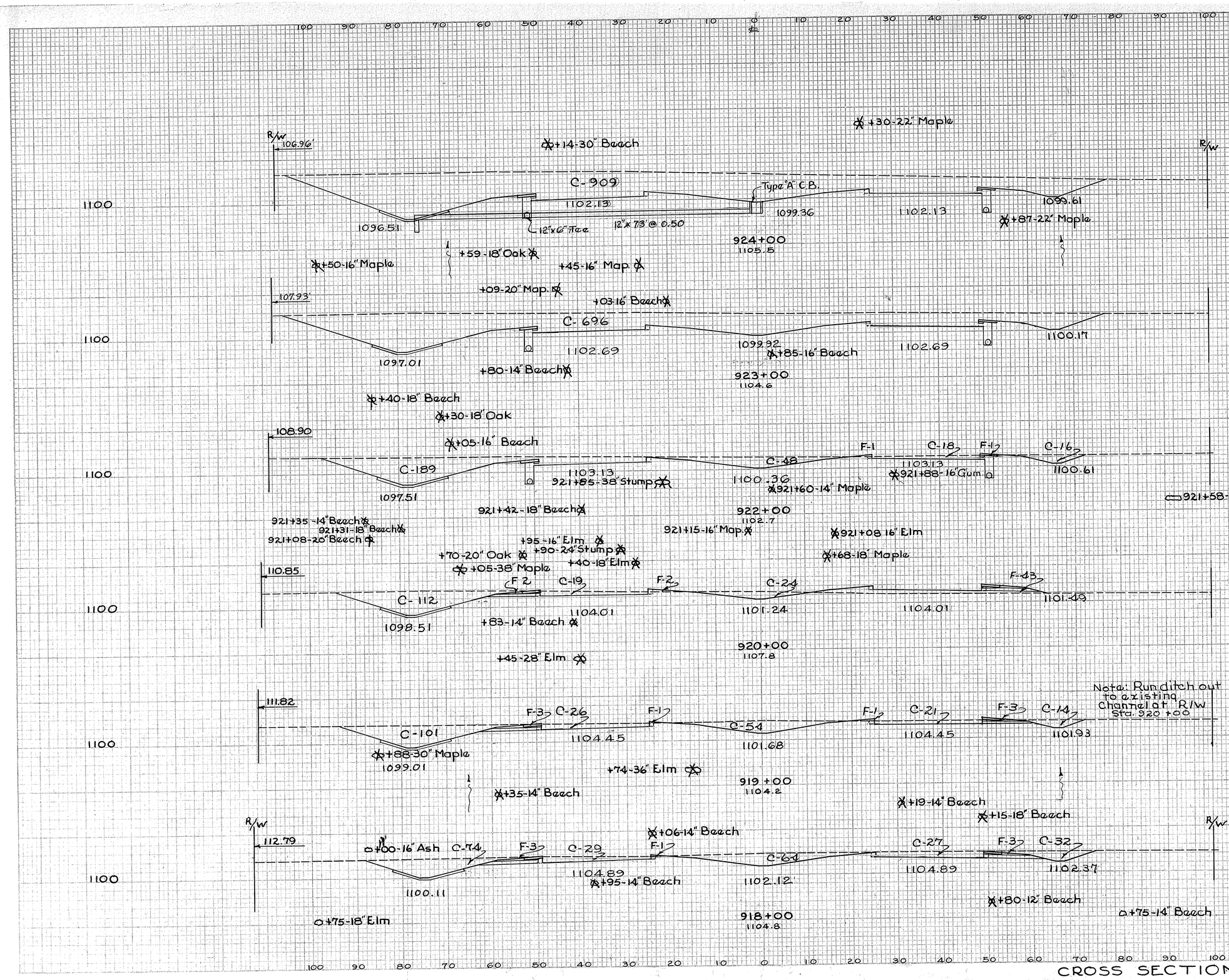
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
101		281	5		
	1061			711	28
90		103	10		
	972			281	106
85		49	47		
	391			44	131
91		10	90		
	613			59	138
93		43	34		
	1056			287	76
97		104	7		
	1106			459	0
102		144	0		

CROSS SECTIONS STA. 913+00 TO STA. 917+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

97
209

TRU-82-12.67



	CY.
Excavation	152.79
Embankment	741
Seeding	137.71
	CY.
	SY.

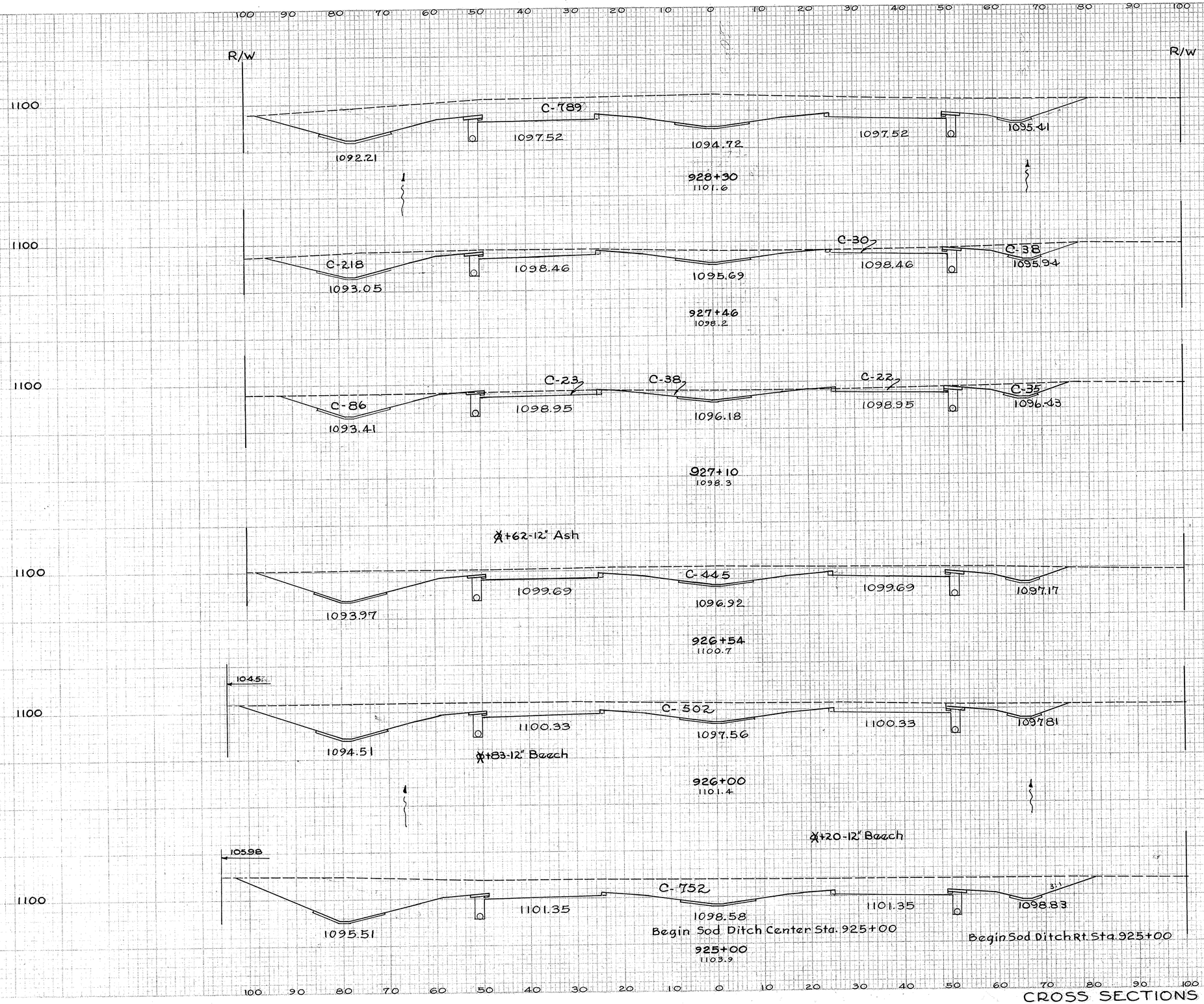
Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
122		909	0		
	1350			2972	0
121		696	0		
	1283			1791	4
110		271	2		
	2312			1578	182
98		155	47		
	1133			687	102
106		216	8		
	1183			819	28
107		226	7		
	1156			939	22
101		281	5		

CROSS SECTIONS STA. 918+00 TO STA. 924+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

98
209

TRU-82-12.67



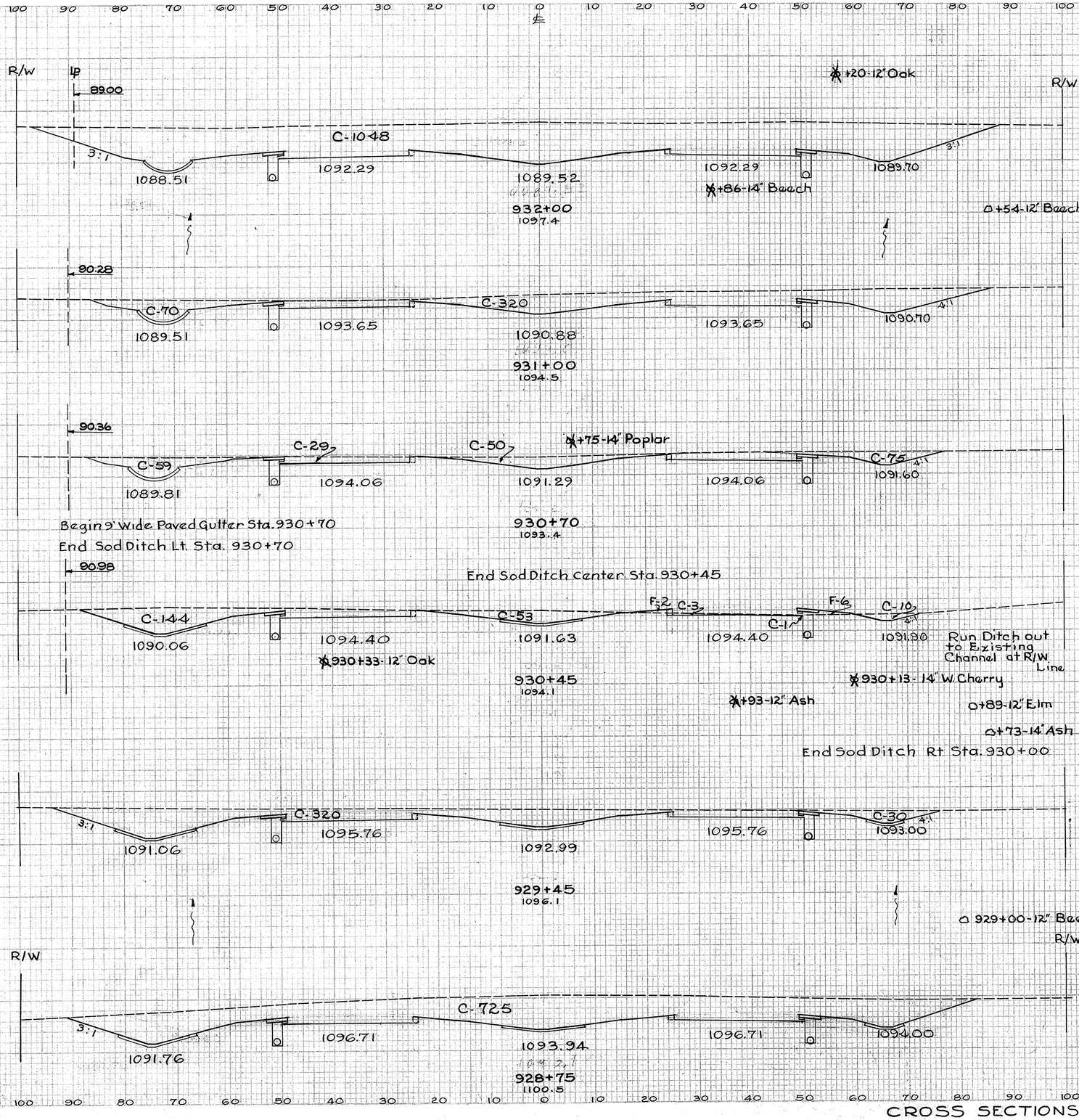
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
93		789	0		
	854			1672	0
90		286	0		
	352			326	0
86		204	0		
	542			673	0
88		445	0		
	543			947	0
93		502	0		
	1078			2322	0
101		752	0		
	1239			3076	0
122		909	0		

CROSS SECTIONS STA. 925+00 TO STA. 928+30

KEY NO. DIST. NO.	STATE	PROJECT	FISCAL YR.

99
209

TRU-82-12.67



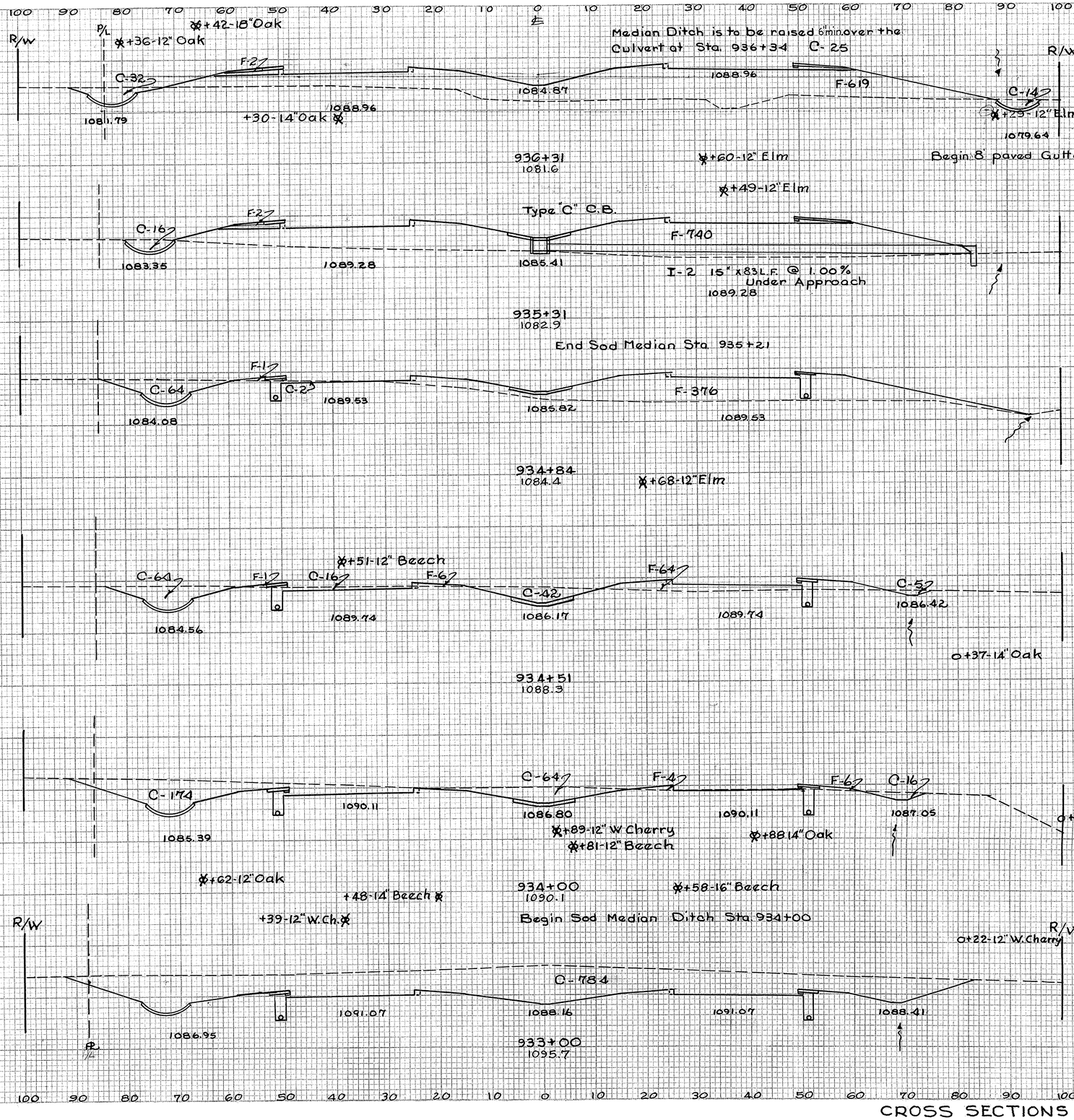
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
132		1048	0		
	1400			2663	0
120		390	0		
	383			335	0
110		213	0		
271				196	4
85		211	8		
950				1039	15
86		350	0		
695				1394	0
89		725	0		
455				1262	0
93		789	0		

CROSS SECTIONS STA. 928+75 TO STA. 932+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

100
209

TRU-82-12.67



Seeding		End Area		cu. yds.	
L.F	S.Y.	Cut	Fill	Exc.	Emb.
126		46	621		
	1244			115	2524
98		16	742		
	551			71	974
113		66	377		
	376			118	274
92		127	71		
	541				360 76
99		254	10		
	1244			1922	19
125		784	0		
	1428				3393 0
132		1048	0		

Excavation	16749 C.Y.
Embankment	7849 C.Y.
Seeding	13918 S.Y.

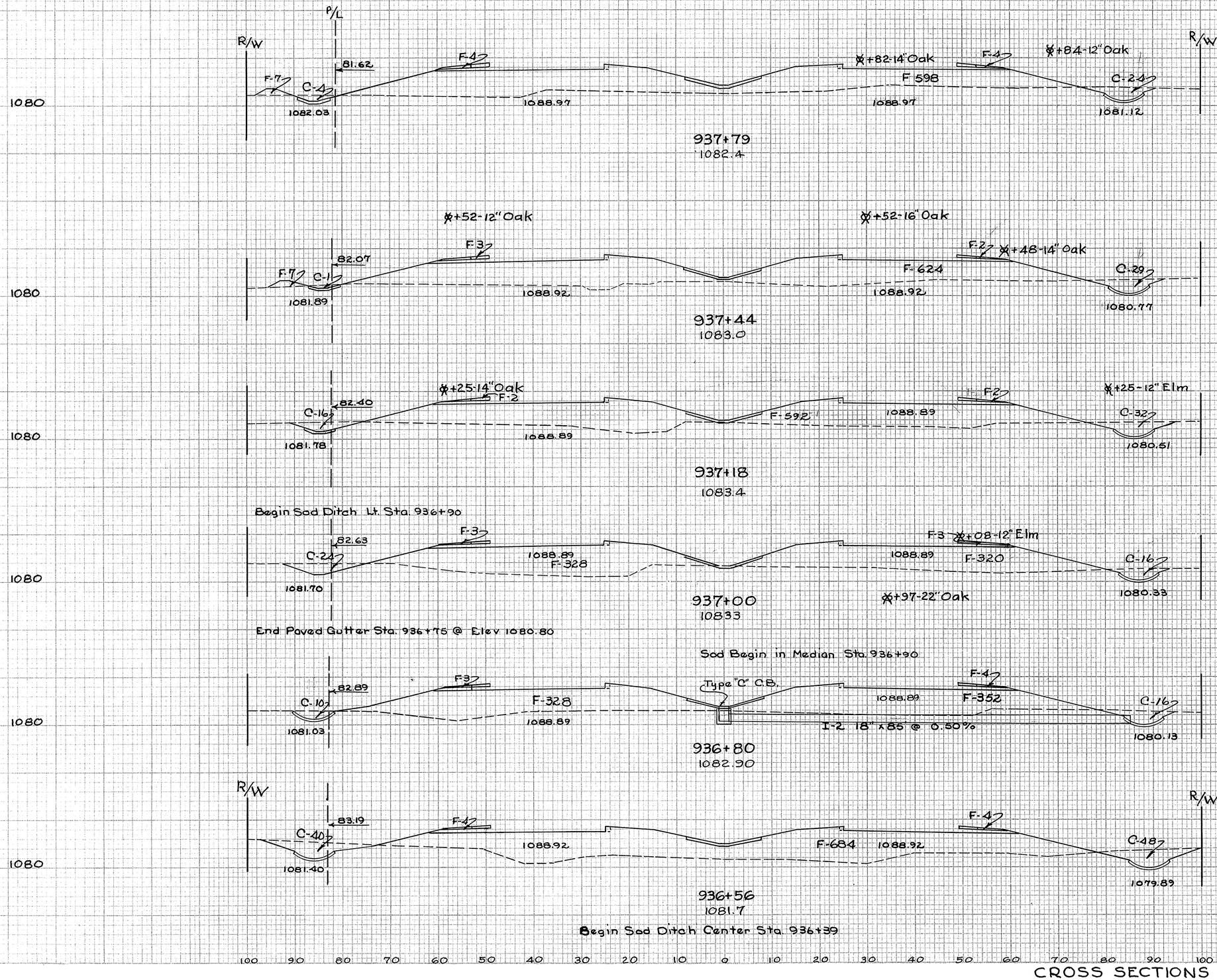
CROSS SECTIONS STA. 933+00 TO STA. 936+31

FED. NO. DIST. NO.	STATE	PROJECT	FISCAL YEAR

101
209

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 ℄ 10 20 30 40 50 60 70 80 90 100



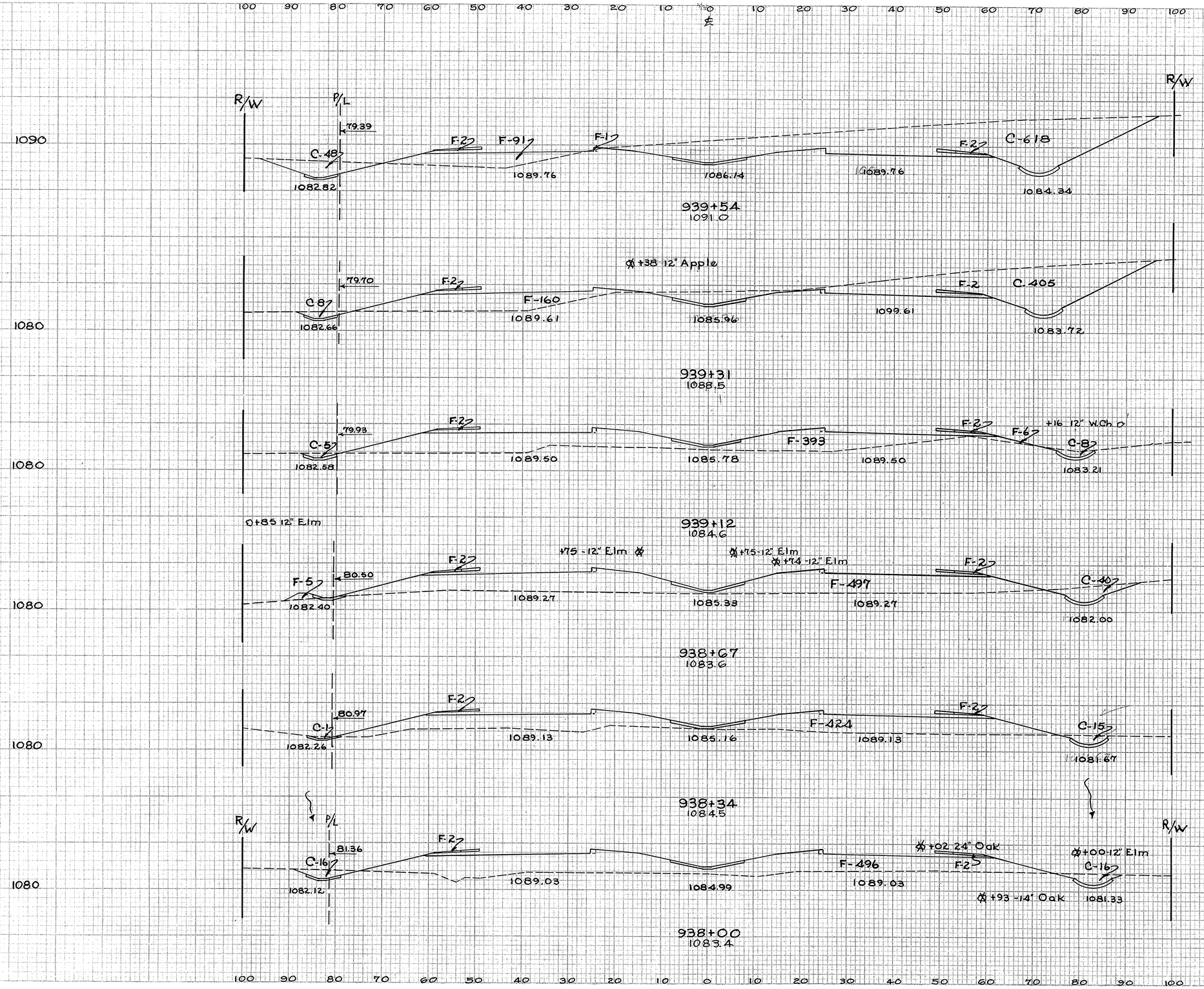
Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu.Yds. Exc.	Cu.Yds. Emb.
110		28	606		
	430			37	805
111		30	636		
	316			37	593
108		48	596		
	224			29	417
116		40	654		
	249			24	497
108		26	687		
	293			51	613
112		88	692		
	331			62	608
126		46	621		

CROSS SECTIONS STA. 936+56 TO STA. 937+79

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

102
209

TRU-82-12.67



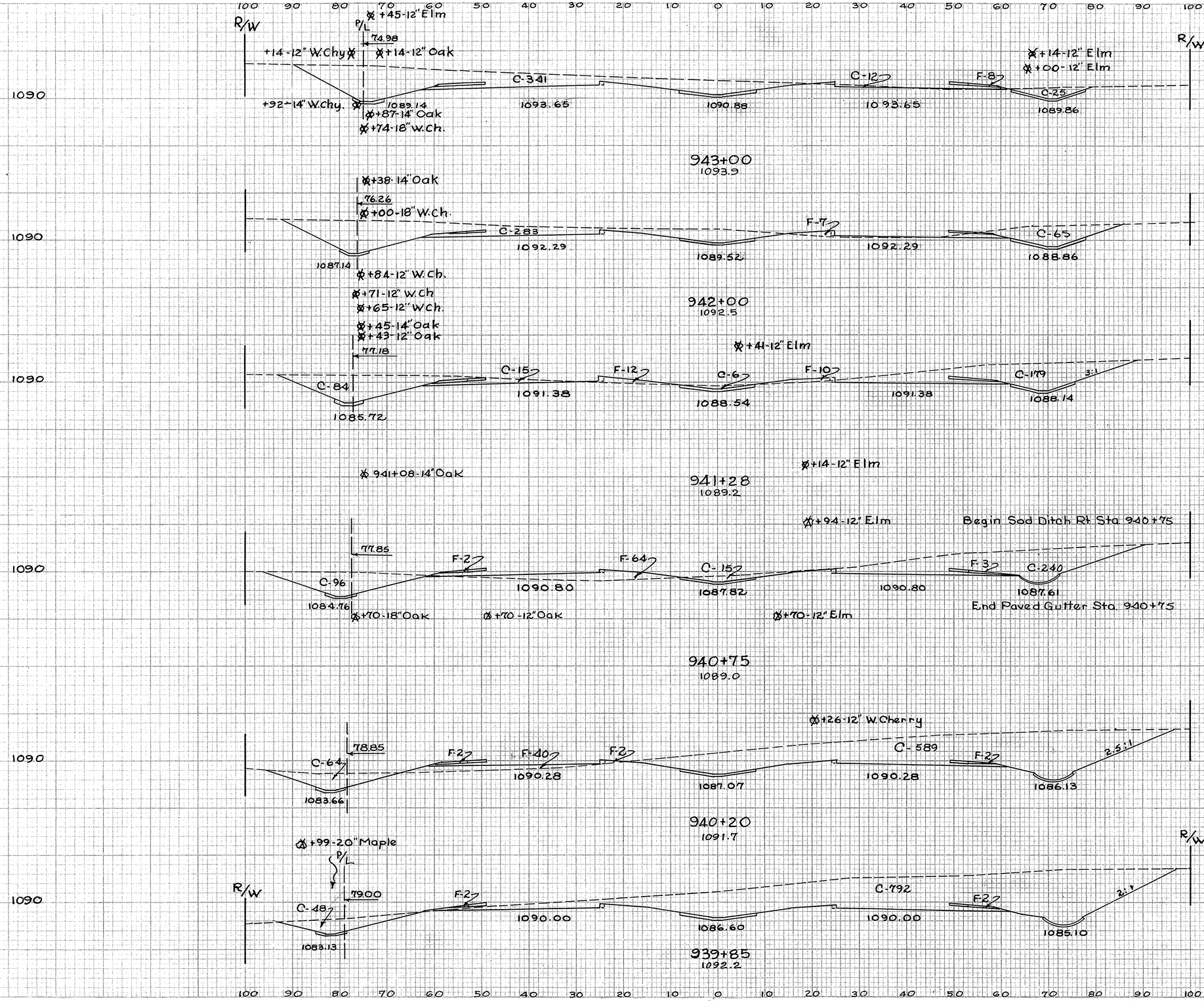
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
116		660	96		
	286			460	111
108		413	164		
	220			150	199
100		13	403		
	520			44	757
108		40	506		
	374			34	571
96		16	428		
	372			30	584
101		32	500		
	246			23	430
110		28	606		

CROSS SECTIONS STA. 938+00 TO STA. 939+54

FED. AID DIST. NO.	STATE	PROJECT	FISCAL YEAR

103
209

TRU-82-12.67



Seeding		End Area		Cu. Yds.	
L.F	S.Y.	Cut	Fill	Exc.	Emb.
88		378	8		
	1050			1344	30
101		348	8		
	808			342	40
101		284	22		
	624			623	90
111		351	69		
	694			1022	117
116		653	46		
	438			968	32
109		840	4		
	387			865	57
116		666	96		

Sta. 939+54

CROSS SECTIONS STA. 939+85 TO STA. 943+00

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

+58-18" Oak
+43-12" Oak
+36-20" Oak
+34-16" Oak
+30-12" Oak
+28-12" Oak
+20-12" Oak
R/W
R/W
F-442
1097.99
1099.99
1097.22
1099.99
1094.3
1090
947+20
1095.5
+06-16" Elm
+00-12" Elm
Begin Sod Ditch Center Sta. 947+14
+00-18" Oak
C-14
F 352
1097.00
1099.61
1096.84
1099.61
1093.7
1090
947+00
1095.4
Begin Sod Ditch Rt. Sta. 946+74
+57-12" Oak
End Sod Ditch Rt. Sta. 946+74
+43-16" Oak
+32-12" Oak
+43-12" Maple
+32-20" Ash
End Sod Ditch Center Sta. 946+00
+24-14" Maple
+12-12" Oak
1100
C-275
1½" per ft.
F-7
1095.40
1097.86
1097.86
C-49
1095.09
1092.86
+50-18" Maple
+37-12" Maple
946+00
1098.8
+54-12" W. Cherry
End Sod Ditch Lt. Sta. 945+00
+13-12" Maple
+28-16" W. Cherry
+26-18" Elm
C-318
+98-18" Oak
1093.90
1096.37
1096.37
C-54
+96-12" Oak
1093.60
1091.86
1090
+81-12" Oak
+70-16" Oak
945+00
1097.1
+81-14" Maple
+70-12" Elm
R/W
+48-12" Elm
R/W
+13-14" Oak
+04-14" W. Cherry
C-389
+13-14" Maple
C-30
1092.0
1095.01
1092.24
1095.01
1090.86
1090
+99-12" Elm
+84-20" Elm
+77-14" Elm
944+00
1096.5
+70-14" Apple
+55-14" Oak
+53-12" Elm
Sta. 943+00
100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Seeding		EndArea		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
100		0	442		
	210			5	294
89		14	352		
	961			626	665
84		324	7		
	900			1289	13
76		312	0		
	889			1465	0
82		419	0		
	944			1476	15
88		378	8		

Excavation	110171 C.Y.
Embankment	6337 C.Y.
Seeding	12386 S.Y.

CROSS SECTIONS STA. 944+00 TO STA. 947+20

100 90 80 70 60 50 40 30 20 10 0 ℄ 10 20 30 40 50 60 70 80 90 100

1110

R/W

C-30 1110.75 | C-25 1113.49 | F-1 | C-44 1110.72 | F-2 | C-15 1113.49 | F-1 | C-35 1111.00 | R/W

953+00
1112.9

1110

C-18 1108.25 | F-2 | C-14 1111.09 | F-1 | C-34 1108.32 | F-2 | C-22 1111.09 | C-35 1107.80

952+00
1110.3

R/W

1100

C-13 1106.25 | F-1 | C-1 1108.69 | C-2 | F-5 | C-28 1105.92 | F-5 1108.69 | F-6 | C-22 1104.60 | R/W

951+00
1107.5

R/W

+18-22" Oak

1100

C-18 1103.96 | C-18 1106.29 | F-3 | C-32 1103.52 | F-5 1106.29 | F-6 | C-22 1101.80

+77-12" Oak

+58-12" Oak

950+00
1105.6

+43-18" W. Cherry

R/W

1100

C-17 1099.88 | F82 1103.89 | F-120 1101.12 | 1103.89 | C-16 1098.40

+89-12" Elm

+83-12" Maple

949+00
1101.1

+27-12" W. Ch

+23-12" Maple

+21-20" Oak

+20-12" Cherry

+19-16" Oak

+21-16" Oak

R/W

1100

+05-18" Oak

1101.62 | F-400 | 1101.62 | C-11 1095.0 | R/W

1097.50 | 1098.85

Begin Sod Ditch Lt. Sta. 947+43

+63-12" Elm

948+00
1097.6

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta. 947+20

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
75		149	4		
	856			504	17
79		123	5		
	356			350	41
75		66	17		
	844			298	57
77		92	14		
	911			231	400
87		33	202		
	967			81	1115
87		1.1	400		
	831			16	1247
100		0	442		

CROSS SECTIONS STA. 948+00 TO STA. 953+00

106
209

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 ℄ 10 20 30 40 50 60 70 80 90 100

1130

R/W

1124.40 1123.60 1123.60 1122.76

2½:1 1122.75 C-1260 3:1 1120.60 R/W

958+08.5
1130.2

1123.82 1123.10 1122.41

End Sod Ditch Center Sta. 958+00

End Sod Ditch Rt. Sta. 958+00

1130

2½:1 1121.75 C-1226 3:1 1120.00

1122.37 1121.91 1121.91 1121.57

957+68.5
1129.6

1130

3:1 1120.75 C-1113 3:1 1119.10

956+88.5
1127.9

1120.45 1120.30 1120.30 1120.29

1120

3:1 1118.50 C-766 3:1 1118.00

956+00
1124.4

1120

1115.75 C-389 1118.29 1115.52 1118.29 1116.00

955+00
1119.4

R/W R/W

1110

1113.25 C-175 1115.89 1113.12 C-25 1115.89 F-1 C-26 1113.40

954+00
1115.8

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

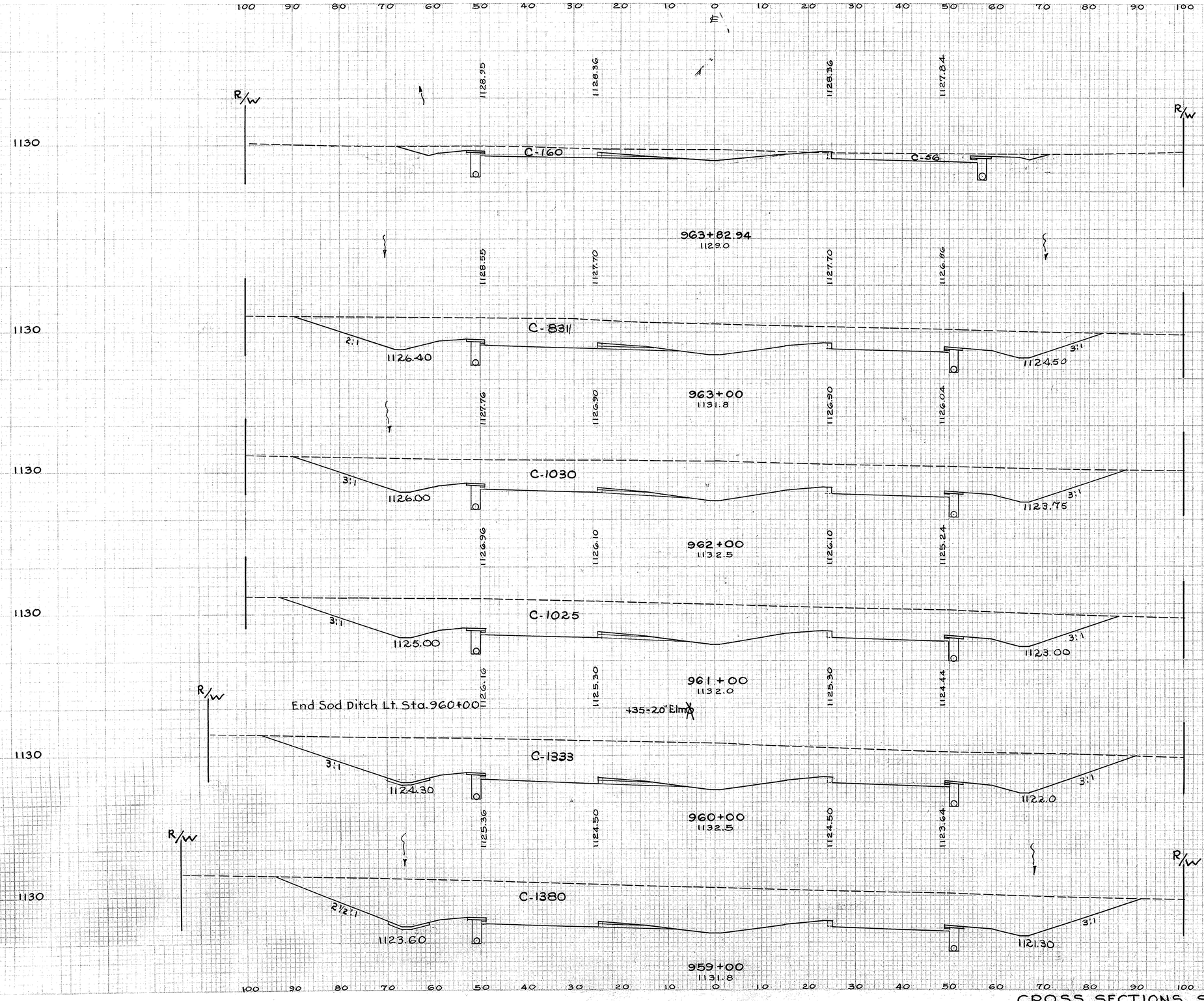
Sta. 953+00

CROSS SECTIONS STA. 954+00 TO STA. 958+08.5

Excavation	31182 C.Y.
Embankment	12976 C.Y.
Seeding	12976 S.Y.

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
129		1260	0		
	540			1842	0
114		1226	0		
	974			3466	0
105		1113	0		
	974			3080	0
93		766	0		
	967			2139	0
81		389	0		
	872			1139	2
76		226	1		
	839			694	9
75		149	4		

TRU-82-12.67



Seeding		End Area		End Area	
L.F.	S.Y.	Cut	Fill	Exc	Emb.
89		216	1		
	1004			1608	2
129		831	0		
	1456			3446	0
133		1030	0		
	1483			3806	0
134		1025	0		
	1483			4367	0
133		1333	0		
	1467			5024	0
131		1380	0		
	1321			4476	0
129		1260	0		

CROSS SECTIONS STA. 959+00 TO STA. 963+82.94

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

⊗ 53+53-12" Willow

R/W

End Sod Ditch Lt. Sta. 969+00

End Sod Ditch Rt. Sta. 969+00

R/W

1130

C-204 F-1 C-32 F-1 C-24

1130.0 1132.69 1132.69 1130.00

Begin Sod Ditch Lt. Sta. 968+40

Begin 6" I-4 Sta. 968+35 (Lt.)

969+00
1132.5

C-15 F-1 C-6 F-24 C-16

1130

1131.89 1127.50

968+00
1131.2

Sta. 968+00 Ahead

Begin Sod Ditch Center Sta. 967+50

1130

Begin 6" I-4 Sta. 966+85 (Rt.)

Begin Sod Ditch Rt. Sta. 966+76

	C.Y.	C.Y.	S.Y.
Excavation	12986		
Embankment		1901	
Seeding			11372

1130 1130.05 1130.05

C-128 F-1 C-5

1126.80

⊗ 90-32" Maple

Intersection Niles Vienna Road
See Detail Sheet No. 148 & 149

Sta. 966+00 Back

966+00
1129.9

1129.62 1129.50 1129.49 1129.51 Match Line

1120 C-40 F-2 C-16 F-42

1125.70

1120

965+24
1128.0

R/W

1129.32 1129.00 1129.00 1128.83 G 1128.69

Intersection

C-16 F-376 C-12

1124.80 1123.10

1120

964+62.94
1125.7

Culvert Sta. 964+58 See Sheet No. 159

Sta. 963+82.94

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

	Seeding		End Area		Cu.Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
	85		260	2		
		700			550	50
	41		37	25		
	59		133	1		
		545			266	63
	70		56	44		
		628			82	475
	115		16	388		
		906			344	576
	89		216	1		

CROSS SECTIONS STA. 964+62.94 TO STA. 969+00

TRU-82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Channel Easement

1130

R/W

1133.00

F-395

1137.17

1137.17

C-15

1131.90

R/W

Channel Easement 125'

6" I-4 End Sta. 973+50 (Lt)

974+00
1132.9

1130

C-27
1133.40

C-20

1136.25

C-22

C-30

1136.25

C-40

1132.73

6" I-4 Ends Sta. 973+00 (Rt)

+57-14" Oak

+75=(1133.50)

+59-12" Oak

973+00
1134.6

+63-12" Oak

+75=(1133.50)

1130

C-520

1132.71

1135.33

1135.33

1132.56

972+00
1137.2

1130

C-522

1131.89

1134.41

1134.41

1131.89

971+00
1136.3

+51-14" Oak

+41-16" Oak

+38-20" Apple

+38-14" Oak

+30-12" W. Cherry

End Sod Ditch Center Sta. 970+00

+11-14" W. Cherry

R/W

R/W

1130

C-488

1131.00

1133.52

1133.52

1131.00

+71-14" Oak

+69-14" Oak

970+00
1135.3

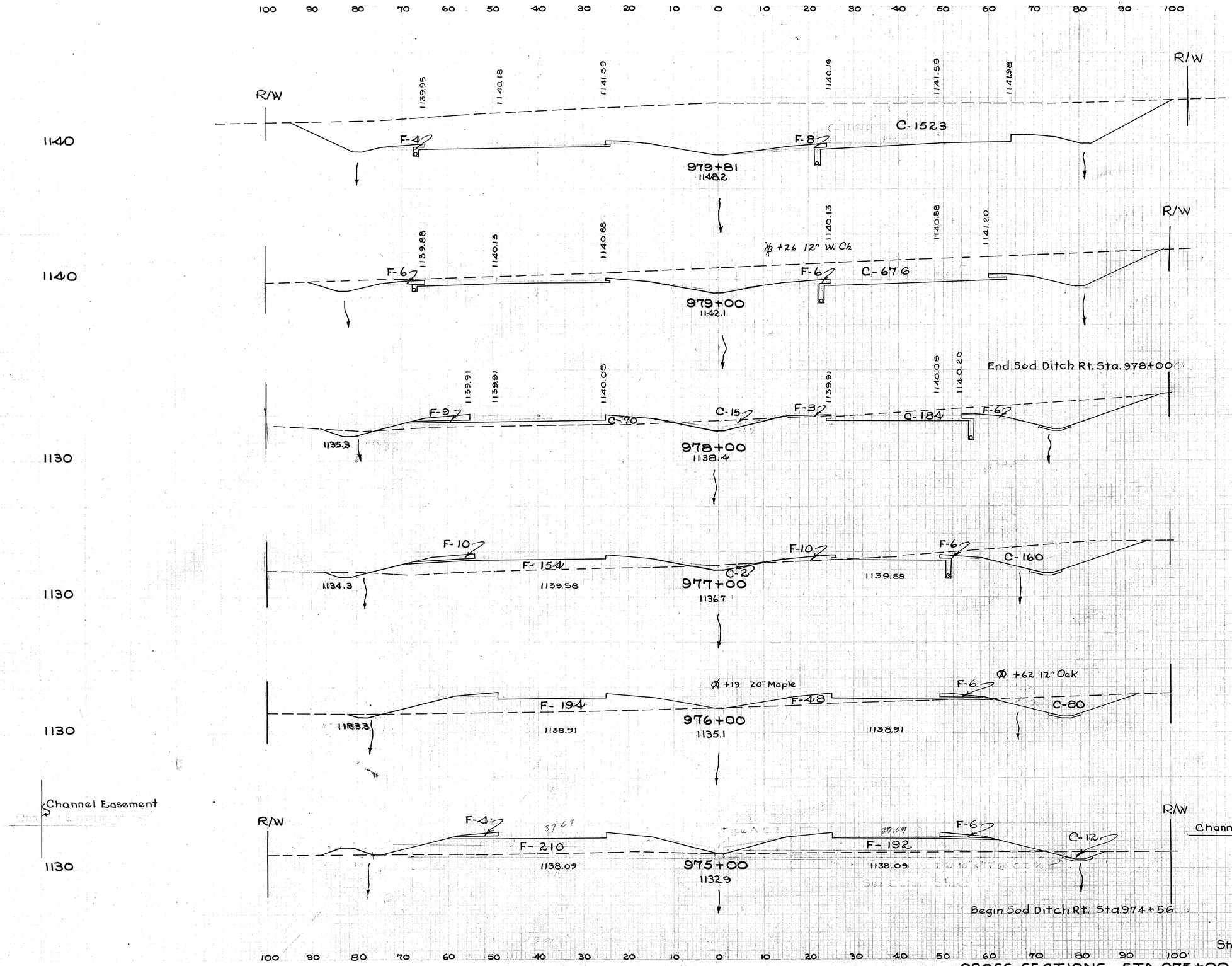
Sta. 969+00

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
117		15	395		
	127			285	731
113		139	0		
	129			122	0
120		52	0		
	130			193	0
115		52	2		
	121			187	0
103		48	8		
	104			138	4
85		26	0		

CROSS SECTIONS STA. 970+00 TO STA. 974+00

TRU. 82 12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
129		1523	12		
	1156			3299	36
128		676	12		
				1750	56
	1356				
116		269	18		
				798	367
	1272				
113		162	180		
	1189			448	793
101		80	248		
	1217			170	1222
118		12	412		
	1306			50	1494
117		15	395		

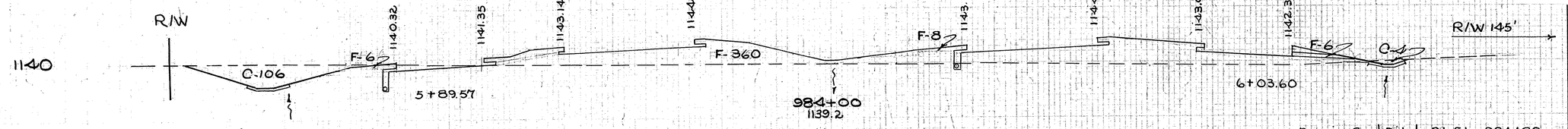
CROSS SECTIONS STA. 975+00 TO 979+81

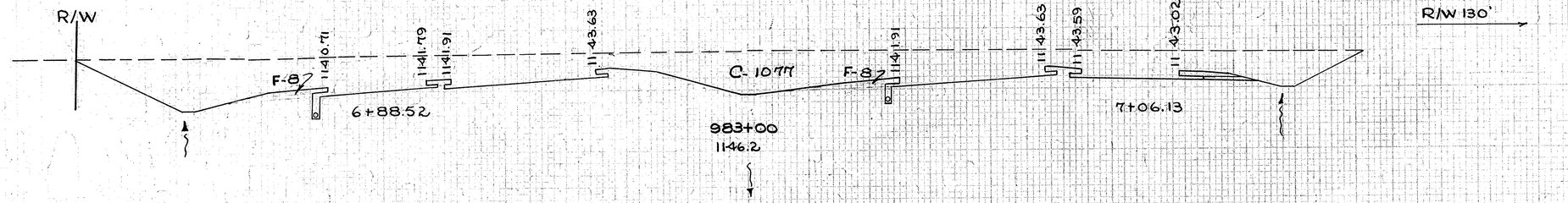
PLATE 4 - CROSS SECTION
THE N. GOLF CO., COLUMBUS, OHIO

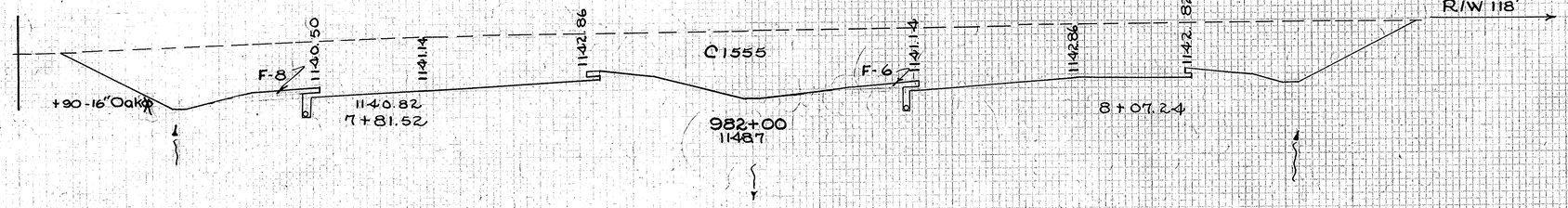
TRU.82 12.67

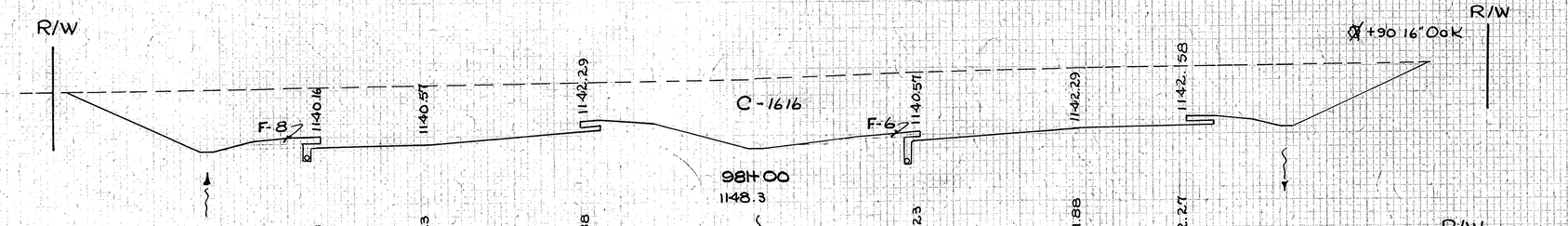
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Begin Guard Rail 984+35.92









Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
157		110	380		
	1678			2198	733
145		1077	16		
	1583			4874	56
140		1555	14		
	1561			5873	52
141		1616	14		
	1202			4846	33
133		1696	8		
	582			2385	15
129		1523	12		

	C.Y.
Excavation	26959
Embankment	16659
Seeding	18530
	S.Y.

Sta. 979+81

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

CROSS SECTIONS STA. 980+21 TO STA. 984+00

PLATE 4 - CROSS SECTION
THE H. COLE CO., COLUMBUS, OHIO

TRU. 82 12.67

End Sod Ditch (Rt.) inside S.W. Ramp Sta. 989+25

End Sod Ditch Rt. Sta. 988+40

End Guard Rail (Lt) 988+84.18

End Guard Rail (Rt) 988+85.92

End Sod Ditch (Lt) Inside N.W. Ramp Sta. 987+10

Begin Sod Ditch (Rt) Inside S.W. Ramp Sta. 987+95

End Sod Ditch (Rt) inside S.W. Ramp Sta. 987+95

End Sod Ditch Lt. Sta. 986+75

Begin Sod Ditch (Lt) inside N.W. Ramp Sta. 986+00

Begin Sod Ditch (Rt) inside S.W. Ramp Sta. 986+00

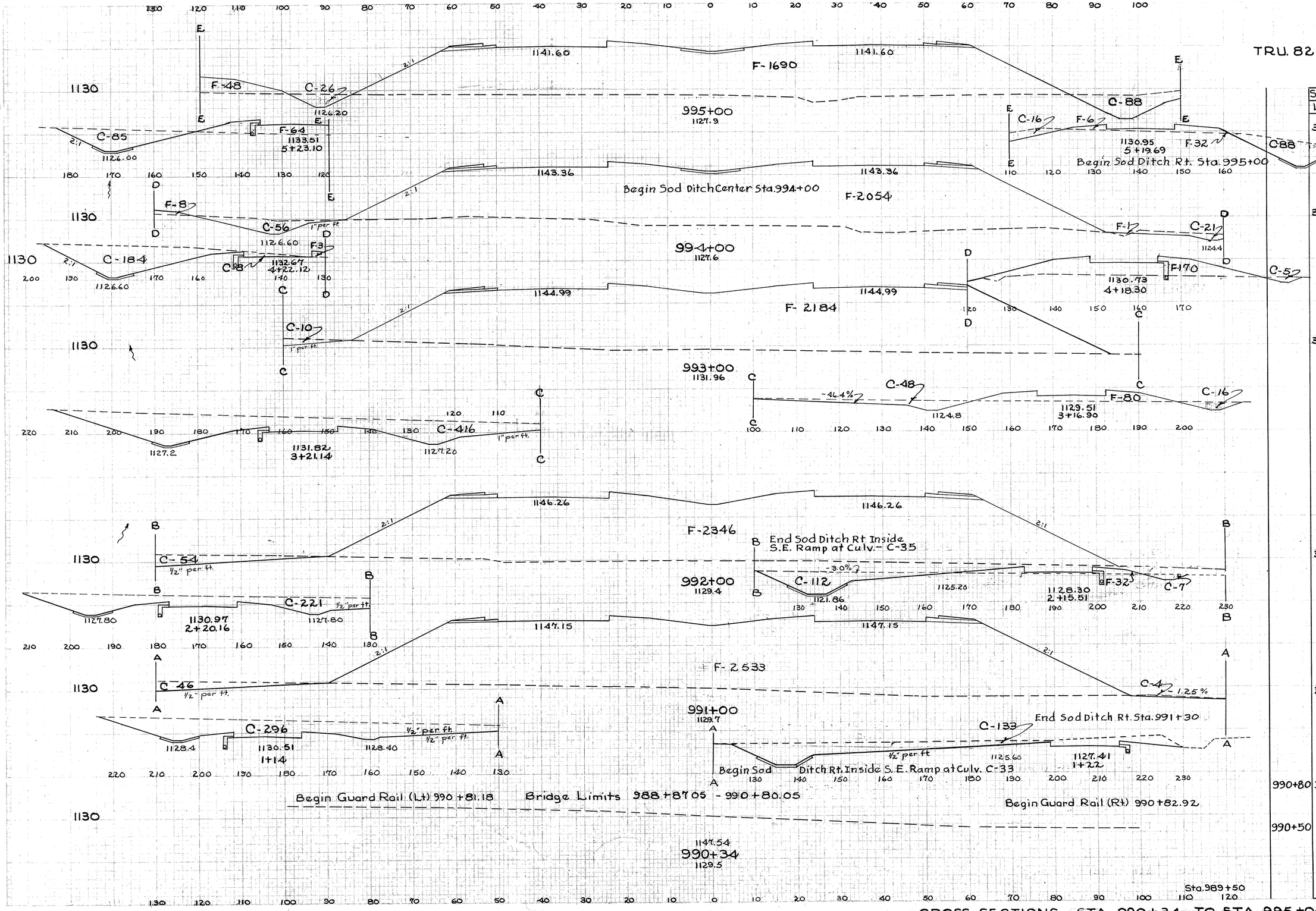
Begin Guard Rail (Lt) 984+96.68

Sta. 984+00

	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
989+25	180		0	0		
		1123			170	1152
988+87	352		242	3057		
		3402			780	9851
	352		242	3057		
		3722			615	11270
	318		90	3029		
		3122			198	10129
	244		17	2441		
		2456			48	7809
	198		9	1776		
		1972			220	3993
	157		110	380		

CROSS SECTIONS STA. 985+00 TO STA. 989+50

TRU. 82 12.67

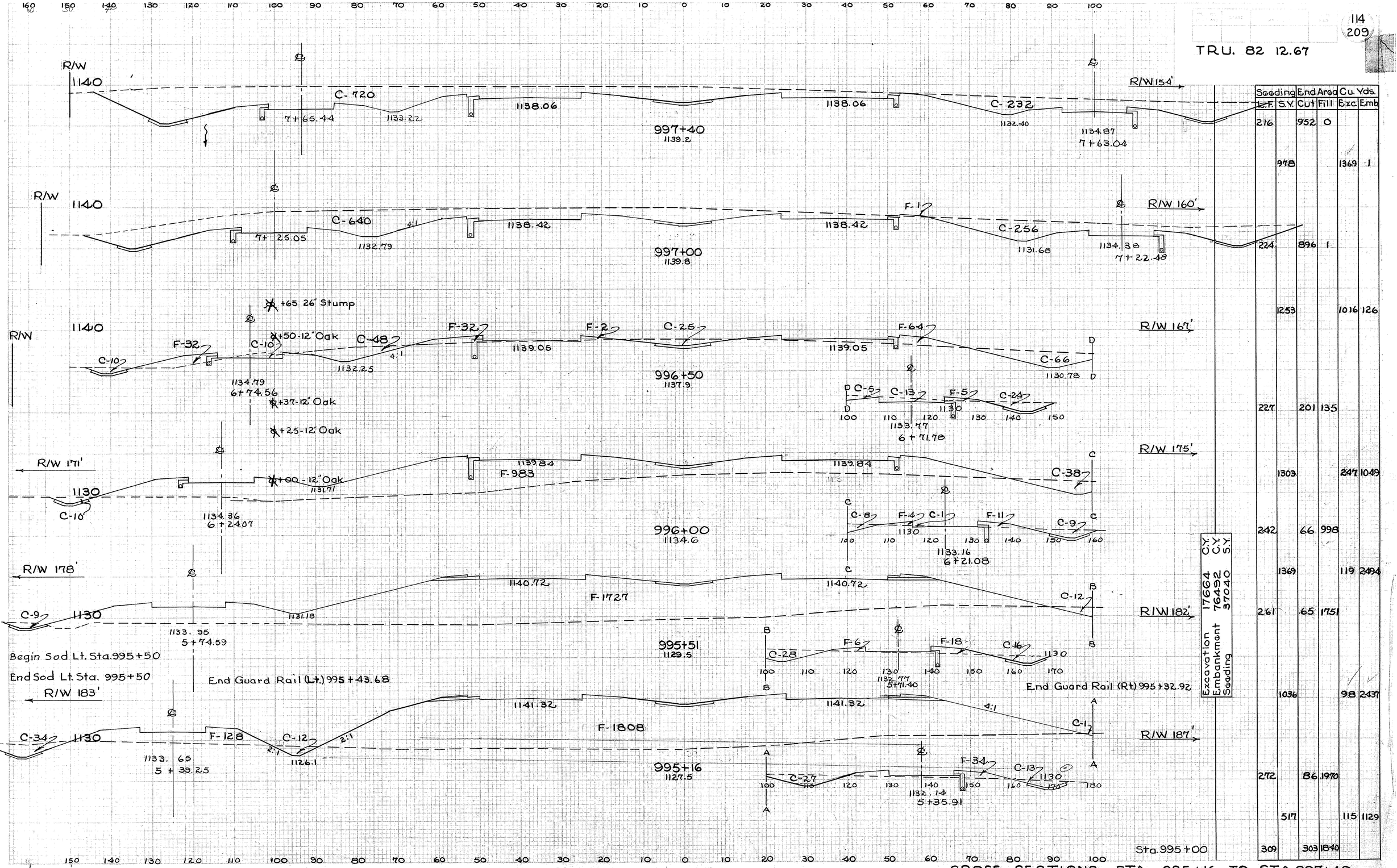


Station	Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
	309		303	1840		
	3511				1069	7548
	323		274	2236		
	3750				1415	8333
	352		490	2264		
	3844				1637	8596
	340		394	2378		
	3994				1617	9094
	379		479	2533		
	842				355	1876
990+80	379		479	2533		
	932				266	1407
990+50	180		0	0		
	352		338	3057		

CROSS SECTIONS STA. 990+34 TO STA 995+00

114
209

TRU. 82 12.67



Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
216		952	0		
	978			1369	1
224		896	1		
	1253			1016	126
227		201	135		
	1303			247	1049
242		66	998		
	1369			119	2494
261		65	1751		
	1036			98	2437
272		86	1970		
	517			115	1129
309		303	1840		

Excavation	17664 C.Y.
Embankment	76492 C.Y.
Seeding	37040 S.Y.

CROSS SECTIONS STA. 995+16 TO STA 997+40

TRU. 82-12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

1140

R/W

12+27.63

1140.33

C-624

1140.33

1140.14

1139.88

R/W

1002+00

1142.3

1140

R/W

1138.66

1139.14

11+27.63

1139.33

C-643

1139.33

1139.14

1138.67

11+26.19

1136.5

1001+00

1141.0

1140

R/W

1137.58

1138.10

10+27.91

1138.33

C-784

1138.33

1138.14

1138.05

1137.49

10+26.42

1134.6

R/W

1000+00

1140.4

1140

R/W

+23-30" Ash

1136.66

1137.11

9+32.84

1137.71

C-32

C-21

C-832

1137.71

1136.98

1136.55

9+31.25

1132.8

R/W 130'

999+05

1141.2

1140

R/W

1136.31

1136.68

8+80.40

1137.61

C-12

C-72

Type B C.B.

C-792

1137.61

1136.27

1135.93

8+70.54

1131.80

R/W 137'

998+46

1140.1

998+00

1140

R/W

1135.71

1135.81

8+05.93

1137.75

C-224

1131.0

C-365

1137.75

26' 8" I-4@1%

1135.47

8+13.73

1131.4

R/W 145'

997+90

1137.8

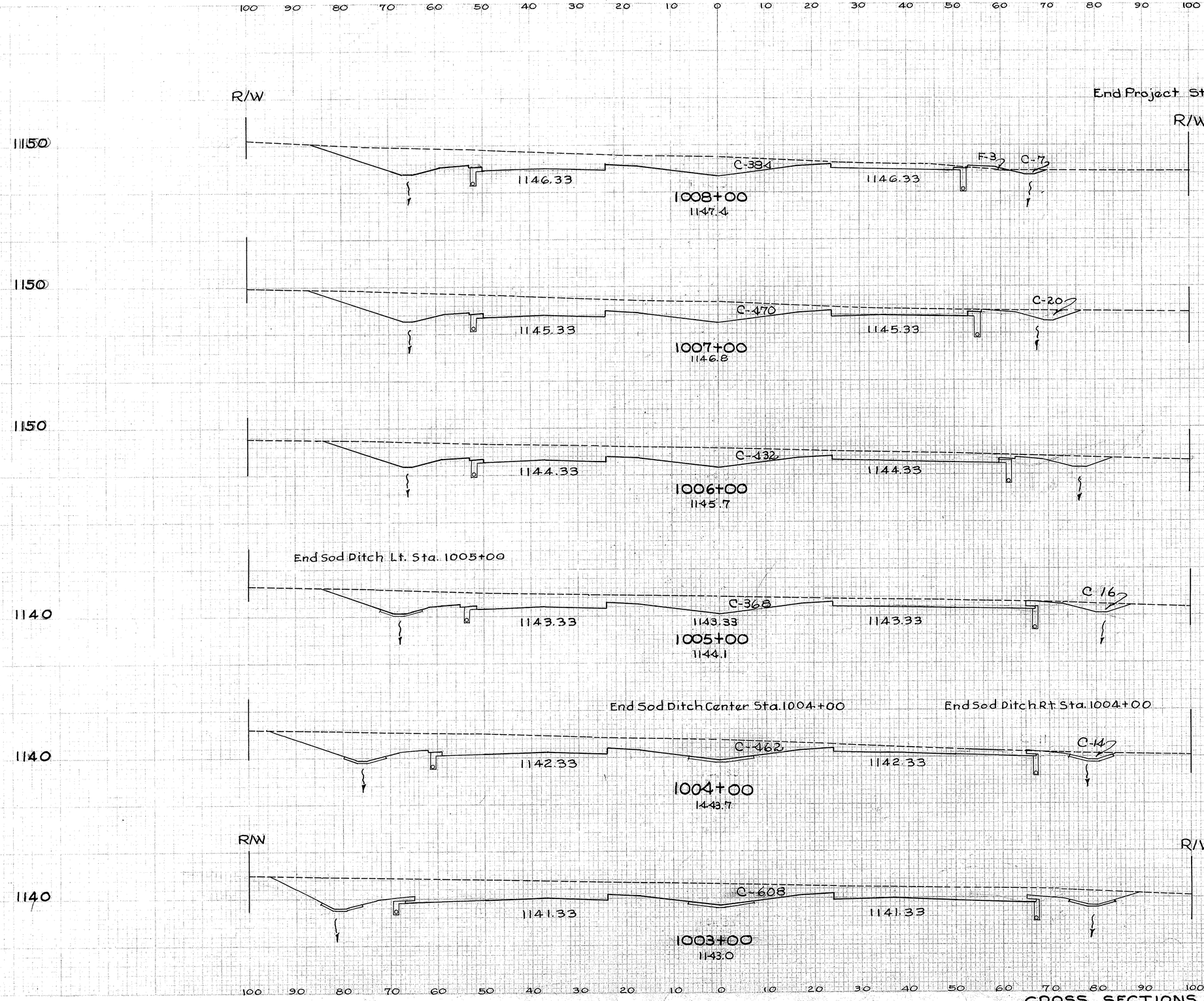
Sta. 997+40

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
118		624	0		
	1294			2346	0
115		643	0		
	1328			2643	0
124		784	0		
	1425			2936	0
146		885	0		
	1085			1924	0
185		876	0		
	1192			1519	0
198		589	0		
	1150			1427	0
216		952	0		

CROSS SECTIONS STA. 997+90 TO STA. 1002+00

TRU. 82-12.67



Excavation	20581	C.Y.
Embankment	6	C.Y.
Seeding	13822	S.Y.

Seeding		End Area		Cu. Yds	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
110		391	3		
	1256			1631	6
116		490	0		
	1278			1907	0
114		432	0		
	1261			1511	0
113		384	0		
	1783			1593	0
208		476	0		
	1806			2008	0
117		608	0		
	1306			2282	0
118		624	0		

CROSS SECTIONS STA. 1003+00 TO STA. 1008+00

TRU-82 12.67

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

950

C-22 C-4 C-4 F-3 C-4

948.19
1+00
948.05

Feathering Begins at Sta. 0+68

950

℄ Drive No Work

0+20
947.50

950

0+00
947.35

950

0-73
946.57

950

0-80
946.48

950

0-100
946.28

950

0-190
945.88

950

0-200
945.89

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

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
42		34	3		

PLATE 4 - CROSS SECTION
THE [illegible] OF [illegible]

CROSS SECTIONS INTERSECTION S.R. 46 STA. 0-200 TO STA. 1+00

TRU 82 12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

950

Exist. R/W — F-2 — F-2 — C-6 — C-10 — C-88 — R/W — 946.20

949.15
3+00
948.79

Begin I-4

950

F-2 — F-3 — C-2 — C-7 — F-1 — C-64 — 946.00

948.96
2+61
948.60

950

F-3 — F-16 — C-3 — C-7 — F-3 — C-38 — 945.95

948.91
2+51
948.55

940

F-2 — F-29 — C-4 — C-4 — F-9 — C-23

12"x15' @ 10% Elev. 944.26

948.73
2+12

18"x13' @ 3.06% Elev. 945.36

Inlet Elev. 945.76

Note: Remove 1' Lt. & Rt. Headwalls

950

F-4 — C-4 — F-18 — C-4 — C-5 — F-11 — C-21 — 945.86

948.67
2+00
948.45

950

Drive — R/W — C-7

948.58
1+82
948.38

℄ Slag Drive

950

Exist. R/W — 12" x20' R.C.P. Exist. Dr. Pipe — F-13 — C-1

12" x34' @ 1.00%

948.25
1+22
948.17

℄ Slag Drive (DRIVE GRAPHICAL GRADE)

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 Sta. 1+0

Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
46		104	4		
	206			128	7
49		73	6		
	56			22	5
51		48	22		
	212			57	45
47		31	40		
	63			14	16
47		30	33		
	494			119	67
42		34	3		

CROSS SECTIONS INTERSECTION S.R. 46 STA. 2+00 TO STA. 3+00

FED. RD. DIST. NO.	STATE	PROJECT	FISCAL YEAR

119
209

TRU 82 12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

950

949.98

R/W

C-168

Slope Easement

4:1

R=6'
T=1'-0"

950.06
6+13
949.58

950

Exist. R/W

R/W

949.96

949.96

C-2

C-96

E-16

6+00
949.52

R/W

949.82

949.82

No.2-4 C.B
El. 948.00

18" x 79' @ 1.00%

945.02

949.87

Outlet Elev. 944.90

Inlet Elev. 945.75

6" FIELD DRAIN PIPE

No. 2-4 C.B
Elev. 944.00

5+47
949.23

950

R/W

949.82

949.82

F-8

F-1

C-61

C-5

949.83
5+00
949.14

950

R/W

C-26

F-4

C-11

C-7

949.56
4+00
949.33

950

Exist. R/W

F-8

C-9

949.36
3+44
949.08

℄ Asphalt Drive

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
	56		98	16	
		572		304	46
	47		66	9	
		456		204	24
	35		44	4	
		450		274	15
Sta. 3+0	46		104	4	

Excavation 4835 C.Y.
Embankment 2582 C.Y.
Seeding 6605 S.Y.

PLATE 4—CROSS SECTION
THE H. COLE CO., COLUMBUS, OHIO

CROSS SECTIONS INTERSECTION S.R. 46 STA. 4+00 TO STA. 6+00

120
209

TRU 82 12.67

Back

Seeding		End Areas		Cu. Yds.	
L. F	S.Y.	Cut	Fill	Exc.	Emb
78		199	78		
	838			408	913
154		140	680		
	570			336	612
139		378	264		
	1094			1043	550
58		185	33		
	633			524	91
Sta. 6+00	56	98	16		

950.41
9+32
950.27

950.42
9+00
950.27

950.40
8+35
949.85

950.38
8+00
949.77

950.23
7+00
950.05

950.18
6+77
950.09

+80 6" Peach
+48 6" Peach
+11 12" Pin Oak
+14 6" Apple
+71 24" Maple
+63 8" Locust
+34 42" Stump

Sta. 7+68 Graphical Grade & Drive

Graphical Grade 7+68 & Drive

Graphical Grade for Drive Way & Slag Drive

No. 1 M.H.

30" x 18" @ 1.5%

MATCH LINE

Edge of Berm

940.00

942.78

CROSS SECTIONS INTERSECTION S.R. 46 STA. 7+00 TO STA. 9+00

TRU 82 12.67

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

950

Exist. R/w
948.60
948.99
949.00
948.52
Exist. R/w
R/w
C-5
F-45
C-147
945.40
949.07
14+00
948.31
R/w
R/w
948.68
949.05
C-4
F-51
949.14
13+85
948.44
948.68
949.22
R/w
R/w
C-237
945.70
949.31
13+46
948.69
949.38
949.40
+26 10" Locust
948.71
R/w
948.68
C-416
2:1
R/w
F-43
949.51
13+00
949.13
+95 10" Maple
+60 20" Ash
949.66
949.21
948.91
948.64
R/w
C-397
2:1
949.81
12+27
949.65
948.48
949.73
949.75
949.28
949.05
948.87
C-2
C-5
C-381
949.90
12+00
949.82
15" V.S.P.
Cne 1 M.H.
MATCH LINE
F-299
30" x 153' @ 1.00%
941.00
24" x 112" @ 1.00%
942.68
RIP-RAP
939.50
R/W=152'
Approx.
948.50
949.31
949.75
949.77
949.29
949.14
949.08
C-6
C-4
F-8
C-7
C-262
MATCH LINE
F-366
949.93
11+90
949.90
R/W=175'
Approx.
Exist. R/w
949.48
949.95
949.98
Exist. R/w
948.47
C-7
C-2
C-306
947.00
F-25
950.18
11+00
950.72

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
74		152	45		
	917			1065	163
91		423	43		
	1189			1502	633
123		388	299		
131				123	125
112		279	374		
	1035			990	665
95		315	25		
	961			952	191
	961			952	191
78		199	78		

Ahead

Sta. 9+00

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

PLATE 4—CROSS SECTION
THE M. COLE CO., COLUMBUS, OHIO

CROSS SECTIONS INTERSECTION S.R. 46 STA. 11+00 TO STA. 14+00

TRU 82 12.67

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

950

Exist. R/W

R/W

F-19

C-6

C-7

946.51
16+32
948.09

Exist. R/W

R/W

F-12

C-48 2:1

946.15

950

F-37

C-5

948.46
16+00
947.93

C-16

C-37

945.91

950

F-12

C-4

948.45
15+79
947.86

℄ Slag Drive (Graphical Grade for Drive)

948.50
15+72
947.86

950

F-29

C-5

948.61
15+04
948.13

℄ Slag Drive (Graphical Grade for Drive)

950

F-88

C-5

948.63
15+00

C-5

C-2

F-2

C-51

945.40

F-50

Slope Easement

Pond

950

R/W

948.30

F-93

C-7

948.67

948.67

C-3

948.30

F-3

C-22

R/W

F-68

Slope Easement

Pond

24'x38' @ 4.00%

941.95

943.33

24'x32' @ 2.41%

948.71
14+81
948.22

944.12

24'x24' @ 2.61%

944.80

Exist. R/W

Exist. R/W

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

Station	Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
50			61	20		
		201			70	34
63			58	37		
		783			224	328
78			63	140		
		150			33	107
64			32	164		
		621			276	313
Sta. 14+00	74		152	45		

PLATE 4—CROSS SECTION
THE H. GOLL CO., COLUMBUS, OHIO

CROSS SECTIONS INTERSECTION S.R. 46 STA. 14+81 TO STA. 16+32

123
209

TRU 82 12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

950

Exist. R/W

F-19 C-2 C-3

944.35

948.85
19+37

R/W

Exist. R/W

R/W

Remove top foot of Headwalls

C-2 C-2 F-1

No 1-3 C.B. E.I. 948.06

3:1 Slope

18"x11' @ 6.00%

18" x 31' @ 2.00%

Inlet E.I. 944.60
18"x 5' @ 2.00%

943.97 944.59

948.93
19+15
948.68

Outlet E.I. 943.12

950

F-32 C-1 C-2 F-16 C-51

943.20
943.20

949.80
19+00
948.74

945.60

950

F-8

Drive Way

C-4

949.21
18+49

℄ Concrete Drive Graphical Grade for Drive

950

F-18 C-5 F-4 C-9 C-64

944.20 947.00

949.27
18+00
949.18

946.40

950

F-18 C-3 C-9 C-56 2:1

945.25

948.83
17+00

946.80

950

Exist. R/W

R/W

F-12

Drive Way

C-12

948.64
16+71
948.38

℄ Asphalt Drive (Graphical Grade for Drive)

Exist. R/W

R/W

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

Sta.	Seeding L.F.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds Exc.	Cu. Yds Emb.
	50		5	18		
		238			42	45
	66		54	48		
		667			244	130
	54		78	22		
		578			270	74
	50		68	18		
		378			163	47
16+32	50		61	20		

Excavation 5975 C.Y.
Embankment 2879 C.Y.
Seeding 8024 S.Y.

CROSS SECTIONS INTERSECTION S.R.46 STA. 17+00 TO STA. 19+37

TRU 82 - 12.67

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

950

Exist. R/W

946.70

Exist. R/W

22+00
949.38

Feather T-35 from Sta. 21+00 to 21+50

950

948.30

949.11
21+00
948.99

R/W

950

Drive Way
& Asphalt Drive

948.94
20+67
948.81

950

948.90
20+57
948.72

Drive Way
& Asphalt Drive

Exist. R/W

Exist. R/W

R/W

950

C-2

947.60

948.78
20+00
948.32

100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

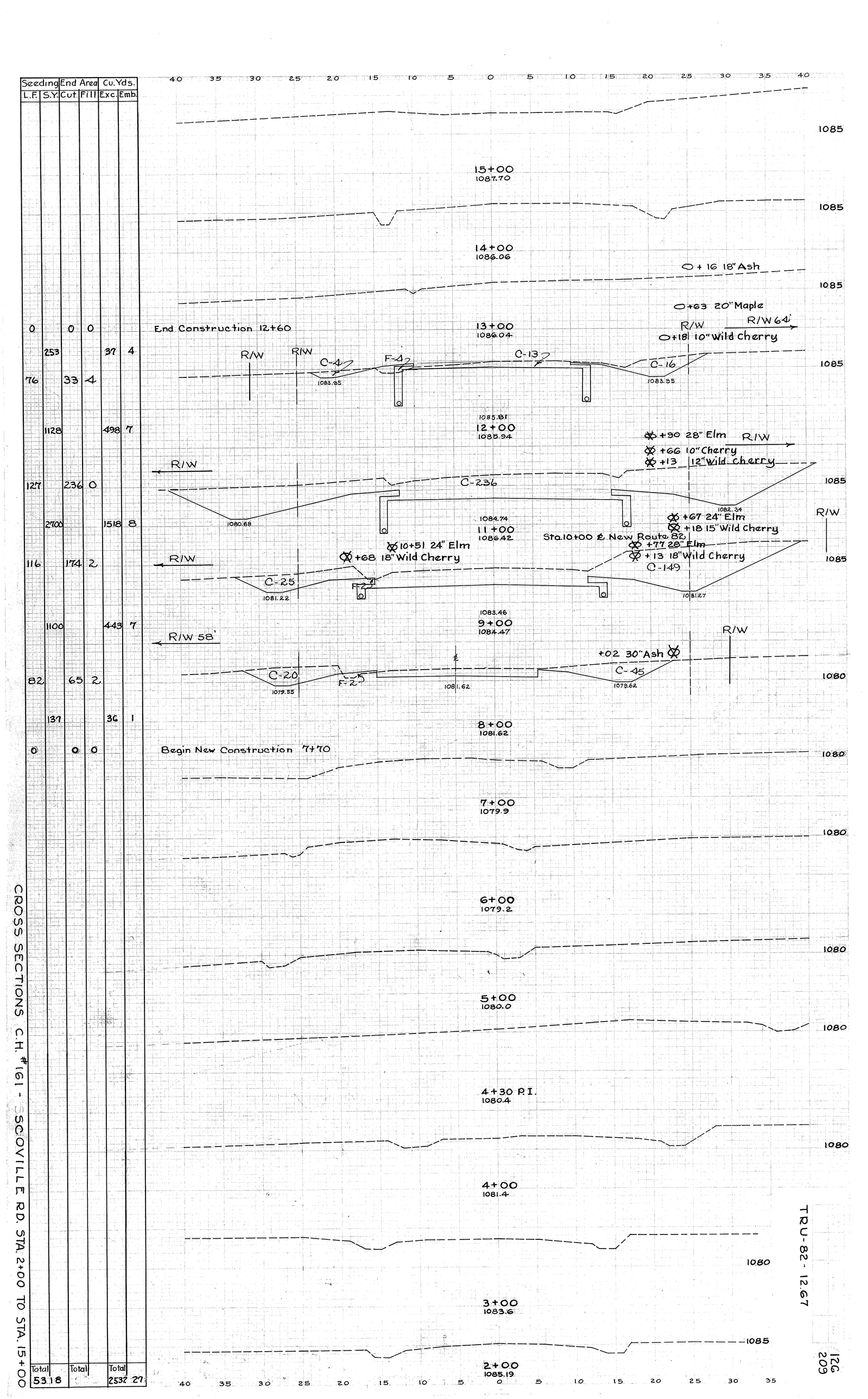
Sta. 19+37

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
		0	2	0	
		175		28	21
		50	22	18	

PLATE 4- CROSS SECTION
THE M'CORKLE CO., COLUMBUS, OHIO

CROSS SECTIONS INTERSECTION S.R. 46 STA. 20+00 TO STA 22+00

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.


Seeding
L.F. S.Y.
End Area
Cut Fill
Cu. Yds.
Exc. Emb.
0 0 0
253 37 4
76 33 4
1128 498 7
127 236 0
2700 1518 8
116 174 2
1100 443 7
82 65 2
137 36 1
0 0 0
Total 5318
Total
Total 2532 27
CROSS SECTIONS C.H. #161 - SCOVILLE RD. STA. 2+00 TO STA. 15+00
TRU-82-12.67
126
209
40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40
15+00
1087.70
1085
14+00
1086.06
0+16 18" Ash
0+63 20" Maple
End Construction 12+60
13+00
1086.04
R/W
R/W 64'
0+18 10" Wild Cherry
R/W
R/W
C-4
F-4
C-13
C-16
1083.95
1083.85
1085.81
12+00
1085.94
+90 28" Elm
+66 10" Cherry
+13 12" Wild cherry
R/W
C-236
1080.68
1082.34
1084.74
11+00
1086.42
Sta. 10+00 ℄ New Route 82
+67 24" Elm
+18 15" Wild Cherry
+77 28" Elm
+13 18" Wild Cherry
C-149
10+51 24" Elm
+68 18" Wild Cherry
C-25
F-25
1081.22
1081.27
1083.46
9+00
1084.47
R/W 58'
+02 30" Ash
C-20
F-25
C-45
1079.55
1081.62
1079.62
8+00
1081.62
Begin New Construction 7+70
7+00
1079.9
6+00
1079.2
5+00
1080.0
4+30 P.I.
1080.4
4+00
1081.4
3+00
1083.6
2+00
1085.19

127
209

TRU. 82 12.67

65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60

⊗ +91 6" Twin Cherry

⊗ +38 8" Cherry

1130.13 Match Line

1130.35

C-34

1130.25

G 1130.22

F-8

1130

1130.00

5+00

1130.45

C-184

F-51

1130.52

1130.88

A

A

+58 26" Maple

1130

1130.75

F-52

C-14

1125.59

60 70 80 90 100

1130

Match Line

F-64

1129.70

F-4

C-27

1129.46

4+00

1129.26

F-10

C-42

1123.81

1130

F-48

C-34

3+00

1128.18

F-22

C-16

1122.57

+83 12" Maple

36 x 72' @ 0.4%

1122.60

1122.31

2+83

1128.04

Culvert No. C-29

STA 2+28 Ahead

+62 18" Willow

R+61 18" Stump

+59 18" Stump

2+00

1127.09

65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65

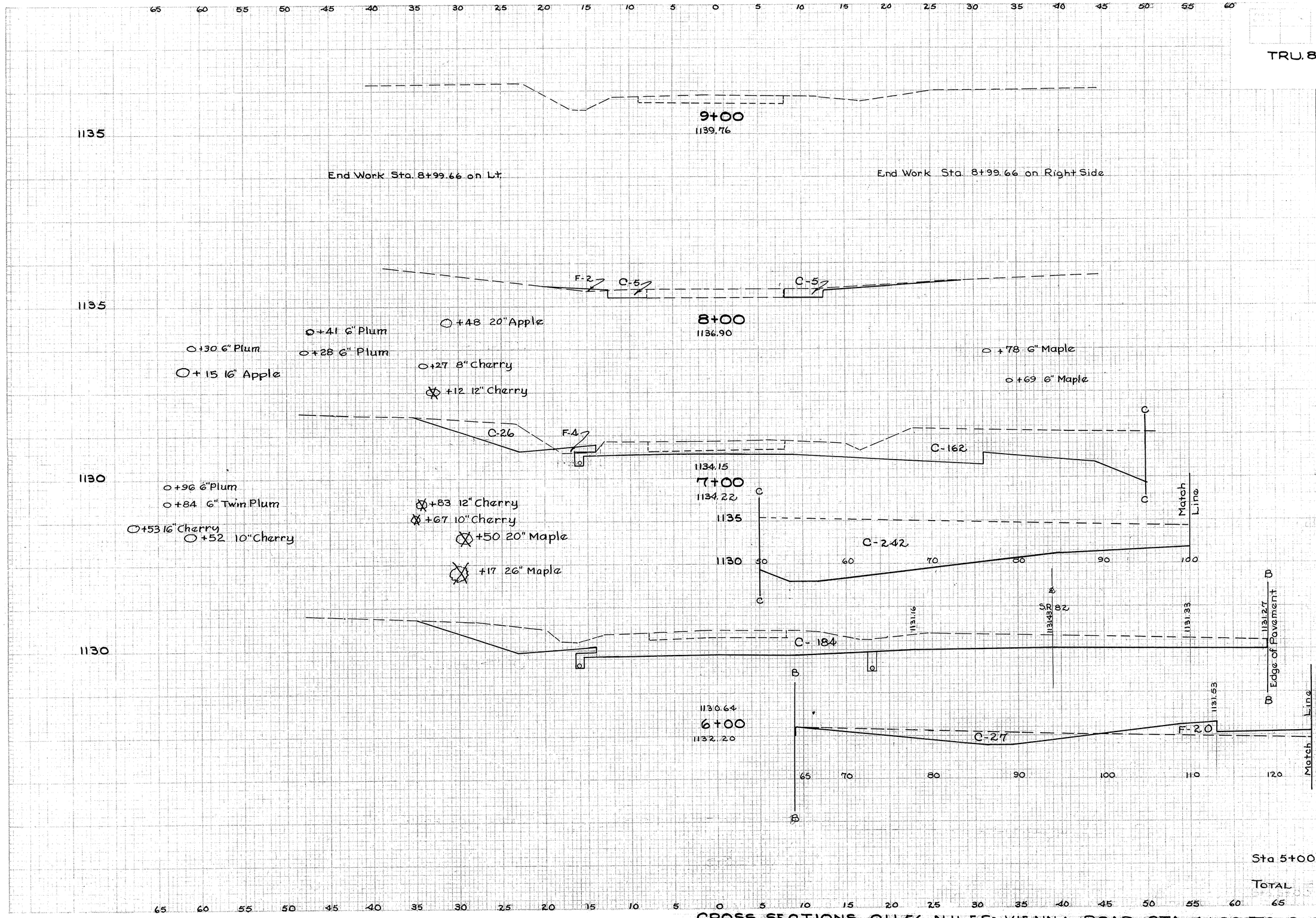
Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
120		232	111		
	1122			557	350
82		69	78		
	1106			220	274
117		50	70		
	468			67	94
0		0	0		

CROSS SECTIONS C.H 56 NILES-VIENNA ROAD STA. 2+00 TO STA. 5+00

128
209

TRU. 82 12.67

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
34		10	2		
	761			815	11
103		430	4		
	994			187	44
76		211	20		
	1089			820	243
Sta 5+00 120		232	111		
TOTAL	5540			3666	1016



CROSS SECTIONS C.H. 56 NILES - VIENNA ROAD STA. 6+00 TO 9+00

TRU-82 12.67

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

1130

Exist R/W
+77 24" Maple
+25 18" Maple
R/W
345+47 DR.
C-5 C-6 C-27
F-6 F-5
+83 38" Oak
+80 18" Maple
+80 20" Maple
+80 24" Maple Hse
+60 18" Maple
345+00
1133.47
R/W
F-1 C-7 C-4 F-6
+39 18" Maple
+39 12" Stump
+39 30" Maple
+15 15" Maple R/W
344+51
1134.10
Begin 15" I-2. Sta. 344+30 43' Rt.
F.L. El. 1132.18
C-10 F-10 344+50 F-1 C-13
C-4 C-5
F.L. El. 1131.5
Begin 15" I-2
Sta. 344+00 48' Lt.
F.L. El. 1131.5
AHEAD C-0
BACK C-16
+83 18" Maple
344+00
1134.83
+53 24" Cherry
+50 18" Maple R/W
C-7 F-10 C-3
343+00
1135.67
+09 60" Elm
C-6 F-5
1133.00
+83 12" Maple
+78 18" Maple
+37 18" Maple
+20 15" Maple
Sta. 341+90
Begin work on Lt. side
See Typical Section
Sheet No. 154
342+00
1135.71
+20 15" Maple
+10 18" Stump
HOUSE
+95 30" Elm
No Work
341+00
1134.97
+91 36" Maple
+46 15" Maple
+59 15" Maple
+27 12" Maple
R/W +01 18" Maple
No Work
340+00
1133.52
+94 30" Maple
+65 15" Apple
R/W
No Work
339+00
1132.42
+81 15" Apple
+79 18" Stump
Exist R/W
+77 18" Maple
Exist R/W
R/W
No Work
338+00
1130.16

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

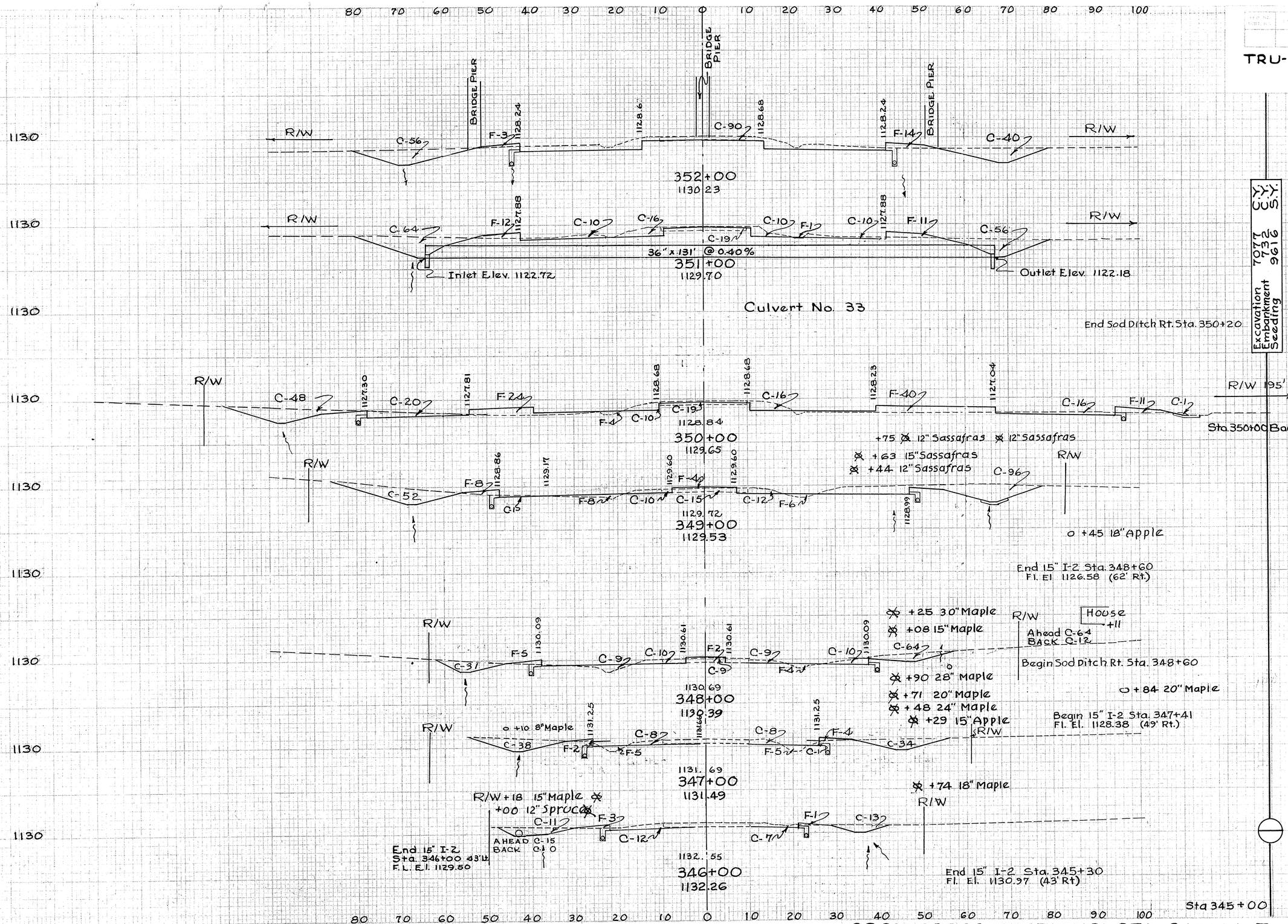
Excavation C.Y.
Embankment C.Y.
Seeding S.Y.
487
1370
2190

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
58		66	11		
	305			97	16
54		41	7		
	323			69	17
60		32	11		
	489			78	39
28		10	10		
	306			30	28
27		6	5		
	150			11	9
0		0	0		

S.R. 90 CROSS SECTIONS STA. 338+00 TO STA. 345+00

130
209

TRU-82 12.67

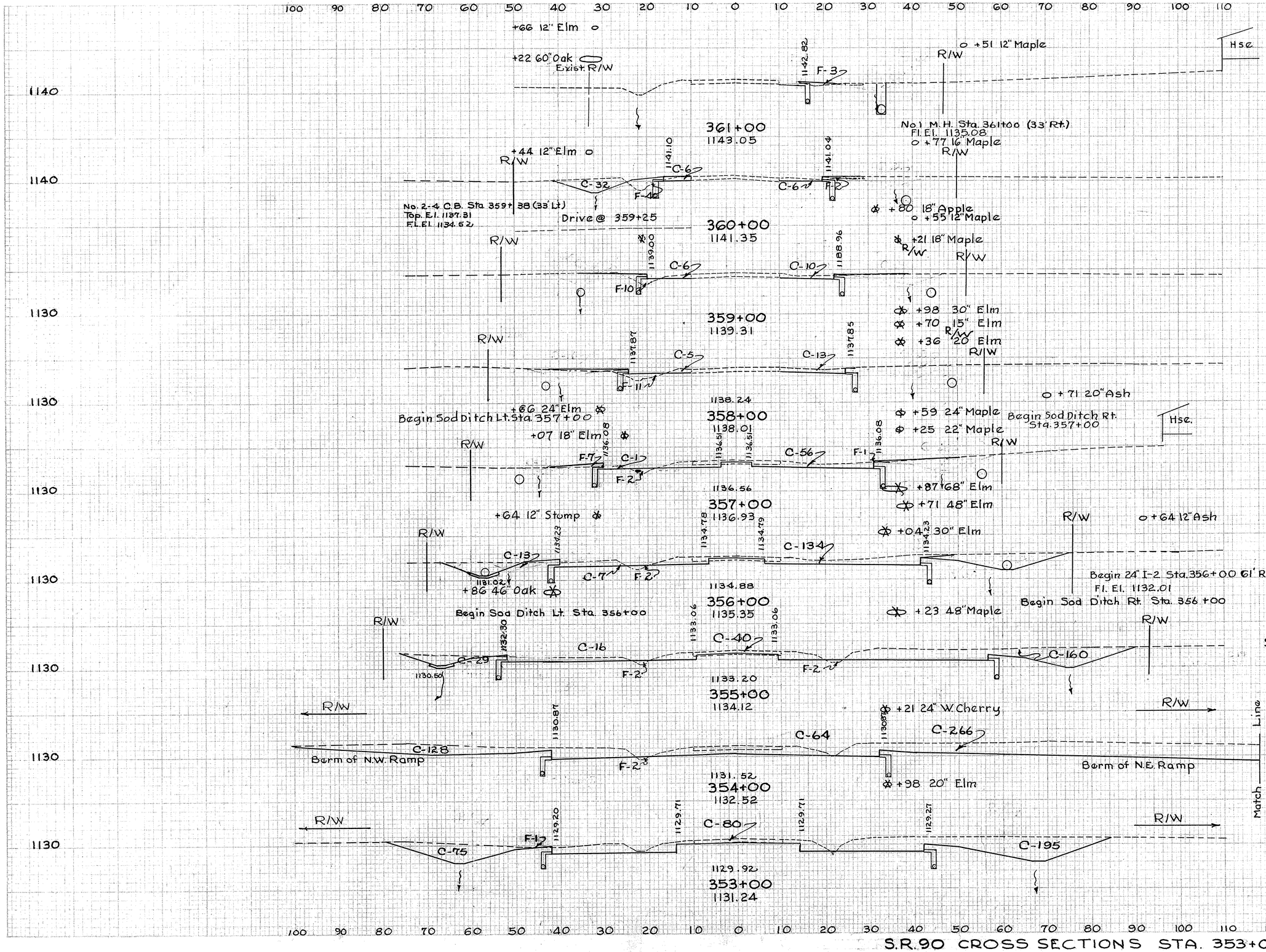


Excavation 7077 C.Y.
Embankment 7326 C.Y.
Seeding 9616 S.Y.

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
110		186	17		
	127			652	76
109		166	24		
	128			548	191
123		130	79		
	220			585	194
97		186	26		
	967			607	69
77		142	11		
	822			428	50
71		89	16		
	689			244	37
53		43	4		
	617			202	28
58		66	11		

S.R.90 CROSS SECTIONS STA. 346+00 To STA. 352+00

TRU. 82 - 12.67



Excavation 748 C.Y.
Embankment 1083 C.Y.
Seeding 1983 S.Y.

Seeding		Erd Area		Co. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
35		13	3		
	539			150	17
62		68	6		
	683			248	30
61		66	10		
	667			244	39
59		66	11		
	700			311	39
67		102	10		
	806			474	24
78		154	3		
	939			739	13
Sta. 355+00 Ahead 91		245	4		
0		458	2		
	678			1496	6
122		350	1		
	1289			993	33
Sta. 352+00 110		186	17		

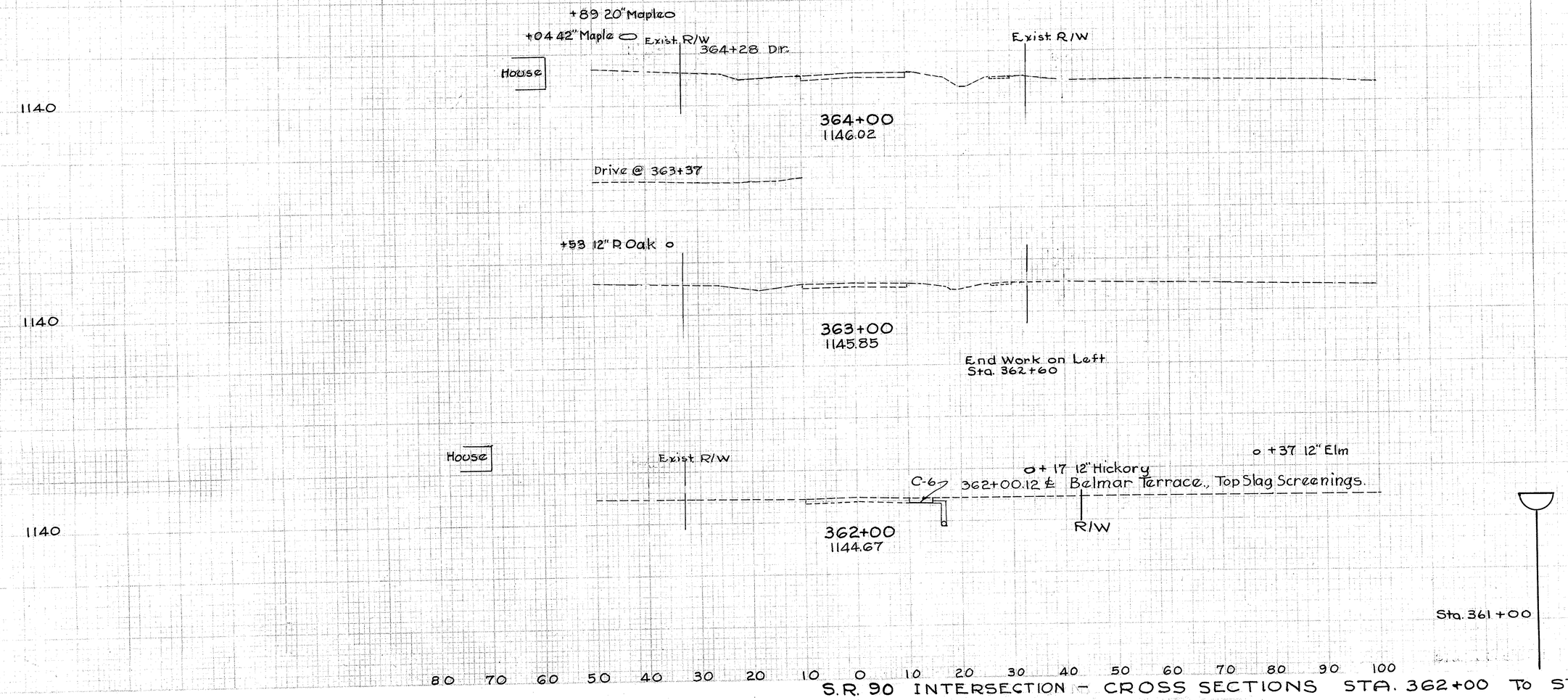
S.R. 90 CROSS SECTIONS STA. 353+00 To STA. 361+00

80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100

132
209

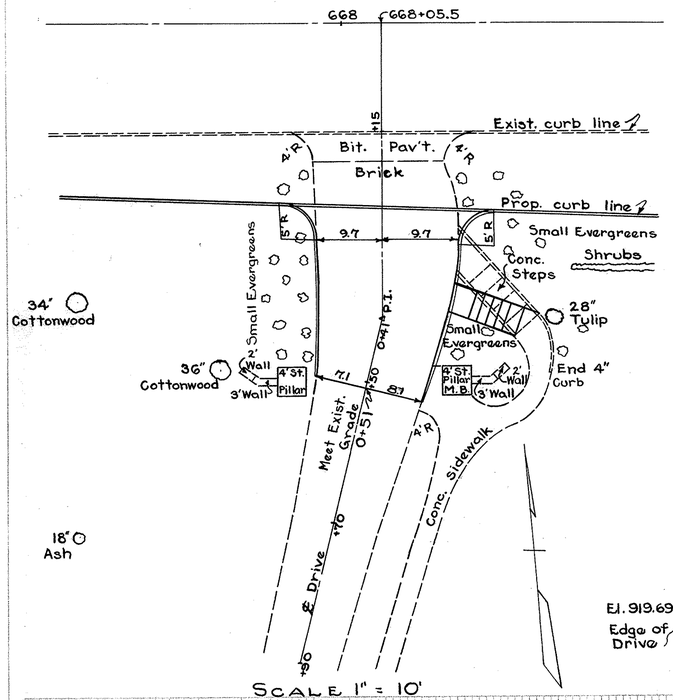
TRU-82-12.67

Seeding		End Area		Cu. Yds.	
L.F.	S.Y.	Cut	Fill	Exc.	Emb.
				0	
					6
				0	
	94				
					106
					17
	35				
				13	
				3	

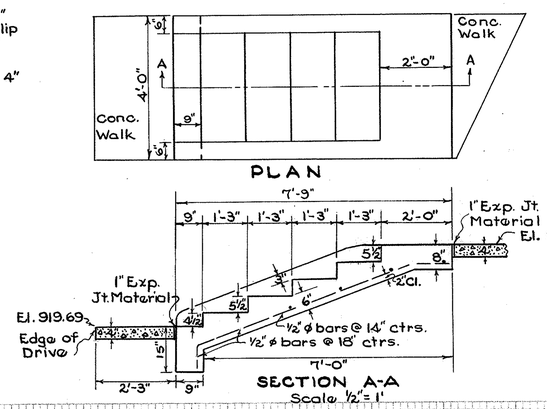


S.R. 90 INTERSECTION - CROSS SECTIONS STA. 362+00 TO STA. 364+00

DRIVE STA. 668+05.5 D-2

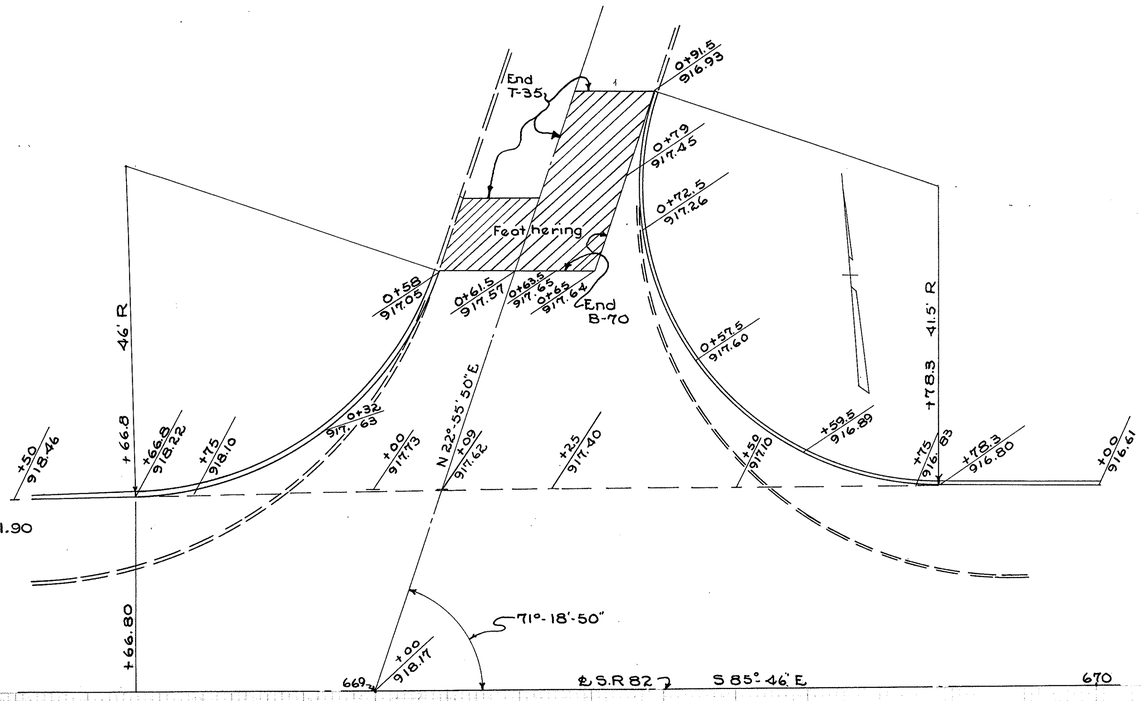


DETAIL - CONCRETE STEPS



GOLF DRIVE

STA. 669+00



Estimated Quantities

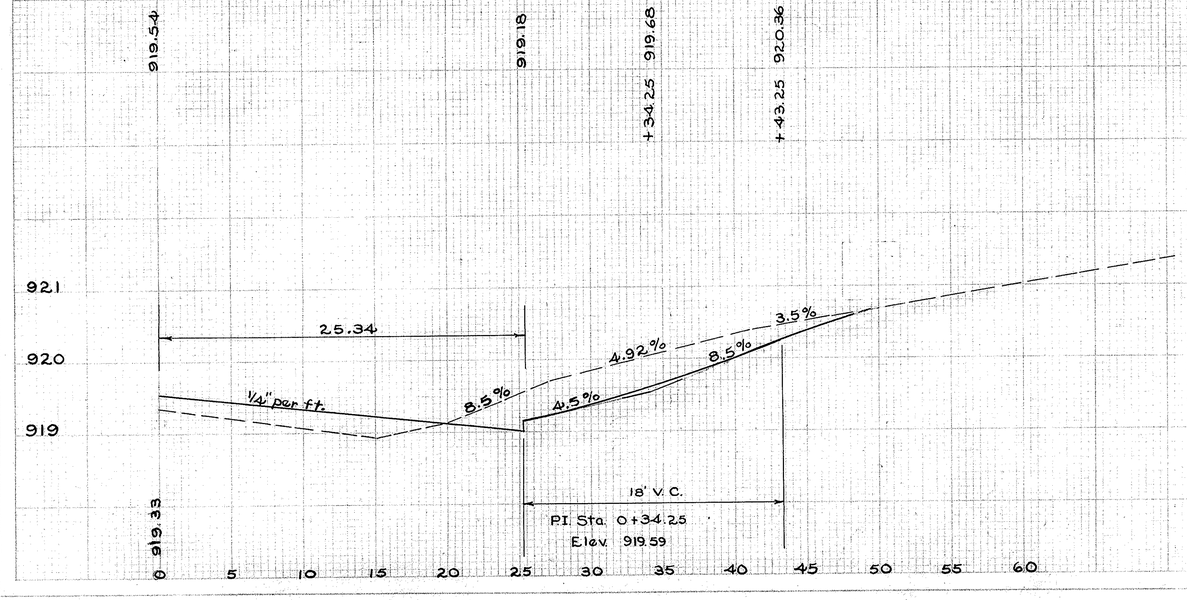
I-22	4½" Subbase	8	C.Y.
T-70	7" Portland Cement Conc. Pavement	59	S.Y.
I-12	Concrete Curb Type 2A	57	L.F.
I-13	Concrete Sidewalk	22	S.F.
I-13	Concrete Steps	24	L.F.

Removal

E-8	Remove & Dispose Ex. Pavement	70	S.Y.
E-8	Remove & Dispose Curb	74	L.F.

Estimated Quantities

B-70	8" Portland Cement Concrete Base Course	186	S.Y.
B-35	1½" Asphaltic Concrete Leveling Course	186	S.Y.
T-35	1¼" Asphaltic Concrete Surface Course	186	S.Y.
I-12	Conc. Curb Type 2B	140	L.F.
I-22	6" Subbase	186	S.Y.
E-8	Removal & Disposal of Existing Curb & Gutter	152	L.F.



INTERSECTION - DETAILS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU-82-12.67

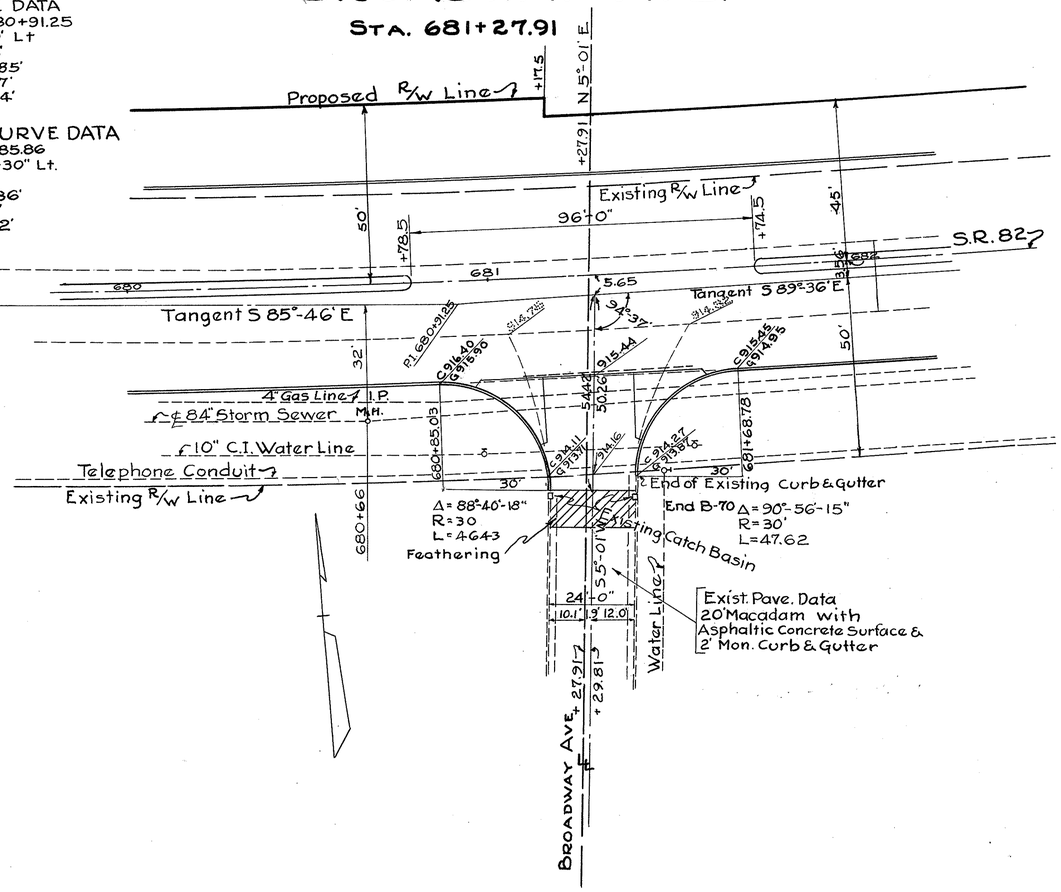
134
209

BROADWAY AVE.

STA. 681+27.91

CURVE DATA
P.I.=Sta. 680+91.25
Δ = 3°-50' Lt
D = 0°-28'
R = 12277.85'
T = 410.87'
L = 821.44'
E = 687'

EXIST. CURVE DATA
P.I.=680+85.86
Δ = 3°-53'-30" Lt.
D = 3°-0'
R = 1909.86'
T = 64.89'
L = 129.72'
E = 1.10'



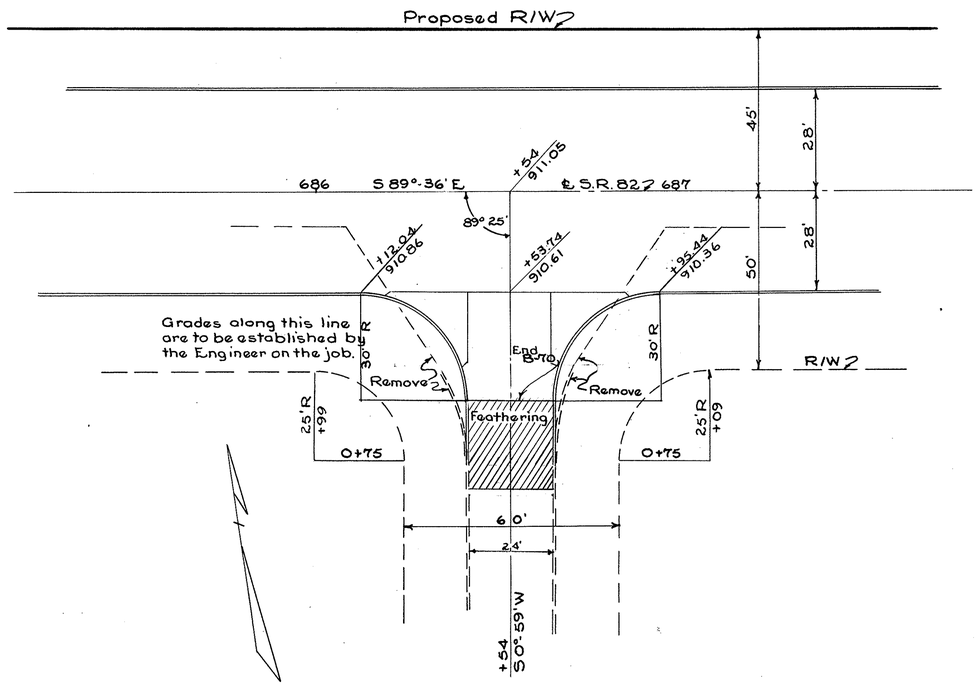
ESTIMATED QUANTITIES

B-70	8" Portland Cement Concrete Base Course	129	S.Y.
B-35	1¼" Asphaltic Concrete Leveling Course	129	S.Y.
T-35	1¼ Asphaltic Concrete Surface Course	129	S.Y.
I-22	6" Subbase	132	S.Y.
I-12	Concrete Curb Type 2 B	94	L.F.
T-35	Asphaltic Concrete Surface Course (Feather)	2.5	C.Y.

SCALE 1" = 20'

MARWOOD DRIVE

STA. 686+54



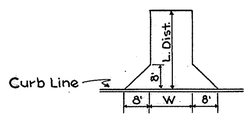
ESTIMATED QUANTITIES

B-70	8" Portland Cement Concrete Base Course	121	S.Y.
B-35	1¼" Asphaltic Concrete Leveling Course	121	S.Y.
T-35	1¼" Asphaltic Concrete Surface Course	121	S.Y.
I-22	6" Subbase	126	S.Y.
I-12	Concrete Curb Type 2 B	94	L.F.
E-8	Removal & Disposal of Existing Curb & Gutter	75	L.F.
T-35	Asphaltic Concrete Surface Course (Feather)	2.5	C.Y.

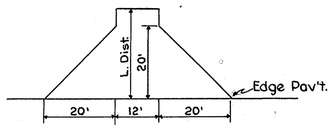
SCALE 1" = 20'

TYPICAL DRIVE APPROACH DETAILS

Res. & Field - Curb Section



Res. & Field - No Curb Section

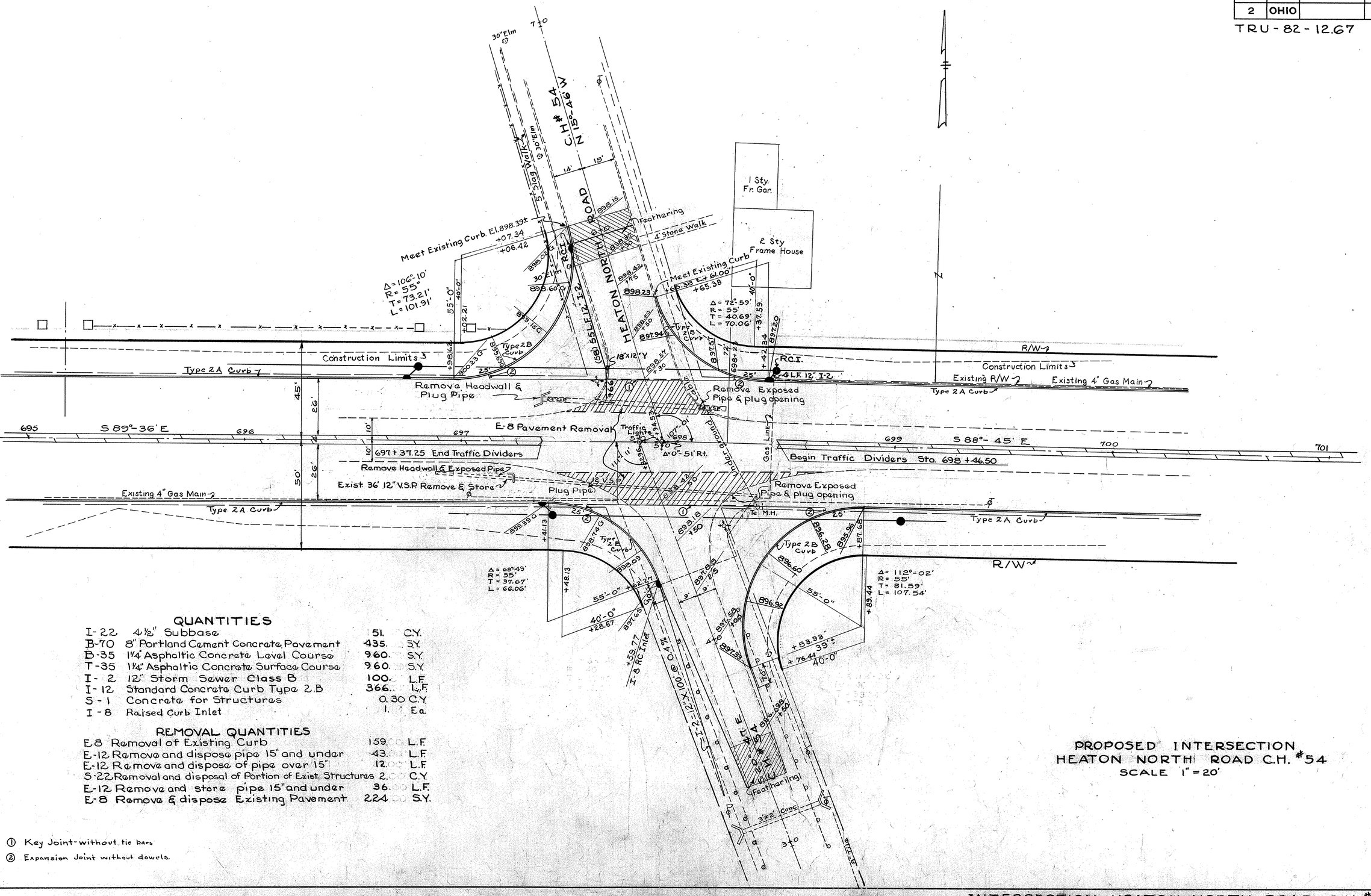


INTERSECTION DETAILS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

135
209

TRU-82-12.67



QUANTITIES

I-22	4½" Subbase	51.	C.Y.
B-70	8" Portland Cement Concrete Pavement	435.	S.Y.
B-35	1¼" Asphaltic Concrete Level Course	960.	S.Y.
T-35	1¼" Asphaltic Concrete Surface Course	960.	S.Y.
I-2	12" Storm Sewer Class B	100.	L.F.
I-12	Standard Concrete Curb Type 2.B	366.	L.F.
S-1	Concrete for Structures	0.30	C.Y.
I-8	Raised Curb Inlet	1.	Ea.

REMOVAL QUANTITIES

E-8	Removal of Existing Curb	159.	L.F.
E-12	Remove and dispose pipe 15" and under	43.	L.F.
E-12	Remove and dispose of pipe over 15"	12.	L.F.
S-22	Removal and disposal of Portion of Exist. Structures	2.	C.Y.
E-12	Remove and store pipe 15" and under	36.	L.F.
E-8	Remove & dispose Existing Pavement	224	S.Y.

① Key Joint-without tie bars

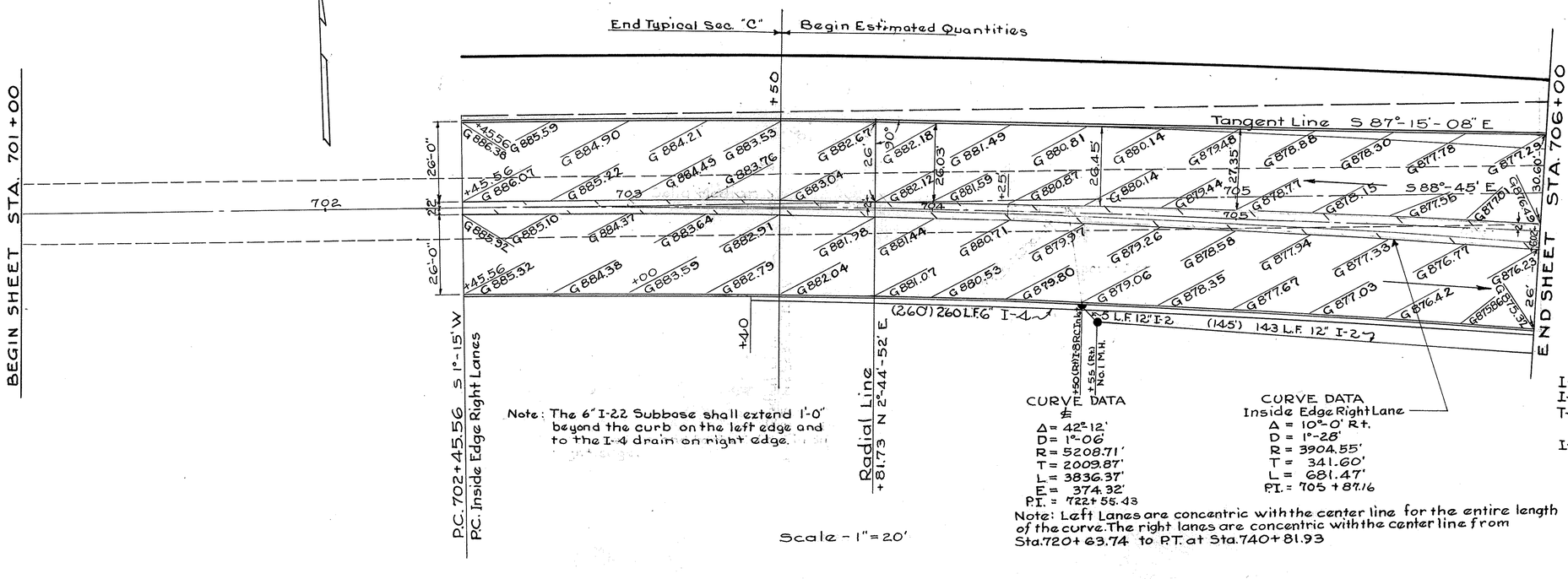
② Expansion Joint without dowels.

PROPOSED INTERSECTION
HEATON NORTH ROAD C.H. #54
SCALE 1" = 20'

INTERSECTION HEATON NORTH ROAD C.H. # 54

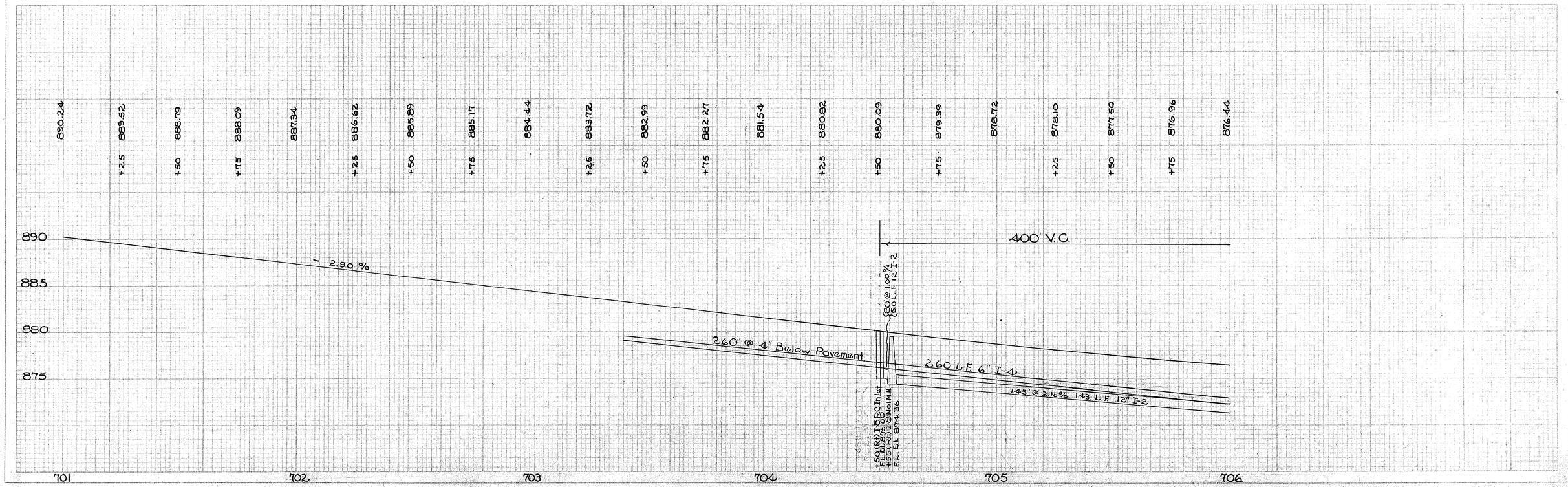
2	OHIO			

TRU-82-12.67



Estimated Quantities

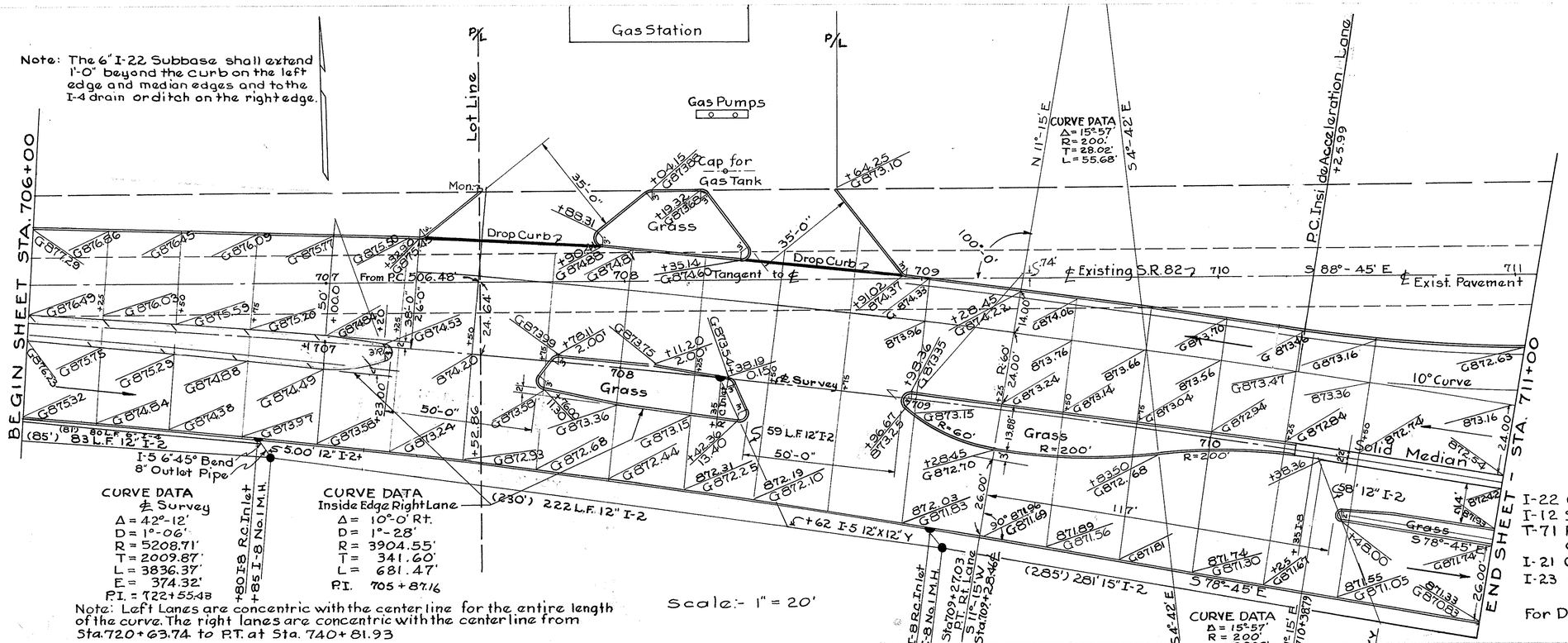
I-22-6" Subbase or 6" Gran. Slag M 3.13	1728	S.Y.
I-12 Standard Concrete Curb (Type 2A)	495	L.F.
T-71 9" Reinforced Portland Cement Concrete Pavement	1675	S.Y.
I-23 Precast Concrete Traffic Dividers	See Sheet 20	



INTERSECTION - EXISTING S.R. 82 STA. 701+00 TO STA. 706+00

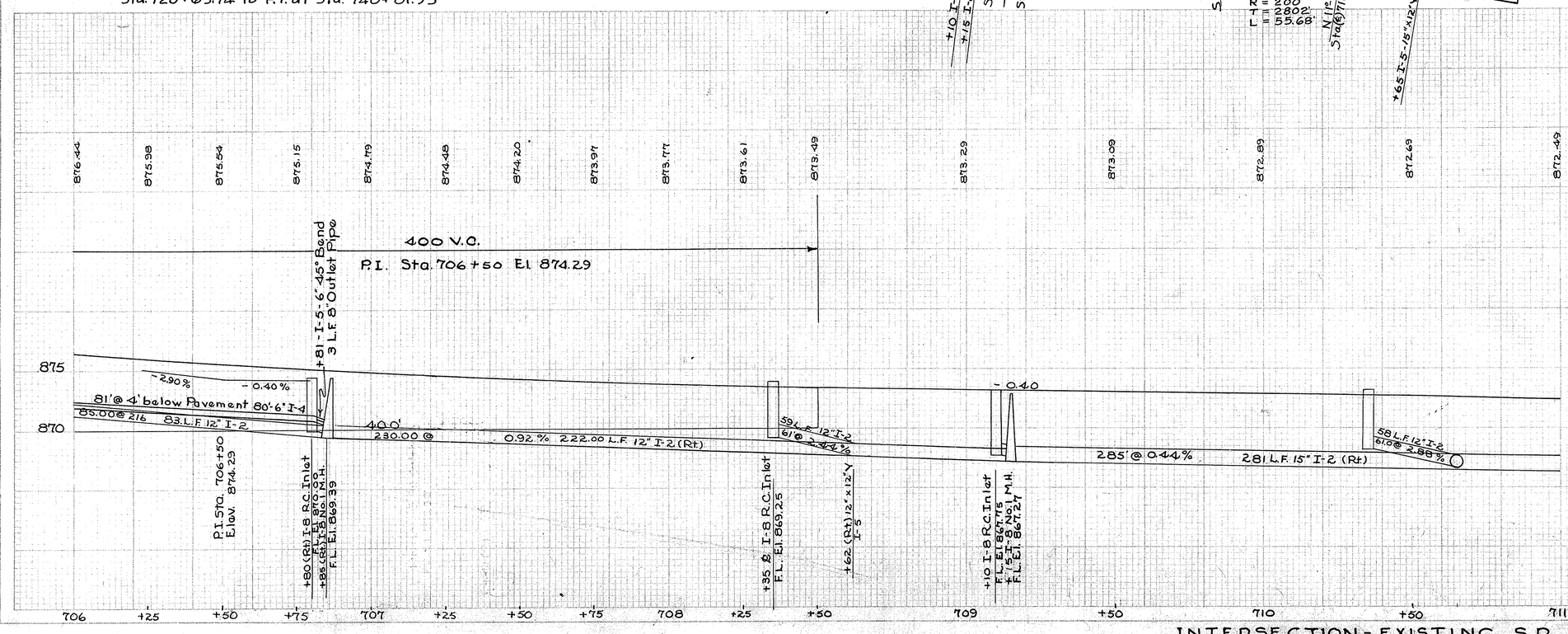
TRU-82-12.67

Note: The 6" I-22 Subbase shall extend 1'-0" beyond the curb on the left edge and median edges and to the I-4 drain or ditch on the right edge.



I-22 6" Subbase or 6" Gran. Slag M 3.13	4783	S.Y.
I-12 Standard Concrete Curb Type 2.A	1648	L.F.
T-71 Reinforced Portland Cement Concrete Pavement (9")	4438.44	S.Y.
I-21 Concrete Median Pavement	15.7	S.Y.
I-23 Precast Conc. Traffic Dividers	See Sheet	20

For Drainage Quantities See Sht. No. 20-21



INTERSECTION - EXISTING S.R. 82 STA. 706+00 TO STA. 711+00

2	OHIO			

138
209

TRU-82-12.67

Curve Data
Δ = 26°-11'-40"
R = 160'
T = 37.22'
L = 73.15'

Curve Data
Δ = 20°-57'-30"
D = 10°-0' Lt.
R = 572.96'
T = 105.98'
L = 209.58'

Curve Data
P.I. STA. 713+55.82
Δ = 12°-22'-25"
D = 10°-0" Rt.
R = 572.96'
T = 62.14'
L = 123.74'

Curve Data
Δ = 33°-46'-40"
R = 143'
T = 43.42'
L = 84.28'

Curve Data
Inside Edge
Δ = 133°-08'-40"
R = 42.67'
T = 98.47'
L = 99.16'

Curve Data
Δ = 42°-12'
D = 1°-06'
R = 5208.71
T = 2009.87
L = 3836.37
E = 374.32

Curve Data
Inside Edge Right Lane
Δ = 10°-0' Rt
D = 1°-28'
R = 3904.55'
T = 341.60
L = 681.47

Scale 1" = 20'

BEGIN SHEET - STA. 711+00

END SHEET - STA. 716+00

Note: The 6" I-22 Subbase shall extend 1'-0" beyond the curb or pavement edge on the left lane, the wide median, and the approach roads and to the ditch line on the right side of right lane.

ESTIMATED QUANTITIES

I-22 6" Subbase or 6" Gran. Slag M 3.13	4320 S.Y.
I-12 Standard Concrete Curb Type 2. A	2824 L.F.
I-21 Concrete Median Pavement	30 S.Y.
I-18 6" Stabilized Crushed Aggregate Shoulders and approaches	28 C.Y.
T-35 Asphaltic Concrete Surface Course (Feather)	3,00 C.Y.
T-71 Reinforced Portland Cement Concrete Pavement (9")	4079 S.Y.

For Drainage Quantities See Sheet No. 21

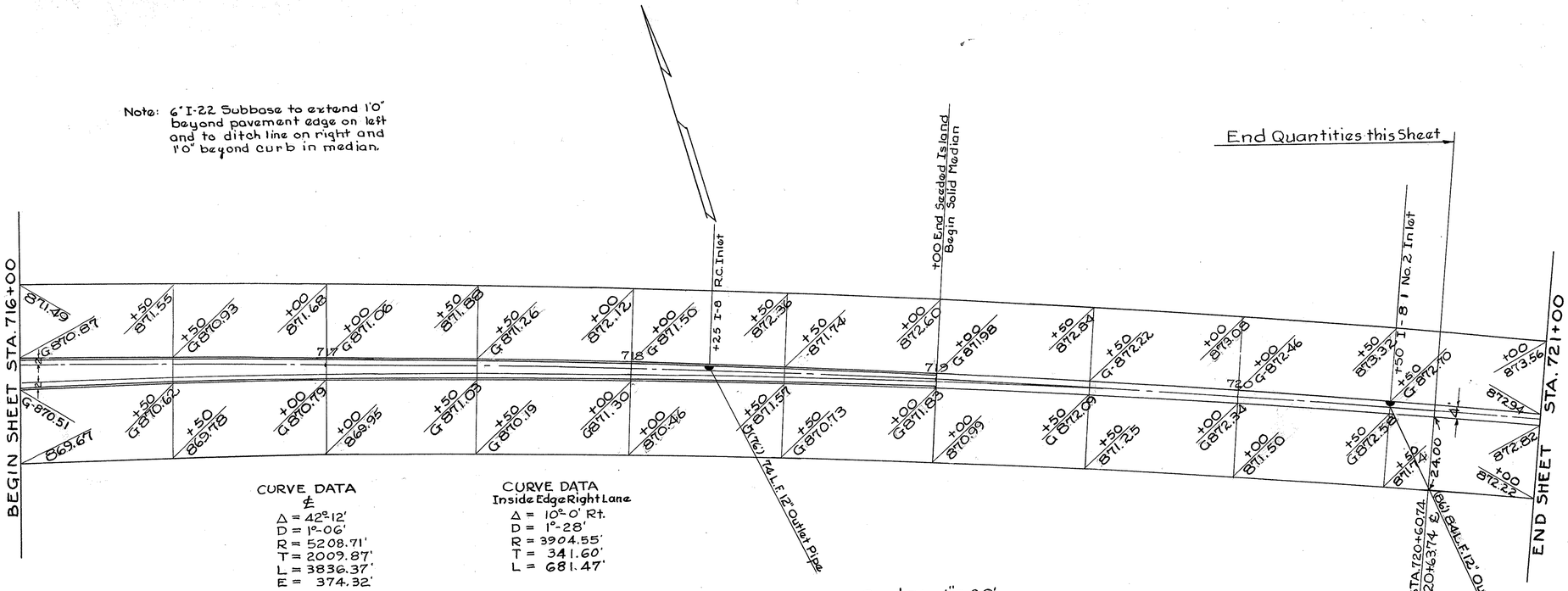
INTERSECTION - EXISTING S.R. 82 STA. 711+00 TO STA. 716+00

FED. HD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

139
209

TRU-82-12.67

Note: 6" I-22 Subbase to extend 1'0" beyond pavement edge on left and to ditch line on right and 1'0" beyond curb in median.



CURVE DATA
℄
Δ = 42°12'
D = 1°-06'
R = 5208.71'
T = 2009.87'
L = 3836.37'
E = 374.32'

CURVE DATA
Inside Edge Right Lane
Δ = 10°-0' Rt.
D = 1°-28'
R = 3904.55'
T = 341.60'
L = 681.47'

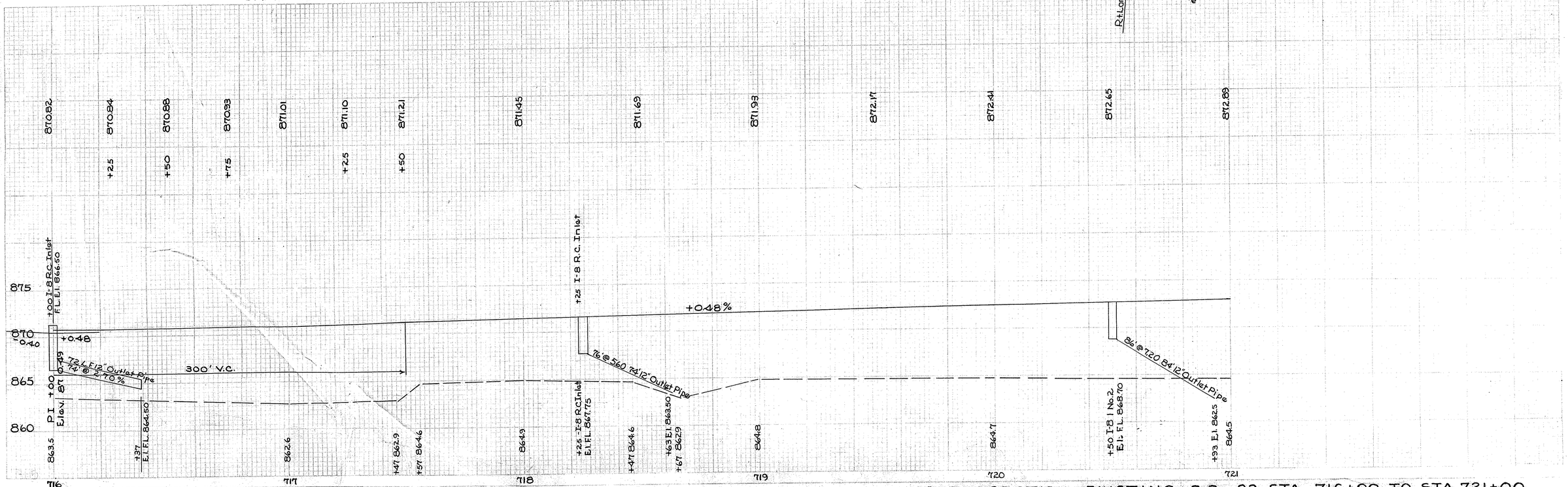
Note: Left Lanes are concentric with the center line for the entire Length of the curve. The right lanes are concentric with the center line from Sta. 720+63.74 to P.T. at Sta. 740+81.93

Scale :- 1" = 20'

Estimated Quantities To Sta. 720+60.74

I-22-6' Subbase or 6" Gran Slag M 3.13	3300	S.Y.
I-12 Std. Concrete Curb Type 2-A	595	L.F.
I-18 6" Stabilized Crush Aggregate Shoulders & Approaches	68	C.Y.
T-71-9" Reinforced Portland Cement Concrete Pavement	2526	S.Y.
I-21 Concrete Median Pavement	34	S.Y.

For Drainage Quantities See Sheet No. 21



INTERSECTION - EXISTING S.R. 82 STA. 716+00 TO STA. 721+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

140
209

TRU - 82 - 12.67

Sec. A-A SCALE 3/8" = 1 Ft.

Note: Pavement Removal is from Sta. 5+18 to 14+97

INTERSECTIONS SR 46 & S.R 82

Scale 1" = 30'

ESTIMATED QUANTITIES

(Includes all paving on S.R 46 & Interchange Ramps)

E-8 Pavement Removal	2875 S.Y.
T 30 Bituminous Prime Coat	1688 Gal.
T 35 1¼" Asphaltic Conc. Surface Course	3539 S.Y.
B 35 1¼" Asphaltic Conc. Leveling Course	3472 S.Y.
B 35 3" Asphaltic Conc. Base Course	1550 S.Y.
T 71 9" Reinforced Portland Cement Concrete Pavement	16119 S.Y.
I-12 Type 2A Curb	2900 L.F.
I-22 6" Subbase	24598 S.Y.
T-35 2" Asphaltic Conc. Surf. Course	30795 Y.
B-119 7" Crushed Aggregate Base	32075 Y.
I-21 Portland Cem. Conc. Median	75 Y.
B 119 4½" Crushed Aggregate Base	1650 SY.
I-18 Stabilized Shoulders	139 C.Y.

① Key Joint without bars

② Expansion Joint without bars

NOTE:
Elevations shown above are for top of pavement.

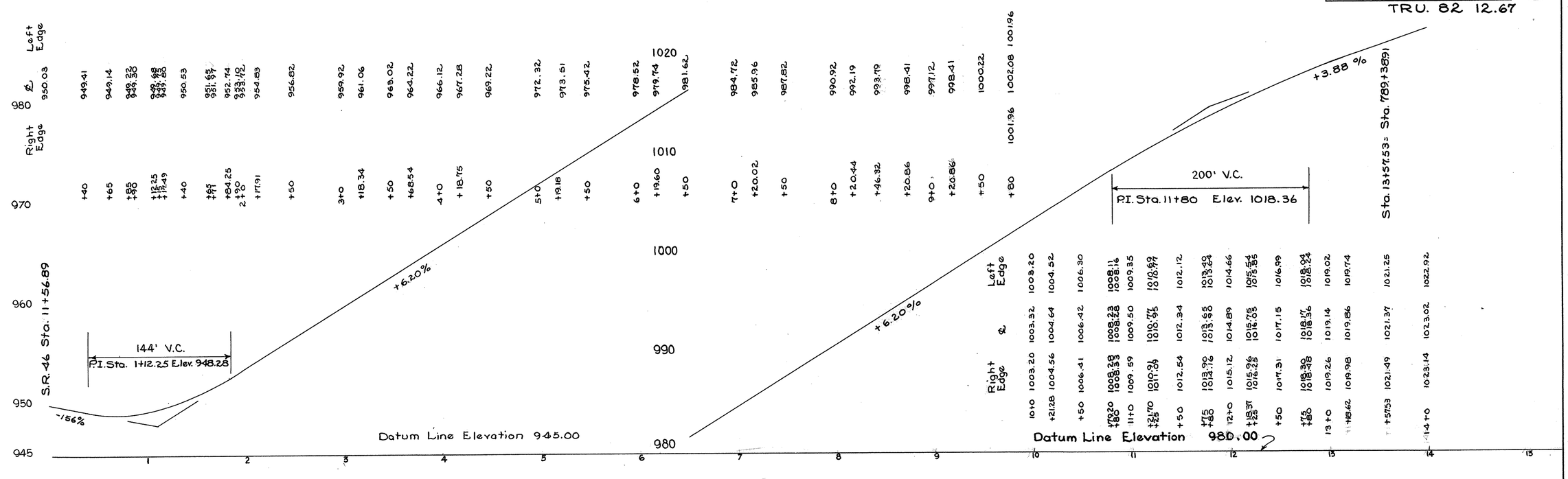
NOTE: Radii indicated are measured to the edge of Pavement.

NORTH EAST RAMP S.R. 46

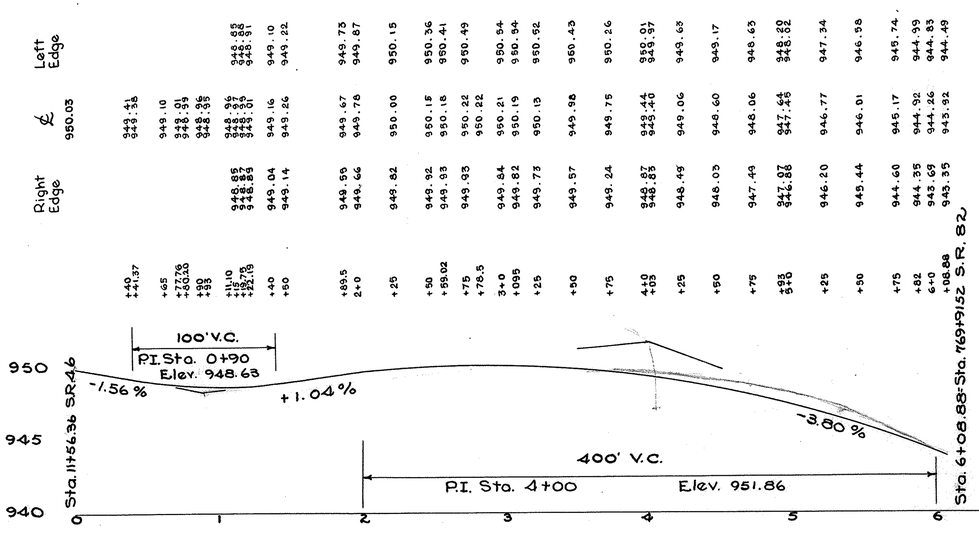
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

141/209

TRU. 82 12.67



NORTH WEST RAMP S.R. 46



PROFILE OF N.E. & N.W. RAMPS S.R. 46

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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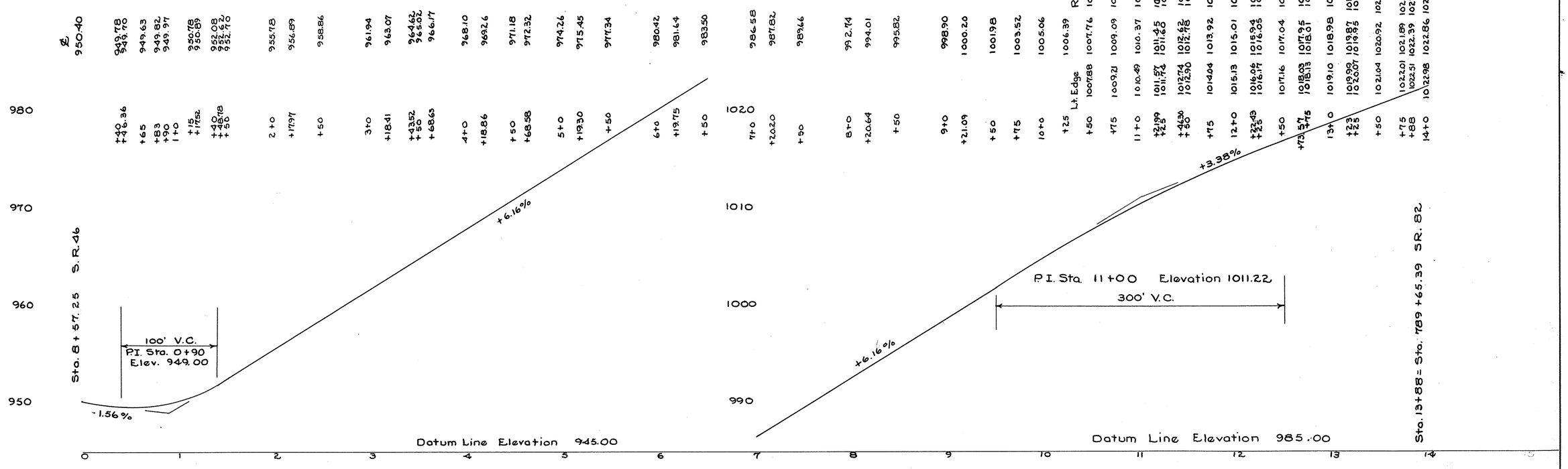
209

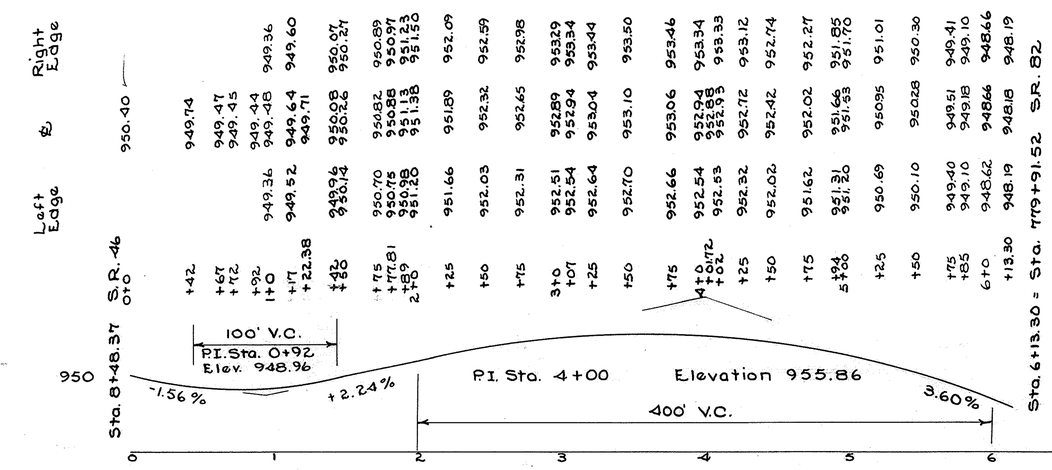
TRU. 82 12.67

SOUTH EAST RAMP S.R. 46



℄	Lt. Edge	Rt. Edge
950.40		
949.78		
949.70		
+40	1007.88	1007.64
+46.36	1009.21	1009.09
+65	1010.49	1010.37
+83	1011.57	1011.45
+90	1011.72	1011.60
1+0	1012.74	1012.62
+15	1012.90	1012.78
+17.52	1013.04	1012.92
+40	1013.21	1013.09
+48.78	1013.29	1013.17
+56	1013.37	1013.25
955.78		
956.69		
958.86		
961.94		
963.07		
964.42		
965.02		
966.17		
968.10		
969.26		
971.18		
972.32		
974.26		
975.45		
977.34		
980.42		
981.64		
983.50		
984.58		
987.82		
989.66		
992.74		
994.01		
995.82		
998.90		
1000.20		
1001.98		
1003.52		
1005.06		
1006.39		
1007.64		
1008.97		
1010.25		
1011.33		
1011.48		
1012.50		
1012.66		
1013.78		
1014.85		
1015.76		
1015.89		
1016.84		
1017.73		
1017.89		
1018.78		
1019.69		
1019.84		
1020.77		
1022.76		
1022.86		
1022.74		

SOUTH WEST RAMP S.R. 46



Left Edge	℄	Right Edge
950.40		
949.74		
949.47		
949.45		
949.44		
949.36	949.48	949.36
949.52	949.64	949.60
949.76	949.71	
950.08		950.07
950.26		950.21
950.70	950.82	950.89
950.78	950.88	950.97
950.98	951.13	951.23
951.20	951.38	951.50
951.66	951.89	952.09
952.03	952.32	952.59
952.31	952.65	952.98
952.51	952.89	953.29
952.54	952.94	953.34
952.64	953.04	953.44
952.70	953.10	953.50
952.66	953.06	953.46
952.54	952.94	953.34
952.53	952.93	953.33
952.32	952.72	953.12
952.02	952.42	952.74
951.62	952.02	952.27
951.31	951.66	951.85
951.20	951.53	951.70
950.69	950.95	951.01
950.10	950.28	950.30
949.40	949.51	949.41
949.10	949.18	949.10
948.62	948.66	948.66
948.19	948.18	948.19

PROFILE OF S.E. & S.W RAMPS S.R. 46

SHEET NO. REVISED	STATE	PROJECT	
2	OHIO		

143
209

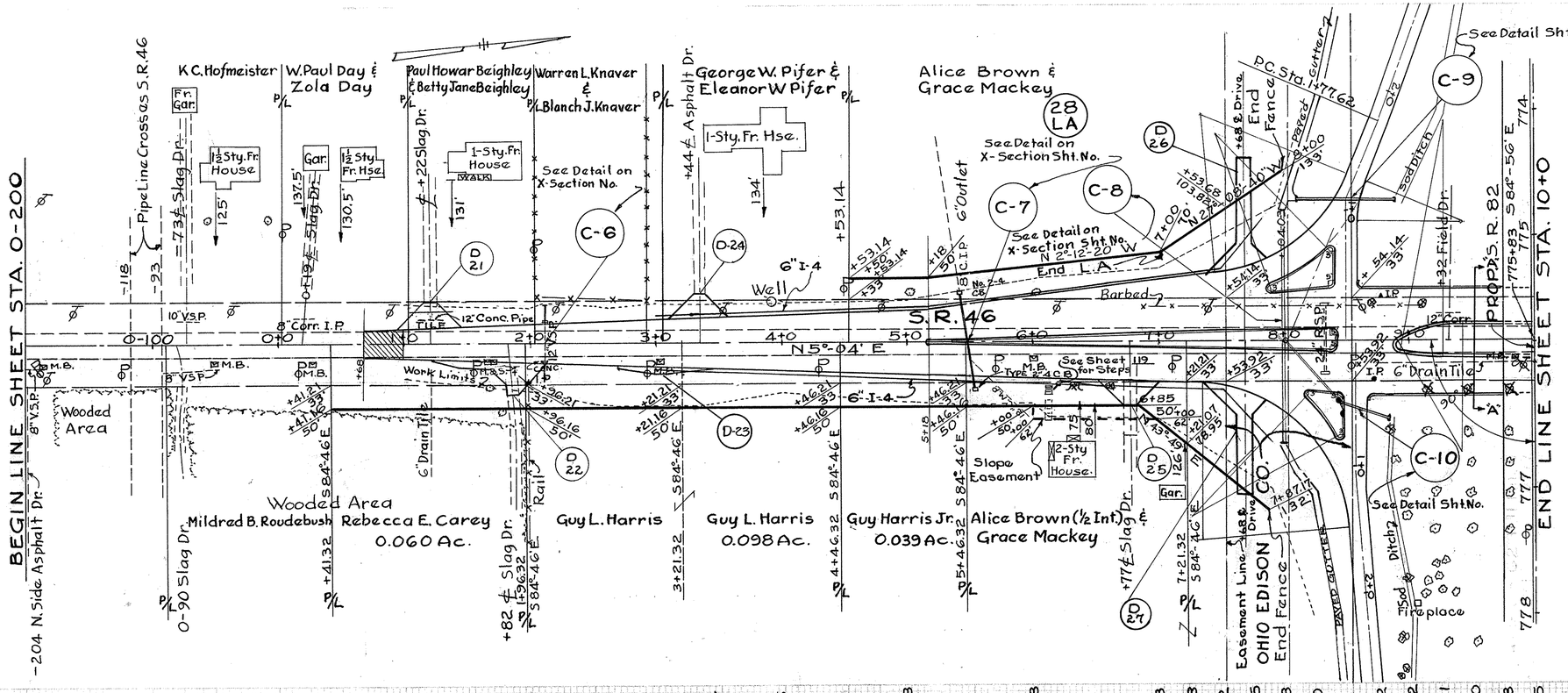
TRU-82-12.67

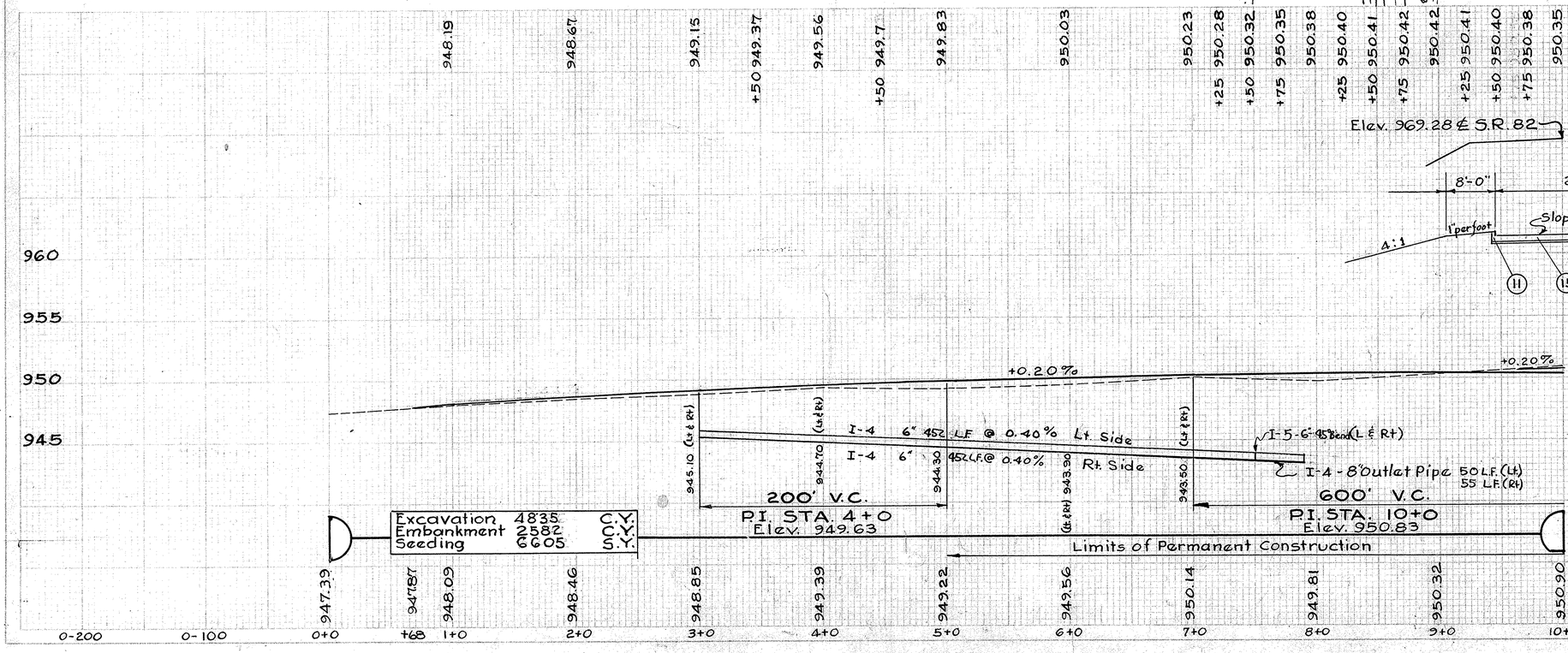
STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHT. No.
C-6	S.R. 46 Sta. 2+12 Extension	STD. PIPE CULV.	12" x 15' L 18" x 13' R	158
C-7	SR. 46 Sta. 5+47	STD. PIPE CULV.	18" x 79'	158
C-8	SR 46 Sta. 8+00	STD. PIPE CULV.	30" x 181'	158
C-9	S.W. Ramp Sta. 1+09	STD. PIPE CULV.	18" x 84'	158
C-10	S.E. Ramp	STD. PIPE CULV.	21" x 33" 21" x 33"	158

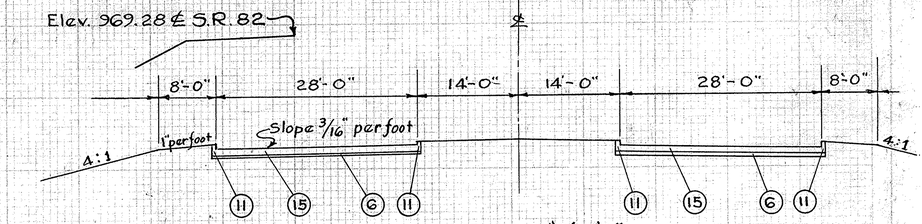
DRAINAGE					
STATION From	STATION To	Side	Dist. From ℄	I-4 L.F. Under Drain 6"	I-4 L.F. Outlet Pipe 8"	I-5 for I-4 6"-45° Bend Each
3+00	7+79	Lt.		452	50'	1
3+00	7+90	Rt.		452	55'	1
TOTAL				904	105	2

DRIVES & MAIL BOX APPROACHES													
MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.	I-1 12" L.F.		E-12 15" & Under R.C.P. L.F.	E-1 Exc. C.Y.	E-1 Emb. C.Y.
D-21	1+22	Res.	Lt.	21	12	72		72					10
D-22	1+82	Comb.	Rt.	26	12	84		84				5	
D-23	3+05	M.B.A.	Rt.	-	-	31		31					
D-24	3+44	Res.	Lt.	19	12	70		70					6
	5+50										35		
D-25		Comb.	Rt.	20	12	71		71					
D-26		Field	Lt.	83	12	159		159					120
D-27		Field	Lt.	86	12	155		155	40				36
	9+32										20		
	10+00										125		
TOTALS						642		642	40		180	5*	172*

* Quantities carried to earthwork table.







(11) Item I-12 Standard Concrete Curb Type 2 A
(15) Item I-71 9" Reinforced Portland Cement Conc Pavt.
(6) Item I-22 6" Subbase

INTERSECTION S.R. 46

TRU-82-12.67

BEGIN LINE SHEET STA. 10+0 — 775+83 — 778

PROP. S.R. 82 — S 84°-56' E — 774

See Detail Sht. No. 163

Alice Brown & Grace Mackey

Louis W. Daugherty & Lillian M. Daugherty 0.126 Ac.

Paul F. Swain & Ruth A. Swain 0.039 Ac.

R. M. McMillen & Stella V. McMillen 0.059 Ac.

Harold E. Muter & Mary L. Muter

Guy L. Harris 0.416 Ac.

C. S. Cole & B. R. Cole 0.273 Ac.

Ditch — Gutter — End Paved — Sod — Paved Gutter — Sod Ditch

C-11 — C-12 — C-13 — C-14

D-28 End L.A. — D-29 — D-30 — D-31 — D-32 — D-33 — D-34 — D-35

12+10.05 — 136.16

N 35°-32'-20" E

Limits of Construction

Riprap

+34 ℄ Field Drive — +46 Field Dr. — +72 Field Dr. — +85 ℄ Field Dr.

+53.00 — +71 Asphalt Dr. — +73 ℄ Slag Dr. — +04 Slag Dr.

1-Sty. Fr. Res. & Gar. — 151'

1-Sty Brk House — 145'

1-Sty Fr. Hse. (Conc. Walk, Porch) — 147'

2-Sty Fr. — 124'

Fr. Gar. — +49 ℄ Conc. Dr.

1½ Story Fr. Hse — 121'

1½ Sty Fr. House — 125'

+67 ℄ Asphalt Dr.

Well

See X-Section Sht. No. 122

See X-Section Sheet No. 121

N 11°-02'-20" E

Proposed R/W

S.R. 46

N 5°-04' E

Sta. 19+47

Conc.

END LINE SHEET STA 22+00

6" Drain Tile — Guy — M.B. — 12" Corr. — 12" V.S.P. — 24" V.S.P. — 18" V.S.P.

See Detail Sht. No. 163

R.C.I. 12" I-27 — M.H. — 4" House Drain

+27 ℄ Black Top Dr.

Begin Fence

Slope Easement

POND — Stake 4 on ℄

Wood — Wire — C.B. — 12" V.S.P.

Wood Fence — Stone Wall — +57 ℄ Asphalt Dr. — Ornamental Lamp Post

+45 — +316 — +03 — +47 — +70

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHT. No.
C-11	N.W. Ramp Sta. 1+19.75	STD. PIPE CULV.	15" x 74'	158
C-12	N.E. Ramp Sta. 0+65	STD. PIPE CULV.	18" x 67'	158
C-13	S.R. 46 Sta. 12+00	STD. PIPE CULV.	24" x 112'; 30" x 153'	158
C-14	S.R. 46 Sta. 14+81 Extension	STD. PIPE CULV.	24" x 26'; 24" x 30'	158
C-14A	S.R. 46 13+15 Extension	STD. PIPE CULV.	18" x 17'; 18" x 5'	159

DRIVES & MAIL BOX APPROACHES

MARK	STATION	SIDE	TYPE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.	E-1 Exc.	E-1 Emb.	E-12 R.to 18" Under C.F.	I-1 12"	T-70 1"
	10+01	R									133		
	12+27	R											
D-28	13+34	L	Fld.Dr.	31	12		86				20		
	13+46	R									18		
	13+76												
	16+32	R									258		
	13+85	L									16		
	14+47	L									20		
D-29	15+04	L	RES.	28	12	82		82		5			
D-30	15+72	R	Comb.	33	12	103		103					10
D-31	15+79	L	Res	27	12	80		80	3				
D-32	16+71	R	Res.	30	12	84		84	4				
D-33	16+78	R	M.B.A.			34		34	3				
D-34	18+49	L	Res.	27	12	78						30	78
D-35	18+52	R	M.B.A.			34		34					
* TOTALS						495	86	417	15	465	70		78

* Quantity carried to earthwork table.

TYPICAL SECTION

Variable — Width — 10'-0" — 10'-0" — Variable — Width

3"-3" — 3" — 3/16" per foot — 3/16" per foot — 8" Berm 1" per foot — 8" Berm 1" per foot — 4'-0" — 4'-0"

(A) T-35 1¼" Asph. Conc. Surf. Course
(B) B-35 1¼" Asph. Conc. Leveling Course
(C) B-35 3" Asph. Conc. Base
(D) B-119 4½" Crushed Aggregate Base
(E) I-22 6" Subbase
(F) I-18 6" Stabilized Crushed Aggregate

970 / 965 / 960 / 955 / 950 / 945

Elev. 969.28

+34 R.C.I. 42' Lt. F.L. 947.08
+42 R.C.I. 42' Rt. F.L. 945.91
+70 R.C.I. 70' Rt. F.L. 945.34
+00 * M.H. 50' Rt. F.L. 12" 944.33

950.35 — +25 950.32 — +50 950.28 — +75 950.23 — 950.18 — +25 950.12 — +50 950.05 — +75 949.98 — 949.90 — +25 949.81 — +50 949.72 — +75 949.62 — 949.51 — 949.07 — 948.63 — +50 948.48 — 948.46 — 948.58 — 948.83 — +(25) 948.99 — +(50) 949.13 — 949.24 — +(50) 949.21 — +(75) 949.11 — 948.99 — +(50) 948.82 — 948.78 — +(50) 948.88 — 949.11

-0.44% — -0.44% — +0.64% — -0.48% — +0.60%

66'@24% { 30 L.F. 12" I-2 / 32 L.F. 12" I-2UA.

64'@8.4% = 62 L.F. 12" I-2 Lt.

42'@24%=38 L.F. 12" I-2 Rt.

15"x74' Culv.

600' V.C. P.I. STA. 10+0 Elev. 950.83

200' V.C. P.I. STA. 16+0 Elev. 948.19

200' V.C. P.I. Sta. 20+00 Elev. 948.51

150' V.C. P.I. Sta. 18+00 Elev. 949.47

Limits of Permanent Construction

Excavation	5975	C.Y.
Embankment	2876	C.Y.
Seeding	8024	S.Y.

950.90 — 950.78 — 949.83 — 949.14 — 948.42 — 948.22 — 948.08 — 947.93 — 948.65 — 949.18 — 948.74 — 948.32 — 948.99 — 949.50

10+0 — 11+0 — 12+0 — 13+0 — 14+0 — 15+0 — 16+0 — 17+0 — 18+0 — 19+0 — 20+0 — 21+0 — 22+0

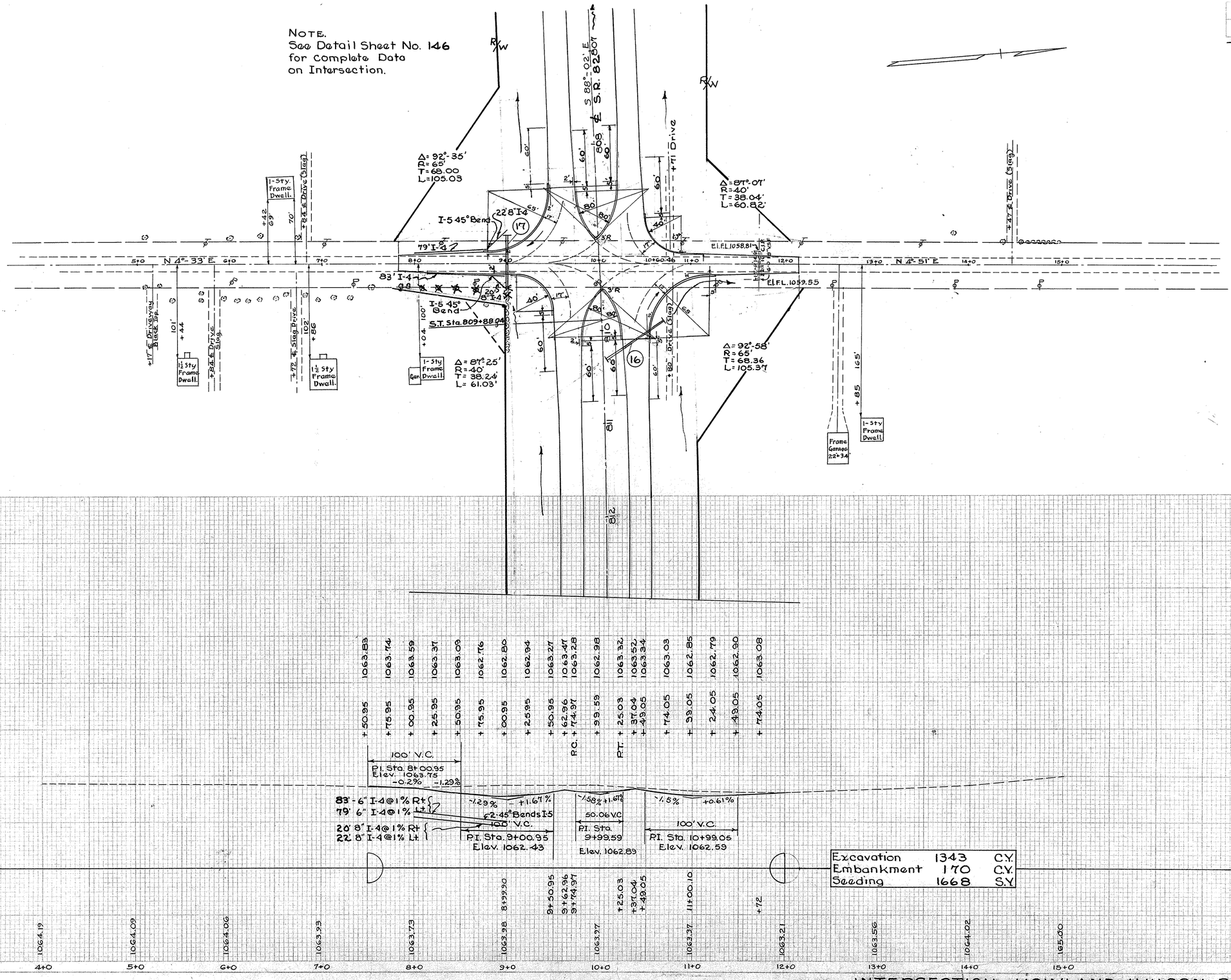
INTERSECTION S.R. 46

FED. RD. DIV. NO.	STATE	PROJECT	SHEET NO.
2	OHIO		

145
209

TRU-82-12.67

NOTE.
See Detail Sheet No. 146
for Complete Data
on Intersection.



Excavation	1343	C.Y.
Embankment	170	C.Y.
Seeding	1668	S.Y.

INTERSECTION - HOWLAND WILSON ROAD., C. H. # 155

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

146/209

TRU – 82 – 12.67

Curb Transition 6" to 2"
For end 10'-0" of all Curb

Proposed R/W

Limits of Construction

4' Stabilized Berm

Δ = 92°-35'
R = 65
T = 68.00
L = 105.03

Δ = 87°-07'
R = 40
T = 38.04
L = 60.82

Δ = 87°-2.5'
R = 40'
T = 38.24
L = 61.03

Δ = 44°-46'
R = 80'
T = 32.95
L = 62.51

Δ = 39°-36'
R = 80'
T = 28.80
L = 55.29

Δ = 95°-38'
R = 80'
T = 83.01
L = 132.83

Δ = 44°-46'
R = 80'
T = 32.95
L = 62.51

Δ = 39°-36'
R = 80'
T = 28.80
L = 55.29

Δ = 92°-53'
R = 65
T = 68.36
L = 105.37

HOWLAND WILSON ROAD CH #155

N 4°-33' E

N 4°-51' E

S 85°-27' E

S 85°-11'-10" E

S 88°-02' E

Def -0°-18' Rt

End Fence

Begin Fence

6" I-4 79 L.F.

6"x45° Bend

8" Outlet

83 L.F. 6" I-4

12"x18" Tee

Exist. V.S.P

18-8" Pipe, 45°-26'-15" 18°-19'-25" 27°-39'-20"

6" I-4

12" V.S.P

12" CMP

2.4" Std Pipe Culvert

Slag Drive

+80 Drive, Slag

+72 Slag Drive

Dr. to Slag

1 Sty Frame House

1½ Sty Frame House

Gar.

C-17

C-16

15A

T.S. Sta. 809+88.04

R/W

PL

ESTIMATED QUANTITIES

T-71 9" Reinforced Portland Cement Concrete Pavement	1843.2 S.Y.
I-12 Type 2A Curb	569.23 L.F.
I-22 6" Subbase	2348.1 S.Y.
E-12 15"ϕ Underpenetration (Type A)	201.0 L.F.
I-4 6" Underdrain vert	16.2 L.F.
I-4 8" Outlet Pipe	42.0 L.F.
I-5 6" 45° Bend	2.0 Ea.
I-5 For I-3 12"x6" Tee	1 Ea.

① Key Joint without tie bars.
② Expansion Joint without dowels.

SCALE 1" = 20'

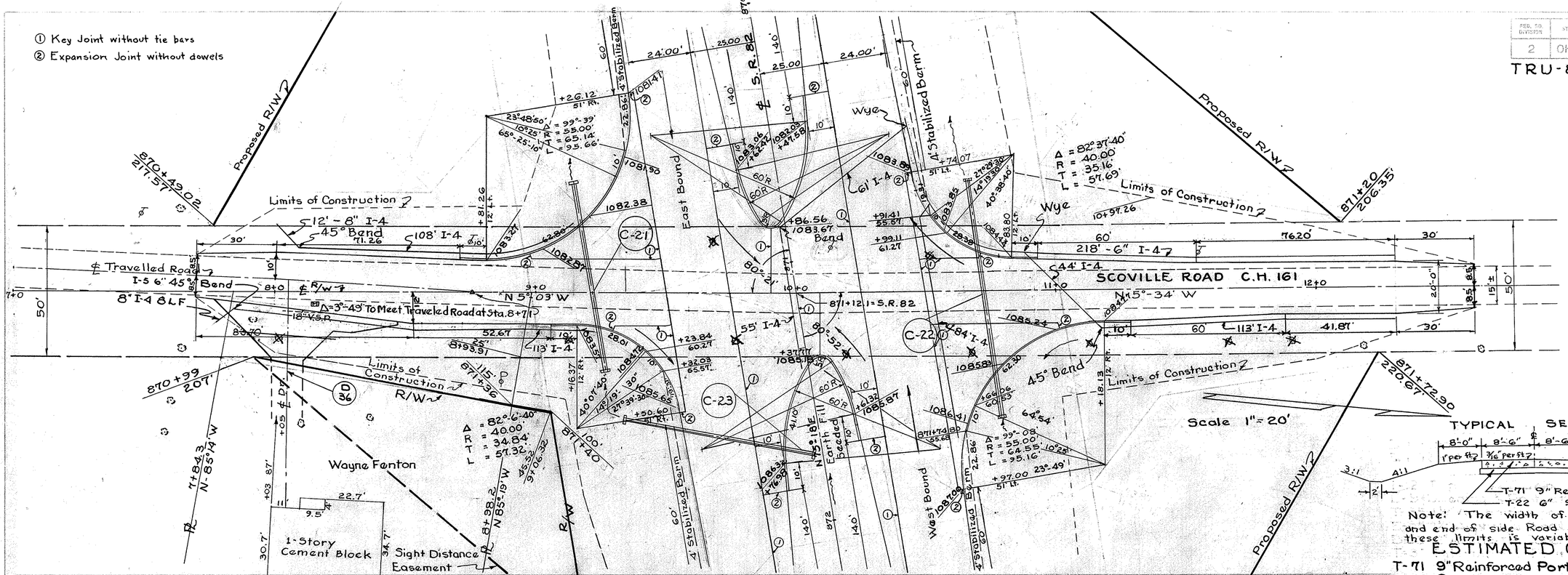
INTERSECTION DETAIL HOWLAND WILSON ROAD, CH #155, STA. 809+28.25

FED. RD. DIVISION	STATE	PROJECT	YEAR
2	OHIO		

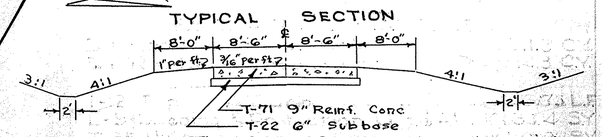
147
209

TRU-82-12.67

① Key Joint without tie bars
② Expansion Joint without dowels



TYPICAL SECTION



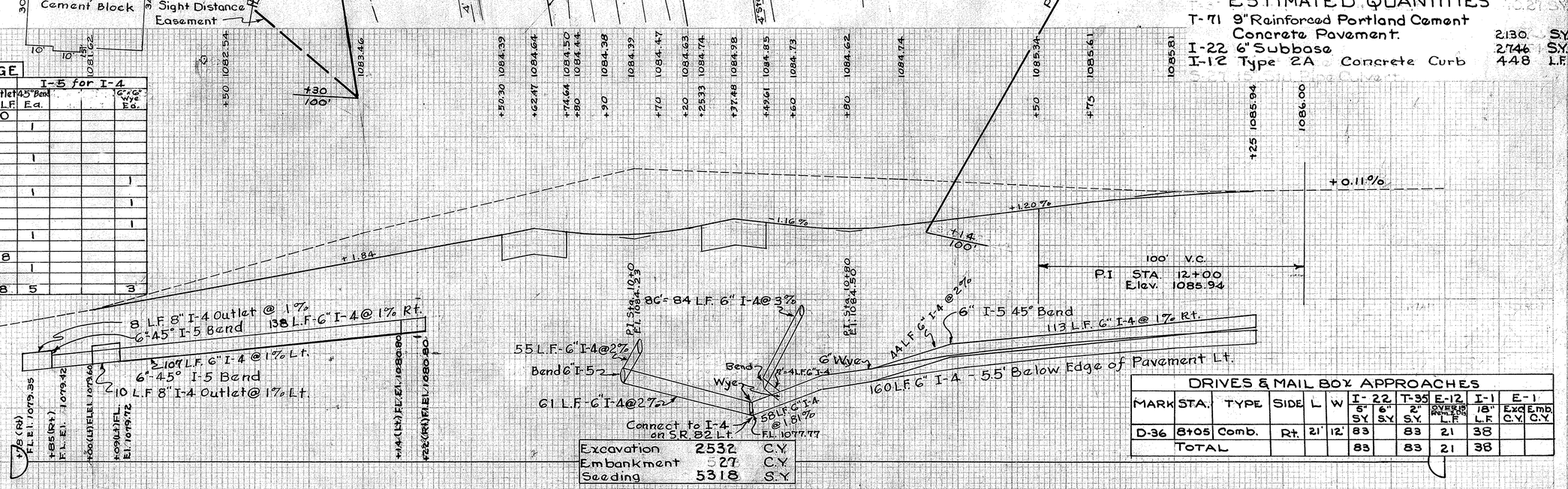
Note: The width of pavement at the beginning and end of side Road is 17'-0". The width between these limits is variable.

ESTIMATED QUANTITIES

T-71 9" Reinforced Portland Cement Concrete Pavement.	2130.	S.Y.
I-22 6" Subbase	2746	S.Y.
I-12 Type 2A Concrete Curb	448	L.F.

DRAINAGE

STATION From	STATION To	SIDE	I-4 Under drain 6" L.F.	I-4 Outlet 8" L.F.	I-5 for I-4 45° Bend Ea.			I-5 for I-4 6"x6" Wye Ea.
8+00	8+09	L		10				
8+09		L			1			
8+09	9+14	L	107					
10+02	9+94	L&R	53					
9+94		L			1			
9+94	10+44	L	57					
10+44		L						1
10+62	10+48	L&R	84		1			
10+48	10+52	L	4					1
10+44	12+30	L	215					
10+87		L						1
10+87	11+18	R&L	40		1			
11+18	12+30	R	110					
7+78	7+85	R		8				
7+85		R			1			
7+85	9+22	R	135					
Totals			805	18	5			3



Excavation	2532	C.Y.
Embankment	527	C.Y.
Seeding	5318	S.Y.

DRIVES & MAIL BOX APPROACHES

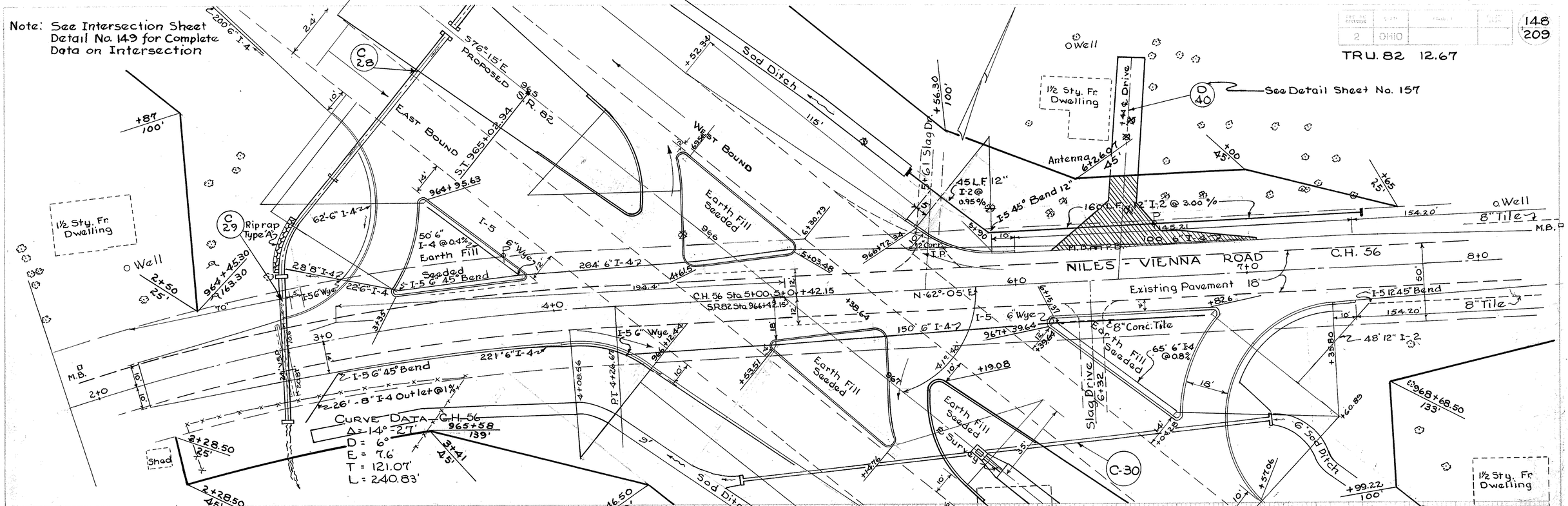
MARK	STA.	TYPE	SIDE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.	E-12 over 15" Pipe L.F.	I-1 18" L.F.	E-1 Exc C.Y.	E-1 Emb C.Y.
D-36	8+05	Comb.	Rt.	21'	12'	83		83	21	38		
TOTAL						83		83	21	38		

INTERSECTION - SCOVILLE ROAD - C.H.# 161, - STA. 871+12.1 - S.R. 82

DIST.	CO.	ROUTE	SECT.	148
2	OHIO			209

TRU. 82 12.67

Note: See Intersection Sheet Detail No. 149 for Complete Data on Intersection


C 28
C 29
Rip rap Type A
S 76° 15' E Proposed 965 C.L. S.R. 82
S.T. 965+02.34
EAST BOUND
WEST BOUND
Sod Ditch
Earth Fill Seeded
1½ Sty. Fr. Dwelling
Well
Antenna
Slag Drive
See Detail Sheet No. 157
D 40
NILES - VIENNA ROAD
C.H. 56
Existing Pavement 18'
M.B.
Shed
Basement House
C-30
Curve Data - C.H. 56
Δ = 14° - 27'
D = 6°
E = 7.6'
T = 121.07'
L = 240.83'
P.I. 4+24.69
C.H. 56 Sta 5+00.53+42.15
SR 82 Sta 966+12.15
N 62° - 05' E
45 L.F. 12" I-2 @ 0.95%
160 L.F. 12" I-2 @ 3.00%
45 L.F. 12" I-2 @ 0.95%
I-5 45° Bend 12"
I-5 12 45° Bend
8" Tile
8" Conc. Tile
48' 12" I-2
154.20'
154.21'
I-5 6" Wye
I-5 6" 45° Bend
I-4 Outlet @ 1%
50' 6" I-4 @ 0.4%
65' 6" I-4 @ 0.8%
264' 6" I-4
150' 6" I-4
221' 6" I-4
62' 6" I-4
28' 8" I-4
22' 6" I-4
2-26' - 8" I-4 Outlet @ 1%
6" Sod Ditch
+87 100'
+52.34
+56.30 100'
+46.50 100'
+99.22 100'
+90 45'
+65 25'
2+50 25'
2+28.50 45'
3+41 45'
+53.51
+19.08
+82.6
+60.85
+57.06
+38.60
+39.64
+30.13
+42.15
+24.69
+28.56
+29.58
+12.76
+5.36
+1.44
+0.56
+0.34
+0.10
+0.28
+0.38
+0.58
+0.88
+1.18
+1.48
+1.78
+2.08
+2.38
+2.68
+2.98
+3.28
+3.58
+3.88
+4.18
+4.48
+4.78
+5.08
+5.38
+5.68
+5.98
+6.28
+6.58
+6.88
+7.18
+7.48
+7.78
+8.08
+8.38
+8.68
+8.98
+9.28
+9.58
+9.88
+10.18
+10.48
+10.78
+11.08
+11.38
+11.68
+11.98
+12.28

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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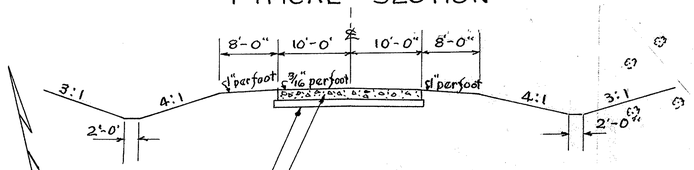
209

TRU-82-12.67

TYPICAL SECTION



Note: Width of Pavement is 20'-0" at beginning and end of Side Road. The width thruout is Variable.

ESTIMATED QUANTITIES

E-1	Roadway Excavation	CU.YDS.
E-2	Roadway Embankment	CU.YDS.
T-71	9" Reinf. Portland Cement Conc. Pavt.	3520 S.Y.
I-12	Type 2A Curb	1164 L.F.
I-22	6" Subbase	4280 S.Y.
[illegible]	[illegible] Protection	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible] Coarse	[illegible]
[illegible]	[illegible] Conc. Base Course	[illegible]
[illegible]	[illegible] Prime Coat	[illegible]
[illegible]	[illegible] Reinf. Portland Cement Conc. Pavt.	[illegible]
I-22	6" Subbase	[illegible]
S-27	30" Std. Pipe Culvert	L.F.

PROPOSED INTERSECTION

S.R. 82 & NILES-VIENNA ROAD-C.H. 56

SCALE 1"=20'

CHANNEL DATA
Δ = 42°
T = 12'
L = 22.91'
R = 31.26'

CURVE DATA C.H. 56
Δ = 14°-27'
D = 6°
E = 7.6'
T = 121.07
L = 240.83
R = 954.93

① Key Joint without Tie bars
② Expansion Joint without dowels

INTERSECTION NILES-VIENNA ROAD C.H. 56

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU. 82 12.67

150
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LENA G. HAGER

W.R. & H.B. HOWDEN

1 Story Brick House

2 Sty. Frame House

W.R. & H.B. HOWDEN

Proposed R/W

4' Stab. Shoulder

NEW PAVEMENT BEGINS STA. 347+00 ENDS STA. 357+50

S.R. 90

S.R. 82

CURVE DATA
Δ = 29°-47'
R = 30'
L = 46.78'

① Key Joint without tie bars
② Expansion Joint without dowels

SCALE 1" = 20'

INTERCHANGE S.R. 90 & S.R. 82

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU. 82 12.67

W.R.& H.B. HOWDEN

LENA G HAGER

JOHN E. WILSON

J.W. & ELSIE PURDY

Proposed R/W

4' Stab. Shoulder

S.R. 90

S.R. 82

East Bound

West Bound

Field Dr.

Res. Dr.

Note - All Grades are for pavement or gutters

① Key Joints without tie bars

② Expansion Joints without dowels

ESTIMATED QUANTITIES

T-35 2" Asphaltic Concrete Surface Course	1763 S.Y.
B 119 7" Crushed Aggregate Base Course	1836 S.Y.
B 119 4½" Crushed Aggregate Base Course	1730 S.Y.
T-30 Bituminous Prime Coat	1250 Gals
T-35 1¼" Asphaltic Conc. Surface Course	3848 S.Y.
B-35 1¼" Asphaltic Conc. Leveling Course	3696 S.Y.
B-35 3" Asphaltic Conc. Base Course	1634 S.Y.
T-71 9" Reinf. Portland Cement Conc. Pavement	18052 S.Y.
I-4 6" Pipe	3718 L.F.
I-12 Type 2A Curb	2650 L.F.
I-22 6" Subbase	27552 S.Y.
I-18 6" Stabilized Sholders	43.6 C.Y.

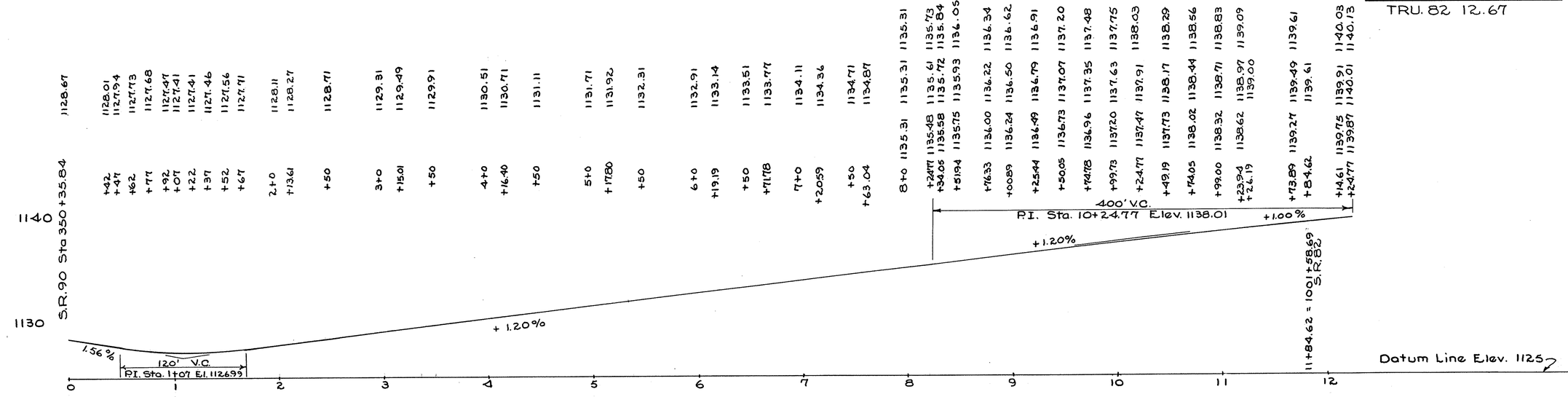
Scale 1" = 20'

INTERCHANGE SR. 90 & S.R. 82

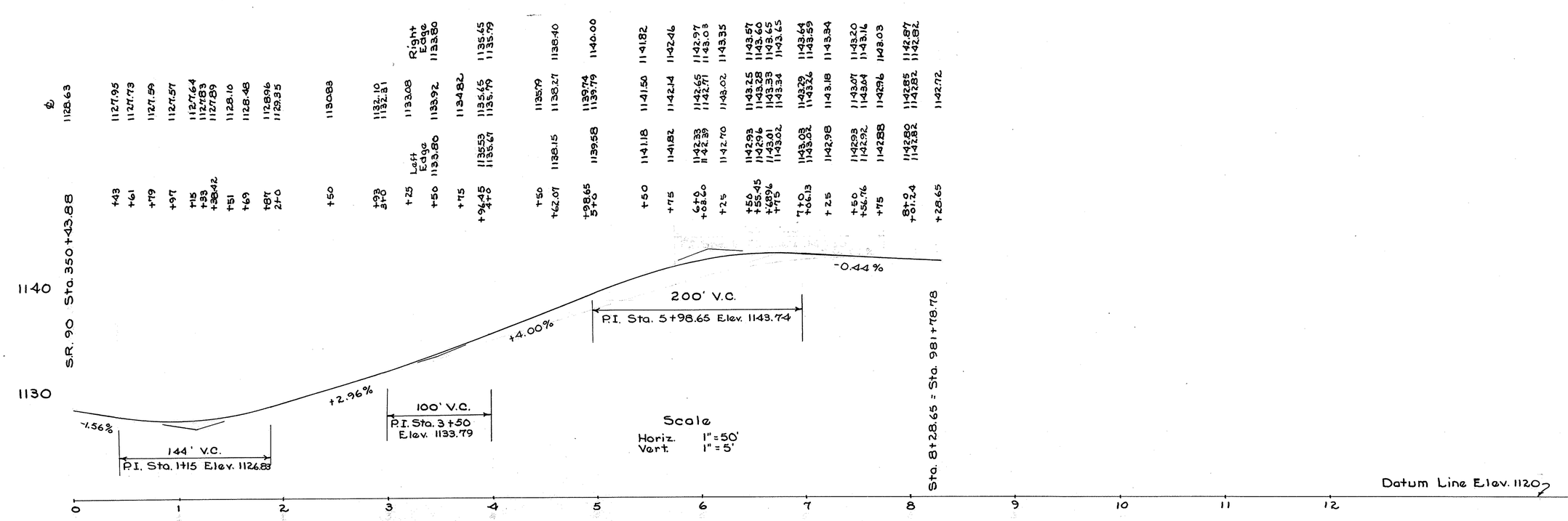
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU. 82 12.67

SOUTH EAST RAMP S.R. 90



SOUTH WEST RAMP S.R. 90



PROFILE OF S.E. & S.W. RAMP S.R. 90

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU. 82 - 12.67

NORTH EAST RAMP S.R. 90

Left Edge	℄	Right Edge
S.R. 90 Sta. 354+20.53	1131.86	
+42	1131.20	
+60	1130.95	
+78	1130.74	
+96	1130.60	
+14	1130.51	
+19.18	1130.49	
+32	1130.47	
+50	1130.48	
+68	1130.56	
+79.51	1130.64	
+86	1130.68	
2+0	1130.80	
+20.16	1130.97	
+50	1131.22	
3+0	1131.64	
+21.14	1131.82	
+50	1132.06	
4+0	1132.48	
+22.12	1132.67	
+50	1132.90	
5+0	1133.32	
+28.10	1133.51	
+39.25	1133.65	
+50	1133.74	
+74.59	1133.95	
6+0	1134.16	
+24.08	1134.36	
+50	1134.58	
+74.56	1134.79	
7+0	1134.87	1135.00
+25.05	1135.08	1135.21
+50	1135.29	1135.42
+65.44	1135.42	1135.55
8+0	1135.71	1135.85
+26.03		1136.06
+50		1136.26
+68.07	1136.22	1136.41
+80.40	1136.31	1136.52
+04.96	1136.49	1136.71
+28.15	1136.66	1136.92
+54.02	1136.87	1137.14
+78.73	1137.10	1137.36
+03.51	1137.33	1137.59
+27.99	1137.58	1137.84
+78.36		1138.36
+27.73		1138.91
+87.40	1139.47	1139.60
11+87.40 = 1001+59.62 S.R. 82		

144' V.C.
P.I. Sta. 1+14 Elev. 1130.08

200' V.C.
P.I. Sta. 10+27.99 Elev. 1137.76

-1.56 %

+0.84 %

+1.16 %

Datum Line Elevation 1125

0 1 2 3 4 5 6 7 8 9 10 11 12

NORTH WEST RAMP S.R. 90

Left Edge	℄	Right Edge
S.R.90 Sta. 354+16.95	1131.80	
+40	1131.16	
+55	1130.96	
+70	1130.83	
+85	1130.77	
1+0	1130.78	
+15	1130.87	
+26	1130.98	
+30	1131.03	
+45	1131.26	
+60	1131.54	
2+0	1132.48	
+50	1133.62	
+85.75	1134.44	
3+0	1134.64	1134.76
+50	1135.78	1135.90
+90.68	1136.71	1136.83
4+0	1136.92	1137.04
+30	1137.60	1137.72
+50	1138.01	1138.18
+71.35	1138.45	1138.67
+88.82	1138.81	1139.07
5+01.96	1139.06	1139.36
+26.96	1139.53	1139.89
+51.96	1139.91	1140.33
+76.96	1140.21	1140.69
6+01.96	1140.42	1140.96
+26.96	1140.61	1141.15
+51.96	1140.71	1141.25
+76.96	1140.71	1141.27
+88.52	1140.71	1141.25
7+01.96	1140.70	1141.20
+38.52	1140.60	1141.04
+88.52	1140.50	1140.82
8+09.74	1140.46	1140.73
S.R.82 Sta. 981+78.78		

eMAX = 0.0675
(DS = 48 mph)

120' V.C.
P.I. Sta. 1+00
Elev. 1130.20

200' V.C.
P.I. Sta. 6+01.96 Elev. 1141.64

-1.56%

+2.28%

-0.44%

Scale.
Horiz. 1" = 50'
Vert. 1" = 5'

Datum Line Elevation 1125

0 1 2 3 4 5 6 7 8 9

PROFILE OF N.E. & N.W. RAMPS S.R.90

FED. AID DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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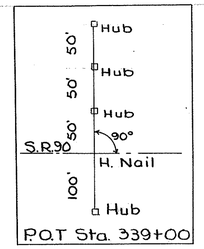
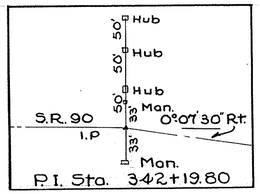
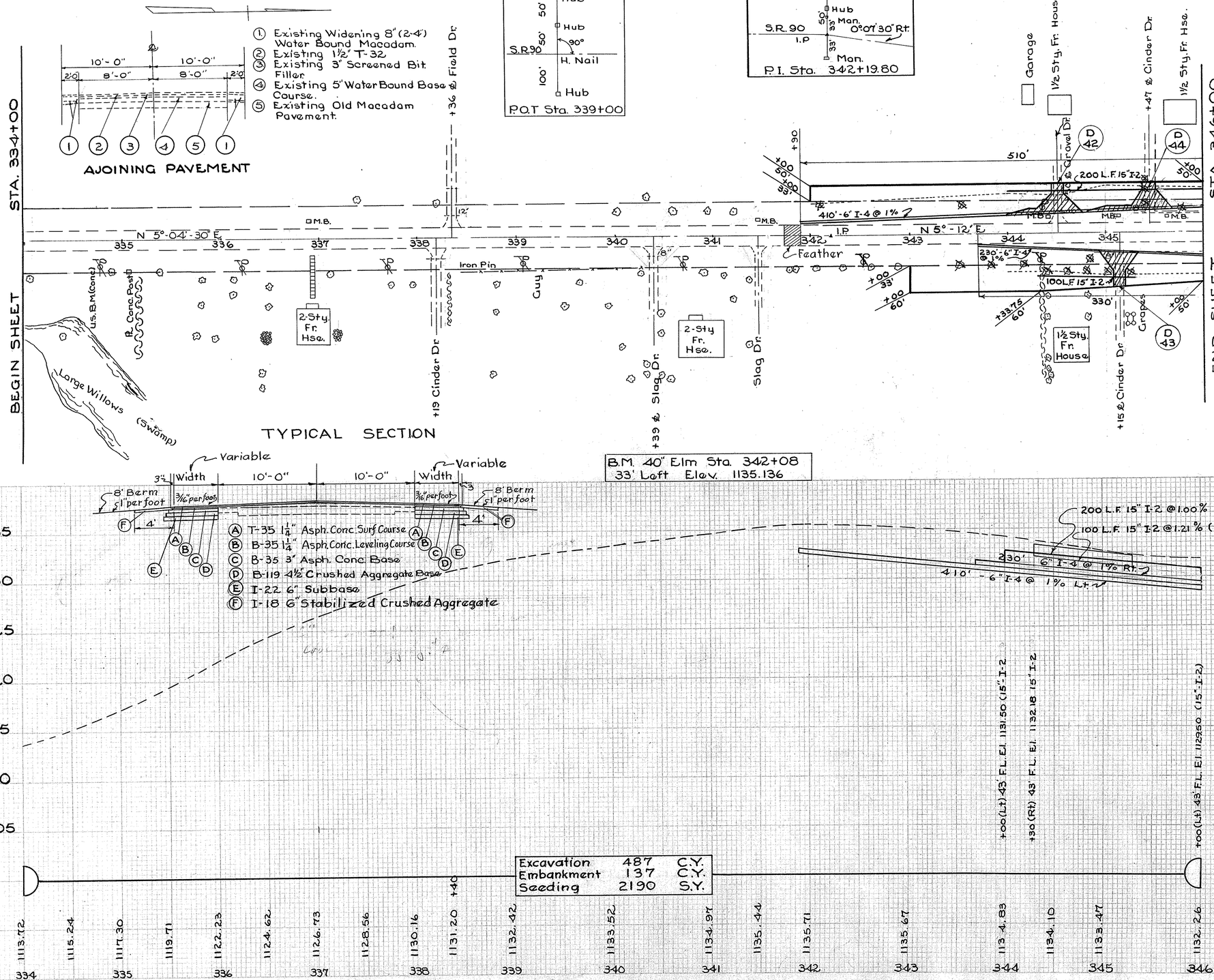
① Existing Widening 8" (2-4") Water Bound Macadam.
② Existing 1½" T-32
③ Existing 3" Screened Bit. Filler
④ Existing 5" Water Bound Base Course.
⑤ Existing Old Macadam Pavement.

AJOINING PAVEMENT







Excavation	487	C.Y.
Embankment	137	C.Y.
Seeding	2190	S.Y.

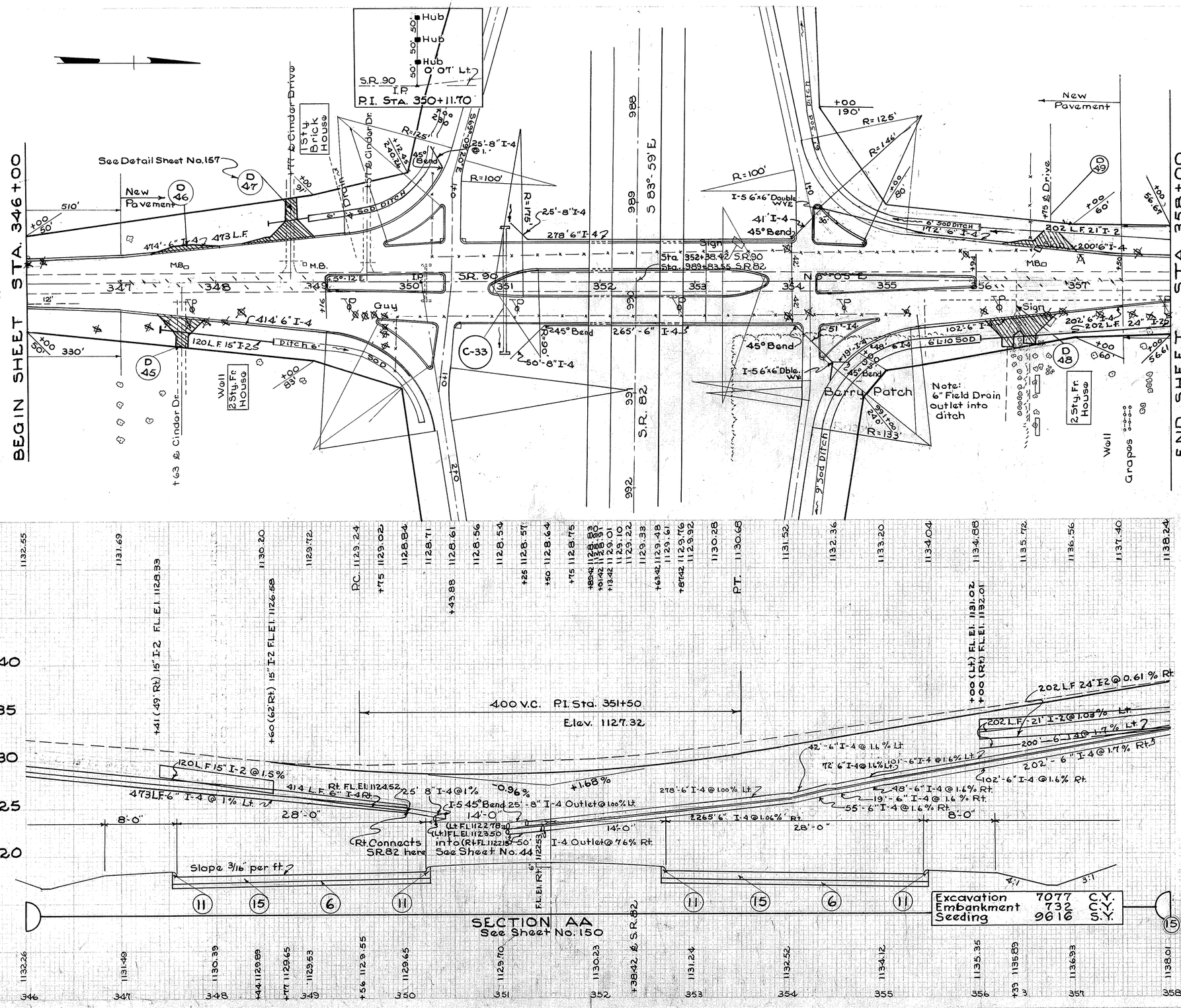
DRIVES & MAIL BOX APPROACHES

MARK	STATION	TYPE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.	I-1 12"			
D-42	344+50	Comb.	30	12	96		96				
D-43	345+15	Res.	36	12	92		92				
D-44	345+47	Comb.	25	12	91		91				
TOTALS					279		279				

DRAINAGE

STATION FROM	STATION To	SIDE	I-2 Class B 15" L.F.	I-2 Class B 15" UA L.F.	I-4 6" L.F.	E-12 Ramp Drop Under 15 L.F.	S-1 Class E C.Y.
341+90	346+00	L			410		
343+70	346+00	R			230		
344+00	346+00	L	152	48		34	0.52
344+30	345+30	R	76	24		45	0.52
344+92	345+56	R				164	
TOTALS			228	72	640	243	1.04

INTERSECTION S.R. 90



Excavation	7077	C.Y.
Embankment	732	C.Y.
Seeding	9616	S.Y.

(11) Item I-12 Standard Concrete Curb Type 2A
(15) Item I-71 9" Reinforced Portland Cement Conc. Pavement
(6) Item I-22 - 6" Subbase

DRAINAGE

STATION FROM	STATION TO	SIDE	I-4 6" UNDER DRAIN	I-4 8" OUTLET PIPE	I-5 for I-4. 6"x6" Dble. Wye EA.	I-5 for I-4. 6"x45° BEND Eq.	I-5 for I-4. 8"x45° BEND Eq.
346+00	350+37	L	473			1	
350+24	350+37	L		24			
351+06	351+23	L		24		1	
351+23	354+01	L	274			1	
354+01	354+33	L	42		1		
354+35	358+00	L	370				
346+00	350+00	R	414				
351+06	351+42	R	24	24		1	
351+42	354+08	R	262			1	
354+08	354+43	R	51		1		
354+43	354+62	R	18			1	
354+62	358+00	R	352				
TOTALS			2280	72	2	6	

DRAINAGE

STATION FROM	STATION TO	SIDE	I-2 Class "B" 15" L.F.	15" U.P. L.F.	21" L.F.	21" U.P. L.F.	24" L.F.	24" U.P. L.F.	E-12 15" Under Ramp St. L.F.	S-1 Class E C.Y.
347+41	348+60	Rt.	92	28						0.52
356+00	358+00	Lt.			180	22				0.36
356+00	358+00	Rt.					157	45		0.41
355+60	358+00	Rt.							240	
TOTAL			92	28	180	22	157	45	240	1.29

DRIVES & APPROACHES

MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	I-22 6" S.Y.	T-35 2" S.Y.	E-12 15" Under Ramp St. L.F.
D-45	347+63	Res.	R	22	12	74		74	15
D-46	347+63	M.B.A.	L			31		31	
D-47	348+77	Comb.	L			See Detail Sheet + 157			
D-48	356+38	Res.	R	28	24	101		101	
D-49	356+	Comb.	L	20	12	83		83	
TOTAL						289		289	15

L-10 SODDING

STATION FROM	STATION TO	SIDE		Sodding S.Y.
348+60	349+12	Rt.		35
355+32	356+00	Lt.		44
355+36	356+00	Rt.		64
				143

I-23 PRECAST CONC. TRAFFIC DIVIDERS

STATION FROM	STATION TO	EACH
347+00	349+04	18
356+06	357+50	13
TOTAL		31

INTERSECTION S.R. 90

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

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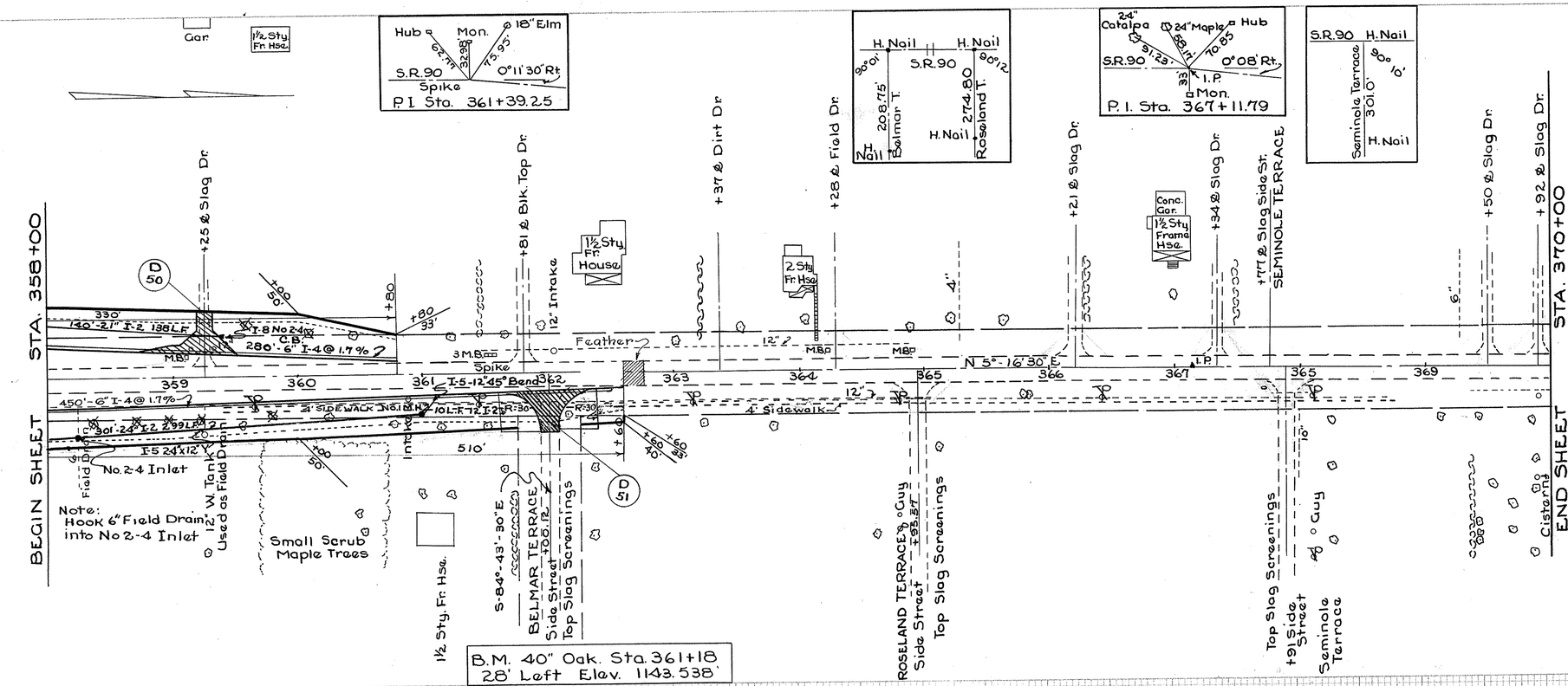
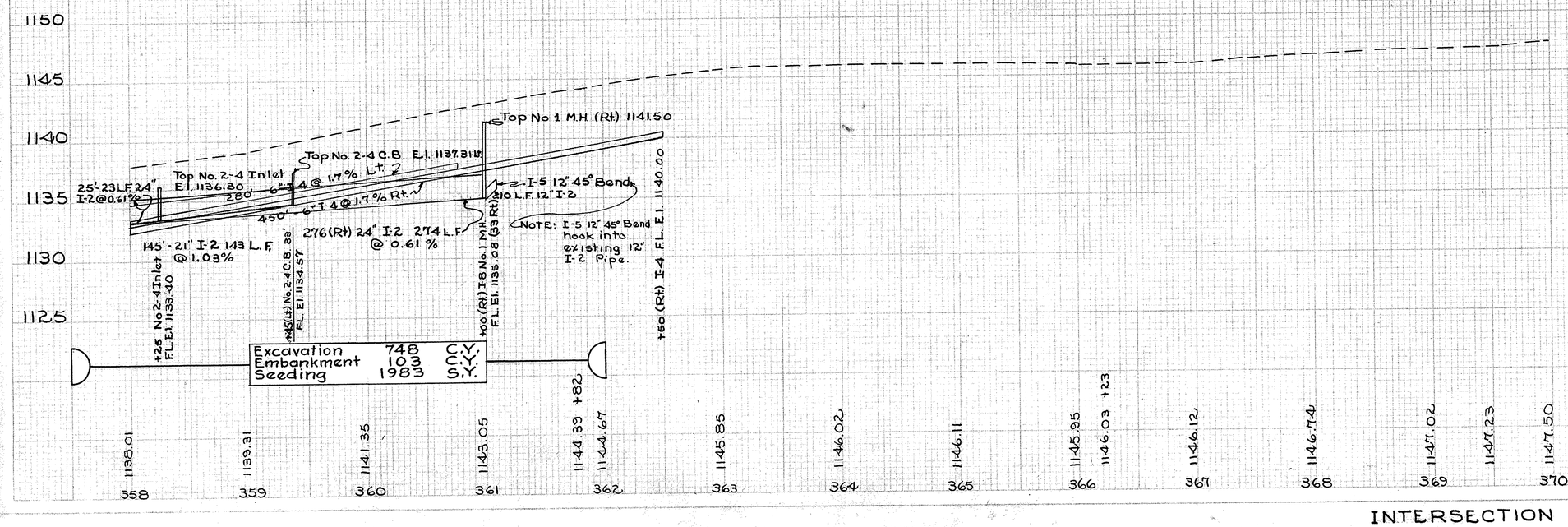


I-13-4" Conc. Sidewalk			
Station			
From	To	Side	S.F.
360+50	361+32	R	328
Total			328

DRIVES & MAIL BOX APPROACHES									
MARK	STATION	TYPE	SIDE	L	W	I-22 5" S.Y.	T-35 2" S.Y.	E-12 15"&Un. Rem'd L.F.	
D-50	359+25	Comb	L	34	12	102	102	28	
D-51	362+00.12	Inter	R	33	16	96	96		
TOTAL						198	198	28	

DRAINAGE												
STATION			I-2 Class B			I-8		I-4	E-12	I-5		
FROM	TO	SIDE	12" L.F.	21" L.F.	21"& 24" L.F.	No1 MH EA	#2-4 C.B. EA.	6" Under Dr. L.F.	Rem'd 15" & Under L.F.	24" Bend EA.	24" WYE EA.	
358+00	360+80	L						280				
358+00	362+50	R						450				
358+00	359+38	L		108	35							
359+38		L					1					
358+00	358+25	R			23							
358+25		R					1					
358+25	361+00	R			274							
359+22		R							25		1	
358+00	361+10	R							310			
361+00		R				1						
361+00	361+10	R	10									
361+10		R								1		
TOTAL			10	108	35	297	1	2	730	335	1	1



INTERSECTION S.R.90

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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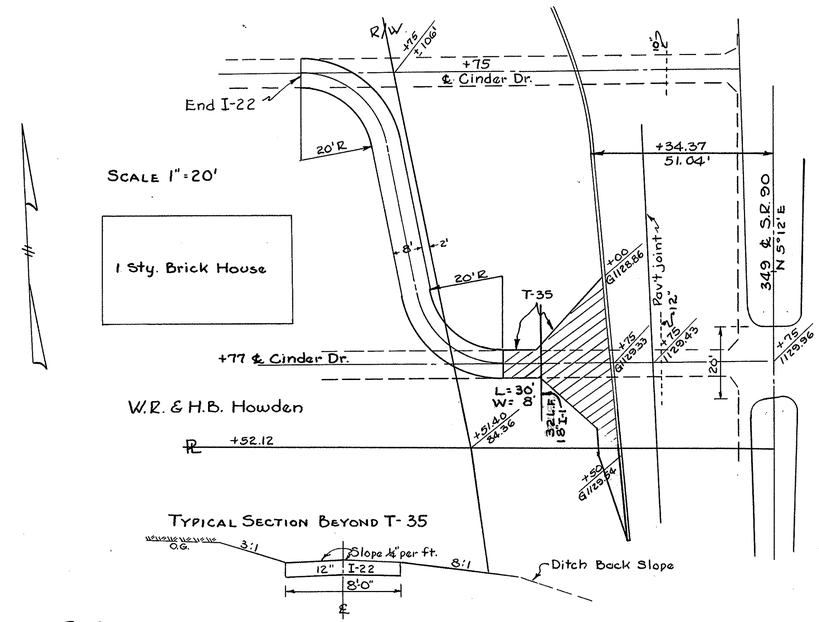
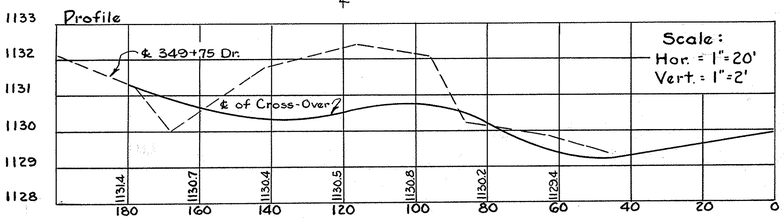
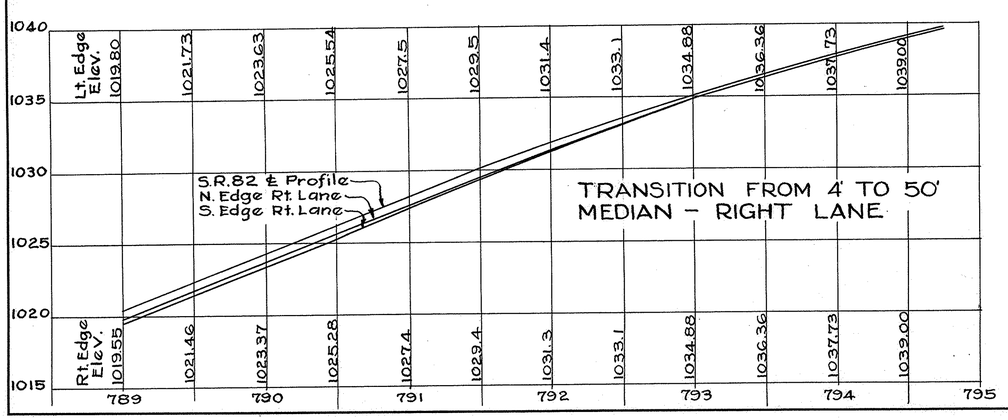
DRIVE DETAIL
STA. 989+45 Rt. D-46



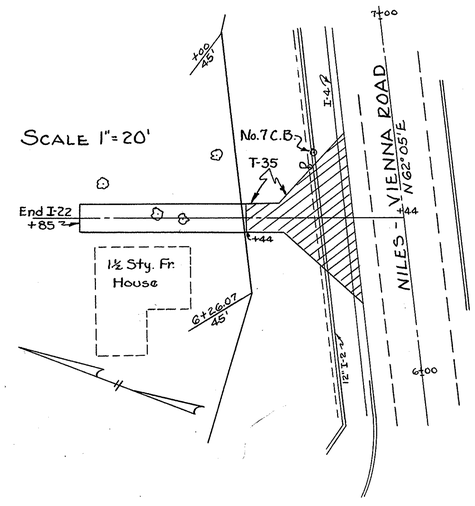


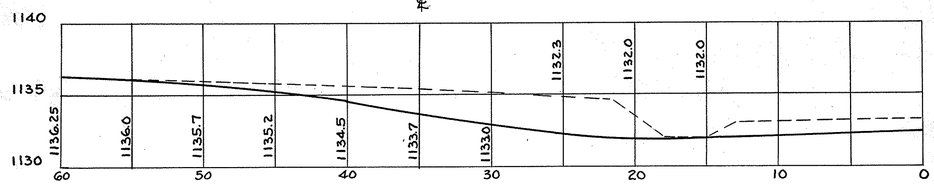
ESTIMATED QUANTITIES

I-22	6" Subbase	189	S.Y.
T-35	2" Asphaltic Concrete Surface Course	81	S.Y.
* E-1	Excavation	147	C.Y. * Carried to earthwork table.
E-12	15" & Under-Remove & Dispose.	40	L.F.
I-1	18" Pipe for Driva	32	L.F.



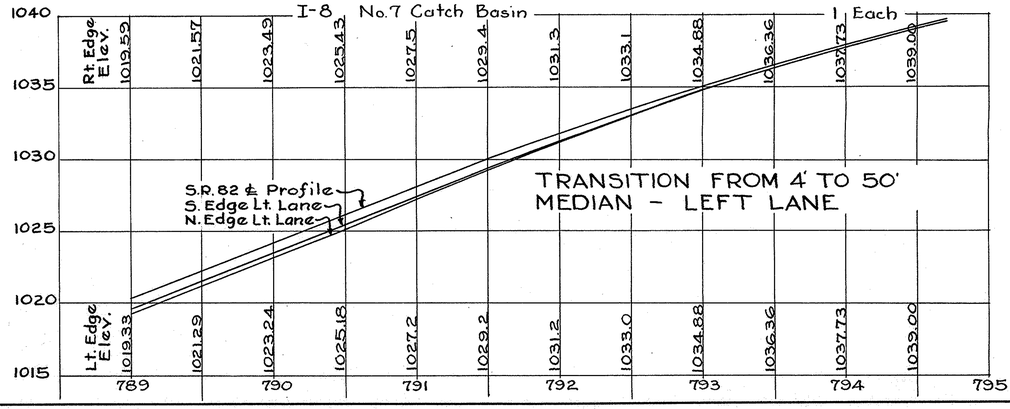
DRIVE DETAIL
STA. 967+36 Lt. D-40





ESTIMATED QUANTITIES

I-22	6" Subbase	108	S.Y.
T-35	2" Asphaltic Concrete Surface Course	71	S.Y.
* E-1	Excavation	72	C.Y. * Carried to earthwork table.
I-8	No.7 Catch Basin	1	Each



SPECIAL DRIVE DETAILS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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STRUCTURES UNDER 20' SPAN

Cul. No.	Station	Skew	Length from ℄ Survey Lt.	Length from ℄ Survey Rt.	% Grade	Inlet Elev.	Outlet Elev.	Flow	Type & Size	Drainage Acres	S-27 12" L.F.	S-27 15" L.F.	S-27 18" L.F.	S-27 21" L.F.	S-27 24" L.F.	S-27 30" L.F.	S-27 36" L.F.	S-27 48" L.F.	S-28 9'-6" x 6'-5" L.F.	S-28 C.M.P. 7'-3" x 5'-3" L.F.	I-8 Type A C.B. EA.	I-8 Type B C.B. EA.	I-8 Type D C.B. EA.	S-4 Reinf. Steel Lbs.	S-23 Dowel Holes L.F.	S-1 Class "C" Conc. C.Y.	S-1 Class "E" Conc. Collar C.Y.	S-1 Class "F" Conc. C.Y.	S-22 Removal Portion of Ex. Struct C.Y.	E-3 C.Y.	E-2 C.Y.	Channel Grade % Lt.	Channel Grade % Rt.	Channel Slope & Width	I-10 Type "A" Grout S.Y.	I-10 Dumpage Fill C.Y.	I-8 No. 1 M.H. Eq.	I-8 No. 1-B Eq.	I-8 No. 2-A Eq.	I-8 Spec. Ditch Inlet Eq.	Structure No.	Cul. No.	REMARKS
1	672+10	0°	58'	50'	0.21	907.58	907.35	Lt.	48"x108'	95								108						303	44	10.28		0.86			58											TRU-82 1273	© 1	Remove the Existing 36" C.M.P. and Headwalls, also the Foot Bridge on the left side. See Detail Sht. No. 160 & 161
2	730+30.5	25°30'L.F.	66'	84'	0.48	859.50	858.78	Lt.	30"x150'							150												1.02			117											TRU-82 1383	Ⓐ 2	Build Std. Pipe Culvert with end walls at both ends.
3	737+86	35°R.F.	68'	77'	0.20	860.10	859.72	Lt.	30"x145'							145												1.02			112											TRU-82 1397	Ⓐ 3	Build Std. Pipe Culvert with end walls at both ends.
4	745+12	53°32'L.F.	77'	80'	1.00	867.29	865.72	Rt.	36"x157'	90							157											1.18			105											TRU-82 1411	4	Build Std. Pipe Culvert with end walls at both ends.
5	751+00	47°40'L.F.	82'	87'	1.40	869.19	866.82	Rt.	36"x169'	70							169											1.18		29	175	1.60	0.80	2:1 3'-6"	42							TRU-82 1422	5	Build Std. Pipe Culvert with end walls c both ends. Excavate the inlet channel as shown on Sheet No. 24 Place Riprap in inlet and outlet channel.
6	S.R.46 2+12	0°	EXTEN 15'	EXTEN 13'	10.0 Lt. 3.06 Rt.	945.76	942.76	Lt.	12"x15' 18"x13'	3	12		13														0.67	0.53	0.37		1										TRU-46 0729	6	Extend existing Culvert with 12" Std. Pipe Culvert 15' on left & 18"x13" on right using Concrete Collars and end walls at both ends. See X-Section Sheet No. 118
7	S.R.46 5+47	10° R.F.	40'	39'	1.00	944.79	944.00	Lt.	18"x79'	4			79																		20							2			TRU-46 0736	Ⓒ Ⓕ 7	Remove the Existing 8" & 12" C.I.P. and replace with an 18" Std. Pipe Culvert. Build a No. 2-A C.B. on the Rt. & Lt. side. Connect the Exist. 6" field drain to C.B. on Lt. Side. See X-Sec. Sht No. 119
8	S.R.46 8+00	0°	103'	82'	1.50	942.78	940.00	Lt.	30"x181'	7						181												1.02			171						1			TRU-46 0740	Ⓒ 8	Build. Std. Pipe Culvert with End walls at both ends. Build No. 1 M.H. as shown. See X-Section Sheet No. 120 Remove the Existing 24" RC.P. at Sta. 8+32.
9	SW. RAMP 1+09	0°	44'	39.5	1.00	940.90	940.06	South	18"x84'	3			84															0.60			7									TRU-82 1467	9	Build Std. Pipe Culvert with end walls at both ends. See Detail Sheet No. 162
10	S.E. RAMP	10° L.F.			1.00 0.90	945.50	943.86	South	21"x53' 21"x49'	3				102														0.72			38						1			TRU-82 1468	10	Build a Std. Pipe Culvert with end wall at left end . Place No. 1 M.H. as shown. See Detail Sheet No. 162
11	N.W. RAMP 1+19.75	0°	40'	33.5	3.00	941.70	939.49	North	15"x74'	3		74																0.52			11									TRU-82 1465	Ⓔ 11	Build Std. Pipe Culvert with End Walls at both ends. See Detail Sheet No. 163 Connect Paved Gutter from Outlet into Proposed Paved Gutter. See Dt. Sht. 4
12	N.E. RAMP 0+65	19° R.F.	43'	24'	14.4 1.00	946.21	944.33	North	18"x67'	3			67															0.60			32									TRU-82 1469	Ⓓ 12	Build Std. Pipe Culvert with End wall at the Inlet and and Concrete Collar at broken back. Connect the outlet into No. 1. M.H. at Culv. No. 13 See Detail Sht. No. 163
13	S.R.46 12+00	0°	104'	165' 49'	1.00 1.00	943.12 941.00	942.00 939.50	Lt.	24"x112' 30"x153'	4 7															112	153		0.51			183		5.5				1		1		TRU-46 0748	Ⓒ Ⓕ 13	Build 24" Std. Pipe Culv. with a Spec. Ditch Inlet at the Inlet. Connect Outlet into a Nat. M.H. Build 30" Std. Pipe Culv. from the No. 1 M.H. & build End Wall at the outlet Remove Exist. 10"x30' C.I.P. at Sta. 11+90 S.R. 46. See X-Sect Sht No. 121
14	S.R.46 14+81	0°	EXTEN 38' 54'	EXTEN 26' 42'	2.61 4.00	944.80	941.95	Lt.	24"x26' 24"x38'	4															64		0.83	0.82			8										See Detail X-Sect. Sht. 122 TRU-46 0753	14	Remove the Existing C.B. on the right side and extend the Existing Culvert with 24" Std. Pipe Culvert 38' on Left, 26' on Right using Conc. Collars & End Walls both end
14A	See C 14A Sh	eet No 1	56 &	Cro	ss Section	Sheet	134																																		
15	795+00	5° L.F.	71'	77'	0.70	1034.73	1033.69	Rt.	30"x148'	30						148						1						1.02		210	89	2.00	0.5	2:1 3'-0	30						TRU-82 1506 See Sht. No. 27-28	Ⓐ 15	Build Std. Pipe Culvert with endwalls at both ends. Place Type B C.B. in Median Ditch. Place Type A Riprap in Median ditch for Slope protection. Channel Excavation in Inlet & Outlet Channel. Place Type A Riprap in Outlet Chan.
15A	11+72 C.H. 155	0°	30	25	3.64	1059.55	1057.55	West	24"x55'	20						55											0.83		0.59		20										TRU-82 1534	15A	Build Std. Pipe Culvert with EndWalls at both ends. See Cross Sect. Sheet No. 125 Remove a portion of exist. Hdwalls Lee
16	810+34	33° R.F.	79'		0.40	1061.27	1060.96	Lt.	18"x77'	4			77															0.60			15										TRU-82 1535	16Ⓐ	Build Std. Pipe Culvert with End Walls at both ends.
17	808+93.77 809+48.71	0°		99' 101.00	1.00	1059.46	1058.91	West	Side Road South 18"x55'	3			55															0.60			10										TRU-82 1532	17	Build Std. Pipe Culvert with EndWalls at bother s Place 18" x 12" Tee on the Right. See X-Section Sheet No. 125
18	831+00	25°44'L.F.	75'		0.61	1064.93	1064.38	Rt.	Twin 30"x68'	40						136												1.02			55										TRU-82 1574	18	Build Twin 30" Std. Pipe Culverts with Endwalls at both ends.
19	831+00	25°44'L.F.		80'	0.61	1064.36	1063.92	Rt.	Twin 30"x73'	40						146												1.02			55				15						TRU-82 1574	19	Build Twin 30" Std. Pipe Culverts with End Walls at both ends. Place Riprap at inlet in the Median ditch for Slope Protection. See Sht. No. 31
20	860+55	25° R.F.	87'-5¾"	96'-7¾"	0.30	1055.96	1055.41	Rt.	Conc. Box 10'x5'x18-4½"	650			8											30,873		197			72	194	1.0%	1.0%	4:1 10'-0							TRU-82 1630	20	Build a 10'x5' Large Box Culvert. See Detail Sheet No. 164, 165 & 166
21	870+56 871+30			77.5 77'	1.87	1081.12	1079.70	West	Side Road South 15"x76'	3		76																0.52			30										TRU-82 1650	21	Build Std. Pipe Culvert with endwalls at both ends. See Detail Sheet No. 147
22	870+79.5 871+71.75		72'	70'	2.00	1081.54	1079.70	West	Side Road North 18"x92'	4			96															0.60			23										TRU-82 1651	22	Build Std. Pipe Culvert with end walls at both ends. See Detail Sheet No. 147
23	871+75	20° R.R.		78'	2.68	1083.74	1081.73	Rt.	18" x 75'	3		75																0.52			21										TRU-82 1652	23	Build Std. Pipe Culvert with end walls at both ends. See Detail Sheet No. 147
24	892+86	17° L.F.	70'4½"	70'10"	0.55	1085.79	1085.03	Rt.	Conc. Box Culv. 6'x2'-6"x141'-3"	180														94.47		67.00				75										TRU-82 1691	24	Build a 6'-0"x2'-6"x141'-3" Reinf. Concrete Box Culvert. See Detail Sheets No. 167 & 168
25	936+34	43° L.F. (3.00)	84'	86'	0.40	1080.18	1079.50	Rt.	Seat Plate 9'-6"x6'-5"x170	635									170									12.66		223	69	1.10	0.64		91						TRU-82 1773 Std. D SP 53	25	Build Sectional Plate Pipe Arch Culvert with Concrete End Walls at both ends. Place dump rock fill at inlet & outlet. Channel Excavation at inlet & outlet.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-82-12.67

STRUCTURES UNDER 20' SPAN

Cul. No.	Station	Skew	Length from ℄ Survey Lt.	Length from ℄ Survey Rt.	% Grade	Inlet Elev.	Outlet Elev.	Flow	Type & Size	Drainage Acres	S-27 12" L.F.	S-27 15" L.F.	S-27 18" L.F.	S-27 21" L.F.	S-27 24" L.F.	S-27 30" L.F.	S-28 36" L.F.	S-28 48" L.F.	S-28 9'-6"x6'-5" L.F.	S-28 7'-3"x5'-3" L.F.	I-8 Type "A" Ea.	I-8 Type "B" Ea.	I-8 Type "D" Ea.	S-4 Reinf. Steel Lbs.	S-23 Dowel Holes L.F.	S-1 Class "C" Conc. C.Y.	S-1 Class "E" Conc. C.Y.	S-1 Class "F" Conc. C.Y.	S-22 Removal of Portion of Ex. Stru. C.Y.	E-3 C.Y.	E-2 C.Y.	Channel Grade % Lt.	Channel Grade % Rt.	Channel Slope & Width	I-10 Dump C.Y. Rock Fill	I-10 Type "A" Grade S.Y.	I-8 No.1 M.H. Ea.	I-8 No.1-3 C.B. Ea.	I-8 No.2-4 C.B. Ea.	I-8 Ditch Inlet Ea.	Structure No.	Cul. No.	REMARKS
26	947+14	23°04'L.F.	74'	77'	1.25	1095.49	1093.60	Rt.	30"x147'	25						147						1						1.02		10	100	2.00	1.25	2:1 3'-0"							TRU-82 1794	26	Build Standard Pipe Culvert with end walls at both ends. Place Type "B" C.B. in Median Strip Ditch. Channel Exc. at Inlet See Sheet No. 39
27	964+58	0°	68'		1.21	1124.80	1124.00	Rt.	30"x66'	45						66												1.02		12	43	0.40	0.40	2:1 3'-0"							TRU-82 1827	27	Build Standard Pipe Culvert with end walls at both ends. Channel Exc. at Inlet. See Sheet No. 149.
28	964+58	0°		82'	1.06	1123.95	1123.10	Rt.	30"x80'	45						80												1.02		50	51	0.4	0.5	2:1 3'-0"			8				TRU-82 1827	28	Build Standard Pipe Culvert with end walls at both ends. Place Riprap at inlet for Median ditch slope protection & outlet Channel. Channel Exc. at outlet. See Sht. No. 149
29	964+65.25 965+07			127' 175'	0.45	1122.60	1122.31	East	30"x64'	45						64									76		Std. Dr. S-27 Pc. 1 3.80		0.51			35	0.50	0.80	2:1 3'-0"		25					TRU-82 1828	© 29	Build Std. Pipe Culvert with end wall on East side and Headwall on West side. See Intersection Detail Sheet No. 149 Place Riprap in the Inlet Channel.
30	967+50	45° L.F.	125	102'	1.12	1127.45	1124.91	Rt.	15"x227'	3		224									1							0.52			75									TRU-82 1832	30	Build Standard Pipe Culvert with end walls at both ends. Place Type "A" C.B. in Median Ditch.
31	974+60	3° L.F.	68'	74'	1.08	1132.76	1131.69	Rt.	30"x142'	20						142						1						1.02		6	102	1.08	1.08								TRU-82 1846	31	Build Standard Pipe Culvert with end walls at both ends. Channel Exc. at Inlet & Outlet. See Sheet No. 43
32	987+50	21° R.F.	105' 183' 103'	125'	0.50 0.50	1125.44 1125.00	1125.01 1123.90	Rt.	36"x 86' 36"x220'	38							* 306						1						1.18		8	234	0.80	0.40	2:1 4'-0"							TRU-82 1870	32	Build Standard Pipe Culvert with end walls at both ends. Place Type "D" C.B. as shown on Line Sheet No. 44. Channel Exc. at Inlet.
33	SR. 90 351+00	0°	64'	67'	0.40	1122.72	1122.18	East	36"x131'	44							131											1.18			97	1.10	0.4	2:1 4'-0"							TRU-90 0666	© 33	Remove existing 18"x36'-6" V.S.P. Culvert at Sta. 350+19. Build Std. Pipe Culvert with End Walls at both ends. See Detail on Cross Section Sht. No. 130
34	SW. Ramp SR. 90 1+38.42	0°	27'	28'	0.40	1123.59	1123.37	North	21" x 55'	6				55														0.72			18	0.80	0.40	2:1 3'-0"							TRU-82 1872	34	Build Standard Pipe Culvert with end walls at both ends.
35	S.E. Ramp SR. 90 3+00	40° R.F.	42'	45'	0.98	1121.75	1120.90	South	36" x 87'	44							87											1.18		15	78	0.40	0.40	2:1 4'-0"		14					TRU-82 1880	35	Build Standard Pipe Culvert with end walls at both ends. Place Type A Riprap at inlet and outlet.
36	N.E. Ramp 5+58	9° L.F.	29'	36'	0.50	1125.98	1125.67	Rt.	7'-3"x5'-3"x65'	350											65							6.76		16	93	1.86	0.50	2:1 6'-0"		15					TRU-82 1885	36	Build 7'-3"x5'-3" Multi-Plate Culvert with End Walls at both ends. Place Type A Riprap at inlet & Outlet.
37	995+15	10° L.F.	88'	92'	1.50	1125.59	1122.87	Rt.	7'-3"x5'-3"x180'	350											180							6.76			259	0.50	0.50								TRU-82 1885	37	Build 7'-3"x5'-3" Multi-Plate Culvert with End Walls at both ends. Per Channel Exc of C-35-36-37 & 38 See Sht. No. 44
38	SE. Ramp 5+34.89	0°		106' 183'	1.50	1122.69	1121.53	Rt.	7'-3"x5'-3"x177'	350											77							6.76		27	155	0.50		2:1 6'-0"		15					TRU-82 1885	38	Build 7'-3"x5'-3" Multi-Plate Culvert with End Walls at both ends. Place Type A Riprap at outlet.
14A	SR. 46 19+15	0°	15' 32'	16' 21'	5.00 2.00	944.60	943.12	West	18" x 17' 18" x 5'	12			21														0.45	0.30			4						1		TRU 46-0754	14A	Extend Existing Culvert with 18" Std. Pipe Culv. 17' on Left and 5' on Right with an end wall on Lt. Side & No. 1-3 C.B. on Rt. Side.
	TOTALS										+ 12	+ 449	+ 500	+ 157	+ 231	+ 1558	+ 306* 544	108	• 170	• 180 142	1	3	1	40,639	44	278.08	2.78	59.09	0.96	678	3038				91	164	3	1	2	1			* Sectional Plate Structure C-37 10-8 gauge, Culvert No. C-36 & 38. 10-10 gauge; & Culvert No. C-25 8-7 gauge.

(A) Skew is off of chord between Sta. 730+00 & 731+00; Sta. 737+00 & 738+00; Sta. 795+00 & 796+00; Sta. 810+00 & 811+00, and Sta. 831+00 & 832+00

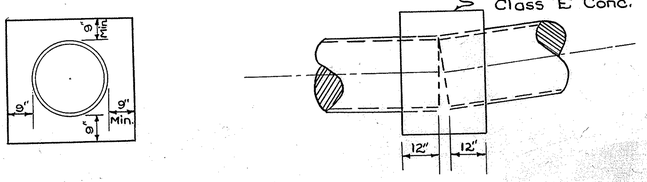
(C) (D) (E) Removal of Existing Structures are to be paid by Lump Sum, bid for Item S-24.
Concrete Collar or Pipe Special may be used on broken back Culverts. The Contractor is given his choice & Payment for either is included in the regular price bid per Lin. Ft. of S-27
Build Special inlet to the paved gutter at the Culvert end. See Sheet No. 4

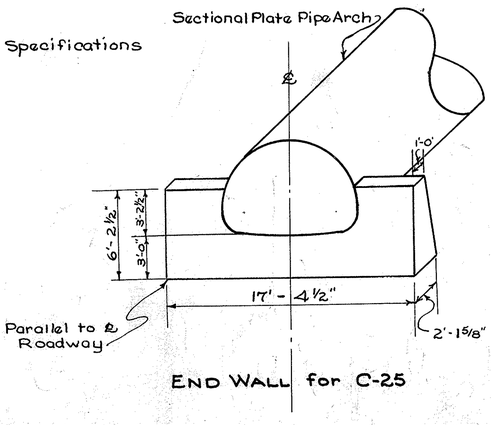
(F) All heavy construction equipment shall comply to E-2.08 Backfill (Method A)
Existing Pipes to be salvaged.

\+ Pipe marked thus to conform to Sec. M 6.6 (b) or M-6.8 (b) of the Specifications

* Sec. M-106.6(d) or Sec. M-6.4(d)

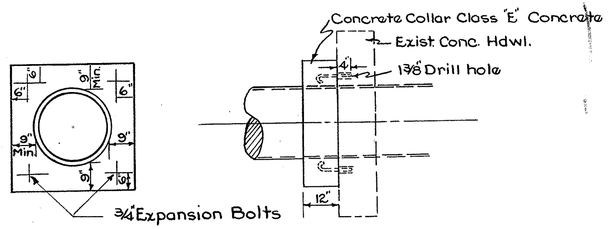
DETAIL OF CONCRETE COLLAR FOR BROKEN BACK CULVERT

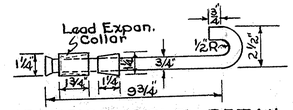




END WALL for C-25

DETAIL OF CONCRETE COLLAR FOR CULVERT EXTENSION





Item Special Expansion Anchor Bolts - 16 EA.
Item S-23 Dowel Holes 533 L.F.

EXPANSION BOLT DETAIL

Cost of bolts to be included in unit price bid per Cu. Yd. of Concrete.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
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TRU. 82 12.67

DRAINAGE STRUCTURE C-1

STATION 672+10

SURVEYED BY R.O.W.

DRAWN BY W.G.S.

CHECKED BY W.B.

CULVERT NO. TRU-82-1273

DRAINAGE AREA 95 AC.

Scale 3/16" = 1'-0"

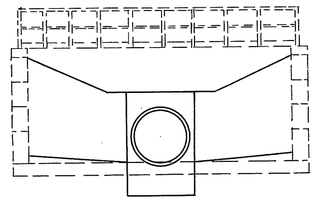
EXISTING CULVERT DATA

Type: Twin Corn Metal Pipes
Size: 36" dia x 49 feet

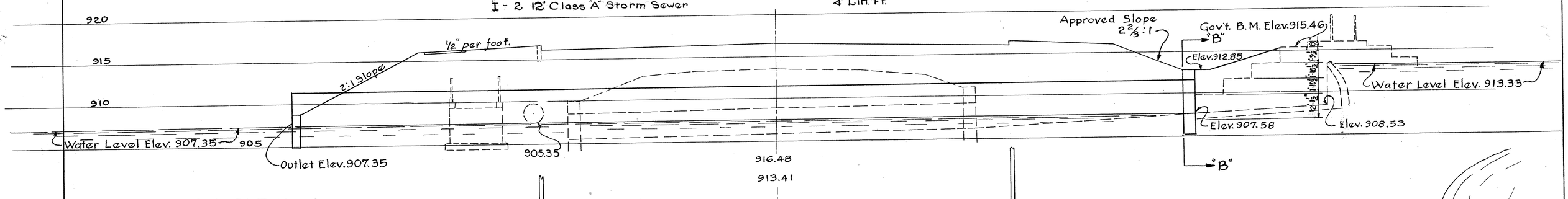
Condition: Good

ESTIMATED QUANTITIES

S-1	Concrete for Structure	Class "C"	10.28 Cu. Yds.
S-1	Concrete for Structure	Class "E"	0.86 Cu. Yds.
S-4	Reinforcing Steel		303 lbs.
S-23	Dowel holes for 3/4" dowels		44 Lin. feet
S-24	Removal of Existing Structures		Lump Sum
S-27	48"in. Std. Pipe Culvert		108 Lin. Ft.
E-2	Excavation for Structure (Unclassified)		58 Cu. Yds.
E-4	Granular Borrow		120 Cu. Yds.
I-2	12" Class A Storm Sewer		4 Lin. Ft.



SECTION B-B



SECTION A-A

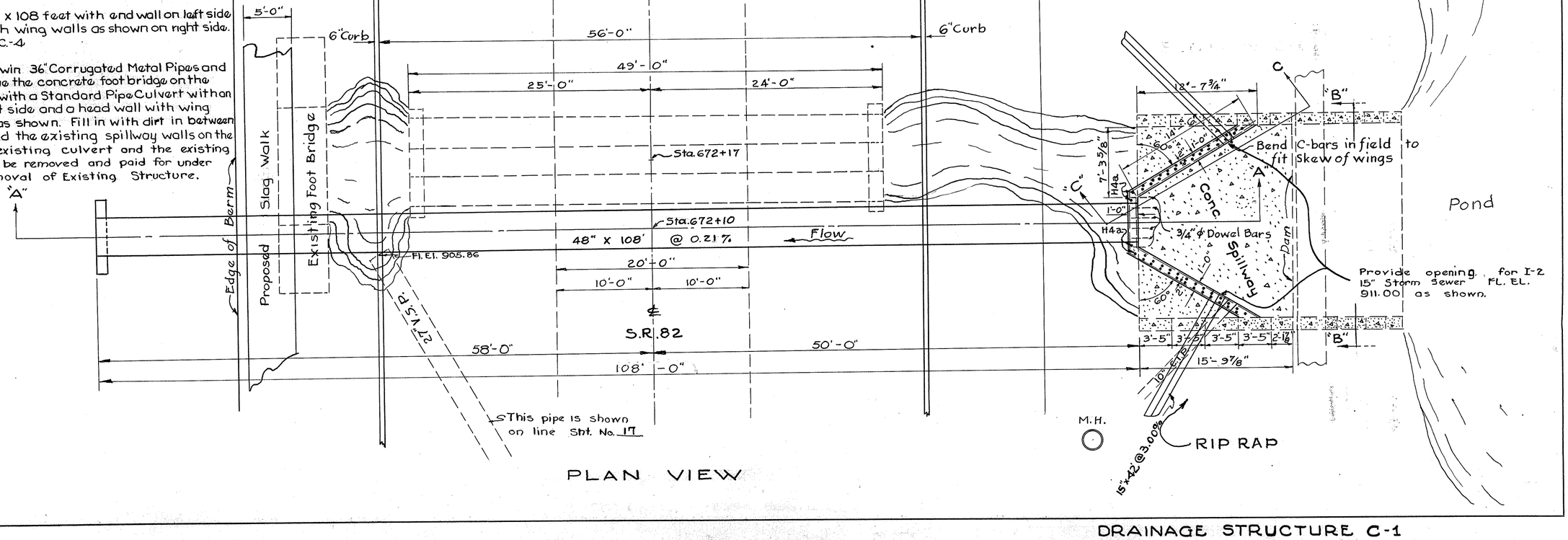
PROPOSED CULVERT DATA

Type: Std. Pipe Culvert with end wall on left side and head wall with reinforced conc. wingwalls on right side.

Size: 48 inch diameter x 108 feet with end wall on left side and head wall with wing walls as shown on right side.

Std. Dwg. S-27 P.C.-1 S-27-P.C.-4

Work Rqd. Remove existing twin 36" Corrugated Metal Pipes and head walls. Remove the concrete foot bridge on the left side. Replace with a Standard Pipe Culvert with an end wall on the left side and a head wall with wing walls on right side as shown. Fill in with dirt in between the wing walls and the existing spillway walls on the right side. The existing culvert and the existing foot bridge are to be removed and paid for under Item S-24 Removal of Existing Structure.

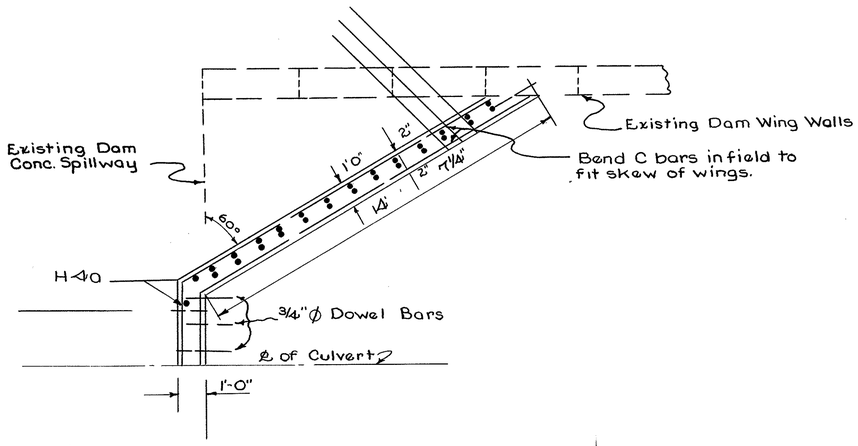


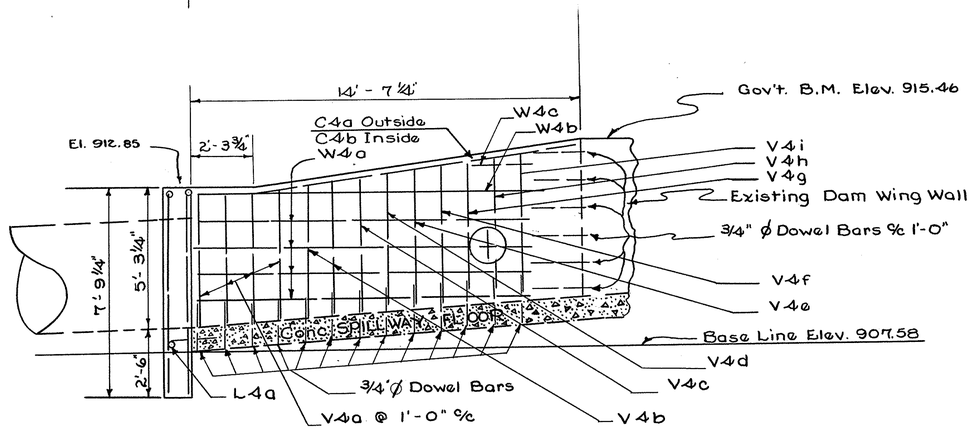
PLAN VIEW

DRAINAGE STRUCTURE C-1

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU. 82 12.67



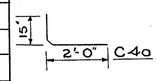


SECTION C-C

SCALE 3/8" = 1'-0"

STEEL LIST						
Mark	Location	Shape	Size	No.	Length	Weight#
H4a	Headwall	Str.	½"ø	4	7'-4"	20
L4a	Headwall	Str.	½"ø	1	6'-0"	4
C4a	Headwalls Wingwalls	Bent	½"ø	1	32'-0"	21
C4b	Headwalls Wingwalls	Bent	½"ø	1	32'-9"	22
W4a	Wingwalls	Str.	½"ø	8	12'-6"	67
W4b	Wingwalls	Str.	½"ø	2	10'-6"	14
W4c	Wingwalls	Str.	½"ø	2	5'-6"	7
V4a	Wingwalls	Str.	½"ø	8	4'-9"	28
V4b	Wingwalls	Str.	½"ø	4	4'-10"	12
V4c	Wingwalls	Str.	½"ø	2	5'-0"	7

DIAGRAM



STEEL LIST						
Mark	Location	Shape	Size	No.	Length	Weight#
V4d	Wingwalls	Str.	½"ø	2	5'-2"	7
V4e	Wingwalls	Str.	½"ø	2	5'-3"	7
V4f	Wingwalls	Str.	½"ø	2	5'-4"	7
V4g	Wingwalls	Str.	½"ø	2	5'-5"	7
V4h	Wingwalls	Str.	½"ø	2	5'-6"	7
V4i	Wingwalls	Str.	½"ø	2	5'-7"	7
Dowel	Headwalls Wingwalls	Str.	3/4"ø	44	2'-0"	59
TOTAL						303

DRAINAGE STRUCTURE C-1

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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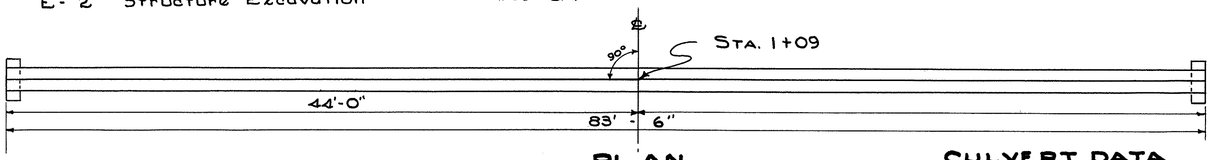
STRUCTURE No. TRU-82-1467 C-9

SOUTH WEST RAMP OF S.R. 82 & S.R.46
SCALE 1" = 5'-0"

ESTIMATED QUANTITIES

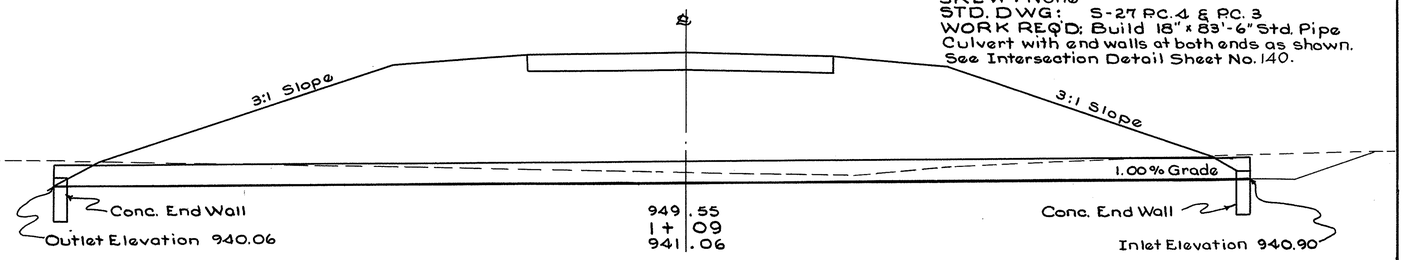
S-27	18" Std. Pipe Culvert	83.5	L.F.
S-1	Conc. End Walls (Class 'E')	0.60	C.Y.
E-2	Structure Excavation	7.33	C.Y.



PLAN

CULVERT DATA

DRAINAGE AREA: 3 Acres
TYPE : Std. Pipe Culvert
SIZE : 18" x 83'-6"
SKEW : None
STD. DWG: S-27 PC.4 & PC. 3
WORK REQ'D: Build 18" x 83'-6" Std. Pipe Culvert with end walls at both ends as shown. See Intersection Detail Sheet No. 140.



CROSS SECTION

CULVERT DATA

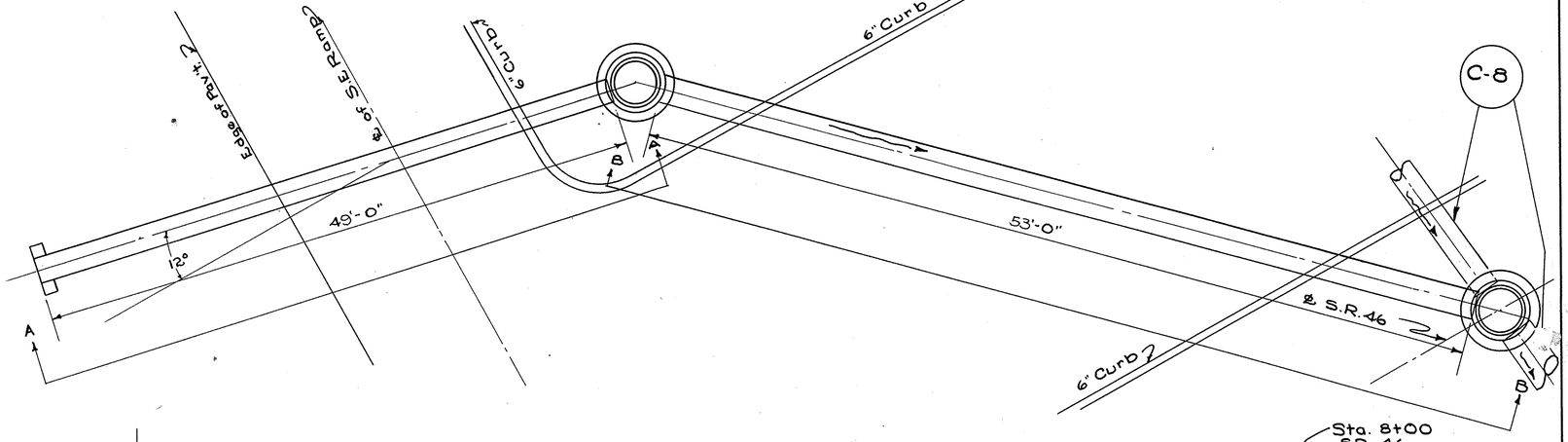
DRAINAGE AREA: 3 Acres
TYPE: Std. Pipe Culvert
SIZE : 21" x 43'-0" & 24 x 60'-0"
SKEW: 12° L.F.
STD. DWG. S-27 PC 3 & 4 I-8 M.H. No 1.
WORK RQD. Build the proposed No 1 M.H. and connect the 21" x 49' & 21" x 53'-0" Std. Pipe Culvert as shown.

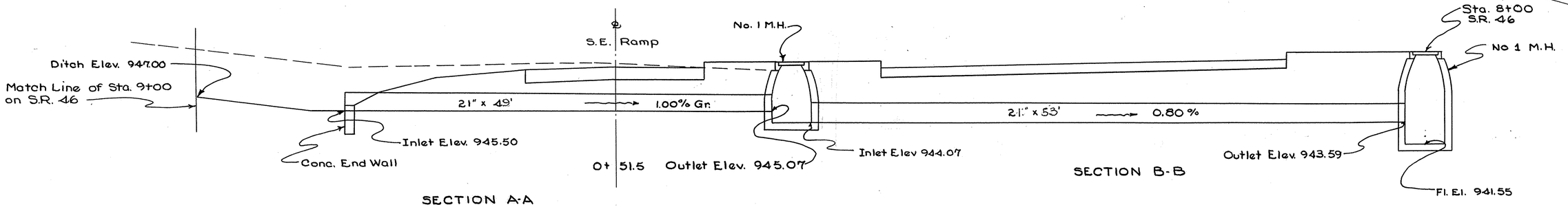
STRUCTURE No. TRU-82-1468 C-10

SOUTH EAST RAMP SR 82 & S.R.46
SCALE 1" = 5'-0"

ESTIMATED QUANTITIES

S-27	21" Std. Pipe Culvert	102	L.F.
S-1	Concrete End Walls (Class 'E')	0.36	Cu.Y.
E-2	Structure Excavation	38	C.Y.
I-8	No 1 Manhole	1	Each





SECTION A-A

SECTION B-B

CROSS SECTION
SCALE 5'-0"

DRAINAGE STRUCTURE C-9 & 10

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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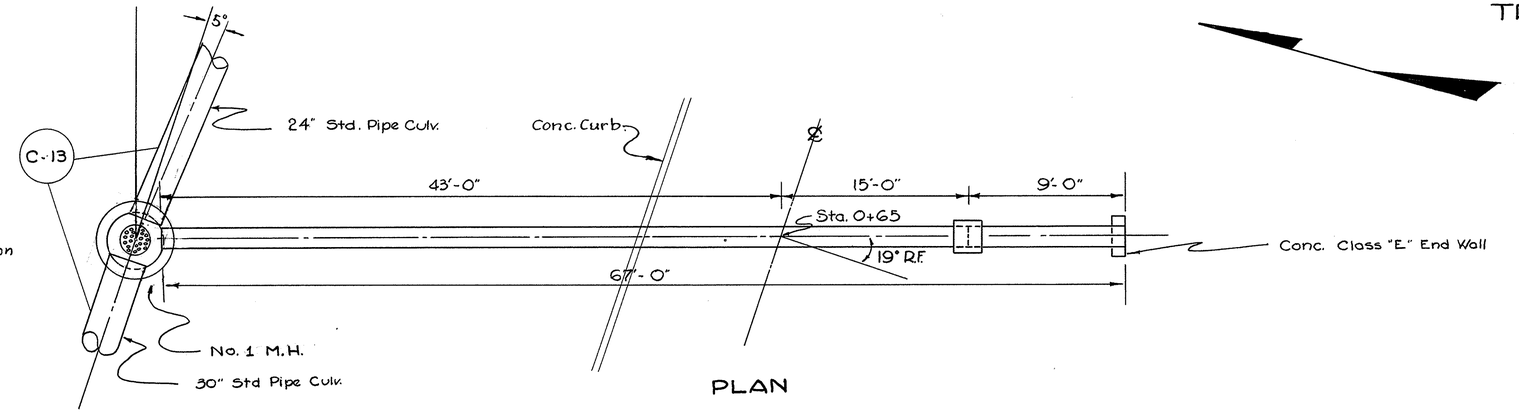
TRU-82-12.67

STRUCTURE NO. TRU-82-1469 STA. 0+65 C-12

NORTHEAST RAMP OF INTERSECTION OF SR 82 & 46

CULVERT DATA

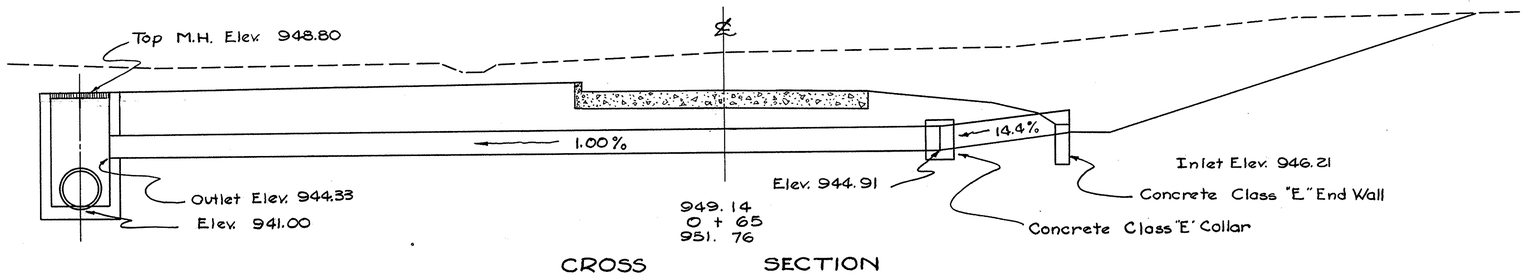
DRAINAGE AREA : 3 Acres
TYPE : Standard Pipe Culvert
SIZE : 18" x 67'-0"
SKEW : 19° R.F.
STD. DRAWING: S-27 P.C. 3 & P.C. 4
WORK REQ'D: Build new 18"x67'-0" Std Pipe Culvert with a broken back on right side and a end wall on the right side only. Connect the outlet into a No 1 Manhole as shown. See Cross Section Sheet No. ___ of S.R. 46.



PLAN

ESTIMATED QUANTITIES

S-27	18" Std. Pipe Culv.	67 Lin. Ft
S-1	End Wall Concrete Class "E"	0.60 Cu. Yds
S-1	Collar Concrete Class "E"	0.79 Cu. Yds
E-2	Structure Excavation	32 Cu. Yds.



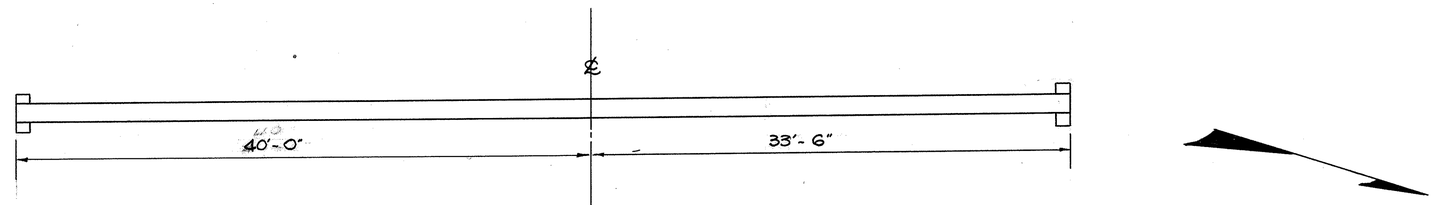
CROSS SECTION
Scale 1"=5'

STRUCTURE NO. TRU-82-1465 STA. 1+19.75 C-11

NORTHWEST RAMP OF INTERSECTION OF SR 82 & 46

CULVERT DATA

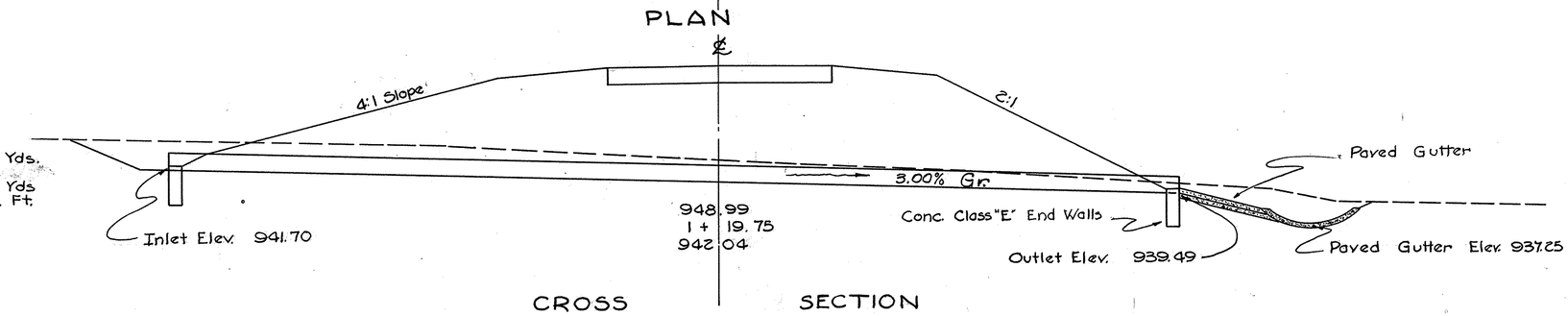
DRAINAGE AREA : Acres
TYPE : Standard Pipe Culvert
SIZE : 15" x 73'-6"
SKEW : None
ST'D. DRAWINGS: S-27 P.C. 3
WORK REQ'D : Build new 15" x 73'-6" Standard Pipe Culvert as shown. Build Paved Gutter from outlet of 15" Std Pipe Culv. to the Paved Gutter in the ditch as shown



PLAN

ESTIMATED QUANTITIES

S-1	Concrete for Structure	0.52 Cu. Yds.
E & S-27	Excavation for Structure 15" Std. Pipe Culv.	11 Cu. Yds 73.5 Lin. Ft.



CROSS SECTION

DRAINAGE STRUCTURE C-11-12

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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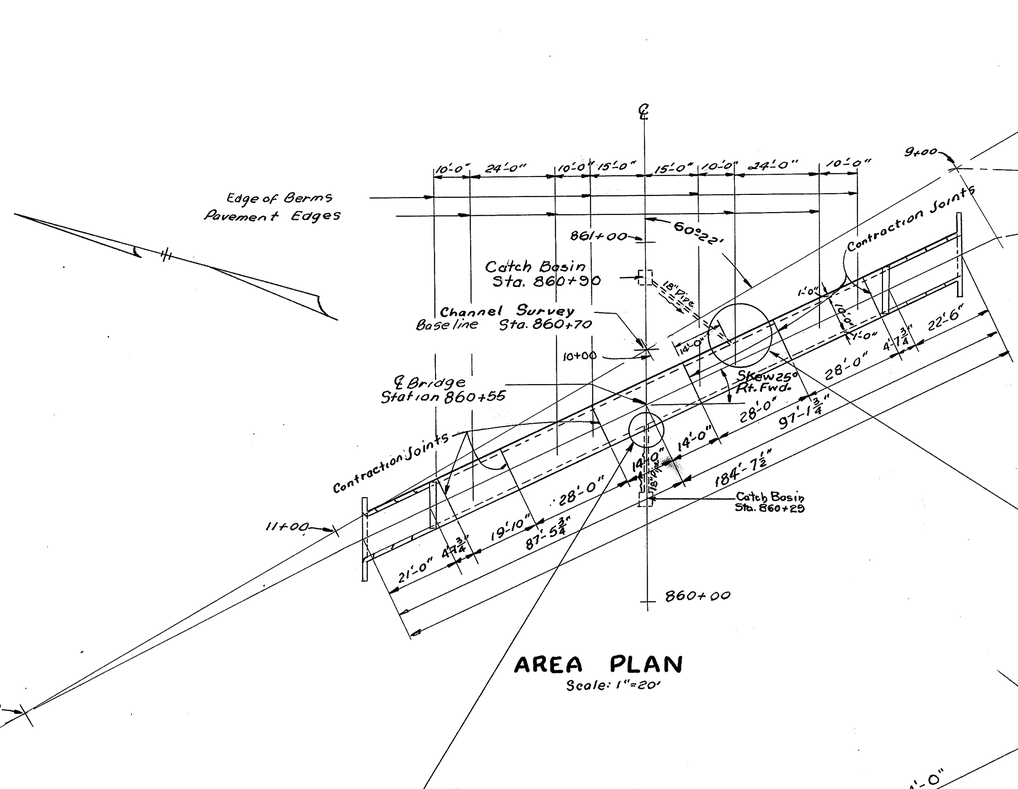
BRIDGE NUMBER TRU-82-1630

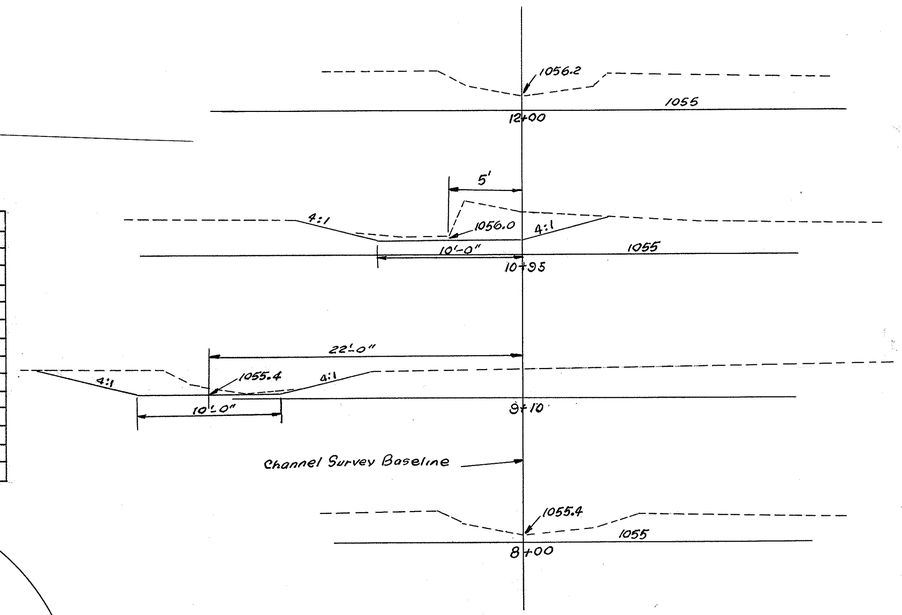
TRU - 82- 12.67

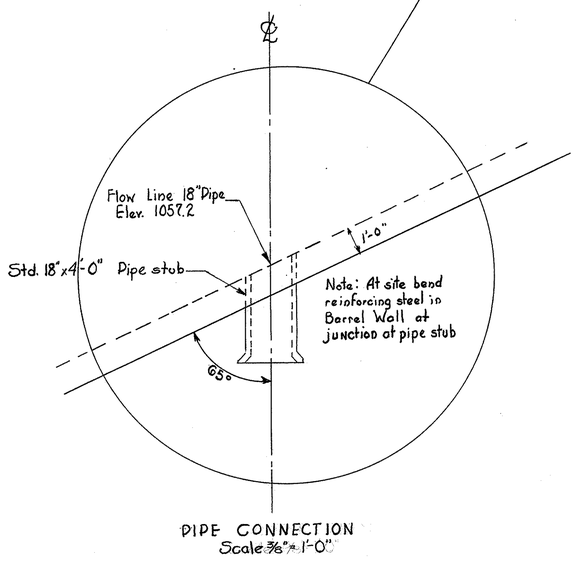


AREA PLAN

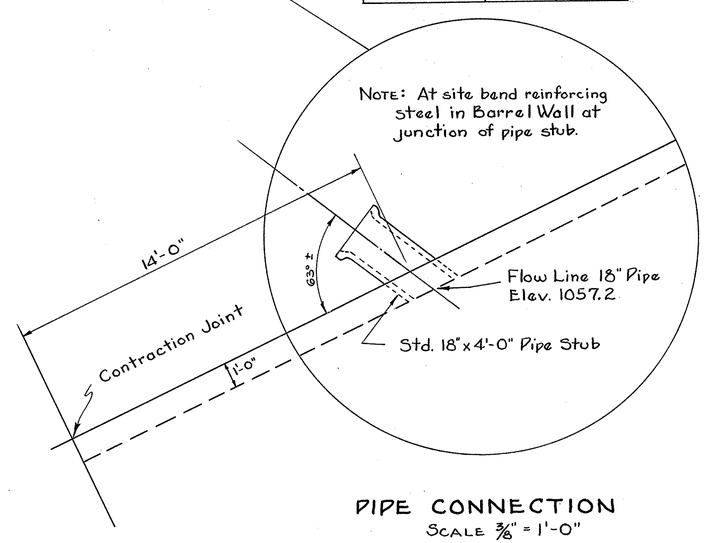
Scale: 1"=20'

Channel Station	End Area Sq. Ft.	Exc. Cu. Yds.
12+00	0	
		35
11+00	19	
10+95 Ahead	19	
Structure		—
9+10 Back	15	
		6
9+00	15	
8+00	0	28
TOTAL EXC.		72





PIPE CONNECTION
Scale 3/8" = 1'-0"



PIPE CONNECTION
Scale 3/8" = 1'-0"

PROPOSED BRIDGE DATA

TYPE: Large Concrete Box Culvert
SIZE: 10'-0" x 5'-0" x 184'-7½"
ROADWAY: 118'-0"
SKEW: 25° Right Forward
STD. DRAWING: LBC - 45
ALIGNMENT: Dc = 2°-00' Left
WORK REQ'D.: Build Large Box Culvert at Station 860+55, as shown. Excavate Channel to alignment and cross-sections shown.
Set 18"x4'-0" Pipe Stubs in Barrel Wall

Length of reinforcing steel figured on basis of Construction Joints being built as shown.

ESTIMATED QUANTITIES

E-2	Excavation for Structures	194 Cu. Yds.
E-3	Channel Excavation	72 Cu. Yds.
S-1	Concrete for Structures, Class "C"	197 Cu. Yds.
S-4	Reinforcing Steel	30,873 Lbs.
I-2	Storm Sewer - Std. 18" Pipe Stub, 2 Each	8 Lin. Ft.

STRUCTURE NUMBER C-20

DRAINAGE STRUCTURE C-20 BRIDGE NO. TRU-82-1630

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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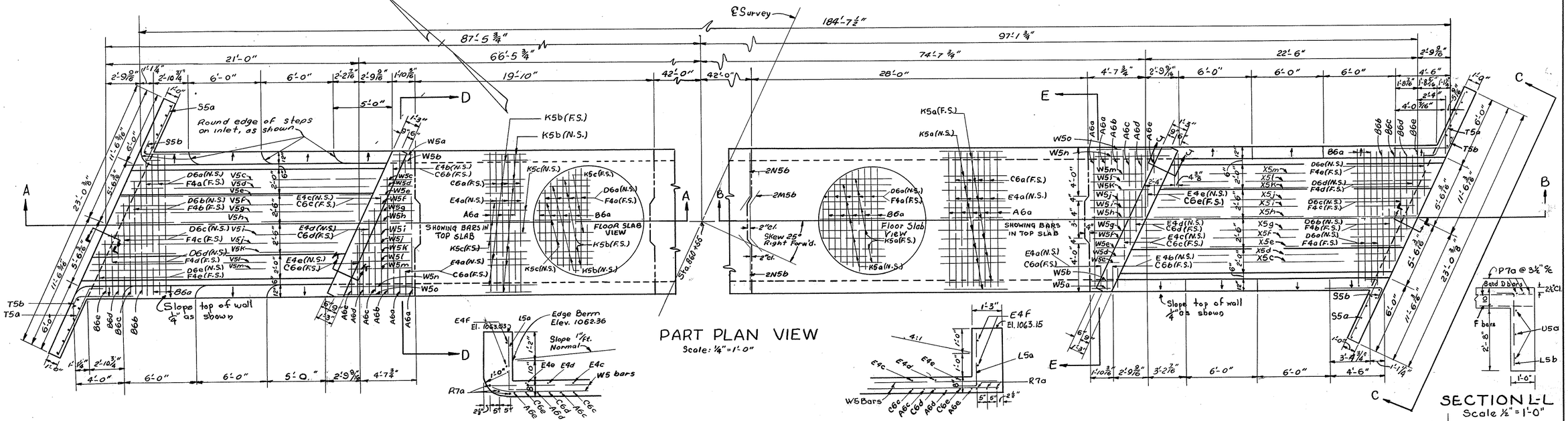
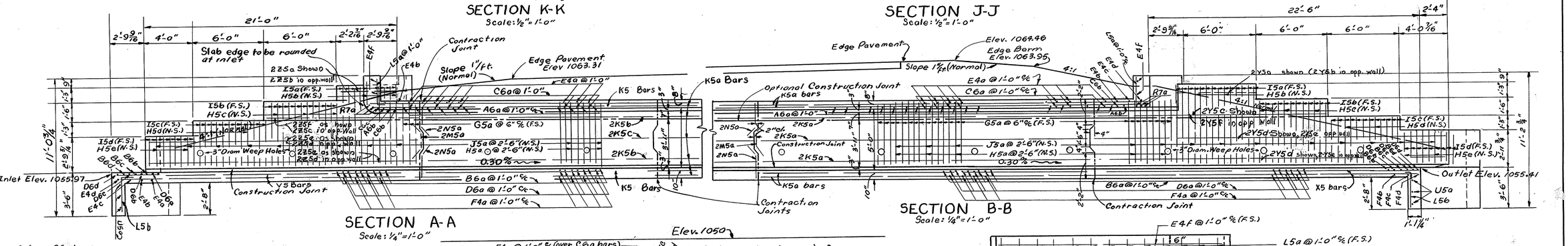
STATION 860+55 DRAINAGE AREA 650 AC.

DRAWN BY: R.H.W. CHECKED BY: H.L.R. REVIEWED BY:





DRAINAGE STRUCTURE C-20

Note

The bar size designations shown do not correspond with the size designations given in the Jan. 1, 1955 edition of the Construction and Material Specifications.

STEEL LIST

LOCATION	MARK	SHAPE	SPACING	SIZE	NO.	LENGTH	WEIGHT
Cut off walls	P7a	St.	0'-3½" c/c	⅞" ϕ	6	17'-0"	209
Head walls	R7a	Bent	0'-5" c/c	⅞" ϕ	6	14'-2"	174
Head walls	L5a	Bent	1'-0" c/c	⅝" ϕ	26	2'-11"	79
Cut off walls	L5b	Bent	1'-0" c/c	⅝" ϕ	26	3'-9"	102
Cut off walls	U5a	St.	1'-0" c/c	⅝" ϕ	6	22'-6"	141
Turn back Wings	Q5a	St.	as shown	⅝" ϕ	28	5'-11"	173
Turn back Wings	S5a	Bent	1'-0" c/c	⅝" ϕ	6	6'-0"	38
Turn back Wings	S5b	Bent	1'-0" c/c	⅝" ϕ	6	5'-6"	34
Turn back Wings	T5a	Bent	1'-0" c/c	⅝" ϕ	6	6'-10"	43
Turn back Wings	T5b	Bent	1'-0" c/c	⅝" ϕ	6	5'-6"	34
Floor - Rt. side	X5a	St.	as shown	⅝" ϕ	1	23'-11"	25
" "	X5b	St.	as shown	⅝" ϕ	1	24'-2"	25
" "	X5c	St.	as shown	⅝" ϕ	1	25'-2"	26
" "	X5d	St.	as shown	⅝" ϕ	1	25'-4"	26
" "	X5e	St.	as shown	⅝" ϕ	1	25'-8"	27
" "	X5f	St.	as shown	⅝" ϕ	1	26'-6"	27
" "	X5g	St.	as shown	⅝" ϕ	1	26'-10"	28
" "	X5h	St.	as shown	⅝" ϕ	1	27'-2"	28
" "	X5i	St.	as shown	⅝" ϕ	1	27'-7"	29
" "	X5j	St.	as shown	⅝" ϕ	1	27'-11"	29
" "	X5K	St.	as shown	⅝" ϕ	1	27'-8"	29
" "	X5l	St.	as shown	⅝" ϕ	1	28'-2"	29
" "	X5m	St.	as shown	⅝" ϕ	1	28'-6"	30
" "	X5n	St.	as shown	⅝" ϕ	1	29'-0"	30
" "	X5o	St.	as shown	⅝" ϕ	1	29'-3"	31
Steps - Rt. side	Y5a	St.	as shown	⅝" ϕ	2	6'-6"	14
" " "	Y5b	St.	as shown	⅝" ϕ	2	6'-3"	13
" " "	Y5c	St.	as shown	⅝" ϕ	2	19'-2"	40
" " "	Y5d	St.	as shown	⅝" ϕ	4	29'-0"	121
" " "	Y5e	St.	as shown	⅝" ϕ	4	24'-0"	100
" " "	Y5f	St.	as shown	⅝" ϕ	2	13'-6"	28
Floor - Lt. side	V5a	St.	as shown	⅝" ϕ	1	22'-5"	23
" " "	V5b	St.	as shown	⅝" ϕ	1	22'-8"	24
" " "	V5c	St.	as shown	⅝" ϕ	1	23'-8"	25
" " "	V5d	St.	as shown	⅝" ϕ	1	23'-10"	25
" " "	V5e	St.	as shown	⅝" ϕ	1	24'-2"	25
" " "	V5f	St.	as shown	⅝" ϕ	1	25'-0"	26
" " "	V5g	St.	as shown	⅝" ϕ	1	25'-4"	26
" " "	V5h	St.	as shown	⅝" ϕ	1	25'-8"	27
" " "	V5i	St.	as shown	⅝" ϕ	1	26'-1"	27
" " "	V5j	St.	as shown	⅝" ϕ	1	26'-5"	27
" " "	V5K	St.	as shown	⅝" ϕ	1	26'-2"	27
" " "	V5l	St.	as shown	⅝" ϕ	1	26'-6"	28
" " "	V5m	St.	as shown	⅝" ϕ	1	26'-8"	28
" " "	V5n	St.	as shown	⅝" ϕ	1	27'-6"	29
" " "	V5o	St.	as shown	⅝" ϕ	1	27'-9"	29
Steps - Lt. side	Z5a	St.	as shown	⅝" ϕ	2	5'-0"	10
" " "	Z5b	St.	as shown	⅝" ϕ	2	5'-3"	11
" " "	Z5c	St.	as shown	⅝" ϕ	2	17'-4"	36
" " "	Z5d	St.	as shown	⅝" ϕ	4	27'-3"	114
" " "	Z5e	St.	as shown	⅝" ϕ	4	22'-0"	92
" " "	Z5f	St.	as shown	⅝" ϕ	2	11'-9"	25

BRIDGE NUMBER TRU-82-1630

FED. RD. DIVISION	STATE	PROJECT	
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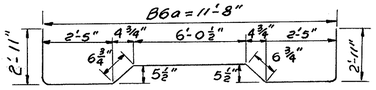
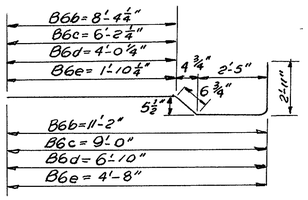
STEEL LIST

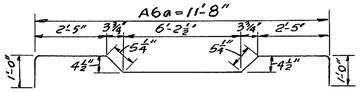
LOCATION	MARK	SHAPE	SPACING	SIZE	NO.	LENGTH	WEIGHT
Roof Slab	A6a	Bent	1'-0" c/c	¾" ϕ	135	13'-7"	2754
" "	A6b	Bent	as shown	¾" ϕ	2	11'-2"	34
" "	A6c	Bent	as shown	¾" ϕ	2	9'-0"	27
" "	A6d	Bent	as shown	¾" ϕ	2	6'-10"	21
" "	A6e	Bent	as shown	¾" ϕ	2	4'-8"	14
Roof Slab	E4a	St.	1'-0" c/c	½" ϕ	129	11'-6"	991
" "	E4b	St.	as shown	½" ϕ	2	11'-2"	15
" "	E4c	St.	as shown	½" ϕ	2	9'-0"	12
" "	E4d	St.	as shown	½" ϕ	2	6'-10"	9
" "	E4e	St.	as shown	½" ϕ	2	5'-0"	7
Head walls	E4F	St.	1'-0" c/c	½" ϕ	4	12'-6"	33
Roof Slab	C6a	St	1'-0" c/c	¾" ϕ	129	11'-6"	2228
" "	C6b	St.	as shown	¾" ϕ	2	11'-2"	34
" "	C6c	St	as shown	¾" ϕ	2	9'-0"	27
" "	C6d	St.	as shown	¾" ϕ	2	6'-10"	21
" "	C6e	St	as shown	¾" ϕ	2	5'-0"	15
Barrel	K5a	St.	as shown	⅝" ϕ	168	27'-6"	4819
Barrel	K5b	St.	as shown	⅝" ϕ	28	19'-4"	565
Barrel	K5c	St.	as shown	⅝" ϕ	14	18'-8"	273
Roof Slab	W5a	St	as shown	⅝" ϕ	2	1'-5"	3
" "	W5b	St.	as shown	⅝" ϕ	2	1'-8"	3
" "	W5c	St.	as shown	⅝" ϕ	2	2'-6"	5
" "	W5d	St.	as shown	⅝" ϕ	2	2'-8"	6
" "	W5e	St.	as shown	⅝" ϕ	2	3'-1"	6
" "	W5f	St.	as shown	⅝" ϕ	2	3'-10"	8
" "	W5g	St.	as shown	⅝" ϕ	2	4'-3"	9
" "	W5h	St.	as shown	⅝" ϕ	2	4'-6"	9
" "	W5i	St.	as shown	⅝" ϕ	2	4'-9"	10
" "	W5j	St.	as shown	⅝" ϕ	2	5'-3"	11
" "	W5K	St.	as shown	⅝" ϕ	2	5'-2"	11
" "	W5l	St.	as shown	⅝" ϕ	2	5'-9"	12
" "	W5m	St.	as shown	⅝" ϕ	2	5'-8"	12
" "	W5n	St.	as shown	⅝" ϕ	2	6'-6"	14
" "	W5o	St.	as shown	⅝" ϕ	2	6'-7"	14
Barrel Walls	G5a	Bent	0'-6" c/c	⅝" ϕ	550	6'-3"	3385
Barrel Walls & Steps	J5a	Bent	2'-6" c/c	⅝" ϕ	144	3'-9"	563
Barrel Walls	H5a	St.	2'-6" c/c	⅝" ϕ	108	5'-3"	591
Steps	H5b	St.	2'-6" c/c	⅝" ϕ	8	6'-6"	54
Steps	H5c	St.	2'-6" c/c	⅝" ϕ	12	5'-3"	66
Steps	H5d	St.	2'-6" c/c	⅝" ϕ	8	3'-9"	31
Steps	H5e	St.	2'-6" c/c	⅝" ϕ	8	2'-6"	21
Steps	I5a	St.	0'-6" c/c	⅝" ϕ	48	6'-9"	338
Steps	I5b	St.	0'-6" c/c	⅝" ϕ	48	5'-6"	275
Steps	I5c	St.	0'-6" c/c	⅝" ϕ	48	4'-0"	200
Steps	I5d	St.	0'-6" c/c	⅝" ϕ	34	2'-9"	98
Floor Slab	B6a	Bent	1'-0" c/c	¾" ϕ	177	17'-6"	4652
" "	B6b	Bent	as shown	¾" ϕ	2	14'-3"	43
" "	B6c	Bent	as shown	¾" ϕ	2	12'-1"	36
" "	B6d	Bent	as shown	¾" ϕ	2	9'-11"	30
" "	B6e	Bent	as shown	¾" ϕ	2	7'-9"	23
Floor Slab	D6a	St.	1'-0" c/c	¾" ϕ	175	11'-6"	3023
" "	D6b	St.	as shown	¾" ϕ	2	10'-1"	30
" "	D6c	St.	as shown	¾" ϕ	2	7'-11"	24
" "	D6d	St.	as shown	¾" ϕ	2	5'-9"	17
" "	D6e	St.	as shown	¾" ϕ	2	3'-7"	11
Floor Slab	F4a	Bent	1'-0" c/c	½" ϕ	175	16'-5"	1919
" "	F4b	Bent	as shown	½" ϕ	2	13'-0"	17
" "	F4c	Bent	as shown	½" ϕ	2	10'-10"	14
" "	F4d	Bent	as shown	½" ϕ	2	8'-8"	12
" "	F4e	Bent	as shown	½" ϕ	2	6'-6"	9
Contr. Joint Walls	N5a	Bent	-	⅝" ϕ	48	3'-6"	175
Contr. Joint Walls	M5a	Bent	-	⅝" ϕ	24	4'-6"	113
Contr. Joint Floor & Roof	N5b	Bent	-	⅝" ϕ	48	5'-4"	267
Contr. Joint Floor & Roof	M5b	Bent	-	⅝" ϕ	24	6'-4"	158
TOTAL							30,873 Lbs.

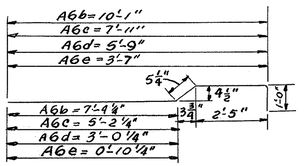
REPLACEMENT STEEL

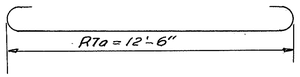
Re4a	Str.	-	½" ϕ	1	5'-3"	
Re5a	Str.	-	⅝" ϕ	1	5'-7"	
Re6a	Str.	-	¾" ϕ	1	5'-11"	
Re7a	Str.	-	⅞" ϕ	1	6'-3"	

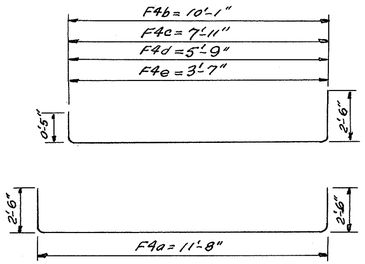


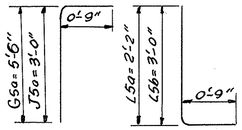


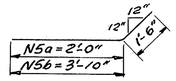


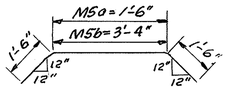


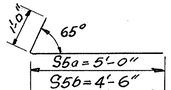


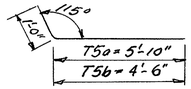












STRUCTURE NUMBER C-20

DRAINAGE STRUCTURE C-24 CULVERT NO.

STATION 892+86.0 DRAINAGE AREA 180 TR-82-169

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-82-12.67

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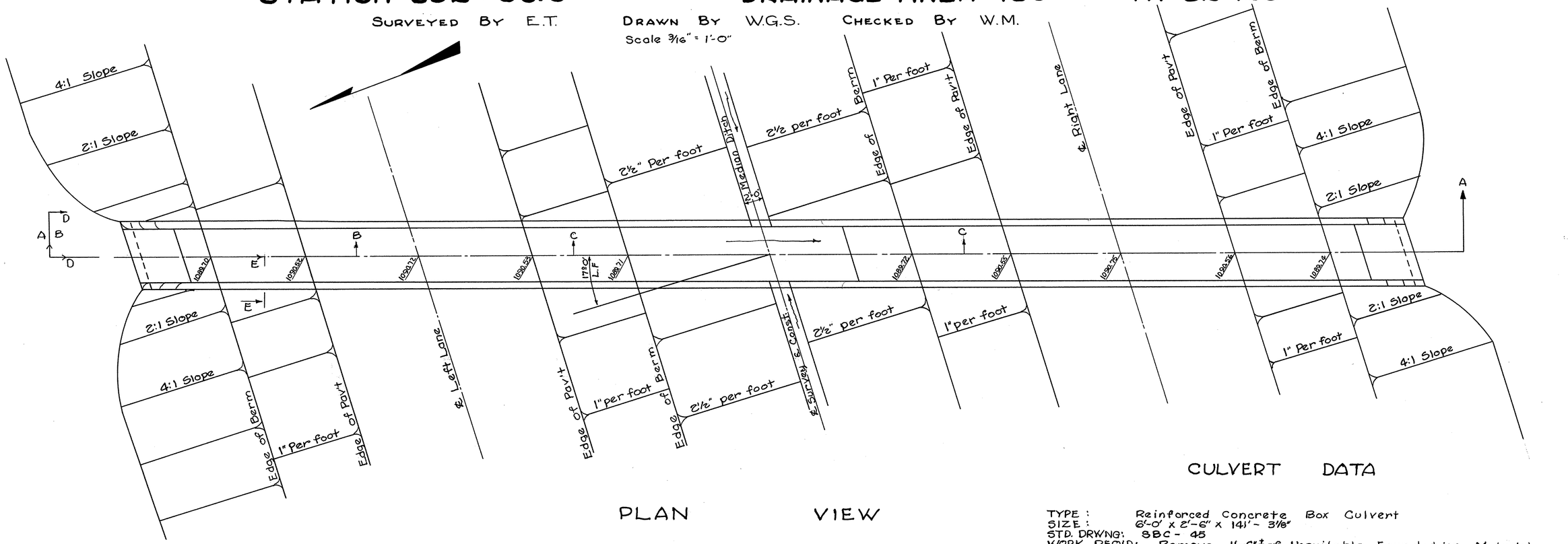
SURVEYED BY E.T. DRAWN BY W.G.S. CHECKED BY W.M.

Scale 3/16" = 1'-0"



PLAN VIEW

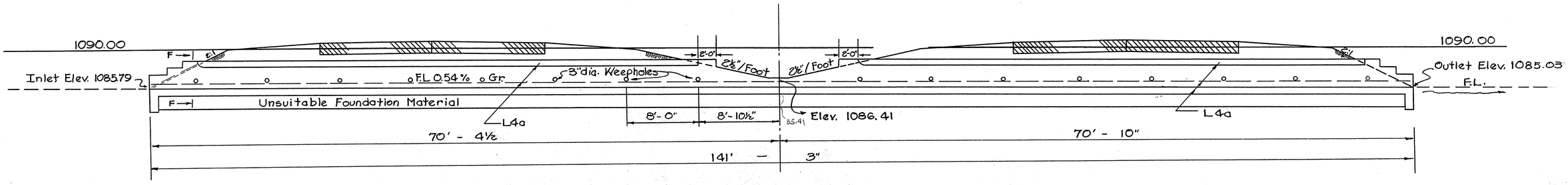
ESTIMATED QUANTITIES

S-1	Concrete for Structures Class "C"	67 Cu Yds.
S-4	Reinforcing Steel	9447 lbs.
E-2	Excavation for Structure (Unclassified)	75 Cu. Yds
E-4	Granular Borrow (E-1.02)	75 Cu. Yds

CULVERT DATA

TYPE : Reinforced Concrete Box Culvert
SIZE : 6'-0" x 2'-6" x 141'-3⅛"
STD. DRWNG: SBC-45
WORK REQ'D: Remove 1'-6"± of Unsuitable Foundation Material and replace with E-4 (Borrow) granular material E-1.02, modified to require 75 per cent to be retained on the No. 200 sieve. Build a Reinforced Concrete Box Culvert 6'-0" x 2'-6" x 141'-3" as shown.

SECTION A-A



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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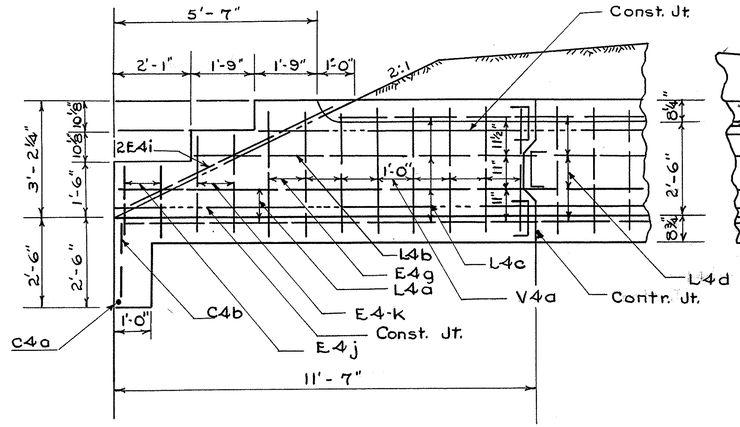
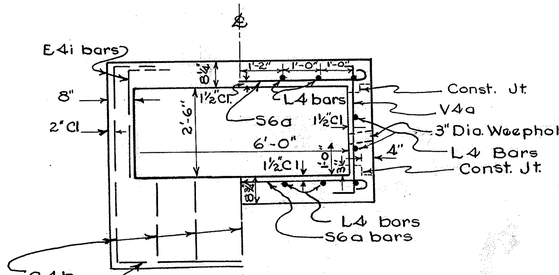
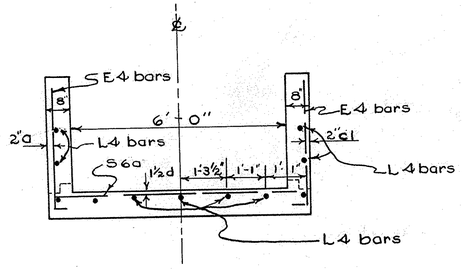
SECTION B-B
Scale ½"=1'-0"





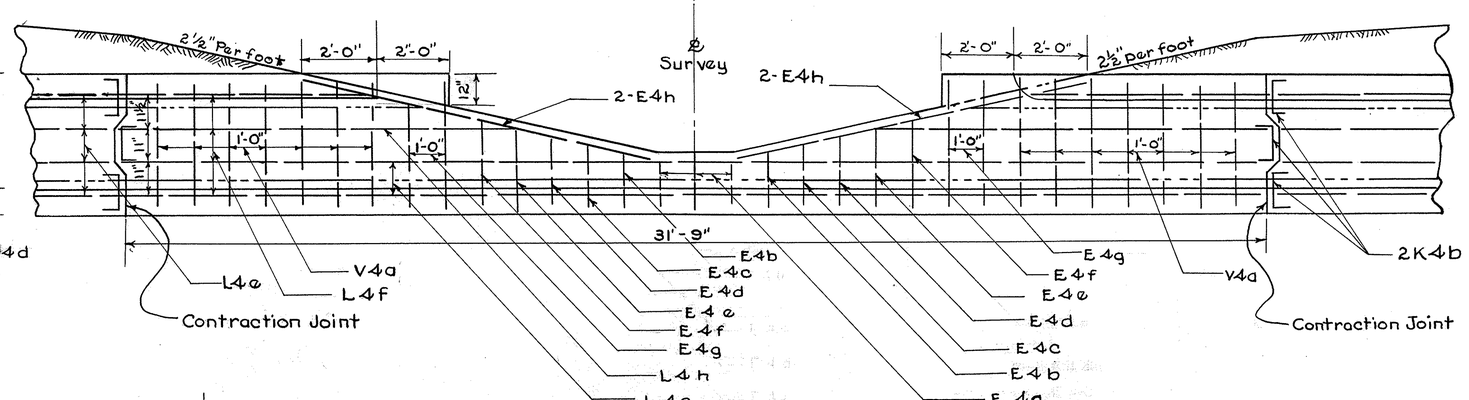
VIEW D-D

SECTION E-E



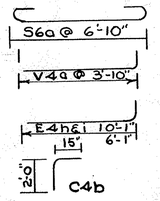
SECTION F-F

SECTION C-C
Scale ½" = 1'-0"

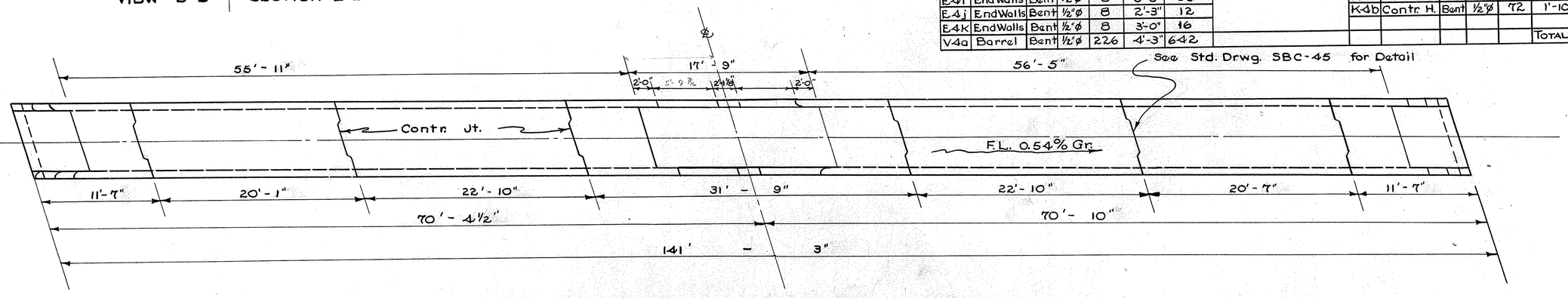


STEEL LIST						
Mark	Location	Shape	Size	No.	Length	Weight#
C4a	End Walls	Std	½"ϕ	2	7'-3"	10
C4b	End Walls	Bent	½"ϕ	14	3'-2"	30
E4a	Median Ditch Walls	Bent	½"ϕ	6	1'-9"	7
E4b	Median Ditch Walls	Bent	½"ϕ	4	2'-0"	5
E4c	Median Ditch Walls	Bent	½"ϕ	4	2'-2"	6
E4d	Median Ditch Walls	Bent	½"ϕ	4	2'-4"	6
E4e	Median Ditch Walls	Bent	½"ϕ	4	2'-7"	7
E4f	Median Ditch Walls	Bent	½"ϕ	4	2'-10"	8
E4g	Median Ditch Walls	Bent	½"ϕ	16	3'-11"	42
E4h	Median Ditch Walls	Bent	½"ϕ	8	10'-6"	56
E4i	End Walls	Bent	½"ϕ	8	6'-6"	35
E4j	End Walls	Bent	½"ϕ	8	2'-3"	12
E4k	End Walls	Bent	½"ϕ	8	3'-0"	16
V4a	Barrel	Bent	½"ϕ	226	4'-3"	642

DIAGRAM



STEEL LIST						
Mark	Location	Shape	Size	No.	Length	Weight#
L4a	End Walls	Str.	½"ϕ	18	6'-9"	81
L4b	End Walls	Str.	½"ϕ	4	4'-9	13
L4c	Barrel	Str.	½"ϕ	36	5'-8	136
L4d	Barrel	Str.	½"ϕ	18	19'-10"	238
L4e	Barrel	Str.	½"ϕ	36	22'-6"	541
L4f	Barrel	Str.	½"ϕ	36	6'-8"	160
L4g	Median Ditch Walls	Str.	½"ϕ	9	21'-3"	128
L4h	Median Ditch Walls	Str.	½"ϕ	4	5'-3"	14
L4i	Barrel	Str.	½"ϕ	18	20'-2"	243
S6a	Barrel, End & Median Ditch W	Bent	¾"ϕ	553	8'-2"	6783
K4a	Contr. H.	Bent	½"ϕ	72	2'-11'	140
K4b	Contr. H.	Bent	½"ϕ	72	1'-10"	88
					TOTAL	9447



CONTRACTION JOINTS LAYOUT
Scale 3/16" = 1'-0"

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-82-12.67
1 Mi.± East of Warren

Existing Bridge (Tr. 82-137- Low Truss) 550'± North of Proposed ℄. (To remain in place)

Bridge Data
Clear Span 102'-4"
Out to Out Fl. 108'-8"
Width Rdwy. 29'-0"
Floor above Br. St. 4'-4 1/8"
Curb 6"x12 1/8"
Height to Stream 15'-0"
Condition of Banks-Wooded-Bushy

B.M. (A 152) South end of the east Abutment of Bridge Tr. 82-137- Elev. 873.29

B.M. R.R. Spike N.W. Root of 48" Maple tree 153' Lt Sta. 729+44 Elev. 863.36

MOSQUITO CREEK

Standing Water 862.1

Standing Water 862.8

Standing Water 862.6

Standing Water 863.0

12" Stump

Drainage Area
Above Dam-Mosquito Creek Reservoir
97.6 Sq. Miles
Below Dam-Mosquito Creek Reservoir
30 Sq. Miles
Total Drainage Area
127.6 Sq. Miles

NOTE: Mosquito Creek Reservoir, completed in 1943, is 4.5± miles up stream from the Bridge Site on The proposed re-location of S.R. 82

TREES & BRUSH
End Appro. Slab Sta. 726+04.42

TREES
Begin Appro. Slab Sta. 727+39.62

BRUSH

To Warren Corp. Line 1.09 Miles — To U.S. 62 - 12.12 Miles

30° Skew

℄ of Survey

4' Bench

4' Bench

CURVE DATA
Δ = 42°12' Right
D = 1°06'
R = 5208.71'
T = 2009.87
E = 374.32'
L = 3886.37
P.C. = Sta. 702+45.56
P.I. = Sta. 722+55.43
P.T. = Sta. 740+81.93

Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy, thereof.

Transition 2:1 to 4:1 at three corners of Bridge.

Clears 50 Year Frequency H.W. El. 864.5 -4.1±

BRIDGE LIMITS

Sta. 726+04.42

Sta. 727+39.62

Bench El. 866.9

Bench El. 866.6

Proposed Grade -0.20%

High Water El. 867.2 (From Mosquito Creek Bridges - S.H.(I.C.H.) 329 Sec. S 1929) (See Note; Mosquito Creek Reservoir)

Assumed 50 Yr. Freq. H.W. El. 864.5
Water level 5-25-54 El. 859.6

± Elev. 857.0

2:1 (Normal)

2:1 (Normal)

Est. Ave. Pay length 54'

Est. Ave. Pay length 56' to 60'

All piles 14" cast-in-place concrete

Est. Ave Pay Length 72'

Profile On Proposed Center Line

PROPOSED STRUCTURE
TYPE: Continuous steel beams with reinforced concrete deck and capped pile substructure
SPAN: 40'-50'-40' c/c bearings
ROADWAY: 72' f/f of guard rails incl. 4' median
LOAD FREQUENCY: CF-400(51)
SKEW: 30° R.F.
WEARING SURF.: 1" Monolithic concrete
APPROACH SLABS: AS-1-54 (20' long)
ALIGNMENT: 1°06' Curve right
SUPERELEVATION: .026 ft/ft

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. TRU-82-1375
OVER MOSQUITO CREEK
TRUMBULL CO. S.R. 82
STA. 726 04.42
727 39.62

SCALE 1"=20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Aerial Survey	Aerial Survey	C.E.S.	C.E.S.	D.D.C.	C.T.A.

BFG C.T.A. 4-11-56

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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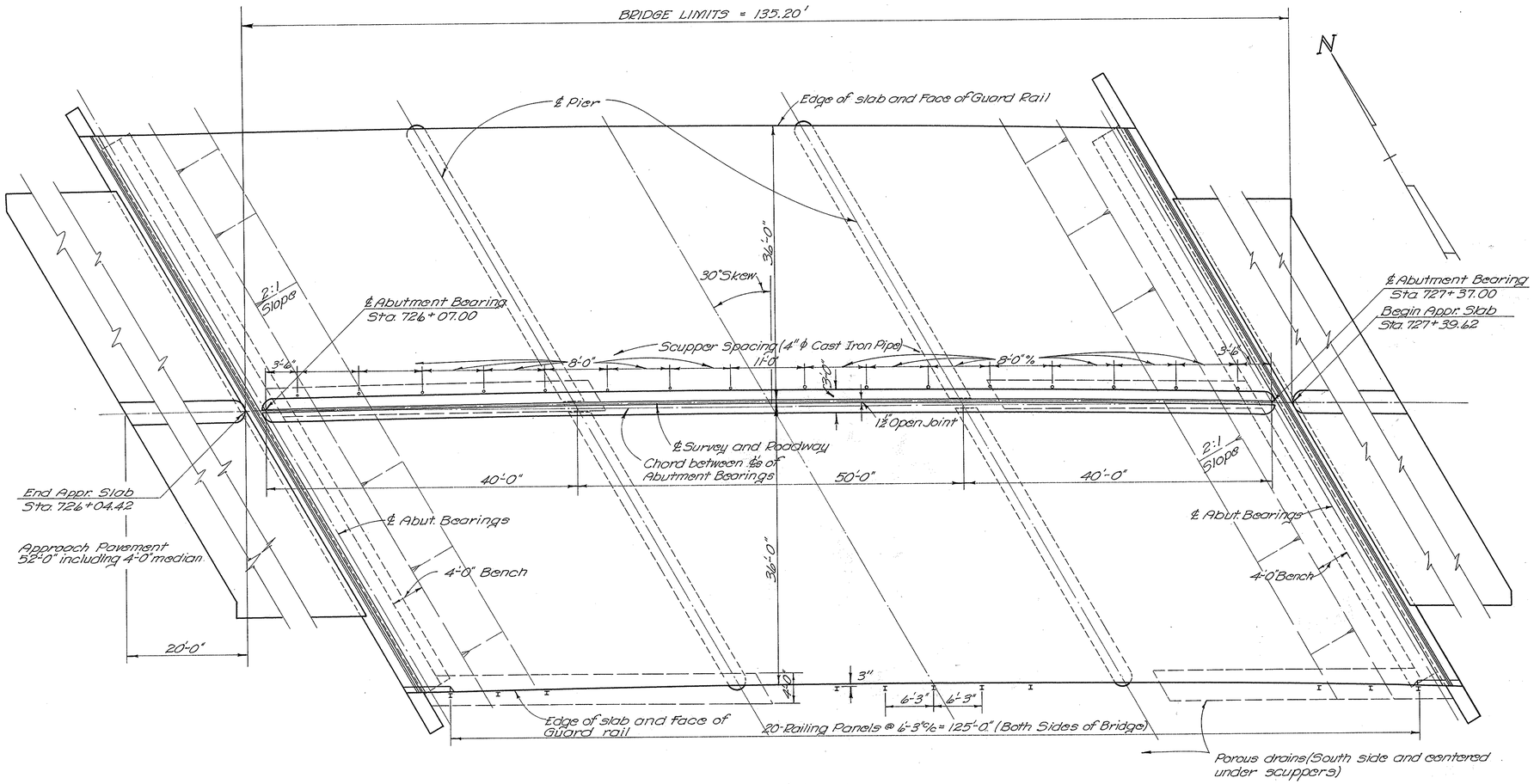
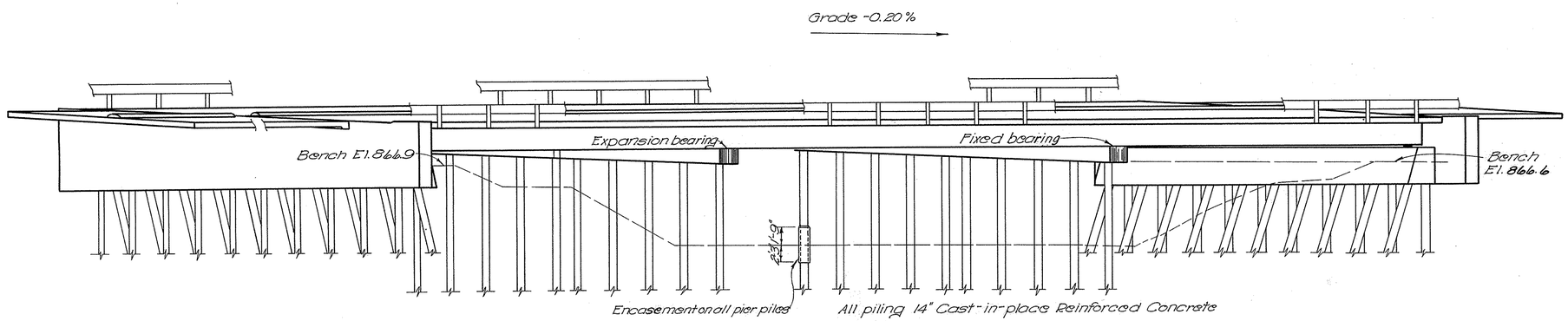


GENERAL PLAN



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 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

PILES shall be driven to a minimum bearing capacity of 33 tons for the abutments and 43 tons for the piers. The length of penetration of every pile shall be at least 80% of the estimated average penetration the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class C concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

PAINT, both shop & field, shall be applied by brushing. Spray application will not be permitted.

SURFACE FINISH OF CONCRETE: Fascia of deck slab shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 511.

POROUS DRAINS, extending from face of abutment to Elev. 859.6, shall be provided at both south corners of the bridge. The drains shall be 4 ft. wide and one foot thick.

GALVANIZING of all members which are specified to be galvanized shall be as called for in Sec. M-7.4(d).

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION AND GENERAL NOTES

BRIDGE No. TRU-82-1375
OVER MOSQUITO CREEK
TRUMBULL COUNTY Sta. 726+04.42
Sta. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.P.S.	G.P.S.	RHD	JEM	BFG. G.P.S.	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-82-12.67

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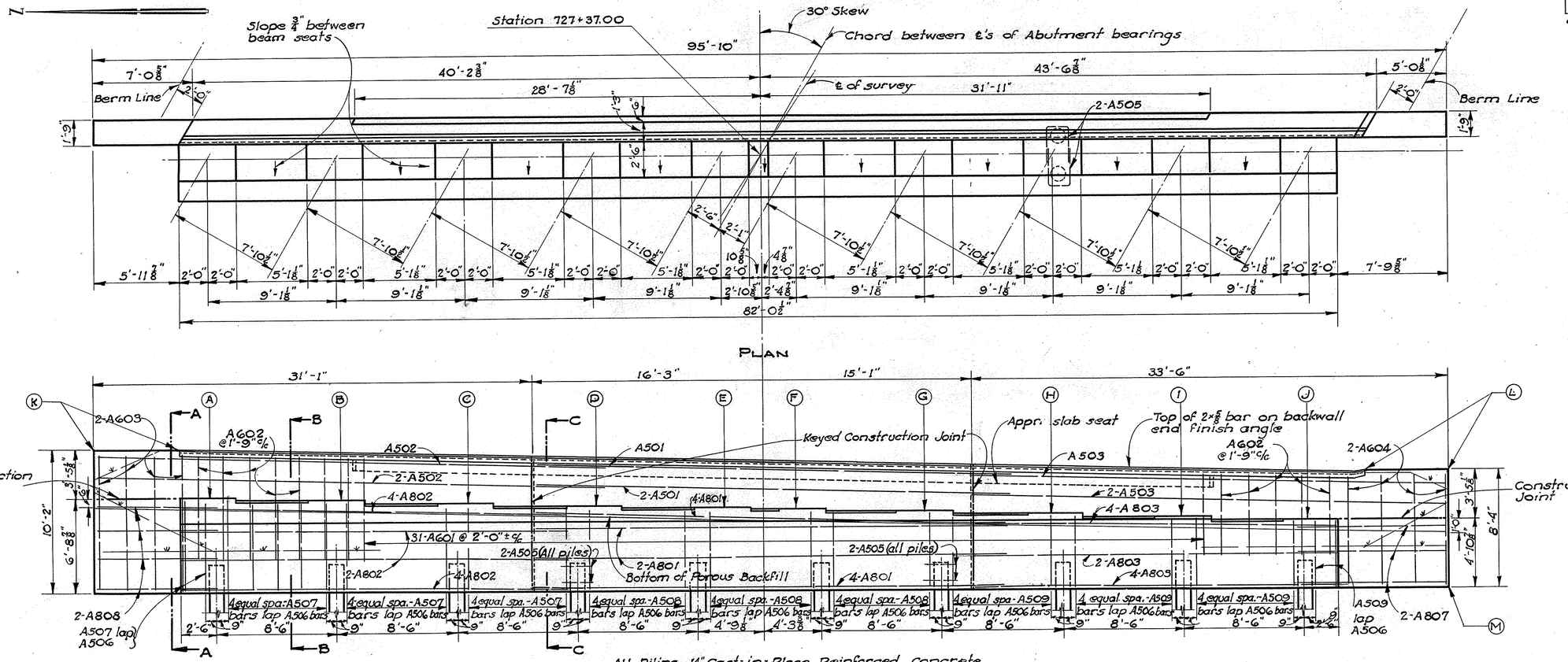
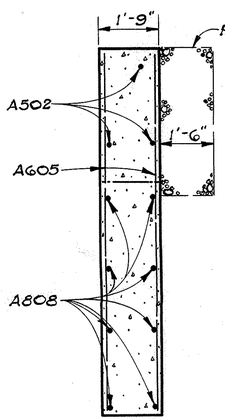
Pt.	Elevation
A	870.34
B	870.12
C	869.91
D	869.69
E	869.49
F	869.35
G	869.15
H	868.93
I	868.72
J	868.50
K	873.77
L	871.93
M	863.6



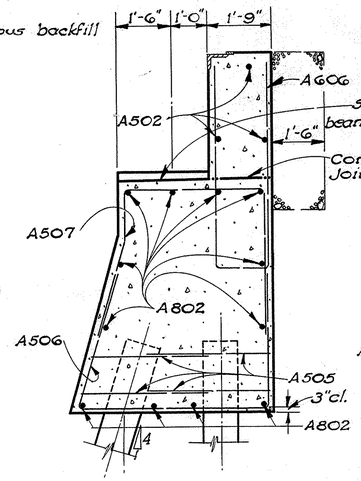
PLAN

All Piling 14" Cast-in-Place Reinforced Concrete

ELEVATION

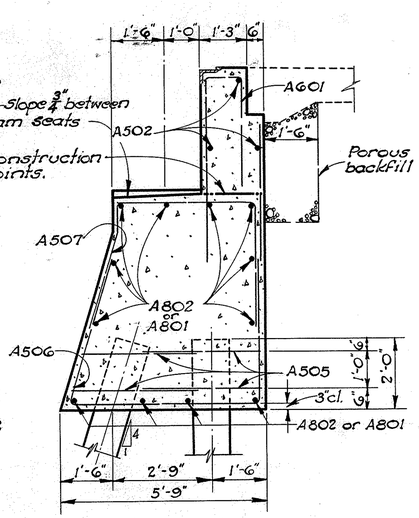


SECTION A-A



Batter front piles 1:4

SECTION B-B



SECTION C-C

NOTE: For additional notes see sheet # 172

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

FORWARD ABUTMENT DETAILS

BRIDGE NO. TRU-82-1375 OVER MOSQUITO CREEK

TRUMBULL COUNTY STA. 726+04.42
727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.F.S.	E.F.S.	PCB	JEM	BFG	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-82-12.67

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N

Sta. 726+07.00

30° Skew

℄ Chord between ℄ Abutment bearings

93'-3⅝"

39'-9¼"

28'-3⅜"

42'-9⅛"

31'-3⅞"

5'-2¾"

5'-6"

2'-0"

2'-0"

Slope ¾" between bridge seats

2-A505 All piles

℄ of Survey

℄ Bearing

1'-9"

1'-9"

6"

14'-10"

15"

2'-1"

2'-5"

4⅛"

10⅝"

4'-2⅝" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-10½" 5'-1⅛" 2'-0" 2'-0" 7'-0"

9'-1⅛" 9'-1⅛" 9'-1⅛" 9'-1⅛" 2'-4⅛" 2'-10⅝" 9'-1⅛" 9'-1⅛" 9'-1⅛" 9'-1⅛"

82'-0½"

PLAN

K A B C D E F G H I J L

31'-1" 13'-11" 15'-2⅝" 33'-1"

Construction Joint

Keyed Construction Joint

Construction Joint

2-A604

A602 @ 1'-9" %±

A503

A504

A503

A602 @ 1'-9" %±

2-A603

2-A503

4-A804

2-A504 4-A806

4-A805

2-A805

3'-5"

8'-3½"

4'-10½"

1'-0"

30-A601 @ 2'-0" ±%

2-A806

2-A505

2-A806

4-A806

2-A805

4-A805

Bottom of Porous Backfill

3'-5"

6"

6'-8½"

10'-1½"

4-A804

2-A804

2-A809

A509 lap A506

1 equal spa.~A509 bars lap A506 bars

1 equal spa.~A509 bars lap A506 bars.

1 equal spa.~A509 lap A506 bars.

1 equal spa.~A508 bars lap A506 bars.

1 equal spa.~A508 bars lap A506 bars.

1 equal spa.~A508 lap A506 bars

1 equal spa.~A507 bars lap A506 bars

1 equal spa.~A507 bars lap A506 bars

1 equal spa.~A507 lap A506 bars

2-A810 A507 lap A506

M

9" 9"

2'-6" 8'-6" 8'-6" 8'-6" 8'-6" 4'-3⅜" 4'-9⅛" 8'-6" 8'-6" 8'-6" 8'-6" 2'-6"

All Piling ~ 14" Cast in Place Reinforced Concrete

ELEVATION

Pt.	Elevation
A	868.77
B	868.98
C	869.20
D	869.41
E	869.62
F	869.75
G	869.96
H	870.18
I	870.39
J	870.61
K	872.19
L	874.02
M	863.9

NOTES:

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

REINFORCING BARS shall be carefully placed in the abutment seat so as to clear the anchor bolts.

REINFORCING BAR clearance shall be 2" from face of concrete unless otherwise specified.

Concrete shall be Class "E" and payment will be made on this basis but Class "C" concrete may be used for any or all parts of the abutment.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

REAR ABUTMENT DETAILS
BRIDGE No. TRU-82-1375
OVER MOSQUITO CREEK

TRUMBULL CO. Sta. 726+04.42
Sta. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.P.S. G.A.S.	E.P.S. G.A.S.	D.A.S.	J.E.M.	B.F.G. A.J.K.	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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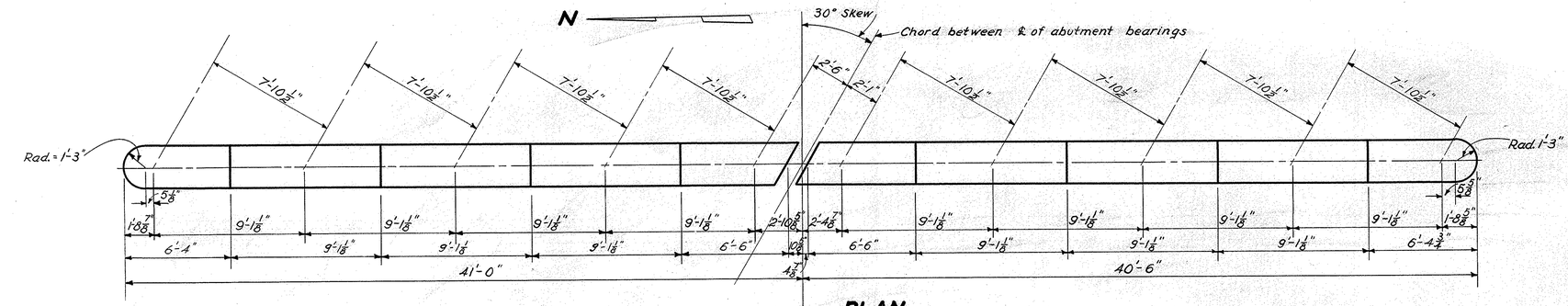
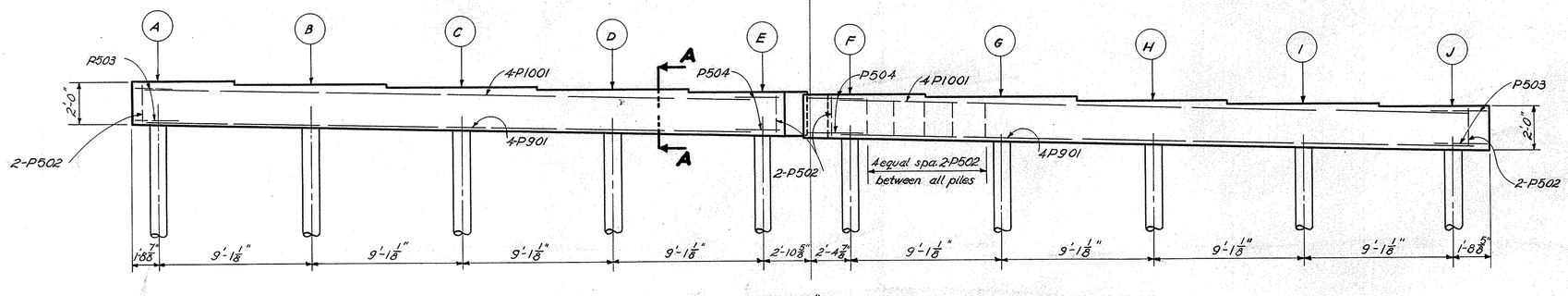


PLAN



All Piling – 14" Cast-in-Place Reinforced Concrete

ELEVATION

	REAR PIER	FORWARD PIER
Pt.	Elevation	Elevation
A	870.46	870.44
B	870.25	870.23
C	870.04	870.02
D	869.82	869.80
E	869.61	869.59
F	869.48	869.47
G	869.27	869.25
H	869.06	869.04
I	868.84	868.83
J	868.63	868.61

PIER DETAILS

CONCRETE shall be Class "C."

PILE CASINGS: The casings of cast-in-place concrete piles shall be of the type that is left in place and is designed to resist both direct compression and bending. The portion above the circular concrete encasement shall be of uniform diameter (not tapered) and shall have a thickness of metal not less than No. 7 gauge.

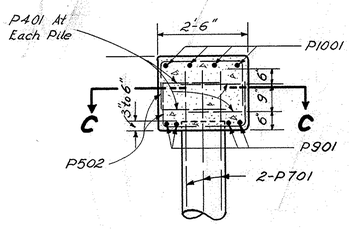
PILE ENCASEMENT, as shown hereon, shall be provided for each pier pile. It shall consist of Class "C" or "E" concrete and may be placed in water as per Sec. S-1.18, care being taken to remove all dirt between the piles and the forms. Metal forms, if used, may be left in place if the exposed portion is painted or galvanized. Corrugated metal may be used. Metal forms with irregular deformations, such as oil drums, will not be permitted. If metal forms meeting the requirements of Sec. M-6.4(a) are left in place, no spiral reinforcement in the concrete will be required.

PILE PAINTING: The exposed portion of the piles, above the encasement, shall be painted in accordance with S-8, applying two coats as per Secs. M-9.9, M-9.20 or M-9.21, and two coats as per Sec. M-9.12. Metal forms, left in place on the encasement, unless galvanized, shall be similarly painted.

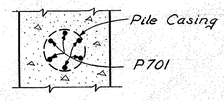
PAYMENT FOR PILES, per lin. ft., includes payment for the encasement (concrete, reinforcement, forms, painting, galvanizing, and excavating) and the pile painting. The elevation of cut-off, as per Sec. S-18.13, shall be considered as 4" above the bottom of the concrete cap.

EXTRA SPECIAL CARE shall be exercised by the Contractor in placing the reinforcing steel in the piers so that it will not interfere with the drilling of anchor bolt holes for bearing plate as called for in Sec. S-0.03 of the Construction and Materials Specifications.

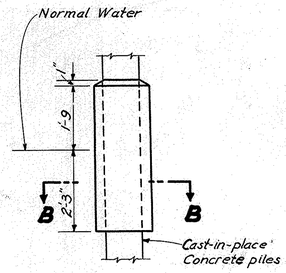
REINFORCING BAR clearance shall be 2".



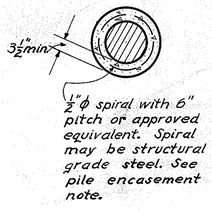
SECTION A-A



SECTION C-C



DETAIL OF PILE ENCASEMENT



SECTION B-B

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE NO. TRU-82-1375
OVER MOSQUITO CREEK

TRUMBULL COUNTY — STA. 726+04.12
STA. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.P.S.	P.P.S.	R.W.L.	JEM	BFG	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
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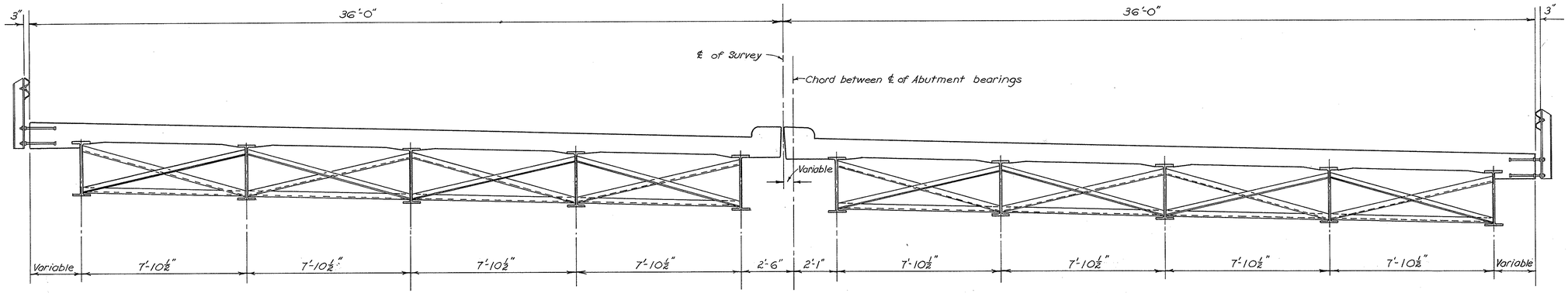
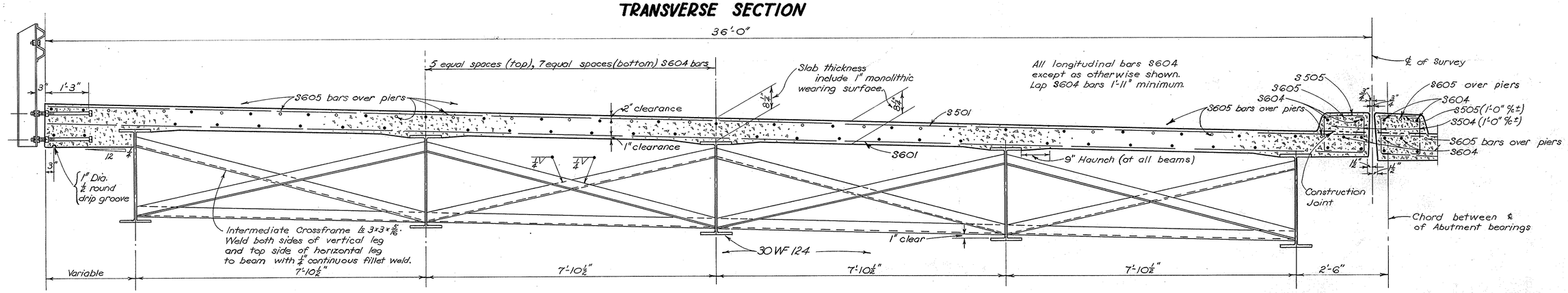
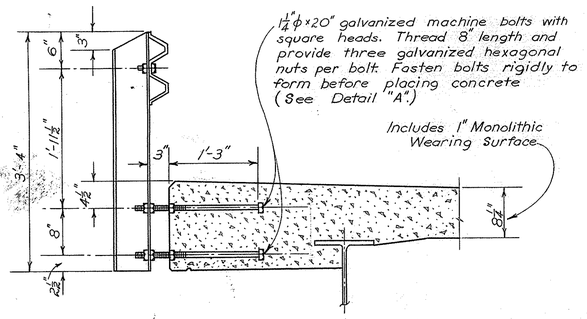


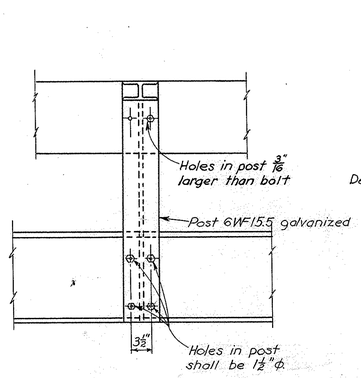
TRANSVERSE SECTION



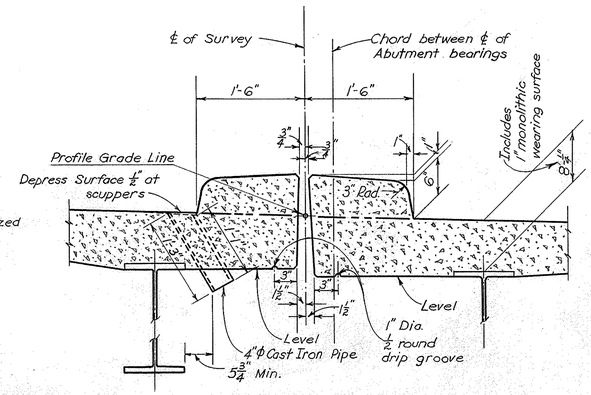
TRANSVERSE HALF SECTION



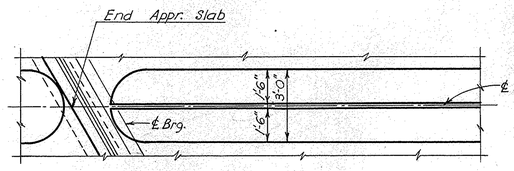
PART DECK SECTION



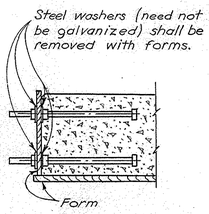
ELEVATION OF RAILING POST



MEDIAN DETAILS



TYPICAL MEDIAN AT END FINISH



DETAIL A

For additional notes see sheet No. 176

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
BRIDGE No. TRU-82-1375
OVER Mosquito Creek

TRUMBULL COUNTY — Sta. 726+04.42 — Sta. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
B.F.G.	B.F.G.	P.D.M.	JEM	B.F.G.	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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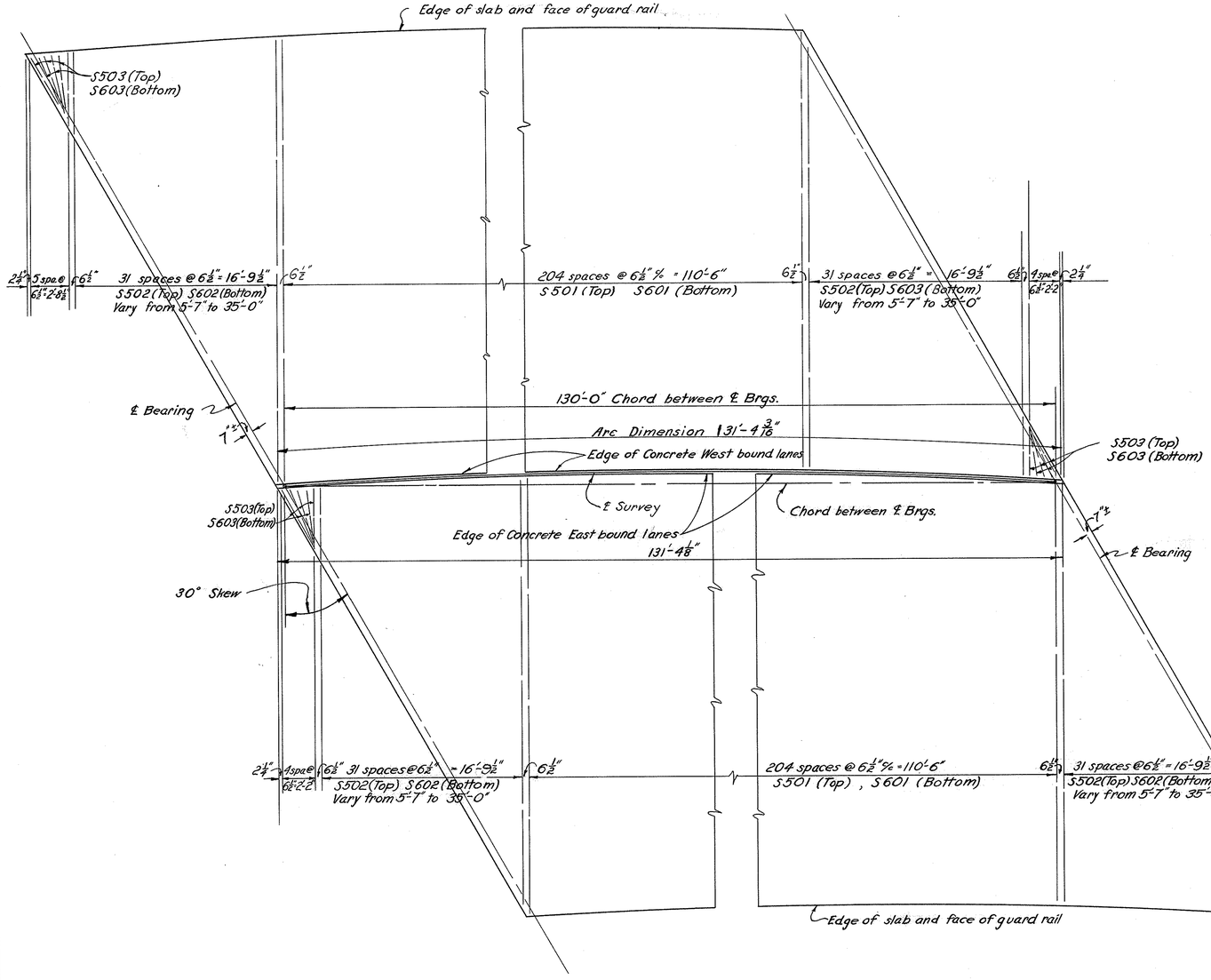
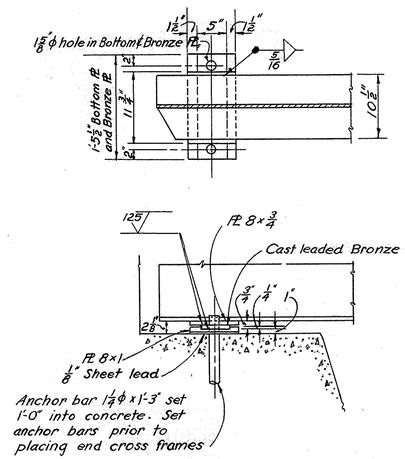
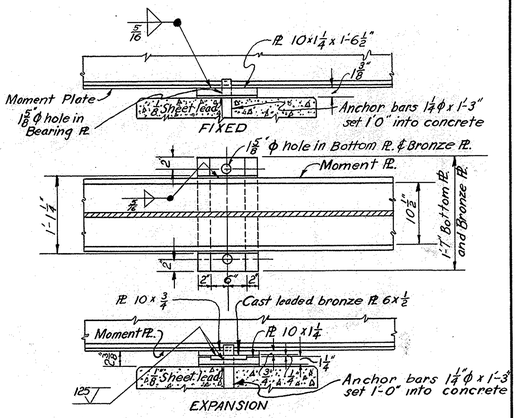
TRU-82-12.67



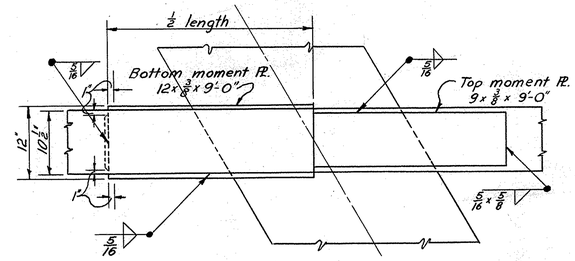
PART PLAN OF DECK REINFORCING STEEL



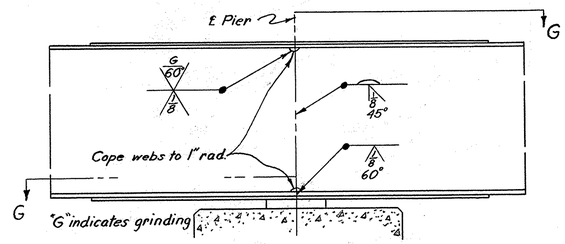
ABUTMENT BEARING PLATES



PIER BEARING PLATES



SECTION G-G



BEAM SPLICE DETAILS
with Moment PLATES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
BRIDGE NO. TRU-82-1375
OVER MOSQUITO CREEK

TRUMBULL CO.

STA. 726+04.42
STA. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.P.S.	E.P.S.	D.A.S.	JEM	BFG	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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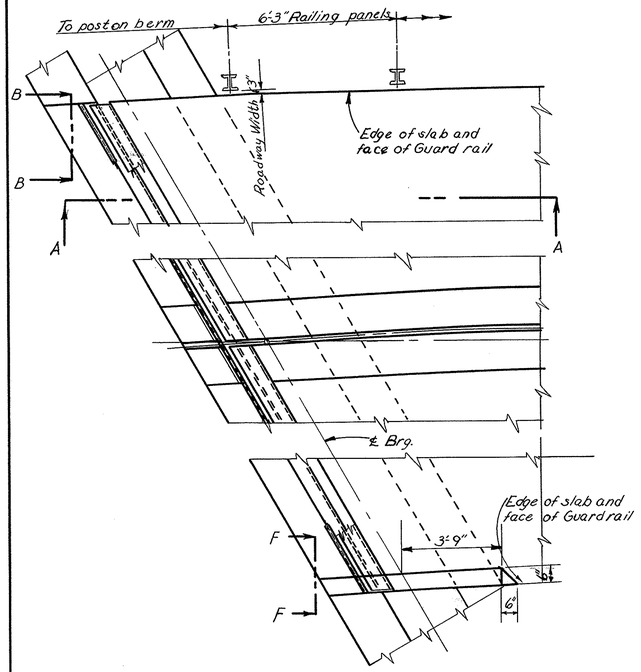
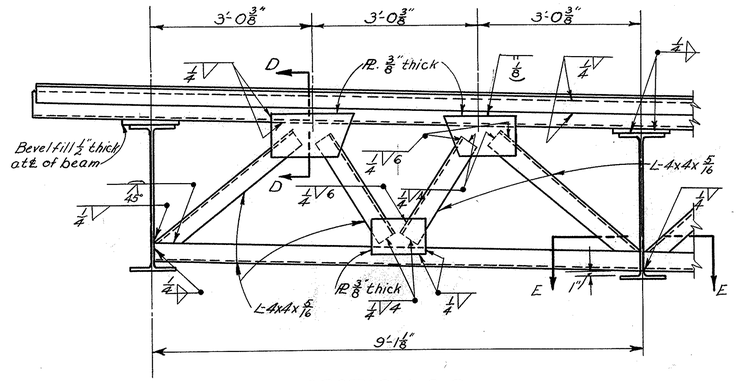
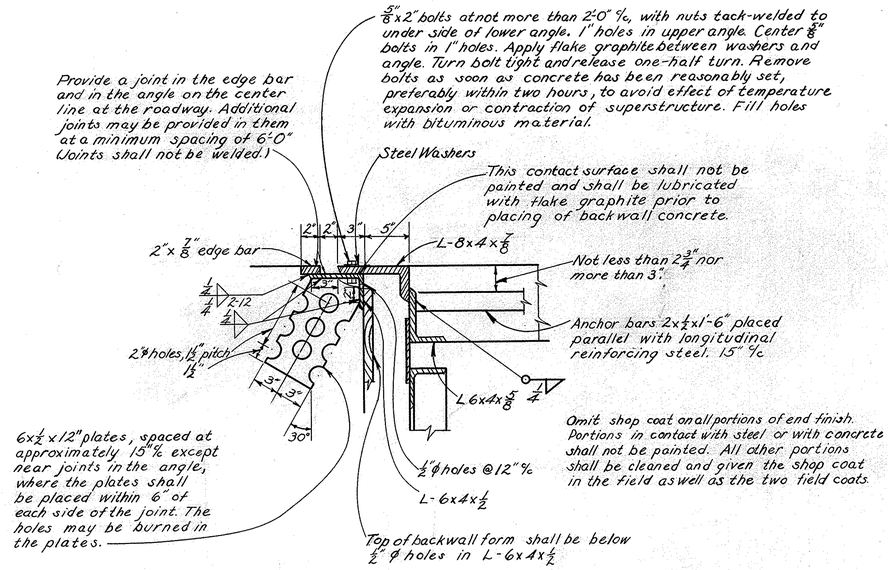
TRU-82-12.67



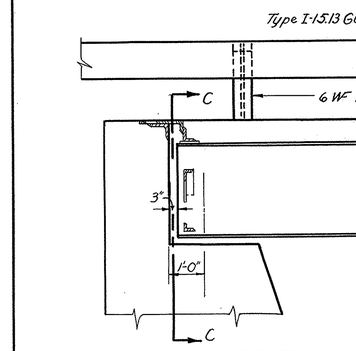
PART PLAN AT ABUTMENT



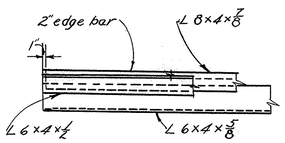
SECTION C-C



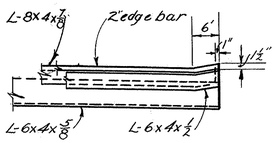
SECTION D-D



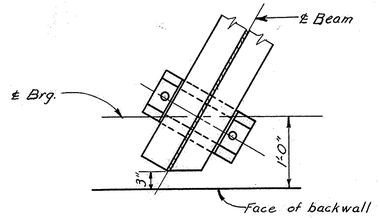
SECTION A-A



SECTION B-B



SECTION F-F



SECTION E-E

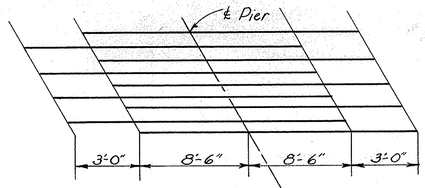


DIAGRAM SHOWING STAGGER OF S605 BARS OVER PIERS

WELDING of structural steel shall be Class "A". Any welds shown as field welds may, at the option of the Contractor, be made in the shop.

BEAM SPLICE WELDING PROCEDURE:
1. Raise the abutment ends of the beams 3/8".
2. Butt-weld the beam flanges and web.
3. Weld the bottom and top moment plates.
4. Lower the beam ends to final position.

END FINISH:
The portion attached to the backwall shall be placed in segments which shall be closely butted, but shall not be welded.

CONCRETE shall be Class "C".

DECK CONSTRUCTION PROCEDURE:
The deck slab shall be placed in sections, between transverse construction joints, in the numerical order and in the direction indicated on the "Illustration of Framing and Concrete Pouring Sequence," in order that the major portion of the dead load deflection will occur prior to placing concrete over each pier.

RAILING:
The transition between the guard rail height on the bridge and on the bridge and on the approaches shall be made in a distance of 100 feet from each end of the bridge.
The guard rail shall be painted white in accordance with Section I-15.07 of the Construction and Material Specifications. The galvanized posts and anchor bolts shall not be painted.
The tabulated railing quantity is for the length of railing between the bridge limits shown on the project plans. The price per linear foot of railing includes payment for guard rail, posts, anchors, connectors, galvanizing and painting.

REINFORCING BAR clearance shall be 2" unless otherwise specified.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS
BRIDGE NO. TRU-82-1375
OVER MOSQUITO CREEK
TRUMBULL COUNTY

Sta. 726+04.42
Sta. 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.P.S. G.H.S.	E.P.S. G.H.S.	F	JEM	BEG O.K.	4-11-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-82-12.67

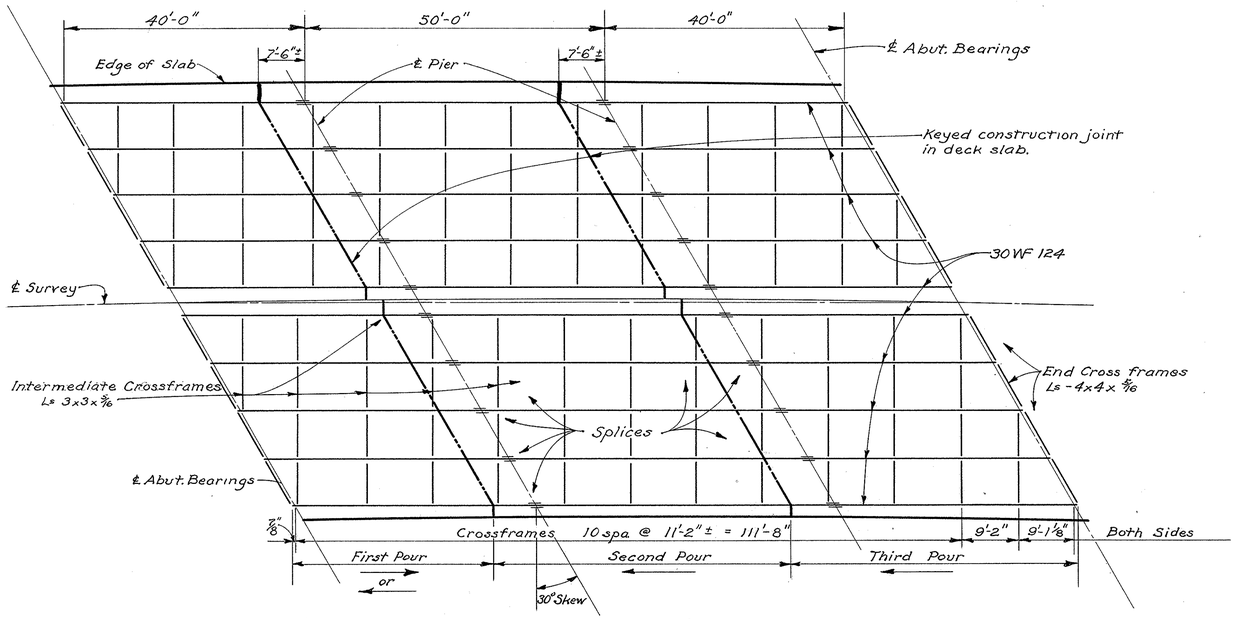


ILLUSTRATION OF FRAMING AND CONCRETE POURING SEQUENCE

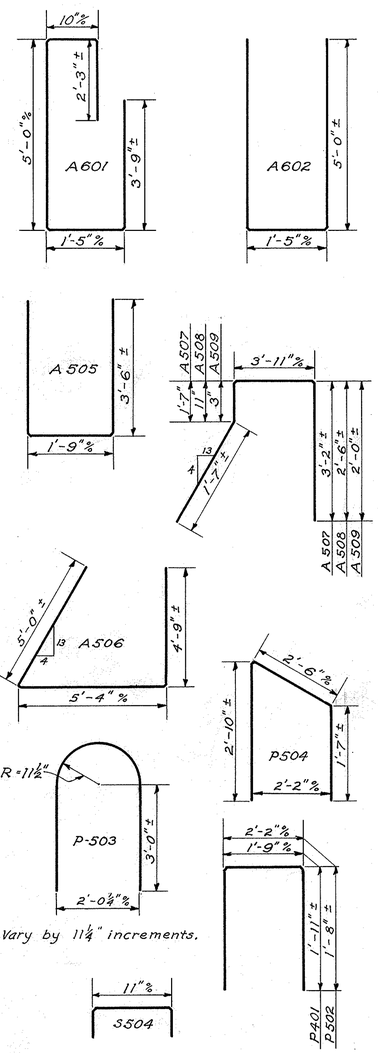
ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superst.	Abut	Piers	Gen.	As Built		
E-2	157	cu. yds.	Unclassified Excavation		157					
S-1	30	cu. yds.	Class "C" concrete, pier caps							
S-1	263	cu. yds.	Class "C" concrete, Superstructure		263	30				
S-1	222	cu. yds.	Class "E" concrete, Abutments		222					
S-4	89,077 ~~203,800~~	lbs.	Reinforcing Steel	70479	11423	7049	126			
S-7	203800 ~~203,800~~	lbs.	Structural Steel	~~203800~~				C-5, -130	203,670	1A
S-8	203800 ~~203,800~~	lbs.	Field painting of Structural steel	203800				C-5, -130	203,670	1A
S-14	270.40	lin. ft.	Railing (I-15.13 with galvanized steel posts)	270.40						
S-16	lump ~~sum~~	sum	First test pile				lump			
S-18	~~3660~~	lin. ft.	14" Cast-in-Place Reinforced Concrete piles.		~~2240~~	~~1440~~		C-5, +138	3818	1A
S-29	36	cu. yds.	Porous backfill		36					
S-29	0 ~~20~~	cu. yds.	Porous drains on embankment slopes				~~20~~	C-7, -20	0	1A
S-29	16	each	Scuppers (4"ϕ Cast Iron Pipe)	16						

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Stp.
Abutment				
A801	12	33'-10"	1084	S
A802	12	27'-5"	878	S
A803	10	25'-6"	681	S
A804	10	29'-4"	783	S
A805	12	26'-11"	862	S
A806	12	31'-5"	1006	S
A807	6	10'-3"	164	S
A808	8	8'-6"	184	S
A809	6	6'-5"	103	S
A810	8	8'-4"	178	S
A601	61	12'-9"	1168	B
A602	25	11'-2"	419	B
A603	16	9'-9"	234	S
A604	14	7'-11"	166	S
A501	3	32'-10"	103	S
A502	3	32'-7"	102	S
A503	3	33'-4"	104	S
A504	3	30'-6"	95	S
A505	80	8'-6"	709	B
A506	98	14'-10"	1516	B
A507	34	9'-10"	349	B
A508	30	8'-6"	269	B
A509	34	7'-6"	266	B
Pier				
P1001	16	38'-0"	2616	S
P901	16	38'-0"	2067	S
P502	176	5'-3"	964	B
P503	8	9'-2"	76	B
P504	8	6'-8"	56	B
P401	80	5'-5	289	B
P701	120	4'-0"	981	S
Replacement Steel				
RE 10	1	7'-2"	31	S
RE 9	1	6'-10"	23	S
RE 8	2	6'-6"	35	S
RE 6	3	5'-11"	27	S
RE 5	1	5'-7"	6	S
RE 4	1	5'-3"	4	S
Superstructure				
S 601	410	35'-6	21,862	St
S602	4 Series of 32	5'-7" to 35'-0"	3901	St
S603	22	4'-4"	143	St
S604	440	34'-4"	22,695	St
S605	92	20'-0"	2764	St
S501	410	35'-6"	15,181	St
S502	4 Series of 32	5'-7" to 35'-0"	2709	St
S503	22	4'-4"	99	St
S504	264	1'-11"	528	B
S505	528	1'-1"	597	St

Bending Diagrams



Vary by 11¼" increments.

Vary by 11¼" increments.

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, A801 is a No. 8 size bar and P1001 is a No. 10 size.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS, STEEL LIST, AND ESTIMATED QUANTITIES

Bridge No TRU-82-1375
Over Mosquito Creek
TRUMBULL COUNTY STA 726+04.42
STA 727+39.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.F.S.	E.F.S.	~~H.E.R.~~	JEM	BFG	4-11-58	

1A Revised As-Built H.E.R. 6-17-59

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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TRU-82-12.67

AT HOWLAND CORNERS

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made of the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy thereof.

B.M + on N.W. corner West Headwall culvert
200' North of ℄ of relocation S.R. 82 Elev. 948.66

PROPOSED STRUCTURE

Type: Continuous reinf. concrete slab with reinf. concrete substructure.
Spans: 44'-55'-55'-44' c/c Brgs.
Roadway: 56 ft. face to face of 2'-0" safety curbs, including 4 ft. median
Load Frequency: CF-400(51)
Skew: None
Wear Surf: 1" Monolithic
Appr. Slabs: AS-1-54 (20' long)
Alignment: Tangent

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SITE PLAN

BRIDGE NO. TRU-82-1467
OVER S.R. 46
TRUMBULL CO. S.R. 82
STA. 774+81.83
776+84.17
SCALE 1"=20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
Howell Surveying	Howell Surveying	B.F.G.	B.F.G.	J.W.G.	C.W.L.

B.F.G. 2-28-56

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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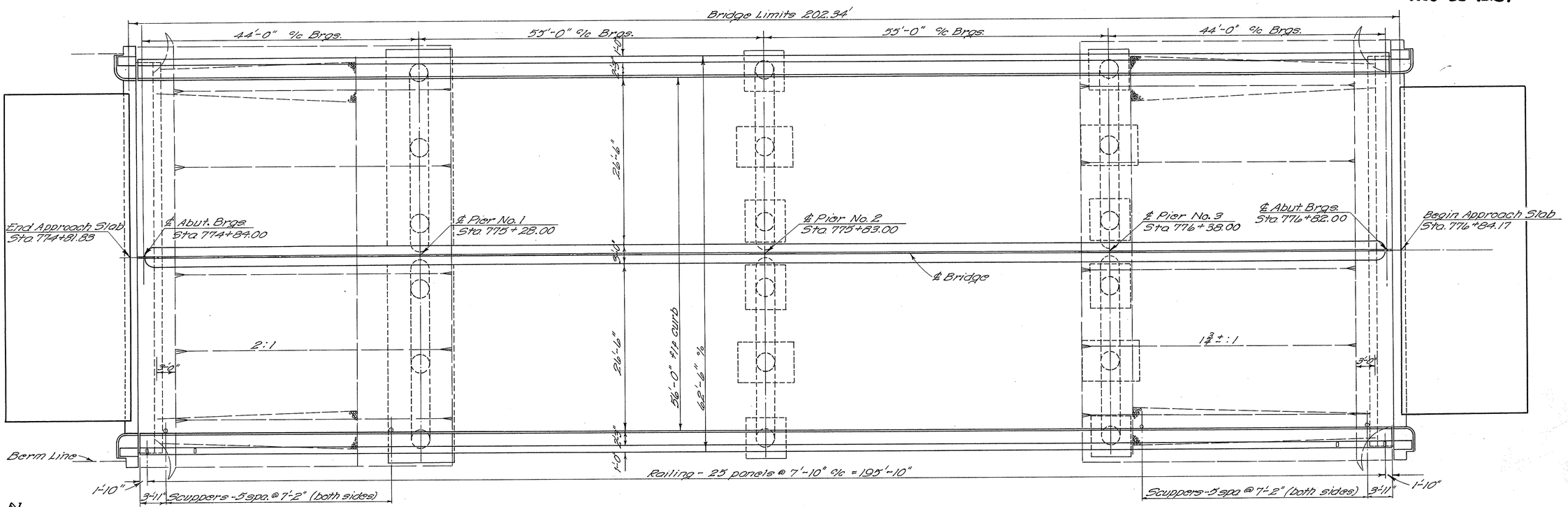
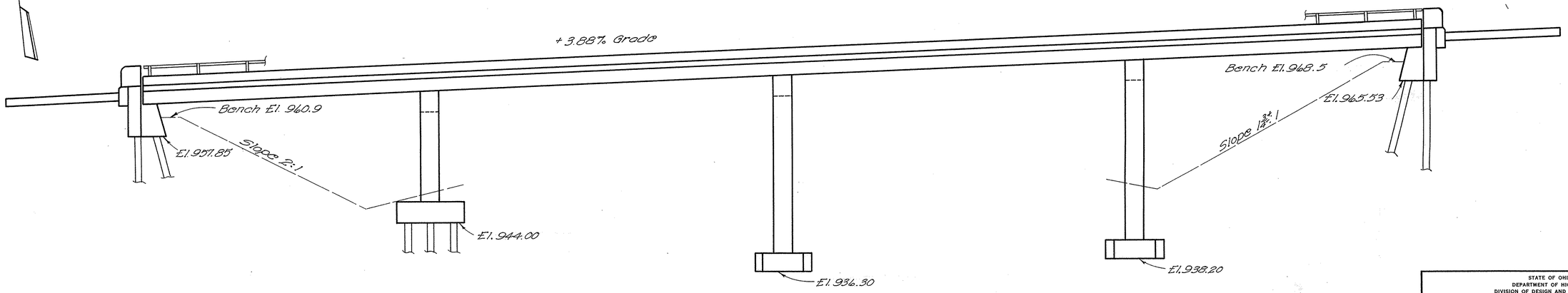
TRU-82-12.67



GENERAL PLAN



GENERAL ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION

BRIDGE No. TRU-82-1467 over SR 46

TRUMBULL COUNTY STA. 774+81.83 STA. 776+84.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	RMP	EHN	DFG	2-28-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-82-12.67

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CS-2-54, dated 12-1-54, and Supplemental Specification No. S-114, dated 8-30-55.

PILES shall be driven to firm contact with shale, which shall be considered as attained when the capacity according to the formula in Sec. S-18.05 is at least 40 tons per pile for the pier piles and 35 tons for the abutment piles if a 7000 ft. lb. steam hammer is used, or 30 tons for the pier piles and 25 tons for the abutment piles if a steam hammer or drop hammer of 15,000 ft. lb or greater energy is used and if the length of penetration is approximately equal to the depth to shale according to the bridge foundation investigation report. If the energy rating of the hammer is between these values the required formula capacity shall be determined by interpolation. (The design load is 22 tons per pile.) The length of penetration of every pile shall be at least 80% of the estimated average pay length of the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

FOOTINGS for Piers No. 2 and No. 3 shall extend a minimum of 3" into solid shale, or to the elevations shown, whichever is lower.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54 and 2-1-55.

WELDING of structural steel shall be Class "A" except as otherwise shown. Class "B" welds shown thus: B

SURFACE FINISH OF CONCRETE: Railing parapet and end posts, curb faces, fascias of deck and exposed surfaces of piers, abutments and wing walls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

PAINT, both shop and field, shall be applied by brushing. Spray application will not be permitted.

POROUS DRAINS, extending from face of abutment to Elev. 946.4 at rear abutment and Elev. 949.0 at forward abutment, shall be provided at all four corners of the bridge. The drains shall be 6 feet wide at the low end of the rear abutment and 7 feet wide at the low end of the forward abutment, tapering to 4 feet wide at the face of the abutments, and one foot thick.

MAINTENANCE OF TRAFFIC: Two-way traffic shall be maintained on S.R. 46 at all times. Minimum construction clearances shall be a 26 ft. roadway width and 13 ft. clear height. The Contractor shall provide platforms, nets or other suitable means above the travelled lanes to protect the travelling public on S.R. 46.

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp.
Superstructure				
A1154	300	42'-8"	68,006	S
B1154	52	35'-11"	3,923	B
C1154	52	31'-1"	8,588	B
D1154	52	32'-6"	8,979	S
E1154	52	24'-2"	6,677	S
F1154	228	35'-2"	42,599	S
G1154	108	16'-0"	9,181	S
H1154	114	10'-8"	6,461	S
J601	76	28'-11"	3,301	S
K601	76	23'-8"	2,702	S
L501	12	29'-2"	365	S
M701	410	30'-3"	25,351	S
N601	242	30'-3"	10,995	S
O501	20	24'-2"	504	S
P501	8	28'-6"	238	S
R1154	48	34'-0"	8,671	S
S501	446	5'-2"	2,403	B
T501	450	3'-5"	1,604	B
U501	450	7'-11"	3,716	B
V501	16	5'-7"	*	S
V502	96	15'-4"	*	S
W501	284	3'-1"	*	B
X501	284	3'-11"	*	B

* Included with railing for payment.

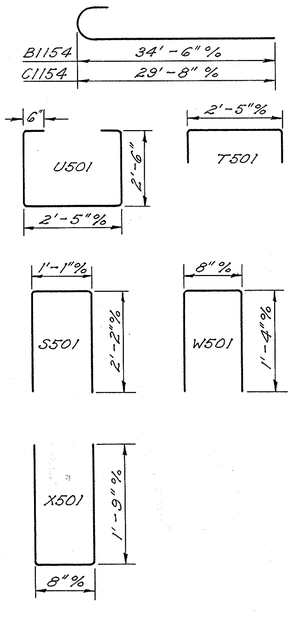
Mark	No.	Length	Weight	Shp.
Piers				
P1101	36	13'-8"	2,614	B
P1102	36	21'-1"	4,033	S
P1001	84	17'-10"	6,446	B
P901	24	17'-4"	1,414	S
P902	24	27'-8"	2,258	S
P903	24	27'-11"	2,278	S
P904	24	17'-2"	1,401	S
P905	24	27'-6"	2,244	S
P906	24	27'-3"	2,264	S
P907	10	17'-0"	578	S
P908	10	27'-4"	929	S
P909	10	27'-6"	935	S
P910	14	30'-11"	1,472	B
P911	14	31'-3"	1,488	B
P912	14	31'-5"	1,495	B
P913	24	32'-8"	2,666	B
P914	216	7'-2"	5,263	B
P915	28	11'-0"	1,047	B
P801	32	11'-8"	997	B
P601	312	7'-0"	3,280	B
P603	132	7'-6"	1,487	B
P501	64	13'-1"	873	B

Mark	No.	Length	Weight	Shp.
Abutments				
A801	40	32'-1"	3,426	S
A601	54	11'-3"	912	B
A602	52	3'-1"	241	S
A501	78	10'-11"	888	B
A502	78	9'-11"	807	B
A503	20	28'-6"	595	S
A504	64	8'-5"	562	B
A505	240	2'-11"	730	B
A506	40	7'-6"	313	S
A507	8	5'-8"	47	S
A508	24	7'-11"	198	S
A509	24	4'-8"	117	S
A510	8	3'-10"	32	S
A511	16	4'-5"	74	S
A512	12	8'-11"	112	B
A513	12	2'-11"	37	S
R501	8	5'-2"	*	B
R502	16	2'-6"	*	S

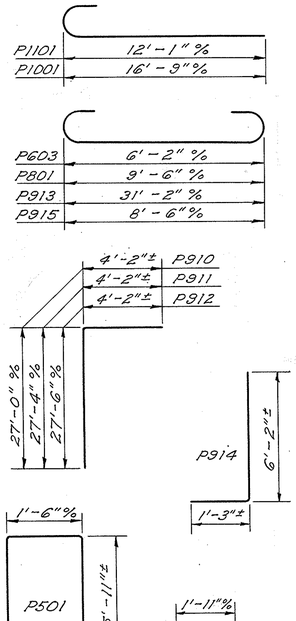
* Included with railing for payment.

Mark	No.	Length	Weight	Shp.
Replacement Bars				
RE1101	9	7'-6"	360	S
RE1001	1	7'-2"	31	S
RE901	2	6'-10"	46	S
RE801	1	6'-6"	17	S
RE701	2	6'-2"	26	S
RE601	2	5'-11"	18	S
RE501	1	5'-7"	6	S
RE401	1	5'-3"	4	B

Bending Diagrams

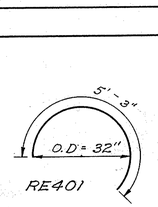


Bending Diagrams



SPIRALS

Mark	No.	Core Dia. %	Length	Pitch	No. Turns	Weight
SP401	2	32"	14'-6"	4½"	41	538
SP402	2	32"	24'-10"	4½"	69	907
SP403	2	32"	25'-1"	4½"	70	919
SP404	2	32"	14'-4"	4½"	41	537
SP405	2	32"	24'-8"	4½"	68	895
SP406	2	32"	24'-11"	4½"	69	908
SP407	2	32"	14'-2"	4½"	40	525
SP408	2	32"	24'-6"	4½"	68	894
SP409	2	32"	24'-9"	4½"	69	907



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.

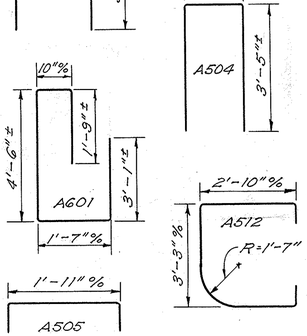
The "No. of Turns" shown in the steel list for the spiral bars is the "Length" divided by the pitch plus 3 turns (total number of coils), expressed as the nearest whole number.

Spiral reinforcing bars shall not have deformations but shall in other respects conform to Item S-4.

1½ closed coils shall be provided at the ends of each spiral unit.

Four steel channel, tee or angle spacers weighing approximately 0.68 lb. per lin. ft. of 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.

Bending Diagrams



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, A700 is a No. 7 size bar and A1014 is a No. 10 size.

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstr.	Abuts.	Piers	Gen.	As Built		
E-2	lump	sum	Cofferdams, cribs and sheeting				lump			
E-2	~~667~~ 667	cu.yd.	Unclassified excavation, including shale		~~116~~	~~545~~		C-5, +6	667	A3
S-1	~~961~~ 982	cu.yd.	Class "C" concrete, superstructure	~~982~~				C-5, -21	961	A3
S-1	~~174~~ 158	cu.yd.	Class "C" concrete, pier caps & columns			~~158~~		C-5, +16	174	A3
S-1	145	cu.yd.	Class "E" concrete, pier footings			145				
S-1	143	cu.yd.	Class "E" concrete, abutments		143					
S-4	284,356	lb.	Reinforcing steel	220,264	9091	54,492	509			
S-7	~~10,170~~ 10,295	lb.	Structural steel end finish & scuppers, including all painting	10,170				C-5, +125	10,295	A3
S-9	816	lb.	½" Cast leaded bronze sliding plates	816						
S-9	338	sq.ft.	½" Premolded expansion joint filler	338						
S-14	411.66	lin.ft.	Railing (Aluminum rail and supports, concrete parapet and end posts)	411.66						
S-16	lump	sum	First test pile				lump			
S-18	~~1320~~ 1440	lin.ft.	Steel piling, 12 BP 53		~~665~~	~~575~~		C-5, -134	1306	A3
S-29	25	cu.yd.	Porous backfill				25			
S-29	30	cu.yd.	Porous drains on embankment slopes				30			

A3 Revised As-Built H.E.R. 6-17-59

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL NOTES, ESTIMATED QUANTITIES & REINFORCING STEEL LIST

BRIDGE No. TRU-82-1467
over S.R. 46
Sta. 774+81.83
to 776+84.17
Trumbull County

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.		RHN	DFG	2-28-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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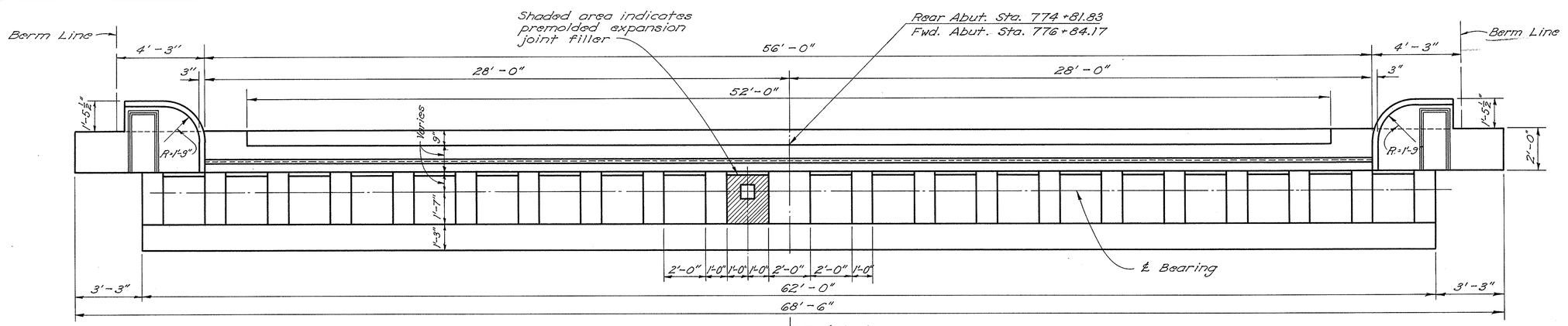
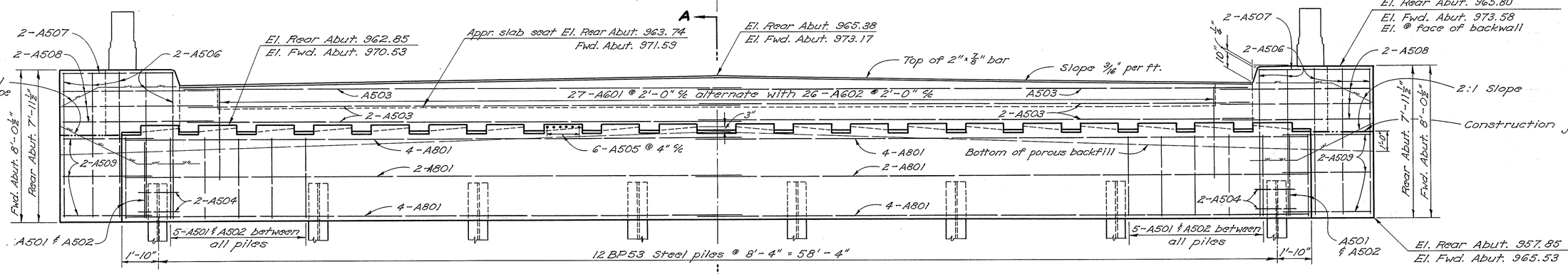
TRU-82-12.67



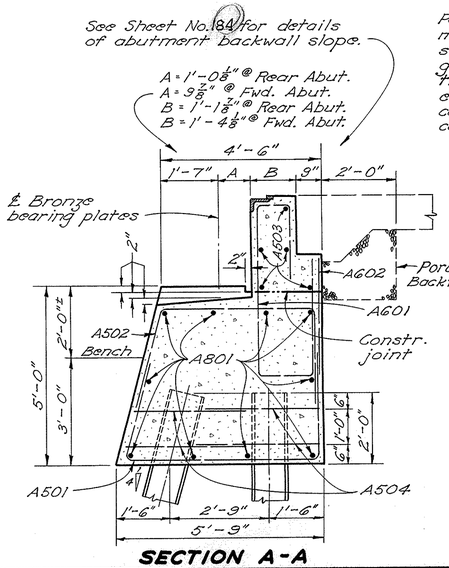
ABUTMENT PLAN

Concrete above bridge seat construction joint shall not be placed until after concrete deck is in place. Steel end finish shall be used as a template for top of backwall.



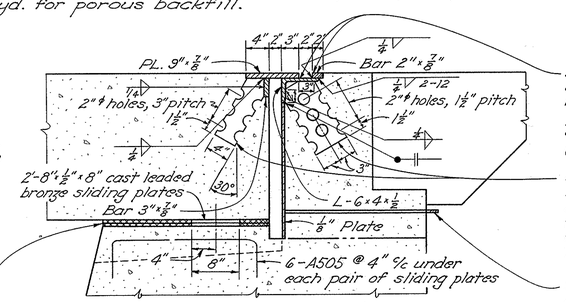
ABUTMENT ELEVATION

All reinforcing 2" clear except as shown.



SECTION A-A

Porous backfill, 2 ft. thick, full length of abutment and wings shall extend up to the under side of the approach slab or to the finished ground surface and outward to the surfaces of the embakment slopes. Excavation therefor, in excess of that required for the abutment, shall be considered as included in the bid price paid per cu. yd. for porous backfill.



Provide a joint in the edge bar and in the angle on the center line of roadway. Additional joints may be provided in them at a minimum spacing of 6'-0". (Joints shall not be welded.)

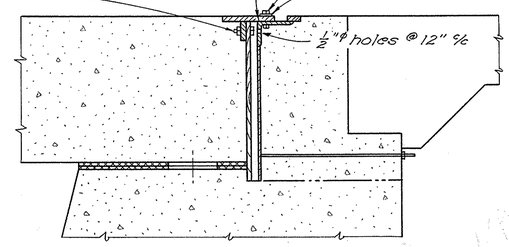
6"x½"x12" and 4"x½"x12" plates, spaced at approximately 15" % except near joints in the angle, where the plates shall be placed within 6" of each side of the joint. The holes may be burned in the plate.

½"ϕ x 26" threaded end @ 1'-6" %. Notch to break off 1" below concrete surface after use.

ROADWAY END FINISH

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing backwall concrete.

⅝"x2½" bolts @ 1'-6" % for roadway & ⅝"x2" bolts @ 1'-3" % for curb with nuts welded to bar. Remove bolts with forms.



END FINISH CONSTRUCTION METHODS

⅝"x2" bolts at not more than 2'-0" % for roadway & ⅝"x1½" bolts @ 1'-3" % for curb, with nuts tack-welded to under side of angle. 1" holes in plate. Center ⅝" bolts in 1" holes. Apply flake graphite between washers and plate. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has been reasonably set, preferably within two hours, to avoid effects of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

Omit shop coat on all portions of end finish. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS & END FINISH DETAILS

BRIDGE No. TRU-82-1467
over S.R. 46
Sta. 774+81.83
to 776+84.17
Trumbull County

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.		RHN	BFG	2-28-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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TRU-82-12.67

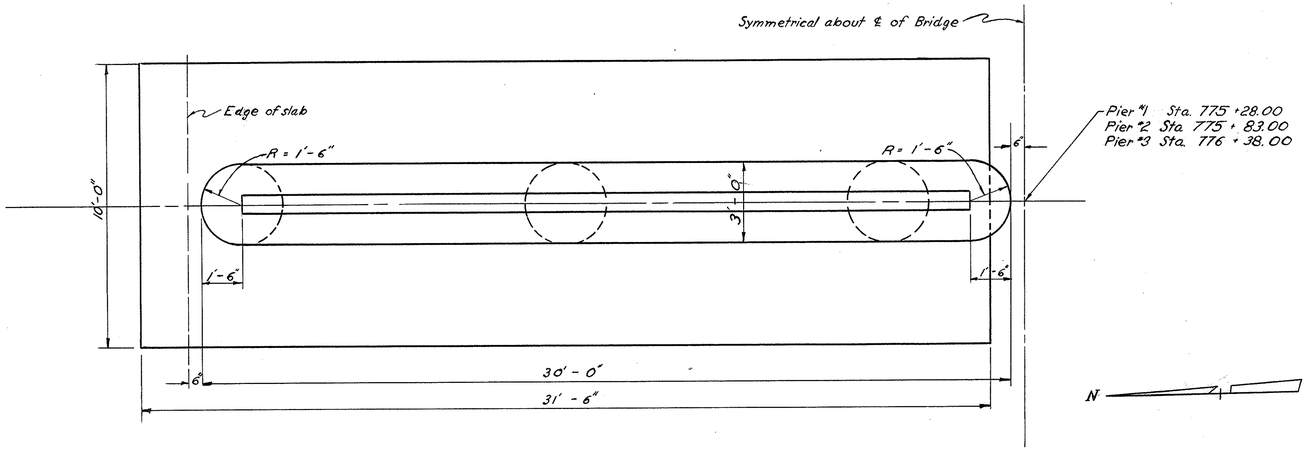
NOTES

Reference shall be made to Suppl. Spec. No. S-114, Aluminum Bridge Railing.

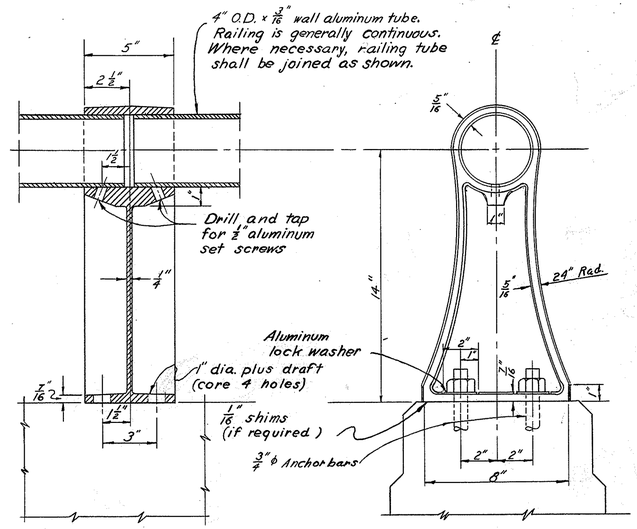
POSTS shall be of aluminum alloy and the bottom of the post shall be thoroughly coated with an aluminum impregnated caulking compound. (Alumilastic or equal).

SHIMS shall be used where necessary for vertical alignment. They shall be of aluminum alloy 5"x8"x1/16" thick. The surface in contact with the concrete shall be thoroughly coated with an aluminum impregnated caulking compound. (Alumilastic or equal).

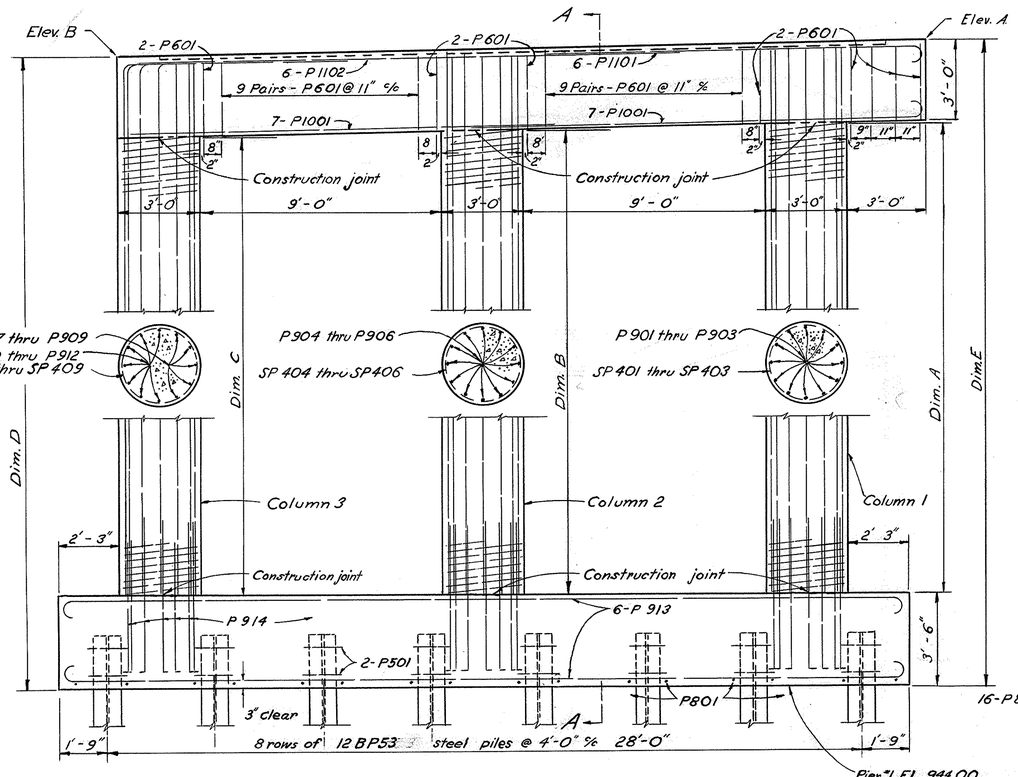
ANCHOR BARS shall be 3/4" ϕ aluminum bars, threaded and fitted with aluminum nuts at both ends and embedded 1'-0" into concrete. The bar and the embedded nut shall be coated with zinc chromate paint and allowed to dry before installation. Care shall be exercised in placing the anchor bars to insure correct horizontal alignment of the railing.



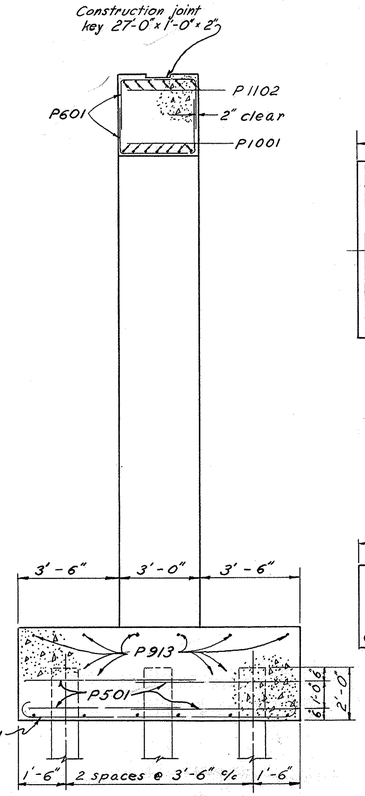
PIER PLAN
(Footing for pier #1 shown)
All reinforcing 2" clear except as shown



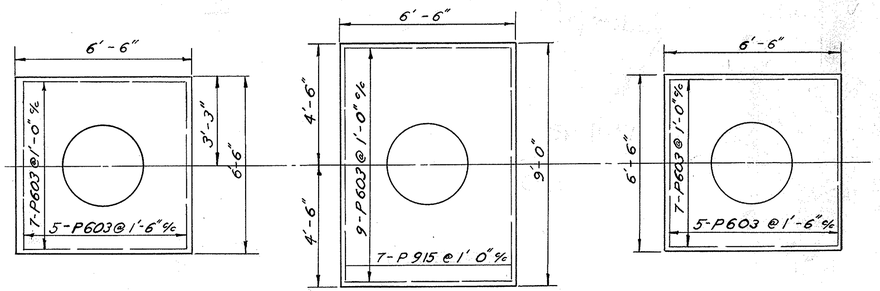
ALUMINUM POST



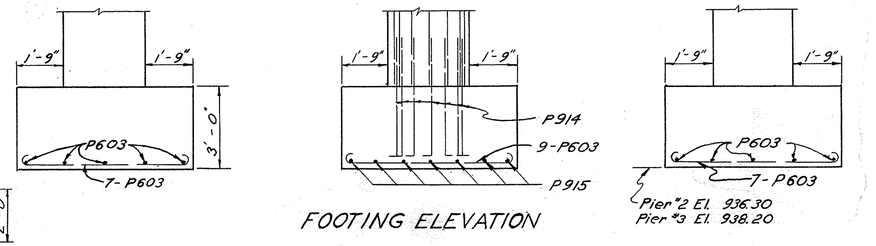
PIER ELEVATION
(Footing for pier #1 shown)



SECTION A-A



FOOTING PLAN
(Footings for Pier #2 & #3)



FOOTING ELEVATION

	Longitudinal Bars			Dim. A	Dim. B	Dim. C	Dim. D	Dim. E	Bt Bars	Spirals			Elev. A	Elev. B
Column	1	2	3	1	2	3			3	1	2	3		
Pier 1	P901	P904	P907	14'-6 5/8"	14'-4 3/8"	14'-2 1/8"	20'-7 1/8"	21'-1 1/4"	P910	SP401	SP404	SP407	965.10	964.63
Pier 2	P902	P905	P908	24'-10 3/8"	24'-8 3/8"	24'-6 1/8"	22'-9 1/8"	23'-2 3/4"	P911	SP402	SP405	SP408	967.23	966.76
Pier 3	P903	P906	P909	25'-1 1/8"	24'-11 1/8"	24'-8 7/8"	24'-10 1/8"	25'-4 1/8"	P912	SP403	SP406	SP409	969.36	968.90

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS & ALUMINUM POST DETAILS

BRIDGE NO. TRU-82-1467
over S.R. 46

TRUMBULL COUNTY Sta. 774+81.83
776+84.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	D.A.S.	R.H.N.	B.F.G.	2-28-56	

TRU-82-1267

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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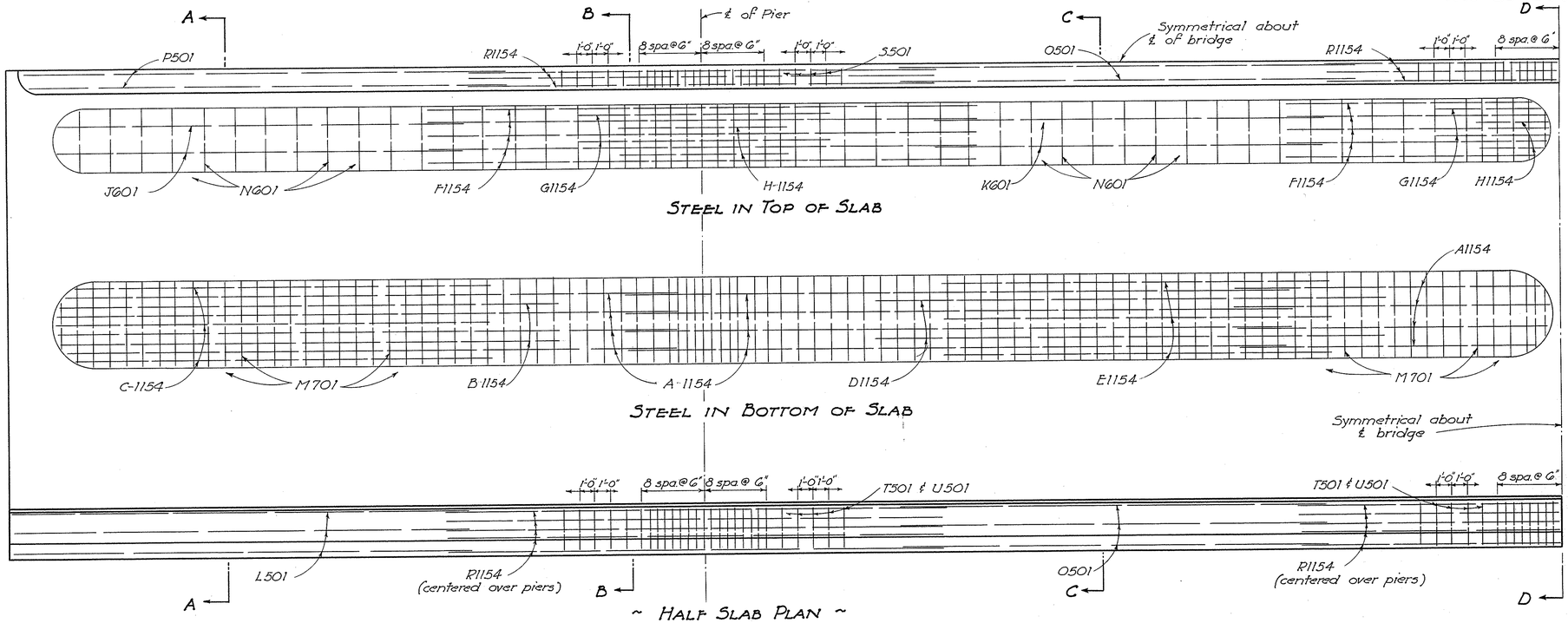
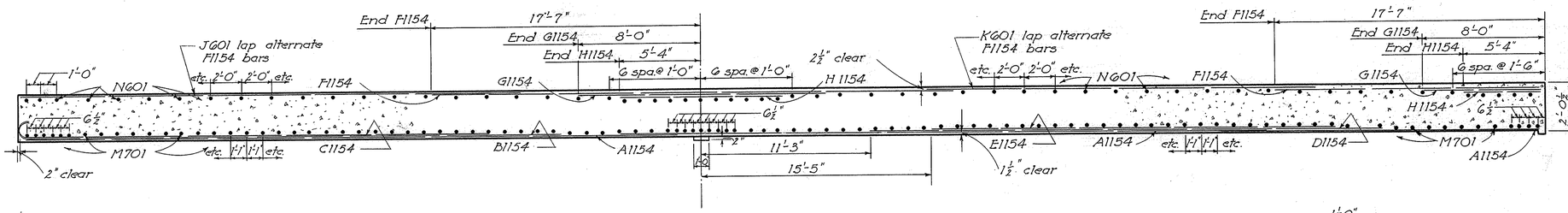
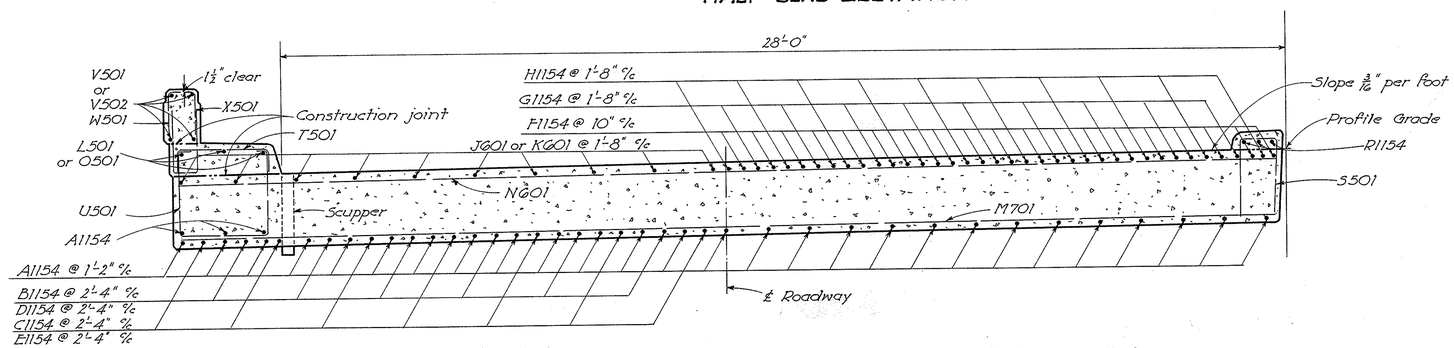
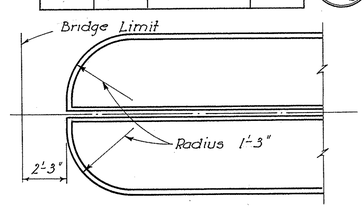




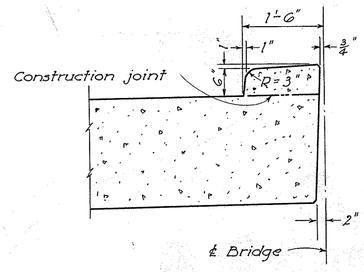


SECTION A-A AND C-C

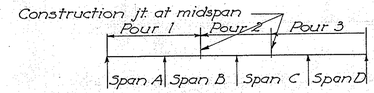
SECTION B-B AND D-D



END OF MEDIAN



SECTION OF MEDIAN

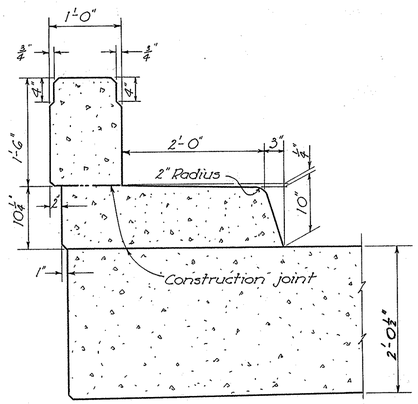


POURING PROCEDURE

Complete forms and falsework for Spans A, B and C before Pour 1 is placed, for Span D before Pour 2.

Forms and falsework may be removed from Span A when concrete in pour 2 has met requirements for removal as per Sec. 5-0.01 and from Spans B, C and D when the concrete in Pour 3 has met these requirements.

Includes 1" Monolithic wearing surface



PART SECTION OF PARAPET AND FASCIA

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

BRIDGE DECK DETAILS

BRIDGE No. TRU-82-1467 OVER S.R. 46

TRUMBULL CO.

STA. 774 + 81.83
776 + 84.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	Grasselli	R.H.N.	BFG	2-28-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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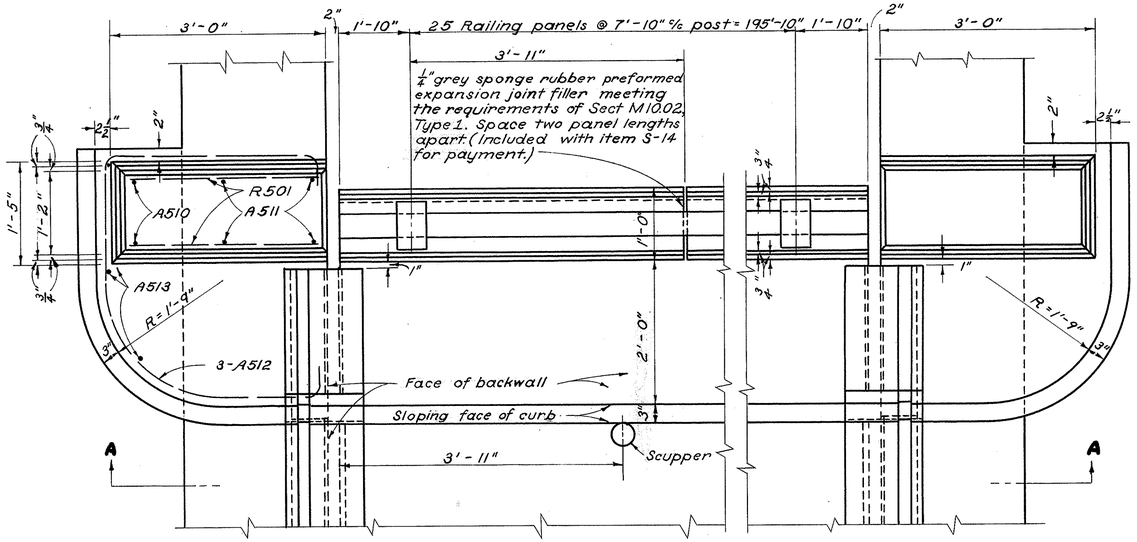
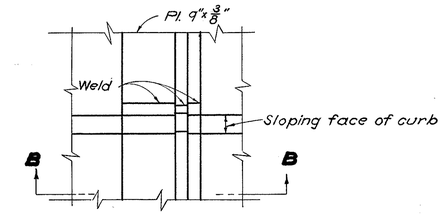
209

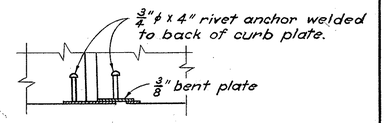
TRU-82-12.67



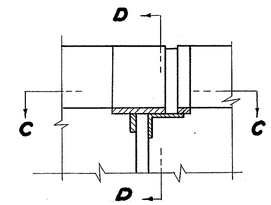
PART PLAN AT ABUTMENT



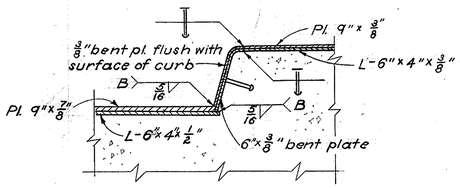
PART PLAN



SECTION C-C

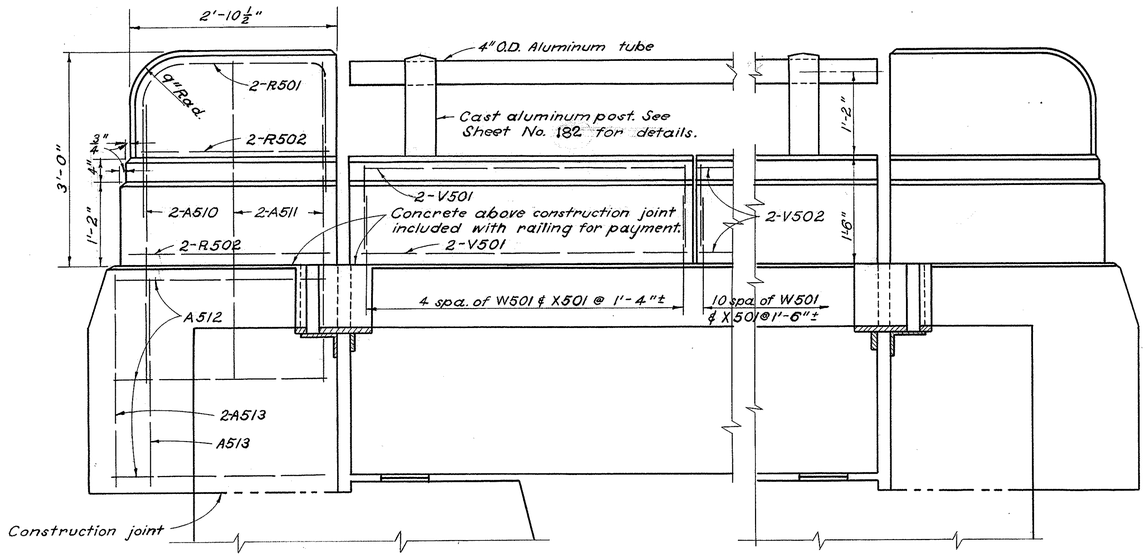


SECTION B-B

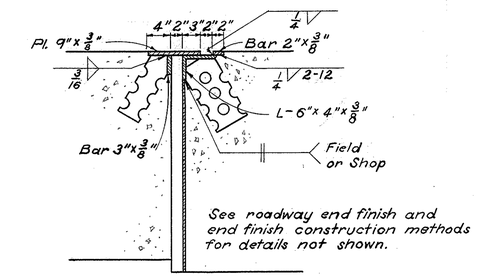


SECTION D-D

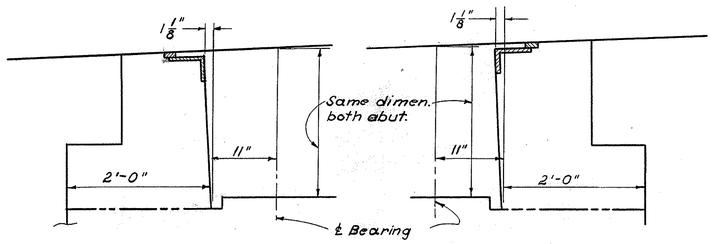
CURB PLATE DETAILS



SECTION A-A



CURB END FINISH



REAR ABUTMENT FORWARD ABUTMENT

DETAIL OF BACKWALL

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PART PLAN AT ABUTMENT, DETAILS OF CURB PLATE, CURB END FINISH & BACKWALL

BRIDGE NO. TRU-82-1467
over S.R. 46
TRUMBULL Co.
Sta. 774+81.83 to 776+84.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	S	RHN	BFG	2-28-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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209

TRU. 82 12.67
6.1 miles ± E. of Warren

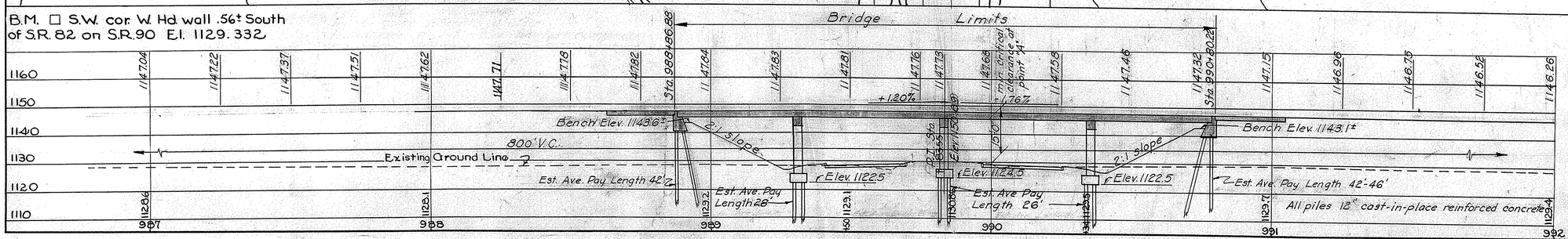
Barry Patch
24" W.Ch.
20" Elm
1134
1133
1132
1131
1130
1129
1128
1127
S'ign
℄ To Existing S.R. 82 .051 Miles
354
353
352
℄ S.R. 90 to Youngstown Corp. 6.69 Miles
N 5°-05' E Line
Point "A"
16'-0"
8'-0"
28'-0"
28'-0"
8'-0"
90°-0"
90°-0"
3:1
4:1
2:1
3'-0"
← West Bound
End Approach Slab Sta. 988+86.88
This area level normal to ℄ roadway
℄ To East Corp. Line City of Warren 6.08 Mi.
S 83°-59' E
988
℄ Proposed S.R. 82
989
990
991
992
℄ To S.R. 62 7.50 Miles
(S.R. 82: 989+83.55
(S.R. 90: 352+38.42
Begin Approach Slab Sta. 990+80.22
This area level normal to ℄ Roadway
24'-0"
25'-0"
24'-0"
East Bound →

Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy thereof.

PROPOSED STRUCTURE

Type: Continuous reinforced concrete slab with reinforced concrete substructure
Spans: 42'-52.5'-52.5'-42' c/c brgs.
Roadways: 2 @ 28'-0" f/f, or 2'-0" safety curbs
Load Frequency: CF = 400 (51)
Skew: 00°-56' R.F.
Wearing Surface: 1" monolithic concrete
Approach Slabs: AS-1-54 (25' long)
Alignment: Tangent

B.M. □ S.W. cor. W. Hd. wall .56± South of S.R. 82 on S.R. 90 El. 1129.332



SITE PLAN

BRIDGE No. TRU-82-1873
OVER S.R. 90
TRUMBULL CO.
S.R. 82 & 90
STA. 988+86.88
990+80.22
SCALE 1" = 20'

PRESENT TOPOGRAPHY		PROPOSED WORK			
Surveyed	Drawn	Designed	Drawn	Checked	Reviewed
		D.I.C.	D.I.C.	J.R.P.	P.E.S.

BFG 9 P.M. 4-30-56

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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209

TRU-82-12.67

N

2:1
3'-0"
℄ Westbound Lane
1'-0"
2'-3"
14'-0"
28'-0" % curb
34'-9" % Fascias
2'-3"
1'-0"
12'-0"
24'-0"
25'-0"

End Approach Slab
Sta. 988+86.88
℄ Pier No. 1
Sta. 989+31.05
℄ Pier No. 2
Sta. 989+83.55
90° 56'
℄ Pier No. 3
Sta. 990+35.05
Begin Approach Slab
Sta. 990+80.22

42'-0" % Bearing
52'-6" % Bearing
52'-6" % Bearing
42'-0" % Bearing
Bridge Limits — 193.34'

℄ Eastbound Lane

Railing - 25 Panels @ 7'-6" % post = 137'-6"

Porous Drains at all four corners of each bridge
1'-6"
3'-11"
Scuppers - 5 spa. @ 6'-10" (both sides)

PLAN

800' V.C.
+1.20 %
-1.76 %
El. Sta. 989+83.55
El. 1150.69

Bench El. 1143.6±
2:1 Slope
El. 1122.5
El. 1124.5
Bench El. 1143.1±
2:1 Slope
El. 1122.5

ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

GENERAL PLAN & ELEVATION

BRIDGE No. TRU-82-1873
over S.R. 90

TRUMBULL COUNTY STA. 988+86.88
990+80.22

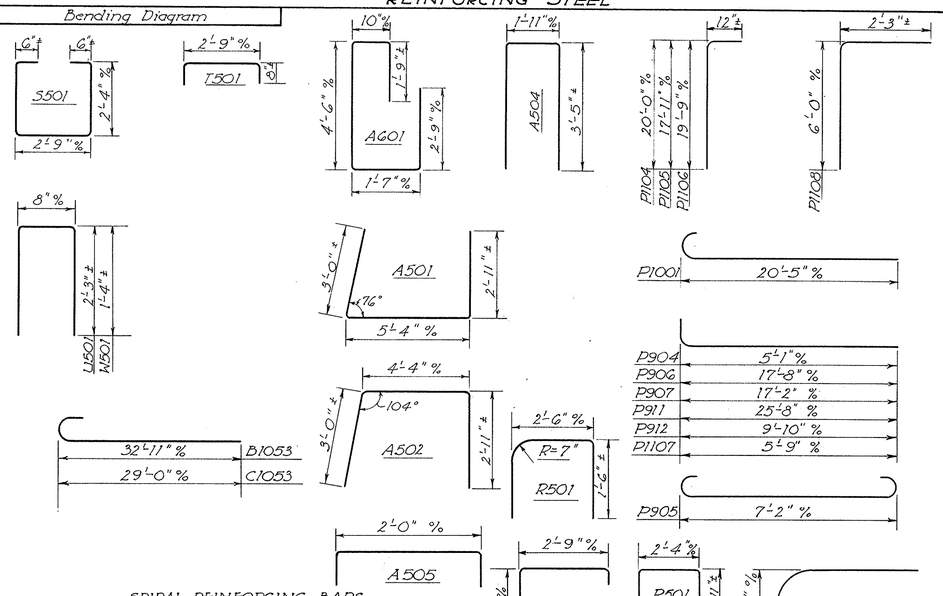
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	R.W.L.	RHN	BFG	4-30-56	

REINFORCING STEEL

Mark	No.	Length	Weight	Shp
Superstructure				
FI153	240	33'-8"	42,929	S
G1153	114	15'-4"	9,287	S
H1153	120	9'-8"	6,163	S
R1153	60	28'-10"	9,191	S
A1053	410	40'-7"	71,598	S
B1053	68	34'-2"	9,997	B
C1053	68	30'-3"	8,851	B
D1053	68	31'-6"	9,217	S
E1053	68	23'-2"	6,779	S
M701	374	34'-0"	25,992	S
J601	84	27'-8"	3,491	S
K601	84	24'-8	3,112	S
N601	230	34'-0"	11,746	S
O501	24	26'-10"	672	S
P501	24	29'-9"	745	S
S501	860	7'-10"	7,026	B
T501	860	3'-10"	3,438	B
U501	568	4'-11"	2,913	B
V501	32	4'-11"	164	S
V502	192	14'-8"	2,937	S
W501	568	3'-1"	1,827	B
Abutments				
A801	40	33'-2"	3,542	S
A601	52	10'-11"	853	B
A602	48	3'-4"	240	S
A501	88	11'-0"	1,010	B
A502	88	9'-11"	910	B
A503	20	27'-7"	575	S
A504	80	8'-5"	702	B
A505	240	3'-0"	751	B
A506	64	7'-6"	501	S
A507	16	4'-6"	75	S
A508	48	6'-10"	342	S
A509	48	3'-11"	196	S
A510	32	4'-6"	150	S
A511	24	8'-9"	219	B
A512	24	2'-10"	71	S
A513	16	3'-10"	64	S
*P501	16	5'-2"	—	B
*P502	32	2'-6"	—	S

*Included with railing for payment.

Bending Diagram



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 in the steel list for the spiral bars 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 5-4.

1½ closed coils shall be provided at the ends of each spiral unit.

Three 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.

Mark	No.	Length	Weight	Shp
Piers				
P1101	16	19'-10"	1,686	S
P1102	16	17'-9"	1,509	S
P1103	16	19'-7"	1,665	S
P1104	16	20'-9"	1,764	B
P1105	16	18'-8"	1,587	B
P1106	16	20'-6"	1,743	B
P1107	96	6'-11"	3,528	B
P1108	48	7'-11"	2,019	B
P1001	144	21'-10"	13,529	B
P1002	60	37'-6"	9,682	S
P901	32	19'-10"	2,158	S
P902	32	17'-9"	1,931	S
P903	32	19'-7"	2,131	S
P904	96	6'-1"	1,986	B
P905	156	9'-8"	3,127	B
P906	12	18'-8"	762	B
P907	24	18'-2"	1,482	B
P908	24	28'-4"	2,312	S
P909	12	27'-4"	1,115	S
P910	12	11'-6"	469	B
P911	24	26'-8"	2,176	B
P912	24	10'-10"	884	B
P501	288	5'-11"	1,772	B

Mark	No.	Bore Dia.	Length	Pitch	No. of Turns	Weight
Spiral						
SP401	8	28"	17'-8⅛"	4½"	50	2,248
SP402	8	28"	15'-7⅜"	4½"	45	2,018
SP403	8	28"	17'-5"	4½"	49	2,203
Replacement Bars						
RE1100	5	7'-6"	200	S		
RE1000	7	7'-2"	217	S		
RE900	1	6'-10"	23	S		
RE800	1	6'-6"	17	S		
RE700	2	6'-2"	26	S		
RE600	1	5'-11"	9	S		
RE500	1	5'-7"	6	S		
RE400	1	5'-3"	4	B		

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super.	Abuts.	Piers	Gen'l.	As Built	
							Lump		
E-2	~~661~~ 675	Sum	Cofferdams, cribs & sheeting						
E-2	~~661~~ 675	Cu.Yd.	Unclassified excavation		~~131~~ 391	530		C-5, +14	675
5-1	~~1,512~~ 1,526	Cu.Yd.	Class "C" concrete, superstructure	1,026				C-5, -30	996
5-1	~~158~~ 136	Cu.Yd.	Class "C" concrete, pier caps & columns			~~138~~		C-5, -2	136
5-1	173	Cu.Yd.	Class "E" concrete, pier footings			173			
5-1	159	Cu.Yd.	Class "E" concrete, abutments		159				
5-4	818,264	Lb.	Reinforcing steel	238,075	10,201	69,486	502		
5-7	~~9,774~~ 11,420	Lb.	Structural steel end finish & scuppers including all painting.	~~9,774~~				C-5, +164	11,420
5-9	978	Lb.	½" Cast leaded bronze sliding plates	978					
5-9	418	Sq.Ft.	½" Pre-formed expansion joint filler	418					
5-14	787.32	Lin.Ft.	Railing (Aluminum rail and supports, concrete parapet and end posts.)	787.32					
5-16	Lump	Sum	First test pile.				Lump		
5-18	~~3,960~~ 3,240	Lin.Ft.	12" Cast-in-place reinforced concrete piles		~~1,720~~	~~2,240~~		C-5, -713	3240
5-29	24	Cu.Yd.	Porous backfill				24		
5-29	59	Cu.Yds.	Porous drains on embankment slopes			59			

FED. RD. DIVISION	STATE	PROJECT		
2	OHIO			

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TRU-82-12.67

GENERAL NOTES

REFERENCE shall be made to Standard Drawing CS-2-54 dated 12-1-54, and Supplemental Specification No. S-114, dated 8-30-55.

MAINTENANCE OF TRAFFIC: Two-way traffic shall be maintained on S.R. 90 at all times. Minimum roadway width shall be 14' for each roadway, if separate span openings are provided and 26' if a combined two-way facility is provided. The clear height shall be 13'. The Contractor shall provide platforms, nets or other suitable means above the travelled lanes to protect the travelling public on S.R. 90.

PILES shall be driven to a minimum bearing capacity of 30 tons for the abutments and 35 tons for the piers. The length of penetration of every pile shall be at least 80 % of the estimated average pay length of the piles in the pertinent pier or abutment as indicated on the plans as indicated on the plans unless a lesser penetration is approved by the Director.

GRAVEL, if used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

WELDING of structural steel shall be Class "A" except as otherwise shown. Class "B" welds shown thus: B>

SURFACE FINISH OF CONCRETE: Railing parapet and end posts, curb faces, fascias of deck and exposed surfaces of piers, abutments, and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item 5-1.

PAINT, both shop and field, shall be applied by brushing. Spray application will not be permitted.

POROUS DRAINS, extending from face of abutment to Elev. 1127.6, shall be provided at all four corners of the bridge. The drains shall be 6'-6" wide at the low end, tapering to 4 ft. wide at the face of the abutment, and one foot thick.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

NOTES, ESTIMATED QUANTITIES & REINFORCING STEEL LIST
BRIDGE NO. TRU-82-1873

TRUMBULL CO. STA. 988+86.88 to 990+80.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	Grasselli	RHN	BPG	4-30-56	

[A] Revised As Built H.E.R. 6-17-59

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU-82-12.67

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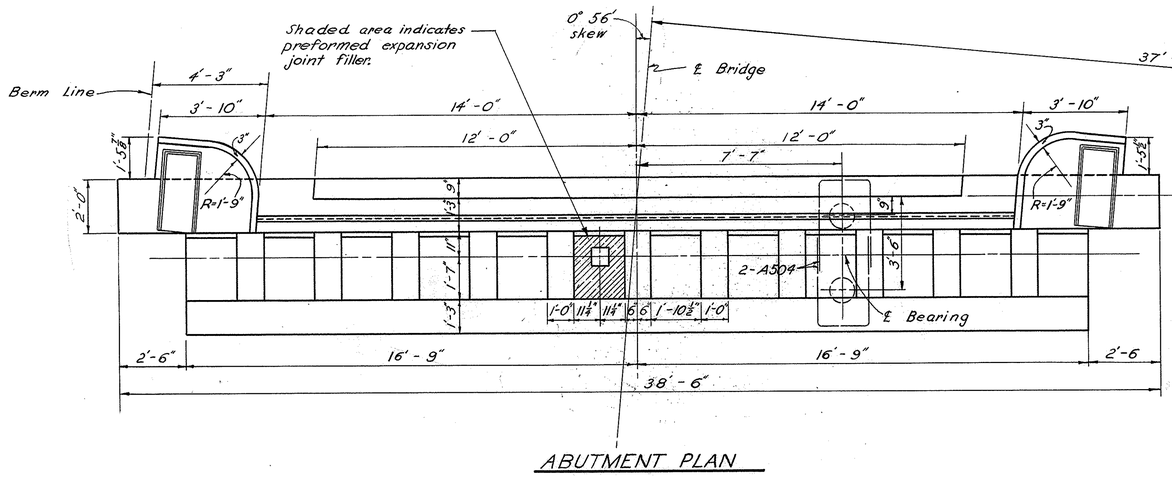
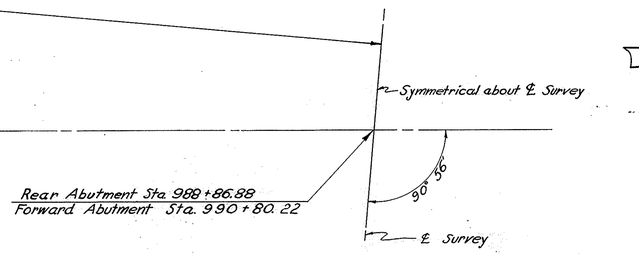
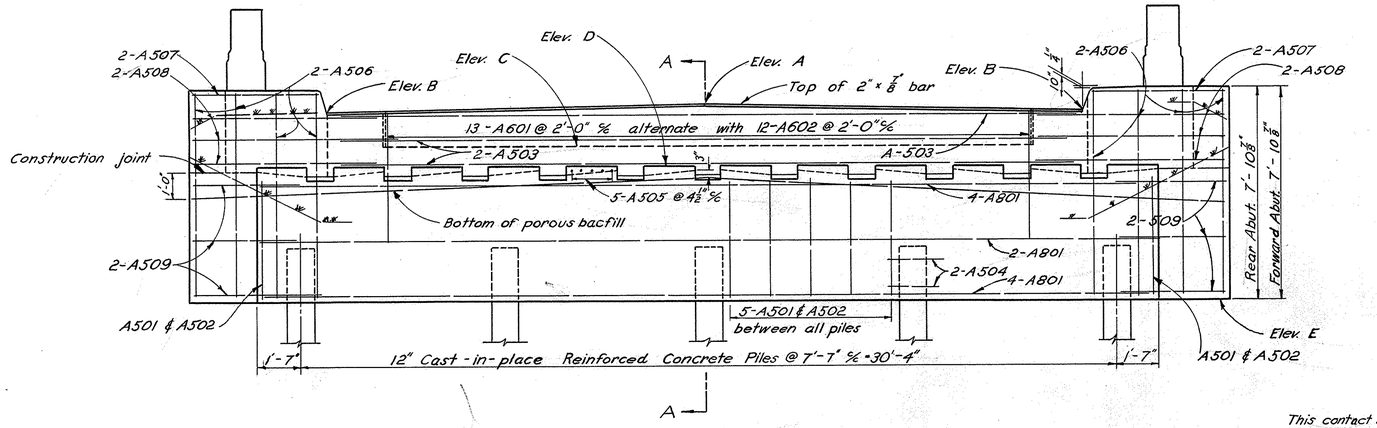
209





ABUTMENT PLAN



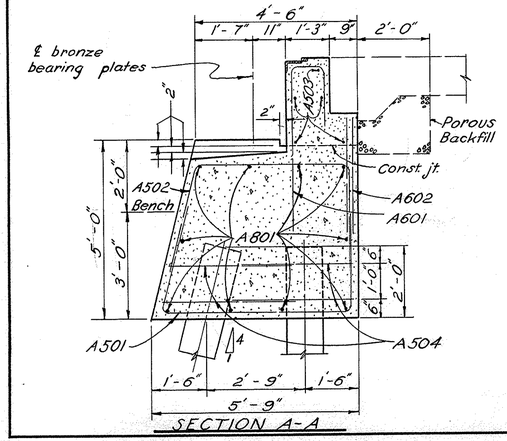
ABUTMENT ELEVATION

All reinforcing 2" clear

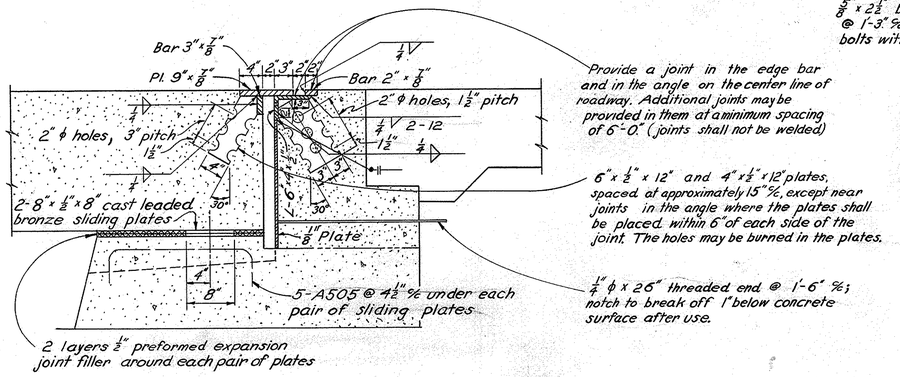
North Bridge	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E
Rear Abutment	1147.83	1147.61	1146.31	1145.56	1140.56
Forward Abutment	1147.30	1147.08	1145.77	1145.03	1140.03
South Bridge					
Rear Abutment	1147.83	1147.61	1146.31	1145.56	1140.56
Forward Abutment	1147.29	1147.07	1145.76	1145.02	1140.02

Concrete above bridge seat construction joint shall not be placed until concrete deck is in place. Steel end finish shall then be used as a template for top of backwall.

Porous Backfill, 2' thick, full length of abutment and wings, shall extend upward to the underside of the approach slab or to the surface of the earth shoulders and outward to the surface of the embankment slopes. Excavation therefor, in excess of that required for the abutment, shall be considered as included in the bid price paid per cu. yd. for porous backfill.



SECTION A-A



Provide a joint in the edge bar and in the angle on the center line of roadway. Additional joints may be provided in them at a minimum spacing of 6'-0". (joints shall not be welded)

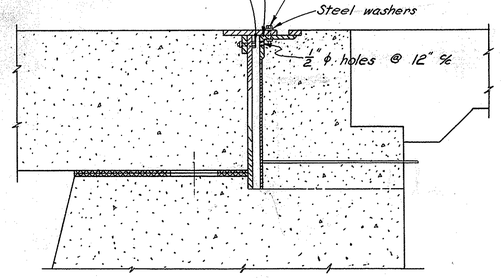
6" x ½" x 12" and 4" x ½" x 12" plates, spaced at approximately 15" ℄, except near joints in the angle where the plates shall be placed within 6" of each side of the joint. The holes may be burned in the plates.

¼" ϕ x 26" threaded end @ 1'-6" ℄; notch to break off 1" below concrete surface after use.

ROADWAY END FINISH

This contact surface shall not be painted and shall be lubricated with flake graphite prior to placing backwall concrete.

⅝" x 2½" bolts @ 1'-6" ℄ for roadway & ⅝" x 2" bolts @ 1'-3" ℄ for curb, with nuts welded to bar. Remove bolts with forms.



⅝" x 2" bolts at not more than 2'-0" ℄ for roadway & ⅝" x 1½" at 1'-3" ℄ for curb, with nuts tack-welded to under side of angle. L holes in plates Center ⅝" bolts in 1" holes. Apply flake graphite between washers and plate. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has been reasonably set, preferably within two hours, to avoid effect of temperature expansion or contraction of superstructure. Fill holes with bituminous material.

Omit shop coat on all portions of end finish. Portions in contact with steel or with concrete shall not be painted. All other portions shall be cleaned and given the shop coat in the field as well as the two field coats.

END FINISH CONSTRUCTION METHODS

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

ABUTMENT DETAILS & END FINISH DETAILS

BRIDGE NO. TRU-82-1873

TRUMBULL COUNTY STA. 988+86.88 990+80.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	D.A.S.	R.H.N.	BFG	4-30-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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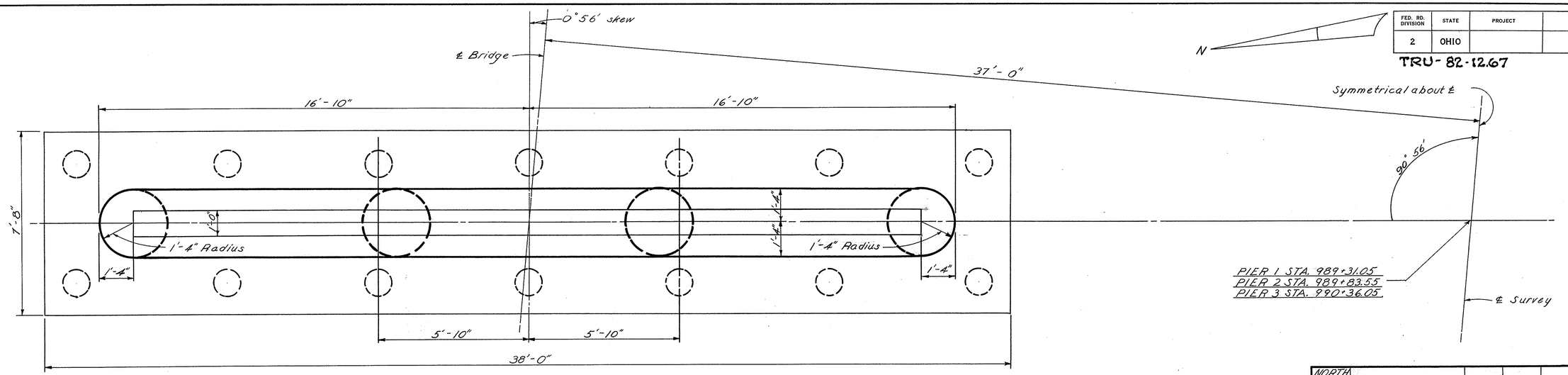
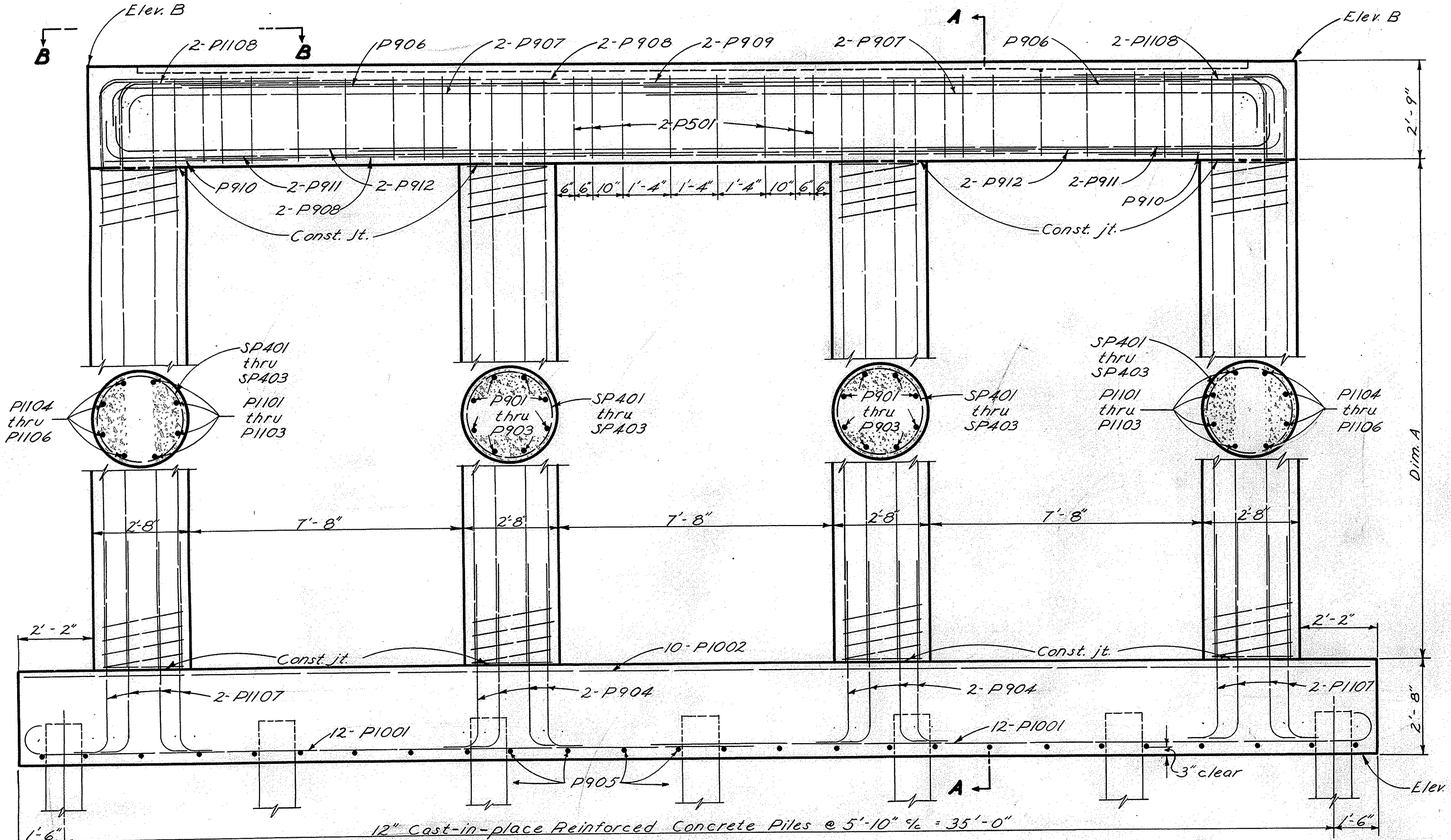
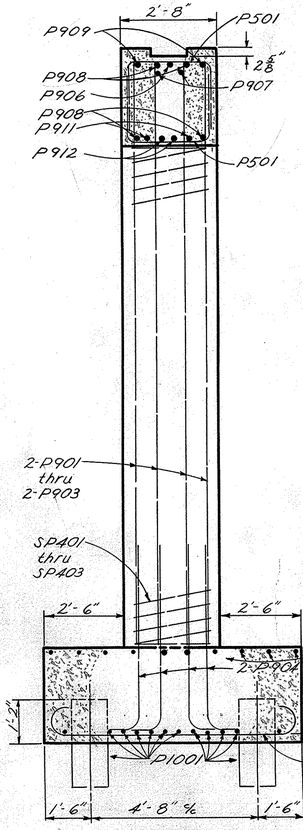
TRU-82-12.67



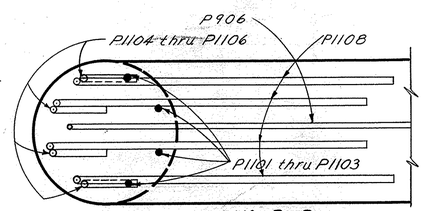
PLAN



ELEVATION



SECTION A-A



VIEW B-B

(Showing Steel in top of cap)

NORTH BRIDGE	LONGITUDINAL BARS		SPIRAL	ELEV. B	ELEV. C	DIM. A
COLUMN	1 & 4	2 & 3	1, 2, 3, 4			
PIER 1	4-P1101	4-P1104	8-P901	SP401	1145.63	1122.5	17'-8½"
PIER 2	4-P1102	4-P1105	8-P902	SP402	1145.53	1124.5	15'-7⅞"
PIER 3	4-P1103	4-P1106	8-P903	SP403	1145.33	1122.5	17'-5"
SOUTH BRIDGE							
PIER 1	4-P1101	4-P1104	8-P901	SP401	1145.63	1122.5	17'-8½"
PIER 2	4-P1102	4-P1105	8-P902	SP402	1145.53	1124.5	15'-7⅞"
PIER 3	4-P1103	4-P1106	8-P903	SP403	1145.33	1122.5	17'-5"

Note: All reinforcing 2" clear unless otherwise shown.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PIER DETAILS

BRIDGE NO. TRU-82-1873
over S.R. 90

TRUMBULL COUNTY STA. 988+86.88
990+80.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	J	RHN	BFG	4-30-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU-82-12.67

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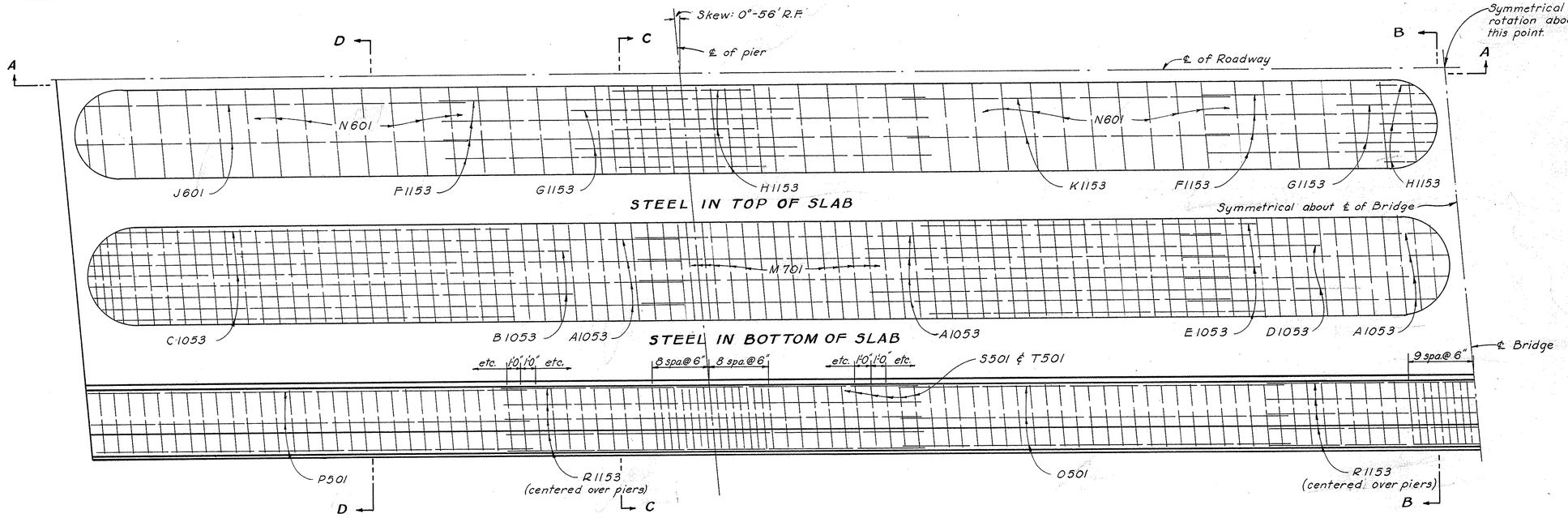
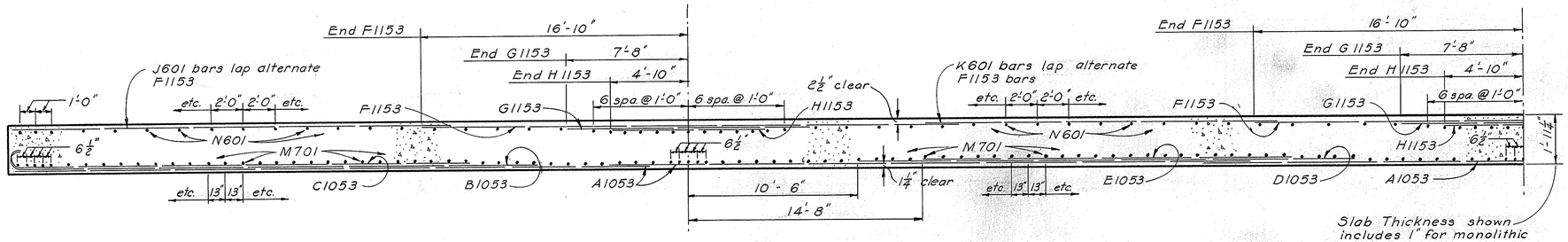
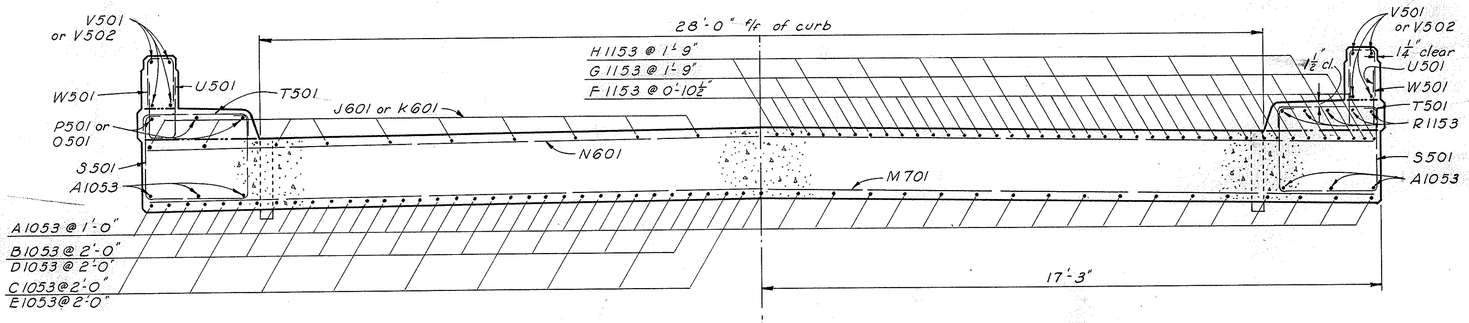


PART PLAN

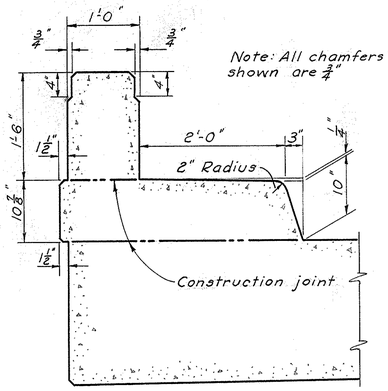


SECTION A-A

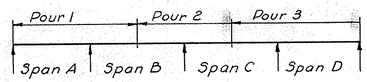


SECTION B-B AND D-D

SECTION C-C



PART SECTION OF PARAPET AND FASCIA



POURING PROCEDURE

Complete forms and falsework for Spans A, B, and C before Pour 1 is placed, for Span D before Pour 2.
Forms and falsework may be removed from Span A when concrete in Pour 2 has met requirements for removal as per Sec. 5-0.01 and from Spans B, C, and D when the concrete in pour 3 has met these requirements.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES AND RAILROAD CROSSINGS

SUPERSTRUCTURE DETAILS

BRIDGE NO. TRU-82-1873
over S.R. 90

TRUMBULL COUNTY Sta. 988+86.88 to 990+80.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EBL	EBL	[illegible]	RHN	BFG AJH	4-30-56	

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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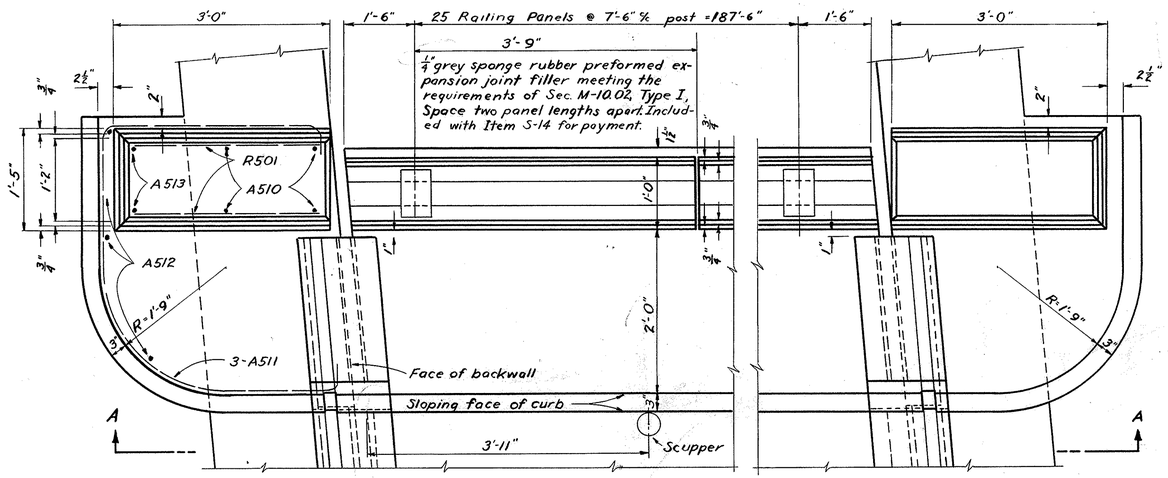
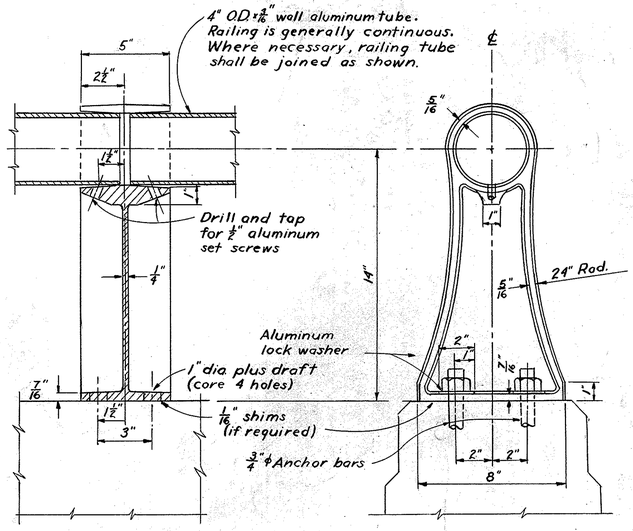
TRU-82-12.67



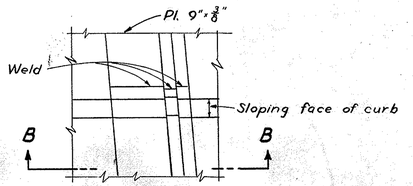
PART PLAN AT ABUTMENT



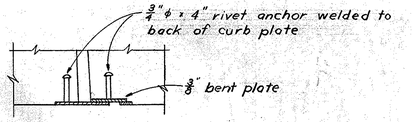
ALUMINUM POST

NOTES

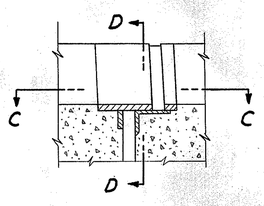
Reference shall be made to Suppl. Spec. No. S-114 Aluminum Bridge Railing.
POSTS shall be of aluminum alloy and the bottom of the post shall be thoroughly coated with an aluminum impregnated caulking compound ("Alumilastic" or equal.)
SHIMS shall be used where necessary for vertical alignment. They shall be of aluminum alloys, 5" x 8" x 1/16" thick. The surface in contact with the concrete shall be thoroughly coated with an aluminum impregnated caulking compound (Alumilastic" or equal).
ANCHOR BARS shall be ¾" aluminum bars, threaded and fitted with aluminum nuts at both ends, and embedded 1'0" into concrete. The bar and the embedded nut shall be coated with zinc chromate paint and allowed to dry before installation. Care shall be exercised in placing the anchor bars to insure correct horizontal alignment of the railing.



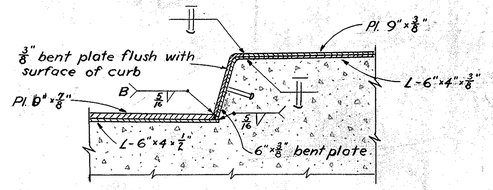
PART PLAN



SECTION C-C

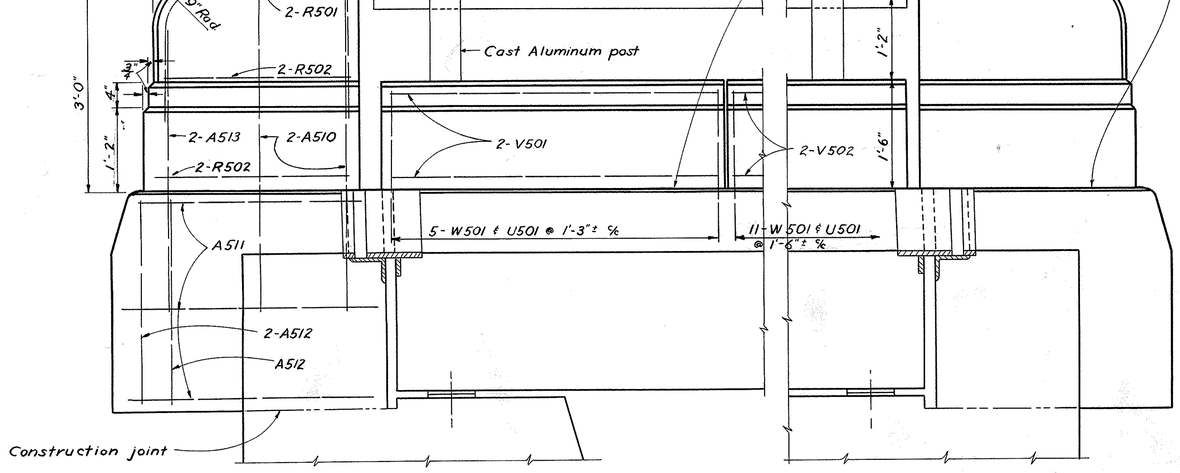


SECTION B-B

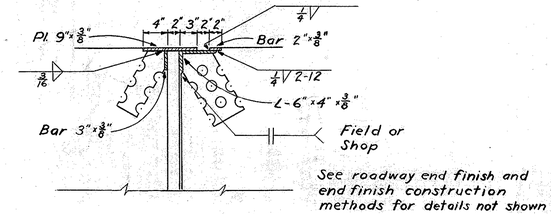


SECTION D-D

CURB PLATE DETAILS



SECTION A-A



See roadway end finish and end finish construction methods for details not shown.

CURB END FINISH

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

PART PLAN AT ABUTMENT, CURB PLATE DETAILS, CURB END FINISH & ALUMINUM POST

BRIDGE NO. TRU - 82 - 1873
over S.R. 90
TRUMBULL COUNTY STA. 988 + 86.88
990 + 80.22

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
E.B.L.	E.B.L.	N.F.Y.	R.H.N.	DPG A.J.F.	4-30-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

1/18

TRU-82-12.67

TRUMBULL COUNTY

HOWLAND TOWNSHIP
LOT 24
T=4-N R=3-W

TBA — 0.330 Ac.
PRO — 0.465 Ac.
6L — 0.050 Ac.

THE TRUMBULL COUNTRY CLUB, INC.
31.67' Access
STA. 669+1692
6 L.A

Limited Access begins at the Corp. Line of the City of Warren.

BEGIN SHEET - STA. 662+00

END SHEET STA. 674+00

CITY OF WARREN

HOWLAND TOWNSHIP

BEGIN LIMITED ACCESS

BEGIN PROJECT STA. 668+97.76

Corp. Line

Eastland N 3°-14'-E 150.00'

CARL J. & HELTZEL

J. WILLIAM HELTZEL

TBA 0.20 Ac.

TBA 0.16 Ac.
DONALD T. HELTZEL
ELISABETH G. HELTZEL
& J. WILLIAM HELTZEL

16' Access Sta. 673+05

TR-82-127

RIGHT OF WAY SHEET STA 662+00 TO STA. 674+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

2 / 12

TRU-82-12.67

COUNTRY CLUB DRIVE ALLOTMENT - VOL. 20 - PG. 74

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 25
T = 4-N R = 3-W

Eliminated See Journal Entry Case No. 65530

COUNTRY CLUB CURVE DATA

Δ = 3°-50'	Ls = 200'
Δc = 0°-10'	Ts = 204.60'
Dc = 1°-50'	Xc = 199.98'
Rc = 3125.23'	Yc = 2.14'
TS = 678+86.65	θs = 1°-50'
SC = 680+86.65	θc = 0°-36'-40"
P.I. = 680+91.25	LT = 133.34'
CS = 680+95.74	ST = 66.67'
ST = 682+95.74	LC = 199.99'
LC = 9.09'	Es = 2.28'
k = 100'	p = 0.53'

EXIST. CURVE DATA

P.I. = 680+85.86
Δ = 3°-53'-30" Lt.
D = 3°-0'
R = 1909.86'
T = 64.89'
L = 129.72'
E = 2.28'

THE TRUMBULL COUNTRY CLUB, INC.

GRAHAM DEVELOPMENT CORPORATION

Sub. Lot 35 — Lot 24

Sub Lot 1 — PRO 0.33 Ac. (9 Q.C.D.)

Sub Lot 2

PRO. 0.17 Ac.

Lot 25 (9B LA)

Lot #24 T.B.A. - 0.234 Ac.
Lot #25 PRO. - 0.468 Ac.

Ornamental Iron Fence 6' High

16' Access Sta. 6+11.11

16' Access Sta 683+44 Lt.

16' Access Sta. 685+42 Lt.

Proposed R/W

Shrub Hedge

Exist. 4" Gas Pipe

Exist. 10" C.I. Water Pipe

Telephone Conduit

Existing 10" C.I. Water Pipe

Existing 4" Gas Line

Existing 84" Reinf. Conc. Storm Sewer

Existing 4" Gas Line

Telephone Conduit

End Evergreen Hedge

BEGIN SHEET STA. 674+00

MATCH LINE - STA. 686+00

16' Access Sta. 675+96 Rt.
Sta. 677+94 Rt.
Sta. 678+94 Rt.
Sta. 679+66 Rt.

Walcott Dr.; Private

Donald T. Heltzel
Elizabeth G. Heltzel
& J. William Heltzel

± 84" Reinf. Conc. Storm Sewer

T.B.A. 0.20 Ac.
P.R.O. 0.30 Ac.

Carl J. Heltzel
Robert E. Heltzel
& Mary Alice Timmins

Lot 62
Northmar
Subdivision No. 3
Vol. 14, P. 54, 55

Broadway Ave.

Storm Sewer

Existing R/W

NORTH MAR SUB-DIVISION NO. 2
THE GIBSON REALTY & DEVELOPMENT CO.
P.B. 19 P. 41

P.R.O. 1.067 Ac.

16' Access Sta. 683+71

16' Access Sta. 684+91

See Journal Entry Case No. 65530

16' Access Sta. 686+32.35

RAYMOND E. HUGHES & ELIZABETH POND HUGHES

T.B.A. 0.236 Ac.
P.R.O. 0.473 Ac.

ALBERT MIKE FARAH
JOHN PETER FARAH

16' Access Sta. 689+17

16' Access Sta. 690+57

16' Access Sta. 691+57

16' Access Sta. 692+57

16' Access Sta. 693+57

16' Access Sta. 694+63

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 25
T = 4-N R = 3-W

Limits of Construction

Proposed R/W

Existing R/W

Existing 4" Gas Main

Limits of Construction

Proposed R/W

MATCH LINE STA. 686+00

END SHEET STA. 698+00

MARWOOD DR.

NORTH MAR SUB-DIVISION No. 2
THE GIBSON REALTY & DEVELOPMENT CO.
P.B. 19 P. 41

1-Sty. Tr. Bldg.

16' Access Sta. 683+01 Rt.

16' Access Sta. 690+11 Rt.

16' Access Sta. 691+34 Rt.

35' Access Sta. 693+40.66

MELLON NATIONAL BANK & TRUST COMPANY
TRUSTEE
FORMER OWNER
T.B.A. - 0.287 Ac.

Present Owner:
FIRST WARREN CORPORATION

Deleted 16' Access Sta. 694+86

T.B.A. - 0.146 Ac.
0.287 Ac.
0.433 Ac.
P.R.O. - 0.430 Ac.

35' Access Sta. 695+75.66

35' Access Sta. 696+50.66

(Iron Fence around house., Locked)

16' Access Sta. 696+04 Lt

16' Access Sta. 696+93 Lt

2½ Sty Brick

Brk. Pillar

5' Conc. Walk

Ornamental Iron Fence

Closed Porch

2½ Sty. Brick Res.

Sta. 697+94.53 Δ = 0°-51' Rt.

Sta. 697+31.25 End Traffic Divider

Added new 10' wide R/W from Sta. 691+44.56 to Sta. 697+50.05 ; Changed name, Added 35' Access points at Sta. 693+40.66, Sta. 695+75.66, and Sta. 696+50.66 - Parcel 13-LA ; Deleted 16' Access point at Sta. 694+86 per Journal Entry Directors Journal, April 26, 1971, Vol. 56, Page 408. June 3, 1971 R.A.W.

Added Pcl. 13-A-WL 6-7-71 (R/W)
Widened Pavement As Per I.O.C. Permit Tru.-82-91 On SR 82
At Intersection Of Heaton North 5-28-74

DETAIL A
Scale - 1" = 20'

Revised Access Sta. From 695+13 To 696+04 As Requested By The Director On August 7 1961 Recorded In Vol. 46 Pg. 485 Of His Journal

8-11-61

Rev. 5-12-56 — 7-10-56 — 7-24-56
Rev. 4-10-56
Rev. 3-22-56

RIGHT OF WAY SHEET STA. 674+00 TO STA. 698+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

3/18

TRU-82-12.67

16' Access Sta. 700+44 Lt.
TBA 0.034 Ac.
PRO 0.07 Ac.

16' Access Sta 701+46 Lt.
TBA 0.03 Ac.
PRO 0.07 Ac.

16' Access Sta. 702+194 Lt.
TBA 0.034 Ac.
PRO 0.07 Ac.

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 25
T = 4-N R = 3-W

16' Access Sta. 704+15 Lt.

16' Access Sta. 705+38 Lt.

16' Access Sta. 706+52 Lt.

16' Access Sta. 706+82 Lt.

LOT 25

LOT 26

4.8' Access Sta. 707+95 Lt.
33' Access Sta. 708+45 Lt.

JOSEPH SARKIES
P.R.O. 0.17 Ac.
25A LA

16' Access Sta. 709+29

LYNN B. GRIFFITH
14 LA
TBA 0.073 Ac.
PRO 0.14 Ac.

SAM LAMBERT & JENETTA LAMBERT
15 LA

SAM V. LAMBERT
16 LA

WALTER G. CASAVANT & GERTRUDE E. CASAVANT
17 LA

ANNA R. PRICE
18 LA
T.B.A. 0.06 Ac.
P.R.O. 0.12 Ac.

19 LA
T.B.A. 0.029 Ac.
PRO 0.058 Ac.

W.R. O'CONNELL & MARIE C. O'CONNELL
20 LA
T.B.A. 0.03 Ac.
PRO 0.06 Ac.

Mary Edna Poulton - Now Mary Kennedy - Maiden Name
T.B.A. 0.03 Ac.
PRO 0.06 Ac.

Vernad Walker
21 LA
T.B.A. 0.03 Ac.
PRO 0.06 Ac.

MARY J. BLANK
22 LA

Conc. Blk. Gas. Sta. & Garage
Conc. Base
Gas Tank
Slag Dr.

GEORGE F. HACHEN ET AL
23 LA
TBA 0.202 Ac.
PRO 0.266 Ac.

Harry G. Gentithes
24 LA
In Lot # 25 = 0.63 Ac.
L.A. In Lot # 26 = 4.94 Ac.
TBA Total = 5.57 Ac.
P.R.O. 0.91 Ac.

Subdivision of Lands of Harry G. Gentithes
Vol. 21 Pg. 8
Parcel # 1
0.597 Ac.

16' Access Sta. 704+00
Parcel # 2
0.463 Ac.

CURVE DATA ℄
P.I. = Sta. 722+55.43
Δ = 42° 12' Rt.
D = 1° 06'
R = 5208.71
T = 2009.87
E = 374.32
L = 3836.37

CURVE DATA
Δ = 10° 0'
D = 1° 28'
R = 3904.5
T = 341.60'
L = 685.30'

Inside Edge Rt Lane
R = 5133.71
Arc = 507.24

Sta. 698+46.50 Begin Traffic Dividers

BEGIN SHEET STA. 698+00

CH. 54 HEATON-NORTH

Widened Pavement As Per I.O.C. Permit Tru-82-91 On SR 82 At Intersection of Heaton-North 5-28-74

P.C. Sta. 702+45.56

Outlet

Traffic Dividers

Concrete Traffic Dividers

Tree Orchard

Chord

STA. 710+00

Joseph Sarkies
25A LA

Harry N. Humason

25 LA
T.B.A. 0.02 Ac. T = 4-N
P.R.O. 026 Ac.
R = 3-W

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 26

Stop L.A.

Overflow opening 6'x2.4'

Buckeye Beer Sign 6' long

Waterbury Furnace Sign 15' Long

Harry G. Gentithes
24 LA

Existing R/W

Cameron Bills Sign 10'

Gen. Outdoor Adv. Co. Sign 15'x5'

Grass

Solid 4" Median

19 L.F. 12" I-2

38 L.F. 12" I-2

End Curb

5.0'-12"I-2

33'-18" I-2

58'-12" I-2

651-5-15"x12" Y

WOODED AREA

Begin Fence

Gibson Realty & Development Co.
26 LA

Inside Edge PC Rt Lane Sta. 713+79.27

Sta. (℄) 710+38.79

END SHEET STA. 722+00

Revised 3-28-57 Parcel 14 LA Co-ordinate + 36.49/50 changed to 36.49/45

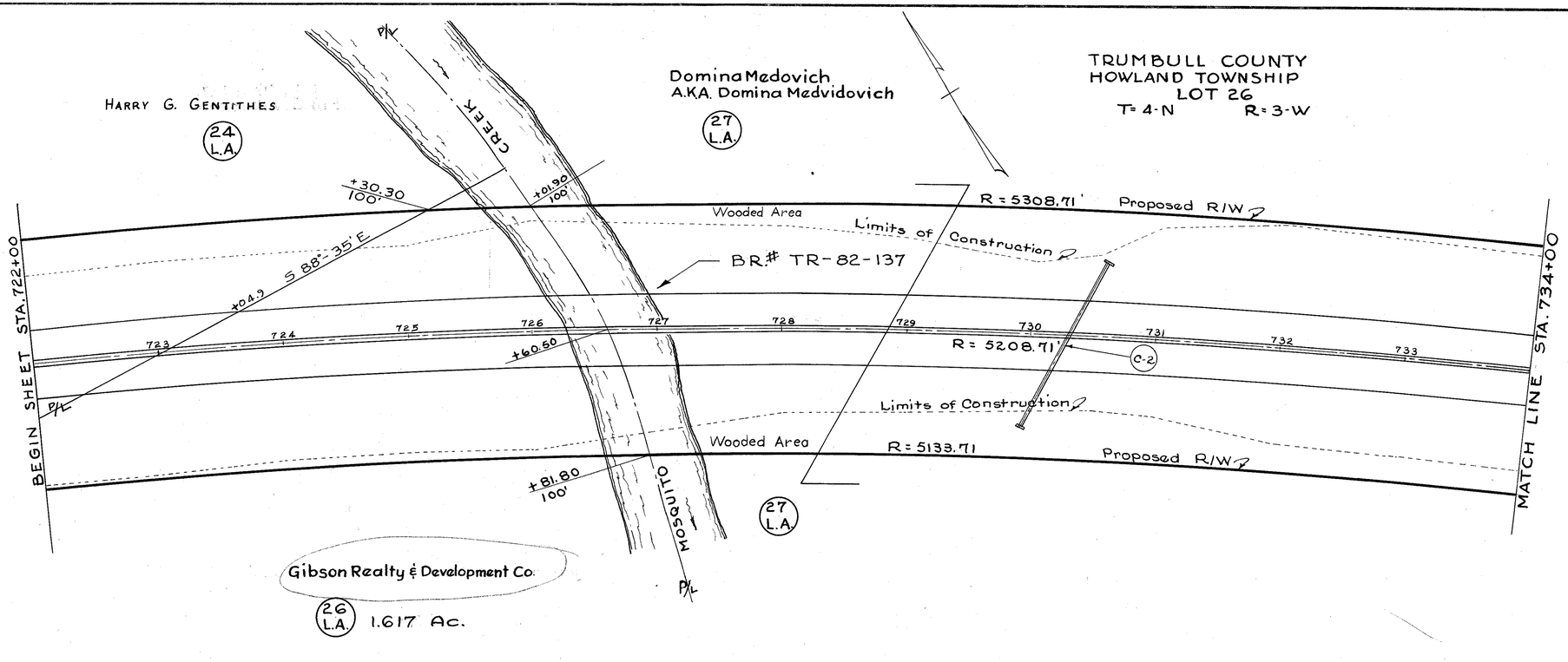
Rev 5-12-56 — 6-18-56 — 7-10-56 — 7-24-56
Rev. 3-27-56

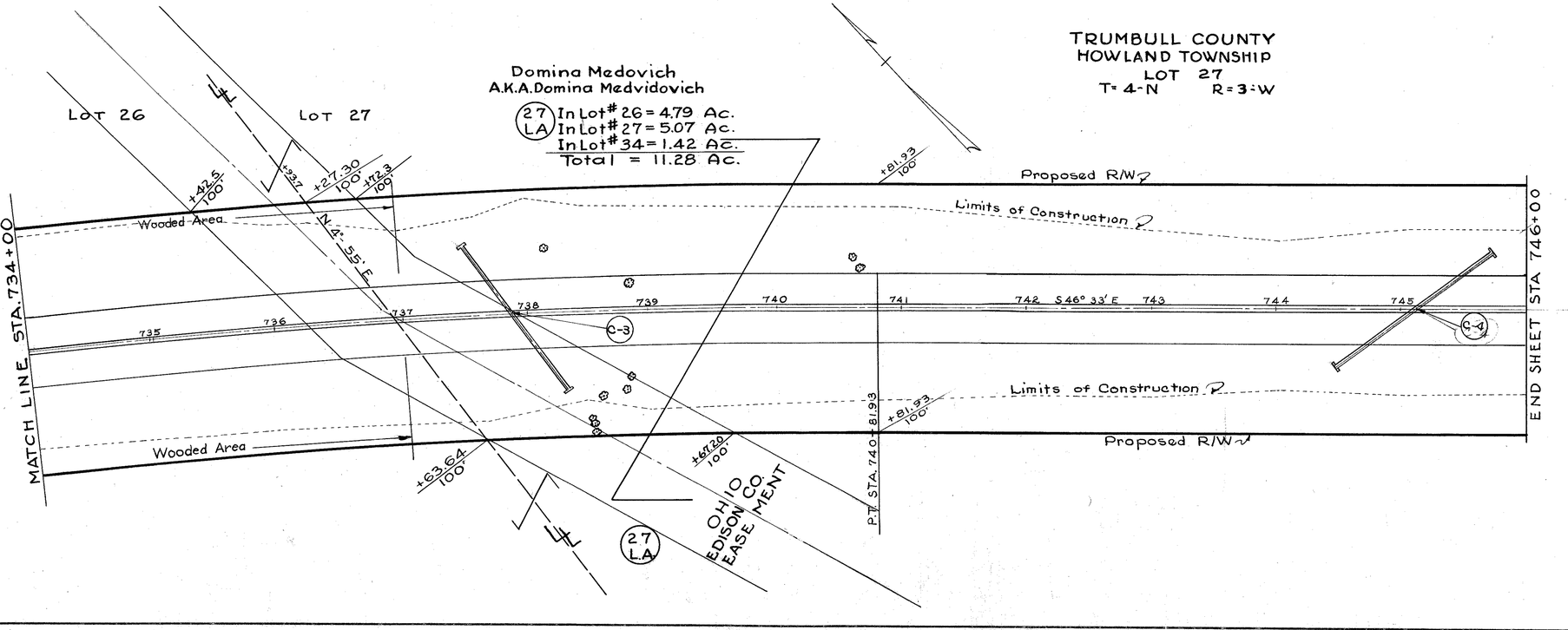
RIGHT OF WAY SHEET STA. 698+00 TO STA. 722+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU-82 - 12.67

4
18





RIGHT OF WAY SHEET STA. 722+00 TO STA. 746+00

REV 5-12-56 — 7-10-56 — 7-24-56
REV. 7-27-56

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU-82 - 12.67

5
18

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 34
T = 4-N R = 3-W

DOMINA MEDOVICH
A.K.A. DOMINA MEDVIDOVICH

27 L.A.

Lot 27 | Lot 34

+26.08 / 100'

+23.00 / 100'

28X .05 Ac.

Channel Easement

+45 / 145'

+85 / 155'

28X

ALICE BROWN & GRACE MACKEY

+89 / 100'

+29 / 100'

2.8 L.A.

Proposed R/W

Exist. Channel

Limits of Construction

T.S. Sta. 757+12.08

+12.08 / 100'

BEGIN SHEET STA. 746+00

7471 = 99.0
5°-8'-45"E

C-5

TRU. 82
1442

747 748 749 750 751 752 753 754 755 756 757

38°-12'

S-46°-33'E

+07.3

+71.92 / 100'

Fence

Limits of Construction

Proposed R/W

+91.60 / 100'

S 39°-19'-W

+12.08 / 100'

MATCH LINE STA. 758+00

Lot 27 Lot 34

27 L.A.

28 L.A.

TBA = 15.41 Ac.
PRO = 0.46 Ac.

CURVE DATA

Δ = 38°-23'		Ls = 350	
Δc = 27°-53		Ts = 840.67	
Dc = 3°-0'		Xc = 349.71	
Rc = 1909.86		Yc = 1068	
TS = 757+1208		θs = 5°-15'	
SC = 760+6208		φc = 1°-45'	
PI = 765+52.75		LT = 233.44	
CS = 769+91.52		ST = 116.76	
ST = 773+41.52		LC = 349.87	
Lc = 929.44		Es = 115.36	
		k = 174.95	
		p = 2.67	

ALICE BROWN & GRACE MACKEY

28 L.A.

+62.08 / 140'

MATCH LINE STA. 758+00

SC - STA. 760+62.08

Limits of Construction

Proposed R/W

R = 1769.86'

759 760 761 762 763 764 765 766 767 768 769

CS 769+91.52

STA. 770+00

END SHEET

+91.52 / 140'

28 L.A.

+62.08 / 140'

38°-23'

Limits of Construction

Proposed R/W

R = 2049.86

+91.52 / 140'

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 34
T = 4-N R = 3-W

Rev. 6-12-56 — 7-10-56 — 7-24-56
Rev. 3-27-56

RIGHT OF WAY SHEET STA. 746+00 TO STA. 770+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

6/18

TRU-82-12.67

CURVE DATA & SURVEY

Δ = 38°-23' Ls = 350'
Δc = 27°-23' Ts = 840.67'
Dc = 3°-0' Xc = 349.71'
Rc = 1909.86' Yc = 10.68'
TS = 757+12.08 θs = 5°-15'
SC = 760+62.08 Φc = 10°-45'
P.I. = 765+52.75 L.T. = 233.44'
CS = 769+91.52 S.T. = 116.76'
ST = 773+41.52 LC = 349.87'
Lc = 929.44' Es = 115.3'
k = 174.95'
p = 2.67'

BEGIN SHEET STA. 770+00

MATCH LINE STA. 782+00

END SHEET STA. 794+00

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 34
T = 4-N R = 3-W

28 L.A

29 L.A — Lucian J. Brown & Alice M. Brown — TBA-1.192 Ac. PRO-0.07 Ac.

29A L.A — T.B.A. 0.27 Ac. PRO. 0.16 Ac.

30 L.A — Alice L. Mackey Rodgers — TBA- 3.296 Ac. PRO. 0.204 Ac.

31 L.A — Alice Brown — TBA 1.07 Ac. PRO. 0.13 Ac.

32 L.A — Arlene Ruth Stein & Calvin H. Stein — TBA. 0.41 Ac.

33 L.A — Alice M. Brown & Grace Mackey — 8.09 Ac. 0.02 Ac. Channel Easement

TBA 0.15 PRO. 0.08

Ohio Edison Easement — Steel Tower

End Fence & Curve Data
Δ = 3°-06'
D = 0°-30'
R = 11459.16'
T = 310.08'
L = 620.00'
E = 4.19'
P.I. 787+35.85

Curve Data-Inside Lt. Lane
Δ = 3°-06'
D = 0°-30'
R = 11457.16
T = 310.02
L = 619.89
E = 4.19

Curve Data-Inside Edge Rt. Lane
Δ = 3°-06'
D = 0°-30'
R = 11461.16'
T = 310.13'
L = 620.11'
E = 4.19'

CURVE DATA
Δ = 4°-50'-07"
D = 2°-0'
R = 2864.79
T = 120.95
L = 241.70

Ramp Data
Δ = 8°-21'
R = 1909.86
D = 3°
L = 278.83
T = 139.41

Proposed R/W

Easement Line

℄ Ohio Edison Co. Easement

Grass

Curb

Wooded Area

Steel Tower

Rev 5-12-56 — 7-10-56
Rev 3-27-56 — 7-24-56

RIGHT OF WAY SHEET STA. 770+00 TO STA. 794+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TRU. 82-12.67

7

K.C. HOFMEISTER

W. PAUL DAY & ZOLA DAY

PAUL HOWARD & BETTIE JANE BEIGHLEY

WARREN L. & BLANCH J. KNAVER

GEORGE W. PIFER & ELEANOR W. PIFER

ALICE BROWN & GRACE MACKEY

See Detail Sheet No. 162

BEGIN SHEET STA. 0-2-200

-2.04 N Side Asphalt Dr.

8" V.S.P.

Pipeline Crosses S.R. 46

Fr. Gar.

1½ Sty. Fr. Hse.

-73 & Slag Drive

-118

-93

12.5'

137.5'

Gar.

1½ Sty. Fr. Hse.

0+19 & Slag Drive

130.5'

+22 & Slag Dr.

1 Sty. Fr. House

Water

131'

See Detail on Cross Section No. 118

C-6

+44 & Asphalt Dr

1 Sty. Fr. Hse.

134'

Well

+53.14

28 A

0.14 Ac.

See Detail on Cross Section Sheet No. 119

C-7

See Detail on Cross Section Sheet No. 120

C-8

8" C.I.P.

6" Field Drain

+18

60'

+53.14

60'

+69.14

33'

End L.A. End Fence N 2°-12'-20" W

Proposed R/W

Limits of Construction

+53.14

300'

Barbed Wire Fence

Ø775+54.14

6" I-4

0-100

0+0

1+0

2+0

3+0

4+0

5+0

6+0

7+0

8+0

9+0

10+00

8" C.I.P.

10" V.S.P.

8" V.S.P.

M.B.

Wooded Area

8" V.S.P.

+41.21

33'

+41.16

50'

+68

+96.62

33'

+96.16

50'

+21.21

33'

+21.16

50'

+46.21

33'

+46.16

50'

Limits of Construction

Proposed R/W

N 5°-04' E

S.R. 46

6" Drain Tile

Rail Fence

Slope Easement

+00

50'

+00

62'

+21.07

79.95

+53.92

33'

+21.21

33'

+46.16

50'

5+18

6+85

50'

Begin L.A. Fence

Ø775+83

300'

Barbed Wire Fence

6" Drain Tile

Wooded Area

0.06 Ac.

MILDRED B. ROUDEBUSH

REBECCA E. CAREY

GUY L. HARRIS

GUY L. HARRIS

GUY HARRIS JR.

ALICE BROWN

0.06 Ac.

0.03 Ac. Slope Easement

2 Sty. Fr. Hse.

31 C

31 B

31 A

31

31-L

31 LA

0-90 Slag Dr.

+41.32

S 84°-46' E

+82 & Slag Dr.

+96.32

S 84°-46' E

31+21.32

S 84°-46' E

5+46.32

S 84°-46' E

7+21.32

S 84°-46' E

7+54

126.0'

1+75 & Slag Dr.

Easement Line

Gar.

Begin L.A. Fence

Ø775+83

300'

Barbed Wire Fence

+00

50'

+00

50'

+00

62'

+21.07

79.95

+53.92

33'

+21.21

33'

+46.16

50'

6+85

50'

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

8
18

TRU-82-12.67

TRUMBULL COUNTY
HOWLAND TOWNSHIP
LOT 35
T = 4-N R = 3-W

LOT 34 | LOT 35

Channel Easement

ALICE M. BROWN & GRACE MACKEY
33X

Clifford Miller
35 LA
TBA - 0.674 Ac.

P.I. (Inside Edge) Rt. Line 794+71.07
Channel Easement
+02.62 Rt
+48.62
+25.00 Rt
+19.02
+63.34
119.33'
+00
118.62
+56.29
Proposed R/W
S 88°-31' E
S 85°-33' E
P/L
Limits of Construction
BEGIN SHEET STA. 794+00
33 LA
C-15
TRU-82-1506
795 796 797 798 799 S 88°-02' E 800 801 802 803 804 805
MATCH LINE STA. 806+00
+43.89
100'
Limits of Construction
Proposed R/W
Lewis L. Guarnieri
34 LA
TBA 6.17 Ac.
PRO 0.16 Ac.
+46.58
151.92'
P/L
32 LA
ARLINE RUTH STEIN & CALVIN H. STEIN
+40.84
241.33
I.P.

TRUMBULL COUNTY
Howland Township
Lot 35
T = 4-N R = 3-W

CURVE DATA & SURVEY

Δ = 28°34' Rt	Ls =	300.00	
Δc = 21°-04'	Ts =	733.88	
Dc = 2°-30'	Xc =	299.87	
Rc = 2291.83	Yc =	6.54	
T.S = 809+88.04	θs =	3°-45'	
S.C. = 812+88.04	φc =	1°-15'	
P.I = 817+21.92	LT. =	200.04	
C.S. = 821+30.71	S.T. =	100.04	
S.T. = 824+30.71	LC =	299.94	
L.c. = 842.67	Es =	74.8	
	k =	149.98	
	p =	1.63	

C-15 A
End Fence
12+10
25'
12+15
0.00
12+20
25'
Begin Fence
Clifford Miller &
Katherine Miller
38A LA
TBA 0.08
PRO 0.05
12+00
+56.9
182.46'
+61.9
151.76'
99'
+59.8
147.4
+38.04
100'
Concrete Retain Wall 2' High
2-Sty Fr. Dwell.
1-Sty Fr.
1-Sty Fr. Res.
+34.01
128.35'
+19
123'
+31.26
73.40'
N 45°-55' E
S 85°-33' E
Katherine Miller (Single)
36 LA
0.36 Ac.
PRO 0.02 Ac.
275'
P/L
MATCH LINE STA. 806+00
County Road #155
N 4°-51' E
+32.33
79.46'
+31.00
80.46'
+56.10
60.39'
25'
+06.00
61.48'
C-16
40 LA
William R. Baker & Nellie Baker
0.83 TBA
In Road = 0.05 PRO
+74.74
183.02'
93.00'
N 4°-59' E
Earl O. Jones & Lottie E. Jones
41 LA
+88.04
100'
Limits of Construction
Proposed R/W
S 85°-11'-10" E
+89.44
100'
R = 2291.83
807 S 88°-02' E 808 809 810 811 812 813 814 815 816 817
+03.22
100'
+28.25
100'
+20.71
98.41'
+08.50
93.87'
+63.03
END SHEET STA. 818+00
C-19
Howland Wilson Rd.
N 4°-33' E
37 A-LA
Ruth L. Kelly
2.737 TBA
In Road = .091 PRO
Total = 2.828 Ac.
39 LA
+50.2
102.10'
+68.9
102.60'
+88.04
102.80'
+66.76
101.84'
+19
105.20'
35°35'
S 85°-27' E
166.30'
253.25'
+88.04
103.69'
+62.04
100'
+31.47
61.96'
+83.33
100'
Limits of Construction
Proposed R/W
0.110 Ac.
38 LA
+35
100'
Lewis L. Guarnieri
34 LA
808+92.19
219.71'
809+17.19
219.71'
End Fence
T. S. 809+88.04
S 1°-58' W
Sight Distance Easement
Begin Fence
Gouram Dean & Irma G Dean
38B LA
TBA - 0.03
P.R.O. - 0.06
Sight Dist. Ease. - 0.03
38 SD
S.C. 812+88.04
S 5°-43' W

REV. 5-12-56 — 7-10-56 — 7-24-56
REV. 3-27-56

RIGHT OF WAY SHEET STA. 794+00 TO STA. 818+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

9
18

TRU-82-12.67

CURVE DATA ℄ SURVEY

Δ	= 28°-34' Rt	Ls	= 300.00
Δc	= 21°-04'	Ts	= 733.88
Dc	= 2°-30'	Xc	= 299.87
Rc	= 2291.83	Yc	= 6.58
T.S.	= 809+88.04	θs	= 3°-45'
S.C.	= 812+88.04	φc	= 1°-15'
P.I.	= 817+21.92	LT	= 200.04
C.S.	= 821+30.71	ST	= 100.04
ST	= 824+30.71	LC	= 299.94
LC.	= 842.67	Es	= 74.8
		k	= 149.98
		p	= 1.63

TRUMBULL COUNTY
Howland Township
Lot 35
T= 4-N R= 3-W

41 LA
Earl O. Jones ℄
Lottie E. Jones
4.58 Ac.

42 LA
Maria Mokodean

16' Access 822+00

+30.71 100'

Proposed R/W

+60.88 100'

T.S. Sta. 828+73.27

+73.27 100'

+00 100'

Limits of Construction

BEGIN SHEET STA. 818+00

819 820 821 822 823 824 825 826 S 59° 28' E 827 828 829

MATCH LINE STA. 830+00

Limits of Construction

Proposed R/W

65°-9' Rt

+51.36 100'

S 6°-03' W

73.27 100'

R=2191.83

C.S. Sta. 821+30.71

S.T. Sta. 824+30.71

16' Access 822+00

41 LA

42 LA

P/L

TRUMBULL COUNTY
Howland Township
Lot 35
T=4-N R=3-W

42 L.A
Maria Mokodean
4.55 Ac.

CURVE DATA

Δ	= 25°-44' Lt	Ls	= 200.00
Δc	= 21°-44	Ts	= 754.51
Dc	= 2°-00'	Xc	= 199.98
Rc	= 2864.79	Yc	= 2.33
T.S	= 828+73.27	θs	= 2°-0'
S.C.	= 830+73.27	φc	= 0°-40'
P.I.	= 836+18.78	L.T.	= 133.34
C.S.	= 841+59.95	S.T.	= 66.67
S.T.	= 843+59.95	L.C.	= 199.99
Lc.	= 1086.67	Es.	= 74.4
		k	= 100.00
		p	= 0.58

MATCH LINE STA. 830+00

C.S. 830+73.27 N 28°-32' E

+73.27 100'

R=2764.79

Proposed R/W

C-18

TRU-82-1574

832 833 834 835 836 77°-57' 837 838 839 840 841

C-19

+73.27 100'

830+65 100'

Limits of Construction

0+00

42 X

0.41 Ac.

0+50 S 0°-53' W 53'

4+00

20' 20'

4+50

Ex Channel

S 59°-26'E S 85°-12' E 2.5°-44' Rt

Proposed R/W R=2964.79

42 LA

+11.96 100'

P/L

44 LA

City Of Warren
Avalon Golf Course

0.003 Ac.

N 4°-56'-50" E

+98.18

+77.80 100'

+15.68 100'

Wooded Area

N 85°-12' W

P/L

+79.30 92.80 P.I.

Limits of Construction

+59.95 100'

+59.95 147.62' C.S.

841+59.95

END SHEET STA. 842+00

43 LA

Wooded Area

Norman Swager ℄
Mildred Swager

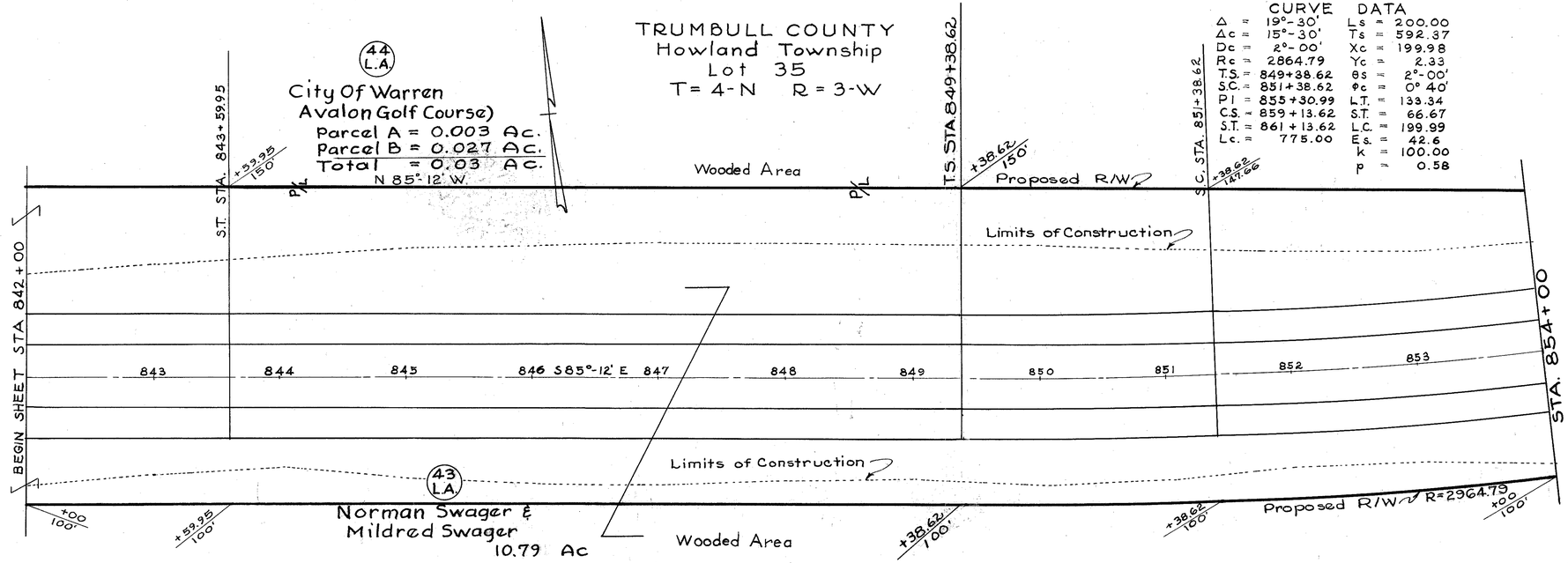
Rev. 11-1-57 Parcel 42-X Added
Rev. 5-12-56 — 7-10-56 — 7-24-56
Rev. 3-27-58

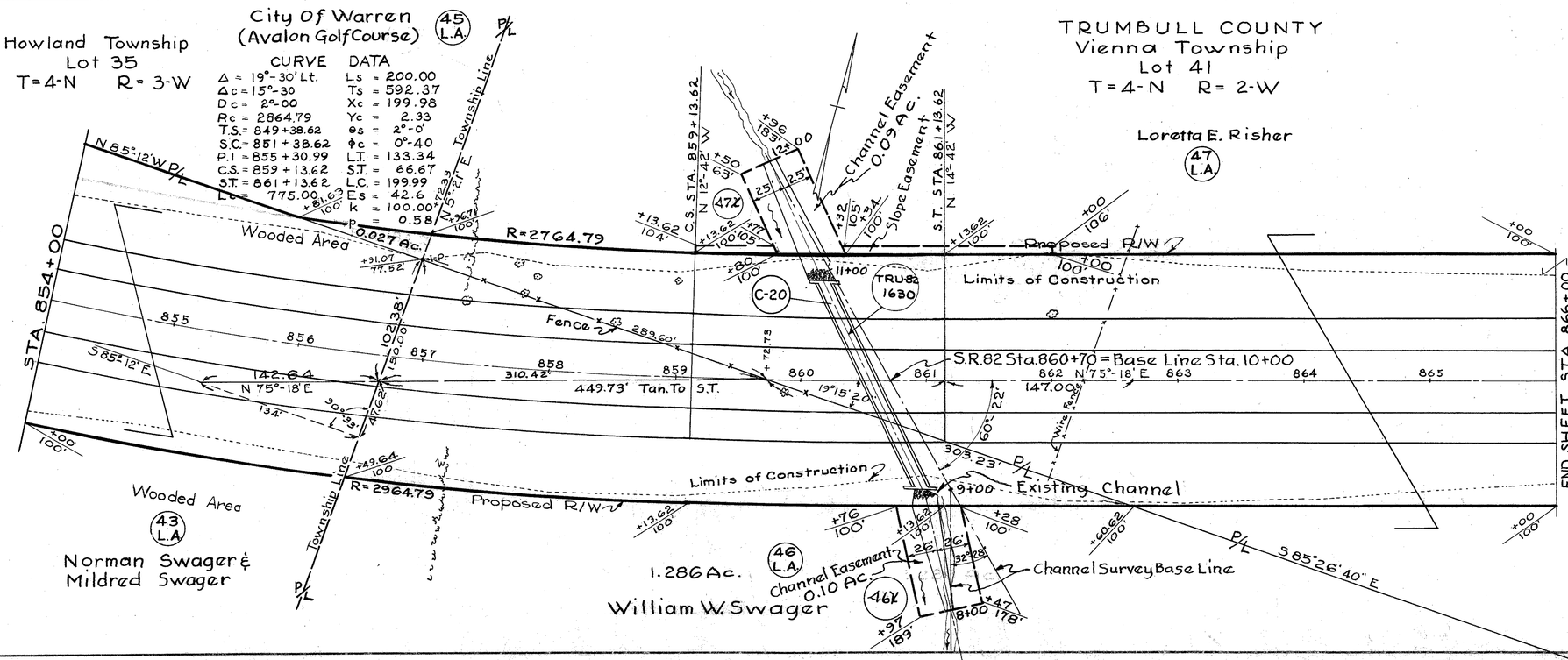
RIGHT OF WAY SHEET STA. 818+00 TO STA. 842+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU 82 - 12.67

10/18





REV. 5-12-56 — 7-10-56 — 7-24-56
REV. 5-27-56

RIGHT OF WAY SHEET STA. 842+00 TO STA. 866 +00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

11
18

TRU 82 - 12.67

TRUMBULL COUNTY
VIENNA TOWNSHIP
LOT 41
T = 4-N R = 2-W

CURVE DATA

Δ =	18°02' Rt	Ls =	200.00
Δc =	15°02'	Ts =	706.19
Dc =	1° 30'	Xc =	199.99
Rc =	3819.72	Yc =	1.75
TS =	873+23.14	θs =	1°-30'
SC =	875+23.14	φc =	0°-30'
PI =	880+29.33	L.T. =	133.34
CS =	885+25.36	S.T. =	66.67
ST =	887+25.36	L.C. =	199.99
Lc =	1002.22	Es =	48.3
		k =	100.00
		p =	0.44

T.B.A. 13.89 Ac.
P.R.O. 0.43 Ac.
Sight Dist. Ease. 0.06 Ac.

Begin Fence
871+72.90
220.67'
Begin Fence
Loretta E. Risher
47 LA
End Fence
871+20
206.35'
Loretta E. Risher
47 LA
+91.5
100'
+00
100'
C-22
+28.16
100'
N 5° 34' W
1420
1410
+14
100'
873+23.14
100'
Proposed R/W
Limits of Construction
+23.14
100'
+00
100'
BEGIN SHEET STA. 866+00
867 868 869 N 75° 18' E 870 871 872 873 874 875 876 877
STA. 878+00
99°-09'
80°-52'
871+PI Δ=18°-37' Lt
80°-24'
199.99
C-21
C-23
47 S.D 0.06 Ac.
+20.46
100'
871+40
100'
+30
100'
+23.14
100'
Limits of Construction
Proposed R/W
Begin Fence
+00
100'
+09
100'
47 LA
870+95.34
100'
8+94.74
93.5
870+84
18.5'
SCIOTO RD.
S 35° 03' W
Meas. 4.39
870+36
End Fence
Traveled Road
Sight Dist. Easement 0.07
0.07 AC
(48.39)
132.3
871+83.5
15
Dr.
13 Yr. Campbells
05
187+04
18.5'
+06.39
4.39
P/L
Wayne Fenton & Vesta Fenton
T. S. STA. 873+23.14
S.C. STA. 875+23.14
48 LA
T.B.A. 0.02 Ac.
P.R.O. 0.05 Ac.
47 LA
Loretta E. Risher
870+49.02
217.57'
P/L
R/W
870+74.38
221.82'
N 4°-43' E

TRUMBULL COUNTY
Vienna Township
Lot 41
T = 4-N R = 2-W

CURVE DATA

Δ =	18°02'	Ls =	200.00
Δc =	15°02'	Ts =	706.19
Dc =	1°-30'	Xc =	199.99
Rc =	3819.72	Yc =	1.75
T.S. =	873+23.14	θs =	1°-30'
C.S. =	875+23.14	φc =	0° 30'
P.I. =	880+29.33	LT =	133.34
C.S. =	885+25.36	ST =	66.67
S.T. =	887+25.36	LC =	199.99
Lc =	1002.22	Es =	48.3
		k =	100.00
		p =	0.44

LORETTA E. RISHER
47 LA
+41.00
100'
+40.66
89.90
Proposed R/W
+25.36
100'
+25.36
100'
49 LA 3.23 Ac.
+00
100'
R=3919.72
Limits of Construction
P/L
S 84°-06'-50" E
+25.36
56.39'
+25.36
47.72'
+0
35.48'
879 880 881 882 883 884 885 886 887 888 889
S 86°-40' E
STA. 878+00
END SHEET STA. 890+00
Limits of Construction
R=3719.72
+00
100'
+25.36
100'
C.S. STA. 885+25.36
+25.36
100'
S.T. STA. 887+25.36
Proposed R/W
+00
100'
47 LA
Loretta E. Risher
47 LA

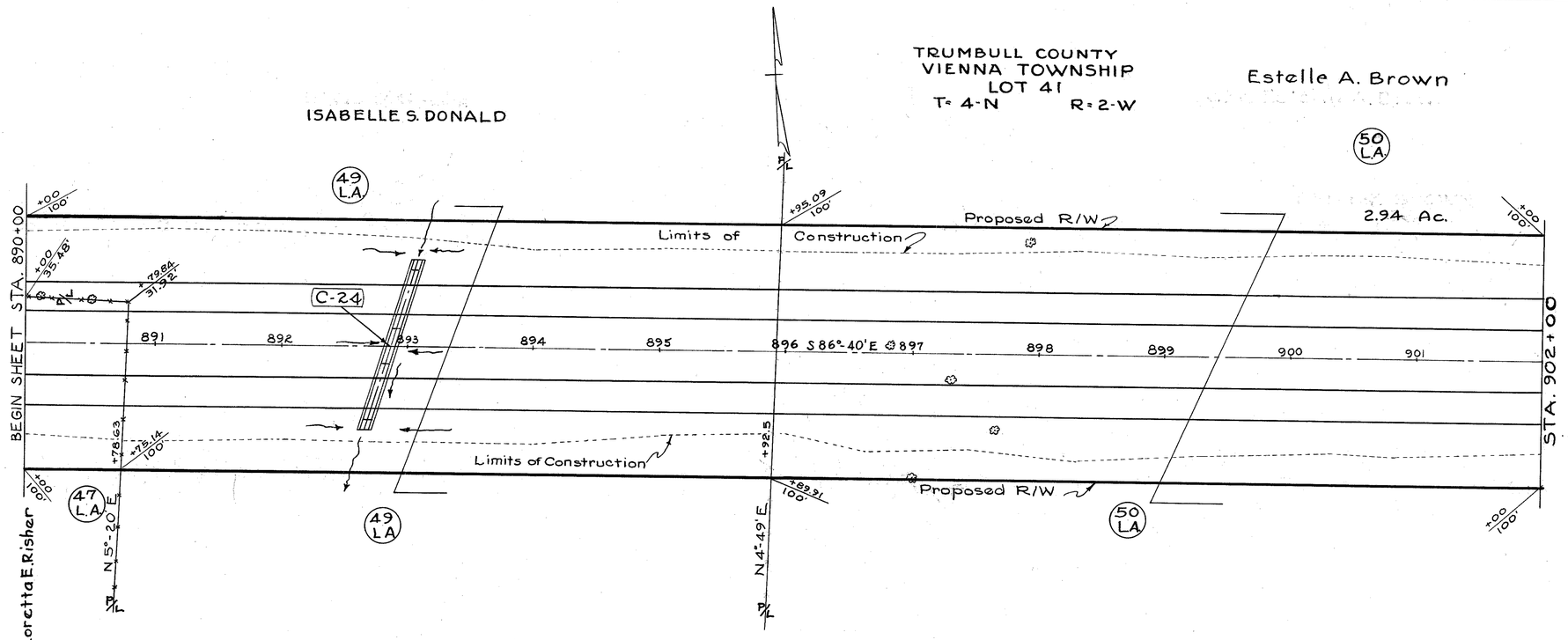
Rev 6-12-56 — 7-10-56 — 1-24-56
Rev 5-27-58

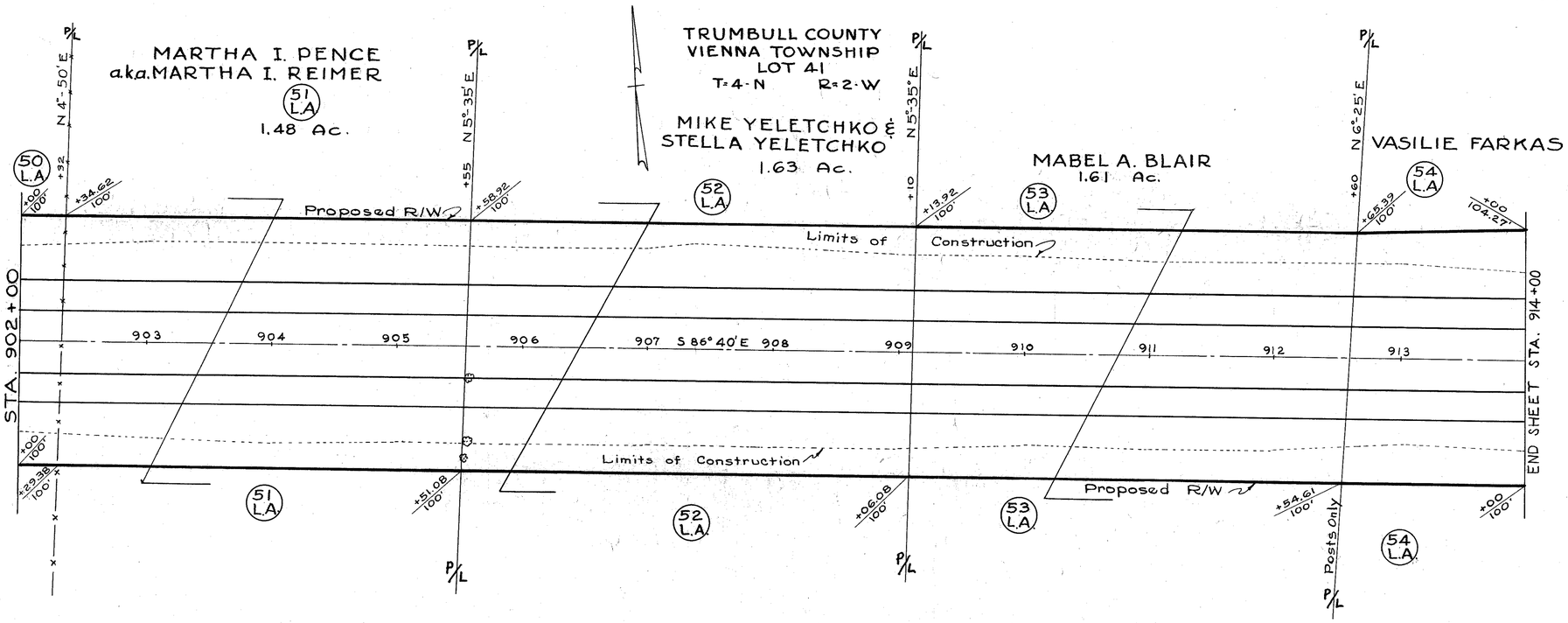
RIGHT OF WAY SHEET STA. 866+00 TO STA. 890+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU 82-12.67

12/18





Rev 5-12-56 — 7-10-56 — 7-24-56
Rev 3-27-58

RIGHT OF WAY SHEET STA. 890+00 TO STA. 914+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU 82 12.67

13
18

ORIG'L. LOT 41

VASILIE FARKAS
V 466 - 203
2.00 Ac.

54 LA

LOT 35

FREDERICK K BOYER JR. &
CLARISSA V. BOYER
V-483 - 212

56 LA

TRUMBULL COUNTY
VIENNA TOWNSHIP
LOT 35
T = 4-N R = 2-W

EDGAR L. AIKEN &
MARY AIKEN
V 252 - 369

57 LA

EDGAR LLOYD AIKEN JR. &
MARGARET B. AIKEN
V-574 - 499

58 L.A

55 LA

N 6°-14' E

+00 104.27

+86.37 113.85'

352.00'

+38.40 110.20'

S 86°-06'-30" E 878.15'

274.08'

+12.50 107.40'

274.07'

+86.56 105.14'

+00 104.56'

Proposed R/W

Limits of Construction

+80.60

81°-06'

BEGIN SHEET STA 914+00

STA. 926+00

915 916 917 918 919 S 86°-40' E 920 921 922 923 924 925

Fence

Limits of Construction

+00 100'

Proposed R/W

54 LA

+75.53 100'

ERNEST A. CATCHPOLE

55 LA

6.36 Ac.

TRUMBULL COUNTY
VIENNA TOWNSHIP
LOT 35
T=4-N R=2-W

ERNEST A. CATCHPOLE

55 LA

16' R/W Fence Opening

+00 104.56'

+00 100'

+68.03 91.96'

Proposed R/W

68.47 100'

S 85°-56' 15" E 2056.58'

Limits of Construction

12'

8'

8'

STA. 926+00

927 928 929 930 931 932 S 86°-40' E 933 934 935 936 937

92.1

93°-08'

Limits of Construction

Proposed R/W

+00 100'

16' R/W Fence Opening

55 LA

+57.53 100'

N 6°-28' E 2+63

ERNEST A. CATCHPOLE

59 LA

MOSE SZAKACS &
ROSE SZAKACS
V 492 - 68

55X

+32 170'

+114 170'

Exist. Channel
Channel Easement

Proposed Channel

+18 100'

+00 100'

+18 100'

Dump Rock Fill

TRU-82
17.73

C-25

Dump Rock Fill

END SHEET STA. 938+00

+53 100'

+99 100'

+00 100'

Proposed Channel

Channel Easement

+05 180'

+61 180'

59X

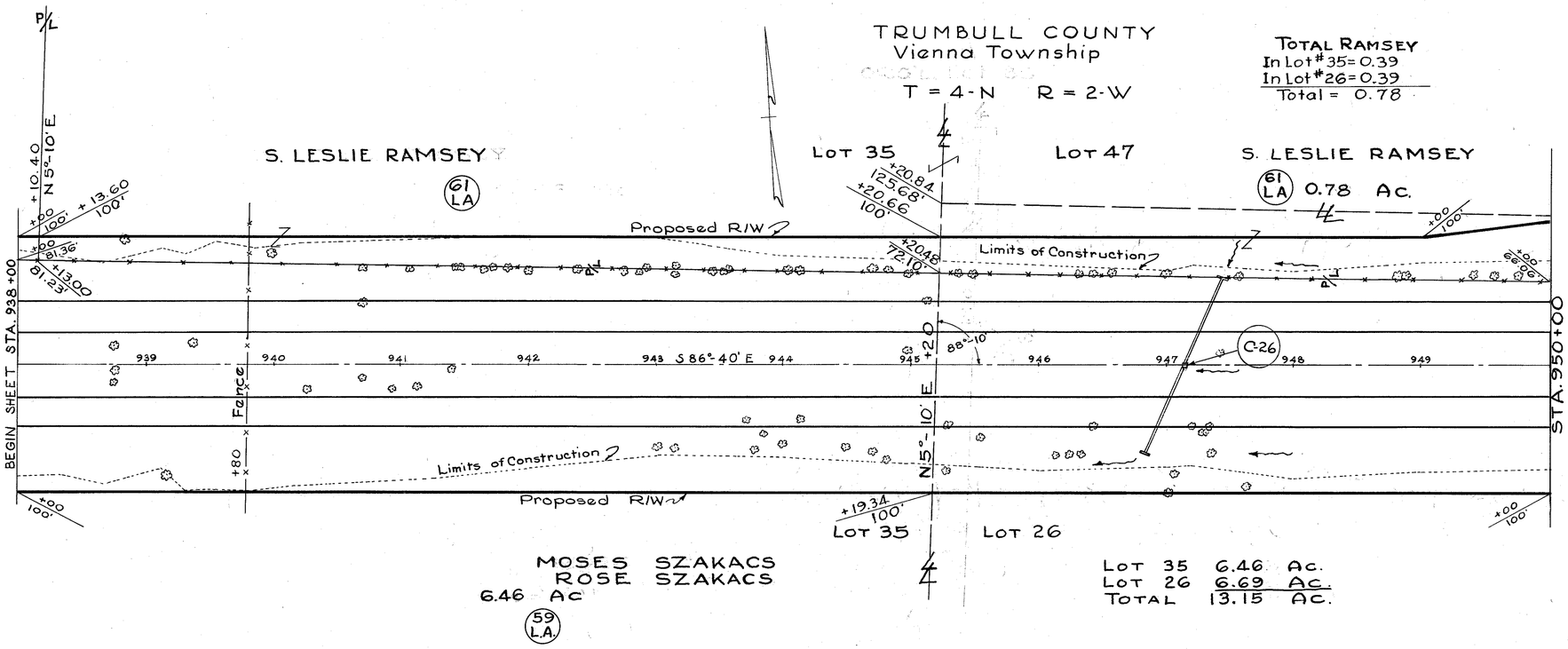
Rev 5-12-56 — 7-10-56 — 7-24-56

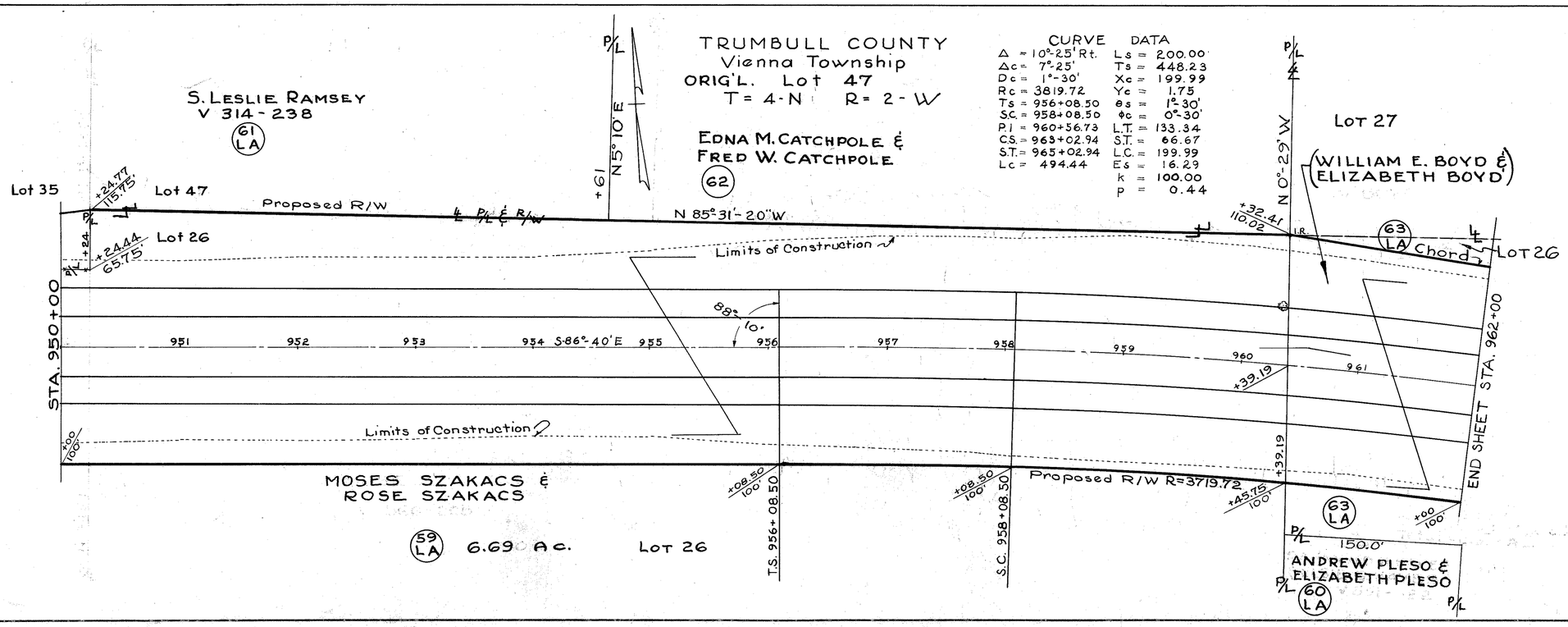
RIGHT OF WAY SHEET STA. 914+00 TO STA. 938+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU 82 - 12.67

14
18





REV. 5-12-56 — 7-10-56 — 7-24-56

RIGHT OF WAY SHEET STA. 938+00 TO STA. 962+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

TRU 82 - 12.67

15
18

TRUMBULL COUNTY
Vienna Township
ORIG'L LOT 26
T = 4-N R = 2-W

HAROLD W. ROBINSON & DOROTHA F. ROBINSON (67 LA)

W. C. COGLEY (66 LA)

DONALD N. EVERITT (65 LA)

MATTHEW W. JOHNSON JR. & RUTH JOHNSON (64 LA)

WILLIAM E. BOYD & ELIZABETH BOYD (63 LA)

ANNA MAE WILSON (68)

MATTHEW W. JOHNSON JR. & RUTH JOHNSON (64B LA)

ORIG'L LOT 27

ORIG'L LOT 26

MILES VIENNA ROAD (S.R. 3)

16' ACCESS STA. 6+44 C.H. 56

BEGIN SHEET STA 962+00

END SHEET STA. 974+00

T.B.A. 3.39 Ac.
P.R.O. 0.15 Ac.

Small Orchard 24 trees (Within 100' Limit)

Limits of Construction

Begin Fence

End Fence

Proposed R/W

West Bound

East Bound

C-27

C-28

C-29

C-30

Ex. Curve Data C.H. 56
Δ = 14°-27'
D = 6°-0'
E = 7.6
T = 121.07
L = 240.83

T.B.A. 0.78 Ac.
P.R.O. 0.36 Ac.

T.B.A. 1.46
P.R.O. 0.16

0.01 Ac.
ORIG'L. LOT 26

T.B.A. 0.931 Ac.

T.B.A. 1.699 Ac.
P/L Channel Easement 0.17 Ac.

Small Orchard 12 Trees within 100' Limits (Abn'd.)

Abandoned Route

Post

Well

Fr. Shed

Fr. Garage

REV. 6-12-56 — 7-10-56 — 7-24-56

RIGHT OF WAY SHEET STA. 962+00 TO STA. 974+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

16
18

TRU.-82-12.67

TRUMBULL COUNTY
VIENNA TOWNSHIP
LOT 26
T-4-N R-2-W

CURVE DATA

Δ = 7°-44' Lt
Δc = 4°-44'
Dc = 1°-30'
Rc = 3819.72
T.S. = 978+21.00
S.C. = 980+21.00
P.I. = 981+79.20
C.S. = 983+36.56
S.T. = 985+36.56
Lc = 315.56
Ls = 200

Ts = 358.20
Xs = 199.99
Yc = 1.75
Θs = 1°-30'
Φc = 0°-30'
L.T. = 133.34
S.T = 66.67
L.C. = 199.99
E.S. = 9.2
P.R.C. = 100
P = 44

67 LA
HAROLD W ROBINSON &
DOROTHA F. ROBINSON

67 X
0.11 Ac.

Channel Easement

N 5°05' E

69 LA
LENA G. HAGER

T.S. Sta. 978+21.0

S.C. Sta. 980+21.0

981+78.78 on ℄ S.R. 82
P.C.C. Sta. 6+09.74 on Ramp

C.S. Sta. 983+36.56
6+61.96 (Ramp)

Δ = 16°-55'10"
DD = 5°
R = 1145.92'
T = 170.44
L = 338.39

P.C. Sta. 4+11.35

S.T. Sta. 985+36.56

STATION 986+00

BEGIN SHEET STA. 974+00

Sta. 976+28.78

225'
550'
325'

Proposed R/W

Limits of Construction

16" Oak

11+34.74

975 976 977 978 979 980 981 982 983 983+34 984 985

20" Maple

S 76°-15' E

12" W. Cherry

S 83°-59' E

TRU-82-18.46

C-31

12" Oak

Limits of Construction

8+0 7+0 6+0 5+0 4+0

0.06 Ac.

67-Y

Channel Easement

15' Wide Brush Line

Sta. 976+24

Sta. 777+45

225'
208.78'
413.78'

Δ = 10°-57'-40"
D = 3°
R = 1909.86'
T = 183.24'
L = 365.37'

Proposed R/W

P.T. Sta. 4+63.28

67 LA

70 Q6
WALTER R. HOWDEN
& HELENA B. HOWDEN
V. 558-621
T.B.A. 11.76
P.R.O. 0.67

Sta. 981+78.78 on ℄ S.R. 82
Sta. 8+28.65

Rev. 7-21-9, Changed R/L TO L&T6 TO Q.0.
Rev. 5-12-56 — 7-10-56 — 7-24-56

RIGHT OF WAY SHEET STA. 974+00 TO STA. 986+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

17/18

TRU 82 12.67

LOT 27
JOHN E. WILSON
T.B.A. 0.13 Ac.
69D

MATCH LINE STA 357+00

Proposed R/W
Limits of Construction
5' W.Ch.
24" Elm
18" Elm
8" Apple
10" Elm
60" Oak
Blk. Top Dr.
12" Intake
JOHN & VIENNETA ANDERSON
M.B.
Spike
N 5°-05' E
358
359
S.R. 90
360
361
362
20" Elm
15" Elm
18" Maple
5" Apple
18" Apple
6" Apple
12" Intake
12" Hickory
22 Maple
30" Elm
Limits of Construction
10" Maple
10" Maple
60" Oak
12" Maple
Proposed R/W
28" Ash
20" Maple
Spruce
T.B.A. .14 Ac.
71 JOHN W. PURDY & ELSIE PURDY
71A LOT 15 T.B.A. 0.05 Ac. THEODORE MAGOS
71B 1½ Sty Fr. Hse. WADE W. & EUGENIA McGINNIS
Small Scrub Maple Trees
71C LOT 16 T.B.A. 0.03 Ac.
LOT 17 T.B.A. 0.01 Ac. RUTH W. SCOTT 332 0.02 Ac.
ORCHARD VILLA P.B. 13, P. 23
Grapes
8" Spruce
15" Spruce
2 Sty Fr. Hse.
Used as Field Office
Proposed R/W
Channel Easement 0.08 Ac. 71X
BELMAR TERRACE Side Street
Top Slag Screenings
12" Elm
2-6" Maples
12" Spruce
Gravel Dr.

LOT 27
JOHN E. WILSON
69D
End L.A.
+63.82
+63.91
33'
16' Access Sta. 356+35
36' Access Sta. 356+39
Small Trees
Small Spruce
Begin L.A. LOT 17
TRUMBULL COUNTY
VIENNA TOWNSHIP
LOT 16
T-4-N R-2-W
71
JOHN W. PURDY & ELSIE PURDY
T.B.A. 1.99 Ac.
P.R.O. 0.25 Ac.
71 LA
Begin Fence
Berry Patch
LOT 26
LEN A. G. HAGER
T.B.A. 4.79 Ac.
P.R.O. 0.32 Ac.
69 LA
End Fence
69X 0.09 Ac.
Channel Easement
Proposed R/W
Limits of Construction
JOHN W. PURDY & ELSIE PURDY
V. 423-397
71 LA
Channel Easement 0.08 Ac. 71X
MATCH LINE STA. 357+00
BEGIN SHEET
END SHEET
STA. 986+00
STA. 998+00
N 82°-51'-50" E
C-32
2 Type "D" Inlet
TRU. 82 1870
C-36
C-37
TRU 82 1885
F.L.
R=90'
R=140'
R=100'
S 83° 59' E
Sta. 989+83.55 S.R. 82
Sta. 352+38.42 S.R. 90
℄ PROPOSED S.R. 82
S 83°-59' E
I-8MA.
S.R. 90
WALTER R. HOWDEN & HELENA B. HOWDEN
T.B.A. 11.76
P.R.O. 0.67
70 QQ
R=175'
C-34
C-33
C-38
C-35
TRU. 82 1880
70 LA
N 81°-30'-10" E
Limits of Construction
Proposed R/W
Channel Easement
70X 0.36 Ac.
End Fence
Begin Fence
1st. Sty. Brick Hse.
1.6' Access Sta. 348+77
End L.A.
Begin L.A.
2 Sty. Fr. House Well
70D 0.15 Ac.
LENA G. HAGER 69
T.B.A. 0.19 Ac.
MATCH LINE
STA. 347+00
Guy
Sassafras
Cinder Dr.
Gravel Dr.
Grape
Peach
Apple
Maple
Oak
Cherry
Pear
Plum
Elm
Spruce

MATCH LINE STA. 347+00
70D
WALTER R. HOWDEN & HELENA B. HOWDEN
LENA G. HAGER 69
LEE C. CLARK ET AL
MARY L. CREW deceased
1½ Sty Fr. Hse. 69A
T.B.A. 0.03
+47.2 Cinder Dr.
T.B.A. 0.12 Ac.
70E ROBERT T. & ANNA M. BENNER
LOT 26
EDGAR O. ANGSTADT & EVELYN L. ANGSTADT
T.B.A. .10 Ac. 69B
Gar.
Existing R/W
Limits of Construction
Proposed R/W
N 5°-12'-E
S.R. 90
Gravel Dr.
1½ Sty. Fr. Hse.
ROSE M. MIRANDA 69C
T.B.A. 0.03 Ac.
T.B.A. 0.08 Ac.
70F LOT 16 VIRGIL H. ROWE & EDNA L. ROWE

REV. 7-21-91 - CHANGED RL TO LA TO 70 QQ
REV. 5-12-56 — 7-10-56 — 7-24-56

RIGHT OF WAY SHEET STA. 986+00 TO STA. 998+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18/18

TRU 82 - 12.67

TRUMBULL COUNTY
VIENNA TOWNSHIP
T-4-N R-2-W
LOT 16

Δ = 7°-59'
D = 2°-30'
R = 2291.83'
T = 159.92'
L = 319.33'

P.C. Sta. 8+67.07

JOHN W. PURDY & ELSIE PURDY
5.89 Ac.
71D LA

P.T. Sta. 11+87.40
Sta. 1001+59.62

Sta. 1005+00

365.38'
+70.81
171'
140.38'
225'

+00 142'
+60 108.58
+00 106.75'
+87.40 170.45' 100.55'
13+27.78

Proposed R/W
Limits of Construction
+00 100'

BEGIN SHEET STA. 998+00

999 1000 1001 1002 1003 1004 1005 1006 1007

S 83°-59' E.

END SHEET STA 1008+00

Limits of Construction
11+84.62
4+12.93

Proposed R/W
+00 100'
+00 142.49'
+71.17 100'
341.31'
225'
566.31'
+00 100'

P.C. Sta. 8+67.49

P.T. Sta. 1001+58.69

Sta. 1007+12.5

Δ = 9°-30'-50"
D = 3°
R = 1909.86'
T = 158.93'
L = 317.13'

70 Q.C.

WALTER R. HOWDEN &
HELENA B. HOWDEN
V. 558-621

JOHN W. PURDY &
ELSIE PURDY
V. 423-397

END PROJECT
STA. 1008+00

1001+71

MATCH LINE STA 1008+00

+00 100'
TR-82-1911
10.09 10.10 10.11 10.12 10.13 10.14 10.15 10.16
S 83°-59' E.
+52.6
+50.6 100'
+54.6 100'
P/L
P/L

71D LA

Coake Flemming &
Louise Flemming
4.96 Ac.

Rev 7-21-91 Changed Rel 70LA To 70 Q.C.
Rev. 5-12-56 — 7-10-56 — 7-24-56

RIGHT OF WAY SHEET STA. 998+00 TO STA. 1008+00

SOIL PROFILE
TRUMBULL COUNTY

1/5

TRU-82-12.67

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

LEGEND FOR PROJECT-AVERAGE RESULTS OF TESTS- 278 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 WITH SAND	A-1-b(0)	A-1-b	49	8	21	14	8	23	2	19	2
COARSE & FINE SAND	----	A-3a	6	14	56	12	12	NP	NP	24	10
GRAVEL WITH SAND & SILT	A-1-b(0)	A-2-4	39	14	17	24	8	NP	NP	23	3
GRAVEL WITH SAND, SILT, & CLAY	A-2-6(0)	A-2-6	30	22	19	19	10	24	12	16	1
SANDY SILT	A-4(5)	A-4a	11	7	21	39	22	24	6	20	120
SILT	A-4(8)	A-4b	3	3	12	59	23	26	6	24	27
SILT & CLAY	A-6(9)	A-6a	9	4	14	42	31	31	13	22	79
SILTY CLAY	A-6(11)	A-6b	3	3	12	44	38	36	17	28	24
ELASTIC CLAY WITH OR WITHOUT ORGANIC MATERIAL	A-7-5(20)	A-7-5	0	3	7	50	40	95	35	118	4
CLAY	A-7-6(14)	A-7-6	0	2	9	43	46	46	23	34	8

SHALE — CLASSIFIED BY VISUAL INSPECTION

SAMPLES TESTED
LAB. NOS. 50-8433-8496, 8567-8606, 8703-8746, 8902-9007, 9021-9037, 9308-9317, 9330-9337.

BERM MATERIAL

TOP SOIL T.S. = x' = APPROX. DEPTH

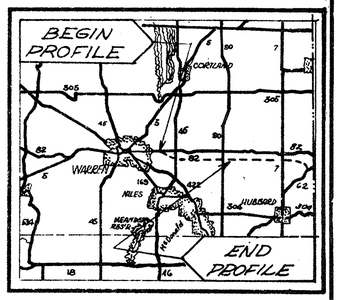
AUGER BORING — PLOTTED TO VERTICAL SCALE ONLY

WATER CONTENT NEARLY EQUAL TO OR GREATER THAN LIQUID LIMIT

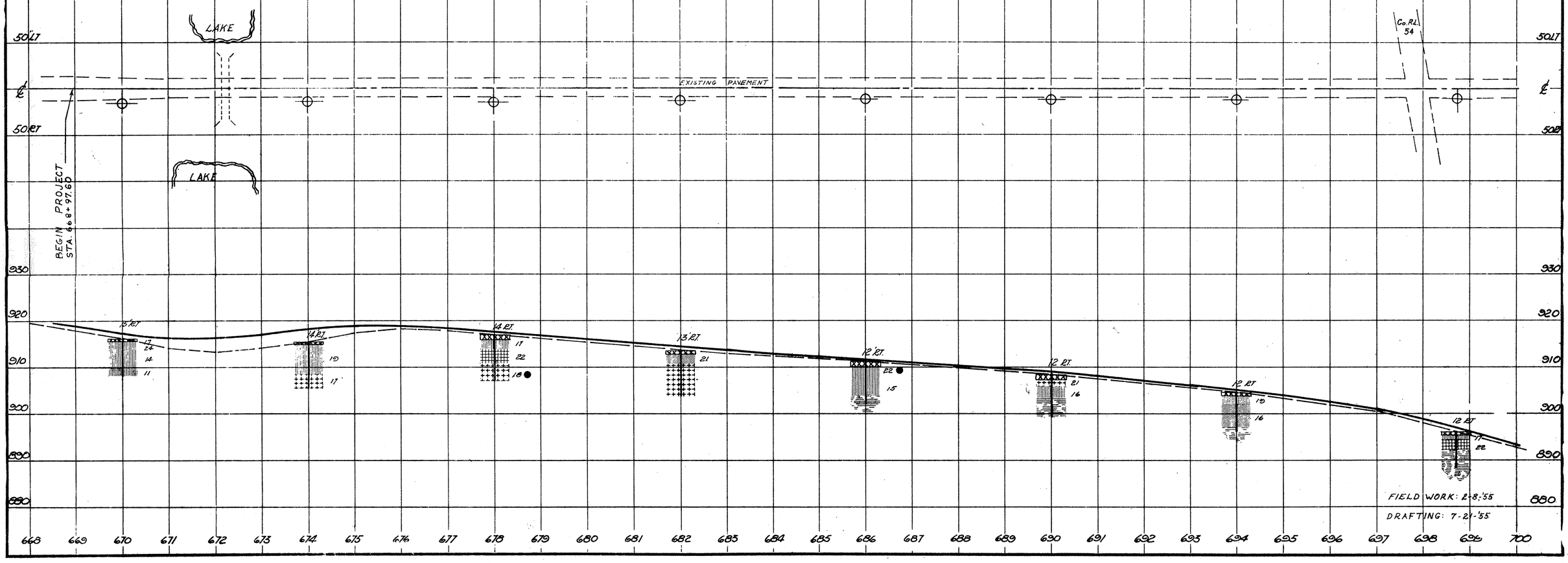
AUGER BORING PLAN VIEW

W FREE WATER

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PERCENT



LOCATION MAP



FIELD WORK: 2-8-'55
DRAFTING: 7-21-'55

SOIL PROFILE
TRUMBULL COUNTY

2/5

TRU-82-12.67

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

O. S. U. CAMPUS, COLUMBUS, OHIO

REVISED - SEPTEMBER 1955

EXISTING PAVEMENT

50' RT.

SWAMPY AREA

WOODED

DEPRESSION

WOODED

50' LT.

REFER TO SHEET 5 FOR CROSS SECTIONS IN THIS AREA

12 ET

18

21

T.S.+0.5'

26

21

23

17

T.S.+0.5'

W

34

31

T.S. +0.4'

SWAMP WATER +0.8'

W

37

23

27

ORGANIC

21

11

39

T.S.+0.5'

50

W

31

W

23

49

29

STANDING WATER +2.0'

52

45

22

24

T.S.+0.5'

25

22

T.S.+0.5'

W

32

T.S.+0.5'

35

20

890 880 870 860 850

700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732

BRUSH AND SWAMP GRASS

50' RT.

WOODED

T.S.+0.5'

30

T.S.+0.5'

41

35

T.S.+0.5'

34

T.S.+0.5'

25

21

T.S.+0.5

21

W

30

T.S.+0.5'

W

32

38

T.S.+0.5'

22

STOPPED IN GRAVEL

T.S.+0.5'

27

17

10

T.S.+0.5'

19

W

12

880 900

870 890

860 880

850 870

732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764

S.R. 46

940 960 960 1000 1000 1040

930 950 950 990 990 1030

920 940 940 980 980 1020

910 930 930 970 970 1010

900 920 920 960 960 1000

T.S.+0.5'

17

16

T.S.+0.5'

16

T.S.+0.5'

18

16

STOPPED ON BROKEN SANDSTONE

T.S.+0.5'

16

T.S.+0.5'

18

15

W

3

× SANDSTONE OUTCROP

T.S.+0.2'

21

T.S.+0.2'

18

LOG OF USES BORING AT STA. 788+00 ℄

T.S.+0.2

W

30

SANDSTONE, COARSE GRAINED, INTERMITTENTLY CONGLOMERATIC, POORLY CEMENTED, FRIABLE, THIN BEDDED IN UPPER QUARTER TO MASSIVE IN LOWER PART.

SANDSTONE, COARSE TO MEDIUM GRAINED, INTERMITTENTLY CONGLOMERATIC, FRIABLE TO MEDIUM FIRM, CROSS BEDDED AT BASE.

WOODED

T.S.+0.2

28

MEANDERING STREAMS

T.S.+0.2

W

33

LOG OF AUGER BORINGS AT STA. 791+00

50' LT. 50' RT.

T.S. +0.2'

24

30

940 930 920 910 900

1040 1030 1020 1010 1000

764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796

SOIL PROFILE

TRUMBULL COUNTY

TRU-82-12.67

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

O. S. U. CAMPUS, COLUMBUS, OHIO

3/5

REVISED - SEPTEMBER 1955

STREAMS & BRUSH

BRUSH

Co. Rd. No. 155

WOODED

WOODS & BRUSH

STOPPED ON BOCK FRAGMENTS

WOODED

WOODED

STOPPED ON BOULDERS

STOPPED ON BOULDERS

STOPPED ON BOULDERS

STOPPED ON BOULDERS

STOPPED ON BOULDERS

STOPPED ON BOULDERS

STOPPED ON LOOSE ROCK

STOPPED ON BOULDERS

STOPPED ON GRAVEL

STOPPED ON GRAVEL

SWAMP

REFER TO SHEET 5 FOR CROSS SECTION AT STA. 891+00

STOPPED ON LARGE GRAVEL

SOIL PROFILE

TRUMBULL COUNTY

TRU-82-12.67

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

O. S. U. CAMPUS, COLUMBUS, OHIO

4/5

SOIL PROFILE

TRUMBULL COUNTY

TRU-82-12.67

STATE HIGHWAY TESTING AND RESEARCH LABORATORY

O. S. U. CAMPUS, COLUMBUS, OHIO

5/5

50' LT.

S.R. 90

℄

50' RT.

1160 / 1150 / 1140 / 1130 / 1120

T.S. = 0.3'
W
32
22
STOPPED ON LARGE GRAVEL

T.S. = 0.4'
24
22
STOPPED ON STONE FRAGMENTS

T.S. = 0.3'
23
STOPPED ON LARGE STONES

T.S. = 0.4'
26
16

T.S. = 0.3'
17
13
14
W
15

T.S. = 0.3'
17
15
13

T.S. = 0.3'
20
13
21

T.S. = 0.3'
22
26
27

T.S. = 0.3'
26
W
35
20
STOPPED IN GRAVEL

T.S. = 0.3'
18
STOPPED IN GRAVEL

T.S. = 0.3'
27
24
30
STOPPED IN GRAVEL

988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 1018 1019 1020

PROPOSED GRADE

T.S. = 0.4'
52

SWAMP WATER STANDING 0.8' DEEP
ORGANIC
38
21
11
29

MUCK = 1.5'
ORGANIC
48
69
91

MUCK = 0.5'

860 / 850

STA. 714+00

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

PROPOSED GRADE

T.S. & SOD = 0.3'

T.S. = 0.3'
31
22
21
69
29

T.S. & SOD = 0.7'
28
22
28

860 / 850

STA. 715+00

100 90 10 ℄ 10 90 100

PROPOSED GRADE

WATER 1'
MUCK = 0.5'

WATER STANDING 2' DEEP
MUCK = 0.5'
32
43
22
34

WATER = 1'
MUCK = 1'
36
33
31
18
31

860 / 850 / 840

STA. 717+00

100 90 80 70 30 20 10 ℄ 10 20 30 70 80 90 100

WATER & MUCK = 1'
49
STOPPED ON LARGE GRAVEL

PROPOSED GRADE

WATER & MUCK = 1'
35
27
STOPPED ON LARGE GRAVEL

WATER & MUCK = 0.4'
41
25
17
STOPPED ON LARGE GRAVEL

1080 / 1070

STA. 891+00

80 70 60 20 10 ℄ 10 20 60 70 80